

TEXT LISTING

068-000234-02

PROGRAM

ECLIPSE CP DIAGNOSTIC, PART 2

TEXT TAPE

097-000234-02

ABSTRACT

'ECLIPSEB' CP DIAGNOSTIC PROGRAM IS USED TO CHECK OUT THE BIT MANIPULATION INSTRUCTIONS REFERENCING THE ACCUMULATORS, ACCUMULATOR COMPARE INSTRUCTIONS AND LOGICAL SHIFT INSTRUCTIONS OF THE ECLIPSE CENTRAL PROCESSOR.

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0001 ECLPB      MACRO REV 06.30      11:48:14 02/15/79
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07 *****
08 * NAME: ECLIPSE.TX          PART NUMBER: 097-000234
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11 * DESCRIPTION: ECLIPSE CENTRAL PROCESSOR DIAGNOSTIC, PART 2
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13 * REVISION HISTORY:
14 *
15 * REV.      DATE
16 *
17 *
18 *   00      08/02/74
19 *   01      12/20/74
20 *   02      08/06/76
21 *
22 * COPYRIGHT © DATA GENERAL CORPORATION, 1974, 1976
23 * ALL RIGHTS RESERVED.
24 * *****
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10002 ECLPB
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*ITL ECLPB
*ECLIPSE
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*ECLIPSE - CONTINUATION OF ECLIPSEA
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*PART 2 OF CENTRAL PROCESSOR DIAGNOSTIC FOR
*ECLIPSE.
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10003 ECLPH
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CENTRAL PROCESSOR DIAGNOSTIC FOR ECLIPSE: PART 2
PROGRAM NAME
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ECLIPSEB
GENERAL DESCRIPTION
-----
'ECLIPSEB' CP DIAGNOSTIC PROGRAM IS USED TO CHECK
OUT THE BIT MANIPULATION INSTRUCTIONS REFERENCING
THE ACCUMULATORS, ACCUMULATOR COMPARE INSTRUCTIONS AND
LOGICAL SHIFT INSTRUCTIONS OF THE ECLIPSE
CENTRAL PROCESSOR.
2.2 THE INSTRUCTIONS TESTED ARE AS FOLLOWS:
LOB, COB, LRB, SGT, SBE, HXL, HXR, DHXL, DHXR,
LSH AND DLSH
THE OPCODE AND THE DESCRIPTION OF EACH INSTRUCTION
IS GIVEN BEFORE ITS TESTS.
2.3 LOCATIONS 200 TO 205 IN PAGE 0 ARE FIXED FOR ECLIPSE
CP TESTS.
LOCATION 203 KEEPS TRACK OF NUMBER OF PASSES RUN
THROUGH ECLIPSEB PROGRAM.
LOCATION 201 KEEPS TRACK OF THE TEST RUNNING AT
PRESENT AND IS USEFUL FOR DEBUG WHEN LOOPING
OCCURS IN THE PROGRAM.
LOCATION 202 CONTAINS THE STARTING ADDRESS OF
ECLIPSEB PROGRAM.
LOCATION 200 IS USED BY DTOS.
LOCATION 204 KEEPS TRACK OF INTERNAL PASS COUNT
WHICH IS FIXED BY LOCATION 205.
2.4 FIRST PASS THROUGH ECLIPSEB TEST TAKES 10 SECONDS.
NEXT PASSES THROUGH ECLIPSEB TEST TAKE HALF A MINUTE.
MACHINE REQUIREMENTS
-----
ECLIPSE PROCESSOR
4K READ-WRITE MEMORY
SWITCH SETTINGS
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STAND ALONE STARTING ADDRESS = 200
MONITOR LOCATION 203 TO CHECK THE CURRENT PASS COUNT.

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10004 ECLPS
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IF PROGRAM WAS LOADED WITH 'CAT' OR 'KITTEN' AND
A RESTART IS NECESSARY, START AS FOLLOWS:
STARTING ADDR=170 (FOR RESTART WITHOUT 'CAT')
STARTING ADDR=171 (FOR RESTART WITH 'CAT')
MONITOR LOCATION X6000 TO VERIFY 'CAT' OR 'KITTEN'
OPERATION. NORMALLY THIS LOCATION CONTAINS A PATTERN CHANGING
FROM ZEROS TO ALL ONES TO AN INC/SWAP PATTERN.
X=THE NUMBER OF THE HIGHEST MEMORY MODULE (1<->7)
OPERATING PROCEDURE/OPERATOR INPUT
-----
LOAD THE PROGRAM VIA THE BINARY LOADER OR INSERT A
PRELOADED MEMORY MODULE.
SET SWITCHES TO 200.
PRESS START.
THE PROGRAM WILL RUN UNTIL MANUALLY STOPPED OR UNTIL
AN ERROR IS DETECTED.
PROGRAM OUTPUT/ERROR DESCRIPTION
-----
FOR ANY MALFUNCTION DETECTED BY THE TEST, THE PROGRAM
WILL HALT. (PROGRAM COUNTER=1) IS THE ERROR HALT
LOCATION.
REFER TO THE LISTING FOR EXPLANATION OF THE ERROR.
TO LOOP ON ERROR, STORE 'JMP TO BEGINNING OF TEST'
THAT FAILED, IN THE ERROR HALT LOCATION AND START
PROGRAM AT THE BEGINNING OF THE TEST.
IF LOOPING OCCURS IN THE PROGRAM, STOP THE COMPUTER
AND CHECK LOCATION 201 TO FIND OUT THE TEST THAT
WAS RUNNING BEFORE THE LOOPING OCCURRED.
PROGRAM DESCRIPTION/THEORY OF OPERATION
-----
EACH TEST IS COMPLETE IN ITSELF, SO THE PROGRAM CAN
BE STARTED FROM ANY TEST WITHOUT CAUSING ANY
INITIALIZATION ERRORS.
ECLIPSE IS A MICRO-PROGRAMMED COMPUTER.
EACH INSTRUCTION IS ACCOMPLISHED BY SET OF MICRO
CODE WORDS CONTAINED IN (512 X 56) WORD ROM.
THE TESTS ARE WRITTEN SO AS TO FOLLOW THE MICRO
CODE FLOW FOR THE INSTRUCTION AND IDENTIFY THE
ERROR CAUSE TO AN UNIQUE MICROCODE WORD AND
TO ITS INDIVIDUAL FIELDS WHENEVER POSSIBLE.
ADDITIONAL DIAGNOSTIC REFERRING TO THE LBD PRINTS
IS ALSO GIVEN.
THE OPERATOR SHOULD HAVE CAPABILITY OF READING
SIMPLE MICRCODES TO USE THIS PROGRAM TO ITS
UTMOST EFFICIENCY.

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10005 ECLP8

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RESTRICTIONS/MISC  
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CERTAIN INSTRUCTIONS LIKE BLM, XCT, BAN, ETC.,  
DO ALLOW INTERRUPTS TO OCCUR DURING THEIR  
EXECUTION. THIS FEATURE OF THOSE INSTRUCTIONS IS  
NOT CHECKED IN THIS TEST.

.EOT

0006 ECLP8

\*\*00000 TOTAL ERRORS, 00000 PASS 1 ERRORS