

INSTRUCTIONS FOR INSTALLATION OF 402327 MODIFICATION KIT  
TO ALLOW AUTOMATIC SKIP OF PROTECTED FIELDS  
IN A "DATASPEED\*" 40/1 or 40/2 STATION

1. GENERAL

1.01 This specification gives description, installation, testing and parts information for changing a Read Only Memory (ROM) circuit pack in the 40DL291 Display Logic (Fig.1). The modified logic module will automatically skip the cursor over protected fields in the local mode.

1.02 The 402327 modification kit is designed to be installed on a 410018 circuit card.

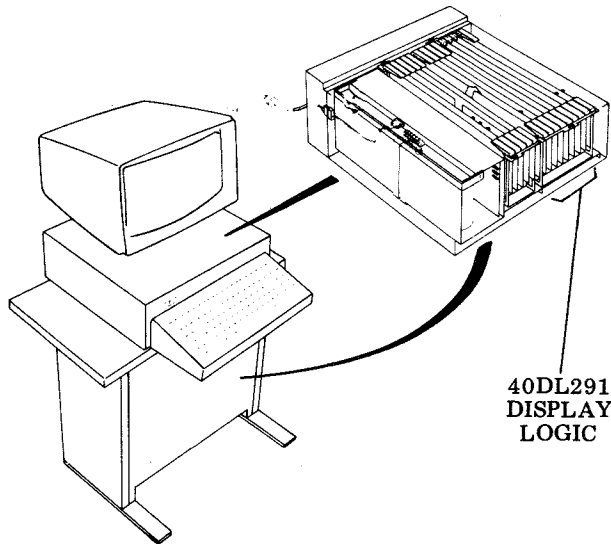


Fig. 1—Display Logic Locations

1.03 To prevent damage to the replacing ROM, it should be left in its individual container until it is required for installation on the 410018 circuit card.

2. PARTS LIST

2.01 Parts list for 402327 modification kit consists of:

Qty	Part No.	Description
1	404617	ROM (256 by 8)
1	405476	Socket
1	407510	Label
1	50916S	Specification

2.02 Parts not supplied (but required) are — 20 watt (or less) soldering iron, desoldering tool, solder (no. 60-40) and a small pair of side cutters.

3. DESCRIPTION

3.01 The 402327 modification kit modifies a 410018 display logic edit control circuit card. If an attempt is made to enter a character in a protected field, the cursor skips to the first unprotected character position following the protected field.

3.02 The new ROM will cause the logic to look at the character position just entered by the cursor. The logic is controlled by the Character Available (CA) lead. If cursor is in a protected field with CA on, the logic will sense the next character position. If the next position is also protected, it will go to the next and so on, until an unprotected position is found. The character is then entered at that position in the logic memory and is shown on the monitor. CA going off momentarily returns the logic to its standard program.

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# SPECIFICATION 50916S

## 4. INSTALLATION

4.01 Installation of 402327 modification kit requires the following steps.

*Danger: Remove all power from the set before performing any ROM replacement.*

*Note: Before this modification kit is installed, make sure that the controller to be modified is completely functional and without the need for repair.*

*Warning: To avoid possible internal damage to circuitry, wear a 346392 static discharge strap connected to ground to allow static discharge before handling printer circuit card for removal or replacement. Avoid touching circuit lands or components as much as possible.*



Attach static ground strap tightly to wrist.

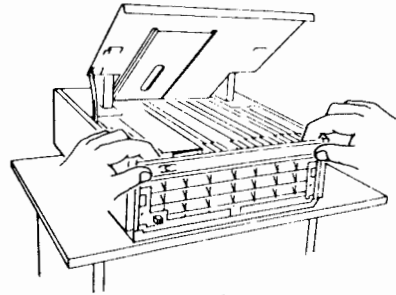


Attach clip end of static discharge strap to frame ground.

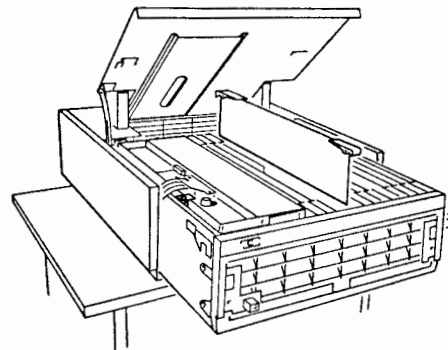
4.02 To remove circuit card (typical).

- ① Open lid.
- ② Insert, in fingers shown, and lift while pulling logic package forward.

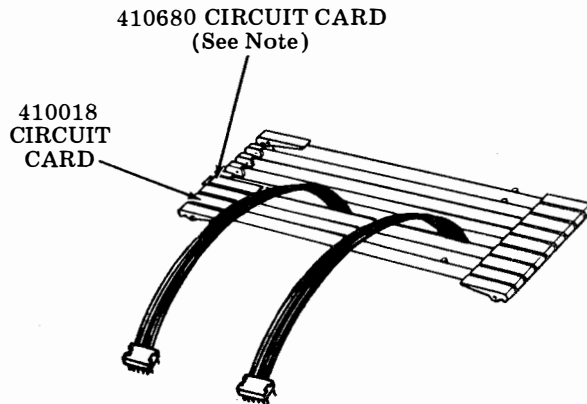
*Note: Do not attempt to lift by the opcon (if present).*



- ③ Move logic package forward until blocked by latch to provide sufficient clearance for card removal.

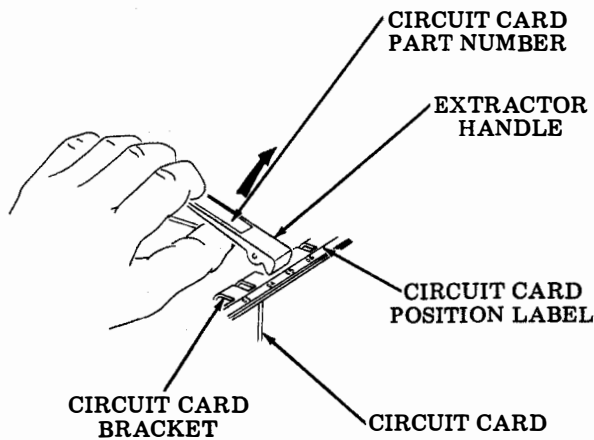


- ④ Locate 410018 circuit card assembly in 40DL291 display logic module.

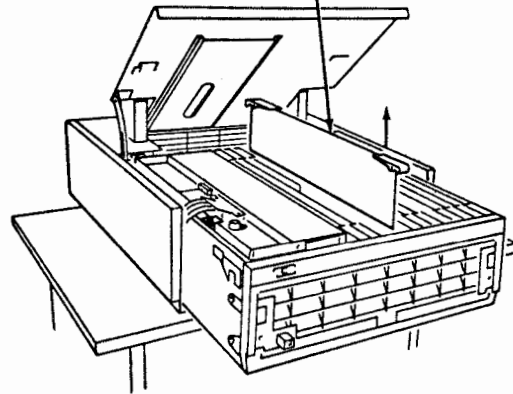


*Note: If these straps are present, remove the 410680 circuit card before removing the 410018 circuit card. The 410680 circuit card must be reinstalled after the 410018 circuit card is installed.*

⑤ Lift extractor handle(s) carefully.



⑥ Remove circuit cards by lifting straight up.



4.03 Component removal — use a 20 watt or less soldering iron, and a desoldering tool to remove the ROM from the MLA10 pack location (Fig. 2) on the 410018 circuit card.

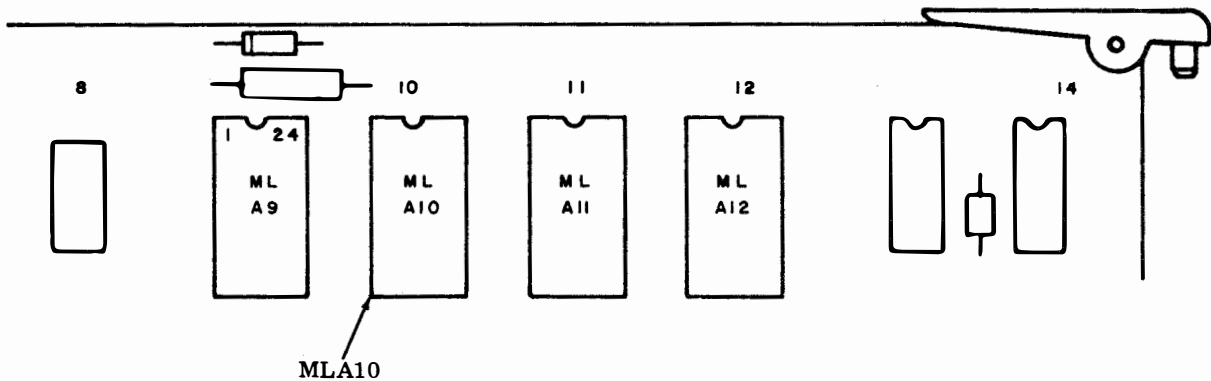


Fig. 2—Logic Pack Locations

**Note 1:** Great care is required to remove a ROM pack. Do not apply heat to circuit card lands for a long period of time. Excessive heat destroys the bonding and causes the lands (plating) to separate from the board.

**Note 2:** Before trying to remove the pack from the board, make sure all solder is removed from the plated through holes. All ROM pack pins must be free in their holes. Failure to remove all solder from a hole may result in the plating (circuit land) ripping off when the ROM pack is extracted from the board.

**Note 3:** It is sometimes easier, and safer for the circuit board, if a small pair of side cutters is used to clip off each pack lead on the component side of the circuit board. After cutting out the pack, desolder and remove each pack pin individually from the circuit board.

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4.04 After extracting the pack from the circuit board, visually examine the board for any solder splashes and/or damaged lands. Repair, if necessary.

4.05 To replace component:

- ① Install one 405476 socket (Fig. 3) in position vacated in 4.03. Before carefully soldering socket pins to the board plating, make sure the indexing mark of the socket points to the top of the circuit board. (Pin 1 is in upper left-hand corner.)

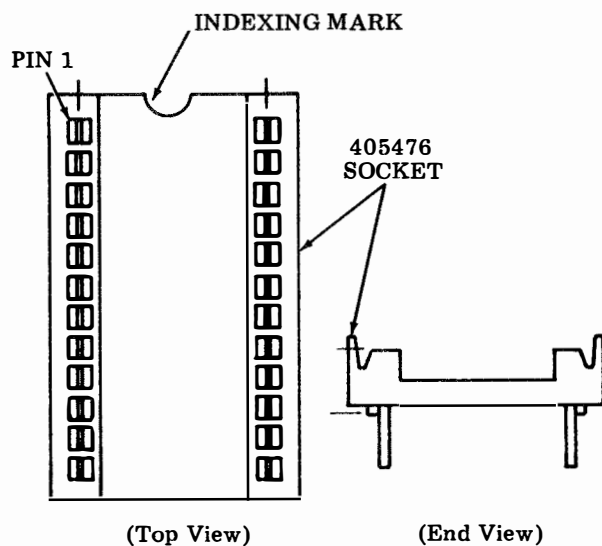


Fig. 3—405476 Socket

- ② After installation of the 405476 socket, visually examine the circuit board for solder splashes and/or damaged circuit lands. Repair, if necessary.
- ③ Install the 404617 ROM pack in the newly installed socket. Make sure all of the pack pins are inserted into the socket and are not bent under. Use caution when inserting the pack, because undue force could fracture the case, and/or break off the pack pins. Make sure the index mark on the pack is toward the top of the card. (Pin 1 is in upper left-hand corner).

**Warning:** When installing the ROMs, make sure they are oriented properly. ROMs oriented improperly will result in improper terminal action and can result in damage to the ROMs.

- ④ Remove old part number label (Fig. 4) from the front extractor handle (if present).

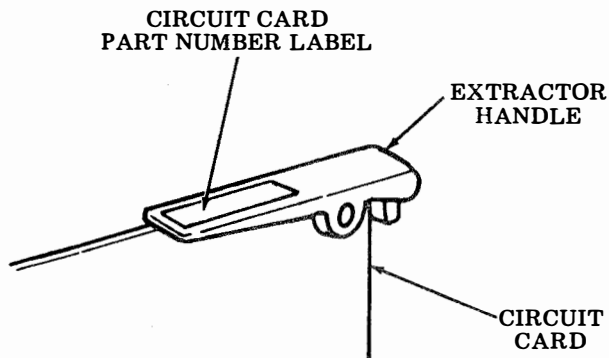


Fig. 4—Label Location

- ⑤ Remove paper backing from a 407510 label ("402327 Kit Installed"). Affix label to front card extractor, as in Fig. 4.

4.06 Reinstall circuit card into the 40DL291 display logic module. If 410680 circuit card was present, reinstall it. Return module to original position in cabinet, close lid and restore power. Remove the static wrist strap. Go to 5.01.

5. TEST

- 5.01 Turn on power. Check that 40PSU101 circuit breaker in the station is operated to the "on" position.
- 5.02 Perform controller self-test on modified controller, refer to Section 582-200-500 for 40/1 and 582-200-502 for 40/2, if required.
- 5.03 To check this added feature, perform the following steps:
  - (a) Go to local mode, HOME and CLEAR.
  - (b) Depress the SPACE BAR until cursor is at midscreen.
  - (c) Depress FORM ENTER and enter some protected data.

- (d) Using the cursor positioning keys, back the cursor to one cursor position before the protected data.
- (e) With the form enter lamp off enter a character (cursor moves to the right of the protected field).
- (f) Position the cursor in the protected field and enter a character (cursor leaves protected field — character is displayed in the first unprotected character position to the right of the protected field).

## 6. TROUBLESHOOTING

6.01 Troubleshooting of Section 581-100-501 applies. If a modified circuit card is indicated by a trouble pattern:

- (a) Check ROM placement on that card using Part 4 of this specification.
- (b) ROMs are oriented in correct way.

- (c) There are no bent pins on card connector (no leads bent under chip body).

*Note:* Ohmmeters or any other continuity checking device should not be used to "lamp out" circuits on the circuit card. This would cause a potential hazard to the MOS circuitry.

## 7. DISASSEMBLY/REASSEMBLY

7.01 The disassembly/reassembly of a station equipped with this modification kit is not affected other than as given in Part 4.

## 8. PARTS

8.01 Modification kit parts are given in 2.01.

## 9. OPERATOR INFORMATION

9.01 Changes in operator actions affected by these modification kits are described in the following attendant information.

ATTENDANT INFORMATION

CUT ON DASHED LINES  
PLACE IN ATTENDANTS HOW TO OPERATE MANUAL 999-300-121

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MODIFIED OPERATION FOR CURSOR "AUTO SKIP"

With the terminal in the local mode, this feature causes the cursor to move to the first unprotected character position to the right following entry of a character in the character position immediately to the left of a protected field. If the cursor is

placed in a protected field and a character is entered, the cursor will move to the first unprotected character position at which point the character will appear on the display.