

“DATASPEED®” MAGNETIC TAPE SET

DISASSEMBLY AND REASSEMBLY

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1. GENERAL

1.01 This section provides the disassembly and reassembly procedures for the Dataspeed Magnetic Tape Sets (Figure 1). It is reissued to include information presented in TCNs 1568 and 1707, to include engineering changes, and to permit standard distribution. Changes and additions are indicated by marginal arrows. Issues 1 and 2 of this section were limited printings and did not receive standard distribution.

1.02 The disassembly procedure divides the components of the set into their major subassemblies. If further disassembly is required refer to Section 578-300-800 which shows a detailed arrangement of the parts.

1.03 Disassembly should be confined to subassemblies, which can, in some cases, be removed without disturbing adjustments.

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

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

1.06 In removing a subassembly from the component the procedure followed and the location from which parts are removed should be carefully noted so that the unit can be correctly reassembled.

1.07 Refer to Section 570-005-800 for the tools necessary for disassembly and reassembly procedures.

1.08 For component removal and replacement procedures refer to Section 578-300-702.

CAUTION: REMOVE ALL POWER BEFORE ATTEMPTING ANY DISASSEMBLY, OR BEFORE REMOVING OR REPLACING CARDS IN ELECTRONICS MODULE.

2. DISASSEMBLY

MAGNETIC TAPE TRANSPORT

A. Top Plate Assembly

2.01 To remove the top plate assembly:

(1) Remove the tape transport from the cabinet then remove two head cable connector mounting posts (Figure 2). Remove connector. In late design units which have the lamp brightness rheostat assembly, the rheostat assembly is freed upon removal of the head cable connector.

(2) Remove three connectors labeled J211, J212, and J213 from the tape transport service module, also two fast access coil leads.

(3) Loosen lower dust trap mounting screw (TP151722) then lower dust trap and tighten screw.

(4) Remove the reel drive belt (TP337193) from the gear shift pulley.

(5) Remove the counter drive belt (TP337223) from the pulleys on the capstan shaft and counter shaft.

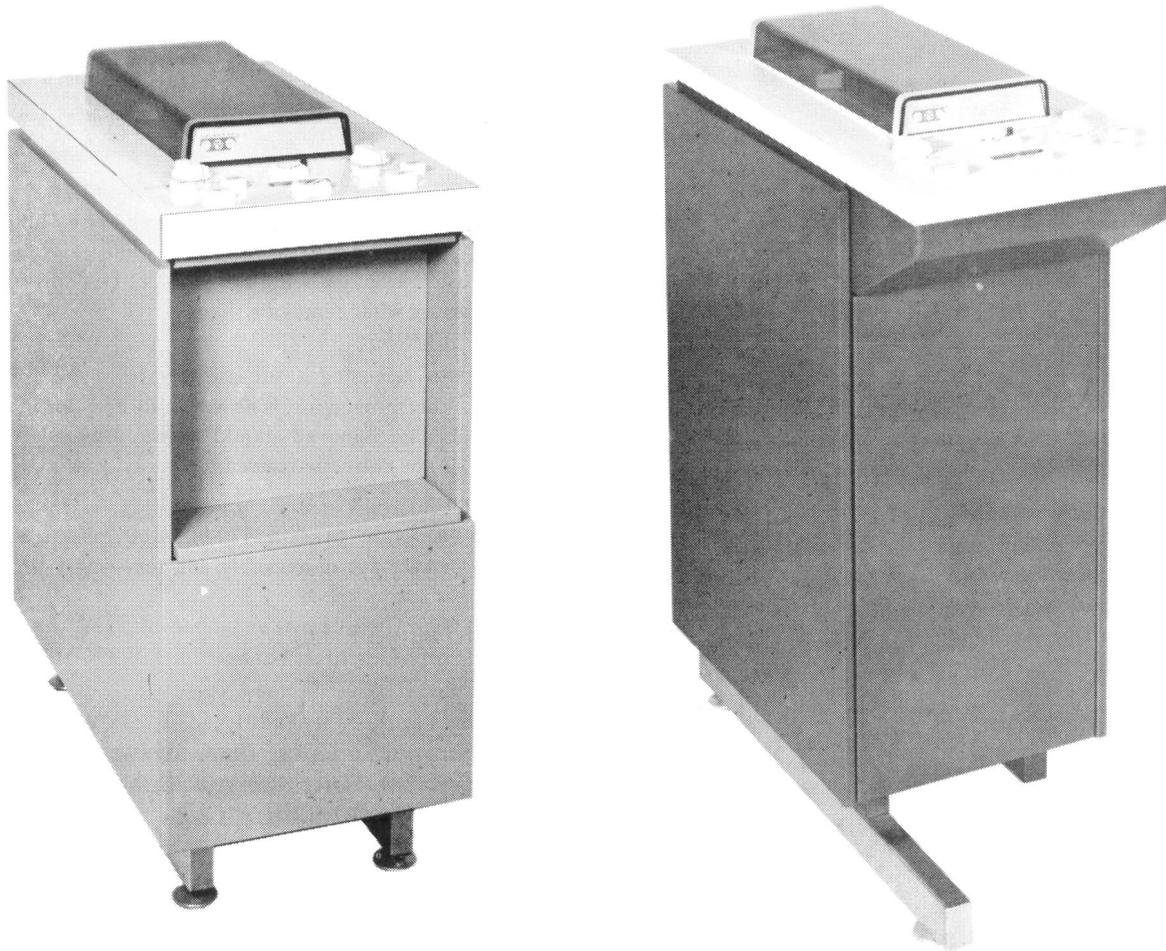


Figure 1 - Magnetic Tape Set for Stand-Alone Operation or 33, 35, or 37 Adjunct Use (Left), and for Use With Parallel Interface Terminals Such as the CDT (Right)

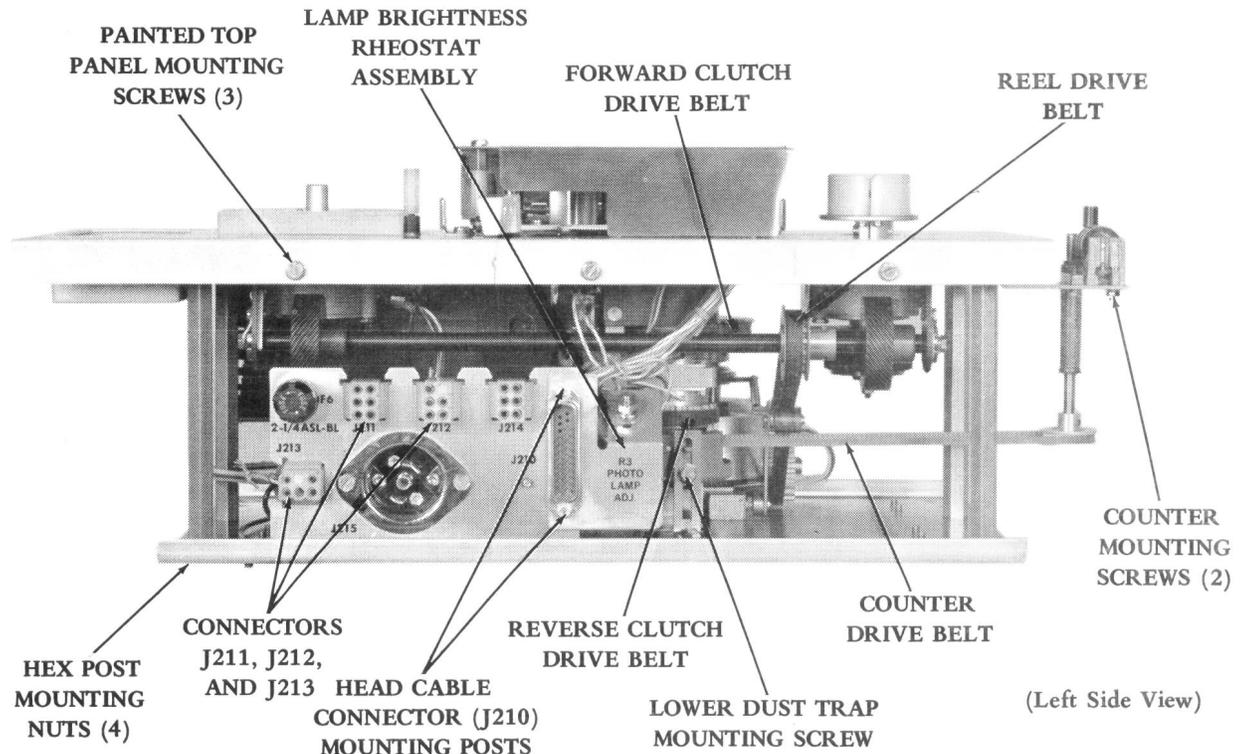
- (6) Remove four top plate assembly hex post mounting nuts (TP112626).
- (7) Raise top plate assembly so hex posts clear baseplate. Set assembly down on baseplate.
- (8) Remove the forward clutch drive belt (TP337106) from the forward direction pulley (upper) on the gearshift mechanism.
- (9) Remove the reverse clutch drive belt (TP337106) from the capstan clutch pulley.
- (10) Remove the top plate assembly from the transport.

B. Tape Position Indicator (Counter)

2.02 To remove the tape position indicator (counter):

- (1) Remove the counter drive belt (2.01, Step 5).
- (2) Remove two each counter mounting screws (TP152893), lockwashers (TP110743), and flat washers (TP125011) from the underside of the counter mounting bracket.

Note: After reassembling tape position indicator, refer to Section 578-300-700 COUNTER DRIVE BELT TENSION and perform adjustment.



Note: Late design transport shown. Early design unit does not have brightness rheostat adjacent to J210.

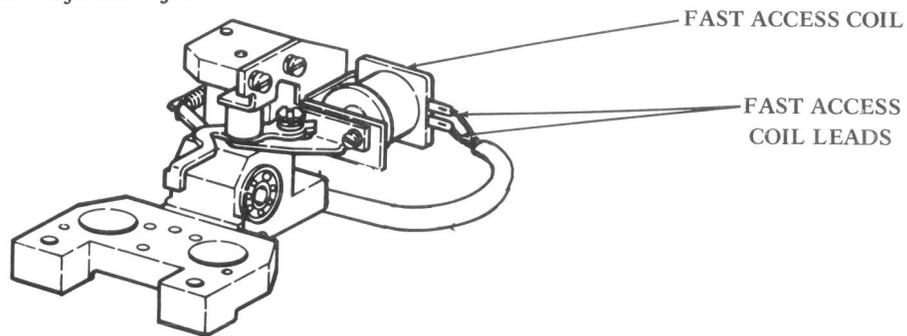


Figure 2 - Magnetic Tape Transport

C. Tape Drive Assembly

2.03 To remove the tape drive assembly:

- (1) Remove the top plate assembly (2.01), then remove left-hand head cover (TP337005) by lifting straight up.
- (2) In early design units (Figure 3), remove right-hand head cover (TP337006) by loosening the head cover clamp screw (TP151630) and lifting straight up. In late design units, pivot right-hand head cover open on its hinge.

Note: Before proceeding with the next step be sure that the pinch roller engagement lever is in the RELEASE position (towards the rear of the unit).

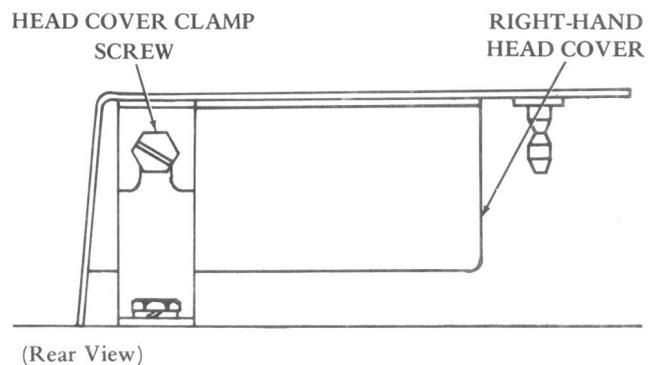
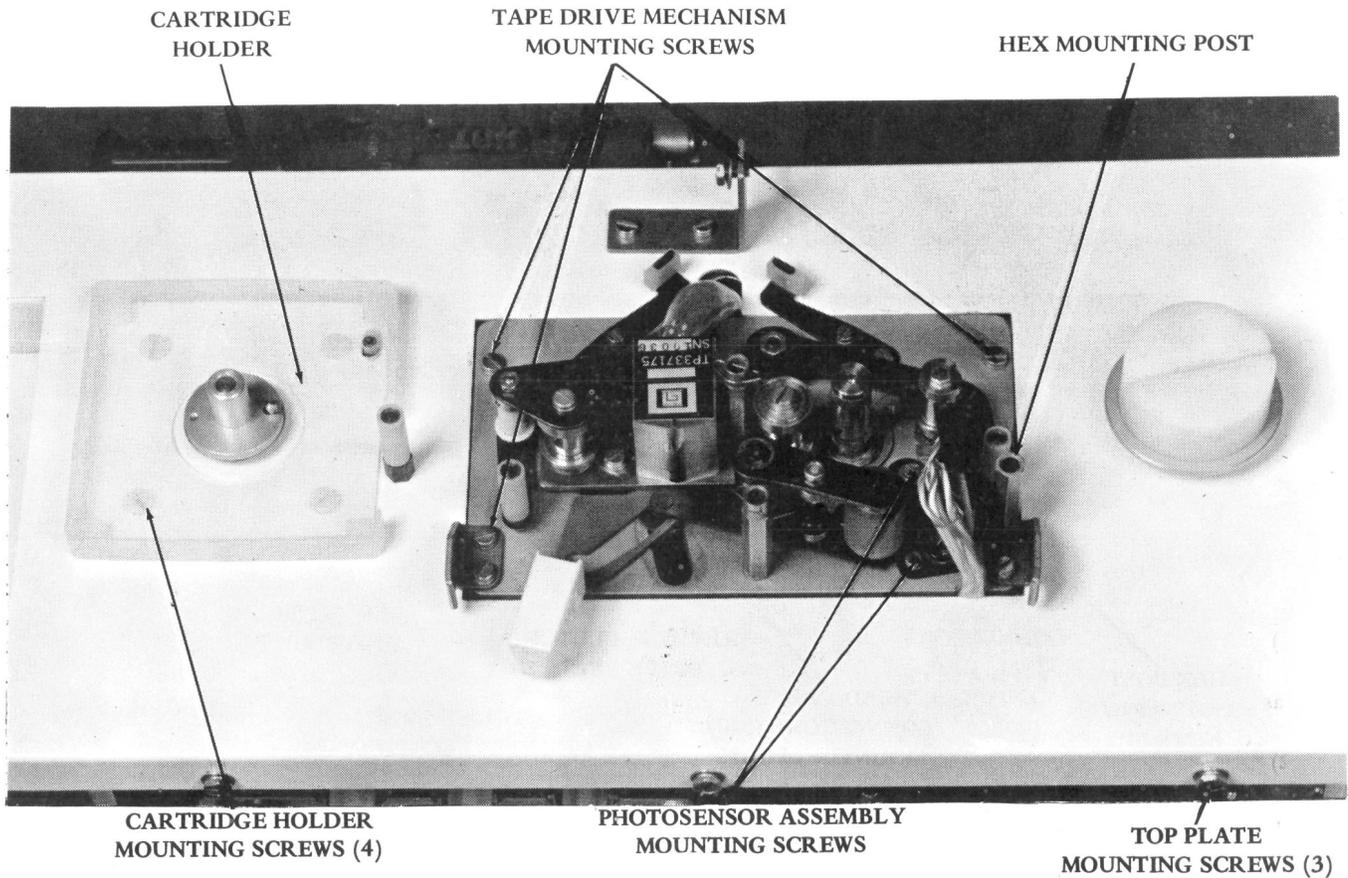


Figure 3 - Right-Hand Head Cover (Early Design)



➔ **Note:** Early design unit with removable head covers shown. Mounting screws are in same positions in late design units with hinged head cover.

Figure 4 - Tape Transport With Head Covers Removed

- (3) Remove one hex mounting post (TP337209) and three drive mechanism mounting screws (TP151346) (Figure 4).
- (4) Lift the left side of the assembly slightly to the right, raise and remove.

CAUTION: DO NOT USE THE TAPE HEAD OR TENSION ARMS AS A HANDLE TO REMOVE THE ASSEMBLY.

D. Reel Drive Mechanism

2.04 To remove the reel drive mechanism:

- (1) Remove the top plate assembly (2.01) from the baseplate, and the tape drive mechanism (2.03) from the top plate assembly.
- (2) Loosen supply reel hub setscrew (TP301477) (Figure 5) and remove hub.

Note: After reassembling supply reel hub, refer to Section 578-300-700 SUPPLY REEL HUB HEIGHT AND CLEARANCE and perform adjustment as indicated.

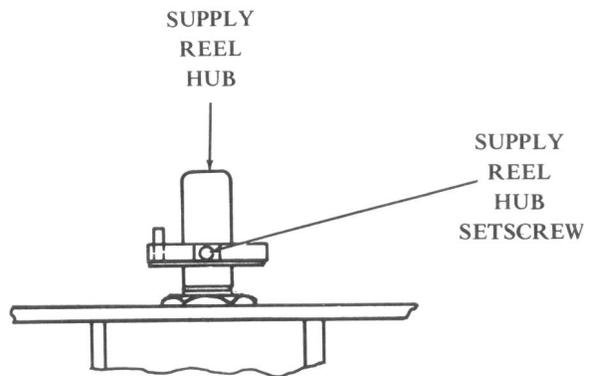


Figure 5 - Supply Reel

- (3) Loosen two take-up reel hub mounting screws (TP151687) (Figure 6) and remove hub.

Note: After reassembling take-up reel hub, refer to Section 578-300-700 TAKE-UP REEL HUB HEIGHT AND CLEARANCE and perform adjustment as indicated.

- (4) Remove three top panel mounting screws (TP151630) (Figure 4), slide top panel to left and remove.
- (5) Remove six reel drive mechanism mounting screws (TP151631) (Figure 7) and remove mechanism.

E. Gearshift Mechanism

2.05 To remove the gearshift mechanism:

- (1) Remove three each gearshift mounting screws (TP151724), lockwashers (TP2669), and flat washers (TP3438) from underside of baseplate.
- (2) Loosen lower dust trap mounting screw (TP151722) then lower dust trap and tighten screw.
- (3) Remove reel drive belt (TP337193) from gearshift pulley; counter drive belt (TP337223) from pulleys on capstan shaft and counter shaft; forward clutch drive

belt (TP337106) from forward direction pulley (upper) on gearshift mechanism; and reverse clutch drive belt (TP337106) from capstan clutch pulley.

- (4) Remove the two front and the right rear motor unit mounting bracket mounting screws (TP151723) (under baseplate), lockwashers (TP2669), and flat washers (TP3438). Loosen left rear mounting screw and pivot motor unit outward to permit removal of gearshift mechanism.

F. Transport Service Module

2.06 To remove transport service module:

- (1) Remove red lead from terminal 2 and blue lead from terminal 3 of motor start relay. Remove yellow lead from terminal 5 of the solid state switch. Remove two head cable connector mounting posts and remove connector. In late design units with lamp brightness rheostat, removal of head cable connector frees rheostat assembly. Remove three connectors labeled J211, J212, and J213 (Figure 8).

Note: If transport contains a running time meter (optional feature), remove meter leads from terminals 4 and 5 of solid state switch.

- (2) Remove four transport service module mounting screws from underneath baseplate and remove service module.

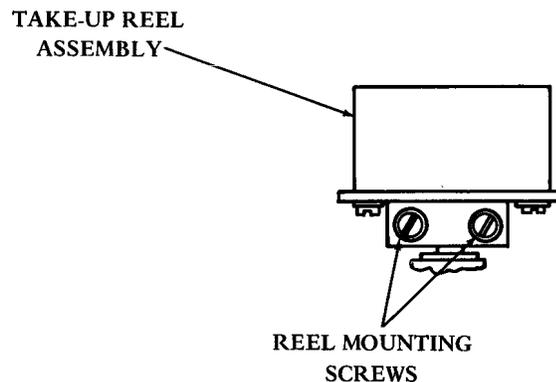


Figure 6 - Take-Up Reel

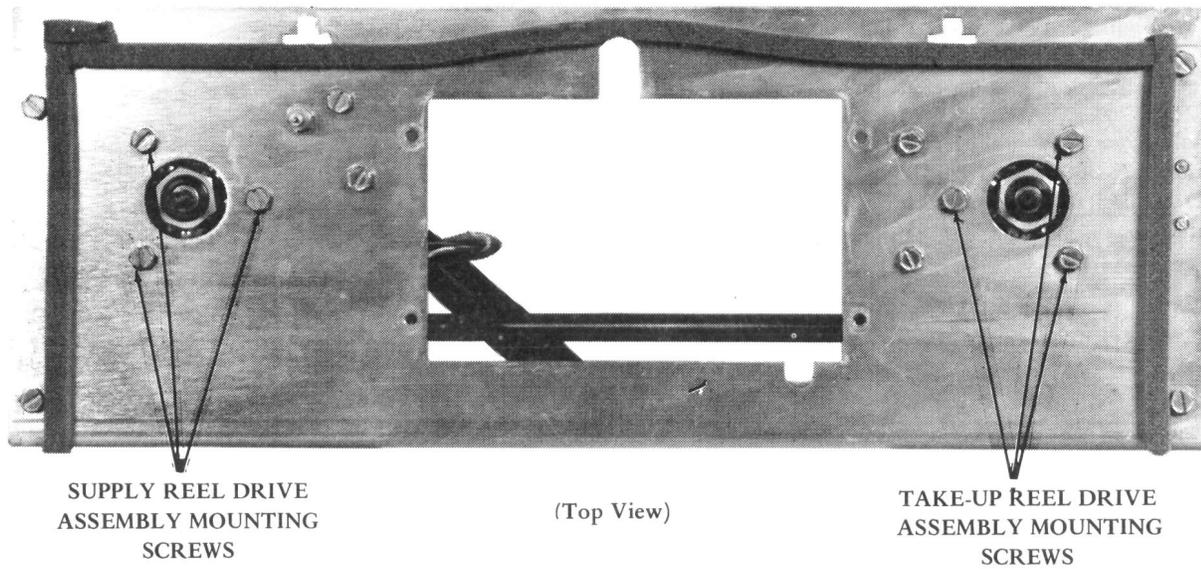


Figure 7 - Top Plate Assembly

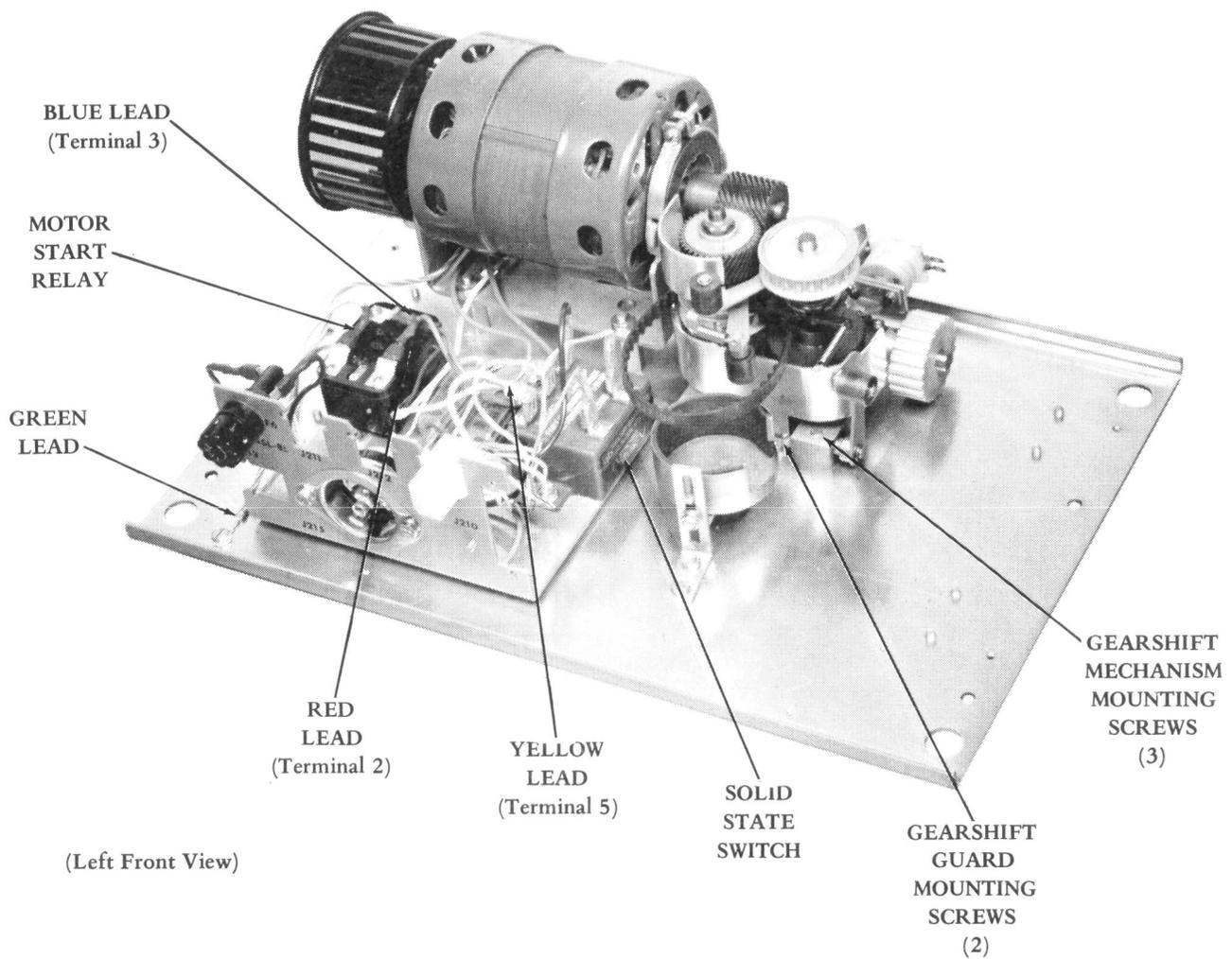


Figure 8 - Baseplate Assembly

G. Motor Unit Assembly

2.07 To remove the motor unit assembly:

- (1) Remove red lead from terminal 2 and blue lead from terminal 3 of the motor start relay. Remove yellow lead from terminal 5 of the solid state switch and green lead from baseplate by removing ground screw.
- (2) Remove four each motor unit mounting bracket mounting screws (under baseplate) (TP151723), lockwashers (TP2669), and flat washers (TP3438) (Figure 9).

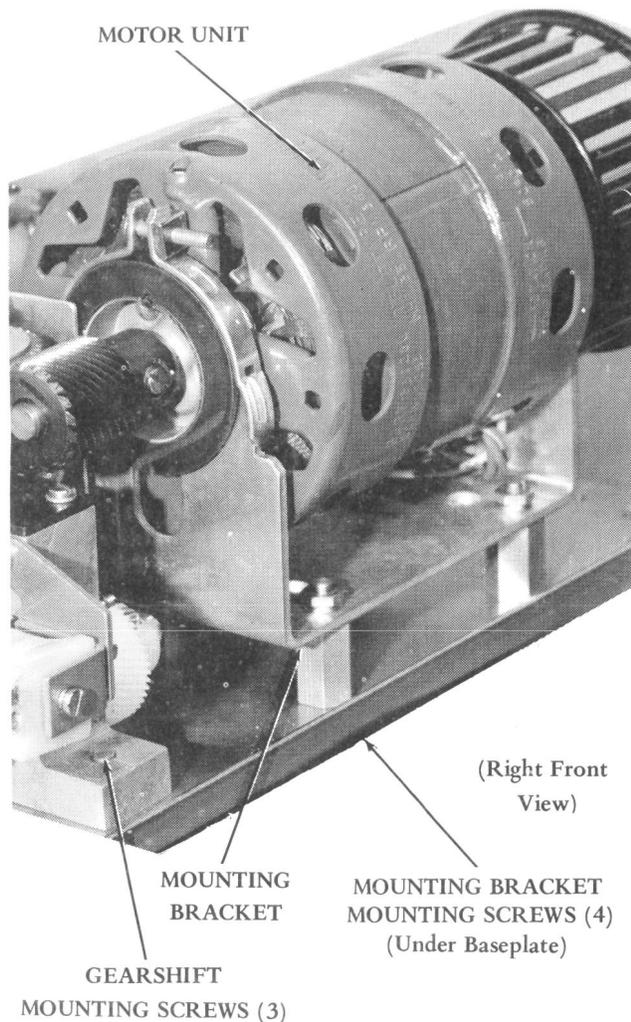


Figure 9 - Motor Unit

H. Running Time Meter (Optional Feature)

2.08 If the tape transport contains a running time meter (left front corner of base), the meter may be removed as follows:

- (1) Remove meter leads from terminals 4 and 5 of solid state switch.
- (2) Remove two each TP163537 screws and TP110743 lockwashers from underside of transport base, and lift meter (TP337427) and two cylindrical spacers (TP337009) from top side of base.

ELECTRONICS MODULE

A. Etched Circuit Card

2.09 To remove an etched circuit card:

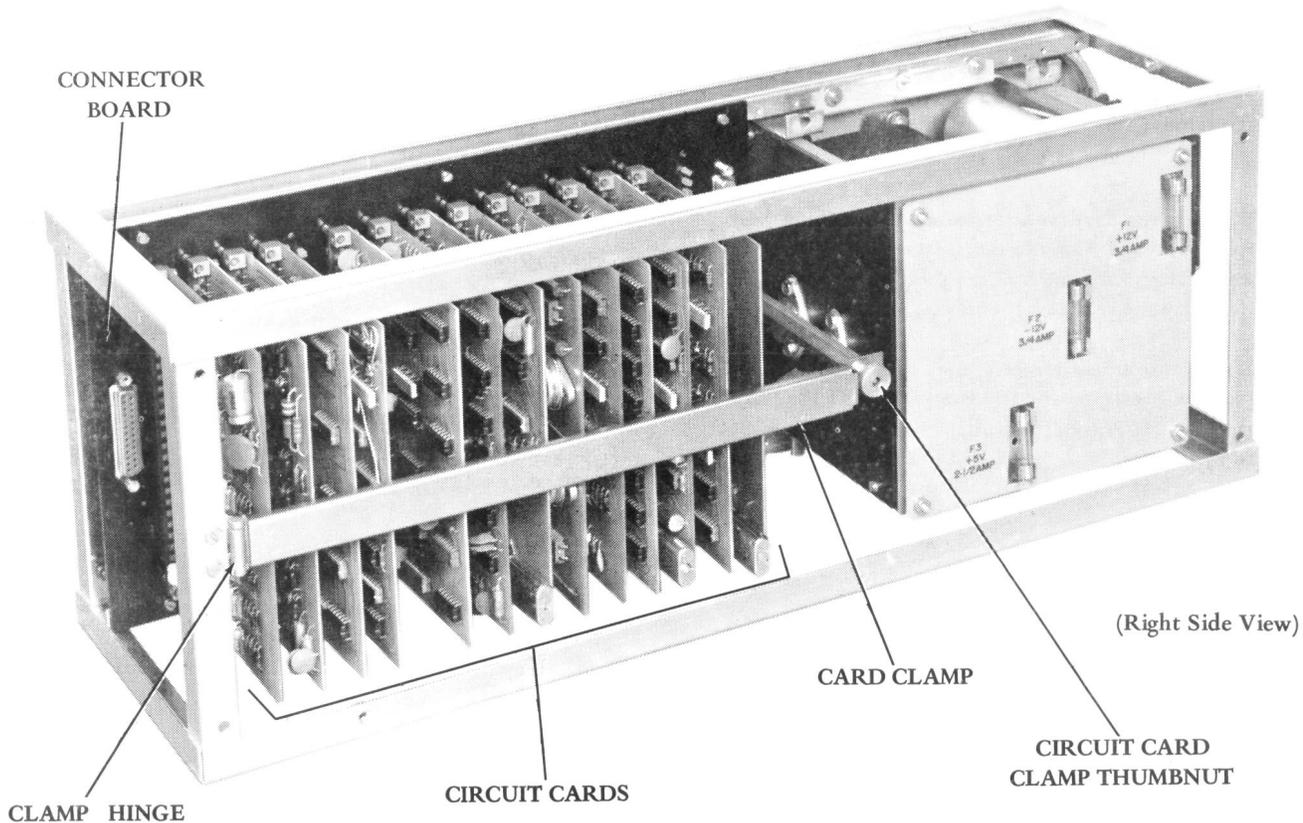
- (1) Remove electronics module from cabinet as explained in Section 578-300-702.
- (2) For modules with hinged circuit card clamp (Figure 10), remove circuit card clamp thumbnut (TP101981). Rotate clamp about hinge and remove circuit card. For modules with removable clamp, remove thumbscrew (TP124501) and disengage clamp from module frame to remove circuit card.

Note: Circuit card guides (TP337388 and TP337430) (Figure 12) are mounted to the connector board to keep the soldered side of a circuit card from contacting the component side of an adjacent card. Exercise care in replacing circuit cards by aligning pins with insulators before final seating as pins may be damaged in replacement. Also, make sure cards are placed in the right connectors.

B. Power Supply

2.10 To remove the power supply:

- (1) Remove electronic module from cabinet.
- (2) Disconnect power connections at terminal block TB1 (early design) or remove connector P102 from J101 (late design). Remove connector P101 from J101 on rear of power supply.
- (3) Rotate electronics module so that the power supply fuses are up, then remove six each mounting screws (TP151685), lockwashers (TP110743), and flat washers (TP125011) (Figure 11). Raise supply vertically to remove.



→ **Note:** Hinged circuit card clamp shown. Removable clamp wraps around frame and is secured to post by thumbscrew rather than thumbnut.

Figure 10 - Electronics Module

C. Connector Board

2.11 To remove the connector board:

- (1) Remove all etched circuit cards (2.09) and cables.
- (2) Remove six circuit card guide mounting screws (TP151685). Remove circuit card guides, then remove six connector board/circuit card guide mounting posts (TP337272). Remove connector board.

3. REASSEMBLY

3.01 Unless otherwise stated, reassemble the subassemblies in the reverse order of disassembly. If only one subassembly was removed, reverse the single procedure for reassembly. After reassembly is complete refer to Section 578-300-700 for the adjustment and lubrication procedures.

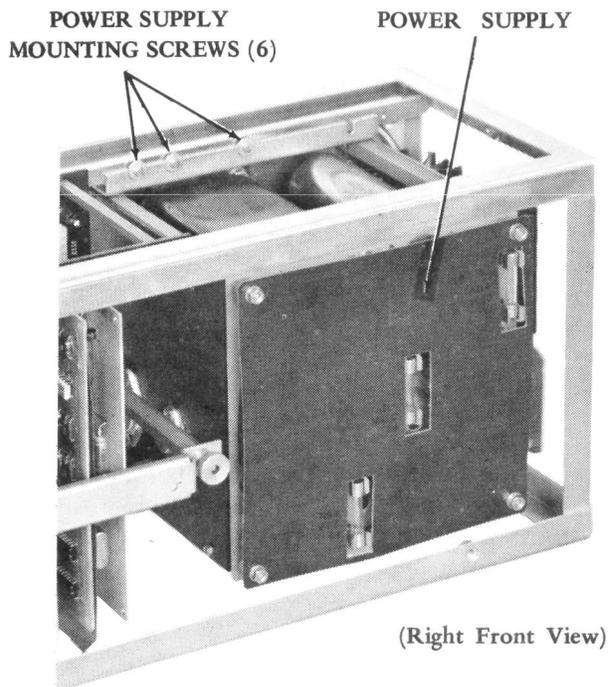


Figure 11 - Electronics Module With Power Supply

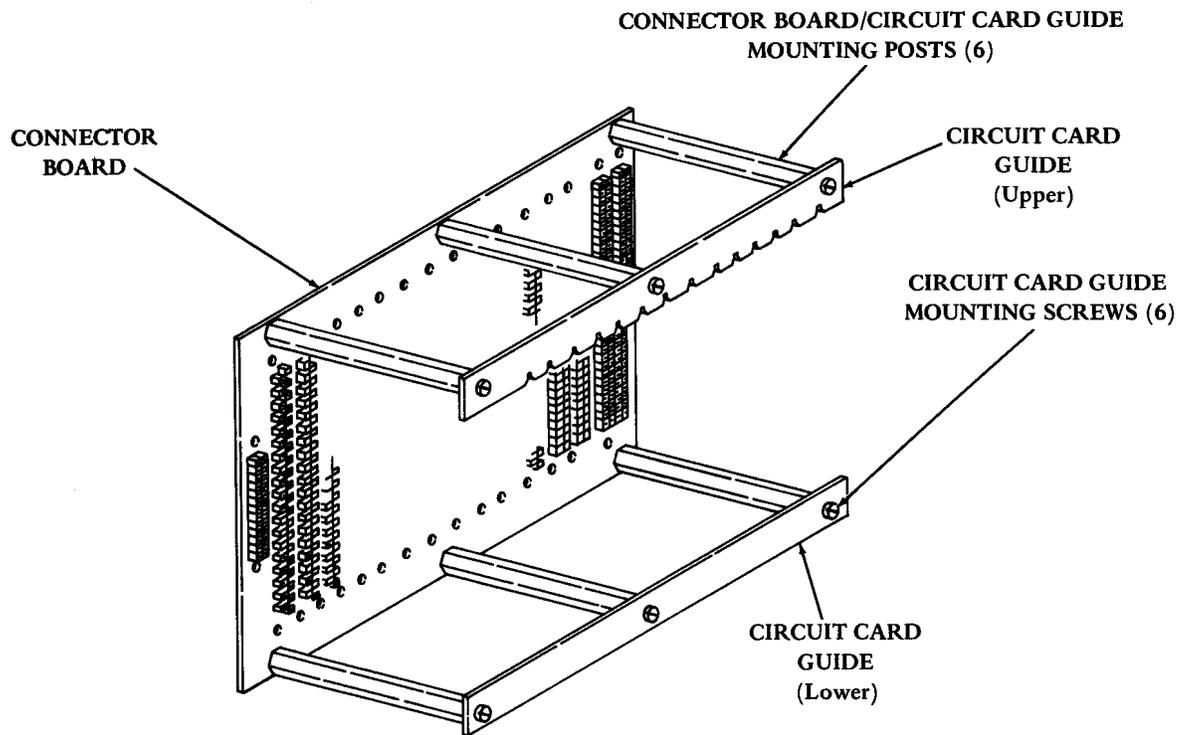


Figure 12 - Connector Board With Circuit Card Guides