REPLACING PAGE ADDENDUM

Filing Instructions:

1. Remove from the section the pages numbered the same as those attached to this sheet.
2. Insert the attached pages into the section in their place.
3. Place this sheet ahead of Page 1 of the section.

32 AND 33 TAPE PUNCH

ADJUSTMENTS

1. GENERAL

1.001 This addendum supplements Section 574-125-700TC, Issue 2, and is issued to correct an error in and to clarify the Ten Characters Per Inch adjustment. Arrows in the margins indicate changes and additions.

1.002 Insert the attached page in accordance with the filing instructions above.

Attached:
Page 11 dated October 1965, reissued
Page 12 dated October 1965, revised
# 32 AND 33 TAPE PUNCH

## ADJUSTMENTS

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### 1. GENERAL

1.01 This section provides adjustment and maintenance information for the 32 and 33 tape punches. It is reissued to add automatic control information and to generally update the section. The adjustment information applies equally well to 5- and 8-level tape punches except where noted. Since this is a general revision, marginal arrows ordinarily used to indicate changes and additions are omitted.

1.02 There is just one area in which tape punch adjustments and spring tensions are found. Figure 1 is provided to show this area — tape punch area.

1.03 In the adjustments covered in this section, location of clearances, position of parts, and point and angle of scale applications are illustrated by line drawings. Requirements and procedures are set forth in the several texts that accompany the line drawings.

> Note: The configuration of an illustration or line drawing does not necessarily indicate that it and its associated text are exclusively applicable to a particular tape punch.

Required tools, not supplied with either 32 or 33 teletypewriter sets, are listed in the appropriate maintenance tools publication.

1.04 The sequence in which the adjustments appear is that which should be followed when a complete readjustment of the tape punch is undertaken. No single adjustment should be undertaken without first completely understanding the procedure and knowing the requirements. Therefore, read a procedure all the way through before making an adjustment or checking a spring tension.

1.05 References to "left," "right," "front," or "rear," etc consider the tape punch to be viewed from a position where the tape guide assembly faces up and the backspace lever is located to the viewer's left.

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1.06 Unless specifically stated otherwise, make screws or nuts friction tight to make an adjustment and tighten them securely once the adjustment has been made.

1.07 When a procedure calls for using pry points or slots to make an adjustment, place a screwdriver between the points or in the slots and pry parts in the proper direction.

1.08 If the tape punch is removed from the typing unit to facilitate the making of an adjustment and subsequently replaced, recheck any adjustment that may have been affected. Also, if parts are removed from the tape punch to facilitate the making of an adjustment, be sure that they are subsequently replaced. Recheck any adjustment that may have been affected by the removal of the parts.

1.09 The spring tensions specified in this section are indications, not exact values. Therefore, to obtain reliable readings, it is important that spring tensions be measured by spring scales placed in the positions shown on pertinent line drawings. Springs that do not meet their requirements shall be replaced by new ones. Only those springs that directly affect the operation of the tape punch are measured, however, others may be measured indirectly in the process. If, at first, the spring tension requirement cannot be met, replace the indicated spring being directly measured. Then, if the requirement is not met, any springs that are indirectly measured in the procedure shall be replaced, one at a time, with the performance of requirement checks each time a spring is replaced.

Note 1: Use spring scales which are recommended by the manufacturer of 32 and 33 teletypewriter sets and found in the appropriate maintenance tools publication.

Note 2: The spring tensions may be checked in any sequence.
1.10 Certain adjustments require that the tape punch be either "on" or "off." When a tape punch is "on," it is capable of converting coded intelligence into punched tape. When it is "off," the tape punch is not capable of converting coded intelligence into punched tape. These conditions can be further identified as follows:

(a) Manual Controls: A tape punch within this grouping is "off" when the control lever is detented in its most clockwise position and, when detented, locks the drive post in the off position (1.11). The opposite is true when the tape punch is "on"—the control lever is raised to its most counterclockwise position and does not lock the drive post in the off position.

(b) Automatic Controls: A tape punch within this grouping is "off" when the feed pawl does not engage the feed wheel ratchet—the lever of the control ball assembly is latched by the latch ball. Again, the opposite is true when a tape punch is "on"—the feed pawl engages a tooth of the feed wheel ratchet and the lever of the control ball assembly is not latched by the latch ball.

1.11 With the tape punch and typing unit assembled together, all adjusting procedures shall be started with the typing unit in the stop condition. It is in the stop condition when the selector armature is in its attracted (frontward) position and all clutches are disengaged. Furthermore, when the typing unit is in the stop condition, the tape punch will be in the off position.

Note: The off position of the tape punch is roughly the midpoint of the path which the feed pawl arm takes while oscillating during a tape punch cycle. A tape punch cycle begins with counterclockwise movement (feed and select) of the feed pawl arm, then clockwise movement (punch), and finally counterclockwise movement (strip and punch pin withdrawal) to the off position.

1.12 To place the typing unit in the stop condition, hold the selector armature in its attracted (frontward) position. Rotate the main shaft clockwise (as viewed from the left) until all push levers are in a stop position. Fully disengage all of the clutches as instructed in 1.13 below.

Note 1: A stop position is that position where a shoe lever contacts a trip lever.

Note 2: The distributor clutch will not disengage unless the answer-back drum is in its home position, which is the position where the control lever is fully detented into the indent on the answer-back drum.

1.13 When disengaged, a clutch is latched so that a shoe lever is held in its stop position by a trip lever while a corresponding latch lever is seated in a notch of the clutch disc. This allows the clutch shoes to release their tension on the clutch drum. With all clutches disengaged, the main shaft will turn freely without any clutch shoes dragging.

Note: If the shaft is turned by hand, a clutch will not fully disengage upon reaching a stop position. To fully disengage a clutch, rotate the clutch to a stop position, apply a screwdriver to the associated stop-lug, and push the clutch disc in the normal direction of main shaft rotation until the corresponding latch lever seats in its clutch disc notch.

1.14 A clutch is engaged when a trip lever is moved up so that it no longer holds a shoe lever in its stop position. When this action occurs, the shoe lever and a stop-lug on the clutch disc move apart, and the clutch shoes wedge against the drum so that when the shaft is turned the clutch will turn in unison with it.

1.15 Manual Operation: To manually operate the typing unit, place it in the stop condition as instructed in 1.12 and 1.13 above. Momentarily permit the armature to move to its unattracted (rearward) position to trip the selector clutch. Slowly rotate the main shaft clockwise (as viewed from the left) until all push levers have moved under their respective selector levers. Using a spring hook, strip the push levers from under the selector levers corresponding to the spacing elements of the code combination to be set up. Then continue to rotate the main shaft until the proper condition is set up or the character is cleared through the typing unit.

1.16 On 32 typing units, the selector levers are number "1" through "5" from left to right. To set up the character "Y," for example, whose 5-level code combination is 1-3-5, strip the push levers from the "2" and "4" selector levers. On 33 typing units, the selector levers are numbered "1," "2," "3," "4," "5," "6," "7," "8," and "9" from left to right. To set up the character "Y," for example, whose 8-level code combination is 1--45-78, strip the push levers from the "2," "3," and "6" selector levers.
1.17 Coded intelligence is transferred from the typing unit selector to the tape punch via the codebar extension, sensing levers, etc. This coded intelligence is ultimately evidenced by the code combinations which are punched into paper tape by the punch pins which are located in the punch block assembly of the tape punch. Each punch pin, except the feed (F) punch pin, represents a code level. The relationship between code levels, sensing levers, and codebar extension is illustrated in Figure 2.

1.18 General Maintenance Principles:

(a) Lubrication instructions and intervals are given in the appropriate lubrication sections.

(b) To maintain the operational effectiveness of the equipment, it is recommended that certain parts be replaced at intervals based upon the speed and operating hours as indicated below:

<table>
<thead>
<tr>
<th>Operating Speed (Words per Minute)</th>
<th>Recommended Maintenance Overhaul Interval (Operating Hours*)</th>
<th>Estimated Service Life (Operating Hours*)</th>
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<tr>
<td>60 or 66</td>
<td>2500</td>
<td>7500</td>
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<tr>
<td>100</td>
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* Typing Unit Operating Hours

The parts are available in overhaul maintenance kits listed in the appropriate parts publication.
2. BASIC UNIT

2.01 Tape Punch Area

Note 1: Prior to making adjustments, remove the chad extension TP182915. Reassemble when the adjustments are completed.

PAWL UPSTOP ASSEMBLY—PRELIMINARY

Requirement
At the time of disassembly or reassembly of the pawl upstop assembly, it shall be positioned so that it is vertical or nearly vertical.

To Adjust
Loosen the screw which secures the pawl upstop assembly post to the tape punch casting and position pawl upstop assembly.

TAPE NUDGER

Note 2: This adjustment applies only to tape punches which have an elongated hole in the tape punch casting.

Requirement
At the time of disassembly or reassembly of the post, it shall be in its most rearward position.

To Adjust
Loosen the screw which secures the post to the tape punch casting and position the post.
FEED WHEEL RATCHET AND PAWL—PRELIMINARY

Requirement
The plate shall be in middle of slot located in feed pawl arm, as gauged by eye.

To Adjust
Loosen screw and adjust plate using pry points.

(FULL ENGAGEMENT)

(LEFT SIDE VIEW)
STRIPPER BAIL UPSTOP

Requirement
With the tape punch in the off position and all pawls in their uppermost position, the stripper bail shall clear bottom corner of the stripping surface of lowermost pawl by
Min Some—Max 0.012 inch as gauged by eye.

To Adjust
With all pawls in their uppermost position, loosen screw and rotate bracket to meet requirement.
2.04 Tape Punch Area (continued)

Note 1: For the adjustments which follow, the tape punch shall be mounted to the typing unit. For instructions, see section titled "32 and 33 Tape Punch, Disassembly and Reassembly."

Note 2: The following Tape Punch Area adjustments must be made in sequence: TAPE PUNCH DRIVE, PUNCH PENETRATION, PAWL UPSTOP ASSEMBLY — FINAL, and FEED WHEEL RATCHET AND PAWL — FINAL. Prior to making the above adjustments, check or make the following Tape Punch Area adjustments: PAWL UPSTOP ASSEMBLY — PRELIMINARY, TAPE NUDGER, FEED WHEEL RATCHET AND PAWL — PRELIMINARY, and STRIPPER BAIL UPSTOP.

**TAPE PUNCH DRIVE**

To Check
With no tape in the tape punch and with the tape punch "on," manually rotate the main shaft until the function rocker shaft and stripper bail are in their most forward positions. Take up rear roller play toward rear and tape nudge play in a clockwise direction.

Requirement
Min 0.070 inch — Max 0.090 inch between the rear roller and highest point on tape nudge.

To Adjust
Loosen screw and position plate using pry points.

Note 3: When subsequently rechecking the TAPE PUNCH DRIVE adjustment, the requirement shall be considered met if there is
Min 0.030 inch — Max 0.120 inch between the rear roller and highest point on tape nudge.
2.05 Tape Punch Area (continued)

**PUNCH PENETRATION**

To Check
With no tape in the tape punch and with the tape punch "on," set up an "all-marking" code combination in the selector. Manually rotate the main shaft until the function rocker shaft and stripper bail are in their most forward positions. Determine which lever has the least and which has the greatest clearance between lever's top surface and the bottom surface of the holder.

Requirement

1. Min 0.032 inch --- Max 0.037 inch between the bottom surface of the holder and the top surface of the lever which has the greatest clearance.

2. Min 0.017 inch between the bottom surface of the holder and the top surface of the lever which has the least clearance.

Note 1: For those 5-level tape punches equipped with an auxiliary drive ball TP182186, repeat the above procedure with a FOGS D code combination set up in the selector. Omit checking the lever in the no. 3 code level position (Figure 2), since it is not operated.

To Adjust
Loosen the lever post screw and position the lever post in its elongated hole.

Note 2: When subsequently rechecking the PUNCH PENETRATION adjustment, the requirement shall be considered met if there is
Min 0.017 inch --- Max 0.037 inch between the bottom surface of the holder and the top surface of each lever.
PAWL UPSTOP ASSEMBLY — FINAL

To Check
With the tape punch "on," set up an "all-marking" code combination in the selector. Manually rotate the main shaft until the function rocker shaft and stripper bail are in their rearmost positions.

Note 1: For tape punches equipped with special features such as FIGS D or automatic controls, use the following "To Check" procedure:

To Check
With the tape punch "on," set up the code combination in the selector that will cause the special feature to operate. Manually rotate the main shaft until the function rocker shaft and stripper bail are in their rearmost positions. Check requirement (1). Then, set up an "all-marking" code combination in selector. Manually rotate the main shaft until the function rocker shaft and stripper bail are in their rearmost positions. Check requirement (2).

(1) Requirement
Min 0.005 inch—Max 0.020 inch between the leftmost sensing lever (Figure 2) and its associated pawl.

Note 2: There shall also be some clearance between the rightmost sensing lever (Figure 2) and its associated pawl.

Note 3: "Some clearance" can be determined by feeling movement when pressing down on a sensing lever while holding its assembled lever in its most downward position.

(2) Requirement
Some clearance between the feed lever and its associated pawl and each sensing lever and its associated pawl.

To Adjust
Loosen the screw which secures the pawl upstop assembly post to the tape punch casting. Provide proper clearance by rotating the pawl upstop assembly. Recheck requirement (1) above and refine if necessary. Remake STRIPPER BAIL UPSTOP (Tape Punch Area) adjustment.

CAUTION: EXERCISE CARE AND SEE THAT THE PLATE OF THE PAWL UPSTOP ASSEMBLY ALWAYS GUIDES THE PAWL AND LEVER SIMULTANEOUSLY. AVOID ROTATING PLATE IN A COUNTERCLOCKWISE DIRECTION FROM ITS VERTICAL POSITION IF POSSIBLE.
FEED WHEEL RATCHET AND PAWL—FINAL

To Check
With no tape in the tape punch and with the tape punch "on," set up an "all-marking" code combination in the selector. Manually rotate the main shaft until the function rocker shaft and stripper bail are in their rearmost positions. Take up all play in stripper bail toward rear.

To Adjust
Loosen screw and position plate w/bushing using pry points. Backspace feed wheel ratchet one full revolution, one tooth at a time, using backspace lever. Check each tooth to see if the requirement is met. Gauge by eye. Readjust where necessary.

Requirement
With feed wheel ratchet in its fully detented position
Min Some—Max 0.010 inch between the feed pawl and feed wheel ratchet tooth.

(LEFT SIDE VIEW)
2.08 Tape Punch Area (continued)

**TEN CHARACTERS PER INCH**

→ Note 1: From left to right, with the smooth side of gauge TP156011 up, there are six holes in line—five holes with 0.072-inch diameters and one hole with an 0.086-inch diameter.

To Check

Position one end of spring to lower notch of arm w/bushing. Operate the typing unit under power and perforate either alternate R and Y or R and "hyphen" code combinations in approximately 8 inches of tape. Tear the 8-inch length of punched tape from the tape punch and place it to the smooth side of gauge TP156011. Concentrically align a no. 2 code hole of the punched tape with the first 0.072-inch diameter hole of gauge TP156011.

Note 2: Perforate alternate R and Y code combinations when checking 5-level tape punches. Use the R and "hyphen" code combinations when checking 8-level tape punches.

**Requirement**

1. The four remaining 0.072-inch diameter gauge holes shall be visible through corresponding no. 2 code holes in the punched tape.

2. The no. 2 code hole which corresponds with the 0.086-inch diameter gauge hole shall lie entirely within the perimeter of that gauge hole.

To Adjust

Position spring up arm w/bushing, notch by notch, until requirement is met.

**TOP VIEW**
2.09 Tape Punch Area (continued)

TAPE BIAS SPRING

Requirement
With tape removed from the tape punch, tape bias spring shall rest against side of clearance slot in die plate and shall be symmetrical about the tape opening, as gauged by eye.

To Adjust
Loosen tape bias spring screw and position tape bias spring so that it just rests against the left side of clearance slot and is symmetrical about the tape opening.

Requirement
With bracket in a vertical position, as gauged by eye, the extension shall clear all moving parts and shall have no kinks along its length.

To Adjust
Loosen screw and position bracket to meet requirement.
CODEBAR EXTENSION SPRINGS

Requirement
With the typing unit in stop condition and
the tape punch in off position
Min 3/4 oz---Max 1-1/4 oz
to pull spring to its installed length.

SENSE LEVER SPRINGS

Requirement
With the tape punch in off position
Min 15 grams---Max 32 grams
to start sensing lever moving.
2.11 Tape Punch Area (continued)

**PAWL AND LEVER SPRING**

Requirement
With the tape punch in off position,

Upper spring
Min 7/8 oz---Max 1-1/2 oz

Lower spring
Min 1-1/2 oz---Max 2-1/8 oz
to start pawl moving.

![Diagram of Pawl and Lever Spring](LEFT SIDE VIEW)

**STRIPPER BAIL SPRING**

Requirement
With the tape punch in off position
Min 12 oz---Max 15 oz
to pull spring to its installed length.

![Diagram of Stripper Bail Spring](LEFT SIDE VIEW)
2.12 Tape Punch Area (continued)

**FEED PAWL SPRING**

Requirement
With tape punch in off position
Min 1/2 oz --- Max 1 oz
To start feed pawl moving.

![Diagram of FEED PAWL SPRING](image)

**DETENT LEVER SPRING**

Requirement
With the tape punch in off position
Min 10 oz --- Max 13 oz
To start detent lever moving.

![Diagram of DETENT LEVER SPRING](image)
**BACKSPACE LEVER SPRING**

Requirement

With the tape punch in off position

- Min 3/4 oz --- Max 1-1/2 oz
to pull spring to its installed length.

![Diagram of Backspace Lever Spring](image)

**TAPE GUIDE TENSION SPRING**

Requirement

With the tape punch in off position and with tension spring in

- Upper notch
  - Min 40 oz --- Max 48 oz
- Lower notch
  - Min 22 oz --- Max 28 oz
to start tape guide moving.

![Diagram of Tape Guide Tension Spring](image)
2.14  Tape Punch Area (continued)

**TAPE GUIDE COMPRESSION SPRING**

Requirement
With the tape punch in off position, remove the tension spring. Place roller slightly above the feed wheel.
Min 24 oz—Max 48 oz

to start tape guide moving.

![Diagram of Tape Guide Compression Spring](image)

**CONTROL DETENT LEVER SPRING**

Note: This adjustment applies only to tape punches equipped with detent lever TP182843.

Requirement
With the tape punch in off position — the control lever post in the upper notch of the detent lever.
Min 10-1/2 oz—Max 14-1/2 oz

to start detent lever moving.

![Diagram of Control Detent Lever Spring](image)

**CONTROL PUSHPUSHBUTTONS**

Requirement
Min 1/2 oz—Max 1-1/2 oz
to push each control pushbutton down 1/8 inch
as gauged by eye, while remaining control pushbuttons remain in their normal upward positions.

![Diagram of Control Pushbuttons](image)

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DRIVE LINK SPRING

Requirement
With the typing unit in the stop condition and the tape punch in off position
Min 7 oz---Max 9 oz
to start drive link moving.

Note 1: The following adjustment applies to either 5-level or 8-level tape punches.

PUNCH BLOCK ASSEMBLY

To Check
Remove the punch block assembly from the tape punch. Replace after performing this adjustment. (For instructions, see the appropriate tape punch section.)

Requirement
With the punch pin slots facing the guide pin
Min Some---Max 4 oz
to start feed punch pin and each code punch pin moving.

Note 2: The above requirement must be met anywhere along each punch pin's travel in holder.
3. AUTOMATIC CONTROLS

3.01 Tape Punch Area

CONTROL BAIL ASSEMBLY

To Check
With the typing unit in the stop condition and the tape punch "on," gently oscillate the control bail assembly from its clockwise position to its counterclockwise position and back again. Repeat this oscillating motion several times while noting requirement.

Requirement
(1) The control bail assembly shall be free from binds along its normal travel.
(2) When released from its counterclockwise position, the control bail assembly shall return to its clockwise position under spring tension.

To Adjust
Remove the control bail spring, latch bail spring, and the left screw. Loosen the right screw and retighten. Without bending lever TP182384 and lever TP182412, the threaded hole of post TP182388 shall fall within the hole in lever TP182384. Bend if necessary. Reassemble left screw before reassembling springs. Recheck requirement and refine if necessary.
3.02 Tape Punch Area (continued)

LEVER OVERTRAVEL

To Check
With the tape punch "on," set up the TAPE (--3-5--) code combination in the selector. Manually rotate the main shaft until the function rocker shaft and stripper bail are in their most forward positions.

Note: The code combination which will automatically turn the tape punch off is the one to select. In this case, the 8-level "even parity" code combination is given.

Requirement
- Min 0.005 inch -- Max 0.015 inch
  between the lever TP182384 and latch bail.

To Adjust
Loosen screws and position latch bail using pry points.
3.03 Tape Punch Area (continued)

**FEED WHEEL RATCHET AND PAWL GAP**

1. To Check
   - With the tape punch "off," manually rotate the main shaft until the function rocker shaft positions the feed pawl so that there is a minimum clearance between it and a tooth of the feed wheel ratchet.

   **Requirement**
   - Min 0.015 inch -- Max 0.030 inch between the feed pawl and a tooth of the feed wheel ratchet.
   - To Adjust
     - Loosen the screw and position the lever TP182386 using the pry points.

2. To Check
   - With the tape punch "on," manually rotate the main shaft until the function rocker shaft positions the feed pawl so that it engages a tooth of the feed wheel ratchet.

   **Requirement**
   - The feed pawl shall fully engage a tooth of the feed wheel ratchet.
   - To Adjust
     - Refine requirement under "(1) To Check."
3.04 Tape Punch Area (continued)

SENSING LEVER AND BAIL GAP

Note: This adjustment applies only to tape punches equipped with the sense suppression option — bail TP182430 etc.

To Check
With the tape punch "off," manually rotate the main shaft until the tape punch is in the off position.

Requirement
The sensing lever associated with the leftmost code level (Figure 2) shall be
Min 0.010 inch underflush—Max 0.010 inch overflush with the bail.

To Adjust
Loosen screws and position bail using pry points.

(SENSING LEVER)

(SCREWS)

(BAIL)

(LEFT SIDE VIEW)

(PRY POINTS)
3.05 Tape Punch Area (continued)

**LATCH BAIL GAP**

Note: This adjustment applies only to tape punches equipped with the tape-to-tape mode option — lever TP182424 etc.

To Check
With the typing unit in the tape-to-tape mode, place the typing unit in the stop condition and the tape punch in the off position.

Requirement
Min 0.015 inch --- Max 0.030 inch between the latch bail and lever TP182384.

To Adjust
Loosen screws and position bracket.

(LEFT SIDE VIEW)
3.06 Tape Punch Area (continued)

VISUAL "ON OFF" INDICATOR

Note: This adjustment applies only to tape punches equipped with the visual ON OFF indicator — indicator arm TP182446 etc.

To Check
With the tape punch cover in place over the tape punch, place the tape punch "off." Note the gap between the rear edge of the cover opening and the rear edge of the indicator arm. Place the tape punch "on." Note the gap between the front edge of the cover opening and the front edge of the indicator arm.

Requirement
The two gaps noted in "To Check" shall be equal, as gauged by eye.

To Adjust
With the tape punch lid removed from the tape punch cover, loosen screw post and position indicator arm.

CONTROL BAIL ASSEMBLY SPRING

Note: This adjustment applies only to tape punches equipped with the visual ON OFF indicator — indicator arm TP182446 etc.

Requirement
With the tape punch "off" in off position
- Min 2 oz --- Max 3 oz
to pull spring to installed length.
3.07 Tape Punch Area (continued)

CONTROL BAIL ASSEMBLY SPRING

Note: This adjustment applies only to tape punches which are not equipped with visual ON OFF indicator — indicator arm TP182446 etc.

Requirement
With the tape punch "off" in off position
Min 2-1/2 oz --- Max 3-1/4 oz
to pull the spring to installed length.

(RIGHT SIDE VIEW)

"LOCK ON"

Note: This adjustment applies only to tape punches equipped with the LOCK ON option — lock bail TP182466 etc.

To Check
With the typing unit in the stop condition and the tape punch in the off position, depress the LOCK ON pushbutton and allow the lock bail TP182466 to latch the lever TP182466.

Requirement
Min 0.050 inch --- Max 0.070 inch between the latch bail and lever TP182384.

To Adjust
Loosen clampscrew and position the bracket.

"UNLOCK" PUSHBUTTON

"LOCK ON" PUSHBUTTON

(LEFT SIDE VIEW)

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3.08 Tape Punch Area (continued)

"UNLOCK"

Note: This adjustment applies only to tape punches equipped with the LOCK ON option — lock bail TP182466 etc.

To Check
With the tape punch "on," depress the UNLOCK pushbutton. Set up the TAPE (-2---5--) code combination in the selector. Manually rotate the main shaft until the function rocker shaft and stripper bail are in their most forward positions.

Note: The code combination which will automatically turn the tape punch "on" is the one to select. In this case, the 8-level "even parity" code combination is given.

Requirement
Min 0.010 inch---Max 0.025 inch between the latch bail and lever TP182384.

To Adjust
Loosen clamp nut and rotate eccentric post.

![Diagram](LEFT SIDE VIEW) (FRONT VIEW)
ON MECHANISM RETURN SPRING

Requirement
With the tape punch "off" in the off position
Min 1/2 oz---Max 2-1/2 oz
to pull spring to installed length.

TAPE-TO-TAPE LEVER SPRING

Note: This adjustment applies only to tape punches equipped with the tape-to-tape mode option — lever TP182424 etc.

Requirement
With tape punch out of tape-to-tape mode and in off position
Min 1-1/2 oz---Max 2 oz
to pull spring to installed length.