

“DATASPEED®” MAGNETIC TAPE TERMINAL

REMOVAL AND REPLACEMENT OF COMPONENTS

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1.03 The removal procedures are for the main components of the set. If further disassembly is required, refer to Section 578-300-703.

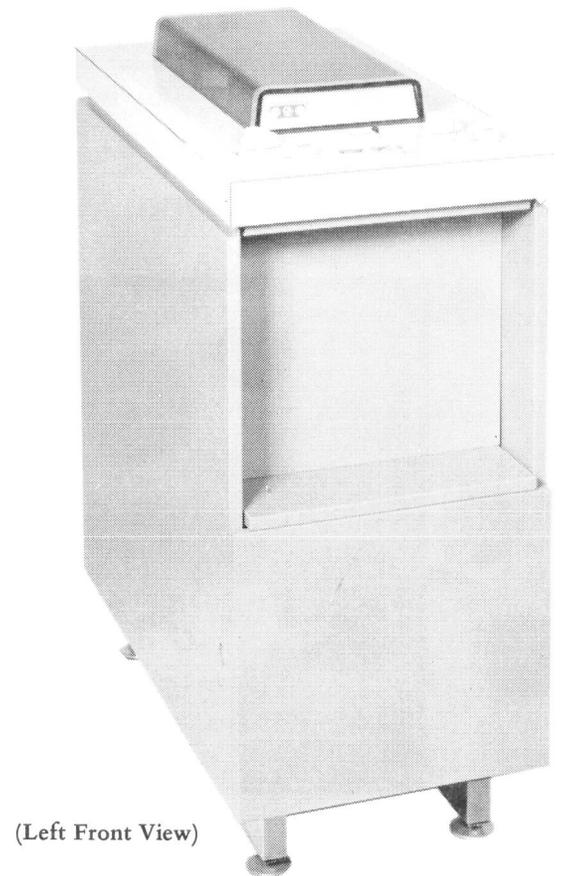
1.04 Refer to Section 570-005-800 for the tools necessary for component removal and replacement.

1.05 Retaining rings are made of spring steel and have a tendency to release suddenly. To avoid loss of these rings, hold the ring to prevent it from turning and place

1. GENERAL

1.01 This section provides component removal and replacement procedures for the Dataspeed Magnetic Tape Terminals. It is reissued 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 printing and did not receive standard distribution.

1.02 Two versions of the tape set are produced. For clarity, the component removal procedures for the two types of tape sets are grouped separately. Part 2 of this section covers the tape sets used for stand-alone operation or as adjuncts to 33, 35, or 37 teletypewriters (Figure 1). Part 3 covers the tape sets used as adjuncts to the CDT and other parallel devices (Figure 10).



(Left Front View)

Figure 1 - Magnetic Tape Set for Stand-Alone Operation or for Use With 33, 35, or 37 Teletypewriters

a screwdriver blade in one of the slots. Rotate the screwdriver to increase the ring diameter; the ring will come off easily without flying.

CAUTION: REMOVE POWER FROM SET BEFORE STARTING ANY REMOVAL PROCEDURE.

2. COMPONENT REMOVAL (STAND-ALONE OR 33/35/37 TELETYPEWRITER ADJUNCT)

2.01 With the exception of some of the cabling, it is possible to remove one component without removing any other.

A. Control Panel With Cable

2.02 To remove the control panel with cable:

- (1) Remove the cabinet front panel mounting screw (TP337284), then raise and latch the cabinet top and remove the front panel.
- (2) Remove four control panel mounting nuts (TP87639) and washers (TP107116) (Figure 2).

- (3) Separate connectors marked P311 and J311 by loosening connector mounting screws. Remove control panel cable from behind cable clamp. Raise front of control panel first and tilt panel to clear cabinet top, and remove.

B. Tape Transport

2.03 To remove the tape transport:

- (1) Remove cabinet front panel mounting screw (TP337284). Raise and latch cabinet top and remove front panel.
- (2) Remove four each retaining rings (TP119653), flat washers (TP82833), and shock mounts (TP197822) (Figure 3). Lift tape transport to clear cabinet sides, rotate tape transport, and place it down, across cabinet.
- (3) Remove six plugs (Figure 4) labeled P210, P211, P212, P213, P214, and P215 from tape transport service module.

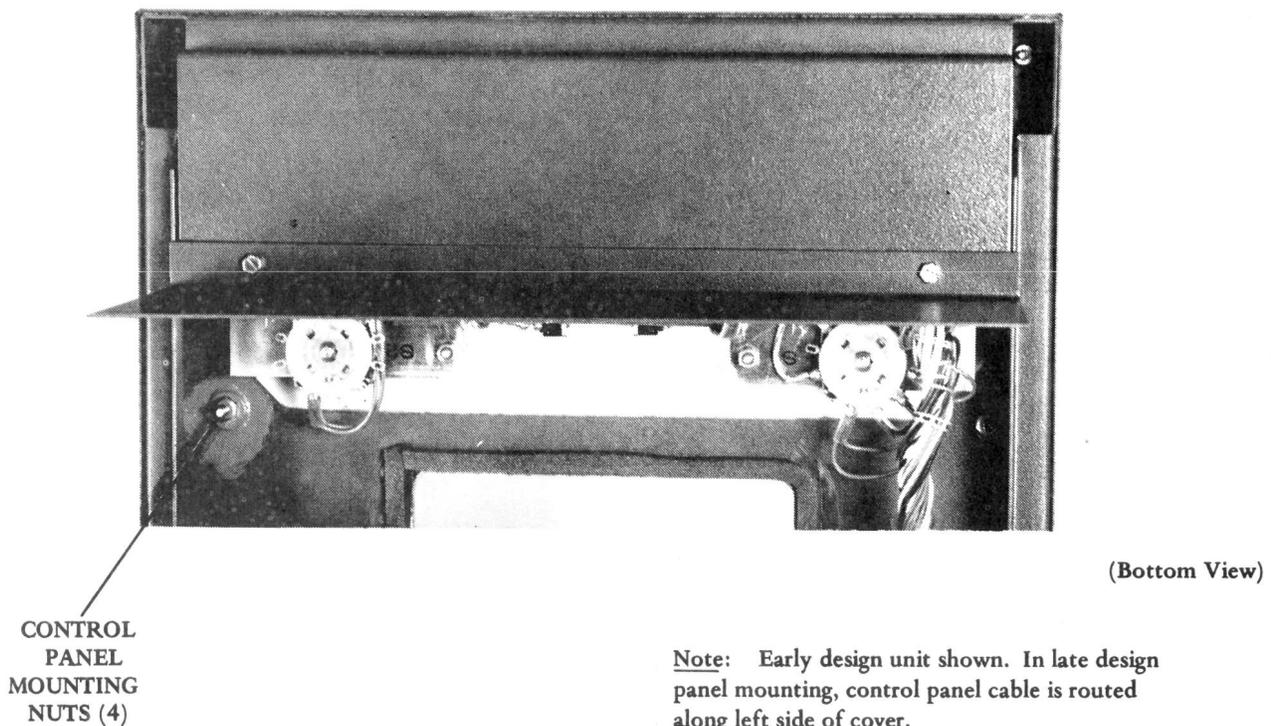


Figure 2 - Control Panel

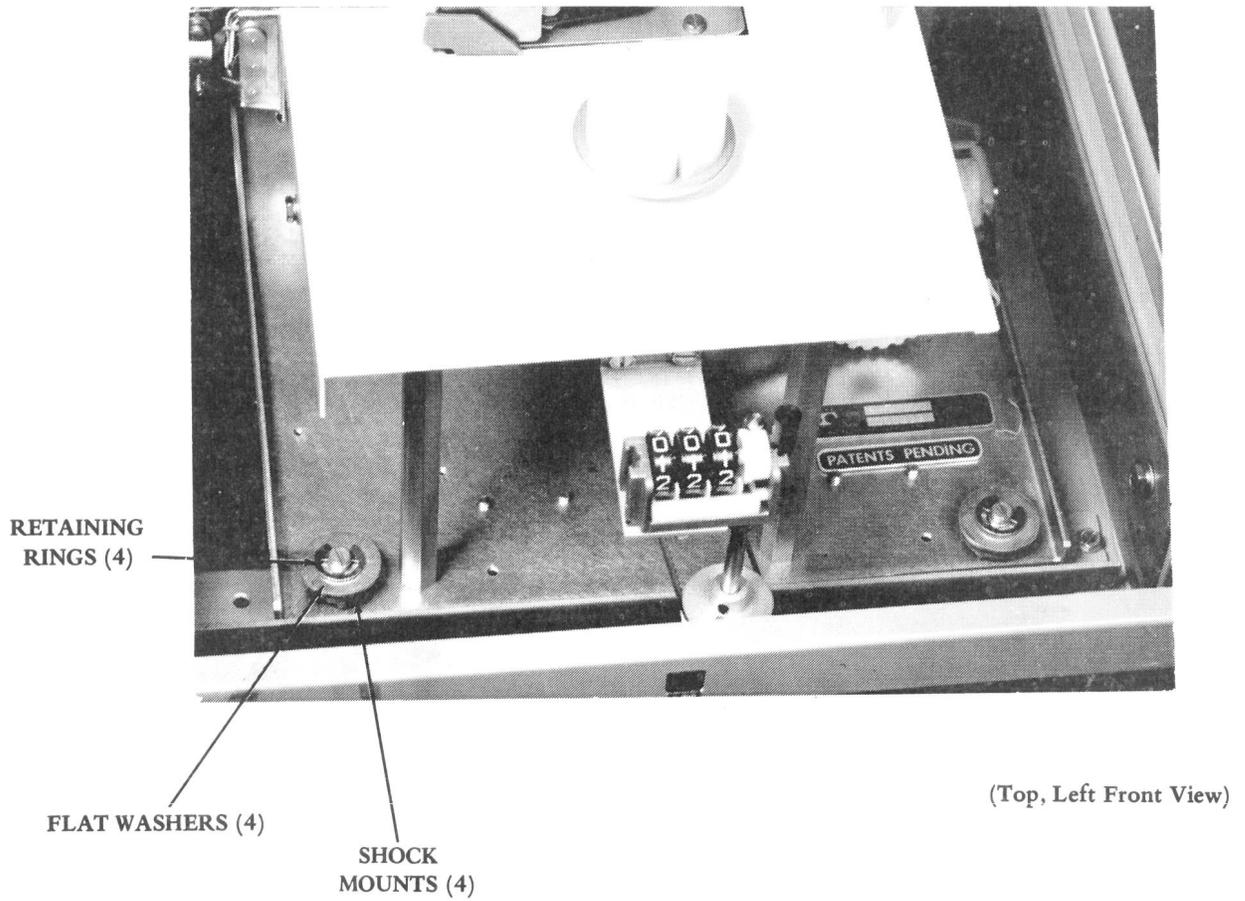
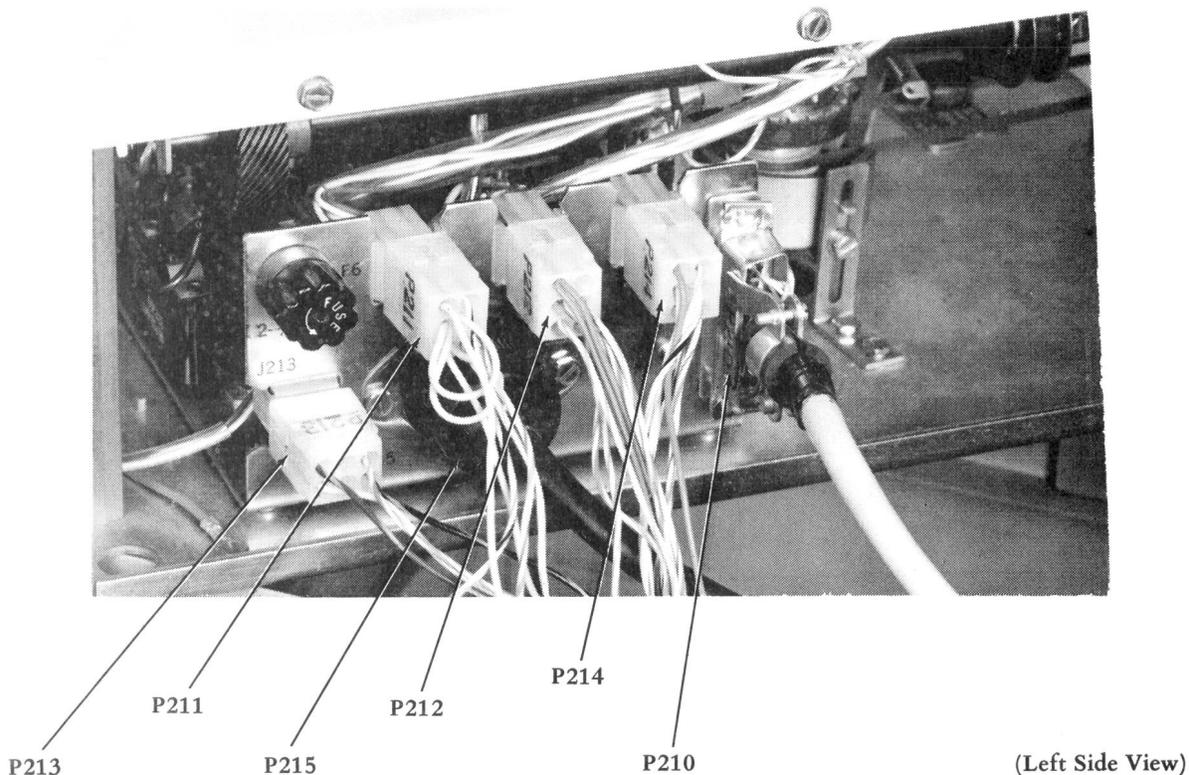


Figure 3 - Tape Transport With Cover Raised



→ **Note:** Lamp brightness rheostat (late design) not shown at right end of connector P210.

Figure 4 - Tape Transport Service Module Plugs

Note: Plug P210 is removed by loosening its mounting screws; P215 is removed by turning plug, as it is a twist-lock plug.

C. Electronics Module

2.04 To remove the electronics module:

- (1) Open cabinet lower door, remove one each module mounting clamp screw (TP55219), lockwasher (TP3646), and flat washer (TP2719) and remove clamp (TP337251) (Figure 5).

- (2) Pull module out part way, loosen connector screws, and unplug head service cable connector P110, cabinet service cable connector P111, low speed interface cable connector P113 (if used), and high speed interface cable connector P112 (if used) from connector board (TP337297) (Figure 6).

Note: If tape set has a module retaining clamp on right side of module frame, tip module to release from clamp.

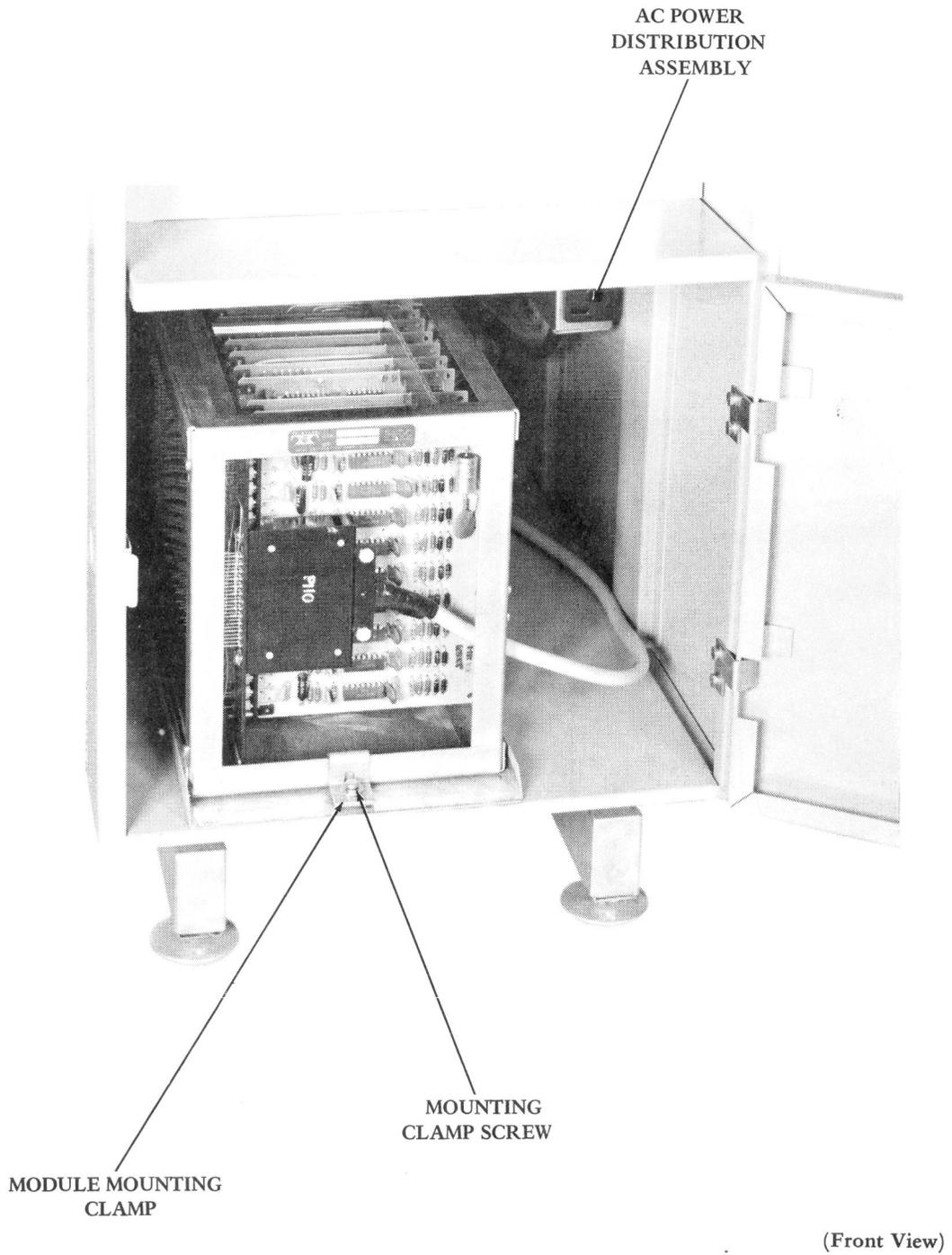


Figure 5 - Stand-Alone or 33/35/37 Adjunct Tape Set
With Electronics Module Exposed

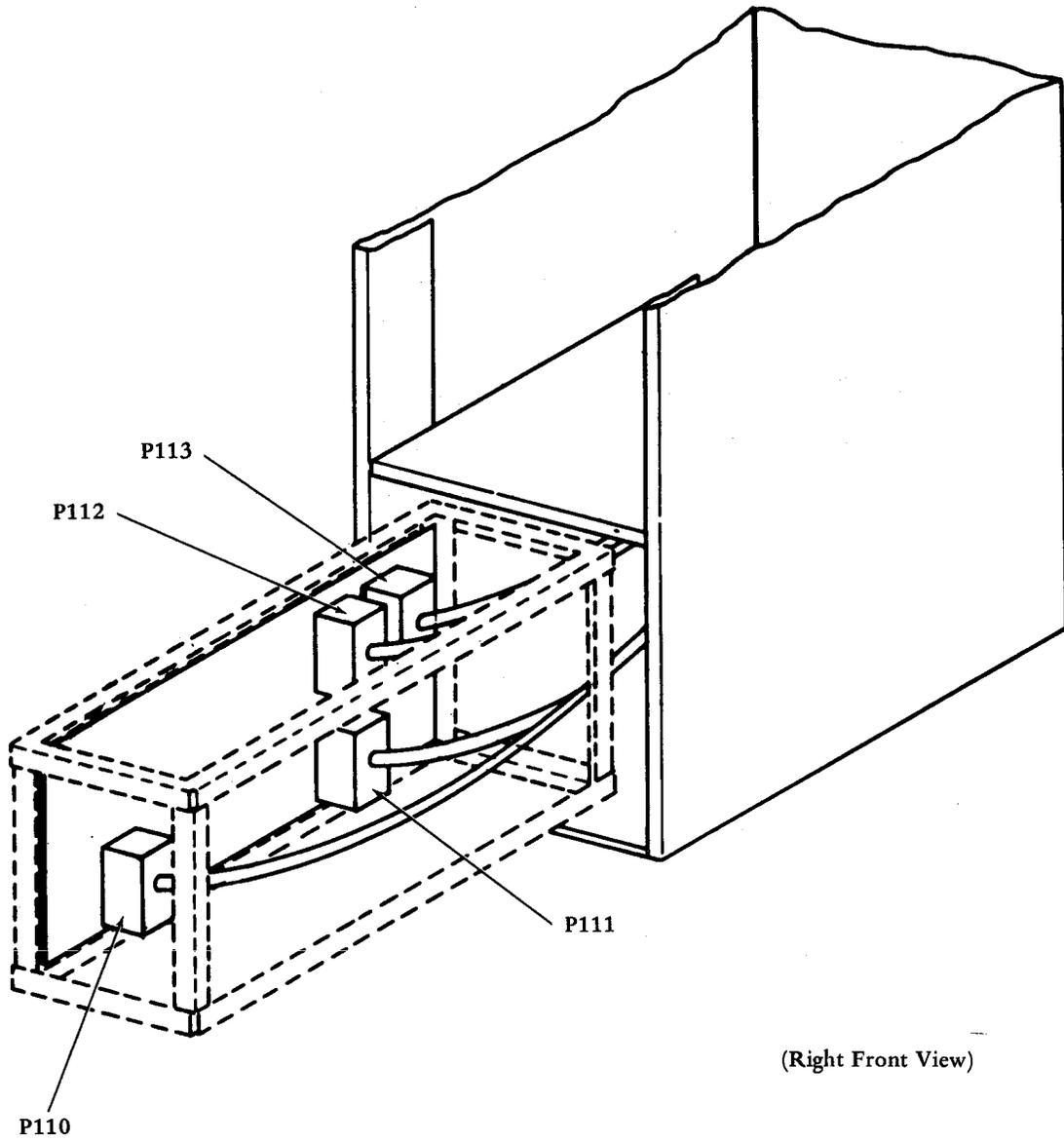


Figure 6 - Cabinet With Module Extended

(3) On late design modules, unplug connector P102 from connector J102 on the rear of the module. On early design modules which have a terminal block instead of a cable connector (Figure 7), rotate terminal block insulator mounting screw (TP181241), rotate insulator to gain access to terminal block connecting points, and remove (one at a time, observing wire color and position) three leads from terminal block TB101.

Note: When reconnecting this cable to the terminal block or connector, route the cable over the bottom frame of the module as shown in Figure 7. If routed under the frame, the cable may be crimped between the module and lower shelf of the cabinet.

D. Data Set

2.05 If the tape set is equipped with a high speed data set, the data set may be removed as follows:

- (1) Remove cabinet front panel mounting screw (TP337284), then raise and latch cabinet top. Remove front panel.
- (2) Remove power plug and signal connector from rear of data set.
- (3) Disconnect data set line connector from associated connector block and pull signal line through port in rear of tape set cabinet. Remove data set from cabinet.

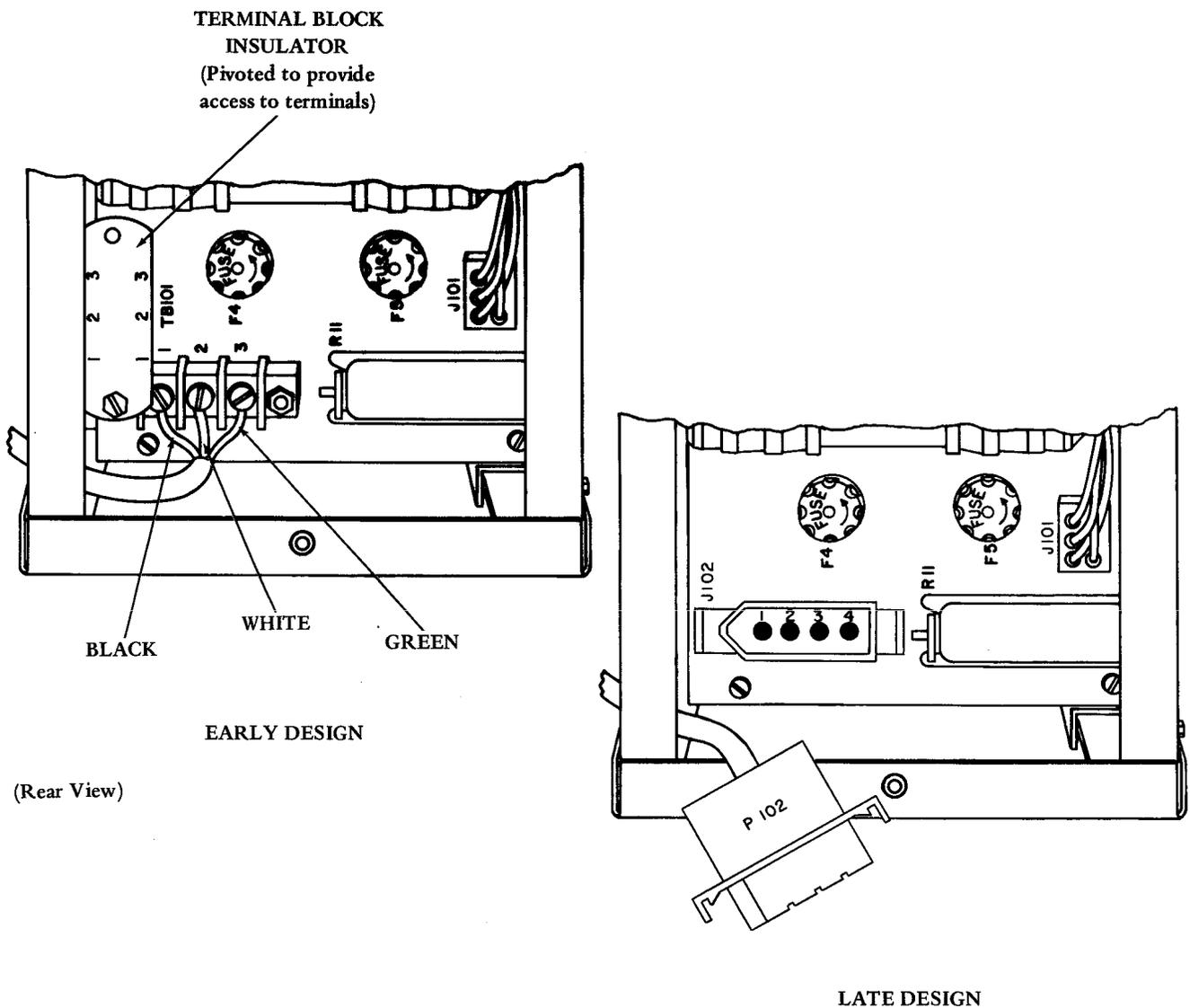


Figure 7 - Electronics Module

E. AC Power Distribution Assembly

2.06 To remove the ac power distribution assembly:

- (1) Pull ac power cord (TP182510) into lower compartment of cabinet through port at rear of cabinet.
- (2) Disconnect connector P215 from tape transport module (Figure 4) and pull tape transport power cable (TP337367) through duct to lower compartment of cabinet.
- (3) Remove module power cable (TP337390) from terminal block TB101 at rear of electronic module as explained in 2.04.
- (4) If terminal includes a data set, unplug data set power cord from socket J100 of ac power distribution assembly.
- (5) Remove two TP184056 screws with lockwashers holding top flange of assembly to right wall of cabinet, and remove assembly with three cables through front door of cabinet.

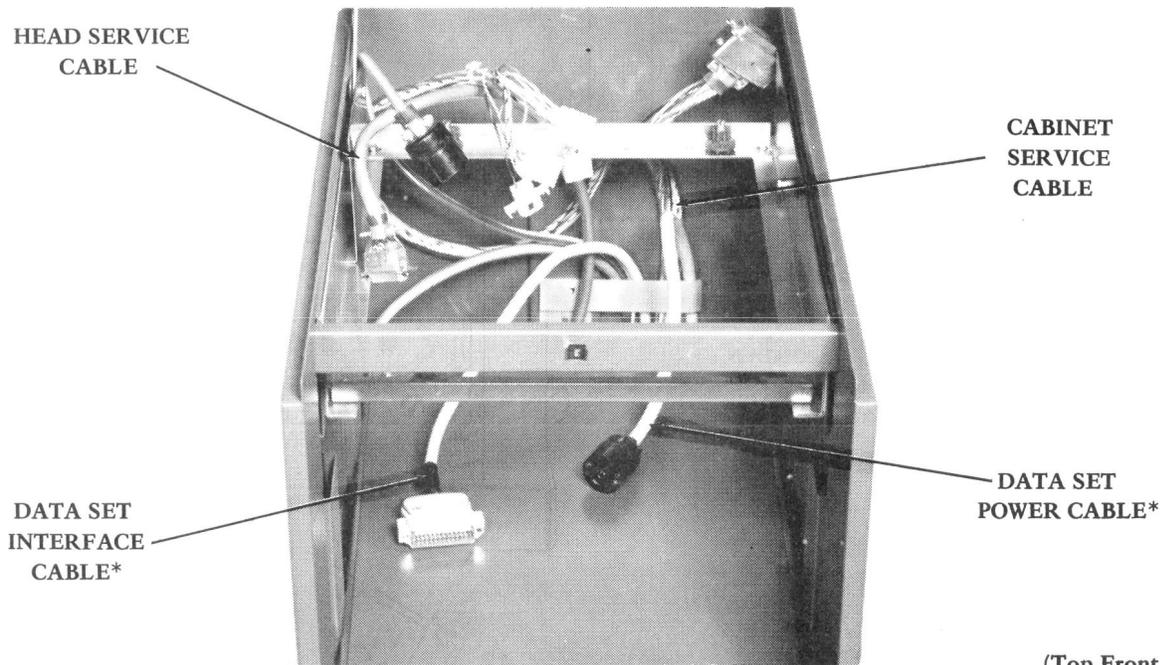
Note: To inspect cable connectors inside ac power distribution assembly, remove terminal block insulator mounting screw and rotate insulator. (Insulator may not be present on late design units.) Connections to terminal block TB100 are shown in Figure 9.



F. Cable Assemblies

2.07 To remove cable assemblies:

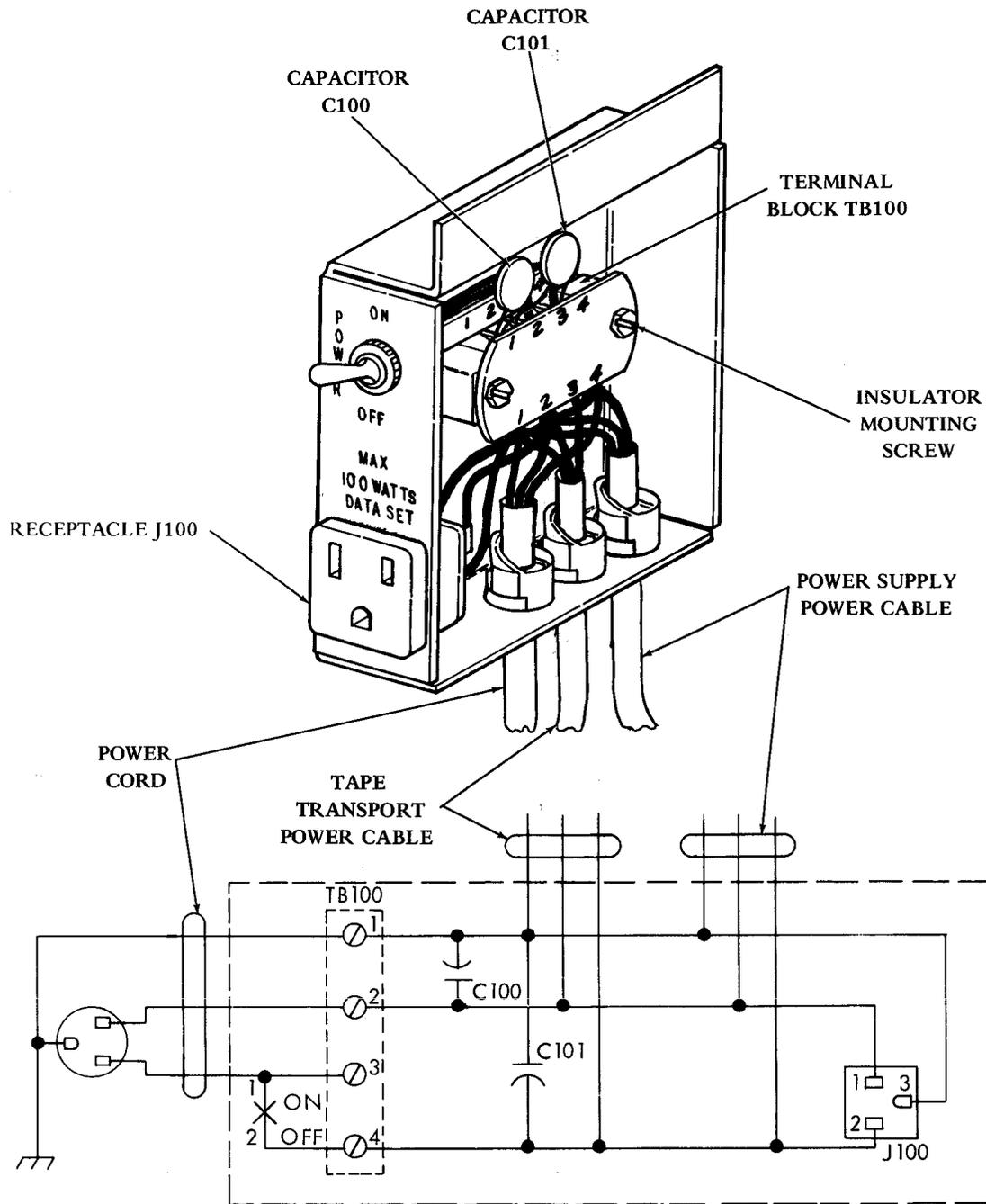
- (1) Disconnect all cable assemblies from their components or have all components removed from the cabinet.
- (2) Remove the cabinet service cable (TP337365) and head service cable (TP337366) from behind rear cable clamp (TP337252) (Figure 8). Also remove data set power cable and interface cable (if used) from behind cable clamp. The data set power cable (if used) must be unplugged from receptacle J100 on the ac power distribution assembly.



(Top Front View)

*Data set cables used only if tape set is equipped with a high speed data set. These cables included with data set.

Figure 8 - Cable Assemblies in Stand-Alone or 33/35/37 Adjunct Tape Set



Note: Late design assembly shown. Early design assemblies may not include capacitors C100 and C101. Also, some late design terminal blocks do not contain insulating cover.

Figure 9 - Power Distribution Cables

3. COMPONENT REMOVAL (ADJUNCT TO CDT OR OTHER PARALLEL DEVICE) (Figure 10)

3.01 With the exception of some cabling, it is possible to remove one component without removing any other.

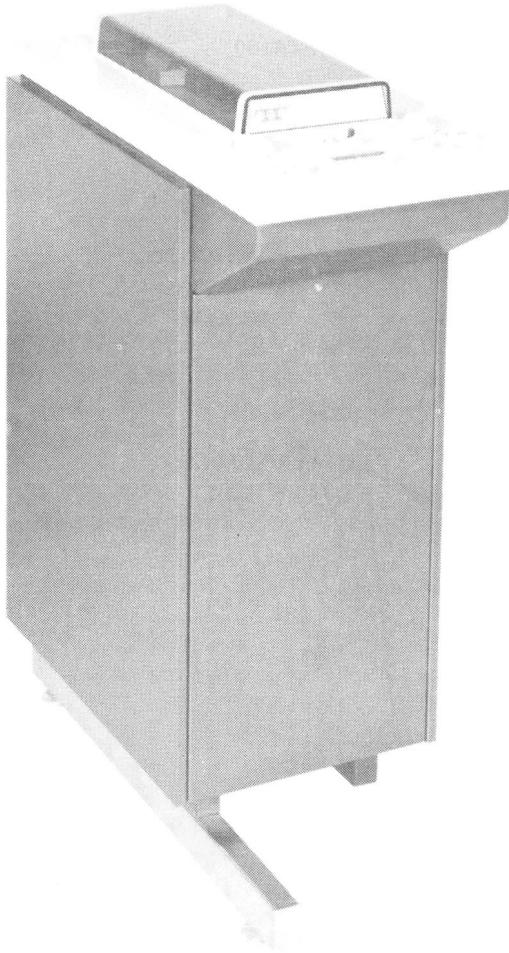


Figure 10 - Magnetic Tape Set Used With CDT or Other Parallel Device

A. Control Subpanel With Cable

3.02 To remove the control subpanel with cable:

- (1) Loosen the setscrews on the rotary switch knobs, and remove the rotary switch knobs from the panel.
- (2) Remove the TP162730 screw, TP2449 lockwasher, and TP76081 flat washer (underside of flange at top of cabinet) that hold the cabinet top closed.

- (3) Raise and latch the cabinet top.
- (4) Separate connector P311 of the control subpanel cable from connector J311 of the TP337373 cable assembly by loosening the connector mounting screws. Remove control panel cable from behind cable clamp (Figure 11).
- (5) Remove four each TP3598 nuts and TP2191 lockwashers from the threaded posts which engage the control subpanel, and remove the subpanel from the cabinet top.

B. Tape Transport

3.03 To remove the tape transport:

- (1) Remove the TP162730 screw, TP2449 lockwasher, and TP76081 flat washer (underside of flange at top of cabinet) that hold the cabinet top closed.
- (2) Raise and latch the cabinet top.
- (3) Remove four each retaining rings (TP119653), flat washers (TP82833), and shock mounts (TP197822) (Figure 12). Lift tape transport to clear cabinet sides, rotate tape transport, and place it down, across cabinet.
- (4) Remove six plugs (Figure 4) labeled P210, P211, P212, P213, P214, and P215 from tape transport service module.

Note: Plug P210 is removed by loosening its mounting screws; P215 is removed by turning plug, as it is a twist-lock plug.

C. Electronics Module

3.04 To remove the electronics module:

- (1) Turn retaining screw on cabinet front panel until it releases from cabinet, and open front panel (Figure 13). Lift front panel away from cabinet.
- (2) Loosen the two TP153442 screws that hold the bottom of the module to the side brackets.

Note: When shipped, the module is secured to the bottom of the cabinet by a TP153442 screw, TP2669 lockwasher, and TP112080 flat washer. If not already removed, they must be removed from the underside of the cabinet to free the module.

- (3) Pivot the top of the module forward and slide the module out of the slots on the side brackets. Lay the module in front of the cabinet.

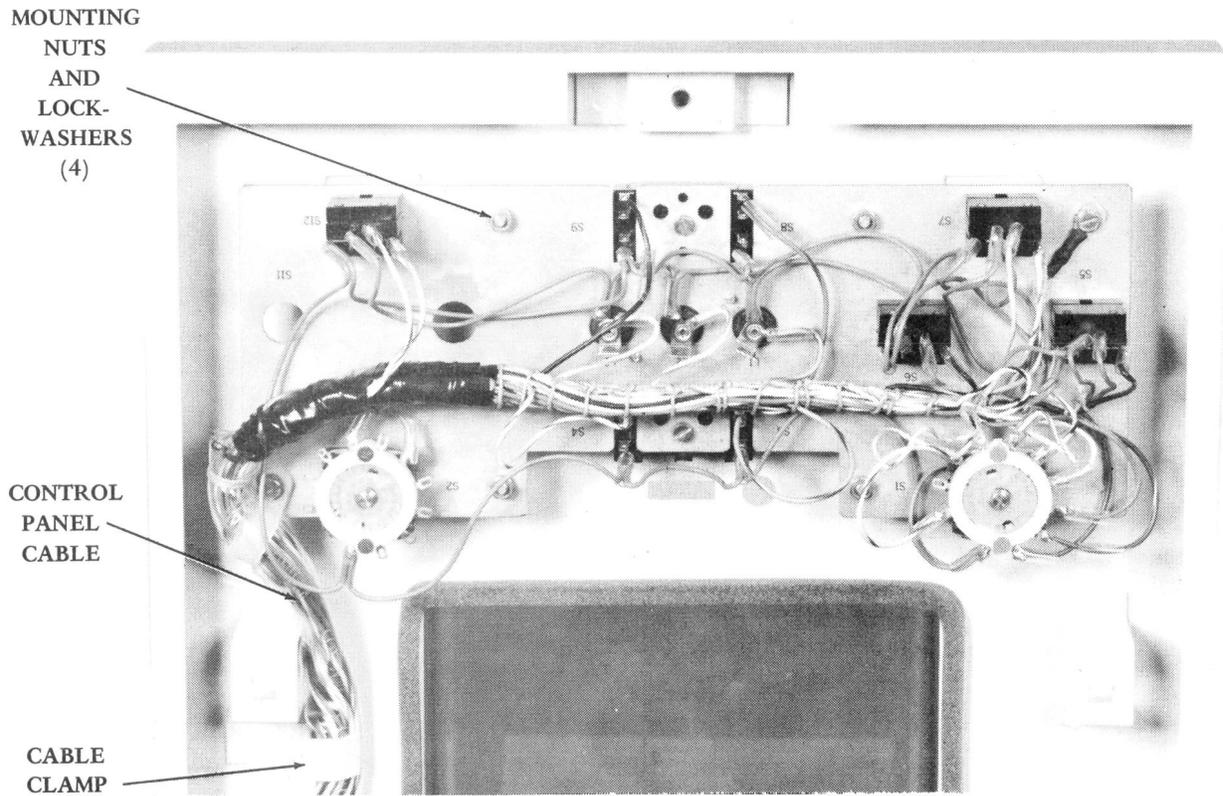


Figure 11 - Control Subpanel

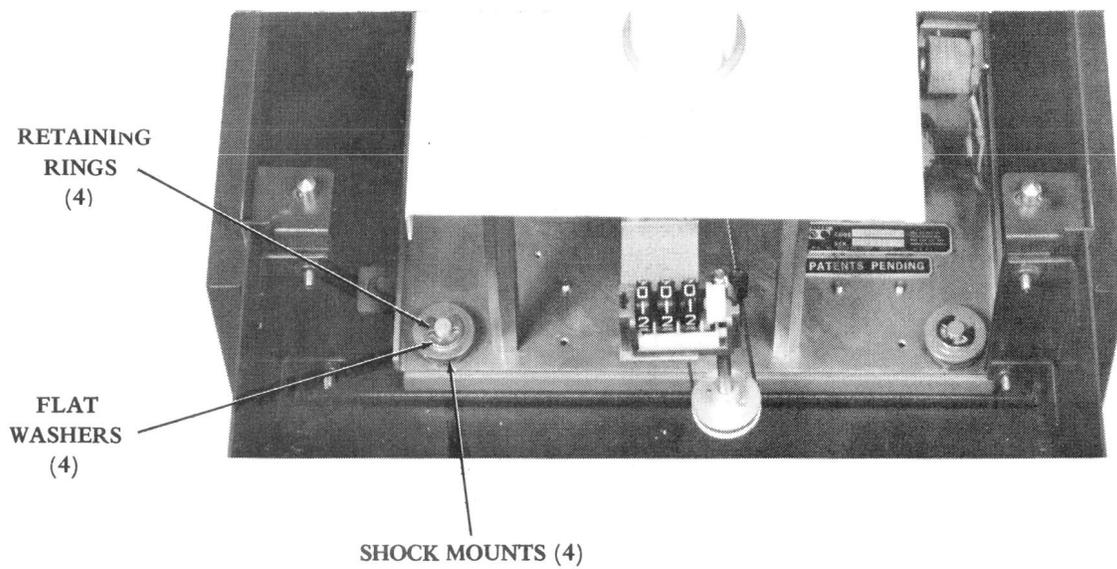


Figure 12 - Tape Transport With Cover Raised

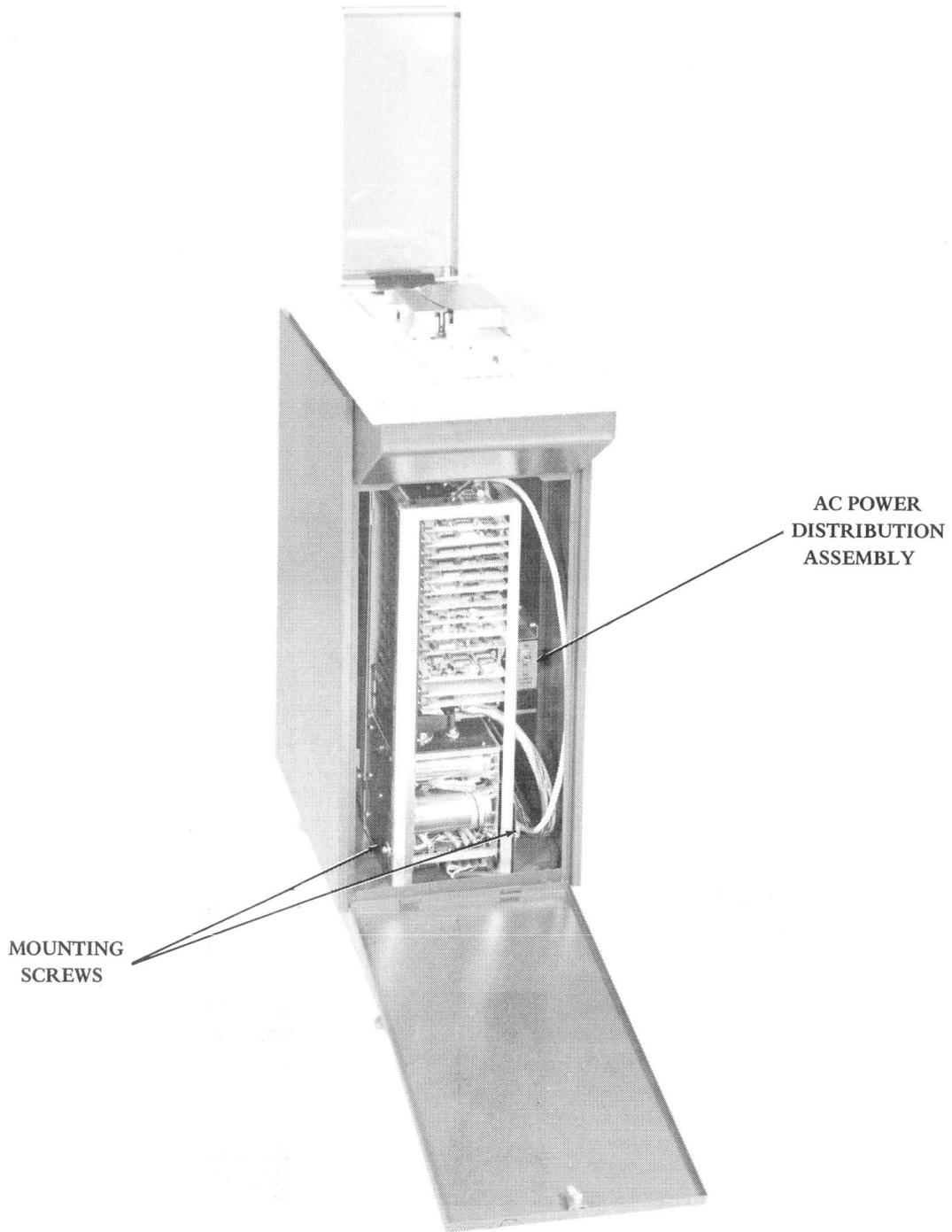


Figure 13 - Magnetic Tape Set With Electronics Module Exposed

(4) If the tape set is serving as an adjunct to a voltage-sensitive parallel device which does not require the accessory interface module: Unplug cable connectors P110, P111, P112, and P113 from connector board TP337296.

If the tape set is serving as an adjunct to a CDT: Unplug cable connectors P110 and P111 from connector board TP337296. Unplug cable connector P400 from the "piggyback" accessory module. If the accessory module is to be separated from the basic module, remove one TP337434 frame clip and two TP198670 panhead screws from the front right side of the module, and one each frame clip and panhead screw from the rear left side of the module, and unplug connectors P112 and J113 from the connector board TP337296 of the basic module.

(5) Remove one power supply terminal block insulator mounting screw (TP181241) (Figure 7). Rotate insulator to gain access to terminal connecting points. Remove (one at a time, observing wire color and position) three leads from terminal block TB101.

D. AC Power Distribution Assembly

3.05 To remove the ac power distribution assembly:

- (1) Pull ac power cord (TP182510) into lower compartment of cabinet through port at rear of cabinet.
- (2) Disconnect connector P215 from tape transport module (Figure 4) and pull tape transport power cable (TP337367) through duct to lower compartment of cabinet.
- (3) Remove module power cable (TP337390) from terminal block TB101 at rear of electronics module as explained in 3.04.

(4) Remove two TP184056 screws with lockwashers holding top flange of assembly to right wall of cabinet, and remove assembly with three cables through front door of cabinet.

Note: To inspect cable connections inside ac power distribution assembly, remove terminal block insulator mounting screw and rotate insulator. Connections to terminal block TB100 are illustrated in Figure 9.

E. Cable Assemblies

3.06 To remove cable assemblies:

- (1) Disconnect all cable assemblies from their components or have all components removed from the cabinet.
- (2) Remove cabinet service cable (TP337365) and head service cable (TP337366) from behind cable clamps in lower compartment of cabinet. Also remove interface cable (TP337373 for voltage-sensitive parallel device; TP337447 or TP337448 for CDT) from cable clamp.

4. COMPONENT REPLACEMENT

4.01 Unless otherwise stated, replace components in reverse order of removal. If only one component is removed, reverse the single procedure for the replacement of that component. After component replacement is complete, refer to Section 578-300-300 for the checkout and troubleshooting procedures. Also, if adjustments have been affected, or if a new component is installed, check the adjustment procedures in Section 578-300-700 (tape transport) and 578-300-701 (cabinet), as necessary.