37 KEYBOARD UNIT

ADJUSTMENTS

CONTENTS PAGE

1. GENERAL

1.01 This section provides adjustment procedures for the late design, 11-contact 37 keyboard unit (Figure 1). It is reissued to add information about the depressed keytop audible "click". Base and reset mechanism information was removed and placed in Section 574-331-100. Marginal arrows normally indicating changes have not been used. Adjustments for early design, 28-contact units, can be found in Section 574-321-700.

1.02 Control panel adjustments, required after reinstallation of typing unit cover and pan on the typing unit, are given in Section 574-326-703.

1.03 Each adjustment or mechanical requirement is associated with a basic mechanism of the keyboard unit. The basic mechanism is identified in Figure 2.

Note: The keyboard electrical contacts are not to be adjusted.

1.04 The adjustments are arranged in a sequence that should be followed if a complete readjustment of a mechanism 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. If one adjustment is changed, related adjustments should be checked.

Note: Unless otherwise specified, perform adjustments with the typing unit removed. For instructions on removing typing unit, see Section 574-301-702.

1.05 In each adjustment the location of clearances, position of parts, and point and angle of scale applications are illustrated by line drawings. Requirements and procedures

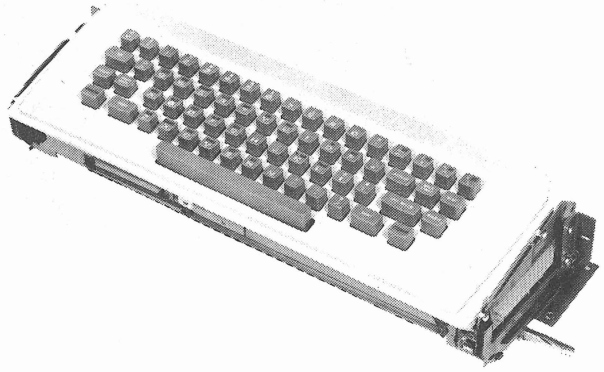

Figure 1 - Keyboard Unit

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are set forth in the several texts that accompany the line drawings. Tools necessary to maintain this equipment are illustrated in Section 570-005-800.

1.06 References made to the right or left and front or rear apply to the keyboard unit in its normal operating position as viewed by the operator facing the unit.

1.07 When parts are removed to facilitate the making of an adjustment and subsequently replaced, check any adjustment which may have been affected by such removal and replacement of parts.

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

1.09 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.

1.10 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 should be replaced by new ones. Only those springs that directly affect the operation of the keyboard 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: Use only spring scales found in Maintenance Tool Section 570-005-800.

1.11 When cleaning plastic parts such as the cover of the keyboard mechanism, use soap or detergent and water. Do not use solvents containing alcohol or chlorinated ingredients.

CAUTION: REMOVE POWER FROM EQUIPMENT BEFORE MAKING ANY ADJUSTMENTS.

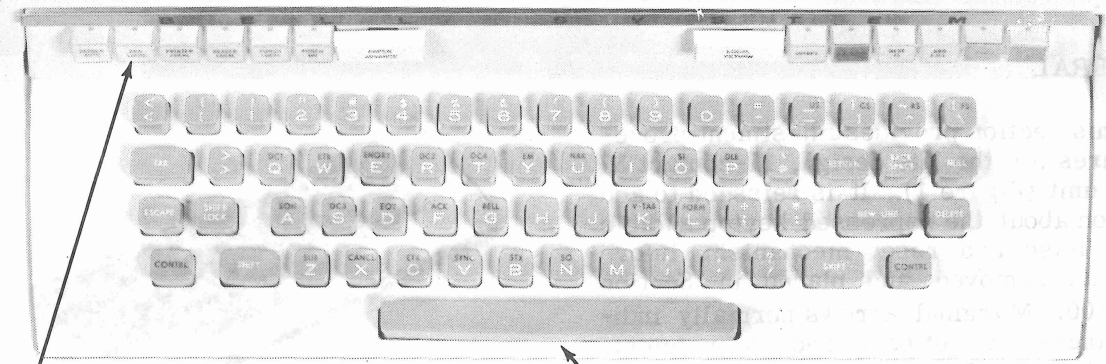


Figure 2 - Keyboard Unit

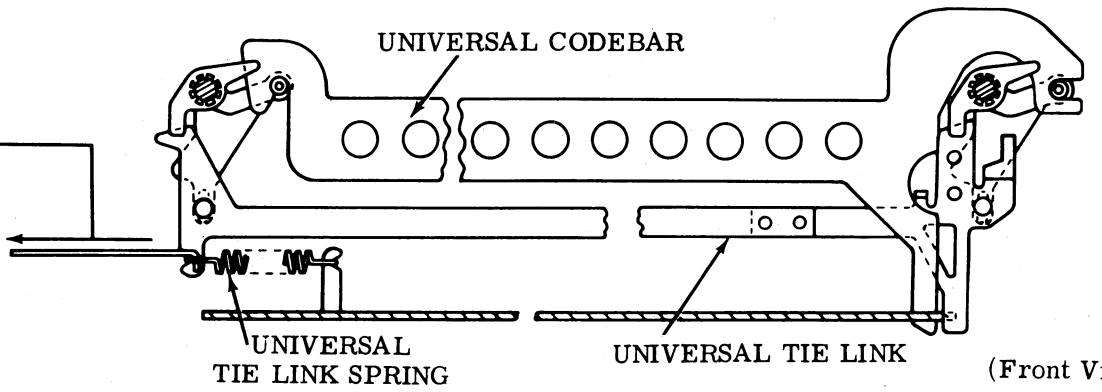
2. KEYBOARD UNIT

2.01 Keyboard Mechanism

UNIVERSAL TIE LINK SPRING

To Check
Unhook spring from tie link. Depress any primary key to normal downstop position.

Requirement
Min 3/4 oz---Max 7/8 oz
to extend spring to operating length.

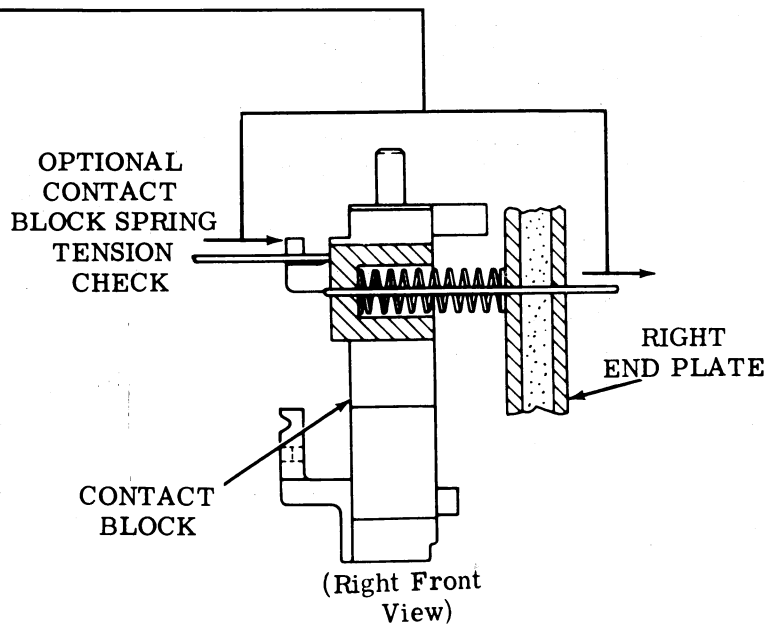


(Front View)

CONTACT BLOCK SPRING

To Check
Remove T-lever guide.

Requirement
Min 18 oz---Max 64 oz
at each spring location
to start contact block moving.



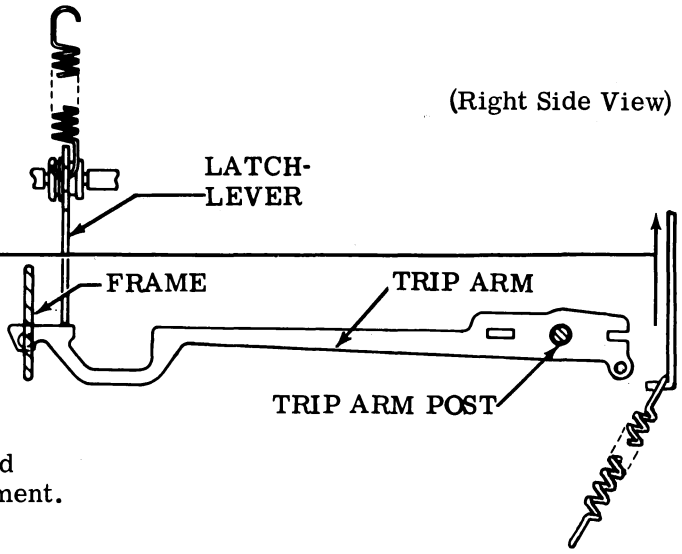
(Right Front View)

2.02 Keyboard Mechanism (continued)

TRIP ARM SPRING

To Check
Keyboard in latched position.

Requirement
Min 7 oz---Max 8 oz
to extend spring to installed position.

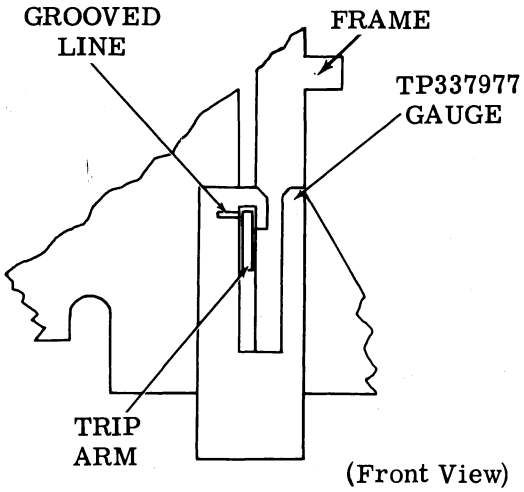


(Right Side View)

TRIP ARM

Note: The typing unit must be assembled on the base to make the trip arm adjustment.

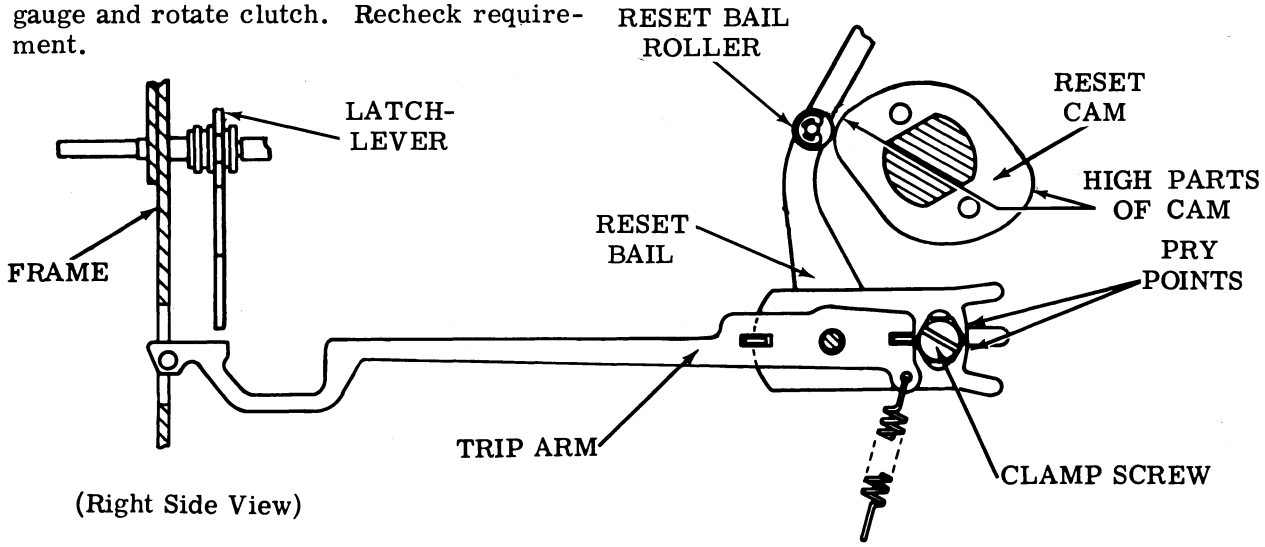
To Check
Engage clutch (trip keyboard). Rotate clutch until shoe lever and disc stop-lug just clear clutch stop arm. Manually reset (latch) trip arm lever. Place TP337977 gauge over end of trip arm lever with top edge of gauge against latched trip arm lever. Rotate cam until reset bail roller is on the cam high.



(Front View)

Requirement
Top surface of trip arm lever aligned within width of gauge's grooved lines.

To Adjust
Place reset bail roller on the lower of the cams two high surfaces. Loosen clamp screw friction tight. Use screwdriver between upper pry points to position trip lever arm beyond width of grooved lines. Use screwdriver between lower pry points to position trip lever arm to the gauge's lower line. Tighten clamp screw. Remove gauge and rotate clutch. Recheck requirement.



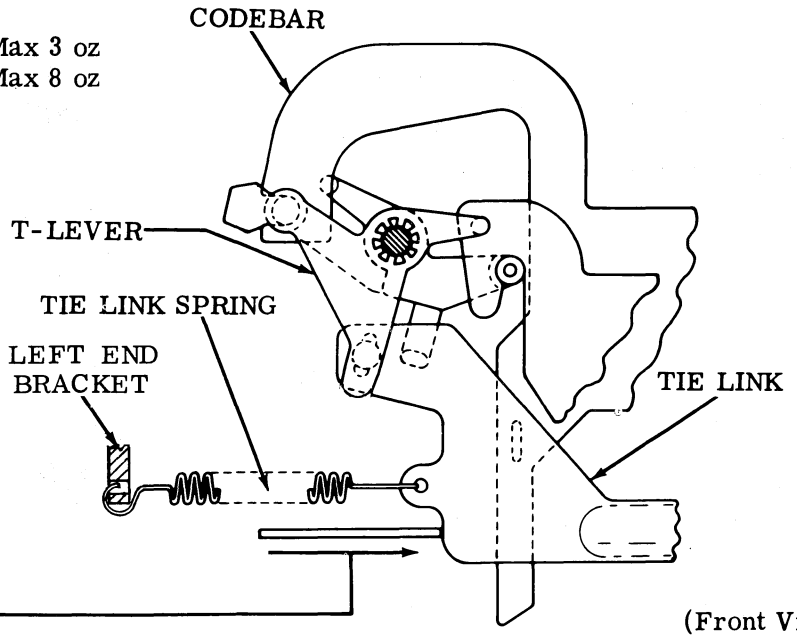
(Right Side View)

2.03 Keyboard Mechanism (continued)

SHIFT AND CONTROL TIE LINK SPRINGS

To Check
Keyboard in unshift position.

Requirement
Shift Tie Link: Min 2 oz---Max 3 oz
Control Tie Link: Min 6 oz---Max 8 oz
to start tie link moving.

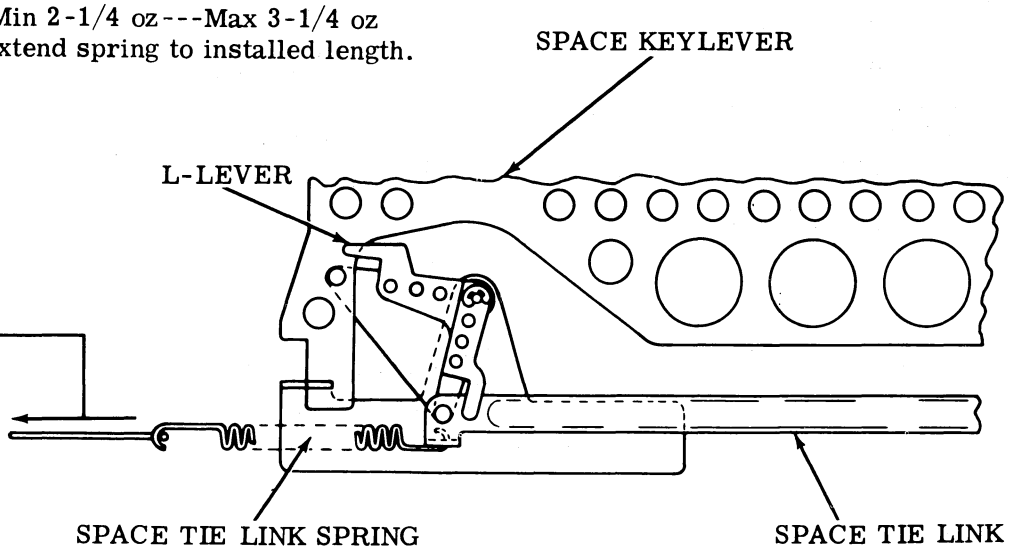


(Front View)

SPACE TIE LINK SPRING

To Check
Unhook spring from frame.

Requirement
Min 2-1/4 oz---Max 3-1/4 oz
to extend spring to installed length.



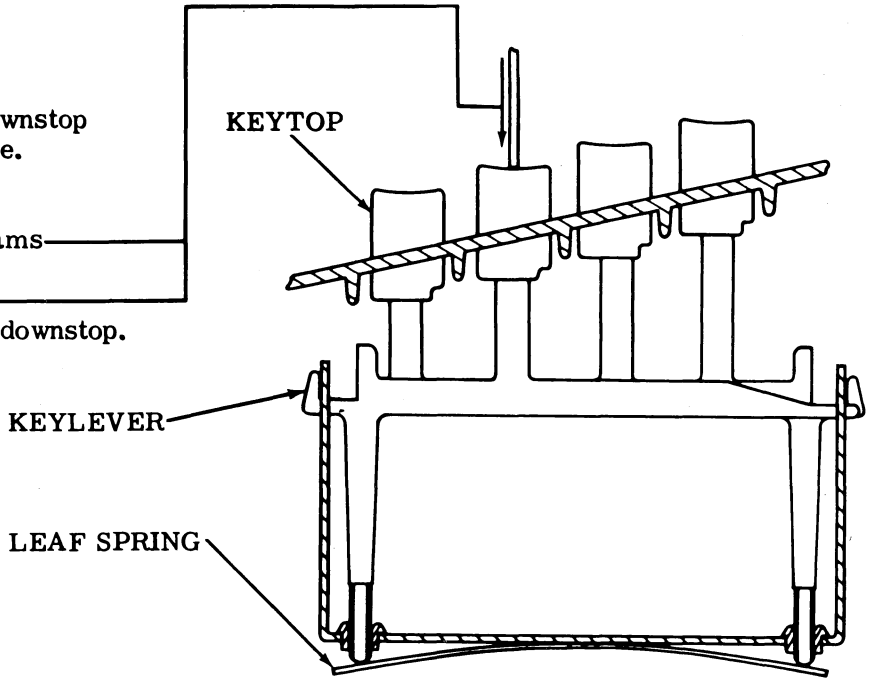
(Front View)

2.04 Keyboard Mechanism (continued)

KEYLEVER LEAF SPRING

To Check
Depress keylever to normal downstop position (nonrepeat) and release.

Requirement
Min 13 grams---Max 25 grams to start keylever moving.
Max 7 oz to depress keylever to normal downstop.



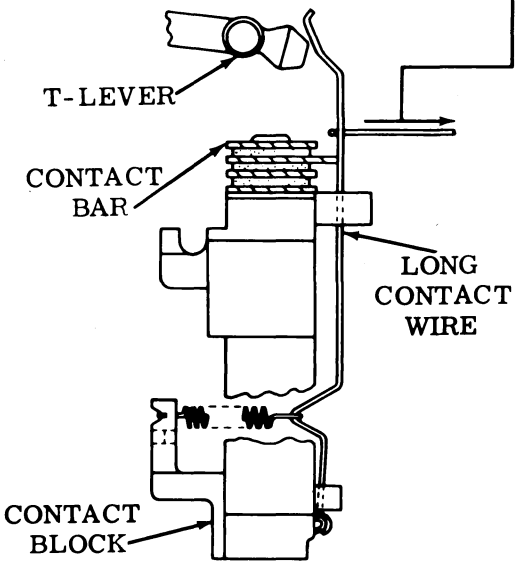
(Right Side View)

CONTACT WIRE SPRING

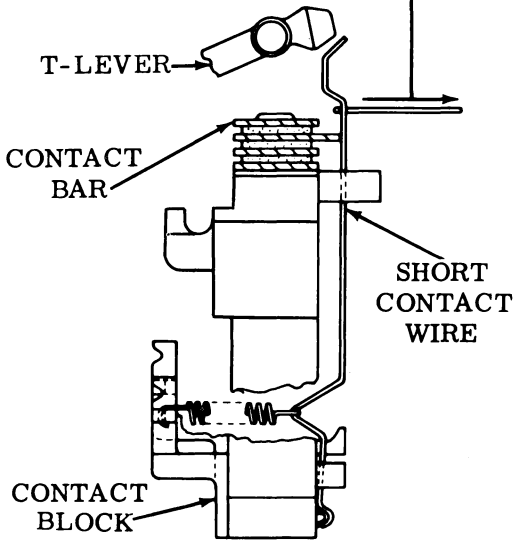
To Check
Remove T-lever guide, check contact wire when closed.

CAUTION: CONTACT WIRES ARE NOT TO BE ADJUSTED.

Requirement
Min 8 grams---Max 12 grams to start short contact wire moving.
Min 10 grams---Max 14 grams to start long contact wire moving.



(Front View)



(Front View)

2.05 Keyboard Mechanism (continued)

LATCHLEVER SPRING

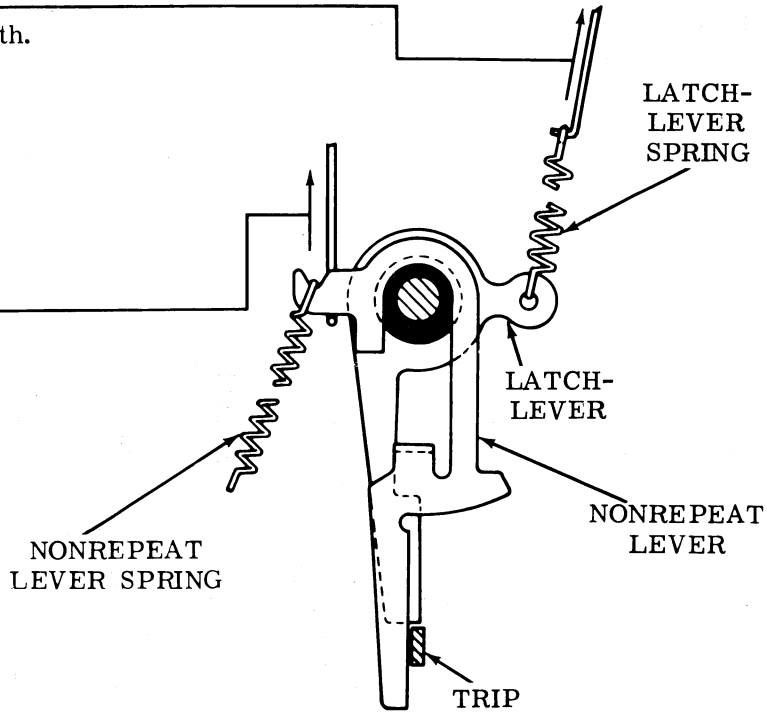
To Check
Unhook latchlever spring. Hold trip arm in overtravel position.

Requirement
Min 1/2 oz---Max 3/4 oz
to extend spring to installed length.

NONREPEAT LEVER SPRING

To Check
Latchlever moved away from nonrepeat lever.

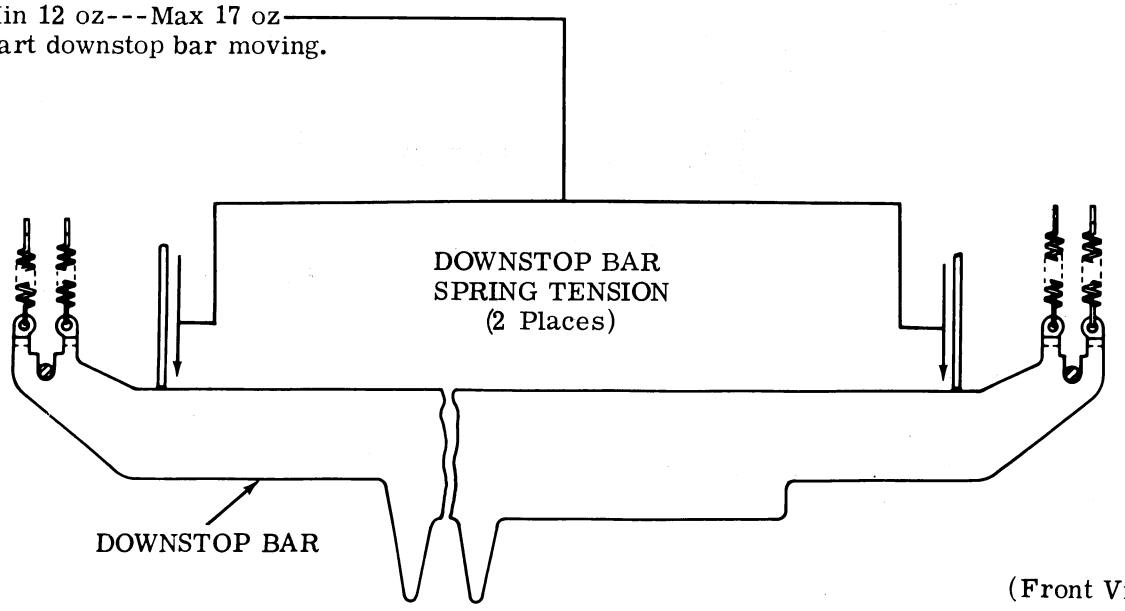
Requirement
Min 1/2 oz---Max 5/8 oz
to start nonrepeat lever moving.



(Front View)

REPEAT DOWNSTOP BAR SPRING

Requirement
Min 12 oz---Max 17 oz
to start downstop bar moving.



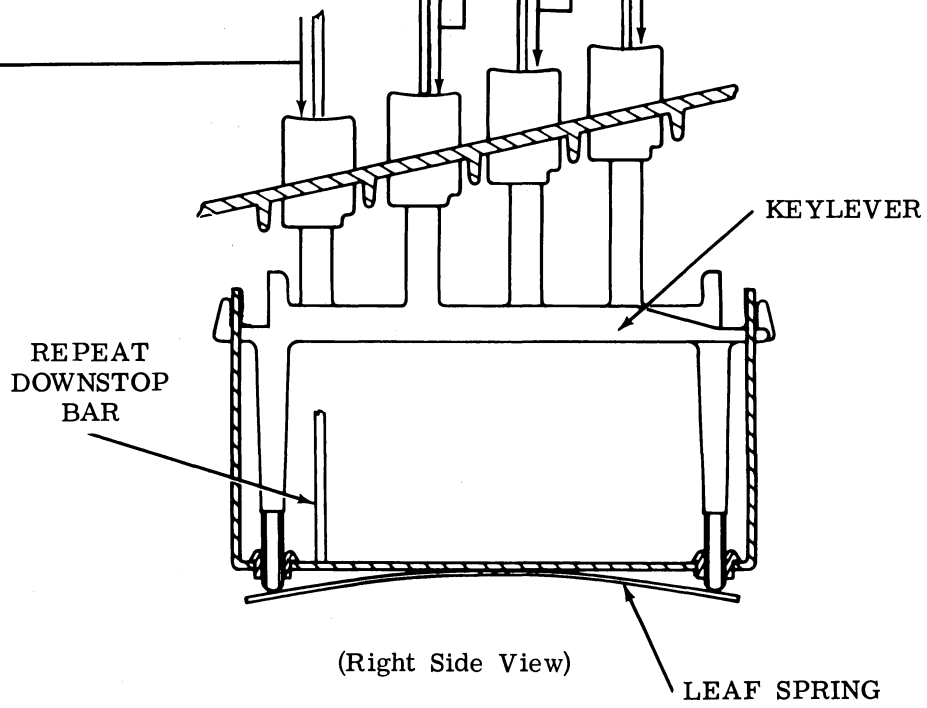
(Front View)

2.06 Keyboard Mechanism (continued)

CODEBAR BIND CHECK

To Check
Hold trip arm in overtravel position.

Requirement
Max 7 oz
to depress, to normal downstop position,
the following keylevers (in sequence):
O (letter), 0 (figure), and LINE SPACE.



(Right Side View)

REPEAT FORCE CHECK

To Check
Depress any repeatable key past the
normal downstop position.

Requirement
Min 12-1/2---Max 54 oz
to trip keyboard.

3. KEYBOARD CLACKER

3.01 Clacker Mechanism

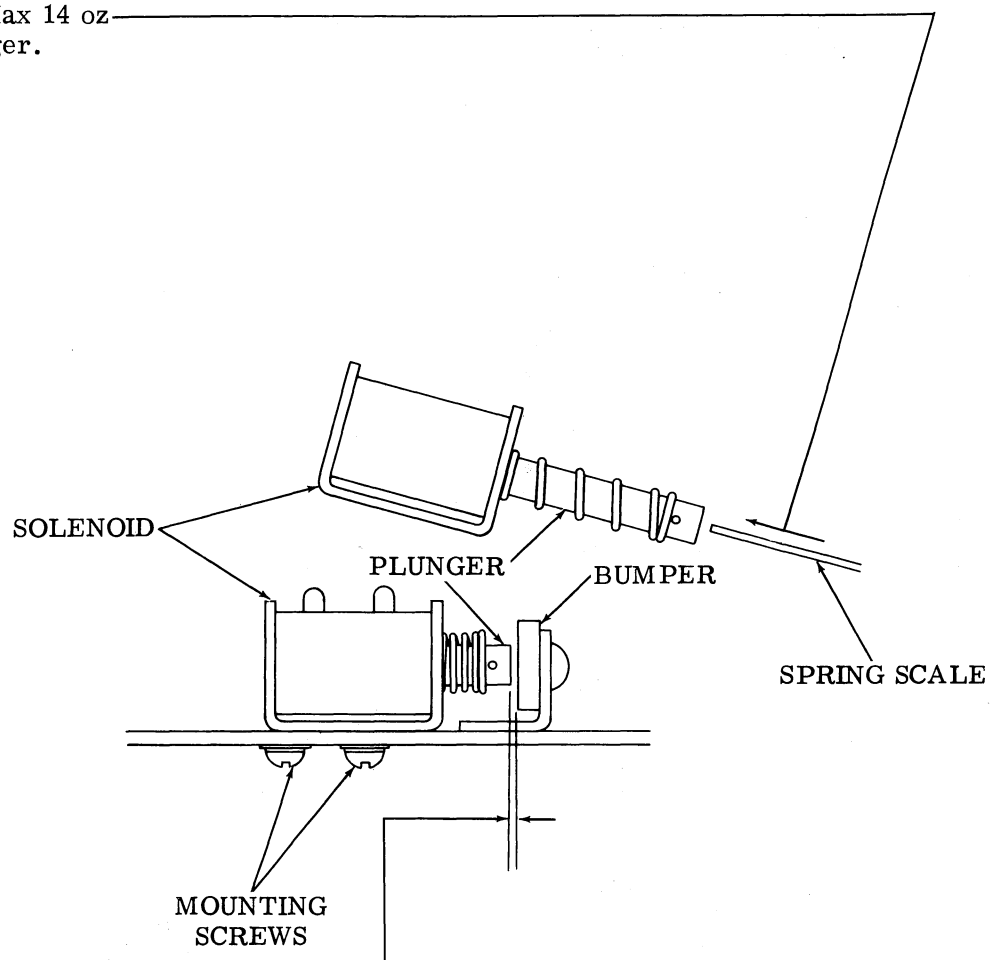
SOLENOID CLACKER

To Check

Remove one, then loosen the other solenoid mounting screw. Rotate solenoid as needed to place spring scale in line with plunger. Check (1) requirement. Remount solenoid with both mounting screws tightened. Check (2) requirement.

(1) Requirement

Min 12 oz---Max 14 oz to fully seat plunger.



(2) Requirement

Min some---Max 0.005 inch between fully seated plunger and bumper.

To Adjust

With mounting screws friction tight, position solenoid. Tighten screws.

3.02 Clacker Mechanism (continued)

MAGNETIC CLACKER

To Check

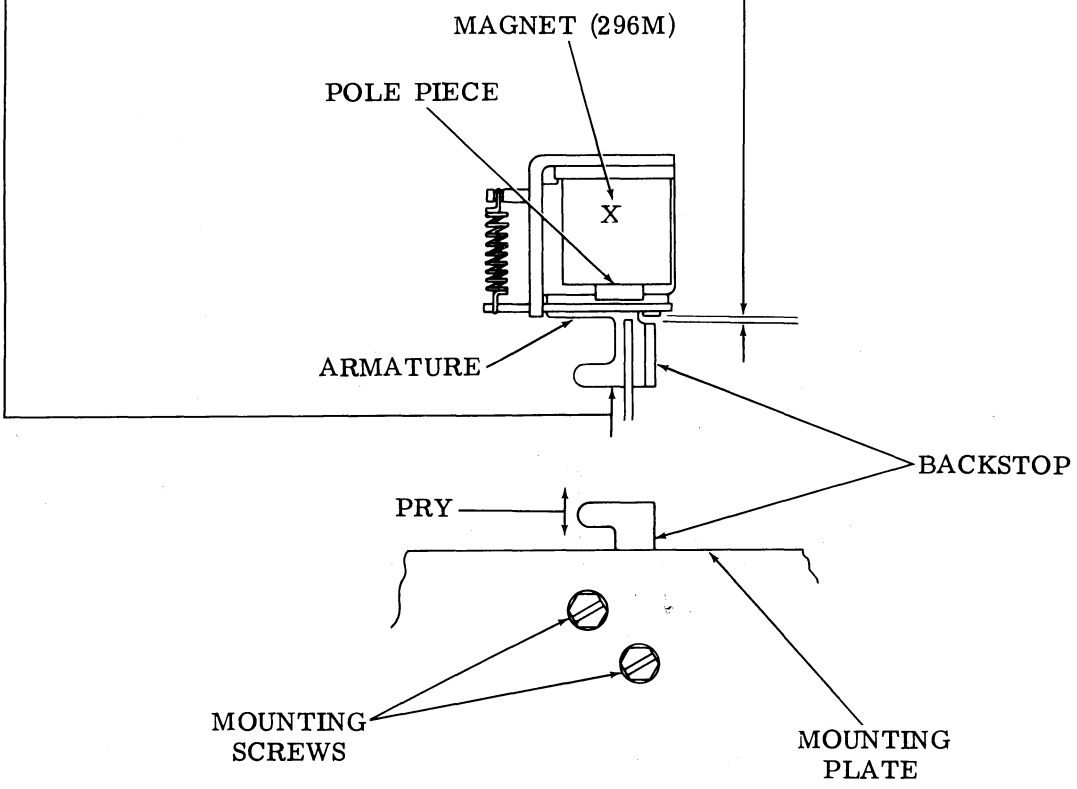
Reposition armature slightly back and forth to reduce hinge friction.

(1) Requirement

Min 6 oz---Max 8 oz to seat armature against pole piece.

(2) Requirement

Min 0.015 inch---Max 0.025 inch between armature and backstop.



To Adjust

With mounting screws friction tight, seat armature against pole piece and position backstop. For under power adjustment (optional) with clacker assembly in terminal set: Loosen mounting screws friction tight and position backstop toward mounting plate. While depressing (any) repeating keytop, pry backstop away from mounting plate to obtain required clacker operation. Tighten mounting screws. Check both repeat and single clacker operation.