

35 EDGE PUNCHED CARD READER

DISASSEMBLY AND REASSEMBLY

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1. GENERAL

1.01 This section provides disassembly and reassembly instructions for the 35 edge punched card reader (3A READER). It is reissued to accommodate engineering changes. Since this is a general revision, marginal arrows to indicate changes or additions are omitted.

1.02 Disassembly as outlined in this section covers a procedure for removing the principal subassemblies which make up the reader. The craftsman should refer to the exploded views in Section 574-242-800 for an illustration of the mechanism to be disassembled, for location and visual identification of parts, and detailed disassembly and reassembly features.

CAUTION: REMOVE POWER FROM SET OR UNIT BEFORE STARTING ANY DISASSEMBLY PROCEDURES.

1.03 Most maintenance, lubrication and adjustments can be accomplished simply by removing the top plate and cover from the unit. If possible, disassembly should be confined to subassemblies, which can, in some cases, be removed without disturbing adjustments. When reassembling the subassemblies, be sure to check all associated adjustments, clearances and spring tensions.

1.04 If a part that is mounted on shims is removed, the number of shims used at each of its mounting screws should be noted so that the same shim pile-up can be replaced when the part is remounted.

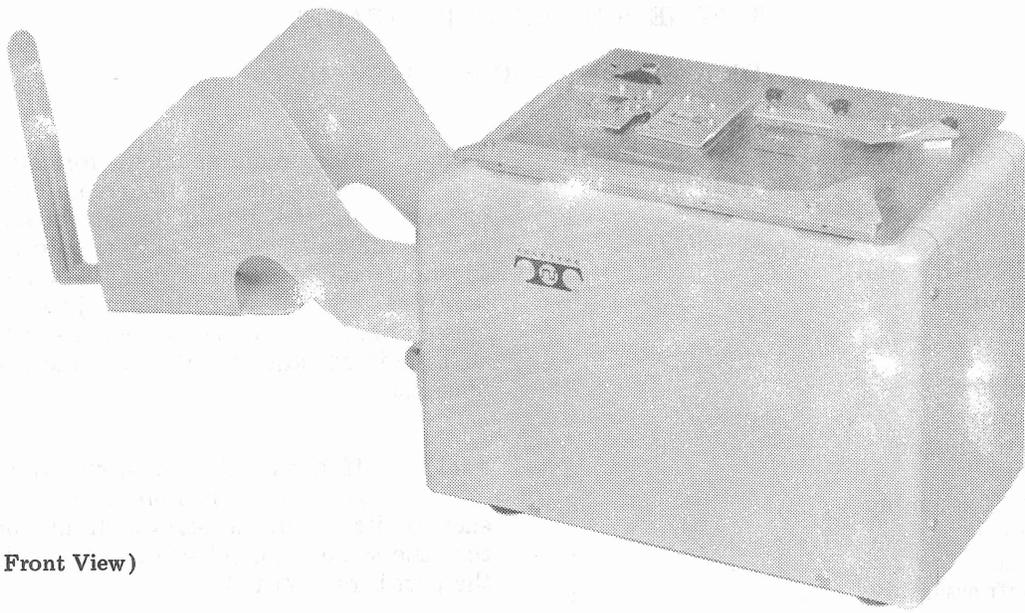
1.05 Retaining rings are made of spring steel and have a tendency to release suddenly when being removed. Loss of these retainers can be minimized as follows: Hold the retainer with the left hand to prevent it from rotating. Place the blade of a suitable screwdriver in one of the slots of the retainer. Rotate the screwdriver in a direction to increase the diameter of the retainer for removal.

1.06 Avoid loss of springs in disassembly by holding one spring loop with the left hand while gently removing the opposite loop with a spring hook. Do not stretch or distort springs in removing them.

1.07 Photographs in this section are of current design units (Figures 1 and 2). Early design units differ from current design units mainly in the top plate and cover arrangements, and to some extent in the internal mechanisms. Where necessary, differences in units are noted.

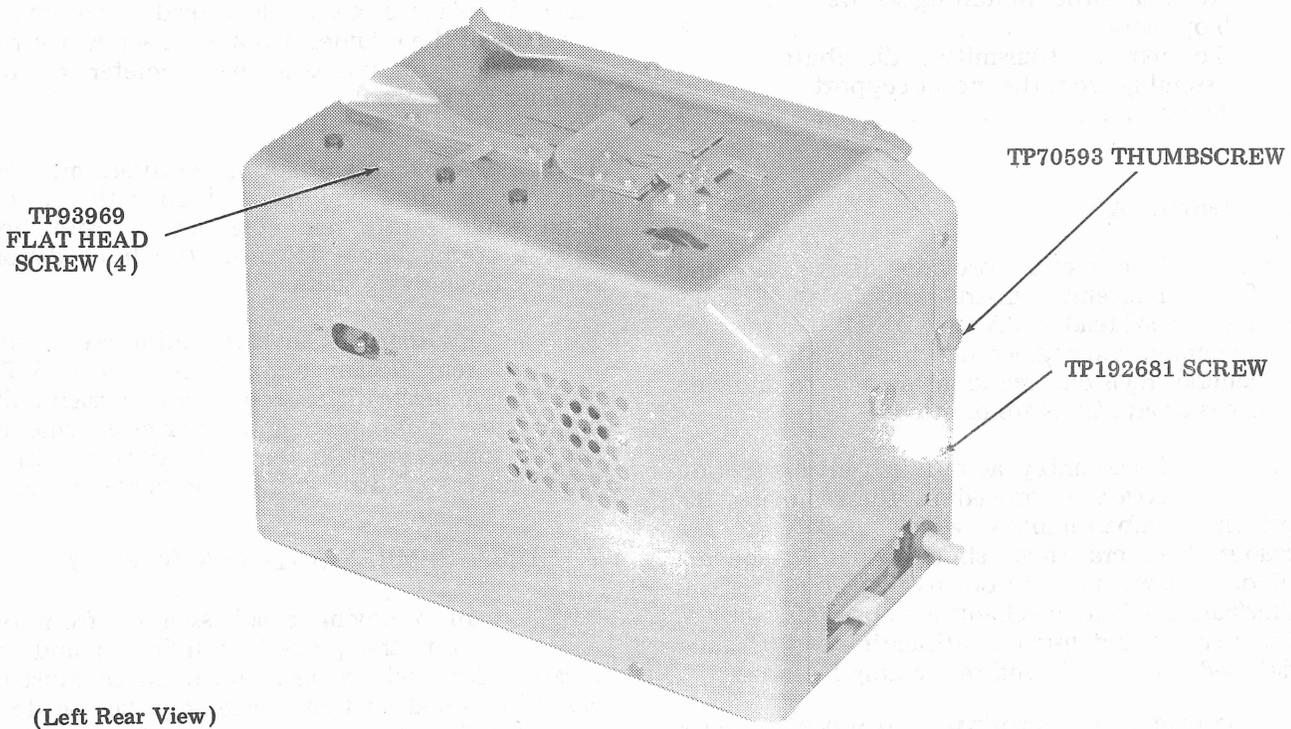
2. DISASSEMBLY AND REASSEMBLY

2.01 In removing a subassembly from the unit, the procedure followed and the location from which parts are removed must be carefully noted so that reassembly can be done correctly. Where no specific instructions are given for reassembly, reverse the procedure used in removing it.



(Right Front View)

Figure 1 - 35 Edge Punched Card Reader With Card Collector



(Left Rear View)

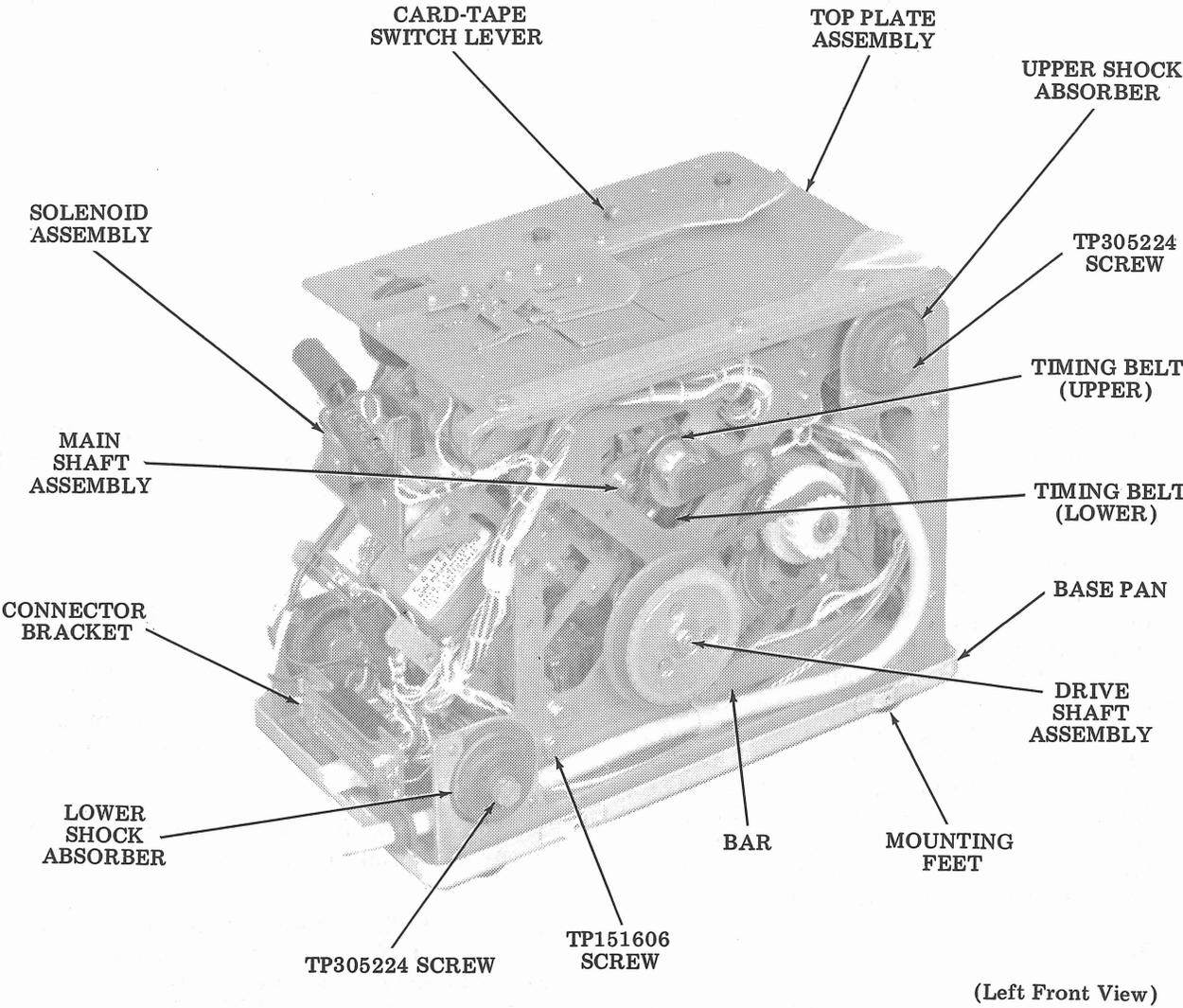
Figure 2 - 35 Edge Punched Card Reader With Card Collector Removed

Top Plate

2.02 To remove the top plate TP305324 assembly, move the card-tape switch lever to the card position (Figure 3). Remove the four flat head screws TP93969 (Figure 2), and remove the top plate assembly. To replace the top plate assembly, have card-tape switch lever (Figure 4) in the card position, guide the pin of the extension TP305069 into the slot of the lever TP305250 (Figure 6). Lower the top plate assembly into place and replace the four screws TP100759.

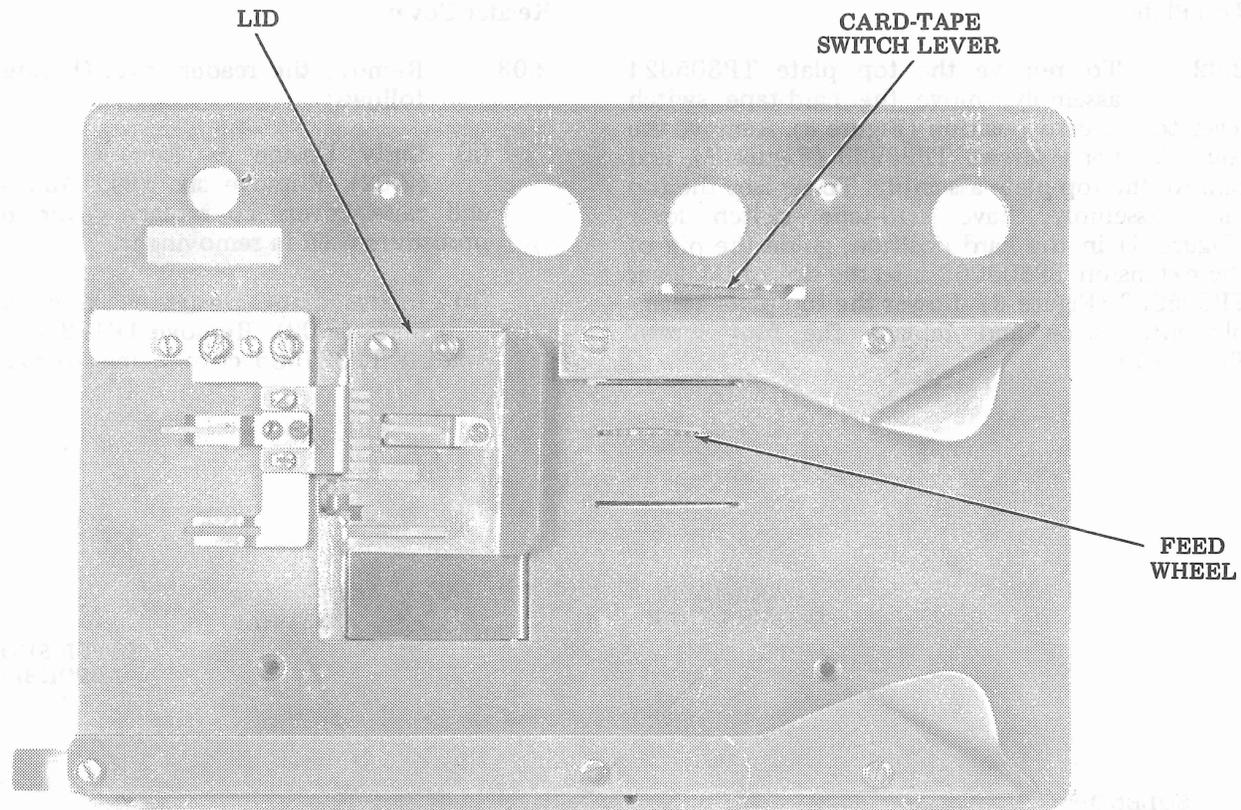
Reader Cover

2.03 Remove the reader cover (Figure 7) as follows:
(a) Early Design — Remove top plate (2.02). Remove six TP110434 screws and raise cover. To replace cover, reverse procedure used in removing it.
(b) Intermediate Design — Remove top plate (2.02). Remove TP192681 screw holding TP327585 cover panel to right end



(Left Front View)

Figure 3 - 35 Edge Punched Card Reader Without Cover



(Top View)

Figure 4 - Top Plate Assembly

of pan and remove cover panel. Remove six TP110434 screws and raise cover. To replace cover, reverse procedure used in removing it.

(c) Current Design — Loosen two TP70593 thumbscrews and remove card collector from left end of cover. Remove front cover by removing two TP192681 screws from right flange, three from left flange, and two from bottom edge, and sliding cover forward off unit. Slide grommet on power cord out of slot on left flange of front cover. Remove rear cover by removing two TP192681 screws from bottom edge and one from left flange and sliding cover off rear of unit. To replace, reverse procedure used in removal. Make sure grommet on power cord is seated in slot on left flange of front cover.

Base Pan

2.04 To remove the base pan TP305340, follow the procedure outlined in paragraph "Reader Cover." Remove the four screws

TP1093 holding the mounting feet TP142352 (Figure 3). To replace the base pan, reverse the procedure used to remove it.

Circuit Card

2.05 To remove the circuit card assembly TP305273, follow the procedure outlined in paragraph "Base Pan." Tilt unit to its side, grasp end of card away from the connector TP198649, and withdraw card from unit. To replace card, reverse the procedure used to remove it.

To Pivot Reader about the Lower Shock Absorber Mounting Screws

2.06 Follow the procedure outlined in paragraph "Base Pan." Remove the circuit card TP305273 and the timing belt (Figure 5). Remove the four screws TP151606, disconnecting the bars TP305234 and TP305235 (Figures 3 and 8) from front and rear of the reader assembly.

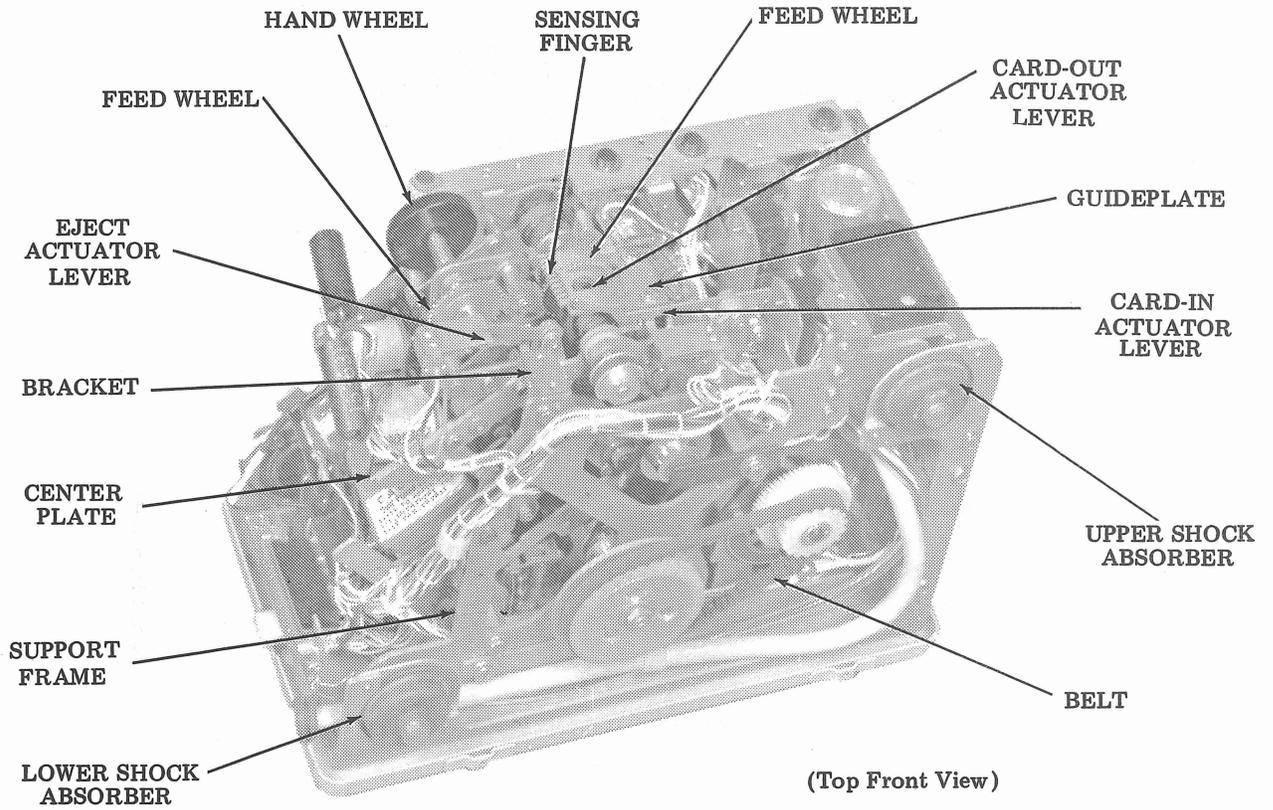


Figure 5 - 35 Edge Punched Card Reader Without Top Plate and Cover

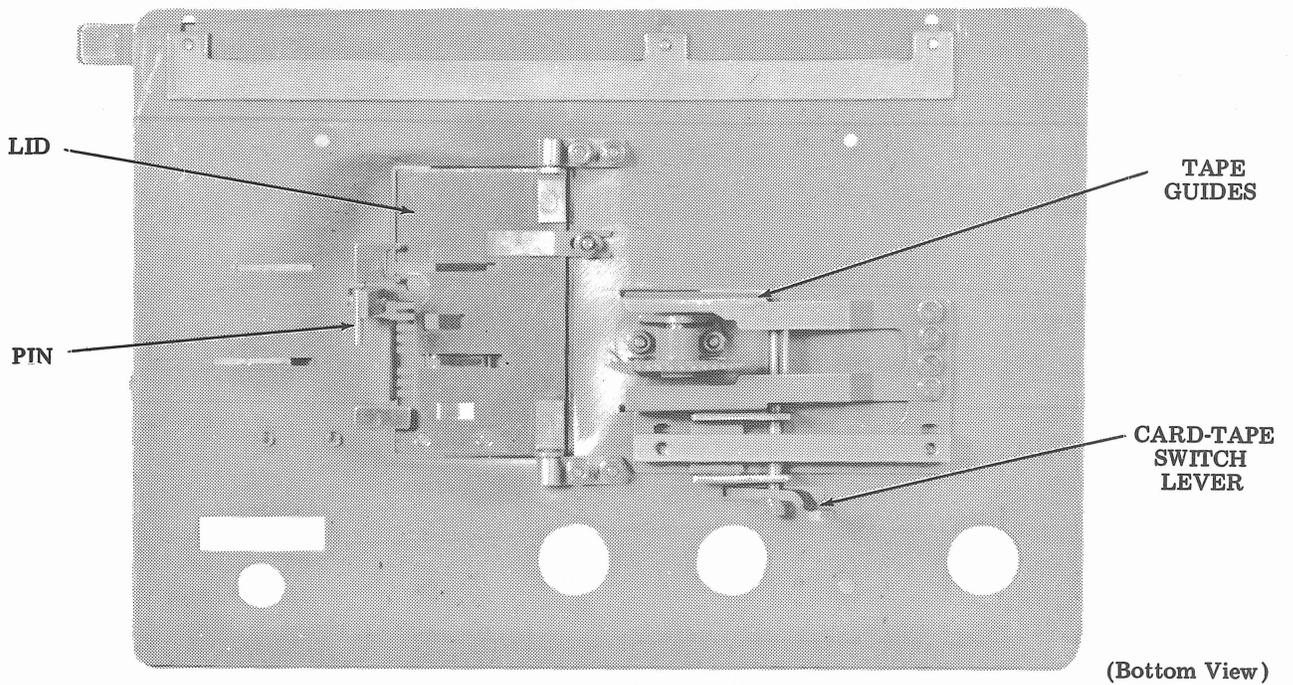
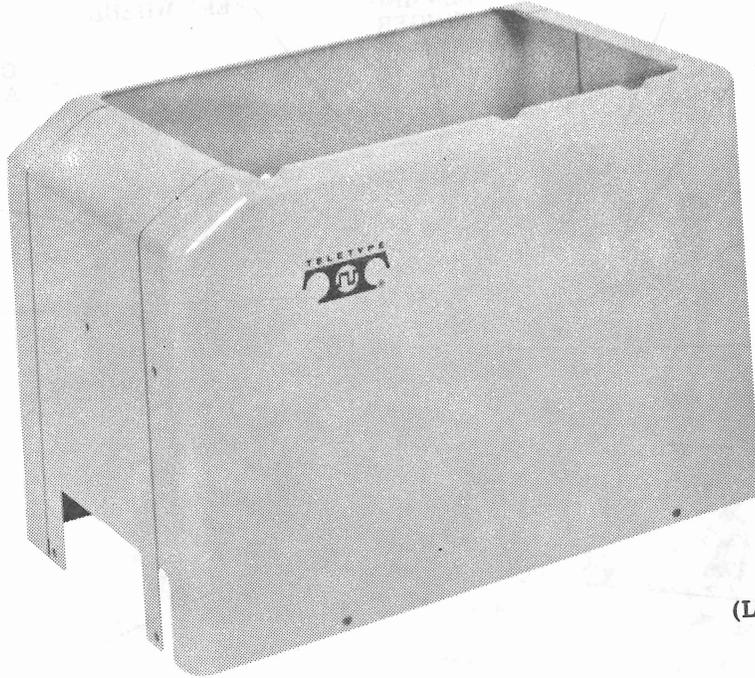
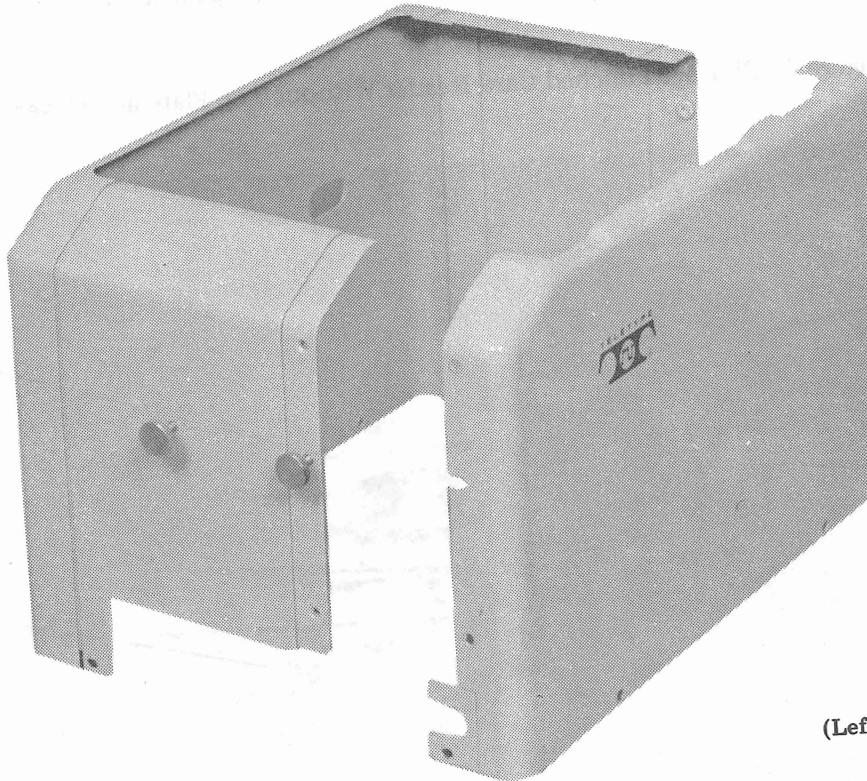


Figure 6 - Top Plate Assembly



(Left Front View)

EARLY DESIGN



(Left Front View)

CURRENT DESIGN

Figure 7 - Cover Assembly

Note: For access to the bar mounting screws on the rear of the unit, it may be necessary to remove the nut and lockwasher and unscrew the fan.

Loosen the lower two and remove the upper two mounting screws TP305224 from the shock absorbers TP305246 (Figures 3 and 8). Remove the ground strap adjacent to the fan. Pivot unit upward about lower shock absorbers. To reassemble the unit, use the above procedure in exact reverse order.

CAUTION: EXERCISE CARE IN PIVOTING THE UNIT. DO NOT PLACE EXCESSIVE TENSION ON CABLING OR PARTS.

Guideplate

2.07 To remove the guideplate TP321626 (Figure 5), follow the procedure outlined in paragraph "Top Cover." Take out the

two screws TP151630 holding the guideplate. Lift off the guideplate. To replace the guideplate, guide the sensing fingers TP305225, the card-out actuator TP305245 and the feed wheel TP305260 (Figure 5) into their respective slots. Align the guideplate to square the row of sensing fingers with the direction of card travel. Tighten the screws TP151630, using flat washers TP8330 and lockwashers TP2191.

To Remove Transmitter Distributor Assembly from the Motor Support Frame

2.08 Follow the procedure outlined in paragraph "To Pivot Reader about the Lower Shock Absorber Mounting Screws" of this section, except remove the lower mounting screws TP305224. Remove the two mounting screws TP151722 holding the connector bracket TP305278 (Figure 3). Note that the cable still ties the assemblies. To reassemble the transmitter distributor assembly, reverse the procedure used to remove it.

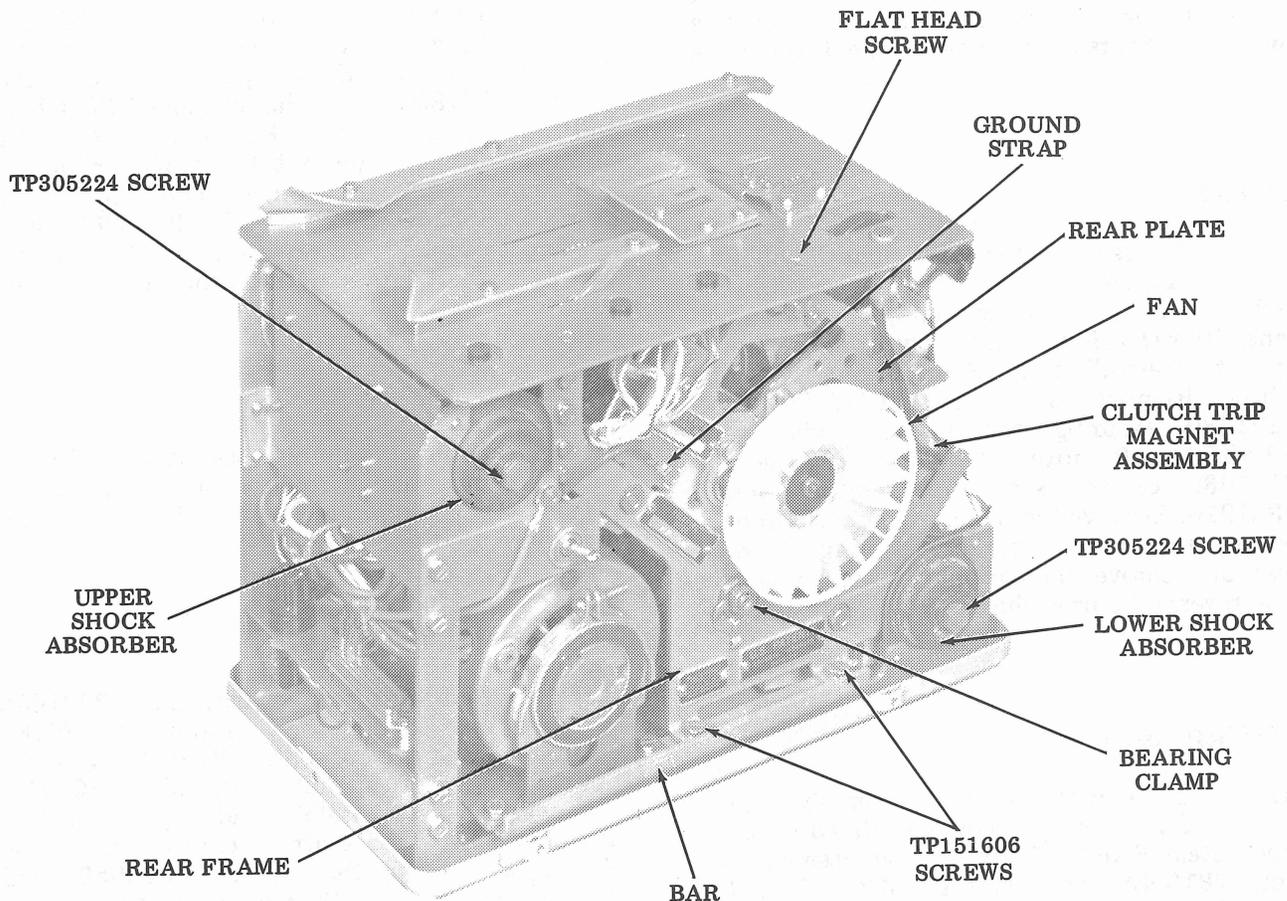


Figure 8 - 35 Edge Punched Card Reader

SECTION 574-242-702

Rear Frame

2.09 To disassemble the rear frame TP305233 (Figure 8), follow procedure outlined in paragraph "To Remove Transmitter Distributor Assembly from the Motor Support Frame" of this section. Remove the two nuts TP112626. Remove the nut TP3595 from the shaft TP305211. Remove the screws TP151631 holding the top plate bracket and remove the screws TP152893 fastening the terminal strip holder TP305223. Remove the rear frame. To assemble the rear frame, reverse the procedure used to remove it.

Drive Shaft Assembly

2.10 To remove drive shaft assembly (Figure 3), follow the procedure outlined in paragraph "Rear Frame" of this section. Remove the nut TP3595, the screw TP151658, and the pulley assembly TP305317. Remove the bearing retainer ring TP156588. Remove the shaft TP305211 towards the gear side. To assemble drive shaft, reverse the procedure used to remove it.

Rear Plate

2.11 To remove the rear plate TP305201 (Figure 8), follow the procedures outlined in paragraphs "Guideplate," "To Remove Transmitter Distributor Assembly from the Motor Support Frame," and "Rear Frame" of this section. Remove the screws TP151722 and TP151630 securing the bracket with post TP156531. Remove the mounting screws TP151630 of the signal regenerator contact TP321916. Remove the bearing clamp TP156588. Remove the clutch trip latch spring TP7603. Raise and remove the rear plate. To assemble rear plate, reverse the procedure used to remove it.

Main Shaft Assembly

2.12 To remove main shaft assembly (Figure 3), follow procedure outlined in paragraph "Rear Plate" of this section. Remove the clamp TP156831 and plate TP156832 from the front plate TP160024. Remove the main shaft assembly TP305332. To replace main shaft assembly, reverse the procedure used to remove it.

Center Plate

2.13 To remove the center plate TP305300 (Figure 5), follow procedure outlined in paragraph "Main Shaft Assembly" of this section. Remove the solenoid plunger pin TP144871 from the solenoid TP305308 (Figure 3). Remove the mounting screw TP310158, the solenoid, and the hand wheel TP305248 (Figure 5). Remove the retainer ring TP128357 holding the bail and link assembly TP305268. Remove the assemblies TP305268 and TP305275. Remove the post TP305067, two nuts TP3598, and the shoulder nut TP162499. Remove the eccentric screw TP162498 from the plate TP174010. Remove the lockwasher TP136083 from the guide post TP172899. Remove the spring TP7603 from the clutch trip lever TP177048. Raise and remove the center plate TP305300. To assemble the center plate, reverse the procedure used to remove it.

Feed Wheel

2.14 To remove the feed wheel TP305260 (Figure 5), loosen the setscrew TP107256 of the timing pulley, remove the setscrew TP180595 in the bushing TP305259, and remove the screw TP151732 holding the drum TP305263. Pull out the shaft TP305258 and remove the clutch release TP305262, shaft drum TP305263, feed wheel TP305260, and bushing TP305259. To replace feed wheel assembly with shaft, reverse the procedure used to remove it.

Timing Belt (Upper)

2.15 Remove the pulley assembly TP321638 and timing belt (upper) TP320189 (Figure 3). To replace timing belt, reverse the procedure used to remove it.

Timing Belt (Lower)

2.16 Remove the pulley assembly TP321638 and timing belt (lower) TP320189 (Figure 3). Remove the screw TP151658 from the hub TP305215 of the pulley assembly TP305317. Remove the nut TP3595 and slip the pulley assembly off the shaft. Remove the screw TP151722 holding the retainer TP156588 and remove the bearing. Withdraw the timing belt TP320189 from the unit through the bearing hole in the front frame TP305232. To install belt, reverse the procedure used to remove it.

Clutch Trip Magnet Assembly

2.17 To remove the clutch trip magnet assembly (Figure 8), pivot the reader about the front shock absorber mounting screws TP305224. Remove the four screws TP151630 that mount the solenoid mounting bracket TP305066. Remove the two screws TP151630 that hold the clutch trip magnet assembly TP305337 to the rear plate TP305201. With a spring hook, guide the end of the magnet arma-

ture extension TP156534 past the follower plate TP174010 and the eccentric screw TP162498 on the code reading contact mechanism. To replace the magnet assembly, reverse the procedure used to remove it.

2.18 For further disassembly, refer to the exploded views in parts literature. It may be necessary in some instances to remove some wiring. When this is done, make note of how wiring was originally placed.