35 TYPING REPERFORATOR

ADJUSTMENTS

CONTENTS

CONTENTS PAGE

Figure 1 - Typical 35 Typing Reperforator (Left Front View)

1. GENERAL

1.01 This section is reissued to include complete adjustment requirements for the 35 Typing Reperforator as a standard.

1.02 This section contains specific requirements and adjustments for the 35 Typing Reperforator (Fig. 1). The basic equipment includes selector mechanism, transfer mechanism, eight-level fully perforating punch mechanism, and printing mechanism. The printing mechanism includes letters-figures contacts and magnet and may include print suppression, remote control non-interfering reboot tape feed-out, end of feed-out timing contacts and power drive backspace mechanisms.

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 (energy marking condition of signal line). The unit is in the latched condition when the typewheel rack is in its upper position (the numerals appear on the top half of the typewheel). The unit is in the figures condition when the typewheel rack is in its lower position (the letters appear on the top half of the typewheel).

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 against the trip lever (or stop arm) and latch lever. The main shaft will then turn freely while 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 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 (B), 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 pushlevers from their selector levers if they are sparing 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.

1.11 Where a 35 Typing Reperforator is used as a component of a receive only or a send-receive set, it is mounted on a base or keyboard base. Refer to the base, keyboard and other applicable sections for gear mesh and additional adjustment requirements.

2. BASIC UNIT

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 Mechanism

2.03 Function Mechanism

NOTE: FOR GEAR MESH ADJUSTMENT, REFER TO APPLICABLE SECTIONS COVERING BASE OR KEYBOARD MOUNTING FACILITY.

(A) CLUTCH SHOE LEVER

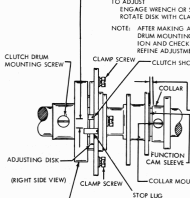
NOTE:
THIS ADJUSTMENT SHOULD BE MADE FOR BOTH SELECTING AND FUNCTION CLUTCHES.

TO CHECK
(1) DISENGAGE CLUTCH. MEASURE CLEARANCE.
(2) ALIGN HEAD OF CLUTCH DRUM MOUNTING SCREW WITH STOP LUG. ENGAGE CLUTCH. MANUALLY PRESS SHOE LEVER AND STOP LUG TOGETHER AND ALLOW TO SNAP APART. MEASURE CLEARANCE.

REQUIREMENT
CLEARANCE BETWEEN SHOE LEVER AND STOP LUG:
MIN. 0.005 INCH---MAX. 0.085 INCH
GREATER WHEN CLUTCH ENGAGED (2) THAN WHEN DISENGAGED (1).

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 REPINE ADJUSTMENT.



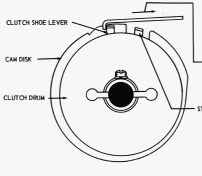
(B)
FUNCTION CLUTCH DRUM END PLAY
REQUIREMENT
WITH FUNCTION CLUTCH DISENGAGED:
MIN. SOME --- MAX. 0.015 INCH
WHEN PLAY IS EAKEN UP TO MAKE CLEARANCE MAX.

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

→ 2.04 Selector Mechanism (continued)

→ 2.05 Function Mechanism (continued)

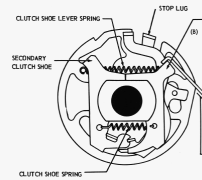
NOTE:
THESE SPRING TENSIONS APPLY TO BOTH CLUTCHES.



(A)
CLUTCH SHOE LEVER SPRING

TO CHECK
ENGAGE CLUTCH. HOLD CAM DISK TO PREVENT ITS TURNING.

REQUIREMENT
MIN. 15 OZS. -----MAX. 20 OZS.
TO PULL SHOE LEVER IN CONTACT WITH STOP LUG.



(B) CLUTCH SHOE SPRING

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

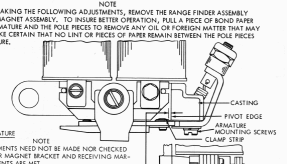
TO CHECK
REMOVE CLUTCH FROM DRUM.

REQUIREMENT
MIN. 3 OZS. -------MAX. 5 OZS.
TO START PRIMARY SHOE MOVING.

2.06 Selector Mechanism (continued)

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.



NOTE

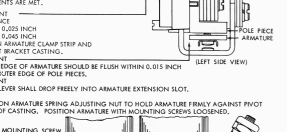
THESE REQUIREMENTS NEED NOT BE MADE NOR CHECKED IF THE SELECTOR MAGNET BRACKET AND RECEIVING MAR-GIN REQUIREMENTS ARE MET.

(1) REQUIREMENT
CLEARANCE
MIN. 0.025 INCH
MAX. 0.040 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.

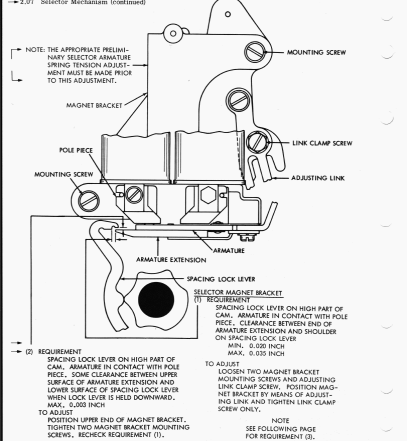


REQUIREMENT

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.

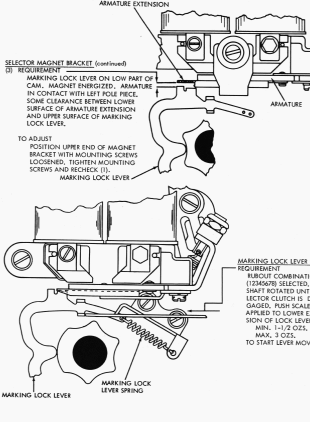
TO ADJUST
POSITION DOWNSTOP BRACKET WITH MOUNTING SCREW LOOSENED. REPLACE OIL SHIELD AND CHECK OIL SHIELD ADJUSTMENT.

2.07 Selector Mechanism (continued)



2.08 Selector Mechanism (continued)

NOTE: SEE PRECEDING PAGE FOR SELECTOR MAGNET BRACKET ADJUSTMENTS (1) AND (2).

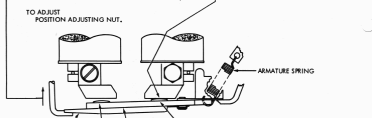


2.09 Selector Mechanism (continued)

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

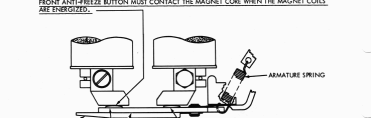
0.060 AMPERE - APPROXIMATELY 3/4 OZ.
0.030 AMPERE - APPROXIMATELY 3/8 OZ.
0.300 AMPERE - APPROXIMATELY 1-1/8 OZS.

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 2.14)

2.10 Selector Mechanism (continued)

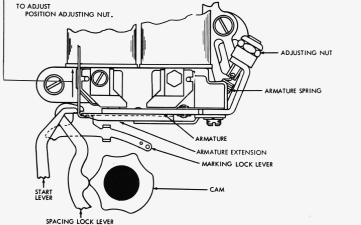
SELECTOR ARMATURE SPRING
FOR UNITS EMPLOYING SELECTOR ARMATURE WITH SINGLE ANTI-FREEZE BUTTON ONLY).
REQUIREMENT (PRELIMINARY)
WITH LOCKING LEVERS AND START LEVER ON HIGH PART OF THEIR CAMS, SCALE APPLIED AS NEARLY VERTICAL AS POSSIBLE UNDER END OF ARMATURE EXTENSION, IT SHALL REQUIRE THE FOLLOWING TENSIONS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

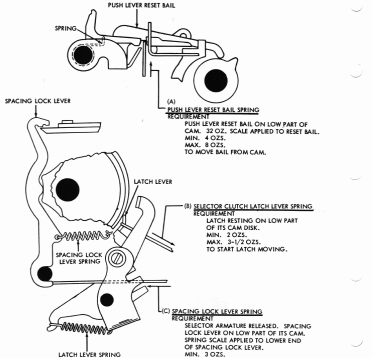
THIS SPRING CAN BE ADJUSTED FOR MAXIMUM SELECTOR PERFORMANCE ONLY WHEN PRINTER IS CONNECTED TO THE SPECIFIC CIRCUIT OVER WHICH IT IS TO OPERATE UNDER SERVICE CONDITIONS. SINCE THERE ARE SEVERAL OPERATING SPEEDS AND SINCE CIRCUITS VARY WIDELY, IT IS IMPOSSIBLE TO ADJUST SPRING FOR MAXIMUM PERFORMANCE 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.

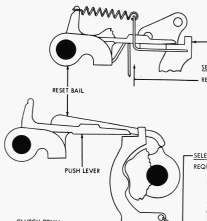


REQUIREMENT (FINAL)
SEE SELECTOR RECEIVING MARGIN ADJUSTMENT (PARAGRAPH 2.14)

→2.11 Selector Mechanism (continued)

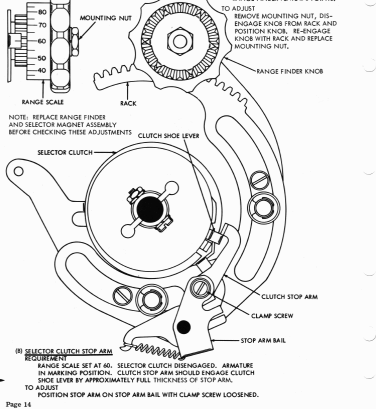


2.12 Selector Mechanism (continued)



→2.13 Selector Mechanism (continued)

(A) RANGE FINDER KNOB PHASING



(B) SELECTOR CLUTCH STOP ARM

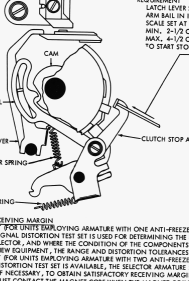
REQUIREMENT

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 STOP ARM.

→ TO ADJUST

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

2.14 Selector Mechanism (continued)



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)

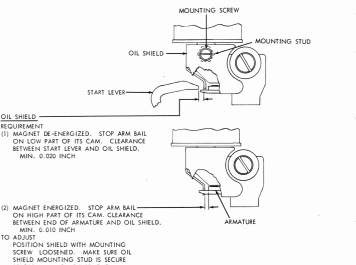
WHEN A DISTORTION TEST SET IS AVAILABLE, THE SELECTOR ARMATURE SPRING TENSION SHOULD BE REFINED, IF NECESSARY, TO OBTAIN SATISFACTORY RECEIVING MARGINS. THE FRONT ANTI-FREEZE BUTTON MUST CONTACT THE MAGNET CORE WHEN THE MAGNET COILS ARE ENERGIZED.

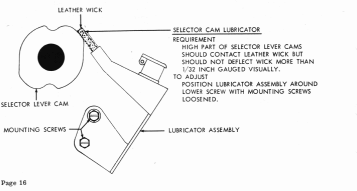
TO ADJUST: REFINE THE SELECTOR ARMATURE SPRING ADJUSTMENT

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
0.500 AMP (WINDINGS SERIES)	100	72	38	35

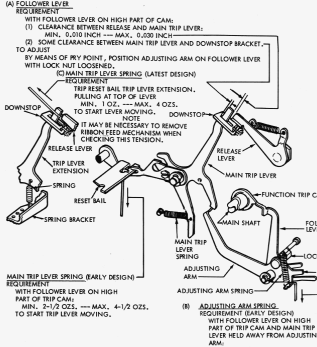
→ 2.15 Selector Mechanism (continued)



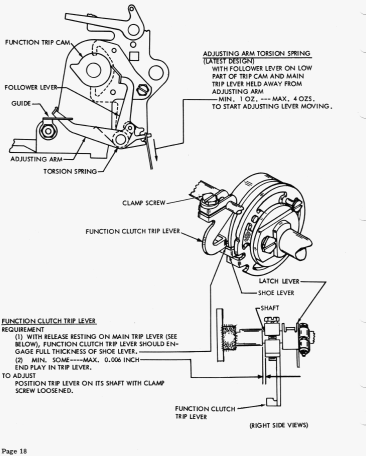


2.16 Function Mechanism (continued)

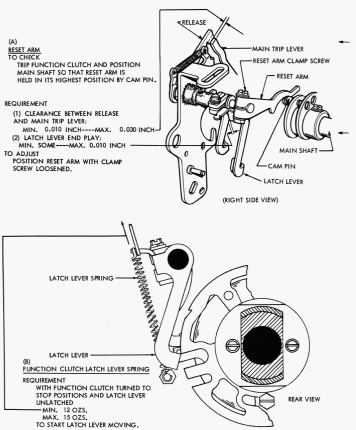
NOTE: FOR UNITS EQUIPPED WITH AUTOMATIC NON-INTERFERING LETTERS TAPE FEED OUT MECHANISM, SUBSTITUTE ADJUSTMENT IN VARIABLE FEATURES, PARAGRAPH 3.



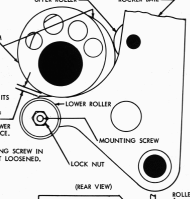
→2.17 Function Mechanism (continued)



2.18 Function Mechanism (continued)



→2.19 Function Mechanism (continued)



(A)

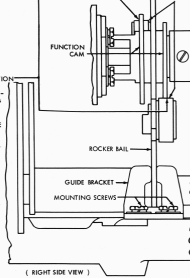
→ CAM FOLLOWER ROLLER REQUIREMENT

WITH ROCKER BAIL POSITIONED TO ITS EXTREME LEFT AND UPPER ROLLER IN CONTACT WITH FUNCTION CAM:

→ MIN. SOME------MAX. 0.004 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.



(B)

→ CAM FOLLOWER ROLLER ALIGNMENT REQUIREMENT

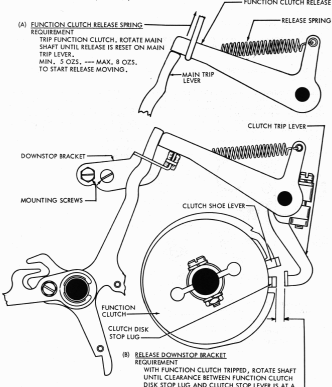
(1) ROCKER BAIL ROLLERS SHOULD ENGAGE FULL THICKNESS OF FUNCTION CAMS.

(2) LIFTER ROLLER IN FULL ENGAGEMENT WITH ROCKER BAIL CAMMING SURFACE.

TO ADJUST

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

2.20 Function Mechanism (continued)



2.21 Punch Mechanism

PERFORATOR POSITION (PRELIMINARY)

REQUIREMENT

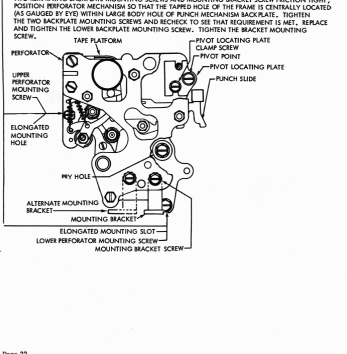
THE PERFORATOR MECHANISM MOUNTING SCREW BENEATH PUNCH BLOCK AND MOUNTING SCREW AT LOWER EDGE OF PERFORATOR MECHANISM BACKPLATE SHALL BE LOCATED CENTRALLY WITHIN THEIR RESPECTIVE MOUNTING HOLES.

NOTE

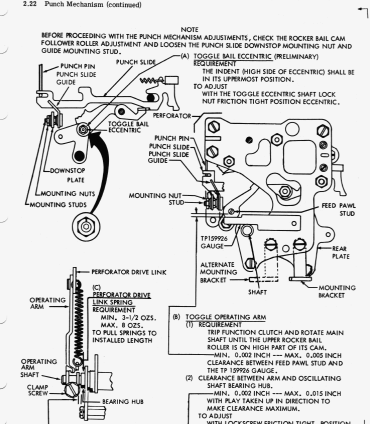
THE MOUNTING HOLES ARE OVERSIZE TO FACILITATE USE OF PERFORATOR MECHANISM ON THE TYPING REPERFORATOR.

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.

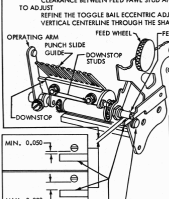


2.22 Punch Mechanism (continued)



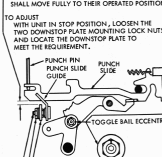
2.23 Punch Mechanism (continued)

(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 TP13990A 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 TP13990A 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.



PERFORATOR POSITION----FINAL

(1) TO CHECK
SELECT RUBOUT CODE COMBINATION (12345678). ROTATE UNTIL FUNCTION CLUTCH TRIPS WITH PUNCH LEVERS IN EXTREME LEFT-HAND POSITION.

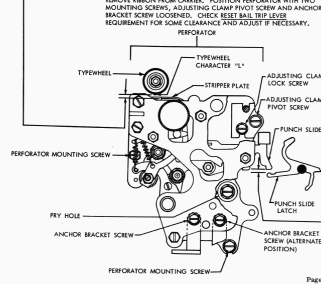
REQUIREMENT
CLEARANCE BETWEEN PUNCH SLIDE AND PUNCH SLIDE LATCH:
MIN. 0.015 INCH----MAX. 0.045 INCH
AT SLIDE WHERE CLEARANCE IS LEAST.

TO ADJUST
LOOSEN PERFORATOR MOUNTING SCREWS, ADJUSTING CLAMP LOCK SCREW, ADJUSTING CLAMP PIVOT SCREW AND ANCHOR BRACKET SCREW UNTIL FRICTION TIGHT. PLACE TIP OF SCREW DRIVER BETWEEN SCREW AND RIM OF PRY HOLE AND PRY PERFORATOR UP OR DOWN. TIGHTEN ONLY ADJUSTING CLAMP LOCK SCREW.

(2) TO CHECK
SELECT "L" CODE COMBINATION (---34---78). TRIP FUNCTION CLUTCH AND MOVE ROCKER BAIL TO EXTREME LEFT.

REQUIREMENT
CLEARANCE BETWEEN STRIPPER PLATE AND TYPEWHEEL CHARACTER "L":
MIN. 0.075 INCH----MAX. 0.085 INCH

TO ADJUST
REMOVE RIBBON FROM CARRIER. POSITION PERFORATOR WITH TWO MOUNTING SCREWS, ADJUSTING CLAMP PIVOT SCREW AND ANCHOR BRACKET SCREW LOOSENED. CHECK RESET BAIL TRIP LEVER REQUIREMENT FOR SOME CLEARANCE AND ADJUST IF NECESSARY.



2.35 Punch Mechanism (continued)

RESET BAIL TRIP LEVER REQUIREMENT

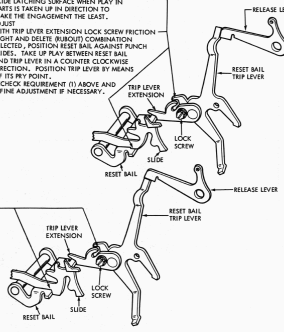
(1) MANUALLY SELECT AN ALL SPACING COMBINATION. MANUALLY ROTATE RESET BAIL TRIP LEVER. THE PUNCH SLIDE RESET BAIL SHALL TRIP BEFORE THE FUNCTION CLUTCH IS TRIPPED.

(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

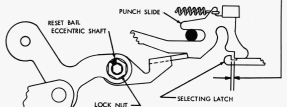
(1) WITH TRIP LEVER EXTENSION LOCK SCREW FRICTION TIGHT AND DELETE (RUBOUT) COMBINATION SELECTED, POSITION RESET BAIL AGAINST PUNCH SLIDES. TAKE UP PLAY BETWEEN RESET BAIL AND TRIP LEVER IN A COUNTER CLOCKWISE DIRECTION. POSITION TRIP LEVER BY MEANS OF ITS PRY POINT.

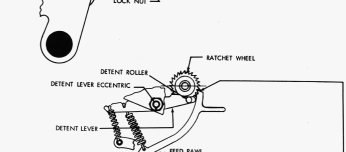
(2) RECHECK REQUIREMENT (1) ABOVE AND REFINE ADJUSTMENT IF NECESSARY.



2.26 Punch Mechanism (continued)

(A) PUNCH SLIDE RESET BAIL
REQUIREMENT
WITH FUNCTION CLUTCH DISENGAGED:
MIN. 0.005 INCH——MAX. 0.015 INCH
BETWEEN PUNCH SLIDE AND PUNCH SLIDE LATCH.
TO ADJUST
ROTATE THE RESET BAIL ECCENTRIC SHAFT WITH ITS LOCK NUT LOOSENED.
KEEP THE INDENTATION IN THE ECCENTRIC ABOVE CENTER OF SHAFT.

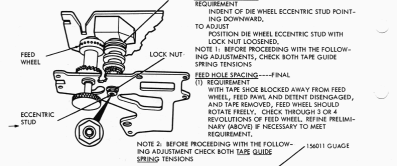




NOTE

THIS ADJUSTMENT IS RELATED TO FEED HOLE SPACING, AND TWO ADJUSTMENTS SHOULD BE MADE AT SAME TIME.

→ 2.37 Punch Mechanism (continued)



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. REFINE PRELIMINARY (ABOVE) IF NECESSARY TO MEET REQUIREMENT.

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 R.BOUT COMBINATION PLACED OVER THE SMOOTH SIDE OF THE 156011 TAPE GAUGE SO THAT 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 PUNCH MECHANISM, LOOSEN ECCENTRIC LOCK NUT AND ROTATE DIE WHEEL ECCENTRIC SHAFT UNTIL IT BINDS AGAINST FEED WHEEL. BACK OFF ECCENTRIC UNTIL DIE WHEEL IS JUST FREE. CHECK THROUGH 3 OR 4 ROTATIONS. KEEP THE INDENT OF 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 A 0.007 INCH VARIATION IN 5 INCHES.

2.28 Punch Mechanism (continued)

(FOR LATEST DESIGN SEE PARAGRAPH 2.29)

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

REQUIREMENT

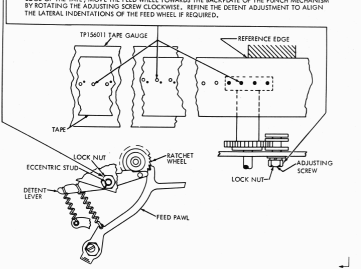
WITH THE REPERFORATOR OPERATING UNDER POWER, OBTAIN A TAPE SAMPLE CONSISTING OF A SERIES OF "SPACE" REPERFORATIONS, BY A VISUAL INSPECTION OF THE REPERFORATED FEED HOLES LATERALLY AND FRONT TO REAR, THE INDENTATIONS OF THE FEED WHEEL SHALL BE FULLY PUNCHED OUT.

TO ADJUST

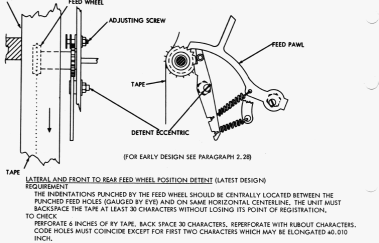
(1) TO MEET THE LATERAL REQUIREMENT, LOOSEN THE DETENT ECCENTRIC STUD LOCK NUT AND ROTATE THE DETENT ECCENTRIC CLOCKWISE TO MOVE THE FEED WHEEL PERFORATIONS TOWARDS THE LEAD EDGE OF THE FEED HOLE AND ROTATE THE DETENT ECCENTRIC COUNTER CLOCKWISE TO MOVE THE FEED WHEEL PERFORATION TOWARDS THE TRAILING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



2.39 Punch Mechanism (continued)



(FOR EARLY DESIGN SEE PARAGRAPH 2.28)

LATERAL AND FRONT TO REAR FEED WHEEL POSITION DETENT (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

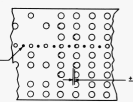
PERFORATE 6 INCHES OF RY TAPE, BACK SPACE 30 CHARACTERS, REPERFORATE WITH RUBOUT CHARACTERS. CODE HOLES MUST COINCIDE EXCEPT FOR FIRST TWO CHARACTERS WHICH MAY BE ELONGATED ±0.010 INCH.

TO ADJUST (LATERALLY)

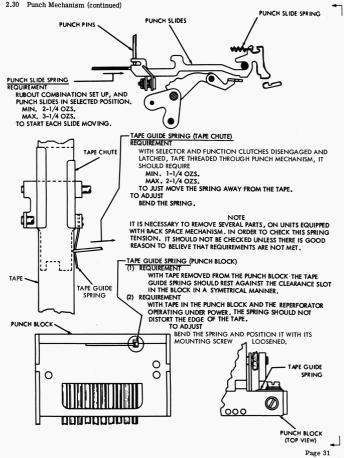
ROTATE DETENT ECCENTRIC CLOCKWISE TO MOVE THE FEED WHEEL PERFORATION TOWARD THE LEADING EDGE OF THE FEED HOLE AND ROTATE ECCENTRIC COUNTERCLOCKWISE TO MOVE THE PERFORATION TOWARD THE TRAILING EDGE OF THE FEED HOLE. TIGHTEN LOCK NUT. REFINE FEED PAWL ADJUSTMENT IF NECESSARY.

TO ADJUST (FRONT TO REAR)

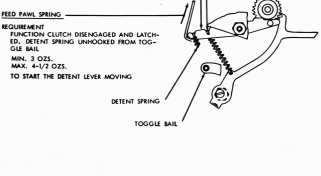
LOOSEN LOCK NUT ON ADJUSTING SCREW AND ROTATE THE SCREW COUNTERCLOCKWISE TO MOVE THE INDENTATIONS IN THE TAPE AWAY FROM THE REFERENCE EDGE (REAR) OF THE TAPE. TO MOVE INDENTATIONS IN THE TAPE TOWARD THE REFERENCE EDGE OF THE TAPE, ROTATE ADJUSTING SCREW CLOCKWISE. REFINE THE DETENT ADJUSTMENT IF NECESSARY.



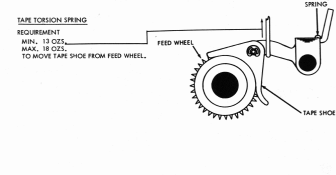
2.30 Punch Mechanism (continued)

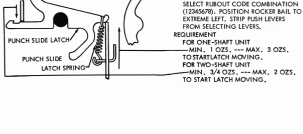


→2.31 Punch Mechanism (continued)

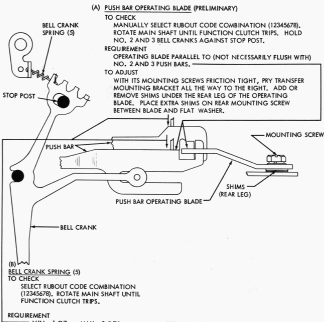


2.32 Punch Mechanism (continued)



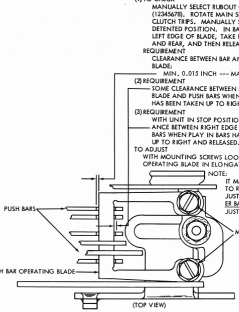


→ 2.33 Typing Mechanism

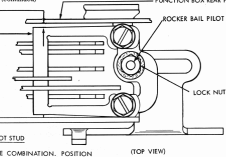


NOTE: THIS ADJUSTMENT IS COMPLETED ON THE FOLLOWING PAGE.

2.34 Typing Mechanism (continued)

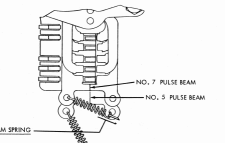


2.35 Typing Mechanism (continued)



(TOP VIEW)

(A) ROCKER BAIL PILOT STUD
TO CHECK
SELECT SPACE COMBINATION. POSITION ROCKER BAIL THROUGH A COMPLETE CYCLE TO INSURE THE CLEARANCE IS A MINIMUM.
REQUIREMENT
CLEARANCE BETWEEN FUNCTION BOX REAR PLATE AND PUSH BAR OPERATING BLADE.
MIN. 0.005 INCH ---- MAX. 0.020 INCH
AT A POINT IN THE CYCLE WHERE PLAY IS TAKEN UP TO MAKE CLEARANCE MINIMUM.
TO ADJUST
POSITION ROCKER BAIL PILOT STUD IN ELONGATED HOLE WITH LOCK NUT LOOSENED.



(TOP VIEW)

2.36 Typing Mechanism (continued)

FUNCTION BOX

REQUIREMENT

WITH LETTERS (RUBOUT) PUSH BAR TO EXTREME RIGHT AND FULLY DETENTED, RUBOUT CODE (12345678) SELECTED, PUNCH SLIDES DISENGAGED AND FUNCTION CLUTCHED TRIPPED, ELIMINATE PLAY IN DOWNWARD DIRECTION, THEN RELEASE, KEEP OPERATING BLADE PARALLEL WITH NO. 2 AND NO. 3 PUSH BARS AND TAKE-UP FUNCTION BOX PLAY IN A CLOCKWISE DIRECTION. THE TOP OF THE OPERATING BLADE SHALL BE

MIN. FLUSH --- MAX. 0.020 INCH

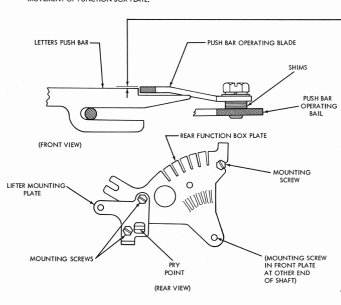
ABOVE TOP RUBOUT PUSH BARS.

TO ADJUST

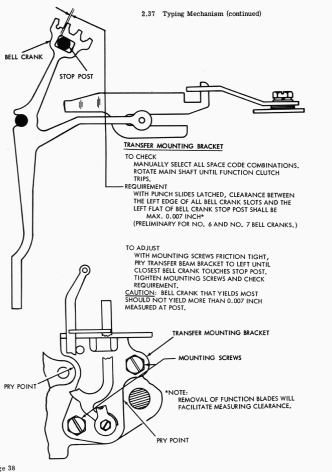
(1) LOOSEN TWO SCREWS MOUNTING FUNCTION BOX TO FRONT PLATE SPACER POSTS
(2) USING PRY POINT, ROTATE ENTIRE FUNCTION BOX.
(3) TAKE UP SPACER POST PLAY TO RIGHT AND TIGHTEN SCREWS.

TO CHECK

(1) FUNCTION BOX SHALL BE FREE TO ROTATE AT LEAST 0.010 INCH IN ITS MOUNTING AS MEASURED AT LIFTER MOUNTING PLATE SHOULDER SCREWS.
(2) SELECT ALL MARKING CODE COMBINATIONS, TRIP FUNCTION CLUTCH AND CHECK FOR FREE MOVEMENT OF FUNCTION BOX PLATE.



2.37 Typing Mechanism (continued)

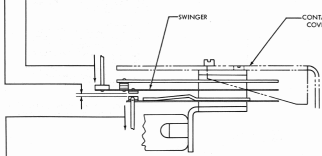


2.38 Ribbon Shift and Print Suppression Mechanism

NOTE: REFER TO VARIABLE FEATURES (PARAGRAPH 3) FOR ADDITIONAL ADJUSTMENTS APPLYING TO PRINT SUPPRESSION ONLY.

RIBBON SHIFT AND PRINT SUPPRESSION CONTACTS

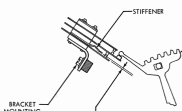
REQUIREMENT
DISCONNECT ALL POWER FROM UNIT. REMOVE CONTACT ASSEMBLY FROM FUNCTION BOX.
(1) CLEARANCE BETWEEN SWINGER CONTACT POINTS AND NORMALLY OPEN CONTACT POINTS SHALL BE
—MIN. 0.015 INCH—MAX. 0.020 INCH.
(2) IT SHALL TAKE
—MIN. 2 OZS. —MAX. 3 OZS.
TO START SWINGER MOVING



(3) IT SHALL TAKE
—MIN. 2 OZS. —MAX. 3 OZS.
TO START NORMALLY OPEN CONTACT MOVING.

TO ADJUST
REMOVE COVER AND REPLACE COVER SCREWS. BEND CONTACTS WITH CONTACT ADJUSTING TOOL.

2.39 Ribbon Shift and Print Suppression Mechanism (continued)



RIBBON SHIFT AND PRINT SUPPRESSION CONTACT POSITION

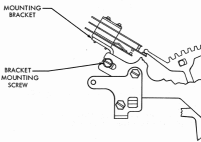
REQUIREMENT

MANUALLY SELECT ALL SPACING COMBINATION (--------) AND TRIP FUNCTION CLUTCH, TAKE UP FUNCTION BOX PLAY IN CLOCKWISE DIRECTION.

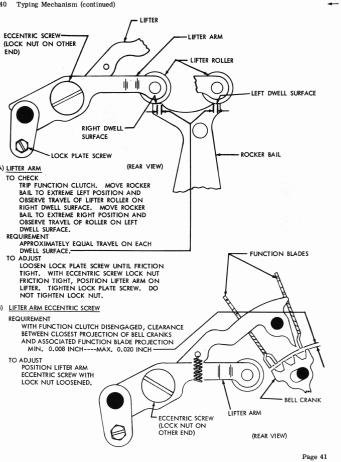
----MIN., SOME----MAX., 0.004 INCH CLEARANCE BETWEEN SPACING CONTACT AND STIFFENER.

TO ADJUST

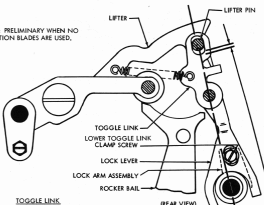
POSITION CONTACT MOUNTING BRACKET WITH ITS MOUNTING SCREWS LOOSENED.



2.40 Typing Mechanism (continued)



→ 2.41 Typing Mechanism (continued)



→ NOTE: PRELIMINARY WHEN NO FUNCTION BLADES ARE USED.

→ TOGGLE LINK

REQUIREMENT

(1) WITH RUBOUT CODE COMBINATION (12345678) SELECTED AND ROCKER RAIL TO EXTREME LEFT, TOGGLE LINKAGE SHOULD MOVE THROUGH POINT WHERE TOGGLE LINK AND LOCK LEVER ARE IN STRAIGHT LINE WITHOUT RAISING LIFTER.

(2) WITH TOGGLE LINK AND LOCK LEVER IN STRAIGHT LINE, CLEARANCE BETWEEN TOGGLE LINK AND LIFTER PIN MIN. SOME-----MAX. 0.015 INCH.

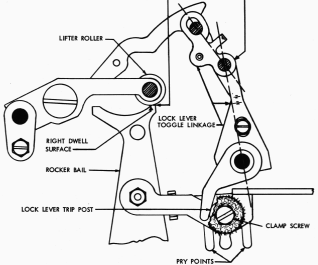
→ TO ADJUST

POSITION TOGGLE LINK ON LOCK ARM ASSEMBLY WITH CLAMP SCREW FRICTION TIGHT.

NOTE

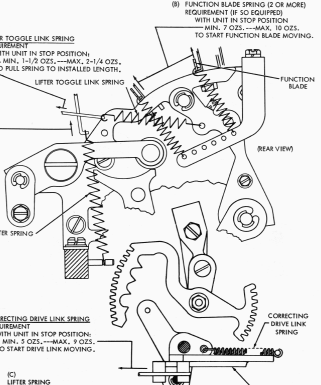
TO AVOID INTERFERENCE WITH LOCK LEVER, IT MAY BE NECESSARY TO MOVE HIGH PART OF CORRECTING DRIVE LINK ECCENTRIC BEARING ABOVE HORIZONTAL CENTER LINE.

2.42 Typing Mechanism (continued)



(REAR VIEW)

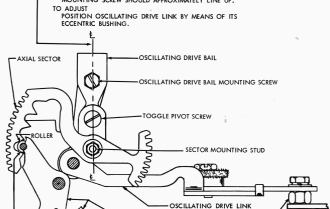
2.43 Typing Mechanism (continued)



2.44 Typing Mechanism (continued)

(A) OSCILLATING DRIVE LINK

TO CHECK
POSITION ROCKER BAIL TO ITS EXTREME LEFT.
REQUIREMENT
SECTOR MOUNTING STUD, TOGGLE PIVOT SCREW AND OSCILLATING DRIVE BAIL MOUNTING SCREW SHOULD APPROXIMATELY LINE UP.
TO ADJUST
POSITION OSCILLATING DRIVE LINK BY MEANS OF ITS ECCENTRIC BUSHING.



(B)

AXIAL CORRECTOR (NON-YIELDING)

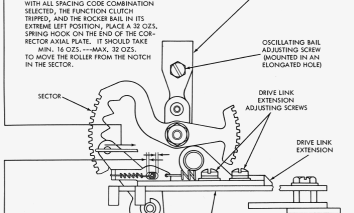
TO CHECK
MANUALLY SELECT ALL SPACING CODE COMBINATIONS. ROTATE MAIN SHAFT UNTIL ROCKER BAIL IS TO EXTREME LEFT.
REQUIREMENT
ROLLER ON AXIAL CORRECTING PLATE SEATED FIRMLY IN CENTER OF FIRST NOTCH OF AXIAL SECTOR.

TO ADJUST
(1) LOOSEN DRIVE LINK ADJUSTING SCREWS. FIRMLY SEAT AXIAL CORRECTOR ROLLER INTO FIRST NOTCH OF SECTOR BY MANUALLY APPLYING AND HOLDING THIS POSITION FOR NEXT PART OF ADJUSTMENT.
(2) APPLY MANUAL PRESSURE ON DRIVE LINK TO BOTTOM ITS SLOT AGAINST ROCKER BAIL BUSHING.
(3) MAINTAIN PRESSURE AT THESE TWO PLACES, TIGHTEN ADJUSTING SCREWS.

2.45 Typing Mechanism (continued)

CORRECTOR DRIVE LINK (YIELDING) EXTENSION SPRING TENSION

REQUIREMENT
WITH ALL SPACING CODE COMBINATION SELECTED, THE FUNCTION CLUTCH TRIPPED, AND THE ROCKER BAIL IN ITS EXTREME LEFT POSITION, PLACE A 32 OZS. SPRING HOOK ON THE END OF THE CORRECTOR AXIAL PLATE. IT SHOULD TAKE
MIN. 16 OZS. ----MAX. 32 OZS.
TO MOVE THE ROLLER FROM THE NOTCH IN THE SECTOR.

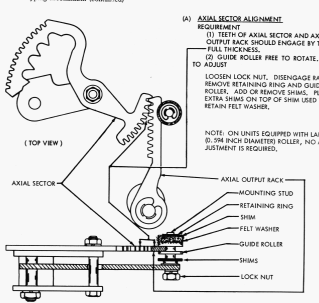


AXIAL CORRECTOR (YIELDING)

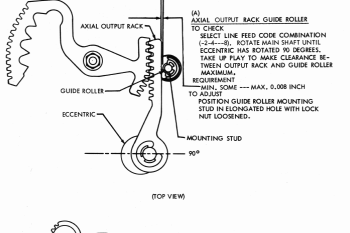
REQUIREMENT
WITH ALL SPACING CODE COMBINATION SELECTED, FUNCTION CLUTCH TRIPPED AND ROCKER BAIL IN ITS EXTREME LEFT POSITION, THE AXIAL CORRECTOR ROLLER SHOULD SEAT IN THE FIRST SECTOR NOTCH AND THERE SHOULD BE
MIN. 0.005 INCH
BETWEEN THE ENDS OF THE SLOT AND THE SPRING POST. CHECK BOTH SIDES AND CHECK SEATING IN FOURTH NOTCH (LETTERS SELECTION). TURN THE RETAINING RING THAT FASTENS THE DRIVE LINK EXTENSION TO THE CORRECTOR PLATE TO CHECK THE MINIMUM REQUIREMENT.

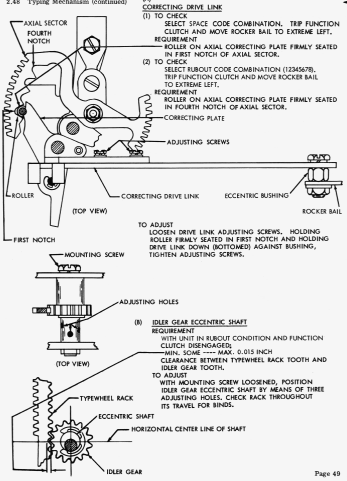
TO ADJUST
LOOSEN TWO DRIVE LINK ADJUSTING SCREWS. POSITION DRIVE LINK TO MEET THE REQUIREMENT AND RETIGHTEN THE SCREWS.

2.46 Typing Mechanism (continued)



→ 2.47 Typing Mechanism (continued)



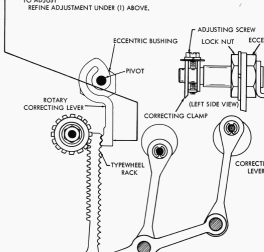

(A)
CORRECTING DRIVE LINK
(1) TO CHECK
SELECT SPACE CODE COMBINATION, TRIP FUNCTION CLUTCH AND MOVE ROCKER BAIL TO EXTREME LEFT.
REQUIREMENT
ROLLER ON AXIAL CORRECTING PLATE FIRMLY SEATED IN FIRST NOTCH OF AXIAL SECTOR.
(2) TO CHECK
SELECT RUBOUT CODE COMBINATION (12345678). TRIP FUNCTION CLUTCH AND MOVE ROCKER BAIL TO EXTREME LEFT.
REQUIREMENT
ROLLER ON AXIAL CORRECTING PLATE FIRMLY SEATED IN FOURTH NOTCH OF AXIAL SECTOR.
AXIAL SECTOR
FOURTH NOTCH
CORRECTING PLATE
ADJUSTING SCREWS
ROLLER
CORRECTING DRIVE LINK
ECCENTRIC BUSHING
ROCKER BAIL
(TOP VIEW)
FIRST NOTCH
TO ADJUST
LOOSEN DRIVE LINK ADJUSTING SCREWS. HOLDING ROLLER FIRMLY SEATED IN FIRST NOTCH AND HOLDING DRIVE LINK DOWN (BOTTOMED) AGAINST BUSHING, TIGHTEN ADJUSTING SCREWS.
MOUNTING SCREW
ADJUSTING HOLES
(TOP VIEW)
(B) IDLER GEAR ECCENTRIC SHAFT
REQUIREMENT
WITH UNIT IN RUBOUT CONDITION AND FUNCTION CLUTCH DISENGAGED;
MIN. SOME ---- MAX. 0.015 INCH
CLEARANCE BETWEEN TYPEWHEEL RACK TOOTH AND IDLER GEAR TOOTH.
TO ADJUST
WITH MOUNTING SCREW LOOSENED, POSITION IDLER GEAR ECCENTRIC SHAFT BY MEANS OF THREE ADJUSTING HOLES. CHECK RACK THROUGHOUT ITS TRAVEL FOR BINDS.
TYPEWHEEL RACK
ECCENTRIC SHAFT
HORIZONTAL CENTER LINE OF SHAFT
IDLER GEAR

→2.49 Typing Mechanism (continued)

ROTARY CORRECTING LEVER

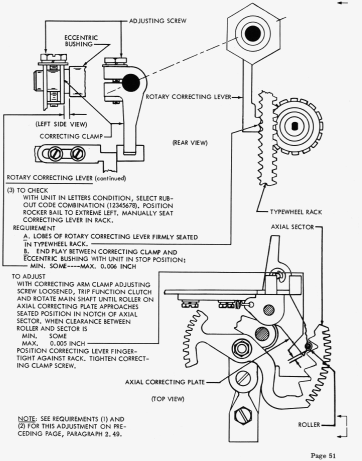
(1) TO CHECK
LOOSEN CORRECTING CLAMP ADJUSTING SCREW. WITH UNIT IN FIGURES CONDITION SELECT "X" CODE COMBINATION (---45-78). TRIP FUNCTION CLUTCH AND POSITION ROCKER BAIL TO EXTREME LEFT, MANUALLY SEAT ROTARY CORRECTING LEVER IN TYPEWHEEL RACK.
REQUIREMENT
SECOND TOOTH FROM TOP OF RACK SEATED BETWEEN LOBES OF CORRECTING LEVER.
TO ADJUST
LOOSEN ECCENTRIC BUSHING LOCK NUT. WITH CLAMP ADJUSTING SCREW LOOSENED AND CORRECTING LEVER PIVOT TO RIGHT OF CENTER LINE, POSITION CORRECTING LEVER. TIGHTEN BUSHING LOCK NUT. DO NOT TIGHTEN CLAMP ADJUSTING SCREW AT THIS TIME.

(2) TO CHECK
IN A MANNER SIMILAR TO THAT DESCRIBED ABOVE, CHECK ENGAGEMENT OF FIFTH TOOTH (---34---78) , NINTH TOOTH (---4---8) AND SIXTEENTH TOOTH (---3-5---8).
TO ADJUST
REFINE ADJUSTMENT UNDER (1) ABOVE.



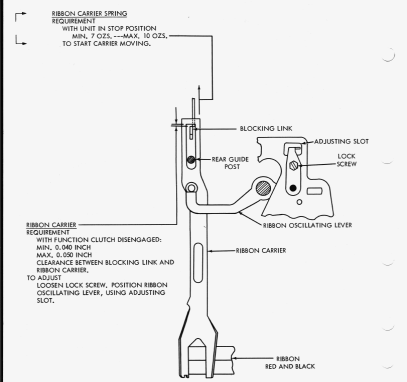
NOTE: THIS ADJUSTMENT CONTINUED ON FOLLOWING PAGE. SEE REQUIREMENT (3) PARAGRAPH 2.50.

2.50 Typing Mechanism (continued)



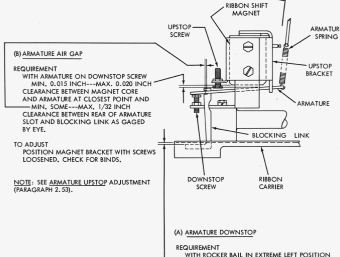
NOTE: SEE REQUIREMENTS (1) AND (2) FOR THIS ADJUSTMENT ON PRECEDING PAGE, PARAGRAPH 2.49.

→2.51 Ribbon Shift and Print Suppression Mechanism (continued)



2.52 Ribbon Shift and Print Suppression Mechanism (continued)

NOTE: REFER TO VARIABLE FEATURES (PARAGRAPH 3) FOR ADDITIONAL PRINT SUPPRESSION ADJUSTMENTS.



2.53 Ribbon Shift and Print Suppression Mechanism (continued)

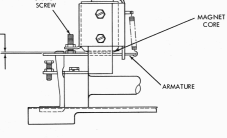
NOTE: REFER TO VARIABLE FEATURES (PARAGRAPH 3) FOR ADDITIONAL PRINT SUPPRESSION ADJUSTMENTS.

NOTE: THIS ADJUSTMENT IS TO BE PRECEDED BY ARMATURE DOWNSTOP AND ARMATURE AIR GAP ADJUSTMENTS (PARAGRAPH 2.52).

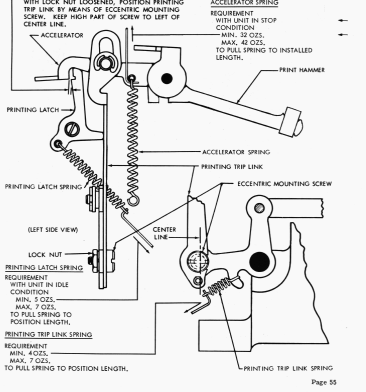
ARMATURE UPSTOP

REQUIREMENT
WITH ARMATURE HELD AGAINST UPSTOP SCREW (MAGNET IS NOT TO BE ENERGIZED)
MIN. 0.004 INCH---MAX. 0.007 INCH CLEARANCE BETWEEN MAGNET CORE AND ARMATURE AT CLOSEST POINT.

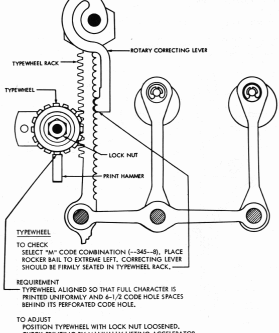
TO ADJUST
POSITION UPSTOP SCREW WITH LOCK NUT LOOSENED.



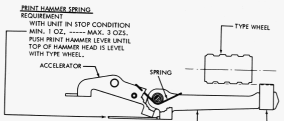
2.54 Typing Mechanism (continued)

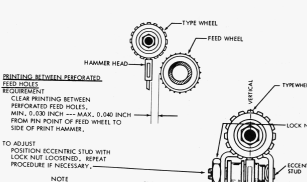


→ 2.55 Typing Mechanism (continued)

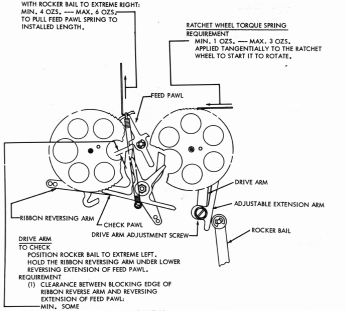


2.56 Typing Mechanism (continued)

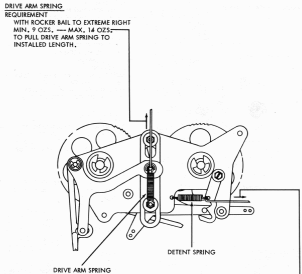




→ 2.57 Typing Mechanism (continued)



2.58 Typing Mechanism (continued)

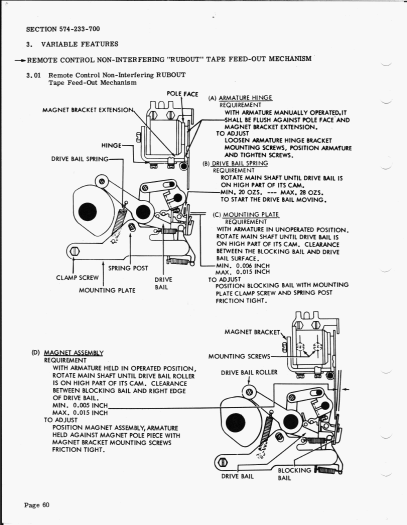


SECTION 574-233-700

3. VARIABLE FEATURES

→REMOTE CONTROL NON-INTERFERING "RUBOUT" TAPE FEED-OUT MECHANISM

3.01 Remote Control Non-Interfering RUBOUT Tape Feed-Out Mechanism



3.02 Remote Control Non-Interfering
BUBOUT Tape Feed-Out Mechanism (continued)

(A)
BLOCKING LATCH TORSION SPRING
REQUIREMENT
WITH ARMATURE IN UNOPERATED POSITION AND DRIVE BAIL ROLLER ON HIGH PART OF ITS CAM.
MIN. 15 OZ. ---MAX. 40 OZS.
TO START BLOCKING LATCH MOVING.

PRY POINT
CLAMP SCREWS
DRIVE BAIL ROLLER
BLOCKING LATCH
BLOCKING BAIL
NON-REPEAT LEVER SPRING

(B)
ARMATURE BACKSTOP
REQUIREMENT
WITH ARMATURE IN UNOPERATED POSITION, ROTATE MAIN SHAFT UNTIL DRIVE BAIL ROLLER IS ON HIGH PART OF ITS CAM.
BLOCKING BAIL SHALL FULLY ENGAGE THE DRIVE BAIL.
TO ADJUST
WITH THE ARMATURE BACKSTOP MOUNTING SCREWS FRICTION TIGHT, POSITION BY MEANS OF PRY POINT.

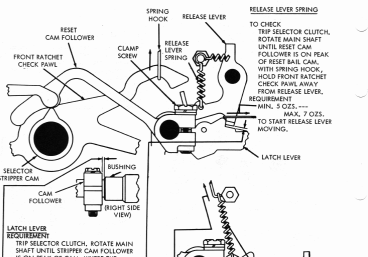
LATCH LEVER
ARMATURE
CLAMP SCREW
DRIVE BAIL ROLLER
RELEASE LEVER

(C)
NON-REPEAT LEVER SPRING
REQUIREMENT
WITH ARMATURE IN UNOPERATED POSITION AND DRIVE BAIL ROLLER ON HIGH PART OF ITS CAM
MIN. 6 OZS. --- MAX. 9 OZS.
TO PULL SPRING TO INSTALLED LENGTH.

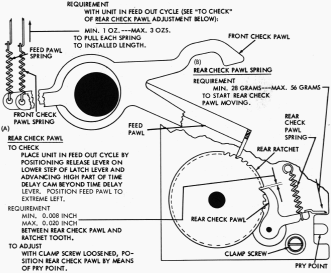
(D)
BLOCKING BAIL SPRING
REQUIREMENT
WITH ARMATURE IN UNOPERATED POSITION AND DRIVE BAIL ROLLER ON HIGH PART OF ITS CAM.
MIN. 3 OZS. --- MAX. 5 OZS.
TO PULL SPRING TO INSTALLED LENGTH.

(E)
RELEASE LEVER
REQUIREMENT
WITH ARMATURE IN OPERATED POSITION, ROTATE MAIN SHAFT UNTIL DRIVE BAIL ROLLER IS IN-DENT OF ITS CAM. CLEARANCE BETWEEN RELEASE LEVER AND LATCH LEVER.
MIN. 0.010 INCH
MAX. 0.025 INCH
TO ADJUST
WITH CLAMP SCREW FRICTION TIGHT POSITION RELEASE LEVER.

→3.03 Remote Control Non-Interfering
BUBOUT Tape Feed-Out Mechanism (continued)



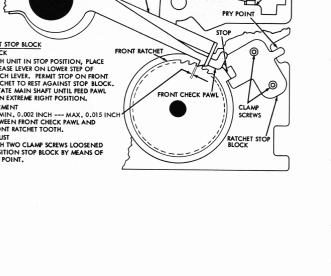
3.04 Remote Control Non-Interfering
RUBOUT Tape Feed-Out Mechanism (continued)



NOTE: PROCEED TO RATCHET STOP BLOCK ADJUSTMENT (PARAGRAPH 3.05).

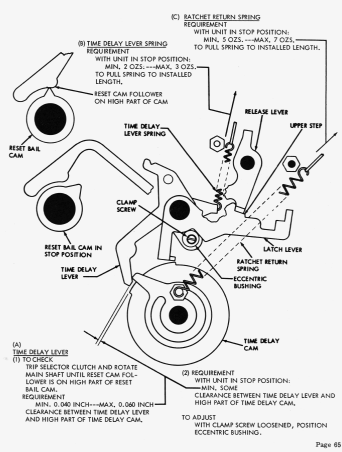
→3.05 Remote Control Non-Interfering
RUBOUT Tape Feed-Out Mechanism (continued)

NOTE: SEE REAR CHECK PAWL ADJUSTMENT (PARAGRAPH 3.04) BEFORE MAKING THIS ADJUSTMENT.



RATCHET STOP BLOCK
TO CHECK
WITH UNIT IN STOP POSITION, PLACE RELEASE LEVER ON LOWER STEP OF LATCH LEVER. PERMIT STOP ON FRONT RATCHET TO REST AGAINST STOP BLOCK. ROTATE MAIN SHAFT UNTIL FEED PAWL IS IN EXTREME RIGHT POSITION.
REQUIREMENT
MIN., 0.002 INCH — MAX., 0.015 INCH BETWEEN FRONT CHECK PAWL AND FRONT RATCHET TOOTH.
TO ADJUST
WITH TWO CLAMP SCREWS LOOSENED POSITION STOP BLOCK BY MEANS OF PRY POINT.

→3.06 Remote Control Non-Interfering
BUBOUT Tape Feed-Out Mechanism (continued)

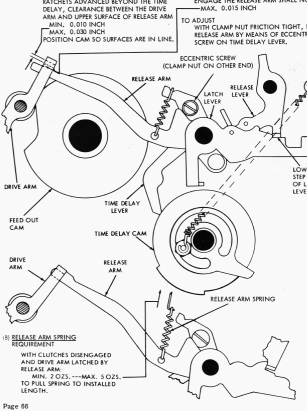


→3.07 Remote Control Non-Interfering
BUBOUT Tape Feed-Out Mechanism (continued)

(A) RELEASE ARM
(1) REQUIREMENT
WITH UNIT IN THE FEED-OUT CYCLE, RATCHETS ADVANCED BEYOND THE TIME DELAY, CLEARANCE BETWEEN THE DRIVE ARM AND UPPER SURFACE OF RELEASE ARM
MIN. 0.010 INCH
MAX. 0.030 INCH
POSITION CAM SO SURFACES ARE IN LINE.

(2) REQUIREMENT
WITH UNIT IN STOP POSITION THE SURFACE OF THE DRIVE ARM BAIL THAT DOES NOT ENGAGE THE RELEASE ARM SHALL NOT EXCEED
MAX. 0.015 INCH

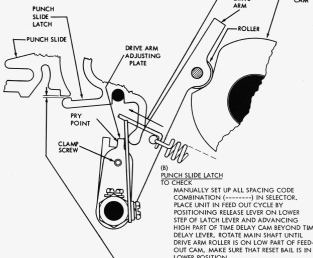
TO ADJUST
WITH CLAMP NUT FRICTION TIGHT, POSITION RELEASE ARM BY MEANS OF ECCENTRIC SCREW ON TIME DELAY LEVER.



(B) RELEASE ARM SPRING
REQUIREMENT
WITH CLUTCHES DISENGAGED AND DRIVE ARM LATCHED BY RELEASE ARM:
MIN. 2 OZS. —MAX. 5 OZS.
TO FULL SPRING TO INSTALLED LENGTH.

3.08 Remote Control Non-Interfering
RUBOUT Tape Feed-Out Mechanism (continued)

(A) DRIVE ARM SPRING
REQUIREMENT
WITH UNIT IN FEED-OUT CYCLE AND DRIVE ARM ROLLER HELD FIRMLY AGAINST ITS CAM INDENT, MIN. 42 OZS.---MAX. 50 OZS. TO PULL SPRING TO INSTALLED LENGTH.



(B)
PUNCH SLIDE LATCH
TO CHECK
MANUALLY SET UP ALL SPACING CODE COMBINATION (-------) IN SELECTOR. PLACE UNIT IN FEED OUT CYCLE BY POSITIONING RELEASE LEVER ON LOWER STEP OF LATCH LEVER AND ADVANCING HIGH PART OF TIME DELAY CAM BEYOND TIME DELAY LEVER. ROTATE MAIN SHAFT UNTIL DRIVE ARM ROLLER IS ON LOW PART OF FEED-OUT CAM. MAKE SURE THAT RESET BAIL IS IN LOWER POSITION.
REQUIREMENT
MIN. 0.040 INCH---MAX. 0.055 INCH BETWEEN PUNCH SLIDE AND PUNCH SLIDE LATCH AT SLIDE WHERE CLEARANCE IS LEAST.
TO ADJUST
WITH CLAMP SCREW LOOSENED, POSITION DRIVE ARM ADJUSTING PLATE BY MEANS OF PRY POINT.

3.09 Remote Control Non-Interfering
SUBOUT Tape Feed-Out Mechanism (continued)

(B) ADJUSTING LEVER TO CHECK

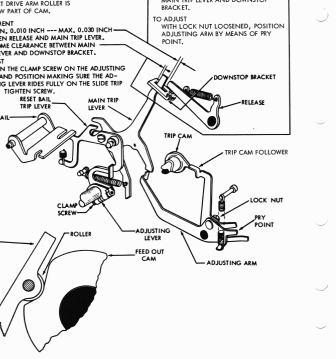
PLACE UNIT IN FEED OUT CYCLE BY POSITIONING RELEASE LEVER ON LOWER STEP OF LATCH LEVER AND ADVANCING HIGH PART OF TIME DELAY CAM BEYOND TIME DELAY LEVER. POSITION MAIN SHAFT SO THAT DRIVE ARM ROLLER IS ON LOW PART OF CAM.

REQUIREMENT
(1) MIN. 0.010 INCH --- MAX. 0.030 INCH BETWEEN RELEASE AND MAIN TRIP LEVER.
(2) SOME CLEARANCE BETWEEN MAIN TRIP LEVER AND DOWNSTOP BRACKET.

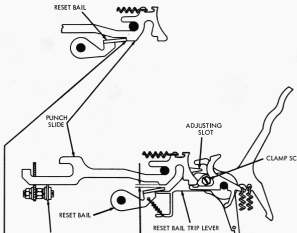
TO ADJUST
LOOSEN THE CLAMP SCREW ON THE ADJUSTING LEVER AND POSITION MAKING SURE THE ADJUSTING LEVER RIDES FULLY ON THE SLIDE TRIP LEVER. TIGHTEN SCREW.

(A) TRIP CAM FOLLOWER REQUIREMENT
WITH FOLLOWER LEVER ON HIGH PART OF TRIP CAM:
(1) MIN. 0.010 INCH---MAX. 0.030 INCH BETWEEN RELEASE AND MAIN TRIP LEVER.
(2) SOME CLEARANCE BETWEEN MAIN TRIP LEVER AND DOWNSTOP BRACKET.

TO ADJUST
WITH LOCK NUT LOOSENED, POSITION ADJUSTING ARM BY MEANS OF PRY POINT.



3.10 Remote Control Non-Interfering RUBOUT Tape Feed-Out Mechanism (continued)



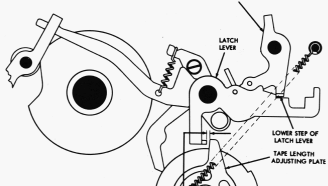
RESET BAIL TRIP LEVER

(1) TO CHECK
SELECT RUBOUT CODE COMBINATION (12345678). ROTATE MAIN SHAFT UNTIL FUNCTION CLUTCH TRIPS. POSITION PUNCH SLIDES AGAINST DOWNSTOP. TRIP CAM FOLLOWER ON HIGH PART OF CAM.
REQUIREMENT
MIN. 0.008 INCH---MAX. 0.020 INCH BETWEEN PUNCH SLIDE AND RESET BAIL.

(2) REQUIREMENT
WITH CLUTCHES FULLY DISENGAGED AND LATCHED, RESET BAIL SHOULD FULLY ENGAGE NOTCHES IN PUNCH SLIDES.

TO ADJUST
WITH CLAMP SCREW LOOSENED, POSITION RESET BAIL TRIP LEVER BY MEANS OF ADJUSTING SLOT.

→ 3.11 Remote Control Non-Interfering
RUBOUT Tape Feed-Out Mechanism (continued)



TAPE LENGTH ADJUSTING PLATE

NOTE

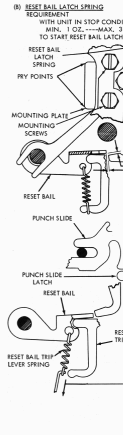
AMOUNT OF TAPE FED OUT CAN BE SET FOR ANY LENGTH UP TO 18 INCHES.

(1) REQUIREMENT
PLACE UNIT IN FEED OUT CYCLE BY POSITIONING RELEASE LEVER ON LOWER STEP OF LATCH LEVER; MANUALLY ADVANCE RATCHETS SO THAT PRONT RATCHET IS IN THE TOOTH PRECEDING TRIP OFF. ROTATE MAIN SHAFT UNTIL FEED PAWL IS IN THE EXTREME LEFT POSITION. CLEARANCE BETWEEN ADJUSTING PLATE AND LATCH LEVER PROJECTION: MIN., 0.002 INCH
MAX., 0.020 INCH

(2) REQUIREMENT
WHEN OPERATING UNDER POWER, UNIT SHOULD FEED OUT CORRECT LENGTH OF TAPE.

TO ADJUST
WITH SPRING POST FRICTION TIGHT, POSITION ADJUSTING PLATE.

3.12 Remote Control Non-interfering
RUBOUT Tape Feed-Out Mechanism (continued)



(A) RESET BAIL LATCH
TO CHECK
(VERTICAL CLEARANCE) SELECT RUBOUT CODE COMBINATION (12345678). ROTATE MAIN SHAFT UNTIL FUNCTION CLUTCH TRIPS AND PUNCH SLIDES ARE TO EXTREME LEFT. MANUALLY SET UP ALL SPACING CODE COMBINATION (--------) IN SELECTOR. ROTATE MAIN SHAFT UNTIL PUNCH SLIDES ARE JUST LATCHED.

(1) REQUIREMENT
----MIN. 0.008 INCH----MAX. 0.020 INCH BETWEEN RESET BAIL AND RESET BAIL LATCH.
TO ADJUST
WITH MOUNTING SCREWS LOOSENED, POSITION MOUNTING PLATE BY MEANS OF PRY POINTS.

(2) REQUIREMENT (HORIZONTAL CLEARANCE) WITH CLUTCHES DISENGAGED,
----MIN. 0.003 INCH----MAX. 0.020 INCH BETWEEN RESET BAIL AND RESET BAIL LATCH.
TO ADJUST
POSITION RESET BAIL SO THAT APPROX. HALF ITS THICKNESS IS BELOW TOP SURFACE OF ITS LATCH. WITH CLAMP SCREW LOOSENED, POSITION RESET BAIL LATCH BY MEANS OF PRY POINT.

(3) TO CHECK
SELECT RUBOUT CODE COMBINATION (12345678). ROTATE MAIN SHAFT UNTIL FUNCTION CLUTCH TRIPS. MANUALLY SET UP ALL SPACING CODE COMBINATION (--------). ROTATE MAIN SHAFT TO STOP POSITION.

REQUIREMENT
PUNCH SLIDES LATCHED BY PUNCH SLIDE LATCHES.

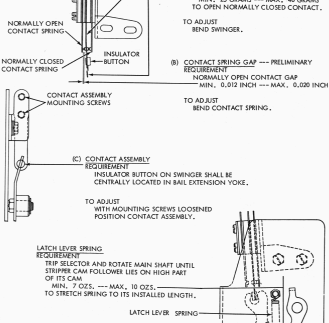
TO ADJUST
REFINE (1) AND (2) ABOVE.

(C) RESET BAIL TRIP LEVER SPRING
TO CHECK
DISENGAGE BOTH CLUTCHES. TRIP FUNCTION CLUTCH BY PIVOTING MAIN TRIP LEVER COUNTERCLOCKWISE. HOLD RESET BAIL TRIP LEVER UP AGAINST RESET BAIL.

REQUIREMENT
----MIN. 18 OZS. ----MAX. 24.OZS.
TO PULL SPRING TO INSTALLED LENGTH.

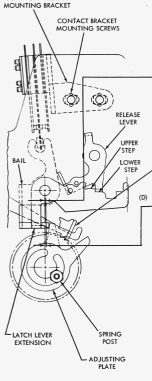
TIMING CONTACTS

3. 13 End of Feed-Out Contacts for Non-Interfering RUBOUT Tape Feed-Out Mechanism.



3.14 End of Feed-Out Contacts for Non-Interfering RUBOUT Tape Feed-Out Mechanism (continued)

NOTE: SEE PRELIMINARY CONTACT ADJUSTMENTS, PARAGRAPH 3.13.



(E) TAPE LENGTH ADJUSTING PLATE

(1) REQUIREMENT
WITH UNIT IN STOP POSITION AND RELEASE LEVER ON LOWER STEP OF LATCH LEVER, MANUALLY ADVANCE RATCHET SO THAT FEED PAWL IS IN THE FRONT TOOTH PRECEDING TRIP OFF (NOT IN DEEP TOOTH OF REAR RATCHET). HOLD BAIL LIGHTLY AGAINST LATCH LEVER EXTENSION.
MIN 0.002 INCH --- MAX 0.020 INCH CLEARANCE BETWEEN ADJUSTING PLATE AND BAIL.

(2) REQUIREMENT
WHEN OPERATING UNDER POWER, UNIT SHOULD FEED-OUT CORRECT LENGTH OF TAPE.

TO ADJUST
POSITION ADJUSTING PLATE WITH SPRING POST LOOSENED.

FEED PAWL IN EXTREME LEFT POSITION AND ADJUSTING PLATE IN DOTTED POSITION FOR ADJUSTMENT (B) ONLY.

(D) CONTACT ASSEMBLY MOUNTING BRACKET REQUIREMENTS
UNIT IN STOP POSITION

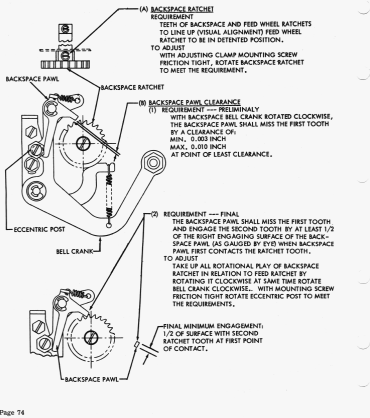
(1) WHEN NORMALLY OPEN CONTACTS ARE USED AND RELEASE LEVER IS ABOVE LOWER STEP OF LATCH LEVER
MIN. 0.005 INCH
OVERTRAVEL OF SWINGER AFTER IT MAKES CONTACT WITH NORMALLY OPEN CONTACT.

(2) WHEN NORMALLY CLOSED CONTACTS ARE USED AND RELEASE LEVER IS ON UPPER STEP OF LATCH LEVER, THE NORMALLY CLOSED CONTACTS SHOULD BE CLOSED AND BAIL SHOULD NOT EXERT ANY FORCE AGAINST SWINGER INSULATOR BUTTON.

TO ADJUST
POSITION CONTACTS WITH BRACKET MOUNTING SCREWS LOOSENED.

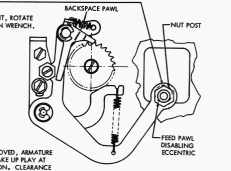
POWER DRIVE BACKSPACE MECHANISM

3.15 Power Drive Backspace Mechanism



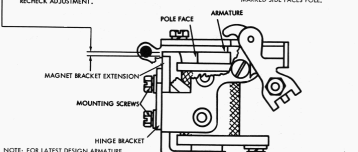
3.16 Power Drive Backspace Mechanism (continued)

(A) FEED PAWL DISABLING
REQUIREMENT
WHEN BELL CRANK IS IN OPERATED POSITION HIGH SIDE OF FEED PAWL DISABLING ECCENTRIC SHOULD BE IN UPPERMOST POSITION.
TO ADJUST
WITH NUT POST FRICTION TIGHT, ROTATE ECCENTRIC WITH A 0.060" ALLEN WRENCH.



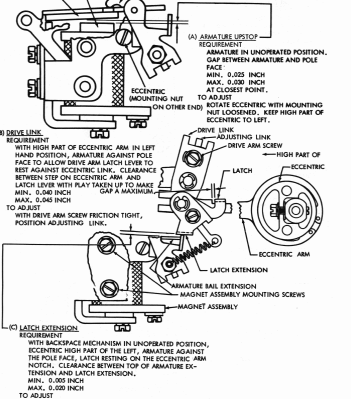
(B) ARMATURE HINGE (EARLY DESIGN)
REQUIREMENT
WITH ARMATURE BAIL SPRING REMOVED, ARMATURE HELD AGAINST THE POLE FACE, TAKE UP PLAY AT HINGE IN A DOWNWARD DIRECTION. CLEARANCE BETWEEN THE ARMATURE AND MAGNET BRACKET, MIN., SOME
MAX., 0.004 INCH
TO ADJUST
WITH HINGE MOUNTING SCREWS FRICTION TIGHT, POSITION HINGE. ARMATURE SHOULD TOUCH FRONT AND REAR OF POLE FACE. TIGHTEN SCREWS AND RECHECK ADJUSTMENT.

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

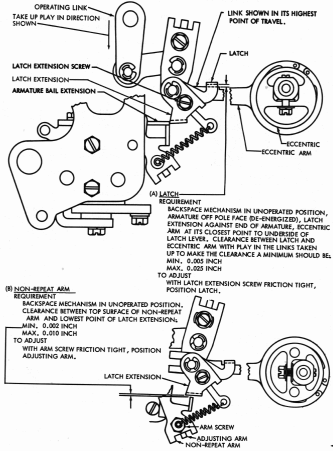


NOTE: FOR LATEST DESIGN ARMATURE ADJUSTMENTS SEE PARAGRAPH 3.19.

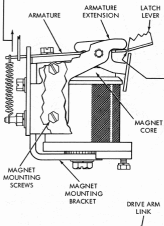
3.17 Power Drive Backspace Mechanism (continued)



3.18 Power Drive Backspace Mechanism (continued)



3.19 Power Drive Backspace Mechanism (continued)



NOTE: FOR EARLY DESIGN ADJUSTABLE MAGNET ASSEMBLY SEE PARAGRAPH 3.16.

ARMATURE SPRING (LATEST DESIGN)

REQUIREMENT
MIN. 13 OZS., ---MAX. 20 OZS.
TO PULL SPRING TO INSTALLED LENGTH.

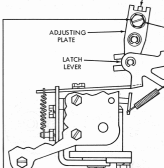
(A) MAGNET POSITION (LATEST DESIGN)

REQUIREMENT
MAGNET DEENERGIZED, ARMATURE EXTENSION SHOULD ENGAGE LATCH BY APPROXIMATELY ITS FULL THICKNESS.

TO ADJUST
POSITION MAGNET MOUNTING BRACKET BY LOOSENING TWO MOUNTING SCREWS.

(B) FINAL POWER ADJUSTMENT (LATEST DESIGN)

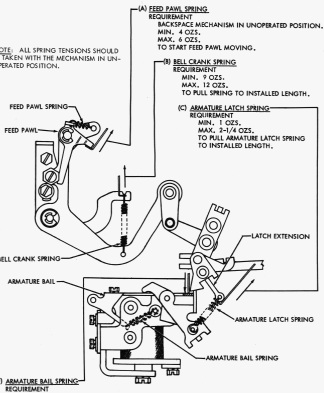
REQUIREMENT
UNIT OPERATING UNDER POWER, TAPE IN PUNCH, PLACE FEED WHEEL SHAFT OIL HOLE IN UPPERMOST POSITION, AND OPERATE BACKSPACE MECHANISM ONCE. BACKSPACE RATCHET WHEEL SHALL BE BACKED ONE SPACE AND FEED WHEEL RATCHET TO A FULLY DETENTED POSITION. RECHECK EVERY 90° FOR ONE FULL REVOLUTION OF THE BACKSPACE RATCHET WHEEL.



NOTE: A FULL DETENTED POSITION IS WHEN WITH THE DETENT ROLLER IN CONTACT WITH THE RATCHET WHEEL, THE PUNCH UNIT FEED PAWL ENGAGES THE FIRST TOOTH BELOW THE HORIZONTAL CENTER LINE OF THE RATCHET FEED WHEEL WITH NO PERCEPTIBLE CLEARANCE.

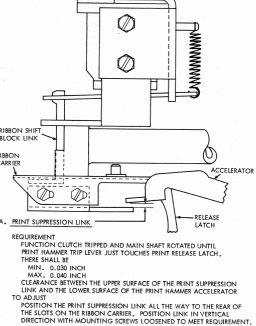
TO ADJUST
LOOSEN ARM ADJUSTING SCREW AND MOVE ADJUSTING PLATE.

3.20 Power Drive Backspace Mechanism (continued)



PRINT SUPPRESSION MECHANISMS

3.21 Print Suppression Link



REQUIREMENT

FUNCTION CLUTCH TRIPPED AND MAIN SHAFT ROTATED UNTIL PRINT HAMMER TRIP LEVER JUST TOUCHES PRINT RELEASE LATCH, THERE SHALL BE

MIN., 0.030 INCH

MAX., 0.040 INCH

CLEARANCE BETWEEN THE UPPER SURFACE OF THE PRINT SUPPRESSION LINK AND THE LOWER SURFACE OF THE PRINT HAMMER ACCELERATOR

TO ADJUST

POSITION THE PRINT SUPPRESSION LINK ALL THE WAY TO THE REAR OF THE SLOTS ON THE RIBBON CARRIER. POSITION LINK IN VERTICAL DIRECTION WITH MOUNTING SCREWS LOOSENED TO MEET REQUIREMENT.

NOTE: REFER TO PARAGRAPH 2 FOR PRELIMINARY ADJUSTMENTS IN COMMON WITH RIBBON SHIFT ADJUSTMENTS IN ALL UNITS.

3.22 Manual Print Suppression Mechanism

CONTROL LEVER (MANUAL)

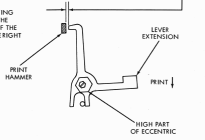
REQUIREMENT

(1) THERE SHALL BE A CLEARANCE OF MIN. 0.015 INCH BETWEEN THE PRINT SUPPRESS LEVER AND THE PRINT HAMMER WHEN THE LEVER EXTENSION IS IN THE PRINT POSITION (DOWN).

(2) WHEN THE LEVER EXTENSION IS IN THE NON-PRINT POSITION (UP), THE BLOCKING EXTENSION SHOULD EXTEND ACROSS THE FULL THICKNESS OF THE PRINT HAMMER WITH A CLEARANCE OF MIN. 0.015 INCH AT THE SIDE OF THE PRINT HAMMER.

TO ADJUST

LOOSEN THE ECCENTRIC BUSHING MOUNTING NUT AND POSITION THE BUSHING UNTIL THE REQUIREMENTS ARE MET. THE HIGH PART OF THE ECCENTRIC SHOULD BE DOWN AND TO THE RIGHT AS VIEWED FROM THE REAR OF THE UNIT.



LEVER SHOULD EXTEND ACROSS FULL THICKNESS OF PRINT HAMMER.