## SEPARATOR SET PN 83464

THIS SEPARATOR SET CONTAINS 19 TABS TOTAL IN THE FOLLOWING ORDER:

MAINTENANCE MANUAL

1. INTRODUCTION 2. OPERATION 3. INSTALLATION 4. STORAGETEK INTERFACE 5. INDUSTRY INTERFACE 6. SCSI INTERFACE 7. VS INTERFACE 8. FUNCTIONAL DESCRIPTION 9. MAINTENANCE 10. REMOVAL/REPLACEMENT 11. DIAGNOSTICS APPENDICES IPC PN COMPATIBILITY MMLL 21/22/25 STD & 25 IND STD FCD 21/22 IND STD FCD 2925 SCSI FCD

21/22 IND STD

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## FAULT CODE DICTIONARY

## 2921 & 2922 WITH INDUSTRY STANDARD INTERFACE

This dictionary corresponds to given release levels of subsystem microcode. To ascertain the microcode release level, use the following front panel sequence:

<ENTER ADDR>,1FFA,<ENTER>: displays msb of the release level <ENTER>: displays lsb of the release level

It is important that the user of this dictionary ensures the matching of dictionary text to microcode level. The following table associates microcode EC and release level to dictionary page changes. The table shows the Fault Code Dictionary EC levels, and the microcode levels which are valid for each EC level.

| EC    | Microcode Level     | Page(s) Changed |
|-------|---------------------|-----------------|
| 49763 | C102-C106           | Initial Release |
| 49791 | C102-C106/D101      | All pages       |
| 49831 | C102-C106/D102-D108 | All pages       |
| 22926 | C102-C106/D102-D108 | All pages       |
| 26140 | C102-C106/D102-D108 | Cover page only |

As an example, if the drive has microcode level D107, the following Fault Code Dictionary EC levels are valid: 49831, 22926, or 26140.

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| Code  | Detected<br>by | Fault DescriptionFRU'S   |
|-------|----------------|--|
| 001   | TESTOO         | Drive not loaded before forward motion request.  |
| 002   | TESTOO         | EOT status detected before forward motion set.<br>Card: WR IF                                |
| 003   | TEST00         | EOT detected via sensors during forward motion.  |
| 011   | TEST01         | Slot: A4 A3<br>Drive not loaded before backward motion request.                              |
| 012   | TEST01         | BOT status detected before backward motion set.<br>Card: WR IF<br>Slot: A4 A3                |
| 013   | TESTOI         | BOT detected via sensors during backward motion.<br>Card: WR IF<br>Slot: A4 A3               |
| 021   | TEST02         | Drive not loaded before motion request.  |
| 022   | TEST02         | EOT status detected before motion set.<br>Card: WR IF  |
| 023   | TESTO2         | Slot: A4 A3<br>EOT detected via sensors during forward motion.<br>Card: WR IF<br>Slot: A4 A3 |
| 031   | TEST03         | Drive not loaded before motion request.  |
| 87004 |                | EC 22926   |

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| Code | Detected |
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|      | by       |

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032 TEST03 EOT status detected before motion set. Card: WR |F Slot: A4 A3 033 TEST03 BOT or EOT detected during motion via sensors. Card: WR IF Slot: A4 A3 041 TEST01 Reject or Machine check during mode switch. See description of reject codes preceeding code E01. Can not execute maintenance reel/capstan driver 091 TEST09 while drive is loaded. 092 TEST09 Tape presence was detected in thread path via sensors. Can not execute maintenance reel/capstan driver. Card: WR IF Slot: A4 A3 OE1 TESTOE Maintenance write requires drive loaded. OE2 TESTOE Maintenance write will not run on file protected tape. OE3 TESTOE EOT status detected before motion. OE4 TESTOE EOT detected via sensors during forward motion. OF1 TESTOF Maintenance write requires drive loaded. OF2 TESTOF .Maintenance write will not run on file protected tape.

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| Code | Detected<br>by | Fault DescriptionFRU'S   |
|------|----------------|--|
|      |                |  |
| 0F 3 | TESTOF         | EOT status detected before motion.   |
| OF 4 | TESTOF         | EOT detected via sensors during forward motion.  |
| 121  | TEST12         | Initial write of memory compared incorrectly while testing functional RAM (COOO-C7FF). |
|      |                | Card: IF<br>Slot: A3   |
| 122  | TEST12         | Read, write complement, read sequence failed while testing functional RAM (COOO-C7FF). |
|      |                | Card: IF<br>Slot: A3   |
| 123  | TEST12         | Initial write of memory compared incorrectly while testing diagnostic RAM (A000-A0FF). |
|      |                | Card: IF<br>Slot: A3   |
| 124  | TEST12         | Read,write complement,read sequence failed while testing diagnostic RAM (A000-A0FF).   |
|      |                | Card: IF<br>Slot: A3   |
| 125  | TEST12         | Checksum incorrect in PROM 1 (0000-1FFF).  |
|      |                | Card: IF<br>Slot: A3   |
| 126  | TEST12         | Checksum incorrect in PROM 2 (2000-3FFF).  |
|      |                | Card: IF<br>Slot: A3   |

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| Code | Detected<br>by | Fault DescriptionFRU'S  |
|------|----------------|---|
| 127  | TEST12         | Checksum incorrect in PROM 3 (4000-5FFF).<br>Card: IF<br>Slot: A3   |
| 128  | TEST12         | Checksum incorrect in PROM 4 (6000-7FFF).<br>Card: IF<br>Slot: A3   |
| 129  | TEST12         | Checksum incorrect in PROM 5 (8000-9FFF).<br>Card: !F<br>Slot: A3   |
| 12A  | TEST12         | Release level mis-match between proms.<br>Locations: PROM 1 = (1FFA, B)<br>PROM 2 = (3FFA, B)<br>PROM 3 = (5FFA, B)<br>PROM 4 = (7FFA, B)<br>PROM 5 = (9FFA, B)<br>Card: IF<br>Slot: A3 |
| 132  | TEST13         | Spurious interrupts received by controller.<br>Card: IF<br>Slot: A3   |
| 134  | TEST13         | Timer A (250 us) interrupt not received.<br>Card: IF<br>Slot: A3  |
| 136  | TEST13         | Timer B (1 ms) interrupt not received.<br>Card: IF<br>Slot: A3  |

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EC 22926

| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
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Timer C (10 ms) interrupt not received. 138 TEST13 Card: IF Slot: A3 Watch-dog timer (8253) not counting properly. 13A TEST13 Card: IF Slot: A3 141 TEST14 Failed to write & read 8155 ports (E001,2,3). Card: IF Slot: A3 143 TEST14 Failed to write & read loop of E019 to E028. Card: IF Slot: A3 151 TEST15 Multiple keyboard columns active in sense register (E008) for a given row selection (E013). Check for proper panel cable connection. Card: IF KΚ Slot: A3 153 TEST15 More than one front panel key detected (E008)

for different row selections (E013). Check for proper panel cable connection.

> Card: IF KK Slot: A3

| Code | Detected |
|------|----------|
|      | by       |

181 TEST18 Position counter (SV card, XCS chip) could not be looped correctly (wrt: EOA3; rd: EOA5). Status A-O: expected pattern Status A-1: actual pattern Card: IF SV DP WR Slot: A3 A1 A5 A4 183 TEST18 Velocity register (SV card, XCS chip) could not be looped correctly (wrt: EOA6, A8, A9; rd: EOA7). Status A-O: pattern Status A-2: should be pattern shifted left once IF SV DP WR Card: Slot: A3 A1 A5 Α4 185 TEST18 Machine swing arm position (SV card, XRS chip) could not be looped correctly (wrt: EOB0, B2; rd: EOB4). Status A-O: pattern Status A-3: should be pattern shifted left twice Card: IF SV DP WR Slot: A3 A1 A5 A4 187 TEST18 File swing arm position (SV card, XRS chip) could not be looped correctly (wrt: EOB1,B3; rd: EOB5). Status A-O: pattern Status A-4: should be pattern shifted left 3 bits Card: IF SV DP WR Slot: A3 A1 A5 A4 Data path status B (EOC2) not 0 with resets active. 1B1 TEST1B Card: DP IF WR SV Slot: A5 A3 A4 A 1

EC 22926

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| Code | Detected | Fault DescriptionFRU'S |
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1B3 TEST1B Data path status B (EOC2) not indicating CRC + CRCA (06h) after resets cleared and GCR mode set. Card: DP IF WR SV . Slot: A5 A3 A4 A1 1B4 TEST1B Dead track register (EOCO) not inactive (FFh) following data path reset. Card: DP IF Slot: A5 A3 1B5 TEST1B Data path status A (EOC1) not 0 following data path reset. Card: DP IF Slot: A5 A3 1B6 TESTIB Data path status C (EOC3) not inactive (04h) following data path reset. Card: DP IF Slot: A5 A3 1B7 TEST1B Phase pointer register (EOC4) not 0 following data path reset. Card: DP IF . Slot: A5 A3 1B8 TEST1B Amp sensor register (EOC5) not 0 following data path reset. Card: DP IF

Slot: A5 A3

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| Code | Detected<br>by | Fault DescriptionFRU'S |
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| 1D1 | TESTID | Following the disabling of all sensors (EOE8), only file protect status (EOE0) should have been active. |
|-----|--------|---|
|     |        | Status A-0: sensor bit(s) in error  |
|     |        | Card: WR IF<br>Slot: A4 A3  |
|     |        | Sensor: EOT/BOT, File Protect, Leader   |
| 102 | TEST1D | After enabling EOT sensor only (EOE8), sensor<br>status (EOEO) was incorrect.                           |
|     |        | Status A-0: sensor bit(s) in error  |
|     |        | Card: WR IF<br>Slot: A4 A3  |
|     |        | Sensor: EOT/BOT, File Protect, Leader   |
| 103 | TEST1D | After enabling BOT sensor only (EOE8), sensor<br>status (EOEO) was incorrect.                           |
|     |        | Status A-0: sensor bit(s) in error  |
|     |        | Card: WR IF<br>Slot: A4 A3  |
|     |        | Sensor: EOT/BOT, File Protect, Leader   |
| 1D4 | TESTID | After enabling tape present sensor only (EOE8),<br>status (EOEO) was incorrect.                         |
|     |        | Status A-0: sensor bit(s) in error  |
|     |        | Card: WR IF<br>Slot: A4 A3  |
|     |        | Sensor: EOT/BOT, File Protect, Leader   |

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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | by       |                        |

1D5 TEST1D After enabling leader sensor only (EOE8), status (EOEO) was incorrect. Status A-O: sensor bit(s) in error Card: WR IF Slot: A4 A3 Sensor: EOT/BOT, File Protect, Leader 1D6 TEST1D After enabling file protect sensor only (EOE8), status (EOEO) was incorrect. Status A-0: sensor bit(s) in error Card: WR IF Slot: A4 A3 Sensor: EOT/BOT, File Protect, Leader 1D7 TESTID After disabling the write/erase currents (EOE8), current status (EOE1) should indicate off and stable. Status A-O: sensor bit(s) in error Card: WR IF Rd/Wrt head, cable Slot: A4 A3

1F1 TEST1F Functional code detected machine check condition during swing arm extend/retract cycle.

Status A-6: Machine check code See listing for code Fxx, where xx= contents of this status location

| Code | Detected |
|------|----------|
|      | by       |

1F2 TEST1F INDEX's from both arm position sensors (EOE1) were detected when retracting from 'EXTENDED'. However, the FILE arm's upper EPO area ('INDEX' off) was not detected before the MACHINE arm reached 'Retracted'.

> Check FILE arm sensor for 'INDEX' off capability. Check MACH arm sensor for false 'INDEX'.

Card: SV WR IF Slot: A1 A4 A3

1F3 TEST1F INDEX's from both arm position sensors (EOE1) were detected when retracting from 'EXTENDED'. However, the MACHINE arm's upper EPO area ('INDEX' off) was not detected before the FILE arm reached 'Retracted'.

> Check MACH arm sensor for 'INDEX' off capability. Check FILE arm sensor for false 'INDEX'.

Card: SV WR IF Slot: A1 A4 A3

1F8 TEST1F Software count of MACHINE arm tachs (EOB6) was extremely low through the 'INDEX' area. This may indicate inoperable phase A and/or B tach lines.

> Status B-2, B-3: MACH index dist (low, high byte) Allowed range: OOFOh -> O108h

Check MACH arm tach assembly for tach signals.

Card: SV WR IF Slot: A1 A4 A3

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| Code | Detected | Fault DescriptionFRU'S |  |
|------|----------|------------------------|--|
|      | by       |                        |  |

1F9 TEST1F Software count of FILE arm tachs (EOB6) was extremely low through the 'INDEX' area. This may indicate inoperable phase A and/or B tach lines. Status B-4,B-5: FILE index dist (low, high byte) Allowed range: 00F0h -> 0108h Check FILE arm tach assembly for tach signals. Card: SV WR IF

1FA TEST1F Software count of MACHINE arm tachs (EOB6) thru 'INDEX' area was not as expected.

> Status B-2,B-3: MACH index dist (low, high byte) Allowed range: 00F0h -> 0108h

Card: SV WR IF Slot: A1 A4 A3

Slot: A1 A4 A3

1FB TEST1F Software count of FILE arm tachs (EOB6) through 'INDEX' area was not as expected.

> Status B-4,B-5: FILE index dist (low, high byte) Allowed range: 00F0h -> 0108h

Card: SV WR !F Slot: A1. A4 A3

1FC TEST1F Insufficient EPO margin ('EXTENDED' to 'INDEX') was indicated by the MACH arm tach (EOB6).

> Status B-0: MACH epo distance (quarter tachs) minimum: 03 hex

Check MACH arm tach assembly.

Card: SV WR IF Slot: A1 A4 A3 1FD TEST1F Insufficient EPO margin ('EXTENDED' to 'INDEX')
was indicated by the FILE arm tach (EOB6).
Status B-1: FILE epo distance (quarter tachs)
minimum: 03 hex
Check FILE arm tach assembly.
Card: SV WR IF
Slot: A1 A4 A3

1FE TEST1F Software counts of MACHINE arm position tachs were within allowable limits. However, hardware counter (read from EOB4 and placed in Status B-6) was not within 10 (decimal) counts of the software count. (Note: only the low byte of software count is used in the compare).

> Status B-2, B-3: mach index dist (low, high byte) Status B-6: mach index dist (from hardware)

Card: SV WR IF Slot: A1 A4 A3

1FF TESTIF Software counts of FILE arm position tachs were within allowable limits. However, hardware counter (read from EOB5 and placed in Status B-7) was not within 10 (decimal) counts of the software count. (Note: only the low byte of software count is used in the compare).

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Status B-4,B-5: file index dist (low, high byte) Status B-7: file index dist (from hardware)

Card: SV WR IF Slot: A1 A4 A3

87004

| Code | Detected<br>by | Fault DescriptionFRU'S  |
|------|----------------|---|
| 221  | TEST22         | Write and/or Read complete (E028) failed<br>to initialize following a reset (E012).   |
|      |                | STATUS B-0: patterns in order of execution<br>O- FF's to data path<br>1- 00's to data path<br>2- AA55 pattern<br>3- 55AA pattern<br>4- walking 0 bit<br>5- walking 1 bit<br>6- pseudo random (long records) |
|      |                | STATUS B-1: byte count (range: 5 -> 8)<br>STATUS B-2: byte pointer (walking bit patterns)<br>STATUS B-3: bit pointer ("-"")   |
|      |                | Card: DP IF<br>Slot: A5 A3  |
| 222  | TEST22         | Attempt to clear data-path-complete interrupt failedsee code 221 for status locations.  |
|      |                | Card: DP IF<br>Slot: A5 A3  |
| 223  | TEST22         | After setting byte count (IP card) and allowing<br>write transfer, write complete did not occur<br>see code 221 for status locations.   |
|      |                | Card: DP IF<br>Slot: A5 A3  |
| 224  | TEST22         | Data path complete was returned early; before<br>the expected termination of postamble writing<br>see code 221 for status locations.  |
|      |                | Card: DP IF<br>Slot: A5 A3  |

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225 TEST22 After issuing read command, setting short reset to data path front end (E010), and allowing data transfer, timeout occurred waiting for read complete--see code 221 for status locations. Card: DP IF WR

Slot: A5 A3 A4

226 TEST22 After readback of given byte count, data-pathcomplete interrupt (indicating completion of postamble write) did not occur-see code 221 for status locations.

> Card: DP RD IF WR Slot: A5 A6 A3 A4

227 TEST22 Parity was incorrect (E028) following completion of readback--see code 221 for status locations.

Card: DP IF Slot: A5 A3

- 229 TEST22 Reject occurred during speed switch operation. See description of reject codes preceeding code EC1.
- 22A TEST22 Following completion of write and read portions of the loop-write-read, DPSTATA (EOC1) was not as expected (OOh or O1h)--see code 221 for status locations.

Card: DP RD WR IF Slot: A5 A6 A4 A3

22B TEST22 Following completion of write and read portions of the loop-write-read, DPSTATB (EOC2) was not as expected (OOh or O2h)--see code 221 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

> > EC 22926

87004

| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | by       |                        |

22C TEST22 Following completion of write and read portions of the loop-write-read, DPSTATC (EOC3) was not as expected (OOh -> O7h)--see code 221 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

22F TEST22 Following completion of write and read portions of the loop-write-read without detectable errors, write and read buffer data miscompared--see code 221 for status locations.

> Card: DP IF Slot: A5 A3

231 TEST23 Data path "Status A" (EOC1) not indicating velocity error only (O2 hex) following a "loop-write-to-read" record written at 12.5% high velocity.

STATUS A-0: failing status bits

Card: DP IF Slot: A5 A3

232 TEST23 Data path "Status A" (EOC1) not zero following a "loop-write-to-read" record written at 2.1% high velocity.

> Card: DP iF Slot: A5 A3

233 TEST23 Data path "Status A" (EOC1) not zero following a "loop-write-to-read" record written at 11.7% low velocity.

> Card: DP IF Slot: A5 A3

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| Code | Detected<br>by | Fault DescriptionFRU'S |
|------|----------------|------------------------|
|      |                |                        |

234 TEST23 Data path "Status A" (EOC1) not indicating velocity error only (O2 hex) following a "loop-write-to-read" record written at 18.6% low velocity.

STATUS A-O: failing status bits

Card: DP IF Slot: A5 A3

- 239 TEST23 Reject occurred during speed switch operation. See description of reject codes preceeding code E01.
- 241 TEST24 Write and/or Read complete (E028) failed to initialize following a reset (E012).

STATUS B-O: patterns in order of execution--O- FF's to data path 1- OO's to data path 2- AA55 pattern 3- 55AA pattern 4- walking 0 bit 5- walking 1 bit 6- pseudo random (long records) STATUS B-1: byte count (range: 1 -> 6) STATUS B-2: byte pointer (walking bit patterns) STATUS B-3: bit pointer ("""") Card: DP IF

Slot: A5 A3

242 TEST24 Attempt to clear data-path-complete interrupt failed--see code 241 for status locations.

Card: DP IF Slot: A5 A3

243 TEST24 After setting byte count (IP card) and allowing write transfer, write complete did not occur-see code 241 for status locations.

> Card: DP IF Slot: A5 A3

| Code | Detected | Fault DescriptionFRU'S |  |
|------|----------|------------------------|--|
|      | by       |                        |  |

244 TEST24 Data path complete was returned early; before the expected termination of postamble writing-see code 241 for status locations.

> Card: DP IF Slot: A5 A3

245 TEST24 After issuing read command, setting short reset to data path front end (E010), and allowing data transfer, timeout occurred waiting for read complete--see code 241 for status locations.

> Card: DP IF Slot: A5 A3

246 TEST24 After readback of given byte count, data-pathcomplete interrupt (indicating completion of postamble write) did not occur-see code 241 for status locations.

> Card: DP RD IF WR Slot: A5 A6 A3 A4

247 TEST24 Parity was incorrect (E028) following completion of readback--see code 241 for status locations.

> Card: DP IF Slot: A5 A3

- 249 TEST24 Reject occurred during speed switch operation. See description of reject codes preceeding code E01.
- 24A TEST24 Following completion of write and read portions of the loop-write-read, DPSTATA (EOC1) was not as expected (OOh or O1h)--see code 241 for status locations.

Card: DP RD WR IF Slot: A5 A6 A4 A3

| Code | Detected | Fault DescriptionFRU'S |  |
|------|----------|------------------------|--|
|      | by       |                        |  |

24B TEST24 Following completion of write and read portions of the loop-write-read, DPSTATB (EOC2) was not as expected (OOh or O8h)--see code 241 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

24C TEST24 Following completion of write and read portions of the loop-write-read, DPSTATC (EOC3) was not as expected (OOh -> O7h)--see code 241 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

24F TEST24 Following completion of write and read portions of the loop-write-read without detectable errors, write and read buffer data miscompared--see code 241 for status locations.

> Card: DP IF Slot: A5 A3

251 TEST25 Data path "Status A" (EOC1) not indicating velocity error only (O2 hex) following a "loop-write-to-read" record written at 12.5% high velocity.

STATUS A-O: failing status bits

Card: DP IF Slot: A5 A3

252 TEST25 Data path "Status A" (EOC1) not zero following a "loop-write-to-read" record written at 2.1% high velocity.

> Card: DP IF Slot: A5 A3

> > EC 22926

| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
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253 TEST25 Data path "Status A" (EOC1) not zero following a "loop-write-to-read" record written at 11.7% low velocity.

> Card: DP IF Slot: A5 A3

254 TEST25 Data path "Status A" (EOC1) not indicating velocity error only (02 hex) following a "loop-write-to-read" record written at 18.6% low velocity.

STATUS A-O: failing status bits

Card: DP IF Slot: A5 A3

- 259\_TEST25 Reject occurred during speed switch operation. See description of reject codes preceeding code E01.
- 261 TEST26 Write and/or Read complete (E028) failed to initialize following a reset (E012).

STATUS C-O: dead tracks (tracks 0-7, initially 01) STATUS C-1: dead tracks (track P, initially 00)

STATUS B-0: patterns in order of execution--4- walking 0 bit 6- pseudo random (long records) STATUS B-1: byte count (8 bytes for pattern 4) STATUS B-2: byte pointer (walking bit patterns) STATUS B-3: bit pointer (""") Card: DP IF

Slot: A5 A3

262 TEST26 Attempt to clear data-path-complete interrupt failed--see code 261 for status locations. Card: DP IF Slot: A5 A3

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| Code | Detected |
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263 TEST26 After setting byte count (IP card) and allowing write transfer, write complete did not occur--see code 261 for status locations.

Card: DP IF Slot: A5 A3

264 TEST26 Data path complete was returned early; before the expected termination of postamble writing-see code 261 for status locations.

> Card: DP IF Slot: A5 A3

265 TEST26 After issuing read command, setting short reset to data path front end (E010), and allowing data transfer, timeout occurred waiting for read complete--see code 261 for status locations.

> Card: DP IF Slot: A5 A3

266 TEST26 After readback of given byte count, data-pathcomplete interrupt (indicating completion of postamble write) did not occur-see code 261 for status\_locations.

> Card: DP RD IF WR Slot: A5 A6 A3 A4

267 TEST26 Parity was incorrect (E028) following completion of readback--see code 261 for status locations.

Card: DP IF Slot: A5 A3

269 TEST26 Reject occurred during speed switch operation. See description of reject codes preceeding code E01.

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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | by       |                        |

26A TEST26 Following completion of write and read portions of the loop-write-read, DPSTATA (EOC1) was not as expected (08h or 09h)--see code 261 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

26B TEST26 Following completion of write and read portions of the loop-write-read, DPSTATB (EOC2) was not as expected (OOh or O2h)--see code 261 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

26C TEST26 Following completion of write and read portions of the loop-write-read, DPSTATC (EOC3) was not as expected (00h -> 07h)--see code 261 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

26F TEST26 Following completion of write and read portions of the loop-write-read without detectable errors, write and read buffer data miscompared--see code 261 for status locations.

> Card: DP IF Slot: A5 A3

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EC 22926

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| 271 | TEST27 | Write and/or Read complete (E028) failed<br>to initialize following a reset (E012).  |
|-----|--------|--|
|     |        | STATUS C-O: dead tracks (tracks O-7, initially O1)<br>STATUS C-1: dead tracks (track P, initially OO)  |
|     |        | STATUS B-O: patterns in order of execution<br>4- walking 0 bit<br>6- pseudo rapdom (long records)  |
|     |        | STATUS B-1: byte count (6 bytes for pattern 4)<br>STATUS B-2: byte pointer (walking bit patterns)<br>STATUS B-3: bit pointer (""")   |
|     |        | Card: DP IF<br>Slot: A5 A3   |
| 272 | TEST27 | Attempt to clear data-path-complete interrupt failedsee code 271 for status locations.   |
|     |        | Card: DP IF<br>Slot: A5 A3   |
| 273 | TEST27 | After setting byte count (IP card) and allowing<br>write transfer, write complete did not occur<br>see code 271 for status locations.  |
|     |        | Card: DP IF<br>Slot: A5 A3   |
| 274 | TEST27 | Data path complete was returned early; before<br>the expected termination of postamble writing<br>see code 271 for status locations.   |
|     |        | Card: DP IF<br>Slot: A5 A3   |
| 275 | TEST27 | After issuing read command, setting short reset<br>to data path front end (E010), and allowing data<br>transfer, timeout occurred waiting for read com-<br>pletesee code 271 for status locations. |
|     |        | Card: DP IF<br>Slot: A5 A3   |

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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
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276 TEST27 After readback of given byte count, data-pathcomplete interrupt (indicating completion of postamble write) did not occur-see code 271 for status locations. Card: DP RD IF WR Slot: A5 A6 A3 A4

277 TEST27 Parity was incorrect (E028) following completion of readback--see code 271 for status locations.

Card: DP IF Slot: A5 A3

- 279 TEST27 Reject occurred during speed switch operation. See description of reject codes preceeding code E01.
- 27A TEST27 Following completion of write and read portions of the loop-write-read, DPSTATA (EOC1) was not as expected (08h or 09h)--see code 271 for status locations.

Card: DP RD WR IF Slot: A5 A6 A4 A3

27B TEST27 Following completion of write and read portions of the loop-write-read, DPSTATB (EOC2) was not as expected (OOh or O8h)--see code 271 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

27C TEST27 Following completion of write and read portions of the loop-write-read, DPSTATC (EOC3) was not as expected (00h -> 07h)--see code 271 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

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| Code | Detected<br>by | Fault DescriptionFRU'S |
|------|----------------|------------------------|
|      |                |                        |

27F TEST27 Following completion of write and read portions of the loop-write-read without detectable errors, write and read buffer data miscompared--see code 271 for status locations.

> Card: DP IF Slot: A5 A3

281 TEST28 Write and/or Read complete (E028) failed to initialize following a reset (E012).

STATUS C-O: dead tracks (tracks 0-7, initially 03) STATUS C-1: dead tracks (track P, initially 00)

STATUS B-0: patterns in order of execution--4- walking 0 bit 6- pseudo random (long records) STATUS B-1: byte count (8 bytes for pattern 4) STATUS B-2: byte pointer (walking bit patterns) STATUS B-3: bit pointer (""")

- Card: DP IF. Slot: A5 A3
- 282 TEST28 Attempt to clear data-path-complete interrupt failed--see code 281 for status locations.

Card: DP IF Slot: A5 A3

283 TEST28 After setting byte count (IP card) and allowing write transfer, write complete did not occur-see code 281 for status locations.

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Card: DP IF Slot: A5 A3

284 TEST28 Data path complete was returned early; before the expected termination of postamble writing-see code 281 for status locations.

> Card: DP IF Slot: A5 A3

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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | ьр       |                        |

285 TEST28 After issuing read command, setting short reset to data path front end (E010), and allowing data transfer, timeout occurred waiting for read complete--see code 281 for status locations.

> Card: DP IF Slot: A5 A3

286 TEST28 After readback of given byte count, data-pathcomplete interrupt (indicating completion of postamble write) did not occur-see code 281 for status locations.

> Card: DP RD IF WR Slot: A5 A6 A3 A4

- 289 TEST28 Reject occurred during speed switch operation. See description of reject codes preceeding code E01.
- 28A TEST28 Following completion of write and read portions of the loop-write-read, DPSTATA (EOC1) was not as expected (74h; 09h bits don't care)--see code 281 for status locations.

Card: DP RD WR IF Slot: A5 A6 A4 A3

28B TEST28 Following completion of write and read portions of the loop-write-read, DPSTATB (EOC2) was not as expected (00h; OBh bits don't care)--see code 281 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

28C TEST28 Following completion of write and read portions of the loop-write-read, DPSTATC (EOC3) was not as expected (00h -> 07h)--see code 281 for status locations.

|       | Card: | DP | rd | WR | IF    |
|-------|-------|----|----|----|-------|
|       | Slot: | A5 | A6 | A4 | A3    |
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| Code | Detected<br>by | Fault DescriptionFRU'S  |
|------|----------------|---|
| 28D  | TEST28         | CRC-C and BUPER did not both set in DPSTATB (EOC2)<br>at some time during multi-track error PE loop-<br>write to read testing.        |
|      |                | Card: DP IF<br>Slot: A5 A3  |
| 291  | TEST29         | Write and/or Read complete (E028) failed<br>to initialize following a reset (E012).   |
|      |                | STATUS C-O: dead tracks (tracks 0-7, initially 03)<br>STATUS C-1: dead tracks (track P, initially 00)                                 |
|      |                | STATUS B-O: patterns in order of execution<br>4- walking 0 bit  |
|      |                | STATUS B-1: byte count (6 bytes for pattern 4)<br>STATUS B-2: byte pointer (walking bit patterns)<br>STATUS B-3: bit pointer (""")    |
|      |                | Card: DP IF<br>Slot: A5 A3  |
| 292  | TEST29         | Attempt to clear data-path-complete interrupt failedsee code 291 for status_locations.  |
|      |                | Card: DP IF<br>Slot: A5 A3  |
| 293  | TEST29         | After setting byte count (IP card) and allowing<br>write transfer, write complete did not occur<br>see code 291 for status locations. |
|      |                | Card: DP IF<br>Slot: A5 A3  |
| 294  | TEST29         | Data path complete was returned early; before<br>the expected termination of postamble writing<br>see code 291 for status locations.  |
|      |                | Card: DP IF<br>Slot: A5 A3  |
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| Code | Detected<br>by | Fault DescriptionFRU'S |
|------|----------------|------------------------|
|      |                |                        |

295 TEST29 After issuing read command, setting short reset to data path front end (EC10), and allowing data transfer, timeout occurred waiting for read complete--see code 291 for status locations.

> Card: DP IF Slot: A5 A3

296 TEST29 After readback of given byte count, data-pathcomplete interrupt (indicating completion of postamble write) did not occur-see code 291 for status locations.

> Card: DP RD IF WR Slot: A5 A6 A3 A4

297 TEST29 Parity was incorrect (E028) following completion of readback--see code 291 for status locations.

Card: DP IF Slot: A5 A3

- 299 TEST29 Reject occurred during speed switch operation. See description of reject codes preceeding code E01.
- 29A TEST29 Following completion of write and read portions of the loop-write-read, DPSTATA (EOC1) was not as expected (10h,11h,18h, or 19h)--see code 291 for status locations.

Card: DP RD WR IF Slot: A5 A6 A4 A3

29B TEST29 Following completion of write and read portions of the loop-write-read, DPSTATB (EOC2) was not as expected (OOh or O8h)--see code 291 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | by       |                        |

29C TEST29 Following completion of write and read portions of the loop-write-read, DPSTATC (EOC3) was not as expected (OOh -> O7h)--see code 291 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

29F TEST29 Following completion of write and read portions of the loop-write-read without detectable errors, write and read buffer data miscompared--see code 291 for status locations.

> Card: DP IF Slot: A5 A3

2C1 TEST2C Write and/or read complete (E028) failed to initialize following a reset (E012).

> STATUS B-0: patterns in order of execution--O- FF's to data path 1- 00's to data path 2- AA55 pattern 3- 55AA pattern 4- walking 0 bit 5- walking 1 bit 6- pseudo random (long records) STATUS B-1: byte count (range: 5 -> 8) STATUS B-2: byte pointer (walking bit patterns) STATUS B-3: bit pointer ("""")

Card: DP IF Slot: A5 A3

2C2 TEST2C Attempt to clear data-path-complete interrupt failed--See code 2C1 for status locations.

Card: DP IF Slot: A5 A3

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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | Ьу       |                        |

2C3 TEST2C After setting byte count (IP card) and allowing write transfer, write complete did not occur--See code 2C1 for status locations.

> Card: DP IF Slot: A5 A3

2C4 TEST2C Data path complete was returned early; before the expected termination of postamble writing--See code 2C1 for status locations.

> Card: DP IF Slot: A5 A3

2C5 TEST2C After issuing read command, setting short reset to data path front end (E010), and allowing data transfer, timeout occurred waiting for read complete--see code 2C1 for status locations.

> Card: DP IF WR Slot: A5 A3 A4

- 2C6 TEST2C After readback of given byte count, data-pathcomplete interrupt (indicating completion of postamble write) did not occur-see code 2C1 for status locations.
  - Card: DP RD IF WR Slot: A5 A6 A3 A4
- 2C7 TEST2C Parity was incorrect (E028) following completion of readback--see code 2C1 for status locations.

Card: DP IF Slot: A5 A3

2C9 TEST2C Reject occurred during speed switch operation. See description of reject codes preceeding code E01.

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| Code | Detected<br>by | Fault DescriptionFRU'S |
|------|----------------|------------------------|
| 201  | TESTOC         |                        |

2CA TEST2C Following completion of write and read portions of the loop-write-read, DPSTATA (EOC1) was not as expected (00h or 01h)--see code 2C1 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

2CB TEST2C Following completion of write and read portions of the loop-write-read, DPSTATB (EOC2) was not as expected (OOh or O2h)--see code 2C1 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

2CC TEST2C Following completion of write and read portions of the loop-write-read, DPSTATC (EOC3) was not as expected (00h -> 07h)--see code 2C1 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

- 2CF TEST2C Following completion of write and read portions of the loop-write-read without detectable errors, write and read buffer data miscompared--see code 2C1 for status locations.
  - Card: DP IF Slot: A5 A3

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| Code | Detected |  |
|------|----------|--|
|      | by       |  |

2E1 TEST2E Write and/or Read complete (E028) failed to initialize following a reset (E012). STATUS B-O: patterns in order of execution--0- FF's to data path 1- 00's to data path 2- AA55 pattern 3- 55AA pattern 4- walking 0 bit 5- walking 1 bit 6- pseudo random (long records) STATUS B-1: byte count (range: 1 -> 6) STATUS B-2: byte pointer (walking bit patterns) STATUS B-3: bit pointer ( " " ) Card: DP IF Slot: A5 A3 2E2 TEST2E Attempt to clear data-path-complete interrupt failed--see code 2E1 for status locations. Card: DP IF Slot: A5 A3 After setting byte count (IP card) and allowing 2E3 TEST2E write transfer, write complete did not occur-see code 2E1 for status locations. Card: DP IF Slot: A5 A3 2E4 TEST2E Data path complete was returned early; before the expected termination of postamble writing-see code 2E1 for status locations. Card: DP IF Slot: A5 A3

| Code | Detected |
|------|----------|
|      | by       |

2E5 TEST2E After issuing read command, setting short reset to data path front end (E010), and allowing data transfer, timeout occurred waiting for read complete--see code 2E1 for status locations.

> Card: DP IF Slot: A5 A3

2E6 TEST2E After readback of given byte count, data-pathcomplete interrupt (indicating completion of postamble write) did not occur-see code 2E1 for status locations.

> Card: DP RD IF WR Slot: A5 A6 A3 A4

2E7 TEST2E Parity was incorrect (E028) following completion of readback--see code 2E1 for status locations.

Card: DP IF Slot: A5 A3

- 2E9 TEST2E Reject occurred during speed switch operation. See description of reject codes preceeding code E01.
- 2EA TEST2E Following completion of write and read portions of the loop-write-read, DPSTATA (EOC1) was not as expected (00h or 01h)--see code 2E1 for status locations.

Card: DP RD WR IF Slot: A5 A6 A4 A3

2EB TEST2E Following completion of write and read portions of the loop-write-read, DPSTATB (EOC2) was not as expected (00h or 08h)--see code 2E1 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | by       |                        |

2EC TEST2E Following completion of write and read portions of the loop-write-read, DPSTATC (EOC3) was not as expected (OOh -> O7h)--see code 2E1 for status locations.

> Card: DP RD WR IF Slot: A5 A6 A4 A3

2EF TEST2E Following completion of write and read portions of the loop-write-read without detectable errors, write and read buffer data miscompared--see code 2E1 for status locations.

> Card: DP IF Slot: A5 A3

321 TEST32 While in EPO'd state and driving both machine and file DAC's (SV) through drive range (7Fh to 80h), current mode feedback indicated multiple null points.

> Status A-O: first negative drive feedback (mach) Status A-1: first negative drive feedback (file)

Card: SV IF EPO Relay Slot: A1 A3 MBD

322 TEST32 Machine/File reel current mode feedback (EODO) indicated null points outside range: FOh <-> OFh.

> Status A-O: machine reel null Status A-1: file reel null

Card: SV IF Slot: A1 A3

| Code Detected |    | etected Fault DescriptionFRU'S |  |
|---------------|----|--------------------------------|--|
|               | by |                                |  |

| 323 | TEST32 | With EPO reset (current driven thru reels) and DAC drive applied, initial current mode feedback |
|-----|--------|---|
|     |        | (-nump un/down) was incorrect. This is represented  |
|     |        | by a EF byte in any of the following status   |
|     |        |   |
|     |        | Status B-O: MACH reel current time, DAC = 7F  |
|     |        | Status B-1: MACH reel current time, DAC = $40$  |
|     |        | Status B-2: MACH reel current time, DAC = $20$  |
|     |        | Status B-3: MACH reel current time, $DAC = 10$  |
|     |        | Status $B-4$ : MACH reel current time, $DAC = FF$   |
|     |        | Status $B-5$ : MACH reel current time, $DAC = DF$   |
|     |        | Status $B-6$ : MACH real current time, DAC = BF   |
|     |        | Status B-7: MACH real current time, $DAC = 80$  |
|     |        | Status B". Mach reer current time, bac - 00   |
|     |        | Status B-8: FILE reel current time. DAC = $7F$  |
|     |        | Status B-9: FILE reel current time. DAC = $40$  |
|     |        | Status B-A: FILE reel current time, DAC = $20$  |
|     |        | Status B-B: FILE reel current time, DAC = $10$  |
|     |        | Status B-C: FILE reel current time, DAC = EF  |
|     |        | Status B-D: FILE reel current time, DAC = $DF$  |
|     |        | Status $B-E$ : FILE reel current time, $DAC = BE$   |
|     |        | Status B-E: FILE reel current time, DAC = $80$  |
|     |        |   |
|     |        | Card: SV IF   |
|     |        | Slot: A1 A3   |
|     |        |   |
|     |        |   |
| 324 | TEST32 | With EPO reset (current driven thru MACHINE reel),  |
|     |        | current feedback was not detected. The timeout  |
|     |        | for this feedback is indicated by a FE in any of  |
|     |        |   |
|     |        | Status B-O: MACH reel current time, DAC = 7F  |
|     |        | Status B-1: MACH reel current time, DAC = 40  |
|     |        | Status B-2: MACH reel current time, DAC = 20  |
|     |        | Status B-3: MACH reel current time, DAC = 10  |
|     |        | Status B-4: MACH reel current time, DAC = EF  |
|     |        | Status B-5: MACH reel current time, DAC = DF  |
|     |        | Status B-6: MACH reel current time, DAC = BF  |
|     |        | Status B-7: MACH reel current time, DAC = $80$  |
|     |        |   |
|     |        | Check MACHINE reel motor cabling.   |
|     |        | Card. SV IF Machine Real FDO Pelay  |
|     |        | Slot: A1 A3 Motor MBD   |

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| Code | Detected | Fault DescriptionFRU'S |  |
|------|----------|------------------------|--|
|      | ьу       | -                      |  |

- With EPO reset (current driven thru FILE reel), 325 TEST32 current feedback was not detected. The timeout for this feedback is indicated by a FE in any of.. Status B-8: FILE reel current time, DAC = 7F Status B-9: FILE reel current time, DAC = 40 Status B-A: FILE reel current time, DAC = 20 Status B-B: FILE reel current time, DAC = 10 Status B-C: FILE reel current time, DAC = EF Status B-D: FILE reel current time, DAC = DF Status B-E: FILE reel current time, DAC = BF Status B-F: FILE reel current time, DAC = 80 Check FILE reel motor cabling. Card: SV File Reel EPO Relay Slot: A1 MBD Motor
- 326 TEST32 In current mode, the two reel DAC's were each driven through 8 levels: most positive to most negative. The resulting current feedback times did not follow the relative level of drive.

Card: SV Slot: A1

327 TEST32 The feedback time of MACHINE or FILE reel current was not reduced by a power supply switch to the higher rewind voltage. The expected ratio:

Normal/Rewind > 1.125

Status B-O: Normal-V feedback (Machine) Status C-O: Rewind-V feedback (Machine)

Status B-8: Normal-V feedback (File) Status C-8: Rewind-V feedback (File)

Card: SV AK Slot: A! Pwr Supply

| Code | Detected | Fault DescriptionFRU'S |  |
|------|----------|------------------------|--|
|      | by       |                        |  |

328 TEST32 In threading mode (voltage feedback), each reel DAC was driven to a forward (08h) and a backward (F7h) level. The "-Pump Up (Down)" signals were not as expected. (In the following status, FF indicates both Up & Down signals were active; FE indicates Up or Down was active longer than 1.5 ms).

> Status A-8: Machine reel accel time (Fwd) Status A-9: Machine reel accel time (Bkwd) Status A-A: File reel accel time (Fwd) Status A-B: File reel accel time (Bkwd)

329 TEST32 In threading mode (voltage feedback), each reel DAC was driven to a forward (08h) and a backward (F7h) level. Motion of the MACHINE reel was not detected (this is indicated by a FD in the status below).

> Status A-8: Machine reel accel time (Fwd) Status A-9: Machine reel accel time (Bkwd)

Card: SV Machine reel Slot: A1 Motor

32A TEST32 In threading mode (voltage feedback), each reel DAC was driven to a forward (08h) and a backward (F7h) level. Motion of the FILE reel was not detected (this is indicated by a FD in the status below).

> Status A-A: File reel accel time (Fwd) Status A-B: File reel accel time (Bkwd)

Card: SV File reel Slot: A1 Motor

32B TEST32 No detectable capstan motion after 4 ms drive pulse applied (maximum positive drive).

| Card: | sv  | Capstan/Tach | EPO Relay |
|-------|-----|--------------|-----------|
| Slot: | A 1 | Motor        | MBD       |

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Card: SV Slot: A1

| Code | Detected<br>by | Fault DescriptionFRU'S |
|------|----------------|------------------------|
|------|----------------|------------------------|

- 32C TEST32 in processor controlled mode, the capstan DAC was loaded to generate 4 ms pulses of varying magnitude. The resulting capstan positions did not indicate displacement relative to the drive magnitude. Status B-O: Capstan distance, DAC = 7F (max pos) Status B-1: Capstan distance, DAC = 40 Status B-2: Capstan distance, DAC = 20 Status B-3: Capstan distance, DAC = 10 Status B-4: Capstan distance, DAC = EF Status B-5: Capstan distance, DAC = DF Status B-6: Capstan distance, DAC = BF Status B-7: Capstan distance, DAC =  $80 \pmod{\text{max neg}}$ Card: SV Capstan/Tach Slot: A1 Motor 32D TEST32 Capstan position count (EOA4, A5) not indicating 50 ips change rate within 100 milli-seconds. Card: SV Capstan/Tach Slot: A1 Motor
- 32E TEST32 After successfully ramping capstan to 50 ips (verified by position counter: EOA5) velocity control mode was enabled. Tach-A at diagnostic sense register (EODO) was inactive or period was more than 50% over nominal sometime during the check of 1000 tach lines (one revolution).

| Card: | SV  | Capstan/Tach |
|-------|-----|--------------|
| Slot: | A 1 | Motor        |

| Code | Detected | Fault DescriptionFRU'S |  |
|------|----------|------------------------|--|
|      | by       |                        |  |

32F TEST32 After successfully ramping capstan to 50 ips (verified by position counter: EOA5) velocity control mode was enabled. Velocity error (EOA7) was monitored for a complete revolution of the capstan. Low and high velocities did not meet test requirements:

Allowed range

| Status C- | 0: Low  | velocity | FAh | -> | OEh |
|-----------|---------|----------|-----|----|-----|
| Status C- | 1: High | velocity | FEh | -> | 12h |

Card: SV Capstan/Tach Slot: A1 Motor

331 TEST32 Machine check occurred during the initial unload operation.

Status A-6: Machine check code See description for code Fxx, where xx= contents of this status location

332 TEST32 Following successful reel and capstan servo testing, a load operation resulted in a machine check.

> Status A-6: Machine check code See description for code Fxx, where xx= contents of this status location

333 TEST32 Load task did not complete due to non-machine check interrupt (door open, undefined NMI, etc.).

Card: SV IF WR EOT/BOT Slot: A1 A3 A4 Sensor

334 TEST32 Door open detected during test.

Card: SV IF Slot: A1 A3

| Code  | Detected<br>by | Fault DescriptionFRU'S  |
|-------|----------------|---|
| 341   | TEST34         | STATUS A-5 = 0: Drive not loaded  |
|       |                | <pre>STATUS A-5 not 0: Speed switch reject code   (see description for code Exx, where     xx = contents of this status location)</pre> |
| 342   | TEST34         | EOT status detected.  |
| 343   | TEST34         | Machine check occurred during wait for stable turn around conditions.   |
|       |                | Status A-1: motion number (01h -> 20h: fwd)<br>(21h -> 3Fh: bkwd)   |
|       |                | Status A-6: Machine check code<br>See description for code Fxx, where<br>xx= contents of this status location                           |
| 344   | TEST34         | Reject resulted from switch to 50 ips motion.   |
|       |                | Status A-5: Reject code<br>See description for code Exx, where<br>xx= contents of this status location                                  |
| 345   | TEST34         | Machine check occurred during acceleration phase<br>of test.<br>See status and FRU information for code 343.                            |
| 346   | TEST34         | Machine check occurred during sustained velocity<br>phase of test.<br>See status and FRU information for code 343.                      |
| . 347 | TEST34         | Machine check occurred during deceleration phase<br>of test.<br>See status and FRU information for code 343.                            |
| 348   | TEST34         | Machine check occurred during stop-lock phase<br>of test.<br>See status and FRU information for code 343.                               |

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34A TEST34 Acceleration characteristics were not within spec. Check for excessive tape path drag.

> Status A-1: motion number (01h -> 20h: fwd) (21h -> 3Fh: bkwd) parameter: should be: Status B-0: Cumulative ramp error DDh -> 23h

Status B-1: Feed-forward term 08h -> 28h

Card: SV Capstan/Tach Slot: A1 Motor

34B TEST34 Arm position did not reach zero-error (+/- 5) within required time on long forward or bkwd motion. The thresholds for this test are valid only when using a full 10.5-inch reel. Tape slip may be indicated by this failure (examine & clean capstan).

> Status A-1: motion number (01h= 1st fwd) (21h= 1st bkwd)

parameter: should be: Status B-2: Mach arm recovery time 00h -> C8h Status B-3: File arm recovery time 00h -> C8h

Card: SV Capstan/Tach Slot: A1 Motor

34C TEST34 Sustained velocity characteristics not within spec.

Status A-1: motion number (01h -> 20h: fwd) (21h -> 3Fh: bkwd)

|   | parameter:  | should be:                             |
|---|---|--|
| Status B-4:<br>Status B-5:<br>Status B-6: | Maximum Velocity<br>Minimum Velocity<br>Feed-forward term | EDh -> 13h<br>EDh -> 13h<br>F4h -> 14h |
|   |   |  |

Card: SV Capstan/Tach Slot: A1 Motor

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| Code | Detected | Fault DescriptionFRU'S |  |
|------|----------|------------------------|--|
|      | by       |                        |  |

34D TEST34 Deceleration characteristics not within spec.

Status A-1: motion number (01h -> 20h: fwd) (21h -> 3Fh: bkwd) parameter: should be: Status B-7: Cumulative ramp error DDh -> 23h Status B-8: Feed-forward term D8h -> F8h Card: SV Capstan/Tach Slot: A1 Motor

34E TEST34 Stop-lock positioning outside limits.

Status A-1: motion number (01h -> 20h: fwd) (21h -> 3Fh: bkwd)

|        |      | parameter:    | should be: |
|--------|------|---------------|------------|
| Status | B-9: | Low position  | F6n -> OAh |
| Status | B-A: | High position | F6h -> OAh |
| Card:  | SV   | Capstan/Tach  |            |
| Slot:  | A 1  | Motor         |            |

351 TEST35 STATUS A-5 = 0: Drive not loaded STATUS A-5 not 0: Speed switch reject code (see description for code Exx, where xx = contents of this status location)

352 TEST35 EOT status detected.

353 TEST35 Machine check occurred during wait for stable turn around conditions.
Status A-1: motion number (01h -> 20h: fwd) (21h -> 3Fh: bkwd)
Status A-6: Machine check code See description for code Fxx, where xx= contents of this status location

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| Code | Detected |  |
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| 354 | TEST35 | Reject resulted from switch to 100 ips motion.   |
|-----|--------|--|
|     |        | Status A-5: Reject code<br>See description for code Exx, where<br>xx= contents of this status location             |
| 355 | TEST35 | Machine check occurred during acceleration phase<br>of test.<br>See status and FRU information for code 353.       |
| 356 | TEST35 | Machine check occurred during sustained velocity<br>phase of test.<br>See status and FRU information for code 353. |
| 357 | TEST35 | Machine check occurred during deceleration phase<br>of test.<br>See status and FRU information for code 353.       |
| 358 | TEST35 | Machine check occurred during stop-lock phase<br>of test.<br>See status and FRU information for code 353.          |
| 35A | TEST35 | Acceleration characteristics were not within spec.<br>Check for excessive tape path drag.                          |
|     |        | Status A-i: motion number (01h -> 20h: fwd)<br>(21h -> 3Fh: bkwd)  |
|     |        | parameter: should be:  |
|     |        | Status B-O: Cumulative ramp error DDh -> 23h<br>Status B-1: Feed-forward term 08h -> 28h                           |
|     |        | Card: SV Capstan/Tach<br>Slot: Al Motor  |

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| Code | Detected<br>by | Fault DescriptionFRU'S |
|------|----------------|------------------------|
|------|----------------|------------------------|

35C TEST35 Sustained velocity characteristics not within spec.

(01h -> 20h: fwd) Status A-1: motion number (21h -> 3Fh: bkwd) should be: parameter: Status B-4: Maximum Velocity EDh -> 13h Status B-5: Minimum Velocity EDh -> 13h Status B-6: Feed-forward term F4h -> 14h Card: SV Capstan/Tach Slot: A1 Motor 35D TEST35 Deceleration characteristics not within spec. Status A-1: motion number (01h -> 20h: fwd) (21h -> 3Fh: bkwd) | should be: parameter: Status B-7: Cumulative ramp error | DDh -> 23h Status B-8: Feed-forward term D8h -> F8h Card: SV Capstan/Tach Slot: A1 Motor 35E TEST35 Stop-lock positioning outside limits. Status A-1: motion number (01h -> 20h: fwd)  $(21h \rightarrow 3Fh: bkwd)$ should be: parameter: Status B-9: Low position F6h -> 0Ah Status B-A: High position F6h -> 0Ah Card: SV Capstan/Tach Slot: Al Motor

| 361 | TEST36 | STATUS A-5 = 0: Drive not loaded  |
|-----|--------|---|
|     |        | STATUS A-5 not 0: Speed switch reject code<br>(see description for code Exx, where<br>xx = contents of this status location)  |
| 362 | TEST36 | Machine check occurred during fwd motion (50 ips).  |
|     |        | Status A-6: Machine check code<br>See description for code Fxx, where<br>xx= contents of this status location   |
|     |        | Check power supply voltages (AK card).  |
| 363 | TEST36 | Machine check occurred during velocity ramp up<br>from 50 to 170 ips.<br>See status and FRU information for code 362.   |
| 364 | TEST36 | Machine check occurred during attempted velocity<br>ramp up from 170 to 220 ips.<br>See status and FRU information for code 362.  |
| 365 | TEST36 | Following BOT detection during rewind, a machine<br>check occurred during the ramp down from approx<br>220 ips to 50 ips.<br>See status and FRU information for code 362. |
| 366 | TEST36 | Immediately after rewind ramp down at BOT, a<br>machine check occurred during the settling time.<br>See status and FRU information for code 362.                          |
| 367 | TEST36 | Machine check occurred during turn around operation   |

See status and FRU information for code 362.

| Code | Detected<br>by | Fault DescriptionFRU'S                           |
|------|----------------|--|
| 368  | TEST36         | Maximum velocity attained during 125 foot rewind |

was less than 165 ips (OC7h). Status B-O: maximum velocity (VL-VR) Check for early EOT sticker on tape or spurious EOT detections.

> Card: SV AK Slot: Al Pwr Supply

421 TEST42 STATUS A-5 = 0: Drive not loaded

STATUS A-5 not 0: Speed switch reject code (see description for code Exx, where xx = contents of this status location)

422 TEST42 Tape must be write enabled

423 TEST42 Reject or Machine check from initial rewind. See description of reject codes preceeding code E01.

424 TEST42 Current on or unstable (EOE1) afer rewind.

Card: WR IF RD Slot: A4 A3 A6

425 TEST42 Immediately after setting erase, status was in error (EOE1).

Card: WR IF RD Slot: A4 A3 A6

426 TEST42 Interrupt from erase transition was not seen.

Card: WR IF Slot: A4 A3

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| Code | Detected<br>by | Fault DescriptionFRU'S  |
|------|----------------|---|
| 427  | TEST42         | Stable erase-only status was not seen in sense  |
| ;    |                | register (EOE1).  |
|      |                | Card: WR IF Rd/Wrt<br>Slot: A4 A3 Head  |
| 428  | TEST42         | Stable write mode status was not seen in sense<br>register (EOE1).  |
|      |                | Card: WR IF Rd/Wrt<br>Slot: A4 A3 Head  |
| 429  | TEST42         | Interrupt from write transition was not seen.   |
|      |                | Card: WR IF<br>Slot: A4 A3  |
| 42A  | TEST42         | Amplitude sensor active without motion (EOC5 or EOC3).  |
| ·    |                | Card: WR IF DP<br>Slot: A4 A3 A5  |
| 42B  | TEST42         | Machine check occurred during forward write motion.   |
|      |                | Status A-6: Machine check code<br>See description for code Fxx, where<br>xx= contents of this status location |
| 42C  | TEST42         | Amplitude sensor not as expected during 30 foot<br>all track write.   |
|      |                | Check tape quality.   |
|      |                | Status B-0,7: error count for tracks 0,7<br>Status B-8: error count for tracks P                              |
|      |                | Card: WR RD DP Rd/Wrt<br>Slot: A4 A6 A5 Head  |
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| Code | Detected | Fault DescriptionFRU'S |  |  |
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write of one track only.

Amplitude sensor not as expected during 1 foot

Check tape quality. Status B-0,7: error count for tracks 0,7 Status B-8: error count for tracks P Card: WR RD DP Rd/Wrt Slot: A4 A6 A5 Head Amplitude sensor not as expected during 1 foot 42E TEST42 write of all but one track. Check tape quality. Status B-0,7: error count for tracks 0,7 Status B-8: error count for tracks P Card: WR RD DP Rd/Wrt Slot: A4 A6 A5 Head 42F TEST42 Amplitude sensor detected during feed-through check (all tracks writing; no motion). Status B-0,7: error count for tracks 0,7 Status B-8: error count for tracks P Card: WR RD DP Rd/Wrt Slot: A4 A6 A5 Head 431 TEST43 STATUS A-5 = 0: Drive not loaded STATUS A-5 not 0: Speed switch reject code (see description for code Exx, where xx = contents of this status location) 432 TEST43 Tape must be write enabled 433 TEST43 Reject or Machine check from initial rewind. See description of reject codes preceeding code E01.

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| Code | Detected |
|------|----------|
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| 434 | TEST43 | Current on or unstable (EOE1) afer rewind.  |
|-----|--------|---|
|     |        | Card: WR IF RD<br>Slot: A4 A3 A6  |
| 435 | TEST43 | Immediately after setting erase, status was in error (EOE1).  |
|     |        | Card: WR IF RD<br>Slot: A4 A3 A6  |
| 436 | TEST43 | Interrupt from erase transition was not seen.   |
|     |        | Card: WR IF<br>Slot: A4 A3  |
| 437 | TEST43 | Stable erase-only status was not seen in sense<br>register (EOE1).  |
|     |        | Card: WR IF Rd/Wrt<br>Slot: A4 A3 Head  |
| 438 | TEST43 | Stable write mode status was not seen in sense<br>register (EOE1).  |
|     |        | Card: WR IF Rd/Wrt<br>Slot: A4 A3 Head  |
| 43A | TEST43 | Amplitude sensor active without motion (EOC5 or EOC3).  |
|     |        | Card: WR IF DP<br>Slot: A4 A3 A5  |
| 43B | TEST43 | Machine check occurred during forward write motion.   |
|     |        | Status A-6: Machine check code<br>See description for code Fxx, where<br>xx= contents of this status location |

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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
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43C TEST43 Amplitude sensor not as expected during 30 foot all track write.
Check tape quality.
Status B-0,7: error count for tracks 0,7 Status B-8: error count for tracks P
Card: WR RD DP Rd/Wrt
Slot: A4 A6 A5 Head

43D TEST43 Amplitude sensor not as expected during 1 foot - write of one track only.

Check tape quality.

Status B-0,7: error count for tracks 0,7 Status B-8: error count for tracks P

Card: WR RD DP Rd/Wrt Slot: A4 A6 A5 Head

43E TEST43 Amplitude sensor not as expected during 1 foot write of all but one track.

Check tape quality.

Status B-0,7: error count for tracks 0,7 Status B-8: error count for tracks P

Card: WR RD DP Rd/Wrt Slot: A4 A6 A5 Head

43F TEST43 Amplitude sensor detected during feed-through check (all tracks writing; no motion).

Status B-0,7: error count for tracks 0,7 Status B-8: error count for tracks P

Card: WR RD DP Rd/Wrt Slot: A4 A6 A5 Head

| 481 | TEST48 | STATUS A-5 = 0: Drive not loaded  |
|-----|--------|---|
| •   |        | <pre>STATUS A-5 not 0: Speed switch reject code   (see description for code Exx, where     xx = contents of this status location)</pre> |
| 482 | TEST48 | Tape must be write enabled  |
| 483 | test48 | Reject or Machine check from initial rewind.<br>See description of reject codes preceeding code E01.                                    |
| 484 | TEST48 | Reject or Machine check from internal write command.  |
|     |        | Status A-0,A-1: Low, high byte of record number.<br>Range: 000-100 hex.<br>See description of reject codes preceeding code E01.         |
| 485 | TEST48 | Write overrun status (EOC2) during internal<br>write (data supplied to DP from IF card only).   |
|     |        | Status A-0,A-1: Low, high byte of record number.<br>Range: 000-100 hex.   |
|     |        | Card: IF DP<br>Slot: A3 A5  |
| 486 | TEST48 | Bus parity error status (EOC2) during internal write (data supplied to DP from IF card only).   |
|     |        | Status A-0,A-1: Low, high byte of record number.<br>(Range: 000-100 hex)  |
|     |        | Card: IF DP<br>Slot: A3 A5  |
| 488 | TEST48 | Reject or Machine check from back-space-block   |

or erase-gap command during write error recovery. See description of reject codes preceeding code E01.

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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
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| 489 | TEST48 | During write error recovery, all 5 retries failed.  |
|-----|--------|---|
|     |        | Status A-0,A-1: Low, high byte of record number.<br>(Range: 000-100 hex)  |
|     |        | Check tape quality.   |
|     |        | Card: DP WR RD IF<br>Slot: A5 A4 A6 A3  |
| 48a | TEST48 | Reject or Machine check from write-tape-mark command.   |
|     |        | Status A-0,A-1: Low, high byte of record number<br>(first WTM occurs at 10 hex)   |
|     |        | See description of reject codes preceeding code E01.  |
| 48B | test48 | During the writing of 256 PE records, more than one temporary write error occurred.   |
|     |        | Status A-2: Total failing writes<br>Status A-3: Temporary write errors  |
|     |        | (1 data check in 6 attempts)<br>Status A-4: Media defects<br>(>1 data check in 6 attempts)  |
|     |        | ** Read/Write Error Tallies **  |
|     |        | Status A-8: Data checksStatus A-C: Multi-trksStatus A-9: VelocityStatus A-D: Part. recd'sStatus A-A: End Data ChksStatus A-E: Un-corr.Status A-B: CorrectionsStatus A-F: CRC errors |
|     |        | Status B-O -> B-8: Dead Track counters O-7,P<br>Status C-O -> C-8: Phase error counters O-7,P   |
|     |        | Card: DP WR RD IF<br>Slot: A5 A4 A6 A3  |
| 491 | TEST49 | STATUS A-5 = 0: Drive not loaded  |
|     |        | STATUS A-5 not 0: Speed switch reject code<br>(see description for code Exx, where<br>xx = contents of this status location)  |

| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | by       |                        |

492 TEST49 Reject or machine check from initial rewind. See description of reject codes preceeding code E01. 493 TEST49 Reject or Machine check from internal read forward. See description of reject codes preceeding code E01. 496 TEST49 Unexpected tape mark (did not follow a 16 record group). Tape must have been written by TEST48. Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex) Card: DP Slot: A5 497 TEST49 Unexpected tape mark (more than 256 records read correctly, but tape mark did not follow 16 record group). Tape must have been written by TEST48. Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex) Card: DP Slot: A5 499 TEST49 Data miscompare following read without data check (tape must have been written by TEST48). Comparison involved 32 bytes of write buffer (A000-A01F) and 32 bytes of read buffer (A020-A03F). Data should match record number below: Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex)

> Card: DP RD IF Slot: A5 A6 A3

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| 49B | TEST49 | Reject or Machine check from internal read forward over expected tape mark.   |
|-----|--------|---|
|     |        | Status A-0,A-1: Low, high byte of record number<br>(Range: 000-100 hex)   |
|     |        | See description of reject codes preceeding code E01.  |
| 49C | TEST49 | Tape mark status not detected when expected (but<br>16 record group read OK).   |
|     |        | Status A-0,A-1: Low, high byte of record number<br>(Range: 000-100 hex, first TMK @ 10)   |
|     |        | Card: DP<br>Slot: A5  |
| 49E | TEST49 | Failed internal record read with 5 retries.   |
|     |        | Status A-0,A-1: Low, high byte of record number<br>(Range: 000-100 hex)   |
|     |        | ** Read/Write Error Tallies **  |
|     |        | Status A-8: Data checksStatus A-C: Multi-trksStatus A-9: VelocityStatus A-D: Part. recd'sStatus A-A: End Data ChksStatus A-E: Un-corr.Status A-B: CorrectionsStatus A-F: CRC errors |
|     |        | Status B-O -> B-8: Dead track counters O-7, P<br>Status C-O -> C-8: Phase error counters O-7, P   |
|     |        | Card: DP<br>Slot: A5  |

49F TEST49 Reject or Machine check from internal Back-Space-Block command during read error recovery. See description of reject codes preceeding code E01.

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| Code | Detected<br>by | Fault DescriptionFRU'S |
|------|----------------|------------------------|
|      |                |                        |

4A1 TEST4A STATUS A-5 = 0: Drive not loaded

STATUS A-5 not 0: Speed switch reject code (see description for code Exx, where xx = contents of this status location)

- 4A2 TEST4A Reject or Machine check from internal read backward operation (searching for EOF tape marks). See description of reject codes preceeding code EO1.
- 4A3 TEST4A Reject or Machine check from internal read forward operations (searching for EOF tape marks) or read backward operations (if positioning around TMK's). See description of reject codes preceeding code EO1.
- 4A4 TEST4A After finding 2 tape marks reading forward, read backward operation did not produce tape mark status.
  - Card: DP Slot: A5
- 4A5 TEST4A Reject or Machine check from internal read backward. See description of reject codes preceeding code E01.
- 4A6 TEST4A ID-burst status (EOC3) detected before reading 256 records. Tape must have been written by TEST48.

Status A-0: record number (range: FF-00)

Card: DP Slot: A5

| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | by       |                        |

4A7 TEST4A Data miscompare following read without data check (tape must have been written by TEST48). Comparison involved 32 bytes of write buffer (A000-A01F) and 32 bytes of read buffer (A020-A03F). Data should match record number below:

Status A-0: record number expected (range: FF-00)

Card: DP RD IF Slot: A5 A6 A3

4A8 TEST4A Unexpected tape mark (did not follow a 16 record group). Tape must have been written by TEST48.

Status A-0: record number (range: FF-00)

- Card: DP Slot: A5
- 4AE TEST4A Failed internal record read with 5 retries.

Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex)

\*\* Read/Write Error Tallies \*\*

Status A-8: Data checksStatus A-C: Multi-trksStatus A-9: VelocityStatus A-D: Part. recd'sStatus A-A: End Data ChksStatus A-E: Un-corr.Status A-B: CorrectionsStatus A-F: CRC errors

Status B-O -> B-8: Dead track counters O-7, P Status C-O -> C-8: Phase error counters O-7, P

Card: DP IF Slot: A5 A3

4AF TEST4A Reject or Machine check from internal Forward-Space-Block command during read error recovery. See description of reject codes preceeding code E01.

| Code | Detected<br>by | Fault DescriptionFRU'S  |
|------|----------------|---|
| 4B1  | TEST4B         | <pre>STATUS A-5 = 0: Drive not loaded STATUS A-5 not 0: Speed switch reject code   (see description for code Exx, where      xx = contents of this status location)</pre>   |
| 4B2  | TEST4B         | Reject or Machine check from initial rewind.<br>See description of reject codes preceeding code E01.  |
| 4B3  | TEST4B<br>-    | Reject or Machine check from read backward.<br>See description of reject codes preceeding code E01.   |
| 4B4  | TEST4B         | Data checks occurred on 5 retries of read backward<br>operation. Check tape quality.<br>** Read/Write Error Tallies **  |
|      |                | Status A-8: Data checksStatus A-C: Multi-trksStatus A-9: VelocityStatus A-D: Part. recd'sStatus A-A: End Data ChksStatus A-E: Un-corr.Status A-B: CorrectionsStatus A-F: CRC errorsStatus B-0 -> B-8:Dead track counters 0-7, P |
|      |                | Status C-O -> C-8: Phase error counters O-7, P<br>Card: DP RD<br>Slot: A5 A6  |
| 485  | TEST4B         | Reject or Machine check from forward-space-block<br>command during read backward error recovery.<br>See description of reject codes preceeding code E01.  |
| 486  | TEST4B         | Reject or Machine check from read forward.<br>See description of reject codes preceeding code E01.  |
|      |                |   |

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4B7 TEST4B Data checks occurred on 5 retries of read forward operation. Check tape quality. \*\* Read/Write Error Tallies \*\* Status A-8: Data checks Status A-C: Multi-trks Status A-9: Velocity Status A-D: Part. recd's Status A-A: End Data Chks Status A-E: Un-corr. Status A-B: Corrections Status A-F: CRC errors Status B-O -> B-8: Dead track counters O-7, P Status C-O -> C-8: Phase error counters O-7, P Card: DP RD Slot: A5 A6 4B8 TEST4B Reject or Machine check from backward-space-block command during read forward error recovery. See description of reject codes preceeding code E01. 4B9 TEST4B Reject or Machine check from forward-space-file. See description of reject codes preceeding code E01. 4BA TEST4B Reject or Machine check from backward-space-file. See description of reject codes preceeding code E01. 4BB TEST4B Reject or Machine check from forward-space-block. See description of reject codes preceeding code E01. 4BC TEST4B Reject or Machine check from backward-space-block. See description of reject codes preceeding code E01. 4BD TEST4B Tape Mark status set when not expected indicating possible positioning problem. (Tape must have been written by TEST48) Card: DP Slot: A5

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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
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4BE TEST4B Data miscompare indicating possible positioning problem. (Tape must have been written by TEST48).

Card: DP Slot: A5

4BF TEST4B Tape Mark status not set when not expected indicating possible positioning problem. (Tape must have been written by TEST48)

> Card: DP Slot: A5

4C1 TEST4C STATUS A-5 = 0: Drive not loaded

STATUS A-5 not 0: Speed switch reject code
 (see description for code Exx, where
 xx = contents of this status location)

- 4C2 TEST4C Tape must be write enabled
- 4C3 TEST4C Reject or Machine check from initial rewind. See.description of reject codes preceeding code E01.

4C4 TEST4C Reject or Machine check from internal write command.

Status A-0,A-1: Low, high byte of record number. (Range: 000-100 hex) See description of reject codes preceeding code E01.

4C5 TEST4C Write overrun status (EOC2) during internal write (data supplied to DP from IF card only).

Status A-0,A-1: Low, high byte of record number. Range: 000-100 hex.

Card: IF DP Slot: A3 A5

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| Code | Detected | Fault DescriptionFRU'S |   |
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406 TEST40 Bus parity error status (E002) during internal write (data supplied to DP from IF card only). Status A-0,A-1: Low, high byte of record number. (Range: 000-100 hex) Card: IF DP Slot: A3 A5

- 4C8 TEST4C Reject or Machine check from back-space-block or erase-gap command during write error recovery. See description of reject codes preceeding code E01.
- 4C9 TEST4C During write error recovery, all 5 retries failed.

Status A-0, A-1: Low, high byte of record number. (Range: 000-100 hex)

Check tape quality.

Card: DP WR RD IF Slot: A5 A4 A6 A3

4CA TEST4C \_ Reject or Machine check from write-tape-mark command.

Status A-0,A-1: Low, high byte of record number (first WTM occurs at 10 hex) See description of reject codes preceeding code E01. 4CB TEST4C During the writing of 256 GCR records, more than one temporary write error occurred. Status A-2: Total failing writes Status A-3: Temporary write errors (1 data check in 6 attempts) Status A-4: Media defects (>1 data check in 6 attempts) \*\* Read/Write Error Tallies \*\* Status A-8: Data checks Status A-C: Multi-trks Status A-9: Velocity Status A-D: Part. recd's Status A-A: End Data Chks Status A-E: Un-corr. Status A-B: Corrections Status A-F: CRC errors Status B-0 -> B-8: Dead Track counters 0-7,P Status C-O -> C-8: Phase error counters O-7,P Card: DP WR RD IF Slot: A5 A4 A6 A3 4D1 TEST4D STATUS A-5 = 0: Drive not loaded STATUS A-5 not 0: Speed switch reject code (see description for code Exx, where xx = contents of this status location) 4D2 TEST4D Reject or Machine check from initial rewind. See description of reject codes preceeding code E01. 4D3 TEST4D Reject or Machine check from internal read forward. Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex) See description of reject codes preceeding code E01.

| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | by       |                        |

4D6 TEST4D Unexpected tape mark (did not follow a 16 record group). Tape must have been written by TEST4C. Status A-0,A-1: Low, high byte of record number (Range: 000-100 hex) Card: DP Slot: A5

4D7 TEST4D Unexpected tape mark (more than 256 records read correctly, but tape mark did not follow 16 record group). Tape must have been written by TEST4C.

Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex)

Card: DP Slot: A5

4D9 TEST4D Data miscompare following read without data check (tape must have been written by TEST4C). Comparison involved 32 bytes of write buffer (A000-A01F) and 32 bytes of read buffer (A020-A03F). Data should match record number below:

Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex)

Card: DP RD !F Slot: A5 A6 A3

4DB TEST4D Reject or Machine check from internal read forward over expected tape mark.

Status A-0,A-1: Low, high byte of record number (Range: 000-100 hex) See description of reject codes preceeding code E01.

| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | by       |                        |

| 4DC  | TEST4D | Tape mark status not detected when expected (but<br>16 record group read OK).   |
|------|--------|---|
|      |        | Status A-0,A-1: Low, high byte of record number<br>(Range: 000-100 hex, first TMK @ 10)   |
|      |        | Card: DP<br>Slot: A5  |
| 4DE  | TEST4D | Failed internal record read with 5 retries.   |
|      |        | Status A-0,A-1: Low, high byte of record number<br>(Range: 000-100 hex)   |
|      |        | ** Read/Write Error Tallies **  |
|      |        | Status A-8: Data checksStatus A-C: Multi-trksStatus A-9: VelocityStatus A-D: Part. recd'sStatus A-A: End Data ChksStatus A-E: Un-corr.Status A-B: CorrectionsStatus A-F: CRC errors |
|      |        | Status B-O -> B-8: Dead track counters O-7, P<br>Status C-O -> C-8: Phase error counters O-7, P   |
|      |        | Card: DP<br>Slot: A5  |
| 4DF  | TEST4D | Reject or Machine check from internal Back-Space<br>Block command during read error recovery.<br>See descripticn of reject codes preceeding code E01.                               |
| 4E 1 | TEST4E | STATUS A-5 = 0: Drive not loaded  |
|      |        | STATUS A-5 not 0: Speed switch reject code<br>(see description for code Exx, where<br>xx = contents of this status location)  |
| 4E2  | TEST4E | Reject or Machine check from internal read backward<br>operation (searching for EOF tape marks).<br>See description of reject codes preceeding code EO1.                            |

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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
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- 4E3 TEST4E Reject or Machine check from internal read forward operations (searching for EOF tape marks) or read backward operations (if positioning around TMK's). See description of reject codes preceeding code EO1.
- 4E4 TEST4E After finding 2 tape marks reading forward, read backward operation did not produce tape mark status.
  - Card: DP Slot: A5
- 4E5 TEST4E Reject or Machine check from internal read backward. See description of reject codes preceeding code E01.
- 4E6 TEST4E !D-burst status (EOC3) detected before reading 256 records. Tape must have been written by TEST4C.

Status A-0: record number (range: FF-00)

Card: DP Slot: A5

4E7 TEST4E Data miscompare following read without data check (tape must have been written by TEST4C). Comparison involved 32 bytes of write buffer (A000-A01F) and 32 bytes of read buffer (A020-A03F). Data should match record number below:

Status A-0: record number expected (range: FF-00)

Card: DP RD IF Slot: A5 A6 A3

4E8 TEST4E Unexpected tape mark (did not follow a 16 record group). Tape must have been written by TEST4C.

Status A-0: record number (range: FF-00)

Card: DP Slot: A5

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| Coce | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
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4EE TEST4E Failed internal record read with 5 retries.

Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex)

\*\* Read/Write Error Tailies \*\*

Status A-8: Data checksStatus A-C: Multi-trksStatus A-9: VelocityStatus A-D: Part. recd'sStatus A-A: End Data ChksStatus A-E: Un-corr.Status A-B: CorrectionsStatus A-F: CRC errors

Status E-O -> E-&: Dead track counters O-7, P Status C-O -> C-&: Phase error counters O-7, P

Card: DP IF Slot: A5 A3

4EF TEST4E Reject or Machine check from internal Forward-Space Block command during read error recovery. See description of reject codes preceeding code E01.

4F1 TEST4F STATUS A-5 = 0: Drive not loaded

- STATUS A-5 not 0: Speed switch reject code (see description for code Exx, where xx = contents of this status location)
- 4F2 TEST4F Reject or Machine check from initial rewind. See description of reject codes preceeding code E01.
- 4F3 TEST4F Reject or Machine check from read backward. See description of reject codes preceeding code E01.

| Code | Detected | Fault DescriptionFRU'S |  |
|------|----------|------------------------|--|
|      | by       |                        |  |

4F4 TEST4F Data checks occurred on 5 retries of read backward operation. Check tape quality. \*\* Read/Write Error Tallies \*\* Status A-8: Data checks Status A-C: Multi-trks Status A-9: Velocity Status A-D: Part. recd's Status A-A: End Data Chks Status A-E: Un-corr. Status A-B: Corrections Status A-F: CRC errors Status B-0 -> B-8: Dead track counters 0-7, P Status C-O -> C-8: Phase error counters O-7, P Card: DP RD Slot: A5 A6 4F5 TEST4F Reject or Machine check from forward-space-block command during read backward error recovery. See description of reject codes preceeding code E01. 4F6 TEST4F Reject or Machine check from read forward. See description of reject codes preceeding code E01. 4F7 TEST4F Data checks occurred on 5 retries of read forward operation. Check tape quality. \*\* Read/Write Error Tallies \*\* Status A-8: Data checks

Status A-8: Data checks Status A-C: Multi-trks
Status A-9: Velocity Status A-D: Part. recd's
Status A-A: End Data Chks Status A-E: Un-corr.
Status A-B: Corrections Status A-F: CRC errors
Status B-0 -> B-8: Dead track counters 0-7, P
Status C-0 -> C-8: Phase error counters 0-7, P
Card: DP RD
Slot: A5 A6

4F8 TEST4F Reject or Machine check from backward-space-block command during read forward error recovery. See description of reject codes preceeding code E01.

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| Code | Detected<br>by | Fault DescriptionFRU'S  |          |
|------|----------------|---|----------|
| 4F9  | TEST4F         | Reject or Machine check from forward-space-file.<br>See description of reject codes preceeding code E                             | .01.     |
| 4FA  | TEST4F         | Reject or Machine check from backward-space-file.<br>See description of reject codes preceeding code E                            | 01.      |
| 4FB  | TEST4F         | Reject or Machine check from forward-space-block.<br>See description of reject codes preceeding code E                            | 01.      |
| 4FC  | TEST4F         | Reject or Machine check from backward-space-block<br>See description of reject codes preceeding code E                            | 01.      |
| 4FD  | TEST4F         | Tape Mark status set when not expected indicating<br>possible positioning problem.<br>(Tape must have been written by TEST4C)     | <b>I</b> |
|      |                | Card: DP<br>Slot: A5  |          |
| 4FE  | TEST4F         | Data miscompare indicating possible positioning problem. (Tape must have been written by TEST4C).                                 |          |
|      |                | Card: DP<br>Slot: A5  |          |
| 4FF  | TEST4F         | Tape Mark status not set when not expected<br>indicating possible positioning problem.<br>(Tape must have been written by TEST4C) |          |
|      |                | Card: DP<br>Slot: A5  |          |
| 521  | TEST52         | STATUS A-5 = 0: Drive not loaded  |          |
|      |                | STATUS A-5 not 0: Speed switch reject code<br>(see description for code Exx, where<br>xx = contents of this status location)      |          |
| 522  | TEST52         | Tape must be write enabled  |          |
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| Code | Detected<br>by | Fault DescriptionFRU'S  |
|------|----------------|---|
| 523  | TEST52         | Reject or Machine check from initial rewind.<br>See description of reject codes preceeding code E01.                            |
| 524  | TEST52         | Current on or unstable (EOE1) afer rewind.<br>Card: WR IF RD<br>Slot: A4 A3 A6  |
| 525  | TEST52         | Immediately after setting erase, status was in<br>error (EOE1).<br>Card: WR IF RD<br>Slot: A4 A3 A6                             |
| 526  | TEST52         | Interrupt from erase transition was not seen.<br>Card: WR IF<br>Slot: A4 A3   |
| 527  | TEST52         | Stable erase-only status was not seen in sense<br>register (EOE1).<br>Card: WR IF Write/Erase head<br>Slot: A4 A3               |
| 528  | TEST52         | <pre>Stable write mode status was not seen in sense<br/>register (EOE1).<br/>Card: WR IF Write/Erase head<br/>Slot: A4 A3</pre> |
| 529  | TEST52         | Interrupt from write transition was not seen.<br>Card: WR IF<br>Slot: A4 A3   |

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| Code | Detected | Fault DescriptionFRU'S |  |
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52A TEST52 Amplitude sensor active without motion (EOC5 or EOC3). Card: WR IF DP Slot: A4 A3 A5

52B TEST52 Machine check occurred during forward write motion.

Status A-6: Machine check code See description for code Fxx, where xx= contents of this status location

52C TEST52 Amplitude sensor not as expected during 30 foot all track write.

Check tape quality.

Status B-0,7: error count for tracks 0,7 Status B-8: error count for tracks P

Card: WR RD DP Rd/Wrt Slot: A4 A6 A5 Head

52D TEST52 Amplitude sensor not as expected during 1 foot write of one track only.

Check tape quality.

Status B-0,7: error count for tracks 0,7 Status B-8: error count for tracks P

Card: WR RD DP Rd/Wrt Slot: A4 A6 A5 Head
| Code  | Detected<br>by | Fault DescriptionFRU'S   |
|-------|----------------|--|
| 52E   | TEST52         | Amplitude sensor not as expected during 1 foot write of all but one track.   |
|       |                | Check tape quality.  |
|       |                | Status B-0,7: error count for tracks 0,7<br>Status B-8: error count for tracks P   |
|       |                | Card: WR RD DP Rd/Wrt<br>Slot: A4 A6 A5 Head   |
| 52F   | TEST52         | Amplitude sensor detected during feed-through check (all tracks writing; no motion).   |
|       |                | Status B-0,7: error count for tracks 0,7<br>Status B-8: error count for tracks P   |
|       |                | Card: WR RD DP Rd/Wrt<br>Slot: A4 A6 A5 Head   |
| 531   | TEST53         | STATUS A-5 = 0: Drive not loaded   |
|       |                | STATUS A-5 not 0: Speed switch reject code<br>(see description for code Exx, where<br>xx = contents of this status location) |
| 532   | TEST53         | Tape must be write enabled   |
| 533   | TEST53<br>-    | Reject or Machine check from initial rewind.<br>See description of reject codes preceeding code E01.                         |
| 534   | TEST53         | Current on or unstable (EOE1) afer rewind.   |
|       |                | Card: WR IF RD<br>Slot: A4 A3 A6   |
| 535   | TEST53         | Immediately after setting erase, status was in error (EOE1).   |
|       |                | Card: WR IF RD<br>Slot: A4 A3 A6   |
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| Code | Detected<br>by | Fault DescriptionFRU'S |  |
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| 536 | TEST53 | Interrupt from erase transition was not seen.  |
|-----|--------|--|
|     |        | Card: WR IF<br>Slot: A4 A3   |
| 537 | TEST53 | Stable erase-only status was not seen in sense<br>register (EOE1).   |
|     |        | Card: WR IF Rd/Wrt<br>Slot: A4 A3 Head   |
| 538 | TEST53 | Stable write mode status was not seen in sense<br>register (EOE1).   |
|     |        | Card: WR IF Rd/Wrt<br>Slot: A4 A3 Head   |
| 53A | TEST53 | Amplitude sensor active without motion (EOC5 or EOC3).   |
|     |        | Card: WR IF DP<br>Slot: A4 A3 A5   |
| 53B | TEST53 | Machine check occurred during forward write motion.  |
|     |        | Status A-6: Machine check code<br>See description for code Fxx, where<br>xx= contents of this status location<br>- |
| 53C | TEST53 | Amplitude sensor not as expected during 30 foot all track write.   |
|     |        | Check tape quality.  |
|     |        | Status B-0,7: error count for tracks 0,7<br>Status B-8: error count for tracks P                                   |
|     |        | Card: WR RD DP Rd/Wrt<br>Slot: A4 A6 A5 Head   |

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| Code | Detected | Fault DescriptionFRU'S |
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53D TEST53 Amplitude sensor not as expected during 1 foot write of one track only.

Check tape quality.

Status B-0,7: error count for tracks 0,7 Status B-8: error count for tracks P

Card: WR RD DP Rd/Wrt Slot: A4 A6 A5 Head

53E TEST53 Amplitude sensor not as expected during 1 foot write of all but one track.

Check tape quality.

Status B-0,7: error count for tracks 0,7 Status B-8: error count for tracks P

Card: WR RD DP Rd/Wrt Slot: A4 A6 A5 Head

53F TEST53 Amplitude sensor detected during feed-through check (all tracks writing; no motion).

Status B-0,7: error count for tracks 0,7 Status B-8: error count for tracks P

Card: WR RD DP Rd/Wrt Slot: A4 A6 A5 Head

581 TEST58 STATUS A-5 = 0: Drive not loaded

STATUS A-5 not 0: Speed switch reject code (see description for code Exx, where xx = contents of this status location)

582 TEST58 Tape must be write enabled

583 TEST58 Reject or Machine check from initial rewind. See description of reject codes preceeding code E01.

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| 584 | TEST58 | Reject or Machine check from internal write command.   |
|-----|--------|--|
|     |        | Status A-0, A-1: Low, high byte of record number.  |
|     |        | See description of reject codes preceeding code E01.   |
| 585 | TEST58 | Write overrun status (EOC2) during internal<br>write (data supplied to DP from IF card only).  |
|     |        | Status A-0,A-1: Low, high byte of record number.<br>Range: 000-100 hex.  |
|     |        | Card: IF DP -<br>Slot: A3 A5   |
| 586 | TEST58 | Bus parity error status (EOC2) during internal write (data supplied to DP from IF card only).  |
|     |        | Status A-0,A-1: Low, high byte of record number.<br>(Range: 000-100 hex)   |
|     |        | Card: IF DP<br>Slot: A3 A5   |
| 588 | TEST58 | Reject or Machine check from back-space-block<br>or erase-gap command during write error recovery.<br>See description of reject codes preceeding code E01. |
| 589 | TEST58 | During write error recovery, all 5 retries failed.   |
| -   |        | Status A-0,A-1: Low, high byte of record number.<br>(Range: 000-100 hex)   |
|     |        | Check tape quality.  |
|     |        | Card: DP WR RD IF<br>Slot: A5 A4 A6 A3   |

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| Code | Detected<br>by | fault [                                      | escriptionFRU'S   |
|------|----------------|--|---|
|      |                |  |   |
| 58A  | TEST58         | Reject or Machine ch<br>command.             | neck from write-tape-mark                                   |
|      |                | Status A-0,A-1: Low (fi                      | w, high byte of record number<br>irst WTM occurs at 10 hex) |
|      |                | See description of r                         | reject codes preceeding code E01.                           |
| 58B  | TEST58         | During the writing one temporary write       | of 256 PE records, more than<br>error occurred.             |
|      |                | Status A-2:                                  | Total failing writes  |
|      |                | Status A-3:                                  | Temporary write errors<br>(1 data check in 6 attempts)      |
|      |                | Status A-4:                                  | Media defects<br>(>1 data check in 6 attempts)              |
|      |                | ** Read/Write Error                          | Tallies **  |
|      |                | Status A-8: Data che<br>Status A-9: Velocity | ecks Status A-C: Multi-trks                                 |
|      |                | Status A-A: End Data                         | a Chks Status A-E: Un-corr.                                 |
|      |                | Status A-B: Correct                          | ions Status A-F: CRC errors                                 |

Status B-O -> B-8: Dead Track counters O-7,P Status C-O -> C-8: Phase error counters O-7,P

Card: DP WR RD IF Slot: A5 A4 A6 A3

591 TEST59 STATUS A-5 = 0: Drive not loaded

STATUS A-5 not 0: Speed switch reject code
 (see description for code Exx, where
 xx = contents of this status location)

592 TEST59 Reject or machine check from initial rewind. See description of reject codes preceeding code E01.

593 TEST59 Reject or Machine check from internal read forward. See description of reject codes preceeding code E01.

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| Code | Detected |
|------|----------|
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596 TEST59 Unexpected tape mark (did not follow a 16 record group). Tape must have been written by TEST58.
Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex)
Card: DP Slot: A5
597 TEST59 Unexpected tape mark (more than 256 records read correctly, but tape mark did not follow 16 record

group). Tape must have been written by TEST58.

Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex)

Card: DP Slot: A5

599 TEST59 Data miscompare following read without data check (tape must have been written by TEST58). Comparison involved 32 bytes of write buffer (A000-A01F) and 32 bytes of read buffer (A020-A03F). Data should match record number below:

Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex)

Card: DP RD IF Slot: A5 A6 A3

59B TEST59 Reject or Machine check from internal read forward over expected tape mark.

Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex)

See description of reject codes preceeding code E01.

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| Code | Detected<br>by | Fault DescriptionFRU'S  |
|------|----------------|---|
| 59C  | TEST59         | Tape mark status not detected when expected (but<br>16 record group read CK).   |
|      |                | Status A-0,A-1: Low, high byte of record number<br>(Range: 000-100 hex, first TMK @ 10)   |
|      |                | Card: DP<br>Slot: A5  |
| 59E  | TEST59         | Failed internal record read with 5 retries.   |
|      |                | Status A-0,A-1: Low, high byte of record number<br>(Range: 000-100 hex)   |
|      |                | ** Read/Write Error Tallies **  |
|      |                | Status A-8: Data checksStatus A-C: Multi-trksStatus A-9: VelocityStatus A-D: Part. recd'sStatus A-A: End Data ChksStatus A-E: Un-corr.Status A-B: CorrectionsStatus A-F: CRC errors |
|      |                | Status B-O -> B-8: Dead track counters O-7, P<br>Status C-O -> C-8: Phase error counters O-7, P   |
|      |                | Card: DP<br>Slot: A5  |
| 59F  | TEST59         | Reject or Machine check from internal Back-Space-<br>Block command during read error recovery.<br>See description of reject codes preceeding code E01.                              |
| 541  | TEST5A         | STATUS A-5 = 0: Drive not loaded  |
|      |                | STATUS A-5 not 0: Speed switch reject code<br>(see description for code Exx, where<br>xx = contents of this status location)  |
| 542  | TEST5A         | Reject or Machine check from internal read backward<br>operation (searching for EOF tape marks).<br>See description of reject codes preceeding code EO1.                            |

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| Code | Detected |  |
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5A3 TEST5A Reject or Machine check from internal read forward operations (searching for EOF tape marks) or read backward operations (if positioning around TMK's). See description of reject codes preceeding code EO1.

- 5A4 TEST5A After finding 2 tape marks reading forward, read backward operation did not produce tape mark status.
  - Card: DP Slot: A5
- 5A5 TEST5A Reject or Machine check from internal read backward. See description of reject codes preceeding code E01.
- 5A6 TEST5A ID-burst status (E053) detected before reading 256 records. Tape must have been written by TEST58.

Status A-0: record number (range: FF-00)

- Card: DP Slot: A5
- 5A7 TEST5A Data miscompare following read without data check (tape must have been written by TEST58). Comparison involved 32 bytes of write buffer (A000-A01F) and 32 bytes of read buffer (A020-A03F). Data should match record number below:

Status A-0: record number expected (range: FF-00)

Card: DP RD IF Slot: A5 A6 A3

5A8 TEST5A Unexpected tape mark (did not follow a 16 record group). Tape must have been written by TEST58.

Status A-0: record number (range: FF-00)

Card: DP Slot: A5

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| Code | Detected<br>by | Fault DescriptionFRU'S |
|------|----------------|------------------------|
|------|----------------|------------------------|

Failed internal record read with 5 retries. 5AE TEST5A Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex) \*\* Read/Write Error Tallies \*\* Status A-8: Data checks Status A-C: Multi-trks Status A-9: Velocity Status A-D: Part. recd's Status A-A: End Data Chks Status A-E: Un-corr. Status A-B: Corrections Status A-F: CRC errors Status B-O -> B-8: Dead track counters O-7, P Status C-O -> C-8: Phase error counters O-7, P Card: DP IF Slot: A5 A3 5AF TEST5A Reject or Machine check from internal Forward-Space-Block command during read error recovery. See description of reject codes preceeding code E01. 5B1 TEST5B STATUS A-5 = 0: Drive not loaded STATUS A-5 not 0: Speed switch reject code (see description for code Exx, where xx = contents of this status location) Reject or Machine check from initial rewind. 5B2 TEST5B See description of reject codes preceeding code E01. \_ 5B3 TEST5B Reject or Machine check from read backward.

See description of reject codes preceeding code E01.

5B4 TEST5B Data checks occurred on 5 retries of read backward operation. Check tape quality. \*\* Read/Write Error Tallies \*\* Status A-8: Data checks Status A-C: Multi-trks Status A-9: Velocity Status A-D: Part. recd's Status A-A: End Data Chks Status A-E: Un-corr. Status A-B: Corrections Status A-F: CRC errors Status B-O -> B-8: Dead track counters O-7, P Status C-O -> C-8: Phase error counters O-7, P Card: DP RD Slot: A5 A6 5B5 TEST5B Reject or Machine check from forward-space-block command during read backward error recovery. See description of reject codes preceeding code E01. 5B6 TEST5B Reject or Machine check from read forward. See description of reject codes preceeding code E01. Data checks occurred on 5 retries of read forward 5B7 TEST5B operation. Check tape quality. \*\* Read/Write Error Tallies \*\* Status A-8: Data checks Status A-C: Multi-trks Status A-9: Velocity Status A-D: Part. recd's Status A-A: End Data Chks Status A-E: Un-corr. Status A-B: Corrections Status A-F: CRC errors Status B-O -> B-8: Dead track counters O-7, P Status C-O -> C-8: Phase error counters O-7, P Card: DP RD Slot: A5 A6 5B8 TEST5B Reject or Machine check from backward-space-block

command during read forward error recovery. See description of reject codes preceeding code E01.

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| Code | Detected | Fault DescriptionFRU'S |
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| 5B9 | TEST5B | Reject or Machine check from forward-space-file.<br>See description of reject codes preceeding code E01.                          |
|-----|--------|---|
| 5BA | TEST5B | Reject or Machine check from backward-space-file.<br>See description of reject codes preceeding code E01.                         |
| 5BB | TEST5B | Reject or Machine check from forward-space-block.<br>See description of reject codes preceeding code E01.                         |
| 5BC | TEST5B | Reject or Machine check from backward-space-block.<br>See description of reject codes preceeding code E01.                        |
| 5BD | TEST5B | Tape Mark status set when not expected indicating possible positioning problem.<br>(Tape must have been written by TEST58)        |
|     |        | Card: DP<br>Slot: A5  |
| 5BE | TEST5B | Data miscompare indicating possible positioning problem. (Tape must have been written by TEST58).                                 |
|     |        | Card: DP<br>Slot: A5  |
| 5BF | TEST5B | Tape Mark status not set when not expected<br>indicating possible positioning problem.<br>(Tape must have been written by TEST58) |
|     |        | Card: DP<br>Slot: A5  |
| 501 | TEST5C | STATUS A-5 = 0: Drive not loaded  |
|     |        |   |

STATUS A-5 not 0: Speed switch reject code (see description for code Exx, where xx = contents of this status location)

5C2 TEST5C Tape must be write enabled

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| Code | Detected<br>by | Fault DescriptionFRU'S |  |
|------|----------------|------------------------|--|
|------|----------------|------------------------|--|

- 5C3 TEST5C Reject or Machine check from initial rewind. See description of reject codes preceeding code E01.
- 5C4 TEST5C Reject or Machine check from internal write command.

Status A-0,A-1: Low, high byte of record number. (Range: 000-100 hex) See description of reject codes preceeding code E01.

5C5 TEST5C Write overrun status (EOC2) during internal write (data supplied to DP from IF card only).

Status A-0, A-1: Low, high byte of record number. Range: 000-100 hex.

- Card: IF DP Slot: A3 A5
- 5C6 TEST5C Bus parity error status (EOC2) during internal write (data supplied to DP from IF card only).

Status A-0, A-1: Low, high byte of record number. (Range: 000-100 hex)

- Card: IF DP Slot: A3 A5
- 5C8 TEST5C Reject or Machine check from back-space-block or erase-gap command during write error recovery. See description of reject codes preceeding code E01.
- 5C9 TEST5C During write error recovery, all 5 retries failed.

Status A-0, A-1: Low, high byte of record number. (Range: 000-100 hex)

Check tape quality.

Card: DP WR RD IF Slot: A5 A4 A6 A3

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| Code | Detected<br>by | Fault DescriptionFRU'S  |
|------|----------------|---|
|      |                |   |
| 5CA  | TEST5C         | Reject or Machine check from write-tape-mark command.   |
|      |                | Status A-O,A-1: Low, high byte of record number<br>(first WTM occurs at 10 hex)<br>See description of reject codes preceeding code E01. |
| 5CB  | TEST5C         | During the writing of 256 GCR records, more than one temporary write error occurred.  |
|      |                | Status A-2:Total failing writesStatus A-3:Temporary write errors<br>(1 data check in 6 attempts)  |

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\*\* Read/Write Error Tallies \*\*

Status A-8: Data checksStatus A-C: Multi-trksStatus A-9: VelocityStatus A-D: Part. recd'sStatus A-A: End Data ChksStatus A-E: Un-corr.Status A-B: CorrectionsStatus A-F: CRC errorsStatus B-0 -> B-8:Dead Track counters 0-7,PStatus C-0 -> C-8:Phase error counters 0-7,P

Media defects

(>1 data check in 6 attempts)

Card: DP WR RD IF Slot: A5 A4 A6 A3

Status A-4:

5D1 TEST5D STATUS A-5 = 0: Drive not loaded

STATUS A-5 not 0: Speed switch reject code (see description for code Exx, where xx = contents of this status location)

5D2 TEST5D Reject or Machine check from initial rewind. See description of reject codes preceeding code E01.

5D3 TEST5D Reject or Machine check from internal read forward. Status A-0,A-1: Low, high byte of record number (Range: 000-100 hex)

See description of reject codes preceeding code E01.

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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | by       |                        |

5D6 TEST5D Unexpected tape mark (did not follow a 16 record group). Tape must have been written by TEST5C.

Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex)

Card: DP Slot: A5

5D7 TEST5D Unexpected tape mark (more than 256 records read correctly, but tape mark did not follow 16 record group). Tape must have been written by TEST5C.

Status A-C, A-1: Low, high byte of record number (Range: 000-100 hex)

Card: DP Slot: A5

5D9 TEST5D Data miscompare following read without data check (tape must have been written by TEST5C). Comparison involved 32 bytes of write buffer (A000-A01F) and 32 bytes of read buffer (A020-A03F). Data should match record number below:

> Status A-0,A-1: Low, high byte of record number (Range: 000-100 hex)

- Card: DP RD IF Slot: A5 A6 A3
- 5DB TEST5D Reject or Machine check from internal read forward over expected tape mark.

Status A-0,A-1: Low, high byte of record number (Range: 000-100 hex) See description of reject codes preceeding code E01.

| Code | Detected<br>by | Fault DescriptionFRU'S  |
|------|----------------|---|
| 5DC  | TEST5D         | Tape mark status not detected when expected (but<br>16 record group read OK).   |
|      |                | Status A-O,A-1: Low, high byte of record number<br>(Ranye: 000-100 hex, first TMK @ 10)   |
|      |                | Card: DP<br>Slot: A5  |
| 5DE  | TEST5D         | Failed internal record read with 5 retries.   |
|      |                | Status A-0,A-1: Low, high byte of record number<br>(Range: 000-100 hex)   |
|      |                | ** Read/Write Error Tallies **  |
|      |                | Status A-8: Data checksStatus A-C: Multi-trksStatus A-9: VelocityStatus A-D: Part. recd'sStatus A-A: End Data ChksStatus A-E: Un-corr.Status A-B: CorrectionsStatus A-F: CRC errors |
|      |                | Status B-O -> B-8: Dead track counters O-7, P<br>Status C-O -> C-8: Phase error counters O-7, P   |
|      |                | Card: DP<br>Slot: A5  |
| 5DF  | TEST5D         | Reject or Machine check from internal Back-Space<br>Block command during read error recovery.<br>See description of reject codes preceeding code E01.                               |
| 5E 1 | TEST5E         | STATUS A-5 = 0: Drive not loaded  |
|      |                | STATUS A-5 not 0: Speed switch reject code<br>(see description for code Exx, where<br>xx = contents of this status location)  |
| 5E2  | TEST5E         | Reject or Machine check from internal read backward<br>operation (sezrching for EOF tape marks).<br>See description of reject codes preceeding code EO1.                            |

| Code | Detected | Fault DescriptionFRU'S |  |
|------|----------|------------------------|--|
|      | by       |                        |  |

5E3 TEST5E Reject or Machine check from internal read forward operations (searching for EOF tape marks) or read backward operations (if positioning around TMK's). See description of reject codes preceeding code EO1.

5E4 TEST5E After finding 2 tape marks reading forward, read backward operation did not produce tape mark status.

- Card: DP Slot: A5
- 5E5 TEST5E Reject or Machine check from internal read backward. See description of reject codes preceeding code E01.
- 5E6 TEST5E ID-burst status (E053) detected before reading 256 records. Tape must have been written by TEST5C.

Status A-O: record number (range: FF-00)

Card: DP Slot: A5

5E7 TEST5E Data miscompare following read without data check (tape must have been written by TEST5C). Comparison involved 32 bytes of write buffer (A000-A01F) and 32 bytes of read buffer (A020-A03F). Data should match record number below:

Status A-0: record number expected (range: FF-00)

Card: DP RD IF Slot: A5 A6 A3

5E8 TEST5E Unexpected tape mark (did not follow a 16 record group). Tape must have been written by TEST5C.

Status A-0: record number (range: FF-00)

Card: DP Slot: A5

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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | by       |                        |

5EE TEST5E Failed internal record read with 5 retries. Status A-0, A-1: Low, high byte of record number (Range: 000-100 hex) \*\* Read/Write Error Tallies \*\* Status A-8: Data checks Status A-C: Multi-trks Status A-9: Velocity Status A-D: Part. recd's Status A-A: End Data Chks Status A-E: Un-corr. Status A-B: Corrections Status A-F: CRC errors Status B-O -> B-8: Dead track counters O-7, P Status C-O -> C-8: Phase error counters O-7, P Card: DP IF Slot: A5 A3 5EF TEST5E Reject or Machine check from internal Forward-Space Block command during read error recovery. See description of reject codes preceeding code E01. 5F1 TEST5F STATUS A-5 = 0: Drive not loaded STATUS A-5 not 0: Speed switch reject code (see description for code Exx, where xx = contents of this status location) 5F2 TEST5F Reject or Machine check from initial rewind. See description of reject codes preceeding code E01. 5F3 TEST5F Reject or Machine check from read backward. See description of reject codes preceeding code E01.

5F4 TEST5F Data checks occurred on 5 retries of read backward operation. Check tape quality. \*\* Read/Write Error Tallies \*\* Status A-8: Data checks Status A-C: Multi-trks Status A-9: Velocity Status A-D: Part. recd's Status A-A: End Data Chks Status A-E: Un-corr. Status A-B: Corrections Status A-F: CRC errors Status B-0 -> B-8: Dead track counters 0-7, P Status C-0 -> C-8: Phase error counters 0-7, P

> Card: DP RD Slot: A5 A6

5F5 TEST5F Reject or Machine check from forward-space-block command during read backward error recovery. See description of reject codes preceeding code E01.

- 5F6 TEST5F Reject or Machine check from read forward. See description of reject codes preceeding code E01.
- 5F7 TEST5F Data checks occurred on 5 retries of read forward operation. Check tape quality.

\*\* Read/Write Error Tallies \*\*

Status A-8: Data checksStatus A-C: Multi-trksStatus A-9: VelocityStatus A-D: Part. recd'sStatus A-A: End Data ChksStatus A-E: Un-corr.Status A-B: CorrectionsStatus A-F: CRC errors

Status B-O -> B-8: Dead track counters O-7, P Status C-O -> C-8: Phase error counters O-7, P

Card: DP RD Slot: A5 A6

5F8 TEST5F Reject or Machine check from backward-space-block command during read forward error recovery. See description of reject codes preceeding code E01.

87004

| Code | Detected<br>by | Fault DescriptionFRU'S  |
|------|----------------|---|
| 5F9  | TEST5F         | Reject or Machine check from forward-space-file.<br>See description of reject codes preceeding code E01.  |
| 5FA  | TEST5F         | Reject or Machine check from backward-space-file.<br>See description of reject codes preceeding code E01. |

- 5FB TEST5F Reject or Machine check from forward-space-block. See description of reject codes preceeding code E01.
- 5FC TEST5F Reject or Machine check from backward-space-block. See description of reject codes preceeding code E01.

5FD TEST5F Tape Mark status set when not expected indicating possible positioning problem. (Tape must have been written by TEST5C)

> Card: DP Slot: A5

5FE TEST5F Data miscompare indicating possible positioning problem. (Tape must have been written by TEST5C).

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Card: DP Slot: A5

5FF TEST5F Tape Mark status not set when not expected indicating possible positioning problem. (Tape must have been written by TEST5C)

> Card: DP Slot: A5

CO1 FEIDLE Test requested for execution does not exist in internal routine library.

| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
|      | by       |                        |

The following codes are not displayed on the panel as such, but referred to by other code descriptions in this dictionary. The Exx codes indicate rejects, where xx is the hex equivalent of reject codes normally returned to the host system. In this case they were actually returned to the internal diagnostics which has left them in a fixed status location:

Status A-5 = xx, see code Exx

E01 The subsystem is not in ready status.

E03 During a write operation, TRAK was not returned within 75 milliseconds of TREQ.

Card: IF DP Slot: A3 A5

E05 File protect status was detected on a write request.

E06 Erase status was not detected.

Card: WR IF Slot: A4 A3

E07 illegal command or command sequence. Card: WR IF Siot: A4 A3

E08 Read status was not detected.

Card: WR IF Slot: A4 A3

| Code  | Detected<br>by | Fault DescriptionFRU'S  |
|-------|----------------|---|
| E09   |                | <pre>If read operation:<br/>No density status (DP card) within 5 inches.<br/>If write operation:<br/>DP interrupt during writing of ID track, or<br/>DP reject status during writing of ID track.</pre> |
|       |                | Check tape quality.<br>Card: DP WR<br>Slot: A5 A4   |
| EOC   |                | Write status was not detected.  |
|       |                | Card: WR IF<br>Slot: A4 A3  |
| EOF   |                | Noise detected during an erase gap or during a read/write command sequence.   |
|       |                | Check tape quality.   |
|       |                | Card: DP RD IF<br>Slot: A5 A6 A3  |
| E11   |                | Machine Check condition detected.   |
|       |                | Status A-6 = Code of machine check: xx<br>See description of code Fxx.  |
| E13   |                | Backward operation requested at BOT.  |
| E 1 4 |                | During the writing of ARA burst portion of tape<br>ID, data path (DP) returned reject status.   |
|       |                | Check tape quality.   |
|       |                | Card: DP RD IF<br>Slot: A5 A6 A3  |
| E15   |                | Blank tape: PE25 foot limit; GCR15 foot limit.  |
| 87004 | <b>k</b>       | EC 22926  |

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| Code | Detected<br>by | Fault DescriptionFRU'S   |
|------|----------------|--|
| E16  |                | Multiple speed change requests (Write Extended Cmd)<br>withcut intervening motion command. |

E18 Following write of ID track at BOT, proper density status was not returned from data path (DP).

Card: WR DP SV IF Slot: A4 A5 A1 A3

E19 LWR attemped with tape loaded and away from bot.

E1A Subsystem failed to initiate tape motion.

E1B During a read back check of a write operation, data was detected in the ibg area either before or after the record written.

Check tape quality.

Card: RD Read/Write head (feedthru) Slot: A6

E1D Record not found during a backspace operation over an incorrectly written record.

Check tape quality.

Card: DP RD IF Slot: A5 A6 A3

E1E During a write from BOT, data path (DP) rejected ARA ID after successfully writing ID track and ARA burst.

Check tape quality.

Card: DP RD IF Slot: A5 A6 A3

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| Code Detected<br>by | Fault DescriptionFRU'S   |    |
|---------------------|--|----|
| 1 F                 | No data detected during the read back check of a write or write tape mark command.   |    |
|                     | Check tape quality.  |    |
|                     | Card: DP RD IF<br>Slot: A5 A6 A3   |    |
| 1                   | 'TAPE PRESENT' not seen during thread operation.   |    |
|                     | <pre>If blower inactive during load procedure, check: 1) Power supply high voltage (AK card). 2) J18/P18 connector 3) Solid state relay (motherboard). 4) Blower Motor</pre> |    |
| •                   | <pre>If not detecting tape in path (FILE reel never accelerated):    Card: WR EOT/BOT IF    Slot: A4 Sensor A3</pre>   |    |
| 02                  | Failed to load tape in three retries.<br>Check that leader is free.  |    |
|                     | <pre>If blower inactive during load procedure, check: 1) Power supply high voltage (AK card). 2) J18/P18 connector 3) Solid state relay (motherboard). 4) Blower Motor</pre> |    |
|                     | lf no FILE reel rotation:<br>Card: SV AK<br>Slot: Al Pwr Supply  |    |
|                     | <pre>If leader not detected (forward FILE reel motion):    Card: WR Leader IF    Slot: A4 Sensor A3</pre>  |    |
| F03                 | Failed to sense leader during load.<br>Check that leader is free.  |    |
|                     | <pre>If leader not detected (forward FILE reel motion):    Card: WR Leader IF    Slot: A4 Sensor A3</pre>  |    |
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| Code | Detected | Fault DescriptionFRU'S |
|------|----------|------------------------|
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| FO4 | Leader status always asserted during load attempt.   |      |
|-----|--|------|
|     | Card: WR Leader IF<br>Slot: A4 Sensor A3   |      |
| F05 | BOT not found during forward search.<br>Check for reflective sticker on tape.<br>Check EOT/BOT SENSOR connections. |      |
|     | Card: WR IF<br>Slot: A4 A3   |      |
| F06 | BOT failed to drop in expected time.<br>Check EOT/BOT SENSOR connections.  |      |
|     | Card: WR IF<br>Slot: A4 A3   |      |
| F08 | File protect status check was inconclusive.<br>Check FILE PROTECT SENSOR connections.                              |      |
|     | Card: WR IF<br>Slot: A4 A3   |      |
| F09 | SENSOR ERROR (EOEO) status indicated.<br>Check all sensor connections.   |      |
|     | Card: WR IF<br>Slot: A4 A3   |      |
| F10 | Swing arms not both retracted on load initiation.<br>Check swing arm retraction tolerances.                        |      |
| F11 | Swing arms still retracted after extend command.   |      |
|     | Check swing arm motor and mechanism for jams.<br>Check motor drive cable connections.                              |      |
|     | Card: SV WR IF<br>Slot: A1 A4 A3   |      |
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| Code | Detected<br>by | Fault DescriptionFRU'S  |
|------|----------------|---|
| F12  | ·              | 'INDEX' not detected during servoing of swing arms.   |
|      |                | Card: WR IF SV<br>Slot: A4 A3 A1  |
| F13  | LOAD           | Swing arms failed to reach 'EXTENDED' status in 2 seconds.  |
|      |                | <pre>If arms not in 'EXTENDED' position and no motion:<br/>Check retractor motor and mechanism for jams.<br/>Check retractor motor fuse (inline).<br/>Check power supply (+/- 24/36 volts).<br/>Card: SV IF<br/>Slot: A1 A3</pre> |
|      |                | If arms at 'EXTENDED' position:<br>Check 'EXTENDED' switch and connections.<br>Card: WR IF<br>Slot: Al. A2  |

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| Code | Detected | Fault DescriptionFRU'S |  |
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F14 LOAD From 'EXTENDED', failed to sense both swing arms in 'INDEX' area in 900 ms.

Check 'EXTENDED' switch function (probe EOE1). If display (04 bit) does not change when EXTENDED switch is manually toggled:

Card: Extended WR IF Slot: Switch A4 A3

Check 'INDEX' from both sensors (probe EOE1) by manually moving arms from 'EXTENDED' position. 01 bit represents MACH arm (upper) 'INDEX'. 02 bit represents FILE arm (lower) 'INDEX'.

If neither bit toggles: Card: WR IF Slot: A4 A3

If only 01 bit toggles: Card: WR FILE ARM/TACH Slot: A4 SENSOR

If only 02 bit toggles: Card: WR MACH ARM/TACH Slot: A4 SENSOR

If N0 swing arm motion in retract direction: Check power supply (+/- 24/36 volts). Card: SV IF Slot: A1 A3

| Code | Detected | Fault DescriptionFRU'S |  |
|------|----------|------------------------|--|
|      | by       |                        |  |

F16 LOAD After sensing 'EXTENDED' (switch) and 'INDEX' active (rotary sensors) for both arms, failed to detect arms of retracted (INDEX's reset then set again).

> Check 'EXTENDED' switch function (probe EOE1). If display (04 bit) does not change when EXTENDED switch is manually toggled:

Card: Extended WR IF Slot: Switch A4 A3

Otherwise (display does change):

Card: SV WR IF File/Mach Slot: A1 A4 A3 Tach Asmbly

- F19 LOAD After initiating a manually controlled load (horizontally configured machine or double depression of "LOAD" push-button), 30 seconds expired without an operator indication to continue (moving tape leader into thread channel or an additional "LOAD" depression). Door must also be closed to continue.
  - If blower inactive during load procedure, check:
     1) Power supply high voltage (AK card).
    - 2) J18/P18 connector
    - 3) Solid state relay (motherboard).
    - 4) Blower Motor

If not detecting tape in path: Card: WR EOT/BOT IF Slot: A4 Sensor A3

F20

Data path issued reject for unknown reasons.

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Card: DP IF Slot: A5 A3

F30 Following the servoing of the swing arms, an unstable <u>capstan</u> was detected. Check for proper tape threading.

> Card: SV IF AK Slot: A1 A3 (Power Sply)

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|      |           |                  |              | when the      | an standard                              | 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -<br>1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -<br>1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - |                    | <u> </u>       |          |      |
|------|-----------|------------------|--------------|---------------|--|---|--------------------|----------------|----------|------|
| F 40 | ÷.        | Drive<br>Operat  | unab<br>or R | le to<br>ESET | return<br>or turn                        | to B<br>arou  | DT; EPO<br>nd fail | forced<br>ure. | •        |      |
|      |           | Card:<br>Slot:   | SV<br>A1     | IF<br>A3      |  |   |                    |                |          |      |
| F 50 |           | Door i           | nter         | lock          | switch                                   | is in   | dicatin            | g open         | door.    |      |
|      | ς.        | Card:<br>Slot:   | SV<br>A1     | IF<br>A3      |  |   |                    |                |          |      |
| F70  |           | Data p           | bath         | inter         | rupt fa                                  | iled  | to occu            | r in ex        | pected t | ime. |
|      |           | Card:<br>Slot:   | DP<br>A5     | IF<br>A3      |  |   |                    |                |          |      |
| F71  |           | Positi<br>expect | on c<br>ed t | count<br>ime. | interru                                  | ipt fa  | iled to            | occur          | in       |      |
|      |           | Card:<br>Slot:   | SV<br>A1     | IF<br>A3      |  |   |                    |                |          |      |
| F80  |           | Drive            | did          | not r         | each ve                                  | locit   | / in 10            | ms.            |          |      |
|      | : • • •   | Card:<br>Slot:   | SV<br>A 1    | 1 F<br>A 3    |  |   |                    |                |          |      |
| F81  |           | Turn a           | arour        | nd con        | ditions                                  | not i   | net wit            | hin 1 s        | econd.   |      |
|      |           | Card:<br>Slot:   | SV<br>A1     | IF<br>A3      |  |   | ·                  |                |          |      |
| F82  |           | Failed           | i to         | reach         | 'stop'                                   | cond  | est.<br>ition i    | n 10 ms        | •        |      |
|      |           | Card:<br>Slot:   | SV<br>A1     | IF<br>A3      |  |   | _ 4<br>_ * 1       |                |          |      |
|      | 360 390 S |                  |              |               | 10 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - |   | f en t             |                |          |      |

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| <ul> <li>F85 Acceleration of deceleration ramp out of spec.</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>F90 Write or erase current on after read mode request.</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F91 Write or erase current failed during write.</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F92 Write current on while in erase-only mode.</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F93 Erase current failure while in erase-only mode</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F93 Erase current failure while in erase-only mode</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F96 Nonmaskable interrupt (NMI): Unknown or multiple.</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NMI): Power failure.</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>  | sbou<br>1 |
|---|-----------|
| <ul> <li>Acceleration of deceleration ramp out of spec.</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>Write or erase current on after read mode request.</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>Write or erase current failed during write.</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>Write current on while in erase-only mode.</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F92</li> <li>Write current failure while in erase-only mode.</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F93</li> <li>Erase current failure while in erase-only mode</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F96</li> <li>Nonmaskable interrupt (NMI): Unknown or multiple.</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>F97</li> <li>Nonmaskable interrupt (NMI): Power failure.</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>F98</li> <li>Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>  |           |
| <ul> <li>Card: SV IF<br/>Slot: A1 A3</li> <li>F90 Write or erase current on after read mode request.<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>F91 Write or erase current failed during write.<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>F92 Write current on while in erase-only mode.<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>F93 Erase current failure while in erase-only mode<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>F93 Erase current failure while in erase-only mode</li> <li>Card: WR IF<br/>Slot: A4 A3</li> <li>F94 Nonmaskable interrupt (NMI): Unknown or multiple.<br/>Card: SV IF<br/>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NMI): Power failure.<br/>Card: SV IF<br/>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>  | 643       |
| <ul> <li>F90 Write or erase current on after read mode request.<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>F91 Write or erase current failed during write.<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>F92 Write current on while in erase-only mode.<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>F93 Erase current failure while in erase-only mode<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>F96 Nonmaskable interrupt (NMI): Unknown or multiple.<br/>Card: SV IF<br/>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NMI): Power failure.<br/>Card: SV IF<br/>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>  |           |
| <ul> <li>90 Write or erase current on after read mode request.</li> <li>Card: WR IF<br/>Slot: A4 A3</li> <li>F91 Write or erase current failed during write.</li> <li>Card: WR IF<br/>Slot: A4 A3</li> <li>F92 Write current on while in erase-only mode.</li> <li>Card: WR IF<br/>Slot: A4 A3</li> <li>F93 Erase current failure while in erase-only mode</li> <li>Card: WR IF<br/>Slot: A4 A3</li> <li>F96 Nonmaskable interrupt (NM1): Unknown or multiple.</li> <li>Card: SV IF<br/>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NM1): Power failure.</li> <li>Card: SV IF<br/>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NM1): Swing arms looped out.</li> </ul>   |           |
| <ul> <li>Card: WR IF<br/>Slot: A4 A3</li> <li>Write or erase current failed during write.<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>Write current on while in erase-only mode.<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>Erase current failure while in erase-only mode<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>Erase current failure while in erase-only mode<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>Erase current failure while in erase-only mode<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>Kard: SV IF<br/>Slot: A1 A3</li> <li>Nonmaskable interrupt (NMI): Unknown or multiple.<br/>Card: SV IF<br/>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>   | ्र<br>०२२ |
| <ul> <li>Slot: A4 A3</li> <li>F91 Write or erase current failed during write.</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F92 Write current on while in erase-only mode.</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F93 Erase current failure while in erase-only mode</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F93 Erase current failure while in erase-only mode</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F94 Nonmaskable interrupt (NMI): Unknown or multiple.</li> <li>Card: SV IF</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NMI): Power failure.</li> <li>Card: SV IF</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>   |           |
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| <ul> <li>Card: WR IF<br/>Slot: A4 A3</li> <li>F92 Write current on while in erase-only mode.<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>F93 Erase current failure while in erase-only mode<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>F96 Nonmaskable interrupt (NMI): Unknown or multiple.<br/>Card: SV IF<br/>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NMI): Power failure.<br/>Card: SV IF<br/>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>  | F70       |
| <ul> <li>Slot: A4 A3</li> <li>F92 Write current on while in erase-only mode.</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F93 Erase current failure while in erase-only mode</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F96 Nonmaskable interrupt (NMI): Unknown or multiple.</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NMI): Power failure.</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>  |           |
| <ul> <li>F92 Write current on while in erase-only mode.</li> <li>Card: WR IF<br/>Slot: A4 A3</li> <li>F93 Erase current failure while in erase-only mode</li> <li>Card: WR IF<br/>Slot: A4 A3</li> <li>F96 Nonmaskable interrupt (NMI): Unknown or multiple.</li> <li>Card: SV IF<br/>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NMI): Power failure.</li> <li>Card: SV IF<br/>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>   |           |
| <ul> <li>Card: WR IF<br/>Slot: A4 A3</li> <li>F93 Erase current failure while in erase-only mode<br/>Card: WR IF<br/>Slot: A4 A3</li> <li>F96 Nonmaskable interrupt (NMI): Unknown or multiple.<br/>Card: SV IF<br/>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NMI): Power failure.<br/>Card: SV IF<br/>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>  |           |
| <ul> <li>Slot: A4 A3</li> <li>F93 Erase current failure while in erase-only mode</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F96 Nonmaskable interrupt (NMI): Unknown or multiple.</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NMI): Power failure.</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>  | i.        |
| <ul> <li>F93 Erase current failure while in erase-only mode</li> <li>Card: WR IF</li> <li>Slot: A4 A3</li> <li>F96 Nonmaskable interrupt (NMI): Unknown or multiple.</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NMI): Power failure.</li> <li>Card: SV IF</li> <li>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>   |           |
| <ul> <li>Card: WR IF<br/>Slot: A4 A3</li> <li>F96 Nonmaskable interrupt (NMI): Unknown or multiple.</li> <li>Card: SV IF<br/>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NMI): Power failure.</li> <li>Card: SV IF<br/>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>  |           |
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| <ul> <li>F96 Nonmaskable interrupt (NMI): Unknown or multiple.</li> <li>Card: SV IF<br/>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NMI): Power failure.</li> <li>Card: SV IF<br/>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>   |           |
| <ul> <li>F96 Nonmaskable interrupt (NMI): Unknown or multiple.</li> <li>Card: SV IF<br/>Slot: A1 A3</li> <li>F97 Nonmaskable interrupt (NMI): Power failure.</li> <li>Card: SV IF<br/>Slot: A1 A3</li> <li>F98 Nonmaskable interrupt (NMI): Swing arms looped out.</li> </ul>   |           |
| Card:       SV       IF         Slot:       A1       A3         F97       Nonmaskable interrupt (NMI):       Power failure.         Card:       SV       IF         Slot:       A1       A3         F98       Nonmaskable interrupt (NMI):       Swing arms looped out.   |           |
| F97 Nonmaskable interrupt (NMI): Power failure.<br>Card: SV IF<br>Slot: A1 A3 F98 Nonmaskable interrupt (NMI): Swing arms looped out.   |           |
| F97 Nonmaskable interrupt (NMI): Power failure.<br>Card: SV IF Theorem Contract Address Card:<br>Slot: A1 A3 F98 Nonmaskable interrupt (NMI): Swing arms looped out.  |           |
| F97 Nonmaskable interrupt (NMI): Power failure.<br>Card: SV IF Theorem Control of the second<br>Slot: A1 A3 F98 Nonmaskable interrupt (NMI): Swing arms looped out.   |           |
| F97 Nonmaskable interrupt (NMI): Power failure.<br>Card: SV IF Theorem and the second |           |
| Card: SV IF Through Control Address States<br>Slot: A1 A3<br>F98 Nonmaskable interrupt (NMI): Swing arms looped out.  |           |
| Slot: A1 A3<br>F98 Nonmaskable interrupt (NMI): Swing arms looped out.  |           |
| F98 Nonmaskable interrupt (NMI): Swing arms looped out.   |           |
| F98 Nonmaskable interrupt (NMI): Swing arms looped out.   |           |
|   |           |
| Card: SV IF   |           |
| Slot: A1 A3   |           |
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|   | Code Detected | Fault DescriptionFRU'S   |
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F99 Nonmaskable interrupt (NMI): Watch-dog timer expired

Card: SV IF Slot: AT A3

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