

“DATASPEED*” MAGNETIC TAPE TERMINAL

TEST PROCEDURES

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1. GENERAL

1.01 This practice provides instructions for on-line and off-line testing. These test procedures, when performed, will verify that the station has been properly installed. These tests may also aid in locating a trouble condition in the DATASPEED Magnetic Tape Terminal if it was previously installed and operating. This section was formerly 578-300-500.

1.02 These test procedures are for use by a telephone craft employee to follow the step-by-step actions of a Data Test Center (DTC) operator using a standard magnetic tape terminal equipped for testing. Loop-back testing of the data set and attended on-line and off-line testing are covered in a series of operator actions and procedures followed by a terminal response for each.

1.03 These tests generally apply to all 33/35/37/40 adjunct magnetic tape sets equipped with a 200 Series Data Set. Information that applies to only one version, or to a specific application of that version, is indicated.

1.04 Off-line testing does not include a magnetic tape set connected to a parallel interface device or stand-alone operation.

2. PREPARATION FOR TESTING

2.01 After initial installation or before trouble analysis begins, it is required that the station option card or list be brought up to date. The option list will be required when discussing the station with the DTC (see 3.06).

2.02 Before testing a station for which a trouble report was filed, confirm the trouble report with the station operator. Try to determine the probable cause and location of the trouble. If the cause is apparent, repair should be attempted and testing used as a final checkout. If the cause is not apparent and the trouble may be in the data set or the telephone line, contact the DTC and request a loop-back test or other specific data set testing. In all other cases, full testing of the station is required. Call the DTC and request complete on-line testing. Off-line testing may be done before calling the DTC or on a recommendation from the DTC. On-line testing must be under the coordination of the DTC.

2.03 Review Tables A, B, and C along with the introductory material in Part 3 — especially 3.03 and 3.06. This, along with the directions from the DTC operator, will speed the progress of the testing. Any results other than those explained in the procedure should be noted and mentioned to the operator.

2.04 Perform a final visual inspection of the station, cords, cables, connectors, and data set. Eliminate any obvious physical or mechanical problems.

3. TEST PROCEDURES

GENERAL

3.01 Perform each step of the test procedure. Each action is followed by a subparagraph which gives the required response.

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SECTION 582-900-500

If the station does not respond as required and trouble analysis is required call the DTC for aid or refer to Section 582-900-300 (Checkout and Troubleshooting) or Section 579-505-350 (Field Installation and Maintenance Practices — FIMP).

LOOP-BACK TEST

3.02 This test allows the data set and line facilities to be checked by looping back the Data Test Center signals through the data set. The test is performed as follows:

- (1) Verify that the station has been released from service.
- (2) Call the DTC and request the loop-back test.
- (3) When the DTC operator is ready, the TEST key on the data set is to be depressed.

Note: Test signals are then sent and received by the DTC. The signals are then checked for distortion.

(4) If the test results indicate that the line facilities or the data set is the problem, replace the 202C Data Set and retest.

(5) If the test results indicate that the TTY equipment is the problem, proceed to 3.03 for off-line testing.

OFF-LINE TESTING

3.03 The off-line testing is divided into two tables; Table A for 33/35/37 adjunct teletypewriters and Table B for the 40 adjunct. Refer to the option card or list for the unit whenever an exception is noted. All of the actions can be performed without the use of tools or disassembly of the station. Mention of the opening of covers or doors to observe responses inside the station have been omitted.

3.04 The following tests provide a method to verify proper operation of all individual components of a station.

TABLE A
ATTENDED TESTING
OFF LINE FOR 33/35/37 ADJUNCT TAPE TERMINAL

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
1	At the magnetic tape terminal, place maintenance (power) switch to ON position.	STOP lamp lights. ERROR lamp may light. Motors off.
2	Move STOP CODES switch to FS position and engagement lever to RELEASE position.	No effect.
3	Load test cartridge (TP337400 or equivalent) onto tape transport (record interlock plug in top position).	No effect.
4	Move engagement lever to ENGAGE position.	Photosensor lamp on tape transport lights.
5	In 33/35/37 teletypewriter, turn power on.	POWER lamp on. LOCAL lamp lights.

TABLE A
ATTENDED TESTING
OFF LINE FOR 33/35/37 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
6	<p>Place DATA MODE switch in LOCAL position and depress controls on adjunct unit as follows:</p> <p>37 EIA — PROCEED 37 RT — PUNCH ON PUNCH LOCAL READER LOCAL KEYBOARD LOCAL PRINTER LOCAL</p> <p>33/35 — LOCAL</p> <p>In parallel device adjunct tape set, place MOTOR CONTROL switch in ON position, and activate adjunct unit to permit keyboarding to tape terminal.</p>	<p>37 EIA (Electronic Industries Association) interface only, teletypewriter motor on. All others, no effect.</p>
7	<p>Depress FAST ACCESS FWD for approximately 10 seconds.</p>	<p>Motor turns on.</p> <p>BEGIN OF TAPE lamp lights momentarily.</p> <p>Tape moves rapidly in forward direction while FAST ACCESS FWD is depressed.</p> <p>STOP lamp blinks and then stays on.</p>
8	<p>Depress FAST ACCESS REV until BEGIN OF TAPE lamp lights.</p>	<p>Tape moves rapidly in reverse direction (while FAST ACCESS REV is depressed).</p> <p>Tape stops when BEGIN OF TAPE lamp blinks, STOP lamp on.</p>
9	<p>Successively depress SINGLE STEP REV and SEARCH REVERSE; also depress DATA RECEIVE.</p>	<p>No response should be observed, since beginning of tape condition inhibits all reverse functions except unload.</p>
10	<p>Depress SINGLE STEP FWD (once).</p>	<p>BEGIN OF TAPE lamp goes out. (Tape advances to second clock pulse available character)</p> <p>STOP lamp blinks with tape movement.</p> <p>DATA SEND lamp may light momentarily.</p>

TABLE A

ATTENDED TESTING
OFF LINE FOR 33/35/37 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
10 (cont)		Character is transmitted to local adjunct.
11	Depress tape position indicator (counter) reset button to zero the counter.	Counter resets to 000.
12	Move STOP CODES switch to RECORD CLK. TRK. position.	No response observed since this function is only initiated when in beginning of tape condition.
13	Return STOP CODES switch to FS position.	No effect.
14	Depress FAST ACCESS FWD until LOW TAPE lamp lights.	<p>STOP lamp blinks as tape advances rapidly (33 inches per second).</p> <p>LOW TAPE lamp lights when low tape marker is detected on tape.</p> <p>Counter reads approximately 1040 +20.</p>
15	<p>Depress DATA RECEIVE.</p> <p>In CDT or other parallel device adjunct, select tape set as receiver by depressing appropriate key on control panel of adjunct terminal.</p>	No effect. Receive mode cannot be initiated in low tape condition. (If TP322468 card is Issue 10 or greater, receive mode can be initiated after low tape in local mode, but not on-line.)
16	Depress FAST ACCESS FWD.	<p>Tape moves forward until END OF TAPE lamp lights, then stops.</p> <p>Counter reads approximately 1110 +50.</p>
17	Successively depress SEARCH FORWARD and SINGLE STEP FWD; also depress DATA SEND and DATA RECEIVE.	No response observed, since all forward tape motion is inhibited by END OF TAPE alarm.
18	Depress FAST ACCESS REV, and hold depressed until counter indicates a number below 100 (about 25 to 30 seconds).	<p>END OF TAPE lamp goes out, followed by LOW TAPE lamp, as tape moves rapidly in reverse direction.</p> <p>STOP lamp blinks.</p> <p>Counter reverse counts.</p>

TABLE A

ATTENDED TESTING
OFF LINE FOR 33/35/37 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
19	Set STOP CODES switch to each search character provided in set (FS, GS, LF, EOT, and if provided, characters programmed on character recognition expander card TP322465), and depress SEARCH FORWARD or REVERSE. Allow set to find characters if prerecorded on test tape.	<p>SEARCH FORWARD or REVERSE lamp lights and STOP lamp blinks as tape is searched.</p> <p>Tape movement stops and SEARCH lamp goes off immediately after selected search character is read.</p> <p><u>Note:</u> If search characters are closely spaced on test message, SEARCH lamp may not have time to light before search character is located.</p> <p>Tape movement also stops at beginning or end of tape, or when STOP pushbutton is depressed.</p>
20	Successively depress SINGLE STEP FWD and REV.	<p><u>Note 1:</u> If local interface is provided to a device capable of printing out or otherwise displaying data, such as 33, 35, or 37 teletypewriter, check character readout on single step in forward direction. Character is not transmitted in reverse direction.</p> <p><u>Note 2:</u> By stepping back and forth over same character, it can be observed by the readout that only a single step is being taken in either direction. (The same character should be produced for each depression of the SINGLE STEP FWD switch.)</p>
21	Place STOP CODES switch in TAPE UNLOAD position.	<p>Tape rewinds completely into cartridge.</p> <p>STOP lamp blinks.</p> <p>BEGIN OF TAPE lamp flashes as beginning of tape marker passes photosensor assembly.</p> <p>STOP lamp blinks.</p> <p>Motor turns off after short time-out.</p>

TABLE A

ATTENDED TESTING
OFF LINE FOR 33/35/37 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
22	Move STOP CODES switch from TAPE UNLOAD to FS position.	STOP lamp stops blinking.
23	Move engagement lever to RELEASE position.	Photosensor lamp goes out.
24	Load a blank, unrecorded (or bulk erased) cartridge onto tape transport. Move engagement lever to ENGAGE position.	Photosensor lamp lights when pinch roller engagement lever is in ENGAGED position.
25	<p>Move STOP CODES switch to RECORD CLK. TRK. position. Depress FAST ACCESS FWD for about 5 seconds or until BEGIN OF TAPE lamp flashes and tape drive shifts to low speed. Allow clock track to be recorded for at least 10 counts on counter, then move function selector switch out of RECORD CLK. TRK. position.</p> <p>To check: Depress SINGLE STEP REV (three times).</p>	<p>STOP lamp blinks while clock track is being recorded.</p> <p>Clock track should be recorded over the 10 counts duration of tape.</p> <p>Tape moves in reverse direction and stops at next recorded clock track position.</p> <p>ERROR lamp should be off, if not, depress ERROR lamp switch.</p> <p><u>Note:</u> If clock track has not been recorded, tape will move continuously in reverse direction until beginning of tape is reached (BEGIN OF TAPE lamp lights).</p>
26	Depress SEARCH REVERSE until tape reaches beginning of tape.	<p>SEARCH REVERSE lamp lights.</p> <p>When beginning of tape is reached, BEGIN OF TAPE lamp lights and tape stops.</p> <p>SEARCH REVERSE lamp goes out.</p> <p>ERROR lamp should not light.</p> <p>Audible brake noise heard.</p>
27	Place STOP CODES switch in RECORD CLK. TRK. position and record clock track on entire length of tape. (Time required: About 6-1/2 minutes.)	<p>STOP lamp blinks while clock track is being recorded.</p> <p>Tape moves forward.</p>

TABLE A
ATTENDED TESTING
OFF LINE FOR 33/35/37 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
27 (cont)		Near end of tape, LOW TAPE lamp lights, followed by END OF TAPE lamp. Tape stops.
28	Place STOP CODES switch in TAPE UNLOAD position.	Tape moves in reverse direction at fast access speed. END OF TAPE and LOW TAPE lamps go out. STOP lamp blinks. BEGIN OF TAPE lamp flashes as beginning of tape marker passes photosensor assembly. Tape rewinds completely into cartridge. Motor turns off after short time-out.
29	Move STOP CODES switch out of TAPE UNLOAD position. Carefully pick up cartridge; place record interlock plug in bottom side of cartridge (opposite label). Reload cartridge on tape transport.	Photosensor lamp lights when pinch roller engagement lever is in ENGAGED position.
30	Depress SINGLE STEP FWD.	SEND lamp lights. Motor turns on and tape advances. BEGIN OF TAPE lamp flashes as beginning of tape marker passes photosensor assembly. Tape stops when first character position is reached. In the adjunct teletypewriter, the delete character is received. SEND lamp turns off but motor remains on.

TABLE A

ATTENDED TESTING
OFF LINE FOR 33/35/37 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
31	Select tape set as receiver and depress DATA RECEIVE.	No response observed since receive mode is inhibited by record interlock feature. DATA RECEIVE lamp remains off.
32	Place STOP CODES switch in TAPE UNLOAD position. Carefully pick up cartridge and restore interlock plug to top (label side) of tape cartridge. Load cartridge on tape transport.	
33	Depress SINGLE STEP FWD.	BEGIN OF TAPE lamp blinks. Tape advances to first character position (about 16 inches) as in Step 30.
34	Place DATA MODE switch of 33/35/37 adjunct in LOCAL position or MOTOR CONTROL switch of parallel device adjunct in ON position. Select tape set as receiver. <u>Note:</u> Select local operation of adjunct unit as outlined in Step 6. Transmit from keyboard of teletypewriter to magnetic tape set. Choose a message of convenient length and include any characters programmed on character recognition expander card (TP322465) if this optional card is included in tape set. Start message with FS (SHIFT, CTRL, L on 33/35 teletypewriter). End message with EOT (unless Stop on EOT is disabled). <u>Note:</u> If Stop on EOT feature is disabled, use character A programmed on card TP322465 to end message.	Motors on at magnetic tape terminal. STOP lamp blinks, indicating data is being recorded.
35	Depress STOP button when message is complete.	STOP lamp remains on steadily. DATA RECEIVE lamp goes out.
36	Place STOP CODES switch in FS position and depress SEARCH REVERSE.	SEARCH REVERSE lamp lights during search mode. STOP lamp blinks as tape moves in reverse direction.

TABLE A
ATTENDED TESTING
OFF LINE FOR 33/35/37 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
36 (cont)		<p>Tape stops.</p> <p>SEARCH REVERSE lamp goes out.</p> <p>STOP lamp remains on steadily when FS is detected at beginning of message.</p>
37	Select tape set as sender and depress DATA SEND.	<p>DATA SEND lamp lights.</p> <p>STOP lamp blinks.</p> <p>Tape moves forward.</p> <p>Message is printed by teletypewriter.</p> <p>Message should check with originally transmitted copy.</p> <p><u>Note:</u> If tape set includes character recognition expander card (TP322465), response to selected characters will depend on programmed options. Details of programming and special operating options of this card are described in Section 582-900-200.</p> <p>Tape set automatically stops and clears to stop mode when EOT (or optional character A of expander card, if used) is detected.</p>
38	Select tape set as receiver and depress DATA RECEIVE.	DATA RECEIVE lamp lights.
39	<p>Using keyboard of adjunct terminal, type the following message:</p> <p>(GS) THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK. (CR LF) THE RYRYR BROWN FOX JUMPED OVER THE LAZY DOG'S BACK. (EOT)</p>	<p>Tape forward movement is barely perceptible at the counter as each character is recorded.</p> <p>STOP lamp blinks as each character is recorded.</p> <p>Adjunct terminal prints or displays message as it is recorded.</p>

TABLE A

ATTENDED TESTING
OFF LINE FOR 33/35/37 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
39 (cont)	<p><u>Note 1:</u> GS is SHIFT, CTRL, M on 33/35 teletypewriter.</p> <p><u>Note 2:</u> If "stop" on EOT is disabled, use character A programmed on card TP322465 to end message.</p>	
40	Depress STOP button.	DATA RECEIVE lamp goes out.
41	Place STOP CODES switch in LF position and depress SEARCH REVERSE.	<p>SEARCH REVERSE lamp lights.</p> <p>STOP lamp blinks as tape moves in reverse direction.</p> <p>Tape stops.</p> <p>SEARCH REVERSE lamp goes out.</p> <p>STOP lamp remains on steadily when tape reaches LF character at end of first part of message prepared in Step 39.</p>
42	Depress DATA RECEIVE.	<p>DATA RECEIVE lamp lights.</p> <p>DATA SEND lamp is off.</p> <p>STOP lamp remains on.</p>
43	<p>Depress SINGLE STEP FWD six times.</p> <p><u>Note:</u> It is assumed that the RYRYR code group in the second sentence of the message of Step 39 is in error. Steps 42 through 44 will be used to correct this error by re-recording the erroneous part of the tape.</p>	<p>STOP and DATA RECEIVE lamps blink off, and then on.</p> <p>DATA SEND lamp blinks on, then off, each time SINGLE STEP FWD switch is depressed.</p> <p>Adjunct terminal prints or displays each character as it is sent from tape set:</p> <p style="text-align: center;">THE R</p>
44	Depress SINGLE STEP REV once.	<p>STOP and DATA RECEIVE lamps blink once.</p> <p>Adjunct terminal does not print in single step reverse operation.</p> <p>Tape reverses one character position, placing the R just ahead of the read/write head.</p>

TABLE A
ATTENDED TESTING
OFF LINE FOR 33/35/37 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
45	Type the word QUICK on the keyboard of the adjunct terminal.	STOP lamp blinks, indicating signals being received by magnetic tape set. Errored tape should now be corrected.
46	Depress STOP button.	DATA RECEIVE lamp goes out.
47	Set STOP CODES switch to GS.	No effect.
48	Depress SEARCH REVERSE.	SEARCH REVERSE lamp lights. Tape moves in reverse direction and stops at GS character at start of test message of Step 39. SEARCH REVERSE lamp goes out.
49	Select tape set as sender and depress DATA SEND pushbutton.	STOP lamp blinks and tape moves in forward direction. DATA SEND lamp lights. Adjunct terminal prints or displays corrected test message. Transmission stops when EOT (or character A of expander card if "stop" on EOT is disabled) is detected at end-of-message. <u>Note:</u> If tape terminal is adjunct to 37 EIA, PROCEED lamp on 37 Teletypewriter will turn off.
50	Depress FAST ACCESS REV.	STOP lamp blinks and tape reverses at high speed until beginning of tape is detected and reverse function is inhibited.
51	If tape set is used as an adjunct to a parallel device such as a CDT, turn MOTOR CONTROL switch to AUTO. (a) Select tape set as sender. (b) Select tape set as receiver.	Tape set motor turns off. Tape set motor turns on and remains on until set is removed from send mode. <u>Note:</u> If tape contains message, printout or display occurs in normal manner. Tape set motor turns on and remains on until tape set is removed from receive mode.

TABLE A

ATTENDED TESTING
OFF LINE FOR 33/35/37 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
52	<p>Optional: In 37 KSR adjunct tape set, turn DATA MODE switch to OPTION position (late design only).</p> <p>(a) With 37 Teletypewriter Set for local punch operation (PUNCH ON and PUNCH LOCAL lamps on), depress DATA RECEIVE on tape set.</p> <p>(b) With 37 Teletypewriter Set for local reader operation, depress DATA SEND on tape set.</p>	<p>Tape set motor turns off.</p> <p>Tape set motor turns on and remains on until local punch mode is deselected.</p> <p>Tape set motor turns on and remains on until local reader mode is deselected.</p>
53	<p>Optional: The special character hold feature can be checked by transmitting a test message containing horizontal and vertical tab and form-feed characters from the tape terminal to a 33, 35, or 37 Teletypewriter. For friction feed or sprocket feed units which do not employ the tabbing feature, a slight delay will be noticed after each tab or form feed character is transmitted. For units equipped for tab or form feed functions, proper tabbing or form feed should occur in this interval.</p>	
54	<p>This completes the off-line checkout of the magnetic tape terminal. If the terminal does not include a 202 Series Data Set for on-line operation, unload the tape, remove the cartridge from the transport, and turn off the ac power. If the terminal includes a data set, proceed to the on-line tests starting with 3.05.</p>	

TABLE B
ATTENDED TESTING
OFF LINE FOR 40 ADJUNCT TAPE TERMINAL

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
1	At the magnetic tape terminal, place maintenance (power) switch to ON position.	STOP lamp lights. ERROR lamp may light. Motors off.
2	Move STOP CODES switch to FS position and pinch roller engagement lever to RELEASE position.	No effect.
3	Load test cartridge (TP337400 or blank with clock track) onto tape transport (record interlock plug in top position).	No effect.
4	Move engagement lever to ENGAGE position.	Photosensor lamp on tape transport lights.
5	At 40 adjunct, turn power on.	POWER lamp on. LOCAL lamp lights.
6	Place DATA MODE switch in LOCAL position. Depress controls on 40 adjunct unit as follows: LOCAL, FORM ENTER, HOME, CLEAR, TAB CLEAR, and FORM ENTER.	At 40, cursor moves to first character position. FORM ENTER lamp lights, then goes out. Monitor is clear.
7	Depress FAST ACCESS FWD for approximately 10 seconds.	Motor turns on. BEGIN OF TAPE lamp lights momentarily. Tape moves rapidly in forward direction while FAST ACCESS FWD is depressed. STOP lamp blinks and then stays on.
8	Depress FAST ACCESS REV until BEGIN OF TAPE lamp lights.	Tape moves rapidly in reverse direction (while FAST ACCESS REV is depressed). Tape stops when BEGIN OF TAPE lamp lights.

TABLE B

ATTENDED TESTING
OFF LINE FOR 40 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
9	Successively depress SINGLE STEP REV and SEARCH REVERSE; also depress DATA RECEIVE.	No response should be observed, since beginning of tape condition inhibits all reverse functions except unload.
10	Depress SINGLE STEP FWD (once).	BEGIN OF TAPE lamp goes out. (Tape advances to second clock pulse available character). STOP lamp blinks with tape movement. DATA SEND lamp may light momentarily.
11	Depress tape position indicator (counter) reset button to zero the counter.	Counter resets to 000.
12	Move STOP CODES switch to RECORD CLK. TRK. position.	No response observed since this function is only initiated when in beginning of tape condition.
13	Return STOP CODES switch to FS position.	No effect.
14	Depress FAST ACCESS FWD until LOW TAPE lamp lights.	STOP lamp blinks as tape advances rapidly (33 inches per second). LOW TAPE lamp lights when low tape marker is detected on tape. Counter reads approximately 1020 \pm 30.
15	Depress DATA RECEIVE.	No effect. Receive mode cannot be initiated in low tape condition. (If TP322468 card is Issue 10 or greater, receive mode can be initiated after low tape in local mode, but not on-line.)
16	Depress FAST ACCESS FWD.	Tape moves forward until END OF TAPE lamp lights, then stops. Counter reads approximately 1090 \pm 30.
17	Successively depress SEARCH FORWARD and SINGLE STEP FWD; also depress DATA SEND and DATA RECEIVE.	No response observed, since all forward tape motion is inhibited by END OF TAPE alarm.

TABLE B
ATTENDED TESTING
OFF LINE FOR 40 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
18	Depress FAST ACCESS REV and hold depressed until counter indicates a number below 100 (about 25 to 30 seconds).	<p>END OF TAPE lamp goes out, followed by LOW TAPE lamp, as tape moves rapidly in reverse direction.</p> <p>STOP lamp blinks.</p> <p>Counter reverse counts.</p>
19	Set STOP CODES switch to each search character provided in set (FS, GS, LF, EOT, and if provided, characters programmed on character recognition expander card TP322465), and depress SEARCH FORWARD or REVERSE. Allow set to find characters if prerecorded on test tape.	<p>SEARCH FORWARD or REVERSE lamp lights and STOP lamp blinks as tape is searched.</p> <p>Tape movement stops and SEARCH lamp goes off immediately after selected search character is read.</p> <p><u>Note:</u> If search characters are closely spaced on test message, SEARCH lamp may not have time to light before search character is located.</p> <p>Tape movement also stops at beginning or end of tape, or when STOP pushbutton is depressed.</p>
20	Depress REC switch at 40.	LOCAL lamp goes out and REC lamp lights at 40.
21	Successively depress SINGLE STEP FWD and REV.	<p>Character is displayed on monitor only when SINGLE STEP FWD is depressed. Character is not transmitted in reverse direction.</p> <p><u>Note:</u> By stepping back and forth over same character, it can be observed by the readout that only a single step is being taken in either direction. (The same character should be produced for each depression of the SINGLE STEP FWD switch.)</p>

TABLE B
ATTENDED TESTING
OFF LINE FOR 40 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
22	Place STOP CODES switch in TAPE UNLOAD position.	Tape rewinds completely into cartridge. STOP lamp blinks. BEGIN OF TAPE lamp flashes as beginning of tape marker passes photo-sensor assembly. Motor turns off after short time-out.
23	Move STOP CODES switch from TAPE UNLOAD to FS position.	STOP lamp stops blinking and stays on.
24	Move engagement lever to RELEASE position.	Photosensor lamp goes out.
25	Load a blank, unrecorded (or bulk erased) cartridge onto tape transport. Move engagement lever to ENGAGE position.	Photosensor lamp lights when pinch roller engagement lever is in engaged position.
26	Move STOP CODES switch to RECORD CLK. TRK. position. Depress FAST ACCESS FWD for about 5 seconds or until BEGIN OF TAPE lamp flashes and tape drive shifts to low speed. Allow clock track to be recorded for at least 10 counts on counter, then move function selector switch out of RECORD CLK. TRK. position. To check: Depress SINGLE STEP REV.	STOP lamp blinks while clock track is being recorded. Clock track should be recorded over the 10 counts duration of tape. Tape moves in reverse direction and stops at next recorded clock track position. ERROR lamp should be off, if not, depress ERROR lamp switch. Note: If clock track has not been recorded, tape will move continuously in reverse direction until beginning of tape is reached (BEGIN OF TAPE lamp lights).
27	Depress SEARCH REVERSE until tape reaches beginning of tape.	SEARCH REVERSE lamp lights. STOP lamp blinks. When beginning of tape is reached, BEGIN OF TAPE lamp lights and tape stops. SEARCH REVERSE lamp goes out.

TABLE B
ATTENDED TESTING
OFF LINE FOR 40 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
27 (cont)		<p>ERROR lamp should not light.</p> <p>Audible brake noise heard.</p>
28	<p>Place STOP CODES switch in RECORD CLK. TRK. position and record clock track on entire length of tape. (Time required: About 6-1/2 minutes.)</p>	<p>STOP lamp blinks while clock track is being recorded.</p> <p>Tape moves forward.</p> <p>Near end of tape, LOW TAPE lamp lights, followed by END OF TAPE lamp.</p> <p>Tape stops.</p>
29	<p>Place STOP CODES switch in TAPE UNLOAD position.</p>	<p>Tape moves in reverse direction at fast access speed.</p> <p>END OF TAPE and LOW TAPE lamps go out.</p> <p>STOP lamp blinks.</p> <p>BEGIN OF TAPE lamp flashes as beginning of tape marker passes photo-sensor assembly and continues to flash.</p> <p>Tape rewinds completely into cartridge.</p> <p>Motor turns off after short time-out.</p>
30	<p>Move STOP CODES switch out of TAPE UNLOAD position. (If winder continues to rotate, move engagement lever to RELEASE). Carefully pick up cartridge, place record interlock plug in bottom side of cartridge (opposite label). Reload cartridge on tape transport. Move engagement lever to ENGAGE.</p>	<p>Photosensor lamp lights when pinch roller engagement lever is in engaged position.</p>
31	<p>Depress SINGLE STEP FWD.</p>	<p>SEND lamp lights.</p> <p>Motor turns on and tape advances.</p>
32	<p>Select tape set as receiver, depress DATA RECEIVE.</p>	<p>No response observed since receive mode is inhibited by record interlock feature.</p> <p>DATA RECEIVE lamp remains off.</p>

TABLE B

ATTENDED TESTING
OFF LINE FOR 40 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
33	Place STOP CODES switch in TAPE UNLOAD position. Move engagement lever to RELEASE. Carefully pick up cartridge and restore interlock plug to top (label side) of tape cartridge. Load cartridge on tape transport. Move STOP CODES switch to FS position and engagement lever to ENGAGE.	Tape rewinds completely into cartridge. STOP lamp blinks. Motor turns off after a short time.
34	Depress SINGLE STEP FORWARD. Then depress FAST ACCESS FORWARD for 3 seconds. Depress FAST ACCESS REV.	Motor turns on. Tape advances, STOP lamp blinks. BEGIN OF TAPE lamp lights and tape movement stops.
35	For terminals having a TP322485 automatic rewind card, use Steps 35 to 48; if card is not present at XZ5, use Steps 41 to 48. Place DATA MODE switch in LOCAL, and depress DATA RECEIVE switch. (Check that STOP CODES switch is at FS.) At 40, depress LOCAL, FORM ENTER (if lamp is on), HOME, CLEAR, and TAB CLEAR switches and type the following message: (FS) THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK. (NEW LINE and RETURN) THE U*U*U BROWN FOX JUMPED OVER THE LAZY DOG'S BACK. (EOT)	Tape terminal motors on. RECEIVE lamp on. Monitor is clear. Message appears as typed.
36	Depress HOME and SEND switches at 40 adjunct. <u>Note:</u> If STOP CODES switch was placed in "A" or "B" position the set will rewind after an EOT.	Tape moves (about 1 count) at the counter. STOP lamp blinks, indicating data is being recorded. EOT is sensed; STOP lamp on, RECEIVE lamp on. At 40, cursor moves across message and stops after EOT character, SEND lamp off and REC lamp lights.

TABLE B
ATTENDED TESTING
OFF LINE FOR 40 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
37	Depress STOP button when message is complete.	STOP lamp remains on steadily. DATA RECEIVE lamp goes out.
38	Move STOP CODES switch to FS position and depress SEARCH REVERSE.	SEARCH REVERSE lamp lights during search mode. STOP lamp blinks as tape moves in reverse direction. Tape stops. SEARCH REVERSE lamp goes out. STOP lamp remains on steadily when FS is detected at beginning of message.
39	Depress DATA SEND switch. At 40, depress LOCAL switch, position cursor at beginning of a new line, and depress REC switch.	DATA SEND lamp lights. STOP lamp blinks. Tape moves forward. Message is displayed at monitor. (Check message against transmitted copy — EOT displayed, etc) At 40, LOCAL lamp on.
40	Depress STOP switch.	(Tape terminal automatically stops when EOT is detected, but send mode is not cleared). Tape terminal goes out of send mode.
41	If TP322485 automatic rewind card is not present at XZ5, use Steps 41 to 48. Check that DATA MODE switch is in LOCAL, and depress DATA RECEIVE switch.	RECEIVE lamp on.

TABLE B

ATTENDED TESTING
OFF LINE FOR 40 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
41 (cont)	<p>At 40, depress LOCAL, FORM ENTER (if lamp is on), HOME, CLEAR, and TAB CLEAR switches. Type the following message:</p> <p>(FS) THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK. (NEW LINE and RETURN) THE U*U*U BROWN FOX JUMPED OVER THE LAZY DOG'S BACK. (GS) (ETX) (EOT) (NEW LINE and RETURN) (DLE-EOT)</p>	<p>Monitor is clear.</p> <p>Message appears as typed.</p>
42	Depress HOME and SEND switches at 40 adjunct.	<p>Tape forward movement is barely perceptible at the counter as each character is recorded.</p> <p>STOP lamp blinks, indicating data is being recorded.</p> <p>EOT is sensed, STOP lamp on, and RECEIVE lamp off.</p> <p>At 40, cursor moves across message, REC lamp comes on or depress LOCAL to stop sending.</p>
43	Depress STOP button when message is complete (to clear receive mode).	<p>STOP lamp remains on steadily.</p> <p>DATA RECEIVE lamp goes out.</p>
44	Place STOP CODES in FS position and depress SEARCH REVERSE.	<p>SEARCH REVERSE lamp lights during search mode.</p> <p>STOP lamp blinks as tape moves in reverse direction.</p> <p>Tape stops.</p> <p>SEARCH REVERSE lamp goes out.</p> <p>STOP lamp remains on steadily when FS is detected at beginning of message.</p>
45	<p>Place STOP CODES switch in "A" position (already in LOCAL).</p> <p>Select tape set as sender and depress DATA SEND.</p> <p>At 40, position cursor at beginning of a new line and depress REC switch.</p>	<p>DATA SEND lamp lights.</p> <p>STOP lamp blinks.</p> <p>Tape moves forward.</p>

TABLE B
ATTENDED TESTING
OFF LINE FOR 40 ADJUNCT TAPE TERMINAL

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
45 (cont)		<p>Message is displayed at monitor. Message ending characters not displayed GS, ETX, and EOT.</p> <p>DLE-EOT is displayed, REC lamp stays on (if cursor continues to move across monitor, depress LOCAL).</p> <p>SEND lamp off and STOP lamp on.</p> <p><u>Note:</u> If tape set includes character recognition expander card (TP322465), response to selected characters will depend on programmed options. Details of programming and special operating options of this card are described in Section 582-900-200.</p>
46	Depress STOP switch, move STOP CODES switch to FS position, and depress SEARCH REVERSE.	<p>SEARCH REVERSE lamp lights during search mode.</p> <p>STOP lamp blinks as tape moves in reverse direction.</p> <p>Tape stops.</p> <p>SEARCH REVERSE lamp goes out.</p> <p>STOP lamp remains on steadily when FS is detected at beginning of message.</p>
47	<p>Place STOP CODES switch in any position, but not in "A".</p> <p>Select tape set as sender and depress DATA SEND.</p> <p>At 40, position cursor at beginning of a new line and depress REC switch.</p>	<p>DATA SEND lamp lights.</p> <p>STOP lamp blinks.</p> <p>Tape moves forward and stops (if EOT strap is cut at card TP322464).</p> <p>At 40, if 40 is <u>not</u> optioned to go to local on GS, ETX, or EOT, the entire message will be displayed at monitor. Step 40-48 is not required.</p>

TABLE B
ATTENDED TESTING
OFF LINE FOR 40 ADJUNCT TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT	RESPONSE OBSERVED AT STATION
47 (cont)		<p>If 40 is optioned to go local on GS, ETX, or EOT, the message will be displayed (except the ending characters). Proceed to Step 48.</p> <p>STOP lamp on.</p> <p><u>Note:</u> If tape set includes character recognition expander card (TP322465), response to selected characters will depend on programmed options. Details of programming and special operating options of this card are described in Section 582-900-200.</p>
48	Depress REC switch two or three times.	<p>REC lamp on at 40.</p> <p>Ending characters displayed on monitor.</p> <p>STOP lamp blinks and then stays on.</p>

ON-LINE TESTING

3.05 The on-line testing is for use with a Data Test Center using another magnetic tape terminal with display capabilities as a test set — Table C contains this test.

3.06 Verify that the station has been released from service. Call the DTC and inform the operator that a 4210 Magnetic Tape Terminal is to be tested. The operator will then suggest the type of testing to use. Give the operator the station characteristics from the option card:

(a) Type of adjunct set: 33/35/37 or 40.

(b) Station area code and telephone number.

(c) Baud level of line (1050 or 1200).

(d) Data set characteristics — type and options:

(1) Reverse channel feature (present — yes or no);

(2) Automatic answer back feature used (yes or no).

(e) Is TP322485 option card present at XZ5; if so, give the following information on card strapping for options.

OPTION	TYPE	PROGRAMMING	
5A	Shunt Screw	At Back of Card — IN	At Front of Card — OUT
5B	Wire	Strap Cut — IN	Strap Intact — OUT
5C	Wire	Strap Cut — IN	Strap Intact — OUT
5D	Wire	Strap Cut — OUT	Strap Intact — IN
Stop Code	Shunt Screw	Insulator at RS	Insulator at \wedge

3.07 Inquire if the entire test is to be followed or just a portion of the test is to be used — refer to portions by step number.

Note: The following test procedures apply only to magnetic tape terminals equipped with a 200 Series Data Set.

3.08 During conversation with a DTC operator, make sure that all initial steps of the testing are understood. Go over Steps 1 and 2

with the operator (Table C); also, what actions are required for the automatic answer feature of the data set. Then disconnect the call; the DTC call back will occur momentarily.

3.09 Ready the magnetic tape terminal for testing (check power, remove any testing apparatus, close doors, etc).

TABLE C

SECTIONALIZING TROUBLE — ATTENDED TESTING
WITH A DTC USING A MAGNETIC TAPE TERMINAL

STEP	ACTION OF ATTENDANT OR MTCE EMPLOYEE AT STATION TAKEN AT REQUEST OF TEST CENTER	ACTION OBSERVED AT THE STATION	TEST CENTER ACTION
1	Load BLANK tape cartridge (with prerecorded clock track) or test cartridge (as directed by test center), move lever to ENGAGE, depress SINGLE STEP FWD, and set TAPE POSITION indicator (counter) to zero. Position tape to a blank area.	Lamp under cover (next to tape) on. BEGIN OF TAPE lamp on and off.	Set up operation.
2	Turn DATA MODE switch to ON LINE MAN.	None	Set up operation.
3	Depress DATA RECEIVE and TALK keys, lift handset, then depress DATA key at data set.	Data set rings, TALK lamp on and DATA RECEIVE and DATA lamps on.	Recall station.
4	None	None	Goes to data mode and sends message.
5	None	STOP lamp blinks and then stays on; tape advances and then stops (message received).	None
6	Depress STOP switch, lift handset, and depress TALK.	Give results.	Gives results.
7	Turn STOP CODES switch to FS or GS and depress REVERSE SEARCH.	REVERSE lamp on, STOP lamp blinks, REVERSE lamp goes off, and tape stops (FS or GS is detected).	None
8	Depress DATA SEND switch and then DATA key.	SEND and DATA lamps on, STOP lamp blinks, tape advances, SEND lamp off, and STOP lamp on.	Goes to data mode.

TABLE C

SECTIONALIZING TROUBLE — ATTENDED TESTING
WITH A DTC USING A MAGNETIC TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT OR MTCE EMPLOYEE AT STATION TAKEN AT REQUEST OF TEST CENTER	ACTION OBSERVED AT THE STATION	TEST CENTER ACTION
9	<p>None</p> <p><u>Note:</u> If tape set includes character recognition expander and "stop" on EOT feature is disabled, character A of expander card must be used in place of EOT.</p> <p>Lift handset, depress TALK.</p>	<p>None</p> <p>Give results.</p>	<p>Message received.</p> <p>Gives results.</p>
10	<p>Hang up handset (ready station for call — perform Steps 11 and 12).</p> <p><u>Note:</u> Before requesting test for auto-answer, check whether a 202 Data Set is strapped for permanent or key-controlled auto-answer. If key-controlled, depress third button from left on data set after hanging up.</p>	<p>None</p>	<p>Disconnects.</p>
11	<p>Turn DATA MODE switch to ON LINE AUTO, set tape at beginning of test message (FS or GS), and depress DATA SEND.</p>	<p>SEND lamp on; magnetic tape terminal now off.</p>	
12	<p>None</p>	<p>Data set rings once. TALK and DATA lamps on and motors on.</p>	<p>Recall station.</p>
13	<p>None</p> <p><u>Note:</u> If tape set includes character recognition expander and "stop" on EOT feature is disabled, character A of expander card must be used in place of EOT.</p>	<p>STOP lamp blinks and then stays on, SEND lamp off, RECEIVE lamp on, STOP lamp remains on, and disconnect occurs after 45 seconds.</p>	<p>Sends message and disconnects after a brief delay.</p>

TABLE C

SECTIONALIZING TROUBLE — ATTENDED TESTING
WITH A DTC USING A MAGNETIC TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT OR MTCE EMPLOYEE AT STATION TAKEN AT REQUEST OF TEST CENTER	ACTION OBSERVED AT THE STATION	TEST CENTER ACTION
14	Lift handset and depress TALK. <u>Note:</u> Prepare a message of blocks of data separated by prearranged stop codes (character "C" of card TP322465 or the selected stop code, RS or \wedge , of card TP322485).	Give results.	Gives results. <u>Note:</u> Applies reverse channel before transmission begins.
15	Lift handset, depress TALK, and then depress DATA.	Data set rings, TALK and DATA lamps on, and motors on.	Recall station.
16	Turn STOP CODES switch to (C) and depress DATA SEND.	Tape advances, SEND lamp on, and STOP lamp blinks.	Message starts.
17	None	Tape stops, STOP lamp on, and SEND lamp remains on.	Turns off reverse channel.
18	None <u>Note:</u> Sequence repeats for each block of data sent. Disconnect occurs as explained in Step 13 when EOT (or alternate character if TP322465 card is used) is detected at end-of-message.	Tape advances and STOP lamp blinks and then stays on.	Turns on reverse channel.
19	Lift handset and depress TALK.	Give results.	Gives results.
20	Turn STOP CODES switch to (A); depress DATA RECEIVE and AUTO key.	RECEIVE lamp on and motor remains off.	
21	None	Data set rings, TALK and DATA lamp on, motor on, tape advances, and STOP lamp blinks.	Recall station and send message (with FS beginning and EOT ending).

TABLE C

SECTIONALIZING TROUBLE — ATTENDED TESTING
WITH A DTC USING A MAGNETIC TAPE TERMINAL (Continued)

STEP	ACTION OF ATTENDANT OR MTCE EMPLOYEE AT STATION TAKEN AT REQUEST OF TEST CENTER	ACTION OBSERVED AT THE STATION	TEST CENTER ACTION
22	None	Tape stops, STOP lamp on, and RECEIVE, TALK and DATA lamps off.	Message completed.
23	None	REVERSE lamp on, adjunct motor on, STOP lamp blinks, and REVERSE lamp off.	None
24	None	SEND lamp on, STOP lamp blinks, print-out at adjunct display, SEND lamp off, STOP lamp remains on, adjunct turns off, and RECEIVE lamp on.	None
25	Lift handset, depress TALK. Testing concluded.	Give results.	Gives results.

3.10 The test message figures that follow (Figure 1 through Figure 7) indicate the test messages that are recorded on the test tape cartridge (TP337400) at the tape position indicator (counter) number shown in the figure. Even parity ASCII (American National Standard Code for Information Interchange) is used unless otherwise specified.

Note 1: Test messages shown are for equipment with standard width platen. For wide platen units (ie, 132 character),

test tape must be prepared locally with check for full-line operation.

Note 2: Test messages shown include only upper case graphics. If terminal has lower case capabilities, include lower case graphics in locally made test tape.

Note 3: Test messages shown include only basic search codes (FS, GS, LF, EOT). If terminal includes character recognition expander card (TP322465), add user selected search codes in locally prepared test message.

SECTION 582-900-500

153
4200 SERIES TEST MESSAGE NO. 001:53
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
4153
4200 SERIES TEST MESSAGE NO. 002:53
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
4153
4200 SERIES TEST MESSAGE NO. 003:53
2THE QUICK BROWN FOX . . .

etc (total of 060 messages)

. . . THE LAZY DOG'S BACK 1234567890 TIMES.66653

4153
4200 SERIES TEST MESSAGE NO. 060:53
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
4

(followed by rubouts until counter position 100)

Figure 1 - Test Message Recorded at Counter Number 000

153
4200 SERIES TEST MESSAGE NO. 101:53
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
2THE QUICK BROWN FOX . . .

etc (total of 75 QBF lines)

. . . THE LAZY DOG'S BACK 1234567890 TIMES.66653
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
4153
4200 SERIES TEST MESSAGE NO. 102:53
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
2THE QUICK BROWN FOX . . .

etc (total of 75 QBF lines)

. . . THE LAZY DOG'S BACK 1234567890 TIMES.66653
2THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG'S BACK 1234567890 TIMES.66653
4

(followed by rubouts until counter position 200)

Figure 2 - Test Message Recorded at Counter Number 100

153
 4200 SERIES TEST MESSAGE NO. 401:53
7
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
7
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
9
4153
 4200 SERIES TEST MESSAGE NO. 402:53
7
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
7
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
9
4153
 4200 SERIES TEST MESSAGE NO. 403:53
7
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
 2THE 8QUICK 8BROWN . . .

etc (total of 15 messages)

 . . . 818283 8TIMES.66653
9
4153
 4200 SERIES TEST MESSAGE NO. 415:53
7
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
7
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
 2THE 8QUICK 8BROWN 8FOX 8JUMPED 818283 8TIMES.66653
9
4

(followed by rubouts until counter position 450)

Figure 5 - Test Message Recorded at Counter Number 400

4. REFERENCES

4.01 For information on description and operation refer to the following:

<u>Section</u>	<u>Title</u>
582-900-100	"DATASPEED Magnetic Tape Set — General Description"
582-900-101	"DATASPEED Magnetic Tape Terminal for DATAPHONE* Service — Station Arrangement Identification"
582-900-110	"DATASPEED Magnetic Tape Set — Description and Principles of Operation"

4.02 For information on installation and checkout, refer to the following:

<u>Section</u>	<u>Title</u>
582-900-200	"DATASPEED Magnetic Tape Set — Installation"
582-900-300	"DATASPEED Magnetic Tape Terminal — Checkout and Troubleshooting"

4.03 For information on adjustment, lubrication, and removal and replacement of components, refer to the following:

<u>Section</u>	<u>Title</u>
582-900-701	"DATASPEED Magnetic Tape Set Tape Transport — Adjustment and Lubrication"
582-900-702	"DATASPEED Magnetic Tape Set Cabinet — Adjustment"
582-900-703	"DATASPEED Magnetic Tape Terminal — Removal and Replacement of Components"

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4.04 For information on field practices, refer to the following:

<u>Section</u>	<u>Title</u>
579-504-350	"DATASPEED Magnetic Tape Terminal for DATAPHONE Service — Field Installation and Maintenance Practice"
999-300-114	"How to Operate — DATASPEED Magnetic Tape Terminal for DATAPHONE Service"

5. TROUBLESHOOTING AIDS

5.01 When troubleshooting a magnetic tape terminal, repairs at the station should be confined to troubles of a minor nature (replacement of assemblies, circuit cards, and tape transport adjustments, etc). Troubles of a serious nature should be isolated to the specific assembly. The defective assembly should then be replaced with a known good assembly. Return the defective assembly to a repair center that has the facilities to perform comprehensive testing and repairs.

CAUTION: DO NOT INSERT, REMOVE, CONNECT, OR DISCONNECT ANY ELECTRONIC COMPONENT WHILE THE MAINTENANCE ON-OFF SWITCH (LOCATED ON THE POWER SUPPLY FRONT PANEL) IS IN THE ON POSITION.

5.02 When the station fails a step in the test procedure, refer to Section 582-900-300 (Troubleshooting) or 579-505-350 (FIMP) for an indication of the probable cause and location of the trouble.