

AUG 21 1957

\*INSTRUCTIONS FOR INSTALLING THE 104994 OR 136101 MODIFICATION KIT  
ON A MODEL 14 TYPING REPERFORATOR (SERIAL NOS. 49376 AND UP) TO  
PROVIDE A TAPE BACKSPACE MECHANISM

1. GENERAL

a. The 104994 manual backspace mechanism modification kit when installed on a Model 14 Typing Reperforator enables the operator to backspace tape for the purpose of making corrections. It is operated by means of a backspace lever and a ribbon guide lever located at the front of the unit near the platen mechanism. These levers may be operated consecutively or simultaneously by the fingers of one hand. The backspace lever moves the tape backward one space for each operation, and the ribbon guide lever lifts the ribbon guide and ribbon away from the tape to provide visibility of the typed copy. This modification kit is arranged to be used on units with serial numbers above 49376. These units are equipped with a 96844 main bracket which was modified for the adoption of the backspace mechanism.

*2-104449  
Blocks  
TP102703*

\*b. The 136101 remote control backspace mechanism modification kit when installed on a Model 14 Typing Reperforator equipped with the 104994 modification kit (see paragraph 1.a. above) and with standard pull bars in slot 3 and 4, and Bell, Lockout and Tape Illumination parts omitted, provides a remote control backspace mechanism in addition to the manual backspace mechanism. This mechanism is actuated by a solenoid pulsed from an external source.

c. The 104994 modification kit consists of:

|   |        |                       |   |        |                      |
|---|--------|-----------------------|---|--------|----------------------|
| 1 | 1010   | Shoulder Screw 6-40   | 1 | 102107 | Tape Knife           |
| 2 | 1162   | Screw 4-40 x 1/4 Fil. | 1 | 102108 | Backspace Pawl       |
| 1 | 2421   | Spring                | 1 | 102109 | Ribbon Lifter        |
| 1 | 3640   | Lock Washer           | 1 | 102110 | Stud                 |
| 1 | 7965   | Spring                | 1 | 102111 | Feed Pawl            |
| 1 | 42661  | Spring                | 1 | 102795 | Ribbon Guide         |
| 1 | 80478  | Spring Post           | 1 | 110435 | Nut 4-40 Hex.        |
| 1 | 92668  | Post                  | 1 | 111024 | Punch Block Assembly |
| 1 | 102104 | Backspace Lever       | 1 | 125011 | Washer               |

\*d. The 136101 modification kit consists of:

|   |        |                         |   |        |                          |
|---|--------|-------------------------|---|--------|--------------------------|
| 4 | 2191   | Washer, Lock            | 1 | 138937 | Plate, Tape Stripper     |
| 4 | 7002   | Washer, Flat            | 1 | 138938 | Plate, Mounting          |
| 2 | 74807  | Nut 10-32 Hex.          | 1 | 138939 | Bail                     |
| 2 | 80342  | Screw 6-40 x 11/32 Hex. | 1 | 138941 | Link w/stud, Feed        |
| 1 | 90432  | Washer, Flat            | 1 | 138942 | Pin                      |
| 2 | 102187 | Screw 10-32 Pilot       | 1 | 138943 | Link w/stud, Solenoid    |
| 3 | 152634 | Shim                    | 1 | 138945 | Lever w/studs, Backspace |
| 2 | 119649 | Ring, Retainer          | 4 | 151692 | Screw 6-40 x 3/16 Fil.   |
| 1 | 138936 | Platform, Tape          | 1 | 139012 | Solenoid                 |

c. For part numbers referred to other than those listed in the modification kit, see Teletype Model 14 Typing Reperforator Parts Bulletin.

\* Indicates Change

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## 2. INSTALLATION

### a. 104994 Modification Kit (Figure 1)

- (1) Remove and discard the 81603 tape knife; retain the two 8543 screws and 2191 lock washer.
- (2) Remove and retain the 96840 feed roll bracket assembly together with its two 74986 screws, 2191 lock washers and the 95440 spacer. Remove and retain the 80757 screw and 2669 lock washer. When removing this assembly, the 73481 tape tension lever must be lifted to clear the feed roll pins.
- (3) Remove and discard the 95449 ribbon guide and the 102052 mounting screws but retain the 125011 washers and 3640 lock washers.
- (4) Remove and discard the punch block assembly but retain the two 1026 mounting screws and 2191 lock washers.
- (5) Remove and discard the 95446 feed pawl but retain the 95447 eccentric bushing, 80444 screw, 2191 lock washer, and the 7603 feed pawl spring.
- (6) Remove and retain the 74554 spring post that anchors the 4705 detent lever spring.
- (7) Install the 74554 post (retained) in the tapped hole in front of the 95448 feed pawl spring post hole to anchor the 7965 backspace lever spring.
- (8) Secure the 102108 backspace pawl to the stud of the 102104 backspace lever with the 125011 washer, 3640 lock washer and 110435 nut.
- (9) Attach the 42661 backspace pawl spring to the 102108 backspace pawl and the backspace lever post.
- (10) With the punch bail in its lowermost position, mount the 111024 punch block assembly on the 96844 main bracket by means of the two 1026 screws and 2191 lock washers previously removed.
- (11) Attach the 102111 feed pawl to the punch bail extension by means of the (retained) 95447 eccentric bushing, 80444 screw and 2191 lock washer.
- (12) Attach the (retained) feed roll bracket assembly to the punch block assembly with the 95440 retained spacer inserted between the punch block and the 96840 bracket, using the two 74986 (retained) screws and 2191 lock washers. Fasten the assembly to the 96844 main bracket by means of the 80757 retained screw and 2669 lock washer. Take care that the feed roll operates freely when the tape retaining fork is lifted off the feed roll.
- (13) Hook the retained 7603 feed pawl spring to the 102111 feed pawl and secure it to the 95448 spring post.
- (14) Install the 102104 backspace lever (with posts) to the 96844 main bracket by means of the 1010 shoulder screw in the tapped hole above the right-hand punch block mounting screw. The lever extension should engage the underside of the feed pawl extension.

(15) Hook the 7965 backspace lever spring from the 102104 backspace lever to the 74554 spring post.

(16) Mount the 80478 spring post for the 102109 ribbon lifter in the tapped hole below the mounting hole for the 102110 stud.

(17) Secure the 102109 ribbon lifter to the 96844 main bracket by means of the 102110 stud inserted in the mounting hole from which the 74554 spring post was removed.

(18) Thread the 92668 ribbon lifter spring post into the 96844 main bracket and attach the 2421 ribbon lifter spring to the 102109 ribbon lifter and 92668 post.

(19) Hook the 4705 detent lever spring between the detent lever and the 102110 ribbon lifter stud.

(20) Secure the 102795 ribbon guide to the 102109 ribbon lifter by means of the two 1162 screws and the 125011 washers and 2191 lock washers previously removed.

(21) Attach the 102107 tape knife to the 96844 main bracket by using the 8543 screws and 2191 lock washers previously removed.

\*b. 136101 Modification Kit (Figures 2 and 3)

(1) Drill and tap two holes in the plate assembly as shown in Figure 1. Transfer the 106380 serial no. name plate with its two 83408 screws to these holes.

(2) Remove and retain the following parts:

|   |        |                 |   |        |                |
|---|--------|-----------------|---|--------|----------------|
| 2 | 2191   | Washer, Lock    | 1 | 125011 | Washer, Flat   |
| 2 | 86561  | Clamp           | 1 | 42661  | Spring         |
| 1 | 7965   | Spring          | 1 | 102108 | Backspace Pawl |
| 1 | 1010   | Screw, Shoulder | 2 | 1176   | Screw          |
| 1 | 110435 | Nut             | 2 | 2191   | Washer, Lock   |
| 1 | 3640   | Washer, Lock    |   |        |                |

(3) Discard the following parts:

|   |               |   |        |                 |
|---|---------------|---|--------|-----------------|
| 1 | Tape Stripper | 2 | 6746   | Screw           |
| 1 | Tape Platform | 1 | 102104 | Backspace Lever |

(4) Mount the 138937 tape stripper plate using the 1176 screws, and 2191 lock washers, previously removed.

(5) On the 138945 backspace lever assembly use the retained 102108 backspace pawl, and the 42661 spring. Put two 152634 shims and the 138941 feed link on the same stud utilized by the backspace pawl. Secure with the retained 125011 flat washer, 3640 lock washer, and the 110435 nut. Tighten the nut, and mount completed sub assembly with the retained 1010 Shoulder Screw.

(6) Mount the 153588 solenoid on the 138938 mounting plate utilizing the four 151692 screws, 2191 lock washers, and the 7002 flat washers.

(7) Through the two 10-32 tapped holes thread the two 102187 pilot screws, and on the inner sides of the tapped lips engage the threads of the pilot screws with two 74807 nuts. (Bearing surface of nuts toward the lip side of the mounting plate). Install the 138939 bail between the pilot screws; add one 152634 shim on the stud of the feed link, and engage the stud portion of the feed link in the hole located on the extended arm of the bail. Secure the link with a 119561 ring retainer. Thread the pilot screws through the mounting plate so that the bearing surfaces pin through the two holes on the bail. Install solenoid link, and secure stud portion with a 119561 retainer ring.

(8) Lift up the free end of the solenoid link and position hole so that it lines up with the two holes located on the solenoid armature yoke. Use the 90432 flat washer as a spacer, and then pin through this assembly with the 138942 pin. Secure pin with two 119649 ring retainers. Make certain that the long end of the pin is located as shown.

(9) Install the new 138936 tape platform with two 80342 screws, and the two retained 2191 lock washers and 86561 clamps.

(10) Provide wiring to backspace solenoid (cable not furnished).

### 3. ADJUSTMENTS

a. For adjusting procedure refer to standardized adjustment information. Check the following:

- (1) 104994 modification kit
  - Punch Bail Front Pivot Bearing Plate
  - Feed Roll Bearing
  - Tape Tension Lever Stud
  - Feed Roll Detent (Preliminary)
  - Feed Pawl Eccentric (Preliminary)
  - Vertical Lever Pivot Screw
  - Punch Selector Finger Backstop
  - Punch Bail Link
  - Punch Bail Up-Stop Screw
  - Feed Roll Detent (Final)
  - Feed Pawl Eccentric (Final)
  - Tape Stripper Plate
  - Tape Tension Lever Spring Tension
  - Ribbon Guide
  - Feed Roll Detent Lever Spring Tension
  - Tape Guide Spring
  - Backspace Mechanism
- (2) 136101 modification kit
  - Tape Platform

(a) With the solenoid manually retracted to the energized position, the backspace pawl should engage a tooth on the feed wheel and the ratchet should move the feed wheel one tooth. To adjust, loosen the tape platform mounting screws and position the mounting plate in its elongated mounting holes. Tighten the screws. Check this adjustment with the solenoid electrically energiz-

ed, and recheck by manually depressing the backspace lever. (Bail should move freely; loosen the two nuts and reposition the two pilot screws).

(b) The tape platform should not interfere with the bail stripper plate or pin. To adjust, loosen the two mounting screws and move the tape platform without disturbing adjustment (a) above. Tighten screws and recheck.

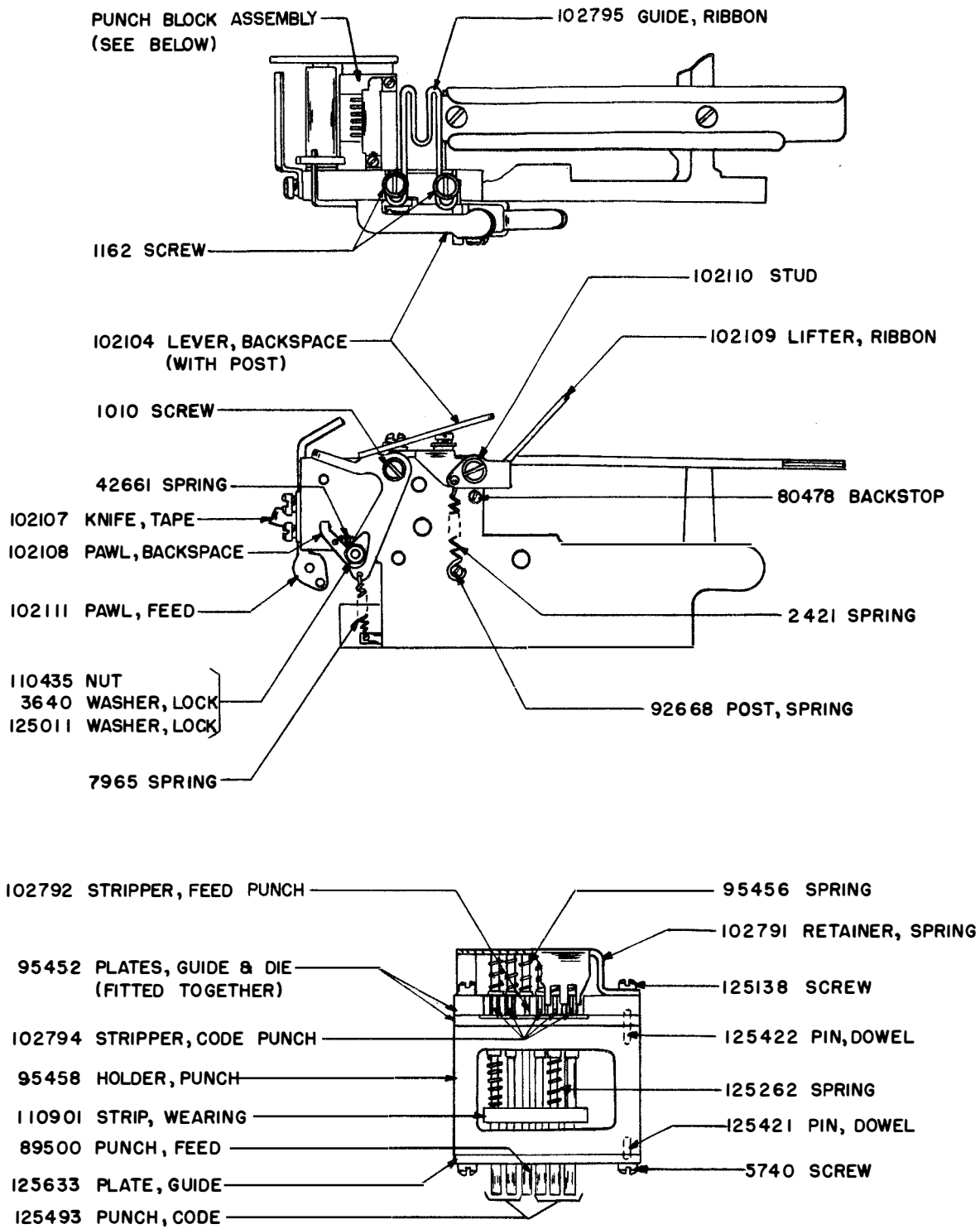
Tape Stripper Plate  
Feed Pawl Eccentric

#### 4. LUBRICATION

Lubricate all pivot points with a light coating of grease.

Caution: Keep oil and grease away from solenoid armature.

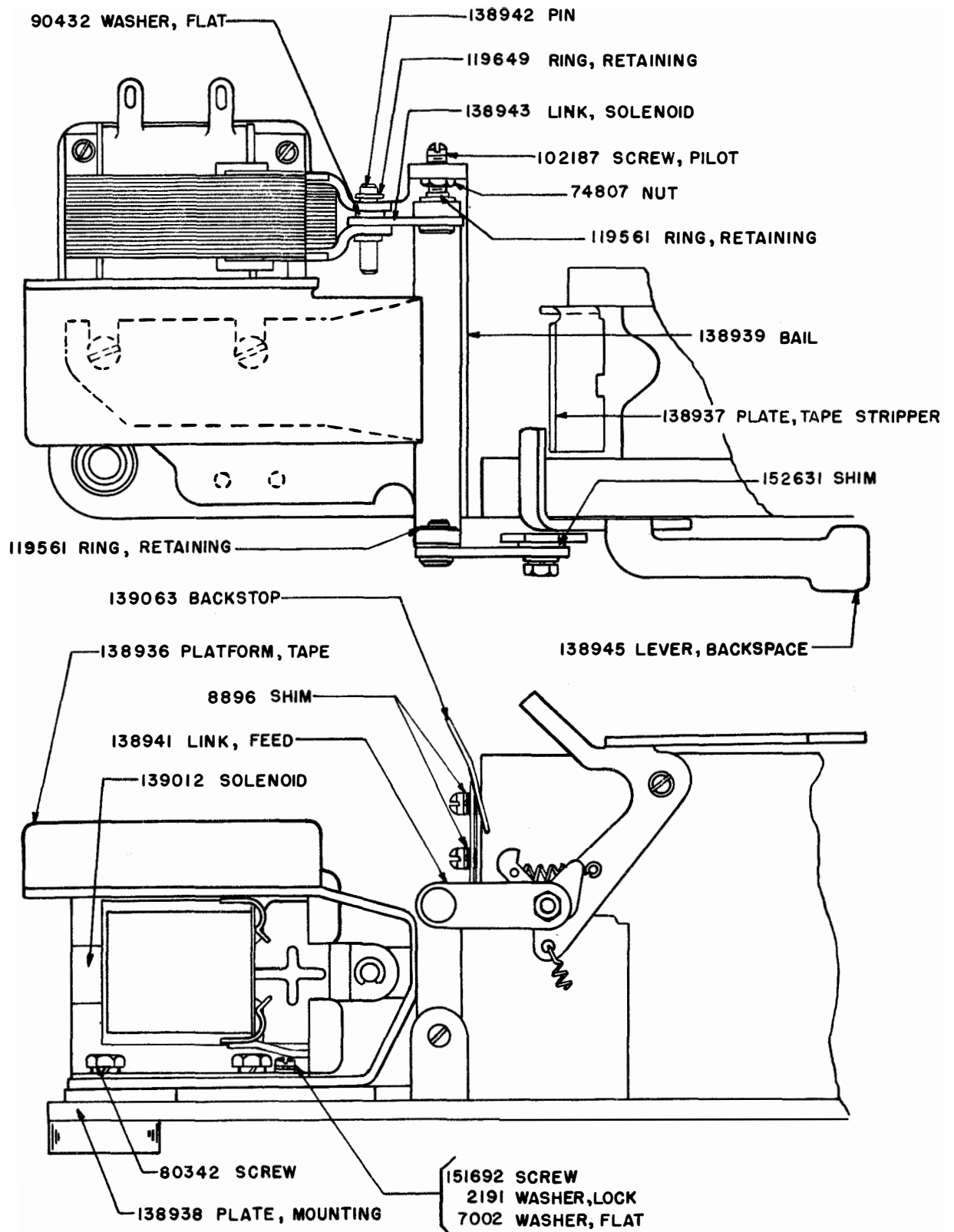
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111024 PUNCH BLOCK ASSEMBLY

104994 MODIFICATION KIT TO PROVIDE MANUAL BACKSPACE

FIGURE 1



136101 MODIFICATION KIT TO PROVIDE REMOTE CONTROL BACKSPACE

Figure 2

FIGURE 3

