33 TELETYPEWRITER SET

REMOVAL AND REPLACEMENT OF COMPONENTS

1. GENERAL

1.01 This section provides removal and replacement of components for the 33 teletypewriter set. It is reissued to include information for Computer Input/Output Sets, 3300 Series Coded Sets, and to make minor corrections. Marginal arrows indicate the changes and additions.

1.02 References to left, right, front, rear, etc, consider the set as viewed from the normal operating position.

1.03 The removal procedure given in this section subdivides the set into its major components. Each removal procedure is written assuming the set to be completely assembled, that is, no components previously removed. If further disassembly of the component is required, refer to the appropriate disassembly and reassembly section or the illustrated parts section which gives detailed arrangements of all parts. Where it will help in determining their location, the numbers of the parts are given in the instructions.

1.04 All tools used to remove the major components referred to in this section can be found in the 570-005-800TC standard tool section.

1.05 All damaged, worn, or distorted parts should be replaced if encountered in the removal and replacement procedure.

CAUTION: BEFORE REMOVING COMPONENTS, REMOVE CONNECTORS FROM EXTERNAL RECEPTACLES (POWER SOURCE, DATA SET, ETC).

2. REMOVAL AND REPLACEMENT

COVER

2.01 To remove the set cover (Figure 1), proceed as follows.

(a) Remove paper and paper roll spindle. Remove bezel, if used, on call control unit by removing screws. Remove the volume control knob, if used, or the power switch rotary knob, if used, by pulling frontward. Remove the nameplate by pulling it down and out. Remove the platen knob used on friction feed typing units by pulling it to the left. On sprocket feed typing units, remove a platen knob screw first, then remove the platen knob by pulling it to the left.

(b) Remove the four TP181141 screws from front and the three TP184085 screws from rear of typing unit cover.

Note: On Automatic Send-Receive (ASR) Teletypewriter Sets, remove the TP183112 screw from left rear corner of the tape reader cover.

(c) Gently lift the cover from the subbase and set it aside.
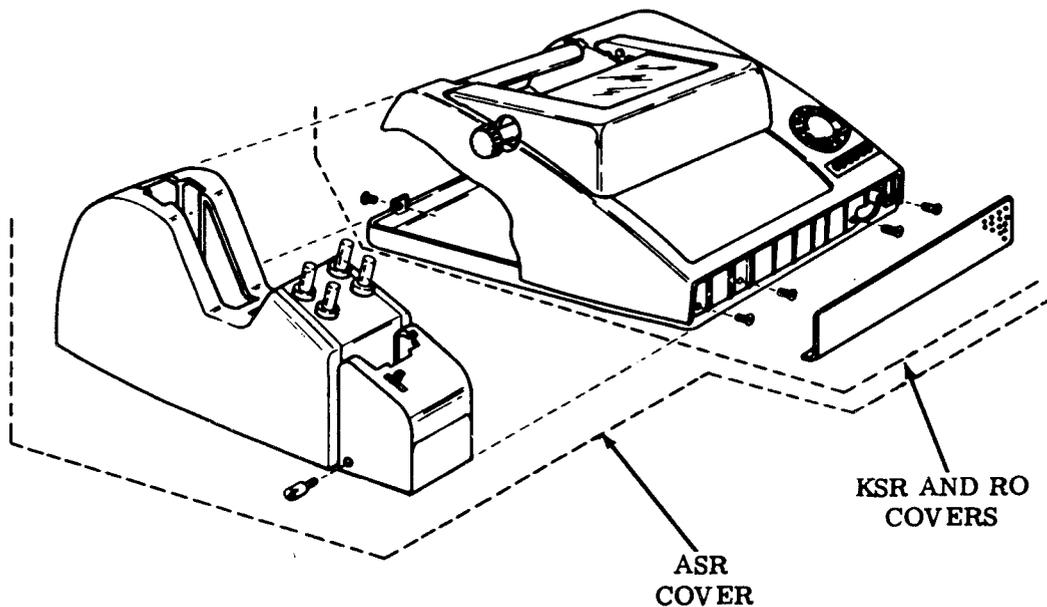
KSR AND RO
COVERS

ASR
COVER

Figure 1 - Set Covers

Note: On Automatic Send-Receive (ASR) Teletypewriter Sets, the typing unit cover, tape punch cover, and reader cover are all interconnected and they remove as one unit. If desired the three covers can then be separated from each other.

(d) To replace the cover on sets with low paper alarm switch, first replace the paper and paper roll spindle. Then reverse the procedure used to remove it. Make sure all protrusions are aligned in the holes provided.

TYPING UNIT

Note: Computer Input/Output Sets having a keyboard lock mechanism — the keyboard must be removed from the base before the typing unit can be disassembled.

2.02 To remove typing unit (Figure 2), proceed as follows.

(a) Remove cover assembly as described in 2.01.

(b) Remove all plugs which connect the typing unit to the call control unit. Remove ground strap from ground tab on call control unit.

Note: On ASR Sets, remove the two leads that connect to the reader cable from the contact assembly.

(c) Insert screwdriver in slot of TP180977 H-plate and push to left against pressure of spring until plate is disengaged from universal lever. Remove H-plate. (See Figure 2)

(d) Lift typing unit from subbase using the following procedure.

(1) Insert a screwdriver between the typing unit base casting and the subbase in the left rear of the typing unit.

(2) Using the screwdriver as a lever, lift the left rear section of the typing unit until the left hand can be placed under the unit.

(3) Grasp the extreme right side of the front carriage shaft and lift the typing unit from the subbase.

(e) To replace typing unit, reverse procedure used to remove it. Make sure typing unit is properly seated on rubber isolators and TP180831 answer-back bellcrank is under and aligned with HERE IS key. Replace plugs in proper receptacles on call control unit. Replace H-plate.
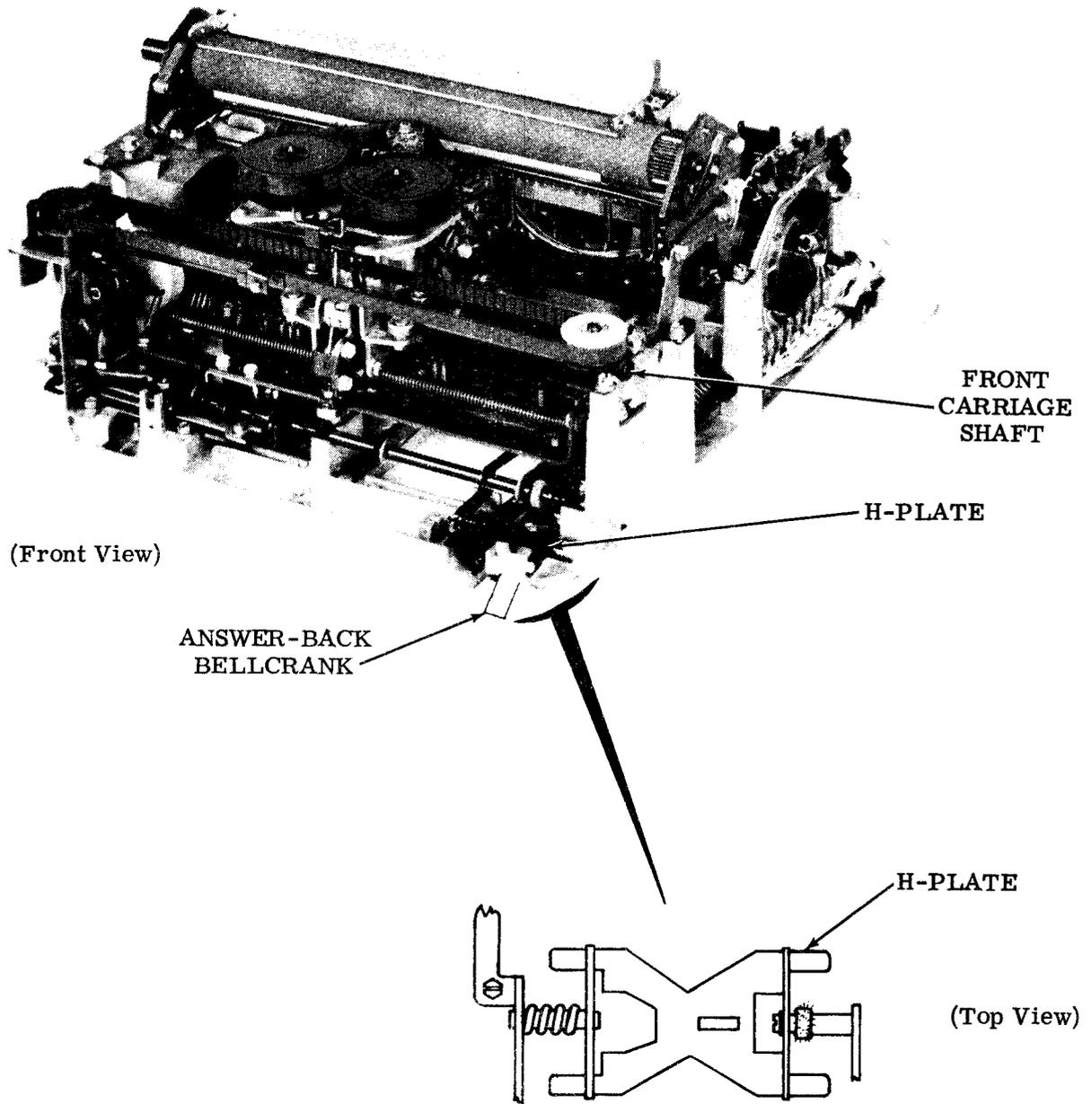
FRONT
CARRIAGE
SHAFT

H-PLATE

(Front View)

ANSWER-BACK
BELLCRANK

H-PLATE

(Top View)

Figure 2 - Typing Unit

KEYBOARD

2.03 To remove the keyboard (Figure 3), proceed as follows.

(a) Remove cover assembly as described in 2.01.

(b) Remove the keyboard plug from its receptacle on the call control unit.

(c) Temporarily remove the call control unit by removing the four TP121551 mounting screws.

Note: On Computer Input/Output Sets refer to 2.05 for removal of call control unit.

(d) Disengage the keyboard cable from the TP182531 cable clips on subbase.

(e) Insert a screwdriver in slot of TP180977 H-plate and push to left against pressure of spring until H-plate is disengaged from the universal lever. Remove the H-plate.

(f) Loosen the two TP180708 keyboard mounting screws. Slide keyboard assembly toward the rear and lift it from subbase.

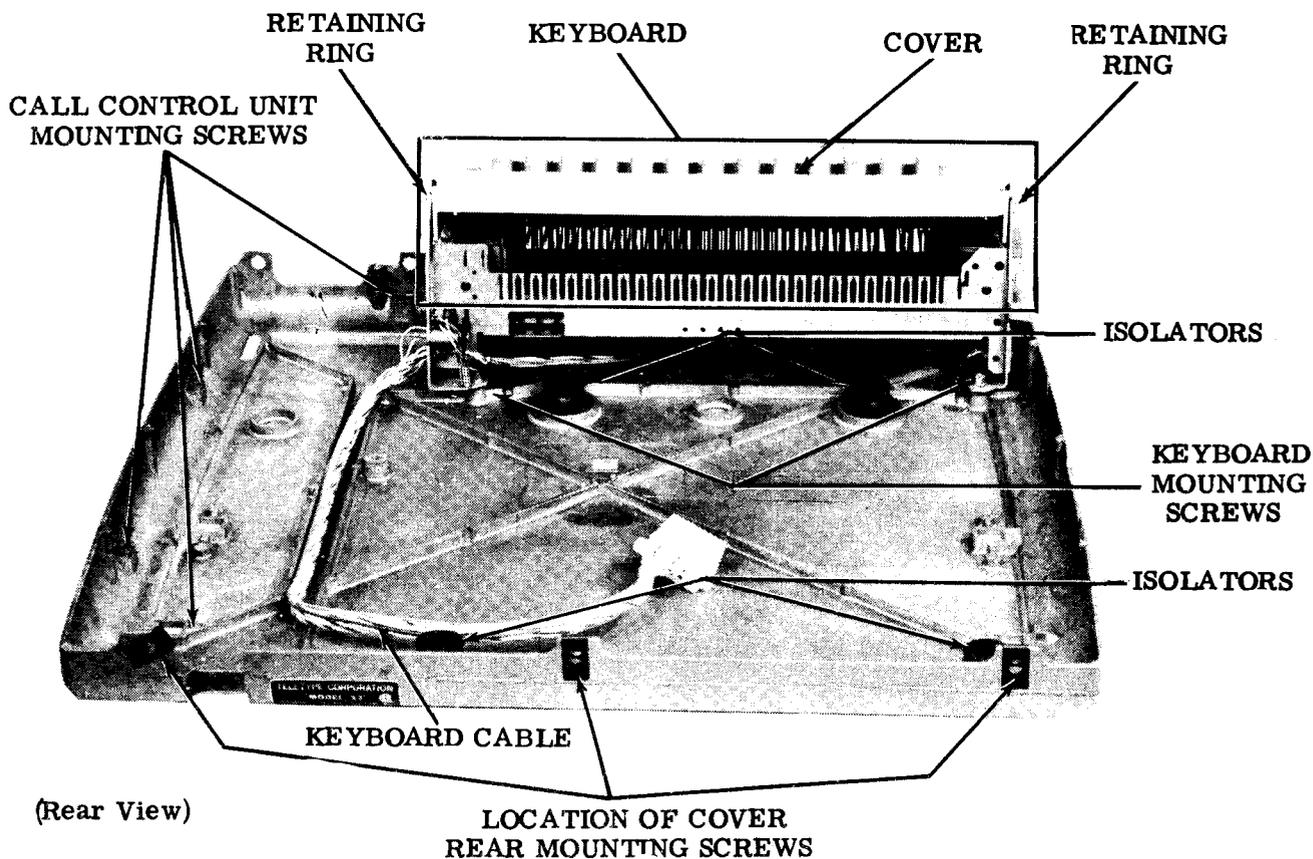(g) To replace keyboard, reverse procedure used to remove it.

Figure 3 - Subbase With Keyboard

CALL CONTROL UNIT

3300 Series Coded Sets and 33 Sets

2.04 To remove the call control unit (Figure 3), proceed as follows.

(a) Remove cover assembly as described in 2.01.

Note: If a speaker is used in conjunction with the call control unit, lift it off the sub-base and set it with the call control unit.

(b) Remove all plugs from rear of call control unit.

(c) Remove the four TP121551 mounting screws.

(d) Remove ground strap.

(e) Remove the call control unit.

(f) To replace the call control unit, reverse the procedure used to remove it.

CAUTION: BE SURE THAT THE SPEAKER WIRES DO NOT BECOME ENTANGLED WITH THE BELL RINGER ADJUSTMENT LEVER.

Computer Input/Output Sets

2.05 To remove the call control unit, proceed as follows:

(a) Remove cover assembly as described in 2.01.

(b) Remove all plugs from the rear of the call control unit.

(c) Remove ground strap.

(d) Remove two screws at the right and one screw at the front of the call control unit.

(e) Lift and slide the call control unit forward.

(f) To replace the call control unit, engage the rear slot under the shoulder screw provided and slide to the rear and down. Reverse procedure used to remove it.

TAPE READER

3300 Series Coded Sets and Computer I/O Sets

2.06 To remove the tape reader and attached cable assembly, proceed as follows:

(a) Remove cover assembly as described in 2.01.

(b) Remove plugs no. 5 and no. 6 from the rear of the call control unit.

(c) Disconnect the power pack connector.

(d) Remove the two TP182726 push-on terminals from the tabs of the tape reader feed magnet contact assembly.

(e) Remove the reader cable from under the typing unit casting. Remove any necessary cable clamps.

(f) Remove TP119651 retaining ring from the TP183117 locking screw on tape readers so equipped. Then, remove the TP183117 locking screw from tape reader mounting bracket.

(g) To replace the tape reader reverse the procedure used to remove it.

33 Sets

2.07 To remove the tape reader and attached cable assembly, proceed as follows.

(a) Remove cover assembly as described in 2.01.

(b) Remove tape reader plug marked "6" from receptacle in back of call control unit.

Note: On units with automatic reader control, also remove plug marked "5".

(c) Remove plug from power pack.

(d) Remove the two TP182726 push-on terminals from the tabs of the tape reader feed magnet contact assembly.

(e) Remove any necessary cable clamps.

(f) Remove the four TP121551 call control bracket mounting screws.

(g) Lift call control unit and remove tape reader cable which is located under the call control unit.

(h) Replace call control unit.

Note 1: Early Design Tape Readers: Remove the three TP181244 mounting screws, TP7002 flat washers, and TP124177 lockwashers from tape reader mounting bracket.

Note 2: Late Design Tape Readers: First remove the TP119651 retaining ring from the TP183117 locking screw on tape readers so equipped. Then, remove the TP183117 locking screw from tape reader mounting bracket.

PUNCH

Note: The 3300 Series Coded Sets and Computer Input/Output Sets are equipped with late design tape punches. The 33 sets may be equipped with either early design or late design tape punches.

2.08 Early Design (Aluminum Casting): To remove the tape punch from the typing unit base casting (Figure 4), proceed as follows.

(a) Unhook the TP3864 spring from the TP182894 drive link and rotate drive link out of the way.

(b) Remove the three screws which secure the tape punch base casting to the typing unit base casting in the following order:

First, the TP181246 screw.
Second, the rear TP182891.
Finally, the most forward TP182891 screw.

(c) Remove the TP182805 nut plate from the inside surface of the front wall of the typing unit base casting.

(d) Remove the codebar extensions from their respective codebar slots while removing the tape punch base casting from the carriage shaft.

(e) To replace the tape punch to the typing unit base casting, reverse the procedure used to remove it. Prior to replacing the tape punch to the left side of the typing unit base casting, manually set up the typing unit so that all codebars are in the marking position.

2.09 Late Design (Sheet Steel Frame): To remove the tape punch from the typing unit base casting (Figure 5), proceed as follows.

(a) Unhook the spring from the drive link and rotate drive link out of the way.

(b) Remove two bracket connecting screws.

(c) Remove the mounting screw that holds the platen mounting post to the plate.

(d) Remove the codebar extensions from their respective codebar slots while also removing the tape punch from the typing unit.

(e) To replace the tape punch to the typing unit base casting, reverse the procedure used to remove it. Prior to replacing the tape punch to the left side of the typing unit base casting, manually set up the typing unit so that all codebars are in the marking position. Make sure the top surfaces of the mounting brackets are parallel to each other.
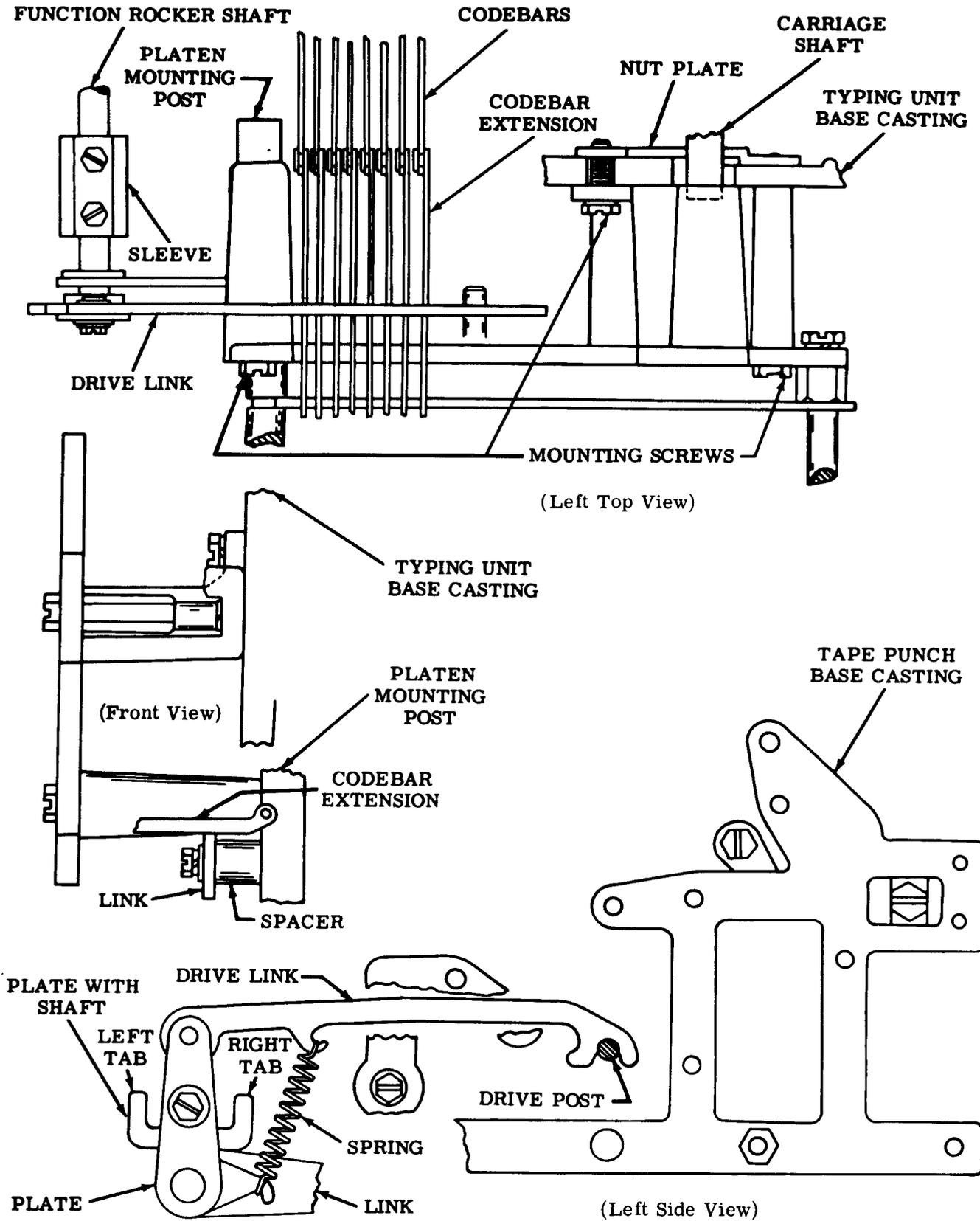
FUNCTION ROCKER SHAFT

PLATEN MOUNTING POST

CODEBARS

CARRIAGE SHAFT

NUT PLATE

TYPING UNIT BASE CASTING

CODEBAR EXTENSION

SLEEVE

DRIVE LINK

MOUNTING SCREWS

(Left Top View)

TYPING UNIT BASE CASTING

(Front View)

PLATEN MOUNTING POST

CODEBAR EXTENSION

TAPE PUNCH BASE CASTING

LINK

SPACER

PLATE WITH SHAFT

DRIVE LINK

LEFT TAB

RIGHT TAB

DRIVE POST

SPRING

PLATE

LINK

(Left Side View)

Figure 4 - Tape Punch (Early Design)

DRIVE POST

DRIVE LINK

(Left Side View)

SPRING

PLATEN
MOUNTING
POST

CODEBAR

TYPING UNIT
BASE CASTING

CODEBAR
EXTENSION

(Left Top View)

MOUNTING
SCREW

BRACKET CONNECTING
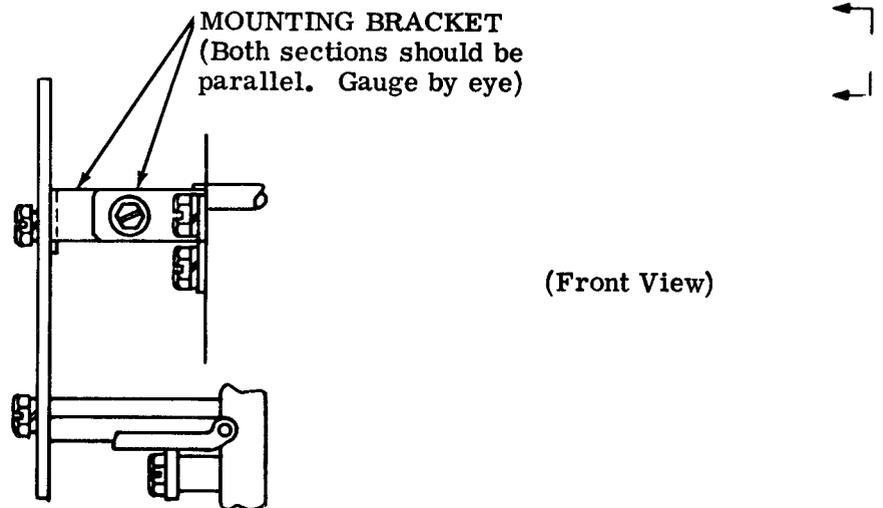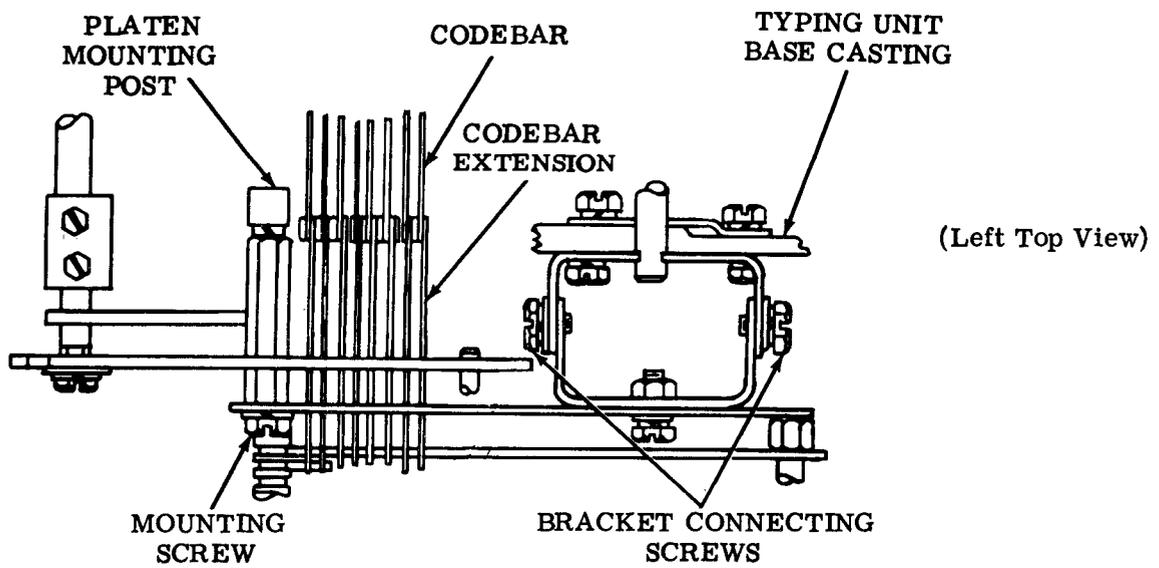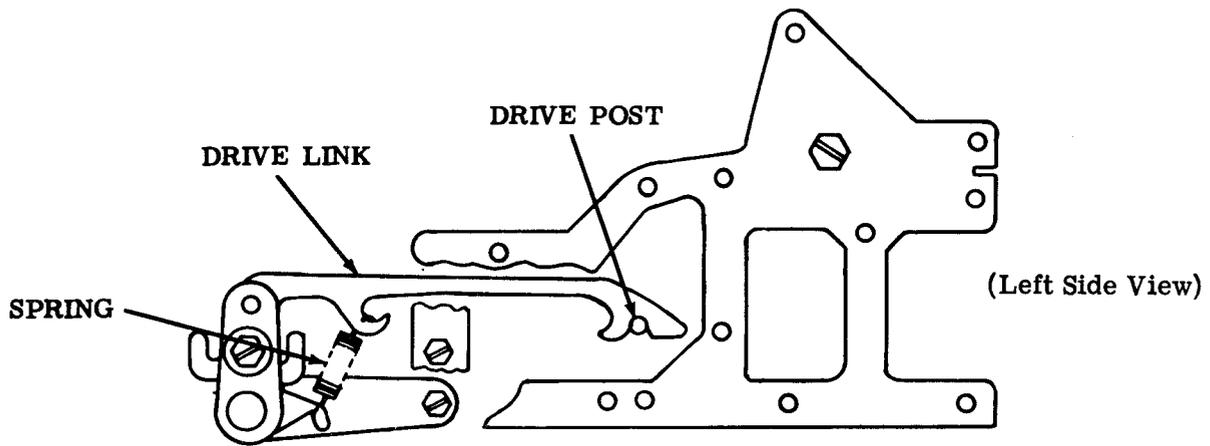SCREWS

MOUNTING BRACKET
(Both sections should be
parallel. Gauge by eye)

(Front View)

Figure 5 - Tape Punch (Late Design)