

"DATASPEED®" PRINTER (RECEIVE-ONLY)

REMOVAL AND REPLACEMENT OF COMPONENTS

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1. GENERAL

1.01 This section describes the method of removing and replacing the main components of the DATASPEED Printer (Receive-Only), as illustrated in Figures 1 and 2. If further disassembly of these components is required, refer to the detailed illustrations of parts in Sections 578-500-800 through 578-500-802 (formerly Sections 592-820-800 through 592-820-802). Also, for further disassembly of the recorder and paper transport mechanism, refer to Section 578-500-703.

1.02 The sequence given is for complete removal and replacement of components. If only partial removal is required, certain components may have to be removed to gain access to the desired components; for example, the recorder/paper transport assembly must be removed before the base can be removed.

1.03 In most cases, components are replaced by reversing the procedure used in removal. Where adjustments are affected, check the appropriate adjustment procedure in Section 578-500-700 or 578-500-701 (formerly Section 592-820-700 or 592-820-701).

**CAUTION: REMOVE POWER FROM THE PRINTER BY DISCONNECTING THE LINE CORD PLUG FROM THE AC OUTLET BEFORE ATTEMPTING TO REMOVE ANY OF THE COMPONENTS.**

1.04 Unless otherwise stated, all references to left or right, up or down, and front or rear, refer to the unit as viewed from the front, or control panel side.

2. REMOVAL AND REPLACEMENT OF COMPONENTS

COVER

2.01 The cover is the top part of the noise-reducing enclosure which houses the recorder and paper transport. It also contains the fluorescent lamp that illuminates the printed copy appearing in the plexiglass window in the front lid. Two magnetic reed switches in the cover form part of the interlock circuit, turning off the high voltage to the printer when any part of the cover is raised. Power to the fluorescent lamp and reed switches is supplied through a connector on the bottom of the left side of the cover. This connector mates with a connector on the base when the cover is properly positioned on the base.

2.02 If there is paper in the transport, tear the paper at the point where it enters the rear of the cover, coming from the paper un-

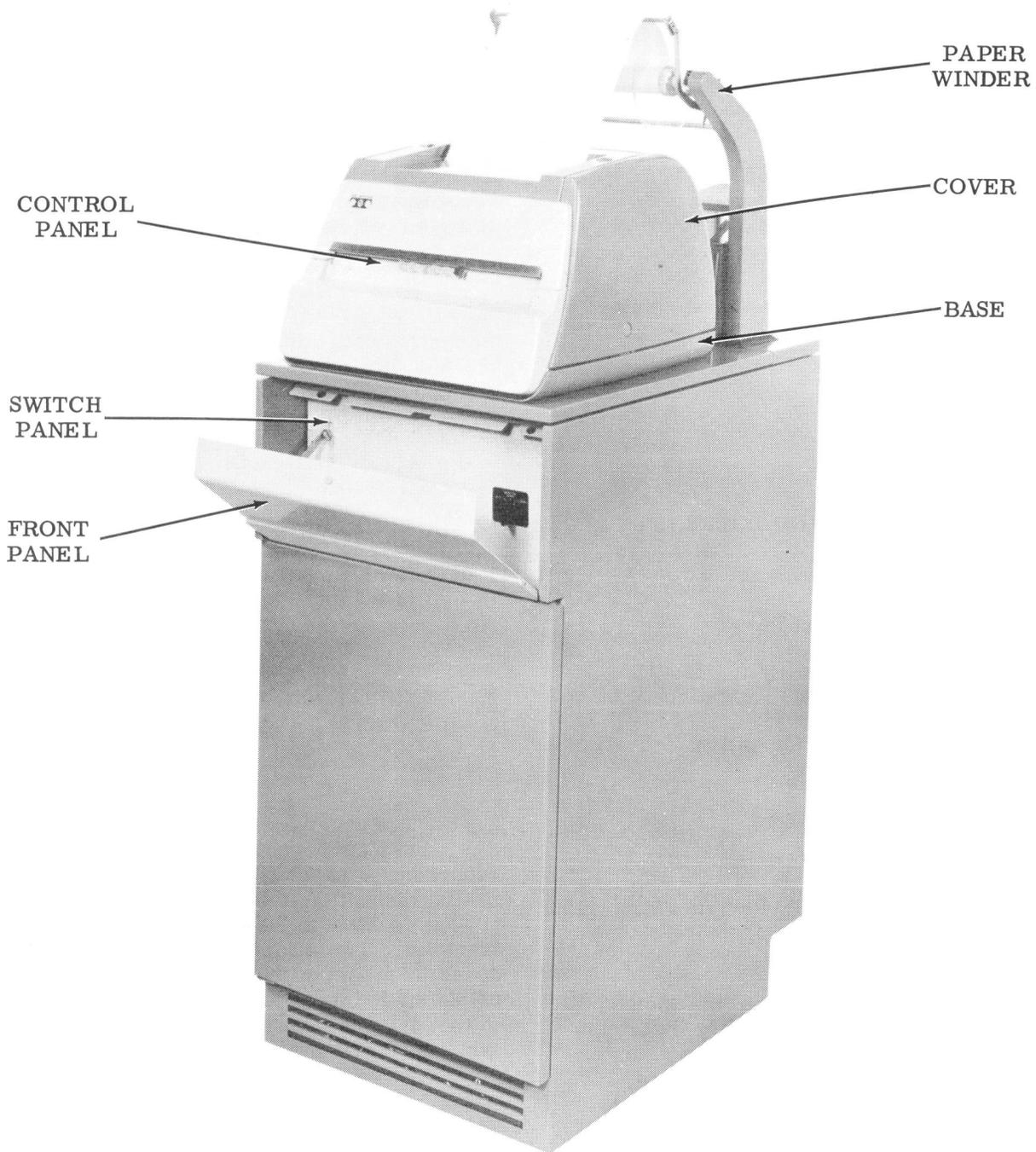


Figure 1 - DATASPEED Printer (Receive-Only)  
With Blank Front Panel and Switch Panel

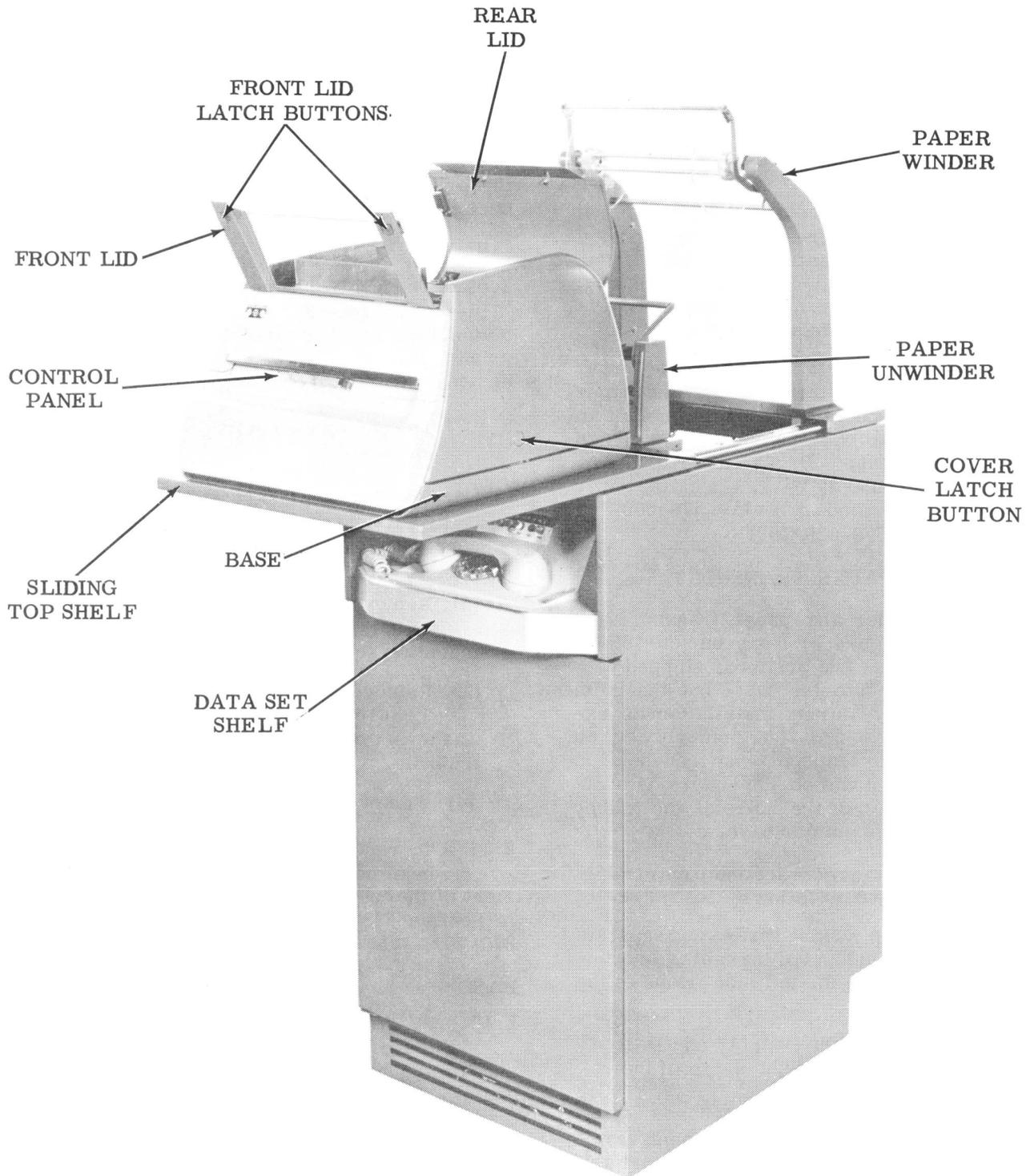


Figure 2 - DATASPEED Printer (Receive-Only) With Data Set Shelf for 202C Data Set or 804A Data Auxiliary Set, Top Shelf Extended, and Cover Lids Raised

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winder. Open the front and rear lids of the cover by pressing inward on the latch buttons on both ends of the front lid. The front lid will spring upward, releasing the rear lid, so that both lids may be opened (Figure 2). Unlatch the idler roller assembly, raise the paper tensioner idler rollers, and place the paper pressure roller arm in its OPEN position. The paper can then be removed from the transport by pulling it up out of the cover lid.

2.03 To separate the cover from the control panel and base, press inward on the latch buttons on the sides of the cover. Lift the cover off the base. The recorder and paper transport, the switches on the control panel, and the copylight and interlock switches are now accessible.

2.04 To replace the cover on the base, lower the cover over the recorder and paper transport until the locating holes in the bottom of the cover line up with the locating studs on either side of the base. Press the cover downward until it latches to the base. Check the cover alignment as described in Section 578-500-701 (formerly Section 592-820-701).

### RECORDER AND PAPER TRANSPORT

2.05 The recorder and paper transport assembly (Figure 3) rests on four shock mounts in the base. The printer is shipped with the transport bolted to the base, but the bolts should be removed during installation as explained in Section 578-500-200 (formerly Section 592-820-200). The transport is then held in place by the four posts on the underside of its base, which are set in the holes of the rubber shock mounts on the printer base.

2.06 To remove the recorder and paper transport, proceed as follows:

- (1) Unscrew the locking screws and separate connector DAT/A1 of the cable from connector DAT/A1 on the left side frame of the transport.
- (2) Unsnap connectors DAR/A2 and DAR/A3 from the left and right sides of the recorder.
- (3) Grasp the sides of the transport and carefully lift the recorder and transport assembly out of the base.

**CAUTION: BE CAREFUL NOT TO TIP THE ASSEMBLY. THE INK IN THE RECORDER TANK HAS POWERFUL STAINING PROPERTIES.**

2.07 The recorder may be separated from the paper transport, and the transport may be disassembled into main subassemblies, as described in Section 578-500-703.

2.08 To replace the recorder and paper transport assembly in the base, reverse the procedure used in removal. Make sure the four posts on the underside of the transport base are in the holes of the four rubber shock mounts on the printer base. Also, make sure the connectors are firmly seated.

### CONTROL PANEL

2.09 The control panel attached to the front of the base contains the illuminated push-button switches that control the operation of the printer station. The switch assembly is connected by cable to the rest of the printer circuits.

2.10 To remove the control panel, proceed as follows:

- (1) Unscrew the locking screws on connector CP1, and remove this connector from the connector on the control strip (Figures 4 and 5).
- (2) Remove the ground lead from the left mounting bracket by unscrewing the mounting screw.
- (3) Remove the four TP156768 screws, TP3646 lockwashers, and TP181204 flat washers that hold the mounting brackets to the base.
- (4) Remove the control panel from the base.

2.11 To replace, reverse the procedure used in removing the panel. Check the alignment of the cover and control panel as described in Section 578-500-701 (formerly Section 592-820-701).

### BASE

2.12 The base is attached to the sliding panel at the top of the cabinet. It contains the starter and ballast for the copylight (Figures 4 and 5). The cables for the recorder, paper transport, copylight, and control strip enter the rear of the base and are dressed to the sides by metal clips. These cables must be freed before the base can be removed from the sliding panel.

2.13 To remove the base, proceed as follows:

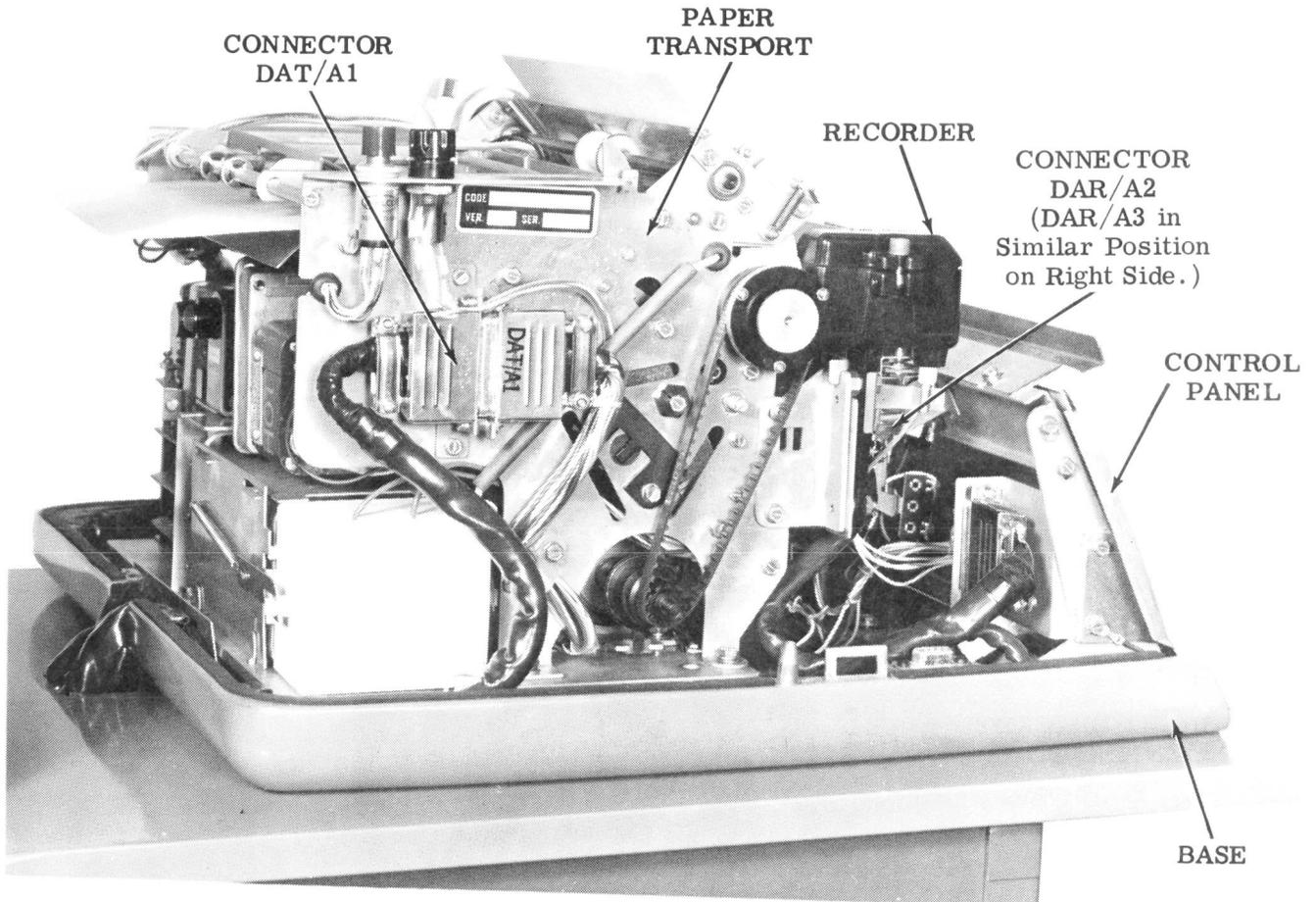
- (1) Disconnect connector DAC/B1, which supplies power for the copylight.

- (2) Remove the two TP301035 shoulder screws that hold connector DARC/A1 to the left side of the base.
- (3) Pry up the TP309596 speed clip that holds the cable bracket to the stud at the center rear of the base.
- (4) Remove the clips that hold the cables to the sides of the base, and carefully lift all cables out of the base.

- (5) Remove the four TP153442 screws, TP2669 lockwashers, and TP34432 flat washers that hold the base to the sliding panel at the top of the cabinet.

- (6) Lift the base from the sliding panel.

2.14 To replace the base on the sliding panel, reverse the procedure used in removing the base. Make sure the cables are properly routed and clamped in place. Also make sure connector DARC/A1 is properly oriented on the left side of the base.



(Left Side View)

Figure 3 - Base, Control Panel, Recorder and Paper Transport Assembly With Cover Removed

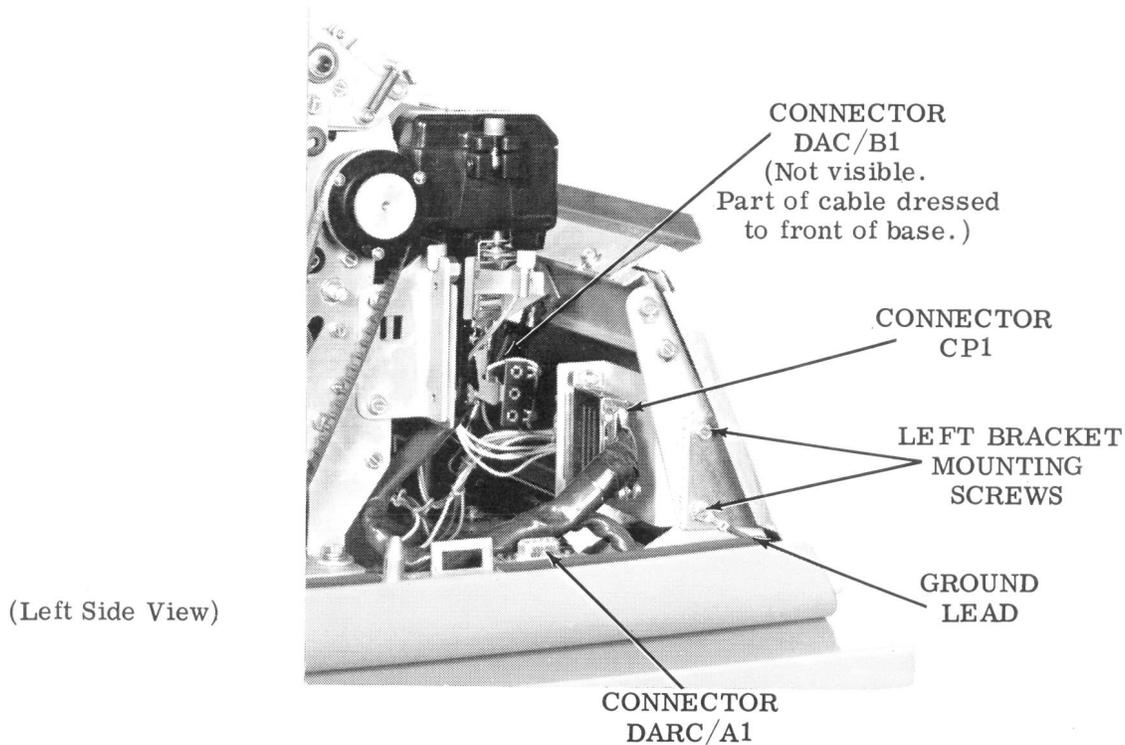


Figure 4 - Control Panel and Base

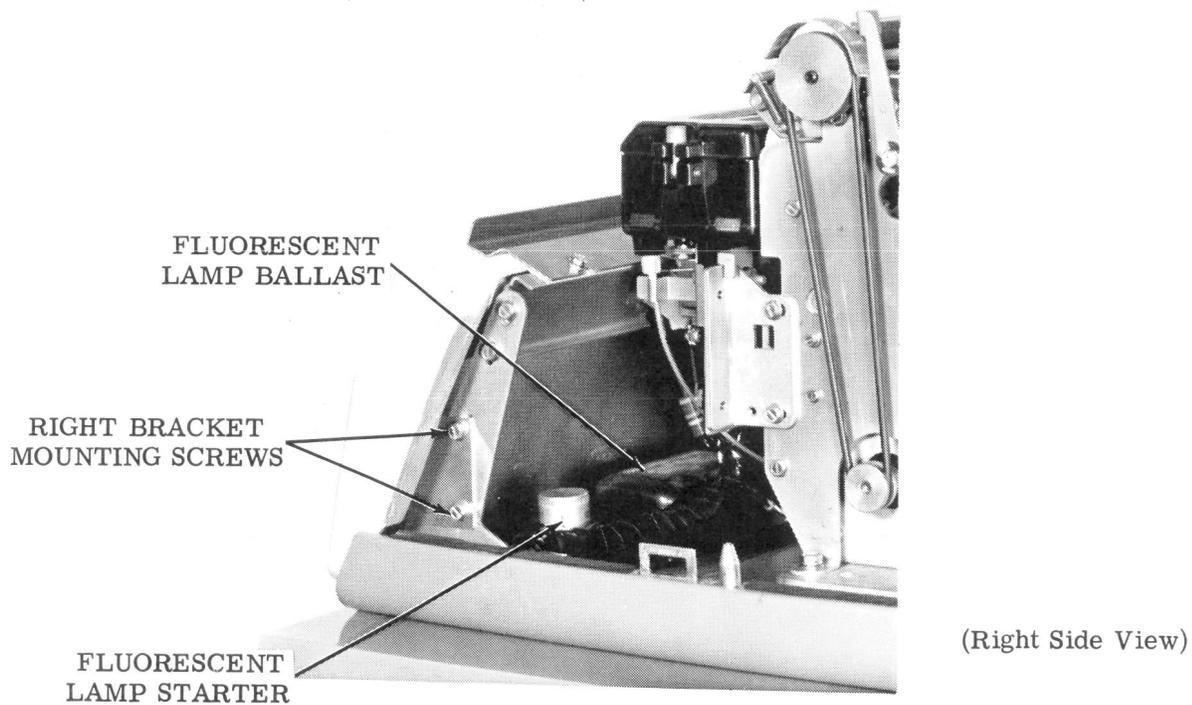


Figure 5 - Control Panel and Base

**PAPER UNWINDER**

2.15 The paper unwinder is mounted at the rear of the sliding panel at the top of the cabinet (Figure 6). It consists of the paper supply reel and slack arm, and the low paper alarm arm and switch.

2.16 To remove the paper unwinder, proceed as follows:

(1) Loosen the four terminal screws of the terminal block on the base of the paper unwinder bracket, and remove the red/blue, yellow/green, green, and brown/green leads from the terminals. Note the terminal to which each of these leads connects so they may be properly connected when the assembly is replaced.

(2) Remove the TP112626 nut, TP2669 lockwasher, and TP3438 flat washer from the threaded stud at the right end of the unwinder base.

(3) Remove the two TP153441 screws, TP2669 lockwashers, and TP3438 flat washers from the center and left end of the unwinder base.

(4) Lift the paper unwinder assembly off the sliding panel of the printer. Feed the cable containing the four connecting leads through the grommet, making sure there is no excessive tension that might snap the leads.

2.17 To replace the paper unwinder, reverse the procedure used in removing it. Insert the four connecting leads through the grommet and slide the bracket down the cable until the oblong hole at the right end of the bracket engages the threaded stud on the sliding panel. Check the paper alignment adjustment as described in Section 578-500-701 (formerly Section 592-820-701).

**CABINET PANELS AND DOORS**

2.18 The printer frame is enclosed by two side panels, a front and rear door, and a data set shelf or blank front panel (depending on the type of data set used). Although it is possible to service the modules and other components inside the cabinet by opening the front and rear doors, there are situations where it is

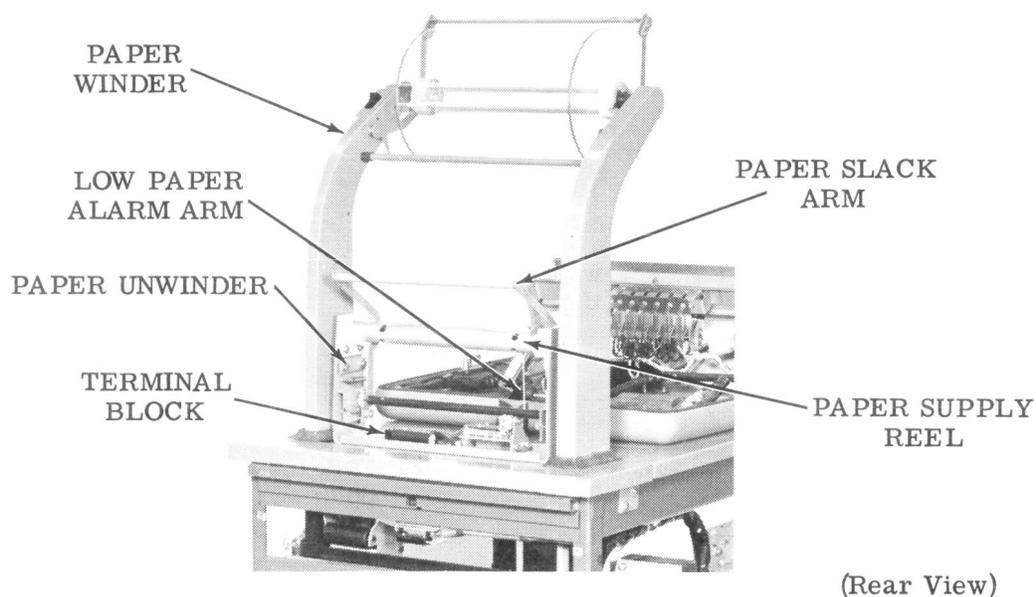


Figure 6 - Top Deck of Printer Showing Paper Unwinder and Paper Winder.

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more convenient to remove the doors and panels to provide full access to the components (Figure 7).

2.19 Open the front door by reaching under the bottom of the door (left or right side, depending on which side the door is hung during installation) and pressing upward on the latching mechanism. To remove the front door from the cabinet, press downward on the top hinge pin until it releases from the hole in the hinge bracket, and lift the door away from the cabinet.

2.20 To remove the rear door, loosen the TP172715 captive screw that holds the top of the door to the frame, and lift the door away from the frame.

2.21 If the printer has a shelf for a 202C data set or 804A data auxiliary set (Figure 2), the shelf can be removed as follows:

- (1) With the rear door of the cabinet removed, disconnect the data set cables.
- (2) Unscrew the two TP144778 retaining screws that hold the bottom of the shelf to the frame, and slide the shelf out of the cabinet until it releases from the tracks.

2.22 If the printer has a blank front panel for use with a 202D or 402D data set, or for direct interface with a DATASPEED installation (Figure 1), remove the front panel as follows:

- (1) Open the hinged front panel and remove the TP17993 shoulder screw, TP2669 lockwasher, and TP112626 nut that hold the front panel to the stop arm.
- (2) Remove the four TP125108 screws, TP2191 lockwashers, and TP7002 flat washers that hold the hinges of the front panel to the printer frame, and remove the front panel.
- (3) Remove the four TP125108 screws, TP2191 lockwashers, and TP7002 flat washers that hold the switch panel to the printer frame. If there is no switch on the panel, remove the panel from the frame. If there is a switch on the panel, remove the switch before removing the panel from the frame.

2.23 With the front panel (or data set shelf) and the front and rear doors removed from the cabinet, the screws that hold the side panels to the frame are accessible. To remove

the side panels, unscrew the seven TP148756 sheet metal screws from each panel and lift the panels away from the frame.

2.24 To replace the panels and doors, reverse the procedure used in removing them. Check the adjustment of the front door and front panel as described in Section 578-500-200 (formerly Section 592-820-200).

### MODULES

2.25 The four modules that contain most of the electronic circuitry for the printer are mounted in the left and right compartments of the printer cabinet (Figure 7). The printer drive module (DAD) and power supply module (DAPS) are latched together in the left compartment, and the character generator module (DAG) and interface module (DAIF) are latched together in the right compartment. The lower module of each group rests on a pair of guide tracks at the bottom of the compartment. Each set of modules can be extended for servicing by unscrewing the bolts at the top of the upper module and the bottom of the lower module, and sliding the modules forward until they are stopped by the post on the release lever. To extend the modules beyond the stop point, the release lever must be pressed downward.

**CAUTION: IF IT IS NECESSARY TO EXTEND THE MODULES BEYOND THE STOP POINT, REMOVE THEM COMPLETELY FROM THE CABINET TO PREVENT OVERBALANCE.**

#### A. Printer Drive and Power Supply Modules

2.26 To remove the printer drive and power supply modules (left compartment), proceed as follows:

- (1) Unscrew the bolts at the top of the printer drive module and the bottom of the power supply module.
- (2) Slide the two modules forward to the stop position, then press down on the release lever and slide the modules completely out of the cabinet.

**CAUTION: THE COMBINED WEIGHT OF THESE TWO MODULES IS OVER 60 POUNDS (THE POWER SUPPLY ALONE WEIGHS MORE THAN 50 POUNDS), SO GRASP THIS PAIR OF MODULES FIRMLY WHEN REMOVING THEM FROM THE TRACKS.**

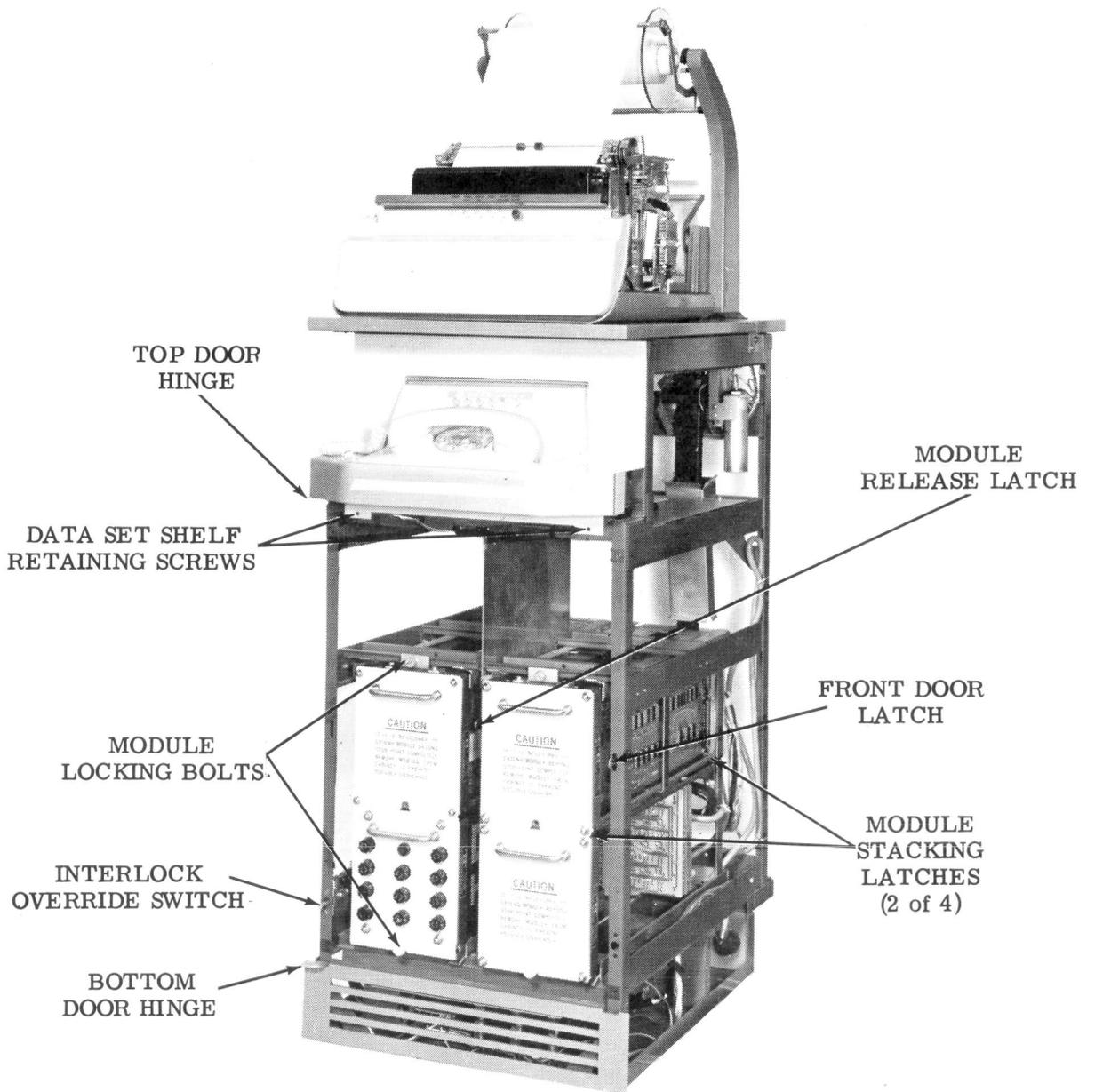


Figure 7 - DATASPEED Printer With Data Set Shelf Assembly (Panels and Doors Removed)

(3) Set the modules in front of the cabinet.

(4) To disconnect the printer drive module, unscrew the four nuts that secure the DAD connector to the back of the drive module (Figure 8) and remove the connector from the module. To disconnect the power supply module, unlatch and remove connectors DAPS/A1 and DAPS/A3. Also unplug connector DAPS/A2.

(5) Separate the printer drive module from the power supply module by prying the latches at the four corners outward until they disengage from the studs on the top of the power supply module.

(6) Lift the printer drive module away from the power supply module.

2.27 To replace the modules, reverse the procedure used in removing them from the compartment.

#### B. Character Generator and Interface Modules

2.28 To remove the character generator and interface modules (right compartment), proceed as follows:

(1) Unscrew the bolts at the top of the character generator module and the bottom of the interface module.

(2) Slide the two modules forward to the stop position, then press down on the release lever and slide the modules completely out of the cabinet.

(3) Set the modules in front of the cabinet.

(4) To disconnect the character generator module, unscrew the four nuts that secure the DAG connector to the back of the module, and remove the connector from the module. To disconnect the interface module, unplug connectors DAIF/AA1 and DAIF/AA2.

(5) Separate the character generator from the interface module by prying the latches at the four corners outward until they disengage from the studs on the top of the interface module.

(6) Lift the character generator module away from the interface module.

2.29 To replace the modules, reverse the procedure used in removing them from the compartment.

#### INK HEATER AND LINE FEED BRACKET ASSEMBLY

2.30 The ink heater and line feed bracket assembly is mounted on the left side of the perforated panel above the module housing. It can be removed from the cabinet by disconnecting the electrical connections and removing the screws that secure it to the panel.

2.31 To remove the assembly, proceed as follows:

(1) Unlatch connector DAC/A1 and remove it from the socket.

(2) Unplug connectors DAC/A2 and DAC/A3 from the jacks.

(3) Remove the three TP1263 screws, TP2191 lockwashers, and TP7002 flat washers, and lift the assembly out of the cabinet.

2.32 To replace the assembly, reverse the procedure used in removing it.

#### PAPER WINDER

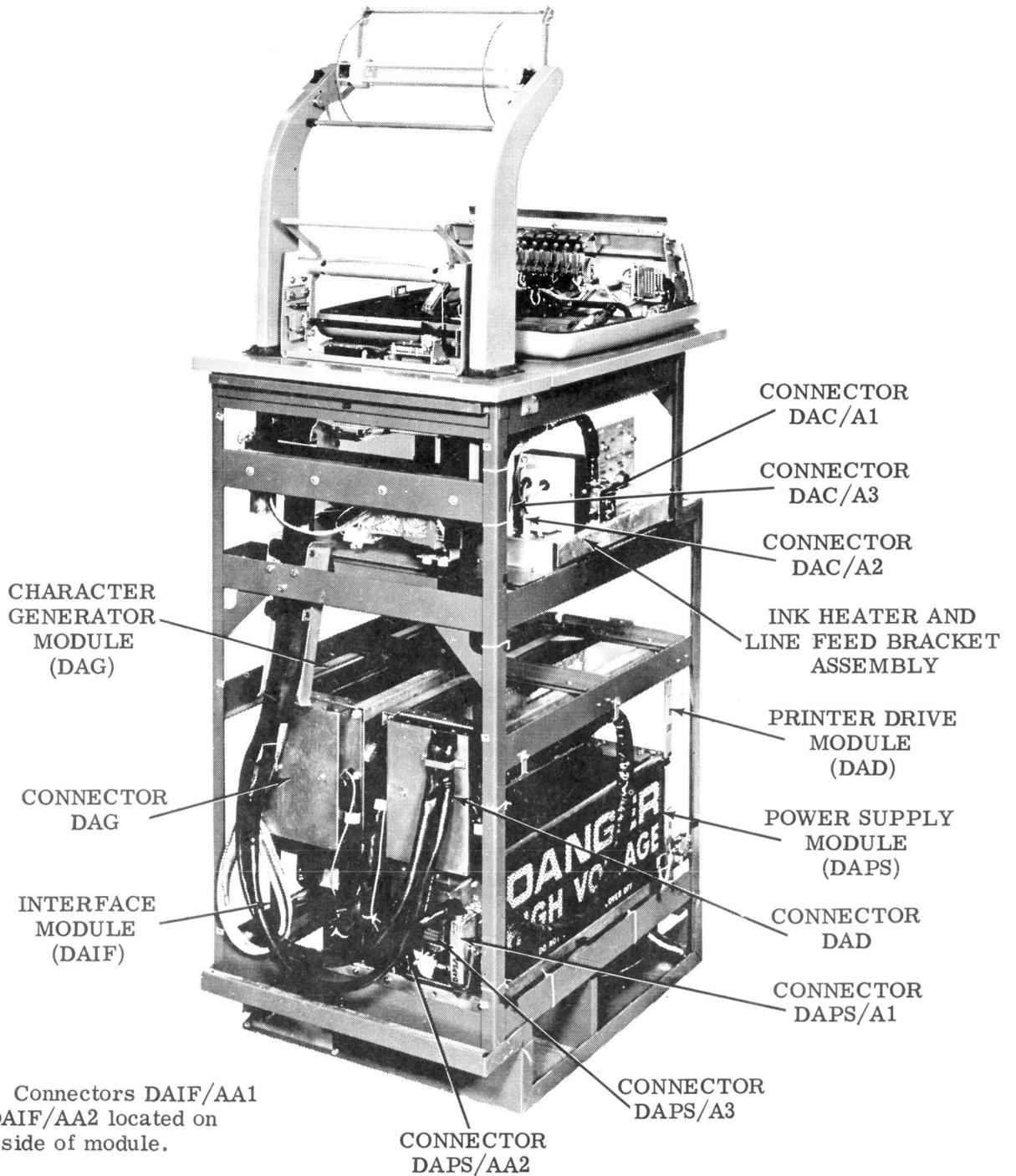
2.33 The paper winder is an optional feature of the DATASPEED Printer. If used, it may be removed as a complete unit, including the winder mechanism, the motor, and the control circuitry.

2.34 To remove the paper winder, proceed as follows:

(1) With the side panels removed, unscrew the four TP151631 screws, TP2191 lockwashers, and TP151610 flat washers that hold the rear cabinet top to the frame (Figure 9), and lift the rear cabinet top away from the frame.

(2) Remove the two TP151631 screws, TP2191 lockwashers, and TP151610 flat washers in the L-brackets on the left and right arms of the paper winder. Loosen the TP5599 nuts that hold these brackets to the undersides of the top rails of the frame, and slide the brackets off the frame.

(3) Remove the two TP151637 screws, TP3640 lockwashers, and TP125011 flat washers that hold the rear door interlock switch (Figure 10) to the bracket on the underside of the upper perforated panel of the printer frame.



(Rear View)

Figure 8 - DATASPEED Printer With Panels and Doors Removed, Modules in Normal Position

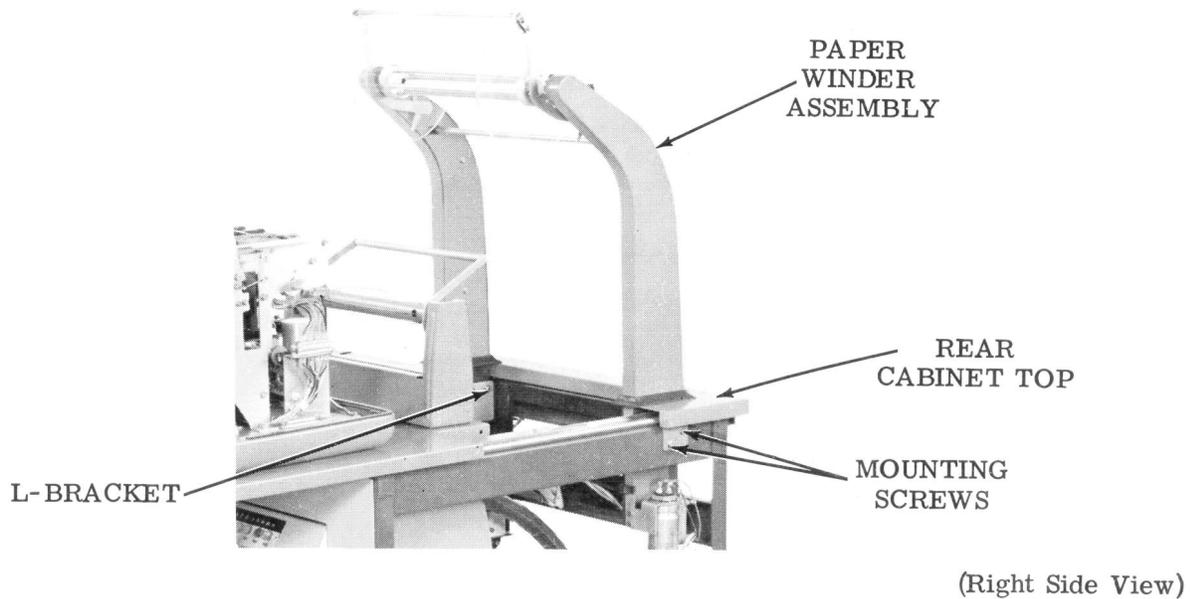


Figure 9 - Paper Winder Assembly, Panels Removed and Top Shelf Extended

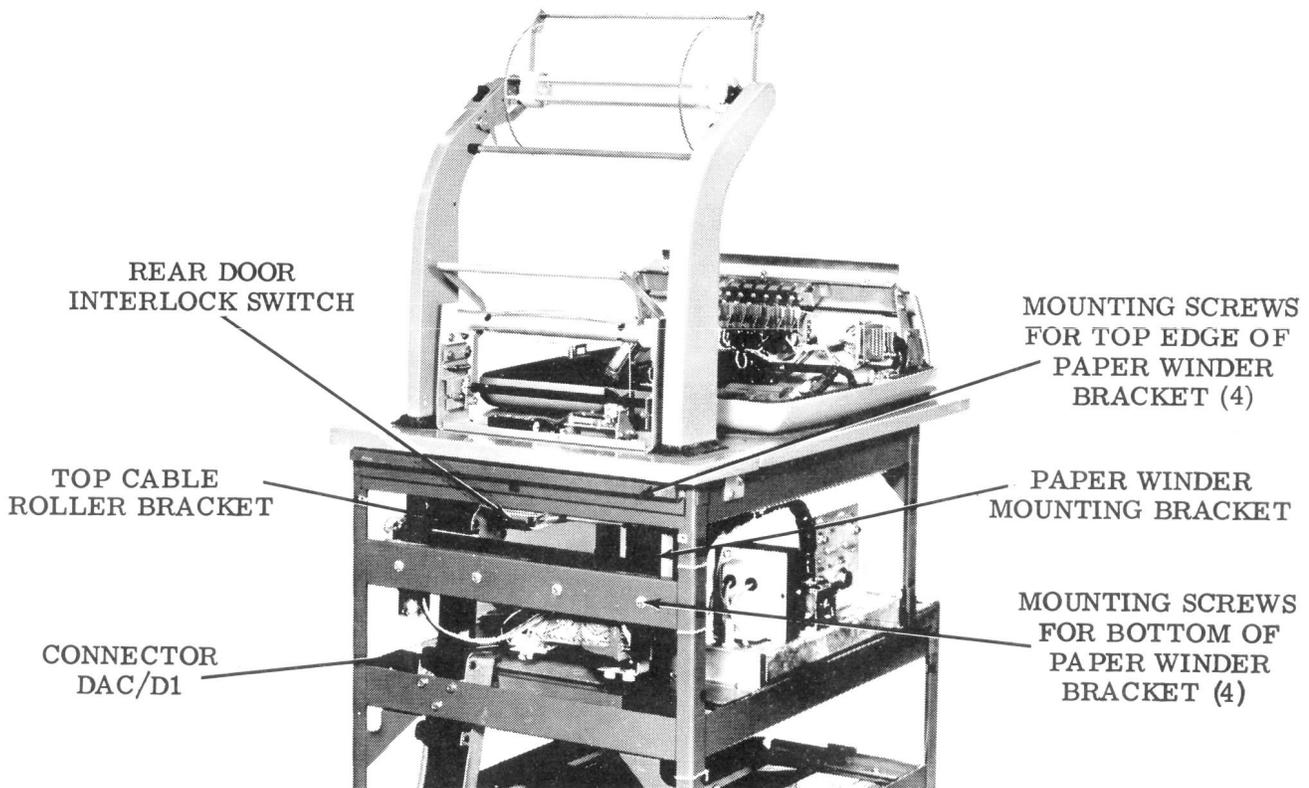


Figure 10 - Paper Winder Assembly

Note: To prevent damage to the switch during the rest of the procedure, it is advisable to tape or tie the switch to the top rail of the cabinet.

- (4) Remove the two TP151631 screws, TP2191 lockwashers, and TP7002 flat washers that hold the plate at the rear of the perforated panel to the underside of the top rail of the cabinet frame.
- (5) Remove the two TP151631 screws, TP2191 lockwashers, and TP7002 flat washers that hold the left side of the perforated panel to the top rail of the cabinet frame. (The rear screw supports a cable connector.)
- (6) Remove the two TP151631 screws, TP2191 lockwashers, and TP7002 flat washers that hold the right side of the perforated panel to the top rail of the cabinet frame. Remove the perforated panel from the cabinet.
- (7) Remove the two TP3598 nuts, TP2191 lockwashers, and TP151610 flat washers that hold the top cable roller bracket to the inside of the rear rail of the cabinet frame. Slide the roller and bracket down the cable so it rests on the perforated panel above the module housing.
- (8) Remove the four TP153839 screws, TP2191 lockwashers, and TP151610 flat washers that hold the paper winder bracket to the inside of the rear rail of the cabinet.
- (9) Separate connector DAC/D1.
- (10) From the underside of the rear top rail, remove the four TP85529 screws, TP2191 lockwashers, and TP7002 flat washers that hold the top of the paper winder bracket to the top rail of the cabinet frame.
- (11) Lift the complete paper winder assembly out of the cabinet frame.

2.35 To replace the paper winder assembly, reverse the procedure used in removing it from the cabinet frame. Check the adjustments described in Section 578-500-701 (formerly Section 592-820-701).

#### FAN HOUSING

2.36 The two ventilating fans are mounted in a housing at the bottom of the printer cabinet (Figure 11). These fans circulate air

through the cabinet to cool the components. To service the fans, the modules must be removed from the cabinet. This permits access to the fan grilles, which can be pried out for cleaning. However, to remove and replace the fans, the brackets and vertical panel that form the module housing must be dismantled.

2.37 To remove the fan housing, proceed as follows:

- (1) Remove all four modules from the cabinet (2.26 and 2.28).
- (2) Remove the three TP1170 flat head screws from each of the four module guide rails at the bottom of the cabinet.
- (3) Remove the TP125143 flat head screw, TP2191 lockwashers, and TP2658 nut that hold each of the four guide rails to the bracket at the rear of the cabinet frame, and remove the four guide rails from the frame.
- (4) Remove the two TP125143 flat head screws, TP2191 lockwashers, and TP2658 nuts that hold the upper right module guide rail to the brackets of the left compartment, and remove the guide rail from the frame.
- (5) Remove the two TP125143 flat head screws, TP2191 lockwashers, and TP2658 nuts that hold the upper left module guide rail to the brackets of the right compartment, and remove the guide rail from the frame.
- (6) Remove the four TP1157 screws, TP44048 flat washers, TP110126 lockwashers, and TP3354 nuts that hold the inner ends of the four top brackets of the module housing to the vertical cabinet plate.
- (7) Remove the two TP6032 screws, TP110126 lockwashers, and TP44048 flat washers that hold the bottom of the vertical cabinet plate to the bottom of the cabinet frame.
- (8) Remove the two TP55219 screws, TP110126 lockwashers, and TP44048 flat washers that hold the top of the vertical cabinet plate to the mounting bracket.
- (9) Slide the vertical cabinet plate to the rear of the frame until it clears the fan housing.

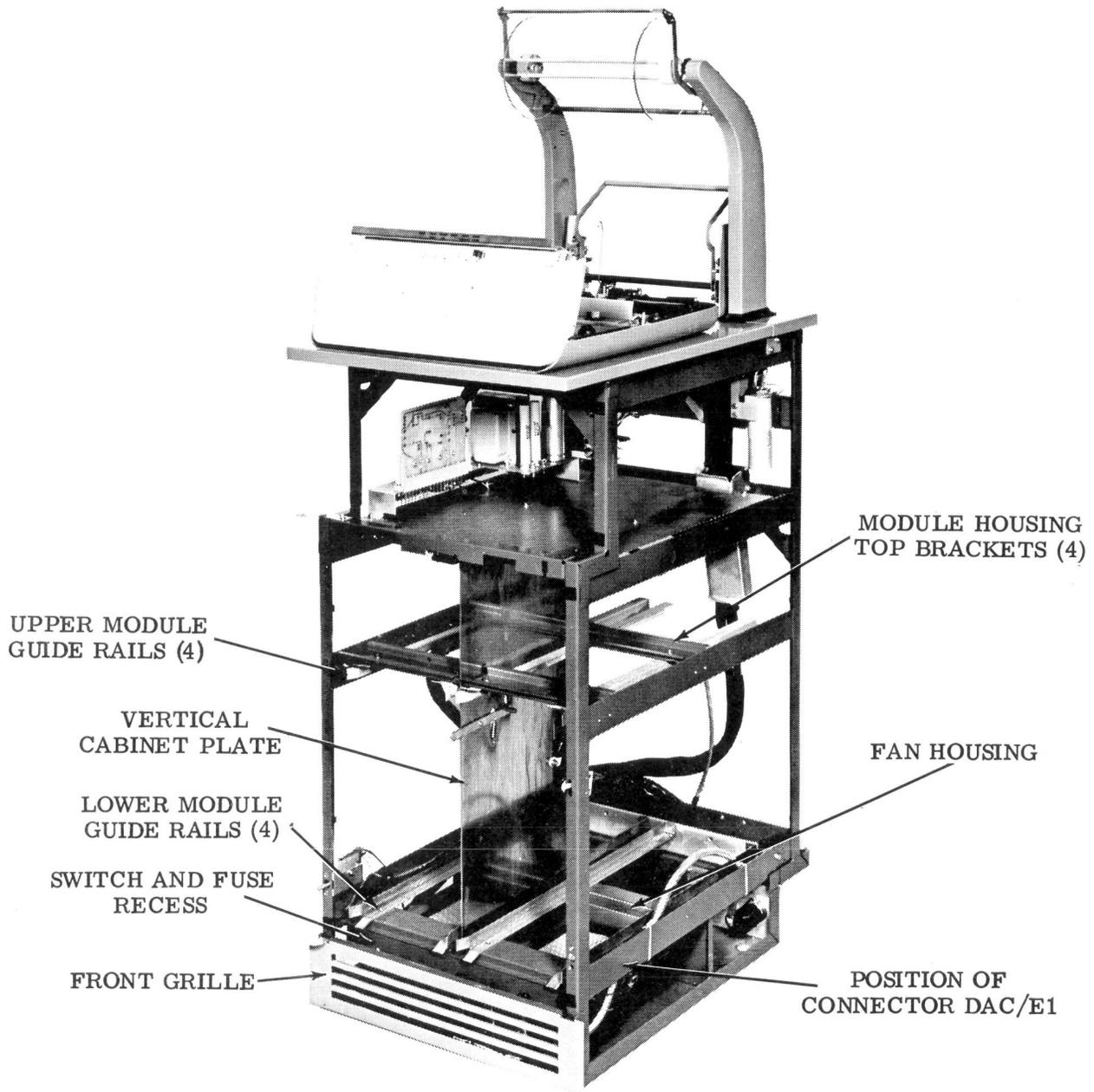


Figure 11 - Printer Frame With Panels and Doors Removed and Modules Out of Housing to Permit Access to Fan Housing

- (10) Unplug connector DAC/E1 from the right side of the fan housing.
  - (11) Remove the six TP1263 screws, TP2191 lockwashers, and TP7002 flat washers that hold the fan housing to the bottom of the cabinet.
  - (12) Lift the fan housing out of the cabinet.
- 2.38 To replace the fan housing, reverse the procedure used in removing it from the cabinet.

#### AC SWITCH AND FUSE PLATE

- 2.39 The ac ON/OFF switch and three fuses in the recessed area at the bottom of the cabinet are mounted on a metal plate that attaches to the underside of the recess. To remove this plate, the grille at the bottom of the cabinet must be removed, and the plate must then be unscrewed and pulled out through the grille opening.
- 2.40 To remove the switch and fuse plate, proceed as follows:

- (1) Reach behind the top of the grille and remove the two TP112626 nuts, TP2669 lockwashers, and TP3438 flat washers from the threaded studs in the top corners of the grille.
  - (2) From the side of the cabinet, reach under the bottom rail of the module housing and remove the TP112626 nut, TP2669 lockwasher, and TP84579 flat washer from the stud at the center of the bottom of the grille.
  - (3) Pull the grille away from the cabinet.
  - (4) Remove the two TP154249 screws from the top of the switch and fuse recess.
  - (5) Reach through the grille opening and carefully pull the switch and fuse plate out of the cabinet. The connecting wires are long enough to allow easy access to the switch, fuseholders, and terminal block on the plate:
- 2.41 To replace the switch and fuse plate, reverse the procedure used in removing it from the cabinet. In replacing the grille, be sure to use the larger flat washer (TP84579) on the bottom stud.