

TEXT LISTING

068-000518-02

PROGRAM

E130 FLOATING POINT  
FIRMWARE DIAGNOSTIC

TEXT TAPE

097-000518-02

ABSTRACT

THIS PROGRAM PERFORMS A FUNCTIONAL TEST OF THE  
ECLIPSE MODEL 130 FLOATING POINT INSTRUCTION SET.

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10005 .MAIN

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01 ; VIII. PROGRAM DIAGNOSTIC OUTPUTS:
02 ; IN THE EVENT OF AN ERROR THE PROGRAM MAY OUTPUT
03 ; ONE OF SEVERAL MESSAGES. THESE ARE LISTED
04 ; BELOW. A STRING OF "0" S INDICATES A NUMBER
05 ; PRINTED IN OCTAL FORMAT. A STRING OF "H" S INDICATES
06 ; A NUMBER IN HEXIDECIMAL FORMAT.
07 ;
08 ; A. FLOATING POINT STATUS REGISTER TEST ERROR.
09 ;
10 ; ERROR IN TEST AT LOC. 000000
11 ;
12 ; EXPECTED STATUS 000000
13 ; STATUS READ 000000
14 ;
15 ; THE STATUS INFORMATION IS SELF EXPLANATORY
16 ; THE LOCATION GIVEN IS THE ADDRESS OF
17 ; THE START OF THE SUBTEST, NOT THE
18 ; ACTUAL LOCATION OF THE ERROR.
19 ;
20 ; B. FLOATING POINT SKIP TEST ERROR.
21 ;
22 ; SKIP ERROR AT THE FOLLOWING LOCATION:
23 ; PC= 000000
24 ;
25 ; IN THE EVENT A SKIP INSTRUCTION DOES NOT
26 ; PERFORM AS EXPECTED THIS MESSAGE IS
27 ; OUTPUT. THE PC LOCATION MENTIONED IS THAT
28 ; OF THE ERROR CALL. THE FAILING INSTRUCTION
29 ; IS THE FIRST SKIP INSTRUCTION PRIOR TO
30 ; THE ERROR CALL.
31 ;
32 ; C. ARITHMETIC OPERATION TEST ERROR.
33 ;
34 ; ERROR IN TEST AT LOC. 000000
35 ;
36 ; CORRECT BUFF <A,B,C> HHHH HHHH (HHHH HHHH)
37 ; BUFF <A,B,C> HHHH HHHH (HHHH HHHH)
38 ;
39 ; THIS FORMAT IS USED WHEN TESTING INSTRUCTIONS
40 ; THAT STORE THEIR RESULTS INTO MEMORY.
41 ;
42 ; THE LOCATION GIVEN IS THE ADDRESS OF THE START
43 ; OF THE SUBTEST FAILING. THIS IS FOLLOWED BY
44 ; THE NAME OF THE BUFFER CONTAINING THE EXPECTED
45 ; ANSWER AND THE VALUE EXPECTED (EXPRESSED IN
46 ; HEX. THE LAST 8 DIGITS ARE DISPLAYED
47 ; ONLY FOR DOUBLE PRECISION).
48 ; THE NAME OF THE BUFFER CONTAINING
49 ; THE RESULTS OF THE OPERATION
50 ; FOLLOWS USING THE SAME FORMAT.

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01 ;
02 ; ANOTHER VARIATION OF THIS ERROR FORMAT
03 ; IS SHOWN BELOW:
04 ;
05 ; ERROR IN TEST AT LOC. 000000
06 ;
07 ; CORRECT BUFF <A,B,C> HHHH HHHH (HHHH HHHH)
08 ; (FPAC) HHHH HHHH (HHHH HHHH)
09 ;
10 ; THE LOCATION SPECIFIED IN THIS MESSAGE IS THE
11 ; SAME AS IN THE LAST FORMAT. THE TERM FPAC
12 ; REFERS TO THE FLOATING POINT ACCUMULATOR UNDER
13 ; TEST THIS PASS, AND CHANGES FROM PASS TO
14 ; PASS.
15 ;
16 ; LASTLY THERE IS A SPECIAL FORMAT TO DEAL WITH
17 ; THOSE INSTRUCTIONS WHICH MODIFY THE CPU'S
18 ; ACCUMULATORS AS SHOWN BELOW:
19 ;
20 ; ERROR IN TEST AT LOC. 000000
21 ;
22 ; OCTAL HEX
23 ; (AC0) 000000 HHHH
24 ; (AC1) 000000 HHHH
25 ; (AC2) 000000 HHHH
26 ;
27 ; THE ERROR LOCATION INFORMATION IS THE SAME
28 ; AS BEFORE. THE SIGNIFICANCE OF THE AC-
29 ; ACCUMULATORS PRINTED OUT MUST BE DETERMINED
30 ; BY EXAMINING THE SUBTEST.
31 ;
32 ; IX. HELPFUL HINTS:
33 ; THE PROGRAM HAS A DATA BLOCK BEGINNING AT
34 ; LOCATION 200 TO AID IN MONITORING THE PROGRAM
35 ; FOR CORRECT FUNCTION. THE MOST USEFUL OF
36 ; THE ENTRIES IN THIS BLOCK IS AT LOCATION 201.
37 ; THIS ENTRY ALWAYS CONTAINS THE ADDRESS OF
38 ; THE SUBTEST CURRENTLY BEING EXECUTED.
39 ;
40 ; ADDITIONAL INFORMATION MAY BE FOUND IN:
41 ; PROGRAMERS REFERENCE MANUAL FOR THE ECLIPSE.
42 ;
43 ; DIANOSTIC TAPE OPERATING SYSTEM REFERENCE MANUAL.
44 ;
45 ; *****
46 ; IN ORDER TO COMPLETELY TEST THE FLOATING POINT
47 ; FIRMWARE IN THE ECLIPSE 130, BOTH THE FLOATING
48 ; POINT DIAGNOSTIC AND THE FLOATING POINT
49 ; EXERCISER MUST BE RUN!
50 ; *****

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10007 .MAIN  
01 000000 .TXM 0

\*\*00000 TOTAL ERRORS, 00000 FIRST PASS ERRORS