

DataGeneral

**TECHNICAL
STATEMENT**

TEXT LISTING

068-000068-07

PROGRAM

CASSETTE DIAGNOSTIC

TEXT TAPE

097-000068-07

ABSTRACT

THIS DIAGNOSTIC IS NOT TO BE USED AS AN INSTRUMENT FOR DEMONSTRATING CASSETTE RELIABILITY UNDER LONG TERM TESTING (I.E. OVERNIGHT). FOR LONG TERM TESTING (GREATER THAN 4 HRS.) USE THE TAPE CASSETTE RELIABILITY PROGRAM.

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0001 .MAIN          MACRO REV 06.30          09:29:16 02/16/79
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*****TAPE CASSETTE DIAGNOSTIC*****
MACHINE REQUIREMENTS
:1.1 NOVA(EXCEPT MICRO) OR ECLIPSE FAMILY PROCESSOR
:1.2 4K READ/WRITE MEMORY
:1.3 CASSETTE I/O CONTROL
:1.4 CASSETTE DRIVE (#4076,4077,4078,4079)
:1.5 OR EXPANDED UNITS(#40A1)
RESTRICTIONS
: THIS DIAGNOSTIC IS NOT TO BE USED AS
: AN INSTRUMENT FOR DEMONSTRATING CASSETTE
: RELIABILITY UNDER LONG TERM TESTING (I.E.
: OVERTNIGHT). FOR LONG TERM TESTING (> 4
: HOURS) USE THE TAPE CASSETTE RELIABILITY
: PROGRAM.
STARTING LOCATIONS
:2.0 ALL DIAGNOSTIC TESTS
:2.1 501 WRITE LOCK TEST ONLY
: 502 DATA LATE TEST ONLY
: 503 SPECIAL SETUP FOR READ TEST
: SCOPE LOOP.
SWITCH SETTINGS
: SWITCH 1(1) = PROCEED FROM ERROR
: SWITCH 2(1) = INHIBIT TTY OUTPUT
: SWITCH 3(1) = PRINT FAILURE RATE
: SWITCH 5(1) = OUTPUT TO LPT
: SWITCH 15(1) = INHIBIT PRINTING STATUS
: AND TIMING TEST ERRORS.
TO CHANGE DEVICE CODES
: LOAD 204 IN SWITCHES AND START
: PROGRAM WILL PRINT OUT PRESENT
: AND THEN WAIT FOR NEW DEVICE CODE.
: A CARRIAGE RETURN PRESERVES PRESENT DEVICE
: CODE, AND TYPING NEW CODE WITH CARRIAGE
: RETURN CHANGES CODE TO THAT SPECIFIED.
: PROGRAM WILL PRINT MESSAGE VERIFYING THAT
: THE DEVICE CODE HAS BEEN SET TO THE NEW
: VALUE, AND THEN WILL HALT. RESTART PROGRAM
: AT ONE OF THE TEST ADDRESSES ABOVE TO
: CONTINUE TESTING.
OPERATING PROCEDURE
:4.0 ALL DIAGNOSTIC TESTS
:4.1 VERIFY POWER IS APPLIED TO PROCESSOR AND CASSETTE
: DRIVES.VERIFY A CASSETTE CARTRIDGE IS PROPERLY
: INSTALLED IN EACH DRIVE, AND VERIFY
: THAT THE CARTRIDGES ARE NOT WRITE LOCKED BEFORE
: INSTALLING. VERIFY THAT NO TWO CASSETTES ARE
: ARE SET TO THE SAME UNIT NUMBER. LOAD
: PROGRAM INTO THE PROCESSOR WITH THE BINARY LOADER
: OR DIAGNOSTIC OPERATING SYSTEM
: AND START AT THE PROPER LOCATION FOR THE TEST TO BE
: RUN(DIAGNOSTIC OPERATING SYSTEM STARTS AT 200).
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NAME: CTDIAG.TX          PART NUMBER: 097-00006A
:
: DESCRIPTION: CASSETTE DIAGNOSTIC
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: REVISION HISTORY:
: REV.          DATE
: 00          11/15/72
: 01          05/28/73
: 02          09/13/73
: 03          10/31/73
: 04          02/05/74
: 05          05/03/74
: 06          XX/XX/XX
: 07          05/28/76
:
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: THE PROGRAM WILL AUTOMATICALLY SELECT THE
: UNIT WITH THE LOWEST ADDRESS FOR
: TESTING AND WILL SO INDICATE BY AN OUTPUT MESSAGE
: IDENTIFYING THE UNIT SELECTED, THEREFORE TO TEST A
: GROUP OF DRIVES IN SEQUENCE, MAKE SURE ALL DRIVES
: HAVE CARTRIDGES MOUNTED, AND SET THE ADDRESS OF THE
: DRIVE TO BE TESTED TO THE LOWEST ADDRESS IN THE SYSTEM.
: AFTER THE DIAGNOSTIC HAS BEEN RUN ON THIS
: PARTICULAR DRIVE, THE PROCESSOR WILL TYPE
: "END OF TEST" AND THEN HALT. SET THE
: ADDRESS OF THE NEXT DRIVE TO BE TESTED TO THE
: LOWEST IN THE SYSTEM AND RESTART PROGRAM AT LOCATION
: 200. ***CAUTION*** DO NOT SWITCH DRIVE UNIT
: ADDRESSES WHILE THE PROGRAM IS RUNNING !!!

:
: ALL TESTS SHOULD BE RUN ON ALL DRIVES FOR A COMPLETE
: CHECK. IF A HALT OCCURS CONSULT THE PROGRAM LISTING
: FOR DIRECTIONS. THERE ARE TWO TYPES OF HALTS. A
: HALT THAT INTERFERES WITH THE PROPER EXECUTION OF
: THE TEST PROGRAM, SUCH AS FAILING TO FIND ANY CASSETTE
: UNIT AVAILABLE FOR TESTING, AND AN ERROR HALT (WHERE
: THE TEST PROGRAM DETECTED SOME MALFUNCTION). IF THE
: PROGRAM COMES TO A HALT, THE LISTING WILL INDICATE
: WHETHER IT IS AN INTERFERENCE HALT, OR A HALT IN THE
: ERROR SUBROUTINE.
: IF IT IS AN INTERFERENCE HALT, OPERATOR INTERVENTION
: WILL BE REQUIRED BEFORE TESTING CAN CONTINUE. IF IT
: IS AN ERROR HALT FOLLOW THE PROCEDURES BELOW.

:
: IF A MALFUNCTION IS DETECTED THE PROGRAM WILL
: COME TO AN ERROR HALT AND AC3 WILL CONTAIN THE
: LOCATION (IN THE PROGRAM) OF THE ERROR +1.
: CONSULT THE LISTING, THE ACCUMULATORS AND
: OTHER PERTINANT SOFTWARE REGISTERS. IF SWITCH
: 1 IS DOWN, PRESSED, CONTINUE WILL CAUSE
: A SCOPE LOOP
: TO BE ENTERED. WHILE IN THE SCOPE LOOP
: SETTING SWITCH 3 UP WILL PRINTOUT THE FAILURE
: RATE IN %. SETTING SWITCH 1 UP WILL CAUSE THE
: PROGRAM TO LEAVE THE SCOPE LOOP AND GO ON TO THE
: NEXT TEST.

:
: SETTING SWITCH 15 UP ANY TIME PRIOR OR DURING
: TESTING WILL CAUSE THE ERROR STATUS BITS TO BE
: PRINTED OUT AFTER AN ERROR HAS BEEN DETECTED.
: THE ERROR STATUS BITS PROVIDE AN OPERATIONAL
: PROFILE OF THE CASSETTE AT THE TIME OF THE ERROR
: AND PROVIDE USEFUL INFORMATION POINTING TO THE
: CAUSE OF THE MALFUNCTION.

:
: EACH SUCCESSIVE TEST ASSUMES THAT ALL PREVIOUS
: TESTS HAVE BEEN RUN SUCCESSFULLY. BYPASSING
: ANY FAILING TEST MAY LEAD TO OR COMPLICATE OTHER
: ERROR SITUATIONS.

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: STATUS BIT SIGNIFICANCE

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: 0 = ERROR, 1 = DATA LATE,
: 2 = REMINDING, 3 = ILLEGAL,
: 5 = CHECKWORD, 6 = END OF TAPE, 7 = END OF FILE,
: 8 = REG OF TAPE, 10 = WRITE FAIL, 13 = WRITE LOCK.
:
: WRITE LOCK TEST
:4.2
: THAT ONLY ONE WRITE LOCKED CARTRIDGE IS MOUNTED
: IN THE SYSTEM. VERIFY THAT THE WRITE LOCKED CAR-
: TRIDGE IS MOUNTED IN THE CASSETTE UNIT UNDER TEST.
: THE PROGRAM WILL PRINT OUT THE # OF THE UNIT WITH
: THE WRITE LOCKED CARTRIDGE AND HALT.
: OF THE SECOND HALF OF THIS TEST CHECKS THE OPERATION
: OF THE ILLEGAL FLIP-FLOP SETTING DONE WHEN
: WRITE LOCK IS A "1" AND AN ERASE COMMAND IS ISSUED.
: PRESS CONTINUE TO PERFORM THIS SECTION OF THE
: TEST. IF THIS SECTION PASSES THE PROGRAM WILL HALT
: AGAIN. SWITCH THE WRITE LOCKED CARTRIDGE TO THE NEXT
: UNIT TO BE TESTED AND PRESS CONTINUE TO RUN THE
: COMPLETE TEST. IF THE TEST FAILS A MESSAGE WILL BE
: PRINTED AND THE PROGRAM WILL ENTER A SCOPE LOOP ON
: THIS SECTION OF THE TEST. THE LOOP WILL CONTINUE
: UNTIL STOPPED MANUALLY BY THE OPERATOR. AFTER THE
: MALFUNCTION HAS BEEN REPAIRED RESTART THE PROGRAM
: AT 501.
:
: DATA LATE TEST
:4.3
: THIS TEST ALSO REQUIRES OPERATOR INTERVENTION.
: AFTER THE PROGRAM REMINDS, IT WILL INSTRUCT
: THE OPERATOR TO PRESS CONTINUE WHEN THE COMPUTER
: COMES TO A HALT. AFTER THE FIRST WORD HAS BEEN
: WRITTEN, THE PROGRAM WILL HALT. IMMEDIATELY AFTER
: THE OPERATOR CONTINUE THE PROGRAM TESTS THE DATA
: LATE BIT. IF DATA LATE IS PRESENT THE PROGRAM
: WILL STATE, "DATA LATE ON." AND COME TO A HALT.
: IF THE DATA LATE BIT IS ABSENT, THE PROGRAM WILL
: STATE, "NO DATA LATE BIT." AND COME TO AN ERROR
: HALT. PRESS CONTINUE TO RERUN THE TEST FROM EITHER
: 40. A CONTINUE FROM THE ERROR HALT WITH SWITCH 0
: DOWN WILL CAUSE THE PROGRAM TO ENTER THE SCOPE
: LOOP AS DESCRIBED IN PARAGRAPH 3.
:
: SPECIAL SETUP FOR READ TEST SCOPE LOOP
:4.4
: THIS SPECIAL ENTRANCE TO THE READ TEST CONTAINS
: A PREFACE WHICH WRITES TWO WORDS RECORDS THE ENTIRE
: LENGTH OF TAPE. THIS FEATURE SHOULD BE USED WHEN
: A SCOPE LOOP ON THE READ TEST IS REQUIRED, AND
: WILL PREVENT TAPE RUNAWAY WHEN ATTEMPTING TO READ
: AN UNWRITTEN SECTION OF TAPE (SUCH AS MIGHT
: OCCUR IN THE ENDLESS EXECUTION OF THE SCOPE LOOP).
: TO ENTER THE READ TEST VIA THIS SPECIAL ENTRANCE
: SET 403 INTO THE SWITCHES AND START THE PROGRAM
: WILL ENTER THE READ TEST AUTOMATICALLY AFTER THE TAPE
: HAS BEEN WRITTEN. ASSUMING THE SAME ERROR IS DETECTED
: WHEN THE READ TEST WAS ORIGINALLY PERFORMED, THE
: PROGRAM WILL COME TO AN EHALT. VERIFY THE ERROR LOCATION
: IS STILL IN THE READ TEST AND PRESS CONTINUE FOR
: THE SCOPE LOOP.

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**0000c TOTAL ERRORS. 00000 PASS 1 ERRORS