

“DATASPEED\*” 40 PRINTER

DISASSEMBLY/REASSEMBLY AND PARTS

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## 1. GENERAL

1.01 This section provides disassembly/reassembly and parts information for the DATASPEED 40 printer (80-column friction and tractor feed, 132-column tractor feed, and 80-column forms access).

1.02 This section is reissued to incorporate 40P102 80-column friction feed printer (noise reduced), 40P154 80-column tractor feed printer, 40P253 80-column forms access printer, 40P202 132-column tractor feed printer, and updated disassembly/reassembly and parts information.

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

1.03 A convenient order for disassembly of the major subassemblies in the printer is provided in Part 2. Preceding the actual disassembly procedures for each printer are line drawings showing the location of the major subassemblies. Further disassembly to the parts level can be accomplished by referring to the illustrations in Part 3.

*Caution:* Certain parts of the major subassemblies cannot be reassembled without specialized techniques or equipment. Do NOT attempt to disassemble to levels beyond those specifically illustrated in Parts 2 or 3.

1.04 Refer to Section 570-005-800, "Maintenance Tools," for a complete listing of the various types of hand tools available for maintenance of TELETYPE® equipment.

1.05 Use 124828 maintenance pad to protect bench top or floor coverings from oil, grease, and dirt during disassembly and reassembly of the printer unit.

1.06 After disassembly and reassembly of the various mechanisms, certain adjustments must be remade to insure proper operation. These adjustments are listed in appropriate steps within the text. Refer to Section 582-210-700 if other adjustment requirements were accidentally disturbed during the disassembly procedures.

1.07 Before returning the printer to service, make a visual inspection to see if lubrication is required. See Section 582-210-700 for general lubrication requirements.

1.08 Retaining rings are made of spring steel and have the tendency to release suddenly upon removal. To minimize the loss of these retaining rings, it is suggested that the following procedure be followed:

- (a) Hold the retainer with one hand to prevent it from rotating.
- (b) Place the blade of a screwdriver in one of the slots of the retainer.
- (c) Rotate the blade of the screwdriver in a direction to increase the diameter of the retainer until it pops off gently against your finger.

1.09 Avoid loss of springs during disassembly by holding one end of the spring with your fingers while gently removing the opposite end from its attached point using a spring hook. DO NOT STRETCH OR DISTORT SPRINGS.

1.10 Reference in the procedures to left or right, up or down, and top or bottom, etc, refer to the printer in its normal operating position as viewed facing the ribbon mechanism.

*Caution: Do not attempt removal of any sub-assembly or part without first removing the printer from the cabinet. All ac power to the printer must be off during disassembly.*

1.11 Remove any paper supply which may be loaded in the printer. To remove the printer from the cabinet, reverse the procedures in Section 582-210-200 covering installation of the printer.

1.12 When removing a subassembly from the printer, do not force or pry any parts to provide the necessary clearance for removal. No force is required to accomplish a removal procedure. Follow the removal procedure and note how each part is removed and the sequence of its removal so that proper reassembly can be accomplished. For reassembly, reverse the removal procedure except where different instructions are given.

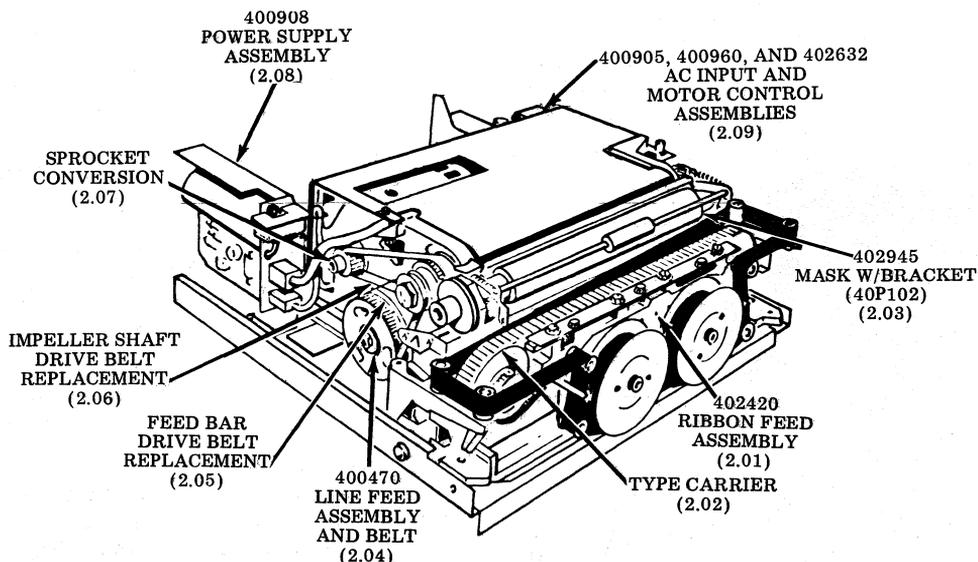
1.13 The following tools are recommended for use during the disassembly and reassembly procedures:

73404	Tommy wrench (2 required)
75503	Spring hook—push
75765	Spring hook—pull
89954	1/4-inch nut driver wrench
89955	5/16-inch nut driver wrench
95368	Screwdriver (2-inch)
100982	Screwdriver (6-inch medium)
108285	Long-nose pliers
108286	Cutting pliers
125752	3/16-inch nut driver wrench
129534	1/4-inch open end wrench
129535	3/4-inch open end wrench
152835	5/16-inch open end wrench
160396	Retaining ring pliers
346392	Static discharge strap
402840	Terminal extractor

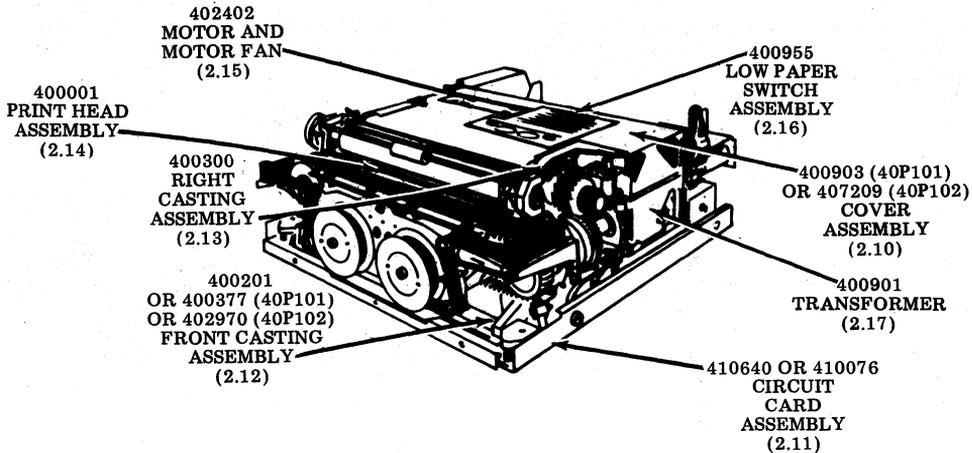
## 2. DISASSEMBLY AND REASSEMBLY PROCEDURES

### A. Friction Feed Printer

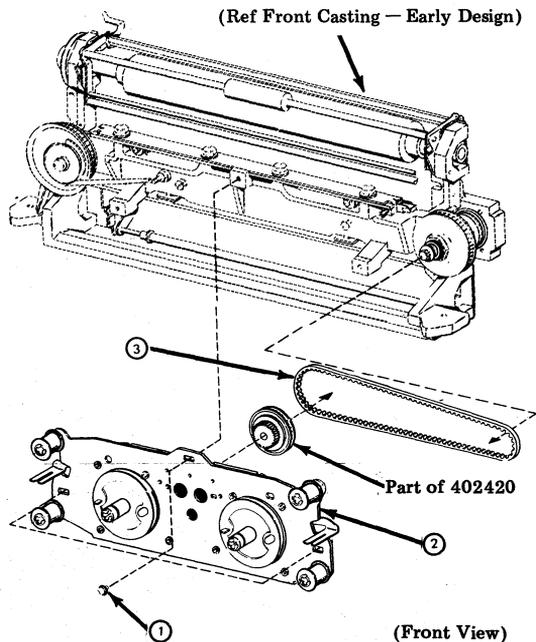
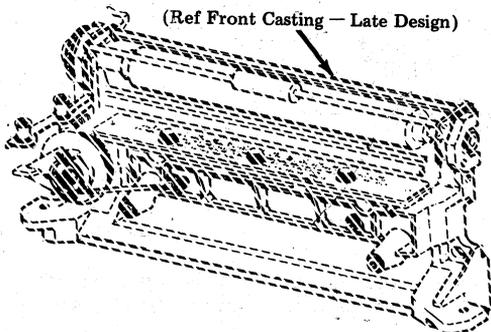
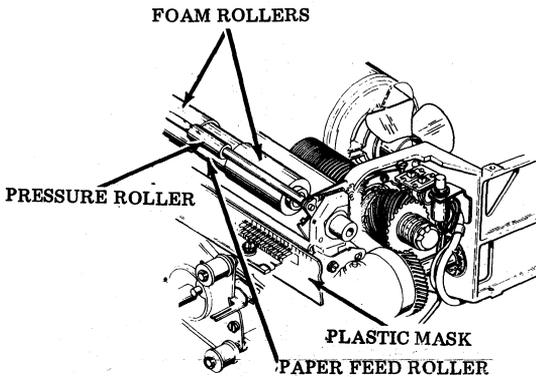
*Note:* Unless otherwise specified, assemblies are common to 40P101 and 40P102 printers.



*Note:* To remove a subassembly, go to the procedure referenced in parentheses. Number sequence does not imply a strict adherence to disassembly, as many subassemblies are independent of each other for removal.



*Note:* Foam rollers on the paper feed roller and plastic mask are peculiar to the 40P102 noise reduced printer or 40P101 printer equipped with acoustical noise reduction parts (407104 modification kit).

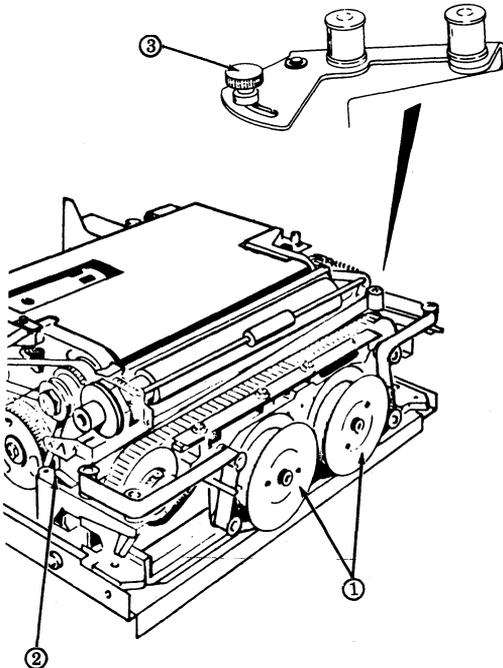


**2.01 402420 Ribbon Feed Assembly**

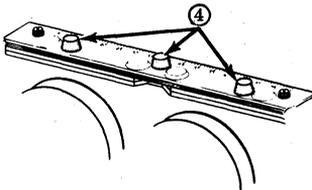
- Remove the ribbon (402444 — not shown).
  - ① Remove three screws w/lockwashers (184056).  
*Note:* Only two screws w/lockwashers (184056) are used with late design front casting.
  - ② Remove ribbon feed assembly (402420).
  - ③ Move to right to remove belt (400630).
- In reassembly, perform the Ribbon Feed Drive Belt Tension adjustment.

## 2.02 Type Carrier

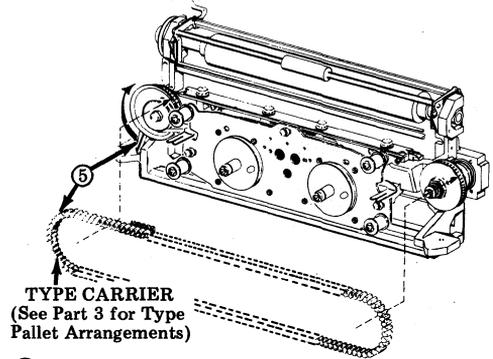
- ① Remove the ribbon (402444).
- ② Release the thumb lever on the left ribbon guide bracket allowing the guide to spring to left.
- ③ Loosen the thumbscrew on the right ribbon guide bracket and swing the guide to the right.



- ④ On late design 40P101 or on noise reduced printer (carrier top guide secured to backup bar with three thumbscrews) remove carrier top guide.



- ⑤ Lift up the arm on the left type carrier sprocket to release the spring bias on the sprocket. While holding the arm up, lift the type carrier from the right sprocket and remove.

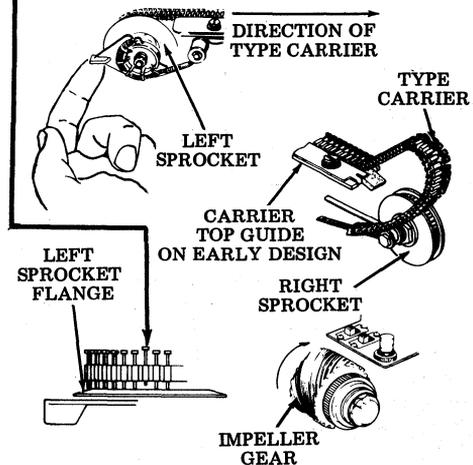


- ⑥ When replacing the type carrier, observe the following:

- Start carrier at left sprocket.
- On early design unit (carrier top guide not secured with thumbscrews) make sure all pallet stems at top of belt are under the top guide.
- Rotate carrier one revolution by turning impeller gear clockwise.
- Align all pallets against left sprocket flange.

*Caution: Damage to type carrier or printer will result if any type pallet is left protruding.*

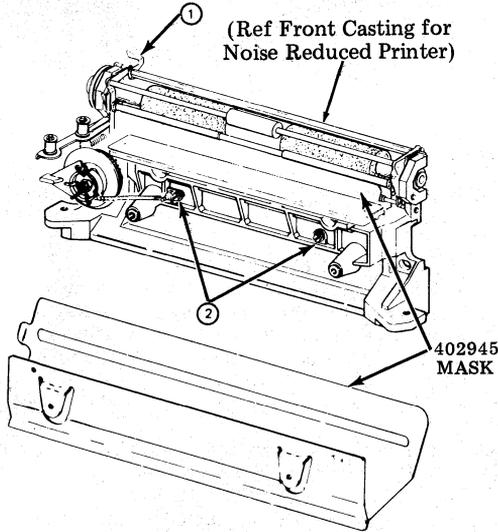
- On late design unit, reinstall carrier top guide. With the three thumbscrews loose, apply slight pressure to the top guide, down and toward the front of unit. Hold in this position while tightening thumbscrews.



2.03 402945 Mask w/Bracket (Noise Reduced Printer)

- Remove ribbon feed assembly (2.01).
- Remove type carrier (2.02).
- Open paper tray (2.11 ①).

- ① Pull pressure release lever forward.
- ② Remove two screws w/lockwashers (184060). Angle bottom right corner of mask downward and toward the right.

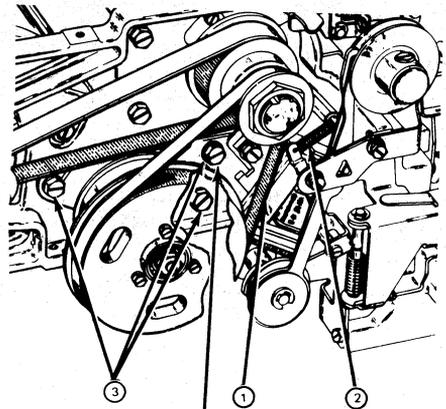


To facilitate installation of 402945 mask w/bracket, stand printer on rear.

In reassembly, perform Ribbon Feed Drive Belt Tension and Mask adjustments.

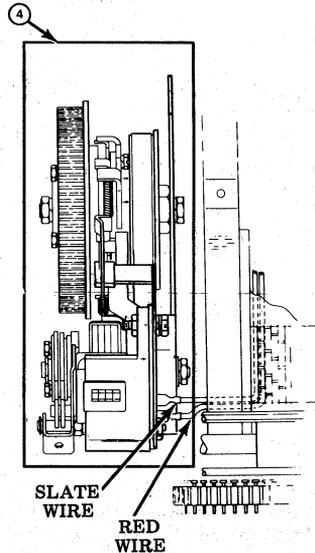
2.04 400470 Line Feed Assembly and Belt

- ① Slide clutch drive belt (400634) off. Replace if worn.
- ② Remove spring (41385).
- ③ On early design, remove three screws (one 153442 and two 173974), three lockwashers (45815), and two flat washers (41663). On late design, remove two screws (one 153442 and one 173974), two lockwashers (45815) and one flat washer (41663).



Not present on late design.

- ④ Carefully separate the line feed assembly, (400470), from the casting. Do not move line feed assembly too far away from the printer. Move assembly just enough to disconnect the two wires attached to the coil, and then remove assembly.



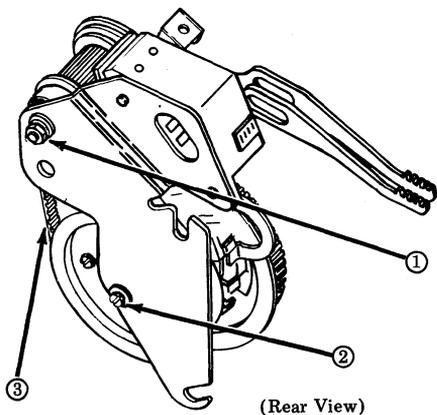
*Note:* When reassembling, connect red wire to front terminal of magnet; slate wire to rear terminal (as viewed from front of printer). Cut cable strap for ease of reassembly, then retie.

In reassembly, perform the Clutch Drive Belt Tension adjustment.

## 2.05 Feed Bar Drive Belt Replacement

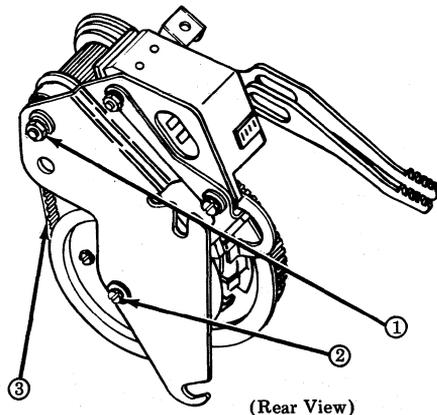
- Perform procedure 2.04 first, then;
- ① Remove nut (112626), lockwasher (45815), and flat washer (3438).
- ② Remove screw (153442) and lockwasher (45815).
- ③ Remove plate and feed bar drive belt (400632). Replace belt.

EARLY DESIGN



(Rear View)

LATE DESIGN

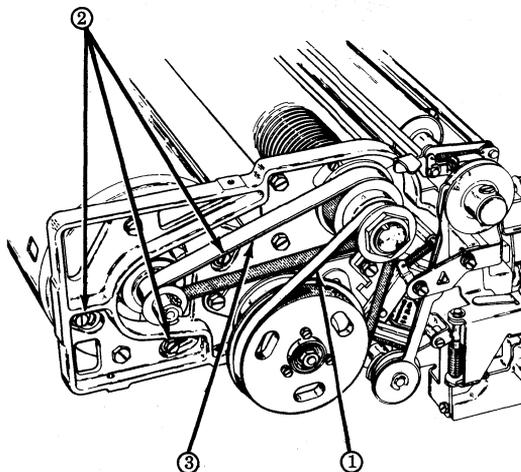


(Rear View)

In reassembly, perform the Line Feed Bar Eccentric and Drive Belt Tension adjustment and the Clutch Drive Belt Tension adjustment.

## 2.06 Impeller Shaft Drive Belt Replacement

- ① Remove clutch drive belt (400634).
- ② Loosen three motor adjusting screws friction tight. Press motor inward and up to release belt tension.
- ③ Remove worn belt and replace with new belt (400631).



In reassembly, perform the Impeller Shaft Drive Belt Tension adjustment. Check the Clutch Drive Belt Tension adjustment.

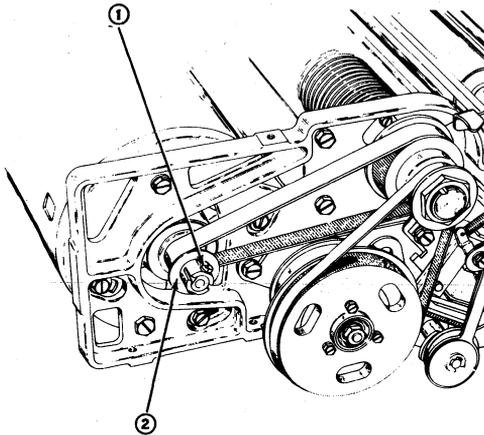
2.07 Sprocket Conversion (60 Hz to 50 Hz, 50 Hz to 60 Hz)

*Note 1:* Only those printers equipped with 402402 motors and 402632 ac input and motor control assemblies are capable of operation on either a 50 or 60 hertz 117 V ac source of power. Conversion is accomplished by installing the proper sprocket on the motor shaft, 400280 for 60 hertz, 400282 for 50 hertz.

*Note 2:* Early printers equipped with either the 400905 or 400960 ac input and motor control assembly and the 400270 motor, (60 hertz only) may be updated for 50 or 60 hertz operation with the 402633 modification kit and the 400282 sprocket.

- Perform procedure 2.06 first, then;

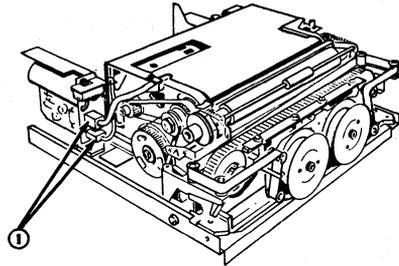
- ① Remove screw (153841), lockwasher (2191), and nut (3598) from sprocket. Remove sprocket.
- ② Replace with sprocket (400282), 50 hertz or (400280), 60 hertz.



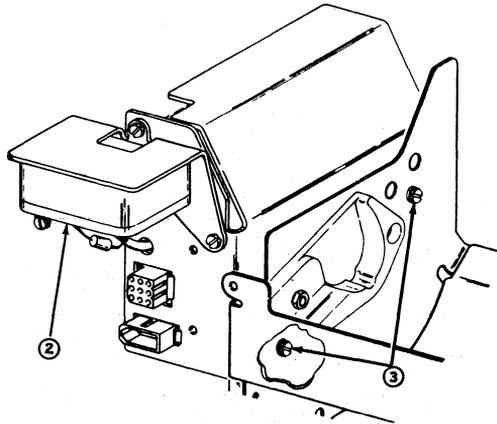
In reassembly, perform the Impeller Shaft Drive Belt Tension adjustment and the Clutch Drive Belt Tension adjustment.

2.08 400908 Power Supply Assembly

- ① Unplug two connectors at the front of power supply.



- ② Remove screws (153484) and lockwashers (107116) from terminals 1 (WHITE-BLUE lead) and 3 (WHITE-BLACK lead) on the relay.
- ③ Remove 2 screws w/lockwashers (184056). Remove power supply assembly (400908) and replace.

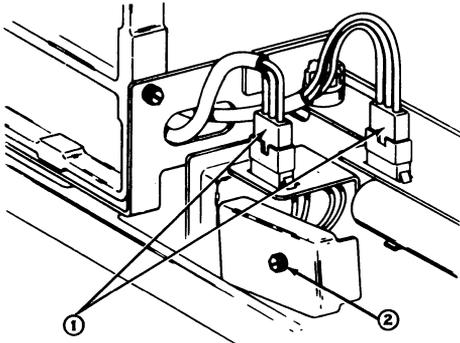


In reassembly, make sure the WHITE-BLACK lead is on the 3 terminal and WHITE-BLUE is on the 1 terminal.

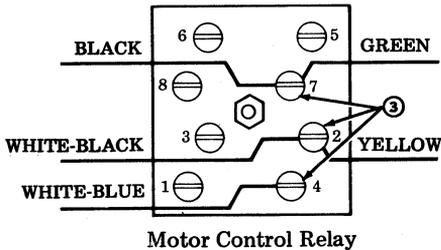
**2.09a. 400905 AC Input and Motor Control Assemblies**

*Note:* Present on early printers. Later printers equipped with 400960 or 402632 ac input and motor control assembly as detailed in 2.09b.

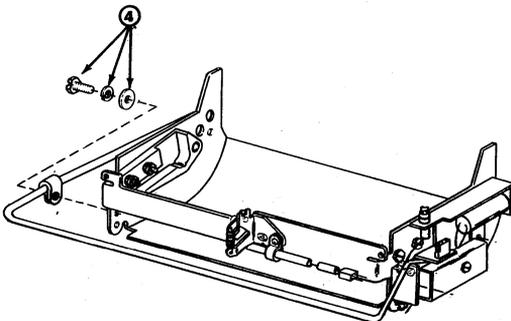
- ① Remove the connectors.
- ② Remove screw w/lockwasher (181241) from relay cover. Remove cover.



- ③ Remove screws (153484) from motor control relay at terminals 4, 2, and 7 to disconnect leads.

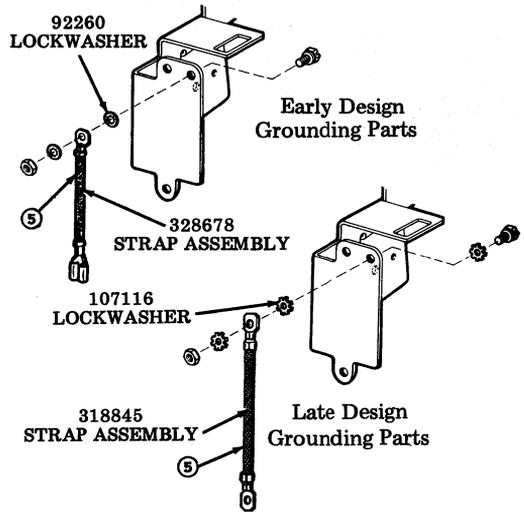


- ④ Remove screw (151631), lockwasher (2191), and flat washer (7002) from cable clamp to loosen cable.

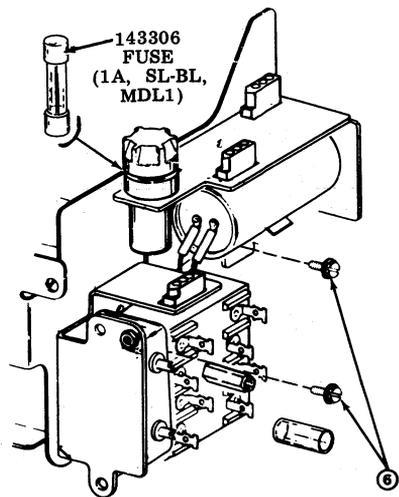


- ⑤ Disconnect frame ground strap (328678 or 318845) at motor control assembly.

*Note:* Do not disconnect ground strap from printer base.



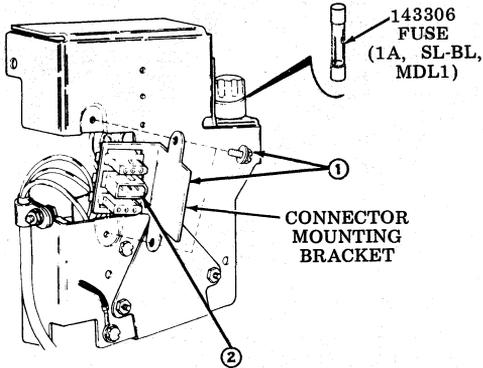
- ⑥ Remove screw w/lockwasher (184055) securing motor control assembly (400905) to paper container. Remove assembly.



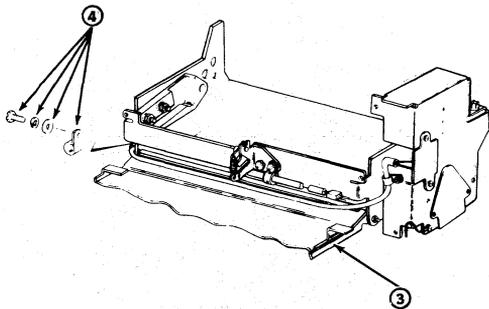
In reassembly, make sure that the correct color leads are connected to the terminals on the relay, and the correct connectors are mounted to their receptacles.

2.09b. 400960 or 402632 AC Input and Motor Control Assemblies

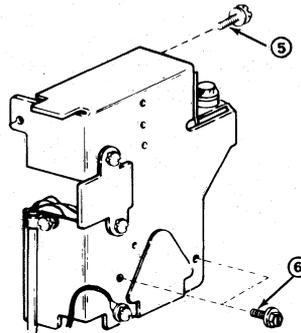
- ① Remove two screws that fasten connector mounting bracket. Position bracket as shown.
- ② Unplug connectors from the three receptacles.



- ③ Stand printer on rear and open cover. See 2.11
- ④ Remove screw, lockwasher and flat washer from cable clamp. Move cable to right of cover. Close cover and restore printer to normal position.

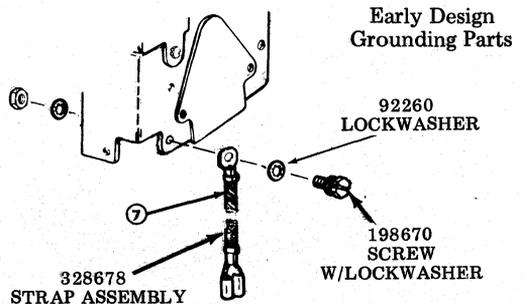
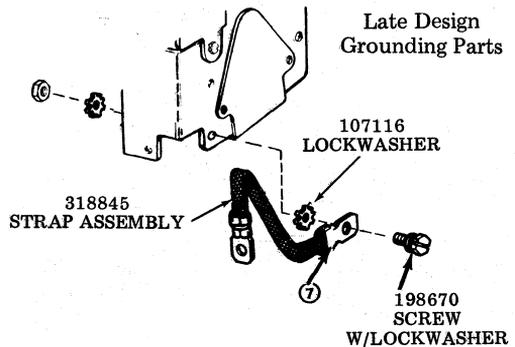


- ⑤ Remove 184056 screw w/lockwasher .
- ⑥ Remove two 184055 screws w/lockwashers. Motor control assembly should drop down for access to the ground strap screw.



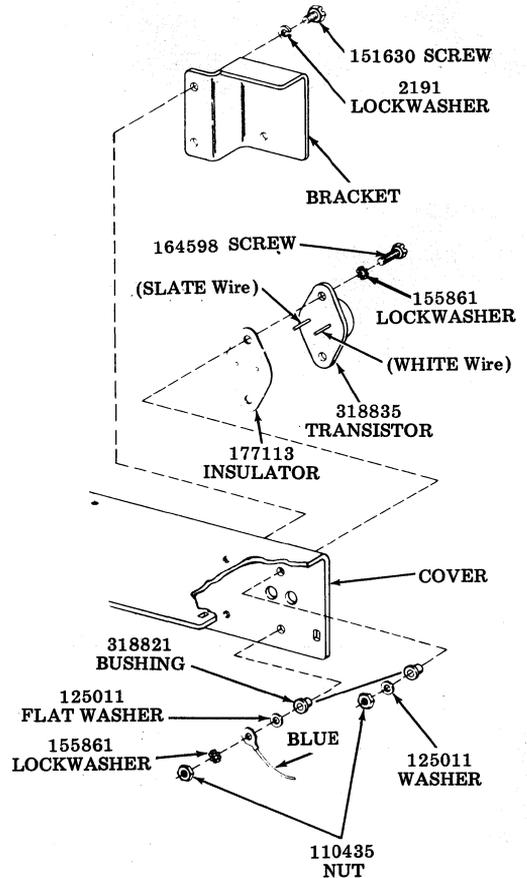
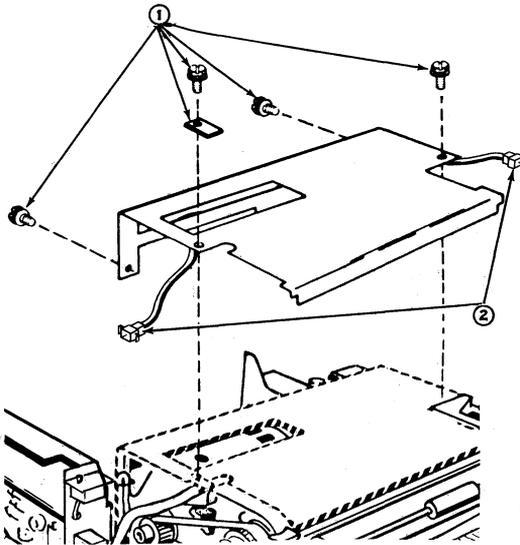
- ⑦ Disconnect (318845 or 328678) frame ground strap at the motor control assembly. Remove the assembly.

*Note:* Do not disconnect ground strap from printer base.



2.10 400903 Cover Assembly (40P101)  
407209 Cover Assembly (40P102)

- ① Remove the four screws w/lockwashers (184057) and the clamp (400586) that secure the cover to the castings.
- ② Lift up cover and unplug connectors from receptacles. Remove cover.



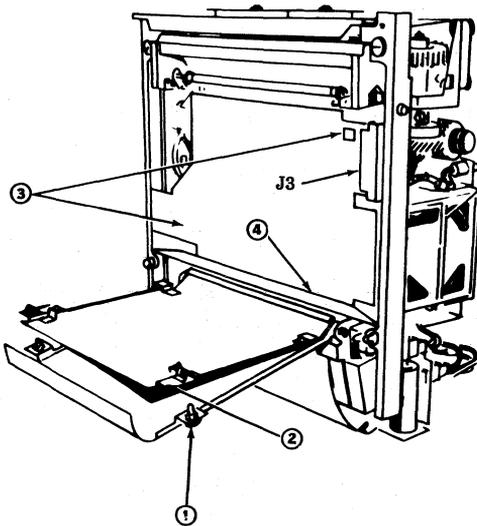
- ③ For replacement of the transistor (318835) located on the back of the cover, use the following illustration, and note location of the parts.

In reassembly, make sure all wires are connected properly and thermal compound is applied to the bases of the insulator and transistor.

## 2.11 410076 or 410640 Circuit Card Assembly

**Note 1:** 410076 circuit card assembly can be used in the 40P101 or 40P102 printer. The 410640 circuit card assembly cannot be used in the 40P102 printer.

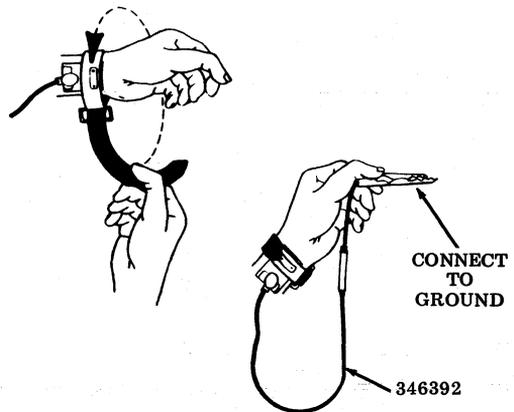
- ① Open the paper tray by grasping knobs and snap tray down while printer is raised.
- ② Remove two screws (184056) that secure the circuit card cover to the bottom of the printer and allow the cover to hang down.
- ③ Using finger hold and a firm grip of the card edge on the opposite side as shown, apply an even pulling force and unplug the circuit card from the two rows of magnet assembly contacts.
- ④ Lift left (bottom) end of card up and out of channel (by passing printer base shipping screws) first, then right side of card up and out. Remove card from J3.



**Note 2:** During reassembly, make certain that the J3 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.

**Note 3:** When replacing the 410076 or 410640 circuit card with a NEW card, remake the Impeller Shaft Sensor and Flag Sensor adjustments.

**Caution:** When handling circuit cards with MOS devices such as the 410076 or 410640 circuit card, personnel must wear a static protection grounding strap (346392 or equivalent). The strap must be worn in firm contact with the skin at all times with the ground clip connected to ground as illustrated below. Care should be taken to avoid touching circuit paths or components on the circuit card.

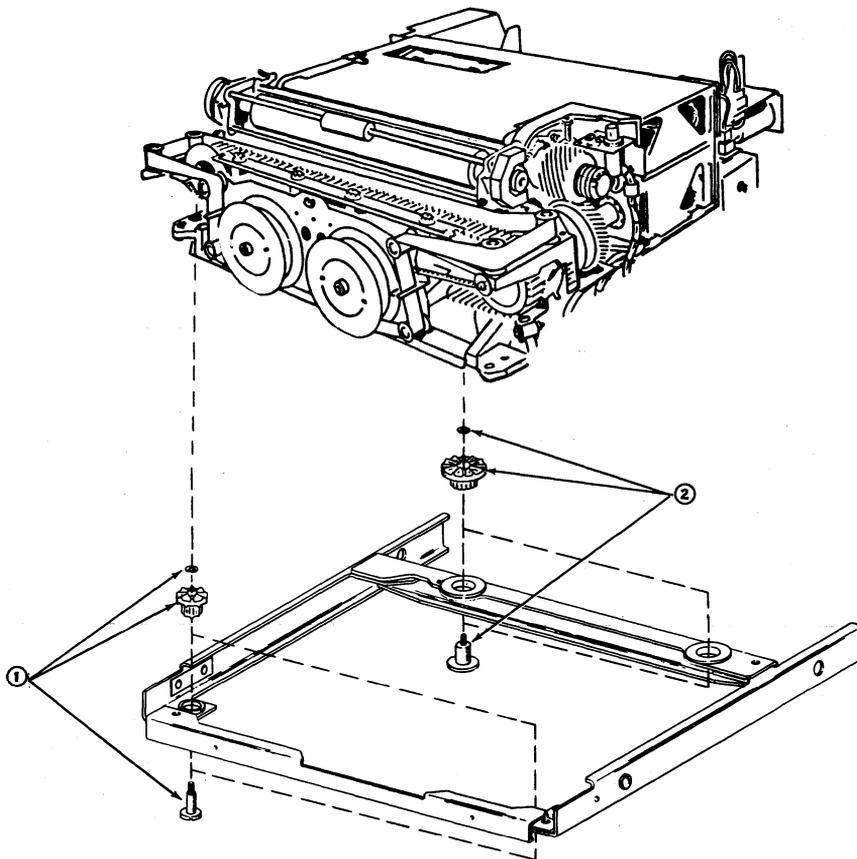


Service personnel are never to be connected directly to ground but rather through a high resistance discharge path of a minimum of one megohm where 115 V ac is present. This resistance is built into the grounding strap (346392).

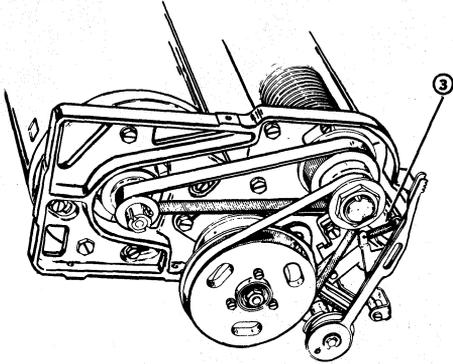
2.12 400201 or 400377 Front Casting Assembly  
(40P101)  
402970 Front Casting Assembly (40P102)

- Remove type carrier — see 2.03.
- Remove circuit card as a precaution against damage — see 2.11.
- If equipped with early design ac input and motor control assembly, remove relay cover and wires — see 2.09a.

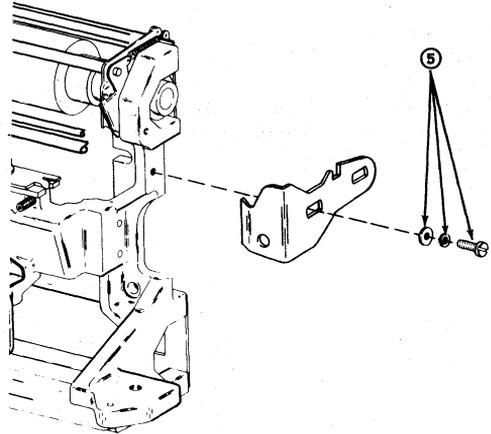
- ① Remove two screws (400405), two bushing isolators (338728), and two lockwashers (3646) from the front of the printer base.
- ② Remove two screws (400406), two bushing isolators (400402), and two lockwashers (2669) from the rear of the printer base. Remove base.



- ③ Unhook spring (41385) from post on line feed assembly to disengage pawls.

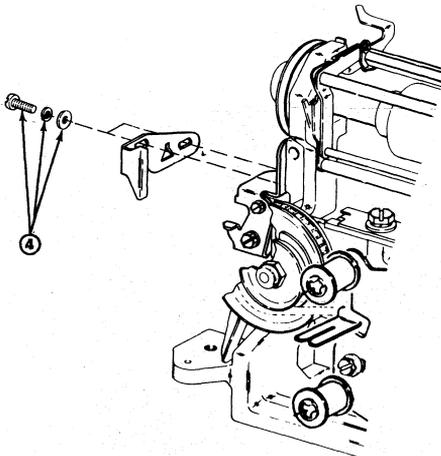


- ⑤ To remove right ribbon guide, remove screw (110434), lockwasher (3640), and flat washer (125011).

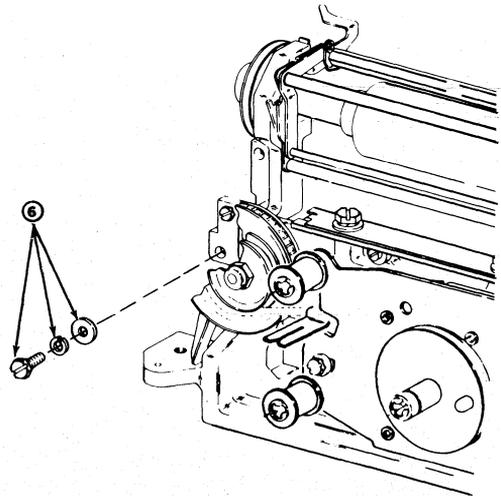


- To gain access to the front mounting screws, it is necessary to remove the left and right ribbon guides.

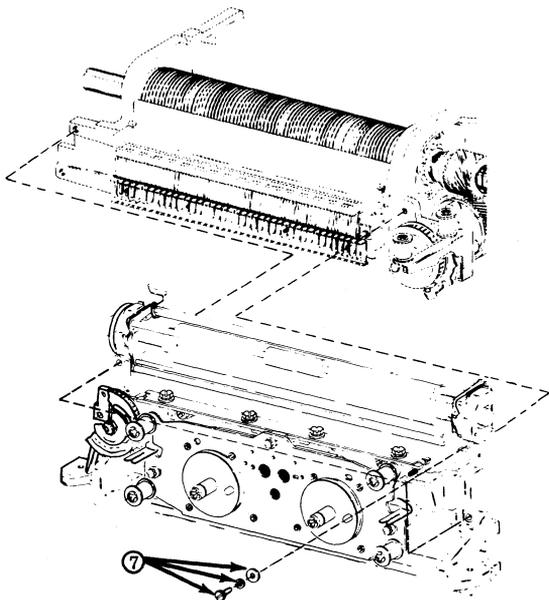
- ④ To remove left ribbon guide, remove two screws (110434), two lockwashers (3640), and two flat washers (125011).



- ⑥ Rotate the finger lever clockwise on the left type carrier (idler) pulley to gain access to the mounting screw (153442), lockwasher (45815), and flat washer (41663). Remove hardware.



- ⑦ Remove the three remaining screws (153442), lockwasher (45815), and flat washer (41663). Move the front casting assembly to the left until clear of the type carrier pulley and remove.

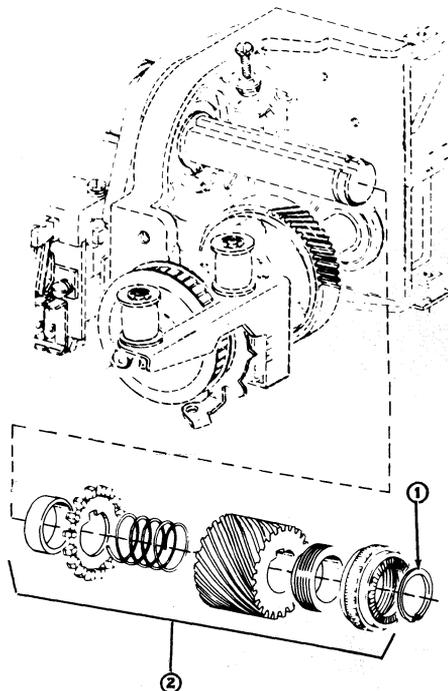


In reassembly, do not forget to follow through with 2.11, 2.09, and 2.03. The front casting adjustments should be checked to see if adjustment is required. Also perform Ribbon Guide adjustment.

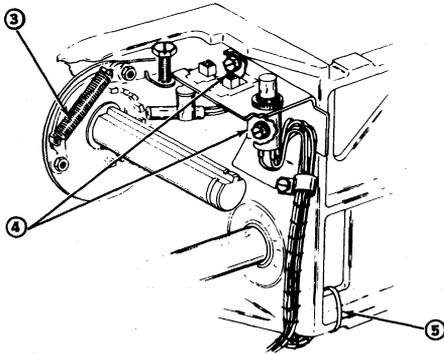
### 2.13 400300 Right Casting Assembly (40P101)

*Note:* Right casting for 40P102 is the same except for the ribbon roller posts used.

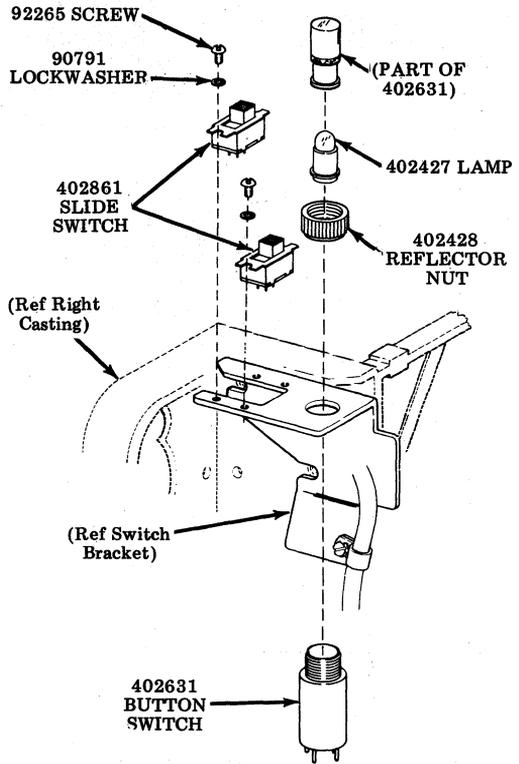
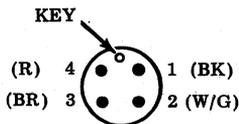
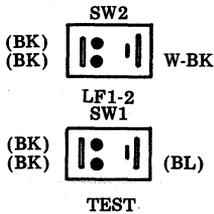
- Remove type carrier — see 2.03.
  - Remove ac input and motor control — see 2.09.
  - Remove circuit card — see 2.11.
  - Remove front casting — see 2.12.
- ① Remove retainer (400075) from shaft.
  - ② Slide off spring, gear, adjusting ring, collar, timing wheel, and bushing from shaft.



- ③ Unhook spring (110438) from post on sensor bracket.
- ④ Remove two screws w/lockwashers (184056), and slide switch bracket out.
- ⑤ Cut cable strap, if present.

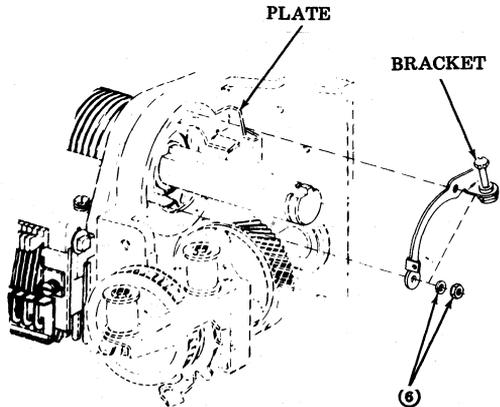


Note: If slide switch (402861) or button switch parts require replacement, use the following illustration for parts replacement.



- To remove sensors proceed as follows:

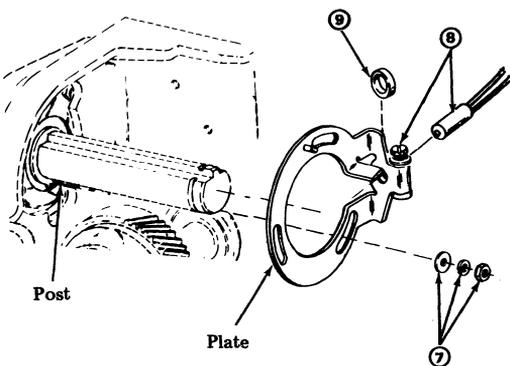
- ⑥ Remove the two nuts (3599) and lockwashers (3640) holding bracket to the plate. Remove bracket.



⑦ Remove the nut (3599), lockwasher (3640), and flat washer (125011) holding the plate to the post. Remove plate.

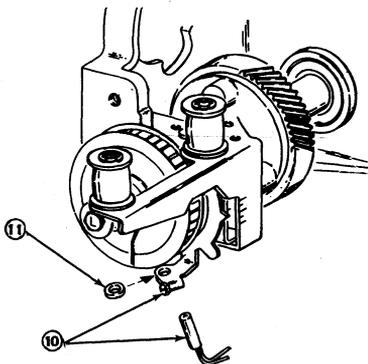
⑧ Loosen the screw holding the sensor. Remove the sensor.

⑨ Be careful not to lose spacer (400931).



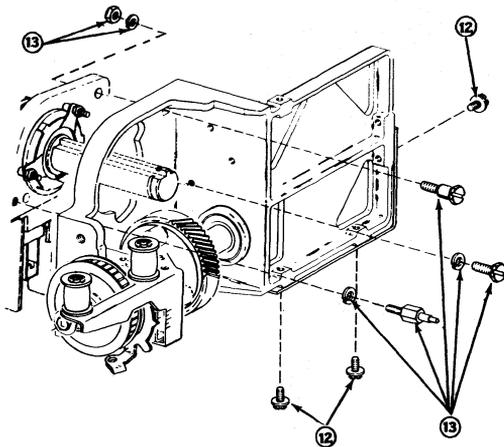
⑩ On the front, loosen the screw holding the sensor. Remove the sensor.

⑪ Be careful not to lose spacer (400931).



⑫ Remove three screws, w/lockwashers (184057) holding bottom pan to the casting.

⑬ Remove shoulder screw (400293), lockwasher (45815), and nut (112626); remove screw (153442), and lockwasher (45815); remove post (400457) and lockwasher (2669); remove right casting assembly (400300).



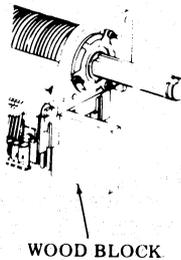
In reassembly, do not forget to follow through with 2.12, 2.11, 2.09 and 2.03. Perform adjustments in 2.12. Check the Impeller Shaft Sensor Gap and Flag Sensor Gap adjustments. On printing test, the Impeller Shaft to Carrier Phasing, the Impeller Shaft Sensor, and Flag Sensor adjustments may have to be checked.

2.14 400001 Print Head Assembly

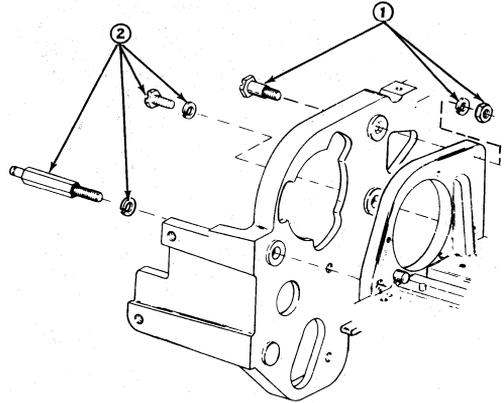
*Warning: If a trouble is isolated to the Print Head Assembly, the complete printer should be replaced. Disassembly information shown is for repair shop location reference.*

- Remove type carrier — see 2.03.
- Remove impeller shaft drive belt — see 2.06.
- Remove ac input and motor control — see 2.09.
- Remove circuit card — see 2.11.
- Remove front casting — see 2.12.
- Remove right casting — see 2.13.

*Note:* It is suggested that when right casting is removed, a 3-inch piece of wood be placed under right end of print head to keep it from dropping.



- ① At left casting, remove shoulder screw (400293), lockwasher (45815), and nut (112626).
- ② Also, remove screw (153442), lockwasher (45815), post (400317), and lockwasher (45815). Remove print head assembly (400001).

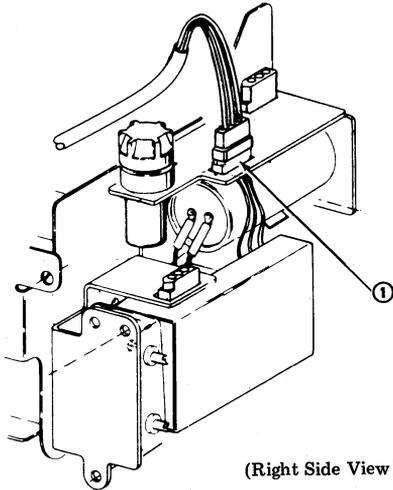


In reassembly, be sure to follow all the procedures and perform all the adjustments in 2.03, 2.06, 2.09, 2.11, 2.12, and 2.13.

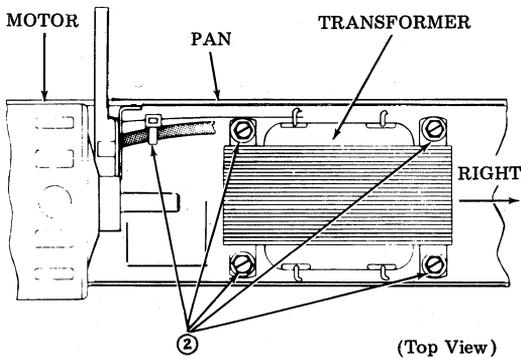
## 2.15 402402 Motor Assembly

- Remove the cover — see 2.10.

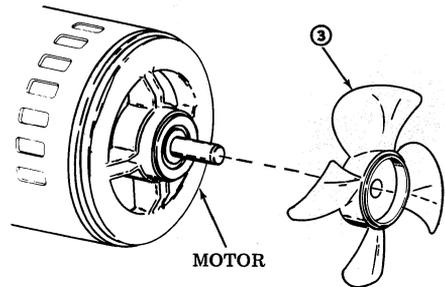
① Remove motor cable connector.



② Remove four screws (173974), lockwashers (45815), and flat washers (3438) holding transformer to the pan. Slide transformer up and out.

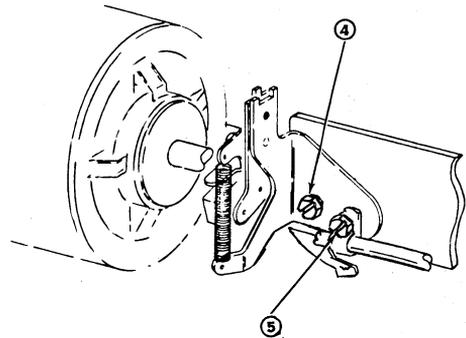


③ Loosen setscrew in hub of fan and pull the fan (408032) off from the end of the motor shaft.



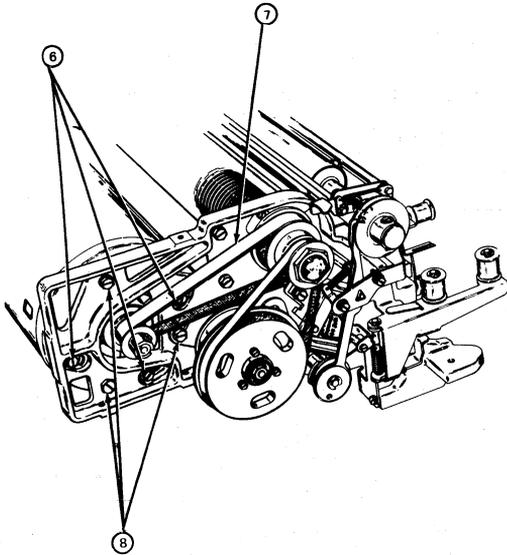
④ Remove the left mounting screw (184056).

⑤ Loosen the right mounting screw and then pivot the switch bracket up approximately 90 degrees.



- ⑥ Loosen three motor adjusting screws friction tight.
- ⑦ Press motor inward and up to release belt tension. Remove belt (400631).
- ⑧ Remove the top mounting screw (99082) and lockwasher (93985). Remove the bottom left mounting screw (151723) and lockwasher (45815). Remove bottom right mounting screw (153442), lockwasher (45815) and flat washer (41663). Remove motor assembly.

*Note:* On late design, remove the top mounting screw (99082) and lockwasher (93985) and the three motor adjusting screws (99082), lockwashers (93985) and flat washers (44048) to remove motor assembly.



(Left Side View)

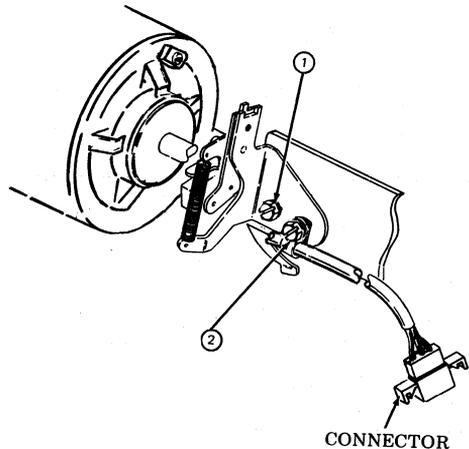
In reassembly, make sure fan blade is properly remounted and does not touch mounting plate of paper-out assembly. Plug cable connectors.

In reassembly, perform Impeller Shaft Belt Tension adjustment. Check Low Paper Switch adjustment.

## 2.16 400955 Low Paper Switch Assembly

- Remove the cover — see 2.10.

- ① Remove screw (184056) from left side.
- ② From right side remove screw (151631), lockwasher (2191), and flat washer (7002). Unplug connector from associated cable connector. Remove low paper switch assembly (400955).



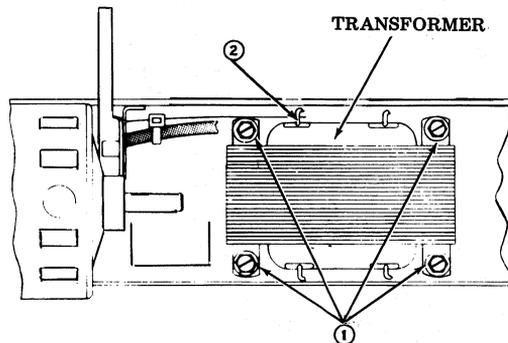
In reassembly, make sure the connectors are plugged together.

## 2.17 400901 Transformer

- Remove the cover — see 2.10.
- ① Remove four screws (173794), four lock-washers (45815), and four flat washers (3438) holding transformer to the pan.
  - ② Unsolder four leads to the transformer. Remove transformer (400901).

*Caution:* Be careful not to cut or pinch any other wires.

*Note:* In reassembly, reverse the disassembly procedure and resolder the four wires to the transformer terminals. After terminating wires, bend transformer terminals toward the core. Nestle wires between the winding and the core. The wires must not protrude beyond the top of the core.

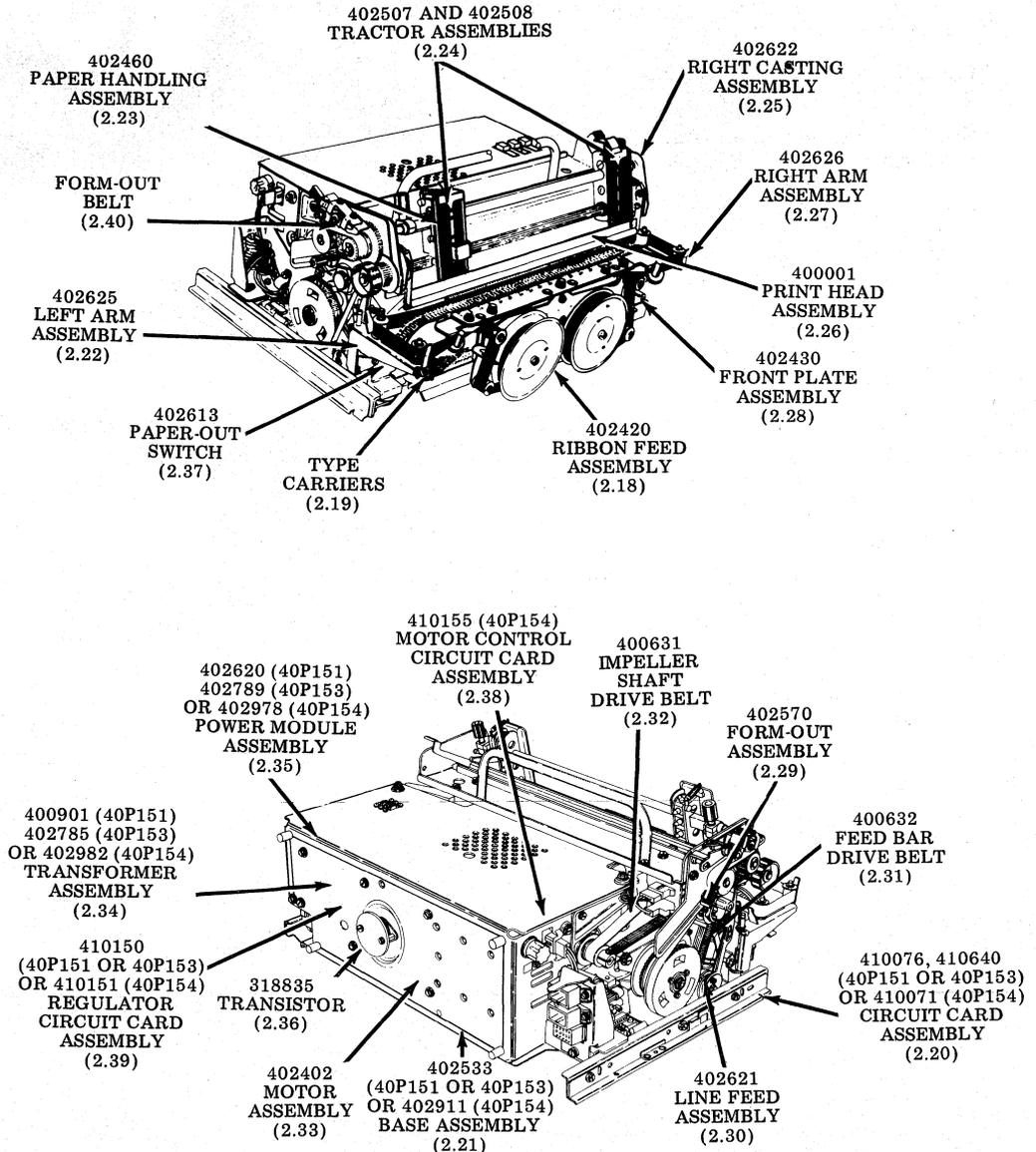


In reassembly, note the numbering of the transformer terminals and follow the coloring wire list. Retie the cable.

Terminal	Color
1	BK
2	W
3	Y
4	BR

## B. 80-Column Tractor Feed Printer

*Note:* Unless otherwise specified, assemblies are common to 40P151, 40P153, and 40P154 80-Column Tractor Feed Printers.

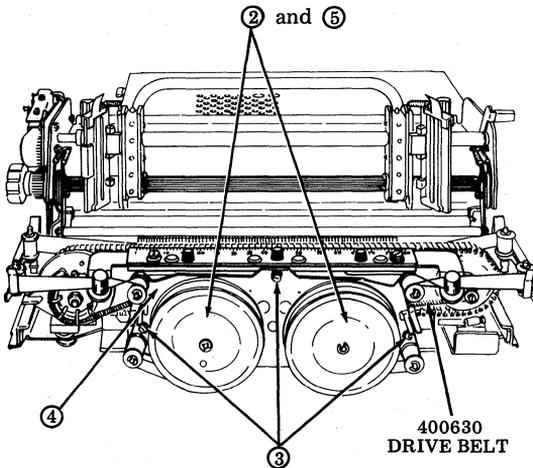


*Note:* To remove an assembly, go to the procedure referenced in parentheses. Number sequence does not imply a strict adherence to disassembly as many assemblies are independent of each other for removal.

## 2.18 402420 Ribbon Feed Assembly

- ① Stand printer on rear with ribbon feed mechanism up.
- ② Pull off ribbon spools. Roll up ribbon (402444) and set aside.
- ③ Remove three 184056 screws w/lockwashers.
- ④ Move ribbon feed assembly to right to disengage drive belt (400630). Remove ribbon feed assembly and drive belt.
- ⑤ When installing ribbon, follow ribbon loading instructions printed on cover top.

In reassembly, perform the Ribbon Feed Drive Belt Tension adjustment.



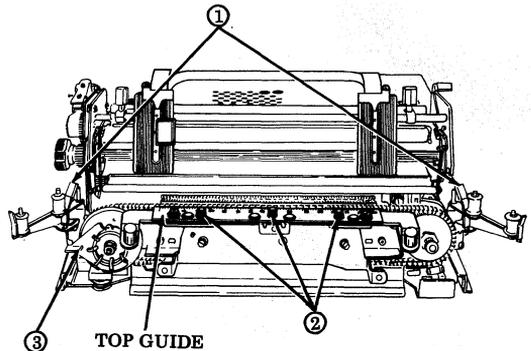
## 2.19 Type Carriers

- Remove ribbon. See 2.18, ②.
- ① Release thumb levers on left and right ribbon guide brackets allowing guides to spring to sides of printer.
  - ② Remove three thumbscrews and lockwashers, then remove carrier top guide from over type carrier.
  - ③ Flags should be to left and right of backup bar for ease of removal. Lift up arm on left type carrier sprocket to release spring bias on sprocket. While holding arm up, lift type carrier from right sprocket and remove.

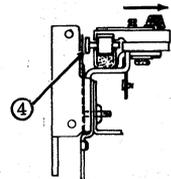
*Note:* When replacing the type carrier, observe the following:

- Start carrier at left sprocket.
- Rotate carrier one revolution by turning impeller gear clockwise.
- Align all pallets against left sprocket flange.

*Caution:* Damage to type carrier or printer will result if any type pallet is left protruding.



- ④ When replacing the carrier top guide, make sure it is positioned to front. This insures that type carrier is positioned against backup bar.

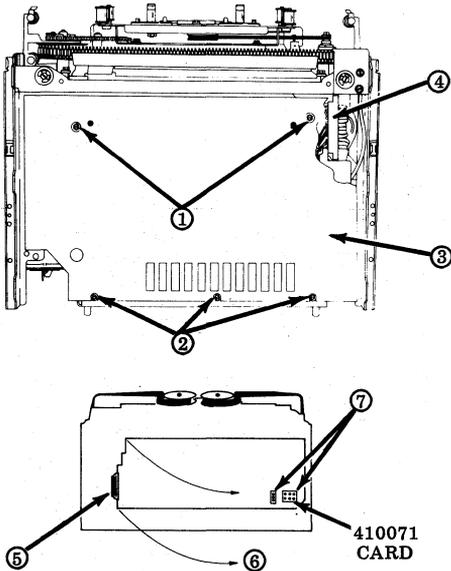


*Note:* See 3. PARTS for Type Pallet Arrangements.

2.20 410076 or 410640 Circuit Card Assembly (used on 40P151 and 40P153) or 410071 Circuit Card Assembly (used on 40P154).

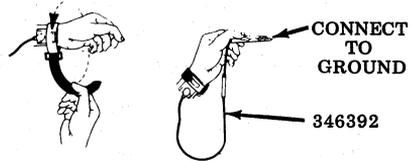
- Stand printer on rear.
- ① Remove two screws.
- ② Loosen three screws.
- ③ Slide plate out.
- ④ On 40P151 or 40P153, remove connector from 410076 or 410640 card, and using pull points, pull card down and out.
- ⑤ On 40P154, unplug flat P109 cable from left-hand side of 410071 card. Slide to left.
- ⑥ Lift left-hand side of 410071 card away from printer to a 90-degree position.
- ⑦ Unplug P106 sensor and P103 power supply cables from the 410071 card.

*Note:* When replacing the 410071, 410076, or 410640 circuit card with a NEW card, remake the Impeller Shaft Sensor and Flag Sensor adjustments.



**Caution:** When handling circuit cards with MOS devices such as the 410071, 410076, or 410640 circuit card, personnel must wear a static protection grounding strap (346392 or equivalent). The

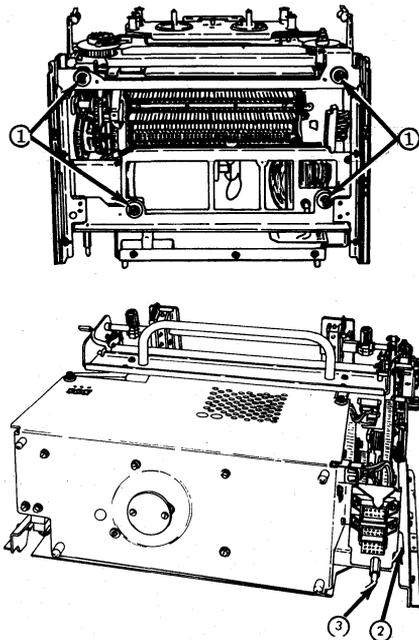
strap must be worn in firm contact with the skin at all times with the ground clip connected to ground as illustrated below. Care should be taken to avoid touching circuit paths or components on the circuit card.



*Service personnel are never to be connected directly to ground but rather through a high resistance discharge path of a minimum of one megohm where 115 V ac is present. This resistance is built into the grounding strap (346392).*

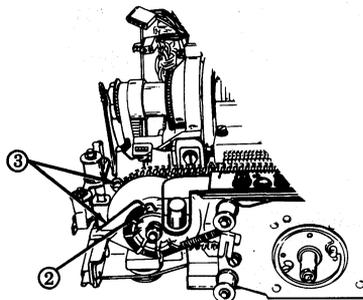
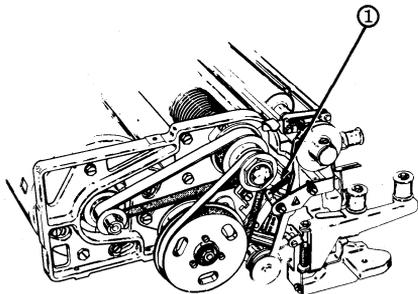
2.21 402533 Base Assembly (used on 40P151 or 40P153) or 402911 Base Assembly (used on 40P154).

- Remove circuit card — see 2.20.
- ① Remove four ring retainers and spacers.
- ② Loosen two connector bracket mounting screws.
- ③ Remove post that secures connector bracket to base.



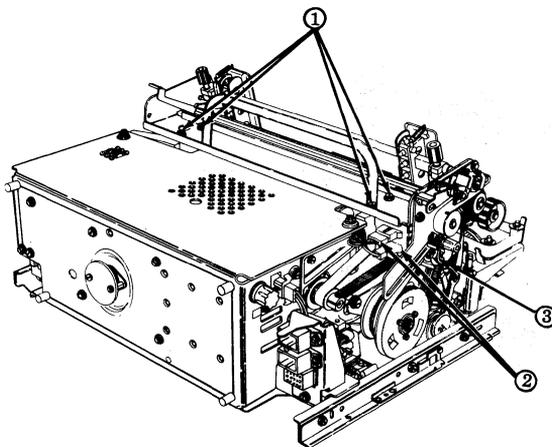
## 2.22 402625 Left Arm Assembly

- Remove ribbon. See 2.18, ② .
  - Remove type carrier. See 2.19.
- ① Unhook spring (402905) from left arm assembly spring post.
  - ② Unhook idler sprocket spring (400226).
  - ③ Remove two screws.



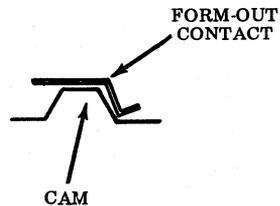
## 2.23 402460 Paper Handling Assembly

- ① Remove four screws.
- ② Remove two plugs, P102 and P116.
- ③ Move feed bars to rear and lift paper handling assembly (402460) by handle.



In reassembly, reset form-out contact to belt phasing as follows:

- Move line feed pawls out of engagement with the line feed gear.
- Rotate the paper advance knob until the slope part of the contact just touches the long cam.
- Release the line feed pawls.



## SECTION 582-210-702

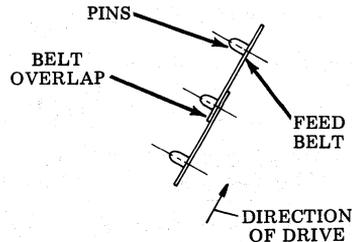
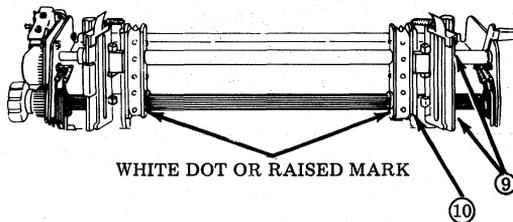
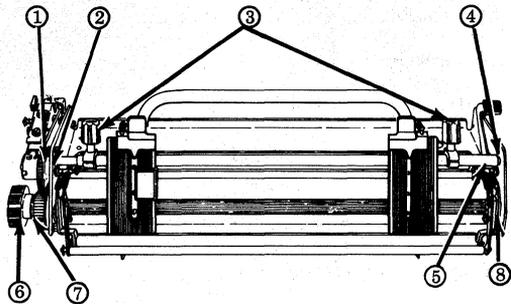
### 2.24 402507 or 402508 Tractor Assembly

- Remove 402460 paper handling assembly (2.23).
- Remove 402570 form-out assembly (2.29).

- ① Remove ring retainer from left side plate.
- ② Remove ring retainer.
- ③ Remove left and right tractor clamps.
- ④ Slide inner shaft out.
- ⑤ Move tractors forward and slide out outer shaft.
- ⑥ Remove ring retainer that secures left knob. Remove flat washer, spring, and knob.
- ⑦ Remove ring retainer that secures sprocket. Slide washer and sprocket off of shaft.
- ⑧ Remove two screws that secure oilite bearing to right side of frame. Slide shaft out to right.
- ⑨ Loosen two Phillip head screws on tractor assembly that is to be replaced.
- ⑩ Remove torsion spring on tractor assembly.
  - Slide tractor assembly to right to remove.

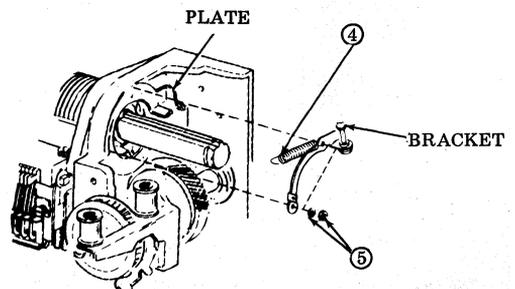
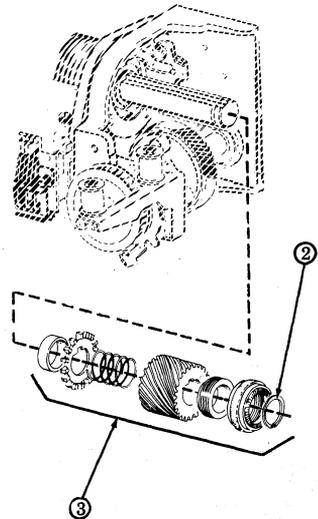
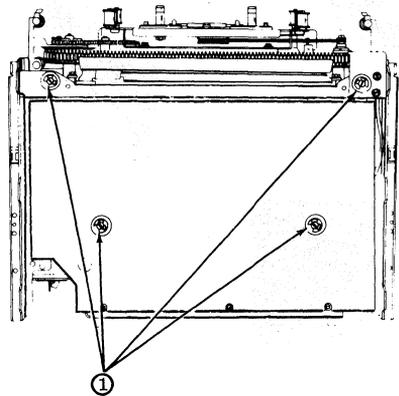
*Note 1:* To replace a 402877 tractor belt, loosen two Phillip head screws on tractor assembly. The new belt should be installed with the overlap in direction illustrated.

*Note 2:* During reassembly of tractor assembly to the shaft, perform Tractor Phasing and Tractor Lid adjustments. Perform the adjustments in 2.29 in reassembly of form-out assembly.

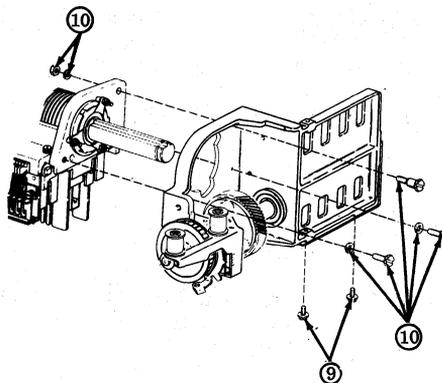
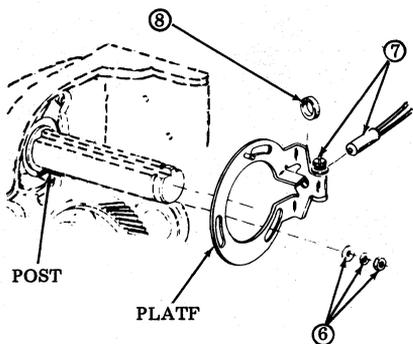


## 2.25 402622 Right Casting Assembly

- Remove type carrier — see 2.19.
  - Remove circuit card — see 2.20.
  - Remove front plate — see 2.28.
  - Remove paper handling — see 2.23.
  - Remove power module — see 2.35.
- ① Stand printer on rear and remove four retaining rings. Remove printer from base. Restore printer to normal position.
  - ② Remove retaining ring from shaft.
  - ③ Slide off adjusting ring, collar, gear, spring, timing wheel, and bushing from shaft.
  - ④ Unhook spring (110438) from post on sensor bracket.
  - ⑤ Remove two nuts (3599) and lockwashers (3640) holding bracket to the plate. Remove bracket.
  - ⑥ Remove nut (3599), lockwasher (3640), and flat washer (125011) holding plate to post. Remove plate.
  - ⑦ Loosen screw holding the sensor. Remove sensor.
  - ⑧ Be careful not to lose spacer (400931).
  - ⑨ Remove two screws w/lockwashers (184057) holding bottom pan to casting.
  - ⑩ Remove shoulder screw (400923), lockwasher (45815), and nut (112626); remove two screws (153442) and lockwasher (45815); remove right casting assembly.



In reassembly, follow through with 2.35, 2.23, 2.28, 2.20, and 2.19. Perform adjustments in 2.23 and 2.28. Check the Impeller Shaft Sensor Gap and Flag Sensor Gap adjustments. On printing test, the Impeller Shaft to Carrier Phasing, the Impeller Shaft Sensor, and Flag Sensor adjustments may have to be checked.



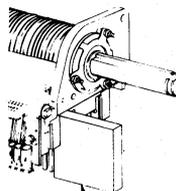
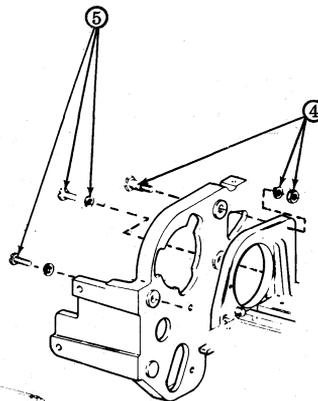
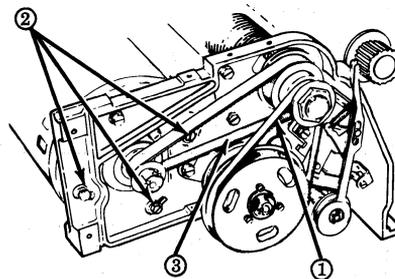
2.26 400001 Print Head Assembly

**Warning:** If a trouble is isolated to the Print Head Assembly, the complete printer should be replaced. Disassembly information shown is for repair shop location reference.

- Remove type carrier — see 2.19.
- Remove circuit card — see 2.20.
- Remove front plate — see 2.28.
- Remove right casting — see 2.25.

- ① Remove clutch drive belt.
- ② Loosen three motor adjusting screws friction tight. Press motor inward and up to release belt tension.
- ③ Remove impeller shaft drive belt.
- ④ At left casting, remove shoulder screw (400293), lockwasher(45815), and nut (112626).
- ⑤ Also remove two screws (153442) and lockwashers (45815). Remove print head assembly (400001).

**Note:** It is suggested that when the right casting is removed, a 3-inch piece of wood be placed under the right end of the print head to keep it from dropping.



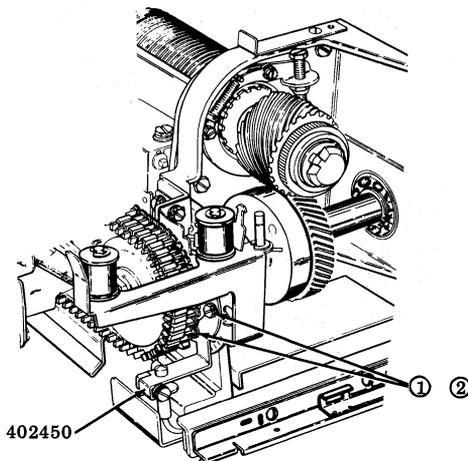
WOOD BLOCK

In reassembly, be sure to follow all the procedures and perform all the adjustments in 2.25 and 2.32.

## 2.27 402626 Right Arm Assembly

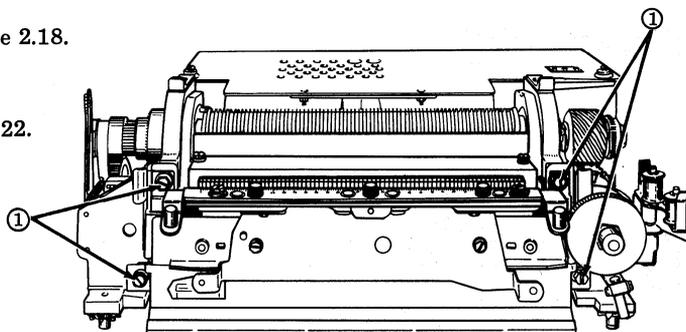
- Remove ribbon — see 2.18, ② .
- Stand printer on rear.
- ① Remove two screws (400499), two lock-washers (2191) and two flat washers (7002). This frees the flag sensor mounting bracket (402450) which should be moved aside.
- ② Remove remaining screw (151631) and lock-washer (2191) fastening right arm assembly to frame.

In reassembly, remake the Flag Sensor Gap and the Flag Sensor Final adjustments.



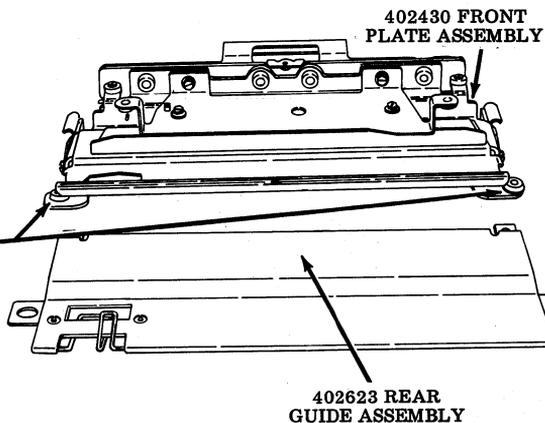
## 2.28 402430 Front Plate and 402623 Rear Guide Assemblies

- Remove ribbon feed assembly. See 2.18.
- Remove type carrier. See 2.19.
- Remove left arm assembly. See 2.22.



- Stand printer on rear.
- ① Remove four mounting screws and carefully remove both the front plate assembly (402430) and rear guide assembly (402623).

*Caution: Do not lose four spacers which separate the two assemblies.*



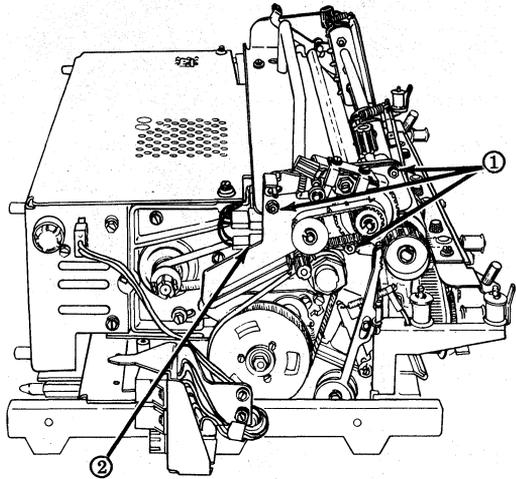
In reassembly, make the Ribbon Mechanism Drive Belt adjustment.

2.29 402570 Form-Out Assembly

- ① Remove three nuts and lockwashers.
- ② Disconnect P116 and remove lower connector J116 from bracket.

In reassembly, remake Gear Backlash adjustment. Reset form-out contact to belt phasing as follows:

- Move line feed pawls out of engagement with the line feed gear.
- Rotate the paper advance knob until the slope part of the contact just touches the long cam.
- Release the line feed pawls.



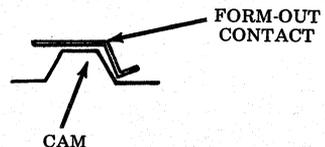
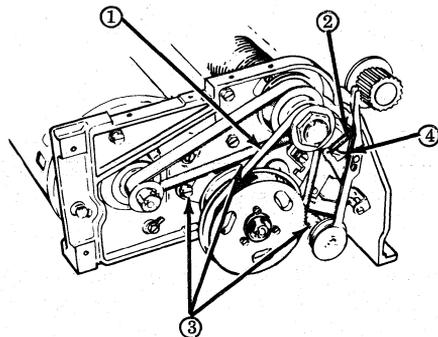
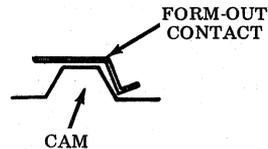
2.30 402621 Line Feed Assembly

- ① Slide belt off.
- ② Disconnect one end of spring (402905).
- ③ On early design, remove three screws (151723), three lockwashers (45815), and two flat washers (3438).  
On late design, remove two screws (151723), two lockwashers (45815), and one flat washer (3438).

- ④ Remove WHITE-BLACK and BLACK wires from rear of coil. Reconnect these wires FIRST during reassembly.

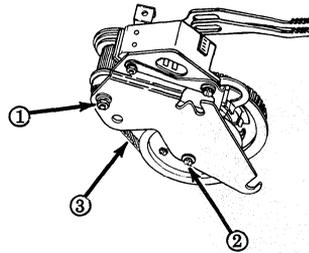
In reassembly, remake Clutch Drive Belt Tension adjustment. Reset form-out contact to belt phasing as follows:

- Move line feed pawls out of engagement with the line feed gear.
- Rotate the paper advance knob until the slope part of the contact just touches the long cam.
- Release the line feed pawls.



## 2.31 400632 Feed Bar Drive Belt

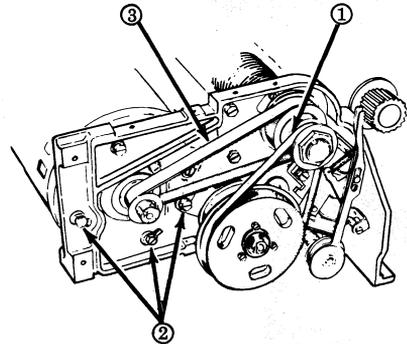
- Remove 402621 line feed assembly (2.30).
- ① Remove 112626 nut, 45815 lockwasher and 3438 flat washer.
- ② Remove 153442 screw and 45815 lockwasher.
- ③ Remove plate and 400632 feed bar drive belt. Replace belt.



In reassembly, perform Line Feed Bar Eccentric and Drive Belt Tension adjustment and the adjustments in 2.30.

## 2.32 400631 Impeller Shaft Drive Belt

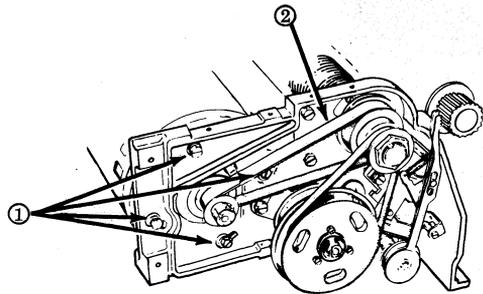
- ① Remove 400634 clutch drive belt.
- ② Loosen three motor adjusting screws friction tight. Press motor inward and up to release belt tension.
- ③ Remove worn 400631 belt and replace with new belt.



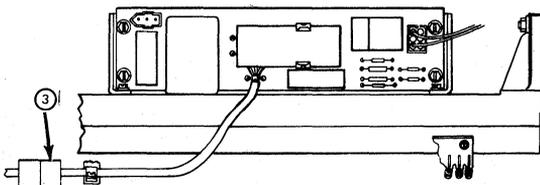
In reassembly, perform Impeller Shaft Drive Belt Tension adjustment. Check Clutch Drive Belt Tension adjustment.

## 2.33 402402 Motor Assembly

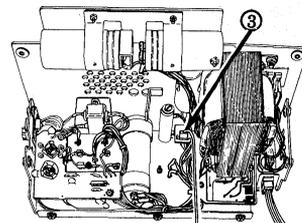
- Remove paper handling assembly (40P151 and 40P153 only). See 2.23.
- Remove power module. See 2.35.
- ① Remove four screws.
- ② Remove impeller shaft drive belt.
- ③ Unplug P107 (located at power module on 40P151 or 40P153 or at motor control circuit card assembly on 40P154).



In reassembly, make Impeller Shaft Drive Belt Tension adjustment.



(MOTOR CONTROL CIRCUIT CARD ASSEMBLY)



(POWER MODULE)

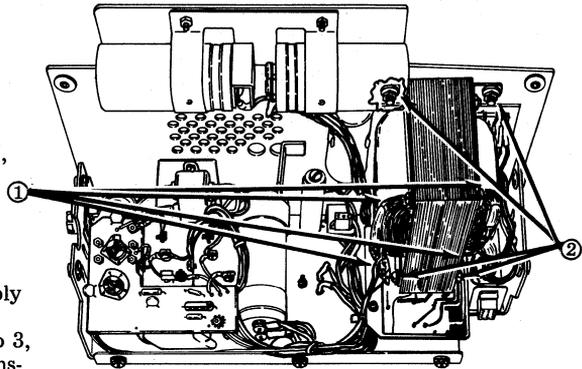
2.34 400901 Transformer (402620 power module assembly), 402785 Transformer Assembly (402789 power module assembly) or 402982 Transformer Assembly (402978 power module assembly).

2.34a. 400901 Transformer

- Remove power module. See 2.35a.

- ① Cut the protective tubing at the transformer terminals and unsolder four wires (W, BK, Y, BR).
- ② Remove four nuts, lockwashers, and flat washers that mount the transformer.

*Note:* In reassembly, reverse the disassembly procedure and resolder the four wires to the transformer terminals (W to 1, BK to 2, Y to 3, BR to 4). After terminating wires, bend transformer terminals toward core. Nestle wires between the winding and the core. The wires must not protrude beyond the top of the core. Perform the adjustment in 2.23.

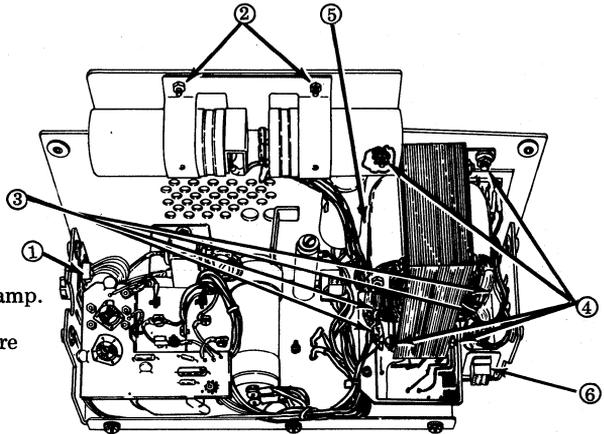


402620 POWER MODULE ASSEMBLY

2.34b. 402785 Transformer Assembly

- Remove power module. See 2.35a.

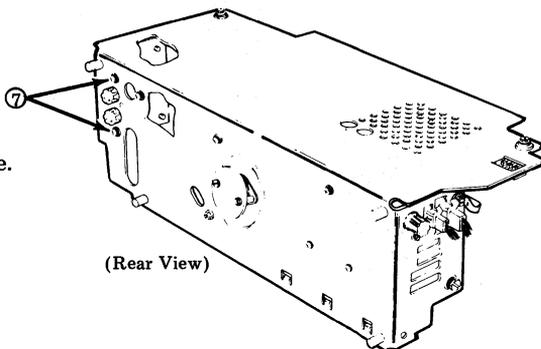
- ① Remove the P117 plug from frame.
- ② Remove the two capacitor mounting bracket screws.
- ③ Cut the protective tubing at the top terminals of the transformer and unsolder four wires (BK, BK, Y, BR).
- ④ Remove four transformer mounting nuts, lockwashers, flat washers and the cable clamp.
- ⑤ Remove the nut and lockwasher that secure the braided ground strap.
- ⑥ Remove the P105 plug from the fuse mounting bracket.



402789 POWER MODULE ASSEMBLY

- ⑦ Remove the two fuse/plug bracket mounting screws.

*Note:* When installing a new 402785 transformer assembly, transfer the two 129919 fuses from the fuse holders on the old assembly to the fuseholders on the new assembly. The four wires must be resoldered to terminals (BK to 1, BK to 2, Y to 3, BR to 4). After terminating wires, bend transformer terminals toward the core. Nestle wires between the winding and the core. Wires must not protrude beyond top of core. The five transformer wires at the bottom of the transformer should be routed so that all slack is removed between the transformer breakout and the cable clamp and the wires are within the outside edge of the 3-switch nut plate.

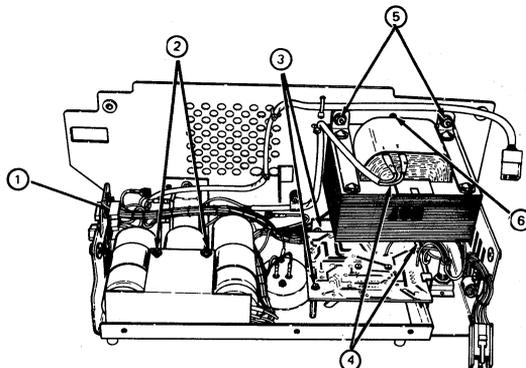


In reassembly, perform the adjustment in 2.23.

### 2.34c 402982 Transformer Assembly

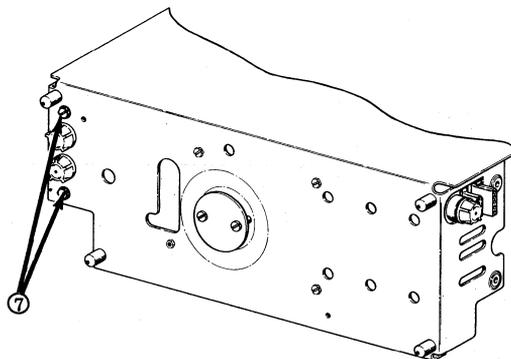
- Remove the power module assembly. See 2.35b.

- ① Remove the P117 plug from frame.
- ② Remove the four capacitor clamp mounting nuts, lockwashers, flat washers, the insulator, two lockwashers and bushings.
- ③ Remove the screw that mounts the 410151 card. Remove the card and two J102 connector mounting screws and lockwashers.
- ④ Cut the protective tubing at the top terminals of the transformer and unsolder seven wires (BR, BL, Y, BR, R, G, O).
- ⑤ Remove four nuts, lockwashers, and flat washers that mount the transformer.
- ⑥ Remove the nut and lockwasher that secure the braided ground strap.
- ⑦ Remove two fuse bracket mounting screws.



402978 POWER MODULE ASSEMBLY

*Note:* When installing a new 402982 transformer assembly, transfer the two 129919 fuses from the fuse holders on the old assembly to the fuse holders on the new assembly. The seven wires must be resoldered to terminals (BR to 1, BL to 2, Y to 3, BR to 4, R to 6, G to 7, O to 8). After terminating wires, bend transformer terminals toward the core. Nestle wires between the winding and the core. Wires must not protrude beyond top of core.



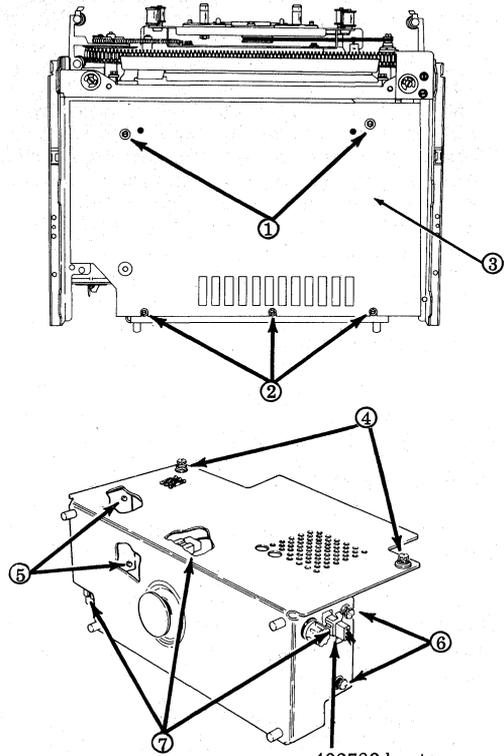
2.35 402620 Power Module Assembly (for 40P151), 402789 Power Module Assembly (for 40P153), or 402978 Power Module Assembly (for 40P154)

2.35a 402620 or 402789 Power Module Assembly (40P151 or 40P153, respectively)

- Remove paper handling assembly. See 2.23.
  - Stand printer on rear.
- ① Remove two screws.
  - ② Loosen three screws.
  - ③ Slide plate out.
  - ④ Remove two top mounting screws.
  - ⑤ Remove two right side mounting screws.
  - ⑥ Remove two left side mounting screws.
  - ⑦ Disconnect three connectors (on 402620 power module) or four connectors (on 402789 power module) and lift assembly off.

*Note:* Removal of lower screw on left side is facilitated by sliding connector mounting bracket to rear. Remove rear mounting screw (or post) from bracket, loosen two mounting screws that hold bottom of bracket to frame, and slide bracket to rear until cover mounting screw is accessible.

In reassembly, reverse the disassembly procedure and perform adjustment in 2.23.



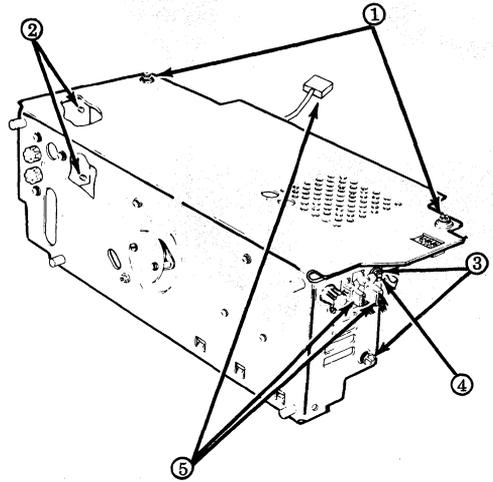
402620 OR 402789  
POWER MODULE ASSEMBLY

402789 has two  
connectors on left side

## 2.35b. 402978 Power Module Assembly (for 40P154)

- Remove 410071 circuit card (2.20).
- ① Remove two top mounting screws.
- ② Remove two right side mounting screws.
- ③ Remove two left side mounting screws and cable clamp.
- ④ Remove the screw and lockwasher that secure the braided ground strap on the left side.
- ⑤ Disconnect three connectors and lift assembly off printer.

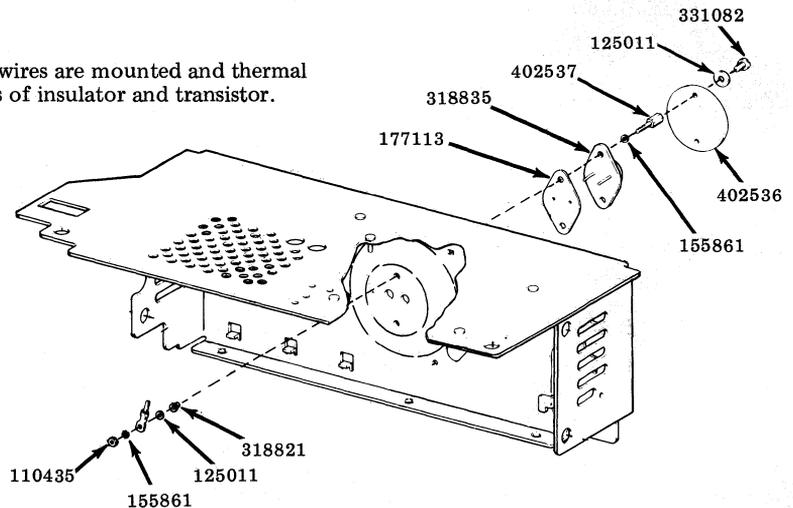
*Note:* Removal of lower screw on left side is facilitated by sliding connector mounting bracket to rear. Remove rear mounting post from bracket, loosen two mounting screws that hold bottom of bracket to frame, and slide bracket to rear until cover mounting screw is accessible.



## 2.36 318835 Transistor

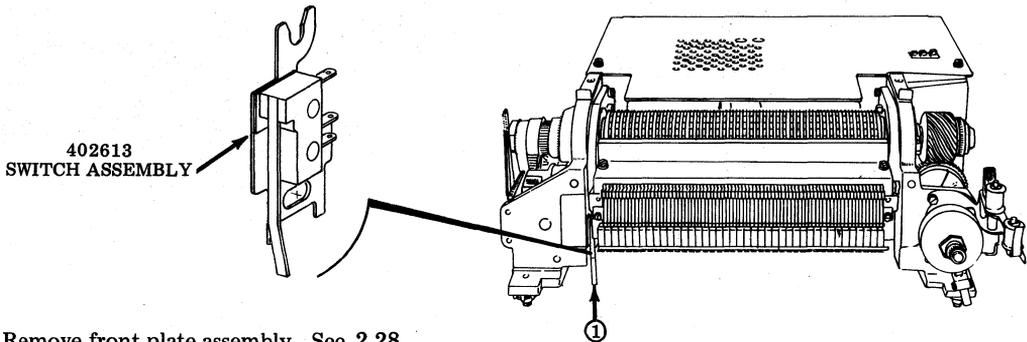
- Remove power module assembly (2.35).
- ① Unsolder white and slate leads to transistor terminals.
- ② Remove transistor mounting hardware as illustrated below.
- ③ Remove transistor.

In reassembly, make sure all wires are mounted and thermal compound is applied to bases of insulator and transistor.



2.37 402613 Paper-Out Switch

*Caution: Due to mounting screw being located close to the end armature, care should be exercised when removing and replacing the switch assembly.*

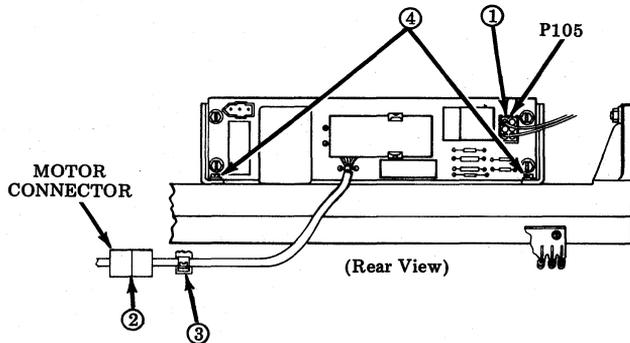


- Remove front plate assembly. See 2.28.
- ① Remove and retain the lower screw and adjusting pry plate.
- Disengage the switch assembly from the pivot by carefully pulling the assembly toward the bottom and removing.

In reassembly, perform the Paper-Out Switch adjustment.

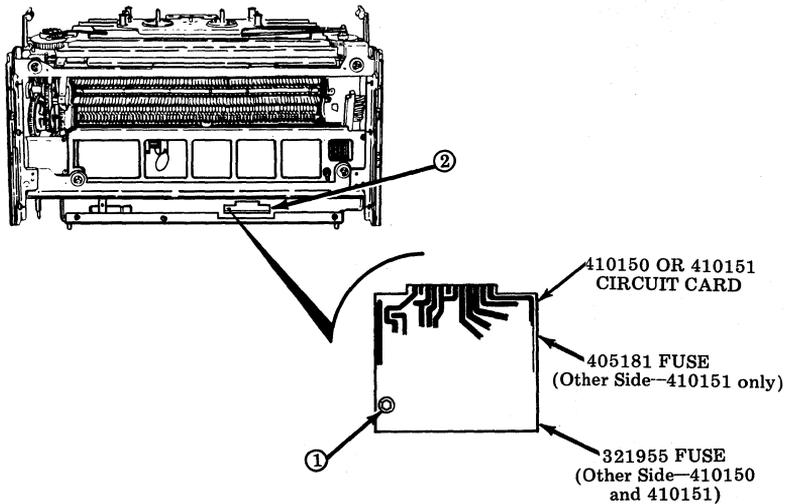
2.38 410155 Motor Control Circuit Card Assembly (40P154)

- Remove 402978 power module assembly (2.35).
- ① Disconnect P105 connector from card assembly.
- ② Disconnect motor connector.
- ③ Remove cable clamp(s).
- ④ Remove two screws that secure motor control circuit card assembly.
- Remove assembly.

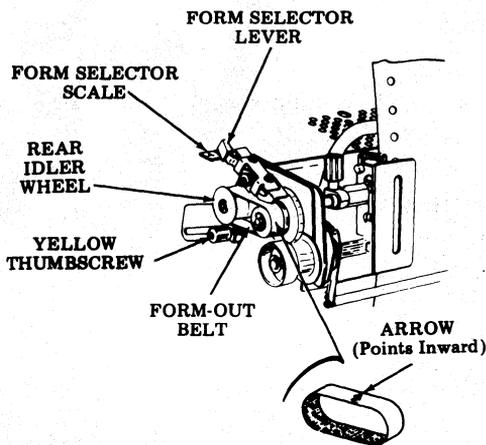


2.39 410150 (40P151 or 40P153) or 410151  
(40P154) Regulator Circuit Card Assembly

- Remove power module assembly (2.35).
- ① Remove screw w/lockwasher that secures circuit card.
- ② Slide circuit card out from J111 receptacle (40P151 or 40P153) or J102 receptacle (40P154).



## 2.40 Form-Out Belt



## Removal:

- ① Loosen yellow thumbscrew (counterclockwise) and slide bracket forward to remove tension.
- ② Depress and hold form selector lever so that contact arm clears.
- ③ Move rear idler wheel forward.
- ④ Remove belt by sliding it to left.

## Replacement:

- ① Depress and hold form selector lever while holding rear idler wheel forward.
- ② Position new belt on wheels so that arrow points inward.
- ③ Position rear wheel back and remove slack in belt. Have bracket at right angles to slot as shown.
- ④ Tighten thumbscrew clockwise.
- ⑤ Depress FORM ADVANCE, and check stop positions.

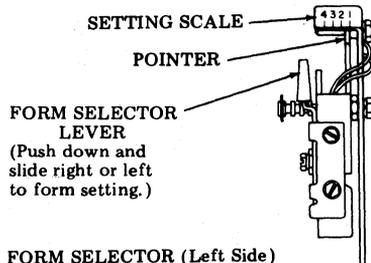
*Note:* If form stop positions do not correspond to form lengths, belt may be reversed or incorrect belt is used. Check Form-Out Belt Selection

## Form-Out Belt Selection

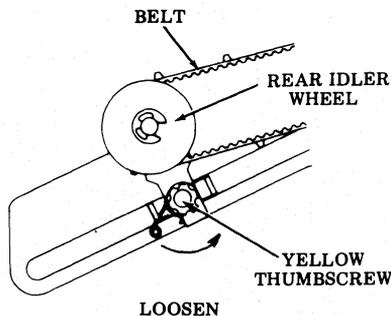
Form Selector Setting				Part No.	Color of Belt
4	3	2	1		
Length of Form, Inches					
+3-1/3	2-1/2	5	10	402571	Amber
+3-2/3	* 2-3/4	5-1/2	11	402572	Dk Blue
4	3	6	12	402573	Yellow
+4-1/3	* 3-1/4	6-1/2	13	402574	Brown
+4-2/3	3-1/2	7	14	402575	Red
5	* 3-3/4	7-1/2	15	402576	Pink
+5-1/3	4	8	16	402577	Lt Green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

+ For six lines per inch

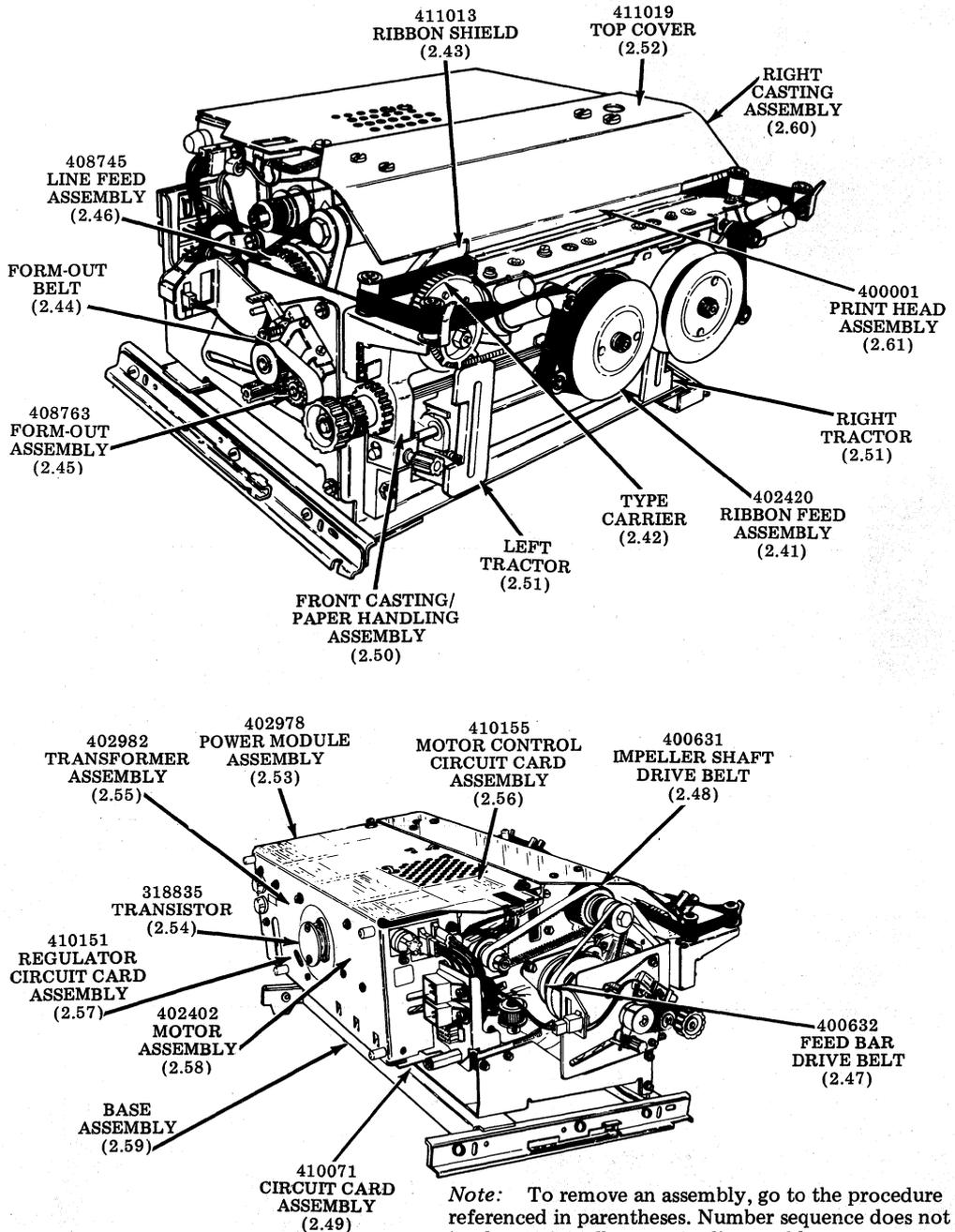
\* For eight lines per inch



(Adjusted Position of Idler Wheel)



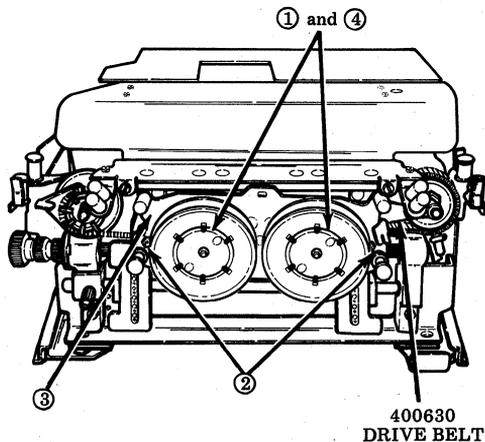
## C. 80-Column Forms Access Printer (40P253)



2.41 402420 Ribbon Feed Assembly

- ① Pull off ribbon spools. Roll up ribbon (402444) and set aside.
- ② Remove two nuts, lockwashers and flat washers.
- ③ Move ribbon feed assembly to right to disengage drive belt (400630). Remove ribbon feed assembly and drive belt.
- ④ When installing ribbon, follow ribbon loading instructions printed on cover top.

In reassembly, perform the Ribbon Feed Drive Belt Tension adjustment.



2.42 Type Carrier

- Remove ribbon. See 2.41 ①
- ① Depress thumb lever on right guide bracket allowing guide to spring open.
  - ② Remove two screws (hex head), lockwashers and flat washers and remove the tear bar assembly.

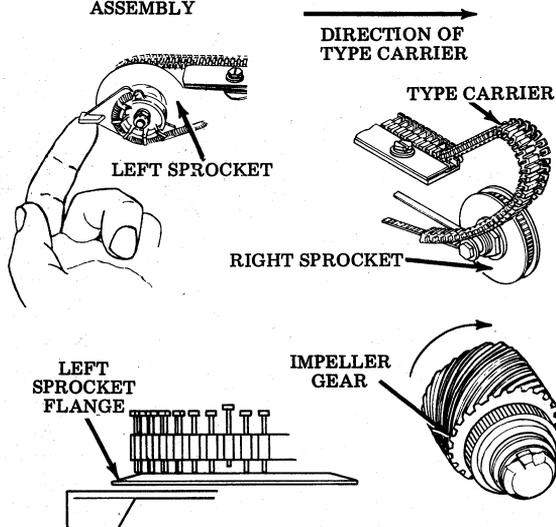
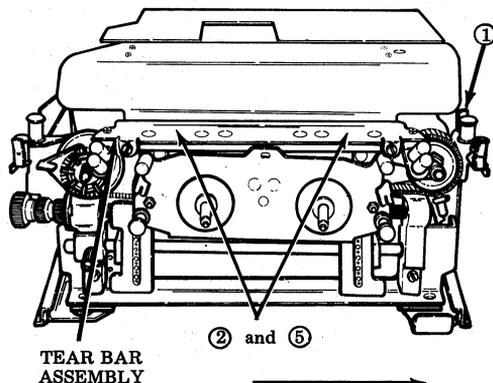
*Caution:* Exercise care in handling tear bar assembly to prevent injury from the tear edge. Careless handling of the tear bar assembly may produce a burr on the tearing edge which may impair feeding of paper forms.

- ③ Lift up arm on left type carrier sprocket to release spring bias on sprocket. While holding arm up, lift type carrier from right sprocket and remove.

Install type carrier starting at left sprocket. Lift finger lever on left sprocket and position carrier over right sprocket.

- ④ Reinstall the tear bar assembly securing screws while holding tear bar assembly toward rear of the unit.
- ⑤ Rotate type carrier one revolution by turning impeller gear by hand clockwise. At the same time, align any protruding type pallets against left sprocket flange.

*Caution:* Damage to type carrier or printer will result if any type pallet is left protruding.



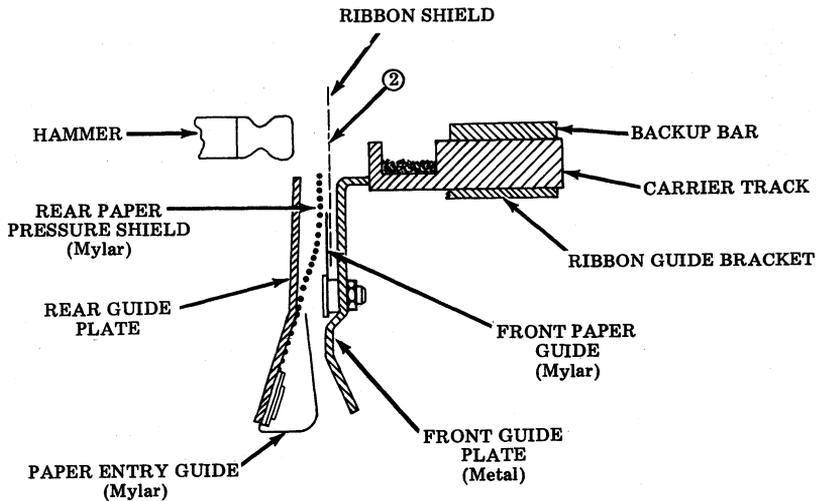
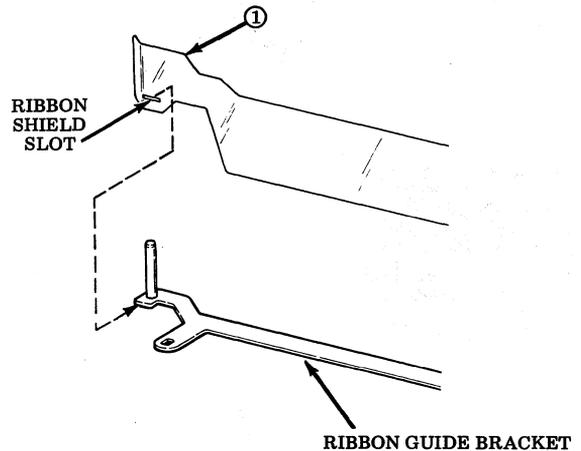
## 2.43 411013 Ribbon Shield

- Remove ribbon. See 2.41 ① .
- Remove type carrier (2.42).

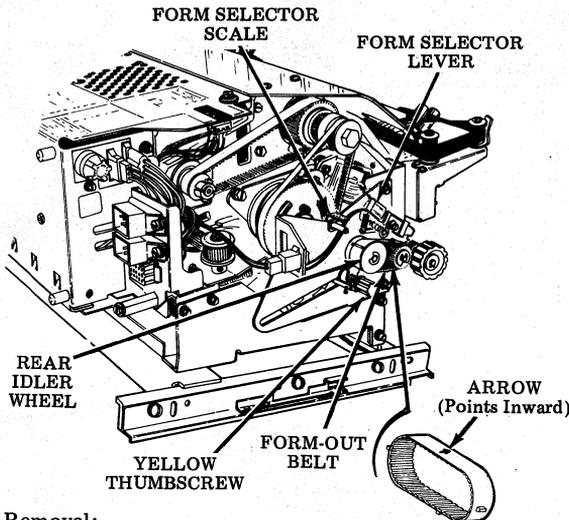
① Grasp ribbon shield at left tab. Bend shield forward and lift in an upward direction to remove.

② To install, insert ribbon shield between the front guide plate (metal) and front paper guide (Mylar) and anchor to the ribbon guide bracket utilizing ribbon shield slots.

*Caution: If ribbon shield is installed in wrong position, paper jam will result or the ribbon shield will be disengaged.*



## 2.44 Form-Out Belt



## Removal:

- ① Loosen yellow thumbscrew (counterclockwise) and slide bracket forward to remove tension.
- ② Depress and hold form selector lever so that contact arm clears.
- ③ Move rear idler wheel forward.
- ④ Remove belt by sliding it to left.

## Replacement:

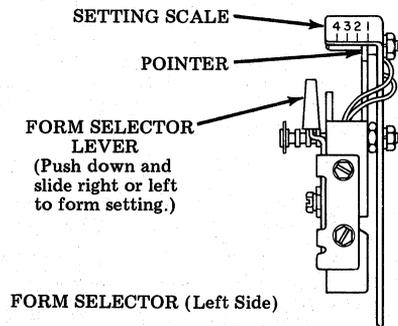
- ① Depress and hold form selector lever while holding rear idler wheel forward.
- ② Position new belt on wheels so that arrow points inward.
- ③ Position rear wheel back and remove slack in belt. Have bracket at right angles to slot as shown.
- ④ Tighten thumbscrew clockwise.
- ⑤ Depress FORM ADVANCE, and check stop positions.

*Note:* If form stop positions do not correspond to form lengths, belt may be reversed or incorrect belt is used. Check Form-Out Belt Selection

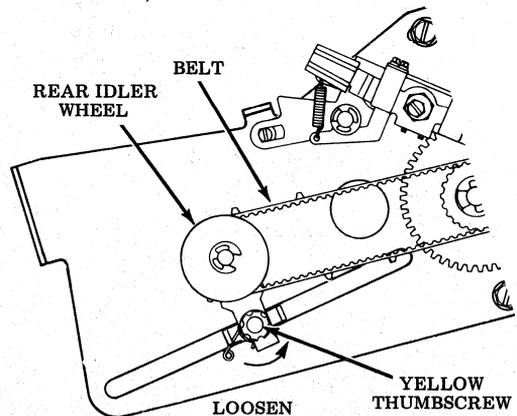
## Form-Out Belt Selection

Form Selector Setting				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

+ For six lines per inch  
\* For eight lines per inch



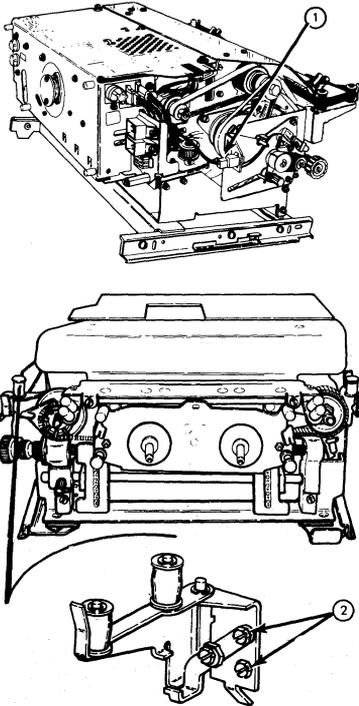
(Adjusted Position of Idler Wheel)



## 2.45 408763 Form-Out Assembly

- Remove ribbon. See 2.41 C .

- ① Disconnect P116 plug from J116 receptacle.
- ② Remove two screws w/lockwashers that secure mounting bracket to side casting. Removal of upper screw is facilitated by lifting up arm on left type carrier sprocket.



In reassembly, check Gear Backlash adjustment.  
Reset form-out contact to belt phasing as follows:

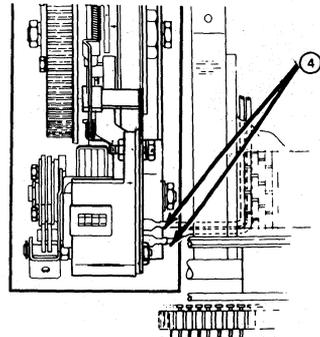
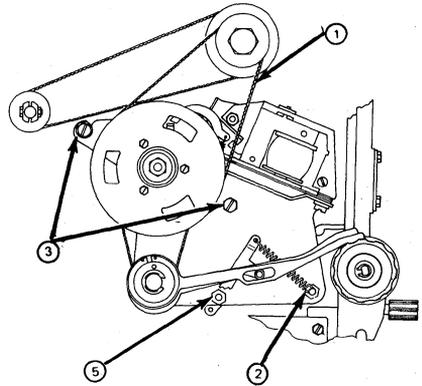
- Move line feed pawls out of engagement with the line feed gear.
- Rotate the paper advance knob until the slope part of the contact just touches the long cam.
- Release the line feed pawls.



## 2.46 408745 Line Feed Assembly

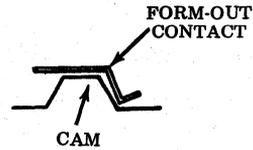
- Remove form-out assembly (2.45).

- ① Slide line feed clutch drive belt off.
- ② Disconnect one end of spring.
- ③ Remove two screws, two lockwashers and one flat washer.
- ④ Remove two leads from backside of coil.
- ⑤ Remove rear screw securing post cable clamp for P104 cable.



⑥ When replacing the line feed assembly, reconnect orange and yellow leads and brown and red leads to coil first.

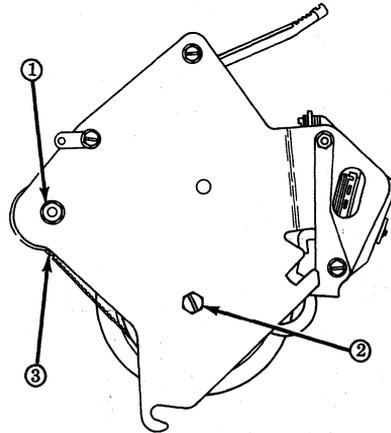
In reassembly, perform Clutch Drive Belt Tension adjustment. In reassembly of form-out assembly, check Gear Backlash adjustment. Reset form-out contact to belt phasing as follows:



- Move line feed pawls out of engagement with the line feed gear.
- Rotate the paper advance knob until the slope part of the contact just touches the long cam.
- Release the line feed pawls.

2.47 400632 Feed Bar Drive Belt

- Remove 408745 line feed assembly (2.46).
- ① Remove 112626 nut, 2669 lockwasher, and 35826 flat washer.
- ② Remove 153442 screw and 45815 lockwasher.
- ③ Remove plate and 400632 feed bar drive belt. Replace belt.

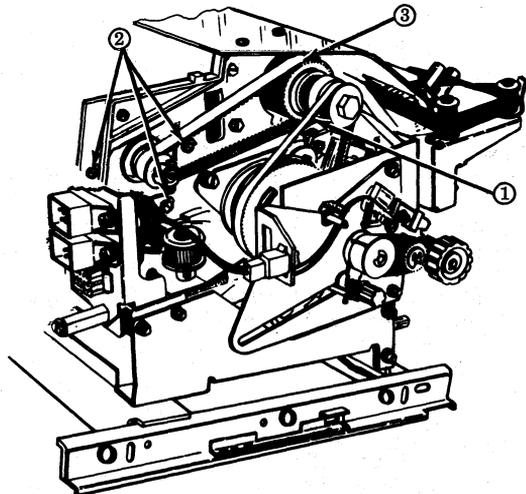


In reassembly, perform Line Feed Bar Eccentric and Drive Belt Tension adjustment and the adjustments in 2.46.

2.48 400631 Impeller Shaft Drive Belt

- ① Remove 400634 clutch drive belt.
- ② Loosen three motor adjusting screws friction tight. Press motor inward and up to release belt tension.
- ③ Remove worn 400631 belt and replace with new belt.

In reassembly, perform Impeller Shaft Drive Belt Tension adjustment. Check Clutch Drive Belt Tension adjustment.

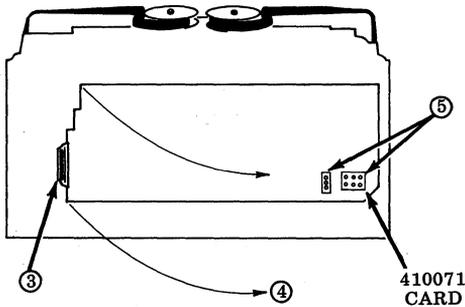
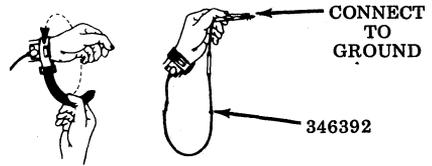


## 2.49 410071 Circuit Card Assembly

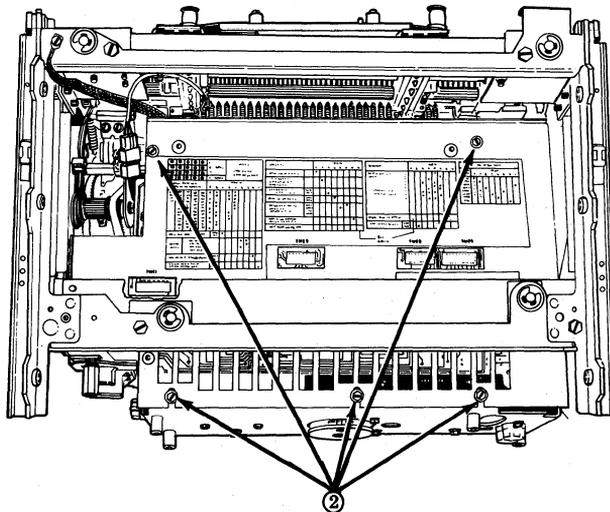
- ① Turn printer upside down.
- ② Remove five screws securing circuit card cover and remove cover.
- ③ Unplug flat P109 cable from left-hand side of 410071 card.
- ④ Lift card away from printer.
- ⑤ Unplug P106 sensor and P103 power supply cables from 410071 card.
- ⑥ Remove card through opening in rear of base frame assembly.

**Note:** When replacing the 410071 circuit card with a NEW card, remake the Impeller Shaft Sensor and Flag Sensor adjustments.

**Caution:** When handling circuit cards with MOS devices such as the 410071 circuit card, personnel must wear a static protection grounding strap (346392 or equivalent). The strap must be worn in firm contact with the skin at all times with the ground clip connected to ground as illustrated below. Care should be taken to avoid touching circuit paths or components on the circuit card.

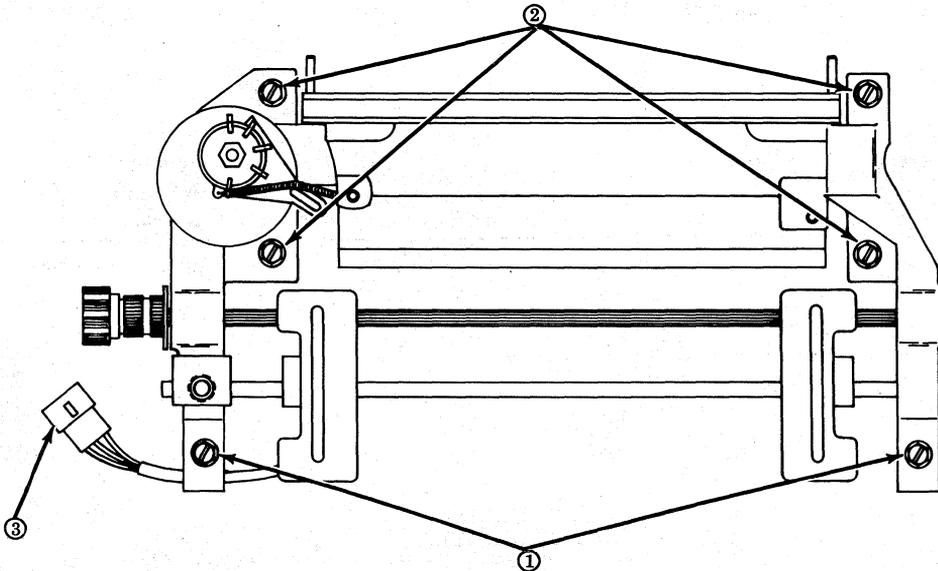


Service personnel are *never* to be connected directly to ground but rather through a high resistance discharge path of a minimum of one megohm where 115 V ac is present. This resistance is built into the grounding strap (346392).



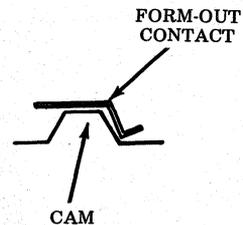
2.50 Front Casting/Paper Handling Assembly

- Remove ribbon feed assembly (2.41).
- Remove type carrier (2.42).
- ① Remove two screws, lockwashers and flat washers that secure front casting to base frame front plate.
- ② Remove four screws, lockwashers, and flat washers that mount front casting to side castings.
- ③ Disconnect J104 receptacle.
- ④ Move line feed pawls out of engagement with the line feed gear and remove front plate—paper handling assembly.



In reassembly, perform the Ribbon Feed Drive Belt Tension adjustment. Reset form-out contact to belt phasing as follows:

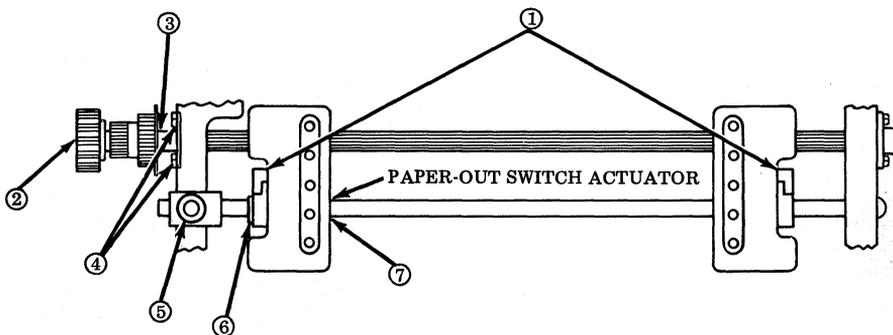
- Move line feed pawls out of engagement with the line feed gear.
- Rotate the paper advance knob until the slope part of the contact just touches the long cam.
- Release the line feed pawls.



## 2.51 Left or Right Tractor Assembly

- Remove form-out assembly 2.45.

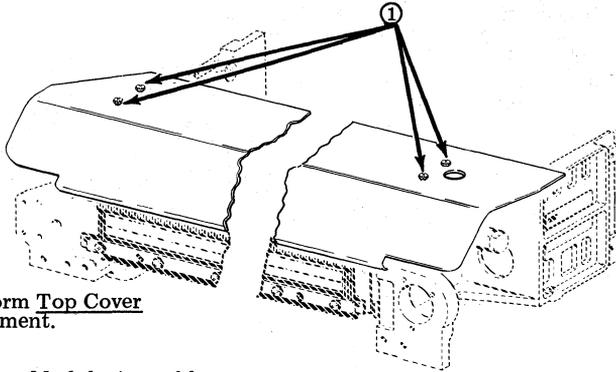
- ① Release the tractor clamp levers on left and on right tractor assemblies.
- ② Remove retainer ring that secures left knob. Remove flat washer, spring and knob. Remove spur gear while holding line feed pawls up.
- ③ Remove retainer ring and spacer.
- ④ Remove two screws that secure oilite bearing to left side frame. Slide shaft out to left.
- ⑤ Remove blue thumb knob, lockwasher, flat washer and bracket.
- ⑥ Remove retainer ring located to left of left tractor.
- ⑦ With left tractor biased to the left and tractor lid open, remove two retainer rings from left and right sides of paper-out switch actuator. Slide support shaft out to left.



During reassembly of tractor assembly to shaft, perform Tractor Phasing adjustment. If paper-out switch is replaced on the left tractor assembly, also perform the Paper-Out Switch adjustment. In reassembly of the Form-Out assembly, perform the adjustments in 2.45.

2.52 411019 Top Cover

- ① Remove four mounting screws and lift off top cover.

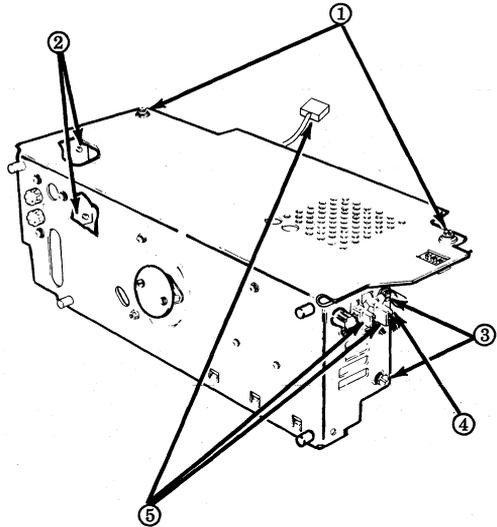


In reassembly, perform Top Cover (Preliminary) adjustment.

2.53 402978 Power Module Assembly

- Remove circuit card (2.49).

- ① Remove two top mounting screws.
- ② Remove two right side mounting screws.
- ③ Remove two left side mounting screws and cable clamp.
- ④ Remove screw and lockwasher that secure braided ground strap on left side.
- ⑤ Disconnect three connectors and lift assembly off printer.

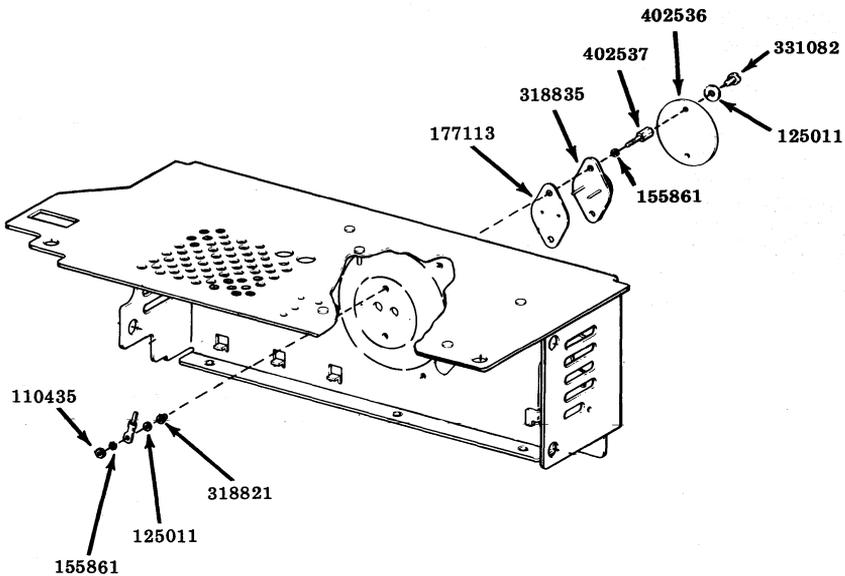


*Note:* Removal of lower screw on left side is facilitated by sliding connector mounting bracket to rear. Remove rear mounting post from bracket, loosen two mounting screws that hold bottom of bracket to frame, and slide bracket to rear until cover mounting screw is accessible.

## 2.54 318835 Transistor

- Remove 402978 power module assembly (2.53).
- ① Unsolder white and slate leads to transistor terminals.
  - ② Remove transistor mounting hardware as illustrated below.
  - ③ Remove transistor.

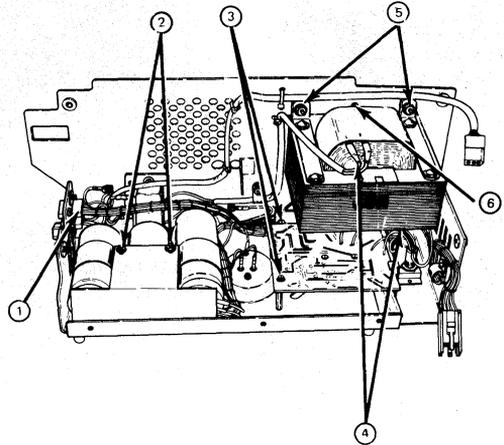
In reassembly, make sure all wires are mounted, and thermal compound is applied to bases of insulator and transistor.



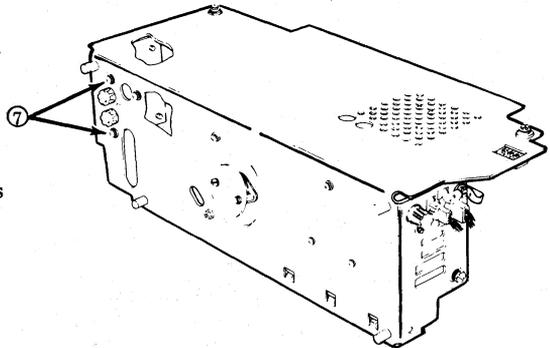
2.55 402982 Transformer Assembly

- Remove power module assembly (2.53).

- ① Remove the P117 plug from frame.
- ② Remove the four capacitor clamp mounting nuts, lockwashers, flat washers, the insulator, two lockwashers and bushings.
- ③ Remove the screw that mounts the 410151 card. Remove the card and two J102 connector mounting screws and lockwashers.
- ④ Cut the protective tubing at the top terminals of the transformer and unsolder seven wires (BR, BL, Y, BR, R, G, O).
- ⑤ Remove four nuts, lockwashers, and flat washers that mount the transformer.
- ⑥ Remove the nut and lockwasher that secure the braided-ground strap.
- ⑦ Remove two fuse bracket mounting screws.



*Note:* When installing a new 402982 transformer assembly, transfer the two 129919 fuses from the fuse holders on the old assembly to the fuse holders on the new assembly. The seven wires must be resoldered to terminals (BR to 1, BL to 2, Y to 3, BR to 4, R to 6, G to 7, O to 8). After terminating wires, bend transformer terminals toward core. Nestle wires between the winding and the core. Wires must not protrude beyond top of core.



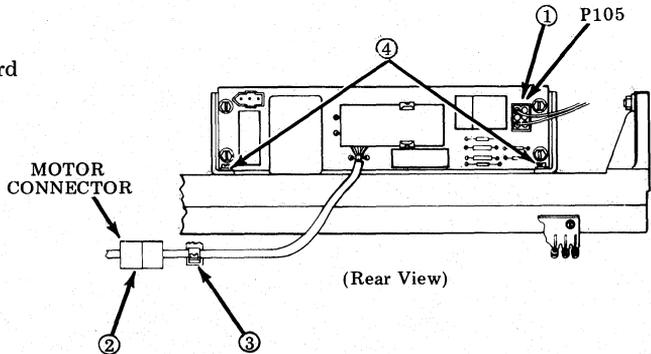
(Rear View)

2.56 410155 Motor Control Circuit Card Assembly

- Remove power module assembly (2.53).

- ① Disconnect P105 connector from card assembly.
- ② Disconnect motor connector.
- ③ Remove cable clamp(s).
- ④ Remove two screws that secure motor control circuit card assembly.

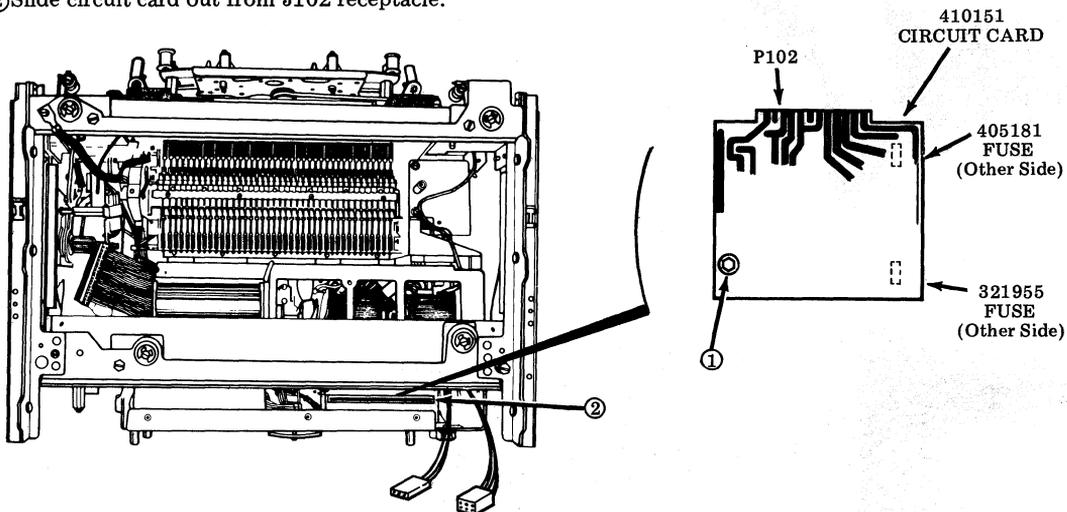
- Remove assembly.



(Rear View)

## 2.57 410151 Regulator Circuit Card Assembly

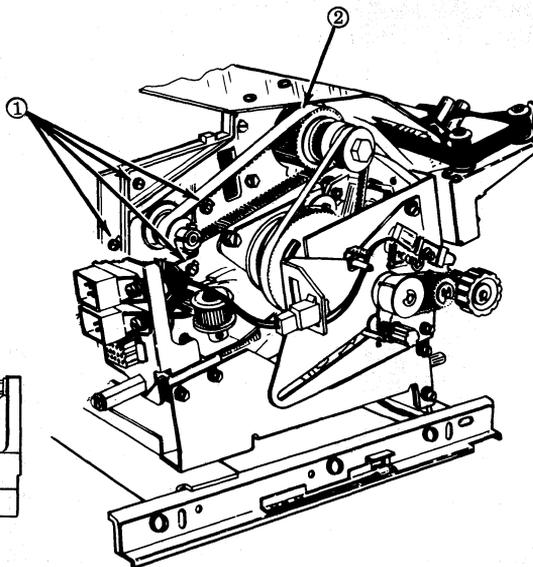
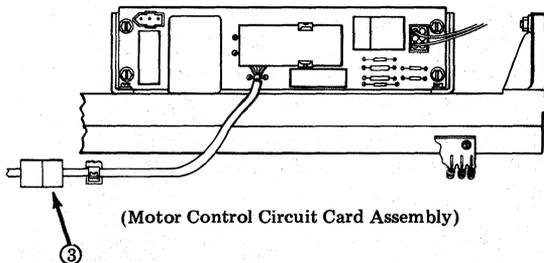
- Remove power module assembly (2.53).
- ① Remove screw w/lockwasher that secures circuit card.
- ② Slide circuit card out from J102 receptacle.



## 2.58 402402 Motor Assembly

- Remove power module assembly (2.53).
- ① Remove four screws.
- ② Remove impeller shaft drive belt.
- ③ Unplug P107.

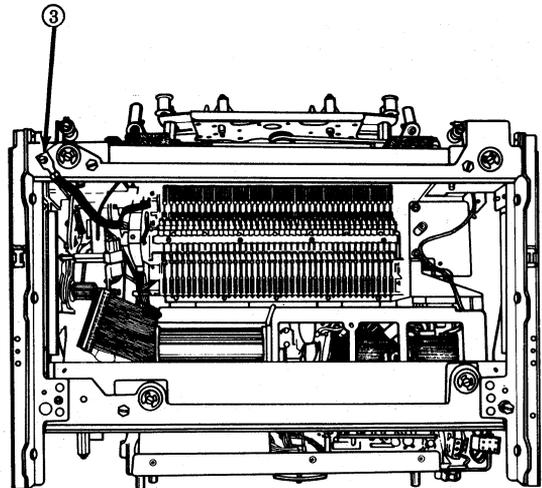
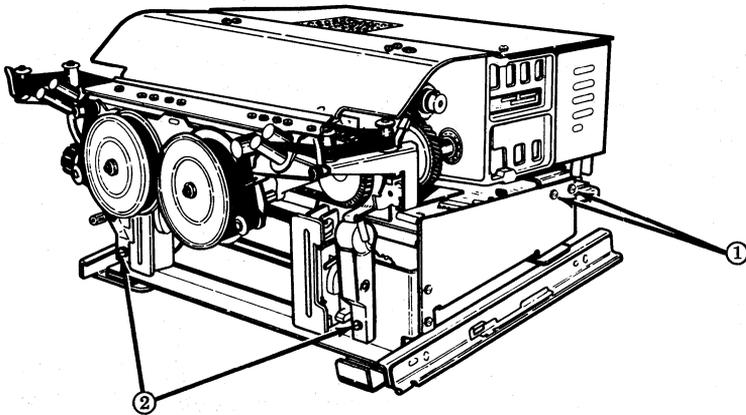
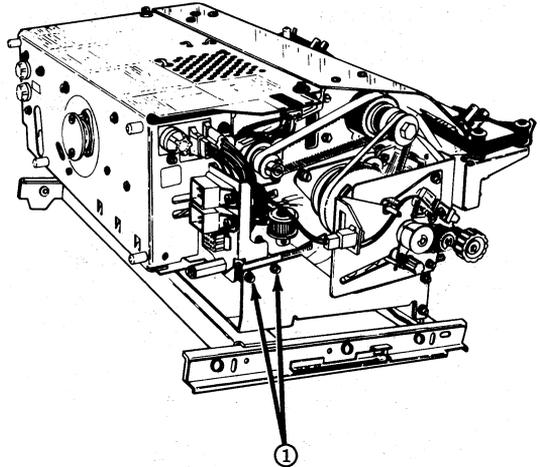
In reassembly, make Impeller Shaft Drive Belt Tension adjustment.



2.59 Base Assembly

• Stand printer on rear.

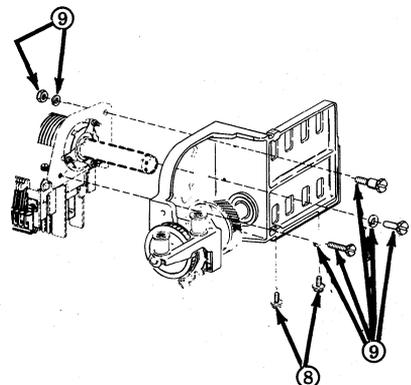
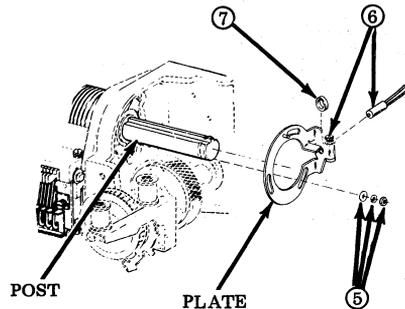
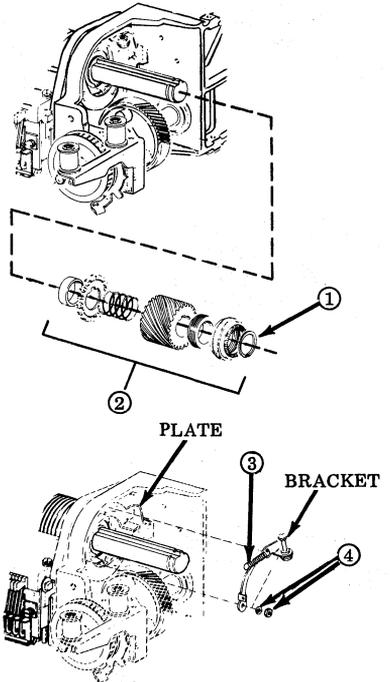
- ① Remove four screws (two each side) securing side brackets to power module adapter strip.
- ② Remove two screws securing front casting/paper handling assembly to base frame front plate.
- ③ Remove screw and lockwasher associated with ground strap.



## 2.60 Right Casting Assembly

- Remove top cover (2.52).
- Remove type carrier (2.42).
- Remove circuit card (2.49).
- Remove front casting/paper handling (2.50).
- Remove power module (2.53).
- Remove base assembly (2.59).

- ① Remove retaining ring from shaft.
- ② Slide off adjusting ring, collar, gear, spring, timing wheel, and bushing from shaft.
- ③ Unhook spring (110438) from post on sensor bracket.
- ④ Remove two nuts (3599) and lockwashers (3640) holding bracket to the plate. Remove bracket.
- ⑤ Remove nut (3599), lockwasher (3640), and flat washer (125011) holding plate to post. Remove plate.
- ⑥ Loosen screw holding the sensor. Remove sensor.
- ⑦ Be careful not to lose spacer (400931).
- ⑧ Remove two screws w/lockwashers (184057) holding bottom pan to casting.
- ⑨ Remove shoulder screw (400923), lockwasher (2669), and nut (112626); remove two screws (153442) and lockwasher (45815); remove right casting assembly.



In reassembly, follow through with 2.59, 2.53, 2.50, 2.49, 2.42, and 2.52. Perform adjustments in 2.50 and 2.52. Check the Impeller Shaft Sensor Gap and Flag Sensor Gap adjustments. On printing test, the Impeller Shaft to Carrier Phasing, Impeller Shaft Sensor, and Flag Sensor adjustments may have to be checked.

## 2.61 400001 Print Head Assembly

*Warning: If a trouble is isolated to the Print Head Assembly, the complete printer should be replaced. Disassembly information shown is for repair shop location reference.*

- Remove type carrier (2.42).
- Remove circuit card (2.49).
- Remove front casting/paper handling (2.50).
- Remove right casting (2.60).

① Remove clutch drive belt.

② Loosen three motor adjusting screws friction tight. Press motor inward and up to release belt tension.

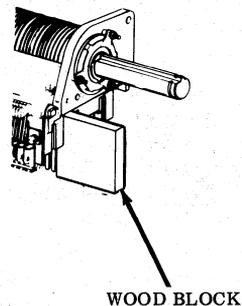
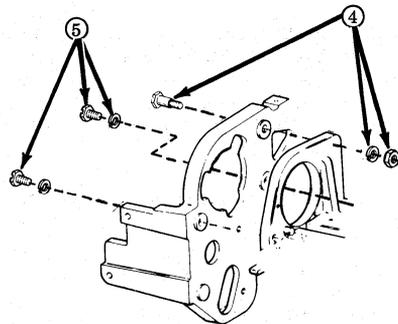
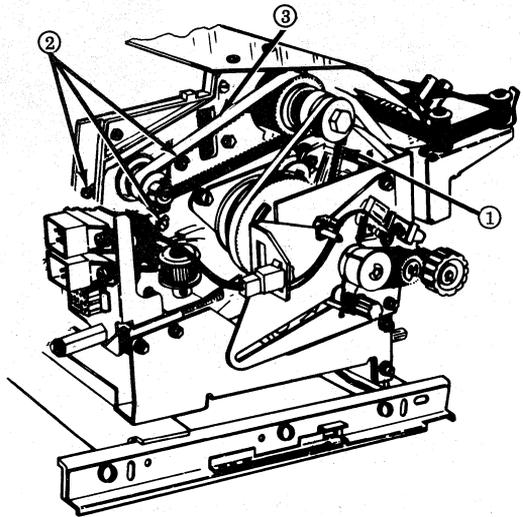
③ Remove impeller shaft drive belt.

④ At left casting, remove shoulder screw, lock-washer (2669), and nut (112626).

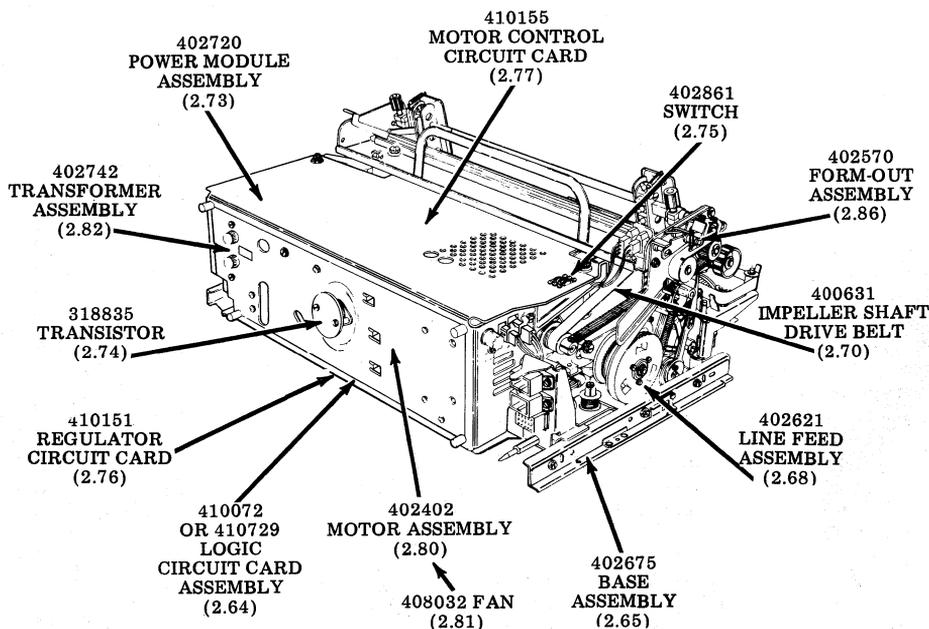
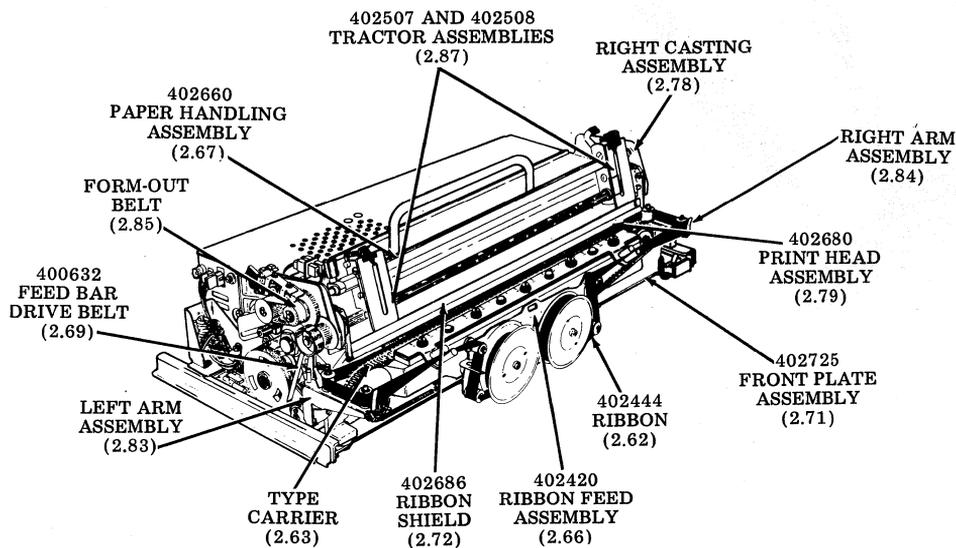
⑤ Also remove two screws (153442) and lock-washers (45815). Remove print head assembly (400001).

*Note:* It is suggested that when the right casting is removed, a 3-inch piece of wood be placed under the right end of the print head to keep it from dropping.

In reassembly, be sure to follow all the procedures and perform all the adjustments in 2.60 and 2.48.



## D. 132-Column Tractor Feed Printer

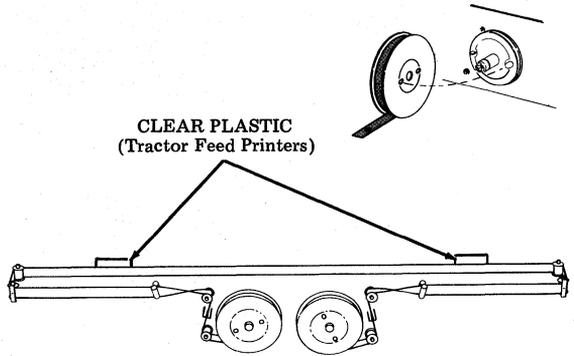


*Note:* Paragraph numbers are indicated in parentheses for disassembly procedures for major assemblies. Go directly to the procedures for the major assembly to be removed.

2.62 402444 Ribbon

The ribbon spools rest on nylon drive pins. Pull outward to remove. Remove ribbon and spools.

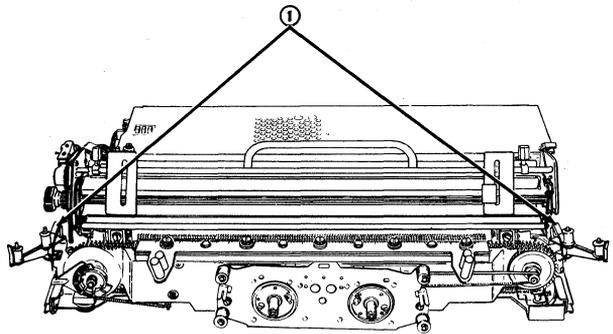
CLEAR PLASTIC  
(Tractor Feed Printers)



2.63 Type Carrier

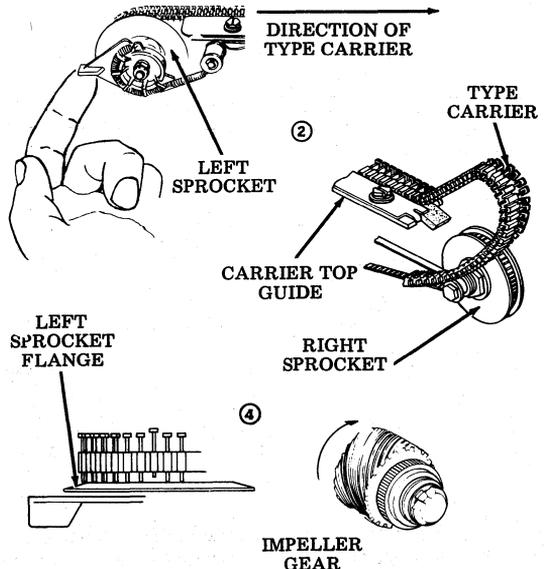
- Remove 402444 ribbon (2.62).

- ① Release thumb levers on left and right ribbon guide brackets allowing guides to spring to sides of printer.



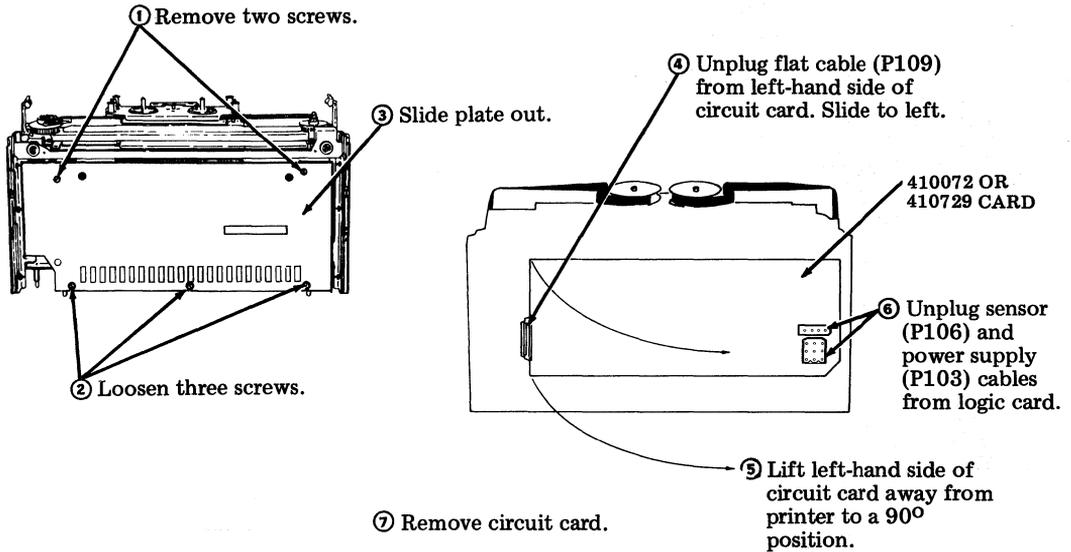
- ② Lift finger lever on left sprocket and hold. Remove type carrier starting at right sprocket as shown. (Release finger lever.)
- ③ Install type carrier starting at left sprocket then over right sprocket. Make sure all pallet stems are positioned under top guide on printer.
- ④ Rotate type carrier one revolution by turning impeller gear by hand clockwise. At the same time, align any protruding type pallets against left sprocket flange.

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



2.64 410072 or 410729 Logic Circuit Card Assembly

- Place printer on backside.

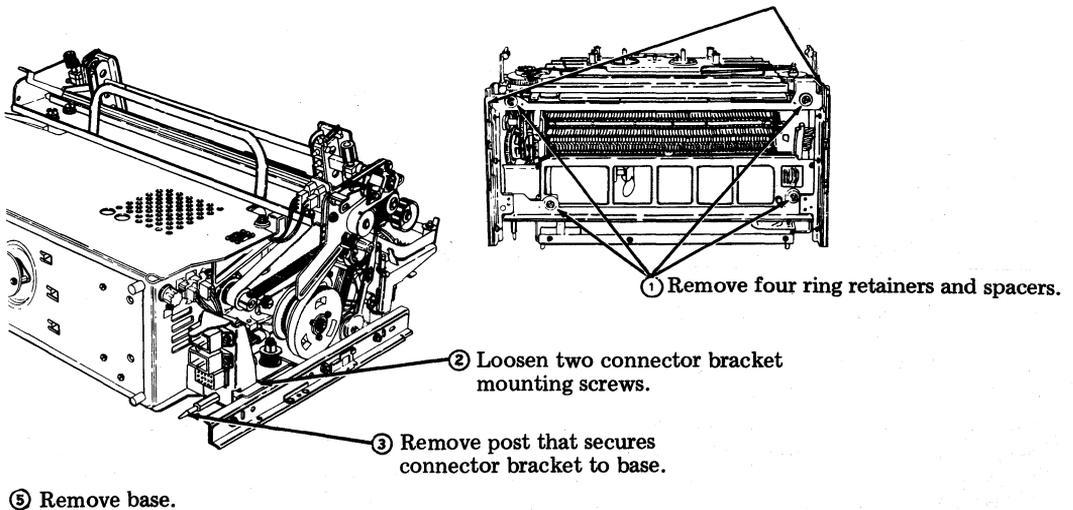


*Note:* When replacing the 410072 or 410729 circuit card with a NEW CARD, remake the Impeller Shaft Sensor and Flag Sensor adjustments.

2.65 402675 Base Assembly

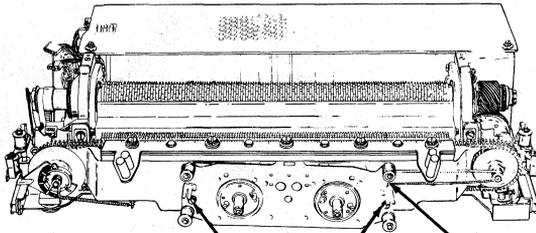
- Remove 410072 or 410729 logic circuit card (2.64).

- ④ Remove round head screws that secure braided ground strap from left and right rails.



2.66 402420 Ribbon Feed Assembly

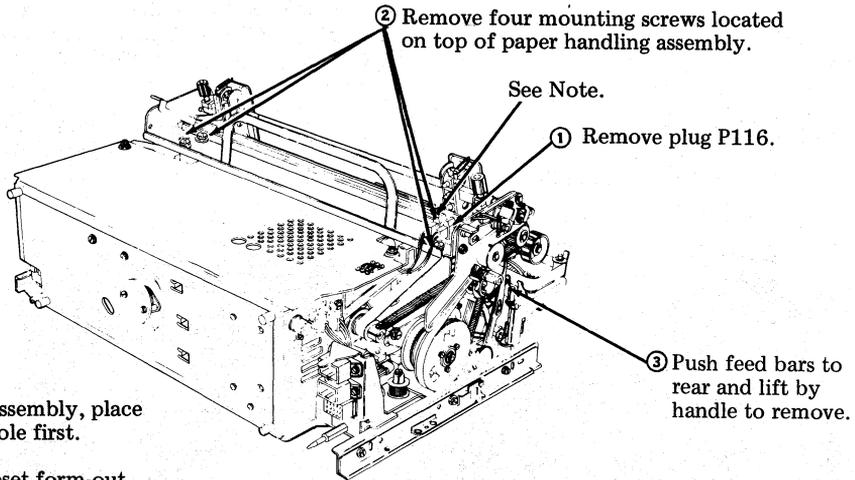
- Remove 402444 ribbon (not shown) (2.62).



- ① Remove two nuts, lockwashers and flat washers.
- ② Move ribbon assembly forward and right to remove 400635 belt.

In reassembly, perform Ribbon Feed Drive Belt Tension adjustment.

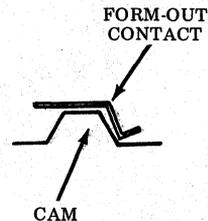
2.67 402660 Paper Handling Assembly



*Note:* During reassembly, place screw in locating hole first.

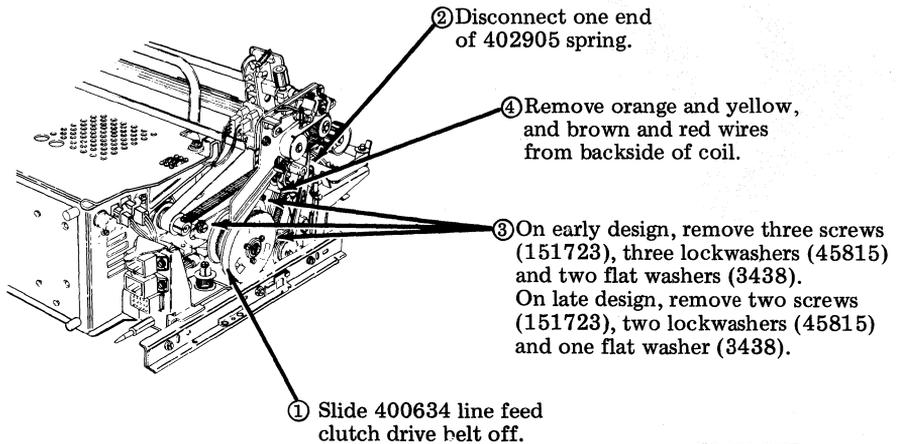
During reassembly, reset form-out contact to belt phasing as follows:

- Move line feed pawls out of engagement with the line feed gear.
- Rotate the paper advance knob until the slope part of the contact just touches the long cam.
- Release the line feed pawls.



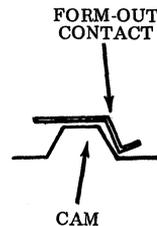
## 2.68 402621 Line Feed Assembly

- Remove 410072 or 410729 logic circuit card.



During reassembly, reconnect orange and yellow, and brown and red leads first.

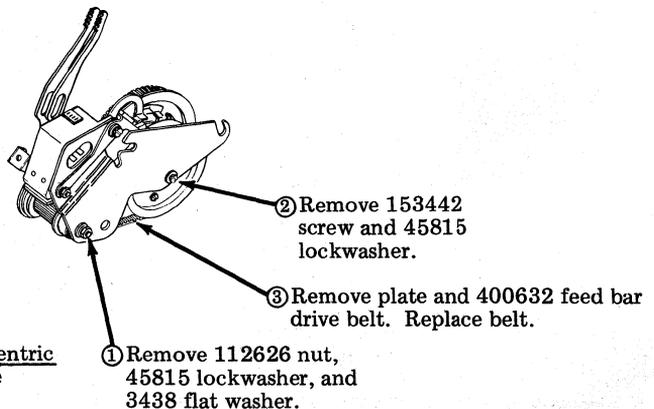
In reassembly, perform Clutch Drive Belt Tension adjustment. Reset form-out contact to belt phasing as follows:



- Move line feed pawls out of engagement with the line feed gear.
- Rotate the paper advance knob until the slope part of the contact just touches the long cam.
- Release the line feed pawls.

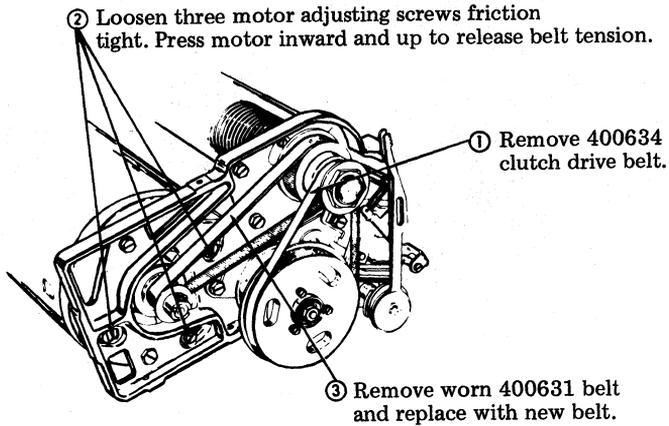
## 2.69 400632 Feed Bar Drive Belt

- Remove 402621 line feed assembly (2.68).



In reassembly, perform Line Feed Bar Eccentric and Drive Belt Tension adjustment and the adjustments in 2.68.

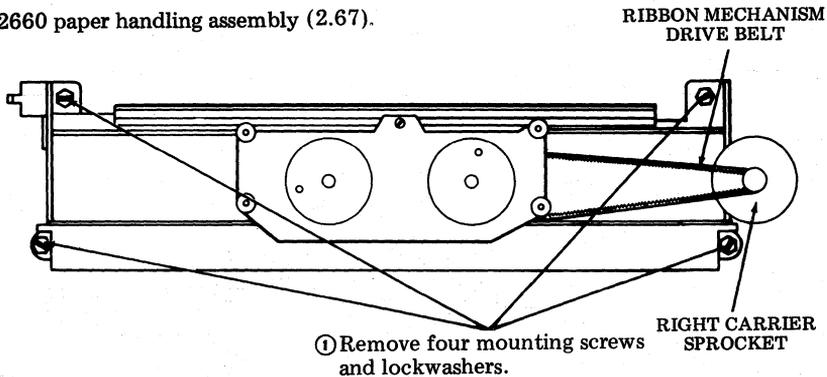
2.70 400631 Impeller Shaft Drive Belt



In reassembly, perform Impeller Shaft Drive Belt Tension adjustment. Check Clutch Drive Belt Tension adjustment.

2.71 402725 Front Plate Assembly

- Remove type carrier (2.63).
- Remove 402420 ribbon feed assembly (2.66).
- Remove left arm assembly (2.83).
- Remove 402660 paper handling assembly (2.67).

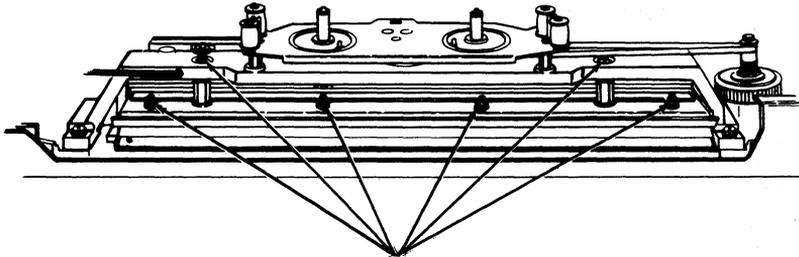


Slide assembly up to clear paper chute.  
Remove front casting assembly.

In reassembly, perform Ribbon Mechanism Drive Belt adjustment.

2.72 402686 Ribbon Shield

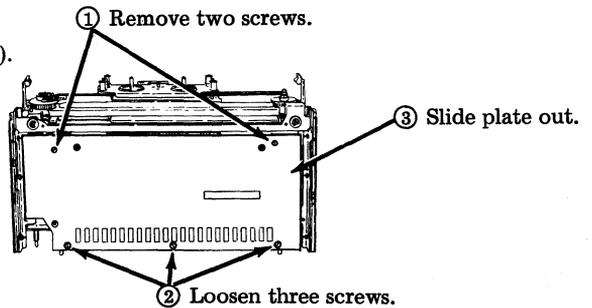
- Remove 402725 front plate assembly (2.71).



Remove six nuts, lockwashers and flat washers.

2.73 402720 Power Module Assembly

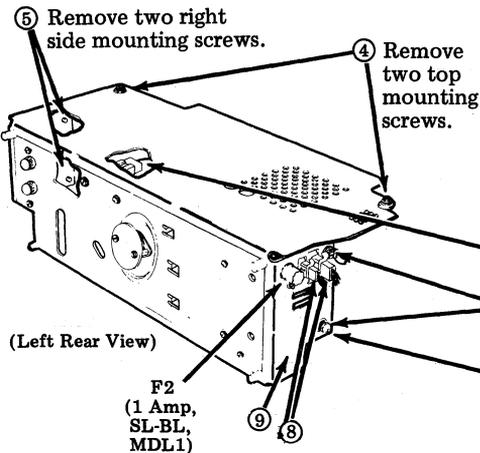
- Remove 402660 paper handling assembly (2.67).
- Place printer on backside.



① Remove two screws.

③ Slide plate out.

② Loosen three screws.



⑤ Remove two right side mounting screws.

④ Remove two top mounting screws.

⑩ Disconnect remaining connector and left module assembly off of printer.

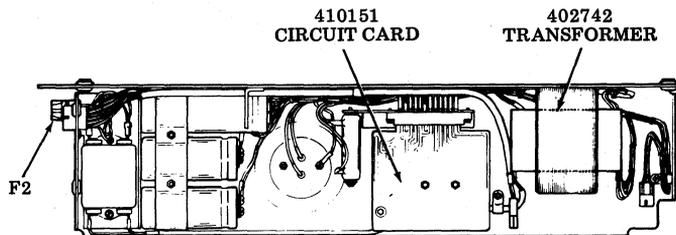
⑦ Remove two left side mounting screws.

⑥ Removal of lower screw is facilitated by sliding connector mounting bracket to rear. Remove rear mounting screw (or post) from bracket, loosen two mounting screws that hold bottom of bracket to frame, and slide bracket to rear until cover mounting screw is accessible.

⑧ Disconnect two connectors.

⑨ Remove the screw and lockwasher that secure the braided ground strap.

To reassemble, reverse the disassembly procedure and perform adjustment in 2.67.



SECTION 582-210-702

2.74 318835 Transistor

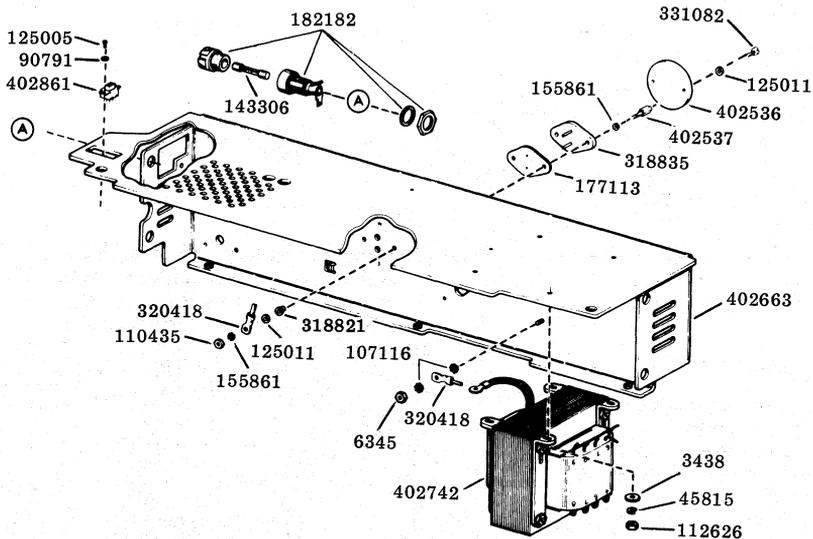
- Remove 402720 power module assembly (2.73).
- ① Unsolder white and slate leads to transistor terminals.
- ② Remove transistor mounting hardware as illustrated below.
- ③ Remove transistor.

In reassembly, make sure all wires are mounted and thermal compound is applied to bases of insulator and transistor.

2.75 402861 Switch

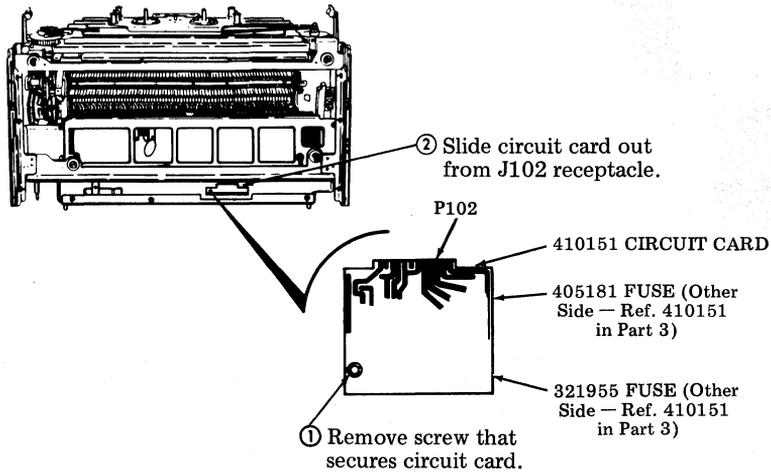
- Remove 402720 power module assembly (2.73).
- ① Unsolder leads to associated switch to be removed.
- ② Remove two screws and lockwashers.
- ③ Remove switch.

In reassembly, make sure wires are mounted.



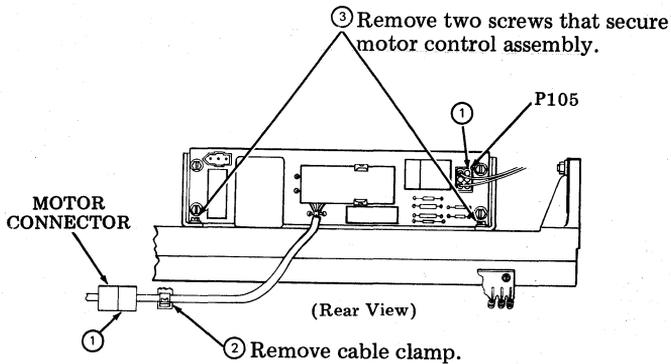
2.76 410151 Regulator Circuit Card Assembly

- Remove 410072 or 410729 logic circuit card (2.64).



2.77 410155 Motor Control Circuit Card Assembly

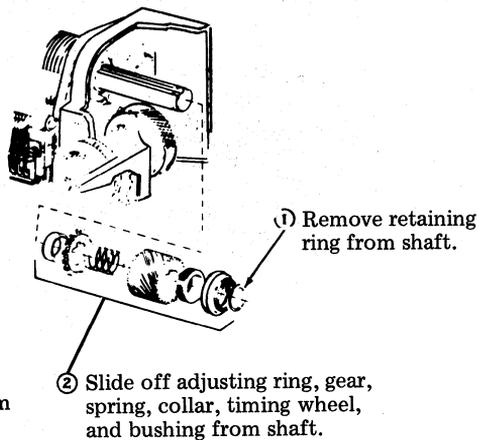
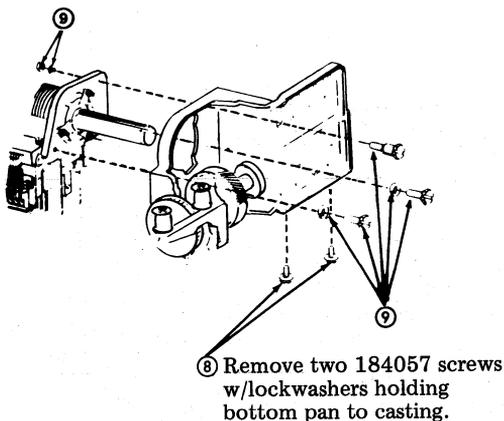
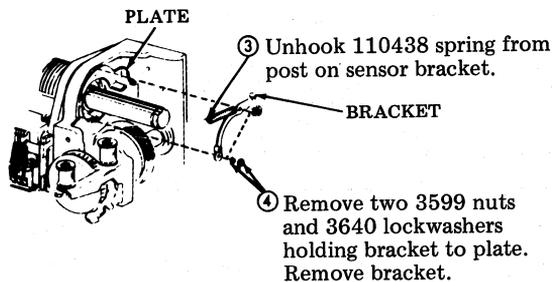
- Remove 402720 power module assembly (2.73).
- ① Disconnect P105 connector and motor connector.



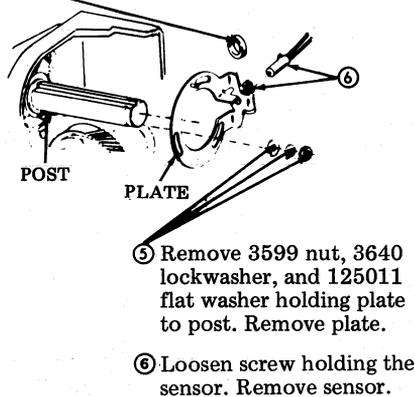
- ④ Remove assembly.

2.78 Right Casting Assembly

- Remove type carrier (2.63).
- Remove 410072 or 410729 logic circuit card (2.64).
- Remove 402675 base (2.65).
- Remove 402660 paper handling assembly (2.67).
- Remove 402725 front plate (2.71).
- Remove 402720 power module assembly (2.73).



⑦ Be careful not to lose 400931 spacer.



In reassembly, follow through with 2.73, 2.71, 2.67, 2.65, 2.64, and 2.63. Perform adjustments in 2.67 and 2.71. Check the Impeller Shaft Sensor Gap and Flag Sensor Gap adjustments. On printing test, the Impeller Shaft to Carrier Phasing, the Impeller Shaft Sensor, and Flag Sensor adjustments may have to be checked.

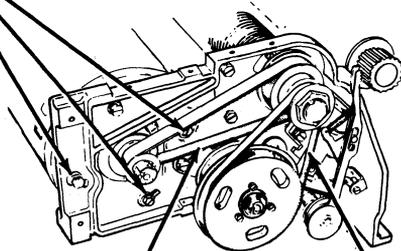
- Remove 402689 shoulder screw, 2669 lockwasher, and 112626 nut; remove two 153442 screws and 45815 lockwasher; remove right casting assembly.

## 2.79 402680 Print Head Assembly

**Warning:** If a trouble is isolated to the Print Head Assembly, the complete printer should be replaced. Disassembly information shown is for repair shop location reference.

- Remove type carrier (2.63).
- Remove circuit card (2.64).
- Remove front plate (2.71).
- Remove right casting assembly (2.78).

② Loosen three motor adjusting screws friction tight. Press motor inward and up to release belt tension.

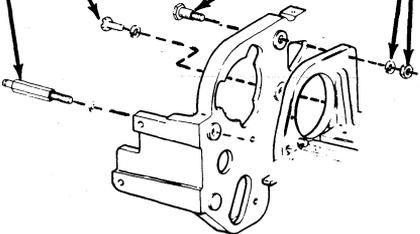


③ Remove impeller shaft drive belt.

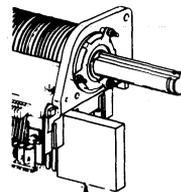
① Remove clutch drive belt.

⑤ Also remove two screws (153442) and lockwashers (45815). Remove print head assembly (400001).

④ At left casting, remove shoulder screw (400923), lockwasher (2669), and nut (112626).



**Note:** It is suggested that when the right casting is removed, a 3-inch piece of wood be placed under the right end of the print head to keep it from dropping.



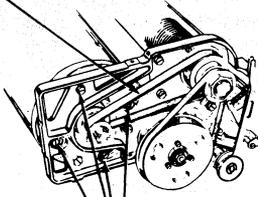
WOOD BLOCK

In reassembly, be sure to follow all the procedures and perform all the adjustments in 2.78 and 2.70.

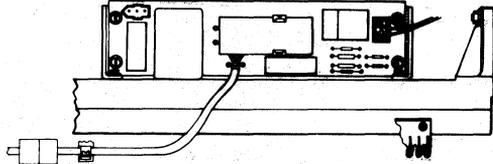
2.80 402402 Motor Assembly

- Remove 402660 paper handling assembly (2.67).
- Remove 402720 power module assembly (2.73).

② Remove impeller shaft drive belt.



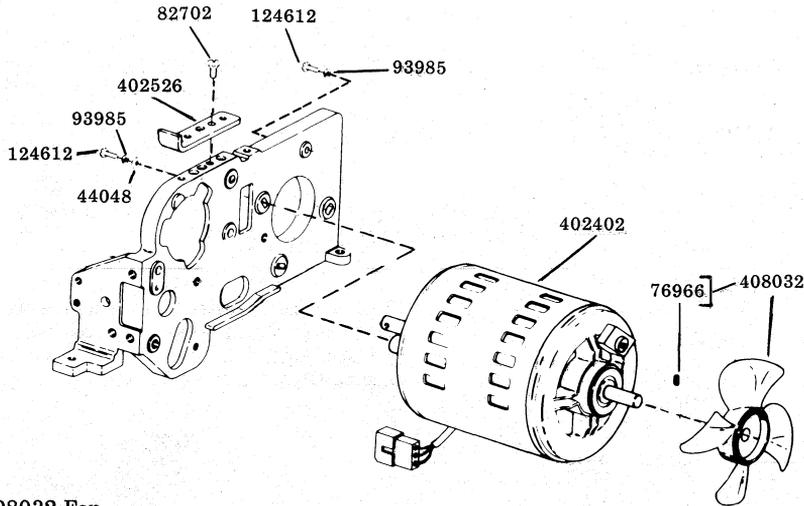
① Remove four screws.



③ Remove P107 connector.

In reassembly, make Impeller Shaft Drive Belt Tension adjustment.

Left Casting Assembly — Parts



2.81 408032 Fan

- Remove 402660 paper handling assembly (2.67).
- Remove 402720 power module assembly (2.73).

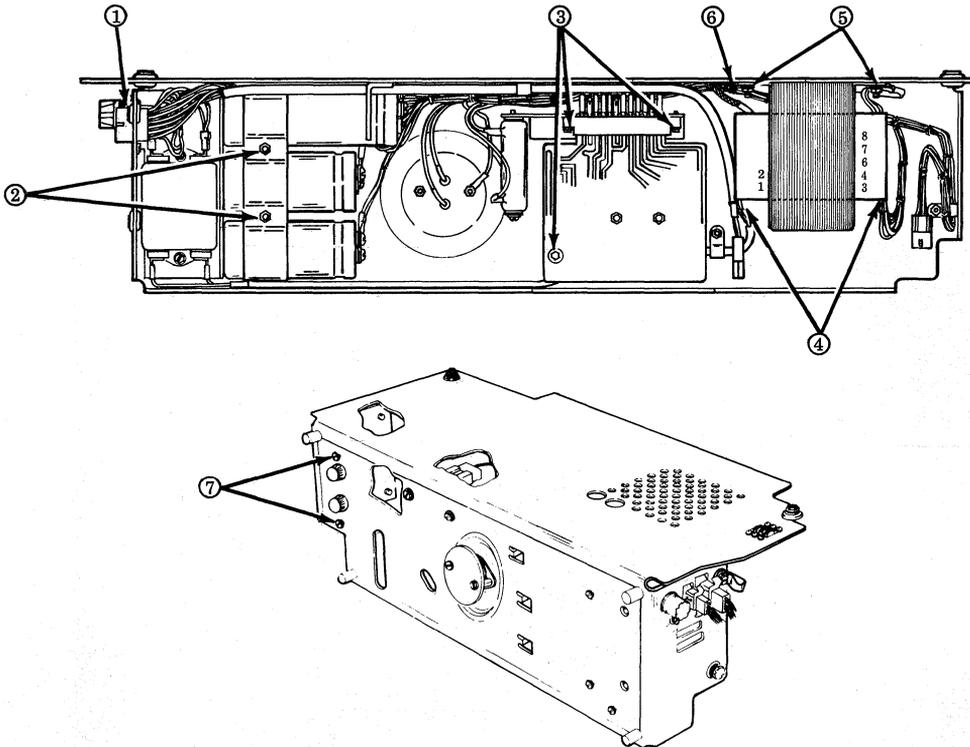
Loosen setscrew; slide fan blade to right.

## 2.82 402742 Transformer Assembly

- Remove 402720 power module assembly (2.73).
- ① Remove the P117 plug from frame.
  - ② Remove the two capacitor clamp mounting nuts and lockwashers.
  - ③ Remove the screw that mounts the 410151 card. Remove the card and two J102 connector mounting screws and lockwashers.
  - ④ Cut the protective tubing at the top terminals of the transformer and unsolder seven wires (W, BK, Y, BR, R, G, O).
  - ⑤ Remove four nuts, lockwashers and flat washers that mount the transformer.
  - ⑥ Remove the nut and lockwasher that secure the braided ground strap and green ground wire.
  - ⑦ Remove two fuse bracket mounting screws.

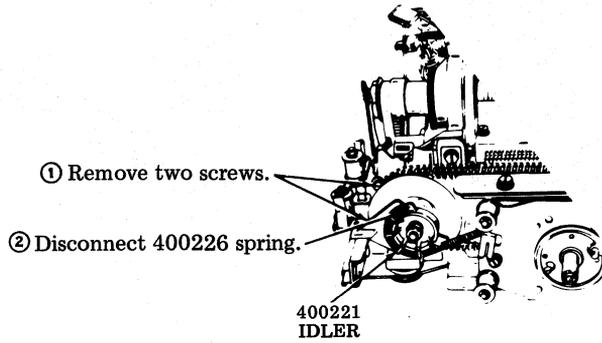
*Note:* When installing a new 402742 transformer assembly, transfer the two 129919 fuses from the fuse holders on the old assembly to the fuse holders on the new assembly. The seven wires must be resoldered to terminals (W to 1, BK to 2, Y to 3, BR to 4, R to 6, G to 7, O to 8) and the ground straps reconnected. After terminating wires, bend transformer terminals toward core. Nestle wires between the winding and the core. Wires must not protrude beyond top of core.

In reassembly, perform adjustment in 2.67.

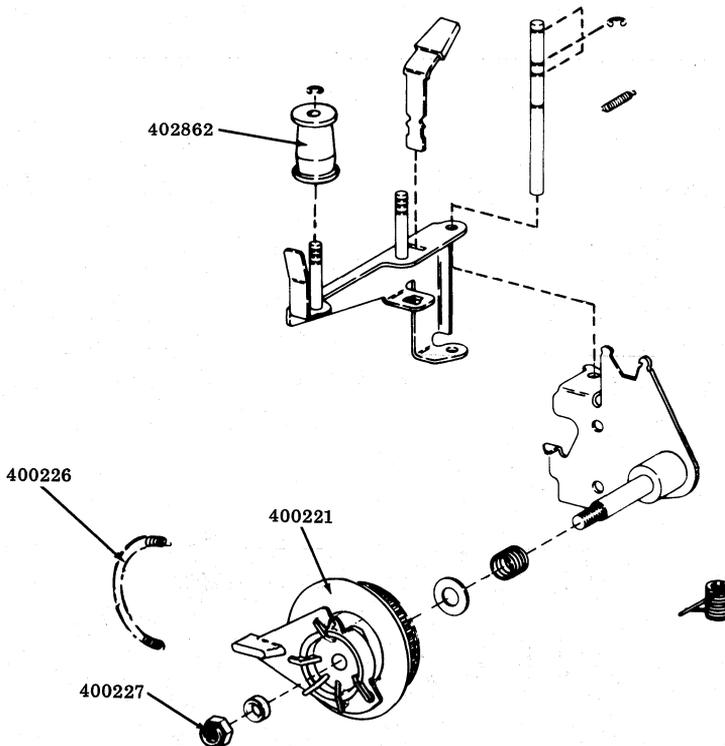


2.83 Left Arm Assembly

- Remove type carrier (2.63).

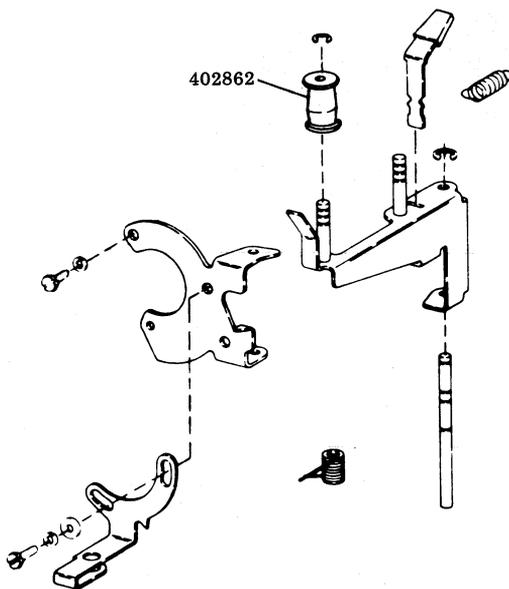
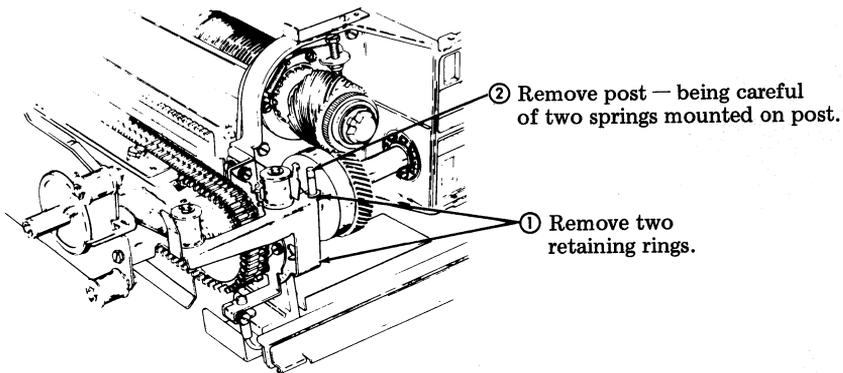


In reassembly, perform Left Carrier Sprocket adjustment, if idler is replaced.



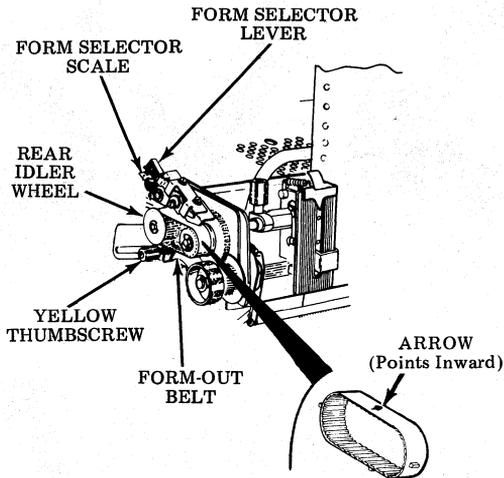
### 2.84 Right Arm Assembly

- Remove 402444 ribbon (not shown) (2.62).



## 2.85 Form-Out Belt

## Form-Out Belt Selection



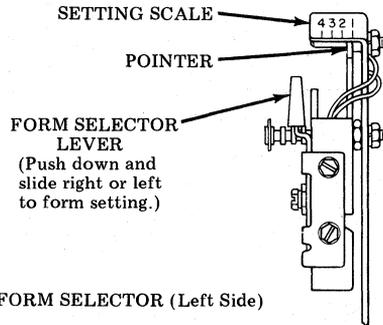
Form Selector Setting				Part No.	Color of Belt
4	3	2	1		
Length of Form, Inches					
+3-1/3	2-1/2	5	10	402571	Amber
+3-2/3	* 2-3/4	5-1/2	11	402572	Dk Blue
4	3	6	12	402573	Yellow
+4-1/3	* 3-1/4	6-1/2	13	402574	Brown
+4-2/3	3-1/2	7	14	402575	Red
5	* 3-3/4	7-1/2	15	402576	Pink
+5-1/3	4	8	16	402577	Lt Green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

+ For six lines per inch

\* For eight lines per inch

## Removal:

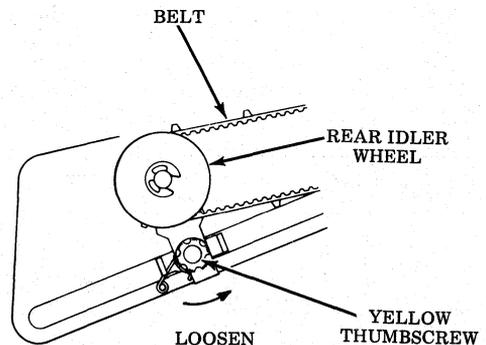
- ① Loosen yellow thumbscrew (counterclockwise) and slide bracket to remove tension.
- ② Depress and hold form selector lever so that contact arm clears.
- ③ Move rear idler wheel forward.
- ④ Remove belt by sliding it to left.



(Adjusted Position of Idler Wheel)

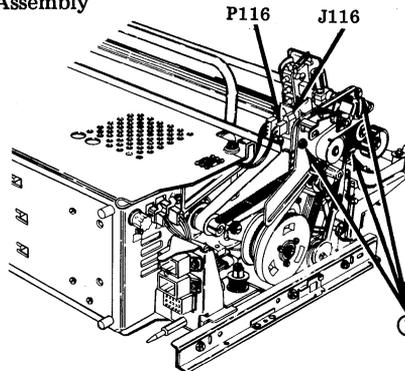
## Replacement:

- ① Depress and hold form selector lever while holding rear idler wheel forward.
- ② Position new belt on wheels so that arrow points inward.
- ③ Position rear wheel back and remove slack in belt. Have bracket at right angles to slot as shown.
- ④ Tighten thumbscrew clockwise.
- ⑤ Depress FORM ADVANCE, and check stop positions.



**Note:** If form stop positions do not correspond to form lengths, belt may be reversed or incorrect belt is used. Check Form-Out Belt Selection.

## 2.86 402570 Form-Out Assembly

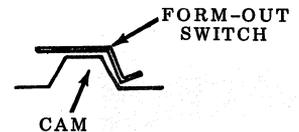


② Disconnect P116 and remove connector J116 from bracket.

① Remove three nuts and lockwashers.

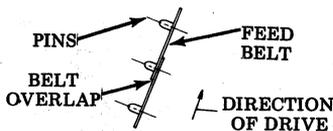
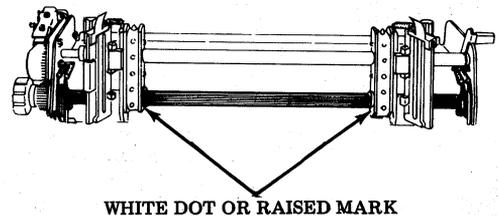
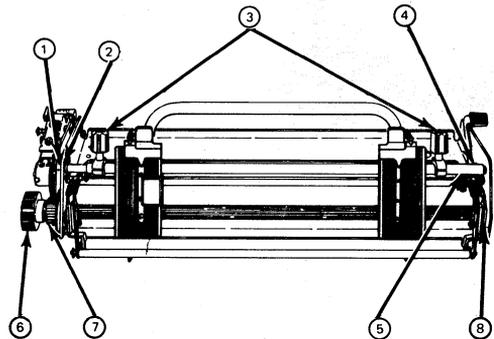
In reassembly, remake Form-Out Gear Backlash adjustment. Reset form-out contact to belt phasing as follows:

- Move line feed pawls out of engagement with the line feed gear.
- Rotate the paper advance knob until the slope part of the contact just touches the long cam.
- Release the line feed pawls.



## 2.87 402507 or 402508 Tractor Assembly

- Remove 402660 paper handling assembly (2.67).
  - Remove 402570 form-out assembly (2.86).
- ① Remove ring retainer from left side plate.
  - ② Remove ring retainer.
  - ③ Remove left and right tractor clamps.
  - ④ Slide inner shaft out.
  - ⑤ Move tractors forward and slide out outer shaft.
  - ⑥ Remove ring retainer that secures left knob. Remove flat washer, spring, and knob.
  - ⑦ Remove ring retainer that secures sprocket. Slide washer and sprocket off of shaft.
  - ⑧ Remove two screws that secure oilite bearing to right side frame. Slide shaft out to right.
  - ⑨ Slide tractor assembly to right to remove.



**Note 1:** To replace a 402877 tractor belt, loosen two Phillip head screws on tractor assembly. The new belt should be installed with the overlap in direction illustrated.

**Note 2:** During reassembly of tractor assembly to the shaft, perform Tractor Phasing and Tractor Lid adjustments. Perform the adjustments in 2.86 in reassembly of form-out assembly.

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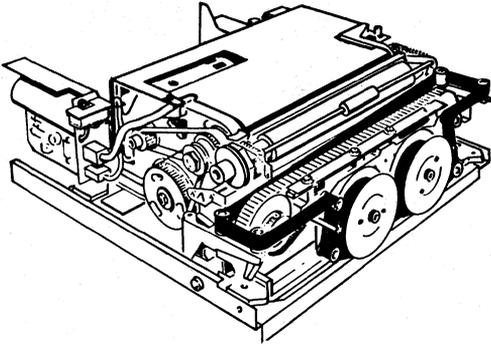
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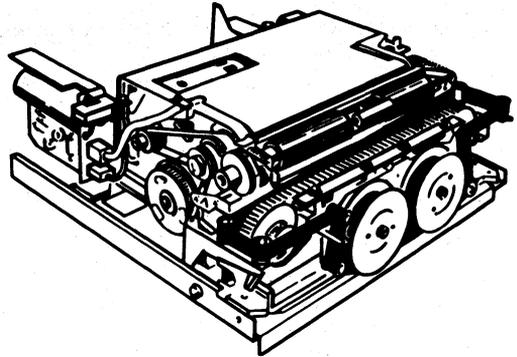
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## MODIFICATION KITS

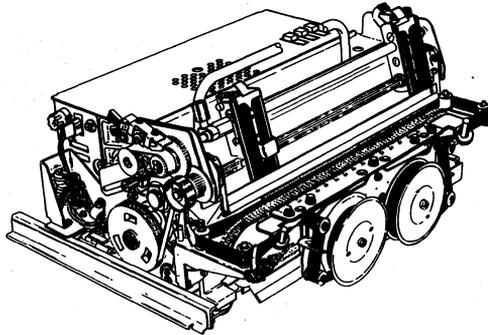
- 402866—Modification Kit to Provide Improved Ribbon Tracking for 80-Column Tractor Feed Printer.  
(Specification 50836S)
- 402887—Modification Kit to Provide the 410072 Circuit Card and 402980 Lower Pan.  
(Specification 50894S)
- 402920—Modification Kit to Provide 80 and 132 Column Tractor Feed Printers with a Paper Jam Alarm.  
(Specification 50901S)
- 402936—Modification Kit to Install Replaceable Ribbon Shield on 80-Column Tractor Feed Printers.  
(Specification 50868S)
- 403380—Modification Kit to Provide a Multicopy Roll and Single Copy Fanfold Paper on Friction Feed Printers.  
(Specification 50815S)
- 405905—Modification Kit to Provide a New Paper Spindle to Friction Feed Printers.  
(Specification 50819S)
- 406337—Modification Kit to Provide Relay Noise Suppression to 80-Column Tractor Feed Printer Power Modules.  
(Specification 50940S)
- 406338—Modification Kit to Provide Relay Noise Suppression to 80-Column Tractor Feed Printer Power Modules.  
(Specification 50940S)
- 407790—Modification Kit to Provide a Reinking Device on 132-Column Tractor Feed Printer.  
(Specification 50905S)
- 408680—Modification Kit to Provide a Late Design Wire Form Actuator on 80-Column Tractor Feed Printers.  
(Specification 50882S)
- 408681—Modification Kit to Provide a Redesigned Paper Out Switch.  
(Specification 50904S)
- 408990—Modification Kit to Provide a Reinking Device on 80-Column Tractor Feed Printer.  
(Specification 50913S)



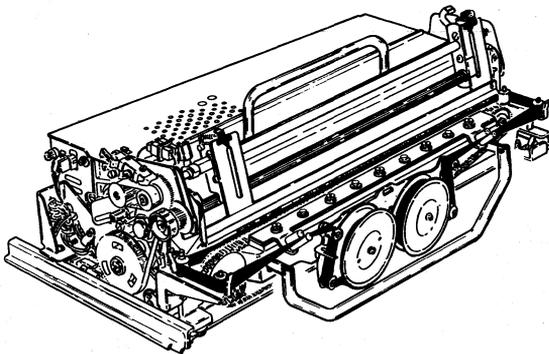
40P101/\*\* Friction Feed Printer (80-Column)



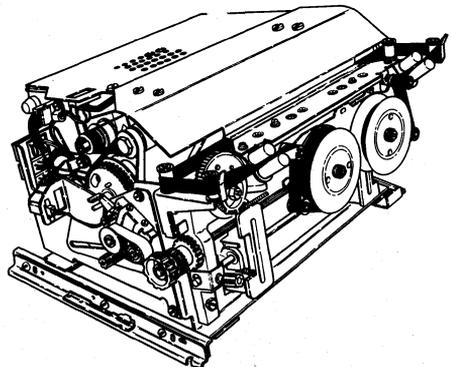
40P102/\*\* Friction Feed Printer  
(Noise Reduced - 80 Column)



40P151/\*\* 40P153/\*\* and 40P154/\*\* Tractor Feed Printer (80-Column)



40P201/\*\* and 40P202/\*\* Tractor Feed  
Printer (132-Column)



40P253/\*\* Forms Access Tractor  
Feed Printer

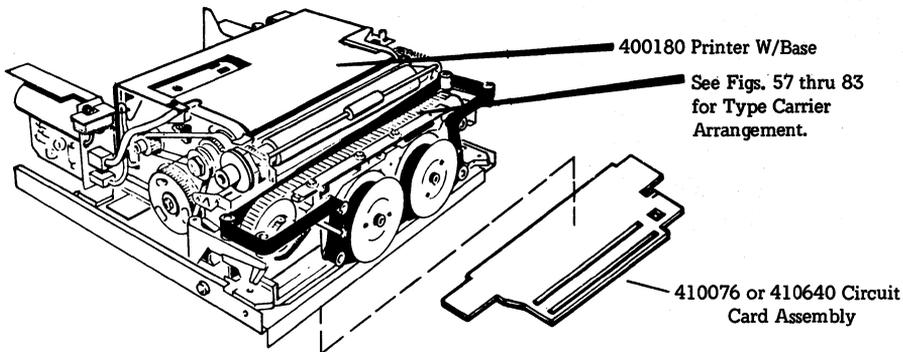


Fig. 1—40P101/\*\* DATASPEED 40 Impact Printer (Friction Feed)

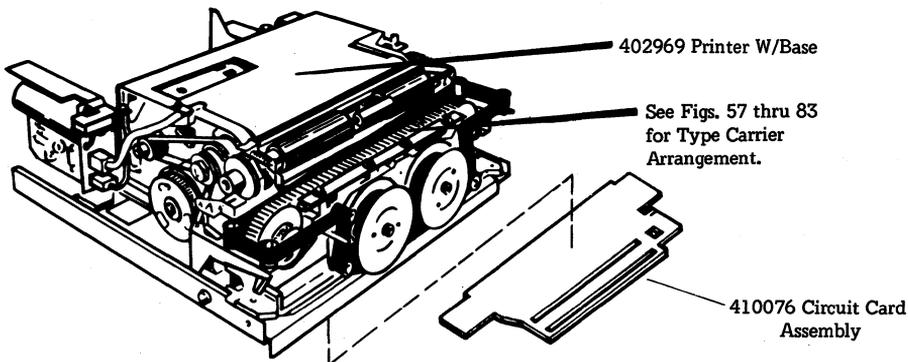


Fig. 2—40P102/\*\* DATASPEED 40 Impact Printer (Noise Reduced - Friction Feed)

NOTE: 410076 or 410640 Card is used in 40P150/\*\*, 40P151/\*\* or 40P153/\*\*. 410071 Card is used in 40P154/\*\*.

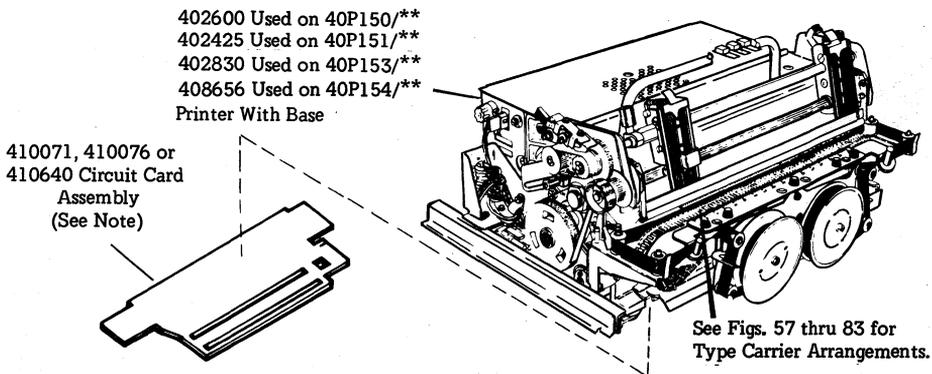


Fig. 3—40P150/\*\*, 40P151/\*\*, 40P153/\*\* and 40P154/\*\*  
DATASPEED 40 Impact Printer (Tractor Feed - 80-Column)

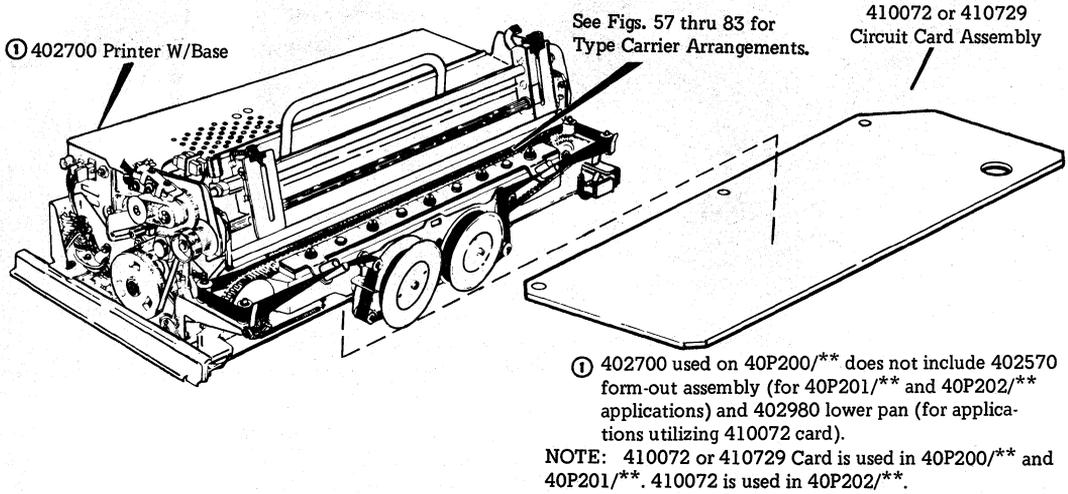


Fig. 4—40P200/\*\*, 40P201/\*\* and 40P202/\*\* DATASPEED 40 Impact Printer (Tractor Feed – 132-Column)

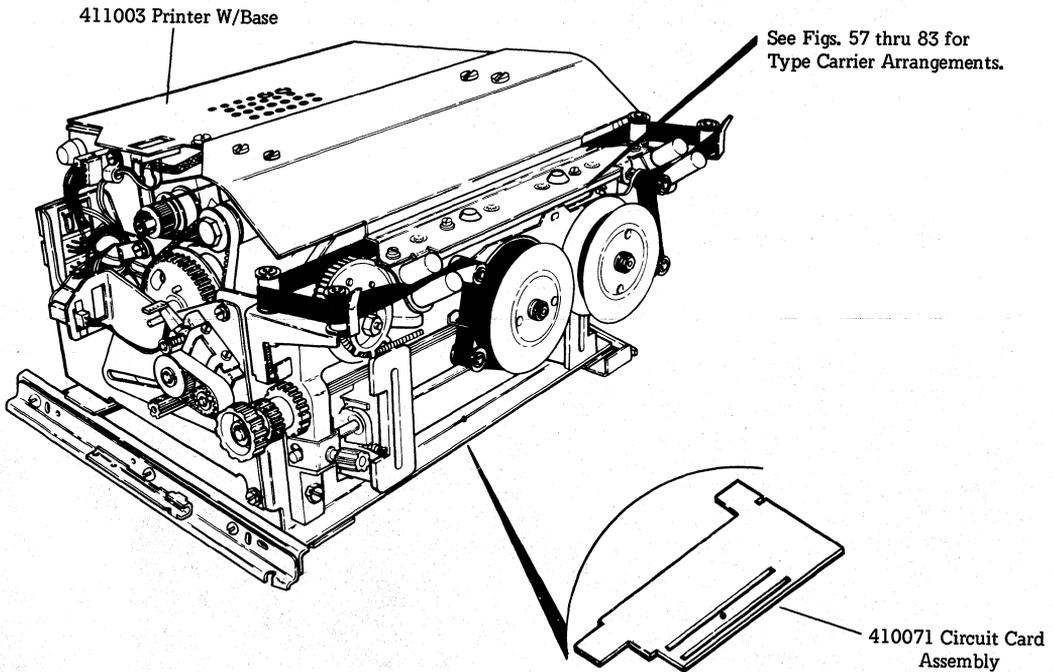


Fig. 5—40P253/\*\* DATASPEED 40 Forms Access Printer (Tractor Feed – 80-Column)

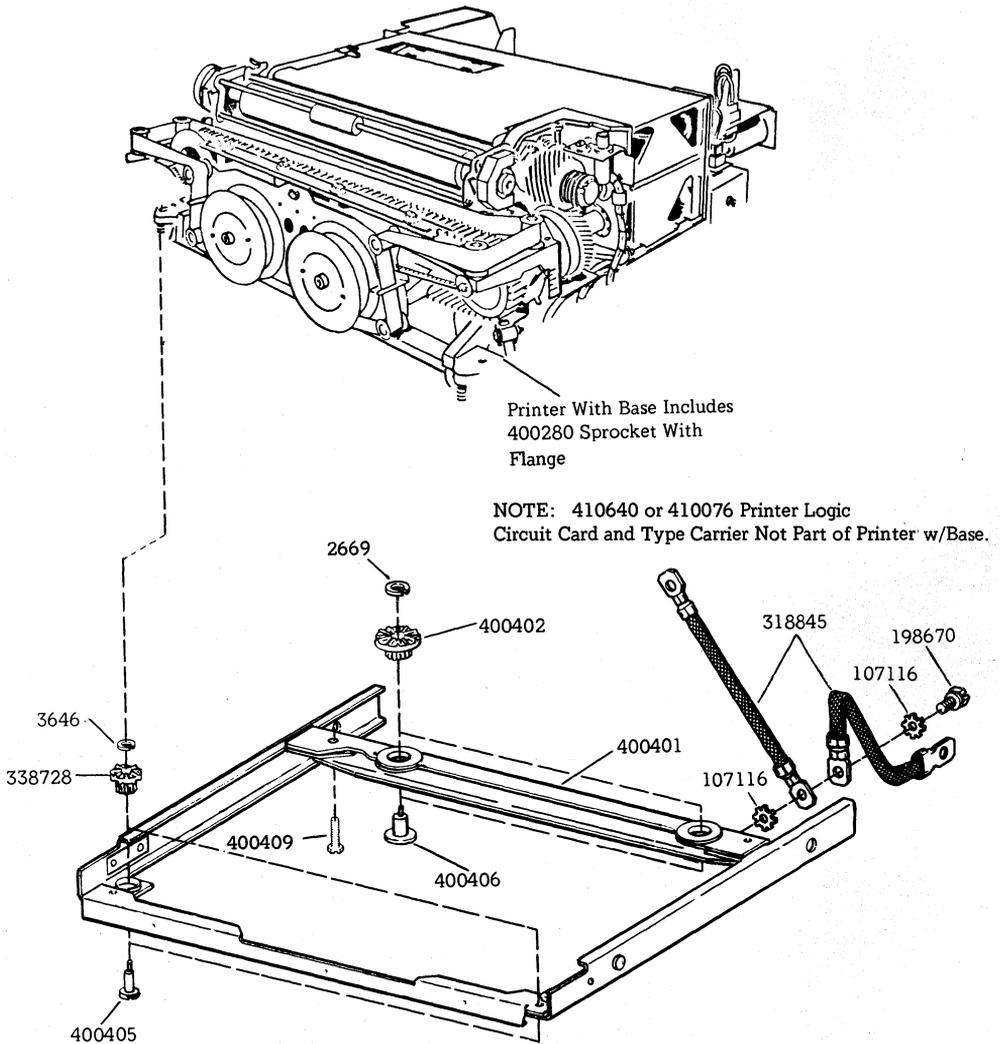


Fig. 6 - Printer Base (Friction Feed - 80-Column)

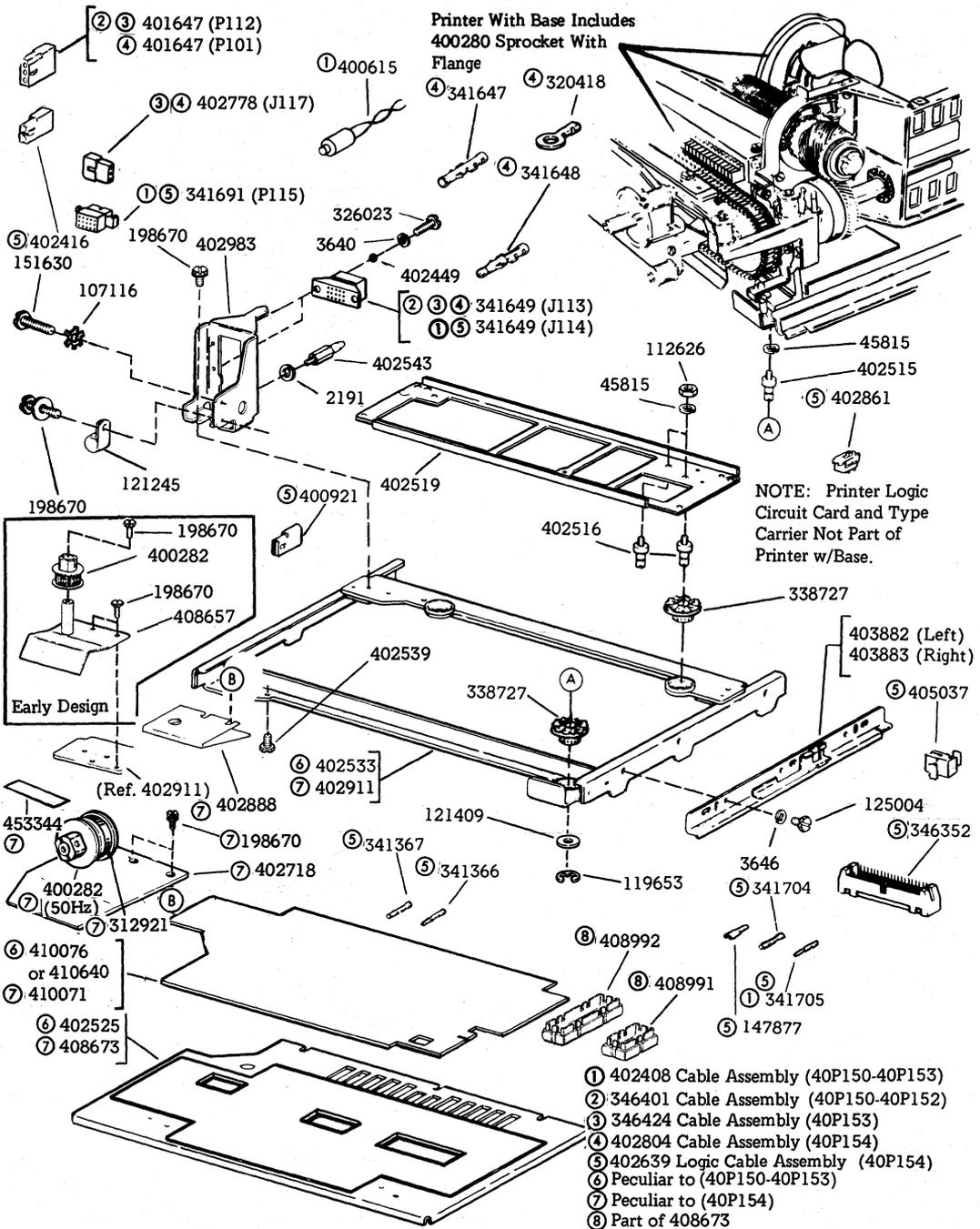


Fig. 7—Printer Base (Tractor Feed - 80-Column)

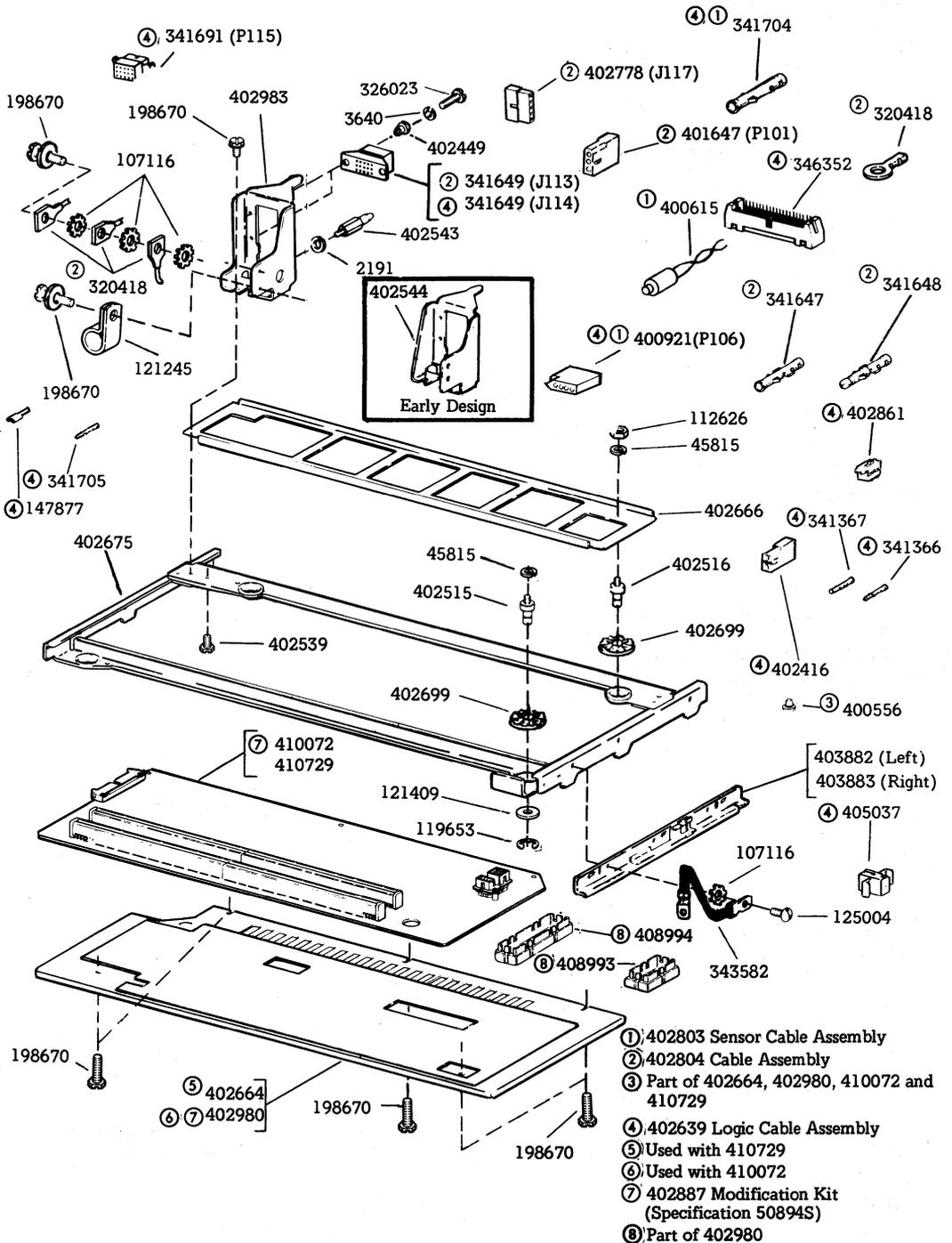


Fig. 8—Printer Base (Tractor Feed - 132-Column)

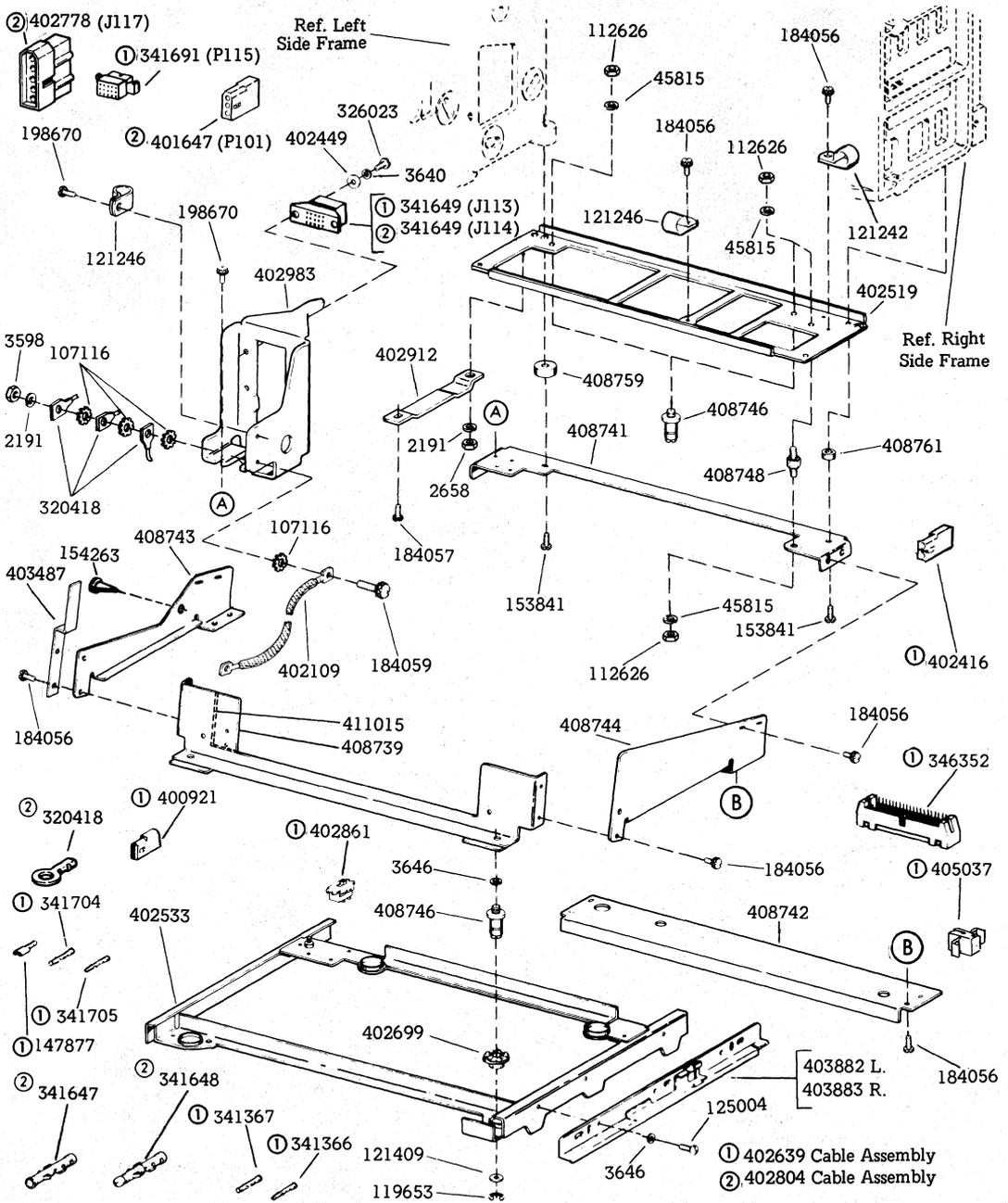
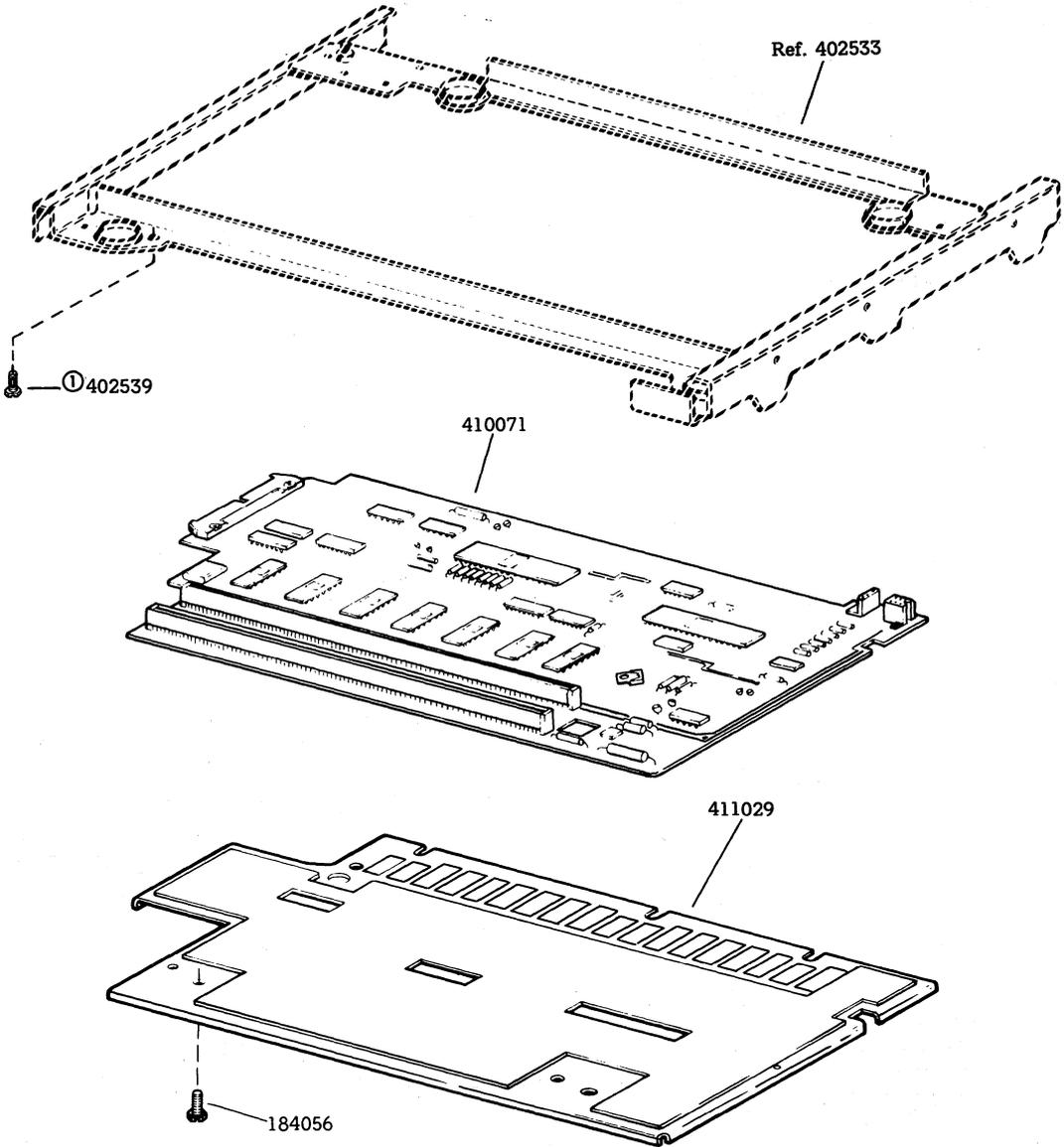
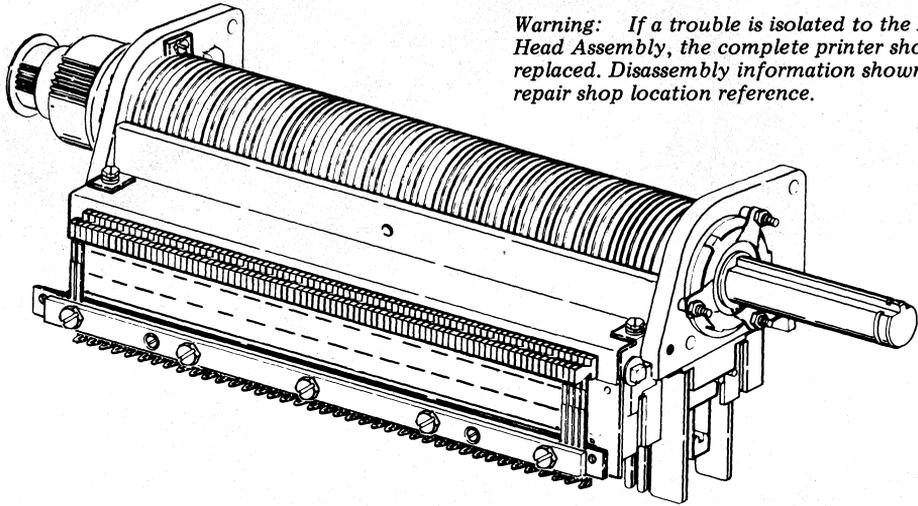


Fig. 9-Printer Base (Forms Access - Tractor Feed)



① 402539 Screw is used for Shipping.

Fig. 9—Printer Base (Forms Access – Tractor Feed) (Cont.)



*Warning: If a trouble is isolated to the Print Head Assembly, the complete printer should be replaced. Disassembly information shown is for repair shop location reference.*

Fig. 10—400001 Print Head Assembly (Friction and Tractor Feed – 80-Column) (Late Design)

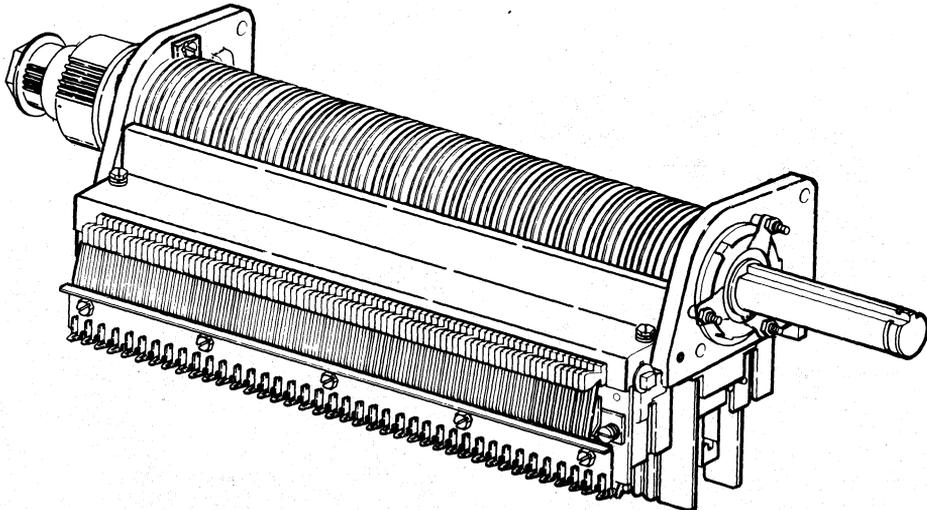
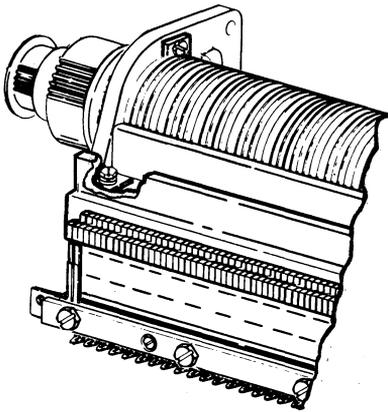


Fig. 11—400001 Print Head Assembly (Friction and Tractor Feed – 80-Column) (Early Design)



*Warning: If a trouble is isolated to the Print Head Assembly, the complete printer should be replaced. Disassembly information shown is for repair shop location reference.*

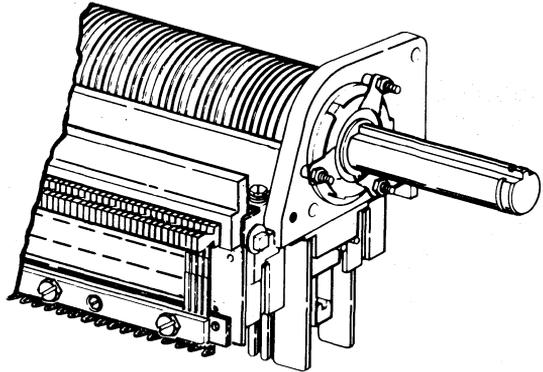


Fig. 12-402680 Print Head Assembly (Tractor Feed - 132-Column) (Late Design)

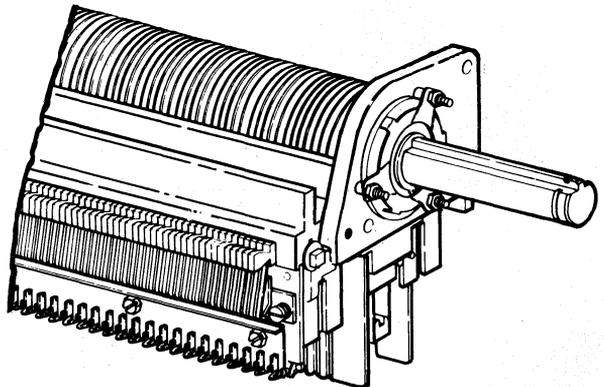
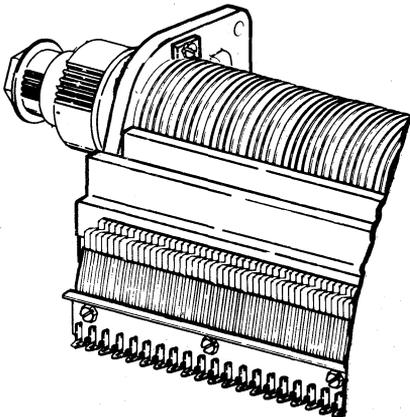


Fig. 13-402680 Print Head Assembly (Tractor Feed - 132-Column) (Early Design)

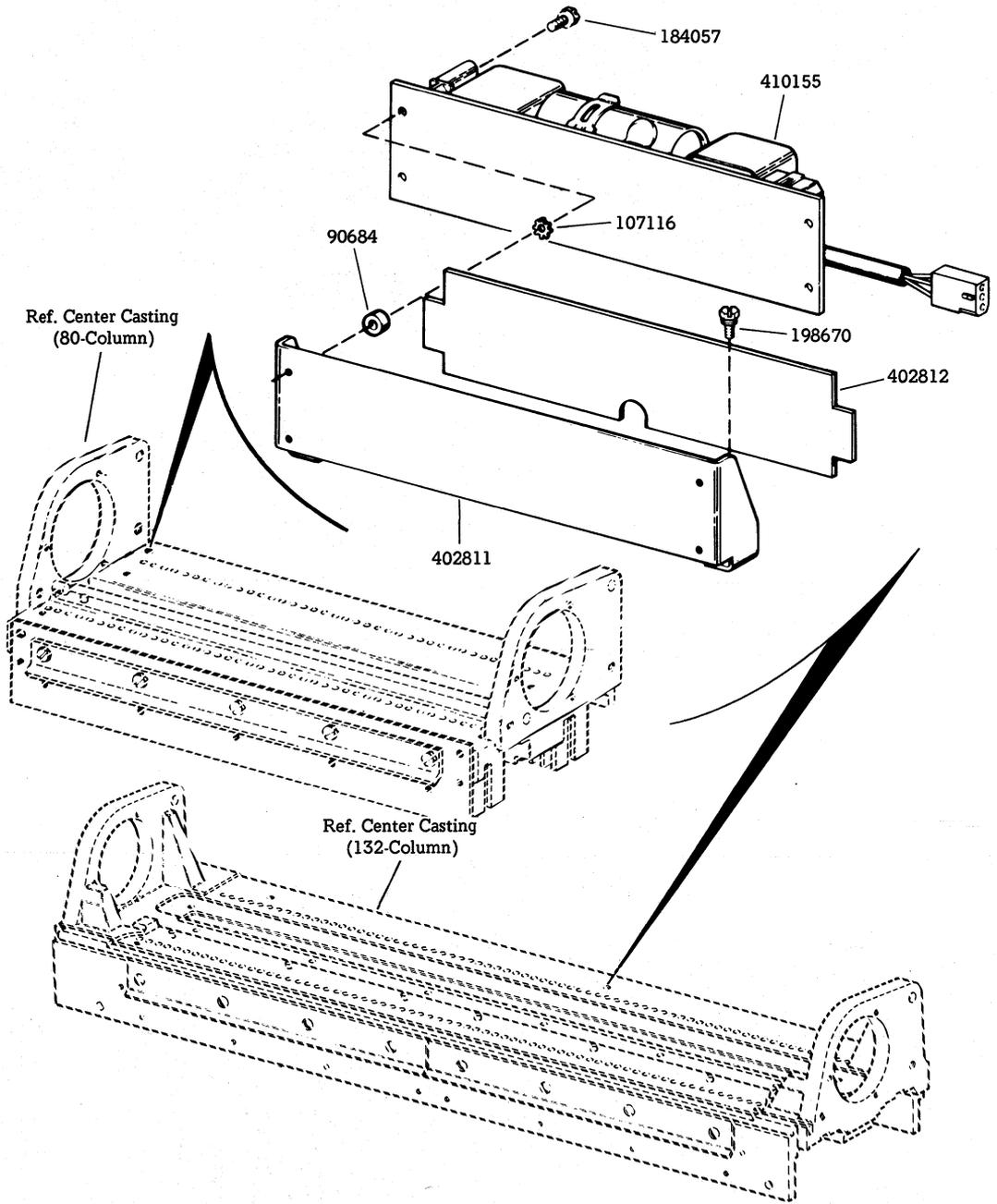


Fig. 14 - Motor Control Assembly

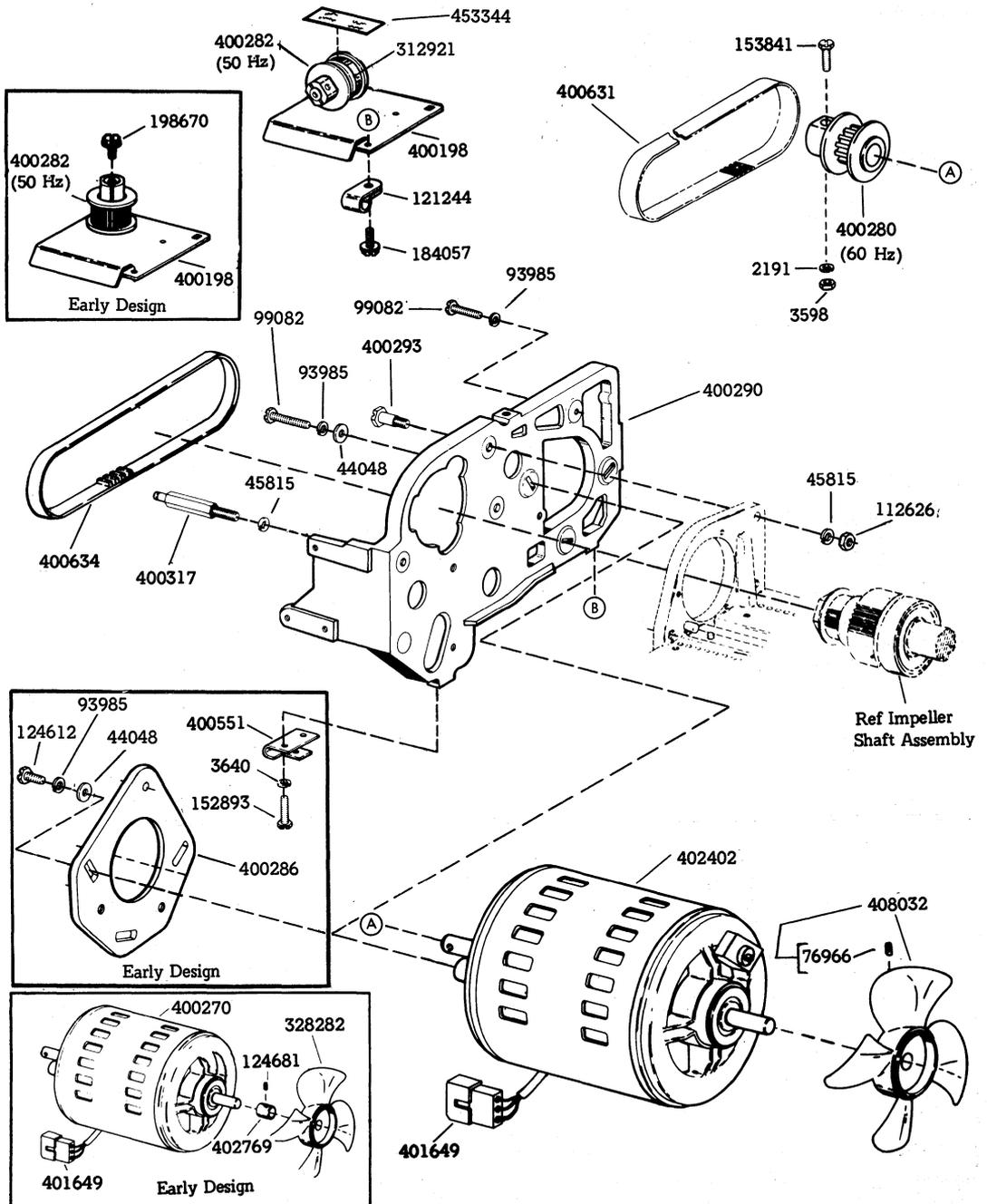


Fig. 15—Left Casting and 402402 Motor (Friction Feed)

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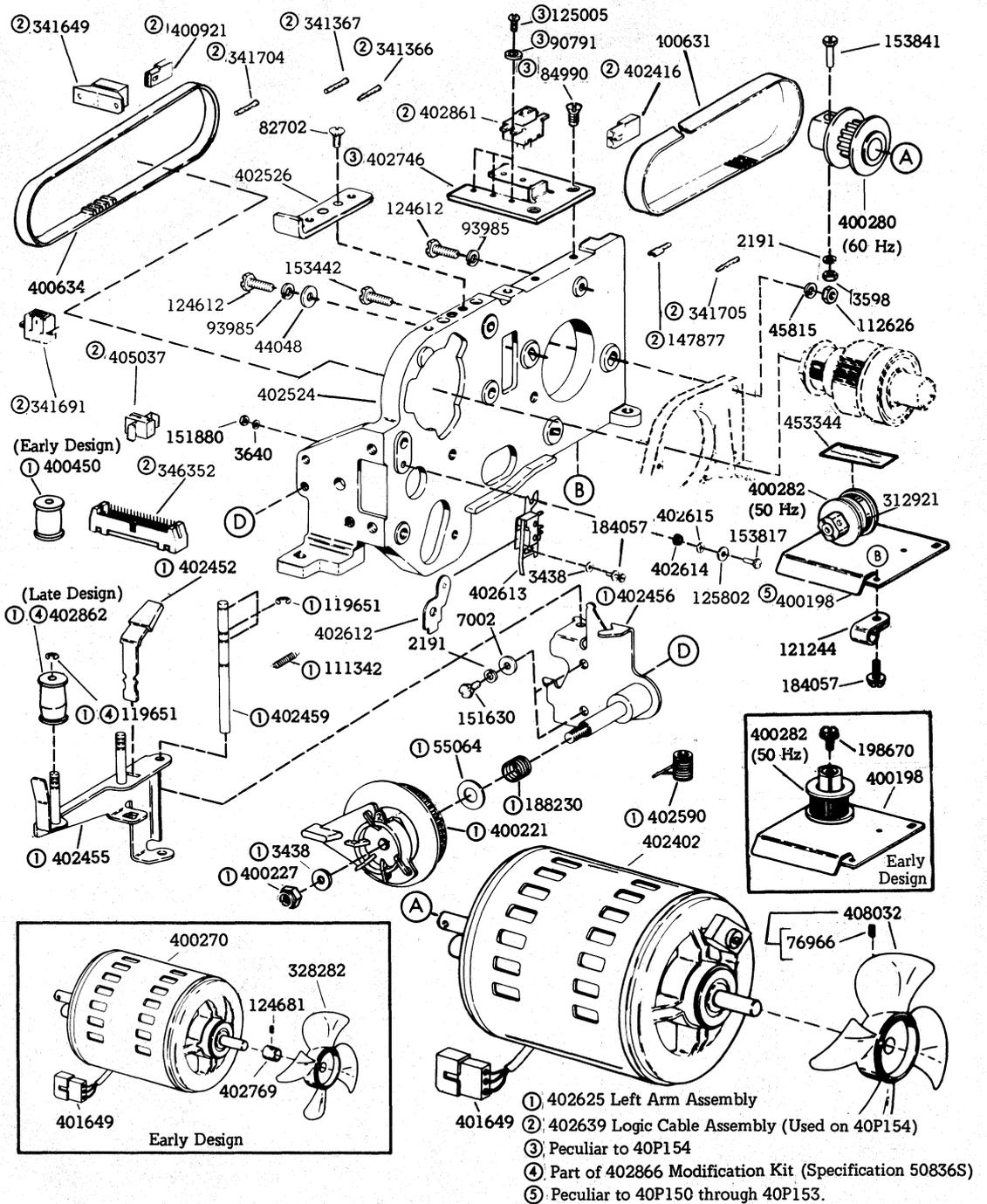


Fig. 16—Left Casting Assembly and 402402 Motor (Tractor Feed – 80-Column)

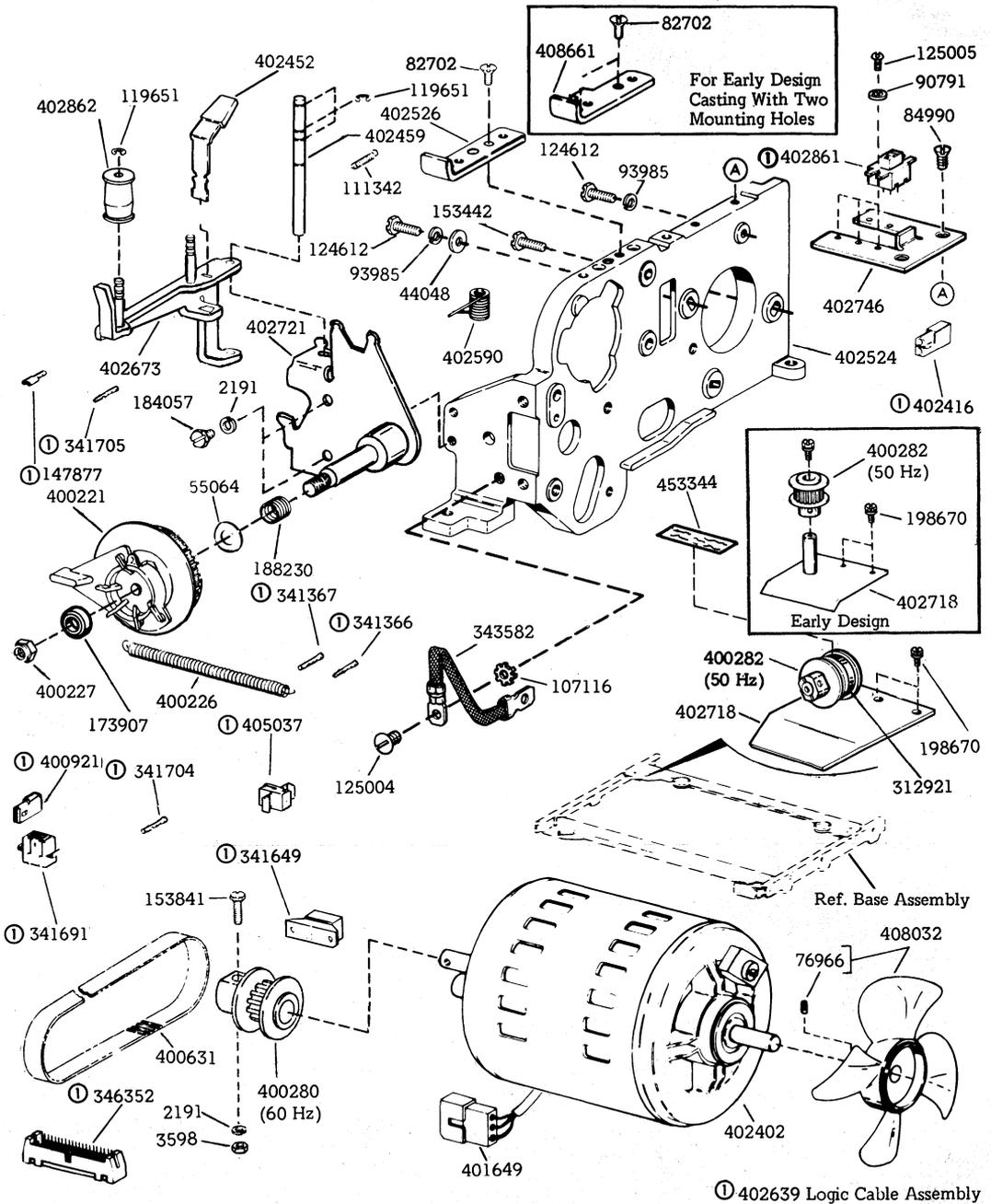


Fig. 17—Left Casting Assembly and 402402 Motor (Tractor Feed - 132-Column)

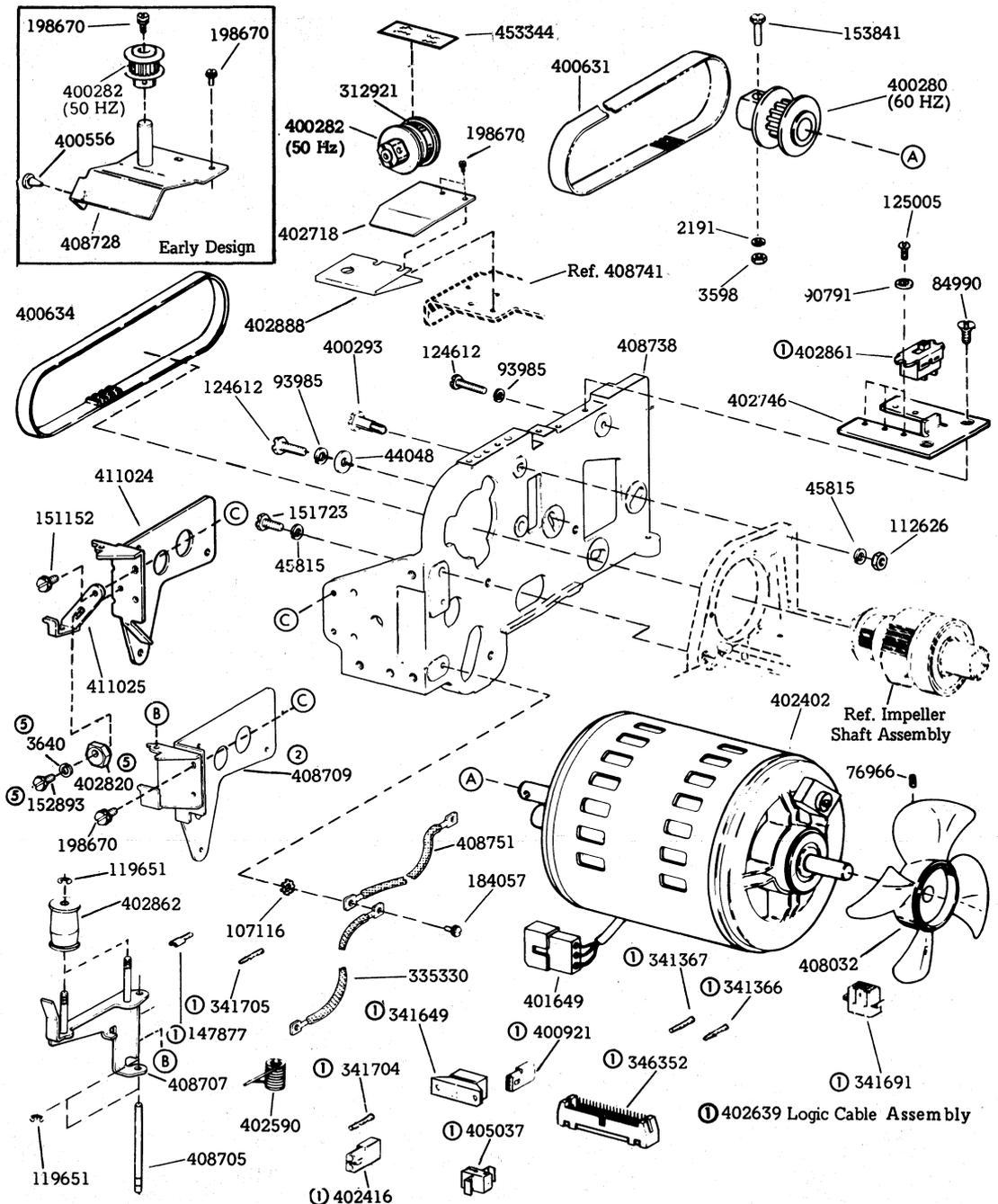


Fig. 18—Left Casting Assembly and 402402 Motor (Forms Access - Tractor Feed)

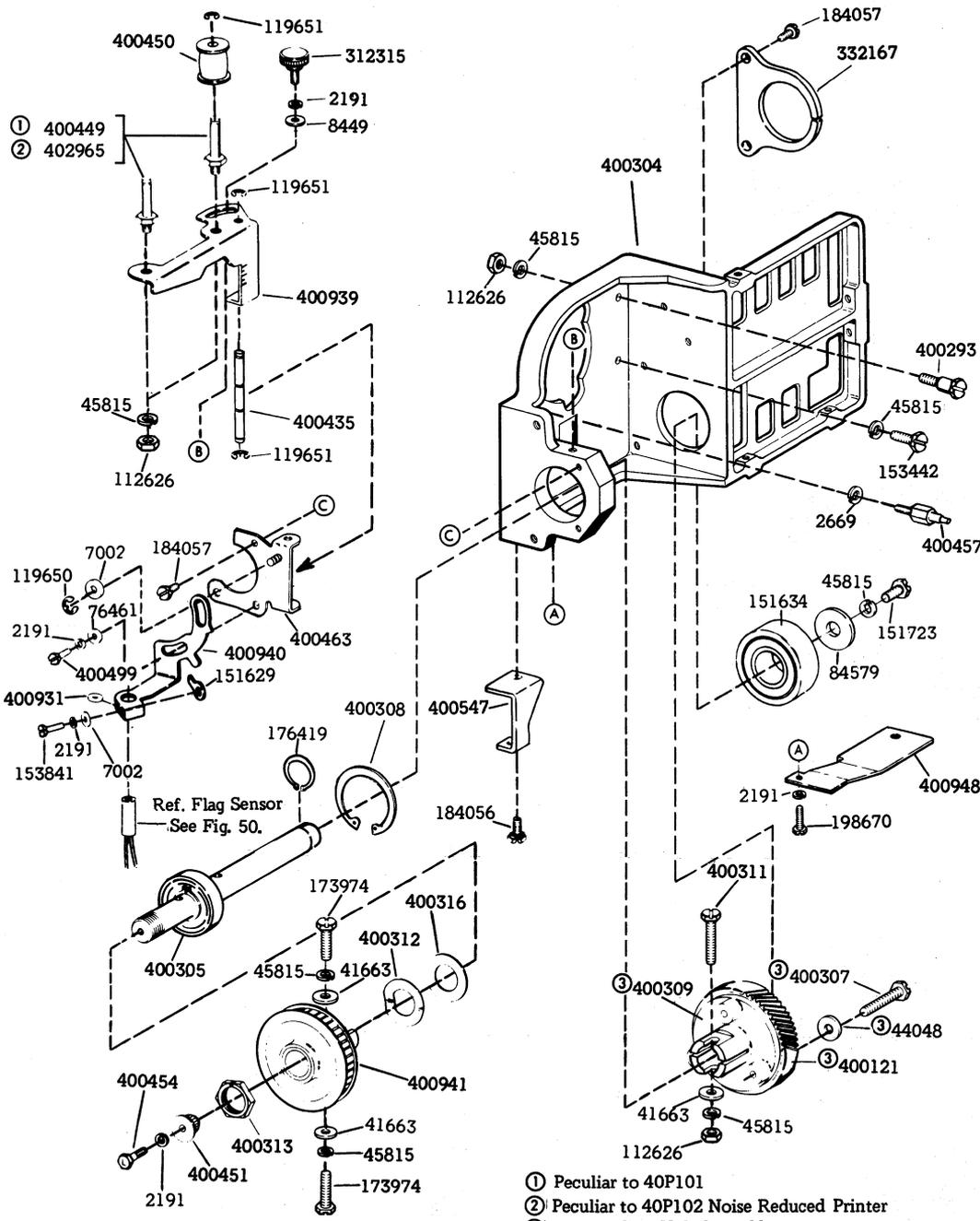


Fig. 19—Right Casting Assembly (Friction Feed)

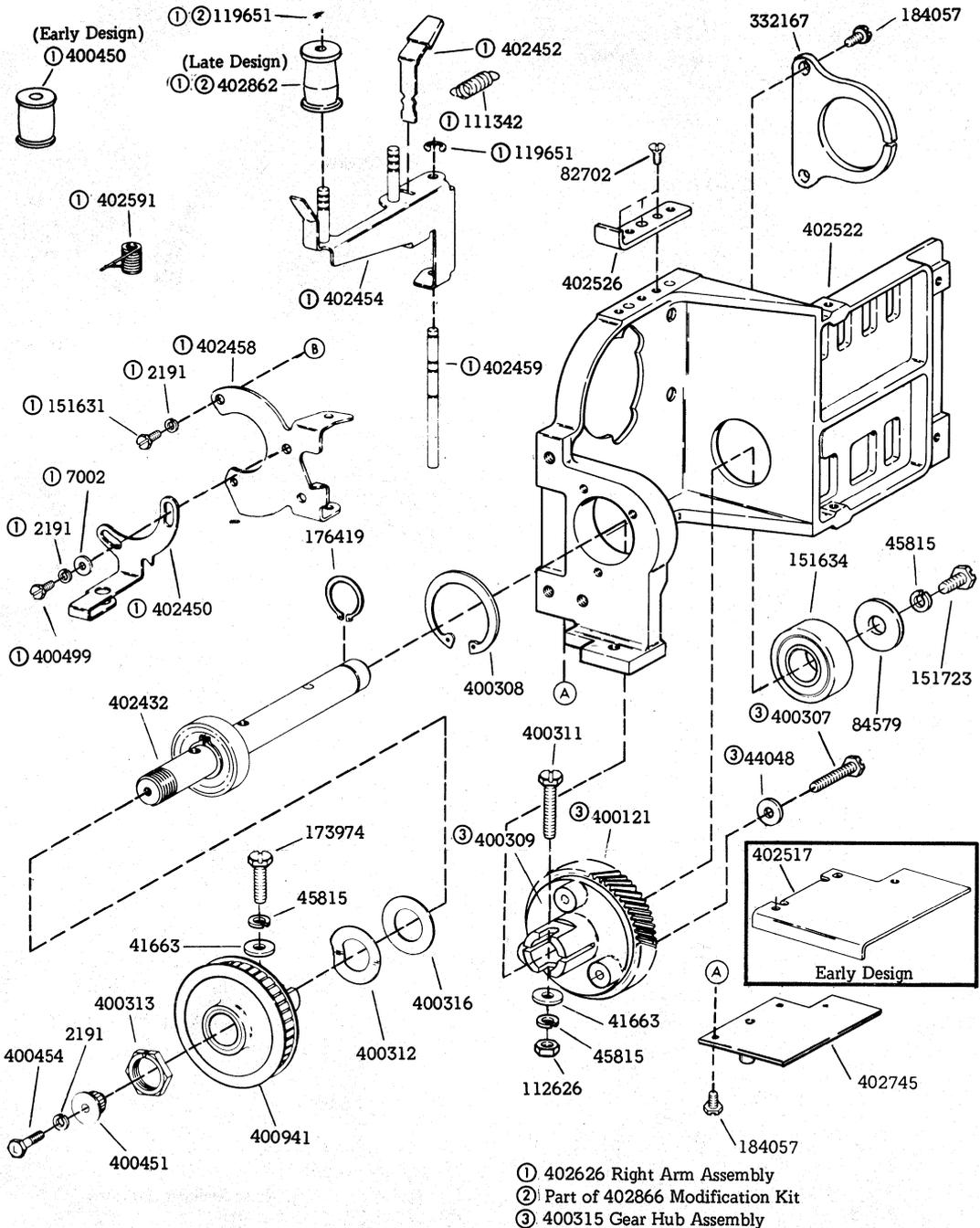


Fig. 20—402622 Right Casting Assembly (Tractor Feed - 80-Column)

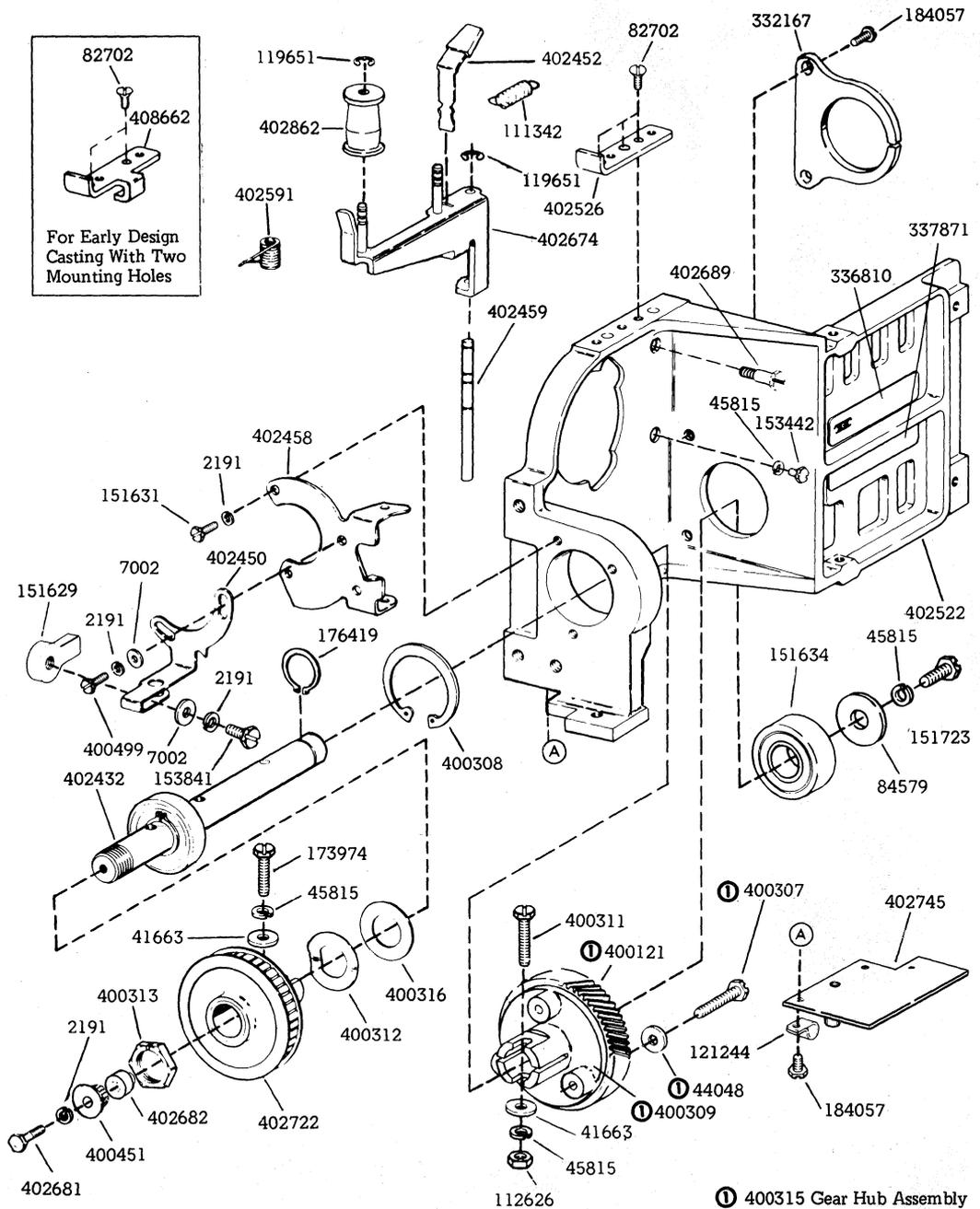
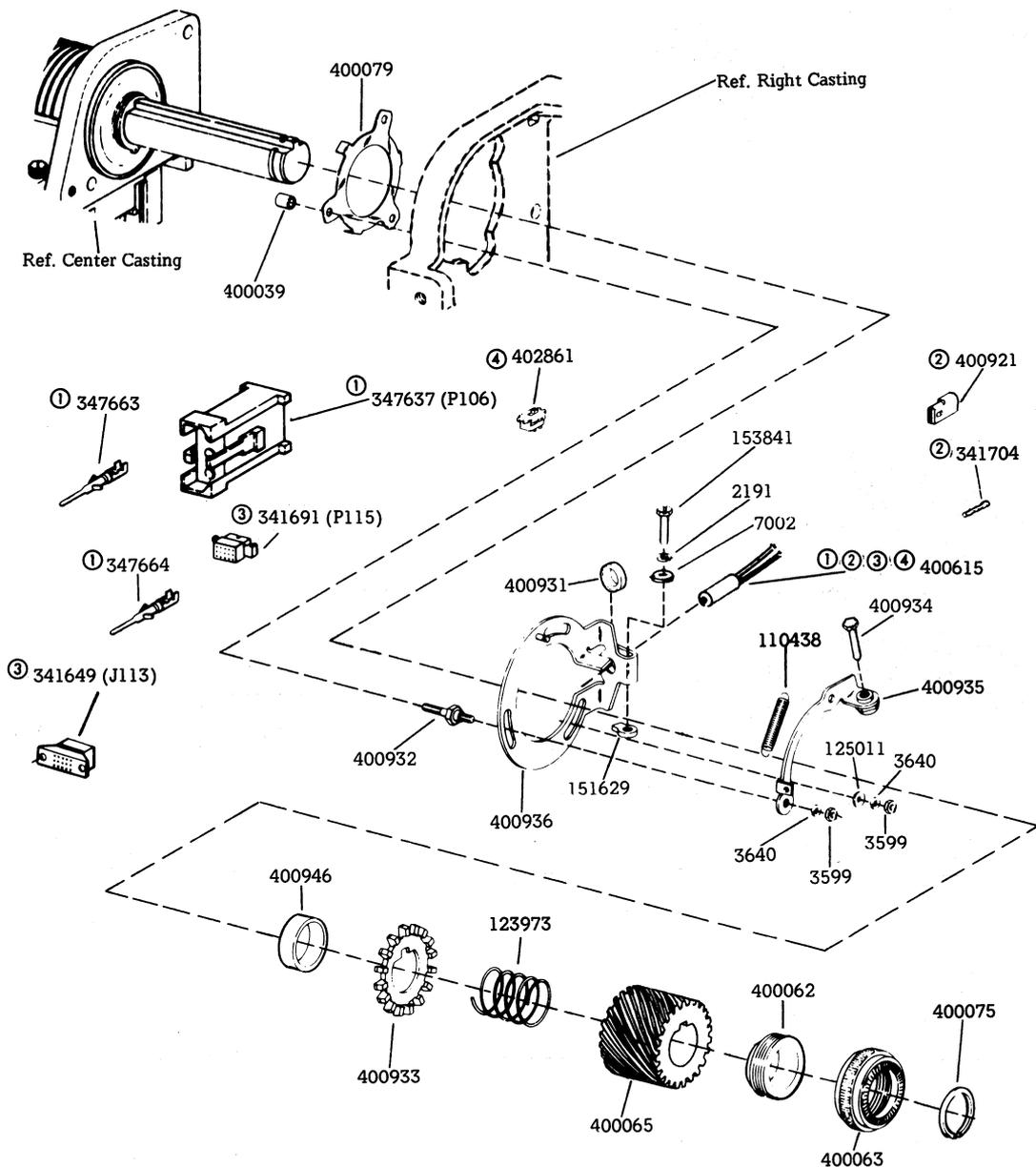


Fig. 21—Right Casting Assembly (Tractor Feed - 132-Column)





- ① 408655 Sensor Cable Assembly (40P154 and 40P253)
- ② 402803 Sensor Cable Assembly (40P201 and 40P203)
- ③ 402408 Cable Assembly (40P150-40P153)
- ④ 400580 Cable Assembly (40P101 and 40P102)

Fig. 23—Impeller Shaft Sensor Bracket and Gear (Friction and Tractor Feed)

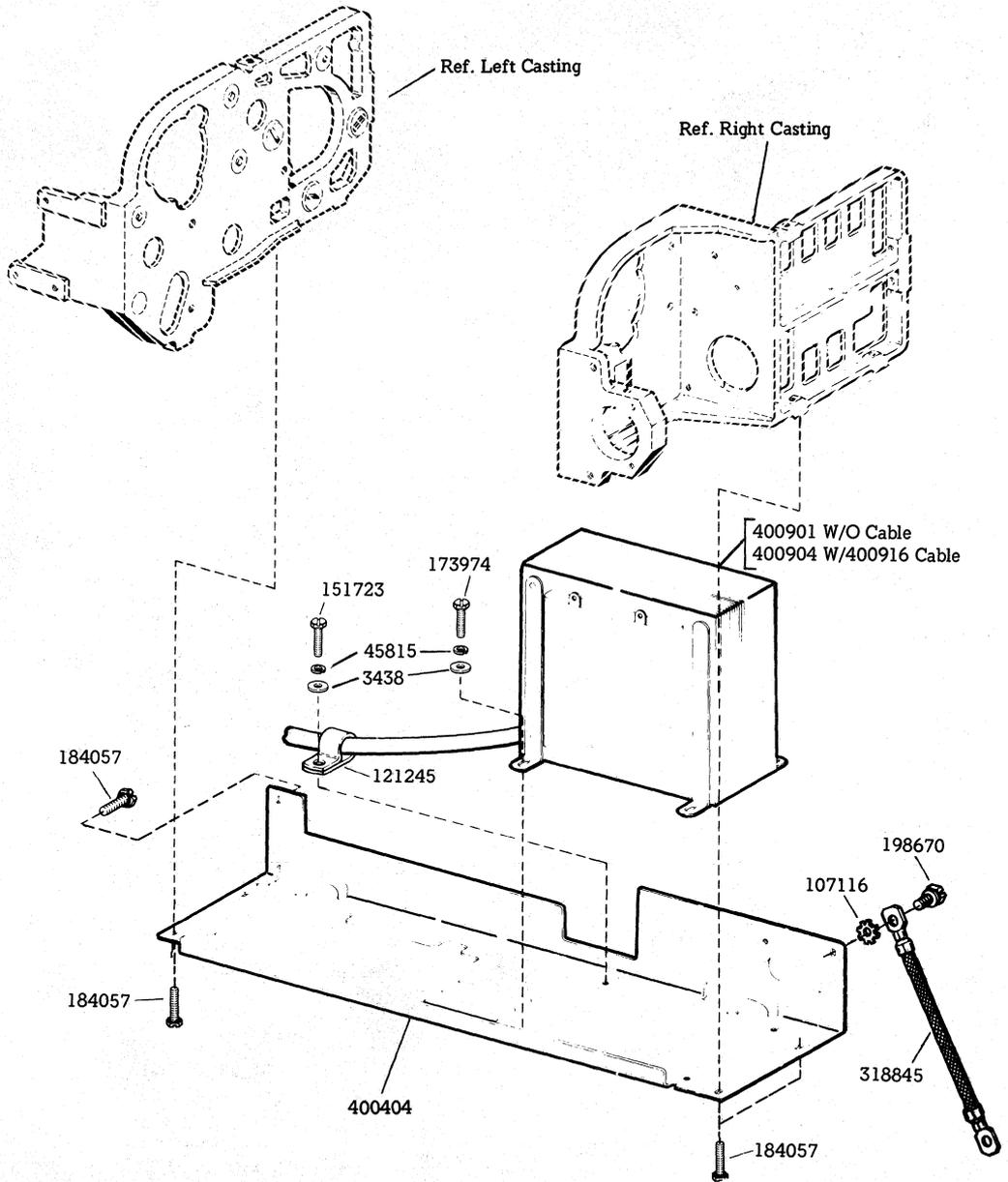


Fig. 24—Bottom Pan and Transformer (Friction Feed Only)

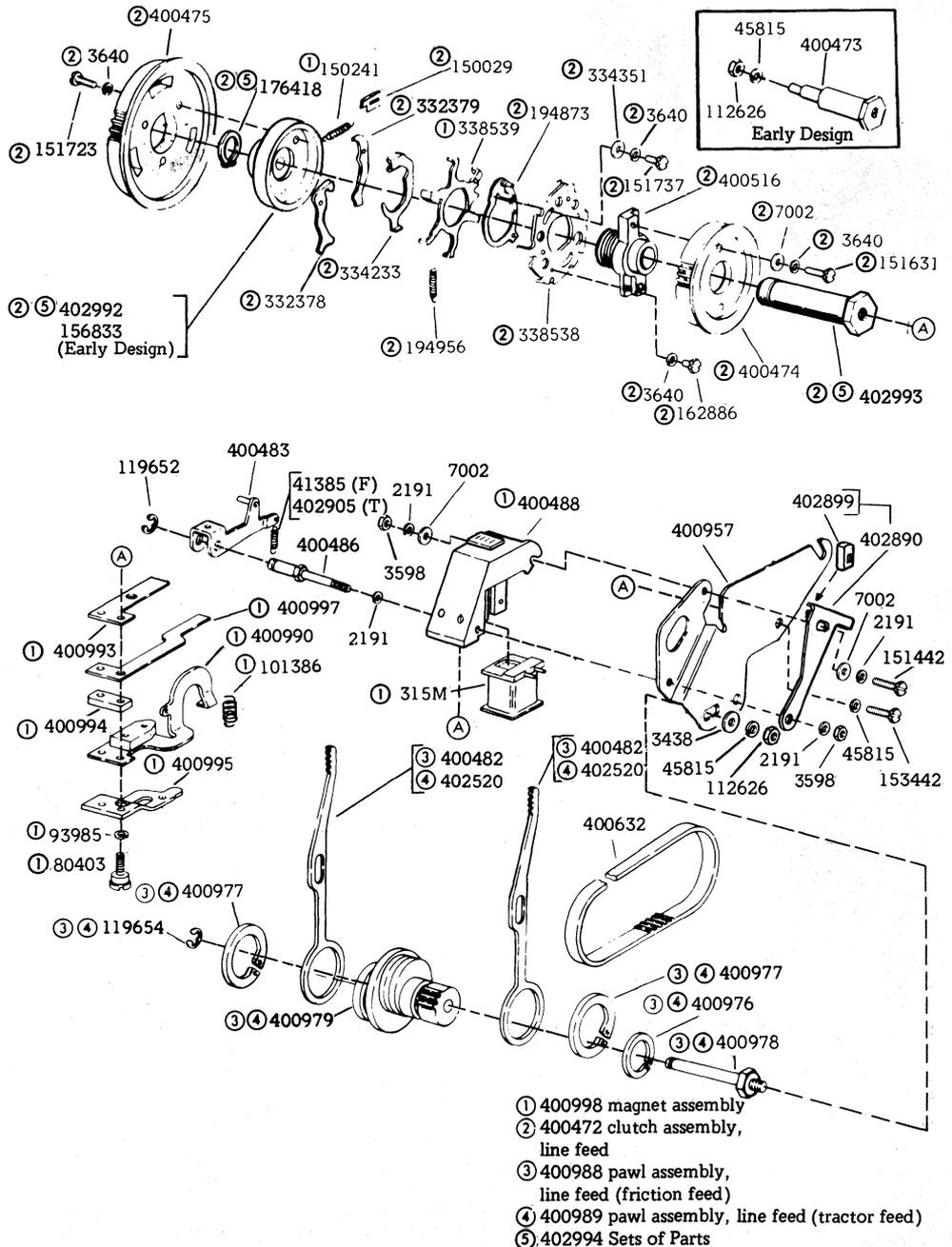


Fig. 25—400470 Line Feed Assembly (Friction Feed) and 402621 Line Feed Assembly (Tractor Feed - 80 and 132-Column)

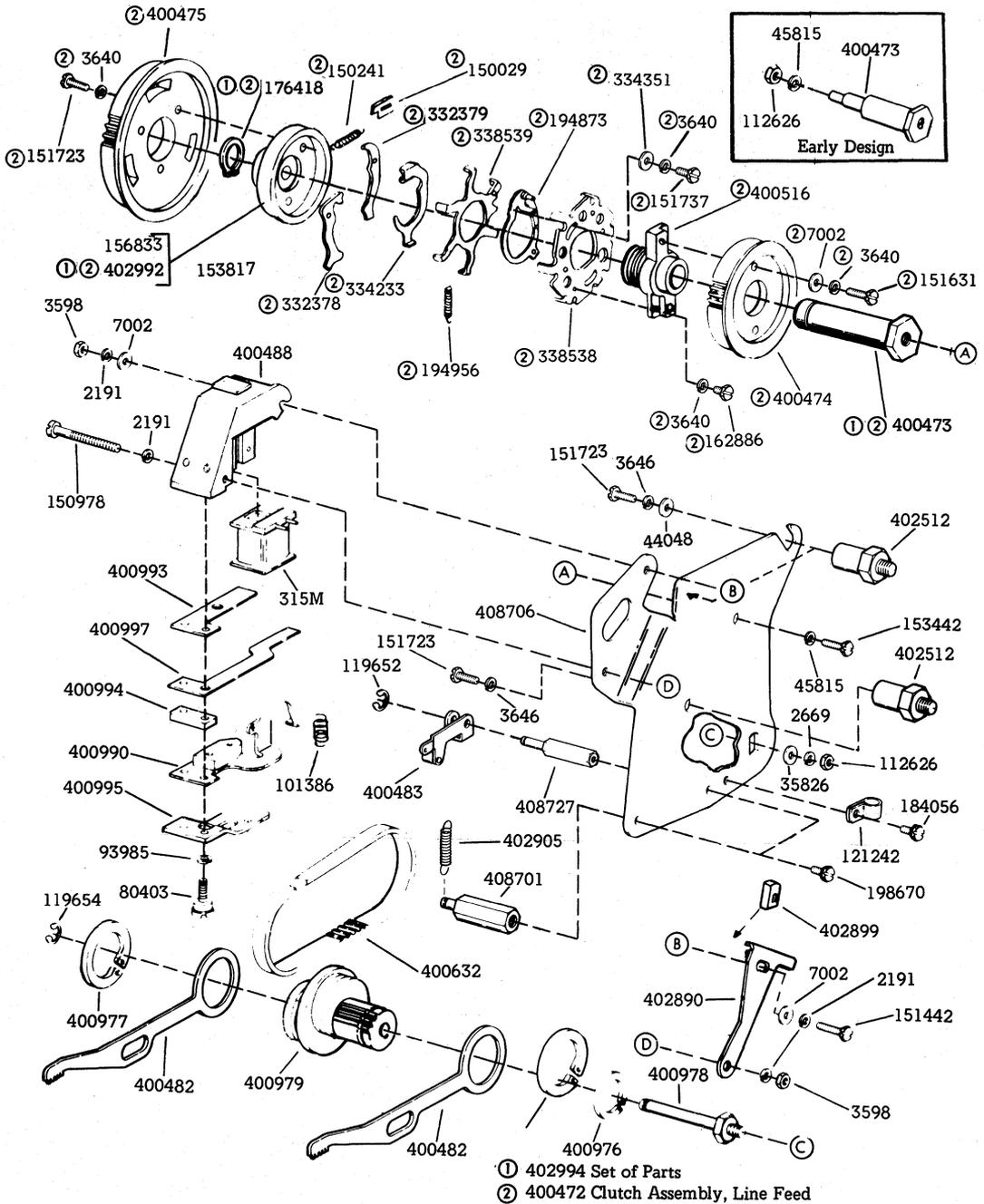


Fig. 26-408745 Line Feed Assembly (Forms Access - Tractor Feed)

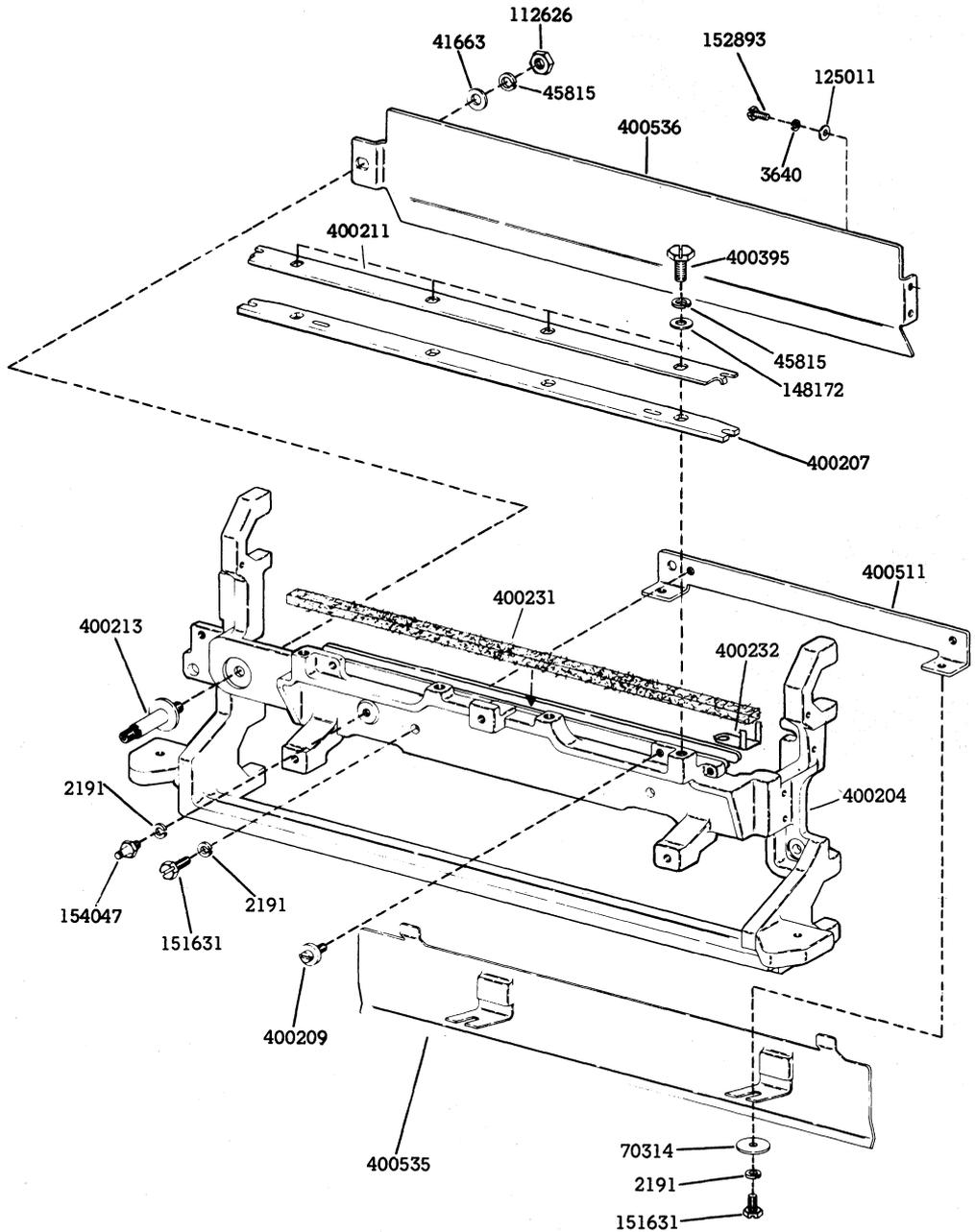


Fig. 27-400201 Front Casting Assembly (Friction Feed - 40P101 Early Design)

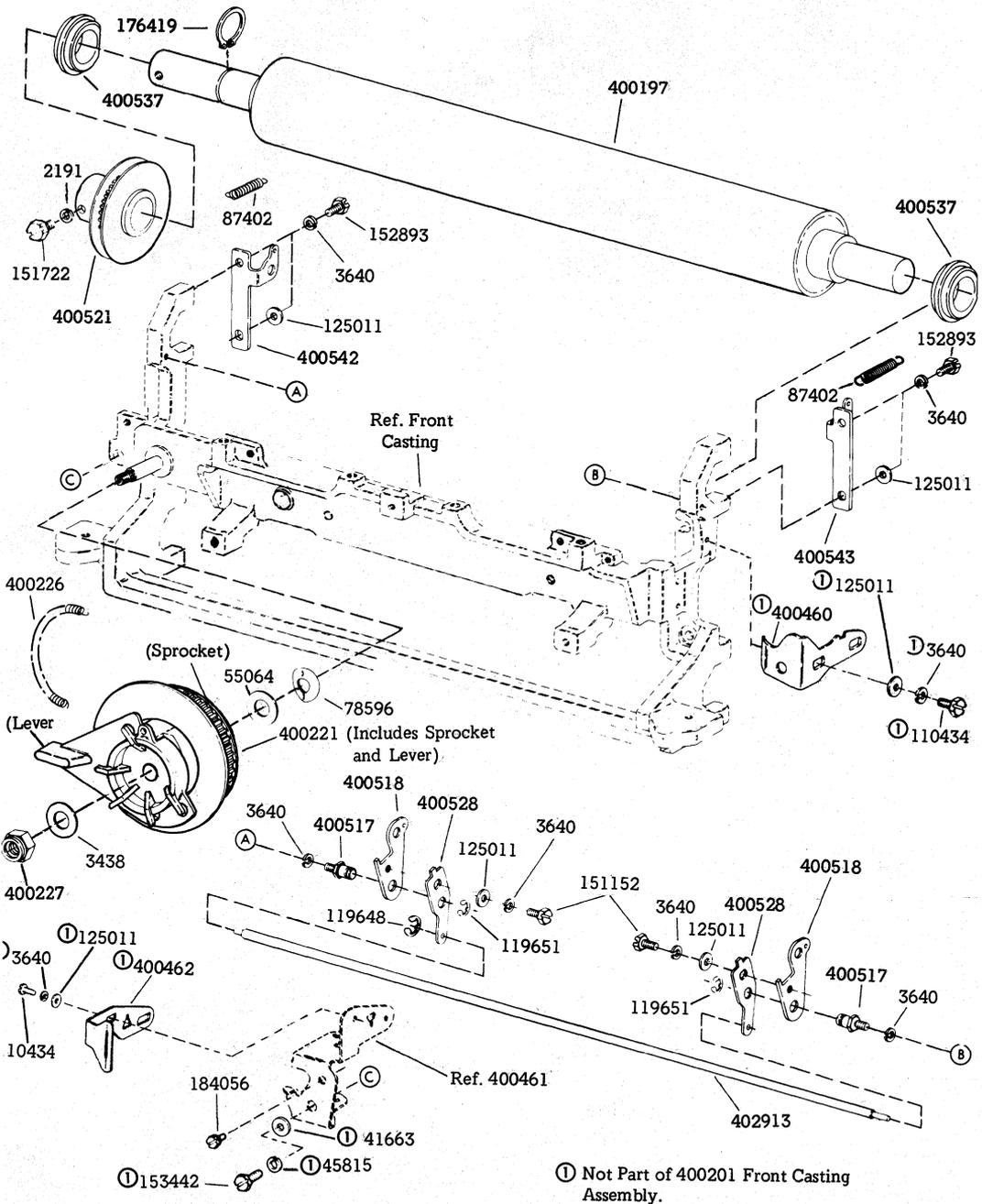


Fig. 27-400201 Front Casting Assembly (Friction Feed 40P101 Early Design) (Cont.)

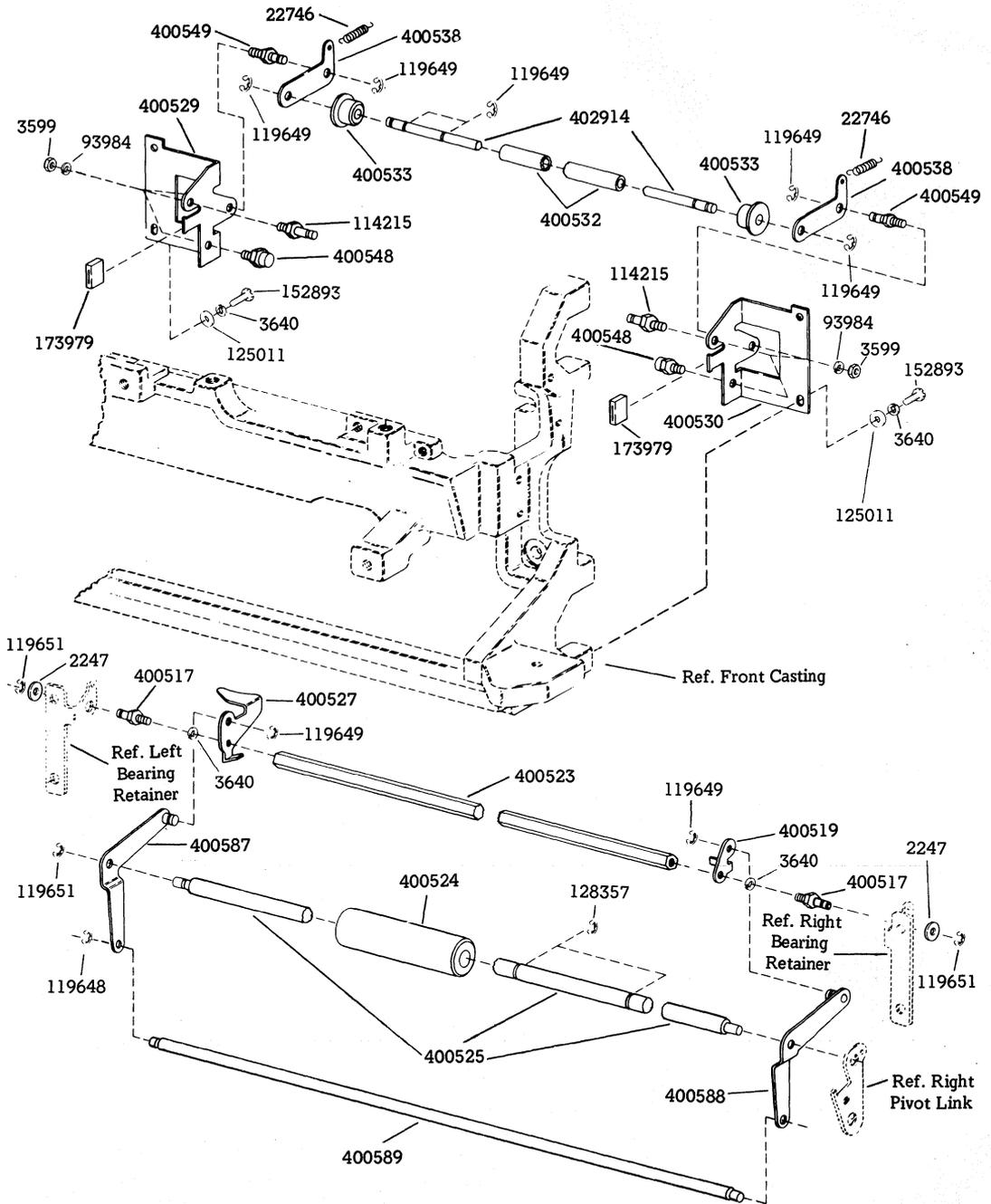


Fig. 27-400201 Front Casting Assembly (Friction Feed 40P101 - Early Design) (Cont.)

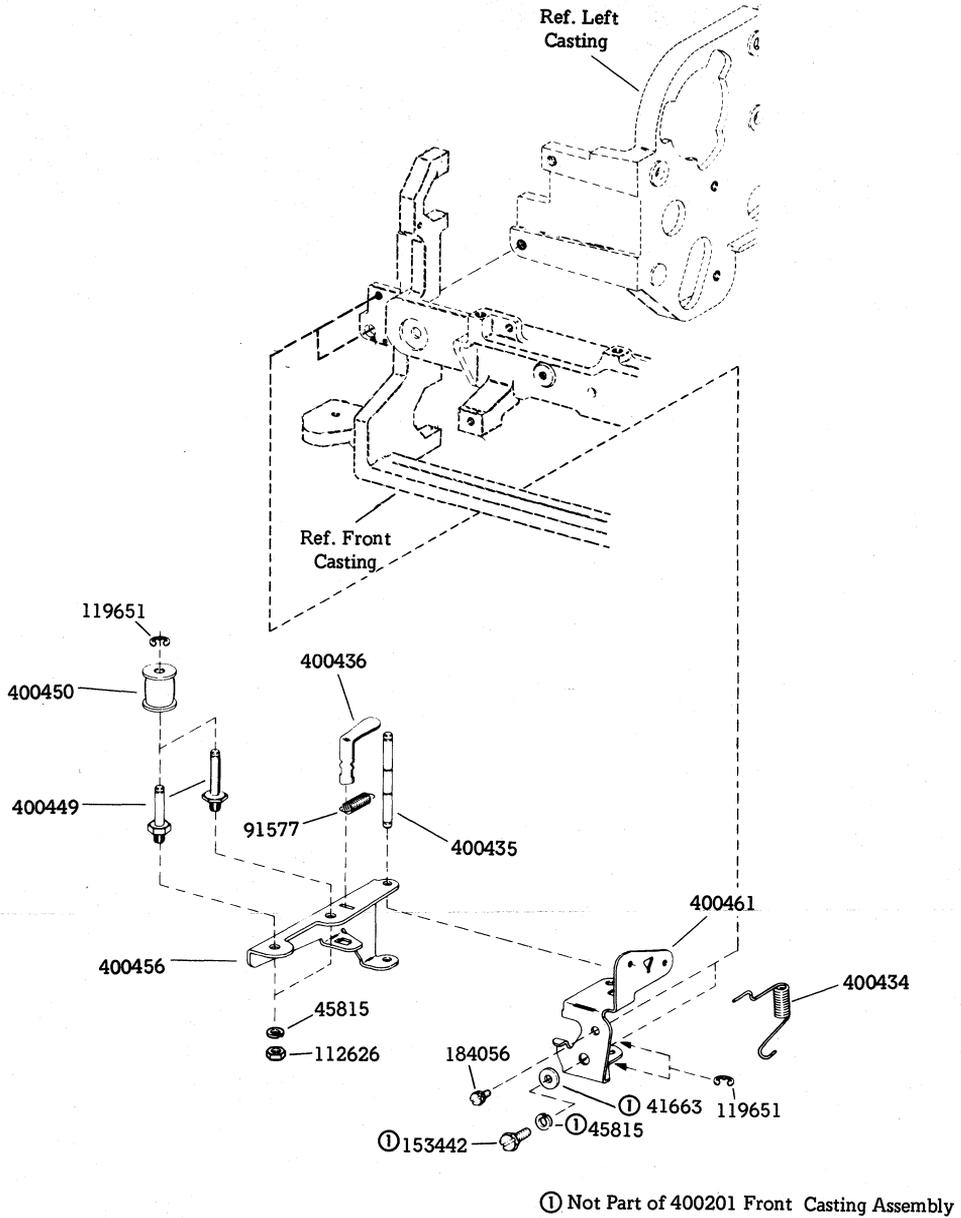


Fig. 27-400201 Front Casting Assembly (Friction Feed 40P101 - Early Design) (Cont.)



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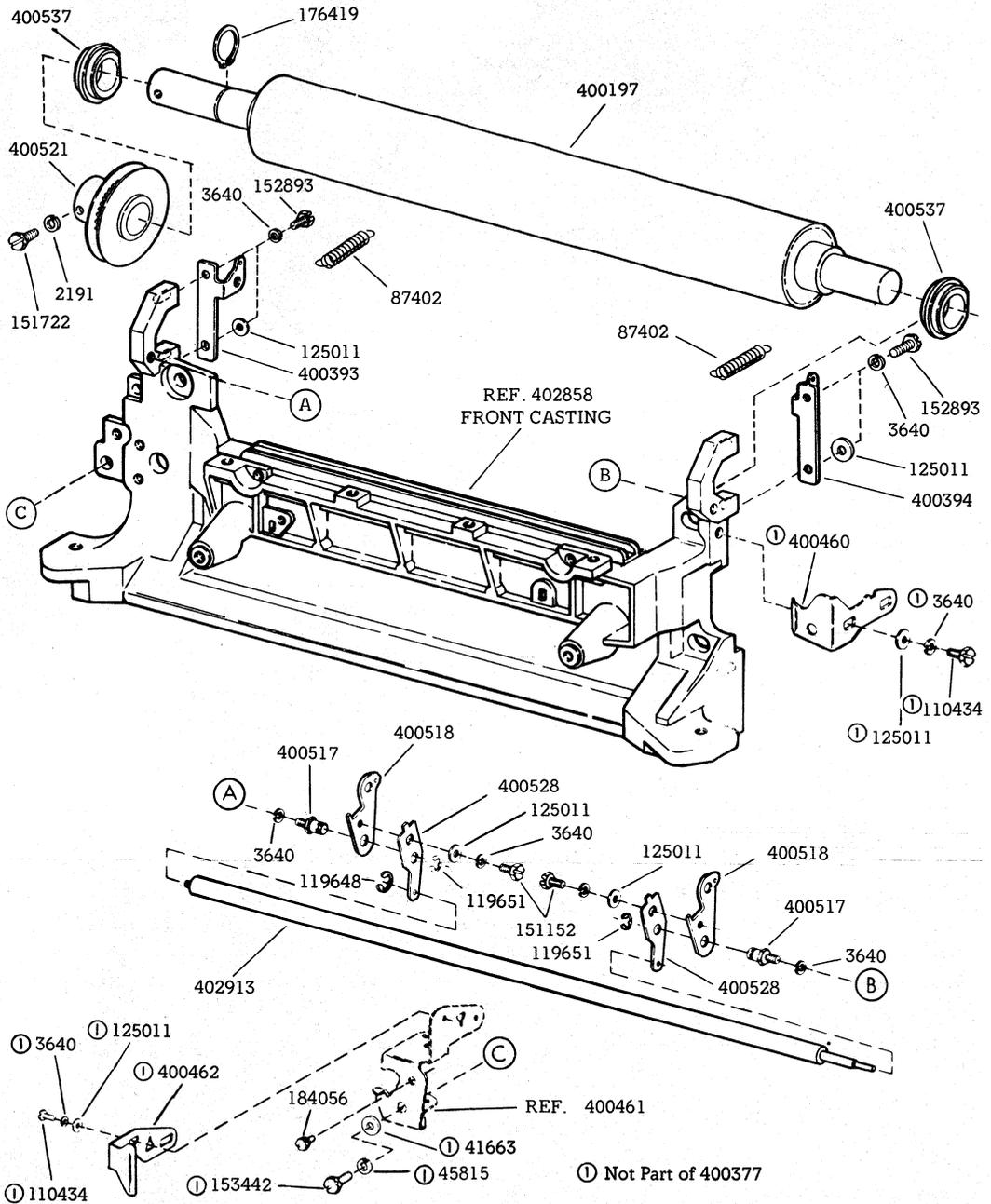


Fig. 28-400377 Front Casting Assembly (Friction Feed 40P101 - Late Design) (Cont.)

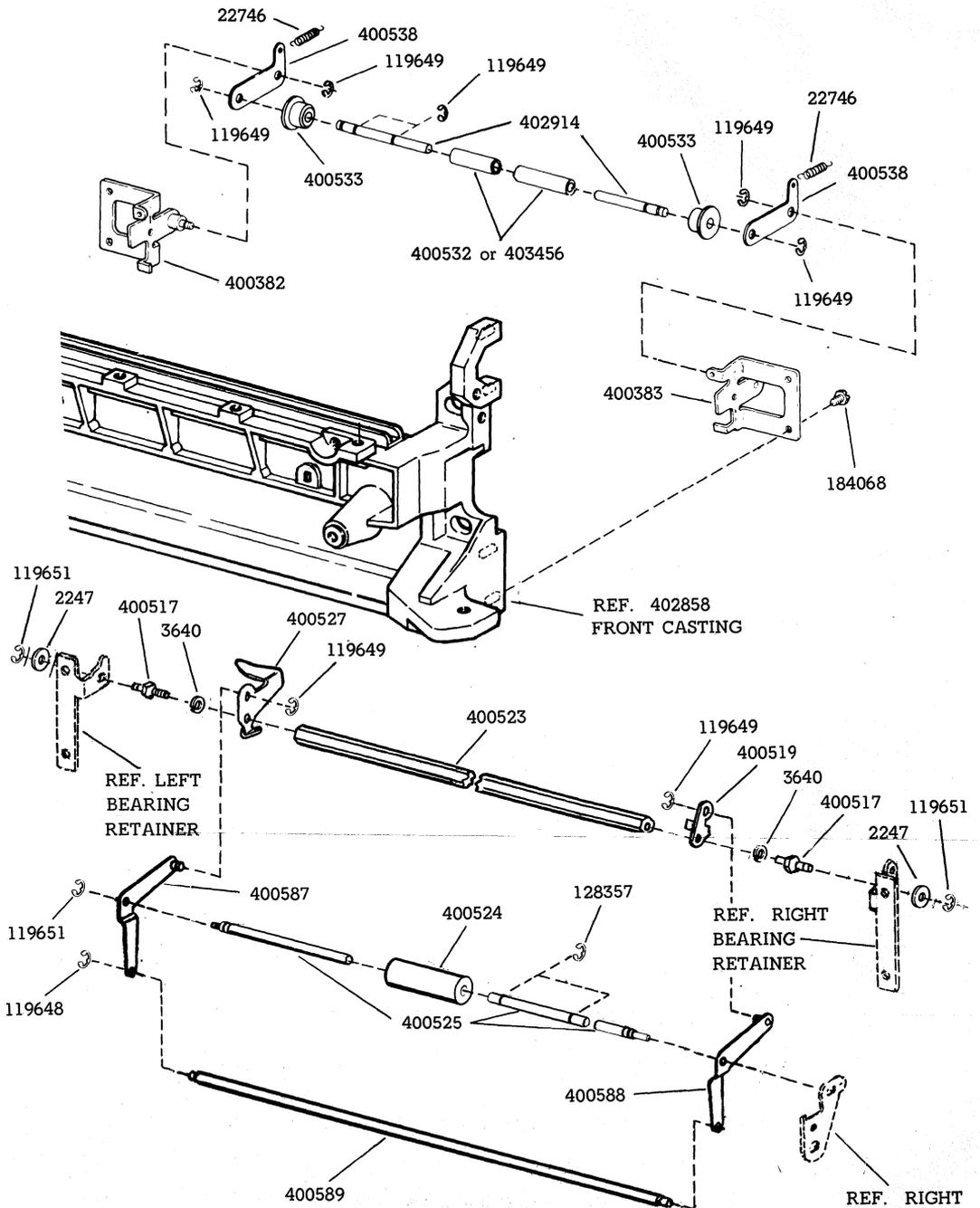


Fig. 28-400377 Front Casting Assembly (Friction Feed 40P101 Late Design) (Cont.)

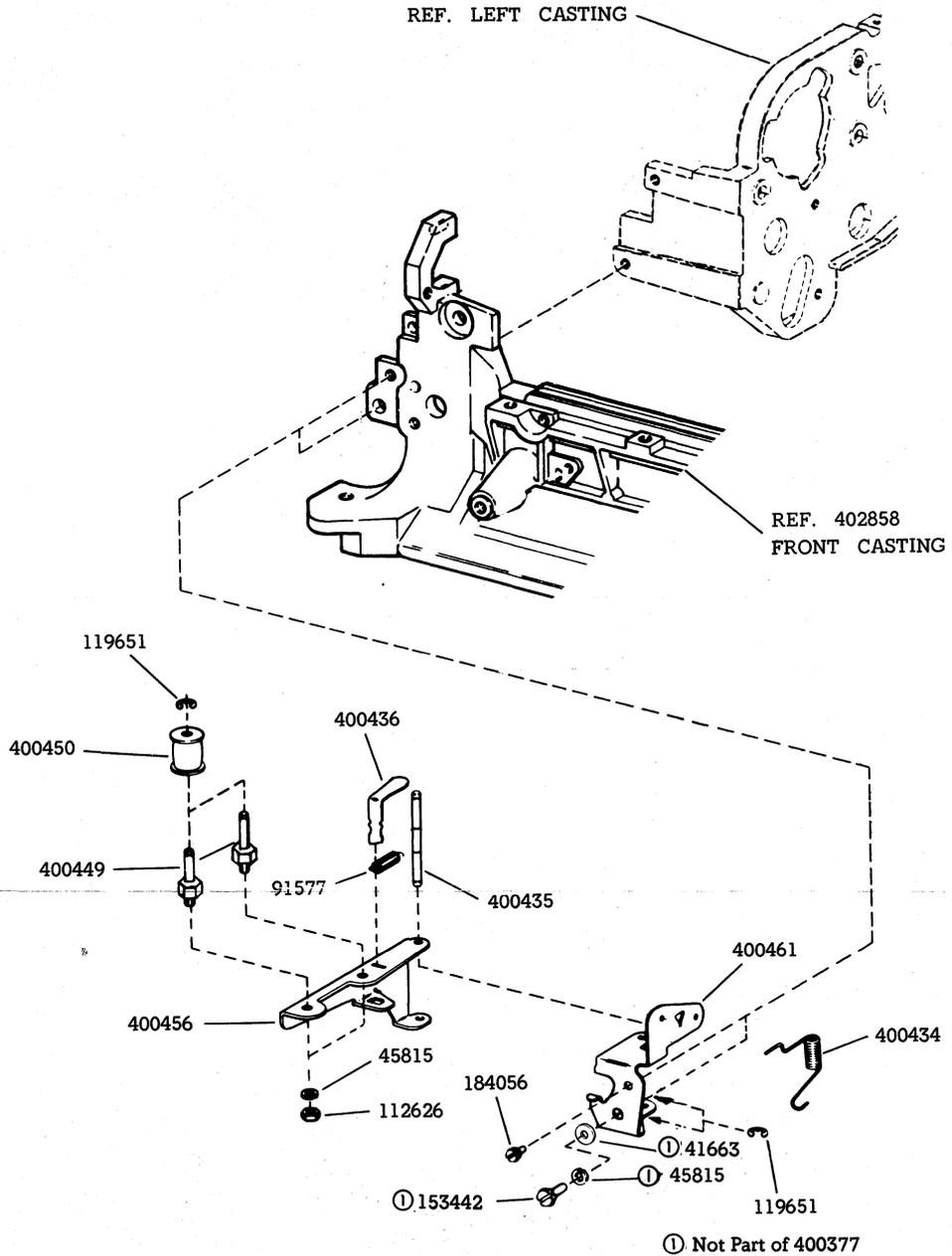


Fig. 28-400377 Front Casting Assembly (Friction Feed 40P101  
Late Design) (Cont.)

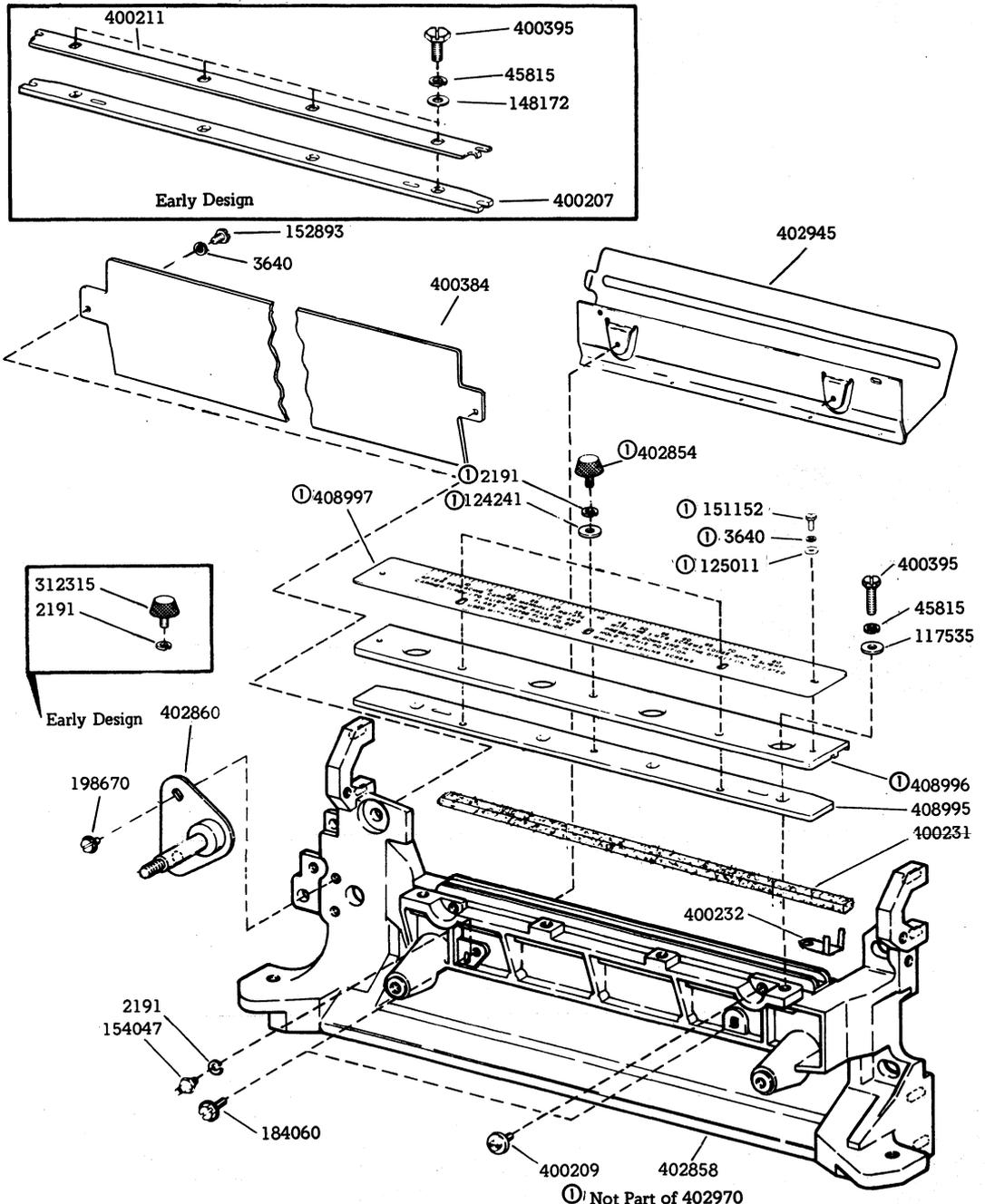
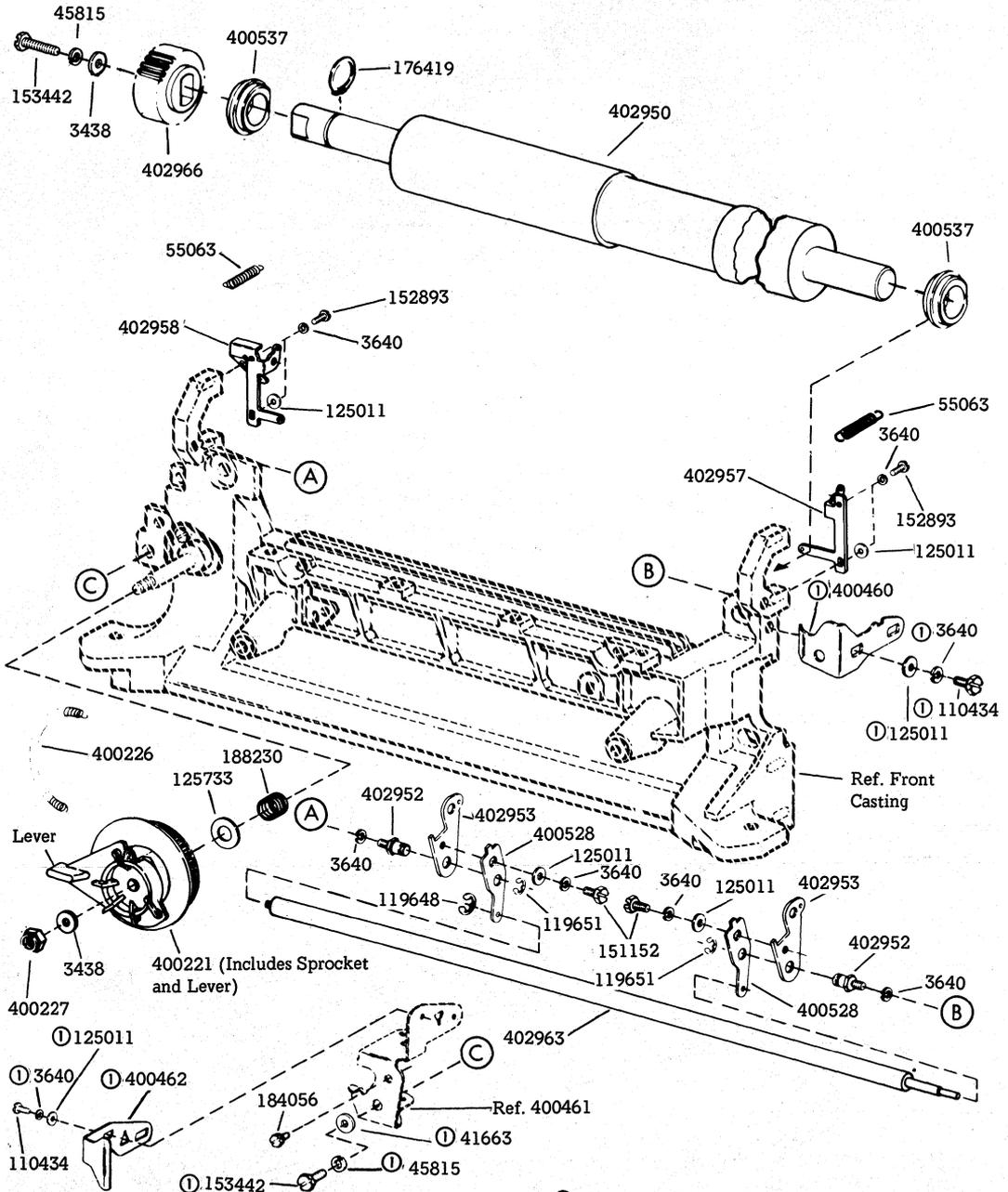


Fig. 29-402970 Front Casting Assembly (Friction Feed 40P102)



① Not Part of 402970 Front Casting Assembly.

Fig. 29-402970 Front Casting Assembly (Friction Feed - 40P102) (Cont.)

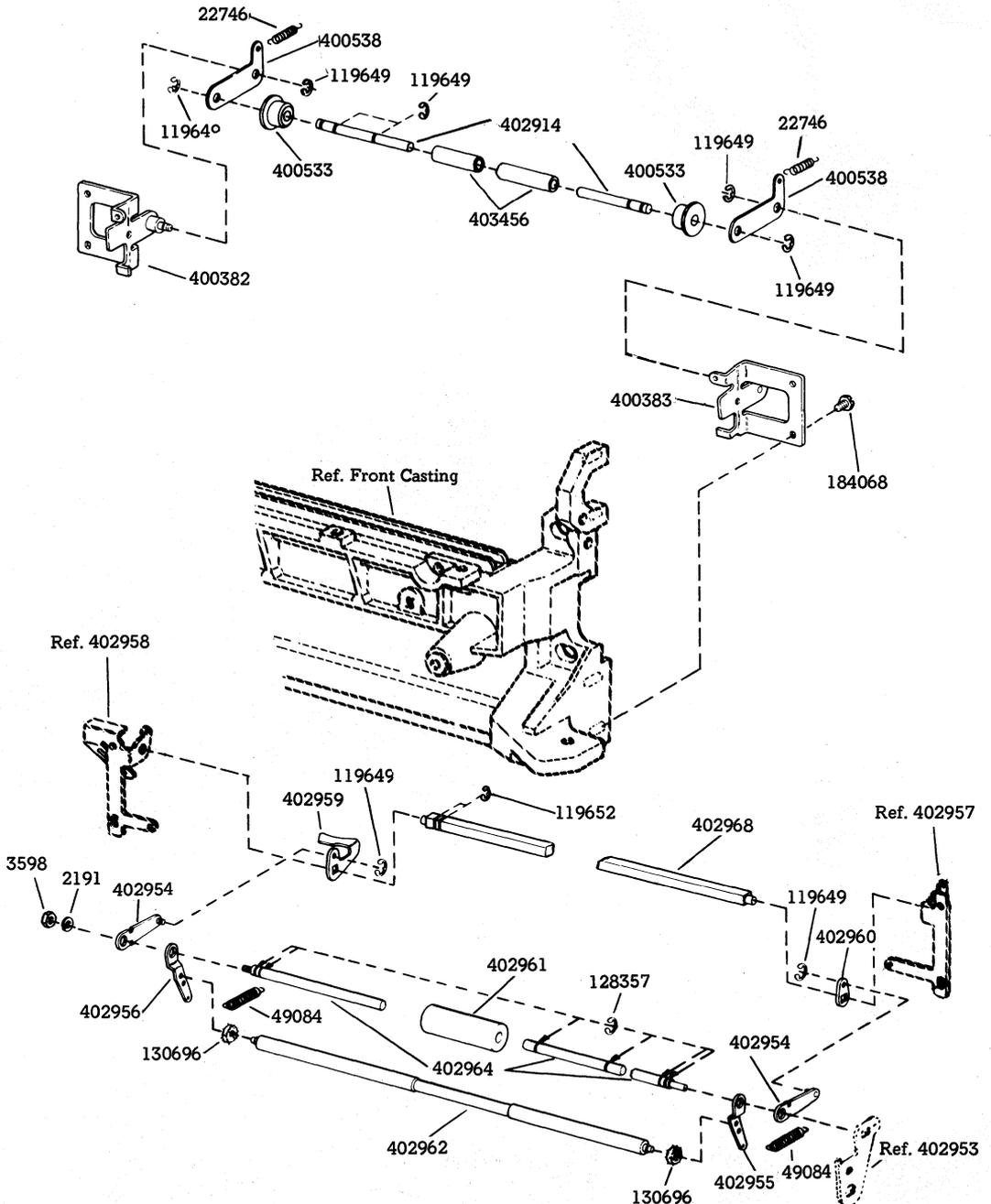


Fig. 29-402970 Front Casting Assembly (Friction Feed - 40P102) (Cont.)

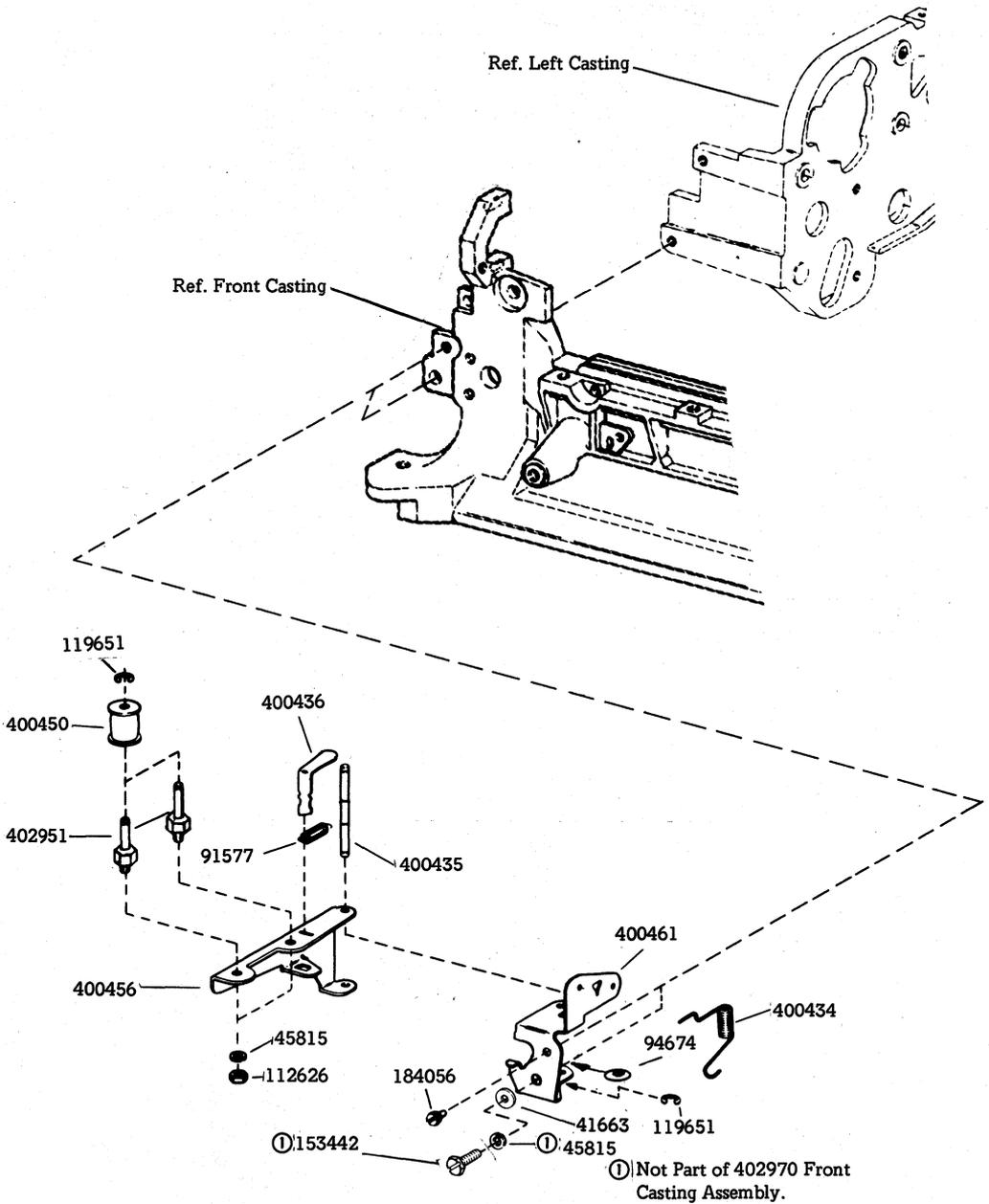


Fig. 29-402970 Front Casting Assembly (Friction Feed - 40P102)



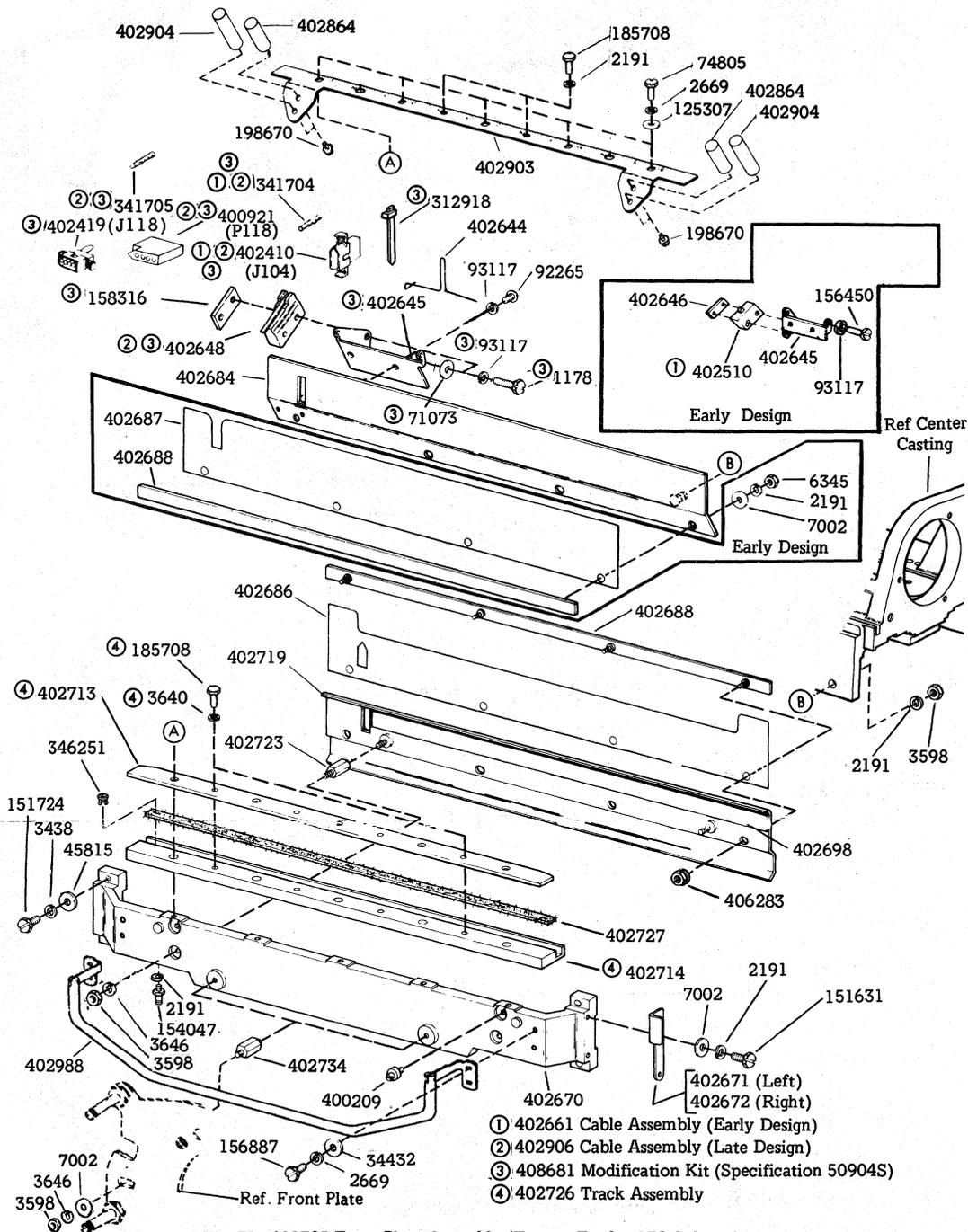
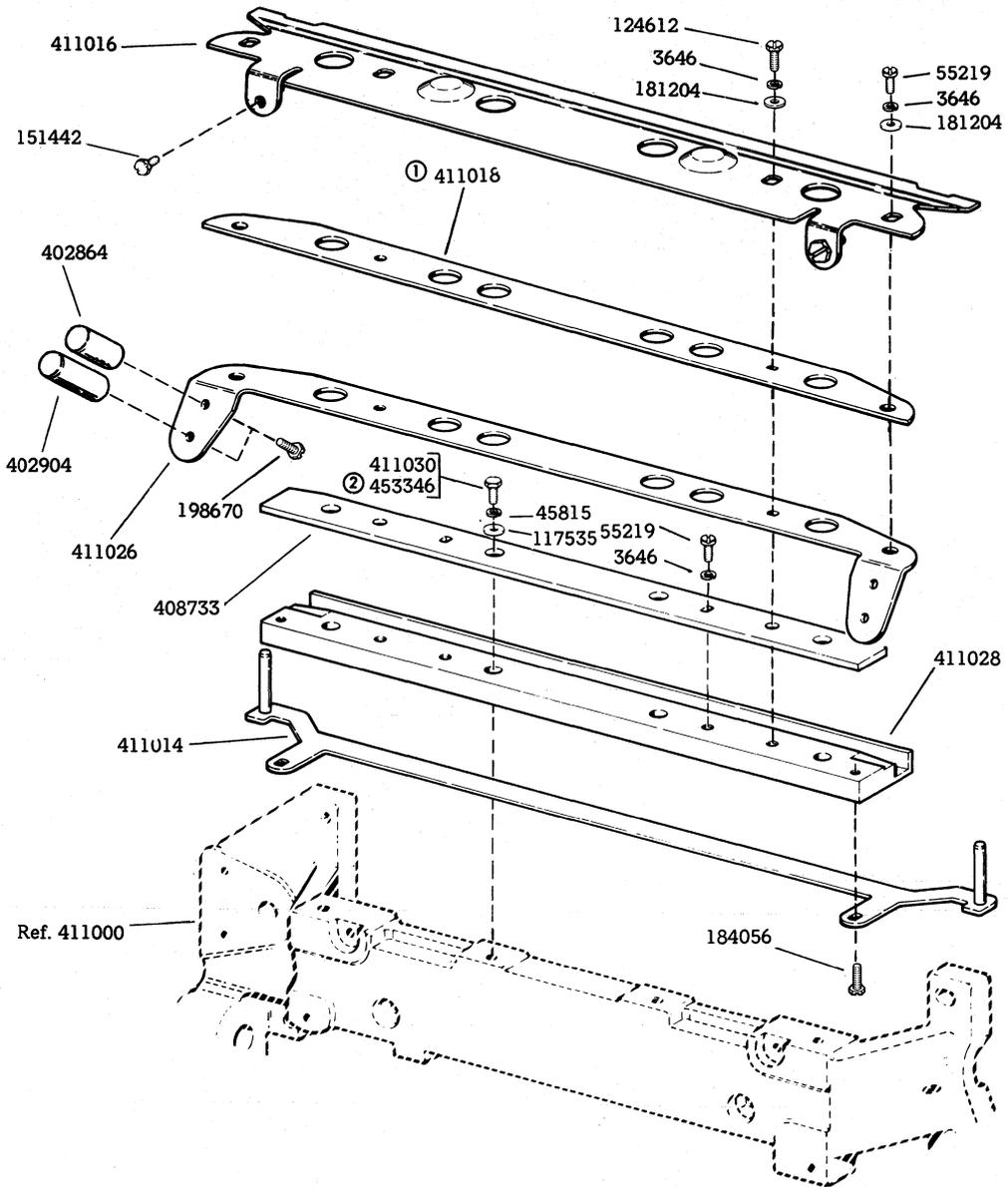


Fig. 31-402725 Front Plate Assembly (Tractor Feed - 132-Column)





① Peculiar to Printer With 8 Lines Per Inch Spacing.

② 453346 peculiar to serial numbers between 82206 and 90187.

Fig. 32—Front Casting Assembly (Forms Access – Tractor Feed ) (Cont.)

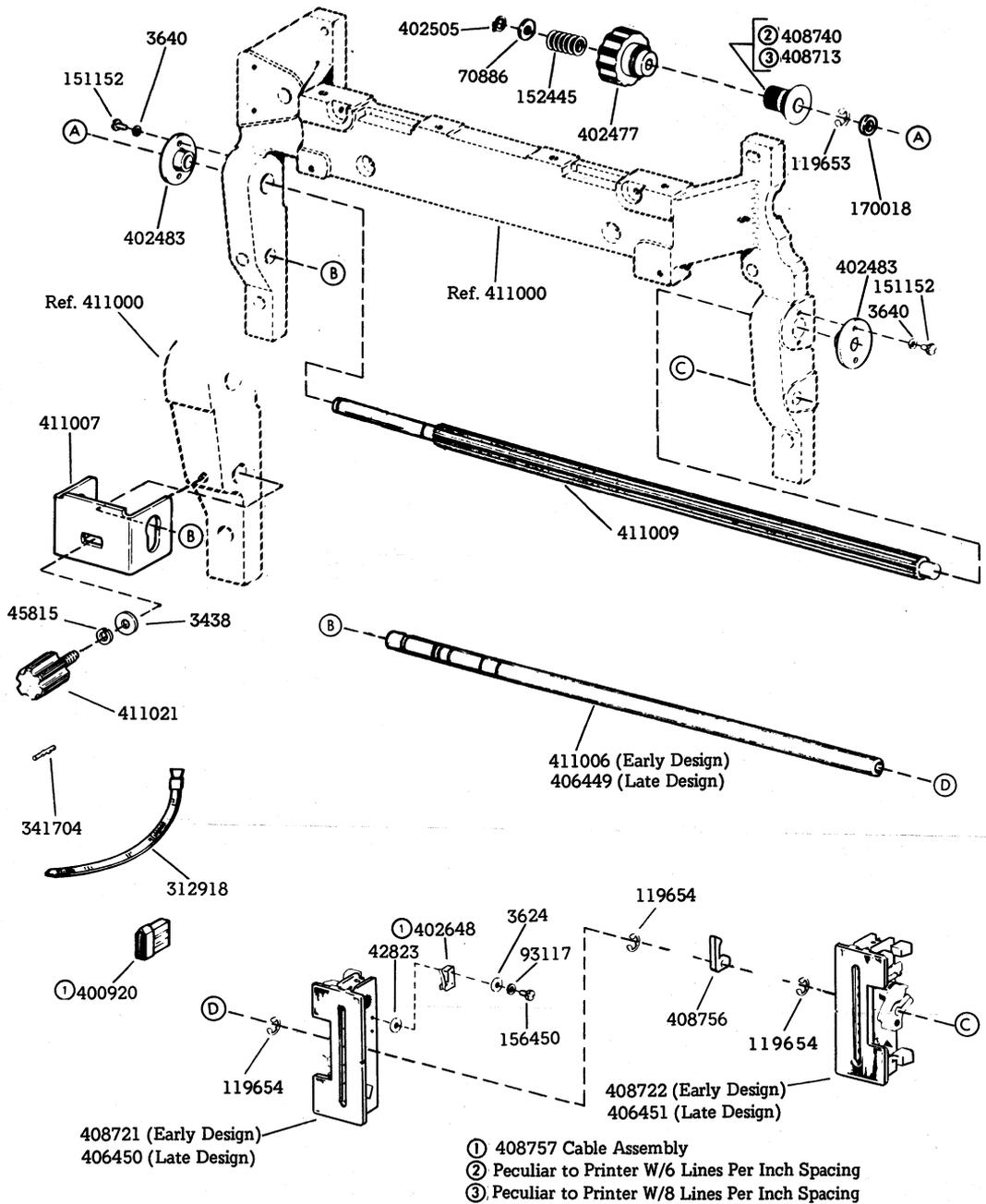
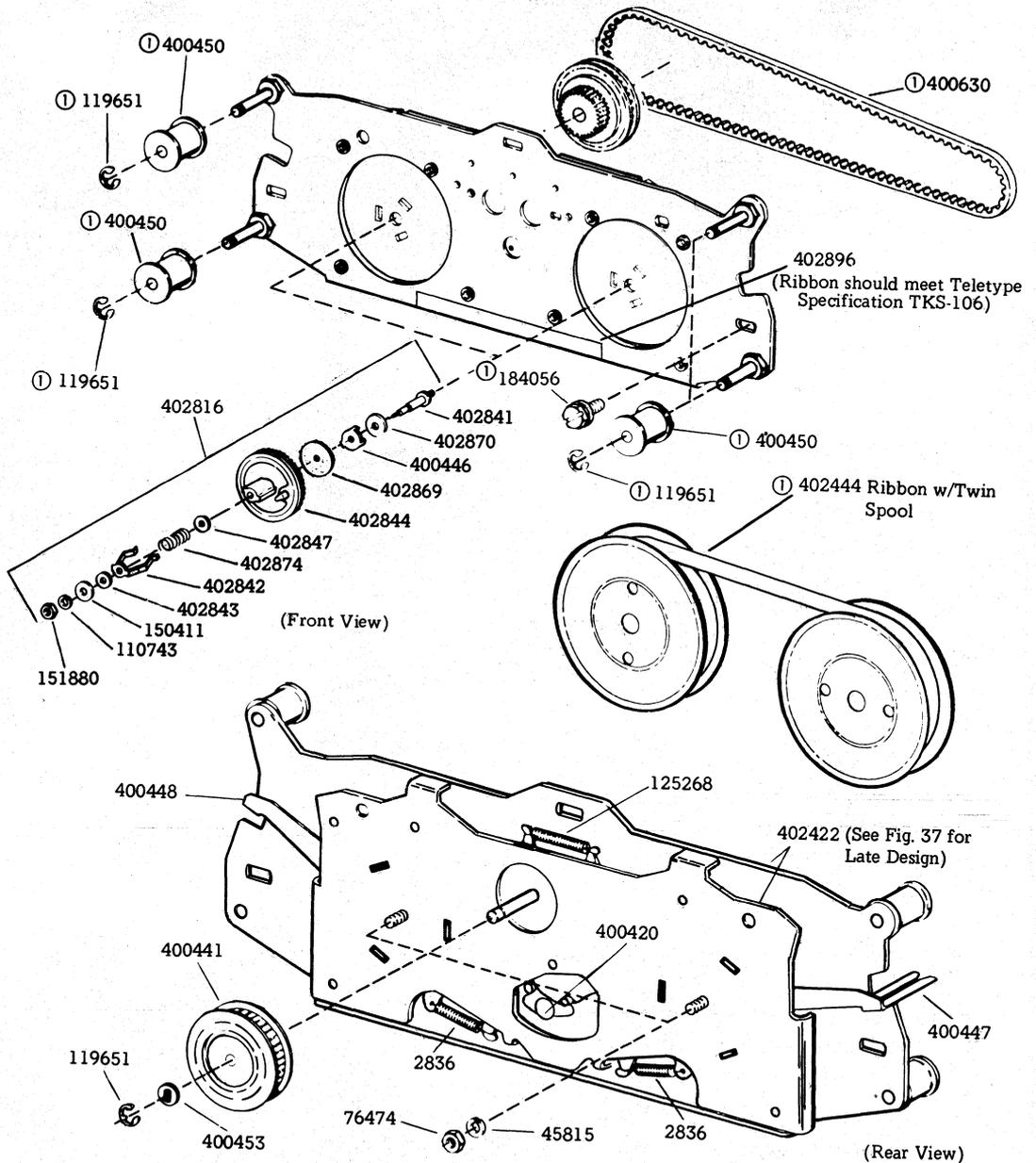


Fig. 33—Paper Handling Assembly (Forms Access - Tractor Feed)



① Not Part of 402420  
Ribbon Feed Assembly.

Fig. 34-402420 Ribbon Feed Assembly (Friction Feed Only)

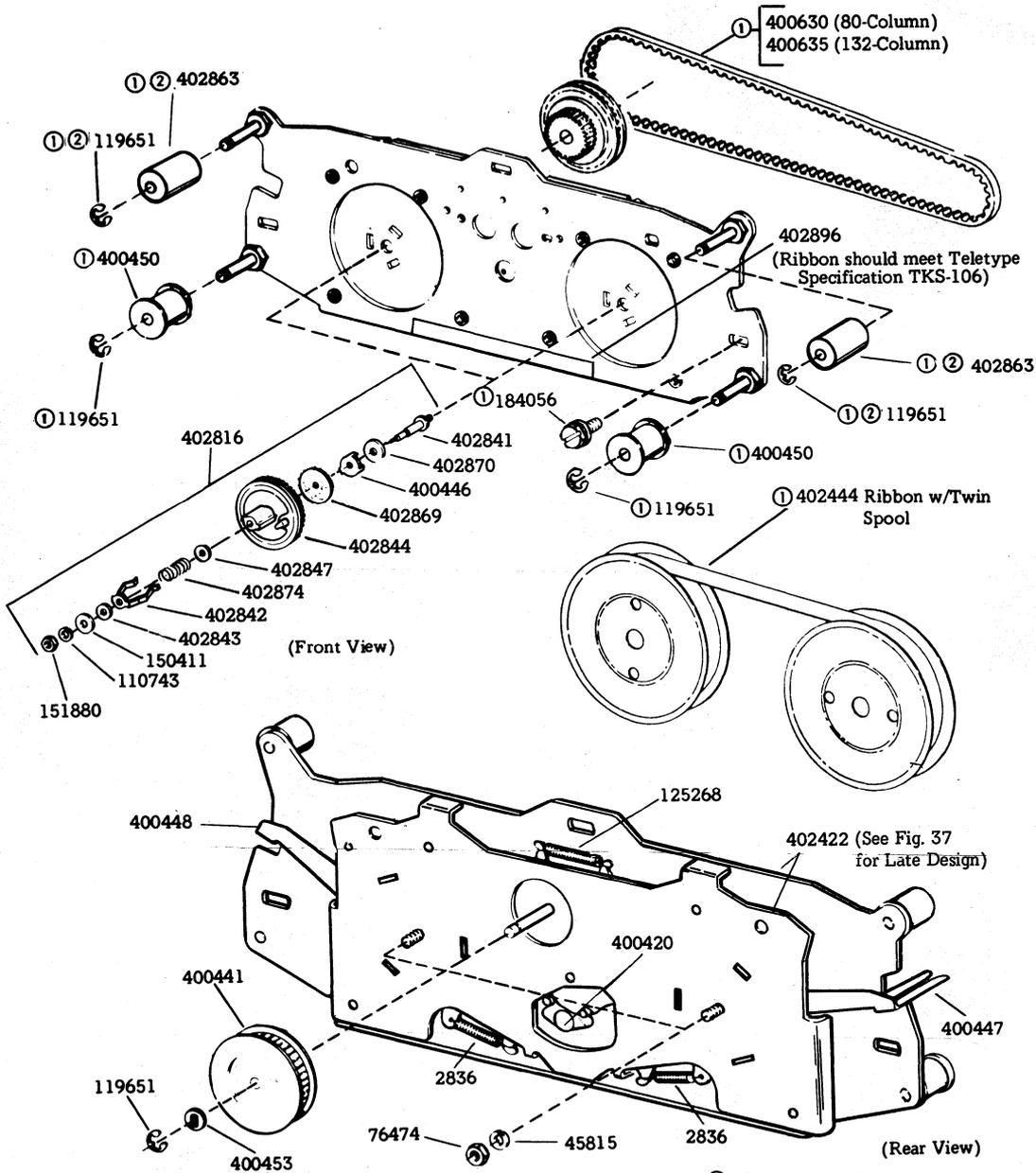


Fig. 35-402420 Ribbon Feed Assembly (Tractor Feed - 80 and 132-Column)



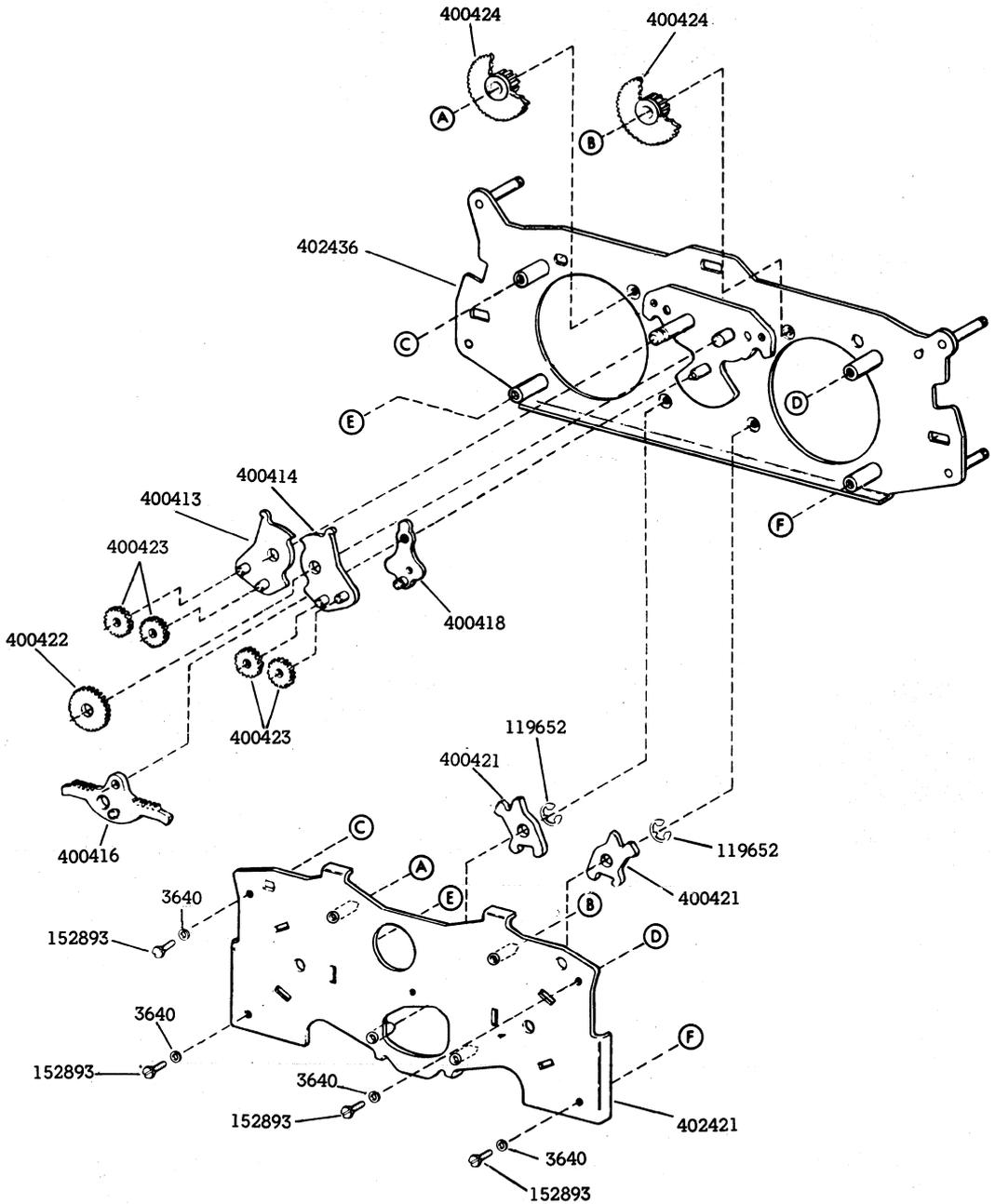


Fig. 37-402422 Ribbon Feed Frame Assembly (Late Design)



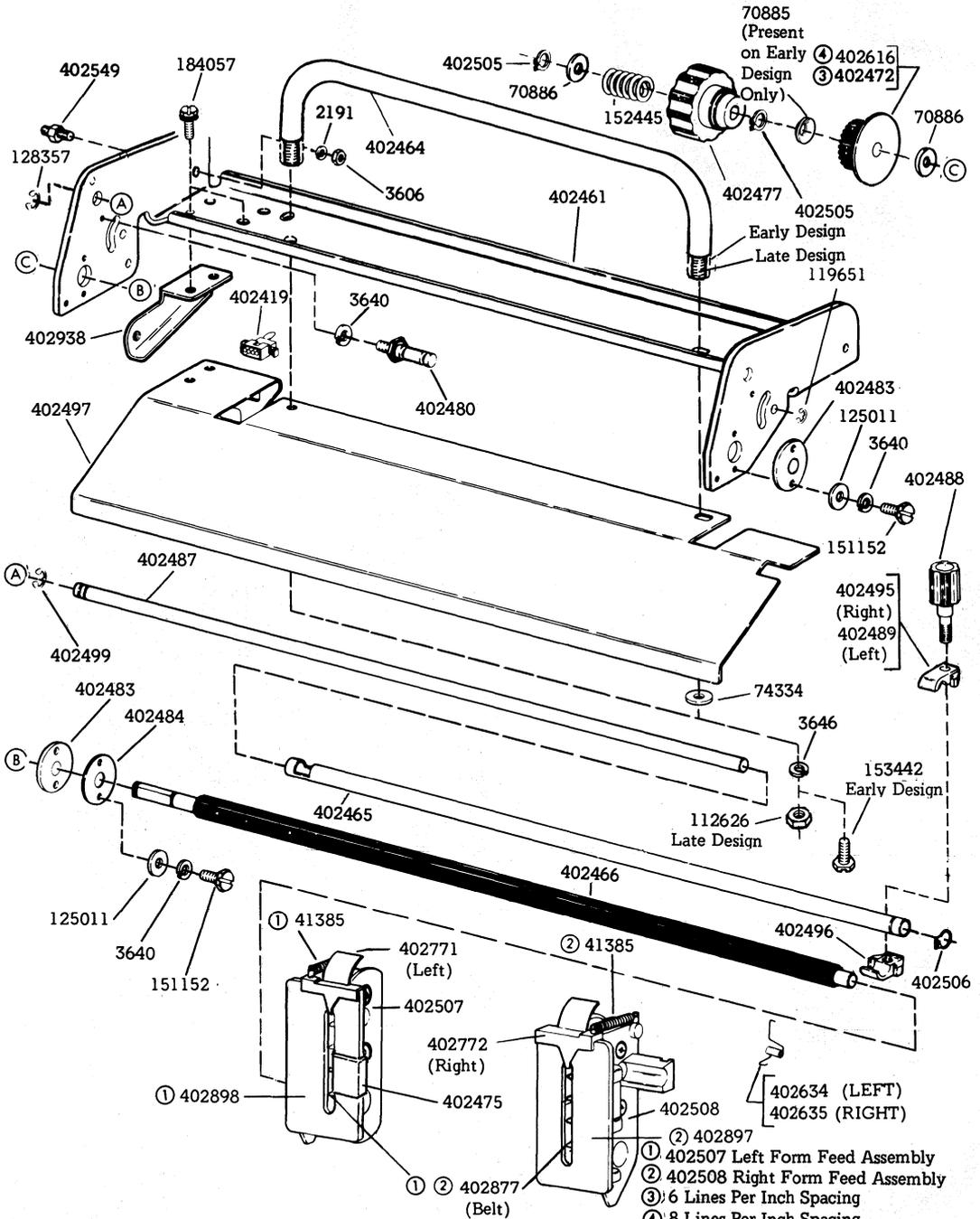


Fig. 39-402460 Paper Handling Assembly (Tractor Feed - 80-Column)

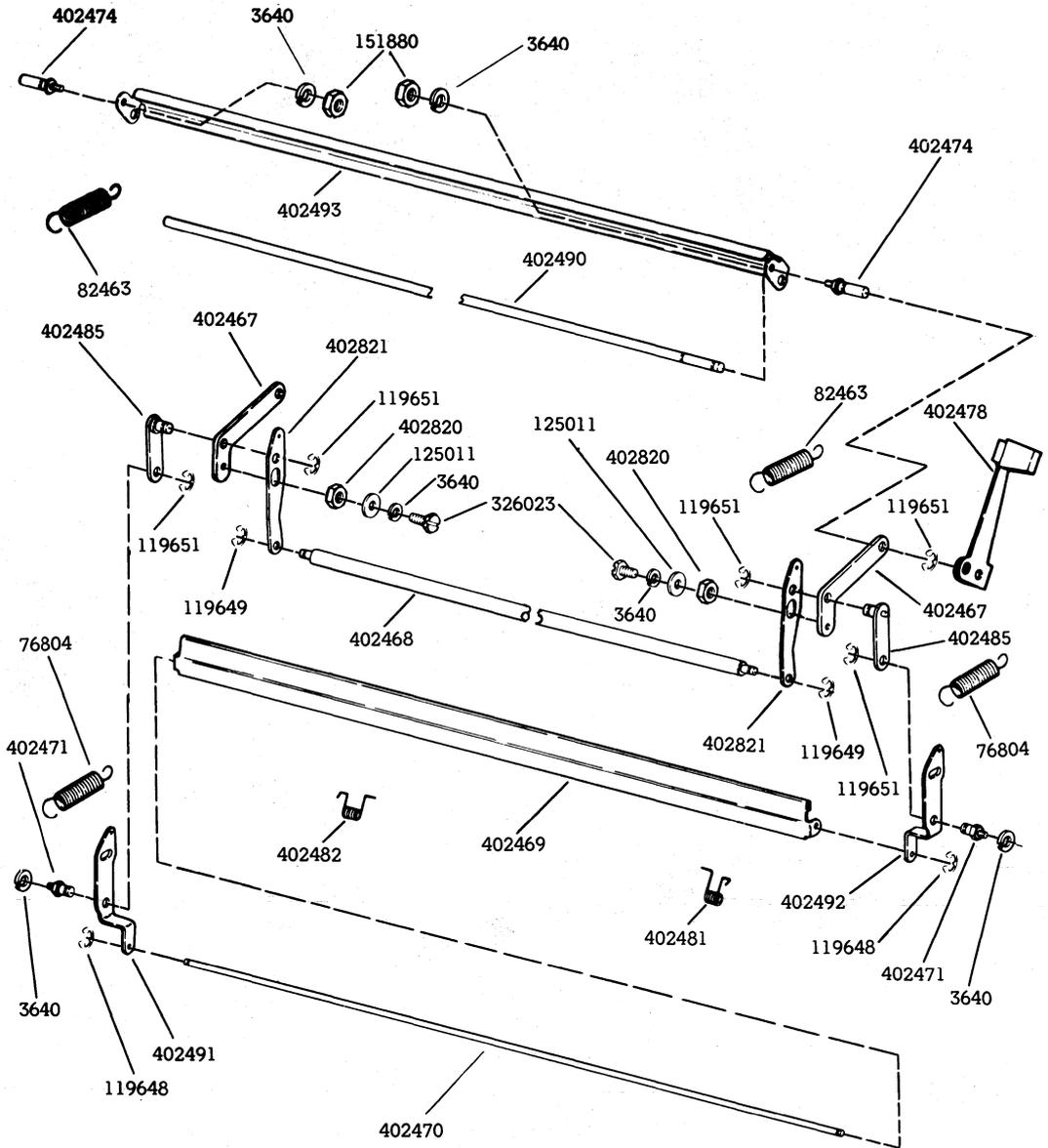


Fig. 39—402460 Paper Handling Assembly (Tractor Feed - 80-Column) (Cont.)

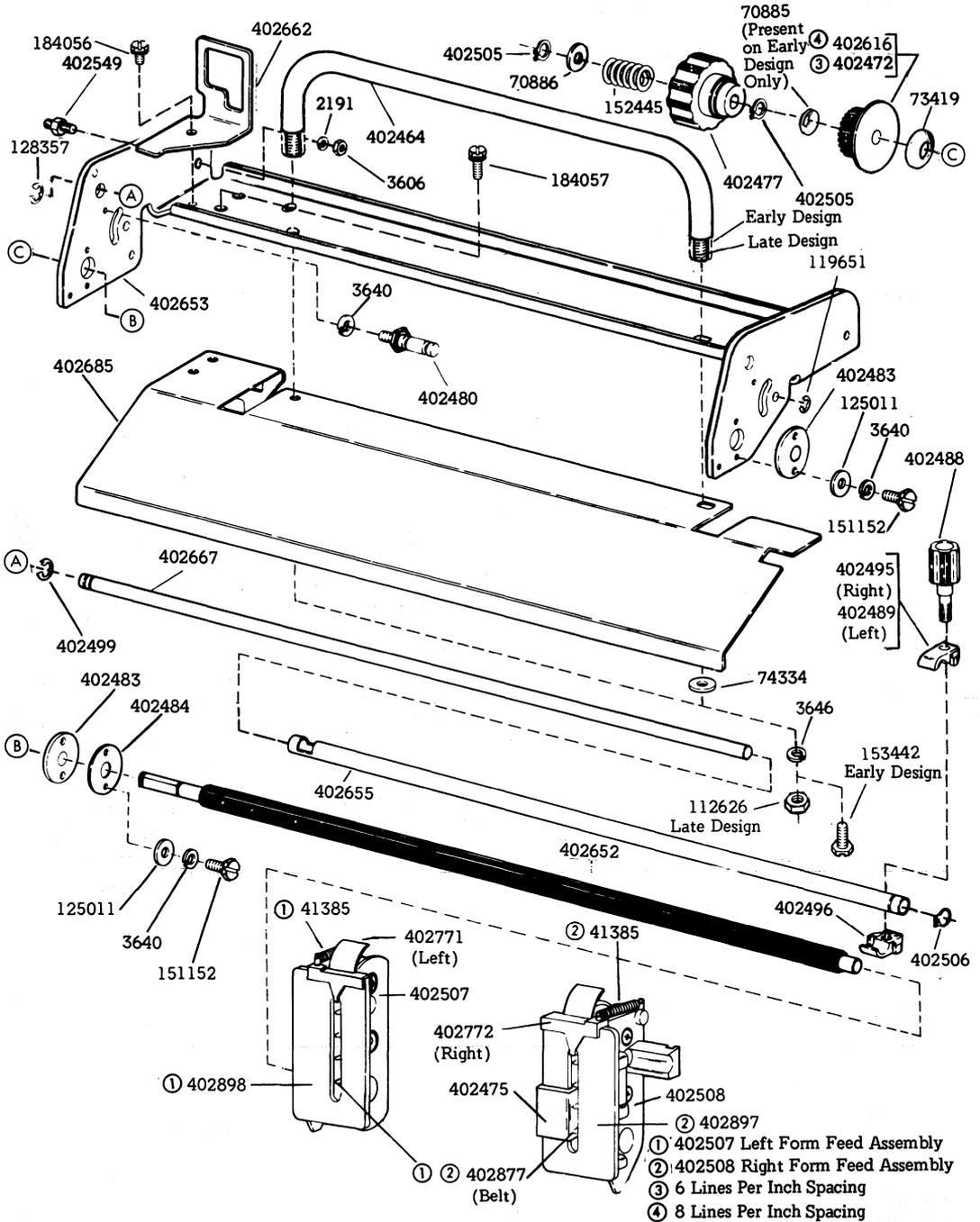


Fig. 40-402660 Paper Handling Assembly (Tractor Feed - 132-Column)

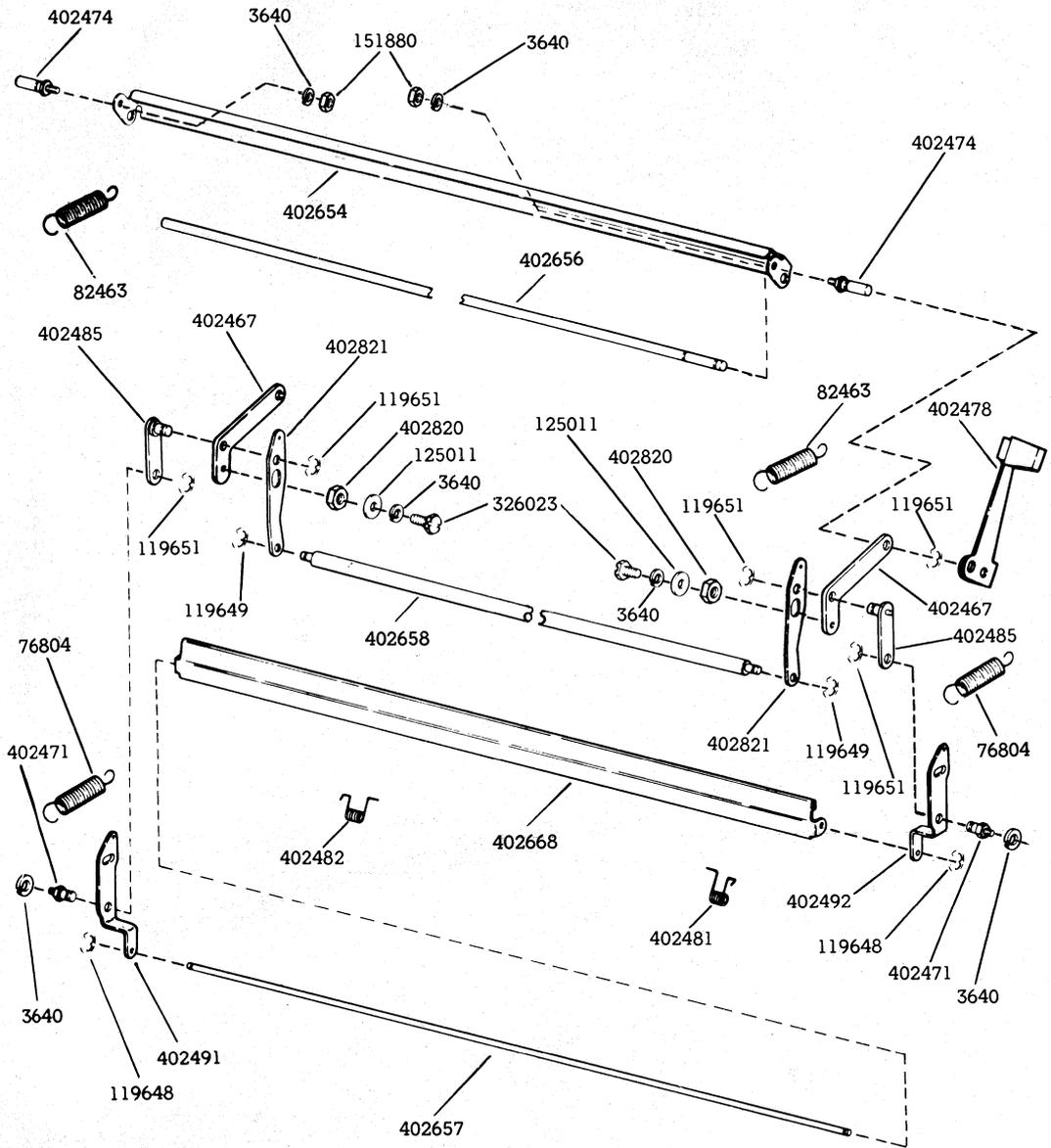


Fig. 40-402660 Paper Handling Assembly (Tractor Feed - 132-Column) (Cont.)

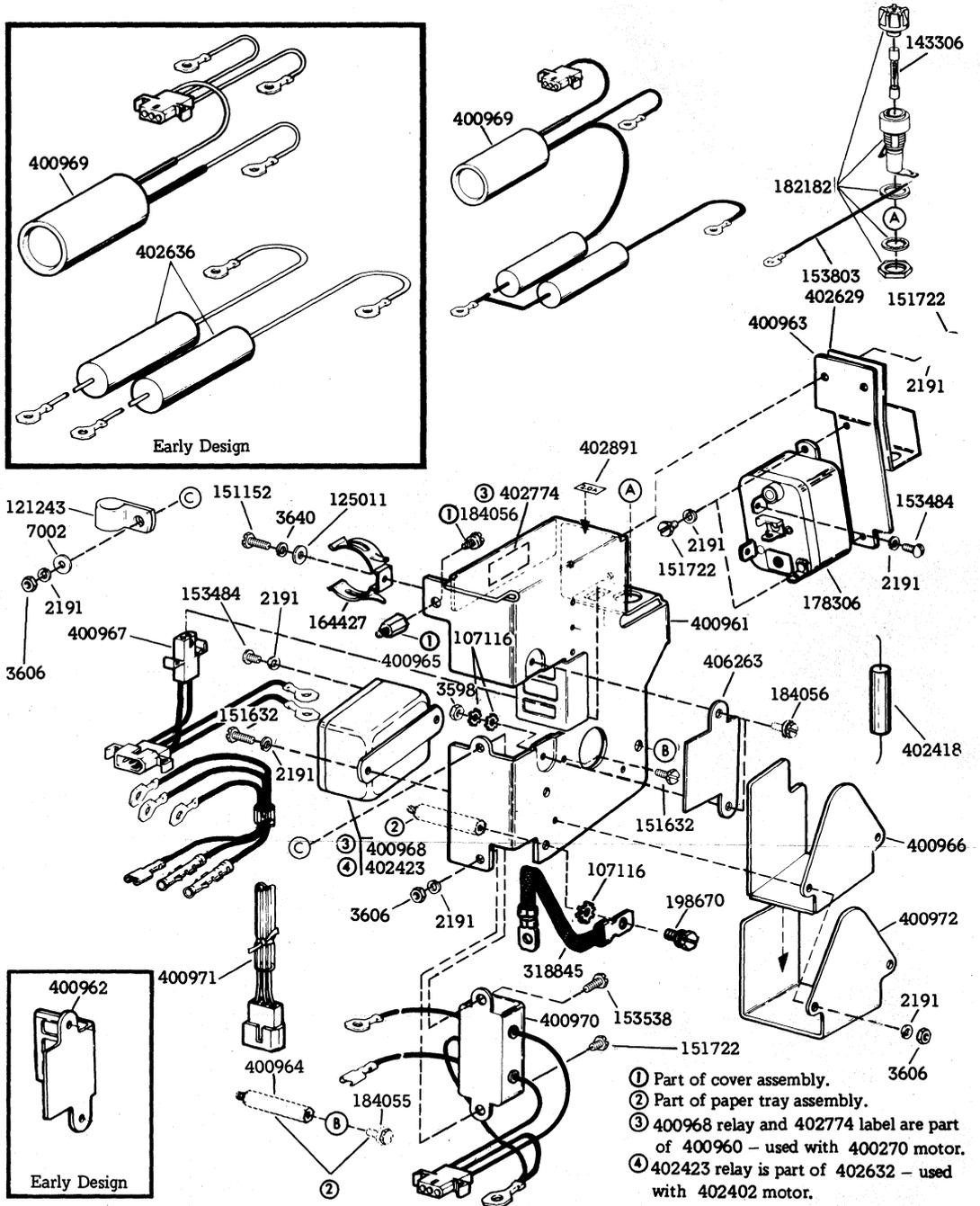


Fig. 41—400960 or 402632 AC Input and Motor Control Assembly (Friction Feed Only)

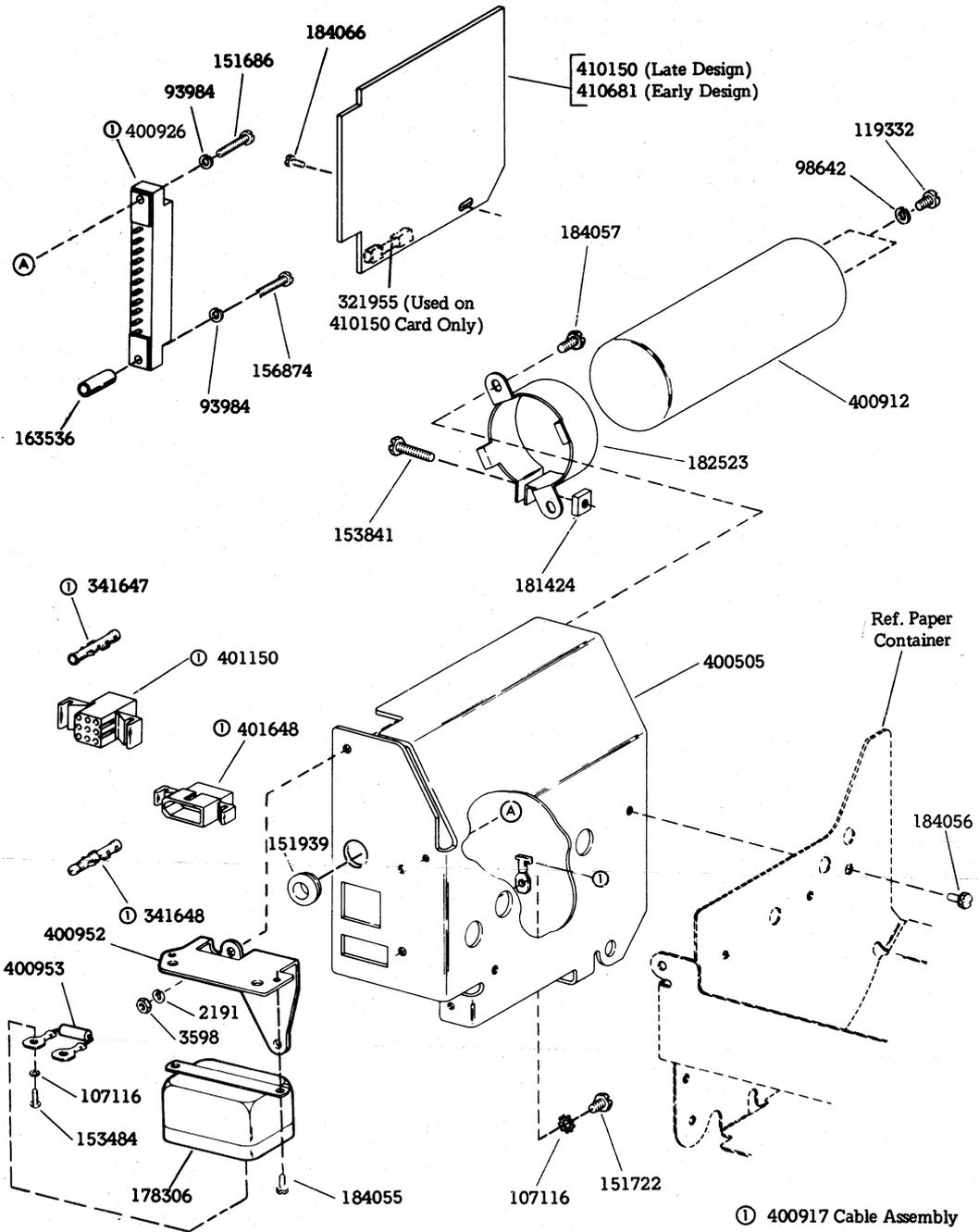


Fig. 42-400908 Power Supply Assembly (Friction Feed)

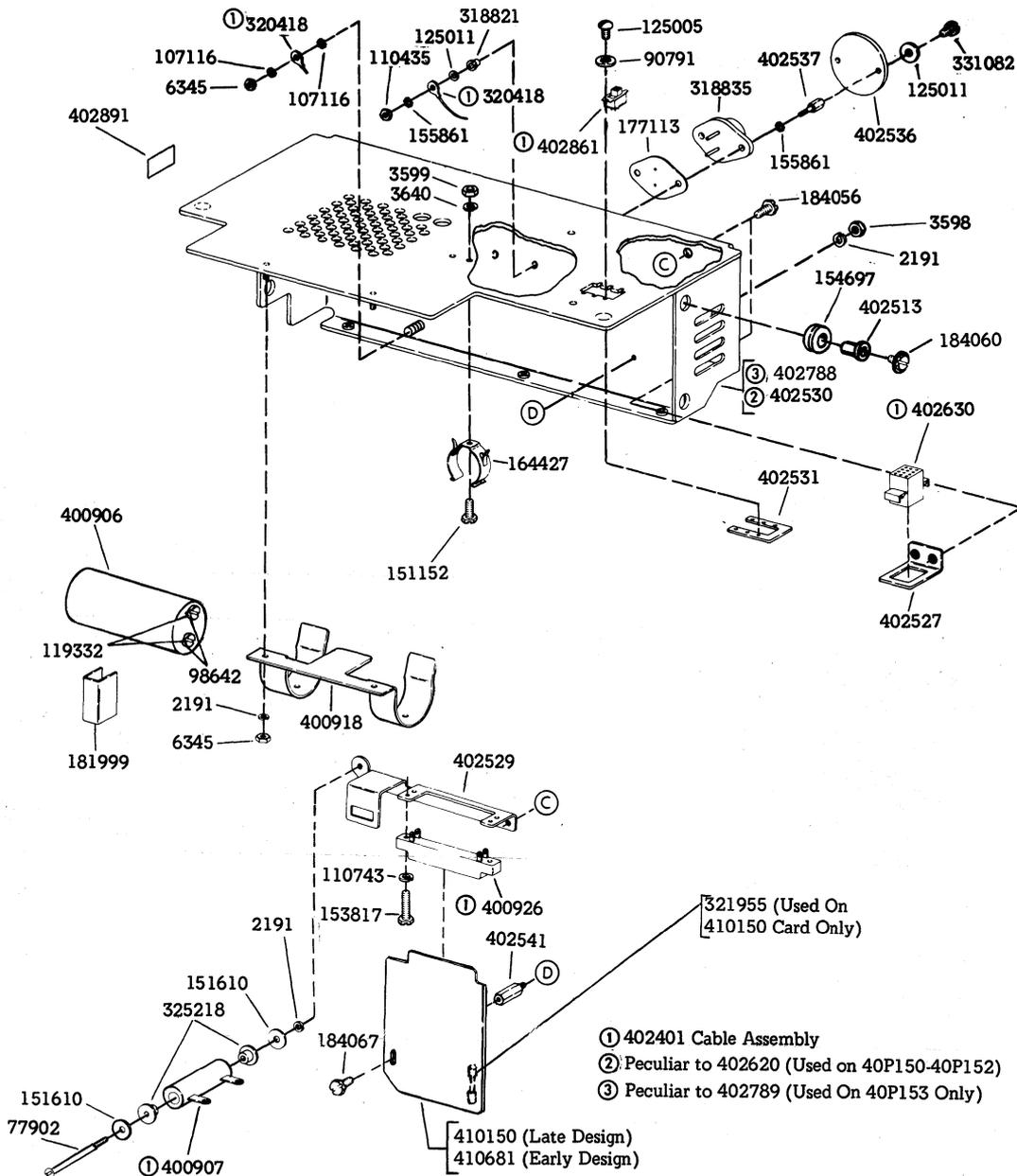


Fig. 43—402620 and 402789 Power Module (Early Design) (Tractor Feed - 80-Column)

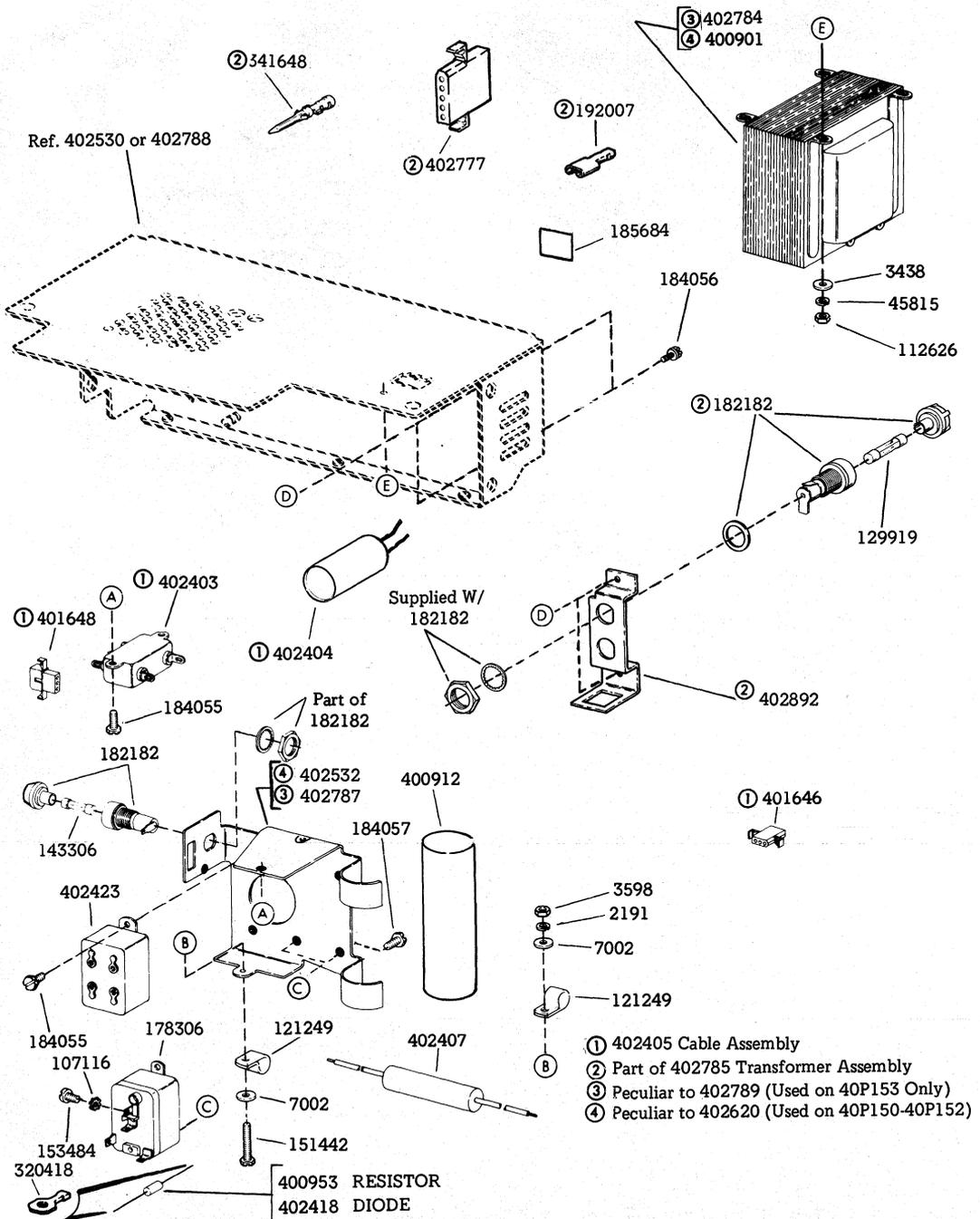


Fig. 43-402620 and 402789 Power Module (Early Design) (Tractor Feed - 80-Column) (Cont.)

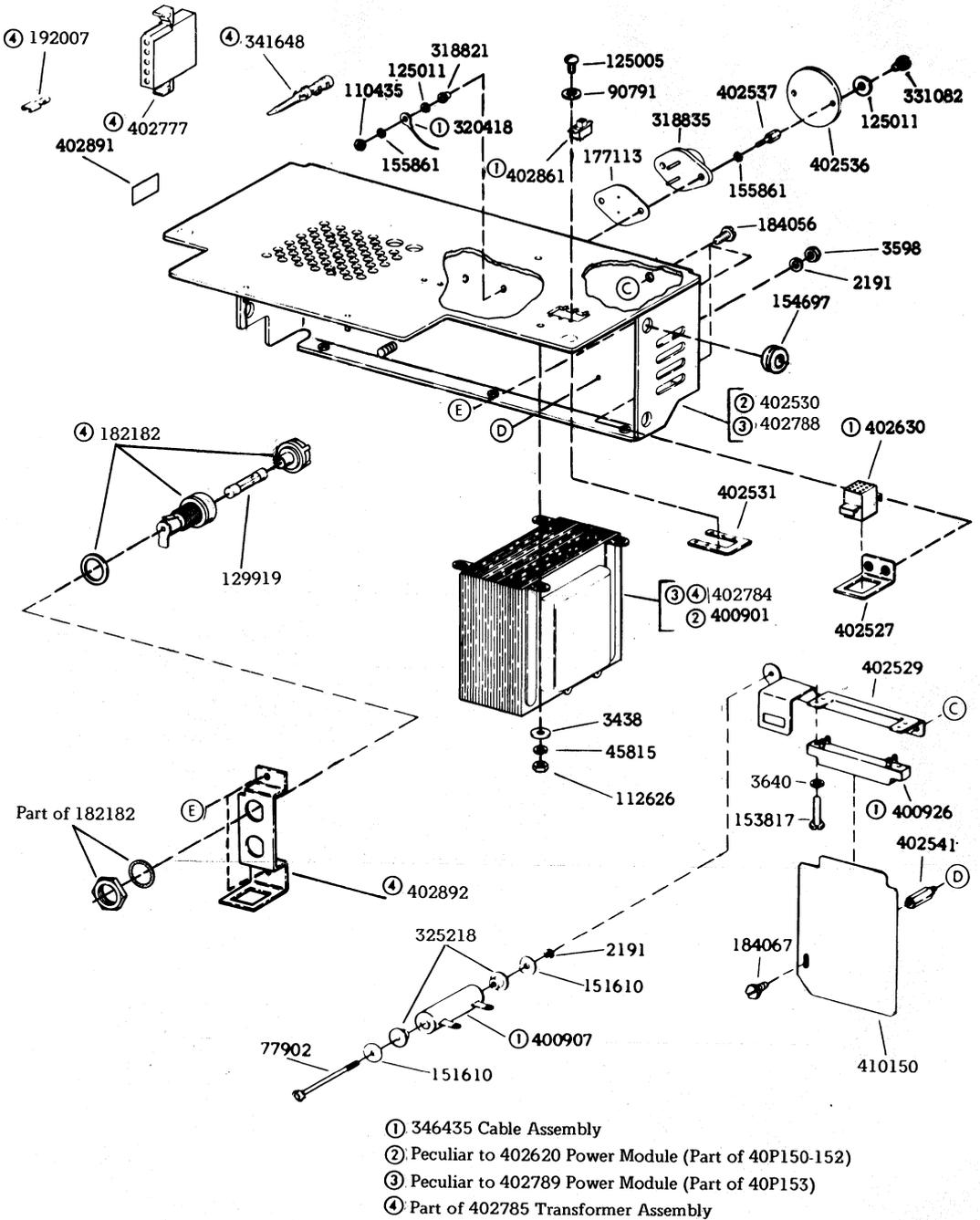


Fig. 44 402620 and 402789 Power Module Assemblies (Late Design) (Tractor Feed - 80-Column)

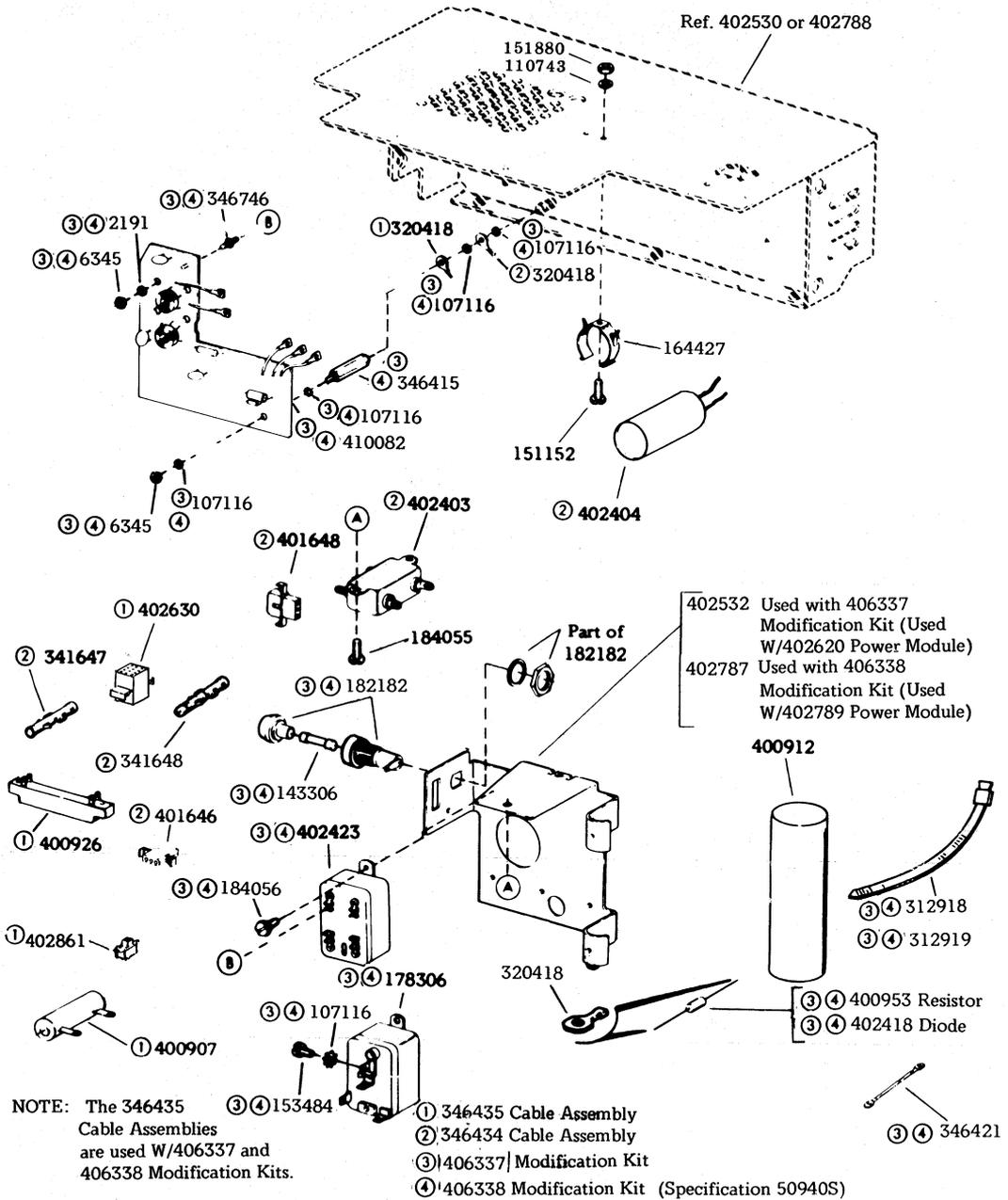


Fig. 44 - 402620 and 402789 Power Module Assemblies (Late Design) (Tractor Feed - 80-Column) (Cont.)





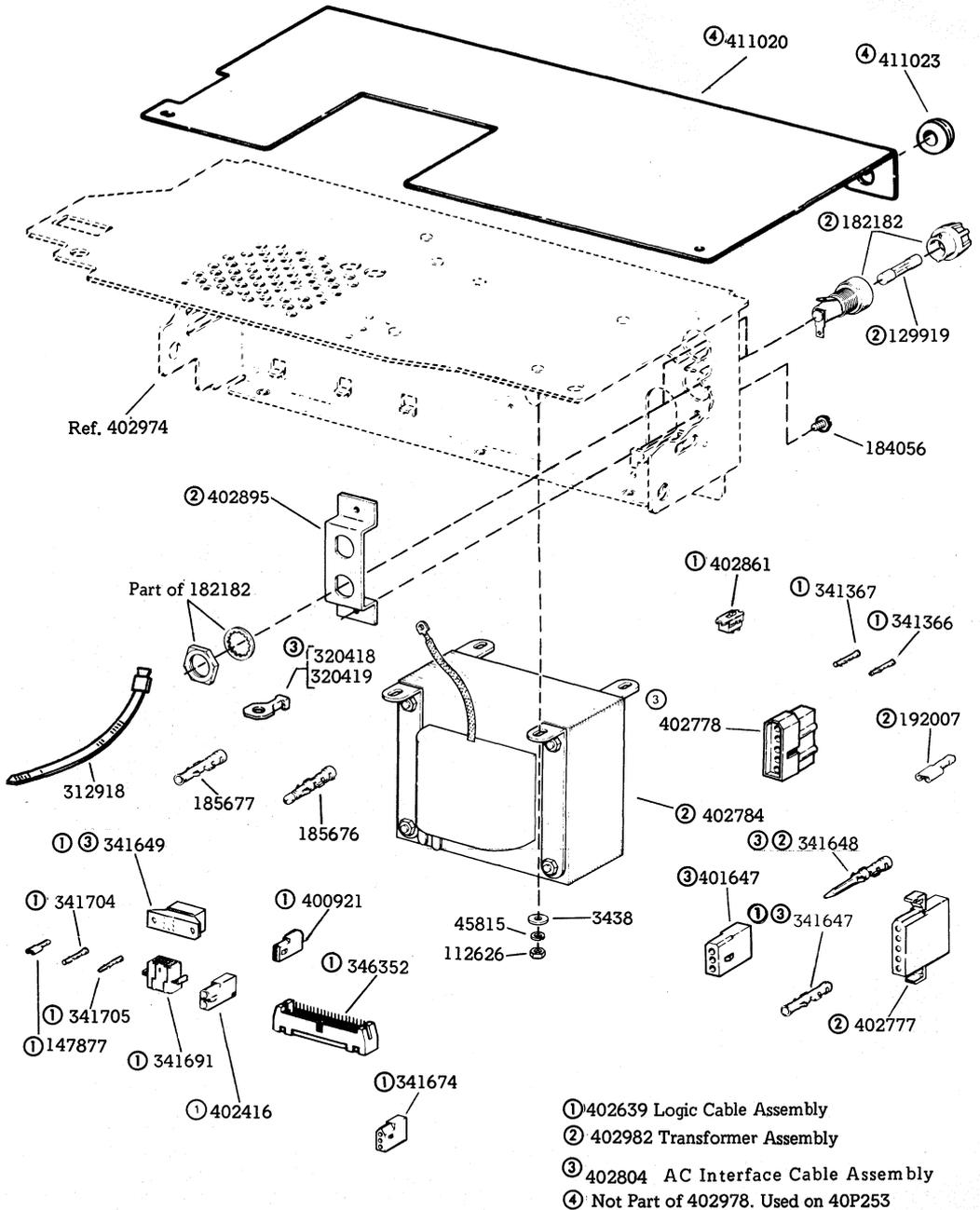


Fig. 46-402978 Power Module (Tractor Feed - 80-Column - 40P154 and Forms Access 40P253) (Cont.)

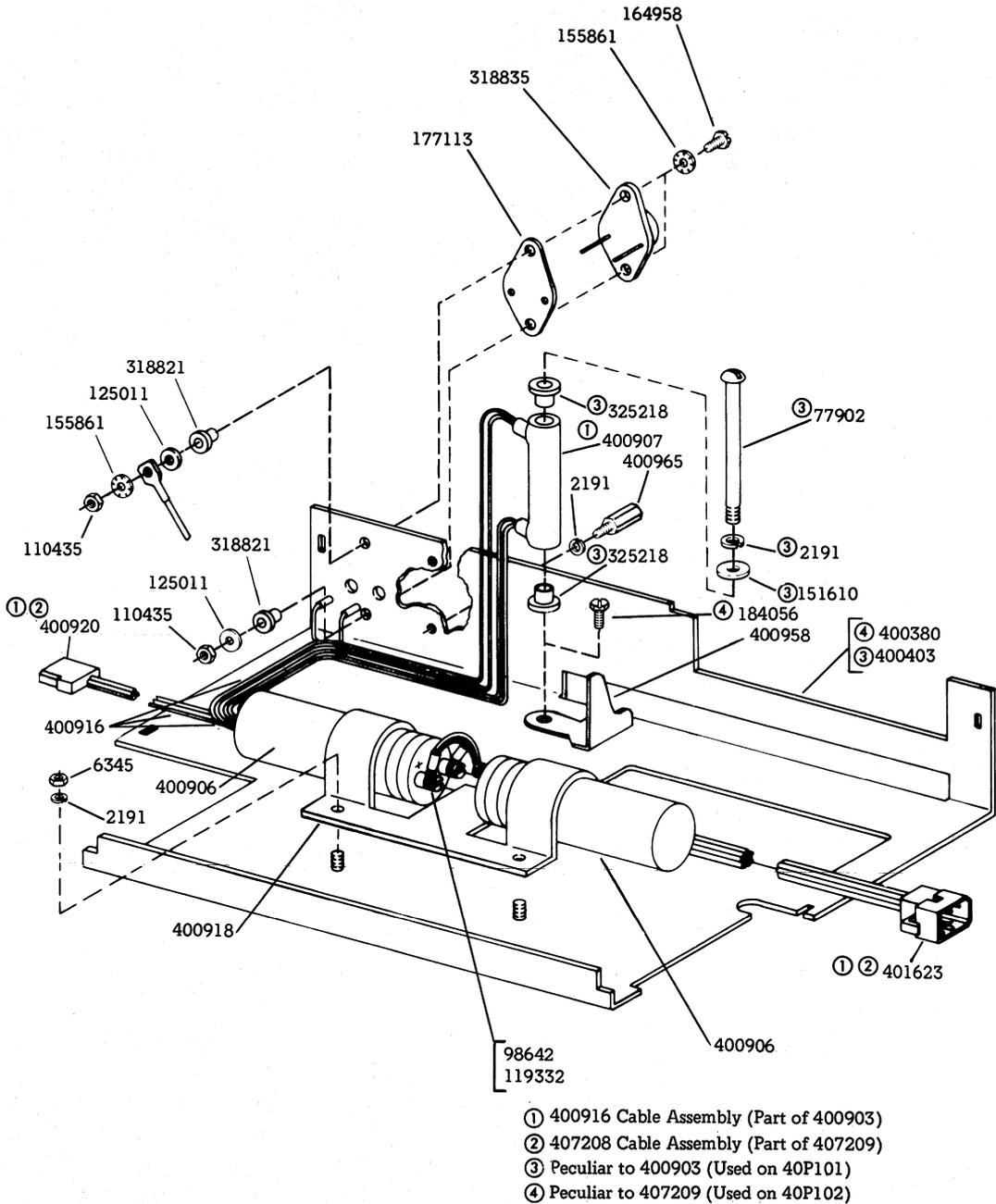


Fig. 47—400903 and 407209 Cover Assembly (Friction Feed Only)

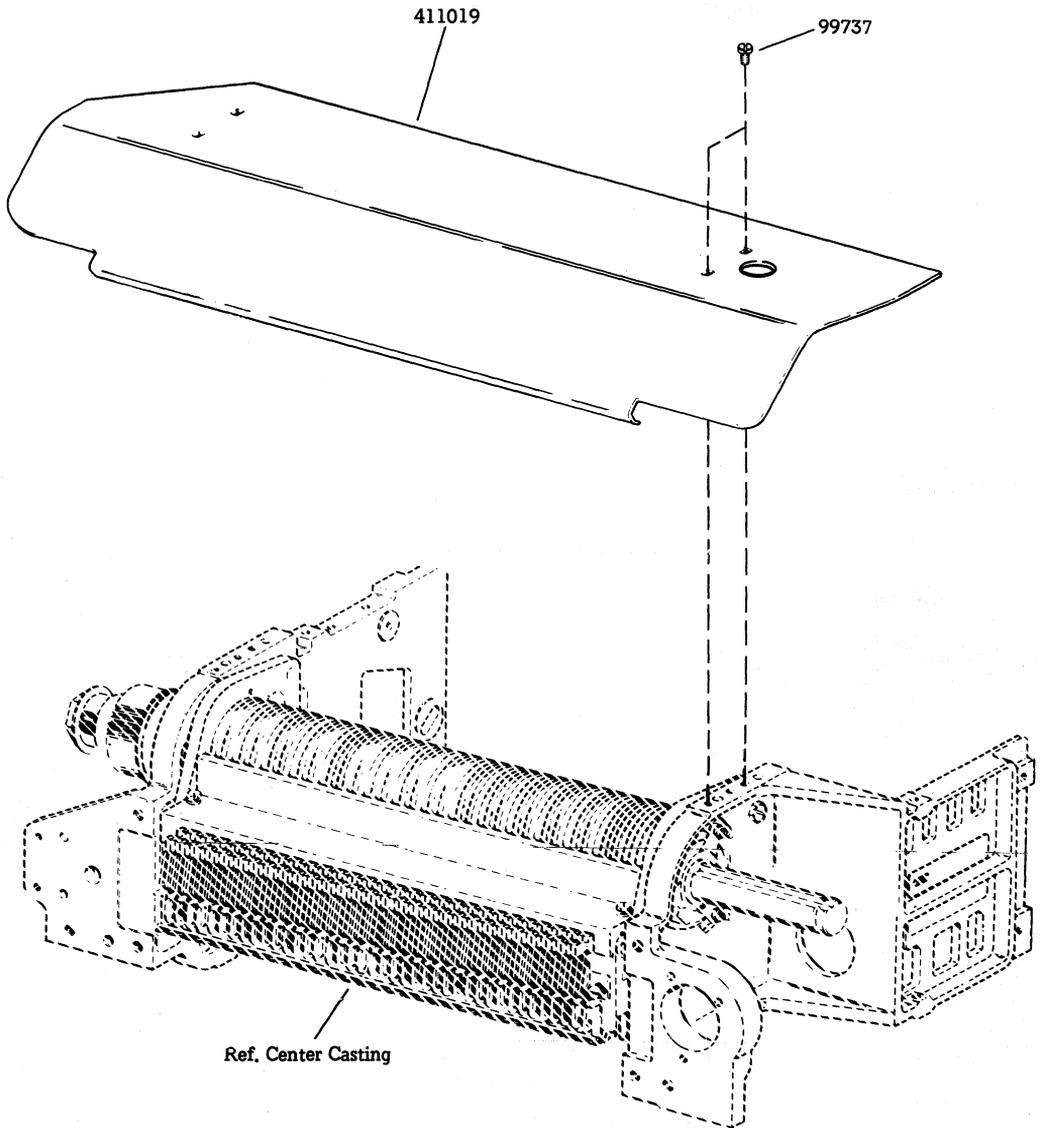


Fig. 48—Top Plate (Forms Access — Tractor Feed)

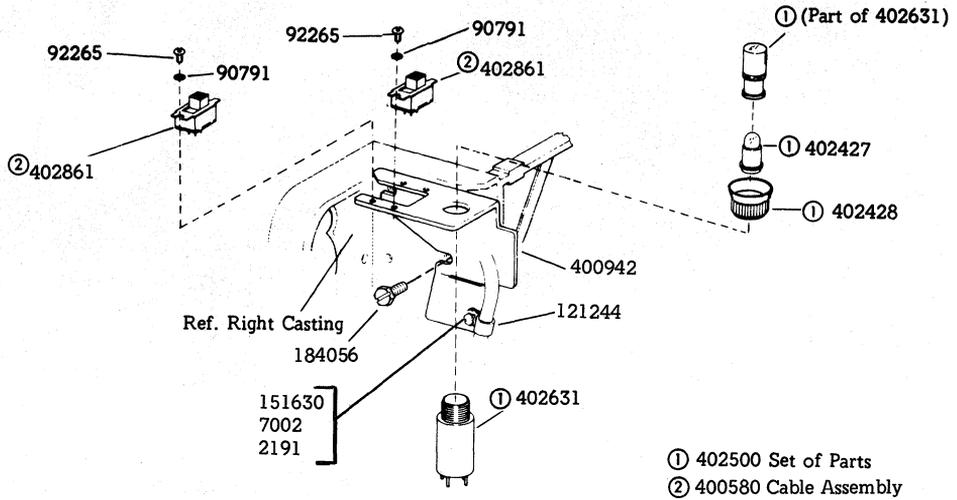


Fig. 49—Switch Assembly (Friction Feed Only)

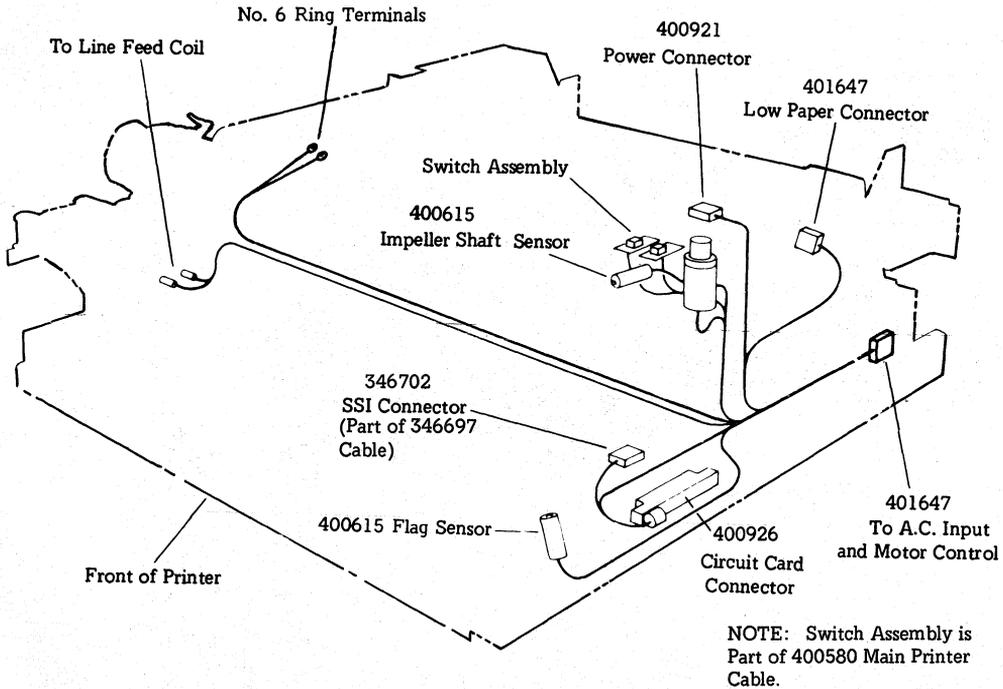
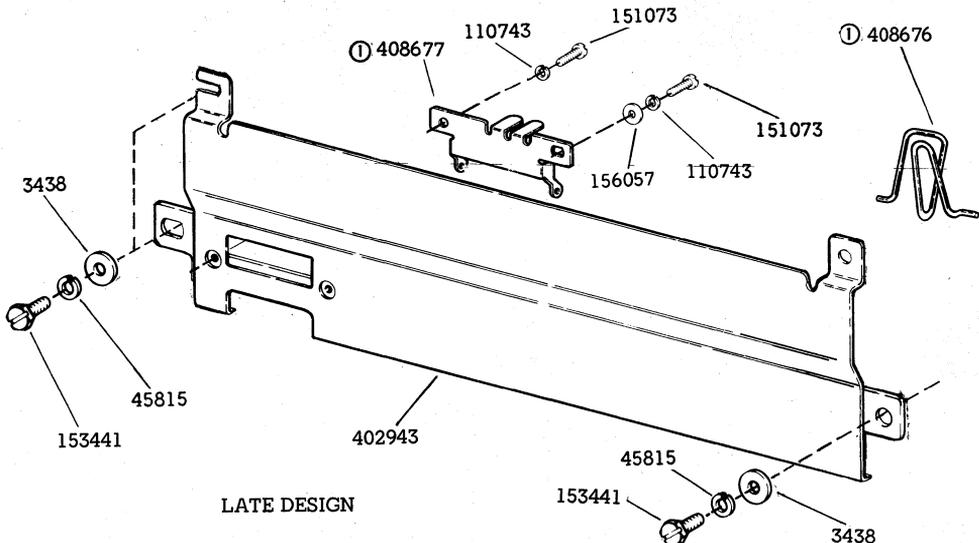
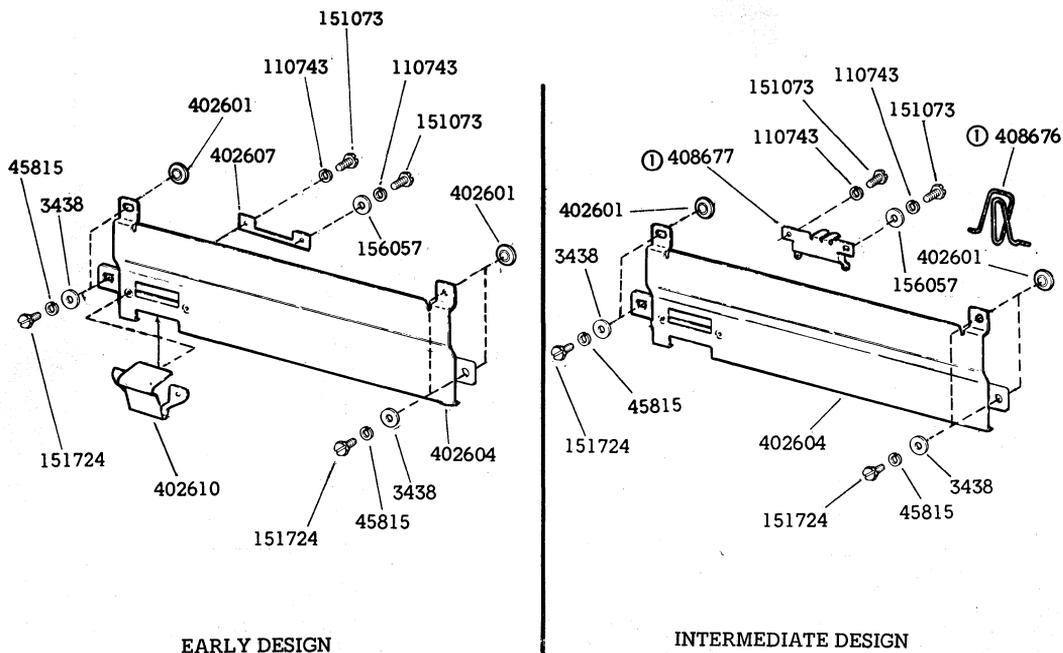


Fig. 50—400580 Main Printer Cable (Friction Feed Only)

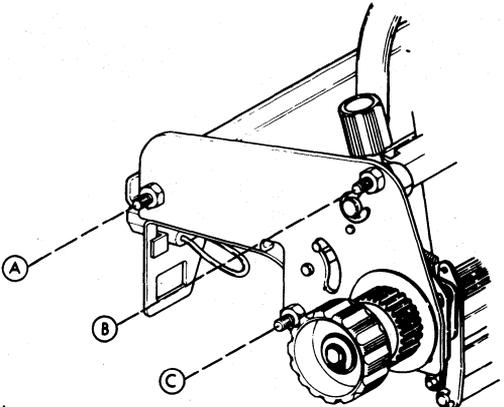


① 408680 Modification Kit (Specification 50882S)

Fig. 51-402623 Rear Guide Assembly (Tractor Feed - 80-Column)

FORM-OUT BELT SELECTION (USOC WES62)

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



- ▼ Six Lines Per Inch
- Eight Lines Per Inch

NOTE: The Dark Blue 402572 Belt is supplied with Tractor Feed Printers.

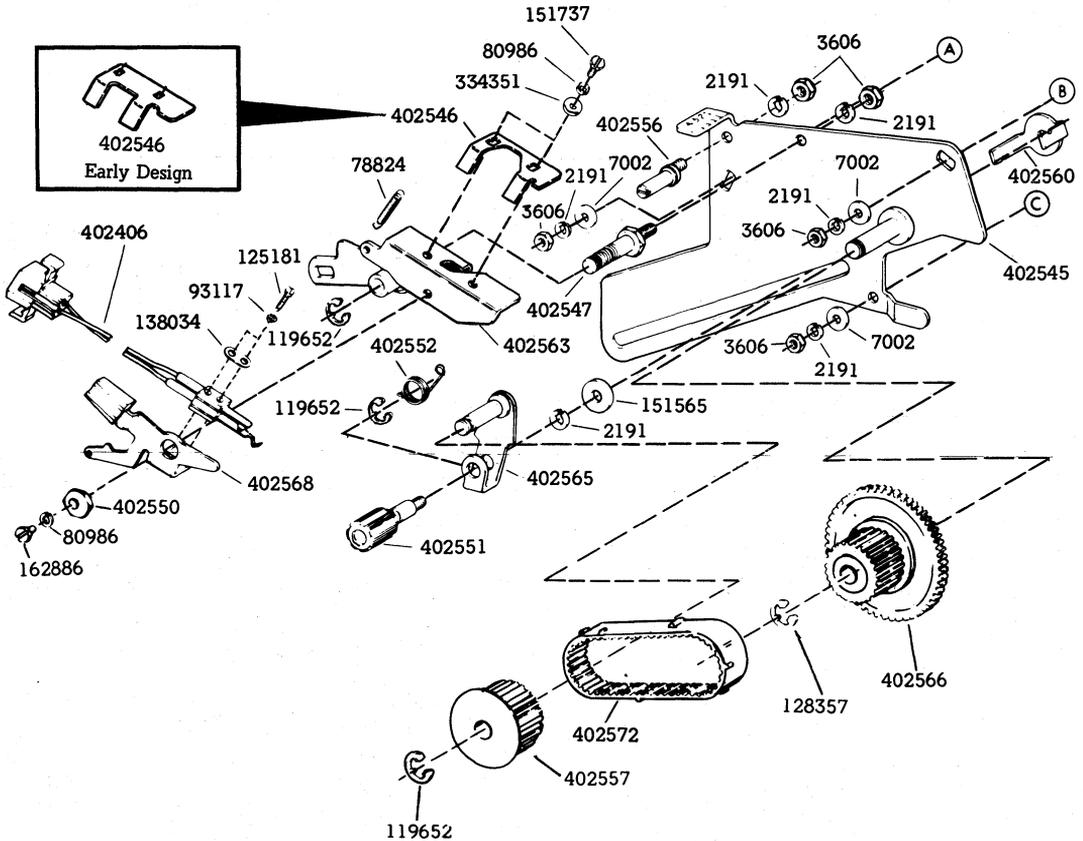


Fig. 52—402570 Form-Out – Assembly (Tractor Feed – 80 and 132-Column)

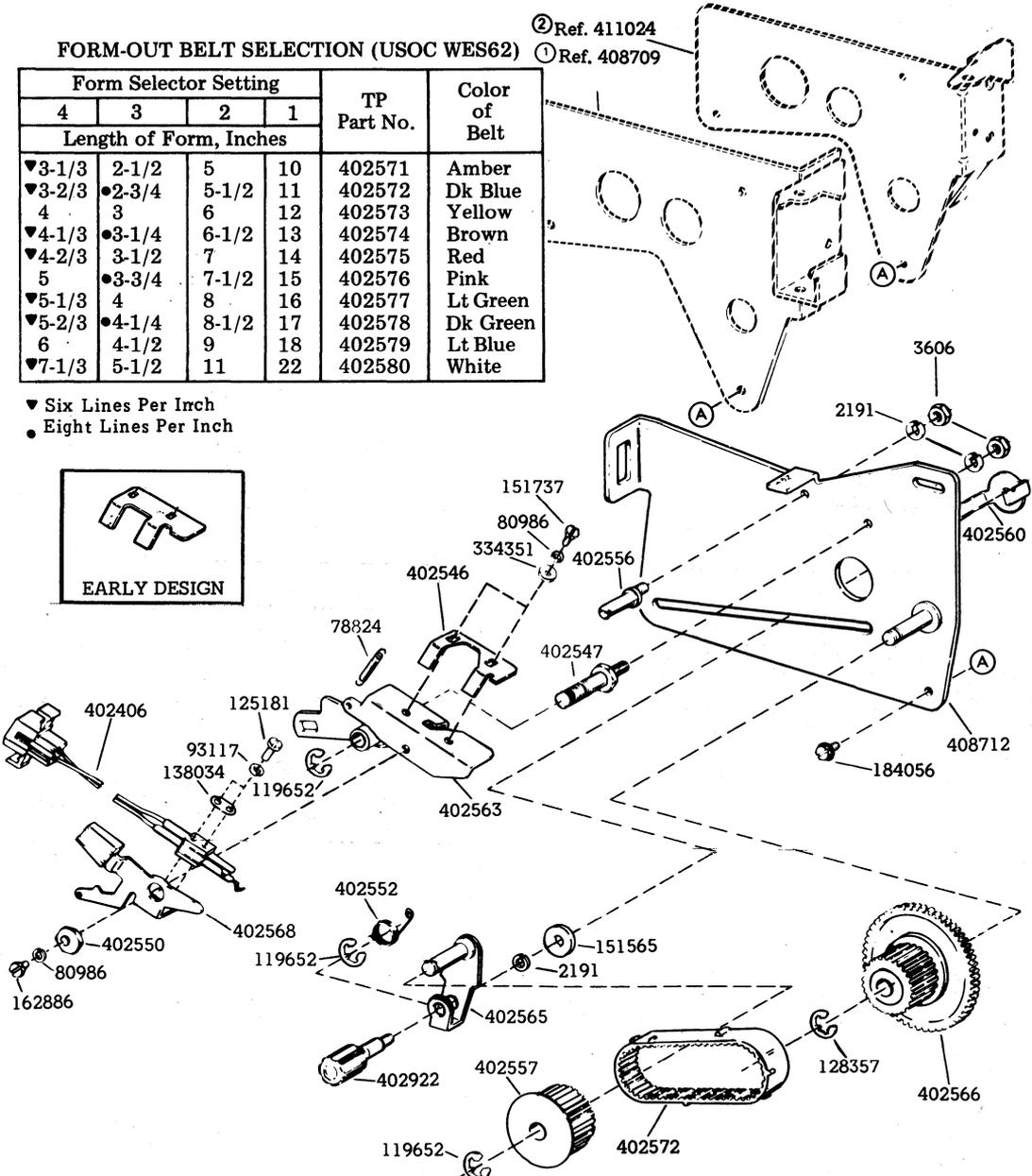
FORM-OUT BELT SELECTION (USOC WES62)

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

▼ Six Lines Per Inch  
 ● Eight Lines Per Inch



② Ref. 411024  
 ① Ref. 408709



① Peculiar to 40P250  
 ② Peculiar to 40P252 thru 40P255

Fig. 53-408763 Form-Out Assembly (Forms Access - Tractor Feed)

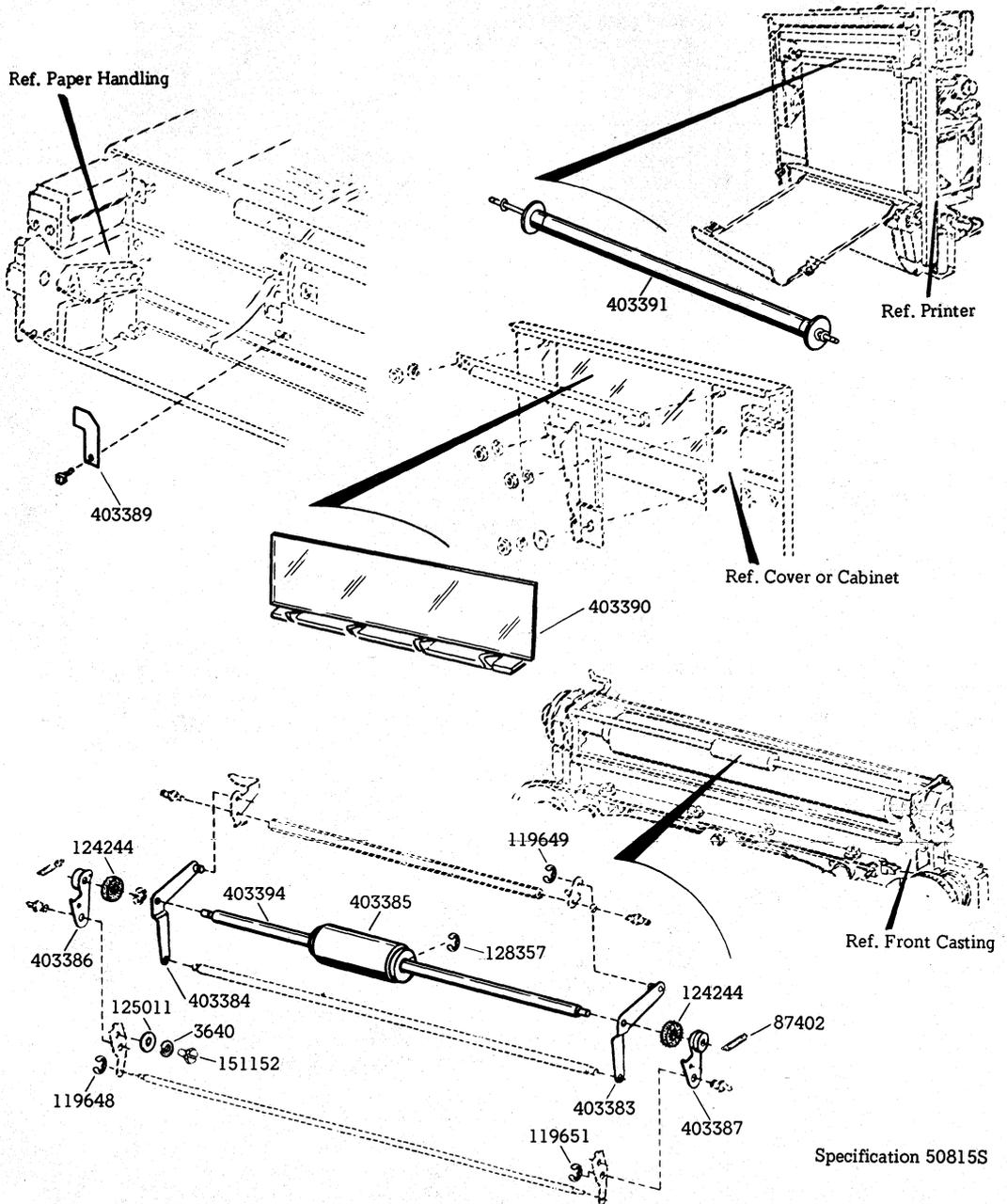


Fig. 54—403380 Modification Kit For Multicopy Roll and Single Copy Fanfold Paper (40P101 Friction Feed Only)

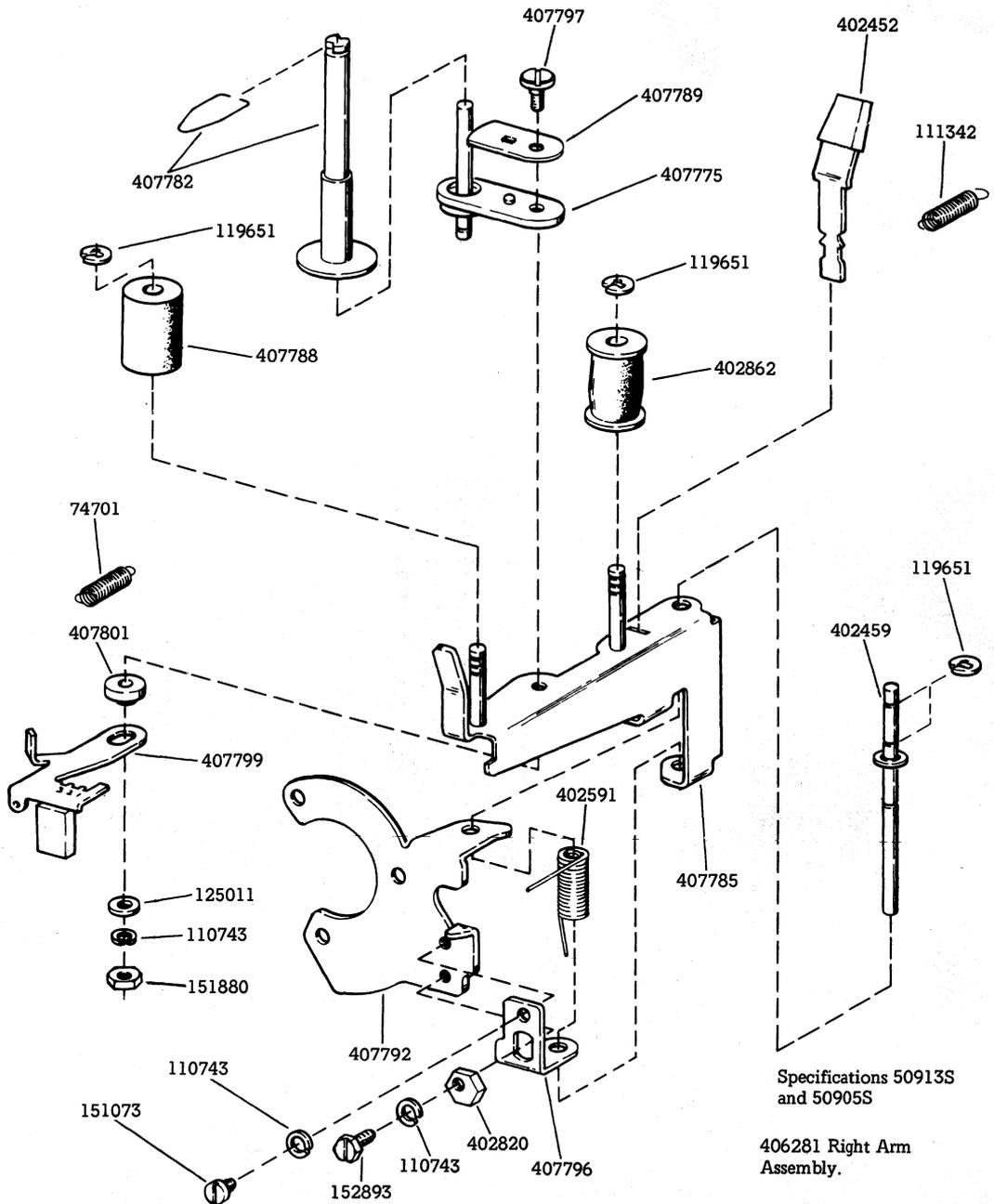
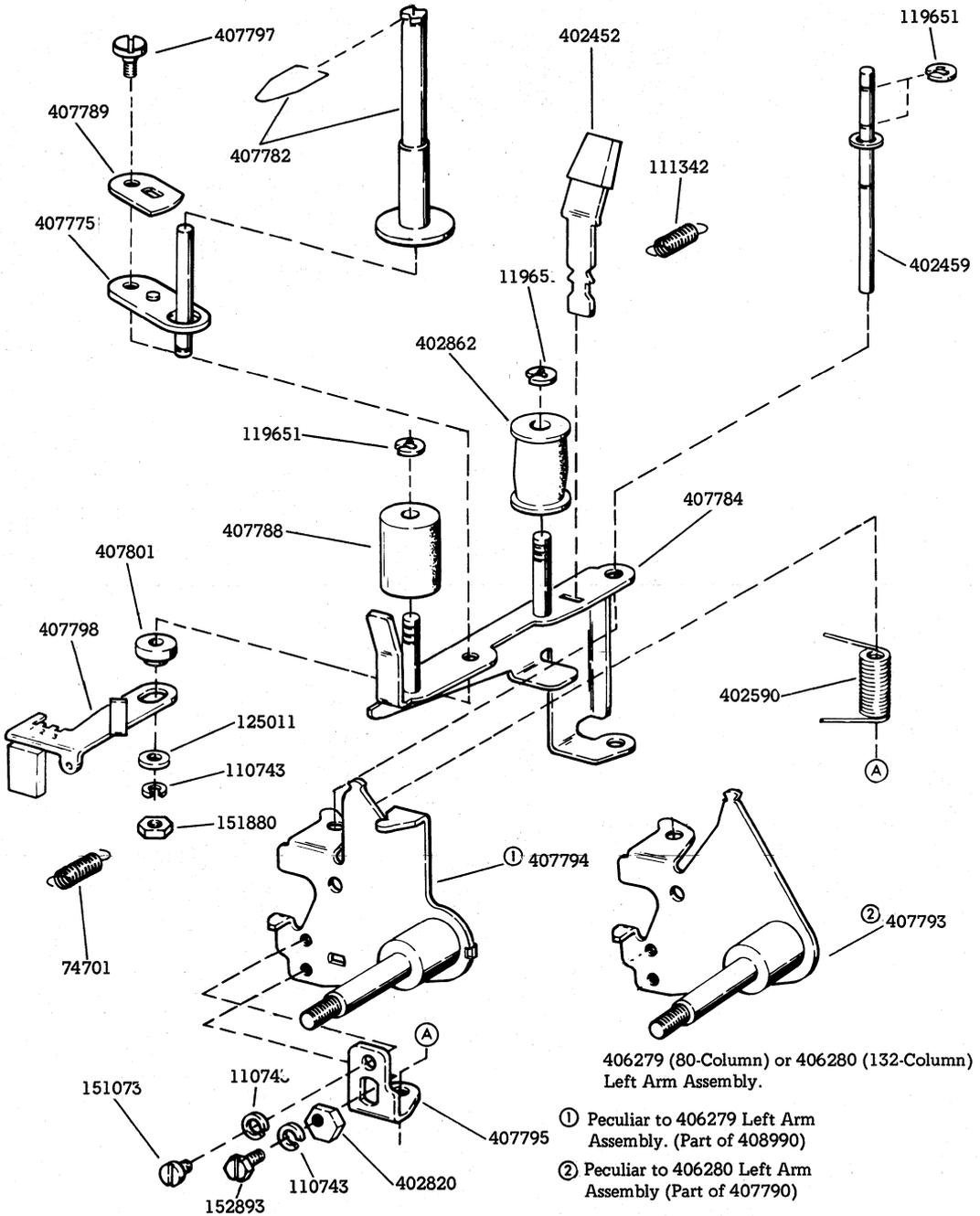


Fig. 55-408990 (80-Column) and 407790 (132-Column) Modification Kits To Provide A Reinking Device For Tractor Feed Printers



406279 (80-Column) or 406280 (132-Column) Left Arm Assembly.

- ① Peculiar to 406279 Left Arm Assembly. (Part of 408990)
- ② Peculiar to 406280 Left Arm Assembly (Part of 407790)

Fig. 55-408990 (80-Column) and 407790 (132-Column) Modification Kits To Provide A Reinking Device For Tractor Feed Printers (Cont.)

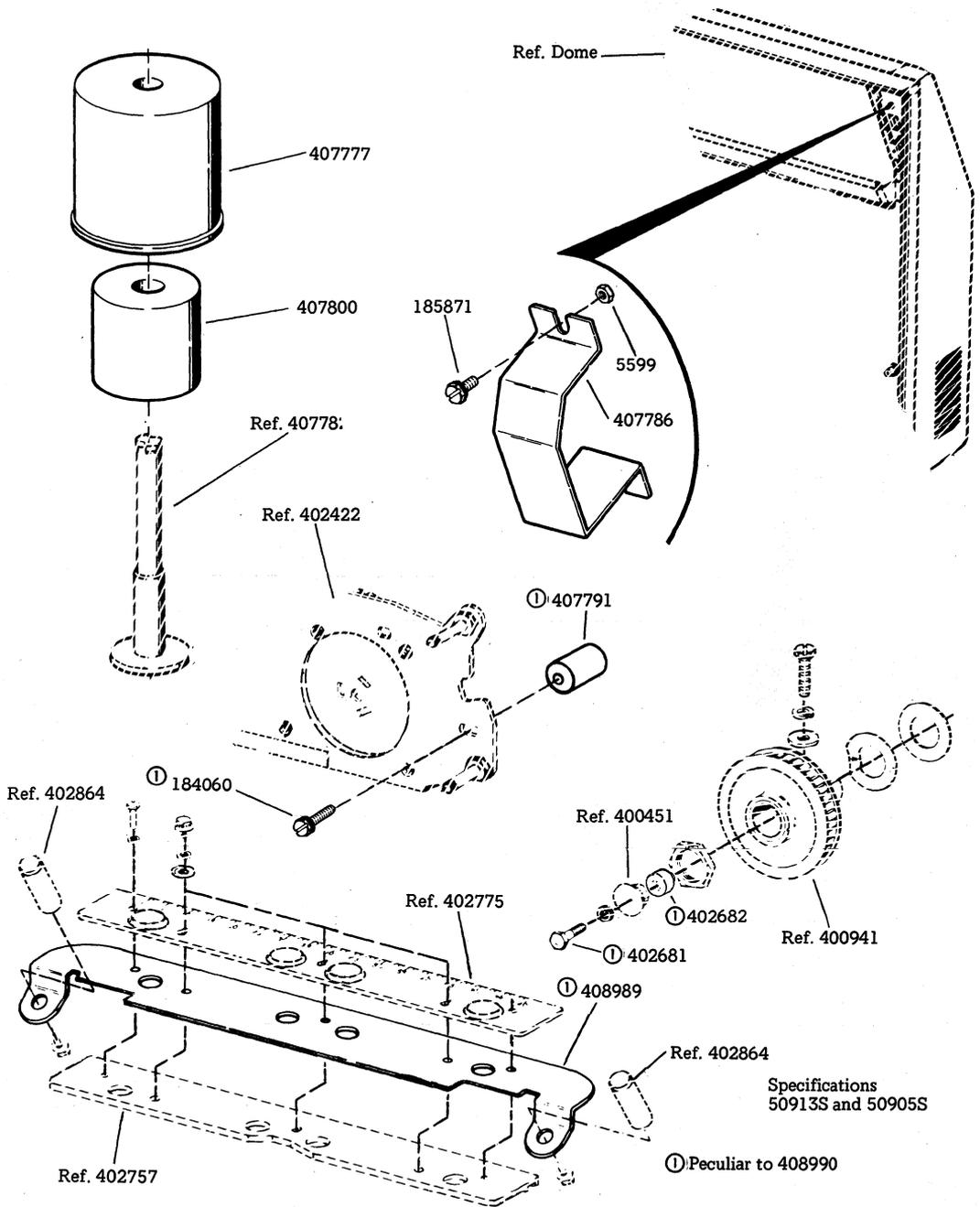


Fig. 55—408990 (80-Column) and 407790 (132-Column) Modification Kits To Provide A Reinking Device For Tractor Feed Printers (Cont.)

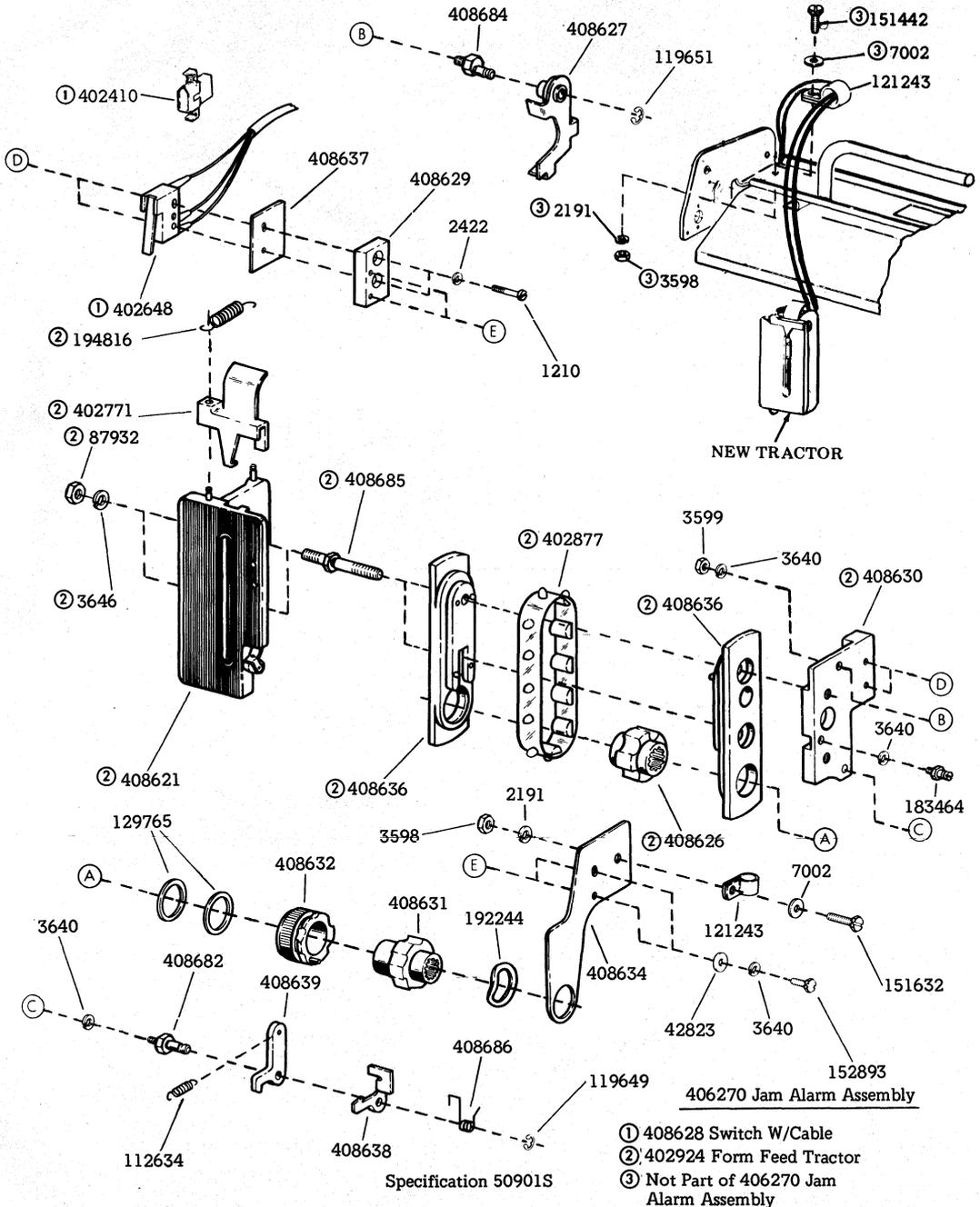
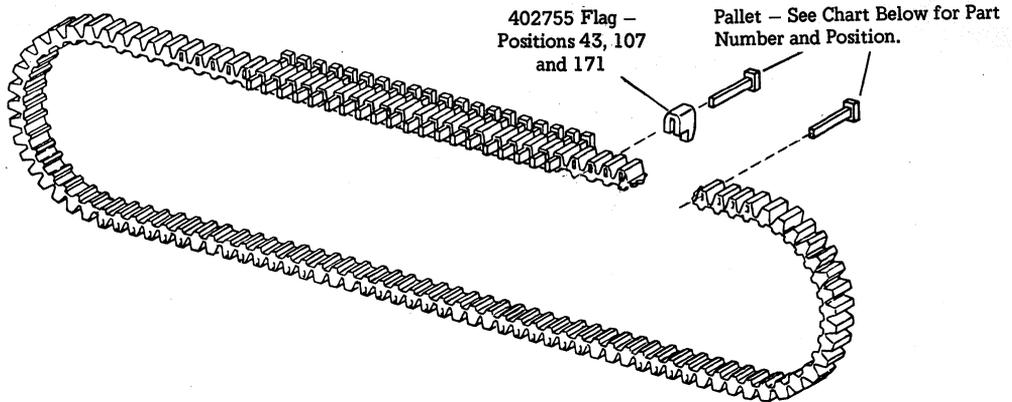
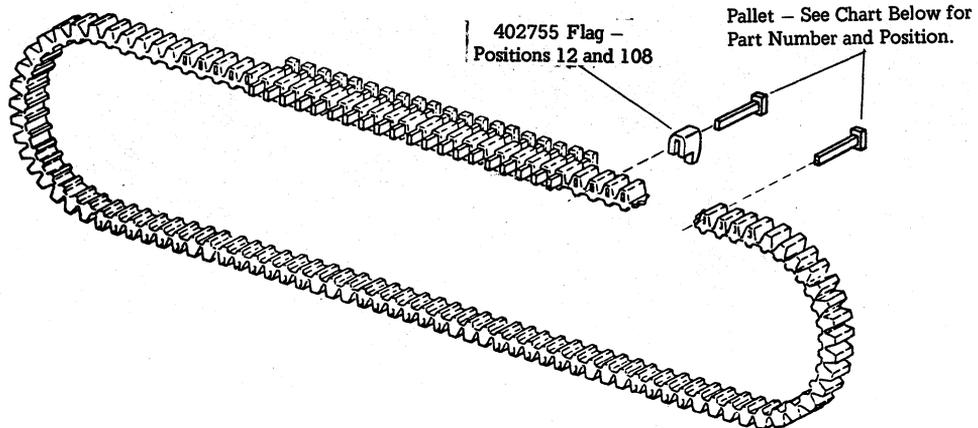


Fig. 56—402920 Modification Kit To Provide Paper Jam Alarm (80 and 132-Column)



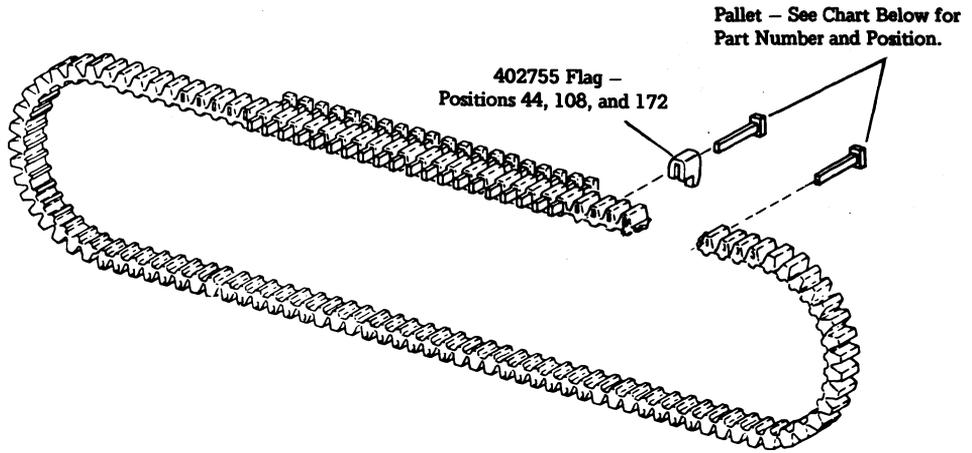
POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.
1,65,129	400650	!	17,81,145	400666	1	33,97,161	400682	A	49,113,177	400698	Q
2,66,130	400651	"	18,82,146	400667	2	34,98,162	400683	B	50,114,178	400699	R
3,67,131	400652	#	19,83,147	400668	3	35,99,163	400684	C	51,115,179	400700	S
4,68,132	400653	\$	20,84,148	400669	4	36,100,164	400685	D	52,116,180	400701	T
5,69,133	400654	%	21,85,149	400670	5	37,101,165	400686	E	53,117,181	400702	U
6,70,134	400655	&	22,86,150	400671	6	38,102,166	400687	F	54,118,182	400703	V
7,71,135	400656	'	23,87,151	400672	7	39,103,167	400688	G	55,119,183	400704	W
8,72,136	400657	(	24,88,152	400673	8	40,104,168	400689	H	56,120,184	400705	X
9,73,137	400658	)	25,89,153	400674	9	41,105,169	400690	I	57,121,185	400706	Y
10,74,138	400659	*	26,90,154	400675	:	42,106,170	400691	J	58,122,186	400707	Z
11,75,139	400660	+	27,91,155	400676	;	43,107,171	400692	K	59,123,187	400708	[
12,76,140	400661	,	28,92,156	400677	<	44,108,172	400693	L	60,124,188	400709	\
13,77,141	400662	-	29,93,157	400678	=	45,109,173	400694	M	61,125,189	400710	]
14,78,142	400663	.	30,94,158	400679	>	46,110,174	400695	N	62,126,190	400711	^
15,79,143	400664	/	31,95,159	400680	?	47,111,175	400696	O	63,127,191	400712	—
16,80,144	400665	0	32,96,160	400681	@	48,112,176	400697	P	64,128,192	400745	≡

Fig. 57—400645AA Carrier and Type Pallet Arrangement (Friction and Tractor Feed – 80-Column) (Monocase)



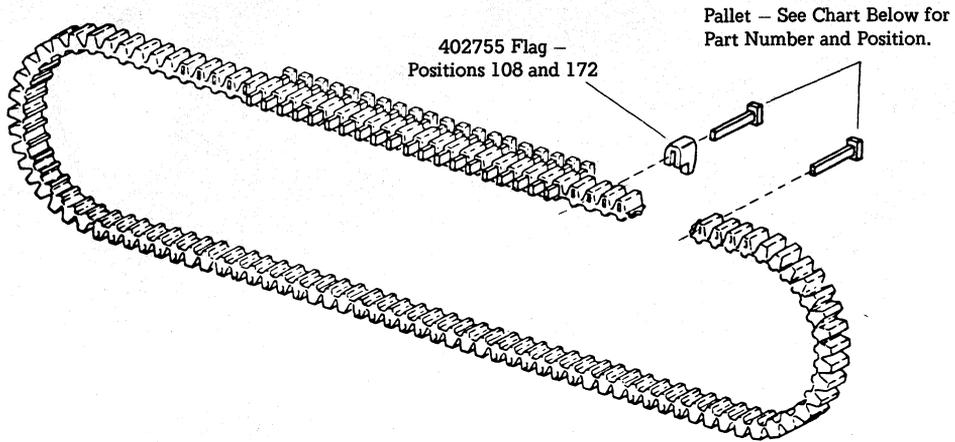
POSITION NUMBER	PART NO.	CHAR.	POSITION NUMBER	PART NO.	CHAR.	POSITION NUMBER	PART NO.	CHAR.	POSITION NUMBER	PART NO.	
1,97	400746	=	25,121	400673	8	49,145	400697	P	73,169	400721	h
2,98	400650	!	26,122	400674	9	50,146	400698	Q	74,170	400722	i
3,99	400651	"	27,123	400675	:	51,147	400699	R	75,171	400723	j
4,100	400652	#	28,124	400676	;	52,148	400700	S	76,172	400724	k
5,101	400653	\$	29,125	400677	<	53,149	400701	T	77,173	400725	l
6,102	400654	%	30,126	400678	=	54,150	400702	U	78,174	400726	m
7,103	400655	&	31,127	400679	>	55,151	400703	V	79,175	400727	n
8,104	400656	/	32,128	400680	?	56,152	400704	W	80,176	400728	o
9,105	400657	(	33,129	400681	@	57,153	400705	X	81,177	400865	p
10,106	400658	)	34,130	400682	A	58,154	400706	Y	82,178	400866	q
11,107	400659	*	35,131	400683	B	59,155	400707	Z	83,179	400731	r
12,108	400660	+	36,132	400684	C	60,156	400708	[	84,180	400732	s
13,109	400661	,	37,133	400685	D	61,157	400709	\	85,181	400733	t
14,110	400662	-	38,134	400686	E	62,158	400710	]	86,182	400734	u
15,111	400663	.	39,135	400687	F	63,159	400711	^	87,183	400735	v
16,112	400664	/	40,136	400688	G	64,160	400712	—	88,184	400736	w
17,113	400665	0	41,137	400689	H	65,161	400713	`	89,185	400737	x
18,114	400666	1	42,138	400690	I	66,162	400714	a	90,186	400867	y
19,115	400667	2	43,139	400691	J	67,163	400715	b	91,187	400739	z
20,116	400668	3	44,140	400692	K	68,164	400716	c	92,188	400740	{
21,117	400669	4	45,141	400693	L	69,165	400717	d	93,189	400741	:
22,118	400670	5	46,142	400694	M	70,166	400718	e	94,190	400742	}
23,119	400671	6	47,143	400695	N	71,167	400719	f	95,191	400743	~
24,120	400672	7	48,144	400696	O	72,168	400864	g	96,192	—	—

Fig. 58—400629AB Carrier and Type Pallet Arrangement (Friction and Tractor Feed - 80-Column) (Up/Low)



POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.
1,65,129	400747	≡ ≡ ≡	17,81,145	400665	∅	33,97,161	400773	⊕	49,113,177	400697	P
2,66,130	400762	→	18,82,146	400666	1	34,98,162	400682	A	50,114,178	400698	Q
3,67,131	400651	“	19,83,147	400667	2	35,99,163	400683	B	51,115,179	400699	R
4,68,132	400652	#	20,84,148	400668	3	36,100,164	400684	C	52,116,180	400700	S
5,69,133	400653	\$	21,85,149	400669	4	37,101,165	400685	D	53,117,181	400701	T
6,70,134	400654	%	22,86,150	400670	5	38,102,166	400686	E	54,118,182	400702	U
7,71,135	400767	\	23,87,151	400671	6	39,103,167	400687	F	55,119,183	400703	V
8,72,136	400768	/	24,88,152	400672	7	40,104,168	400688	G	56,120,184	400704	W
9,73,137	400657	(	25,89,153	400673	8	41,105,169	400689	H	57,121,185	400705	X
10,74,138	400658	)	26,90,154	400674	9	42,106,170	400690	I	58,122,186	400706	Y
11,75,139	400659	*	27,91,155	400675	:	43,107,171	400691	J	59,123,187	400707	Z
12,76,140	400660	+	28,92,156	400676	;	44,108,172	400692	K	60,124,188	400771	Ⓚ
13,77,141	400661	,	29,93,157	400677	<	45,109,173	400693	L	61,125,189	400772	Ⓛ
14,78,142	400662	-	30,94,158	400678	=	46,110,174	400694	M	62,126,190	400770	Ⓜ
15,79,143	400663	.	31,95,159	400679	>	47,111,175	400695	N	63,127,191	400711	Ⓝ
16,80,144	400664	/	32,96,160	400680	?	48,112,176	400696	O	64,128,192	400712	—

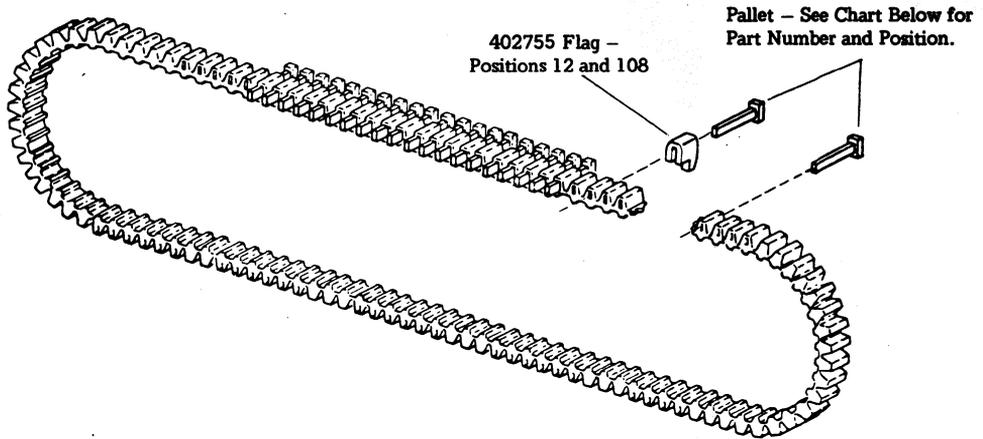
Fig. 59—400774AC Carrier and Type Pallet Arrangement (Friction and Tractor Feed — 80-Column)  
(Weather Monocase)



NOTE: Positions 161 through 192 have  $\frac{A}{d}$  pallets.

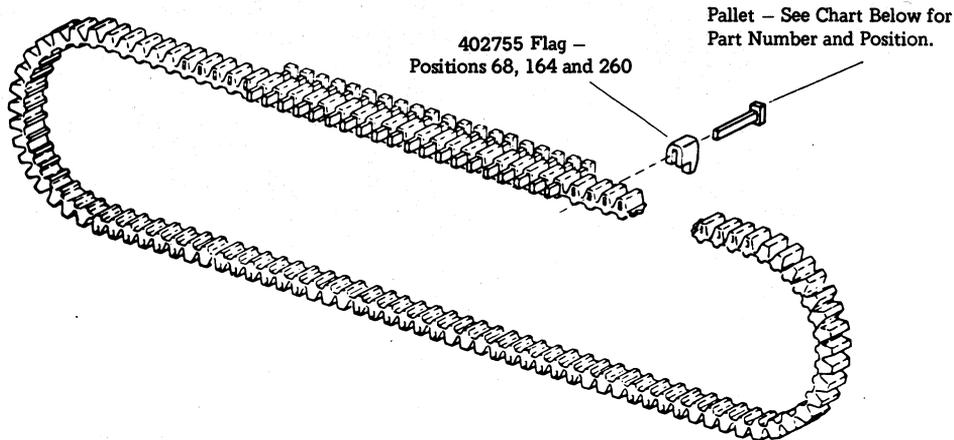
POSITION NUMBER	PART NO.	CHAR.									
1,65	400748	≡	25,89	400673	8	49,113	400697	P	137	400797	≡
2,66	400650	!	26,90	400674	9	50,114	400698	Q	138	400798	≡
3,67	400651	“	27,91	400675	:	51,115	400699	R	139	400799	\
4,68	400652	#	28,92	400676	;	52,116	400700	S	140	400800	/
5,69	400653	\$	29,93	400677	<	53,117	400701	T	141	400801	→
6,70	400654	%	30,94	400678	=	54,118	400702	U	142	400802	←
7,71	400655	&	31,95	400679	>	55,119	400703	V	143	400803	↑
8,72	400656	/	32,96	400680	?	56,120	400704	W	144	400804	↓
9,73	400657	(	33,97	400681	@	57,121	400705	X	145	400805	↘
10,74	400658	)	34,98	400682	A	58,122	400706	Y	146	400806	↗
11,75	400659	*	35,99	400683	B	59,123	400707	Z	147	400807	↖
12,76	400660	+	36,100	400684	C	60,124	400708	[	148	400808	↙
13,77	400661	,	37,101	400685	D	61,125	400709	\	149	400809	↘
14,78	400662	-	38,102	400686	E	62,126	400710	]	150	400810	.
15,79	400663	.	39,103	400687	F	63,127	400711	^	151	400811	.
16,80	400664	/	40,104	400688	G	64,128	400712	—	152	400812	.
17,81	400665	∅	41,105	400689	H	129	400789	Γ	153	400813	—
18,82	400666	1	42,106	400690	I	130	400790	⌒	154	400814	⊥
19,83	400667	2	43,107	400691	J	131	400791	⌒	155	400815	⊥
20,84	400668	3	44,108	400692	K	132	400792	⌒	156	400816	+
21,85	400669	4	45,109	400693	L	133	400793	≡	157	400817	
22,86	400670	5	46,110	400694	M	134	400794	≡	158	400818	
23,87	400671	6	47,111	400695	N	135	400795	≡	159	400819	
24,88	400672	7	48,112	400696	O	136	400796	≡	160		

Fig. 60-400775AD Carrier and Type Pallet Arrangement (Friction and Tractor Feed - 80-Column)  
(Line Drawing Monocase)



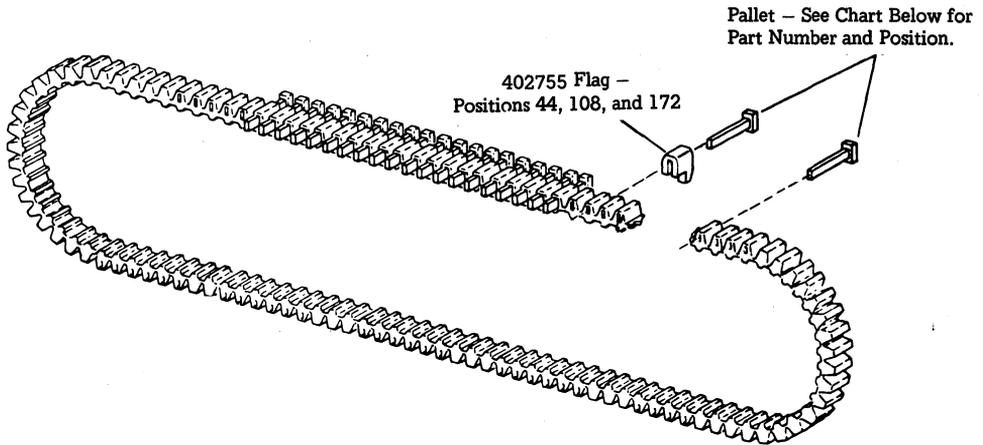
POSITION NUMBER	PART NO.	CHAR.									
1,97	400750	≡	25,121	400673	8	49,145	400697	P	73,169	400721	h
2,98	400820	1/8	26,122	400674	9	50,146	400698	Q	74,170	400722	i
3,99	400651	“	27,123	400675	:	51,147	400699	R	75,171	400723	j
4,100	400652	#	28,124	400676	;	52,148	400700	S	76,172	400724	k
5,101	400653	\$	29,125	400677	<	53,149	400701	T	77,173	400725	l
6,102	400654	%	30,126	400678	=	54,150	400702	U	78,174	400726	m
7,103	400655	&	31,127	400679	>	55,151	400703	V	79,175	400727	n
8,104	400656	∕	32,128	400680	?	56,152	400704	W	80,176	400728	o
9,105	400657	(	33,129	400821	1/4	57,153	400705	X	81,177	400865	p
10,106	400658	)	34,130	400682	A	58,154	400706	Y	82,178	400866	q
11,107	400823	1/2	35,131	400683	B	59,155	400707	Z	83,179	400731	r
12,108	400660	+	36,132	400684	C	60,156	400826	7/8	84,180	400732	s
13,109	400661	,	37,133	400685	D	61,157	400709	\	85,181	400733	t
14,110	400662	-	38,134	400686	E	62,158	400825	3/4	86,182	400734	u
15,111	400663	.	39,135	400687	F	63,159	400822	3/8	87,183	400735	v
16,112	400664	/	40,136	400688	G	64,160	400824	5/8	88,184	400736	w
17,113	400665	∅	41,137	400689	H	65,161	400713	∖	89,185	400737	x
18,114	400666	1	42,138	400690	I	66,162	400714	a	90,186	400867	y
19,115	400667	2	43,139	400691	J	67,163	400715	b	91,187	400739	z
20,116	400668	3	44,140	400692	K	68,164	400716	c	92,188	400740	{
21,117	400669	4	45,141	400693	L	69,165	400717	d	93,189	400741	:
22,118	400670	5	46,142	400694	M	70,166	400718	e	94,190	400742	}
23,119	400671	6	47,143	400695	N	71,167	400719	f	95,191	400743	~
24,120	400672	7	48,144	400696	O	72,168	400864	g	96,192	—	—

Fig. 61—400776AF Carrier and Type Pallet Arrangement (Friction and Tractor Feed - 80-Column)  
(Fractions in One-Eighths - Up/Low)



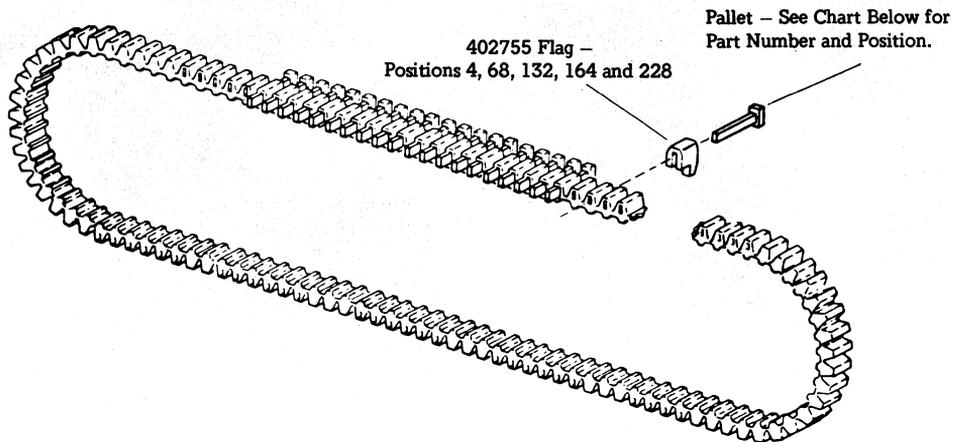
POSITION NUMBER	PART NUMBER	CHAR	POSITION NUMBER	PART NUMBER	CHAR	POSITION NUMBER	PART NUMBER	CHAR
1,97,193	400751	≡	33,129,225	400681	@	65,161,257	400713	\
2,98,194	400650	!	34,130,226	400682	A	66,162,258	400714	a
3,99,195	400651	"	35,131,227	400683	B	67,163,259	400715	b
4,100,196	400652	#	36,132,228	400684	C	68,164,260	400716	c
5,101,197	400653	\$	37,133,229	400685	D	69,165,261	400717	d
6,102,198	400654	%	38,134,230	400686	E	70,166,262	400718	e
7,103,199	400655	&	39,135,231	400687	F	71,167,263	400719	f
8,104,200	400656	/	40,136,232	400688	G	72,168,264	400864	g
9,105,201	400657	(	41,137,233	400689	H	73,169,265	400721	h
10,106,202	400658	)	42,138,234	400690	I	74,170,266	400722	i
11,107,203	400659	*	43,139,235	400691	J	75,171,267	400723	j
12,108,204	400660	+	44,140,236	400692	K	76,172,268	400724	k
13,109,205	400661	,	45,141,237	400693	L	77,173,269	400725	l
14,110,206	400662	-	46,142,238	400694	M	78,174,270	400726	m
15,111,207	400663	.	47,143,239	400695	N	79,175,271	400727	n
16,112,208	400664	/	48,144,240	400696	O	80,176,272	400728	o
17,113,209	400665	Ø	49,145,241	400697	P	81,177,273	400865	p
18,114,210	400666	1	50,146,242	400698	Q	82,178,274	400866	q
19,115,211	400667	2	51,147,243	400699	R	83,179,275	400731	r
20,116,212	400668	3	52,148,244	400700	S	84,180,276	400732	s
21,117,213	400669	4	53,149,245	400701	T	85,181,277	400733	t
22,118,214	400670	5	54,150,246	400702	U	86,182,278	400734	u
23,119,215	400671	6	55,151,247	400703	V	87,183,279	400735	v
24,120,216	400672	7	56,152,248	400704	W	88,184,280	400736	w
25,121,217	400673	8	57,153,249	400705	X	89,185,281	400737	x
26,122,218	400674	9	58,154,250	400706	Y	90,186,282	400867	y
27,123,219	400675	:	59,155,251	400707	Z	91,187,283	400739	z
28,124,220	400676	;	60,156,252	400708	[	92,188,284	400740	{
29,125,221	400677	<	61,157,253	400709	\	93,189,285	400741	:
30,126,222	400678	=	62,158,254	400710	]	94,190,286	400742	}
31,127,223	400679	>	63,159,255	400711	^	95,191,287	400743	~
32,128,224	400680	?	64,160,256	400712	-	96,192,288	—	—

Fig. 62—400777AG Carrier and Type Pallet Arrangement (Tractor Feed - 132-Column) (Up/Low)



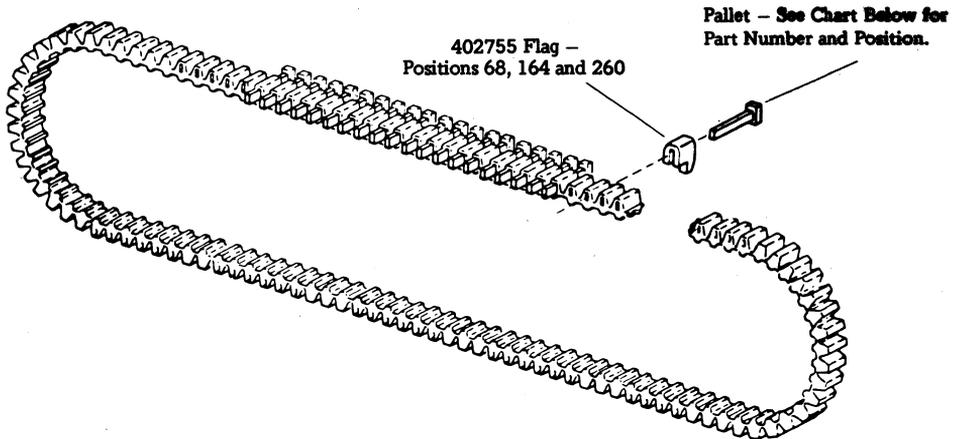
POSITION NUMBER	PART NO.	CHAR.									
1,65,129	400752	∞	17,81,145	400857	∅	33,97,161	400851	1/4	49,113,177	196755	P
2,66,130	400850	1/8	18,82,146	400858	1	34,98,162	196740	A	50,114,178	196756	Q
3,67,131	400859	"	19,83,147	196766	2	35,99,163	196741	B	51,115,179	196757	R
4,68,132	400652	#	20,84,148	196767	3	36,100,164	196742	C	52,116,180	196758	S
5,69,133	196778	\$	21,85,149	196768	4	37,101,165	196743	D	53,117,181	196759	T
6,70,134	400654	%	22,86,150	196769	5	38,102,166	196744	E	54,118,182	196760	U
7,71,135	196774	&	23,87,151	196770	6	39,103,167	196745	F	55,119,183	196761	V
8,72,136	400656	'	24,88,152	196771	7	40,104,168	196746	G	56,120,184	196762	W
9,73,137	400657	(	25,89,153	196772	8	41,105,169	196747	H	57,121,185	196763	X
10,74,138	400658	)	26,90,154	196773	9	42,106,170	196748	I	58,122,186	196764	Y
11,75,139	400853	1/2	27,91,155	400675	:	43,107,171	196749	J	59,123,187	196765	Z
12,76,140	400660	+	28,92,156	400676	;	44,108,172	196750	K	60,124,188	400856	7/8
13,77,141	400661	,	29,93,157	400677	<	45,109,173	196751	L	61,125,189	400709	\
14,78,142	400662	-	30,94,158	400678	=	46,110,174	196752	M	62,126,190	400855	3/4
15,79,143	400663	.	31,95,159	400679	>	47,111,175	196753	N	63,127,191	400852	3/8
16,80,144	400861	/	32,96,160	400680	?	48,112,176	196754	O	64,128,192	400854	5/8

Fig. 63-400778AH Carrier and Type Pallet Arrangement (Friction and Tractor Feed - 80-Column)  
(Large Gothic W/Fractions)



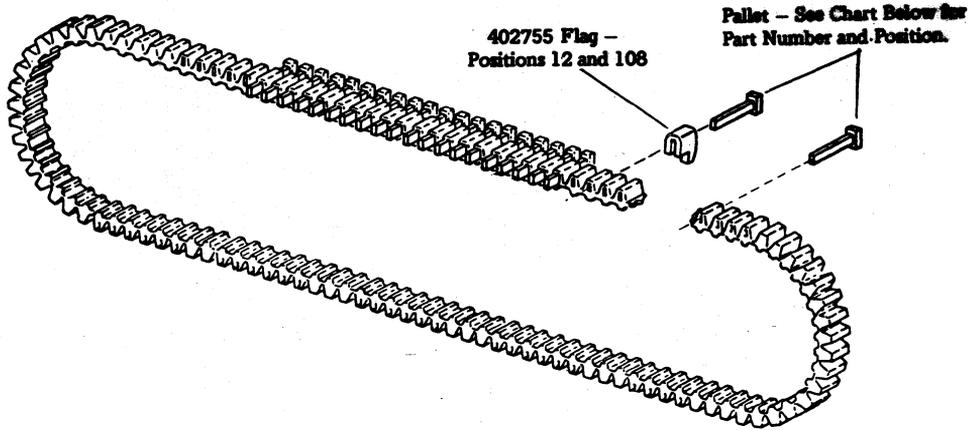
POSITION NUMBER	PART NUMBER	CHAR	POSITION NUMBER	PART NUMBER	CHAR
1,65,129,193,257	400755	⊕	33,97,161,225	400681	@
2,66,130,194,258	400650	!	34,98,162,226	400682	A
3,67,131,195,259	400651	"	35,99,163,227	400683	B
4,68,132,196,260	400652	#	36,100,164,228	400684	C
5,69,133,197,261	400653	\$	37,101,165,229	400685	D
6,70,134,198,262	400654	%	38,102,166,230	400686	E
7,71,135,199,263	400655	&	39,103,167,231	400687	F
8,72,136,200,264	400656	/	40,104,168,232	400688	G
9,73,137,201,265	400657	(	41,105,169,233	400689	H
10,74,138,202,266	400658	)	42,106,170,234	400690	I
11,75,139,203,267	400659	*	43,107,171,235	400691	J
12,76,140,204,268	400660	+	44,108,172,236	400692	K
13,77,141,205,269	400661	,	45,109,173,237	400693	L
14,78,142,206,270	400662	-	46,110,174,238	400694	M
15,79,143,207,271	400663	.	47,111,175,239	400695	N
16,80,144,208,272	400664	/	48,112,176,240	400696	O
17,81,145,209,273	400665	∅	49,113,177,241	400697	P
18,82,146,210,274	400666	1	50,114,178,242	400698	Q
19,83,147,211,275	400667	2	51,115,179,243	400699	R
20,84,148,212,276	400668	3	52,116,180,244	400700	S
21,85,149,213,277	400669	4	53,117,181,245	400701	T
22,86,150,214,278	400670	5	54,118,182,246	400702	U
23,87,151,215,279	400671	6	55,119,183,247	400703	V
24,88,152,216,280	400672	7	56,120,184,248	400704	W
25,89,153,217,281	400673	8	57,121,185,249	400705	X
26,90,154,218,282	400674	9	58,122,186,250	400706	Y
27,91,155,219,283	400675	:	59,123,187,251	400707	Z
28,92,156,220,284	400676	:	60,124,188,252	400708	[
29,93,157,221,285	400677	<	61,125,189,253	400709	\
30,94,158,222,286	400678	=	62,126,190,254	400710	]
31,95,159,223,287	400679	>	63,127,191,255	400711	^
32,96,160,224,288	400680	?	64,128,192,256	400712	_

Fig. 64-400780AL Carrier and Type Pallet Arrangement (Tractor Feed - 132-Column) (Monocase)



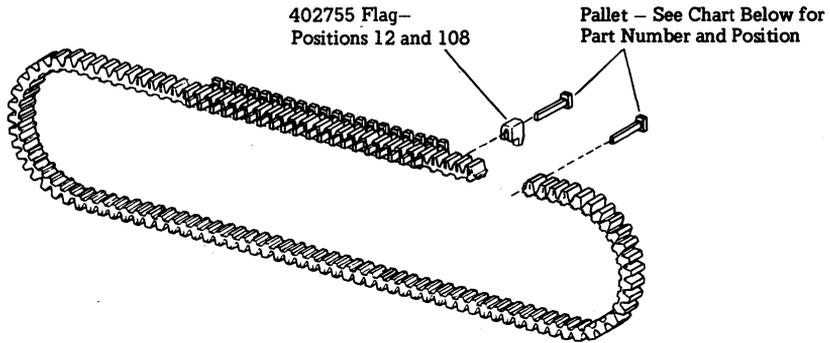
POSITION NUMBER	PART NUMBER	CHAR	POSITION NUMBER	PART NUMBER	CHAR	POSITION NUMBER	PART NUMBER	CHAR
1,97,193	400756	≡≡≡	33,129,225	400681	@	65,161,257	400713	\
2,98,194	400650	!	34,130,226	400682	A	66,162,258	400714	a
3,99,195	400651	!"	35,131,227	400683	B	67,163,259	400715	b
4,100,196	400652	#	36,132,228	400684	C	68,164,260	400716	c
5,101,197	400653	\$	37,133,229	400685	D	69,165,261	400717	d
6,102,198	400654	%	38,134,230	400686	E	70,166,262	400718	e
7,103,199	400655	&	39,135,231	400687	F	71,167,263	400719	f
8,104,200	400656	/	40,136,232	400688	G	72,168,264	400864	g
9,105,201	400657	(	41,137,233	400689	H	73,169,265	400721	h
10,106,202	400658	)	42,138,234	400690	I	74,170,266	400722	i
11,107,203	400659	*	43,139,235	400691	J	75,171,267	400723	j
12,108,204	400660	+	44,140,236	400692	K	76,172,268	400724	k
13,109,205	400661	,	45,141,237	400693	L	77,173,269	400725	l
14,110,206	400662	-	46,142,238	400694	M	78,174,270	400726	m
15,111,207	400663	.	47,143,239	400695	N	79,175,271	400727	n
16,112,208	400664	/	48,144,240	400696	O	80,176,272	400728	o
17,113,209	400665	ø	49,145,241	400 97	P	81,177,273	400865	p
18,114,210	400666	1	50,146,242	400698	Q	82,178,274	400866	q
19,115,211	400667	2	51,147,243	400699	R	83,179,275	400731	r
20,116,212	400668	3	52,148,244	400700	S	84,180,276	400732	s
21,117,213	400669	4	53,149,245	400701	T	85,181,277	400733	t
22,118,214	400670	5	54,150,246	400702	U	86,182,278	400734	u
23,119,215	400671	6	55,151,247	400703	V	87,183,279	400735	v
24,120,216	400672	7	56,152,248	400704	W	88,184,280	400736	w
25,121,217	400673	8	57,153,249	400705	X	89,185,281	400737	x
26,122,218	400674	9	58,154,250	400706	Y	90,186,282	400867	y
27,123,219	400675	:	59,155,251	400707	Z	91,187,283	400739	z
28,124,220	400676	;	60,156,252	400833	—	92,188,284	400740	{
29,125,221	400677	<	61,157,253	400709	\	93,189,285	400741	
30,126,222	400678	=	62,158,254	400834		94,190,286	400742	}
31,127,223	400679	>	63,159,255	400835	†	95,191,287	400743	~
32,128,224	400680	?	64,160,256	400712	-	96,192,288	—	—

Fig. 65—400783 AM Carrier and Type Pallet Arrangement (Friction and Tractor Feed – 80-Column)  
(EBCDIC Up/Low)



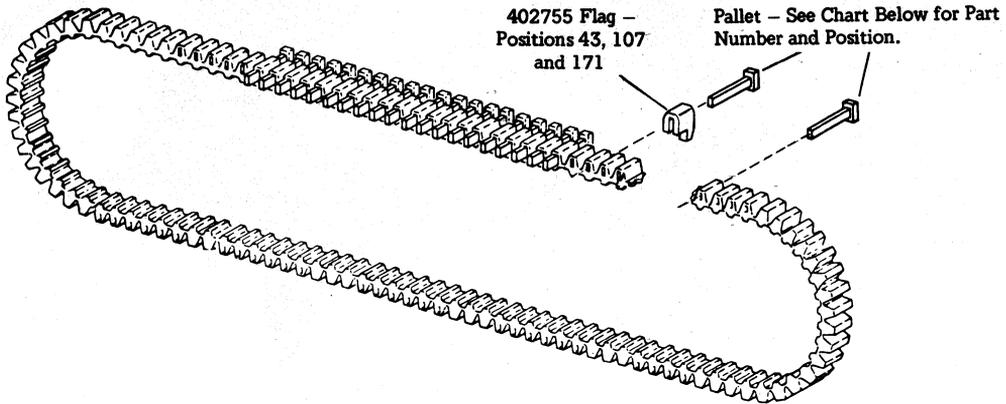
POSITION NUMBER	PART NO.	CHAR.									
1,97	400757	≡	25,121	400673	8	49,145	400697	P	73,169	400721	h
2,98	400650	!	26,122	400674	9	50,146	400698	Q	74,170	400722	i
3,99	400651	"	27,123	400675	:	51,147	400699	R	75,171	400723	j
4,100	400652	#	28,124	400676	;	52,148	400700	S	76,172	400724	k
5,101	400653	\$	29,125	400677	<	53,149	400701	T	77,173	400725	l
6,102	400654	%	30,126	400678	=	54,150	400702	U	78,174	400726	m
7,103	400655	&	31,127	400679	>	55,151	400703	V	79,175	400727	n
8,104	400656	/	32,128	400680	?	56,152	400704	W	80,176	400728	o
9,105	400657	(	33,129	400681	@	57,153	400705	X	81,177	400865	p
10,106	400658	)	34,130	400682	A	58,154	400706	Y	82,178	400866	q
11,107	400659	*	35,131	400683	B	59,155	400707	Z	83,179	400731	r
12,108	400660	+	36,132	400684	C	60,156	400833	⌋	84,180	400732	s
13,109	400661	,	37,133	400685	D	61,157	400709	⌈	85,181	400733	t
14,110	400662	-	38,134	400686	E	62,158	400834		86,182	400734	u
15,111	400663	.	39,135	400687	F	63,159	400835	≠	87,183	400735	v
16,112	400664	/	40,136	400688	G	64,160	400712	—	88,184	400736	w
17,113	400665	∅	41,137	400689	H	65,161	400713	∖	89,185	400737	x
18,114	400666	1	42,138	400690	I	66,162	400714	a	90,186	400867	y
19,115	400667	2	43,139	400691	J	67,163	400715	b	91,187	400739	z
20,116	400668	3	44,140	400692	K	68,164	400716	c	92,188	400740	{
21,117	400669	4	45,141	400693	L	69,165	400717	d	93,189	400741	}
22,118	400670	5	46,142	400694	M	70,166	400718	e	94,190	400742	~
23,119	400671	6	47,143	400695	N	71,167	400719	f	95,191	400743	~
24,120	400672	7	48,144	400696	O	72,168	400864	g	96,192	—	—

Fig. 66-400784AN Carrier and Type Pallet Arrangement (Friction and Tractor Feed - 80-Column) (EBCDIC - Up/Low)



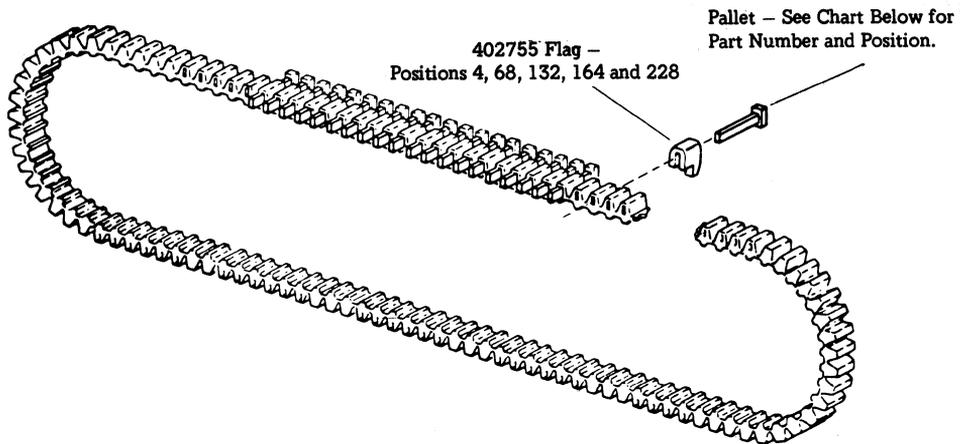
POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.
1, 97	400758	∞	25, 121	400673	8	49, 145	400697	P	73, 169	400721	h
2, 98	400650	!	26, 122	400674	9	50, 146	400698	Q	74, 170	400722	i
3, 99	400651	"	27, 123	400675	:	51, 147	400699	R	75, 171	400723	j
4, 100	400652	#	28, 124	400676	;	52, 148	400700	S	76, 172	400724	k
5, 101	400653	\$	29, 125	400677	<	53, 149	400701	T	77, 173	400725	l
6, 102	400654	%	30, 126	400678	=	54, 150	400702	U	78, 174	400726	m
7, 103	400655	&	31, 127	400679	>	55, 151	400703	V	79, 175	400727	n
8, 104	400656	^	32, 128	400680	?	56, 152	400704	W	80, 176	400728	o
9, 105	400657	(	33, 129	400804	↓	57, 153	400705	X	81, 177	400865	p
10, 106	400658	)	34, 130	400682	A	58, 154	400706	Y	82, 178	400866	q
11, 107	400659	*	35, 131	400683	B	59, 155	400707	Z	83, 179	400731	r
12, 108	400660	+	36, 132	400684	C	60, 156	400820	$\frac{1}{b}$	84, 180	400732	s
13, 109	400661	,	37, 133	400685	D	61, 157	400821	$\frac{1}{c}$	85, 181	400733	t
14, 110	400662	-	38, 134	400686	E	62, 158	400822	$\frac{1}{d}$	86, 182	400734	u
15, 111	400663	.	39, 135	400687	F	63, 159	400711	^	87, 183	400735	v
16, 112	400664	/	40, 136	400688	G	64, 160	400813	—	88, 184	400736	w
17, 113	400665	∅	41, 137	400689	H	65, 161	400713	`	89, 185	400737	x
18, 114	400666	1	42, 138	400690	I	66, 162	400714	a	90, 186	400867	y
19, 115	400667	2	43, 139	400691	J	67, 163	400715	b	91, 187	400739	z
20, 116	400668	3	44, 140	400692	K	68, 164	400716	c	92, 188	400823	$\frac{1}{z}$
21, 117	400669	4	45, 141	400693	L	69, 165	400717	d	93, 189	400824	$\frac{2}{z}$
22, 118	400670	5	46, 142	400694	M	70, 166	400718	e	94, 190	400825	$\frac{3}{z}$
23, 119	400671	6	47, 143	400695	N	71, 167	400719	f	95, 191	400826	$\frac{4}{z}$
24, 120	400672	7	48, 144	400696	O	72, 168	400864	g	96, 192	—	—

Fig. 67—400779AP Carrier and Type Pallet Arrangement (Friction and Tractor Feed – 80-Column)  
(Fractions in one Eighths – Up/Low)



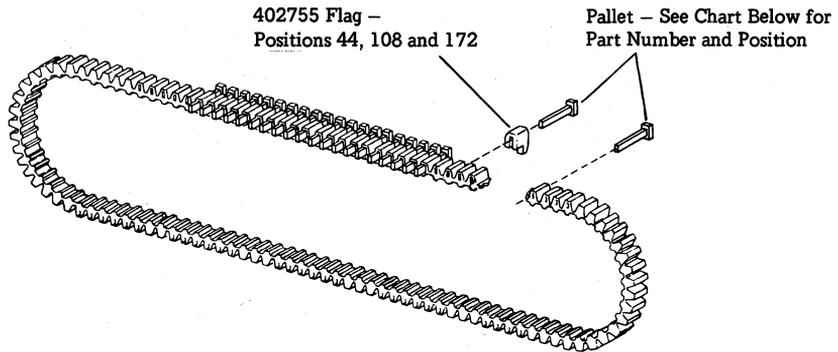
POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.
1,65,129	400650	!	17,81,145	400666	1	33,97,161	400682	A	49,113,177	400698	Q
2,66,130	400651	"	18,82,146	400667	2	34,98,162	400683	B	50,114,178	400699	R
3,67,131	400652	#	19,83,147	400668	3	35,99,163	400684	C	51,115,179	400700	S
4,68,132	400653	\$	20,84,148	400669	4	36,100,164	400685	D	52,116,180	400701	T
5,69,133	400654	%	21,85,149	400670	5	37,101,165	400686	E	53,117,181	400702	U
6,70,134	400655	&	22,86,150	400671	6	38,102,166	400687	F	54,118,182	400703	V
7,71,135	400656	'	23,87,151	400672	7	39,103,167	400688	G	55,119,183	400704	W
8,72,136	400657	(	24,88,152	400673	8	40,104,168	400689	H	56,120,184	400705	X
9,73,137	400658	)	25,89,153	400674	9	41,105,169	400690	I	57,121,185	400706	Y
10,74,138	400659	*	26,90,154	400675	:	42,106,170	400691	J	58,122,186	400707	Z
11,75,139	400660	+	27,91,155	400676	;	43,107,171	400692	K	59,123,187	400833	⌋
12,76,140	400661	,	28,92,156	400677	<	44,108,172	400693	L	60,124,188	400709	\
13,77,141	400662	-	29,93,157	400678	=	45,109,173	400694	M	61,125,189	400834	
14,78,142	400663	.	30,94,158	400679	>	46,110,174	400695	N	62,126,190	400835	¢
15,79,143	400664	/	31,95,159	400680	?	47,111,175	400696	O	63,127,191	400712	—
16,80,144	400665	∅	32,96,160	400681	@	48,112,176	400697	P	64,128,192	400759	⌋

Fig. 68—400785AQ Carrier and Type Pallet Arrangement (Friction and Tractor Feed – 80-Column)  
(EBCDIC Monocase)



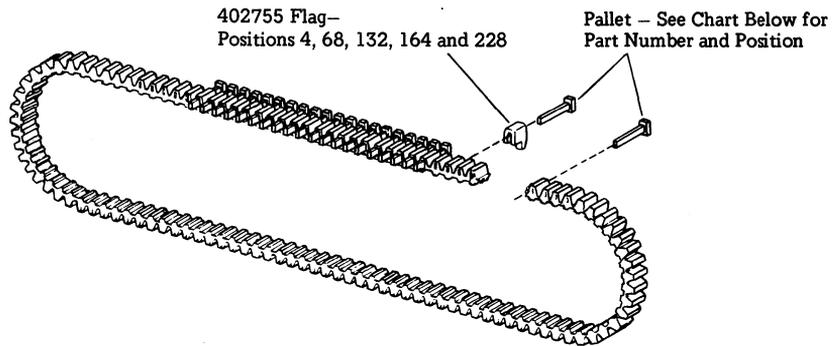
POSITION NUMBER	PART NUMBER	CHAR	POSITION NUMBER	PART NUMBER	CHAR
1,65,129,193,257	400888	Ⓔ	33,97,161,225	400681	@
2,66,130,194,258	400650	!	34,98,162,226	400682	A
3,67,131,195,259	400651	"	35,99,163,227	400683	B
4,68,132,196,260	400652	*	36,100,164,228	400684	C
5,69,133,197,261	400653	\$	37,101,165,229	400685	D
6,70,134,198,262	400654	%	38,102,166,230	400686	E
7,71,135,199,263	400655	&	39,103,167,231	400687	F
8,72,136,200,264	400656	/	40,104,168,232	400688	G
9,73,137,201,265	400657	(	41,105,169,233	400689	H
10,74,138,202,266	400658	)	42,106,170,234	400690	I
11,75,139,203,267	400659	*	43,107,171,235	400691	J
12,76,140,204,268	400660	+	44,108,172,236	400692	K
13,77,141,205,269	400661	,	45,109,173,237	400693	L
14,78,142,206,270	400662	-	46,110,174,238	400694	M
15,79,143,207,271	400663	.	47,111,175,239	400695	N
16,80,144,208,272	400664	/	48,112,176,240	400696	O
17,81,145,209,273	400665	∅	49,113,177,241	400697	P
18,82,146,210,274	400666	1	50,114,178,242	400698	Q
19,83,147,211,275	400667	2	51,115,179,243	400699	R
20,84,148,212,276	400668	3	52,116,180,244	400700	S
21,85,149,213,277	400669	4	53,117,181,245	400701	T
22,86,150,214,278	400670	5	54,118,182,246	400702	U
23,87,151,215,279	400671	6	55,119,183,247	400703	V
24,88,152,216,280	400672	7	56,120,184,248	400704	W
25,89,153,217,281	400673	8	57,121,185,249	400705	X
26,90,154,218,282	400674	9	58,122,186,250	400706	Y
27,91,155,219,283	400675	:	59,123,187,251	400707	Z
28,92,156,220,284	400676	;	60,124,188,252	400833	⌋
29,93,157,221,285	400677	<	61,125,189,253	400709	\
30,94,158,222,286	400678	=	62,126,190,254	400834	
31,95,159,223,287	400679	>	63,127,191,255	400835	†
32,96,160,224,288	400680	?	64,128,192,256	400712	-

Fig. 69—400887AS Carrier and Type Pallet Arrangement (Tractor Feed - 132-Column) (EBCDIC Monocase)



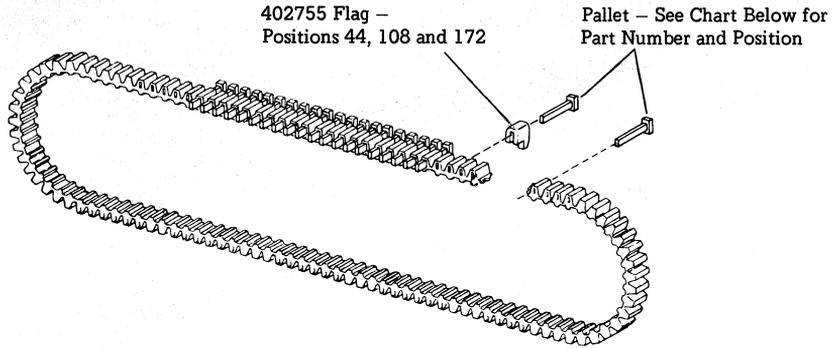
POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.
1, 33, 60 to 65, 97, 124 to 129, 161, 188 to 192	400889	至	14, 78, 142	408150	-	30, 94, 158	408122	=	47, 111, 175	408095	N
			15, 79, 143	408118	.	31, 95, 159	408138	H	48, 112, 176	408096	O
			16, 80, 144	408124	/	32, 96, 160	408130	?	49, 113, 177	408097	P
			17, 81, 145	408117	□	34, 98, 162	408082	A	50, 114, 178	408098	Q
2, 66, 130	408139		18, 82, 146	408108	↓	35, 99, 163	408083	B	51, 115, 179	408099	R
3, 67, 131	408126	∩	19, 83, 147	408109	∩	36, 100, 164	408084	C	52, 116, 180	408100	S
4, 68, 132	408137	∪	20, 84, 148	408110	∪	37, 101, 165	408085	D	53, 117, 181	408101	T
5, 69, 133	408133	≡	21, 85, 149	408111	≡	38, 102, 166	408086	E	54, 118, 182	408102	U
6, 70, 134	408129	∴	22, 86, 150	408112	∴	39, 103, 167	408087	F	55, 119, 183	408103	V
7, 71, 135	408131	⊗	23, 87, 151	408113	⊗	40, 104, 168	408088	G	56, 120, 184	408104	W
8, 72, 136	408132	⊙	24, 88, 152	408114	⊙	41, 105, 169	408089	H	57, 121, 185	408105	X
9, 73, 137	408128	{	25, 89, 153	408115	∅	42, 106, 170	408090	I	58, 122, 186	408106	Y
10, 74, 138	408127	}	26, 90, 154	408116	∅	43, 107, 171	408091	J	59, 123, 187	408107	Z
11, 75, 139	408125	*	27, 91, 155	408120	:	44, 108, 172	408092	K			
12, 76, 140	408123	+	28, 92, 156	408121	;	45, 109, 173	408093	L			
13, 77, 141	408119	∴	29, 93, 157	408136	∴	46, 110, 174	408094	M			

Fig. 70-408177AT Carrier and Type Pallet Arrangement (Friction and Tractor Feed - 80-Column)  
(ASCII Monocase)



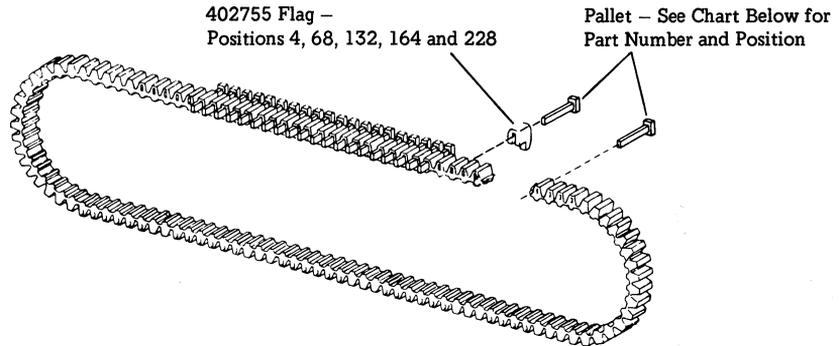
POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.
1, 33, 60 to 65, 97, 124 to 129, 161, 188 to 193, 225, 252 to 257	400890	⌈	19, 83, 147, 211, 275	408109	2	41, 105, 169, 233	408089	H
			20, 84, 148, 212, 276	408110	3	42, 106, 170, 234	408090	I
			21, 85, 149, 213, 277	408111	4	43, 107, 171, 235	408091	J
			22, 86, 150, 214, 278	408112	5	44, 108, 172, 236	408092	K
2, 66, 130, 194, 258	408139		23, 87, 151, 215, 279	408113	6	45, 109, 173, 237	408093	L
3, 67, 131, 195, 259	408126	"	24, 88, 152, 216, 280	408114	7	46, 110, 174, 238	408094	M
4, 68, 132, 196, 260	408137	∪	25, 89, 153, 217, 281	408115	8	47, 111, 175, 239	408095	N
5, 69, 133, 197, 261	408133	≡	26, 90, 154, 218, 282	408116	9	48, 112, 176, 240	408096	0
6, 70, 134, 198, 262	408129	∴	27, 91, 155, 219, 283	408120	:	49, 113, 177, 241	408097	P
7, 71, 135, 199, 263	408131	&	28, 92, 156, 220, 284	408121	;	50, 114, 178, 242	408098	Q
8, 72, 136, 200, 264	408132	'	29, 93, 157, 221, 285	408136	∩	51, 115, 179, 243	408099	R
9, 73, 137, 201, 265	408128	{	30, 94, 158, 222, 286	408122	=	52, 116, 180, 244	408100	S
10, 74, 138, 202, 266	408127	}	31, 95, 159, 223, 287	408138	∏	53, 117, 181, 245	408101	T
11, 75, 139, 203, 267	408125	*	32, 96, 160, 224, 288	408130	?	54, 118, 182, 246	408102	U
12, 76, 140, 204, 268	408123	+	34, 98, 162, 226	408082	A	55, 119, 183, 247	408103	V
13, 77, 141, 205, 269	408119	∩	35, 99, 163, 227	408083	B	56, 120, 184, 248	408104	W
14, 78, 142, 206, 270	408150	-	36, 100, 164, 228	408084	C	57, 121, 185, 249	408105	X
15, 79, 143, 207, 271	408118	.	37, 101, 165, 229	408085	D	58, 122, 186, 250	408106	Y
16, 80, 144, 208, 272	408124	/	38, 102, 166, 230	408086	E	59, 123, 187, 251	408107	Z
17, 81, 145, 209, 273	408117	□	39, 103, 167, 231	408087	F			
18, 82, 146, 210, 274	408108	⌋	40, 104, 168, 232	408088	G			

Fig. 71—408178AU Carrier and Type Pallet Arrangement (Tractor Feed – 132-Column)  
(ASCII Monocase)



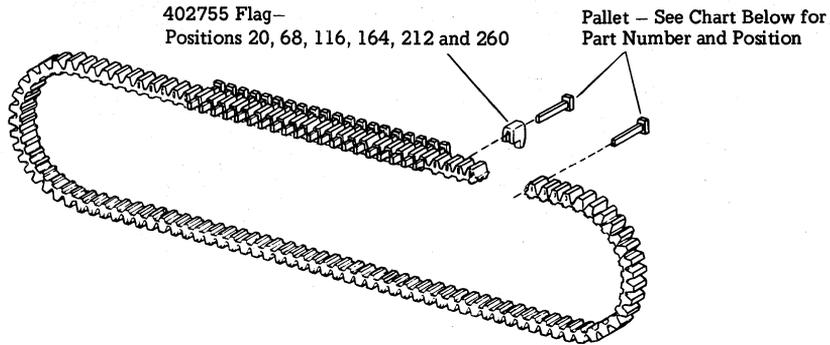
POSITION NUMBER	PART NO.	CHAR.									
1, 65, 129	400891	∅	17, 81, 145	408214	0	33, 97, 161	408226	⊖	49, 113, 177	408194	P
2, 66, 130	408241	!	18, 82, 146	408205	1	34, 98, 162	408179	A	50, 114, 178	408195	Q
3, 67, 131	408225	''	19, 83, 147	408206	2	35, 99, 163	408180	B	51, 115, 179	408196	R
4, 68, 132	408233	#	20, 84, 148	408207	3	36, 100, 164	408181	C	52, 116, 180	408197	S
5, 69, 133	408228	\$	21, 85, 149	408208	4	37, 101, 165	408182	D	53, 117, 181	408198	T
6, 70, 134	408234	%	22, 86, 150	408209	5	38, 102, 166	408183	E	54, 118, 182	408199	U
7, 71, 135	408236	ε	23, 87, 151	408210	6	39, 103, 167	408184	F	55, 119, 183	408200	V
8, 72, 136	408216	'	24, 88, 152	408211	7	40, 104, 168	408185	G	56, 120, 184	408201	W
9, 73, 137	408217	(	25, 89, 153	408212	8	41, 105, 169	408186	H	57, 121, 185	408202	X
10, 74, 138	408218	)	26, 90, 154	408213	9	42, 106, 170	408187	I	58, 122, 186	408203	Y
11, 75, 139	408221	*	27, 91, 155	408239	:	43, 107, 171	408188	J	59, 123, 187	408204	Z
12, 76, 140	408220	+	28, 92, 156	408240	;	44, 108, 172	408189	K	60, 124, 188	408231	~
13, 77, 141	408219	,	29, 93, 157	408230	<	45, 109, 173	408190	L	61, 125, 189	408238	
14, 78, 142	408232	-	30, 94, 158	408223	=	46, 110, 174	408191	M	62, 126, 190	408237	□
15, 79, 143	408215	.	31, 95, 159	408229	>	47, 111, 175	408192	N	63, 127, 191	408242	^
16, 80, 144	408222	/	32, 96, 160	408224	?	48, 112, 176	408193	□	64, 128, 192	408235	-

Fig. 72—408269AV Carrier and Type Pallet Arrangement (Friction and Tractor Feed – 80-Column)  
(Monocase)



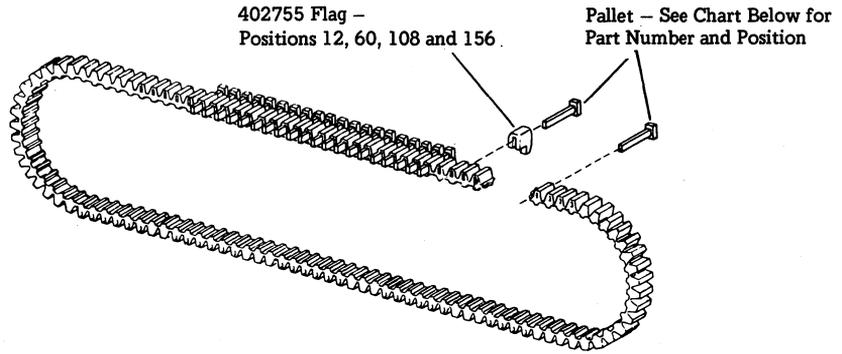
POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.
1, 65, 129, 193, 257	400892	☉	23, 87, 151, 215, 279	408210	6	45, 109, 173, 237	408190	L
2, 66, 130, 194, 258	408241	!	24, 88, 152, 216, 280	408211	7	46, 110, 174, 238	408191	M
3, 67, 131, 195, 259	408225	"	25, 89, 153, 217, 281	408212	8	47, 111, 175, 239	408192	N
4, 68, 132, 196, 260	408233	#	26, 90, 154, 218, 282	408213	9	48, 112, 176, 240	408193	□
5, 69, 133, 197, 261	408228	\$	27, 91, 155, 219, 283	408239	:	49, 113, 177, 241	408194	P
6, 70, 134, 198, 262	408234	%	28, 92, 156, 220, 284	408240	;	50, 114, 178, 242	408195	Q
7, 71, 135, 199, 263	408236	€	29, 93, 157, 221, 285	408230	<	51, 115, 179, 243	408196	R
8, 72, 136, 200, 264	408216	'	30, 94, 158, 222, 286	408223	=	52, 116, 180, 244	408197	S
9, 73, 137, 201, 265	408217	(	31, 95, 159, 223, 287	408229	>	53, 117, 181, 245	408198	T
10, 74, 138, 202, 266	408218	)	32, 96, 160, 224, 288	408224	?	54, 118, 182, 246	408199	U
11, 75, 139, 203, 267	408221	*	33, 97, 161, 225	408226	@	55, 119, 183, 247	408200	V
12, 76, 140, 204, 268	408220	+	34, 98, 162, 226	408179	A	56, 120, 184, 248	408201	W
13, 77, 141, 205, 269	408219	,	35, 99, 163, 227	408180	B	57, 121, 185, 249	408202	X
14, 78, 142, 206, 270	408232	-	36, 100, 164, 228	408181	C	58, 122, 186, 250	408203	Y
15, 79, 143, 207, 271	408215	.	37, 101, 165, 229	408182	D	59, 123, 187, 251	408204	Z
16, 80, 144, 208, 272	408222	/	38, 102, 166, 230	408183	E	60, 124, 188, 252	408231	~
17, 81, 145, 209, 273	408214	0	39, 103, 167, 231	408184	F	61, 125, 189, 253	408238	
18, 82, 146, 210, 274	408205	1	40, 104, 168, 232	408185	G	62, 126, 190, 254	408237	▣
19, 83, 147, 211, 275	408206	2	41, 105, 169, 233	408186	H	63, 127, 191, 255	408242	^
20, 84, 148, 212, 276	408207	3	42, 106, 170, 234	408187	I	64, 128, 192, 256	408235	-
21, 85, 149, 213, 277	408208	4	43, 107, 171, 235	408188	J			
22, 86, 150, 214, 278	408209	5	44, 108, 172, 236	408189	K			

Fig. 73—408270AW Carrier and Type Pallet Arrangement (Tractor Feed – 132-Column) (Monocase)



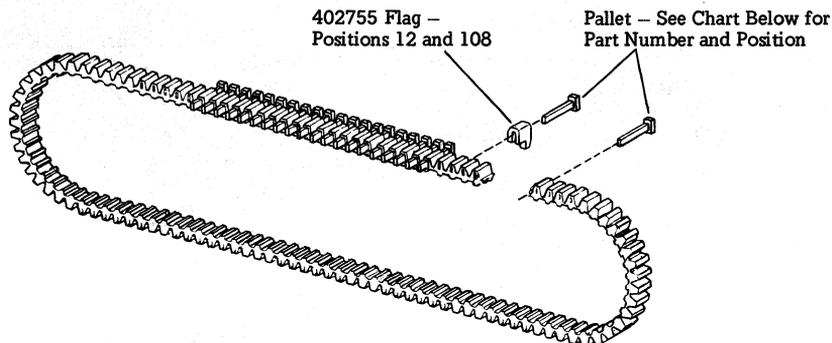
POSITION NUMBER	PART NO.	CHAR.	POSITION NUMBER	PART NO.	CHAR.
1, 49, 97, 145, 193, 241	400893	⊗	25, 73, 121, 169, 217, 265	408186	H
2, 50, 98, 146, 194, 242	408205	1	26, 74, 122, 170, 218, 266	408187	I
3, 51, 99, 147, 195, 243	408206	2	27, 75, 123, 171, 219, 267	408188	J
4, 52, 100, 148, 196, 244	408207	3	28, 76, 124, 172, 220, 268	408189	K
5, 53, 101, 149, 197, 245	408208	4	29, 77, 125, 173, 221, 269	408190	L
6, 54, 102, 150, 198, 246	408209	5	30, 78, 126, 174, 222, 270	408191	M
7, 55, 103, 151, 199, 247	408210	6	31, 79, 127, 175, 223, 271	408192	N
8, 56, 104, 152, 200, 248	408211	7	32, 80, 128, 176, 224, 272	408193	0
9, 57, 105, 153, 201, 249	408212	8	33, 81, 129, 177, 225, 273	408194	P
10, 58, 106, 154, 202, 250	408213	9	34, 82, 130, 178, 226, 274	408195	Q
11, 59, 107, 155, 203, 251	408214	0	35, 83, 131, 179, 227, 275	408196	R
12, 60, 108, 156, 204, 252	408228	\$	36, 84, 132, 180, 228, 276	408197	S
13, 61, 109, 157, 205, 253	408219	,	37, 85, 133, 181, 229, 277	408198	T
14, 62, 110, 158, 206, 254	408232	-	38, 86, 134, 182, 230, 278	408199	U
15, 63, 111, 159, 207, 255	408215	.	39, 87, 135, 183, 231, 279	408200	V
16, 64, 112, 160, 208, 256	408222	/	40, 88, 136, 184, 232, 280	408201	W
17, 65, 113, 161, 209, 257	408226	∂	41, 89, 137, 185, 233, 281	408202	X
18, 66, 114, 162, 210, 258	408179	A	42, 90, 138, 186, 234, 282	408203	Y
19, 67, 115, 163, 211, 259	408180	B	43, 91, 139, 187, 235, 283	408204	Z
20, 68, 116, 164, 212, 260	408181	C	44, 92, 140, 188, 236, 284	408221	*
21, 69, 117, 165, 213, 261	408182	D	45, 93, 141, 189, 237, 285	408233	#
22, 70, 118, 166, 214, 262	408183	E	46, 94, 142, 190, 238, 286	408234	%
23, 71, 119, 167, 215, 263	408184	F	47, 95, 143, 191, 239, 287	408236	€
24, 72, 120, 168, 216, 264	408185	G	48, 96, 144, 192, 240, 288	408237	∏

Fig. 74—408271 AX Carrier and Type Pallet Arrangement (Tractor Feed — 132-Column)  
(Spec. Alpha/Num.-Monocase)



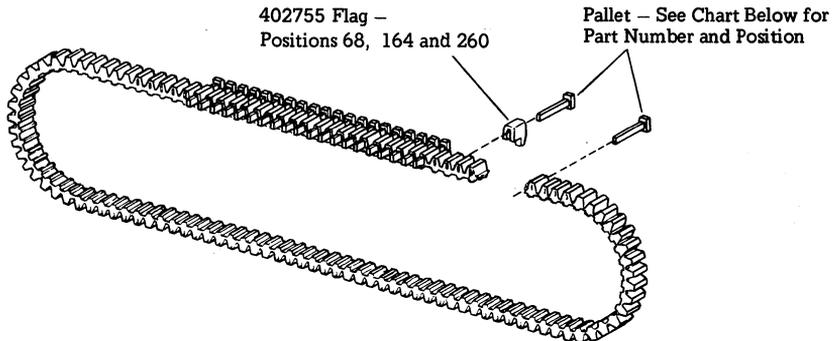
POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.
1, 49, 97, 145	400895	⊗	17, 65, 113, 161	408226	⊗	33, 81, 129, 177	408194	P
2, 50, 98, 146	408205	1	18, 66, 114, 162	408179	A	34, 82, 130, 178	408195	Q
3, 51, 99, 147	408206	2	19, 67, 115, 163	408180	B	35, 83, 131, 179	408196	R
4, 52, 100, 148	408207	3	20, 68, 116, 164	408181	C	36, 84, 132, 180	408197	S
5, 53, 101, 149	408208	4	21, 69, 117, 165	408182	D	37, 85, 133, 181	408198	T
6, 54, 102, 150	408209	5	22, 70, 118, 166	408183	E	38, 86, 134, 182	408199	U
7, 55, 103, 151	408210	6	23, 71, 119, 167	408184	F	39, 87, 135, 183	408200	V
8, 56, 104, 152	408211	7	24, 72, 120, 168	408185	G	40, 88, 136, 184	408201	W
9, 57, 105, 153	408212	8	25, 73, 121, 169	408186	H	41, 89, 137, 185	408202	X
10, 58, 106, 154	408213	9	26, 74, 122, 170	408187	I	42, 90, 138, 186	408203	Y
11, 59, 107, 155	408214	0	27, 75, 123, 171	408188	J	43, 91, 139, 187	408204	Z
12, 60, 108, 156	408228	\$	28, 76, 124, 172	408189	K	44, 92, 140, 188	408221	*
13, 61, 109, 157	408219	,	29, 77, 125, 173	408190	L	45, 93, 141, 189	408233	#
14, 62, 110, 158	408232	-	30, 78, 126, 174	408191	M	46, 94, 142, 190	408234	%
15, 63, 111, 159	408215	.	31, 79, 127, 175	408192	N	47, 95, 143, 191	408236	£
16, 64, 112, 160	408222	/	32, 80, 128, 176	408193	0	48, 96, 144, 192	408237	□

Fig. 75-408346AZ Carrier and Type Pallet Arrangement (Friction and Tractor Feed - 80-Column)



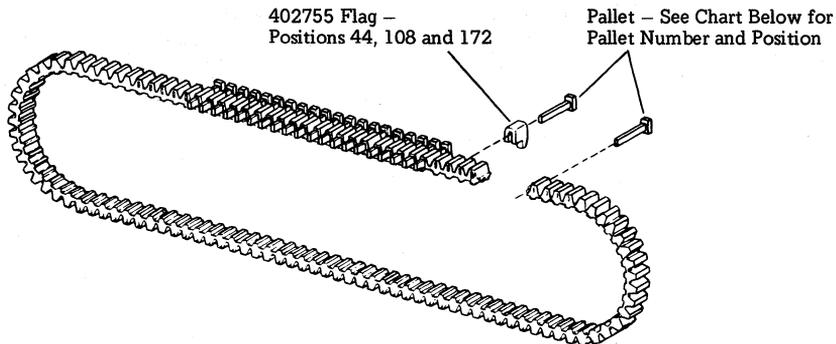
POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.
1, 65, 97, 161	400838	—	24, 120	408400	7	48, 144	408418	O	73, 169	408437	h
2, 98	408469	!	25, 121	408401	8	49, 145	408419	P	74, 170	408438	i
3, 99	408465	!"	26, 122	408402	9	50, 146	408420	Q	75, 171	408439	j
4, 100	408477	#	27, 123	408463	:	51, 147	408421	R	76, 172	408440	k
5, 101	408483	\$	28, 124	408464	;	52, 148	408422	S	77, 173	408441	l
6, 102	408476	%	29, 125	408472	<	53, 149	408423	T	78, 174	408442	m
7, 103	408478	&	30, 126	408459	=	54, 150	408424	U	79, 175	408443	n
8, 104	408466	'	31, 127	408473	>	55, 151	408425	V	80, 176	408444	o
9, 105	408470	(	32, 128	408468	?	56, 152	408426	W	81, 177	408445	p
10, 106	408471	)	33, 129	408479	@	57, 153	408427	X	82, 178	408446	q
11, 107	408456	*	34, 130	408404	A	58, 154	408428	Y	83, 179	408447	r
12, 108	408457	+	35, 131	408405	B	59, 155	408429	Z	84, 180	408448	s
13, 109	408462	,	36, 132	408406	C	60, 156	408474	[	85, 181	408449	t
14, 110	408458	-	37, 133	408407	D	61, 157	408485	\	86, 182	408450	u
15, 111	408461	.	38, 134	408408	E	62, 158	408475	]	87, 183	408451	v
16, 112	408460	/	39, 135	408409	F	63, 159	408480	^	88, 184	408452	w
17, 113	408403	0	40, 136	408410	G	64, 160	408467	_	89, 185	408453	x
18, 114	408394	1	41, 137	408411	H	66, 162	408430	a	90, 186	408454	y
19, 115	408395	2	42, 138	408412	I	67, 163	408431	b	91, 187	408455	z
20, 116	408396	3	43, 139	408413	J	68, 164	408432	c	92, 188	408508	{
21, 117	408397	4	44, 140	408414	K	69, 165	408433	d	93, 189	408484	
22, 118	408398	5	45, 141	408415	L	70, 166	408434	e	94, 190	408509	}
23, 119	408399	6	46, 142	408416	M	71, 167	408435	f	95, 191	408506	~
			47, 143	408417	N	72, 168	408436	g	96, 192	408487	■

Fig. 76—408390BB Carrier and Type Pallet Arrangement (Friction and Tractor Feed — 80-Column)  
(ASCII Up/Low)



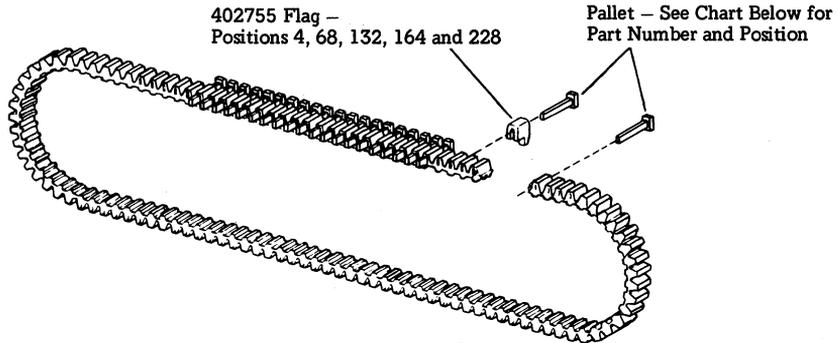
POSITION NUMBER	PART NO.	CHAR.									
1, 65, 97	400839	E	24, 120, 216	408400	7	48, 144, 240	408418	O	73, 169, 265	408437	h
161, 193, 257			25, 121, 217	408401	8	49, 145, 241	408419	P	74, 170, 266	408438	i
2, 98, 194	408469	!	26, 122, 218	408402	9	50, 146, 242	408420	Q	75, 171, 267	408439	j
3, 99, 195	408465	"	27, 123, 219	408463	:	51, 147, 243	408421	R	76, 172, 268	408440	k
4, 100, 196	408477	#	28, 124, 220	408464	;	52, 148, 244	408422	S	77, 173, 269	408441	l
5, 101, 197	408483	\$	29, 125, 221	408472	<	53, 149, 245	408423	T	78, 174, 270	408442	m
6, 102, 198	408476	%	30, 126, 222	408459	=	54, 150, 246	408424	U	79, 175, 271	408443	n
7, 103, 199	408478	&	31, 127, 223	408473	>	55, 151, 247	408425	V	80, 176, 272	408444	o
8, 104, 200	408466	'	32, 128, 224	408468	?	56, 152, 248	408426	W	81, 177, 273	408445	p
9, 105, 201	408470	(	33, 129, 225	408479	@	57, 153, 249	408427	X	82, 178, 274	408446	q
10, 106, 202	408471	)	34, 130, 226	408404	A	58, 154, 250	408428	Y	83, 179, 275	408447	r
11, 107, 203	408456	*	35, 131, 227	408405	B	59, 155, 251	408429	Z	84, 180, 276	408448	s
12, 108, 204	408457	+	36, 132, 228	408406	C	60, 156, 252	408474	[	85, 181, 277	408449	t
13, 109, 205	408462	,	37, 133, 229	408407	D	61, 157, 253	408485	\	86, 182, 278	408450	u
14, 110, 206	408458	-	38, 134, 230	408408	E	62, 158, 254	408475	]	87, 183, 279	408451	v
15, 111, 207	408461	.	39, 135, 231	408409	F	63, 159, 255	408480	^	88, 184, 280	408452	w
16, 112, 208	408460	/	40, 136, 232	408410	G	64, 160, 256	408467	_	89, 185, 281	408453	x
17, 113, 209	408403	0	41, 137, 233	408411	H	66, 162, 258	408430	a	90, 186, 282	408454	y
18, 114, 210	408394	1	42, 138, 234	408412	I	67, 163, 259	408431	b	91, 187, 283	408455	z
19, 115, 211	408395	2	43, 139, 235	408413	J	68, 164, 260	408432	c	92, 188, 284	408508	{
20, 116, 212	408396	3	44, 140, 236	408414	K	69, 165, 261	408433	d	93, 189, 285	408484	
21, 117, 213	408397	4	45, 141, 237	408415	L	70, 166, 262	408434	e	94, 190, 286	408509	}
22, 118, 214	408398	5	46, 142, 238	408416	M	71, 167, 263	408435	f	95, 191, 287	408506	~
23, 119, 215	408399	6	47, 143, 239	408417	N	72, 168, 264	408436	g	96, 192, 288	408487	■

Fig. 77-408391BC Carrier and Type Pallet Arrangement (Tractor Feed - 132-Column) (ASCII Up/Low)



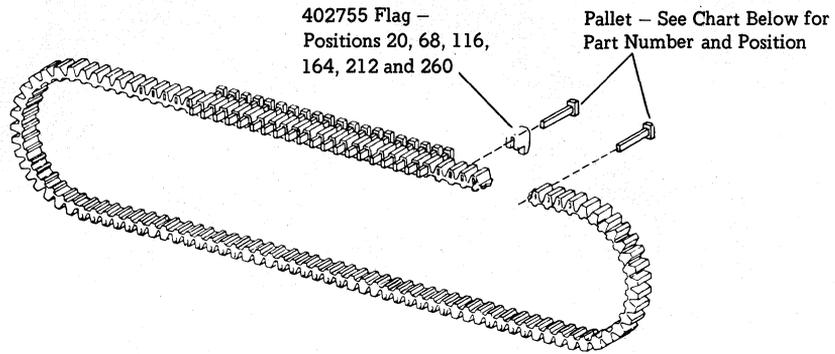
POSITION NUMBER	PART NO.	C H A R.									
1, 65, 129	400840	~	17, 81, 145	408403	0	33, 97, 161	408479	@	49, 113, 177	408419	P
2, 66, 130	408469	!	18, 82, 146	408394	1	34, 98, 162	408404	A	50, 114, 178	408420	Q
3, 67, 131	408465	"	19, 83, 147	408395	2	35, 99, 163	408405	B	51, 115, 179	408421	R
4, 68, 132	407477	#	20, 84, 148	408396	3	36, 100, 164	408406	C	52, 116, 180	408422	S
5, 69, 133	408483	\$	21, 85, 149	408397	4	37, 101, 165	408407	D	53, 117, 181	408423	T
6, 70, 134	408476	%	22, 86, 150	408398	5	38, 102, 166	408408	E	54, 118, 182	408424	U
7, 71, 135	408478	&	23, 87, 151	408399	6	39, 103, 167	408409	F	55, 119, 183	408425	V
8, 72, 136	408466	'	24, 88, 152	408400	7	40, 104, 168	408410	G	56, 120, 184	408426	W
9, 73, 137	408470	<	25, 89, 153	408401	8	41, 105, 169	408411	H	57, 121, 185	408427	X
10, 74, 138	408471	)	26, 90, 154	408402	9	42, 106, 170	408412	I	58, 122, 186	408428	Y
11, 75, 139	408456	*	27, 91, 155	408463	:	43, 107, 171	408413	J	59, 123, 187	408429	Z
12, 76, 140	408457	+	28, 92, 156	408464	;	44, 108, 172	408414	K	60, 124, 188	408474	[
13, 77, 141	408462	,	29, 93, 157	408472	<	45, 109, 173	408415	L	61, 125, 189	408485	\
14, 78, 142	408458	-	30, 94, 158	408459	=	46, 110, 174	408416	M	62, 126, 190	408475	]
15, 79, 143	408461	.	31, 95, 159	408473	>	47, 111, 175	408417	N	63, 127, 191	408480	^
16, 80, 144	408460	/	32, 96, 160	408468	?	48, 112, 176	408418	O	64, 128, 192	408467	-

Fig. 78—408392BD Carrier and Type Pallet Arrangement (Friction and Tractor Feed – 80-Column) (ASCII Monocase)



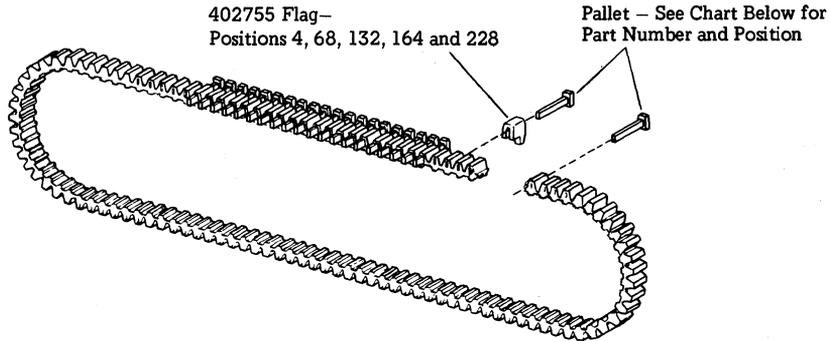
POSITION NUMBER	PART NO.	CHAR.	POSITION NUMBER	PART NO.	CHAR.	POSITION NUMBER	PART NO.	CHAR.
1, 65, 129, 193, 257	400841	~	23, 87, 151, 215, 279	408399	6	45, 109, 173, 237	408415	L
2, 66, 130, 194, 258	408469	!	24, 88, 152, 216, 280	408400	7	46, 110, 174, 238	408416	M
3, 67, 131, 195, 259	408465	"	25, 89, 153, 217, 281	408401	8	47, 111, 175, 239	408417	N
4, 68, 132, 196, 260	408477	#	26, 90, 154, 218, 282	408402	9	48, 112, 176, 240	408418	O
5, 69, 133, 197, 261	408483	\$	27, 91, 155, 219, 283	408463	:	49, 113, 177, 241	408419	P
6, 70, 134, 198, 262	408476	%	28, 92, 156, 220, 284	408464	;	50, 114, 178, 242	408420	Q
7, 71, 135, 199, 263	408478	&	29, 93, 157, 221, 285	408472	<	51, 115, 179, 243	408421	R
8, 72, 136, 200, 264	408466	'	30, 94, 158, 222, 286	408459	=	52, 116, 180, 244	408422	S
9, 73, 137, 201, 265	408470	(	31, 95, 159, 223, 287	408473	>	53, 117, 181, 245	408423	T
10, 74, 138, 202, 266	408471	)	32, 96, 160, 224, 288	408468	?	54, 118, 182, 246	408424	U
11, 75, 139, 203, 267	408456	*	33, 97, 161, 225	408479	@	55, 119, 183, 247	408425	V
12, 76, 140, 204, 268	408457	+	34, 98, 162, 226	408404	A	56, 120, 184, 248	408426	W
13, 77, 141, 205, 269	408462	,	35, 99, 163, 227	408405	B	57, 121, 185, 249	408427	X
14, 78, 142, 206, 270	408458	-	36, 100, 164, 228	408406	C	58, 122, 186, 250	408428	Y
15, 79, 143, 207, 271	408461	.	37, 101, 165, 229	408407	D	59, 123, 187, 251	408429	Z
16, 80, 144, 208, 272	408460	/	38, 102, 166, 230	408408	E	60, 124, 188, 252	408474	[
17, 81, 145, 209, 273	408403	0	39, 103, 167, 231	408409	F	61, 125, 189, 253	408485	\
18, 82, 146, 210, 274	408394	1	40, 104, 168, 232	408410	G	62, 126, 190, 254	408475	]
19, 83, 147, 211, 275	408395	2	41, 105, 169, 233	408411	H	63, 127, 191, 255	408480	^
20, 84, 148, 212, 276	408396	3	42, 106, 170, 234	408412	I	64, 128, 192, 256	408467	_
21, 85, 149, 213, 277	408397	4	43, 107, 171, 235	408413	J			
22, 86, 150, 214, 278	408398	5	44, 108, 172, 236	408414	K			

Fig. 79-408393BE Carrier and Type Pallet Arrangement (Tractor Feed - 132-Column) (ASCII Monocase)



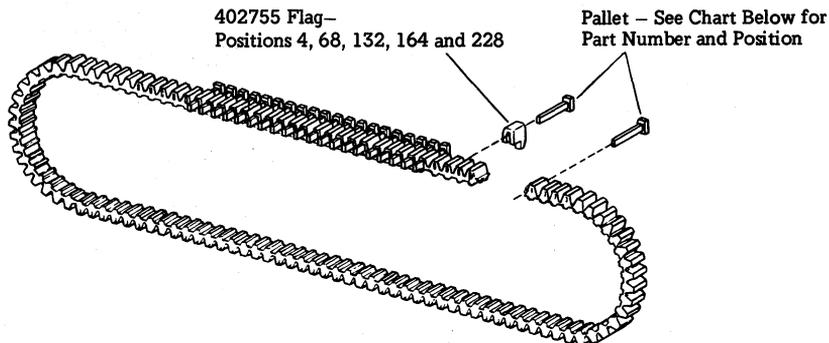
POSITION NUMBER	PART NO.	CHAR.	POSITION NUMBER	PART NO.	CHAR.
1, 49, 97, 145, 193, 241	400842	Q	25, 73, 121, 169, 217, 265	400692	K
2, 50, 98, 146, 194, 242	400655	&	26, 74, 122, 170, 218, 266	400693	L
3, 51, 99, 147, 195, 243	400662	-	27, 75, 123, 171, 219, 267	400694	M
4, 52, 100, 148, 196, 244	400664	/	28, 76, 124, 172, 220, 268	400695	N
5, 53, 101, 149, 197, 245	400665	Ø	29, 77, 125, 173, 221, 269	400696	O
6, 54, 102, 150, 198, 246	400666	1	30, 78, 126, 174, 222, 270	400697	P
7, 55, 103, 151, 199, 247	400667	2	31, 79, 127, 175, 223, 271	400698	Q
8, 56, 104, 152, 200, 248	400668	3	32, 80, 128, 176, 224, 272	400699	R
9, 57, 105, 153, 201, 249	400669	4	33, 81, 129, 177, 225, 273	400700	S
10, 58, 106, 154, 202, 250	400670	5	34, 82, 130, 178, 226, 274	400701	T
11, 59, 107, 155, 203, 251	400671	6	35, 83, 131, 179, 227, 275	400702	U
12, 60, 108, 156, 204, 252	400672	7	36, 84, 132, 180, 228, 276	400703	V
13, 61, 109, 157, 205, 253	400673	8	37, 85, 133, 181, 229, 277	400704	W
14, 62, 110, 158, 206, 254	400674	9	38, 86, 134, 182, 230, 278	400705	X
15, 63, 111, 159, 207, 255	400682	A	39, 87, 135, 183, 231, 279	400706	Y
16, 64, 112, 160, 208, 256	400683	B	40, 88, 136, 184, 232, 280	400707	Z
17, 65, 113, 161, 209, 257	400684	C	41, 89, 137, 185, 233, 281	400663	.
18, 66, 114, 162, 210, 258	400685	D	42, 90, 138, 186, 234, 282	400660	+
19, 67, 115, 163, 211, 259	400686	E	43, 91, 139, 187, 235, 283	400659	*
20, 68, 116, 164, 212, 260	400687	F	44, 92, 140, 188, 236, 284	400661	,
21, 69, 117, 165, 213, 261	400688	G	45, 93, 141, 189, 237, 285	400656	'
22, 70, 118, 166, 214, 262	400689	H	46, 94, 142, 190, 238, 286	400653	\$
23, 71, 119, 167, 215, 263	400690	I	47, 95, 143, 191, 239, 287	400652	#
24, 72, 120, 168, 216, 264	400691	J	48, 96, 144, 192, 240, 288	400681	@

Fig. 80—408518BF Carrier and Type Pallet Arrangement (Tractor Feed - 132-Column)



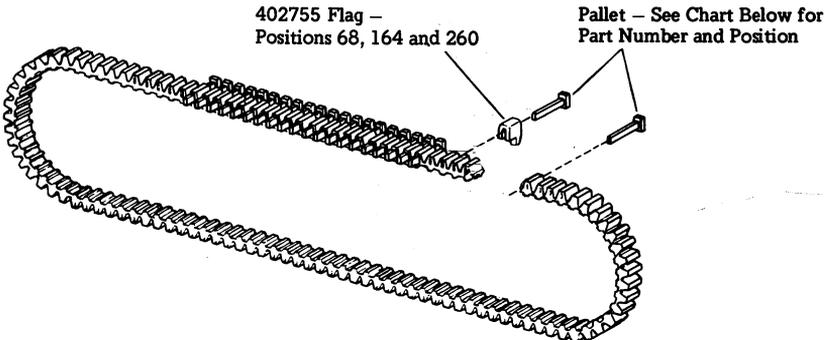
POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.
1, 65, 129, 193, 257	400845	Ⓐ	23, 87, 151, 215, 279	196770	6	45, 109, 173, 237	196751	L
2, 66, 130, 194, 258	400850	Ⓑ	24, 88, 152, 216, 280	196771	7	46, 110, 174, 238	196752	M
3, 67, 131, 195, 259	400859	Ⓒ	25, 89, 153, 217, 281	196772	8	47, 111, 175, 239	196753	N
4, 68, 132, 196, 260	400652	#	26, 90, 154, 218, 282	196773	9	48, 112, 176, 240	196754	O
5, 69, 133, 197, 261	196778	\$	27, 91, 155, 219, 283	400675	:	49, 113, 177, 241	196755	P
6, 70, 134, 198, 262	400654	%	28, 92, 156, 220, 284	400676	;	50, 114, 178, 242	196756	Q
7, 71, 135, 199, 263	196774	&	29, 93, 157, 221, 285	400677	<	51, 115, 179, 243	196757	R
8, 72, 136, 200, 264	400656	^	30, 94, 158, 222, 286	400678	=	52, 116, 180, 244	196758	S
9, 73, 137, 201, 265	400657	(	31, 95, 159, 223, 287	400679	>	53, 117, 181, 245	196759	T
10, 74, 138, 202, 266	400658	)	32, 96, 160, 224, 288	400680	?	54, 118, 182, 246	196760	U
11, 75, 139, 203, 267	400853	Ⓔ	33, 97, 161, 225	400851	Ⓐ	55, 119, 183, 247	196761	V
12, 76, 140, 204, 268	400660	+	34, 98, 162, 226	196740	A	56, 120, 184, 248	196762	W
13, 77, 141, 205, 269	400661	,	35, 99, 163, 227	196741	B	57, 121, 185, 249	196763	X
14, 78, 142, 206, 270	400662	-	36, 100, 164, 228	196742	C	58, 122, 186, 250	196764	Y
15, 79, 143, 207, 271	400663	.	37, 101, 165, 229	196743	D	59, 123, 187, 251	196765	Z
16, 80, 144, 208, 272	400861	/	38, 102, 166, 230	196744	E	60, 124, 188, 252	400856	Ⓔ
17, 81, 145, 209, 273	400857	∅	39, 103, 167, 231	196745	F	61, 125, 189, 253	400709	∖
18, 82, 146, 210, 274	400858	1	40, 104, 168, 232	196746	G	62, 126, 190, 254	400855	Ⓔ
19, 83, 147, 211, 275	196766	2	41, 105, 169, 233	196747	H	63, 127, 191, 255	400852	Ⓔ
20, 84, 148, 212, 276	196767	3	42, 106, 170, 234	196748	I	64, 128, 192, 256	400854	Ⓔ
21, 85, 149, 213, 277	196768	4	43, 107, 171, 235	196749	J			
22, 86, 150, 214, 278	196769	5	44, 108, 172, 236	196750	K			

Fig. 81—408521BJ Carrier and Type Pallet Arrangement (Tractor Feed — 132-Column) (Large Gothic w/Fractions)



POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.	POSITION NUMBER	PART NO.	C H A R.
1, 65, 129, 193, 257	400846	⌘	23, 87, 151, 215, 279	408399	6	45, 109, 173, 237	408415	L
2, 66, 130, 194, 258	408469	!	24, 88, 152, 216, 280	408400	7	46, 110, 174, 238	408416	M
3, 67, 131, 195, 259	408465	"	25, 89, 153, 217, 281	408401	8	47, 111, 175, 239	408417	N
4, 68, 132, 196, 260	408477	#	26, 90, 154, 218, 282	408402	9	48, 112, 176, 240	408418	O
5, 69, 133, 197, 261	408483	\$	27, 91, 155, 219, 283	408463	:	49, 113, 177, 241	408419	P
6, 70, 134, 198, 262	408476	%	28, 92, 156, 220, 284	408464	;	50, 114, 178, 242	408420	Q
7, 71, 135, 199, 263	408478	&	29, 93, 157, 221, 285	408472	<	51, 115, 179, 243	408421	R
8, 72, 136, 200, 264	408503	'	30, 94, 158, 222, 286	408459	=	52, 116, 180, 244	408422	S
9, 73, 137, 201, 265	408470	(	31, 95, 159, 223, 287	408473	>	53, 117, 181, 245	408423	T
10, 74, 138, 202, 266	408471	)	32, 96, 160, 224, 288	408468	?	54, 118, 182, 246	408424	U
11, 75, 139, 203, 267	408456	*	33, 97, 161, 225	408479	@	55, 119, 183, 247	408425	V
12, 76, 140, 204, 268	408457	+	34, 98, 162, 226	408404	A	56, 120, 184, 248	408426	W
13, 77, 141, 205, 269	408462	-	35, 99, 163, 227	408405	B	57, 121, 185, 249	408427	X
14, 78, 142, 206, 270	408458	~	36, 100, 164, 228	408406	C	58, 122, 186, 250	408428	Y
15, 79, 143, 207, 271	408461	.	37, 101, 165, 229	408407	D	59, 123, 187, 251	408429	Z
16, 80, 144, 208, 272	408460	/	38, 102, 166, 230	408408	E	60, 124, 188, 252	400833	~
17, 81, 145, 209, 273	408403	0	39, 103, 167, 231	408409	F	61, 125, 189, 253	408485	\
18, 82, 146, 210, 274	408394	1	40, 104, 168, 232	408410	G	62, 126, 190, 254	408484	
19, 83, 147, 211, 275	408395	2	41, 105, 169, 233	408411	H	63, 127, 191, 255	400835	¢
20, 84, 148, 212, 276	408396	3	42, 106, 170, 234	408412	I	64, 128, 192, 256	408511	—
21, 85, 149, 213, 277	408397	4	43, 107, 171, 235	408413	J			
22, 86, 150, 214, 278	408398	5	44, 108, 172, 236	408414	K			

Fig. 82—408522BK Carrier and Type Pallet Arrangement (Tractor Feed — 132-Column) (EBCDIC Monocase)



POSITION NUMBER	PART NO.	CHAR.									
1, 97, 193	400847	~	25, 121, 217	408401	8	49, 145, 241	408419	P	73, 169, 265	408437	h
2, 98, 194	408469	!	26, 122, 218	408402	9	50, 146, 242	408420	Q	74, 170, 266	408438	i
3, 99, 195	408465	"	27, 123, 219	408463	:	51, 147, 243	408421	R	75, 171, 267	408439	j
4, 100, 196	408477	#	28, 124, 220	408464	;	52, 148, 244	408422	S	76, 172, 268	408440	k
5, 101, 197	408483	\$	29, 125, 221	408472	<	53, 149, 245	408423	T	77, 173, 269	408441	l
6, 102, 198	408476	%	30, 126, 222	408459	=	54, 150, 246	408424	U	78, 174, 270	408442	m
7, 103, 199	408478	&	31, 127, 223	408473	>	55, 151, 247	408425	V	79, 175, 271	408443	n
8, 104, 200	408503	'	32, 128, 224	408468	?	56, 152, 248	408426	W	80, 176, 272	408444	o
9, 105, 201	408470	(	33, 129, 225	408479	@	57, 153, 249	408427	X	81, 177, 273	408445	p
10, 106, 202	408471	)	34, 130, 226	408404	A	58, 154, 250	408428	Y	82, 178, 274	408446	q
11, 107, 203	408456	*	35, 131, 227	408405	B	59, 155, 251	408429	Z	83, 179, 275	408447	r
12, 108, 204	408457	+	36, 132, 228	408406	C	60, 156, 252	400833	^	84, 180, 276	408448	s
13, 109, 205	408462	,	37, 133, 229	408407	D	61, 157, 253	408485	\	85, 181, 277	408449	t
14, 110, 206	408458	-	38, 134, 230	408408	E	62, 158, 254	408484		86, 182, 278	408450	u
15, 111, 207	408461	.	39, 135, 231	408409	F	63, 159, 255	400835	¢	87, 183, 279	408451	v
16, 112, 208	408460	/	40, 136, 232	408410	G	64, 160, 256	408511	—	88, 184, 280	408452	w
17, 113, 209	408403	0	41, 137, 233	408411	H	65, 161, 257	408504	`	89, 185, 281	408453	x
18, 114, 210	408394	1	42, 138, 234	408412	I	66, 162, 258	408430	a	90, 186, 282	408454	y
19, 115, 211	408395	2	43, 139, 235	408413	J	67, 163, 259	408431	b	91, 187, 283	408455	z
20, 116, 212	408396	3	44, 140, 236	408414	K	68, 164, 260	408432	c	92, 188, 284	408508	{
21, 117, 213	408397	4	45, 141, 237	408415	L	69, 165, 261	408433	d	93, 189, 285	400741	
22, 118, 214	408398	5	46, 142, 238	408416	M	70, 166, 262	408434	e	94, 190, 286	408509	}
23, 119, 215	408399	6	47, 143, 239	408417	N	71, 167, 263	408435	f	95, 191, 287	408506	~
24, 120, 216	408400	7	48, 144, 240	408418	O	72, 168, 264	408436	g	96, 192, 288	—	—

Fig. 83—408523BL Carrier and Type Pallet Arrangement (Tractor Feed - 132-Column) (EBCDIC Up/Low)

## SECTION 582-210-702

## Numerical Index

Part Number	Description and Page Number	Part Number	Description and Page Number	Part Number	Description and Page Number
315M	Coil, Magnet 97	42823	Washer, Flat 115,144	93118	Lockwasher 120
1178	Screw, 2-56 x 7/16 Fil 112	44048	Washer, Flat 87,88,89, 90,91,92,93,94	93984	Lockwasher 101,120,126
1210	Screw, 2-56 x 5/8 Fil 144	45815	Lockwasher 80,81,82,87, 88,90 to 94,96 to 100, 102,103,104,106,107, 108,110 to 118,128, 129,131,133,137	93985	Lockwasher 87,88,89,90, 97,98
2191	Lockwasher 80,81,82,87 to 95,97 to 100,103,104, 107,109,111,112,113,120, 121,123,125 to 132,134, 136,138,139,144	49084	Spring 109	94674	Washer, Cup 110
2247	Washer, Flat 101,105	55063	Spring 108	98642	Lockwasher 126,127,132,134
2422	Lockwasher 144	55064	Washer, Flat 88,89,100,113	99737	Screw, 6-40 x 13/64 Fil 111,135
2658	Nut, 6-32 Hex 82	55219	Screw, 8-32 x 3/8 Fil 114	101386	Spring 97,98
2669	Lockwasher 79,91,98, 112	70314	Washer, Flat 99	107116	Lockwasher 79,80,81,82, 86,89,90,96,125,126,127, 128,130,131,132
2836	Spring 116,117,118	70885	Washer, Spring 121,123	110434	Screw, 4-40 x 3/16 Fil 100, 104,108
3438	Washer, Flat 88,96,97, 100,103,108,112,113, 115,128,129,131,133, 137	70886	Washer, Flat 115,121,123	110435	Nut, 4-40 Hex 127,129,131, 132,134
3598	Nut 6-40 Hex 82,87,88, 89,90,97,98,109,112, 113,118,120,125,126, 127,128,129,132,144	71073	Washer, Flat 112	110438	Spring 95
3599	Nut 4-40 Hex 95,101, 111,120,127,144	73419	Washer, Flat 123	110743	Lockwasher 94,116,117, 118,127,137,141,142
3606	Nut, 6-40 Hex 120,121, 123,125,138,139	74014	Screw, 10-32 x 3/4 Hex 113	111342	Spring 88,89,92,93,94,141, 142
3624	Washer, Flat 115	74334	Washer, Flat 121,123	112626	Nut, 10-32 Hex 8081,82,87, 88,90,91,92,93,94,97,98, 99,102,106,110,121,123, 128,129,131,133
3640	Lockwasher 80,81,82,87, 88,94,95,97 to 101,103, 104,105,107,108,111, 115,119,121 to 125,127, 129,131,132,140,144	74701	Spring 141,142	112634	Spring 144
3646	Lockwasher 79,80,82,98, 112,113,114,118,121, 123,144	74805	Screw, 10-32 x 3/4 Hex 112	114215	Post, Spring 101
5599	Nut, 8-32 Hex 143	76461	Washer, Flat 91	117535	Washer, Flat 103,107,111, 114
6345	Nut, 6-32 Hex 112,113, 127,130,131,134	76474	Nut, 10-32 Hex 116,117, 118	119332	Screw, 10-32 x 1/4 Rd -126, 127,132,134
7002	Washer, Flat 88,91 to 95, 97,98,111,112,113,118, 120,125,128,131,132, 136,138,144	76804	Spring 122,124	119648	Ring, Retaining 100,101, 104,105,108,122,124,131, 140
8330	Washer, Flat 111	76966	Setscrew, 10-32 86,87, 88,89,90	119649	Ring, Retaining 101,105, 109,122,124,131,140,144
8449	Spacer .094" Thk 91,111	77902	Screw, 6-40 x 2-3/8 Rd 127,129,131,134	119650	Ring, Retaining 91
22746	Spring 101,105,109	78596	Washer, Friction 100	119651	Ring, Retaining 88 to 94, 100,101,102,104,105,106, 108,110,116,117,118,120 to 124,140,141,142,144
34432	Washer, Flat 112	78824	Spring 138,139	119652	Ring, Retaining 97,98,109, 119,138,139
35826	Washer, Flat 98	80403	Screw, Shoulder 97,98	119653	Ring, Retaining 80,81,82, 115
36273	Washer, Flat 120	80986	Lockwasher 138,139	119654	Ring, Retaining 97,98,115
41385	Spring 97,121,123	82463	Spring 122,124	121242	Clamp, 1/8 ID Cable 82,98
41663	Washer Flat 91,92,93, 94,99,100,102,104, 106,108,110	82702	Screw, 6-40 x 9/32 Flat 88,89,92,93	121243	Clamp, 3/16 ID Cable 120, 125,131,132,144
		82861	Spring 120	121244	Clamp, 1/4 ID Cable 87,88, 93,131,136
		84579	Washer, Flat 91,92,93,94	121245	Clamp, 5/16 ID Cable 80,81,96
		84990	Screw, 6-40 x 1/4 Flat 88,89,90		
		87402	Spring 100,104,140		
		87932	Screw, 8-32 Hex 144		
		88891	Spring 111		
		90684	Spacer 86		
		90790	Washer, Flat 111		
		90791	Lockwasher 88,89,90,127, 129,136		
		91577	Spring 102,106,110		
		92265	Screw, 2-56 x 1/8 Rd 112, 136		
		93117	Lockwasher 112,115,138 139		

Part Number	Description and Page Number	Part Number	Description and Page Number	Part Number	Description and Page Number
121246	Clamp, 3/8 ID Cable 82,132	151565	Bushing, Shoulder 138,139	156874	Screw, 4-40 x 15/16 Fil 126
121249	Clamp, 5/8 ID Cable 128	151610	Washer, Flat 127,129,131, 134	156887	Screw, 10-32 x 9/16 Hex 112
121409	Washer, Insulating 80,81, 82	151629	Nut, 6-40 Lug 91,93,95	158316	Plate, Nut 112
121790	Screw, 6-40 x 1-7/8 Hex 132	151630	Screw, 6-40 x 1/4 Hex 80, 88,111,131,136	162886	Screw, 4-40 x 7/32 Hex 97, 98,138,139
123973	Spring 95	151631	Screw, 6-40 x 5/16 Hex 92, 93,94,97,98,99,112,120	163536	Spacer, .562" Thk 126
124223	Screw, 6-40 Shoulder 120	151632	Screw, 6-40 x 3/8 Hex 120, 125,144	164427	Clip, Capacitor 125,127,130
124241	Spacer 103,107	151634	Bearing, Ball 91,92,93,94	164958	Screw, 4-40 x 1/2 Hex 134
124244	Washer, Felt 140	151686	Screw, 4-40 x 3/8 Fil 126	170018	Bushing 115
124612	Screw, 8-32 x 1/2 Hex 87, 88,89,90,114	151694	Screw, 6-40 x 11/32 Fil 111	173907	Spacer 89
124681	Setscrew, 6-40 87,88	151722	Screw, 6-40 x 3/16 Hex 100, 104,125,126	173974	Screw, 10-32 x 5/16 Hex 91, 92,93,94,96
125004	Screw, 8-32 x 1/4 Rd 80, 81,82,89	151723	Screw, 10-32 x 3/8 Hex 90 to 94,96,97,98	173979	Head, Hammer 101
125005	Screw, 2-56 x 3/16 Rd 80, 81,88,89,90,127,129	151724	Screw, 10-32 x 5/8 Hex 112, 113,137	176418	Ring, Retaining 97,98
125011	Washer, Flat 95,99,100, 101,103,104,107,108,111, 120 to 125,127,129,131, 132,134,140,141,142	151737	Screw, 4-40 x 11/64 Hex 97, 98,138,139	176419	Ring, Retaining 91 to 94,100, 104,108
125181	Screw, 2-56 x 3/8 Fil 138, 139	151880	Nut, 4-40 Hex 88,116,117, 118,122,124,141,142	177113	Insulator 127,129,131,132, 134
125268	Spring 116,117,118	151939	Grommet, Rubber 126	178306	Relay, Power 114,125,126, 128,130
125307	Washer, Flat 112	152445	Spring, Compression 115, 121,123	181204	Washer, Flat 114
125733	Washer, Flat 103,108	152893	Screw, 4-40 x 1/4 Hex 87, 94,99,100,101,103,104,107, 108,111,119,141,142,144	181424	Nut, 6-40 Sq 126
125802	Washer, Flat 88	153441	Screw, 10-32 x 7/16 Hex 111,137	181999	Insulator 127
128357	Ring Retaining 101,105, 109,121,123,138,139,140	153442	Screw, 10-32 x 1/2 Hex 88, 89,91,93,94,97,98,100,102, 104,106,108,110,121,123	182182	Holder, Fuse 125,128 to 133
129765	Shim, .020" Thk 144	153484	Screw, 6-32 Spl 125,126, 128,130	182523	Clamp, 1-3/8" ID Mounting 126
129919	Fuse, SL-BL 4 Amp 128, 129,131,133	153538	Screw, 6-40 x 7/16 Hex 125	182612	Screw, 6-40 x 1-1/2 Hex 131
130696	Washer, Felt 109	153803	Jumper, 5" Slate 125	183464	Post, Spring 144
138031	Bushing, Insulating 120	153817	Screw, 4-40 x 3/8 Hex 88,98, 127,129,131,132	184055	Screw w/Lockwasher, 6-40 x 3/16 Hex 125,126,128,130,132
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