## 28 KEYBOARD, BASE, COVER, AND MOTOR

FOR COMPACT KSR AND RO TELETYPEWRITER SETS

### ADJUSTMENTS

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1. GENERAL

1.01 This section is issued to provide the mechanical requirements and adjustments for the 28 keyboard, base, cover, and motor units. The units apply to the 28 Compact Keyboard Send.Receive and Receive-Only Teletypewriter Sets. The keyboard unit is associated with the KSR Set and the base unit with the RO Set.

1.02 The adjustments are divided into basic units and variable features. The keyboard, base, cover, and motor units are classified as basic units and are subdivided into major mechanisms which make up the units. Mechanisms of an optional nature, which develop variations of the KSR or RO Set, are given under variable features.

1.03 In general, the adjustments are presented in an order which should be followed if a complete readjustment of the unit is made.

However, the keyboard unit is a composite of major mechanisms which may be adjusted or checked as separate entities. Adjustments and spring tensions are included with each mechanism.

1.04 Reference made to left or right, front or rear, and top or bottom apply to the units in their normal operating position as viewed from the front of the set.

1.05 Location of clearances, positions of parts, and angle of scale applications are illustrated in the drawings. Requirements and procedures are given in the texts that accompany the drawings. A procedure should be read thoroughly before making the adjustment or checking the spring tension. Tools required to make adjustments and check spring tensions are not supplied with the equipment, but are listed in Teletype Bulletin 1124B.

1.06 If parts are removed, all adjustments which removal of these parts might facilitate should be made before the parts are replaced. When a part mounted on shims is removed, the number of shims at each mounting screw should be noted so that identical piles can be made when the part is replaced. After an adjustment has been made, all nuts and screws that were loosened should be tightened unless specifically stated otherwise.

1.07 The spring tensions given in this section are indications, not exact values, and should be checked with appropriate spring scales. Springs which do not meet the requirements and for which there are no adjusting procedures, should be discarded and replaced by new springs.

1.08 All contact points should meet squarely. Smaller points should fall wholly within the circumference of larger mating points. Points that are the same size should not be out of alignment more than 25 per cent of the point diameter.
2. BASIC UNITS

KEYBOARD

2.01 Keyboard Transmitter Mechanism

![Diagram of Keyboard Transmitter Mechanism]

**UNIVERSAL LINK**

Requirement
With keyboard transmitter in reset condition:
Min 0.089 inch -- Max 0.103 inch between the universal link and keyboard frame.

To Adjust
Place screwdriver through opening and bend tab on frame.

**CONTACT WIRES**

(1) Requirement
With keyboard transmitter in reset condition and t-levers in marking positions:
Min 0.010 inch -- Max 0.025 inch between contact wire and terminal.

To Adjust
Bend wire with TP98055 bending tool.

(2) Requirement
With keyboard transmitter in reset condition, place t-levers in spacing positions. Set universal lever in up position by depressing universal codebar. (Universal codebar illustrated in UNIVERSAL LINK adjustment.)
Min 0.020 inch -- Max 0.040 inch between contact wire and terminal.

To Adjust
Bend wire with TP98055 bending tool.

Note 1: Part (2) of this adjustment is affected by part (1).

Note 2: Check requirements for each contact wire.
2.02 Keyboard Transmitter Mechanism (Cont'd)

**SPACE BAR SPRING**

Requirement
With space bar depressed and then released:
Min 5 grams—Max 25 grams
to start bar moving.

**KEYLEVER SPRING**

Requirement
With key depressed and then released:
Min 5 grams—Max 25 grams
to start key moving.

Note: Check each keylever spring.

**LATCHLEVER SPRING**

**NON-REPEAT LEVER SPRING**

**LATCHLEVER**

**NON-REPEAT LEVER SPRING**

**LATCHLEVER SPRING**

Requirement
With keyboard transmitter in reset condition:
Min 3/4 oz—Max 1-1/2 oz
to start non-repeat lever moving.

**LATCHLEVER SPRING**

Requirement
With universal lever held away:
Min 1/2 oz—Max 1 oz
to start latchlever moving.
2.03 Keyboard Transmitter Mechanism (Cont'd)

**CONTACT BLOCK SPRING**

Requirement

Min 18 oz --- Max 42 oz
to start contact block moving.

**TERMINAL**

**RESET BAIL**

**CONTACT WIRE**

**CONTACT WIRE SPRING**

To Check
Place t-levers in marking (clockwise) positions.
Trip contact wire reset bail by depressing universal codebar. (Universal codebar illustrated in UNIVERSAL LINK adjustment.)

Requirement

Min 3/4 oz --- Max 1-1/4 oz
to start contact wire moving away from terminal.

**REPEAT KEYLEVER SPRING**

Requirement

Min 15 grams --- Max 30 grams
to start keylever moving.

**BREAK KEYLEVER SPRING**

Requirement

Min 12 oz --- Max 18 oz
to start lever moving.

**KEYLEVER SPRING**

**FRAME**

(RIGHT SIDE VIEW)
2.04 Keyboard Transmitter Mechanism (Cont’d)

RESET BAIL SPRING

Requirement
With LETTERS keylever tripped:
Min 1-1/2 oz -- Max 2 oz
to start reset bail moving.

UNIVERSAL LEVER SPRING

Requirement
With universal lever latched:
Min 15 oz -- Max 17 oz
to extend spring to installed length.

UNIVERSAL LEVER

UNIVERSAL LINK SPRING

UNIVERSAL LINK SPRING

Requirement
With keyboard tripped:
Min 1/2 oz -- Max 1-1/4 oz
to start universal link moving.

(LIGHT SIDE VIEW)

UNIVERSAL LEVER SPRING

(LIGHT SIDE VIEW)
RESET SOLENOID POSITION

Requirement
Plunger should move freely without binding in solenoid core.

To Adjust
Position solenoid with mounting screws loosened.

RESET ARM

To Check
Hold plunger in fully operated condition with screwdriver in pry point and against plunger.

Requirement
With solenoid fully energized, clearance should be:
Min 0.020 inch — Max 0.045 inch between universal lever and latchlever

To Adjust
Loosen reset arm clamp screw. Hold plunger in fully operated condition with screwdriver. Position reset arm to meet requirement. Tighten clamp screw.

Note: Care should be taken not to bind reset arm against mounting bracket by pushing clamp toward the solenoid when tightening clamp screw.
2.06  Keyboard Transmitter Mechanism (Cont’d)

**UNIVERSAL CONTACT**

To Check
Move contact wire out of fiberboard guide slot.

Requirement
With keyboard transmitter in reset condition, clearance should be:
Min 0.040 inch --- Max 0.050 inch
between contact wire and metal contact strip.

To Adjust
Bend wire with TP98055 bending tool.
Replace contact wire in guide slot.

**KEYBOARD TRANSMITTER POSITIONING**

Requirement
End of slots in left and right brackets should be against rear mounting screws.

To Adjust
Position keyboard transmitter assembly with mounting screws loosened.
2.07 Distributor Mechanism

CLUTCH TRIP ARMATURE AIR GAP

Requirement
With armature held flush against magnet core, air gap should be:
Min 0.004 inch — Max 0.008 inch between armature and magnet assembly bracket.

To Adjust
Remove armature extension spring. Loosen spring post and hinge mounting screw. Position hinge bracket.

Note: To eliminate chatter and ac hum in ac operation, the armature should be reversed (side stamped C facing away from magnet core). To reverse, remove armature mounting screws from bail.

PLATE MOUNTING SCREW
PLATE ADJUSTING SCREW

CLUTCH TRIP LEVER

Requirement
With clutch trip lever on high part of cam, clearance should be:
Min 0.020 inch — Max 0.030 inch between latching surfaces of clutch trip lever and armature extension lever. (Play taken up with spring.)

To Adjust
Loosen plate adjusting screw and plate mounting screw. Insert screwdriver in slot adjacent to adjusting screw, and position plate for required clearance.

CLUTCH TRIP LEVER
BRACKET MOUNTING SCREW

ARMATURE EXTENSION

Requirement
With clutch trip lever on high part of cam and armature flush against core, clearance should be:
Min 0.030 inch — Max 0.040 inch between armature extension lever and clutch trip lever. (Play taken up with spring.)

To Adjust
Loosen bracket mounting screw and plate adjusting screw. Insert screwdriver into slot below plate adjusting screw, and adjust bracket.
2.08 Distributor Mechanism (Cont'd)

CLUTCH STOP ARM

Requirement
With clutch trip lever in latched position, clutch lever should fully engage clutch shoe lever.

To Adjust
With clutch in stop position, loosen clutch trip clamping screw and adjust clutch stop lever to obtain full bite with clutch shoe lever.

Note: When armature is in attracted position, clutch stop arm should clear stop lever and stop lug by some clearance.

CLUTCH SHOE LEVER

Requirement
Clearance between clutch shoe lever and stop lug should be:

<table>
<thead>
<tr>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.055 inch</td>
<td>0.085 inch</td>
</tr>
</tbody>
</table>

greater when clutch is engaged than when disengaged.

To Adjust
Loosen two clampscrews in clutch disc. Rotate adjusting disc to obtain clearance.

Note: After making adjustment, disengage clutch and rotate drum in normal rotation to make certain it does not drag on shoes. If drum drags, refine adjustment.

Note 1: Remove typing unit from the base before making the following adjustments.

Note 2: Remove fiberboard insulator from distributor terminal block to check and adjust distributor contact assembly. Replace insulator after performing maintenance.

CAM FOLLOWER GUIDE

Requirement
Cam follower guide oriented so center cam follower is fully on cam when follower is moved sideways in guide slot. Other followers must have at least 75% bite when moved in either direction, and be free in guide slots.

To Adjust
Position cam follower guide with its mounting screws loosened. After tightening, check for freeness.
2.09 Interrelated Adjustments

MOUNTING TYPING UNIT ON BASE

Requirement
When placing the typing unit on the base, hold it tilted slightly to the right, and lower the right end into engagement with the right locating stud. While easing the left end downward, rotate the motor by hand to properly mesh gears. Secure with four mounting screws. Rotate the motor by hand to insure proper meshing of gears.
2.10 Distributor Mechanism (Cont'd)

Note 1: Remove typing unit from the base before making the following adjustments.

Note 2: Remove fiberboard insulator from distributor terminal block to check and adjust distributor contact assembly. Replace insulator after performing maintenance.

**Distributor Block Assembly**

**Requirement**
Distributor block assembly positioned on casting so that rocker levers are fully engaged with bakelite on follower levers.

**To Adjust**
Loosen distributor block assembly mounting screws and position block left or right.

**Code Level Contact Gaps**

**Requirement**
With cam follower lever on high part of cam, contact gap should be:
- Min 0.020 inch
- Max 0.030 inch

**To Adjust**
Turn contact screw at socket end until desired gap is obtained.

Note 1: Position follower on high part of cam by tripping clutch manually and rotating distributor shaft.

Note 2: Check first six contact gaps from clutch end of shaft.

Note 3: The code level contact gaps may be refined by strobing. See Pars. 2.14 and 2.15.
2.11 Distributor Mechanism (Cont'd)

Note 1: Remove typing unit from the base before making the following adjustments.

Note 2: Remove fiberboard insulator from distributor terminal block to check and adjust distributor contact assembly. Replace insulator after performing maintenance.

CLUTCH TIMING CONTACT GAP

Requirement
Distributor clutch should trip every time a keylever is depressed.

To Adjust
With the clutch latched, back off contact screw until some gap is visible. Under power depress a keylever and slowly turn contact screw until distributor clutch becomes engaged. Give contact adjustment screw an additional 1/16 to 1/8 turn. Depress another keylever to ensure operation. Refine if necessary.

Note 1: Clutch timing contact is seventh contact from clutch end of shaft.

Note 2: In order to check timing contact gap, it is necessary to remake adjustment.

Note 3: Use an insulated adjustment tool when making adjustment.

Solenoid Contact Gap

Requirement
With distributor clutch in latched or stop position, solenoid contact gap should be:
Min 0.009 inch -- Max 0.012 inch

To Adjust
Turn contact screw at socket end until desired gap is obtained.

Note: Solenoid contact is ninth contact position from clutch end.

CLUTCH SHOE LEVER SPRING

Requirement
Clutch engaged. Clutch disc held to prevent its turning
Min 15 oz -- Max 20 oz to pull shoe lever in contact with lug on clutch disc.
2.12 Distributor Mechanism (Cont'd)

Note 1: Remove typing unit from the base before making the following adjustments.

Note 2: Remove fiberboard insulator from distributor terminal block to check and adjust distributor contact assembly. Replace insulator after performing maintenance.

CLUTCH SHOE SPRING

Requirement
Clutch drum removed
Min 3 oz---Max 5 oz
to start primary shoe moving away from secondary shoe.

Note: As it requires removal of clutch from shaft, THIS SPRING TENSION SHOULD NOT BE CHECKED UNLESS THERE IS GOOD REASON TO SUSPECT THAT IT WILL NOT MEET ITS REQUIREMENT.

CAM FOLLOWER SPRING

Requirement
Distributor block removed
Min 1/2 oz---Max 1-1/2 oz
to start cam follower lever moving when lever is on high of cam.

ROCKER SPRING

COMPRESSION SPRING

ROCKER SPRING

Requirement
With compression springs removed and contacts initially adjusted so contact surface is approximately 1/32 inch below outer surface of contact block
Min 3 oz---Max 4 oz
to separate contacts.

ROCKER COMPRESSION SPRING

Requirement
With compression springs installed
Min 6-1/2 oz---Max 9-1/2 oz
to just separate contacts.
2.13 Distributor Mechanism (Cont'd)

**CLUTCH LATCHLEVER SPRING**

Requirement
Clutch latchlever on low of clutch disc (but not latched)
Min 2-1/2 oz --- Max 4-1/2 oz
to start latchlever moving.

(RIGHT SIDE VIEW)

**CLUTCH TRIP LEVER SPRING**

Requirement
Clutch tripped and armature held against magnet core.
Min 2 oz --- Max 3-1/2 oz
to start trip lever moving.

(RIGHT SIDE VIEW)

**CLUTCH MAGNET ARMATURE BAIL SPRING**

Requirement
Clutch magnet tripped and shaft rotated manually until trip follower is on high of cam
Min 3 oz --- Max 4-1/2 oz
to start armature extension lever moving.

ARMATURE BAIL SPRING
(RIGHT SIDE VIEW)
SIGNAL PULSE (FINAL ADJUSTMENT WITH DXD OR STROBE)

Note 1: Detailed instructions for operating signal distortion test set (DXD) are given in Teletype Bulletin 181B.

Note 2: Use correct unit code test set scale for test set (DXD); i.e., 5 level, 7.42 unit code test set scale for 7.42 unit code transmission, and 5 level, 7.00 unit code test set scale for 7.00 unit code transmission.

Note 3: The test set must operate at the same speed (Baud or WPM) as the distributor. Variations of the 28 Compact Keyboard Send Receive Sets distribute code at the following speeds:

<table>
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<th>Baud (Bits per Second)</th>
<th>WPM (Words per Minute)</th>
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<td>7.00</td>
<td>45.5, 50.0 &amp; 75.0</td>
<td>65.0, 71.4 &amp; 107</td>
</tr>
<tr>
<td>7.42</td>
<td>45.5, 50.0 &amp; 75.0</td>
<td>61.3, 67.3 &amp; 101</td>
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<tr>
<td>7.42</td>
<td>45.5, 50.0 &amp; 74.2</td>
<td>61.3, 67.3 &amp; 100</td>
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</table>

Procedure
Connect strobe or test set across each code level contact (first six contacts from clutch end) in turn to view pulse image generated by that distributor contact. Remove the armature ball spring from the distributor clutch magnet to hold armature down. Set Baud on keyboard to correspond with Baud of test set. Align end of stop pulse image generated by distributor with last mark on test set scale by rotating scale.

Note 4: The distributor contacts, numbered from the clutch end, are identified with their code levels as follows:

1. No. 1 code level pulse
2. No. 2 code level pulse
3. No. 3 code level pulse
4. No. 4 code level pulse
5. No. 5 code level pulse
6. Stop pulse

(See next page for requirements)
2.15 Distributor Mechanism (Cont'd)

SIGNAL PULSE (FINAL ADJUSTMENT WITH DXD OR STROBE) (Cont'd)

1. Requirement
There should be no breaks in the transmitted signal pulses.\n(184,399),(700,425)

2. Requirement
(184,416),(700,441)
Each marking pulse should lie in its respective segment on the test scale within +3 divisions at each end.

3. Requirement
The stop pulse should lie within +3 divisions of the zero mark and terminate on the last mark.

To Adjust
Turn contact screw at socket end until pulse image is obtained.

Note 5: The auxiliary contacts, i.e., clutch timing contact and reset solenoid contact, do not require strobing.
2.16 Gear Shift Assembly

**Typing Unit Gear Backlash**

Requirement
There should be perceptible backlash between the typing unit gear and the associated gear shift pinion at their closest point.

To Adjust
Remove typing unit from base and terminal block bracket from gear shift casting. Loosen three locknuts on gear shift bracket clamp-screws. Replace printer. Slide gear shift casting forward or backward to obtain proper gear tooth engagement.

**Motor Pinion Backlash**

Requirement
There should be perceptible backlash between the motor pinion and the associated driven gear at their closest point.

To Adjust
Loosen the two locknuts on the adjustable bushings. Raise or lower the two adjustable bushings to obtain proper gear tooth engagement.

Note: Check the Typing Unit Gear Backlash as this adjustment may have been disturbed when making the above adjustment. Refine both backlash adjustments, if necessary.
2.17 Gear Shift Assembly (Cont'd)

SPEED SELECTOR STOP PLATE

Requirement
Highest and lowest speed gears should engage variable speed shaft.

To Check
With unit under power, detent selector knob to engage each of three gear speeds.

To Adjust
With mounting screws loosened, position stop plate to left or right to obtain full range.

GEAR SHIFT SPRING

To Check
Disconnect shift link from collar by removing retainer ring. Slide key out from under gears.

CAUTION: PULL KEY TO LEFT SLOWLY. WHEN HEAD OF PIN BEGINS TO EMERGE, HOLD IT IN PLACE UNTIL COMPLETELY OUT. OTHERWISE PIN AND SPRING WILL FLY WITH DANGER OF LOSS.

Requirement
Min 25 oz—Max 40 oz to depress key to lowermost position.
2.18 Interrelated Adjustments (Cont'd)

**DISTRIBUTOR GEAR BACKLASH**

**Requirement**
There should be perceptible backlash between the distributor idler gear and associated gear shift pinion at their closest point.

**To Adjust**
Loosen the four distributor mounting screws, and move distributor forward or backward to obtain proper gear tooth engagement.

---

**MARGIN INDICATOR SPRING**

**Requirement**
Min 7 oz---Max 11 oz
to start lever moving.
2.19 Local Function Mechanisms

LOCAL CARRIAGE RETURN SPRING

Requirement
With free end unhooked
Min 5 oz—Max 7 oz
to extend spring to installed length.

(CARTIDGE RETURN SPRING)

(LEFT SIDE VIEW)

LOCAL LINE FEED SPRING

Requirement
Min 1 oz—Max 3 oz
to start trip link moving toward rear.

(TRIP LINK)

(LINE FEED SPRING)

(RIGHT SIDE VIEW)
RECEIVE ONLY BASE

Note: The adjustments and spring tensions listed below are pertinent to the Receive Only Base. When making a complete readjustment of the base, they should precede the adjustments in this part.

Paragraph

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Local Carriage Return Spring. .......... 2.19
Local Line Feed Spring .............. 2.19

2.20 Local Function Mechanisms (Cont'd)

LINE BREAK KEY

Requirement
Typing unit should run in open condition when line break key is depressed. Break key extension must fully engage contact actuator.

To Adjust
Position contact bracket with mounting screws loosened.

LOCAL LINE FEED

To Check
With cover in place, depress the local line feed key to advance platen.

Requirement
Keylever extension must fully engage the local line feed adjusting screw to release the line feed clutch allowing the platen to advance.

To Adjust
Loosen the locknut and turn the adjusting screw until requirement is met.

Note: Slot in adjusting screw should be left perpendicular to keylever extension.
2.21 Local Function Mechanism (Cont'd)

LOCAL CARRIAGE RETURN

To Check
Depress local carriage return key with cover in place and type box to the right. Type box should return to the left margin.

Requirement
Keylever extension must engage the adjusting screw by at least half the width of the keylever extension to release the carriage return clutch, allowing the typebox to return to its left position.

To Adjust
Loosen the locknut and turn the adjusting screw until requirement is met.

Note: Slot in adjusting screw should be left perpendicular to keylever extension.

COVER

2.22 Latch and Hinge Mechanisms

COVER LATCH

Requirement
Latches should hold cover snugly in place by fitting tightly against latching posts.

To Adjust
With typing unit removed and cover on base, loosen locknuts that hold eccentrics in place. Adjust eccentrics until latches are tight against latching posts without tilting cover. Tighten locknuts. Recheck latch operation and readjust if necessary.
SECTION 573-116-703

2.23 Latch and Hinge Mechanisms (Cont'd)

WINDOW DOOR HINGE

Requirement
Window door should conform with curvature of cover when dome is latched.

To Adjust
Position hinge brackets with mounting nuts loosened.

DOME HINGE CLEARANCE

Requirement
With dome closed, clearance between dome and cover should be:
Min 0.010 inch --- Max 0.062 inch

To Adjust
Raise or lower hinges with cover mounting nuts loosened.

DOME CENTERING

(1) Requirement
With dome closed, clearance between dome and rear of cover should be:
Min 5/32 inch --- Max 1/4 inch

(2) Requirement
With dome closed, sides of dome should be approximately centered and parallel on cover.

To Adjust
Position dome with dome mounting nuts loosened.
2.24 Latch and Hinge Mechanisms (Cont’d)

DOME LATCH

(1) Requirement
When dome is closed, latch should engage cover by
Min 0.031 inch—Max 0.085 inch

(2) Requirement
With window door and dome closed, latches should be parallel and freely engage underside of cover.

To Adjust
Position mounting brackets with mounting screws loosened.

2.25 Paper Guide and Window

PAPER GUIDE

Requirement
Clearance between lower edge of paper guide and lower edge of dome should be:
Min 1/4 inch—Max 11/32 inch

To Adjust
Loosen paper guide mounting nuts and position paper guide parallel with lower edge of dome.

WINDOW

Requirement
With window door closed and dome latched, clearance between window edge and paper guide should be:
Min 0.080 inch—Max 0.110 inch

To Adjust
With clampscrews loosened, position window to meet requirement.

Note: Paper guide should clear window when dome is opened. If paper guide hits window, refine PAPER GUIDE adjustment.
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2.26 Hood and Line Guide

KEYBOARD HOOD (KSR SET ONLY)

Requirement
Bottom of keyboard hood should be flush with bottom of cover.

To Adjust
With cover removed from base, position keyboard hood with mounting nuts loosened.

BASE HOOD

COVER

MOUNTING NUTS

(RIGHT SIDE VIEW)

BASE HOOD (RO SET ONLY)

Requirement
Bottom of base hood should be flush with cover.

To Adjust
With cover removed from base, position base hood with mounting nuts loosened.

WINDOW DOOR
REFERENCE LINE

MOUNTING SCREWS

LINE GUIDE

LINE GUIDE MOUNTING BRACKET

LINE GUIDE

MOUNTING NUTS

KEYBOARD HOOD

(RIGHT SIDE VIEW)
3. VARIABLE FEATURES

3.01 Time Delay Mechanism

RATCHET WHEEL TENSION

Requirement
With all pawls held away
Min 2 oz -- Max 8 oz
to move ratchet wheel.

To Adjust
Remove and bend friction springs.

TIME DELAY SWITCH POSITION

Requirement
With contact pawl on high part of ratchet wheel, latchlever tripped, and play in ratchet wheels taken up toward the rear, clearance should be:
Min Some -- Max 0.010 inch
between contact pawl and switch plunger.

To Adjust
Position switch with two mounting screws loosened.

LATCH PAWL SPRING

Requirement
With latch pawl spring unhooked and latch pawl held down
Min 12 oz -- Max 15 oz
to extend spring to installed length.
3.02 Time Delay Mechanism (Cont’d)

**Feed Pawl Spring**

Requirement
- Min 1 oz -- Max 2 oz

To move feed pawl away from ratchet wheel.

**Contact Pawl Spring**

Requirement
- With contact pawl latched on end of latchlever
  - Min 5 oz -- Max 6 oz

To start pawl moving.

**Disabling Device**

To Disable
- Loosen two mounting screws on the upstop bracket. Lower bracket to its bottom position. Tighten screws.

To Enable
- Loosen two mounting screws on the upstop bracket. Raise bracket to its upper position. Tighten screws.
3.03 Time Delay Mechanism (Cont'd)

CAM FOLLOWER LEVER SPRING

To Check
Place upstop bracket in lowermost position.
Unhook upper end of cam follower lever spring.

Requirement
Min 9 oz -- Max 11 oz
to extend spring to installed length. Restore
upstop bracket to its original condition after
checking requirement.