TELETYPE CORPORATION
Skokie, Illinois, U. S. A.

SECTION 574-224-700TC
Issue 4, August, 1963

35 NON-TYPING REPERFORATOR

ADJUSTMENTS

CONTENTS

1. GENERAL

1.01 This section is reissued to:

(a) Include recent engineering changes.

(b) Include armature with two anti-freeze buttons.

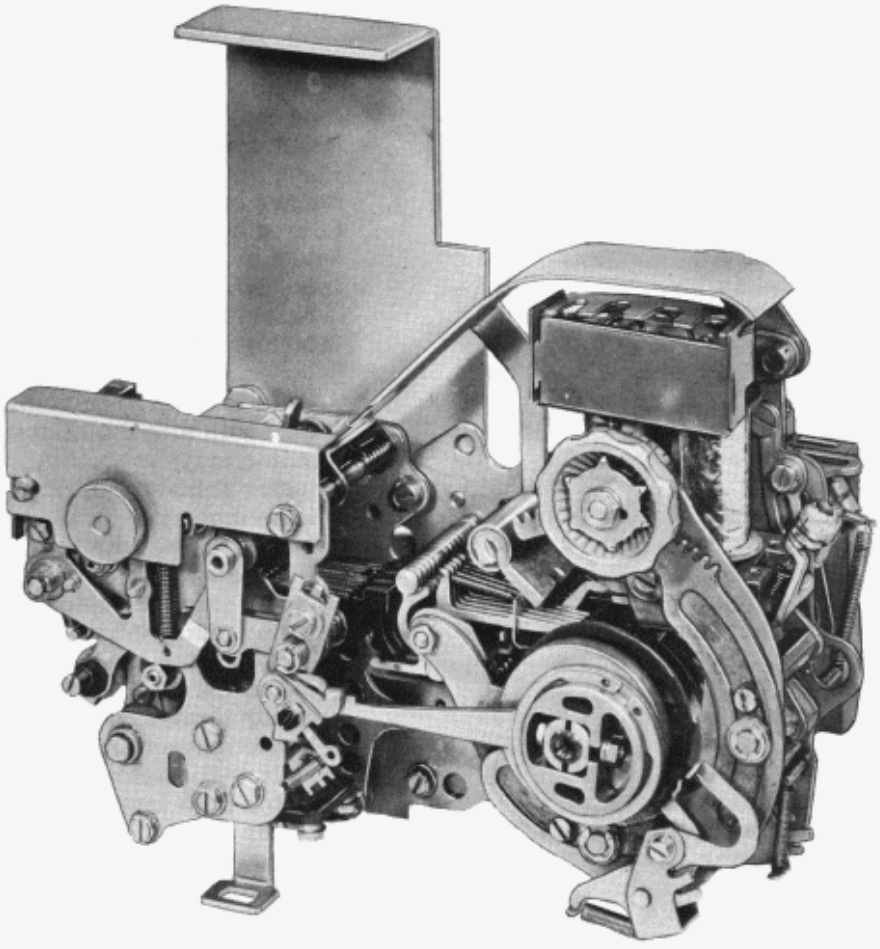


Figure 1 - 35 Non-Typing Reperforator (Right Front View)

(c) Include lateral and front to rear feed wheel adjustment (early design).

1.02 This section contains specific requirements and adjustments for the 35 Non-Typing Reperforator (Fig. 1). The basic equipment includes selector mechanism, fully perforating punch mechanism and power driven backspace mechanism. The unit is designed for adaptation either by a single shaft or by a main shaft and jack shaft to power supplied from a base mounted motor. Where there are differences in the adjustment procedures for single shaft and double shaft units, these are noted in the adjustment text and illustrations. Motors and bases are covered in the applicable sections.

1.03 Reference to left or right, front or rear and up or down refer to the apparatus in its normal operating position, as viewed from the front with the selector mechanism to the right and the punch mechanism to the left. It is assumed that the elements depicted in illustrations in this section are being viewed from a position in front of the equipment, unless the illustrations are specifically labeled otherwise. In the illustrations, pivot points are shown by circles or ellipses that are solid black to indicate fixed points and cross-hatched to indicate floating points.

1.04 Tools required to make the adjustments and test the spring tensions are listed in the appropriate section. Spring tensions given in this section are indications, not exact values, and should be checked with the correct scale applied in the positions shown in the drawings.

1.05 The unit is in its unoperated, or stop, condition when it is not under power. It is in its idling condition when it is under power and clutches are disengaged (steady marking condition of signal line).

CAUTION: APPARATUS SHOULD NOT BE SEPARATED FROM ITS PROTECTIVE HOUSING UNLESS POWER IS DISCONNECTED. WHERE OPERATION OF THE EQUIPMENT IS REQUIRED AFTER IT HAS BEEN SEPARATED FROM ITS PROTECTIVE HOUSING, APPROPRIATE PRECAUTIONARY MEASURES SHOULD BE TAKEN TO PREVENT ACCIDENTS.

1.06 When a requirement calls for a clutch to be DISENGAGED, the clutch shoe lever must be fully latched between its trip lever (or stop arm) and latch lever. The main shaft will then turn freely without the clutch shoes dragging. When the clutch is ENGAGED, the shoe lever and cam disk stop lug are moved apart, and the clutch shoes are wedged against the drum so that the clutch turns with the shaft.

Note: If the shaft is turned by hand, the clutch will not fully disengage upon reaching its stop position. Where a procedure calls for disengagement, rotate the clutch to its stop position, apply a screwdriver to the cam disk stop lug and turn the disk in the normal direction of shaft rotation until the latch lever seats in its notch in the disk.

1.07 To manually operate the 35 Non-Typing Reperforator, proceed as follows:

(a) Attach the armature clip to the selector magnet armature by carefully putting the flat formed end of the armature clip over the top of the armature between the pole pieces and then hooking the projection under the edge of the armature. The spring tension of the armature clip will hold the selector armature in the marking (attracted) position.

(b) While holding the selector magnet attracted by means of the armature clip, manually rotate the main shaft in a counterclockwise direction until all the clutches are brought to their disengaged position.

(c) Fully disengage the clutches in accordance with 1.06, Note.

(d) Release the selector magnet armature momentarily to permit the selector clutch to engage.

(e) Rotate the main shaft slowly until all the push levers have fallen to the left of their selecting levers.

(f) Strip the push levers from their selector levers if they are spacing in the code combination of the character or function that is being selected. Allow the push levers to

move to the right. The push levers and selector levers move in succession, starting with the inner lever No. 1, to the outer lever No. 8.

(g) Continue to rotate the main shaft until all operations initiated by the selector action clear through the unit.

1.08 Parts dismantled to facilitate checking or readjustment should be reassembled after the operation is completed. If a part mounted on shims is to be dismantled, the number of shims used at each mounting screw should be noted so that the same shim pile-ups can be replaced when the part is remounted. When parts removed are replaced, related adjustments which may have been affected should be checked.

1.09 Parts that are worn to the extent that they can no longer be made to meet the specified requirements by authorized adjustments or which are worn to the extent that it seems probable that early further wear might cause a loss of adjustment should be replaced by new parts. Springs which do not meet the requirements and for which there are no adjusting procedures should be discarded and replaced by new springs.

1.10 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. Avoid sharp kinks or bends in the contact springs.

Note: Keep all electrical contacts free of oil and grease.

2. ADJUSTMENTS

2.01 The following figures show the adjusting tolerances, position of parts and spring tensions. The illustrations are arranged so that the adjustments are in the sequence that would be followed if a complete readjustment of the apparatus were being made. In some cases, where an illustration shows interrelated parts, the sequence that should be followed in checking the requirements and making the adjustments is indicated by the letters (A), (B), (C), etc.

2.02 Selector and Function Mechanisms

CLUTCH SHOE LEVER (BOTH CLUTCHES)

REQUIREMENT

GAP BETWEEN CLUTCH SHOE LEVER AND ITS STOP LUG SHOULD BE 0.055 INCH TO 0.085 INCH GREATER WHEN CLUTCH IS ENGAGED THAN WHEN CLUTCH IS DISENGAGED.

TO CHECK

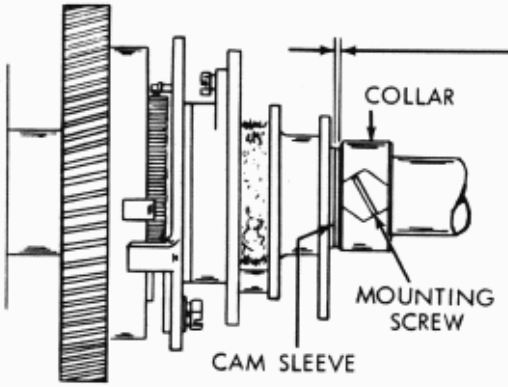
DISENGAGE CLUTCH AND MEASURE GAP. ALIGN HEAD OF DRUM MOUNTING SCREW WITH STOP LUG. ENGAGE CLUTCH. MANUALLY PRESS SHOE LEVER AGAINST STOP LUG AND ALLOW TO SNAP APART. MEASURE GAP WITH CLUTCH ENGAGED.

TO ADJUST

ENGAGE WRENCH OR SCREWDRIVER WITH LUG ON ADJUSTING DISK. ROTATE DISK WITH CLAMP SCREWS LOOSENED.

NOTE

AFTER MAKING ADJUSTMENT, DISENGAGE CLUTCH. REMOVE DRUM MOUNTING SCREW. ROTATE DRUM IN NORMAL DIRECTION AND CHECK TO SEE IF IT DRAGS ON SHOE. IF IT DOES, REFINE ADJUSTMENT.



FUNCTION CLUTCH DRUM END PLAY (FOR UNITS EQUIPPED WITH TWO SHAFTS)

REQUIREMENT

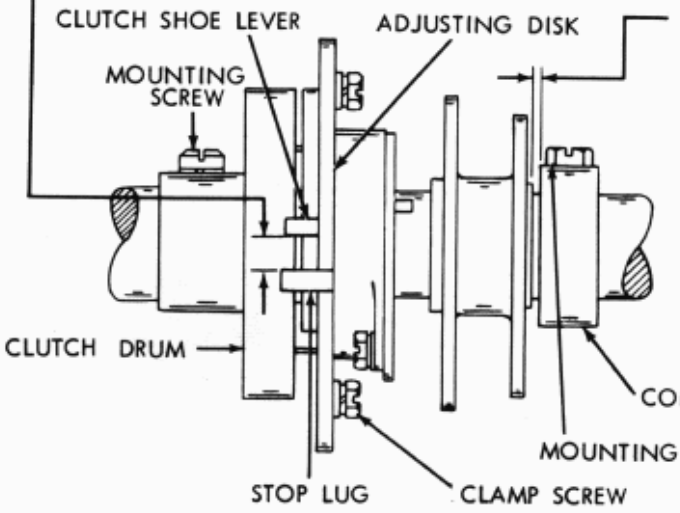
FUNCTION CLUTCH DISENGAGED. SOME END PLAY BETWEEN CAM SLEEVE AND COLLAR

MAX. 0.015 INCH

WHEN PLAY IS TAKEN UP TO MAKE CLEARANCE A MAXIMUM.

TO ADJUST

POSITION COLLAR WITH MOUNTING SCREW LOOSENED.



FUNCTION CLUTCH DRUM END PLAY

REQUIREMENT

WITH FUNCTION CLUTCH DISENGAGED

MIN. SOME----MAX. 0.015 INCH

WHEN PLAY IS TAKEN UP TO MAKE CLEARANCE MAX.

TO ADJUST

WITH ITS MOUNTING SCREW LOOSENED, MOVE DRUM TO EXTREME FRONT POSITION. TIGHTEN DRUM MOUNTING SCREW. POSITION COLLAR WITH MOUNTING SCREW LOOSENED.

2.03 Selector and Function Mechanisms (Cont.)

CLUTCH SHOE LEVER SPRING TENSION

REQUIREMENT

CLUTCH ENGAGED. CAM DISK HELD TO PREVENT TURNING. SPRING SCALE PULLED AT TANGENT TO CLUTCH.

MIN. 16 OZS.

MAX. 22 OZS.

TO MOVE SHOE LEVER IN CONTACT WITH STOP LUG.

CLUTCH SHOE SPRING TENSION

NOTE

IN ORDER TO CHECK THIS SPRING TENSION, IT IS NECESSARY TO REMOVE CLUTCH FROM MAIN SHAFT. THEREFORE, IT SHOULD NOT BE CHECKED UNLESS THERE IS GOOD REASON TO BELIEVE THAT IT DOES NOT MEET ITS REQUIREMENT.

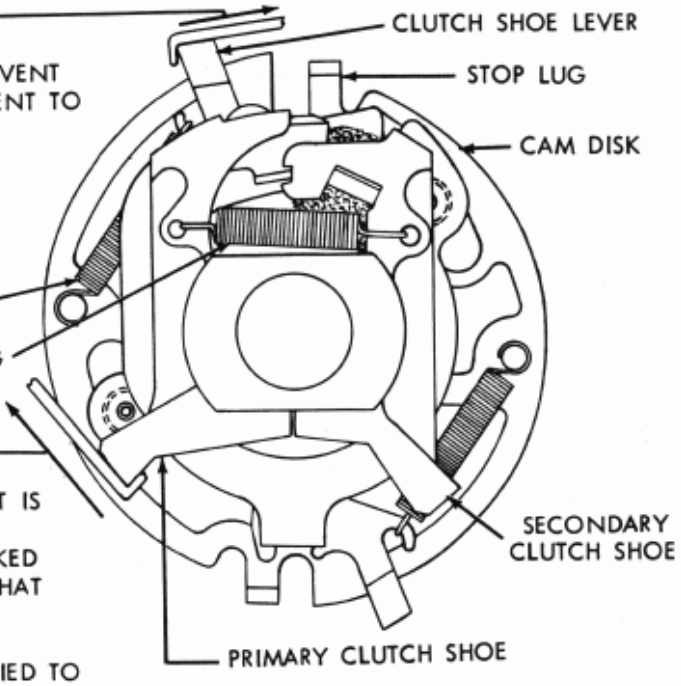
REQUIREMENT

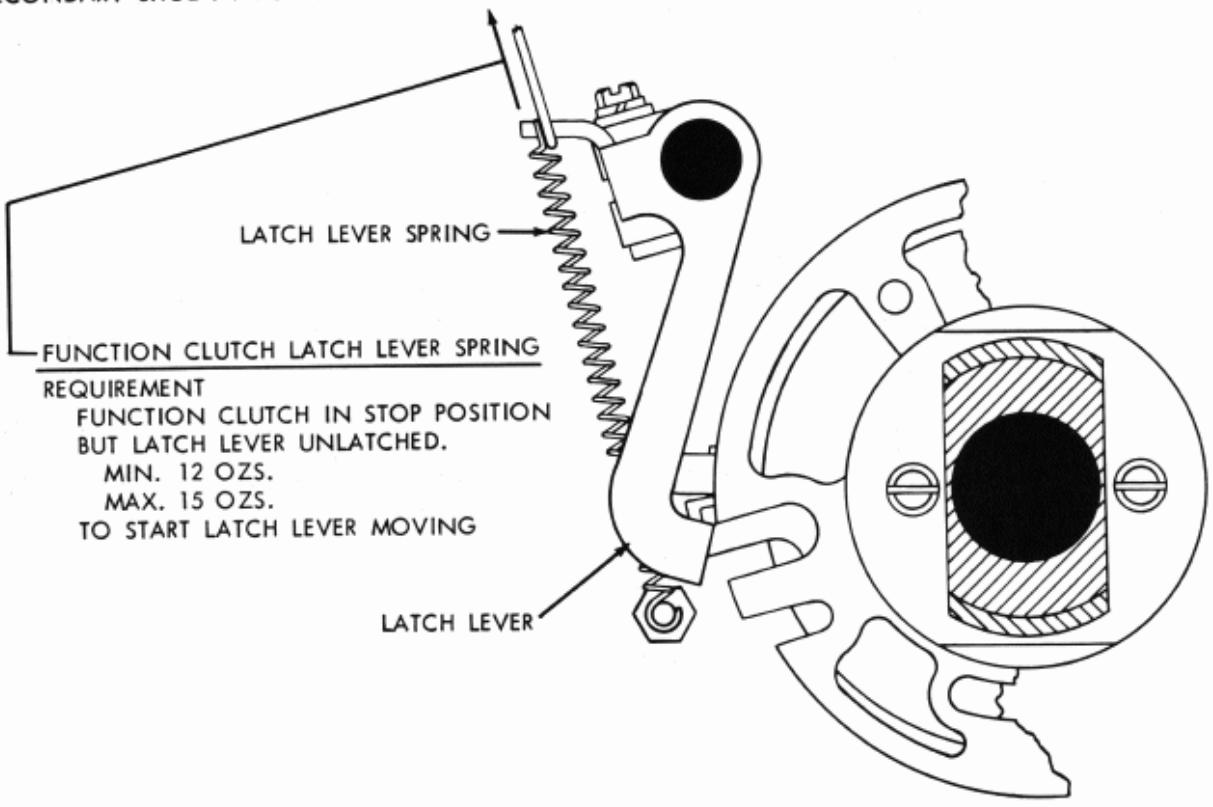
CLUTCH DRUM REMOVED. SPRING SCALE APPLIED TO PRIMARY SHOE AT TANGENT TO FRICTION SURFACE.

MIN. 3 OZS.

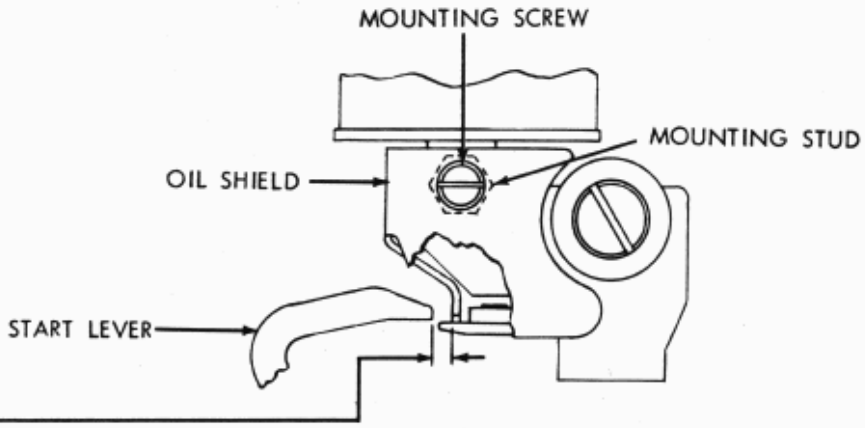
MAX. 5 OZS.

TO START SHOE MOVING AWAY FROM SECONDARY SHOE AT POINT OF CONTACT.



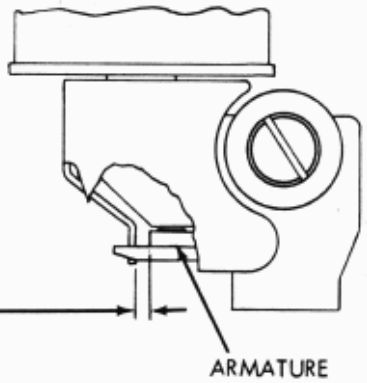


2.04 Selector Mechanism



REQUIREMENT

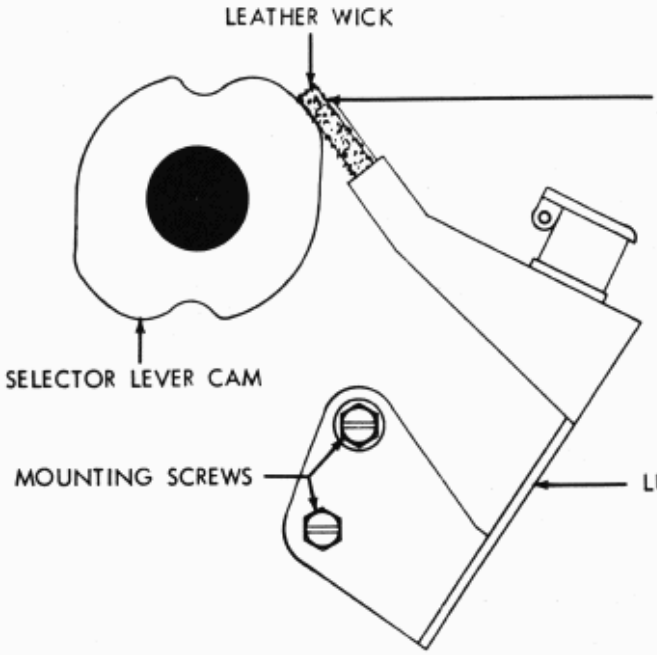
(1) MAGNET DE-ENERGIZED. STOP ARM BAIL ON LOW PART OF ITS CAM. CLEARANCE BETWEEN START LEVER AND OIL SHIELD.
MIN. 0.020 INCH
MAX. 0.030 INCH



(2) MAGNET ENERGIZED. STOP ARM BAIL ON HIGH PART OF ITS CAM. CLEARANCE BETWEEN END OF ARMATURE AND OIL SHIELD.
MIN. 0.010 INCH

TO ADJUST

POSITION SHIELD WITH MOUNTING SCREW LOOSENED. MAKE SURE OIL SHIELD MOUNTING STUD IS SECURE BEFORE MAKING ADJUSTMENT.



SELECTOR CAM LUBRICATOR

REQUIREMENT

HIGH PART OF SELECTOR LEVER CAMS SHOULD CONTACT LEATHER WICK BUT SHOULD NOT DEFLECT WICK MORE THAN 1/32 INCH GAUGED VISUALLY.

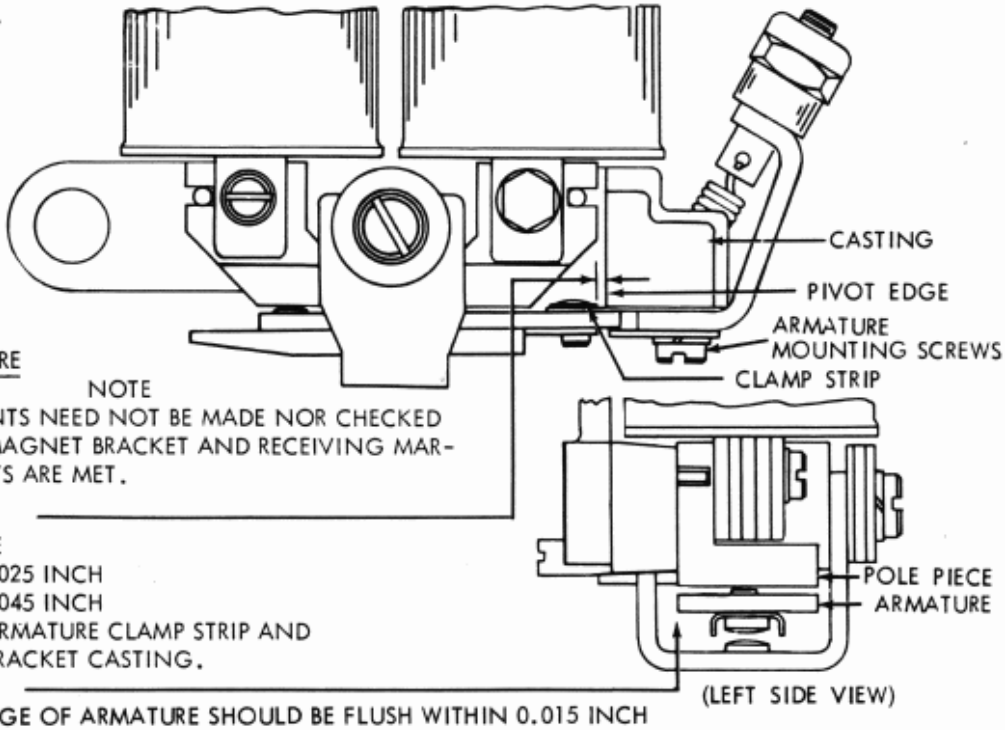
TO ADJUST

POSITION LUBRICATOR ASSEMBLY AROUND LOWER SCREW WITH MOUNTING SCREWS LOOSENED.

2.05 Selector Mechanism (Cont.)

NOTE

TO FACILITATE MAKING THE FOLLOWING ADJUSTMENTS, REMOVE THE RANGE FINDER ASSEMBLY AND SELECTOR MAGNET ASSEMBLY. TO INSURE BETTER OPERATION, PULL A PIECE OF BOND PAPER BETWEEN THE ARMATURE AND THE POLE PIECES TO REMOVE ANY OIL OR FOREIGN MATTER THAT MAY BE PRESENT. MAKE CERTAIN THAT NO LINT OR PIECES OF PAPER REMAIN BETWEEN THE POLE PIECES AND THE ARMATURE.



SELECTOR ARMATURE

NOTE

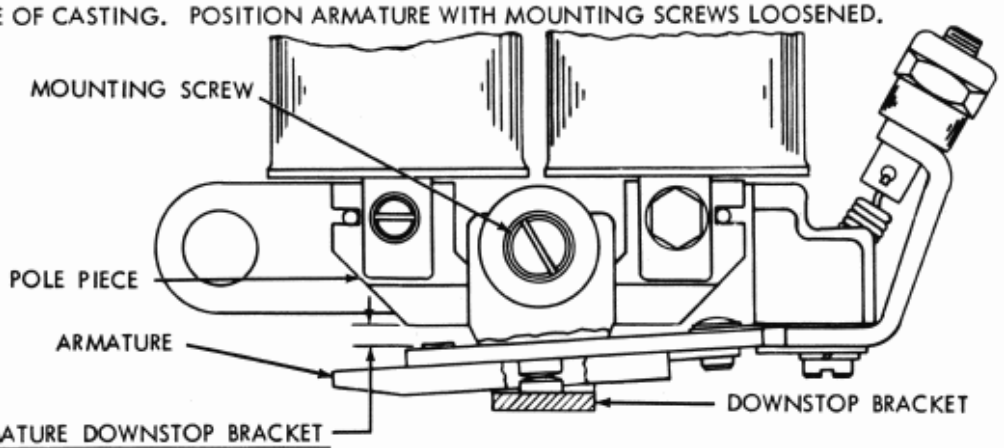
THESE REQUIREMENTS NEED NOT BE MADE NOR CHECKED IF THE SELECTOR MAGNET BRACKET AND RECEIVING MARGIN REQUIREMENTS ARE MET.

(1) REQUIREMENT
CLEARANCE
MIN. 0.025 INCH
MAX. 0.045 INCH
BETWEEN ARMATURE CLAMP STRIP AND MAGNET BRACKET CASTING.

(2) REQUIREMENT
OUTER EDGE OF ARMATURE SHOULD BE FLUSH WITHIN 0.015 INCH WITH OUTER EDGE OF POLE PIECES.

(3) REQUIREMENT
START LEVER SHALL DROP FREELY INTO ARMATURE EXTENSION SLOT.

TO ADJUST
POSITION ARMATURE SPRING ADJUSTING NUT TO HOLD ARMATURE FIRMLY AGAINST PIVOT EDGE OF CASTING. POSITION ARMATURE WITH MOUNTING SCREWS LOOSENED.



SELECTOR ARMATURE DOWNSTOP BRACKET

REQUIREMENT
REMOVE OIL SHIELD. WITH MAGNET DE-ENERGIZED, LOCK LEVERS ON HIGH PART OF THEIR CAM, AND ARMATURE RESTING AGAINST ITS DOWNSTOP, CLEARANCE BETWEEN END OF ARMATURE AND LEFT EDGE OF LEFT POLE PIECE
MIN. 0.025 INCH MAX. 0.030 INCH.

TO ADJUST
POSITION DOWNSTOP BRACKET WITH MOUNTING SCREW LOOSENED. REPLACE OIL SHIELD AND CHECK OIL SHIELD ADJUSTMENT.

2.06 Selector Mechanism (Cont.)

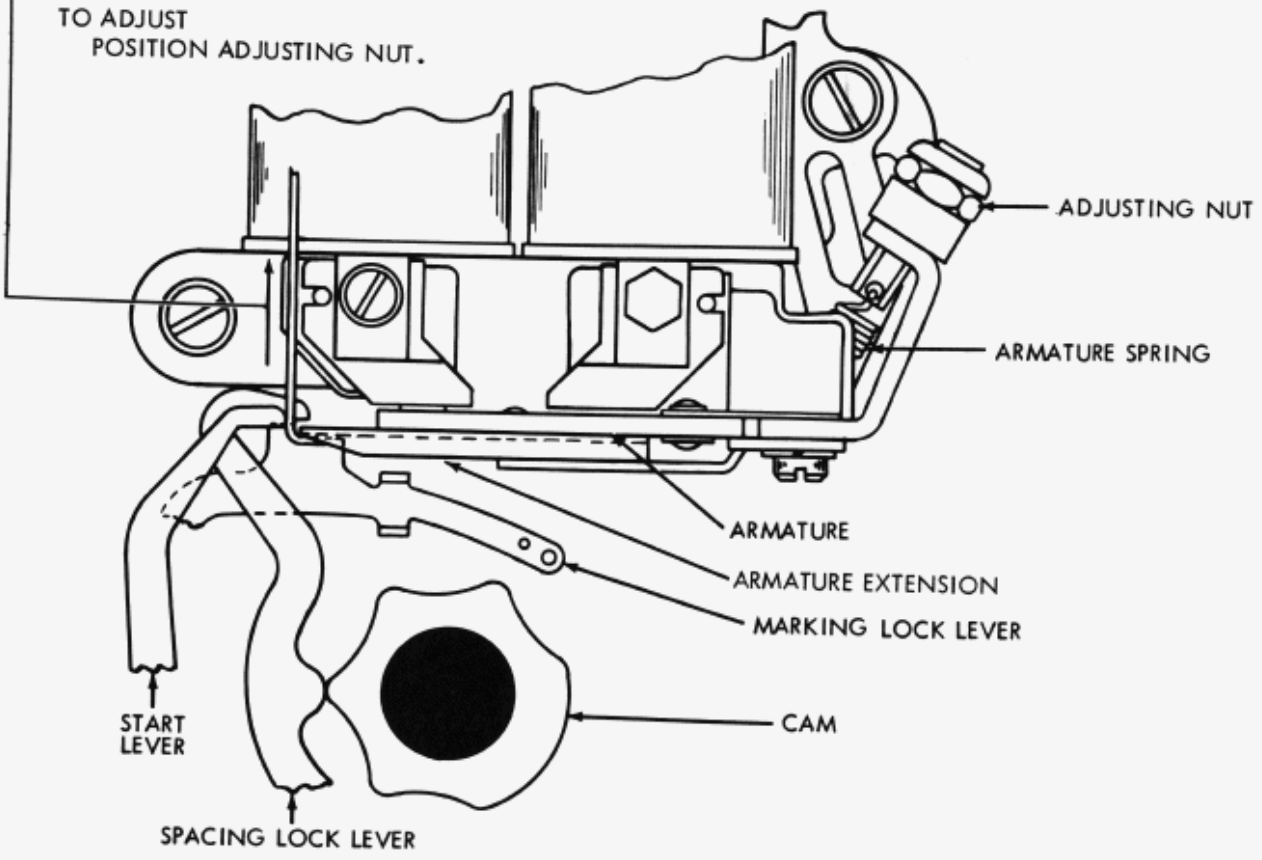
SELECTOR ARMATURE SPRING
(FOR UNITS EMPLOYING SELECTOR ARMATURE WITH SINGLE ANTI-FREEZE BUTTON ONLY).
REQUIREMENT (PRELIMINARY)
WITH LOCKING LEVERS AND START LEVER ON HIGH PART OF THEIR CAMS, SCALE APPLIED AS NEARLY VERTICAL AS POSSIBLE UNDER END OF ARMATURE EXTENSION. IT SHALL REQUIRE THE FOLLOWING TENSIONS TO MOVE ARMATURE TO MARKING POSITION:

0.060 AMPERE - MIN. 2-1/2 OZS. --- MAX. 3 OZS.
0.030 AMPERE - MIN. 1-1/2 OZS. --- MAX. 2 OZS.
0.500 AMPERE - MIN. 4-1/2 OZS. --- MAX. 5-1/2 OZS.

NOTE

THIS SPRING CAN BE ADJUSTED FOR MAXIMUM SELECTOR PERFORMANCE ONLY WHEN PRINTER IS CONNECTED TO THE SPECIFIC CIRCUIT OVER WHICH IT IS TO OPERATE UNDER SERVICE CONDITIONS. SINCE THERE ARE SEVERAL OPERATING SPEEDS AND SINCE CIRCUITS VARY WIDELY, IT IS IMPOSSIBLE TO ADJUST SPRING FOR MAXIMUM PERFORMANCE AT THE FACTORY. THE FOREGOING SPRING TENSION REQUIREMENT IS GIVEN TO PERMIT OPERATION PRIOR TO MEASUREMENT OF RECEIVING MARGINS. READJUSTMENT MADE TO OBTAIN SATISFACTORY RECEIVING MARGIN SHOULD NOT BE DISTURBED IN ORDER TO MEET REQUIREMENTS OF THIS ADJUSTMENT.

TO ADJUST
POSITION ADJUSTING NUT.



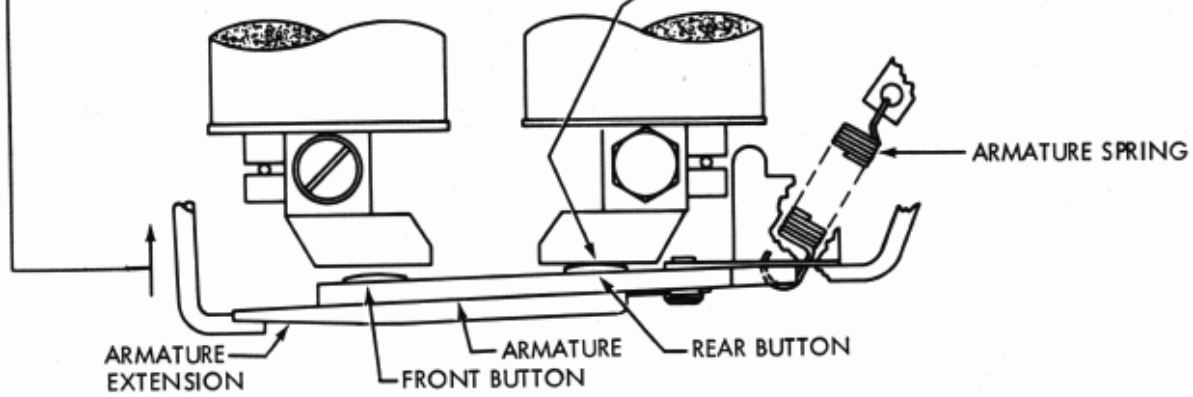
REQUIREMENT (FINAL)
SEE SELECTOR RECEIVING MARGIN ADJUSTMENT (PARAGRAPH 2-13)

2.07 Selector Mechanism (Cont.)

SELECTOR ARMATURE SPRING
(FOR UNITS EMPLOYING SELECTOR ARMATURE WITH TWO ANTI-FREEZE BUTTONS ONLY).
REQUIREMENT (PRELIMINARY)
WITH LOCKING LEVERS AND START LEVER ON HIGH PART OF THEIR CAMS, SCALE APPLIED AS NEARLY VERTICAL AS POSSIBLE UNDER END OF ARMATURE EXTENSION. IT SHALL REQUIRE APPROXIMATELY THE FOLLOWING TENSIONS TO MOVE THE REAR ANTI-FREEZE BUTTON AGAINST THE MAGNET CORE:

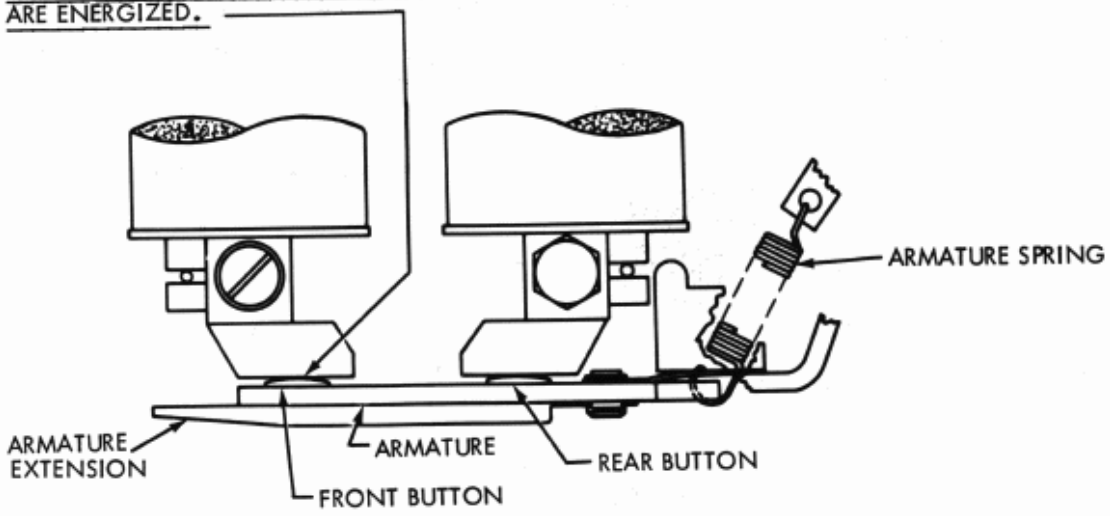
0.060 AMPERE - APPROXIMATELY 1-1/4 OZS.
0.030 AMPERE - APPROXIMATELY 5/8 OZ.
0.500 AMPERE - APPROXIMATELY 1-3/4 OZS.

TO ADJUST
POSITION ADJUSTING NUT.



(SEE SELECTOR RECEIVING MARGIN ADJUSTMENT)

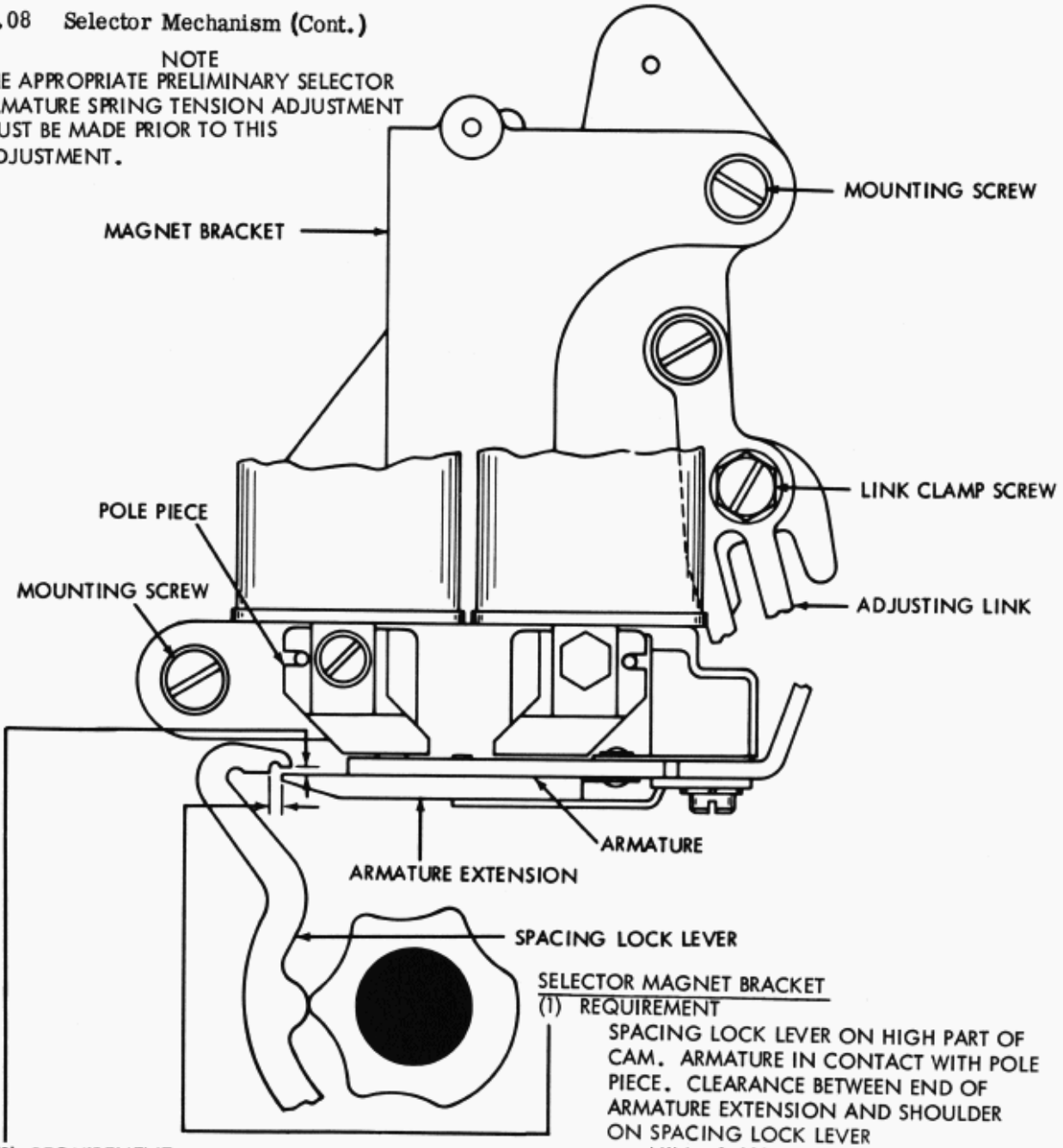
SELECTOR ARMATURE SPRING
REQUIREMENT (FINAL)
WHEN A DISTORTION TEST SET IS AVAILABLE, THE SELECTOR ARMATURE SPRING TENSION SHOULD BE REFINED, IF NECESSARY, TO OBTAIN SATISFACTORY RECEIVING MARGINS. THE FRONT ANTI-FREEZE BUTTON MUST CONTACT THE MAGNET CORE WHEN THE MAGNET COILS ARE ENERGIZED.



REQUIREMENT (FINAL)
SEE SELECTOR RECEIVING MARGIN ADJUSTMENT (PARAGRAPH 2-13)

2.08 Selector Mechanism (Cont.)

NOTE
THE APPROPRIATE PRELIMINARY SELECTOR ARMATURE SPRING TENSION ADJUSTMENT MUST BE MADE PRIOR TO THIS ADJUSTMENT.



SELECTOR MAGNET BRACKET

(1) REQUIREMENT
SPACING LOCK LEVER ON HIGH PART OF CAM. ARMATURE IN CONTACT WITH POLE PIECE. CLEARANCE BETWEEN END OF ARMATURE EXTENSION AND SHOULDER ON SPACING LOCK LEVER
MIN. 0.020 INCH
MAX. 0.035 INCH

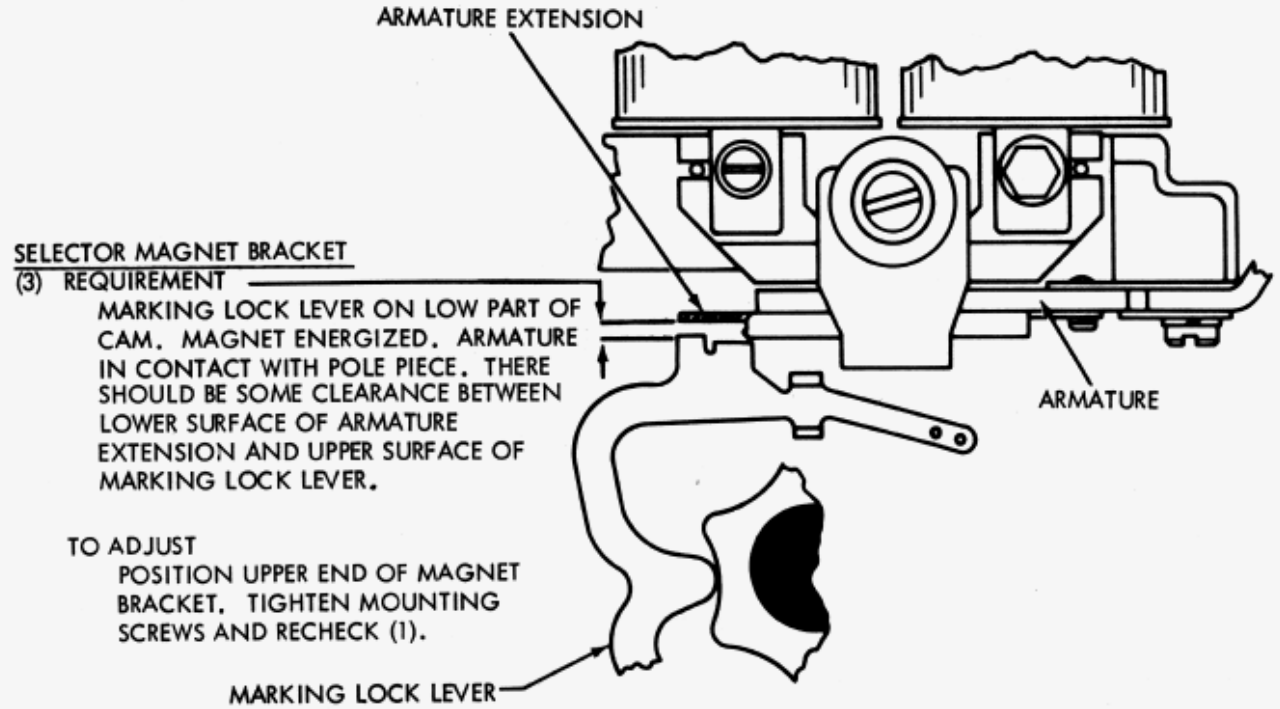
TO ADJUST
LOOSEN TWO MAGNET BRACKET MOUNTING SCREWS AND ADJUSTING LINK CLAMP SCREW. POSITION MAGNET BRACKET BY MEANS OF ADJUSTING LINK AND TIGHTEN LINK CLAMP SCREW ONLY.

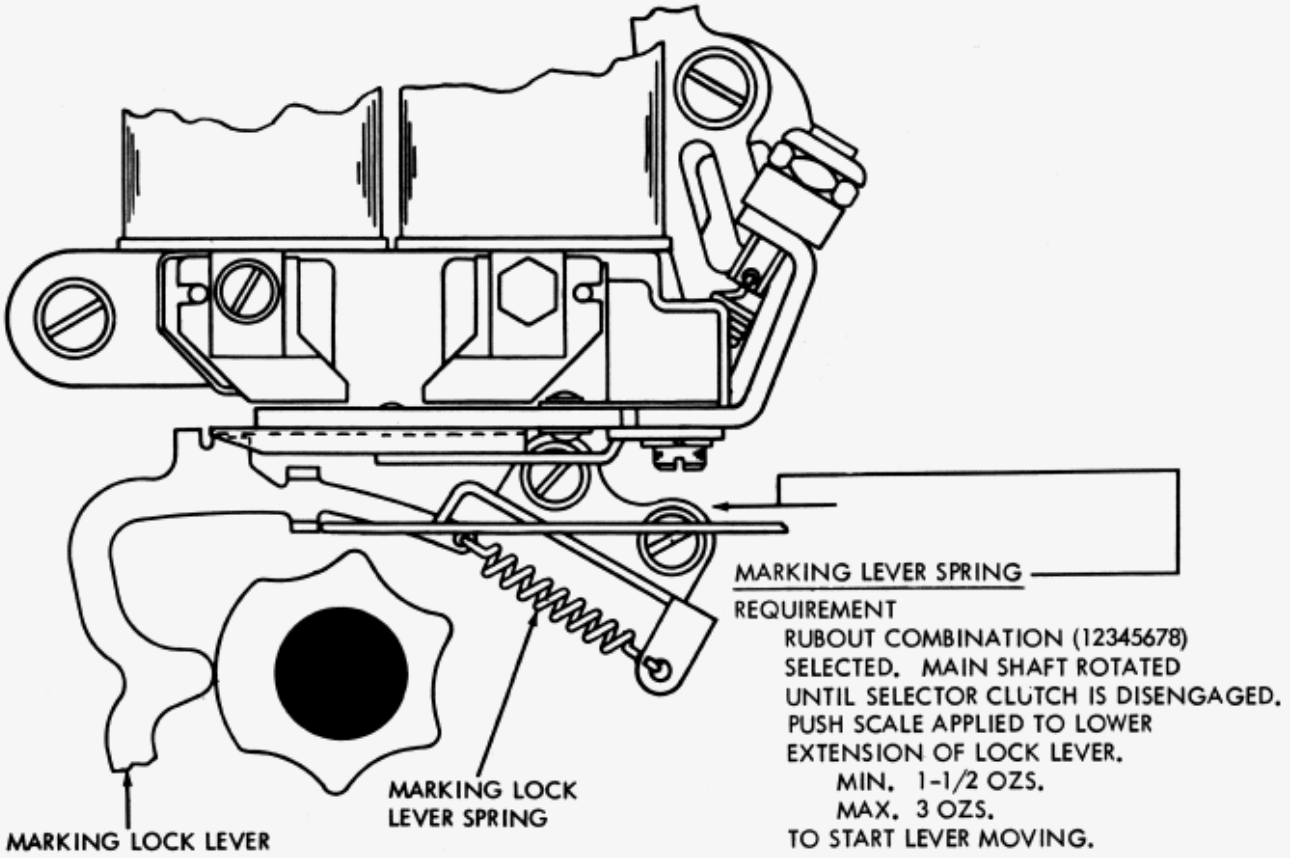
(2) REQUIREMENT
SPACING LOCK LEVER ON HIGH PART OF CAM. ARMATURE IN CONTACT WITH POLE PIECE. SOME CLEARANCE BETWEEN UPPER SURFACE OF ARMATURE EXTENSION AND LOWER SURFACE OF UPPER STEP OF SPACING LOCK LEVER WHEN LOCK LEVER IS HELD DOWWARD.
MAX. 0.003 INCH

TO ADJUST
POSITION UPPER END OF MAGNET BRACKET. TIGHTEN TWO MAGNET BRACKET MOUNTING SCREWS. RECHECK REQUIREMENT (1).

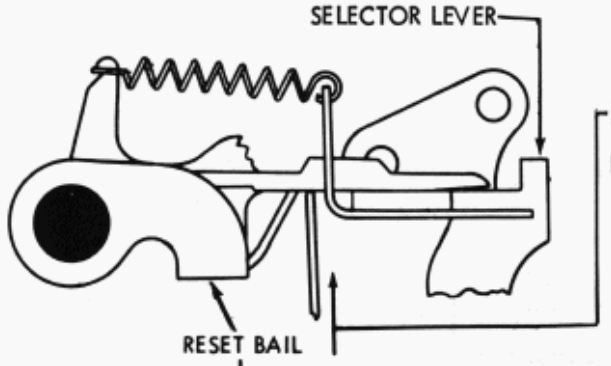
NOTE
SEE FOLLOWING PAGE FOR REQUIREMENT (3).

2.09 Selector Mechanism (Cont.)



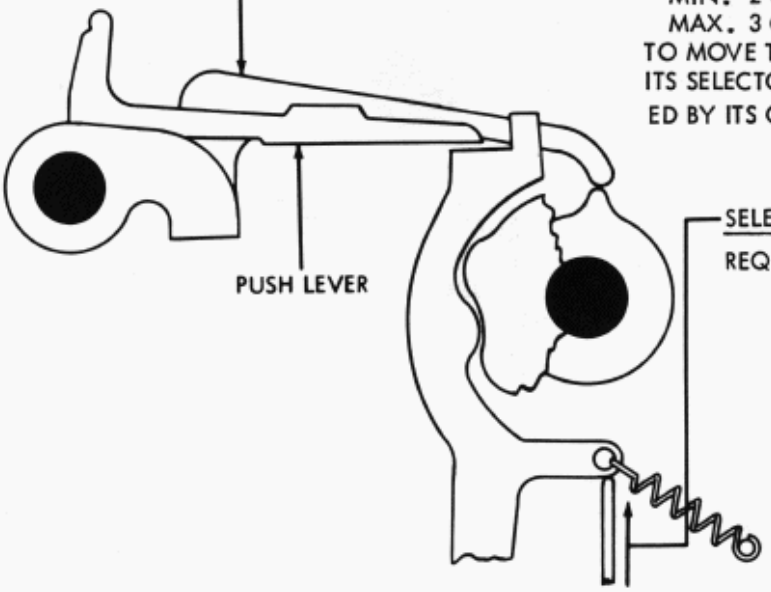


2.10 Selector Mechanism (Cont.)



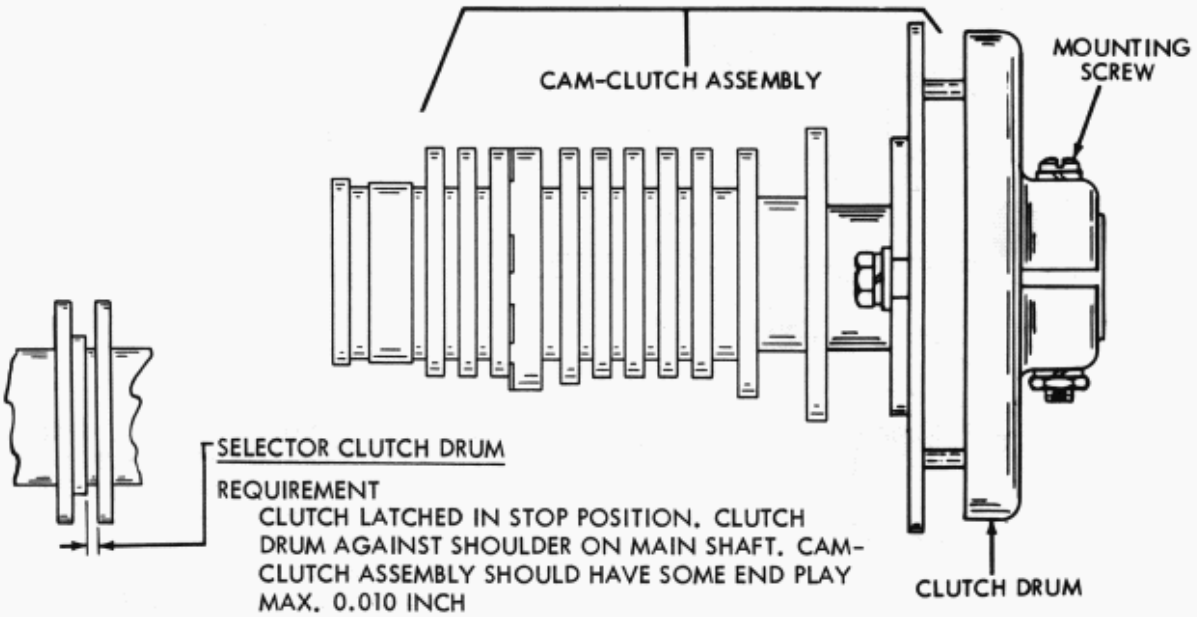
SELECTOR PUSH LEVER SPRING

REQUIREMENT
PUSH LEVER IN SPACING POSITION
MIN. 1 OZ.
MAX. 2 OZ.
TO MOVE PUSH LEVERS FROM SELECTOR LEVERS ON ALL PUSH LEVERS EXCEPT THAT ONE WHICH IS FIRST IN SEQUENCE OF SELECTION.
MIN. 2 OZS.
MAX. 3 OZS.
TO MOVE THIS PUSH LEVER AWAY FROM ITS SELECTOR LEVER. THIS SPRING IS DISTINGUISHED BY ITS COPPER COLOR.



SELECTOR LEVER SPRING

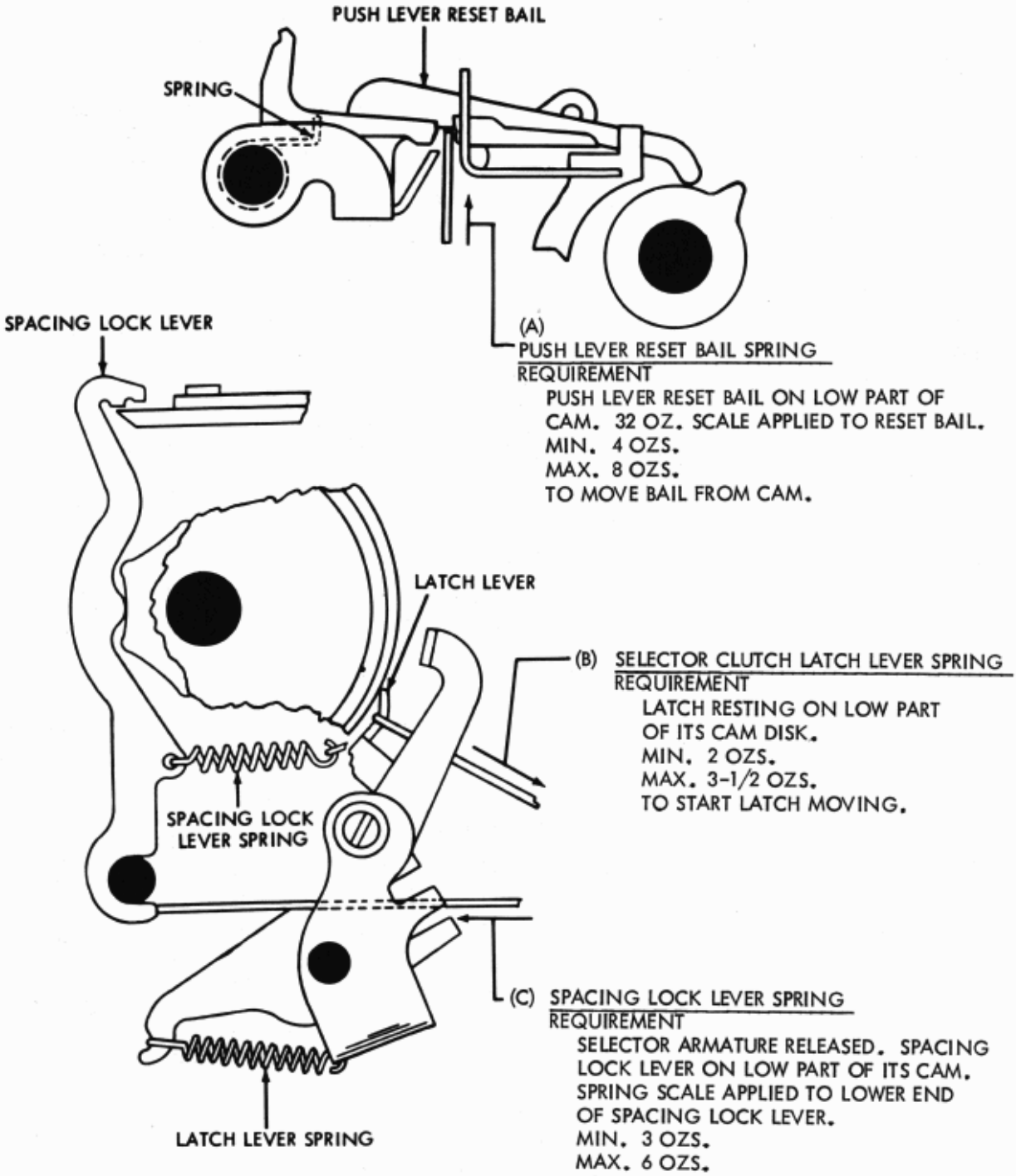
REQUIREMENT
TYPING UNIT UPSIDE DOWN.
RESET BAIL ON PEAK OF ITS CAM.
MIN. 1-1/4 OZS.
MAX. 1-1/2 OZS.
TO START EACH LEVER MOVING CHECK EIGHT SPRINGS. IF NECESSARY, UNHOOK START LEVER SPRING TO CHECK NO. 4 SELECTOR LEVER SPRING.



SELECTOR CLUTCH DRUM

REQUIREMENT
CLUTCH LATCHED IN STOP POSITION. CLUTCH DRUM AGAINST SHOULDER ON MAIN SHAFT. CAM-CLUTCH ASSEMBLY SHOULD HAVE SOME END PLAY MAX. 0.010 INCH
TO ADJUST
POSITION CLUTCH DRUM WITH MOUNTING SCREW LOOSENED.

2.11 Selector Mechanism (Cont.)



(A) PUSH LEVER RESET BAIL SPRING REQUIREMENT

PUSH LEVER RESET BAIL ON LOW PART OF CAM. 32 OZ. SCALE APPLIED TO RESET BAIL.
MIN. 4 OZS.
MAX. 8 OZS.
TO MOVE BAIL FROM CAM.

(B) SELECTOR CLUTCH LATCH LEVER SPRING REQUIREMENT

LATCH RESTING ON LOW PART OF ITS CAM DISK.
MIN. 2 OZS.
MAX. 3-1/2 OZS.
TO START LATCH MOVING.

(C) SPACING LOCK LEVER SPRING REQUIREMENT

SELECTOR ARMATURE RELEASED. SPACING LOCK LEVER ON LOW PART OF ITS CAM. SPRING SCALE APPLIED TO LOWER END OF SPACING LOCK LEVER.
MIN. 3 OZS.
MAX. 6 OZS.
TO MOVE SPACING LOCK LEVER FROM ITS PIVOT SHAFT.

2.12 Selector Mechanism (Cont.)

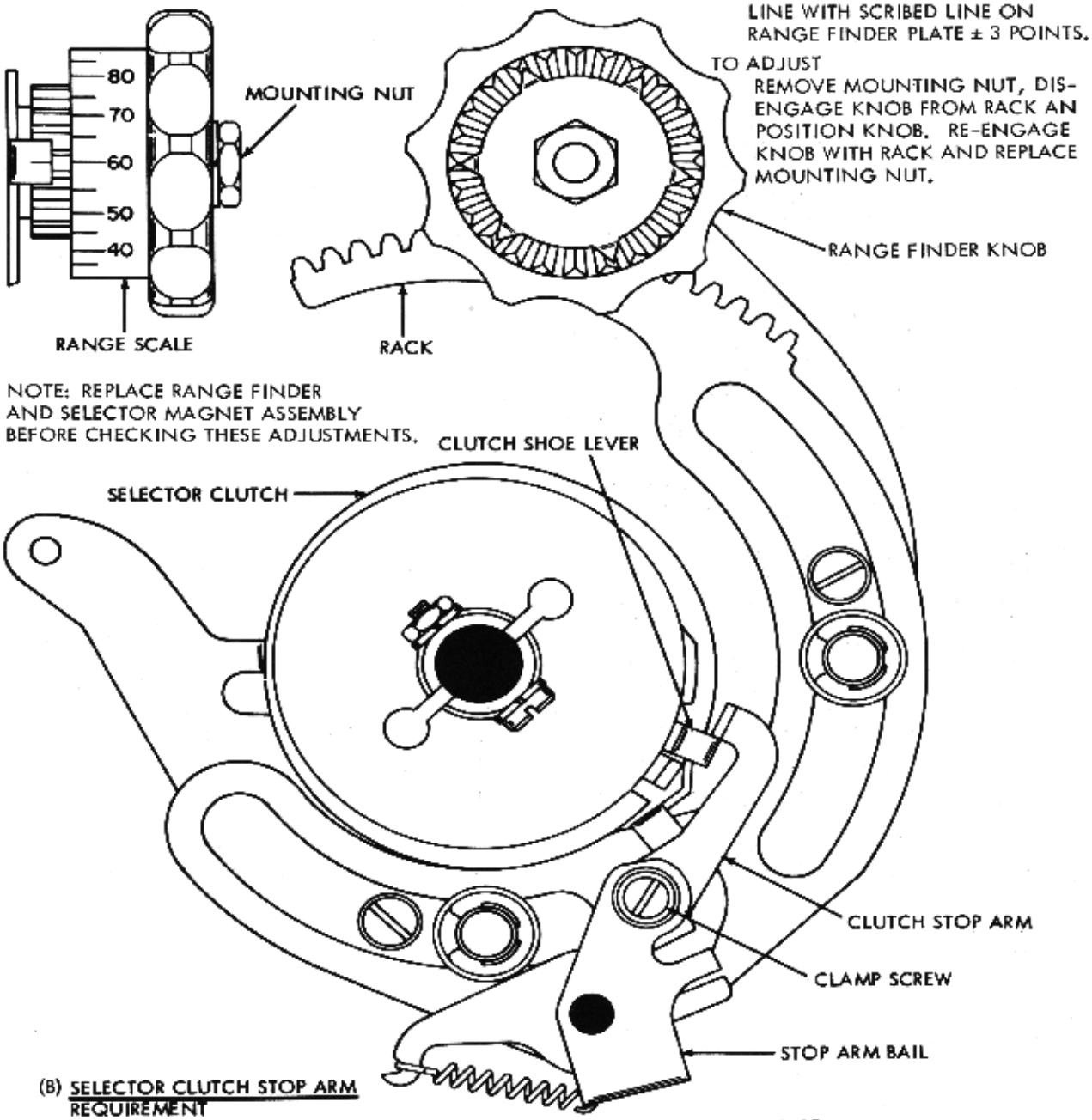
(A) RANGE FINDER KNOB PHASING

REQUIREMENT

WITH RANGE FINDER KNOB TURNED TO EITHER END OF RACK, ZERO MARK ON SCALE SHOULD BE IN LINE WITH SCRIBED LINE ON RANGE FINDER PLATE ± 3 POINTS.

TO ADJUST

REMOVE MOUNTING NUT, DISENGAGE KNOB FROM RACK AN POSITION KNOB. RE-ENGAGE KNOB WITH RACK AND REPLACE MOUNTING NUT.



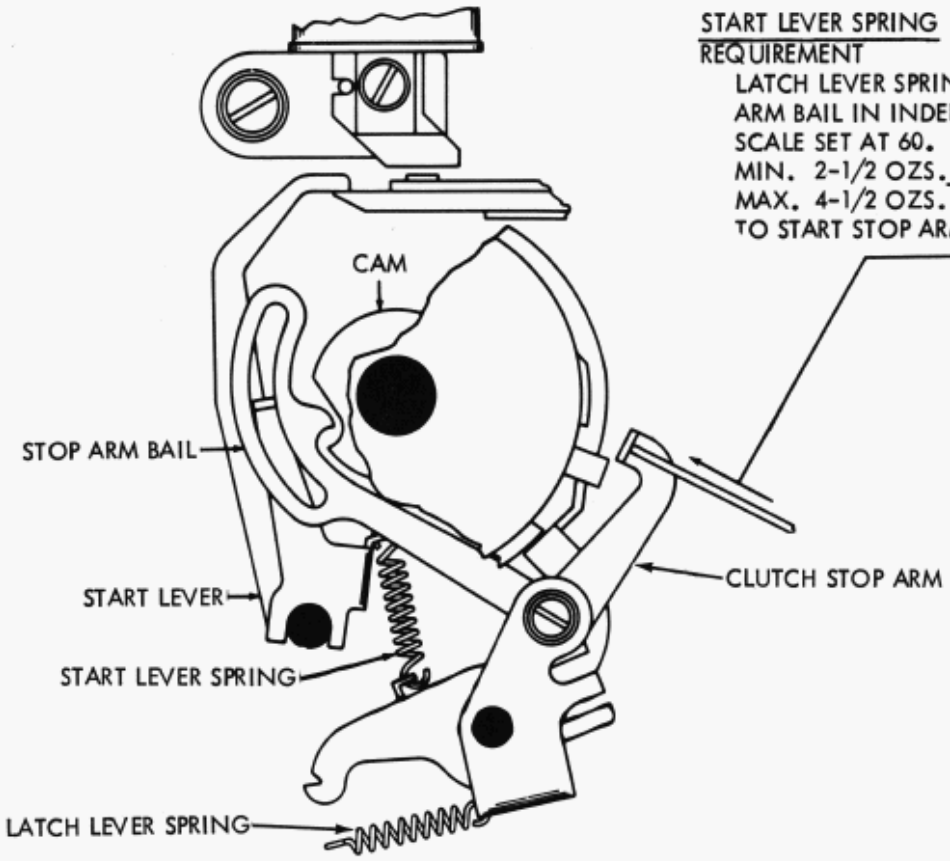
(B) SELECTOR CLUTCH STOP ARM

REQUIREMENT

RANGE SCALE SET AT 60. SELECTOR CLUTCH DISENGAGED. ARMATURE IN MARKING POSITION. CLUTCH STOP ARM SHOULD ENGAGE CLUTCH SHOE LEVER BY APPROXIMATELY FULL THICKNESS OF SHOE LEVER.

TO ADJUST

POSITION STOP ARM ON STOP ARM BAIL WITH CLAMP SCREW LOOSENED.



START LEVER SPRING
REQUIREMENT
LATCH LEVER SPRING UNHOOKED. STOP ARM BAIL IN INDENT OF ITS CAM. RANGE SCALE SET AT 60.
MIN. 2-1/2 OZS.
MAX. 4-1/2 OZS.
TO START STOP ARM MOVING.

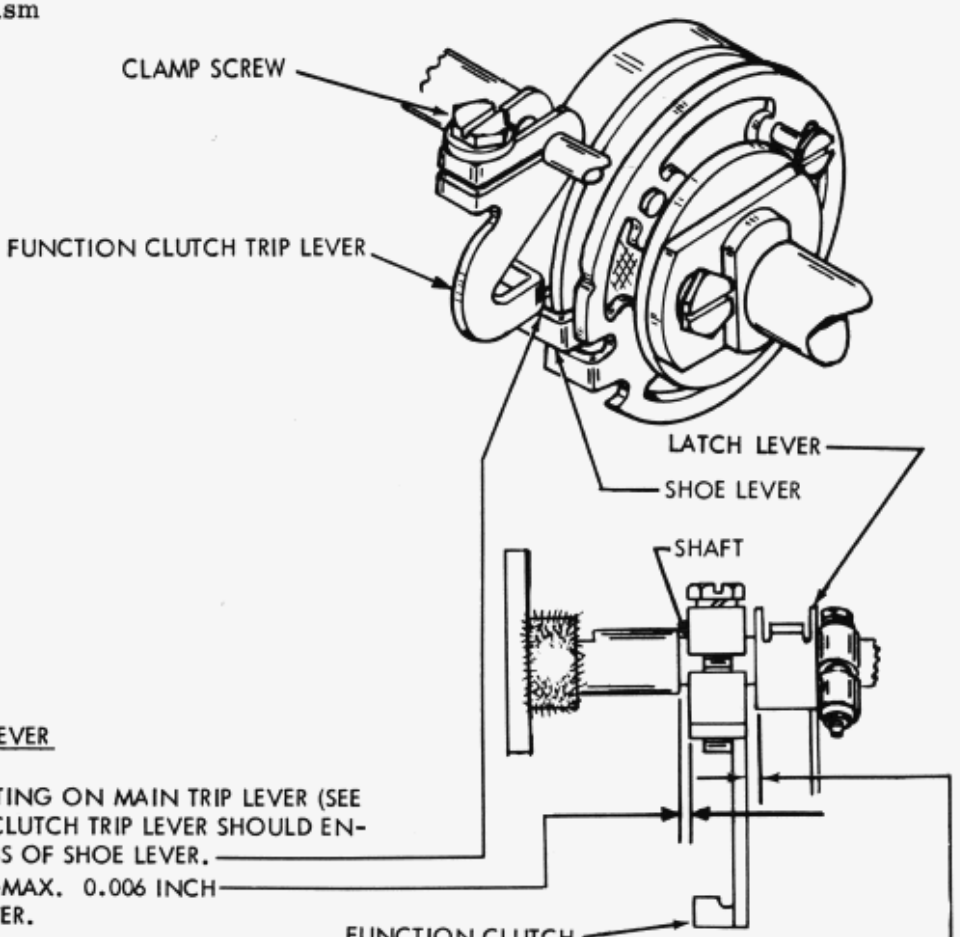
SELECTOR RECEIVING MARGIN
REQUIREMENT (FOR UNITS EMPLOYING ARMATURE WITH ONE ANTI-FREEZE BUTTON)
WHEN A SIGNAL DISTORTION TEST SET IS USED FOR DETERMINING THE RECEIVING MARGINS OF THE SELECTOR, AND WHERE THE CONDITION OF THE COMPONENTS IS EQUIVALENT TO THAT OF NEW EQUIPMENT, THE RANGE AND DISTORTION TOLERANCES BELOW SHOULD BE MET.
REQUIREMENT (FOR UNITS EMPLOYING ARMATURE WITH TWO ANTI-FREEZE BUTTONS)
WHEN A DISTORTION TEST SET IS AVAILABLE, THE SELECTOR ARMATURE SPRING TENSION SHOULD BE REFINED, IF NECESSARY, TO OBTAIN SATISFACTORY RECEIVING MARGINS. THE FRONT ANTI-FREEZE BUTTON MUST CONTACT THE MAGNET CORE WHEN THE MAGNET COILS ARE ENERGIZED.

TO ADJUST: REFINE THE SELECTOR ARMATURE SPRING (PARAGRAPH 2.06 OR 2.07)

SELECTOR RECEIVING MARGIN MINIMUM REQUIREMENTS

CURRENT	SPEED IN W.P.M.	POINTS RANGE WITH ZERO DISTORTION	PERCENTAGE OF MARKING AND SPACING BIAS	END DISTORTION TOLERATED WITH SCALE AT BIAS OPTIMUM SETTING
0.060 AMP (WINDINGS PARALLEL)	100	65	35	30
0.500 AMP (WINDINGS PARALLEL)	100	72	38	35

2.14 Function Mechanism



(A)

FUNCTION CLUTCH TRIP LEVER

REQUIREMENT

(1) WITH RELEASE RESTING ON MAIN TRIP LEVER (SEE BELOW), FUNCTION CLUTCH TRIP LEVER SHOULD ENGAGE FULL THICKNESS OF SHOE LEVER.

(2) MIN. SOME----MAX. 0.006 INCH END PLAY IN TRIP LEVER.

TO ADJUST

POSITION TRIP LEVER ON ITS SHAFT WITH CLAMP SCREW LOOSENED.

(B)

RESET ARM

TO CHECK

TRIP FUNCTION CLUTCH AND POSITION MAIN SHAFT SO THAT RESET ARM IS HELD IN ITS HIGHEST POSITION BY CAM PIN.

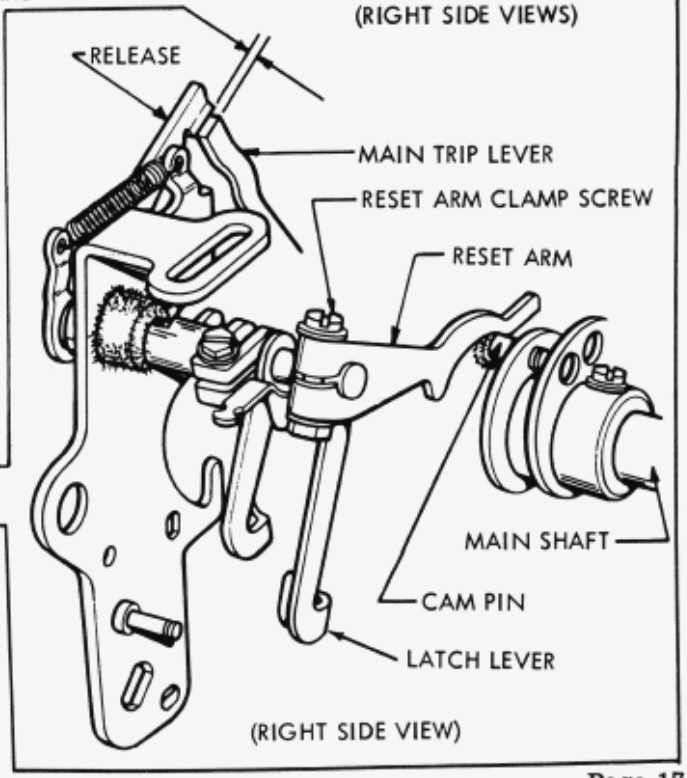
REQUIREMENT

(1) CLEARANCE BETWEEN RELEASE AND MAIN TRIP LEVER:
MIN. 0.010 INCH----MAX. 0.030 INCH

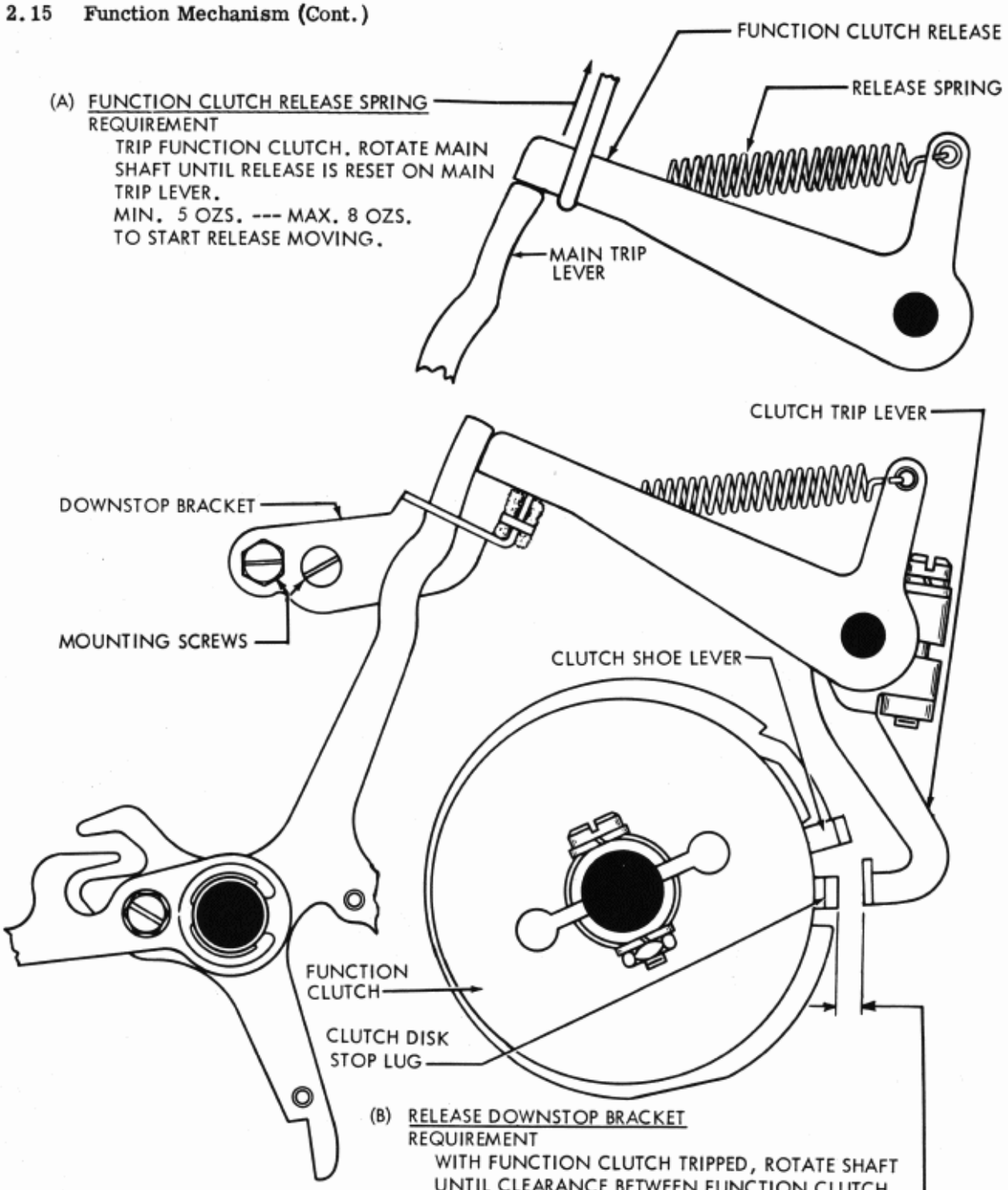
(2) LATCH LEVER END PLAY:
MIN. SOME----MAX. 0.010 INCH

TO ADJUST

POSITION RESET ARM WITH CLAMP SCREW LOOSENED.



2.15 Function Mechanism (Cont.)



(A) FUNCTION CLUTCH RELEASE SPRING

REQUIREMENT

TRIP FUNCTION CLUTCH. ROTATE MAIN SHAFT UNTIL RELEASE IS RESET ON MAIN TRIP LEVER.
MIN. 5 OZS. --- MAX. 8 OZS.
TO START RELEASE MOVING.

(B) RELEASE DOWNSTOP BRACKET

REQUIREMENT

WITH FUNCTION CLUTCH TRIPPED, ROTATE SHAFT UNTIL CLEARANCE BETWEEN FUNCTION CLUTCH DISK STOP LUG AND CLUTCH STOP LEVER IS AT A MINIMUM. RELEASE RESTING AGAINST DOWN-STOP BRACKET. CLEARANCE BETWEEN FUNCTION CLUTCH DISK STOP LUG AND STOP LEVER:
MIN. 0.002 INCH --- MAX. 0.045 INCH

TO ADJUST

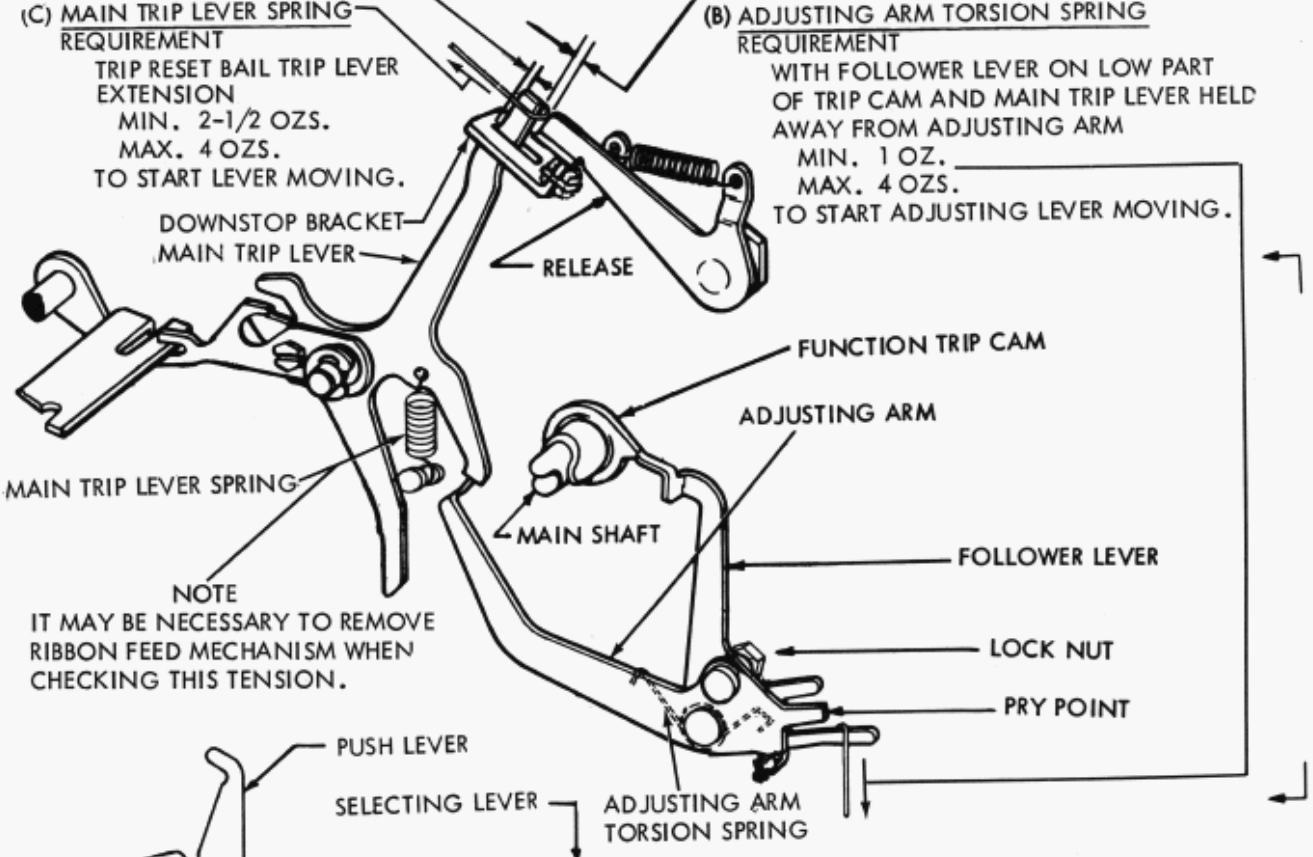
REMOVE TAPE GUIDE. WITH DOWNSTOP BRACKET MOUNTING SCREWS FRICTION TIGHT POSITION BRACKET.

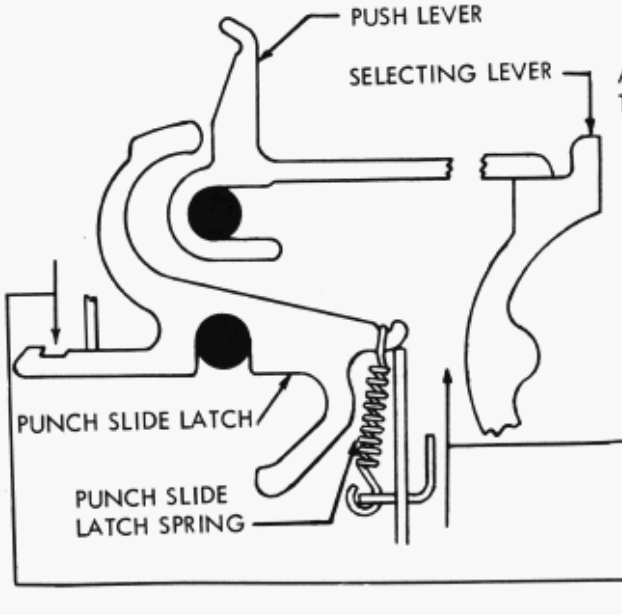
2.16 Function Clutch Trip Mechanism

(A) FOLLOWER LEVER
REQUIREMENT
(1) WITH FOLLOWER LEVER ON HIGH PART OF CAM, CLEARANCE BETWEEN RELEASE AND MAIN TRIP LEVER:
MIN. 0.010 INCH --- MAX. 0.030 INCH
(2) SOME CLEARANCE BETWEEN MAIN TRIP LEVER AND DOWNSTOP BRACKET.
TO ADJUST
BY MEANS OF PRY POINT, POSITION ADJUSTING ARM ON FOLLOWER LEVER WITH LOCK NUT LOOSENED.

(C) MAIN TRIP LEVER SPRING
REQUIREMENT
TRIP RESET BAIL TRIP LEVER EXTENSION
MIN. 2-1/2 OZS.
MAX. 4 OZS.
TO START LEVER MOVING.

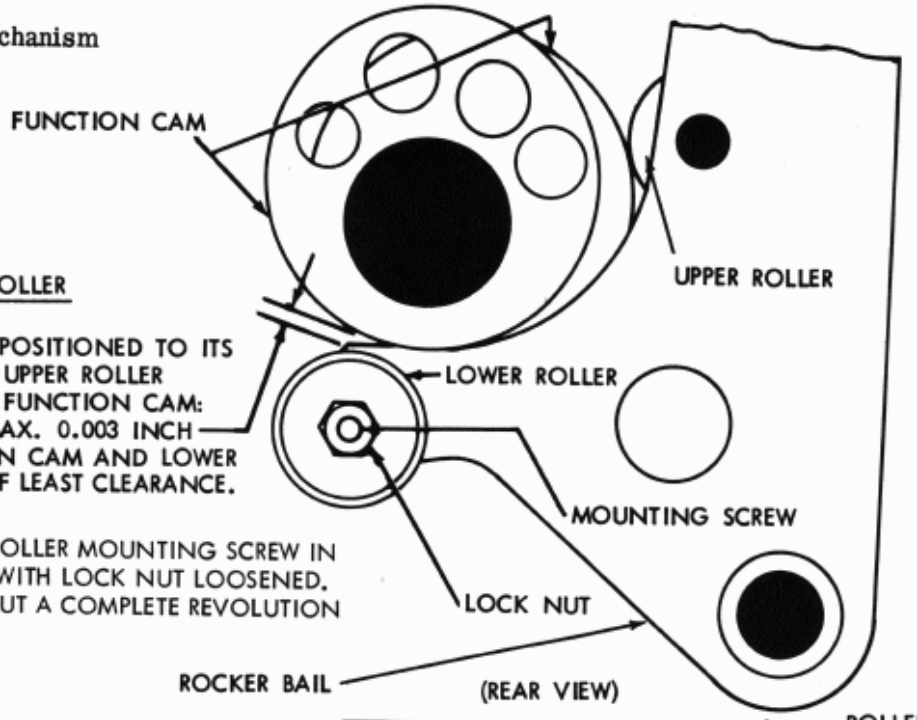
(B) ADJUSTING ARM TORSION SPRING
REQUIREMENT
WITH FOLLOWER LEVER ON LOW PART OF TRIP CAM AND MAIN TRIP LEVER HELD AWAY FROM ADJUSTING ARM
MIN. 1 OZ.
MAX. 4 OZS.
TO START ADJUSTING LEVER MOVING.





(D) PUNCH AND FEED SLIDE LATCH SPRINGS
TO CHECK
SELECT RUBOUT CODE COMBINATION (12345678). POSITION ROCKER BAIL TO EXTREME LEFT. STRIP PUSH LEVERS FROM SELECTING LEVERS.
REQUIREMENT
MIN. 1 OZ.
MAX. 3 OZS.
TO START LATCH MOVING.
TO CHECK (TWO SHAFT UNITS)
RANGE SCALE AT 60. SELECT RUBOUT COMBINATION. CLUTCHES DISENGAGED AND LATCHED.
REQUIREMENT
MIN. 3/4 OZ. ----MAX. 1-3/4 OZS.
TO START LATCH MOVING.

2.17 Rocker Bail Mechanism



(A)

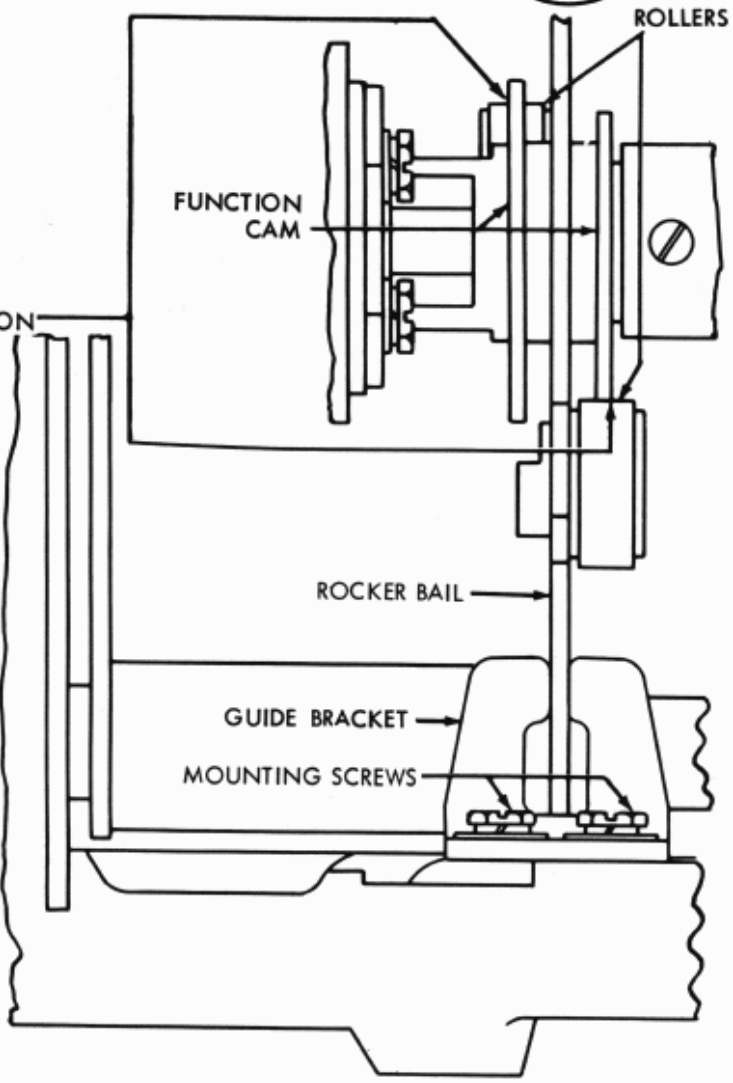
ROCKER BAIL LOWER ROLLER

REQUIREMENT

WITH ROCKER BAIL POSITIONED TO ITS EXTREME LEFT AND UPPER ROLLER IN CONTACT WITH FUNCTION CAM: MIN. SOME----MAX. 0.003 INCH CLEARANCE BETWEEN CAM AND LOWER ROLLER AT POINT OF LEAST CLEARANCE.

TO ADJUST

POSITION LOWER ROLLER MOUNTING SCREW IN ELONGATED SLOT WITH LOCK NUT LOOSENED. CHECK THROUGHOUT A COMPLETE REVOLUTION FOR BINDS.



(B)

ROCKER BAIL GUIDE BRACKET

REQUIREMENT

ROCKER BAIL ROLLERS SHOULD ENGAGE FULL THICKNESS OF FUNCTION CAM.

TO ADJUST

POSITION ROCKER BAIL AND GUIDE BRACKET WITH GUIDE BRACKET MOUNTING SCREWS LOOSENED.

(RIGHT SIDE VIEW)

2.18 Punch Mechanism

PERFORATOR POSITION (PRELIMINARY)

REQUIREMENT

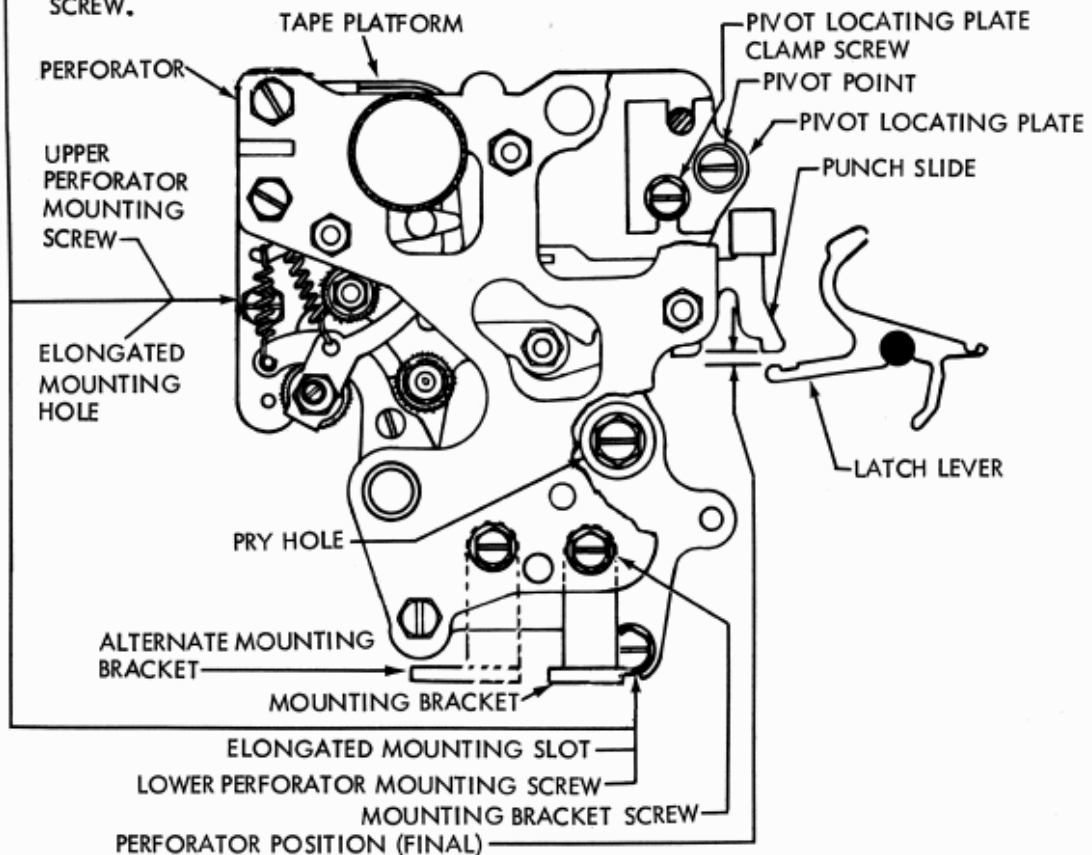
THE PERFORATOR MECHANISM MOUNTING SCREW BENEATH PUNCH BLOCK AND MOUNTING SCREW AT LOWER EDGE OF PERFORATOR MECHANISM BACKPLATE SHALL BE LOCATED CENTRALLY WITHIN THEIR RESPECTIVE MOUNTING HOLES.

NOTE

THE MOUNTING HOLES ARE OVERSIZE TO FACILITATE USE OF PERFORATOR MECHANISM ON THE TYPING RF PERFORATOR.

TO ADJUST

REMOVE MOUNTING SCREW AT THE LOWER EDGE OF PERFORATOR MECHANISM BACKPLATE, WITH THE TWO REMAINING BACKPLATE MOUNTING SCREWS AND MOUNTING BRACKET SCREW FRICTION TIGHT, POSITION PERFORATOR MECHANISM SO THAT THE TAPPED HOLE OF THE FRAME IS CENTRALLY LOCATED (AS GAUGED BY EYE) WITHIN LARGE BODY HOLE OF PUNCH MECHANISM BACKPLATE. TIGHTEN THE TWO BACKPLATE MOUNTING SCREWS AND RECHECK TO SEE THAT REQUIREMENT IS MET. REPLACE AND TIGHTEN THE LOWER BACKPLATE MOUNTING SCREW. TIGHTEN THE BRACKET MOUNTING SCREW.



PERFORATOR POSITION (FINAL)

REQUIREMENT

WITH RUBOUT CODE COMBINATION SELECTED AND THE PUSH LEVERS IN THEIR EXTREME LEFT HAND POSITION.

MIN. 0.015 INCH --- MAX. 0.045 INCH

CLEARANCE BETWEEN THE CLOSEST LATCH LEVER AND ASSOCIATED PUNCH SLIDE.

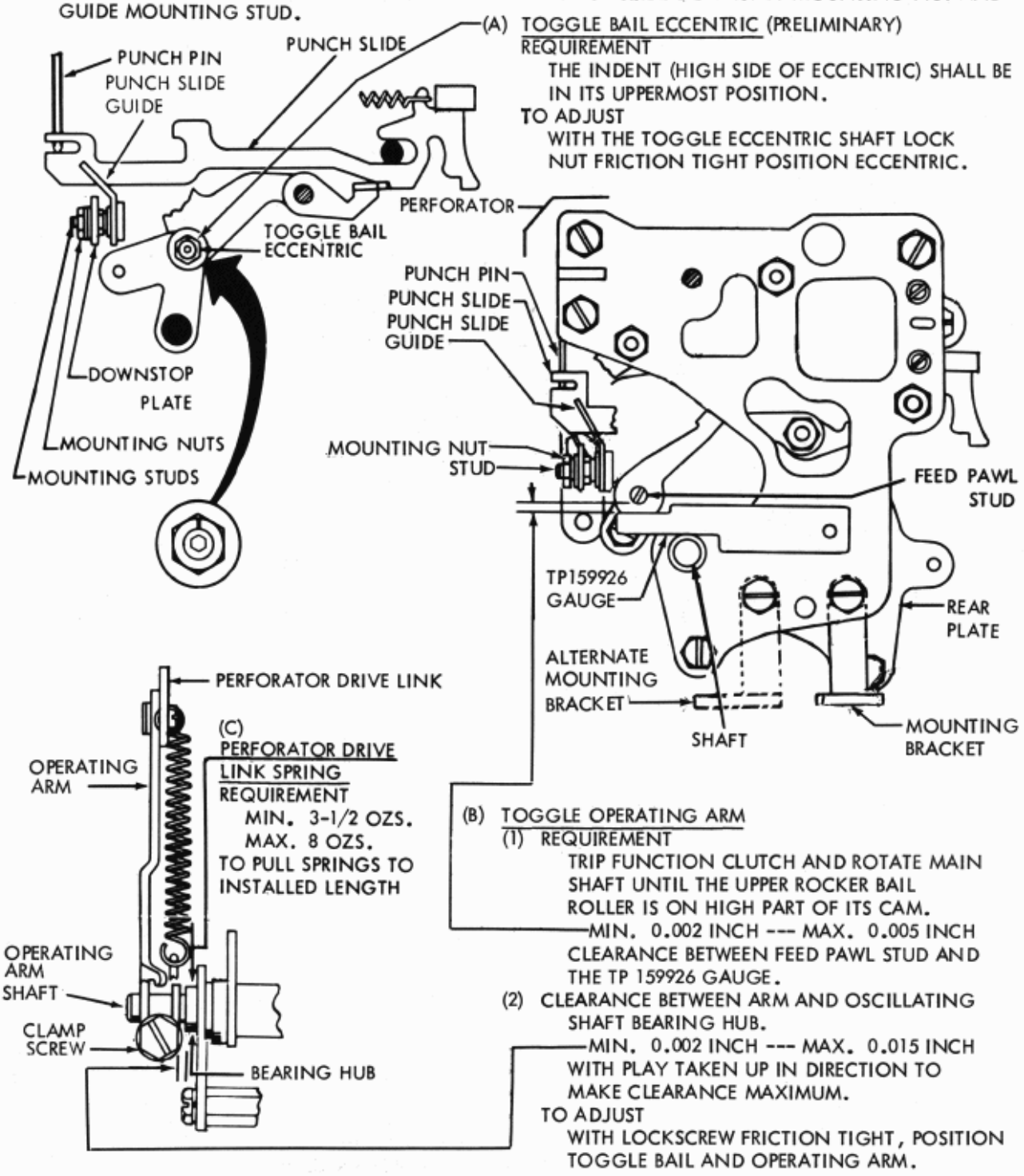
TO ADJUST

WITH THE REAR FRAME MOUNTING SCREWS AND FRONT FRAME MOUNTING BRACKET SCREWS FRICTION TIGHT. PLACE TIP OF SCREWDRIVER BETWEEN HEXAGON HEAD SCREW AND ITS CLEARANCE HOLE RIM AND PRY UP OR DOWN TO MEET REQUIREMENTS.

2.19 Punch Mechanism (Cont.)

NOTE

BEFORE PROCEEDING WITH THE PUNCH MECHANISM ADJUSTMENTS, CHECK THE ROCKER BAIL CAM FOLLOWER ROLLER ADJUSTMENT AND LOOSEN THE PUNCH SLIDE DOWNSTOP MOUNTING NUT AND GUIDE MOUNTING STUD.



(A) TOGGLE BAIL ECCENTRIC (PRELIMINARY)

REQUIREMENT

THE INDENT (HIGH SIDE OF ECCENTRIC) SHALL BE IN ITS UPPERMOST POSITION.

TO ADJUST

WITH THE TOGGLE ECCENTRIC SHAFT LOCK NUT FRICTION TIGHT POSITION ECCENTRIC.

(B) TOGGLE OPERATING ARM

(1) REQUIREMENT

TRIP FUNCTION CLUTCH AND ROTATE MAIN SHAFT UNTIL THE UPPER ROCKER BAIL ROLLER IS ON HIGH PART OF ITS CAM.

MIN. 0.002 INCH --- MAX. 0.005 INCH CLEARANCE BETWEEN FEED PAWL STUD AND THE TP 159926 GAUGE.

(2) CLEARANCE BETWEEN ARM AND OSCILLATING SHAFT BEARING HUB.

MIN. 0.002 INCH --- MAX. 0.015 INCH WITH PLAY TAKEN UP IN DIRECTION TO MAKE CLEARANCE MAXIMUM.

TO ADJUST

WITH LOCKSCREW FRICTION TIGHT, POSITION TOGGLE BAIL AND OPERATING ARM.

(C) PERFORATOR DRIVE LINK SPRING

REQUIREMENT

MIN. 3-1/2 OZS.
MAX. 8 OZS.
TO PULL SPRINGS TO INSTALLED LENGTH

2.20 Punch Mechanism (Cont.)

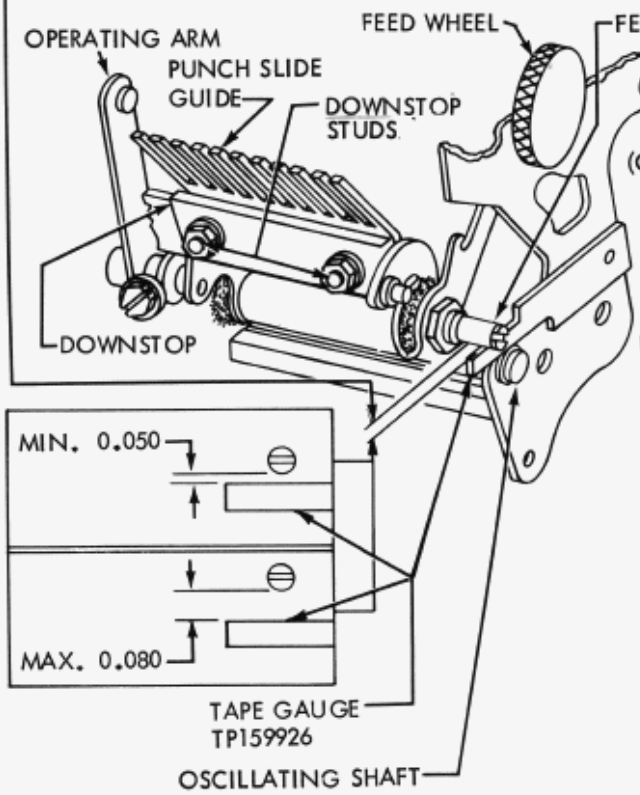
(A) PUNCH PIN PENETRATION

REQUIREMENT

(1) WITH THE RUBOUT COMBINATION SELECTED, FUNCTION CLUTCH ENGAGED. ROTATE MAIN SHAFT UNTIL ALL PUNCH PINS ARE INTO OR ABOVE THE TAPE APERTURE IN PUNCH BLOCK. WITH THE TP159926 GAUGE IN POSITION
MIN. 0.050 INCH
CLEARANCE BETWEEN FEED PAWL STUD AND THE GAUGE.

(2) WITH RUBOUT COMBINATION SELECTED, FUNCTION CLUTCH ENGAGED. ROTATE MAIN SHAFT UNTIL ALL PUNCH PINS HAVE CLEARED THE PUNCH BLOCK. WITH THE TP159926 GAUGE IN POSITION
MAX. 0.080 INCH
CLEARANCE BETWEEN FEED PAWL STUD AND GAUGE.

TO ADJUST
REFINE THE TOGGLE BAIL ECCENTRIC ADJUSTMENT KEEPING THE INDENT TO THE RIGHT OF A VERTICAL CENTERLINE THROUGH THE SHAFT.



(B) PUNCH SLIDE GUIDE

REQUIREMENT
THE PUNCH SLIDES SHOULD ALIGN WITH THEIR CORRESPONDING PUNCH PINS AND BE FREE OF BINDS AFTER TIGHTENING THE GUIDE MOUNTING STUDS. EACH PUNCH SLIDE SHOULD RETURN FREELY AFTER BEING PUSHED IN NOT MORE THAN 1/16 INCH.

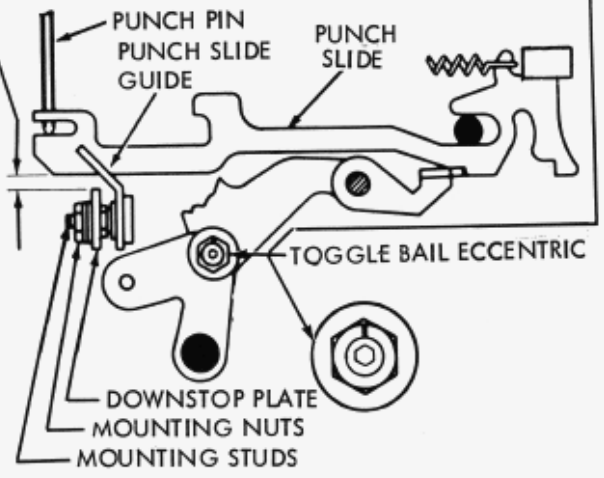
TO ADJUST
POSITION THE GUIDE WITH ITS MOUNTING STUDS FRICTION TIGHT.

(C) PUNCH SLIDE DOWNSTOP POSITION

REQUIREMENT
WITH FUNCTION CLUTCH DISENGAGED AND LATCHED. PLAY TAKEN UP TOWARD THE TOP, CLEARANCE BETWEEN BOTH THE FRONT AND REAR PUNCH SLIDES AND THE DOWNSTOP PLATE
MIN. SOME --- MAX. 0.008 INCH
ALL OTHER PUNCH SLIDES SHALL HAVE SOME CLEARANCE.

NOTE
TO CHECK FOR SOME CLEARANCE, PLACE UNIT IN STOP POSITION, TRIP FUNCTION TRIP MECHANISM AND LATCHES, THE PUNCH SLIDES SHALL MOVE FULLY TO THEIR OPERATED POSITION.

TO ADJUST
WITH UNIT IN STOP POSITION, LOOSEN THE TWO DOWNSTOP PLATE MOUNTING LOCK NUTS AND LOCATE THE DOWNSTOP PLATE TO MEET THE REQUIREMENT.



2.21 Punch Mechanism (Cont.)

RESET BAIL TRIP LEVER

REQUIREMENT

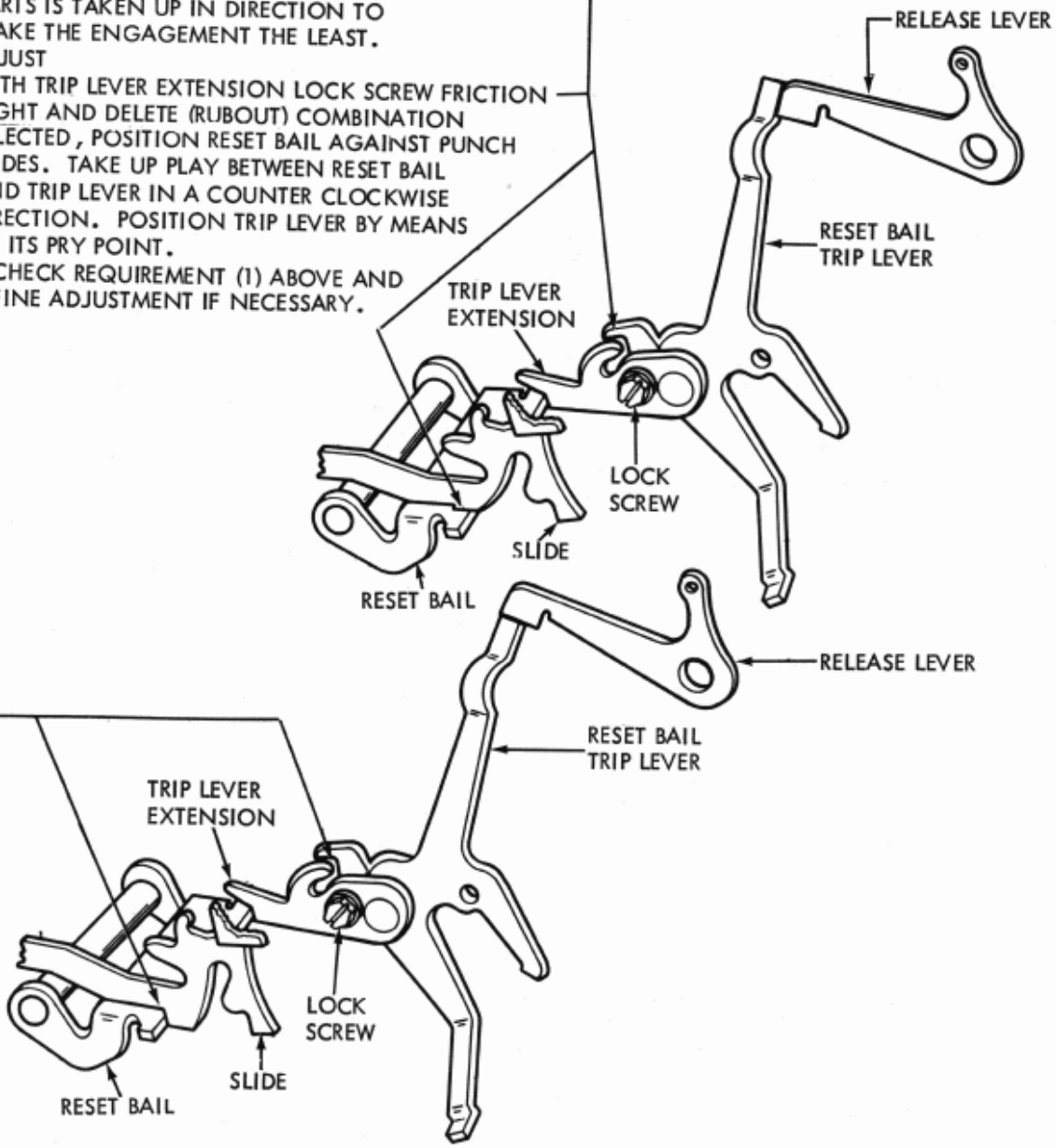
(1) MANUALLY SELECT AN ALL SPACING COMBINATION. MANUALLY ROTATE RESET BAIL TRIP LEVER. THE PUNCH SLIDE RESET BAIL SHALL TRIP BEFORE THE FUNCTION CLUTCH IS TRIPPED.

(2) WITH FUNCTION AND SELECTOR CLUTCHES DISENGAGED AND LATCHED, THE PUNCH SLIDE RESET BAIL SHALL FULLY ENGAGE THE PUNCH SLIDE LATCHING SURFACE WHEN PLAY IN PARTS IS TAKEN UP IN DIRECTION TO MAKE THE ENGAGEMENT THE LEAST.

TO ADJUST

(1) WITH TRIP LEVER EXTENSION LOCK SCREW FRICTION TIGHT AND DELETE (RUBOUT) COMBINATION SELECTED, POSITION RESET BAIL AGAINST PUNCH SLIDES. TAKE UP PLAY BETWEEN RESET BAIL AND TRIP LEVER IN A COUNTER CLOCKWISE DIRECTION. POSITION TRIP LEVER BY MEANS OF ITS PRY POINT.

(2) RECHECK REQUIREMENT (1) ABOVE AND REFINE ADJUSTMENT IF NECESSARY.



2.22 Punch Mechanism (Cont.)

(A) LATCH LEVER CLEARANCE

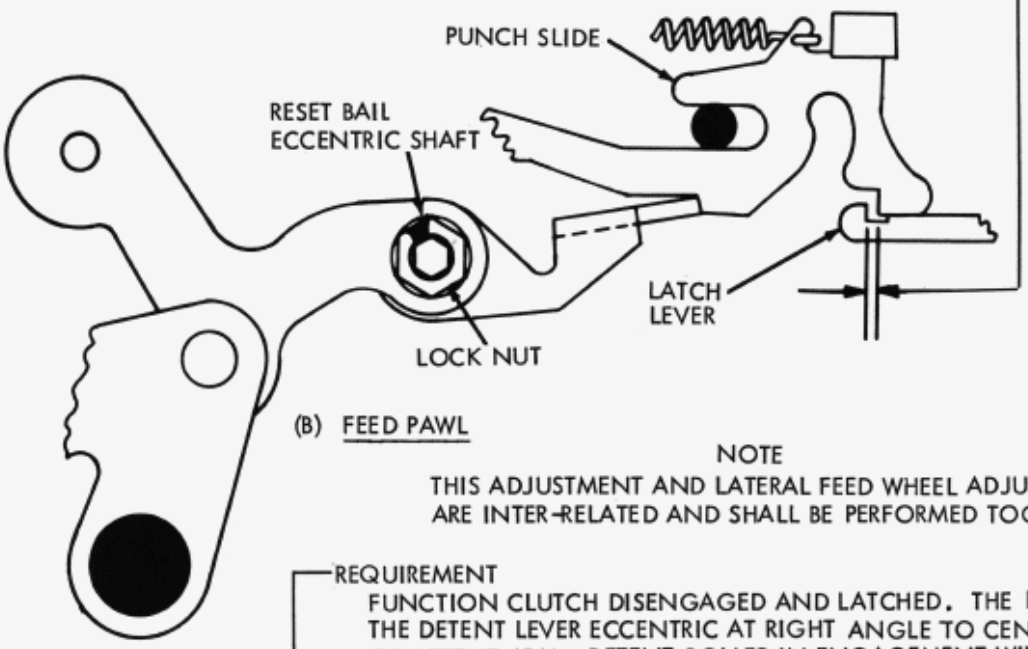
MANUALLY SELECT AN ALL SPACING COMBINATION. WITH FUNCTION CLUTCH DISENGAGED AND LATCHED. CLEARANCE BETWEEN PUNCH SLIDE AND ITS ASSOCIATED LATCH LEVER.

MIN. 0.015 INCH --- MAX. 0.025 INCH

FOR THE SLIDE HAVING THE LEAST CLEARANCE.

TO ADJUST

ROTATE THE RESET BAIL ECCENTRIC SHAFT WITH ITS LOCK NUT LOOSENED. KEEP THE INDENTATION IN THE ECCENTRIC ABOVE CENTER OF SHAFT.



(B) FEED PAWL

NOTE

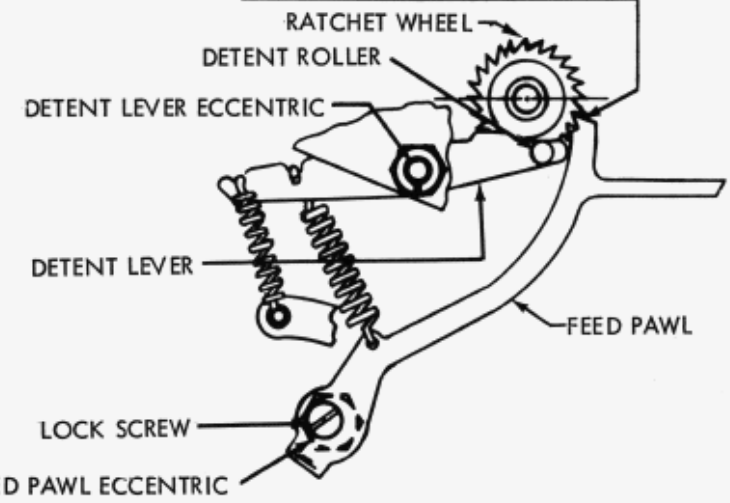
THIS ADJUSTMENT AND LATERAL FEED WHEEL ADJUSTMENT ARE INTER-RELATED AND SHALL BE PERFORMED TOGETHER.

REQUIREMENT

FUNCTION CLUTCH DISENGAGED AND LATCHED. THE INDENT OF THE DETENT LEVER ECCENTRIC AT RIGHT ANGLE TO CENTER LINE OF DETENT ARM. DETENT ROLLER IN ENGAGEMENT WITH FEED WHEEL RATCHET, AND HIGH SIDE OF FEED PAWL ECCENTRIC TO RIGHT OF ITS LOCKING SCREW. THE FEED PAWL SHALL ENGAGE THE FIRST TOOTH BELOW HORIZONTAL CENTER LINE OF RATCHET WHEEL WITH NO PERCEPTIBLE CLEARANCE.

TO ADJUST

ROTATE THE FEED PAWL ECCENTRIC WITH LOCK SCREW LOOSENED.



2.23 Punch Mechanism (Cont.)

(FOR LATEST DESIGN SEE PARAGRAPH 2-25)

LATERAL AND FRONT TO REAR FEED WHEEL POSITION (EARLY DESIGN)

REQUIREMENT

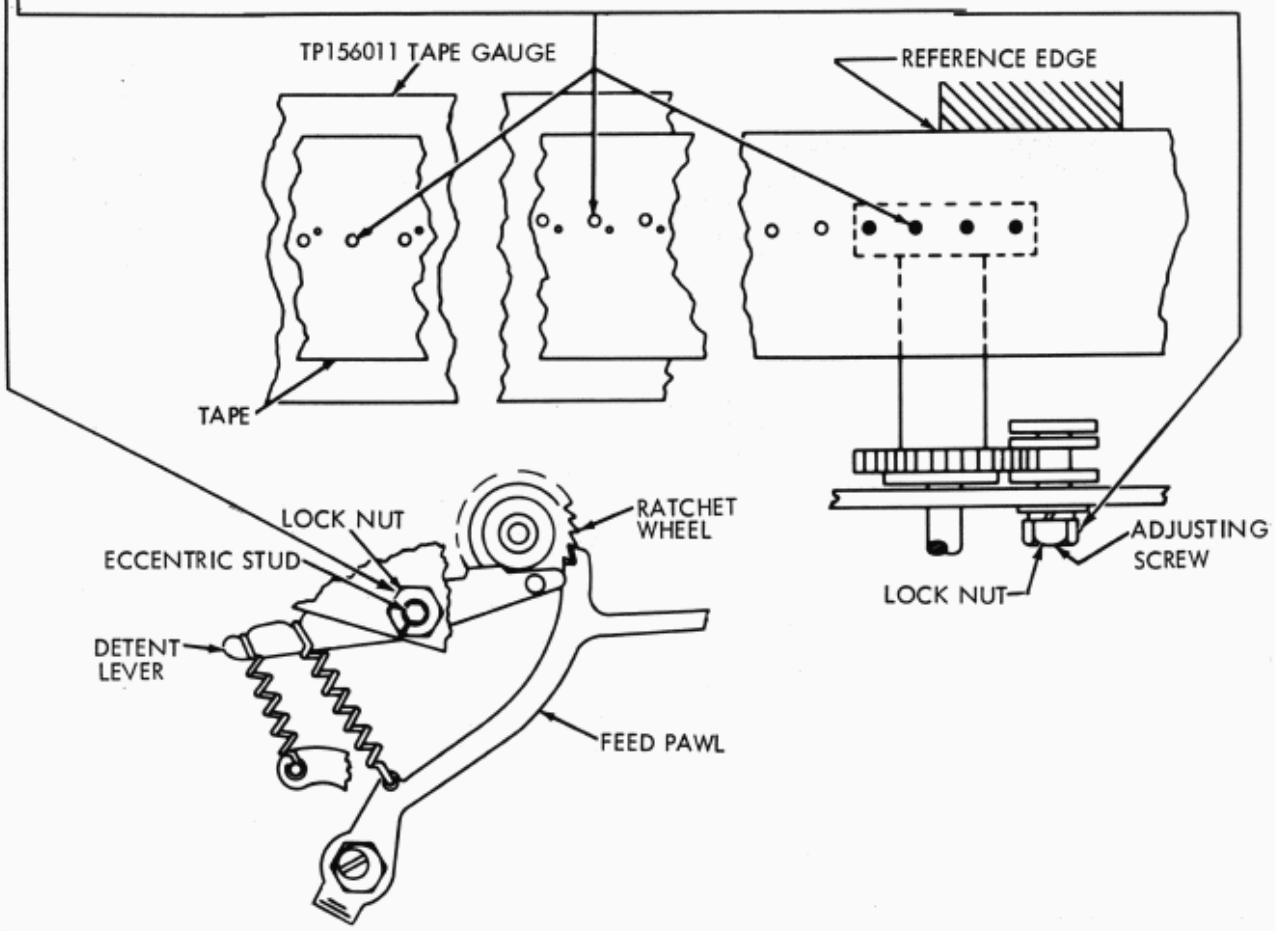
WITH THE REPERFORATOR OPERATING UNDER POWER, OBTAIN A TAPE SAMPLE CONSISTING OF A SERIES OF "SPACE" PERFORATIONS, BY A VISUAL INSPECTION OF THE PERFORATED FEED HOLES, LATERALLY AND FRONT TO REAR, THE INDENTATIONS OF THE FEED WHEEL SHALL BE FULLY PUNCHED OUT.

TO ADJUST

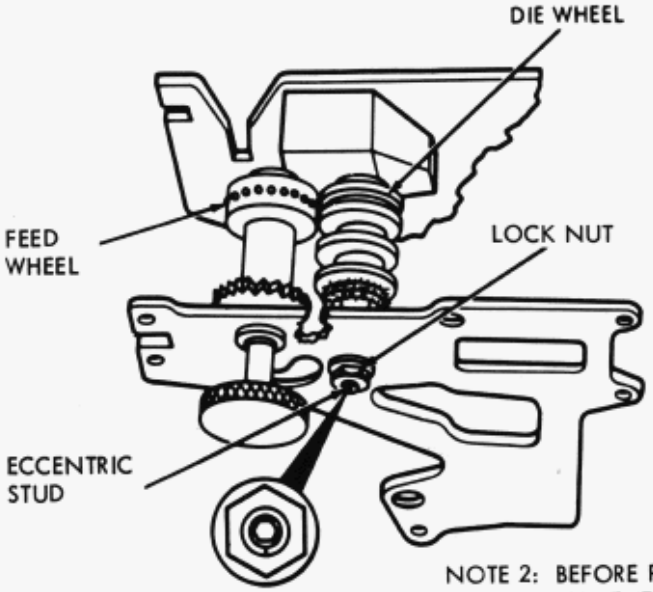
(1) TO MEET THE LATERAL REQUIREMENT. LOOSEN THE DETENT ECCENTRIC STUD LOCK NUT AND ROTATE THE DETENT ECCENTRIC CLOCKWISE TO MOVE THE FEED WHEEL PERFORATIONS TOWARDS THE LEAD EDGE OF THE FEED HOLE AND ROTATE THE DETENT ECCENTRIC COUNTER CLOCKWISE TO MOVE THE FEED WHEEL PERFORATION TOWARDS THE TRAILING EDGE OF THE FEED HOLE. REFINE THE FEED PAWL ADJUSTMENT.

(2) TO ADJUST

TO MEET THE FRONT TO REAR REQUIREMENT WITH RESPECT TO THE REFERENCE EDGE OF THE TAPE LOOSEN THE ADJUSTING SCREW LOCK NUT AND POSITION THE ADJUSTING SCREW. TO MOVE THE INDENTATIONS IN THE TAPE AWAY FROM THE REFERENCE EDGE OF THE TAPE, MOVE THE FEED WHEEL TOWARDS THE FRONT PLATE OF THE PUNCH MECHANISM BY ROTATING THE ADJUSTING SCREW COUNTER CLOCKWISE. TO MOVE THE INDENTATIONS IN THE TAPE TOWARDS THE REFERENCE EDGE OF THE TAPE, MOVE THE FEED WHEEL TOWARDS THE BACKPLATE OF THE PUNCH MECHANISM BY ROTATING THE ADJUSTING SCREW CLOCKWISE. REFINE THE DETENT ADJUSTMENT TO ALIGN THE LATERAL INDENTATIONS OF THE FEED WHEEL IF REQUIRED.



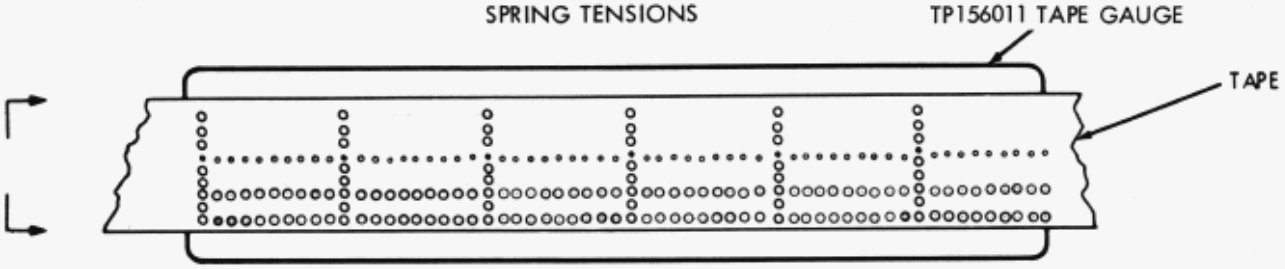
2.24 Punch Mechanism (Cont.)



FEED HOLE SPACING----PRELIMINARY
REQUIREMENT
INDENT OF DIE WHEEL ECCENTRIC STUD POINTING DOWNWARD.
TO ADJUST
POSITION DIE WHEEL ECCENTRIC STUD WITH LOCK NUT LOOSENED.
NOTE 1: BEFORE PROCEEDING WITH THE FOLLOWING ADJUSTMENTS, CHECK BOTH TAPE GUIDE SPRING TENSIONS

FEED HOLE SPACING----FINAL
(1) REQUIREMENT
WITH TAPE SHOE BLOCKED AWAY FROM FEED WHEEL, FEED PAWL AND DETENT DISENGAGED, AND TAPE REMOVED, FEED WHEEL SHOULD ROTATE FREELY. CHECK THROUGH 3 OR 4 REVOLUTIONS OF FEED WHEEL.

NOTE 2: BEFORE PROCEEDING WITH THE FOLLOWING ADJUSTMENT CHECK BOTH TAPE GUIDE SPRING TENSIONS



FEED HOLE SPACING
(1) REQUIREMENT
WITH A PIECE OF TAPE PERFORATED WITH SIX SERIES OF 9 SPACE CODE COMBINATIONS FOLLOWED BY A RUBOUT COMBINATION PLACED OVER THE SMOOTH SIDE OF THE TP156011 TAPE GAUGE SO THE CIRCULAR PORTION OF THE FIRST NUMBER 2 CODE HOLE IN THE TAPE IS CONCENTRIC WITH THE FIRST HOLE OF THE TAPE GAUGE. THE NEXT FOUR HOLES IN THE TAPE GAUGE SHOULD BE VISIBLE THROUGH THE NUMBER 2 CODE HOLES IN THE TAPE AND THE CIRCULAR PORTION OF THE LAST (SIXTH) NUMBER 2 CODE HOLE IN THE TAPE SHALL BE ENTIRELY WITHIN THE 0.086 DIAMETER HOLE OF THE TAPE GAUGE.

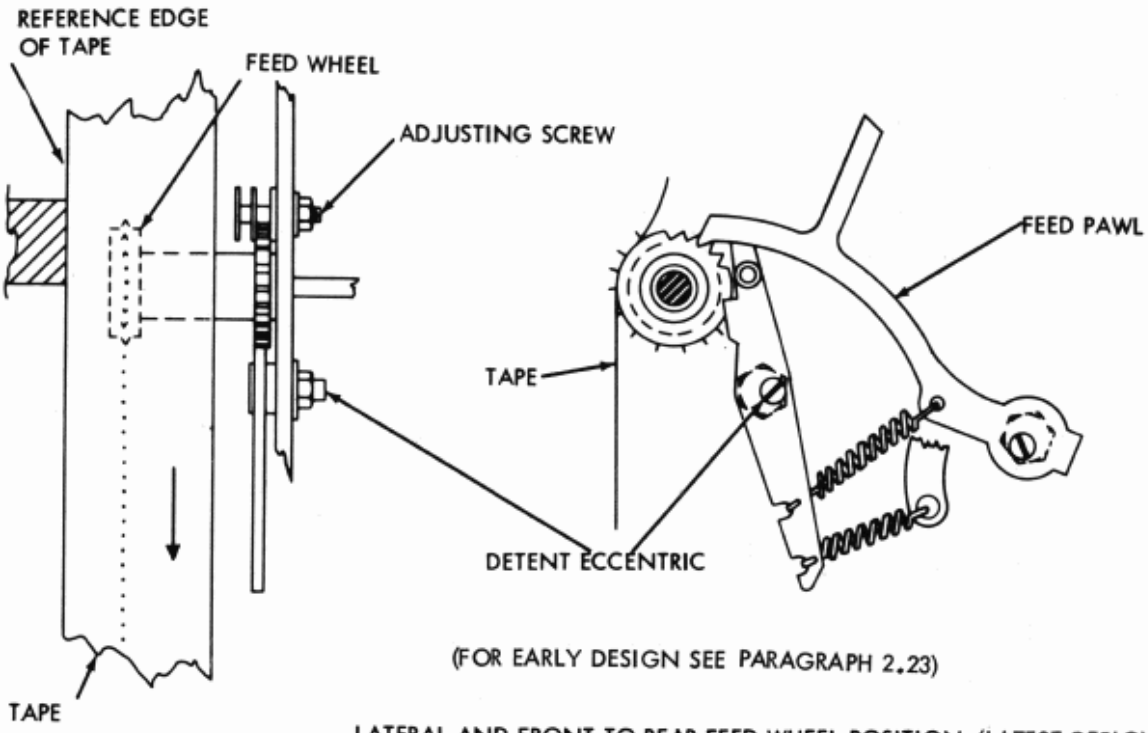
(2) REQUIREMENT
WITH TAPE SHOE HELD AWAY FROM FEED WHEEL, FEED PAWL AND DETENT DISENGAGED AND TAPE REMOVED, FEED WHEEL SHOULD ROTATE FREELY.

TO ADJUST
WITH TAPE REMOVED FROM THE PUNCH MECHANISM, LOOSEN THE ECCENTRIC LOCK NUT AND ROTATE THE DIE WHEEL ECCENTRIC SHAFT UNTIL IT BINDS AGAINST THE FEED WHEEL. BACK OFF THE ECCENTRIC UNTIL THE DIE WHEEL IS JUST FREE. KEEP THE INDENT OF THE ECCENTRIC BELOW THE HORIZONTAL CENTERLINE OF THE STUD. REFINE ADJUSTMENT FOR REQUIREMENT (1), IF NECESSARY, BY MOVING THE DIE WHEEL TOWARD THE FEED WHEEL TO DECREASE THE CHARACTER SPACING AND AWAY FROM THE FEED WHEEL TO INCREASE THE CHARACTER SPACING.

CAUTION: WITH TAPE REMOVED. MAKE SURE FEED WHEEL AND DIE WHEEL DO NOT BIND. RECHECK REQUIREMENT (1). IF NECESSARY, REFINE.

NOTE 3: FIRST THROUGH FIFTH HOLES IN GAUGE ARE SAME SIZE AS CODE HOLES IN TAPE (0.072 INCH DIAMETER). SIXTH HOLE IN GAUGE IS LARGER (0.086 INCH). THIS ARRANGEMENT ALLOWS ± 0.007 INCH VARIATION IN 5 INCHES.

2.25 Punch Mechanism (Cont.)



(FOR EARLY DESIGN SEE PARAGRAPH 2.23)

LATERAL AND FRONT TO REAR FEED WHEEL POSITION (LATEST DESIGN)

REQUIREMENT

THE INDENTATIONS PUNCHED BY THE FEED WHEEL SHOULD BE CENTRALLY LOCATED BETWEEN THE PUNCHED FEED HOLES (GAUGED BY EYE) AND ON SAME HORIZONTAL CENTERLINE. THE UNIT MUST BACKSPACE THE TAPE AT LEAST 30 CHARACTERS WITHOUT LOSING ITS POINT OF REGISTRATION.

TO CHECK

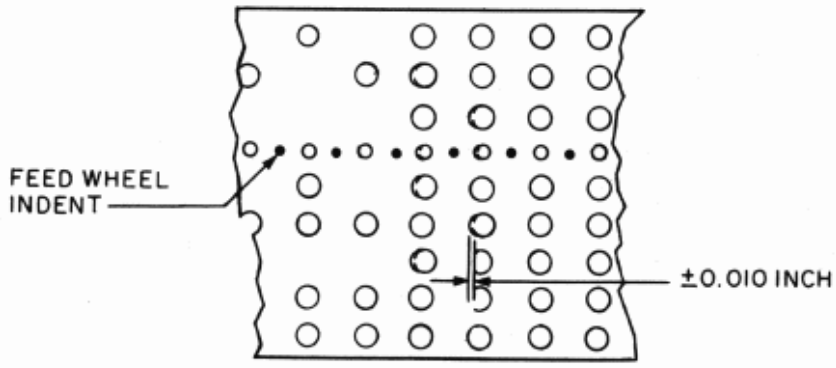
PERFORATE 6 INCHES OF RY TAPE. BACK SPACE 30 CHARACTERS.REPERFORATE WITH RUBOUT CHARACTERS. CODE HOLES MUST COINCIDE EXCEPT FOR FIRST TWO CHARACTERS WHICH MAY BE ELONGATED ±0.010 INCH.

TO ADJUST (LATERALLY)

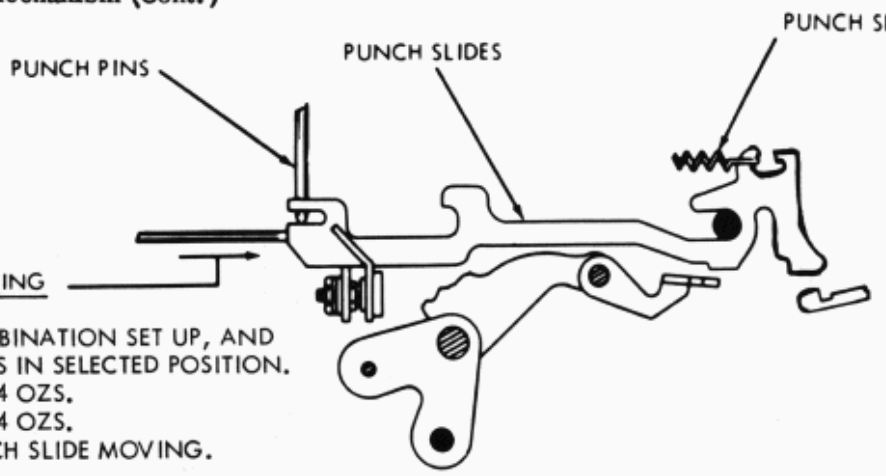
ROTATE THE DETENT ECCENTRIC CLOCKWISE TO MOVE THE FEED WHEEL PERFORATION TOWARD THE LEADING EDGE OF THE FEED HOLE AND ROTATE THE ECCENTRIC COUNTER-CLOCKWISE TO MOVE THE PERFORATION TOWARD THE TRAILING EDGE OF THE FEED HOLE. TIGHTEN THE LOCK NUT. REFINE THE FEED PAWL ADJUSTMENT IF NECESSARY.

TO ADJUST (FRONT TO REAR)

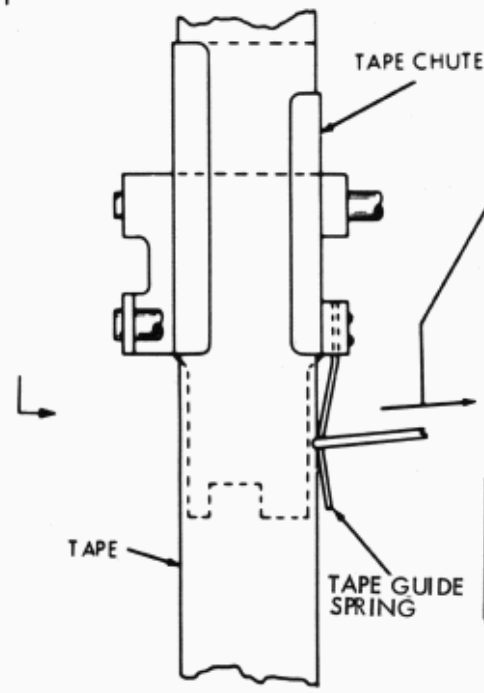
LOOSEN THE LOCK NUT ON THE ADJUSTING SCREW AND ROTATE THE SCREW COUNTER-CLOCKWISE TO MOVE THE INDENTATIONS IN THE TAPE AWAY FROM THE REFERENCE EDGE (REAR) OF THE TAPE. TO MOVE THE INDENTATIONS IN THE TAPE TOWARD THE REFERENCE EDGE OF THE TAPE, ROTATE THE ADJUSTING SCREW CLOCKWISE. REFINE THE DETENT ADJUSTMENT IF NECESSARY.



2.26 Punch Mechanism (Cont.)



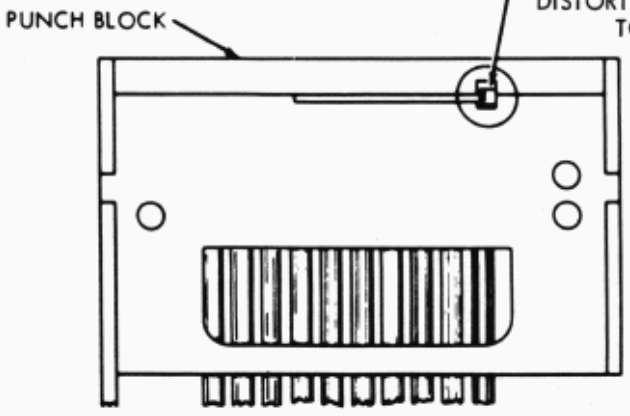
PUNCH SLIDE SPRING
REQUIREMENT
RUBOUT COMBINATION SET UP, AND PUNCH SLIDES IN SELECTED POSITION.
MIN. 2-1/4 OZS.
MAX. 3-1/4 OZS.
TO START EACH SLIDE MOVING.

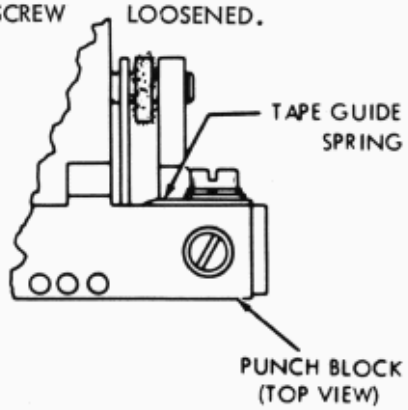


TAPE GUIDE SPRING (TAPE CHUTE)
REQUIREMENT
WITH SELECTOR AND FUNCTION CLUTCHES DISENGAGED AND LATCHED, TAPE THREADED THROUGH PUNCH MECHANISM, IT SHOULD REQUIRE
MIN. 1-1/4 OZS.
MAX. 2-1/4 OZS.
TO JUST MOVE THE SPRING AWAY FROM THE TAPE.
TO ADJUST
BEND THE SPRING.

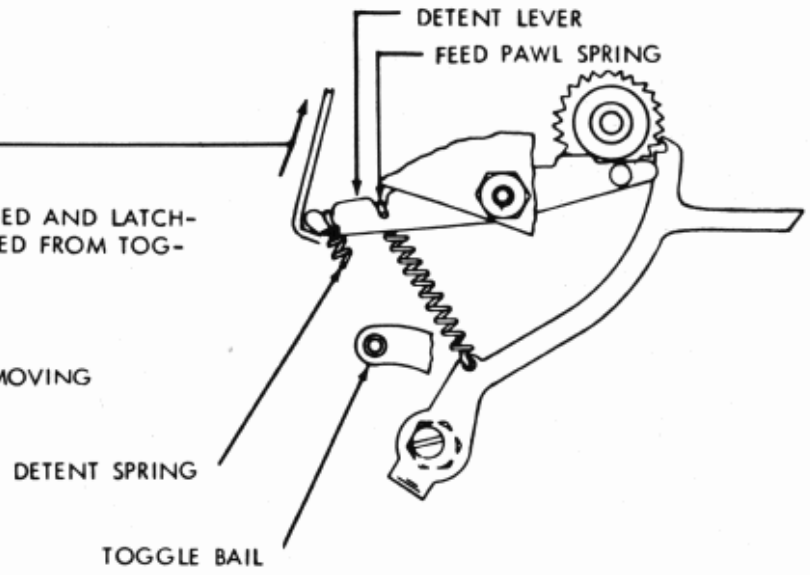
NOTE
IT IS NECESSARY TO REMOVE SEVERAL PARTS, ON UNITS EQUIPPED WITH BACK SPACE MECHANISM, IN ORDER TO CHECK THIS SPRING TENSION. IT SHOULD NOT BE CHECKED UNLESS THERE IS GOOD REASON TO BELIEVE THAT REQUIREMENTS ARE NOT MET.

TAPE GUIDE SPRING (PUNCH BLOCK)
(1) REQUIREMENT
WITH TAPE REMOVED FROM THE PUNCH BLOCK THE TAPE GUIDE SPRING SHOULD REST AGAINST THE CLEARANCE SLOT IN THE BLOCK IN A SYMETRICAL MANNER.
(2) REQUIREMENT
WITH TAPE IN THE PUNCH BLOCK AND THE REPERFORATOR OPERATING UNDER POWER, THE SPRING SHOULD NOT DISTORT THE EDGE OF THE TAPE.
TO ADJUST
BEND THE SPRING AND POSITION IT WITH ITS MOUNTING SCREW LOOSENED.





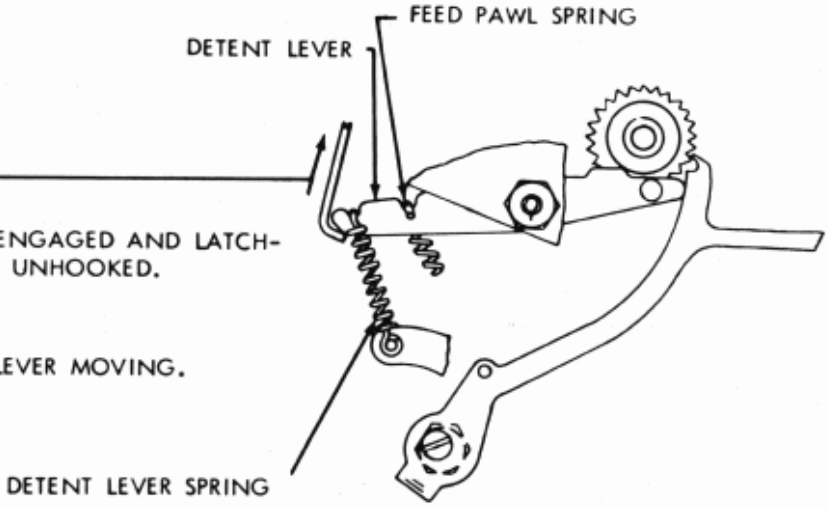
2.27 Punch Mechanism (Cont.)



REQUIREMENT
FUNCTION CLUTCH DISENGAGED AND LATCHED. DETENT SPRING UNHOOKED FROM TOGGLE BAIL

MIN. 3 OZS.
MAX. 4-1/2 OZS.

TO START THE DETENT LEVER MOVING



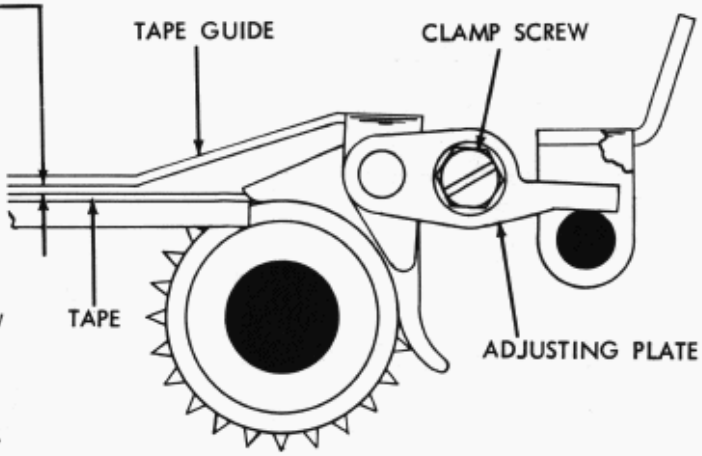
REQUIREMENT
FUNCTION CLUTCH DISENGAGED AND LATCHED. FEED PAWL SPRING UNHOOKED.

MIN. 7 OZS.
MAX. 10 OZS.

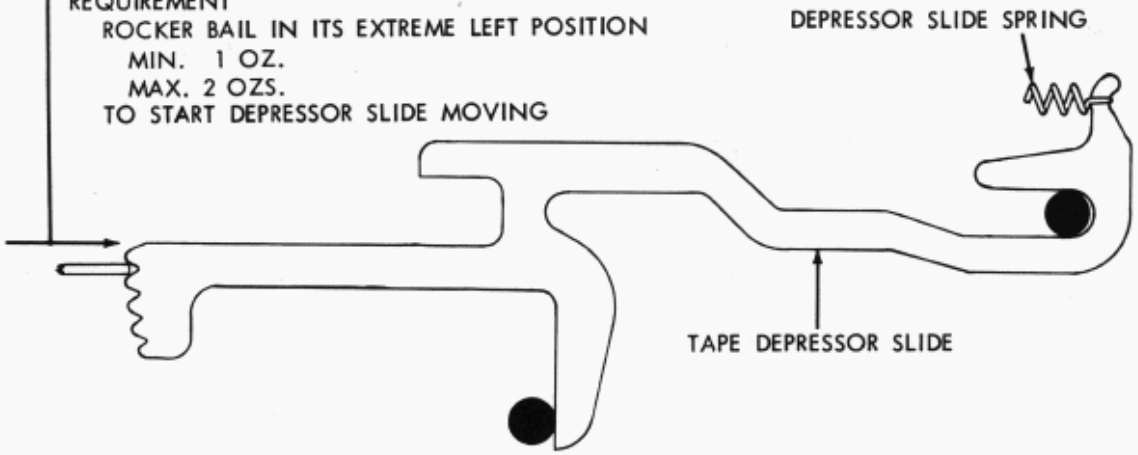
TO START THE DETENT LEVER MOVING.

2.28 Punch Mechanism (Cont.)

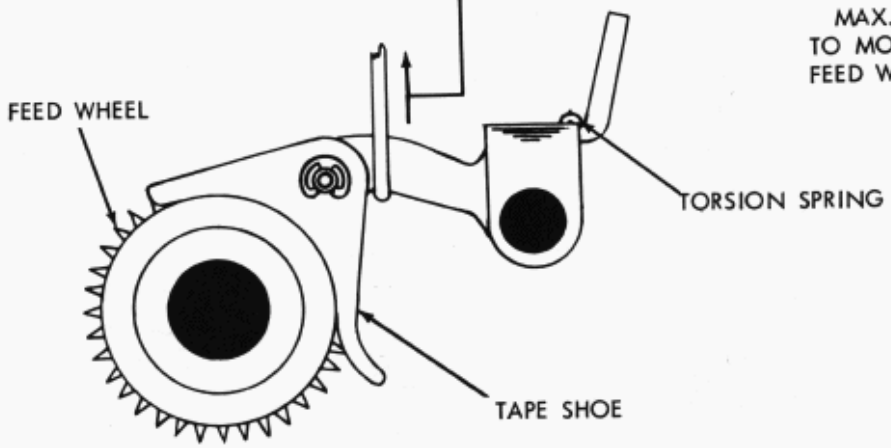
TAPE GUIDE
REQUIREMENT
ROTATE FEED WHEEL UNTIL OIL HOLE IS UP. CENTER TAPE SHOE AND TAPE GUIDE, HOLD TAPE GUIDE DOWNWARD. CLEARANCE BETWEEN ADJUSTING PLATE EXTENSION AND BACKSTOP POST SHALL BE
MIN. 0.002 INCH
MAX. 0.008 INCH
TO ADJUST
LOOSEN ADJUSTING PLATE CLAMP SCREW FRICTION TIGHT AND MOVE ADJUSTING PLATE UP OR DOWN. TIGHTEN SCREW.



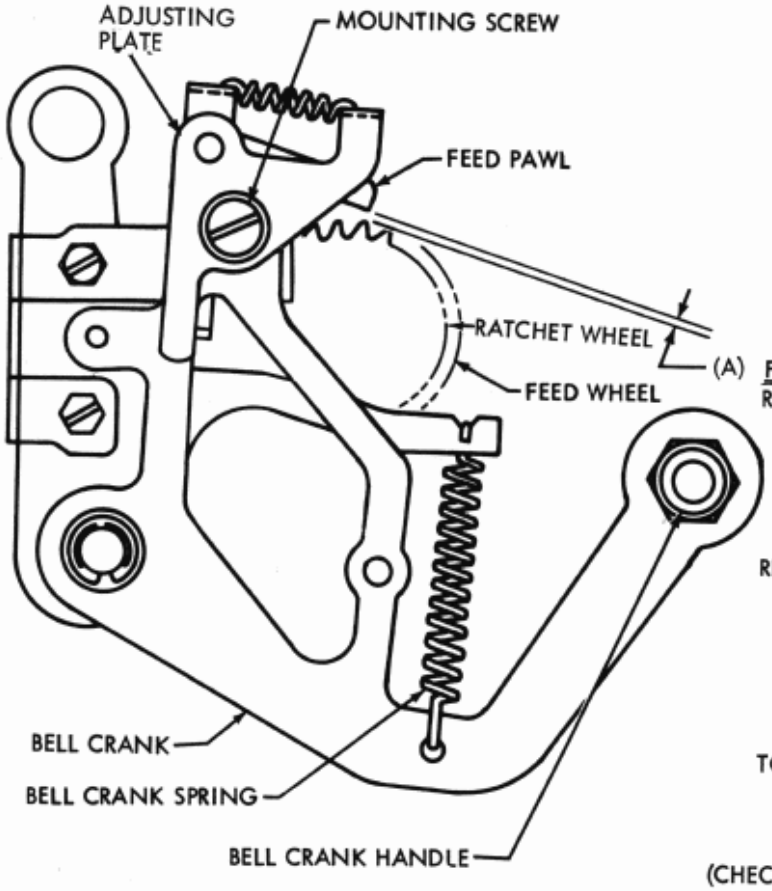
TAPE DEPRESSOR SLIDE SPRING
REQUIREMENT
ROCKER BAIL IN ITS EXTREME LEFT POSITION
MIN. 1 OZ.
MAX. 2 OZS.
TO START DEPRESSOR SLIDE MOVING



TAPE SHOE TORSION SPRING
REQUIREMENT
MIN. 13 OZS.
MAX. 18 OZS.
TO MOVE TAPE SHOE FROM FEED WHEEL.



2.29 Power Drive Backspace Mechanism



(A) FEED PAWL CLEARANCE

REQUIREMENT (PRELIMINARY)

(1) WITH BACKSPACE BELL CRANK ROTATED CLOCKWISE, BACKSPACE FEED PAWL SHOULD MISS FIRST TOOTH BY A CLEARANCE OF:
MIN. 0.006 INCH
MAX. 0.040 INCH

REQUIREMENT (FINAL)

(2) BACKSPACE FEED PAWL SHOULD MISS FIRST TOOTH AND ENGAGE SECOND TOOTH BY AT LEAST 1/2 OF RIGHT ENGAGING SURFACE OF FEED PAWL (AS GAUGED BY EYE) WHEN THE FEED PAWL FIRST CONTACTS RATCHET TOOTH.

TO ADJUST

POSITION ADJUSTING PLATE WITH MOUNTING SCREW FRICTION TIGHT.

(CHECK WITH FEED WHEEL SHAFT OIL HOLE IN THE UPPERMOST POSITION AND RECHECK EACH 90 DEGREES ABOUT PERIPHERY OF FEED WHEEL.)

(B)

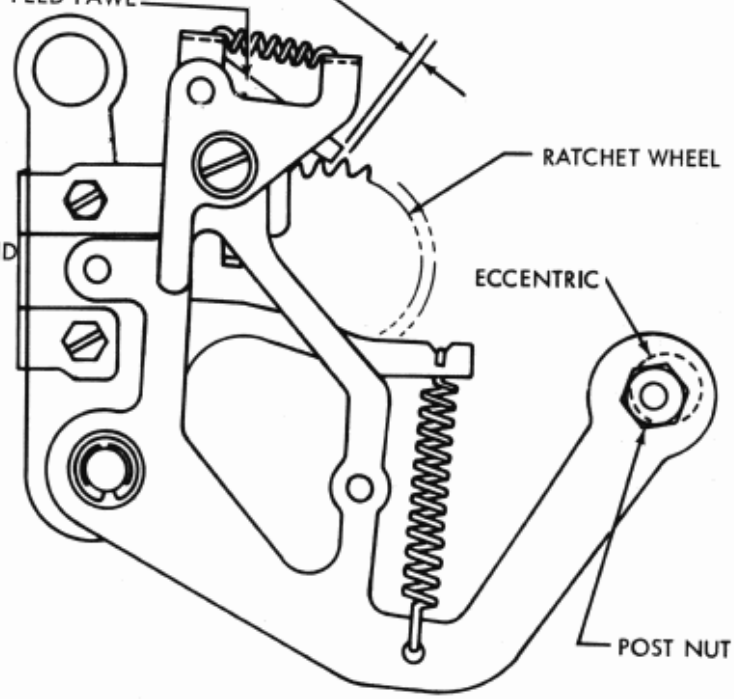
FEED PAWL (PRELIMINARY WHEN POWER DRIVE IS USED)

REQUIREMENT

BACKSPACE MECHANISM IN OPERATED POSITION. FEED WHEEL RATCHET IN DETENTED POSITION. CLEARANCE BETWEEN FEED WHEEL RATCHET TOOTH AND FEED PAWL:
MIN. SOME
MAX. 0.003

TO ADJUST

BY MEANS OF 0.060" ALLEN WRENCH, ROTATE ECCENTRIC WITH NUT POST FRICTION TIGHT.



2.30 Power Drive Backspace Mechanism (Cont.)

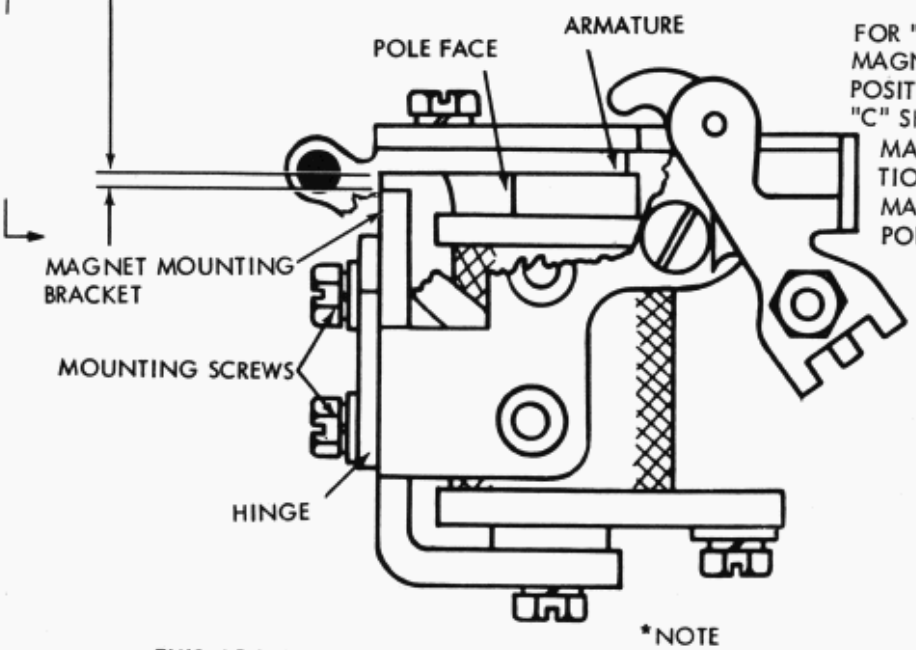
(A) ARMATURE HINGE

REQUIREMENT

WITH ARMATURE HELD AGAINST POLE FACE (ARMATURE BAIL SPRING UNHOOKED)
MIN. SOME --- MAX. 0.004 INCH
BETWEEN ARMATURE AND MAGNET MOUNTING BRACKET WITH PLAY TAKEN UP FOR MINIMUM.

TO ADJUST

WITH MOUNTING SCREWS LOOSENED, POSITION HINGE. WHILE ADJUSTMENT IS BEING MADE, ARMATURE SHOULD TOUCH FRONT AND REAR OF POLE FACE.

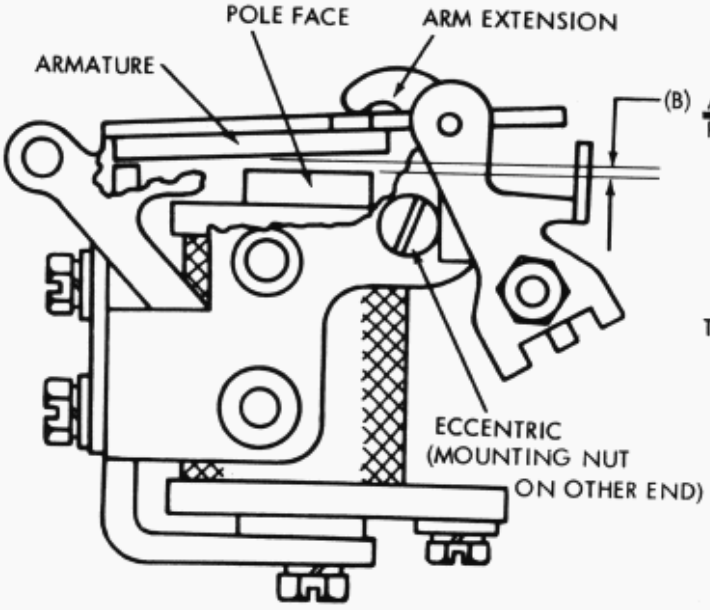


NOTE

FOR "DC" OPERATION, THE BACKSPACE MAGNET ARMATURE SHALL BE POSITIONED SO THAT THE SIDE MARKED "C" SHALL FACE THE POLE FACE OF THE MAGNET CORE. FOR "AC" OPERATION, THE UNMARKED SIDE OF THE MAGNET ARMATURE SHALL FACE THE POLE OF THE MAGNET CORE.

*NOTE

THIS ADJUSTMENT IS MADE AT FACTORY AND SHOULD NOT BE DISTURBED UNLESS A REASSEMBLY OF THE UNIT IS UNDERTAKEN. IF NECESSARY TO MAKE THIS ADJUSTMENT, THE PUNCH UNIT SHOULD BE REMOVED. SEE DISASSEMBLY AND REASSEMBLY. REMAKE PUNCH UNIT POSITION ADJUSTMENT.



(B) ARMATURE UP-STOP*

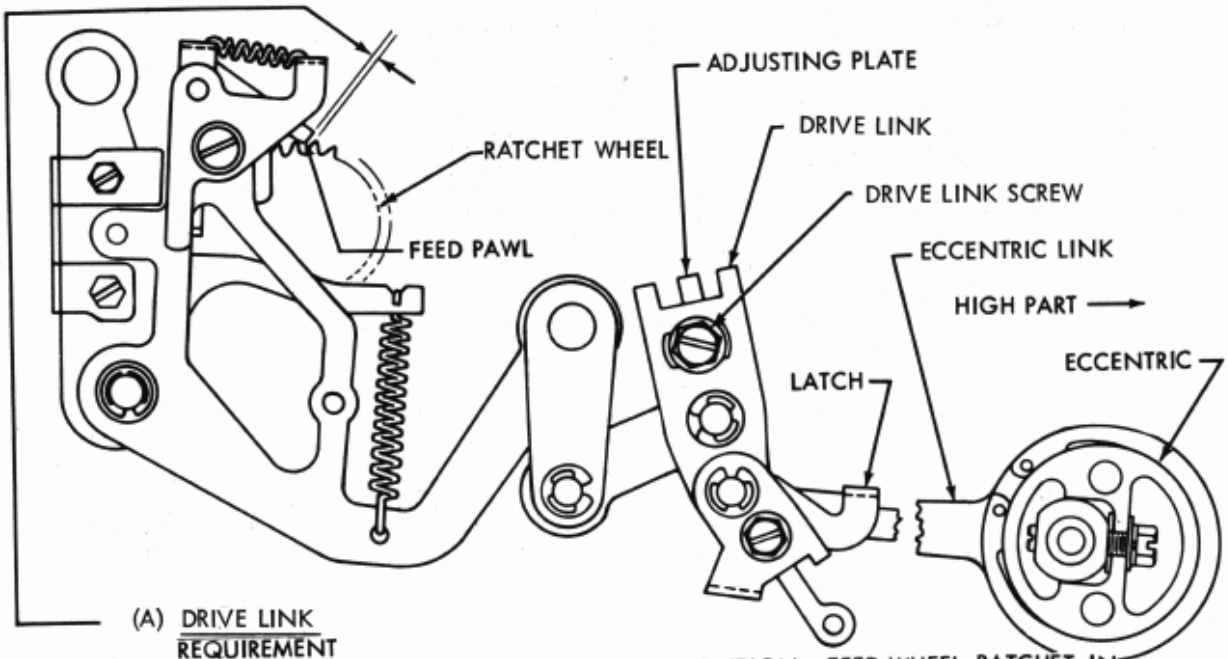
REQUIREMENT

ARMATURE IN UNOPERATED POSITION.
GAP BETWEEN ARMATURE AND POLE FACE
MIN. 0.025 INCH.
MAX. 0.030 INCH.
AT CLOSEST POINT.

TO ADJUST

ROTATE ECCENTRIC WITH MOUNTING NUT LOOSENED. KEEP HIGH PART OF ECCENTRIC TO LEFT.

2.31 Power Drive Backspace Mechanism (Cont.)



(A) DRIVE LINK

REQUIREMENT

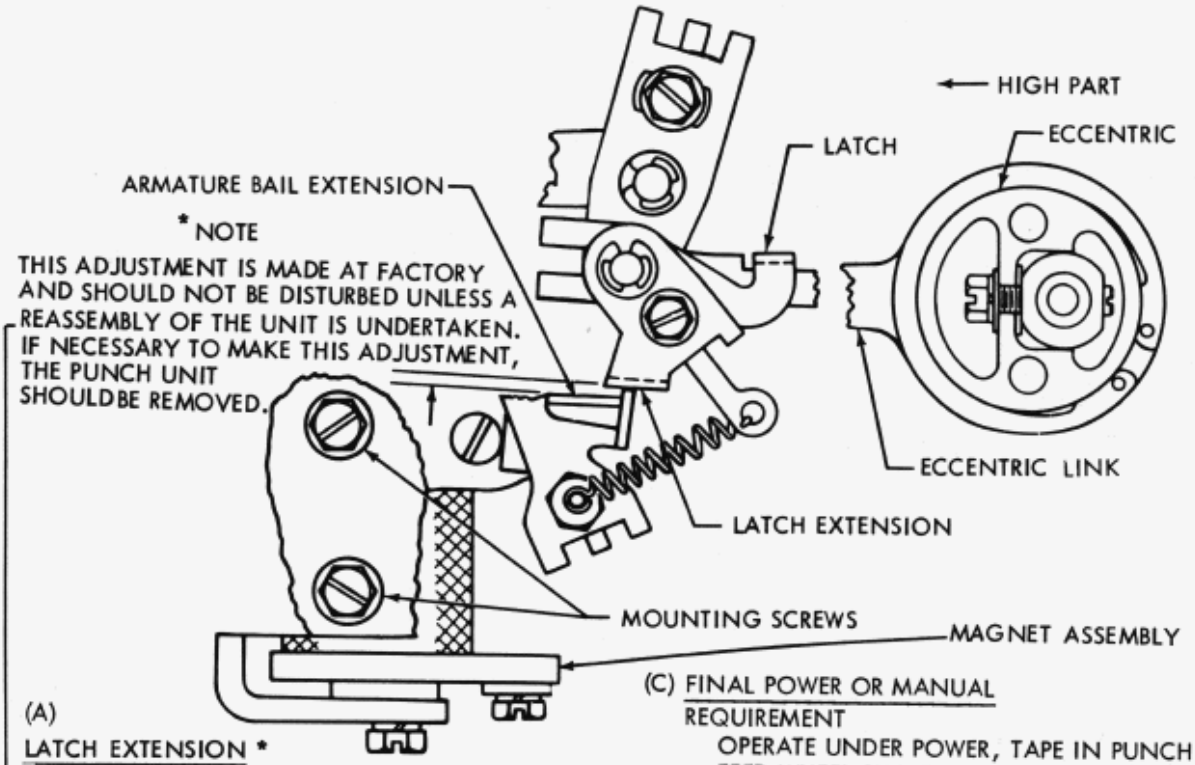
BACKSPACE MECHANISM IN OPERATED POSITION. FEED WHEEL RATCHET IN DETENTED POSITION. LATCH ENGAGED WITH ECCENTRIC LINK. HIGH PART OF ECCENTRIC TO RIGHT. CLEARANCE BETWEEN FEED PAWL AND FEED WHEEL RATCHET TOOTH

MIN. SOME
MAX. 0.003 INCH

TO ADJUST

BY MEANS OF PRY POINT, POSITION ADJUSTING LINK WITH DRIVE LINK SCREW FRICTION TIGHT.

2.32 Power Drive Backspace Mechanism (Cont.)



(A)

LATCH EXTENSION *

REQUIREMENT

BACKSPACE MECHANISM IN UNOPERATED POSITION. HIGH PART OF ECCENTRIC TO LEFT. ARMATURE AGAINST POLE FACE. LATCH RESTING ON ECCENTRIC ARM NOTCH. CLEARANCE BETWEEN TOP OF ARMATURE BAIL EXTENSION AND LATCH EXTENSION:

MIN. 0.005 INCH
MAX. 0.020 INCH

TO ADJUST

SWING MAGNET CLOCKWISE OR COUNTERCLOCKWISE, AS NECESSARY, WITH MOUNTING SCREWS FRICTION TIGHT.

(C) FINAL POWER OR MANUAL

REQUIREMENT

OPERATE UNDER POWER, TAPE IN PUNCH UNIT. FEED WHEEL SHAFT OIL HOLE IN UPPERMOST POSITION, OPERATE BACKSPACE MECHANISM ONCE. RATCHET WHEEL SHOULD BE BACKED ONE SPACE TO FULLY DETENTED POSITION.

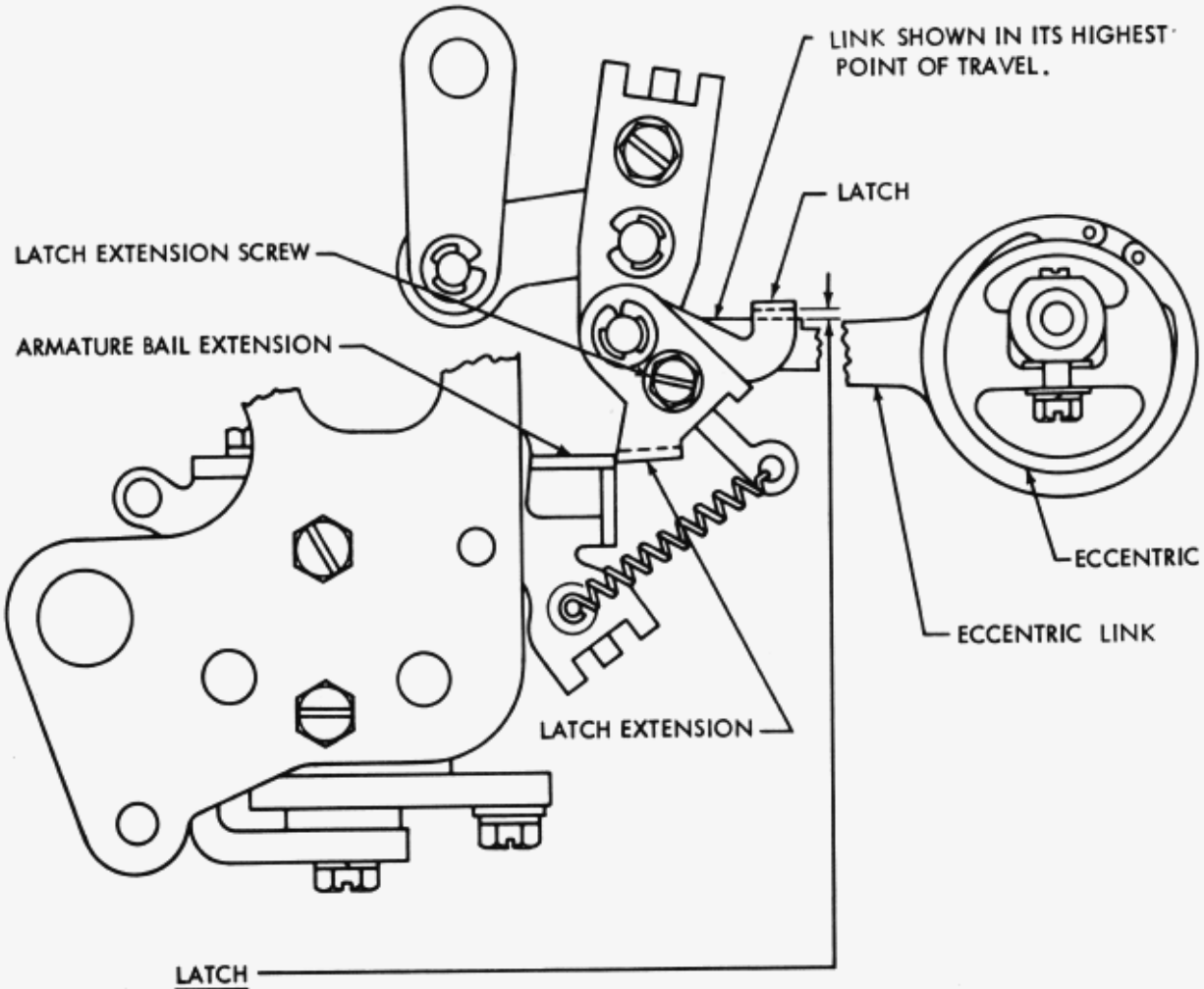
NOTE

A FULLY DETENTED POSITION IS DEFINED AS: "WITH DETENT ROLLER IN CONTACT WITH RATCHET WHEEL, PUNCH UNIT FEED PAWL SHOULD ENGAGE FIRST TOOTH BELOW HORIZONTAL CENTER LINE OF RATCHET FEED WHEEL WITH NO PERCEPTIBLE CLEARANCE."

TO ADJUST

REFINE FEED PAWL ADJUSTMENTS.

2.33 Power Drive Backspace Mechanism (Cont.)



REQUIREMENT

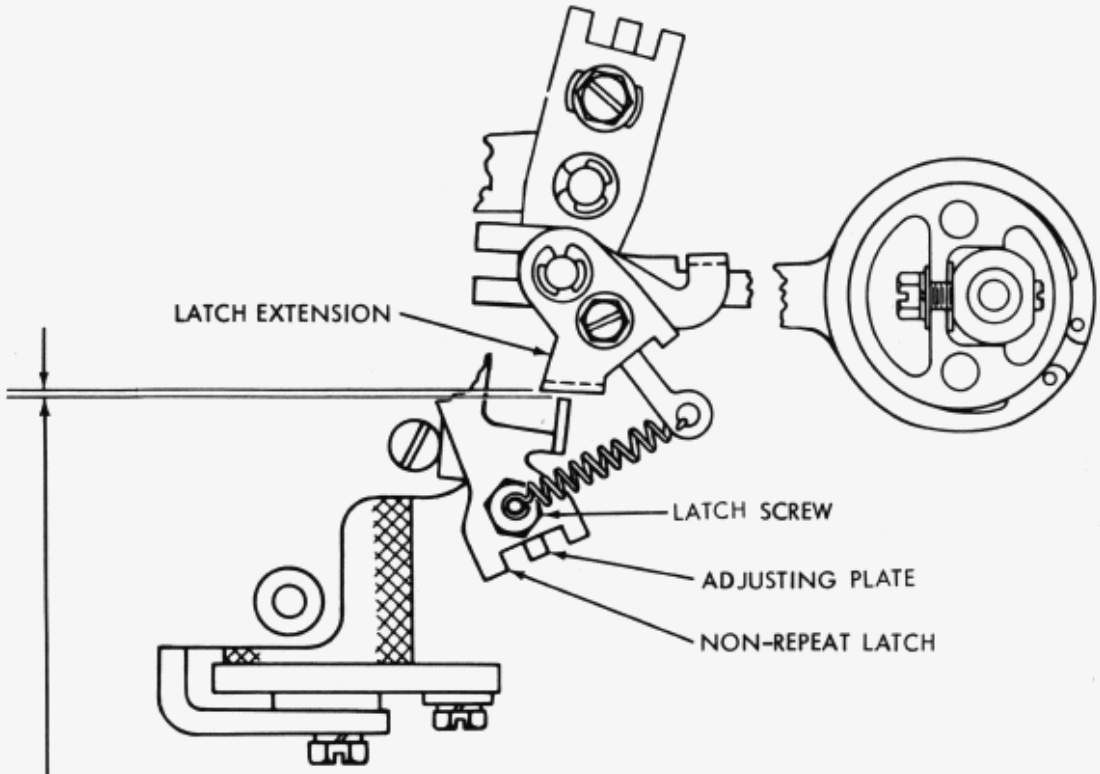
BACKSPACE MECHANISM IN UNOPERATED POSITION. ARMATURE OFF POLE FACE (DE-ENERGIZED). LATCH EXTENSION AGAINST END OF ARMATURE BAIL EXTENSION. ECCENTRIC LINK AT ITS CLOSEST POINT TO UNDERSIDE OF LATCH. CLEARANCE BETWEEN LATCH AND ECCENTRIC LINK:

MIN. 0.005 INCH
MAX. 0.025 INCH

TO ADJUST

POSITION LATCH WITH LATCH EXTENSION SCREW LOOSENED.

2.34 Power Drive Backspace Mechanism (Cont.)



NON-REPEAT LATCH

REQUIREMENT

BACKSPACE MECHANISM IN UNOPERATED POSITION. CLEARANCE BETWEEN TOP SURFACE OF NON-REPEAT LATCH AND LOWEST POINT OF LATCH EXTENSION

MIN. 0.002 INCH

MAX. 0.010 INCH

TO ADJUST

WITH LATCH SCREW FRICTION TIGHT POSITION ADJUSTING PLATE.

2.35 Power Drive Backspace Mechanism (Cont.)