

DataGeneral

**TECHNICAL
STATEMENT**

TEXT LISTING

068-000035-09

PROGRAM

4010/4023 OR 4077/4078
DIAGNOSTIC

TEXT TAPE

097-000035-09

ABSTRACT

4010/4023 DIAGNOSTIC IS A MAINTENANCE PROGRAM DESIGNED TO TEST THE TYPE 4010 WITH 4023 OPTION HARDWARE OR THE TYPE 4075/4077 WITH THE 4078 EIA OPTION HARDWARE. THE PROGRAM REQUESTS THE OPERATOR TYPE IN THE PARAMETER FOR THE OUTPUT AND INPUT DEVICE CODES.

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: NAME: 4001.TX
: DESCRIPTION: 4010/4023 OR 4077/4078 DIAGNOSTIC
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: REVISION HISTORY:
:
: REV.          DATE
: 00           09/18/71
: 01           01/22/73
: 02           07/03/73
: 03           08/26/74
: 04           03/21/75
: 05           06/25/76
: 06           03/18/77
: 07           08/19/77
: 08           11/18/77
: 09           01/19/79
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: COPYRIGHT © DATA GENERAL CORPORATION, 1971, 1973, 1974, 1975,
: 1976, 1977, 1979
: ALL RIGHTS RESERVED.
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PROGRAM NAME
4010/4023 OR 4077/4078 DIAGNOSTIC
DIRT NAME: 4010 D
SOURCE NAME: 4001

REVISION HISTORY
09 DGC+DLIB, SOFT CONSOLE UPDATE
CHANGES:
1. CHANGE DIRT (DTOS) NAME FROM "EIA INTR" TO "4010 D"
2. STANDARDIZE START ADDRESS TO LOCATION 200
3. INSERT I/O MODULE POINTER
4. REPLACE PREVIOUS SETUP, ERROR, LOOP ROUTINES WITH
DLIB EQUIVALENTS.
5. TESTS WITH "TORST" USE L2OPX RATHER THAN LOOP
6. USE DLIB PPGOU, PPSM MACROS FOR STANDARDIZATION
7. DELETE TORST FROM SETUP AND LOOP ROUTINES
8. USE DLIB TYPACK, SWPACK, OOT (OCTAL DEBUGGER)
9. PROGRAM NOW PRINTS PASS X AT END OF PASS
10. PRINT "CLOCK INTERVAL IN MICRO-SEC" EVERY TIME
(RATHER THAN EVERY 37 TIMES)
11. REPLACE ALL "HALT" WITH EXIT TO ODT AND MESSAGE
INDICATING FAULT

MACHINE REQUIREMENTS
NOVA(EXCEPT MICRO)/ECLIPSE PROCESSOR
4K READ/WRITE MEMORY
4010 CONTROL
CONSOLE TELETYPE
TYPE 4007 BOARD WITH 4010 OR 4023 OPTION INSTALLED.
TYPE 4075 BOARD WITH 4077/4078 OPTION.
TEST PLUG
(TF A TEST PLUG IS NOT AVAILABLE PIN A65
ON THE BACK PANEL SHOULD BE JUMPED TO
PIN B69 OF THE BOARD WITH THE 4023 OR 4078)

TEST REQUIREMENTS
N/A

ABSTRACT
4010/4023 DIAGNOSTIC IS A MAINTENANCE PROGRAM
DESIGNED TO TEST THE TYPE 4010 WITH 4023 OPTION
HARDWARE OR THE TYPE 4075/4077 WITH THE 4078
EIA OPTION HARDWARE. THE PROGRAM REQUESTS THAT
THE OPERATOR TYPE IN THE PARAMETER FOR THE
OUTPUT AND INPUT DEVICE CODES.

RESTRICTIONS
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THIS PROGRAM IS NOT TO BE USED
WHEN THE 4023 OPTION IS INSTALLED ALONG WITH
THE 4029 OPTION.

IT ALSO REQUIRES THAT THE OUTPUT DEVICE
CODE IS AN ODD NUMBER AND THAT THE INPUT
DEVICE CODE IS AN EVEN NUMBER (E.G. 41 AND
40 RESPECTIVELY FOR .IT0 AND .IT1).
AS INDICATED THE REC DEVICE CODE MUST BE
ONE LESS THAN THE XMT CODE. THE CODE
MUST NOT BE 10 AND 11.
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0007 .MAIN

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01 STATUS OF TIO DONE FLAG
02 STATUS OF INTERRUPTS (ION FLAG)
03 STATUS OF CARRY BIT
04 ADDRESS OF THE LOCATION HAVING THE BREAK POINT (IF
05 ANY)
06 INSTRUCTION AT THE BREAK POINT LOCATION
07
08 OTHER COMMANDS TO OPEN CELLS ARE:
09
10 "ADR"/ OPEN THE CELL AND PRINT ITS CONTENTS
11 ./ OPEN THE CELL CURRENTLY POINTED TO BY THE POINTER
12 AND PRINT ITS CONTENTS.
13 "+ADR"/ ADD "ADR" TO THE POINTER, OPEN THE CELL
14
15 "-ADR"/ SUBTRACT "ADR" FROM THE POINTER, OPEN
16 THE CELL AND PRINT ITS CONTENTS.
17 THE RETURN KEY IS USED TO CLOSE THE OPEN CELL
18 WITH OR WITHOUT MODIFICATION.
19 "LF" LINE FEED IS USED TO CLOSE THE OPEN CELL WITH OR
20 WITHOUT MODIFICATION AND TO OPEN THE SUCCEEDING
21 CELL.
22 "-" CLOSE THE OPEN CELL WITH OR WITHOUT MODIFICATION
23 AND OPEN THE PRECEDING CELL
24 / CLOSE THE OPEN CELL WITHOUT MODIFICATION, AND
25 OPEN THE CELL POINTED TO BY ITS CONTENTS.
26 "+ADR"/ CLOSE THE OPEN CELL WITHOUT MODIFICATION, AND
27 OPEN THE CELL POINTED TO BY ITS CONTENTS + "ADR".
28 "-ADR"/ CLOSE THE OPEN CELL WITHOUT MODIFICATION, AND
29 OPEN THE CELL POINTED TO BY ITS CONTENTS - "ADR".
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NOTE:
IN PROGRAMS WHICH RELOCATE THEMSELVES THE
THE USER SHOULD PLACE BREAK POINTS ONLY IN THE
THE ORIGINAL PROGRAM AREA. IF A BREAK POINT IS
PLACED OUTSIDE THIS AREA THE RESULTS WILL
BE UNPREDICTABLE.

MISC
THE TEST PLUG CONSISTS OF A WIRE CONNECTING
THE OUTPUT TO THE INPUT.

RUN TIME
AT 2400 BAUD:
PASS 1: 5 SECONDS
PASS 2: 105 SECONDS

.EOT
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11.3.2 MODIFICATION OF A CELL
ONCE A CELL HAS BEEN OPENED ITS CONTENTS CAN BE MODIFIED
BY TYPING THE NEW VALUE THE CELL IS TO CONTAIN IN THE
FORM OF AN OCTAL EXPRESSION FOLLOWED BY "CR" OR "LF".
IF A + OR - IS TYPED AS THE FIRST CHARACTER OF THE EX-
PRESSION THEN THE VALUE OF THE EXPRESSION IS ADDED TO OR
SUBTRACTED FROM THE OLD CONTENTS OF THE CELL. THE
ADDRESS ITSELF OR AN EXPRESSION RELATIVE TO THE ADDRESS
CAN BE DEPOSITED BY TYPING A ".", OR "+"/-OCTAL EXPRESS-
ION. A RUBOUT COMMAND GIVEN RIGHT AFTER OPENING A CELL
ALLOWS THE MODIFICATION OF ITS CONTENTS AS IF THEY WERE
TYPED IN JUST BEFORE THE COMMAND WAS ISSUED.
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11.3.3 OTHER ODT COMMANDS
RUBOUT THIS KEY IS USED TO DELETE ERRONEOUSLY TYPED
DIGITS. EACH TIME THE KEY IS PRESSED THE RIGHT MOST
DIGIT IS DELETED AND ECHOED ON THE TERMINAL. IF
THE RUBOUT KEY IS PRESSED RIGHT AFTER OPENING A
CELL THEN IT DELETES THE RIGHT MOST DIGIT OF THE CELLS
CONTENTS. THIS ALLOWS THE MODIFICATION OF THE CELL
AS IF ITS CONTENTS WERE TYPED IN JUST BEFORE THE
KEY WAS PRESSED.
"ADR"B INSERT A BREAK POINT AT LOCATION "ADR".
ONLY ONE BREAK POINT CAN BE INSERTED AND ANY
ENTRY TO ODT AFTER EXECUTING A BREAK POINT WILL
CAUSE IT TO BE DELETED.
D DELETE THE BREAK POINT IF ANY.
P RESTART THE EXECUTION OF THE PROGRAM AT LOCATION
POINTED BY "A".
"ADR"R START EXECUTING THE PROGRAM AT "ADR" AFTER AN
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0009 .MAIN

**00000 TOTAL ERRORS, 00000 PASS 1 ERRORS

0010 .MAIN

020TD 001551 MC 6/19
S:RPD 001075 MC 3/11