

VOLUME 1  
E.2 VORTEX/VORTEX II LISTINGS

SUPPLEMENT

92L9905-013B

COMMON

THESE ARE SUPPLEMENTAL LISTINGS ONLY. THE MODULES IN THIS VOLUME REPLACE THE SAME MODULES IN THE E VORTEX LISTINGS (92L0705-019E). THESE LISTINGS REPLACE THE E.1 LISTINGS (92L9905-013A). THE END OF THE COMMON MODULE CONTAINS THE EDIT CHANGES FROM RELEASE E TO RELEASE E.2. AN ENTRY NAME TO PROGRAM NAME CROSS REFERENCE LIST IS INCLUDED WITH THE COMMON MODULE. A LISTINGS OF THE E.2 SGL IS INCLUDED AT THE END OF THE VORTEX AND VORTEX II MODULES.



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000001 A 1 VORTEX SET ! 06 000001
3 * NEW FORTRAN (BASE) * 06 000003
4 * 06 000004
5 * VDM PART NO. 81L0405-012 RELEASED 12/17/74 PD 06 000005
6 * 06 000006
7 * V$FORT 06 000007
8 * 06 000008
9 * 06 000009
10 COMPL OPSY COMP 06 000010
11 EJECT OPSY EJEC 06 000011
12 ENTRY OPSY ENIR 06 000012
13 MERGE OPSY MERG 06 000013
14 SPACE OPSY SPAC 06 000014
15 TITLE V$FORT 06 000015
16 * 06 000016
17 * THIS IS A COPYRIGHTED PROGRAM 1974 BY VARIAN DATA MACHINES PD 06 000017
18 * 06 000018
19 * VERSION PD REFERS TO E8393 PD 06 000019
21 ***** 06 000021
22 * 06 000022
23 * 06 000023
24 * VORTEX FORTRAN IV COMPILER 06 000024
25 * 06 000025
26 * 06 000026
27 * THIS COMPILER IS A ONE-PASS FORTRAN IV COMPILER, COMPATIBLE WITH 06 000027
28 * ANSI SPECIFICATION X3.9-1966. 06 000028
29 * 06 000029
30 * IT OPERATES UNDER CONTROL OF THE VDM 620/F REAL-TIME OPERATING 06 000030
31 * SYSTEM(VORTEX). IT IS CALLED BY THE JCP DIRECTIVE: 06 000031
32 * 06 000032
33 * /FORT P1,P2,... 06 000033
34 * 06 000034
35 * WHERE P1,P2,... IS A PARAMETER LIST WHICH MAY BE EMPTY OR 06 000035
36 * EACH PI MAY HAVE ONE OF THE SINGLE LETTER VALUES: 06 000036
37 * 06 000037
38 * B: SUPPRESS OBJECT OUTPUT ON BO FILE 06 000038
39 * I: INTEGER AND LOGICAL VARIABLES AND ARRAYS ASSIGNED 2 WORDS * 06 000039
40 * L: AFTER COMPILATION, LOAD AND EXECUTE FROM GO FILE * 06 000040
41 * M: SUPPRESS POST-COMPILATION MAP ON LO FILE * 06 000041
42 * N: SUPPRESS SOURCE LISTING ON LO FILE * 06 000042
43 * O: OUTPUT OCTAL LISTING OF OBJECT TEXT ON LO FILE * 06 000043
44 * X: COMPILE STATEMENTS WITH AN 'X' IN COLUMN 1 * 06 000044
45 * 06 000045
46 ***** 06 000046
47 * EJEC 06 000047
48 ***** 06 000048
49 * 06 000049
50 *** JCP PROCESSOR LOW CORE EQUATES *** 06 000050
51 * 06 000051
52 ***** 06 000052
000050 A 54 LCUP EQU 050 06 000054
000050 A 55 V$UNAN EQU LCUP JCP NAME 06 000053
000054 A 56 V$LCNT EQU LCUP+4 LINE COUNT 06 000055
000055 A 57 V$JCFB EQU LCUP+5 JCP FLAGS 06 000057
58 * BIT 2-0 = LOAD AND GO FLAGS 06 000058
59 * BIT 3 = DUMP FLAG 1=DUMP, 0=NO DUMP 06 000059
60 * BIT 9-4 = UNUSED 06 000060
61 * BIT 15-10 = 35 EXTRA CORE BLOCKS TO ALLOC 06 000061
000056 A 63 V$JFCB EQU LCUP+6 JCP FILE CONTROL BLOCK 06 000063
000070 A 64 V$DATE EQU LCUP+16 JCP DATA RECORD 06 000064
65 * EJEC 06 000065
66 ***** 06 000066
67 * 06 000067
68 *** LOW CORE DESCRIPTION *** 06 000068
69 * 06 000069
70 ***** 06 000070
000380 A 72 LC EQU 0300 06 000072
000317 A 73 V$LLUP EQU LC+15 LOC. OF LAST UNPROTECTED WORD 06 000073
000345 A 74 V$LUNT EQU LC+37 ADDR. OF LOGICAL UNIT NAME TABLE 06 000074
000355 A 75 V$DSTB EQU LC+45 DATA ADDR. FOR DST BLOCK 06 000075
000357 A 76 V$TKSZ EQU LC+47 RMD TRACK SIZE 06 000076
000360 A 77 V$CTAD EQU LC+48 BASE ADDR. FOR CONTROLLER ADDR. TABLE 06 000077
000400 A 78 V$LUT1 EQU LC+64 START LUN ADDR FOR JCP/JCPCHN ASSIGNABLE 06 000078
000401 A 79 V$LUT2 EQU LC+65 START LUN ADDR FOR V$ASSIGNABLE 06 000079
000402 A 80 V$LUT3 EQU LC+66 START LUN ADDR FOR DPCBN ASSIGNABLE 06 000080
000412 A 81 V$JCB EQU LC+74 ALL SYSTEM BACKGROUND PROGRAMS AND JCP USE 06 000081
82 * THIS SYSTEM BUFFER TO READ DEFECTIVES AND 06 000082
83 * SOURCE RECORDS IN. 06 000083
000417 A 84 V$STSZ EQU LC+79 ACTUAL SECTOR SIZE 06 000084
85 * EJEC 06 000085
86 ***** 06 000086
87 * 06 000087
88 *** MASK TABLE DESCRIPTION *** 06 000088
89 * 06 000089
90 ***** 06 000090
000420 A 92 NT SET 0400 06 000092
000420 A 93 ZERO EQU 01 ZERO WORD 06 000093
000421 A 94 B00 EQU 01+1 BIT MASK CONTENTS 000001 06 000094
000422 A 95 B01 EQU 01+2 000002 06 000095
000423 A 96 B02 EQU 01+3 000004 06 000096
000424 A 97 B03 EQU 01+4 000010 06 000097

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000425 A 98 BS4 EQU MT+5 000020 06 00098
000426 A 99 BS5 EQU MT+6 000040 06 00099
000427 A 100 BS6 EQU MT+7 000100 06 00100
000430 A 101 BS7 EQU MT+8 000200 06 00101
000431 A 102 BS8 EQU MT+9 000400 06 00102
000432 A 103 BS9 EQU MT+10 001000 06 00103
000433 A 104 BS10 EQU MT+11 002000 06 00104
000434 A 105 BS11 EQU MT+12 004000 06 00105
000435 A 106 BS12 EQU MT+13 010000 06 00106
000436 A 107 BS13 EQU MT+14 020000 06 00107
000437 A 108 BS14 EQU MT+15 040000 06 00108
000440 A 109 BS15 EQU MT+16 0100000 06 00109
000441 A 110 BR0 EQU MT+17 BIT MASK CONTENTS 0177776 06 00110
000442 A 111 BR1 EQU MT+18 0177775 06 00111
000443 A 112 BR2 EQU MT+19 0177773 06 00112
000444 A 113 BR3 EQU MT+20 0177767 06 00113
000445 A 114 BR4 EQU MT+21 0177757 06 00114
000446 A 115 BR5 EQU MT+22 0177737 06 00115
000447 A 116 BR6 EQU MT+23 0177677 06 00116
000450 A 117 BR7 EQU MT+24 0177577 06 00117
000451 A 118 BR8 EQU MT+25 0177377 06 00118
000452 A 119 BR9 EQU MT+26 0176777 06 00119
000453 A 120 BR10 EQU MT+27 0175777 06 00120
000454 A 121 BR11 EQU MT+28 0173777 06 00121
000455 A 122 BR12 EQU MT+29 0167777 06 00122
000456 A 123 BR13 EQU MT+30 0157777 06 00123
000457 A 124 BR14 EQU MT+31 0137777 06 00124
000460 A 125 BR15 EQU MT+32 0077777 06 00125
000461 A 126 NEG EQU MT+33 SET ALL BITS 06 00126
000462 A 127 LHW EQU MT+34 LEFT HALF WORD MASK 0177400 06 00127
000463 A 128 RHW EQU MT+35 RIGHT HALF WORD MASK 0377 06 00128
000421 A 129 ONE EQU MT+1 CONTAINS NUMBER 1 06 00129
000422 A 130 TWO EQU MT+2 CONTAINS NUMBER 2 06 00130
000464 A 131 THREE EQU MT+36 CONTAINS NUMBER 3 06 00131
000423 A 132 FOUR EQU MT+3 CONTAINS NUMBER 4 06 00132
000465 A 133 FIVE EQU MT+37 CONTAINS NUMBER 5 06 00133
000466 A 134 SIX EQU MT+38 CONTAINS NUMBER 6 06 00134
000467 A 135 SEVEN EQU MT+39 CONTAINS NUMBER 7 06 00135
000424 A 136 EIGHT EQU MT+4 CONTAINS NUMBER 8 06 00136
000470 A 137 NINE EQU MT+40 CONTAINS NUMBER 9 06 00137
000471 A 138 TEN EQU MT+41 CONTAINS NUMBER 10 06 00138
000421 A 139 BM1 EQU MT+1 BIT MASK WORD 00001 06 00139
000461 A 140 BM3 EQU MT+36 BIT MASK WORD 00003 06 00140
000467 A 141 BM7 EQU MT+39 BIT MASK WORD 06007 06 00141
000472 A 142 BM17 EQU MT+42 BIT MASK WORD 00017 06 00142
000473 A 143 BM37 EQU MT+43 BIT MASK WORD 00037 06 00143
000474 A 144 BM77 EQU MT+44 BIT MASK WORD 00077 06 00144
000475 A 145 BM177 EQU MT+45 BIT MASK WORD 00177 06 00145
000463 A 146 BM377 EQU MT+35 BIT MASK WORD 00377 06 00146
000476 A 147 BM777 EQU MT+46 BIT MASK WORD 00777 06 00147
000477 A 148 BM1777 EQU MT+47 BIT MASK WORD 01777 06 00148
000500 A 149 MTE EQU BM1777+1 FF 06 00149
150 EJECT * 06 00150
151 ***** * 06 00151
152 * * 06 00152
153 * COMPILE - TIME MEMORY MAP * 06 00153
154 * * 06 00154
155 ***** * 06 00155
156 * * 06 00156
157 * * 06 00157
158 * * 06 00158
159 * BLD / AID / NUCLEUS / FOREGROUND * 06 00159
160 * * 06 00160
161 * ***** * 06 00161
162 * * V$LLUP * 06 00162
163 * * DD TABLE * 06 00163
164 * * DT * 06 00164
165 * ***** * 06 00165
166 * * * 06 00166
167 * * EXPRESSION TABLE * 06 00167
168 * * * 06 00168
169 * ***** * 06 00169
170 * * * 06 00170
171 * * AVAILABLE STORAGE * 06 00171
172 * * * 06 00172
173 * ***** * 06 00173
174 * * * 06 00174
175 * * TRIAD TABLE * 06 00175
176 * * * 06 00176
177 * ***** * 06 00177
178 * * * 06 00178
179 * * ASSIGNMENT TABLE * 06 00179
180 * * * 06 00180
181 * ***** * 06 00181
182 * * * 06 00182
183 * * FORTRAN IV COMPILER * 06 00183
184 * * * 01000 * 06 00184
185 * ***** * 06 00185
186 * * * 06 00186
187 * * VORTEX LOW CORE DATA * 06 00187
188 * * * 06 00188

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371 *
372 *
373 * *****
374 * *
375 * * DP1 * WD 0 *
376 * *
377 * *****
378 * *
379 * * DP2 * WD 1 *
380 * *
381 * *15 10 9 7 6 1 0 *
382 * *****
383 * * * * *
384 * * *TU* TM * DP *SF* WD 2 *
385 * * * * *
386 * *****
387 *
388 *
389 * DP1: ADDRESS OF 1ST OPERAND(IN TRIAD OR ASSIGNMENT TABLE)
390 * DP2: ADDRESS OF 2ND OPERAND(IN TRIAD OR ASSIGNMENT TABLE)
391 * OP: OPERATOR CODE
392 * SF: STORAGE FLAG. SET TO 1 IF TRIAD VALUE IS TO BE SAVED
393 * TM: TRIAD MODE. RESULT MODE OF TRIAD
394 * TU: TRIAD USE. SET TO 1 IF EITHER TRIAD OPERAND REDEFINED
395 *
396 * *****
397 * EJECT
398 * *****
399 *
400 * P R O G R A M C O N T R O L
401 *
402 * B L O C K
403 *
404 * *****
405 * *****
406 * *****
407 *
408 * E N T R Y N A M E S
409 *
410 * *****
411 * NAME FOR
412 *
413 *
414 *
415 *
416 * E X T E R N A L S
417 *
418 * *****
419 *
420 * EXT SDFCB SYSTEM SD FOR
421 * EXT SDFCB SYSTEM GD FOR
422 * EXT LCMCR SYSTEM LD FOR
423 * EXT PDCB SYSTEM PI FOR
424 * EXT SDFCB SYSTEM SJ FOR
425 * EXT SDFCB ENTRY TO PLS SERVICES
426 * EXT SDFCB ENTRY TO I/O
427 * EXT SDFCB ENTRY TO I/O STATUS CALL
428 * *****
429 *
430 * S Y S T E M V A R I A B L E S
431 *
432 * *****
000020 A 433 * BIT SET 16 SELECT 16-811 VBM 200 COMPUTER
000002 A 434 * B SET 2 B-REGISTER
000001 A 435 * X SET 1 X-REGISTER
436 *
437 *
438 *
439 * P A R A M E T E R S F O R W O S V 7 4 F I R M W A R E
440 *
441 *
105032 A 442 * FLDI EQU 0105032 FLI EQU DP1-00E
105033 A 443 * FSTI EQU 0105033 FSI EQU DP2-00E
105034 A 444 * FADBI EQU 0105034 FADBI EQU DP1-00E
105037 A 445 * FADBI1 EQU 0105037 FADBI1 EQU DP1-00E
105036 A 446 * FADBI EQU 0105036 FADBI EQU DP1-00E
105037 A 447 * FMUVI EQU 0105037 FMUVI EQU DP1-00E
105127 A 448 * FSORT EQU 0105127 FSORT EQU DP1-00E
105024 A 449 * FLREL EQU 0105024 FLREL EQU DP1-00E
105125 A 450 * FLJAG EQU 0105125 FLJAG EQU DP1-00E
105226 A 451 * FLAIF EQU 0105226 FLAIF EQU DP1-00E
105167 A 452 * FLIOP EQU 0105167 FLIOP EQU DP1-00E
453 *
454 * * FAST FLOATING-POINT BOX OF CODES
455 *
105400 A 456 * FADBP EQU 0105400 BAI TO FFP OP
105503 A 457 * FADBP EQU 0105503 BP ADD
105410 A 458 * FADBP EQU 0105410 BP SUB
105505 A 459 * FADBP EQU 0105505 BP DIVIDE
105401 A 460 * FADBP EQU 0105401 BP DIVIDE
105501 A 461 * FADBP EQU 0105501 BP DIVIDE
105400 A 462 * FADBP EQU 0105400 BP DIVIDE
105502 A 463 * FADBP EQU 0105502 BP DIVIDE
105405 A 464 * FADBP EQU 0105405 BP DIVIDE
105506 A 465 * FADBP EQU 0105506 BP DIVIDE
105416 A 466 * FADBP EQU 0105416 BP DIVIDE

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105710 A 467 FSTD EQU FFPOP+0310 STORE DP FF 06 00467
105680 A 468 FSTS EQU FFPOP+0200 STORE SP FF 06 00468
105543 A 469 FSUBD EQU FFPOP+0143 SUBTRACT DP FF 06 00469
105450 A 470 FSUBS EQU FFPOP+0050 SUBTRACT SP FF 06 00470
471 * 06 00471
472 * 06 00472
000422 A 473 K2 EQU TWO 06 00473
000441 A 474 MTWO EQU BRO 06 00474
000423 A 475 K4 EQU FOUR 06 00475
000466 A 476 K6 EQU SIX 06 00476
000424 A 477 K10 EQU BS3 06 00477
000471 A 478 K12 EQU TEN 06 00478
000472 A 479 K17 EQU BM17 06 00479
000425 A 480 K20 EQU BS4 06 00480
000473 A 481 K37 EQU BM37 06 00481
000463 A 482 K77 EQU BM377 06 00482
000432 A 483 KJMP EQU BS9 06 00483
484 EJECT 06 00484
485 ***** 06 00485
486 * 06 00486
487 * 06 00487
488 * 06 00488
489 * FUNCTION: TO LOCATE AN ITEM IN THE ASSIGNMENT TABLE, OR ENTER IT 06 00489
490 * IF IT IS NOT PRESENT. 06 00490
491 * 06 00491
492 * ENTRY: ID FIELD HOLDS ITEM IDENTIFICATION 06 00492
493 * EL HAS ID SIZE 06 00493
494 * IU,IM HOLD FURTHER INFO 06 00494
495 * NT=0 FOR VARIABLE AND ARRAY NAMES,ETC. 06 00495
496 * NT=1 FOR CONSTANTS, ETC. 06 00496
497 * NTFI=1 IF ITEM NOT TO BE TAGGED BY ASI 06 00497
498 * 06 00498
499 * EXIT : A=IM 06 00499
500 * I POINTS TO ITEM 06 00500
501 * ITEM LOADED BY LAX 06 00501
502 * NTFI=0 06 00502
503 * TRIAD TABLE MOVED UP 06 00503
504 * IF SPFL.NE.0,IU,OR.NTFI TESTED. IF.NE.0 NO-OP 06 00504
505 * .EQ.0 IF TC.NE.'(' IU=1 06 00505
506 * .EQ.'(' CALL TSB 06 00506
507 * 06 00507
508 * ERRORS: ER19 IF ILLEGAL DUPLICATION OF NAMES 06 00508
509 * TER3 IF TABLE OVERFLOWS MEMORY 06 00509
510 * 06 00510
511 ***** 06 00511
000000 000000 A 513 ASI ENTRY 06 00513
000001 017000 I 514 LDA DPB INITIALIZE TABLE PTR I AT START OF TABLE 06 00514
515 ***** 06 00515
516 * ENTRY TO TABLE SEARCH LOOP * 06 00516
517 ***** 06 00517
000002 057000 I 518 ASIL STA I SAVE NEXT ITEM POINTER IN I 06 00518
000003 005014 A 519 TAX AND X 06 00519
000004 147000 I 520 SUB IT 06 00520
000005 001004 A 521 JAZ ASIC TEST FOR END OF TABLE 06 00521
000006 000051 R
522 ***** 06 00522
523 * NO FIND - MAKE NEW ENTRY * 06 00523
524 ***** 06 00524
000007 077000 I 525 STX CL CL=I: CHAIN ITEM TO ITSELF 06 00525
000010 057000 I 526 STA AF AF=0 06 00526
000011 017000 I 527 LDA EL 06 00527
000012 114035 A 528 ORA ASII FORMAT STORE COMMAND 06 00528
000013 054025 A 529 STA ASIM+1 STORE IN LINE 06 00529
000014 010422 A 530 LDA K2 06 00530
000015 057000 I 531 STA AT SET AT=2 06 00531
000016 127000 I 532 ADD JT 06 00532
000017 005012 A 533 TAB POINT B AT TOP OF TRIADS 06 00533
000020 127000 I 534 ADD CL TEST IF ROOM FOR NEW ENTRY 06 00534
000021 147000 I 535 SUB ST 06 00535
000022 002002 A 536 JAPM YOF DATA POOL FULL 06 00536
000023 006710 R
000024 017000 I 537 LDA J 06 00537
000025 127000 I 538 ADD EL BUMP TRIAD POINTER J BY EL 06 00538
000026 057000 I 539 STA J 06 00539
000027 017000 I 540 LDA JT 06 00540
000030 127000 I 541 ADD EL BUMP TRIAD POINTER JT BY EL 06 00541
000031 057000 I 542 STA JT 06 00542
000032 017000 I 543 LDA IT 06 00543
000033 127000 I 544 ADD EL BUMP TABLE TOP POINTER IT 06 00544
000034 057000 I 545 STA IT 06 00545
000035 147000 I 546 SUB JT 06 00546
000036 001010 A 547 JAZ ASIC TEST IF TRIAD TABLE EMPTY 06 00547
000037 000170 R
548 ***** 06 00548
549 * FLOATING TRIAD TABLE MUST BE MOVED UP EL WORDS * 06 00549
550 ***** 06 00550
000040 016000 A 551 ASIM LDA C,B GET TRIAD WORD 06 00551
000041 056005 A 552 STA C,B MOVE UP EL 06 00552
000042 005323 A 553 DECR C,B DECREMENT POINTER B 06 00553
000043 147000 I 554 SUB J 06 00554
000044 001002 A 555 JAP ASIM LOOP UNTIL DONE 06 00555

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000045 000040 R
000046 001000 A 556 JMP AS13 06 00556
000047 000170 R
000050 056000 A 557 AS11 STA 0,B ASIM RESET INSTRUCTION 06 00557
558 ***** 06 00558
559 * COMPARE TABLE ENTRY * 06 00559
560 ***** 06 00560
000051 015002 A 561 AS1C LDA 2,X EL(I) 06 00561
000052 150472 A 562 ANA 8M17 06 00562
000053 137000 I 563 ERA EL 06 00563
000054 001010 A 564 JAZ AS10 06 00564
000055 000060 R
000056 015002 A 565 AS1X LDA 2,X BUMP TABLE POINTER 06 00565
000057 150472 A 566 ANA 8M17 EL(I) 06 00566
000060 127000 I 567 ADD I 06 00567
000061 001000 A 568 JMP AS1L LOOP 06 00568
000062 000002 F
000063 020464 A 569 AS10 LDB THREE 06 00569
000064 014060 A 570 LDA AS11 'LDA 2,X' 06 00570
000065 054001 A 571 STA AS105 SET ID-PICKUP INSTRUCTION 06 00571
000066 044000 A 572 INR AS105 06 00572
000067 015002 A 573 AS105 LDA 2,X GET ID(X) 06 00573
000070 006136 A 574 ERAE ID-3,B 06 00574
000071 010234 R
000072 001016 A 575 JANZ AS1X NO MATCH 06 00575
000073 000056 R
000074 005123 A 576 INCR 023 06 00576
000075 147000 I 577 SUB EL 06 00577
000076 001016 A 578 JANZ AS105-1 TEST REMAINING ID WORDS 06 00578
000077 000066 R
579 ***** 06 00579
580 * ID FIELDS MATCH - CHECK NT * 06 00580
581 ***** 06 00581
000100 027000 I 582 LDB NT 06 00582
000101 015002 A 583 LDA 2,X 06 00583
000102 001022 A 584 JIF 022,AS1Y EXIT IF NT FIELDS 8D1H=0 06 00584
000103 000123 R
000104 001020 A 585 JBZ AS11 GO TO AS11 IF LOOKING FOR VARIABLE 06 00585
000105 000145 R
000106 001002 A 586 JAF AS1X CONTINUE SEARCH IF LOOKING FOR NT=1 ITEM 06 00586
000107 000056 R
587 ***** 06 00587
588 * NT=1 MATCH. COMPARE IM,IU * 06 00588
589 ***** 06 00589
000110 004551 A 590 LLDR 8BIT-7 06 00590
000111 150467 A 591 ANR SEVEN GET IM 06 00591
000112 137000 I 592 ERA 10 06 00592
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000114 000056 R
000115 004442 A 594 LRL 2 06 00594
000116 001010 A 595 JAZ AS1X IGNORE IF IU=0 06 00595
000117 000056 R
000120 137000 I 596 ERA IU 06 00596
000121 001016 A 597 JAZ AS1X IU (> IU(I)) 06 00597
000122 000056 R
598 ***** 06 00598
599 * ITEM FOUND/ASSIGNED * 06 00599
600 ***** 06 00600
000123 002000 A 601 AS1Y CALL 10X LOAD ITEM 06 00601
000124 003166 R
000125 017000 I 602 LDA IM 06 00602
000126 140422 A 603 SUB K2 06 00603
000127 001000 A 604 JAZ AS1Z EXIT ON LABELS, COMMON BLOCK NAMES 06 00604
000130 000140 R
000131 017000 I 605 LDA 8PFL 06 00605
000132 001010 A 606 JAZ AS1Z EXIT IF PROCESSING SPECIFICATIONS 06 00606
000133 000140 R
000134 017000 I 607 LPA 10 06 00607
000135 117000 I 608 ORL NIFL EXIT IF NO-TAG FLAG NIFL SET 06 00608
000136 001010 A 609 JAZ AS1Z OTHERWISE ASSIGN USAGE 06 00609
000137 000161 R
610 ***** 06 00610
611 * EXIT * 06 00611
612 ***** 06 00612
000140 005001 A 613 AS1Z LDA 06 00613
000141 057000 I 614 STA NIFL CLEAR NO-TAG FLAG 06 00614
000142 017000 I 615 LDA IM LOAD A=IM 06 00615
000143 001000 A 616 JMP* 06 00616
000144 100000 R
000145 015002 A 617 AS11 LDA 2,X PROCESS NJ=1,NT(ID)=0 AND ID=ID(I) 06 00617
000146 004354 A 618 LARA 10 06 00618
000147 150464 A 619 JAZ THREE GET AT(I) 06 00619
000150 005011 A 620 ERA 06 00620
000151 001016 A 621 JANZ 00Y NOT ENTRY NAME 06 00621
000152 000056 R
000153 017000 I 622 LDA 8PFL 06 00622
000154 140464 A 623 ORL 10PCE 06 00623
000155 002004 A 624 LARM 8R19 ILLEGAL NAME (ENTRY USED IN SPECIFICATION) 06 00624
000156 000331 R
000157 001000 A 625 JAF AS1X 06 00625
000160 000056 R

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000161 017000 I 626 ASI2 LDA TC ASSIGN USAGE 06 00626
000162 130000 L 627 ERA =*( MAKE SUBPROGRAM IF TC = *( 06 00627
000163 002010 A 628 JAZM TSB 06 00628
000164 006733 R
000165 017000 I 629 LDA IU 06 00629
000166 003010 A 630 XAZ ASI4 IF IU=0, SET IU=1 (VARIABLE) 06 00630
000167 000174 R
000170 002000 A 631 ASI3 CALL SAK 06 00631
000171 005134 R
000172 001000 A 632 JMP ASIY 06 00632
000173 000123 R
000174 047000 I 633 ASI4 INR IU 06 00633
634 EJECT 06 00634
635 ***** 06 00635
636 * 06 00636
637 * ASSIGN SPECIAL (ASS) 06 00637
638 * 06 00638
639 * FUNCTION: TO CALL ASI TO MAKE AN ENTRY INTO THE ASSIGNMENT TABLE 06 00639
640 * WITH NT=1 06 00640
641 * 06 00641
642 * ENTRY: SYMBOL/NUMBER IN ID FIELD 06 00642
643 * A=IU 06 00643
644 * B=IM 06 00644
645 * 06 00645
646 * EXIT: SYMBOL/NUMBER ENTERED INTO ASSIGNMENT TABLE WITH NT=1 06 00646
647 * 06 00647
648 ***** 06 00648
000175 000000 A 650 ASS ENTRY 06 00650
000176 057000 I 651 STA IU SET IU TO A 06 00651
000177 067000 I 652 STB IM SET IM TO B 06 00652
000200 005101 A 653 INCR 1 06 00653
000201 057000 I 654 STA NT SET NT TO 1 06 00654
000202 002000 A 655 CALL ASI MAKE ENTRY IN SYMBOL TABLE 06 00655
000203 000000 R
000204 001000 A 656 JMP* ASS EXIT 06 00656
000205 100175 R
657 EJECT 06 00657
658 ***** 06 00658
659 * 06 00659
660 * CONVERT BINARY TO ASCII (CBA) 06 00660
661 * 06 00661
662 * FUNCTION: TO CONVERT A BINARY VALUE TO ASCII 06 00662
663 * 06 00663
664 * ENTRANCE: (A) = BINARY VALUE (0-99) 06 00664
665 * 06 00665
666 * EXIT: (A) = ASCII VALUE (DECIMAL) 06 00666
667 * 06 00667
668 ***** 06 00668
000206 000000 A 670 CBA ENTRY 06 00670
000207 005012 A 671 TAB 06 00671
000210 005001 A 672 TZA 06 00672
000211 170471 A 673 DIV TEN 06 00673
000212 004250 A 674 LRLA 8 06 00674
000213 004470 A 675 LLRL 24 MAKE MOD-10 06 00675
000214 006120 A 676 ADDI '00' 06 00676
000215 130260 A
000216 001000 A 677 JMP* CBA 06 00677
000217 100206 R
678 EJECT 06 00678
679 ***** 06 00679
680 * 06 00680
681 * OUTPUT A CALL TO NAME (CAN) 06 00681
682 * 06 00682
683 * FUNCTION: TO OUTPUT A CALL OF FORM: 'JMPM $AB' 06 00683
684 * 06 00684
685 * ENTRY: A='$AB' 06 00685
686 * 06 00686
687 * EXIT: 'JMPM $AB' OUTPUT 06 00687
688 * $AB IN ASSIGNMENT TABLE: IU=3, IM=0, NT=0 06 00688
689 * I SAVED 06 00689
690 * 06 00690
691 ***** 06 00691
000220 000000 A 693 CAN ENTRY 06 00693
000221 005012 A 694 TAB 06 00694
000222 010465 A 695 LDA FIVE 06 00695
000223 057000 I 696 STA EL 06 00696
000224 010464 A 697 LDA THREE 06 00697
000225 057000 I 698 STA IU SET IU=3 FOR SUBPROGRAM 06 00698
000226 006010 A 699 LDAI '* 06 00699
000227 120244 A
000230 004450 A 700 LLRL 8 06 00700
000231 057000 I 701 STA ID 06 00701
000232 067000 I 702 STB ID+1 06 00702
000233 005001 A 703 TZA 06 00703
000234 057000 I 704 STA IM SET IM=0 06 00704
000235 057000 I 705 STA NT SET NT=0 06 00705
000236 017000 I 706 LDA I 06 00706
000237 054011 A 707 STA CANT SAVE I 06 00707
000240 002000 A 708 CALL ASI FIND/ASSIGN NAME 06 00708
000241 000000 R
000242 014000 A 709 LDA *+1 06 00709

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000243 002003 A 710 CALL DBB OUTPUT 'JMPM SAB' 06 00710
000244 003725 R 711 LDA CANT 06 00711
000245 014003 A 712 STA I RESTORE I 06 00712
000246 057000 I 713 JMP* CAN EXIT 06 00713
000250 100220 R 714 CANT BSS I SAVE I 06 00714
000251 715 EJECT 06 00715
716 *****
717 *
718 * C O M M A T E S T ( C C R ) *
719 * *
720 * FUNCTION: CCR IS AN EXIT SWITCH FOR STATEMENTS WHICH ALLOW *
721 * MULTIPLE OPERANDS: E.G. 'EXTERNAL NAME1;NAME2;...' *
722 * *
723 * ENTRY: TC=TERMINATING CHARACTER *
724 * STSW=ADDRESS OF STATEMENT PROCESSOR *
725 * *
726 * EXIT : THROUGH STSW IF TC=',' *
727 * OTHERWISE TO STATEMENT COMPLETION ENTRY CRT *
728 * *
729 *****
000252 010000 L 731 CCR LDA ',' 06 00731
000253 147000 I 732 SUB TC COMPARE WITH TERMINATING CHAR TC 06 00732
000254 001010 A 733 JAZ* STSW EXIT THROUGH STSW IF TC=',' 06 00733
000255 110401 R 734 JMP CRT OTHERWISE STATEMENT COMPLETION 06 00734
000256 001000 A 735 EJECT 06 00735
000257 006162 R 736 *****
737 *
738 * C O M M A T E S T ( C T S ) *
739 * *
740 *****
000260 000000 A 742 CTS ENTRY 06 00742
000261 010000 L 743 LDA ',' 06 00743
000262 002000 A 744 CALL ISJ 06 00744
000263 007465 R 745 JMP* CTS 06 00745
000264 001000 A 746 EJECT 06 00746
000265 100260 R 747 *****
748 *
749 * D E C R E M E N T K ( D E K ) *
750 * *
751 * FUNCTION: TO DECREMENT THE EXPRESSION TABLE POINTER K BY 2 *
752 * *
753 * ENTRY: NO SPECIAL CONDITIONS *
754 * *
755 * EXIT : POINTER K DECREMENTED BY 2 *
756 * *
757 *****
000266 000000 A 759 DEK ENTRY 06 00759
000267 017000 I 760 LDA K GET K 06 00760
000270 140422 A 761 SUB #2 DECREMENT BY 2 06 00761
000271 057000 I 762 STA K RESTORE 06 00762
000272 001000 A 763 JMP* DEK EXIT 06 00763
000273 100266 R 764 EJECT 06 00764
765 *****
766 *
767 * D E F I N E A F A N D A T ( D F T ) *
768 * *
769 * FUNCTION: TO ENTER VALUES INTO THE AF AND AT FIELDS OF AN *
770 * ASSIGNMENT TABLE ENTRY *
771 * *
772 * ENTRY: I POINTS TO ASSIGNMENT TABLE ENTRY *
773 * A=AF *
774 * B=AT *
775 * *
776 * EXIT : AF AND AT FIELDS OF TABLE ENTRY I REPLACED *
777 * *
778 *****
000274 000000 A 780 DFT ENTRY 06 00780
000275 057000 I 781 STA AF SET AF TO A 06 00781
000276 067000 I 782 STA AT SET AT TO B 06 00782
000277 002000 A 783 CALL CAN STORE IN ASSIGNMENT TABLE 06 00783
000300 005134 R 784 JMP* DFT EXIT 06 00784
000302 100274 R 785 EJECT 06 00785
786 *
787 * D E F I N E S T A T E M E N T M O D E *
000303 047000 I 788 DSM1 INR IM 06 00788
000304 002000 A 789 JMPM CAN 06 00789
000305 005134 R 790 JMP 06 00790
000306 001000 A 791 DSM EQU *-1 06 00791
000310 017000 I 792 LDA AT 06 00792
000311 140422 A 793 SUB #2 06 00793
000312 001010 A 794 JAZ DSM1 IS 06 00794

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Address	Code	Label	Op	Op	Text	Line
000313	000303	R				
000314	017000	I	795	LDA	IM	NOT, MUST BE FORMAT
000315	005311	A	796	DAR		
000316	002016	A	797	JANZN	ERS	IMPROPER STATEMENT NO.
000317	000347	R				
000320	001000	A	798	JMP*	DSM	
000321	100307	R				
	799			CJEC		
	801 *			ERR	ERROR ROUTINE	
000322	047000	I	803	INR	EC	THIS INSURES PROPER T ERROR MESSAGE
000323	047000	I	804	INR	EC	NOT PRESENTLY USED
000324	047000	I	805	INR	EC	UNDEFINED STATEMENT NUMBER
000325	047000	I	806	INR	EC	EXPONENT OVER/UNDERFLOW
000326	047000	I	807	INR	EC	ARRAY NAME PREVIOUSLY DECLARED
000327	047000	I	808	INR	EC	NAME IS DUMMY
000330	047000	I	809	INR	EC	DO INDEX NOT REFERENCED
000331	047000	I	810	INR	EC	ILLEGAL NAME
000332	047000	I	811	INR	EC	NON-CO MMON DATA
000333	047000	I	812	INR	EC	MORE THAN 29 COMMON REGION
000334	047000	I	813	INR	EC	STATEMENT OUT OF ORDER
000335	047000	I	814	INR	EC	TRUNCATED VALUE
000336	047000	I	815	INR	EC	FUN. NOT USED AS VAR.
000337	047000	I	816	INR	EC	FORMAT HAS NO STMT. NO.
000340	047000	I	817	INR	EC	SPELLING
000341	047000	I	818	INR	EC	INVALID FORMAT
000342	047000	I	819	INR	EC	DOUBLY DEFINED STMT. NO.
000343	047000	I	820	INR	EC	NO PATH TO THIS STMT.
000344	047000	I	821	INR	EC	NON-EXECUTEABLE STMT. REF.
000345	047000	I	822	INR	EC	ILLEGAL EQUIV. GROUP
000346	047000	I	823	INR	EC	COMMON BASE LOWERED
000347	047000	I	824	INR	EC	IMPROPER STMT. NO.
000350	047000	I	825	INR	EC	ILLEGAL DO TERMINATION
000351	047000	I	826	INR	EC	MODE
000352	047000	I	827	INR	EC	USAGE
000353	047000	I	828	INR	EC	CONSTRUCTION
000354	047000	I	829	INR	EC	INPUT-OUTPUT
	000323	R	830	TER26	ER25	SUBSCRIPT NOT INTEGER CONSTANT
	000324	R	831	TER25	ER24	HLT STATEMENT END
	000325	R	832	TER24	ER23	ILLEGAL STATEMENT TERMINATOR
	000326	R	833	TER23	ER22	STATEMENT TERMINATOR NOT ','
	000327	R	834	TER22	ER21	NON NUMERIC EXPONENT
	000330	R	835	TER21	ER20	TOD MANY CHARACTERS
	000331	R	836	TER20	ER19	OPERAND IS NOT A NAME
	000332	R	837	TER19	ER18	INVALID DIMENSIONS
	000333	R	838	TER18	ER17	TARGET STATEMENT PRECEDES DO
	000334	R	839	TER17	ER16	FUNCTION STATEMENT HAS NO PARAMETERS
	000335	R	840	TER16	ER15	ILLEGAL OPERATOR
	000336	R	841	TER15	ER14	INVALID '='
	000337	R	842	TER14	ER13	SUBSCRIPT VARIABLE NOT DUMMY
	000340	R	843	TER13	ER12	INVALID UMARY +,-
	000341	R	844	TER12	ER11	ITEM NOT FUNCTION
	000342	R	845	TER11	ER10	ITEM NOT OPERAND
	000343	R	846	TER10	ER9	NOT FIRST STATEMENT
	000344	R	847	TER9	ER8	IMPROPER DO NEST
	000345	R	848	TER8	ER7	FIRST TWO CHARACTERS NOT 'DO'
	000346	R	849	TER7	ER6	MODE
	000347	R	850	TER6	ERS	IMPROPER STMT. NUMBER
	000350	R	851	TER5	ER4	IMPROPER USE OF NAME
	000351	R	852	TER4	ER3	ILLEGAL STMT.
	000352	R	853	TER3	ER2	DATA POOL FULL
	000353	R	854	TER2	ER1	NOT IN SUBPROGRAM
	000354	R	855	TER1	ER0	CONSTRUCTION
000355	074044	A	856	TER0	ERRR	INPUT-OUTPUT
	000355	R	857	ABORT	ERRR	
	006010	A	858	LDRI	ERRR	
000356	000354	R				
000357	000354	R				
000360	147000	I	859	SUB	EC	SET RETURN ADDRESS (IF NOT T ERROR) FROM
000361	005012	A	860	TAB		ENTRY WORD... GO TO T ERROR PROCESSOR IF
000362	016000	A	861	LDA	0,2	T ERROR.
000363	054040	A	862	STA	ERR2	
000364	144003	A	863	SUB	ERR0	
000365	001010	A	864	JAZ	ERR3	
000366	000427	R				
000367	006010	A	865	DATA	00010	RESTORE ENTRY WORD.
000370	047000	I	866	INR	EC	
000370			867	ERR0	0	
000371	056000	A	868	STA	0,2	
000372	010000	L	869	LDA	-'	
000373	006057	A	870	STAE	ERRF-3	
000374	007737	R				
000375	017000	I	871	LDA	EC	CONVERT ERROR CODE TO ASCII AND ENTER IN
000376	002000	A	872	CALL	ERR	
000377	000206	R				
000400	006057	A	873	STAE	ERRF-2	ERROR CODE
000401	007740	R				
000402	006020	A	874	LDRI	ERRF-6	LIST ERROR BUFFER.
000403	007734	R				
000404	006030	A	875	LDXI	12	
000405	000014	A				
000406	002000	A	876	JMPM	LIST	
000407	003406	R				

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000410 005030 A 877 LDXI NSRR INCREMENT NO. OF ERRORS 06 00877
000411 007751 R
000412 002000 A 878 JMPM NADS 05 00878
000413 003552 R
000414 010055 A 879 LDA VSJCFG 06 00879
000415 110423 A 880 ORA FOUR SET ERROR FLAG 06 00880
000416 050055 A 881 STA VSJCFG 06 00881
000417 005001 A 882 TZA RESET ERROR CODE. 06 00882
000420 057000 I 883 STA EC 06 00883
000421 005030 A 884 LDXI * 06 00884
000422 000421 R
000422 885 ERRR BES 0 06 00885
000423 001000 A 886 JMP * 06 00886
000424 000423 R
000424 887 ERR2 BES 0 06 00887
000425 001000 A 888 JMP ERR4 06 00888
000426 000373 R
000427 017000 I 889 ERR3 LDA EC CONVERT (TERMINATING) ERROR CODE TO ASCII, 06 00889
000430 054046 A 890 STA ERRS SAVE ERROR COUNTER 06 00890
000431 006010 A 891 LDAI 'T' ITS TERMINAL 06 00891
000432 120324 A
000433 002000 A 892 JMPM ERR2 06 00892
000434 000424 R
000435 014041 A 893 LDA ERRS 06 00893
000436 001010 A 894 JAZ EXIT ABORT COMPILATION ON ZERO ERROR 06 00894
000437 001371 R
000440 017000 I 895 LDA STSW 06 00895
000441 001004 A 896 JAN* ENDX ERROR IN END STATEMENT 06 00896
000442 110623 R
000443 002000 A 897 JMPM RCH SET REREAD CHARACTER SWITCH AND RESET 06 00897
000444 005110 R
000445 006010 A 898 LDAI IC00 06 00898
000446 001261 R
000447 006057 A 899 STAE IC0+2 SET INPUT COLUMN SWITCH 06 00899
000450 001256 R
000451 006010 A 900 LDAI %CORNL SET TO READ NEXT CARD 06 00900
000452 001277 R
000453 054611 A 901 STA EOLSW 06 00901
000454 006010 A 902 LDAI 00000 ENTER TEXT ERROR CODE IN OBJECT BUFFER. 06 00902
000455 006000 A
000456 002000 A 903 JMPM NOS 06 00903
000457 004747 R
000460 047000 T 904 INR TERF SET TERMINATING ERROR FLAG. 06 00904
000461 017000 I 905 LEA LT 06 00905
000462 057000 I 906 STA UT RESET TRIAD TABLE 06 00906
000463 002000 A 907 JMPM ICH SCAN OFF INPUT LINE AND THEN GO TO 06 00907
000464 001217 R
000465 140460 A 908 SUB K77 PROCESS NEXT LINE. 06 00908
000466 001010 A 909 JAZ RST 06 00909
000467 006160 R
000470 001000 A 910 JMP ICH+1 06 00910
000471 001210 R
000472 010055 A 911 ERRX LDA VSJCFG 06 00911
000473 110423 A 912 ORA FOUR SET ERROR FLAG 06 00912
000474 050055 A 913 STA VSJCFG 06 00913
000475 001000 A 914 JMP EXIT EXIT TO VORTEX RTE 06 00914
000476 001371 R
000477 915 ERRS BES 1 SAVE ERROR NUMBER 06 00915
916 SUBJECT 06 00916
917 ***** 06 00917
918 * 06 00918
919 * EXAMINE NEXT CHARACTER IN CARD * 06 00919
920 * * 06 00920
921 * FUNCTION: TO LOOK ONE SOURCE CHARACTER AHEAD WITHOUT ADVANCING SCAN * 06 00921
922 * * 06 00922
923 * ENTRY: NO SPECIAL CONDITIONS * 06 00923
924 * * 06 00924
925 * EXIT: TO=NEXT CHAR * 06 00925
926 * AND IF NEXT CHAR NUMERIC * 06 00926
927 * IS SET FOR NEXT CHAR * 06 00927
928 * * 06 00928
929 ***** 06 00929
930 ENA ENTRY 06 00930
931 CALL I01 INPUT DIGIT 06 00931
932 06 00932
933 CALL RCH SET SCAN PARAMETERS TO REREAD 06 00933
934 JMP* T00 EXIT 06 00934
935 SUBJECT 06 00935
936 ***** 06 00936
937 * 06 00937
938 * EXCHANGE LINKS * 06 00938
939 * * 06 00939
940 * FUNCTION: TO LINK TWO CHAINS TOGETHER. (NOT APT THREADED THRU * 06 00940
941 * THEIR CL FIELDS. * 06 00941
942 * * 06 00942
943 * ENTRY: I POINTS TO AN ITEM ON ONE CHAIN. THIS ITEM LOADED BY LAX * 06 00943
944 * J POINTS TO AN ITEM ON ANOTHER CHAIN * 06 00944
945 * * 06 00945
946 * EXIT: CL(I) SWAPPED WITH CL(J) * 06 00946

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947 *          CL=CL(F)                                     * 06 00947
948 *
949 *****
000507 000000 A 951 EXL  ENTRY                                     06 00951
000510 037000 I 952     LDX      F                                     06 00952
000511 015001 A 953     LDA      1,X      GET CL(F)                 06 00953
000512 027000 I 954     LDB      CL                                     06 00954
000513 065001 A 955     STB      1,X      STORE CL IN CL(F)         06 00955
000514 037000 I 956     LDX      1                                     06 00956
000515 057000 I 957     STA      CL      STORE CL(F) IN CL         06 00957
000516 055001 A 958     STA      1,X      AND CL(I)                 06 00958
000517 001000 A 959     JMP*     EXL                                     06 00959
000520 100507 R
960     EJECT                                             06 00960
961 *****
962 *
963 *          F I N I S H   O P E R A T O R ( F N D )
964 *
965 * TO IDENTIFY AND PROCESS OPERATORS WHICH START AND END WITH A '.',
966 * E.G. .EQ., .AND., . . .
967 *
968 * ENTRY: TERMINATING CHAR IN TC
969 *       CFPTSW .EQ. 0 TO TEST FOR FINAL '.'
970 *
971 * EXIT : TC .NE. '.' : IMMEDIATE RETURN
972 *       TC .EQ. '.' : IAC IS CALLED TO INPUT REST OF OPERATOR
973 *       INTO PC+1,PC+2,PC+3.
974 *       B=TC=PC+3
975 *
976 * ERRORS: TER16 IF OPERATOR DOES NOT END WITH '.' AND CFPTSW=0
977 *
978 *****
000521 000000 A 980 FND  ENTRY                                     06 00980
000522 017000 I 981     LDA      TC      GET TERMINATOR             06 00981
000523 140000 L 982     SUB      ='..'
000524 001016 A 983     JANZ*   FND      NOT '.' RETURN             06 00983
000525 100521 R
000526 010466 A 984     LDA      K6      YES                               06 00984
000527 002000 A 985     CALL     IAC      INPUT REST OF OPERATOR    06 00985
000530 001163 R
000531 027000 I 986     LDB      TC
000532 057000 I 987     STA      TC      (TC)=LAST TWO CHARACTERS PACKED 06 00987
000533 005021 A 988     TBA
000534 140000 L 989     SUB      ='..'
000535 001010 A 990     JAZ*    FND      YES; RETURN                06 00990
000536 100521 R
000537 017000 I 991     LDA      CFPTSW   NO; GET POINT SCAN SWITCH 06 00991
000540 001016 A 992     JANZ*   FND
000541 100521 R
000542 001000 A 993     JMP      TER16      ILLEGAL OPERATOR          06 00993
000543 000335 R
994     EJECT                                             06 00994
995 *
996 *          F N S B   F I R S T   N O N - S P E C I F I C A T I O N   C H E C K
997 *
998 *
999 *
000544 017000 I 997 FNSB  LDA      AF
000545 005311 A 998     DAR
000546 002000 A 999     JMPM    DCR      OUTPUT STRING RL          06 00999
000547 004257 R
000550 010423 A 1000 FNSA  LDA      K4
000551 144217 A 1001     SUB      T2FN      IF FMT. STMT., THEN
000552 002000 A 1002     JANM    DCM      DEFINE STMT. MODE      V 06 01001
000553 000307 R
000554 017000 I 1003     LDA      RL      (LDCOPTION)                06 01003
000555 005102 A 1004     INCR    2
000556 002000 A 1005     JMPM    DFT      DEFINE AF:AT          06 01005
000557 000274 R
000560 017000 I 1006 FNS4  LDA      T8
000561 057000 I 1007     STA      I
000562 002000 A 1008     JMPM    LAX      LOAD ASSIGN              06 01008
000563 003166 R
000564 024205 A 1009     LDB      T2FN+1      ACTUAL SPEC          06 01009
000565 006016 A 1010     LDRE   T2FN+3,B
000566 000774 R
000567 002000 A 1011     CALL     DVER      GET CORRECT OVERLAY    06 01011
000570 004653 R
000571 001000 A 1012     JMP      **
000572 100571 R
000572 000572 R 1013 FNS  EQU      *-1
000573 005012 A 1014     TAB
000574 054175 A 1015     STA      T2FN+1
000575 140424 A 1016     SUB      EIGHT
000576 003010 A 1017     XAZ    T2FN+2      (B)=4 FOR ENTRY      06 01017
000577 000773 R
000600 064170 A 1018     STB      T2FN
000601 005021 A 1019     TBA
000602 027000 I 1020     LDB      I
000603 067000 I 1021     STB      T8      SAVE ASSMT. PNTR.      06 01021
000604 140421 A 1022     SUB      ONE
000605 001010 A 1023     JAZ    FNS05
000606 000614 R
000607 140464 A 1024     SUB      THREE
000610 001000 A 1025     JAN      FNS0      NOT EXECUTEABLE      06 01025

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Address	Code	Label	Op	Comment	Page	Line
000611	000627	R				
000612	001016	R	1026	JANZ FNS07		06 01026
000613	000621	R				
000614	010422	R	1027	FNS05 LDA TWO		06 01027
000615	002000	R	1028	CALL OVER		06 01028
000616	004653	R				
000617	002000	R	1029	CALL PTR PURGE TRIADS FOR SPEC =1 OR =4		06 01029
000620	005013	R				
000621	024147	R	1030	FNS07 LDB T2FN		06 01030
000622	005021	R	1031	PER		06 01031
000623	140467	R	1032	SUB SEVEN		06 01032
000624	003010	R	1033	XAZ T2FN+2	(B)=4 FOR SPEC=7	06 01033
000625	000773	R				
000626	064142	R	1034	STB T2FN		06 01034
000627	014141	R	1035	FNS0 LDA T2FN		06 01035
000630	147000	I	1036	SUB SPFL		06 01036
000631	001010	R	1037	JAZ FNS2	NO CHANGE	06 01037
000632	000666	R				
000633	001004	R	1038	JAN FNS5	SPFL GREATER; MUST BE END	06 01038
000634	000720	R				
000635	017000	I	1039	LDA SPFL		06 01039
000636	005011	R	1040	DR0		06 01040
000637	001000	R	1041	JAZ FNS1	NOT 1ST NON-SPEC.	06 01041
000640	000640	R				
000641	010421	R	1042	LDA ONE		06 01042
000642	002000	R	1043	CALL OVER		06 01043
000643	004653	R				
000644	001000	R	1044	JMP* ASP		06 01044
000645	110622	R				
000646	017000	I	1045	FNS1 LDA SPFL		06 01045
000647	140423	R	1046	SUB K4		06 01046
000650	001010	R	1047	JAZ FNS6		06 01047
000651	000725	R				
000652	014110	R	1048	LDA T2FN	NOT EXEC. ALREADY	V 06 01048
000653	057000	I	1049	STB SPFL		06 01049
000654	140423	R	1050	SUB K4		06 01050
000655	001004	R	1051	JAN FNS3		06 01051
000656	000701	R				
000657	001010	R	1052	JAZ FNS7		06 01052
000660	000742	R				
000661	017000	I	1053	LDA ERAD	FORMAT	06 01053
000662	005211	R	1054	STA		06 01054
000663	057000	I	1055	STB SPFL		06 01055
000664	001000	R	1056	JAZ FNS8		06 01056
000665	000752	R				
000666	017000	I	1057	FNS2 LDA SPFL		06 01057
000667	001004	R	1058	JAN FNS9	FORMAT END	06 01058
000670	000763	R				
000671	117000	I	1059	DR0 STB		06 01059
000672	117000	I	1060	DR0 LIF		V 06 01060
000673	001010	R	1061	JANZ FNS0		06 01061
000674	000711	R				
000675	014074	R	1062	LDA T2FN+1		06 01062
000676	140424	R	1063	SUB SLGHT		06 01063
000677	002010	R	1064	JANZM DR0	NO PATH ERROR	06 01064
000700	000844	R				
000701	017000	I	1065	FNS3 LDA SINR		06 01065
000702	057000	I	1066	STA		06 01066
000703	001010	R	1067	JAZ FNS4	NO STMT. NMBER	06 01067
000704	000566	R				
000705	017000	I	1068	LDA LIF		V 06 01068
000706	001016	R	1069	JANZ FNS4	PROCESSING LOGICAL-IF	06 01069
000707	000566	R				
000710	002000	R	1070	JAN LAM	LOAD ASSIGN	06 01070
000711	000140	R				
000712	017000	I	1071	LDA AT		06 01071
000713	140464	R	1072	SUB THREE		06 01072
000714	001010	R	1073	JAZ FNS5		06 01073
000715	000544	R				
000716	001000	R	1074	JAN FNS6		06 01074
000717	000353	R				
000720	014054	R	1075	FNS5 LDA T2FN		06 01075
000721	005011	R	1076	PER		06 01076
000722	001010	R	1077	JAZ FNS9		06 01077
000723	000701	R				
000724	001000	R	1078	JAN T2FN	ILLEGAL STMT.	06 01078
000725	000351	R				
000726	017000	I	1079	FNS6 LDA SPFL		06 01079
000727	005011	R	1080	PER		06 01080
000730	001004	R	1081	JAZ FNS0		06 01081
000731	000701	R				
000732	010422	R	1082	LDA KUP		06 01082
000733	047000	I	1083	STA		06 01083
000734	047000	I	1084	JAZ		06 01084
000735	002000	R	1085	LDA		06 01085
000736	002000	R	1086	CALL		06 01086
000737	004700	R				
000740	001000	R	1087	JAN FNS3		06 01087
000741	000701	R				
000742		R	1088	FNS7		V 06 01088
000743	147000	I	1089	STA		V 06 01089

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000743 001004 A 1090      JAN      *+5
000744 000750 R
000745 017000 I 1091      LDA      EXAD
000746 002000 A 1092      JMPM     OSR          OUTPUT SRING RL
000747 004257 R
000750 010463 A 1093      LDA      K77
000751 057000 I 1094      STA      XRPT        X POINTER SET OFF
000752 017000 I 1095      FNS8    LDA      RL
000753 057000 I 1096      STA      EXAD
000754 010423 A 1097      LDA      K4
000755 057000 I 1098      STA      SPFL
000756 001000 A 1099      JMP      FNS3
000757 000701 R
000760 017000 I 1100      FNSH    LDA      JPFL
000761 001002 A 1101      JAP      FNS3
000762 000701 R
000763 005211 A 1102      FNS9    CPA
000764 057000 I 1103      STA      JPFL
000765 002000 A 1104      JMPM     OSR          OUTPUT STRING RL
000766 004257 R
000767 001000 A 1105      JMP      FNS3
000770 000701 R
000771 1106      T2FN    BSS      2          SPEC-LEVEL SAVE CELLS
000773 020423 A 1107      LDB     FOUR
000774 000001 A 1108      DATA   1,3,1,2,2,4,2,2,1
000775 000003 A
000776 000001 A
000777 000002 A
001000 000002 A
001001 000004 A
001002 000002 A
001003 000002 A
001004 000001 A
1109      EJECT
1110      *****
1111      *
1112      *   F O R T R A N   E N T R A N C E   ( F O R T )
1113      *
1114      *****
001005 005001 A 1116      FORT    TZA
001006 002000 A 1117      CALL    OVER        GET INITIALIZE OVERLAY
001007 004653 R
001010 002000 A 1118      CALL*   START      INITIALIZE
001011 110622 R
001012 010421 A 1119      FORT1   LDA      ONE
001013 002000 A 1120      CALL    OVER        GET SPECIFICATION OVERLAY
001014 004653 R
001015 001000 A 1121      JMP*    BGN
001016 110623 R
1122      EJECT
1123      *****
1124      *
1125      *   G E N E R A T E   S U B P R O G R A M   E N T R A N C E   ( G S E )
1126      *
1127      *   ENTRANCE: (A)=0  FUNCTION/SUBPROGRAM
1128      *               >0  D VALUE FOR ENTRY AND STATEMENT FUNCTION
1129      *
1130      *****
001017 000000 A 1132      GSE     ENTRY      (A) IS PARAMETER FLAG
001020 057000 I 1133      STA      D
001021 005001 A 1134      TZA
001022 057000 I 1135      STA      T3
001023 057000 I 1136      STA      T4
001024 002000 A 1137      JMPM     PTS        PARENTHESIS TEST
001025 005034 R
001026 002000 A 1138      GSE1    CALL    ICH
001027 001214 R
001030 140000 L 1139      SUB     =**
001031 001010 A 1140      JAZ     GSE5        SPECIAL RETURN
001032 001147 R
001033 140465 A 1141      SUB     FIVE
001034 002016 A 1142      JANZM   RCH        DELETE LEADING '/'
001035 005110 R
001036 002000 A 1143      CALL    INA
001037 001657 R
001040 017000 I 1144      GSE15   LDA      D
001041 001010 A 1145      JAZ     GSE2        FUNCTION/SUBROUTINE
001042 001055 R
001043 140465 A 1146      SUB     FIVE
001044 057000 I 1147      STA      D
001045 017000 I 1148      LDA      I
001046 057000 I 1149      STA      DV
001047 017000 I 1150      LDA      PT
001050 057000 I 1151      STA      OR
001051 017000 I 1152      LDA      AF
001052 057000 I 1153      STA      DI
001053 002000 A 1154      JMPM     S&X        STORE DD ENTRIES
001054 005216 R
001055 017000 I 1155      GSE2    LDA      RL
001056 027000 I 1156      LDB     $PCW
001057 006424 A 1157      BT      024,*+3     GO IF FIRMWARE FLOATING SET

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001060	001062	R					
001061	0051111	D	1158	JAR		EXTRA CALL \$SE WORD	06 01158
001062	120464	D	1159	ADD	THREE		06 01159
001063	127000	I	1160	ADD	T3		06 01160
001064	0020467	R	1161	LDP	SEVEN	DUMMY	06 01161
001065	0020470	R	1162	JRPM	DFT		06 01162
001066	000271	R					
001067	067000	I	1163	INR	T3		06 01163
001068	017000	I	1164	LDA	T3		06 01164
001069	110000	L	1165	SUB	R*/		06 01165
001070	0020470	R	1166	JRPM	ICH	PASS TRAILING '/'	06 01166
001071	0112114	P					
001072	017000	I	1167	LDA	T3		06 01167
001073	140000	L	1168	SUB	R*/		06 01168
001074	0010100	R	1169	JAR	GSE1		06 01169
001075	0010885	R					
001076	0020470	R	1170	JRPM	R10	RIGHT INPUT DPR.	06 01170
001077	0051116	R					
001078	0050001	D	1171	T30			06 01171
001079	0020470	R	1172	JRPM	008	OUTPUT ABSOLUTE	06 01172
001080	0037116	R					
001081	017000	I	1173	LDA	\$PCW		06 01173
001082	0064004	D	1174	BT	04,GSE3	GO IF FIRMWARE FLOATING ON	06 01174
001083	0011110	R					
001084	0080100	R	1175	LDAL	'\$C'		06 01175
001085	1517000	I					
001086	0020470	R	1176	JRPM	008	CALL NAME	06 01176
001087	0020470	R					
001088	0010885	R	1177	JAR	GSE4		06 01177
001089	0011222	R					
001090	0050100	D	1178	LDAL	\$PCW	\$SE BCS INSTRUCTION	06 01178
001091	1050000	R	1179	JRPM	008		06 01179
001092	0007116	R					
001093			1180	GSE4	000		06 01180
001094	017000	I	1181	LDA	T3	= OF PARAMETERS	06 01181
001095	0020470	R	1182	JRPM	008	OUTPUT ABSOLUTE	06 01182
001096	0037116	R					
001097	017000	I	1183	LDA	RL		06 01183
001098	127000	I	1184	ADD	T3		06 01184
001099	057000	I	1185	SLA	RL	NEL LDC. COUNTER	06 01185
001100	0050100	D	1186	JAR	008		06 01186
001101	0104000	R	1187	JMP	000		06 01187
001102	0020470	R	1188	JRPM	008	OUTPUT WORD STORE	06 01188
001103	0047000	I					
001104	017000	I	1189	LDA	T4		06 01189
001105	0010100	R	1190	JAR	GSE		06 01190
001106	1010100	R					
001107	127000	I	1191	ADD	\$PCW	-MAX NON-STANDARD-EXIT COUNT	06 01191
001108	0010100	R	1192	JAR	GSE		06 01192
001109	1010100	R					
001110	0050001	D	1193	T30			06 01193
001111	147000	I	1194	SUB	T4		06 01194
001112	057000	I	1195	SLA	T4	NEW -MAX	06 01195
001113	0010100	R	1196	JAR	GSE		06 01196
001114	1010100	R					
001115	0050001	D	1197	GSE5	000		06 01197
001116	147000	I	1198	SUB	\$PCW	SPECIAL RETURN IN FUNCTION	06 01198
001117	0010100	R	1199	JAR	\$PCW		06 01199
001118	0003350	R					
001119	047000	I	1200	INR	T4		06 01200
001120	017000	I	1201	LDA	00		06 01201
001121	0020470	R	1202	JRPM	008		06 01202
001122	0020470	R					
001123	0020470	R	1203	JRPM	004		06 01203
001124	0010100	R					
001125	0010100	R	1204	JAR	GSE15		06 01204
001126	0010100	R					
001127			1205	EXIT			06 01205
001128			1206				06 01206
001129			1207				06 01207
001130			1208				06 01208
001131			1209				06 01209
001132			1210				06 01210
001133			1211				06 01211
001134			1212				06 01212
001135			1213				06 01213
001136			1214				06 01214
001137			1215				06 01215
001138			1216				06 01216
001139			1217				06 01217
001140			1218				06 01218
001141			1219				06 01219
001142			1220	JAC	ENTRY	STORE MAX CHAR COUNT IN PC	06 01220
001143			1221	JAR	PC		06 01221
001144			1222	JAR	PC		06 01222
001145			1223	JAR	PC+1	CLEAR PACK BLOCK PC+1-PC+2-PC+3	06 01223
001146			1224	JAR	PC+2		06 01224
001147			1225	JAR	PC+3		06 01225
001148			1226	JAR	PC+4		06 01226
001149			1227	JAR	PC+5		06 01227
001150			1228	JAR	PC+6		06 01228

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001171 002000 A 1229 IAC1 CALL ICH GET CHARACTER 06 01229
001172 001214 R 1230 LDA DF 06 01230
001173 017000 I 1231 JAP IAC2 DELIMITER 06 01231
001174 001002 A 1232 LDX =PC+1 POINT X AT PACK BLOCK ADDR PC+1 06 01232
001175 001203 R 1233 CALL PCK PACK CHARACTER STRING 06 01233
001176 030000 L 1234 JANZ IAC1 MORE CHARACTERS 06 01234
001177 002000 A 1235 IAC2 LDA PC+3 (A)=LAST TWO CHARACTERS 06 01235
001200 004727 R 1236 JMP* IAC EXIT 06 01236
001201 001016 A
001202 001171 R
001203 017000 I
001204 001000 A
001205 101163 R
1237 EJECT 06 01237
1238 ***** 06 01238
1239 * 06 01239
1240 * INPUT CHARACTER ( ICH ) 06 01240
1241 * 06 01241
1242 * FUNCTION: ICH CONTROLS SOURCE CHARACTER INPUT. IT HAS SWITCHES TO 06 01242
1243 * READ OR REREAD, AND TO SELECT THE CHARACTER FETCH 06 01243
1244 * ROUTINE. IT HAS LOGIC TO SLEW THROUGH BLANKS, PACK THE 06 01244
1245 * NEW CHARACTER INTO THE ERROR BUFFER ERBF, AND CLASSIFY THE 06 01245
1246 * CHARACTER AS ALPHAMERIC OR NOT. 06 01246
1247 * 06 01247
1248 * ENTRY: SWITCHES SET AS DESIRED 06 01248
1249 * 06 01249
1250 * EXIT: A=TC=TC+1 = CHARACTER 06 01250
1251 * CHAR PACKED IN ERROR BUFFER ERBF 06 01251
1252 * DF<0 IF CHARACTER ALPHAMERIC OR '$' (MDS ALLOWS '$' IN 06 01252
1253 * SYMBOLS). 06 01253
1254 * 06 01254
1255 * SWITCHES: ICRR=ICRD READ NEXT CHARACTER 06 01255
1256 * ICRE REREAD PREVIOUS CHARACTER 06 01256
1257 * 06 01257
1258 * ICSI=ICD CALL ICD FOR NEXT CHAR FROM SOURCE BUFFER 06 01258
1259 * =ISC CALL ISC FOR NEXT CHAR FROM COMMON/EQUIVALENCE 06 01259
1260 * STRING STORED IN HIGH CORE. 06 01260
1261 * 06 01261
1262 ***** 06 01262
1263 ***** 06 01263
1264 ***** 06 01264
1265 * REREAD LOGIC * 06 01265
1266 ***** 06 01266
001206 006010 A 1267 ICRE LDAI ICRD 06 01267
001207 001217 R
001210 054005 A 1268 STA ICRR SET SWITCH TO READ 06 01268
001211 017000 I 1269 LDA TC+1 06 01269
001212 057000 I 1270 STA TC LOAD TC WITH PREVIOUS CHARACTER 06 01270
1271 ***** 06 01271
1272 * ENTRY/EXIT * 06 01272
1273 ***** 06 01273
001213 001000 A 1274 JMP 0 06 01274
001214 000000 A
001215 001000 A 1275 ICH BES 0 06 01275
001216 000000 A 1276 JMP 0 06 01276
001217 002000 A 1277 ICRR BES 0 READ/REREAD SWITCH 06 01277
1278 ***** 06 01278
1279 * READ LOGIC * 06 01279
1280 ***** 06 01280
001220 000000 A 1281 ICRD CALL 0 INPUT NEXT SOURCE CHARACTER 06 01281
001221 140000 L 1282 ICSI BES 0 FETCH SOURCE CHAR ROUTINE SWITCH 06 01282
001222 001010 A 1283 SUB =* SUBTRACT 06 01283
001223 001215 R 1284 JAZ ICRD-1 LOOP BACK FOR NEXT CHAR ON BLANK 06 01284
001224 002000 A 1285 CALL PEB PACK NEW CHAR IN ERROR BUFFER ERBF 06 01285
001225 004727 R
001226 057000 I 1286 STA TC+1 SAVE NEW CHAR IN TC+1 FOR REREAD 06 01286
1287 ***** 06 01287
1288 * CLASSIFY CHARACTER * 06 01288
1289 ***** 06 01289
001227 140000 L 1290 SUB =* SUBTRACT 06 01290
001230 001010 A 1291 JAZ ICH1-1 06 01291
001231 001247 R
001232 006140 A 1292 SUBI '9'-'9'+1 06 01292
001233 000026 A
001234 001002 A 1293 JAP ICH0 NOT DIGIT 06 01293
001235 001241 R
001236 120471 A 1294 ADD TEN 06 01294
001237 001000 A 1295 JMP ICH1-1 MAKE NEG FOR DIGIT 06 01295
001240 001247 R
001241 006140 A 1296 ICH0 SUBI 'Z'-'9' 06 01296
001242 000041 A
001243 001002 A 1297 JAP ICH1 06 01297
001244 001250 R
001245 006120 A 1298 ADDI 032 TEST FOR 'A' 06 01298
001246 000032 A
001247 005211 Q 1299 CPA 06 01299
001250 057000 I 1300 ICH1 STA DF 06 01300
001251 017000 I 1301 LDA TC LOAD A WITH CHAR 06 01301
001252 001000 A 1302 JMP* ICH EXIT 06 01302

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001253 101214 R

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1303      EJECT
1304      *****
1305      *
1306      *           I N P U T   C O L U M N ( I C O )
1307      *
1308      * FUNCTION: ICO IS THE BASIC SOURCE CHARACTER FETCH ROUTINE
1309      *
1310      * ENTRY: INBP HOLDS SOURCE BUFFER CHAR COUNT
1311      *
1312      * EXIT : IC=A=INPUT CHAR IN 6-DIG FORTRAN CODE IF NOT END OF LINE OR
1313      *        IF END OF LINE PROCESSOR READ A CONTINUATION LINE(A
1314      *        CONTINUATION LINE IS A LINE WITH COLS. 1-5 BLANK AND COL. 6
1315      *        ZERO OR BLANK)
1316      *
1317      *        IC=1A)=0377 FOR END-OF STATEMENT
1318      *
1319      *        IC=1A)=0376 WHEN COL.-6 READ (END-OF-LABEL)
1320      *
1321      *        INBP=INBP+1 (NORMALLY)
1322      *                =7  (CONTINUATION LINE)
1323      *                =0  (NEW LINE)
1324      *
1325      * SWITCH: COLSW IS AN END-OF-LINE SWITCH. IT POINTS TO AN END-OF-LINE
1326      *        PROCESSING ROUTINE. NORMALLY IT POINTS TO ICORN1, WHICH
1327      *        READS THE NEXT SOURCE LINE. THE STATEMENT SCAN ROUTINE STS,
1328      *        HOWEVER, POINTS IT ELSEWHERE WHEN PRODUCING AN INITIAL LINE
1329      *
1330      * ERRORS: ERO IS INVALID ASCII CHAR INPUT
1331      *
1332      *****

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001254 000000 A
001255 002000 A
001256 001261 R
001257 001000 A
001260 101251 R
001261 000000 A
001262 017000 I
001263 006140 A
001264 000110 A
001265 001000 A
001266 001000 R
001267 001000 A
001270 000000 A
001270 001270 R
001271 002000 A
001272 006140 R
001273 024234 A
001274 010000 L
001275 055000 A
001276 005123 A
001277 144121 A
001300 001000 A
001301 001270 A
001302 017000 I
001303 001011 A
001304 001311 A
001305 017000 I
001306 001011 A
001307 001301 R
001310 006500 A
001311 000410 A
001312 100000 A
001313 010000 A
001314 010130 A
001315 000000 A
001316 000000 A
001317 006500 A
001320 000300 A
001321 001310 A
001322 000000 A
001323 001300 A
001324 000000 A
001325 000000 R
001326 017000 I
001327 001011 A
001330 001000 A

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1334 ICO      ENTRY
1335      MAIL      ICOD      CHANGED BY DATA IN ASP
1336      INF*      ICOD
1337 ICOD      ENTRY
1338      LBN      INBP      GET SOURCE LINE CHARACTER COUNT
1339      INBP      ICOD
1340      JAP      ICOD0      CHECK FOR END OF LINE
1341 *****
1342 * SOURCE SCAN HAS REACHED END OF LINE *
1343 *****
1344      JAP      ICOD      EXIT TO END-OF-LINE PROCESSOR
1345      COLSW      ICOD      END OF LINE SWITCH(NORMALLY ICORN1)
1346 *****
1347 * LOOP TO READ THROUGH BLANK AND COMMENT LINES TO NEXT LINE *
1348 *****
1349 ICORL1      ICOD      LIST BLANKS AND COMMENTS
1350 *****
1351 * BLANK AND SPACES INPUT BUFFER SET *
1352 *****
1353 ICORN1      ICOD      ICORL1+1      SET
1354 ICORL2      ICOD      ICORL1      GET BLANK WORD
1355      ICORL2      ICOD      ICORL1      IN 1ST
1356      ICORL2      ICOD      ICORL1      IN 2ND POINTER
1357      ICORL2      ICOD      ICORL1      IN 3RD
1358      ICORL2      ICOD      ICORL1      LOOP UNTIL FINISHED
1359 *****
1360 * READ SOURCE INPUT LINE *
1361 *****
1362      ICORL1      ICOD      ICORL1
1363      ICORL1      ICOD      ICORL1      ARE SOURCE RECORDS BLOCKED ?
1364 ICOR2      ICOD      ICORL1      YES
1365      ICOR2      ICOD      ICORL1      POINT IF BLANK COUNTED
1366 ICORBP1      ICOD      ICORL1+4*0+1      ICORL1/ICORL2 ETC A(1)
1367      ICORL1      ICOD      ICORL1+ICORL1*ICORL1*ICORL1
1368      ICORL1      ICOD      ICORL1
1369      ICORL1      ICOD      ICORL1      ARE SOURCE RECORDS BLOCKED ?

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001331 006037 A 1370 ICMV LDXE ICRDPI+4 06 01370
001332 001314 R
001333 015001 A 1371 LDA 1,X YES. GET BLOCKING BUFFER ADDRESS 06 01371
001334 027000 I 1372 LDB PIBLCN 06 01372
001335 164173 A 1373 MUL ICDLS+2 40 06 01373
001336 017000 I 1374 LDA PIBLCN 06 01374
001337 005111 A 1375 IAR BUMP BLOCK COUNT 06 01375
001340 005014 A 1376 TAX 06 01376
001341 140464 A 1377 SUB THREE 06 01377
001342 001004 A 1378 JAN *+3 MOD 3 06 01378
001343 001345 R
001344 005004 A 1379 TZX 06 01379
001345 077000 I 1380 STX PIBLCN 06 01380
001346 034163 A 1381 LDX ICDLS+3 $BUF+3 06 01381
001347 014161 A 1382 LDA ICDLS+2 40 06 01382
001350 002000 A 1383 CALL MOVE MOVE RECORD FROM BLOCKING BUFFER TO $BUF 06 01383
001351 003606 R
1384 *****
1385 * TEST FOR '/' RECORD *
1386 *****
001352 017000 I 1387 ICD4 LDA $BUF+3 06 01384
001353 004350 A 1388 LSRA 8 GET 1ST CHAR 06 01385
001354 140000 L 1389 SUB = '/' 06 01386
001355 001016 A 1390 JANZ ICD5 IS IT '/' ? 06 01387
001356 001420 R
001357 030412 A 1391 ICD6 LDX V$JOB YES 06 01391
001360 024151 A 1392 LDB ICDLS+3 $BUF+3 06 01392
001361 014147 A 1393 LDA ICDLS+2 40 06 01393
001362 002000 A 1394 CALL MOVE MOVE '/' RECORD TO JCF BUFFER 06 01394
001363 003606 R
001364 017000 I 1395 LDA DTFL 06 01395
001365 005311 A 1396 DAR 06 01396
001366 117000 I 1397 ORQ T2 06 01397
001367 001016 A 1398 JANZ ABORT ABORT IF NOT 1ST RECORD OF PROGRAM UNIT 06 01398
001370 000355 R
001371 017000 I 1399 EXIT LDA BDBLFL 06 01399
001372 001016 A 1400 JANZ EXCLGD IS GO RMD ? 06 01400
001373 001403 R
1401 CLOSE BLFCB,7,0,1 YES. CLOSE/GO/WAIT/UPDATE 06 01401
001374 006505 A
001375 000404 A
001376 100000 A
001377 013407 A
001400 010072 R
001401 000000 A
001402 000000 A
001403 017000 I 1402 EXCLGD LDA BDBLFL 06 01402
001404 001016 A 1403 JANZ EXCLLD IS GO RMD ? 06 01403
001405 001415 R
1404 CLOSE BLFCB,9,0,1 YES. CLOSE/GO/WAIT/UPDATE 06 01404
001406 006505 A
001407 000404 A
001410 100000 A
001411 013411 A
001412 010104 R
001413 000000 A
001414 000000 A
1405 EXCLLD EXIT EXIT TO VORTEX 06 01405
001415 006505 A
001416 000406 A
001417 000200 R
1406 *****
1407 * BUMP ASCII LINE NUMBER ON SOURCE LINE LIST *
1408 *****
001420 034107 A 1409 ICD5 LDX ICDLS+1 $BUF 06 01408
001421 002000 A 1410 CALL MADS 06 01409
001422 003552 R
1411 *****
1412 * CHECK FOR BLANK CARD *
1413 *****
001423 024104 A 1414 LDB ICDLS+1 $BUF 06 01411
001424 005123 A 1415 ICOLP3 INCR 023 BUMP POINTER 06 01412
001425 006140 A 1416 SUBI $BUF+40 CHECK FOR END-OF-LINE (EOL) 06 01413
001426 021043 R
001427 001426 R 1417 ICOLP4 EQU *-1 06 01414
001428 001010 A 1418 JAZ ICOLP1 IF EOL, LIST LINE AND READ NEXT LINE 06 01415
001430 001271 R
001431 010000 L 1419 LDA = ' ' GET BLANK WORD 06 01416
001432 136002 A 1420 ERA 2,B CHECK BUFFER WORD 06 01417
001433 001010 A 1421 JAZ ICOLP3 CONTINUE SCAN ON BLANK 06 01418
001434 001424 R
1422 *****
1423 * CHECK FIRST CHAR FOR '*', 'C', OR 'X' *
1424 *****
001435 015003 A 1425 LDA 3,X 06 01422
001436 004350 A 1426 LSRA 0 GET FIRST SOURCE CHARACTER 06 01423
001437 130000 L 1427 ERA = '*' 06 01424
001440 001010 A 1428 JAZ ICOLP1 IF '*', LIST LINE AND READ NEXT LINE 06 01425
001441 001271 R
001442 006130 A 1429 CRAI 0151 CHECK FOR 'C' 06 01426
001443 000151 A

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001444 001010 A 1430 JAZ ICCLP1 IF 'C', LIST LINE AND READ NEXT LINE 06 01430
001445 001271 R
001446 006130 A 1431 ERAI 033 06 01431
001447 008033 A
001450 005011 A 1432 BAR CHECK FOR 'X' 06 01432
001451 001002 A 1433 JAP IC010 06 01433
001452 001462 R
1434 *****
1435 * A LINE WITH COL 1 = 'X' WAS READ *
1436 *****
001453 017000 I 1437 LDA #PCW GET PROCESSOR CONTROL WORD #PCW 06 01437
001454 006406 A 1438 BT 6,IC0RNL IGNORE IF 'X' FLAG OFF 06 01438
001455 001273 R
001456 015003 A 1439 LDA 3,X 06 01439
001457 006130 A 1440 ERAI 074000 IF 00, CLEAR 'X' TO BLANK 06 01440
001460 074000 A
001461 055003 A 1441 STA 3,X AND COMPILF LINE 06 01441
1442 *****
1443 * NEW SOURCE LINE *
1444 *****
001462 005001 A 1445 IC010 TZA INITIALIZE SOURCE BUFFER POINTER 06 01445
001463 057000 I 1446 STA INBP 06 01446
001464 015005 A 1447 LDA 5,X 06 01447
001465 150463 A 1448 RRA #0377 COL.-6 06 01448
001466 130000 L 1449 ERA = ' ' 06 01449
001467 001010 A 1450 JAZ IC030 EXIT WITH TC=077 IF COL. 6 BLANK 06 01450
001470 001521 R
001471 130425 A 1451 EPA K30 06 01451
001472 001010 A 1452 JAZ IC030 EXIT WITH TC=077 IF COL. 6 ZERO 06 01452
001473 001521 R
1453 *****
1454 * CONTINUATION CARD *
1455 *****
001474 002000 A 1456 CALL 0L0V LIST CONTINUATION CARD 06 01456
001475 006140 R
001476 010465 A 1457 LDA 05 SET SOURCE BUFFER POINTER TO COL. 7 06 01457
001477 057000 I 1458 STA INBP 06 01458
1459 *****
1460 * FETCH A SOURCE CHARACTER *
1461 *****
001500 017000 I 1462 IC020 LDA INBP GET SOURCE BUFFER POINTER 06 01462
001501 047000 I 1463 INP INBP BUMP IT 06 01463
001502 140465 A 1464 CUP FIVE 06 01464
001503 001010 A 1465 JAZ IC030+1 EXIT WITH TC=076 IF COL. 6 IS REFERENCED 06 01465
001504 001522 R
001505 006120 A 1466 ANPI 013 06 01466
001506 000013 A
001507 005002 A 1467 TZE CLEAR B 06 01467
001510 004541 A 1468 LLOP 1 CONVERT TO $BUF WORD (COUNT(HI/LO SW TO B)) 06 01468
001511 124016 A 1469 JAZ 0000+1 06 01469
001512 005014 A 1470 TAY POINT X AT SOURCE WORD 06 01470
001513 015000 A 1471 IC0LDA LDA #X GET SOURCE WORD 06 01471
001514 003020 A 1472 RST #00LS 'LORA 0' IF 0=0 (HIGH BYTE) 06 01472
001515 001527 R
001516 150463 A 1473 RND 00377 MASK OFF LOW BYTE 06 01473
001517 001000 A 1474 JMF #00 INPUT DIGIT (I D I) 06 01474
001520 001524 A
001521 005101 A 1475 IC030 INCR 1 06 01475
001522 006120 A 1476 ANPI 0376 06 01476
001523 000376 A
001524 057000 I 1477 STA TC EXIT WITH TERMINATOR IN A AND TC 06 01477
001525 001003 A 1478 JMF* 100 06 01478
001526 101250 A
001527 004330 A 1479 IC0LS LIRA 0 SHIFT INSTRUCTION 06 01479
001530 020773 A 1480 LDA #BUF 06 01480
001531 000050 A 1481 ROTA 10 06 01481
001532 020773 A 1482 LIRA #BUF+3 06 01482
1483 *****
1484 *****
1485 *****
1486 *****
1487 *****
1488 * FUNCTION: TO INPUT A CHARACTER AND TEST FOR NUMERIC *
1489 * ENTRY: NO SPECIAL CONDITIONS *
1490 * EXIT: TC=CHAR *
1491 * ALSO IF CHAR NUMERIC *
1492 *****
001533 000000 A 1493 IBI ENTRY 06 01493
001534 002000 A 1494 CALL ICH GET NEXT CHAR 06 01494
001535 001214 A 1495 SUBI 0278 '*': 06 01495
001536 006140 A 1496 JAP* IBI EXIT, NOT DIGIT 06 01496
001537 000272 A
001540 001002 A 1500 JAP* IBI EXIT, NOT DIGIT 06 01500
001541 101533 R
001542 120471 A 1501 ANI 1EN 06 01501
001543 005211 A 1502 LDA MAKE (A) RES. FOR DIGIT 06 01502
001544 001000 A 1503 JMF* IBI EXIT 06 01503
001545 101533 R

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1504      EJECT
001546 000000 A 1505 *      IHW      INPUT HOLLERITH WORD      06 01504
001547 002000 A 1507 IHW      ENTR
001550 001561 R 1508      JMPM      IHW1      GET CHAR      V 06 01505
001551 004250 A 1509      LRLA      8
001552 054003 A 1510      STA      *+4      SAVE CHAR      V 06 01510
001553 002000 A 1511      JMPM      IHW1      GET CHAR      V 06 01511
001554 001561 R 1512      ADDI      0-0      PACK CHAR(S)    V 06 01512
001556 000000 A 1513      JMP*      IHW      RETURN      V 06 01513
001560 101546 R 1514 IHW1     ENTR
001562 027000 I 1515      LDB      HCC
001563 010000 L 1516      LDA      =*
001564 001020 A 1517      JBZ*     IHW1      EXIT WITH FORCED BLANK CHARACTER 06 01516
001565 101561 R 1518      DBR
001566 005322 A 1519      STB      HCC      06 01518
001570 002000 A 1520      CALL     ICD      06 01519
001571 001254 R 1521      CALL     PEB      06 01520
001572 002000 A 1521      CALL     PEB      06 01521
001573 004770 R 1522      SUB      BM377
001574 140463 A 1523      JAZ      TER1      PREMATURE END OF STATEMENT 06 01522
001575 001010 A 1523      JAZ      TER1      06 01523
001576 000334 R 1524      LDA      HCC
001577 017000 I 1525      JAP      IHW2      H - FIELD      06 01524
001600 001002 A 1525      JAP      IHW2      06 01525
001601 001622 R 1526      LDA      TC
001602 017000 I 1527      SUB      =0247      * - FIELD      06 01526
001603 140000 L 1527      SUB      =0247      06 01527
001604 001016 A 1528      JANZ     IHW2      NOT '          06 01528
001605 001622 R 1529      CALL     EXA      06 01529
001606 002000 A 1529      CALL     EXA      06 01529
001607 000500 R 1530      LDA      TC
001610 017000 I 1531      SUB      =0247
001611 140000 L 1532      JAZ      IHW2-2    ** GIVES SINGLE DATA QUOTE 06 01530
001612 001010 A 1532      JAZ      IHW2-2    06 01531
001613 001620 R 1533      TZA
001614 005001 A 1534      STA      HCC      TERMINATING ' PROCESSED 06 01533
001615 057000 I 1534      STA      HCC      06 01534
001616 001000 A 1535      JMP      IHW1+1    06 01535
001617 001562 R 1536      CALL     ICH      06 01536
001620 002000 A 1536      CALL     ICH      06 01536
001621 001214 R 1537 IHW2     LDA      TC
001622 017000 I 1538      JMP*     IHW1      EXIT WITH NEXT CHARACTER 06 01537
001623 001000 A 1538      JMP*     IHW1      06 01538
001624 101561 R 1539      EJECT
001625 000000 A 1540 *      IIIV     INPUT INTEGER VALUE      06 01539
001626 002000 A 1542 IIIV     ENTR
001627 001700 R 1543      JMPM     INN      INPUT ITEM      06 01540
001630 027000 I 1544      LDB      ID
001631 001020 A 1545      JRZ*    IIIV      EXIT WITH (B)=0 IF NO OPERAND 06 01544
001632 101623 R 1546      LRLA     1
001633 004241 A 1547      AED      NT
001634 127000 I 1548      SUB      FIVE
001635 140465 A 1549      JAZ*    IIIV      RETURN WITH BR=VALUE IF INTEGER CONST. 06 01548
001636 001010 A 1549      JAZ*    IIIV      06 01549
001637 101623 R 1550      JMP      TER7      OTHERWISE, ERROR. 06 01550
001640 001000 A 1550      JMP      TER7      06 01550
001641 000346 R 1551      EJECT
1552 *****
1553 *
1554 *      I N I T I A L I Z E   L I S T   &   B U F F E R   ( I L B )
1555 *
1556 * FUNCTION: TO INITIALIZE THE SPECIAL LIST BUFFER AND PRINTER
1557 *
1558 *****
001642 000000 A 1560 ILB     ENTRY
001643 010000 L 1561      LDA      =*
001644 006020 A 1562      LDBI     20
001645 000024 A 1563 ILB1    STAE      SLOT-1,B      BLANK 'SLOT'      06 01563
001646 006056 A 1564      DBR
001647 010001 R 1565      JBZ     ILB1
001650 005322 A 1566      LDA      FIVE
001651 001026 A 1567      STA     CLDP      POINT TO CHARACTER-6 06 01564
001652 001646 R 1568      JMP*    ILB      06 01565
001653 010465 A 1569      EJECT
001654 057000 I 1570 *****
001655 001000 A 1571 *
001656 101642 R 1572 *      I N P U T   N A M E   ( I N A )
001657 *
1573 *
1574 * FUNCTION: TO INPUT A NAME AND FIND/STORE IT IN THE ASSIGNMENT TABLE * 06 01572
1574 * 06 01573
1574 * 06 01574

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1575 *
1576 * ENTRY: NO SPECIAL CONDITIONS
1577 *
1578 * EXIT : R=IN
1579 *
1580 * ERRORS: TERRO IF OPERAND INPUT IS NOT A NAME
1581 *
1582 *****
001657 000000 A 1584 INA ENTRY
001658 002000 A 1585 CALL INO INPUT OPERAND
001659 002778 R
001660 017000 I 1586 LDA NY
001661 001010 A 1587 JAZ* INA EXIT IF OPERAND IS A NAME
001662 101657 R
001663 001000 O 1588 JNP TERRO OPERAND IS NOT A NAME
001664 000331 R
1589 SJECT
1590 *****
1591 *
1592 * INPUT ITEM (INI)
1593 *
1594 * FUNCTION: TO INPUT A SYNTACTICAL ITEM AND CALL ASI TO FIND/STORE IT
1595 * IN THE ASSIGNMENT TABLE IF IT IS AN OPERAND.
1596 *
1597 * ENTRY: NO SPECIAL CONDITIONS
1598 *
1599 * EXIT : R=IN
1600 * ASI CALLED TO FIND/STORE OPERAND ITEMS
1601 *
1602 *****
001667 000000 A 1604 INI ENTRY
001668 002000 A 1605 CALL TNH INPUT SYNTACTICAL ITEM
001669 001700 R
001670 001010 A 1606 JAZ* INI EXIT IF ITEM IS NOT AN OPERAND
001671 101667 R
001672 002000 A 1607 CALL ASI FIND/STORE OPERAND IN ASSIGNMENT TABLE
001673 000000 R
001674 001000 A 1608 JMP* INI EXIT
001675 101667 R
1609 FWC
1610 *****
1611 *
1612 * INPUT / DO NOT ASSIGN (INH)
1613 *
1614 * FUNCTION: TO INPUT AN OPERAND AND ITS FOLLOWING OPERATOR. INH
1615 * INPUTS AND DECODES SYMBOLS; PUT MAKES NO ENTRY IN SYMBOL
1616 * TABLES.
1617 *
1618 * ENTRY: SYF=1 IF COMPLEX CONSTANT OKKED BY EN" AFTER "I" INPUTS
1619 *
1620 * EXIT : SYF=0
1621 * R=IN=OPERAND MODECO IF UNARY OP
1622 * IC=OPERATOR
1623 *
1624 * NAME: PACKED LEFT NORMALIZED IN ID,ID+1,IC+2
1625 * IF SET BY 1ST CHARACTER OF NAME AND MODE VALUE
1626 *
1627 * CONSTANT: IU=NT=1
1628 *
1629 * INTEGER: VALUE IN ID
1630 * MSB: FL=4
1631 *
1632 * LOGICAL: VALUE IN ID (0=.FALSE., -1=.TRUE)
1633 * MSB: CL=4
1634 *
1635 * REAL: VALUE IN ID, ID+1
1636 * MSB: FL=5
1637 *
1638 * DOUBLE PRECISION: VALUE IN ID, ID+1, ID+2, ID+3
1639 * MSB: CL=7
1640 *
1641 * COMPLEX: REAL PART IN ID, ID+1
1642 * IMAGINARY PART IN ID+2, ID+3
1643 * MSB: FL=7
1644 *
1645 * DOUBLE PRECISION INTEGER: VALUE IN ID, ID+1
1646 * MSB: FL=6
1647 *
1648 * UNARY OP:
1649 * -N IS INPUT AND CONVERTED AS A SINGLE ITEM IF N
1650 * IS A NON-COMPLEX CONSTANT.
1651 * NH ID=I"=0
1652 * ID=1+N
1653 * IN SAME AS NH
1654 *
1655 * ERRORS: ERROR SP15 IF CONSTANT RANGE ERROR
1656 *
1657 *****
001700 000000 A 1659 JNP EN"
001701 005000 A 1660 I"
001702 054678 A 1661 I" EN" FLAG

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1662 *****
1663 * LOOP ENTRY TO INPUT IMAGINARY PART OF COMPLEX CONSTANT *
1664 *****
1665 *****
1666 * CLEAR FLAGS AND VARIABLES *
1667 *****
1668 *****
001703 005001 A 1669 INNL1 TZA
001704 054677 A 1670 STA INNSF CLEAR MANTISSA SIGN FLAG
001705 054672 A 1671 STA INNESF CLEAR EXPONENT SIGN FLAG
001706 057000 I 1672 STA IM CLEAR PARAMETER BLOCK
001707 057000 I 1673 STA NT
001710 057000 I 1674 STA IU
001711 057000 I 1675 STA ID
001712 057000 I 1676 STA ID+1
001713 057000 I 1677 STA ID+2
001714 057000 I 1678 STA ID+3
001715 054734 A 1679 STA INMPF CLEAR '.' FLAG
001716 054732 A 1680 STA INNDEX CLEAR IMPLICIT DECIMAL EXPONENT
001717 054654 A 1681 STA INNDE CLEAR EXPLICIT DECIMAL EXPONENT FIELD
001720 054654 A 1682 STA INNDE+1
001721 054654 A 1683 STA INNDE+2
001722 054654 A 1684 STA INNDE+3
001723 006010 A 1685 LDAI 0274
001724 000274 A
001725 057000 I 1686 STA INNBE LOAD BINARY EXPONENT WITH MANTISSA LENGTH
1687 *****
1688 * LOOP ENTRY TO INPUT/TEST LEADING CHAR OF ITEM *
1689 *****
001726 002000 A 1690 INNL2 CALL IDI INPUT/TEST CHAR
001727 001533 R
001730 001004 A 1691 JAN INN16 NUMERIC ?
001731 002073 R
001732 017000 I 1692 LDA DF NO
001733 001004 A 1693 JAN INN10 TEST FOR ALPHAMERIC(OR '$')
001734 002035 R
1694 *****
1695 * LEADING CHAR NOT ALPHAMERIC *
1696 *****
001735 017000 I 1697 LDA TC
001736 140000 L 1698 SUB = '.'
001737 001016 A 1699 JANZ INN4 TEST FOR '.'
001740 002004 R
1700 *****
1701 * LEADING CHAR IS '.' *
1702 *****
001741 002000 A 1703 CALL EXA EXAMINE NEXT CHAR
001742 000500 R
001743 020000 L 1704 LDB = '.'
001744 067000 I 1705 STB TC RESTORE '.' AS TERMINATOR
001745 001004 A 1706 JAN INN20 TEST IF NUMERIC FOLLOWS '.'
001746 002195 R
1707 *****
1708 * PROCESS .TRUE./FALSE. *
1709 *****
001747 002000 A 1710 CALL END INPUT ALPHAMERIC STRING FOLLOWING '.'
001750 000521 R
001751 017000 I 1711 LDA TC
001752 006140 A 1712 SUBI 'SE'
001753 151705 A
001754 001010 A 1713 JAZ INN2 LOW WORD OF DF = 'SE.' ?
001755 001765 R
001756 140432 A 1714 SUB BSS
001757 001016 A 1715 JANZ INNX 'UE.' ?
001760 002562 R
001761 005301 A 1716 DECR 1 YES
001762 057000 I 1717 STA ID+3 SET .TRUE. (-1)
001763 006010 A 1718 LDAI 0168440
001764 168440 A
001765 127000 I 1719 INN2 ADD PC+1 TEST HIGH WORD
001766 006140 A 1720 SUBI 061222
001767 061222 A
001770 127000 I 1721 ADD PC+2
001771 001016 A 1722 JANZ INNX EXIT IF NOT .TRUE. OR .FALSE.
001772 002562 R
001773 002000 A 1723 CALL ICH SCAN BEYOND .TRUE./FALSE.
001774 001214 R
001775 002000 A 1724 CALL END INPUT FOLLOWING OPERATOR
001776 000521 R
001777 017000 I 1725 LDA DF TERMINATOR SHOULD BE NON-ALPHAMERIC
002000 001002 A 1726 JAP INN20 DEFINE .TRUE./FALSE. AS INTEGER CONSTANT
002001 002105 R
002002 001000 A 1727 JMP INNX EXIT ON ALPHAMERIC TERMINATOR
002003 002562 R
1728 *****
1729 * LEADING CHAR NOT ALPHAMERIC OF '.' *
1730 *****
002004 014577 A 1731 INN4 LDA INNSF
002005 001010 A 1732 JAZ INN6 HAS A SIGN BEEN PREVIOUSLY INPUT ?
002006 002014 R
002007 057000 I 1733 STA TC SET TERMINATOR TO PREVIOUS SIGN
002010 002000 A 1734 CALL PCH BACK UP SCAN

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Line	Address	Op	Op1	Op2	Text	Page	Line
002011	005110	P					
002012	001000	S	1735	JMP	INNX		AND EXIT
002013	002560	R					06 01735
	1736				*****		06 01736
	1737				* PROCESS SIGN *		06 01737
002014	017000	I	1738	INNS	LDX TO		06 01738
002015	054560	S	1739	SIX	INNSF		06 01739
002016	140000	L	1740	SUB	'+'		06 01740
002017	001010	A	1741	JAZ	INNL2		06 01741
002021	140420	A	1742	SUB	TWO		06 01742
002022	001010	A	1743	JAZ	INNL2		06 01743
002023	001720	R					
002024	100460	A	1744	ADD	SIX		06 01744
002025	001010	A	1745	JANZ	INNX		06 01745
002026	002560	R					
002027	005310	A	1746	DDP			06 01746
002030	057000	I	1747	STG	WCC		06 01747
002031	010420	A	1748	LDX	FOUR		06 01748
002032	057000	I	1749	STG	SL		06 01749
002033	001000	A	1750	JAZ	INNX		06 01750
002034	002560	R					
	1751				*****		06 01751
	1752				* LEADING CHAR -ALPHAMERIC *		06 01752
	1753				*****		06 01753
002035	014540	A	1754	INNI0	LDX INNSF		06 01754
002036	140000	L	1755	SUB	'+'		06 01755
002037	001010	A	1756	JAZ	INNI4		06 01756
002040	002000	R					06 01757
	1757				*****		06 01757
	1758				* ASSIGN IMPLICIT MODE TO NAME *		06 01758
	1759				*****		06 01759
002041	017000	I	1760	LDX	TO		06 01760
002042	005010	A	1761	JAZ			06 01761
002043	140000	L	1762	SUB	'+'		06 01762
002044	003010	A	1763	JAZ	INNI6-1		06 01763
002045	002070	R					
002046	006070	A	1764	LDX	0070-0001,B		06 01764
002047	010000	R					
002050	067000	I	1765	STG	W		06 01765
	1766				*****		06 01766
	1767				* INPUT PACK NAME IN ID FIELD *		06 01767
	1768				*****		06 01768
002051	017000	I	1769	LDX	TO		06 01769
002052	057000	I	1770	SIX	1-2		06 01770
002053	010460	A	1771	LDX	FIVE		06 01771
002054	057000	I	1772	SIX	TO		06 01772
002055	002000	A	1773	INNL3	CALL		06 01773
002056	001710	R					
002057	017000	I	1774	LDX	TO		06 01774
002060	001010	A	1775	JAZ	INNI4-2		06 01775
002061	002560	R					
002062	017000	I	1776	LDX	TO		06 01776
002063	001000	A	1777	JAZ	INNI4-2		06 01777
002064	002560	R					
002065	000000	I	1778	LDX	TO		06 01778
002066	002000	A	1779	CALL	TO		06 01779
002067	004700	R					
002070	001000	A	1780	JMP	INNL3		06 01780
002071	002000	R					
002072	000000	L	1781	LDX	TO		06 01781
	1782				*****		06 01782
	1783				* INPUT NUMBER *		06 01783
	1784				*****		06 01784
002073	000000	L	1785	INNI6	LDX TO		06 01785
002074	002000	A	1786	CALL	INNOB		06 01786
002075	002600	R					06 01787
002076	017000	I	1787	LDX	TO		06 01787
002077	001010	A	1788	JAZ	INNI2		06 01788
002100	002100	R					
002101	017000	I	1789	LDX	TO		06 01789
002102	054560	A	1790	STG	INNT		06 01790
002103	001000	A	1791	JMP	INNI2		06 01791
002104	002000	R					
	1792				*****		06 01792
	1793				* ASSIGN MODE TO NUMBER *		06 01793
	1794				*****		06 01794
002105	005100	A	1795	INNI20	LDX		06 01795
002106	057000	I	1796	SIX	TO		06 01796
002107	057000	I	1797	STG	NT		06 01797
002110	010460	A	1798	LDX	FORCE		06 01798
002111	057000	I	1799	SIX	TO		06 01799
002112	010460	A	1800	LDX	FORCE		06 01800
002113	057000	I	1801	SIX	TO		06 01801
002114	017000	I	1802	LDX	TO		06 01802
002115	005000	A	1803	JAZ	TO		06 01803
002116	140000	L	1804	SUB	'+'		06 01804
002117	001010	A	1805	JAZ	INNI30		06 01805
002120	002010	R					
002121	006140	A	1806	SUBT	000		06 01806
002122	000000	A					

PD

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002123 001016 A 1807      JANZ      INN21
002124 002132 R
002125 017000 I 1808      LDA      ID+3      *H*
002126 057000 I 1809      STA      HCC      SET HOLLERITH COUNT
002127 005001 A 1810      TZA
002130 001000 A 1811      JMP      INN24     FORCE IM=0
002131 002152 R
002132 140425 A 1812  INN21  SUB      K20
002133 001010 A 1813      JAZ      INN24     *X* ? (IM=0 FOR X)
002134 002152 R
002135 017000 I 1814      LDA      DF      NO
002136 001004 A 1815      JAN      INN34     TEST IF ALPHAMERIC
002137 002227 R
1816 *****
1817 * DEFINE INTEGER CONSTANT *
1818 *****
002140 020423 A 1819  INN22  LDB      FOUR
002141 067000 I 1820      STB      EL
002142 020422 A 1821      LDB      TWO
002143 017000 I 1822      LDA      ID+2
002144 001010 A 1823      JAZ      INN24
002145 002152 R
002146 020466 A 1824      LDB      SIX      FORCE DOUBLE PRECISION INTEGER
002147 005211 A 1825      CPA
002150 005111 A 1826      IAR      MAKE -(ID+1)
002151 047000 I 1827      INR      EL
002152 067000 I 1828  INN24  STB      IM
002153 127000 I 1829      ADD      ID+2
002154 117000 I 1830      ORA      ID
002155 117000 I 1831      ORA      ID+1
002156 027000 I 1832      LDB      CFPTSW
002157 001010 A 1833      JAZ      *+4
002160 002163 R
002161 002020 A 1834      JBZM     ER15     INTEGER TO LARGE
002162 000335 R
002163 014420 A 1835      LDA      INNSF
002164 027000 I 1836      LDB      ID+3
002165 037000 I 1837      LDX      ID+2
002166 006442 A 1838      BT      042, INN25 SIGN IS ABSENT OR '+'
002167 002176 R
002170 005244 A 1839      CPX
002171 005222 A 1840      CPB
002172 005122 A 1841      IBR      MAKE TWO'S COMPLIMENT
002173 006437 A 1842      BT      037, INN25
002174 002176 R
002175 005144 A 1843      IXR
002176 067000 I 1844  INN25  STB      ID
002177 017000 I 1845      LDA      EL
002200 140423 A 1846      SUB      FOUR
002201 001010 A 1847      JAZ      INNX*    NORMAL INTEGER/LOGICAL
002202 002562 R
002203 077000 I 1848      STX      ID      DP INTEGER
002204 005021 A 1849      TBA
002205 150460 A 1850      ANA      BR15     CLEAR SIGN-BIT OF SECOND WORD
002206 057000 I 1851      STA      ID+1
002207 001000 A 1852      JMP      INNX     EXIT
002210 002562 R
1853 *****
1854 * PROCESS '.' AFTER INTEGER *
1855 *****
002211 017000 I 1856  INN30  LDA      TC
002212 054372 A 1857      STA      INNT     SAVE '.'
002213 044436 A 1858      INR      INNPF    SET '.' FLAG
002214 002000 A 1859      CALL     IDI      INPUT/TEST NEXT CHAR
002215 001533 R
002216 001000 A 1860      JAN      INN16     NUMERIC ?
002217 002073 R
002220 014364 A 1861      LDA      INNT     NO
002221 004250 A 1862      LRLA     8
002222 117000 I 1863      ORA      TC      PACK LAST 2 CHARS IN INNT
002223 054361 A 1864      STA      INNT
002224 017000 I 1865  INN32  LDA      DF
002225 001002 A 1866      JAP      INN60     IS TERMINATOR ALPHA(OR '$') ?
002226 002315 R
002227 017000 I 1867  INN34  LDA      TC      YES
002230 006140 A 1868      SUBI     'E'
002231 000305 A 1869      JAZ      INN42     'E' ?
002232 001010 A 1870      JAZ
002233 002252 R
002234 005111 A 1871      IAR      NO
002235 001010 A 1871      JAZ      INN40     'D' ?
002236 002247 R
002237 002000 A 1872      CALL     RCH      NO. BACK UP SCAN
002240 005110 R
002241 014343 A 1873      LDA      INNT
002242 004350 A 1874      LSR     8
002243 150463 A 1875      ANA      BM377
002244 057000 I 1876      STA      TC      RECOVER PREVIOUS CHAR
002245 001000 A 1877      JMP      INN22
002246 002140 R
1878 *****

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1879 * PROCESS *.E* OR *.D* *
1880 *****
002247 047000 I 1881 INN40 INK IM SET IM=4 TO FLAG DOUBLE PRECISION
002250 010467 A 1882 LDA SEVEN
002251 057000 I 1883 STA EL
002252 002000 A 1884 INN42 CALL IDI INPUT/TEST NEXT CHAR
002253 001533 R
002254 001004 A 1885 JAN INN54 GO TO PROCESS EXPONENT IF NUMERIC
002255 002307 R
002256 017000 I 1886 LDA TC
002257 140000 L 1887 SUB ='+*
002260 001010 A 1888 JAZ INN52 '+* ?
002261 002303 R
002262 140422 A 1889 SUB TWO
002263 001010 A 1890 JAZ INN50 TEST *-
002264 002302 R

1891 *****
1892 * PROCESS LIKE RELATIONAL OP(*.EQ.*) *
1893 *****
002265 014317 A 1894 LDA INNT SET *.E*(OR *.D*)
002266 004210 A 1895 ASLA 0
002267 117000 I 1896 ORA TC
002270 057000 I 1897 STA PC+3 SAVE TERMINATOR
002271 002000 A 1898 CALL ICH GET *. (HOPEFULLY)
002272 001214 R
002273 010000 L 1899 LDA =*
002274 057000 I 1900 STA PC+1
002275 057000 I 1901 STA PC+2 SET UP PC AND B LINE IAC HAD INPUT *.EQ.*
002276 027000 I 1902 LDB PC+3
002277 067000 I 1903 STB TC
002300 001000 A 1904 JMP INN22

1905 *****
1906 * PROCESS EXPONENT *
1907 *****
002302 044275 A 1908 INN50 INR INNE5F SET EXPONENT SIGN FLAG
002303 002000 A 1909 INN52 CALL IDI INPUT/TEST NEXT CHAR
002304 001533 R
002305 001002 A 1910 JAP TER22 NON NUMERIC EXPONENT
002306 000327 R
002307 005001 A 1911 INN54 TZA CLEAR *. FLAG
002310 054341 A 1912 STA INNE5F
002311 006030 A 1913 LDXI INNE5E
002312 002574 A
002313 002000 A 1914 CALL INADB INPUT/CONVERT DECIMAL EXPONENT
002314 002606 R

1915 *****
1916 * CONVERT FROM BINARY INTEGER/DECIMAL EXP TO BINARY FLOATING POINT *
1917 *****
002315 017000 I 1918 INN60 LDA ID
002316 117000 I 1919 JCA ID+1
002317 117000 I 1920 ORA ID+2
002320 117000 I 1921 ORA ID+3
002321 001010 A 1922 JAZ INR70 EXIT IF MANTISSA = 0
002322 002422 R
002323 024325 A
002324 004110 A 1923 LDB ININDEX GET IMPLICIT DECIMAL EXPONENT
002325 001020 A 1924 ASRB 8
002326 002320 R 1925 ORA =+3
002327 005022 A
002328 014246 A 1926 ORB GET HIGH BYTE
002329 004310 A 1927 LDA ININDEX+3 GET EXPLICIT DECIMAL EXPONENT
002330 001002 A 1928 ORA 8
002331 001002 A 1929 JOP =+3
002332 003033 A
002333 003033 A
002334 005031 A 1930 ORA
002335 114235 A 1931 STAGE 031
002336 114235 A 1932 ORA ININDEX
002337 114235 A 1933 ORA ININDEX+1
002340 001020 A 1934 ORA ININDEX+2
002341 001010 A 1935 LANC INR70 ERROR/EXPONENT OVERFLOW
002342 002421 R
002343 014230 A
002344 034230 A 1936 LDA ININDEX+3
002345 001040 A 1937 LDX INNE5F
002346 002351 A 1938 LXC =+3 IS EXPONENT SIGN *- ?
002347 003011 A
002348 003011 A
002349 003011 A
002350 003011 A
002351 124277 A 1940 ORA ININDEX YES
002352 034270 A 1941 STB ININDEX NEGATE
002353 003011 A 1942 LDB ININDEX GET TOTAL DECIMAL EXPONENT
002354 003011 A
002355 002713 R 1943 *****
002356 014272 A 1944 * LOOP TO REDUCE DECIMAL EXPONENT TO ZERO *
002357 001010 A 1945 *****
002358 002422 A 1946 INML4 JOP =10
002359 002422 A 1947 CALL INNE5M NORMALIZE FR FIELD
002360 001010 A 1948 LDA ININDEX
002361 001004 A 1949 JAZ INR70 EXIT IF DECIMAL EXPONENT = 0
002362 002413 R
1951 *****

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1952 * DECIMAL EXPONENT + MULTIPLY BY 10 *
1953 *****
002363 014265 A 1954 LDA ININDEX
002364 005311 A 1955 DAR DROP DECIMAL EXPONENT
002365 054263 A 1956 STA ININDEX
002366 017000 I 1957 LDA ID+2
002367 027000 I 1958 LDB ID+3 SHIFT ID RIGHT 4
002370 004504 A 1959 LASR 4
002371 067000 I 1960 STB ID+3 WORD 3
002372 017000 I 1961 LDA ID+1
002373 027000 I 1962 LDB ID+2
002374 004504 A 1963 LASR 4
002375 067000 I 1964 STB ID+2 WORD 2
002376 017000 I 1965 LDA ID
002377 027000 I 1966 LDB ID+1
002400 004504 A 1967 LASR 4
002401 067000 I 1968 STB ID+1 WORD 1
002402 057000 I 1969 STA ID WORD 0
002403 014371 A 1970 LDA INNBE
002404 120423 A 1971 ADD FOUR BUMP BINARY EXPONENT BY 4
002405 054367 A 1972 STA INNBE
002406 030000 L 1973 LDX =ID
002407 002000 A 1974 CALL INNM10 MULTIPLY ID BY 10
002410 002653 R
002411 001000 A 1975 JMP INNL4 CONTINUE LOOP
002412 002353 R

1976 *****
1977 * DECIMAL EXPONENT - DIVIDE BY 10 *
1978 *****
002413 044235 A 1979 INN62 INR ININDEX BUMP DECIMAL EXPONENT
002414 030000 L 1980 LDX =ID
002415 002000 A 1981 CALL INND10 DIVIDE ID BY 10
002416 002673 R
002417 001000 A 1982 JMP INNL4 CONTINUE LOOP
002420 002353 R

1983 *****
1984 * EXPONENT OVER/UNDER/FLOW *
1985 *****
002421 002000 A 1986 INNEO CALL ER23 EXPONENT OVER/UNDER/FLOW
002422 000325 R
002423 010430 A 1987 LDA BS7
002424 054350 A 1988 STA INNBE SET BINARY EXPONENT TO 0
1989 *****
1990 * FORMAT REAL OR DP CONSTANT *
1991 *****
002425 017000 I 1992 INN70 LDA IM
002426 140464 A 1993 SUB THREE
002427 027000 I 1994 LDB ID
002430 001010 A 1995 JAZ INN72 TEST REAL OR DP
002431 002464 R

1996 *****
1997 * FORMAT DP CONSTANT *
1998 *****
002432 001020 A 1999 JBZ INNX EXIT IF MANTISSA = 0
002433 002562 R
002434 017000 I 2000 LDA ID+3
002435 004241 A 2001 LRLA 1
002436 057000 I 2002 STA ID+3
002437 030000 L 2003 LDX =ID
002440 002000 A 2004 CALL INNCA PROPAGATE OVERFLOWS
002441 002742 R
002442 014332 A 2005 LDA INNBE
002443 004310 A 2006 ASRA 8
002444 001016 A 2007 JANZ INNEO ERROR/EXPONENT OVER/UNDER/FLOW/
002445 002421 R
002446 017000 I 2008 LDA ID+2
002447 057000 I 2009 STA ID+3 TAKE HIGH-ORDER 3 WORDS
002450 017000 I 2010 LDA ID+1
002451 057000 I 2011 STA ID+2
002452 037000 I 2012 LDX ID
002453 014130 A 2013 LDA INNSF
002454 006442 A 2014 BT 042,#+3 SIGN IS ABSENT OR '+'
002455 002457 R
002456 005244 A 2015 CPX
002457 077000 I 2016 STX ID+1
002460 014314 A 2017 LDA INNBE
002461 057000 I 2018 STA ID STORE EXPONENT
002462 001000 A 2019 JMP INNX EXIT
002463 002562 R

2020 *****
2021 * FORMAT REAL CONSTANT *
2022 *****
002464 001020 A 2023 INN72 JBZ INN75 EXIT IF MANTISSA = 0
002465 002517 R
002466 017000 I 2024 LDA ID+1
002467 120430 A 2025 ADD 37
002470 057000 I 2026 STA ID+1
002471 030000 L 2027 LDX =ID
002472 002000 A 2028 CALL INNCA PROPAGATE OVERFLOWS
002473 002742 R
002474 014300 A 2029 LDA INNBE

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002475	004010	A	2030	ASRA	8			06	02030
002476	001016	A	2031	JANZ	INMED	ERROR/EXPONENT OVER/UNDER/FLOW/		06	02031
002477	002421	R							
002500	014274	A	2032	LDA	INMBE			06	02032
002501	027000	I	2033	LDB	ID			06	02033
002502	004407	A	2034	LASL	8BIT-9	FORMAT HIGH-ORDER WORD		06	02034
002503	057000	I	2035	STA	ID			06	02035
002504	014077	A	2036	LDA	INNSF			06	02036
002505	006442	A	2037	BT	042:INN73	SIGN IS ABSENT OR '+'		06	02037
002506	002512	R							
002507	017000	I	2038	LDA	ID			06	02038
002510	005211	A	2039	CPA				06	02039
002511	057000	I	2040	STA	ID			06	02040
002512	005001	A	2041	INN73	TZA			06	02041
002513	004410	A	2042	LASL	8			06	02042
002514	027000	I	2043	LDB	ID+1			06	02043
002515	004407	A	2044	LASL	8BIT-9	FORMAT LOW-ORDER WORD		06	02044
002516	057000	I	2045	STA	ID+1			06	02045
002517	014061	A	2046	INN75	LDA	INNIF		06	02046
002520	001010	A	2047	JAZ	INN77	IS IMAGINARY FLAG SET ?		06	02047
002521	002542	R							
002522	017000	I	2048	LDA	ID+1	YES		06	02048
002523	057000	I	2049	STA	ID+3	MOVE IMAGINARY PART TO WORDS 2,3		06	02049
002524	017000	I	2050	LDA	ID			06	02050
002525	057000	I	2051	STA	ID+2			06	02051
002526	014053	A	2052	LDA	INNRP			06	02052
002527	057000	I	2053	STA	ID	MOVE REAL PART TO WORDS 0,1		06	02053
002530	014052	A	2054	LDA	INNRP+1			06	02054
002531	057000	I	2055	STA	ID+1			06	02055
002532	010465	A	2056	LDA	FIVE			06	02056
002533	057000	I	2057	STA	IM	IM=5 FOR COMPLEX		06	02057
002534	010467	A	2058	LDA	SEVEN			06	02058
002535	057000	I	2059	STA	EL	EL = 4		06	02059
002536	002000	A	2060	CALL	RIG	SCAN THRU '>'		06	02060
002537	005116	R							
002540	001000	A	2061	JMP	INNY	EXIT		06	02061
002541	002565	R							
002542	017000	I	2062	INN77	LDA	SKF		06	02062
002543	001010	A	2063	JAZ	INN7	EXIT IF COMPLEX FLAG RESET		06	02063
002544	002562	R							
002545	017000	I	2064	LDA	TC			06	02064
002546	140000	L	2065	TMB	'*'			06	02065
002547	001016	A	2066	JANZ	INN7	EXIT IF TERMINATOR NOT '*'		06	02066
002550	002562	R							
002551	044027	A	2067	INR	INNIF	SET IMAGINARY FLAG		06	02067
002552	017000	I	2068	LDA	ID			06	02068
002553	054026	A	2069	STA	INNRP	SAVE REAL PART		06	02069
002554	017000	I	2070	LDA	ID+1			06	02070
002555	054025	A	2071	STA	INNRP+1			06	02071
002556	001000	A	2072	JMP	INN77	LOOP BACK FOR IMAGINARY PART		06	02072
002557	001700	R							
			2073	*****				06	02073
			2074	* EXIT *				06	02074
			2075	*****				06	02075
002560	002000	R	2076	CALL	MRM			06	02076
002561	003653	R							
002562	014016	A	2077	INN7	LDA	INNIF		06	02077
002563	001016	A	2078	JANZ*	TER1	NO IMAGINARY PART		06	02078
002564	100354	R							
002565	005001	A	2079	INNY	TZA			06	02079
002566	057000	I	2080	STA	SKF	CLEAR COMPLEX FLAG		06	02080
002567	002000	A	2081	CALL	TMB	FINISH UP		06	02081
002570	000321	R							
002571	017000	I	2082	LDA	IM	ARM AT EXIT		06	02082
002572	001000	A	2083	JMP*	INN			06	02083
002573	101700	R							
002574			2084	INNDE	BSS	4	EXPLICIT DECIMAL EXPONENT	06	02084
002600			2085	INNSF	BSS	1	EXPONENT SIGN FLAG	06	02085
002601			2086	INNIF	BSS	1	IMAGINARY PART FLAG	06	02086
002602			2087	INNRP	BSS	2	REAL PART OF COMPLEX	06	02087
002604			2088	INNSF	BSS	1	STAR FLAG	06	02088
002605			2089	INNT	BSS	1	TEMP	06	02089
002606			2090	*****				06	02090
002607			2091	* SUBROUTINE TO INPUT A DECIMAL STRING AND CONVERT TO BINARY *				06	02091
002608			2092	*****				06	02092
002606	000000	A	2093	INNDE	CALL			06	02093
002607	074040	A	2094	INNDEB	CALL	SAVE X		06	02094
002610	015000	A	2095	INNDEB	LDA	INNDBT		06	02095
002611	144035	A	2096	INNDEB	SUB	INNDBM		06	02096
002612	001000	A	2097	INNDEB	JAN	INNDB1	WILL FIELD*10 + 9 OVERFLOW ?	06	02097
002613	002622	R							
002614	014035	A	2098	LDA	INNSF	YES		06	02098
002615	001016	A	2099	JANZ	INNDEB	ARE WE IN FRACTIONAL PART ?		06	02099
002616	002640	R							
002617	044031	A	2100	INP	INNDEB	NO. SOME DECIMAL EXPONENT		06	02100
002620	001000	A	2101	JAN	INNDEB	AND GOBBLE FIELD		06	02101
002621	002640	R							
002622	002000	A	2102	INNDB1	CALL	INN10	MULTIPLY FIELD BY 10	06	02102
002623	002653	R							
002624	017000	I	2103	LDA	TC			06	02103
002625	140000	L	2104	SUB	'*'			06	02104

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002626 125003 A 2105 ADD 3,X ADD IN NEW CHAR 06 02105
002627 055003 A 2106 STA 3,X 06 02106
002630 002000 A 2107 CALL INNCA PROPAGATE OVERFLOWS 06 02107
002631 002742 R
002632 014017 A 2108 LDA INNPF 06 02108
002633 001010 A 2109 JAZ INNDBX ARE WE IN FRACTIONAL PART ? 06 02109
002634 002640 R
002635 014013 A 2110 LDA INNDEX YES 06 02110
002636 005311 A 2111 DAR DROP DECIMAL EXPONENT 06 02111
002637 054011 A 2112 STA INNDEX 06 02112
002640 002000 A 2113 INNDBX CALL IDI INPUT NEXT CHAR 06 02113
002641 001533 R
002642 034005 A 2114 LDX INNDBT RESTORE X 06 02114
002643 001004 A 2115 JAN INNDBL LOOP TO NON-NUMERIC 06 02115
002644 002610 R
002645 001000 A 2116 JMP* INNDB 06 02116
002646 102606 R
002647 006313 A 2117 INNDBM DATA 3275 LIMIT 06 02117
002650 2118 INNDBT BSS 1 SAVE X 06 02118
002651 2119 INNDEX BSS 1 IMPLICIT DECIMAL EXPONENT 06 02119
002652 2120 INNPF BSS 1 '.' FLAG 06 02120
2121 ***** 06 02121
2122 * SUBROUTINE TO MULTIPLY (X) BY 10 * 06 02122
2123 ***** 06 02123
002653 000000 A 2124 INNMI0 ENTR 06 02124
002654 005001 A 2125 TZA 06 02125
002655 025003 A 2126 LDB 3,X 06 02126
002656 160471 A 2127 MUL TEN 06 02127
002657 065003 A 2128 STB 3,X 06 02128
002660 025002 A 2129 LDB 2,X 06 02129
002661 160471 A 2130 MUL TEN 06 02130
002662 065002 A 2131 STB 2,X 06 02131
002663 025001 A 2132 LDB 1,X 06 02132
002664 160471 A 2133 MUL TEN 06 02133
002665 065001 A 2134 STB 1,X 06 02134
002666 025000 A 2135 LDB 0,X 06 02135
002667 160471 A 2136 MUL TEN 06 02136
002670 065000 A 2137 STB 0,X 06 02137
002671 001000 A 2138 JMP* INNMI0 EXIT 06 02138
002672 102653 R
2139 ***** 06 02139
2140 * SUBROUTINE TO DIVIDE (X) BY 10 * 06 02140
2141 ***** 06 02141
002673 000000 A 2142 INNDI0 ENTR 06 02142
002674 005001 A 2143 TZA 06 02143
002675 025000 A 2144 LDB 0,X 06 02144
002676 170471 A 2145 DIV TEN WORD 0 06 02145
002677 065000 A 2146 STB 0,X 06 02146
002700 025001 A 2147 LDB 1,X 06 02147
002701 170471 A 2148 DIV TEN WORD 1 06 02148
002702 065001 A 2149 STB 1,X 06 02149
002703 025002 A 2150 LDB 2,X 06 02150
002704 170471 A 2151 DIV TEN WORD 2 06 02151
002705 065002 A 2152 STB 2,X 06 02152
002706 025003 A 2153 LDB 3,X 06 02153
002707 170471 A 2154 DIV TEN WORD 3 06 02154
002710 065003 A 2155 STB 3,X 06 02155
002711 001000 A 2156 JMP* INNDI0 EXIT 06 02156
002712 102673 R
2157 ***** 06 02157
2158 * SUBROUTINE TO NORMALIZE (X) * 06 02158
2159 ***** 06 02159
002713 000000 A 2160 INNRM ENTR 06 02160
002714 015000 A 2161 INNRM1 LDA 0,X 06 02161
002715 004241 A 2162 LRLA 1 06 02162
002716 001004 A 2163 JAN* INNRM EXIT WHEN NORMALIZATION COMPLETE 06 02163
002717 102713 R
002720 014054 A 2164 LDA INNBE 06 02164
002721 005311 A 2165 DAR DECREMENT BINARY EXPONENT 06 02165
002722 054052 A 2166 STA INNBE 06 02166
002723 015000 A 2167 LPA 0,X 06 02167
002724 025001 A 2168 LDB 1,X 06 02168
002725 004401 A 2169 LASL 1 SHIFT WORD 0 06 02169
002726 055000 A 2170 STA 0,X 06 02170
002727 015001 A 2171 LPA 1,X 06 02171
002730 025002 A 2172 LDB 2,X 06 02172
002731 004401 A 2173 LASL 1 SHIFT WORD 1 06 02173
002732 055001 A 2174 STA 1,X 06 02174
002733 015002 A 2175 LDA 2,X 06 02175
002734 025003 A 2176 LDB 3,X 06 02176
002735 004401 A 2177 LASL 1 SHIFT WORDS 2,3 06 02177
002736 055002 A 2178 STA 2,X 06 02178
002737 065003 A 2179 STB 3,X 06 02179
002740 001000 A 2180 JMP INNRM1 LOOP TILL DONE 06 02180
002741 002714 R
2181 ***** 06 02181
2182 * SUBROUTINE TO PROPAGATE (X) CARRIES * 06 02182
2183 ***** 06 02183
002742 000000 A 2184 INNCA ENTR 06 02184
002743 015003 A 2185 LDA 0,X 06 02185
002744 001002 A 2186 JAP *+3 WORD 3 OVERFLOW ? 06 02186

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002745 002751 R
002746 045000 A 2187 INR 2,X YES. PROPAGATE TO WORD 2 06 02187
002747 150460 A 2188 ANA BR15 CLEAR SIGN BIT 06 02188
002750 055000 A 2189 STA 3,X 06 02189
002751 015000 A 2190 LDA 2,X 06 02190
002752 001000 A 2191 JAP *+5 WORD 2 OVERFLOW ? 06 02191
002753 002757 R
002754 045000 A 2192 INR 1,X YES. PROPAGATE TO WORD 1 06 02192
002755 150460 A 2193 ANA BR15 CLEAR SIGN BIT 06 02193
002756 055000 A 2194 STA 2,X 06 02194
002757 015000 A 2195 LDA 1,X 06 02195
002760 001000 A 2196 JAP *+5 WORD 1 OVERFLOW ? 06 02196
002761 002765 R
002762 045000 A 2197 INR 0,X YES. PROPAGATE TO WORD 0 06 02197
002763 150460 A 2198 ANA BR15 CLEAR SIGN BIT 06 02198
002764 055000 A 2199 STA 1,X 06 02199
002765 015000 A 2200 LDA 0,X 06 02200
002766 001000 A 2201 JAP* INNCA EXIT IF NO WORD 0 OVERFLOW 06 02201
002767 102742 R
002770 010437 A 2202 LDA BS14 06 02202
002771 055000 A 2203 STA 0,X LOAD WORD 0 06 02203
002772 044000 A 2204 INR INNBE BUMP BINARY EXPONENT 06 02204
002773 001000 A 2205 JMP* INNCA EXIT 06 02205
002774 102742 R
002775 2206 INNBE PSS 1 BINARY EXPONENT 06 02206
002775 2207 EJECT 06 02207
002775 2208 ***** 06 02208
002775 2209 * 06 02209
002775 2210 * INPUT OPERAND ( I M O ) * 06 02210
002775 2211 * * 06 02211
002775 2212 * FUNCTION: TO INPUT A CONSTANT OR NAME AND FIND/STORE IT IN * 06 02212
002775 2213 * THE ASSIGNMENT TABLE * 06 02213
002775 2214 * * 06 02214
002775 2215 * ENTRY: NO SPECIAL CONDITIONS * 06 02215
002775 2216 * * 06 02216
002775 2217 * EXIT : A=IM * 06 02217
002775 2218 * * 06 02218
002775 2219 * ERRORS: TER11 IF SYNTACTICAL ITEM INPUT IS NOT A CONSTANT OR NAME * 06 02219
002775 2220 * * 06 02220
002775 2221 ***** 06 02221
002775 2222 ***** 06 02222
002775 2223 IND ENTRY 06 02223
002775 2224 CALL INI INPUT ITEM; FIND/STORE IN ASSIGNMENT TABLE 06 02224
003000 001000 R 2225 JAZ TER11 ITEM NOT AN OPERAND 06 02225
003002 000342 A 2226 JMP* IND EXIT 06 02226
003004 102775 R
003004 2227 EJECT 06 02227
003004 2228 ***** 06 02228
003004 2229 * 06 02229
003004 2230 * INPUT EXECUTABLE STATEMENT NUMBER * 06 02230
003004 2231 * * 06 02231
003004 2232 * ( I M S ) * 06 02232
003004 2233 * * 06 02233
003004 2234 * FUNCTION: TO INPUT AN EXECUTABLE STATEMENT NUMBER * 06 02234
003004 2235 * * 06 02235
003004 2236 * ENTRY: NO SPECIAL CONDITIONS * 06 02236
003004 2237 * * 06 02237
003004 2238 * EXIT : ISN CALLED TO FIND/STORE STATEMENT NUMBER IN ASSIGNMENT TBL * 06 02238
003004 2239 * (A) = POINTER OF STATEMENT NUMBER * 06 02239
003004 2240 * * 06 02240
003004 2241 * ERRORS: ER5 IF STATEMENT NUMBER IS LABEL OF A FORMAT STATEMENT * 06 02241
003004 2242 * * 06 02242
003004 2243 ***** 06 02243
003004 2244 ***** 06 02244
003005 000000 A 2245 INS ENTRY 06 02245
003006 002000 A 2246 CALL ISN INPUT STATEMENT NUMBER 06 02246
003007 003026 R
003010 017000 I 2247 LDA IM 06 02247
003011 005311 A 2248 JAR IN=1 FOR FORMAT STATEMENT 06 02248
003012 002000 A 2249 JAPM ER5 ERROR ER5/MON-EXECUTABLE STATEMENT/ 06 02249
003013 000347 R
003014 017000 I 2250 LDA I 06 02250
003015 001000 A 2251 JMP* INS 06 02251
003016 103000 R
003016 2252 EJECT 06 02252
003016 2253 ***** 06 02253
003016 2254 * 06 02254
003016 2255 * I N T E G E R T E S T ( I M T ) * 06 02255
003016 2256 * * 06 02256
003016 2257 * FUNCTION: TO TEST IF MODE OF AN ITEM IS INTEGER * 06 02257
003016 2258 * * 06 02258
003016 2259 * ENTRY: ITEM MODE IN IM * 06 02259
003016 2260 * * 06 02260
003016 2261 * EXIT : A DESTROYED * 06 02261
003016 2262 * * 06 02262
003016 2263 * ERRORS: ER3 IF IM .NE. 2 * 06 02263
003016 2264 * * 06 02264
003016 2265 ***** 06 02265
003016 2266 ***** 06 02266
003017 000000 A 2267 INT ENTRY 06 02267
003020 017000 T 2268 LDA IM GET ITEM MODE 06 02268
003021 140422 A 2269 SUB KC 06 02269

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003022 002016 A 2270 JANZM ER3 MODE ERROR 06 02270
003023 000351 R 2271 JMP* INT EXIT 06 02271
003024 001000 A 2272 EJECT 06 02272
003025 103017 R 2273 * ISN INPUT STATEMENT NUMBER 06 02273
2274 ISN ENTRY 06 02274
003026 000000 A 2275 TZA 06 02275
003027 005001 A 2276 STA IM 06 02276
003030 057000 I 2277 STA IU 06 02277
003031 057000 I 2278 STA NT 06 02278
003032 057000 I 2279 LDA FIVE 06 02279
003033 010465 A 2280 STA PC 06 02280
003034 057000 I 2281 LDA = 06 02281
003035 010000 L 2282 STA ID 06 02282
003036 057000 I 2283 STA ID+1 06 02283
003037 057000 I 2284 ISN1 LDAI ' )' 06 02284
003040 006010 A 2285 STA ID+2 SET LEADING CHARACTER 06 02285
003041 120251 A 2286 ISN2 CALL IDI INPUT NUMERIC STATEMENT NUMBER 06 02286
003042 057000 I 2287 JAP ISN3 DONE 06 02287
003043 002000 A 2288 LDA PC 06 02288
003044 001533 R 2289 JAZ TER21 MORE THAN FIVE DIGITS 06 02289
003045 001002 A 2290 LDX =ID 06 02290
003046 003064 R 2291 CALL PCK 06 02291
003047 017000 I 2292 LDA ID+2 06 02292
003050 001010 A 2293 ERAE '00' 06 02293
003051 000330 R 2294 JAZ ISN1 DELETE LEADING ZEROS 06 02294
003052 030000 L 2295 JMP ISN2 06 02295
003053 002000 A 2296 ISN3 CALL NRM 06 02296
003054 004727 R 2297 JPM ASI ASSIGN ITEM 06 02297
003055 017000 I 2298 LDA AF 06 02298
003056 006130 A 2299 SUB EXAD EXECUTION START 06 02299
003057 124660 A 2300 JAP* ISN 06 02300
003060 001010 A 2301 LDA AT 06 02301
003061 003040 R 2302 SUB K2 06 02302
003062 001000 A 2303 JAZ* ISN IS 06 02303
003063 003043 R 2304 JPM CR8 REFERENCE TO NON-EXECUTEABLE STMT. 06 02304
003064 002000 A 2305 JMP* ISN 06 02305
003065 003653 R 2306 EJECT 06 02306
003066 002000 A 2307 * IVA INPUT INTEGER VARIABLE 06 02307
003067 000000 R 2308 IVA ENTRY 06 02308
003070 017000 I 2309 JPM IVC INPUT INT. VAR./CON. 06 02309
003071 147000 I 2310 LDA NT 06 02310
003072 001002 A 2311 DAR 06 02311
003073 103026 R 2312 JAPM ER2 USAGE ERROR 06 02312
003074 017000 I 2313 JMP* IVA 06 02313
003075 140422 A 2314 EJECT 06 02314
003076 001010 A 2315 * IVC INPUT INTEGER VARIABLE/CONSTANT 06 02315
003077 103026 R 2316 IMC ENTRY 06 02316
003100 002000 A 2317 JPM INQ INPUT OPERAND 06 02317
003101 000344 R 2318 JMPM INT INTEGER TEST 06 02318
003102 001000 A 2319 JMPM TVR TAG VARIABLE 06 02319
003103 103026 R 2320 JPM* IVC 06 02320
003104 000000 A 2321 EJECT 06 02321
003105 002000 A 2322 ***** 06 02322
003106 003115 R 2323 COMPUTE ITEM SIZE ( I W I ) 06 02323
003107 017000 I 2324 * FUNCTION: TO COMPUTE THE RUN-TIME SIZE OF AN ITEM 06 02324
003110 005311 A 2325 * ENTRY: IS=SIZE OF A SINGLE ELEMENT, IN WORDS(SEE LAX) 06 02325
003111 002002 A 2326 * IS+1=1ST DIMENSION VALUE 06 02326
003112 000352 R 2327 * IS+2=2ND DIMENSION VALUE 06 02327
003113 001000 A 2328 * IS+3=3RD DIMENSION VALUE 06 02328
003114 103104 R 2329 * EXIT: IS=RUN-TIME SIZE OF ITEM 06 02329
003115 000000 A 2330 ***** 06 02330
003116 002000 A 2331 ***** 06 02331
003117 002776 R 2332 ***** 06 02332
003120 002000 A 2333 ***** 06 02333
003121 003017 R 2334 ***** 06 02334
003122 002000 A 2335 ***** 06 02335
003123 007473 R 2336 ***** 06 02336
003124 001000 A 2337 ***** 06 02337
003125 103115 R 2338 ***** 06 02338
2339 ***** 06 02339
2340 * ITEM IS AN ARRAY * 06 02340

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2341 *****
003126 027000 I 2342 IWI' LDB IS+7 06 02341
003127 005001 A 2343 TZA 06 02342
003130 167000 I 2344 MUL IS+6 06 02343
003131 001016 A 2345 JANZ TER19 ARRAY SIZE OVERFLOW 06 02344
003132 000332 R 06 02345
003133 167000 I 2346 MUL IS+5 06 02346
003134 001016 A 2347 JANZ TER19 ARRAY SIZE OVERFLOW 06 02347
003135 000332 R 06 02348
003136 167000 I 2348 MUL IS+4 06 02348
003137 001016 A 2349 JANZ TER19 ARRAY SIZE OVERFLOW 06 02349
003140 000332 R 06 02350
003141 167000 I 2350 MUL IS+3 06 02350
003142 001016 A 2351 JANZ TER19 ARRAY SIZE OVERFLOW 06 02351
003143 000332 R 06 02352
003144 167000 I 2352 MUL IS+2 2ND*3RD TO B 06 02352
003145 001016 A 2353 JANZ TER19 ARRAY SIZE OVERFLOW 06 02353
003146 000332 R 06 02354
003147 167000 I 2354 MUL IS+1 1ST*2ND*3RD TO B 06 02354
003150 001016 A 2355 JANZ TER19 ARRAY SIZE OVERFLOW 06 02355
003151 000332 R 06 02356
003152 167000 I 2356 MUL IS 1ST*2ND*3RD*ELEMENT SIZE TO B 06 02356
003153 001016 A 2357 JANZ TER19 ARRAY SIZE OVERFLOW 06 02357
003154 000332 R 06 02358
003155 067000 I 2358 STB IS IS = PRODUCT OF ALL 06 02358
003156 001000 A 2359 JMP 0 ENTRY 06 02359
003157 000000 A 06 02360
003157 2360 IWI BES 0 EXIT 06 02360
003160 017000 I 2361 LDA IU 06 02361
003161 140422 A 2362 SUB K2 06 02362
003162 001010 A 2363 JAZ IWI1 IS ITEM AN ARRAY ? 06 02363
003163 003126 R 06 02364
003164 001000 A 2364 JMP* IWI NO, EXIT 06 02364
003165 103157 R 06 02365
2365 EJECT 06 02365
2366 ***** 06 02366
2367 * 06 02367
2368 * LOAD ASSIGNMENT ENTRY (LAX) * 06 02368
2369 * 06 02369
2370 * FUNCTION: TO UNPACK THE SUBFIELDS OF AN ASSIGNMENT TABLE ENTRY. * 06 02370
2371 * 06 02371
2372 * ENTRY: I POINTS TO ASSIGNMENT TABLE ENTRY * 06 02372
2373 * 06 02373
2374 * EXIT : SUBFIELDS BROKEN OUT AND STORED: AF,CL,NT,AT,IM,IU,ID-1,ID, * 06 02374
2375 * ID+1,ID+2,ID+3. * 06 02375
2376 * 06 02376
2377 * IS=4 FOR COMPLEX AND DP ITEMS * 06 02377
2378 * IM=2 FOR REAL AND DP-INTEGGER ITEMS * 06 02378
2379 * IS=1 FOR INTEGER AND LOGICAL CONSTANTS * 06 02379
2380 * IS=1 FOR OTHER INTEGER AND LOGICAL ITEMS IF 'D' PARAMETER * 06 02380
2381 * NOT PRESENT IN PARAMETER LIST OF '/FORTRAN' DIRECTIVE * 06 02381
2382 * IS=2 FOR OTHER INTEGER AND LOGICAL ITEMS IF 'D' PARAMETER * 06 02382
2383 * PRESENT IN '/FORTRAN' LIST * 06 02383
2384 * 06 02384
2385 * 06 02385
2386 * IF ITEM IS AN ARRAY NAME, THE FOLLOWING ARE ALSO LOADED: * 06 02386
2387 * 06 02387
2388 * LP: POINTER TO ARRAY HEADER * 06 02388
2389 * NP: NUMBER OF DIMENSIONS * 06 02389
2390 * IP: POINTS TO IS ENTRY(1,2, OR 4) IN TABLE * 06 02390
2391 * IS+1 - IS+ND: DIMENSION VALUES (0 FOR DUMMY) * 06 02391
2392 * IP+1 - IP+ND: POINTER TO ID VALUE (0 IF NO DIMENSION) * 06 02392
2393 * 06 02393
2394 ***** 06 02394
003166 000000 A 2396 LAX ENTRY 06 02396
003167 037000 I 2397 LDX 1 USE X AS TABLE POINTER 06 02397
003170 015000 A 2398 LDA 0,X 06 02398
003171 057000 I 2399 STA AF WORD 0 TO AF 06 02399
003172 015001 A 2400 LDA 1,X 06 02400
003173 057000 I 2401 STA CL WORD 1 TO CL 06 02401
003174 005001 A 2402 TZA 06 02402
003175 025002 A 2403 LDB 2,X BREAK OUT PACKED DATA FIELDS 06 02403
003176 004441 A 2404 LLRL 1 06 02404
003177 057000 I 2405 STA PT 06 02405
003200 005001 A 2406 TZA 06 02406
003201 004443 A 2407 LLRL 3 06 02407
003202 057000 I 2408 STA AT 06 02408
003203 005001 A 2409 TZA 06 02409
003204 004443 A 2410 LLRL 3 06 02410
003205 057000 I 2411 STA IM 06 02411
003206 005001 A 2412 TZA 06 02412
003207 004442 A 2413 LLRL 2 06 02413
003210 057000 I 2414 STA IU 06 02414
003211 005001 A 2415 TZA 06 02415
003212 004447 A 2416 LLRL 7 06 02416
003213 057000 I 2417 STA EL 06 02417
003214 140423 A 2418 SUB FOUR 06 02418
003215 025003 A 2419 LDB 3,X TRANSFER ID FIELD 06 02419
003216 067000 I 2420 STB ID 06 02420
003217 005311 A 2421 DAR 06 02421
003220 025004 A 2422 LDB 4,X 06 02422

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Address	Code	Label	Op	Op2	Text	Page	Line
003221	003004	A	2423	XAN	LAX6	FORCE TRAILING BLANKS	06 02423
003222	003347	R					
003223	067000	I	2424	STB	ID+1		06 02424
003224	005311	A	2425	DAR			06 02425
003225	025005	A	2426	LDB	5,X		06 02426
003226	003004	A	2427	XAN	LAX6		06 02427
003227	003347	R					
003230	067000	I	2428	STB	ID+2		06 02428
003231	025006	A	2429	LDB	6,X		06 02429
003232	067000	I	2430	STB	ID+3		06 02430
			2431	*****			06 02431
			2432	* GET ITEM SIZE IN IS *			06 02432
			2433	*****			06 02433
003233	017000	I	2434	LDA	IM		06 02434
003234	140466	A	2435	SUB	SIX		06 02435
003235	001010	A	2436	JAZ	LAXA	DP-INTEGER	06 02436
003236	003260	R					
003237	005111	A	2437	IAR			06 02437
003240	001010	A	2438	JAZ	LAXC	COMPLEX	06 02438
003241	003262	R					
003242	005111	A	2439	IAR			06 02439
003243	001010	A	2440	JAZ	LAXC		06 02440
003244	003262	R					
003245	005111	A	2441	IAR			06 02441
003246	001010	A	2442	JAZ	LAXA	IS IT REAL ?	06 02442
003247	003260	R					
003250	017000	I	2443	LDA	NT	NO	06 02443
003251	005311	A	2444	DAR			06 02444
003252	001010	A	2445	JAZ	LAXB	IS IT A CONSTANT?	06 02445
003253	003261	R					
003254	005001	A	2446	TZA			06 02446
003255	027000	I	2447	LDB	SPCW		06 02447
003256	006470	A	2448	BT	070,LAXB		06 02448
003257	003261	R					
003260	005101	A	2449	LAXA	INCR	1	06 02449
003261	140464	A	2450	LAXB	SUB	THREE	06 02450
003262	120423	A	2451	LAXC	ADD	K4	06 02451
003263	057000	I	2452	STA	IS		06 02452
003264	017000	I	2453	LDA	IU		06 02453
003265	140422	A	2454	SUB	TWO		06 02454
003266	001016	A	2455	JANZ*	LAX		06 02455
003267	103166	R					
			2456	*****			06 02456
			2457	* ITEM IS AN ARRAY NAME *			06 02457
			2458	*****			06 02458
003270	037000	I	2459	LDX	AF	POINT X AT ARRAY HEADER	06 02459
003271	077000	I	2460	STX	LF	STORE POINTER IN LF	06 02460
003272	015000	A	2461	LDA	0,X		06 02461
003273	057000	I	2462	STA	AF	GET AF	06 02462
003274	015002	A	2463	LDA	2,X		06 02463
003275	004351	A	2464	LSRA	9		06 02464
003276	150467	A	2465	ANA	SEVEN	GET NUMBER OF DIMENSIONS	06 02465
003277	057000	I	2466	STA	ND	STORE IN ND	06 02466
003300	027000	I	2467	LDB	IS		06 02467
003301	006016	A	2468	LDAE	DPCA-1,B		06 02468
003302	010200	R					
003303	057000	I	2469	STA	IP	POINTER TO IS	06 02469
003304	005001	A	2470	TZA			06 02470
003305	054042	A	2471	STA	LAX7	POINT TO 1ST DIMENSION	06 02471
003306	005144	A	2472	IXR			06 02472
003307	014040	A	2473	LDA	LAX7	PROCESS SEVEN DIMENSIONS	06 02473
003310	147000	I	2474	SUB	ND		06 02474
003311	001004	A	2475	JAN	LAX3		06 02475
003312	003317	R					
003313	005002	A	2476	TZE		SET NO-DIMENSION	06 02476
003314	010421	A	2477	LDB	ONE		06 02477
003315	001000	A	2478	JMP	LAX4		06 02478
003316	003327	R					
003317	025000	A	2479	LDB	0,X		06 02479
003320	016002	A	2480	LDA	2,X		06 02480
003321	154001	A	2481	ANA	*+2	GET AT(IP)	06 02481
003322	006130	A	2482	ERA1	070000		06 02482
003323	070000	A					
003324	001010	A	2483	JAZ	LAX4		06 02483
003325	003327	R					
003326	016003	A	2484	LDA	3,B	GET IS	06 02484
003327	034020	A	2485	LAX4	LAX7		06 02485
003330	006055	A	2486	STAE	IS+1,X		06 02486
003331	010260	R					
003332	006065	A	2487	STBE	IP+1,X	POINTER	06 02487
003333	010247	R					
003334	044013	A	2488	INR	LAX7		06 02488
003335	014012	A	2489	LDA	LAX7		06 02489
003336	140467	A	2490	SUB	SEVEN		06 02490
003337	001010	A	2491	JAZ*	LAX	FINISHED	06 02491
003340	103166	R					
003341	014006	A	2492	LDA	LAX7		06 02492
003342	120422	A	2493	ADD	TWO	FORCE AROUND WORD-3	06 02493
003343	127000	I	2494	LAX5	LF		06 02494
003344	005014	A	2495	LAX			06 02495
003345	001000	A	2496	JMP	LAX2		06 02496



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003346 003307 R 2497 LAX6 LDB =*
003347 020003 L 2498 LAX7 DATA 0
003350 000000 P 2499 EJECT
2501 * LDX LOAD DO ENTRIES
003351 000000 A 2503 LDX ENTRY
003352 027000 I 2504 LDB 0
003353 016000 A 2505 LDA 0,2
003354 057000 I 2506 STA DS TERMINATING STMT. PNTR.
003355 016001 A 2507 LDA 1,2
003356 057000 I 2508 STA DV VARIABLE PNTR.
003357 016002 A 2509 LDA 2,2
003360 057000 I 2510 STA DH HIGH VALUE PNTR.
003361 016003 A 2511 LDA 3,2
003362 057000 I 2512 STA DI INCREMENT PNTR.
003363 016004 A 2513 LDA 4,2
003364 057000 I 2514 STA DR RETURN ADDRESS
003365 001000 A 2515 JMP* LDX
003366 103351 A 2516 EJECT
2517 *****
2518 *
2519 * LOAD EXPRESSION ENTRY ( LEX )
2520 *
2521 * FUNCTION: TO LOAD AN ENTRY FROM THE EXPRESSION TABLE
2522 *
2523 * ENTRY: K POINTS TO ENTRY
2524 *
2525 * EXIT : I=(K)
2526 * EH=(K+1) BITS 7-15
2527 * OP=(K+1) BITS 1-6
2528 * NF=(K+1) BIT 0
2529 *
2530 *****
003367 000000 A 2532 LEX ENTRY
003370 027000 I 2533 LDB K POINT B AT ENTRY
003371 016000 A 2534 LDA 0,B
003372 057000 I 2535 STA I WORD 0 TO I
003373 016001 A 2536 LDA 1,B GET WORD 1
003374 005002 A 2537 TZR CLEAR B
003375 004451 A 2538 LLRL 8BIT-7 ROTATE EH TO B
003376 067000 I 2539 STB EH STORE IN EH
003377 005002 A 2540 TZR CLEAR B
003400 004446 A 2541 LLRL 6 ROTATE OP TO B
003401 067000 I 2542 STB OP STORE IN OP
003402 004357 A 2543 LSKA 8BIT-1 GET NF
003403 057000 I 2544 STA NF STORE IN NF
003404 001000 A 2545 JMP* LEX
003405 103367 P 2546 EJECT
2547 *****
2548 *
2549 * LIST ROUTINE ( LIST )
2550 *
2551 * FUNCTION: TO WRITE A LINE ON THE LD DEVICE
2552 *
2553 * ENTRY: LLOP HOLDS COUNT OF LINES REMAINING ON PAGE
2554 * B POINTS TO START OF OUTPUT BUFFER
2555 * X HOLDS OUTPUT WORD COUNT
2556 *
2557 * EXIT : IF LLOP=0 : PAGE EJECTED, HEADER WRITTEN, ONE LINE SPACED,
2558 * AND LLOP SET TO V$LCNT-2
2559 *
2560 * LLOP DECREMENTED
2561 *
2562 *****
003406 000000 A 2564 LIST ENTRY
003407 074064 A 2565 STX L$ISTCT+1 STORE OUTPUT WORD COUNT
003410 064064 A 2566 STB L$ISTCT+2 STORE BUFFER ADDRESS
003411 017000 I 2567 LDA LLOP GET REMAINING LINE COUNT
003412 005311 A 2568 DRR
003413 001002 A 2569 JAP L$ISTC CHECK IF LINE COUNT BACKED OFF TO ZERO
003414 003431 R 2570 *****
2571 * END OF PAGE *
2572 *****
003415 006030 A 2573 LAXI TITP
003416 010001 R 2574 CALL WADS BUMP ASCII PAGE NUMBER IN PAGE HEADER
003420 000552 P 2575 LBS L$ISTHD
003421 024054 A 2576 CALL L$ISTOT OUTPUT VORTEX HEADER
003423 003437 R 2577 LBS L$ISTLF
003424 024054 A 2578 CALL L$ISTOT SPACE 1 LINE
003426 003437 P 2579 *****
2580 * RESET LINE COUNT *
2581 *****
003427 010054 A 2582 LBS V$LCNT GET VORTEX LINE COUNT/PAGE
003430 100464 A 2583 STB THREE KNOCK OFF 3 FOR HEADER

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003431 057000 I 2584 LIS10 STA LLOP LOAD REMAINING LINE COUNT 06 02584
2585 *****
2586 * OUTPUT DATA LINE * 06 02586
2587 ***** 06 02587
003432 024040 A 2588 LDB LISTCT 06 02588
003433 002000 A 2589 CALL LISTOT 06 02589
003434 003437 R
003435 001000 A 2590 JMP* LIST EXIT 06 02590
003436 103406 R
2591 ***** 06 02591
2592 * LD OUTPUT SUBROUTINE * 06 02592
2593 ***** 06 02593
003437 000000 A 2594 LISTOT ENR 06 02594
003440 034015 A 2595 LDX WROLD+5 SET X=FCB D.1 06 02595
003441 016000 A 2596 LDA 0,B D.1 06 02596
003442 055000 A 2597 STA 0,X FCB(0) = WORD COUNT D.1 06 02597
003443 016001 A 2598 LDA 1,B D.1 06 02598
003444 055001 A 2599 STA 1,X FCB(1) = BUFFER ADDRESS D.1 06 02599
003445 002000 A 2600 CALL WROLD OUTPUT TO LD D.1 06 02600
003446 003451 R
003447 001000 A 2601 JMP* LISTOT 06 02601
003450 103437 R
2602 ***** 06 02602
2603 * I/O CALL * 06 02603
2604 ***** 06 02604
003451 000000 A 2605 WROLD ENR 06 02605
2606 WRITE LLFCB,5,0,1 WRITE/LO/COMPLETE/ASCII 06 02606
003452 006505 A
003453 000404 A
003454 100000 A
003455 010405 A
003456 010116 R
003457 000000 A
003460 000000 A
2607 STAT WROLD+1,ERRX,ERRX,ERRX,ERRX 06 02607
003461 006505 A
003462 000373 A
003463 003452 R
003464 000472 R
003465 000472 R
003466 000472 R
003467 000472 R
003470 001000 A 2608 JMP* WROLD 06 02608
003471 103451 R
003472 000170 A 2609 LIST12 DATA 120 06 02609
003473 003474 R 2610 LISTCT PZE +1 I/O BLOCK 06 02610
003474
2611 BSS ? 06 02611
003476 003477 R 2612 LISTHD PZE +1 ADDRESS OF HEADER BLOCK 06 02612
003477 000044 A 2613 DATA TITQ-TITL PAGE HEADER WORD COUNT D.1 06 02613
003500 010026 R 2614 PZE TITL ADDRESS OF VORTEX HEADER 06 02614
003501 003502 R 2615 LISTLF PZE +1 ADDRESS OF LINE FEED BLOCK 06 02615
003502 000001 A 2616 DATA 1 1 BLANK WORD 06 02616
003503 003504 A 2617 PZE +1 06 02617
003504 120240 R 2618 DATA * 06 02618
003505
2619 LISTT BSS 1 BLOCKING BUFFER ADDRESS 06 02619
2620 EJECT 06 02620
2621 ***** 06 02621
2622 * 06 02622
2623 * LIST OCTAL VALUE ( LOCT ) * 06 02623
2624 * 06 02624
2625 * FUNCTION: TO CONVERT A BINARY INTEGER TO AN OCTAL ASCII STRING * 06 02625
2626 * 06 02626
2627 * ENTRY: BINARY INTEGER IN A * 06 02627
2628 * 06 02628
2629 * EXIT : OCTAL ASCII STRING IN BUFFER SLOT * 06 02629
2630 * 06 02630
2631 ***** 06 02631
003506 000000 A 2633 LOCT ENTRY 06 02633
003507 005012 A 2634 TAB 06 02634
003510 010000 L 2635 LDA = * 06 02635
003511 002000 A 2636 CALL SLOP OUTPUT A LEADING BLANK 06 02636
003512 006117 R
003513 010440 A 2637 LDA BS15 LOAD FINISH FLAG 06 02637
003514 004441 A 2638 LLRL BIT-15 GET FIRST OCTAL DIGIT IN A 06 02638
2639 ***** 06 02639
2640 * BINARY TO OCTAL CONVERSION LOOP * 06 02640
2641 ***** 06 02641
003515 120000 L 2642 LOCL ADD = '0' 06 02642
003516 002000 A 2643 CALL SLOP OUTPUT ASCII OCTAL DIGIT TO BUFFER SLOT 06 02643
003517 006117 R
003520 005001 A 2644 TZA CLEAR A 06 02644
003521 004443 A 2645 LLRL 3 GET NEXT OCTAL DIGIT 06 02645
003522 001020 A 2646 JRZ* LOCT EXIT ON FINISH 06 02646
003523 103506 R
003524 001000 A 2647 JMP LOCL LOOP TILL DONE 06 02647
003525 003515 R
2648 EJECT 06 02648
2649 ***** 06 02649
2650 * 06 02650
2651 * LOAD TRIAD ENTRY ( LTX ) * 06 02651
2652 * 06 02652

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2653 * FUNCTION: TO LOAD AN ENTRY FROM THE TRIAD TABLE * 06 02653
2654 * * 06 02654
2655 * ENTRY: J POINTS TO TRIAD * 06 02655
2656 * * 06 02656
2657 * EXIT : D1=(J) * 06 02657
2658 * D2=(J+1) * 06 02658
2659 * SF=(J+2) BIT 0 * 06 02659
2660 * DP=(J+2) BITS 1-6 * 06 02660
2661 * TM=(J+2) BITS 7-9 * 06 02661
2662 * TU=(J+2) BIT 10 * 06 02662
2663 * * 06 02663
2664 *****'8'***** MM * 06 02664
003526 000000 A 2666 LTX ENTRY * 06 02666
003527 027000 I 2667 LDB J POINT B AT TRIAD ENTRY * 06 02667
003530 016000 A 2668 LDA 0,B * 06 02668
003531 057000 I 2669 STA D1 WORD 0 TO D1 * 06 02669
003532 016001 A 2670 LDA 1,B * 06 02670
003533 057000 I 2671 STA D2 WORD 1 TO D2 * 06 02671
003534 016002 A 2672 LDA 2,B GET WORD 3 * 06 02672
003535 004552 A 2673 LLSR 10 * 06 02673
003536 057000 I 2674 STA TU TRIAD USE * 06 02674
003537 005001 A 2675 TZA * 06 02675
003540 004443 A 2676 LLRL 3 * 06 02676
003541 057000 I 2677 STA TM TRIAD MODE * 06 02677
003542 005001 A 2678 TZA * 06 02678
003543 004446 A 2679 LLRL 6 * 06 02679
003544 057000 I 2680 STA DP OPERATOR * 06 02680
003545 005001 A 2681 TZA * 06 02681
003546 004441 A 2682 LLRL 1 * 06 02682
003547 057000 I 2683 STA SF STORAGE FLAG * 06 02683
003550 001000 A 2684 JMP* LTX EXIT * 06 02684
003551 103526 R

2685 EJECT * 06 02685
2686 ***** * 06 02686
2687 * * 06 02687
2688 * M O D I F Y A S C I I D I G I T S T R I N G ( M A D S ) * 06 02688
2689 * * 06 02689
2690 * FUNCTION: TO INCREMENT A 4-CHARACTER ASCII DECIMAL DIGIT FIELD * 06 02690
2691 * WITH LEADING BLANKS. * 06 02691
2692 * * 06 02692
2693 * ENTRY: X POINTS TO START OF ASCII DECIMAL STRING * 06 02693
2694 * * 06 02694
2695 * EXIT : ASCII DECIMAL STRING INCREMENTED * 06 02695
2696 * * 06 02696
2697 ***** * 06 02697
003552 000000 A 2699 MADS ENTRY * 06 02699
003553 025000 A 2700 LDB 0,X CHARS 1-2 TO B * 06 02700
003554 015001 A 2701 LDA 1,X CHARS 3-4 TO A * 06 02701
003555 005111 A 2702 IAR INCREMENT CHAR 4 * 06 02702
003556 002000 A 2703 CALL MAB ZR67-7++ + H A- 6 9 6 6 8 9 * 06 02703
003557 003572 R
003560 004470 A 2704 LLRL $BIT+8 CHARS 2-3 TO A * 06 02704
003561 002000 A 2705 CALL MAB PROPAGATE CHAR 3 OVERFLOW TO CHAR 2 * 06 02705
003562 003572 R
003563 004470 A 2706 LLRL $BIT+$BIT-8 CHARS 1-2 TO A * 06 02706
003564 002000 A 2707 CALL MAB PROPAGATE CHAR 2 OVERFLOWS TO CHAR 1 * 06 02707
003565 003572 R
003566 055000 A 2708 STA 0,X RESTORE CHARS 1-2 * 06 02708
003567 065001 A 2709 STB 1,X RESTORE CHARS 3-4 * 06 02709
003570 001000 A 2710 JMP* MADS EXIT * 06 02710
003571 103552 R

2711 ***** * 06 02711
2712 * SERVICE SUBROUTINE TO PROPAGATE OVERFLOWS * 06 02712
2713 ***** * 06 02713
003572 000000 A 2714 MAB ENTRY IF OVERFLOW, LOW BYTE OF A=0272 * 06 02714
003573 124007 A 2715 ADD MADI 0106 (RAISES HIGH-BYTE, LOW TO 0) * 06 02715
003574 004250 A 2716 LRLA $BIT-8 SWAP BYTES * 06 02716
003575 001004 A 2717 JAN 7++ * 06 02717
003576 003601 R
003577 006119 A 2718 DRAI 0173260 * 06 02718
003600 173260 A
003601 004250 A 2719 LRLA 8 RESTORE BYTES * 06 02719
003602 006140 A 2720 SUBI 0106 RESTORE LOW-BYTE TO '0' * 06 02720
003603 000106 A
003604 003603 R 2721 MADI EQU 7-1 * 06 02721
003604 001000 A 2722 JMP* MAB * 06 02722
003605 103572 R

2723 EJECT * 06 02723
2724 ***** * 06 02724
2725 * * 06 02725
2726 * M O V E B L O C K ( M O V E ) * 06 02726
2727 * * 06 02727
2728 * FUNCTION: TO MOVE A BLOCK OF DATA IN CORE * 06 02728
2729 * * 06 02729
2730 * ENTRY: A=WORD COUNT * 06 02730
2731 * B=FROM ADDRESS * 06 02731
2732 * X=TO ADDRESS * 06 02732
2733 * * 06 02733
2734 * EXIT : NO SPECIAL CONDITIONS * 06 02734
2735 * * 06 02735
2736 ***** * 06 02736

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003606 000000 A 2738 MOVE ENTR
003607 054013 A 2739 STA MOVET SAVE COUNT
003610 016000 A 2740 MOVEL LDA 0,B MOVE WORD
003611 055000 A 2741 STA 0,X
003612 005122 A 2742 IBR BUMP POINTERS
003613 005144 A 2743 IXR
003614 014006 A 2744 LDA MOVET
003615 005311 A 2745 DAR DROP COUNT
003616 054004 A 2746 STA MOVET
003617 001016 A 2747 JANZ MOVEL LOOP TILL DONE
003620 003610 R
003621 001000 A 2748 JMP* MOVE EXIT
003622 103606 R
003623 2749 MOVET BSS 1 MOVE COUNT
2750 EJECT
2751 *****
2752 *
2753 * MAKE EXIT LABEL (MXL)
2754 *
2755 * ENTRANCE: (A)=LABEL NUMBER
2756 *
2757 *****
003624 000000 A 2759 MXL ENTRY
003625 002000 R 2760 CALL CBA
003626 000206 R
003627 057000 I 2761 STA ID+1
003630 006010 A 2762 LDAI ' )X'
003631 124730 A
003632 057000 I 2763 STA ID
003633 010465 A 2764 LDA FIVE
003634 057000 I 2765 STA EL
003635 010421 A 2766 LDA ONE
003636 057000 I 2767 STA IU
003637 057000 I 2768 STA IM
003640 005001 A 2769 TZA
003641 057000 I 2770 STA NT
003642 002000 A 2771 CALL ASI
003643 000000 R
003644 001000 A 2772 JMP* MXL
003645 103624 R
2773 EJECT
2774 *****
2775 *
2776 * N O R M A L I Z E I D ( N R M )
2777 *
2778 * FUNCTION: TO LEFT NORMALIZE THE NAME IN ID, ID+1, ID+2
2779 *
2780 * EXIT: ID, ID+1, ID+2 LEFT NORMALIZED WITH TRAILING BLANKS
2781 * EL SET TO 4,5, OR 6
2782 *
2783 *****
003646 017000 I 2785 NRM3 LDA EL
003647 004341 A 2786 LSRA 1
003650 120464 A 2787 ADD THREE
003651 057000 I 2788 STA EL ACTUAL ENTRY SIZE
003652 001000 A 2789 JMP 0
003653 000000 A
003654 003653 R 2790 NRM EDU *-1
003655 010467 A 2791 LDA SEVEN
003656 057000 I 2792 STA EL
003657 017000 I 2793 NRM1 LDA ID+1
003658 027000 I 2794 LDB ID
003660 004430 A 2795 LLRL 3
003661 150463 A 2796 ANA 3M377
003662 001010 A 2797 JAZ NRM2
003663 003667 R
003664 140000 L 2798 SUB *
003665 001016 A 2799 JANZ NRM3 NORMALIZED
003666 003646 R
003667 017000 I 2800 NRM2 LDA EL
003670 005311 A 2801 DAR
003671 001010 A 2802 JAZ NRM3 ALL SIX BLANKS
003672 003646 R
003673 057000 I 2803 STA EL
003674 067000 I 2804 STB ID
003675 027000 I 2805 LDB ID+1
003676 017000 I 2806 LDA ID+2
003677 004450 A 2807 LLRL 3
003700 067000 I 2808 STB ID+1
003701 006150 A 2809 ANAI 0177400
003702 177400 A
003703 120000 L 2810 ADD *
003704 057000 I 2811 STA ID+2 APPEND TRAILING BLANK
003705 001000 A 2812 JMP NRM1
003706 003656 R
2813 EJECT
2814 *****
2815 *
2816 * N O U S A G E T E S T ( N U T )
2817 *
2818 * FUNCTION: TO CHECK THAT AN ITEM HAS NOT BEEN ASSIGNED A USAGE
    
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2819 *
2820 * ENTRY: IU=ITEM USAGE
2821 *
2822 * EXIT : NO SPECIAL CONDITIONS
2823 *
2824 * ERRORS: ER2 IF IU.NE.ZERO
2825 *
2826 *
003707 000000 A 2828 NUT ENTRY
003710 017000 I 2829 LDA IU
003711 002016 A 2830 JANZM ER2
003712 000352 R
003713 005001 A 2831 TZA
003714 001000 A 2832 JMP* NUT
003715 103707 R

2833 * EJECT
2834 *
2835 *
2836 * OUTPUT ABSOLUTE WORD ( O A B )
2837 *
2838 * FUNCTION: TO OUTPUT AN ABS WORD IN THE OBJECT TEXT
2839 *
2840 * ENTRY: A=ABS WORD
2841 *
2842 * EXIT : 2-WORD LOAD ITEM OUTPUT:
2843 *
2844 * WORD 1: 0100000 CONTROL WORD(CODE=4,COUNT=1)
2845 * WORD 2: ABS WORD
2846 *
003716 000000 A 2849 OAB ENTRY
003717 005012 A 2850 TAB ABS WORD TO B
003720 010440 A 2851 LDA BS15 LOAD A WITH LOADER CONTROL WORD
003721 002000 A 2852 CALL LWD OUTPUT ABS LOAD ITEM
003722 004675 R
003723 001000 A 2853 JMP* OAB EXIT
003724 103716 R

2854 * EJECT
2855 *
2856 *
2857 * OUTPUT DOUBLE ( O D B )
2858 *
2859 * FUNCTION: TO OUTPUT A VDM 620 2-WORD INSTRUCTION(E.G. JMPM *ST)
2860 *
2861 * ENTRY: A=1ST WORD OF INSTRUCTION
2862 * I=POINTER TO ASSIGNMENT TABLE ENTRY DEFINING 2ND WORD
2863 *
2864 * EXIT : XRPY SET TO KILL X-REG ASSIGNMENT
2865 * 2 WORD INSTRUCTION OUTPUT
2866 *
003725 000000 A 2869 ODB ENTRY
003726 057000 I 2870 STA XRPY KILL X-REG ASSIGNMENT
003727 002000 A 2871 CALL OAB OUTPUT ABS 1ST WORD
003730 003716 R
003731 005001 A 2872 TZA CALL OUT WITH A=0
003732 002000 A 2873 CALL OUT OUTPUT 2ND WORD
003733 004320 R
003734 001000 A 2874 JMP* ODB EXIT
003735 103725 R

2875 * EJECT
2876 *
2877 *
2878 * OUTPUT DATA STORE ( O D S )
2879 *
2880 * FUNCTION: TO OUTPUT AN OBJECT WORD TO THE OBJECT BUFFER OBUF,
2881 * AND TO OUTPUT ITS EQUIVALENT ASCII OCTAL STRING TO
2882 * BUFFER SLOT.
2883 *
2884 * ENTRY: A=OUTPUT OBJECT WORD
2885 *
2886 * EXIT : NO SPECIAL CONDITIONS
2887 *
003736 000000 A 2890 ODS ENTRY
003737 002000 A 2891 CALL OAB STORE OBJECT WORD IN OBUF
003740 004747 R
003741 027000 I 2892 LDB LPOW
003742 006463 A 2893 BT 000,ODS5-2 NO LIST OUTPUT
003743 004044 R
003744 054102 A 2894 STA ODS5+1
003745 017000 I 2895 PA LOP
003746 140465 A 2896 SUB LVC
003747 001016 A 2897 JANZ ODS5 NOT CONTROL WORD OUTPUT
003750 004046 R
003751 014073 A 2898 LDA ODS5+1
003752 004355 A 2899 LARA LS (&) = LOADER CODE
003753 001010 A 2900 JAZ ODS3 LOADER FUNCTION
003754 004006 R
003755 140482 A 2901 SUB THD
003756 001010 A 2902 JAZ ODS1 RELATIVE

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003757 003767 R
003760 140422 A 2903 SUB TWO
003761 001016 A 2904 JANZ DDS5
003762 004046 R
003763 010000 L 2905 LDA = ' ' ABSOLUTE
003764 005012 A 2906 TAB
003765 001000 A 2907 JMP DDS2
003766 004000 R
003767 006020 A 2908 DDS1 LDBI ' R '
003770 120322 A
003771 014035 A 2909 LDA DDS5+1
003772 140437 A 2910 SUB BS14
003773 001016 A 2911 JANZ DDS3+2 NOT PROGRAM RELATIVE
003774 004010 R
003775 005021 A 2912 TBA
003776 006020 A 2913 LDBI 'EL'
003777 142714 A
004000 006057 A 2914 DDS2 STAE SLOT+3
004001 010005 R
004002 006067 A 2915 STBE SLOT+4
004003 010006 R
004004 001000 A 2916 JMP DDS4
004005 004023 R
004006 006020 A 2917 DDS3 LDBI ' F '
004007 120306 A
004010 006067 A 2918 STBE SLOT+3 SET TYPE
004011 010005 R
004012 010467 A 2919 LDA SEVEN
004013 057000 I 2920 STA CLOP
004014 014032 A 2921 LDA DDS5+1
004015 020421 A 2922 LIB ONE
004016 002000 A 2923 CALL DDS6 OUTPUT REMAINDER OF CONTROL WORD
004017 004054 R
004020 014026 A 2924 LDA DDS5+1
004021 006456 A 2925 BT 056,DDS42 NO LOC-CNTR LIST FOR LOADER FUNCTION
004022 004041 R
004023 006020 A 2926 DDS4 LDBI '0'
004024 130240 A
004025 006067 A 2927 STBE SLOT+2 SET 0-VALUE
004026 010004 R
004027 005002 A 2928 TZB
004030 067000 I 2929 STB CLOP POINT TO 1ST WORD OF SLOT
004031 017000 I 2930 LDA RL
004032 001010 A 2931 JAZ DDS42
004033 004041 R
004034 002000 A 2932 CALL DDS6 OUTPUT PROGRAM LOCATION
004035 004054 R
004036 010000 L 2933 LDA = ' '
004037 002000 A 2934 CALL SLOP ROTATE LAST DIGIT
004040 006117 R
004041 006010 A 2935 DDS42 LDAI 12
004042 000014 A
004043 057000 I 2936 STA CLOP RESET CLOP TO SECOND FIELD
004044 001000 A 2937 JMP* DDS
004045 103736 R
004046 006010 A 2938 DDS5 LDAI **
004047 104046 R
004050 002000 A 2939 CALL LOCT
004051 003506 R
004052 001000 A 2940 JMP* DDS
004053 103736 R
2941 * OUTPUT 5 OCTAL CHARACTERS
004054 000000 A 2942 DDS6 ENTRY
004055 064012 A 2943 STB DDS8 LEADING ZERO SUPPRESS FLAG
004056 005012 A 2944 TAB
004057 010440 A 2945 LDA BS15
004060 004441 A 2946 LLRL 1 SET END MARK
004061 014006 A 2947 DDS7 LDA DDS8
004062 004443 A 2948 LLRL 3 GET NEXT OCTAL DIGIT
004063 001020 A 2949 JBE* DDS6 EXIT
004064 104054 R
004065 001010 A 2950 JAZ DDS9 SUPPRESS LEADING ZEROS
004066 004073 R
004067 006040 A 2951 INRI ** TURN OFF ZERO-SUPPRESSION
004070 104067 R
004071 004070 R 2952 DDS8 EQU *-1
004072 150467 A 2953 ANA SEVEN GET OCTAL CHARACTER
004073 120425 A 2954 ADD K20 '0'-' '
004074 120000 L 2955 DDS9 ADD = ' '
004075 006117 R
004076 001000 A 2957 JMP DDS7
004077 004061 R
2958 EJECT
2959 *****
2960 *
2961 * OUTPUT NAME ( O N E N )
2962 *
2963 * FUNCTION: TO OUTPUT A 4-WORD NAME LOAD ITEM
2964 *
2965 * ENTRY: A=LOADER CONTROL WORD(BITS 0-3=0)

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2966 *      B=NUMERIC VALUE * 06 02966
2967 *      ID, ID+1, ID+2 HOLD LEFT NORMALIZED NAME INASCII * 06 02967
2968 * * * 06 02968
2969 * EXIT : 4-WORD LOAD ITEM OUTPUT(6-BIT LOADER CODE = ASCII-0240): * 06 02969
2970 * * * 06 02970
2971 *      WORD 0: CONTROL WORD AND HIGH 4 BITS OF NAME * 06 02971
2972 *      WORD 1: NEXT 16 BITS OF NAME * 06 02972
2973 *      WORD 2: LOWER 16 BITS OF NAME * 06 02973
2974 *      WORD 3: NUMERIC VALUE ASSOCIATED WITH NAME * 06 02974
2975 * * * 06 02975
2976 *      PC SAVED * 06 02976
2977 * * * 06 02977
2978 * *****
004100 000000 A 2980 DNE0 ENTRY * 06 02980
004101 064067 A 2981 STB DNEV SAVE NUMERIC VALUE * 06 02981
004102 054037 A 2982 STA DNEC SAVE CONTROL WORD * 06 02982
004103 005001 A 2983 TZA * 06 02983
004104 030466 A 2984 LDX SIX * 06 02984
004105 006055 A 2985 DNE0 STAE DNEX,X CLEAR CHARACTERS * 06 02985
004106 004224 R * * *
004107 005344 A 2986 DXR * 06 02986
004110 001046 A 2987 JXNZ DNE0 * 06 02987
004111 004105 R * * *
004112 006010 A 2988 LDAI DNEX+6 * 06 02988
004113 004232 R * * *
004114 054107 A 2989 STA DNEX * 06 02989
004115 030464 A 2990 LDX THREE * 06 02990
004116 005344 A 2991 DNE1 DXR LOOP TO FORM RIGHT-NORMALIZED NAME * 06 02991
004117 006025 A 2992 LDSE ID,X * 06 02992
004120 010237 R * * *
004121 005001 A 2993 DNE2 TZA * 06 02993
004122 004470 A 2994 LLRL 24 * 06 02994
004123 004350 A 2995 LSRA 8 * 06 02995
004124 140000 L 2996 SUB = * * * 06 02996
004125 001010 A 2997 JAZ DNE3 PASS TRAILING BLANKS * 06 02997
004126 004133 R * * *
004127 057000 I 2998 STA* DNEX * 06 02998
004130 014073 A 2999 LDA DNEX * 06 02999
004131 005311 A 3000 DRR * 06 03000
004132 054071 A 3001 STA DNEX * 06 03001
004133 001026 A 3002 DNE3 JBNZ DNE2 * 06 03002
004134 004121 R * * *
004135 001046 A 3003 JXNZ DNE1 * 06 03003
004136 004116 R * * *
004137 014065 A 3004 LDA DNEX+1 * 06 03004
004140 004342 A 3005 LSRA 2 * 06 03005
004141 006120 A 3006 ADDI ** * 06 03006
004142 104141 R * * *
004143 004142 R 3007 DNEC EQU *-1 CONTROL WORD * 06 03007
004144 002000 A 3008 CALL LBS WORD-0 * 06 03008
004145 014064 A 3009 LDA DNEX+6 * 06 03009
004146 004546 A 3010 LLSR 6 * 06 03010
004147 014061 A 3011 LDA DNEX+5 * 06 03011
004150 004546 A 3012 LLSR 5 * 06 03012
004151 014056 A 3013 LDA DNEX+4 * 06 03013
004152 004544 A 3014 LLSR 4 * 06 03014
004153 064050 A 3015 STB DNEX * 06 03015
004154 004542 A 3016 LLSR 3 * 06 03016
004155 014051 A 3017 LDA DNEX+3 * 06 03017
004156 004546 A 3018 LLSR 2 * 06 03018
004157 014046 A 3019 LDA DNEX+2 * 06 03019
004160 004546 A 3020 LLSR 1 * 06 03020
004161 014043 A 3021 LDA DNEX+1 * 06 03021
004162 004456 A 3022 LLRL 14 * 06 03022
004163 002000 A 3023 CALL LBS WORD-1 * 06 03023
004164 003736 R * * *
004165 014036 A 3024 LDA DNEX * 06 03024
004166 002000 A 3025 CALL LBS WORD-3 * 06 03025
004167 003736 R * * *
004170 006010 A 3026 LDAI ** * 06 03026
004171 104170 R * * *
004172 004171 R 3027 DNEV EQU *-1 * 06 03027
004173 002000 A 3028 CALL LBS VALUE * 06 03028
004174 017000 I 3029 LDA 9PCW * 06 03029
004175 006443 A 3030 BT 043,DNE4 NO LIST OUTPUT * 06 03030
004176 004220 R * * *
004177 010000 L 3031 LDA = * * * 06 03031
004200 002000 A 3032 CALL SLOP * 06 03032
004201 006117 R * * *
004202 006020 A 3033 LDAI SLOP+17 * 06 03033
004203 010020 R * * *
004204 017000 I 3034 LDA ID TRANSFER ALPHA NAME * 06 03034
004205 056000 A 3035 STA 0,B * 06 03035
004206 017000 I 3036 LDA ID+1 * 06 03036
004207 056001 A 3037 STA 1,B * 06 03037
004210 017000 I 3038 LDA 10+2 * 06 03038
004211 056002 A 3039 STA 2,B * 06 03039
004212 006030 A 3040 LDXI 29 * 06 03040
004213 000035 A

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004214 006020 A 3041      LDBI      SLOT-9                06 03041
004215 007771 R
004216 002000 A 3042      CALL      LIST                06 03042
004217 003406 R
004220 002000 A 3043  ONE4    CALL      ILB                06 03043
004221 001642 R
004222 001000 A 3044      JMP*     DNEN                06 03044
004223 104100 R
004224      3045  DNEX    BSS          7                06 03045
      3046      EJECT                06 03046
      3047 *****                06 03047
      3048 *                06 03048
      3049 *                06 03049
      3050 *                06 03050
      3051 * FUNCTION: DPK OUTPUTS ASCII CHARS, 2/WORD, TO THE OBJECT TEXT
      3052 *          STREAM.                06 03051
      3053 *                06 03052
      3054 * ENTRY: TC=OUTPUT CHAR IN FORTRAN 6-BIT CODE
      3055 *          DPW=PREVIOUS CHAR OR ZERO, DN.ALTERNATE ENTRIES
      3056 *                06 03053
      3057 * EXIT : IF DPW=ASCII CHAR AT ENTRY: WORD (DPW,TC) OUTPUT TO BD
      3058 *          DPW=0                06 03054
      3059 *          OTHERWISE, DPW=TC(ASCII)
      3060 *                06 03055
      3061 *****                06 03056
      3062 *                06 03057
      3063 DPK      ENTRY                06 03058
      3064 LDA      TC          GET FORTRAN CHAR
      3065 LLSR     8
      3066 LDA      DPW
      3067 LLRL     8
      3068 JAP      DPK1          ONLY ONE CHARACTER PRESENT
      3069      CALL      DAB          OUTPUT 2 ASCII CHARS
      3070      TZA          CLEAR DPW
      3071 DPK1    STA      DPW          STORE CHAR IN DPW IF ONLY ONE
      3072      JMP*     DPK          EXIT
      3073      EJECT                06 03070
      3074 *****                06 03071
      3075 *                06 03072
      3076 *                06 03073
      3077 *                06 03074
      3078 * FUNCTION: TO OUTPUT A RELATIVE LOAD ITEM
      3079 *                06 03075
      3080 * ENTRY: A=RELATIVE ADDRESS
      3081 *                06 03076
      3082 * EXIT : A 2-WORD LOAD ITEM IS OUTPUT:
      3083 *                06 03077
      3084 *          WORD 1: 040000 CODE=2(RELATIVE)
      3085 *          POINTER=0(PROGRAM REGION)
      3086 *                06 03078
      3087 *          WORD 2: RELATIVE ADDRESS
      3088 *                06 03079
      3089 *****                06 03080
      3090 *                06 03081
      3091 DRE      ENTRY                06 03082
      3092 TAB          RELATIVE WORD TO B
      3093 LDA      BS14        LOADER CONTROL WORD TO A
      3094 CALL      DWD          OUTPUT 2-WORD LOAD ITEM TO BD DEVICE
      3095      JMP*     DRE          EXIT
      3096      EJECT                06 03093
      3097 *****                06 03094
      3098 *                06 03095
      3099 *                06 03096
      3100 *                06 03097
      3101 * FUNCTION: TO OUTPUT A LOAD ITEM DIRECTING THAT THE CURRENT CONTENTS
      3102 *          OF THE LOCATION COUNTER REPLACE ALL MEMBERS OF A CHAIN.
      3103 *                06 03098
      3104 * ENTRY: A=ADDRESS(PROGRAM RELATIVE) OF FIRST LINK OF CHAIN.THIS IS
      3105 *          ASSUMED TO REFER TO THE FIRST WORD OF A 2-WORD INSTRUCTION,
      3106 *          SO DSR ACTUALLY CHAINS THROUGH A+1.
      3107 *                06 03099
      3108 * EXIT : 2-WORD LOAD ITEM OUTPUT:
      3109 *                06 03100
      3110 *          WORD 1: 002000 SUBCODE=2(CHAIN)
      3111 *          POINTER=0(PROGRAM)
      3112 *                06 03101
      3113 *          WORD 2: A+1 PROGRAM RELATIVE ADDRESS OF FIRST LINK
      3114 *                06 03102
      3115 *          AT LOAD TIME, ALL LINKS OF THE CHAIN WILL BE REPLACED BY
      3116 *          THE CONTENTS OF THE LOAD LOCATION COUNTER, UNTIL A ZERO LINK
      3117 *          IS REACHED.
      3118 *                06 03103
      3119 *****                06 03104
      3120 *                06 03105
      3121 DSR      ENTRY                06 03106
      3122 INCR.    012          CHAIN START ADDRESS A+1 TO B
      3123 LDA      A+1        LOAD A WITH LOADER CONTROL WORD
      3124 CALL      DWS          OUTPUT CHAIN LOAD ITEM
      004250 000000 A 3091
      004251 005012 A 3092
      004252 010437 A 3093
      004253 002000 A 3094
      004254 004675 R
      004255 001000 A 3095
      004256 104250 R
      004257 000000 A 3121
      004260 005112 A 3122
      004261 014000 A 3123
      004262 002000 A 3124
      004263 004703 R
    
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004264 001000 A 3125      JMP*   DSR                      06 03125
004265 104257 R          EJECT                      06 03126
3126 *****
3127 *****
3128 *
3129 *          O U T P U T   J U M P   0 ( O T J )
3130 *
3131 * FUNCTION: TO OUTPUT 'JMP 0' TO THE OBJECT TEXT STREAM
3132 *
3133 * ENTRY: NO SPECIAL CONDITIONS
3134 *
3135 * EXIT : 'JMP 0' QUIPUT
3136 *
3137 *****
004266 000000 A 3139 DTJ   ENTRY                      06 03139
004267 010432 A 3140     LDA   KJMP      LOAD 'JMP'
004270 057000 I 3141     STA   KRPT
004271 002000 G 3142     CALL  DSR      OUTPUT 'JMP'
004272 003710 R          TZA
004273 005001 A 3143     CALL  DAP      OUTPUT 0
004274 002000 A 3144
004275 003710 R          JMP*   DTJ      EXIT
004276 001000 R          EJECT                      06 03146
004277 104266 R          *
3146 *          O U T P U T   O P E R A T O R   A N D   P O I N T E R
3147 *
004300 017000 I 3149 DTJ7  LDA   RT
004301 140467 A 3150     SUB   SEVEN
004302 001004 A 3151     JAM   DUTE
004303 004306 R          LDA   BS15      DUMMY, FORCE IND. BIT
004304 010440 A 3152     DATA 01006
004305 001006 A 3153     LDA   AS+1
004306 017000 I 3154     ORA   AF
004307 117000 I 3155     LARL  #BIT      A==R
004310 004460 A 3156     LARL  1
004311 004244 A 3157     ADD   BS14
004312 120437 A 3158     JMPM  DND      OUTPUT WORD
004313 002000 A 3159
004314 004675 R          OUTDEC DECR      1      (A):-1
004315 005301 A 3160     STA   KRPT
004316 057000 I 3161     JMP
004317 001000 A 3162
004320 000000 R          OUT   EQU   *-1
004321 057000 I 3164     STA   AS+1
004322 006150 A 3165     ANAI  0177377  REMOVE INDIRECT BIT
004323 177377 R          STA   AS
004324 057000 I 3166     ORA   BS+1
004325 137000 I 3167     LARL  7
004326 004247 A 3168     STA   AS+1
004327 057000 I 3169     INM
004330 002000 A 3170     LARL  LAR
004331 003166 R          LDA   IU
004332 017000 I 3171     SUB   THREE
004333 140464 A 3172     JAZ   DUT5     SUBR. CALL
004334 001010 A 3173
004335 004514 R          LDA   IM
004336 017000 I 3174     SUB   K2
004337 140422 A 3175     JAM   DUT5
004340 001004 A 3176
004341 004514 R          DTJB  LDA   RT
004342 017000 I 3177     SUB   K2
004343 140420 A 3178     JAZ   LTC     STRING BASE
004344 001010 A 3179
004345 004545 R          INCR  B      (B):1
004346 005102 A 3180     SUB   THREE
004347 140464 A 3181     JAZ   DUT1    DATA POOL
004348 001010 A 3182
004351 004357 R          LDS   DL
004352 007000 I 3183     DAR   DUT1
004353 005311 A 3184     JAZ   DUT1    COMMON
004354 001010 A 3185
004355 004357 R          TZR
004356 005002 A 3186     LDA   BI
004357 017000 I 3187     JAZ   DUT1    DATA WORD
004360 001010 A 3188
004361 004300 R          ANAI  07000
004362 006150 A 3189     JAZ   DUT8    DUMMY FORCE
004363 007000 R         
004364 001010 A 3190
004365 004556 R          DUT2  DECR      4      (X):-1
004366 005301 A 3191     LDA   AF      FIND POINTER
004367 017000 I 3192
004370 005144 A 3193 KIXR  INR
004371 140432 A 3194     SUB   KJMP    (512)
004372 001002 A 3195     JAM   *-2
004373 004373 R          ADD   KJMP    (512)
004374 120432 A 3196     STA   AF      RESIDUAL
004375 057000 I 3197
004376 005041 A 3198     TZA
004377 147000 I 3199     SUB   KRPT+1

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004400	001010	A	3200	JAZ	OUT9	MATCHED SIZE	05	03200
004401	004566	R						
004402	077000	I	3201	STX	XRPT+1		06	03201
004403	067000	I	3202	STB	XRPT		06	03202
004404	006010	A	3203	LDAI	06030		06	03203
004405	006030	A						
004406	002000	A	3204	CALL	DAB	OUTPUT 'LDXI'	06	03204
004407	003716	R						
004410	017000	I	3205	LDA	AT		06	03205
004411	140465	A	3206	SUB	FIVE		06	03206
004412	001016	A	3207	JANZ	JUTG	POSTPROGRAM ?	05	03207
004413	004470	R						
004414	017000	I	3208	LDA	I	YES	06	03208
004415	054234	A	3209	STA	OUTI		06	03209
004416	017000	I	3210	LDA	AF		06	03210
004417	054231	A	3211	STA	OUTAF	SAVE PARAMS	06	03211
004420	005001	A	3212	TZA			06	03212
004421	057000	I	3213	STA	NT		06	03213
004422	057000	I	3214	STA	IM		06	03214
004423	017000	I	3215	LDA	XRPT+1		06	03215
004424	002000	A	3216	CALL	CBA		06	03216
004425	000206	R						
004426	057000	I	3217	STA	ID+1		06	03217
004427	006010	A	3218	LDAI	'DD'		06	03218
004430	124704	A						
004431	057000	I	3219	STA	ID		06	03219
004432	010465	A	3220	LDA	FIVE		06	03220
004433	057000	I	3221	STA	EL		06	03221
004434	002000	A	3222	CALL	ASI	GET POSTPRG CHAIN HEAD	06	03222
004435	000000	R						
004436	017000	I	3223	LDA	AT		06	03223
004437	140422	A	3224	SUB	TWO		06	03224
004440	001010	A	3225	JAZ	OUTH		06	03225
004441	004447	R						
004442	017000	I	3226	LDA	AF		06	03226
004443	002000	A	3227	CALL	DRE	OUTPUT CHAIN	06	03227
004444	004250	R						
004445	001000	A	3228	JMP	OUTJ		06	03228
004446	004453	R						
004447	002000	A	3229	CALL	DAB	'DATA 0' FOR CHAIN END	06	03229
004450	003716	R						
004451	010421	A	3230	LDA	DNE		06	03230
004452	057000	I	3231	STA	AT		06	03231
004453	017000	I	3232	LDI	RL		06	03232
004454	005311	A	3233	DAR			06	03233
004455	057000	I	3234	STA	AF		06	03234
004456	002000	A	3235	CALL	SAX	RESTORE CHAIN ENTRY	06	03235
004457	005134	R						
004460	014171	A	3236	LDA	OUTI		06	03236
004461	057000	I	3237	STA	I	RESTORE I	06	03237
004462	002000	A	3238	CALL	LAX	RESTORE ENTRY	06	03238
004463	003165	R						
004464	014164	A	3239	LDA	OUTAF		06	03239
004465	057000	I	3240	STA	AF	RESTORE AF	06	03240
004466	001000	A	3241	JMP	OUTF-1		06	03241
004467	004477	R						
004470	017000	I	3242	LDI	XRPT		06	03242
004471	004244	A	3243	LRLA	4		06	03243
004472	110437	A	3244	DRA	8S14		06	03244
004473	027000	I	3245	LDB	XRPT+1		06	03245
004474	004051	A	3246	LRLB	9		06	03246
004475	002000	A	3247	CALL	OWD	OUTPUT ADDRESS	06	03247
004476	004675	R						
004477	017000	I	3248	LDA	AT		06	03248
004500	140467	A	3249	SUB	SEVEN		06	03249
004501	001010	A	3250	JAZ	OUTA	DUMMY	06	03250
004502	004636	R						
004503	017000	I	3251	LDA	AS+1		06	03251
004504	001004	A	3252	JAN	OUTA	INDIRECT	06	03252
004505	004636	R						
004506	017000	I	3253	LDI	AS		06	03253
004507	127000	I	3254	ADD	AF		06	03254
004510	002000	A	3255	JMPM	DAB	OUTPUT ABSOLUTE	06	03255
004511	003716	R						
004512	001000	A	3256	JMP*	OUT		06	03256
004513	104320	R						
004514	017000	I	3257	LDI	AT		06	03257
004515	140422	A	3258	SUB	K2		06	03258
004516	001010	A	3259	JAZ	OUTC		06	03259
004517	004541	R						
004520	140465	A	3260	SUB	FIVE		06	03260
004521	001010	A	3261	JAZ	OUTB		06	03261
004522	004342	R						
004523	017000	I	3262	LDA	AF		06	03262
004524	002000	A	3263	JMPM	DRE	OUTPUT RELATIVE	06	03263
004525	004250	R						
004526	017000	I	3264	LDA	AT		06	03264
004527	005311	A	3265	DAR			06	03265
004530	001010	A	3266	JAZ*	OUT		06	03266
004531	104320	R						
004532	017000	I	3267	LDI	RL		06	03267

004533	005311	A	3268	DAR				06	03268
004534	020464	A	3269	LDB	THREE			06	03269
004535	002000	A	3270	JMPM	DFT	DEFINE AF,AT		06	03270
004536	000274	R							
004537	001000	A	3271	JMP*	OUT			06	03271
004540	104320	R							
004541	002000	A	3272	OUT6	JMPM	OAB	OUTPUT ABSOLUTE 0	06	03272
004542	003716	R							
004543	001000	A	3273	JMP	OUTD			06	03273
004544	004532	R							
004545	017000	I	3274	OUTC	LDA	RL+1	MAKE DATA ADDR	06	03274
004546	020465	A	3275		LDB	FIVE		06	03275
004547	002000	A	3276		JMPM	DFT	DEFINE AF,AT	06	03276
004550	000274	R							
004551	127000	I	3277		ADD	IS	INCREMENT RL1 BY IS	06	03277
004552	057000	I	3278		STA	RL+1	V	06	03278
004553	003102	A	3279		INCR	2	(B):1	06	03279
004554	001000	A	3280		JMP	OUT1		06	03280
004555	004357	R							
004556	005101	A	3281	OUT8	INCR	1	(A):1	06	03281
004557	057000	I	3282		STA	AT	MAKE REL.	06	03282
004560	017000	I	3283		LDA	AS		06	03283
004561	006120	A	3284		ADDI	05000	MAKE B MOD.	06	03284
004562	005000	A							
004563	057000	I	3285		STA	AS		06	03285
004564	001000	A	3286		JMP	OUT2		06	03286
004565	004366	R							
004566	005021	A	3287	OUT9	TBA			06	03287
004567	147000	I	3288		SUB	XRPT		06	03288
004570	001010	A	3289		JAZ	OUTF-1	(X) AT OBJECT D.K.	06	03289
004571	004477	R							
004572	017000	I	3290		LDA	IM		FF	06 03290
004573	140422	A	3291		SUB	TWO		FF	06 03291
004574	001016	A	3292		JANZ	OUT9B	INTEGER ?	FF	06 03292
004575	004633	R							
004576	017000	I	3293		LDA	NT	YES	FF	06 03293
004577	001010	A	3294		JAZ	OUT9B	CONSTANT ?	FF	06 03294
004600	004633	R							
004601	005021	A	3295		TBA		YES	FF	06 03295
004602	004354	A	3296		LSRA	12		FF	06 03296
004603	140465	A	3297		SUB	FIVE		FF	06 03297
004604	001010	A	3298		JAZ	OUT9B	IGNORE STORE	FF	06 03298
004605	004633	R							
004606	054042	A	3299		STB	OUTAF	SAVE B	FF	06 03299
004607	006030	A	3300		LDXI	NT		FF	06 03300
004610	000420	A							
004611	017000	I	3301	OUT9L	LDA	10		06	03301
004612	145000	A	3302		SUB	01X	SEARCH LOW CORE CONSTANTS	FF	06 03302
004613	001016	A	3303		JANZ	OUT9A	FIND ?	FF	06 03303
004614	004625	R							
004615	017000	I	3304		LDA	03	YES	FF	06 03304
004616	006150	A	3305		ANAI	0170000		FF	06 03305
004617	1700000	A							
004620	005051	A	3306		MERG	051	CONSTRUCT DIRECT REF	FF	06 03306
004621	002000	A	3307		CALL	OAB		FF	06 03307
004622	003716	R							
004623	001000	A	3308		JMP*	OUT		FF	06 03308
004624	104320	R							
004625	005145	A	3309	OUT9A	INCR	045		FF	06 03309
004626	006140	A	3310		SUBI	NTE		FF	06 03310
004627	000500	A							
004630	001004	A	3311		JAN	OUT9L		FF	06 03311
004631	004611	R							
004632	024016	A	3312		LDB	OUTAF	RESTORE B	FF	06 03312
004633	067000	I	3313	OUT9B	STA	XRPT		FF	06 03313
004634	001000	A	3314		JMP	OUT3		06	03314
004635	004604	R							
004636	006010	A	3315	OUTA	LDAI	035000		06	03315
004637	035000	A							
004640	127000	I	3316		ADD	AF		06	03316
004641	002000	A	3317		JMPM	OAB	OUTPUT ABSOLUTE	06	03317
004642	003716	R							
004643	005001	A	3318		TZA			06	03318
004644	057000	I	3319		STA	AF		06	03319
004645	005301	A	3320		DECR	1	(A):-1	06	03320
004646	057000	I	3321		STA	XRPT		06	03321
004647	001000	A	3322		JMP	OUT4		06	03322
004650	004506	R							
004651			3323	OUTAF	BSS	1		06	03323
004652			3324	OUTI	BSS	1		06	03324
			3325		OBJECT			06	03325
			3326		*****			06	03326
			3327	*				06	03327
			3328	*	OVERLAY CALL (OVER)			06	03328
			3329	*				06	03329
			3330	*	FUNCTION: TO CALL IN THE NEXT REQUIRED OVERLAY			06	03330
			3331	*				06	03331
			3332	*	ENTRANCE: (A) = OVERLAY NUMBER			06	03332
			3333	*				06	03333
			3334	*	*****			06	03334
004653	000000	A	3336	OVER	ENTRY			06	03336

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004654 134017 A 3337 ERA OVE2
004655 001010 A 3338 JAZ* OVER CORRECT OVERLAY PRESENT
004656 104653 R
004657 134014 A 3339 ERA OVE2
004660 054013 A 3340 STA OVE2 NEW OVERLAY VALUE
004661 006120 A 3341 ADDI 'R0'
004662 151260 A
004663 054005 A 3342 STA OVE1 MAKE OVERLAY NAME
3343 OVLAY 1,'VS','FO','R0'
004664 006505 A
004665 000406 A
004666 001301 A
004667 153244 A
004670 143317 A
004671 151260 A
004672 004671 R 3344 OVE1 EQU *-1
004673 001000 A 3345 JMP* OVER
004674 104653 R
004674 177777 A 3346 OVE2 DATA -1 OVERLAY NUMBER PRESENT
3347 EJECT
3348 *****
3349 *
3350 * OUTPUT MEMORY WORD ( O W D ) *
3351 * *
3352 * FUNCTION: TO OUTPUT THE TWO WORDS OF OBJECT TEXT IN REGS AB, WHERE *
3353 * THE RESULT WILL LOAD A WORD OF MEMORY AT EXECUTION TIME. *
3354 * *
3355 * ENTRY: AB=OUTPUT *
3356 * *
3357 * EXIT : PROGRAM LOCATION COUNTER RL INCREMENTED *
3358 * OWS CALLED TO OUTPUT AB *
3359 * *
3360 *****
004675 000000 A 3361 OWD ENTRY
004676 002000 A 3362 CALL OWS
004677 004703 R
004700 047000 I 3364 INR RL BUMP LOCATION COUNTER
004701 001000 A 3365 JMP* OWD EXIT
004702 104675 R
3366 EJECT
3367 *****
3368 *
3369 * OUTPUT A B ( O W S ) *
3370 * *
3371 * FUNCTION: TO OUTPUT TWO WORDS OF OBJECT TEXT *
3372 * *
3373 * ENTRY: AB=OBJECT OUTPUT *
3374 * *
3375 * EXIT : OBJECT LINE LISTED ON LD DEVICE IF 'D' PARAMETER PRESENT *
3376 * ON '/FORTRAN' DIRECTIVE *
3377 * *
3378 *****
004703 000000 A 3380 OWS ENTRY
004704 064003 A 3381 STB OWSB SAVE WORD 2
004705 002000 A 3382 CALL OWS OUTPUT WORD 1
004706 003736 R
004707 006010 A 3383 LDAI 0 LOAD WORD 2
004710 000000 A
004710 3384 OWSB BES 0
004711 002000 A 3385 CALL OWS OUTPUT WORD 2
004712 003736 R
004713 002000 ? 3386 CALL SLIT TERMINATE OCTAL LIST LINE
004714 006075 R
004715 004254 A 3387 LRLA %BIT-4 GET %PCW BIT 3 IN SIGN POSITION OF A
004716 001002 A 3388 JAP OWS1 'D' PARAMETER ABSENT
004717 004723 R
004720 017000 I 3389 LDA %TERF
004721 002010 A 3390 JAZM LIST OCTAL LINE IF NO TERMINATING ERRORS
004722 003406 R
004723 002000 A 3391 OWS1 CALL ILB
004724 001642 R
004725 001000 A 3392 JMP* OWS EXIT
004726 104703 R
3393 EJECT
3394 *****
3395 *
3396 * PACK CHARACTER STRING ( P C K ) *
3397 * *
3398 * FUNCTION: TO PACK A CHARACTER INTO THE LOW ORDER OF A 3-WORD BLOCK *
3399 * *
3400 * ENTRY: X POINTS TO FIRST WORD OF BLOCK *
3401 * PC HOLDS CHAR COUNTER *
3402 * TC HOLDS CHAR TO BE PACKED *
3403 * *
3404 * EXIT : BLOCK SHIFTED LEFT 1 CHAR, TC SHIFTED IN AT RIGHT END *
3405 * A=PC=PC-1 *
3406 * *
3407 *****
004727 000000 A 3409 PCK ENTRY
004730 015000 A 3410 LDA 0,X
004731 025001 A 3411 LDB 1,X

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004732 004450 A 3412 LLRL 8
004733 055000 A 3413 STA 0,X WORD-1
004734 004150 A 3414 LSRB 8
004735 015002 A 3415 LDA 2,X
004736 004450 A 3416 LLRL 8
004737 065001 A 3417 STB 1,X WORD-2
004740 117000 I 3418 ORA 10 MERGE IN NEW CHAR
004741 055002 A 3419 STA 0,X RESTORE THIRD WORD
004742 017000 I 3420 LDA PC
004743 005311 A 3421 BAR DECREMENT CHAR COUNTER PC
004744 057000 I 3422 STA PC
004745 001800 A 3423 JMP* PCK
004746 104727 R 3424 EJECT
3425 *****
3426 *
3427 * PACK DATA SUB-FIELD ( PDS )
3428 *
3429 * FUNCTION: TO OUTPUT AN OBJECT WORD
3430 *
3431 * ENTRY: OBJECT WORD IN A
3432 * DBUF+1 POINTS TO LAST OUTPUT WORD IN OBJECT BUFFER DBUF
3433 * TERF HOLDS COUNT OF TERMINATING ERRORS
3434 *
3435 * EXIT : BUFFER DBUF IS OUTPUT IF FULL AT ENTRY TO PDS.
3436 * OBJECT WORD STORED IN DBUF AT NEXT CONSECUTIVE AVAILABLE
3437 * LOCATION.
3438 * DBUF+1 POINTS AT OBJECT WORD IN DBUF
3439 *
3440 *****
004747 000000 A 3442 PDS ENTRY
004750 054012 A 3443 STA PDS10 SAVE OBJECT WORD
3444 *****
3445 * NO OBJECT OUTPUT IF A TERMINATING ERROR HAS OCCURRED *
3446 *****
004751 017000 I 3447 LDB TERF GET TERMINATING ERROR FLAG TERF
004752 001016 A 3448 JNZ* PDS NO OUTPUT IF TERMINATING ERROR OCCURRED
004753 104747 R 3449 *****
3450 * WRITE AN OBJECT RECORD IF BUFFER FULL *
3451 *****
004754 037000 I 3452 LDX DBUF+1 POINT X AT LAST DATA WORD IN BUFFER
004755 005145 A 3453 INCR 045 BUMP POINTER X
004756 006140 A 3454 SUBI DBUF+60 END OF BUFFER ?
004757 021142 R 3455 JAZM NOT IF YES, OUTPUT OBJECT BUFFER
004760 002010 A 3456 *****
004761 007510 R 3457 * STORE OBJECT WORD IN OBJECT BUFFER DBUF *
3458 *****
004762 006010 A 3459 LDAB 0 RELOAD OBJECT WORD
004763 000000 A 3460 PDS10 YES 0 SAVE OBJECT WORD
004764 055000 A 3461 STA 0,X STORE IN OBJECT BUFFER
004765 077000 I 3462 STX DBUF+1 STORE POINTER TO LAST DATA WORD IN DBUF+1
004766 001000 A 3463 JMP* PDS EXIT
004767 104747 R 3464 EJECT
3465 *****
3466 *
3467 * PACK ERROR BUFFER ( PEB )
3468 *
3469 * FUNCTION: TO MAINTAIN AN ASCII SUBSTRING OF THE MOST RECENT
3470 * CHARACTERS INPUT FROM THE SOURCE RECORD. THIS SUBSTRING,
3471 * THE 12-CHARACTER BUFFER ERBF, IS OUTPUT WITH ERROR
3472 * MESSAGES TO AID IN ISOLATING THE ERROR.
3473 *
3474 * ENTRY: LAST SOURCE CHARACTER IN TC
3475 *
3476 * EXIT : (A) = 10
3477 * 12-CHAR STRING ERBF SHIFTED 1 CHAR LEFT; TC(ASCII) SHIFTED
3478 * INTO RIGHT BYTE.
3479 *
3480 *****
004770 000000 A 3482 PEB ENTRY
004771 017000 I 3483 LDA 10
004772 004550 A 3484 LLSR 8
004773 006067 A 3485 STBE ERBF+6
004774 007750 R 3486 LDX ERBF
004775 006030 A 3487 *****
004776 007742 R 3488 PEB10 LDA 0,X SHIFT STRING LEFT ONE CHARACTER
004777 015000 A 3489 LDB 1,X
005000 025001 A 3490 LLRL 8
005001 004450 A 3491 STA 0,X RESTORE SHIFTED WORD
005002 055000 A 3492 INCR 045 BUMP STRING POINTER
005003 005145 A 3493 SUBI ERBF+6 CHECK FINISH
005004 006140 A 3494 JAZM NOT LOOP BACK UNTIL FINISHED
005005 007750 R 3495 *****
005006 001004 A 3496 LDA PEB10
005007 004777 R 3497 *****
005010 017000 I 3498 LDA 10 EXIT WITH TC IN A

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005011 001000 A 3495      JMP*   PEB                      06 03495
005012 104770 R          EJECT                      06 03496
3496      *****                      06 03497
3497      *****                      06 03498
3498      *****                      06 03499
3499      PURGE TRIADS (PTR)          06 03500
3500      *****                      06 03501
3501      FUNCTION: TO OUTPUT ALL TRIADS IN THE TRIAD TABLE 06 03502
3502      *****                      06 03503
3503      ENTRY: NO SPECIAL CONDITION 06 03504
3504      *****                      06 03505
3505      EXIT: NO SPECIAL CONDITION 06 03506
3506      *****                      06 03507
3507      *****                      06 03508
005013 000000 A 3508 PTR   ENTRY                      06 03509
005014 017000 I 3509      LDA     IT      ASSIGNMENT LIMIT 06 03510
005015 147000 I 3510      SUB     JT      TRIAD BASE      06 03511
005016 001010 A 3511      JAZ     PTR1                      06 03512
005017 005027 R          *****                      06 03513
005020 017000 I 3512      LDA     SPFL                      06 03514
005021 001010 A 3513      JAZ     PTR1      NO OUTPUT BEFORE SPECIFICATION ASSIGNMENT 06 03515
005022 005027 R          *****                      06 03516
005023 002000 A 3514      CALL*  DTR                      06 03517
005024 110640 R          *****                      06 03518
005025 001000 A 3515      JMP     PTR+1                    06 03519
005026 005014 R          *****                      06 03520
005027 017000 I 3516 PTR1  LDA     TSFL                      06 03521
005030 150462 A 3517      ANA     LHW                      06 03522
005031 057000 I 3518      STA     TSFL                      06 03523
005032 001000 A 3519      JMP*   PTR      RESET TEMP LOGIC 06 03524
005033 105013 R          *****                      06 03525
3520      EJECT                      06 03526
3521      *****                      06 03527
3522      *****                      06 03528
3523      LEFT PARENTHESIS TEST (PTS) 06 03529
3524      *****                      06 03530
3525      FUNCTION: TO TEST THAT TERMINATOR TC IS '<' 06 03531
3526      *****                      06 03532
3527      ENTRY: TERMINATOR IN TC      06 03533
3528      *****                      06 03534
3529      EXIT : A=0 IF TC='<'         06 03535
3530      OTHERWISE EXIT THROUGH TST AND TER1 06 03536
3531      *****                      06 03537
3532      *****                      06 03538
005034 000000 A 3534 PTS  ENTRY                      06 03539
005035 010000 L 3535      LDA     = '<'                      06 03540
005036 002000 A 3536      CALL   TST      DOES TC = '<' ? 06 03541
005037 007465 R          *****                      06 03542
005040 001000 A 3537      JMP*   PTS      YES, RETURN      06 03543
005041 105034 R          *****                      06 03544
3538      EJECT                      06 03545
3539      *****                      06 03546
3540      *****                      06 03547
3541      SAVE / RESTORE SCAN PARAMETERS 06 03548
3542      *****                      06 03549
3543      *****                      06 03550
3544      *****                      06 03551
3545      FUNCTION: TO SAVE AND RESTORE SOURCE SCAN PARAMETERS 06 03552
3546      *****                      06 03553
3547      ENTRY: RCCS: SAVE ENTRY      06 03554
3548      RCC : RESTORE ENTRY          06 03555
3549      *****                      06 03556
3550      EXIT: RCCS SAVES: INBP: SOURCE BUFFER POINTER 06 03557
3551      ICRR: READ/REREAD SWITCH     06 03558
3552      TC: TERMINATING CHAR         06 03559
3553      TC+1: PREVIOUS TERMINATING CHAR 06 03560
3554      DF: DELIMITER FLAG          06 03561
3555      *****                      06 03562
3556      RCC: RESTORES ABOVE PARAMETERS 06 03563
3557      CLEARS ERBF AND PACKS TC IN IT 06 03564
3558      SETS END-OF-LINE SWITCH TO READ NEXT LINE 06 03565
3559      *****                      06 03566
3560      *****                      06 03567
005042 000000 A 3562 RCCS  ENTRY                      06 03568
005043 017000 I 3563      LDA     INBP                      06 03569
005044 054016 A 3564      STA     RCC1      SAVE SOURCE BUFFER POINTER INBP 06 03570
005045 017000 I 3565      LDA     ICRR                      06 03571
005046 054017 A 3566      STA     RCC2      SAVE READ/REREAD SWITCH ICRR 06 03572
005047 017000 I 3567      LDA     TC                      06 03573
005050 054020 A 3568      STA     RCC3      SAVE TERMINATING CHAR TC 06 03574
005051 017000 I 3569      LDA     TC+1                    06 03575
005052 054023 A 3570      STA     RCC4      SAVE PREVIOUS TERMINATOR TC+1 06 03576
005053 017000 I 3571      LDA     DF                      06 03577
005054 054024 A 3572      STA     RCC5      SAVE DELIMITED FLAG 06 03578
005055 001000 A 3573      JMP*   RCCS                      06 03579
005056 105042 R          *****                      06 03580
005057 000000 A 3574 RCC  ENTRY                      06 03581
005060 002000 A 3575      CALL   ZEB      BLANK ERROR BUFFER 06 03582
005061 007722 R          *****                      06 03583
005062 006010 A 3576      LDAI   0                      06 03584
005063 000000 A          *****                      06 03585

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005063      3577 RCC1  BES  0
005064 057000 I 3578 STA  INBP RESTORE SOURCE BUFFER POINTER INBP
005065 006010 A 3579 LDAI  0
005066 000000 A
005066      3580 RCC2  BES  0
005067 057000 I 3581 STA  ICRR RESTORE READ/REREAD SWITCH ICRR
005070 006010 A 3582 LDAI  0
005071 000000 A
005071      3583 RCC3  BES  0
005072 057000 I 3584 STA  TC RESTORE TERMINATING CHAR TC
005073 002000 A 3585 CALL  PEP STORE TC IN ERROR BUFFER ERBF
005074 004770 R
005075 006010 A 3586 LDAI  0
005076 000000 A
005076      3587 RCC4  BES  0
005077 057000 I 3588 STA  TC+1 RESTORE PREVIOUS TERMINATING CHAR TC+1
005100 006010 A 3589 LDAI  0
005101 000000 A
005101      3590 RCC5  BES  0
005102 057000 I 3591 STA  DF RESTORE DELIMITER FLAG DF
005103 006010 A 3592 LDAI  ICORNL
005104 001270 R
005105 057000 I 3593 STA  EDLSW SET END-OF-LINE SW TO READ NEXT LINE
005106 001000 A 3594 JMP*  RCC EXIT
005107 105057 R
3595 EJECT
3596 *****
3597 *
3598 * SET REREAD SWITCH (RCH)
3599 *
3600 * FUNCTION: TO SET THE READ/REREAD CHAR SWITCH ICRR TO THE REREAD
3601 * POSITION. THIS SETS THE SCAN BACK 1 CHAR, SO THE LAST
3602 * CHAR WILL BE INPUT AGAIN.
3603 *
3604 * ENTRY: NO SPECIAL CONDITIONS
3605 *
3606 * EXIT : ICRR POINTS TO ICRE
3607 * A SAVED
3608 *****
005110 000000 A 3610 RCH ENTRY
005111 006020 R 3611 LDAI  ICRE
005112 001200 R
005113 067000 I 3612 STA  ICRR SET SWITCH TO REREAD POSITION
005114 001000 A 3613 JMP*  RCH EXIT
005115 105110 R
3614 EJECT
3615 *****
3616 *
3617 * RIGHT INPUT OPERATOR (RIO)
3618 *
3619 * FUNCTION: TO TERMINATE SCAN OF AN ITEM WHICH ENDS IN ')'
3620 *
3621 * ENTRY: NO SPECIAL CONDITIONS
3622 *
3623 * EXIT : SCAN PASSES ')' AND CALLS ICH AND FND TO INPUT
3624 * FOLLOWING OPERATOR.
3625 * CH+1 DECREMENTED BY 020
3626 * A=0
3627 *
3628 *****
005116 000000 A 3630 RIO ENTRY
005117 010000 L 3631 LDA  #'
005120 002000 A 3632 CALL  IST TERMINATOR MUST BE ')'
005121 007465 R
005122 002000 A 3633 CALL  ICH INPUT FOLLOWING CHAR
005123 001214 R
005124 002000 A 3634 CALL  FND PROCESS OPERATOR
005125 000521 R
005126 017000 I 3635 LDA  EM+1
005127 140425 A 3636 SUB  020 DECREMENT HIERARCHY BASE EM+1
005130 057000 I 3637 STA  EM+1
005131 005001 A 3638 LDA
005132 001000 R 3639 JMP*  RIO CLEAR A
005133 105116 R
3640 EJECT
3641 *****
3642 *
3643 * STORE ASSIGNMENT ENTRY (SAX)
3644 *
3645 * FUNCTION: TO FORMAT, PACK, AND STORE AN ENTRY IN THE ASSIGNMENT
3646 * TABLE.
3647 *
3648 * ENTRY: I POINTS TO ENTRY LOCATION IN ASSIGNMENT TABLE.
3649 * ENTRY PARAMETERS LOADED: AC,LC,IF,IO=CALL,INT,IN,IO-
3650 * ID-1, ID-ID+1.
3651 *
3652 * EXIT : I UNCHANGED
3653 *
3654 *****
005134 000000 A 3656 SAX ENTRY
005135 000000 A 3657 *****

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3658 * PACK WORD 2 *
3659 *****
005135 017000 I 3660 LDA NT GET NT
005136 004243 A 3661 LRLA 3 AT FIELD IS 3 BITS
005137 117000 I 3662 DRA 3 AT GET AT
005140 004243 A 3663 LRLA 3 IM FIELD IS 3 BITS
005141 117000 I 3664 DRA 1M GET IM
005142 004242 A 3665 LRLA 2 IU FIELD IS 2 BITS
005143 117000 I 3666 DRA IU GET IU
005144 004247 A 3667 LRLA 7 SHIFT WORD 2 TO POSITION
005145 117000 I 3668 DRA EL APPEND ENTRY LENGTH
005146 027000 I 3669 LDB I POINT B AT ITEM IN TABLE
005147 056002 A 3670 STA 2,B STORE WORD 2
3671 *****
3672 * STORE WORDS 1,3,4 *
3673 *****
005150 017000 I 3674 LDA CL CL TO WORD 1
005151 056001 A 3675 STA 1,B
005152 017000 I 3676 LDA EL
005153 140423 A 3677 SUB FOUR 3 LENGTH ID
005154 001004 A 3678 JAM SAX5
005155 005202 R
005156 017000 I 3679 LDA ID ID TO WORD 3
005157 056003 A 3680 STA 3,B
005160 017000 I 3681 LDA EL
005161 140465 A 3682 SUB FIVE 0 OR 1 WORD ID
005162 001004 A 3683 JAM SAX5
005163 005202 R
005164 017000 I 3684 LDA ID+1
005165 056004 A 3685 STA 4,B
005166 017000 I 3686 LDA EL
005167 140466 A 3687 SUB SIX 2-WORD ID
005170 001004 A 3688 JAM SAX5
005171 005202 R
005172 017000 I 3689 LDA ID+2
005173 056005 A 3690 STA 5,B
005174 017000 I 3691 LDA EL
005175 140467 A 3692 SUB SEVEN 3-WORD ID
005176 001004 A 3693 JAM SAX5
005177 005202 R
005200 017000 I 3694 LDA ID+3
005201 056006 A 3695 STA 6,B
005202 017000 I 3696 SAX5 LDA IU
005203 130422 A 3697 ERA K2 TEST FOR ARRAY NAME
005204 005311 A 3698 DAR
005205 001002 A 3699 JAP SAX10
005206 005212 R
3700 *****
3701 * ITEM IS AN ARRAY NAME *
3702 *****
005207 017000 I 3703 LDA LF GET LF
005210 056000 A 3704 STA 0,B STORE IN WORD 0
005211 005012 A 3705 TAB POINT B AT ARRAY HEADER ITEM
005212 017000 I 3706 SAX10 LDA AF GET AF
005213 056000 A 3707 STA 0,B STORE IN WORD 0 (OF HEADER, IF ARRAY NAME)
005214 001000 A 3708 JMP SAX EXIT
005215 105134 R
3709 EJECT
3710 * SDX STORE DD ENTRIES
3711 SDX ENTRY
3712 SDX LDB 0
3713 TBA
3714 TBA
3715 SUB DT
3716 JAP SDX1 INSIDE TABLE
3717 TBA
3718 SUB JT
3719 SUB THREE
3720 JAMM TOP
3721 SDX1 STB DT NEW TOP
3722 SDX1 LDA DS STMT. NMBR
3723 SDX1 STA 0,2
3724 SDX1 LDA DV VARIABLE
3725 SDX1 STA 1,2
3726 SDX1 LDA DH HIGH
3727 SDX1 STA 2,2
3728 SDX1 LDA DI INCREMENT
3729 SDX1 STA 3,2
3730 SDX1 LDA DR RETURN
3731 SDX1 STA 4,2
3732 SDX1 JMP SAX
3733 EJECT
3734 *****
3735 *
3736 * STATEMENT IDENTIFICATION (SID) *
3737 *
3738 * FUNCTION: TO IDENTIFY A STATEMENT BY ITS INITIAL CHARACTERS *
3739 *
3740 * ENTRY: REPLACEMENT, DD, AND STATEMENT-FUNCTION STATEMENTS HAVE *

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3741 *          ALREADY BEEN IDENTIFIED IN (STS)          * 06 03741
3742 *          *          *          *          *          * 06 03742
3743 * EXIT: TO STATEMENT PROCESSOR THRU STSW AFTER CALLING FNS * 06 03743
3744 *          STSW = PROCESSOR ADDRESS          * 06 03744
3745 *          MF = MODE (FOR MODE ORIENTED STATEMENTS) * 06 03745
3746 *          NAME = 1ST TWO CHARACTERS OF I.D.      * 06 03746
3747 *          *          *          *          *          * 06 03747
3748 *          *          *          *          *          * 06 03748
005246 005001 A 3750 SID TZA          CFPTSW          ENABLE FINAL '.' TEST IN FND 06 03750
005247 057000 I 3751 STA          ERBF+5          *          *          * 06 03751
005250 017000 I 3752 LDA          'ND'          *          *          * 06 03752
005251 006130 A 3753 ERAI          *          *          *          *          * 06 03753
005252 147304 A          *          *          *          *          *          *
005253 001010 A 3754          JANZ          SID1          NOT 'END'          06 03754
005254 005271 R          *          *          *          *          *          *
005255 006017 A 3755          LDAE          ERBF+4          *          *          * 06 03755
005256 007746 R          *          *          *          *          *          *
005257 006130 A 3756          ERAI          0177305          'D'          *          * 06 03756
005260 177305 A          *          *          *          *          *          *
005261 001010 A 3757          JANZ          SID1          NOT 'END'          06 03757
005262 005271 R          *          *          *          *          *          *
005263 006010 A 3758          LDAI          END          *          *          * 06 03758
005264 010622 R          *          *          *          *          *          *
005265 057000 I 3759          STA          STSW          *          *          * 06 03759
005266 010421 A 3760          LDA          ONE          *          *          * 06 03760
005267 001000 A 3761          JMP          SID2          *          *          * 06 03761
005270 005305 R          *          *          *          *          *          *
005271 002000 A 3762 SID1 CALL          RCC          *          *          * 06 03762
005272 005057 R          *          *          *          *          *          *
005273 006010 A 3763          LDAI          SIDTBX          *          *          * 06 03763
005274 005666 R          *          *          *          *          *          *
005275 002000 A 3764          CALL          SIS          SCAN STATEMENT TABLE 06 03764
005276 005670 R          *          *          *          *          *          *
005277 015001 A 3765          LDA          1,X          (X) = SIDTB ADDRESS 06 03765
005300 057000 I 3766          STA          STSW          *          *          * 06 03766
005301 015000 A 3767          LDA          2,X          GET 1ST TWO CHARACTERS OF I.D. 06 03767
005302 057000 I 3768          STA          NAME          *          *          * 06 03768
005303 015000 A 3769          LDA          3,X          *          *          * 06 03769
005304 004351 A 3770          LSRA          9          GET SPECIFICATION LEVEL 06 03770
005305 002000 A 3771 SID2 CALL          FNS          *          *          * 06 03771
005306 000572 R          *          *          *          *          *          *
005307 017000 I 3772          LDA*         STSW          *          *          * 06 03772
005310 057000 I 3773          STA          STSW          *          *          * 06 03773
005311 001000 A 3774          JMP*         STSW          TO PROCESSOR 06 03774
005312 110401 R          *          *          *          *          *          *
3775          EJECT          *          *          *          *          * 06 03775
3776          *          *          *          *          *          * 06 03776
3777          *          *          *          *          *          * 06 03777
3778          *          *          *          *          *          * 06 03778
3779          *          *          *          *          *          * 06 03779
3780          *          *          *          *          *          * 06 03780
3781          *          *          *          *          *          * 06 03781
3782          *          *          *          *          *          * 06 03782
3783          *          *          *          *          *          * 06 03783
3784          *          *          *          *          *          * 06 03784
3785          *          *          *          *          *          * 06 03785
3786          *          *          *          *          *          * 06 03786
3787          *          *          *          *          *          * 06 03787
3788          *          *          *          *          *          * 06 03788
005313 000203 A 3790          SIDTB          Q          7,3,6          *          *          * 06 03790
005314 010634 R 3791          DATA          MOD          *          *          * 06 03791
005315 144716 A 3792          DATA          'INTEGER'          *          *          * 06 03792
005316 152305 A          *          *          *          *          *          *
005317 143705 A          *          *          *          *          *          *
005320 151240 A          *          *          *          *          *          *
005321 000205 A 3793          Q          0,2,5          *          *          * 06 03793
005322 010634 R 3794          DATA          MOD          *          *          * 06 03794
005323 144716 A 3795          DATA          'INTEGER*2'          *          *          * 06 03795
005324 152305 A          *          *          *          *          *          *
005325 143705 A          *          *          *          *          *          *
005326 151252 A          *          *          *          *          *          *
005327 131240 A          *          *          *          *          *          *
005330 000605 A 3796          Q          0,6,5          *          *          * 06 03796
005331 010634 R 3797          DATA          MOD          *          *          * 06 03797
005332 144716 A 3798          DATA          'INTEGER*4'          *          *          * 06 03798
005333 152305 A          *          *          *          *          *          *
005334 143705 A          *          *          *          *          *          *
005335 151252 A          *          *          *          *          *          *
005336 132240 A          *          *          *          *          *          *
005337 000300 A 3799          Q          0,3,0          *          *          * 06 03799
005340 010634 R 3800          DATA          MOD          *          *          * 06 03800
005341 151305 A 3801          DATA          'REAL'          *          *          * 06 03801
005342 140714 A          *          *          *          *          *          *
005343 000302 A 3802          Q          0,3,2          *          *          * 06 03802
005344 010634 R 3803          DATA          MOD          *          *          * 06 03803
005345 151305 A 3804          DATA          'REAL*4'          *          *          * 06 03804
005346 140714 A          *          *          *          *          *          *
005347 125264 A          *          *          *          *          *          *
005350 000402 A 3805          Q          0,4,2          *          *          * 06 03805
005351 010634 R 3806          DATA          MOD          *          *          * 06 03806
005352 151305 A 3807          DATA          'REAL*8'          *          *          * 06 03807
005353 140714 A          *          *          *          *          *          *

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Address	Hex	Char	Line No	Label	Code	Text	Page	Line
005354	125270	A						
005355	000413	A	3808		Q	0,4,11	06	03808
005356	010634	R	3809		DATA	MOD	06	03809
005357	142317	A	3810		DATA	'DOUBLEPRECISION'	06	03810
005360	152702	A						
005361	146305	A						
005362	150322	A						
005363	142703	A						
005364	144723	A						
005365	144717	A						
005366	147240	A						
005367	000503	A	3811		Q	0,5,3	06	03811
005370	010634	R	3812		DATA	MOD	06	03812
005371	141717	A	3813		DATA	'COMPLEX'	06	03813
005372	146720	A						
005373	146305	A						
005374	154240	A						
005375	000505	A	3814		Q	0,5,5	06	03814
005376	010634	R	3815		DATA	MOD	06	03815
005377	141717	A	3816		DATA	'COMPLEX*8'	06	03816
005400	146720	A						
005401	146305	A						
005402	154252	A						
005403	134240	A						
005404	000203	A	3817		Q	0,2,3	06	03817
005405	010634	R	3818		DATA	MOD	06	03818
005406	146317	A	3819		DATA	'LOGICAL'	06	03819
005407	143711	A						
005410	141701	A						
005411	146240	A						
005412	000203	A	3820		Q	0,2,5	06	03820
005413	010634	R	3821		DATA	MOD	06	03821
005414	146317	A	3822		DATA	'LOGICAL*2'	06	03822
005415	143711	A						
005416	141701	A						
005417	146252	A						
005420	131240	A						
	005420	R	3823	SIDTB1 EQU	*-1	END OF MODE-ORIENTED STATEMENTS	06	03823
005421	004002	A	3824		Q	4,0,2	06	03824
005422	010622	R	3825		DATA	ASSI	06	03825
005423	140723	A	3826		DATA	'ASSIGN'	06	03826
005424	151711	A						
005425	143716	A						
005426	004005	A	3827		Q	4,0,5	06	03827
005427	010625	R	3828		DATA	SSP	06	03828
005430	141301	A	3829		DATA	'BACKSPACE'	06	03829
005431	141713	A						
005432	151720	A						
005433	140703	A						
005434	142640	A						
005435	000005	A	3830		Q	0,0,5	06	03830
005436	010624	R	3831		DATA	BLD	06	03831
005437	141314	A	3832		DATA	'BLOCKDATA'	06	03832
005440	147703	A						
005441	145704	A						
005442	140724	A						
005443	140640	A						
005444	007000	A	3833		Q	7,0,0	06	03833
005445	010626	R	3834		DATA	CAL	06	03834
005446	141701	A	3835		DATA	'CALL'	06	03835
005447	146314	A						
005450	000002	A	3836		Q	0,0,2	06	03836
005451	010625	R	3837		DATA	CMH	06	03837
005452	141717	A	3838		DATA	'COMMON'	06	03838
005453	146715	A						
005454	147716	A						
005455	004005	A	3839		Q	4,0,5	06	03839
005456	005667	R	3840		DATA	SIDTBX+1	06	03840
005457	141717	A	3841		DATA	'CONTINUE'	06	03841
005460	147324	A						
005461	144716	A						
005462	152705	A						
005463	177777	A	3842		DATA	-1	06	03842
005464	002000	A	3843		Q	2,0,0	06	03843
005465	010626	R	3844		DATA	DAT	06	03844
005466	142301	A	3845		DATA	'DATA'	06	03845
005467	152301	A						
005470	004003	A	3846		Q	4,0,3	06	03846
005471	010627	R	3847		DATA	DEC	06	03847
005472	142305	A	3848		DATA	'DECODEX'	06	03848
005473	141717	A						
005474	142305	A						
005475	124240	A						
005476	004006	A	3849		Q	4,0,6	06	03849
005477	010635	R	3850		DATA	DEF	06	03850
005500	142305	A	3851		DATA	'DEFINEFILE'	06	03851
005501	143311	A						
005502	147305	A						
005503	143311	A						
005504	146305	A						
005505	000005	A	3852		Q	0,0,5	06	03852

E.2 VORTEX LISTINGS

V\$FORT

PROGRAM PAGE 51

LISTING PAGE ( 51 )

005506	010627	R	3853	DATA	DMN		06	03853
005507	142311	A	3854	DATA	'DIMENSION'		06	03854
005510	146705	A						
005511	147323	A						
005512	144717	A						
005513	147240	A						
005514	004003	A	3855		4,0,3		06	03855
005515	010633	R	3856	DATA	ENC		06	03856
005516	142716	A	3857	DATA	'ENCODEC'		06	03857
005517	141717	A						
005520	142305	A						
005521	124240	A						
005522	004003	R	3858		4,0,3		06	03858
005523	010633	R	3859	DATA	EFI		06	03859
005524	142716	A	3860	DATA	'ENDFILE'		06	03860
005525	142308	A						
005526	144714	A						
005527	142640	A						
005530	010601	R	3861		8,0,1		06	03861
005531	010640	R	3862	DATA	ENT		06	03862
005532	142716	A	3863	DATA	'ENTRY'		06	03863
005533	152332	A						
005534	154640	A						
005535	000007	A	3864		0,0,7		06	03864
005536	010630	R	3865	DATA	EQU		06	03865
005537	142721	A	3866	DATA	'EQUIVALENCE'		06	03866
005540	152711	A						
005541	153301	A						
005542	146305	A						
005543	147303	A						
005544	142640	A						
005545	000004	A	3867		0,0,4		06	03867
005546	010631	R	3868	DATA	EXT		06	03868
005547	142730	A	3869	DATA	'EXTERNAL'		06	03869
005550	152333	A						
005551	151316	A						
005552	140714	A						
005553	004001	A	3870		4,0,1		06	03870
005554	010634	R	3871	DATA	END		06	03871
005555	143311	A	3872	DATA	'FINDC'		06	03872
005556	147304	A						
005557	124240	A						
005560	005003	A	3873		5,0,3		06	03873
005561	010622	R	3874	DATA	FOR		06	03874
005562	143317	A	3875	DATA	'FORMATC'		06	03875
005563	151017	A						
005564	140724	A						
005565	124240	A						
005566	000004	A	3876		0,0,4		06	03876
005567	010632	R	3877	DATA	FUN		06	03877
005570	143325	A	3878	DATA	'FUNCTION'		06	03878
005571	147303	A						
005572	152311	A						
005573	147716	A						
005574	004000	A	3879		4,0,0		06	03879
005575	010635	R	3880	DATA	GOT		06	03880
005576	143717	A	3881	DATA	'GOTD'		06	03881
005577	152317	A						
005580	007003	A	3882		7,0,0		06	03882
005581	010637	R	3883	DATA	IFT		06	03883
005582	123343	A	3884	DATA	'IF'		06	03884
005583	144706	A						
005584	000006	A	3885		0,0,4		06	03885
005585	010638	R	3886	DATA	IMP		06	03886
005586	144715	A	3887	DATA	'IMPLICIT'		06	03887
005587	153314	A						
005588	144724	A						
005589	000003	A	3888		0,0,0		06	03888
005590	010639	R	3889	DATA	INB		06	03889
005591	147301	A	3890	DATA	'NAME'		06	03890
005592	146705	A						
005593	004001	A	3891		1,0,1		06	03891
005594	010641	R	3892	DATA	NET		06	03892
005595	150331	A	3893	DATA	'HOUSE'		06	03893
005596	152723	A						
005597	142640	A						
005598	004001	A	3894		4,0,1		06	03894
005599	010642	R	3895	DATA	NEW		06	03895
005600	151305	A	3896	DATA	'REARC'		06	03896
005601	140704	A						
005602	124240	A						
005603	004003	A	3897		4,0,2		06	03897
005604	010643	R	3898	DATA	RET		06	03898
005605	151305	A	3899	DATA	'RETURN'		06	03899
005606	152333	A						
005607	151316	A						
005608	004003	A	3900		4,0,2		06	03900
005609	010644	R	3901	DATA	REW		06	03901
005610	151305	A	3902	DATA	'REWIND'		06	03902
005640	153711	A						

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005641 147304 A
005642 004000 A 3903 Q 4,0,0 06 03903
005643 010646 R 3904 DATA STP 06 03904
005644 151724 A 3905 DATA *STOP* 06 03905
005645 147720 A
005646 000006 A 3906 Q 0,0,6 06 03906
005647 010636 R 3907 DATA SUB 06 03907
005650 151725 A 3908 DATA *SUBROUTINE* 06 03908
005651 141322 A
005652 147725 A
005653 152311 A
005654 147303 A
005655 000001 A 3909 Q 0,0,1 06 03909
005656 010637 R 3910 DATA TIPR 06 03910
005657 152311 A 3911 DATA *TITLE* 06 03911
005660 152314 A
005661 142640 A
005662 004002 A 3912 Q 4,0,2 06 03912
005663 010647 R 3913 DATA WRT 06 03913
005664 153722 A 3914 DATA *WRITE(* 06 03914
005665 144724 A
005666 142650 A
005666 R 3915 SIDTBX EQU *-1 END OF TABLE 06 03915
005667 006162 R 3916 DATA CRT 06 03916
3917 EJECT 06 03917
3918 ***** 06 03918
3919 * 06 03919
3920 * STATEMENT I.D. SCAN (SIS) * 06 03920
3921 * 06 03921
3922 * FUNCTION: TO SCAN THE STATEMENT-ID TABLE FOR A MATCH * 06 03922
3923 * 06 03923
3924 * ENTRY: (A) = TABLE LIMIT (SIDTB1 OR SIDTBX) * 06 03924
3925 * 06 03925
3926 * EXIT: (X) = POINTER TO MATCHING ENTRY * 06 03926
3927 * MF = MODE OF STATEMENT (FOR MODE ORIENTED STATEMENTS) * 06 03927
3928 * 06 03928
3929 * ERRORS: TER4 IF CHARACTERS 1-4 NOT IN TABLE * 06 03929
3930 * ER12 IF SPELLING ERROR (INCORRECT CHARACTERS BEYOND 4) * 06 03930
3931 * 06 03931
3932 ***** 06 03932
005670 000000 A 3934 SIS ENTRY 06 03934
005671 054104 A 3935 STA SIS8 LABEL LIMIT 06 03935
005672 010423 A 3936 LDA FOUR 06 03936
005673 002000 A 3937 CALL IAC GET UST FOUR CHARACTERS 06 03937
005674 001163 R
005675 006030 A 3938 LDXI SIDTB 06 03938
005676 005313 R
005677 015002 A 3939 SIS1 LDA 2,X 06 03939
005700 137000 I 3940 ERA PC+2 06 03940
005701 001018 A 3941 JANZ SIS2 NO MATCH CHARACTERS 1,2 06 03941
005702 005707 R
005703 015003 A 3942 LDA 3,X 06 03942
005704 137000 I 3943 ERA PC+3 06 03943
005705 001010 A 3944 JAZ SIS3 MATCH ON CHARACTERS 1-4 06 03944
005706 005713 R
005707 002000 A 3945 SIS2 CALL SIS6 BUMP TABLE ADDRESS 06 03945
005710 005762 R
005711 001000 A 3946 JMP SIS1 06 03946
005712 005677 R
005713 077000 I 3947 SIS3 STX T8 06 03947
005714 015000 A 3948 LDA 2,X 06 03948
005715 150474 A 3949 ANA BM77 06 03949
005716 001010 A 3950 JAZ SIS9 NO CHARACTERS REMAINING 06 03950
005717 006003 R
005720 054136 A 3951 STA SIS12 06 03951
005721 077000 I 3952 STX T8 06 03952
005722 002000 A 3953 SIS4 CALL ICH 06 03953
005723 001214 R
005724 027000 I 3954 LDB T8 06 03954
005725 016004 A 3955 LDA 4,B 06 03955
005726 004350 A 3956 LSPR 8 LEFT CHARACTER 06 03956
005727 002000 A 3957 CALL SIS5 06 03957
005730 005743 R
005731 002000 A 3958 CALL ICH 06 03958
005732 001214 R
005733 027000 I 3959 LDB T8 06 03959
005734 016004 A 3960 LDA 4,B 06 03960
005735 150463 A 3961 ANA BM377 RIGHT CHARACTER 06 03961
005736 002000 A 3962 CALL SIS5 06 03962
005737 005743 R
005740 047000 I 3963 INR T8 06 03963
005741 001000 A 3964 JMP SIS4 06 03964
005742 005722 R
005743 000000 A 3965 SIS5 ENTRY 06 03965
005744 137000 I 3966 ERA T8 06 03966
005745 002016 A 3967 JANZM ER12 SPELLING ERROR 06 03967
005746 000340 R
005747 014107 A 3968 LDA SIS12 06 03968
005750 005311 A 3969 SAR 06 03969
005751 001010 A 3970 JAZ SIS9 ALL CHARACTERS CORRECT 06 03970
005752 006003 R

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Address	Hex	Op	Label	Op	Text	Page	Line
005753	054103	A	3971	STA	SIS12		06 03971
005754	017000	I	3972	LDA	TC		06 03972
005755	130463	A	3973	ERA	BM377		06 03973
005756	001016	A	3974	JANZ*	SIS5		06 03974
005757	105743	R					
005760	001000	A	3975	JMP	TER4	ILLEGAL END OF STATEMENT	06 03975
005761	000351	R					
005762	000000	A	3976	SIS6	ENTRY		06 03976
005763	015000	A	3977	LDA	0,X		06 03977
005764	150474	A	3978	ANA	BM77	NO. OF CHARACTERS	06 03978
005765	005111	A	3979	IAR			06 03979
005766	004341	A	3980	LSRA	1		06 03980
005767	120423	A	3981	ADD	FOUR		06 03981
005770	054002	A	3982	STA	SIS7		06 03982
005771	005041	A	3983	TXA			06 03983
005772	006120	A	3984	ADDI	**		06 03984
005773	105772	R					
005774	005773	R	3985	SIS7	EQU	*-1	06 03985
005775	005014	A	3986	TAX			06 03986
005776	006140	A	3987	SUBI	**		06 03987
005777	105775	R					
005778	005776	R	3988	SIS8	EQU	*-1	06 03988
006000	001004	A	3989	JAN*	SIS6	TABLE LIMIT	06 03989
006001	105762	R					
006002	001000	A	3990	JMP	TER4	ILLEGAL STATEMENT	06 03990
006003	000351	R					
006004	017000	I	3991	SIS9	LDA	TO	06 03991
006005	005014	A	3992	TAX			06 03992
006006	006140	A	3993	SUBI	SIDTBI		06 03993
006007	005420	R					
006010	001002	A	3994	JAP*	SIS	NORMAL STATEMENT EXIT	06 03994
006011	105670	R					
006012	002000	A	3995	CALL	FXA		06 03995
006013	000500	R					
006014	017000	I	3996	LDA	TC		06 03996
006015	130000	L	3997	ERA	=**		06 03997
006016	037000	I	3998	LDX	TO		06 03998
006017	001016	A	3999	JANZ	SIS14	NO MODE SIZE	06 03999
006020	006067	R					
006021	015000	A	4000	LDA	0,X		06 04000
006022	150474	A	4001	ANA	BM77		06 04001
006023	054022	A	4002	STA	SIS11	CHARACTERS TESTED	06 04002
006024	002000	A	4003	CALL	SIS6		06 04003
006025	005762	R					
006026	077000	I	4004	STX	TO		06 04004
006027	002000	A	4005	CALL	ICH	GET **	06 04005
006030	001214	R					
006031	002000	A	4006	CALL	ICH	GET SIZE	06 04006
006032	001214	R					
006033	037000	I	4007	LDX	TO		06 04007
006034	002000	A	4008	CALL	SIS10		06 04008
006035	006043	R					
006036	002000	A	4009	CALL	SIS6		06 04009
006037	005762	R					
006038	002000	A	4010	CALL	SIS10		06 04010
006040	006043	R					
006041	001000	A	4011	JMP	TER4	ILLEGAL STATEMENT	06 04011
006042	000351	R					
006043	000000	A	4012	SIS10	ENTRY		06 04012
006044	006010	A	4013	LDAI	**		06 04013
006045	106044	R					
006046	006045	R	4014	SIS11	EQU	*-1	06 04014
006047	005111	A	4015	IAR		GET EXTENSION CHARACTER	06 04015
006050	004341	A	4016	LSRA	1		06 04016
006051	054006	A	4017	STA	SIS12		06 04017
006052	005041	A	4018	TXA			06 04018
006053	124004	A	4019	ADD	SIS12		06 04019
006054	064003	A	4020	STB	SIS12		06 04020
006055	005012	A	4021	TAB			06 04021
006056	016004	A	4022	LDA	4,B		06 04022
006057	006020	A	4023	LDBI	**		06 04023
006060	106050	R					
006061	006057	R	4024	SIS12	EQU	*-1	06 04024
006062	006437	A	4025	BT	037,SIS13		06 04025
006063	006063	R					
006064	004350	A	4026	LSRA	8	GET CHARACTER	06 04026
006065	150463	A	4027	SIS13	ANA	BM377	06 04027
006066	137000	I	4028	ERA	TC		06 04028
006067	001016	A	4029	JANZ*	SIS10		06 04029
006070	106043	R					
006071	015000	A	4030	SIS14	LDA	0,X	06 04030
006072	004346	A	4031	LSRA	0	GET MODE	06 04031
006073	150467	A	4032	ANA	BM7		06 04032
006074	057000	I	4033	IAR	BF		06 04033
006075	001000	A	4034	JMP*	SIS	EXIT	06 04034
006076	105670	R					
4003				EJECT			06 04035
4036				*****			06 04036
4037				*			06 04037
4038				* SPECIAL LIST TERMINATOR (SLIT)			06 04038
4039				*			06 04039

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4040 * FUNCTION: TO PREPARE TO OUTPUT BUFFER SLOT
4041 *
4042 * ENTRY: CLOP HOLDS CHAR COUNT OF BUFFER SLOT
4043 *
4044 * EXIT : CLOP=6
4045 *         A=$PCW
4046 *         X=WORD COUNT OF BUFFER SLOT
4047 *         B=ADDRESS OF BUFFER SLOT
4048 *
4049 *****
006075 000000 A 4051 SLIT  ENTRY
006076 017000 I 4052      LDA    CLOP
006077 006140 A 4053      SUBI   40
006100 000050 A
006101 001002 R 4054      JAP    SLIT1      BUFFER FULL
006102 006106 R
006103 010000 L 4055      LDA    = ' '
006104 002000 A 4056      CALL   SLOP      OUTPUT 1 BLANK TO FINISH LINE
006105 006117 R
006106 017000 I 4057 SLIT1  LDA    CLOP
006107 004341 A 4058      LSRA   1          GET BUFFER WORD COUNT
006110 120470 A 4059      ADD    NINE
006111 005014 A 4060      TAX
006112 006020 A 4061      LDBI   SLOT-9
006113 007771 R
006114 017000 I 4062      LDA    $PCW      GET $PCW IN A
006115 001000 A 4063      JMP*   SLIT
006116 106075 R
4064      EJECT
4065 *****
4066 *
4067 *     S P E C I A L   L I S T   O U T P U T   P A C K ( S L O P )
4068 *
4069 * FUNCTION: TO PACK A CHARACTER INTO THE SPECIAL BUFFER SLOT
4070 *
4071 * ENTRY: A HOLDS FORTRAN CHAR
4072 *         CLOP HOLDS CHARACTER COUNT FOR BUFFER SLOT
4073 *
4074 * EXIT : ASCII EQUIVALENT SHIFTED INTO LOW-ORDER BYTE OF THE WORD AT
4075 *         ADDRESS SLOT+CLOP/2
4076 *         CHAR COUNT CLOP INCREMENTED BY 1
4077 *
4078 *****
006117 000000 A 4080 SLOP  ENTRY
006120 064014 A 4081      STB    SLOP2      SAVE (B)
006121 004550 A 4082      LLSR   8
006122 017000 I 4083      LDA    CLOP
006123 004341 A 4084      LSRA   1
006124 006120 A 4085      ADDI   SLOT      FORM CHARACTER ADDRESS
006125 010002 R
006126 054003 A 4086      STA    SLOP1
006127 017000 I 4087      LDA*   SLOP1
006130 004550 A 4088      LLSR   8
006131 006067 R 4089      STBE   **      STORE PACKED WORD
006132 106131 R
006133 047000 I 4090 SLOP1 EQU    *-1
006134 006020 A 4091      INR    CLOP
006135 106134 R 4092      LDBI   **      RESTORE (B)
006136 006135 R 4093 SLOP2 EQU    *-1
006137 001000 A 4094      JMP*   SLOP      EXIT
006137 106117 R
4095      EJECT
4096 *****
4097 *
4098 *     L I S T   S O U R C E   L I N E ( S L S T )
4099 *
4100 * FUNCTION: TO CALL LIST TO OUTPUT THE SOURCE LINE ON THE LD DEVICE.
4101 *
4102 * ENTRY: BIT 0 OF $PCW=1 IF 'N' OPTION ON '/FORTRAN' MOD DIRECTIVE.
4103 *
4104 * EXIT : $PCW(BIT 0)=1 : SLST DOES NOTHING
4105 *         =0 : SLST CALLS LIST TO OUTPUT $BUF TO LD
4106 *
4107 *****
006140 000000 A 4109 SLST  ENTRY
006141 006030 A 4110      LDXI   44      GET BUFFER WORD COUNT IN X
006142 000054 A
006143 006020 A 4111      LDBI   $BUF-1   GET ADDRESS OF BUFFER $BUF IN B
006144 020772 R
006145 017000 I 4112      LDA    $PCW      GET $PCW IN A
006146 004257 A 4113      LRLA   $BIT-1   GET LISTING BIT INTO SIGN
006147 002002 A 4114      JAPM   LIST      LIST SOURCE RECORD IF BIT NOT SET
006150 003406 R
006151 001000 A 4115      JMP*   SLST      EXIT
006152 106140 R
4116      EJECT
4117 *
006153 005301 A 4118 STN  DEC  1      STATEMENT COMPLETION
006154 057000 I 4119      STA    DTFL     ILLEGAL DD TERM./NO CONTROL CONTINUE
006155 005001 A 4120      TZA

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Address	Label	Operation	Comments	Page	Line
006156		JMP STC		06	04121
006157					
006160	005301	A 4122	ILT DECR 1		06 04122
006161	057000	I 4123	STA DTFL		06 04123
006162	005101	A 4124	CRT INCR 1		06 04124
006163	057000	I 4125	STC STA JPFL		06 04125
006164	017000	I 4126	LDA TC		06 04126
006165	140463	A 4127	SUB K77		06 04127
006166	001004	A 4128	JAN TER25		06 04128
006167	000324	R			
006170	017000	I 4129	LDA DSAV		06 04129
006171	001010	A 4130	JAZ *+5		06 04130
006172	006175	R			
006173	057000	I 4131	STA DT		06 04131
006174	005001	A 4132	TZR		06 04132
006175	057000	I 4133	STA DSAV		06 04133
006176	017000	I 4134	LDA LIF		06 04134
006177	001010	A 4135	JAZ STC5		06 04135
006200	006220	R			
006201	002000	A 4136	CALL PTR	DUMP ALL TRIADS	06 04136
006202	005013	R			
006203	017000	I 4137	LDA JPFL+1		06 04137
006204	001010	A 4138	JAZ STC0	NO JUMPS	06 04138
006205	006213	R			
006206	027000	I 4139	LDB JPFL+2		06 04139
006207	006437	A 4140	BT 037, STC6	BCS CALL	06 04140
006210	006276	R			
006211	002000	A 4141	CALL STI20	OUTPUT NORMAL JUMPS	06 04141
006212	006403	R			
006213	017000	I 4142	STC0 LDA LIF		06 04142
006214	057000	I 4143	STA XRPT		06 04143
006215	002000	A 4144	JMPM DSR	OUTPUT STRING RELATIVE LOCATION	06 04144
006216	004257	R			
006217	047000	I 4145	INR JPFL		06 04145
006220		4146	STC5 BSS 0		06 04146
006220	005001	A 4147	TZR		06 04147
006221	057000	I 4148	STA DTFL+1		06 04148
006222	017000	I 4149	LDA STNB	STMT. NMBR	06 04149
006223	001010	A 4150	JAZ STI	STMT. INPUT	06 04150
006224	006332	R			
006225	017000	I 4151	LDA DT	DO TOP	06 04151
006226	057000	I 4152	STC1 STA 0		06 04152
006227	147000	I 4153	SUB BPX	DATA POOL TOP	06 04153
006230	001010	A 4154	JAZ STI	NO DO	06 04154
006231	006332	R			
006232	002000	A 4155	JMPM LDX	LOAD DO ENTRIES	06 04155
006233	003351	R			
006234	017000	I 4156	LDA DS		06 04156
006235	147000	I 4157	SUB STNB		06 04157
006236	001010	A 4158	JAZ STC3		06 04158
006237	006245	R			
006240	017000	I 4159	LDA DS		06 04159
006241	057000	I 4160	STA DTFL+1		06 04160
006242	017000	I 4161	STC2 LDA 0		06 04161
006243	120465	A 4162	AND FIVE	BUMP DO POINTER	06 04162
006244	001000	A 4163	JMP STC1		06 04163
006245	006226	R			
006246	017000	I 4164	STC3 LDA DTFL		06 04164
006247	002000	A 4165	JANM ER4	ILLEGAL DO TERMINATION	06 04165
006250	000350	R			
006251	017000	I 4166	LDA DTFL+1		06 04166
006252	001010	A 4167	JAZ STC4		06 04167
006253	006261	R			
006254	057000	I 4168	STA DS	RESET FOR NO LOOP	06 04168
006255	002000	A 4169	JMPM CDX	STORE DO ENTRIES	06 04169
006256	005215	R			
006257	001000	A 4170	JMP TER9	DO NEST ERROR	06 04170
006260	000344	R			
006261	002000	A 4171	STC4 CALL PTR	DUMP ALL TRIADS	06 04171
006262	005013	R			
006263	017000	I 4172	LDA JPFL		06 04172
006264	001002	A 4173	JAP *+6		06 04173
006265	006272	R			
006266	005211	A 4174	CPA		06 04174
006267	057000	I 4175	STA JPFL		06 04175
006270	002000	A 4176	JMPM DSR	OUTPUT IF FORMAT	06 04176
006271	004257	R			
006272	002000	A 4177	CALL* DOT	DO TERMINATION	06 04177
006273	110631	R			
006274	001000	A 4178	JMP STC2		06 04178
006275	006242	R			
006276	017000	I 4179	STC6 LDA RL	PROCESS 'HF' LOGICAL-IF WITH GO-TO	06 04179
006277	140464	A 4180	SUB THREE		06 04180
006300	057000	I 4181	STA RL		06 04181
006301	005012	A 4182	TAB		06 04182
006302	010432	A 4183	LDA KUMP		06 04183
006303	002000	A 4184	CALL DMS	POINT AT BCS CALL	06 04184
006304	004703	R			
006305	017000	I 4185	LDA JPFL+2		06 04185
006306	120432	A 4186	ADD TWO		06 04186
006307	002000	A 4187	CALL DAB	RELATIONAL WITH JMP	06 04187

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006310 003716 R
006311 027000 I 4188 LDB RL 06 04188
006312 005122 A 4189 IBR 06 04189
006313 005122 A 4190 IBR 06 04190
006314 067000 I 4191 STB RL 06 04191
006315 010432 A 4192 LDA XJMP 06 04192
006316 002000 A 4193 CALL UWS REPOSITION LOCATION COUNTER 06 04193
006317 004703 R
006320 017000 I 4194 LDA JPFL+1 GO-TO POINTER 06 04194
006321 057000 I 4195 STA I 06 04195
006322 005001 A 4196 TZA 06 04196
006323 057000 I 4197 STA LIF 06 04197
006324 057000 I 4198 STA JPFL+1 06 04198
006325 057000 I 4199 STA JPFL+2 06 04199
006326 002000 A 4200 CALL OUT MAKE TRUE-JMP PARAMETER 06 04200
006327 004320 R
006330 001000 A 4201 JMP STC5 06 04201
006331 006220 R

4202 EJECT 06 04202
4203 ***** 06 04203
4204 * 06 04204
4205 * STATEMENT INPUT (STI) * 06 04205
4206 * 06 04206
4207 * FUNCTION: TO START PROCESSING OF A STATEMENT. STI HANDLES BRANCHES * 06 04207
4208 * FROM PREVIOUS STATEMENT, ABORTING THEM IF BRANCH IS TO * 06 04208
4209 * THE CURRENT STATEMENT. IT ALSO PROCESSES THE LABEL FIELD * 06 04209
4210 * (COLS. 1-5). * 06 04210
4211 * 06 04211
4212 * ENTRY: JPFL+1 HOLDS ASSN TABLE PTR TO LABEL OF TARGET BRANCH FROM * 06 04212
4213 * PREVIOUS STATEMENT(0 IF NONE). * 06 04213
4214 * 06 04214
4215 * EXIT : TO STATEMENT SCAN ROUTINE(STS). * 06 04215
4216 * FIRST SOURCE LINE OF STATEMENT LISTED. * 06 04216
4217 * TC=0 * 05 04217
4218 * JPFL+1=0 * 06 04218
4219 * IF STATEMENT NUMBER PRESENT: * 06 04219
4220 * STATEMENT NUMBER ENTERED IN ASSIGNMENT TABLE. * 06 04220
4221 * STNB=XRPT=POINTER TO STMT NO. IN ASSN TABLE. * 06 04221
4222 * IF JPFL+1 .NE. 0: * 06 04222
4223 * IF JPFL+1 .NE. STNB * 05 04223
4224 * A 'JMP (JPFL+1)' IS OUTPUT * 06 04224
4225 * JPFL=0(PATH FLAG.SAYS CONTROL CANT DROP THRU TO CURR STMT) * 06 04225
4226 * 06 04226
4227 * ERRORS: TER6 IF ILLEGAL STATEMENT NUMBER FIELD. * 06 04227
4228 * ER10 IF STATEMENT NUMBER MULTIPLY DEFINED. * 06 04228
4229 * 06 04229
4230 ***** 06 04230
006332 005001 A 4232 STI TZA 06 04232
006333 057000 I 4233 STA STNB CLEAR STATEMENT NUMBER FLAG 06 04233
006334 057000 I 4234 STA DTFL CLEAR DO-TERMINATION FLAG 06 04234
006335 057000 I 4235 STA LIF CLEAR LOGICAL IF FLAG 06 04235
006336 002000 A 4236 STI1 CALL ZEB BLANK ERROR BUFFER ERBF 06 04236
006337 007722 R
006340 002000 A 4237 CALL SLST LIST SOURCE LINE 06 04237
006341 006140 R
006342 002000 A 4238 CALL IDI INPUT CHAR, FLAG DIGIT 06 04238
006343 001533 R
006344 001002 A 4239 JAP STI2 CHECK FOR DIGIT 06 04239
006345 006364 R

4240 ***** 06 04240
4241 * FIRST(NON-BLANK) CHAR IS NUMERIC AND IN COLS. 1-5. * 06 04241
4242 * PROCESS STATEMENT NUMBER. * 06 04242
4243 ***** 06 04243
006346 002000 A 4244 CALL RCH SET SCAN TO REREAD FIRST DIGIT 06 04244
006347 005110 R
006350 002000 A 4245 CALL ISN INPUT STATEMENT NUMBER 06 04245
006351 003026 R
006352 017000 I 4246 LDA AT GET ADDRESS TYPE 06 04246
006353 005311 A 4247 DAR AT=1 MEANS STATEMENT NO. ALREADY DEFINED 06 04247
006354 002010 A 4248 JAZM ER10 ERROR ER10/MULTIPLE DEF OF STATEMENT NO./ 06 04248
006355 000342 R
006356 017000 I 4249 LDA I GET ASSN TABLE PTR TO STMT NO. ENTRY 06 04249
006357 057000 I 4250 STA STNB STORE IN STNB 06 04250
006360 002000 A 4251 CALL PTR 06 04251
006361 005013 R
006362 005301 A 4252 DECR 1 TURN X-POINER OFF 06 04252
006363 057000 I 4253 STA XRPT 06 04253
4254 ***** 06 04254
4255 * PROCESS JUMPS FROM PREVIOUS STATEMENT * 06 04255
4256 ***** 06 04256
006364 017000 I 4257 STI2 LDA JPFL+1 GET ASSN TABLE PTR TO JUMP STATEMENT NO. 06 04257
006365 001010 A 4258 JAZ STI13 NO JUMPS 06 04258
006366 006372 R
006367 002000 A 4259 CALL STI20 06 04259
006370 006403 R
006371 057000 I 4260 STA JPFL SET NO CONTROL FALL THRU FROM PRIOR STMT. 06 04260
006372 027000 I 4261 STI13 LDB TC SAVE TERMINATING CHARACTER 06 04261
006373 057000 I 4262 STA TC CLEAR TC 06 04262
006374 005021 A 4263 TBA 06 04263
006375 006140 A 4264 SUBI 0376 06 04264
006376 000376 A

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006377	001004	A	4265	JAN	TER6	ERROR TER6/ILLEGAL STATEMENT NO. FIELD/	06	04265
006400	000347	R						
006401	001000	A	4266	JMP	STS	EXIT TO STATEMENT SCAN	03	04266
006402	006534	R						
			4267	*	PROCESS	JUMPS		06 04267
006403	000000	A	4268	ST120	ENTRY			06 04268
006404	027000	I	4269		LDB	JPFL+3	S2	06 04269
006405	001020	A	4270		JBZ	STI10+1	SIMPLE JUMP	06 04270
006406	006517	R						
006407	147000	I	4271		SUB	JPFL+2	S1	06 04271
006410	001016	A	4272		JANZ	STI4	S1.NE.S3	06 04272
006411	006426	R						
006412	017000	I	4273	ST13	LDA	JPFL+1	S3	06 04273
006413	057000	I	4274		STA	I		06 04274
006414	147000	I	4275		SUB	JPFL+3	S2	06 04275
006415	001010	A	4276		JAZ	STI10	S2=S3	06 04276
006416	006516	R						
006417	017000	I	4277		LDA	JPFL+3	S2	06 04277
006420	147000	I	4278		SUB	STNB		06 04278
006421	001016	A	4279		JANZ	STI9	S2.NE.NEXT	06 04279
006422	006513	R						
006423	014034	A	4280		LDA	STI5		06 04280
006424	001000	A	4281		JMP	STI6	JANZ - S3	06 04281
006425	006472	R						
006426	017000	I	4282	ST14	LDA	\$PCW		06 04282
006427	154001	A	4283		ANA	*+2		06 04283
006430	006140	A	4284		SUBI	060		06 04284
006431	000060	A						
006432	001016	A	4285		JANZ	STI45	NOT 'F','H'	06 04285
006433	006455	R						
006434	005021	A	4286		TBA		S2	06 04286
006435	147000	I	4287		SUB	JPFL+2	S1	06 04287
006436	001016	A	4288		JANZ	STI45	S1.NE.S2	06 04288
006437	006455	R						
006440	017000	I	4289		LDA	JPFL+1	S3	06 04289
006441	147000	I	4290		SUB	STNB		06 04290
006442	001010	A	4291		JAZ	STI45	S3.EQ.NEXT	06 04291
006443	006455	R						
006444	017000	I	4292		LDA	JPFL+1	S3	06 04292
006445	057000	I	4293		STA	I		06 04293
006446	006010	A	4294		LDAI	FLJAG		06 04294
006447	105123	A						
006450	002000	A	4295		CALL	DBB	(JAG - S3)	06 04295
006451	003725	R						
006452	017000	I	4296		LDA	JPFL+2	S1	06 04296
006453	001000	A	4297		JMP	STI10+1		06 04297
006454	006517	R						
006455	017000	I	4298	ST145	LDA	JPFL+2	S1	06 04298
006456	057000	I	4299		STA	I		06 04299
006457	147000	I	4300		SUB	STNB		06 04300
006460	001016	A	4301	ST15	JANZ	STI7	S1.NE.NEXT	06 04301
006461	006476	R						
006462	005021	A	4302		TBA		(A)=S2	06 04302
006463	147000	I	4303		SUB	JPFL+1	S3	06 04303
006464	002016	A	4304		JANZM	STI8	(JAZ - S2) IF S2.NE.S3	06 04304
006465	006504	R						
006466	017000	I	4305		LDA	JPFL+1	S3	06 04305
006467	057000	I	4306		STA	I		06 04306
006470	006010	A	4307		LDAI	01002		06 04307
006471	001002	A						
006472	002000	A	4308	ST16	CALL	DBB	JAP - S3, JANZ - S3	06 04308
006473	003725	R						
006474	001000	A	4309		JMP	STI12		06 04309
006475	006526	R						
006476	006010	A	4310	ST17	LDAI	01004		06 04310
006477	001004	A						
006500	002000	A	4311		CALL	DBB	JAN - S1	06 04311
006501	003725	R						
006502	001000	A	4312		JMP	STI3		06 04312
006503	006412	R						
006504	000000	A	4313	ST18	ENTRY			06 04313
006505	067000	I	4314		STB	I		06 04314
006506	014012	A	4315		LDA	STI11		06 04315
006507	002000	A	4316		CALL	DBB	JAZ - S2	06 04316
006510	003725	R						
006511	001000	A	4317		JMP*	STI8		06 04317
006512	006504	R						
006513	027000	I	4318	ST19	LDB	JPFL+3		06 04318
006514	002000	A	4319		JANM	STI8	(JAZ - S2)	06 04319
006515	006504	R						
006516	017000	I	4320	ST110	LDA	JPFL+1	S3	06 04320
006517	057000	I	4321		STA	I		06 04321
006520	147000	I	4322		SUB	STNB		06 04322
006521	001010	A	4323	ST111	JAZ	STI12	S3 = NEXT	06 04323
006522	006526	R						
006523	010430	A	4324		LDA	KUMP		06 04324
006524	002000	A	4325		CALL	DBB	JMP - S3	06 04325
006525	003725	R						
006526	005001	A	4326	ST112	TZA			06 04326
006527	057000	I	4327		STA	JPFL+1		06 04327
006530	057000	I	4328		STA	JPFL+2		06 04328

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006531 057000 I 4329 STA JPFL+3 06 04329
006532 001000 A 4330 JMP STI20 06 04330
006533 106403 R
4331 EJECT 06 04331
4332 ***** 06 04332
4333 * 06 04333
4334 * STATEMENT SCAN(STS) * 06 04334
4335 * 06 04335
4336 * FUNCTION: STS IS THE INITIAL SCAN OF THE SOURCE STATEMENT PROPER. * 06 04336
4337 * IT IS CALLED BY STI AFTER THE LABEL FIELD IS PROCESSED, * 06 04337
4338 * AND BY IFF AFTER A LOGICAL IF HAS BEEN IDENTIFIED. ITS * 06 04338
4339 * FUNCTION IS TO IDENTIFY THE THREE STATEMENT TYPES WHICH * 06 04339
4340 * ARE NOT UNIQUELY IDENTIFIED BY A LEADING WORD: * 06 04340
4341 * 06 04341
4342 * DO STATEMENTS('...=OP;') * 06 04342
4343 * REPLACEMENT STATEMENTS: ' =... ' * 06 04343
4344 * 'NAME=...' * 06 04344
4345 * 'ARRAY NAME...=...' * 06 04345
4346 * STATEMENT FUNCTIONS: NON-ARRAY NAME...=...' * 06 04346
4347 * 06 04347
4348 * ENTRY: NO SPECIAL CONDITIONS * 06 04348
4349 * 06 04349
4350 * EXIT : TO SID IF STATEMENT NOT OF THREE ABOVE TYPES * 06 04350
4351 * TO DOP IF DO STATEMENT * 06 04351
4352 * TO ASTM IF PSEUDO-ACCUMULATOR REPLACEMENT STMT(' =... ') * 06 04352
4353 * TO AST IF OTHER REPLACEMENT STATEMENT * 06 04353
4354 * TO STF IF STATEMENT FUNCTION * 06 04354
4355 * 06 04355
4356 * IF STATEMENT FUNCTION OR REPLACEMENT STATEMENT(EXCEPT * 06 04356
4357 * FOR TYPE ' =... '), FNS IS CALLED AT LEVEL 3 IF THIS IS * 06 04357
4358 * THE FIRST NON-SPECIFICATION STATEMENT. WHETHER FIRST OR * 06 04358
4359 * NOT, INA IS CALLED BEFORE EXIT TO INPUT/ASSIGN THE * 06 04359
4360 * REPLACEMENT OR STATEMENT FUNCTION NAME. * 06 04360
4361 * 06 04361
4362 ***** 06 04362
4364 ***** 06 04364
4365 * INITIALIZE SCAN * 06 04365
4366 ***** 06 04366
006534 014055 A 4367 STS LDA STSD 06 04367
006535 057000 I 4368 STA EDLSW POINT END-OF-LINE SWITCH AT ROUTINE SID 06 04368
006536 017000 I 4369 LDA DPB 06 04369
006537 057000 I 4370 STA I MAKE VALID ADDRESS POINTER 06 04370
006540 002000 A 4371 CALL ROCS SAVE SCAN PARAMETERS 06 04371
006541 005042 R
006542 005301 A 4372 DECR I 06 04372
006543 057000 I 4373 STA T3 SET '(' COUNTER TO -1 06 04373
006544 057000 I 4374 STA NAME SET CHARACTER COUNTER TO -1 06 04374
006545 057000 I 4375 STA CFPTSW DISABLE TEST FINAL '.' IN ROUTINE FND 06 04375
006546 005001 A 4376 TZA 06 04376
006547 057000 I 4377 STA BPPP RESET SPECIAL IF FLAG 06 04377
4378 ***** 06 04378
4379 * SCAN LOOP * 06 04379
4380 ***** 06 04380
006550 002000 A 4381 STSL CALL ICH INPUT A SOURCE CHARACTER 06 04381
006551 001214 R
006552 047000 I 4382 INR NAME BUMP CHARACTER COUNT 06 04382
006553 140000 L 4383 SUB '(' CHECK FOR '(' 06 04383
006554 001010 A 4384 JAZ STSB 06 04384
006555 006605 R
006556 005311 A 4385 DAR 06 04385
006557 001010 A 4386 JAZ STSR CHECK FOR ')' 06 04386
006560 006576 R
006561 140464 A 4387 SUB THREE 06 04387
006562 001010 A 4388 JAZ STS5 06 04388
006563 006606 R
006564 006140 A 4389 SUBI 021 06 04389
006565 000021 A
006566 001010 A 4390 JAZ STSE CHECK FOR '=' 06 04390
006567 006616 R
006570 006120 A 4391 ADDI 026 06 04391
006571 000026 A
006572 001010 A 4392 JAZ SID EXIT TO SID ON QUOTE B.2 06 04392
006573 005246 R
006574 001000 A 4393 JMP STSL CHAR NONE OF ABOVE, CONTINUE SCAN 06 04393
006575 006550 R
4394 ***** 06 04394
4395 * ')' INPUT * 06 04395
4396 ***** 06 04396
006576 017000 I 4397 STSR LDA T3 PD 06 04397
006577 005311 A 4398 DAR PD 06 04398
006600 057000 I 4399 STA T3 RESET PAREN COUNT TO 0-LEVEL (-U) PD 06 04399
006601 002000 A 4400 CALL ICH INPUT CHARACTER FOLLOWING ")" PD 06 04400
006602 001214 R
006603 001000 A 4401 JMP STS5+2 SKIP CALL TO INN 06 04401
006604 006610 R
4402 ***** 06 04402
4403 * CALL INN TO INPUT OP FOLLOWING ',' OR '<' * 06 04403
4404 ***** 06 04404
006605 047000 I 4405 STSB INR T3 06 04405
006606 002000 A 4406 STS5 CALL INN INPUT OPERAND/OPERATOR 06 04406
006607 001700 R

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006610 017000 I 4407 LDA DF
006611 001004 A 4408 JAN SID EXIT TO ROUTINE SID ON ALPHANUM TERMINATOR
006612 005246 R 4409 STSD EQU #-1
006613 017000 I 4410 LDA TC RELOAD TERMINATOR
006614 001000 A 4411 JMP STSL+2 AND REENTER SCAN LOOP WITH IT
006615 006552 R
4412 *****
4413 * AN '=' WAS INPUT, STATEMENT MUST BE REPLACEMENT, DO, OR STATEMENT FUN *
4414 * STATEMENT MAY ALSO BE READ/WRITE WITH END/ERR OPTIONS PD
4415 *****
006616 017000 I 4416 STSE LDA T3 PD
006617 001002 A 4417 JAP SID - READ/WRITE
006620 005246 R
006621 006010 A 4418 LDAI STS2 PD
006622 006630 R
006623 057000 I 4419 STA EDLSW POINT END-OF-LINE SWITCH AT STS2
006624 005001 A 4420 TZA
006625 057000 I 4421 STA CPPTSW ENABLE FINAL '.' TEST IN ROUTINE FND
4422 *****
4423 * INPUT OP FOLLOWING '=' *
4424 *****
006626 002000 A 4425 CALL INN INPUT OPERAND/OPERATOR
006627 001700 R
006630 017000 I 4426 STS2 LDA TC
006631 054006 A 4427 STA STS3 SAVE TERMINATOR AFTER OP
006632 002000 A 4428 CALL PCC RESTORE SCAN PARAMETERS
006633 005057 R
4429 *****
4430 * TEST FOR PSEUDO-ACCUMULATOR REPLACEMENT STATEMENT= ' =EXPRESSION' *
4431 *****
006634 017000 I 4432 LDA NAME
006635 001010 A 4433 JAZ STS6 ASTM IF NO CHARACTERS BEFORE '='
006636 006671 R
4434 *****
4435 * TEST FOR DO STATEMENT *
4436 *****
006637 006010 A 4437 LDAI 0 RELOAD TERMINATOR AFTER '=OP'
006640 000000 R
006641 140000 L 4438 STS3 EQU #-1
006642 001010 A 4439 SUB =','
006643 006675 R 4440 JAZ STS7 DO PROCESSOR
4441 *****
4442 * REPLACEMENT OR STATEMENT FUNCTION *
4443 *****
006644 027000 I 4444 LDB SPFL
006645 005122 A 4445 IER C.1
006646 004142 A 4446 LDRB 2 C.1
006647 010464 A 4447 LDA THREE CHECK IF THIS IS FIRST NON-SPECIFICATION
006650 002020 A 4448 J8ZM FNS STATEMENT; IF SO, CALL FNS AT LEVEL 3
006651 000572 R
4449 *****
4450 * INPUT/ASSIGN NAME OF VARIABLE, ARRAY, OR STATEMENT FUNCTION *
4451 *****
006652 002000 A 4452 CALL INA INPUT NAME
006653 001657 R
006654 017000 I 4453 LDA TC GET TERMINATOR
006655 140000 L 4454 SUB = '='
006656 001010 A 4455 JAZ STS8 ASTM PROCESSOR
006657 006702 R
006660 017000 I 4456 LDA IU
006661 140422 A 4457 SUB K2 IS NAME AN ARRAY ?
006662 001010 A 4458 JAZ STS8 ASTM PROCESSOR
006663 006702 R
006664 006020 A 4459 LDBI STF
006665 010645 R
006666 010464 A 4460 LDA THREE
006667 001000 A 4461 JMP STS9
006670 006705 R
006671 006020 A 4462 STS6 LDBI ASTM
006672 010624 R
006673 001000 A 4463 JMP STS8+2
006674 006704 R
006675 006020 A 4464 STS7 LDBI POP
006676 010630 R
006677 010423 A 4465 LDA FOUR
006700 001000 A 4466 JMP STS9
006701 006705 R
006702 006020 A 4467 STS8 LDBI ASTM
006703 010623 R
006704 010467 A 4468 LDA SEVEN
006705 067000 I 4469 STS9 STB STSW SET PROCESSOR ADDRESS
006706 001000 A 4470 JMP SIDE
006707 005305 R
4471 EJECT
4472 *****
4473 *
4474 * T E S T . . . O V E R F L O W
4475 *
4476 * FUNCTION: TO TEST FOR DATA POOL SPACE AVAILABLE AND

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4477 *          OUTPUTTING TRIADS OR CALLING TER3          06 04477
4478 *          06 04478
4479 * ENTRY: NO SPECIAL CONDITIONS          06 04479
4480 *          06 04480
4481 * EXIT: RETURN OR TER3          06 04481
4482 *          06 04482
4483 *****          06 04483
006710 000000 A 4484 TDF ENTRY          06 04484
006711 017000 I 4485 LDA JT          06 04485
006712 147000 I 4486 SUB YT          06 04486
006713 001010 A 4487 JAZ TER3          06 04487
006714 000352 R          NO TRIADS TO OUTPUT
006715 002010 A 4488 JAZM DTR          06 04488
006716 110640 R          06 04488
006717 017000 I 4489 LDA OP          06 04489
006720 140000 L 4490 SUB =*=*          06 04490
006721 001010 A 4491 JAZ* TDF          06 04491
006722 106710 R          LOOP ENDED - RETURN TO PROGRAM
006723 017000 I 4492 LDA IT          06 04492
006724 147000 I 4493 SUB JT          06 04493
006725 001010 A 4494 JAZ* TDF          06 04494
006726 106710 R          ALL TRIADS DUMPED
006727 017000 I 4495 LDA IT          06 04495
006730 057000 I 4496 STA JT          06 04496
006731 001000 A 4497 JMP TER3          06 04497
006732 000352 R          IMPROPER LOOP END

4498 EJECT          06 04498
4499 *****          06 04499
4500 *          06 04500
4501 *          TAG SUBPROGRAM ( T S B )          06 04501
4502 *          06 04502
4503 * FUNCTION: TO LOAD IU AND IM FIELDS IN A SUBPROGRAM NAME ENTRY          06 04503
4504 *          IN ASSIGNMENT TABLE.          06 04504
4505 *          06 04505
4506 * ENTRY: NAME LOADED(AS BY LAX)          06 04506
4507 *          06 04507
4508 * EXIT : IU(NAME)=3          06 04508
4509 *          IF NAME IS ONE OF THE FORTRAN INTRINSIC OR EXTERNAL          06 04509
4510 *          DOUBLE-PRECISION OR COMPLEX FUNCTION NAMES:          06 04510
4511 *          IM(NAME)=4 DOUBLE PRECISION          06 04511
4512 *          5 COMPLEX          06 04512
4513 *          06 04513
4514 *****          06 04514
006733 000000 A 4516 TSB ENTRY          06 04516
006734 017000 I 4517 LDA IU          06 04517
006735 140464 A 4518 SUB THREE          06 04518
006736 001010 A 4519 JAZ* TSB          06 04519
006737 106733 R          EXIT IF NAME ALREADY TAGGED AS SUBPROGRAM
006740 017000 I 4520 LDA AT          06 04520
006741 140482 A 4521 SUB K2          06 04521
006742 002016 A 4522 JANZM NUT          06 04522
006743 003707 R          ERROR IF USAGE AND TYPE ASSIGNED
006744 057000 I 4523 STA CL          06 04523
006745 010464 A 4524 LDA THREE          06 04524
006746 057000 I 4525 STA IU          06 04525
006747 017000 I 4526 LDA EL          06 04526
006750 140465 A 4527 SUB FIVE          06 04527
006751 001004 A 4528 JAN TSB4          06 04528
006752 007035 R          NOT FORCED MODE (1/2 CHARACTERS)
006753 006020 A 4529 LDBI TSBTB          06 04529
006754 007042 R          06 04529
006755 017000 I 4530 TSB1 LDA ID          06 04530
006756 146001 A 4531 SUB 1,B          06 04531
006757 001016 A 4532 JANZ TSB3          06 04532
006760 007021 R          06 04532
006761 017000 I 4533 LDA ID+1          06 04533
006762 146002 A 4534 SUB 2,B          06 04534
006763 001016 A 4535 JANZ TSB3          06 04535
006764 007021 R          06 04535
006765 017000 I 4536 LDA EL          06 04536
006766 140466 A 4537 SUB SIX          06 04537
006767 001004 A 4538 JAN TSB12          06 04538
006770 007002 R          2-WORD ID
006771 016000 A 4539 LDA 0,B          06 04539
006772 001004 A 4540 JAN TSB3+2          06 04540
006773 007023 R          2-WORD ENTRY, 3-WORD ID
006774 017000 I 4541 LDA ID+2          06 04541
006775 146003 A 4542 SUB 3,B          06 04542
006776 001016 A 4543 JANZ TSB3          06 04543
006777 007021 R          06 04543
007000 001000 A 4544 JMP TSB14          06 04544
007001 007005 R          06 04544
007002 016000 A 4545 TSB12 LDA 0,B          06 04545
007003 001002 A 4546 JAP TSB3+2          06 04546
007004 007023 R          3-WORD ENTRY, 2-WORD ID
007005 016000 A 4547 TSB14 LDA 0,B          06 04547
007006 001002 A 4548 JAP TSB2          06 04548
007007 007012 R          06 04548
007010 005211 A 4549 CPA          06 04549
007011 005111 A 4550 IAR          06 04550
007012 004544 A 4551 TSB2 LLSR 4          06 04551
    
```

007013	057000	I	4552	STA	CL	SET MAX-MIN FLAG	06	04552	
007014	005001	A	4553	TZA			06	04553	
007015	004444	A	4554	LLRL	4		06	04554	
007016	057000	I	4555	STA	IM	SET FORCED MODE	06	04555	
007017	001000	A	4556	JMP	TSB4		06	04556	
007020	007035	R							
007021	001004	A	4557	TSB3	JAN	NOT IN TABLE	06	04557	
007022	007035	R							
007023	016000	A	4558	LDA	0,3		06	04558	
007024	003002	A	4559	KAP	TSBTB-1	'IBR' FOR THREE WORD ENTRY	06	04559	
007025	007041	R							
007026	005021	A	4560	TBA			06	04560	
007027	120464	A	4561	ADD	THREE		06	04561	
007030	005012	A	4562	TAB			06	04562	
007031	006140	A	4563	SUBI	TSBTBX		06	04563	
007032	007465	R							
007033	001004	A	4564	JAN	TSB1	LOOP	06	04564	
007034	006755	R							
007035	002000	A	4565	TSB4	CALL	SAX	SET SUBPROGRAM PARAMETERS	06	04565
007036	005134	R							
007037	001000	A	4566	JMP*	TSB		06	04566	
007040	106733	R							
			4567	EJECT			06	04567	
			4568	*****			06	04568	
			4569	* T S B T A B L E ( T S B T B ) *			06	04569	
			4570	* *			06	04570	
			4571	* *			06	04571	
			4572	* THE TSBTB TABLE CONTAINS 3 OR 4 WORD ENTRIES IN ALPHABETIC ORDER *			06	04572	
			4573	* WORD-0: -IM (2-WORD ID) OR +IM (3-WORD ID) *			06	04573	
			4574	* WORD 2-			06	04574	
			4575	* WORD-2/4: ID FIELD			06	04575	
			4576	* *			06	04576	
			4577	*****			06	04577	
007041	005122	A	4579	IBR			06	04579	
	007042	R	4580	TSBTB	EQU	*		06	04580
007042	177775	A	4581	DATA	-3	2-WORD REAL	06	04581	
007043	140702	A	4582	DATA	'ABS'		06	04582	
007044	151640	A							
007045	000003	A	4583	DATA	+3	3-WORD REAL	06	04583	
007046	140711	A	4584	DATA	'AIMAG'		06	04584	
007047	146701	A							
007050	143640	A							
007051	177775	A	4585	DATA	-3	2-WORD REAL	06	04585	
007052	140711	A	4586	DATA	'AINT'		06	04586	
007053	147324	A							
007054	000003	A	4587	DATA	+3	3-WORD REAL	06	04587	
007055	140714	A	4588	DATA	'ALGAMA'		06	04588	
007056	143701	A							
007057	146701	A							
007060	177775	A	4589	DATA	-3	2-WORD REAL	06	04589	
007061	140714	A	4590	DATA	'ALOG'		06	04590	
007062	147707	A							
007063	000003	A	4591	DATA	+3	3-WORD REAL	06	04591	
007064	140714	A	4592	DATA	'ALOG10'		06	04592	
007065	147707	A							
007066	130660	A							
007067	000023	A	4593	DATA	+19	3-WORD, REAL, MAX-MIN	06	04593	
007070	140715	A	4594	DATA	'AMAX0'		06	04594	
007071	140730	A							
007072	130240	A							
007073	000023	A	4595	DATA	+19	3-WORD, REAL, MAX-MIN	06	04595	
007074	140715	A	4596	DATA	'AMAX1'		06	04596	
007075	140730	A							
007076	130640	A							
007077	000023	A	4597	DATA	+19	3-WORD, REAL, MAX-MIN	06	04597	
007100	140715	A	4598	DATA	'AMIN0'		06	04598	
007101	144716	A							
007102	130240	A							
007103	000023	A	4599	DATA	+19	3-WORD, REAL, MAX-MIN	06	04599	
007104	140715	A	4600	DATA	'AMIN1'		06	04600	
007105	144716	A							
007106	130640	A							
007107	177775	A	4601	DATA	-3	2-WORD REAL	06	04601	
007110	140715	A	4602	DATA	'AMOD'		06	04602	
007111	147704	A							
007112	000003	A	4603	DATA	+3	3-WORD REAL	06	04603	
007113	140722	A	4604	DATA	'ARCOB'		06	04604	
007114	141717	A							
007115	151640	A							
007116	000003	A	4605	DATA	+3	3-WORD REAL	06	04605	
007117	140722	A	4606	DATA	'ARSIN'		06	04606	
007120	151711	A							
007121	147240	A							
007122	177775	A	4607	DATA	-3	2-WORD REAL	06	04607	
007123	140724	A	4608	DATA	'ATAN'		06	04608	
007124	140716	A							
007125	000003	A	4609	DATA	+3	3-WORD REAL	06	04609	
007126	140724	A	4610	DATA	'ATAN2'		06	04610	
007127	140716	A							
007130	131240	A							
007131	177773	A	4611	DATA	-5	2-WORD COMPLEX	06	04611	

## E.2 VORTEX LISTINGS

V\$FORT

PROGRAM PAGE 62

LISTING PAGE ( 62)

Address	Label	Value	Text	Program Page	Listing Page		
007132	141701	A	4612	DATA	'CABS'	06 04612	
007133	141323	A					
007134	177773	A	4613	DATA	-5	2-WORD COMPLEX	06 04613
007135	141703	A	4614	DATA	'CCOS'	06 04614	
007136	147723	A					
007137	177773	A	4615	DATA	-5	2-WORD COMPLEX	06 04615
007140	141703	A	4616	DATA	'CEXP'	06 04616	
007141	154320	A					
007142	177773	A	4617	DATA	-5	2-WORD COMPLEX	06 04617
007143	141714	A	4618	DATA	'CLOG'	06 04618	
007144	147707	A					
007145	000005	A	4619	DATA	+5	3-WORD COMPLEX	06 04619
007146	141715	A	4620	DATA	'CMPLX'	06 04620	
007147	150314	A					
007150	154240	A					
007151	000005	A	4621	DATA	+5	3-WORD COMPLEX	06 04621
007152	141717	A	4622	DATA	'CONJG'	06 04622	
007153	147312	A					
007154	143640	A					
007155	177775	A	4623	DATA	-3	2-WORD REAL	06 04623
007156	141717	A	4624	DATA	'COS'	06 04624	
007157	151640	A					
007160	177775	A	4625	DATA	-3	2-WORD REAL	06 04625
007161	141717	A	4626	DATA	'COSH'	06 04626	
007162	151710	A					
007163	000003	A	4627	DATA	+3	3-WORD REAL	06 04627
007164	141717	A	4628	DATA	'COTAN'	06 04628	
007165	152301	A					
007166	147240	A					
007167	177773	A	4629	DATA	-5	2-WORD COMPLEX	06 04629
007170	141723	A	4630	DATA	'CSIN'	06 04630	
007171	144716	A					
007172	000005	A	4631	DATA	+5	3-WORD COMPLEX	06 04631
007173	141723	A	4632	DATA	'CSQRT'	06 04632	
007174	150722	A					
007175	152240	A					
007176	177774	A	4633	DATA	-4	2-WORD DOUBLE PRECISION	06 04633
007177	142301	A	4634	DATA	'DABS'	06 04634	
007200	141323	A					
007201	000004	A	4635	DATA	+4	3-WORD DOUBLE PRECISION	06 04635
007202	142301	A	4636	DATA	'DARCOS'	06 04636	
007203	151303	A					
007204	147723	A					
007205	000004	A	4637	DATA	+4	3-WORD DOUBLE PRECISION	06 04637
007206	142301	A	4638	DATA	'DARSIN'	06 04638	
007207	151323	A					
007210	144716	A					
007211	000004	A	4639	DATA	+4	3-WORD DOUBLE PRECISION	06 04639
007212	142301	A	4640	DATA	'DATAN'	06 04640	
007213	152301	A					
007214	147240	A					
007215	000004	A	4641	DATA	+4	3-WORD DOUBLE PRECISION	06 04641
007216	142301	A	4642	DATA	'DATAN2'	06 04642	
007217	152301	A					
007220	147262	A					
007221	177774	A	4643	DATA	+4	2-WORD DOUBLE PRECISION	06 04643
007222	142302	A	4644	DATA	'DBLE'	06 04644	
007223	146303	A					
007224	177774	A	4645	DATA	-4	2-WORD DOUBLE PRECISION	06 04645
007225	142303	A	4646	DATA	'DCOS'	06 04646	
007226	147723	A					
007227	000004	A	4647	DATA	+4	3-WORD DOUBLE PRECISION	06 04647
007230	142303	A	4648	DATA	'DCOSH'	06 04648	
007231	147723	A					
007232	144240	A					
007233	000004	A	4649	DATA	+4	3-WORD DOUBLE PRECISION	06 04649
007234	142303	A	4650	DATA	'DCOTAN'	06 04650	
007235	147724	A					
007236	140716	A					
007237	177774	A	4651	DATA	-4	2-WORD DOUBLE PRECISION	06 04651
007240	142304	A	4652	DATA	'DDIM'	06 04652	
007241	144715	A					
007242	177774	A	4653	DATA	-4	2-WORD DOUBLE PRECISION	06 04653
007243	142305	A	4654	DATA	'DERF'	06 04654	
007244	151306	A					
007245	000004	A	4655	DATA	+4	3-WORD DOUBLE PRECISION	06 04655
007246	142305	A	4656	DATA	'DERFC'	06 04656	
007247	151306	A					
007250	141640	A					
007251	177774	A	4657	DATA	-4	2-WORD DOUBLE PRECISION	06 04657
007252	142305	A	4658	DATA	'DEXP'	06 04658	
007253	154320	A					
007254	000004	A	4659	DATA	+4	3-WORD DOUBLE PRECISION	06 04659
007255	142306	A	4660	DATA	'DFLOAT'	06 04660	
007256	146317	A					
007257	140724	A					
007260	000004	A	4661	DATA	+4	3-WORD DOUBLE PRECISION	06 04661
007261	142307	A	4662	DATA	'DGAMMA'	06 04662	
007262	140715	A					
007263	146701	A					
007264	177775	A	4663	DATA	-3	2-WORD REAL	06 04663

007265	142311	A	4664	DATA	'DIM'		06	04664
007266	146640	A						
007267	177774	A	4665	DATA	-4	2-WORD DOUBLE PRECISION	06	04665
007270	142311	A	4666	DATA	'DINT'		06	04666
007271	147324	A						
007272	000004	A	4667	DATA	+4	3-WORD DOUBLE PRECISION	06	04667
007273	142314	A	4668	DATA	'DLGAMA'		06	04668
007274	143701	A						
007275	146701	A						
007276	177774	A	4669	DATA	-4	2-WORD DOUBLE PRECISION	06	04669
007277	142314	A	4670	DATA	'DLOG'		06	04670
007300	147707	A						
007301	000004	A	4671	DATA	+4	3-WORD DOUBLE PRECISION	06	04671
007302	142314	A	4672	DATA	'DLOG10'		06	04672
007303	147707	A						
007304	130660	A						
007305	000024	A	4673	DATA	+20	3-WORD, DOUBLE-PRECISION, MAX-MIN	06	04673
007306	142315	A	4674	DATA	'DMAX1'		06	04674
007307	140730	A						
007310	130640	A						
007311	000024	A	4675	DATA	+20	3-WORD, DOUBLE-PRECISION, MAX-MIN	06	04675
007312	142315	A	4676	DATA	'DMIN1'		06	04676
007313	144716	A						
007314	130640	A						
007315	177774	A	4677	DATA	-4	2-WORD DOUBLE PRECISION	06	04677
007316	142315	A	4678	DATA	'DMQD'		06	04678
007317	147704	A						
007320	000004	A	4679	DATA	+4	3-WORD DOUBLE PRECISION	06	04679
007321	142323	A	4680	DATA	'DSIGN'		06	04680
007322	144707	A						
007323	147240	A						
007324	177774	A	4681	DATA	-4	2-WORD DOUBLE PRECISION	06	04681
007325	142323	A	4682	DATA	'DSIN'		06	04682
007326	144716	A						
007327	000004	A	4683	DATA	+4	3-WORD DOUBLE PRECISION	06	04683
007330	142323	A	4684	DATA	'DSINH'		06	04684
007331	144716	A						
007332	144240	A						
007333	000004	A	4685	DATA	+4	3-WORD DOUBLE PRECISION	06	04685
007334	142323	A	4686	DATA	'DSQRT'		06	04686
007335	150722	A						
007336	152240	A						
007337	177774	A	4687	DATA	-4	2-WORD DOUBLE PRECISION	06	04687
007340	142324	A	4688	DATA	'DTAN'		06	04688
007341	140716	A						
007342	000004	A	4689	DATA	+4	3-WORD DOUBLE PRECISION	06	04689
007343	142324	A	4690	DATA	'DTANH'		06	04690
007344	140716	A						
007345	144240	A						
007346	177775	A	4691	DATA	-3	2-WORD REAL	06	04691
007347	142722	A	4692	DATA	'ERF'		06	04692
007350	143240	A						
007351	177775	A	4693	DATA	-3	2-WORD REAL	06	04693
007352	142722	A	4694	DATA	'ERFC'		06	04694
007353	143303	A						
007354	177775	A	4695	DATA	-3	2-WORD REAL	06	04695
007355	142730	A	4696	DATA	'EXP'		06	04696
007356	150240	A						
007357	000003	A	4697	DATA	+3	3-WORD REAL	06	04697
007360	143314	A	4698	DATA	'FLOAT'		06	04698
007361	147701	A						
007362	152240	A						
007363	000003	A	4699	DATA	+3	3-WORD REAL	06	04699
007364	143701	A	4700	DATA	'GAMMA'		06	04700
007365	146715	A						
007366	140640	A						
007367	177776	A	4701	DATA	-2	2-WORD INTEGER	06	04701
007370	144306	A	4702	DATA	'IFIX'		06	04702
007371	144730	A						
007372	177776	A	4703	DATA	-2	2-WORD INTEGER	06	04703
007373	144701	A	4704	DATA	'IABS'		06	04704
007374	141323	A						
007375	177776	A	4705	DATA	-2	2-WORD INTEGER	06	04705
007376	144704	A	4706	DATA	'IDIM'		06	04706
007377	144715	A						
007400	000002	A	4707	DATA	+2	3-WORD INTEGER	06	04707
007401	144704	A	4708	DATA	'IDINT'		06	04708
007402	144716	A						
007403	152240	A						
007404	177776	A	4709	DATA	-2	2-WORD INTEGER	06	04709
007405	144706	A	4710	DATA	'IFIX'		06	04710
007406	144730	A						
007407	177776	A	4711	DATA	-2	2-WORD INTEGER	06	04711
007410	144716	A	4712	DATA	'INT'		06	04712
007411	152240	A						
007412	000002	A	4713	DATA	+2	3-WORD INTEGER	06	04713
007413	144723	A	4714	DATA	'ISIGN'		06	04714
007414	144737	A						
007415	147240	A						
007416	177756	A	4715	DATA	-18	2-WORD, INTEGER, MAX-MIN	06	04715
007417	146701	A	4716	DATA	'MAX0'		06	04716

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007420 154260 A
007421 177756 A 4717 DATA -18 2-WORD, INTEGER, MAX-MIN 06 04717
007422 146701 A 4718 DATA 'MAX1' 06 04718
007423 154261 A
007424 177756 A 4719 DATA -18 2-WORD, INTEGER, MAX-MIN 06 04719
007425 146711 A 4720 DATA 'MIN0' 06 04720
007426 147260 A
007427 177756 A 4721 DATA -18 2-WORD, INTEGER, MAX-MIN 06 04721
007430 146711 A 4722 DATA 'MIN1' 06 04722
007431 147261 A
007432 177756 A 4723 DATA -2 2-WORD INTEGER 06 04723
007433 146717 A 4724 DATA 'MOD' 06 04724
007434 142240 A
007435 177775 A 4725 DATA -3 2-WORD REAL 06 04725
007436 151305 A 4726 DATA 'REAL' 06 04726
007437 140714 A
007440 177775 A 4727 DATA -3 2-WORD REAL 06 04727
007441 151711 A 4728 DATA 'SIGN' 06 04728
007442 143716 A
007443 177775 A 4729 DATA -3 2-WORD REAL 06 04729
007444 151711 A 4730 DATA 'SIN' 06 04730
007445 147240 A
007446 177775 A 4731 DATA -3 2-WORD REAL 06 04731
007447 151711 A 4732 DATA 'SINH' 06 04732
007450 147310 A
007451 177775 A 4733 DATA -3 2-WORD REAL 06 04733
007452 151716 A 4734 DATA 'SINGL' 06 04734
007453 143714 A
007454 177775 A 4735 DATA -3 2-WORD REAL 06 04735
007455 151721 A 4736 DATA 'SQRT' 06 04736
007456 151324 A
007457 177775 A 4737 DATA -3 2-WORD REAL 06 04737
007460 152301 A 4738 DATA 'TAN' 06 04738
007461 147240 A
007462 177775 A 4739 DATA -3 2-WORD REAL 06 04739
007463 152301 A 4740 DATA 'TANH' 06 04740
007464 147310 A
007465 R 4741 TSBTBX EQU * 06 04741
4742 EJECT 06 04742
4743 ***** 06 04743
4744 * 06 04744
4745 * TEST TERMINATOR (TST) * 06 04745
4746 * 06 04746
4747 * FUNCTION: TO TEST THAT TC = A GIVEN VALUE * 06 04747
4748 * 06 04748
4749 * ENTRY: TEST VALUE IN A * 06 04749
4750 * TERMINATOR IN TC * 06 04750
4751 * 06 04751
4752 * EXIT : RETURN WITH A=0 IF TC=A * 06 04752
4753 * 06 04753
4754 * ERRORS: TER24 IF TC .NE. A * 06 04754
4755 * 06 04755
4756 ***** 06 04756
007465 000000 A 4758 TST ENTRY 06 04758
007466 144721 A 4759 SUB TC 06 04759
007467 001010 A 4760 JAZ* TST NORMAL RETURN IF A=TC 06 04760
007470 107465 R
007471 001000 A 4761 JMP TER24 ILLEGAL TERMINATOR 06 04761
007472 000325 R
4762 EJECT 06 04762
4763 ***** 06 04763
4764 * 06 04764
4765 * TAG VARIABLE (TVR) * 06 04765
4766 * 06 04766
4767 * FUNCTION: TO DEFINE AN ASSIGNMENT TABLE ENTRY AS A SINGLE * 06 04767
4768 * INTERNAL ITEM BY SETTING IU=1 * 06 04768
4769 * 06 04769
4770 * ENTRY: I POINTS TO ASSIGNMENT TABLE ENTRY * 06 04770
4771 * 06 04771
4772 * EXIT : IMMEDIATE RETURN IF IU=1 * 06 04772
4773 * IU SET TO 1 IF IU .NE. 1 AT ENTRY * 06 04773
4774 * TVR CALLS NUT WHICH OUTPUTS ERROR ER2 IF IU .NE. 0 OR 1 * 06 04774
4775 * 06 04775
4776 ***** 06 04776
007473 000000 A 4778 TVR ENTRY 06 04778
007474 014573 A 4779 LDA IU GET IU 06 04779
007475 005311 A 4780 DAR 06 04780
007476 001010 A 4781 JAZ* TVR EXIT IF IU=1 ALREADY 06 04781
007477 107473 R
007500 002000 A 4782 CALL NUT CHECK IU=0 (ITEM NOT ARRAY OR EXTERNAL) 06 04782
007501 003707 R
007502 005101 A 4783 INCR 1 06 04783
007503 054564 A 4784 STA IU 06 04784
007504 002000 A 4785 CALL SAX SET IU(I)=1 IN TABLE ENTRY 06 04785
007505 005134 R
007506 001000 A 4786 JMP* TVR 06 04786
007507 107473 R
4787 EJECT 06 04787
4788 ***** 06 04788
4789 * 06 04789
4790 * WRITE OBJECT RECORD (WRDT) * 06 04790

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4791 *
4792 * FUNCTION: TO OUTPUT A RECORD OF OBJECT TEXT FROM OBJECT BUFFER OBUF * 06 04791
4793 * TO BO AND GO FILES. * 06 04792
4794 * * 06 04793
4795 * ENTRY: OBUF+1 POINTS TO LAST WORD STORED IN OBUF * 06 04794
4796 * BIT 1 OF SPCW SET IF BO OUTPUT TO BE SUPPRESSED * 06 04795
4797 * BIT 0 OF V$JCFG SET IF GO OUTPUT ENABLED * 06 04796
4798 * * 06 04797
4799 * EXIT : X POINTS TO OBUF+2 * 06 04798
4800 * RECORD CONTROL WORD UPDATED: * 06 04799
4801 * * 06 04800
4802 * BITS 0-7: RECORD NUMBER: BUMPED BY 1 MOD 256 * 06 04801
4803 * BIT 12 : SET TO INDICATE NOT STARTING RECORD * 06 04802
4804 * * 06 04803
4805 * ***** * 06 04804
007510 000000 A 4807 WRDT ENTRY * 06 04805
007511 005002 A 4808 TZB CLEAR B * 06 04806
007512 037000 I 4809 LDX OBUF+1 POINT X AT LAST DATA WORD IN BUFFER * 06 04807
007513 067000 I 4810 STB OBUF+1 CLEAR CHECKSUM WORD * 06 04808
4811 * ***** * 06 04809
4812 * CLEAR UNUSED PORTION OF OBJECT BUFFER TO ZERO * * 06 04810
4813 * ***** * 06 04811
007514 005145 A 4814 WRD10 INCR 045 BUMP POINTER X * 06 04812
007515 006140 A 4815 SUBI OBUF+60 * 06 04813
007516 021142 R 4816 JAZ WRD20+3 END OF BUFFER ? * 06 04814
007517 001010 A 4817 STB 0,X NO, STORE ZERO * 06 04815
007520 007527 R 4818 JMP WRD10 LOOP BACK * 06 04816
007521 065000 A
007522 001000 A
007523 007514 R
4819 * ***** * 06 04817
4820 * COMPUTE CHECKSUM * * 06 04818
4821 * ***** * 06 04819
007524 005021 A 4822 WRD20 TBA GET EXCLUSIVE OR CHECKSUM IN A * 06 04820
007525 135000 A 4823 ERA 0,X EXCLUSIVE OR IN NEXT WORD * 06 04821
007526 005012 A 4824 TAB RESTORE CHECKSUM IN B * 06 04822
007527 005345 A 4825 DECR 045 BACK UP POINTER * 06 04823
007530 006140 A 4826 SUBI OBUF CHECK IF BACKED PAST START OF BUFFER * 06 04824
007531 021046 R 4827 JAP WRD20 LOOP UNTIL FINISHED * 06 04825
007532 001002 A 4828 STB OBUF+1 STORE CHECKSUM IN WORD 1 * 06 04826
007533 007524 R 4829 * ***** * 06 04827
007534 067000 I 4830 * TEST FOR OBJECT BLOCKING * * 06 04828
4831 * ***** * 06 04829
007535 014405 A 4832 LDA GOBLFL GET GO BLOCKING FLAG * 06 04830
007536 130421 A 4833 ERA ONE * 06 04831
007537 150055 A 4834 ANA V$JCFG * 06 04832
007540 130421 A 4835 ANA ONE * 06 04833
007541 004241 A 4836 LRLA 1 * 06 04834
007542 054156 A 4837 STA WRDT SET BIT 1 IN FLAG WORD IF GO RMD * 06 04835
007543 006037 A 4838 LDXE WRDGO+5 POINT X AT GO FCB * 06 04836
007544 007705 R
007545 014400 A 4839 LDA SPCW * 06 04837
007546 004341 A 4840 LSRA 1 GET BO DISABLE FLAG * 06 04838
007547 114372 A 4841 ORA GOBLFL MERGE WITH BO BLOCKING FLAG * 06 04839
007550 130421 A 4842 ERA ONE * 06 04840
007551 150421 A 4843 ANA ONE * 06 04841
007552 001010 A 4844 JAZ *+4 IS BO RMD ? * 06 04842
007553 007556 R
007554 006037 A 4845 LDXE WRDBO+5 YES. POINT X AT BO FCB * 06 04843
007555 007664 R
007556 114142 A 4846 ORA WRDT MERGE WITH FLAG WORD * 06 04844
007557 054141 A 4847 STA WRDT * 06 04845
007560 001010 A 4848 JAZ WRD30 IS THERE ANY OBJECT BLOCKING ? * 06 04846
007561 007615 R
007562 014402 A 4849 LDA BOBLCN YES * 06 04847
007563 114450 A 4850 ORA GOBLCN * 06 04848
007564 001010 A 4851 JAZ *+3 * 06 04849
007565 007567 R
007566 014095 A 4852 LDA WRD25 * 06 04850
007567 125001 A 4853 ADD 1,X ADD BASE ADDRESS * 06 04851
007570 005014 A 4854 TAX POINT X AT BLOCKING BUFFER * 06 04852
007571 006020 A 4855 LDBI OBUF * 06 04853
007572 021046 R
007573 006010 A 4856 LDRI 60 * 06 04854
007574 000074 A
007575 007574 R 4857 WRD25 EQU *-1 * 06 04855
007576 003606 R 4858 CALL MOVE MOVE OBJECT RECORD FROM OBUF * 06 04856
007577 014365 A 4859 LDA BOBLCN * 06 04857
007600 114433 A 4860 ORA GOBLCN * 06 04858
007601 005111 A 4861 IAR BUMP BLOCKING COUNTER * 06 04859
007602 150421 A 4862 ANA ONE MOD 2 * 06 04860
007603 005012 A 4863 TAB * 06 04861
007604 014114 A 4864 LDA WRDT * 06 04862
007605 004256 A 4865 LRLA 14 * 06 04863
007606 001002 A 4866 JAP *+3 IS GO BLOCKED ? * 06 04864
007607 007611 R
007610 064423 A 4867 STB GOBLCN YES. STORE COUNT * 06 04865
007611 004241 A 4868 LRLA 1 * 06 04866

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007612 001002 A 4869      JAP      *+3      IS BD BLOCKED ?          06 04869
007613 007613 R
007614 064850 A 4870      STB      BOBLCN   YES. STORE COUNT        06 04870
4871      *****
4872 * OUTPUT BD *          06 04871
4873 *****          06 04872
007615 014330 A 4874 WRD30 LDA      SPCW      YES          06 04874
007616 150422 A 4875      ANA      TWO          06 04875
007617 001016 A 4876      JANZ     WRD40     IS BD OUTPUT ENABLED ? 06 04876
007620 007631 R
007621 014320 A 4877      LDA      BOBLFL   YES          06 04877
007622 001016 A 4878      JANZ     WRD35     IS BD RMD ?            06 04878
007623 007627 R
007624 014340 A 4879      LDA      BOBLCN   YES          06 04879
007625 001016 A 4880      JANZ     WRD40     IS BLOCK FULL ?       06 04880
007626 007631 R
007627 002000 A 4881 WRD35 CALL     WRD80     YES. OUTPUT BLOCK      06 04881
007630 007657 R
4882 *****          06 04882
4883 * OUTPUT GO *          06 04883
4884 *****          06 04884
007631 010055 A 4885 WRD40 LDA      V$JCFG   YES          06 04885
007632 150421 A 4886      ANA      ONE          06 04886
007633 001010 A 4887      JANZ     WRD50     IS GO ENABLED ?       06 04887
007634 007645 R
007635 014305 A 4888      LDA      GOBLFL   YES          06 04888
007636 001016 A 4889      JANZ     WRD45     IS GO RMD ?            06 04889
007637 007643 R
007640 014373 A 4890      LDA      GOBLCN   YES          06 04890
007641 001016 A 4891      JANZ     WRD50     IS BLOCK FULL ?       06 04891
007642 007645 R
007643 002000 A 4892 WRD45 CALL     WRD60     YES. OUTPUT BLOCK      06 04892
007644 007700 R
4893 *****          06 04893
4894 * UPDATE RECORD CONTROL WORD * 06 04894
4895 *****          06 04895
007645 017000 I 4896 WRD50 LDA      DEUF      GET RECORD CONTROL WORD 06 04896
007646 005111 A 4897      IAR      INCRMENT IT          06 04897
007647 150463 A 4898      ANA      BM377     MASK OFF ALL BUT RECORD NUMBER FIELD 06 04898
007650 006110 A 4899      DRAI     074400    DR IN NON-FIRST RECORD CONTROL WORD 06 04899
007651 074400 A
007652 057000 I 4900      STA      DEUF      RESTORE RECORD CONTROL WORD 06 04900
007653 006030 A 4901      LDWI     DEUF+2    POINT X AT FIRST DATA WORD 06 04901
007654 021050 R
007655 001000 A 4902      JMP*     WRD70     EXIT          06 04902
007656 107510 R
4903 *****          06 04903
4904 * WRITE BD SUBROUTINE *      06 04904
4905 *****          06 04905
007657 000000 A 4906 WRD80 ENTR     WRITE     BLFCB,7,0,0  WRITE/BD/WAIT/BINARY 06 04906
4907
007660 006505 A
007661 000404 A
007662 100000 A
007663 000407 A
007664 010072 R
007665 000000 A
007666 000000 A
4908      STAT     WRD80+1,ABORT,ABORT,ABORT,ABORT 06 04908
007667 006505 A
007670 000373 A
007671 007660 R
007672 000355 R
007673 000355 R
007674 000355 R
007675 000355 R
007676 001000 A 4909      JMP*     WRD80     EXIT          06 04909
007677 107657 R
4910 *****          06 04910
4911 * WRITE GO SUBROUTINE *      06 04911
4912 *****          06 04912
007700 000000 A 4913 WRD60 ENTR     WRITE     GLFCB,9,0,0  WRITE/GO/WAIT/BINARY 06 04913
4914
007701 006505 A
007702 000404 A
007703 100000 A
007704 000411 A
007705 010104 R
007706 000000 A
007707 000000 A
4915      STAT     WRD60+1,ABORT,ABORT,ABORT,ABORT 06 04915
007710 006505 A
007711 000373 A
007712 007701 R
007713 000355 R
007714 000355 R
007715 000355 R
007716 000355 R
007717 001000 A 4916      JMP*     WRD60     EXIT          06 04916
007720 107700 R
007721 4917 WRD7T BSS     1          BLOCKING FLAGS        06 04917

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4918          EJECT                                     06 04918
4919 *****                                         06 04919
4920 *                                               * 06 04920
4921 *           Z E R O   E R R O R   B U F F E R ( Z E B ) * 06 04921
4922 *                                               * 06 04922
4923 * FUNCTION: TO LOAD THE 12-CHARACTER ERROR BUFFER ERBF WITH BLANKS * 06 04923
4924 *                                               * 06 04924
4925 * ENTRY: NO SPECIAL CONDITIONS * 06 04925
4926 *                                               * 06 04926
4927 * EXIT : ALL REGS SAVED BUT A * 06 04927
4928 *                                               * 06 04928
4929 *****                                         06 04929
4930 *                                               06 04930
007722 000000 A 4931 ZEB      ENTRY * 06 04931
007723 010000 L 4932          LDA      = * *          GET BLANK WORD * 06 04932
007724 054015 A 4933          STA      ERBF      BLANK WORD 0 * 06 04933
007725 054015 A 4934          STA      ERBF+1    WORD 1 * 06 04934
007726 054015 A 4935          STA      ERBF+2    WORD 2 * 06 04935
007727 054015 A 4936          STA      ERBF+3    WORD 3 * 06 04936
007730 054015 A 4937          STA      ERBF+4    WORD 4 * 06 04937
007731 054015 A 4938          STA      ERBF+5    WORD 5 * 06 04938
007732 001000 A 4939          JMP*      ZEB      EXIT * 06 04939
007733 107722 R
4940          EJECT                                     06 04940
4941 *****                                         06 04941
4942 *                                               * 06 04942
4943 * I/O BUFFER, VARIABLE BLOCK, AND TRANSFER VECTOR DEFINITIONS * 06 04943
4944 *                                               * 06 04944
4945 *****                                         06 04945
007734 R 4947 VARBLD EQU * 06 04947
4949 *****                                         06 04949
4950 * ERROR MESSAGE BUFFER * 06 04950
4951 *****                                         06 04951
007734 120305 A 4953          DATA  ' ERROR ' * 06 04953
007735 151322 A
007736 147722 A
007737 120240 A
007740 120240 A 4954          DATA  ' '          ASCII ERROR NUMBER 06 04954
007741 120240 A
007742 4955 ERBF  BSS      6          12-CHAR SOURCE TEXT BUFFER 06 04955
007750 4956          BSS      1          WORKING CELL FOR SHIFTING TEXT INTO ERBF 06 04956
4958 *****                                         06 04958
4959 * COMPLETION MESSAGE BUFFER * 06 04959
4960 *****                                         06 04960
007751 120240 A 4962 MERR  DATA  ' '          TOTAL ERROR COUNT 06 04962
007752 120240 A
007753 120305 A 4963          DATA  ' ERRORS COMPILATION COMPLETE' * 06 04963
007754 151322 A
007755 147722 A
007756 151640 A
007757 141717 A
007760 146720 A
007761 144714 A
007762 140724 A
007763 144717 A
007764 147240 A
007765 141717 A
007766 146720 A
007767 145305 A
007770 152305 A
4964 *****                                         06 04964
4965 * SPECIAL BUFFER FOR OCTAL LISTINGS, MAPS, ETC. * 06 04965
4966 *****                                         06 04966
007771 120240 A 4968          DATA  ' ' * 06 04968
007772 120240 A
007773 120240 A
007774 120240 A
007775 120240 A
007776 120240 A
007777 120240 A
010000 120240 A
010001 120240 A
010002          4969 SLOT  BSS      20 * 06 04969
4971 *****                                         06 04971
4972 * LISTING TITLE BUFFER * 06 04972
4973 *****                                         06 04973
010026 130720 A 4975 TITL  DATA  '1PAGE ' * 06 04975
010027 140707 A
010030 142640 P
010031 120240 A 4976 TITP  DATA  ' 0 '          PAGE NUMBER 06 04976
010032 120260 A
010033 120240 A
010034 120240 A 4977 TITD  DATA  ' '          DATE 06 04977
010035 120240 A
010036 120240 A
010037 120240 A
010040 120240 A
010041 120240 A 4978 TITJ  DATA  ' '          JOB NAME 06 04978
010042 120240 A
010043 120240 A
010044 120240 A

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010045 120240 A
      4979      IFF      VORTEX-2
      4980      DATA    'VORTXII'
      4981      IFF      VORTEX-1
      4982      DATA    'VORTEX'
010046 153317 A
010047 151324 A
010050 142730 A
010051 120240 A
010052 120240 A
010053 143324 A      4983      DATA    'FTN IV(G)'
010054 147240 A
010055 144726 A
010056 124307 A
010057 124640 A
010060 120240 A      4984      TITN      DATA
010061 120240 A
010062 120240 A
010063 120240 A
010064 120240 A      4985      DATA
010065 120240 A      4986      TITM      DATA    '      HOURS'
010066 120240 A
010067 120310 A
010070 147725 A
010071 151323 A
      010072      R      4987      TITQ      EQU      *
      4988      *****
      4989      * FILE CONTROL BLOCKS (FCB) *
      4990      *****
      4991      *****
      4992      BLFCB    FCB      120,*,3,,'BD',',',,
      4993      *****
010072 000170 A
010073 010072 R
010074 001400 A
010075 000000 A
010076 000000 A
010077 000000 A
010100 000000 A
010101 141317 A
010102 120240 A
010103 120240 A
      4994      GLFCB    FCB      120,*,3,,'GD',',',,
010104 000170 A
010105 010104 R
010106 001400 A
010107 000000 A
010110 000000 A
010111 000000 A
010112 000000 A
010113 143717 A
010114 120240 A
010115 120240 A
      4995      LLFCB    FCB      120,*,3,,'LD',',',,
010116 000170 A
010117 010116 R
010120 001400 A
010121 000000 A
010122 000000 A
010123 000000 A
010124 000000 A
010125 146317 A
010126 120240 A
010127 120240 A
      4996      PLFCB    FCB      120,*,3,,'PI',',',,
010130 000170 A
010131 010130 R
010132 001400 A
010133 000000 A
010134 000000 A
010135 000000 A
010136 000000 A
010137 150311 A
010140 120240 A
010141 120240 A
      4997      EJEC
      4998      *****
      4999      *
      5000      *          C O M P I L E R   V A R I A B L E   B L O C K
      5001      *
      5002      *****
      5003      *****
      5004      *****
      5005      * FIXED ON LOADING BY ROUTINE FORT *
      5006      *****
010142 000001 A      5007      BOBLFL    DATA    1          BO BLOCKING FLAG
010143 000001 A      5008      GOBLFL    DATA    1          GO BLOCKING FLAG
010144 000001 A      5009      LOBLFL    DATA    1          LO BLOCKING FLAG
010145 000001 A      5010      PLOBLFL   DATA    1          PI BLOCKING FLAG
010146      5011      $PCW      BSS      1          COMPILER CONTROL FLAGS
010147      5012      $ECW      BSS      1          ERROR CONTROL WORD
010150 021142 R      5013      DPB        PZE      BLBF1     START ADDRESS OF AVAILBLE MEMORY
010151      5014      DPX        BSS      1          END ADDRESS OF AVAIL CORE
      5015      *****
      5016      *****
      5017      * C L E A R E D   F O R   E A C H   C O M P I L A T I O N   *

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06 04979
06 04980
06 04981
06 04982
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06 04984
06 04985
06 04986
D.106 04987
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06 04990
06 04991
06 04993
06 04994
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06 04996
06 04997
06 04998
06 04999
06 05000
06 05001
06 05002
06 05004
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06 05007
06 05008
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06 05010
06 05011
06 05012
06 05013
06 05014
06 05016
06 05017

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Address	Label	Value	Description	Count	Address
010152	R 5018	*****		06	05018
010152	R 5020	VBLOBG EQU	DPX+1 START OF CLEARED VARIABLES	06	05020
010152	R 5021	AF EQU	VBLOBG ADDRESS FIELD	01	05021
010153	R 5022	AIFW EQU	AF+1 SCAN FORWARD I POINTER	01	05022
010154	R 5023	AS EQU	AIFW+1 ARRAY SUBSCRIPTS	07	05023
010163	R 5024	AT EQU	AS+7 ADDRESS TYPE	01	05024
010164	R 5025	BDF EQU	AT+1 BLOCK DATA FLAG	01	05025
010165	R 5026	BOBLON EQU	BDF+1 BO BLOCKING FLAG	01	05026
010166	R 5027	CF EQU	BOBLON+1 SCAN COMPLIMENT FLAG	01	05027
010167	R 5028	CFPTSW EQU	CF+1 FINAL POINT CHECK SWITCH	01	05028
010170	R 5029	CL EQU	CFPTSW+1	01	05029
010171	R 5030	CLOP EQU	CL+1 LIST OUTPUT PACK COUNT	01	05030
010172	R 5031	CMFL EQU	CLOP+1 COMMON FLAGS	01	05031
010173	R 5032	CNP EQU	CMFL+1 COMMON NAME POINTER	01	05032
010174	R 5033	D EQU	CNP+1 DO POINTER	01	05033
010175	R 5034	DF EQU	D+1 DELIMITER FLAG	01	05034
010176	R 5035	DFPP EQU	DF+1 FLOATING POINT DISABLE FLAG	01	05035
010177	R 5036	DH EQU	DFPP+1 DO LIMIT POINTER	01	05036
010200	R 5037	DI EQU	DH+1 DO INCREMENT POINTER	01	05037
010201	R 5038	DPCA EQU	DI+1 DATA POOL CONSTANTS - I-POINTER FOR:	06	05038
		5039 *	1,2,3,4,0.0,000,ASC, SORT, IFIX, FLOAT	06	05039
		5040 *	,-1,DFLOAT	06	05040
010215	R 5041	DR EQU	DPCA+12 DO RETURN ADDRESS	06	05041
010216	R 5042	DS EQU	DR+1	01	05042
010217	R 5043	DSAV EQU	DS+1 DT SAVE FOR RD/WR PROCESSING	01	05043
010220	R 5044	DT EQU	DSAV+1 DO TOP POINTER	01	05044
010221	R 5045	DTFL EQU	DT+1 DO TERMINATION FLAG	02	05045
010223	R 5046	DV EQU	DTFL+2 DO VARIABLE POINTER	01	05046
010224	R 5047	EC EQU	DV+1 ERROR COUNT	01	05047
010225	R 5048	EH EQU	EC+1 EXPRESSION HIERARCHYS	02	05048
010227	R 5049	EHBK EQU	EH+2 SCAN BACKWARD EXPRESSION HETRARCHY	01	05049
010230	R 5050	EL EQU	EHBK+1 ENTRY LENGTH	01	05050
010231	R 5051	EXAD EQU	EL+1 EXECUTEABLE ADDRESS	01	05051
010232	R 5052	F EQU	EXAD+1 ALTERNATE I POINTER	01	05052
010233	R 5053	FFPFL EQU	F+1 FLOATING POINT PROCESSOR FLAG	01	05053
010234	R 5054	GOBLON EQU	FFPFL+1 GO BLOCKING COUNT	01	05054
010235	R 5055	HCC EQU	GOBLON+1 HOLLERITH COLUMN COUNTER	01	05055
010236	R 5056	I EQU	HCC+1 ASSIGNMENT TABLE POINTER	01	05056
010237	R 5057	ID EQU	I+1 IDENTIFICATION	04	05057
010243	R 5058	IM EQU	ID+4 ITEM MODE	01	05058
010244	R 5059	INBP EQU	IM+1 INPUT BUFFER POINTER	01	05059
010245	R 5060	IDFL EQU	INBP+1 I/O FLAG	01	05060
010246	R 5061	IP EQU	IDFL+1 ARRAY POINTERS	09	05061
010257	R 5062	IS EQU	IP+9 ARRAY DIMENSIONS	08	05062
010267	R 5063	IT EQU	IS+9 ASSIGNMENT TOP POINTER	01	05063
010270	R 5064	IU EQU	IT+1 ITEM USAGE	01	05064
010271	R 5065	J EQU	IU+1 TRIAD POINTER	01	05065
010272	R 5066	JPFL EQU	J+1 JUMP FLAGS	04	05066
010276	R 5067	JT EQU	JPFL+4 TRIAD TOP POINTER	01	05067
010277	R 5068	K EQU	JT+1 EXPRESSION POINTER	01	05068
010300	R 5069	KT EQU	K+1 EXPRESSION TOP POINTER	01	05069
010301	R 5070	LF EQU	KT+1 LOCATION FIELD	01	05070
010302	R 5071	LIF EQU	LF+1 LOGICAL IF FLAG	01	05071
010303	R 5072	LLOP EQU	LIF+1 NO. OF LINES LEFT ON PAGE	01	05072
010304	R 5073	MAXOPC EQU	LLOP+1 MAXIMUM FPP OPERATION COUNT	01	05073
010305	R 5074	MDTB EQU	MAXOPC+1 OPERAND IMPLICIT MODE TABLE	26	05074
010340	R 5075	MF EQU	MDTB+27 MODE FLAG	06	05075
010341	R 5076	MM EQU	MF+1 MAX/MIN LIST FLAG	01	05076
010344	R 5077	MR EQU	MM+1 MULTIPLY REGISTERS	02	05077
010344	R 5078	NAME EQU	MR+2 SUBROUTINE GENERATION NAME	01	05078
010345	R 5079	ND EQU	NAME+1 NUMBER OF DIMENSIONS	01	05079
010346	R 5080	NF EQU	ND+1 NEGATION FLAG	01	05080
010347	R 5081	NFFW EQU	NF+1 SCAN FORWARD NEGATION FLAG	01	05081
010350	R 5082	NS EQU	NFFW+1 NUMBER OF SUBSCRIPTS	01	05082
010351	R 5083	NT EQU	NS+1 NAME TAG	01	05083
010352	R 5084	NTFL EQU	NT+1 NO TAG-USAGE FLAG	01	05084
010353	R 5085	OP EQU	NTFL+1 OPERATION	01	05085
010354	R 5086	OPBK EQU	OP+1 SCAN BACKWARD OPERATION	01	05086
010355	R 5087	OPCNT EQU	OPBK+1 OPERATION COUNT	01	05087
010356	R 5088	OPW EQU	OPCNT+1 OUTPUT PACK WORD	01	05088
010357	R 5089	OTFL EQU	OPW+1 OUTPUT-ITEM FLAG	01	05089
010360	R 5090	O1 EQU	OTFL+1 LEFT OPERAND	01	05090
010361	R 5091	O2 EQU	O1+1 RIGHT OPERAND	01	05091
010362	R 5092	OC EQU	O2+1 PACK CONTROL	04	05092
010366	R 5093	OBBLON EQU	OC+4 PI BLOCKING COUNT	01	05093
010367	R 5094	OFL EQU	OBBLON+1 QUOTE FLAG	01	05094
010370	R 5095	OL EQU	OFL+1 RELATIVE PROGRAM LOCATIONS	02	05095
010372	R 5096	SBFL EQU	OL+2 SUBPROGRAM FLAGS	02	05096
010375	R 5097	SF EQU	SBFL+3 STORAGE FLAG	06	05097
010376	R 5098	SPFL EQU	SF+1 SPECIFICATION FLAG	01	05098
010377	R 5099	STPFL EQU	SPFL+1 STATEMENT FUNCTION FLAG	01	05099
010400	R 5100	STNB EQU	STPFL+1 STATEMENT NUMBER	01	05100
010401	R 5101	STSW EQU	STNB+1 STATEMENT SWITCH	01	05101
010402	R 5102	SSP EQU	STSW+1 SPECIFICATION STACK POINTERS	05	05102
010403	R 5103	SXF EQU	SSP+5 COMPLEX FLAG	01	05103
010410	R 5104	TC EQU	SXF+1 TERM CHARACTER/ CHARACTER IMAGE	02	05104
010412	R 5105	TERF EQU	TC+2 TERMINATING ERROR FLAG	01	05105
010413	R 5106	TM EQU	TERF+1 TRIAD MODE	01	05106
010414	R 5107	TSFL EQU	TM+1 TEMPORARY STORAGE FLAG	01	05107
010415	R 5108	TU EQU	TSFL+1 TRIAD USE	01	05108
010416	R 5109	TO EQU	TU+1 TEMPORARY STORAGE	01	05109

Address	Mode	Label	Op	Op2	Op3	Description	Page	Line	Address
010417	R	5110	T1	EQU	T0+1	TEMPORARY STORAGE	01	06	05110
010420	R	5111	T2	EQU	T1+1	TEMPORARY STORAGE	01	06	05111
010421	R	5112	T2IN	EQU	T2+1		01	06	05112
010422	R	5113	T3	EQU	T2IN+1	TEMPORARY STORAGE	01	06	05113
010423	R	5114	T4	EQU	T3+1	TEMPORARY STORAGE	01	06	05114
010424	R	5115	T5	EQU	T4+1	TEMPORARY STORAGE	01	06	05115
010425	R	5116	T6	EQU	T5+1	TEMPORARY STORAGE	01	06	05116
010426	R	5117	T7	EQU	T6+1	TEMPORARY STORAGE	01	06	05117
010427	R	5118	T8	EQU	T7+1	TEMPORARY STORAGE	01	06	05118
010430	R	5119	T9	EQU	T8+1	TEMPORARY STORAGE	01	06	05119
010431	R	5120	XRPT	EQU	T9+1	OBJECT X-REGISTER POINTER	01	06	05120
010433	R	5121	VBLOND	EQU	XRPT+2	VARIABLE BLOCK END	06	05121	
		5122		EJECT			06	05122	
		5123	*****					06	05123
		5124	*****					06	05124
		5125	* TRANSFER VECTOR FOR FORTRAN INITIALIZE (NFO) ONLY					06	05125
		5126	*****					06	05126
		5127	*****					06	05127
010152		5129	ORG	AF			06	05129	
010152	001000	5131	JMP	ERRX			06	05131	
010153	000472								
010154	001400	5132	DATA	EXIT+7			06	05132	
010155	001412	5133	DATA	EXCLGD+7			06	05133	
010156	001314	5134	DATA	ICRDPI+4			06	05134	
010157	007664	5135	DATA	WRD0+5			06	05135	
010160	007735	5136	DATA	WRDGD+5			06	05136	
010161	003456	5137	DATA	WRDLD+5			06	05137	
010162	003451	5138	DATA	WRDLD			06	05138	
		5139		EJECT			06	05139	
		5140	*****					06	05140
		5141	*****					06	05141
		5142	* C O M P I L E R T R A N S F E R V E C T O R					06	05142
		5143	*****					06	05143
		5144	*****					06	05144
010433		5146	ORG	VBLOND			06	05146	
		5148	* T O - C O M P I L E R					06	05148
010433	000000	5150	DATA	ASI	ASSIGN ITEM		06	05150	
010434	000175	5151	DATA	ASS	ASSIGN SPECIAL		06	05151	
010435	000220	5152	DATA	CAN	CALL NAME		06	05152	
010436	000206	5153	DATA	CEA	CONVERT BINARY TO ASCII		06	05153	
010437	000252	5154	DATA	CCR	COMMA OR C/R TEST		06	05154	
010440	006162	5155	DATA	CRT	C/R TEST		06	05155	
010441	000260	5156	DATA	CTS	COMMA TEST		06	05156	
010442	000266	5157	DATA	DEK	DECREMENT K		06	05157	
010443	000274	5158	DATA	DFT	DEFINE AF,AT		06	05158	
010444	000307	5159	DATA	DSM	DEFINE STATEMENT MODE		06	05159	
010445	001270	5160	DATA	EDLSW			06	05160	
010446	000353	5161	DATA	ER1			06	05161	
010447	000352	5162	DATA	ER2	USAGE ERROR		06	05162	
010450	000351	5163	DATA	ER3	MODE ERROR		06	05163	
010451	000346	5164	DATA	ER6	COMMON BASE LOWERED		06	05164	
010452	000345	5165	DATA	ER7	ILLEGAL EQUIVALENCE GROUP		06	05165	
010453	000344	5166	DATA	ER8			06	05166	
010454	000341	5167	DATA	ER11			06	05167	
010455	000340	5168	DATA	ER12			06	05168	
010456	000337	5169	DATA	ER13			06	05169	
010457	000336	5170	DATA	ER14			06	05170	
010460	000335	5171	DATA	ER15	TRUNCATED VALUE ERROR		06	05171	
010461	000334	5172	DATA	ER16	STATEMENT OUT OF ORDER		06	05172	
010462	000333	5173	DATA	ER17	MORE THAN 25 COMMON REGIONS		06	05173	
010463	000332	5174	DATA	ER18	NON-COMMON DATA ERROR		06	05174	
010464	000330	5175	DATA	ER20	DO INDEX NOT REFERENCED ERROR		06	05175	
010465	000327	5176	DATA	ER21			06	05176	
010466	000326	5177	DATA	ER22	ARRAY NAME PREVIOUSLY DECLARED		06	05177	
010467	000324	5178	DATA	ER24			06	05178	
010470	000500	5179	DATA	EXA	EXAMINE NEXT CHARACTER		06	05179	
010471	000507	5180	DATA	EXL	EXCHANGE LINKS		06	05180	
010472	000646	5181	DATA	FNS1	ENTRY TO FNS		06	05181	
010473	001012	5182	DATA	FORT1			06	05182	
010474	001017	5183	DATA	GSE	GENERATE SUBPROGRAM ENTRANCE		06	05183	
010475	001163	5184	DATA	IAC			06	05184	
010476	001214	5185	DATA	ICH	INPUT CHARACTER		06	05185	
010477	001254	5186	DATA	ICD	INPUT COLUMN		06	05186	
010500	001273	5187	DATA	ICORN1			06	05187	
010501	001217	5188	DATA	ICPD			06	05188	
010502	001216	5189	DATA	ICRR			06	05189	
010503	001220	5190	DATA	ICSI	INPUT SOURCE CONTROL SWITCH		06	05190	
010504	001533	5191	DATA	ID1	INPUT DIGIT		06	05191	
010505	001546	5192	DATA	INH	INPUT HOLLERITH WORD		06	05192	
010506	001623	5193	DATA	IIV	INPUT INTEGER VARIABLE		06	05193	
010507	001642	5194	DATA	ILB	INITIALIZE LIST BUFFER		06	05194	
010510	006160	5195	DATA	ILT	ILLEGAL DO TERMINATION		06	05195	
010511	001657	5196	DATA	INA	INPUT NAME		06	05196	
010512	001667	5197	DATA	INI	INPUT ITEM		06	05197	
010513	001700	5198	DATA	INN	INPUT (DO NOT ASSIGN)		06	05198	
010514	003005	5199	DATA	INS	INPUT NORMAL STATEMENT NUMBER		06	05199	
010515	003017	5200	DATA	INT	INTEGER TEST		06	05200	
010516	003026	5201	DATA	ISN	INPUT STATEMENT NUMBER		06	05201	
010517	003101	5202	DATA	IYA	INPUT VARIABLE		06	05202	
010520	003115	5203	DATA	IYC	INPUT INTEGER VARIABLE/CONSTANT		06	05203	
010521	003157	5204	DATA	INI	WORDS/ITEM		06	05204	

Address	Code	Label	Description	Address	Code	Label	Description
010522	003166	R	5205	DATA	LAX	LOAD ASSIGNMENT DATA	06 05205
010523	003331	R	5206	DATA	LBY	LOAD DD	06 05206
010524	003367	RR	5207	DATA	LEX	LOAD EXPRESSION	06 05207
010525	003406	RR	5208	DATA	LIST	LIST A LINE	06 05208
010526	003506	RR	5209	DATA	LOCT		06 05209
010527	003526	RR	5210	DATA	LTX	LOAD TRIADS	06 05210
010528	003606	RR	5211	DATA	MOVE	MOVE ALPHA DATA	06 05211
010529	003624	RR	5212	DATA	MXL	MAKE EXIT LABEL	06 05212
010530	003716	RR	5213	DATA	OAB	OUTPUT ABSOLUTE	06 05213
010531	003723	RR	5214	DATA	OTB		06 05214
010532	003736	RR	5215	DATA	ODS	OUTPUT DATA STRING	06 05215
010533	004100	RR	5216	DATA	ONEN	OUTPUT NAME	06 05216
010534	004233	RR	5217	DATA	OPK	OUTPUT PACK	06 05217
010535	004233	RR	5218	DATA	URE	OUTPUT RELATIVE	06 05218
010536	004257	RR	5219	DATA	OSR	OUTPUT STRING RELATIVE	06 05219
010537	004266	RR	5220	DATA	OTJ	OUTPUT JUMP	06 05220
010538	004320	RR	5221	DATA	OUT	OUTPUT OPERATOR/OPERAND	06 05221
010539	004343	RR	5222	DATA	OND		06 05222
010540	004703	RR	5223	DATA	ONS	OUTPUT WORDS	06 05223
010541	004747	RR	5224	DATA	POC	PACK DATA STRING	06 05224
010542	004770	RR	5225	DATA	POE	PACK ERROR BUFFER	06 05225
010543	005013	RR	5226	DATA	PTR	PURGE TRIADS	06 05226
010544	005033	RR	5227	DATA	PTS	*C* TEST	06 05227
010545	005057	RR	5228	DATA	RCC	RESTORE SCAN PARAMETERS	06 05228
010546	005042	RR	5229	DATA	RCCS	SAVE SCAN PARAMETERS	06 05229
010547	005110	RR	5230	DATA	RCH	REREAD CHARACTER	06 05230
010548	005116	RR	5231	DATA	RIB	RIGHT INPUT OPERATOR	06 05231
010549	005134	RR	5232	DATA	SAX	STORE ASSIGNMENT DATA	06 05232
010550	005216	RR	5233	DATA	SIX	STORE DD	06 05233
010551	005420	RR	5234	DATA	SIDTB1	END OF MODE-SETTING IN SIDTB	06 05234
010552	005670	RR	5235	DATA	SIS	STATEMENT IDENTIFICATION SCAN	06 05235
010553	006075	RR	5236	DATA	SLIT		06 05236
010554	006117	RR	5237	DATA	ALOP	SPECIAL LIST OUTPUT	06 05237
010555	006163	RR	5238	DATA	STC	STATEMENT COMPLETION	06 05238
010556	006336	RR	5239	DATA	STJ1	ENTRY TO STJ	06 05239
010557	006153	RR	5240	DATA	STN	ILLEGAL DD TER./NO CONTROL CONTINUE	06 05240
010558	006534	RR	5241	DATA	STS	STATEMENT SCAN	06 05241
010559	000354	RR	5242	DATA	TER1	CONSTRUCTION ERROR	06 05242
010560	000353	RR	5243	DATA	TER2	NOT IL SUBPROGRAM ERROR	06 05243
010561	000352	RR	5244	DATA	TER3	DATA POOL FULL ERROR	06 05244
010562	000351	RR	5245	DATA	TER4	ILLEGAL STATEMENT	06 05245
010563	000350	RR	5246	DATA	TER5		06 05246
010564	000346	RR	5247	DATA	TER7		06 05247
010565	000345	RR	5248	DATA	TER8		06 05248
010566	000344	RR	5249	DATA	TER9	IMPROPER DD NEST ERROR	06 05249
010567	000342	RR	5250	DATA	TER11	ITEM NOT OPERAND	06 05250
010568	000341	RR	5251	DATA	TER12	ITEM NOT FUNCTION	06 05251
010569	000340	RR	5252	DATA	TER13		06 05252
010570	000337	RR	5253	DATA	TER14	SUBSCRIPT VARIABLE NOT DUMMY	06 05253
010571	000336	RR	5254	DATA	TER15		06 05254
010572	000334	RR	5255	DATA	TER17	FUNCTION STATEMENT HAS NO PARAMETERS	06 05255
010573	000333	RR	5256	DATA	TER18		06 05256
010574	000332	RR	5257	DATA	TER19		06 05257
010575	000331	RR	5258	DATA	TER20		06 05258
010576	000325	RR	5259	DATA	TER24		06 05259
010577	000320	RR	5260	DATA	TER26	SUBSCRIPT NOT INTEGER CONSTANT	06 05260
010578	006710	RR	5261	DATA	TOP	TEST OVERFLOW	06 05261
010579	005733	RR	5262	DATA	TOR	TAG SUBPROGRAM	06 05262
010580	007465	RR	5263	DATA	TOT	CHARACTER TEST	06 05263
010581	007473	RR	5264	DATA	TVR	TAG VARIABLE	06 05264
010582	007657	RR	5265	DATA	UNDD		06 05265
010583	007700	RR	5266	DATA	UNDD		06 05266
010584	007510	RR	5267	DATA	UNDT		06 05267
010585	007722	RR	5268	DATA	UNDT		06 05268
010622		R	5269	DATA	UNDT		06 05269
010623		RR	5270	DATA	UNDT		06 05270
010624		RR	5271	DATA	UNDT		06 05271
010625		RR	5272	DATA	UNDT		06 05272
010626		RR	5273	DATA	UNDT		06 05273
010627		RR	5274	DATA	UNDT		06 05274
010628		RR	5275	DATA	UNDT		06 05275
010629		RR	5276	DATA	UNDT		06 05276
010630		RR	5277	DATA	UNDT		06 05277
010631		R	5278	DATA	UNDT		06 05278

\* D M C O M P I L E R \*

\*  
 V START  
 RSP INITIALIZE  
 ASSI ASSIGN  
 END TERMINATION  
 FOR FORMAT  
 V V+1  
 BGN V  
 RST V ASSIGNMENT STATEMENT  
 ENDX V  
 V V+1  
 BLD V BLOCK DATA  
 RSTM V REGISTER ASSIGNMENT  
 V V+1  
 CMN V COMMON  
 RSP V BACKSPACE  
 V V+1  
 DAT V DATA  
 CAL V CALL  
 V V+1  
 DIM V DIMENSION  
 DEC V DECODE  
 V V+1  
 EQU V EQUIVALENCE  
 RSP V DD STATEMENT  
 V V+1





000327	R	ER21	000326	R	ER22	000325	R	ER23	000324	R	ER24
000323	R	ER25	000322	R	ER26	000321	R	ER3	000320	R	ER4
000347	R	ER5	000346	R	ER6	000345	R	ER7	000344	R	ER8
000343	R	ER9	000342	R	ERBF	000370	R	ERR0	000424	R	ERR2
000427	R	ERR3	000373	R	ERR4	000422	R	ERRR	000477	R	ERRS
000472	R	ERRX	000300	R	EXA	010221	R	EXAD	001403	R	EXCLGO
001415	R	EXCLLD	001371	R	EXIT	000507	R	EXL	010501	R	EXT
010232	R	F	105035	A	F9DDI	105027	A	F9DDI1	105026	A	F9SEI
105503	A	FADDD	105410	A	FADDS	105535	A	FDIVD	105461	A	FDIVS
010233	R	FFPFL	105400	A	FFPOP	000465	A	FIVE	105621	A	FIX
105226	A	FLAIF	105522	A	FLDB	105032	A	FLDI	105420	A	FLDS
105167	A	FLIDP	105123	A	FLJAG	105024	A	FLREL	105425	A	FLT
105037	A	FMOV1	105506	A	FMULD	105413	A	FMUL3	010624	R	FMB
000521	R	FND	000572	R	FNS	000627	R	FNS0	000614	R	FNS05
000621	R	FNS07	000646	R	FNS1	000666	R	FNS2	000701	R	FNS3
000660	R	FNS4	000720	R	FNS5	000726	R	FNS6	000742	R	FNS7
000752	R	FNS8	000753	R	FNS9	000550	R	FNSA	000544	R	FNSF
000760	R	FNSH	010622	R	FOP	001005	R	FORT	001012	R	FORT1
000423	A	FOUP	105127	A	FOSRT	105710	A	FSTB	105033	A	FSTI
105600	A	FST3	105043	A	FSSUB	105450	A	FSSBS	010632	R	FUN
010104	R	GLFCB	010234	P	GOBLCH	010143	P	GOBLFL	000000	E	GOFCB
010636	R	GDT	001017	P	GSE	001022	P	GSE1	001040	R	GSE15
010555	R	GSEC	001114	R	GSE3	001122	R	GSE4	001127	R	GSE5
010235	R	HCC	010236	P	I	001160	R	IAC	001171	R	IAC1
010203	R	IAC2	001214	R	ICH	001241	R	ICH0	001250	R	ICH1
001331	R	ICMV	001254	R	ICU	001261	R	IC00	001462	R	IC010
001385	R	IC02	001500	R	IC020	001531	R	IC030	001352	R	IC04
001420	R	IC05	001357	R	IC0A	001513	R	IC0LBA	001271	R	IC0LP1
010274	R	IC0LP2	001424	R	IC0LP3	001426	R	IC0LP4	001527	R	IC0L3
001273	R	ICORN1	001217	R	ICRD	001310	R	ICRDPI	001206	R	IC32
001216	R	ICRR	001220	R	IC31	010604	R	ID	001523	R	ID1
010637	R	IFF	001546	R	IMM	001541	R	IMW1	001622	R	IMW2
001625	R	IIV	001642	R	ILB	001646	R	ILB1	006160	R	ILT
010243	R	IM	010633	R	IMP	001657	R	INA	010244	R	INBP
010667	R	INI	001700	R	INN	002295	R	INN10	002073	R	INN16
001765	R	INN2	002105	R	INN20	002132	R	INN21	002140	R	INN22
002152	R	INN24	002176	R	INN25	002211	R	INN30	002224	R	INN32
002227	R	INN34	002204	R	INN4	002247	R	INN40	002232	R	INN42
002302	R	INN50	002300	R	INN52	002327	R	INN54	002274	R	INN5
002315	R	INN60	002410	R	INN62	002425	R	INN70	002464	R	INN72
002512	R	INN73	002512	R	INN75	002542	R	INN77	002775	R	INNBE
002742	R	INNCA	002673	P	INN10	002636	R	INNDB	002622	R	INNDB1
002610	R	INNDBL	002647	R	INNDBM	002653	R	INNDBT	002640	R	INNDBX
002574	R	INNDE	002651	R	INNDEX	002421	R	INNED	002600	R	INNEXF
002601	R	INNIF	001700	R	INNL1	001736	R	INNL2	002055	R	INNL3
002353	R	INNL4	002653	R	INNM10	002672	P	INNPF	002713	R	INNSM
002714	R	INNRM1	002602	P	INNR P	002604	R	INNSF	002605	R	INNT
010256	R	INNX	002665	R	INNY	002776	R	IND	003005	R	INS
003017	R	INT	010245	R	IOFL	010266	R	IP	010257	R	IS
003026	R	ISN	003040	R	ISN1	003040	P	ISN2	003064	R	ISN3
010267	R	IT	010270	P	IU	003104	P	IYA	003115	R	IYC
003157	R	IWI	003176	R	INT1	010271	R	J	010272	R	JFPL
010276	R	JT	010227	R	K	000422	R	K10	000471	A	K12
000472	A	K17	000422	R	K2	000423	R	K20	000470	A	K37
000423	A	K4	000406	A	K6	000453	R	K73	000453	R	KP4P
000437	R	KIXR	000432	A	KJMP	010300	R	KT	003106	R	LAX
000307	R	LAX2	000317	R	LAX3	000327	R	LAX4	000312	R	LAX5
000347	R	LAX6	000350	R	LAX7	000326	R	LAXA	000251	R	LAXE
000262	R	LAX0	000300	A	LC	000350	A	LCJP	000351	R	LDX
000367	R	LEX	010301	R	LF	000402	A	LHN	010302	R	LIF
003431	R	LIS10	003436	R	LIST	000472	R	LIST12	000472	R	LISTCT
003476	R	LIS1HD	003501	R	LIS1L1	003467	R	LISTDT	003505	R	LIS1T
010116	R	LLFCB	010303	R	LLDP	011111	P	LSBLFL	003515	R	LSCL
003506	R	LOCT	003600	R	LOCTM	003501	P	LTX	003570	R	MAB
003603	R	MA01	003532	R	MA02	010304	R	MAVDR	010304	R	MTB
010340	R	MA	010304	P	MA	010304	R	MAT	003570	R	MOV1
003610	R	NOVEL	003623	R	MOV11	010342	R	MA	010304	R	MT
000500	A	MTE	000441	A	MTHD	003624	R	MCL	010305	R	MAS
010344	R	NAME	010345	R	MD	000461	A	MES	003751	R	MERS
010346	R	MF	010347	R	MFFH	000470	A	MINS	003800	R	MRM
003656	R	NRM1	000667	R	NRM2	000611	R	NRM3	010300	R	NS
010351	R	NT	010352	R	NTFL	003700	P	NUT	010300	R	01
010361	R	02	003716	R	03E	021000	R	03E7	003715	R	03E
003736	R	03S	003726	R	03T1	004000	R	03S3	004000	R	03S3
004023	R	03S4	004041	R	03T2	004000	R	03S5	004000	R	03S4
004061	R	03S7	004070	R	03S9	004000	R	03S9	010301	R	03TFL
000421	A	ONE	004100	R	ONE0	004110	R	ONE1	004121	R	ONE2
004133	R	ONE3	004200	R	ONE4	004140	R	ONEC	004100	R	ONEM
004171	R	ONEV	004224	R	ONEP	010303	R	OP	010304	R	OP8P
010355	R	OPCNT	004233	R	OPK	004210	R	OPY1	010306	R	OPW
004250	R	ORC	004257	R	OPP	004206	R	OTJ	010340	R	OT2
004320	R	OUT	004337	R	OUT1	004300	R	OUT2	004404	R	OUT3
004506	R	OUT4	004514	R	OUT0	004511	R	OUT6	004310	R	OUT7
004556	R	OUT8	004546	R	OUT5	004530	R	OUT9A	004600	R	OUT9B
004611	R	OUTBL	014613	R	OUT4	004551	R	OUTAF	004342	R	OUTE
004545	R	OUTC	004532	R	OUTE	004515	R	OUTREC	004506	R	OUTE
004500	R	OUTF	004470	R	OUTG	004447	R	OUTH	004652	R	OUTI
004453	R	OUTJ	004671	R	OUTJ	004674	R	OVE2	004653	R	OVER
010150	A	OVERS2	004675	R	OVD	004703	R	OVS	004722	R	OVS1
004710	R	OVS3	010352	R	PC	014720	R	POC	004747	R	PDS
004763	R	PDS10	004770	R	PEB	004771	R	PER10	010366	R	PIELCN

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010145 R PIBLFL 000000 E PIFCB 010130 R PLFCB 010641 R PSE
005013 R PTR 005027 R PTR1 005034 R PTS 010367 R QFL
005057 R RCC 005063 R RCC1 005066 R RCC2 005071 R RCC3
005076 R RCC4 005101 R RCC5 005042 R RCCS 005110 R RCH
010642 R RED 010643 R RET 010644 R REW 000463 A RHW
005116 R RID 010370 R RL 005134 R SAX 005212 R SAX10
005202 R SAX5 010372 R SBFL 005216 R SDX 005232 R SDX1
000467 A SEVEN 010375 R CF 005246 R SID 005271 R SID1
005305 R SID2 005313 R SIDTB 005420 R SIDTB1 005666 R SIDTEX
000000 E SIFCB 005670 R SIS 005677 R SIS1 006043 R SIS10
006045 R SIS11 006057 R SIS12 006063 R SIS13 006067 R SIS14
005707 R SIS2 005713 R SIS3 005722 R SIS4 005743 R SIS5
005762 R SIS6 005773 R SIS7 005776 R SIS8 006003 R SIS9
000466 A SIX 006075 R SLIT 006106 R SLIT1 006117 R SLOP
006132 R SLOP1 006135 R SLOP2 010002 R SLOT 006140 R SLST
010376 R SPFL 010402 R SSP 010622 R START 006163 R STC
006213 R STC0 006226 R STC1 006242 R STC2 006246 R STC3
006261 R STC4 006220 R STC5 006276 R STC6 010645 R STF
010377 R STFFL 006362 R ST1 006336 R ST11 006516 R ST110
006521 R ST111 006526 R ST112 006372 R ST113 006364 R ST12
006403 R ST120 006412 R ST13 006426 R ST14 006455 R ST145
006460 R ST15 006472 R ST16 006473 R ST17 006504 R ST18
006513 R ST19 006153 R STN 010400 R STNB 010646 R STP
006534 R STS 006630 R STS2 006640 R STS3 006606 R STS5
006671 R STS6 006675 R STS7 006702 R STS8 006705 R STS9
006605 R STSB 006612 R STSD 006616 R STSE 006550 R STSL
006576 R STSR 010401 R STSH 010636 R SUB 010407 R SXF
010416 R T0 010417 R T1 010420 R T2 000771 R T2FN
010421 R T2IN 010422 R T3 010423 R T4 010424 R T5
010425 R T6 010426 R T7 010427 R T8 010430 R T9
010410 R T0 000471 A TEN 000355 R TER0 000354 R TER1
000343 R TER10 000342 R TER11 000341 R TER12 000340 R TER13
000337 R TER14 000336 R TER15 000335 R TER16 000334 R TER17
000333 R TER18 000332 R TER19 000333 R TER2 000331 R TER20
000330 R TER21 000327 R TER22 000326 R TER23 000325 R TER24
000324 R TER25 000323 R TER26 000352 R TER3 000351 R TER4
000350 R TER5 000347 R TER6 000346 R TER7 000345 R TER8
000344 R TER9 010412 R TERF 000027 A TFVCSZ 000464 A THREE
010637 R TJPB 010034 R TITD 010041 R TITJ 010076 R TITL
010065 R TITM 010060 R TITN 010031 R TITP 010072 R TITQ
010413 R TM 006710 R TDF 006733 R TSB 006755 R TSB1
007002 R TSB12 007005 R TSB14 007012 R TSB2 007021 R TSB3
007035 R TSB4 007042 R TSBTB 007465 R TSBTEX 010414 R TSFL
007465 R TST 010415 R TU 007473 R TVR 000422 A TWO
010650 R V 000360 A VSCTAD 000070 A VSDATE 000355 A VSDSTB
000000 E VSEVEC 000000 E VSIOC 000000 E VSIOST 000412 A VSJOB
000055 A VSJCFG 000056 A VSJFCB 000050 A VSJNAM 000054 A VSLCNT
000317 A VSLLUP 000345 A VSLMNT 000400 A VSLUT1 000401 A VSLUT2
000402 A VSLUT3 000417 A VSSYSZ 000357 A VSTKSZ 007734 R VARELD
000666 A VARBL5 010152 R VBLDBG 010423 R VBLDND 000001 A VORTEX
007574 R WRD25 007514 R WRD10 007504 R WRD20 007615 R WRD30
007627 R WRD35 007631 R WRD40 007643 R WRD45 007645 R WRD50
007657 R WRD50 007700 R WRDGD 003451 R WRDLD 007510 R WRDT
007721 R WRDTT 010647 R WRT 006091 A X 010431 R XRPT
007722 R ZEB 000426 A ZCRD
0 ERRORS ASSEMBLY COMPLETE
    
```

```

434 $BIT 590
0 AF 526 781 997
513 ASI 616 655 708
569 AS10 564
573 AS105 571 572 573
617 AS11 570 585
626 AS12 609
631 AS13 547 556
630 AS14 630
561 AS1C 521
557 AS1I 523
518 AS1L 562
551 AS1M 529 555
565 AS1X 575 586 593 593 597 621 625
601 AS1Y 584 632
613 AS1Z 604 606
0 ASP 1644
650 ASS 656
0 AT 531 782 792
435 E 551 552 557 574 1010
142 BM17 479 562 566
148 BM1777 149
143 BM37 481
146 BM377 482
0 BDFCB 480
110 BR0 474
97 BS3 477
98 BS4 480
103 BS9 483
693 CAN 713
714 CANT 707 711
670 CBA 677 872
0 CFPTS4 991
    
```

0	CL	525	954	957						
0	COMP	10								
0	CRT	734	909							
742	CTS	745								
759	DEK	763								
780	DFT	784	1005							
0	DPB	514								
791	DSM	798	1002							
788	DSM1	794								
0	EC	803	804	805	806	807	809	809	810	811
		812	813	814	815	816	817	818	819	820
		821	822	823	824	825	826	827	828	829
		859	866	871	883	889				
136	EIGHT	1016								
0	EJEC	11								
0	EL	527	534	538	541	544	563	577	696	
0	ENDX	896								
0	ENTR	12								
0	EOLSH	901								
829	ER0	855	858							
828	ER1	854								
819	ER10	845								
818	ER11	844								
817	ER12	843								
816	ER13	842								
815	ER14	841								
814	ER15	840								
813	ER16	839								
812	ER17	838								
811	ER18	837								
810	ER19	824	836							
827	ER2	853								
809	ER20	835								
808	ER21	834								
807	ER22	833								
806	ER23	832								
805	ER24	831								
804	ER25	830								
826	ER3	852								
825	ER4	851								
824	ER5	797	850							
823	ER6	849								
822	ER7	848								
821	ER8	847								
820	ER9	846								
0	ERBF	870	873	874						
867	ERR0	863								
887	ERR2	862	892							
889	ERR3	864								
870	ERR4	888								
885	ERRR	856								
915	ERRS	890	893							
931	EXA	934								
0	EXAD	1053								
0	EXIT	894	914							
951	EXL	959								
0	F	952								
456	FFPOP	457	458	459	460	461	462	463	464	465
		466	467	468	469	470				
133	FIVE	695								
980	FND	983	990	992						
1035	FNS0	1025								
1027	FNS05	1023								
1030	FNS07	1026								
1045	FNS1	1041								
1057	FNS2	1037								
0	FNS3	1051								
0	FNS5	1038								
0	FNS6	1047								
0	FNS7	1052								
0	FNS8	1056								
0	FNS9	1058								
0	FORT	412								
132	FOUR	475	880	912						
0	GDFCB	421								
0	I	518	554	567	706	712	956	1007	1028	
0	IAC	985								
0	ICH	907	910							
0	ICD	899								
0	ICD0	898								
0	ICDRNL	906								
0	ID	574	701	702						
0	IDI	932								
0	IM	592	602	615	652	704	788	795		
0	IT	520	543	545	905					
0	IU	596	607	629	633	651	698			
0	J	537	539							
0	JPFL	1055	1057							
0	JT	532	540	542	546	906				
0	K	760	762							
473	K2	530	603	761	793					

177454	R	286	JT	EQU	JPFL+4	TRIAD TOP POINTER	01	10	00286			
177455	R	287	K	EQU	JT+1	EXPRESSION POINTER	01	10	00287			
177456	R	288	KT	EQU	K+1	EXPRESSION TOP POINTER	01	10	00288			
177457	R	289	LF	EQU	KT+1	LOCATION FIELD	01	10	00289			
177460	R	290	LIF	EQU	LF+1	LOGICAL IF FLAG	01	10	00290			
177461	R	291	LLOP	EQU	LIF+1	NO. OF LINES LEFT ON PAGE	01	10	00291			
177462	R	292	MAXOPC	EQU	LLOP+1	MAXIMUM FPP OPERATION COUNT	01	10	00292			
177463	R	293	MDTB	EQU	MAXOPC+1	OPERAND IMPLICIT MODE TABLE	26	10	00293			
177516	R	294	MF	EQU	MDTB+27	MODE FLAG	10	10	00294			
177517	R	295	MM	EQU	MF+1	MAX/MIN LIST FLAG	01	10	00295			
177520	R	296	MR	EQU	MM+1	MULTIPLY REGISTERS	02	10	00296			
177522	R	297	NAME	EQU	MR+2	SUBROUTINE GENERATION NAME	01	10	00297			
177523	R	298	ND	EQU	NAME+1	NUMBER OF DIMENSIONS	01	10	00298			
177524	R	299	NF	EQU	ND+1	NEGATION FLAG	01	10	00299			
177525	R	300	NFFW	EQU	NF+1	SCAN FORWARD NEGATION FLAG	01	10	00300			
177526	R	301	NS	EQU	NFFW+1	NUMBER OF SUBSCRIPTS	01	10	00301			
177527	R	302	NT	EQU	NS+1	NAME TAG	01	10	00302			
177530	R	303	NTFL	EQU	NT+1	NO TAG-USAGE FLAG	01	10	00303			
177531	R	304	OP	EQU	NTFL+1	OPERATION	01	10	00304			
177532	R	305	OPBK	EQU	OP+1	SCAN BACKWARD OPERATION	01	10	00305			
177533	R	306	OPCNT	EQU	OPBK+1	OPERATION COUNT	01	10	00306			
177534	R	307	OPW	EQU	OPCNT+1	OUTPUT PACK WORD	01	10	00307			
177535	R	308	OTFL	EQU	OPW+1	OUTPUT-ITEM FLAG	01	10	00308			
177536	R	309	O1	EQU	OTFL+1	LEFT OPERAND	01	10	00309			
177537	R	310	O2	EQU	O1+1	RIGHT OPERAND	01	10	00310			
177540	R	311	PC	EQU	O2+1	PACK CONTROL	04	10	00311			
177544	R	312	PIBLCN	EQU	PC+4	PI BLOCKING COUNT	01	10	00312			
177545	R	313	QFL	EQU	PIBLCN+1	QUOTE FLAG	01	10	00313			
177546	R	314	RL	EQU	QFL+1	RELATIVE PROGRAM LOCATIONS	02	10	00314			
177556	R	315	SBFL	EQU	RL+2	SUBPROGRAM FLAGS	02	10	00315			
177553	R	316	SF	EQU	SBFL+3	STORAGE FLAG	10	10	00316			
177554	R	317	SPFL	EQU	SF+1	SPECIFICATION FLAG	01	10	00317			
177555	R	318	STFFL	EQU	SPFL+1	STATEMENT FUNCTION FLAG	01	10	00318			
177556	R	319	STNB	EQU	STFFL+1	STATEMENT NUMBER	01	10	00319			
177557	R	320	STSW	EQU	STNB+1	STATEMENT SWITCH	01	10	00320			
177560	R	321	SSP	EQU	STSW+1	SPECIFICATION STACK POINTERS	05	10	00321			
177565	R	322	SXF	EQU	SSP+5	COMPLEX FLAG	01	10	00322			
177566	R	323	TC	EQU	SXF+1	TERM CHARACTER/ CHARACTER IMAGE	02	10	00323			
177570	R	324	TERF	EQU	TC+2	TERMINATING ERROR FLAG	01	10	00324			
177571	R	325	TM	EQU	TERF+1	TRIAD MODE	01	10	00325			
177572	R	326	TSFL	EQU	TM+1	TEMPORARY STORAGE FLAG	01	10	00326			
177573	R	327	TU	EQU	TSFL+1	TRIAD USE	01	10	00327			
177574	R	328	T0	EQU	TU+1	TEMPORARY STORAGE	01	10	00328			
177575	R	329	T1	EQU	T0+1	TEMPORARY STORAGE	01	10	00329			
177576	R	330	T2	EQU	T1+1	TEMPORARY STORAGE	01	10	00330			
177577	R	331	T2IN	EQU	T2+1	TEMPORARY STORAGE	01	10	00331			
177600	R	332	T3	EQU	T2IN+1	TEMPORARY STORAGE	01	10	00332			
177601	R	333	T4	EQU	T3+1	TEMPORARY STORAGE	01	10	00333			
177602	R	334	T5	EQU	T4+1	TEMPORARY STORAGE	01	10	00334			
177603	R	335	T6	EQU	T5+1	TEMPORARY STORAGE	01	10	00335			
177604	R	336	T7	EQU	T6+1	TEMPORARY STORAGE	01	10	00336			
177605	R	337	T8	EQU	T7+1	TEMPORARY STORAGE	01	10	00337			
177606	R	338	T9	EQU	T8+1	TEMPORARY STORAGE	01	10	00338			
177607	R	339	XRPT	EQU	T9+1	OBJECT X-REGISTER POINTER	01	10	00339			
177611	R	340	VRLOND	EQU	XRPT+2	END OF CLEARED VARIABLES	10	10	00340			
		341		EJECT			10	10	00341			
		342	*****							10	10	00342
		343	*				*	10	10	00343		
		344	*	C O M P I L E R T R A N S F E R V E C T O R					*	10	00344	
		345	*				*	10	10	00345		
		346	*****							10	10	00346
		348	*	T D - C O M P I L E R					*	10	00348	
077611	R	350	V	SET	VRLOND-0100000			10	00350			
077611	R	352	ASI	EQU	V	ASSIGN ITEM		10	00352			
077612	R	353	V	SET	V+1			10	00353			
077612	R	354	ASS	EQU	V	ASSIGN SPECIAL		10	00354			
077613	R	355	V	SET	V+1			10	00355			
077613	R	356	CAN	SET	V	"ALL NAME		10	00356			
077614	R	357	V	SET	V+1			10	00357			
077614	R	358	CBA	SET	V	CONVERT BINARY TO ASCII		10	00358			
077615	R	359	V	SET	V+1			10	00359			
077615	R	360	CCR	EQU	V	COMMA OR C/R TEST		10	00360			
077616	R	361	V	SET	V+1			10	00361			
077616	R	362	CRT	EQU	V	C/R TEST		10	00362			
077617	R	363	V	SET	V+1			10	00363			
077617	R	364	CTS	EQU	V	COMMA TEST		10	00364			
077620	R	365	V	SET	V+1			10	00365			
077620	R	366	DEK	SET	V	DECREMENT K		10	00366			
077621	R	367	V	SET	V+1			10	00367			
077621	R	368	DFT	EQU	V	DEFINE AF,AT		10	00368			
077622	R	369	V	SET	V+1			10	00369			
077622	R	370	DSM	SET	V	DEFINE STATEMENT MODE		10	00370			
077623	R	371	V	SET	V+1			10	00371			
077623	R	372	EQLSW	SET	V			10	00372			
077624	R	373	V	SET	V+1			10	00373			
077624	R	374	ER1	SET	V			10	00374			
077625	R	375	V	SET	V+1			10	00375			
077625	R	376	FR2	EQU	V	USAGE ERROR		10	00376			
077626	R	377	V	SET	V+1			10	00377			
077626	R	378	ER3	EQU	V	MODE ERROR		10	00378			
077627	R	379	V	SET	V+1			10	00379			

```

1 *NEW FORTRAN - OVERLAY 0
2 COMPL OPSY COMP
3 EJECT OPSY EJEC
4 ENTRY OPSY ENTR
5 MERGE OPSY MERG
6 SPACE OPSY SPAC
7 TITLE V$FOR0
8 EJEC
9 *****
10 *
11 *** JOB PROCESSOR LOW CORE EQUATES ***
12 *
13 *****
14 000050 A 15 LCJP EQU 050
15 000050 A 16 V$JNAM EQU LCJP JCP NAME
16 000054 A 17 V$LCNT EQU LCJP+4 LINE COUNT
17 000055 A 18 V$JCFG EQU LCJP+5 JCP FLAGS
18 * BIT 2-0 = LOAD AND GO FLAGS
19 * BIT 3 = DUMP FLAG 1=DUMP, 0=NO DUMP
20 * BIT 9-4 = UNUSED
21 * BIT 15-10 = BG EXTRA CORE BLOCKS TO ALLOC
22 *
23 000056 A 24 V$JFCB EQU LCJP+6 JCP FILE CONTROL BLOCK
24 000070 A 25 V$DATE EQU LCJP+16 JCP DATA RECORD
25 *
26 *
27 *****
28 *
29 **** LOW CORE DESCRIPTION ****
30 *
31 *****
32 000300 A 33 LC EQU 0300
33 000317 A 34 V$LLUP EQU LC+15 LOC. OF LAST UNPROTECTED WORD
34 000345 A 35 V$LUNT EQU LC+37 ADDR. OF LOGICAL UNIT NAME TABLE
35 000355 A 36 V$DSTB EQU LC+45 BASE ADDR. FOR DST BLOCK
36 000357 A 37 V$TKSZ EQU LC+47 RMD TRACK SIZE
37 000360 A 38 V$CTAD EQU LC+48 BASE ADDR. FOR CONTROLLER ADDR. TABLE
38 000400 A 39 V$LUT1 EQU LC+64 START LUN ADDR FOR JCP/DPCOM ASSIGNABLE
39 000401 A 40 V$LUT2 EQU LC+65 START LUN ADDR FOR UNASSIGNABLE
40 000402 A 41 V$LUT3 EQU LC+66 START LUN ADDR FOR DPCOM ASSIGNABLE
41 000412 A 42 V$JCB EQU LC+74 ALL SYSTEM BACKGROUND PROGRAMS AND JCP USE
42 * THIS SYSTEM BUFFER TO READ DIRECTIVES AND
43 * SOURCE RECORDS IN.
44 * ACTURAL SECTOR SIZE
45 000417 A 45 V$STSZ EQU LC+79
46 *
47 *****
48 *
49 **** MASK TABLE DESCRIPTION ****
50 *
51 *****
52 000420 A 53 MT SET 0420
53 000420 A 54 ZERO EQU MT ZERO WORD
54 000421 A 55 BS0 EQU MT+1 BIT MASK CONTENTS 000001
55 000422 A 56 BS1 EQU MT+2 000002
56 000423 A 57 BS2 EQU MT+3 000004
57 000424 A 58 BS3 EQU MT+4 000010
58 000425 A 59 BS4 EQU MT+5 000020
59 000426 A 60 BS5 EQU MT+6 000040
60 000427 A 61 BS6 EQU MT+7 000100
61 000430 A 62 BS7 EQU MT+8 000200
62 000431 A 63 BS8 EQU MT+9 000400
63 000432 A 64 BS9 EQU MT+10 001000
64 000433 A 65 BS10 EQU MT+11 002000
65 000434 A 66 BS11 EQU MT+12 004000
66 000435 A 67 BS12 EQU MT+13 010000
67 000436 A 68 BS13 EQU MT+14 020000
68 000437 A 69 BS14 EQU MT+15 040000
69 000440 A 70 BS15 EQU MT+16 0100000
70 * BIT MASK CONTENTS 0177776
71 000441 A 71 BR0 EQU MT+17 0177775
71 000442 A 72 BR1 EQU MT+18 0177773
72 000443 A 73 BR2 EQU MT+19 0177767
73 000444 A 74 BR3 EQU MT+20 0177757
74 000445 A 75 BR4 EQU MT+21 0177737
75 000446 A 76 BR5 EQU MT+22 0177677
76 000447 A 77 BR6 EQU MT+23 0177577
77 000450 A 78 BR7 EQU MT+24 0177377
78 000451 A 79 BR8 EQU MT+25 0176777
79 000452 A 80 BR9 EQU MT+26 0175777
80 000453 A 81 BR10 EQU MT+27 0173777
81 000454 A 82 BR11 EQU MT+28 0167777
82 000455 A 83 BR12 EQU MT+29 0157777
83 000456 A 84 BR13 EQU MT+30 0137777
84 000457 A 85 BR14 EQU MT+31 0177777
85 000460 A 86 BR15 EQU MT+32
86 * SET ALL BITS
87 000461 A 87 NEG EQU MT+33 LEFT HALF WORD MASK 0177400
87 000462 A 88 LHN EQU MT+34 RIGHT HALF WORD MASK 0377
88 000463 A 89 RHN EQU MT+35
89 000481 A 90 ONE EQU MT+1 CONTAINS NUMBER 1
90 000482 A 91 TWO EQU MT+2 CONTAINS NUMBER 2
91 000464 A 92 THREE EQU MT+3 CONTAINS NUMBER 3
92 000483 A 93 FOUR EQU MT+3 CONTAINS NUMBER 4
93 000465 A 94 FIVE EQU MT+37 CONTAINS NUMBER 5
94 000466 A 95 SIX EQU MT+38 CONTAINS NUMBER 6

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E.2 VORTEX LISTINGS

V\$FORT

PROGRAM PAGE

76

LISTING PAGE ( 76)

475	K4	1000	1046	1050							
476	K6	984									
482	K77	908									
0	KT	535									
0	LAX	601	1008								
72	LC	73	74	75	76	77	78	79	80	81	
		84									
54	LCJP	55	56	57	63	64					
0	LIST	876									
0	LOFCB	422									
0	MAOS	878									
0	MERG	13									
92	MT	93	94	95	96	97	98	99	100	101	
		102	103	104	105	106	107	108	109	110	
		111	112	113	114	115	116	117	118	119	
		120	121	122	123	124	125	126	127	128	
		129	130	131	132	133	134	135	136	137	
		138	139	140	141	142	143	144	145	146	
		147	148								
0	NERR	877									
0	NT	582	654	705							
0	NTFL	608	614								
0	ODB	710									
129	ONE	1022	1042								
0	OSR	999									
0	OVER	1011	1028	1043							
0	PDS	903									
0	PIFCB	423									
0	PTR	1029									
0	RCH	897	933								
0	RL	1003									
0	SAX	631	783	789							
135	SEVEN	591	1032								
0	SIFCB	424									
134	SIX	476									
0	SPAC	14									
0	SPFL	605	622	1036	1039	1045	1049				
0	STNB	1059									
0	STSW	733	895								
0	T2FN	1001	1009	1010	1015	1017	1018	1030	1033	1034	
		1035	1048								
0	T8	1006	1021								
0	TC	626	732	981	986	987					
138	TEN	478	673								
856	TER0	857									
840	TER16	993									
0	TERF	904									
131	THREE	569	619	623	697	1024					
0	TDF	536									
0	TSP	628									
0	TST	744									
130	TWO	473	1027								
0	V\$EXEC	425									
0	V\$FORT	15									
0	V\$IOC	426									
0	V\$IOST	427									
57	V\$JCFG	879	881	911	913						
436	X	561	565	573	583	617	953	955	958		

```

190          EJECT
191 *****
192 *
193 * I/O BUFFER, VARIABLE BLOCK, AND TRANSFER VECTOR DEFINITIONS
194 *
195 *****
010150 A 197 DVERSZ SET 4200 MAXIMUM OVERLAY SIZE
000027 A 198 TFVCSZ SET 027 FROM-COMPILER TRANSFER VECTOR SIZE
000666 A 199 VARBLS SET 0666 VARIABLE BLOCK SIZE
177112 R 200 VARBLD EQU *-VARBLS VARIABLE BLOCK START ADDRESS
177120 R 202 ERBF EQU VARBLD+06 ERROR BUFFER
177127 R 203 HERR EQU VARBLD+015 ERROR COUNT
177160 R 204 SLOT EQU VARBLD+0046 SPECIAL LIST BUFFER
177204 R 205 TITL EQU VARBLD+0072 TITLE BUFFER
177207 R 206 TITP EQU VARBLD+0075 TITLE PAGE NUMBER
177212 R 207 TITD EQU VARBLD+0100 TITLE DATE
177217 R 208 TITJ EQU VARBLD+0105 TITLE JOB NAME
177236 R 209 TITN EQU VARBLD+0124 TITLE NAME
177243 R 210 TITM EQU VARBLD+0131 TIME
177250 R 211 TITQ EQU VARBLD+0136 END
177250 R 212 BLFCB EQU VARBLD+0136 BD FCB
177262 R 213 GLFCB EQU VARBLD+0150 GD FCB
177274 R 214 LLFCB EQU VARBLD+0162 LD FCB
177306 R 215 PLFCB EQU VARBLD+0174 PI FCB
216 *****
217 *****
218 *
219 * COMPILER VARIABLE BLOCK
220 *
221 *****
222 *****
223 *****
224 * FIXED ON LOADING BY ROUTINE FORT *
225 *****
177320 R 226 BOBLFL EQU VARBLD+0206 BD BLOCKING FLAG
177321 R 227 GOBLFL EQU VARBLD+0207 GD BLOCKING FLAG
177322 R 228 LOBLFL EQU VARBLD+0210 LD BLOCKING FLAG
177323 R 229 PIBLFL EQU VARBLD+0211 PI BLOCKING FLAG
177324 R 230 $PCW EQU VARBLD+0212 COMPILER CONTROL FLAGS
177325 R 231 $ECW EQU VARBLD+0213 ERROR CONTROL WORD
177326 R 232 DPB EQU VARBLD+0214 AVAILABLE CORE START ADDRESS
177327 R 233 DPX EQU VARBLD+0215 AVAILABLE CORE END ADDRESS
234 *****
235 *****
236 * CLEARED FOR EACH COMPILATION *
237 *****
177330 R 239 VBDBG EQU DPX+1 START OF CLEARED VARIABLES
177330 R 240 AF EQU VBDBG ADDRESS FIELD 01
177331 R 241 AIFW EQU AF+1 SCAN FORWARD I POINTER 01
177332 R 242 AS EQU AIFW+1 ARRAY SUBSCRIPTS 07
177341 R 243 AT EQU AS+7 ADDRESS TYPE 01
177342 R 244 BDF EQU AT+1 BLOCK DATA FLAG 01
177343 R 245 BOBLCN EQU BDF+1 BD BLOCKING FLAG 01
177344 R 246 CF EQU BOBLCN+1 SCAN COMPLIMENT FLAG 01
177345 R 247 CFPTSW EQU CF+1 FINAL POINT CHECK SWITCH 01
177346 R 248 CL EQU CFPTSW+1 LIST OUTPUT PACK COUNT 01
177347 R 249 CLOP EQU CL+1 COMMON FLAGS 01
177350 R 250 CMFL EQU CLOP+1 COMMON NAME POINTER 01
177351 R 251 CNP EQU CMFL+1 DD POINTER 01
177352 R 252 D EQU CNP+1 DELIMITER FLAG 01
177353 R 253 DF EQU D+1 FLOATING POINT DISABLE FLAG 01
177354 R 254 DFPP EQU DF+1 DD LIMIT POINTER 01
177355 R 255 DH EQU DFPP+1 DD INCREMENT POINTER 01
177356 R 256 DI EQU DH+1 DATA POOL CONSTANTS - I-POINTER FOR:
177357 R 257 DPCA EQU DI+1 1,2,0,4,0,0,ASC, SORT, IFIX, FLOAT
258 *
259 *
177373 R 260 DR EQU DPCA+12 DD RETURN ADDRESS 01
177374 R 261 DS EQU DR+1 DT SAVE FOR RD/WR PROCESSING 01
177375 R 262 DSAV EQU DS+1 DD TOP POINTER 01
177376 R 263 DT EQU DSAV+1 DD TERMINATION FLAG 02
177377 R 264 DTFL EQU DT+1 DD VARIABLE POINTER 01
177401 R 265 DV EQU DTFL+2 ERROR COUNT 01
177402 R 266 EC EQU DV+1 EXPRESSION HIERARCHYS 02
177403 R 267 EH EQU EC+1 SCAN BACKWARD EXPRESSION HEIRARCHY 01
177405 R 268 EMBK EQU EH+2 ENTRY LENGTH 01
177406 R 269 EL EQU EMBK+1 EXECUTEABLE ADDRESS 01
177410 R 270 EXAD EQU EL+1 ALTERNATE I POINTER 01
177411 R 271 F EQU EXAD+1 FLOATING POINT PROCESSOR FLAG 01
177412 R 272 FFPFL EQU F+1 GO BLOCKING COUNT 01
177413 R 273 GOBLCN EQU FFPFL+1 HOLLERITH COLUMN COUNTER 01
177414 R 274 HCC EQU GOBLCN+1 ASSIGNMENT TABLE POINTER 01
177415 R 275 I EQU HCC+1 IDENTIFICATION 04
177421 R 276 ID EQU I+1 ITEM MODE 01
177422 R 277 IM EQU ID+4 INPUT BUFFER POINTER 01
177423 R 278 INBP EQU IM+1 I/O FLAG 01
177424 R 279 IOFL EQU INBP+1 ARRAY POINTERS 09
177435 R 280 IP EQU IOFL+1 ARRAY DIMENSIONS 08
177445 R 281 IS EQU IP+9 ASSIGNMENT TOP POINTER 01
177446 R 282 IT EQU IS+8 ITEM USAGE 01
177447 R 283 J EQU IT+1 TRIAD POINTER 01
177453 R 285 JPFL EQU J+1 JUMP FLAGS 04

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000467 A 96 SEVEN EQU MT+39 CONTAINS NUMBER 7 10 00096
000424 A 97 EIGHT EQU MT+4 CONTAINS NUMBER 8 10 00097
000470 A 98 NINE EQU MT+40 CONTAINS NUMBER 9 10 00098
000471 A 99 TEN EQU MT+41 CONTAINS NUMBER 10 10 00099
000421 A 100 BM1 EQU MT+1 BIT MASK WORD 00001 10 00100
000464 A 101 BM3 EQU MT+36 BIT MASK WORD 00003 10 00101
000467 A 102 BM7 EQU MT+39 BIT MASK WORD 00007 10 00102
000472 A 103 BM17 EQU MT+42 BIT MASK WORD 00017 10 00103
000473 A 104 BM37 EQU MT+43 BIT MASK WORD 00037 10 00104
000474 A 105 BM77 EQU MT+44 BIT MASK WORD 00077 10 00105
000475 A 106 BM177 EQU MT+45 BIT MASK WORD 00177 10 00106
000463 A 107 BM377 EQU MT+35 BIT MASK WORD 00377 10 00107
000476 A 108 BM777 EQU MT+46 BIT MASK WORD 00777 10 00108
000477 A 109 BM1777 EQU MT+47 BIT MASK WORD 01777 10 00109
000500 A 110 MTE EQU BM1777+1 FF 10 00110
111 * EJECT * 10 00111
112 * ***** * 10 00112
113 * * 10 00113
114 * P R O G R A M C O N T R O L * 10 00114
115 * * 10 00115
116 * B L O C K * 10 00116
117 * * 10 00117
118 * ***** * 10 00118
120 * ***** * 10 00120
121 * * 10 00121
122 * E X T E R N A L S * 10 00122
123 * * 10 00123
124 * ***** * 10 00124
126 EXT BDFCB SYSTEM BD FCB 10 00126
127 EXT GDFCB SYSTEM GD FCB 10 00127
128 EXT LDFCB SYSTEM LD FCB 10 00128
129 EXT PIFCB SYSTEM PI FCB 10 00129
130 EXT SIFCB SYSTEM SI FCB 10 00130
131 EXT VSEMED ENTRY TO RTE SERVICES 10 00131
132 EXT VSIOUC ENTRY TO IOB 10 00132
133 EXT VSIOST ENTRY TO IOB STATUS CALL 10 00133
134 * ***** * 10 00134
135 * * 10 00135
136 * S Y S T E M V A R I A B L E S * 10 00136
137 * * 10 00137
138 * ***** * 10 00138
000020 A 140 $BIT SET 16 SELECT 16-BIT VDM 620 COMPUTER 10 00140
000002 A 141 B SET 2 B-REGISTER 10 00141
000001 A 142 X SET 1 X-REGISTER 10 00142
143 * * 10 00143
144 * * 10 00144
145 * P A R A M E T E R S F O R W O S V 7 4 F O R T R A N * 10 00145
146 * * 10 00146
147 * * 10 00147
105032 A 148 FLDI EQU 0105032 FLD BCS DPCODE 10 00148
105033 A 149 FSTI EQU 0105033 FST BCS DPCODE 10 00149
105035 A 150 F#DDI EQU 0105035 $DD BCS DPCODE 10 00150
105027 A 151 F#DDI1 EQU 0105027 $DD BCS DPCODE(INCREMENT=1) FF 10 00151
105036 A 152 F#SEI EQU 0105036 $SE BCS DPCODE 10 00152
105037 A 153 F#DVI EQU 0105037 F#DV BCS INSTRUCTION 10 00153
105127 A 154 FSQRT EQU 0105127 FLOATING SQUARE-ROOT BCS INSTRUCTION 10 00154
105024 A 155 FLREL EQU 0105024 FLOATING RELATIONAL BASE OP-CODE 10 00155
105125 A 156 FLJAG EQU 0105125 BCS JMP A.GT.0 10 00156
105226 A 157 FLAIF EQU 0105226 FLOATING ARITHMETIC-IF OP-CODE 10 00157
105167 A 158 FLIOP EQU 0105167 BCS SUBSCRIPT OPERATOR 10 00158
159 * * FF 10 00159
160 * F A S T F L O A T I N G - P O I N T B O X O P C O D E S * FF 10 00160
161 * * FF 10 00161
105400 A 162 FFPDP EQU 0105400 BASIC FFP OP FF 10 00162
105503 A 163 FADDD EQU FFPDP+0103 DP ADD FF 10 00163
105410 A 164 FADDS EQU FFPDP+010 DP ADD FF 10 00164
105505 A 165 FDIVD EQU FFPDP+0135 DP DIVIDE FF 10 00165
105401 A 166 FDIVS EQU FFPDP+1 DP DIVIDE FF 10 00166
105621 A 167 FIX EQU FFPDP+0221 FIX FP FF 10 00167
105420 A 168 FLDS EQU FFPDP+020 LOAD SP FF 10 00168
105522 A 169 FLDD EQU FFPDP+0122 LOAD DP FF 10 00169
105423 A 170 FLI EQU FFPDP+025 FLOAT INTEGER FF 10 00170
105506 A 171 FMULD EQU FFPDP+0106 MULTIPLY DP FF 10 00171
105416 A 172 FMULS EQU FFPDP+016 MULTIPLY SP FF 10 00172
105710 A 173 FSTD EQU FFPDP+0310 STORE DP FF 10 00173
105600 A 174 FSTSD EQU FFPDP+0200 STORE SP FF 10 00174
105543 A 175 FSUBD EQU FFPDP+0143 SUBTRACT DP FF 10 00175
105450 A 176 FSUBS EQU FFPDP+050 SUBTRACT SP FF 10 00176
177 * * 10 00177
178 * * 10 00178
000422 A 179 K2 EQU TWD 10 00179
000441 A 180 MTHD EQU TRS 10 00180
000423 A 181 K4 EQU FOUR 10 00181
000466 A 182 K6 EQU SIX 10 00182
000424 A 183 K10 EQU TEN 10 00183
000471 A 184 K12 EQU TEN 10 00184
000472 A 185 K17 EQU THIRTY 10 00185
000425 A 186 K20 EQU B24 10 00186
000473 A 187 K37 EQU BM37 10 00187
000463 A 188 K77 EQU BM377 10 00188
000432 A 189 KUMP EQU X35 10 00189

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077627 R 380 ER6 EQU V  
077630 R 381 V SET V+1  
077630 R 382 ER7 EQU V  
077631 R 383 V SET V+1  
077631 R 384 ER8 SET V  
077632 R 385 V SET V+1  
077632 R 386 ER11 SET V  
077633 R 387 V SET V+1  
077633 R 388 ER12 SET V  
077634 R 389 V SET V+1  
077634 R 390 ER13 SET V  
077635 R 391 V SET V+1  
077635 R 392 ER14 SET V  
077636 R 393 V SET V+1  
077636 R 394 ER15 EQU V  
077637 R 395 V SET V+1  
077637 R 396 ER16 EQU V  
077640 R 397 V SET V+1  
077640 R 398 ER17 EQU V  
077641 R 399 V SET V+1  
077641 R 400 ER18 EQU V  
077642 R 401 V SET V+1  
077642 R 402 ER20 EQU V  
077643 R 403 V SET V+1  
077643 R 404 ER21 SET V  
077644 R 405 V SET V+1  
077644 R 406 ER22 EQU V  
077645 R 407 V SET V+1  
077645 R 408 ER24 SET V  
077646 R 409 V SET V+1  
077646 R 410 EXA+ EQU V  
077647 R 411 V SET V+1  
077647 R 412 EXL EQU V  
077650 R 413 V SET V+1  
077650 R 414 FN\$1 EQU V  
077651 R 415 V SET V+1  
077651 R 416 FORT1 SET V  
077652 R 417 V SET V+1  
077652 R 418 GSE EQU V  
077653 R 419 V SET V+1  
077653 R 420 IAC SET V  
077654 R 421 V SET V+1  
077654 R 422 ICH EQU V  
077655 R 423 V SET V+1  
077655 R 424 ICD EQU V  
077656 R 425 V SET V+1  
077656 R 426 JCORNL SET V  
077657 R 427 V SET V+1  
077657 R 428 ICRD SET V  
077660 R 429 V SET V+1  
077660 R 430 ICRR SET V  
077661 R 431 V SET V+1  
077661 R 432 ICSI EQU V  
077662 R 433 V SET V+1  
077662 R 434 IDI SET V  
077662 R 435 V SET V+1  
077663 R 436 IHM EQU V  
077664 R 437 V SET V+1  
077664 R 438 IIV EQU V  
077665 R 439 V SET V+1  
077665 R 440 ILB SET V  
077666 R 441 V SET V+1  
077666 R 442 ILT EQU V  
077667 R 443 V SET V+1  
077667 R 444 INA EQU V  
077670 R 445 V SET V+1  
077670 R 446 INI EQU V  
077671 R 447 V SET V+1  
077671 R 448 INN EQU V  
077672 R 449 V SET V+1  
077672 R 450 INS SET V  
077673 R 451 V SET V+1  
077673 R 452 INT EQU V  
077674 R 453 V SET V+1  
077674 R 454 ISN SET V  
077675 R 455 V SET V+1  
077675 R 456 IVA EQU V  
077676 R 457 V SET V+1  
077676 R 458 IVC SET V  
077677 R 459 V SET V+1  
077677 R 460 IWI EQU V  
077700 R 461 V SET V+1  
077700 R 462 LAX EQU V  
077701 R 463 V SET V+1  
077701 R 464 LDX SET V  
077702 R 465 V SET V+1  
077702 R 466 LEX SET V  
077703 R 467 V SET V+1  
077703 R 468 LIST EQU V  
077704 R 469 V SET V+1  
077704 R 470 LDOY SET V

COMMON BASE LOWERED  
ILLEGAL EQUIVALENCE GROUP  
TRUNCATED VALUE ERROR  
STATEMENT OUT OF ORDER  
MORE THAN 29 COMMON REGIONS  
NON-COMMON DATA ERROR  
DO INDEX NOT REFERENCED  
ARRAY NAME PREVIOUSLY DECLARED  
EXAMINE NEXT CHARACTER  
EXCHANGE LINKS  
ENTRY TO FNS  
GENERATE SUBPROGRAM ENTRANCE  
INPUT (A) CHARACTERS  
INPUT CHARACTER  
INPUT COLUMN  
INPUT SOURCE CONTROL SWITCH  
INPUT DIGIT  
INPUT HOLLERITH WORD  
INPUT INTEGER VARIABLE  
INITIALIZE LIST BUFFER  
ILLEGAL DO TERMINATION/CONTROL CONTINUE  
INPUT NAME  
INPUT ITEM  
INPUT (DO NOT ASSIGN)  
INPUT NORMAL STATEMENT NUMBER  
INTEGER TEST  
INPUT STATEMENT NUMBER  
INPUT VARIABLE  
INPUT INTEGER VARIABLE/CONSTANT  
WORDS/ITEM  
LOAD ASSIGNMENT DATA  
LOAD DO  
LOAD EXPRESSION  
LIST A LINE

10 00380  
10 00381  
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10 00470

077705	R	471	V	SET	V+1		10	00471
077705	R	472	LTX	SET	V	LOAD TRIADS	10	00472
077706	R	473	V	SET	V+1		10	00473
077706	R	474	MOVE	EQU	V	MOVE ALPHA DATA	10	00474
077707	R	475	V	SET	V+1		10	00475
077707	R	476	MXL	EQU	V	MAKE EXIT LABEL	10	00476
077710	R	477	V	SET	V+1		10	00477
077710	R	478	DAB	EQU	V	OUTPUT ABSOLUTE	10	00478
077711	R	479	V	SET	V+1		10	00479
077711	R	480	ODB	SET	V	OUTPUT DOUBLE	10	00480
077712	R	481	V	SET	V+1		10	00481
077712	R	482	ODS	SET	V	OUTPUT DATA STRING	10	00482
077713	R	483	V	SET	V+1		10	00483
077713	R	484	ONEN	EQU	V	OUTPUT NAME	10	00484
077714	R	485	V	SET	V+1		10	00485
077714	R	486	OPK	SET	V	OUTPUT PACK	10	00486
077715	R	487	V	SET	V+1		10	00487
077715	R	488	ORE	SET	V	OUTPUT RELATIVE	10	00488
077716	R	489	V	SET	V+1		10	00489
077716	R	490	OSR	SET	V	OUTPUT STRING RELATIVE	10	00490
077717	R	491	V	SET	V+1		10	00491
077717	R	492	OTJ	EQU	V	OUTPUT JUMP	10	00492
077720	R	493	V	SET	V+1		10	00493
077720	R	494	OUT	SET	V	OUTPUT OPERATOR/OPERAND	10	00494
077721	R	495	V	SET	V+1		10	00495
077721	R	496	OWD	SET	V	OUTPUT WORD	10	00496
077722	R	497	V	SET	V+1		10	00497
077722	R	498	DWS	EQU	V	OUTPUT WORDS	10	00498
077723	R	499	V	SET	V+1		10	00499
077723	R	500	PDS	SET	V	PACK DATA STRING	10	00500
077724	R	501	V	SET	V+1		10	00501
077724	R	502	PFB	SET	V	PACK ERROR BUFFER	10	00502
077725	R	503	V	SET	V+1		10	00503
077725	R	504	PTR	SET	V	PURGE TRIADS	10	00504
077726	R	505	V	SET	V+1		10	00505
077726	R	506	PTS	EQU	V	'<<' TEST	10	00506
077727	R	507	V	SET	V+1		10	00507
077727	R	508	RCC1	EQU	V	RESTORE SCAN PARAMETERS	10	00508
077730	R	509	V	SET	V+1		10	00509
077730	R	510	RCCS	EQU	V	SAVE SCAN PARAMETERS	10	00510
077731	R	511	V	SET	V+1		10	00511
077731	R	512	RCH	EQU	V	REREAD CHARACTER	10	00512
077732	R	513	V	SET	V+1		10	00513
077732	R	514	RID	EQU	V	RIGHT INPUT OPERATOR	10	00514
077733	R	515	V	SET	V+1		10	00515
077733	R	516	SAX	EQU	V	STORE ASSIGNMENT DATA	10	00516
077734	R	517	V	SET	V+1		10	00517
077734	R	518	SBX	SET	V	STORE DO	10	00518
077735	R	519	V	SET	V+1		10	00519
077735	R	520	SIDTB1	SET	V	END OF MODE-SETTING IN SIDTB	10	00520
077736	R	521	V	SET	V+1		10	00521
077736	R	522	SIS	EQU	V	STATEMENT IDENTIFICATION SCAN	10	00522
077737	R	523	V	SET	V+1		10	00523
077737	R	524	SLIT	SET	V		10	00524
077740	R	525	V	SET	V+1		10	00525
077740	R	526	SLDP	SET	V	SPECIAL LIST OUTPUT	10	00526
077741	R	527	V	SET	V+1		10	00527
077741	R	528	STC	SET	V	STATEMENT COMPLETION	10	00528
077742	R	529	V	SET	V+1		10	00529
077742	R	530	STI1	EQU	V	ENTRY TO STI	10	00530
077743	R	531	V	SET	V+1		10	00531
077743	R	532	STM	EQU	V	ILLEGAL DO TERM./NO CONTROL CONTINUE	10	00532
077744	R	533	V	SET	V+1		10	00533
077744	R	534	STS	SET	V	STATEMENT SCAN	10	00534
077745	R	535	V	SET	V+1		10	00535
077745	R	536	TER1	EQU	V	CONSTRUCTION	10	00536
077746	R	537	V	SET	V+1		10	00537
077746	R	538	TER2	EQU	V	NOT IN SUBPROGRAM	10	00538
077747	R	539	V	SET	V+1		10	00539
077747	R	540	TER3	EQU	V	DATA POOL FULL	10	00540
077750	R	541	V	SET	V+1		10	00541
077750	R	542	TER4	EQU	V	ILLEGAL STATEMENT	10	00542
077751	R	543	V	SET	V+1		10	00543
077751	R	544	TER5	SET	V		10	00544
077752	R	545	V	SET	V+1		10	00545
077752	R	546	TER7	SET	V		10	00546
077753	R	547	V	SET	V+1		10	00547
077753	R	548	TER8	SET	V		10	00548
077754	R	549	V	SET	V+1		10	00549
077754	R	550	TER9	EQU	V	IMPROPER DO NEST	10	00550
077755	R	551	V	SET	V+1		10	00551
077755	R	552	TER11	EQU	V	ITEM NOT OPERAND	10	00552
077756	R	553	V	SET	V+1		10	00553
077756	R	554	TER12	EQU	V	ITEM NOT FUNCTION	10	00554
077757	R	555	V	SET	V+1		10	00555
077757	R	556	TER13	SET	V		10	00556
077760	R	557	V	SET	V+1		10	00557
077760	R	558	TER14	EQU	V	SUBSCRIPT VARIABLE NOT DUMMY	10	00558
077761	R	559	V	SET	V+1		10	00559
077761	R	560	TER15	SET	V		10	00560
077762	R	561	V	SET	V+1		10	00561

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077762 R 562 TER17 EQU V FUNCTION STATEMENT HAS NO PARAMETERS 10 00562
077763 R 563 V SET V+1 10 00563
077763 R 564 TER18 SET V 10 00564
077764 R 565 V SET V+1 10 00565
077764 R 566 TER19 SET V 10 00566
077765 R 567 V SET V+1 10 00567
077765 R 568 TER20 SET V 10 00568
077766 R 569 V SET V+1 10 00569
077766 R 570 TER24 SET V 10 00570
077767 R 571 V SET V+1 10 00571
077767 R 572 TER26 EQU V SUBSCRIPT NOT INTEGER CONSTANT 10 00572
077770 R 573 V SET V+1 10 00573
077770 R 574 TDF SET V TEST OVERFLOW 10 00574
077771 R 575 V SET V+1 10 00575
077771 R 576 TSB EQU V TAG SUBPROGRAM 10 00576
077772 R 577 V SET V+1 10 00577
077772 R 578 TST EQU V CHARACTER TEST 10 00578
077773 R 579 V SET V+1 10 00579
077773 R 580 TVR EQU V TAG VARIABLE 10 00580
077774 R 581 V SET V+1 10 00581
077774 R 582 WRD0 SET V 10 00582
077775 R 583 V SET V+1 10 00583
077775 R 584 WRD00 SET V 10 00584
077776 R 585 V SET V+1 10 00585
077776 R 586 WRD1 SET V 10 00586
077777 R 587 V SET V+1 10 00587
077777 R 588 ZEB EQU V ZERO ERROR BUFFER 10 00588
000000 R 590 * F R O M - C O M P I L E R * 10 00590
000001 R 592 V SET * 10 00592
000026 R 593 DATA START INITIALIZE 10 00593
000001 R 594 BSS TFVCSZ-#+V-1 10 00594
595 EJECT 10 00595
596 ***** 10 00596
597 * I/O BUFFERS * 10 00597
598 ***** 10 00598
010151 R 600 $BUF EQU V+OVSZ+1 INPUT BUFFER AREA 10 00600
010224 R 601 $BUF EQU $BUF+43 OBJECT BUFFER 10 00601
010320 R 602 $BLBF1 EQU $BUF+60 BLOCKING BUFFER 1 10 00602
603 EJECT 10 00603
604 ***** 10 00604
605 * 10 00605
606 * TRANSFER VECTOR FOR FORTRAN INITIALIZE (INFO) ONLY * 10 00606
607 * 10 00607
608 ***** 10 00608
077330 R 610 SETUP EQU AF-0100000 10 00610
177330 R 612 ERRX EQU SETUP+0100000 'JPM ERRX' 10 00612
077332 R 613 EXIT EQU SETUP+2 'DATA EXIT+7' 10 00613
077333 R 614 EXCLGD EQU SETUP+3 'DATA EXCLGD+7' 10 00614
077334 R 615 ICRDPI EQU SETUP+4 'DATA ICRDPI+4' 10 00615
077335 R 616 WRD005 EQU SETUP+5 'DATA WRD005' 10 00616
077336 R 617 WRD005 EQU SETUP+6 'DATA WRD005' 10 00617
077337 R 618 WRD005 EQU SETUP+7 'DATA WRD005' 10 00618
077340 R 619 WRD0 EQU SETUP+8 'DATA WRD0' 10 00619
620 EJECT 10 00620
621 ***** 10 00621
622 * 10 00622
623 * INITIALIZE COMPILER (FOR T) * 10 00623
624 * 10 00624
625 * FUNCTION: TO INITIALIZE THE COMPILER * 10 00625
626 * 10 00626
627 * ENTRY: FROM JCP, WITH /FORT IN JCP BUFFER, LEFT ADJUSTED TO * 10 00627
628 * PARAMETER LIST. * 10 00628
629 * 10 00629
630 * EXIT : /FORT PARAMS PROCESSED: * 10 00630
631 * 10 00631
632 * B: SPCW(BIT 1)=1 * 10 00632
633 * B: SPCW(BIT 8)=1 * 10 00633
634 * F: SPCW(BIT 4) * 10 00634
635 * H: SPCW(BIT 5) * 10 00635
636 * L: V$JCFG(BIT 0)=1 * 10 00636
637 * M: SPCW(BIT 2)=1 * 10 00637
638 * N: SPCW(BIT 0)=1 * 10 00638
639 * O: SPCW(BIT 3)=1 * 10 00639
640 * X: SPCW(BIT 6)=1 * 10 00640
641 * 10 00641
642 * NAME LOADED FROM VSUNAM INTO HEADER * 10 00642
643 * DATE LOADED FROM VSDATE INTO HEADER * 10 00643
644 * FCB/BOB'S SET UP FOR BO,GO,LO,PI * 10 00644
645 * DPB=1ST AVAIL ADDRESS * 10 00645
646 * DPX=LAST AVAIL ADDRESS * 10 00646
647 * RMD FLAGS BOBLFL,GOBLFL,LOBLFL,PIBLFL = 0 ON RMD * 10 00647
648 * 10 00648
649 * ERRORS: J001 ON INVALID PARAMETERS * 10 00649
650 * 10 00650
651 ***** 10 00651
652 ***** 10 00652
653 * INITIALIZE * 10 00653
654 ***** 10 00654
000026 000000 A 656 START ENTRY 10 00656
000027 005001 A 657 TZA 10 00657
000030 057000 I 658 STA $PCW CLEAR CONTROL WORD 10 00658

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Address	Hex	Op	Opnd	Comment	Page	Line
000031	057000	I	659	STA T0		10 00659
000032	057000	I	660	STA T1		10 00660
000033	010317	A	661	LDA V\$LLUP		10 00661
000034	057000	I	662	STA DPX		10 00662
			664	*****		10 00664
			665	* LOAD JOB NAME AND DATE *		10 00665
			666	*****		10 00666
000035	010423	A	667	LDA FOUR		10 00667
000036	006020	A	668	LDBI V\$JNAM		10 00668
000037	000050	A				
000040	006030	A	669	LDXI TITU		10 00669
000041	177217	R				
000042	002000	A	670	CALL MOVE		10 00670
000043	077706	R				
000044	010423	A	671	LDA FOUR		10 00671
000045	006020	A	672	LDBI V\$DATE		10 00672
000046	000070	A				
000047	006030	A	673	LDXI TITD		10 00673
000050	177212	R				
000051	002000	A	674	CALL MOVE		10 00674
000052	077706	R				
			675	*****		10 00675
			676	* SET UP LD OUTPUT *		10 00676
			677	*****		10 00677
000053	006030	A	678	LDXI LDPCB	POINT X AT SYSTEM LD FCB	10 00678
000054	000090	E				
000055	015005	A	679	LDA 5,X		10 00679
000056	001010	A	680	JAZ FORTCK	IS SYSTEM LD FCB ACTIVE ?	C.1 10 00680
000057	000064	R				
000060	006077	A	681	SIXE J WPCLOS		10 00681
000061	077337	R				
000062	001000	A	682	JMP FORTA1		D.1 10 00682
000063	000110	R				
000064	002000	A	683	FORTCK CALL RMD,5	CHECK IF LD ON RMD	C.1 10 00683
000065	000707	R				
000066	000005	A				
000067	006030	A	684	LDXI LLFCB		D.110 00684
000070	177274	R				
000071	001016	A	685	JANZ FORTA2		D.1 10 00685
000072	000110	R				
			686	FORTDL OPEN LLFCB,5,0,1	OPEN/LD/WAIT/LEAVE	10 00686
000073	006505	A				
000074	000404	A				
000075	100000	A				
000076	013005	A				
000077	177274	R				
000100	000000	A				
000101	000000	A				
			687	STAT FORTDL,ERRX,FORTA1,ERRX,ERRX		10 00687
000102	006505	A				
000103	000373	A				
000104	000073	R				
000105	177330	R				
000106	000110	R				
000107	177330	R				
000110	177330	R				
000111	006030	A	688	LDXI LLFCB		D.110 00688
000112	177274	R				
000113	005001	A	689	FORTA1 TZA		D.1 10 00689
000114	057000	I	690	STA LDIFL	SET RMD FLAG	D.1 10 00690
000115	006020	A	691	FORTA2 LDBI 44		D.110 00691
000116	000054	A				
000117	065000	A	692	STB 0,X	SET OUTPUT WORD COUNT TO 44	10 00692
000120	014427	A	693	LDA PCRA		10 00693
000121	005311	A	694	DAR		10 00694
000122	055001	A	695	STA 1,X	LOAD BUFFER ADDRESS INTO FCB	10 00695
000123	005014	A	696	TAX		D.1 10 00696
000124	010000	L	697	LDA =		10 00697
000125	055000	A	698	STA JAX	BLANK BUFFER	10 00698
000126	005144	A	699	LDR	BLANK BUFFER POINTER	10 00699
000127	005322	A	700	DAR	DROP LOOP COUNTER	10 00700
000130	001026	A	701	JPHZ *-3	LOOP TILL DONE	10 00701
000131	000125	R				
000132	034415	A	702	LDBI PCRA		10 00702
000133	006020	A	703	LDBI FORTDC+3		10 00703
000134	000537	R				
000135	010464	A	704	LDA THREE		10 00704
000136	002000	A	705	CALL MOVE	LOAD ERROR MESSAGE * JC02 *	10 00705
000137	077706	R				
			706	*****		10 00706
			707	* SCAN PARAMETER LIST *		10 00707
			708	*****		10 00708
000140	017000	I	709	FORTL1 LDA T0	GET CHAR COUNT	10 00709
000141	005000	A	710	TDB	CLEAR BYTE FLAG	10 00710
000142	004541	A	711	LLSR 1	LOAD BYTE FLAG B	10 00711
000143	120412	A	712	ADD V\$JOB		10 00712
000144	005014	A	713	TAX	POINT X AT CHAR IN BUFFER	10 00713
000145	015000	A	714	LDA 0,X	GET BUFFER WORD	10 00714
000146	001026	A	715	JANZ *-3	HIGH BYTE ?	10 00715
000147	000151	R				
000150	004350	A	716	LORA 8	YES. SHIFT TO LOW	10 00716

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000151 150463 A 717 ANA RHW CLEAR HIGH BYTE 10 00717
000152 057000 I 718 STA TC SAVE CHAR 10 00718
000153 140000 L 719 SUB =',, 10 00719
000154 001010 A 720 JAZ FORTZ1 IGNORE BLANKS 10 00720
000155 000240 R
000156 017000 I 721 LDA T1 10 00721
000157 001010 A 722 JAZ FORT4 LOOKING FOR TERMINATOR ? 10 00722
000160 000200 R
000161 017000 I 723 FORT2 LDA TC YES 10 00723
000162 140000 L 724 SUB =',, 10 00724
000163 001010 A 725 JAZ FORTX1 ',, OK 10 00725
000164 000233 R
000165 140422 A 726 SUB TWO 10 00726
000166 001010 A 727 JAZ FORTB END SCAN ON ',, 10 00727
000167 000246 R
000170 140472 A 728 SUB K17 10 00728
000171 001010 A 729 JAZ FORTX1 '=, OK 10 00729
000172 000233 R
000173 017000 I 730 LDA T1 10 00730
000174 001010 A 731 JAZ FORTZ1 EXIT IF ILLEGAL CHAR 10 00731
000175 000240 R
000176 002000 A 732 CALL FORTE OUTPUT 'JC02' TO SD AND LD D.1 10 00732
000177 000602 R
000200 006030 A 733 FORT4 LDXI FORTB1 LOOK FOR PARAMETER 10 00733
000201 000643 R
000202 017000 I 734 FORTL2 LDA TC GET CHAR 10 00734
000203 145000 A 735 SUB 0,X COMPARE AGAINST TABLE 10 00735
000204 001010 A 736 JAZ FORT6 EQUAL ? 10 00736
000205 000222 R
000206 005145 A 737 INCR 045 NO. BUMP TABLE POINTER 10 00737
000207 006140 A 738 SUBI FORTB2 CHECK TABLE END 10 00738
000210 000654 R
000211 001004 A 739 JAN FORTL2 LOOP TILL DONE 10 00739
000212 000202 R
000213 017000 I 740 LDA T1 10 00740
000214 001004 A 741 JAN FORTZ1 EXIT IF ILLEGAL CHAR 10 00741
000215 000240 R
000216 002000 A 742 CALL FORTE OUTPUT 'JC02' TO SD AND LD D.1 10 00742
000217 000602 R
000220 001000 A 743 JMP FORT2 TEST IF PARAM 10 00743
000221 000161 R
000222 017000 I 744 FORT6 LDA $PCW VALID PARAM - TEST FOR MULTIPLES 10 00744
000223 155011 A 745 ANA FORTB2-FORTB1,X 10 00745
000224 002016 A 746 JANZM FORTE OUTPUT 'JC02' TO SD AND LD D.1 10 00746
000225 000602 R
000226 017000 I 747 LDA $PCW 10 00747
000227 115011 A 748 ORA FORTB2-FORTB1,X 10 00748
000230 057000 I 749 STA $PCW SET PARAMETER FLAG IN $PCW 10 00749
000231 001000 A 750 JMP FORTY1 10 00750
000232 000236 R
000233 005001 A 751 FORTX1 TZA SET FLAG FOR PARAM 10 00751
000234 001000 A 752 JMP *+3 10 00752
000235 000237 R
000236 005301 A 753 FORTY1 DECR 1 SET FLAG FOR TERMINATOR 10 00753
000237 057000 I 754 STA T1 10 00754
000240 047000 I 755 FORTZ1 INR T0 BUMP BUFFER POINTER 10 00755
000241 017000 I 756 LDA T0 10 00756
000242 006140 A 757 SUBI T2 TEST END OF BUFFER 10 00757
000243 000110 A
000244 001004 A 758 JAN FORTL1 LOOP TILL DONE 10 00758
000245 000140 R
000246 017000 I 759 FORTB LDA $PCW 10 00759
000247 150432 A 760 ANA B39 10 00760
000250 001010 A 761 JAZ *+8 IS 'L' PRESENT ? 10 00761
000251 000260 R
000252 017000 I 762 LDA $PCW YES 10 00762
000253 150452 A 763 ANA BR9 CLEAR 'L' BIT 10 00763
000254 057000 I 764 STA $PCW 10 00764
000255 010055 A 765 LDA $JCFG 10 00765
000256 110421 A 766 ORA ONE SET LOAD/GO FLAG 10 00766
000257 050055 A 767 STA $JCFG 10 00767
000260 034267 A 768 LDX BUFA 10 00768
000261 006020 A 769 LDBI ERBF-6 10 00769
000262 177112 R
000263 010465 A 770 LDA FIVE 10 00770
000264 002000 A 771 CALL MOVE 10 00771
000265 077706 R
000266 006010 A 772 LDAI '0' 10 00772
000267 120260 A
000270 055000 A 773 STA 0,X SET ERROR NO TO 0 10 00773
774 ***** 10 00774
775 * SET UP BD OUTPUT * 10 00775
776 ***** 10 00776
000271 017000 I 777 LDA $PCW 10 00777
000272 150422 A 778 ANA TWO 10 00778
000273 001016 A 779 JANZ FORTC IS BD DISABLED BY A 'B' ON /FORT ? 10 00779
000274 000363 R
000275 006030 A 780 LDXI BDFCB NO 10 00780
000276 000000 E
000277 015005 A 781 LDA 5,X 10 00781
000300 001010 A 782 JAZ FORBCK IS SYSTEM BD FCB ACTIVE ? C.1 10 00782

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000301 000310 R
000302 006077 A 783 STXE WRDB05 10 00783
000303 077335 R
000304 006077 A 784 STXE EXIT 10 00784
000305 077332 R
000306 001000 A 785 JMP FORTB4 10 00785
000307 000346 R
000310 002000 A 786 FORBCK CALL RMD,7 CHECK IF BD ON RMD C.1 10 00786
000311 000707 R
000312 000007 A
000313 001016 A 787 JANZ FORTB3 IF NOT C.1 10 00787
000314 000333 R
788 FORTOB OPEN BLFCB,7,0,1 OPEN/BD/WAIT/LEAVE 10 00788

000315 006505 A
000316 000404 A
000317 100000 A
000320 013007 A
000321 177250 R
000322 000000 A
000323 000000 A
789 STAT FORTOB,FORTER,FORTB3,FORTER,FORTER 10 00789

000324 006505 A
000325 000373 A
000326 000315 R
000327 000576 R
000330 000333 R
000331 000576 R
000332 000576 R
000333 006030 A 790 FORTB3 LDXI BLFCB 10 00790
000334 177250 R
000335 015005 A 791 LDA 5,X 10 00791
000336 001016 A 792 JANZ FORTB4 IS BD RMD ? 10 00792
000337 000346 R
000340 014072 A 793 LDA FORTC3 10 00793
000341 055000 A 794 STA 0,X SET OUTPUT WORD COUNT TO 60 10 00794
000342 014073 A 795 LDA DBUFA 10 00795
000343 055001 A 796 STA 1,X LOAD BUFFER ADDRESS INTO FCB 10 00796
000344 001000 A 797 JMP FORTC 10 00797
000345 000363 R
000346 005001 A 798 FORTB4 TZA BD IS RMD 10 00798
000347 057000 I 799 STA BOBFLF RESET BD BLOCKING FLAG 10 00799
000350 014271 A 800 LDA FORT12 10 00800
000351 055000 A 801 STA 0,X SET BUFFER SIZE TO 120 10 00801
000352 015002 A 802 LDA 2,X 10 00802
000353 150463 A 803 ANA RHM 10 00803
000354 006117 A 804 DRAE BLFCB+2 10 00804
000355 177250 R
000356 055002 A 805 STA 2,X STORE MODE 10 00805
000357 017000 I 806 LDA DPB 10 00806
000360 055001 A 807 STA 1,X STORE BUFFER ADDRESS IN FCB 10 00807
000361 124260 A 808 ADD FORT12 ALLOCATE BLOCKING BUFFER 10 00808
000362 057000 I 809 STA DPB 10 00809
810 *****
811 * SET UP GO OUTPUT *
812 *****
000363 010055 A 813 FORTC LDA V$JCFG 10 00813
000364 150421 A 814 ANA ONE 10 00814
000365 001010 A 815 JAZ FORTD IS 'GO' OPTION ON '/FORT' ? 10 00815
000366 000466 R
000367 006030 A 816 LDXI GDFCB YES 10 00816
000370 000000 E
000371 015005 A 817 LDA 5,X 10 00817
000372 001010 A 818 JAZ FORGCK IS SYSTEM GO FCB ACTIVE ? C.1 10 00818
000373 000402 R
000374 006077 A 819 STXE WRDGD5 10 00819
000375 077336 R
000376 006077 A 820 STXE EXCLGD 10 00820
000377 077333 R
000400 001000 A 821 JMP FORTC2 10 00821
000401 000442 R
000402 002000 A 822 FORGCK CALL RMD,9 CHECK IF GO ON RMD C.1 10 00822
000403 000707 R
000404 000011 A
000405 001016 A 823 JANZ FORTC1 IF NOT C.1 10 00823
000406 000425 R
824 FORTOG OPEN GLFCB,9,0,1 OPEN/GO/WAIT/LEAVE 10 00824

000407 006505 A
000410 000404 A
000411 100000 A
000412 013011 A
000413 177262 R
000414 000000 A
000415 000000 A
825 STAT FORTOG,FORTER,FORTC1,FORTER,FORTER 10 00825

000416 006505 A
000417 000373 A
000420 000407 R
000421 000576 R
000422 000425 R
000423 000576 R
000424 000576 R

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000425 006030 A 826 FORTC1 LDXI GLFCB 10 00826
000426 177262 R
000427 015005 A 827 LDA 5,X 10 00827
000430 001016 A 828 JANZ FORTC2 IS GO RMD ? 10 00828
000431 000442 R
000432 006010 A 829 LDAI 60 10 00829
000433 000074 A
000433 000433 R 830 FORTC3 EQU *-1 10 00830
000434 055000 A 831 STA 0,X SET OUTPUT WORD COUNT TO 60 10 00831
000435 006010 A 832 LDAI DBUF 10 00832
000436 010224 R
000436 000436 R 833 DBUFA EQU *-1 10 00833
000437 055001 A 834 STA 1,X OUTPUT BUFFER ADDRESS 10 00834
000440 001000 A 835 JMP FORTD LOAD BUFFER ADDRESS INTO FCB 10 00835
000441 000466 R
000442 005001 A 836 FORTC2 TZA GO IS RMD 10 00836
000443 057000 I 837 STA GOBLFL CLEAR GO BLOCKING FLAG 10 00837
000444 014175 A 838 LDA FORT12 10 00838
000445 055000 A 839 STA 0,X SET BUFFER SIZE TO 120 10 00839
000446 015002 A 840 LDA 2,X 10 00840
000447 150463 A 841 ANA RHW 10 00841
000450 006117 A 842 ORAE GLFCB+2 10 00842
000451 177264 R
000452 055002 A 843 STA 2,X STORE MODE 10 00843
000453 006027 A 844 LDRE WROB05 (B)=FCB ADDRESS 10 00844
000454 077335 R
000455 016001 A 845 LDA 1,X GET BD BUFFER ADDRESS 10 00845
000456 055001 A 846 STA 1,X SET GO BUFFER=BD 10 00846
000457 017000 I 847 LDA DBLFL 10 00847
000460 001010 A 848 JAZ FORTD ALREADY BD BLOCKING BUFFER ? 10 00848
000461 000466 R
000462 017000 I 849 LDA DPB NO 10 00849
000463 055001 A 850 STA 1,X LOAD GO BUFFER ADDRESS INTO FCB 10 00850
000464 124155 A 851 ADD FORT12 ALLOCATE BINARY BLOCKING BUFFER 10 00851
000465 057000 I 852 STA DPB 10 00852
853 ***** 10 00853
854 * SET UP PI INPUT * 10 00854
855 ***** 10 00855
000466 006030 A 856 FORTD LDXI PIFCB 10 00856
000467 000000 E
000470 002000 A 857 CALL RMD,4 10 00857
000471 000707 R
000472 000004 A
000473 001016 A 858 JANZ FORTOP PI NOT A RMD 10 00858
000474 000517 R
000475 015005 A 859 LDA 5,X 10 00859
000476 001016 A 860 JANZ FORTD4 IS SYSTEM PI FCB ENABLED ? 10 00860
000477 000555 R
000500 030400 A 861 LDX V$LUT1 NO 10 00861
000501 015004 A 862 LDA 4,X 10 00862
000502 145002 A 863 SUB 2,X 10 00863
000503 150463 A 864 ANA RHW 10 00864
000504 006030 A 865 LDXI SIFCB POINT X AT SYSTEM SI FCB 10 00865
000505 000000 E
000506 001016 A 866 JANZ FORTOP SI = PI ? 10 00866
000507 000517 R
000510 015005 A 867 LDA 5,X YES 10 00867
000511 001010 A 868 JAZ FORTOP 10 00868
000512 000517 R
000513 006077 A 869 STXE ICRDPI SYSTEM PI FCB IS ACTIVE 10 00869
000514 077334 R
000515 001000 A 870 JMP FORTD3 10 00870
000516 000544 R
871 FORTOP OPEN PLFCB,4,0,1 NO OPEN/PI/WAIT/LEAVE 10 00871
000517 006505 A
000520 000404 A
000521 100000 A
000522 013004 A
000523 177306 R
000524 000000 A
000525 000000 A
872 STAT FORTOP,ERRX,ERRX,ERRX,ERRX 10 00872
000526 006505 A
000527 000373 A
000530 000517 R
000531 177330 R
000532 177330 R
000533 177330 R
000534 177330 R
000535 006030 A 873 LDXI PLFCB 10 00873
000536 177306 R
000537 015005 A 874 LDA 5,X 10 00874
000540 001016 A 875 JANZ FORTD4 IS PI RMD ? 10 00875
000541 000555 R
000542 010465 A 876 LDA FIVE NO 10 00876
000543 055002 A 877 STA 2,X SET RETRY COUNT=5 10 00877
000544 006010 A 878 FORTD3 LDAI 40 10 00878
000545 000050 A
000546 055000 A 879 STA 0,X SET INPUT WORD COUNT TO 40 10 00879
000547 006010 A 880 LDAI $BUF 10 00880
000550 010151 R

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000551 000550 R 881 BUFA EQU *-1 INPUT BUFFER ADDRESS 10 00881
000552 120464 A 882 ADD THREE 10 00882
000553 055001 A 883 STA 1,X LOAD BUFFER ADDRESS INTO FCB 10 00883
000554 001000 A 884 JMP* START TO COMPILER 10 00884
000555 100026 R 885 FORTD4 TZA 10 00885
000556 005001 A 886 STA PIBLFL RESET BD BLOCKING FLAG 10 00886
000557 057000 I 887 FORTD6 STXE ICRDPI PI IS RMD 10 00887
000558 006077 A
000559 077334 R
000560 014060 A 888 LDA FORT12 10 00888
000561 055000 A 889 STA 0,X SET BUFFER SIZE TO 120 10 00889
000562 015002 A 890 LDA 2,X 10 00890
000563 150463 A 891 ANA RHW 10 00891
000564 006117 A 892 ORAE PLFCB+2 10 00892
000565 177310 R
000566 055002 A 893 STA 2,X STORE MODE 10 00893
000567 017000 I 894 LDA DPB 10 00894
000568 055001 A 895 STA 1,X STORE BUFFER ADDRESS IN FCB 10 00895
000569 124047 A 896 ADD FORT12 ALLOCATE BLOCKING BUFFER 10 00896
000570 057000 I 897 STA DPB 10 00897
000571 001000 A 898 JMP* START TO COMPILER 10 00898
000572 100026 R
000573 002000 A 899 FORTER CALL WRDLD WRITE ERROR MSG. ON LD 10 00899
000574 077340 R
000575 001000 A 900 JMP ERRX EXIT TO VORTEX RTE 10 00900
000576 100026 R
000577 002000 A
000578 077340 R
000579 001000 A
000580 177330 R
000581 000000 A
000582 074027 A
000583 006505 A
000584 000404 A
000585 100000 A
000586 010403 A
000587 000634 R
000588 000000 A
000589 000000 A
000590 000000 A
000591 006505 A 907 STAT FORTE1,ERRX,ERRX,ERRX,ERRX 10 00907
000592 000373 A
000593 000604 R
000594 177330 R
000595 177330 R
000596 177330 R
000597 177330 R
000598 006505 A 908 JSR V$SOLD,X TEST SD=LD 10 00908
000599 000713 R
000600 001010 A 909 JAZ FORTX SD=LD ? 10 00909
000601 000630 R
000602 002000 A 910 CALL WRDLD 10 00910
000603 077340 R
000604 034002 A 911 FORTX LDX FORTX RESTORE X 10 00911
000605 001000 A 912 JMP* FORTE EXIT 10 00912
000606 100602 R
000607 000003 A 913 FORTX BSS 1 SAVE X 10 00913
000608 000003 A 914 FORTDC DATA 3 10 00914
000609 000637 R 915 DATA *+2 10 00915
000610 000001 A 916 DATA 1 10 00916
000611 120312 A 917 DATA ' JC02' *FORT' ERROR MESSAGE 10 00917
000612 141660 A
000613 131240 A
000614 000170 A
000615 000302 A 918 FORT12 DATA 120 10 00918
000616 000304 A 919 ***** 10 00919
000617 000306 A 920 * PARAMETER TABLE * 10 00920
000618 000310 A 921 ***** 10 00921
000619 000314 A 922 FORTB1 DATA 0302 B 10 00922
000620 000315 A 923 DATA 0304 D 10 00923
000621 000316 A 924 DATA 0306 F 10 00924
000622 000317 A 925 DATA 0310 H FF 10 00925
000623 000318 A 926 DATA 0314 L 10 00926
000624 000319 A 927 DATA 0315 M 10 00927
000625 000320 A 928 DATA 0316 N 10 00928
000626 000321 A 929 DATA 0317 O 10 00929
000627 000322 A 930 DATA 0320 X 10 00930
000628 000002 A 931 FORTB2 DATA 2 B 10 00931
000629 000400 A 932 DATA 0400 D 10 00932
000630 000020 A 933 DATA 020 F 10 00933
000631 000040 A 934 DATA 040 H FF 10 00934
000632 001000 A 935 DATA 01000 L 10 00935
000633 000004 A 936 DATA 4 M 10 00936
000634 000001 A 937 DATA 1 N 10 00937
000635 000010 A 938 DATA 010 D 10 00938
000636 000100 A 939 DATA 0100 X 10 00939
000637 940 * 10 00940
000638 941 * THIS ROUTINE DETERMINES IF THE LOGICAL UNIT IS ON A RMD 10 00941
000639 942 * 10 00942
000640 943 * CALLING SEQUENCE 10 00943
000641 944 * CALL RMD,X X=LUN 10 00944
000642 945 * RETURN A REG=0 IF ON RMD 10 00945

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000665 024021 A 946 *
000666 016000 A 948 RMD1 LDB RMD 10 00946
000667 120400 A 949 LDA 0,2 10 00948
000670 005012 A 950 ADD V$LUT1 LUN PARAM OF CALL 10 00949
000671 016000 A 951 TAB 10 00950
000672 150463 A 952 LDA 0,B GET CURRENT DST ENTRY NO. 10 00951
000673 005311 A 953 ANA RHW 10 00952
000674 054015 A 954 DAR CONVERT 10 00953
000675 004201 A 955 STA RMDA TO 10 00954
000676 124013 A 956 ASLA 1 DISPLACEMENT 10 00955
000677 120355 A 957 ADD RMDA IN TABLE 10 00956
000700 005012 A 958 ADD V$DSTB ADD TABLE BASE 10 00957
000701 016001 A 959 TAB 10 00958
000702 004350 A 960 LDA 1,B DEVICE NAME 10 00959
000703 006140 A 961 LSRA 0 LEFT CHAR 10 00960
000704 000304 A 962 SUBI 0304 D ? 10 00961
000705 044001 A 963 INR RMD 10 00962
000706 001000 A 964 JMP * RETURN- A REG=0 IF ON RMD 10 00963
000707 000706 R 10 00964
000707 965 RMD BSS 0 ENTRY 10 00965
000710 001000 A 966 JMP RMD1 10 00966
000711 000665 R
000712 000000 A 967 RMDA DATA 0 TEMP STORE 10 00967
968 EJECT 10 00968
969 * 10 00969
970 * 10 00970
971 * SUBROUTINE TO DETERMINE IF LD LOGICAL 10 00971
972 * UNIT AND SD LOGICAL UNIT ARE ASSIGNED 10 00972
973 * TO THE SAME DEVICE. 10 00973
974 * 10 00974
975 * CALLING SEQUENCE: 10 00975
976 * JSR V$SOLD,X 10 00976
977 * 10 00977
978 * ENTRANCE PARAMETERS - NONE 10 00978
979 * 10 00979
980 * RETURN PARAMETER - A REGISTER = ZERO, 10 00980
981 * SAME DEVICE, A REGISTER NOT = ZERO, 10 00981
982 * DIFFERENT DEVICES. 10 00982
983 * 10 00983
984 * B REGISTER IS PRESERVED DURING EXECUTION. 10 00984
985 * 10 00985
000713 074012 A 986 V$SOLD STX SOLD1 10 00986
000714 030400 A 987 LDX V$LUT1 10 00987
000715 015003 A 988 LDA 0,X GET SD CURRENT 10 00988
000716 150463 A 989 ANA RHW ASSIGNMENT 10 00989
000717 054007 A 990 STA SOLD2 10 00990
000720 015005 A 991 LDA 0,X GET LD CURRENT 10 00991
000721 150463 A 992 ANA RHW ASSIGNMENT 10 00992
000722 144004 A 993 SUB SOLD2 TAKE DIFFERENCE 10 00993
000723 034002 A 994 LDX SOLD1 10 00994
000724 006705 A 995 IJMP 0,X RETURN 10 00995
000725 000000 A
000726 000000 A 996 SOLD1 DATA 0 10 00996
000727 000000 A 997 SOLD2 DATA 0 10 00997
000730 998 BSS BLEF1+120-* 10 00998
999 END 10 00999

```

## ENTRY NAMES

## EXTERNAL NAMES

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000276 E BOFCB 000370 E GDFCB 000054 E LOFCB 000467 E PIFCB
000505 E SIFCB 000000 E V$EXEC 000000 E V$IDC 000000 E V$IDXT

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## SYMBOLS

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000020 A $BIT 010151 R $BUF 177325 R $ECW 177324 R $PCW
177330 R AF 177331 R AIFW 177332 R AS 077611 R ASI
177612 R ASS 177341 R AT 000000 A B 177342 R BDF
010320 R BLBF1 177250 R BLFCB 000421 A BM1 000472 A BM17
000475 A BM177 000477 A BM1777 000464 A BM3 000473 A BM37
000463 A BM377 000467 A BM7 000474 A BM77 000476 A BM777
177343 R BOBLCN 177320 R BOBLFL 000276 E BOFCB 000441 A BR0
000442 A BR1 000453 A BR10 000454 A BR11 000455 A BR12
000456 A BR13 000457 A BR14 000460 A BR15 000443 A BR2
000444 A BR3 000445 A BR4 000446 A BR5 000447 A BR6
000450 A BR7 000451 A BR8 000452 A BR9 000421 A B30
000422 A BS1 000433 A BS10 000434 A BS11 000435 A BS12
000436 A BS13 000427 A BS14 000440 A BS15 000423 A BS2
000424 A BS3 000425 A BS4 000426 A BS5 000427 A BS6
000430 A BS7 000431 A BS8 000432 A BS9 000550 R BUFA
177613 R CAN 077614 R CBA 077615 R CCR 177344 R CF
177345 R CFPTSW 177346 R CL 177347 R CLOP 177350 R CMFL
177351 R CNP 077616 R CRT 077617 R CTS 177352 R D
077620 R DEK 177353 R DF 177354 R DFPP 077621 R DFT
177355 R DH 177356 R DI 177326 R DPE 177377 R DPCA
177327 R DPX 177373 R DR 177374 R DS 177375 R DSAV
077622 R DSM 177376 R DT 177377 R DTFL 177401 R DV
177402 R EC 177403 R EH 177405 R EHBK 000424 A EIGHT
177406 R EL 077623 R EQLSW 077624 R ER1 077632 R ER11
077633 R ER12 077634 R ER13 077635 R ER14 077636 R ER15
077637 R ER16 077640 R ER17 077641 R ER18 077625 R ER2
077642 R ER20 077643 R ER21 077644 R ER22 077645 R ER24
077626 R ER3 077627 R ER6 077620 R ER7 077631 R ER8
177120 R ERBF 177330 R ERRN 077646 R EXA 177407 R EXAD

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077333 R EXCLGD 077332 R EXIT 077647 R EXL 177410 R F
105035 A F$DDI 105027 A F$DDI1 105036 A F$SEI 105503 A FADDD
105410 A FADDS 105535 A FDIVD 105401 A FDIVS 177411 R FFFFL
105400 A FFPOP 000465 A FIVE 105621 A FIX 105226 A FLAIF
105522 A FLDD 105032 A FLDI 105420 A FLDS 105167 A FLIDP
105125 A FLJAG 105024 A FLREL 105425 A FLT 105037 A FMOVI
105506 A FMULD 105416 A FMULS 077650 R FNS1 000310 R FORBCK
000402 R FORGCK 077651 R FORT1 000642 R FORT12 000161 R FORT2
000200 R FORT4 000222 R FORT6 000113 R FORTA1 000115 R FORTA2
000246 R FORTB 000643 R FORTB1 000654 R FORTB2 000333 R FORTB3
000346 R FORTB4 000363 R FORTC 000425 R FORTC1 000442 R FORTC2
000433 R FORTC3 000064 R FORTCK 000466 R FORTD 000544 R FORTD3
000555 R FORTD4 000557 R FORTD6 000634 R FORTDC 000602 R FORTE
000604 R FORTE1 000576 R FORTER 000630 R FORTEX 000140 R FORTL1
000202 R FORTL2 000315 R FORTOB 000407 R FORTOG 000073 R FORTOL
000517 R FORTOP 000633 R FORTX 000233 R FORTX1 000236 R FORTY1
000240 R FORTZ1 000423 A FOUR 105127 A FSQRT 105710 A FSTD
105033 A FSTI 105600 A FSTS 105543 A FSUBD 105450 A FSUBS
177262 R GLFCB 177412 R GOBLCN 177321 R GOBLFL 000370 E GDFCB
077652 R GSE 177413 R HCC 177414 R I 077653 R IAC
077654 R ICH 077653 R ICD 077656 R ICDNL 077657 R ICRD
077334 R ICRDPI 077660 R ICRR 077661 R ICSI 177415 R ID
077662 R IDI 077663 R IHW 077664 R IIV 077665 R ILB
077666 R ILT 177421 R IM 077667 R INA 177422 R INBP
077670 R INI 077671 R INN 077672 R INS 077673 R INT
177423 R IOFL 177424 R IP 177435 R IS 077674 R ISN
177445 R IT 177446 R IU 077675 R IVA 077676 R IVC
077677 R IWI 177447 R J 177450 R JPFL 177454 R JT
177455 R K 000424 A K10 000471 A K12 000472 A K17
000422 A K2 000425 A K20 000473 A K37 000423 A K4
000466 A K6 000463 A K77 000432 A KJMP 177456 R KT
077700 R LAX 000300 A LC 000050 A LCJP 077701 R LDX
077702 R LEX 177457 R LF 000462 A LHW 177460 R LIF
077703 R LIST 177274 R LLFCB 177461 R LLOP 177322 R LOBLFL
077704 R LOCT 000054 E LDFCB 077705 R LTX 177462 R MAXOPC
177463 R MBTB 177516 R MF 177517 R MM 077706 R MOVE
177520 R MR 000420 A MT 000500 A MTE 000441 A MTHD
077707 R MXL 177522 R NAME 177523 R ND 000461 A NEG
177127 R NERR 177524 R NF 177525 R NFFW 000470 A NINE
177526 R NS 177527 R NT 177530 R NTFL 177536 R O1
177537 R O2 077710 R OAB 010224 R OBUF 000436 R OBUFA
077711 R ODB 077712 R ODS 177535 R OITFL 000421 A ONE
077713 R ONEN 177531 R OP 177532 R OPBK 177533 R OPCNT
077714 R OPK 177534 R OPW 077715 R ORE 077716 R OSR
077717 R OTJ 077720 R OUT 010150 A OVERSZ 077721 R OWD
077722 R OWS 177540 R PC 077723 R PDS 077724 R PEB
177544 R PIBLCN 177323 R PIBLFL 000467 E PIFCB 177306 R PLFCB
077725 R PTR 077726 R PTS 177545 R QFL 077727 R RCC
077730 R RCCS 077731 R RCH 000463 A RHW 077732 R RIO
177546 R RL 000707 R RMD 000665 R RMD1 000712 R RMDA
077733 R SAX 177550 R SBFL 077734 R SDX 077330 R SETUP
000467 A SEVEN 177553 R SF 077735 R SIDTB1 000505 E SIFCB
077736 R SIS 000466 A SIX 077737 R SLIT 077740 R SLOP
177160 R SLOT 000726 R SOLD1 000727 R SOLD2 177554 R SPFL
177560 R SSP 000026 R START 077741 R STC 177555 R STFFL
077742 R STI1 077743 R STN 177556 R STNB 077744 R STS
177557 R STSW 177565 R SXF 177574 R T0 177575 R T1
177576 R T2 177577 R T2IN 177600 R T3 177601 R T4
177602 R T5 177603 R T6 177604 R T7 177605 R T8
177606 R T9 177566 R TC 000471 A TEN 077745 R TER1
077755 R TER11 077756 R TER12 077757 R TER13 077760 R TER14
077761 R TER15 077762 R TER17 077763 R TER18 077764 R TER19
077746 R TER2 077765 R TER20 077766 R TER24 077767 R TER26
077747 R TER3 077750 R TER4 077751 R TERS 077752 R TER7
077753 R TERS 077754 R TER9 177570 R TERF 000027 A TFVCSZ
000464 A THREE 177212 R TITD 177217 R TITJ 177204 R TITL
177243 R TITM 177236 R TITN 177207 R TITP 177250 R TITW
177571 R TM 077770 R TOF 077771 R TSB 177572 R TSFL
077772 R TST 177573 R TU 077773 R TVR 000422 A TWO
000000 R V 000360 A V$CTAD 000070 A V$DATE 000355 A V$DSTB
000000 E V$EXEC 000000 E V$IDC 000000 E V$IDST 000412 A V$JCB
000055 A V$JCFG 000056 A V$JFCB 000050 A V$JNAM 000054 A V$LCNT
000317 A V$LLUP 000345 A V$LUNT 000400 A V$LUT1 000401 A V$LUT2
000402 A V$LUT3 000713 A V$SOLD 000417 A V$STSZ 000357 A V$TKSZ
177112 R VARBLD 000666 A VARBLS 177330 R VBLOBG 177611 R VBLOND
077774 R WRD0 077335 R WRD05 077775 R WRDGD 077336 R WRDGD5
077340 R WRD10 077337 R WRD105 077776 R WRDT 000001 A X
177607 R XRPT 077777 R ZEB 000400 A ZERO

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0 ERRORS ASSEMBLY COMPLETE

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600 $BUF 601 880
230 $PCW 658 744 747 749 759 762 764 777
240 AF 241 610
241 AIFW 242
242 AS 243
243 AT 244
141 B 845 952 960
244 BDF 245
602 BLBF1 998
212 BLFCB 788 790 804

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103	EM17	185							
109	EM1777	110							
104	EM37	187							
107	EM377	188							
245	EOBLCN	246							
226	EOBLFL	799	847						
0	EOFCB	126	780						
71	ER0	180							
00	ER9	763							
58	ES3	183							
59	ES4	186							
64	ES9	189	760						
881	EUFA	693	702	768					
246	CF	247							
247	CFPTSH	248							
248	CL	249							
249	CLOP	250							
250	CMFL	251							
251	CNP	252							
0	COMP	2							
252	S	253							
253	DF	254							
254	DFPP	255							
255	DH	256							
256	DI	257							
257	DPS	258	809	849	852	894	897		
257	DPCA	260							
258	DPX	259	662						
260	DR	261							
261	DS	262							
262	DSAV	263							
263	DT	264							
264	DTFL	265							
265	DV	266							
266	EC	267							
267	EH	268							
268	EHBK	269							
0	EJEC	3							
269	EL	270							
0	ENTR	4							
202	ERRBF	769							
612	ERRX	687	687	872	872	872	372	900	907
		907	907						
270	EXAD	271							
614	EXCLGD	820							
613	EXIT	784							
271	F	272							
272	FFPFL	273							
162	FFPOP	163	164	165	166	167	168	169	170
		172	173	174	175	176			171
		876							
94	FIVE	770							
786	FORBCK	782							
822	FORGCK	818							
918	FORT12	800	808	838	851	888	896		
723	FORT2	743							
733	FORT4	782							
744	FORT6	736							
689	FORTA1	682	687						
691	FORTA2	685							
759	FORTB	727							
922	FORTB1	733	745	749					
931	FORTB2	738	745	748					
790	FORTB3	787	789						
798	FORTB4	785	792						
813	FORTC	779	797						
826	FORTC1	823	825						
836	FORTC2	821	828						
830	FORTC3	793							
683	FORTCX	680							
856	FORTD	815	835	848					
878	FORTD3	870							
885	FORTD4	860	875						
914	FORTDC	703	906						
904	FORTE	732	742	746	912				
906	FORTE1	907							
899	FORTER	789	789	789	825	825	825		
911	FORTEX	909							
709	FORTL1	758							
734	FORTL2	739							
788	FORTLB	789							
824	FORTDG	825							
836	FORTDL	687							
871	FORTDP	853	866	868	872				
913	FORTX	905	911						
751	FORTX1	725	729						
753	FORTY1	750							
755	FORTZ1	720	731	741					
93	FOUR	181	667	671					
213	GLFCB	824	826	842					
273	GOBLCN	274							
227	GOBLFL	837							





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1 *NEW FORTRAN - OVERLAY 1 . 10 00001
2 COMPL OPSY COMP 10 00002
3 EJECT OPSY EJEC 10 00003
4 ENTRY OPSY ENTR 10 00004
5 MERGE OPSY MERG 10 00005
6 SPACE OPSY SPAC 10 00006
7 TITLE V$FOR1 10 00007
8 EJEC 10 00008
9 ***** 10 00009
10 * 10 00010
11 *** JOB PROCESSOR LOW CORE EQUATES ** 10 00011
12 * 10 00012
13 ***** 10 00013
000050 A 15 LCJJP EQU 050 10 00015
000050 A 16 V$JNAM EQU LCJJP JCP NAME 10 00016
000054 A 17 V$LCNT EQU LCJJP+4 LINE COUNT 10 00017
000055 A 18 V$JCFG EQU LCJJP+5 JCP FLAGS 10 00018
19 * BIT 2-0 = LOAD AND GO FLAGS 10 00019
20 * BIT 3 = DUMP FLAG 1=DUMP, 0=NO DUMP 10 00020
21 * BIT 9-4 = UNUSED 10 00021
22 * BIT 15-10 = BG EXTRA CORE BLOCKS TO ALLOC 10 00022
000056 A 24 V$JFCB EQU LCJJP+6 JCP FILE CONTROL BLOCK 10 00024
000070 A 25 V$DATE EQU LCJJP+16 JCP DATA RECORD 10 00025
26 EJEC 10 00026
27 ***** 10 00027
28 * 10 00028
29 **** LOW CORE DESCRIPTION *** 10 00029
30 * 10 00030
31 ***** 10 00031
000300 A 33 LC EQU 0300 10 00033
000317 A 34 V$LLUP EQU LC+15 LOC. OF LAST UNPROTECTED WORD 10 00034
000345 A 35 V$LUNT EQU LC+37 ADDR. OF LOGICAL UNIT NAME TABLE 10 00035
000355 A 36 V$DSTB EQU LC+45 BASE ADDR. FOR DST BLOCK 10 00036
000357 A 37 V$TKSZ EQU LC+47 RMD TRACK SIZE 10 00037
000360 A 38 V$CTAD EQU LC+48 BASE ADDR. FOR CONTROLLER ADDR. TABLE 10 00038
000400 A 39 V$LUT1 EQU LC+64 START LUN ADDR FOR JCP/OPCOM ASSIGNABLE 10 00039
000401 A 40 V$LUT2 EQU LC+65 START LUN ADDR FOR UNASSIGNABLE 10 00040
000402 A 41 V$LUT3 EQU LC+66 START LUN ADDR FOR OPCOM ASSIGNABLE 10 00041
000412 A 42 V$JCB EQU LC+74 ALL SYSTEM BACKGROUND PROGRAMS AND JCP USE 10 00042
43 * THIS SYSTEM BUFFER TO READ DIRECTIVES AND 10 00043
44 * SOURCE RECORDS IN. 10 00044
000417 A 45 V$STSZ EQU LC+79 ACTUAL SECTOR SIZE 10 00045
46 EJEC 10 00046
47 ***** 10 00047
48 * 10 00048
49 **** MASK TABLE DESCRIPTION *** 10 00049
50 * 10 00050
51 ***** 10 00051
000420 A 53 MT SET 0420 10 00053
000420 A 54 ZERD EQU MT ZERO WORD 10 00054
000421 A 55 BS0 EQU MT+1 BIT MASK CONTENTS 000001 10 00055
000422 A 56 BS1 EQU MT+2 000002 10 00056
000423 A 57 BS2 EQU MT+3 000004 10 00057
000424 A 58 BS3 EQU MT+4 000010 10 00058
000425 A 59 BS4 EQU MT+5 000020 10 00059
000426 A 60 BS5 EQU MT+6 000040 10 00060
000427 A 61 BS6 EQU MT+7 000100 10 00061
000430 A 62 BS7 EQU MT+8 000200 10 00062
000431 A 63 BS8 EQU MT+9 000400 10 00063
000432 A 64 BS9 EQU MT+10 001000 10 00064
000433 A 65 BS10 EQU MT+11 002000 10 00065
000434 A 66 BS11 EQU MT+12 004000 10 00066
000435 A 67 BS12 EQU MT+13 010000 10 00067
000436 A 68 BS13 EQU MT+14 020000 10 00068
000437 A 69 BS14 EQU MT+15 040000 10 00069
000440 A 70 BS15 EQU MT+16 0100000 10 00070
000441 A 71 BR0 EQU MT+17 BIT MASK CONTENTS 0177776 10 00071
000442 A 72 BR1 EQU MT+18 0177775 10 00072
000443 A 73 BR2 EQU MT+19 0177773 10 00073
000444 A 74 BR3 EQU MT+20 0177767 10 00074
000445 A 75 BR4 EQU MT+21 0177757 10 00075
000446 A 76 BR5 EQU MT+22 0177737 10 00076
000447 A 77 BR6 EQU MT+23 0177677 10 00077
000450 A 78 BR7 EQU MT+24 0177577 10 00078
000451 A 79 BR8 EQU MT+25 0177377 10 00079
000452 A 80 BR9 EQU MT+26 0176777 10 00080
000453 A 81 BR10 EQU MT+27 0175777 10 00081
000454 A 82 BR11 EQU MT+28 0173777 10 00082
000455 A 83 BR12 EQU MT+29 0167777 10 00083
000456 A 84 BR13 EQU MT+30 0157777 10 00084
000457 A 85 BR14 EQU MT+31 0137777 10 00085
000460 A 86 BR15 EQU MT+32 0077777 10 00086
000461 A 87 NEG EQU MT+33 SET ALL BITS 10 00087
000462 A 88 LHW EQU MT+34 LEFT HALF WORD MASK 0177400 10 00088
000463 A 89 RHW EQU MT+35 RIGHT HALF WORD MASK 0377 10 00089
000421 A 90 ONE EQU MT+1 CONTAINS NUMBER 1 10 00090
000422 A 91 TWO EQU MT+2 CONTAINS NUMBER 2 10 00091
000464 A 92 THREE EQU MT+36 CONTAINS NUMBER 3 10 00092
000423 A 93 FOUR EQU MT+3 CONTAINS NUMBER 4 10 00093
000465 A 94 FIVE EQU MT+37 CONTAINS NUMBER 5 10 00094
000466 A 95 SIX EQU MT+38 CONTAINS NUMBER 6 10 00095

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000467 A 96 SEVEN EQU MT+39 CONTAINS NUMBER 7 10 00096
000424 A 97 EIGHT EQU MT+4 CONTAINS NUMBER 8 10 00097
000470 A 98 NINE EQU MT+40 CONTAINS NUMBER 9 10 00098
000471 A 99 TEN EQU MT+41 CONTAINS NUMBER 10 10 00099
000421 A 100 BM1 EQU MT+1 BIT MASK WORD 00001 10 00100
000464 A 101 BM3 EQU MT+36 BIT MASK WORD 00003 10 00101
000467 A 102 BM7 EQU MT+39 BIT MASK WORD 00007 10 00102
000472 A 103 BM17 EQU MT+42 BIT MASK WORD 00017 10 00103
000473 A 104 BM37 EQU MT+43 BIT MASK WORD 00037 10 00104
000474 A 105 BM77 EQU MT+44 BIT MASK WORD 00077 10 00105
000475 A 106 BM177 EQU MT+45 BIT MASK WORD 00177 10 00106
000463 A 107 BM377 EQU MT+35 BIT MASK WORD 00377 10 00107
000476 A 108 BM777 EQU MT+46 BIT MASK WORD 00777 10 00108
000477 A 109 BM1777 EQU MT+47 BIT MASK WORD 01777 10 00109
000500 A 110 MTE EQU BM1777+1 FF 10 00110
111 EJECT 10 00111
112 ***** 10 00112
113 * 10 00113
114 * P R O G R A M C O N T R O L * 10 00114
115 * 10 00115
116 * B L O C K * 10 00116
117 * 10 00117
118 ***** 10 00118
120 ***** 10 00120
121 * 10 00121
122 * E X T E R N A L S * 10 00122
123 * 10 00123
124 ***** 10 00124
126 EXT BOFCB SYSTEM BO FCB 10 00126
127 EXT GOFCB SYSTEM GO FCB 10 00127
128 EXT LOFCB SYSTEM LO FCB 10 00128
129 EXT PIFCB SYSTEM PI FCB 10 00129
130 EXT SIFCB SYSTEM SI FCB 10 00130
131 EXT V$EXEC ENTRY TO RTE SERVICES 10 00131
132 EXT V$IDC ENTRY TO IDC 10 00132
133 EXT V$IDST ENTRY TO IDC STATUS CALL 10 00133
134 ***** 10 00134
135 * 10 00135
136 * S Y S T E M V A R I A B L E S * 10 00136
137 * 10 00137
138 ***** 10 00138
000020 A 140 $BIT SET 16 SELECT 16-BIT VDM 620 COMPUTER 10 00140
000002 A 141 B SET 2 B-REGISTER 10 00141
000001 A 142 X SET 1 X-REGISTER 10 00142
143 * 10 00143
144 * 10 00144
145 * P A R A M E T E R S F O R W C S V 7 4 F O R T R A N * 10 00145
146 * 10 00146
147 * 10 00147
105032 A 148 FLDI EQU 0105032 FLD BCS OPCODE 10 00148
105033 A 149 FSTI EQU 0105033 FST BCS OPCODE 10 00149
105035 A 150 F$DOI EQU 0105035 $DO BCS OPCODE 10 00150
105027 A 151 F$DOI1 EQU 0105027 $DO BCS OPCODE(INCREMENT=1) FF 10 00151
105036 A 152 F$SEI EQU 0105036 $SE BCS OPCODE 10 00152
105037 A 153 FMQVI EQU 0105037 FMQV BCS INSTRUCTION 10 00153
105127 A 154 FSORT EQU 0105127 FLOATING SQUARE-ROOT BCS INSTRUCTION 10 00154
105024 A 155 FLREL EQU 0105024 FLOATING RELATIONAL BASE OP-CODE 10 00155
105125 A 156 FLJAG EQU 0105125 BCS JMP A.GT.0 10 00156
105226 A 157 FLAIF EQU 0105226 FLOATING ARITHMETIC-IF OP-CODE 10 00157
105167 A 158 FLIDP EQU 0105167 BCS SUBSCRIPT OPERATOR 10 00158
159 * 10 00159
160 * FAST FLOATING-POINT BOX OP CODES * FF 10 00160
161 * FF 10 00161
105400 A 162 FFPOP EQU 0105400 BASIC FFP OP FF 10 00162
105503 A 163 FADDD EQU FFPOP+0103 DP ADD FF 10 00163
105410 A 164 FADDS EQU FFPOP+010 DP ADD FF 10 00164
105535 A 165 FDIVD EQU FFPOP+0135 DP DIVIDE FF 10 00165
105401 A 166 FDIVS EQU FFPOP+1 DP DIVIDE FF 10 00166
105621 A 167 FIX EQU FFPOP+0221 FIX FP FF 10 00167
105420 A 168 FLDS EQU FFPOP+020 LOAD SP FF 10 00168
105522 A 169 FLTD EQU FFPOP+0122 LOAD DP FF 10 00169
105425 A 170 FLT EQU FFPOP+025 FLOAT INTEGER FF 10 00170
105506 A 171 FMULD EQU FFPOP+0106 MULTIPLY DP FF 10 00171
105416 A 172 FMULS EQU FFPOP+016 MULTIPLY SP FF 10 00172
105710 A 173 FSTD EQU FFPOP+0310 STORE DP FF 10 00173
105600 A 174 FSTI EQU FFPOP+0200 STORE SP FF 10 00174
105543 A 175 FSUBD EQU FFPOP+0143 SUBTRACT DP FF 10 00175
105450 A 176 FSUBS EQU FFPOP+050 SUBTRACT SP FF 10 00176
177 * 10 00177
178 * 10 00178
000422 A 179 K2 EQU TWO 10 00179
000441 A 180 MTWD EQU BR0 10 00180
000423 A 181 K4 EQU FOUR 10 00181
000466 A 182 K6 EQU SIX 10 00182
000424 A 183 K10 EQU BS3 10 00183
000471 A 184 K12 EQU TEN 10 00184
000472 A 185 K17 EQU BM17 10 00185
000425 A 186 K20 EQU BS4 10 00186
000473 A 187 K37 EQU BM37 10 00187
000463 A 188 K77 EQU BM377 10 00188
000432 A 189 KJMP EQU BS9 10 00189

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190          EJECT
191 *****
192 *
193 * I/O BUFFER, VARIABLE BLOCK, AND TRANSFER VECTOR DEFINITIONS
194 *
195 *****
010150 A 197 OVSZ SET 4200 MAXIMUM OVERLAY SIZE
000027 A 198 TFVCSZ SET 027 FROM-COMPILER TRANSFER VECTOR SIZE
000666 A 199 VARBL S SET 0666 VARIABLE BLOCK SIZE
177112 R 200 VARBLD EQU *-VARBL VARIABLE BLOCK START ADDRESS
177120 R 202 ERBF EQU VARBLD+06 ERROR BUFFER
177127 R 203 NERR EQU VARBLD+015 ERROR COUNT
177160 R 204 SLOT EQU VARBLD+0046 SPECIAL LIST BUFFER
177204 R 205 TITL EQU VARBLD+0072 TITLE BUFFER
177207 R 206 TITP EQU VARBLD+0075 TITLE PAGE NUMBER
177212 R 207 TITD EQU VARBLD+0100 TITLE DATE
177217 R 208 TITJ EQU VARBLD+0105 TITLE JOB NAME
177236 R 209 TITN EQU VARBLD+0124 TITLE NAME
177243 R 210 TITM EQU VARBLD+0131 TIME
177250 R 211 TITQ EQU VARBLD+0136 END
177250 R 212 BLFCB EQU VARBLD+0136 BO FCB
177262 R 213 GLFCB EQU VARBLD+0150 GO FCB
177274 R 214 LLFCB EQU VARBLD+0162 LO FCB
177306 R 215 PLFCB EQU VARBLD+0174 PI FCB
216 EJECT
217 *****
218 *
219 * COMPILER VARIABLE BLOCK
220 *
221 *****
222 * FIXED ON LOADING BY ROUTINE FORT *
223 *****
224 *
225 *****
177320 R 226 BOBLFL EQU VARBLD+0206 BO BLOCKING FLAG
177321 R 227 GOBLFL EQU VARBLD+0207 GO BLOCKING FLAG
177322 R 228 LOBLFL EQU VARBLD+0210 LO BLOCKING FLAG
177323 R 229 PIBFL EQU VARBLD+0211 PI BLOCKING FLAG
177324 R 230 $PCW EQU VARBLD+0212 COMPILER CONTROL FLAGS
177325 R 231 $ECW EQU VARBLD+0213 ERROR CONTROL WORD
177326 R 232 DPB EQU VARBLD+0214 AVAILABLE CORE START ADDRESS
177327 R 233 DPX EQU VARBLD+0215 AVAILABLE CORE END ADDRESS
234 *****
235 *
236 * CLEARED FOR EACH COMPILATION *
237 *****
177330 R 239 VBLOG EQU DPX+1 START OF CLEARED VARIABLES
177330 R 240 AF EQU VBLOG ADDRESS FIELD 01 10 00240
177331 R 241 AIFW EQU AF+1 SCAN FORWARD I POINTER 01 10 00241
177332 R 242 AS EQU AIFW+1 ARRAY SUBSCRIPTS 07 10 00242
177341 R 243 AT EQU AS+7 ADDRESS TYPE 01 10 00243
177342 R 244 BDF EQU AT+1 BLOCK DATA FLAG 01 10 00244
177343 R 245 BOBLCN EQU BDF+1 BO BLOCKING FLAG 01 10 00245
177344 R 246 CF EQU BOBLCN+1 SCAN COMPLIMENT FLAG 01 10 00246
177345 R 247 CFPTSW EQU CF+1 FINAL POINT CHECK SWITCH 01 10 00247
177346 R 248 CL EQU CFPTSW+1
177347 R 249 CLDP EQU CL+1 LIST OUTPUT PACK COUNT 01 10 00249
177350 R 250 CMFL EQU CLOP+1 COMMON FLAGS 01 10 00250
177351 R 251 CNP EQU CMFL+1 COMMON NAME POINTER 01 10 00251
177352 R 252 D EQU CNP+1 DO POINTER 01 10 00252
177353 R 253 DF EQU D+1 DELIMITER FLAG 01 10 00253
177354 R 254 DFPP EQU DF+1 FLOATING POINT DISABLE FLAG 01 10 00254
177355 R 255 DH EQU DFPP+1 DO LIMIT POINTER 01 10 00255
177356 R 256 DI EQU DH+1 DO INCREMENT POINTER 01 10 00256
177357 R 257 DPCA EQU DI+1 DATA POOL CONTANTS - I-POINTER FOR:
258 * 1,2,0,4,0.0,0D0,$C,$QRT,$FIX,$FLOAT
259 * -1,$DFLOAT
177373 R 260 DR EQU DPCA+12 DO RETURN ADDRESS
177374 R 261 DS EQU DR+1
177375 R 262 DSAV EQU DS+1 DT SAVE FOR RD/WR PROCESSING
177376 R 263 DT EQU DSAV+1 DO TOP POINTER
177377 R 264 DTFL EQU DT+1 DO TERMINATION FLAG
177401 R 265 DV EQU DTFL+2 DO VARIABLE POINTER
177402 R 266 EC EQU DV+1 ERROR COUNT
177403 R 267 EH EQU EC+1 EXPRESSION HIERARCHYS
177405 R 268 EHBK EQU EH+2 SCAN BACKWARD EXPRESSION HEIRARCHY
177406 R 269 EL EQU EHBK+1 ENTRY LENGTH
177407 R 270 EXAD EQU EL+1 EXECUTEABLE ADDRESS
177410 R 271 F EQU EXAD+1 ALTERNATE I POINTER
177411 R 272 FFPFL EQU F+1 FLOATING POINT PROCESSOR FLAG
177412 R 273 GOBLCN EQU FFPFL+1 GO BLOCKING COUNT
177413 R 274 HCC EQU GOBLCN+1 HOLLERITH COLUMN COUNTER
177414 R 275 I EQU HCC+1 ASSIGNMENT TABLE POINTER
177415 R 276 ID EQU I+1 IDENTIFICATION
177421 R 277 IM EQU ID+4 ITEM MODE
177422 R 278 INBP EQU IM+1 INPUT BUFFER POINTER
177423 R 279 IDFL EQU INBP+1 I/O FLAG
177424 R 280 IP EQU IDFL+1 ARRAY POINTERS
177435 R 281 IS EQU IP+9 ARRAY DIMENSIONS
177445 R 282 IT EQU IS+8 ASSIGNMENT TOP POINTER
177446 R 283 IU EQU IT+1 ITEM USAGE
177447 R 284 J EQU IU+1 TRIAD POINTER
177450 R 285 JPFL EQU J+1 JUMP FLAGS
    
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177454	R	286	JT	EQU	JPFL+4	TRIAD TOP POINTER	01	10	00286		
177455	R	287	K	EQU	JT+1	EXPRESSION POINTER	01	10	00287		
177456	R	288	KT	EQU	K+1	EXPRESSION TOP POINTER	01	10	00288		
177457	R	289	LF	EQU	KT+1	LOCATION FIELD	01	10	00289		
177460	R	290	LIF	EQU	LF+1	LOGICAL IF FLAG	01	10	00290		
177461	R	291	LLOP	EQU	LIF+1	NO. OF LINES LEFT ON PAGE	01	10	00291		
177462	R	292	MAXOPC	EQU	LLOP+1	MAXIMUM FPP OPERATION COUNT	01	10	00292		
177463	R	293	MDTB	EQU	MAXOPC+1	OPERAND IMPLICIT MODE TABLE	26	10	00293		
177516	R	294	MF	EQU	MDTB+27	MODE FLAG	01	10	00294		
177517	R	295	MM	EQU	MF+1	MAX/MIN LIST FLAG	01	10	00295		
177520	R	296	MR	EQU	MM+1	MULTIPLY REGISTERS	02	10	00296		
177522	R	297	NAME	EQU	MR+2	SUBROUTINE GENERATION NAME	01	10	00297		
177523	R	298	ND	EQU	NAME+1	NUMBER OF DIMENSIONS	01	10	00298		
177524	R	299	NF	EQU	ND+1	NEGATION FLAG	01	10	00299		
177525	R	300	NFFW	EQU	NF+1	SCAN FORWARD NEGATION FLAG	01	10	00300		
177526	R	301	NS	EQU	NFFW+1	NUMBER OF SUBSCRIPTS	01	10	00301		
177527	R	302	NT	EQU	NS+1	NAME TAG	01	10	00302		
177530	R	303	NTFL	EQU	NT+1	NO TAG-USAGE FLAG	01	10	00303		
177531	R	304	OP	EQU	NTFL+1	OPERATION	01	10	00304		
177532	R	305	OPBK	EQU	OP+1	SCAN BACKWARD OPERATION	01	10	00305		
177533	R	306	OPCNT	EQU	OPBK+1	OPERATION COUNT	01	10	00306		
177534	R	307	OPW	EQU	OPCNT+1	OUTPUT PACK WORD	01	10	00307		
177535	R	308	OTFL	EQU	OPW+1	OUTPUT-ITEM FLAG	01	10	00308		
177536	R	309	O1	EQU	OTFL+1	LEFT OPERAND	01	10	00309		
177537	R	310	O2	EQU	O1+1	RIGHT OPERAND	01	10	00310		
177540	R	311	PC	EQU	O2+1	PACK CONTROL	04	10	00311		
177544	R	312	PIBLCN	EQU	PC+4	PI BLOCKING COUNT	01	10	00312		
177545	R	313	QFL	EQU	PIBLCN+1	QUOTE FLAG	01	10	00313		
177546	R	314	RL	EQU	QFL+1	RELATIVE PROGRAM LOCATIONS	02	10	00314		
177550	R	315	SBFL	EQU	RL+2	SUBPROGRAM FLAGS	02	10	00315		
177553	R	316	SF	EQU	SBFL+3	STORAGE FL	01	10	00316		
177554	R	317	SPFL	EQU	SF+1	SPECIFICATION FLAG	01	10	00317		
177555	R	318	STFFL	EQU	SPFL+1	STATEMENT FUNCTION FLAG	01	10	00318		
177556	R	319	STNB	EQU	STFFL+1	STATEMENT NUMBER	01	10	00319		
177557	R	320	STSH	EQU	STNB+1	STATEMENT SWITCH	01	10	00320		
177560	R	321	SSP	EQU	STSH+1	SPECIFICATION STACK POINTERS	05	10	00321		
177565	R	322	SXF	EQU	SSP+5	COMPLEX FLAG	01	10	00322		
177566	R	323	TC	EQU	SXF+1	TERM CHARACTER/ CHARACTER IMAGE	02	10	00323		
177570	R	324	TERF	EQU	TC+2	TERMINATING ERROR FLAG	01	10	00324		
177571	R	325	TM	EQU	TERF+1	TRIAD MODE	01	10	00325		
177572	R	326	TSFL	EQU	TM+1	TEMPORARY STORAGE FLAG	01	10	00326		
177573	R	327	TU	EQU	TSFL+1	TRIAD USE	01	10	00327		
177574	R	328	T0	EQU	TU+1	TEMPORARY STORAGE	01	10	00328		
177575	R	329	T1	EQU	T0+1	TEMPORARY STORAGE	01	10	00329		
177576	R	330	T2	EQU	T1+1	TEMPORARY STORAGE	01	10	00330		
177577	R	331	T2IN	EQU	T2+1	TEMPORARY STORAGE	01	10	00331		
177600	R	332	T3	EQU	T2IN+1	TEMPORARY STORAGE	01	10	00332		
177601	R	333	T4	EQU	T3+1	TEMPORARY STORAGE	01	10	00333		
177602	R	334	T5	EQU	T4+1	TEMPORARY STORAGE	01	10	00334		
177603	R	335	T6	EQU	T5+1	TEMPORARY STORAGE	01	10	00335		
177604	R	336	T7	EQU	T6+1	TEMPORARY STORAGE	01	10	00336		
177605	R	337	T8	EQU	T7+1	TEMPORARY STORAGE	01	10	00337		
177606	R	338	T9	EQU	T8+1	TEMPORARY STORAGE	01	10	00338		
177607	R	339	XRPT	EQU	T9+1	OBJECT X-REGISTER POINTER	01	10	00339		
177611	R	340	VELOND	EQU	XRPT+2	END OF CLEARED VARIABLES	10	10	00340		
		341		EJECT			10	10	00341		
		342	*****						10	10	00342
		343	*				*	10	00343		
		344	*	C O M P I L E R T R A N S F E R V E C T O R				*	10	00344	
		345	*				*	10	00345		
		346	*****						10	10	00346
		348	*	- C O M P I L E R				*	10	00348	
077611	R	350	V	SET	VELOND-0100000			10	00350		
077611	R	352	ASI	EQU	V	ASSIGN ITEM		10	00352		
077612	R	353	V	SET	V+1			10	00353		
077612	R	354	ASS	EQU	V	ASSIGN SPECIAL		10	00354		
077613	R	355	V	SET	V+1			10	00355		
077613	R	356	DAN	SET	V	"ALL NAME		10	00356		
077614	R	357	V	SET	V+1			10	00357		
077614	R	358	CBA	SET	V	CONVERT BINARY TO ASCII		10	00358		
077615	R	359	V	SET	V+1			10	00359		
077615	R	360	CCR	EQU	V	COMMA OR C/R TEST		10	00360		
077616	R	361	V	SET	V+1			10	00361		
077616	R	362	CRT	EQU	V	C/R TEST		10	00362		
077617	R	363	V	SET	V+1			10	00363		
077617	R	364	CTS	EQU	V	COMMA TEST		10	00364		
077620	R	365	V	SET	V+1			10	00365		
077620	R	366	DEK	SET	V	DECREMENT K		10	00366		
077621	R	367	V	SET	V+1			10	00367		
077621	R	368	DFT	EQU	V	DEFINE AF:AT		10	00368		
077622	R	369	V	SET	V+1			10	00369		
077622	R	370	DSM	SET	V	DEFINE STATEMENT MODE		10	00370		
077623	R	371	V	SET	V+1			10	00371		
077623	R	372	EDLSH	SET	V			10	00372		
077624	R	373	V	SET	V+1			10	00373		
077624	R	374	ER1	SET	V			10	00374		
077625	R	375	V	SET	V+1			10	00375		
077625	R	376	ER2	EQU	V	USAGE ERROR		10	00376		
077626	R	377	V	SET	V+1			10	00377		
077626	R	378	ER3	EQU	V	MODE ERROR		10	00378		
077627	R	379	V	SET	V+1			10	00379		

077627	R	380	ER6	EQU	V	COMMON BASE LOWERED	10	00380
077630	R	381	V	SET	V+1		10	00381
077630	R	382	ER7	EQU	V	ILLEGAL EQUIVALENCE GROUP	10	00382
077631	R	383	V	SET	V+1		10	00383
077631	R	384	ER8	SET	V		10	00384
077632	R	385	V	SET	V+1		10	00385
077632	R	386	ER11	SET	V		10	00386
077633	R	387	V	SET	V+1		10	00387
077633	R	388	ER12	SET	V		10	00388
077634	R	389	V	SET	V+1		10	00389
077634	R	390	ER13	SET	V		10	00390
077635	R	391	V	SET	V+1		10	00391
077635	R	392	ER14	SET	V		10	00392
077636	R	393	V	SET	V+1		10	00393
077636	R	394	ER15	EQU	V	TRUNCATED VALUE ERROR	10	00394
077637	R	395	V	SET	V+1		10	00395
077637	R	396	ER16	EQU	V	STATEMENT OUT OF ORDER	10	00396
077640	R	397	V	SET	V+1		10	00397
077640	R	398	ER17	EQU	V	MORE THAN 29 COMMON REGIONS	10	00398
077641	R	399	V	SET	V+1		10	00399
077641	R	400	ER18	EQU	V	NON-COMMON DATA ERROR	10	00400
077642	R	401	V	SET	V+1		10	00401
077642	R	402	ER20	EQU	V	DO INDEX NOT REFERENCED	10	00402
077643	R	403	V	SET	V+1		10	00403
077643	R	404	ER21	SET	V		10	00404
077644	R	405	V	SET	V+1		10	00405
077644	R	406	ER22	EQU	V	ARRAY NAME PREVIOUSLY DECLARED	10	00406
077645	R	407	V	SET	V+1		10	00407
077645	R	408	ER24	SET	V		10	00408
077646	R	409	V	SET	V+1		10	00409
077646	R	410	EXA	EQU	V	EXAMINE NEXT CHARACTER	10	00410
077647	R	411	V	SET	V+1		10	00411
077647	R	412	EXL	EQU	V	EXCHANGE LINKS	10	00412
077650	R	413	V	SET	V+1		10	00413
077650	R	414	FNS1	EQU	V	ENTRY TO FNS	10	00414
077651	R	415	V	SET	V+1		10	00415
077651	R	416	FORT1	SET	V		10	00416
077652	R	417	V	SET	V+1		10	00417
077652	R	418	GSE	EQU	V	GENERATE SUBPROGRAM ENTRANCE	10	00418
077653	R	419	V	SET	V+1		10	00419
077653	R	420	IAC	SET	V	INPUT (A) CHARACTERS	10	00420
077654	R	421	V	SET	V+1		10	00421
077654	R	422	ICH	EQU	V	INPUT CHARACTER	10	00422
077655	R	423	V	SET	V+1		10	00423
077655	R	424	ICD	EQU	V	INPUT COLUMN	10	00424
077656	R	425	V	SET	V+1		10	00425
077656	R	426	ICORN	SET	V		10	00426
077657	R	427	V	SET	V+1		10	00427
077657	R	428	ICRD	SET	V		10	00428
077660	R	429	V	SET	V+1		10	00429
077660	R	430	ICRR	SET	V		10	00430
077661	R	431	V	SET	V+1		10	00431
077661	R	432	ICSI	EQU	V	INPUT SOURCE CONTROL SWITCH	10	00432
077662	R	433	V	SET	V+1		10	00433
077662	R	434	IDI	SET	V	INPUT DIGIT	10	00434
077663	R	435	V	SET	V+1		10	00435
077663	R	436	IHW	EQU	V	INPUT HOLLERITH WORD	10	00436
077664	R	437	V	SET	V+1		10	00437
077664	R	438	IIV	EQU	V	INPUT INTEGER VARIABLE	10	00438
077665	R	439	V	SET	V+1		10	00439
077665	R	440	ILB	SET	V	INITIALIZE LIST BUFFER	10	00440
077666	R	441	V	SET	V+1		10	00441
077666	R	442	ILT	EQU	V	ILLEGAL DO TERMINATION/CONTROL CONTINUE	10	00442
077667	R	443	V	SET	V+1		10	00443
077667	R	444	INA	EQU	V	INPUT NAME	10	00444
077670	R	445	V	SET	V+1		10	00445
077670	R	446	INI	EQU	V	INPUT ITEM	10	00446
077671	R	447	V	SET	V+1		10	00447
077671	R	448	INN	EQU	V	INPUT (DO NOT ASSIGN)	10	00448
077672	R	449	V	SET	V+1		10	00449
077672	R	450	INS	SET	V	INPUT NORMAL STATEMENT NUMBER	10	00450
077673	R	451	V	SET	V+1		10	00451
077673	R	452	INT	EQU	V	INTEGER TEST	10	00452
077674	R	453	V	SET	V+1		10	00453
077674	R	454	ISN	SET	V	INPUT STATEMENT NUMBER	10	00454
077675	R	455	V	SET	V+1		10	00455
077675	P	456	IVA	EQU	V	INPUT VARIABLE	10	00456
077676	R	457	V	SET	V+1		10	00457
077676	R	458	IVC	SET	V	INPUT INTEGER VARIABLE/CONSTANT	10	00458
077677	R	459	V	SET	V+1		10	00459
077677	R	460	IWI	EQU	V	WORDS/ITEM	10	00460
077700	R	461	V	SET	V+1		10	00461
077700	R	462	LAX	EQU	V	LOAD ASSIGNMENT DATA	10	00462
077701	R	463	V	SET	V+1		10	00463
077701	R	464	LDX	SET	V	LOAD DO	10	00464
077702	R	465	V	SET	V+1		10	00465
077702	R	466	LEX	SET	V	LOAD EXPRESSION	10	00466
077703	R	467	V	SET	V+1		10	00467
077703	R	468	LIST	EQU	V	LIST A LINE	10	00468
077704	R	469	V	SET	V+1		10	00469
077704	R	470	LOCT	SET	V		10	00470

077705	R	471	V	SET	V+1		10	00471
077705	R	472	LTX	SET	V	LOAD TRIADS	10	00472
077706	R	473	V	SET	V+1		10	00473
077706	R	474	MOVE	EQU	V	MOVE ALPHA DATA	10	00474
077707	R	475	V	SET	V+1		10	00475
077707	R	476	MXL	EQU	V	MAKE EXIT LABEL	10	00476
077710	R	477	V	SET	V+1		10	00477
077710	R	478	DAB	EQU	V	OUTPUT ABSOLUTE	10	00478
077711	R	479	V	SET	V+1		10	00479
077711	R	480	ODE	SET	V	OUTPUT DOUBLE	10	00480
077712	R	481	V	SET	V+1		10	00481
077712	R	482	ODS	SET	V	OUTPUT DATA STRING	10	00482
077713	R	483	V	SET	V+1		10	00483
077713	R	484	ONEN	EQU	V	OUTPUT NAME	10	00484
077714	R	485	V	SET	V+1		10	00485
077714	R	486	OPK	SET	V	OUTPUT PACK	10	00486
077715	R	487	V	SET	V+1		10	00487
077715	R	488	ORE	SET	V	OUTPUT RELATIVE	10	00488
077716	R	489	V	SET	V+1		10	00489
077716	R	490	OSR	SET	V	OUTPUT STRING RELATIVE	10	00490
077717	R	491	V	SET	V+1		10	00491
077717	R	492	OTJ	EQU	V	OUTPUT JUMP	10	00492
077720	R	493	V	SET	V+1		10	00493
077720	R	494	OUT	SET	V	OUTPUT OPERATOR/OPERAND	10	00494
077721	R	495	V	SET	V+1		10	00495
077721	R	496	OWB	SET	V	OUTPUT WORD	10	00496
077722	R	497	V	SET	V+1		10	00497
077722	R	498	OWS	EQU	V	OUTPUT WORDS	10	00498
077723	R	499	V	SET	V+1		10	00499
077723	R	500	PDS	SET	V	PACK DATA STRING	10	00500
077724	R	501	V	SET	V+1		10	00501
077724	R	502	PEB	SET	V	PACK ERROR BUFFER	10	00502
077725	R	503	V	SET	V+1		10	00503
077725	R	504	PTR	SET	V	PURGE TRIADS	10	00504
077726	R	505	V	SET	V+1		10	00505
077726	R	506	PTS	EQU	V	'(' TEST	10	00506
077727	R	507	V	SET	V+1		10	00507
077727	R	508	RCC	EQU	V	RESTORE SCAN PARAMETERS	10	00508
077730	R	509	V	SET	V+1		10	00509
077730	R	510	RCCS	EQU	V	SAVE SCAN PARAMETERES	10	00510
077731	R	511	V	SET	V+1		10	00511
077731	R	512	RCH	EQU	V	REREAD CHARACTER	10	00512
077732	R	513	V	SET	V+1		10	00513
077732	R	514	RID	EQU	V	RIGHT INPUT OPERATOR	10	00514
077733	R	515	V	SET	V+1		10	00515
077733	R	516	SAX	EQU	V	STORE ASSIGNMENT DATA	10	00516
077734	R	517	V	SET	V+1		10	00517
077734	R	518	SDX	SET	V	STORE DO	10	00518
077735	R	519	V	SET	V+1		10	00519
077735	R	520	SIDTB1	SET	V	END OF MODE-SETTING IN SIDTB	10	00520
077736	R	521	V	SET	V+1		10	00521
077736	R	522	SIS	EQU	V	STATEMENT IDENTIFICATION SCAN	10	00522
077737	R	523	V	SET	V+1		10	00523
077737	R	524	SLIT	SET	V		10	00524
077740	R	525	V	SET	V+1		10	00525
077740	R	526	SLOP	SET	V	SPECIAL LIST OUTPUT	10	00526
077741	R	527	V	SET	V+1		10	00527
077741	R	528	STC	SET	V	STATEMENT COMPLETION	10	00528
077742	R	529	V	SET	V+1		10	00529
077742	R	530	STI1	EQU	V	ENTRY TO STI	10	00530
077743	R	531	V	SET	V+1		10	00531
077743	R	532	STN	EQU	V	ILLEGAL DO TERM./NO CONTROL CONTINUE	10	00532
077744	R	533	V	SET	V+1		10	00533
077744	R	534	CTS	SET	V	STATEMENT SCAN	10	00534
077745	R	535	V	SET	V+1		10	00535
077745	R	536	TER1	EQU	V	CONSTRUCTION	10	00536
077746	R	537	V	SET	V+1		10	00537
077746	R	538	TER2	EQU	V	NOT IN SUBPROGRAM	10	00538
077747	R	539	V	SET	V+1		10	00539
077747	R	540	TER3	EQU	V	DATA POOL FULL	10	00540
077750	R	541	V	SET	V+1		10	00541
077750	R	542	TER4	EQU	V	ILLEGAL STATEMENT	10	00542
077751	R	543	V	SET	V+1		10	00543
077751	R	544	TER5	SET	V		10	00544
077752	R	545	V	SET	V+1		10	00545
077752	R	546	TER7	SET	V		10	00546
077753	R	547	V	SET	V+1		10	00547
077753	R	548	TER8	SET	V		10	00548
077754	R	549	V	SET	V+1		10	00549
077754	R	550	TER9	EQU	V	IMPROPER DO NEST	10	00550
077755	R	551	V	SET	V+1		10	00551
077755	R	552	TER11	EQU	V	ITEM NOT OPERAND	10	00552
077756	R	553	V	SET	V+1		10	00553
077756	R	554	TER12	EQU	V	ITEM NOT FUNCTION	10	00554
077757	R	555	V	SET	V+1		10	00555
077757	R	556	TER13	SET	V		10	00556
077760	R	557	V	SET	V+1		10	00557
077760	R	558	TER14	EQU	V	SUBSCRIPT VARIABLE NOT DUMMY	10	00558
077761	R	559	V	SET	V+1		10	00559
077761	R	560	TER15	SET	V		10	00560
077762	R	561	V	SET	V+1		10	00561

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077762 R 562 TER17 EQU V FUNCTION STATEMENT HAS NO PARAMETERS 10 00562
077763 R 563 V SET V+1 10 00563
077763 R 564 TER18 SET V 10 00564
077764 R 565 V SET V+1 10 00565
077764 R 566 TER19 SET V 10 00566
077765 R 567 V SET V+1 10 00567
077765 R 568 TER20 SET V 10 00568
077766 R 569 V SET V+1 10 00569
077766 R 570 TER24 SET V 10 00570
077767 R 571 V SET V+1 10 00571
077767 R 572 TER26 EQU V SUBSCRIPT NOT INTEGER CONSTANT 10 00572
077770 R 573 V SET V+1 10 00573
077770 R 574 TDF SET V TEST OVERFLOW 10 00574
077771 R 575 V SET V+1 10 00575
077771 R 576 TSP EQU V TAG SUBPROGRAM 10 00576
077772 R 577 V SET V+1 10 00577
077772 R 578 TST EQU V CHARACTER TEST 10 00578
077773 R 579 V SET V+1 10 00579
077773 R 580 TVR EQU V TAG VARIABLE 10 00580
077774 R 581 V SET V+1 10 00581
077774 R 582 WRDDB SET V 10 00582
077775 R 583 V SET V+1 10 00583
077775 R 584 WRDGD SET V 10 00584
077776 R 585 V SET V+1 10 00585
077776 R 586 WRDT SET V 10 00586
077777 R 587 V SET V+1 10 00587
077777 R 588 ZEB EQU V ZERO ERROR BUFFER 10 00588
077777 R 589 * F R D M - C O M P I L E R * 10 00590
000000 R 592 V SET * 10 00592
000000 000026 R 593 DATA ASP 10 00593
000001 000316 R 594 DATA BGN BEGIN 10 00594
000002 000743 R 595 DATA BLD BLOCK DATA 10 00595
000003 001005 R 596 DATA CMN COMMON 10 00596
000004 001010 R 597 DATA DAT DATA 10 00597
000005 001751 R 598 DATA DMN DIMENSION 10 00598
000006 002132 R 599 DATA EQU EQUIVALENCE 10 00599
000007 002305 R 600 DATA EXT EXTERNAL 10 00600
000010 002330 R 601 DATA FUN FUNCTION 10 00601
000011 002437 R 602 DATA IMP IMPLICIT 10 00602
000012 002732 R 603 DATA MOD MODE SET 10 00603
000013 003123 R 604 DATA NAM NAME 10 00604
000014 002331 R 605 DATA SUB SUBROUTINE 10 00605
000015 003467 R 606 DATA TIPR TITLE 10 00606
000016 001761 R 607 DATA ENT ENTRY 10 00607
000017 608 BSS TFCVCSZ-*+V-1 10 00608
609 EJECT 10 00609
610 ***** 10 00610
611 * I/O BUFFERS * 10 00611
612 ***** 10 00612
010151 R 614 $BUF EQU V+OVERSZ+1 INPUT BUFFER AREA 10 00614
010224 R 615 $BUF EQU $BUF+43 OBJECT BUFFER 10 00615
010320 R 616 $BLBF1 EQU $BUF+60 BLOCKING BUFFER 1 10 00616
617 EJECT 10 00617
618 * ASP ASSIGN SPECIFICATIONS 10 00618
000026 017000 I 620 ASP LDA RL 10 00620
000027 057000 I 621 STA EXAD SET EXECUTION ADDRESS 10 00621
000030 002000 A 622 CALL RDCS 10 00622
000031 077730 R 623 CALL ZEB 10 00623
000032 002000 A 624 LDAI ISC 10 00624
000033 077777 R 625 STAE ICSI 10 00625
000034 006010 A 626 JMP PCS 10 00626
000035 002702 R 627 ASPP CALL RCC 10 00627
000036 006057 A 628 LDAE* ICD 10 00628
000037 077661 R 629 STAE ICSI 10 00629
000040 001000 A 630 LDA DT 10 00630
000041 003220 R 631 STA KT 10 00631
000042 017000 I 632 ASPS LDA CMFL 10 00632
000043 147000 I 633 STA SSP+2 V 10 00633
000044 006017 A 634 JAZ ASP3 NO COMMON 10 00634
000045 177655 R 635 INR SSP+2 V 10 00635
000046 006057 A 636 LDA SSP+2 V 10 00636
000047 077661 R 637 ADD CNP V 10 00637
000050 017000 I 638 TAB V 10 00638
000051 057000 I 639 LDA 0,2 V 10 00639
000052 017000 I 640 STA F 10 00640
000053 147000 I 641 STA I 10 00641
000054 001010 A 642 TZA 10 00642
000055 000132 R 643 STA TO 10 00643
000056 047000 I 644 ASP1 RSC 0 V 10 00644
000057 017000 I 645 LDA 1 V 10 00645
000060 127000 I 646 STA ASP0+1 V 10 00646
000061 005012 A 647 JMPM FLN V 10 00647
000062 016000 A 647
000063 057000 I 647
000064 057000 I 647
000065 005001 A 647
000066 057000 I 647
000067 017000 I 647
000068 054003 A 647
000069 002000 A 647

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Address	Hex	Op	Label	Op	Comments	Line	Hex
000072	002313	R					
000073	006030	A	648 ASP0	LDXI	0-0		V 10 00648
000074	000000	A					
000075	027000	I	649	LDB	SSP+2		V 10 00649
000076	005122	A	650	IBR			V 10 00650
000077	065001	A	651	STB	1,1		V 10 00651
000100	001010	A	652	JAZ	ASP2		10 00652
000101	000112	R					
000102	017000	I	653	LDA	IS		10 00653
000103	127000	I	654	ADD	AF		10 00654
000104	005012	A	655	TAB			10 00655
000105	147000	I	656	SUB	T0	COMMON SIZE	10 00656
000106	003002	A	657	XAP	ASP4		10 00657
000110	001000	A	658	JMP	ASP1		10 00658
000111	000067	R					
000112	017000	I	659 ASP2	LDA	T0		10 00659
000113	057000	I	660	STA	AF	COMMON SIZE TO BASE	10 00660
000114	002000	A	661	CALL	SAX		10 00661
000115	077733	R					
000116	017000	I	662	LDA	T0		V 10 00662
000117	001010	A	663	JAZ	ASPS	REPEAT FOR NEXT COMMON NAME	V 10 00663
000120	000052	R					
000121	017000	I	664	LDA	CL		V 10 00664
000122	004244	A	665	LRLA	4		V 10 00665
000123	006120	A	666	ADDI	011000	OUTPUT POINTER DEFINITION FOR COMMON NAME.	10 00666
000124	011000	A					
000125	027000	I	667	LDB	T0		10 00667
000126	002000	A	668	CALL	DNEN		10 00668
000127	077713	R					
000130	001000	A	669	JMP	ASPS		V 10 00669
000131	000052	R					
000132	057000	I	670 ASP3	STA	EL	EL=0	10 00670
000133	017000	I	671	LDA	DPB		10 00671
000134	057000	I	672	STA	F		10 00672
000135	017000	I	673	LDA	BDF		10 00673
000136	002010	A	674	JAZM	DTJ	INITIAL JUMP	10 00674
000137	077717	R					
000140	017000	I	675 ASP9	LDA	F		10 00675
000141	127000	I	676	ADD	EL		10 00676
000142	057000	I	677	STA	F		10 00677
000143	057000	I	678	STA	I		10 00678
000144	147000	I	679	SUB	IT		10 00679
000145	001010	A	680	JAZ	ASP7	END OF ASSMT.	10 00680
000146	000235	R					
000147	002000	A	681	CALL	LAX		10 00681
000150	077700	R					
000151	017000	I	682	LDA	AT		10 00682
000152	130422	A	683	ERA	K2		10 00683
000153	127000	I	684	ADD	NT		10 00684
000154	027000	I	685	LDB	10		10 00685
000155	005022	A	686	DBR			10 00686
000156	001030	A	687	JIF	030,ASP4	NT=0,AT=2,IV=1	10 00687
000157	000165	R					
000160	005322	A	688	DBR			10 00688
000161	001030	A	689	JIF	030,ASP4	NT=0,AT=2,IV=2	10 00689
000162	000165	P					
000163	001000	A	690	JMP	ASP9		10 00690
000164	000140	R					
000165	067000	I	691 ASP4	STB	T0	T0=0	10 00691
000166	006010	A	692	LDAI	-03777		10 00692
000167	174001	A					
000170	057000	I	693	STA	T1	T1=-MAX	10 00693
000171	002000	A	694 ASP8	JMPM	FLN	FETCH LINK	10 00694
000172	002313	R					
000173	017000	I	695	LDA	T0		10 00695
000174	147000	I	696	SUB	AF		10 00696
000175	027000	I	697	LDB	AF		10 00697
000176	002004	A	698	XAN	ASP4	SET NEW MAX	10 00698
000177	000165	R					
000200	017000	I	699	LDA	IS		10 00699
000201	147000	I	700	SUB	AF		10 00700
000202	005012	A	701	TAB			10 00701
000203	147000	I	702	SUB	T1		10 00702
000204	001004	A	703	JAN	*+3		10 00703
000205	000207	R					
000206	067000	I	704	STB	T1	SIZE	10 00704
000207	017000	I	705	LDA	T		10 00705
000210	147000	I	706	SUB	F		10 00706
000211	001010	A	707	JAZ	ASP5	LINK END	10 00707
000212	000213	R					
000213	001000	A	708	JMP	ASP8		10 00708
000214	000171	R					
000215	017000	I	709 ASP3	LDA	T0		10 00709
000216	127000	I	710	ADD	PL		10 00710
000217	057000	I	711	STA	T0	OFFSET	10 00711
000220	127000	I	712	ADD	T1	SIZE	10 00712
000221	057000	I	713	STA	PL	NEXT LOCATION	10 00713
000222	017000	I	714 ASP6	LDA	T0		10 00714
000223	147000	I	715	SUB	AF	ACTUAL REL. ADD.	10 00715
000224	005102	A	716	INCR	2		10 00716

000225	002000	A	717	CALL	DFT			10	00717
000226	077621	R							
000227	002000	A	718	JMPM	FLN	FETCH LINK		10	00718
000228	002313	R							
000231	001010	A	719	JAZ	ASP9			10	00719
000232	000140	R							
000233	001000	A	720	JMP	ASP6			10	00720
000234	000222	R							
000235	010432	A	721	ASP7	LDA	KJNP		10	00721
000236	027000	I	722		LDB	RL		10	00722
000237	002000	A	723		CALL	DWS		10	00723
000240	077722	R							
000241	017000	I	724		LDA	JT		10	00724
000242	147000	I	725		SUB	IT		10	00725
000243	001010	A	726		JAZ	FNS1	NO DATA	10	00726
000244	077650	R							
000245	006037	A	727		LDXE*	ICD		10	00727
000246	177655	R							
000247	006010	A	728		LDAI	ASP10		10	00728
000250	000270	R							
000251	055002	A	729		STA	2,X	SET READ SWITCH TO READ FROM DATA POOL	10	00729
000252	017000	I	730		LDA	IT		10	00730
000253	057000	I	731		STA	J		10	00731
000254	002000	A	732		CALL	DAT00		10	00732
000255	001014	R							
000256	006037	A	733		LDXE*	ICD		10	00733
000257	177655	R							
000260	005041	A	734		TXA			10	00734
000261	120465	A	735		ADD	FIVE		10	00735
000262	055002	A	736		STA	2,X	RESET READ SWITCH	10	00736
000263	017000	I	737		LDA	IT		10	00737
000264	057000	I	738		STA	JT		10	00738
000265	057000	I	739		STA	J		10	00739
000266	001000	A	740		JMP	FNS1		10	00740
000267	077650	R							
000270	000000	A	741	ASP10	ENTRY		READ DATA FROM DATA POOL	10	00741
000271	017000	I	742		LDA	J		10	00742
000272	005014	A	743		TXA			10	00743
000273	147000	I	744		SUB	JT		10	00744
000274	001010	A	745		JAZ	ASP13	END OF DATA	10	00745
000275	000313	R							
000276	015000	A	746		LDA	0,X		10	00746
000277	004550	A	747		LLSR	8		10	00747
000300	001016	A	748		JANZ	ASP12	LEFT CHARACTER	10	00748
000301	000307	R							
000302	004450	A	749		LLRL	8		10	00749
000303	047000	I	750		INR	J		10	00750
000304	057000	I	751	ASP11	STA	TC		10	00751
000305	001000	A	752		JMP*	ASP10	EXIT (A)=CHARACTER	10	00752
000306	100270	R							
000307	004150	A	753	ASP12	LSRB	8		10	00753
000310	065000	A	754		STB	0,X	SET RIGHT CHARACTER	10	00754
000311	001000	A	755		JMP	ASP11		10	00755
000312	000304	R							
000313	010463	A	756	ASP13	LDA	BM377		10	00756
000314	001000	A	757		JMP	ASP11		10	00757
000315	000304	R							
758				EJECT				10	00758
759				*****				10	00759
760				*				10	00760
761				* RE - INITIALIZE COMPILER ( BGN )				10	00761
762				* *				10	00762
763				* FUNCTION: BGN IS THE COMPILER REINITIALIZATION ROUTINE				10	00763
764				* *				10	00764
765				* ENTRY: FROM INITIALIZE ROUTINE FORT OR FROM END STATEMENT				10	00765
766				* *				10	00766
767				* EXIT : VARIABLE BLOCK ORGY-JAIL CLEARED.				10	00767
768				* TABLE POINTERS INITIALIZED:				10	00768
769				* TOP OF AVAILABLE CORE =V\$LLUP =DPX=KT=K=DT=D				10	00769
770				* START OF COMMON BLOCK NAME LIST =V\$LLUP-30 =CNP				10	00770
771				* TOP OF AVAIL CORE TO STORE SPEC STRING=SSP=V\$LLUP-30				10	00771
772				* BOTTOM OF AVAILABLE CORE ==DPB=IT=JT=J				10	00772
773				* DTFL=1 TO FLAG FIRST STATEMENT				10	00773
774				* JPFL=1 TO FLAG PATH EXISTS TO FIRST STATEMENT				10	00774
775				* XRPT=1 TO KILL X-REG ASSIGNMENT				10	00775
776				* INTEGERS 1,2,4 IN ASSIGNMENT TABLE				10	00776
777				* MDTB INITIALIZED TO REAL EXCEPT (I-N) TO INTEGER PD				10	00777
778				* DATE TEXT STRING LOADED INTO OBJECT BUFFER OBUF FROM V\$DATE				10	00778
779				* PAGE AND LINE NUMBERS; ERROR COUNT SET TO ZERO.				10	00779
780				* READ SWITCHES ALL SET TO INITIAL POSITION.				10	00780
781				* FIRST STATEMENT READ.				10	00781
782				* EXIT TO ST11.				10	00782
783				* *				10	00783
784				* *****				10	00784
785				* *****				10	00785
786				* *****				10	00786
787				* CLEAR VARIABLE BLOCK *				10	00787
788				* *****				10	00788
789				* *****				10	00789
000316	006030	A		BGN	LDXI	VBLOGG			
000317	177330	R							
000320	005001	A	790	BGN4	TZA			10	00790
000321	055000	A	791		STA	0,X	CLEAR VARIABLE TO ZERO	10	00791

000322	005145	A	792	INCR	045	BUMP POINTER	10	00792	
000323	006140	A	793	SUBI	VBLOND		10	00793	
000324	177611	R							
000325	001004	A	794	JAN	BGN4		10	00794	
000326	000320	R							
			795	*****				10	00795
			796	* INITIALIZE FLAGS AND POINTERS *				10	00796
			797	*****				10	00797
000327	017000	I	798	LDA	DPK	GET TOP OF AVAILABLE CORE	10	00798	
000330	057000	I	799	STA	KT	TOP OF EXPRESSION TABLE	10	00799	
000331	057000	I	800	STA	K	EXPRESSION TABLE POINTER	10	00800	
000332	057000	I	801	STA	BT	TOP OF DO TABLE	10	00801	
000333	057000	I	802	STA	D	DO TABLE POINTER	10	00802	
000334	006140	A	803	SUBI	036		10	00803	
000335	000036	A							
000336	057000	I	804	STA	CNP	START OF LIST:LABLD COMM BLOCK NAME PTRS	10	00804	
000337	057000	I	805	STA	SSP	TOP OF AVAIL CORE FOR STORING SPEC STRING	10	00805	
000340	005012	A	806	TAB			10	00806	
000341	005001	A	807	TZA			10	00807	
000342	056001	A	808	STA	1,B	CLEAR BLANK COMMON BLOCK NAME POINTER	10	00808	
000343	017000	I	809	LDA	DPB	GET BASE OF AVAILABLE CORE	10	00809	
000344	057000	I	810	STA	IT	TOP OF ASSIGNMENT TABLE	10	00810	
000345	057000	I	811	STA	JT	TOP OF TRIAD TABLE	10	00811	
000346	057000	I	812	STA	J	TRIAD TABLE POINTER	10	00812	
000347	005301	A	813	DECR	1		10	00813	
000350	057000	I	814	STA	XRPT	KILL X-REG ASSIGNMENT	10	00814	
000351	005101	A	815	INCR	1		10	00815	
000352	057000	I	816	STA	DTFL	DTFL=1 ONLY FOR FIRST SOURCE LINE	10	00816	
000353	057000	I	817	STA	JPFL	JPFL=1 SAYS PATH EXISTS TO FIRST STMT	10	00817	
			818	*****				10	00818
			819	* ASSIGN INTEGERS 1,2,4 AT START OF TABLE *				10	00819
			820	*****				10	00820
000354	057000	I	821	STA	ID		10	00821	
000355	010423	A	822	LDA	FOUR		10	00822	
000356	057000	I	823	STA	EL		10	00823	
000357	005101	A	824	BGN6 INCR	1	SET IU=1	10	00824	
000360	020422	A	825	LDB	K2	SET IM=2(INTEGER)	10	00825	
000361	002000	A	826	CALL	ASS		10	00826	
000362	077612	R							
000363	037000	I	827	LDX	ID		10	00827	
000364	017000	I	828	LDA	I		10	00828	
000365	006055	A	829	STAE	DPCA-1,X	SET POINTERS TO 1,2,4	10	00829	
000366	177356	R							
000367	005041	A	830	TXA			10	00830	
000370	004241	A	831	LPLA	1	MULTIPLY BY 2	10	00831	
000371	057000	I	832	STA	ID		10	00832	
000372	140465	A	833	SUB	FIVE	CHECK LOOP END	10	00833	
000373	001004	A	834	JAN	BGN6		10	00834	
000374	000357	R							
000375	005001	A	835	TZA			10	00835	
000376	057000	I	836	STA	ID		10	00836	
000377	002000	A	837	CALL	ASI	INTEGER-0	10	00837	
000400	077611	R							
000401	017000	I	838	LDA	I		10	00838	
000402	057000	I	839	STA	DPCA+2		10	00839	
000403	010461	A	840	LDA	HEG		10	00840	
000404	057000	I	841	STA	ID		10	00841	
000405	002000	A	842	CALL	ASI	-1	10	00842	
000406	077611	R							
000407	017000	I	843	LDA	I		10	00843	
000410	057000	I	844	STA	DPCA+10		10	00844	
000411	047000	I	845	INR	IM		10	00845	
000412	047000	I	846	INR	EL		10	00846	
000413	005001	A	847	TZA			10	00847	
000414	057000	I	848	STA	ID		10	00848	
000415	057000	I	849	STA	ID+1		10	00849	
000416	002000	A	850	CALL	ASI	REAL-0	10	00850	
000417	077611	R							
000420	017000	I	851	LDA	I		10	00851	
000421	057000	I	852	STA	DPCA+4		10	00852	
000422	047000	I	853	INR	IM		10	00853	
000423	047000	I	854	INR	EL		10	00854	
000424	047000	I	855	INR	EL		10	00855	
000425	005001	A	856	TZA			10	00856	
000426	057000	I	857	STA	ID+2		10	00857	
000427	057000	I	858	STA	ID+3		10	00858	
000430	002000	A	859	CALL	ASI	DOUBLE-PRECISION-0	10	00859	
000431	077611	R							
000432	017000	I	860	LDA	I		10	00860	
000433	057000	I	861	STA	DPCA+5	D.P. 0	10	00861	
000434	017000	I	862	LDA	UPCM		10	00862	
000435	006445	A	863	BT	045,BGN65	(A) = POINTER NOT NEEDED	10	00863	
000436	000572	R							
000437	006010	A	864	LDAI	'AS'		10	00864	
000440	140644	A							
000441	057000	I	865	STA	ID		10	00865	
000442	006010	A	866	LDAI	'C'		10	00866	
000443	141640	A							
000444	057000	I	867	STA	ID+1		10	00867	
000445	005001	A	868	TZA			10	00868	
000446	057000	I	869	STA	NT		10	00869	

000447	010465	A	870	LDA	FIVE			10	00870	
000450	057000	I	871	STA	EL			10	00871	
000451	010464	A	872	LDA	THREE			10	00872	
000452	057000	I	873	STA	IU			10	00873	
000453	002000	A	874	CALL	ASI	A\$C		10	00874	
000454	077611	R								
000455	017000	I	875	LDA	I			10	00875	
000456	057000	I	876	STA	DPCA+6			10	00876	
000457	006010	A	877	LDAI	'IF'			10	00877	
000460	144706	A								
000461	057000	I	878	STA	ID			10	00878	
000462	006010	A	879	LDAI	'IX'			10	00879	
000463	144730	A								
000464	057000	I	880	STA	ID+1			10	00880	
000465	010422	A	881	LDA	TWO			10	00881	
000466	057000	I	882	STA	IM			10	00882	
000467	002000	A	883	CALL	ASI			10	00883	
000470	077611	R								
000471	005001	A	884	TZA				10	00884	
000472	057000	I	885	STA	CL			10	00885	
000473	002000	A	886	CALL	SAX	CLEAR COMMON LINK		10	00886	
000474	077733	R								
000475	017000	I	887	LDA	I	IFIX		10	00887	
000476	006057	A	888	STAE	DPCA+8			10	00888	
000477	177367	R								
000500	006010	A	889	LDAI	'FL'			10	00889	
000501	143314	A								
000502	057000	I	890	STA	ID			10	00890	
000503	006010	A	891	LDAI	'DA'			10	00891	
000504	147701	A								
000505	057000	I	892	STA	ID+1			10	00892	
000506	006010	A	893	LDAI	'T'			10	00893	
000507	152240	A								
000510	057000	I	894	STA	ID+2			10	00894	
000511	047000	I	895	INR	EL			10	00895	
000512	047000	I	896	INR	IM			10	00896	
000513	002000	A	897	CALL	ASI			10	00897	
000514	077611	R								
000515	005001	A	898	TZA				10	00898	
000516	057000	I	899	STA	CL			10	00899	
000517	002000	A	900	CALL	SAX	CLEAR COMMON LINK		10	00900	
000520	077733	R								
000521	017000	I	901	LDA	I	FLOAT		10	00901	
000522	006057	A	902	STAE	DPCA+9			10	00902	
000523	177370	R								
000524	006010	A	903	LDAI	'DF'			10	00903	
000525	142306	A								
000526	057000	I	904	STA	ID			10	00904	
000527	006010	A	905	LDAI	'LD'			10	00905	
000530	146317	A								
000531	057000	I	906	STA	ID+1			10	00906	
000532	006010	A	907	LDAI	'AT'			10	00907	
000533	140724	A								
000534	057000	I	908	STA	ID+2			10	00908	
000535	047000	I	909	INR	IM			10	00909	
000536	002000	A	910	CALL	ASI			10	00910	
000537	077611	R								
000540	005001	A	911	TZA				10	00911	
000541	057000	I	912	STA	CL			10	00912	
000542	002000	A	913	CALL	SAX			10	00913	
000543	077733	R								
000544	017000	I	914	LDA	I			10	00914	
000545	006057	A	915	STAE	DPCA+11	'DFLOAT'		10	00915	
000546	177372	R								
000547	017000	I	916	LDA	\$PCW			10	00916	
000550	006444	A	917	BT	944, BGN65	NO SORT IF NOT 'F'		10	00917	
000551	000572	R								
000552	006010	A	918	LDAI	'SQ'			10	00918	
000553	151721	A								
000554	057000	I	919	STA	ID			10	00919	
000555	006010	A	920	LDAI	'RT'			10	00920	
000556	151324	A								
000557	057000	I	921	STA	ID+1			10	00921	
000560	010465	A	922	LDA	FIVE			10	00922	
000561	057000	I	923	STA	EL			10	00923	
000562	010464	A	924	LDA	THREE			10	00924	
000563	057000	I	925	STA	IM			10	00925	
000564	057000	I	926	STA	IU			10	00926	
000565	002000	A	927	CALL	ASI			10	00927	
000566	077611	R								
000567	017000	I	928	LDA	I	SORT		10	00928	
000570	006057	A	929	STAE	DPCA+7			10	00929	
000571	177366	R								
			930	*****				PD	10	00930
			931	* INITIALIZE MODE TABLE *				PD	10	00931
			932	*****				PD	10	00932
			933	BGN65	LDBI	27		10	00933	
000572	006020	A								
000573	000033	A								
000574	010464	A	934	LDA	THREE	3 = REAL		PD	10	00934
000575	006056	A	935	BGN7	STAE	MDTB-1, B	A-Z SET REAL	PD	10	00935
000576	177462	R								





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000720 006057 A 1009 STAE EOLSW SET END-OF-LINE SWITCH TO READ NEXT LINE 10 01009
000721 077623 R
000722 006017 A 1010 LDAE* ICRD 10 01010
000723 177657 R
000724 006057 A 1011 STAE ICRR SET REREAD SWITCH TO READ 10 01011
000725 077660 R
000726 014006 A 1012 LDA BGN3 10 01012
000727 006037 A 1013 STAE ICSI SET CHAR. FETCH ROUTINE TO 'ICD' 10 01013
000730 077661 R
000731 006010 A 1014 LDAI 72 10 01014
000732 000110 A
000733 057000 I 1015 STA INBP SET SOURCE CHAR COUNT TO END OF LINE 10 01015
000734 002000 A 1016 CALL ICD 10 01016
000735 077655 R
000735 1017 BGN3 BES 0 10 01017
000736 001000 A 1018 JMP STI1 10 01018
000737 077742 R
000740 000074 A 1019 SIXTY DATA 60 D.110 01019
000741 000000 A 1020 TEMP DATA 0 D.110 01020
000742 130260 A 1021 ANB DATA '00' D.110 01021
1022 EJECT 10 01022
1023 ***** 10 01023
1024 * 10 01024
1025 * P R O C E S S B L O C K D A T A S T A T E M E N T ( B L D ) * 10 01025
1026 * 10 01026
1027 * F U N C T I O N : T O P R O C E S S T H E F O R T R A N S O U R C E S T A T E M E N T : ' B L O C K D A T A ' * 10 01027
1028 * 10 01028
1029 * E N T R Y : D I R E C T F R O M S I D * 10 01029
1030 * 10 01030
1031 * E X I T : B D F = 1 * 10 01031
1032 * D I R E C T T O S T Y Y * 10 01032
1033 * 10 01033
1034 * E R R O R S : T E R 4 I F B L O C K D A T A N O T F I R S T S T A T E M E N T O F P R O G R A M * 10 01034
1035 * 10 01035
1036 ***** 10 01036
000743 047000 I 1038 BLD INR BDF SET BLOCK-DATA FLAG 10 01038
000744 002000 A 1039 CALL ICH 10 01039
000745 077654 R
000746 140463 A 1040 SUB BM377 10 01040
000747 001010 A 1041 JAZ STI1 10 01041
000750 077742 R
000751 002000 A 1042 CALL RCH 10 01042
000752 077731 R
000753 001000 A 1043 JMP NAM 10 01043
000754 003123 R
1044 EJECT 10 01044
1045 ***** 10 01045
1046 * 10 01046
1047 * B U I L D U N R E F E R E N C I B L E N A M E F O R * 10 01047
1048 * 10 01048
1049 * S U B P R O G R A M ( B U N S ) * 10 01049
1050 * 10 01050
1051 * F U N C T I O N : T O P R O C E S S A S U B P R O G R A M E N T R Y N A M E * 10 01051
1052 * 10 01052
1053 * E N T R Y : F R O M F U N C T I O N , S U B R O U T I N E , O R N A M E S T A T E M E N T P R O C E S S O R * 10 01053
1054 * 10 01054
1055 * E X I T : N A M E E N T E R E D I N T A B L E : * 10 01055
1056 * I M = M F I F M F . N E . 0 * 10 01056
1057 * I U = 3 * 10 01057
1058 * N T = 1 * 10 01058
1059 * N A M E O U T P U T ( L O A D E R S U B C O D E 1 0 ) A S E N T R Y A T L O C = 0 * 10 01059
1060 * B = P O I N T E R T O N A M E I N T A B L E * 10 01060
1061 * A = 0 E N D O F S T A T E M E N T * 10 01061
1062 * < 0 N O T E N D O F S T A T E M E N T * 10 01062
1063 * 10 01063
1064 * E R R O R S : T E R 1 0 I F N O T F I R S T S T A T E M E N T * 10 01064
1065 * 10 01065
1066 ***** 10 01066
000755 000000 A 1068 BUNS ENTRY 10 01068
000756 002000 A 1069 CALL INA 10 01069
000757 077667 R
000760 017000 I 1070 LDA MF EXPLICIT MODE IN FUNCTION OVERRIDES 10 01070
000761 001010 A 1071 JAZ *+3 IMPLICIT 10 01071
000762 000764 R
000763 057000 I 1072 STA IM 10 01072
000764 010464 A 1073 LDA THREE 10 01073
000765 057000 I 1074 STA IU SET IU=3 FOR SUBPROGRAM 10 01074
000766 020421 A 1075 LDB ONE 10 01075
000767 067000 I 1076 STB NT 10 01076
000770 017000 I 1077 LDA RL 10 01077
000771 057000 I 1078 STA AF 10 01078
000772 002000 A 1079 CALL SAX 10 01079
000773 077733 R
000774 010435 A 1080 LDA BS12 10 01080
000775 027000 I 1081 LDB RL 10 01081
000776 002000 A 1082 CALL DNEN 10 01082
000777 077713 R
001000 027000 I 1083 LDB I EXIT WITH B POINTING TO NAME 10 01083
001001 017000 I 1084 LDA TC 10 01084
001002 140463 A 1085 SUB K77 A=TC-077 10 01085
001003 001000 A 1086 JMP* BUNS EXIT 10 01086

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101004 100755 R
1087 EJECT
1088 *****
1089 *
1090 * P R O C E S S C O M M O N S T A T E M E N T ( C M N )
1091 *
1092 * F U N C T I O N : T O P R O C E S S T H E F O R T R A N S O U R C E S T A T E M E N T ' C O M M O N '
1093 *
1094 * E N T R Y : D I R E C T F R O M S I D
1095 *
1096 * E X I T : D I R E C T T O S S C
1097 * B=1
1098 *
1099 *****
001005 005102 A 1101 CMN INCR C SET B=1 TO FLAG COMMON ENTRY
001006 001000 A 1102 JMP SSC STORE STATEMENT CHARACTER STRING
001007 003406 R
1103 EJECT
1104 * DAT DATA STATEMENT PROCESSOR
001010 002000 A 1106 DAT CALL DAT00
001011 001014 R
001012 001000 A 1107 JMP CRT
001013 077616 R
1108 * DATA SUBROUTINE
001014 000000 A 1109 DAT00 ENTRY
001015 017000 I 1110 LDA RL
001016 054524 A 1111 STA TAT11+1
001017 017000 I 1112 DAT02 LDA DPX
001020 054706 A 1113 STA T0DA
001021 057000 I 1114 STA K
001022 005002 A 1115 TZB BR=0
001023 064713 A 1116 STB KTEMP D
001024 064707 A 1117 STB T4DA+1
001025 064707 A 1118 STB T4DA+2 CLEAR T4(1),T4(2),T4(3)
001026 064707 A 1119 STB T4DA+3
001027 064701 A 1120 DAT0 STB T2DA T2=BR
001030 002000 A 1121 DAT0 JMPM PAS1 ENTER LOD(0,T2)
001031 001636 R
001032 014707 A 1122 LDA K1DA
001033 055001 A 1123 STA 1,1
001034 014711 A 1124 LDA K5DA
001035 055002 A 1125 STA 2,1
001036 074671 A 1126 STX T1DA T1=K(LOD)
001037 002000 A 1127 CALL IN1
001040 077670 R
001041 054675 A 1128 STA T5DA T5=IM
001042 002010 A 1129 JAZM PTS
001043 077726 R
001044 027000 I 1130 LDB K AND GO TO RECYCLE.
001045 001010 A 1131 JAZ DAT0
001046 001027 R
001047 005001 A 1132 TZA ERROR IF OPERAND IS CONSTANT.
001050 147000 I 1133 SUB NT
001051 001004 A 1134 JAZ TEP1
001052 077745 R
001053 017000 I 1135 LDA TC GO TO PROCESS 'DO' CONSTRUCTION IF TC='*'
001054 140000 L 1136 SUB '='
001055 001010 A 1137 JAZ DAU9
001056 001270 R
001057 017000 I 1138 LDA AT
001060 027000 I 1139 LDB SDF
001061 001020 A 1140 JAZ TAT1
001062 001071 R
001063 140466 A 1141 SUB K6 IF BLOCK DATA PROGRAM, THEN ERROR IF ITEM
001064 002004 A 1142 JAZM ER18
001065 077641 R
001066 005101 A 1143 INCR 1
001067 027000 I 1144 LDB CL SCALE COMMON POINTER
001070 004044 A 1145 LRLB 4
001071 064643 A 1146 DAT1 STB T5DA T6=RELOCATION POINTER
001072 005311 A 1147 JAZ GO TO FURTHER PROCESSING IF EITHER BLOCK
001073 001010 A 1148 JAZ DAT2 DATA PROGRAM OR ITEM IS 'RELATIVE'.
001074 001112 R
001075 005311 A 1149 JAZ
001076 001016 A 1150 JAZ TEP2
001077 077746 R
001100 002000 A 1151 CALL TMR
001101 077773 R
001102 017000 I 1152 LDA RL (AF=RL)
001103 005102 A 1153 INCR 2 (AT=REL)
001104 002000 A 1154 CALL DAT
001105 077621 R
001106 017000 I 1155 LDA RL INCREMENT RL BY NO. OF WORDS REQUIRED FOR
001107 027000 I 1156 ADD IS ITEM.
001110 057000 I 1157 STA RL
001111 054431 A 1158 STA DAT11+1 NEW UPPER BOUND
001112 017000 I 1159 DAT2 LDA T7 MODIFY LOD ENTRY TO LOD(0,AF)
001113 027000 I 1160 LDB K
001114 056000 A 1161 STA C+2
001115 017000 I 1162 LDA 10
001116 140428 A 1163 SUB K2

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001117	001010	A	1164	JAZ	DAU2	FLAKE OUT SOMAIRSELS IF ITEM IS ARRAY.	10	01164
001120	001140	R						
001121	002000	A	1165	JMPM	DAS2	ENTER XEQ(T5,T6)	10	01165
001122	001651	R						
001123	024605	A	1166	DAU0	LDB	T2DA	10	01166
001124	017000	I	1167		LDA	TC	10	01167
001125	140000	L	1168		SUB	=','	10	01168
001126	001010	A	1169		JAZ	DATO	10	01169
001127	001027	R						
001130	001020	A	1170	JBZ	DAV1	GO TO PROCESS CONSTANT LIST IF T2=0.	10	01170
001131	001341	R						
001132	016000	A	1171		LDA	0,2	10	01171
001133	054575	A	1172		STA	T2DA	10	01172
001134	002000	A	1173	DAU1	CALL	RID	10	01173
001135	077732	R						
001136	001000	A	1174		JMP	DAU0	10	01174
001137	001123	R						
001140	017000	I	1175	DAU2	LDA	TC	10	01175
001141	140000	L	1176		SUB	=','	10	01176
001142	001010	A	1177		JAZ	DAU3	10	01177
001143	001166	R						
001144	002000	A	1178		JMPM	DAS2	10	01178
001145	001651	R						
001146	027000	I	1179		LDB	IS	10	01179
001147	002000	A	1180		JMPM	DAS1	10	01180
001150	001636	R						
001151	014570	A	1181		LDA	K1DA	10	01181
001152	055001	A	1182		STA	1,1	10	01182
001153	014571	A	1183		LDA	K4DA	10	01183
001154	055002	A	1184		STA	2,1	10	01184
001155	002000	A	1185		CALL	IWI	10	01185
001156	077677	R						
001157	005021	A	1186		TBA		10	01186
001160	127000	I	1187		ADD	AF	10	01187
001161	005312	A	1188		DECR	012	10	01188
001162	002000	A	1189		JMPM	DAS3	10	01189
001163	001663	R						
001164	001000	A	1190		JMP	DAU0	10	01190
001165	001123	R						
001166	057000	I	1191	DAU3	STA	NS	10	01191
001167	017000	I	1192		LDA	IS	10	01192
001170	054542	A	1193	DAU4	STA	T4DA	10	01193
001171	054540	A	1194		STA	T3DA	10	01194
001172	002000	A	1195		CALL	EXA	10	01195
001173	077646	R						
001174	001002	A	1196		JAF	DAU8	10	01196
001175	001246	R						
001176	002000	A	1197		CALL	IIV	10	01197
001177	077664	R						
001200	164531	A	1198		MUL	T3DA	10	01198
001201	005021	A	1199		TBA		10	01199
001202	054527	A	1200		STA	T3DA	10	01200
001203	017000	I	1201		LDA	TC	10	01201
001204	140000	L	1202		SUB	=','	10	01202
001205	001010	A	1203		JAZ	DAU8	10	01203
001206	001246	R						
001207	027000	I	1204		LDB	ID	10	01204
001210	005001	A	1205	DAU6	TZA		10	01205
001211	164521	A	1206		MUL	T4DA	10	01206
001212	005021	A	1207		TBA		10	01207
001213	144517	A	1208		SUB	T4DA	10	01208
001214	024513	A	1209		LDB	T1DA	10	01209
001215	126000	A	1210		ADD	0,2	10	01210
001216	056000	A	1211		STA	0,2	10	01211
001217	017000	I	1212		LDA	NS	10	01212
001220	005111	A	1213		IAR		10	01213
001221	057000	I	1214		STA	NS	10	01214
001222	147000	I	1215		SUB	ND	10	01215
001223	001010	A	1216		JAZ	DAU7	10	01216
001224	001242	R						
001225	002000	A	1217		CALL	CTS	10	01217
001226	077617	R						
001227	027000	I	1218		LDB	IS+1	10	01218
001230	017000	I	1219		LDA	IS+2	10	01219
001231	057000	I	1220		STA	IS+1	10	01220
001232	017000	I	1221		LDA	IS+3	10	01221
001233	057000	I	1222		STA	IS+2	10	01222
001234	005001	A	1223		TZA		10	01223
001235	057000	I	1224		STA	IS+3	10	01224
001236	164474	A	1225		MUL	T4DA	10	01225
001237	005021	A	1226		TBA		10	01226
001240	001000	A	1227		JMP	DAU4	10	01227
001241	001170	R						
001242	002000	A	1228	DAU7	JMPM	DAS2	10	01228
001243	001651	R						
001244	001000	A	1229		JMP	DAU1	10	01229
001245	001134	R						
001246	002000	A	1230	DAU8	CALL	IYA	10	01230
001247	077675	R						
001250	002000	A	1231		JMPM	DAS4	10	01231
001251	001674	R						

FLAKE OUT SOMAIRSELS IF ITEM IS ARRAY. 10 01164

ENTER XEQ(T5,T6) 10 01165

GO TO PROCESS NEXT LIST ITEM IF TC=','. 10 01166

GO TO PROCESS CONSTANT LIST IF T2=0. 10 01170

OTHERWISE, SET T2=(T2)...(FROM LOD ENTRY) 10 01171

RETEST (NEW) TC. 10 01174

IF ITEM IS SUBSCRIBTED ARRAY REFERENCE, 10 01175

ENTER XEQ(T5,T6) IF NOT SUBS. ARRAY ITEM. 10 01178

ENTER AUG(0,IS) 10 01179

ENTER RPT(T1,LOC OF LAST WORD OF ARRAY) 10 01189

THEN GO TO PROCESS TC. 10 01190

NS=0 TO PROCESS FIRST SUBSCRIPT. 10 01191

AR= NO. WORDS PER ELEMENT. 10 01192

T4=T3=AR 10 01193

IS IT A DIGIT? 10 01196

IF TC='\*' THEN GO TO CONTINUE INPUT OF 10 01200

NS=NS+1 10 01212

IF NS=ND THEN GO TO TERMINATE SUBSCRIPT 10 01215

PROCESSING 10 01216

BR=IS(1) 10 01218

IS(1)=IS(2) 10 01219

IS(2)=IS(3) 10 01221

IS(3)=0 10 01223

GO TO PROCESS NEXT SUBSCRIPT. 10 01227

ENTER XEQ(T5,T6) FOR SUBSC. ITEM AND GO 10 01228

TO PROCESS TC. 10 01229

SET IS=PTR TO VARIABLE 10 01231

Address	Label	Operation	Comments	Line	Address
001252		LDB T3DA	ENTER MAR(IS,T3)	10	01232
001253		JMPM DAS1		10	01233
001254					
001255		STX KTEMP			
001256		LDA IS	D	10	01234
001257		STA 1,1		10	01235
001260		LDA K3DA		10	01236
001261		STA 2,1		10	01237
001262		CALL RCH		10	01238
001263				10	01239
001264		CALL IIV		10	01240
001265					
001266		JMP DAU6	GO TO COMPLETE PROCESSING OF SUBSCRIPT.	10	01241
001267					
001270	DAU9	LDA T2DA	ERROR IF DO CONSTRUCTION NOT PARENTHESIZED	10	01242
001271		JAZ TER1		10	01243
001272					
001273		CALL TVR		10	01244
001274					
001275		JMPM DAS4	SET IS=PTR TO INDEX VARIABLE AND CLEAR	10	01245
001276					
001277		STA 0,2	T4(PTR).	10	01246
001300		DAR	ERROR IF VARIABLE JUST ENTERED IN T4 (DD	10	01247
001301		JAPM ER20		10	01248
001302					
001303		CALL IIV		10	01249
001304					
001305		LDB T2DA	T1=T2	10	01250
001306		STX T1DA		10	01251
001307		LDA 0,1	T2=(T1)	10	01252
001310		STA T2DA		10	01253
001311		STB 0,1	MODIFY LOD ENTRY TO LOD(IS,BR)	10	01254
001312		LDA IS		10	01255
001313		STA 1,1		10	01256
001314		CALL CTS		10	01257
001315					
001316		CALL IIV		10	01258
001317					
001320		STB T3DA		10	01259
001321		LDA TC	IF TC=',' THEN INPUT INTEGER VALUE INTO	10	01260
001322		SUB =','		10	01261
001323		INCR 2		10	01262
001324		JAZM IIV		10	01263
001325					
001326		JMPM DAS1	ENTER AUG(IS,BR)	10	01264
001327					
001330		LDA IS		10	01265
001331		STA 1,1		10	01266
001332		LDA K4DA		10	01267
001333		STA 2,1		10	01268
001334		LDB T3DA		10	01269
001335		JMPM DAS3	ENTER RPT(T1,T3)	10	01270
001336					
001337		JMP DAU1	GO TO PROCESS TC.	10	01271
001340					
001341	DAV1	LDA =',/'		10	01272
001342		STA T6DA	SET T6 TO FORCE ORIGIN CODE	10	01273
001343		CALL TST		10	01274
001344					
001345		STA T1DA		10	01275
001346		LDA =','		10	01276
001347		STA TC		10	01277
001350	DATA3	LDA T3DA	T0 TO T0-3	10	01278
001351		SUB THREE		10	01279
001352		STA T0DA		10	01280
001353		TAX	V	10	01281
001354		SUB K		10	01282
001355		JAN DAT7	IF VARIABLE LIST EXHAUSTED	10	01283
001356					
001357		LDA 0,1		10	01284
001360		LDB 1,1		10	01285
001361		STB T5DA		10	01286
001362		LDB 2,1		10	01287
001363		STX 3,2		10	01288
001364		JMP *		10	01289
001365					
001366	DAV2	LDB 0,2	PROCESS MAR	10	01290
001367		STA DAT		10	01291
001370		TZA		10	01292
001371		MUL DAT		10	01293
001372		TZA		10	01294
001373		LDB K1DA		10	01295
001374	DAV3	ADD 0,2	PROCESS AUG	10	01296
001375	DAV4	STA 0,2	PROCESS LOD	10	01297
001376		JMP DAT3		10	01298
001377					
001400	DATT	BSS 1		10	01299
001401	DAV5	LDB 1,2	PROCESS RPT	10	01300
001402		SUB 0,1		10	01301
001403		JAN DAT3		10	01302
001404					

001405	064321	A	1303	STB	T0DA		10	01303
001406	001000	A	1304	JMP	DAT3		10	01304
001407	001350	R						
001408	144327	A	1305	DAV6	SUB	T6DA	10	01305
001411	005012	A	1306	TAB			10	01306
001412	014320	A	1307	LDA	T4DA		10	01307
001413	144315	A	1308	SUB	T2DA		10	01308
001414	001030	A	1309	JIF	030, DAV7	ORIGIN SAME AS LAST OUTPUT (+1)?	10	01309
001415	001427	R						
001416	024314	A	1310	LDB	T4DA	NO	10	01310
001417	064311	A	1311	STB	T2DA	UPDATE DISPLACEMENT	10	01311
001420	067000	I	1312	STB	RL	SET RL FOR LIST	10	01312
001421	034305	A	1313	LDA	T0DA		10	01313
001422	015000	A	1314	LDA	0,1		10	01314
001423	054314	A	1315	STA	T6DA	UPDATE POINTER	10	01315
001424	120432	A	1316	ADD	KJMP		10	01316
001425	002000	A	1317	CALL	DWS		10	01317
001426	077722	R						
001427	014300	A	1318	DAV7	LDA	T1DA	10	01318
001430	005311	A	1319	DAR			10	01319
001431	001002	A	1320	JAP	DAT8		10	01320
001432	001447	R						
001433	002000	A	1321	CALL	CTS		10	01321
001434	077617	R						
001435	002000	A	1322	DAV4	CALL	INN	10	01322
001436	077671	R						
001437	001010	A	1323	JAZ	DAT9		10	01323
001440	001565	R						
001441	017000	I	1324	LDA	NT		10	01324
001442	002010	A	1325	JAZM	ER2		10	01325
001443	077625	R						
001444	014263	A	1326	LDA	T1DA		10	01326
001445	001010	A	1327	JAZ	DAT8		10	01327
001446	001552	R						
001447	054260	A	1328	DAVB	STA	T1DA	10	01328
001450	017000	I	1329	DAV5	LDA	IM	10	01329
001451	001010	A	1330	JAZ	DAV8	HOLLERITH DATA?	10	01330
001452	001456	R						
001453	144263	A	1331	SUB	T5DA	NO	10	01331
001454	002016	A	1332	JANZM	ER3	DATA MODE DOES NOT MATCH VARIABLE MODE	10	01332
001455	077626	R						
001456	014260	A	1333	DAV8	LDA	T5DA	10	01333
001457	140422	A	1334	SUB	TWO		10	01334
001460	001016	A	1335	JANZ	DAV9	NOT INTEGER	10	01335
001461	001471	R						
001462	017000	I	1336	LDA	\$PCW		10	01336
001463	150431	A	1337	ANA	BSS		10	01337
001464	001010	A	1338	JAZ	DAV9	1-WORD INTEGER	10	01338
001465	001471	R						
001466	005002	A	1339	TZB			10	01339
001467	002000	A	1340	CALL	DAV10		10	01340
001470	001520	R						
001471	017000	I	1341	DAV9	LDA	ID	10	01341
001472	002000	A	1342	CALL	DAV10		10	01342
001473	001520	R						
001474	140422	A	1343	SUB	TWO		10	01343
001475	001010	A	1344	JAZ	DAT3	INTEGER	10	01344
001476	001350	R						
001477	017000	I	1345	LDA	ID+1		10	01345
001500	002000	A	1346	CALL	DAV10		10	01346
001501	001520	R						
001502	140423	A	1347	SUB	FOUR		10	01347
001503	001004	A	1348	JAN	DAT3	REAL	10	01348
001504	001350	R						
001505	140422	A	1349	SUB	TWO		10	01349
001506	001002	A	1350	JAP	DAT3	DP-INT	10	01350
001507	001350	R						
001510	017000	I	1351	LDA	ID+2	DBL/CMP	10	01351
001511	002000	A	1352	CALL	DAV10		10	01352
001512	001520	R						
001513	017000	I	1353	LDA	ID+3		10	01353
001514	002000	A	1354	CALL	DAV10		10	01354
001515	001520	R						
001516	001000	A	1355	JMP	DAT3		10	01355
001517	001350	R						
001520	000000	A	1356	DAV10	ENTRY	OUTPUT DATA WORD	10	01356
001521	002000	A	1357	CALL	DAB		10	01357
001522	077710	R						
001523	044205	A	1358	INR	T2DA		10	01358
001524	014212	A	1359	LDA	T5DA		10	01359
001525	001000	A	1360	JMP*	DAV10		10	01360
001526	101520	R						
001527	010000	L	1361	DAV7	LDA	='/'	10	01361
001530	002000	A	1362	CALL	TST		10	01362
001531	077772	R						
001532	144175	A	1363	SUB	T1DA		10	01363
001533	002004	A	1364	JANM	ER1		10	01364
001534	077624	R						
001535	002000	A	1365	CALL	ICH		10	01365
001536	077654	R						
001537	140000	L	1366	SUB	=','		10	01366

Address	Operation	Code	Label	Comments	Line	Page
001540	001010	A	1367	JAZ	DAT02	
001541	001017	R				
001542	006020	A	1368	DATA11	LISI	**
001543	101542	R				
001544	067000	I	1369	STB	RL	
001545	010432	A	1370	LDA	KJMP	
001546	002000	A	1371	CALL	DMS	RESTORE PROGRAM LOCATION COUNTER
001547	077722	R				
001550	001000	A	1372	JMP*	DAT00	EXIT
001551	101014	R				
001552	017000	I	1373	DATA8	LDA	TC
001553	140000	L	1374	SUB	'*'	
001554	001016	A	1375	JANZ	DAT5	
001555	001450	R				
001556	002000	A	1376	CALL	INT	
001557	077673	R				
001560	017000	I	1377	LDA	ID	
001561	005311	A	1378	BAR		
001562	054145	A	1379	STA	TIDA	
001563	001000	A	1380	JMP	DAT4	GO TO SET T1=ID-1
001564	001435	R				
001565	017000	I	1381	DATA9	LDA	TC
001566	140000	L	1382	SUB	#0247	
001567	001010	A	1383	JAZ	DATA	***
001570	001602	R				
001571	006140	A	1384	SUBI	041	
001572	000041	A				
001573	001010	A	1385	JAZ	DATA	IF TC='H'
001574	001602	R				
001575	002000	A	1386	CALL	PTS	
001576	077726	R				
001577	047000	I	1387	INP	SXF	SXF=1
001600	001000	A	1388	JMP	DAT4	
001601	001435	R				
001602	005001	A	1389	DATA	IZA	
001603	054126	A	1390	STA	TIDA	
001604	002000	A	1391	DATA1	CALL	INW
001605	077663	R				
001606	057000	I	1392	STA	ID	
001607	002000	A	1393	CALL	INW	
001610	077663	R				
001611	057000	I	1394	STA	ID+1	
001612	002000	A	1395	CALL	INW	
001613	077663	R				
001614	057000	I	1396	STA	ID+2	
001615	002000	A	1397	CALL	INW	
001616	077663	R				
001617	057000	I	1398	STA	ID+3	
001620	017000	I	1399	LDA	HCC	
001621	001010	A	1400	JAZ	DATA2	
001622	001632	R				
001623	002000	A	1401	CALL	ERIC	
001624	077636	R				
001625	002000	A	1402	CALL	INW	
001626	077663	R				
001627	017000	I	1403	LDA	HCC	
001630	001016	A	1404	JANZ	*-3	
001631	001625	R				
001632	002000	A	1405	DATA2	CALL	ICN
001633	077653	R				
001634	001000	A	1406	JMP	DAT5	
001635	001450	R				
001636	000000	A	1407	DAS1	ENTR	
001637	017000	I	1408	LDA		ROUTINE TO ALLOCATE ENTRY AND PLACE PARAM. K=K-3
001640	140464	A	1409	SUB	IMREE	
001641	057000	I	1410	STA		
001642	005014	A	1411	TAX		
001643	147000	I	1412	SUB		
001644	001004	A	1413	JAN	TER3	K < IT
001645	077747	R				
001646	065000	A	1414	STB	0+1	PLACE LOW ORDER PARAMETER.
001647	001000	A	1415	JMP*	DAS1	
001650	101636	R				
001651	000000	A	1416	DAS2	ENTR	
001652	024365	A	1417	LDA	T6DA	ROUTINE TO ENTER XEQ(T5,T6) ALLOCATE ENTRY AND PLACE T6.
001653	002000	A	1418	JMP*	DAS1	
001654	001636	R				
001655	014061	A	1419	LDA	T5PA	PLACE T5.
001656	055001	A	1420	STA	0+1	
001657	014070	A	1421	LDA	T7DA	PLACE XEQ CODE.
001660	055002	A	1422	STA	0+1	
001661	001000	A	1423	JMP*	DAS2	
001662	101651	R				
001663	000000	A	1424	DAS3	ENTR	
001664	002000	A	1425	JMP*	DAS1	ROUTINE TO ENTER RPT(T1,BR). ALLOCATE ENTRY AND PLACE BR.
001665	001633	R				
001666	014041	A	1426	LDA	T1DA	PLACE T1.
001667	055001	A	1427	STA	0+1	
001670	014056	A	1428	LDA	R6DA	PLACE RPT CODE.
001671	055002	A	1429	STA	0+1	
001672	001000	A	1430	JMP*	DAS3	

Address	Label	Operation	Operand	Description	Line	Page
001673	101663	R				
001674	000000	A	1431	DAS4	ENTR	
001675	024045	A	1432		LDB	K2DA
001676	016000	A	1433	DAS5	LDA	0,2
001677	001010	A	1434		JAZ	DAS6A
001700	001704	R				
001701	147000	I	1435		SUB	I
001702	001010	A	1436		JAZ	DAS7
001703	001724	R				
001704	005323	A	1437	DAS6A	DECR	023
001705	144034	A	1438		SUB	K1DA
001706	001016	A	1439		JANZ	DAS5
001707	001676	R				
001710	024032	A	1440		LDB	K2DA
001711	016000	A	1441	DAS5A	LDA	0,3
001712	001010	A	1442		JAZ	DAS6
001713	001722	R				
001714	005323	A	1443		DECR	023
001715	144024	A	1444		SUB	K1DA
001716	001010	A	1445		JAZ	TER9
001717	077754	R				
001720	001000	A	1446		JMP	DAS5A
001721	001711	R				
001722	017000	I	1447	DAS6	LDA	I
001723	056000	A	1448		STA	0,2
001724	067000	I	1449	DAS7	STB	IS
001725	001000	A	1450		JMP*	DAS4
001726	101674	R				
001727			1451	T0DA	BSS	1
001730			1452	T1DA	BSS	1
001731			1453	T2DA	BSS	1
001732			1454	T3DA	BSS	1
001733			1455	T4DA	BSS	4
001737			1456	T5DA	BSS	1
001740			1457	T6DA	BSS	1
001741			1458	KTEMP	BSS	1
001742	001733	R	1459	K1DA	DATA	T4DA
001743	001736	R	1460	K2DA	DATA	T4DA+3
001744	001366	R	1461	K3DA	DATA	DAV2
001745	001374	R	1462	K4DA	DATA	DAV3
001746	001375	R	1463	K5DA	DATA	DAV4
001747	001401	R	1464	K6DA	DATA	DAV5
001750	001410	R	1465	K7DA	DATA	DAV6
1466				EJECT		
1467				*****		
1468				* P R O C E S S D I M E N S I O N S T A T E M E N T ( D M N )		
1469				* F U N C T I O N : T O P R O C E S S T H E F O R T R A N S O U R C E S T A T E M E N T :		
1470				* ' D I M E N S I O N N 1 ( A 1 ) , N 2 ( A 2 ) , . . . '		
1471				* W H E R E : N 1 I S A N A R R A Y N A M E		
1472				* A I I S A N A R R A Y D E C L A R A T O R		
1473				* E N T R Y : D I R E C T F R O M S I D		
1474				* E X I T : T H R O U G H C C R		
1475				*****		
1476				* E N T R Y S T A T E M E N T ( E N T )		
1477				*****		
001751	002000	A	1484	DMN	CALL	INA
001752	077667	R				
001753	002000	A	1485		CALL	PTS
001754	077726	R				
001755	002000	A	1486		CALL	PAD
001756	003131	R				
001757	001000	A	1487		JMP	CCR
001760	077615	R				
1488				EJECT		
1489				*****		
1490				* E N T R Y S T A T E M E N T ( E N T )		
1491				*****		
001761	017000	I	1495	ENT	LDA	SDFL+1
001762	001010	A	1496		JAZ	TER2
001763	077746	R				
001764	017000	I	1497		LDA	JPFL
001765	001004	A	1498		JAN	ENTO
001766	001773	R				
001767	017000	I	1499		LDA	RL
001770	057000	I	1500		STA	JPFL
001771	002000	A	1501		CALL	DTJ
001772	077717	R				
001773	002000	A	1502	ENTO	CALL	BUNS
001774	000755	R				
001775	064056	A	1503		STB	ENT3+1
001776	001010	A	1504		JAZ	ENT4
001777	002117	R				
002000	017000	I	1505		LDA	DPX
002001	147000	I	1506		SUB	DT



Address	Op/Code	Label	Op/Code	Description	Page	Address
002002	001016	A	1507	JANZ	IER9	ENTRY INSIDE DO
002003	077754	P				
002004	017000	I	1508	LDA	DPX	
002005	002000	A	1509	CALL	GSE	
002006	077652	P				
002007	002000	A	1510	ENT1	CALL	DBX
002010	077701	R				CORRECT ENTRY PARAMETER ADDRESSES
002011	017000	I	1511	LDA	DM	
002012	057000	I	1512	STA	I	
002013	002000	A	1513	CALL	LAX	
002014	077700	R				
002015	017000	I	1514	LDA	LR	
002016	140422	A	1515	SUB	TUD	
002017	001016	A	1516	JAZ	ENT2	NEW DUMMY VARIABLE
002020	002044	R				
002021	140465	A	1517	SUB	FIVE	
002022	001016	A	1518	JANZ	TER5	LABEL ALREADY USED
002023	077751	R				
002024	014000	A	1519	LDA	ENT3	
002025	002000	A	1520	CALL	DAB	'LDAE'
002027	017000	I	1521	LDA	AF	
002030	002000	A	1522	CALL	DRE	'DATA NEW-DUMMY-ADDRESS'
002031	077715	R				
002032	014000	A	1523	LDA	ENT5+1	
002033	002000	A	1524	CALL	DAB	'STAE'
002034	077710	R				
002035	017000	I	1525	LDA	DI	
002036	002000	A	1526	CALL	DRE	'DATA OLD-DUMMY-ADDRESS'
002037	077715	R				
002040	017000	I	1527	LDA	DR	
002041	002000	A	1528	CALL	SEVEN	
002042	002000	A	1529	CALL	DET	
002043	077621	R				
002044	017000	I	1530	ENT2	LDA	DT
002045	120465	A	1531	ADD	FIVE	
002046	057000	I	1532	STA	DT	
002047	057000	I	1533	STA	I	
002050	147000	I	1534	SUB	DPX	
002051	001000	A	1535	JAN	ENT1	PROCESS ALL PARAMETERS
002052	002000	R				
002053	006010	A	1536	ENT3	LDAI	**
002054	102053	R				
002055	057000	I	1537	STA	I	
002056	002000	A	1538	CALL	LAX	GET ENTRY NAME
002057	077700	R				
002060	014047	A	1539	LDA	ENT5	
002061	002000	A	1540	CALL	DAB	'LDAE'
002062	077710	R				
002063	017000	I	1541	LDA	AF	
002064	002000	A	1542	CALL	DRE	'DATA ENTRANCE-ADDRESS'
002065	077715	R				
002066	014042	A	1543	LDA	ENT5+1	
002067	002000	A	1544	CALL	DAB	'STAE'
002070	077710	R				
002071	005001	A	1545	TER		'DATA 0CR)'
002072	002000	A	1546	CALL	DRE	
002073	077715	R				
002074	017000	I	1547	LDA	AFDL	
002075	002000	A	1548	JARM	TER	TERMINATE JUMP-AROUND
002076	077716	R				
002077	017000	I	1549	LDA	AFDL	
002100	005011	A	1550	TER		SUBROUTINE
002101	001000	A	1551	JAN	ENT	
002102	077653	R				
002103	005001	A	1552	ENT35	TER	NAME VARIABLE WITH SAME NAME
002104	007000	I	1553	STA	DT	
002105	010422	A	1554	STA	DRE	
002106	057000	I	1555	STA	IL	
002107	002000	A	1556	CALL	DDI	
002110	007601	R				
002111	005001	A	1557	TER		
002112	000465	A	1558	TER	FIVE	
002113	002000	A	1559	CALL	DET	
002114	077621	R				
002115	001000	A	1560	JAN	ENT	
002116	077650	R				
002117	017000	I	1561	ENT4	LDA	AFDL
002120	005011	A	1562	TER		
002121	001000	A	1563	JAN	TER17	FUNCTION MUST HAVE PARAMETERS
002122	077762	R				
002123	010001	A	1564	TER		
002124	002000	A	1565	CALL	DAB	
002125	077710	R				
002126	001000	A	1566	JAN	ENT3	
002127	002000	A				
002130	005017	A	1567	ENT5	LDA	16017
002131	005001	A	1568	STA	01057	'LDAE'
002132						'STAE'
002133						
002134						
002135						
002136						
002137						
002138						
002139						
002140						
002141						

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1572 * PROCESS EQUIVALENCE STATEMENT ( EQU ) * 10 01572
1573 * * 10 01573
1574 * FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENT 'EQUIVALENCE' * 10 01574
1575 * * 10 01575
1576 * ENTRY: DIRECT FROM SID * 10 01576
1577 * * 10 01577
1578 * EXIT : DIRECT TO SSC * 10 01578
1579 * B=2 * 10 01579
1580 * * 10 01580
1581 * ***** * 10 01581
002132 020422 A 1583 EQU LDB K2 SET B=2 TO FLAG EQUIVALENCE ENTRY 10 01583
002133 001000 A 1584 JMP SSC STORE STATEMENT CHARACTER STRING 10 01584
002134 003406 R 1585 EJECT * 10 01585
002135 002135 R 1586 EQUO BSS 0 V 10 01586
002135 010422 A 1587 PES EQU * 10 01587
002136 057000 I 1588 LDA K2 10 01588
002137 005001 A 1589 STA T1 10 01589
002140 057000 I 1590 TZA 10 01590
002141 002000 A 1591 STA F 10 01591
002142 077654 R 1592 CALL ICH 10 01592
002143 002000 A 1593 CALL PTS 10 01593
002144 077726 R 1594 EQU1 CALL ILE 10 01594
002145 002000 A 1595 SUB AF 10 01595
002146 002413 R 1596 STA T3 10 01596
002147 147000 I 1597 LDA I 10 01597
002150 057000 I 1598 STA T4 10 01598
002151 017000 I 1599 LDA F 10 01599
002152 057000 I 1600 JAZ EQU4 START OF GROUP 10 01600
002153 017000 I 1601 EQUO SUB I 10 01601
002154 001010 A 1602 JAZ EQU7 END 10 01602
002155 002216 R 1603 EQU3 LDA AT 10 01603
002156 147000 I 1604 SUB K6 10 01604
002157 001010 A 1605 JAZ EQU5 COMMON 10 01605
002160 002253 R 1606 EQUO LDA T3 10 01606
002161 017000 I 1607 ADD AF 10 01607
002162 140466 A 1608 STA T0 10 01608
002163 001010 A 1609 LDA T1 10 01609
002164 002222 R 1610 SUB K6 10 01610
002165 017000 I 1611 JAZ EQU8 NOT COMMON 10 01611
002166 127000 I 1612 LDA T9 10 01612
002167 057000 I 1613 SUB T0 10 01613
002168 017000 I 1614 STA T0 10 01614
002170 017000 I 1615 JANM ER6 COMMON BASE < 0 10 01615
002171 140466 A 1616 EQUO LDA T0 NEW AF = OFFSET 10 01616
002172 001004 A 1617 LDB T1 NEW AT 10 01617
002173 002201 R 1618 CALL DFT 10 01618
002174 017000 I 1619 JMPM FLN FETCH LINK 10 01619
002175 147000 I 1620 LDA I 10 01620
002176 057000 I 1621 SUB T4 10 01621
002177 002004 A 1622 JAZ EQU8 LINK END 10 01622
002178 077627 R 1623 LDA F 10 01623
002179 017000 I 1624 JMP EQUO 10 01624
002180 002313 R 1625 EQU4 LDA I 10 01625
002181 017000 I 1626 STA F 10 01626
002182 057000 I 1627 JMP EQU3 10 01627
002183 002161 R 1628 EQU5 LDA AS 10 01628
002184 002000 A 1629 ADD AF 10 01629
002185 002000 A 1630 STA T9 10 01630
002186 017000 I 1631 LDA T1 10 01631
002187 140422 A 1632 SUB K2 10 01632
002188 001010 A 1633 JAZ EQU9 STR.-BASE 10 01633
002189 002264 R 1634 EQU6 CALL ER7 10 01634
002190 002000 A 1635 LDA TC 10 01635
002191 077630 R 1636 SUB =', ' 10 01636
002192 017000 I 1637 JAZ EQU1 GROUP CONTINUES 10 01637
002193 140000 L 1638 JMPM RIO RIGHT INPUT DPR. 10 01638
002194 001010 A 1639 LDA TC V 10 01639
002195 002145 R 1640 SUB =', ' V 10 01640
002196 002000 A 1641 JAZ EQUO V 10 01641
002197 002135 R 1642 LDAI 0376 10 01642
002198 006010 A 1643 JMPM TST CHARACTER TEST ROUTINE V 10 01643
002199 000376 A
002200 002000 A
```

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0002250 0777772 R
0002251 0010000 R 1644          JMP      EQU0
0002252 0021335 R
0002253 0170000 I 1645 EQU7     LDA      T3
0002254 0010100 R 1646          JAZ      EQU6+2
0002255 0022222 R
0002256 0010000 R 1647          JMP      EQU6
0002257 0022222 R
0002258 0020000 R 1648 EQU8     CALL     EWL
0002259 0077647 R
0002260 0010000 R 1649          JMP      EQU6+2
0002261 0022222 R
0002262 0010000 R 1650 EQU9     LDA      K6
0002263 0044666 R 1651          STA      T1          SET TO COMMON
0002264 0057000 R 1652          LDA      J
0002265 0017000 R 1653          SUB      F
0002266 0470000 R 1654          JAZ      EQU6+2          GROUP END
0002267 0010100 R
0002268 0022222 R
0002269 0017000 R 1655          LDA      F
0002270 0057000 R 1656          STA      T
0002271 0057000 R 1657          LDB      T2
0002272 0057000 R 1658          STA      T2
0002273 0057000 R 1659          STA      T2
0002274 0057000 R 1660          CALL     LAX
0002275 0057000 R
0002276 0057000 R
0002277 0057000 R
0002278 0057000 R
0002279 0057000 R
0002280 0057000 R
0002281 0057000 R
0002282 0057000 R
0002283 0057000 R
0002284 0057000 R

```

```

1664          EJECT
1665 *****
1666 *
1667 *          P R O C E S S   E X T E R N A L  ( E X T )
1668 *
1669 * FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENT: 'EXTERNAL'
1670 *
1671 * ENTRY: DIRECT FROM SID
1672 *
1673 * EXIT : THROUGH ORT
1674 *          EXTERNAL NAMES ENTERED AS SUBPROGRAM NAMES IN ASSIGNMT TABLE
1675 *
1676 *****
0002305 0020000 R 1678 EXT      CALL     INA
0002306 0077667 R R 1679
0002307 0020000 R R 1679          CALL     ISB
0002310 0077771 R R
0002311 0010000 R R 1680          JMP      OLS
0002312 0077615 R R

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1681          EJECT
1682 *****
1683 *
1684 *          F E T C H   L I N K   O F   L I N K
1685 *
1686 * FUNCTION: TO LOAD AND GET SIZE OF NEXT LINK IN CL CHAIN
1687 *
1688 * ENTRY: I=POINTER TO CURRENT LINK
1689 *
1690 * EXIT : ITEM CL(I) LOADED, WITH SIZE IN IS
1691 *          AND IF THIS ITEM IS HEAD OF CHAIN F
1692 *
1693 *****
0002313 0000000 R 1693 FLN      ENTRY
0002314 0020000 R 1694          CALL     LNA
0002315 0077793 R R
0002316 0177310 R 1697          LIA      CL
0002317 0057000 R 1698          STA      T
0002318 0020000 R 1699          CALL     LNA
0002319 0077793 R R
0002320 0020000 R R 1700          CALL     CRT
0002321 0077793 R R
0002322 0077667 R R 1701          LDA      J
0002323 0017000 R 1702          LDB      T
0002324 0044666 R 1703          STA      T2          A=I-T
0002325 0057000 R 1704          LDB      T2          EXIT
0002326 0057000 R
0002327 0057000 R
0002328 0057000 R
0002329 0057000 R
0002330 0057000 R

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1705          EJECT
1706 *****
1707 *
1708 *          P R O C E S S   S U B P R O G R A M   S T A T E M E N T
1709 *
1710 *          ( F U N C T I O N )
1711 *
1712 * FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENTS:
1713 *          'FUNCTION' AND 'SUBROUTINE'
1714 *
1715 * ENTRY: DIRECT FROM SID
1716 *
1717 * EXIT : DIRECT TO CRT
1718 *          ORFL+1 FOR FUNCTION
1719 *          ORFL+1 POINTS TO SUBPROGRAM NAME IN ASSIGNMENT TABLE
1720 *          SUBROUTINE ENTRY GENERATED
1721 *          IF FUNCTION VARIABLE ASSIGNED WITH SAME NAME AND TYPE
1722 *

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1721 *
1722 * ERRORS: TER17 IF FUNCTION HAS NO PARAMETERS *
1723 *
1724 *****
1726 *****
1727 * FUNCTION ENTRY *
1728 *****
002330 047000 I 1729 FUN INR SBFL SET FUNCTION FLAG
1731 *****
1732 * SUBROUTINE ENTRY *
1733 *****
002331 002000 A 1734 SUB CALL BUNS
002332 000753 R
002333 067000 I 1735 STB SBFL+1 STORE POINTER TO NAME IN SBFL+1
002334 034030 A 1736 STA FUNT SAVE PARAMETER LIST SWITCH
002335 001010 A 1737 JAZ FUN1 CHECK IF NO PARAMETERS
002336 002344 R
1738 *****
1739 * PROCESS PARAMETER LIST *
1740 *****
002337 003001 A 1741 TZA
002340 002000 A 1742 CALL GSE
002341 077652 R
002342 001000 A 1743 JMP FUN2
002343 002346 R
1744 *****
1745 * NO PARAMETER LIST *
1746 *****
002344 002000 A 1747 FUN1 CALL DAB
002345 077710 R
1748 *****
1749 * EXIT IF SUBROUTINE *
1750 *****
002346 005001 A 1751 FUN2 TZA
002347 147000 I 1752 SUB SBFL
002350 001002 A 1753 JAP CRT SUBROUTINE
002351 077616 R
1754 *****
1755 * FUNCTION ENTRY - DEFINE VARIABLE WITH SAME NAME *
1756 *****
002352 017000 I 1757 LDA SBFL+1
002353 057000 I 1758 STA I
002354 002000 A 1759 CALL LAX
002355 077700 R
002356 014006 A 1760 LDA FUNT GET PARAMETER LIST SWITCH
002357 001010 A 1761 JAZ TER17 FUNCTION STATEMENT HAS NO PARAMETER
002360 077762 R
002361 010423 A 1762 LDA FOUR
002362 057000 I 1763 STA RL+1 MAKE SPACE FOR ALL VALUES
002363 001000 A 1764 JMP ENT35
002364 002103 R
002365 1765 FUNT BSS I ZERO IF NO PARAMETERS
1766 EJEK
1767 * INPUT LIST ITEM
002366 002000 A 1767 ILE0 JMPM ISB INPUT SUBSCRIPT (AR=0)
002367 002603 R
002370 002000 A 1770 CALL LAX
002371 077700 R
002372 017000 I 1771 LDA ND = DIM. (1,2)
002373 147000 I 1772 SUB NS = SUBS. (1,2)
002374 001004 A 1773 JAN TER19 NUM.-SUBSCRIPTS > NUM.-DIMENSIONS
002375 077764 R
002376 037000 I 1774 LDX ND
002377 005001 A 1775 TZA
002400 003344 A 1776 ILE2 DXR CALCULATE ELEMENT OFFSET
002401 006125 A 1777 ADDE AS,X
002402 177332 R
002403 004560 A 1778 LLSR 16
002404 006165 A 1779 MULE IS,X
002405 177435 R
002406 005021 A 1780 TBA
002407 001046 A 1781 JXNZ ILE2 LOOP
002410 002400 R
002411 057000 I 1782 ILE1 STA AS
002412 001000 A 1783 JMP
002413 000000 A
002414 002413 R 1784 ILE EQU *-1
002415 002000 A 1785 CALL INA
002416 017000 I 1786 LDA AT
002417 140457 A 1787 SUB SEVEN
002420 002010 A 1788 JAZM ER21 BUNNY NAME
002421 077643 R
002422 017000 I 1789 LDA IU
002423 140464 A 1790 SUB THREE
002424 002010 A 1791 JAZM ER2 SUBPROGRAM NAME
002425 077625 R
002426 017000 I 1792 LDA IU
002427 140422 A 1793 SUB K2
002430 001010 A 1794 JAZ ILE0 IF IU=ARR
002431 002366 R

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002432	002000	A	1795	CALL	TVR				10	01795	
002433	077777	R							10	01796	
002434	005001	R	1796	TRA					V	10 01797	
002435	001000	R	1797	JMP	ILF1						
002436	002411	R							PD	10 01798	
			1798	EJECT					PD	10 01799	
			1799	*****						PD	10 01800
			1800	*****						PD	10 01801
			1801	*****						PD	10 01802
			1802	*****						PD	10 01803
			1803	*****						PD	10 01804
			1804	*****						PD	10 01805
			1805	*****						PD	10 01806
			1806	*****						PD	10 01807
			1807	*****						PD	10 01808
			1808	*****						PD	10 01809
			1809	*****						PD	10 01810
			1810	*****						PD	10 01811
002437	006017	R		IMP	LDRE*	SIDTB1					
002440	177735	R									
002441	002000	R	1812	CALL	CIS					10 01812	
002442	077736	R									
002443	002000	R	1813	CALL	ICH					10 01813	
002444	0777654	R									
002445	002000	R	1814	CALL	PIS					10 01814	
002446	0777706	R									
002447	002000	R	1815	IMP6	CALL	IMP10				10 01815	
002450	002564	R							PD	10 01816	
002451	057000	I	1816	STA	T8			SET SINGLE CHARACTER RANGE	PD	10 01817	
002452	057000	I	1817	STB	T9				PD	10 01818	
002453	002000	R	1818	CALL	ICH					10 01819	
002454	0777654	R									
002455	140000	L	1819	SUB	...				PD	10 01820	
002456	001016	R	1820	JANZ	IMP61			NDR RANGE			
002457	002477	R								10 01821	
002460	002000	R	1821	CALL	IMP10						
002461	002564	R							PD	10 01822	
002462	057000	I	1822	STA	T9			SECOND SECOND HALF OF RANGE	PD	10 01823	
002463	147000	I	1823	SUB	T8				PD	10 01824	
002464	001004	R	1824	JAN	YER1						
002465	077745	R								10 01825	
002466	002000	R	1825	CALL	ICH						
002467	0777654	R									
002470	027000	I	1826	IMP61	LDS	T8		SET TABLE MODE	PD	10 01826	
002471	017000	I	1827	IMP62	LDS	MF		SET TABLE MODE	PD	10 01827	
002472	006056	R	1828	STGE		MDTR-0301,0				10 01828	
002473	177100	R									
002474	005021	R	1829	TEA					PD	10 01829	
002475	147000	I	1830	SUB	T9				PD	10 01830	
002476	005100	R	1831	IBR					PD	10 01831	
002477	001016	R	1832	JANZ	IMP62			LOOP FOR RANGE	PD	10 01832	
002500	002471	R									
002501	017000	I	1833	LDR	T8				PD	10 01833	
002502	140000	L	1834	SUB	...				PD	10 01834	
002503	001016	R	1835	JAN	IMP6			MORE OF SAME MODE	PD	10 01835	
002504	002447	R								10 01836	
002505	010000	L	1836	LDR	...				PD	10 01837	
002506	002000	R	1837	CALL	TST						
002507	077772	R								10 01838	
002510	002000	R	1838	CALL	ICH						
002511	0777654	R								10 01839	
002512	140000	L	1839	SUB	...				PD	10 01840	
002513	001016	R	1840	JAN	IMP			NEW MODE			
002514	002487	R									
002515	017000	I	1841	LDR	...				PD	10 01841	
002516	057000	I	1842	STA	T8			CHECK ASSIGNMENT TABLE MODES	PD	10 01842	
002517	005014	R	1843	IBR					PD	10 01843	
002520	147000	I	1844	SUB	T9				PD	10 01844	
002521	001000	R	1845	JAN	...				PD	10 01845	
002522	0777610	R								10 01846	
002523	015000	R	1846	LDR	...				PD	10 01847	
002524	001004	R	1847	JAN	IMP69						
002525	002557	R									
002526	154000	L	1848	SUB	...			GET TO	PD	10 01848	
002527	006140	R	1849	JANZ	...			TEST FOR SUBPROGRAM NAME	PD	10 01849	
002530	000000	R									
002531	001016	R	1850	JAN	IMP69			PAGE IF SUBPROGRAM	PD	10 01850	
002532	002557	R									
002533	015000	R	1851	LDR	...				PD	10 01851	
002534	154000	L	1852	SUB	...			GET AT	PD	10 01852	
002535	006140	R	1853	JANZ	...			TEST FOR GUMMY	PD	10 01853	
002536	0777654	R								10 01854	
002537	001016	R	1854	JANZ	...						
002540	0777654	R								10 01855	
002541	015000	R	1855	LDR	...			SET LEADING CHARACTER	PD	10 01856	
002542	006140	R	1856	JANZ	...				PD	10 01857	
002543	005014	R	1857	IBR					PD	10 01858	
002544	140000	L	1858	SUB	...				PD	10 01859	
002545	003714	R	1859	JAN	IMP11						
002546	002000	R									
002547	015000	R	1860	LDR	...				PD	10 01860	
002550	004204	R	1861	LDR	...				PD	10 01861	

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002551 006150 A 1862 ANAI 0177770 DELETE OLD MODE PD 10 01862
002552 177770 A 1863 ADDE MDTB-'A',B SET IMPLICIT MODE 10 01863
002553 006126 A 1863 LRLA 9 REPOSITION PD 10 01864
002554 177162 R 1864 STA 2,X 10 01865
002555 004251 A 1865 IMP09 LDA 2,X ADVANCE I POINTER PD 10 01866
002556 055002 A 1866 ANA BM37 GET EL(I) 10 01867
002557 015002 A 1867 ADD I I + ENTRY LENGTH PD 10 01868
002558 150473 A 1868 JMP IMP07 LOOP BACK 10 01869
002559 002516 R 1869 IMP10 ENTRY 10 01870
002560 000000 A 1870 CALL ICH 10 01871
002561 002000 A 1871 LDA DF 10 01872
002562 077654 R 1872 JAP TER1 NOT ALPHA CHARACTER 10 01873
002563 017000 I 1873 LDA TC 10 01874
002564 000000 A 1874 TAB 10 01875
002565 002000 A 1875 SUB ='S' 10 01876
002566 077745 R 1876 XAZ IMP11 10 01877
002567 017000 I 1877 TBA 10 01878
002568 017000 I 1878 JMP* IMP10 10 01879
002569 005021 A 1879 IMP11 LDB =0333 (B)=0333 IF TC='S' 10 01880
002570 001002 A 1880 EJECT 10 01881
002571 102564 R 1881 ***** 10 01882
002572 020000 L 1882 INPUT SUBSCRIPTS ( I S B ) * 10 01883
002573 000000 A 1883 ***** 10 01884
002574 140000 L 1884 * FUNCTION: TO PROCESS ARRAY SUBSCRIPT FIELDS IN THE SPECIFICATION * 10 01885
002575 003010 A 1885 * STATEMENT BLOCK AND IN DATA STATEMENTS * 10 01886
002576 002602 R 1886 * ENTRY: A= 0: PROCESS DATA OR EQUIVALENCE STATEMENT * 10 01887
002577 005021 A 1887 * A= 1: PROCESS NORMAL ARRAY DECLARATOR * 10 01888
002578 001000 A 1888 * A=-1 PROCESS DUMMY ARRAY DECLARATOR * 10 01889
002579 102564 R 1889 * EXIT : NS HOLDS NUMBER OF SUBSCRIPTS. * 10 01890
002600 001000 A 1890 * THE AS BLOCK HOLDS 1 WORD/SUBSCRIPT. IF A DATA OR EQUIV * 10 01891
002601 102564 R 1891 * STATEMENT IS BEING PROCESSED, THE WORD IS THE ACTUAL * 10 01892
002602 020000 L 1892 * SUBSCRIPT INTEGER VALUE. IF NOT, THE WORD POINTS TO THE * 10 01893
002603 000000 A 1893 * SUBSCRIPT ENTRY IN THE ASSIGNMENT TABLE. * 10 01894
002604 057000 I 1894 * AS:SUBSCRIPT 1 * 10 01895
002605 005001 A 1895 * AS+1:SUBSCRIPT 2(0 IF NONE) * 10 01896
002606 057000 I 1896 * AS+2:SUBSCRIPT 3(0 IF NONE) * 10 01897
002607 057000 I 1897 * ERRORS: TER14 IF DUMMY ARRAY HAS VARIABLE SUBSCRIPT NOT DUMMY * 10 01898
002608 057000 I 1898 * TER26 IF NONDUMMY ARRAY HAS SUBSCRIPT NOT INTEGER CONSTANT * 10 01899
002609 057000 I 1899 * ***** 10 01900
002610 057000 I 1900 ISB ENTRY 10 01901
002611 057000 I 1901 STA T0 SAVE ENTRY FLAG 10 01902
002612 057000 I 1902 STA AS+1 CLEAR 2ND DIMENSION 10 01903
002613 057000 I 1903 STA AS+2 CLEAR 3RD DIMENSION 10 01904
002614 057000 I 1904 STA AS+3 10 01905
002615 057000 I 1905 STA AS+4 10 01906
002616 057000 I 1906 STA AS+5 10 01907
002617 057000 I 1907 STA AS+6 10 01908
002618 057000 I 1908 STA AS+7 10 01909
002619 057000 I 1909 STA NS CLEAR NUMBER OF SUBSCRIPTS COUNTER 10 01910
002620 017000 I 1910 CALL PTS 10 01911
002621 001002 A 1911 ***** 10 01912
002622 002637 R 1912 * SUBSCRIPT LOOP ENTRY * 10 01913
002623 002000 A 1913 ISBL LDA T0 10 01914
002624 077646 R 1914 JAP ISBN TEST ENTRY FLAG 10 01915
002625 001004 A 1915 ***** 10 01916
002626 002637 R 1916 * ARRAY NAME IS DUMMY * 10 01917
002627 002000 A 1917 ***** 10 01918
002628 077675 R 1918 CALL EXA 10 01919
002629 010466 A 1919 JAN ISBN TEST FOR CONSTANT SUBSCRIPT 10 01920
002630 002637 R 1920 CALL IVA 10 01921
002631 010466 A 1921 LDA K6 10 01922
002632 147000 I 1922 SUB AT SUBSCRIPT VARIABLE MUST BE DUMMY(AT=7) 10 01923
002633 001002 A 1923 JAP TER14 10 01924
002634 077760 R 1924 JMP ISB3 10 01925
002635 001000 A 1925 ***** 10 01926
002636 002653 R 1926 * NUMERIC SUBSCRIPT * 10 01927
002637 002000 A 1927 ***** 10 01928
002638 077671 R 1928 ISBN CALL INN 10 01929
002639 002000 A 1929 ***** 10 01930
002640 077671 R 1930 ***** 10 01931
002641 002000 A 1931 ***** 10 01932
002642 077671 R 1932 ***** 10 01933
002643 002000 A 1933 ***** 10 01934
002644 077671 R 1934 ***** 10 01935
002645 002000 A 1935 ***** 10 01936
002646 077671 R 1936 ***** 10 01937
002647 002000 A 1937 ***** 10 01938
002648 077671 R 1938 ***** 10 01939

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002641	012000	A	1939	CALL	INT		10	01939
002642	017000	R						
002643	017000	T	1941	LDR	BT	MUST BE CONSTANT	10	01940
002644	001000	A	1941	JAZ	1ER26	SUBSCRIPT NOT INTEGER CONSTANT	10	01941
002645	017000	R						
002646	017000	T	1942	LDR	TO		10	01942
002647	001000	A	1943	JAZ	10B4	GO TO ISB4 ON ILE ENTRY(DATA OR EQUIV)	10	01943
002648	002000	R						
			1944	*****			10	01944
			1945	* NON-DUMMY ARRAY DECLARATOR *			10	01945
			1946	*****			10	01946
			1947	CALL	ESI		10	01947
			1948	ISB3	LDR	1	10	01948
			1949	JMP	1025	POINT B AT ASSIGNMENT TABLE ENTRY	10	01949
			1950	*****			10	01950
			1951	* DATA EQUIVALENCE *			10	01951
			1952	*****			10	01952
			1953	LDR	TO	SUBSCRIPT VALUE	10	01953
			1954	LDR	TO	CONVERT FROM BASE 1 TO BASE 0	10	01954
			1955	LDR	TO	GET SUBSCRIPT COUNT	10	01955
			1956	ADD	TO	ADD BASE ADDRESS	10	01956
			1957	SWP	TO	SWAP REGS	10	01957
			1958	STB	TO	STORE SUBSCRIPT INFO IN AS BLOCK	10	01958
			1959	INC	TO	BUMP SUBSCRIPT COUNT	10	01959
			1960	LDR	TO		10	01960
			1961	SUB	TO		10	01961
			1962	JAZ	1027		10	01962
			1963	LDR	TO	GET TERMINATOR	10	01963
			1964	SUB	TO		10	01964
			1965	JAZ	102L	LOOP BACK FOR NEXT SUBSCRIPT ON ','	10	01965
			1966	ISBX	CALL	TO	10	01966
			1967	JMP*	103	EXIT	10	01967
			1968	EJECT			10	01968
			1969	*****			10	01969
			1970	* INPUT SPECIFICATION CHARACTER *			10	01970
			1971	*****			10	01971
			1972	* I S C *			10	01972
			1973	*****			10	01973
			1974	* FUNCTION: TO BRING OUT THE COMMON AND EQUIVALENCE STATEMENTS STORED			10	01974
			1975	* IN HIGH CORE BY SSC. EACH STATEMENT IS STORED AS A			10	01975
			1976	* SUBSTRING, 1 CHARACTER, DOWNWARD FROM HIGH CORE,			10	01976
			1977	* TERMINATING IN A NEGATIVE WORD. THE 1-COMP OF THIS WORD			10	01977
			1978	* IS EITHER ZERO, MEANING THE END OF THE CHAIN FOR THIS			10	01978
			1979	* COMMON OR EQUIVALENCE CHAIN, OR A POINTER TO THE NEXT			10	01979
			1980	* SUBSTRING LINK OF THE CHAIN.			10	01980
			1981	* ENTRY: SSC+1: CURRENT CHAIN POINTER (AT END OF CHAIN)			10	01981
			1982	* SSC+2: NEXT CHAIN POINTER (IF NONE)			10	01982
			1983	* SSC+3: ISC LABEL THRU ICH: WHERE SWITCH ISCI POINTS TO ISC			10	01983
			1984	* EXIT: SSC+1 BUMPED DOWN 1			10	01984
			1985	* TO=INPUT CHAR			10	01985
			1986	* TO=CHARS AT END-OF-STATEMENT			10	01986
			1987	*****			10	01987
			1988	* ISC ENTRY			10	01988
			1989	LDR	TO		10	01989
			1990	JAZ	1020	END OF CHAIN ?	10	01990
			1991	LDR	TO	NO: GET ITEM FROM CHAIN	10	01991
			1992	DDZ	TO	DECR DOWN CHAIN POINTER	10	01992
			1993	STZ	TO		10	01993
			1994	LDR	TO	END OF STATEMENT ?	10	01994
			2000	DDZ	TO	YES	10	02000
			2001	LDR	TO	DECR POINTER TO NEXT CHAIN LINK	10	02001
			2002	LDR	TO		10	02002
			2003	ISOX	CALL	TO	10	02003
			2004	JMP*	102	EXIT	10	02004
			2005	ISOF	LDR	TO	10	02005
			2006	LDR	TO	GET NEXT CHAIN POINTER	10	02006
			2007	LDR	TO		10	02007
			2008	LDR	TO	DECR NEXT CHAIN POINTER	10	02008
			2009	LDR	TO	REPLACE CURRENT CHAIN POINTER	10	02009
			2010	LDR	TO	COMMON AND COMMON FINISHED IF CURR PTR=0	10	02010
			2011	LDR	TO	OTHERWISE PROCESS EQUIVALENCES	10	02011
			2012	EJECT			10	02012
			2013	*****			10	02013
			2014	* *****			10	02014

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2014 *      P R O C E S S   T Y P E   S T A T E M E N T S
2015 *
2016 * FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENTS!
2017 *      INTEGER P
2018 *      INTEGER*2 P
2019 *      INTEGER*4 P
2020 *      REAL P
2021 *      REAL*4 P
2022 *      REAL*8 P
2023 *      DOUBLEPRECISION P
2024 *      COMPLEX P
2025 *      COMPLEX*8 P
2026 *      LOGICAL P
2027 *      LOGICAL*2 P
2028 *
2029 *      WHERE: P IS EITHER A LIST OF VARIABLE/ARRAY NAMES
2030 *             OR IS THE WORD 'FUNCTION'
2031 *
2032 * ENTRY: DIRECT FROM SID
2033 *
2034 * EXIT: TO FUN IF P='FUNCTION', ELSE TO CCR
2035 *
2036 * *****
002732 002000 A 2038 MOD    CALL    INN
002733 077671 R
002734 001010 A 2039      JAZ    TER11      ITEM NOT OPERAND
002735 077755 R
002736 017000 I 2040      LDA    RT
002737 001016 A 2041      JANZ   TER1      NOT NAME
002740 077745 R
002741 017000 I 2042      LDA    DF
002742 001002 A 2043      JAP    MOD1      NOT ALPHA TERMINATOR
002743 082764 R
002744 017000 I 2044      LDA    TC
002745 137000 I 2045      ERA    ID
002746 137000 I 2046      ERA    ID+1
002747 137000 I 2047      ERA    ID+2
002750 006140 A 2048      SUBI   0156020    TEST FOR 'FUNCTION'
002751 156020 A
002752 001016 A 2049      JANZ   TER12     ILLEGAL MODE STATEMENT
002753 077756 R
002754 002000 A 2050      CALL   ICH
002755 077654 R
002756 006140 A 2051      SUBI   'N'
002757 000316 A
002760 001016 A 2052      JANZ   TER12
002761 077756 R
002762 001000 A 2053      JMP    FUN
002763 002330 R
002764 006010 A 2054 MOD1  LDAI   MOD2
002765 002773 R
002766 057000 I 2055      STA   STSW
002767 002000 A 2056      CALL  ASI
002770 077611 R
002771 001000 A 2057      JMP   MOD2+2
002772 002775 R
002773 002000 A 2058 MOD2  CALL   INA
002774 077667 R
002775 017000 I 2059      LDA   TC
002776 140000 L 2060      SUB   '='
002777 001016 A 2061      JANZ   MOD3      NOT NEW MODE SETTING
003000 003022 R
003001 002000 A 2062      CALL  IDI
003002 077662 R
003003 001002 A 2063      JAP   TER1
003004 077745 R
003005 005211 A 2064      CPA
003006 057000 I 2065      STA   T8
003007 147000 I 2066      SUB   MF
003010 001010 A 2067      JAZ   MOD3      NO MODE CHANGE
003011 003022 R
003012 027000 I 2068      LDB   MF
003013 006146 A 2069      SUBE  MOD4-2,B
003014 003114 R
003015 027000 I 2070      LDR   T8
003016 001010 A 2071      JAZ   MOD3+1
003017 003023 R
003020 002016 A 2072      JANZM ER3      ILLEGAL MODE
003021 077626 R
003022 027000 I 2073 MOD3  LDB   MF
003023 067000 I 2074      STB   IM      SET FORCED MODE
003024 002000 A 2075      CALL  SAX
003025 077733 R
003026 002000 A 2076      CALL  PAD
003027 003131 R
003030 017000 I 2077      LDA   TC
003031 140000 L 2078      SUB   '='
003032 001016 A 2079      JANZ   CCR      NO DATA
003033 077615 R
003034 017000 I 2080      LDA   J1
003035 005014 A 2081      TAX
    
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2160 *          IU=0
2161 *          IM=NUMBER OF SUBSCRIPTS
2162 *          ID=POINTER TO 1ST SUBSCRIPT
2163 *          ID+1=POINTER TO 2ND SUBSCRIPT(0 IF NONE)
2164 *          LF=POINTER TO 3RD SUBSCRIPT(0 IF NONE)
2165 *
2166 *          I POINTS TO ARRAY NAME WHICH HAS FORMAT:
2167 *
2168 *          IU=2
2169 *          LF=POINTER TO ARRAY HEADER
2170 *
2171 * ERRORS: ER22 IF ARRAY NAME ALREADY DEFINED
2172 *
2173 *****
003131 000000 A 2175 PAD ENTRY
003132 017000 I 2176 LDA TC
003133 140000 L 2177 SUB =*('
003134 001016 A 2178 JANZ* PAD NOT ARRAY DECLARATOR
003135 103131 R
003136 005101 A 2179 INCR 1
003137 147000 I 2180 SUB IU
003140 002004 A 2181 JANM ER22 ARRAY NAME PREVIOUSLY DECLARED
003141 077644 R
003142 017000 I 2182 LDA I
003143 054053 A 2183 STA PADD SAVE POINTER TO ARRAY NAME
003144 010467 A 2184 LDA SEVEN
003145 147000 I 2185 SUB AT
003146 001010 A 2186 JAZ *+3
003147 003151 R
003150 010422 A 2187 LDA K2 A=-1 FOR DUMMY ARRAY NAME
003151 005311 A 2188 BAR A= 1 FOR NON-DUMMY ARRAY NAME
003152 002001 A 2189 CALL ISB PROCESS SUBSCRIPTS
003153 002603 R
003154 017000 I 2190 LDA NS
003155 005012 A 2191 TAB
003156 120422 A 2192 ADD TWO
003157 057000 I 2193 STA EL
003160 005001 A 2194 TZA
003161 002000 A 2195 CALL ASS MAKE ARRAY SPACE (IU=0,IM=NS,NT=1)
003162 077612 R
003163 017000 I 2196 LDA AS
003164 055001 A 2197 STA 1,X SUBS(1)=CL
003165 005002 A 2198 TZE
003166 005122 A 2199 PAD1 IER
003167 005021 A 2200 TBA
003170 147000 I 2201 SUB NS
003171 001010 A 2202 JAZ PAD2
003172 003201 R
003173 006016 A 2203 LDAE AS,B
003174 177332 R
003175 055003 A 2204 STA 3,X
003176 005144 A 2205 IXR
003177 001000 A 2206 JMP PAD1
003200 003166 R
003201 017000 I 2207 PAD2 LDA I
003202 034014 A 2208 LDX PADD GET ARRAY NAME POINTER
003203 054013 A 2209 STA PADD SAVE ARRAY HEADER POINTER
003204 077000 I 2210 STX I
003205 002000 A 2211 CALL LAX
003206 077700 R
003207 010422 A 2212 LDA K2
003210 057000 I 2213 STA IU SET IU=2
003211 014005 A 2214 LDA PADD
003212 057000 I 2215 STA LF SET LF=POINTER TO ARRAY HEADER
003213 002000 A 2216 CALL SAX
003214 077733 R
003215 001000 A 2217 JMP* PAD
003216 103131 R
003217
2218 PADD BSS 1 WORKING POINTER
2219 EJECT
2220 *****
2221 *
2222 * PROCESS COMMON SPECIFICATIONS (PCS) *
2223 *
2224 * FUNCTION: TO PROCESS COMMON STATEMENTS STORED IN HIGH CORE WHILE
2225 * SPECIFICATION STATEMENTS WERE BEING INPUT.
2226 *
2227 * ENTRY: FNS HAS IDENTIFIED THE 1ST FORTRAN SOURCE STATEMENT WHICH IS
2228 * NOT A SPECIFICATION STATEMENT.
2229 *
2230 * EXIT : ICH CALLS ISC, WHICH IDENTIFIES END OF COMMON STATEMENTS,
2231 * AND EXITS DIRECTLY TO PES.
2232 * COMMON BLOCK NAMES STORED IN ASSIGNMENT TABLE, WITH
2233 * IM=0,NT=1, AND IU=1.
2234 * CNP+1=LIST OF POINTERS TO COMMON BLOCK NAMES(BLANK COMMON
2235 * NAME 'COMMON' IS ALWAYS 1ST).
2236 * CMFL=COUNT OF COMMON BLOCK NAMES.
2237 * COMMON VARIABLE AND ARRAY NAMES IN ASSIGNMENT TABLE, THUS:
2238 * AF=LOCATION(COMMON RELATIVE) OF ITEM
2239 * AT=6
2240 * CL=POINTER TO NEXT ITEM ON COMMON BLOCK CHAIN

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003322 057000 I 2312 STA AF STORE IN AF AS ITEM ADDRESS 10 02312
003323 002000 A 2313 CALL SAX 10 02313
003324 077733 R 2314 CALL EXL 10 02314
003325 002000 A 2314 CALL EXL 10 02314
003326 077647 R 2315 CALL PAD PROCESS ARRAY DECLARATOR 10 02315
003327 002000 A 2315 CALL PAD PROCESS ARRAY DECLARATOR 10 02315
003330 003131 R 2316 PCLX LDA TC 10 02316
003331 017000 I 2316 PCLX LDA TC 10 02316
003332 140000 L 2317 SUB ='/ ' 10 02317
003333 001010 A 2318 JAZ PCL2 NEW COMMON BLOCK IF TC='/' 10 02318
003334 003222 R 2319 ADD THREE 10 02319
003335 120464 A 2320 JAZ PCL3 NEXT VAR/ARRAY NAME IF TC=', ' 10 02320
003336 001010 A 2320 JAZ PCL3 NEXT VAR/ARRAY NAME IF TC=', ' 10 02320
003337 003265 R 2321 SUBI 0122 10 02321
003340 006140 A 2321 SUBI 0122 10 02321
003341 000122 A 2322 JAZ PCL1 STATEMENT END IF TC=0376 10 02322
003342 001010 A 2322 JAZ PCL1 STATEMENT END IF TC=0376 10 02322
003343 003220 R 2323 JMP TER24 ILLEGAL TERMINATOR 10 02323
003344 001000 A 2323 JMP TER24 ILLEGAL TERMINATOR 10 02323
003345 077766 R 2324 ***** 10 02324
2325 * SERVICE SUBROUTINE TO PROCESS COMMON BLOCK NAMES * 10 02325
2326 ***** 10 02326
003346 027000 I 2327 PCB1 LDB CNP 10 02327
003347 016001 A 2328 LDA 1,B 10 02328
003350 147000 I 2329 SUB I OUTER LOOP ALWAYS STARTS WITH A CALL FOR 10 02329
003351 001010 A 2330 JAZ* PCBN BLANK COMMON. EXIT IF REPEAT/CHAIN EMPTY. 10 02330
003352 103370 R 2331 LDA CMFL 10 02331
003353 017000 I 2332 SUBI 035 10 02332
003354 006140 A 2333 XAM PCRL+1 BUMP BLOCK COUNT 10 02333
003355 000035 A 2334 JAPM ER17 TO MANY BLOCK NAMES 10 02334
003356 003004 A 2335 LDA CMFL 10 02335
003357 003405 R 2336 ADD CNP 10 02336
003360 002002 A 2337 TAB POINT B AT NAME LIST 10 02337
003361 077640 R 2338 LDA I 10 02338
003362 017000 I 2339 STA 0,B STORE BLOCK NAME POINTER IN CNP LIST 10 02339
003363 127000 I 2340 JMP 0 EXIT 10 02340
003364 005012 A 2341 PCBN BES 0 ENTRY 10 02341
003365 017000 I 2342 INCR 1 10 02342
003366 056000 A 2343 TZB 10 02343
003367 001000 A 2344 CALL ASS 10 02344
003370 000000 A 2345 LDA I STORE BLOCK NAME POINTER AS 10 02345
003371 005101 A 2346 STA F HEAD OF CHAIN F 10 02346
003372 005002 A 2347 SUB CL 10 02347
003373 002000 A 2348 JAZ PCB1 IS CHAIN EMPTY ? 10 02348
003374 077612 R 2349 JMP* PCBN NO, EXIT 10 02349
003375 017000 I 2350 PCRL BSS 1 COMMON RELATIVE LOCATION COUNTER 10 02350
003376 057000 I 2351 INR CMFL 10 02351
003377 147000 I 2352 EJECT 10 02352
003400 001010 A 2353 ***** 10 02353
003401 003346 R 2354 * 10 02354
003402 001000 A 2355 * STORE SPECIFICATION * 10 02355
003403 103370 R 2356 * 10 02356
003404 047000 I 2357 * C H A R A C T E R S ( S S C ) * 10 02357
2358 * 10 02358
2359 * 10 02359
2360 * FUNCTION: TO STORE COMMON AND EQUIVALENCE STATEMENTS AS CHARACTER * 10 02360
2361 * STRINGS DOWNWARD FROM HIGH CORE, TO BE PROCESSED AT END * 10 02361
2362 * OF SPECIFICATION STATEMENTS. * 10 02362
2363 * 10 02363
2364 * EACH STATEMENT IS STORED ONE CHAR/WORD SEQUENTIALLY * 10 02364
2365 * DOWNWARD, THE FINAL END-OF-STATEMENT CHAR 077 BEING * 10 02365
2366 * REPLACED BY - (POINTER TO NEXT STATEMENT OF SAME TYPE), * 10 02366
2367 * OR BY -1 IF END IF CHAIN. THUS SSC CREATES TWO CHAINS OF * 10 02367
2368 * CHAR STRINGS, ONE FOR COMMON STATEMENTS AND ONE FOR * 10 02368
2369 * EQUIVALENCE STATEMENTS. * 10 02369
2370 * 10 02370
2371 * ENTRY: B=1 COMMON ENTRY * 10 02371
2372 * B=2 EQUIVALENCE ENTRY * 10 02372
2373 * 10 02373
2374 * SSP=NEXT AVAILABLE CORE ADDRESS * 10 02374
2375 * SSP+1=START ADDRESS OF COMMON CHAIN( IF NONE) * 10 02375
2376 * SSP+2=START ADDRESS OF EQUIVALENCE CHAIN( IF NONE) * 10 02376
2377 * SSP+3=END ADDRESS OF COMMON CHAIN * 10 02377
2378 * SSP+4=END ADDRESS OF EQUIVALENCE CHAIN * 10 02378
2379 * 10 02379
2380 * EXIT : TO STATEMENT COMPLETION ENTRY CRT * 10 02380
2381 * SSP BLOCK UPDATED * 10 02381
2382 * KT=BOTTOM OF STRING * 10 02382
2383 * 10 02383
2384 * ERRORS: TER3 IF MEMORY OVERFLOW * 10 02384
2385 * 10 02385
2386 ***** 10 02386

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003507	002000	A	2468	TIPRL	CALL	PEB			10	02468
003510	077724	R								
003511	140463	A	2469		SUB	K77			10	02469
003512	001002	A	2470		JAP	TIPRX	EXIT ON STATEMENT END		10	02470
003513	003551	R								
003514	017000	I	2471		LDA	T0	GET CHAR COUNT		10	02471
003515	047000	I	2472		INR	T0	BUMP CHAR COUNT		10	02472
003516	005002	A	2473		TZB				10	02473
003517	004541	A	2474		LLSR	1	CONVERT TO WORD COUNT		10	02474
003520	006120	A	2475		ADDI	TITN			10	02475
003521	177236	R								
003522	005014	A	2476		TAX		POINT X AT WORD		10	02476
003523	010463	A	2477		LDA	RHW			10	02477
003524	001020	A	2478		JBZ	*+3			10	02478
003525	003527	R								
003526	004250	A	2479		LRLA	8	POSITION BYTE MASK		10	02479
003527	155000	A	2480		ANA	0,X	CLEAR CHAR		10	02480
003530	055000	A	2481		STA	0,X			10	02481
003531	017000	I	2482		LDA	TC	RESTORE CHAR		10	02482
003532	001026	A	2483		JBNZ	*+3			10	02483
003533	003535	R								
003534	004250	A	2484		LRLA	8	POSITION CHAR		10	02484
003535	115000	A	2485		DRA	0,X			10	02485
003536	055000	A	2486		STA	0,X	STORE CHAR		10	02486
003537	017000	I	2487		LDA	T0			10	02487
003540	140424	A	2488		SUB	EIGHT			10	02488
003541	001002	A	2489		JAP	TIPRX	GOBBLE 8 CHARS MAX		10	02489
003542	003551	R								
003543	002000	A	2490		CALL	ICD			10	02490
003544	077655	R								
003545	001000	A	2491		JMP	TIPRL	LOOP TILL DONE		10	02491
003546	003507	R								
003547	002000	A	2492	TIPRE6	CALL	ER16			10	02492
003550	077637	R								
003551	005001	A	2493	TIPRX	TZA				10	02493
003552	057000	I	2494		STA	LLOP	SET LINE COUNT FOR NEW PAGE		10	02494
003553	006020	A	2495		LDBI	TITJ-1			10	02495
003554	177216	R								
003555	003104	A	2496		INCR	4	OUTPUT 1 BLANK		10	02496
003556	002000	A	2497		CALL	LIST			10	02497
003557	077703	R								
003558	006020	A	2498		LDBI	TITN			10	02498
003561	177236	R								
003562	006030	A	2499		LDXI	DBUF+3			10	02499
003563	010227	R								
003564	010423	A	2500		LDA	FOUR			10	02500
003565	002000	A	2501		CALL	MOVE			10	02501
003566	077706	R								
003567	017000	I	2502		LDA	TC			10	02502
003570	001000	A	2503		JMP	*+4			10	02503
003571	003574	R								
003572	002000	A	2504		CALL	ICH			10	02504
003573	077654	R								
003574	140463	A	2505		SUB	K77			10	02505
003575	001004	A	2506		JAN	*-3			10	02506
003576	003572	R								
003577	001000	A	2507		JMP	CRT			10	02507
003600	077616	R								
			2508		END				10	02508

ENTRY NAMES

EXTERNAL NAMES											
000000	E	BOFCB	000000	E	GOFCB	000000	E	LOFCB	000000	E	PIFCB
000000	E	SIFCB	000000	E	V\$EXEC	000000	E	V\$IDC	000000	E	V\$IDST
SYMBOLS											
000020	A	\$BIT	010151	R	\$BUF	177325	R	SECW	177324	R	SPCW
177330	R	AF	177331	R	AIFW	000742	R	ANB	177332	R	AS
077611	R	ASI	000026	R	ASP	000073	R	ASP0	000067	R	ASP1
000270	R	ASP10	000304	R	ASP11	000307	R	ASP12	000313	R	ASP13
000112	R	ASP2	000132	R	ASP3	000165	R	ASP4	000215	R	ASP5
000222	R	ASP6	000235	R	ASP7	000171	R	ASP8	000140	R	ASP9
000042	R	ASPP	000052	R	ASPS	077612	R	ASS	177341	P	AT
000002	A	B	177342	R	BDF	000316	R	BGN	000735	R	BGN3
000320	R	BGN4	000357	R	BGN6	000547	R	BGN62	000572	R	BGN55
000575	R	BGN7	000604	R	BGN8	010320	R	BLEF1	000743	R	BLD
177250	R	BLFCB	000421	A	BM1	000472	A	BM17	000475	A	BM177
000477	A	BM1777	000464	A	BM3	000473	A	BM37	000463	A	BM377
000467	A	BM7	000474	A	BM77	000476	A	BM777	177343	R	BDLON
177320	R	BDLFL	000000	E	BOFCB	000441	A	BR0	000442	A	BR1
000453	A	BR10	000454	A	BR11	000455	A	BR12	000456	A	BR13
000457	A	BR14	000460	A	BR15	000443	A	BR2	000444	A	BR3
000445	A	BR4	000446	A	BR5	000447	A	BR6	000450	A	BR7
000451	A	BR8	000452	A	BR9	000421	A	BS0	000422	A	BS1
000433	A	BS10	000434	A	BS11	000435	A	BS12	000436	A	BS13
000437	A	BS14	000440	A	BS15	000423	A	BS2	000424	A	BS3
000425	A	BS4	000426	A	BS5	000427	A	BS6	000430	A	BS7
000421	A	BS8	000432	A	BS9	000755	R	BUNS	077613	R	CAN
077	R	CBA	077615	R	CCR	177344	R	CF	177345	R	CFPTSW
177	R	CL	177347	R	CLOP	177350	R	CMFL	001005	R	CMN
177351	R	CNP	077616	R	CRT	077617	R	CTS	177352	R	D
001636	R	DAS1	001651	R	DAS2	001663	R	DAS3	001674	R	DAS4
001676	R	DAS5	001711	R	DAS5A	001722	R	DAS6	001704	R	DAS5A

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003406 064056 A 2388 SSC STB SSCK STORE ENTRY KEY 10 02388
003407 005021 A 2389 TBA 10 02389
003410 124055 A 2390 ADD SSCK+1 10 02390
003411 005012 A 2391 TAB POINT B AT CHAIN POINTER 10 02391
003412 017000 I 2392 LDA SSP LOAD NEXT AVAILABLE ADDRESS 10 02392
003413 026000 A 2393 LDB 0,B GET END-OF-CHAIN ADDRESS 10 02393
003414 001020 A 2394 JBZ *+6 IS THIS FIRST STATEMENT OF THIS TYPE ? 10 02394
003415 003422 R 10 02395
003416 005211 A 2395 CPA NO 10 02395
003417 056000 A 2396 STA 0,B REPLACE -1 TERM WITH -(PTR TO CURR STRING) 10 02396
003420 001000 A 2397 JMP SSC2 10 02397
003421 003430 R 10 02398
2398 *****
2399 * FIRST COMMON OR EQUIVALENCE STATEMENT * 10 02399
2400 *****
003422 005012 A 2401 TAB 10 02400
03423 014041 A 2402 LDA SSCK 10 02401
003424 006120 A 2403 ADDI SSP 10 02402
003425 177560 R 10 02403
003426 004460 A 2404 LLRL 16 10 02404
003427 056000 A 2405 STA 0,B STORE CHAIN STARTING ADDRESS 10 02405
2406 *****
2407 * LOOP TO READ/STORE STATEMENT STRINGS * 10 02406
2408 *****
003430 002000 A 2409 SSC2 CALL ICH 10 02407
003431 077654 R 10 02408
003432 027000 I 2410 LDB SSP POINT B AT NEXT AVAILABLE ADDRESS 10 02410
003433 056000 A 2411 STA 0,B STORE SOURCE CHAR 10 02411
003434 005323 A 2412 DECR 023 DECREMENT STRING POINTER 10 02412
003435 147000 I 2413 SUB IT 10 02413
003436 001002 A 2414 JAP *+5 CHECK TABLE SPACE 10 02414
003437 003443 R 10 02415
003440 007401 A 2415 SDF SET OVFL IF OVERFLOW 10 02415
003441 001000 A 2416 JMP SSC6 10 02416
003442 003432 R 10 02417
003443 067000 I 2417 STB SSP UPDATE NEXT AVAILABLE ADDRESS IN SSP 10 02417
003444 067000 I 2418 STB KT DROP CORE LIMIT POINTER KT 10 02418
003445 017000 I 2419 LDA TC 10 02419
003446 140463 A 2420 SUB K77 TEST FOR END OF STATEMENT 10 02420
003447 001004 A 2421 JAN SSC2 10 02421
003450 003430 R 10 02422
2422 *****
2423 * END OF STATEMENT * 10 02423
2424 *****
003451 007400 A 2425 RDF RESET OVFL TO FLAG NO OVERFLOW 10 02424
003452 005301 A 2426 SSC6 DECR 1 10 02425
003453 056001 A 2427 STA 1,B FLAG CHAIN END BY REPLACING 077 WITH -1 10 02426
003454 005122 A 2428 IBR POINT B AT CHAIN END 10 02427
003455 014007 A 2429 LDA SSCK RELOAD ENTRY KEY 10 02428
003456 124007 A 2430 ADD SSCK+1 10 02429
003457 005014 A 2431 TAX POINT X AT SSP BLOCK 10 02430
003460 065000 A 2432 STB 0,X STORE POINTER TO END OF CHAIN IN SSP BLOCK 10 02432
003461 001001 A 2433 JUF TER3 MEMORY OVERFLOW 10 02433
003462 077747 R 10 02434
003463 001000 A 2434 JMP CRT 10 02434
003464 077616 R 10 02435
003465 2435 SSCK BSS 1 SAVE ENTRY KEY 10 02435
003466 177562 R 2436 DATA SSP+2 10 02436
2437 EJEC 10 02437
2438 *****
2439 * 10 02438
2440 * P R O C E S S T I T L E S T A T E M E N T ( T I P R ) * 10 02439
2441 * 10 02440
2442 * FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENT: * 10 02441
2443 * 10 02442
2444 * 'TITLE XX...' * 10 02443
2445 * 10 02444
2446 * ENTRY: DIRECT FROM SID * 10 02445
2447 * 10 02446
2448 * EXIT : TO STI1 IF NO ERRORS * 10 02447
2449 * TITLE STRING PACKED IN OBUF AND TITN * 10 02448
2450 * 10 02449
2451 * ERRORS: ER16 IF TITLE NOT 1ST STATEMENT * 10 02450
2452 * 10 02451
2453 *****
003467 017000 I 2455 TIPR LDA DTFL 10 02452
003470 001010 A 2456 JAZ TIPRE6 ERROR 16/NOT 1ST STATEMENT/ 10 02453
003471 003547 R 10 02454
003472 017000 I 2457 LDA T2 GET 'TITLE' FLAG 10 02457
003473 001016 A 2458 JANZ TIPRE6 ERROR 16/MULTIPLE 'TITLE'/ 10 02458
003474 003547 R 10 02459
003475 047000 I 2459 INR T2 SET 'TITLE' FLAG 10 02459
003476 010000 L 2460 LDA '=' 10 02460
003477 057000 I 2461 STA TITN BLANK NAME FIELD IN TITLE 10 02461
003500 057000 I 2462 STA TITN+1 10 02462
003501 057000 I 2463 STA TITN+2 10 02463
003502 057000 I 2464 STA TITN+3 10 02464
003503 005001 A 2465 TZA 10 02465
003504 057000 I 2466 STA T0 CLEAR CHAR COUNTER 10 02466
003505 002000 A 2467 CALL ICH 10 02467
003506 077654 R

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001724	R	DAS7	001010	R	DAT	001027	R	DAT0	001014	R	DAT00
001017	R	DAT02	001071	R	DAT1	001542	R	DAT11	001112	R	DAT2
001350	R	DAT3	001435	R	DAT4	001450	R	DAT5	001527	R	DAT7
001552	R	DAT8	001565	R	DAT9	001602	R	DATA	001604	R	DATA1
001632	R	DATA2	001447	R	DATB	001400	R	DATT	001123	R	DAU0
001134	R	DAU1	001140	R	DAU2	001166	R	DAU3	001170	R	DAU4
001210	R	DAU6	001242	R	DAU7	001246	R	DAU8	001270	R	DAU9
001341	R	DAV1	001520	R	DAV10	001366	R	DAV2	001374	R	DAV3
001375	R	DAV4	001401	R	DAV5	001410	R	DAV6	001427	R	DAV7
001456	R	DAV8	001471	R	DAV9	077620	R	DEK	177353	R	DF
177354	R	DFPP	077621	R	DFT	177355	R	DH	177356	R	DI
001751	R	DMN	177326	R	DPB	177357	R	DPCA	177327	R	DPX
177373	R	DR	177374	R	DS	177375	R	DSAV	077622	R	DSM
177376	R	DT	177377	R	DTFL	177401	R	DV	177402	R	EC
177403	R	EH	177405	R	EHBK	000424	A	EIGHT	177406	R	EL
001761	R	ENT	001773	R	ENT0	002007	R	ENT1	002044	R	ENT2
002053	R	ENT3	002103	R	ENT35	002117	R	ENT4	002130	R	ENT5
077623	R	EOLSH	002132	R	EQU	002135	R	EQU0	002145	R	EQU1
002161	R	EQU3	002216	R	EQU4	002222	R	EQU5	002231	R	EQU6
002253	R	EQU7	002260	R	EQU8	002264	R	EQU9	002201	R	EQUB
002156	R	EQUC	002166	R	EQUD	077624	R	ER1	077632	R	ER11
077633	R	ER12	077634	R	ER13	077633	R	ER14	077636	R	ER15
077637	R	ER16	077640	R	ER17	077641	R	ER18	077625	R	ER2
077642	R	ER20	077643	R	ER21	077644	R	ER22	077645	R	ER24
077626	R	ER3	077627	R	ER6	077630	R	ER7	077631	R	ER8
177120	R	ERBF	077646	R	EXA	177407	R	EXAD	077647	R	EXL
002305	R	EXT	177410	R	F	105035	A	F#DDI	105027	A	F#DDI1
105036	A	F#SEI	105503	A	F#DDD	105410	A	F#DDS	105535	A	F#DIVB
105401	A	F#DIVS	177411	R	FFPFL	105400	A	FFPOP	000465	A	FIVE
105621	A	FIX	105226	A	FLAIF	105522	A	FLDD	105032	A	FLDI
105420	A	FLDS	105167	A	FLIOP	105125	A	FLJAG	002313	A	FLN
105024	A	FLREL	105425	A	FLT	105037	A	FMOVI	105506	A	FMULD
105416	A	FMUL3	077650	R	FNS1	077651	R	FORT1	000423	A	FOUR
105127	A	FQRT	105710	A	FSTD	105033	A	FSTI	105600	A	FSTS
105543	A	FSUBD	105450	A	FSUBS	002330	R	FUN	002344	R	FUN1
002346	A	FUN2	002365	R	FUNT	177262	R	GLFCB	177412	R	GOBLON
177321	R	GOBLFL	000000	E	GOFCB	077652	R	GSE	177413	R	HCC
177414	R	I	077653	R	IAC	077654	R	ICH	077655	R	ICD
077656	R	ICDRNL	077657	R	ICRD	077660	R	ICRR	077651	R	ICSI
177415	R	ID	077662	R	IDI	077663	R	IHW	077664	R	IIV
177665	R	ILB	002413	R	ILE	002366	R	ILE0	002411	R	ILE1
002400	R	ILE2	077666	R	ILT	177421	R	IM	002437	R	IMP
002516	R	IMP07	002557	R	IMP09	002564	R	IMP10	002600	R	IMP11
002447	R	IMP6	002470	R	IMP61	002471	R	IMP62	077667	R	INA
177422	R	INBP	077670	R	INI	077671	R	INN	077672	R	INS
077673	R	INT	177423	R	IDFL	177424	R	IP	177435	R	IS
002603	R	ISB	002653	R	ISB3	002656	R	ISB4	002660	R	ISB5
12620	R	ISBL	002637	R	ISBN	002676	R	ISBX	002702	R	ISC
002722	R	ISCE	002717	R	ISCX	077674	R	ISN	177445	R	IT
177446	R	IU	077675	R	IYA	077676	R	IYC	077677	R	IWI
177447	R	J	177450	R	JFFL	177454	R	JT	177455	R	K
000424	A	K10	000471	A	K12	000472	A	K17	001742	R	K1DA
000422	A	K2	000425	A	K20	001743	R	K2DA	000473	A	K37
001744	R	K3DA	000423	A	K4	001745	R	K4DA	001746	R	K5DA
000466	A	K6	001747	R	K5DA	000460	A	K77	001700	R	K7DA
000432	A	KJMP	177456	R	KT	001741	R	KTEMP	077700	R	LAY
000300	A	LC	000050	A	LCUF	077701	R	LDX	077702	R	LEX
177457	R	LF	000462	A	LPH	177460	R	LIF	077703	R	LIST
177274	R	LLFCB	177461	R	LLDP	177398	R	LOBLFL	077704	R	LOCT
000000	E	LDFCB	077705	R	LTX	177462	R	MAXOPC	177463	R	MDTB
177516	R	MF	177517	R	NM	002722	R	MOD	002764	R	MOD1
002773	R	MOD2	003022	R	MOD3	003116	R	MOD4	003045	R	MOD5
003061	R	MOD6	003065	R	MOD7	003102	R	MOD8	077706	R	MOVE
177520	R	MR	000420	A	MT	000500	A	MTE	000411	A	MTWD
077707	R	MXL	003123	R	NAM	177522	R	NAME	177523	R	ND
000461	A	NEG	177127	R	NERR	177524	R	NF	177525	R	NFFN
000470	A	NIME	177526	R	NS	177527	R	NT	177530	R	NTFL
177536	R	O1	177537	R	OE	077719	R	OAB	010224	R	ORUF
077711	R	ODE	077712	R	OES	177535	R	OITFL	000401	R	ONE
077713	R	ONEN	177531	R	OP	177532	R	OPBK	177533	R	OPCNT
077714	R	OPK	177534	R	OPW	077715	R	ORE	077716	R	OSR
077717	R	OTJ	077720	R	OUT	010150	A	OVERSZ	077721	R	OWD
077722	R	OVS	003131	R	PAD	003166	R	PAD1	003201	R	PAD2
003217	R	PADP	177540	R	PC	003341	R	PCB1	003370	R	PCBN
003220	R	PCL1	003222	R	PCL2	003261	R	PCL3	003314	R	PCL5
003331	R	PCLX	003404	R	PCRL	003260	R	PCS	077723	R	PDS
077724	R	PER	002135	R	PES	177544	R	PIBLON	177381	R	PIBLFL
000000	E	PIFCB	177306	R	PLFCB	077720	R	PTR	077726	R	PTS
177545	R	QFL	077727	R	RCC	077730	R	RCC3	077731	R	RCH
000463	A	RHN	077732	R	RI0	177546	R	RL	077733	R	SAK
177550	R	SBFL	077734	R	SEX	000467	A	SEVEN	177553	R	SF
077735	R	SIDTB1	000000	E	SIFCB	077736	R	SIS	000466	A	SIX
000740	R	SIXTY	077737	R	SLTY	077740	R	SLOP	177160	R	SLOT
177554	R	SPFL	003430	R	SSC	003430	R	SSC2	003452	R	SSC6
003465	R	SSCK	177560	R	SSP	077741	R	STC	177555	R	STFFL
077742	R	STI1	077743	R	STN	177556	R	STNB	077744	R	STS
177557	R	STSH	002331	R	SUB	177565	R	SXF	177574	R	T0
001727	R	T0DA	177575	R	T1	001730	R	T1DA	177576	R	T2
001731	R	T2DA	177577	R	T2IN	177600	R	T3	001732	R	T3DA
177601	R	T4	001733	R	T4DA	177602	R	T5	001737	R	T5DA
177603	R	T6	001740	R	T6DA	177604	R	T7	177605	R	T8

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77606 R T9      177566 R TC      000741 R TEMP    000471 A TEN
77745 R TER1    077755 R TER11   077756 R TER12   077757 R TER13
77760 R TER14   077761 R TER15   077762 R TER17   077763 R TER18
77764 R TER19   077746 R TER2    077765 R TER20   077766 R TER24
77767 R TER26   077747 R TER3    077750 R TER4    077751 R TER5
77752 R TER7    077753 R TER8    077754 R TER9    177570 R TERF
00027 A TFVCSZ 000464 A THREE   003467 R TIPR    003547 R TIPRE6
03507 R TIPRL   003551 R TIPRX   177212 R TITD    177217 R TITJ
77204 R TITL    177243 R TITM    177236 R TITN    177207 R TITP
77250 R TITQ    177371 R TM      077770 R TDF     077771 R TSB
77572 R TSFL    077772 R TST     177573 R TU      077773 R TVR
00422 A TWD     000000 R V       000360 A V$CTAD  000070 A V$DATE
00355 A V$DSTB  000000 E V$EXEC  000000 E V$IDC   000000 E V$IDST
00412 A V$JCB   000055 A V$JCFG  000056 A V$JFCB  000050 A V$JHAM
00054 A V$LCNT  000317 A V$LLUP  000345 A V$LUNT  000400 A V$LUT1
00401 A V$LUT2  000402 A V$LUT3  000417 A V$STSZ  000357 A V$TKSZ
77112 R VARBLD  000666 A VARBLS  177330 R VBLDBG  177611 R VBLOND
77774 R WRDGD   077775 R WRDGD   077776 R WRDGD   000001 A X
77607 R XRPT    077777 R ZEB     000420 A ZERO
0 ERRORS ASSEMBLY COMPLETE
    
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614 $BUF      615 995
230 $PCW     862 916
240 AF      241 654 660 696 697 700 715
241 AIFW    242
1021 ANB    985 992
242 AS      243
352 ASI     837 842 850 859 874 883 897 910 927
620 ASP     593
648 ASP0    646
644 ASP1    658
741 ASP10   728 752
751 ASP11   755 757
753 ASP12   748
756 ASP13   745
659 ASP2    652
670 ASP3    634
691 ASP4    657 687 689 698
709 ASP5    707
714 ASP6    720
721 ASP7    680
694 ASP8    708
675 ASP9    690 719
632 ASPS    663 669
354 ASS     826
243 AT      244 682
141 B       808 935 940 948 951 953 955 956 957
          958 966 968 970 972 997 998 1002
244 BDF     245 673 1038
789 BGN     594
1017 BGN3    1012
790 BGN4    794
824 BGN6    834
933 BGN65   863 917
935 BGN7    937
940 BGN8    942
1038 BLD     595
103 BM17    185
109 BM1777  110
104 BM37    187
107 BM377   188 756 1040
245 BOBLCN  246
0 BDFCB    126
71 BRO     180
58 BS3     183
59 BS4     186
64 BS9     189
246 CF      247
247 CFPTSW  248
248 CL      249 664 885 899 912
249 CLOP    250
250 CMFL    251 632
0 CMN      596
251 CNP     252 637 804
0 COMP     2
252 D       253 802
0 DAT      597
0 DAT00    732
253 DF      254
254 DFPP    255
368 DFT     717
255 DH      256
256 DI      257
0 DMN      598
232 DPB     671 809
257 DPCA    260 829 839 844 852 861 876 888 902
          915 929
233 DPX     239 798
260 DR      261
261 DS      262
    
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1 *NEW FORTRAN - OVERLAY 2
2 COMPL OPSY COMP
3 EJECT OPSY EJEC
4 ENTRY OPSY ENTR
5 MERGE OPSY MERG
6 SPACE OPSY SPAC
7 TITLE V$FDR2
8 EJEC
9 *****
10 *
11 *** JOB PROCESSOR LOW CORE EQUATES ***
12 *
13 *****
000050 A 15 LCJP EQU 050
000050 A 16 V$JNAM EQU LCJP JCP NAME
000054 A 17 V$LCNT EQU LCJP+4 LINE COUNT
000055 A 18 V$JCFG EQU LCJP+5 JCP FLAGS
19 * BIT 2-0 = LOAD AND GO FLAGS
20 * BIT 3 = DUMP FLAG 1=DUMP, 0=NO DUMP
21 * BIT 9-4 = UNUSED
22 * BIT 15-10 = BG EXTRA CORE BLOCKS TO ALLOC
000056 A 24 V$JFCB EQU LCJP+6 JCP FILE CONTROL BLOCK
000070 A 25 V$DATE EQU LCJP+16 JCP DATA RECORD
26 EJEC
27 *****
28 *
29 *** LOW CORE DESCRIPTION ***
30 *
31 *****
000300 A 33 LC EQU 0300
000317 A 34 V$LLUP EQU LC+15 LDC. OF LAST UNPROTECTED WORD
000345 A 35 V$LUNT EQU LC+37 ADDR. OF LOGICAL UNIT NAME TABLE
000355 A 36 V$DSTB EQU LC+45 BASE ADDR. FOR DST BLOCK
000357 A 37 V$TKSZ EQU LC+47 RMD TRACK SIZE
000360 A 38 V$CTAD EQU LC+48 BASE ADDR. FOR CONTROLLER ADDR. TABLE
000400 A 39 V$LUT1 EQU LC+64 START LUN ADDR FOR JCP/OPCOM ASSIGNABLE
000401 A 40 V$LUT2 EQU LC+65 START LUN ADDR FOR UNASSIGNABLE
000402 A 41 V$LUT3 EQU LC+66 START LUN ADDR FOR OPCODE ASSIGNABLE
000412 A 42 V$JCB EQU LC+74 ALL SYSTEM BACKGROUND PROGRAMS AND JCP USE
43 * THIS SYSTEM BUFFER TO READ DIRECTIVES AND
44 * SOURCE RECORDS IN.
000417 A 45 V$STSZ EQU LC+79 ACTUAL SECTOR SIZE
46 EJEC
47 *****
48 *
49 *** MASK TABLE DESCRIPTION ***
50 *
51 *****
000420 A 53 MT SET 0420
000420 A 54 ZERO EQU MT ZERO WORD
000421 A 55 BS0 EQU MT+1 BIT MASK CONTENTS 000001
000422 A 56 BS1 EQU MT+2 000002
000423 A 57 BS2 EQU MT+3 000004
000424 A 58 BS3 EQU MT+4 000010
000425 A 59 BS4 EQU MT+5 000020
000426 A 60 BS5 EQU MT+6 000040
000427 A 61 BS6 EQU MT+7 000100
000430 A 62 BS7 EQU MT+8 000200
000431 A 63 BS8 EQU MT+9 000400
000432 A 64 BS9 EQU MT+10 001000
000433 A 65 BS10 EQU MT+11 002000
000434 A 66 BS11 EQU MT+12 004000
000435 A 67 BS12 EQU MT+13 010000
000436 A 68 BS13 EQU MT+14 020000
000437 A 69 BS14 EQU MT+15 040000
000440 A 70 BS15 EQU MT+16 0100000
000441 A 71 BR0 EQU MT+17 BIT MASK CONTENTS 0177776
000442 A 72 BR1 EQU MT+18 0177775
000443 A 73 BR2 EQU MT+19 0177773
000444 A 74 BR3 EQU MT+20 0177767
000445 A 75 BR4 EQU MT+21 0177757
000446 A 76 BR5 EQU MT+22 0177737
000447 A 77 BR6 EQU MT+23 0177677
000450 A 78 BR7 EQU MT+24 0177577
000451 A 79 BR8 EQU MT+25 0177377
000452 A 80 BR9 EQU MT+26 0176777
000453 A 81 BR10 EQU MT+27 0175777
000454 A 82 BR11 EQU MT+28 0173777
000455 A 83 BR12 EQU MT+29 0167777
000456 A 84 BR13 EQU MT+30 0157777
000457 A 85 BR14 EQU MT+31 0137777
000460 A 86 BR15 EQU MT+32 0077777
000461 A 87 NEG EQU MT+33 SET ALL BITS
000462 A 88 LHW EQU MT+34 LEFT HALF WORD MASK 0177400
000463 A 89 RHW EQU MT+35 RIGHT HALF WORD MASK 0377
000421 A 90 ONE EQU MT+1 CONTAINS NUMBER 1
000422 A 91 TWO EQU MT+2 CONTAINS NUMBER 2
000464 A 92 THREE EQU MT+36 CONTAINS NUMBER 3
000423 A 93 FOUR EQU MT+3 CONTAINS NUMBER 4
000465 A 94 FIVE EQU MT+37 CONTAINS NUMBER 5
000466 A 95 SIX EQU MT+38 CONTAINS NUMBER 6

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000467 A 96 SEVEN EQU MT+39 CONTAINS NUMBER 7 10 00096
000468 A 97 EIGHT EQU MT+4 CONTAINS NUMBER 8 10 00097
000470 A 98 NINE EQU MT+40 CONTAINS NUMBER 9 10 00098
000471 A 99 TEN EQU MT+41 CONTAINS NUMBER 10 10 00099
000481 A 100 BM1 EQU MT+1 BIT MASK WORD 00001 10 00100
000484 A 101 BM3 EQU MT+36 BIT MASK WORD 00003 10 00101
000467 A 102 BM7 EQU MT+39 BIT MASK WORD 00007 10 00102
000472 A 103 BM17 EQU MT+42 BIT MASK WORD 00017 10 00103
000473 A 104 BM37 EQU MT+43 BIT MASK WORD 00037 10 00104
000474 A 105 BM77 EQU MT+44 BIT MASK WORD 00077 10 00105
000475 A 106 BM177 EQU MT+45 BIT MASK WORD 00177 10 00106
000463 A 107 BM377 EQU MT+35 BIT MASK WORD 00377 10 00107
000476 A 108 BM777 EQU MT+46 BIT MASK WORD 00777 10 00108
000477 A 109 BM1777 EQU MT+47 BIT MASK WORD 01777 10 00109
000500 A 110 MTE EQU EM1777+1 FF 10 00110
111 EJECT 10 00111
112 ***** 10 00112
113 * 10 00113
114 * P R O G R A M C O N T R O L * 10 00114
115 * 10 00115
116 * B L O C K * 10 00116
117 * 10 00117
118 ***** 10 00118
120 ***** 10 00120
121 * 10 00121
122 * 10 00122
123 * 10 00123
124 ***** 10 00124
126 EXT BDFCB SYSTEM BD FCB 10 00126
127 EXT GDFCB SYSTEM GD FCB 10 00127
128 EXT LDFCB SYSTEM LD FCB 10 00128
129 EXT PIFCB SYSTEM PI FCB 10 00129
130 EXT SIFCB SYSTEM SI FCB 10 00130
131 EXT V$EXEC ENTRY TO RTE SERVICES 10 00131
132 EXT V$IBC ENTRY TO IDC 10 00132
133 EXT V$IDST ENTRY TO IDC STATUS CALL 10 00133
134 ***** 10 00134
135 * 10 00135
136 * 10 00136
137 * 10 00137
138 ***** 10 00138
000020 A 140 $BIT SET 16 SELECT 16-BIT VDM 620 COMPUTER 10 00140
000002 A 141 B SET 2 B-REGISTER 10 00141
000001 A 142 X SET 1 X-REGISTER 10 00142
143 * 10 00143
144 * 10 00144
145 * 10 00145
146 * 10 00146
147 * 10 00147
148 ***** 10 00148
105032 A 148 FLDI EQU 0105032 FLB BCS DPCODE 10 00148
105033 A 149 FSTI EQU 0105033 FST BCS DPCODE 10 00149
105035 A 150 F$DDI EQU 0105035 $DD BCS DPCODE 10 00150
105027 * 151 F$DDI1 EQU 0105027 $DD BCS DPCODE(INCREMENT=1) FF 10 00151
105036 A 152 F$SEI EQU 0105036 $SE BCS DPCODE 10 00152
105037 A 153 FMDVI EQU 0105037 FMDV BCS INSTRUCTION 10 00153
105327 A 154 FSORT EQU 0105327 FLOATING SQUARE-ROOT BCS INSTRUCTION 10 00154
105024 A 155 FEREL EQU 0105024 FLOATING RELATIONAL BASE OP-CODE 10 00155
105125 A 156 FLJAG EQU 0105125 BCS JMP A.GT.0 10 00156
105226 A 157 FLAIF EQU 0105226 FLOATING ARITHMETIC-IF OP-CODE 10 00157
105367 A 158 FLIDP EQU 0105367 BCS SUBSCRIPT OPERATOR 10 00158
159 * 10 00159
160 * FAST FLOATING-POINT BOX OP CODES FF 10 00160
161 * 10 00161
162 ***** 10 00162
105400 A 162 FFFOP EQU 0105400 BASIC FFP OP FF 10 00162
105503 A 163 FADDE EQU FFFOP+0103 DP ADD FF 10 00163
105410 A 164 FADDS EQU FFFOP+0104 SP ADD FF 10 00164
105535 A 165 FDIVR EQU FFFOP+0135 DP DIVIDE FF 10 00165
105401 A 166 FDIVS EQU FFFOP+1 SP DIVIDE FF 10 00166
105621 A 167 FIX EQU FFFOP+0221 FIX FP FF 10 00167
105420 A 168 FLDS EQU FFFOP+020 LOAD SP FF 10 00168
105522 A 169 FLDD EQU FFFOP+0122 LOAD DP FF 10 00169
105425 A 170 FLT EQU FFFOP+025 FLOAT INTEGER FF 10 00170
105506 A 171 FMULD EQU FFFOP+0106 MULTIPLY DP FF 10 00171
105416 A 172 FMULS EQU FFFOP+016 MULTIPLY SP FF 10 00172
105710 A 173 FSTB EQU FFFOP+0310 STORE DP FF 10 00173
105600 A 174 FSTB EQU FFFOP+0200 STORE SP FF 10 00174
105543 A 175 FSUBD EQU FFFOP+0143 SUBTRACT DP FF 10 00175
105457 A 176 FSUBS EQU FFFOP+050 SUBTRACT SP FF 10 00176
177 * 10 00177
178 * 10 00178
000422 A 179 K2 EQU TWO 10 00179
000441 A 180 MTWD EQU NINE 10 00180
000423 A 181 K4 EQU FOUR 10 00181
000466 A 182 K6 EQU SIX 10 00182
000424 A 183 K10 EQU TEN 10 00183
000471 A 184 K12 EQU TWELVE 10 00184
000472 A 185 K17 EQU SEVENTEEN 10 00185
000425 A 186 K20 EQU TWENTY 10 00186
000473 A 187 K37 EQU THIRTYSEVEN 10 00187
000463 A 188 K77 EQU SEVENTYSEVEN 10 00188
000432 A 189 KINF EQU INFINITY 10 00189

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190          EJECT
191 *****
192 *
193 * I/O BUFFER, VARIABLE BLOCK, AND TRANSFER VECTOR DEFINITIONS
194 *
195 *****
010150 A 197 DVERSZ SET      4200          MAXIMUM OVERLAY SIZE
000027 A 198 TFVCSZ SET      027           FROM-COMPILER TRANSFER VECTOR SIZE
000666 A 199 VARBLS SET      0666          VARIABLE BLOCK SIZE
177112 R 200 VARBLD EQU      *-VARBLS       VARIABLE BLOCK START ADDRESS
177120 R 202 ERBF EQU      VARBLD+06        ERROR BUFFER
177127 R 203 NERR EQU      VARBLD+015       ERROR COUNT
177160 R 204 SLOT EQU      VARBLD+0046     SPECIAL LIST BUFFER
177204 R 205 TITL EQU      VARBLD+0072     TITLE BUFFER
177207 R 206 TITP EQU      VARBLD+0075          TITLE PAGE NUMBER
177212 R 207 TITD EQU      VARBLD+0100     TITLE DATE
177217 R 208 TITJ EQU      VARBLD+0105     TITLE JOB NAME
177236 R 209 TITN EQU      VARBLD+0124     TITLE NAME
177243 R 210 TITM EQU      VARBLD+0131     TIME
177250 R 211 TITQ EQU      VARBLD+0136     END
177250 R 212 BLFCB EQU      VARBLD+0136     BO FCB
177262 R 213 GLFCB EQU      VARBLD+0150     GO FCB
177274 R 214 LLFCB EQU      VARBLD+0162     LO FCB
177306 R 215 PLFCB EQU      VARBLD+0174     PI FCB
216          EJECT
217 *****
218 *
219 *          C O M P I L E R   V A R I A B L E   B L O C K
220 *
221 *****
222 *****
223 *****
224 * FIXED ON LOADING BY ROUTINE FORT *
225 *****
177320 R 226 BOBLFL EQU      VARBLD+0206     BO BLOCKING FLAG
177321 R 227 GOBLFL EQU      VARBLD+0207     GO BLOCKING FLAG
177322 R 228 LOBLFL EQU      VARBLD+0210     LO BLOCKING FLAG
177323 R 229 PIBLFL EQU      VARBLD+0211     PI BLOCKING FLAG
177324 R 230 SPCW EQU      VARBLD+0212     COMPILER CONTROL FLAGS
177325 R 231 SECW EQU      VARBLD+0213     ERROR CONTROL WORD
177326 R 232 DPB EQU      VARBLD+0214     AVAILABLE CORE START ADDRESS
177327 R 233 DPX EQU      VARBLD+0215     AVAILABLE CORE END ADDRESS
234 *****
235 *****
236 * C L E A R E D   F O R   E A C H   C O M P I L A T I O N *
237 *****
177330 R 239 VBLOGG EQU      DPX+1           START OF CLEARED VARIABLES
177330 R 240 AF EQU      VBLOGG          ADDRESS FIELD
177331 R 241 AIFW EQU      AF+1           SCAN FORWARD I POINTER
177332 R 242 AS EQU      AIFW+1         ARRAY SUBSCRIPTS
177341 R 243 AT EQU      AS+7          ADDRESS TYPE
177342 R 244 BDF EQU      AT+1         BLOCK DATA FLAG
177343 R 245 BOBLCN EQU      BDF+1       BO BLOCKING FLAG
177344 R 246 CF EQU      BOBLCN+1      SCAN COMPLIMENT FLAG
177345 R 247 CFPTSM EQU      CF+1      FINAL POINT CHECK SWITCH
177346 R 248 CL EQU      CFPTSM+1
177347 R 249 CLOP EQU      CL+1          LIST OUTPUT PACK COUNT
177350 R 250 CMFL EQU      CLOP+1       COMMON FLAGS
177351 R 251 CNP EQU      CMFL+1       COMMON NAME POINTER
177352 R 252 D EQU      CNP+1           DO POINTER
177353 R 253 DF EQU      D+1            DELIMITER FLAG
177354 R 254 DFPP EQU      DF+1         FLOATING POINT DISABLE FLAG
177355 R 255 DH EQU      DFPP+1        DO LIMIT POINTER
177356 R 256 DI EQU      DH+1          DO INCREMENT POINTER
177357 R 257 DPCA EQU      DI+1           DATA POOL CONSTANTS - I-POINTER FOR:
258 *          1,2,0,4,0.0,000,ASC, SORT, IFIX, FLOAT
259 *          ,-1,DFLOAT
177373 R 260 DR EQU      DPCA+12         DO RETURN ADDRESS
177374 R 261 DS EQU      DR+1            DT SAVE FOR RD/WR PROCESSING
177375 R 262 DSAV EQU      DS+1         DO TOP POINTER
177376 R 263 DT EQU      DSAV+1        DO TERMINATION FLAG
177377 R 264 DTFL EQU      DT+1         DO VARIABLE POINTER
177401 R 265 DV EQU      DTFL+2        ERROR COUNT
177402 R 266 EC EQU      DV+1         EXPRESSION HIERARCHYS
177403 R 267 EH EQU      EC+1         SCAN BACKWARD EXPRESSION HEIRARCHY
177405 R 268 EHBK EQU      EH+2        ENTRY LENGTH
177406 R 269 EL EQU      EHBK+1        EXECUTEABLE ADDRESS
177407 R 270 EXAD EQU      EL+1        ALTERNATE I POINTER
177410 R 271 F EQU      EXAD+1        FLOATING POINT PROCESSOR FLAG
177411 R 272 FFPFL EQU      F+1         GO BLOCKING COUNT
177412 R 273 GOBLCN EQU      FFPFL+1   HOLLERITH COLUMN COUNTER
177413 R 274 HCC EQU      GOBLCN+1    ASSIGNMENT TABLE POINTER
177414 R 275 I EQU      HCC+1          IDENTIFICATION
177415 R 276 ID EQU      I+1           ITEM MODE
177421 R 277 IM EQU      ID+4         INPUT BUFFER POINTER
177422 R 278 INBP EQU      IM+1        I/O FLAG
177423 R 279 IDFL EQU      INBP+1       ARRAY POINTERS
177424 R 280 IP EQU      IDFL+1          ARRAY DIMENSIONS
177435 R 281 IS EQU      IP+9           ASSIGNMENT TOP POINTER
177443 R 282 IT EQU      IS+8           ITEM USAGE
177446 R 283 IU EQU      IT+1          TRIAD POINTER
177447 R 284 J EQU      IU+1            JUMP FLAGS
177450 R 285 JPFL EQU      J+1

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177454	R	286	JT	EQU	JPFL+4	TRIAD TOP POINTER	01	10	00286
177455	R	287	K	EQU	JT+1	EXPRESSION POINTER	01	10	00287
177456	R	288	KT	EQU	K+1	EXPRESSION TOP POINTER	01	10	00288
177457	R	289	LF	EQU	KT+1	LOCATION FIELD	01	10	00289
177460	R	290	LIF	EQU	LF+1	LOGICAL IF FLAG	01	10	00290
177461	R	291	LLOP	EQU	LIF+1	NO. OF LINES LEFT ON PAGE	01	10	00291
177462	R	292	MAXOPC	EQU	LLOP+1	MAXIMUM FPP OPERATION COUNT	01	10	00292
177463	R	293	MDTB	EQU	MAXOPC+1	OPERAND IMPLICIT MODE TABLE	26	10	00293
177516	R	294	MF	EQU	MDTB+27	MODE FLAG	10	10	00294
177517	R	295	MM	EQU	MF+1	MAX/MIN LIST FLAG	01	10	00295
177520	R	296	MR	EQU	MM+1	MULTIPLY REGISTERS	02	10	00296
177522	R	297	NAME	EQU	MR+2	SUBROUTINE GENERATION NAME	01	10	00297
177523	R	298	ND	EQU	NAME+1	NUMBER OF DIMENSIONS	01	10	00298
177524	R	299	NF	EQU	ND+1	NEGATION FLAG	01	10	00299
177525	R	300	NFFW	EQU	NF+1	SCAN FORWARD NEGATION FLAG	01	10	00300
177526	R	301	NS	EQU	NFFW+1	NUMBER OF SUBSCRIPTS	01	10	00301
177527	R	302	NT	EQU	NS+1	NAME TAG	01	10	00302
177530	R	303	NTFL	EQU	NT+1	NO TAG-USAGE FLAG	01	10	00303
177531	R	304	OP	EQU	NTFL+1	OPERATION	01	10	00304
177532	R	305	OPBK	EQU	OP+1	SCAN BACKWARD OPERATION	01	10	00305
177533	R	306	OPCNT	EQU	OPBK+1	OPERATION COUNT	01	10	00306
177534	R	307	OPW	EQU	OPCNT+1	OUTPUT PACK WORD	01	10	00307
177535	R	308	OITFL	EQU	OPW+1	OUTPUT-ITEM FLAG	01	10	00308
177536	R	309	O1	EQU	OITFL+1	LEFT OPERAND	01	10	00309
177537	R	310	O2	EQU	O1+1	RIGHT OPERAND	01	10	00310
177540	R	311	PC	EQU	O2+1	PACK CONTROL	04	10	00311
177544	R	312	PIBLCN	EQU	PC+4	PI BLOCKING COUNT	01	10	00312
177545	R	313	QFL	EQU	PIBLCN+1	QUOTE FLAG	01	10	00313
177546	R	314	RL	EQU	QFL+1	RELATIVE PROGRAM LOCATIONS	02	10	00314
177550	R	315	SBFL	EQU	RL+2	SUBPROGRAM FLAGS	02	10	00315
177553	R	316	SF	EQU	SBFL+3	STORAGE FLAG	10	10	00316
177554	R	317	SPFL	EQU	SF+1	SPECIFICATION FLAG	01	10	00317
177555	R	318	STFFL	EQU	SPFL+1	STATEMENT FUNCTION FLAG	01	10	00318
177556	R	319	STNB	EQU	STFFL+1	STATEMENT NUMBER	01	10	00319
177557	R	320	STSW	EQU	STNB+1	STATEMENT SWITCH	01	10	00320
177560	R	321	SSP	EQU	STSW+1	SPECIFICATION STACK POINTERS	05	10	00321
177565	R	322	SXF	EQU	SSP+5	COMPLEX FLAG	01	10	00322
177566	R	323	TC	EQU	SXF+1	TERM CHARACTER/ CHARACTER IMAGE	02	10	00323
177570	R	324	TERF	EQU	TC+2	TERMINATING ERROR FLAG	01	10	00324
177571	R	325	TM	EQU	TERF+1	TRIAD MODE	01	10	00325
177572	R	326	TSFL	EQU	TM+1	TEMPORARY STORAGE FLAG	01	10	00326
177573	R	327	TU	EQU	TSFL+1	TRIAD USE	01	10	00327
177574	R	328	T0	EQU	TU+1	TEMPORARY STORAGE	01	10	00328
177575	R	329	T1	EQU	T0+1	TEMPORARY STORAGE	01	10	00329
177576	R	330	T2	EQU	T1+1	TEMPORARY STORAGE	01	10	00330
177577	R	331	T2IN	EQU	T2+1	TEMPORARY STORAGE	01	10	00331
177600	R	332	T3	EQU	T2IN+1	TEMPORARY STORAGE	01	10	00332
177601	R	333	T4	EQU	T3+1	TEMPORARY STORAGE	01	10	00333
177602	R	334	T5	EQU	T4+1	TEMPORARY STORAGE	01	10	00334
177603	R	335	T6	EQU	T5+1	TEMPORARY STORAGE	01	10	00335
177604	R	336	T7	EQU	T6+1	TEMPORARY STORAGE	01	10	00336
177605	R	337	T8	EQU	T7+1	TEMPORARY STORAGE	01	10	00337
177606	R	338	T9	EQU	T8+1	TEMPORARY STORAGE	01	10	00338
177607	R	339	XRPT	EQU	T9+1	OBJECT X-REGISTER POINTER	01	10	00339
177611	R	340	VBLOND	EQU	XRPT+2	END OF CLEARED VARIABLES	10	10	00340
341			EJECT				10	10	00341
342			*****				10	10	00342
343			*				10	10	00343
344			*		COMPILER TRANSFER VECTOR		10	10	00344
345			*				10	10	00345
346			*****				10	10	00346
348			*		T D - C O M P I L E R		10	10	00348
077611	R	350	V	SET	VBLOND-0100000		10	10	00350
077611	R	352	ASI	EQU	V	ASSIGN ITEM	10	10	00352
077612	R	353	V	SET	V+1		10	10	00353
077612	R	354	ASS	EQU	V	ASSIGN SPECIAL	10	10	00354
077613	R	355	V	SET	V+1		10	10	00355
077613	R	356	CAN	SET	V	"ALL NAME	10	10	00356
077614	R	357	V	SET	V+1		10	10	00357
077614	R	358	CBA	SET	V	CONVERT BINARY TO ASCII	10	10	00358
077615	R	359	V	SET	V+1		10	10	00359
077615	R	360	CCR	EQU	V	COMMA OR C/R TEST	10	10	00360
077616	R	361	V	SET	V+1		10	10	00361
077616	R	362	CRT	EQU	V	C/R TEST	10	10	00362
077617	R	363	V	SET	V+1		10	10	00363
077617	R	364	CFS	EQU	V	COMMA TEST	10	10	00364
077620	R	365	V	SET	V+1		10	10	00365
077620	R	366	DEK	SET	V	DECREMENT K	10	10	00366
077621	R	367	V	SET	V+1		10	10	00367
077621	R	368	DFT	EQU	V	DEFINE AF,AT	10	10	00368
077622	R	369	V	SET	V+1		10	10	00369
077622	R	370	DSM	SET	V	DEFINE STATEMENT MODE	10	10	00370
077623	R	371	V	SET	V+1		10	10	00371
077623	R	372	EDLSH	SET	V		10	10	00372
077624	R	373	V	SET	V+1		10	10	00373
077624	R	374	ER1	SET	V		10	10	00374
077625	R	375	V	SET	V+1		10	10	00375
077625	R	376	ER2	EQU	V	USAGE ERROR	10	10	00376
077626	R	377	V	SET	V+1		10	10	00377
077626	R	378	ER3	EQU	V	MODE ERROR	10	10	00378
077627	R	379	V	SET	V+1		10	10	00379

077627	R	380	ER6	EQU	V	COMMON BASE LOWERED	10	00380
077630	R	381	V	SET	V+1		10	00381
077630	R	382	ER7	EQU	V	ILLEGAL EQUIVALENCE GROUP	10	00382
077631	R	383	V	SET	V+1		10	00383
077631	R	384	ER8	SET	V		10	00384
077632	R	385	V	SET	V+1		10	00385
077632	R	386	ER11	SET	V		10	00386
077633	R	387	V	SET	V+1		10	00387
077633	R	388	ER12	SET	V		10	00388
077634	R	389	V	SET	V+1		10	00389
077634	R	390	ER13	SET	V		10	00390
077635	R	391	V	SET	V+1		10	00391
077635	R	392	ER14	SET	V		10	00392
077636	R	393	V	SET	V+1		10	00393
077636	R	394	ER15	EQU	V	TRUNCATED VALUE ERROR	10	00394
077637	R	395	V	SET	V+1		10	00395
077637	R	396	ER16	EQU	V	STATEMENT OUT OF ORDER	10	00396
077640	R	397	V	SET	V+1		10	00397
077640	R	398	ER17	EQU	V	MORE THAN 29 COMMON REGIONS	10	00398
077641	R	399	V	SET	V+1		10	00399
077641	R	400	ER18	EQU	V	NON-COMMON DATA ERROR	10	00400
077642	R	401	V	SET	V+1		10	00401
077642	R	402	ER20	EQU	V	DO INDEX NOT REFERENCED	10	00402
077643	R	403	V	SET	V+1		10	00403
077643	R	404	ER21	SET	V		10	00404
077644	R	405	V	SET	V+1		10	00405
077644	R	406	ER22	EQU	V	ARRAY NAME PREVIOUSLY DECLARED	10	00406
077645	R	407	V	SET	V+1		10	00407
077645	R	408	ER24	SET	V		10	00408
077646	R	409	V	SET	V+1		10	00409
077646	R	410	EXA	EQU	V	EXAMINE NEXT CHARACTER	10	00410
077647	R	411	V	SET	V+1		10	00411
077647	R	412	EXL	EQU	V	EXCHANGE LINKS	10	00412
077650	R	413	V	SET	V+1		10	00413
077650	R	414	FNSF	EQU	V	ENTRY TO FNS	10	00414
077651	R	415	V	SET	V+1		10	00415
077651	R	416	FORT1	SET	V		10	00416
077652	R	417	V	SET	V+1		10	00417
077652	R	418	GSE	EQU	V	GENERATE SUBPROGRAM ENTRANCE	10	00418
077653	R	419	V	SET	V+1		10	00419
077653	R	420	IAC	SET	V	INPUT (A) CHARACTERS	10	00420
077654	R	421	V	SET	V+1		10	00421
077654	R	422	ICH	EQU	V	INPUT CHARACTER	10	00422
077655	R	423	V	SET	V+1		10	00423
077655	R	424	ICD	EQU	V	INPUT COLUMN	10	00424
077656	R	425	V	SET	V+1		10	00425
077656	R	426	ICORML	SET	V		10	00426
077657	R	427	V	SET	V+1		10	00427
077657	R	428	ICRD	SET	V		10	00428
077660	R	429	V	SET	V+1		10	00429
077660	R	430	ICRR	SET	V		10	00430
077661	R	431	V	SET	V+1		10	00431
077661	R	432	ICSI	EQU	V	INPUT SOURCE CONTROL SWITCH	10	00432
077662	R	433	V	SET	V+1		10	00433
077662	R	434	IDI	SET	V	INPUT DIGIT	10	00434
077663	R	435	V	SET	V+1		10	00435
077663	R	436	IHW	EQU	V	INPUT HOLLERITH WORD	10	00436
077664	R	437	V	SET	V+1		10	00437
077664	R	438	IIV	EQU	V	INPUT INTEGER VARIABLE	10	00438
077665	R	439	V	SET	V+1		10	00439
077665	R	440	ILB	SET	V	INITIALIZE LIST BUFFER	10	00440
077666	R	441	V	SET	V+1		10	00441
077666	R	442	ILT	EQU	V	ILLEGAL DO TERMINATION/CONTROL CONTINUE	10	00442
077667	R	443	V	SET	V+1		10	00443
077667	R	444	INA	EQU	V	INPUT NAME	10	00444
077670	R	445	V	SET	V+1		10	00445
077670	R	446	INI	EQU	V	INPUT ITEM	10	00446
077671	R	447	V	SET	V+1		10	00447
077671	R	448	INN	EQU	V	INPUT (DO NOT ASSIGN)	10	00448
077672	R	449	V	SET	V+1		10	00449
077672	R	450	INS	SET	V	INPUT NORMAL STATEMENT NUMBER	10	00450
077673	R	451	V	SET	V+1		10	00451
077673	R	452	INT	EQU	V	INTEGER TEST	10	00452
077674	R	453	V	SET	V+1		10	00453
077674	R	454	ISN	SET	V	INPUT STATEMENT NUMBER	10	00454
077675	R	455	V	SET	V+1		10	00455
077675	R	456	IYA	EQU	V	INPUT VARIABLE	10	00456
077676	R	457	V	SET	V+1		10	00457
077676	R	458	IVC	SET	V	INPUT INTEGER VARIABLE/CONSTANT	10	00458
077677	R	459	V	SET	V+1		10	00459
077677	R	460	IWI	EQU	V	WORDS/ITEM	10	00460
077700	R	461	V	SET	V+1		10	00461
077700	R	462	LAX	EQU	V	LOAD ASSIGNMENT DATA	10	00462
077701	R	463	V	SET	V+1		10	00463
077701	R	464	LDX	SET	V	LOAD DO	10	00464
077702	R	465	V	SET	V+1		10	00465
077702	R	466	LEX	SET	V	LOAD EXPRESSION	10	00466
077703	R	467	V	SET	V+1		10	00467
077703	R	468	LIST	EQU	V	LIST A LINE	10	00468
077704	R	469	V	SET	V+1		10	00469
077704	R	470	LOCT	SET	V		10	00470



077705	R	471	V	SET	V+1			10	00471
077705	R	472	LTX	SET	V	LOAD TRIADS		10	00472
077706	R	473	V	SET	V+1			10	00473
077706	R	474	MOVE	EQU	V	MOVE ALPHA DATA		10	00474
077707	R	475	V	SET	V+1			10	00475
077707	R	476	MXL	EQU	V	MAKE EXIT LABEL		10	00476
077710	R	477	V	SET	V+1			10	00477
077710	R	478	DAB	EQU	V	OUTPUT ABSOLUTE		10	00478
077711	R	479	V	SET	V+1			10	00479
077711	R	480	DDB	SET	V	OUTPUT DOUBLE		10	00480
077712	R	481	V	SET	V+1			10	00481
077712	R	482	DDS	SET	V	OUTPUT DATA STRING		10	00482
077713	R	483	V	SET	V+1			10	00483
077713	R	484	DNEN	EQU	V	OUTPUT NAME		10	00484
077714	R	485	V	SET	V+1			10	00485
077714	R	486	DPK	SET	V	OUTPUT PACK		10	00486
077715	R	487	V	SET	V+1			10	00487
077715	R	488	DRE	SET	V	OUTPUT RELATIVE		10	00488
077716	R	489	V	SET	V+1			10	00489
077716	R	490	DSR	SET	V	OUTPUT STRING RELATIVE		10	00490
077717	R	491	V	SET	V+1			10	00491
077717	R	492	DTJ	EQU	V	OUTPUT JUMP		10	00492
077720	R	493	V	SET	V+1			10	00493
077720	R	494	DUT	SET	V	OUTPUT OPERATOR/OPERAND		10	00494
077721	R	495	V	SET	V+1			10	00495
077721	R	496	DWB	SET	V	OUTPUT WORD		10	00496
077722	R	497	V	SET	V+1			10	00497
077722	R	498	DWS	EQU	V	OUTPUT WORDS		10	00498
077723	R	499	V	SET	V+1			10	00499
077723	R	500	PDS	SET	V	PACK DATA STRING		10	00500
077724	R	501	V	SET	V+1			10	00501
077724	R	502	PEB	SET	V	PACK ERROR BUFFER		10	00502
077725	R	503	V	SET	V+1			10	00503
077725	R	504	PTR	SET	V	PURGE TRIADS		10	00504
077726	R	505	V	SET	V+1			10	00505
077726	R	506	PTS	EQU	V	'(' TEST		10	00506
077727	R	507	V	SET	V+1			10	00507
077727	R	508	RCC	EQU	V	RESTORE SCAN PARAMETERS		10	00508
077730	R	509	V	SET	V+1			10	00509
077730	R	510	RCCS	EQU	V	SAVE SCAN PARAMETERS		10	00510
077731	R	511	V	SET	V+1			10	00511
077731	R	512	RCH	EQU	V	REREAD CHARACTER		10	00512
077732	R	513	V	SET	V+1			10	00513
077732	R	514	RID	EQU	V	RIGHT INPUT OPERATOR		10	00514
077733	R	515	V	SET	V+1			10	00515
077733	R	516	SAX	EQU	V	STORE ASSIGNMENT DATA		10	00516
077734	R	517	V	SET	V+1			10	00517
077734	R	518	SDX	SET	V	STORE DO		10	00518
077735	R	519	V	SET	V+1			10	00519
077735	R	520	SIDTB1	SET	V	END OF MODE-SETTING IN SIDTB		10	00520
077736	R	521	V	SET	V+1			10	00521
077736	R	522	SIS	EQU	V	STATEMENT IDENTIFICATION SCAN		10	00522
077737	R	523	V	SET	V+1			10	00523
077737	R	524	SLIT	SET	V			10	00524
077740	R	525	V	SET	V+1			10	00525
077740	R	526	SLOP	SET	V	SPECIAL LIST OUTPUT		10	00526
077741	R	527	V	SET	V+1			10	00527
077741	R	528	STC	SET	V	STATEMENT COMPLETION		10	00528
077742	R	529	V	SET	V+1			10	00529
077742	R	530	STI1	EQU	V	ENTRY TO STI		10	00530
077743	R	531	V	SET	V+1			10	00531
077743	R	532	STN	EQU	V	ILLEGAL DO TERM./NO CONTROL CONTINUE		10	00532
077744	R	533	V	SET	V+1			10	00533
077744	R	534	STS	SET	V	STATEMENT SCAN		10	00534
077745	R	535	V	SET	V+1			10	00535
077745	R	536	TER1	EQU	V	CONSTRUCTION		10	00536
077746	R	537	V	SET	V+1			10	00537
077746	R	538	TER2	EQU	V	NOT IN SUBPROGRAM		10	00538
077747	R	539	V	SET	V+1			10	00539
077747	R	540	TER3	EQU	V	DATA POOL FULL		10	00540
077750	R	541	V	SET	V+1			10	00541
077750	R	542	TER4	EQU	V	ILLEGAL STATEMENT		10	00542
077751	R	543	V	SET	V+1			10	00543
077751	R	544	TER5	SET	V			10	00544
077752	R	545	V	SET	V+1			10	00545
077752	R	546	TER7	SET	V			10	00546
077753	R	547	V	SET	V+1			10	00547
077753	R	548	TER8	SET	V			10	00548
077754	R	549	V	SET	V+1			10	00549
077754	R	550	TER9	EQU	V	IMPROPER DO NEST		10	00550
077755	R	551	V	SET	V+1			10	00551
077755	R	552	TER11	EQU	V	ITEM NOT OPERAND		10	00552
077756	R	553	V	SET	V+1			10	00553
077756	R	554	TER12	EQU	V	ITEM NOT FUNCTION		10	00554
077757	R	555	V	SET	V+1			10	00555
077757	R	556	TER13	SET	V			10	00556
077760	R	557	V	SET	V+1			10	00557
077760	R	558	TER14	EQU	V	SUBSCRIPT VARIABLE NOT DUMMY		10	00558
077761	R	559	V	SET	V+1			10	00559
077761	R	560	TER15	SET	V			10	00560
077762	R	561	V	SET	V+1			10	00561

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077762 R 362 TER17 EQU V FUNCTION STATEMENT HAS NO PARAMETERS 10 00562
077763 R 363 V SET V+1 10 00563
077763 R 364 TER18 SET V 10 00564
077764 R 365 V SET V+1 10 00565
077764 R 366 TER19 SET V 10 00566
077765 R 367 V SET V+1 10 00567
077765 R 368 TER20 SET V 10 00568
077766 R 369 V SET V+1 10 00569
077766 R 370 TER24 SET V 10 00570
077767 R 371 V SET V+1 10 00571
077767 R 372 TER26 EQU V SUBSCRIPT NOT INTEGER CONSTANT 10 00572
077770 R 373 V SET V+1 10 00573
077770 R 374 TDF SET V TEST OVERFLOW 10 00574
077771 R 375 V SET V+1 10 00575
077771 R 376 TSP EQU V TAG SUBPROGRAM 10 00576
077772 R 377 V SET V+1 10 00577
077772 R 378 TST EQU V CHARACTER TEST 10 00578
077773 R 379 V SET V+1 10 00579
077773 R 380 TVR EQU V TAG VARIABLE 10 00580
077774 R 381 V SET V+1 10 00581
077774 R 382 WROBO SET V 10 00582
077775 R 383 V SET V+1 10 00583
077775 R 384 WROGO SET V 10 00584
077776 R 385 V SET V+1 10 00585
077776 R 386 WRDT SET V 10 00586
077777 R 387 V SET V+1 10 00587
077777 R 388 ZEB EQU V ZERO ERROR BUFFER 10 00588
077777 R 389 * FROM - C O M P I L E R * 10 00590
000000 000026 R 392 V SET * 10 00592
000000 000065 R 393 DATA ASSI ASSIGNED GO TO 10 00593
000001 000065 R 394 DATA AST ASSIGNMENT STATEMENT 10 00594
000002 000056 R 395 DATA ASTM REGISTER ASSIGNMENT 10 00595
000003 000072 R 396 DATA SSP BACKSPACE 10 00596
000004 000076 R 397 DATA CAL CALL 10 00597
000005 000561 R 398 DATA DEC DECODE 10 00598
000006 000427 R 399 DATA DDP DO STATEMENT 10 00599
000007 000465 R 600 DATA DDT DO TERMINATION 10 00600
000010 000072 R 601 DATA EFI END FILE 10 00601
000011 000565 R 602 DATA ENC ENCODE 10 00602
000012 002073 R 603 DATA FND FIND 10 00603
000013 000203 R 604 DATA DEF DEFINE FILE 10 00604
000014 002153 R 605 DATA GOT GO TO 10 00605
000015 002417 R 606 DATA IFP IF STATEMENT 10 00606
000016 004326 R 607 DATA OTR OUTPUT TRIADS 10 00607
000017 007314 R 608 DATA PSE PAUSE 10 00608
000020 005566 R 609 DATA RED READ 10 00609
000021 006173 R 610 DATA RET RETURN 10 00610
000022 000072 R 611 DATA REW REWIND 10 00611
000023 007165 R 612 DATA STF STATEMENT FUNCTION 10 00612
000024 007314 R 613 DATA STP STOP 10 00613
000025 005571 R 614 DATA WRI WRITE 10 00614
000026 615 BSS TFVCSZ-M+V-1 10 00615
616 EJECT 10 00616
617 ***** 10 00617
618 * I/O BUFFERS * 10 00618
619 ***** 10 00619
010151 R 621 $BUF EQU V+OVERSZ+1 INPUT BUFFER AREA 10 00621
010224 R 622 $BUF EQU $BUF+49 OBJECT BUFFER 10 00622
010320 R 623 $BUF EQU $BUF+60 BLOCKING BUFFER 1 10 00623
624 EJECT 10 00624
625 ***** 10 00625
626 * 10 00626
627 * PROCESS ASSIGN STATEMENT (ASSI) * 10 00627
628 * 10 00628
629 * FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENT: * 10 00629
630 * 10 00630
631 * 'ASSIGN N TO I' N=STATEMENT LABEL * 10 00631
632 * I=INTEGER VARIABLE * 10 00632
633 * 10 00633
634 * ENTRY: DIRECT FROM SID * 10 00634
635 * 10 00635
636 * EXIT : DIRECT TO STYY * 10 00636
637 * CODING OUTPUT TO DO: LDB N * 10 00637
638 * STB I * 10 00638
639 * 10 00639
640 ***** 10 00640
000026 002000 A 642 ASSI CALL INS 10 00642
000027 077672 R 643 LDAI 06020 10 00643
000030 006010 A 644 CALL ODB 10 00644
000031 006020 A 645 LDAI 'T' 10 00645
000032 002000 A 646 CALL TST 10 00646
000033 077711 R 647 CALL ICH 10 00647
000034 006010 A 648 LDAI 'D' 10 00648
000035 000324 A 649 CALL TST 10 00649
000036 002000 A
000037 077772 R
000040 002000 A
000041 077654 R
000042 006010 A
000043 000317 A
000044 002000 A

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000045 077772 R
000046 002000 A 650 CALL IVA 10 00650
000047 077675 R
000050 006010 A 651 LDAI 065000 10 00651
000051 065000 A
000052 002000 A 652 CALL OUT 'STB I' 10 00652
000053 077720 R
000054 001000 A 653 JMP CRT 10 00653
000055 077616 R
654 EJECT 10 00654
655 ***** 10 00655
656 * 10 00656
657 * ARITHMETIC REPLACEMENT STATEMENT * 10 00657
658 * 10 00658
659 * PROCESSOR (AST, ASTM) * 10 00659
660 * 10 00660
661 * FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENTS: * 10 00661
662 * 10 00662
663 * A=EXPRESSION WHERE A=VARIABLE OR ARRAY ELEMENT * 10 00663
664 * =EXPRESSION * 10 00664
665 * 10 00665
666 * ENTRY: DIRECT FROM STS * 10 00666
667 * TO AST FOR A=EXPRESSION.SCAN AFTER 'A=' * 10 00667
668 * TO ASTM FOR =EXPRESSION.SCAN AT START OF STATEMENT * 10 00668
669 * 10 00669
670 * EXIT: DIRECT TO STYY * 10 00670
671 * 10 00671
672 ***** 10 00672
000056 002000 A 674 ASTM CALL IOH '=' 10 00674
000057 077634 R
000060 002000 A 675 CALL INI 10 00675
000061 077670 R
000062 005001 A 676 TZA 10 00676
000063 001000 A 677 JMP AST1 CALL EXP WITH A=0 10 00677
000064 000066 R
678 * 10 00678
000065 010441 A 679 AST LDA MTWD 10 00679
000066 002000 A 680 AST1 CALL EXP CALL EXP WITH A=-2 10 00680
000067 000754 R
000070 001000 A 681 JMP CRT 10 00681
000071 077616 R
682 EJECT 10 00682
683 ***** 10 00683
684 * 10 00684
685 * AUXILIARY I/O STATEMENTS * 10 00685
686 * 10 00686
687 * (BSP, EFI, REW) * 10 00687
688 * 10 00688
689 * FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENTS: * 10 00689
690 * 10 00690
691 * BACKSPACE * 10 00691
692 * ENDFILE * 10 00692
693 * REWIND * 10 00693
694 * 10 00694
695 * ENTRY: DIRECT FROM SID TO: * 10 00695
696 * 10 00696
697 * BSP(BACKSPACE). NAME HOLDS 'BA' * 10 00697
698 * EFI(ENDFILE). NAME HOLDS 'EN' * 10 00698
699 * REW(REWIND). NAME HOLDS 'RE' * 10 00699
700 * 10 00700
701 * EXIT: DIRECT TO STATEMENT COMPLETION ENTRY CRT * 10 00701
702 * 10 00702
703 ***** 10 00703
000072 R 705 BSP EQU * BACKSPACE ENTRY 10 00705
000072 R 706 EFI EQU * ENDFILE ENTRY 10 00706
000072 R 707 REW EQU * REWIND ENTRY 10 00707
708 * 10 00708
000072 002000 A 709 CALL OIL OUTPUT I/O LINK 10 00709
000073 002735 R
000074 001000 A 710 JMP CRT 10 00710
000075 077616 R
711 EJECT 10 00711
712 ***** 10 00712
713 * 10 00713
714 * PROCESS CALL STATEMENT (CALL) * 10 00714
715 * 10 00715
716 * FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENT: * 10 00716
717 * 10 00717
718 * 'CALL A...' * 10 00718
719 * 10 00719
720 * ENTRY: DIRECT FROM SID * 10 00720
721 * 10 00721
722 * EXIT: TO STYY IF NO PARAMETERS * 10 00722
723 * OTHERWISE THRU AST1 TO EXP WITH A=-1 TO PROCESS CALL SEQ * 10 00723
724 * 10 00724
725 ***** 10 00725
000076 047000 I 727 CAL INR BITFL DONT FLAG NAME IN ASI 10 00727
000077 002000 A 728 CALL INA 10 00728
000100 077667 R
000101 002000 A 729 CALL IOF 10 00729
000102 077771 R

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000103 017000 I 730 LDA TC 10 00730
000104 140000 L 731 SUB =*K* 10 00731
000105 001016 A 732 JANZ CAL1 HAS NO PARAMETERS 10 00732
000106 000116 R 733 CPA 10 00733
000107 005211 A 734 CALL EXP DO EXPRESSION WITH AR=-1 10 00734
000110 002000 A 735 CALL PTR 10 00735
000111 000734 R 736 JMP CRT 10 00736
000112 002000 A 737 CAL1 LDA I 10 00737
000113 077725 R 738 STA *+4 10 00738
000114 001000 A 739 CALL PTR 10 00739
000115 077616 R 740 LDAI ** 10 00740
000116 017000 I 741 STA I 10 00741
000117 054003 A 742 LDA *+1 10 00742
000120 002000 A 743 CALL ODB 10 00743
000121 077725 R 744 JMP CRT 10 00744
000122 006010 A 745 EJECT 10 00745
000123 100122 R 746 ***** 10 00746
000124 057000 I 747 * 10 00747
000125 014000 A 748 * C O R R E C T M O D E ( C M D ) * 10 00748
000126 002000 A 749 * 10 00749
000127 077711 R 750 * ENTRANCE: (A)=MODE * 10 00750
000130 001000 A 751 * 10 00751
000131 077616 R 752 * EXIT: (A)=ENTRANCE MODE OR 1(IF ENTRANCE MODE = CMP) * 10 00752
745 ***** 10 00753
746 ***** 10 00754
000132 000000 A 756 CMP ENTRY 10 00756
000133 140465 A 757 SUB FIVE 10 00757
000134 001016 A 758 JANZ CMD1 10 00758
000135 000137 R 759 SUB FOUR 10 00759
000136 140423 A 760 CMD1 ADD FIVE 10 00760
000137 120465 A 761 JMP* CMD 10 00761
000140 001000 A 762 EJECT 10 00762
000141 100132 R 763 ***** 10 00763
764 * 10 00764
765 * C H E C K R E G I S T E R P O S I T I O N ( C R P ) * 10 00765
766 * 10 00766
767 ***** 10 00767
000142 000000 A 769 CRP ENTRY 10 00769
000143 017000 I 770 LDA $PCW 10 00770
000144 006445 A 771 BT 045,CRP2 NOT 'H' 10 00771
000145 000201 R 772 LDA F 10 00772
000146 017000 I 773 JANZ CRP2 FPP ALREADY LOADED 10 00773
000150 000201 R 774 CALL SAV 10 00774
000151 002000 A 775 LDBI FLDD 10 00775
000152 006334 R 776 LDA MF 10 00776
000153 006020 A 777 SUB THREE 10 00777
000154 105522 A 778 JAN CRP2-2 INTEGER 10 00778
000155 017000 I 779 DAR 10 00779
000156 140464 A 780 JAZ CRP1 DBL 10 00780
000157 001004 A 781 JAP CRP2-2 NOT REAL 10 00781
000160 000177 R 782 TZX 10 00782
000161 005311 A 783 CALL TRA (A,B) TO A$C 10 00783
000162 001010 A 784 LDBI FLDS 10 00784
000163 000173 R 785 CRP1 TBA 10 00785
000164 001002 A 786 CALL JDB ACC TO FPP 10 00786
000165 000177 R 787 INR F MARK FPP LOADED 10 00787
000166 005004 A 788 CALL RST 10 00788
000167 002000 A 789 CRP2 JMP* CRP 10 00789
000170 007506 R 790 EJECT 10 00790
000171 006020 A 791 ***** 10 00791
000172 105420 A 792 * 10 00792
000173 005021 A 793 * D I R E C T A C C E S S D E F I N E F I L E ( D E F ) * 10 00793
000174 002000 A 794 * 10 00794
000175 077711 R 795 ***** 10 00795
000176 047000 I 797 DEF LDAI 'DX' 10 00797
000177 002000 A 798 CALL CAN 10 00798
000200 006323 A 799 CALL IIV 10 00799
000201 001000 R
000202 100142 R

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000210 077664 R
000211 005021 A 800 TBA
000212 002000 A 801 CALL DAB 'DATA DATA-SET-REFERENCE-NUMBER'
000213 077710 R
000214 002000 A 802 CALL PTS
000215 077726 R
000216 002000 A 803 CALL IIV
000217 077664 R
000220 005021 A 804 TBA
000221 002000 A 805 CALL DAB 'DATA NUMBER-OF-RECORDS'
000222 077710 R
000223 002000 A 806 CALL CTS
000224 077617 R
000225 002000 A 807 CALL IIV
000226 077664 R
000227 005021 A 808 TBA
000230 002000 A 809 CALL DAB 'DATA RECORD-SIZE'
000231 077710 R
000232 002000 A 810 CALL CTS
000233 077617 R
000234 002000 A 811 CALL ICH
000235 077654 R
000236 006140 A 812 SUBI 'E'
000237 000305 A
000240 001010 A 813 JAZ DEF1
000241 000250 R
000242 140467 A 814 SUB SEVEN
000243 001010 A 815 JAZ DEF1 'L'
000244 000250 R
000245 140470 A 816 SUB NINE
000246 001016 A 817 JANZ TER1 NOT 'U'
000247 077745 R
000250 017000 I 818 DEF1 LDA IC
000251 002000 A 819 CALL DAB 'DATA CONTROL CHARACTER'
000252 077710 R
000253 002000 A 820 CALL ICH
000254 077654 R
000255 002000 A 821 CALL CTS
000256 077617 R
000257 002000 A 822 CALL IVA
000260 077675 R
000261 005001 A 823 TBA
000262 002000 A 824 CALL DUT 'DATA ASSOCIATED VARIABLE'
000263 077720 R
000264 002000 A 825 CALL RID
000265 077732 R
000266 002000 A 826 CALL DCR
000267 077615 R
000267 EJECT
000268 *****
000269 *
000270 * INPUT DO PARAMETERS (DDI)
000271 *
000272 * FUNCTION: TO INPUT A DO PARAMETER LIST AND STORE IN DO TABLE
000273 *
000274 * ENTRY: A=PTR TO TARGET STMT NUMBER IN ASSIGNMENT TABLE
000275 * I=PTR TO DO VARIABLE IN ASSIGNMENT TABLE
000276 *
000277 * EXIT: PARAMETERS STORED IN DO TABLE
000278 * DT=D-DT-5
000279 *
000280 *****
000270 000000 A 842 DDI ENTRY
000271 057000 I 843 STA DS TARGET STMT NO PTR TO DS
000272 017000 I 844 LDA I
000273 057000 I 845 STA DV DO VARIABLE PTR TO DV
000274 017000 I 846 LDA DT
000275 140465 A 847 SUB FIVE
000276 057000 I 848 STA D POINT D AT DT-5
000277 002000 A 849 CALL IIN
000300 002535 R
000301 002000 A 850 CALL CTS
000302 077617 R
000303 017000 I 851 LDA I
000304 057000 I 852 STA DR INITIAL VALUE PTR TO DR
000305 002000 A 853 CALL IIN
000306 002535 R
000307 017000 I 854 LDA I
000310 057000 I 855 STA DH LIMIT VALUE PTR TO DH
000311 017000 I 856 LDA DFB
000312 057000 I 857 STA I INITIALIZE INCREMENT TO I
000313 017000 I 858 LDA IC
000314 140000 L 859 SUB '1'
000315 002010 A 860 JAZM IIN
000316 002535 R
000317 017000 I 861 LDA I
000320 057000 I 862 STA DI INCREMENT PTR TO DI
000321 002000 A 863 CALL DDX STORE PARAMS IN DO TABLE
000322 077734 R
000323 001000 A 864 JMP* DDI EXIT
000324 100270 R

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865 ***** EJECT ***** 10 00865
866 ***** 10 00866
867 ***** 10 00867
868 ***** OUTPUT DO INITIALIZE CODE (DON) ***** 10 00868
869 ***** 10 00869
870 ***** FUNCTION: TO OUTPUT CODE NECESSARY TO INITIALIZE A DO LOOP ***** 10 00870
871 ***** 10 00871
872 ***** ENTRY: D POINTS TO ENTRY IN DO TABLE ***** 10 00872
873 ***** D(DR) POINTS TO INITIAL VALUE ENTRY ***** 10 00873
874 ***** 10 00874
875 ***** EXIT : CODING OUTPUT TO DO: 'LDA INITIAL VALUE' ***** 10 00875
876 ***** 'STA DO VARIABLE' ***** 10 00876
877 ***** 10 00877
878 ***** D(DR) HOLDS DO LOOP ENTRY ADDRESS ***** 10 00878
879 ***** XRPT=-1 TO KILL X-REG ASSIGNMENT ***** 10 00879
880 ***** 10 00880
881 ***** 10 00881
000325 000000 A 883 DON ENTRY 10 00883
000326 002000 A 884 CALL LDX 10 00884
000327 077701 R
000330 017000 I 885 LDA DV 10 00885
000331 057000 I 886 STA I 10 00886
000332 002000 A 887 CALL LAX 10 00887
000333 077700 R
000334 017000 I 888 LDA IM 10 00888
000335 057000 I 889 STA T1 10 00889 VARIABLE MODE
000336 017000 I 890 LDA DI 10 00890
000337 020421 A 891 LDB ONE 10 00891
000340 002000 A 892 CALL DON1 10 00892
000341 000372 R
000342 057000 I 893 STA DI 10 00893 INCREMENT POINTER
000343 017000 I 894 LDA DH 10 00894
000344 020422 A 895 LDB TWO 10 00895
000345 002000 A 896 CALL DON1 10 00896
000346 000372 R
000347 057000 I 897 STA DH 10 00897 LIMIT POINTER
000350 017000 I 898 LDA DR 10 00898
000351 005002 A 899 T2B 10 00899
000352 002000 A 900 CALL DON1 10 00900 INITIALIZE POINTER
000353 000372 R
000354 017000 I 901 LDA DV 10 00901
000355 057000 I 902 STA I 10 00902 POINT I AT DO VARIABLE
000356 006010 A 903 LDAI 055000 10 00903
000357 055000 A
000360 002000 A 904 CALL CRT 10 00904 'STA DO-VARIABLE'
000361 004201 R
000362 017000 I 905 LDA RL 10 00905
000363 057000 I 906 STA DR 10 00906 LOAD DR WITH DO LOOP ENTRY ADDRESS
000364 005301 A 907 DECR 1 10 00907
000365 057000 I 908 STA XRPT 10 00908 KILL X-REG ASSIGNMENT
000366 002000 A 909 CALL SDX 10 00909 STORE NEW DR IN DO TABLE
000367 077734 R
000370 001000 A 910 JMP* DON 10 00910
000371 100325 R
000372 000000 A 911 DON1 ENTRY 10 00911
000373 057000 I 912 STA I 10 00912 OLD POINTER VALUE
000374 067000 I 913 STB TO 10 00913
000375 002000 A 914 CALL LAX 10 00914
000376 077700 R
000377 017000 I 915 LDA IM 10 00915
000400 057000 I 916 STA MF 10 00916
000401 147000 I 917 SUB T1 10 00917
000402 027000 I 918 LDB TO 10 00918
000403 001020 A 919 JNZ *+4 10 00919 INITIALIZE VALUE
000404 000407 R
000405 001010 A 920 JAZ DON2 10 00920 MODE CORRECT
000406 000424 R
000407 010425 A 921 LDA BS4 10 00921 (020)
000410 002000 A 922 CALL CIT 10 00922
000411 003040 R
000412 017000 I 923 LDA T1 10 00923
000413 057000 I 924 STA IM 10 00924
000414 002000 A 925 CALL MODE 10 00925 CORRECT MODE
000415 002552 R
000416 027000 I 926 LDB TO 10 00926
000417 001020 A 927 JNZ* DON1 10 00927 INITIALIZE REQUIRES NO TEMP STORE
000420 100372 R
000421 047000 I 928 INR MR+1 10 00928 SET DON FLAG
000422 002000 A 929 CALL GTS 10 00929
000423 002323 R
000424 017000 I 930 DON2 LDA I 10 00930
000425 001000 A 931 JMP* DON1 10 00931
000426 100372 R
932 ***** EJECT ***** 10 00932
933 ***** 10 00933
934 ***** 10 00934
935 ***** PROCESS DO STATEMENT (DDP) ***** 10 00935
936 ***** 10 00936
937 ***** FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENT: ***** 10 00937
938 ***** 'DO N V=L,H,I' N=TARGET STATEMENT NUMBER ***** 10 00938
939 ***** 10 00939

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940 *          V=DO VARIABLE          * 10 00940
941 *          L=INITIAL VALUE OF V   * 10 00941
942 *          H=UPPER LIMIT VALUE OF V * 10 00942
943 *          I=INCREMENT VALUE OF V  * 10 00943
944 *
945 * ENTRY: DIRECT FROM STS AFTER FINDING PATTERN '..=OP, * 10 00944
946 *
947 * EXIT : DIRECT TO STYN            * 10 00946
948 *
949 * ERRORS: TER18 IF TARGET STATEMENT PRECEDES DO * 10 00949
950 *          TERS  IF STATEMENT DOES NOT START WITH DO * 10 00950
951 *
952 * *****
000427 010422 A 954 DDP   LDA    K2
000430 002000 A 955       CALL   IAC
000431 077653 R
000432 144057 A 956       SUB    DDT1
000433 001016 A 957       JANZ   TERS
000434 077753 R
000435 002000 A 958       CALL   INS
000436 077672 R
000437 057000 I 959       STA    TO      SAVE POINTER TO TARGET STMT. MD.
000440 017000 I 960       LDA    AT
000441 005311 A 961       DAR
000442 001010 A 962       JAZ    TER18   TARGET STATEMENT PRECEEDS 'DO'
000443 077763 R
000444 002000 A 963       CALL   RCH
000445 077731 R
000446 002000 A 964       CALL   IIN
000447 002535 R
000450 017000 I 965       LDA    NT
000451 001016 A 966       JANZ   TER11   NOT VARIABLE
000452 077753 R
000453 010000 L 967       LDA    '='
000454 002000 A 968       CALL   TST
000455 077772 P
000456 017000 I 969       LDA    TO      RELOAD PTR TO TARGET STMT
000457 002000 A 970       CALL   DDI     INPUT DO PARAMETERS
000460 000270 R
000461 002000 A 971       CALL   DON     OUTPUT DO INITIALIZE CODE
000462 000325 R
000463 001000 A 972       JMP    ILT
000464 077666 R
973       EJECT
974 * *****
975 *
976 *          D O T E R M I N A T E ( D O T ) * 10 00976
977 *
978 * FUNCTION: TO OUTPUT CODING TO PROCESS END OF A DO LOOP * 10 00978
979 *
980 * ENTRY: D=ADDRESS OF ENTRY IN DO TABLE * 10 00980
981 *
982 * EXIT : DT=DT+5 TO WIPE OUT ENTRY * 10 00982
983 *          CODING OUTPUT: * 10 00983
984 *
985 *          JMPM $DO * 10 00985
986 *          DATA DO INCREMENT ADDR * 10 00986
987 *          DATA DO VARIABLE ADDR * 10 00987
988 *          DATA DO LIMIT ADDR * 10 00988
989 *          DATA DO LOOP START ADDRESS * 10 00989
990 *
991 * *****
000465 000000 A 993 DOT   ENTRY
000466 002000 A 994       CALL   LDX
000467 077701 R
000470 017000 I 995       LDA    DT
000471 120465 A 996       ADD    FIVE     CLEAR ENTRY FROM DO TABLE
000472 057000 I 997       STA    DT
000473 017000 I 998       LDA    DV
000474 057000 I 999       STA    I
000475 002000 A 1000      CALL   LAX
000476 077700 R
000477 027000 I 1001      LDB    IM
000500 005322 A 1002      DBR
000501 005322 A 1003      DBR
000502 006010 A 1004      LDAI   'D2'
000503 142262 A
000504 001026 A 1005      JBNZ   DDT1+1    DP-INTEGERS
000505 000513 R
000506 017000 I 1006      LDA    FPCW
000507 006404 A 1007      BT     04,DDT2   GO IF FIRMWARE FLOATING ON
000510 000517 R
000511 006010 A 1008      LDAI   'DO'
000512 142317 A
000513 002000 A 1009 DOT1  BES    0
000514 077613 R 1010      CALL   CAN     OUTPUT 'JMPM $DO'
000515 001000 A 1011      JMP    DDT3
000516 000535 R
000517 017000 I 1012 DOT2  LDA    DPCA
000520 147000 I 1013      SUB    DI

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000521 001016 A 1014 JANZ DDT2A INCREMENT=1 ? FF 10 01014
000522 000531 R
000523 006010 A 1015 LDAI F$DDI1 YES FF 10 01015
000524 105027 A
000525 002000 A 1016 CALL DAB 10 01016
000526 077710 R
000527 001000 A 1017 JMP DDT4 FF 10 01017
000530 000542 R
000531 006010 A 1018 DDT2A LDAI F$DDI STANDARD WCS DD FF 10 01018
000532 105035 A
000533 002000 A 1019 CALL DAB 10 01019
000534 077710 R
000535 1020 DDT3 BSS 0 10 01020
000536 017000 I 1021 LDA DI 10 01021
000537 057000 I 1022 STA I 10 01022
000538 005001 A 1023 TZA 10 01023
000539 002000 A 1024 CALL OUT 'DATA DD-INCREMENT' 10 01024
000540 077720 R
000541 017000 I 1025 DDT4 LDA DV FF 10 01025
000542 057000 I 1026 STA I 10 01026
000543 005001 A 1027 TZA 10 01027
000544 002000 A 1028 CALL OUT 'DATA DD-VARIABLE' 10 01028
000545 077720 R
000546 017000 I 1029 LDA DH 10 01029
000547 057000 I 1030 STA I 10 01030
000548 005001 A 1031 TZA 10 01031
000549 002000 A 1032 CALL OUT 'DATA DD-LIMIT' 10 01032
000550 077720 R
000551 017000 I 1033 LDA DR 10 01033
000552 002000 A 1034 CALL OUT 'DATA DD-LOOP-START-ADDRESS' 10 01034
000553 077715 R
000554 001000 A 1035 JMP* DDT EXIT 10 01035
000555 100465 R
1036 EJECT PD 10 01036
1037 ***** PD 10 01037
1038 * PD 10 01038
1039 * ENCODE / DECODE PROCESSOR PD 10 01039
1040 * PD 10 01040
1041 * FUNCTION: TO PROCESS THE FORTRAN STATEMENTS ENCODE/DECODE PD 10 01041
1042 * PD 10 01042
1043 * ENTRY: DIRECT FROM SID PD 10 01043
1044 * PD 10 01044
1045 * EXIT: TO READ/WRITE PROCESSOR FOR LIST PROCESSING PD 10 01045
1046 * PD 10 01046
1047 ***** PD 10 01047
000561 006010 A 1049 DEC LDAI 'DQ' DECODE ENTRY 10 01049
000562 142321 A
000563 001000 A 1050 JMP ENCO0 10 01050
000564 000567 R
000565 006010 A 1051 ENC LDAI 'EQ' ENCODE ENTRY 10 01051
000566 142721 A
000567 057000 I 1052 ENCO0 STA NAME 10 01052
000570 002000 A 1053 CALL OIL 10 01053
000571 002735 R
000572 002000 A 1054 CALL CTS 10 01054
000573 077617 R
000574 002000 A 1055 CALL EXA 10 01055
000575 077646 R
000576 001004 A 1056 JAN ENCO2 FORMAT STATEMENT NUMBER PD 10 01056
000577 000604 R
000600 002000 A 1057 CALL IAR PD 10 01057
000601 002406 R
000602 001000 A 1058 JMP ENCO4 PD 10 01058
000603 000611 R
000604 002000 A 1059 ENCO2 CALL ISN 10 01059
000605 077674 R
000606 002000 A 1060 CALL DSM 10 01060
000607 077622 R
000610 005001 A 1061 TZA PD 10 01061
000611 002000 A 1062 ENCO4 CALL OUT 10 01062
000612 077720 R
000613 002000 A 1063 CALL CTS 10 01063
000614 077617 R
000615 002000 A 1064 CALL IAR PD 10 01064
000616 002406 R
000617 002000 A 1065 CALL OUT 'DATA ARRAY-POINTER' 10 01065
000620 077720 R
000621 017000 I 1066 LDA TC PD 10 01066
000622 140000 L 1067 SUB =', ' 10 01067
000623 001010 A 1068 JAZ ENCO6 PD 10 01068
000624 000632 R
000625 005001 A 1069 TZA PD 10 01069
000626 002000 A 1070 CALL DAB 'DATA 0' FOR NO VARIABLE 10 01070
000627 077710 R
000630 001000 A 1071 JMP ENCO8 PD 10 01071
000631 000637 R
000632 002000 A 1072 ENCO6 CALL IVA 10 01072
000633 077675 R
000634 005001 A 1073 TZA PD 10 01073
000635 002000 A 1074 CALL OUT 'DATA INT.-VAR.-POINTER' 10 01074
000636 077720 R

```



000637	002000	A	1075	ENC08	CALL	R10				10	01075
000640	077732	R									
000641	001000	A	1076		JMP	WR13	PROCESS DATA LIST			PD	10 01076
000642	005746	R									
			1077		EJEC						10 01077
			1079	*	ETT	ENTER TRIAD					10 01079
000643	000000	A	1081	ETT	ENTRY						10 01081
000644	017000	I	1082		LDA	JT					10 01082
000645	120464	A	1083		ADD	THREE					10 01083
000646	057000	I	1084		STA	JT					10 01084
000647	057000	I	1085		STA	J					10 01085
000650	147000	I	1086		SUB	KT					10 01086
000651	002002	A	1087		JAPM	TOP					10 01087
000652	077770	R									
000653	005001	A	1088		TZA						10 01088
000654	057000	I	1089		STA	SF	SF:0				10 01089
000655	057000	I	1090		STA	TU	TRIAD USE = 0				10 01090
000656	027000	I	1091		LDB	D2					10 01091
000657	017000	I	1092		LDA	DP					10 01092
000660	006140	A	1093		SUBI	017	'E'				10 01093
000661	000017	A									
000662	001010	A	1094		JAZ	*+6					10 01094
000663	000670	R									
000664	006140	A	1095		SUBI	035	'.'				10 01095
000665	000035	A									
000666	001010	A	1096		JANZ	*+3					10 01096
000667	000671	R									
000670	027000	I	1097		LDB	D1	USE D1 FOR MODE OF EXPONENTIATE				10 01097
000671	005021	A	1098		TEA						10 01098
000672	002000	A	1099		CALL	GDM					10 01099
000673	002127	R									
000674	057000	I	1100		STA	TH	TRIAD MODE				10 01100
000675	017000	I	1101		LDA	UP					10 01101
000676	006140	A	1102		SUBI	035	'='				10 01102
000677	000055	A									
000700	001010	A	1103		JANZ	ET4					10 01103
000701	000733	R									
000702	027000	I	1104		LDB	IT	TEST FOR POSSIBLE PRIOR USE				10 01104
000703	005021	A	1105	ET4	TEA						10 01105
000704	120422	A	1106		ADD	K2					10 01106
000705	005113	A	1107		INCR	013	(A)=(B)=(A+1)				10 01107
000706	147000	I	1108		SUB	JT					10 01108
000707	001002	A	1109		JAP	ET4	TABLE SCANNED				10 01109
000710	000733	R									
000711	016002	A	1110		LDA	0.8					10 01110
000712	150433	A	1111		ANA	BS10					10 01111
000713	001010	A	1112		JANZ	ET1	USE FLAG SET				10 01112
000714	000703	R									
000715	016002	A	1113		LDA	2.8					10 01113
000716	150000	L	1114		ANA	=0176					10 01114
000717	006140	A	1115		SUBI	0104					10 01115
000720	000104	A									
000721	001010	A	1116		JAZ	ET2	INDEX (X)				10 01116
000722	000725	R									
000723	016000	A	1117		LDA	0.8					10 01117
000724	002000	A	1118		JAPM	ET6					10 01118
000725	000743	R									
000726	016001	A	1119	ET2	LDA	1.8					10 01119
000727	002000	A	1120		JAPM	ET6					10 01120
000730	000743	R									
000731	001000	A	1121		JMP	ET1	NO USE OF THIS TRIAD				10 01121
000732	000703	R									
000733	002000	A	1122	ET4	CALL	ET2					10 01122
000734	007377	R									
000735	017000	I	1123		LDA	0BY					10 01123
000736	127000	I	1124		ADD	IT					10 01124
000737	147000	I	1125		SUB	JT					10 01125
000740	057000	I	1126		STA	D1	INDEPENDANT D1				10 01126
000741	001000	A	1127		JMP*	ETT					10 01127
000742	100643	R									
000743	000000	A	1128	ET6	ENTRY		(A)=POINTER VALUE				10 01128
000744	147000	I	1129		SUB	D2					10 01129
000745	001010	A	1130		JANZ*	ET5	NOT USED				10 01130
000746	100743	R									
000747	016002	A	1131		LDA	2.0	SET USE FLAG				10 01131
000750	110477	A	1132		ORA	010					10 01132
000751	056002	A	1133		STA	2.5					10 01133
000752	001000	A	1134		JMP	ETT					10 01134
000753	000703	R									
			1135		EJECT						10 01135
			1136	*	*****						10 01136
			1137	*							10 01137
			1138	*	E X P R E S S I O N P R O C E S S O R ( E X P )						10 01138
			1139	*							10 01139
			1140	*	FUNCTION: EXP SCANS EXPRESSIONS, LEFT TO RIGHT, PICKING UP						10 01140
			1141	*	DOPEND/OPERATOR PAIRS AND STORING THEM IN THE						10 01141
			1142	*	EXPRESSION TABLE. EXP THEN CALLS SCM TO SCAN THE						10 01142
			1143	*	EXPRESSION TABLE AND BUILD THE TRIAD TABLE. THEN EXP						10 01143
			1144	*	CALLS DTR TO GENERATE CODE FROM THE TRIAD TABLE.						10 01144
			1145	*							10 01145
			1146	*	ENTRY: AS SHOWN IN TABLE BELOW, WHERE:						10 01146

```

1147 *
1148 *   ARN: ARRAY NAME
1149 *   EXP: EXPRESSION
1150 *   ORN: OPERAND NAME
1151 *   @ : OPERATOR
1152 *   S:  ARRAY SUBSCRIPT
1153 *   SFN: STATEMENT FUNCTION NAME
1154 *   SRN: SUBROUTINE NAME
1155 *   VRN: VARIABLE NAME

```

```

1156 *
1157 *   XXX↑ GIVES SCAN ROUTINE NAME XXX AND SCAN POSITION

```

STRING	A	I	IM	TC	COMMENT
VRN = EXP	-2	VRN	VRN	'='	
INA ↑					
= ORN@	0	ORN	ORN	'@'	
INI ↑					
= @	0	---	0	'@'	
INIT					
ARN( S ) = EXP	-2	ARN	ARN	'('	
INAT					
CALL SRN( ...	-1	SRN	SRN	'('	
INAT					
IF( ORN@	0	ORN	ORN	'@'	
INI↑					
IF( @	0	---	0	'@'	
INIT					
READ/WRITE(U,F) ...ARN(	1	ARN	ARN	'('	
INAT					
SFN(... ) = EXP	-2	0	SFN	'='	IU=0
↑					

```

1188 * EXIT : CODE OUTPUT BY DTR
1189 *
1190 * ERRORS: TER1: INVALID EXPRESSION STRUCTURE
1191 *          TER7: INVALID ARRAY SUBSCRIPT
1192 *          TER13: INVALID UNARY +,-
1193 *          TER15: INVALID =
1194 *          ER12: MISSPELLED OP
1195 *

```

```

1196 * *****

```

EXP	ENTRY	T3	TYPE	
000754	000000	A	1198	EXP
000755	057000	I	1199	STA
000756	017000	I	1200	LDA
000757	140466	A	1201	SUB
000760	057000	I	1202	STA
000761	057000	I	1203	STA
000762	005014	A	1204	TAX
000763	005001	A	1205	TZA
000764	055005	A	1206	STA
000765	055004	A	1207	STA
000766	057000	I	1208	STA
000767	057000	I	1209	STA
000770	057000	I	1210	STA
000771	057000	I	1211	STA
000772	057000	I	1212	STA
000773	057000	I	1213	STA
000774	017000	I	1214	LDA
000775	055002	A	1215	STA
000776	006010	A	1216	LDAI
000777	000132	A		
001000	055003	A	1217	STA
001001	017000	I	1218	LDA
001002	001010	A	1219	JAZ
001003	001024	R		
001004	005001	A	1220	TZA
001005	057000	I	1221	STA
001006	017000	I	1222	LDA
001007	140422	A	1223	SUB
001010	001004	A	1224	JAN
001011	001106	R		
001012	017000	I	1225	LDA
001013	140000	L	1226	SUB
001014	001010	A	1227	JAZ
001015	001520	R		
001016			1228	EXLK
001016	017000	I	1229	LDA
001017	140000	L	1230	SUB
001020	001010	A	1231	JAZ
001021	001136	R		
001022	001000	A	1232	JMP
001023	077745	R		

001024	017000	I	1233	EXP3	LDA	TC				10	01233
001025	006140	A	1234		SUBI	0246	'&'			10	01234
001026	000246	A									
001027	001010	A	1235		JAZ	EXP31				10	01235
001030	001071	R									
001031	140422	A	1236		SUB	TWO				10	01236
001032	001010	A	1237		JAZ	EXP6	'<'			10	01237
001033	001057	R									
001034	140422	A	1238		SUB	TWO				10	01238
001035	001010	A	1239		JAZ	EXPJ	'*'			10	01239
001036	001365	R									
001037	005311	A	1240		DAR					10	01240
001040	001010	A	1241		JAZ	EXP2	'+'			10	01241
001041	001075	R									
001042	140422	A	1242		SUB	TWO				10	01242
001043	001010	A	1243		JAZ	EXP2	'-'			10	01243
001044	001076	R									
001045	120468	A	1244		ADD	SIX				10	01244
001046	001010	A	1245		JAZ	EXLH	'*'			10	01245
001047	001279	R									
001050	006140	A	1246		SUBI	041				10	01246
001051	000041	A									
001052	001010	A	1247		JAZ	EXLH	'H'			10	01247
001053	001279	R									
001054	006140	A	1248		SUBI	0147414	'DT'			10	01248
001055	147414	A									
001056	001010	A	1249		JANZ	TER1				10	01249
001057	077745	R									
001060	017000	I	1250		LDA	PC+2				10	01250
001061	006140	A	1251		SUBI	'N'				10	01251
001062	120316	A									
001063	002010	A	1252		JANZM	SR12				10	01252
001064	077633	R									
001065	002000	A	1253		JNPM	EXLU	SET T7, EH+1			V 10	01253
001066	001333	R									
001067	001000	A	1254		JMP	EXPK				V 10	01254
001070	001446	R									
001071	057000	I	1255	EXP31	STA	EH	PROCESS STATEMENT-NUMBER IN CALL			10	01255
001072	002000	A	1256		CALL	ISM				10	01256
001073	077674	R									
001074	001000	A	1257		JMP	EXLK				10	01257
001075	001010	R									
001076	017000	I	1258	EXP2	LDA	EH+1				10	01258
001077	147000	I	1259		SUB	EH				10	01259
001100	001004	A	1260		JAN	TER13				10	01260
001101	077757	R									
001102	005001	A	1261		TZA					10	01261
001103	057000	I	1262		STA	I				10	01262
001104	057000	I	1263		STA	CM				10	01263
001105	057000	I	1264		STA	DP				10	01264
001106	006020	A	1265	EXP4	LDRI	010				10	01265
001107	000013	A									
001110	017000	I	1266		LDA	TC				10	01266
001111	140000	L	1267		SUB	'+'				10	01267
001112	001010	A	1268		JAZ	EXP7				10	01268
001113	001377	R									
001114	140422	A	1269		SUB	TWO	'-'			10	01269
001115	001010	A	1270		JAZ	EXP7				10	01270
001116	001377	R									
001117	020000	L	1271		LDB	0015				10	01271
001120	120464	A	1272		ADD	THREE	'*'			10	01272
001121	001010	A	1273		JAZ	EXP7				10	01273
001122	001377	R									
001123	140465	A	1274		SUB	FIVE	'/'			10	01274
001124	001010	A	1275		JAZ	EXP7				10	01275
001125	001377	R									
001126	006140	A	1276		SUBI	010	'='			10	01276
001127	000016	A									
001130	001010	A	1277		JAZ	EXP8				10	01277
001131	001452	R									
001132	017000	I	1278		LDA	TC+1				10	01278
001133	140000	L	1279		SUB	'*'				10	01279
001134	001010	A	1280		JAZ	EXL6	LOGICAL OR RELATIONAL			V 10	01280
001135	001204	R									
001136	017000	I	1281	EXP5	LDA	CM+1				V 10	01281
001137	001010	A	1282		JAZ	EXPH	TERMINATE IF BASE=0			V 10	01282
001140	001462	R									
001141	002000	A	1283		JNPM	TXLV	GET EFF. T7EX-(EH+1)			V 10	01283
001142	001303	A									
001143	001004	A	1284		JAN	EXL3				V 10	01284
001144	001174	R									
001145	054724	A	1285	EXL4	STA	T7EX				V 10	01285
001146	017000	I	1286		LDA	CM+1				V 10	01286
001147	140425	A	1287		SUB	020				V 10	01287
001150	057000	I	1288		STA	CM+1				V 10	01288
001151	120471	A	1289		ADD	010				10	01289
001152	057000	I	1290		STA	CM				10	01290
001153	014715	A	1291		'D'	T7EX				V 10	01291
001154	001010	A	1292		JANZ	'*+'				10	01292
001155	001160	R									
001156	006010	A	1293		LIAR	061	.NUT. FORCE			10	01293

Address	Code	Label	Op/Arg	Comment	Line
001157	000061	A			
001160	057000	I 1294	STA OP		V 10 01294
001161	002000	A 1295	JMPM SEX	STORE EXPRESSION ENTRIES	V 10 01295
001162	006704	R			
001163	002000	A 1296	CALL DEK		10 01296
001164	077620	R			
001165	005001	A 1297	TZA		V 10 01297
001166	054702	A 1298	STA TOEX		V 10 01298
001167	057000	I 1299	STA EH	RELATIONAL FLAG	V 10 01299
001170	010461	A 1300	LDA NEG		10 01300
001171	057000	I 1301	STA I		V 10 01301
001172	001000	A 1302	JMP EXP4		V 10 01302
001173	001106	R			
001174		1303 EXL3	BSS 0		V 10 01303
001174	017000	I 1304	LDA TC		10 01304
001175	140000	L 1305	SUB =*,*		10 01305
001176	001010	A 1306	JAZ EXP9		10 01306
001177	001473	R			
001200	002000	A 1307 EXPR	CALL RID		10 01307
001201	077732	R			
001202	001000	A 1308	JMP EXP4		10 01308
001203	001106	R			
001204	020424	A 1309 EXLG	LDB EIGHT	CHECK FOR RELATIONAL/LOGICAL OPS	10 01309
001205	017000	I 1310	LDA TC		10 01310
001206	006146	A 1311	SUBE EXLG1-1.8		10 01311
001207	001216	R			
001210	001010	A 1312	JAZ EXLG2		10 01312
001211	001227	R			
001212	005322	A 1313	DBR		10 01313
001213	001026	A 1314	JBNZ EXLG+1		10 01314
001214	001205	R			
001215	001000	A 1315	JMP TER1	ILLEGAL OPERATOR	10 01315
001216	077745	R			
001217	147305	A 1316 EXLG1	DATA 'NE'		10 01316
001220	142721	A 1317	DATA 'EQ'		10 01317
001221	146324	A 1318	DATA 'LT'		10 01318
001222	143705	A 1319	DATA 'GE'		10 01319
001223	147722	A 1320	DATA 'DR'		10 01320
001224	147304	A 1321	DATA 'ND'		10 01321
001225	146305	A 1322	DATA 'LE'		10 01322
001226	143724	A 1323	DATA 'GT'		10 01323
001227	005021	A 1324 EXLG2	TBA		10 01324
001230	006120	A 1325	ADDI 067	MAKE LOG/REL OPERATOR	10 01325
001231	000067	R			
001232	004460	A 1326	LLRL 16	(A):(B)	10 01326
001233	140465	A 1327	SUB FIVE		10 01327
001234	001004	A 1328	JAN EXL0	RELATIONAL	10 01328
001235	001241	R			
001236	140422	A 1329	SUB TWO		10 01329
001237	001004	A 1330	JAN EXL1	LOGICAL	10 01330
001240	001253	R			
001241	005001	A 1331 EXL0	TZA	PROCESS RELATIONAL	10 01331
001242	144626	A 1332	SUB TOEX		10 01332
001243	001004	A 1333	JAN TER1		10 01333
001244	077745	R			
001245	064623	A 1334	STB TOEX		V 10 01334
001246	002000	A 1335	JMPM EXLU	SET T7, EH+1	V 10 01335
001247	001333	R			
001250	010000	L 1336	LDA =046		10 01336
001251	057000	I 1337	STA TC		V 10 01337
001252	020443	A 1338	LDB BR2	-5	10 01338
001253	001000	A 1339	JMP EXP7		V 10 01339
001254	001377	R			
001255	002000	A 1340 EXL1	JMPM EXLV	GET EFF. T7EX-(EH+1)	10 01340
001256	001323	R			
001257	001002	A 1341	JAP EXL4	TERMINATE	V 10 01341
001260	001145	R			
001261	067000	I 1342	STB TC		V 10 01342
001262	004461	A 1343	LLRL \$BIT+1		V 10 01343
001263	006140	A 1344	SUBI 0163		V 10 01344
001264	000163	R			
001265	005012	A 1345	TAB		V 10 01345
001266	001000	A 1346	JMP EXP7		V 10 01346
001267	001377	R			
001270	017000	I 1347 EXLH	LDA RL		V 10 01347
001271	054022	A 1348	STA EXLJ+1		V 10 01348
001272	002000	A 1349	CALL DTJ		10 01349
001273	077717	R			
001274	005003	A 1350	ZERO 3	DEFINE LOC OF STRING	V 10 01350
001275	002000	A 1351	CALL ASS		10 01351
001276	077612	R			
001277	017000	I 1352	LDA RL		V 10 01352
001300	005102	A 1353	INCR 2		V 10 01353
001301	002000	A 1354	CALL UFT		10 01354
001302	077621	R			
001303	002000	A 1355 EXLI	CALL IHW		10 01355
001304	077663	R			
001305	002000	A 1356	CALL OAB		10 01356
001306	077710	R			
001307	017000	I 1357	LDA HCC		V 10 01357
001310	057000	I 1358	STA EH	ZERO EH	V 10 01358

Address	Hex	Op	Label	Op Code	Comment	Page	Line
001311	001016	A		JANZ	EXLI		10 01359
001312	001303	A					
001313	006010	A	1360	EXLJ	LDAI	0-0	V 10 01360
001314	000000	A					
001315	002000	A	1361		CALL	DSR	10 01361
001316	077711	A					
001317	002000	A	1362		CALL	ICR	10 01362
001320	077654	A					
001321	001000	A	1363		JMP	EXLK	V 10 01363
001322	001016	A					
001323	000000	A	1364	EXLV	ENTR	GET EFF. T7EX-(EH+1)	V 10 01364
001324	000000	A	1365		JMPM	T7 EQUIV. OF EH+1	V 10 01365
001325	001345	A					
001326	005011	A	1366		CPA	NEGATE	V 10 01366
001327	003111	A	1367		IAR		V 10 01367
001330	124501	A	1368		ADD	T7EX	V 10 01368
001331	001000	A	1369		JMP*	EXLV	V 10 01369
001332	101327	A					
001333	000000	A	1370	EXLU	ENTR	SET T7, EH+1	V 10 01370
001334	017000	A	1371		LDA	EH+1	V 10 01371
001335	120400	A	1372		ADD	#20	V 10 01372
001336	057000	A	1373		STA	EH+1	V 10 01373
001337	002000	A	1374		JMPM	EXLS	V 10 01374
001340	001345	A					
001341	124500	A	1375		ADD	T7EX	V 10 01375
001342	054500	A	1376		STA	T7EX	V 10 01376
001343	001000	A	1377		JMP*	EXLU	V 10 01377
001344	101336	A					
001345	000000	A	1378	EXLS	ENTR		10 01378
001346	017000	A	1379		LDA	EH+1	10 01379
001347	004000	A	1380		LCRA	4	10 01380
001350	114000	A	1381		ORA	EXLT	10 01381
001351	054000	A	1382		STA	#+2	10 01382
001352	005101	A	1383		INCR	1	10 01383
001353	004000	A	1384		LRLA	0	10 01384
001354	001000	A	1385		JMP*	EXLS	10 01385
001355	101345	A					
001356	004000	A	1386	EXLT	LRLA	0	10 01386
001357	017000	A	1387	EXP6	LDA	EH+1	10 01387
001360	120400	A	1388		ADD	#20	10 01388
001361	057000	A	1389		STA	EH+1	10 01389
001362	057000	A	1390		STA	#15	V 10 01390
001363	001000	A	1391		JMP	EXPK	10 01391
001364	001446	A					
001365	017000	A	1392	EXPJ	LDA	DP	10 01392
001366	140000	A	1393		SUB	#47	10 01393
001367	001016	A	1394		JANZ	TER1	10 01394
001370	077740	A					
001371	047000	A	1395		IAR	0	10 01395
001372	047000	A	1396		JMP	0	10 01396
001373	010470	A	1397		LDA	#17	10 01397
001374	047000	A	1398		IAR	0	10 01398
001375	001000	A	1399		JMP	EXPL	10 01399
001376	001441	A					
001377	067000	A	1400	EXP7	STB	#4	10 01400
001400	017000	A	1401		LDA	EH+1	10 01401
001401	127000	A	1402		SUB	#3	10 01402
001402	001000	A	1403		JAN	TER1	10 01403
001403	077745	A					
001404	017000	A	1404	EXP8	LDA	EH+1	10 01404
001405	127000	A	1405		ADD	#4	10 01405
001406	057000	A	1406	EXPM	STA	#9	10 01406
001407	017000	A	1407		LDA	#1	10 01407
001410	057000	A	1408		STA	#3	10 01408
001411	140400	A	1409		SUB	#56	10 01409
001412	001000	A	1410		JMP	EXPL+1	10 01410
001413	001442	A					
001414	030400	A	1411		LDA	#10	10 01411
001415	006010	A	1412	EXPM2	LDAE	EXPM4-1,X	10 01412
001416	001427	A					
001417	004500	A	1413		CLR	0	10 01413
001420	147000	A	1414		SUB	#1	10 01414
001421	001016	A	1415		JMP	EXPL-1	10 01415
001422	001440	A					
001423	005011	A	1416		CPA		10 01416
001424	001000	A	1417		JMP	EXPM2	10 01417
001425	001000	A					
001426	001000	A	1418		SUB	TER1	10 01418
001427	077745	A					
001430	125445	A	1419	0	EXPM4	013	10 01419
001431	126440	A	1420			#+1,045	10 01420
001432	125047	A	1421			#+1,046	10 01421
001433	127450	A	1422			#+1,047	10 01422
001434	127450	A	1423			#+1,050	10 01423
001435	124050	A	1424			#+1,052	10 01424
001436	124050	A	1425			#+1,053	10 01425
001437	126050	A	1426			#+1,054	10 01426
001438	126450	A	1427			#+1,055	10 01427
001440	004450	A	1428		EXPL	0	10 01428
001441	057000	A	1429		JMP	EXM	10 01429
001442	002000	A	1430		JMPM	EXM	10 01430

GET EFF. T7EX-(EH+1)  
T7 EQUIV. OF EH+1

NEGATE  
ADD T7  
RETURN

SET T7, EH+1  
(EH+1)=(EH+1)+16

T7 EQUIV. OF EH+1

TO T7  
RETURN

PARENTHETIC COUNT

\* \* \*

'E'

DP ALREADY CONVERTED

CONVERT ASCII DP TO INTERNAL

FOUND

ILLEGAL OPERATOR

(A)=CONVERTED DP CODE

STORE EXPRESSION

Address	Code	Label	Operation	Operand	Comment	Line	Address
001443	006704	R					
001444	002000	A 1431	CALL	DEK		10	01431
001445	077620	R					
001446	002000	A 1432	EXP8 CALL	INI		10	01432
001447	077670	R					
001450	001000	A 1433	JMP	EXP1+1		10	01433
001451	001002	R					
001452	017000	I 1434	EXP8 LDA	T3	= SIGN CHECK	10	01434
001453	120422	A 1435	ADD	K2		10	01435
001454	057000	I 1436	STA	T3		10	01436
001455	127000	I 1437	ADD	EH+1		10	01437
001456	001010	A 1438	JAZ	EXPM		10	01438
001457	001406	R					
001460	001000	A 1439	JMP	TER15		10	01439
001461	077761	R					
001462	057000	I 1440	EXP8 STA	OP		10	01440
001463	002000	A 1441	JMPM	SEX	FINISHED, STORE EXPRESSION	10	01441
001464	006704	R					
001465	005001	A 1442	TZA			10	01442
001466	147000	I 1443	SUB	T3		10	01443
001467	002002	A 1444	JAPM	SCN		10	01444
001470	006372	R					
001471	001000	A 1445	JMP*	EXP		10	01445
001472	100754	R					
001473	017000	I 1446	EXP9 LDA	I		10	01446
001474	057000	I 1447	STA	T4		10	01447
001475	017000	I 1448	LDA	K		10	01448
001476	057000	I 1449	STA	T5		10	01449
001477	047000	I 1450	EXPP INR	K		10	01450
001500	047000	I 1451	INR	K		10	01451
001501	002000	A 1452	CALL	LEX		10	01452
001502	077702	R					
001503	017000	I 1453	LDA	EH+1		10	01453
001504	147000	I 1454	SUB	EH		10	01454
001505	001004	A 1455	JAN	EXPP		10	01455
001506	001477	R					
001507	001016	A 1456	JANZ	TER1		10	01456
001510	077745	R					
001511	057000	I 1457	STA	EH		10	01457
001512	017000	I 1458	LDA	T4		10	01458
001513	057000	I 1459	STA	I		10	01459
001514	017000	I 1460	LDA	T5		10	01460
001515	057000	I 1461	STA	K		10	01461
001516	001000	A 1462	JMP	EXPO		10	01462
001517	001404	R					
001520	017000	I 1463	EXPA LDA	EH+1	ARRAY/FUNCTION REFERENCE	10	01463
001521	120425	A 1464	ADD	K20		10	01464
001522	057000	I 1465	STA	EH+1		10	01465
001523	017000	I 1466	LDA	IU		10	01466
001524	140422	A 1467	SUB	K2	ARRAY	10	01467
001525	001010	A 1468	JAZ	*+6		10	01468
001526	001533	R					
001527	010000	L 1469	LDA	=",'		10	01469
001530	057000	I 1470	STA	TC		10	01470
001531	001000	A 1471	JMP	EXP7+1		10	01471
001532	001400	R					
001533	017000	I 1472	LDA	K	PROCESS ARRAYS	10	01472
001534	006140	A 1473	SUBI	021		10	01473
001535	000021	R					
001536	057000	I 1474	STA	K		10	01474
001537	005012	A 1475	TAB			10	01475
001540	147000	I 1476	SUB	JT		10	01476
001541	002004	A 1477	JANM	TBF		10	01477
001542	077770	R					
001543	017000	I 1478	LDA	I	SAVE EXPRESSION PARAMETERS	10	01478
001544	056003	A 1479	STA	3,B		10	01479
001545	017000	I 1480	LDA	EH+1	LEVEL	10	01480
001546	056004	A 1481	STA	4,B		10	01481
001547	017000	I 1482	LDA	T3	EXPRESSION TYPE	10	01482
001550	056005	A 1483	STA	5,B		10	01483
001551	014320	A 1484	LDA	T7EX	EFFECTIVE HIERARCHY	10	01484
001552	056006	A 1485	STA	6,B		10	01485
001553	014315	A 1486	LDA	T0EX	RELATIONAL FLAG	10	01486
001554	056007	A 1487	STA	7,B		10	01487
001555	017000	I 1488	LDA*	EXP20+1	EXP EXIT	10	01488
001556	056010	A 1489	STA	8,B		10	01489
001557	005001	A 1490	TZA			10	01490
001560	056002	A 1491	STA	2,B	DIMENSION COUNT	10	01491
001561	057000	I 1492	STA	T3		10	01492
001562	054306	A 1493	STA	T0EX		10	01493
001563	054306	A 1494	STA	T7EX		10	01494
001564	057000	I 1495	STA	EH+1		10	01495
001565	006010	A 1496	LDRI	EXP11		10	01496
001566	001575	R					
001567	057000	I 1497	STA*	EXP20+1	SET EXP EXIT	10	01497
001570	005001	A 1498	EXP10 TZA			10	01498
001571	057000	I 1499	STA	I		10	01499
001572	057000	I 1500	STA	EH		10	01500
001573	001000	A 1501	JMP	EXPL	PROCESS SUBSCRIPT	10	01501
001574	001441	R					
001575	037000	I 1502	EXP11 LDX	K		10	01502

Address	Hex	Op	Op2	Op3	Op4	Description	Line	Label
001576	045002	A	1503			INR 2*X		INCREMENT DIMENSION COUNT
001577	005041	A	1504			TNA		
001600	125002	A	1505			ADD 2*X		
001601	005010	A	1506			TAB		
001602	017000	I	1507			LDA I		EFFECTIVE POINTER
001603	006011	A	1508			STA 2+8		
001604	015001	A	1509			LDA 2*X		ARRAY POINTER
001605	007000	I	1510			STA I		
001606	002100	R	1511			CALL LAX		
001607	002100	R						
001610	007100	I	1512			LDM I		
001611	013012	A	1513			LDA 2*X		
001612	147001	I	1514			SUB HD		
001613	001017	A	1515			JAZ EXP12		
001614	001031	R						
001615	002000	R	1516			CALL CTS		
001616	007017	R						
001617	001000	I	1517			JMP EXP10		
001620	001070	R						
001621	005000	A	1518			STA 2*X		MAKE FINAL CALCULATION
001622	005011	A	1519			LTA 2*X		
001623	005000	I	1520			STA 2		OFFSET
001624	005000	I	1521			STA 2		CONSTANT FLAG
001625	005000	I	1522			STA 2		DIMENSION COUNTER
001626	005011	A	1523			LDA 2		
001627	005011	A	1524			LDA 2		TABLE POINTER
001628	007424	A	1525			STA 2		
001629	001700	I	1526			LDA 2		
001630	001700	I	1527			LDA 2		
001631	140447	A	1528			SUB SEVEN		
001632	001010	R	1529			JAZ EXP13		
001633	001051	R						
001637	054201	A	1531			STA 2		DUMMY ARRAY
001640	010470	A	1532			LDA NINE		
001641	000000	L	1533			DBE 0010		'A'
001642	002000	A	1534			CALL 00201		
001643	002034	R						
001644	017000	I	1535			LDA 2+1		
001645	001010	A	1536			JAZ EXP13		NOT DUMMY DIMENSIONS
001646	001051	R						
001647	005011	A	1537			DAR		
001650	007000	I	1539			STA 2		SET NO-CONSTANT FLAG
001651	007000	I	1539			LDA 2		
001652	006025	A	1540			DBE IP*X		DIMENSION POINTER
001653	177420	R						
001654	007000	I	1541			STA 2		
001655	010000	L	1542			LDA 0015		
001656	002000	L	1543			DBE 0047		***
001657	002000	D	1544			CALL 00201		MAKE DIMENSION MULTIPLY
001660	002034	R						
001661	017000	I	1545			LDA 2		
001662	047000	I	1546			INR 2		RAISE DIMENSION COUNT
001663	104200	A	1547			ABS 2		
001664	005011	A	1548			LDA 2		
001665	015010	A	1549			LDA 2*X		EFFECTIVE POINTER
001666	007000	I	1550			STA 2		
001667	002000	A	1551			CALL SUN		
001670	002100	R						
001671	140447	A	1552			SUB TWO		
001672	001010	A	1553			JAZ EXP135		NOT INTEGER
001673	001051	R						
001674	017000	I	1554			LDA 2		
001675	007000	I	1555			LTA 2		
001676	005000	A	1556			ST 2		EXP14
001677	001051	R						
001678	001051	R						
001679	147000	I	1557			SUB 2		
001680	001051	A	1558			JAZ EXP14		TRIAD POINTER
001681	001051	R						
001682	001051	R						
001683	001051	R						
001684	001051	A	1560			LDA 2*X		VARIABLE (NT=0)
001685	001051	A	1561			JAZ EXP14		
001686	001051	R						
001687	001051	R						
001688	001051	R						
001689	001051	R						
001690	001051	R						
001691	001051	R						
001692	001051	R						
001693	001051	R						
001694	001051	R						
001695	001051	R						
001696	001051	R						
001697	001051	R						
001698	001051	R						
001699	001051	R						
001700	001051	R						
001701	001051	R						
001702	001051	R						
001703	001051	R						
001704	001051	R						
001705	001051	R						
001706	001051	R						
001707	001051	R						
001708	001051	R						
001709	001051	R						
001710	001051	R						
001711	001051	R						
001712	001051	R						
001713	001051	R						
001714	001051	R						
001715	001051	R						
001716	001051	R						
001717	001051	R						
001718	001051	R						
001719	001051	R						
001720	001051	R						
001721	001051	R						
001722	001051	R						
001723	001051	R						
001724	001051	R						
001725	001051	R						
001726	001051	R						
001727	001051	R						
001728	001051	R						

Address	Op	Opnd	Label	Comment	Line	Page
001731	CALL	EXP21			10	01576
001732	R					
001733	JMP	EXP17			10	01577
001734	R					
001735	I	1578	EXP15	INR T6	10	01578
001736	A	1579		TZA	10	01579
001737	A	1580	EXP16	DAR	10	01580
001740	A	1581		LLSR 16	10	01581
001741	I	1582		MUL IS	10	01582
001742	A	1583		LASL 15	10	01583
001743	I	1584		ADD T5	10	01584
001744	I	1585		STA T5	10	01585
001745	A	1586		TZA	10	01586
001746	I	1587		LDB IS	10	01587
001747	I	1588		LDX T7	10	01588
001750	A	1589		MULE IS,X	10	01589
001751	R					
001752	I	1590		STB IS	10	01590
001753	I	1591	EXP17	LDA T7	10	01591
001754	I	1592		SUB ND	10	01592
001755	A	1593		JANZ EXP13	10	01593
001756	R					
001757	I	1594		STA T7	10	01594
001760	A	1595	EXP175	CALL LEX	10	01595
001761	R					
001762	I	1596		INR K	10	01596
001763	I	1597		INR K	10	01597
001764	I	1598		LDA DP	10	01598
001765	L	1599		SUB =047	10	01599
001766	A	1600		JAZ EXP175	10	01600
001767	R					
001770	I	1601		LDA T6	10	01601
001771	A	1602		JANZ EXP18	10	01602
001772	R					
001773	I	1603		LDA T5	10	01603
001774	I	1604		DRA IS+1	10	01604
001775	A	1605		JAZ EXP19	10	01605
001776	R					
001777	I	1606		LDA DPX	10	01606
002000	I	1607		STA I	10	01607
002001	A	1608		CALL DEK	10	01608
002002	R					
002003	A	1609	EXP18	LDA ONE	10	01609
002004	A	1610		TZB	10	01610
002005	A	1611		CALL EXP21	10	01611
002006	R					
002007	I	1612		LDA T5	10	01612
002010	A	1613		ADD TOEX	10	01613
002011	I	1614		STA I	10	01614
002012	A	1615		LDA TWO	10	01615
002013	A	1616		LDBI 042	10	01616
002014	A					
002015	A	1617		CALL EXP21	10	01617
002016	R					
002017	A	1618		LDX T7EX	10	01618
002020	A	1619		LDA 1,X	10	01619
002021	I	1620		STA I	10	01620
002022	A	1621		MERGE 03	10	01621
002023	A	1622		CALL EXP21	10	01622
002024	R					
002025	A	1623		CALL SCH	10	01623
002026	R					
002027	I	1624		LDX J	10	01624
002030	A	1625		LDA 2,X	10	01625
002031	A	1626		DRA ONE	10	01626
002032	A	1627		STA 2,X	10	01627
002033	A	1628	EXP19	LDX T7EX	10	01628
002034	A	1629		LDA 2,X	10	01629
002035	I	1630		STA EH+1	10	01630
002036	A	1631		LDA 3,X	10	01631
002037	I	1632		STA T3	10	01632
002040	A	1633		LDA 4,X	10	01633
002041	A	1634		STA T7EX	10	01634
002042	A	1635		LDA 5,X	10	01635
002043	A	1636		STA TOEX	10	01636
002044	A	1637		LDA 6,X	10	01637
002045	A	1638	EXP20	STAE EXP	10	01638
002046	R					
002047	A	1639		TXA	10	01639
002050	A	1640		ADD BM17	10	01640
002051	I	1641		STA K	10	01641
002052	A	1642		JMP EXPR	10	01642
002053	R					
002054	A	1643	EXP21	ENTRY	10	01643
002055	I	1644		STA EH	10	01644
002056	I	1645		STB DP	10	01645
002057	I	1646		LDA T7	10	01646
002060	A	1647		ASLA 4	10	01647
002061	I	1648		ADD EH	10	01648
002062	I	1649		STA EH	10	01649
002063	A	1650		CALL DEK	10	01650

(A)=OPERAND HIERARCHY; (B)=OPERATOR



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002064 077620 R
002065 002000 A 1651 CALL TEX 10 01651
002066 006704 P
002067 001000 A 1652 JMP* EXP21 10 01652
002070 102054 P
002071 000000 A 1653 TOEX DATA 0 10 01653
002072 000000 A 1654 TXEX DATA 0 10 01654
1655 SUBJECT 10 01655
1656 ***** 10 01656
1657 * 10 01657
1658 * DIRECT ACCESS FIND ( FND ) * 10 01658
1659 * 10 01659
1660 ***** 10 01660
002073 002000 A 1661 FND CALL STL 10 01661
002074 002735 P
002075 002000 A 1663 CALL FID 10 01663
002076 077733 P
002077 001000 A 1664 JMP EXT 10 01664
002100 077616 P
1665 SUBJECT 10 01665
1666 ***** 10 01666
1667 * 10 01667
1668 * GET DOUBLE VALUE ( GDBV ) * 10 01668
1669 * 10 01669
1670 ***** 10 01670
002101 000000 A 1671 GDBV ENTRY 10 01671
002102 002000 A 1672 CALL FID 10 01672
002103 007433 P
002104 017000 A 1674 LDA DI 10 01674
002105 140420 A 1675 AND 10 01675
002106 001016 A 1676 JMP2 10/5 IS MODE DP ? 10 01676
002107 000000 A 1677 YES 10 01677
002110 006010 A 1678 JMPN 04/1 CALL $ZI TO XFER SIGN WORD TO A-REG 10 01678
002111 155310 A
002112 002000 A 1679 JMP* 02/1 10 01679
002113 077513 P
002114 001000 A 1680 GDBV SUB Y0 10 01680
002115 102101 A 1681 AND* 02/1 DP INTEGER ? 10 01681
002116 143400 A 1682 LDA1 05/31 YES 10 01682
002117 001010 A 1683 CALL 0A2 MERGE B WITH A 10 01683
002118 005031 A
002119 077710 A 1684 JMP* 02/1 10 01684
002120 001000 A
002121 102101 A
1685 SUBJECT 10 01685
1686 ***** 10 01686
1687 * 10 01687
1688 * GET OPERAND MODE 10 01688
1689 * 10 01689
1690 * FUNCTION: TO GET THE MODE OF AN OPERAND 10 01690
1691 * 10 01691
1692 * ENTRY: (A) HAS OPERAND POINTER 10 01692
1693 * 10 01693
1694 * EXIT: (A)=MODE 10 01694
1695 * 10 01695
1696 ***** 10 01696
002127 000000 A 1697 GDBV ENTRY (A)=POINTER 10 01697
002130 005012 A 1698 02 10 01698
002131 142600 A 1699 02 10 01699
002132 001000 A 1700 01 10 01700
002133 002101 A 1701 01 10 01701
002134 016000 A 1702 01 10 01702
002135 000000 A 1703 02 EN GET ASSIGNMENT MODE 10 01703
002136 150000 A 1704 02 10 01704
002137 001000 A
002140 102101 A 1705 GDBV1 02/1 10 01705
002142 005012 A 1706 02 10 01706
002143 102101 A 1707 01 10 01707
002144 102101 A 1708 01 10 01708
002145 000000 A 1709 02 10 01709
002146 000000 A 1710 02 10 01710
002147 000000 A 1711 02 10 01711
002148 000000 A 1712 02 EN GET TRIAD MODE 10 01712
002150 102101 A 1713 02 EN 10 01713
002151 001000 A 1714 02 10 01714
0152 102127 A
1715 SUBJECT 10 01715
1716 ***** 10 01716
1717 * 10 01717
1718 * GO TO PROCESSOR ( GO T ) * 10 01718
1719 * 10 01719
1720 * FUNCTION: TO ACCESS THE FORTRAN SOURCE STATEMENT 'GO TO' * 10 01720
1721 * 10 01721
1722 * ENTRY: (A) FROM SID * 10 01722
1723 * 10 01723
1724 * EXIT: UNCONDITIONAL GO TO (GO TO) DIRECT TO IFU * 10 01724
1725 * UNPREDICTABLE GO TO (GO TO) (A) ENITS TO SCNN AFTER * 10 01725
1726 * ANSWER NO: * 10 01726

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1726 *
1727 *          LDA I (OR EQUIVALENT)
1728 *          JMPM SCG
1729 *          DATA N
1730 *          DATA I1
1731 *
1732 *
1733 *          DATA IN
1734 *
1735 *          ASSIGNED GO TO(GO TO I,(I1,...,IN): EXITS TO SCNM AFTER
1736 *          GENERATING:
1737 *
1738 *          LDX I (OR EQUIVALENT)
1739 *          STX #+2
1740 *          JMP
1741 *          0
1742 *
1743 *****
002153 002000 A 1745 GDT CALL EXA
002154 077646 R 1746 JAN IFU UNCONDITIONAL GO TO IF NUMERIC
002155 001004 A 1747 LDA DF
002156 002503 R 1748 JAN GDA ASSIGNED GO TO IF ALPHABETIC
002157 017000 I
002160 001004 A
002161 002263 R
1749 *****
1750 * PROCESS COMPUTED GO TO *
1751 *****
002162 002000 A 1752 CALL ICH
002163 077654 R
002164 002000 A 1753 CALL PTS
002165 077726 R
002166 017000 I 1754 LDA DT
002167 057000 I 1755 STA KT INITIALIZE KT TO TOP OF AVAILABLE CORE
1756 *****
1757 * LOOP TO INPUT/STORE STATEMENT NUMBERS *
1758 *****
002170 017000 I 1759 GDL1 LDA KT
002171 140422 A 1760 SUB K2 DECREMENT TABLE POINTER
002172 057000 I 1761 STA K
002173 002000 A 1762 CALL INS
002174 077672 R
002175 002000 A 1763 CALL SEX STORE I(POINTS TO STMT NUMB ENTRY)
002176 006704 R
002177 017000 I 1764 LDA TC
002200 140000 L 1765 SUB =', '
002201 001010 A 1766 JAZ GDL1 LOOP BACK FOR NEXT STMT NUMBER ON ', '
002202 002170 R
1767 *****
1768 * END OF STMT NO LIST *
1769 *****
002203 002000 A 1770 CALL RIO
002204 077732 R
002205 002000 A 1771 CALL CTS
002206 077617 R
002207 002000 A 1772 CALL IVA
002210 077675 R
002211 006010 A 1773 LDAI 06037
002212 006037 A
002213 002000 A 1774 CALL DAB 'LDXE'
002214 077710 R
002215 005001 A 1775 TZA
002216 002000 A 1776 CALL DUT 'DATA I'
002217 077720 R
002220 006010 A 1777 LDAI 06035
002221 006035 A
002222 002000 A 1778 CALL DAB 'LDXE ,X'
002223 077710 R
002224 017000 I 1779 LDA RL
002225 120464 A 1780 ADD THREE
002226 002000 A 1781 CALL DRE 'DATA RL+3'
002227 077715 R
002230 006010 A 1782 LDAI 06705
002231 006705 A
002232 002000 A 1783 CALL DAB 'I JMP 0,X'
002233 077710 R
002234 005001 A 1784 TZA
002235 002000 A 1785 CALL DAB 'DATA 0'
002236 077710 R
002237 017000 I 1786 LDA DT
002240 147000 I 1787 SUB KT
002241 004301 A 1788 ASRA 1
002242 002000 A 1789 CALL DAB GET COUNT N OF STATEMENT NUMBERS
002243 077710 R 'DATA N'
002244 017000 I 1790 LDA DT
1791 *****
1792 * LOOP TO OUTPUT LIST OF POINTERS TO STMT NOS *
1793 *****
002245 140422 A 1794 GDL2 SUB K2 DECREMENT TABLE POINTER
002246 057000 I 1795 STA K
002247 002000 A 1796 CALL LEX

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002250	077702	R							
002251	005001	A	1797	TZA					10 01797
002252	002000	A	1798	CALL	OUT		'DATA STATEMENT-NUMBER-ADDRESS'		10 01798
002253	077720	R							
002254	017000	I	1799	LDA	K				10 01799
002255	147000	I	1800	SUB	KT		TEST FOR FINISH		10 01800
002256	001010	A	1801	JAZ	STN				10 01801
002257	077743	R							
002260	017000	I	1802	LDA	K				10 01802
002261	001000	A	1803	JMP	GOL2		LOOP BACK TO OUTPUT NEXT STMT NO		10 01803
002262	002245	R							
			1804	*****					10 01804
			1805	* ASSIGNED GO TO *					10 01805
			1806	*****					10 01806
002263	002000	A	1807	GDA	CALL	IVA			10 01807
002264	077675	R							
002265	006010	A	1808	LDAI	035000				10 01808
002266	035000	A							
002267	002000	A	1809	CALL	OUT		'LDX I'		10 01809
002270	077720	R							
002271	006010	A	1810	LDAI	074001				10 01810
002272	074001	A							
002273	002000	A	1811	CALL	DAB		'STX *+2'		10 01811
002274	077710	R							
002275	002000	A	1812	CALL	DTJ				10 01812
002276	077717	R							
002277	017000	I	1813	LDA	TC				10 01813
002300	140463	A	1814	SUB	K77				10 01814
002301	001010	A	1815	JAZ	STN				10 01815
002302	077743	R							
002303	002000	A	1816	CALL	CTS				10 01816
002304	077617	R							
002305	002000	A	1817	CALL	ICH				10 01817
002306	077654	R							
002307	002000	A	1818	CALL	PTS				10 01818
002310	077726	R							
			1819	*****					10 01819
			1820	* LOOP TO SCAN LIST OF STMT NOS *					10 01820
			1821	*****					10 01821
002311	002000	A	1822	GOL3	CALL	INS			10 01822
002312	077672	R							
002313	017000	I	1823	LDA	TC				10 01823
002314	140000	L	1824	SUB	' , '				10 01824
002315	001010	A	1825	JAZ	GOL3		LOOP BACK FOR NEXT STMT NUMBER ON ' , '		10 01825
002316	002311	R							
002317	002000	A	1826	CALL	RID				10 01826
002320	077732	R							
002321	001000	A	1827	JMP	STN				10 01827
002322	077743	R							
			1828	EJECT					10 01828
			1829	*****					10 01829
			1830	* GENERATE TEMP STORE (GTS) *					10 01830
			1831	*****					10 01831
			1832	*****					10 01832
			1833	*****					10 01833
002323	000000	A	1835	GTS	ENTRY				10 01835
002324	017000	I	1836	LDA	MF				10 01836
002325	057000	I	1837	STA	TM				10 01837
002326	006120	A	1838	ADDI	' : 0 '				10 01838
002327	135260	A							
002330	057000	I	1839	STA	ID		'\$MODE'		10 01839
002331	017000	I	1840	LDA	MR+1				10 01840
002332	001016	A	1841	JANZ	GTS2		DON INPUT		10 01841
002333	002367	R							
002334	017000	I	1842	LDA	TSFL				10 01842
002335	004550	A	1843	LLSR	8				10 01843
002336	002000	A	1844	CALL	CBA				10 01844
002337	077614	R							
002340	057000	I	1845	STA	ID+1		STATEMENT FUNCTION COUNT		10 01845
002341	017000	I	1846	LDA	TSFL				10 01846
002342	047000	I	1847	INR	TSFL				10 01847
002343	150474	A	1848	ANA	BM77				10 01848
002344	002000	A	1849	GTS1	CALL	CBA			10 01849
002345	077614	R							
002346	057000	I	1850	STA	ID+2		'TEMP-STORE-COUNT'		10 01850
002347	010421	A	1851	LDA	DNE				10 01851
002350	057000	I	1852	STA	IU				10 01852
002351	010466	A	1853	LDA	SIX				10 01853
002352	057000	I	1854	STA	EL				10 01854
002353	005001	A	1855	TZA					10 01855
002354	057000	I	1856	STA	NT				10 01856
002355	002000	A	1857	CALL	ASI		MAKE TEMP-STORE-VARIABLE		10 01857
002356	077611	R							
002357	002000	A	1858	CALL	MNT				10 01858
002360	002652	R							
002361	005001	A	1859	TZA					10 01859
002362	057000	I	1860	STA	DITFL				10 01860
002363	002000	A	1861	CALL	DST				10 01861
002364	004234	R							
002365	001000	A	1862	JMP*	GTS				10 01862
002366	102323	R							

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002367 017000 I 1863 GTS2 LDA DPX PROCESS DO CALL 10 01863
002370 147000 I 1864 SUB D 10 01864
002371 004560 A 1865 LLSR 16 10 01865
002372 057000 I 1866 STA MR+1 TURN OFF FLAG 10 01866
002373 170465 A 1867 DIV FIVE 10 01867
002374 005021 A 1868 TBA 10 01868
002375 002000 A 1869 CALL CBA 10 01869
002376 077614 R
002377 057000 I 1870 STA ID+1 DO LOOP NEST LEVEL 10 01870
002400 017000 I 1871 LDA ID 10 01871
002401 120431 A 1872 ADD BSS MAKE 'I' 10 01872
002402 057000 I 1873 STA ID 10 01873
002403 017000 I 1874 LDA TO VARIABLE NAME 10 01874
002404 001000 A 1875 JMP GTS1 10 01875
002405 002344 R
1876 EJECT PD 10 01876
1877 ***** PD 10 01877
1878 * INPUT ARRAY PD 10 01878
1879 * PD 10 01879
1880 * FUNCTION: TO INPUT A NAME AND VERIFY THAT IT IS AN ARRAY PD 10 01880
1881 * PD 10 01881
1882 * ENTRY: NO SPECIAL CONDITIONS PD 10 01882
1883 * PD 10 01883
1884 * EXIT: (A) = 0, I = ARRAY POINTER PD 10 01884
1885 * PD 10 01885
1886 * ERRORS: TERS IF OPERAND INPUT IS NOT AN ARRAY PD 10 01886
1887 * PD 10 01887
1888 ***** PD 10 01888
002406 000000 A 1889 IAR ENTRY PD 10 01889
002407 002000 A 1890 CALL INA 10 01890
002410 077667 R
002411 017000 I 1891 LDA IU PD 10 01891
002412 140422 A 1892 SUB TWO PD 10 01892
002413 001010 A 1893 JAZ* IAR OPERAND IS ARRAY - (A)=0 PD 10 01893
002414 102406 R
002415 001000 A 1894 JMP * TERS NOT ARRAY 10 01894
002416 077751 R
1895 EJECT 10 01895
1896 ***** 10 01896
1897 * 10 01897
1898 * 10 01898
1899 * FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENT 'IF(' 10 01899
1900 * 10 01900
1901 * ENTRY: DIRECT FROM SID 10 01901
1902 * 10 01902
1903 * EXIT : ARITHMETIC IF: TO ILT 10 01903
1904 * JPFL+1 POINTS TO LAST SMT NO IN ASSGN TABLE 10 01904
1905 * 10 01905
1906 * LOGICAL IF: TO STS 10 01906
1907 * LIF HOLDS RELATIVE ADDRESS OF 'JAZ FALSE' 10 01907
1908 * 10 01908
1909 * ERRORS: TER1 IF LOGICAL IF FOLLOWED BY LOGICAL IF 10 01909
1910 * 10 01910
1911 ***** 10 01911
002417 002000 A 1913 IFP CALL PTS 10 01913
002420 077726 R
002421 002000 A 1914 CALL INI 10 01914
002422 077670 R
1915 ***** 10 01915
1916 * TEST FOR STATEMENT 'IF()'. THIS MEANS TEST A-REG * 10 01916
1917 ***** 10 01917
002423 004210 A 1918 ASLA S 10 01918
002424 137000 I 1919 ERA TC GET TERMINATOR 10 01919
002425 130000 L 1920 ERA ='>' 10 01920
002426 001010 A 1921 JAZ *+C 10 01921
002427 002433 R
1922 ***** 10 01922
1923 * STATEMENT NOT 'IF()' * 10 01923
1924 ***** 10 01924
002430 005001 A 1925 TZA 10 01925
002431 002000 A 1926 CALL EXP CALL EXP WITH A=0 10 01926
002432 000754 R
002433 047000 I 1927 INR DFPP SET SPECIAL FLOATING POINT IF FLAG 10 01927
002434 002000 A 1928 CALL PTR 10 01928
002435 077725 R
002436 002000 A 1929 CALL GDV 10 01929
002437 002101 R
002440 010000 L 1930 LDA ='>' 10 01930
002441 002000 A 1931 CALL TST 10 01931
002442 077772 R
002443 002000 A 1932 CALL EYA 10 01932
002444 077646 R
002445 001004 A 1933 JAN JFA ARITHMETIC IF IF FOLLOWED BY NUMBER 10 01933
002446 002466 R
002447 017000 I 1934 LDA LIF 10 01934
002450 001016 A 1935 JANZ TER1 LOGICAL-IF FOLLOWS LOGICAL-IF 10 01935
002451 077745 R
1936 ***** 10 01936
1937 * PROCESS LOGICAL IF * 10 01937
1938 ***** 10 01938
002452 017000 I 1939 LDA RL 10 01939
    
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002453	057000	I	1940		STA	LIF		SAVE LOCATION COUNTER IN LIF	10	01940	
002454	057000	I	1941		STA	JPFL+2			10	01941	
002455	006010	A	1942	IFO	LDAI	01010			10	01942	
002456	001010	A									
002457	002000	A	1943		CALL	DAB		'JAZ'	10	01943	
002460	077710	R									
002461	005001	A	1944		TZA				10	01944	
002462	002000	A	1945		CALL	DAB		'DATA 0'	10	01945	
002463	077710	R									
002464	001000	A	1946		JMP	STS			10	01946	
002465	077744	R									
002466	017000	I	1947	IFA	LDA	DFPP			10	01947	
002467	001004	A	1948		JAN	IFB			10	01948	
002470	002510	R									
002471	002000	A	1949		CALL	INS			10	01949	
002472	077672	R									
002473	057000	I	1950		STA	JPFL+2		SET POINTER FOR NEGATIVE JUMP (S1)	10	01950	
002474	002000	A	1951		CALL	CTS			10	01951	
002475	077617	R									
002476	002000	A	1952		CALL	INS			10	01952	
002477	077672	R									
002500	057000	I	1953		STA	JPFL+3		SET POINTER FOR ZERO JUMP (S2)	10	01953	
002501	002000	A	1954		CALL	CTS			10	01954	
002502	077617	R									
			1955		*****					10	01955
			1956		* UNCONDITIONAL BRANCH *					10	01956
			1957		*****					10	01957
002503	002000	A	1958	IFU	CALL	INS			10	01958	
002504	077672	R									
002505	057000	I	1959		STA	JPFL+1		JPFL+1 POINTS TO U.STI WILL RESOLVE JUMP	10	01959	
002506	001000	A	1960		JMP	ILT			10	01960	
002507	077666	R									
002510	002000	A	1962	IFB	CALL	INS		PROCESS SPECIAL ARITHMETIC OPERATOR	10	01962	
002511	077672	R									
002512	005001	A	1963		TZA				10	01963	
002513	002000	A	1964		CALL	OUT			10	01964	
002514	077720	R									
002515	002000	A	1965		CALL	CTS			10	01965	
002516	077617	R									
002517	002000	A	1966		CALL	INS			10	01966	
002520	077672	R									
002521	005001	A	1967		TZA				10	01967	
002522	002000	A	1968		CALL	OUT			10	01968	
002523	077720	R									
002524	002000	A	1969		CALL	CTS			10	01969	
002525	077617	R									
002526	002000	A	1970		CALL	INS			10	01970	
002527	077672	R									
002530	005001	A	1971		TZA				10	01971	
002531	002000	A	1972		CALL	OUT			10	01972	
002532	077720	R									
002533	001000	A	1973		JMP	ILT			10	01973	
002534	077666	R									
			1974		EJECT					10	01974
			1975		*****					10	01975
			1976		* INPUT INTEGER (IIN) *					10	01976
			1977		*****					10	01977
			1978		*****					10	01978
			1979		*****					10	01979
002535	000000	A	1981	IIN	ENTRY				10	01981	
002536	002000	A	1982		CALL	INI			10	01982	
002537	077670	R									
002540	140422	A	1983		SUB	TWO			10	01983	
002541	001010	A	1984		JAZ	IIN1		INTEGER	10	01984	
002542	002546	R									
002543	140423	A	1985		SUB	FOUR			10	01985	
002544	001016	A	1986		JANZ	TER7		NOT DP-INTEGERS	10	01986	
002545	077752	R									
002546	002000	A	1987	IIN1	CALL	TVR			10	01987	
002547	077773	R									
002550	001000	A	1988		JMP*	IIN			10	01988	
002551	102535	R									
			1989		EJECT					10	01989
			1990		*****					10	01990
			1991		* M O D E *					10	01991
			1992		*****					10	01992
			1993		*****					10	01993
			1994		*****					10	01994
002552	000000	A	1996	MODE	ENTRY				10	01996	
002553	002000	A	1997		CALL	SRM			10	01997	
002554	006743	R									
002555	001010	A	1998		JAZ*	MODE		MODES EQUAL	10	01998	
002556	102552	R									
002557	017000	I	1999		LDA	MF			10	01999	
002560	140463	A	2000		SUB	FIVE			10	02000	
002561	001016	A	2001		JANZ	MODE1			10	02001	
002562	002567	R									
002563	010464	A	2002		LDA	THREE			10	02002	
002564	057000	I	2003		STA	MF		FORCE REAL REGISTER IF CONVERT FROM CMP.	10	02003	
002565	001000	A	2004		JMP	SRM+1			10	02004	
002566	006744	R									

002567	005311	A	2005	MODE1	DAR				10	02005
002570	001016	A	2006		JANZ	MODE3	NOT DPI TO INT		10	02006
002571	002610	R								
002572	006010	A	2007		LDAI	04417			10	02007
002573	004417	A								
002574	002000	A	2008		CALL	DAB	'LASL 15'		10	02008
002575	077710	R								
002576	010422	A	2009		LDA	TWD			10	02009
002577	057000	I	2010		STA	MF			10	02010
002600	001000	A	2011		JMP*	MODE			10	02011
002601	102552	R								
002602	006017	A	2012	MODE2	LDAE	MODE			10	02012
002603	002552	R								
002604	006057	A	2013		STAE	SRM			10	02013
002605	006743	R								
002606	001000	A	2014		JMP	SRM0	CONVERT REGISTER FOR MF>IM		10	02014
002607	006765	R								
002610	017000	I	2015	MODE3	LDA	\$PCW			10	02015
002611	006443	A	2016		BT	045,MODE2	NOT 'H'		10	02016
002612	002602	R								
002613	017000	I	2017		LDA	MF			10	02017
002614	004543	A	2018		LLSR	3			10	02018
002615	017000	I	2019		LDA	IM			10	02019
002616	004443	A	2020		LLRL	3			10	02020
002617	006140	A	2021		SUBI	023			10	02021
002620	000023	A								
002621	001010	A	2022		JAZ	MODE4	REA TO INT		10	02022
002622	002626	R								
002623	005311	A	2023		DAR				10	02023
002624	001016	A	2024		JANZ	MODE2	NOT DBL TO INT		10	02024
002625	002602	R								
002626	002000	A	2025	MODE4	CALL	CRP			10	02025
002627	000142	R								
002630	002000	A	2026		CALL	SAV			10	02026
002631	006334	R								
002632	006010	A	2027		LDAI	FIX			10	02027
002633	105621	A								
002634	002000	A	2028		CALL	DDB			10	02028
002635	077711	R								
002636	006010	A	2029		LDAI	06017			10	02029
002637	006017	A								
002640	002000	A	2030		CALL	DDB	'LDAE ASC'		10	02030
002641	077711	R								
002642	005001	A	2031		TZA				10	02031
002643	057000	I	2032		STA	F	SET FPP EMPTY		10	02032
002644	057000	I	2033		STA	MAXOPC			10	02033
002645	002000	A	2034		CALL	RST			10	02034
002646	006325	R								
002647	057000	I	2035		STA	MF	MF = IM = INT		10	02035
002650	001000	A	2036		JMP*	MODE			10	02036
002651	102552	R								
			2037		EJECT				10	02037
			2038		*****				10	02038
			2039		*				10	02039
			2040		* M I N / M A X T E S T				10	02040
			2041		*				10	02041
			2042		*****				10	02042
002652	000000	A	2044	MMT	ENTRY				10	02044
002653	005001	A	2045		TZA				10	02045
002654	027000	I	2046		LDB	MM			10	02046
002655	057000	I	2047		STA	MM			10	02047
002656	002026	A	2048		JBNZM	DAB	TERMINATE MIN/MAX CALL		10	02048
002657	077710	R								
002660	001000	A	2049		JMP*	MMT			10	02049
002661	102652	R								
			2050		EJECT				10	02050
			2051		*****				10	02051
			2052		*				10	02052
			2053		* O U T P U T A R I T H . O P E R A T I O N ( O A O )				10	02053
			2054		*				10	02054
			2055		* E N T R Y : ( B ) = L E F T N O R M A L I Z E D O P E R A T I O N C H A R A C T E R				10	02055
			2056		*				10	02056
			2057		*****				10	02057
002662	000000	A	2059	DAD	ENTRY				10	02059
002663	064003	A	2060		STB	*+4			10	02060
002664	002000	A	2061		CALL	TFA			10	02061
002665	007435	R								
002666	006020	A	2062		LDBI	**	RESTORE OPERATION		10	02062
002667	102666	R								
002670	017000	I	2063		LDA	IM			10	02063
002671	002000	A	2064		CALL	CMD			10	02064
002672	000132	R								
002673	004543	A	2065		LLSR	3			10	02065
002674	017000	I	2066		LDA	MF			10	02066
002675	002000	A	2067		CALL	CMD			10	02067
002676	000132	R								
002677	004443	A	2068		LLRL	3			10	02068
002700	006120	A	2069		ADDI	0266	MAKE CHARACTER OF MF:IM		10	02069
002701	000266	A								
002702	144004	A	2070		SUB	DAD1+1			10	02070
002703	001002	A	2071		JAP	DAD1			10	02071



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002775 017000 I 2143 LDA TC 10 02143
002776 140000 L 2144 SUB =')' 10 02144
002777 001010 A 2145 JAZ DIL15 10 02145
003000 003013 R
003001 140464 A 2146 SUB THREE 10 02146
003002 001010 A 2147 JAZ DIL15 10 02147
003003 003013 R
003004 005001 A 2148 TZA 10 02148
003005 002000 A 2149 CALL EXP 10 02149
003006 000754 R
003007 002000 A 2150 CALL PTR 10 02150
003010 077725 R
003011 002000 A 2151 CALL GTS 10 02151
003012 002323 R
003013 017000 I 2152 DIL15 LDA I 10 02152
003014 054012 A 2153 STA DIL4+1 10 02153
003015 017000 I 2154 DIL2 LDA NAME 10 02154
003016 002000 A 2155 CALL CAN CALL $BA/$EN/$FX/$RD/$RE/$RX/$WR/$WX/$DE 10 02155
003017 077613 R
003020 006010 A 2156 DIL3 LDAI ** 10 02156
003021 103020 R
003022 057000 I 2157 STA I 10 02157
003023 005001 A 2158 TZA 10 02158
003024 002000 A 2159 CALL OUT 'DATA DATA-SET-REFERENCE' 10 02159
003025 077720 R
003026 006010 A 2160 DIL4 LDAI ** 10 02160
003027 103026 R
003030 001010 A 2161 JAZ* DIL NOT DIRECT ACCESS 10 02161
003031 102735 R
003032 057000 I 2162 STA I 10 02162
003033 005001 A 2163 TZA 10 02163
003034 002000 A 2164 CALL OUT 'DATA RECORD-ADDRESS' 10 02164
003035 077720 R
003036 001000 A 2165 JMP* DIL 10 02165
003037 102735 R
2166 EJECT 10 02166
2167 ***** 10 02167
2168 * 10 02168
2169 * OUTPUT ITEM (DIT) * 10 02169
2170 * 10 02170
2171 * FUNCTION: TO OUTPUT AN OPERATOR/OPERAND PAIR * 10 02171
2172 * 10 02172
2173 * ENTRY: I=POINTER TO OPERAND, (A)=OPERATOR * 10 02173
2174 * 10 02174
2175 ***** 10 02175
003040 000000 A 2177 DIT ENTRY 10 02177
003041 057000 I 2178 STA T8 OPERATOR 10 02178
003042 140000 L 2179 SUB =054 10 02179
003043 002016 A 2180 JANZM MMT 10 02180
003044 002652 R
003045 017000 I 2181 DIT02 LDA T8 10 02181
003046 006140 A 2182 SUBI 015 10 02182
003047 000015 A
003050 001010 A 2183 JAZ DIT56 (015) NEGATE 10 02183
003051 003635 R
003052 005311 A 2184 DAR 10 02184
003053 001010 A 2185 JAZ DIT10 (016) INTEGER CONVERT 10 02185
003054 003207 R
003055 005001 A 2186 TZA 10 02186
003056 057000 I 2187 STA T7 CLEAR INDIRECT FLAG 10 02187
003057 057000 I 2188 STA DITFL CLEAR CONSTANT SUBSCRIPT FLAG 10 02188
003060 017000 I 2189 LDA I 10 02189
003061 001010 A 2190 JAZ TER7 MODE ERROR 10 02190
003062 077752 R
003063 147000 I 2191 SUB DFX 10 02191
003064 001010 A 2192 JAZ DTR2 DUMMY OPERAND 10 02192
003065 004337 R
003066 017000 I 2193 LDA I 10 02193
003067 147000 I 2194 SUB IT 10 02194
003070 001002 A 2195 JAP DIT64 POINTER INSIDE TRIAD TABLE 10 02195
003071 003715 R
003072 002000 A 2196 DIT04 CALL LAX 10 02196
003073 077700 R
003074 017000 I 2197 LDA T8 10 02197
003075 005111 A 2198 IAR 10 02198
003076 001010 A 2199 JAZ* DIT I/O PARAMETER 10 02199
003077 103040 R
003100 005311 A 2200 DAR 10 02200
003101 001010 A 2201 JAZ DIT08 (000) PARAMETER 10 02201
003102 003202 R
003103 006140 A 2202 SUBI 013 10 02202
003104 000010 A
003105 001010 A 2203 JAZ DIT14 (013) DUMMY ARRAY BASE 10 02203
003106 003217 R
003107 140423 A 2204 SUB FOUR 10 02204
003110 001010 A 2205 JAZ DIT16 (017) EXPONENTIATE 10 02205
003111 003226 R
003112 017000 I 2206 LDA $PCW 10 02206
003113 006445 A 2207 BT 045,DIT05 10 02207
003114 003136 R
003115 017000 I 2208 LDA MAXOPC 'H' 10 02208
    
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003116	006140	A	2209		SUBI	20	TEST FOR MAXIMUM OPERATIONS BEFORE STORE	10	02209
003117	000024	A							
003120	001004	A	2210		JAN	DIT05		10	02210
003121	003136	R							
003122	002000	A	2211		CALL	SAV		10	02211
003123	006334	R							
003124	006010	A	2212		LDAI	FSTD		10	02212
003125	105710	A							
003126	002000	A	2213		CALL	ODB	FPP TO ASC	10	02213
003127	077711	R							
003130	006010	A	2214		LDAI	FLDD		10	02214
003131	105522	A							
003132	002000	A	2215		CALL	ODB	RESTORE FPP	10	02215
003133	077711	R							
003134	002000	A	2216		CALL	RST		10	02216
003135	006325	R							
003136	017000	I	2217	DIT05	LDA	T8		10	02217
003137	140425	A	2218		SUB	BS4		10	02218
003140	001010	A	2219		JAZ	DIT20	(020) LOAD	10	02219
003141	003257	R							
003142	006140	A	2220		SUBI	027		10	02220
003143	000027	A							
003144	001004	A	2221		JAN	DIT313	(045) ADD, (046) SUBTRACT	10	02221
003145	003374	R							
003146	140422	A	2222		SUB	TWQ		10	02222
003147	001004	A	2223		JAN	DIT316	(047) MULTIPLY, (050) DIVIDE	10	02223
003150	003412	R							
003151	140464	A	2224		SUB	THREE		10	02224
003152	001010	A	2225		JAZ	DIT08	(054) PARAMETER	10	02225
003153	003202	R							
003154	005311	A	2226		DAR			10	02226
003155	001010	A	2227		JAZ	DIT54	(055) STORE	10	02227
003156	003630	R							
003157	140425	A	2228		SUB	BS4		10	02228
003160	001010	A	2229		JAZ	DIT06	(075) .AND.	10	02229
003161	003166	R							
003162	005111	A	2230		IAR			10	02230
003163	001016	A	2231		JANZ	TER7	NOT (074) .OR.	10	02231
003164	077752	R							
003165	140437	A	2232		SUB	BS14	TO MAKE 'ORA'	10	02232
003166	006120	A	2233	DIT06	ADDI	0155000	'ANA'	10	02233
003167	155000	A							
003170	005012	A	2234		TAB			10	02234
003171	017000	I	2235		LDA	IM		10	02235
003172	127000	I	2236		ADD	MF		10	02236
003173	140423	A	2237		SUB	FOUR		10	02237
003174	001016	A	2238		JANZ	TER7	NOT LOGICAL OPERANDS	10	02238
003175	077752	R							
003176	002000	A	2239		CALL	DOA		10	02239
003177	004145	R							
003200	001000	A	2240		JMP*	DIT		10	02240
003201	103040	R							
003202	117000	I	2241	DIT08	ORA	T7		10	02241
003203	002000	A	2242		CALL	OUT		10	02242
003204	077720	R							
003205	001000	A	2243		JMP*	DIT		10	02243
003206	103040	R							
003207	017000	I	2244	DIT10	LDA	DFCA		10	02244
003210	057000	I	2245		STA	I		10	02245
003211	002000	A	2246		CALL	LAX		10	02246
003212	077700	R							
003213	002000	A	2247		CALL	MODE		10	02247
003214	002552	R							
003215	001000	A	2248		JMP*	DIT		10	02248
003216	103040	R							
003217	006010	A	2249	DIT14	LDAI	0110000	DUMMY BASE ADD	10	02249
003220	110000	A							
003221	120435	A	2250	DIT15	ADD	BS12	DUMMY BASE LOAD	10	02250
003222	020422	A	2251		LDB	TWQ		10	02251
003223	067000	I	2252		STB	MF		10	02252
003224	001000	A	2253		JMP	DIT08+1		10	02253
003225	003203	R							
003226	017000	I	2254	DIT16	LDA	IM	PROCESS EXPONENTIAL	10	02254
003227	140465	A	2255		SUB	FIVE	EXPONENTIATION BY COMPLEX	10	02255
003230	001010	A	2256		JAZ	TER7		10	02256
003231	077752	R							
003232	017000	I	2257		LDA	MF		10	02257
003233	140465	A	2258		SUB	FIVE		10	02258
003234	001016	A	2259		JANZ	DIT165		10	02259
003235	003245	R							
003236	017000	I	2260		LDA	IM		10	02260
003237	140422	A	2261		SUB	TWQ		10	02261
003240	001010	A	2262		JAZ	DIT165		10	02262
003241	003245	R							
003242	140423	A	2263		SUB	FOUR		10	02263
003243	001016	A	2264		JANZ	TER7	EXPONENTIATION OF CPX BY REA/DBL	10	02264
003244	077752	R							
003245	002000	A	2265	DIT165	CALL	SRM		10	02265
003246	006743	R							
003247	002000	A	2266		CALL	TFA		10	02266
003250	007435	R							

003251	006020	A	2267		LDBI	'E'		10	02267
003252	142640	A							
003253	002000	A	2268	DIT18	CALL	DAD		10	02268
003254	002662	R							
003255	001000	A	2269		JMP*	DIT		10	02269
003256	103040	R							
003257	057000	I	2270	DIT20	STA	F	PROCESS LOAD FLAG FPP EMPTY	10	02270
003260	057000	I	2271		STA	MAXOPC		10	02271
003261	017000	I	2272		LDA	IU		10	02272
003262	130422	A	2273		ERA	K2		10	02273
003263	117000	I	2274		DRA	DP		10	02274
003264	001010	A	2275		JAZ	DIT15		10	02275
003265	003221	R							
003266	017000	I	2276		LDA	IM		10	02276
003267	057000	I	2277		STA	MF		10	02277
003270	017000	I	2278		LDA	IU		10	02278
003271	140464	A	2279		SUB	THREE		10	02279
003272	001004	A	2280		JAN	DIT22	VARIABLE/CONSTANT LOAD	10	02280
003273	003312	R							
003274	017000	I	2281		LDA	CL		10	02281
003275	001002	A	2282		JAP	DIT21		10	02282
003276	003304	R							
003277	005211	A	2283		CPA		STATEMENT FUNCTION CALL	10	02283
003300	057000	I	2284		STA	MAXOPC		10	02284
003301	047000	I	2285		INR	F	SET FPP REGISTER USAGE	10	02285
003302	001000	A	2286		JMP	DIT21+1		10	02286
003303	003305	R							
003304	057000	I	2287	DIT21	STA	MM	SET MAX-MIN FLAG	10	02287
003305	014000	A	2288		LDA	*+1		10	02288
003306	002000	A	2289		CALL	DDB		10	02289
003307	077711	R							
003310	001000	A	2290		JMP*	DIT		10	02290
003311	103040	R							
003312	017000	I	2291	DIT22	LDA	IM		10	02291
003313	006020	A	2292		LDBI	015000	'LDA'	10	02292
003314	015000	A							
003315	140422	A	2293		SUB	TWO		10	02293
003316	001010	A	2294		JAZ	DIT26	INTEGER LOAD	10	02294
003317	003347	R							
003320	005311	A	2295		DAR			10	02295
003321	001010	A	2296		JAZ	DIT24	REAL LOAD	10	02296
003322	003342	R							
003323	140464	A	2297		SUB	THREE		10	02297
003324	001010	A	2298		JAZ	DIT26	D.P. INTEGER	10	02298
003325	003347	R							
003326	006020	A	2299		LDBI	'F'		10	02299
003327	143240	A							
003330	005111	A	2300		IAR			10	02300
003331	001010	A	2301		JAZ	DIT18	COMPLEX	10	02301
003332	003253	R							
003333	017000	I	2302		LDA	%PCW		10	02302
003334	006445	A	2303		BT	045, DIT18	NOT 'H'	10	02303
003335	003253	R							
003336	006020	A	2304		LDBI	FLDD		10	02304
003337	105522	A							
003340	001000	A	2305		JMP	DIT29		10	02305
003341	003356	R							
003342	017000	I	2306	DIT24	LDA	%PCW		10	02306
003343	006405	A	2307		BT	05, DIT28	'H'	10	02307
003344	003354	R							
003345	006404	A	2308		BT	04, DIT30	'F'	10	02308
003346	003362	R							
003347	005021	A	2309	DIT26	TBA			10	02309
003350	002000	A	2310		CALL	DRT		10	02310
003351	004201	R							
003352	001000	A	2311		JMP*	DIT		10	02311
003353	103040	R							
003354	006020	A	2312	DIT28	LDBI	FLDS		10	02312
003355	105420	A							
003356	047000	I	2313	DIT29	JNR	MAXOPC		10	02313
003357	047000	I	2314		INR	F	SET FPP LOADED	10	02314
003360	001000	A	2315		JMP	DIT31		10	02315
003361	003364	R							
003362	006020	A	2316	DIT30	LDBI	FLDI		10	02316
003363	105032	A							
003364	005021	A	2317	DIT31	TEA			10	02317
003365	002000	A	2318		CALL	DAB		10	02318
003366	077710	R							
003367	005002	A	2319		TZB			10	02319
003370	002000	A	2320		CALL	DQA		10	02320
003371	004145	R							
003372	001000	A	2321		JMP*	DIT		10	02321
003373	103040	R							
003374	017000	I	2322	DIT313	LDA	I	PROCESS ADD, SUBTRACT	10	02322
003375	147000	I	2323		SUB	DPCA+2	=0	10	02323
003376	001010	A	2324		JAZ*	DIT	NO-OP FOR +, - OF 0	10	02324
003377	103040	R							
003400	017000	I	2325		LDA	I		10	02325
003401	147000	I	2326		SUB	DPCA+5	=000	10	02326
003402	001016	A	2327		JANZ	DIT32		10	02327
003403	003416	R							

003404	017000	I	2328	DIT314	LDA	MF			10	02328
003405	147000	I	2329		SUB	IM			10	02329
003406	001010	A	2330		JAZ*	DIT	NO-OP FOR +, - OF 0		10	02330
003407	103040	R								
003410	001000	A	2331		JMP	DIT32			10	02331
003411	003416	R								
003412	017000	I	2332	DIT316	LDA	I			10	02332
003413	147000	I	2333		SUB	DPCA	=1		10	02333
003414	001010	A	2334		JAZ*	DIT	NO-OP FOR *, / OF 1		10	02334
003415	103040	R								
003416	002000	A	2335	DIT32	CALL	SRM	PROCESS ARITHMETIC OPERATORS		10	02335
003417	006743	R								
003420	037000	I	2336		LDX	T8			10	02336
003421	001016	A	2337		JANZ	DIT34			10	02337
003422	003455	R								
003423	017000	I	2338		LDA	IM			10	02338
003424	006025	A	2339		LDBE	DIT48-045,X	(B)=INTEGER OPERATION		10	02339
003425	003533	R								
003426	140422	A	2340		SUB	TWO	INTEGER		10	02340
003427	001010	A	2341		JAZ	DIT38			10	02341
003430	003461	R								
003431	006025	A	2342		LDBE	DIT52-045,X	REAL - 'H' OP CODES		10	02342
003432	003553	R								
003433	005311	A	2343		DAR				10	02343
003434	001010	A	2344		JAZ	DIT42	REAL		10	02344
003435	003556	R								
003436	006025	A	2345		LDBE	DIT53-045,X	D.P. - 'H' OP CODES		10	02345
003437	003557	R								
003440	005311	A	2346		DAR				10	02346
003441	001010	A	2347		JAZ	DIT46	DBL		10	02347
003442	003567	R								
003443	005311	A	2348		DAR				10	02348
003444	001010	A	2349		JAZ	DIT34	COMPLEX		10	02349
003445	003455	R								
003446	006025	A	2350		LDBE	DIT50-045,X	DP-INT - 'FH' OP CODES		10	02350
003447	003543	R								
003450	017000	I	2351		LDA	\$PCW			10	02351
003451	006445	A	2352		BT	045,DIT34	NOT 'H'		10	02352
003452	003455	R								
003453	006404	A	2353		BT	04,DIT31	'HF' - DP-INT		10	02353
003454	003364	R								
003455	006025	A	2354	DIT34	LDBE	DIT49-045,X	(B)=OP CHARACTER		10	02354
003456	003537	R								
003457	001000	A	2355		JMP	DIT18			10	02355
003460	003253	R								
003461	017000	I	2356	DIT38	LDA	T8			10	02356
003462	006140	A	2357		SUBI	047			10	02357
003463	000047	A								
003464	064050	A	2358		STB	DIT41-1			10	02358
003465	001002	A	2359		JAP	DIT38A	'+' OR '-' ?		10	02359
003466	003510	R								
003467	017000	I	2360		LDA	I	YES		10	02360
003470	147000	I	2361		SUB	DPCA			10	02361
003471	001016	A	2362		JANZ	DIT41	OPERAND = 1 ?		10	02362
003472	003536	R								
003473	017000	I	2363		LDA	T8	YES		10	02363
003474	006140	A	2364		SUBI	045			10	02364
003475	000045	A								
003476	005012	A	2365		TAB				10	02365
003477	006010	A	2366		LDAI	05111			10	02366
003500	005111	A								
003501	001020	A	2367		JBZ	*+3	OUTPUT 'IAR' FOR ADD =1		10	02367
003502	003504	R								
003503	120430	A	2368		ADD	BS7	OUTPUT 'DAR' FOR SUB =1		10	02368
003504	002000	A	2369		CALL	DAB			10	02369
003505	077710	R								
003506	001000	A	2370		JMP*	DIT			10	02370
003507	103040	R								
003510	005311	A	2371	DIT38A	DAR				10	02371
003511	001010	A	2372		JAZ	DIT40	'/'		10	02372
003512	003530	R								
003513	006020	A	2373	DIT39	LDBI	04201	'ASLA 1'		10	02373
003514	004201	A								
003515	017000	I	2374		LDA	I			10	02374
003516	147000	I	2375		SUB	DPCA+1	=2		10	02375
003517	001010	A	2376		JAZ	DIT415			10	02376
003520	003551	R								
003521	005122	A	2377		IBR				10	02377
003522	017000	I	2378		LDA	I			10	02378
003523	147000	I	2379		SUB	DPCA+3	=4		10	02379
003524	001010	A	2380		JAZ	DIT415			10	02380
003525	003551	R								
003526	006010	A	2381		LDAI	041			10	02381
003527	000041	A								
003530	006120	A	2382	DIT40	ADDI	04517			10	02382
003531	004517	A								
003532	002000	A	2383		CALL	DAB	'LLSR 16'(*), 'LASR 15'(/)		10	02383
003533	077710	R								
003534	006020	A	2384		LDBI	**			10	02384
003535	103534	R								
003536	002000	A	2385	DIT41	CALL	DDB			10	02385

003537	004145	R							
003540	017000	I	2386	LDA	T8			10	02386
003541	140000	L	2387	SUB	=047			10	02387
003542	001004	A	2388	JAN*	DIT	'+', '-'		10	02388
003543	103040	R							
003544	006020	A	2389	LDBI	04417	'LASL 15'		10	02389
003545	004417	A							
003546	001010	A	2390	JAZ	DIT415	'*'		10	02390
003547	003551	R							
003550	024000	A	2391	LDB	*+1	'TBA'		10	02391
003551	005021	A	2392	DIT415	TBA			10	02392
003552	002000	A	2393	CALL	DAB			10	02393
003553	077710	R							
003554	001000	A	2394	JMP*	DIT			10	02394
003555	103040	R							
003556	017000	I	2395	DIT42	LDA	\$PCW	REAL OPERATIONS	10	02395
003557	006405	A	2396	BT	05, DIT47	'H'		10	02396
003560	003572	R							
003561	006444	A	2397	BT	044, DIT34	NOT 'F'		10	02397
003562	003455	R							
003563	006025	A	2398	LDBE	DIT51-045, X	REAL - 'F' DP CODES		10	02398
003564	003547	R							
003565	001000	A	2399	JMP	DIT31			10	02399
003566	003364	R							
003567	017000	I	2400	DIT46	LDA	\$PCW		10	02400
003570	006445	A	2401	BT	045, DIT34	NOT 'H'		10	02401
003571	003455	R							
003572	067000	I	2402	DIT47	STB	T4		10	02402
003573	002000	A	2403	CALL	CRP			10	02403
003574	000142	R							
003575	027000	I	2404	LDB	T4			10	02404
003576	001000	A	2405	JMP	DIT29			10	02405
003577	003356	R							
003600	125000	A	2406	DIT48	DATA	0125000	ADD	10	02406
003601	145000	A	2407	DATA	0145000	SUBTRACT		10	02407
003602	165000	A	2408	DATA	0165000	MULTIPLY		10	02408
003603	175000	A	2409	DATA	0175000	DIVIDE		10	02409
003604	145640	A	2410	DIT49	DATA	'K'		10	02410
003605	146240	A	2411	DATA	'L'			10	02411
003606	146640	A	2412	DATA	'M'			10	02412
003607	147240	A	2413	DATA	'N'			10	02413
003610	105334	A	2414	DIT50	DATA	0105334	D.P. INTEGER OPERATIONS	10	02414
003611	105374	A	2415	DATA	0105374			10	02415
003612	105227	A	2416	DATA	0105227			10	02416
003613	105267	A	2417	DATA	0105267			10	02417
003614	105134	A	2418	DIT51	DATA	0105134	FIRMWARE DP CODES	10	02418
003615	105174	A	2419	DATA	0105174			10	02419
003616	105074	A	2420	DATA	0105074			10	02420
003617	105034	A	2421	DATA	0105034			10	02421
003620	105410	A	2422	DIT52	DATA	FADDS	FLOATING POINT DP CODES	10	02422
003621	105450	A	2423	DATA	FSUBS			10	02423
003622	105416	A	2424	DATA	FMULS			10	02424
003623	105401	A	2425	DATA	FDIVS			10	02425
003624	105503	A	2426	DIT53	DATA	FADDD	D.P. FLOATING POINT DP CODES	10	02426
003625	105543	A	2427	DATA	FSUBD			10	02427
003626	105506	A	2428	DATA	FMULD			10	02428
003627	105535	A	2429	DATA	FDIVD			10	02429
003630	017000	I	2430	DIT54	LDA	T7	PROCESS STORE	10	02430
003631	002000	A	2431	CALL	DST			10	02431
003632	004234	R							
003633	001000	A	2432	JMP*	DIT			10	02432
003634	103040	R							
003635	017000	I	2433	DIT56	LDA	MF	COMPLIMENT PROCESSING	10	02433
003636	140422	A	2434	SUB	TWO			10	02434
003637	001016	A	2435	JANZ	DIT58			10	02435
003640	003653	R							
003641	006010	A	2436	LDAI	05311			10	02436
003642	005311	A							
003643	002000	A	2437	CALL	DAB	'DAR'		10	02437
003644	077710	R							
003645	006010	A	2438	DIT57	LDAI	05211		10	02438
003646	005211	A							
003647	002000	A	2439	CALL	DAB	'CPA'		10	02439
003650	077710	R							
003651	001000	A	2440	JMP*	DIT			10	02440
003652	103040	R							
003653	140464	A	2441	DIT58	SUB	THREE		10	02441
003654	001004	A	2442	JAN	DIT60	REA, DBL		10	02442
003655	003667	R							
003656	001016	A	2443	JANZ	DIT62	DP INTEGER		10	02443
003657	003707	R							
003660	005111	A	2444	JAR				10	02444
003661	006120	A	2445	DIT59	ADDI	'ZC'		10	02445
003662	155303	A							
003663	002000	A	2446	CALL	CAN	MAKE \$ZC/\$ZD		10	02446
003664	077613	R							
003665	001000	A	2447	JMP*	DIT			10	02447
003666	103040	R							
003667	002000	A	2448	DIT60	CALL	TFA		10	02448
003670	007435	R							
003671	017000	I	2449	LDA	MF			10	02449

003672	140423	A	2450	SUB	FOUR			10	02450
003673	001010	A	2451	JAZ	DIT59	DBL		10	02451
003674	003661	R							
003675	006010	A	2452	DIT61	LDAI	01010		10	02452
003676	001010	A							
003677	002000	A	2453	CALL	DAB	'JAZ'		10	02453
003700	077710	R							
003701	017000	I	2454	LDA	RL			10	02454
003702	120422	A	2455	ADD	TWO			10	02455
003703	002000	A	2456	CALL	DRE	'DATA *+2'		10	02456
003704	077715	R							
003705	001000	A	2457	JMP	DIT57			10	02457
003706	003645	R							
003707	006010	A	2458	DIT62	LDAI	'6D'		10	02458
003710	133304	A							
003711	002000	A	2459	CALL	CAN	CALL \$6D TO NEGATE DP INTEGER		10	02459
003712	077613	R							
003713	001000	A	2460	JMP*	DIT			10	02460
003714	103040	R							
003715	017000	I	2461	DIT64	LDA	J		10	02461
003716	057000	I	2462		STA	T4		10	02462
003717	017000	I	2463		LDA	DPX		10	02463
003720	127000	I	2464		ADD	IT		10	02464
003721	147000	I	2465		SUB	I		10	02465
003722	057000	I	2466		STA	J		10	02466
003723	002000	A	2467	CALL	LTX	LOAD INDIRECT TRIAD		10	02467
003724	077705	R							
003725	017000	I	2468	LDA	DP			10	02468
003726	001010	A	2469	JAZ	DIT66			10	02469
003727	003743	R							
003730	005311	A	2470	BAR				10	02470
003731	001010	A	2471	JAZ	DIT79	SPECIAL FPP SUBSCRIBTING		10	02471
003732	004076	R							
003733	006140	A	2472	SUBI	041			10	02472
003734	000041	A							
003735	001010	A	2473	JAZ	DIT72	ARRAY BASE		10	02473
003736	003771	R							
003737	002000	A	2474	CALL	DIT70			10	02474
003740	003760	R							
003741	001000	A	2475	JMP	DIT04			10	02475
003742	003072	R							
003743	010431	A	2476	DIT66	LDA	BS8		10	02476
003744	057000	I	2477		STA	T7	SET INDIRECT FLAG	10	02477
003745	017000	I	2478		LDA	D1		10	02478
003746	057000	I	2479		STA	I		10	02479
003747	147000	I	2480		SUB	DPX		10	02480
003750	001010	A	2481	JAZ	DIT74	PRE-CALCULATED ADDRESS		10	02481
003751	004007	R							
003752	002000	A	2482	DIT58	CALL	LAX		10	02482
003753	077700	R							
003754	002000	A	2483	CALL	DIT70			10	02483
003755	003760	R							
003756	001000	A	2484	JMP	DIT04+2			10	02484
003757	003074	R							
003760	000000	A	2485	DIT70	ENTRY		RESTORE TRIADS	10	02485
003761	017000	I	2486		LDA	02		10	02486
003762	057000	I	2487		STA	I		10	02487
003763	017000	I	2488		LDA	T4		10	02488
003764	057000	I	2489		STA	J		10	02489
003765	002000	A	2490	CALL	LTX			10	02490
003766	077705	R							
003767	001000	A	2491	JMP*	DIT70			10	02491
003770	103760	R							
003771	027000	I	2492	DIT72	LDB	T4	PROCESS 'X'	10	02492
003772	017000	I	2493		LDA	02		10	02493
003773	056000	A	2494		STA	01B	D1(T4)=02(I)	10	02494
003774	017000	I	2495		LDA	I		10	02495
003775	002000	A	2496	CALL	DIT76	GENERATE ADD. CST		10	02496
003776	004021	R							
003777	017000	I	2497	LDBL	T4			10	02497
004000	057000	I	2498	STA	J			10	02498
004001	002000	A	2499	CALL	LTX			10	02499
004002	077705	R							
004003	006027	A	2500	LDBE	DIT48	'ADD'		10	02500
004004	003600	R							
004005	001000	A	2501	JMP	DIT41			10	02501
004006	003536	R							
004007	017000	I	2502	DIT74	LDA	02		10	02502
004010	002000	A	2503	CALL	DIT76			10	02503
004011	004021	R							
004012	017000	I	2504	LDA	I			10	02504
004013	027000	I	2505	LDB	02			10	02505
004014	057000	I	2506	STA	02			10	02506
004015	067000	I	2507	STA	I			10	02507
004016	047000	I	2508	INR	DITFL	SET CONSTANT SUBSCRIPT FLAG		10	02508
004017	001000	A	2509	JMP	DIT68			10	02509
004020	003752	R							
004021	000000	A	2510	DIT76	ENTRY		GENERATE CONSTANT	10	02510
004022	147000	I	2511	SUB	IT			10	02511
004023	147000	I	2512	SUB	DPX			10	02512
004024	005211	A	2513	CPA				10	02513

Address	Code	Label	Instruction	Comments	Line	Address
004025	005111	A	2514	IAR-	10	02514
004026	057000	I	2515	STA J	10	02515
004027	057000	I	2516	STA T9	10	02516
004030	002000	A	2517	CALL LTX	10	02517
004031	077705	R				
004032	017000	I	2518	LDA 02	10	02518
004033	057000	I	2519	STA I	10	02519
004034	002000	A	2520	CALL LAX	10	02520
004035	077700	R				
004036	010421	A	2521	LDA ONE	10	02521
004037	057000	I	2522	STA NT	10	02522
004040	057000	I	2523	STA IU	10	02523
004041	017000	I	2524	LDA CL	10	02524
004042	004204	A	2525	ASLA 4	10	02525
004043	057000	I	2526	STA ID+1	10	02526
004044	017000	I	2527	LDA AT	10	02527
004045	020467	A	2528	LDB SEVEN	10	02528
004046	140466	A	2529	SUB SIX	10	02529
004047	001010	A	2530	JAZ DIT78	10	02530
004050	004057	R				
004051	005311	A	2531	DAR	10	02531
004052	001004	A	2532	JAN *+3	10	02532
004053	004055	R				
004054	020422	A	2533	LDB TWO	10	02533
004055	005001	A	2534	TZA	10	02534
004056	057000	I	2535	STA ID+1	10	02535
004057	017000	I	2536	LDA D1	10	02536
004060	057000	I	2537	STA ID	10	02537
004061	067000	I	2538	STB IM	10	02538
004062	010465	A	2539	LDA FIVE	10	02539
004063	057000	I	2540	STA EL	10	02540
004064	002000	A	2541	CALL ASI	10	02541
004065	077611	R				
004066	010422	A	2542	LDA TWO	10	02542
004067	057000	I	2543	STA IM	10	02543
004070	017000	I	2544	LDA T4	10	02544
004071	127000	I	2545	ADD J	10	02545
004072	147000	I	2546	SUB T9	10	02546
004073	057000	I	2547	STA T4	10	02547
004074	001000	A	2548	JMP* DIT76	10	02548
004075	104021	R				
004076	017000	I	2549	LDA T8	10	02549
004077	140000	L	2550	SUB =055	10	02550
004100	001016	A	2551	JANZ DIT80	10	02551
004101	004106	R				
004102	010464	A	2552	LDA THREE	10	02552
004103	057000	I	2553	STA IM	10	02553
004104	002000	A	2554	CALL MODE	10	02554
004105	002552	R				
004106	017000	I	2555	LDA T8	10	02555
004107	140425	A	2556	SUB K20	10	02556
004110	002016	A	2557	JANZM CRP	10	02557
004111	000142	R				
004112	006010	A	2558	LDAI FLIOP	10	02558
004113	105367	A				
004114	002000	A	2559	CALL JAB	10	02559
004115	077710	R				
004116	017000	I	2560	LDA J	10	02560
004117	140464	A	2561	SUB THREE	10	02561
004120	005014	A	2562	TAX	10	02562
004121	015000	A	2563	LDA 0,X	10	02563
004122	057000	I	2564	STA I	10	02564
004123	005001	A	2565	IZA	10	02565
004124	002000	A	2566	CALL OUT	10	02566
004125	077720	R				
004126	017000	I	2567	LDA 02	10	02567
004127	002000	A	2568	CALL DIT76	10	02568
004130	004021	R				
004131	027000	I	2569	LDB 10	10	02569
004132	005122	A	2570	IBR	10	02570
004133	005122	A	2571	IBR	10	02571
004134	017000	I	2572	LDA ID+1	10	02572
004135	120437	A	2573	ADD BS14	10	02573
004136	002000	A	2574	CALL JWD	10	02574
004137	077721	R				
004140	017000	I	2575	LDA 00CA+4	10	02575
004141	057000	I	2576	STA I	10	02576
004142	057000	I	2577	STA 02	10	02577
004143	001000	A	2578	JMP DIT68	10	02578
004144	003752	R				
2579			EJECT		10	02579
2580			*****		10	02580
2581			*		10	02581
2582			* OUTPUT OPERAND ADDRESS (DDA)		10	02582
2583			*		10	02583
2584			* ENTRANCE: (B) = PRIOR OPERATION		10	02584
2585			*		10	02585
2586			*****		10	02586
004145	000000	A	2588	DDA ENTRY	10	02588
004146	017000	I	2589	LDA DITFL	10	02589
004147	001016	A	2590	JANZ DDA1	10	02590







004407	004461	R						
004410	017000	I	2727	<b>DTR4</b>	LDA	\$PCW		10 02727
004411	006444	A	2728		BT	044,DTR45	NOT 'F'	10 02728
004412	004456	R						
004413	017000	I	2729		LDA	DFPP		10 02729
004414	001002	A	2730		JAP	*+4		10 02730
004415	004420	R						
004416	005001	A	2731		TZA			10 02731
004417	057000	I	2732		STA	DFPP	RESET DFPP FLAG	10 02732
004420	017000	I	2733		LDA	D1		10 02733
004421	147000	I	2734		SUB	DPCA+7		10 02734
004422	001010	A	2735		JAZ	DTR41	SQRT	10 02735
004423	005502	R						
004424	017000	I	2736		LDA	DP		10 02736
004425	140000	L	2737		SUB	=046		10 02737
004426	001010	A	2738		JAZ	DTR42		10 02738
004427	004433	R						
004430	140467	A	2739		SUB	SEVEN		10 02739
004431	001016	A	2740		JANZ	DTR45	NOT '--' OR '='	10 02740
004432	004456	R						
004433	017000	I	2741	<b>DTR42</b>	LDA	D1		10 02741
004434	002000	A	2742		CALL	GDM		10 02742
004435	002127	R						
004436	140464	A	2743		SUB	THREE		10 02743
004437	001016	A	2744		JANZ	DTR45	NOT REAL-D1	10 02744
004440	004456	R						
004441	017000	I	2745		LDA	D2		10 02745
004442	002000	A	2746		CALL	GDM		10 02746
004443	002127	R						
004444	140464	A	2747		SUB	THREE		10 02747
004445	001016	A	2748		JANZ	DTR45	NOT REAL-D2	10 02748
004446	004456	R						
004447	017000	I	2749		LDA	DP		10 02749
004450	140000	L	2750		SUB	=055		10 02750
004451	001010	A	2751		JAZ	DTR35	MOVE	10 02751
004452	005233	R						
004453	017000	I	2752		LDA	SF		10 02752
004454	001010	A	2753		JAZ	DTR36	POSSIBLE RELATIONAL/ARITH-IF	10 02753
004455	005273	R						
004456	010425	A	2754	<b>DTR45</b>	LDA	K20	(020) = LOAD	10 02754
004457	002000	A	2755		CALL	DIT		10 02755
004460	003040	R						
004461	017000	I	2756	<b>DTR5</b>	LDA	MF		10 02756
004462	054107	A	2757		STA	DTR7-1		10 02757
004463	017000	I	2758		LDA	D2		10 02758
004464	057000	I	2759		STA	I		10 02759
004465	005111	A	2760		IAR			10 02760
004466	001010	A	2761		JAZ	DTR12	RELATIONAL	10 02761
004467	004661	R						
004470	017000	I	2762		LDA	DP		10 02762
004471	140000	L	2763		SUB	=045		10 02763
004472	001004	A	2764		JAN	DTR50		10 02764
004473	004477	R						
004474	140423	A	2765		SUB	FOUR		10 02765
004475	001004	A	2766		JAN	DTR30	'+', '-', '*', '/'	10 02766
004476	005132	R						
004477	017000	I	2767	<b>DTR50</b>	LDA	DP		10 02767
004500	002000	A	2768		CALL	DIT	OPERATION	10 02768
004501	003040	R						
004502	017000	I	2769	<b>DTR51</b>	LDA	SF		10 02769
004503	001010	A	2770		JAZ	DTR1	NO TEMP. STORE REQUIRED	10 02770
004504	004333	R						
004505	017000	I	2771		LDA	DP		10 02771
004506	140000	L	2772		SUB	=055		10 02772
004507	001016	A	2773		JANZ	DTR6	NOT '=' OPERATOR	10 02773
004510	004532	R						
004511	037000	I	2774		LDA	J		10 02774
004512	015003	A	2775		LDA	3,X		10 02775
004513	147000	I	2776		SUB	D2		10 02776
004514	001010	A	2777		JAZ	DTR1	NO STORE FOR REGISTER CHAIN	10 02777
004515	004333	R						
004516	015004	A	2778		LDA	4,X		10 02778
004517	147000	I	2779		SUB	D2		10 02779
004520	001016	A	2780		JANZ	DTR1	NO STORE FOR DUPLICATE ASSIGNMENTS	10 02780
004521	004333	R						
004522	014047	A	2781		LDA	DTR7-1	EXPRESSION MODE	10 02781
004523	147000	I	2782		SUB	MF		10 02782
004524	027000	I	2783		LDB	D1		10 02783
004525	003010	A	2784		XAZ	DTR6-1	SET NEXT D1 TO FETCH	10 02784
004526	004531	R						
004527	001000	A	2785		JMP	DTR1		10 02785
004530	004333	R						
004531	065003	A	2786	<b>DTR6</b>	STB	3,X		10 02786
004532	017000	I	2787		LDA	F		10 02787
004533	057000	I	2788		STA	T6	SAVE FPP VALUE	10 02788
004534	002000	A	2789		CALL	GTS		10 02789
004535	002323	R						
004536	017000	I	2790		LDA	I		10 02790
004537	057000	I	2791		STA	D2	STORE POINTER	10 02791
004540	002000	A	2792		CALL	STX		10 02792
004541	007377	R						

Address	Label	Op/Opnd	Comment	Line	PC
004542		017000 I 2793			
004543		006445 A 2794			
004544		004333 R			
004545		017000 I 2795			
004546		140464 A 2796			
004547		001004 A 2797			
004550		004333 R			
004551		140422 A 2798			
004552		001002 A 2799			
004553		004333 R			
004554		017000 I 2800			
004555		001010 A 2801			
004556		004333 R			
004557		037000 I 2802			
004560		017000 I 2803			
004561		127000 I 2804			
004562		145003 A 2805			
004563		147000 I 2806			
004564		005012 A 2807			
004565		010425 A 2808			
004566		002020 A 2809			
004567		003040 R			
004570		001000 A 2810			
004571		004333 R			
004572		000000 A 2811			
004573		017000 I 2812			
004574		057000 I 2813			
004575		002016 A 2814			
004576		000325 R			
004577		001000 A 2815			
004600		004333 R			
004601		017000 I 2816			
004602		057000 I 2817			
004603		002000 A 2818			
004604		000465 R			
004605		001000 A 2819			
004606		004333 R			
004607		017000 I 2820			
004610		057000 I 2821			
004611		010461 A 2822			
004612		002000 A 2823			
004613		003040 R			
004614		017000 I 2824			
004615		057000 I 2825			
004616		017000 I 2826			
004617		140422 A 2827			
004620		001016 A 2828			
004621		004626 R			
004622		027000 I 2829			
004623		006410 A 2830			
004624		004626 R			
004625		005311 A 2831			
004626		006120 A 2832			
004627		144662 A			
004630		002000 A 2833			
004631		077613 R			
004632		017000 I 2834			
004633		001002 A 2835			
004634		004650 R			
004635		005111 A 2836			
004636		127000 I 2837			
004637		127000 I 2838			
004640		005012 A 2839			
004641		016002 A 2840			
004642		057000 I 2841			
004643		010431 A 2842			
004644		002000 A 2843			
004645		077720 R			
004646		001000 A 2844			
004647		004652 R			
004650		002000 A 2845			
004651		077710 R			
004652		017000 I 2846			
004653		057000 I 2847			
004654		017000 I 2848			
004655		002000 A 2849			
004656		077720 R			
004657		001000 A 2850			
004660		004333 R			
004661		002000 A 2851			
004662		002101 R			
004663		017000 I 2852			
004664		004341 A 2853			
004665		006140 A 2854			
004666		000034 A			
004667		001016 A 2855			
004670		004705 R			
004671		006010 A 2856			
004672		001010 A			
004673		002000 A 2857			
004674		077710 R			

```

LDA $PCW
BT 045,DTR1 NOT 'H'

LDA MF
SUB THREE
JAN DTR1 INTEGER

SUB TWO
JAP DTR1 NOT REA/DBL

LDA T6
JAZ DTR1 STORE WAS NOT FROM FPP

LDX J
LDA DPX
ADD IT
SUB 3,X
SUB J
TAB
LDA K20
JBZM DIT RELOAD FPP IF NEXT LINKED TO CURRENT

JMP DTR1

DTR7 DATA 0 EXPRESSION MODE
LDA D2 I/O LOOP INITIALIZE
STA D
JANZM DDN

JMP DTR1

DTR8 LDA D2 I/O LOOP TERMINATE
STA B
CALL DOT

JMP DTR1

DTR9 LDA D2 I/O LOOP ITEM
STA I
LDA NEG
CALL DIT

LDA I
STA D2 EFFECTIVE I POINTER
LDA IM
SUB TWO
JANZ DTR10 NOT INTEGER

LOB $PCW
BT 010,DTR10

DTR10 DAB MAKE $I1 FOR 1-WORD INTEGER
ADDI 'I2'

CALL CAN

LDA D1
JAP DTR11

DTR11 IAR PROCESS DUMMY DIMENSIONS
ADD DPX
ADD IT
TAB
LDA 2,B D2(B)
STA I
LDA BSS
CALL DUT 'DATA* WORD-COUNT'

JMP DTR11+2

DTR12 CALL DAB 'DATA WORD-COUNT'

LDA D2
STA I
LDA T7
CALL DUT 'DATA PARAMETER-VALUE'

JMP DTR1

DTR13 JANZ DTR13 NOT '=' OR '<'

LDAI 01010 CONVERT TO TRUE(-1) OR FALSE (0)

CALL DAB 'JAZ'
    
```

004675	017000	I	2858	LDA	RL			10	02858
004676	120422	A	2859	ADD	TWO			10	02859
004677	002000	A	2860	CALL	DRE	'DATA *+3'		10	02860
004700	077715	R							
004701	006010	A	2861	LDAI	05301			10	02861
004702	005301	A							
004703	002000	A	2862	CALL	DAB	'DECR 1'		10	02862
004704	077710	R							
004705	017000	I	2863	DTR13 LDA	DP			10	02863
004706	150423	A	2864	ANA	FOUR			10	02864
004707	001010	A	2865	JAZ	DTR14			10	02865
004710	004715	R							
004711	006010	A	2866	LDAI	05311			10	02866
004712	005311	A							
004713	002000	A	2867	CALL	DAB	'DAR FOR '<=' OR '>'		10	02867
004714	077710	R							
004715	017000	I	2868	DTR14 LDA	DP			10	02868
004716	150422	A	2869	ANA	TWO			10	02869
004717	001010	A	2870	JAZ	DTR15			10	02870
004720	004725	R							
004721	006010	A	2871	LDAI	04320			10	02871
004722	004320	A							
004723	002000	A	2872	CALL	DAB	'ASRA 16' FOR '<' OR '>='		10	02872
004724	077710	R							
004725	017000	I	2873	DTR15 LDA	DP			10	02873
004726	006440	A	2874	BT	040,DTR151			10	02874
004727	004734	R							
004730	006010	A	2875	LDAI	05211			10	02875
004731	005211	A							
004732	002000	A	2876	CALL	DAB	'CPA' FOR '=','>','=',' OR '>'		10	02876
004733	077710	R							
004734	010422	A	2877	DTR151 LDA	TWO			10	02877
004735	057000	I	2878	STA	MF	MF = LOGICAL		10	02878
004736	001000	A	2879	JMP	DTR51			10	02879
004737	004502	R							
004740	037000	I	2880	DTR16 LDX	J	PROCESS CONTINUATION AFTER STORE		10	02880
004741	017000	I	2881	LDA	DPX			10	02881
004742	127000	I	2882	ADD	IT			10	02882
004743	147000	I	2883	SUB	J			10	02883
004744	120464	A	2884	ADD	THREE			10	02884
004745	054102	A	2885	STA	DTR23	VALUES ABOVE THIS ARE IN PRIO SEGMENT		10	02885
004746	015002	A	2886	DTR17 LDA	2,X			10	02886
004747	150000	L	2887	ANA	=0176	DP(X)*2		10	02887
004750	144133	A	2888	SUB	DTR27-1	(042) = 'X'		10	02888
004751	001010	A	2889	JAZ	DTR19	ARRAY BASE		10	02889
004752	004767	R							
004753	015000	A	2890	LDA	0,X	D1(X)		10	02890
004754	002000	A	2891	CALL	DTR22			10	02891
004755	005042	R							
004756	001010	A	2892	JAZ	DTR18			10	02892
004757	004761	R							
004760	055000	A	2893	STA	0,X	ACTUAL D1 POINTER		10	02893
004761	015001	A	2894	DTR18 LDA	1,X	D2(X)		10	02894
004762	002000	A	2895	CALL	DTR22			10	02895
004763	005042	R							
004764	001010	A	2896	JAZ	DTR19			10	02896
004765	004767	R							
004766	055001	A	2897	STA	1,X	ACTUAL D2 POINTER		10	02897
004767	005041	A	2898	DTR19 TXA				10	02898
004770	120464	A	2899	ADD	THREE			10	02899
004771	005014	A	2900	TAX				10	02900
004772	147000	I	2901	SUB	JT			10	02901
004773	005311	A	2902	DAR				10	02902
004774	001004	A	2903	JAN	DTR17			10	02903
004775	004746	R							
004776	037000	I	2904	LDX	J	MOVE TRIAD TABLE		10	02904
004777	017000	I	2905	LDA	IT			10	02905
005000	120464	A	2906	ADD	THREE			10	02906
005001	005012	A	2907	TAB		(B) = MOVE-TO		10	02907
005002	147000	I	2908	SUB	J			10	02908
005003	054111	A	2909	STA	DTR28	OFFSET		10	02909
005004	015000	A	2910	DTR20 LDA	0,X			10	02910
005005	056000	A	2911	STA	0,B			10	02911
005006	015001	A	2912	LDA	1,X			10	02912
005007	056001	A	2913	STA	1,B			10	02913
005010	015002	A	2914	LDA	2,X			10	02914
005011	056002	A	2915	STA	2,B			10	02915
005012	150000	L	2916	ANA	=0176	DP(X)*2		10	02916
005013	144070	A	2917	SUB	DTR27-1	(042) = 'X'		10	02917
005014	001010	A	2918	JAZ	DTR21	ARRAY BASE		10	02918
005015	005026	R							
005016	002000	A	2919	CALL	DTR27	PROCESS D1(X)		10	02919
005017	005105	R							
005020	005122	A	2920	IBR				10	02920
005021	005144	A	2921	IXR				10	02921
005022	002000	A	2922	CALL	DTR27	PROCESS D2(X)		10	02922
005023	005105	R							
005024	005322	A	2923	DBR				10	02923
005025	005344	A	2924	DXR				10	02924
005026	005041	A	2925	DTR21 TXA				10	02925
005027	120464	A	2926	ADD	THREE			10	02926

Address	Code	Label	Op	Comment	Line
005030	005014	A	2927	TAX	10 02927
005031	147000	I	2928	SUB JT	10 02928
005032	005311	A	2929	DAR	10 02929
005033	001002	A	2930	JAP	10 02930
005034	005125	R		DTR29+1	DONE WITH SCAN
005035	005122	A	2931	IBR	10 02931
005036	005122	A	2932	IBR	10 02932
005037	005122	A	2933	IBR	10 02933
005040	001000	A	2934	JMP	DTR20
005041	005004	R			
005042	000000	A	2936	DTR22	ENTRY
005043	054015	A	2937	STA	DTR26
005044	147000	I	2938	SUB	IT
005045	001004	A	2939	JAN	DTR24
005046	005054	R			INSIDE ASSIGNMENT TABLE
005047	006010	A	2940	LDAI	**
005050	105047	R			
005051	005050	R	2941	DTR23	EQU *-1
005052	144007	A	2942	SUB	DTR26
005053	001004	A	2943	JAN	DTR25
005054	005001	A	2944	DTR24	TZA
005055	001000	A	2945	JMP*	DTR22
005056	105042	R			(A) = 0 FOR NO CHANGE
005057	017000	I	2946	DTR25	LDA DPX
005060	006140	A	2947	SUBI	**
005061	105060	R			
005062	005061	R	2948	DTR26	EQU *-1
005063	001010	A	2949	JAZ*	DTR22
005064	105042	R			SELF LINK
005065	127000	I	2950	ADD	IT
005066	005012	A	2951	TAB	
005067	016002	A	2952	LDA	2,B
005070	150000	L	2953	ANA	=0176
005071	001010	A	2954	JAZ	DTR3
005072	004352	R			DP(X)*2
005073	140422	A	2955	SUB	TWO
005074	001010	A	2956	JAZ	DTR3
005075	004352	R			ARRAY HEADER (OP=0) FROM PRIOR SEG. USED
005076	006140	A	2957	SUBI	0102
005077	000102	A			
005100	001010	A	2958	JAZ	DTR3
005101	004352	R			ARRAY BASE (OP='X') FROM PRIOR SEG. USED
005102	016001	A	2959	LDA	1,B
005103	001000	A	2960	JMP*	DTR22
005104	105042	R			ACTUAL STORE POINTER
005105	000104	A	2961	DTR27	DATA
005106	000000	A	2962	ENTRY	0104
005107	015000	A	2963	LDA	0,X
005110	147000	I	2965	SUB	IT
005111	001004	A	2966	JAN*	DTR27
005112	105105	R			NORMAL OPERAND
005113	015000	A	2967	LDA	0,X
005114	147000	I	2968	SUB	DPX
005115	001010	A	2969	JAZ*	DTR27
005116	105105	R			SELF LINK
005117	015000	A	2970	LDA	0,X
005120	006140	A	2971	SUBI	**
005121	105117	R			
005122	005120	R	2972	DTR28	EQU *-1
005123	056000	A	2973	STA	0,B
005124	001000	A	2974	JMP*	DTR27
005125	105105	R			
005126	027000	I	2975	DTR29	LDB
005127	067000	I	2976	STB	IT
005128	002000	A	2977	CALL	MMT
005130	002652	R			
005131	001000	A	2978	JMP*	DTR
005132	001000	A	2979	DTR30	EXIT
005133	104325	R			
005134	017000	I	2979	DTR30	LDA MF
005135	140464	A	2980	SUB	THREE
005136	001010	A	2981	JAZ	DTR31
005137	005160	R			CHECK FOR MODE ORDERING
005138	005311	A	2982	DAR	
005139	001010	A	2983	JAZ	DTR305
005140	005132	R			
005141	005311	A	2984	DAR	
005142	001016	A	2985	JANZ	DTR50
005143	004477	R			NOT REA,CPX
005144	017000	I	2986	LDA	02
005145	002000	A	2987	CALL	GDM
005146	002127	R			
005147	140423	A	2988	SUB	FOUR
005148	001000	A	2989	JMP	DTR32
005149	005164	R			
005150	017000	I	2990	DTR305	LDA
005151	002000	A	2991	CALL	GDM
005152	002127	R			
005153	140466	A	2992	SUB	SIX
005154	001000	A	2993	JMP	DTR32
005155	005164	R			

005160	017000	I	2994	DTR31	LDA	D2	REA	10	02994
005161	002000	A	2995		CALL	GDM		10	02995
005162	002127	R							
005163	140422	A	2996		SUB	TWD		10	02996
005164	001016	A	2997	DTR32	JANZ	DTR50	NOT CPX-OP-DBL OR REA-OP-INT	10	02997
005165	004477	R							
005166	017000	I	2998		LDA	MF		10	02998
005167	057000	I	2999		STA	T0		10	02999
005170	017000	I	3000		LDA	OP		10	03000
005171	057000	I	3001		STA	T1		10	03001
005172	002000	A	3002		CALL	GTS		10	03002
005173	002323	R							
005174	017000	I	3003		LDA	I		10	03003
005175	057000	I	3004		STA	T2		10	03004
005176	017000	I	3005		LDA	D2		10	03005
005177	057000	I	3006		STA	I		10	03006
005200	010425	A	3007		LDA	BS4	(020) = LOAD	10	03007
005201	002000	A	3008		CALL	GIT		10	03008
005202	003040	R							
005203	017000	I	3009		LDA	T0		10	03009
005204	057000	I	3010		STA	IM		10	03010
005205	002000	A	3011		CALL	MODE	CONVERT REGISTER MODE	10	03011
005206	002552	R							
005207	017000	I	3012		LDA	T1		10	03012
005210	002000	A	3013		CALL	TCD		10	03013
005211	007417	R							
005212	001010	A	3014		JAZ	DTR34	COMMUTATIVE OPERATOR	10	03014
005213	005225	R							
005214	002000	A	3015		CALL	GTS		10	03015
005215	002323	R							
005216	017000	I	3016		LDA	I		10	03016
005217	027000	I	3017		LDB	T2		10	03017
005220	057000	I	3018		STA	T2		10	03018
005221	067000	I	3019		STB	I		10	03019
005222	010425	A	3020		LDA	PS4	(020) = LOAD	10	03020
005223	002000	A	3021		CALL	GIT		10	03021
005224	003040	R							
005225	017000	I	3022	DTR34	LDA	T2		10	03022
005226	057000	I	3023		STA	I		10	03023
005227	017000	I	3024		LDA	T1		10	03024
005230	057000	I	3025		STA	OP		10	03025
005231	001000	A	3026		JMP	DTR50		10	03026
005232	004477	R							
005233	057000	I	3027	DTR35	STA	F	PROCESS FLOATING MOVE	10	03027
005234	147000	I	3028		SUB	D1		10	03028
005235	002000	A	3029		CALL	DTR355		10	03029
005236	005252	R							
005237	147000	I	3030		SUB	D2		10	03030
005240	002000	A	3031		CALL	DTR355		10	03031
005241	005252	R							
005242	006010	A	3032		LDAI	FMDVI		10	03032
005243	105037	A							
005244	002000	A	3033		CALL	DTR40		10	03033
005245	005460	R							
005246	010464	A	3034		LDA	THREE		10	03034
005247	057000	I	3035		STA	MF	FORCE REAL REGISTER	10	03035
005250	001000	A	3036		JMP	DTR51		10	03036
005251	004502	R							
005252	000000	A	3037	DTR355	ENTRY		CHECK FOR LINK TO SPECIAL SUBSCRIPT	10	03037
005253	127000	I	3038		ADD	IT		10	03038
005254	001000	A	3039		JAP	DTR356	INSIDE ASSIGNMENT	10	03039
005255	005270	R							
005256	127000	I	3040		ADD	DPX		10	03040
005257	005014	A	3041		TAX			10	03041
005260	147000	I	3042		SUB	IT		10	03042
005261	001000	A	3043		JAP	DTR45	PASS DPX ONLY	10	03043
005262	004456	R							
005263	015000	A	3044		LDA	R,X		10	03044
005264	150000	L	3045		AMA	=0176	OP	10	03045
005265	140422	A	3046		SUB	TWD		10	03046
005266	001010	A	3047		JAZ	DTR45	LINKED TO SPECIAL SUBSCRIPT	10	03047
005267	004456	R							
005270	005001	A	3048	DTR356	TZA			10	03048
005271	001000	A	3049		JMP*	DTR355		10	03049
005272	105252	R							
005273	017000	I	3050	DTR36	LDA	\$PCW		10	03050
005274	006445	A	3051		BT	J45, DTR45	NOT 'HF'	10	03051
005275	004456	R							
005276	037000	I	3052		LDB	J		10	03052
005277	015004	A	3053		LDA	4,X	D2(J+3)	10	03053
005300	005111	A	3054		JAR			10	03054
005301	001016	A	3055		JANZ	DTR37	NOT RELATIONAL	10	03055
005302	005325	R							
005303	015005	A	3056		LDA	S,X		10	03056
005304	006150	A	3057		ANAI	R16	GET RELATIONAL DP(J+3)	10	03057
005305	000016	A							
005306	004204	A	3058		ASLA	4		10	03058
005307	006120	A	3059		ADDI	FLREL		10	03059
005310	105024	A							
005311	057000	I	3060		STA	DFPP		10	03060
005312	002000	A	3061		CALL	DTR40		10	03061

005313	005463	R								
005314	017000	I	3062	LDA	J				10	03062
005315	120464	A	3063	ADD	THREE				10	03063
005316	057000	I	3064	STA	J				10	03064
005317	002000	A	3065	CALL	LTX				10	03065
005320	077705	R								
005321	010422	A	3066	LDA	TWO				10	03066
005322	057000	I	3067	STA	MF	SET LOGICAL MODE			10	03067
005323	001000	A	3068	JMP	DTR51				10	03068
005324	004502	R								
005325	015004	A	3069	DTR37	LDA	4,X			10	03069
005326	147000	I	3070	SUB	DPX				10	03070
005327	001016	A	3071	JANZ	DTR45	NOT POSSIBLE ARITH-IF			10	03071
005330	004456	R								
005331	015005	A	3072	LDA	5,X				10	03072
005332	150000	L	3073	ANA	=0176				10	03073
005333	006140	A	3074	SUBI	0132				10	03074
005334	000132	A								
005335	001016	A	3075	JANZ	DTR45	NOT POSSIBLE ARITH-IF			10	03075
005336	004456	R								
005337	017000	I	3076	LDA	DFPP				10	03076
005340	001010	A	3077	JAZ	DTR45	NOT ARITHMETIC IF			10	03077
005341	004456	R								
005342	006010	A	3078	LDAI	FLAIF				10	03078
005343	105226	A								
005344	057000	I	3079	STA	DFPP				10	03079
005345	002000	A	3080	CALL	DTR40				10	03080
005346	005463	R								
005347	001000	A	3081	JMP	DTR1				10	03081
005350	004333	R								
005351	017000	I	3082	DTR38	LDA	\$PCW	TEST FOR FPP SIMPLE SUBSCRIPT		10	03082
005352	006444	A	3083	BT	044,DTR397	NOT 'F'			10	03083
005353	005460	R								
005354	006445	A	3084	BT	045,DTR397	NOT 'H'			10	03084
005355	005460	R								
005356	017000	I	3085	LDA	02				10	03085
005357	002000	A	3086	CALL	COM				10	03086
005360	002127	R								
005361	140464	A	3087	SUB	THREE				10	03087
005362	001016	A	3088	JANZ	DTR397	NOT REAL ARRAY			10	03088
005363	005460	R								
005364	037000	I	3089	LDX	J				10	03089
005365	015003	A	3090	LDA	3,X				10	03090
005366	147000	I	3091	SUB	IT				10	03091
005367	001002	A	3092	JAP	DTR397	TRIAD LINK FOR SUBSCRIPT			10	03092
005370	005460	R								
005371	015003	A	3093	LDA	3,X				10	03093
005372	002000	A	3094	CALL	COM				10	03094
005373	002127	R								
005374	140422	A	3095	SUB	TWO				10	03095
005375	001016	A	3096	JANZ	DTR397	NOT INTEGER SUBSCRIPT			10	03096
005376	005460	R								
005377	015004	A	3097	LDA	4,X				10	03097
005400	147000	I	3098	SUB	\$PCA+1	=2			10	03098
005401	001016	A	3099	JANZ	DTR397	NOT REAL OFFSET			10	03099
005402	005460	R								
005403	015005	A	3100	LDA	5,X				10	03100
005404	150475	A	3101	ANA	BM177				10	03101
005405	006140	A	3102	SUBI	0116	(047) = '*'			10	03102
005406	000116	A								
005407	001016	A	3103	JANZ	DTR397	NOT SUBSCRIPT*2			10	03103
005410	005460	R								
005411	015010	A	3104	LDA	8,X				10	03104
005412	150000	L	3105	ANA	=0176				10	03105
005413	001016	A	3106	JANZ	DTR397	NOT 0-OPERATOR (ARRAY HEADER)			10	03106
005414	005460	R								
005415	017000	I	3107	LDA	DPX				10	03107
005416	127000	I	3108	ADD	IT				10	03108
005417	147000	I	3109	SUB	J				10	03109
005420	140466	A	3110	SUB	SIX				10	03110
005421	057000	I	3111	STA	T1	EFFECTIVE POINTER			10	03111
005422	037000	I	3112	LDX	J				10	03112
005423	015001	A	3113	DTR39	LDA	1,X	SIMPLE USAGE TEST LOOP		10	03113
005424	147000	I	3114	SUB	T1				10	03114
005425	001016	A	3115	JANZ	DTR395	02(X) NOT LINKED TO CURRENT			10	03115
005426	005443	R								
005427	015002	A	3116	LDA	2,X				10	03116
005430	150000	L	3117	ANA	=0176	0P(X)*2			10	03117
005431	006140	A	3118	SUBI	0112				10	03118
005432	000112	A								
005433	001004	A	3119	JAN	DTR397	NOT ALLOWABLE OP			10	03119
005434	005460	R								
005435	140424	A	3120	SUB	EIGHT				10	03120
005436	001004	A	3121	JAN	DTR395	'+', '-', '*', '/'			10	03121
005437	005443	R								
005440	140424	A	3122	SUB	EIGHT				10	03122
005441	001016	A	3123	JANZ	DTR397	NOT '='			10	03123
005442	005460	R								
005443	005041	A	3124	DTR395	TXA				10	03124
005444	120464	A	3125	ADD	THREE				10	03125
005445	005014	A	3126	TAX					10	03126

005446	147000	I	3127	SUB	JT			10	03127	
005447	005311	A	3128	DAR				10	03128	
005450	001004	A	3129	JAN	DTR39			10	03129	
005451	005423	R								
005452	017000	I	3130	LDA	J			10	03130	
005453	120466	A	3131	ADD	SIX			10	03131	
005454	057000	I	3132	STA	J			10	03132	
005455	005014	A	3133	TAX				10	03133	
005456	045002	A	3134	INR	2,X			10	03134	
005457	045002	A	3135	INR	2,X	SET ARRAY HEADER DP TO 1		10	03135	
005460	005001	A	3136	TZA				10	03136	
005461	001000	A	3137	JMP	DTR1+1			10	03137	
005462	004334	R								
005463	000000	A	3138	DTR40	ENTRY	OUTPUT SPECIAL INSTRUCTIONS		10	03138	
005464	002000	A	3139	CALL	DAB			10	03139	
005465	077710	R								
005466	017000	I	3140	LDA	D1			10	03140	
005467	057000	I	3141	STA	I			10	03141	
005470	010000	L	3142	LDA	=054			10	03142	
005471	002000	A	3143	CALL	DIT			10	03143	
005472	003040	R								
005473	017000	I	3144	LDA	D2			10	03144	
005474	057000	I	3145	STA	I			10	03145	
005475	010000	L	3146	LDA	=054			10	03146	
005476	002000	A	3147	CALL	DIT			10	03147	
005477	003040	R								
005500	001000	A	3148	JMP*	DTR40			10	03148	
005501	105463	R								
005502	057000	I	3149	DTR41	STA	F	PROCESS SORT CALL	10	03149	
005503	006010	A	3150	LDAI	FSORT			10	03150	
005504	105327	A								
005505	002000	A	3151	CALL	DAB			10	03151	
005506	077710	R								
005507	010464	A	3152	LDA	THREE			10	03152	
005510	057000	I	3153	STA	MF			10	03153	
005511	017000	I	3154	LDA	D2			10	03154	
005512	057000	I	3155	STA	I			10	03155	
005513	017000	I	3156	LDA	DP	PARAMETER		10	03156	
005514	002000	A	3157	CALL	DIT			10	03157	
005515	003040	R								
005516	001000	A	3158	JMP	DTR51			10	03158	
005517	004502	R								
005520	017000	I	3159	DTR60	LDA	D1		10	03159	
005521	001010	A	3160	JAZ	DTR4			10	03160	
005522	004410	R								
005523	006147	A	3161	SUBE	DPCA#8			10	03161	
005524	177367	R								
005525	001010	A	3162	JAZ	DTR64	IFIX		10	03162	
005526	005553	R								
005527	017000	I	3163	LDA	D1			10	03163	
005530	006147	A	3164	SUBE	DPCA+9			10	03164	
005531	177370	R								
005532	001010	A	3165	JAZ	DTR62	FLOAT		10	03165	
005533	005542	R								
005534	017000	I	3166	LDA	D1			10	03166	
005535	006147	A	3167	SUBE	DPCA+11			10	03167	
005536	177372	R								
005537	001016	A	3168	JANZ	DTR4			10	03168	
005540	004410	R								
005541	005111	A	3169	IAR		DFLOAT		10	03169	
005542	120464	A	3170	DTR62	ADD	THREE		10	03170	
005543	057000	I	3171	STA	MF	SET REAL/DBL		10	03171	
005544	057000	I	3172	STA	F			10	03172	
005545	006010	A	3173	LDAI	FLT			10	03173	
005546	105425	A								
005547	002000	A	3174	CALL	DAB			10	03174	
005550	077710	R								
005551	001000	A	3175	JMP	DTR5	PARAMETER VALUE OUTPUT		10	03175	
005552	004461	R								
005553	017000	I	3176	DTR64	LDA	D2	PROCESS IFIX	10	03176	
005554	057000	I	3177	STA	I			10	03177	
005555	010425	A	3178	LDA	K20			10	03178	
005556	002000	A	3179	CALL	DIT	LOAD TO FPP		10	03179	
005557	003040	R								
005560	010422	A	3180	LDA	TWO			10	03180	
005561	057000	I	3181	STA	IM			10	03181	
005562	002000	A	3182	CALL	MODE	FIX VALUE TO A\$C		10	03182	
005563	002552	R								
005564	001000	A	3183	JMP	DTR51			10	03183	
005565	004502	R								
			3184	EJECT				10	03184	
			3185	* WRI	INPUT/OUTPUT PROCESSOR			10	03185	
005566	006010	A	3186	RED	LDAI	'RD'		10	03186	
005567	151384	A								
005570	057000	I	3187	STA	NAME			10	03187	
005571	002000	A	3188	WRI	CALL	DIL		10	03188	
005572	002735	R								
005573	005061	A	3189	TZA				PD	10	03189
005574	057000	I	3190	STA	T7	FORMAT ADDRESS		PD	10	03190
005575	057000	I	3191	STA	T8	END ADDRESS		PD	10	03191
005576	057000	I	3192	STA	T9	ERR ADDRESS		PD	10	03192

005577	017000	I	3193	LDA	TC			10	03193
005600	140000	L	3194	SUB	=','			10	03194
005601	001010	A	3195	JAZ	WR12	HAS FORMAT		10	03195
005602	005651	R							
005603	017000	I	3196	WR101 LDA	T7			PD	10 03196
005604	002000	A	3197	CALL	WR102	FORMAT ADDRESS		PD	10 03197
005605	005637	R							
005606	017000	I	3198	LDA	T8			10	03198
005607	127000	I	3199	ADD	T9			10	03199
005610	001010	A	3200	JAZ	WR1015	NO END OR ERR		10	03200
005611	005623	R							
005612	005001	A	3201	TZA				10	03201
005613	002000	A	3202	CALL	0AB	G-LEVEL FLAG		10	03202
005614	077710	R							
005615	017000	I	3203	LDA	T8			PD	10 03203
005616	002000	A	3204	CALL	WR102	END ADDRESS		PD	10 03204
005617	005637	R							
005620	017000	I	3205	LDA	T9			PD	10 03205
005621	002000	A	3206	CALL	WR102	ERR ADDRESS		PD	10 03206
005622	005637	R							
005623	002000	A	3207	WR1015 CALL	RID			10	03207
005624	077732	R							
005625	017000	I	3208	LDA	TC			10	03208
005626	140463	A	3209	SUB	K77			10	03209
005627	001004	A	3210	JAN	WR13	NOT END		10	03210
005630	005746	R							
005631	006010	A	3211	WR1E LDAI	'ND'			10	03211
005632	147304	A							
005633	002000	A	3212	JMPM	CAN	CALL NAME		10	03212
005634	077613	R							
005635	001000	A	3213	JMP	CRT			10	03213
005636	077616	R							
005637	000000	A	3214	WR102 ENTRY		OUTPUT I/O CALL PARAMETERS		PD	10 03214
005640	057000	I	3215	STA	I			PD	10 03215
005641	002010	A	3216	JAZM	0AB	'DATA 0'		10	03216
005642	077710	R							
005643	005001	A	3217	TZA				PD	10 03217
005644	027000	I	3218	LDB	I			PD	10 03218
005645	002026	A	3219	JBNZM	OUT	'DATA STATEMENT-NUMBER/FORMAT-ADDRESS'		10	03219
005646	077720	R							
005647	001000	A	3220	JMP*	WR102			PD	10 03220
005650	105637	R							
005651	002000	A	3221	WR12 CALL	EXA			10	03221
005652	077646	R							
005653	001004	A	3222	JAN	WR122	FORMAT STATEMENT NUMBER		PD	10 03222
005654	005701	R							
005655	002000	A	3223	WR121 CALL	INN			10	03223
005656	077671	R							
005657	001010	A	3224	JAZ	TER11	NOT AN OPERAND		10	03224
005660	077755	R							
005661	017000	I	3225	LDA	NT			PD	10 03225
005662	001016	A	3226	JANZ	TER20			10	03226
005663	077765	R							
005664	017000	I	3227	LDA	TC			PD	10 03227
005665	140000	L	3228	SUB	=','			10	03228
005666	001010	A	3229	JAZ	WR124	END/ERR		PD	10 03229
005667	005710	R							
005670	002000	A	3230	CALL	ASI			10	03230
005671	077611	R							
005672	017000	I	3231	LDA	IU			PD	10 03231
005673	140422	A	3232	SUB	TWD			PD	10 03232
005674	001016	A	3233	JANZ	TER5	NOT ARRAY		10	03233
005675	077751	R							
005676	005002	A	3234	TZB				PD	10 03234
005677	001000	A	3235	JMP	WR128			PD	10 03235
005700	005731	R							
005701	002000	A	3236	WR122 CALL	ISN			10	03236
005702	077674	R							
005703	002000	A	3237	CALL	DSM			10	03237
005704	077622	R							
005705	005002	A	3238	TZB				PD	10 03238
005706	001000	A	3239	JMP	WR128			PD	10 03239
005707	005731	R							
005710	017000	I	3240	WR124 LDA	ID			10	03240
005711	137000	I	3241	ERA	ID+1			10	03241
005712	137000	I	3242	ERA	ID+2			10	03242
005713	006140	A	3243	SUBI	0120716			10	03243
005714	120716	A							
005715	020421	A	3244	LDB	ONE			PD	10 03244
005716	001010	A	3245	JAZ	WR126	END		PD	10 03245
005717	005725	R							
005720	006140	A	3246	SUBI	013004			10	03246
005721	013004	A							
005722	001016	A	3247	JANZ	TER1	NOT END/ERR		10	03247
005723	077745	R							
005724	005122	A	3248	IBR				PD	10 03248
005725	067000	I	3249	WR126 STB	T6			PD	10 03249
005726	002000	A	3250	CALL	ISN			10	03250
005727	077674	R							
005730	027000	I	3251	LDB	T6			PD	10 03251
005731	006016	A	3252	WR128 LDAE	T7,B			PD	10 03252



005732	177604	R							
005733	001016	A	3253	JANZ	TER1	DUPLICATE USAGE		10	03253
005734	077745	R							
005735	017000	I	3254	LDA	I			PD	10 03254
005736	006056	A	3255	STAE	17.3			PD	10 03255
005737	177604	R							
005740	017000	I	3256	LDA	TC			PD	10 03256
005741	140000	L	3257	SUB	=','			10	03257
005742	001010	A	3258	JAZ	WR121			PD	10 03258
005743	005655	R							
005744	001000	A	3259	JMP	WR101			PD	10 03259
005745	005603	R							
005746	002000	A	3260	WR13	CALL	RCH		10	03260
005747	077731	R							
005750	005001	A	3261	TZA				10	03261
005751	057000	I	3262	STA	IDFL	IDFL = 0		10	03262
005752	017000	I	3263	LDA	DT			10	03263
005753	057000	I	3264	STA	DSAV			10	03264
005754	002000	A	3265	WR14	CALL	INI		10	03265
005755	077670	R							
005756	001010	A	3266	JAZ	WR18	IM = 0		10	03266
005757	006062	R							
005760	017000	I	3267	LDA	IU			10	03267
005761	140422	A	3268	SUB	K2			10	03268
005762	001010	A	3269	JAZ	WR19	ARRAY		10	03269
005763	006100	R							
005764	017000	I	3270	LDA	NT			10	03270
005765	001016	A	3271	JANZ	TER1			10	03271
005766	077745	R							
005767	002000	A	3272	CALL	TVR			10	03272
005770	077773	R							
005771	017000	I	3273	LDA	TC			10	03273
005772	140000	L	3274	SUB	=','			10	03274
005773	001010	A	3275	JAZ	WR1D	NEST END		10	03275
005774	006030	R							
005775	017000	I	3276	WR15	LDA	I		10	03276
005776	057000	I	3277	STA	D2			10	03277
005777	017000	I	3278	LDA	IS	ITEM SIZE		10	03278
006000	057000	I	3279	STA	D1			10	03279
006001	006010	A	3280	LDAI	033	'Q'		10	03280
006002	000033	A							
006003	057000	I	3281	STA	DP			10	03281
006004	002000	A	3282	JMPM	ETT	ENTER TRIAD		10	03282
006005	000643	R							
006006	017000	I	3283	WR16	LDA	TC		10	03283
006007	140000	L	3284	SUB	=','			10	03284
006010	001010	A	3285	JAZ	WR14	CONTINUE		10	03285
006011	005754	R							
006012	017000	I	3286	LDA	IDFL			10	03286
006013	002000	A	3287	CALL	PTR			10	03287
006014	077725	R							
006015	017000	I	3288	LDA	IDFL			10	03288
006016	001010	A	3289	JAZ	WR1E	END		10	03289
006017	005631	R							
006020	002000	A	3290	JMPM	WR1A	CORRECT IDFL		10	03290
006021	006162	R							
006022	002000	A	3291	WR17	CALL	RID		10	03291
006023	077732	R							
006024	017000	I	3292	LDA	D1			10	03292
006025	057000	I	3293	STA	IDFL	NEW IDFL		10	03293
006026	001000	A	3294	JMP	WR16			10	03294
006027	006006	R							
006030	017000	I	3295	WR1D	LDA	IDFL		10	03295
006031	001010	A	3296	JAZ	TER1	I/O LOOP NEST		10	03296
006032	077745	R							
006033	147000	I	3297	SUB	DPX			10	03297
006034	147000	I	3298	SUB	IT			10	03298
006035	127000	I	3299	ADD	IT			10	03299
006036	001010	A	3300	JAZ	TER1			10	03300
006037	077745	R							
006040	017000	I	3301	LDA	I			10	03301
006041	002000	A	3302	JMPM	POI	DD INPUT		10	03302
006042	000270	R							
006043	017000	I	3303	LDA	D			10	03303
006044	057000	I	3304	STA	D2			10	03304
006045	006010	A	3305	LDAI	036			10	03305
006046	000036	A							
006047	057000	I	3306	STA	DP			10	03306
006050	002000	A	3307	JMPM	ETT	ENTER TRIAD		10	03307
006051	000643	R							
006052	002000	A	3308	JMPM	WR1A			10	03308
006053	006162	R							
006054	017000	I	3309	LDA	D			10	03309
006055	057000	I	3310	STA	D2			10	03310
006056	002000	A	3311	JMPM	STX	STORE TRIAD		10	03311
006057	007377	R							
006060	001000	A	3312	JMP	WR17			10	03312
006061	006022	R							
006062	002000	A	3313	WR18	CALL	PTS		10	03313
006063	077726	R							
006064	005001	A	3314	TZA				10	03314

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006065 057000 I 3315 STA D2 10 03315
006066 017000 I 3316 LDA IOFL 10 03316
006067 057000 I 3317 STA D1 10 03317
006070 006010 A 3318 LDAI 023 10 03318
006071 000023 A
006072 057000 I 3319 STA DP 10 03319
006073 002000 A 3320 JMPM ETT ENTER TRIAD 10 03320
006074 000643 R
006075 057000 I 3321 STA IOFL CORRECTED POINTER 10 03321
006076 001000 A 3322 JMP WRI4 10 03322
006077 005754 R
006100 017000 I 3323 WRI9 LDA TC 10 03323
006101 140000 L 3324 SUB =*C 10 03324
006102 001010 A 3325 JAZ WRIF HAS ELEMENT 10 03325
006103 006150 R
006104 002000 A 3326 CALL IWI 10 03326
006105 077677 R
006106 017000 I 3327 LDA IS B.2 10 03327
006107 001016 A 3328 JANZ WRI5 DUMMY DIMENSIONS B.2 10 03328
006110 005775 R
006111 010000 L 3329 LDA =047 B.2 10 03329
006112 057000 I 3330 STA DP B.2 10 03330
006113 017000 I 3331 LDA IP B.2 10 03331
006114 057000 I 3332 STA D1 B.2 10 03332
006115 017000 I 3333 LDA IP+1 B.2 10 03333
006116 057000 I 3334 STA D2 B.2 10 03334
006117 002000 A 3335 CALL ETT ENTER TRIAD TRI=IS*DIM1 B.2 10 03335
006120 000643 R
006121 017000 I 3336 LDA ND B.2 10 03336
006122 140422 A 3337 SUB K2 B.2 10 03337
006123 001004 A 3338 JAN WRIU 1-DIMENSION B.2 10 03338
006124 006141 R
006125 054007 A 3339 WRI96 STA WRI98 10 03339
006126 005012 A 3340 TAB 10 03340
006127 006016 A 3341 LDAE IP+2,B 10 03341
006130 177426 R
006131 057000 I 3342 STA D2 10 03342
006132 002000 A 3343 CALL ETT FORM DIMENSION MULTIPLICATION 10 03343
006133 000643 R
006134 006010 A 3344 LDAI ** 10 03344
006135 106134 R
006136 005311 A 3345 WRI96 EQU *-1 10 03345
006137 001002 A 3346 DAR 10 03346
006140 006125 R 3347 JAP WRI96 10 03347
006141 046002 A 3348 WRIU INR 2,B SET STORAGE FLAG B.2 10 03348
006142 017000 I 3349 LDA D1 B.2 10 03349
006143 005211 A 3350 CPA B.2 10 03350
006144 057000 I 3351 STA IS FLAG BY NEGATIVE B.2 10 03351
006145 001000 A 3352 JMP WRI5 10 03352
006146 005775 R
006147 3353 WRI96 BSS 1 B.2 10 03353
006150 017000 I 3354 WRI96 LDA IS 10 03354
006151 054004 A 3355 STA WRI96+1 10 03355
006152 005101 A 3356 INCR ! 10 03356
006153 002000 A 3357 JMPM EXP EXPRESSION 10 03357
006154 000754 R
006155 006010 A 3358 WRI96 LDAI * 10 03358
006156 006155 R
006157 057000 I 3359 STA IS 10 03359
006160 001000 A 3360 JMP WRI5 10 03360
006161 005775 R
006162 000000 A 3361 WRI96 ENTRY CORRECT IOFL 10 03361
006163 017000 I 3362 LDA DPX 10 03362
006164 127000 I 3363 ADD IT 10 03363
006165 147000 I 3364 SUB IOFL 10 03364
006166 057000 I 3365 STA J 10 03365
006167 002000 A 3366 CALL LTX 10 03366
006170 077705 R
006171 001000 A 3367 JMP* WRI96 10 03367
006172 106162 R
3368 EJECT 10 03368
3369 ***** 10 03369
3370 * 10 03370
3371 * PROCESS RETURN STATEMENT (RET) * 10 03371
3372 * 10 03372
3373 * FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENT 'RETURN' * 10 03373
3374 * 10 03374
3375 * ENTRY: DIRECT FROM SID * 10 03375
3376 * SBFL=0 IF SUBROUTINE WITH NO NON-STANDARD EXITS * 10 03376
3377 * <0 IF SUBROUTINE WITH NON-STANDARD EXITS (SBFL = -MAX. NO * 10 03377
3378 * =1 IF IN FUNC SUBP BUT NO RETURNS PROCESSED * 10 03378
3379 * =ADDR OF FIRST RETURN OTHERWISE * 10 03379
3380 * SBFL+2>0 IF VARIABLE RETURNS USED * 10 03380
3381 * 10 03381
3382 * EXIT : DIRECT TO STATEMENT COMPLETION ENTRY STNN * 10 03382
3383 * SUBROUTINE SUBP GENERATES: 'JMP* ENTRY' * 10 03383
3384 * FUNCTION SUBP<1ST RETURN> GENERATES= '=FUNCTION NAME' * 10 03384
3385 * 'JMP* ENTRY * 10 03385
3386 * FUNCTION SUBP<RETURN-NOT FIRST> GENERATES: 'JMP RETURN#1 * 10 03386
3387 * 10 03387

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3388 * ERRORS: TER2 IF NOT IN SUBPROGRAM * 10 03388
3389 * * 10 03389
3390 ***** 10 03390
006173 017000 I 3392 RET LDA SBFL+1 GET POINTER TO SUBPROGRAM NAME 10 03392
006174 057000 I 3393 STA I STORE IN I 10 03393
006175 001016 A 3394 JANZ RET0 10 03394
006176 006204 R
006177 006010 A 3395 LDAI 'ST' 10 03395
006200 151724 A
006201 057000 I 3396 STA NAME 10 03396
006202 001000 A 3397 JMP STP 10 03397
006203 007314 R
006204 017000 I 3398 RET0 LDA SBFL 10 03398
006205 005311 A 3399 DAR 10 03399
006206 001004 A 3400 JAN RET4 SUBROUTINE 10 03400
006207 006261 R
006210 002000 A 3401 CALL ICH PROCESS FUNCTION RETURN 10 03401
006211 077654 R
006212 017000 I 3402 LDA SBFL 10 03402
006213 005311 A 3403 DAR NO, FUNCTION 10 03403
006214 001010 A 3404 JAZ RET1 FIRST RETURN ? 10 03404
006215 006224 R
006216 010432 A 3405 LDA KJMP NO 10 03405
006217 002000 A 3406 CALL DAB 'JMP' 10 03406
006220 077710 R
006221 017000 I 3407 LDA SBFL GET ADDRESS OF FIRST RETURN 10 03407
006222 001000 A 3408 JMP RET3 10 03408
006223 006255 R
3409 ***** 10 03409
3410 * PROCESS FIRST FUNCTION RETURN * 10 03410
3411 ***** 10 03411
006224 017000 I 3412 RET1 LDA RL GET ADDRESS OF FIRST RETURN 10 03412
006225 057000 I 3413 STA SBFL STORE IN SBFL 10 03413
006226 002000 A 3414 CALL LAX 10 03414
006227 077700 R
006230 005001 A 3415 TZA 10 03415
006231 057000 I 3416 STA NT SET NT TO VARIABLE 10 03416
006232 002000 A 3417 CALL ASI 10 03417
006233 077611 R
006234 005301 A 3418 DECR 1 10 03418
006235 057000 I 3419 STA XRPT FORCE RELOAD OF BASE PTR X 10 03419
006236 017000 I 3420 LDA $PCW 10 03420
006237 054006 A 3421 STA RET2-2 10 03421
006240 150446 A 3422 ANA BR5 10 03422
006241 057000 I 3423 STA $PCW 10 03423
006242 010425 A 3424 LDA K20 10 03424
006243 002000 A 3425 CALL BIT 'LOAD FUNCTION-NAME' 10 03425
006244 003040 R
006245 006010 A 3426 LDAI *A 10 03426
006246 106245 R
006247 057000 I 3427 STA $PCW 10 03427
006250 010432 A 3428 RET2 LDA KJMP 10 03428
006251 002000 A 3429 CALL DAB 'JMP' 10 03429
006252 077710 R
006253 006010 A 3430 LDAI 0100000 GET ADDRESS *ENTRY 10 03430
006254 100000 A
006255 002000 A 3431 RET3 CALL DPE 10 03431
006256 077715 R
006257 001000 A 3432 JMP STN 10 03432
006260 077743 R
006261 002000 A 3433 RET4 CALL INN PROCESS SUBROUTINE RETURN 10 03433
006262 077671 R
006263 140422 A 3434 SUB TWO 10 03434
006264 001016 A 3435 JANZ RET2 STANDARD RETURN 10 03435
006265 006250 R
006266 017000 I 3436 LDA NT 10 03436
006267 001010 A 3437 JAZ RET5 VARIABLE RETURN 10 03437
006270 006394 R
006271 010432 A 3438 LDA KJMP 10 03438
006272 002000 A 3439 CALL DAB 'JMP' 10 03439
006273 077710 R
006274 017000 I 3440 LDA ID 10 03440
006275 002000 A 3441 CALL MCL 10 03441
006276 077707 R
006277 005001 A 3442 TZA 10 03442
006300 002000 A 3443 CALL DUT 'DATA EXIT-NAME' 10 03443
006301 077720 R
006302 001000 A 3444 JMP STN 10 03444
006303 077743 R
006304 002000 A 3445 RET5 CALL ASI 10 03445
006305 077611 R
006306 047000 I 3446 INR SBFL+2 10 03446
006307 010425 A 3447 LDA K20 10 03447
006310 002000 A 3448 CALL BIT LOAD VARIABLE 10 03448
006311 003040 R
006312 010432 A 3449 LDA KJMP 10 03449
006313 002000 A 3450 CALL DAB 'JMP' 10 03450
006314 077710 R
006315 005001 A 3451 TZA 10 03451
006316 002000 A 3452 CALL MXL 10 03452
006317 077707 R

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006320 005001 A 3453 TZA
006321 002000 A 3454 CALL OUT *JMP >X00*
006322 077720 R
006323 001000 A 3455 JMP STN
006324 077743 R
3456 EJECT
3457 *****
3458 *
3459 * RESTORE POINTER (RST)
3460 *
3461 *****
006325 000000 A 3460 RST ENTRY
006326 014016 A 3464 LDA SAV1
006327 057000 I 3465 STA I
006330 014015 A 3466 LDA SAV1+1
006331 057000 I 3467 STA IM
006332 001000 A 3468 JMP* RST
006333 106325 R
3469 EJECT
3470 *****
3471 *
3472 * SAVE POINTER (SAV)
3473 *
3474 *****
006334 000000 A 3476 SAV ENTRY
006335 017000 I 3477 LDA I
006336 054006 A 3478 STA SAV1
006337 017000 I 3479 LDA IM
006340 054005 A 3480 STA SAV1+1
006341 017000 I 3481 LDA DPCA+6 A&C POINTER
006342 057000 I 3482 STA I
006343 001000 A 3483 JMP* SAV
006344 106334 R
3484 SAV1 BSS 2 I,IM SAVE CELLS
3485 EJECT
3486 *****
3487 *
3488 * SCAN LOAD EXPRESSION (SCL)
3489 *
3490 * FUNCTION: SCL GETS SYNTACTICAL ITEMS BEFORE AND AFTER THE
3491 * CURRENT ITEM IN THE EXPRESSION TABLE.
3492 *
3493 * ENTRY: K POINTS TO CURRENT ENTRY IN EXPRESSION TABLE
3494 *
3495 * EXIT : OPBK=PRECEDING OPERATOR
3496 * EHBK=HIERARCHY OF OPBK
3497 * AIFW=POINTER TO FOLLOWING OPERAND
3498 * NFFW=FOLLOWING NEGATION FLAG
3499 * CURRENT EXPRESSION TABLE ENTRY LOADED
3500 *
3501 *****
006347 000000 A 3503 SCL ENTRY
006350 017000 I 3504 LDA K
006351 140422 A 3505 SUB K2
006352 005014 A 3506 TAX POINT X AT ENTRY FOLLOWING CURRENT
006353 015005 A 3507 LDA 5,X GET PRECEDING HIERARCHY
006354 004547 A 3508 LLSR 7 STORE IN EHBK
006355 057000 I 3509 STA EHBK
006356 005001 A 3510 TZA
006357 004446 A 3511 LLRL 6 GET PRECEDING OPERATOR
006360 057000 I 3512 STA OPBK STORE IN OPBK
006361 015000 A 3513 LDA 0,X GET POINTER TO FOLLOWING OPERAND
006362 057000 I 3514 STA AIFW STORE IN AIFW
006363 005101 A 3515 INCR 1
006364 155001 A 3516 ANA 1,X GET FOLLOWING NEGATION FLAG
006365 057000 I 3517 STA NFFW STORE IN NFFW
006366 002000 A 3518 CALL LEX
006367 077702 R
006370 001000 A 3519 JMP* SCL EXIT
006371 106347 R
3520 EJECT
3521 * SCN SCAN EXPRESSION TABLE
006372 000000 A 3523 SCN ENTRY
006373 005001 A 3524 TZA
006374 057000 I 3525 STA CF COMPLIMENT FLAG = 0
006375 017000 I 3526 LDA K
006376 057000 I 3527 STA T5
006377 002000 A 3528 JMPM SCL SCAN LOAD EXP.
006400 006347 R
006401 017000 I 3529 LDA EHBK
006402 147000 I 3530 SUB EH
006403 001004 A 3531 JAN SCNC INCREASING HIERARCHY
006404 006415 R
006405 047000 I 3532 INR K
006406 047000 I 3533 INR K
006407 005001 A 3534 TZA
006410 057000 I 3535 STA T6
006411 002000 A 3536 JMPM SCL SCAN LOAD EXP.
006412 006347 R
006413 001000 A 3537 JMP SCND
006414 006421 R

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006415	017000	I	3538	SCNC	LDA	CF			10	03538
006416	137000	I	3539		ERA	NFFW	FORWARD NEG. FLAG		10	03539
006417	057000	I	3540		STA	CF			10	03540
006420	057000	I	3541		STA	T6			10	03541
006421	005001	A	3542	SCND	TZA				10	03542
006422	002000	A	3543		JNPM	SNF	STORE NEG. FLAG		10	03543
006423	006732	P								
006424	017000	I	3544		LDA	CF			10	03544
006425	001010	A	3545		JAZ	SCN1	NOT COMPL.		10	03545
006426	006450	R								
006427	005101	A	3546		INCR	1			10	03546
006430	157000	I	3547		ANA	EH			10	03547
006431	001010	A	3548		JAZ	SCN8	NOT NORMAL OP		10	03548
006432	006315	R								
006433	017000	I	3549		LDA	DP			10	03549
006434	140000	L	3550		SUB	=047	'*', '/' TEST		10	03550
006435	001002	A	3551		JAP	SCN1-2			10	03551
006436	006446	R								
006437	017000	I	3552		LDA	DP			10	03552
006440	130464	A	3553		ERA	THREE	+ TO -, - TO +		10	03553
006441	057000	I	3554		STA	DP			10	03554
006442	005001	A	3555		TZA				10	03555
006443	057000	I	3556		STA	CF			10	03556
006444	002000	A	3557		JNPM	SEX	STORE EXP.		10	03557
006445	006704	R								
006446	002000	A	3558		JNPM	SNF	STORE NEG. FLAG		10	03558
006447	006732	R								
006450	017000	I	3559	SCN1	LDA	I			10	03559
006451	057000	I	3560		STA	01			10	03560
006452	017000	I	3561		LDA	RIFW			10	03561
006453	057000	I	3562		STA	02			10	03562
006454	017000	I	3563		LDA	EH			10	03563
006455	057000	I	3564		STA	T7			10	03564
006456	001010	A	3565		JAZ	SCN9			10	03565
006457	006636	R								
006460	147000	I	3566		SUB	EHBR			10	03566
006461	001004	A	3567		JAN	SCN+1			10	03567
006462	006373	R								
006463	005012	A	3568		TAB				10	03568
006464	017000	I	3569		LDA	IT			10	03569
006465	147000	I	3570		SUB	02			10	03570
006466	001024	A	3571		JIF	00, SCN2	EH>EHBR AND 02 INSIDE TRIAD		10	03571
006467	006505	R								
006470	001020	A	3572		JEZ	SCN+1			10	03572
006471	006373	R								
006472	017000	I	3573		LDA	DP			10	03573
006473	140000	L	3574		SUB	=045	'+'		10	03574
006474	001004	A	3575		JAN	SCN4			10	03575
006475	006534	R								
006476	140422	A	3576		SUB	K2			10	03576
006477	001002	A	3577		JAP	SCN4			10	03577
006500	006534	R								
006501	017000	I	3578		LDA	T6	DP=+,-		10	03578
006502	057000	I	3579		STA	CF			10	03579
006503	001000	A	3580		JNP	SCN4			10	03580
006504	006534	R								
006505	017000	I	3581	SCN2	LDA	DP			10	03581
006506	140000	L	3582		SUB	=045	'+'		10	03582
006507	001004	A	3583		JAN	SCN3			10	03583
006510	006524	R								
006511	140422	A	3584		SUB	K2			10	03584
006512	001002	A	3585		JAP	SCN3			10	03585
006513	006524	R								
006514	017000	I	3586		LDA	DP	DP=+,-		10	03586
006515	147000	I	3587		SUB	DPBK			10	03587
006516	020000	L	3588		LD2	=046			10	03588
006517	003010	A	3589		XAZ	SCNDBR			10	03589
006520	006653	R								
006521	067000	I	3590		STB	DP			10	03590
006522	001000	A	3591		JMP	SCN4			10	03591
006523	006534	R								
006524	140463	A	3592	SCN3	SUB	FIVE	' , '		10	03592
006525	001010	A	3593		JAZ	SCN+1			10	03593
006526	006373	R								
006527	017000	I	3594		LDA	DPBK			10	03594
006530	006140	A	3595		DECI	100	' / '		10	03595
006531	000050	A								
006532	001010	A	3596		JAZ	SCN+1			10	03596
006533	006373	R								
006534	037000	I	3597	SCN4	LDX	K	DELETE EXP. ENTRY		10	03597
006535	005344	A	3598		DXR				10	03598
006536	005344	A	3599		DXR				10	03599
006537	015000	A	3600		LDA	0,1			10	03600
006540	055000	A	3601		STA	2,1			10	03601
006541	015001	A	3602		LCA	1,1			10	03602
006542	053000	A	3603		STA	3,1			10	03603
006543	004341	A	3604		LSRA	1			10	03604
006544	005311	A	3605		DAR				10	03605
006545	001002	A	3606		JAP	SCN4+1			10	03606
006546	006535	R								
006547	017000	I	3607		LDA	JP			10	03607

006550	140000	L	3608	SUB	=054	' , '	10	03608
006551	001010	A	3609	JAZ	SCN7		10	03609
006552	006575	R						
006553	002000	A	3610	SCNA	CALL	TRS	10	03610
006554	007717	R						
006555	017000	I	3611	LDA	DP		10	03611
006556	002000	A	3612	CALL	TCO		10	03612
006557	007417	R						
006560	001010	A	3613	JAZ	SCNG	COMMURATIVE	10	03613
006561	006654	R						
006562	006120	A	3614	ADDI	062		10	03614
006563	000062	A						
006564	001010	A	3615	JAZ	SCNG	A-OPERATOR	10	03615
006565	006654	R						
006566	017000	I	3616	SCN6	LDA	DP	10	03616
006567	140000	L	3617	SUB	=046	' - '	10	03617
006570	001010	A	3618	JAZ	SCNB		10	03618
006571	006633	R						
006572	017000	I	3619	SCNF	LDA	D1	10	03619
006573	002000	A	3620	JMPM	TSC	TEMP STORE CK	10	03620
006574	007773	R						
006575	017000	I	3621	SCN7	LDA	D2	10	03621
006576	002000	A	3622	JMPM	TSC		10	03622
006577	007773	R						
006600	002000	A	3623	JMPM	ETT	ENTER TRIAD	10	03623
006601	000643	R						
006602	002000	A	3624	SCNE	CALL	LEX	10	03624
006603	077702	R						
006604	017000	I	3625	LDA	D1		10	03625
006605	057000	I	3626	STA	I		10	03626
006606	002000	A	3627	JMPM	SEX	STORE EXPRESSION	10	03627
006607	006704	R						
006610	017000	I	3628	LDA	T7		10	03628
006611	001010	A	3629	JAZ*	SCN	DONE	10	03629
006612	106372	R						
006613	001000	A	3630	JMP	SCN+3		10	03630
006614	006375	R						
006615	017000	I	3631	SCN8	LDA	T5	10	03631
006616	137000	I	3632	ERA	K		10	03632
006617	005012	A	3633	TAB			10	03633
006620	017000	I	3634	LDA	T5		10	03634
006621	057000	I	3635	STA	K		10	03635
006622	010000	L	3636	LDA	=015		10	03636
006623	057000	I	3637	STA	DP		10	03637
006624	005001	A	3638	TZA			10	03638
006625	057000	I	3639	STA	CF		10	03639
006626	057000	I	3640	STA	D2		10	03640
006627	002020	A	3641	JBZM	SNF		10	03641
006630	006732	R						
006631	001000	A	3642	JMP	SCNA		10	03642
006632	006553	R						
006633	005101	A	3643	SCNB	INCR	1	10	03643
006634	137000	I	3644	ERA	CF		10	03644
006635	057000	I	3645	STA	CF		10	03645
006636	017000	I	3646	SCN9	LDA	D1	10	03646
006637	027000	I	3647	LDB	D2	INTERCHANGE D1,D2	10	03647
006640	057000	I	3648	STA	D2		10	03648
006641	067000	I	3649	STB	D1		10	03649
006642	001010	A	3650	JAZ	SCNE		10	03650
006643	006602	R						
006644	002000	A	3651	JMPM	TRS	TRIAD SEARCH	10	03651
006645	007717	R						
006646	017000	I	3652	LDA	CF		10	03652
006647	001010	A	3653	JAZ	SCNF		10	03653
006650	006572	R						
006651	001000	A	3654	JMP	SCN6		10	03654
006652	006566	R						
006653	005322	A	3655	SCNDBR	DBR		10	03655
006654	017000	I	3656	SCNG	LDA	D1	10	03656
006655	147000	I	3657	SUB	IT		10	03657
006656	001002	A	3658	JAP	SCNI	D1 INSIDE TRIAD	10	03658
006657	006672	R						
006660	017000	I	3659	LDA	D2		10	03659
006661	147000	I	3660	SUB	IT		10	03660
006662	001002	A	3661	JAP	SCN9		10	03661
006663	006636	R						
006664	017000	I	3662	LDA	D1		10	03662
006665	147000	I	3663	SUB	D2		10	03663
006666	001004	A	3664	JAN	SCN9	REVERSE (D2\01)	10	03664
006667	006636	R						
006670	001000	A	3665	JMP	SCNF		10	03665
006671	006572	R						
006672	017000	I	3666	SCNI	LDA	D2	10	03666
006673	147000	I	3667	SUB	IT		10	03667
006674	001004	A	3668	JAN	SCNF	D2 IN ASSIGNMENT	10	03668
006675	006572	R						
006676	017000	I	3669	LDA	D2		10	03669
006677	147000	I	3670	SUB	D1		10	03670
006700	001004	A	3671	JAN	SCN9	REVERSE (D1>D2)	10	03671
006701	006636	R						
006702	001000	A	3672	JMP	SCNF		10	03672



007021	006010	A	3749	LDAI	**			10	03749
007022	107021	R							
007023	006120	A	3750	ADDI	043			10	03750
007024	000043	A							
007025	140471	A	3751	SRM03	SUB	TEN		10	03751
007026	001010	A	3752	JAZ	SRM6+2	INT TO CPX		10	03752
007027	007130	R							
007030	140422	A	3753	SUB	TWO			10	03753
007031	001010	A	3754	JAZ	SRM6+1	DBL TO CPX		10	03754
007032	007127	R							
007033	140422	A	3755	SUB	TWO			10	03755
007034	001010	A	3756	JAZ	SRM6	DBI TO CPX		10	03756
007035	007126	R							
007036	006140	A	3757	SUBI	030			10	03757
007037	000030	A							
007040	001004	A	3758	JAN	SRM05			10	03758
007041	007046	R							
007042	003010	A	3759	XAZ	SRM5	-5		10	03759
007043	007125	R							
007044	006140	A	3760	SUBI	043			10	03760
007045	000043	A							
007046	004210	A	3761	SRM05	ASLA	8		10	03761
007047	006120	A	3762	ADDI	0156303			10	03762
007050	156303	A							
007051	002000	A	3763	CALL	CAN	MAKE \$IIM:MFIC		10	03763
007052	077613	R							
007053	017000	I	3764	LDA	T2IN			10	03764
007054	057000	I	3765	STA	MF			10	03765
007055	002000	A	3766	CALL	LAX			10	03766
007056	077700	R							
007057	017000	I	3767	SRM1	LDA	T2IN		10	03767
007060	057000	I	3768	STA	IM			10	03768
007061	057000	I	3769	STA	MF			10	03769
007062	005001	A	3770	TZA				10	03770
007063	001000	A	3771	JMP*	SRM			10	03771
007064	106743	R							
007065	017000	I	3772	SRM2	LDA	IM		10	03772
007066	140422	A	3773	SUB	TWO			10	03773
007067	001016	A	3774	JANZ	SRM0	IM>MF		10	03774
007070	006765	R							
007071	017000	I	3775	LDA	NT			10	03775
007072	001010	A	3776	JAZ	SRM4	MF>IM ANF NOT INT. CST.		10	03776
007073	007122	R							
007074	020466	A	3777	LDB	SIX	MAKE NEW DP-INT CONSTANT		10	03777
007075	067000	I	3778	STB	IM			10	03778
007076	067000	I	3779	STB	T2IN			10	03779
007077	017000	I	3780	LDA	ID			10	03780
007100	004517	A	3781	LASR	15			10	03781
007101	067000	I	3782	STB	ID+1			10	03782
007102	057000	I	3783	STA	ID			10	03783
007103	047000	I	3784	INR	EL			10	03784
007104	002000	A	3785	CALL	ASI			10	03785
007105	077611	R							
007106	001000	A	3786	JMP	SRM1			10	03786
007107	007057	R							
007110	017000	I	3787	SRM3	LDA	MF		10	03787
007111	140422	A	3788	SUB	TWO			10	03788
007112	001016	A	3789	JANZ*	SRM	MF>D.P. INT		10	03789
007113	106743	R							
007114	006010	A	3790	LDAI	04517			10	03790
007115	004517	A							
007116	002000	A	3791	CALL	CAB	'LASR 15'		10	03791
007117	077710	R							
007120	001000	A	3792	JMP	SRM1			10	03792
007121	007057	R							
007122	010421	A	3793	SRM4	LDA	ONE		10	03793
007123	001000	A	3794	JMP*	SRM			10	03794
007124	106743	R							
007125	140465	A	3795	SRM5	SUB	FIVE		10	03795
007126	010432	A	3796	SRM6	LDA	BS9	DBI TO REA (\$TC)	10	03796
007127	120432	A	3797	ADD	BS9	DBL TO REA (\$RC)		10	03797
007130	006120	A	3798	ADDI	'PC'	INT TO REA		10	03798
007131	150303	A							
007132	002000	A	3799	CALL	CAN	MAKE INITIAL CONVERSION TO REAL		10	03799
007133	077613	R							
007134	010464	A	3800	LDA	THREE			10	03800
007135	057000	I	3801	STA	MF			10	03801
007136	017000	I	3802	LDA	T2IN			10	03802
007137	057000	I	3803	STA	IM	RESTORE IM		10	03803
007140	001000	A	3804	JMP	SRM0			10	03804
007141	006765	R							
007142	002000	A	3805	SRM7	CALL	SAV	INT TO REA/DBL AND 'H' OPTION	10	03805
007143	006334	R							
007144	006010	A	3806	LDAI	06057			10	03806
007145	006057	A							
007146	002000	A	3807	CALL	CDB	'STAE ASC'		10	03807
007147	077711	R							
007150	006010	A	3808	LDAI	FLT			10	03808
007151	105423	A							
007152	002000	A	3809	CALL	DBE	'FLT ASC'		10	03809
007153	077711	R							





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007305 017000 I 3880      LDA      JFFL
007306 001004 A 3881      JAN      STC
007307 077741 R
007310 001000 A 3882      JMP      CRT
007311 077616 R
007312 3883 STFM      BSS      1      STATEMENT FUNCTION NAME MODE      D      10 03883
007313 000000 A 3884 STFPT     DATA     0      SAVE POINTER TO NAME
3885      EJECT
3886 *****
3887 *
3888 *           P R O C E S S   S T O P   A N D   P A U S E
3889 *
3890 *           S T A T E M E N T S ( S T P , P S E )
3891 *
3892 * FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENTS:
3893 *
3894 *           'STOP N....' WHERE 'N....' IS A BLANK STRING OR
3895 *           'PAUSE N....' OCTAL DIGIT STRING
3896 *
3897 * ENTRY: DIRECT FROM SID
3898 *           NAME='ST' IF STOP
3899 *           ='PA' IF PAUSE
3900 *
3901 * EXIT : PAUSE: DIRECT TO STYN
3902 *         STOP : DIRECT TO STNN
3903 *
3904 * OUTPUT : CALL $ST/$PA
3905 *           DATA -1
3906 *           DATA DIGIT/CHARACTER STRING
3907 *
3908 *
3909 *
3910 *           DATA 0
3911 *
3912 *****
007314 007314 R 3914 STP      EQU      *      STOP ENTRY
007314 007314 R 3915 PSE      EQU      *      PAUSE ENTRY
007314 017000 I 3916      LDA      NAME
007315 002000 A 3917      CALL     CAN      OUTPUT 'JMPM $ST' OR 'JMPM $PA'
007316 077613 R
007317 010461 A 3918      LDA      NEG
007320 002000 A 3919      CALL     DAB      G-LEVEL FLAG
007321 077710 R
007322 005001 A 3920      TZA
007323 057000 I 3921      STA      DPW
007324 002000 A 3922 STP0    CALL     ICH
007325 077654 R
007326 140000 L 3923      SUB      =0247    ...
007327 001010 A 3924      JAZ      STP4
007330 007364 R
007331 017000 I 3925      LDA      TC
007332 001000 A 3926      JMP      STP2
007333 007340 R
007334 002000 A 3927 STP1    CALL     DPK      PROCESS DIGIT STREAM
007335 077714 R
007336 002000 A 3928      CALL     ICH
007337 077654 R
007340 140463 A 3929 STP2    SUB      BM377
007341 001016 A 3930      JANZ   STP1
007342 007334 R
007343 017000 I 3931      LDA      DPW
007344 001010 A 3932      JAZ      STP3
007345 007352 R
007346 004210 A 3933      ASLA    0
007347 120000 L 3934      ADD     =.
007350 002000 A 3935      CALL     DAB
007351 077710 R
007352 005001 A 3936 STP3    TZA
007353 002000 A 3937      CALL     DAB      'DATA 0' TERMINATOR
007354 077710 R
007355 017000 I 3938      LDA      NAME
007356 006140 A 3939      SUBI    'ST'
007357 151724 A
007360 001010 A 3940      JAZ      STN      NO-PATH-CONTINUATION (STOP)
007361 077743 R
007362 001000 A 3941      JMP      ILT      PATH-CONTINUATION (PAUSE)
007363 077666 R
007364 005311 A 3942 STP4    DAR
007365 057000 I 3943      STA      HCC
007366 002000 A 3944 STP5    CALL     IHK      SET QUOTE FLAG
007367 077663 R
007370 002000 A 3945      CALL     DAB      PROCESS MESSAGE
007371 077710 R
007372 017000 I 3946      LDA      HCC
007373 001016 A 3947      JANZ   STP5
007374 007366 R
007375 001000 A 3948      JMP      STP0
007376 007324 R
3949      EJECT
3950 *****
3951 *

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00952 * STORE TRIAD ENTRY (STX) * 10 00952
00953 * * 10 00953
00954 * FUNCTION: TO FORMAT AND STORE AN ENTRY IN THE TRIAD TABLE * 10 00954
00955 * * 10 00955
00956 * ENTRY: 3 POINTS TO ENTRY ADDRESS * 10 00956
00957 * * 10 00957
00958 * EXIT: (J) = 11 * 10 00958
00959 * (J+1) = 12 * 10 00959
00960 * (J+2) = SF (BIT 0) * 10 00960
00961 * = OP (BITS 1-6) * 10 00961
00962 * = IM (BITS 7-9) * 10 00962
00963 * = FU (BIT 10) * 10 00963
00964 * * 10 00964
00965 * * * 10 00965
007377 000000 A 00967 STX ENTRY * 10 00967
007400 007000 A 00968 LDA # POINT B AT ENTRY * 10 00968
007401 017000 A 00969 LDA #1 * 10 00969
007402 050000 A 00970 STA #0 * 10 00970
007403 017000 A 00971 LDA #0 * 10 00971
007404 050000 A 00972 STA #0 * 10 00972
007405 017000 A 00973 LDA #0 * 10 00973
007406 004241 A 00974 ORCA # * 10 00974
007407 117000 A 00975 ORA # IM * 10 00975
007410 004241 A 00976 ORLA # * 10 00976
007411 117000 A 00977 ORA # OP * 10 00977
007412 004241 A 00978 ORLA # * 10 00978
007413 117000 A 00979 ORA # * 10 00979
007414 050000 A 00980 STA #0 * 10 00980
007415 001000 A 00981 JMP # * 10 00981
007416 107077 R * 10 00981

00982 * * * 10 00982
00983 * * * 10 00983
00984 * * * 10 00984
00985 * * * 10 00985
00986 * * * 10 00986
00987 * * * 10 00987
00988 * * * 10 00988
00989 * * * 10 00989
00990 * * * 10 00990
00991 * * * 10 00991
00992 * * * 10 00992
00993 * * * 10 00993
00994 * * * 10 00994
00995 * * * 10 00995
00996 * * * 10 00996
00997 * * * 10 00997
00998 * * * 10 00998
00999 * * * 10 00999
04000 * * * 10 04000
04001 * * * 10 04001
04002 * * * 10 04002
04003 * * * 10 04003
04004 * * * 10 04004
04005 * * * 10 04005
04006 * * * 10 04006
04007 * * * 10 04007
04008 * * * 10 04008
04009 * * * 10 04009
04010 * * * 10 04010
04011 * * * 10 04011
04012 * * * 10 04012
04013 * * * 10 04013
04014 * * * 10 04014
04015 * * * 10 04015
04016 * * * 10 04016
04017 * * * 10 04017
04018 * * * 10 04018
04019 * * * 10 04019
04020 * * * 10 04020
04021 * * * 10 04021
04022 * * * 10 04022
04023 * * * 10 04023
04024 * * * 10 04024
04025 * * * 10 04025
04026 * * * 10 04026
04027 * * * 10 04027
04028 * * * 10 04028
04029 * * * 10 04029
04030 * * * 10 04030

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007613	015000	A	4096	TRS22	LDA	0,X	INTEGER	FF	10	04096
007614	147000	I	4097		SUB	IT		FF	10	04097
007615	001004	A	4098		JAN	TRS23	TRIAD ?	FF	10	04098
007616	007631	R								
007617	017000	I	4099		LDA	DPX	YES	FF	10	04099
007620	127000	I	4100		ADD	IT		FF	10	04100
007621	145000	A	4101		SUB	0,X		FF	10	04101
007622	005012	A	4102		TAB		POINT B AT TRIAD	FF	10	04102
007623	016002	A	4103		LDA	2,B		FF	10	04103
007624	004341	A	4104		LSRA	1		FF	10	04104
007625	150474	A	4105		ANA	2M77	GET DP	FF	10	04105
007626	140000	L	4106		SUB	=054		FF	10	04106
007627	001010	A	4107		JAZ	TRS52	EXIT IF CALL	FF	10	04107
007630	007710	R								
007631	007631	R	4108	TRS23	EQU	*		FF	10	04108
007632	017000	I	4109		LDA	D1			10	04109
007633	145001	A	4110		SUB	1,1			10	04110
007634	001010	A	4111		JAZ	TRS5	MATCH ON ACTUAL REGISTER CONTENTS		10	04111
007635	007666	R								
007636	017000	I	4112		LDA	D1			10	04112
007637	145000	A	4113		SUB	2,1			10	04113
007640	002010	A	4114		JAZM	TRS6	MATCH ON IMPLICIT REGISTER CONTENTS		10	04114
007641	001010	A	4115		JAZ	TRS5	MODE ALLOWS CHAINING		10	04115
007642	007666	R								
007643	017000	I	4116		LDA	DP			10	04116
007644	002000	A	4117		CALL	TCD			10	04117
007645	007417	R								
007646	001016	A	4118		JANZ	TRS51	NOT COMMUTATIVE		10	04118
007647	007674	R								
007650	017000	I	4119	TRS3	LDA	D2	COMMUTATIVE OPERATORS.		10	04119
007651	145001	A	4120		SUB	1,1			10	04120
007652	001010	A	4121		JAZ	TRS4	REVERSE MATCH ON REGISTERS		10	04121
007653	007662	P								
007654	017000	I	4122		LDA	D2			10	04122
007655	145000	A	4123		SUB	3,1			10	04123
007656	002010	A	4124		JAZM	TRS6	IMPLICIT COMMUTATIVE MATCH		10	04124
007657	007761	R								
007660	001016	A	4125		JANZ	TRS51	NO REGISTER MATCH OR MODE CHANGE		10	04125
007661	007674	R								
007662	017000	I	4126	TRS4	LDA	D1	COMMUTE OPERANDS		10	04126
007663	027000	I	4127		LDB	D2			10	04127
007664	057000	I	4128		STA	D2			10	04128
007665	067000	I	4129		STB	D1			10	04129
007666	017000	I	4130	TRS5	LDA	DPX			10	04130
007667	127000	I	4131		ADD	IT			10	04131
007670	147000	I	4132		SUB	JT			10	04132
007671	057000	I	4133		STA	D1	MAKE LINK OPERAND		10	04133
007672	001000	A	4134		JMP	SCN7			10	04134
007673	006575	R								
007674	002000	A	4135	TRS51	JMPR	TRS6			10	04135
007675	007761	R								
007676	001016	A	4136		JANZ	TRS52	MODE CHANGE ACROSS STORE		10	04136
007677	007710	R								
007700	005041	A	4137		TXA				10	04137
007701	140464	A	4138		SUB	THREE			10	04138
007702	005014	A	4139		TAX		POINT TO PRIOR		10	04139
007703	125003	A	4140		ADD	3,X	GET D1 OF LAST STORE		10	04140
007704	147000	I	4141		SUB	IT			10	04141
007705	147000	I	4142		SUB	DPX			10	04142
007706	001010	A	4143		JAZ	TRS21	TEST FOR LINKED STORE		10	04143
007707	007557	R								
007710	017000	I	4144	TRS52	LDA	DPX			10	04144
007711	127000	I	4145		ADD	IT			10	04145
007712	147000	I	4146		SUB	JT			10	04146
007713	147000	I	4147		SUB	D1			10	04147
007714	001010	A	4148		JAZ	SCN7			10	04148
007715	006575	R								
007716	001000	A	4149		JMP				10	04149
007717	000000	A								
007720	007717	R	4150	TRS	EQU	*-1			10	04150
007721	017000	I	4151		LDA	13			10	04151
007722	005311	A	4152		DAR				10	04152
007723	001010	A	4153		JAZ	TRS2	EXP. CONTROL = -1		10	04153
007724	007551	R								
007725	037000	I	4154		LDX	IT			10	04154
007726	005041	A	4155	TRS1	TXA				10	04155
007727	120422	A	4156		ADD	22			10	04156
007728	005114	A	4157		INCR	12	(X)=(A)+1		10	04157
007730	147000	I	4158		SUB	JT	TRIAD TOP		10	04158
007731	001002	A	4159		JAP	TRS2	TABLE SCANNED		10	04159
007732	007551	R								
007733	015000	A	4160		LDA	0,1			10	04160
007734	147000	I	4161		SUB	D1			10	04161
007735	005012	A	4162		TAB				10	04162
007736	015001	A	4163		LDA	1,1			10	04163
007737	147000	I	4164		SUB	D2			10	04164
007740	005032	A	4165		MERGE	20	A OR B TO B		10	04165
007741	015002	A	4166		LDA	2,1			10	04166
007742	004341	A	4167		LSRA	1			10	04167
007743	006150	A	4168		ANOT	01077	GET USE FLAG AND OPERATOR		10	04168

007744	001077	A									
007745	147000	I	4169	SUB	DP					10	04169
007746	001030	A	4170	JIF	24,*+4	MATCHED ON 01,02,AND 0P				10	04170
007747	007752	R									
007750	001000	A	4171	JMP	TRS1					10	04171
007751	007725	R									
007752	005241	A	4172	COMPL	33	NOT (X) TO (A)				10	04172
007753	005111	A	4173	IAR		MAKE -(X)				10	04173
007754	127000	I	4174	ADD	1T					10	04174
007755	127000	I	4175	ADD	DPX					10	04175
007756	057000	I	4176	STA	01	CORRECTED POINTER				10	04176
007757	001000	A	4177	JMP	SCNE					10	04177
007760	006602	R									
007761	000000	A	4178	TRSG	ENTRY	CHECK FOR MODE MATCH ON STORE				10	04178
007762	015000	A	4179	LDA	0,1	FETCH FROM				10	04179
007763	002000	A	4180	JMPM	GDM					10	04180
007764	002127	R									
007765	004247	A	4181	LRLA	7					10	04181
007766	135002	A	4182	ERA	2,1	TEST MODE OF TRIAD				10	04182
007767	006150	A	4183	ANAI	01600					10	04183
007770	001600	A									
007771	001000	A	4184	JMP*	TRSG	EXIT (A)=0 IF MODE MATCH				10	04184
007772	107761	R									
			4185	EJECT						10	04185
			4186	TSC		TEMPORARY STORAGE CHECK				10	04186
007773	000000	A	4188	TRSG	ENTRY	(A) HAS VALUE OF POINTER				10	04188
007774	005012	A	4189	TAB						10	04189
007775	147000	I	4190	SUB	IT					10	04190
007776	001004	A	4191	JAN*	TSC	INSIDE ASSMT. TBL				10	04191
007777	107773	R									
010000	147000	I	4192	SUB	DPX					10	04192
010001	005211	A	4193	CPA						10	04193
010002	005112	A	4194	INCR	012					10	04194
010003	005101	A	4195	INCR	1					10	04195
010004	116002	A	4196	DRA	2,2					10	04196
010005	056002	A	4197	STA	2,2					10	04197
010006	001000	A	4198	JMP*	TSC					10	04198
010007	107773	R									
			4199	END						10	04199

ENTRY NAMES

000000	E	BOFCB	000000	E	GOFCB	000000	E	LOFCB	000000	E	PIFCB
000000	E	SIFCB	000000	E	V\$EXEC	000000	E	V\$IOC	000000	E	V\$IOST
SYMBOLS											
000020	A	\$BIT	010151	R	\$BUF	177325	R	SECU	177324	R	SPCW
177330	R	AF	177331	R	AIFW	177332	R	ASI	077611	R	ASI
077612	R	ASS	000026	R	ASSI	000065	R	AST	000066	R	AST1
000036	R	ASTM	177341	R	AJ	000002	A	B	177342	R	BDF
010320	R	BLEF1	177250	R	BLFCB	000421	A	BM1	000472	A	BM17
000475	A	BM177	000477	A	BM1777	000464	A	BM3	000473	A	BM37
000463	A	BM377	000467	A	BM7	000474	A	BM77	000476	A	BM777
177343	R	BOBLCN	177320	R	BOBFL	000000	E	BOFCB	000441	A	BR0
000442	A	BR1	000453	A	BR10	000434	A	BR11	000455	A	BR12
000436	A	BR13	000457	A	BR14	000430	A	BR15	000443	A	BR2
000444	A	BR3	000445	A	BR4	000446	A	BR5	000447	A	BR6
000450	A	BR7	000451	A	BR8	000452	A	BR9	000421	A	BS0
000422	A	BS1	000433	A	BS10	000434	A	BS11	000435	A	BS12
000436	A	BS13	000437	A	BS14	000440	A	BS15	000423	A	BS2
000424	A	BS3	000425	A	BS4	000426	A	BS5	000427	A	BS6
000430	A	BS7	000431	A	BS8	000432	A	BS9	000072	R	BSP
000076	R	CAL	000116	R	CAL1	077613	R	CAN	077614	R	CBA
077615	R	CCR	177344	R	CF	177345	R	CFPTSW	177346	R	CL
177347	R	CLOP	000132	R	CMD	000137	R	CMD1	177350	R	CMFL
177351	R	CNP	000142	R	CRP	000173	R	CRP1	000201	R	CRP2
077616	R	CRT	077617	R	CTS	177352	R	D	000561	R	DEC
000203	R	DEF	000250	R	DEF1	077620	R	DEK	177353	R	DF
177354	R	DFPP	077621	R	DFT	177355	R	DH	177356	R	DI
000270	R	DDI	000325	R	DDN	000372	R	DDN1	000424	R	DDN2
000427	R	DDP	000465	R	DDT	000512	R	DDT1	000517	R	DDT2
000531	R	DDT2A	000535	R	DDT3	000542	R	DDT4	177326	R	DPB
177357	R	DPCA	177327	R	DPX	177373	R	DR	177374	R	DS
177375	R	DSAV	077622	R	DSM	177376	R	DT	177377	R	DTFL
177401	R	DV	177402	R	EC	000072	R	EFI	177403	R	EH
177405	R	EHBK	000424	A	EIGHT	177406	R	EL	000565	R	ENC
000567	R	ENC00	000604	R	ENC02	000611	R	ENC04	000632	R	ENC06
000637	R	ENC08	077623	R	EDLSW	077624	R	ER1	077632	R	ER11
077633	R	ER12	077634	R	ER13	077635	R	ER14	077636	R	ER15
077637	R	ER16	077640	R	ER17	077641	R	ER18	077625	R	ER2
077642	R	ER20	077643	R	ER21	077644	R	ER22	077645	R	ER24
077626	R	ER3	077627	R	ER6	077630	R	ER7	077631	R	ER8
177120	R	ERBF	000703	R	ET1	000726	R	ET2	000733	R	ET4
000743	R	ET6	000643	R	ETT	077646	R	EXA	177407	R	EXAD
077647	R	EXL	001241	R	EXLG	001255	R	EXL1	001174	R	EXL3
001145	R	EXL4	001204	R	EXLG	001217	R	EXLG1	001227	R	EXLG2
001270	R	EXLH	001303	R	EXLI	001313	R	EXLJ	001016	R	EXLK
001345	R	EXLS	001356	R	EXLT	001333	R	EXLU	001323	R	EXLV
000754	R	EXP	001001	R	EXP1	001570	R	EXP10	001575	R	EXP11
001621	R	EXP12	001651	R	EXP13	001712	R	EXP135	001716	R	EXP14
001735	R	EXP15	001737	R	EXP16	001753	R	EXP17	001760	R	EXP175
002003	R	EXP18	002033	R	EXP19	001076	R	EXP2	002045	R	EXP20
002054	R	EXP21	001024	R	EXP3	001071	R	EXP31	001106	R	EXP4

001136	R	EXP5	001357	R	EXP6	001377	R	EXP7	001452	R	EXP8
001473	R	EXP9	001520	R	EXPA	001365	R	EXPJ	001446	R	EXPK
001441	R	EXPL	001406	R	EXPM	001415	R	EXPM2	001430	R	EXPM4
001462	R	EXPN	001477	R	EXPP	001404	R	EXPQ	001200	R	EXPR
177410	R	F	105035	A	F*DOI	105027	A	F*DOI1	105036	A	F*SEI
105503	A	FADDD	105410	A	FADDS	105535	A	FDIVD	105401	A	FDIVS
177411	R	FFPFL	105400	A	FFPDF	000465	A	FIVE	105621	A	FIX
105226	A	FLAIF	105522	A	FLDD	105032	A	FLDI	105420	A	FLDS
105367	A	FLIDP	105125	A	FLJAG	105024	A	FLREL	105425	A	FLT
105037	A	FMOVI	105506	A	FMULD	105416	A	FMULS	002073	R	FND
077650	R	FMS1	077651	R	FORT1	000423	A	FOUR	105327	A	FSQRT
105710	A	FSTD	105093	A	FSTI	105600	A	FSTS	105543	A	FSUBD
105450	A	FSUBS	002101	R	GDV	002116	R	GDV5	177262	R	GLFCB
002263	R	GOA	177412	R	GOBLCN	177321	R	GOBLFL	000000	E	GOFCB
002170	R	GOL1	002245	R	GOL2	002311	R	GOL3	002127	R	GOM
002141	R	GOM1	002153	R	GDT	077652	R	GSE	002323	R	GTS
002344	R	GTS1	002367	R	GTS2	177413	R	HCC	177414	R	I
077653	R	IAC	002406	R	IAR	077654	R	ICH	077655	R	ICB
077656	R	ICORNL	077657	R	ICRD	077660	R	ICRR	077661	R	ICSI
177415	R	ID	077662	R	ID1	002455	R	IF0	002466	R	IFA
002510	R	IFB	002417	R	IFP	002503	R	IFU	077663	R	IHW
002535	R	IIN	002546	R	IIN1	077664	R	IIV	077665	R	ILB
077666	R	ILT	177421	R	IM	077667	R	INA	177422	R	INBP
077670	R	INI	077671	R	INN	077672	R	INS	077673	R	INT
177423	R	IDFL	177424	R	IP	177435	R	IS	077674	R	ISH
177443	R	IT	177446	R	IU	077675	R	IVA	077676	R	IVC
077677	R	IWI	177447	R	J	177450	R	JPFL	177454	R	JT
177453	R	K	000424	A	K10	000471	A	K12	000472	A	K17
000422	A	K2	000425	A	K20	000473	A	K37	000423	A	K4
000466	A	K6	000463	A	K77	000432	A	KJMP	177456	R	KT
077700	R	LAX	000300	A	LC	000050	A	LCJP	077701	R	LDX
077702	R	LEX	177457	R	LF	000462	A	LHW	177460	R	LIF
077703	R	LIST	177274	R	LLFCB	177461	R	LLOP	177322	R	LOBLFL
077704	R	LOCT	000000	E	LOFCB	077705	R	LTX	177462	R	MAXOPC
177463	R	MDTB	177516	R	MF	177517	R	MM	002652	R	MMT
002552	R	MODE	002567	R	MODE1	002602	R	MODE2	002610	R	MODE3
002626	R	MODE4	077706	R	MOVE	177520	R	MR	000420	A	MT
005500	A	MTE	000441	A	MTWO	077707	R	MXL	177522	R	NAME
177523	R	ND	000461	A	NEG	177127	R	NERR	177524	R	NF
177525	R	NFFW	000470	A	NINE	177526	R	NS	177527	R	NT
177530	R	NTFL	177536	R	O1	127537	R	O2	077710	R	OAB
002662	R	OAO	002706	R	OAO1	002721	R	OAO2	010224	R	OBUF
077711	R	ODB	077712	R	ODS	002735	R	OIL	002766	R	OIL1
003013	R	OIL15	003015	R	OIL2	003020	R	OIL3	003026	R	OIL4
003040	R	OIT	003045	R	OIT02	003072	R	OIT04	003136	R	OIT05
003166	R	OIT06	003202	R	OIT08	003207	R	OIT10	003217	R	OIT14
003221	R	OIT15	003226	R	OIT16	003245	R	OIT165	003253	R	OIT18
003257	R	OIT20	003304	R	OIT21	003312	R	OIT22	003342	R	OIT24
003347	R	OIT26	003354	R	OIT28	003356	R	OIT29	003362	R	OIT30
003364	R	OIT31	003374	R	OIT313	003404	R	OIT314	003412	R	OIT316
003416	R	OIT32	003455	R	OIT34	003461	R	OIT38	003510	R	OIT38A
003513	R	OIT39	003530	R	OIT40	003536	R	OIT41	003551	R	OIT415
003556	R	OIT42	003567	R	OIT46	003572	R	OIT47	003600	R	OIT48
003604	R	OIT49	003610	R	OIT50	003614	R	OIT51	003620	R	OIT52
003624	R	OIT53	003630	R	OIT54	003635	R	OIT56	003645	R	OIT57
003653	R	OIT58	003661	R	OIT59	003667	R	OIT60	003675	R	OIT61
003707	R	OIT62	003715	R	OIT64	003743	R	OIT66	003752	R	OIT68
003760	R	OIT70	003771	R	OIT72	004007	R	OIT74	004021	R	OIT76
004057	R	OIT78	004076	R	OIT79	004106	R	OIT80	004135	R	OIT84
177535	R	OITFL	000421	A	OIE	077713	R	ONEN	004145	R	ODA
004157	R	OBA1	004170	R	OBA2	177531	R	OP	177532	R	OPBK
177533	R	OPCNT	077714	R	OPK	177534	R	OPW	077715	R	ORE
004201	R	ORT	004225	R	ORT1	004230	R	ORT2	077716	R	OSR
004234	R	OST	004260	R	OST1	004266	R	OST2	004311	R	OST3
004275	R	OST4	004305	R	OST5	004317	R	OST6	004325	R	OST7
077717	R	OTJ	004326	R	OTR	004333	R	OTR1	004626	R	OTR10
004650	R	OTR11	004661	R	OTR12	004705	R	OTR13	004715	R	OTR14
004725	R	OTR15	004734	R	OTR151	004740	R	OTR16	004746	R	OTR17
004761	R	OTR18	004767	R	OTR19	004337	R	OTR2	005004	R	OTR20
005026	R	OTR21	005042	R	OTR22	005050	R	OTR23	005054	R	OTR24
005057	R	OTR25	005061	R	OTR26	005105	R	OTR27	005120	R	OTR28
005124	R	OTR29	004352	R	OTR3	005132	R	OTR30	005152	R	OTR305
005160	R	OTR31	005164	R	OTR32	005225	R	OTR34	005233	R	OTR35
005252	R	OTR355	005270	R	OTR356	005273	R	OTR36	005325	R	OTR37
005351	R	OTR38	005423	R	OTR39	005443	R	OTR395	005460	R	OTR397
004410	R	OTR4	005463	R	OTR40	005502	R	OTR41	004433	R	OTR42
004456	R	OTR45	004461	R	OTR5	004477	R	OTR50	004502	R	OTR51
004532	R	OTR6	005520	R	OTR60	005542	R	OTR62	005553	R	OTR64
004573	R	OTR7	004601	R	OTR8	004607	R	OTR9	077720	R	OUT
010150	A	OVERSZ	077721	R	OWD	077722	R	OWS	177540	R	PC
077723	R	PDS	077724	R	PDB	177544	R	PIBLCN	177323	R	PIBLFL
000000	E	PIFCB	177306	R	PLFCB	007314	R	PSE	077725	R	PTR
077726	R	PTS	177545	R	QFL	077727	R	RCC	077730	R	RCC3
077731	R	RCH	005566	R	RED	006173	R	RET	006204	R	RET0
006224	R	RET1	006250	R	RET2	006255	R	RET3	006261	R	RET4
006304	R	RET5	000072	R	REW	000463	A	RHW	077732	R	RID
177546	R	RL	006325	R	R3T	006334	R	SAV	006345	R	SAV1
077733	R	SAX	177550	R	SBFL	006347	R	SCL	006372	R	SCN
006450	R	SCN1	006505	R	SCN2	006524	R	SCN3	006534	R	SCN4
006566	R	SCN6	006575	R	SCN7	006615	R	SCN8	006636	R	SCN9
006553	R	SCNA	006633	R	SCNB	006415	R	SCNC	006421	R	SCND

006653 R SCNDBR	006602 R SCNE	006572 R SCNF	006654 R SCNG
006672 R SCNI	077734 R SDX	000467 A SEVEN	006704 R SEX
006720 R SEX1	177553 R SF	077735 R SIDTB1	000000 E SIFCB
077736 R SIS	000466 A SIX	077737 R SLIT	077740 R SLOP
177160 R SLOD	006732 R SNF	177554 R SPFL	006743 R SRM
006765 R SRM0	007025 R SRM03	007046 R SRM05	007057 R SRM1
007065 R SRM2	007110 R SRM3	007122 R SRM4	007125 R SRM5
007126 R SRM6	007142 R SRM7	007161 R SRM8	177560 R SSP
077741 R STC	007165 R STF	007255 R STF1	007177 R STF4
177555 R STFFL	007312 R STFM	007313 R STFPT	077742 R STI1
077743 R STN	177556 R STNB	007314 R STP	007324 R STP0
007334 R STP1	007340 R STP2	007352 R STP3	007364 R STP4
007366 R STP5	077744 R STS	177557 R STSW	007377 R STX
177565 R SXF	177574 R T0	002071 R TDEX	177575 R T1
177576 R T2	177577 R T2IN	177600 R T3	177601 R T4
177602 R T5	177603 R T6	177604 R T7	002072 R T7EX
177605 R T8	177606 R T9	177566 R TC	007417 R TCD
000471 A TEN	077745 R TER1	077755 R TER11	077756 R TER12
077757 R TER13	077760 R TER14	077761 R TER15	077762 R TER17
077763 R TER18	077764 R TER19	077746 R TER2	077765 R TER20
077766 R TER24	077767 R TER26	077747 R TER3	077750 R TER4
077751 R TER5	077752 R TER7	077753 R TER8	077754 R TER9
177570 R TERF	007435 R TFA	007504 R TFA2	000027 A TFVCSZ
000464 A THREE	177212 R TITD	177217 R TITJ	177204 R TITL
177243 R TITM	177236 R TITN	177207 R TITP	177250 R TITQ
177571 R TM	077770 R TOF	007506 R TRA	007533 R TRA1
007540 R TRAE	007717 R TRS	007725 R TRS1	007551 R TRS2
007557 R TRS21	007613 R TRS22	007631 R TRS23	007650 R TRS3
007662 R TRS4	007666 R TRS5	007674 R TRS51	007710 R TRS52
007761 R TRS6	077771 R TSB	007773 R TSC	177572 R TSFL
077772 R TST	177573 R TU	077773 R TVR	000422 A TWO
000000 R V	000360 A VSCTAD	000070 A VSDATE	000355 A VSDSTB
000000 E V\$EXEC	000000 E V\$IDC	000000 E V\$IDST	000412 A V\$JCB
000055 A V\$JCFG	000056 A V\$JFCB	000050 A V\$JNAM	000054 A V\$LCNT
000317 A V\$LLUP	000345 A V\$LUNT	000400 A V\$LUT1	000401 A V\$LUT2
000402 A V\$LUT3	000417 A V\$STSZ	000357 A V\$TKSZ	177112 R VARBLD
000666 A VARBL5	177330 R VBLDBG	177611 R VBLOND	005571 R WRI
005603 R WRI01	005623 R WRI015	005637 R WRI02	005651 R WRI2
005655 R WRI21	005701 R WRI22	005710 R WRI24	005725 R WRI26
005731 R WRI28	005746 R WRI3	005754 R WRI4	005775 R WRI5
006006 R WRI6	006022 R WRI7	006062 R WRI8	006100 R WRI9
006125 R WRI96	006135 R WRI98	006162 R WRIA	006030 R WRID
005631 R WRIE	006150 R WRIF	006155 R WRIG	006147 R WRIT
006141 R WRIU	077774 R WRD0	077775 R WRDGD	077776 R WRDT
000001 A X	177607 R XRPT	077777 R ZEB	000420 A ZERO

0 ERRORS ASSEMBLY COMPLETE

621 \$BUF	622				
230 \$PCW	770	1006			
240 AF	241				
241 AIFW	242				
242 AS	243				
642 ASSI	593				
679 AST	594				
680 AST1	677				
674 ASTM	595				
243 AT	244	960			
244 BDF	245				
103 BM17	185				
109 BM1777	110				
104 BM37	187				
107 BM377	188				
245 BOBLCN	246				
0 BOFCB	126				
71 BR0	180				
58 BS3	183				
59 BS4	186	921			
64 BS9	189				
705 BSP	596				
727 CAL	597				
737 CAL1	732				
356 CAN	798	1010			
360 CCR	826				
246 CF	247				
247 CFPTSM	248				
248 CL	249				
249 CLOP	250				
756 CMD	761				
760 CMD1	758				
250 CMFL	251				
251 CNP	252				
0 COMP	2				
769 CRP	789				
785 CRP1	780				
789 CRP2	771	773	778	781	
362 CRT	653	681	710	736	744
364 CTS	806	810	821	850	1054
252 D	253	848			
1049 DEC	598				
797 DEF	604				







92	THREE	777							
325	TM	326							
0	TRA	783							
0	TSB	729							
326	TSFL	327							
578	TST	646	649	968					
327	TU	328							
91	TWO	179	895						
350	V	352	353	354	355	356	357	358	359
		361	362	363	364	365	366	367	368
		370	371	372	373	374	375	376	377
		379	380	381	382	383	384	385	386
		388	389	390	391	392	393	394	395
		397	398	399	400	401	402	403	404
		406	407	408	409	410	411	412	413
		415	416	417	418	419	420	421	422
		424	425	426	427	428	429	430	431
		433	434	435	436	437	438	439	440
		442	443	444	445	446	447	448	449
		451	452	453	454	455	456	457	458
		460	461	462	463	464	465	466	467
		469	470	471	472	473	474	475	476
		478	479	480	481	482	483	484	485
		487	488	489	490	491	492	493	494
		496	497	498	499	500	501	502	503
		505	506	507	508	509	510	511	512
		514	515	516	517	518	519	520	521
		523	524	525	526	527	528	529	530
		532	533	534	535	536	537	538	539
		541	542	543	544	545	546	547	548
		550	551	552	553	554	555	556	557
		559	560	561	562	563	564	565	566
		568	569	570	571	572	573	574	575
		577	578	579	580	581	582	583	584
		586	587	588	615	621			
0	VSEXEC	131							
0	V#FOR2	137							
0	V#IDC	132							
0	V#IDST	133							
200	V#BLO	202	203	204	205	206	207	208	209
		211	212	213	214	215	226	227	228
		230	231	232	233				229
199	V#BLS	200							
239	V#BLOG	240							
340	V#BLND	350							
0	WRI	614							
339	XRPT	340	908						

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1 #NEW FORTRAN - OVERLAY 3
2 COMPL OPSY COMP
3 EJECT OPSY EJEC
4 ENTRY OPSY ENTR
5 MERGE OPSY MERG
6 SPACE OPSY SPAC
7 TITLE V$FOR3
8 EJEC
9 *****
10 *
11 *** JOB PROCESSOR LOW CORE EQUATES ***
12 *
13 *****
000059 A 15 LCJP EQU 050
000050 A 16 V$JNAM EQU LCJP JCP NAME
000054 A 17 V$LCNT EQU LCJP+4 LINE COUNT
000055 A 18 V$JCFG EQU LCJP+5 JCP FLAGS
19 * BIT 2-0 = LOAD AND GO FLAGS
20 * BIT 3 = DUMP FLAG 1=DUMP, 0=NO DUMP
21 * BIT 9-4 = UNUSED
22 * BIT 15-10 = BG EXTRA CORE BLOCKS TO ALLOC
000056 A 24 V$JFCB EQU LCJP+6 JCP FILE CONTROL BLOCK
000070 A 25 V$DATE EQU LCJP+16 JCP DATA RECORD
26 EJEC
27 *****
28 *
29 **** LOW CORE DESCRIPTION ****
30 *
31 *****
000300 A 33 LC EQU 0300
000317 A 34 V$LLUP EQU LC+15 LOC. OF LAST UNPROTECTED WORD
000345 A 35 V$LUNT EQU LC+37 ADDR. OF LOGICAL UNIT NAME TABLE
000355 A 36 V$DSTB EQU LC+45 BASE ADDR. FOR DST BLOCK
000357 A 37 V$TKSZ EQU LC+47 RMD TRACK SIZE
000360 A 38 V$CTAD EQU LC+48 BASE ADDR. FOR CONTROLLER ADDR. TABLE
000400 A 39 V$LUT1 EQU LC+64 START LUN ADDR FOR JCP/OPCOM ASSIGNABLE
000401 A 40 V$LUT2 EQU LC+65 START LUN ADDR FOR UNASSIGNABLE
000402 A 41 V$LUT3 EQU LC+66 START LUN ADDR FOR OPCODE ASSIGNABLE
000412 A 42 V$JCB EQU LC+74 ALL SYSTEM BACKGROUND PROGRAMS AND JCP USE
43 * THIS SYSTEM BUFFER TO READ DIRECTIVES AND
44 * SOURCE RECORDS IN.
000417 A 45 V$STSZ EQU LC+79 ACTUAL SECTOR SIZE
46 EJEC
47 *****
48 *
49 **** MASK TABLE DESCRIPTION ****
50 *
51 *****
000420 A 53 MT SET 0420
000420 A 54 ZERO EQU MT ZERO WORD
000421 A 55 BS0 EQU MT+1 BIT MASK CONTENTS 000001
000422 A 56 BS1 EQU MT+2 000002
000423 A 57 BS2 EQU MT+3 000004
000424 A 58 BS3 EQU MT+4 000010
000425 A 59 BS4 EQU MT+5 000020
000426 A 60 BS5 EQU MT+6 000040
000427 A 61 BS6 EQU MT+7 000100
000430 A 62 BS7 EQU MT+8 000200
000431 A 63 BS8 EQU MT+9 000400
000432 A 64 BS9 EQU MT+10 001000
000433 A 65 BS10 EQU MT+11 002000
000434 A 66 BS11 EQU MT+12 004000
000435 A 67 BS12 EQU MT+13 010000
000436 A 68 BS13 EQU MT+14 020000
000437 A 69 BS14 EQU MT+15 040000
000440 A 70 BS15 EQU MT+16 0100000
000441 A 71 BR0 EQU MT+17 BIT MASK CONTENTS 0177776
000442 A 72 BR1 EQU MT+18 0177775
000443 A 73 BR2 EQU MT+19 0177773
000444 A 74 BR3 EQU MT+20 0177767
000445 A 75 BR4 EQU MT+21 0177757
000446 A 76 BR5 EQU MT+22 0177737
000447 A 77 BR6 EQU MT+23 0177677
000450 A 78 BR7 EQU MT+24 0177577
000451 A 79 BR8 EQU MT+25 0177377
000452 A 80 BR9 EQU MT+26 0176777
000453 A 81 BR10 EQU MT+27 0175777
000454 A 82 BR11 EQU MT+28 0173777
000455 A 83 BR12 EQU MT+29 0167777
000456 A 84 BR13 EQU MT+30 0157777
000457 A 85 BR14 EQU MT+31 0137777
000460 A 86 BR15 EQU MT+32 0077777
000461 A 87 NEG EQU MT+33 SET ALL BITS
000462 A 88 LHW EQU MT+34 LEFT HALF WORD MASK 0177400
000463 A 89 RHW EQU MT+35 RIGHT HALF WORD MASK 0377
000421 A 90 ONE EQU MT+1 CONTAINS NUMBER 1
000422 A 91 TWO EQU MT+2 CONTAINS NUMBER 2
000464 A 92 THREE EQU MT+36 CONTAINS NUMBER 3
000423 A 93 FOUR EQU MT+3 CONTAINS NUMBER 4
000465 A 94 FIVE EQU MT+37 CONTAINS NUMBER 5
000466 A 95 SIX EQU MT+38 CONTAINS NUMBER 6

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000467 A 96 SEVEN EQU MT+39 CONTAINS NUMBER 7 10 00096
000484 A 97 EIGHT EQU MT+4 CONTAINS NUMBER 8 10 00097
000470 A 98 NINE EQU MT+40 CONTAINS NUMBER 9 10 00098
000471 A 99 TEN EQU MT+41 CONTAINS NUMBER 10 10 00099
000421 A 100 BM1 EQU MT+1 BIT MASK WORD 00001 10 00100
000464 A 101 BM3 EQU MT+36 BIT MASK WORD 00003 10 00101
000467 A 102 BM7 EQU MT+39 BIT MASK WORD 00007 10 00102
000472 A 103 BM17 EQU MT+42 BIT MASK WORD 00017 10 00103
000473 A 104 BM37 EQU MT+43 BIT MASK WORD 00037 10 00104
000474 A 105 BM77 EQU MT+44 BIT MASK WORD 00077 10 00105
000475 A 106 BM177 EQU MT+45 BIT MASK WORD 00177 10 00106
000463 A 107 BM377 EQU MT+35 BIT MASK WORD 00377 10 00107
000476 A 108 BM777 EQU MT+46 BIT MASK WORD 00777 10 00108
000477 A 109 BM1777 EQU MT+47 BIT MASK WORD 01777 10 00109
000500 A 110 MTE EQU BM1777+1 FF 10 00110
111 EJECT 10 00111
112 ***** 10 00112
113 * 10 00113
114 * P R O G R A M C O N T R O L * 10 00114
115 * 10 00115
116 * B L O C K * 10 00116
117 * 10 00117
118 ***** 10 00118
120 ***** 10 00120
121 * 10 00121
122 * E X T E R N A L S * 10 00122
123 * 10 00123
124 ***** 10 00124
126 EXT BDFCB SYSTEM BD FCB 10 00126
127 EXT GDFCB SYSTEM GD FCB 10 00127
128 EXT LDFCB SYSTEM LD FCB 10 00128
129 EXT PIFCB SYSTEM PI FCB 10 00129
130 EXT SIFCB SYSTEM SI FCB 10 00130
131 EXT V$EXEC ENTRY TO RTE SERVICES 10 00131
132 EXT V$IDC ENTRY TO IDC 10 00132
133 EXT V$IDST ENTRY TO IDC STATUS CALL 10 00133
134 ***** 10 00134
135 * 10 00135
136 * S Y S T E M V A R I A B L E S * 10 00136
137 * 10 00137
138 ***** 10 00138
000020 A 140 $BIT SET 16 SELECT 16-BIT VDM 620 COMPUTER 10 00140
000002 A 141 B SET 2 B-REGISTER 10 00141
000001 A 142 X SET 1 X-REGISTER 10 00142
143 * 10 00143
144 * 10 00144
145 * P A R A M E T E R S F O R W C S V 7 4 F O R T R A N * 10 00145
146 * 10 00146
147 * 10 00147
105032 A 148 FLDI EQU 0105032 FLD BCS OPCODE 10 00148
105033 A 149 FSTI EQU 0105033 FST BCS OPCODE 10 00149
105035 A 150 FSDDI EQU 0105035 $DD BCS OPCODE 10 00150
105027 A 151 FSDDI1 EQU 0105027 $DD BCS OPCODE(INCREMENT=1) FF 10 00151
105036 A 152 F$SEI EQU 0105036 $SE BCS OPCODE 10 00152
105037 A 153 FMOWI EQU 0105037 FMOV BCS INSTRUCTION 10 00153
105127 A 154 FSQRT EQU 0105127 FLOATING SQUARE-ROOT BCS INSTRUCTION 10 00154
105024 A 155 FLREL EQU 0105024 FLOATING RELATIONAL BASE DP-CODE 10 00155
105125 A 156 FLJAG EQU 0105125 BCS JMP A.GT.0 10 00156
105226 A 157 FLAIF EQU 0105226 FLOATING ARITHMETIC-IF DP-CODE 10 00157
105167 A 158 FLIDP EQU 0105167 BCS SUBSCRIPT OPERATOR 10 00158
159 * 10 00159
160 * F A S T F L O A T I N G - P O I N T B O X O P C O D E S * FF 10 00160
161 * FF 10 00161
105400 A 162 FFPDP EQU 0105400 BASIC FFP DP FF 10 00162
105503 A 163 FADD EQU FFPDP+0103 DP ADD FF 10 00163
105410 A 164 FADD EQU FFPDP+010 SP ADD FF 10 00164
105535 A 165 FDIVD EQU FFPDP+0135 DP DIVIDE FF 10 00165
105401 A 166 FDIVS EQU FFPDP+1 SP DIVIDE FF 10 00166
105621 A 167 FIX EQU FFPDP+0221 FIX FP FF 10 00167
105423 A 168 FLDS EQU FFPDP+020 LOAD SP FF 10 00168
105522 A 169 FLDD EQU FFPDP+0122 LOAD DP FF 10 00169
105425 A 170 FLT EQU FFPDP+025 FLOAT INTEGER FF 10 00170
105506 A 171 FMULD EQU FFPDP+0106 MULTIPLY DP FF 10 00171
105418 A 172 FMULS EQU FFPDP+016 MULTIPLY SP FF 10 00172
105710 A 173 FSTD EQU FFPDP+0310 STORE DP FF 10 00173
105600 A 174 FSTS EQU FFPDP+0200 STORE SP FF 10 00174
105543 A 175 FSUBD EQU FFPDP+0143 SUBTRACT DP FF 10 00175
105450 A 176 FSUBS EQU FFPDP+050 SUBTRACT SP FF 10 00176
177 * 10 00177
178 * 10 00178
000422 A 179 K2 EQU TWO 10 00179
000441 A 180 MTHD EQU 5R0 10 00180
000423 A 181 K4 EQU FOUR 10 00181
000466 A 182 K6 EQU SIX 10 00182
000424 A 183 K10 EQU 10 10 00183
000471 A 184 K12 EQU TEN 10 00184
000472 A 185 K17 EQU BM17 10 00185
000425 A 186 K20 EQU 20 10 00186
000473 A 187 K37 EQU BM37 10 00187
000463 A 188 K77 EQU BM377 10 00188
000432 A 189 KJMP EQU 019 10 00189

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190          EJECT
191          *****
192          *
193          * I/O BUFFER, VARIABLE BLOCK, AND TRANSFER VECTOR DEFINITIONS
194          *
195          *****
010150 A 197 OVERSZ SET 4200 MAXIMUM OVERLAY SIZE
000027 A 198 TFVCSZ SET 027 FROM-COMPILER TRANSFER VECTOR SIZE
000666 A 199 VARBLS SET 0666 VARIABLE BLOCK SIZE
177112 R 200 VARBLD EQU *-VARBLS VARIABLE BLOCK START ADDRESS
177120 R 202 ERBF EQU VARBLD+06 ERROR BUFFER
177127 R 203 NERR EQU VARBLD+015 ERROR COUNT
177160 R 204 SLOD EQU VARBLD+0046 SPECIAL LIST BUFFER
177204 R 205 TITL EQU VARBLD+0072 TITLE BUFFER
177207 R 206 TIJP EQU VARBLD+0075 TITLE PAGE NUMBER
177212 R 207 TITD EQU VARBLD+0100 TITLE DATE
177217 R 208 TITJ EQU VARBLD+0105 TITLE JOB NAME
177236 R 209 TITN EQU VARBLD+0124 TITLE NAME
177243 R 210 TITM EQU VARBLD+0131 TIME
177250 R 211 TITQ EQU VARBLD+0136 END
177250 R 212 BLFCB EQU VARBLD+0136 BO FCB
177262 R 213 GLFCB EQU VARBLD+0150 GO FCB
177274 R 214 LLFCB EQU VARBLD+0162 LO FCB
177306 R 215 PLFCB EQU VARBLD+0174 PI FCB
216          EJEC
217          *****
218          *
219          *
220          *
221          *
222          *
223          *
224          * FIXED ON LOADING BY ROUTINE FORT *
225          *
177320 R 226 BOBLFL EQU VARBLD+0206 BO BLOCKING FLAG
177321 R 227 GOBLFL EQU VARBLD+0207 GO BLOCKING FLAG
177322 R 228 LOBLFL EQU VARBLD+0210 LO BLOCKING FLAG
177323 R 229 PIBLFL EQU VARBLD+0211 PI BLOCKING FLAG
177324 R 230 $PCW EQU VARBLD+0212 COMPILER CONTROL FLAGS
177325 R 231 $ECW EQU VARBLD+0213 ERROR CONTROL WORD
177326 R 232 DPB EQU VARBLD+0214 AVAILABLE CORE START ADDRESS
177327 R 233 DPX EQU VARBLD+0215 AVAILABLE CORE END ADDRESS
234          *
235          *
236          * CLEARED FOR EACH COMPILATION *
237          *
177330 R 239 VBLOGG EQU DFX+1 START OF CLEARED VARIABLES
177330 R 240 AF EQU VBLOGG ADDRESS FIELD 01 10 00240
177331 R 241 AIFW EQU AF+1 SCAN FORWARD I POINTER 01 10 00241
177332 R 242 AS EQU AIFW+1 ARRAY SUBSCRIPTS 07 10 00242
177341 R 243 AT EQU AS+7 ADDRESS TYPE 01 10 00243
177342 R 244 BDF EQU AT+1 BLOCK DATA FLAG 01 10 00244
177343 R 245 BOBLCN EQU BDF+1 BO BLOCKING FLAG 01 10 00245
177344 R 246 CF EQU BOBLCN+1 SCAN COMPLIMENT FLAG 01 10 00246
177345 R 247 CFPTSW EQU CF+1 FINAL POINT CHECK SWITCH 01 10 00247
177346 R 248 CL EQU CFPTSW+1
177347 R 249 CLOP EQU CL+1 LIST OUTPUT PACK COUNT 01 10 00249
177350 R 250 CMFL EQU CLOP+1 COMMON FLAGS 01 10 00250
177351 R 251 CNP EQU CMFL+1 COMMON NAME POINTER 01 10 00251
177352 R 252 D EQU CNP+1 DO POINTER 01 10 00252
177353 R 253 DF EQU D+1 DELIMITER FLAG 01 10 00253
177354 R 254 DFPP EQU DF+1 FLOATING POINT DISABLE FLAG 01 10 00254
177355 R 255 DH EQU DFPP+1 DO LIMIT POINTER 01 10 00255
177356 R 256 DI EQU DH+1 DO INCREMENT POINTER 01 10 00256
177357 R 257 DPCA EQU DI+1 DATA POOL CONTANTS - I-POINTER FOR:
258          *
259          *
177373 R 260 DR EQU DPCA+12 DO RETURN ADDRESS 10 00260
177374 R 261 DS EQU DR+1
177375 R 262 DSAV EQU DS+1 DT SAVE FOR RD/WR PROCESSING 01 10 00262
177376 R 263 DT EQU DSAV+1 DO TOP POINTER 01 10 00263
177377 R 264 DTFL EQU DT+1 DO TERMINATION FLAG 02 10 00264
177401 R 265 DV EQU DTFL+2 DO VARIABLE POINTER 01 10 00265
177402 R 266 EC EQU DV+1 ERROR COUNT 01 10 00266
177403 R 267 EH EQU EC+1 EXPRESSION HIERARCHYS 02 10 00267
177405 R 268 EHBK EQU EH+2 SCAN BACKWARD EXPRESSION HEIRARCHY 01 10 00268
177406 R 269 EL EQU EHBK+1 ENTRY LENGTH 01 10 00269
177407 R 270 EXAD EQU EL+1 EXECUTEABLE ADDRESS 01 10 00270
177410 R 271 F EQU EXAD+1 ALTERNATE I POINTER 01 10 00271
177411 R 272 FFPFL EQU F+1 FLOATING POINT PROCESSOR FLAG 01 10 00272
177412 R 273 GOBLCN EQU FFPFL+1 GO BLOCKING COUNT 01 10 00273
177413 R 274 HCC EQU GOBLCN+1 HOLLERITH COLUMN COUNTER 01 10 00274
177414 R 275 I EQU HCC+1 ASSIGNMENT TABLE POINTER 01 10 00275
177415 R 276 ID EQU I+1 IDENTIFICATION 04 10 00276
177421 R 277 IM EQU ID+4 ITEM MODE 01 10 00277
177422 R 278 INBP EQU IM+1 INPUT BUFFER POINTER 01 10 00278
177423 R 279 IOFL EQU INBP+1 I/O FLAG 01 10 00279
177424 R 280 IP EQU IOFL+1 ARRAY POINTERS 09 10 00280
177435 R 281 IS EQU IP+9 ARRAY DIMENSIONS 08 10 00281
177445 R 282 IT EQU IS+8 ASSIGNMENT TOP POINTER 01 10 00282
177446 R 283 IU EQU IT+1 ITEM USAGE 01 10 00283
177447 R 284 J EQU IU+1 TRIAD POINTER 01 10 00284
177450 R 285 JPFL EQU J+1 JUMP FLAGS 04 10 00285

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177454	R	286	JT	EQU	JPFL+4	TRIAD TOP POINTER	01	10	00286
177455	R	287	K	EQU	JT+1	EXPRESSION POINTER	01	10	00287
177456	R	288	KT	EQU	K+1	EXPRESSION TOP POINTER	01	10	00288
177457	R	289	LF	EQU	KT+1	LOCATION FIELD	01	10	00289
177460	R	290	LIF	EQU	LF+1	LOGICAL IF FLAG	01	10	00290
177461	R	291	LLOP	EQU	LIF+1	NO. OF LINES LEFT ON PAGE	01	10	00291
177462	R	292	MAXDPC	EQU	LLOP+1	MAXIMUM FPP OPERATION COUNT	01	10	00292
177463	R	293	MDTB	EQU	MAXDPC+1	OPERAND IMPLICIT MODE TABLE	26	10	00293
177516	R	294	MF	EQU	MDTB+27	MODE FLAG	10	10	00294
177517	R	295	MM	EQU	MF+1	MAX/MIN LIST FLAG	01	10	00295
177520	R	296	MR	EQU	MM+1	MULTIPLY REGISTERS	02	10	00296
177522	R	297	NAME	EQU	MR+2	SUBROUTINE GENERATION NAME	01	10	00297
177523	R	298	ND	EQU	NAME+1	NUMBER OF DIMENSIONS	01	10	00298
177524	R	299	NF	EQU	ND+1	NEGATION FLAG	01	10	00299
177525	R	300	NFFW	EQU	NF+1	SCAN FORWARD NEGATION FLAG	01	10	00300
177526	R	301	NS	EQU	NFFW+1	NUMBER OF SUBSCRIPTS	01	10	00301
177527	R	302	NT	EQU	NS+1	NAME TAG	01	10	00302
177530	R	303	NTFL	EQU	NT+1	NO TAG-USAGE FLAG	01	10	00303
177531	R	304	OP	EQU	NTFL+1	OPERATION	01	10	00304
177532	R	305	OPBK	EQU	OP+1	SCAN BACKWARD OPERATION	01	10	00305
177533	R	306	OPCNT	EQU	OPBK+1	OPERATION COUNT	01	10	00306
177534	R	307	OPW	EQU	OPCNT+1	OUTPUT PACK WORD	01	10	00307
177535	R	308	OITFL	EQU	OPW+1	OUTPUT-ITEM FLAG	01	10	00308
177536	R	309	O1	EQU	OITFL+1	LEFT OPERAND	01	10	00309
177537	R	310	O2	EQU	O1+1	RIGHT OPERAND	01	10	00310
177540	R	311	PC	EQU	O2+1	PACK CONTROL	04	10	00311
177544	R	312	PIBLCN	EQU	PC+4	PI BLOCKING COUNT	01	10	00312
177545	R	313	QFL	EQU	PIBLCN+1	QUOTE FLAG	01	10	00313
177546	R	314	RL	EQU	QFL+1	RELATIVE PROGRAM LOCATIONS	02	10	00314
177550	R	315	SBFL	EQU	RL+2	SUBPROGRAM FLAGS	02	10	00315
177553	R	316	SF	EQU	SBFL+3	STORAGE FLAG	10	10	00316
177554	R	317	SPFL	EQU	SF+1	SPECIFICATION FLAG	01	10	00317
177555	R	318	STFFL	EQU	SPFL+1	STATEMENT FUNCTION FLAG	01	10	00318
177556	R	319	STNB	EQU	STFFL+1	STATEMENT NUMBER	01	10	00319
177557	R	320	STSW	EQU	STNB+1	STATEMENT SWITCH	01	10	00320
177560	R	321	SSP	EQU	STSW+1	SPECIFICATION STACK POINTERS	05	10	00321
177565	R	322	SXF	EQU	SSP+5	COMPLEX FLAG	01	10	00322
177566	R	323	TC	EQU	SXF+1	TERM CHARACTER/ CHARACTER IMAGE	02	10	00323
177570	R	324	TERF	EQU	TC+2	TERMINATING ERROR FLAG	01	10	00324
177571	R	325	TM	EQU	TERF+1	TRIAD MODE	01	10	00325
177572	R	326	TSFL	EQU	TM+1	TEMPORARY STORAGE FLAG	01	10	00326
177573	R	327	TU	EQU	TSFL+1	TRIAD USE	01	10	00327
177574	R	328	T0	EQU	TU+1	TEMPORARY STORAGE	01	10	00328
177575	R	329	T1	EQU	T0+1	TEMPORARY STORAGE	01	10	00329
177576	R	330	T2	EQU	T1+1	TEMPORARY STORAGE	01	10	00330
177577	R	331	T2IN	EQU	T2+1	TEMPORARY STORAGE	01	10	00331
177600	R	332	T3	EQU	T2IN+1	TEMPORARY STORAGE	01	10	00332
177601	R	333	T4	EQU	T3+1	TEMPORARY STORAGE	01	10	00333
177602	R	334	T5	EQU	T4+1	TEMPORARY STORAGE	01	10	00334
177603	R	335	T6	EQU	T5+1	TEMPORARY STORAGE	01	10	00335
177604	R	336	T7	EQU	T6+1	TEMPORARY STORAGE	01	10	00336
177605	R	337	T8	EQU	T7+1	TEMPORARY STORAGE	01	10	00337
177606	R	338	T9	EQU	T8+1	TEMPORARY STORAGE	01	10	00338
177607	R	339	XRPT	EQU	T9+1	OBJECT X-REGISTER POINTER	01	10	00339
177611	R	340	VBLOND	EQU	XRPT+2	END OF CLEARED VARIABLES	10	10	00340
		341			OBJECT		10	10	00341
		342			*****		10	10	00342
		343			*		10	10	00343
		344			*	COMPILER TRANSFER VECTOR	10	10	00344
		345			*		10	10	00345
		346			*****		10	10	00346
		348			*	T D - C O M P I L E R	10	10	00348
077611	R	350	V	SET	VBLOND-0100000		10	10	00350
077612	R	352	ASI	EQU	V	ASSIGN ITEM	10	10	00352
077612	R	353	V	SET	V+1		10	10	00353
077613	R	354	ASS	EQU	V	ASSIGN SPECIAL	10	10	00354
077613	R	355	V	SET	V+1		10	10	00355
077614	R	356	CAN	SET	V	"ALL NAME	10	10	00356
077614	R	357	V	SET	V+1		10	10	00357
077615	R	358	CBA	SET	V	CONVERT BINARY TO ASCII	10	10	00358
077615	R	359	V	SET	V+1		10	10	00359
077616	R	360	CCR	SET	V	COMMA OR C/R TEST	10	10	00360
077616	R	361	V	SET	V+1		10	10	00361
077617	R	362	CRT	SET	V	C/R TEST	10	10	00362
077617	R	363	V	SET	V+1		10	10	00363
077620	R	364	CTS	SET	V	COMMA TEST	10	10	00364
077620	R	365	V	SET	V+1		10	10	00365
077621	R	366	DEK	SET	V	DECREMENT X	10	10	00366
077621	R	367	V	SET	V+1		10	10	00367
077622	R	368	DFT	EQU	V	DEFINE AF:AT	10	10	00368
077622	R	369	V	SET	V+1		10	10	00369
077623	R	370	DSM	SET	V	DEFINE STATEMENT MODE	10	10	00370
077623	R	371	V	SET	V+1		10	10	00371
077624	R	372	EOLSW	SET	V		10	10	00372
077624	R	373	V	SET	V+1		10	10	00373
077625	R	374	ER1	SET	V		10	10	00374
077625	R	375	V	SET	V+1		10	10	00375
077626	R	376	ER2	EQU	V	USAGE ERROR	10	10	00376
077626	R	377	V	SET	V+1		10	10	00377
077626	R	378	ER3	EQU	V	MODE ERROR	10	10	00378
077627	R	379	V	SET	V+1		10	10	00379

077627	R	380	ER6	EQU	V	COMMON BASE LOWERED	10	00380
077630	R	381	V	SET	V+1		10	00381
077630	R	382	ER7	EQU	V	ILLEGAL EQUIVALENCE GROUP	10	00382
077631	R	383	V	SET	V+1		10	00383
077631	R	384	ER8	SET	V		10	00384
077632	R	385	V	SET	V+1		10	00385
077632	R	386	ER11	SET	V		10	00386
077633	R	387	V	SET	V+1		10	00387
077633	R	388	ER12	SET	V		10	00388
077634	R	389	V	SET	V+1		10	00389
077634	R	390	ER13	SET	V		10	00390
077635	R	391	V	SET	V+1		10	00391
077635	R	392	ER14	SET	V		10	00392
077636	R	393	V	SET	V+1		10	00393
077636	R	394	ER15	EQU	V	TRUNCATED VALUE ERROR	10	00394
077637	R	395	V	SET	V+1		10	00395
077637	R	396	ER16	EQU	V	STATEMENT OUT OF ORDER	10	00396
077640	R	397	V	SET	V+1		10	00397
077640	R	398	ER17	EQU	V	MORE THAN 29 COMMON REGIONS	10	00398
077641	R	399	V	SET	V+1		10	00399
077641	R	400	ER18	EQU	V	NON-COMMON DATA ERROR	10	00400
077642	R	401	V	SET	V+1		10	00401
077642	R	402	ER20	EQU	V	DO INDEX NOT REFERENCED	10	00402
077643	R	403	V	SET	V+1		10	00403
077643	R	404	ER21	SET	V		10	00404
077644	R	405	V	SET	V+1		10	00405
077644	R	406	ER22	EQU	V	ARRAY NAME PREVIOUSLY DECLARED	10	00406
077645	R	407	V	SET	V+1		10	00407
077645	R	408	ER24	SET	V		10	00408
077646	R	409	V	SET	V+1		10	00409
077646	R	410	EXA	EQU	V	EXAMINE NEXT CHARACTER	10	00410
077647	R	411	V	SET	V+1		10	00411
077647	R	412	EXL	EQU	V	EXCHANGE LINKS	10	00412
077650	R	413	V	SET	V+1		10	00413
077650	R	414	FNS1	EQU	V	ENTRY TO FNS	10	00414
077651	R	415	V	SET	V+1		10	00415
077651	R	416	FORT1	SET	V		10	00416
077652	R	417	V	SET	V+1		10	00417
077652	R	418	GSE	EQU	V	GENERATE SUBPROGRAM ENTRANCE	10	00418
077653	R	419	V	SET	V+1		10	00419
077653	R	420	IAC	SET	V	INPUT (A) CHARACTERS	10	00420
077654	R	421	V	SET	V+1		10	00421
077654	R	422	ICH	EQU	V	INPUT CHARACTER	10	00422
077655	R	423	V	SET	V+1		10	00423
077655	R	424	ICD	EQU	V	INPUT COLUMN	10	00424
077656	R	425	V	SET	V+1		10	00425
077656	R	426	ICORN1	SET	V		10	00426
077657	R	427	V	SET	V+1		10	00427
077657	R	428	ICRD	SET	V		10	00428
077660	R	429	V	SET	V+1		10	00429
077660	R	430	ICRR	SET	V		10	00430
077661	R	431	V	SET	V+1		10	00431
077661	R	432	ICSI	EQU	V	INPUT SOURCE CONTROL SWITCH	10	00432
077662	R	433	V	SET	V+1		10	00433
077662	R	434	IDI	SET	V	INPUT DIGIT	10	00434
077663	R	435	V	SET	V+1		10	00435
077663	R	436	INH	EQU	V	INPUT HOLLERITH WORD	10	00436
077664	R	437	V	SET	V+1		10	00437
077664	R	438	IIV	EQU	V	INPUT INTEGER VARIABLE	10	00438
077665	R	439	V	SET	V+1		10	00439
077665	R	440	ILB	SET	V	INITIALIZE LIST BUFFER	10	00440
077666	R	441	V	SET	V+1		10	00441
077666	R	442	ILT	EQU	V	ILLEGAL DO TERMINATION/CONTROL CONTINUE	10	00442
077667	R	443	V	SET	V+1		10	00443
077667	R	444	INA	EQU	V	INPUT NAME	10	00444
077670	R	445	V	SET	V+1		10	00445
077670	R	446	INI	EQU	V	INPUT ITEM	10	00446
077671	R	447	V	SET	V+1		10	00447
077671	R	448	INN	EQU	V	INPUT (DO NOT ASSIGN)	10	00448
077672	R	449	V	SET	V+1		10	00449
077672	R	450	INS	SET	V	INPUT NORMAL STATEMENT NUMBER	10	00450
077673	R	451	V	SET	V+1		10	00451
077673	R	452	INT	EQU	V	INTEGER TEST	10	00452
077674	R	453	V	SET	V+1		10	00453
077674	R	454	ISN	SET	V	INPUT STATEMENT NUMBER	10	00454
077675	R	455	V	SET	V+1		10	00455
077675	R	456	IVA	EQU	V	INPUT VARIABLE	10	00456
077676	R	457	V	SET	V+1		10	00457
077676	R	458	IVC	SET	V	INPUT INTEGER VARIABLE/CONSTANT	10	00458
077677	R	459	V	SET	V+1		10	00459
077677	R	460	IWI	EQU	V	WORDS/ITEM	10	00460
077700	R	461	V	SET	V+1		10	00461
077700	R	462	LAX	EQU	V	LOAD ASSIGNMENT DATA	10	00462
077701	R	463	V	SET	V+1		10	00463
077701	R	464	LDX	SET	V	LOAD DO	10	00464
077702	R	465	V	SET	V+1		10	00465
077702	R	466	LEX	SET	V	LOAD EXPRESSION	10	00466
077703	R	467	V	SET	V+1		10	00467
077703	R	468	LIST	EQU	V	LIST A LINE	10	00468
077704	R	469	V	SET	V+1		10	00469
077704	R	470	LOCT	SET	V		10	00470



077705	R	471	V	SET	V+1		10	00471
077705	R	472	LTX	SET	V	LOAD TRIADS	10	00472
077706	R	473	V	SET	V+1		10	00473
077706	R	474	MOVE	EDU	V	MOVE ALPHA DATA	10	00474
077707	R	475	V	SET	V+1		10	00475
077707	R	476	NXL	EDU	V	MAKE EXIT LABEL	10	00476
077710	R	477	V	SET	V+1		10	00477
077710	R	478	ORR	EDU	V	OUTPUT ABSOLUTE	10	00478
077711	R	479	V	SET	V+1		10	00479
077711	R	480	ODR	EDU	V	OUTPUT DOUBLE	10	00480
077712	R	481	V	SET	V+1		10	00481
077712	R	482	ODS	EDU	V	OUTPUT DATA STRING	10	00482
077713	R	483	V	SET	V+1		10	00483
077713	R	484	ONEN	EDU	V	OUTPUT NAME	10	00484
077714	R	485	V	SET	V+1		10	00485
077714	R	486	OPR	EDU	V	OUTPUT PACK	10	00486
077715	R	487	V	SET	V+1		10	00487
077715	R	488	OPR	EDU	V	OUTPUT RELATIVE	10	00488
077716	R	489	V	SET	V+1		10	00489
077716	R	490	OSR	EDU	V	OUTPUT STRING RELATIVE	10	00490
077717	R	491	V	SET	V+1		10	00491
077717	R	492	OTJ	EDU	V	OUTPUT JUMP	10	00492
077720	R	493	V	SET	V+1		10	00493
077720	R	494	OUT	EDU	V	OUTPUT OPERATOR/OPERAND	10	00494
077721	R	495	V	SET	V+1		10	00495
077721	R	496	OWD	EDU	V	OUTPUT WORD	10	00496
077722	R	497	V	SET	V+1		10	00497
077722	R	498	OWS	EDU	V	OUTPUT WORDS	10	00498
077723	R	499	V	SET	V+1		10	00499
077723	R	500	ODS	EDU	V	PACK DATA STRING	10	00500
077724	R	501	V	SET	V+1		10	00501
077724	R	502	PEE	EDU	V	PACK ERROR BUFFER	10	00502
077725	R	503	V	SET	V+1		10	00503
077725	R	504	PTR	EDU	V	PURGE TRIADS	10	00504
077726	R	505	V	SET	V+1		10	00505
077726	R	506	PTG	EDU	V	'C' TEST	10	00506
077727	R	507	V	SET	V+1		10	00507
077727	R	508	RCG	EDU	V	RESTORE SCAN PARAMETERS	10	00508
077730	R	509	V	SET	V+1		10	00509
077730	R	510	RODS	EDU	V	SAVE SCAN PARAMETERS	10	00510
077731	R	511	V	SET	V+1		10	00511
077731	R	512	RCH	EDU	V	REREAD CHARACTER	10	00512
077732	R	513	V	SET	V+1		10	00513
077732	R	514	RID	EDU	V	RIGHT INPUT OPERATOR	10	00514
077733	R	515	V	SET	V+1		10	00515
077733	R	516	SAM	EDU	V	STORE ASSIGNMENT DATA	10	00516
077734	R	517	V	SET	V+1		10	00517
077734	R	518	SDK	EDU	V	STORE DD	10	00518
077735	R	519	V	SET	V+1		10	00519
077735	R	520	SIDTB1	EDU	V	END OF MODE-SETTING IN SIDTB	10	00520
077736	R	521	V	SET	V+1		10	00521
077736	R	522	SIS	EDU	V	STATEMENT IDENTIFICATION SCAN	10	00522
077737	R	523	V	SET	V+1		10	00523
077737	R	524	SLIT	EDU	V		10	00524
077740	R	525	V	SET	V+1		10	00525
077740	R	526	SLDP	EDU	V	SPECIAL LIST OUTPUT	10	00526
077741	R	527	V	SET	V+1		10	00527
077741	R	528	STC	EDU	V	STATEMENT COMPLETION	10	00528
077742	R	529	V	SET	V+1		10	00529
077742	R	530	STI1	EDU	V	ENTRY TO STI	10	00530
077743	R	531	V	SET	V+1		10	00531
077743	R	532	STH	EDU	V	ILLEGAL DD TERM./ND CONTROL CONTINUE	10	00532
077744	R	533	V	SET	V+1		10	00533
077744	R	534	STG	EDU	V	STATEMENT SCAN	10	00534
077745	R	535	V	SET	V+1		10	00535
077745	R	536	TER1	EDU	V	CONSTRUCTION	10	00536
077746	R	537	V	SET	V+1		10	00537
077746	R	538	TER2	EDU	V	NOT IN SUBPROGRAM	10	00538
077747	R	539	V	SET	V+1		10	00539
077747	R	540	TER3	EDU	V	DATA POOL FULL	10	00540
077750	R	541	V	SET	V+1		10	00541
077750	R	542	TER4	EDU	V	ILLEGAL STATEMENT	10	00542
077751	R	543	V	SET	V+1		10	00543
077751	R	544	TER5	EDU	V		10	00544
077752	R	545	V	SET	V+1		10	00545
077752	R	546	TER7	EDU	V		10	00546
077753	R	547	V	SET	V+1		10	00547
077753	R	548	TER8	EDU	V		10	00548
077754	R	549	V	SET	V+1		10	00549
077754	R	550	TER9	EDU	V	IMPROPER DD NEST	10	00550
077755	R	551	V	SET	V+1		10	00551
077755	R	552	TER11	EDU	V	ITEM NOT OPERAND	10	00552
077756	R	553	V	SET	V+1		10	00553
077756	R	554	TER12	EDU	V	ITEM NOT FUNCTION	10	00554
077757	R	555	V	SET	V+1		10	00555
077757	R	556	TER13	EDU	V		10	00556
077758	R	557	V	SET	V+1		10	00557
077758	R	558	TER14	EDU	V	SUBSCRIPT VARIABLE NOT DUMMY	10	00558
077759	R	559	V	SET	V+1		10	00559
077759	R	560	TER15	EDU	V		10	00560
077762	R	561	V	SET	V+1		10	00561

Address	Mode	Label	Operation	Operand	Comment	Line	Address
077762	R	562 TER17	EQU	V	FUNCTION STATEMENT HAS NO PARAMETERS	10	00562
077763	R	563 V	SET	V+1		10	00563
077763	R	564 TER18	SET	V		10	00564
077764	R	565 V	SET	V+1		10	00565
077764	R	566 TER19	SET	V		10	00566
077765	R	567 V	SET	V+1		10	00567
077765	R	568 TER20	SET	V		10	00568
077766	R	569 V	SET	V+1		10	00569
077766	R	570 TER24	SET	V		10	00570
077767	R	571 V	SET	V+1		10	00571
077767	R	572 TER26	EQU	V	SUBSCRIPT NOT INTEGER CONSTANT	10	00572
077770	R	573 V	SET	V+1		10	00573
077770	R	574 TDF	SET	V	TEST OVERFLOW	10	00574
077771	R	575 V	SET	V+1		10	00575
077771	R	576 TSP	EQU	V	TAG SUBPROGRAM	10	00576
077772	R	577 V	SET	V+1		10	00577
077772	R	578 TST	EQU	V	CHARACTER TEST	10	00578
077773	R	579 V	SET	V+1		10	00579
077773	R	580 TVR	EQU	V	TAG VARIABLE	10	00580
077774	R	581 V	SET	V+1		10	00581
077774	R	582 WRQBD	SET	V		10	00582
077775	R	583 V	SET	V+1		10	00583
077775	R	584 WRQGD	SET	V		10	00584
077776	R	585 V	SET	V+1		10	00585
077776	R	586 WRDT	SET	V		10	00586
077777	R	587 V	SET	V+1		10	00587
077777	R	588 ZEB	EQU	V	ZERO ERROR BUFFER	10	00588
000000	R	590 *	F R O M	- C O M P I L E R		10	00590
000000	R	592 V	SET	*		10	00592
000001	R	593	DATA	END	TERMINATE	10	00593
000001	R	594	DATA	ENDX	ERROR TERMINATE	10	00594
000002	R	595	BSS	TFVCSZ-#+V-1		10	00595
		596	EJECT			10	00596
		597	*****			10	00597
		598	* I/O BUFFERS *			10	00598
		599	*****			10	00599
010151	R	601 \$BUF	EQU	V+OVERSZ+1	INPUT BUFFER AREA	10	00601
010224	R	602 DBUF	EQU	\$BUF+43	OBJECT BUFFER	10	00602
010320	R	603 BLBF1	EQU	DBUF+60	BLOCKING BUFFER 1	10	00603
		604	EJEC			10	00604
		605	* END	END PROCESSOR		10	00605
000026	I	607	END	LDA SPFL	IGNORE IF FIRST LINE.	10	00607
000027	I	608		SUB DTFL		10	00608
000030	A	609		JAN FORT1		10	00609
000031	R						
000032	A	610	LDA	NEG		10	00610
000033	I	611	STA	STSW	SET STSW FOR SPECIAL ERROR RETURN	10	00611
000034	I	612	LDA	BDF		10	00612
000035	A	613	JANZ	END04	BLOCK DATA	10	00613
000036	R						
000037	I	614	LDA	STNB		10	00614
000040	A	615	JANZM	ERS	END HAS STATEMENT NUMBER	10	00615
000041	R						
000042	I	616	LDA	JPFL		10	00616
000043	I	617	ORA	STNB		10	00617
000044	A	618	JAZ	END00	NO PATH TO END STATEMENT	10	00618
000045	R						
000046	A	619	LDAI	'ST'		10	00619
000047	A						
000050	A	620	CALL	CAN		10	00620
000051	R						
000052	A	621	LDA	NEG		10	00621
000053	A	622	CALL	DAB		10	00622
000054	R						
000055	A	623	TZA			10	00623
000056	A	624	CALL	DAB		10	00624
000057	R						
000060	I	625	END00	LDA MR		10	00625
000061	A	626	JAZ	END01	NO I/O REFERENCES	10	00626
000062	R						
000063	A	627	LDA	SIX	MAKE EXTERNAL CALLS	10	00627
000064	I	628	STA	EL		10	00628
000065	A	629	LDA	THREE		10	00629
000066	I	630	STA	IU		10	00630
000067	A	631	TZA			10	00631
000070	I	632	STA	IM		10	00632
000071	I	633	STA	NT		10	00633
000072	A	634	LDAI	'Vs'		10	00634
000073	A						
000074	I	635	STA	ID		10	00635
000075	A	636	LDAI	'RE'		10	00636
000076	A						
000077	I	637	STA	ID+1		10	00637
000100	A	638	LDAI	'RR'		10	00638
000101	A						
000102	I	639	STA	ID+2		10	00639
000103	A	640	CALL	ASI	V\$RERR	10	00640
000104	R						
000105	A	641	LDAI	'RN'		10	00641
000106	A						
000107	I	642	STA	ID+2		10	00642

Address	Hex	Dec	Label	Op	Comment	Line	Page
000110	000200	640	CALL	AD1	V\$RERN	10	00643
000111	000201	641					
000112	000202	642	LIW1	'AD1'		10	00644
000113	000203	643					
000114	000204	644	STA	10+3		10	00645
000115	000205	645	CALL	'AD1'	V\$RER1	10	00646
000116	000206	646					
000117	000207	647	END01	10	10BL+2	10	00647
000118	000208	648	CALL	END04	NO VARIABLE RETURNS USED	10	00648
000119	000209	649					
000120	000210	650	LIW	10BL		10	00649
000121	000211	651	CALL	END04	NO NON-STANDARD EXITS USED	10	00650
000122	000212	652					
000123	000213	653	STA	10BL		10	00651
000124	000214	654	CALL	'AD1'		10	00652
000125	000215	655					
000126	000216	656	LDA	BT		10	00653
000127	000217	657	STA	THREE		10	00654
000128	000218	658	CALL	END02		10	00655
000129	000219	659					
000130	000220	660	STA	OF	PROCESS STRING RELATIVE	10	00656
000131	000221	661	CALL	'AD1'		10	00657
000132	000222	662	CALL	'AD1'		10	00658
000133	000223	663					
000134	000224	664	END02	LDA	RL	10	00659
000135	000225	665					
000136	000226	666	CALL	'AD1'	MAKE ENTRY POINT FOR VARIABLE EXIT	10	00660
000137	000227	667					
000138	000228	668	LIW1	'AD1'		10	00662
000139	000229	669					
000140	000230	670	CALL	'AD1'	COMPUTED GO TO CALL	10	00663
000141	000231	671					
000142	000232	672	STA	BT		10	00664
000143	000233	673	STA	BT		10	00665
000144	000234	674	CALL	'AD1'	'DATA MAX-NO-NONSTANDARD-EXITS'	10	00666
000145	000235	675					
000146	000236	676	END03	LDA	TH	10	00667
000147	000237	677					
000148	000238	678	CALL	'AD1'	OUTPUT NON-STANDARD EXIT ADDRESSES	10	00668
000149	000239	679					
000150	000240	680	CALL	'AD1'		10	00669
000151	000241	681					
000152	000242	682	CALL	'AD1'	'DATA >XNN'	10	00670
000153	000243	683					
000154	000244	684	END03	LDA	TH	10	00671
000155	000245	685					
000156	000246	686	CALL	'AD1'		10	00672
000157	000247	687					
000158	000248	688	LDA	TH		10	00673
000159	000249	689	LDA	TH		10	00674
000160	000250	690	LDA	TH		10	00675
000161	000251	691	LDA	TH		10	00676
000162	000252	692	LDA	TH		10	00677
000163	000253	693	END04	STA	BT	10	00678
000164	000254	694					
000165	000255	695	CALL	'AD1'	FUNCTION NOT USED AS VAR./NO RETURN	10	00679
000166	000256	696					
000167	000257	697	LIW	BT		V 10	00681
000168	000258	698	CALL	'AD1'		V 10	00682
000169	000259	699					
000170	000260	700	LDA	RL		V 10	00683
000171	000261	701	STA	RL+1		V 10	00684
000172	000262	702	CALL	END03	LOCAL/Common DATA IN BLOCK-DATA	V 10	00685
000173	000263	703	END1	STA	BT	10	00686
000174	000264	704					
000175	000265	705	LDA	RL		10	00687
000176	000266	706	CALL	'AD1'		10	00688
000177	000267	707					
000178	000268	708	STA	BT		10	00689
000179	000269	709	STA	BT		10	00690
000180	000270	710	STA	BT		10	00691
000181	000271	711	STA	BT		10	00692
000182	000272	712	STA	BT		10	00693
000183	000273	713	STA	BT		10	00694
000184	000274	714	STA	BT		10	00695
000185	000275	715	CALL	'AD1'	MAKE POST-PROGRAM INDEX CHAIN	10	00696
000186	000276	716					
000187	000277	717	STA	BT		10	00698
000188	000278	718	STA	BT		10	00699
000189	000279	719	STA	BT		10	00700
000190	000280	720	ENDL1	CALL	END1	10	00701
000191	000281	721					
000192	000282	722	STA	BT		10	00702
000193	000283	723					
000194	000284	724	CALL	'AD1'		10	00703
000195	000285	725					
000196	000286	726	LDA	BT		10	00705
000197	000287	727	STA	BT		10	00706
000198	000288	728	CALL	'AD1'	EXIT IF NO CHAIN	10	00707
000199	000289	729					
000200	000290	730	STA	BT		10	00708
000201	000291	731	STA	BT		10	00709

000243	127000	I	710	ADD	RL		10	00710
000244	005012	A	711	TAB			10	00711
000245	010432	A	712	LDA	BS9		10	00712
000246	002000	A	713	CALL	DWS		10	00713
000247	077722	R						
000250	017000	I	714	LDA	AF		10	00714
000251	005311	A	715	DAR			10	00715
000252	002000	A	716	CALL	DSR		10	00716
000253	077716	R						
000254	044336	A	717	INR	ENDT	BUMP PAGE NO	10	00717
000255	001000	A	718	JMP	ENDL1		10	00718
000256	000227	R						
000257	014334	A	719	ENDX1 LDA	ENDT+1		10	00719
000260	057000	I	720	STA	IT		10	00720
000261	027000	I	721	LDB	RL		10	00721
000262	010432	A	722	LDA	BS9		10	00722
000263	002000	A	723	CALL	DWS		10	00723
000264	077722	R						
000265	005001	A	724	TZA			10	00724
000266	147000	I	725	SUB	TERF		10	00725
000267	001004	A	726	JAN	ENDD	SKIP MAP IF TERMINATING ERROR OCCURRED	10	00726
000270	000503	R						
000271	017000	I	727	LDA	DPB		10	00727
000272	057000	I	728	STA	I		10	00728
000273	006020	A	729	LDBI	EXME	LIST ENTRY NAMES IF MAP REQUESTED	10	00729
000274	000615	R						
000275	006030	A	730	LDXI	13		10	00730
000276	000015	A						
000277	017000	I	731	LDA	\$PCW		10	00731
000300	006402	A	732	BT	2,ENDL	NO ENTRY/COMMON-BLOCK/NAMES IF NO MAP	10	00732
000301	000363	R						
000302	002000	A	733	CALL	LIST		10	00733
000303	077703	R						
000304	010461	A	734	LDA	NEG	ENTRY COUNT	10	00734
000305	057000	I	735	STA	T9		10	00735
000306	002000	A	736	CALL	LAX		10	00736
000307	077700	R						
000310	017000	I	737	LDA	NT		10	00737
000311	001010	A	738	JAZ	ENDJ2	PASS NORMAL NAMES	10	00738
000312	000336	R						
000313	017000	I	739	LDA	IU		10	00739
000314	140464	A	740	SUB	THREE	ENTRY NAME	10	00740
000315	001010	A	741	JAZ	ENDJ		10	00741
000316	000327	R						
000317	017000	I	742	LDA	AT		10	00742
000320	140422	A	743	SUB	TWO		10	00743
000321	117000	I	744	DRA	IK		10	00744
000322	001016	A	745	JANZ	ENDJ2	NOT COMMON BLOCK NAME	10	00745
000323	000336	R						
000324	020466	A	746	LDB	SIX		10	00746
000325	001000	A	747	JMP	ENDJ1		10	00747
000326	000331	R						
000327	047000	I	748	ENDJ	T9		10	00748
000330	020421	A	749	LDB	ONE		10	00749
000331	067000	I	750	ENDJ1	AT		10	00750
000332	005001	A	751	TZA			10	00751
000333	057000	I	752	STA	NT		10	00752
000334	001000	A	753	JMP	*+3		10	00753
000335	000337	R						
000336	010461	A	754	ENDJ2	NEG	SET NO OUTPUT FLAG	10	00754
000337	002000	A	755	CALL	END4		10	00755
000340	000651	R						
000341	017000	I	756	LDA	T9		10	00756
000342	001002	A	757	JAP	ENDL	AT LEAST ONE ENTRY POINT	10	00757
000343	000363	R						
000344	017000	I	758	LDA	I		10	00758
000345	147000	I	759	SUB	EL		10	00759
000346	057000	I	760	STA	I	DUMMY ROLLBACK	10	00760
000347	005001	A	761	TZA			10	00761
000350	057000	I	762	STA	AF		10	00762
000351	006010	A	763	LDAI	'MA'		10	00763
000352	146701	A						
000353	057000	I	764	STA	ID		10	00764
000354	006010	A	765	LDAI	'IN'		10	00765
000355	144716	A						
000356	057000	I	766	STA	ID+1		10	00766
000357	010000	L	767	LDA	'...'		10	00767
000360	057000	I	768	STA	ID+2		10	00768
000361	001000	A	769	JMP	ENDJ		10	00769
000362	000327	R						
000363	006020	A	770	ENDL	LDBI	EXTERNAL NAME LIST	10	00770
000364	000632	R						
000365	030424	A	771	LDX	K10		10	00771
000366	017000	I	772	LDA	\$PCW		10	00772
000367	004255	A	773	LRLA	\$BIT-3		10	00773
000370	002002	A	774	JAPM	LIST		10	00774
000371	077703	R						
000372	017000	I	775	LDA	DPB	INITIALIZE TABLE POINTER	10	00775
000373	057000	I	776	STA	I		10	00776
000374	002000	A	777	CALL	LAX		10	00777
000375	077700	R						

000376			END1				10 00778
000378	017000						10 00779
000377	150400						10 00780
000400	011111					(IGNORE RELATIVE ENTRIES)	10 00781
000401	011111						
000402	011111						10 00782
000403	011111					(IGNORE NON-EXTERNALS)	10 00783
000404	011111						10 00784
000405	011111						10 00785
000406	011111						
000407	011111						10 00786
000410	011111					HAS CHAIN ADDRESS	10 00787
000411	011111						
000412	011111						10 00788
000413	011111					'DFLOAT'	10 00789
000414	011111						
000415	011111						10 00790
000416	011111						
000417	011111					'SQRT' IF F-OPTION	10 00791
000420	011111						10 00792
000422	011111						10 00793
000423	011111					NO LINK IF UNUSED IFIX,FLOAT,DFLOAT,SQRT	10 00794
000424	011111						
000425	011111		LRAT				10 00795
000426	011111						10 00796
000427	011111						10 00797
000430	011111						10 00798
000431	011111						
000432	011111						10 00799
000433	011111						10 00800
000434	011111						10 00801
000435	011111						
000436	011111						10 00802
000437	011111						
000440	011111						10 00803
000441	011111						
000442	011111						10 00804
000443	011111						
000444	011111		ENDH	JMPM	END4		10 00805
000445	011111						
000446	011111					I:=DP	10 00806
000447	011111						10 00807
000450	011111					LIST SYMBOL TABLE IF MAP REQUESTED9	10 00808
000451	011111						
000452	011111						10 00809
000453	011111						10 00810
000454	011111						10 00811
000455	011111						10 00812
000456	011111						
000457	011111						10 00813
000460	011111						
000461	011111						10 00814
000462	011111						10 00815
000463	011111					IGNORE SPECIAL ASSIGNMENT ENTRY	10 00816
000464	011111						
000465	011111						10 00817
000466	011111					(IGNORE UNREFERENCED CONSTANTS)	10 00818
000467	011111						10 00819
000470	011111						
000471	011111						10 00820
000472	011111						10 00821
000473	011111						10 00822
000474	011111					AT NOT 2,3 (UNASSIGNED, CHAINED)	10 00823
000475	011111						
000476	011111						10 00824
000477	011111						10 00825
000500	011111					BYPASS EXTERNALS	10 00826
000501	011111						10 00827
000502	011111						
000503	011111		ENDD		DEFL-1	IF MAIN PROGRAM, OUTPUT EXECUTION ADDR	10 00828
000504	011111						10 00829
000505	011111						10 00830
000506	011111						10 00831
000507	011111						
000510	011111						10 00832
000511	011111						
000512	011111						10 00833
000513	011111						10 00834
000514	011111						
000515	011111		ENDE			OUTPUT ORG DEFINING PROGRAM SIZE.	10 00835
000516	011111						10 00836
000517	011111						10 00837
000520	011111						10 00838
000521	011111						10 00839
000522	011111						
000523	011111						10 00840
000524	011111					NO MAP OPTION	10 00841
000525	011111						
000526	011111						10 00842
000527	011111						

000530	002000	A	843	CALL	LIST	BLANK LINE	10	00843
000531	077703	R						
000532	010466	A	844	LDA	SIX		10	00844
000533	006020	A	845	LDBI	ENDSZM		10	00845
000534	001100	R						
000535	006030	A	846	LDXI	SLOT		10	00846
000536	177160	R						
000537	002000	A	847	CALL	MOVE	MOVE MEMORY SIZE MESSAGE	10	00847
000540	077706	R						
000541	006010	A	848	LDAI	12		10	00848
000542	000014	A						
000543	057000	I	849	STA	CLOP		10	00849
000544	017000	I	850	LDA	RL		10	00850
000545	127000	I	851	ADD	RL+1		10	00851
000546	002000	A	852	CALL	LOCT	OUTPUT TOTAL SIZE	10	00852
000547	077704	R						
000550	002000	A	853	CALL	SLIT		10	00853
000551	077737	R						
000552	002000	A	854	CALL	LIST		10	00854
000553	077703	R						
000554	002000	A	855	CALL	ILB		10	00855
000555	077665	R						
000556	002000	A	856	CALL	SLIT		10	00856
000557	077737	R						
000560	002000	A	857	CALL	LIST	BLANK LINE	10	00857
000561	077703	R						
000562	002000	A	858	CALL	ILB		10	00858
000563	077665	R						
000564	017000	I	859	LDA	DBUF	WRITE END RECORD	10	00859
000565	150454	A	860	ANA	BR11		10	00860
000566	057000	I	861	STA	DBUF		10	00861
000567	002000	A	862	CALL	WRDT		10	00862
000570	077776	R						
000571	017000	I	863	LDA	DBLCLN		10	00863
000572	002016	A	864	JANZM	WRDBO		10	00864
000573	077774	R						
000574	017000	I	865	LDA	GBLCLN		10	00865
000575	002016	A	866	JANZM	WRDGO		10	00866
000576	077775	R						
000577	017000	I	867	LDA	\$PCW	IF NOT ALL LISTING SUPPRESSED, WRITE	10	00867
000600	006150	A	868	ANAI	013	"END COMPILATION" MESSAGE	10	00868
000601	000015	A						
000602	130465	A	869	ERA	FIVE		10	00869
000603	005311	A	870	DAR			10	00870
000604	006020	A	871	LDBI	NERR		10	00871
000605	177127	R						
000606	030425	A	872	LDX	K20		10	00872
000607	002002	A	873	JAPM	LIST		10	00873
000610	077703	R						
000611	001000	A	874	JMP	FORT1		10	00874
000612	077651	R						
000613			875	ENDT	BSS	2 TEMP	10	00875
000615	120305	A	876	ENME	DATA	' ENTRY/COMMON BLOCK NAMES '	10	00876
000616	147324	A						
000617	151331	A						
000620	127703	A						
000621	147715	A						
000622	146717	A						
000623	147240	A						
000624	141314	A						
000625	147703	A						
000626	145640	A						
000627	147301	A						
000630	146705	A						
000631	151640	A						
000632	120305	A	877	EXME	DATA	' EXTERNAL NAMES '	10	00877
000633	154324	A						
000634	142722	A						
000635	147301	A						
000636	146240	A						
000637	147301	A						
000640	146705	A						
000641	151640	A						
000642	120323	A	878	SYME	DATA	' SYMBOL TABLE '	10	00878
000643	154715	A						
000644	141317	A						
000645	146240	A						
000646	152301	A						
000647	141314	A						
000650	142640	A						
000651	000000	A	879	END4	ENTR		10	00879
000652	001004	A	880	JAN	ENDF	(IGNORE UNWANTED ITEMS)	10	00880
000653	001065	R						
000654	005301	A	881	DECR	1		10	00881
000655	054221	A	882	STA	ENER	SET NO END ERR	10	00882
000656	017000	I	883	LDA	AT	IF AT IS...	10	00883
000657	006120	A	884	ADDI	077771		10	00884
000660	077771	A						
000661	001004	A	885	JAN	END5	. DUM, SET AR=0100000+AF	10	00885
000662	000670	R						
000663	006130	A	886	ERAI	077776		10	00886

000664	077776	A							
000665	005311	A	887	DAR		. DAT, SET AR=RL+AF		10	00887
000666	004317	A	888	ASRA	\$BIT-1			10	00888
000667	157000	I	889	ANA	PL	. ANYOTHER, SET AR=AF		10	00889
000670	127000	I	890	END5	ADD	AF		10	00890
000671	002000	A	891	CALL	LOCT			10	00891
000672	077704	R							
000673	017000	I	892	LDA	AT			10	00892
000674	130466	A	893	ERA	K6			10	00893
000675	001010	A	894	JAZ	END7	(GO TO PROCESS COMMON ITEM)		10	00894
000676	000715	R							
000677	150466	A	895	ANA	K6			10	00895
000700	140423	A	896	SUB	Y4			10	00896
000701	001010	A	897	JAZ	END6	(GO TO PROCESS EXTERNAL OR UNDEFINJ+.		10	00897
000702	000706	R							
000703	010472	A	898	LDA	K17			10	00898
000704	001000	A	899	JMP	END7	(GO TO PROCESS RELATIVE DATUM)		10	00899
000705	000715	R							
000706	017000	I	900	END6	LDA	10		10	00900
000707	140464	A	901	SUB	THREE			10	00901
000710	001010	A	902	JAZ	END6	(GO TO PROCESS EXTERNAL DATUM)		10	00902
000711	000714	R							
000712	044164	A	903	INR	ENRR	SET END ERRDR		10	00903
			904	*				10	00904
000713	010425	A	905	LDA	K20			10	00905
000714	120422	A	906	ADD	K2			10	00906
000715	006120	A	907	END7	ADDI	0120303	MAKE 'C','E','R', OR 'U'	10	00907
000716	120303	A							
000717	006057	A	908	STAE	CLDT+1	ADDRESS TYPE CODE		10	00908
000720	177161	R							
000721	017000	I	909	LDA	NT			10	00909
000722	001010	A	910	JAZ	ENDB	(GO TO PROCESS NAMED ITEM)		10	00910
000723	001017	R							
000724	017000	I	911	LDA	\$PCW			10	00911
000725	054065	A	912	STA	ENDB+3			10	00912
000726	110424	A	913	ORA	EIGHT	SET OBJECT-CODE LIST SWITCH ON		10	00913
000727	057000	I	914	STA	\$PCW			10	00914
000730	010432	A	915	LDA	KJMP	OUTPUT CONSTANT ORIGIN		10	00915
000731	002000	A	916	CALL	PDS			10	00916
000732	077723	R							
000733	017000	I	917	LDA	AF			10	00917
000734	127000	I	918	ADD	PL			10	00918
000735	002000	A	919	CALL	PDS			10	00919
000736	077723	R							
000737	017000	I	920	LDA	IM			10	00920
000740	140467	A	921	SUB	SEVEN			10	00921
000741	001010	A	922	JAZ	END8	(GO TO PROCESS RELATIVE CONSTANT)		10	00922
000742	001003	R							
000743	010440	A	923	LDA	BS15	OUTPUT ID.		10	00923
000744	002000	A	924	CALL	PDS			10	00924
000745	077723	R							
000746	017000	I	925	LDA	ID			10	00925
000747	002000	A	926	CALL	PDS			10	00926
000750	077712	R							
000751	017000	I	927	LDA	IM			10	00927
000752	140422	A	928	SUB	TWO			10	00928
000753	001010	A	929	JAZ	ENDB+2			10	00929
000754	001012	R							
000755	010440	A	930	LDA	BS15	OUTPUT ID+1.		10	00930
000756	002000	A	931	CALL	PDS			10	00931
000757	077723	R							
000760	017000	I	932	LDA	ID+1			10	00932
000761	002000	A	933	CALL	PDS			10	00933
000762	077712	R							
000763	017000	I	934	LDA	EL			10	00934
000764	140465	A	935	SUB	FIVE			10	00935
000765	001010	A	936	JAZ	ENDB+2	REAL DATA		10	00936
000766	001012	R							
000767	010440	A	937	LDA	BS15	OUTPUT ID+2.		10	00937
000770	002000	A	938	CALL	PDS			10	00938
000771	077723	R							
000772	017000	I	939	LDA	ID+2			10	00939
000773	002000	A	940	CALL	PDS			10	00940
000774	077712	R							
000775	010440	A	941	LDA	BS15	OUTPUT ID+3.		10	00941
000776	002000	A	942	CALL	PDS			10	00942
000777	077723	R							
001000	017000	I	943	LDA	ID+3			10	00943
001001	001000	A	944	JMP	ENDB			10	00944
001002	001010	R							
001003	017000	I	945	END8	LDA	ID+1	PROCESS RELATIVE CONSTANTS	10	00945
001004	120437	A	946	ADD	BS14			10	00946
001005	002000	A	947	CALL	PDS			10	00947
001006	077723	R							
001007	017000	I	948	LDA	ID			10	00948
001010	002000	A	949	END9	CALL	PDS		10	00949
001011	077712	R							
001012	006010	A	950	LIAD	**			10	00950
001013	101012	R							
001014	057000	I	951	STA	\$PCW	RESET ORIGINAL \$PCW		10	00951
001015	001000	A	952	JMP	ENDB	GO TO OUTPUT LIST.		10	00952

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001016 001047 R
001017 010000 L 953 ENDB LDA = ' ' OUTPUT NAME WITH LEADING BLANK 10 00953
001020 002000 A 954 CALL SLOP 10 00954
001021 077740 R
001022 017000 I 955 LDA ID 10 00955
001023 004550 A 956 LLSR 8 10 00956
001024 002000 A 957 CALL SLOP CH-1 10 00957
001025 077740 R
001026 004450 A 958 LLRL 8 10 00958
001027 002000 A 959 CALL SLOP CH-2 10 00959
001030 077740 R
001031 017000 I 960 LDA ID+1 10 00960
001032 004550 A 961 LLSR 8 10 00961
001033 002000 A 962 CALL SLOP CH-3 10 00962
001034 077740 R
001035 004450 A 963 LLRL 8 10 00963
001036 002000 A 964 CALL SLOP CH-4 10 00964
001037 077740 R
001040 017000 I 965 LDA ID+2 10 00965
001041 004550 A 966 LLSR 8 10 00966
001042 002000 A 967 CALL SLOP CH-5 10 00967
001043 077740 R
001044 004450 A 968 LLRL 8 10 00968
001045 002000 A 969 CALL SLOP CH-6 10 00969
001046 077740 R
001047 002000 A 970 ENDC CALL SLIT 10 00970
001050 077737 R
001051 004255 A 971 LRLA $BIT-3 10 00971
001052 002002 A 972 JAPM LIST 10 00972
001053 077703 R
001054 002000 A 973 CALL ILB 10 00973
001055 077665 R
001056 014020 A 974 LDA ENER GET END ERR FLAG 10 00974
001057 001004 A 975 JAN ENDF ERROR ? 10 00975
001060 001065 R
001061 017000 I 976 LDA IM YES 10 00976
001062 140422 A 977 SUB TWO ERROR IF STATEMENT NUMBER 10 00977
001063 002004 A 978 JANM ER24 UNDEFINED STATEMENT NUMBER 10 00978
001064 077645 R
001065 017000 I 979 ENDF LDA I STEP TO NEXT ENTRY 10 00979
001066 127000 I 980 ADD EL 10 00980
001067 057000 I 981 STA I 10 00981
001070 147000 I 982 SUB IT 10 00982
001071 001010 A 983 JAZ* END4 (IF ALL ENTRIES PROCESSED) 10 00983
001072 100651 R
001073 006037 A 984 LDXE* LAX 10 00984
001074 177700 R
001075 006705 A 985 IJMP L,X 10 00985
001076 000001 A
001077 177777 A 986 ENER DATA -1 END ERROR FLAG 10 00986
001100 150322 A 987 ENDSZM DATA 'PROGRAM SIZE' 10 00987
001101 147707 A
001102 151301 A
001103 146640 A
001104 151711 A
001105 155305 A
988 END 10 00988

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ENTRY NAMES
EXTERNAL NAMES
000000 E BOFCB 000000 E GOFCEB 000000 E LOFCB 000000 E PIFCB
000000 E SIFCB 000000 E V$EXEC 000000 E V$IDC 000000 E V$IDST
SYMBOLS
000020 A $BIT 010151 R $BUF 177325 R $ECW 177324 R $PCW
177330 R AF 177331 R AIFW 177332 R AS 077611 R ASI
077612 R ASS 177341 R AT 000002 A B 177342 R BDF
010320 R BLBF1 177250 R BLFCB 000421 A BM1 000472 A BM17
000475 A BM177 000477 A BM1777 000464 A BM3 000473 A BM37
000463 A BM377 000467 A BM7 000474 A BM77 000476 A BM777
177343 R BOBLCN 177320 R BOBLFL 000000 E BOFCB 000441 A BR0
000442 A BR1 000453 A BR10 000454 A BR11 000455 A BR12
000456 A BR13 000457 A BR14 000460 A BR15 000443 A BR2
000444 A BR3 000445 A BR4 000446 A BR5 000447 A BR6
000450 A BR7 000451 A BR8 000452 A BR9 000421 A BS0
000422 A BS1 000433 A BS10 000434 A BS11 000435 A BS12
000436 A BS13 000437 A BS14 000440 A BS15 000423 A BS2
000424 A BS3 000425 A BS4 000426 A BS5 000427 A BS6
000430 A BS7 000431 A BS8 000432 A BS9 077613 R CAN
077614 R CBA 077615 R CCR 177344 R CF 177345 R CFPTSW
177346 R CL 177347 R CLDF 177350 R CMFL 177351 R CNP
077616 R CRT 077617 R CTS 177352 R D 077620 R DEK
177353 R DF 177354 R DFPP 077621 R DFT 177355 R DH
177356 R DI 177326 R DPB 177357 R DPCA 177327 R DPX
177373 R DR 177374 R DS 177375 R DSAV 077622 R DSM
177376 R DT 177377 R DTFI 177401 R DV 177402 R EC
177403 R EH 177405 R EHBK 000424 A EIGHT 177406 R EL
000026 R END 000060 R END00 000117 R END01 000140 R END02
000155 R END03 000172 R END04 000205 R END1 000651 R END4
000670 R END5 000706 R END6 000715 R END7 001003 R END8
001010 R ENDA 001017 R ENDB 001047 R ENDC 000503 R ENDD
000515 R ENDE 000564 R ENDE2 001065 R ENDF 000714 R ENDG
000444 R ENDH 000376 R ENDI 000327 R ENDJ 000331 R ENDJ1

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000336 R ENDJ2 000363 R ENDL 000227 R ENDL1 001100 R ENDSZM
000613 R ENDT 000577 R ENDX 000257 R ENDX1 001077 R ENER
000615 R ENME 077623 R EOLSW 077624 R ER1 077632 R ER11
077633 R ER12 077634 R ER13 077635 R ER14 077636 R ER15
077637 R ER16 077640 R ER17 077641 R ER18 077625 R ER2
077642 R ER20 077643 R ER21 077644 R ER22 077645 R ER24
077626 R ER3 077627 R ER6 077630 R ER7 077631 R ER8
177120 R ERBF 077646 R EXA 177407 R EXAD 077647 R EXL
000632 R EXME 177410 R F 105035 A F$DOI 105027 A F$DOI1
105036 A F$SEI 105503 A FADDD 105410 A FADDS 105535 A FDIVD
105401 A FDIVS 177411 R FFPFL 105400 A FFPDP 000465 A FIVE
105621 A FIX 105226 A FLAIF 105522 A FLDD 105032 A FLDI
105420 A FLDS 105167 A FLIDP 105125 A FLJAG 105024 A FLREL
105425 A FLT 105037 A FMBVI 105506 A FMULD 105416 A FMULS
077650 R FNS1 077651 R FORT1 000423 A FOUR 105127 A FSQRT
105710 A FSTD 105033 A FST1 105600 A FSTS 105543 A FSUBD
105450 A FSUBS 177262 R GLFCB 177412 R GOBLCM 177321 R GOBLFL
000000 E GDFCB 077652 R GSE 177413 R HCC 177414 R I
077653 R IAC 077654 R ICH 077655 R ICO 077656 R ICORNL
077657 R ICRD 077660 R ICRR 077661 R ICSI 177415 R ID
077662 R IDI 077663 R IHW 077664 R IIV 077665 R ILB
077666 R ILT 177421 R IM 077667 R INA 177422 R INBP
077670 R INI 077671 R INN 077672 R INS 077673 R INT
177423 R IOFL 177424 R IP 177435 R IS 077674 R ISM
177445 R IT 177446 R IU 077675 R IVA 077676 R IVC
077677 R IWI 177447 R J 177450 R JPFL 177454 R JT
177455 R K 000424 A K10 000471 A K12 000472 A K17
000422 A K2 000425 A K20 000473 A K37 000423 A K4
000466 A K6 000463 A K77 000432 A KJMP 177456 R KT
000425 R LAAT 077700 R LAX 000309 A LC 000050 A LCJP
077701 R LDX 077702 R LEX 177457 R LF 000462 A LHW
177460 R LIF 077703 R LIST 177274 R LLFCB 177451 R LLDOP
177322 R LOBLFL 077704 R LDOCT 000000 E LOFCB 077705 R LTX
177462 R MAXOPC 177463 R MDTB 177516 R MF 177517 R MM
077706 R MOVE 177520 R MR 000420 A MT 000500 A MTE
000441 A MTWO 077707 R MXL 177522 R NAME 177523 R ND
000461 A NEG 177127 R NERR 177524 R NF 177525 R NFFW
000470 A NINE 177526 R NS 177527 R NT 177530 R NTFL
177536 R O1 177537 R O2 077710 R OAB 010224 R OBUF
077711 R ODB 077712 R ODS 177535 R OITFL 000421 A ONE
077713 R ONEM 177531 R OP 177532 R OPBK 177533 R OPCNT
077714 R OPK 177534 R OPW 077715 R ORE 077716 R OSR
077717 R OTJ 077720 R OUT 010150 A OVERSZ 077721 R OWD
077722 R OWS 177540 R PC 077723 R PDS 077724 R PEB
177544 R PIBLCN 177323 R PIBLFL 000000 E PIFCB 177306 R PLFCB
077725 R PTR 077726 R PTS 177545 R QFL 077727 R RCC
077730 R RCCS 077731 R RCH 000463 A RHW 077732 R RID
177546 R RL 077733 R SAX 177550 R SBFL 077734 R SDX
000467 A SEVEN 177553 R SF 077735 R SIDTB1 000000 E SIFCB
077736 R SIS 000466 A SIX 077737 R SLIT 077740 R SLOP
177160 R SLOD 177554 R SPFL 177560 R SSP 077741 R STC
177555 R STFFL 077742 R ST11 077743 R STN 177556 R STNB
077744 R ST6 177557 R STSW 177565 R SXF 000642 R SYME
177574 R T0 177575 R T1 177576 R T2 177577 R T2IN
177600 R T3 177601 R T4 177602 R T5 177603 R T6
177604 R T7 177605 R T8 177606 R T9 177568 R TC
000471 A TEN 077745 R TER1 077755 R TER11 077756 R TER12
077757 R TER13 077760 R TER14 077761 R TER15 077762 R TER17
077763 R TER18 077764 R TER19 077746 R TER2 077765 R TER20
077766 R TER24 077767 R TER26 077747 R TER3 077750 R TER4
077751 R TER5 077752 R TER7 077753 R TER8 077754 R TER9
177570 R TERF 000027 A TFVCSZ 000464 A THREE 177212 R TITD
177217 R TITJ 177204 R TITL 177243 R TITM 177206 R TITN
177207 R TITP 177250 R TITQ 177571 R TM 077770 R TOF
077771 R TSB 177572 R TSFL 077772 R TST 177573 R TU
077773 R TVR 000422 A TWD 000000 R V 000360 A V$CTAD
000070 A V$DATE 000355 A V$DSTB 000000 E V$EXEC 000000 E V$IOC
000000 E V$IDST 000412 A V$JCB 000005 A V$JCFG 000056 A V$JFCB
000050 A V$JNAM 000054 A V$LCNT 000317 A V$LLUP 000345 A V$LUNT
000400 A V$LUT1 000401 A V$LUTE 000402 A V$LUT3 000417 A V$STSZ
000357 A V$TKSZ 177112 R VARELD 000666 A VARELS 177330 R VBLOBG
177611 R VBLOND 077774 R WRDGO 077775 R WRDGO 077776 R WRDT
000001 A X 177607 R XRPT 077777 R ZEB 000420 A ZERO
0 ERRORS ASSEMBLY COMPLETE

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140	\$BIT	773	811	888	971					
601	\$BUF	602								
230	\$PCW	731	772	788	810	840	867	911	914	951
240	AF	241	656	714	762	786	800	890	917	
241	AIFW	242								
242	AS	243								
352	ASI	640	643	646	704					
243	AT	244	653	705	742	750	779	795	820	883
		892								
244	BDF	245	612	681	823					
103	BM17	185								
109	BM1777	110								
104	BM37	187								
107	BM377	188								
245	BOBLCN	246	863							





318	STFFL	319							
319	STNB	320	614	617					
320	STSW	321	611						
322	SXF	323							
328	SYME	808							
328	T0	329							
329	T1	330							
330	T2	331							
331	T2IN	332							
332	T3	333							
333	T4	334							
334	T5	335							
335	T6	336							
336	T7	337							
337	T8	338	668	673					
338	T9	339	735	748	756				
323	TC	324							
99	TEM	184							
324	TERF	325	725						
198	TFVCSZ	595							
92	THREE	629	654	740	796	825	901		
325	TM	326							
326	TSFL	327							
327	TU	328							
91	TWD	179	706	743	821	822	928	977	
350	V	352	353	354	355	356	357	358	359
		361	362	363	364	365	366	367	368
		370	371	372	373	374	375	376	377
		379	380	381	382	383	384	385	386
		388	389	390	391	392	393	394	395
		397	398	399	400	401	402	403	404
		406	407	408	409	410	411	412	413
		415	416	417	418	419	420	421	422
		424	425	426	427	428	429	430	431
		433	434	435	436	437	438	439	440
		442	443	444	445	446	447	448	449
		451	452	453	454	455	456	457	458
		460	461	462	463	464	465	466	467
		469	470	471	472	473	474	475	476
		478	479	480	481	482	483	484	485
		487	488	489	490	491	492	493	494
		496	497	498	499	500	501	502	503
		505	506	507	508	509	510	511	512
		514	515	516	517	518	519	520	521
		523	524	525	526	527	528	529	530
		532	533	534	535	536	537	538	539
		541	542	543	544	545	546	547	548
		550	551	552	553	554	555	556	557
		559	560	561	562	563	564	565	566
		568	569	570	571	572	573	574	575
		577	578	579	580	581	582	583	584
		586	587	588	595	601			585
0	VSEXEC	131							
0	V\$FOR3	7							
0	V\$IDC	132							
0	V\$IDST	133							
200	VARELD	202	203	204	205	206	207	208	209
		211	212	213	214	215	226	227	228
		230	231	232	233				210
199	VARBL5	200							229
239	VBLOBG	240							
340	VBLOND	350							
582	WROBD	864							
584	WROGD	866							
586	WROT	862							
142	X	985							
339	XRPT	340							

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1 *NEW FORTRAN - OVERLAY 4
2 COMPL OPSY COMP
3 EJECT OPSY EJEC
4 ENTRY OPSY ENTR
5 MERGE OPSY MERG
6 SPACE OPSY SPAC
7 TITLE V$FOR4
8 EJEC
9 *****
10 *
11 *** JOB PROCESSOR LOW CORE EQUATES ***
12 *
13 *****
14
15 LCJP EQU 050
16 V$JNAM EQU LCJP JCP NAME
17 V$LCMT EQU LCJP+4 LINE COUNT
18 V$JCFG EQU LCJP+5 JCP FLAGS
19 * BIT 2-0 = LOAD AND GO FLAGS
20 * BIT 3 = DUMP FLAG 1=DUMP, 0=NO DUMP
21 * BIT 9-4 = UNUSED
22 * BIT 15-10 = BG EXTRA CORE BLOCKS TO ALLOC
23
24 V$JFCB EQU LCJP+6 JCP FILE CONTROL BLOCK
25 V$DATE EQU LCJP+16 JCP DATA RECORD
26 EJEC
27 *****
28 *
29 **** LOW CORE DESCRIPTION ****
30 *
31 *****
32
33 LC EQU 0300
34 V$LLUP EQU LC+15 LOC. OF LAST UNPROTECTED WORD
35 V$LUNT EQU LC+37 ADDR. OF LOGICAL UNIT NAME TABLE
36 V$DSTB EQU LC+45 BASE ADDR. FOR DST BLOCK
37 V$TKSZ EQU LC+47 RMD TRACK SIZE
38 V$CTAD EQU LC+48 BASE ADDR. FOR CONTROLLER ADDR. TABLE
39 V$LUT1 EQU LC+64 START LUN ADDR FOR JCP/OPCOM ASSIGNABLE
40 V$LUT2 EQU LC+65 START LUN ADDR FOR UNASSIGNABLE
41 V$LUT3 EQU LC+66 START LUN ADDR FOR OPCOM ASSIGNABLE
42 V$JCB EQU LC+74 ALL SYSTEM BACKGROUND PROGRAMS AND JCP USE
43 * THIS SYSTEM BUFFER TO READ DIRECTIVES AND
44 * SOURCE RECORDS IN.
45 V$STSZ EQU LC+79 ACTURAL SECTOR SIZE
46 EJEC
47 *****
48 *
49 **** MASK TABLE DESCRIPTION ****
50 *
51 *****
52
53 MT SET 0420
54 ZERO EQU MT ZERO WORD
55 BS0 EQU MT+1 BIT MASK CONTENTS 000001
56 BS1 EQU MT+2 000002
57 BS2 EQU MT+3 000004
58 BS3 EQU MT+4 000010
59 BS4 EQU MT+5 000020
60 BS5 EQU MT+6 000040
61 BS6 EQU MT+7 000100
62 BS7 EQU MT+8 000200
63 BS8 EQU MT+9 000400
64 BS9 EQU MT+10 001000
65 BS10 EQU MT+11 002000
66 BS11 EQU MT+12 004000
67 BS12 EQU MT+13 010000
68 BS13 EQU MT+14 020000
69 BS14 EQU MT+15 040000
70 BS15 EQU MT+16 0100000
71 BR0 EQU MT+17 BIT MASK CONTENTS 0177776
72 BR1 EQU MT+18 0177775
73 BR2 EQU MT+19 0177773
74 BR3 EQU MT+20 0177767
75 BR4 EQU MT+21 0177757
76 BR5 EQU MT+22 0177737
77 BR6 EQU MT+23 0177677
78 BR7 EQU MT+24 0177577
79 BR8 EQU MT+25 0177377
80 BR9 EQU MT+26 0176777
81 BR10 EQU MT+27 0175777
82 BR11 EQU MT+28 0173777
83 BR12 EQU MT+29 0167777
84 BR13 EQU MT+30 0157777
85 BR14 EQU MT+31 0137777
86 BR15 EQU MT+32 0077777
87 NEG EQU MT+33 SET ALL BITS
88 LHM EQU MT+34 LEFT HALF WORD MASK 0177400
89 RHM EQU MT+35 RIGHT HALF WORD MASK 0377
90 ONE EQU MT+1 CONTAINS NUMBER 1
91 TWO EQU MT+2 CONTAINS NUMBER 2
92 THREE EQU MT+3 CONTAINS NUMBER 3
93 FOUR EQU MT+3 CONTAINS NUMBER 4
94 FIVE EQU MT+37 CONTAINS NUMBER 5
95 SIX EQU MT+38 CONTAINS NUMBER 6

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000467 A 96 SEVEN EQU MT+39 CONTAINS NUMBER 7 04 00096
000424 A 97 EIGHT EQU MT+4 CONTAINS NUMBER 8 04 00097
000470 A 98 NINE EQU MT+40 CONTAINS NUMBER 9 04 00098
000471 A 99 TEN EQU MT+41 CONTAINS NUMBER 10 04 00099
000421 A 100 BM1 EQU MT+1 BIT MASK WORD 00001 04 00100
000464 A 101 BM3 EQU MT+36 BIT MASK WORD 00003 04 00101
000467 A 102 BM7 EQU MT+39 BIT MASK WORD 00007 04 00102
000472 A 103 BM17 EQU MT+42 BIT MASK WORD 00017 04 00103
000473 A 104 BM37 EQU MT+43 BIT MASK WORD 00037 04 00104
000474 A 105 BM77 EQU MT+44 BIT MASK WORD 00077 04 00105
000475 A 106 BM177 EQU MT+45 BIT MASK WORD 00177 04 00106
000463 A 107 BM377 EQU MT+35 BIT MASK WORD 00377 04 00107
000476 A 108 BM777 EQU MT+46 BIT MASK WORD 00777 04 00108
000477 A 109 BM1777 EQU MT+47 BIT MASK WORD 01777 04 00109
000500 A 110 MTF EQU BM1777+1 FF 04 00110
111 EJECT 04 00111
112 ***** 04 00112
113 * 04 00113
114 * P R O G R A M C O N T R O L * 04 00114
115 * 04 00115
116 * B L O C K * 04 00116
117 * 04 00117
118 ***** 04 00118
120 ***** 04 00120
121 * 04 00121
122 * E X T E R N A L S * 04 00122
123 * 04 00123
124 ***** 04 00124
126 EXT BDFCB SYSTEM BD FCB 04 00126
127 EXT GDFCB SYSTEM GD FCB 04 00127
128 EXT LDFCB SYSTEM LD FCB 04 00128
129 EXT PIFCB SYSTEM PI FCB 04 00129
130 EXT SIFCB SYSTEM SI FCB 04 00130
131 EXT VSEEXEC ENTRY TO RTE SERVICES 04 00131
132 EXT VSIDC ENTRY TO IDC 04 00132
133 EXT VSIDST ENTRY TO IDC STATUS CALL 04 00133
134 ***** 04 00134
135 * 04 00135
136 * S Y S T E M V A R I A B L E S * 04 00136
137 * 04 00137
138 ***** 04 00138
000020 A 140 $BIT SET 16 SELECT 16-BIT VDM 620 COMPUTER 04 00140
000002 A 141 B SET 2 B-REGISTER 04 00141
000001 A 142 X SET 1 X-REGISTER 04 00142
143 * 04 00143
144 * 04 00144
145 * P A R A M E T E R S F O R W C S V 7 4 F O R T R A N * 04 00145
146 * 04 00146
147 * 04 00147
105032 A 148 FLDI EQU 0105032 FLD BCS OPCODE 04 00148
105033 A 149 FSTI EQU 0105033 FST BCS OPCODE 04 00149
105035 A 150 FSDDI EQU 0105035 $DM BCS OPCODE 04 00150
105027 A 151 FSDDI1 EQU 0105027 $DD BCS OPCODE(INCREMENT=1) FF 04 00151
105036 A 152 F$SEI EQU 0105036 $SE BCS OPCODE 04 00152
105037 A 153 FMOV1 EQU 0105037 FMOV BCS INSTRUCTION 04 00153
105127 A 154 FSQRT EQU 0105127 FLOATING SQUARE-ROOT BCS INSTRUCTION 04 00154
105024 A 155 FLREL EQU 0105024 FLOATING RELATIONAL BASE OP-CODE 04 00155
105125 A 156 FLJAG EQU 0105125 BCS JMP A.GT.0 04 00156
105226 A 157 FLAIF EQU 0105226 FLOATING ARITHMETIC-IF OP-CODE 04 00157
105167 A 158 FLIDP EQU 0105167 BCS SUBSCRIPT OPERATOR 04 00158
159 * 04 00159
160 * F A S T F L O A T I N G - P O I N T B O X O P C O D E S * FF 04 00160
161 * FF 04 00161
105400 A 162 FFPDP EQU 0105400 BASIC FFP DP FF 04 00162
105503 A 163 FADDD EQU FFPDP+0103 DP ADD FF 04 00163
105410 A 164 FADDS EQU FFPDP+010 SP ADD FF 04 00164
105535 A 165 FDIVD EQU FFPDP+0135 DP DIVIDE FF 04 00165
105401 A 166 FDIVS EQU FFPDP+1 SP DIVIDE FF 04 00166
105621 A 167 FIX EQU FFPDP+0221 FIX FP FF 04 00167
105420 A 168 FLDS EQU FFPDP+020 LOAD SP FF 04 00168
105522 A 169 FLDD EQU FFPDP+0122 LOAD DP FF 04 00169
105425 A 170 FLT EQU FFPDP+025 FLOAT INTEGER FF 04 00170
105506 A 171 FMULD EQU FFPDP+0106 MULTIPLY DP FF 04 00171
105416 A 172 FMULS EQU FFPDP+016 MULTIPLY SP FF 04 00172
105710 A 173 FSTD EQU FFPDP+0310 STORE DP FF 04 00173
105600 A 174 FSTS EQU FFPDP+0200 STORE SP FF 04 00174
105543 A 175 FSUBD EQU FFPDP+0143 SUBTRACT DP FF 04 00175
105450 A 176 FSUBS EQU FFPDP+050 SUBTRACT SP FF 04 00176
177 * 04 00177
178 * 04 00178
000422 A 179 K2 EQU TWO 04 00179
000441 A 180 MTWO EQU BRO 04 00180
000423 A 181 K4 EQU FOUR 04 00181
000466 A 182 K6 EQU SIX 04 00182
000424 A 183 K10 EQU BS3 04 00183
000471 A 184 K12 EQU TEN 04 00184
000472 A 185 K17 EQU BM17 04 00185
000425 A 186 K20 EQU BS4 04 00186
000473 A 187 K37 EQU BM37 04 00187
000463 A 188 K77 EQU BM377 04 00188
000432 A 189 KJMP EQU BS9 04 00189

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190          EJECT
191 *****
192 *
193 * I/O BUFFER, VARIABLE BLOCK, AND TRANSFER VECTOR DEFINITIONS
194 *
195 *****
010150 A 197 DVERSZ SET      4200          MAXIMUM OVERLAY SIZE
000027 A 198 TFVCSZ SET      027           FROM-COMPILER TRANSFER VECTOR SIZE
000666 A 199 VARBLS SET      0666          VARIABLE BLOCK SIZE
177112 R 200 VARBLD EQU      *-VARBLS       VARIABLE BLOCK START ADDRESS
177120 R 202 ERBF EQU      VARBLD+06       ERROR BUFFER
177127 R 203 NERR EQU      VARBLD+015      ERROR COUNT
177160 R 204 SLOT EQU      VARBLD+0046     SPECIAL LIST BUFFER
177204 R 205 TITL EQU      VARBLD+0072     TITLE BUFFER
177207 R 206 TITP EQU      VARBLD+0075     TITLE PAGE NUMBER
177212 R 207 TITD EQU      VARBLD+0100     TITLE DATE
177217 R 208 TITJ EQU      VARBLD+0105     TITLE JOB NAME
177236 R 209 TITN EQU      VARBLD+0124     TITLE NAME
177243 R 210 TITM EQU      VARBLD+0131     TIME
177250 R 211 TITQ EQU      VARBLD+0136     END
177250 R 212 BLFCB EQU      VARBLD+0136     BO FCB
177262 R 213 GLFCB EQU      VARBLD+0150     GO FCB
177274 R 214 LLFCB EQU      VARBLD+0162     LO FCB
177306 R 215 PLFCB EQU      VARBLD+0174     PI FCB
216          EJECT
217 *****
218 *
219 *
220 *
221 *****
222 *****
223 *****
224 * FIXED ON LOADING BY ROUTINE FORT *
225 *****
177320 R 226 BOBLFL EQU      VARBLD+0206     BO BLOCKING FLAG
177321 R 227 GOBLFL EQU      VARBLD+0207     GO BLOCKING FLAG
177322 R 228 LOBLFL EQU      VARBLD+0210     LO BLOCKING FLAG
177323 R 229 PIBLFL EQU      VARBLD+0211     PI BLOCKING FLAG
177324 R 230 $PCN EQU      VARBLD+0212     COMPILER CONTROL FLAGS
177325 R 231 SECW EQU      VARBLD+0213     ERROR CONTROL WORD
177326 R 232 DPB EQU      VARBLD+0214     AVAILABLE CORE START ADDRESS
177327 R 233 DPX EQU      VARBLD+0215     AVAILABLE CORE END ADDRESS
234 *****
235 *****
236 * CLEARED FOR EACH COMPILATION *
237 *****
177330 R 238 VBLOGG EQU      DPX+1           START OF CLEARED VARIABLES
177330 R 240 AF EQU      VBLOGG           ADDRESS FIELD
177331 R 241 AIFW EQU      AF+1           SCAN FORWARD I POINTER
177332 R 242 AS EQU      AIFW+1         ARRAY SUBSCRIPTS
177341 R 243 AT EQU      AS+7           ADDRESS TYPE
177342 R 244 EDF EQU      AT+1         BLOCK DATA FLAG
177343 R 245 BOBLCN EQU      EDF+1       BO BLOCKING FLAG
177344 R 246 CF EQU      BOBLCN+1      SCAN COMPLIMENT FLAG
177345 R 247 CFPTSW EQU      CF+1       FINAL POINT CHECK SWITCH
177346 R 248 CL EQU      CFPTSW+1      LIST OUTPUT PACK COUNT
177347 R 249 CLOP EQU      CL+1         COMMON FLAGS
177350 R 250 CMFL EQU      CLOP+1      COMMON NAME POINTER
177351 R 251 CNP EQU      CMFL+1      DO POINTER
177352 R 252 D EQU      CNP+1          DELIMITER FLAG
177353 R 253 DF EQU      D+1            FLOATING POINT DISABLE FLAG
177354 R 254 DFPP EQU      DF+1        DO LIMIT POINTER
177355 R 255 DH EQU      DFPP+1       DO INCREMENT POINTER
177356 R 256 DI EQU      DH+1          DATA POOL CONTSANTS - I-POINTER FOR
177357 R 257 DPCA EQU      DI+1          1,2,0,4,0,0,0D0,A$C, SORT,IFIX,FLOAT
258 *
259 *
177373 R 260 DR EQU      DPCA+12         DO RETURN ADDRESS
177374 R 261 DS EQU      DR+1           DT SAVE FOR RD/WR PROCESSING
177375 R 262 DSAV EQU      DS+1        DO TOP POINTER
177376 R 263 DT EQU      DSAV+1        DO TERMINATION FLAG
177377 R 264 DTFL EQU      DT+1         DO VARIABLE POINTER
177401 R 265 DV EQU      DTFL+2       ERROR COUNT
177402 R 266 EC EQU      DV+1         EXPRESSION HIERARCHYS
177403 R 267 EH EQU      EC+1         SCAN BACKWARD EXPRESSION HEIRARCHY
177405 R 268 EHBK EQU      EH+2       ENTRY LENGTH
177406 R 269 EL EQU      EHBK+1       EXECUTEABLE ADDRESS
177407 R 270 EXAD EQU      EL+1        ALTERNATE I POINTER
177410 R 271 F EQU      EXAD+1        FLOATING POINT PROCESSOR FLAG
177411 R 272 FFPFL EQU      F+1        GO BLOCKING COUNT
177412 R 273 GOBLCN EQU      FFPFL+1   HOLLERITH COLUMN COUNTER
177413 R 274 HCC EQU      GOBLCN+1     ASSIGNMENT TABLE POINTER
177414 R 275 I EQU      HCC+1          IDENTIFICATION
177415 R 276 ID EQU      I+1          ITEM MODE
177421 R 277 IM EQU      ID+4          INPUT BUFFER POINTER
177422 R 278 INBP EQU      IM+1        I/O FLAG
177423 R 279 IDFL EQU      INBP+1       ARRAY POINTERS
177424 R 280 IP EQU      IDFL+1           ARRAY DIMENSIONS
177435 R 281 IS EQU      IP+9            ASSIGNMENT TOP POINTER
177445 R 282 IT EQU      IS+8           ITEM USAGE
177446 R 283 IU EQU      IT+1          TRIAD POINTER
177447 R 284 J EQU      IU+1            JUMP FLAGS
177450 R 285 JPFL EQU      J+1

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177454	R	286	JT	EQU	JPFL+4	TRIAD TOP POINTER	01	04	00286			
177455	R	287	K	EQU	JT+1	EXPRESSION POINTER	01	04	00287			
177456	R	288	KT	EQU	K+1	EXPRESSION TOP POINTER	01	04	00288			
177457	R	289	LF	EQU	KT+1	LOCATION FIELD	01	04	00289			
177460	R	290	LIF	EQU	LF+1	LOGICAL IF FLAG	01	04	00290			
177461	R	291	LLOP	EQU	LIF+1	NO. OF LINES LEFT ON PAGE	01	04	00291			
177462	R	292	MAXOPC	EQU	LLOP+1	MAXIMUM FPP OPERATION COUNT	01	04	00292			
177463	R	293	MDTB	EQU	MAXOPC+1	OPERAND IMPLICIT MODE TABLE	26	04	00293			
177516	R	294	MF	EQU	MDTB+27	MODE FLAG		04	00294			
177517	R	295	MM	EQU	MF+1	MAX/MIN LIST FLAG	01	04	00295			
177520	R	296	MR	EQU	MM+1	MULTIPLY REGISTERS	02	04	00296			
177522	R	297	NAME	EQU	MR+2	SUBROUTINE GENERATION NAME	01	04	00297			
177523	R	298	ND	EQU	NAME+1	NUMBER OF DIMENSIONS	01	04	00298			
177524	R	299	NF	EQU	ND+1	NEGATION FLAG	01	04	00299			
177525	R	300	NFFW	EQU	NF+1	SCAN FORWARD NEGATION FLAG	01	04	00300			
177526	R	301	NS	EQU	NFFW+1	NUMBER OF SUBSCRIPTS	01	04	00301			
177527	R	302	NT	EQU	NS+1	NAME TAG	01	04	00302			
177530	R	303	NTFL	EQU	NT+1	NO TAG-USAGE FLAG	01	04	00303			
177531	R	304	OP	EQU	NTFL+1	OPERATION	01	04	00304			
177532	R	305	DPBK	EQU	OP+1	SCAN BACKWARD OPERATION	01	04	00305			
177533	R	306	OPCNT	EQU	DPBK+1	OPERATION COUNT	01	04	00306			
177534	R	307	OPW	EQU	OPCNT+1	OUTPUT PACK WORD	01	04	00307			
177535	R	308	DITFL	EQU	OPW+1	OUTPUT-ITEM FLAG	01	04	00308			
177536	R	309	O1	EQU	DITFL+1	LEFT OPERAND	01	04	00309			
177537	R	310	O2	EQU	O1+1	RIGHT OPERAND	01	04	00310			
177540	R	311	PC	EQU	O2+1	PACK CONTROL	04	04	00311			
177544	R	312	PIBLCN	EQU	PC+4	PI BLOCKING COUNT	01	04	00312			
177545	R	313	QFL	EQU	PIBLCN+1	QUOTE FLAG	01	04	00313			
177546	R	314	RL	EQU	QFL+1	RELATIVE PROGRAM LOCATIONS	02	04	00314			
177550	R	315	SBFL	EQU	RL+2	SUBPROGRAM FLAGS	02	04	00315			
177553	R	316	SF	EQU	SBFL+3	STORAGE FLAG		04	00316			
177554	R	317	SPFL	EQU	SF+1	SPECIFICATION FLAG	01	04	00317			
177555	R	318	STFFL	EQU	SPFL+1	STATEMENT FUNCTION FLAG	01	04	00318			
177556	R	319	STNB	EQU	STFFL+1	STATEMENT NUMBER	01	04	00319			
177557	R	320	STSW	EQU	STNB+1	STATEMENT SWITCH	01	04	00320			
177560	R	321	SSP	EQU	STSW+1	SPECIFICATION STACK POINTERS	05	04	00321			
177565	R	322	SXF	EQU	SSP+5	COMPLEX FLAG	01	04	00322			
177566	R	323	TC	EQU	SXF+1	TERM CHARACTER/ CHARACTER IMAGE	02	04	00323			
177570	R	324	TERF	EQU	TC+2	TERMINATING ERROR FLAG	01	04	00324			
177571	R	325	TM	EQU	TERF+1	TRIAD MODE	01	04	00325			
177572	R	326	TSFL	EQU	TM+1	TEMPORARY STORAGE FLAG	01	04	00326			
177573	R	327	TU	EQU	TSFL+1	TRIAD USE	01	04	00327			
177574	R	328	T0	EQU	TU+1	TEMPORARY STORAGE	01	04	00328			
177575	R	329	T1	EQU	T0+1	TEMPORARY STORAGE	01	04	00329			
177576	R	330	T2	EQU	T1+1	TEMPORARY STORAGE	01	04	00330			
177577	R	331	T2IN	EQU	T2+1	TEMPORARY STORAGE	01	04	00331			
177600	R	332	T3	EQU	T2IN+1	TEMPORARY STORAGE	01	04	00332			
177601	R	333	T4	EQU	T3+1	TEMPORARY STORAGE	01	04	00333			
177602	R	334	T5	EQU	T4+1	TEMPORARY STORAGE	01	04	00334			
177603	R	335	T6	EQU	T5+1	TEMPORARY STORAGE	01	04	00335			
177604	R	336	T7	EQU	T6+1	TEMPORARY STORAGE	01	04	00336			
177605	R	337	T8	EQU	T7+1	TEMPORARY STORAGE	01	04	00337			
177606	R	338	T9	EQU	T8+1	TEMPORARY STORAGE	01	04	00338			
177607	R	339	XRPT	EQU	T9+1	OBJECT X-REGISTER POINTER	01	04	00339			
177611	R	340	VBLOND	EQU	XRPT+2	END OF CLEARED VARIABLES		04	00340			
		341	EJECT					04	00341			
		342	*****							04	00342	
		343	*	C O M P I L E R T R A N S F E R V E C T O R						*	04	00343
		344	*	*****						*	04	00344
		345	*	*****						*	04	00345
		346	*	*****						*	04	00346
		348	*	T O - C O M P I L E R						*	04	00348
077611	R	350	V	SET	VBLOND-0100000	ASSIGN ITEM			04	00350		
077611	R	352	ASI	EQU	V	ASSIGN SPECIAL			04	00352		
077612	R	353	V	SET	V+1	"ALL NAME			04	00353		
077612	R	354	ASS	EQU	V	CONVERT BINARY TO ASCII			04	00354		
077613	R	355	V	SET	V+1	COMMA OR C/R TEST			04	00355		
077613	R	356	CAN	SET	V	C/R TEST			04	00356		
077614	R	357	V	SET	V+1	COMMA TEST			04	00357		
077614	R	358	CBA	SET	V	DECREMENT K			04	00358		
077615	R	359	V	SET	V+1	DEFINE AF,AT			04	00359		
077615	R	360	CCR	EQU	V	DEFINE STATEMENT MODE			04	00360		
077616	R	361	V	SET	V+1				04	00361		
077616	R	362	CRT	EQU	V				04	00362		
077617	R	363	V	SET	V+1				04	00363		
077617	R	364	CTS	EQU	V				04	00364		
077620	R	365	V	SET	V+1				04	00365		
077620	R	366	DEK	SET	V				04	00366		
077621	R	367	V	SET	V+1				04	00367		
077621	R	368	DFT	EQU	V				04	00368		
077622	R	369	V	SET	V+1				04	00369		
077622	R	370	DSM	SET	V				04	00370		
077623	R	371	V	SET	V+1				04	00371		
077623	R	372	EDLSW	SET	V				04	00372		
077624	R	373	V	SET	V+1				04	00373		
077624	R	374	ER1	SET	V				04	00374		
077625	R	375	V	SET	V+1				04	00375		
077625	R	376	ER2	EQU	V	USAGE ERROR			04	00376		
077626	R	377	V	SET	V+1	MODE ERROR			04	00377		
077626	R	378	ER3	EQU	V				04	00378		
077627	R	379	V	SET	V+1				04	00379		



077627	R	380	ER6	EQU	V	COMMON BASE LOWERED	04	00380
077630	R	381	V	SET	V+1	ILLEGAL EQUIVALENCE GROUP	04	00381
077630	R	382	ER7	EQU	V		04	00382
077631	R	383	V	SET	V+1		04	00383
077631	R	384	ER8	SET	V		04	00384
077632	R	385	V	SET	V+1		04	00385
077632	R	386	ER11	SET	V		04	00386
077633	R	387	V	SET	V+1		04	00387
077633	R	388	ER12	SET	V		04	00388
077634	R	389	V	SET	V+1		04	00389
077634	R	390	ER13	SET	V		04	00390
077635	R	391	V	SET	V+1		04	00391
077635	R	392	ER14	SET	V		04	00392
077636	R	393	V	SET	V+1		04	00393
077636	R	394	ER15	EQU	V	TRUNCATED VALUE ERROR	04	00394
077637	R	395	V	SET	V+1	STATEMENT OUT OF ORDER	04	00395
077637	R	396	ER16	EQU	V	MORE THAN 29 COMMON REGIONS	04	00396
077640	R	397	V	SET	V+1	NON-COMMON DATA ERROR	04	00397
077640	R	398	ER17	EQU	V	DO INDEX NOT REFERENCED	04	00398
077641	R	399	V	SET	V+1		04	00399
077641	R	400	ER18	EQU	V		04	00400
077642	R	401	V	SET	V+1		04	00401
077642	R	402	ER20	EQU	V		04	00402
077643	R	403	V	SET	V+1		04	00403
077643	R	404	ER21	SET	V		04	00404
077644	R	405	V	SET	V+1		04	00405
077644	R	406	ER22	EQU	V	ARRAY NAME PREVIOUSLY DECLARED	04	00406
077645	R	407	V	SET	V+1		04	00407
077645	R	408	ER24	SET	V		04	00408
077646	R	409	V	SET	V+1		04	00409
077646	R	410	EXA	EQU	V	EXAMINE NEXT CHARACTER	04	00410
077647	R	411	V	SET	V+1		04	00411
077647	R	412	EXL	EQU	V	EXCHANGE LINKS	04	00412
077650	R	413	V	SET	V+1		04	00413
077650	R	414	FNS1	EQU	V	ENTRY TO FNS	04	00414
077651	R	415	V	SET	V+1		04	00415
077651	R	416	FDRT1	SET	V		04	00416
077652	R	417	V	SET	V+1		04	00417
077652	R	418	GSE	EQU	V	GENERATE SUBPROGRAM ENTRANCE	04	00418
077653	R	419	V	SET	V+1		04	00419
077653	R	420	IAC	SET	V	INPUT (A) CHARACTERS	04	00420
077654	R	421	V	SET	V+1		04	00421
077654	R	422	ICH	EQU	V	INPUT CHARACTER	04	00422
077655	R	423	V	SET	V+1		04	00423
077655	R	424	ICD	EQU	V	INPUT COLUMN	04	00424
077656	R	425	V	SET	V+1		04	00425
077656	R	426	ICORN1	SET	V		04	00426
077657	R	427	V	SET	V+1		04	00427
077657	R	428	ICRD	SET	V		04	00428
077660	R	429	V	SET	V+1		04	00429
077660	R	430	ICRR	SET	V		04	00430
077661	R	431	V	SET	V+1		04	00431
077661	R	432	ICSI	EQU	V	INPUT SOURCE CONTROL SWITCH	04	00432
077662	R	433	V	SET	V+1		04	00433
077662	R	434	IDI	SET	V	INPUT DIGIT	04	00434
077663	R	435	V	SET	V+1		04	00435
077663	R	436	IHW	EQU	V	INPUT HOLLERITH WORD	04	00436
077664	R	437	V	SET	V+1		04	00437
077664	R	438	IIV	EQU	V	INPUT INTEGER VARIABLE	04	00438
077665	R	439	V	SET	V+1		04	00439
077665	R	440	ILB	SET	V	INITIALIZE LIST BUFFER	04	00440
077666	R	441	V	SET	V+1		04	00441
077666	R	442	ILT	EQU	V	ILLEGAL DO TERMINATION/CONTROL CONTINUE	04	00442
077667	R	443	V	SET	V+1		04	00443
077667	R	444	INA	EQU	V	INPUT NAME	04	00444
077670	R	445	V	SET	V+1		04	00445
077670	R	446	INI	EQU	V	INPUT ITEM	04	00446
077671	R	447	V	SET	V+1		04	00447
077671	R	448	INN	EQU	V	INPUT (DO NOT ASSIGN)	04	00448
077672	R	449	V	SET	V+1		04	00449
077672	R	450	INS	SET	V	INPUT NORMAL STATEMENT NUMBER	04	00450
077673	R	451	V	SET	V+1		04	00451
077673	R	452	INT	EQU	V	INTEGER TEST	04	00452
077674	R	453	V	SET	V+1		04	00453
077674	R	454	ISN	SET	V	INPUT STATEMENT NUMBER	04	00454
077675	R	455	V	SET	V+1		04	00455
077675	R	456	IYA	EQU	V	INPUT VARIABLE	04	00456
077676	R	457	V	SET	V+1		04	00457
077676	R	458	IYC	SET	V	INPUT INTEGER VARIABLE/CONSTANT	04	00458
077677	R	459	V	SET	V+1		04	00459
077677	R	460	IWI	EQU	V	WORDS/ITEM	04	00460
077700	R	461	V	SET	V+1		04	00461
077700	R	462	LAX	EQU	V	LOAD ASSIGNMENT DATA	04	00462
077701	R	463	V	SET	V+1		04	00463
077701	R	464	LDX	SET	V	LOAD DO	04	00464
077702	R	465	V	SET	V+1		04	00465
077702	R	466	LEX	SET	V	LOAD EXPRESSION	04	00466
077703	R	467	V	SET	V+1		04	00467
077703	R	468	LIST	EQU	V	LIST A LINE	04	00468
077704	R	469	V	SET	V+1		04	00469
077704	R	470	LOCT	SET	V		04	00470

077705	R	471	V	SET	V+1		04	00471
077705	R	472	LTX	SET	V	LOAD TRIADS	04	00472
077706	R	473	V	SET	V+1		04	00473
077706	R	474	MOVE	EQU	V	MOVE ALPHA DATA	04	00474
077707	R	475	V	SET	V+1		04	00475
077707	R	476	MXL	EQU	V	MAKE EXIT LABEL	04	00476
077710	R	477	V	SET	V+1		04	00477
077710	R	478	DAB	EQU	V	OUTPUT ABSOLUTE	04	00478
077711	R	479	V	SET	V+1		04	00479
077711	R	480	DDB	SET	V	OUTPUT DOUBLE	04	00480
077712	R	481	V	SET	V+1		04	00481
077712	R	482	DDS	SET	V	OUTPUT DATA STRING	04	00482
077713	R	483	V	SET	V+1		04	00483
077713	R	484	DNEN	EQU	V	OUTPUT NAME	04	00484
077714	R	485	V	SET	V+1		04	00485
077714	R	486	DPK	SET	V	OUTPUT PACK	04	00486
077715	R	487	V	SET	V+1		04	00487
077715	R	488	DRE	SET	V	OUTPUT RELATIVE	04	00488
077716	R	489	V	SET	V+1		04	00489
077716	R	490	DSR	SET	V	OUTPUT STRING RELATIVE	04	00490
077717	R	491	V	SET	V+1		04	00491
077717	R	492	DTJ	EQU	V	OUTPUT JUMP	04	00492
077720	R	493	V	SET	V+1		04	00493
077720	R	494	DUT	SET	V	OUTPUT OPERATOR/OPERAND	04	00494
077721	R	495	V	SET	V+1		04	00495
077721	R	496	DWD	SET	V	OUTPUT WORD	04	00496
077722	R	497	V	SET	V+1		04	00497
077722	R	498	DWS	EQU	V	OUTPUT WORDS	04	00498
077723	R	499	V	SET	V+1		04	00499
077723	R	500	PDS	SET	V	PACK DATA STRING	04	00500
077724	R	501	V	SET	V+1		04	00501
077724	R	502	PEB	SET	V	PACK ERROR BUFFER	04	00502
077725	R	503	V	SET	V+1		04	00503
077725	R	504	PTR	SET	V	PURGE TRIADS	04	00504
077726	R	505	V	SET	V+1		04	00505
077726	R	506	PTS	EQU	V	'<' TEST	04	00506
077727	R	507	V	SET	V+1		04	00507
077727	R	508	RCC	EQU	V	RESTORE SCAN PARAMETERS	04	00508
077730	R	509	V	SET	V+1		04	00509
077730	R	510	RCCS	EQU	V	SAVE SCAN PARAMETERS	04	00510
077731	R	511	V	SET	V+1		04	00511
077731	R	512	RCH	EQU	V	REREAD CHARACTER	04	00512
077732	R	513	V	SET	V+1		04	00513
077732	R	514	RID	EQU	V	RIGHT INPUT OPERATOR	04	00514
077733	R	515	V	SET	V+1		04	00515
077733	R	516	SAX	EQU	V	STORE ASSIGNMENT DATA	04	00516
077734	R	517	V	SET	V+1		04	00517
077734	R	518	SDX	SET	V	STORE DO	04	00518
077735	R	519	V	SET	V+1		04	00519
077735	R	520	SIDTB1	SET	V	END OF MODE-SETTING IN SIDTB	04	00520
077736	R	521	V	SET	V+1		04	00521
077736	R	522	SIS	EQU	V	STATEMENT IDENTIFICATION SCAN	04	00522
077737	R	523	V	SET	V+1		04	00523
077737	R	524	SLIT	SET	V		04	00524
077740	R	525	V	SET	V+1		04	00525
077740	R	526	SLOP	SET	V	SPECIAL LIST OUTPUT	04	00526
077741	R	527	V	SET	V+1		04	00527
077741	R	528	STC	SET	V	STATEMENT COMPLETION	04	00528
077742	R	529	V	SET	V+1		04	00529
077742	R	530	STI1	EQU	V	ENTRY TO STI	04	00530
077743	R	531	V	SET	V+1		04	00531
077743	R	532	STN	EQU	V	ILLEGAL DO TERM./NO CONTROL CONTINUE	04	00532
077744	R	533	V	SET	V+1		04	00533
077744	R	534	STS	SET	V	STATEMENT SCAN	04	00534
077745	R	535	V	SET	V+1		04	00535
077745	R	536	TER1	EQU	V	CONSTRUCTION	04	00536
077746	R	537	V	SET	V+1		04	00537
077746	R	538	TER2	EQU	V	NOT IN SUBPROGRAM	04	00538
077747	R	539	V	SET	V+1		04	00539
077747	R	540	TER3	EQU	V	DATA POOL FULL	04	00540
077750	R	541	V	SET	V+1		04	00541
077750	R	542	TER4	EQU	V	ILLEGAL STATEMENT	04	00542
077751	R	543	V	SET	V+1		04	00543
077751	R	544	TER5	SET	V		04	00544
077752	R	545	V	SET	V+1		04	00545
077752	R	546	TER7	SET	V		04	00546
077753	R	547	V	SET	V+1		04	00547
077753	R	548	TER8	SET	V		04	00548
077754	R	549	V	SET	V+1		04	00549
077754	R	550	TER9	EQU	V	IMPROPER DO NEST	04	00550
077755	R	551	V	SET	V+1		04	00551
077755	R	552	TER11	EQU	V	ITEM NOT OPERAND	04	00552
077756	R	553	V	SET	V+1		04	00553
077756	R	554	TER12	EQU	V	ITEM NOT FUNCTION	04	00554
077757	R	555	V	SET	V+1		04	00555
077757	R	556	TER13	SET	V		04	00556
077760	R	557	V	SET	V+1		04	00557
077760	R	558	TER14	EQU	V	SUBSCRIPT VARIABLE NOT DUMMY	04	00558
077761	R	559	V	SET	V+1		04	00559
077761	R	560	TER15	SET	V		04	00560
077762	R	561	V	SET	V+1		04	00561

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077762 R 562 TER17 EQU V FUNCTION STATEMENT HAS NO PARAMETERS 04 00562
077763 R 563 V SET V+1 04 00563
077763 R 564 TER18 SET V 04 00564
077764 R 565 V SET V+1 04 00565
077764 R 566 TER19 SET V 04 00566
077765 R 567 V SET V+1 04 00567
077765 R 568 TER20 SET V 04 00568
077766 R 569 V SET V+1 04 00569
077766 R 570 TER24 SET V 04 00570
077767 R 571 V SET V+1 04 00571
077767 R 572 TER26 EQU V SUBSCRIPT NOT INTEGER CONSTANT 04 00572
077770 R 573 V SET V+1 04 00573
077770 R 574 TDF SET V TEST OVERFLOW 04 00574
077771 R 575 V SET V+1 04 00575
077771 R 576 TSB EQU V TAG SUBPROGRAM 04 00576
077772 R 577 V SET V+1 04 00577
077772 R 578 TST EQU V CHARACTER TEST 04 00578
077773 R 579 V SET V+1 04 00579
077773 R 580 TVR EQU V TAG VARIABLE 04 00580
077774 R 581 V SET V+1 04 00581
077774 R 582 WRD0 SET V 04 00582
077775 R 583 V SET V+1 04 00583
077775 R 584 WRGD SET V 04 00584
077776 R 585 V SET V+1 04 00585
077776 R 586 WRDT SET V 04 00586
077777 R 587 V SET V+1 04 00587
077777 R 588 ZEB EQU V ZERO ERROR BUFFER 04 00588
077777 R 590 * F R O M - C O M P I L E R * 04 00590
000000 R 592 V SET * 04 00592
000001 000026 R 593 DATA FOR FORMAT 04 00593
000001 594 BSS TFVCSZ-#+V-1 04 00594
595 EJECT 04 00595
596 ***** 04 00596
597 * I/O BUFFERS * 04 00597
598 ***** 04 00598
010151 R 600 SBUF EQU V+OVERSZ+1 INPUT BUFFER AREA 04 00600
010224 R 601 DBUF EQU SBUF+43 OBJECT BUFFER 04 00601
010320 R 602 BLBF1 EQU DBUF+60 BLOCKING BUFFER 1 04 00602
603 EJECT 04 00603
604 * FOR FORMAT PROCESSOR 04 00604
000026 005001 A 606 FOR TZA 04 00606
000027 057000 I 607 STA OPW 04 00607
000030 057000 I 608 STA QFL 04 00608
000031 010000 L 609 LDA ='(' 04 00609
000032 002000 A 610 CALL DPK 04 00610
000033 077714 R 611 TZA 04 00611
000034 005001 A 612 STA T3 04 00612
000035 057000 I 613 SUB JPFL 04 00613
000036 147000 A 614 JAP FOR1 NOT GTR ZERO 04 00614
000037 001002 I 615 LDA RL 04 00615
000040 000054 R 616 SUB K2 04 00616
000041 017000 I 617 STA RL 04 00617
000042 140422 A 618 CPA 04 00618
000043 057000 I 619 STA JPFL 04 00619
000044 005211 A 620 LDA RL 04 00620
000045 057000 I 621 LDA KJMP 04 00621
000046 027000 A 622 CALL OWS 04 00622
000047 010432 A 623 CALL DTJ 04 00623
000050 002000 A 624 FOR1 LDA STNB 04 00624
000051 077722 R 625 FOR1 JAZM ER13 NO FORMAT STATEMENT NUMBER 04 00625
000052 002000 A 626 FOR2 JMPM IFS INPUT FORMAT STRING 04 00626
000053 077717 R 627 JBZ FOR3 NO NUMBER 04 00627
000054 017000 I 628 LDA TC 04 00628
000055 002010 A 629 SUBI 'P' 04 00629
000056 077634 R 630 JAZ FOR2 SCALE FACTOR 04 00630
000057 002000 A 631 ADDI 043 04 00631
000058 000370 R 632 JAZ TER1 04 00632
000059 001020 A 633 LDA T1 04 00633
000060 000107 R 634 JAZM ER11 04 00634
000061 017000 I 635 LDA TC 04 00635
000062 006140 A 636 SUBI 'H' 04 00636
000063 000320 A 637 JAZ FOR5 HOLLERITH 04 00637
000064 001010 A 638 SUB K20 04 00638
000065 000206 R 639 JAZ FORX SPACES (X) 04 00639
000066 000164 R 640 FOR3 LDA TC 04 00640
000067 017000 I 641 SUB ='(' 04 00641
000068 140000 L

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Address	Op Code	Op Name	Op Param	Op Comment	Line No
000111	001010	A	642	JAZ FDRB	04 00642
000112	000347	R			
000113	006140	A	643	SUBI 036	04 00643
000115	000036	A			
000115	001010	A	644	JAZ FDR6 'F'	04 00644
000116	000272	R			
000117	005111	A	645	IAR	04 00645
000120	001010	A	646	JAZ FDR6 'E'	04 00646
000121	000272	R			
000122	005111	A	647	IAR	04 00647
000123	001010	A	648	JAZ FDR6 'D'	04 00648
000124	000272	R			
000125	120464	A	649	ADD THREE	04 00649
000126	001010	A	650	JAZ FDR7 'A'	04 00650
000127	000305	R			
000130	140464	A	651	SUB K6	04 00651
000131	001010	A	652	JAZ FDR6 'G'	04 00652
000132	000272	R			
000133	140422	A	653	SUB K2	V 04 00653
000134	001010	A	654	JAZ FDR7 'I'	04 00654
000135	000305	R			
000136	140464	A	655	SUB THREE	04 00655
000137	001010	A	656	JAZ FDR7 'L'	04 00656
000140	000305	R			
000141	006140	A	657	SUBI 016	04 00657
000142	000016	A			
000143	001010	A	658	JAZ FDR7 'Z'	04 00658
000144	000305	R			
000145	006120	A	659	ADDI 'Z'---	04 00659
000146	000055	A			
000147	001010	A	660	FDR4 JAZ FDR6 '---'	04 00660
000150	000175	R			
000151	006140	A	661	SUBI 047	04 00661
000152	000047	A			
000153	001010	A	662	JAZ FDR7 'T'	04 00662
000154	000305	R			
000155	006120	A	663	ADDI 055	04 00663
000156	000055	A			
000157	001010	A	664	JAZ FDR5-1 '---'	04 00664
000160	000205	R			
000161	010000	L	665	LDA '='	04 00665
000162	002000	A	666	CALL TST	04 00666
000163	077772	R			
000164	002000	A	667	FORX JMPM IFS	04 00667
000165	000370	R			
000166	001026	A	668	JBNZ FDR2+4	NUMBER PRESENT
000167	000063	R			
000170	017000	I	669	LDA DF	04 00669
000171	001004	A	670	JAN FDR3	ALPHABETIC CHARACTER
000172	000107	R			
000173	001000	A	671	JMP FDR7+2	SPECIAL CHARACTER
000174	000307	R			
000175	002000	A	672	FORC JMPM FDRA	V 04 00672
000176	000356	R			
000177	006010	A	673	LDAI 'P'	04 00673
000200	000320	A			
000201	002000	A	674	CALL TST	04 00674
000202	077772	R			
000203	001000	A	675	JMP FDR2	V 04 00675
000204	000057	R			
000205	047000	I	676	INR QFL	04 00676
000206	002000	A	677	FOR5 CALL ICD	04 00677
000207	077655	R			
000210	002000	A	678	CALL PEB	04 00678
000211	077724	R			
000212	140463	A	679	SUB K77	04 00679
000213	001010	A	680	JAZ TER1	04 00680
000214	077745	R			
000215	017000	I	681	LDA QFL	04 00681
000216	140422	A	682	SUB TWO	04 00682
000217	002016	A	683	JANZM QPK	04 00683
000220	077714	R			
000221	017000	I	684	LDA QFL	B.2 04 00684
000222	001010	A	685	JAZ FDR53	B.2 04 00685
000223	000263	R			
000224	140422	A	686	SUB TWO	B.2 04 00686
000225	001016	A	687	JANZ FDR51	B.2 04 00687
000226	000247	R			
000227	017000	I	688	LDA TC	B.2 04 00688
000230	140000	L	689	SUB =0247	04 00689
000231	001010	A	690	JAZ FDR52	B.2 04 00690
000232	000255	R			
000233	005001	A	691	TZA	B.2 04 00691
000234	057000	I	692	STA QFL	B.2 04 00692
000235	017000	I	693	LDA TC	04 00693
000236	140000	L	694	SUB '='	04 00694
000237	001010	A	695	JAZ FORX	04 00695
000240	000164	R			
000241	017000	I	696	LDA TC	04 00696
000242	057000	I	697	STA TC+1	34 00697
000243	002000	A	698	CALL RCH	04 00698

000244	077731	R							
000245	001000	A	699	JMP	FDRX			FF	04 00699
000246	000164	R							
000247	017000	I	700	FOR51	LDA	TC	BUMP QUOTE COUNT	B.2	04 00700
000250	140000	L	701		SUB	=0247	...	04	00701
000251	003010	A	702		XAZ	FDR5-1		04	00702
000252	000205	R							
000253	001000	A	703	JMP	FDR5			B.2	04 00703
000254	000206	R							
000255	005101	A	704	FOR52	INCR	1	SET QUOTE COUNT BACK TO 1	B.2	04 00704
000256	057000	I	705		STA	QFL		B.2	04 00705
000257	002000	A	706		CALL	OPK		04	00706
000260	077714	R							
000261	001000	A	707	JMP	FDR5			B.2	04 00707
000262	000206	R							
000263	017000	I	708	FOR53	LDA	T1		B.2	04 00708
000264	005311	A	709		DAR			04	00709
000265	057000	I	710		STA	T1		04	00710
000266	001010	A	711		JAZ	FDRX		04	00711
000267	000164	R							
000270	001000	A	712	JMP	FDR5			04	00712
000271	000206	R							
000272	002000	A	713	FOR6	JMPM	FDR6		04	00713
000273	000356	R							
000274	010000	L	714		LDA	='.'		04	00714
000275	002000	A	715		CALL	TST		04	00715
000276	077772	R							
000277	002000	A	716		JMPM	IFS		04	00716
000300	000370	R							
000301	002020	A	717		JBZM	TER11		04	00717
000302	077755	R							
000303	001000	A	718		JMP	*+4		04	00718
000304	000307	R							
000305	002000	A	719	FOR7	JMPM	FDR6		04	00719
000306	000356	R							
000307	017000	I	720		LDA	TC		04	00720
000310	140000	L	721		SUB	=100		04	00721
000311	001010	A	722		JAZ	FDRB		04	00722
000312	000347	R							
000313	005311	A	723		DAR			04	00723
000314	001010	A	724		JAZ	FDR9	' )'	04	00724
000315	000324	R							
000316	140464	A	725		SUB	THREE		04	00725
000317	001010	A	726		JAZ	FDR2	' ,'	04	00726
000320	000057	R							
000321	005311	A	727		DAR			04	00727
000322	001000	A	728		JMP	FDR4		04	00728
000323	000147	R							
000324	017000	I	729	FOR9	LDA	T3		04	00729
000325	001010	A	730		JAZ	FDRD	END OF FORMAT	04	00730
000326	000337	R							
000327	005311	A	731		DAR		COUNT RIGHT PAREN.	04	00731
000330	057000	I	732		STA	T3		04	00732
000331	002000	A	733		JMPM	IFS		04	00733
000332	000370	R							
000333	001020	A	734		JBZ	FDR7+2		04	00734
000334	000307	R							
000335	001000	A	735		JMP	TER1		04	00735
000336	077745	R							
000337	002000	A	736	FDRD	CALL	ICH		04	00736
000340	077654	R							
000341	017000	I	737		LDA	OPW		04	00737
000342	002016	A	738		JANZM	OPK	FILL LAST FORMAT WORD	04	00738
000343	077714	R							
000344	017000	I	739		LDA	JPFL		04	00739
000345	001000	A	740		JMP	STC		04	00740
000346	077741	R							
000347	047000	I	741	FORB	INR	T3	COUNT LEFT PARENS.	04	00741
000350	017000	I	742		LDA	T3		04	00742
000351	140464	A	743		SUB	THREE		04	00743
000352	001002	A	744		JAP	TER1	TO MUCH NESTING	04	00744
000353	077745	R							
000354	001000	A	745		JMP	FDR2		04	00745
000355	000057	R							
000356	000000	A	746	FORA	ENTRY		INPUT FORMAT STRING	04	00746
000357	002000	A	747		JMPM	IFS		04	00747
000360	000370	R							
000361	001020	A	748		JBZ	*+3		04	00748
000362	000364	R							
000363	027000	I	749		LDB	T1		04	00749
000364	002020	A	750		JBZM	TER11		04	00750
000365	077755	R							
000366	001000	A	751		JMP*	FDR6		04	00751
000367	100356	R							
			752		EJECT			04	00752
			753	*	IFS	INPUT FORMAT STRING		04	00753
000370	000000	A	754	IFS	ENTRY			04	00754
000371	005001	A	755		TZA			04	00755
000372	057000	I	756		STA	T2		04	00756
000373	057000	I	757	IFS1	STA	T1		04	00757
000374	002000	A	758		CALL	ICH		04	00758

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000375 077654 R
000376 002000 A 759 CALL DPK 04 00759
000377 077714 R
000400 017000 I 760 LDA TC 04 00760
000401 027000 I 761 LDB T2 04 00761
000402 006140 A 762 SUBI '!' FLAG 04 00762
000403 000272 A
000404 001002 A 763 JAP* IFS NOT DIGIT 04 00763
000405 100370 R
000406 120471 A 764 ADD TEN 04 00764
000407 001004 A 765 JAN* IFS NOT DIGIT 04 00765
000410 100370 R
000411 047000 I 766 INR T2 04 00766
000412 017000 I 767 LDA T1 04 00767
000413 004201 A 768 ASLA 1 *2 04 00768
000414 057000 I 769 STA T1 04 00769
000415 004202 A 770 ASLA 2 *8 04 00770
000416 127000 I 771 ADD T1 04 00771
000417 127000 I 772 ADD TC 04 00772
000420 140000 L 773 SUB ='0' 04 00773
000421 001000 A 774 JMP IFS1 04 00774
000422 000373 R
775 END 04 00775

```

ENTRY NAMES

```

EXTERNAL NAMES
000000 E BDFCB 000000 E GDFCB 000000 E LDFCB 000000 E PIFCB
000000 E SIFCB 000000 E V$EXEC 000000 E V$IIOC 000000 E V$IOST
SYMBOLS
000020 A $BIT 010151 R $BUF 177325 R $ECH 177324 R $PCW
177330 R AF 177331 R AIFW 177332 R AS 077611 R ASI
077612 R ASS 177341 R AT 000002 A B 177342 R BDF
010320 R BLEF1 177250 R BLFCB 000421 A BM1 000472 A BM17
000475 A BM177 000477 A BM1777 000464 A BM3 000473 A BM37
000463 A BM377 000467 A BM7 000474 A BM77 000476 A BM777
177343 R BOBLCH 177320 R BOBLFL 000000 E BDFCB 000441 A BR0
000442 A BR1 000453 A BR10 000454 A BR11 000455 A BR12
000456 A BR13 000457 A BR14 000460 A BR15 000443 A BR2
000444 A BR3 000445 A BR4 000446 A BR5 000447 A BR6
000450 A BR7 000451 A BR8 000452 A BR9 000421 A BS0
000422 A BS1 000433 A BS10 000434 A BS11 000435 A BS12
000436 A BS13 000437 A BS14 000440 A BS15 000423 A BS2
000424 A BS3 000425 A BS4 000426 A BS5 000427 A BS6
000430 A BS7 000431 A BS8 000432 A BS9 077613 R CAN
077614 R CEA 077615 R CCR 177344 R CF 177345 R CFPTSH
177346 R CL 177347 R CLDP 177350 R CMFL 177351 R CNP
077616 R CRT 077617 R CTS 177352 R D 077620 R DEK
177353 R DF 177354 R DFPP 077621 R DFT 177355 R DH
177356 R DI 177326 R DPB 177357 R DPCA 177327 R DPX
177373 R DR 177374 R DS 177375 R DSAV 077622 R DSM
177376 R DT 177377 R DTFI 177401 R DV 177402 R EC
177403 R EH 177405 R EHBK 000424 A EIGHT 177406 R EL
077623 R EOLSH 077624 R ER1 077632 R ER11 077633 R ER12
077634 R ER13 077635 R ER14 077636 R ER15 077637 R ER16
077640 R ER17 077641 R ER18 077625 R ER2 077642 R ER20
077643 R ER21 077644 R ER22 077645 R ER24 077626 R ER3
077627 R ER6 077630 R ER7 077631 R ER8 177120 R ERBF
077646 R EXA 177407 R EXAD 077647 R EXL 177410 R F
105035 A F$DDI 105027 A F$DDI1 105036 A F$SEI 105503 A FADDD
105410 A FADDS 105535 A FDIVD 105401 A FDIVS 177411 R FFPFL
105400 A FFFDP 000465 A FIVE 105621 A FIX 105226 A FLAIFL
105522 A FLDD 105032 A FLDI 105420 A FLDS 105167 A FLIDP
105125 A FLJAG 105024 A FLREL 105425 A FLT 105037 A FMOVI
105506 A FMULD 105416 A FMULS 077650 R FNS1 000026 R FOR
000054 R FOR1 000057 R FOR2 000107 R FOR3 000147 R FOR4
000206 R FOR5 000247 R FOR51 000255 R FOR52 000263 R FOR53
000272 R FOR6 000305 R FOR7 000324 R FOR9 000356 R FORA
000347 R FORB 000175 R FORC 000337 R FORD 077651 R FORT1
000164 R FORX 000423 A FOUR 105127 A FSQRT 105710 A FSTD
105033 A FST1 105600 A FSTS 105543 A FSUBD 105450 A FSUBS
177262 R GLFCB 177412 R GOBLCH 177321 R GOBLFL 000000 E GDFCB
077652 R GSE 177413 R HCC 177414 R I 077653 R IAC
077654 R ICH 077655 R ICO 077656 R ICORNL 077657 R ICRD
077660 R ICRR 077661 R ICSI 177415 R ID 077662 R IDI
000370 R IFS 000373 R IFS1 077663 R IHW 077664 R IIV
077665 R ILB 077666 R ILT 177421 R IM 077667 R INA
177422 R INBP 077670 R INI 077671 R INN 077672 R INS
077673 R INT 177423 R IDFL 177424 R IP 177435 R IS
077674 R ISN 177445 R IT 177446 R IU 077675 R IVA
077676 R IVC 077677 R IWI 177447 R J 177450 R JPFL
177454 R JT 177455 R K 000424 A K10 000471 A K12
000472 A K17 000422 A K2 000425 A K20 000473 A K37
000423 A K4 000466 A K6 000463 A K77 000432 A KJMP
177456 R KT 077700 R LAX 000300 A LC 000050 A LCJP
077701 R LDX 077702 R LEX 177457 R LF 000462 A LHW
177460 R LIF 077703 R LIST 177274 R LLFCB 177461 R LLOP
177322 R LOBLFL 077704 R LOCT 000000 E LDFCB 077705 R LTX
177462 R MAXOPC 177463 R MDTB 177516 R MF 177517 R MM
077706 R MOVE 177520 R MR 000420 A MT 000500 A MTE
000441 A MTWD 077707 R NXL 177522 R NAME 177523 R ND
000461 A NEG 177127 R NERR 177524 R NF 177525 R NFFW
000470 A NINE 177526 R NS 177527 R NT 177530 R NTFL

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177536 R D1      177537 R D2      077710 R DAB      010224 R DBUF
077711 P DDB      077712 R DDS      177535 R DITFL    000421 A ONE
077713 R DNEN     177531 R DP       177532 R DPBK     177533 R OPCNT
077714 R DPK      177534 R DPH      077715 R DRE     077716 R DSR
077717 R DTJ       077720 R DUT     010150 A DVERSZ 077721 R DWD
077722 R DWS      177540 R DP      077723 R PDS     077724 R PEB
177544 R PIBLCN  177323 R PIBLFL  000000 E PIFCB   177306 R PLFCB
077725 R PTR      077726 R PTS     177545 R QFL     077727 R RCC
077730 R RDCS     077731 R RCH     000463 A RHW     077732 R RID
177546 R RL       077733 R SAX     177550 R SBFL   077734 R SDX
000467 A SEVEN   177553 R SF      077735 R SIDTB1 000000 E SIFCB
077736 R SIS     000466 A SIX     077737 R SLIT   077740 R SLOP
177160 R SLDT     177554 R SPFL   177500 R SSP     077741 R SIC
177555 R STFFL   077742 R STI1   077743 R STN     177506 R STNB
077744 R STS      177557 R STSH   177565 R SXF     177574 R T0
177575 R T1       177576 R T2     177577 R T2IM    177600 R T3
177601 R T4       177632 R T5     177603 R T6     177604 R T7
177635 R T8       177606 R T9     177566 R TC      000471 A TEN
077745 R TER1    077755 R TER11  077756 R TER12  077757 R TER13
077760 R TER14   077761 R TER15  077762 R TER17  077763 R TER18
077764 R TER19   077746 R TER2  077765 R TER20  077766 R TER24
077767 R TER26   077747 R TER3  077759 R TER4   077751 R TERS
077752 R TER7    077753 R TERS   077704 R TLR9   177570 R TERF
000027 A TFVCSZ  000464 A THREE  177212 P TIID   177217 R TIUJ
177204 R TITL    177243 R TITM   177206 R TITH   177207 R TITP
177250 R TIT9    177571 R TM     077718 R TDF     077721 R TSB
177572 R TSFL    077772 R TST    177570 R TU     077700 R TVR
000422 A TUD     000000 R V      000360 A V$CTAD  000070 A V$DATE
170305 A V$DSTB  000000 E V$EXEC  000000 E V$IDC   000000 E V$ICST
000412 A V$JCB   000055 A V$JCFG  000036 A V$JFCB  000050 A V$JHAM
000054 A V$LUNT  000317 A V$LLUP  000305 A V$LUNT  000400 A V$LUT1
000401 A V$LUT2 000402 A V$LUT3 000417 A V$STSZ  000357 A V$TKSZ
177112 R VARELD  000666 A VARELS  177330 R VBLDBG  177611 R VBLDND
177774 R WRSD    077775 R WSDGD   077776 R WRDT    000001 A X
177637 R XRPT    077777 R ZEB     000400 A ZERO

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3 ERRORS ASSEMBLY COMPLETE

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503 $BUF      501
240 AF       241
241 AIFU     242
242 AS       243
243 AT       244
244 BDF      245
103 BM17    105
109 BM1777  110
104 BM37    107
107 BM317   108
245 DBLCLN  246
0 EDFCB     246
71 PRO      140
50 USS      103
52 BS4      106
64 BS9      109
246 CF       247
247 CFPYSM  248
248 CL       249
249 CLDP    250
250 CMFL    251
251 CNP     252
0 COMP     252
252 M       253
253 DF      254
254 DFFP    255
255 DH      256
256 DI      257
257 DPCA    260
233 DPX     239
260 DR      261
261 DS      262
262 DSAV    263
263 DT      264
264 DTFL    265
265 DV      266
266 EC      267
257 EH      268
258 EHBK    269
0 EJEC     3
269 EL      270
0 ENTR     4
286 ER11    634
390 ER13    625
270 EXAD    271
271 F       272
272 FFFFL    273
162 FFRDP   163
164 165 166 167 168 169 170 171
172 173 174 175 176
606 FOR      593
624 FOR1     614
126 FOR2     630
640 FOR3     627
668 673 726 745
670

```







000001 A

```

1 VORTEX SET 1 PUT LAST FOR VORTEX
2 * THIS IS A COPYRIGHTED PROGRAM 1974 BY VARIAN DATA MACHINES
3 *
4 * VDM PART NO. 81L0405-015
5 *
6 * RELEASED 12/17/74
7 * VERSION PD REFERS TO E3393
8 *
9 * V$FORTIO
10 *
11 * TITLE V$FORTIO
12 *
13 *****
14 *
15 * RUN - TIME I / O I N T E R F A C E ( V $ F O R T I O )
16 *
17 * FUNCTION: THIS PROGRAM PROVIDES AN INTERFACE BETWEEN USER MODULES
18 * AND THE RE-ENTRANT PART OF THE RUN-TIME I/O PACKAGE
19 *
20 *****
21 *****
22 *****
23 * ENTRIES *
24 *****
25 NAME $BA BACKSPACE ENTRY
26 NAME $EN WRITE EOF ENTRY
27 NAME $RE REWIND ENTRY
29 NAME $I1 XFER 1-WORD INTEGER/LOGICAL
30 NAME $I2 XFER 2-WORD INTEGER/LOGICAL
31 NAME $I3 XFER REAL
32 NAME $I4 XFER DOUBLE PRECISION
33 NAME $I5 XFER COMPLEX
34 NAME $I6 XFER DOUBLE PRECISION INTEGER
36 NAME $RD READ ENTRY
37 NAME $WR WRITE ENTRY
38 NAME $ND TERMINATE I/O
39 NAME $DQ DECODE
40 NAME $EQ ENCODE
41 NAME $SX DIRECT ACCESS READ
42 NAME $WX DIRECT ACCESS WRITE
44 NAME V$CLOS CLOSE NORMAL RMD FILE
45 NAME V$CLSB CLOSE BLOCKED(LOGICAL) RMD FILE
46 NAME V$OPEN OPEN NORMAL RMD FILE
47 NAME V$OPNB OPEN BLOCKED(LOGICAL) RMD FILE
49 NAME IOCHK I/O CHECK
51 *****
52 * EXTERNALS *
53 *****
54 EXT $EE ERROR PROCESSOR
55 EXT $SE PARAMETER XFER
56 EXT V$EXEC VORTEX EXECUTIVE
57 EXT V$IOC VORTEX IOC
58 EXT V$IOST VORTEX IOC STATUS
59 EXT V$RERR REENTRANT BLOCK ENTRY(VIA ALOC)
60 EXT V$RER1 REENTRANT BLOCK ENTRY(VIA DIRECT JUMP)
61 EXT V$RERN V$RERR NUCLEUS FLAG
62 EXT POFGB MAP GLOBAL FCB'S INTO TASK
63 EXT V$DSTB MAP NUCLEUS TABLES INTO TASK
65 *****
66 * SET BLOCK *
67 *****
68 ASET SET 0 A-REG BIT SET
69 B SET 2 B-REGISTER
70 BF SET 8 BUFFER FILL FLAG
71 LC SET 0300
72 MT SET 0420
73 BM17 SET MT+42
74 BS1 SET MT+2
75 BS4 SET MT+5
76 BS8 SET MT+9
77 BS9 SET MT+10
78 BS10 SET MT+11
79 EIGHT SET MT+4
80 FIVE SET MT+37
81 FOUR SET MT+3
82 KD15 SET BM17
83 KD16 SET BS4
84 LF SET 0 LOGICAL FILE FLAG
85 NINE SET MT+40
86 ONE SET MT+1
87 SEVEN SET MT+39
88 SIX SET MT+38
89 TEN SET MT+41
90 THREE SET MT+36
91 TWO SET MT+2
92 ZERO SET MT
93 V$BVN SET LC+76 BOTTOM OF VORTEX NUCLEUS
94 V$CPL SET LC+1 CURRENT PRIORITY LEVEL
95 WR SET 9 READ/WRITE FLAG
96 X SET 1 X-REGISTER
98 *****
99 * STACK OPS *

```

```

V2 05 00001
PD 05 00002
05 00003
PD 05 00004
05 00005
PD 05 00006
PD 05 00007
05 00008
05 00009
05 00010
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V2 05 00061
V2 05 00062
V2 05 00063
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V2 05 00070
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V2 05 00084
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05 00088
05 00089
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V2 05 00094
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05 00096
05 00098
05 00099

```

Address	Mode	Symbol	Value	Description	Offset	Value
100		*****				
000012	A	101 STKSZ	SET 10	STACK SIZE	05	00100
000420	A	102 CXC	SET ZERO	CALL EXEC FOR IOLINK	05	00101
000421	A	103 CER	SET ONE	CALL ERROR	05	00102
000422	A	104 CEX	SET TWO	CALL EXIT	05	00103
000464	A	105 CIO	SET THREE	CALL I/O	05	00104
000423	A	106 CRB	SET FOUR	CALL REENTRANT BLOCK	05	00105
000465	A	107 CTR	SET FIVE	TERMINATE	05	00106
000466	A	108 CXF	SET SIX	PARAMETER XFER	05	00107
000467	A	109 CBK	SET SEVEN	BACKSPACE	V2	05 00108
000424	A	110 CEF	SET EIGHT	ENDFILE	V2	05 00109
000470	A	111 CRW	SET NINE	REWIND	V2	05 00110
000471	A	112 CRD	SET TEN	READ	V2	05 00111
000464	R	113 CWR	SET KD11	WRITE	V2	05 00112
000465	R	114 CCL	SET KD12	CLOSE FILE	V2	05 00113
000466	R	115 CCB	SET KD13	CLOSE BLOCKED FILE	V2	05 00114
000467	R	116 CDP	SET KD14	OPEN FILE	V2	05 00115
000472	A	117 COB	SET KD15	OPEN BLOCKED FILE	V2	05 00116
000425	A	118 CDC	SET KD16	DECODE	V2	05 00117
000470	R	119 CEN	SET KD17	ENCODE	V2	05 00118
000471	R	120 CRA	SET KD18	DIRECT ACCESS READ	05	00119
000472	R	121 CWA	SET KD19	DIRECT ACCESS WRITE	05	00120
		122 EJEC			05	00121
		123			05	00122
		124			05	00123
		125			05	00124
		126			05	00125
		127			05	00126
		128			05	00127
		*****				
		BASE - RELATIVE SYMBOLS				
		*****				
000001	A	130 AACC	SET VAACC-BASE	ADDRESS OF ACCUMULATOR ACC	05	00128
000002	A	131 ABSCB	SET VABSCB-BASE	ADDRESS OF BUFFER SCB	05	00129
000003	A	132 ACC	SET VACC-BASE	4-WORD ACCUMULATOR	05	00130
000007	A	133 ACHB	SET VACHB-BASE	ADDRESS OF DECIMAL DIGIT ARRAY	05	00131
000010	A	134 ADFCB	SET VADFCB-BASE	DCB/FCB ADDRESS	05	00132
000011	A	135 AFSCB	SET VAFSCB-BASE	ADDRESS OF FORMAT SCB	05	00133
000012	A	136 AGPAR	SET VAGPAR-BASE	ADDRESS OF 'C' GROUP BLOCK	05	00134
000110	A	137 AIBUF	SET VISCB-BASE+1	LIST ITEM ADDRESS	05	00135
000013	A	138 AISCB	SET VAISCB-BASE	ADDRESS OF LIST ITEM SCB	05	00136
000027	A	139 ALBF	SET VBSCB-BASE+1	ADDRESS OF LOGICAL BUFFER	05	00137
000014	A	140 ALOC	SET VALOC-BASE	ALOC ENTRY FLAG	V2	05 00138
000015	A	141 ANPOJ	SET VANPOJ-BASE	ADDRESS OF NON-REENTRANT POP/JUMP	05	00139
000016	A	142 ANRB	SET VANRB-BASE	ADDRESS OF NON-REENTRANT BLOCK	05	00140
000017	A	143 ADPSTK	SET VADPST-BASE	ADDRESS OF DP STACK	05	00141
000020	A	144 APBF	SET VAPBF-BASE	ADDRESS OF PHYSICAL BUFFER	05	00142
000021	A	145 ASCB	SET VASCB-BASE	SCAN BLOCK ADDRESS	05	00143
000022	A	146 ASFL	SET VASFL-BASE	'*' FLAG	05	00144
000023	A	147 ASYSDB	SET VASYSDB-BASE	ADDRESS OF SYSTEM DCB	05	00145
000030	A	148 BCHAR	SET VBSCB-BASE+2	BUFFER CHAR	05	00146
000031	A	149 BCODE	SET VBSCB-BASE+3	BUFFER CHAR CODE	05	00147
000024	A	150 BEXP	SET VBEXP-BASE	BINARY EXPONENT	05	00148
000026	A	151 BFPT	SET VBSCB-BASE	BUFFER CHARACTER POINTER	05	00149
000025	A	152 BFWPT	SET VBFWPT-BASE	BUFFER WORD POINTER	05	00150
000062	A	153 FMPT	SET VFSCB-BASE	FORMAT STRING POINTER	05	00151
000032	A	154 CHB	SET VCHB-BASE	DECIMAL DIGIT ARRAY	05	00152
000050	A	155 CHBPT	SET VCHBPT-BASE	CHB ARRAY POINTER	05	00153
000051	A	156 CHNHDR	SET VCHNHDR-BASE	FCB CHAIN HEADER	05	00154
000052	A	157 COUNT	SET VCOUNT-BASE	COUNTER	05	00155
000053	A	158 CVFL	SET VCVFL-BASE	CHARACTER VALIDITY FLAGS	05	00156
000054	A	159 D	SET VD-BASE	FRACTIONAL FIELD WIDTH	05	00157
000055	A	160 DEXP	SET VDEXP-BASE	DECIMAL EXPONENT	05	00158
000056	A	161 DT	SET VDT-BASE	WORKING FRACTIONAL FIELD WIDTH	05	00159
000057	A	162 EDEXP	SET VEDEXP-BASE	EXPLICIT DECIMAL EXPONENT	05	00160
000060	A	163 ERN	SET VERN-BASE	ERROR NUMBER	05	00161
000064	A	164 FCHAR	SET VFSCB-BASE+2	FORMAT CHARACTER	05	00162
000065	A	165 FCODE	SET VFSCB-BASE+3	FORMAT CHARACTER CODE	05	00163
000061	A	166 FDLKEY	SET VFDLKY-BASE	FIELD DESCRIPTOR LETTER KEY	05	00164
000063	A	167 FRMT	SET VFSCB-BASE+1	ADDRESS OF FORMAT STRING (0 IF NONE)	05	00165
000062	A	168 FRPT	SET VFSCB-BASE	FORMAT STRING CURRENT POINTER	05	00166
000066	A	169 GDRPC	SET VGDRP-BASE	'C' GROUP DYNAMIC REPEAT COUNT	05	00167
000071	A	170 GFRPT	SET VGFRP+3	'C' GROUP FORMAT POINTER	05	00168
000074	A	171 GSRPC	SET VGSRP+6	'C' GROUP STATIC REPEAT COUNT	05	00169
000111	A	172 ICHAR	SET VISCB-BASE+2	LIST ITEM CHARACTER	05	00170
000077	A	173 IDEXP	SET VIDEXP-BASE	IMPLICIT DECIMAL EXPONENT	05	00171
000100	A	174 IFW	SET VIFW-BASE	INTEGER FIELD WIDTH	05	00172
000101	A	175 IIBSZ	SET VIIBSZ-BASE	INDIVIDUAL ITEM BYTE SIZE	05	00173
000102	A	176 IINWSZ	SET VIINWSZ-BASE	INDIVIDUAL ITEM WORD SIZE	05	00174
000103	A	177 INFL	SET VINFL-BASE	INITIALIZE FLAG	V2	05 00175
000104	A	178 IOCONT	SET VIOCON-BASE	I/O CONTROL WORD	05	00176
000105	A	179 IOLNK	SET VIOLNK-BASE	IOLINK CONTROL WORD	05	00177
000106	A	180 IOSTAT	SET VIOSTA-BASE	I/O STATUS	05	00178
000113	A	181 ITEMAD	SET VITEMA-BASE	ADDRESS OF LIST ITEM	05	00179
000114	A	182 ITEMWC	SET VITEMW-BASE	COUNT OF WORDS REMAINING IN ITEM	05	00180
000115	A	183 ITMINC	SET VITMIN-BASE	LIST ITEM WORD INCREMENT	05	00181
000116	A	184 ITMODE	SET VITMOD-BASE	LIST ITEM MODE	05	00182
000117	A	185 LISTFL	SET VLISTF-BASE	LIST DATA XFER FLAG	05	00183
000120	A	186 LNKCNT	SET VLKCN-BASE	FCB CHAIN LINK COUNT	05	00184
000121	A	187 LRECHD	SET VLRECH-BASE	LOGICAL RECORD NUMBER	05	00185
000122	A	188 LRSZ	SET VLRSZ-BASE	LOGICAL RECORD SIZE	05	00186
000123	A	189 LRWC	SET VLRWC-BASE	LOGICAL RECORD REMAINING WORD COUNT	05	00187
000124	A	190 MOV	SET VMOV-BASE	MULTIPLY OVERFLOW SWITCH	05	00188
000125	A	191 N	SET VN-BASE	H/T/X FIELD WIDTH	05	00189
000126	A	192 NFF	SET VNFF-BASE	NUMERIC FORMAT FIELD	05	00190

000000	A	193	OPSTKP	SET	VOPSTP-BASE	OP STACK POINTER	05	00193
000141	A	194	PARLV	SET	VPARLV-BASE	FORMAT 'C' GROUP LEVEL COUNT	05	00194
000142	A	195	PBRC	SET	VPBRC-BASE	PHYSICAL BUFFER RECORD COUNT	05	00195
000143	A	196	PBSZ	SET	VPBSZ-BASE	PHYSICAL BUFFER SIZE	05	00196
000144	A	197	PBWC	SET	VPBWC-BASE	PHYSICAL BUFFER REMAINING WORD COUNT	05	00197
000145	A	198	PRECNO	SET	VPRECN-BASE	PHYSICAL RECORD NUMBER	05	00198
000146	A	199	PRLINK	SET	VPRLIN-BASE	PREVIOUS LINK OF FCB CHAIN	05	00199
000147	A	200	PTFL	SET	VPTFL-BASE	'.' POINT FLAG	05	00200
000150	A	201	QFL	SET	VQFL-BASE	QUOTE FLAG	05	00201
000125	A	202	R	SET	N	REPEAT COUNT	05	00202
000151	A	203	RETURN	SET	VRETUR-BASE	RETURN ADDR/'END' ADDR/'ERR' ADDR	PD	05 00203
000154	A	204	RWFL	SET	VRWFL-BASE	READ/WRITE FLAG WORD	05	00204
000155	A	205	S	SET	VS-BASE	SCALE FACTOR	05	00205
000156	A	206	SCF	SET	VSCF-BASE	SCALE FACTOR FLAG	05	00206
000157	A	207	SGFL	SET	VSGFL-BASE	'-' SIGN FLAG	05	00207
000160	A	208	SVRECN	SET	VSVREC-BASE	SAVE RECORD NO	05	00208
000161	A	209	SYSBSZ	SET	VSYSDC-BASE	SYSTEM BUFFER SIZE	05	00209
000164	A	210	TEMP	SET	VTEMP-BASE	TEMP STORE	05	00210
000165	A	211	TEMP1	SET	VTEMP1-BASE		05	00211
000166	A	212	TERM	SET	VTERM-BASE	PRODUCT TERM	05	00212
000167	A	213	UNIT	SET	VUNIT-BASE	I/O UNIT NUMBER	05	00213
000166	A	214	UNITS	SET	TERM	SAVE UNITS DIGIT	05	00214
000170	A	215	W	SET	VW-BASE	FIELD WIDTH	05	00215
000171	A	216	WT	SET	VWT-BASE	WORKING VALUE OF W	05	00216
000172	A	217	XFFL	SET	VXFFL-BASE	PARAMETER XFER ENABLE FLAG	05	00217
000173	A	218	XFL	SET	VXFL-BASE	EXPONENT FIELD NON-BLANK FLAG	05	00218
000174	A	219	XFW	SET	VXFW-BASE	EXPONENT FIELD WIDTH	05	00219
000175	A	220	XSG	SET	VXSG-BASE	EXPONENT SIGN FLAG	05	00220
000176	A	221	ZFW	SET	VZFW-BASE	LEADING ZERO FIELD WIDTH	05	00221
000204	A	222	ZZZ	SET	VZZZ-BASE	END OF DATA BLOCK	05	00222
		223	EJEC				05	00223
		224	*****				05	00224
		225	* MACROS *				05	00225
		226	*****				05	00226
		227	PUSH	MAC			05	00227
		228	LDX	OPSTKP,B			05	00228
		229	DXR				FG	05 00229
		230	STX	OPSTKP,B			FG	05 00230
		231	LDA	P(1)			05	00231
		232	STA	O,X			05	00232
		233	EMAC				05	00233
		234	*				05	00234
		235	POPX	MAC			05	00235
		236	LDX	OPSTKP,B			05	00236
		237	INRL	OPSTKP,B			FG	05 00237
		238	LDX	O,X			FG	05 00238
		239	EMAC				05	00239
		240	EJEC				05	00240
		241	*****				05	00241
		242	*				05	00242
		243	* T E R M I N A T E R E A D / W R I T E ( \$ N D )				05	00243
		244	*				05	00244
		245	* FUNCTION: TO TERMINATE READ/WRITE STATEMENTS				05	00245
		246	*				05	00246
		247	* ENTRY: NO SPECIAL CONDITIONS				05	00247
		248	*				05	00248
		249	* EXIT : DIRECT TO CAR				05	00249
		250	* RETURN = POINTER TO RETURN ADDRESS				05	00250
		251	* CTR(TERMINATE OP) PUSHED				05	00251
		252	*				05	00252
		253	*****				05	00253
000000	000000	A	255	\$ND	ENTRY		05	00255
000001	024700	A	256	LDB	BASP		05	00256
000002	006030	A	257	LDXI	\$ND	GET POINTER TO RETURN ADDRESS	05	00257
000003	000000	R						
000004	076151	A	258	STX	RETURN,B	SAVE	05	00258
000005	016017	A	259	LDA	ADPSTK,B		05	00259
000006	056000	A	260	STA	OPSTKP,B	CLEAR STACK	05	00260
			261	PUSH	CTR	PUSH TERMINATE OP	05	00261
000007	036000	A						
000010	005344	A						
000011	076000	A						
000012	010465	A						
000013	055000	A						
000014	001000	A	262	JMP	CAR	EXIT TO V\$RERR	V2	05 00262
000015	000041	R						
			263	EJEC			05	00263
			264	*****			05	00264
			265	*			05	00265
			266	* A U X I L I A R Y I / O ( A U X )			05	00266
			267	*			05	00267
			268	* FUNCTION: TO PROCESS THE FORTRAN AUXILIARY I/O CALLS:			05	00268
			269	*			05	00269
			270	* \$BA: BACKSPACE			05	00270
			271	* \$EN: ENDFILE			05	00271
			272	* \$RE: REWIND			05	00272
			273	*			05	00273
			274	* ENTRY: NO SPECIAL CONDITIONS			05	00274
			275	*			05	00275
			276	* CALLING SEQUENCE: JMPM \$BA(OR \$EN, OR \$RE)			05	00276
			277	* DATA ADDRESS OF UNIT NUMBER U			05	00277

```

278 *
279 * EXIT : DIRECT TO PSE
280 *   A = OP CODE
281 *   = CBK: BACKSPACE
282 *   = CEF: ENDFILE
283 *   = CRW: REWIND
284 *   B = CALL SEQUENCE ADDRESS
285 *   X = 1(PARAMETER COUNT)
286 *
287 *
288 *
289 *
290 * BACKSPACE ENTRY *
291 *
292 $BA ENTR
293     LD BE $BA
294     LDA CBK
295     JMP AUX2
296 *
297 * ENDFILE ENTRY *
298 *
299 $EN ENTR
300     LD BE $EN
301     LDA CEF
302     JMP AUX2
303 *
304 * REWIND ENTRY *
305 *
306 $RE ENTR
307     LD BE $RE
308     LDA CRW
309     INC R4
310     JMP PSE
311     EJECT
312 *
313 *
314 * CALL REENTRANT BLOCK (CAR)
315 *
316 * FUNCTION: TO PASS CONTROL TO THE REENTRANT MODULE V$RERR
317 *
318 * ENTRY: DIRECT TO CAR
319 *
320 * EXIT : TO REENTRANT BLOCK
321 *
322 * VIA ALOC IF V$FORTIO IN BACKGROUND, V$RERR IN NUCLEUS
323 * VIA 'JMP V$RERR1' IF NOT
324 *
325 *
326 *
327 CAR EQU *
328     IFT VORTEX-1
329     GOTO 1
330     LDA V$CPL
331     JANZ V$RERR1
332     1
333     LD A CARNF
334     JAZ V$RERR1
335     IFF VORTEX-1
336     JSR V$EXEC,X
337     IFF VORTEX-2
338     JSR 0406,X
339     DATA 01500
340     DATA V$RERR
341     CARNF DATA V$RERN
342     EJECT
343 *
344 *
345 * CLOSE BLOCKED FILE (CBF)
346 *
347 * FUNCTION: TO CLOSE AND FLUSH A BLOCKED FILE
348 *
349 * ENTRY: NO SPECIAL CONDITIONS
350 *
351 * CALLING SEQUENCE: CALL V$CLSB(U,S) WHERE
352 *
353 *   U = FORTRAN UNIT NUMBER
354 *   S = MODE(UPDATE OR LEAVE) OF CLOSE
355 *
356 * EXIT : DIRECT TO PSE
357 *   A = OP CODE
358 *   B = RETURN ADDRESS
359 *   X = 2(PARAMETER COUNT)
360 *
361 *

```

000016 000000 A  
000017 006027 A  
000020 000016 R  
000021 010467 A  
000022 001000 A  
000023 000036 R

000024 000000 A  
000025 006027 A  
000026 000024 R  
000027 010424 A  
000030 001000 A  
000031 000036 R

000032 000000 A  
000033 006027 A  
000034 000032 R  
000035 010470 A  
000036 005104 A  
000037 001000 A  
000040 000305 R

000041 R  
000041 010301 A  
000042 001016 A  
000043 000000 E

000044 014006 A  
000045 001010 A  
000046 000043 E  
000047 006505 A  
000050 000000 E

000051 001500 A  
000052 000000 E  
000053 000000 E

\* 05 00278  
\* 05 00279  
\* 05 00280  
\* 05 00281  
\* 05 00282  
\* 05 00283  
\* 05 00284  
\* 05 00285  
\* 05 00286  
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\* 05 00293  
\* 05 00294  
\* 05 00295  
\* 05 00296  
\* 05 00297  
\* 05 00298  
\* 05 00299  
\* 05 00300  
\* 05 00301  
\* 05 00302  
\* 05 00303  
\* 05 00304  
\* 05 00305  
\* 05 00306  
\* 05 00307  
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\* 05 00311  
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\* 05 00338  
\* 05 00339  
\* 05 00340  
\* 05 00341  
\* 05 00342  
\* 05 00343  
\* 05 00344  
\* 05 00345  
\* 05 00346  
\* 05 00347  
\* 05 00348  
\* 05 00349  
\* 05 00350  
\* 05 00351  
\* 05 00352  
\* 05 00353  
\* 05 00354  
\* 05 00355  
\* 05 00356  
\* 05 00357  
\* 05 00358  
\* 05 00359  
\* 05 00360  
\* 05 00361

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000054 000080 A 363 V*CLSB ENTR 05 00363
000055 006027 A 364 LD BE V*CLSB 05 00364
000056 000054 R
000057 014406 A 365 LDA CCB 05 00365
000060 030422 A 366 LDX TWO 2 PARAMETERS 05 00366
000061 001000 A 367 JMP PSE EXIT TO PSE 05 00367
000062 000305 R
368 EJEC 05 00368
369 ***** 05 00369
370 ***** 05 00370
371 ***** I / O STATUS CHECK (CHK) ***** 05 00371
372 ***** 05 00372
373 ***** FUNCTION: TO CHECK THE STATUS OF THE LAST I/O OPERATION ***** 05 00373
374 ***** 05 00374
375 ***** 05 00375
376 ***** ENTRY: IOSTAT = -1 PREVIOUS I/O GAVE ERROR 05 00376
377 ***** = 0 PREVIOUS I/O OK 05 00377
378 ***** = +1 PREVIOUS I/O GAVE EOF/EOD 05 00378
379 ***** 05 00379
380 ***** CALLING SEQUENCE: CALL IOCHK(I) 05 00380
381 ***** 05 00381
382 ***** EXIT : A = I = IOSTAT 05 00382
383 ***** IOSTAT = 0 05 00383
384 ***** 05 00384
385 ***** 05 00385
000063 024616 A 387 CHK1 LDB BASP LOAD BASE REGISTER B 05 00387
000064 034012 A 388 LDX CHK4 POINT X AT I 05 00388
000065 016106 A 389 LDA IOSTAT,B GET STATUS 05 00389
000066 055000 A 390 STA 0,X SET I = IOSTAT 05 00390
000067 005001 A 391 TZA 05 00391
000070 056106 A 392 STA IOSTAT,B CLEAR STATUS 05 00392
000071 015000 A 393 LDA 0,X LOAD A WITH STATUS 05 00393
000072 001000 A 394 JMP 0 EXIT 05 00394
000073 000000 A
000073 395 IOCHK BES 0 ENTRY 05 00395
000074 002000 A 396 CALL $SE XFER PARAMETER 05 00396
000075 000000 E
000076 000001 A 397 DATA 1 1 PARAMETER 05 00397
000077 398 CHK4 BSS 1 ADDRESS OF I 05 00398
000100 001000 A 399 JMP CHK1 JUMP BACK FOR FORWARD REF 05 00399
000101 000063 R
400 EJEC 05 00400
401 ***** 05 00401
402 ***** 05 00402
403 ***** CALL IOLINK (CIL) ***** 05 00403
404 ***** 05 00404
405 ***** FUNCTION: TO CONSTRUCT AND EXECUTE AN IOLINK MACRO ***** 05 00405
406 ***** 05 00406
407 ***** ENTRY: IOLNK = IOLINK CONTROL WORD 05 00407
408 ***** SYSBSZ = BUFFER SIZE IN WORDS 05 00408
409 ***** 05 00409
410 ***** EXIT : NO SPECIAL CONDITIONS 05 00410
411 ***** 05 00411
412 ***** 05 00412
000102 016105 A 414 CIL LDA IOLNK,B GET IOLINK CONTROL WORD 05 00414
000103 034004 A 415 STA CILCAL+2 STORE IN V*EXEC CALL SEQUENCE 05 00415
000104 016161 A 416 LDA SYSBSZ,B GET BUFFER SIZE 05 00416
000105 034004 A 417 STA CILCAL+4 STORE IN CALL SEQ 05 00417
418 CILCAL IOLINK 0,$$UF,120 CALL V*EXEC IOLINK 05 00418
000106 006505 A
000107 000406 A
000110 001400 A
000111 000512 R
000112 000170 A
000113 001000 A 419 JMP NPJ EXIT 05 00419
000114 000253 R
420 EJEC 05 00420
421 ***** 05 00421
422 ***** 05 00422
423 ***** CLOSE RMD FILE (CLS) ***** 05 00423
424 ***** 05 00424
425 ***** FUNCTION: TO CLOSE A FILE ***** 05 00425
426 ***** 05 00426
427 ***** ENTRY: NO SPECIAL CONDITIONS ***** 05 00427
428 ***** 05 00428
429 ***** CALLING SEQUENCE: CALL V*CLDS(U,S) WHERE ***** 05 00429
430 ***** 05 00430
431 ***** U = FORTRAN UNIT NUMBER ***** 05 00431
432 ***** S = MODE(UPDATE OR LEAVE) OF CLOSE ***** 05 00432
433 ***** 05 00433
434 ***** EXIT : DIRECT TO PSE ***** 05 00434
435 ***** A = OP CODE ***** 05 00435
436 ***** B = RETURN ADDRESS ***** 05 00436
437 ***** X = 2(PARAMETER COUNT) ***** 05 00437
438 ***** 05 00438
439 ***** 05 00439
000115 000000 A 441 V*CLDS ENTR 05 00441
000116 006027 A 442 LD BE V*CLDS 05 00442
000117 000115 R
000120 014344 A 443 LDA CCL 05 00443
000121 030422 A 444 LDX TWO 2 PARAMETERS 05 00444

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000122 001000 A 445 JMP PSE EXIT TO PSE 05 00445
000123 000305 R
446 EJEC PD 05 00446
447 ***** PD 05 00447
448 * PD 05 00448
449 * ENCODE / DECODE ( EDC ) * PD 05 00449
450 * PD 05 00450
451 * FUNCTION: TO PROCESS ENCODE AND DECODE CALLS * PD 05 00451
452 * PD 05 00452
453 * ENTRY: NO SPECIAL CONDITIONS * PD 05 00453
454 * PD 05 00454
455 * CALLING SEQUENCE: JMPM $DQ (OR SEQ) * 05 00455
456 * DATA ADDRESS OF COUNT * PD 05 00456
457 * DATA ADDRESS OF FORMAT STRING * PD 05 00457
458 * DATA ADDRESS OF I/O BUFFER * PD 05 00458
459 * DATA ADDRESS OF CHARACTER-PROCESSED COUNTER * PD 05 00459
460 * (0 IF NONE) * PD 05 00460
461 * PD 05 00461
462 * EXIT: DIRECT TO PSE * PD 05 00462
463 * A = OP CODE * PD 05 00463
464 * B = RETURN ADDRESS * PD 05 00464
465 * X = PARAMETER COUNT (4) * PD 05 00465
466 * PD 05 00466
467 ***** PD 05 00467
468 * PD 05 00468
469 * DECODE ENTRY * PD 05 00469
470 ***** PD 05 00470
000124 000000 A 471 $DQ ENTR 05 00471
000125 006027 A 472 LD BE $DQ 05 00472
000126 000124 R
000127 010425 A 473 LDA CDC PD 05 00473
000130 001000 A 474 JMP EDC1 PD 05 00474
000131 000136 R
475 ***** PD 05 00475
476 * ENCODE ENTRY * PD 05 00476
477 ***** PD 05 00477
000132 000000 A 478 $EQ ENTR 05 00478
000133 006027 A 479 LD BE $EQ 05 00479
000134 000132 R
000135 014332 A 480 LDA CEN PD 05 00480
000136 030423 A 481 EDC1 LDX FOUR PD 05 00481
000137 001000 A 482 JMP PSE PD 05 00482
000140 000305 R
483 EJEC 05 00483
484 ***** 05 00484
485 * 05 00485
486 * ERROR PROCESSOR ( ERR ) * 05 00486
487 * 05 00487
488 * FUNCTION: TO PROCESS RUNTIME ERRORS * 05 00488
489 * 05 00489
490 * ENTRY: E1 FORMAT * 05 00490
491 * E2 MODE * 05 00491
492 * E3 DATA * 05 00492
493 * E4 I/O * 05 00493
494 * 05 00494
495 * EXIT : TO $EE WITH B=1, SO $EE ABORTS JOB * 05 00495
496 * A = ERROR KEY * 05 00496
497 * 05 00497
498 ***** 05 00498
000141 046060 A 500 E4 INR ERN,B I/O ERROR 05 00500
000142 046060 A 501 E3 INR ERN,B DATA ERROR 05 00501
000143 046060 A 502 E2 INR ERN,B MODE ERROR 05 00502
000144 016153 A 503 E1 LDA RETURN+2,B FORMAT ERROR PD 05 00503
000145 001016 A 504 JANZ JGRETR PD 05 00504
000146 000247 R
000147 016060 A 505 LDA ERN,B PD 05 00505
000150 120464 A 506 ADD THREE ADD BIAS 05 00506
000151 005102 A 507 INCR 2 SET B TO ABORT JOB 05 00507
000152 002000 A 508 CALL $EE EXIT 05 00508
000153 000000 E
509 EJEC 05 00509
510 ***** 05 00510
511 * 05 00511
512 * IOC CALL ( IOC ) * 05 00512
513 * 05 00513
514 * FUNCTION: TO PROCESS CALLS TO V$IOC * 05 00514
515 * 05 00515
516 * ENTRY: IOCONT = CONTROL WORD * 05 00516
517 * ADFCB = ADDRESS OF DCB/FCB * 05 00517
518 * IOSTAT = -1 PREVIOUS I/O GAVE ERROR * 05 00518
519 * = 0 PREVIOUS I/O OK * 05 00519
520 * = +1 PREVIOUS I/O GAVE EOF/EOD * 05 00520
521 * RWFL(BIT BF) = 1 FILL BUFFER ON READ SHORT NON-LOG RECORD * 05 00521
522 * = 0 PASS IOC COUNT ON READ SHORT NON-LOG RECORD * 05 00522
523 * RWFL(BIT WR) = 0 READ V2 05 00523
524 * = 1 WRITE * 05 00524
525 * 05 00525
526 * EXIT : DIRECT TO NPJ * 05 00526
527 * IOSTAT = -1 IF ERROR RETURN FROM IOC * 05 00527
528 * = +1 IF ILLEGAL EOF/BCD RETURN FROM IOC * 05 00528
529 * PBWC = FCB(0) ON WRITE * 05 00529

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530 *                = FCB(0) IF RWFL(BF) = 1                * 05 00530
531 *                = IOC WORD COUNT XFERRED OTHERWISE      * 05 00531
532 *                *                                       * 05 00532
533 *                *                                       * 05 00533
000154 036010 A 535 IOC LDX ADFCB,B POINT X AT DCB/FCB 05 00535
000155 074014 A 536 STX IOCDF STORE DCB/FCB ADDRESS IN IOC CALL 05 00536
000156 015000 A 537 LDA 0,X GET RECORD SIZE IN WORDS 05 00537
000157 056144 A 538 STA PBWC,B INITIALIZE PBWC TO FCB(0) 05 00538
000160 016106 A 539 LDA IDSTAT,B GET STATUS OF PREVIOUS I/O 05 00539
000161 005311 A 540 DAR 05 00540
000162 001002 A 541 JAP NPJ SKIP I/O IF EOF/EOD FLAGGED ON LAST I/O 05 00541
000163 000253 R 05 00542
000164 016104 A 542 LDA IOCNT,B 05 00542
000165 054003 A 543 STA IOCCW LOAD CONTROL WORD INTO CALL SEQUENCE 05 00543
544 IOCID READ #,0,0,0 CALL V$IOC 05 00544

000166 006505 A 05 00545
000167 000404 A 05 00546
000170 100000 A 05 00547
000171 000000 A 05 00548
000172 000166 R 05 00549
000173 000000 A 05 00550
000174 000000 A 05 00551
000171 R 545 IOCCW EQU IOCID+3 IOC CONTROL WORD 05 00545
000172 R 546 IOCDF EQU IOCID+4 DCB/FCB ADDRESS 05 00546
000175 024504 A 547 LDB BASP RESTORE BASE REGISTER 05 00547
000176 016154 A 548 LDA RWFL,B 05 00548
000177 006411 A 549 BT ASET+WR,IOCST READ ? V2 05 00549
000200 000206 R 05 00550
000201 006410 A 550 BT ASET+BF,IOCST YES. IS FILL FLAG SET ? V2 05 00550
000202 000206 R 05 00551
000203 006017 A 551 LDAE IOCID+5 NO. GET WORD COUNT FROM IOC CALL 05 00551
000204 000173 R 05 00552
000205 056144 A 552 STA PBWC,B STORE 05 00552
553 IOCST STAT IOCID,IOCERR,IOCEOF,IOCEED,E4 05 00553

000206 006505 A 05 00554
000207 000373 A 05 00555
000210 000166 R 05 00556
000211 000237 R 05 00557
000212 000220 R 05 00558
000213 000230 R 05 00559
000214 000141 R 05 00560
000215 024464 A 554 LDB BASP 05 00561
000216 001000 A 555 JMP NPJ EXIT 05 00562
000217 000253 R 05 00563
556 ***** 05 00564
557 * EOF/EOD EXIT * 05 00565
558 ***** 05 00566
000220 024461 A 559 IOCEOF LDB BASP 05 00567
000221 016104 A 560 LDA IOCNT,B 05 00568
000222 154027 A 561 ANA IOCMSK GET OP CODE FROM V$IOC CALL 05 00569
000223 001010 A 562 JAZ IOCEED SET STATUS FLAG ON READ 05 00570
000224 000230 R 05 00571
000225 130431 A 563 ERA BSS- 05 00572
000226 001016 A 564 JANZ NPJ SET STATUS FLAG ON WRITE 05 00573
000227 000253 R 05 00574
565 ***** 05 00575
566 * EOD EXIT * 05 00576
567 ***** 05 00577
000230 024451 A 568 IOCEED LDB BASP PD 05 00578
000231 016152 A 569 LDA RETURN+1,B PD 05 00579
000232 001016 A 570 JANZ IORETR 'END' ADDRESS PRESENT PD 05 00580
000233 000247 R 05 00581
000234 005111 A 571 IAR 05 00582
000235 001000 A 572 JMP IOCERR! END STATUS = +1 PD 05 00583
000236 000244 R 05 00584
573 ***** 05 00585
574 * ERROR EXIT * 05 00586
575 ***** 05 00587
000237 024442 A 576 IOCERR LDB BASP PD 05 00588
000240 016153 A 577 LDA RETURN+2,B PD 05 00589
000241 001016 A 578 JANZ IORETR 'ERR' ADDRESS PRESENT PD 05 00590
000242 000247 R 05 00591
000243 005311 A 579 DAR 05 00592
000244 056106 A 580 IOCERRI STA IDSTAT,B ERR STATUS = -1 PD 05 00593
000245 001000 A 581 JMP NPJ SET I/I STATUS PD 05 00594
000246 000253 R 05 00595
000247 005014 A 582 IORETR TAX PD 05 00596
000250 006705 A 583 IJMP 0,X PD 05 00597
000251 000000 A 05 00598
000252 007400 A 584 IOCMSK DATA 07400 OP CODE MASK 05 00599
585 EJEC 05 00600
586 ***** 05 00601
587 * 05 00602
588 * NON - REENTRANT PDP / JUMP ( NPJ ) * 05 00603
589 * 05 00604
590 * FUNCTION: TO EXECUTE PDP/JUMP IN V$FORTIO * 05 00605
591 * 05 00606
592 * ENTRY: DPSTKP = ADDRESS OF CURRENT OP * 05 00607
593 * 05 00608
594 * EXIT : DIRECT TO ROUTINE SPECIFIED BY OP * 05 00609
595 * STACK POINTER DPSTKP DECREMENTED * 05 00610

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596 *
597 *****
599 NPJ      NOPX      POINT X AT DP      05 00599
000253 036000 A
000254 046000 A
000255 035000 A
000256 006035 A 600      LDXE      NOPDJT,X      GET EXECUTION ADDRESS      05 00600
000257 000262 R
000260 006705 A 601      LUMP      0,X      EXECUTE DP      05 00601
000261 000000 A
602 *****
603 * EXECUTION ADDRESS TABLE *
604 *****
000262 000102 R 605  NPDPJT PZE      CIL      DP=0 CALL EXEC FOR IOLINK      05 00605
000263 000144 R 606      PZE      E1      DP=1 ERROR      05 00606
000264 000460 R 607      PZE      XIT      DP=2 EXIT      05 00607
000265 000150 R 608      PZE      IOC      DP=3 I/O CALL      05 00608
000266 000041 R 609      PZE      CAR      DP=4 CALL REFRTRANT BLOCK      05 00609
610      EJEC
611 *****
612 *
613 *          O P E N   B L O C K E D   F I L E ( O P B )
614 *
615 * ENTRY: NO SPECIAL CONDITIONS
616 *
617 * CALLING SEQUENCE: CALL V$DPNB(U,L,F,M,S,B,R) WHERE
618 *
619 *          U = FORTRAN UNIT NUMBER
620 *          L = LOGICAL UNIT NUMBER
621 *          F = FOB ARRAY NAME
622 *          M = MODE(REWIND OR LEAVE) OF OPEN
623 *          S = SIZE IN WORDS OF LOGICAL RECORD
624 *          B = ADDRESS OF I/O BUFFER ARRAY
625 *          R = READ BEFORE WRITE FLAG
626 *
627 * EXIT : DIRECT TO PSE
628 *
629 *****
000267 000000 A 631  V$DPNB ENTR
000270 006027 A 632      LDPE      V$DPNB
000271 000267 R
000272 010472 A 633      LDA      CDB
000273 030467 A 634      LDX      $OPEN      7 PARAMETERS
000274 001000 A 635      JMP      PSE      EXIT TO PSE
000275 000000 R
636      EJEC
637 *****
638 *
639 *          O P E N   R E M O V E   F I L E ( O P N )
640 *
641 * ENTRY: NO SPECIAL CONDITIONS
642 *
643 * CALLING SEQUENCE: CALL V$OPEN(U,L,F,M) WHERE
644 *
645 *          U = FORTRAN UNIT NUMBER
646 *          L = LOGICAL UNIT NUMBER
647 *          F = FOB ARRAY NAME
648 *          M = MODE(REWIND OR LEAVE) OF OPEN
649 *
650 * EXIT : DIRECT TO PSE
651 *
652 *****
000276 000000 A 654  V$OPEN ENTR
000277 006027 A 655      LDPE      V$OPEN
000300 000276 R
000301 014165 A 656      LDA      CDB
000302 030423 A 657      LDX      $OUR      4 PARAMETERS
000303 001000 A 658      JMP      PSE      EXIT TO PSE
000304 000305 R
659      EJEC
660 *****
661 *
662 *          P S E U D O - E N T R Y ( P S E )
663 *
664 * FUNCTION: TO PROVIDE A COMMON PSEUDO-ENTRY FOR ALL ENTRY CALLS
665 *
666 * ENTRY: S = DP CODE
667 *          R = RETURN ADDRESS
668 *          X = PARAMETER COUNT
669 *          UPSTKP = ADDRESS (IN STACK) OF LAST DP PUSHED
670 *
671 *          DIRECT TO PSE1 FOR PARAMETER XFER
672 *          DIRECT TO PSE OTHERWISE
673 *
674 * EXIT : DIRECT TO CAR
675 *          DPSTKP = DPSTKP-1 FOR PARAMETER XFER
676 *          = ADDRESS OF START OF STACK, OTHERWISE
677 *
678 * ERRORS: ERA IF IOSTAT NOT CLEARED(EXCEPT ON PARAMETER XFER)
679 *
680 *****

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000305 007401 A 682 PSE SOF TEST I/O STATUS 05 00682
000306 001006 A 683 DATA 01006 SKIP 05 00683
000307 007400 A 684 PSE1 ROP IGNORE I/O STATUS 05 00684
000310 064034 A 685 STB PSENTR STORE ENTRY ADDRESS 05 00685
000311 074036 A 686 STX PSECNT STORE PARAMETER COUNT 05 00686
000312 024367 A 687 LOB BOSP LOAD BASE REGISTER B 05 00687
000313 036017 A 688 LDX ADPSTK,B LOAD X TO INITIALIZE STACK 05 00688
000314 001001 A 689 JOP PSE4 05 00689
000315 000320 R
000316 036000 A 690 LDX OPSTKP,B DONT INITIALIZE STACK ON PARAMETER XFER 05 00690
000317 007401 A 691 SOF SWAP OVFL FLAG 05 00691
000320 005344 A 692 PSE4 BXR DROP STACK POINTER FG 05 00692
000321 076000 A 693 STX OPSTKP,B UPDATE STACK POINTER 05 00693
000322 055000 A 694 STA A,X STORE OP IN STACK 05 00694
000323 001001 A 695 JOP PSE8 IGNORE I/O STATUS ON PARAMETER XFER 05 00695
000324 000332 R
000325 005101 A 696 INCR 1 V2 05 00696
000326 056103 A 697 STA INFL,B SET INITIAL ENTRY FLAG V2 05 00697
000327 016106 A 698 LDA IDSTAT,B ERROR 4/ I/O STATUS BAD / 05 00698
000330 001016 A 699 JANZ E4 05 00699
000331 000141 R
000332 014027 A 700 PSE8 LDA PSEAPL GET CALL SEQUENCE ADDRESS 05 00700
000333 056151 A 701 STA RETURN,B SAVE IN DATA BLOCK 05 00701
000334 014026 A 702 LDA PSENDP 05 00702
000335 054014 A 703 STA PSECAL+1 NO-OP CALL SEQUENCE 05 00703
000336 054014 A 704 STA PSECAL+2 05 00704
000337 054014 A 705 STA PSECAL+3 05 00705
000340 054014 A 706 STA PSECAL+4 05 00706
000341 054014 A 707 STA PSECAL+5 05 00707
000342 054014 A 708 STA PSECAL+6 05 00708
000343 001000 A 709 JMP PSENTR+1 XFER PARAMETERS 05 00709
000344 000346 R
000345 000000 A 710 PSENTR ENTR PSEUDO-ENTRY 05 00710
000346 002000 A 711 CALL ASE XFER PARAMETERS 05 00711
000347 000075 E
000350 712 PSECNT BSS 1 PARAMETER COUNT 05 00712
000351 713 PSECAL BSS 7 PARAMETERS 05 00713
000360 001000 A 714 JMP CAR EXIT TO V$RERR V2 05 00714
000361 000041 R
000362 000345 R 715 PSEAPL PZE PSENTR ADDRESS OF PSEUDO-ENTRY 05 00715
000363 005000 A 716 PSENDP NOP NO-OP 05 00716
717 EJECT 05 00717
718 ***** 05 00718
719 * 05 00719
720 * READ / WRITE ( R W T ) * 05 00720
721 * * 05 00721
722 * FUNCTION: TO PROCESS READ AND WRITE CALLS * 05 00722
723 * * 05 00723
724 * ENTRY: NO SPECIAL CONDITIONS * 05 00724
725 * * 05 00725
726 * CALLING SEQUENCE: JPM $RD(OR $WR) * 05 00726
727 * DATA ADDRESS OF UNIT NUMBER * 05 00727
728 * DATA ADDRESS OF FORMAT STRING(0 IF NONE) * 05 00728
729 * DATA ADDRESS OF 'END' RETURN(0 IF NONE) PD 05 00729
730 * DATA ADDRESS OF 'ERR' RETURN(0 IF NONE) PD 05 00730
731 * * 05 00731
732 * EXIT : DIRECT TO PSE * 05 00732
733 * A = OP CODE * 05 00733
734 * B = RETURN ADDRESS * 05 00734
735 * X = PARAMETER COUNT * 05 00735
736 * * 05 00736
737 ***** 05 00737
738 ***** 05 00738
739 ***** 05 00739
740 * READ ENTRY * 05 00740
741 ***** 05 00741
000364 000000 A 742 $RD ENTR $RD 05 00742
000365 006027 A 743 LOBE $RD 05 00743
000366 000364 R
000367 010471 A 744 LDP $RD 05 00744
000370 001000 A 745 JMP RWT1 05 00745
000371 000376 R
746 ***** 05 00746
747 * WRITE ENTRY * 05 00747
748 ***** 05 00748
000372 000000 A 749 $WR ENTR $WR 05 00749
000373 006027 A 750 LOBE $WR 05 00750
000374 000372 R
000375 014066 H 751 LDP $WR 05 00751
000376 005024 A 752 RWT1 TEX POINT X AT CALLING SEQUENCE 05 00752
000377 035002 A 753 LDX A,X GET FORTRAN 'G' FLAG 05 00753
000400 001040 A 754 JXE RWT2 WAS PROGRAM COMPILED BY 'G' COMPILER ? 05 00754
000401 000405 R
000402 030422 A 755 LDX TWO NO. TWO PARAMETERS 05 00755
000403 001000 A 756 JMP PSE EXIT TO PSE 05 00756
000404 000305 R
000405 030465 A 757 RWT2 LDX FIVE 'G' COMPILER OUTPUTS 5 PARAMETERS 05 00757
000406 001000 A 758 JMP PSE EXIT TO PSE 05 00758
000407 000305 R
759 EJECT 05 00759
760 ***** 05 00760
761 * * 05 00761

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762 *      T R A N S F E R   P A R A M E T E R S ( X F R )
763 *
764 *  FUNCTION: TO TRANSFER PARAMETERS FROM AN I/O LIST
765 *
766 *  ENTRY: NO SPECIAL CONDITIONS
767 *
768 *  CALLING SEQUENCE: JMPM $IX(X=1-5)
769 *                    DATA COUNT OF WORDS IN LIST ITEM
770 *
771 *                    $I1: 1-WORD INTEGER/LOGICAL LIST ITEM
772 *                    $I2: 2-WORD INTEGER/LOGICAL LIST ITEM
773 *                    $I3: REAL LIST ITEM
774 *                    $I4: DOUBLE PRECISION LIST ITEM
775 *                    $I5: COMPLEX LIST ITEM
776 *                    $I6: DOUBLE PRECISION INTEGER
777 *
778 *  EXIT : DIRECT TO PSE
779 *        ITMODE = 0 1-WORD INTEGER/LOGICAL
780 *               = 1 2-WORD INTEGER/LOGICAL
781 *               = 2 REAL
782 *               = 3 DOUBLE PRECISION
783 *               = 4 COMPLEX
784 *               = 5 DOUBLE PRECISION INTEGER
785 *
786 * *****
000410 000000 A 788 $I1 ENTR 1-WORD INTEGER/LOGICAL
000411 006027 A 789 LDDE $I1
000412 000410 R
000413 005001 A 790 TZA MODE = 0
000414 001000 A 791 JMP XFR4
000415 000452 R
000416 000000 A 792 $I2 ENTR 2-WORD INTEGER/LOGICAL
000417 006027 A 793 LDDE $I2
000420 000416 R
000421 005101 A 794 INCR 1 MODE = 1
000422 001000 A 795 JMP XFR4
000423 000452 R
000424 000000 A 796 $I3 ENTR REAL
000425 006027 A 797 LDDE $I3
000426 000424 R
000427 010422 A 798 LDA TWO MODE = 2
000430 001000 A 799 JMP XFR4
000431 000452 R
000432 000000 A 800 $I4 ENTR DOUBLE PRECISION
000433 006027 A 801 LDDE $I4
000434 000432 R
000435 010464 A 802 LDA THREE MODE = 3
000436 001000 A 803 JMP XFR4
000437 000452 R
000440 000000 A 804 $I5 ENTR COMPLEX
000441 006027 A 805 LDDE $I5
000442 000440 R
000443 010423 A 806 LDA FOUR MODE = 4
000444 001000 A 807 JMP XFR4
000445 000452 R
000446 000000 A 808 $I6 ENTR DOUBLE PRECISION INTEGER
000447 006027 A 809 LDDE $I6
000450 000446 R
000451 010465 A 810 LDA FIVE
000452 034227 A 812 XFR4 LDX BASP
000453 055116 A 813 STA ITMODE,X STORE ITEM MODE IN DATA BLOCK
000454 010466 A 814 LDA CXF
000455 030422 A 815 LDX TWO 2 PARAMETERS
000456 001000 A 816 JMP PSE1 PROCESS PSEUDO-ENTRY
000457 000307 R

817 *      E J E C
818 * *****
819 *
820 *  R E T U R N   T O   C A L L I N G   P R O G R A M ( X I T )
821 *
822 *  FUNCTION: TO RETURN FROM RUNTIME TO CALLING PROGRAM
823 *
824 *  ENTRY: RETURN = RETURN ADDRESS
825 *
826 *  EXIT : TO CALLING PROGRAM THRU RETURN
827 *
828 * *****
000460 036151 A 830 XIT LDX RETURN,B POINT X AT CALL SEQUENCE
000461 035000 A 831 LDX 0,X GET RETURN ADDRESS IN X
000462 006705 A 832 IJMP 0,X EXIT
000463 000000 A

833 *      E J E C
834 * *****
835 *
836 *  C O N S T A N T S   A N D   B U F F E R S
837 *
838 * *****
000464 000013 A 840 KD11 DATA 11
000465 000014 A 841 KD12 DATA 12
000466 000015 A 842 KD13 DATA 13
000467 000016 A 843 KD14 DATA 14

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000470 000021 A 844 KD17 DATA 17
000471 000022 A 845 KD18 DATA 18
000472 000023 A 846 KD19 DATA 19
847 EJEC
848 *****
849 *
850 * DIRECT ACCESS READ / WRITE *
851 *
852 * FUNCTION: TO PROCESS DIRECT ACCESS READ AND WRITE CALLS *
853 *
854 * CALLING SEQUENCE: CALL R$X (OR W$X) *
855 * DATA UNIT-NUMBER-ADDRESS *
856 * DATA FORMAT ADDRESS (0 IF NONE) *
857 * DATA 0 *
858 * DATA 'END'-ADDRESS (0 IF NONE) *
859 * DATA 'ERR'-ADDRESS (0 IF NONE) *
860 * DATA FCB-ADDRESS *
861 *
862 * EXIT: DIRECT TO PSE *
863 * (A) = OP-CODE *
864 * (B) = RETURN ADDRESS *
865 * (X) = PARAMETER COUNT *
866 *
867 *****
000473 000000 A 869 R$X ENTR READ ENTRY
000474 006027 R 870 LD BE R$X
000475 000473 R
000476 006017 A 871 LD AE CRA
000477 000471 R
000500 001000 A 872 JMP RWX1
000501 000507 R
000502 000000 A 874 W$X ENTR WRITE ENTRY
000503 006027 A 875 LD BE W$X
000504 000502 R
000505 006017 A 876 LD AE CWA
000506 000472 R
000507 030466 A 877 RWX1 LD X SIX
000510 001000 A 878 JMP PSE
000511 000305 R
000512 879 $BUF BSS 120 I/O BUFFER
880 EJEC
881 *****
882 *
883 * DATA BLOCK - FLAGS, VARIABLES, ETC. *
884 *
885 *****
000702 000703 R 887 BASP PZE BASE POINTER TO BASE OF DATA BLOCK
000703 000703 R 888 BASE EQU * BASE ADDRESS OF DATA BLOCK
000704 000706 R 889 VOPSTP BSS 1 OP STACK POINTER FG
000705 000731 R 890 VAACC PZE VACC ADDRESS OF ACCUMULATOR ACC
000706 891 VABSCB PZE VBSCB ADDRESS OF BUFFER SCB
000712 000735 R 892 VACC BSS 4 4-WORD ACCUMULATOR
000713 893 VACHB PZE VCHB ADDRESS OF DECIMAL DIGIT ARRAY
000714 000765 R 894 VABFCB BSS 1 DCB/FCB ADDRESS
000715 000770 R 895 VAFSCB PZE VFSCB ADDRESS OF FORMAT SCB
000716 001012 R 896 VAGPAR PZE VGDRP-1 ADDRESS OF '<' GROUP BLOCK
000717 897 VAISCB PZE VISCB ADDRESS OF LIST ITEM SCB
000720 000253 R 898 VALDC BSS 1 ALDC ENTRY FLAG V2
000721 000703 R 899 VANPJ PZE NPJ ADDRESS OF V$FORTID POP/JUMP V2
000722 001044 R 900 VANRB PZE BASE ADDRESS OF V$FORTID DATA BLOCK V2
000723 901 VABPST PZE VOPSTK+STKSZ ADDRESS OF OP STACK FG
000724 902 VAPBF BSS 1 ADDRESS OF PHYSICAL BUFFER
000725 903 VASCB BSS 1 SCAN BLOCK ADDRESS
000726 001064 R 904 VASFL BSS 1 '*' FLAG
000727 905 VASYSB PZE VSYSDC ADDRESS OF SYSTEM DCB
000730 906 VBEXP BSS 1 BINARY EXPONENT
000731 907 VBFWPT BSS 1 BUFFER WORD POINTER
000735 908 VBSCB BSS 4 BUFFER SCB
000753 909 VCHB BSS 14 DECIMAL DIGIT ARRAY
000754 910 VCHBPT BSS 1 CHB ARRAY POINTER
000755 911 VCHNHD BSS 1 FCB CHAIN HEADER
000756 912 VCOUN BSS 1 COUNTER
000757 913 VCVFL BSS 1 CHARACTER VALIDITY FLAGS
000760 914 VD BSS 1 FRACTIONAL FIELD WIDTH
000761 915 VDEXP BSS 1 DECIMAL EXPONENT
000762 916 VDT BSS 1 WORKING FRACTIONAL FIELD WIDTH
000763 000000 A 917 VEDEXP BSS 1 EXPLICIT DECIMAL EXPONENT
000764 918 VERN DATA 0 ERROR NUMBER
000765 919 VFBLKY BSS 1 FIELD DESCRIPTOR LETTER KEY
000771 920 VFSCB BSS 4 FORMAT STRING SCB
001002 921 VGDRP BSS 9 '<' GROUP DYNAMIC REPEAT COUNT
001003 922 VIDEXP BSS 1 IMPLICIT DECIMAL EXPONENT
001004 923 VIFW BSS 1 INTEGER FIELD WIDTH
001005 000001 A 924 VIIBSZ BSS 1 INDIVIDUAL ITEM BYTE SIZE
001006 925 VIISZ DATA 1 INDIVIDUAL ITEM WORD SIZE
001007 926 VINFL BSS 1 INITIALIZE FLAG V2
001010 927 VIODCN BSS 1 I/O CONTROL WORD
001011 000000 A 928 VIOLNK BSS 1 IOLINK CONTROL WORD
001012 929 VIDSTA DATA 0 I/O STATUS
001016 930 VISCB BSS 4 LIST ITEM SCB
931 VITENA BSS 1 ADDRESS OF LIST ITEM

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001017		932	VITEMW	BSS	1		COUNT OF WORDS REMAINING IN ITEM	05	00932
001020		933	VITMIN	BSS	1		LIST ITEM WORD INCREMENT	05	00933
001021		934	VITMOD	BSS	1		LIST ITEM MODE	05	00934
001022		935	VLSTF	BSS	1		LIST DATA XFER FLAG	05	00935
001023	000000	A	936	VLNKN	DATA	0	FCB CHAIN LINK COUNT	05	00936
001024			937	VLRECN	BSS	1	LOGICAL RECORD NUMBER	05	00937
001025			938	VLRSZ	BSS	1	LOGICAL RECORD SIZE	05	00938
001026			939	VLWRC	BSS	1	LOGICAL RECORD REMAINING WORD COUNT	05	00939
001027			940	VMDV	BSS	1	MULTIPLY OVERFLOW SWITCH	05	00940
001030			941	VN	BSS	1	H/T/X FIELD WIDTH	05	00941
001031			942	VNFF	BSS	1	NUMERIC FORMAT FIELD	05	00942
001032			943	VOPSTK	BSS	STKSZ	OP STACK	05	00943
001044			944	VPARLV	BSS	1	FORMAT 'C' GROUP LEVEL COUNT	05	00944
001045			945	VPBRC	BSS	1	PHYSICAL BUFFER RECORD COUNT	05	00945
001046			946	VPBSZ	BSS	1	PHYSICAL BUFFER SIZE	05	00946
001047			947	VPBWC	BSS	1	PHYSICAL BUFFER REMAINING WORD COUNT	05	00947
001050			948	VPRECN	BSS	1	PHYSICAL RECORD NUMBER	05	00948
001051			949	VPRLIN	BSS	1	PREVIOUS LINK OF FCB CHAIN	05	00949
001052			950	VPTFL	BSS	1	'.' POINT FLAG	05	00950
001053			951	VQFL	BSS	1	QUOTE FLAG	05	00951
001054			952	VRETUR	BSS	3	RETURN ADDR/'END' ADDR/'ERR' ADDR	PD	05 00952
001057			953	VRWFL	BSS	1	FLAG WORD	V2	05 00953
001060			954	VS	BSS	1	SCALE FACTOR	05	00954
001061			955	VSCF	BSS	1	SCALE FACTOR FLAG	05	00955
001062			956	VSGFL	BSS	1	'-' SIGN FLAG	05	00956
001063			957	VSVREC	BSS	1	SAVE RECORD NO	05	00957
001064	000000	A	958	VSYSDC	DATA	0,\$BUF,0	SYSTEM DCB	05	00958
001065	000512	R							
001066	000000	A							
001067			959	VTEMP	BSS	1	TEMP STORE	05	00959
001070			960	VTEMP1	BSS	1	TEMP STORE	05	00960
001071			961	VTERM	BSS	1	PRODUCT TERM	05	00961
001072			962	VUNIT	BSS	1	I/O UNIT NUMBER	05	00962
001073			963	VW	BSS	1	FIELD WIDTH	05	00963
001074			964	VWT	BSS	1	WORKING VALUE OF W	05	00964
001075	000000	A	965	VXFFL	DATA	0	PARAMETER XFER ENABLE FLAG	05	00965
001076			966	VXFL	BSS	1	EXPONENT FIELD NON-BLANK FLAG	05	00966
001077			967	VXFW	BSS	1	EXPONENT FIELD WIDTH	05	00967
001100			968	VXSG	BSS	1	EXPONENT SIGN FLAG	05	00968
001101			969	VZFW	BSS	1	LEADING ZERO FIELD WIDTH	05	00969
001102	000260	A	970		DATA	0260	ASCII ZERO	V2	05 00970
001103	000016	A	971		DATA	14	DECIMAL 14	V2	05 00971
001104	000170	A	972		DATA	120	DECIMAL 120	V2	05 00972
001105	000240	A	973		DATA	0240	ASCII BLANK CHARACTER	V2	05 00973
001106	120240	A	974		DATA	' '	ASCII BLANK WORD	V2	05 00974
	001107	R	975	VZZZ	EQU	*	END OF DATA BLOCK	05	00975
			976	END				05	00976

ENTRY NAMES

000016	R	\$BA	000124	R	\$DQ	000024	R	\$EN	000132	R	\$EQ
000410	R	\$I1	000416	R	\$I2	000424	R	\$I3	000432	R	\$I4
000440	R	\$I5	000446	R	\$I6	000000	R	\$ND	000364	R	\$RD
000032	R	\$RE	000372	R	\$NR	000073	R	IOCHK	000473	R	\$RX
000115	R	V\$CLOS	000054	R	V\$CLOS	000276	R	V\$OPEN	000267	R	V\$OPNB
000502	R	W\$X									
EXTERNAL NAMES											
000153	E	\$EE	000347	E	\$SE	000000	E	POFCB	000000	E	V\$DSTB
000050	E	V\$EXEC	000000	E	V\$IDC	000000	E	V\$IOST	000046	E	V\$RER1
000053	E	V\$RERN	000052	E	V\$RERR						
SYMBOLS											
000016	R	\$BA	000512	R	\$BUF	000124	R	\$DQ	000132	E	\$EE
000024	R	\$EN	000132	R	\$EQ	000410	R	\$I1	000416	R	\$I2
000424	R	\$I3	000432	R	\$I4	000440	R	\$I5	000446	R	\$I6
000000	R	\$ND	000364	R	\$RD	000032	R	\$RE	000347	E	\$SE
000372	R	\$NR	000001	A	ABCC	000002	A	ABSCB	000003	A	ACC
000007	A	ACHB	000010	A	ADFCB	000011	A	AFSCB	000012	A	AGPAR
000110	A	AIBUF	000013	A	AISCB	000027	A	ALBF	000014	A	ALOC
000015	A	ANPOJ	000016	A	ANRB	000017	A	AOPSTK	000020	A	APBF
000021	A	ASCB	000000	A	ASET	000022	A	ASFL	000023	A	ASYSDC
000036	R	AUX2	000002	A	B	000703	F	BASE	000702	R	BASP
000030	A	BCHAR	000031	A	BCODE	000024	A	BEXP	000010	A	BF
000026	A	BFPT	000025	A	BFWPT	000472	A	BM17	000422	A	BS1
000433	A	BS10	000425	A	BS4	000431	A	BS8	000432	A	BS9
000041	R	CAR	000053	R	CARNF	000437	A	CBK	000466	R	CCB
000465	R	CCL	000425	A	CDC	000424	A	CEF	000470	R	CEN
000421	A	CEP	000422	A	CEX	000032	A	CHB	000050	A	CHBPT
000063	R	CHK1	000077	R	CHK4	000051	A	CHNHDR	000102	R	CIL
000106	R	CILCAL	000464	A	CID	000472	A	COB	000467	R	CDP
000052	A	COUNT	000471	R	CRA	000423	A	CRB	000471	A	CRD
000470	A	CRW	000465	A	CTR	000053	A	CVFL	000472	R	CWP
000464	R	CHR	000420	A	CXC	000466	A	CXF	000054	A	D
000055	A	DEXP	000056	A	DT	000144	R	E1	000143	R	E2
000142	R	E3	000141	R	E4	000136	R	EDC1	000057	A	EDEXP
000424	A	EIGHT	000060	A	ERN	000064	A	FCHAR	000065	A	FCODE
000061	A	FDLKEY	000465	A	FIVE	000062	A	FMPT	000423	A	FOUR
000063	A	FRMT	000062	A	FRPT	000006	A	GDRPC	000071	A	GFRPT
000074	A	GSRPC	000111	A	ICHAR	000077	A	IDEXP	000100	A	IFW
000101	A	IIBSZ	000102	A	IIBSZ	000103	A	INFL	000154	R	IOC
000171	R	IOCCW	000172	R	IOCDF	000230	R	IOCEDD	000220	R	IOCEOF
000244	R	IOCCER1	000237	R	IOCCERR	000073	R	IOCHK	000166	R	IOCID
000252	R	IOCMSK	000164	A	IOCONT	000206	R	IOCST	000105	A	IOLNK
000247	R	IDRETR	000106	A	IDSTAT	000113	A	ITEMAD	000114	A	ITEMWC

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000115 A ITMINC 000116 A ITMODE 000464 R KD11 000465 R KD12
000466 R KD13 000467 R KD14 000472 A KD15 000425 A KD16
000470 R KD17 000471 R KD18 000472 R KD19 000300 A LC
000000 A LF 000117 A LISTFL 000120 A LNKCNT 000121 A LRECND
000122 A LRSZ 000123 A LRWC 000124 A MOV 000420 A MT
000125 A N 000126 A NFF 000470 A NINE 000253 R NPJ
000262 R NPOPJT 000421 A ONE 000000 A DPSTKP 000141 A PARLV
000142 A PBRC 000143 A PBSZ 000144 A PBWC 000000 E POFCE
000145 A PRECND 000146 A PRLINK 000305 R PSE 000307 R PSE1
000320 R PSE4 000332 R PSE3 000362 R PSEAPL 000351 R PSECAL
000350 R PSECNT 000363 R PSENDP 000345 R PSENTR 000147 A PTFL
000150 A QFL 000125 A R 000473 R R$X 000151 A RETURN
000154 A RWFL 000376 R RWT1 000405 R RWT2 000507 R RUX1
000155 A S 000156 A SCF 000467 A SEVEN 000157 A SGFL
000466 A SIX 000012 A STKSZ 000160 A SVRECND 000161 A SYSBSZ
000164 A TEMP 000165 A TEMP1 000471 A TEN 000166 A TERM
000464 A THREE 000422 A TWO 000167 A UNIT 000166 A UNITS
000414 A V$BVN 000115 R V$CLOS 000054 R V$CLSB 000301 A V$CPL
000000 E V$DSTB 000050 E V$EXEC 000000 E V$IDC 000000 E V$IGST
000276 R V$DPEN 000267 R V$DPNB 000046 E V$RER1 000053 E V$RERN
000052 E V$RERR 000704 R VAACC 000705 R VABSCB 000706 R VACC
000712 R VACHB 000713 R VADFCB 000714 R VAFSCB 000715 R VAGPAR
000716 R VAISCB 000717 R VALDC 000720 R VANPOJ 000721 R VANRB
000722 R VADPST 000723 R VAPBF 000724 R VASCB 000725 R VASFL
000726 R VASYSD 000727 R VBEXP 000730 R VBFWPT 000731 R VBSCB
000735 R VCHB 000753 R VCHEPT 000754 R VCHNHD 000755 R VCDUN
000756 R VCVFL 000757 R VD 000760 R VDEXP 000761 R VDT
000762 R VEDEXP 000763 R VERN 000764 R VFDLKY 000765 R VFSCB
000771 R VGDRP 001002 R VIDEXP 001003 R VIFW 001004 R VIIBSZ
001005 R VIINSZ 001006 R VINFL 001007 R VIDCON 001010 R VIDLNK
001011 R VIDSTA 001012 R VISCE 001016 R VITEMA 001017 R VITEMW
001020 R VITMIN 001021 R VITMOD 001022 R VLISTF 001023 R VLNKCN
001024 R VLRECND 001025 R VLRSZ 001026 R VLRWC 001027 R VMOV
001030 R VN 001031 R VNFF 001032 R VDPSTK 000703 R VDPSTP
000001 A VORTEX 001044 R VPARLV 001045 R VPBRC 001046 R VPBSZ
001047 R VPBUC 001050 R VPRECND 001051 R VPRLIN 001052 R VPTFL
001053 R VQFL 001054 R VRETUR 001057 R VRWFL 001060 R VS
001061 R VSCF 001062 R VSGFL 001063 R VSVREC 001064 R VSYSDC
001067 R VTEMP 001070 R VTEMP1 001071 R VTERM 001072 R VUNIT
001073 R VW 001074 R VNT 001075 R VXFFL 001076 R VXFL
001077 R VXFW 001100 R VXSG 001101 R VZFW 001107 R VZZZ
000170 A W 000502 R W$X 000011 A WR 000171 A WT
000001 A X 000172 A XFFL 000173 A XFL 000452 R XFR4
000174 A XFW 000460 R XIT 000175 A XSG 000420 A ZERO
000176 A ZFW 000204 A ZZZ

```

0 ERRORS ASSEMBLY COMPLETE

```

292 $BA 25 293
879 $BUF 418 958
471 $DQ 39 472
0 $EE 54 508
299 $EN 26 300
478 $EQ 40 479
788 $I1 29 789
792 $I2 30 793
796 $I3 31 797
800 $I4 32 801
804 $I5 33 805
808 $I6 34 809
255 $ND 38 257
742 $RD 36 743
306 $RE 27 307
0 $SE 55 396 711
749 $WR 37 750
134 ADFCB 535
143 ADPSTK 259 688
68 ASET 549 550
309 AUX2 295 302
69 B 228 230 236 237 258 259 260 389 392
414 416 416 500 501 502 503 505 535 538
539 542 543 552 560 569 577 580 688
690 693 697 698 701 830
888 BASE 130 131 132 133 134 135 136 137 138
139 140 141 142 143 144 145 146 147
148 149 150 151 152 153 154 155 156
157 158 159 160 161 162 163 164 165
166 167 168 169 172 173 174 175 176
177 178 179 180 181 182 183 184 185
186 187 188 189 190 191 192 193 194
195 196 197 198 199 200 201 203 204
205 206 207 208 209 210 211 212 213
215 216 217 218 219 220 221 222 887
900
887 BASP 256 387 547 554 559 568 576 687 812
70 BF 550
73 BM17 82
75 BS4 83
76 BS8 563
327 CAR 262 609 714
341 CARNF 333

```



0	VSDSTB	63				
0	VSEEXEC	96	336			
0	VSPORT	11				
0	VSIQC	37				
0	VSIQST	58				
634	VSDPEN	46	655			
631	VSDPNB	47	632			
0	VSRER1	60	331	334		
0	VSRERN	61	341			
0	VSRERR	59	340			
890	VACC	130				
891	VABSCB	131				
892	VACC	132	890			
893	VACHB	133				
894	VADFCB	134				
895	VAFSCB	135				
896	VAGPAR	136				
897	VAISCB	138				
898	VALDC	140				
899	VANPOJ	141				
900	VANRB	142				
901	VADPST	143				
902	VAPBF	144				
903	VASCB	145				
904	VASFL	146				
905	VASYSD	147				
906	VBEXP	150				
907	VBFWPT	152				
908	VBSCB	139	148	149	151	891
909	VCHB	154	893			
910	VCHBPT	155				
911	VCHNHD	156				
912	VCDUN	157				
913	VCVFL	158				
914	VD	159				
915	VDEXP	160				
916	VDT	161				
917	VEDEXP	162				
918	VERN	163				
919	VFDLKY	166				
920	VFSCB	153	164	165	167	168
921	VGDRP	169	896			895
922	VIDEXP	173				
923	VIFW	174				
924	VIIBSZ	175				
925	VIIWSZ	176				
926	VINFL	177				
927	VIOCON	178				
928	VIDLNK	179				
929	VIOSTA	180				
930	VISCB	137	172	897		
931	VITEMA	181				
932	VITEMW	182				
933	VITMIN	183				
934	VITMOD	184				
935	VLISTF	185				
936	VLNKCN	186				
937	VLRECN	187				
938	VLRSS	188				
939	VLRWC	189				
940	VMOV	190				
941	VN	191				
942	VNFF	192				
943	VOPSTK	901				
889	VOPSTP	193				
1	VORTEX	328	335	337		
944	VPARLV	194				
945	VPBRC	195				
946	VPBSZ	196				
947	VPBWC	197				
948	VPRECN	198				
949	VPRLIN	199				
950	VPTFL	200				
951	VQFL	201				
952	VRETUR	203				
953	VRWFL	204				
954	VS	205				
955	VSCF	206				
956	VSGFL	207				
957	VSVREC	208				
958	VSYSDC	209	905			
959	VTEMP	210				
960	VTEMP1	211				
961	VTERM	212				
962	VUNIT	213				
963	VW	215				
964	VWT	216				
965	VXFFL	217				
966	VXFL	218				
967	VXFW	219				
968	VXSG	220				





```

000001 A 1 VORTEX SET 1 PUT LAST FOR VORTEX V2 03 00001
2 * THIS IS A COPYRIGHTED PROGRAM. COPYRIGHT 1972 BY VARIAN DATA MACHIVE 03 00002
3 * 03 00003
4 * V.D.M. PART NO. 92L0505-001B 03 00004
5 * 03 00005
6 * MODIFIED 5/25/75 * 03 00006
7 * 03 00007
8 * STOPAUS 03 00008
9 * 03 00009
10 * 03 00010
11 * TITLE STOPAUS 03 00011
12 ***** 03 00012
13 * 03 00013
14 * STOP / PAUSE PROCESSOR ( STP ) * 03 00014
15 * * 03 00015
16 * FUNCTION: TO PROCESS THE FORTRAN SOURCE STATEMENTS: * 03 00016
17 * * 03 00017
18 * STOP N * 03 00018
19 * PAUSE N * 03 00019
20 * * 03 00020
21 * (WHERE N IS A CHARACTER/DIGIT STRING) * 03 00021
22 * (OR N IS ABSENT) * 03 00022
23 * * 03 00023
24 * ENTRY: $ST STOP * 03 00024
25 * SPA PAUSE * 03 00025
26 * * 03 00026
27 * CALLING SEQUENCE STANDARD FORTRAN * 03 00027
28 * JMPM $ST (OR $PA) * 03 00028
29 * DATA DIGIT-1(13-8), DIGIT-2(7-2), DIGIT-3(1-0) * 03 00029
30 * DATA DIGIT-3(15-12), DIGIT-4(11-6), DIGIT-5(5-0) * 03 00030
31 * * 03 00031
32 * CALLING SEQUENCE LEVEL-G FORTRAN * 03 00032
33 * JMPM $ST (OR $PA) * 03 00033
34 * DATA -1 * 03 00034
35 * DATA 2-CHARACTERS MAY BE ABSENT * 03 00035
36 * * 03 00036
37 * * 03 00037
38 * * 03 00038
39 * DATA 0 REQUIRED * 03 00039
40 * * 03 00040
41 * EXIT : MESSAGE OUTPUT TO SO: 'TASK NAME STOP(OR PAUSE) N ' * 03 00041
42 * STOP : STP EXITS TO RTE VIA 'EXIT' MACRO * 03 00042
43 * PAUSE: STP EXITS TO RTE VIA 'SUSPEND' MACRO * 03 00043
44 * * 03 00044
45 ***** 03 00045
46 ***** 03 00046
47 ***** 03 00047
48 * ENTRIES * 03 00048
49 ***** 03 00049
50 NAME SER DUMMY ERROR ENTRY 03 00050
51 NAME $PA PAUSE ENTRY 03 00051
52 NAME $ST STOP ENTRY 03 00052
53 ***** 03 00053
54 ***** 03 00054
55 * EXTERNALS * 03 00055
56 ***** 03 00056
57 EXT V$EXEC VORTEX RTE SERVICE ENTRY 03 00057
58 EXT V$IDC VORTEX IDC ENTRY 03 00058
59 EXT V$IDST VORTEX IDC STATUS ENTRY 03 00059
60 ***** 03 00060
61 ***** 03 00061
62 * SET BLOCK * 03 00062
63 ***** 03 00063
000300 A 64 LC EQU 0300 03 00064
000300 A 65 V$CTL EQU LC ADDRESS OF TIDB 03 00065
000420 A 66 MT SET 0420 03 00066
000470 A 67 NINE EQU MT+40 03 00067
000472 A 68 BM17 EQU MT+42 017 03 00068
000002 A 69 B SET 2 03 00069
000001 A 70 X SET 1 X-REGISTER 03 00070
71 ***** 03 00071
72 ***** 03 00072
73 * ERROR ENTRY * 03 00073
74 ***** 03 00074
000000 000000 A 75 $ER ENTR 03 00075
000001 001000 A 76 JMP* $ER 03 00076
000002 100000 R
77 ***** 03 00077
78 * PAUSE ENTRY * 03 00078
79 ***** 03 00079
000003 000000 A 80 $PA ENTR 03 00080
000004 005001 A 81 TZA SET A=0 TO FLAG PAUSE ENTRY 03 00081
000005 001000 A 82 JMP #+4 03 00082
000006 000011 R
83 ***** 03 00083
84 * STOP ENTRY * 03 00084
85 ***** 03 00085
000007 000000 A 86 $ST ENTR 03 00086
000010 005301 A 87 DECR 1 SET A=-1 TO FLAG STOP ENTRY 03 00087
000011 054165 A 88 STA STPFL SAVE ENTRY FLAG 03 00088
89 ***** 03 00089
90 * LOAD TASK NAME * 03 00090
91 ***** 03 00091
92 IFF VORTEX-2 V2 03 00092
93 GOTO 1 V2 03 00093

```

Address	Hex	Mode	Op	Opnd	Comment	Line	Label
000012	030300	A	LDX	V\$CTL	POINT X AT TIDB	94	
000013	015022	A	LDA	18,X		95	
000014	054173	A	STA	\$BUF+1		96	
000015	015023	A	LDA	19,X		97	
000016	054172	A	STA	\$BUF+2		98	
000017	015024	A	LDA	20,X		99	
000020	054171	A	STA	\$BUF+3		100	
			101	1	CONT		
			102		IFF	VORTEX-1	
			103		GOTO	1	
			104		LDA	V\$CTL	
			105		ADDI	18	GET TIDB ADDRESS
			106		STA	STP2	GET TASK NAME ADDRESS
			107		PASS	3,0,\$BUF+1	STORE IN PASS CALL
			108	STP2	EQU	*-2	MOVE TASK NAME FROM TIDB
			109	1	CONT		
			110		*****		
			111		* LOAD 'STOP/PAUSE' *		
			112		*****		
000021	014156	A	113	LDA	STPMSG		
000022	124154	A	114	ADD	STPFL		
000023	005014	A	115	TAX			POINT X AT STRING
000024	015000	A	116	LDA	0,X		
000025	054166	A	117	STA	\$BUF+5		
000026	015002	A	118	LDA	2,X		
000027	054165	A	119	STA	\$BUF+6		
000030	015004	A	120	LDA	4,X		
000031	054164	A	121	STA	\$BUF+7		
			122		*****		
			123		* TRANSFER MESSAGE *		
			124		*****		
000032	005001	A	125	TZA			
000033	144143	A	126	SUB	STPFL		
000034	004242	A	127	LRLA	2		
000035	006120	A	128	ADDI	\$PA		
000036	000003	R					
000037	005014	A	129	TAX			
000040	035000	A	130	LDX	0,X		POINT X AT CALL SEQ
000041	024027	A	131	LDB	STP6+1		
000042	015000	A	132	LDA	0,X		
000043	005111	A	133	IAR			
000044	001016	A	134	JANZ	STP7		STANDARD FORTRAN
000045	000125	R					
000046	005144	A	135	IXR			G-LEVEL FORTRAN
000047	015000	A	136	STP3	LDA	0,X	TRANSFER MESSAGE DATA
000050	005144	A	137	IXR			
000051	001010	A	138	JAZ	STP5		
000052	000066	R					
000053	056000	A	139	STA	0,B		
000054	005122	A	140	IBR			
000055	005021	A	141	TBA			
000056	006140	A	142	SUBI	STPDTX		
000057	000253	R					
000060	001016	A	143	JANZ	STP3		MORE ROOM IN BUFFER
000061	000047	R					
000062	015000	A	144	STP4	LDA	0,X	PASS CHARACTERS OVER 63
000063	005144	A	145	IXR			
000064	001016	A	146	JANZ	STP4		
000065	000062	R					
000066	074035	A	147	STP5	STX	STPPX+1	EXIT ADDRESS
000067	005021	A	148	TBA			
000070	006140	A	149	STP6	SUBI	STPDT	
000071	000220	R					
000072	120470	A	150	ADD	NINE		
000073	054100	A	151	STA	STPDCB		WORDS TO OUTPUT
			152	STPW	WRITE	STPDCB,3,0,1	WRITE/SD/WAIT/ASCII
000074	006505	A					
000075	000404	A					
000076	100000	A					
000077	010403	A					
000100	000174	R					
000101	000000	A					
000102	000000	A					
			153	STAT	STPW,STPX,STPX,STPX,STPX		
000103	006505	A					
000104	000373	A					
000105	000074	R					
000106	000115	R					
000107	000115	R					
000110	000115	R					
000111	000115	R					
000112	014064	A	154	LDA	STPFL		
000113	001010	A	155	JAZ	STPP		
000114	000120	R					
			156	STPX	EXIT		EXIT ON STOP
000115	006505	A					
000116	000406	A					
000117	000200	A					
			157	STPP	SUSPND	0	SUSPEND ON PAUSE
000120	006505	A					
000121	000406	A					

V2  
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V2

03 00094  
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03 00099  
03 00100  
03 00101  
03 00102  
03 00103  
03 00104  
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03 00109  
03 00110  
03 00111  
03 00112  
03 00113  
03 00114  
03 00115  
03 00116  
03 00117  
03 00118  
03 00119  
03 00120  
03 00121  
03 00122  
03 00123  
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03 00125  
03 00126  
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03 00141  
03 00142  
03 00143  
03 00144  
03 00145  
03 00146  
03 00147  
03 00148  
03 00149  
03 00150  
03 00151  
03 00152  
03 00153  
03 00154  
03 00155  
03 00156  
03 00157

```

000122 000300 A
000123 001000 A 158 STPPX JMP ** RETURN TO CALLING PROGRAM 03 00158
000124 100123 R
000125 015000 A 159 STP7 LDA 0,X 03 00159
000126 002000 A 160 CALL STP8 03 00160
000127 000152 R
000130 054067 A 161 STA STPDT DIGITS 1,2 03 00161
000131 015000 A 162 LDA 0,X 03 00162
000132 025001 A 163 LDB 1,X 03 00163
000133 004452 A 164 LLRL 10 03 00164
000134 002000 A 165 CALL STP8 03 00165
000135 000152 R
000136 054062 A 166 STA STPDT+1 DIGITS 3,4 03 00166
000137 015001 A 167 LDA 1,X 03 00167
000140 004206 A 168 ASLA 6 03 00168
000141 002000 A 169 CALL STP8 03 00169
000142 000152 R
000143 054056 A 170 STA STPDT+2 DIGIT 5 03 00170
000144 005144 A 171 IXR 03 00171
000145 005144 A 172 IXR 03 00172
000146 006020 A 173 LDBI STPDT+3 03 00173
000147 000223 R
000150 001000 A 174 JMP STP5 03 00174
000151 000066 R
000152 000000 A 175 STP8 ENTR MAKE DIGIT CODE 03 00175
000153 004546 A 176 LLSR 6 03 00176
000154 006150 A 177 ANAI 077 03 00177
000155 000077 A
000156 003010 A 178 XAZ STP9 -17 TO MAKE SPACE 03 00178
000157 000172 R
000160 124012 A 179 ADD STP9+1 '0'-1 03 00179
000161 004152 A 180 LSRB 10 03 00180
000162 004460 A 181 LLRL 16 (A):(B) 03 00181
000163 003010 A 182 XAZ STP9 03 00182
000164 000172 R
000165 124005 A 183 ADD STP9+1 '0'-1 03 00183
000166 004250 A 184 LLRL 8 03 00184
000167 004470 A 185 LLRL 24 03 00185
000170 001000 A 186 JMP* STP8 EXIT (A)=2-ASCII DIGITS 03 00186
000171 100152 R
000172 140472 A 187 STP9 SUB BM17 03 00187
000173 000257 A 188 DATA 0257 '0'-1 03 00188
189 *****
190 * CONSTANTS/VARIABLES/BUFFERS * 03 00189
191 ***** 03 00190
000174 000044 A 192 STPDCB DATA 36 D.C.B 03 00192
000175 000207 R 193 PZE $BUF 03 00193
000176 000005 A 194 DATA 5 03 00194
000177 000000 R 195 STPFL BSS 1 STOP/PAUSE FLAG 03 00195
000200 000202 R 196 STPMSG PZE *E 03 00196
000201 151724 A 197 DATA 'STPAOPUS E' 03 00197
000202 150301 A
000203 147720 A
000204 152723 A
000205 120240 A
000206 142640 A
000207 120240 A 198 $BUF DATA ' ' 03 00198
000210 000210 R 199 BSS 3 TASK NAME 03 00199
000213 120240 A 200 DATA ' ' 03 00200
000214 000214 R 201 BSS 3 STOP/PAUSE STRING 03 00201
000217 120240 A 202 DATA ' ' 03 00202
000220 000220 R 203 STPDT BSS 36+$BUF-* MESSAGE STRING 03 00203
000220 000253 R 204 STPDTX EQU * 03 00204
205 END 03 00205

```

```

ENTRY NAMES
000000 R $ER 000003 R $PA 000007 R $ST
EXTERNAL NAMES
000000 E V$EXEC 000000 E V$IDC 000000 E V$IDST
SYMBOLS
000207 R $BUF 000000 R $ER 000003 R $PA 000007 R $ST
000002 A B 000472 A BM17 000300 A LC 000420 A MT
000470 A NINE 000047 R STP3 000062 R STP4 000066 R STP5
000070 R STP6 000125 R STP7 000152 R STP8 000172 R STP9
000174 R STPDCB 000220 R STPDT 000253 R STPDTX 000177 R STPFL
000200 R STPMSG 000120 R STPP 000123 R STPPX 000074 R STPW
000115 R STPX 000300 A V$CTL 000000 E V$EXEC 000000 E V$IDC
000000 E V$IDST 000001 A VORTEX 000001 A X
0 ERRORS ASSEMBLY COMPLETE

```

```

198 $BUF 96 98 100 107 117 119 121 193 203
75 $ER 50 76
80 $PA 51 128
86 $ST 52
69 B 139
68 BM17 187
64 LC 65
66 MT 67
67 NINE 150
0 STPAU 11
108 STP2 106

```

136	STP3	143								
144	STP4	146								
147	STP5	133	174							
148	STP6	131								
159	STP7	134								
173	STP8	160	165	169	186					
187	STP9	178	179	182	183					
192	STP10	151	152							
203	STP11	149	161	166	170	173				
204	STP12	148								
195	STP13	89	114	126	154					
136	STP14	113								
157	STP15	115								
158	STP16	147								
152	STP17	153								
156	STP18	153	153	153	153					
65	STP19	104	104							
8	STP20	57								
8	STP21	52								
8	STP22	54								
1	STP23	92	102							
70	STP24	97	99	116	118	120	130	132	136	
	STP25	144	159	162	163	167				

```

1 ***** 01 00001
2 * 01 00002
3 * RUN TIME DIRECT ACCESS I/O 01 00003
4 * 01 00004
5 * FUNCTION: TO PROVIDE THE NECESSARY INTERFACE BETWEEN USER MODULES 01 00005
6 * USING DIRECT ACCESS I/O AND THE RUN-TIME I/O PACKAGES 01 00006
7 * 01 00007
8 ***** 01 00008
9 TITLE V$FORTDA 01 00009
10 * E N T R I E S 01 00010
11 NAME $DX DEFINE FILE 01 00011
12 NAME $FX FIND 01 00012
13 NAME $RX READ - DIRECT ACCESS 01 00013
14 NAME $WX WRITE - DIRECT ACCESS 01 00014
15 * E X T E R N A L S 01 00015
16 EXT $EE ERROR PROCESSOR 01 00016
17 EXT $EX DIRECT ACCESS READ 01 00017
18 EXT $SE PARAMETER TRANSFER 01 00018
19 EXT $SX 01 00019
20 EJECT 01 00020
21 S E T B L O C K * 01 00021
22 X SET 1 01 00022
23 B SET 2 B-REGISTER 01 00023
24 MT SET 0420 MASK TABLE 01 00024
25 BR15 SET MT+32 077777 01 00025
26 NEG SET MT+33 -1 01 00026
27 RHW SET MT+35 0377 01 00027
28 ONE SET MT+1 1 01 00028
29 TWO SET MT+2 2 01 00029
30 THREE SET MT+36 3 01 00030
31 FOUR SET MT+3 4 01 00031
32 FIVE SET MT+37 5 01 00032
33 SIX SET MT+38 6 01 00033
34 SEVEN SET MT+39 7 01 00034
35 TEN SET MT+41 10 01 00035
36 EJECT 01 00036
37 ***** 01 00037
38 * D E F I N E F I L E ( $ D X ) 01 00038
39 * 01 00039
40 * CALL $DX 01 00040
41 * DATA RECORD-SET-NUMBER 01 00041
42 * DATA NUMBER-OF-RECORDS 01 00042
43 * DATA RECORD-SIZE 01 00043
44 * DATA TYPE 'F','L','U' 01 00044
45 * DATA ADDRESS OF ASSOCIATED VARIABLE 01 00045
46 * INITIALIZED TO 2-ASCII CHARACTERS - 'PN' 01 00046
47 * P = PROTECT CODE 01 00047
48 * N = LOGICAL UNIT (PARTITION) NUMBER 01 00048
49 * ('A' = 20, 'B' = 21, ETC.) 01 00049
50 ***** 01 00050
51 $DX ENTR 01 00051
52 LDAE $DX 01 00052
53 TAX 01 00053
54 ADD FIVE 01 00054
55 STAE $DX SET EXIT 01 00055
56 LDA 0,X 01 00056
57 SUBI 100 01 00057
58 JAP ER1 NUMBER TO LARGE 01 00058
59 LDBI BUF 01 00059
60 DE1 LDA 0,B 01 00060
61 JAN DE2 NOT IN TABLE 01 00061
62 SUB 0,X 01 00062
63 JAZ* $DX EXIT IF MATCH 01 00063
64 TBA 01 00064
65 ADDI 17 01 00065
66 TAB 01 00066
67 JMP DE1 01 00067
68 DE2 TBA 01 00068
69 SUBI BUFX 01 00069
70 JAZ* $DX BUFFER FULL 01 00070
71 LDA 0,X 01 00071
72 STA 0,B REFERENCE NUMBER 01 00072
73 LDA 1,X 01 00073
74 STA 1,B NUMBER OF RECORDS 01 00074
75 LDA 2,X 01 00075
76 STA 4,B RECOR D SIZE(BYTES) 01 00076
77 LDA 3,X 01 00077
78 SUBI 'F' 01 00078

```

```

000001 A
000002 A
000420 A
000460 A
000461 A
000463 A
000421 A
000422 A
000464 A
000423 A
000465 A
000466 A
000467 A
000471 A

```

```

000000 000000 A
000001 006017 A
000002 000000 R
000003 005014 A
000004 120465 A
000005 006057 A
000006 000000 R
000007 015000 A
000010 006140 A
000011 000144 A
000012 001002 A
000013 000345 R
000014 006020 A
000015 000354 R
000016 016000 A
000017 001004 A
000020 000032 R
000021 145000 A
000022 001010 A
000023 100000 R
000024 005021 A
000025 006120 A
000026 000021 A
000027 005012 A
000030 001000 A
000031 000016 R
000032 005021 A
000033 006140 A
000034 000627 R
000035 001010 A
000036 100000 R
000037 015000 A
000040 056000 A
000041 015001 A
000042 056001 A
000043 015002 A
000044 056004 A
000045 015003 A
000046 006140 A

```



000170	006030	A	158	LDXI	\$FX			01	00158	
000171	000162	R								
000172	002000	A	159	CALL	ENT			01	00159	
000173	000313	R								
000174	001000	A	160	JMP*	\$FX	FIND DOES NOTHING		01	00160	
000175	100162	R								
			161	EJEC				01	00161	
			162	*****					01	00162
			163	*				01	00163	
			164	*	READ ENTRY (\$RX)			01	00164	
			165	*				01	00165	
			166	*	CALL	\$RX	CALLING STRUCTURE	01	00166	
			167	*	PZE		ADDRESS OF RECORD-SET-NUMBER	01	00167	
			168	*	PZE		ADDRESS OF RECORD POSITION	01	00168	
			169	*	PZE		ADDRESS OF FORMAT (0 IF NONE)	01	00169	
			170	*	PZE		0 IF END/ERR ADDRESSES PRESENT	01	00170	
			171	*	PZE		ADDRESS OF END RETURN (0 IF NONE)	01	00171	
			172	*	PZE		ADDRESS OF ERROR RETURN (0 IF NONE)	01	00172	
			173	*				01	00173	
			174	*****					01	00174
000176	000000	A	176	SRX	ENTR			01	00176	
000177	006037	A	177	LDXE	\$RX			01	00177	
000200	000176	R								
000201	005002	A	178	TZB				01	00178	
000202	001000	A	179	JMP	WX1			01	00179	
000203	000210	R								
			180	EJEC				01	00180	
			181	*****					01	00181
			182	*				01	00182	
			183	*	WRITE ENTRY (\$WX)			01	00183	
			184	*				01	00184	
			185	*	CALL	\$WX	CALLING STRUCTURE	01	00185	
			186	*	PZE		ADDRESS OF RECORD-SET-NUMBER	01	00186	
			187	*	PZE		ADDRESS OF RECORD POSITION	01	00187	
			188	*	PZE		ADDRESS OF FORMAT (0 IF NONE)	01	00188	
			189	*	PZE		0 IF END/ERR ADDRESSES PRESENT	01	00189	
			190	*	PZE		ADDRESS OF END RETURN (0 IF NONE)	01	00190	
			191	*	PZE		ADDRESS OF ERROR RETURN (0 IF NONE)	01	00191	
			192	*				01	00192	
			193	*****					01	00193
000204	000000	A	195	\$WX	ENTR			01	00195	
000205	006037	A	196	LDXE	\$WX			01	00196	
000206	000204	R								
000207	020421	A	197	LDB	ONE			01	00197	
000210	006016	A	198	WX1	LDAE	WX3-2,B		01	00198	
000211	000231	R								
000212	034055	A	199	STA	WX6	READ/WRITE CALL		01	00199	
000213	020466	A	200	LDB	SIX			01	00200	
000214	015003	A	201	LDA	3,X			01	00201	
000215	001010	A	202	JAZ	WX2	END/ERR BRANCHES PRESENT		01	00202	
000216	000224	R								
000217	014010	A	203	LDA	WX3-3			01	00203	
000220	034021	A	204	STA	WX4+4	SET NOP'S		01	00204	
000221	034021	A	205	STA	WX4+5			01	00205	
000222	034021	A	206	STA	WX4+6			01	00206	
000223	020464	A	207	LDB	THREE			01	00207	
000224	074006	A	208	WX2	STX	WX3		01	00208	
000225	064010	A	209	STB	WX4			01	00209	
000226	001000	A	210	JMP	WX3+1			01	00210	
000227	000234	R								
000230	005000	A	211	NOF				01	00211	
000231	000000	E	212	DATA	R\$X			01	00212	
000232	000000	E	213	DATA	WSX			01	00213	
000233	000000	A	214	WX3	ENTR			01	00214	
000234	002000	A	215	CALL	\$SE	TRANSFER PARAMETERS		01	00215	
000235	000164	E								
000236	100236	R	216	WX4	DATA	**	NO.-OF-PARAMETERS	01	00216	
000237			217	BSS	6			01	00217	
000245	006030	A	218	LDXI	WX3			01	00218	
000246	000233	R								
000247	015003	A	219	LDA	3,X			01	00219	
000250	140464	A	220	SUB	THREE			01	00220	
000251	001016	A	221	JANZ	WX5	6-PARAMETERS		01	00221	
000252	000256	R								
000253	055007	A	222	STA	7,X	CLEAR END/ERR EXITS		01	00222	
000254	055010	A	223	STA	8,X			01	00223	
000255	055011	A	224	STA	9,X			01	00224	
000256	002000	A	225	WX5	CALL	ENT		01	00225	
000257	000313	R								
000260	005021	A	226	TBA				01	00226	
000261	006120	A	227	ADDI	16			01	00227	
000262	000020	A								
000263	034005	A	228	STA	WX6+1	LOGICAL UNIT NUMBER		01	00228	
000264	005021	A	229	TBA				01	00229	
000265	120423	A	230	ADD	FOUR			01	00230	
000266	034007	A	231	STA	WX6+6	FCB ADDRESS		01	00231	
000267	002000	A	232	CALL	**	CALL R\$X OR W\$X		01	00232	
000270	100267	R								
	000270	R	233	WX6	ERU	*-1		01	00233	
000271	100271	R	234	DATA	**	LOGICAL UNIT NUMBER ADDRESS		01	00234	
000272	100241	R	235	MZE	WX4+3	FORMAT ADDRESS		01	00235	



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000273 000000 A 236 DATA 0 01 00236
000274 100243 R 237 MZE WX4+5 END ADDRESS 01 00237
000275 100244 R 238 MZE WX4+6 ERR ADDRESS 01 00238
000276 100276 R 239 DATA ** FCB ADDRESS 01 00239
000277 001000 A 240 JMP* WX3 01 00240
000300 100233 R
241 EJECT 01 00241
242 ***** 01 00242
243 * 01 00243
244 * CONVERT BINARY TO ASCII (CBA) * 01 00244
245 * 01 00245
246 ***** 01 00246
000301 000000 A 248 CBA ENTR 01 00248
000302 005012 A 249 TAB 01 00249
000303 005001 A 250 TZA 01 00250
000304 170471 A 251 DIV TEN 01 00251
000305 004250 A 252 LRLA 3 01 00252
000306 004470 A 253 LLRL 24 01 00253
000307 006120 A 254 ADDI '00' 01 00254
000310 130260 A
000311 001000 A 255 JMP* CBA 01 00255
000312 100301 R
256 EJECT 01 00256
257 ***** 01 00257
258 * 01 00258
259 * PERFORM ENTRANCE (ENT) * 01 00259
260 * 01 00260
261 ***** 01 00261
000313 000000 A 263 ENT ENTR 01 00263
000314 025004 A 264 LDB 4,X 01 00264
000315 016000 A 265 LDA 0,B 01 00265
000316 054025 A 266 STA T1 ACTUAL DATA SET NUMBER 01 00266
000317 006020 A 267 LDBI BUF 01 00267
000320 000354 R
000321 016000 A 268 ENT1 LDA 0,B CHECK FOR DATA SET 01 00268
000322 001004 A 269 JAN ER2 NOT IN DATA SET 01 00269
000323 000350 R
000324 144017 A 270 SUB T1 01 00270
000325 001010 A 271 JAZ ENT2 FOUND CORRECT SET 01 00271
000326 000335 R
000327 005021 A 272 TBA 01 00272
000330 006120 A 273 ADDI 17 01 00273
000331 000021 A
000332 005012 A 274 TAB 01 00274
000333 001000 A 275 JMP ENT1 LOOP 01 00275
000334 000321 R
000335 006015 A 276 ENT2 LDAE* 5,X RECORD POSITION 01 00276
000336 100005 A
000337 056007 A 277 STA 7,B 01 00277
000340 036003 A 278 LDX 3,B 01 00278
000341 055000 A 279 STA 0,X SET ASSOCIATED VARIABLE 01 00279
000342 001000 A 280 JMP* ENT 01 00280
000343 100313 R
000344 000000 A 281 T1 DATA 0 TEMP CELL 01 00281
282 EJECT 01 00282
283 ***** 01 00283
284 * 01 00284
285 * ERROR PROCESSOR (ERN) * 01 00285
286 * 01 00286
287 ***** 01 00287
000345 010465 A 289 ER1 LDA FIVE RECORD SET NUMBER TO LARGE 01 00289
000346 001000 A 290 JMP ERR 01 00290
000347 000351 R
000350 010466 A 291 ER2 LDA SIX 01 00291
000351 020421 A 293 ERR LDB ONE (B)=1 TO ABORT 01 00293
000352 002000 A 294 CALL SEE 01 00294
000353 000000 E
295 EJECT 01 00295
296 ***** 01 00296
297 * 01 00297
298 * I/O CONTROL BUFFER * 01 00298
299 * 01 00299
300 * SIZE: 10 ENTRIES OF 17 WORDS * 01 00300
301 * 01 00301
302 * WORD- 0 DATA SET REFERENCE NUMBER * 01 00302
303 * 1 NUMBER OF RECORDS * 01 00303
304 * 2 TYPE (0=OPTIONAL, 1=FORMATTED, 2=UNFORMATTED) * 01 00304
305 * 3 ASSOCIATED VARIABLE ADDRESS * 01 00305
306 * 4 F.C.B RECORD LENGTH (WORDS) * 01 00306
307 * 5 DATA AREA (IOBF) * 01 00307
308 * 6 ACCESS=0, PROTECT=P * 01 00308
309 * 7 CURRENT RECORD NUMBER * 01 00309
310 * 8 CURRENT POSITION OF FILE * 01 00310
311 * 9 FILE START ADDRESS * 01 00311
312 * 10 FILE END ADDRESS * 01 00312
313 * 11-13 FILE NAME (FILENN) * 01 00313
314 * 14 0 * 01 00314
315 * 15-16 LOGICAL UNIT NUMBER * 01 00315
316 * 01 00316
317 ***** 01 00317
000354 177777 A 319 BUF DATA -1 END OF BUFFER FLAG 01 00319

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000355          320      BSS      171
000627 R      321  BUFX    EQU      *-1
000630          323  IOBF    BSS      160          I/O BUFFER AREA
          324      END

```

```

01 00320
01 00321
01 00323
01 00324

```

```

ENTRY NAMES
000000 R $DX      000162 R $FX      000176 R $RX      000204 R $WX
EXTERNAL NAMES
000353 E $EE      000235 E $SE      000231 E $SX      000000 E V$IOCC
SYMBOLS
000000 R $DX      000353 E $EE      000162 R $FX      000176 R $RX
000235 E $SE      000204 R $WX      000002 A B        000460 A BR15
000354 R BUF      000627 R BUFX     000301 R CBA      000016 R DE1
000032 R DE2      000063 R DE3      000071 R DE4      000100 R DE5
000140 R DE6      000147 R DE7      000313 R ENT      000321 R ENT1
000335 R ENT2     000345 R ER1      000350 R ER2      000351 R ERR
000465 A FIVE     000423 A FOUR     000630 R IOBF     000420 A MT
000461 A NEG      000421 A ONE      000231 E $SX      000463 A RHW
000467 A SEVEN    000466 A SIX      000344 R T1       000471 A TEN
000464 A THREE    000422 A TWO      000000 E V$IOCC  000232 E $WX
000210 R WX1      000224 R WX2      000233 R WX3      000236 R WX4
000256 R WX5      000270 R WX6      000001 A X

```

0 ERRORS ASSEMBLY COMPLETE

60	\$DX	13	61	64	72	79	139	142		
0	\$EE	19	294							
154	\$FX	14	158	160						
176	\$RX	15	177							
0	\$SE	21	155	215						
195	\$WX	16	196							
28	B	69	81	83	85	93	97	98	101	107
		110	113	198	265	268	277	278		
31	BR15	104								
319	BUF	68	134	267						
321	BUFX	78								
248	CBA	126	255							
69	DE1	76								
77	DE2	70								
96	DE3	88	90	95						
102	DE4	106								
107	DE5	103								
134	DE6	118	133							
135	DE7	131								
263	ENT	159	225	280						
268	ENT1	275								
276	ENT2	271								
289	ER1	67								
291	ER2	269								
293	ERR	290								
38	FIVE	63	289							
37	FOUR	132	230							
323	IOBF	128								
29	MT	31	32	33	34	35	36	37	38	39
		40	41							
32	NEG	94	119							
34	ONE	96	197	293						
0	R\$X	20	212							
33	RHW	114								
39	SIX	89	200	291						
281	T1	266	270							
41	TEN	251								
36	THREE	207	220							
0	V\$FORT	10								
0	\$WX	22	213							
198	WX1	179								
208	WX2	202								
214	WX3	198	203	208	210	218	240			
216	WX4	204	205	206	209	235	237	238		
225	WX5	221								
233	WX6	199	228	231						
27	X	65	71	80	82	84	86	91	102	112
		115	116	120	122	124	125	127	129	136
		137	138	140	141	201	219	222	223	224
		264	276	279						