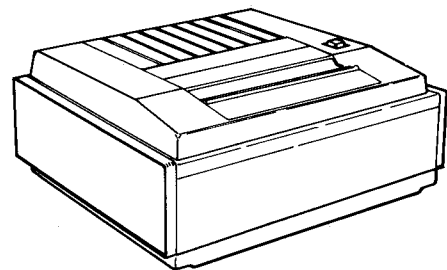
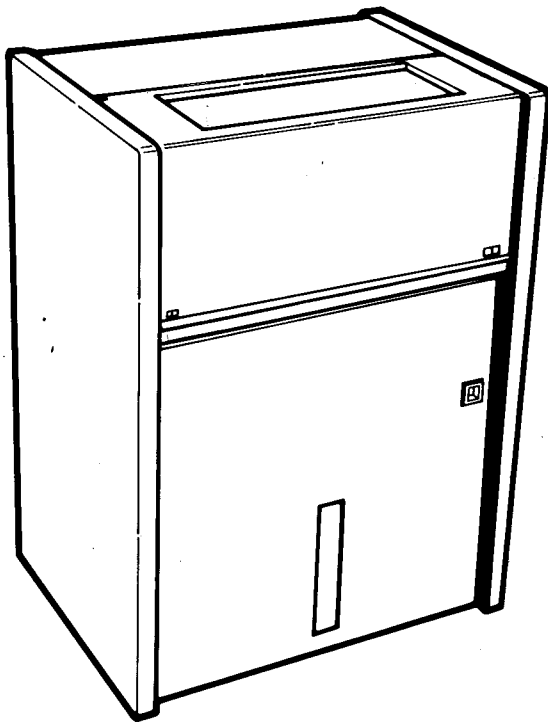
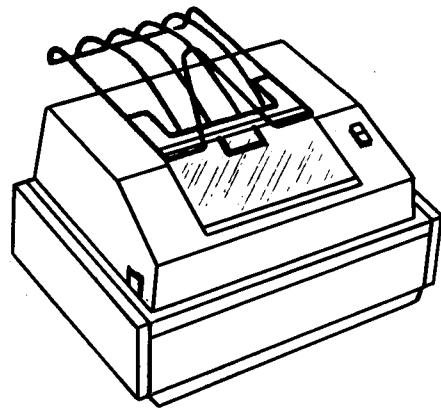
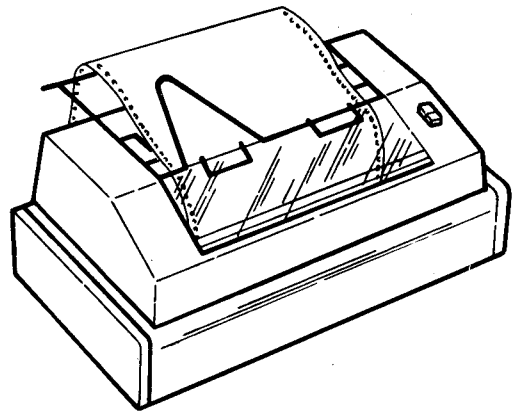


AT&T
Teletype Corporation

User's Guide

MODEL 40

PRINTER



Model 40 Line Printers

"Warning: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of the FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference."

IL100

The purpose of this manual is to provide the user with information on printer installation, operation, options and instructions for paper and ribbon replacement.

The operation of the Model 40 Line Printers is dependent on the system application and is therefore not covered in this manual.

TELETYPE CORPORATION PRODUCT SERVICE AND EDUCATION SERVICES

PRODUCT SERVICE

On the following page is a list of Teletype Corporation Product Service locations which provide maintenance repair and service on all Teletype Corporation products.

For 24 hour information concerning service call toll free:

U.S. 800/323-4226

IL 800/942-4192

EDUCATION SERVICES

Customers are also provided technical training on the installation, maintenance and repair of Teletype Corporation products

or

Sales Workshops on selected Teletype Corporation products for sales personnel who require basic knowledge to enable them to answer customer questions about the features, functions and benefits of Teletype products.

For information about class schedules, enrollment, tuition, any special training needs, or training to be conducted at customer selected locations, please contact:

TECHNICAL TRAINING

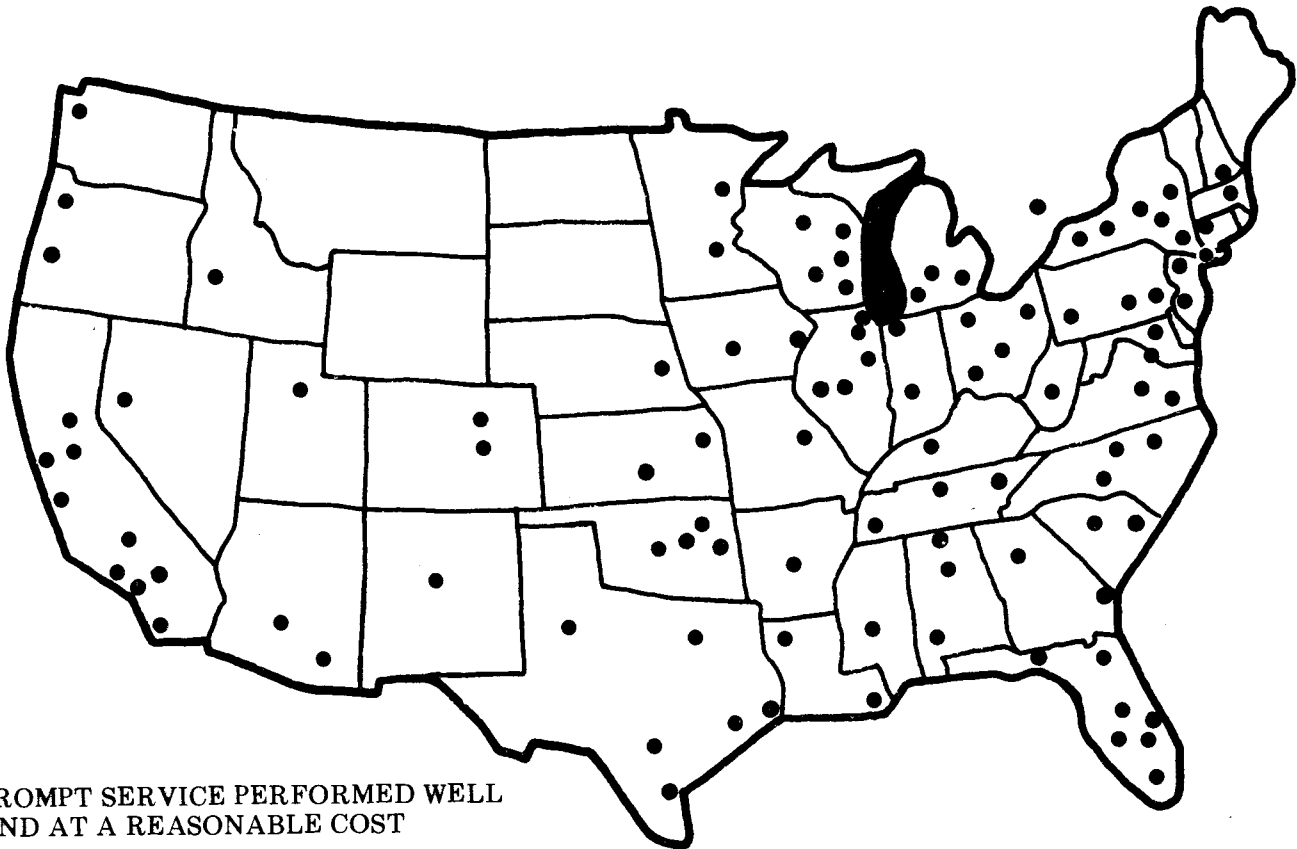
Hickory Ridge Conference Centre
A Service of AT&T Resource Management Corp.
1195 Summerhill Drive
Lisle, IL 60532
312-971-5000

SALES TRAINING

5555 Touhy Avenue
Skokie, Illinois 60077
Department 3221
Information: 312/982-2538
TLX 25-4051
TWX 901/223-3611

Teletype Corporation

Product Service The Complete Resource



PROMPT SERVICE PERFORMED WELL
AND AT A REASONABLE COST

Even the best equipment can fail at some time. When failures occur, you want prompt service, because down time is expensive. You want service performed well -- and at a reasonable cost. With Teletype® Product Service Centers located throughout the United States and Canada, and our National Central Dispatch System available around the clock, every day of the year, you know we rate customer service as our primary goal.

A TOTAL SUPPORT EFFORT

Our service representatives are professional, employed and trained by Teletype Corporation. They know our equipment inside out, and can locate and repair problems quickly and effectively. These skilled technicians are backed by an array of sophisticated test equipment, a multi-million dollar parts inventory, and full engineering support. Only the manufacturer of equipment being serviced can offer this total support effort . . . Teletype Corporation Product Service . . . the complete resource.

NATIONAL SERVICE NETWORK

Albany	Duluth	Louisville	Richmond
Albuquerque	Eau Claire	Lubbock	Rochester
Appleton	Edison	Macon	Sacramento
Atlanta	Elk Grove Village	Madison	Salt Lake City
Baltimore	Eugene	Manchester	San Antonio
Beaumont	Fairfield	Melbourne	San Bernardino
Birmingham	Ft. Lauderdale	Memphis	San Diego
Boise	Ft. Smith	Miami	Santa Clara
Boston	Greensboro	Milwaukee	Savannah
Buffalo	Greenville	Minneapolis	Seattle
Charleston	Harrisburgh	Mobile	Shreveport
Charlotte	Hartford	Nashville	South Bend
Chicago	Houston	New Orleans	Springfield
Cincinnati	Huntsville	New York	St. Louis
Cleveland	Indianapolis	Norfolk	Syracuse
Colorado Springs	Jackson	Oakland	Tallahassee
Columbia	Jacksonville	Oklahoma City	Tampa
Columbus	Kalamazoo	Omaha	Toledo
Corpus Christi	Kansas City	Orange County	Toronto
Dallas	Knoxville	Orlando	Tucson
Davenport	Lansing	Philadelphia	Tulsa
Decatur	Lawndale	Phoenix	Ventura County
Denver	Little Rock	Pittsburgh	Washington
Des Moines	Long Island	Portland	Wausau
Detroit	Los Angeles	Reno	Westchester County
			Wichita

Call Toll Free 800/323-4226

In Illinois 800/942-4192

In Canada, call 416/745-9474

TABLE OF CONTENTS

PAGE

1.	INTRODUCTION	1-1
	GENERAL	1-1
2.	INSTALLATION	2-1
	TOOLS REQUIRED	2-1
	UNPACKING	2-1
	Friction Feed Printer	2-1
	Friction Feed Printer Cabinet	2-2
	Tractor Feed Printer	2-2
	Type Carrier	2-4
	TYPE CARRIER ALIGNMENT	2-4
	Friction Feed Printer	2-5
	Tractor Feed Printer 80- and 132-Column	2-7
	REINKER SET OF PARTS	2-8
	RIBBON	2-10
	TYPE CARRIER BRUSH MECHANISM	2-11
	VISUAL INSPECTION	2-12
	GROUNDING PRECAUTIONS	2-12
	OPTION CIRCUIT CARD	2-13
	General	2-13
	Remove 410076 or 410640 Circuit Card	
	From 80-Column Friction Feed Printer	2-14
	Optioning the 410071 Circuit Card	
	for 40P154 80-Column Tractor Feed Printer	2-15
	Optioning the 410072 or 410729 Circuit Card	
	for 132-Column Tractor Feed Printer	2-15
	INSTALL PRINTER INTO CABINET	2-36
	Friction Feed Printer	2-36
	Tractor Feed Printer	2-38
	Tractor Feed Printer — 132-Column (Floor Mounted Cabinet)	2-40
	PRINTER TERMINAL CONNECTIONS (SSI)	2-41
	PRINTER TERMINAL CONNECTIONS (EIA)	2-42
3.	PAPER LOADING	3-1
	FRICITION FEED PRINTER	3-1
	TRACTOR FEED PRINTER — 80- AND 132-COLUMN	3-3
	TRACTOR FEED PRINTER — 132-COLUMN FLOOR MOUNTED CABINET	3-4

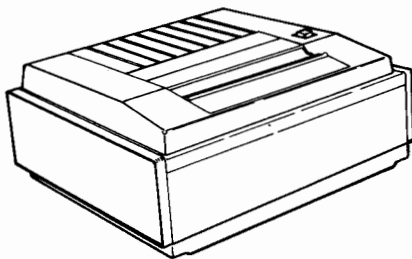
TABLE OF CONTENTS (Contd)		PAGE
	Forms Registration	3-7
	Horizontal Form Alignment	3-8
	Paper Jam Alarm.....	3-9
	PAPER AND FORMAT DATA.....	3-10
	Friction Feed Printer.....	3-10
	Tractor Feed Printer	3-10
4.	FORM LENGTH.....	4-1
	FORM SELECTOR.....	4-1
	FORM BELT REPLACEMENT.....	4-1
	PAPER POSITION (Under Power) (80- and 132-Column Tractor Feed).....	4-3
	IMPACT CONTROL MECHANISM (132 Column Only).....	4-4
5.	INSTALLATION CHECKOUT.....	5-1
	PRELIMINARY REQUIREMENTS	5-1
	LOCAL TEST.....	5-1

1. INTRODUCTION

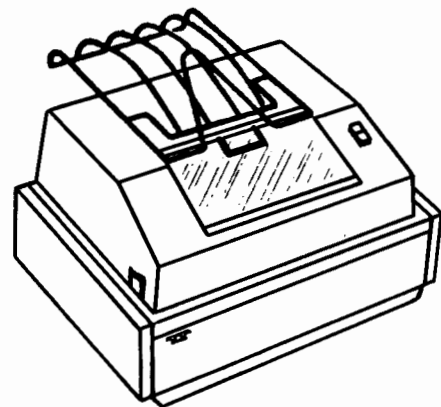
GENERAL

The Model 40 printers provide hard copy of messages originated locally and messages transmitted or received on-line. They are available in either 80-column friction feed, 80-column tractor feed or 132-column tractor feed versions.

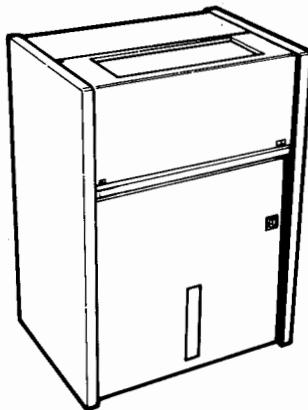
All printers can be placed on various standard pedestals or customer-provided tables. There is a floor mounted cabinet arrangement designed for the 132-column printer to reduce printing noise levels. Tractor feed printers may be equipped with optional paper rack and friction feed printers with optional paper winders. Both friction and tractor feed printers print up to 64, or 96 character ASCII (American Standard Code for Information Interchange) or EBCDIC (Extended Binary Coded Decimal Interchange Code) character sets.



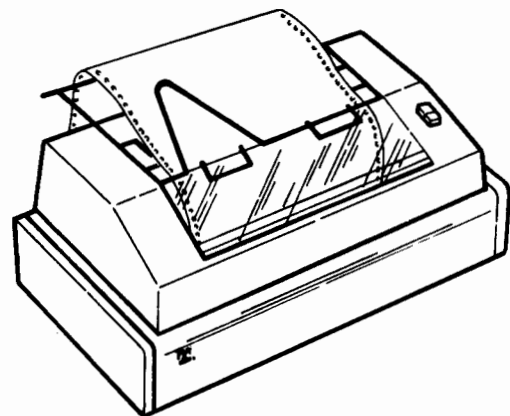
Friction Feed Cabinet



80-Column Tractor Feed Cabinet



132-Column Tractor Feed
Floor Mounted Cabinet



132-Column
Tractor Feed
Cabinet

2. INSTALLATION

TOOLS REQUIRED

Note: When ordering replaceable parts or components, unless otherwise specified, prefix part numbers with the letters "TP" (ie, TP410055). Order all TP numbered items from: Teletype Corporation, 5555 W. Touhy Avenue, Skokie, Illinois 60077, (312) 982-2000.

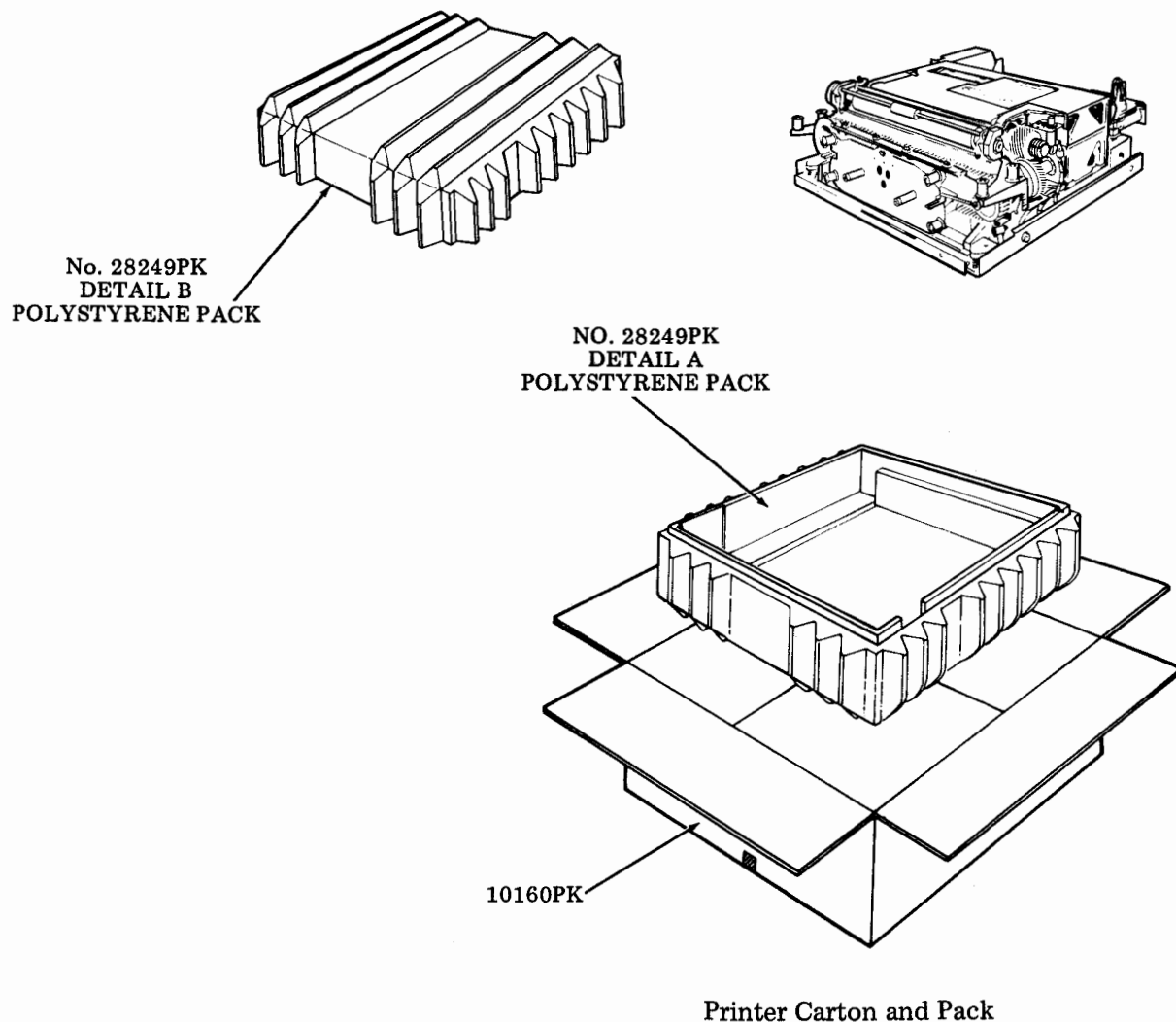
The 402878 type carrier depth gauge is the only tool required for installation other than common type tools such as pliers, wrenches, screwdrivers, etc, that may be procured locally.

UNPACKING

Friction Feed Printer

Open carton and remove polystyrene pack. Remove printer from polystyrene pack.

Note: Retain polystyrene pack for transporting the printer locally.



2. INSTALLATION (Contd)

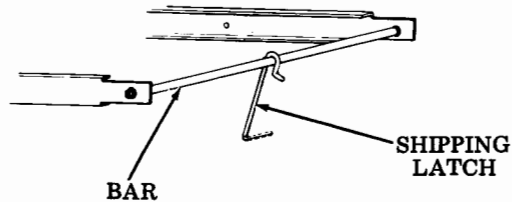
UNPACKING (Contd)

Friction Feed Printer Cabinet

Unpack the cabinet and open the lid.

Danger: Shipping bar is under heavy spring tension -- RELEASE SLOWLY.

Carefully depress the bar, disengage latch from bar and slowly release the bar. Remove shipping latch and bar. Discard. If printer is to be shipped at a later date, retain bar and latch.

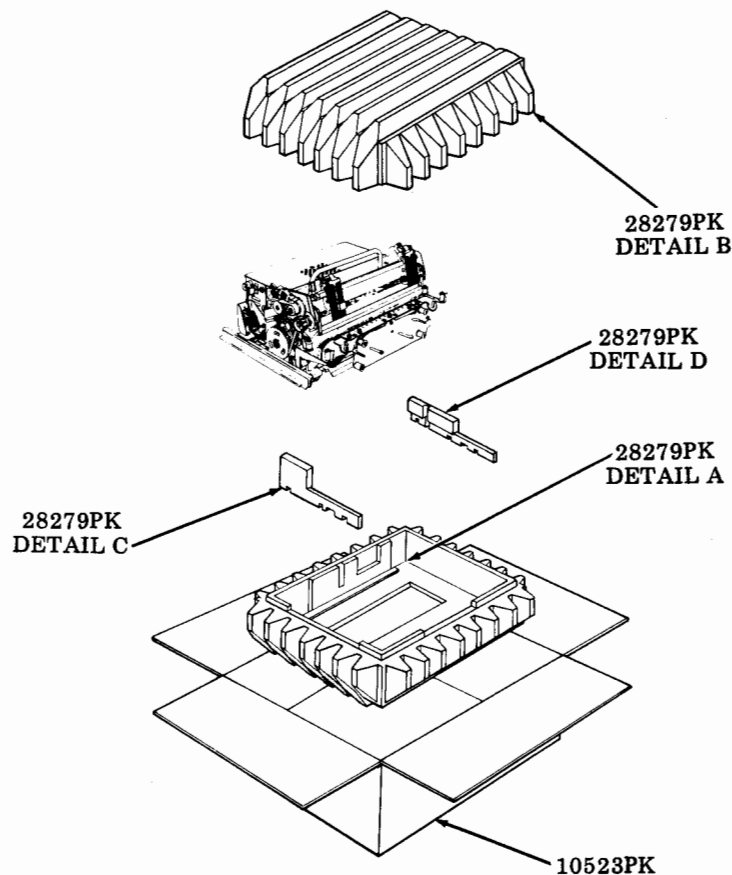


Shipping Bar and Latch

Tractor Feed Printer

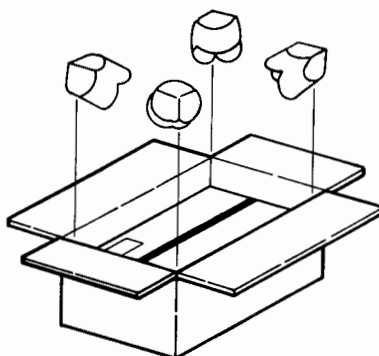
80-Column — Open carton and remove pack. Remove printer from polystyrene pack.

Note: Retain polystyrene pack for transporting the printer locally.



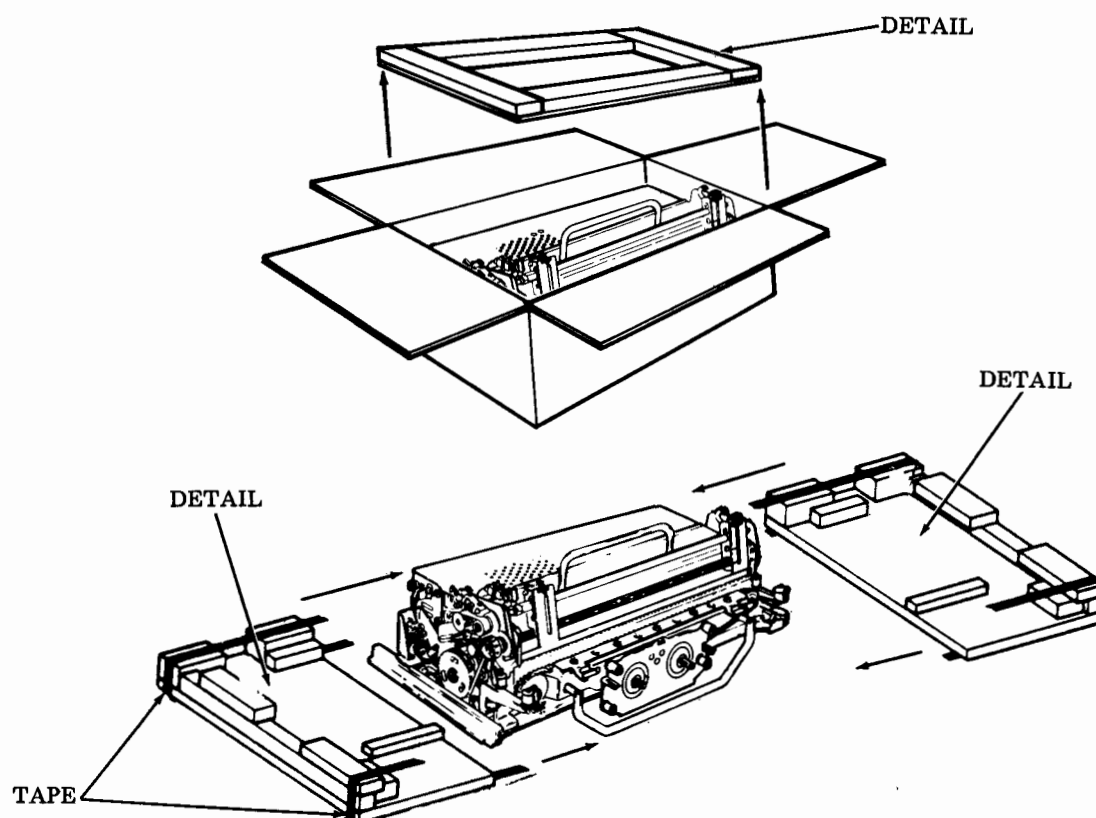
Printer Carton and Pack

132-Column and Forms Access — Open printer carton and remove corner details. Lift printer carton out, open it, and remove details. Lift printer out.



Printer Carton Packing Details

40P203-40P206 Printer — Remove ribbon cartridge set and meter roller set from well in top packing detail. Installation instructions for these reinking mechanism parts are included in the carton.



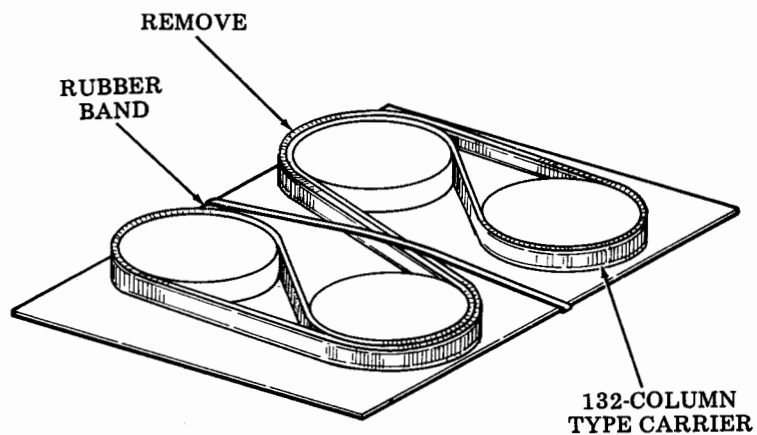
Printer Packing Details

2. INSTALLATION (Contd)

UNPACKING (Contd)

Type Carrier

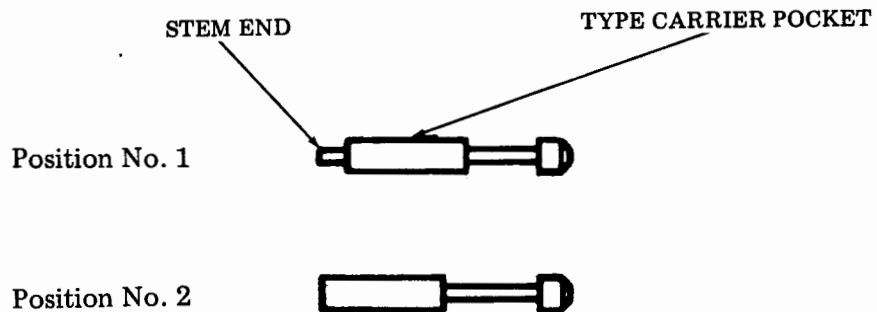
- (a) Remove type carrier from its carton.
- (b) Remove retaining band (rubber).
- (c) Remove type carrier from plastic form (take care not to push any type pallets out of the carrier belt).



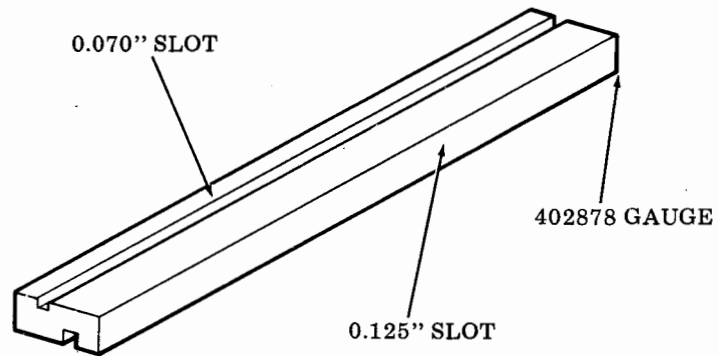
TYPE CARRIER ALIGNMENT

Prior to installation, align all type carrier pallets, using 402878 gauge:

- (a) Position the stem of all pallets against the rear surface of the carrier (from Position No. 1 to Position No. 2).



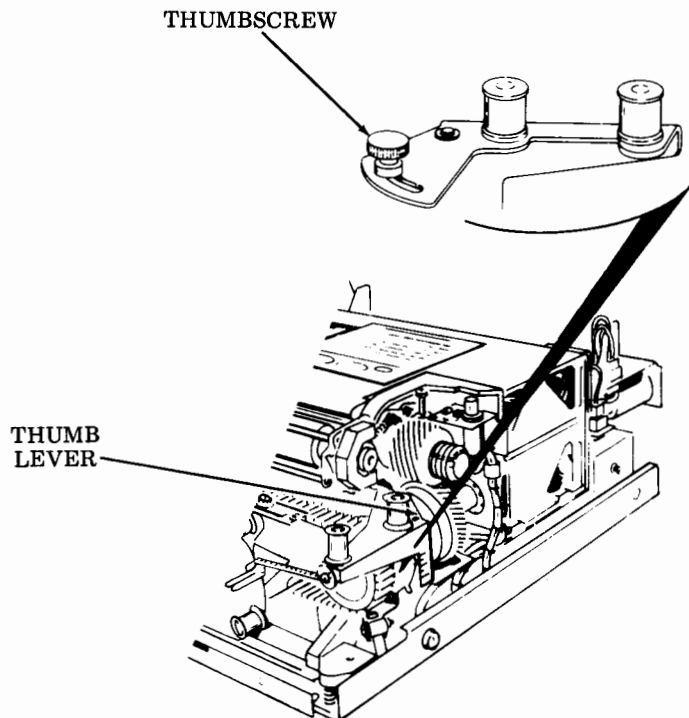
- (b) Place type carrier into proper slot on the 402878 gauge (0.125 inch slot for 80-column printer and 0.070 inch slot for 132-column printer). Seat all pallets into bottom of channel.



Friction Feed Printer

Install type carrier as follows:

- (a) Release the thumb lever on the left ribbon guide bracket allowing the guide to spring to left.
- (b) Loosen the thumbscrew on the right ribbon guide bracket and swing the guide to the right.



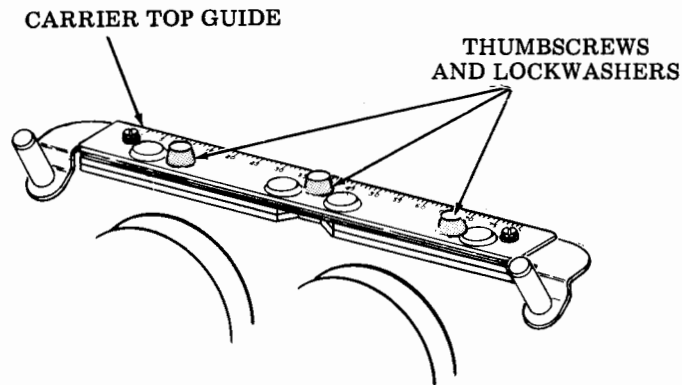
Thumb Lever and Thumbscrew

2. INSTALLATION (Contd)

UNPACKING (Contd)

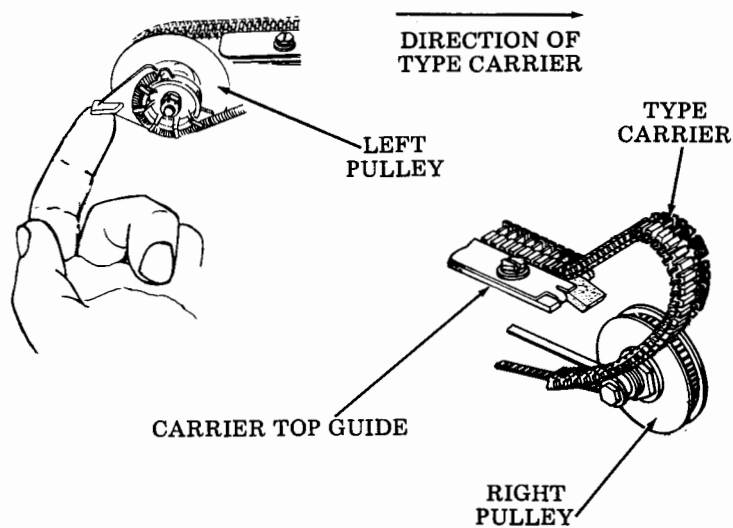
Friction Feed Printer (Contd)

- (c) On late design units (carrier top guide secured to backup bar with three thumbscrews), remove the carrier top guide.



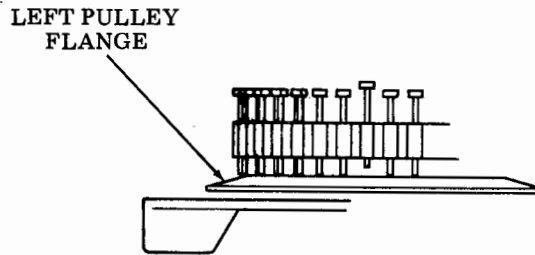
Top Guide

- (d) Start carrier at left pulley. Lift arm at left pulley.
- (e) Position carrier over right pulley.



Type Carrier Installation

- (f) On early design units (carrier top guide not secured with three thumbscrews), make sure all pallet stems at the top of the belt are under the top guide.
- (g) Rotate carrier one revolution by turning impeller gear clockwise.
- (h) Align all pallets against pulley flange.



Type Carrier Alignment

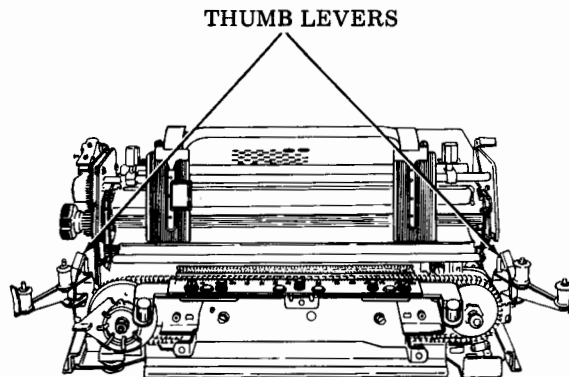
Warning: Danger to the type carrier or printer will result if any protruding type pallet is left unchecked.

- (i) On late design units, reinstall carrier top guide. With the three thumbscrews loosened, apply slight pressure to the top guide, down and toward the front of the unit. Hold in this position while tightening thumbscrews. Run approximately one page of internal test or 30 seconds of carrier idle. Repeat the top guide positioning procedure. For correct carrier tracking, it is essential that the top guide be positioned against the backup bar.

Tractor Feed Printer 80- and 132-Column

Install type carrier as follows:

- (a) Release thumb levers on left and right ribbon guide brackets allowing guides to spring open.



Ribbon Guide Thumb Levers

- (b) Remove three thumbscrews and lockwashers securing carrier top guide and remove guide (guide is not present on 132 column).
- (c) Install type carrier starting at left pulley. Lift finger lever on left pulley and position carrier over right pulley.
- (d) Rotate type carrier one revolution by turning impeller gear by hand clockwise. At the same time align any protruding type pallets against the left pulley flange.

2. INSTALLATION (Contd)

UNPACKING (Contd)

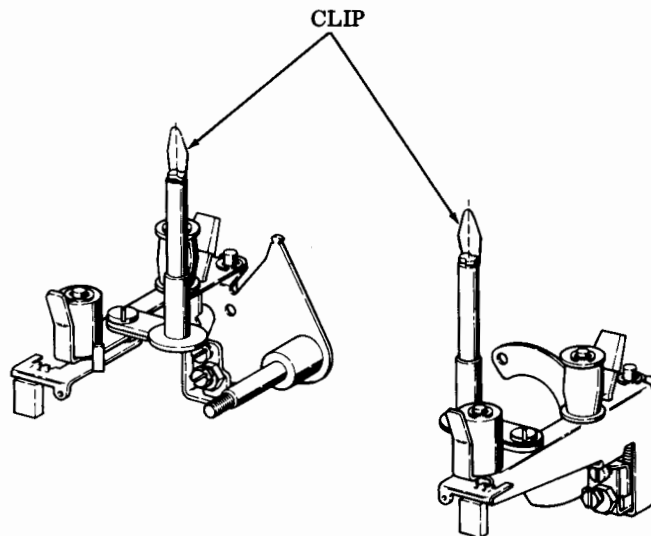
Tractor Feed Printer 80- and 132-Column (Contd)

Warning: Damage to the type carrier or printer will result if any protruding type pallet is left unchecked.

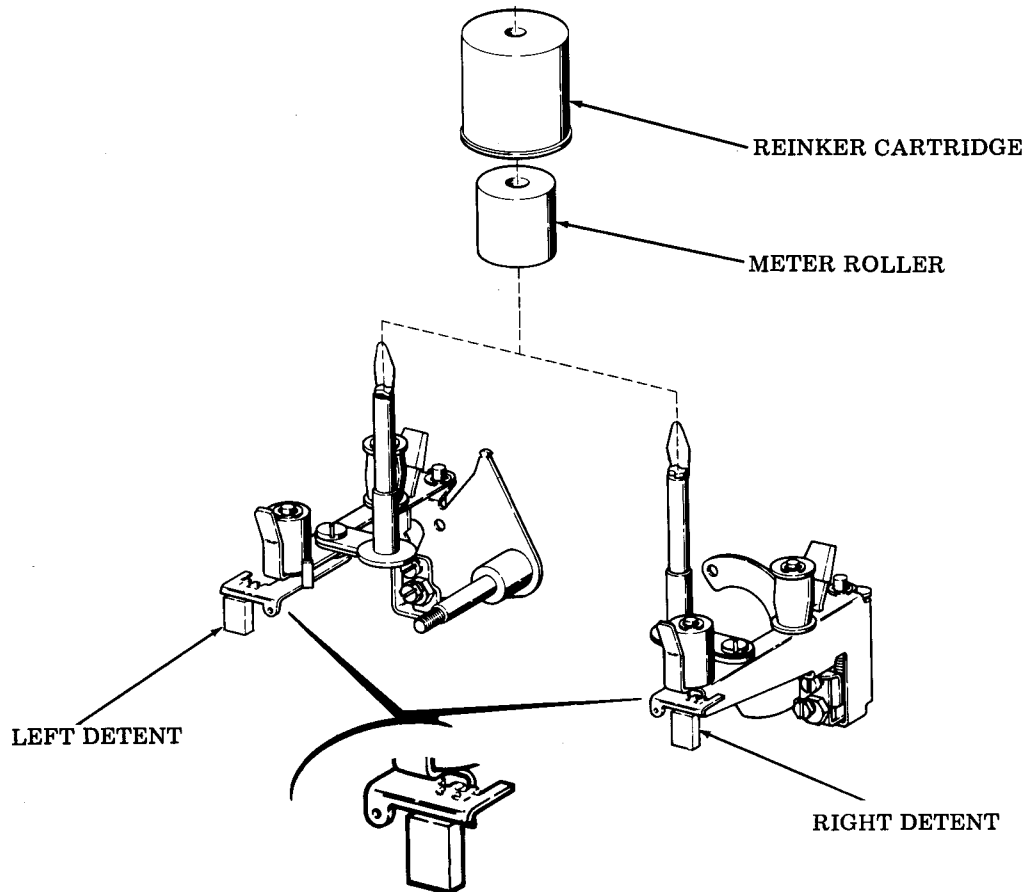
- (e) Reinstall carrier top guide on 80-column printer per instructions on the top guide. Run approximately one page of internal test or 30 seconds of carrier idle. Repeat the top guide positioning procedure. For correct carrier tracking, it is essential that the top guide be positioned against the backup bar.

REINKER SET OF PARTS

- ① Locate the meter roller set, cartridge set and ribbon, then proceed to printer working area. (Retained from unpacking procedure.)
- ② Open the ribbon box and remove the ribbon.
- ③ Remove the ribbon installation glove and then place it on one of your hands.
- ④ Raise up retaining clips on both the left and right ribbon roller posts.



- ⑤ Open the reinker container and install the meter rollers first and then the reinker cartridges on both the left and right ribbon roller posts.



- ⑥ Snap down the retaining clips on both posts.

The reinker feature more than doubles the life of the ribbon. This is subject to normal operating conditions and customer preference as to density of copy.

There are three positions for a left and right detent lever to increase the flow of ink as the ribbon is being used. Position No. 1 allows the ink in the ribbon to be used.

Reinker Settings:

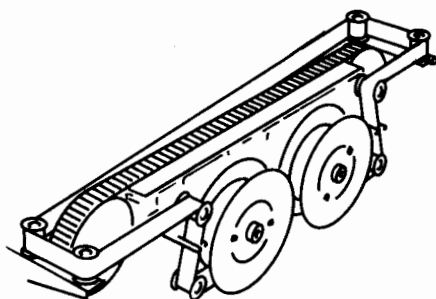
- Printed copy starts to lighten — move right detent lever to Position No. 2.
- As copy starts to lighten again — move left detent lever to Position No. 2.
- As copy begins to lighten once more — move left and right detent levers to Position No. 3.
- If at any time copy becomes too dark (over-inked), move both detent levers down one position.
- When copy is no longer considered acceptable — replace ribbon and ink cartridges. Refer to Printer Maintenance for ordering information.

Warning: If at any time the ribbon is frayed or torn, it should immediately be replaced in order to avoid printer damage.

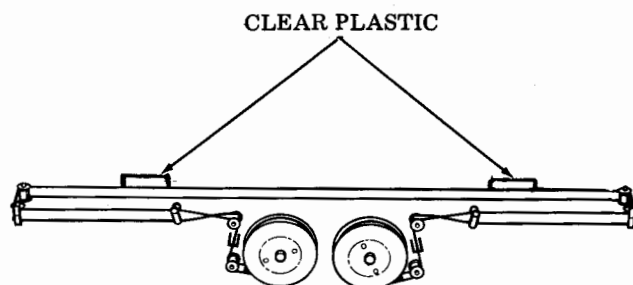
2. INSTALLATION (Contd)

RIBBON

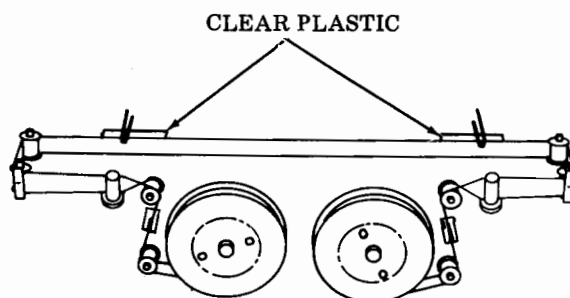
- (a) Rotate spindles by hand to determine which one turns freely. Place full spool on free-turning spindle so that ribbon feeds off bottom of spool.
- (b) Hold empty spool (with ribbon attached) in one hand and thread the ribbon as shown below.



Friction Feed — 80-Column



Tractor Feed — 132 Column



Tractor Feed — 80 Column

Note 1: On 80-column friction feed printer equipped with acoustical noise-reduction parts, ribbon must be located between the mask and type pallets.

Note 2: On tractor feed printer the ribbon must pass between the clear plastic strip and the type carrier. Two wire guides are present on 80-column tractor only; make sure ribbon does not become tangled in the guides.

- (c) Wind sufficient ribbon on empty spool so that the second eyelet is wound on spool. Place empty spool on the other spindle with the ribbon feeding into the bottom of the spool. Rotate full spool to take up all slack.
- (d) For Teletype Corporation part number 402444 (ribbon), there are three suppliers listed below:

1. Addressograph-Multigraph Corp.
(312-527-2025)
443 N. Wabash
Chicago, Illinois 60611
Office Supplies Division
Specify part number:
120-2230-123R

2. Roytype
(312-266-5835)
100 W. Erie
Chicago, Illinois 60610
Specify part number:
Formula 43

3. Aetna Products Co. Inc.
11 Commercial St.
Hicksville, New York 11801
(516) 931-3120
(212) 886-0415
Specify part number:
TF135

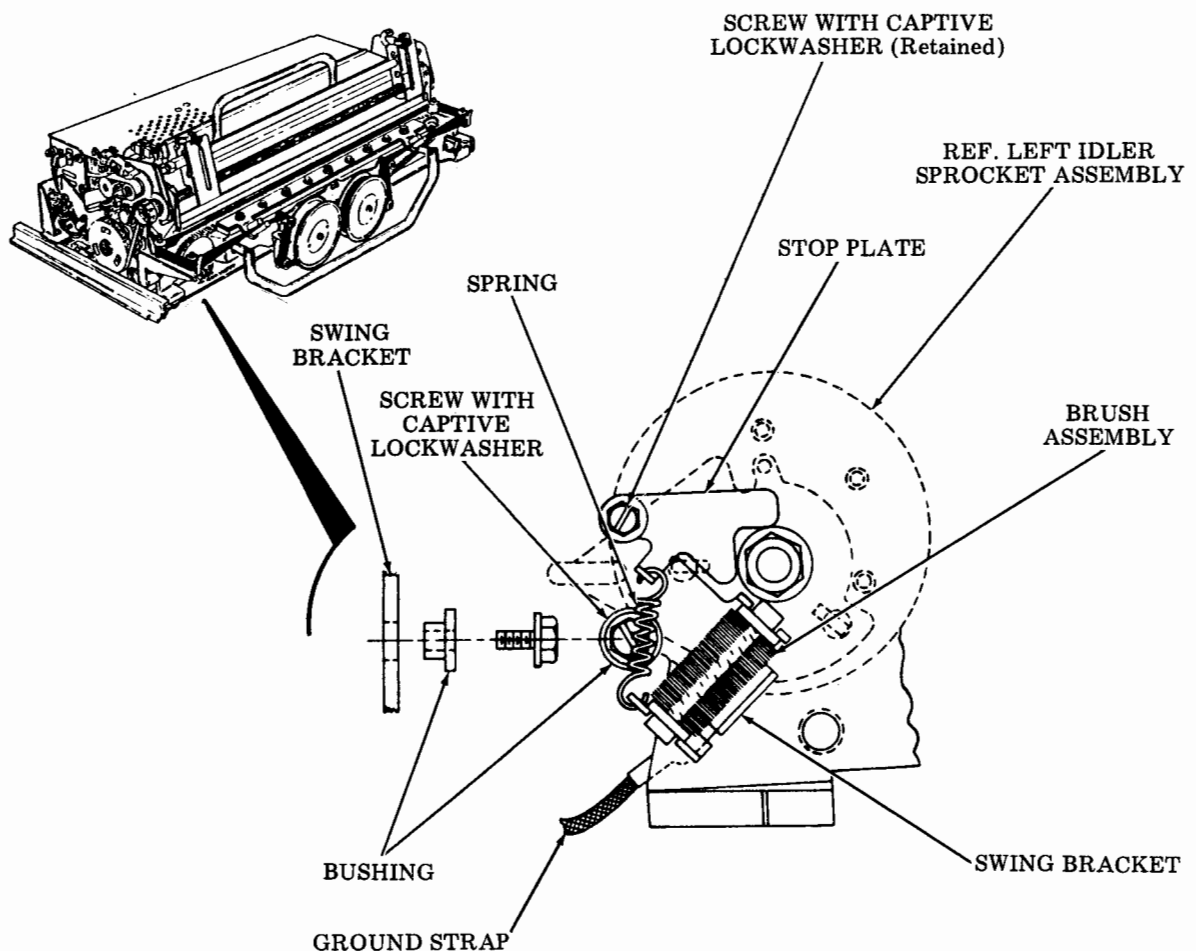
TYPE CARRIER BRUSH MECHANISM

The type carrier brush feature is located on the lower left front surface of the printer and is designed to keep the face of the type pallets clean.

The spring loaded bracket which holds the brush assembly may be engaged or disengaged at the option of the user. The assembly is engaged when it is pivoted to the right, against the stop plate, and is in contact with the type carrier.

The assembly is disengaged when it is pivoted to the left and not in contact with the type carrier.

The brush assembly may be removed from the bracket by first pivoting the bracket until it is approximately horizontal. Use both index fingers and pull the ends of the brush until it is removed from the bracket. Turn the brush end-for-end and reinstall. This will double the useful life of the brush. Refer to illustration below.



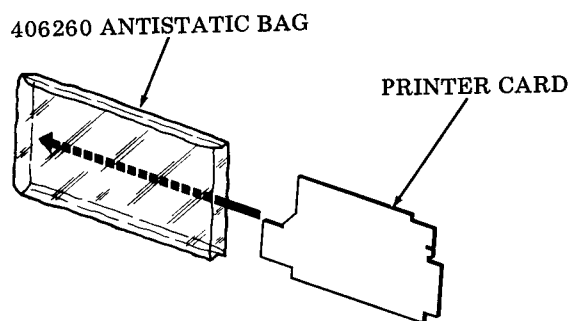
2. INSTALLATION (Contd)

VISUAL INSPECTION

Look for any pinched or crimped wires or cables. Check that no terminal pins are bent or damaged. Make sure that all connectors are seated properly and securely.

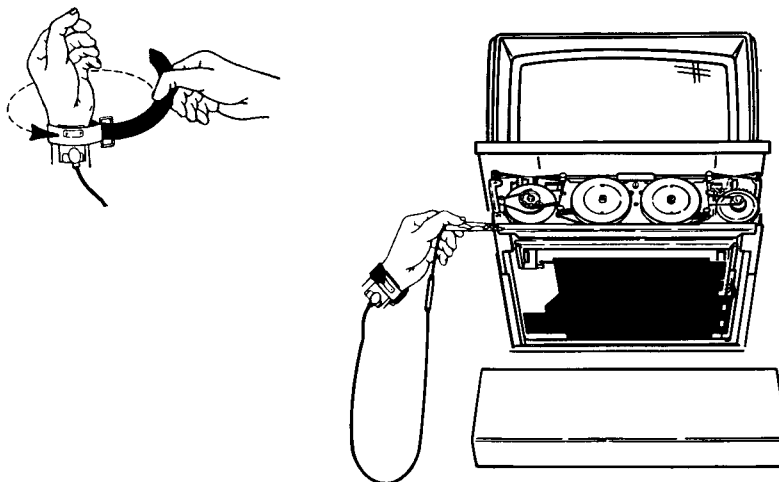
GROUNDING PRECAUTIONS

The 410071, 410072, 410076, 410640 and 410729 printer circuit cards contain MOS logic which requires careful handling. If the printer card is not already installed in the unit it should be handled while stored in its protective 406260 antistatic bag as shown below.



Circuit Card Protective Bag

The 346392 static discharge strap must be worn when handling the printer card outside its protective bag. Attach the strap tightly to the wrist as shown below. Attach clip end of static discharge strap to frame ground.



346392 Static Discharge Strap

OPTION CIRCUIT CARD

General

Warning: Attach the 346392 static discharge strap before removing the 410076 or 410640 circuit card.

This section includes all printer options that are utilized in the printer. It also covers handling of circuit cards, removal of the 410076 or 410640 circuit card, location of the circuit card switch packs, and information on how to activate or change switch positions.

The Printer Options Record provides a means by which the options can be recorded for later servicing or maintenance purposes shown below.

☒ Check desired option.

PRINTER OPTIONS	
17. Printer Margin and Form Width	
a. First Printed Col. — Col. 1	* ☐
b2. First Printed Col. — Col. 2	☐
b3. First Printed Col. — Col. 3	☐
etc	☐
b13. First Printed Col. — Col. 13	☐
c. Last Char. Printed — Col. 80	* ☐
d79. Last Char. Printed — Col. 79	☐
d78. Last Char. Printed — Col. 78	☐
d77. Last Char. Printed — Col. 77	☐
etc	☐
d25. Last Char. Printed — Col. 25	☐
e. Last Char. Printed — Col. 132	* ☐
f131. Last Char. Printed — Col. 131	☐
f130. Last Char. Printed — Col. 130	☐
f129. Last Char. Printed — Col. 129	☐
etc	☐
f73. Last Char. Printed — Col. 73	☐
18. Printer Paper Feed-Out	
a. No Paper Feed-Out	☐
b. Paper FO 16 Lines on DSR Loss	☐
c. Paper FO on DSR Loss or ETX	* ☐
19. Printer Errored Character Symbol	
a. Symbol on Even Parity Error	* ☐
b. Symbol on Odd Parity Error	☐
c. No Symbol on Parity Error	☐
d. 96 Character Set	☐
e. 64 Character Set	☐
f. Extended ASCII Character Set	☐
g. Less Than 64 Char. Set	☐
20. Line Feed	
a. Single	☐
b. Double	☐
21. Foldover on Up-Low Printer	
a. Lower Case and Upper Case Print.	* ☐
b. Lower Case Prints as Upper Case.	☐
22. Foldover on Monocase Printer	
a. Lower Case Prints as Error Symbol.	☐
b. Lower Case Prints as Upper Case.	* ☐
23. Extended ASCII on Printer	
a. Prints Extended ASCII Characters.	☐
b. Does Not Print Extended ASCII Char.	* ☐
39. Forms (Tractor Feed Printers)	
a. On	☐
b. Off	* ☐

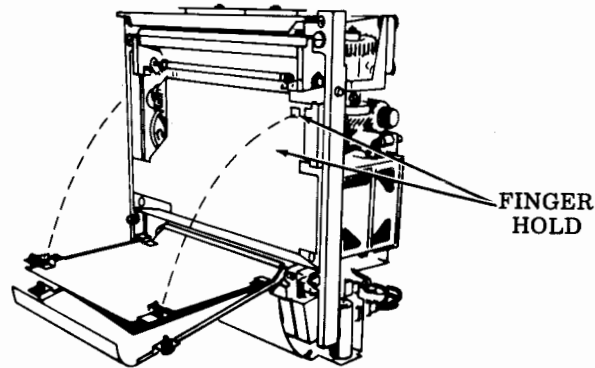
PRINTER OPTIONS (Cont)	
48. Incomplete Form Suppresses Paper Alarm	
a. No (Paper-Out Not Gated W/Form-Out)	☐
b. Yes (Paper-Out Gated W/Form-Out).	* ☐
54. Printing of Escape Sequence Suppressed	
a. Char. After ESC Printed as Received.	* ☐
b. Printing of Char. After ESC Suppressed.	☐
55. Shift-In/Shift-Out (SI/SO) Detection	
a. SI/SO Detection Not Used.	* ☐
b. SI/SO Detection Enables Printing Add. Char.	☐
56. Friction Feed/Tractor Feed Printer	
a. FF Ptr — Motor Held on After Paper Alarm.	* ☐
b. TF Ptr — Motor Turned Off After Paper Alarm.	☐
57. SSI/OEM Interface	
a. SSI	* ☐
b. OEM	☐
58. Idle Line Motor Control	
a. Disabled — Motor Held On Indefinitely During Idle Line.	* ☐
b. Enabled — Motor Turned Off After 40-Second Idle Time.	☐
59. Speed Selection	
a. 75 Baud	☐
b. 150 Baud	☐
c. 300 Baud	☐
d. 600 Baud	☐
e. 1200 Baud	☐
f. 2400 Baud	☐
g. 4800 Baud	☐
h. 9600 Baud	* ☐
60. Auxiliary Alarm	
a. Enable	☐
b. Disable	* ☐
61. Regulator Grounding	
a. SSI	☐
b. SSI/OEM	* ☐
c. OEM	☐

2. INSTALLATION (Contd)

OPTION CIRCUIT CARD (Contd)

Remove 410076 or 410640 Circuit Card From 80-Column Friction Feed Printer

Remove two screws that secure circuit card cover to the bottom of the printer and allow cover to hang down as shown below.



Circuit Card Removal

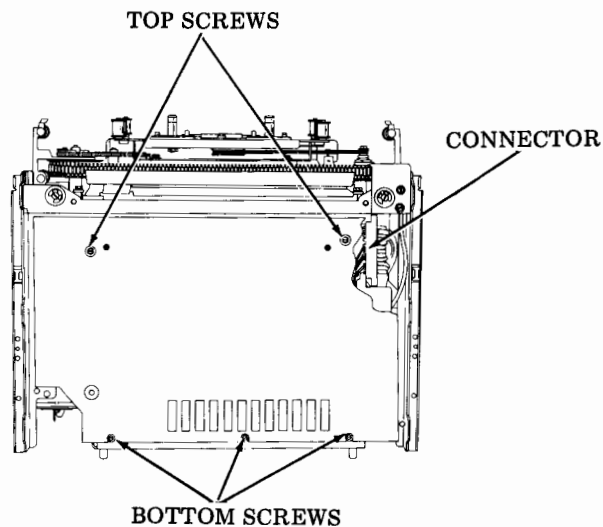
Using finger hold and a firm grip of the card edge on opposite side as shown above, apply an even pulling force and unplug card from the two rows of magnet assembly contacts.

Lift left (bottom) end of card up and out of channel (bypassing printer base shipping screws) first, then right side of card up and out. Remove card from connector. Circuit card option switches are located on the component side of circuit card.

Note: During reassembly, make certain that the connector is plugged onto the card and that the card is located within the channel before plugging it into the two rows of magnet assembly contacts. Apply slight pressure at both ends and middle of card to fully seat it on magnet contacts.

Remove 410076 or 410640 Circuit Card From 80-Column Tractor Feed Printer

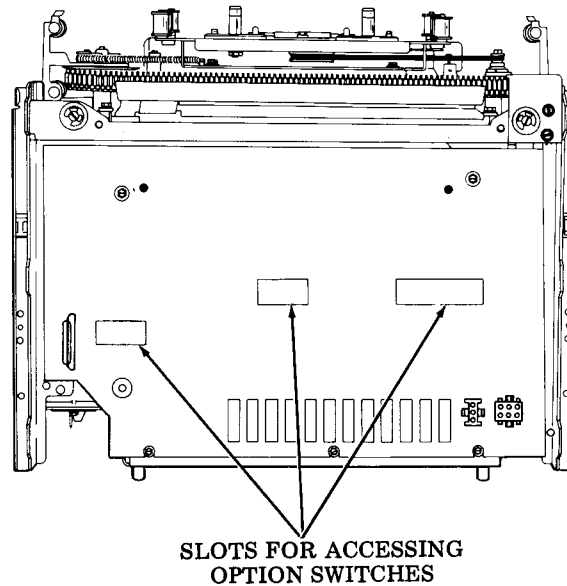
- (a) Remove two top screws and loosen three bottom screws.
- (b) Slide bottom plate out.
- (c) Remove connector from card; using pull points pull card down and out.



Tractor Feed Printer Bottom Plate

Optioning the 410071 Circuit Card for 40P154 80-Column Tractor Feed Printer

It is not necessary to remove the 410071 circuit card from the printer in order to option it. Option switches on the card are accessible through openings in the bottom plate of the printer as shown below.

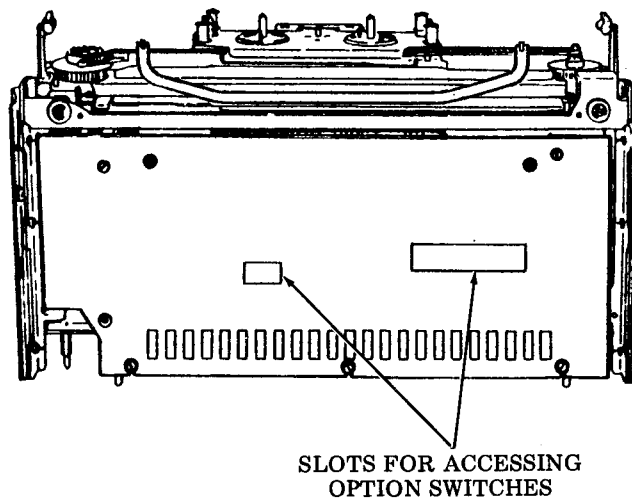


(Bottom View)

40P154 Printer (80-Column)

Optioning the 410072 or 410729 Circuit Card for 132-Column Tractor Feed Printer

It is not necessary to remove the 410072 or 410729 circuit card from the printer in order to option it. Option switches on the card are accessible through openings in the bottom plate of the printer as shown below.



(Bottom View)

132-Column Printer

2. INSTALLATION (Contd)

OPTION CIRCUIT CARD (Contd)

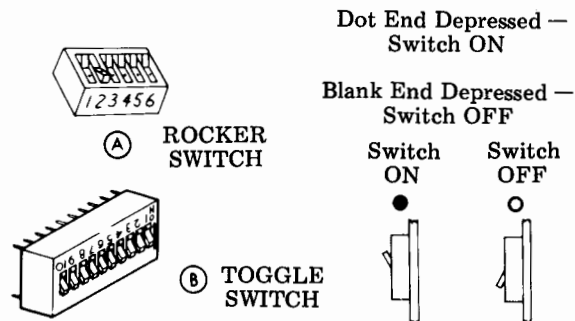
Options are presented in a tabular format as illustrated below.

OPTION NO.	ROCKER SWITCH NUMBERS	LOCATION OF SWITCH ON CIRCUIT CARD
5.		A-10
a.		1 2 3 4 5
b.		1 2 3 4 5
c.		1 2 3 4 5
d.		1 2 3 4 5
e.		1 2 3 4 5
f.		1 2 3 4 5
	OPTION CONDITIONS	OPTION DEFINITION
		INDICATES FACTORY PROGRAMMED OPTION

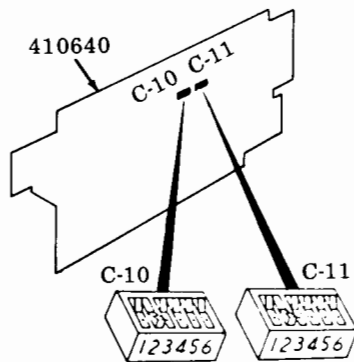
Legend:

- Indicates switch ON — dot end of rocker switch depressed.
- Indicates switch OFF — blank end of rocker switch depressed.
- Switch position does not affect option.
- * Factory programmed.

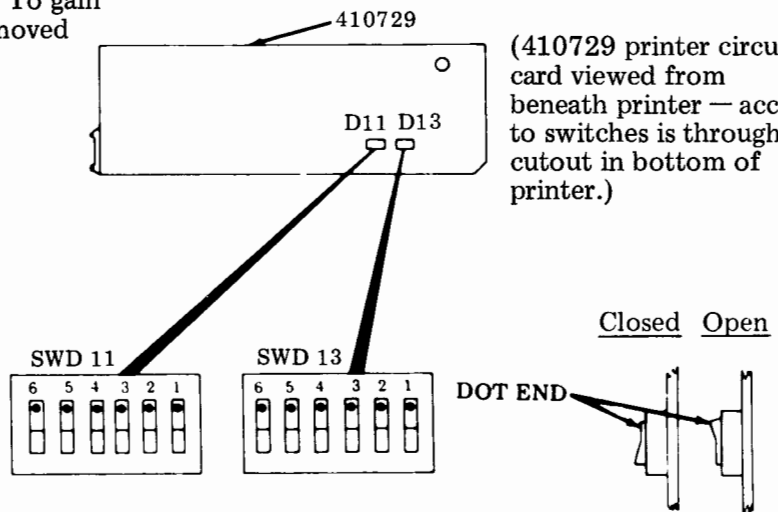
Printer circuit card option switches are addressed as in the illustrations below accompanying the specific option activation information. A number of different switches have been used to option circuit cards. The illustrations below show rocker switch (A), and toggle switch (B), and their respective ON/OFF positions.



(410640 printer circuit card option switches are located on the component side of card. To gain access to switch packs, card must be removed from printer.)



80-Column Printer



132-Column Printer

410640 — 80-Column Printer Logic Circuit Card

17. Printer Margin and Form Width		C-10						C-11					
		1	2	3	4	5	6	1	2	3	4	5	6
c.	Last Character on 80th Column	—	—	—	—	—	—	○	●	●	○	—	—
d.79.	Last Character on 79th Column	—	—	—	—	—	—	○	●	●	●	—	—
d.78.	Last Character on 78th Column	—	—	—	—	—	—	●	○	○	●	—	—
d.77.	Last Character on 77th Column	—	—	—	—	—	—	●	○	●	○	—	—
d.76.	Last Character on 76th Column	—	—	—	—	—	—	●	○	●	●	—	—
d.75.	Last Character on 75th Column	—	—	—	—	—	—	●	●	○	●	—	—
d.74.	Last Character on 74th Column	—	—	—	—	—	—	●	●	●	○	—	—
d.73.	Last Character on 73rd Column	—	—	—	—	—	—	●	●	●	●	—	—

Note: Options 17a and 17b are not used.

410729 — 132-Column Printer Logic Circuit Card

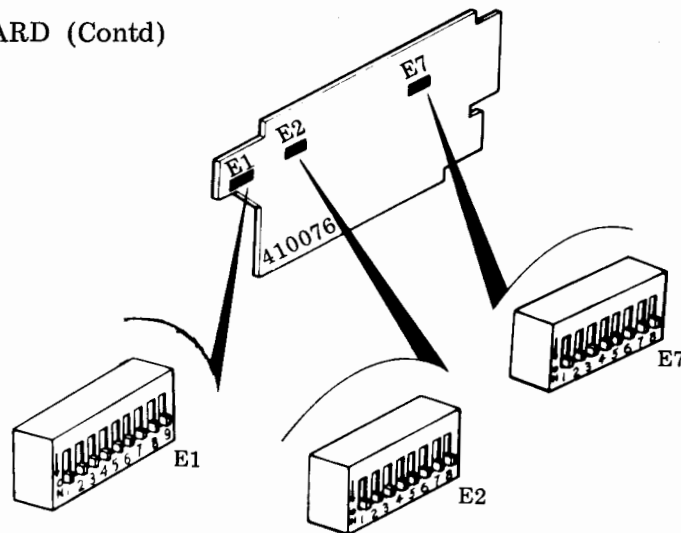
17. Printer Margin and Form Width		D11						D13					
		6	5	4	3	2	1	6	5	4	3	2	1
e.	Last Character on Column 132	—	—	—	—	—	—	○	○	○	●	—	—
f.131.	Last Character on Column 131	—	—	—	—	—	—	○	○	●	○	—	—
f.130.	Last Character on Column 130	—	—	—	—	—	—	○	○	●	●	—	—
f.129.	Last Character on Column 129	—	—	—	—	—	—	○	●	○	●	—	—
f.128.	Last Character on Column 128	—	—	—	—	—	—	○	●	●	○	—	—
f.127.	Last Character on Column 127	—	—	—	—	—	—	○	●	●	●	—	—
f.126.	Last Character on Column 126	—	—	—	—	—	—	●	○	○	●	—	—
f.125.	Last Character on Column 125	—	—	—	—	—	—	●	○	●	○	—	—
f.124.	Last Character on Column 124	—	—	—	—	—	—	●	○	●	●	—	—
f.123.	Last Character on Column 123	—	—	—	—	—	—	●	●	○	●	—	—
f.122.	Last Character on Column 122	—	—	—	—	—	—	●	●	●	○	—	—
f.121.	Last Character on Column 121	—	—	—	—	—	—	●	●	●	●	—	—

Note: Options 17a, 17b, 17c and 17d are not used.

See Legend on Page 2-16.

2. INSTALLATION (Contd)

OPTION CIRCUIT CARD (Contd)



410076 — 80-Column Printer Logic Circuit Card

17. Printer Left Margin and Form Width		E7							
		1	2	3	4	5	6	7	8
a.	First Printed Column — Column 1	—	—	●	●	●	●	—	—
b.2.	First Printed Column — Column 2	—	—	●	●	○	—	—	—
b.3.	First Printed Column — Column 3	—	—	●	●	○	○	—	—
b.4.	First Printed Column — Column 4	—	—	●	○	○	○	—	—
b.5.	First Printed Column — Column 5	—	—	○	○	●	○	—	—
b.6.	First Printed Column — Column 6	—	—	○	○	○	●	—	—
b.7.	First Printed Column — Column 7	—	—	○	○	○	○	—	—
b.8.	First Printed Column — Column 8	—	—	●	○	●	○	—	—
b.9.	First Printed Column — Column 9	—	—	○	○	●	●	—	—
b.10.	First Printed Column — Column 10	—	—	○	●	○	●	—	—
b.11.	First Printed Column — Column 11	—	—	●	●	●	—	—	—
b.12.	First Printed Column — Column 12	—	—	●	○	○	●	—	—
b.13.	First Printed Column — Column 13	—	—	○	●	●	○	—	—

410076 — 80-Column Printer Logic Circuit Card

17. Printer Right Margin and Form Width		E1								E2								E7								
	Last Char Printed Column Number	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
c.	80	—	—	—	—	○	●	—	●	○	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—
d. (X)	73 61 49 37 25	—	—	—	—	●	●	—	●	○	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—
	74 62 50 38 26	—	—	—	—	●	●	—	●	○	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—
	75 63 51 39 27	—	—	—	—	●	●	—	○	●	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—
	76 64 52 40 28	—	—	—	—	●	○	—	●	○	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—
	77 65 53 41 29	—	—	—	—	●	○	—	○	○	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—
	78 66 54 42 30	—	—	—	—	●	○	—	○	○	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—
	79 67 55 43 31	—	—	—	—	○	●	—	●	—	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—
	68 56 44 32	—	—	—	—	○	●	—	●	○	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—
	69 57 45 33	—	—	—	—	○	○	—	○	○	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—
	70 58 46 34	—	—	—	—	○	○	—	●	○	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—
	71 59 47 35	—	—	—	—	○	○	—	○	○	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—
	72 60 48 36	—	—	—	—	○	○	—	○	○	—	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—

To obtain counts:

73 through 80 program as shown.

61 through 72 program as shown, then operate E7 position 2 to OFF.

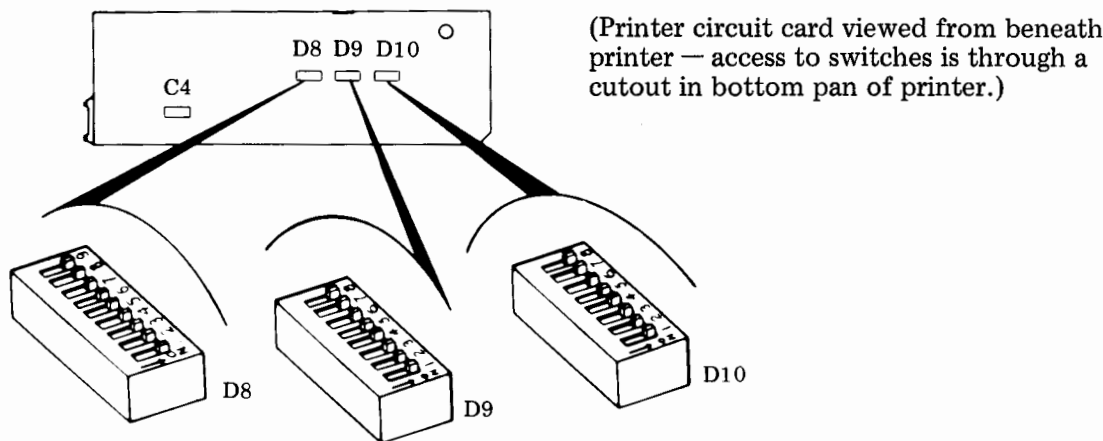
49 through 60 program as shown, then operate E7 position 1 to OFF.

37 through 48 program as shown, then operate E2 position 7 to OFF.

25 through 36 program as shown, then operate E2 position 8 to OFF.

(X) Indicates desired column number.

See Legend on Page 2-16.



410072 — 132-Column Printer Logic Circuit Card

17. Printer Left Margin and Form Width		D8								
		1	2	3	4	5	6	7	8	9
a.	First Printed Column — Column 1	—	—	●	●	●	—	—	—	—
b.2.	First Printed Column — Column 2	—	—	●	●	○	●	—	—	—
b.3.	First Printed Column — Column 3	—	—	●	●	○	○	—	—	—
b.4.	First Printed Column — Column 4	—	—	●	○	○	○	—	—	—
b.5.	First Printed Column — Column 5	—	—	○	○	●	○	—	—	—
b.6.	First Printed Column — Column 6	—	—	○	○	○	●	—	—	—
b.7.	First Printed Column — Column 7	—	—	○	●	○	○	—	—	—
b.8.	First Printed Column — Column 8	—	—	●	○	●	○	—	—	—
b.9.	First Printed Column — Column 9	—	—	○	○	○	●	—	—	—
b.10.	First Printed Column — Column 10	—	—	○	○	○	●	—	—	—
b.11.	First Printed Column — Column 11	—	—	●	●	●	○	—	—	—
b.12.	First Printed Column — Column 12	—	—	●	○	○	●	—	—	—
b.13.	First Printed Column — Column 13	—	—	○	●	●	○	—	—	—

410072 — 132-Column Printer Logic Circuit Card

17. Printer Right Margin and Form Width		D8									D9								D10							
	Last Char Printed Column Number	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
e.	132	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	○	—	—	○	○	—	—	—
f.(X)	121 109 97 85 73	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	○	—	—	●	●	—	—	—
	122 110 98 86 74	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	○	—	—	●	●	—	—	—
	123 111 99 87 75	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	○	—	—	●	●	—	—	—
	124 112 100 88 76	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	○	—	—	○	○	—	—	—
	125 113 101 89 77	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	○	—	—	○	○	—	—	—
	126 114 102 90 78	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	○	—	—	○	○	—	—	—
	127 115 103 91 79	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	○	—	—	●	○	—	—	—
	128 116 104 92 80	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	○	—	—	●	○	—	—	—
	129 117 105 93 81	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	○	—	—	○	○	—	—	—
	130 118 106 94 82	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	○	—	—	○	○	—	—	—
	131 119 107 95 83	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	○	—	—	○	○	—	—	—
	120 108 96 84	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●	●	○	—	—	○	○	—	—	—

To obtain counts:

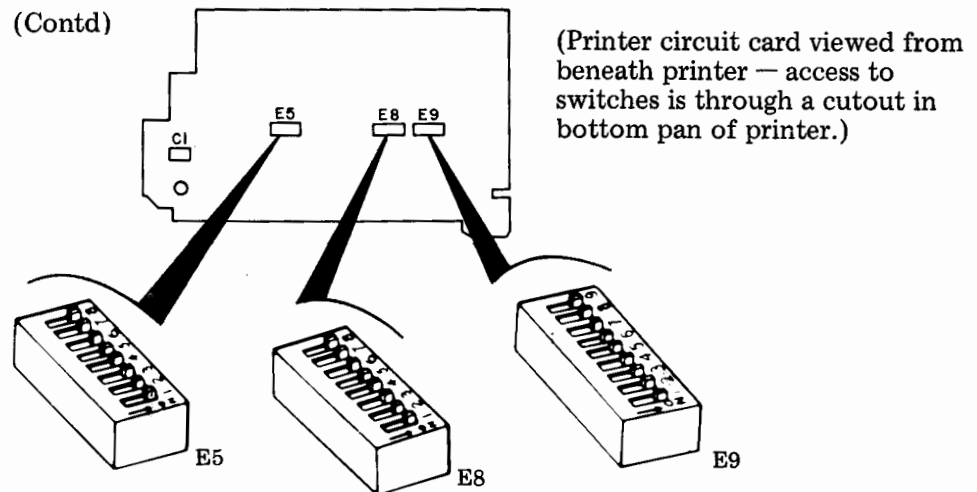
- 121 through 132 program as shown.
- 109 through 120 program as shown, then operate D9 position 7 OFF.
- 97 through 108 program as shown, then operate D9 position 8 OFF.
- 85 through 96 program as shown, then operate D8 position 7 OFF.
- 73 through 84 program as shown, then operate D8 position 8 OFF.

(X) Indicates desired column number.

See Legend on Page 2-16.

2. INSTALLATION (Contd)

OPTION CIRCUIT CARD (Contd)



410071 — 80-Column Tractor Feed Printer Logic Circuit Card

17. Printer Left Margin and Form Width		E5							
		1	2	3	4	5	6	7	8
a.	First Printed Column — Column 1	—	—	●	●	●	●	—	—
b.2.	First Printed Column — Column 2	—	—	●	●	○	●	—	—
b.3.	First Printed Column — Column 3	—	—	●	●	○	○	—	—
b.4.	First Printed Column — Column 4	—	—	●	○	○	○	—	—
b.5.	First Printed Column — Column 5	—	—	○	○	●	○	—	—
b.6.	First Printed Column — Column 6	—	—	○	○	○	●	—	—
b.7.	First Printed Column — Column 7	—	—	○	○	○	○	—	—
b.8.	First Printed Column — Column 8	—	—	●	○	●	○	—	—
b.9.	First Printed Column — Column 9	—	—	○	○	●	●	—	—
b.10.	First Printed Column — Column 10	—	—	○	●	○	○	—	—
b.11.	First Printed Column — Column 11	—	—	●	●	○	○	—	—
b.12.	First Printed Column — Column 12	—	—	●	○	○	●	—	—
b.13.	First Printed Column — Column 13	—	—	○	●	●	○	—	—

410071 — 80-Column Tractor Feed Printer Logic Circuit Card

17. Printer Right Margin and Form Width		E9									E5								E8							
	Last Char Printed Column Number	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
c.	80	○	●	—	●	○	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●
d. (X)	73 61 49 37 25	●	●	—	●	●	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●
	74 62 50 38 26	○	●	—	●	●	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●
	75 63 51 39 27	●	○	—	●	●	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●
	76 64 52 40 28	●	●	—	○	●	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●
	77 65 53 41 29	○	●	—	○	●	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●
	78 66 54 42 30	●	○	—	○	●	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●
	79 67 55 43 31	●	●	—	○	○	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●
	68 56 44 32	○	●	—	●	○	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●
	69 57 45 33	●	○	—	●	○	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●
	70 58 46 34	●	●	—	○	○	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●
	71 59 47 35	○	●	—	○	○	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●
	72 60 48 36	●	○	—	○	○	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	—	—	—	●

To obtain counts:

73 through 80 program as shown.

61 through 72 program as shown, then operate E8 position 8 to OFF.

49 through 60 program as shown, then operate E5 position 1 to OFF.

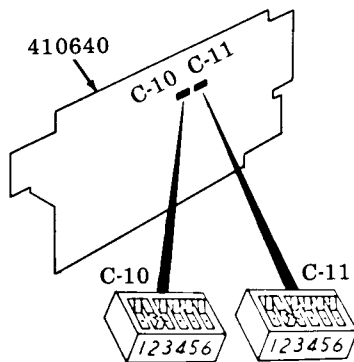
37 through 48 program as shown, then operate E5 position 7 to OFF.

25 through 36 program as shown, then operate E5 position 8 to OFF.

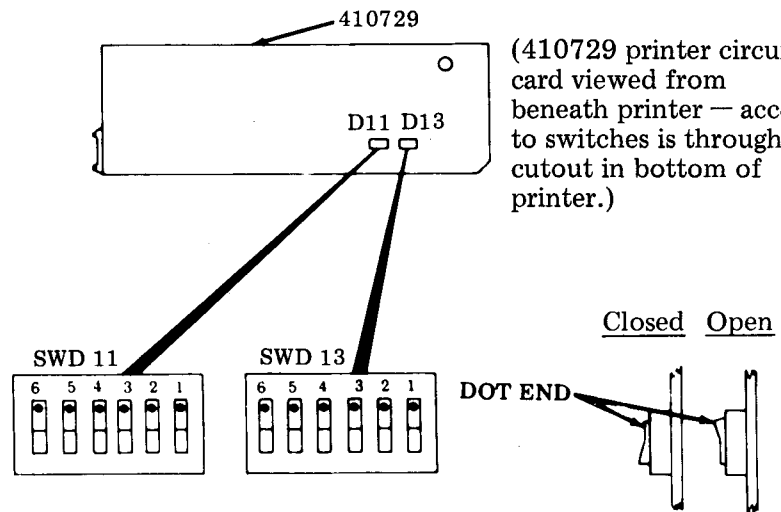
(X) Indicates desired column number.

See Legend on Page 2-16.

(410640 printer circuit card option switches are located on the component side of card. To gain access to switch packs, card must be removed from printer.)



80-Column Printer



132-Column Printer

410640 — 80-Column Printer Logic Circuit Card

18. Printer Paper Feedout		C-10						C-11					
		1	2	3	4	5	6	1	2	3	4	5	6
a.	No Paper Feedout	●	—	—	—	—	—	—	—	—	—	—	○
b.	Paper Feedout on DSR or RM Loss — 16 Lines or One Form	○	—	—	—	—	—	—	—	—	—	—	○
c.	Paper Feedout on DSR or RM Loss or ETX — 16 Lines or One Form	○	—	—	—	—	—	—	—	—	—	—	● *

410729 — 132-Column Printer Logic Circuit Card

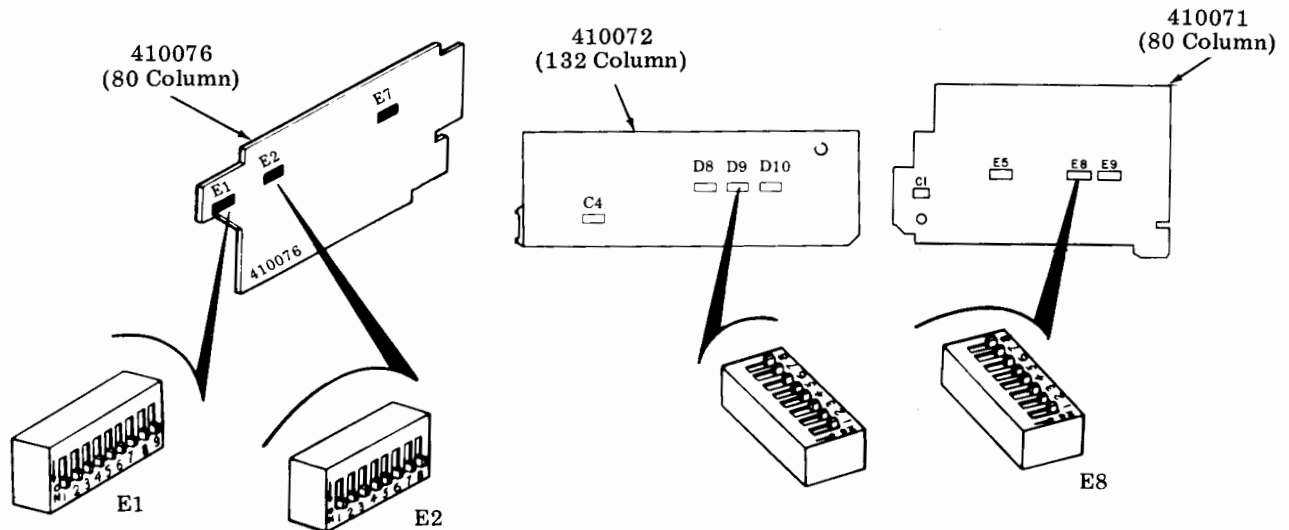
18. Printer Paper Feedout		D11						D13					
		6	5	4	3	2	1	6	5	4	3	2	1
a.	No Paper Feedout	—	—	●	—	—	—	—	—	—	—	—	○
b.	Paper Feedout on DSR or RM Loss — 16 Lines or One Form	—	—	○	—	—	—	—	—	—	—	—	○
c.	Paper Feedout on DSR or RM Loss or ETX — 16 Lines or One Form	—	—	○	—	—	—	—	—	—	—	—	● *

See Legend on Page 2-16.

2. INSTALLATION (Contd)

OPTION CIRCUIT CARD (Contd)

(410072 and 410071 printer circuit cards viewed from beneath printer — access to switches is through a cutout in bottom pan of printer.)



410076 — 80-Column Printer Logic Circuit Card

18. Printer Paper Feedout		E1									E2							
		1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8
a.	No Paper Feedout	●	—	—	—	—	—	—	—	—	—	—	—	—	—	○	—	—
b.	Paper Feedout on DSR or RM Loss — 16 Lines or One Form	○	—	—	—	—	—	—	—	—	—	—	—	—	—	○	—	—
c.	Paper Feedout on DSR or RM Loss or ETX — 16 Lines or One Form	○	—	—	—	—	—	—	—	—	—	—	—	—	—	●	—	—

410072 — 132-Column Printer Logic Circuit Card

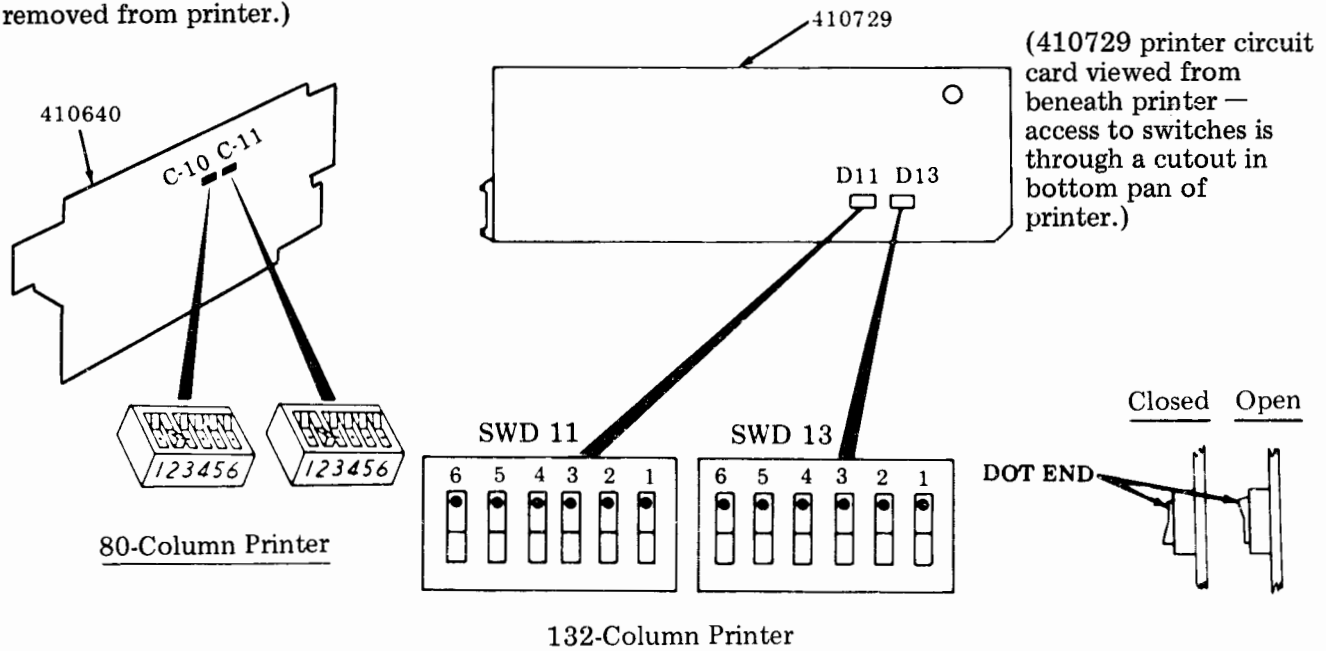
18. Printer Paper Feedout		D9							
		1	2	3	4	5	6	7	8
a.	No Paper Feedout	—	—	●	—	—	—	—	—
b.	Paper Feedout on DSR or RM Loss — 16 Lines or One Form	—	○	○	—	—	—	—	—
c.	Paper Feedout on DSR or RM Loss or ETX — 16 Lines or One Form	—	●	○	—	—	—	—	—

410071 — 80-Column Tractor Feed Printer Logic Circuit Card

18. Printer Paper Feedout		E8							
		1	2	3	4	5	6	7	8
a.	No Paper Feedout	—	—	●	—	—	—	—	—
b.	Paper Feedout on DSR or RM Loss — 16 Lines or One Form	—	○	○	—	—	—	—	—
c.	Paper Feedout on DSR or RM Loss or ETX — 16 Lines or One Form	—	●	○	—	—	—	—	—

See Legend on Page 2-16.

(410640 printer circuit card option switches are located on the component side of card. To gain access to switch packs, card must be removed from printer.)



410640 — 80-Column Printer Logic Circuit Card

19. Printer Errored Character Symbol		C-10						C-11					
		1	2	3	4	5	6	1	2	3	4	5	6
a.	Printed on Even Parity Error	—	—	—	●	○	—	—	—	—	—	—	*
b.	Printed on Odd Parity Error	—	—	—	○	●	—	—	—	—	—	—	—
c.	Not Printed on Parity Error	—	—	—	●	●	—	—	—	—	—	—	—
d.	Printers With 96-Character Set	—	●	○	—	—	—	—	—	—	—	—	—
e.	Printers With 64-Character Set	—	○	●	—	—	—	—	—	—	—	—	—
f.	Printers With Extended ASCII Character Set	—	○	○	—	—	—	—	—	—	—	—	—

410729 — 132-Column Printer Logic Circuit Card

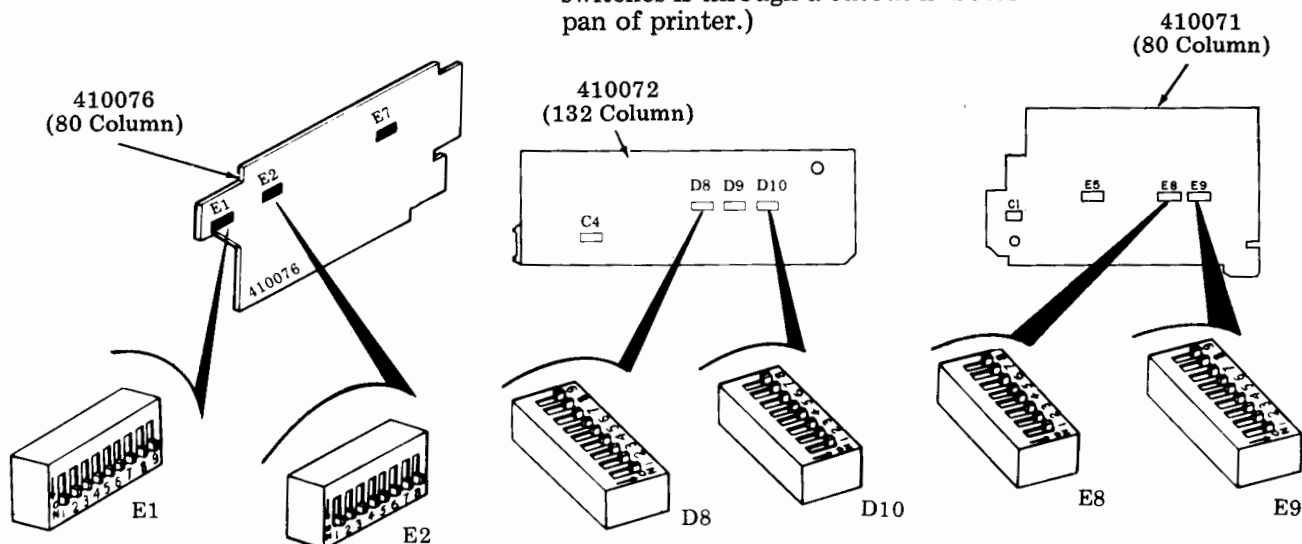
19. Printer Errored Character Symbol		D11						D13					
		6	5	4	3	2	1	6	5	4	3	2	1
a.	Printed on Even Parity Error	—	—	—	●	○	—	—	—	—	—	—	*
b.	Printed on Odd Parity Error	—	—	—	○	●	—	—	—	—	—	—	—
c.	Not Printed on Parity Error	—	—	—	●	●	—	—	—	—	—	—	—
d.	Printers With 96-Character Set	●	○	—	—	—	—	—	—	—	—	—	—
e.	Printers With 64-Character Set	○	●	—	—	—	—	—	—	—	—	—	—
f.	Printers With Extended ASCII Character Set	○	○	—	—	—	—	—	—	—	—	—	—
g.	Printers With Longest Char. Set Having Less Than 64 Char.	○	●	—	—	—	—	—	—	—	—	—	—

See Legend on Page 2-16.

2. INSTALLATION (Cont)

OPTION CIRCUIT CARD (Contd)

(410072 and 410071 printer circuit cards viewed from beneath printer — access to switches is through a cutout in bottom pan of printer.)



410076 — 80-Column Printer Logic Circuit Card

19. Printer Errored Character Symbol		E1								
		1	2	3	4	5	6	7	8	9
a.	Printed on Even Parity Error	—	—	—	●	○	—	—	—	—
b.	Printed on Odd Parity Error	—	—	—	○	●	—	—	—	—
c.	Not Printed on Parity Error	—	—	—	●	●	—	—	—	—

19. Character Set		E2							
		1	2	3	4	5	6	7	8
d.	Printers With 96-Character Set	—	—	—	○	●	—	—	—
e.	Printers With 64-Character Set	—	—	—	●	○	—	—	—
f.	Printers With Extended ASCII Character Set	—	—	—	○	○	—	—	—
g.	Printers With Longest Character Set Having Less Than 64 Characters	—	—	—	○	○	—	—	—

410072 — 132-Column Printer Logic Circuit Card

19. Printer Errored Character Symbol		D10							
		1	2	3	4	5	6	7	8
a.	Printed on Even Parity Error	—	—	—	—	—	○	●	—
b.	Printed on Odd Parity Error	—	—	—	—	—	●	○	—
c.	Printed on Parity Error	—	—	—	—	—	●	●	—

19. Character Set		D8								
		1	2	3	4	5	6	7	8	9
d.	Printers With 96-Character Set	●	○	—	—	—	—	—	—	—
e.	Printers With 64-Character Set	○	●	—	—	—	—	—	—	—
f.	Printers With Extended ASCII Character Set	○	○	—	—	—	—	—	—	—
g.	Printers With Longest Character Set Having Less Than 64 Characters	○	○	—	—	—	—	—	—	—

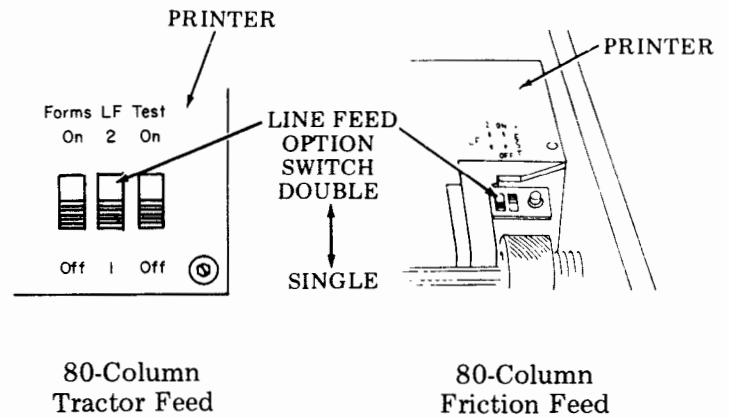
410071 — 80-Column Tractor Feed Printer Logic Circuit Card

19. Printer Errored Character Symbol		E9								
		1	2	3	4	5	6	7	8	9
a.	Printed on Even Parity Error	—	—	—	—	—	○	●	—	—
b.	Printed on Odd Parity Error	—	—	—	—	—	●	○	—	—
c.	Not Printed on Parity Error	—	—	—	—	—	●	●	—	—

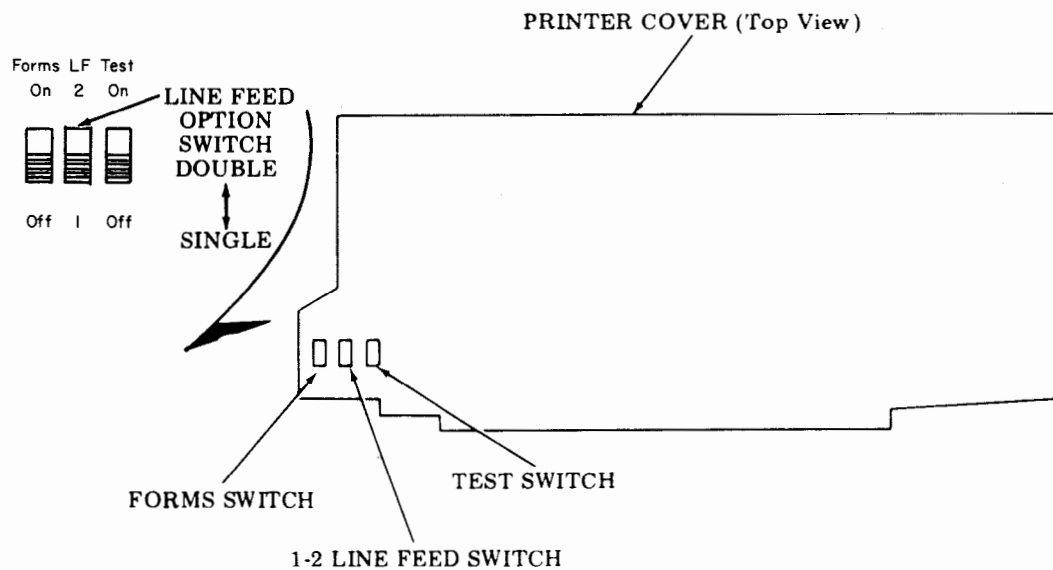
19. Character Set		E8							
		1	2	3	4	5	6	7	8
d.	Printers With 96-Character Set	—	—	—	—	●	○	—	—
e.	Printers With 64-Character Set	—	—	—	—	○	●	—	—
f.	Printers With Extended ASCII Character Set	—	—	—	—	○	○	—	—
g.	Printers With Longest Character Set Having Less Than 64 Characters	—	—	—	—	○	○	—	—

See Legend on Page 2-16.

20. Line Feed on 80-Column Printer (See adjacent figure.)	
a.	Single
b.	Double



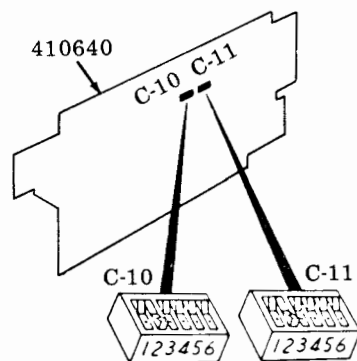
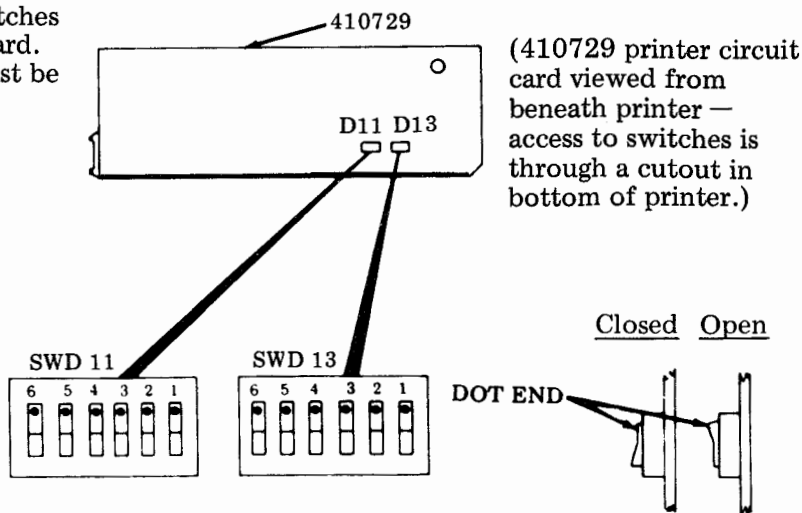
20. Line Feed on 132-Column Printer (See figure below.)	
a.	Single
b.	Double



2. INSTALLATION (Contd)

OPTION CIRCUIT CARD (Contd)

(410640 printer circuit card option switches are located on the component side of card. To gain access to switch packs, card must be removed from printer.)

80-Column Printer132-Column Printer

410640 — 80-Column Printer Logic Circuit Card

21. Foldover on Up-Low Printer		C-10						C-11					
		1	2	3	4	5	6	1	2	3	4	5	6
a.	Lower Case and Upper Case Print	—	—	—	—	—	—	—	—	—	—	○	— *
b.	Lower Case Prints as Upper Case	—	—	—	—	—	—	—	—	—	—	●	—

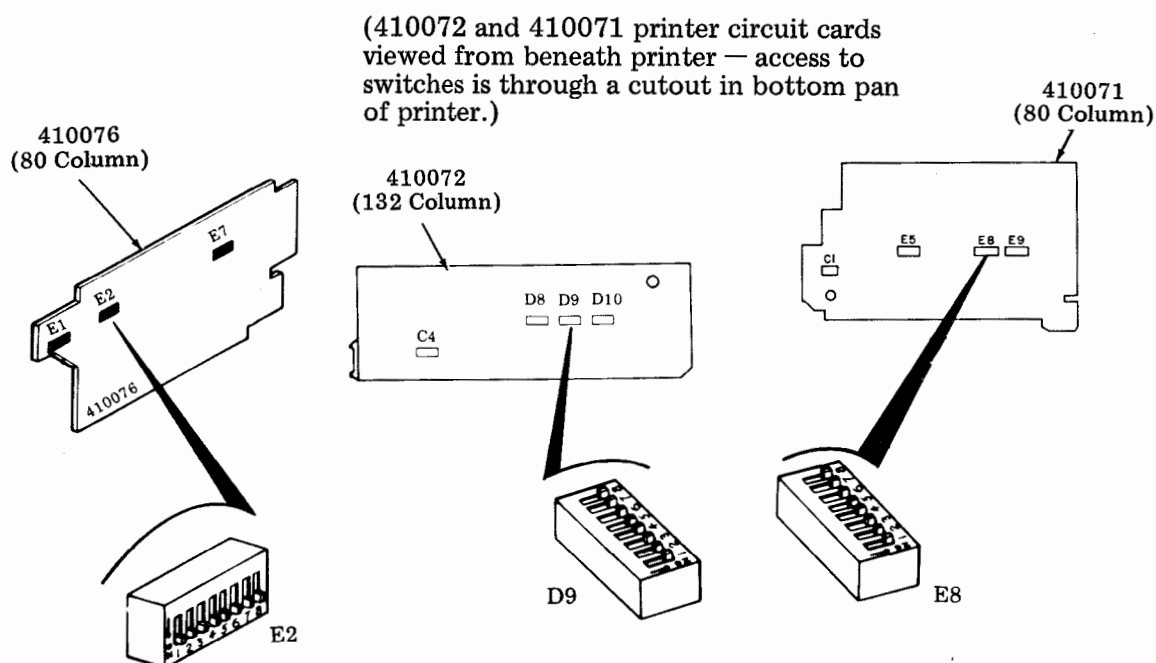
22. Foldover on Monocase Printer		C-10						C-11					
		1	2	3	4	5	6	1	2	3	4	5	6
a.	Lower Case Not Folded Over	—	—	—	—	—	—	—	—	—	—	○	—
b.	Lower Case Printed as Upper Case	—	—	—	—	—	—	—	—	—	—	●	— *

410729 — 132-Column Printer Logic Circuit Card

21. Foldover on Up-Low Printer		D11						D13					
		6	5	4	3	2	1	6	5	4	3	2	1
a.	Lower Case and Upper Case Print	—	—	—	—	—	—	—	—	—	—	○	— *
b.	Lower Case Prints as Upper Case	—	—	—	—	—	—	—	—	—	—	●	—

22. Foldover on Monocase Printer		D11						D13					
		6	5	4	3	2	1	6	5	4	3	2	1
a.	Lower Case Prints as Error Symbol	—	—	—	—	—	—	—	—	—	—	○	—
b.	Lower Case Prints as Upper Case	—	—	—	—	—	—	—	—	—	—	●	— *

See Legend on Page 2-16.



410076 — 80-Column Printer Logic Circuit Card

21. Foldover on Up-Low Printer		E2							
		1	2	3	4	5	6	7	8
a.	Lower Case and Upper Case Print	—	—	○	—	—	—	—	*
b.	Lower Case Prints as Upper Case	—	—	●	—	—	—	—	

22. Foldover on Monocase Printer		E2							
		1	2	3	4	5	6	7	8
a.	Lower Case Prints as Error Symbol	—	—	○	—	—	—	—	
b.	Lower Case Prints as Upper Case	—	—	●	—	—	—	—	*

410072 — 132-Column Printer Logic Circuit Card

21. Foldover on Printers With 96-Character Set		D9							
		1	2	3	4	5	6	7	8
a.	Lower Case and Upper Case	○	—	—	—	—	—	—	*
b.	Lower Case Prints as Upper Case	●	—	—	—	—	—	—	

22. Foldover on Printers With 64-Character Set		D9							
		1	2	3	4	5	6	7	8
a.	Lower Case Prints as Error Symbol	○	—	—	—	—	—	—	
b.	Lower Case Prints as Upper Case	●	—	—	—	—	—	—	*

410071 — 80-Column Tractor Feed Printer Logic Circuit Card

21. Foldover on Printers With 96-Character Set		E8							
		1	2	3	4	5	6	7	8
a.	Lower Case and Upper Case Print	○	—	—	—	—	—	—	*
b.	Lower Case Prints as Upper Case	●	—	—	—	—	—	—	

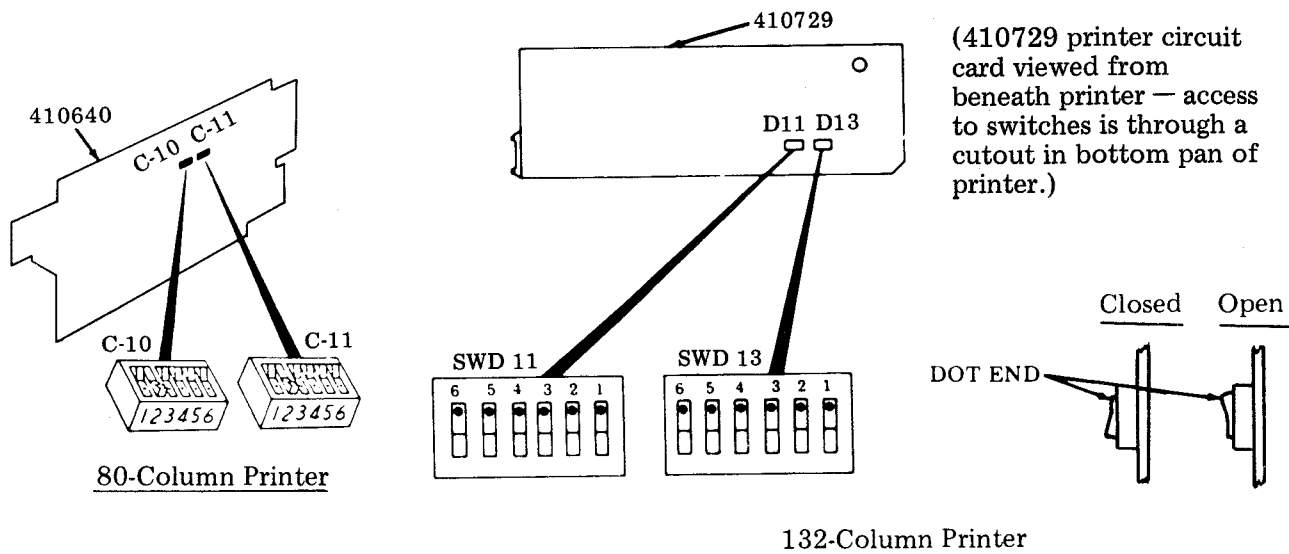
22. Foldover on Printers With 64-Character Set		E8							
		1	2	3	4	5	6	7	8
a.	Lower Case Prints as Error Symbol	○	—	—	—	—	—	—	
b.	Lower Case Prints as Upper Case	●	—	—	—	—	—	—	*

See Legend on Page 2-16.

2. INSTALLATION (Contd)

OPTION CIRCUIT CARD (Contd)

(410640 printer circuit card option switches are located on the component side of card. To gain access to switch packs, card must be removed from printer.)



410640 — 80-Column Printer Logic Circuit Card

23. Extended ASCII on Printer (Extended ASCII)		C-10						C-11					
		1	2	3	4	5	6	1	2	3	4	5	6
a.	†Prints Extended ASCII Characters (No Parity Check)	—	—	—	○	○	—	—	—	—	—	—	—
b.	Does Not Print Extended Characters (See Option 19a, b, or c.)	—	—	—	—	—	—	—	—	—	—	—	*

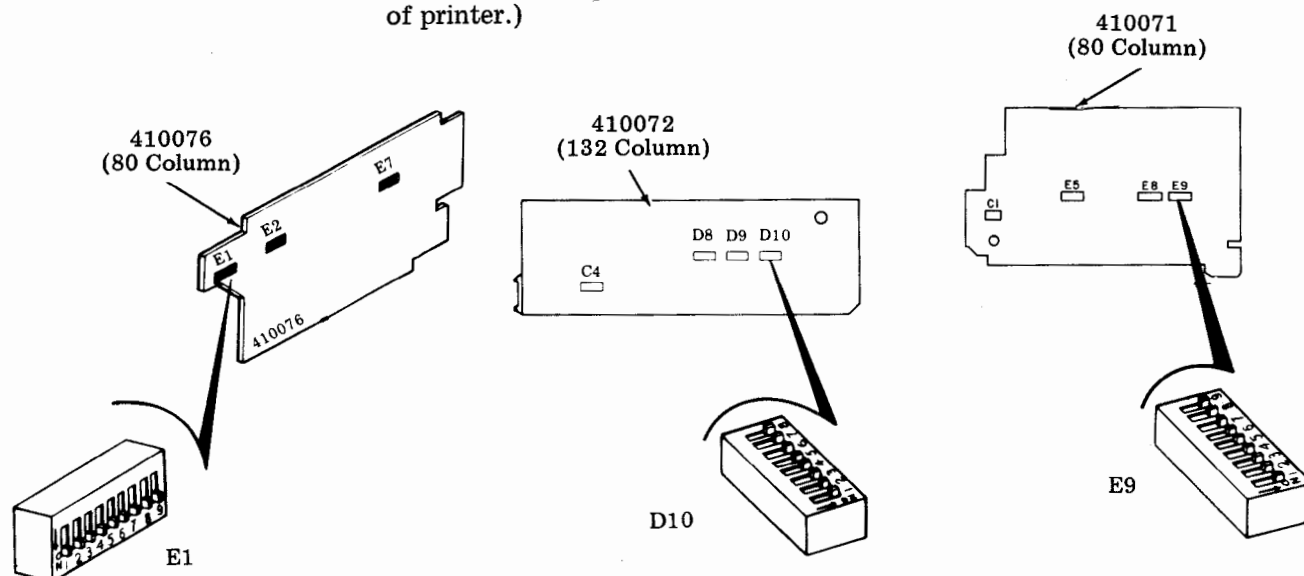
†Option 23a requires local engineering.

410729 — 132-Column Printer Logic Circuit Card

23. Extended ASCII on Printer (Extended ASCII)		D11						D13					
		6	5	4	3	2	1	6	5	4	3	2	1
a.	Prints Extended ASCII Characters (No Parity Check)	—	—	—	○	○	—	—	—	—	—	—	—
b.	Does Not Print Extended ASCII (See Option 19a, b, or c.)	—	—	—	(As in 19.)	—	—	—	—	—	—	—	*

See Legend on Page 2-16.

(410072 and 410071 printer circuit cards viewed from beneath printer — access to switches is through a cutout in bottom pan of printer.)



410076 — 80-Column Printer Logic Circuit Card

23. Extended ASCII on Printer (Extended ASCII)		E1								
		1	2	3	4	5	6	7	8	9
a.	Prints Extended ASCII Characters (No Parity Check)	—	—	○	○	—	—	—	—	—
b.	Does Not Print Extended ASCII (See Option 19a, b, or c.)	—	—	—	(As in 19.)	—	—	—	—	*

410072 — 132-Column Printer Logic Circuit Card

23. Extended ASCII on Printer (Extended ASCII)		D10							
		1	2	3	4	5	6	7	8
a.	Prints Extended ASCII Characters (No Parity Check)	—	—	—	—	—	○	○	—
b.	Does Not Print Extended ASCII (See Option 19a, b, or c.)	—	—	—	(As in 19.)	—	—	—	*

410071 — 80-Column Tractor Feed Printer Logic Circuit Card

23. Extended ASCII on Printer (Extended ASCII)		E9								
		1	2	3	4	5	6	7	8	9
a.	Prints Extended ASCII Characters (No Parity Check)	—	—	—	—	—	○	○	—	—
b.	Does Not Print Extended ASCII (See Option 19a, b, or c.)	—	—	—	(As in 19.)	—	—	—	—	*

See Legend on Page 2-16.

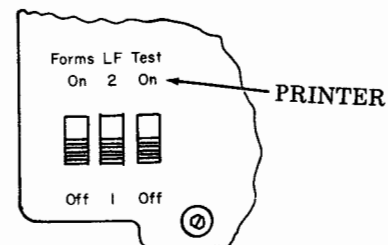
2. INSTALLATION (Contd)

OPTION CIRCUIT CARD (Contd)

Forms Switch (Under Tractor Feed Printer Cover)
(80-Column Printer)

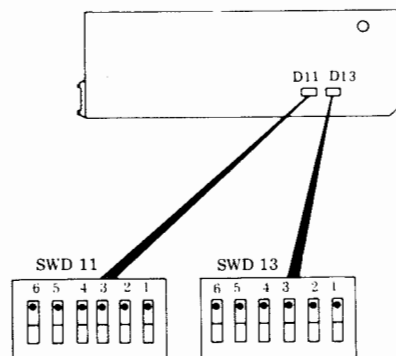
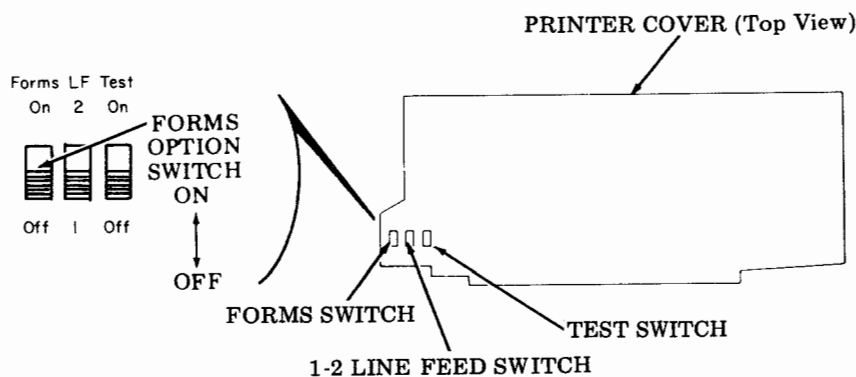
39. Forms (Tractor Feed Printer Only)	
a.	On
b.	Off

Tractor Feed

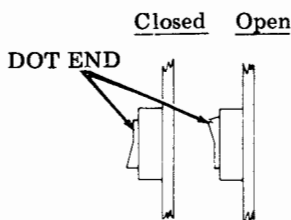


Forms Switch (132-Column Printer)

39. Forms	
a.	On
b.	Off



(Printer circuit card viewed from beneath printer — access to switches is through a cutout in bottom pan of printer.)

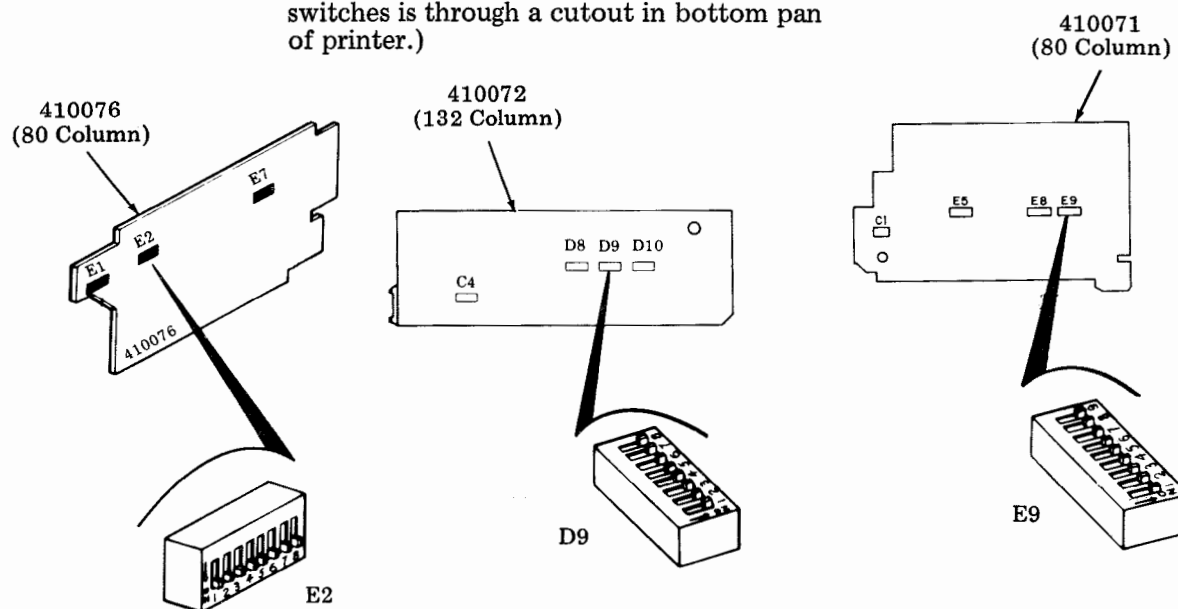


410729 — Printer Logic Circuit Card (132-Column Printer)

48. Incomplete Form Suppresses Paper Alarm		D11						D13					
		6	5	4	3	2	1	6	5	4	3	2	1
a.	No (Paper-Out Not Gated With Formout)	-	-	-	-	-	●	-	-	-	-	-	-
b.	Yes (Paper-Out Gated With Formout)	-	-	-	-	-	○	-	-	-	-	-	-

*Factory programmed.
See Legend on Page 2-16.

(410072 and 410071 printer circuit cards viewed from beneath printer — access to switches is through a cutout in bottom pan of printer.)



410076 — 80-Column Printer Logic Circuit Card

48. Incomplete Form Suppresses Paper Alarm		E2							
		1	2	3	4	5	6	7	8
a.	No (Paper-Out Not Gated With Form-Out)	—	●	—	—	—	—	—	—
b.	Yes (Paper-Out Gated With Form-Out)	—	○	—	—	—	—	—	—

*

410072 — 132-Column Printer Logic Circuit Card

48. Incomplete Form Suppresses Paper Alarm		D9							
		1	2	3	4	5	6	7	8
a.	No (Paper-Out Not Gated With Form-Out)	—	—	—	●	—	—	—	—
b.	Yes (Paper-Out Gated With Form-Out)	—	—	—	○	—	—	—	—

*

410071 — 80-Column Tractor Feed Printer Logic Circuit Card

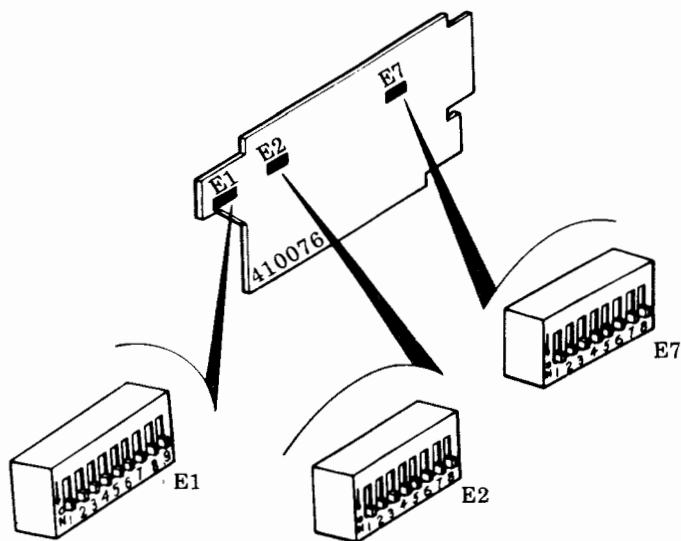
48. Incomplete Form Suppresses Paper Alarm		E9								
		1	2	3	4	5	6	7	8	9
a.	No (Paper-Out Not Gated With Form-Out)	—	—	—	—	—	—	—	—	●
b.	Yes (Paper-Out Gated With Form-Out)	—	—	—	—	—	—	—	—	○

*

See Legend on Page 2-16.

2. INSTALLATION (Contd)

OPTION CIRCUIT CARD (Contd)



410076 — 80-Column Printer Logic Circuit Card

54. Printing of Escape Sequences Suppressed		E1								
		1	2	3	4	5	6	7	8	9
a.	Character After ESC Printed as Received	—	○	—	—	—	—	—	—	—
b.	Printing of Character After ESC Suppressed	—	●	—	—	—	—	—	—	—

55. Shift In/Shift Out Detection		E1								
		1	2	3	4	5	6	7	8	9
a.	SI/SO Detection Not Used	—	—	—	—	—	—	○	—	—
b.	SI/SO Detection Enables Printing Additional Characters	—	—	—	—	—	—	●	—	—

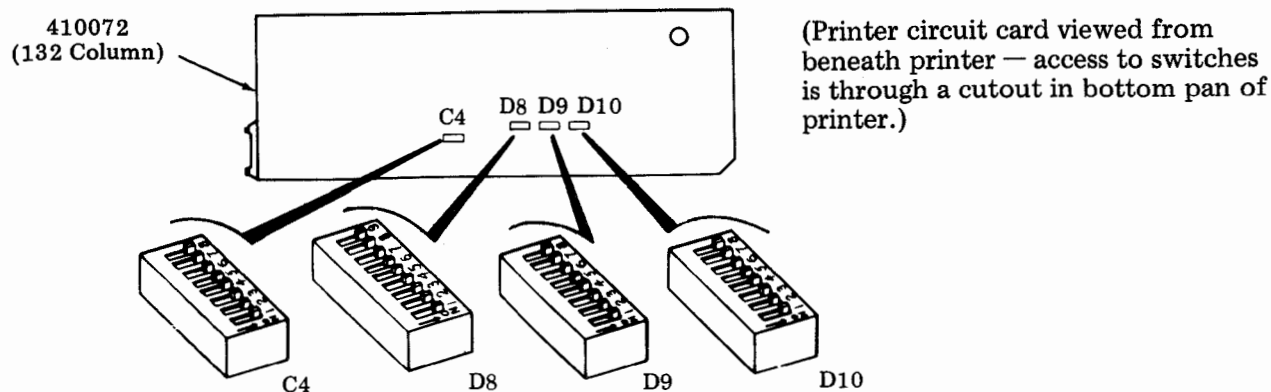
56. Friction Feed/Tractor Feed Printer		E2							
		1	2	3	4	5	6	7	8
a.	Friction Feed Printer — Motor Held On After Paper Alarm	○	—	—	—	—	—	—	—
b.	Tractor Feed Printer — Motor Turned Off After Paper Alarm	●	—	—	—	—	—	—	—

57. SSI/OEM Interface		E7							
		1	2	3	4	5	6	7	8
a.	SSI	—	—	—	—	—	—	●	—
b.	OEM	—	—	—	—	—	—	○	—

58. Idle Line Motor Control		E7							
		1	2	3	4	5	6	7	8
a.	Disabled — Motor Held On Indefinitely During Idle Line	—	—	—	—	—	—	—	○
b.	Enabled — Motor Turned Off After 40-Second Idle Line	—	—	—	—	—	—	—	●

++Requires use of 410085 OEM Card and selection of Option 61b or 61c.

See Legend on Page 2-16.



410072 — 132-Column Printer Logic Circuit Card

54. Printing of Escape Sequences Suppressed		D10							
		1	2	3	4	5	6	7	8
a.	Character After ESC Printed as Received	—	—	—	—	—	—	—	○
b.	Printing of Character After ESC Suppressed	—	—	—	—	—	—	—	●

55. SI/SO Detection		D10							
		1	2	3	4	5	6	7	8
a.	SI/SO Detection Not Used	—	—	○	—	—	—	—	—
b.	SI/SO Detection Enables Printing Additional Characters	—	—	●	—	—	—	—	—

57. SSI/OEM Detection		D8								
		1	2	3	4	5	6	7	8	9
a.	SSI	—	—	—	—	—	—	—	—	● *
b.	OEM †	—	—	—	—	—	—	—	—	○

†An option screw change may be required on 410151 circuit card in power module.
If Option 57b is selected, option screw B on 410151 must be installed from the component side.

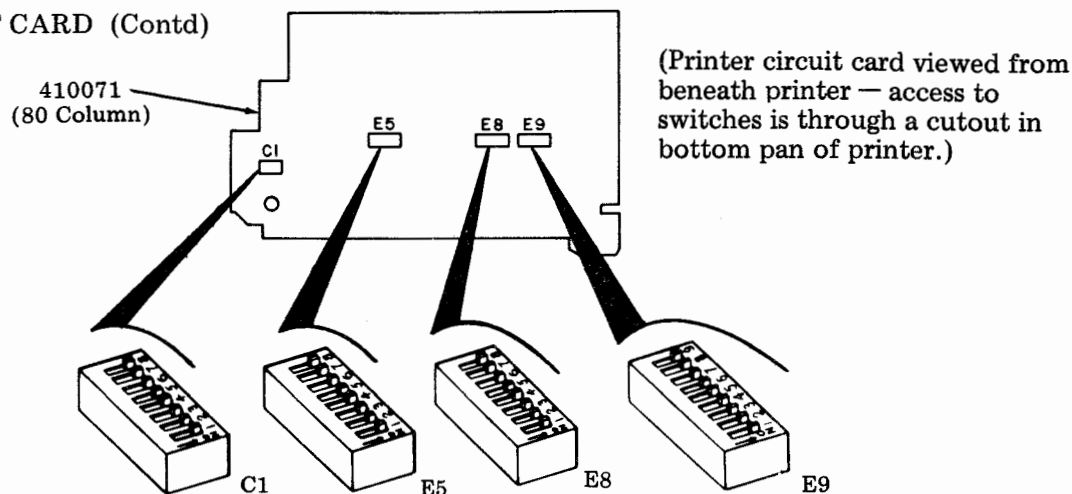
58. Idle Line Motor Control	D9							
a. Disabled — Motor Held On Indefinitely During Idle Line	1	2	3	4	5	6	7	8
b. Enabled — Motor Turned Off After 40-Second Idle Line	—	—	—	—	—	○	—	—
59. Speed Selection (Applies Only if Option 57.b. is Selected)	C4							
a. 75 Baud	1	2	3	4	5	6	7	8
b. 150 Baud	●	○	○	○	○	○	○	○
c. 300 Baud	○	●	○	○	○	○	○	○
d. 600 Baud	○	○	●	○	○	○	○	○
e. 1200 Baud	○	○	○	○	○	○	●	○
f. 2400 Baud	○	○	○	○	○	●	○	○
g. 4800 Baud	○	○	○	○	○	○	●	○
h. 9600 Baud	○	○	○	○	○	○	○	●
60. Aux Alarm (See Note)	D9							
a. Enable	1	2	3	4	5	6	7	8
b. Disable	—	—	—	—	○	—	—	—

Note: Switch must be closed when paper jam alarm mechanism is not present.
Switch must be opened when 402920 paper jam alarm modification kit is present.

See Legend on Page 2-16.

2. INSTALLATION (Contd)

OPTION CIRCUIT CARD (Contd)



410071 — 80-Column Tractor Feed Printer Logic Circuit Card

54. Printing of Escape Sequences Suppressed		E9								
		1	2	3	4	5	6	7	8	9
a.	Character After ESC Printed as Received	—	—	—	—	—	—	—	○	—
b.	Printing of Character After ESC Suppressed	—	—	—	—	—	—	—	●	—

*

55. SI/SO Detection		E9								
		1	2	3	4	5	6	7	8	9
a.	SI/SO Detection Not Used	—	—	○	—	—	—	—	—	—
b.	SI/SO Detection Enables Printing Additional Characters	—	—	●	—	—	—	—	—	—

*

57. SSI/OEM Interface		E8							
		1	2	3	4	5	6	7	8
a.	SSI	—	—	—	—	—	—	●	—
b.	OEM†	—	—	—	—	—	—	○	—

*

†An option screw change may be required on 410151 circuit card in power module. If Option 57b is selected, option screw B on 410151 must be installed from the component side.

58. Idle Line Motor Control		E8							
		1	2	3	4	5	6	7	8
a.	Disabled — Motor Held On Indefinitely During Idle Line				○				
b.	Enabled — Motor Turned Off After 40-Second Idle Line				●				

*

59. Speed Selection (Applies only if Option 57.b. is selected)		C1							
		1	2	3	4	5	6	7	8
a.	75 Baud	●	○	○	○	○	○	○	○
b.	150 Baud	○	●	○	○	○	○	○	○
c.	300 Baud	○	○	○	○	○	○	○	●
d.	600 Baud	○	○	●	○	○	○	○	○
e.	1200 Baud	○	○	○	○	○	●	○	○
f.	2400 Baud	○	○	○	●	○	○	○	○
g.	4800 Baud	○	○	○	○	●	○	○	○
h.	9600 Baud	○	○	○	○	○	○	●	○

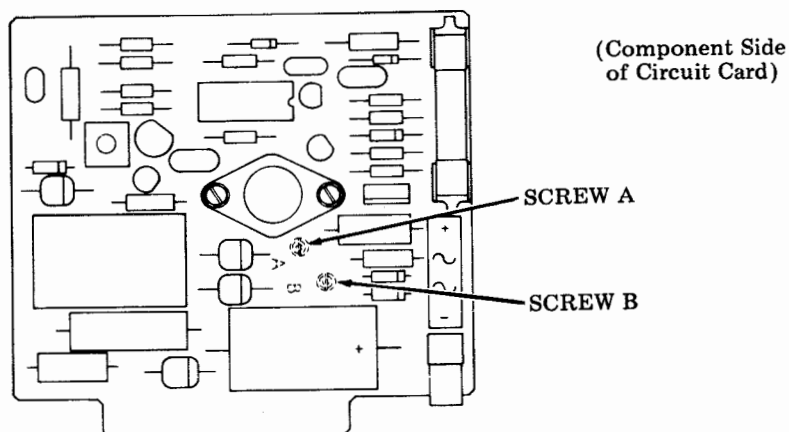
*

60. Aux Alarm (See Note)		E5							
		1	2	3	4	5	6	7	8
a.	Enable	—	○	—	—	—	—	—	—
b.	Disable	—	●	—	—	—	—	—	—

*

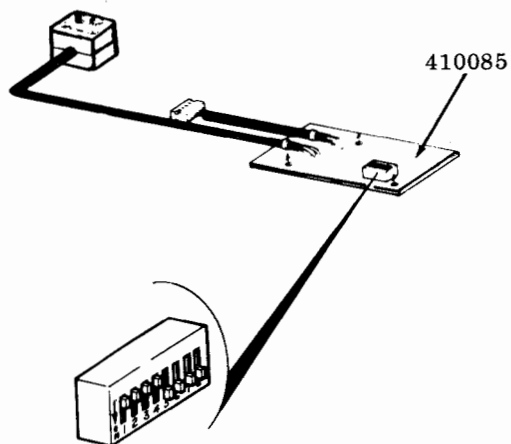
Note: Switch must be closed when paper jam alarm mechanism is not present. Switch must be opened when 402920 paper jam alarm modification kit is present.

See Legend on Page 2-16.



410151 Circuit Card (Located in Printer Power Module or Power Supply)

61. Regulator Grounding		Screw A		Screw B	
		Component	Noncomponent	Component	Noncomponent
a.	SSI (Circuit and Frame Ground at PTR)	In	—	—	In
b.	SSI/OEM (Circuit and Frame Ground at PTR, +12 V)	In	—	In	—
c.	OEM (Circuit Ground External to PTR, +12 V)	—	In	In	—



410085 Circuit Card (OEM) (Required only if Option 57b on 410076 card is selected. See Note.)

59. Speed Selection		SWC-3							
		1	2	3	4	5	6	7	8
a.	75 Baud	●	○	○	○	○	○	○	○
b.	150 Baud	○	●	○	○	○	○	○	○
c.	300 Baud	○	○	○	●	○	○	○	○
d.	600 Baud	○	○	○	●	○	○	○	○
e.	1200 Baud	○	○	○	○	○	○	●	○
f.	2400 Baud	○	○	○	○	●	○	○	○
g.	4800 Baud	○	○	○	○	○	●	○	○
h.	9600 Baud	○	○	○	○	○	○	○	●

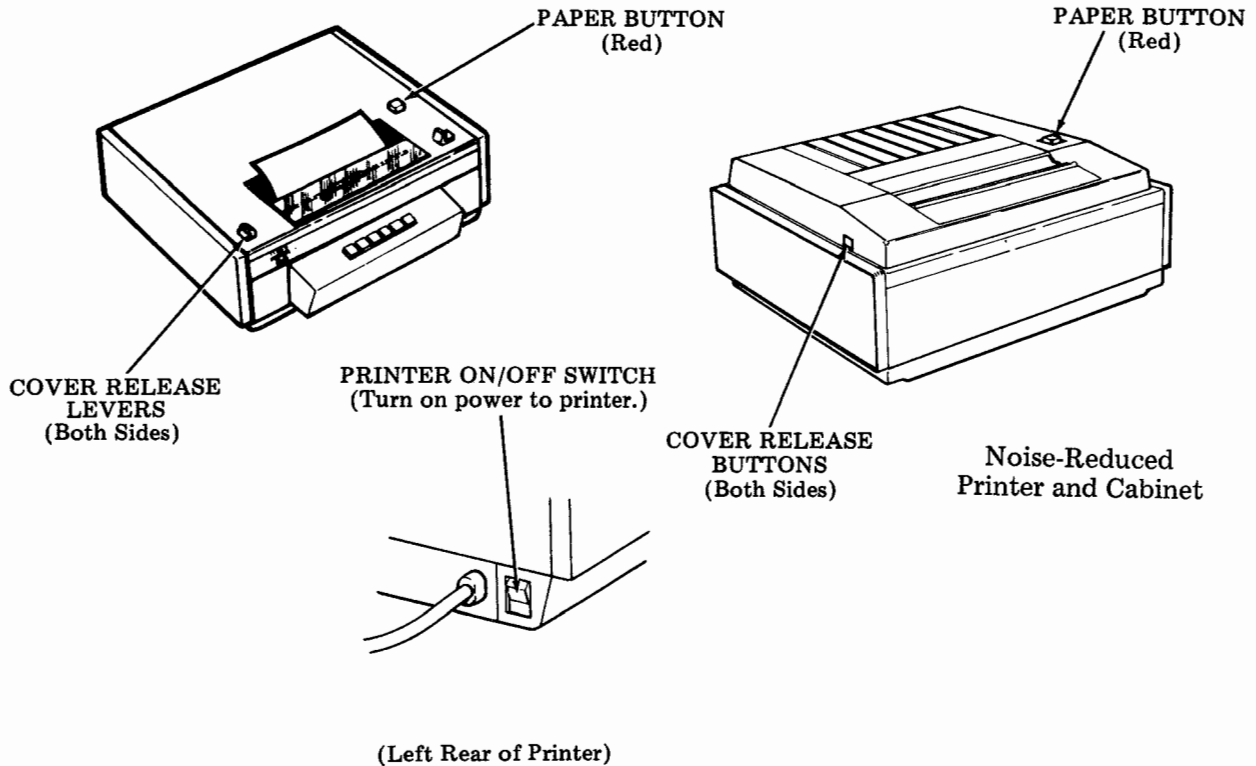
Note: The 410085 circuit card (part of 346745 modification kit) is mounted on the 410076 printer logic circuit card in OEM application. (The installation specification for 346745 modification kit is Specification 50906S.)

See Legend on Page 2-16.

INSTALL PRINTER INTO CABINET

Friction Feed Printer

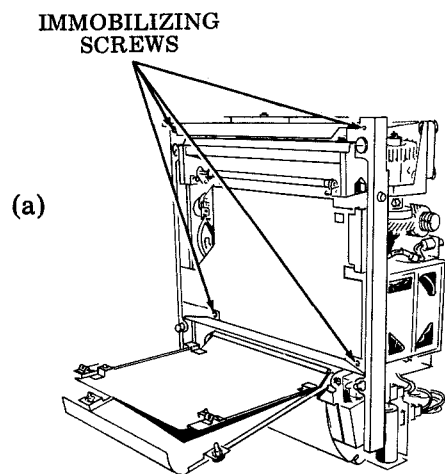
The two types of friction feed printers shown print on standard rolled single-ply paper up to 8-1/2 inches wide. The nonnoise-reduced printer and cabinet shown below may be modified to accommodate up to three ply rolls of paper for multiple copy applications.



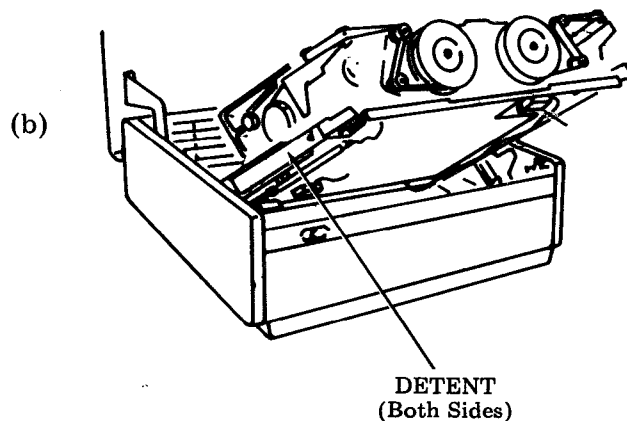
PAPER The red button is located on top of printer. When depressed, paper in page printer advances. Paper feed-out will be continuous until button is released. PAPER button lights when a low or out-of-paper condition exists. PAPER button extinguishes when paper supply is replenished.

Note: Paper button permits manual paper feed. Paper may automatically feed out when power is turned on or at end of message.

- (a) Loosen four immobilizing screws a minimum of four turns until base rides freely on the shock mounts.
- (b) Slide printer into track. Make sure ac and SSI cables are not pinched. Make sure detents snap into place. Refer to illustrations shown below.

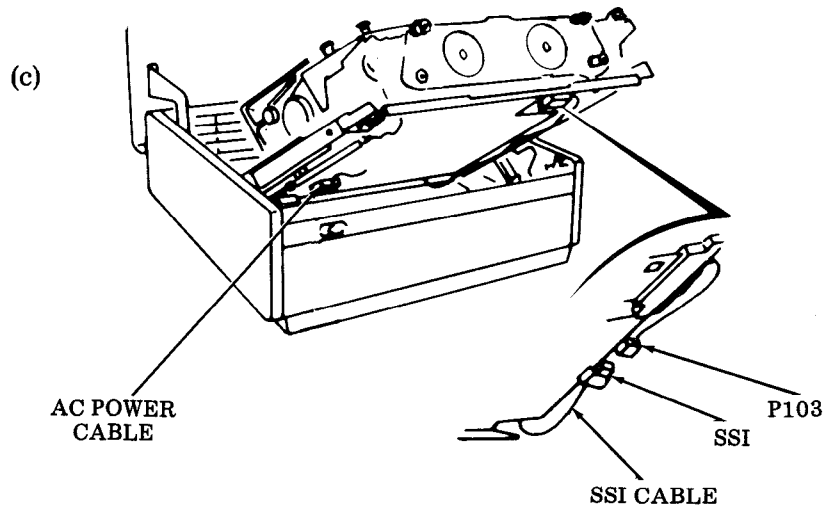


Friction Feed Immobilization



Printer Tracks

- (c) Connect ac power cable and SSI cable as shown below.



Cable Connections

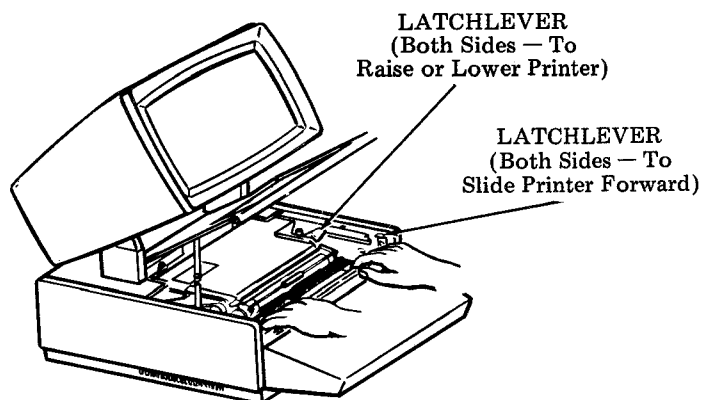
2. INSTALLATION (Contd)

INSTALL PRINTER INTO CABINET (Contd)

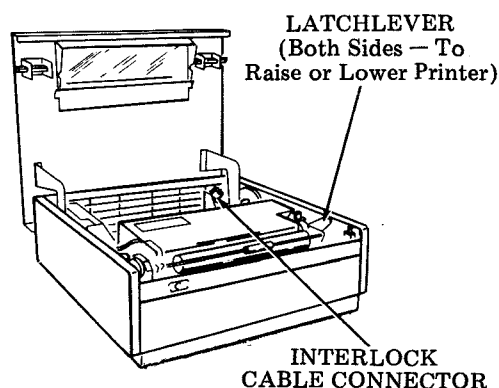
Friction Feed Printer (Contd)

- (d) Depress latchlevers, and push printer down until it latches. Connect interlock cable at right rear corner of printer as shown below.

Note: Installation of printer under monitor and printer adjacent is similar. For printer under monitor arrangement the printer mounting tracks slide out by releasing latches on both sides of the cabinet and pulling forward.



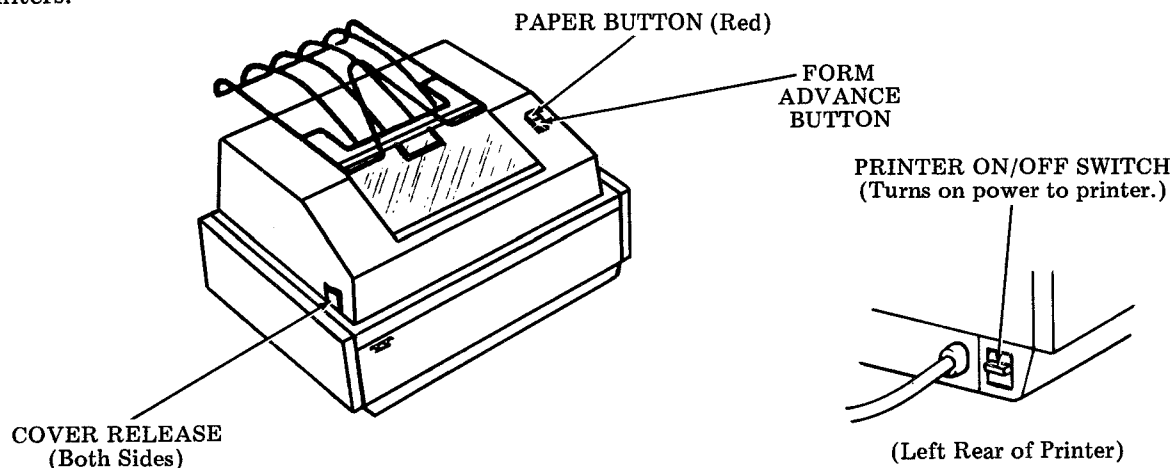
Printer Under Monitor



Printer Adjacent

Tractor Feed Printer

The tractor feed printer uses standard fanfold paper. Multicopy allows up to five copies plus the original. Width of paper between feed holes can be between 3-5/8 inches to 9 inches (paper width 4-1/4 inches to 9-1/2 inches) for 80-column printers; up to 14-1/2 inches (paper width up to 15 inches) for 132-column printers.



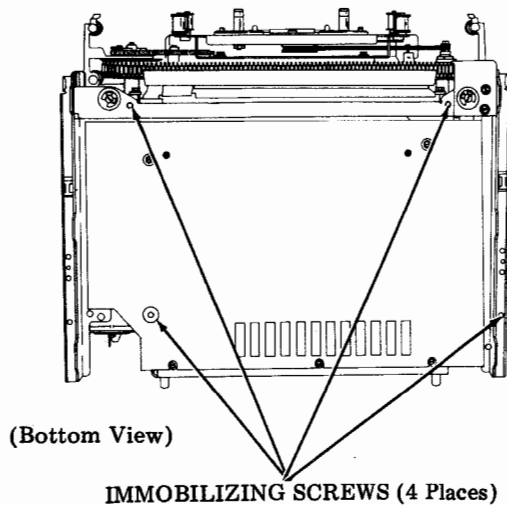
(Red) When depressed, form feed-out will be continuous until button is released. Button lights when an out-of-paper or paper jam condition exists. Replenish paper supply or clear paper jam to extinguish lamp.



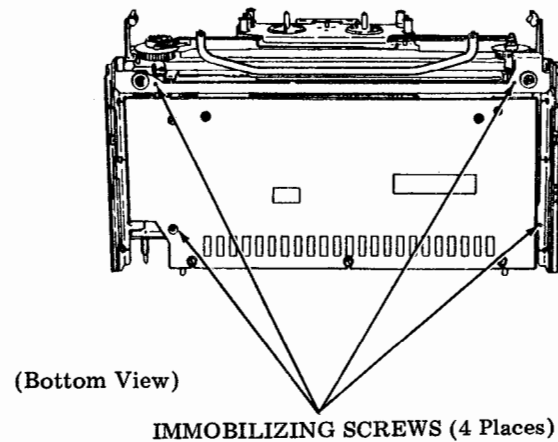
(Black) When depressed momentarily, forms will advance until next initialized form position is reached (if FORMS switch on printer is in the ON position). If FORMS switch is in OFF position, form feed-out is continuous, paper feeds out until button is released.

- (a) Loosen four immobilizing screws a minimum of four turns until base rides freely on the shock mounts as shown below.

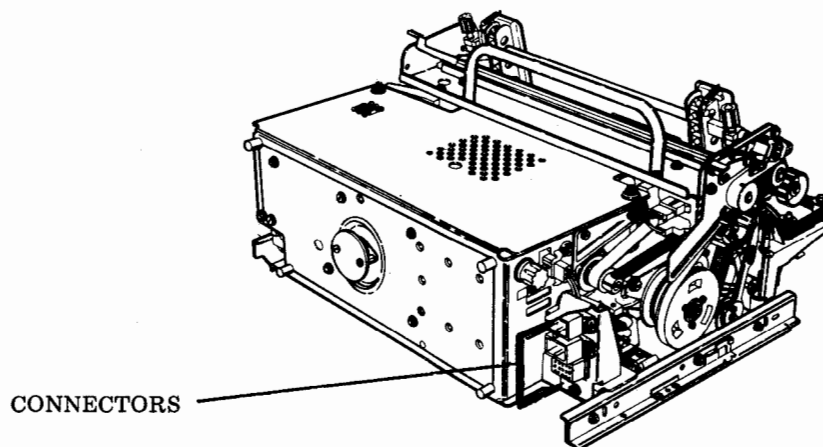
80 Column



132 Column



Slide the printer in place. Make sure that two latches on either side are fully engaged; also make sure that three connectors at the rear of the printer are fully seated as shown in illustration below.



Connectors on Tractor Feed Printer

2. INSTALLATION (Contd)

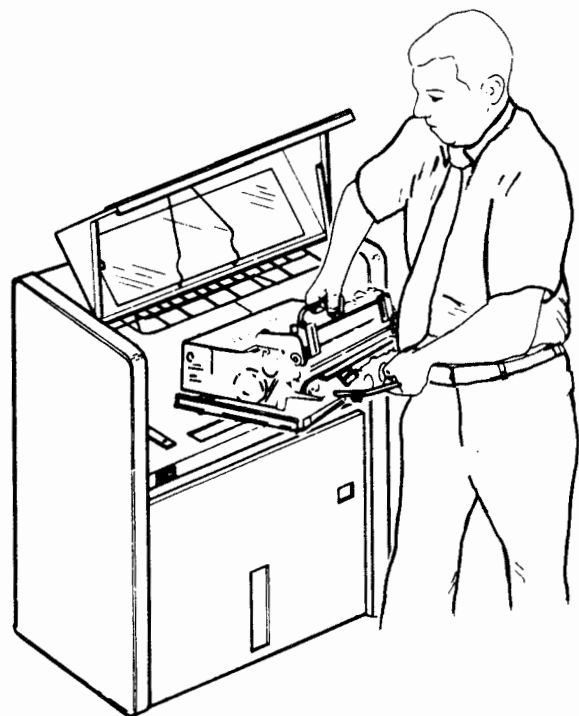
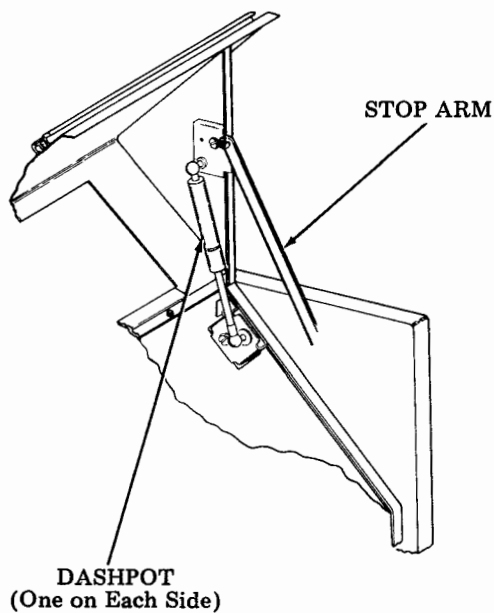
INSTALL PRINTER INTO CABINET (Contd)

Tractor Feed Printer — 132-Column (Floor Mounted Cabinet)

Caution: The printer is heavy and awkward to lift. Safe handling procedures should always be used when lifting or transporting the printer.

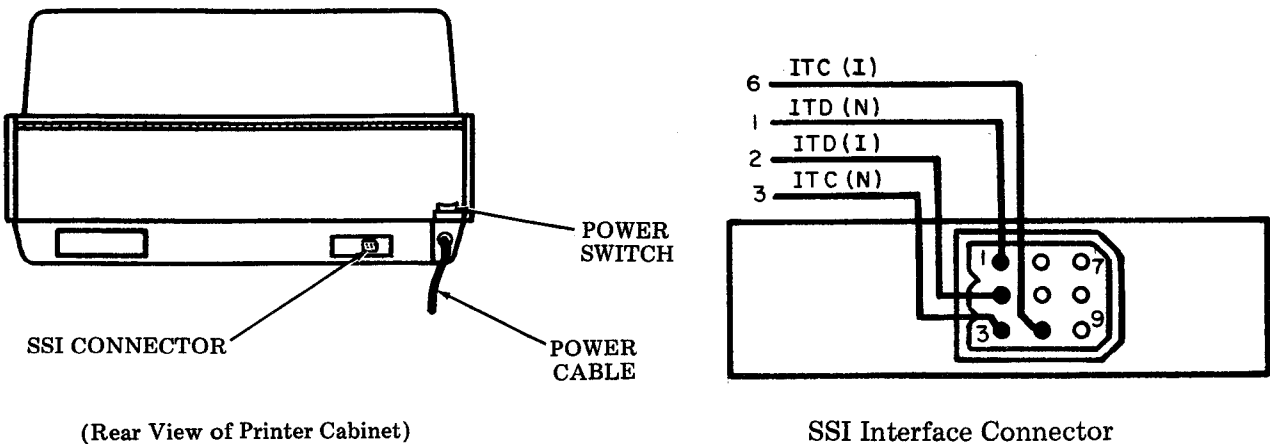
- ① Raise the lid of the cabinet all the way up until it latches in the fully open position.
- ② Remove the printer from the work area by placing both hands on the printer, one hand on the top bar and the other hand on the front handle.
- ③ Grasp the top and front handles of the printer, align printer to tracks in the cabinet and slide printer to the rear until fully seated. If top printer handle strikes paper guide, push guide up and finish pushing printer in. With the printer properly seated, all power and SSI connections will be made to cabinet.

Note: Cabinet with dashpots: Lift up until dashpot pistons are fully extended.

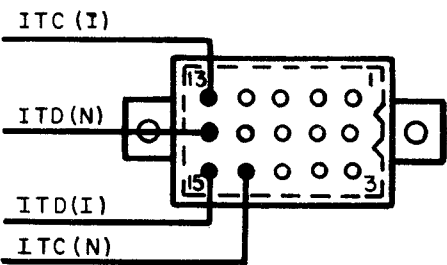


PRINTER TERMINAL CONNECTIONS (SSI)

Listed below are the standard pin numbers and functions for the Model 40 SSI cabling at the printer cabinet interface.



SSI PIN (Interface)	J115 ON TRACTOR FEED PRINTER
1 (ITD) Input To Device (Normal)	14 ITD (N)
2 (ITD) Input To Device (Inverted)	15 ITD (I)
3 (ITC) Input To Controller (Normal)	12 ITC (N)
6 (ITC) Input To Controller (Inverted)	13 ITC (I)

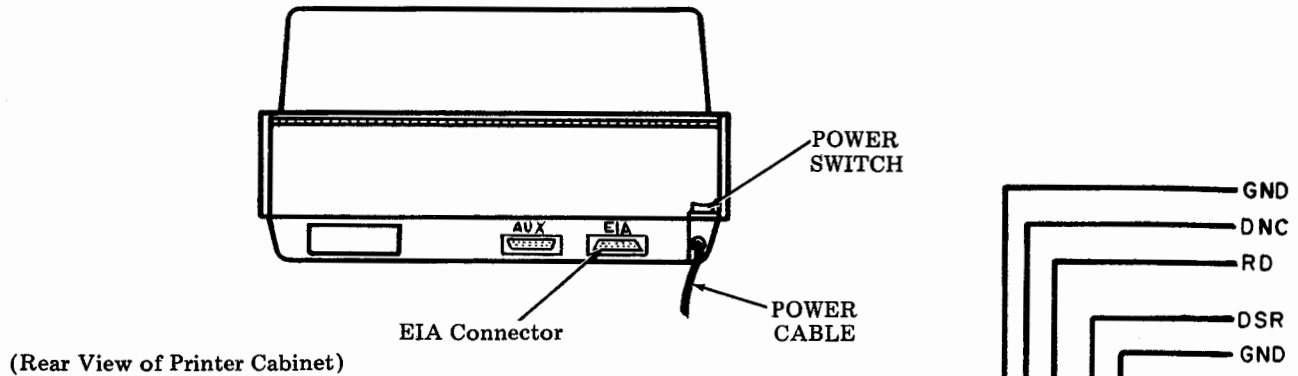


J115
Printer Connector

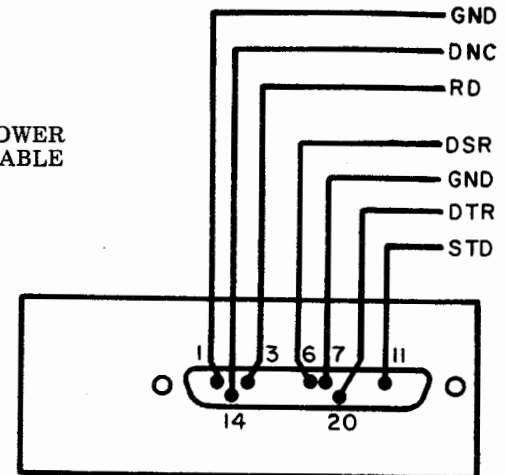
2. INSTALLATION (Contd)

PRINTER TERMINAL CONNECTIONS (EIA)

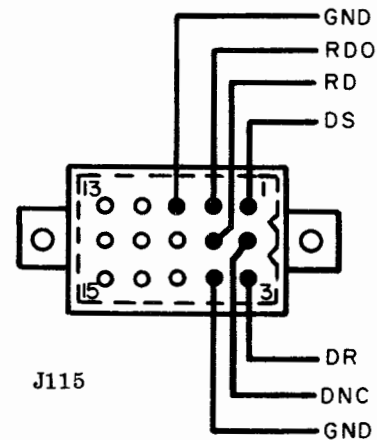
The printer terminal connections consist of the following signal circuits.



EIA PIN (Interface)	J115 ON TRACTOR FEED PRINTER
1 Protective Ground* (FG)	7 Frame Ground
7 Signal Ground* (SG)	6 Logic Ground
3 Received Data-10 bits per character (1 start, 7 information, 1 parity, 1 stop) (RD)	5 Data (to Printer) Received
6 Data Set Ready † (motor held on when DSR is on)	4 Request Device On (to Printer)
20 Data Terminal Ready (Indicates power on and absence of alarm conditions. Low paper, paper-out, jams, etc cause this lead to turn off immediately.) (DTR)	1 Device Selectable (from Printer)
14 Device Next Character (to be turned on when a new character can be accepted). (DNC)	2 Device Next Character (from Printer)
11 Secondary Transmitted Data (indicates motor is on and running at printing speed). (STD)	3 Device Ready (from Printer)



EIA Interface Connector



Printer Connector

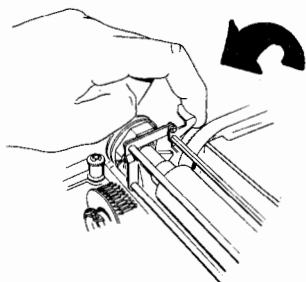
*Signal Ground and Frame Ground should be tied together internally by selecting an option on the power supply circuit card, or externally by the user.

†Use of the idle line motor control option causes the printer motor and DTR signal to turn off after 40 seconds of idle line. The DSR signal must then be made to toggle, off and then on, to reestablish the line. Because of this condition, use of the idle line motor control option is not recommended.

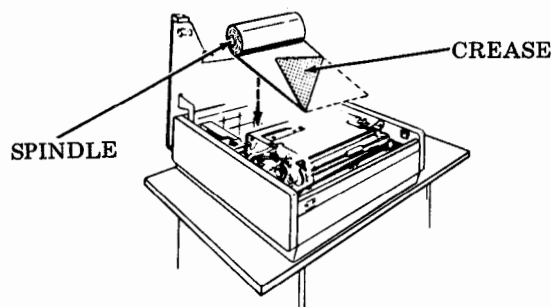
3. PAPER LOADING

FRICTION FEED PRINTER

- (a) Turn off printer power switch.
- (b) Pull pressure roller release lever up and to the front.
- (c) Insert spindle in new roll; crease end of paper as shown and install paper roll into printer enclosure as shown below.

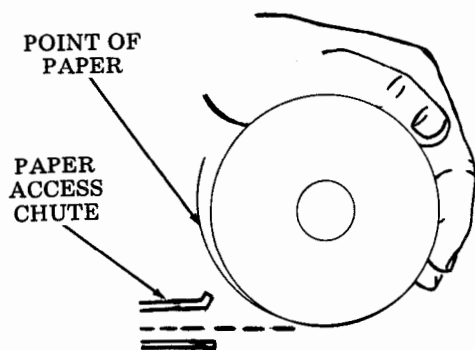


Pressure Roller Release Lever

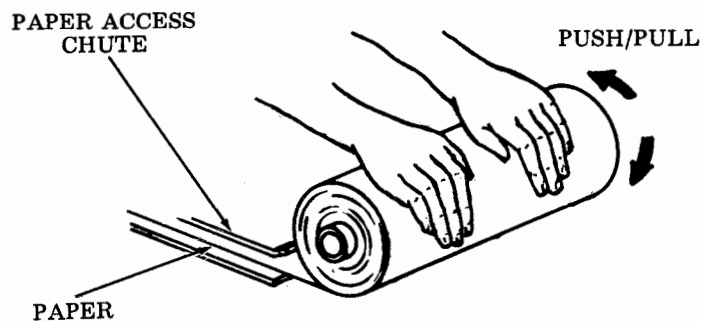


Paper Forming Prior to Installation

- (d) Back up roll until point of paper drops behind lid of paper access chute.
- (e) Rotate paper roll as shown to feed paper through printer. It will be necessary to push and pull paper roll slightly. Use both hands on paper roll for even pressure on paper as shown below.



Feeding Paper in Chute



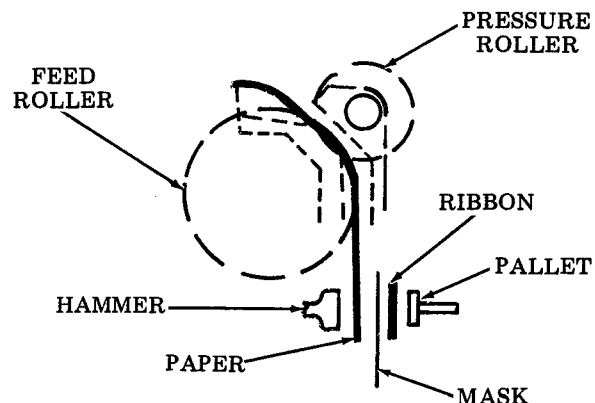
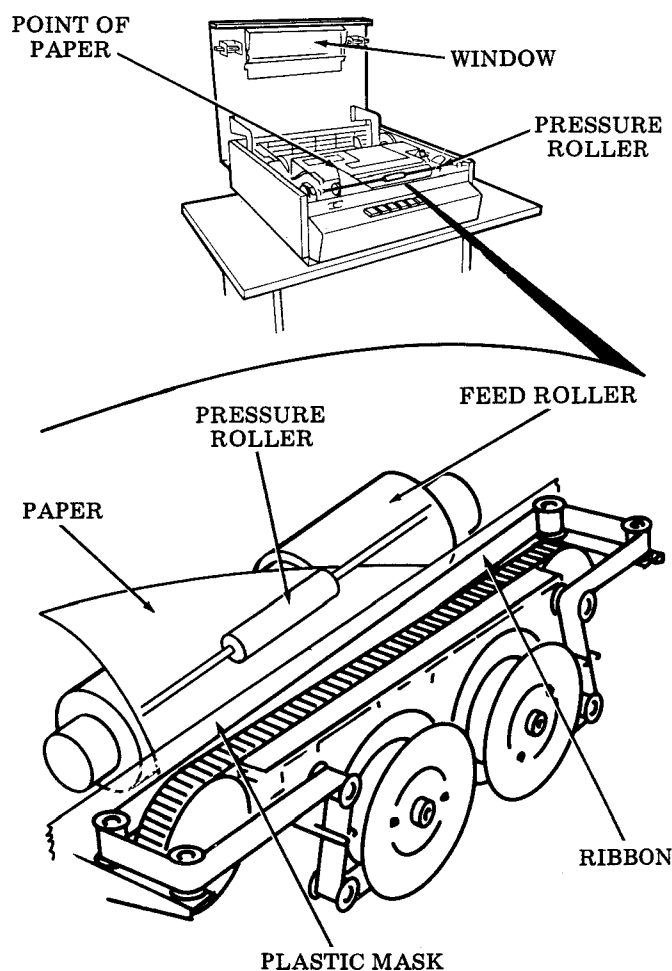
Rotating Paper Roll

3. PAPER LOADING (Contd)

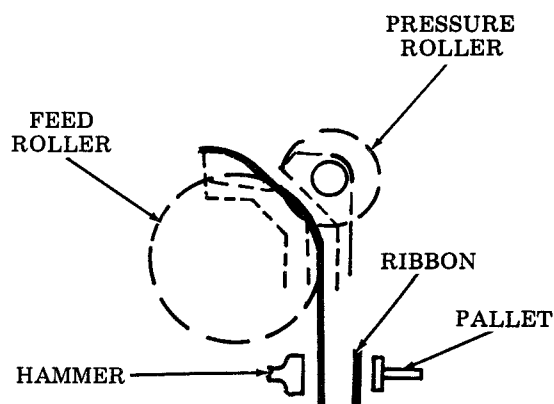
FRICTION FEED PRINTER (Contd)

If the paper path is obstructed for any reason, or if the printer is equipped with acoustical noise reduction parts, it will be necessary to raise the printer and open paper access chute.

- (a) With printer raised and paper access chute opened, feed paper by hand up behind the mask and between the feed roller and pressure roller. (The mask is a plastic piece mounted between the ribbon and the feed roller. An opening in the mask allows for the ribbon to contact the paper during printing as shown below.)
- (b) Grasp end of paper and pull through (approximately 12 inches). Close the paper access chute and lower the printer. Align edge of paper with edge of roll and return pressure roller release lever to engaged position. Feed the end of the paper through the opening in the cover and close the cover while keeping the paper taut.



Friction Feed Printer Equipped With Noise-Reduction Parts



Friction Feed Printer Without Noise-Reduction Parts

If printer is not equipped with acoustical noise-reduction parts, proceed as follows:

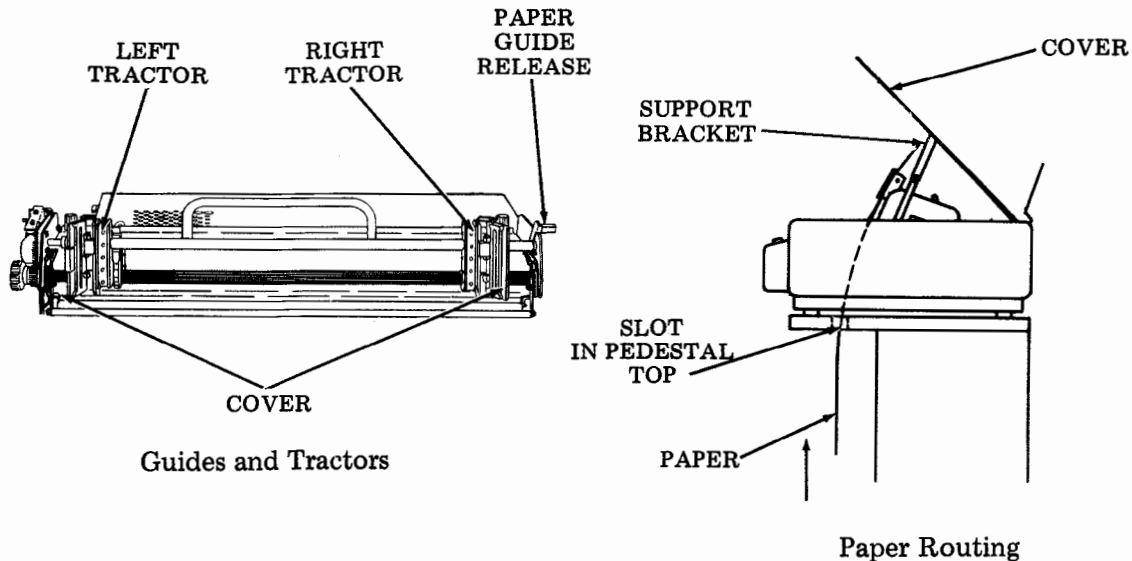
- (a) Rotate paper until leading edge appears under pressure roller shaft. Be sure paper is not between type pallets and ribbon.
- (b) Pull through approximately 12 inches of paper and align edge of paper with edge of roll. Return pressure roller release lever to engaged position, insert paper through window opening and close cover.

TRACTOR FEED PRINTER — 80- AND 132-COLUMN

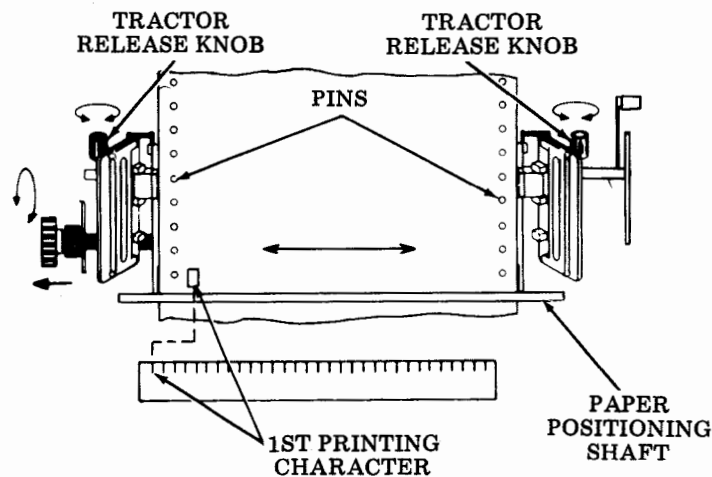
- (a) Release paper guides and open tractor covers as shown below.
- (b) Insert sprocket paper in slot under the table in front of the set.

Note: If multiple forms separate, fold one form down and insert paper.

- (c) Feed paper up through printer, guide paper in back of ribbon and between upper paper guides as shown below.



- (d) Pull paper up and align holes on the paper with the pins on the left tractor. Close the left tractor lid.
- (e) Set the left tractor for left margin. Note that the left tractor can be placed in position one through seven as shown below.



Left and Right Tractor Positioning

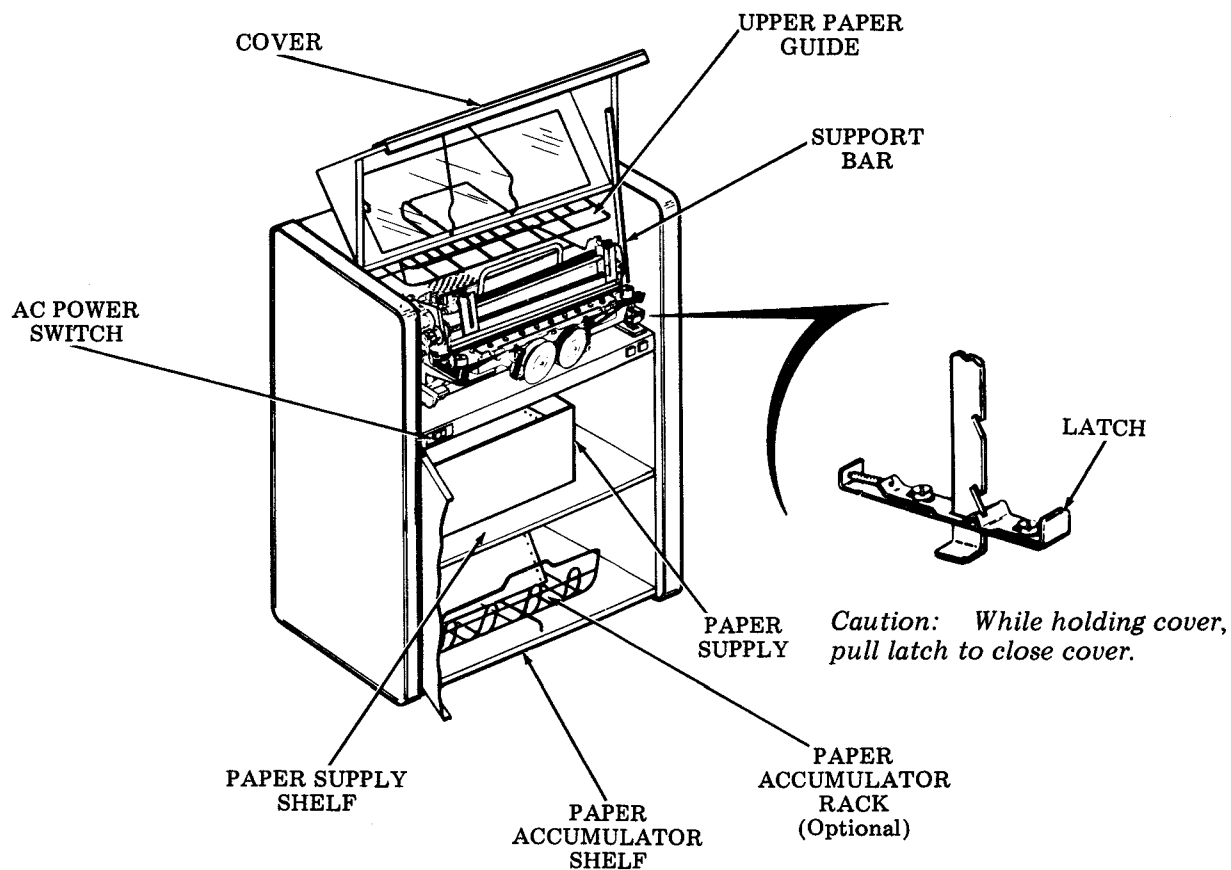
3. PAPER LOADING (Contd)

TRACTOR FEED PRINTER — 80- AND 132-COLUMN (Contd)

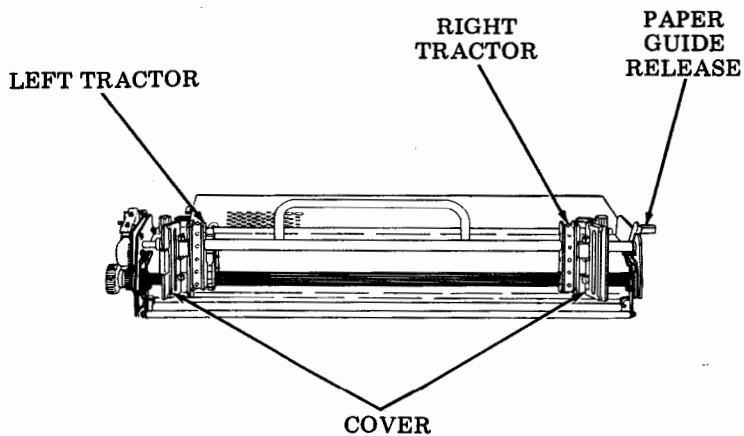
- (1) Loosen the left tractor release knob and slide the tractor to the desired left margin position using the scale on the printer as reference.
 - (2) Tighten the left tractor release knob. Close the tractor cover.
- (f) Position the right tractor to accept the form width:
- (1) Loosen the right tractor release knob.
 - (2) Align tractor pins with holes in paper. Close tractor cover.

TRACTOR FEED PRINTER — 132-COLUMN FLOOR MOUNTED CABINET

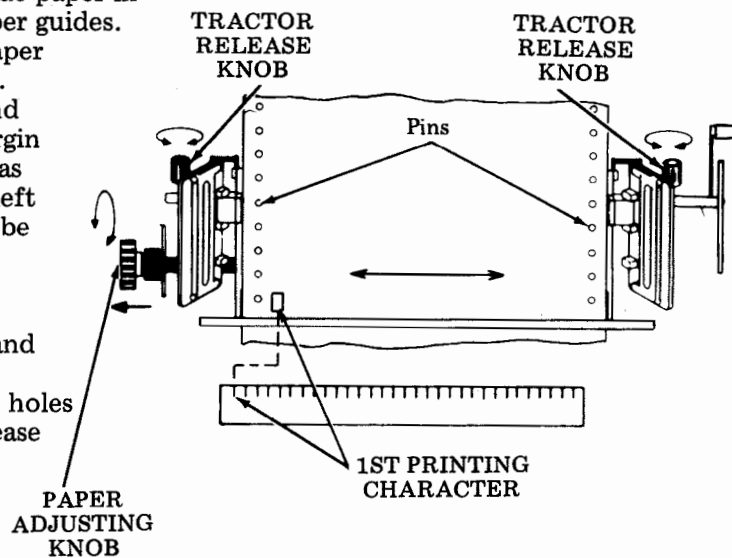
- (a) Turn off ac power switch. Raise cabinet cover to its highest latched position as shown below.
- (b) To access paper supply or paper accumulation in bottom of cabinet, open paper access door by sliding door latch to the left and pulling door open.



- (c) Release paper guide and open tractor covers.



- (d) Place new paper supply on shelf below printer shelf. Be sure to align paper supply directly below printer so that paper does not feed into printer on an angle.
- (e) Push, then pull paper up through slot in printer shelf (under printer). If multiple forms separate, fold one form down and insert paper.
- (f) Feed paper up through printer and guide paper in back of ribbon and between upper paper guides.
- (g) Pull paper up and align holes on the paper with pins on the right and left tractors.
- (h) Loosen the left tractor release knob and slide the tractor to the desired left margin position using the scale on the printer as reference. Set the left tractor for the left margin. Note that the left tractor can be placed in position one through seven.
- (i) Tighten the left tractor release knob.
- (j) Close the tractor cover.
- (k) Loosen the right tractor release knob and position the right tractor to accept the form width; align the tractor pins with holes in paper. Tighten the right tractor release knob.



Left and Right Tractor Positioning

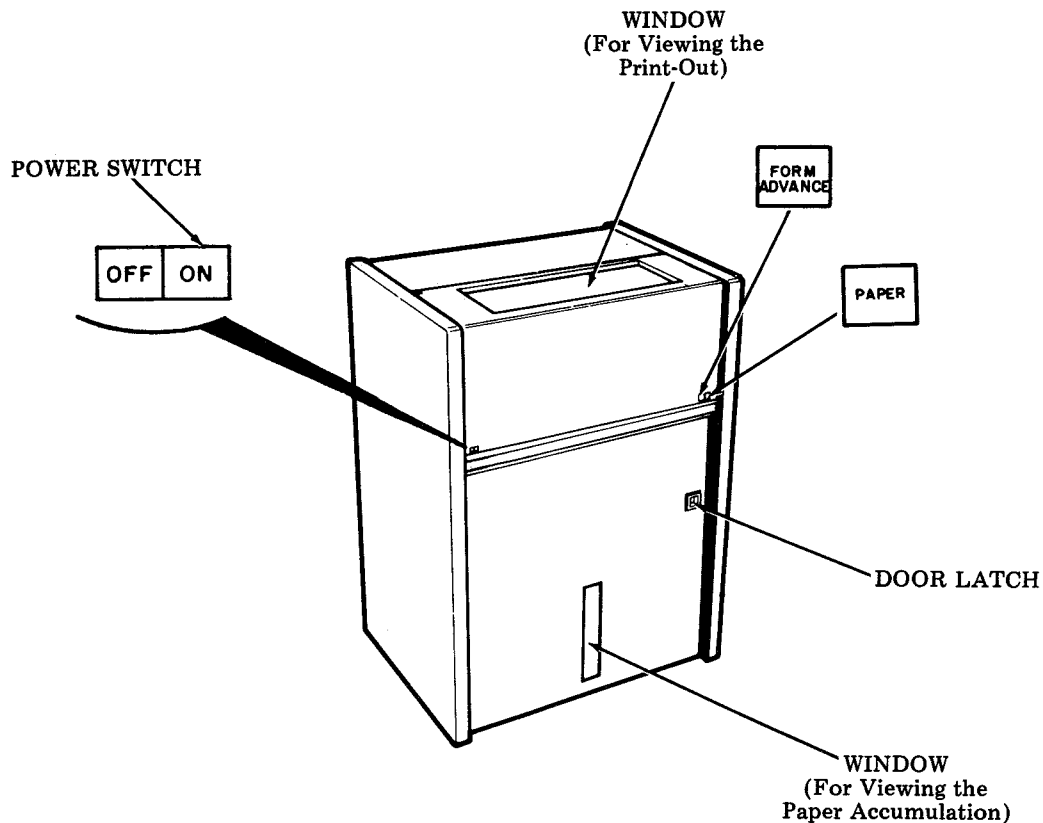
3. PAPER LOADING (Contd)

TRACTOR FEED PRINTER — 132-COLUMN FLOOR MOUNTED CABINET (Contd)

- (l) Close tractor cover and push back the paper guide release.
- (m) Using the paper adjusting knob, feed enough paper out of the printer to be able to route the paper into the upper paper guide.

Caution: Use two hands and slowly close the cover releasing the cover latch lever.

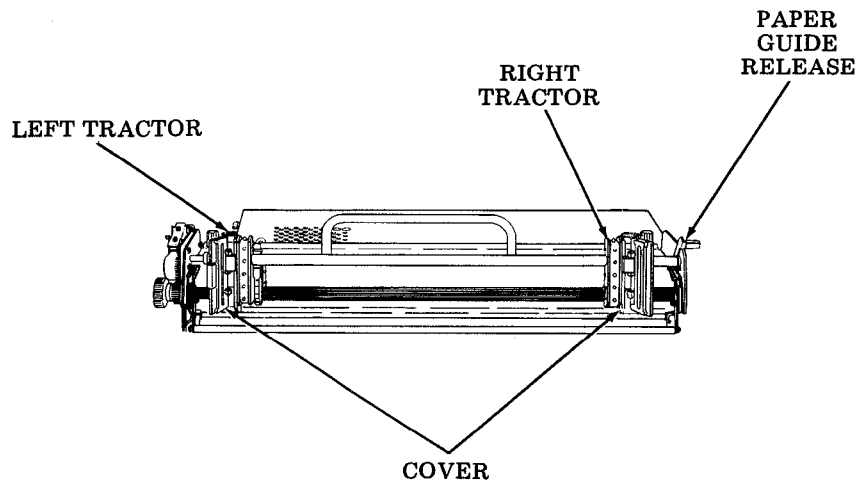
- (n) Plug in the ac power cord to an outlet and turn power switch on.
- (o) Depress the PAPER button and allow paper to accumulate in the bottom of the cabinet. Check by viewing through window that paper is folding correctly. Depress the FORM ADVANCE button and verify a form advance.



Forms Registration

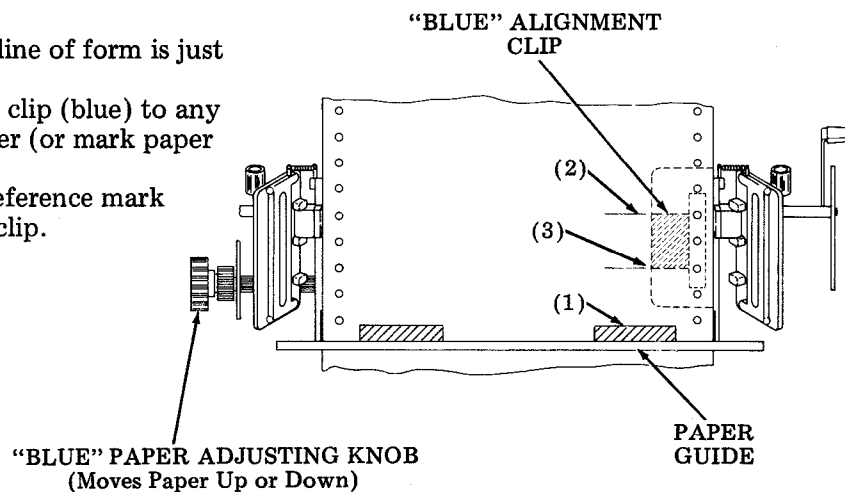
If forms are being used (with the FORMS switch ON), depress  button momentarily. This will assure the first line position of the form advance mechanism when paper is replaced.

- (a) Turn off power.
- (b) Open cover and paper access door.
- (c) Release paper guide and open tractor covers.



- (d) Remove remaining forms and the existing form supply box (if present). Place a new form supply on the shelf below the printer shelf. Be sure to align the form supply directly below the printer so that the forms do not feed into the printer on an angle.
- (e) Push, then pull the forms up through the slot in the printer shelf (under printer).
- (f) Feed forms up through printer (in back of ribbon and between the upper paper guides).
- (g) Pull the form up; align the holes with the pins on the tractors.
- (h) Close tractor covers and swing the paper release back. (Reset paper jam alarm on the left tractor if present.)
- (i) Pull out on the paper adjusting knob (blue); turn to align the form to the printer for the first line of printing as follows:

- (1) Position paper so first line of form is just above paper guide.
- (2) Position top alignment clip (blue) to any reference mark on paper (or mark paper with pencil).
- (3) Move paper down so reference mark aligns with bottom of clip.



Note 1: Dotted lines show position of alignment clip and tractor cover when closed.

3. PAPER LOADING (Contd)

TRACTOR FEED PRINTER — 132-COLUMN FLOOR MOUNTED CABINET (Contd)

Form Registration (Contd)

Note 2: It will be necessary to reset the paper jam alarm after paper is moved down. Refer to Paper Jam Alarm section.

- (j) Close cover, turn on printer power and depress  to verify proper form feedout.

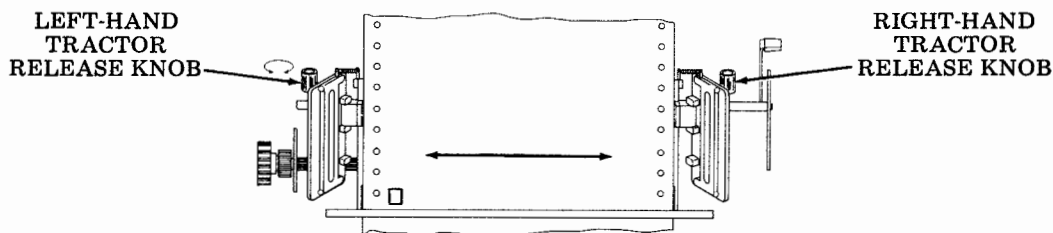
Horizontal Form Alignment

Note: Changing the margins or changing to a different form width will require a realignment of the left or right tractors.

To align the printer for a new form width:

If forms are being used, operate FORM ADVANCE button momentarily before turning power off and opening cover to assume first line position of form advance mechanism.

- ① Loosen right tractor release knob and have tractor covers open.
- ② Route paper up through bottom in usual way.



- ③ Place paper in left-hand tractor and close tractor cover.
- ④ Move right-hand tractor to align pins with holes in paper. Close tractor cover.

Note: Be sure paper is not under stress or wrinkled when placed between tractors.

- ⑤ Tighten right-hand tractor release knob.
- ⑥ Pull out paper adjusting knob and adjust to first line of form.

If left-hand margin does not require realignment:

Check setting of paper jam alarm (refer to Paper Jam Alarm section) and close cover. Turn power on. Depress FORM ADVANCE until first form is observed lying flat on paper accumulator shelf. It may be necessary to aid the form in lying flat by reversing the fold.

To align left-hand margin:

- ① Loosen left knob and slide tractor assembly to align first position on paper with first printing character position on scale.
- ② Check setting of paper jam alarm (refer to Paper Jam Alarm section) and close cover. Turn power on. Depress FORM ADVANCE until first form is observed lying flat on paper accumulator shelf. It may be necessary to aid the form in lying flat by reversing the fold.

Paper Jam Alarm

The paper jam alarm will cause the printer to stop printing and the PAPER button to light under the following conditions:

- ① Paper buckle between the top of the printer and paper accumulator shelf.
- ② Paper misalignment, due to feed hole elongation or improperly inserted forms in either tractor assembly.
- ③ Poor hole alignment of multiple forms.
- ④ A tear along the horizontal perforations causing paper misalignment in either tractor assembly.
- ⑤ Form supply box not aligned properly in relation to the printer. This could cause a jam if the form is misaligned in the tractors.

Note: Several lines of copy may be lost prior to a paper jam.

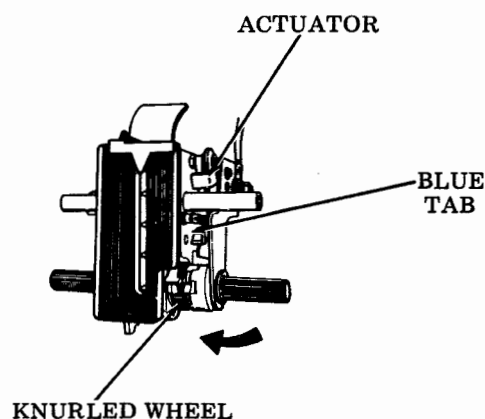
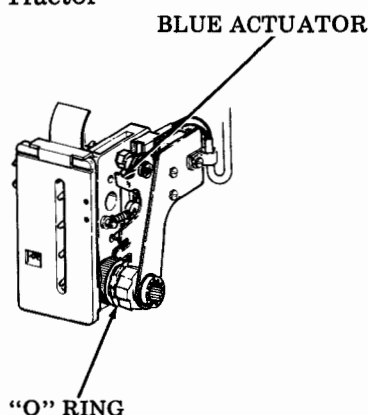
The paper jam alarm is a manual reset device that requires six steps to reset and turn off the PAPER button lamp. It will be necessary to reset the jam alarm mechanism if the form is manually reversed, or after clearing a paper jam.

To Reset Paper Jam Alarm:

- ① Turn off printer power and open cover.
- ② Open left-hand tractor cover.
- ③ Rotate the "O" ring or the knurled wheel toward the rear (pushing on the top of the "O" ring or knurled wheel) until it stops.
- ④ Push on blue actuator or the blue tab until it detents into a reset condition.
- ⑤ Restore paper and close tractor cover.
- ⑥ Close cabinet cover and turn on power.

Caution: If paper was removed from left tractor, be sure paper is not under stress or wrinkled when replaced in tractor.

Left-Hand Tractor



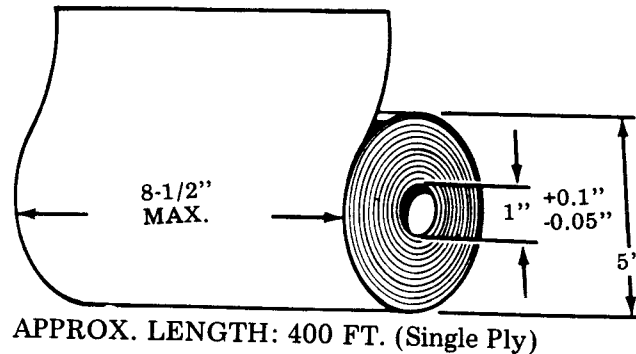
3. PAPER LOADING (Contd)

PAPER AND FORMAT DATA

Friction Feed Printer

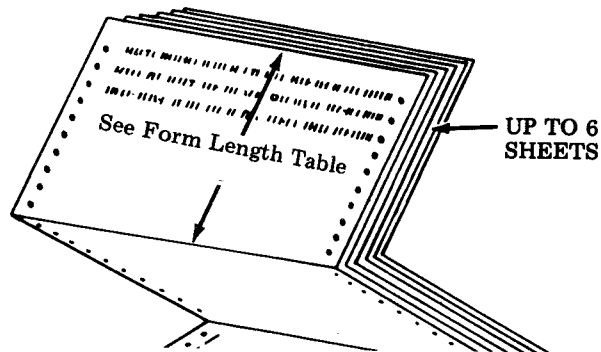
The printer will accommodate single copy friction feed paper, 8-1/2 inches wide and five-inch teletype-writer paper roll with a one-inch diameter core.

Rolled Paper



Tractor Feed Printer

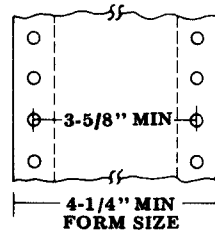
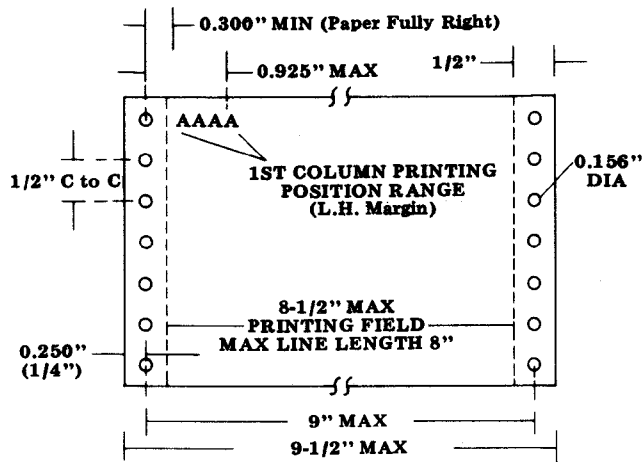
The printer will accommodate various form widths and lengths. It is capable of printing from one original plus five copies. If various paper weight is used, the heavier paper should be to the back of the form.



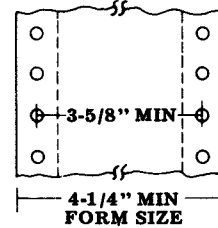
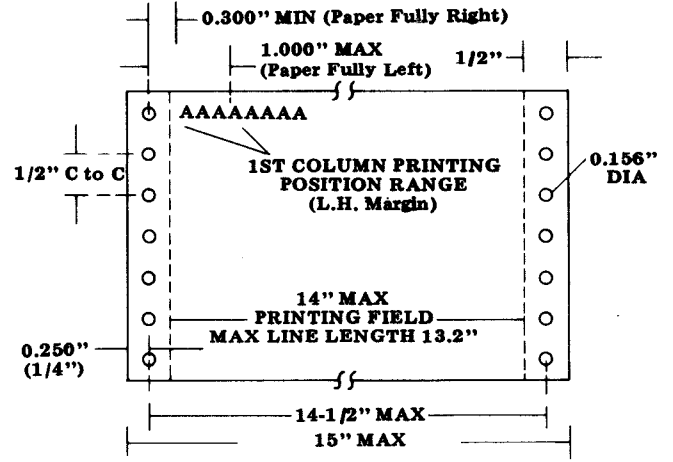
It is recommended that if single-ply basic forms are used, a maximum of 15 pound basic weight, white bond paper (continuous without splices) be used. For original plus up to five copy forms, a maximum of 12 pound weight per page is recommended with 8 pound tab black carbon interleaves. Use of heavier paper than this is not recommended. In any case when it is desired to vary from the above, the variation must be tried for feasibility in such areas as copy legibility and paper handling.

Note: Excessive humidity changes may necessitate a tractor readjustment to accommodate paper dimensional changes. Normally the tractor drive pins should be centered in the paper sprocket holes.

80-Column Tractor Feed Printer



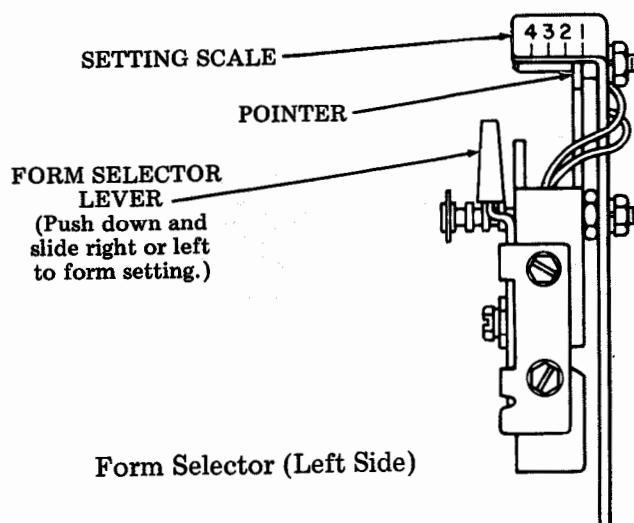
132-Column Tractor Feed Printer



4. FORM LENGTH

FORM SELECTOR

The form selector is located under the cover on the left side of the printer. The settings on the scale will provide four form lengths for each form belt. (Refer to Belt and Form Length Table.) The dark blue belt is standard.



Form Selector (Left Side)

Caution: After changing position of form selector lever, close cover, turn on power and depress **FORM ADVANCE** button momentarily. If forms continuously feed out, turn off power and open cover and verify that the form selector lever is fully seated in slot.

FORM BELT REPLACEMENT

Belt replacement is required when lengths on the standard belt do not conform to the paper used. Form belts can be ordered from Teletype Corporation, 5555 West Touhy Ave., Skokie, Ill., 60077, Service Parts (312) 982-2510. The table below shows the color of belt, form lengths and the part numbers at each of the form selector settings. The complete set of belts can be ordered from Teletype Corporation by part number TP402586 or frequently used (*) belts by number TP402587.

Note: When ordering replaceable parts or components, unless otherwise specified, prefix each part number with the letters "TP" (ie, TP410055).

BELT AND FORM LENGTH TABLE

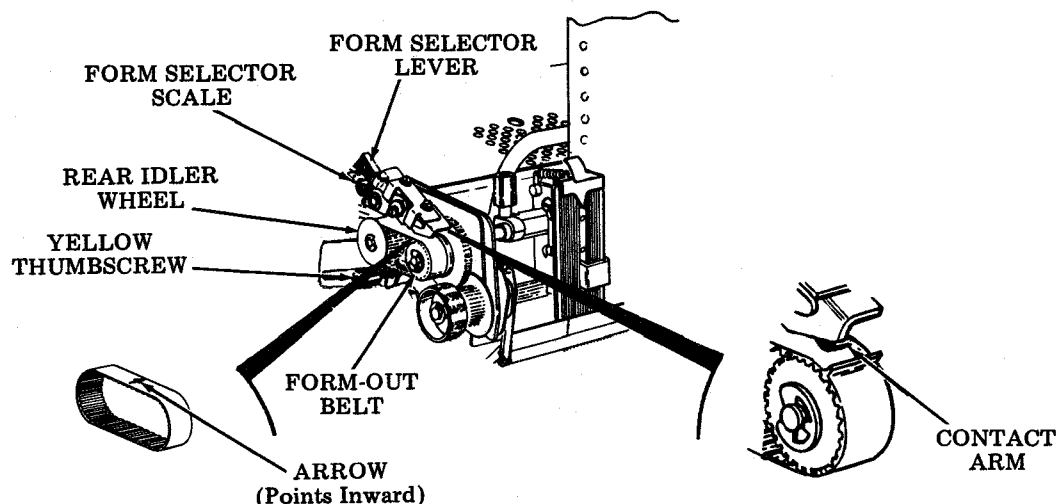
Form Selector Setting				TP Part No.	Color of Belt
4	3	2	1		
Length of Form, Inches					
3-1/3 †	2-1/2	5	10	402571 *	Amber
3-2/3 †	2-3/4 *	5-1/2	11	402572 *	Dk Blue
4	3	6	12	402573 *	Yellow
4-1/3 †	3-1/4 *	6-1/2	13	402574	Brown
4-2/3 †	3-1/2	7	14	402575 *	Red
5	3-3/4 *	7-1/2	15	402576	Pink
5-1/3 †	4	8	16	402577 *	Lt Green
5-2/3 †	4-1/4 *	8-1/2	17	402578	Dk Green
6	4-1/2	9	18	402579	Lt Blue
7-1/3 †	5-1/2	11	22	402580	White

*Not operable on 6 to the inch line spacing printers.

†Not operable on 8 to the inch line spacing printers.

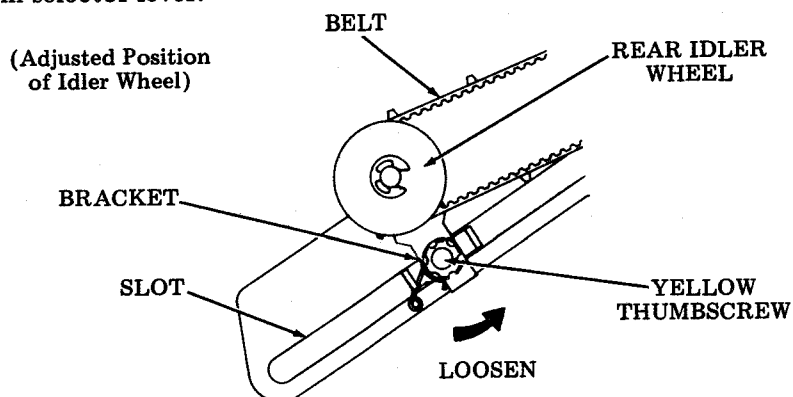
4. FORM LENGTH (Contd)

FORM BELT REPLACEMENT (Contd)



To remove belt:

- (a) Turn off printer power switch.
- (b) Loosen yellow thumbscrew (counterclockwise) and slide bracket forward to remove tension.
- (c) Depress and hold form selector lever so that contact arm clears the belt.
- (d) Move rear (idler) wheel forward to loosen belt.
- (e) Remove belt by sliding it to the left.
- (f) Release form selector lever.



To replace belt:

- (a) Move rear idler wheel forward to install new belt.
- (b) Depress and hold form selector lever while holding rear idler wheel forward.
- (c) Position new belt on wheels so that arrow on belt points inward (toward printer).
- (d) Release form selector lever.
- (e) Position rear wheel back to remove slack in belt.
- (f) Have bracket at right angle to slot as shown above.
- (g) Tighten yellow thumbscrew clockwise.
- (h) Set form selector lever as required. (Refer to Belt and Form Length Table.)
- (i) Check vertical form alignment and reset paper jam alarm (if required).
- (j) Close cover and turn on printer power switch.
- (k) Depress FORM switch four times and check the stop positions.

Note: If form stop positions do not correspond to the form lengths, the belt may be reversed or the incorrect belt used. Check Belt and Form Length Table.

The 80-column tractor feed printer is factory adjusted for a standard original plus five copies. The 132-column tractor feed printer is factory adjusted for a standard original plus three copies. This adjustment may suffice for most installations, including installations requiring single copy. Examine copy for print quality (ink smudge). If necessary, refine the following Paper Positioner adjustment using the paper required in the particular installation.

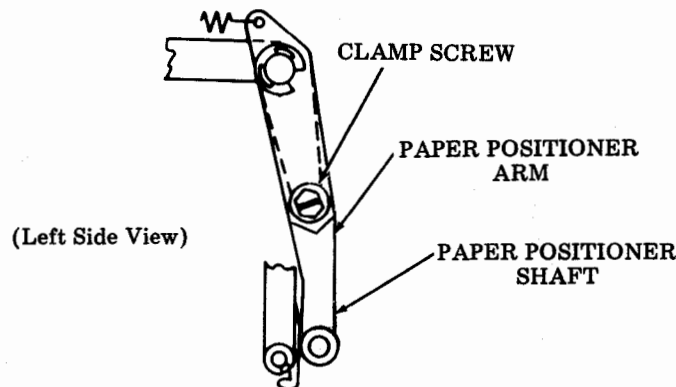
PAPER POSITION (Under Power) (80- and 132-Column Tractor Feed)

Requirement (A)

The paper should be positioned as close to ribbon as possible without causing printed copy to become illegible due to ribbon smudging after a one minute printer idle period.

Requirement (B)

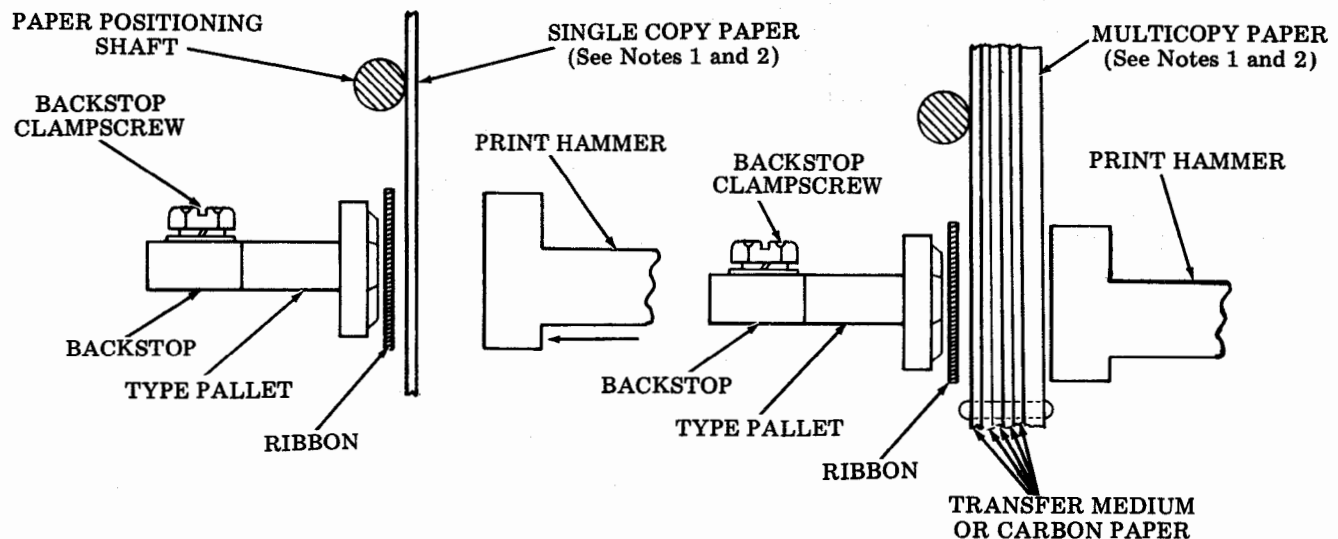
There should be no smudge when printing a text message (not the font identification symbol).



Note 1: These requirements do not apply when printing within two lines of a fold of fanfold paper.

To Adjust

Loosen clamp screws on left and right paper positioner arms and adjust arms to just eliminate marking on either side of paper. Paper should remain as close as possible to ribbon without marking to minimize impact noise and vertical misalignment. Tighten clamp screws.



Staples or other means of fastening copies together should not be used until tested to insure that their presence will not interfere with the ribbon, printer hammers, or type pallets.

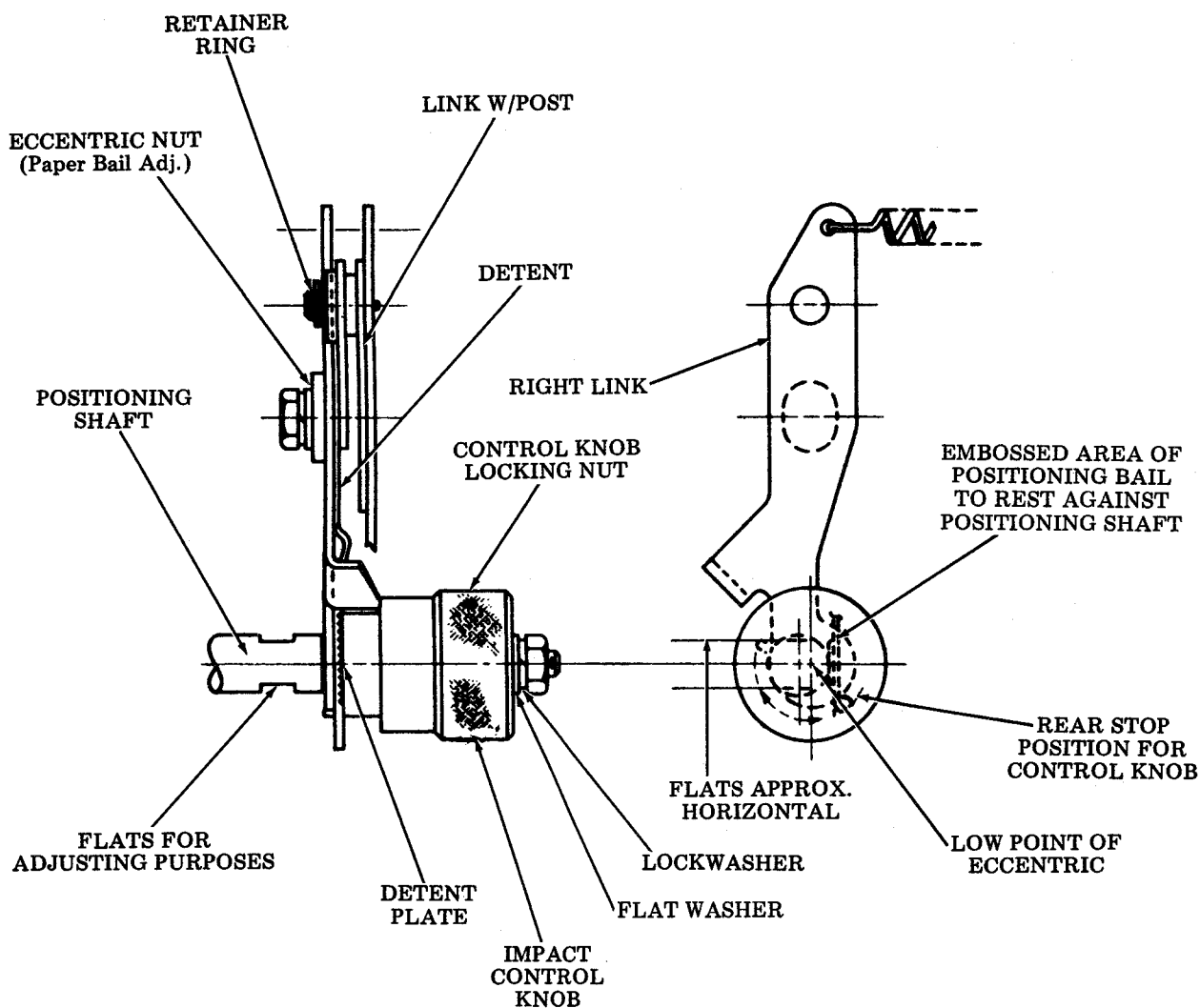
Note 2: The factory final adjustment is made for a standard original plus three copies paper on the 132-column printer and for a standard original plus five copies paper on 80-column printer. Upon installation a refinement of this adjustment may be necessary dictated by the actual paper weight and number of copies being used.

4. FORM LENGTH (Contd)

IMPACT CONTROL MECHANISM (132 Column Only)

The impact control mechanism will allow the operator to position the paper in the printer and obtain optimum print quality with minimum ribbon smudge for both single and multi-ply paper.

The impact control knob is located on the right front side of the printer and just above the type carrier. This knob may be rotated clockwise or counterclockwise to obtain optimum print quality with minimum ribbon smudge (refer to illustration below).



5. INSTALLATION CHECKOUT

PRELIMINARY REQUIREMENTS

- (a) Type carrier installed.
- (b) Ribbon and paper loaded.
- (c) Cabinet covers and doors closed.
- (d) Power cord plugged in. AC power ON-OFF switch in the ON position.
- (e) Check that fan in cabinet is moving air (except in 17-inch friction feed cabinet).
- (f) Check that the PAPER alarm indicator is off (located on front of cabinet). If the indicator is on, the paper alarm may be due to the paper jam alarm (if printer is so equipped) or a paper out condition.
- (g) Proceed with Local Test.

LOCAL TEST

The following local test will verify the printer's ability to print data in all columns. To perform the test, proceed as follows:

- (a) Raise printer cabinet cover.
- (b) Push TEST switch to ON and close the cabinet top cover. The printer will turn on and print a "font" identification symbol (≡×≡) in all columns until the switch is turned off.

Note: If the LF switch on the top of the printer is set for 1, printing will occur on each line. If the LF switch is set for 2, a blank line will occur between printed lines.

- (c) Open the printer cabinet top cover and turn off TEST switch and evaluate test results.
- (d) Test is complete.