

33 TAPE PUNCH

DISASSEMBLY AND REASSEMBLY

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1. GENERAL

1.01 This section is reissued to incorporate all recent engineering changes and to present disassembly and reassembly information exclusively for the 33 tape punch. Since this is a general revision, marginal arrows, used to indicate changes, have been omitted.

1.02 References to left, right, front, rear, etc, consider the tape punch to be viewed from a position where tape guide assembly faces up and the backspace lever is to the viewer's left. Orientation references in the drive link mechanism area consider the drive link to be up and located to the viewer's right.

1.03 Disassembly, as outlined in this section, covers the procedure for removing the principle subassemblies which make up the unit. If further disassembly is required, refer to Section 574-125-800TC, which shows detailed arrangement of parts. Where it will help in deter-

mining their location, the numbers of the parts are given in the instructions.

1.04 When self-tapping screws are used to mount mechanisms onto castings, do not remove the self-tapping screws. Merely loosen them enough to remove the mechanisms unless specifically instructed otherwise.

1.05 Retaining rings are made of spring steel and have a tendency to release suddenly. To avoid loss of these rings when removing them, proceed as follows.

- (a) Hold retaining ring to prevent its rotating.
- (b) Place blade of screwdriver in one of ring's slots and rotate screwdriver to increase diameter.
- (c) Ring will come off easily in fingers without flying.

1.06 All tools used to remove the mechanisms referred to in this section can be found in the 570-005-800TC standard tool section. No additional special tools are required.

1.07 All damaged, worn, or distorted parts should be replaced if encountered in the disassembly and reassembly procedures.

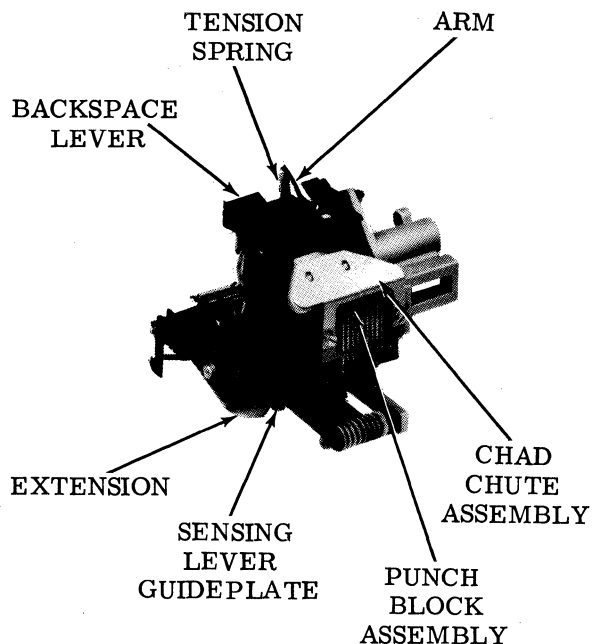
2. DISASSEMBLY AND REASSEMBLY

Note: For information concerning the proper procedure to remove the tape punch from the set, refer to the set disassembly and reassembly section, 574-100-702TC.

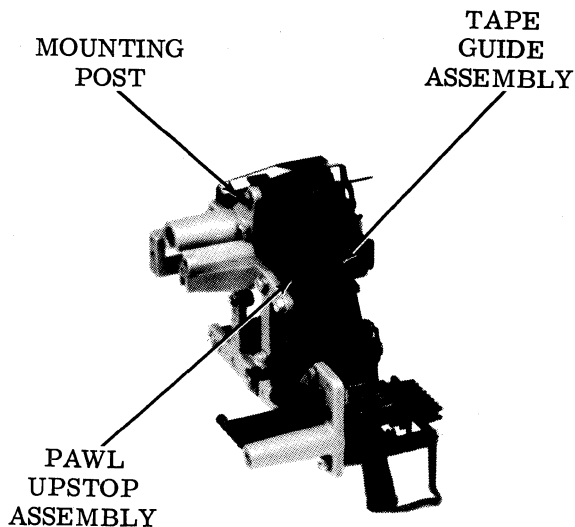
**CAUTION: BEFORE BEGINNING DISASSEMBLY, REMOVE CONNECTORS FROM EXTERNAL RECEPTACLES (POWER SOURCE, DATA SET, ETC).**

CHAD CHUTE ASSEMBLY

2.01 To remove the chad chute assembly (Figures 1 and 3), proceed as follows.



(Left Front View)



(Right Rear View)

Figure 1 - Tape Punch (Cover Removed, Early Design)

Figure 2 - Tape Punch (Cover Removed, Early Design)

- (a) Remove the TP182915 extension.
- (b) Remove two TP152893 screws, TP110743 lockwashers, and TP2034 flat washers.
- (c) Remove the TP182908 chad chute assembly.
- (d) To replace the chad chute assembly, reverse the procedure used to remove it. Line up the oblong holes of the plate with the holes in the punch block holder. Apply finger pressure on top of the chad chute assembly towards punch block holder when replacing and tightening the two screws.

- (b) Slide the punch block assembly forward until the tongue in the punch block holder and the punch pins disengage the groove in the TP182903 tape punch casting and the TP182813 levers respectively.
- (c) To replace the punch block assembly, position the slots in the punch pins so that they face the guide pin. The bottom of the punch pins should be in line and in a position that approximates their position when on the tape punch. Line up the punch pin slots with their levers and reverse the procedure used to remove the punch block assembly.

Note: Late design units have a TP185891 plastic chad chute assembly that should not be removed.

**PUNCH BLOCK ASSEMBLY**

**A. Early Design**

- 2.02 To remove the punch block assembly (Figure 1), proceed as follows.
  - (a) Remove the two TP153817 mounting screws, TP110743 lockwashers, and TP2034 flat washers.

**B. Late Design**

- 2.03 To remove punch block assembly (Figures 3 and 4), proceed as follows.
  - (a) Remove the three TP153817 screws, TP110743 lockwashers, and TP2034 flat washers.
  - (b) Slide the punch block assembly forward until the tongue in the punch block holder and the punch pins disengage the groove in the TP182903 tape punch casting and the TP182813 levers respectively.

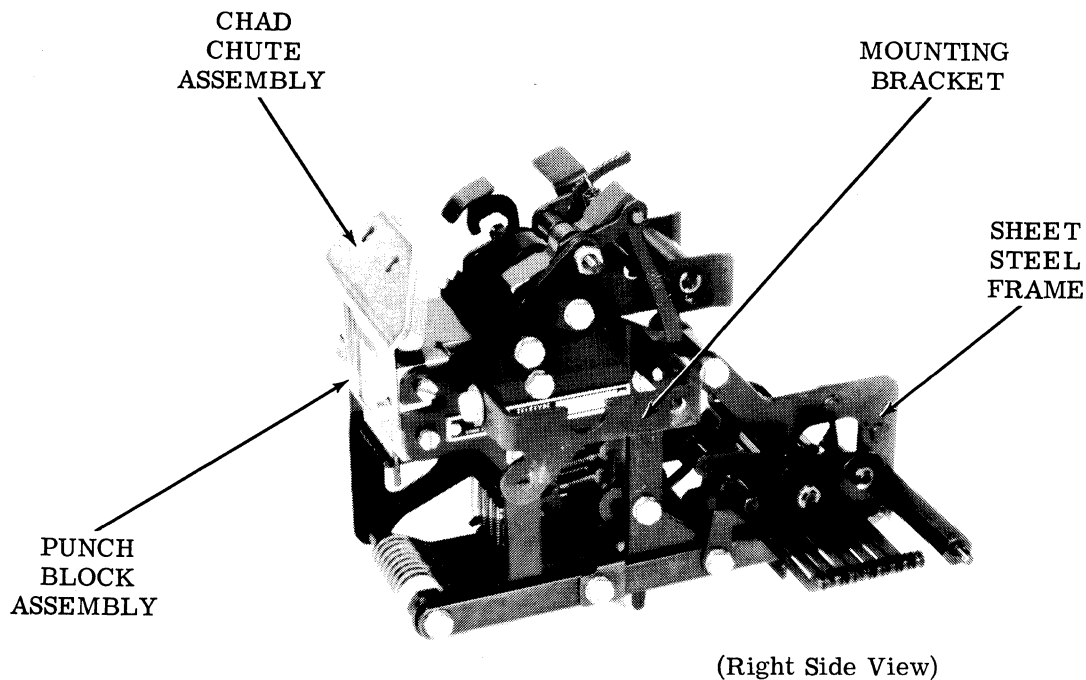


Figure 3 - Tape Punch (Cover Removed, Late Design)

(c) To replace the punch block assembly, position the slots in the punch pins so that they face the guide pin. The bottom of the punch pins should be in line and in a position that approximates their position when on the tape punch. Line up the punch pin slots with their levers and reverse the procedure used to remove the punch block assembly.

#### TAPE GUIDE ASSEMBLY

2.04 To remove the tape guide assembly (Figures 2 and 4), proceed as follows.

- (a) With a pencil or suitable marking instrument, mark the notch where the TP184095 tension spring end is positioned.
- (b) Unhook the TP184095 tension spring and remove the TP182936 arm from the TP182845 post.
- (c) Remove the TP181244 mounting screw from the tape guide assembly.

(d) Remove the tape guide assembly.

(e) To replace the tape guide assembly, reverse the above procedure making sure that the tension spring is positioned in the marked notch of the arm.

#### PAWL UPSTOP ASSEMBLY

2.05 To remove the pawl upstop assembly (Figures 2 and 4), proceed as follows.

Note: Never disassemble the pawl upstop assembly prior to removing the pawl, lever, and spring combinations. The slotted TP182822 plate keeps the "ball" and "socket" of the lever and pawl in full engagement.

- (a) Remove the TP181244 screw.
- (b) Remove the TP182821 post, TP182893 bracket, and TP182822 plate.
- (c) To replace the pawl upstop assembly, reverse the procedure used to remove it.

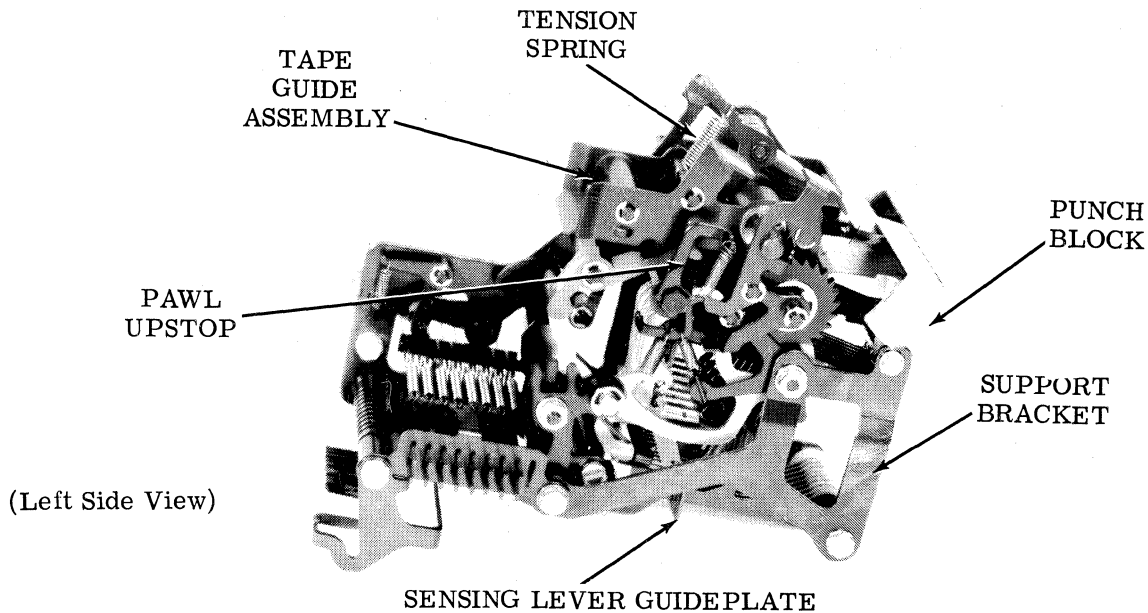


Figure 4 - Tape Punch (Cover Removed, Late Design)

**SENSING LEVERS AND GUIDEPLATE ASSEMBLY**

2.06 To remove the sensing levers and guideplate assembly (Figures 1 and 4), proceed as follows.

- (a) Unhook each TP182909 sensing lever spring and rotate each sensing lever away from the guideplate.
- (b) Remove the two TP181244 screws from the TP185847 post and remove the post and the attached sensing levers.
- (c) Remove the TP181242 screw and TP3598 nut from the TP182815 guideplate. Remove the guideplate.
- (d) To replace the sensing levers and guideplate, reverse the procedure used to remove them. However, before tightening the TP181242 screw and TP3598 nut, push the guideplate downward to take up all play. Viewing the tape punch from the left, position the guideplate in a horizontal to a slightly counterclockwise from horizontal position as gauged by eye. Then, tighten the TP181242 screw and TP3598 nut.

**PAWL, LEVER, AND SPRING COMBINATIONS**

2.07 To remove the pawl, lever, and spring combinations (Figure 4), proceed as follows.

- (a) Remove chad chute assembly.
- (b) Remove punch block assembly.
- (c) Remove tape guide assembly.
- (d) Remove pawl upstop assembly.
- (e) Remove sensing levers and guideplate assembly.
- (f) Remove the two TP181244 screws that hold the power bail mechanism in place.
- (g) Remove the TP119652 retaining ring that holds the TP182377 pawl to the power bail assembly.
- (h) Remove the TP7002 flat washer, the TP124177 lockwasher, and the TP3598 nut from the TP185846 post that supplies the pivot point for the levers.
- (i) The pawl, lever, and spring combination and the attached power bail assembly can now be removed from the tape punch.
- (j) To replace the pawl, lever, and spring combination, reverse the procedure used to remove it.