

INSTRUCTIONS FOR INSTALLING 321216 AND 321218 LOW LEVEL
RFI (POLAR-EMC) MODIFICATION KITS WHICH ADD THE DUST
COVER (SELECTOR ASSEMBLY) WITH CONNECTOR TO MODEL
28 TYPING UNITS AND REPERFORATORS

1. GENERAL

1.01 The 321216 and 321218 modification kits and the parts necessary to install the kits are illustrated in Figures 5 and 6. Each modification kit provides a special selector assembly for low level operation and radio frequency interference (rfi) suppression. They are not intended for general use.

<u>Teletype No.</u>	<u>Navy Nomenclature</u>
321216	MK-1111/UG
321218	MK-1117/UG

1.02 Parts ordering information for the kits is given in Part 5. This information is summarized as follows:

	<u>Typing Unit (321216 Mod Kit)</u>	<u>Reperforator (321218 Mod Kit)</u>
Selector Assembly	319204	319204
Set of Parts	319200	319201

For parts other than those in the kits, see the appropriate parts literature for the equipment or set involved.

1.03 Each selector assembly is compatible with all 28-type receiving equipment operating at speeds of up to 107 words per minute with the following exceptions. The 321216 modification kit (Figure 5) is applicable to all Model 28 typing units except LP111 (Teletypewriter Sets AN/UGC-20, AN/UGC-25, AN/UGC-25X). The 321218 modification kit (Figure 6) is applicable to all Model 28 reperforators.

2. INSTALLATION

2.01 Installation of the modification kits is done best with the typing unit or reperforator removed from its associated base. For instructions, see the appropriate disassembly and reassembly literature for the equipment or set involved.

2.02 References to up, down, left, right, front, or rear pertain to the equipment as viewed when facing the selector assembly.

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2.03 Before proceeding with the disassembly and assembly work, read the applicable portions of the installation text carefully. After completing the assembly work, be sure all screws and nuts are tight. Check for springs unhooked from their anchors and check through several revolutions of the main shaft for alignment and binds in the various mechanisms.

Note: Paragraphs 2.04 through 2.06 are applicable to all installations. Rather than repeat the instructions several times in the installation test, the information in the paragraphs is referenced at the appropriate times.

2.04 To remove and replace the 159961 backspace eccentric arm from the reperformer, perform the following steps.

(a) Remove and retain the 3598 nut and the 2191 lockwasher that secure the 159960 eccentric to the 150001 selector cam sleeve clutch drum. Do not remove the 159961 backspace eccentric arm or its retaining ring from the eccentric. Rotate the main shaft until the eccentric is in its extreme right position and carefully pull the eccentric forward until it just clears the clutch drum. Slide the eccentric down past the hub of the drum gently pull to the right to disengage the eccentric arm from the post on the 159955 drive link. Retain the eccentric and backspace eccentric arm as an assembly.

(b) To replace 159961 backspace eccentric arm, position the slotted end of the backspace eccentric arm over the 159955 drive link and carefully pull the 159960 eccentric forward until it just clears the 150001 clutch drum. Slide the eccentric up over the clutch drum. Replace the retained mounting hardware.

2.05 To remove selector clutch and cam assembly from typing unit and reperformer, perform the following steps.

(a) Remove the selector clutch disc and cam assembly as a unit. First, remove the 150001 clutch drum and retain the mounting hardware. Then manually rotate the 152410 reset bail in a counterclockwise direction and at the same time slide the bail axially to the rear along its mounting post. Release the bail, thereby latching it and the five 152411 pushlevers in a raised position. Manually rotate the 306755 marking locklever counterclockwise. Retain the locklever in this position with a paper clip (or cotter pin) through the unused hole provided in the lever thereby holding the five 152409 selecting levers away from the selector cam sleeve. Remove the clutch disc and cam sleeve assembly from the main shaft as a unit by withdrawing the assembly forward while rotating it counterclockwise. Retain the assembly.

- (b) Replace the retained clutch drum over the clutch mechanism after first insuring that the 150043 and 150044 shoe levers are positioned correctly as shown in Figures 7 and 8. Replace the clutch drum and cam sleeve assembly on the main shaft, rotating the assembly counterclockwise while sliding it axially to its rearmost position. Replace the mounting hardware. (If a backspace eccentric assembly was previously removed from the clutch drum, then the retained flat washer, lockwasher, and nut should be assembled to the clutch drum mounting screw but left loose to accommodate replacement of the eccentric.) Unlatch the 152410 reset bail. Remove and discard the 80516 cotter pin from the 306755 marking locklever. Remove and discard the 319224 tie plate (Figure 9) and its mounting hardware. Manually rotate the main shaft through at least one complete revolution and check to see that all levers, etc, in the selector mechanism are operating freely.
- 2.06 To assemble the cable to the mounting bracket, lower the cable through the slot in the connector mounting bracket and slide the cable and the connector to the left through the large hole in the bracket while aligning the four connector mounting screws with the matching holes in the bracket. Secure the connector to the bracket using four 110743 lockwashers and four 3599 nuts supplied with the kit.

A. Typing Units

- 2.07 To disassemble the standard selector assembly perform the following steps.
- (a) Remove and discard the cable assembly that is used between the selector coils and the electrical receptacle mounted to the typing unit side frame.
 - (b) Remove the selector clutch disc and cam sleeve assembly as described in Paragraph 2.05(a).
 - (c) Remove the 152430 rangefinder plate assembly as a unit, retaining the assembly and all mounting hardware.
 - (d) Remove and retain the 152456 wick holder. Do not remove the 152457 wick or the mounting hardware from the wick holder.
 - (e) Unhook the right end of the 150563 spring from the 152403 bracket. Do not unhook the left end of the spring from the 152640 transfer lever.
 - (f) Remove and discard the 151630 screw and 2191 lockwasher from the lowest 150479 stud that is used as a mounting spacer between the

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152400 selector plate and the printer side frame. Access to the screw is from the rear of the side frame.

- (g) Remove and discard the 3598 nut and 2191 lockwasher from the top 150479 stud. Remove and retain the 151630 screw and 2191 lockwasher from the remaining (middle) 150479 stud. Remove the complete selector mechanism from the typing unit side frame.
- (h) Remove and retain either one of the two remaining 150479 studs from the selector assembly. Discard the selector assembly.

2.08 To install the 319204 selector assembly, perform the following steps.

- (a) Install the 319231 post and 7002 washer in the tapped hole at the top and rear of the 319225 selector plate used on the 319204 selector assembly.
- (b) Remove and retain the 151630 screw and the 2191 lockwasher that secures the 152402 guide to the 319240 selector plate. Replace the removed hardware with the previously retained 150479 stud (Paragraph 2.07(h)).
- (c) Position the 319204 selector assembly on the typing unit side frame. Utilize the previously retained 151630 screw and a 2191 lockwasher (Paragraph 2.07(g)) in the lower right hand 150479 stud. Tighten the screw friction tight.
- (d) Install the 152893 screw, the 110743 lockwasher, and the 104807 flat washer in the 319231 post from the rear of the typing unit side frame. Tighten the screw friction tight.
- (e) Replace the retained 151630 screw and 2191 lockwasher (Paragraph 2.08(b)) in the lowest 150479 stud from the rear of the typing unit side frame. Tighten the screw friction tight.
- (f) Replace the loose end of the 150563 spring in the mounting hole of the 152403 bracket.
- (g) Replace the retained 152456 wick holder and mounting hardware. Tighten the screw securely. Tighten securely the three mounting screws previously left friction tight.
- (h) Replace the selector clutch and cam sleeve assembly as described in Paragraph 2.05(b).
- (i) Install the 321234 connector mounting bracket onto typing unit side frame as shown in Figure 10.

- (j) Assemble 319240 cable as described in Paragraph 2.06.
 - (k) Replace the retained 152430 rangefinder plate assembly.
 - (l) Make all applicable field installation adjustments as given in Part 3.
- 2.09 The reassembly of modified typing units onto their appropriate bases in cabinets is performed in the standard manner. For instructions, see the appropriate disassembly and reassembly literature and/or installation literature for the equipment or set involved.

B. Reperforators without Tape Feed-Out Feature

- 2.10 To disassemble the standard selector assembly, perform the following steps.

Note: If the reperforator to be modified is equipped with a power backspace mechanism, then some backspace parts must be temporarily removed at this time as described in Paragraph 2.04(a).

- (a) Remove and discard the cable assembly that is used between the selector coils and the electrical receptacle mounted at the rear of the reperforator.
- (b) Remove the selector clutch disc and cam sleeve assembly as described in Paragraph 2.05(a).
- (c) Remove the 152430 rangefinder plate assembly as a unit, retaining the assembly and all mounting hardware.
- (d) Remove and retain the 159467 wick holder. Do not remove the 152457 wick or the mounting hardware from the wick holder.
- (e) Remove and retain the 3598 nut and the 2191 lockwasher from the 156472 spring post that is used to anchor the lower end of the 87401 function clutch latchlever spring.
- (f) Loosen and retain in its mounting position the 151442 screw and the 2191 lockwasher used to secure the 152402 selector lever guide to the 152400 selector plate and the reperforator frame. Access to the screw is from the rear of the reperforator: on double-shafted units through a hole provided in the rocker bail; on single-shaft units through the vacant lower shaft hole in the frame. Remove and retain the 159880 slide (found on 5-level double-shafted units only) from the 152402 guide. Remove and discard the selector assembly.

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Note: If the unit being modified is a double-shafted reperforator to be used in the keyboard position of the ASR Set, then the selector cam oiler assembly must be removed from the discarded selector assembly and installed on the 319204 selector assembly in place of the supplied 155090 lubricator assembly.

- 2.11 To install the 319204 selector assembly, perform the following steps.
- (a) Remove and discard the 151630 screw and the 2191 lockwasher that secures the 152402 guide to the 319225 selector plate. Install the retained 159880 slide in the first groove of the 152402 guide (on 5-level double-shafted units only).
 - (b) Install the 319235 tape platform on the 319204 selector assembly as shown in Figure 11. Secure the tape platform with the upper mounting screw only. Leave the screw friction tight.
 - (c) Position the 319204 selector assembly on the reperforator frame. Utilize the 151442 screw and the 2191 lockwasher that was retained in the frame mounting hole to hold the selector assembly in position. Tighten the screw friction tight.
 - (d) Replace the retained 3598 nut and the 2191 lockwasher on the 156472 spring post. Tighten the nut securely and also tighten the 151442 screw previously left friction tight.
 - (e) Replace the 159467 wick holder. Utilize the 311717 wick adaptor supplied with the kit to provide proper orientation of the wick holder. See Figure 11.
 - (f) If the reperforator being modified utilized any one of the "slack tape" modification kits (Specification 50247S), then Paragraph (g) below is applicable to these instructions. If "slack tape" parts were not used on the reperforator, then proceed to Paragraph (h) below.
 - (g) Install the 319236 tape depressor and the 319237 post on the 319235 tape platform as shown in Figure 7. Be sure the slot in the tape depressor arm is over the 153239 roller attached to the reperforator rocker bail.
 - (h) Replace the selector clutch and cam sleeve assembly as described in Paragraph 2.05(b).
 - (i) Install either the 321239 bracket (Figure 12) or 321283 bracket (Figure 13).

Note: The 321239 bracket applies to reperforators using standard bases such as LRB8 and LRB49 (TT-192/UG, TT-274/UG, and TT-274A/UG), while the 321283 bracket applies to reperforators using miniaturized bases such as LRB31 (TT-192A/UG).

- (j) Assemble 319240 cable as described in Paragraph 2.06.
- (k) Replace the retained 152430 rangefinder plate assembly.
- (l) If some parts from the power backspace mechanism were previously removed, replace them as described in Paragraph 2.04(b).
- (m) Make all applicable field installation adjustments as given in Part 3.

2.12 The reassembly of modified reperforators onto their appropriate bases in cabinets and under covers is performed in the standard manner with the exceptions described in Paragraph 2.13. For instructions, see the appropriate disassembly and reassembly literature and/or installation literature for the equipment or set involved.

2.13 To reassemble reperforators on to bases in cabinets such as LAAC200 (CY-2529/UG), LAAC229 (CY-3062/UG), and LAAC237 (CY-3682/UG), perform the following steps.

- (a) If the reperforator that was modified used the new 319236 tape depressor (Figure 14), proceed with Step (1). If the reperforator did not use the tape depressor, omit Step (1).
 - (1) Remove the 193987 tape guide bracket and its associated assembled parts as an assembly from the discarded selector mechanism. Install this tape guide assembly on the 319235 tape platform of the modified unit as shown in Figure 14. Install the new 319234 tape guide on the tape guide assembly using the indicated mounting hardware.
 - (2) Remove and retain either the existing 154319 or 193983 tape guide from the keyboard mounted tape container. Discard the 151632 mounting screws and retain all other mounting hardware. Reassemble either the 154319 or 193983 tape guide to the tape container as shown in Figure 15 using the indicated hardware. If an indicating lamp is used on the left side of the copyholder, make certain the lamp is in the extreme forward position. Install the reperforator on the keyboard base in the usual manner (Paragraph 2.12) and make sure that approximately 1/8-inch clearance exists between lamp bracket and any part of the reperforator. If necessary, bend the lamp bracket. Adjust the 154319 or 193983 tape guide so that in its normal position there is approximately 1/8 inch clearance between the

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wire of the guide and the top of the tape platform with the left side of the roller approximately in line with the right edge of the ribbon spool. If necessary, refine the tape guide adjustment to provide clearance between it and the indicating lamp.

(3) Complete the reassembly of the modified reperforator onto the keyboard base in the standard manner (Paragraph 2.12). Before closing and latching the cabinet dome securely, check for clearance between the upper right-hand corner of the magnet and base assembly and left corner of the reinforcing channel that is spot welded to the inside of the front of the dome. The required clearance can be observed by opening the metal and glass paper access door in the dome and then slowly closing the dome to bring the channel in proximity with the magnet and base assembly. If the clearance is less than 1/4 inch, remove enough material from the corner of the channel to effect 1/4 inch clearance (Figure 16).

(b) If the reperforator that was modified used the new 319236 tape depressor (Figure 17), then the reperforator is to be reassembled into the auxiliary position in the standard way (Paragraph 2.12). If the reperforator did not use the tape depressor, remove and discard the two screws used to secure the 163587 connector mounting bracket to the rear of the 161770 auxiliary base. Mount the 194081 tape guide to the rear of the auxiliary base as shown in Figure 17. Mount the 319237 post to the 319235 tape platform of the reperforator as shown in Figure 18. Reassemble the reperforator in the standard manner (Paragraph 2.12).

Note: Assemble the 195806 tape guide as shown in Figure 18 on reperforators which are not equipped with the 319236 tape depressor.

C. Reperforators with Tape Feed-Out Feature

Note: If the reperforator to be modified is equipped with a power backspace mechanism, then some backspace parts must be temporarily removed at this time as described in Paragraph 2.04(a).

2.14 To disassemble the standard selector assembly, remove and discard the cable assembly that is used between the selector coils and the electrical receptacle mounted at the rear of the reperforator. Remove the selector clutch disc and cam sleeve assembly as described in Paragraph 2.05(a). Remove the 152430 rangefinder plate assembly as a unit, retaining the assembly and all mounting hardware. Remove and retain the 159467 wick holder. Do not remove the 152457 wick or the mounting hardware from the

wick holder. Subparagraphs (a), (b), and (c) below refer to different tape feed-out modification kits, one of which exists on the reperfocator being modified. Follow only the instructions in the particular paragraph applicable to the existing tape feed-out modification kit.

- (a) Remote Control Noninterfering "Blank" Tape Feed-Out Using an Auxiliary of Secondary Feed Pawl (Specification 5772S): Remove and retain the 156130 lever, the 156154 collar, and all mounting hardware. Remove and retain the 3598 nut and the 2191 lockwasher from the 156472 spring post that is used to anchor the lower end of the 87401 function clutch latchlever spring. Loosen and retain in its mounting position the 151442 screw and the 2191 lockwasher used to secure the 152402 selector lever guide to the 152400 selector plate and the reperfocator frame. Access to the screw is from the rear of the reperfocator through the vacant lower shaft hole in the frame. Remove and discard the selector assembly.
- (b) Automatic Noninterfering "Letters" Tape Feed-Out (Specification 5945S): Remove and retain the 162758 cam follower lever and its mounting hardware. Remove and retain the 3598 nut and the 2191 lockwasher from the 173604 spring post that is used to anchor the lower end of the 87401 function clutch latchlever spring. Loosen and retain in its mounting position the 151442 screw and the 2191 lockwasher used to secure the 152402 selector lever guide to the 152400 selector plate, the reperfocator frame, and the 173602 plate. Access to the screw is from the rear of the reperfocator through the vacant lower shaft hole in the frame. Remove and discard the selector mechanism.
- (c) Remote Control Noninterfering "Letters" Tape Feed-Out (Specifications 50043S and 50175S): Remove and retain the 162758 cam follower lever and its mounting hardware. Remove and retain the 3598 nut and the 2191 lockwasher from the 173604 spring post that is used to anchor the lower end of the 87401 function clutch latchlever spring. Unhook the 86873 spring from the 113039 spring post. Do not unhook the other end of the spring from the 173606 bail. A rubber band stretched between the 113039 spring post and the left front mounting foot of the reperfocator frame will serve to retain the loosened 173602 plate in position during subsequent assembly operations. Loosen and retain in its mounting position the 153839 screw and the 2191 lockwasher used to secure the 152402 selector lever guide to the 152400 selector plate, the reperfocator frame, and the 173602 plate. Access to the screw is from the rear of the reperfocator through the vacant lower shaft hole in the frame. Remove and discard the selector mechanism.
- (d) Remote Control Noninterfering "Blank" Tape Feed-Out (Specification 50059S) or Automatic Noninterfering "Blank" Tape Feed-Out (Specification 50206S): Remove and retain the 164884 lever and the 164886 link as an assembly. Remove and retain the 164883 cam follower lever and its mounting hardware. Remove and retain the 3598 nut and the 2191 lockwasher

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from the 173604 spring post that is used to anchor the lower end of the 87401 function clutch latchlever spring. Unhook the 86873 spring from the 113039 spring post. Do not unhook the other end of the spring from the 173606 bail. A rubber band stretched between the 113039 spring post and the left front mounting foot of the reperforator frame will serve to retain the loosened 173602 plate in position during subsequent assembly operations. Loosen and retain in its mounting position the 153839 screw and the 2191 lockwasher used to secure the 152402 selector lever guide to the 152400 selector plate, the reperforator frame, and the 173602 plate. Access to the screw is from the rear of the reperforator through the vacant lower shaft hole in the frame. Remove and discard the selector assembly.

- 2.15 To install the 319204 selector assembly, perform the following steps:
- (a) Remove and discard the 151630 screw and the 2191 lockwasher that secure the 152402 guide to the 319225 selector plate.
 - (b) Install the 319235 tape platform on the selector assembly as shown in Figure 10. Secure the platform with the upper mounting screw only and leave the screw friction tight.
 - (c) Position the 319204 selector assembly on the reperforator frame. Utilize the screw and the lockwasher that was previously retained in the rear reperforator frame mounting hole to hold the selector assembly in position. Tighten the screw friction tight.
 - (d) Replace the retained 3598 nut and the 2191 lockwasher on the function clutch spring post. Tighten the nut securely and also tighten the screw in the rear of the reperforator frame previously left friction tight. Replace any springs that may have previously been unhooked.
 - (e) Replace the 159467 wick holder. Utilize the 311717 wick adaptor supplied with the kit to provide proper orientation of the wick holder (Figure 10).
 - (f) If the reperforator being modified utilized any one of the "slack tape" modification kits (Specification 50247S), then Paragraph (g) below is applicable to these instructions. If "slack tape" parts were not used on the reperforator, proceed to Paragraph (h) below.
 - (g) Install the 319236 tape depressor on the 319235 tape platform as shown in Figure 11. Be sure the slot in the tape depressor arm is over the 153239 roller attached to the reperforator rocker bail.
 - (h) Replace those parts previously removed in Paragraph 2.14.
 - (i) Replace the selector clutch and cam sleeve assembly as described in Paragraph 2.05(b).
 - (j) Install either the 321239 bracket (Figure 12) or 321283 bracket (Figure 13).

Note: The 321239 bracket applies to reperforators using standard bases such as LRB8 and LRB49 (TT-192/UG, TT-274/UG, and TT-274A/UG) while the 321283 bracket applies to reperforators using miniaturized bases such as LRB31 (TT-192A/UG).

- (k) Assemble 319240 cable as described in Paragraph 2. 06.
- (l) Replace the retained 152430 rangefinder plate assembly.
- (m) If some parts from the power backspace mechanism were previously removed, replace them as described in Paragraph 2. 04(b).
- (n) Make all applicable field installation adjustments as given in Part 3. Check to make sure that the modified unit has the 159880 slide mounted on the 152402 guide (Paragraph 2. 10(f) and 2. 11(a)).

2. 16 The reassembly of modified reperforators onto their appropriate bases in cabinets and under covers is performed in the standard manner with the exceptions described in Paragraph 2. 13. For further instructions, see the appropriate disassembly and reassembly literature and/or installation literature for the equipment or set involved.

3. ADJUSTMENTS AND LUBRICATION

A. General Instructions

- 3. 01 All adjustments can be made using standard tools found in Teletype Tool Kit Number 113778.
- 3. 02 Before proceeding with any adjustment, read the applicable portion of the adjusting text carefully. After the adjustment is complete, be sure to tighten any screws or nuts which may have been loosened.
- 3. 03 Reference made to up or down, left or right, front or rear pertains to the equipment as viewed from the operator's position when facing the selector assembly as it is normally mounted in a set.
- 3. 04 All adjustments are common to the typing unit and reperforator unless otherwise stated.

B. Adjustments

- 3. 05 The adjustments in this paragraph have been made at the factory and should not be made unless there is reason to believe that they have been disturbed.

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(a) MAGNET ARMATURE (Figure 19)

Requirement

The front edge of the armature should be flush within 0.010 inch with the front edge of the pole pieces. (This requirement is best checked with the magnet assembly removed from its base.) The left edge of the armature should be flush within 0.010 inch with the left edge of the left pole piece. There should be some to 0.020 inch clearance between the front edge of the armature and pole piece and the inside of the downstop bracket.

To Adjust

The armature spring must have enough initial tension to hold the armature firmly against the pivot edge of the casting. Position the armature with the mounting screws loosened. Tighten screws.

(b) ARMATURE DOWNSTOP (Figure 19)

Requirement

With the magnet assembly removed from its base and de-energized, the armature resting against its downstop, there should be 0.025 inch to 0.030 inch clearance between the end of the armature and the left edge of the left pole piece.

To Adjust

Loosen the downstop mounting screw friction tight and position the downstop to meet the requirement. Tighten the mounting screw.

(c) ARMATURE SPRING (Figure 19)

Note: The following 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 the requirements of this adjustment.

Requirement

Applying an 8 oz spring scale as nearly vertical as possible at the end of the armature, it should require 1-3/4 to 2-1/4 oz to move the armature to the marking position.

To Adjust

Rotate the adjusting screw clockwise to increase spring tension and counterclockwise to decrease spring tension.

3.06 Make the adjustments in this paragraph after the modification kits have been installed.

(a) SELECTOR CLUTCH STOP ARM (Figure 20)

Requirement

With the range scale set at 60, the selector clutch disengaged, and the armature in the marking position, the clutch stop arm should engage the clutch shoe lever by approximately the full thickness of the clutch stop arm.

To Adjust

Position the clutch stop arm with its clampscrew friction tight. Tighten screw.

(b) TAPE PLATFORM (Reperforators Only) (Figure 21)

Requirement

The left edge of the tape platform should be some to 0.030 inch above the right edge of the punch mechanism tape chute.

To Adjust

Position the tape platform with its mounting screws friction tight. Tighten screws.

(c) ARMATURE EXTENSION AND SPACING LOCKLEVER (Figure 22)

Requirement

With the spacing locklever on the high part of its cam and the armature in contact with the left pole piece, the following two requirements should be met:

- (1) The clearance between the end of the armature extension and the shoulder on the spacing locklever should be 0.020 inch to 0.035 inch.
- (2) There should be some clearance, not more than 0.003 inch, between the upper surface of the armature extension and the upper step of the spacing locklever when the play of the spacing locklever is taken in a downward direction to make this clearance a minimum.

To Adjust

Use a 1/16-inch hex wrench to loosen the two magnet and base assembly mounting posts friction tight. Use this wrench in the

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lower right eccentric shoulder post to meet the 0.020 inch to 0.035 inch requirement. Use this wrench in the upper left eccentric shoulder post to meet the same to 0.003 inch requirement. Tighten the magnet and base assembly mounting posts securely.

Note: The initial position of the upper left eccentric is at the 9 o'clock position. The initial position of the lower right eccentric is at the 6 o'clock position.

(d) LATCHLEVER (Reperforator With Tape Feed-Out Only) (Figure 23)

Requirement

Trip the selector clutch. Rotate the main shaft until the reset cam follower is on the peak of the reset bail cam. There should be 0.018 inch to 0.028 inch clearance between the release lever and the latchlever. There must also be some to 0.008 inch endplay between the cam follower and bushing.

To Adjust

Position the latchlever with the clampscrew on the reset cam follower friction tight and tighten clampscrew.

(e) BLOCKING LINK HORIZONTAL CLEARANCE (Reperforator With Tape Feed-Out Only) (Figure 24)

Requirement

With selector in the stop position and the release lever positioned in upper stop of the latchlever, manually trip the function clutch. There should be 0.005 inch to 0.018 clearance between the right edge of the punch slide reset bail and the blocking link. With selector range scale set at 120 the blocking link should be centered between the clutch disc mounting screws and the selector stop arm bail.

To Adjust

Loosen the clampscrew on the adjusting lever and position the blocking link to meet the requirement.

(f) BLOCKING BAIL AND DRIVE BAIL CLEARANCE (Reperforator With Tape Feed-Out Only) (Figure 25)

Requirement

With tape feed-out armature in unoperated position, rotate main shaft until drive bail roller is on high part of its cam. There should be 0.006 to 0.015 inch clearance between blocking bail and drive bail surface.

To Adjust

Loosen mounting plate clampscrew and spring post friction tight.
Position blocking bail. Tighten clampscrew and spring post.

- (g) If a DXD200 Signal Distortion Test Set (Navy TS-383/GG or equivalent) is available, make the stroboscopic test required in the adjustment literature for the equipment or set involved.

C. Lubrication

3.07 Check to make sure that all felt lubricating washers and wicks are saturated with oil. All moving surfaces should be thoroughly lubricated. All springs should be lubricated with one drop of oil at each eyelet.

4. PRINCIPLES OF OPERATION

4.01 The principles of operation of the selector assembly are the same as for the standard selector assemblies. For details, see the appropriate section in Bulletin 270B, Volume 1 (NAVSHIPS 93788).

5. PARTS

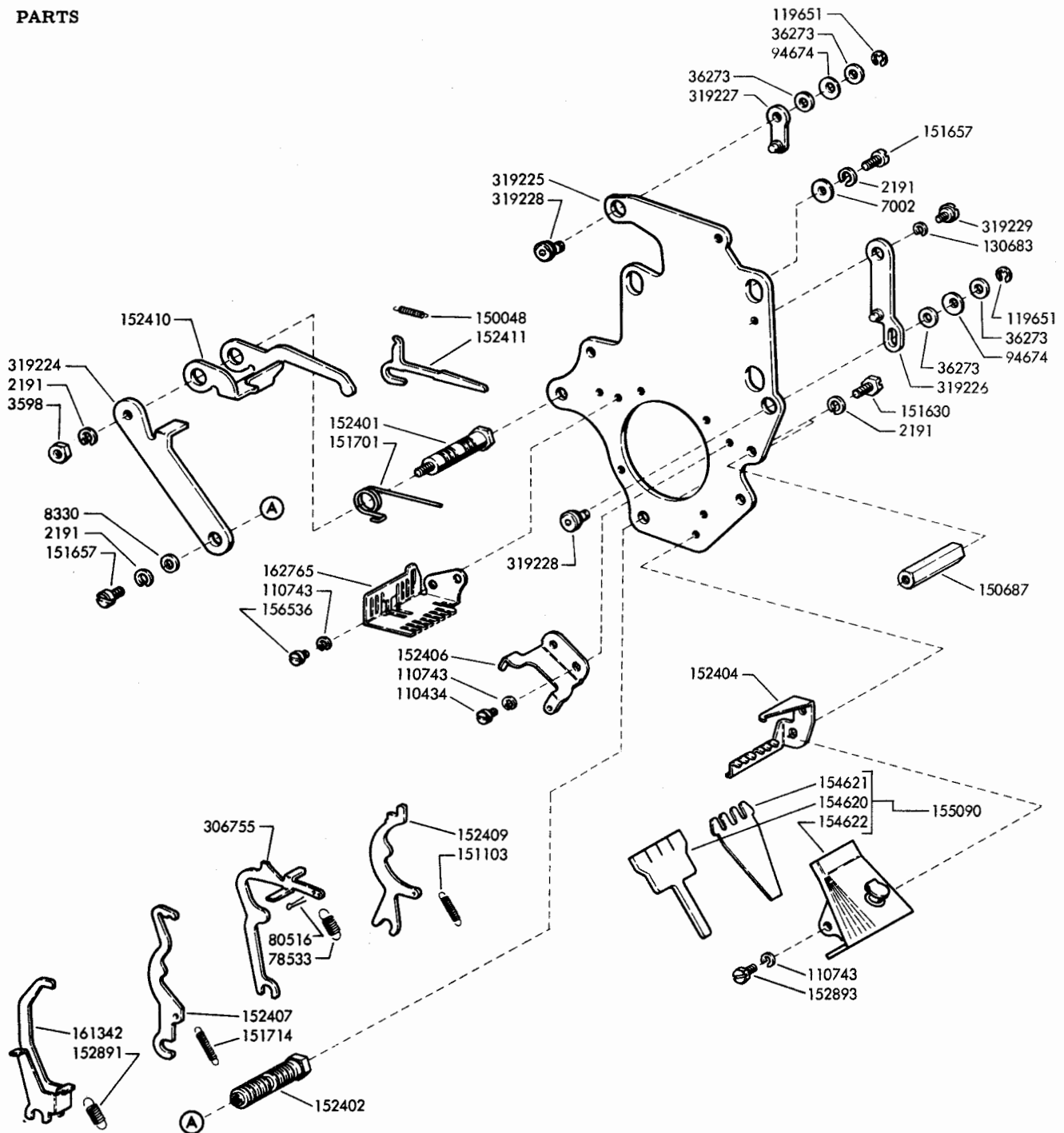


Figure 1 - 319204 Selector Assembly

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Part Number	Description
2191	Washer, Lock
3598	Nut, 6-40 Hex
7002	Washer, Flat
8330	Washer, Flat
36273	Washer, Flat
78533	Spring
80516	Pin, Cotter
94674	Washer, Cup
110434	Screw, 4-40 x 3/16 Fil
110743	Washer, Lock
119651	Ring, Retaining
130683	Washer, Lock
150048	Spring
150687	Stud
151103	Spring
151630	Screw, 6-40 x 1/4 Hex
151657	Screw, 6-40 x 1/4 Fil
151701	Spring
151714	Spring
152401	Guide
152402	Guide, Selector Lever
152404	Bracket, Spring
152406	Bracket, Spring
152407	Lever, Spacing Lock
152409	Lever, Selecting
152410	Bail, Reset
152411	Lever, Push
152891	Spring
152893	Screw, 4-40 x 1/4 Hex
154620	Wick, Leather
154621	Retainer, Wick
154622	Lubricator
155090	Lubricator Assembly
156536	Screw, 4-40 x 1/8 Fil
161342	Lever, Start
162765	Bracket
306755	Lever, Marking Lock
319204	Selector Assembly
319224	Plate, Tie
319225	Plate, Selector Mounting
319226	Link
319227	Link
319228	Post
319229	Screw, 4-40 Shoulder

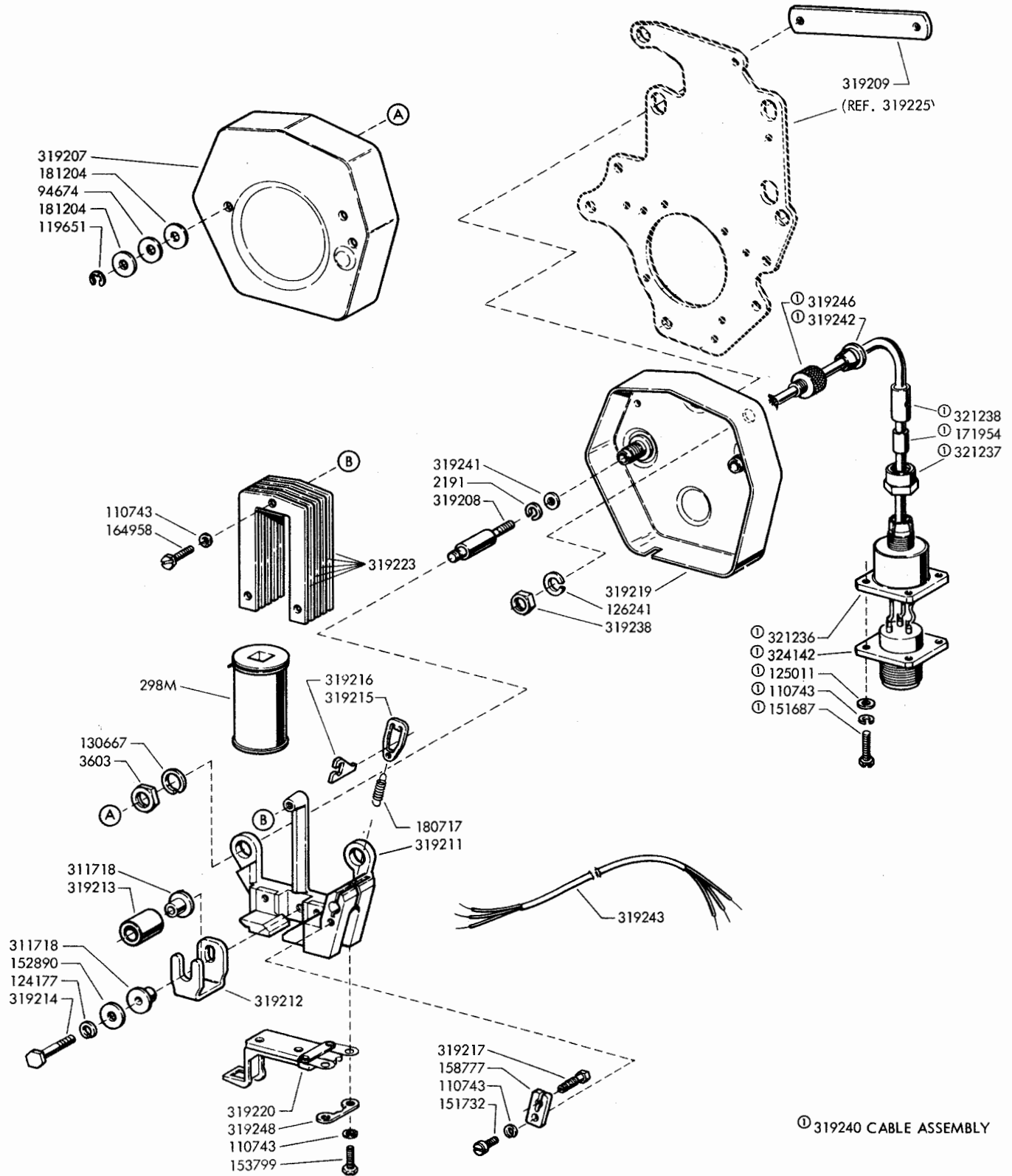


Figure 2 - 319204 Selector Assembly (Continued)

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Part Number	Description	Part Number	Description
298M	Coil, Magnet	319209	Plate, Nut
2191	Washer, Lock	319211	Bracket, Coil Mounting
3603	Nut, 1/4-32 Hex	319212	Bracket w/Button
94674	Washer, Cup	319213	Bushing
110743	Washer, Lock	319214	Screw, 6-40 Spl
119651	Ring, Retaining	319215	Anchor, Spring
124177	Washer, Flat	319216	Wedge
125011	Washer, Flat	319217	Screw, Adjusting
126241	Washer, Lock	319219	Base w/Bushing
130667	Washer, Lock	319220	Armature
151687	Screw, 4-40 x 7/16 Fil	319223	Lamination, Magnet
151732	Screw, 4-40 x 11/32 Fil	319225	Plate, Selector Mounting
152890	Washer, Flat	319238	Nut, 12-32 Hex
153799	Screw, 4-40 x 21/64 Hex	319240	Cable Assembly
158777	Holder, Screw	319241	Washer, Captive
164958	Screw, 4-40 x 1/2 Hex	319242	Bushing, Slotted
171954	Connector, Blue Inner Shielding	319243	Strap, 5" Shielded
180717	Spring	319246	Bushing
181204	Washer, Flat	319248	Strap
311718	Bushing, Shoulder	321236	Coupling, Connector
319204	Selector Assembly	321237	Nut, 3/8-32 Spl
319207	Cover	321238	Sleeve
319208	Post	324142	Connector, 3 Pt Plug

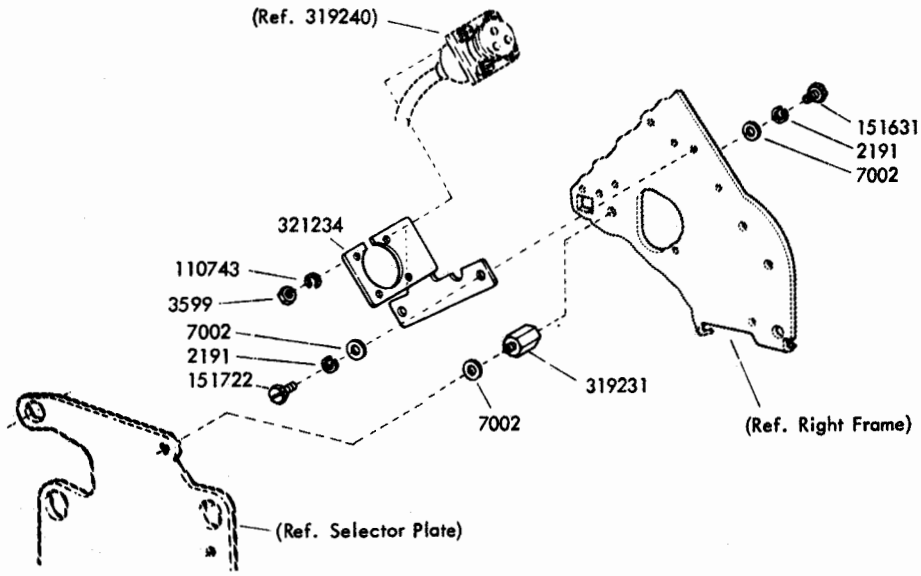


Figure 3 - 319200 Set of Parts for Installing Selector Assembly on Typing Unit (LP)

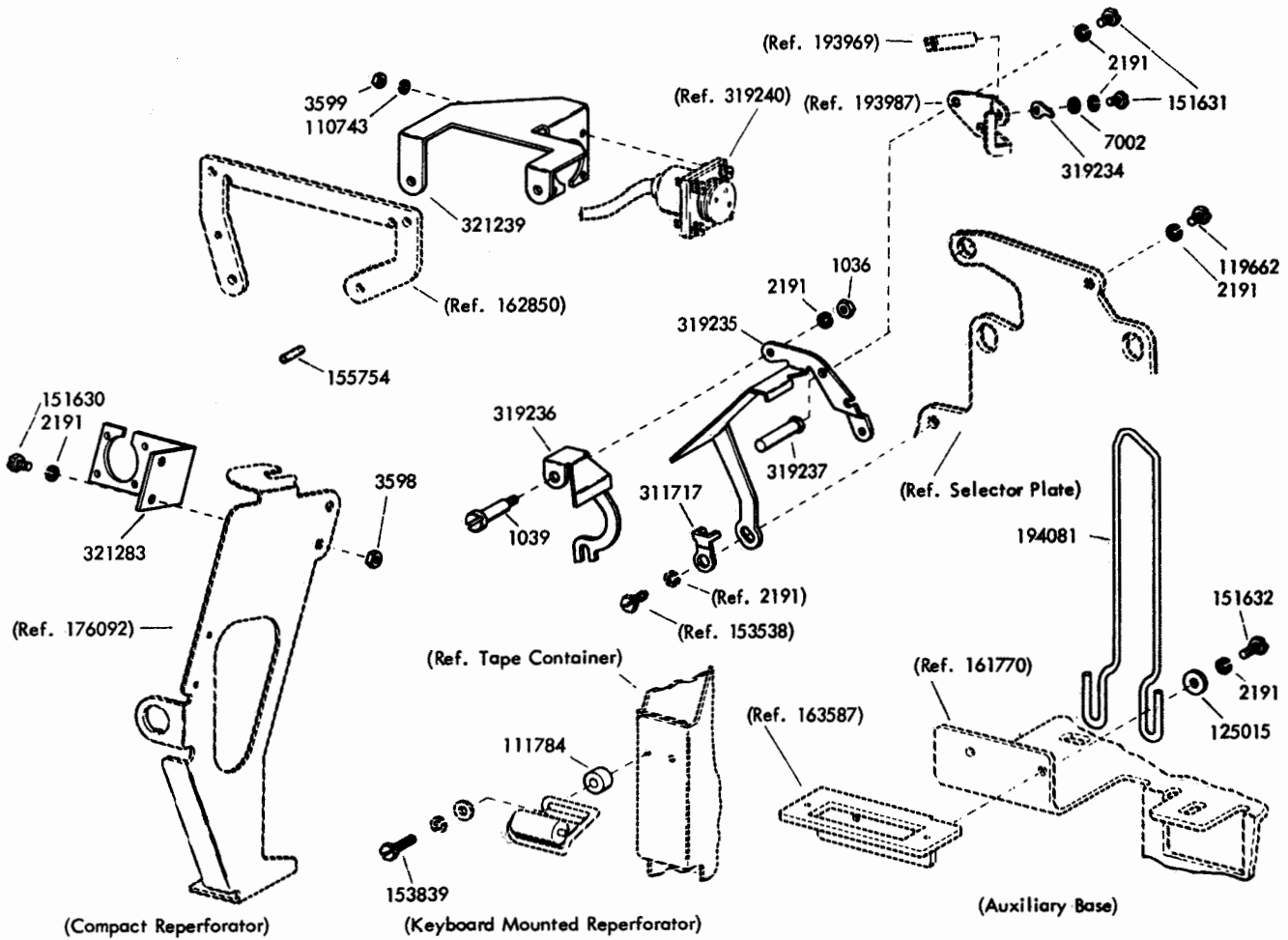


Figure 4 - 319201 Set of Parts for Installing Selector Assembly on Reperforator (LPR)

NUMERICAL INDEX - FIGURES 3 AND 4

Part Number	Description	Part Number	Description
1036	Nut, 6-40 Hex	162850	Handle
1039	Screw, 6-40 Shoulder	163587	Bracket, Connector Mounting
2191	Washer, Lock	176092	Bracket
3598	Nut, 6-40 Hex	193969	Post
3599	Nut, 4-40 Hex	193987	Bracket, Roller
7002	Washer, Flat	194081	Guide, Tape
110743	Washer, Lock	311717	Adapter, Wick
111784	Spacer, 7/32 Thk	319200	Set of Parts
119662	Screw, 6-40 Spl	319201	Set of Parts
125015	Washer, Flat	319231	Post
151630	Screw, 6-40 x 1/4 Hex	319234	Guide, Tape
151631	Screw, 6-40 x 5/16 Hex	319235	Platform, Tape
151632	Screw, 6-40 x 3/8 Hex	319236	Depressor, Tape
151722	Screw, 6-40 x 3/16 Hex	319237	Post
153538	Screw, 6-40 x 11/16 Hex	319240	Cable Assembly
153839	Screw, 6-40 x 5/8 Hex	321234	Bracket, Connector Mounting
155754	Sleeve, 1/16 ID x 1/2 Lg Insulating	321239	Bracket, Connector Mounting
161770	Bracket, Mounting	321283	Bracket, Connector Mounting

SPECIFICATION 50503S

Note: The 155753 insulating sleeves are a part of the 32 12 16 modification kit but are not needed in this application.

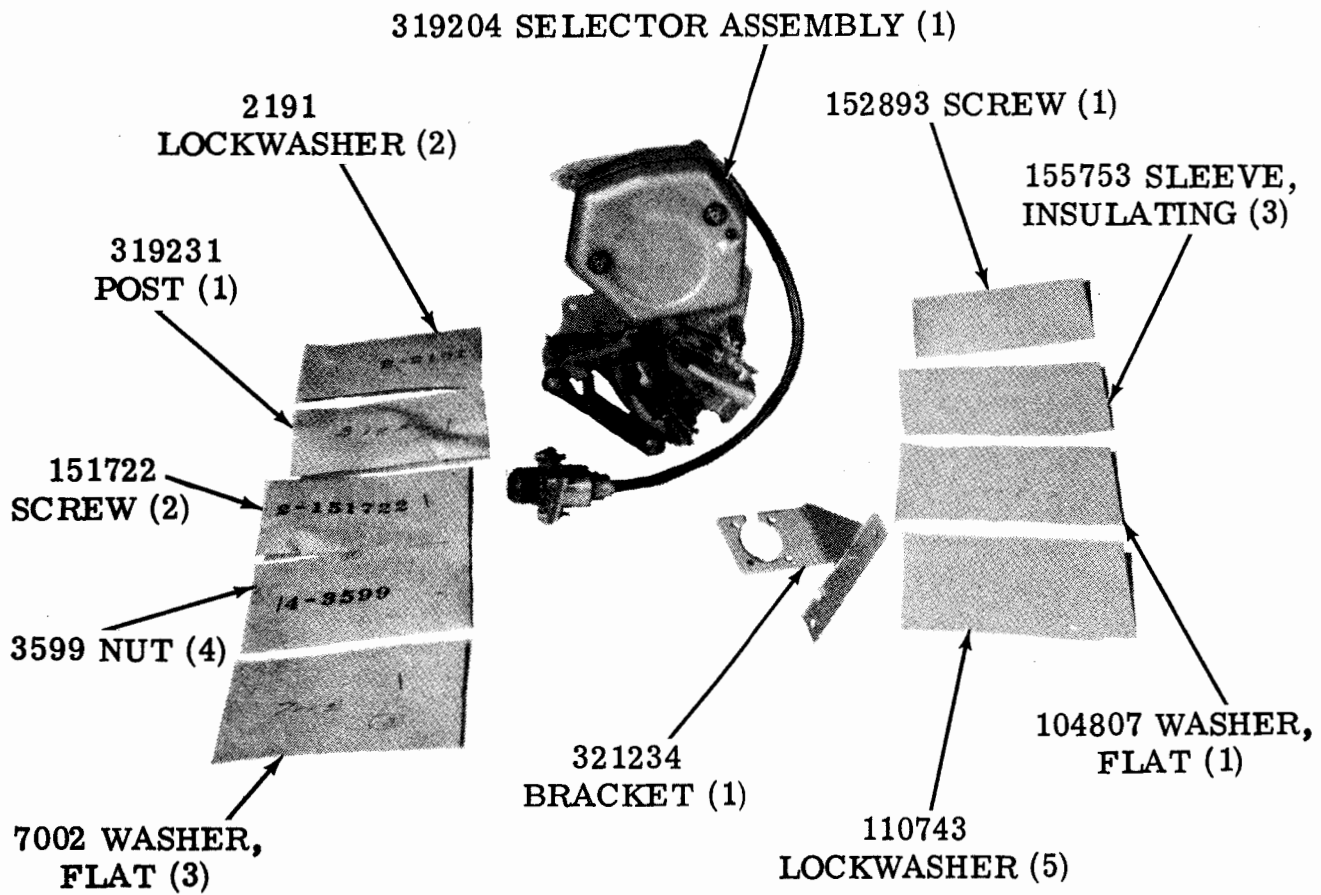


Figure 5 - Modification Kit 321216

Note: The 155754 insulating sleeves are a part of the 321218 modification kit but are not needed in this application.

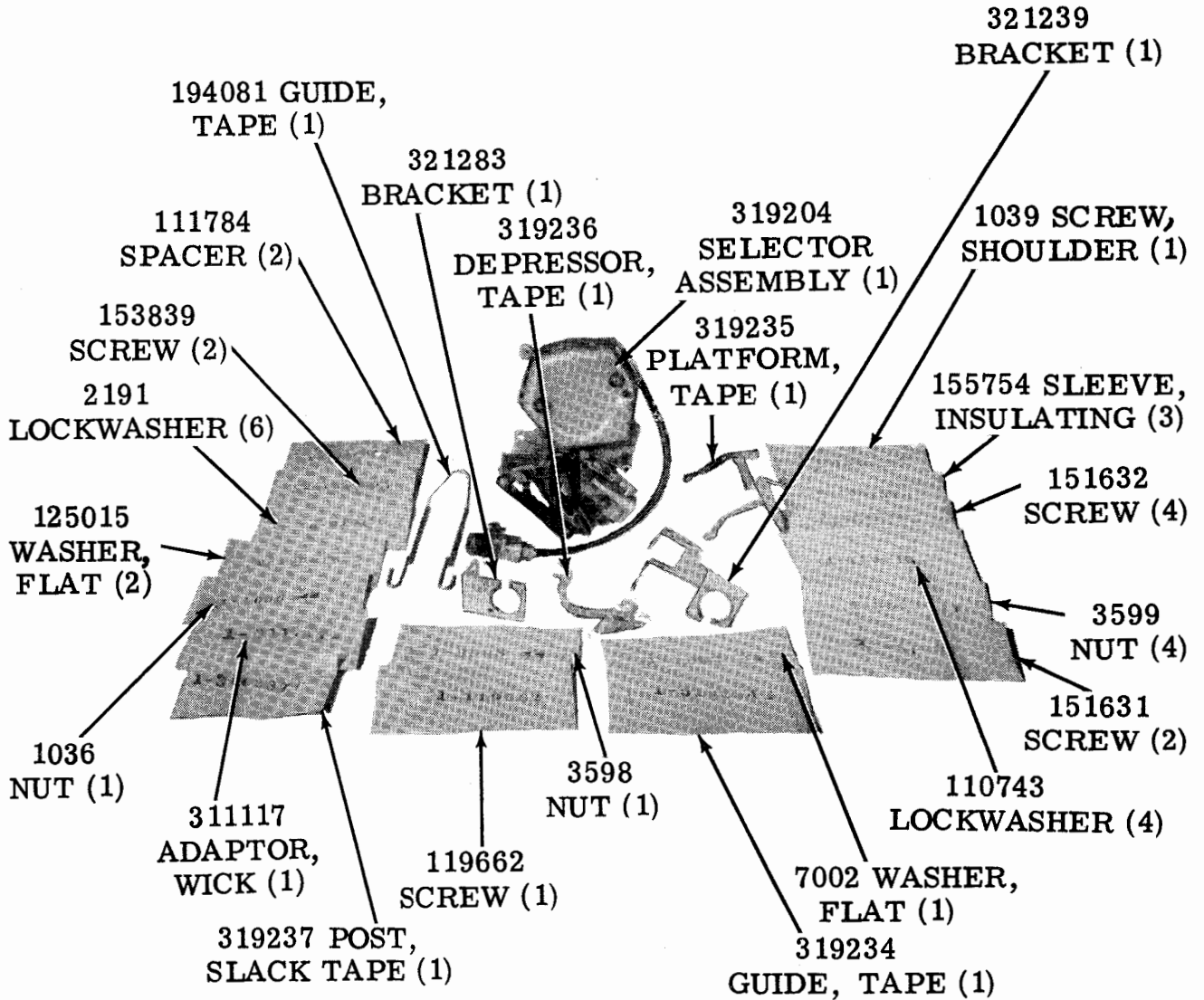


Figure 6 - Modification Kit 321218

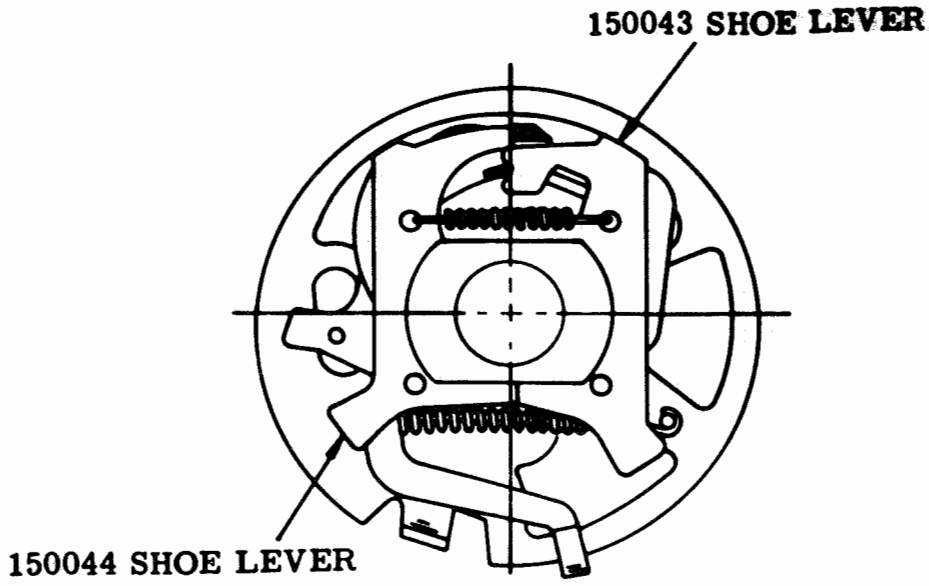


Figure 7 - Clutch Shoe Levers Positioned Correctly

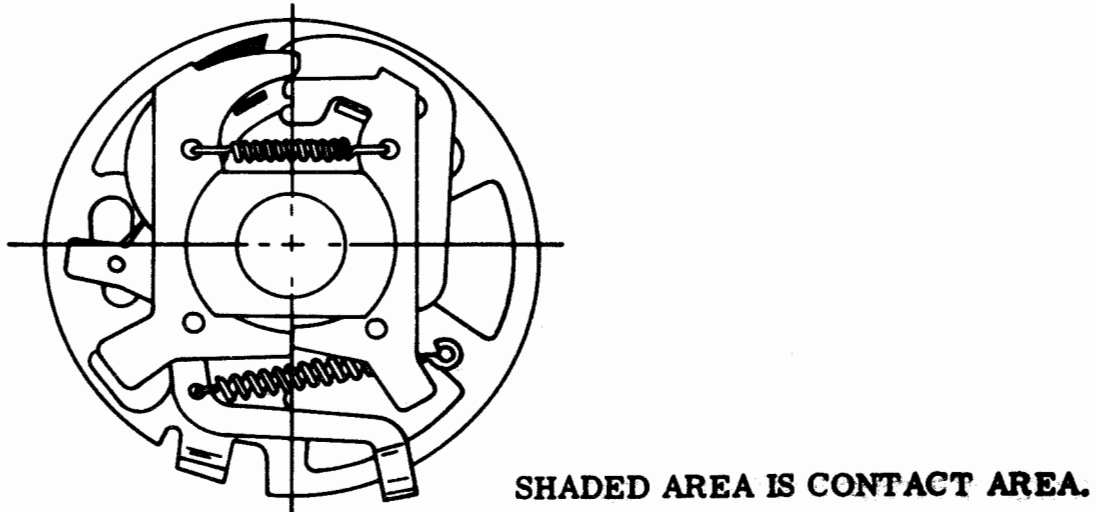


Figure 8 - Clutch Shoe Levers Incorrectly Positioned

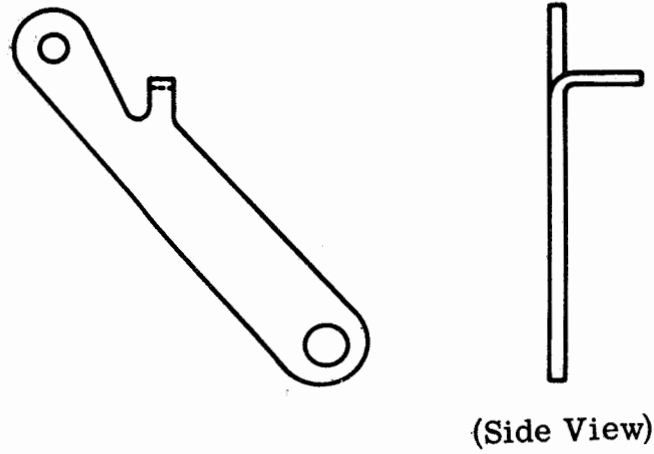


Figure 9 - Tie Plate (319224)

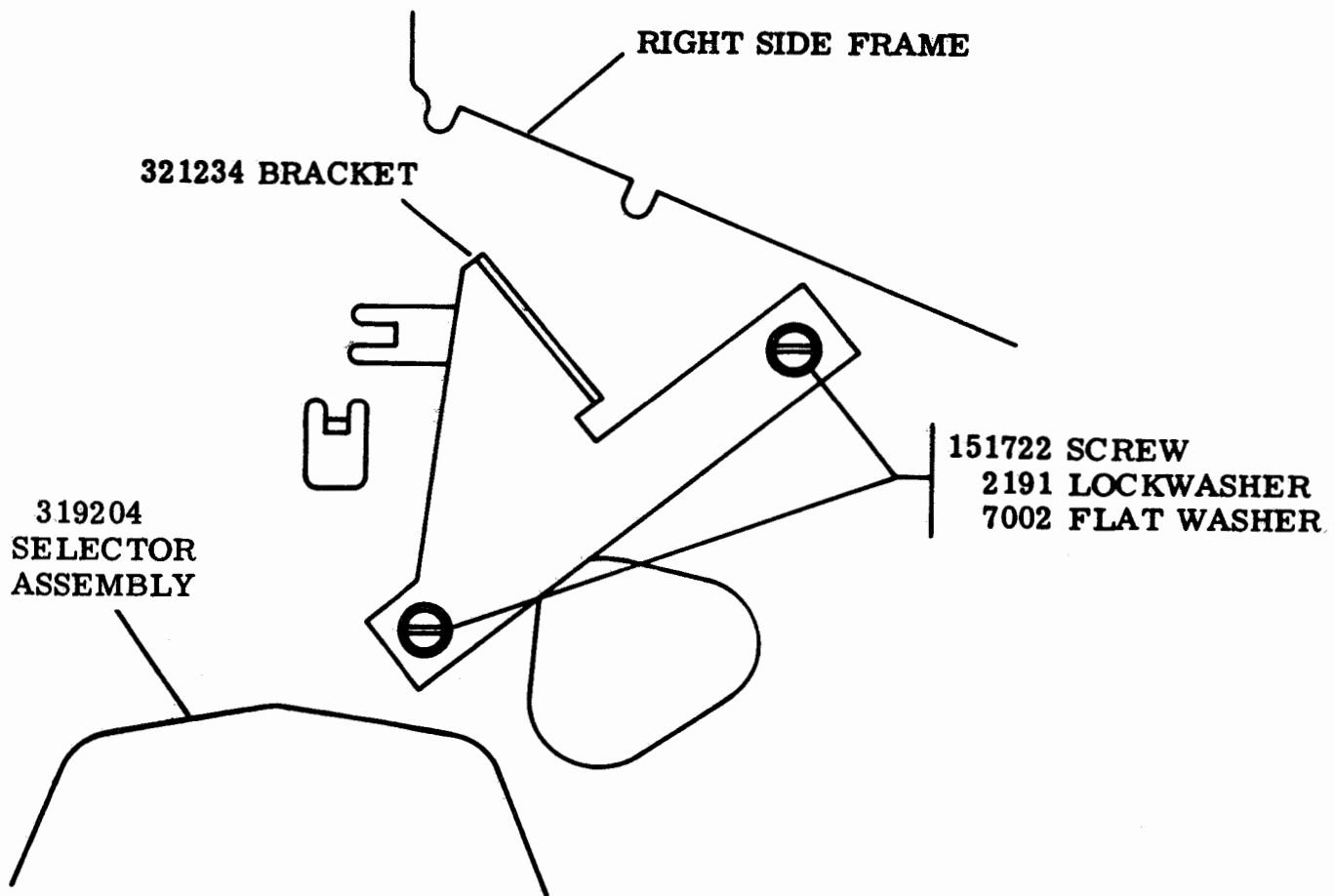


Figure 10 - Typing Unit — 321234 Bracket Position

SPECIFICATION 50503S

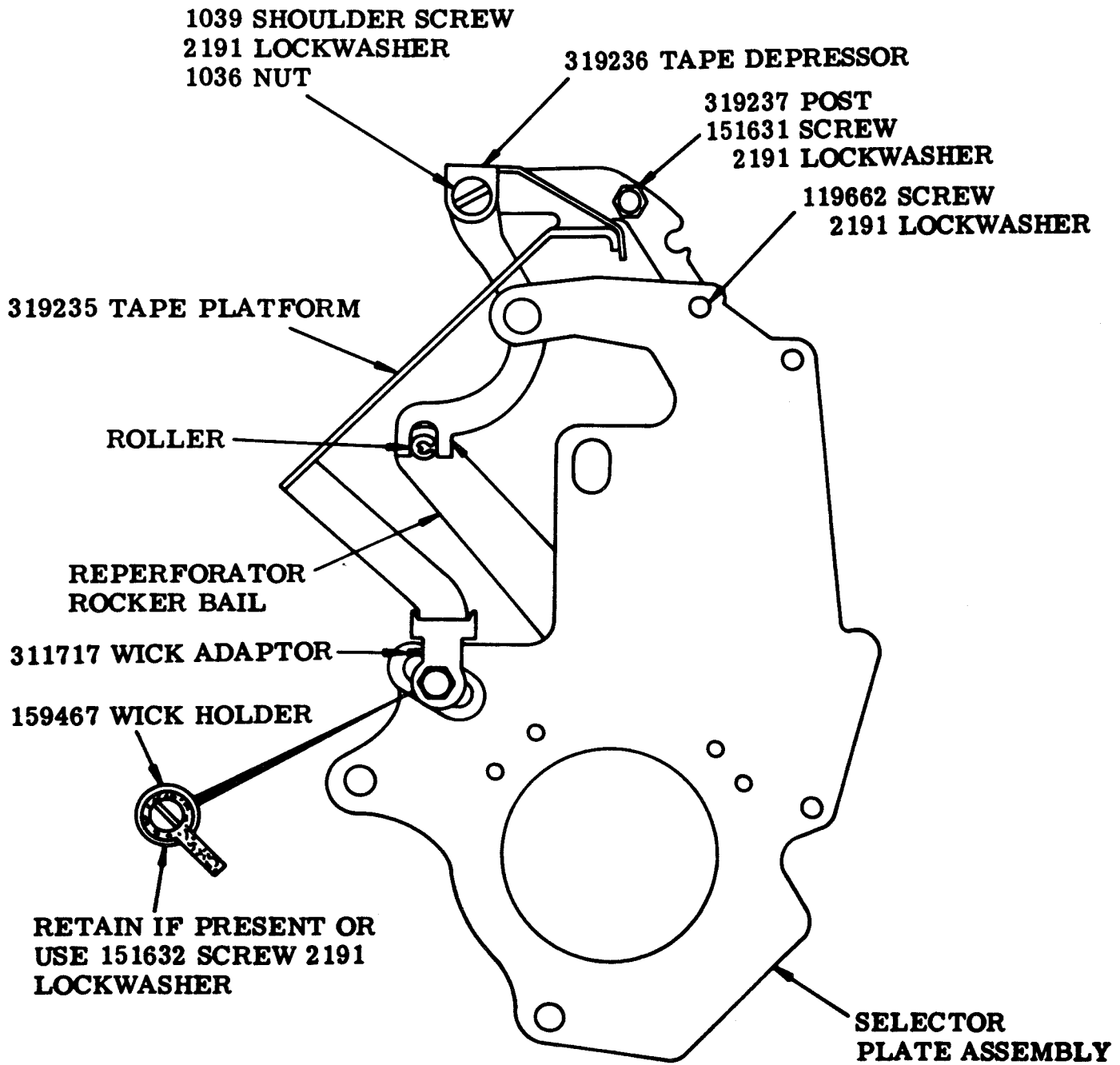


Figure 11 - Reperfurator — Tape Platform, Tape Depressor, and Wick Holder

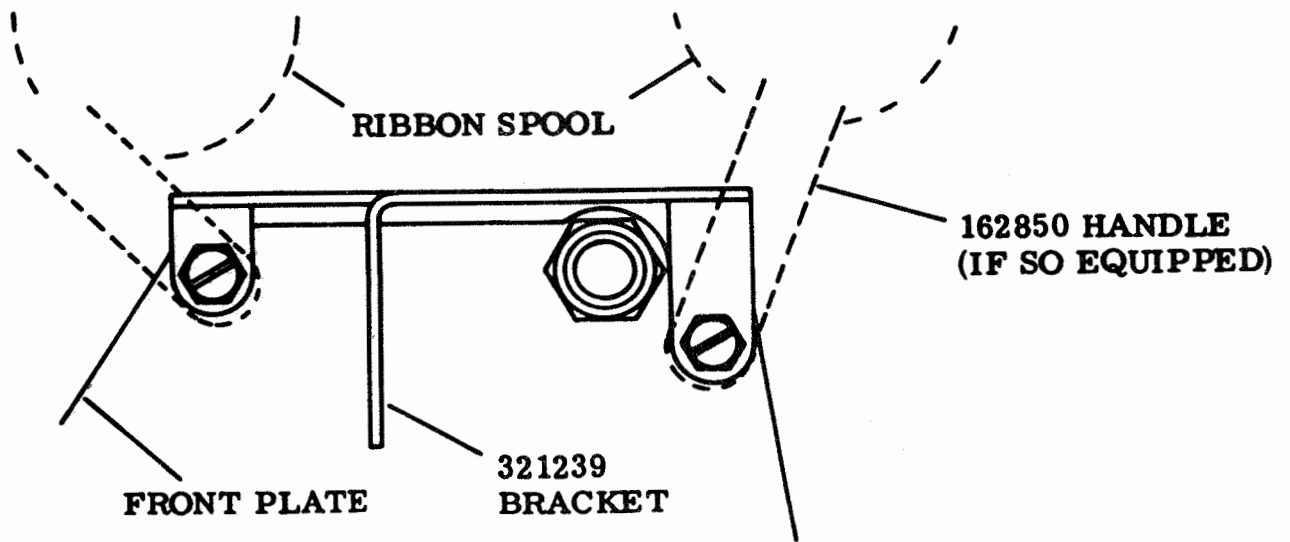


Figure 12 - Reperforator Using Standard — 321239 Bracket Position

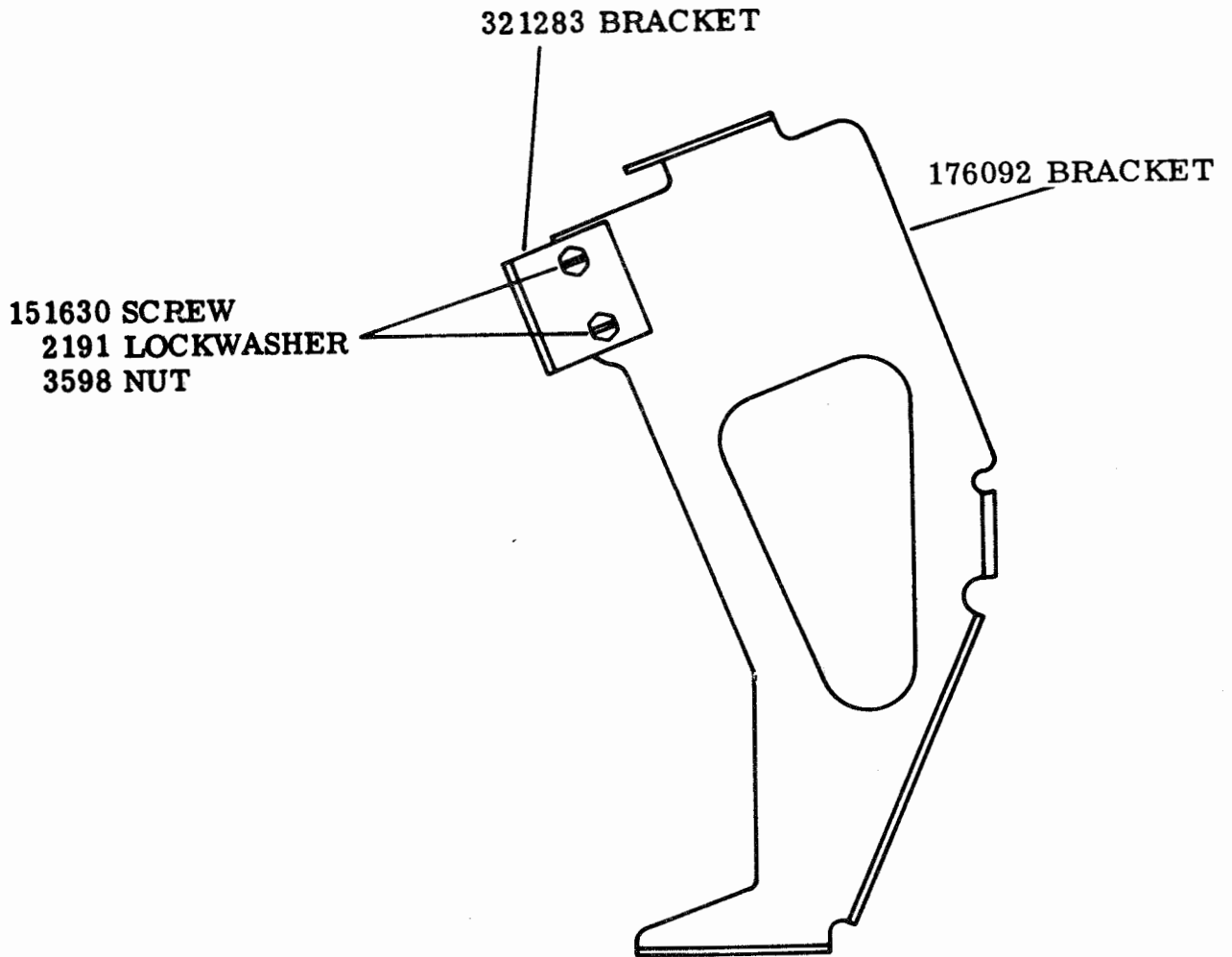


Figure 13 - Reperforator Miniaturized Base — 321283 Bracket Position

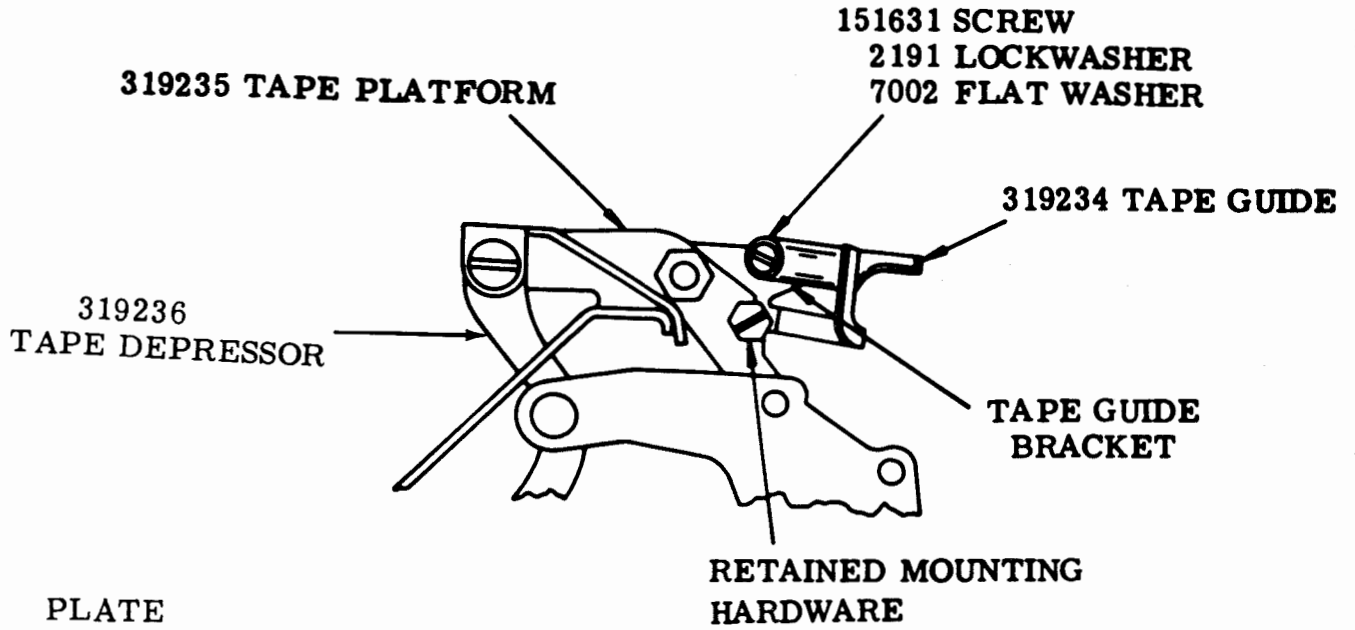


Figure 14 - Reperforator with 319236 Tape Depressor

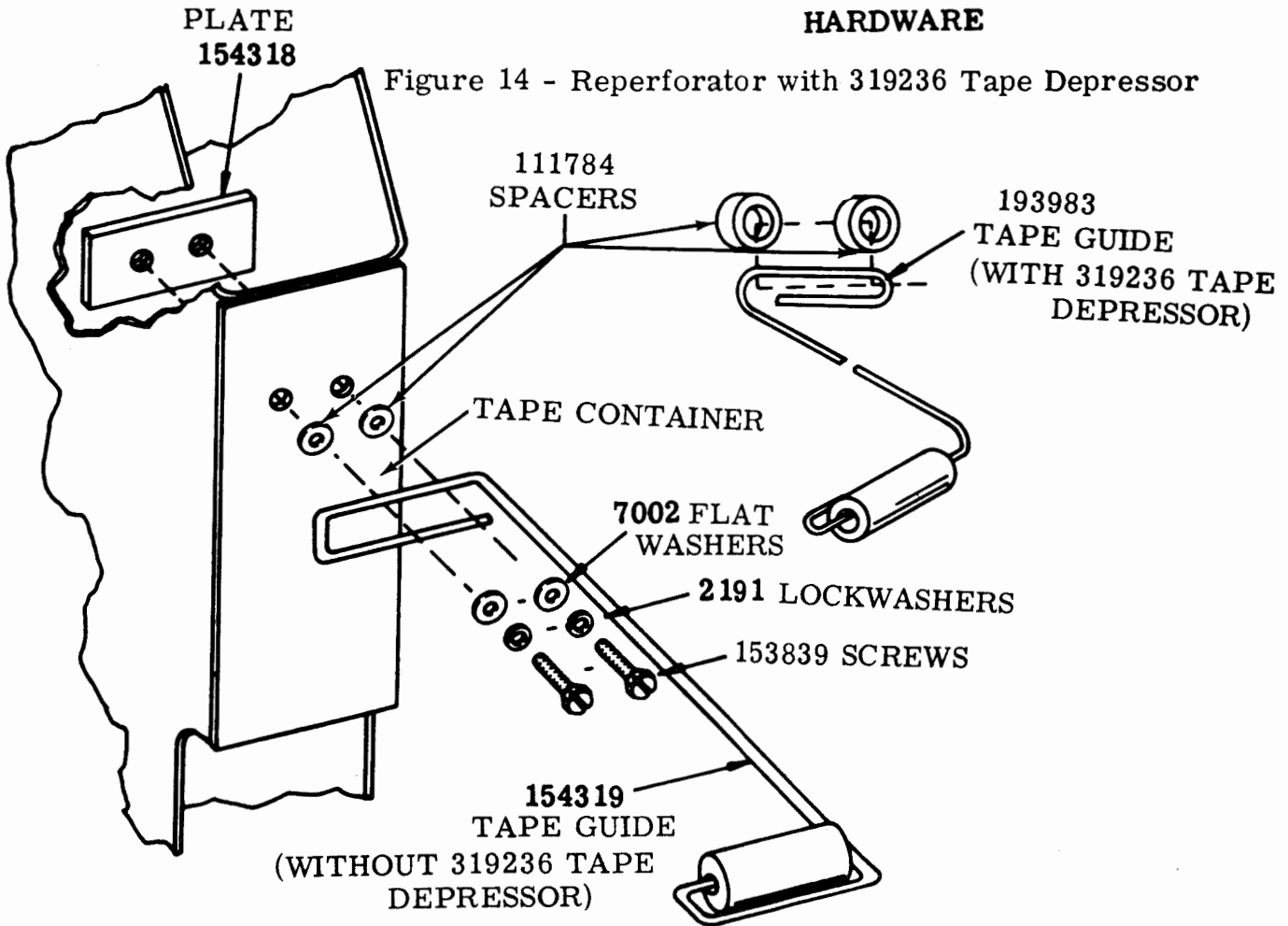


Figure 15 - Tape Guide Mounting With and Without 319236 Tape Depressor

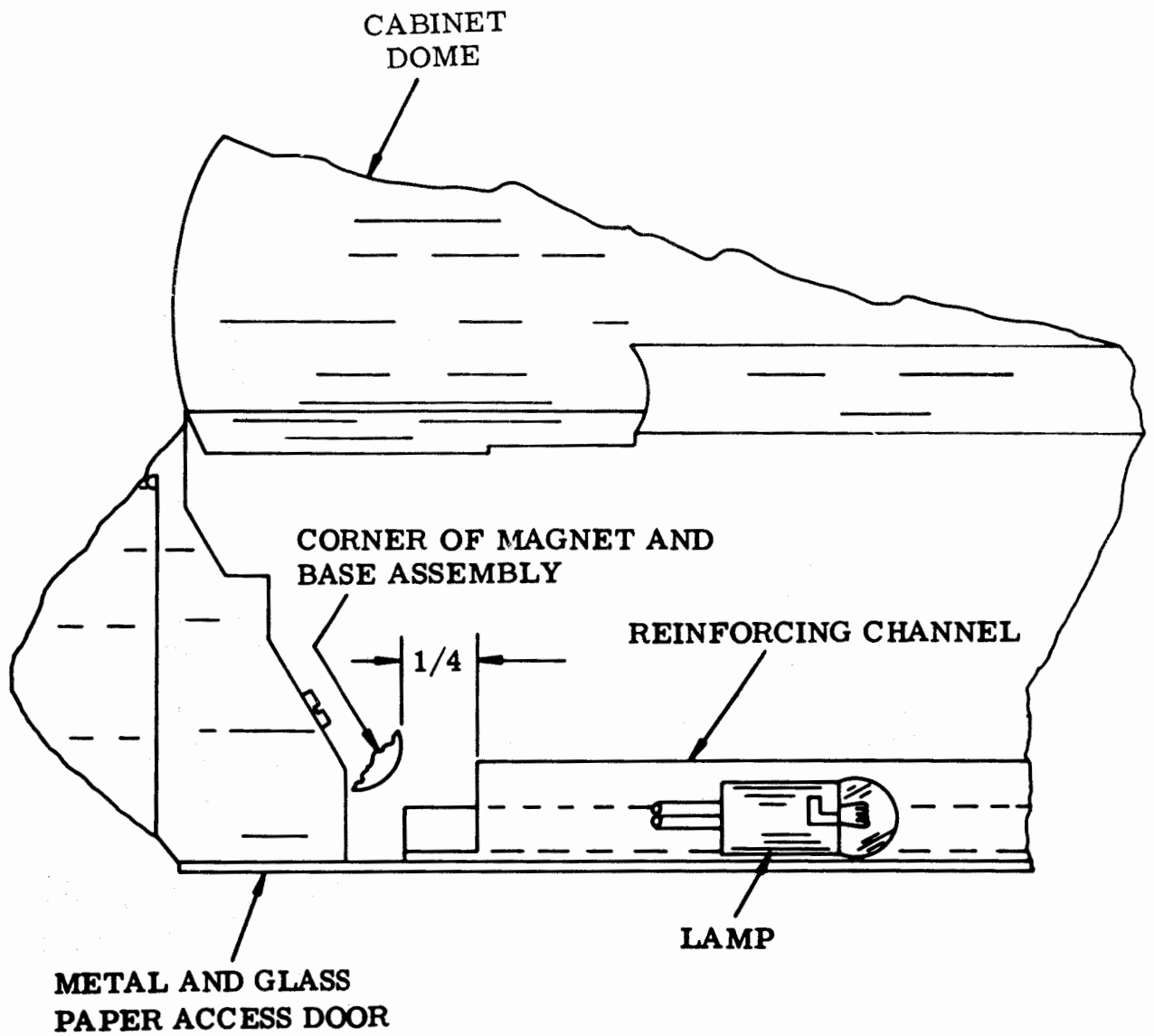


Figure 16 - Reperforator and Cabinet Dome Clearance

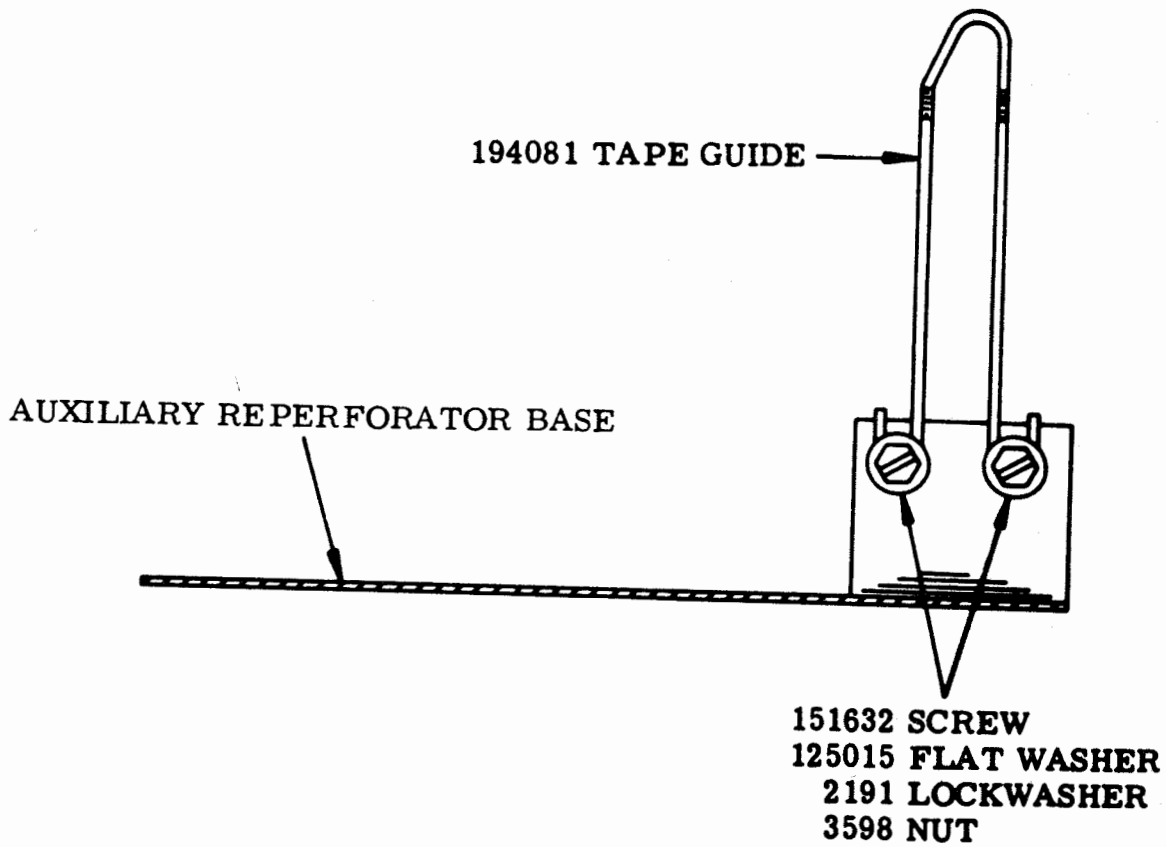


Figure 17 - Auxiliary Reperforator Tape Guide

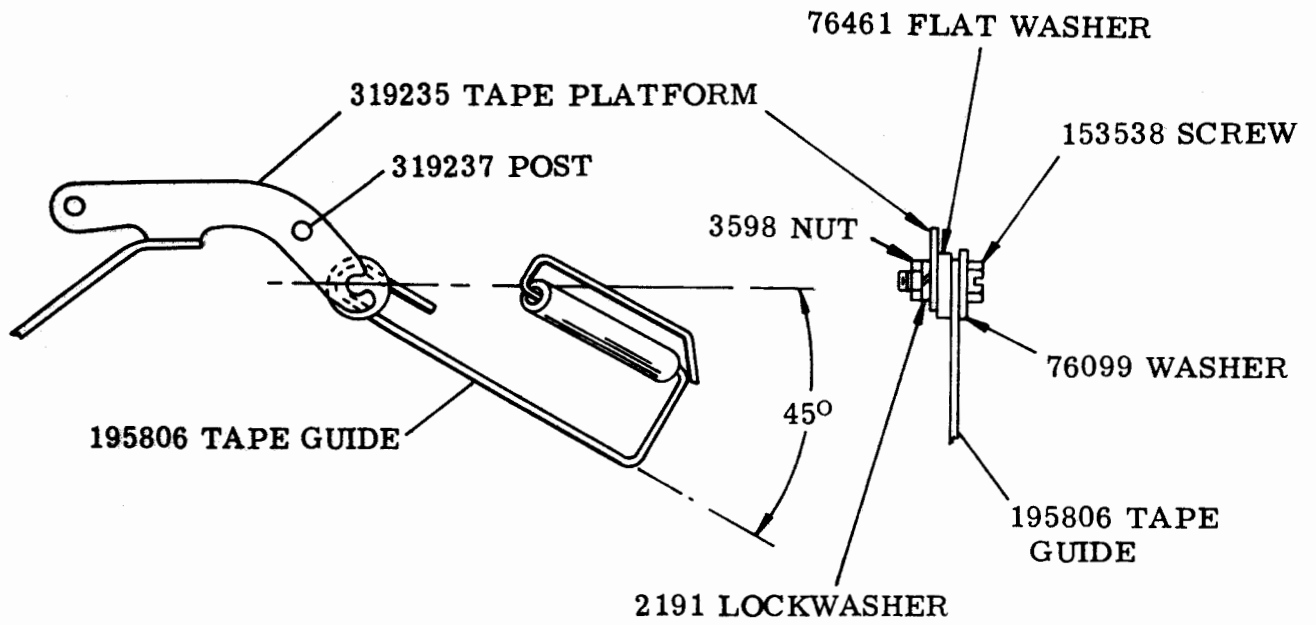


Figure 18 - Tape Guide Mounting Without 319236 Tape Depressor

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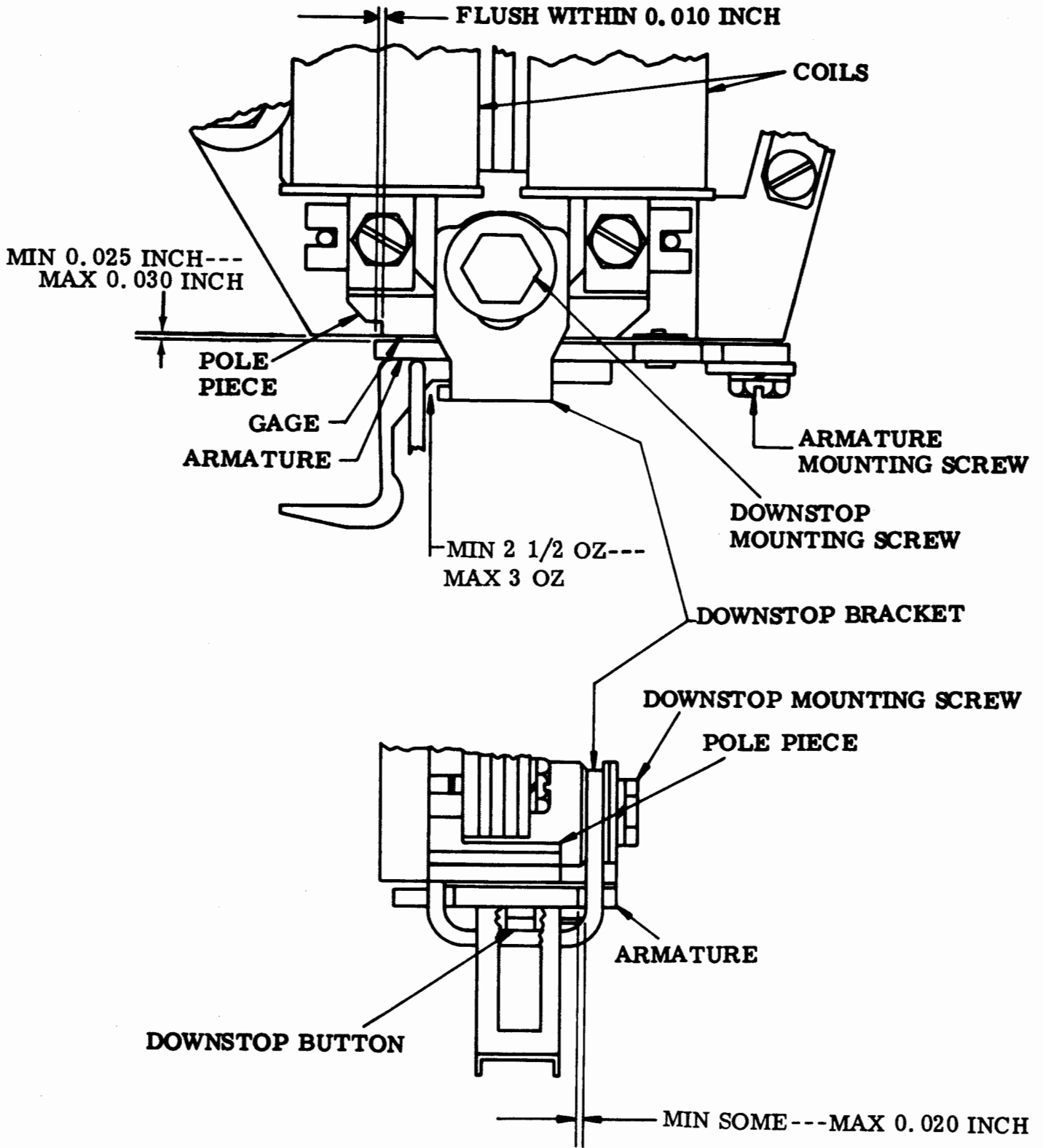


Figure 19 - Magnet Armature, Armature Downstop, and Armature Spring Adjustments

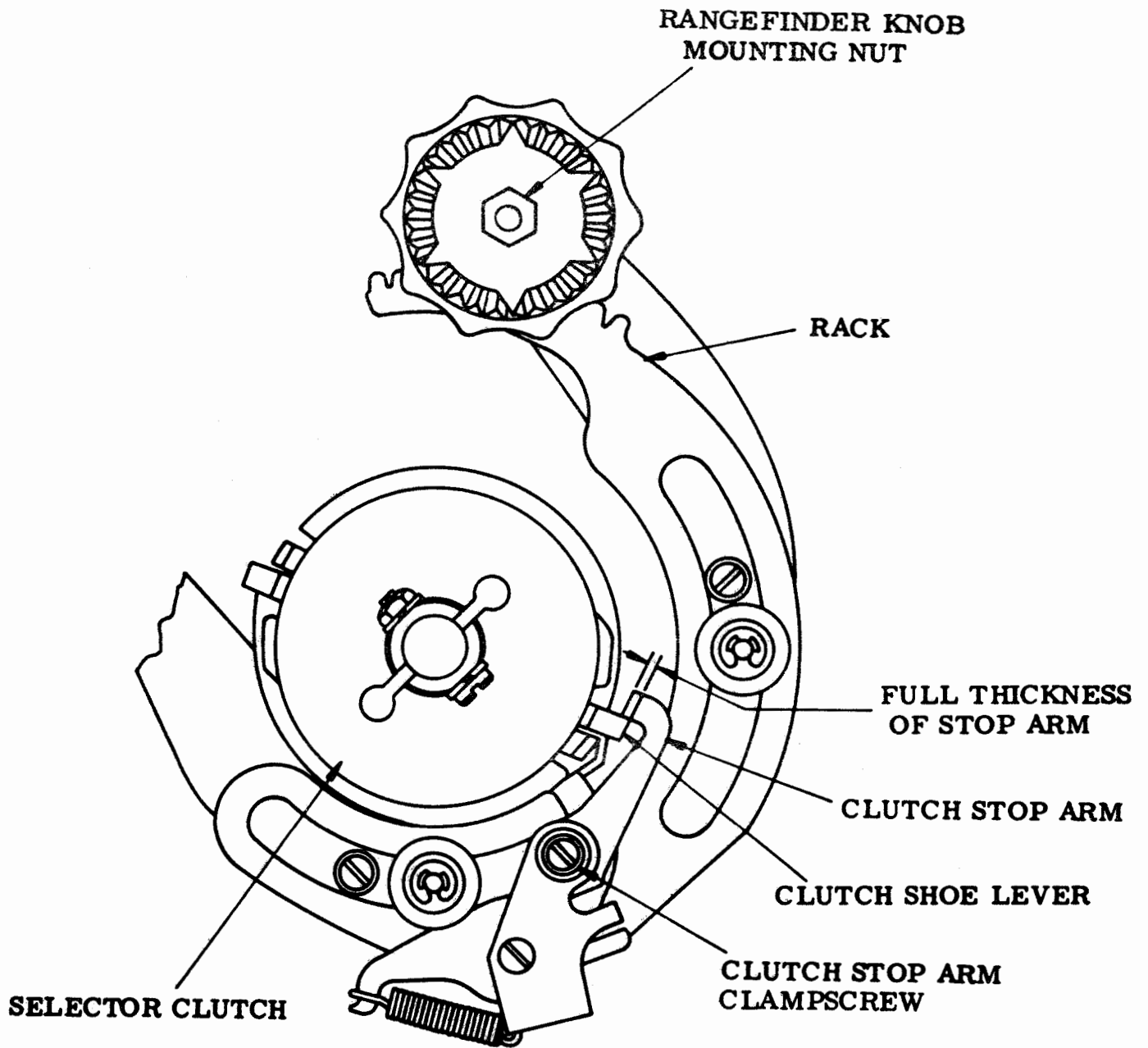


Figure 20 - Selector Clutch Stop Arm Adjustment

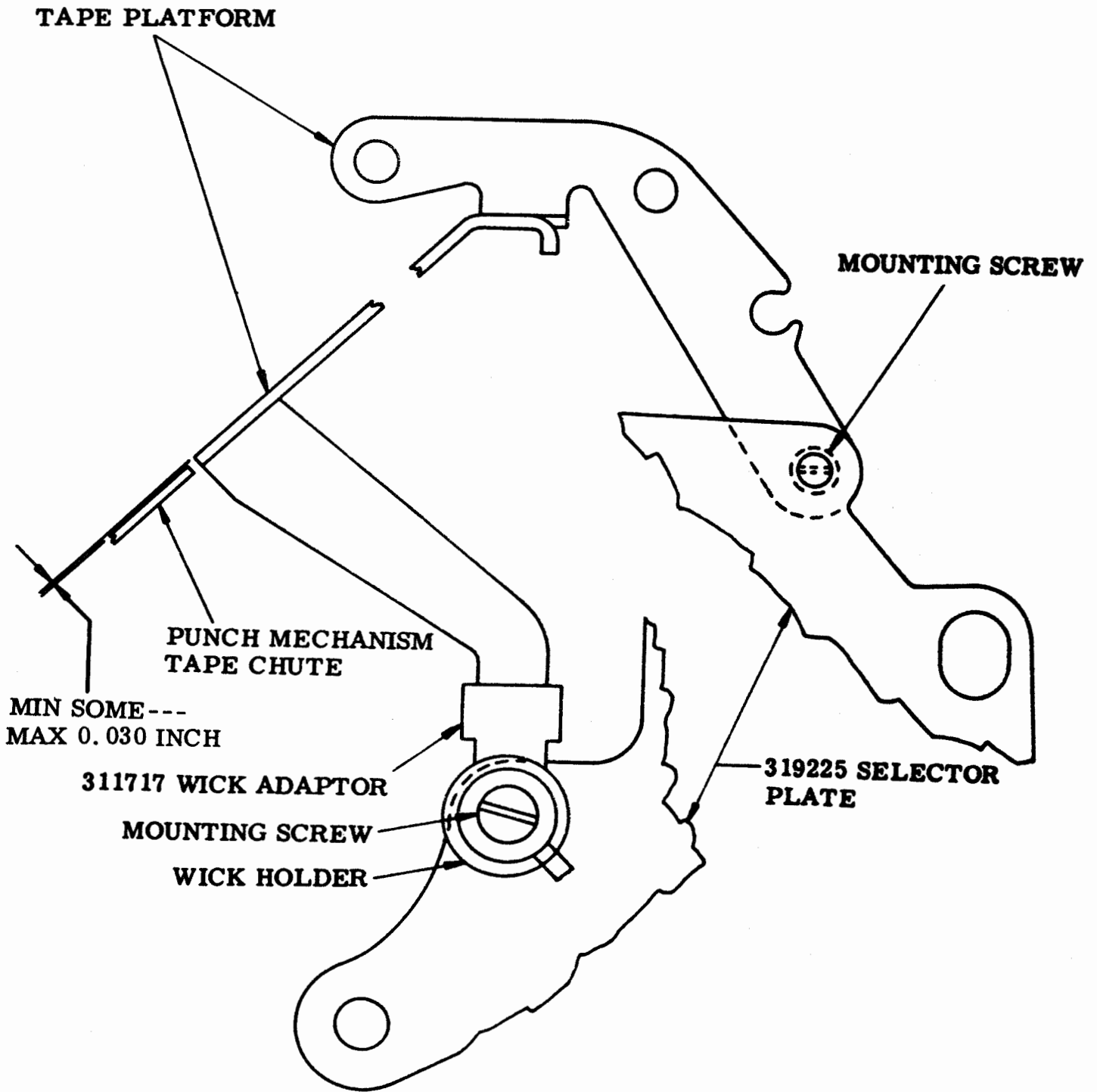


Figure 21 - Tape Platform Adjustment

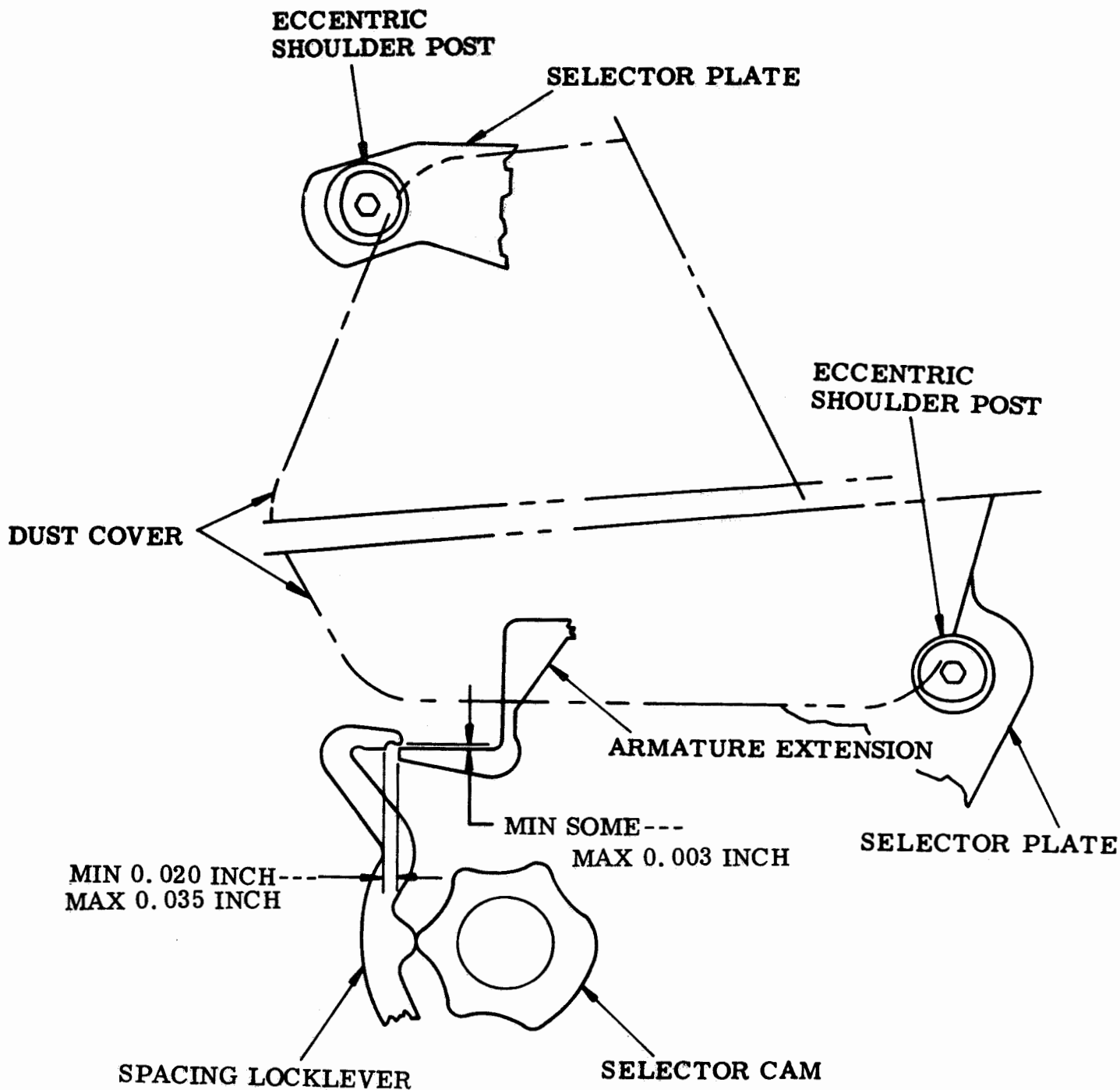


Figure 22 - Armature Extension and Spacing Locklever Adjustment

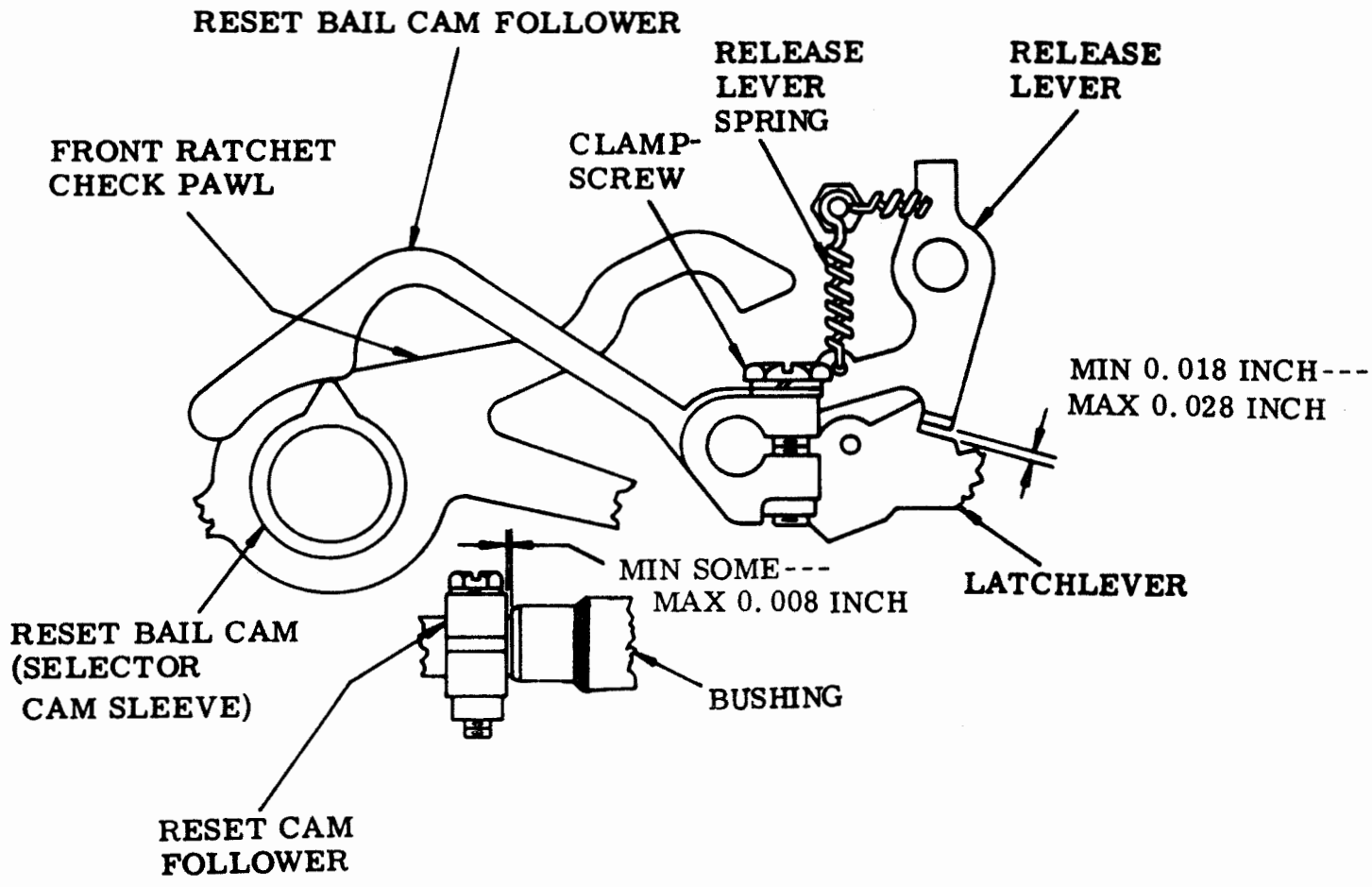


Figure 23 - Latchlever Adjustment

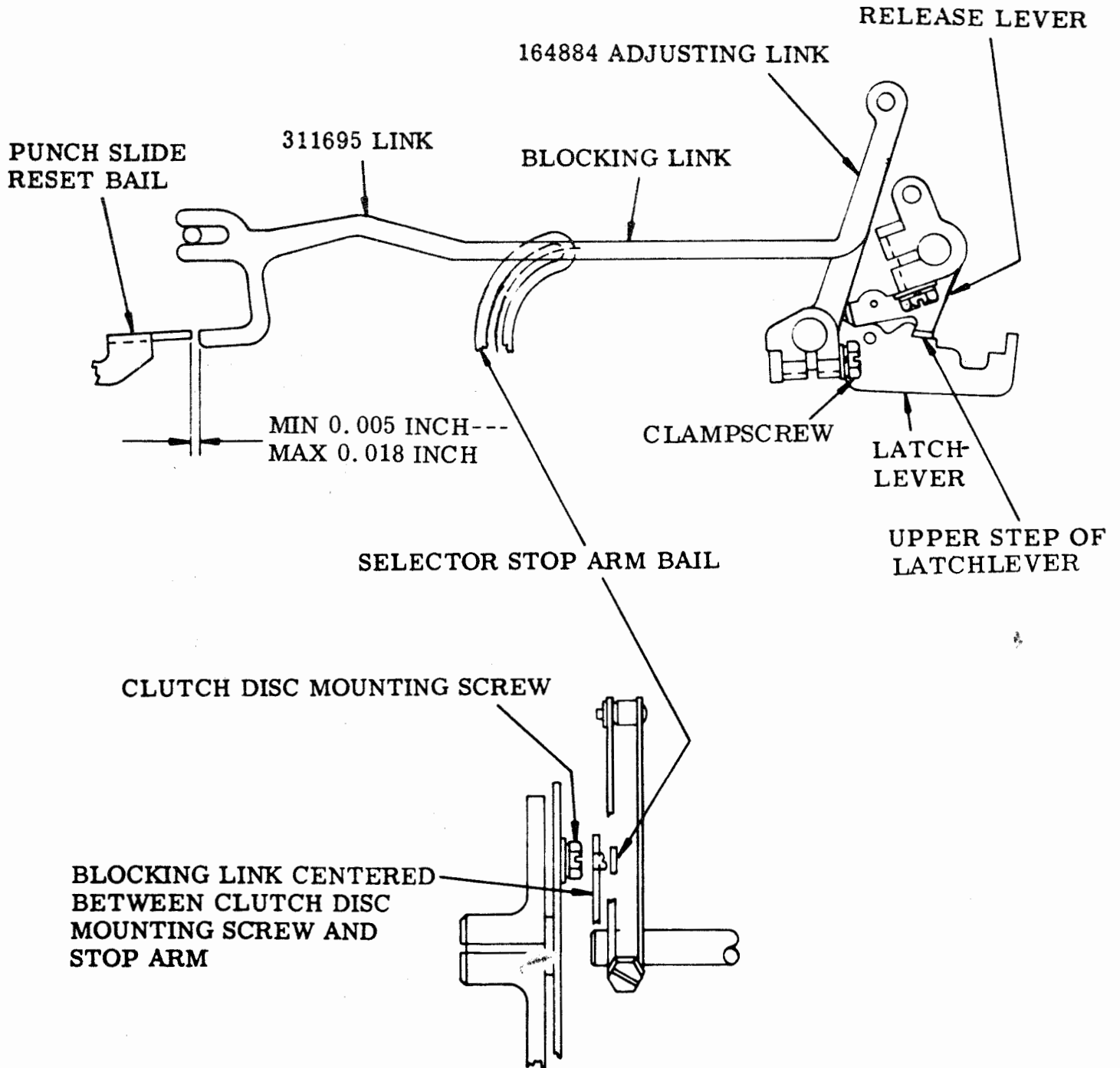


Figure 24 - Blocking Link Horizontal Clearance Adjustment

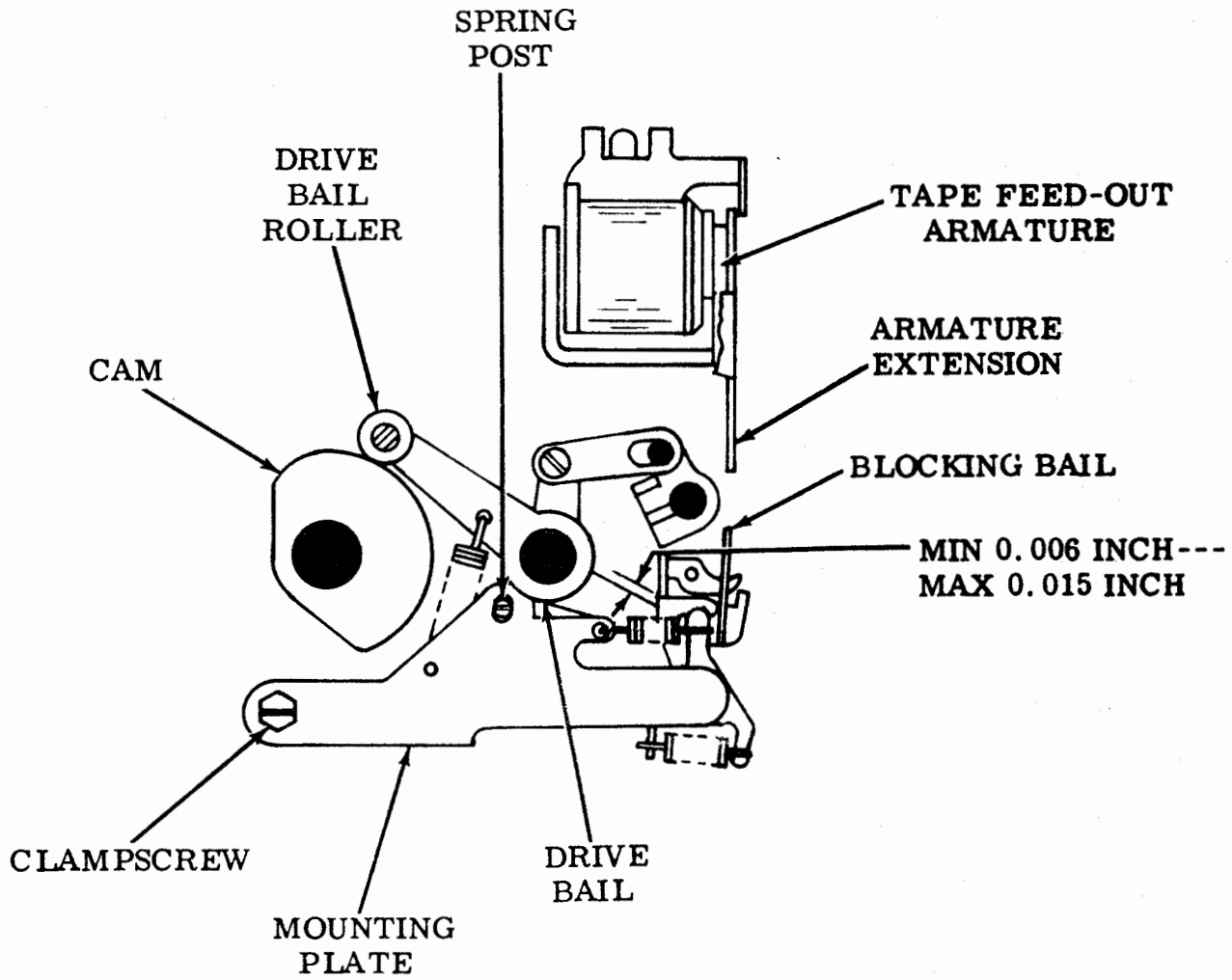


Figure 25 - Blocking Bail and Drive Bail Clearance