

“DATASPEED\*” AP25 PRINTER

TROUBLESHOOTING

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1. GENERAL

1.01 This section provides troubleshooting information for the DATASPEED AP25 Printer.

1.02 This section is reissued to change references from DATASPEED 4540 Auxiliary Character Printer to DATASPEED AP25 Printer and to change the part number of the print head assembly.

1.03 Printer troubleshooting is initiated either by Station Testing and Troubleshooting Section 582-300-500, Printer Testing Section 582-310-500, or when trouble in the printer is suspected from symptoms observed.

1.04 Analysis in this section is limited to isolation of the trouble within the printer up to its electrical interface located at the left rear of the printer.

1.05 When ordering replaceable components, unless otherwise specified, prefix each part number with the letters “TP” (ie, TP410655).

1.06 When replacement of the print head, logic card or power supply corrects the trouble, additional checks should be made to isolate and possibly correct the trouble without returning for repair.

- On The Print Head — Check cable continuity.
- On The Logic Card — Check continuity of cables.
- On The Power Supply — Check fuse.
- On The Form Feed Tape Reader — Check optical switch with cable.

1.07 When replacement of a component does not correct the trouble, the original component should be reinstalled before going to the next step of the trouble analysis. If there are no more steps provided, go to the last question.

1.08 When returned to the Western Electric Service Center for repair, the printer or components should be packed in the container in which the replacement is received or other protective packaging. This includes the conductive (black) plastic bag used with the logic card for static protection.

1.09 Components returnable for repair and referred to in this section for replacement are:

- 45P106/AAA Character Printer
- 430643 Logic Card With Mapex
- 430780 Power Supply Assembly
- 453283 Print Head Assembly

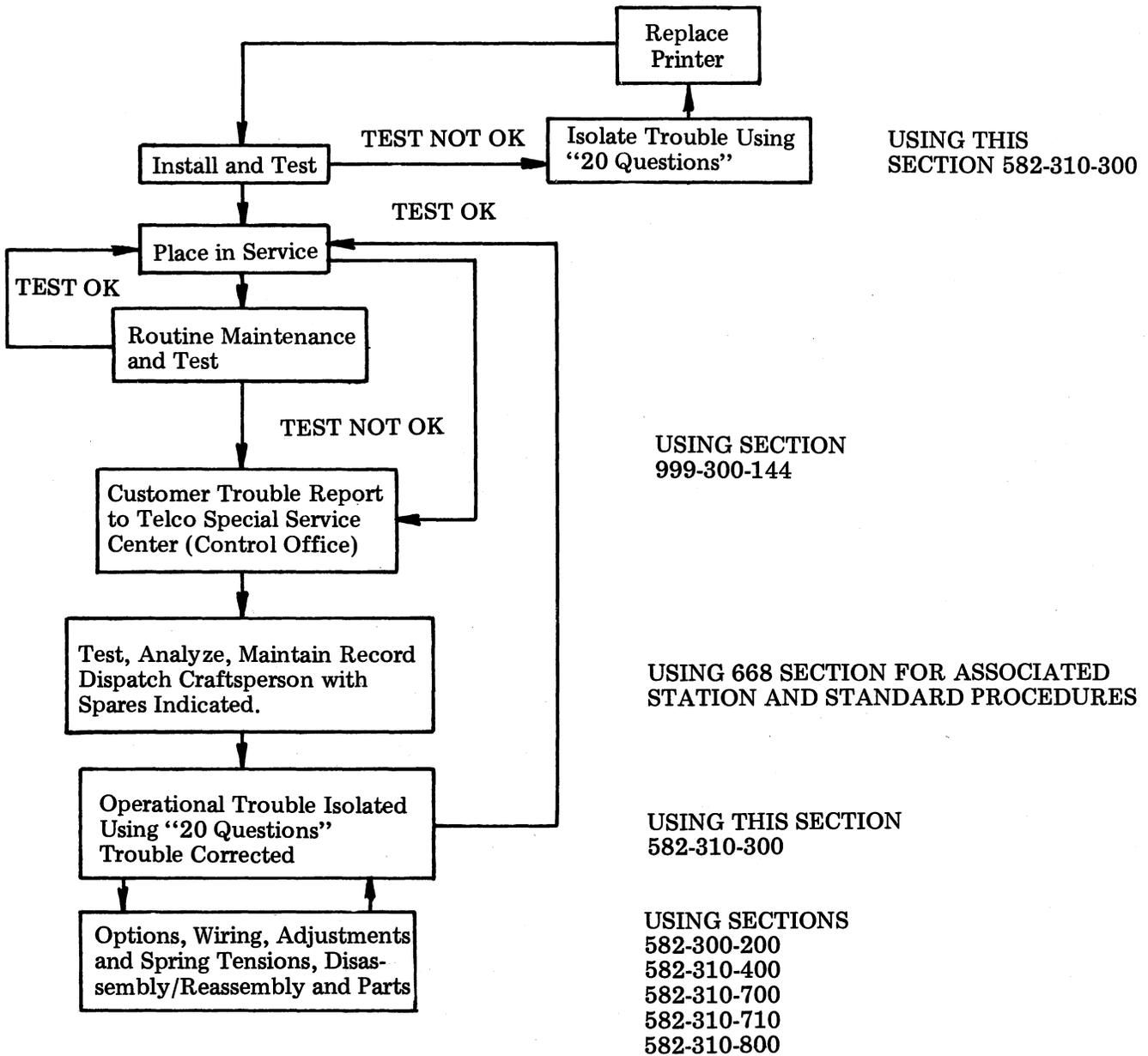
*Warning: Before disconnecting cables or replacing circuit cards or fuses, turn off the ac power.*

1.10 Refer to 2. TROUBLESHOOTING FLOW DIAGRAM for the intended flow of troubleshooting procedures.

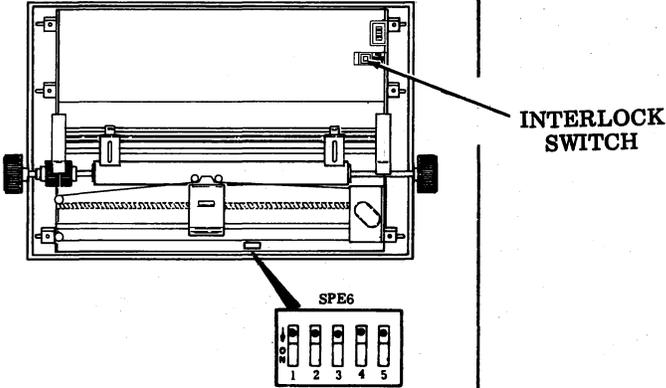
1.11 Trouble analysis is presented in the form of a “20 Questions” routine in 3. TROUBLESHOOTING GUIDE. The guide, with questions and yes or no columns, should be used always starting with the first question and proceeding according to the “yes” or “no” directive.

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2. TROUBLESHOOTING FLOW DIAGRAM



3. TROUBLESHOOTING GUIDE

QUESTION	YES	NO
<p>1. Does anything print or perform while switch SPE6 No. 1 (Printer Test) is operated on the logic card (interlock switch closed)?</p> 	<p>Go to 2.</p>	<p>Go to 1a.</p>
<p>1a. Is there any indication of power in the set?  (Print head movement when power is turned on and off, red lamp on power supply lit, etc.)</p>	<p>Go to 1b.</p>	<p>Check and replace main fuse F1 if blown.  Replace power supply if fuse blows again.  If not blown, go to 1b.</p>
<p>1b. Is red lamp on power supply lit?</p>	<p>Check P201 power supply cable.  Check continuity through interlock switch.  Replace logic card.</p>	<p>Disconnect power supply cable P201 and go to 1c.</p>
<p>1c. Does red lamp on power supply now light?</p>	<p>Unplug SSI cable, bell cable, print head cable, spacing motor and encoder cables, interlock switch cable, paper-out switch cable, line feed motor cable and form feed tape reader cable.  Reconnect power supply cable P201 and go to 1d.</p>	<p>Check F2 fuse on power supply. Replace if blown.  Replace power supply.  Check power switch and power cable to power supply. Replace if bad.</p>
<p>1d. Does red lamp on power supply still light?</p>	<p>Go to 1e.</p>	<p>Replace logic card.</p>
<p>1e. Does red lamp on power supply go out after the cables are reconnected one at a time?</p>	<p>Replace the component that caused the red lamp to go out.</p>	<p>Intermittent short. Check for foreign objects between circuit lands or terminals.</p>

3. TROUBLESHOOTING GUIDE (Contd)

QUESTION	YES	NO
2. Does test message print and paper advance properly during printer test?	Go to 3.	Go to 2a.
2a. Does carriage space and return properly?	Go to 2b.	<p>Check for mechanical bind by moving carriage manually with power off.</p> <p>Check spacing belt tension arm spring.</p> <p>Check continuity of spacing motor and encoder.</p> <p>Check switch on the print head.</p> <p>Replace spacing motor and/or encoder or cable.</p> <p>Replace lead screw nut.</p>
2b. Does paper advance properly (successive lines uniformly spaced)?	Go to 2c.	<p>Check for mechanical bind by rotating platen manually with power off.</p> <p>Check line feed motor gear backlash adjustment.</p> <p>Check printer idler gear and platen gear adjustment.</p> <p>Check tractor mechanism idler gear backlash adjustment.</p> <p>Check tractor mechanism idler gear to printer platen gear adjustment.</p> <p>Check form feed tape to optical switch assembly adjustment.</p> <p>Check tractor gear to platen bushing adjustment.</p> <p>With power on (reset) check platen detenting through full rotation by turning platen knob.</p> <p>Check continuity of line feed motor.</p> <p>Replace motor or cable.</p>

QUESTION	YES	NO
2c. Are any characters printed?	Go to 2d.	Check continuity of print head and cable.  Replace logic card.
2d. Are any dots missing from printed characters?	Check continuity of associated print magnet.  Check print head armature adjustment.  Replace print head or cable.  Replace logic card.	Go to 2e.
2e. Are any dots noticeably out of line on characters with vertical segments?	Replace print head.	Go to 2f.
2f. Is proper print density obtained (good ribbon, proper multicopy paper — see Section 570-008-010)?	Go to 2g.	Check print head to platen adjustment.  Check that platen detent lever is in proper position for the number of ply paper being used (see How To Operate Manual for location of platen detent lever).  With power off and carriage moved manually fully right and left, check that the general direction of ribbon movement is counterclockwise as viewed from the top. If not, check carriage and left bracket ribbon for “one way” rotation.
2g. Does printed copy align properly with edge of paper (prints equally on each side of page perforation)?	Undefined problem during printer test.	Check horizontal line alignment adjustment.

## 3. TROUBLESHOOTING GUIDE (Contd)

QUESTION	YES	NO
3. Does alarm indicator light when a paper-out condition is sensed?	Go to 4.	<p>Check continuity of paper-out cable and switch.</p> <p>Check paper-out switch adjustment.</p> <p>Check continuity of paper-out lamp (forward and reverse bias) and paper-out lamp cable.</p> <p>Replace logic card.</p>
4. Does printer form feed properly on local form feed?	Undefined problem. Go to Station Troubleshooting.	Go to 4a.
4a. Does paper feed at all when FORM key is depressed?	Go to 4b.	<p>Check continuity of form switch and cable.</p> <p>Replace logic card.</p>
4b. Does paper feed continually for about 9 seconds when FORM key is depressed?	<p>Check form feed tape to optical switch assembly adjustment.</p> <p>Check continuity of form feed tape reader cable and led.</p> <p>Replace form feed tape reader.</p> <p>Replace logic card.</p>	Go to 4c.
4c. Does paper feed only while FORM key is depressed?	<p>Check that form feed tape is in form feed tape reader.</p> <p>Replace the form feed tape reader.</p> <p>Replace the logic card.</p>	Undefined problem. Go to Station Troubleshooting.