

"DATASPEED®" PRINTER

RECORDER AND PAPER TRANSPORT

ADJUSTMENTS AND LUBRICATION

1. GENERAL

1.001 This addendum, which supplements Section 578-500-700, Issue 3 is issued to cover the engineering changes incorporated in recent units. Recorder Unit: an access lid and an auxiliary mask have been added to provide protection for the electrodes and shield the elements from an accumulation of paper lint. The hinged lid affords easy access to the nozzle area for cleaning without the need for removing the cover or parts around the tank. An 80-division scale facilitates the inspection and check of the copy. Certain improvements in the pump assembly, ink filters, and electrical components have been made; however, no field maintenance is to be made on these items except for keeping the ink supply clean. Paper Transport: Changes

have been made in the following areas — paper throat detent assembly (revised), paper-out sensing switch (new), and paper tensioner assembly (revised to replace double tire roller with single tire roller).

1.002 Circuit cards and certain interconnecting cables for the following functions have been revised: paper unwinder motor and brake, paper jam alarm, and paper winder motor. Refer to the appropriate sections for the new features and theory.

1.003 Arrows in the margins indicate changes and additions. Insert the attached pages in accordance with the filing instructions above.

Attached:

Page 1, dated October 1970, revised
Page 2, dated October 1970, reissued
Page 8.1, dated October 1970, added
Page 8.2, dated October 1970, added
Page 9, dated October 1970, revised
Page 10, dated October 1970, revised
Page 10.1, dated October 1970, added
Page 12.1, dated October 1970, added
Page 13, dated October 1970, reissued
Page 14, dated October 1970, reissued
Page 16.1, dated October 1970, added
Page 17, dated October 1970, revised
Page 18, dated October 1970, reissued
Page 21, dated October 1970, revised
Page 22, dated October 1970, added

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Pre-paper puller drive belt	8	1. GENERAL	
Upper magnet armature	6	1.01 This section provides the adjustments and lubrication procedure for the maintenance of the recorder and paper transport of the DATASPEED printer. It is being reissued to change the title and to incorporate recent engineering changes. Since it is a general revision, marginal arrows ordinarily used to indicate changes and additions are omitted. This section was formerly designated 592-820-700, but this number is now cancelled. Since this issue of Section 578-500-700 is a revision of Section 592-820-700, Issue 2, it is designated Issue 3.	
Paper Feed Mechanism		2. ADJUSTMENTS	
Detent arm (early design)	9	CAUTION: REMOVE POWER FROM SET BEFORE CHECKING OR MAKING ADJUSTMENTS UNLESS OTHERWISE STATED.	
Detent arm spring	9	2.01 The adjustments are arranged in a sequence that should be followed as if a complete readjustment of the unit were being undertaken. In following such a procedure, parts or assemblies that are removed to facilitate adjustments should not be replaced until all other adjustments, which would be affected by the removal of these parts, have been made. If	
Idler pressure roller spring	3		
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SECTION 578-500-700

any adjustment is changed, related adjustments should be checked. Read the adjustment instructions thoroughly before attempting to make the adjustment. After an adjustment is completed, be sure to tighten any nuts or screws which may have been loosened.

2.02 The cover must be removed for most adjustments on the recorder and transport. To check or make adjustments that require power (for example, line feed adjustments), place jumper connector TP330131 into the interlock socket at the left front of the base. If the jumper connector is not available, insert a jumper wire between terminals 3 and 4 of the interlock socket.

CAUTION: DO NOT TOUCH PLATEN AREA WHEN POWER IS ON.

2.03 The recorder must be separated from the transport to provide access to many of the transport mechanisms. For some adjustments you may also find it convenient to separate the transport frame from the transport base. See Section 592-820-703TC for disassembly instructions.

CAUTION: ALWAYS KEEP RECORDER IN AN UPRIGHT POSITION TO AVOID SPILLING INK. THIS INK HAS POWERFUL STAINING PROPERTIES.

2.04 The spring tension values indicated are scale readings which should be obtained when the proper scales are used. Springs that do not meet the requirements, and for which no adjustment procedure is given, should be replaced by new springs.

2.05 Check all moving parts to make sure they are free from binds before operating the unit under power.

2.06 References to right or left, up or down, front or rear, apply to the units as viewed when facing them from front or recorder side.

2.07 Parts ordering information can be obtained from Section 578-500-800 (formerly Section 592-820-800). For the tools necessary in making the adjustments, refer to Section 570-005-800. The following tools are also necessary to adjust the recorder and transport:

<u>Number</u>	<u>Description</u>
TP310430	Feeler gauge set
TP331041	Go-no-go gauge

2.131 Paper Feed Mechanism (continued)

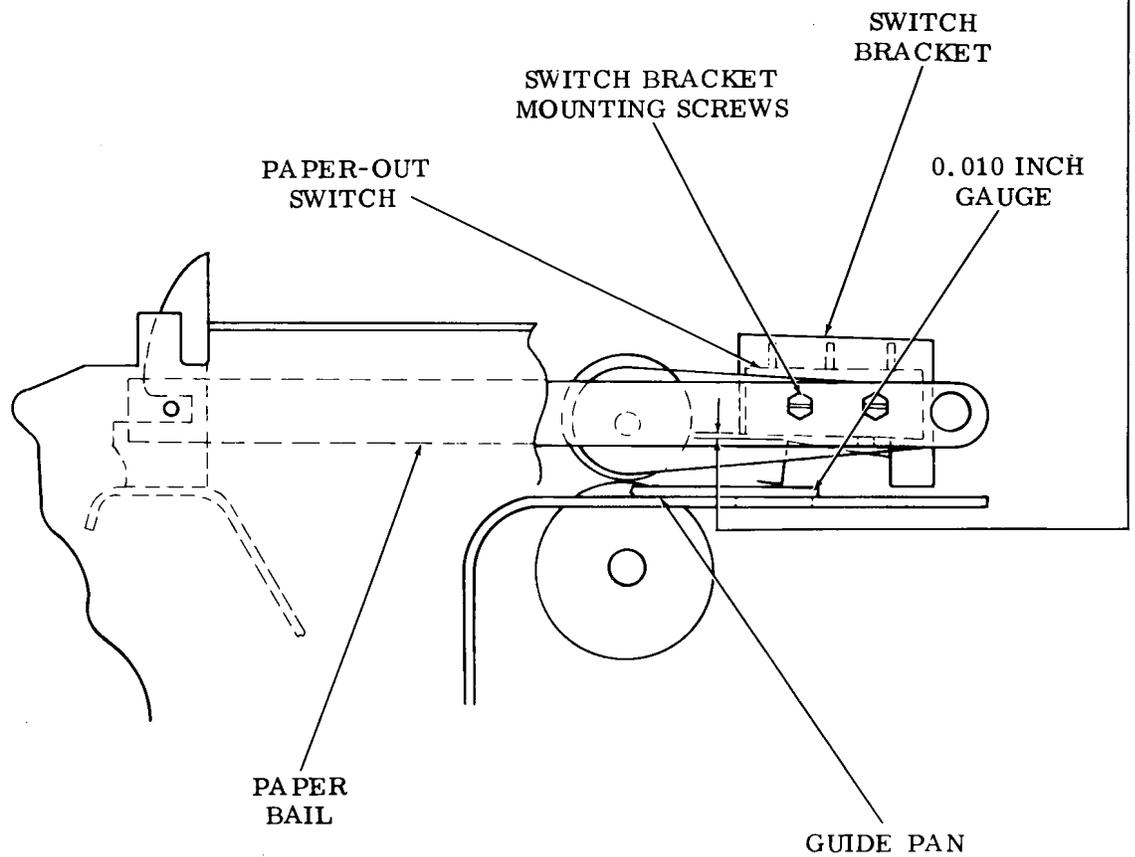
PAPER-OUT SWITCH**Requirement**

With a 0.010 inch shim covering the clearance hole in the paper pan and the switch sensing arm resting upon the shim, there should be

Min some---Max 0.003 inch
clearance between sensing arm and front edge of switch (under side).

To Adjust

With the switch bracket mounting screws loosened, position switch bracket.
Tighten screws and recheck.



(Right Side View)

2.132 Paper Feed Mechanism (continued)

PRESSURE ROLLER RELEASE LEVER SPRING (Latest Design)

To Check

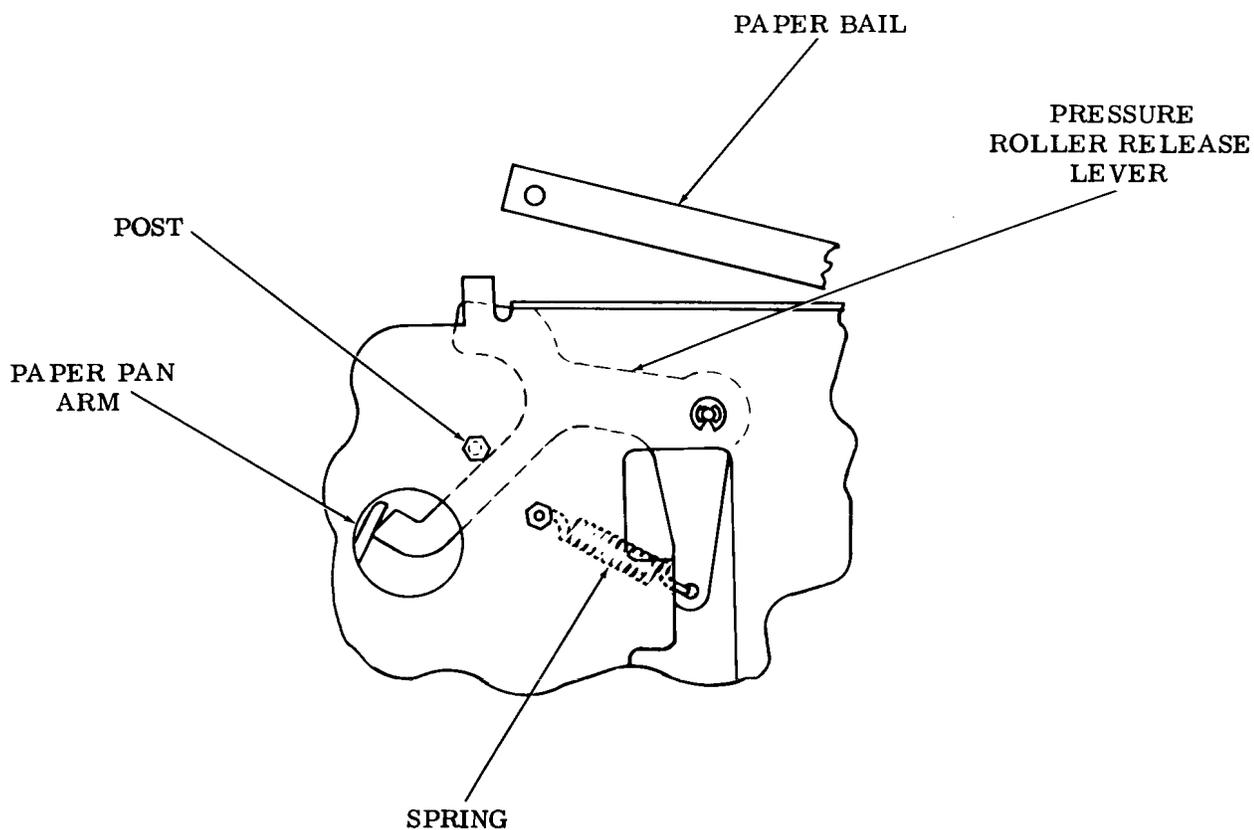
Release the paper bail. The lever should stop against post.

Requirement

With the paper bail in the released position, the lever should move the pressure roller away from the paper feed roller.

To Adjust

Replace spring if requirement is not met.



2.14 Paper Feed Mechanism (continued)

DETENT ARM (Early Design)

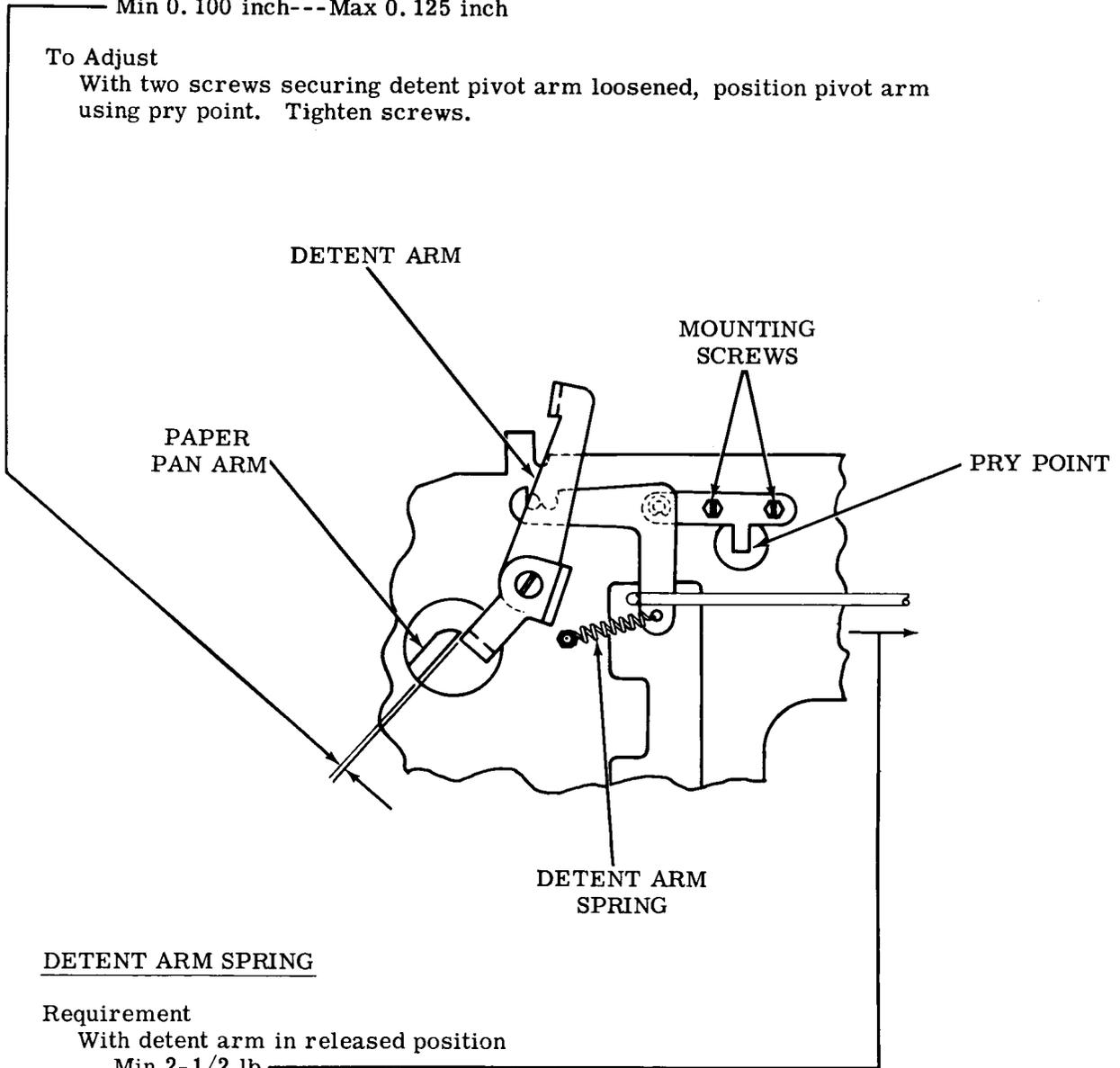
Requirement

With detent arm in released position, clearance between detent arm and paper pan arm should be

Min 0.100 inch---Max 0.125 inch

To Adjust

With two screws securing detent pivot arm loosened, position pivot arm using pry point. Tighten screws.



DETENT ARM SPRING

Requirement

With detent arm in released position

Min 2-1/2 lb

should be required to start arm moving.

2.15 Paper Tensioner Mechanism

→ PAPER TENSIONER (Early Design)

(1) To Check

Insert a piece of teletypewriter paper in paper tensioner assembly. Turn on motors. Attach spring scale through hole in paper and allow paper to move forward slowly (about 1/2 inch per second) for at least a distance of 2 inches.

Requirement

Pulling force of paper tensioner should be

Min 1-1/4 oz --- Max 2-1/2 oz

When paper is moved, it should move slowly without jerks.

To Adjust

No adjustment possible. If tensioner fails to meet requirement, it should be replaced.

(2) To Check

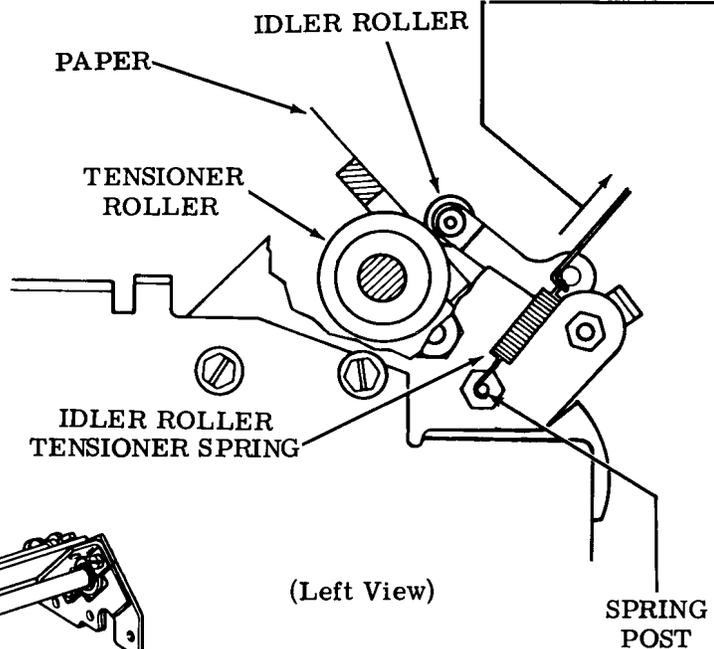
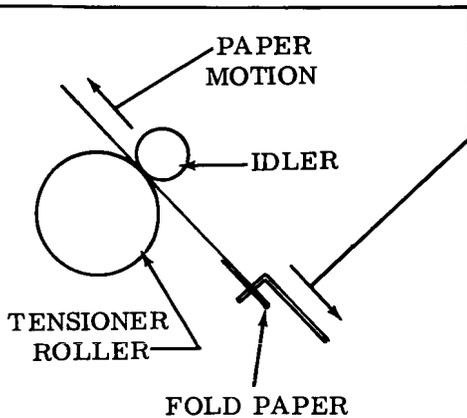
Apply spring scale to stretch each tensioner spring to installed length.

Requirement

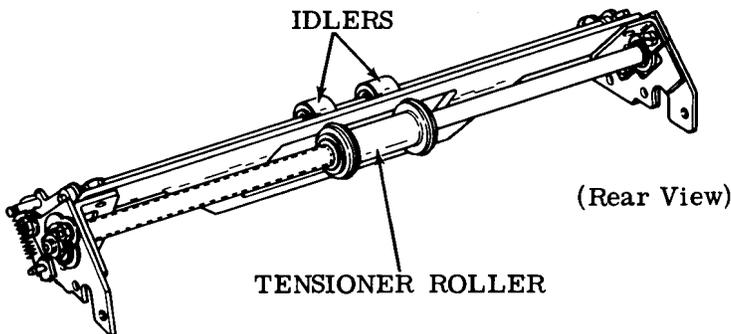
Tension should be equal within 1/2 ounce on both springs.

To Adjust

No adjustment possible. If requirement cannot be met, replace spring(s) and recheck.



(Left View)



(Rear View)

2.151 Paper Tensioner Mechanism

PAPER TENSIONER (Latest Design)

(1) To Check

Insert a piece of teletypewriter paper in paper tensioner assembly. Turn on motors. Attach spring scale through hole in paper and allow paper to move forward slowly (about 1/2 inch per second) for at least a distance of 2 inches.

Requirement

Pulling force of paper tensioner should be

Min 1-1/4 oz --- Max 3-1/2 oz

When paper is moved, it should move slowly without jerks.

To Adjust

No adjustment possible. If tensioner fails to meet requirement, it should be replaced.

(2) To Check

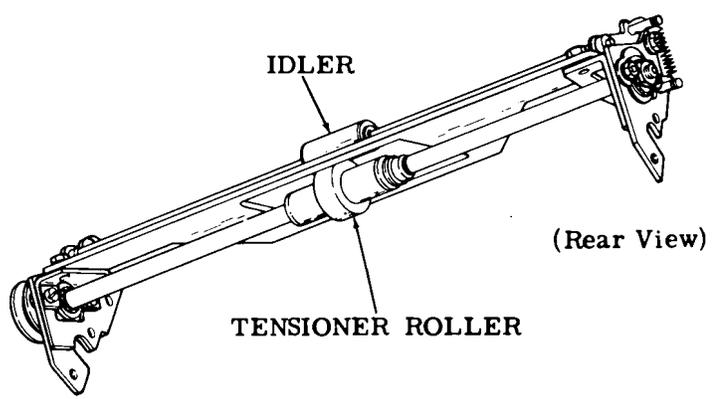
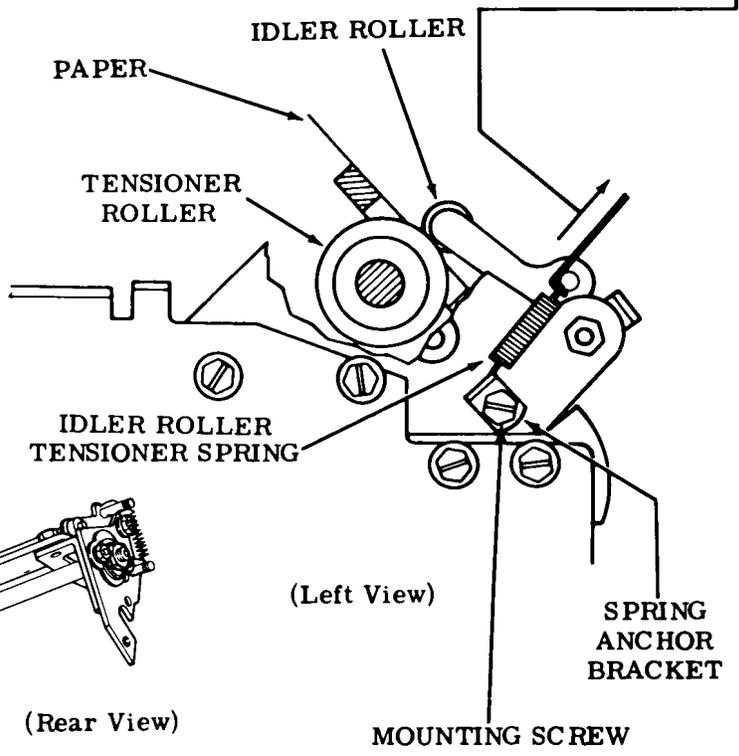
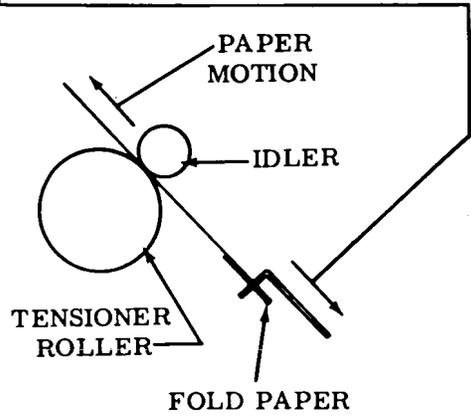
Apply spring scale to stretch each tensioner spring to installed length.

Requirement

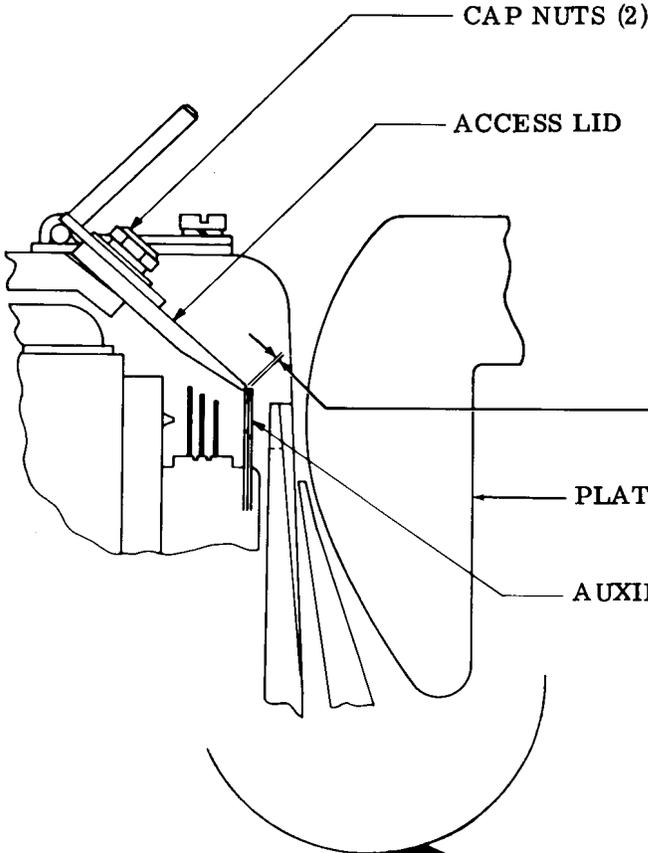
Tension should be equal within 1/2 ounce on both springs.

To Adjust

No adjustment possible. If requirement cannot be met, replace spring(s) and recheck.



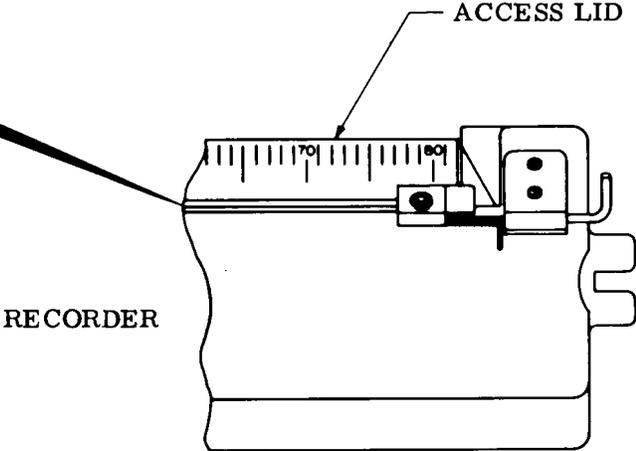
2.18 Printing Mechanism



ACCESS LID

Requirement
 With recorder mounted on transport (tank cover on), uniform clearance should exist between front of access lid and rear edge of electrode mask (check closest point).
 — Min some---Max 0.005 inch

To Adjust
 Loosen cap nuts (2) on access lid and position lid.



(Top View)

2.181 Printing Mechanism (continued)

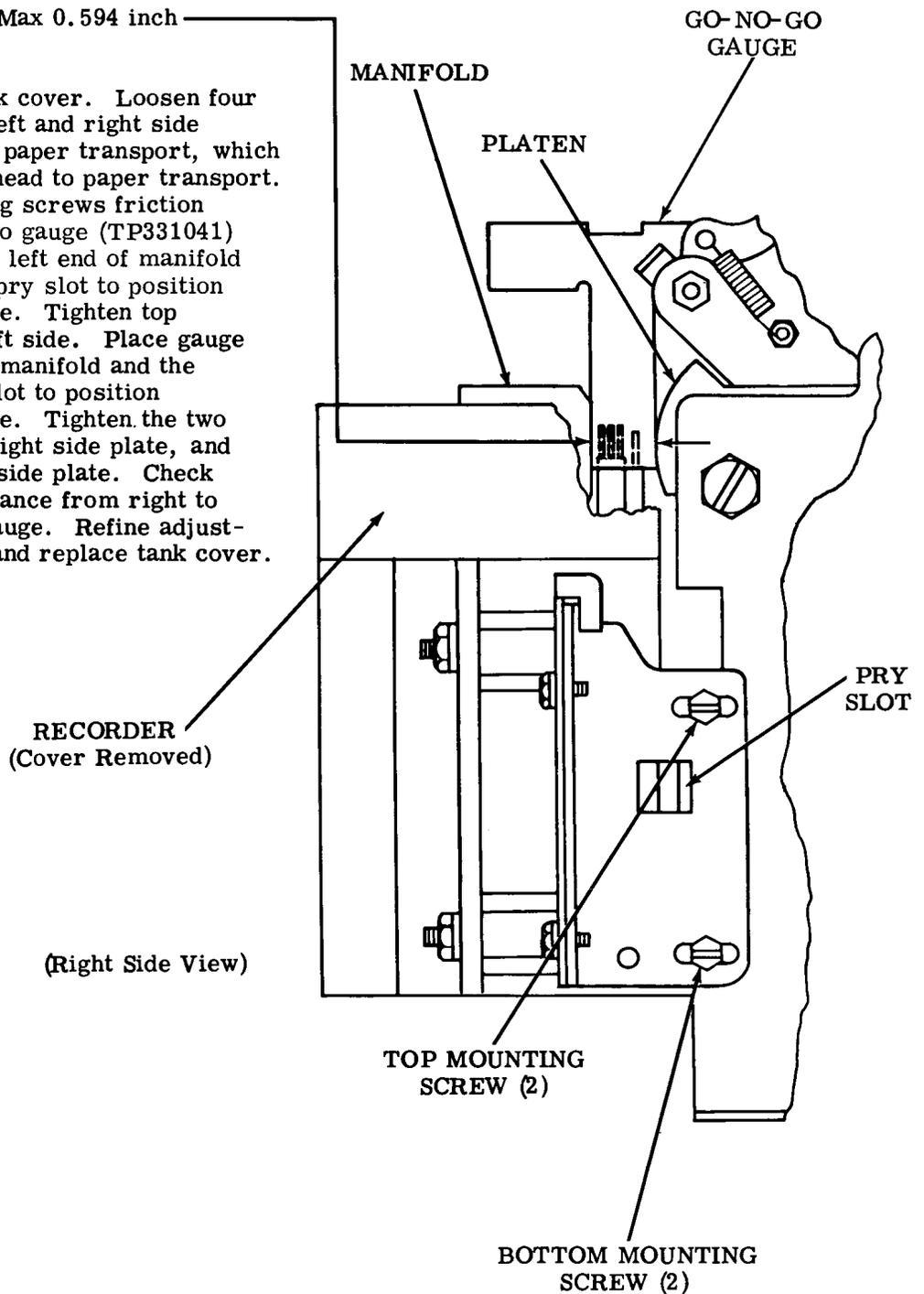
PLATEN-MANIFOLD CLEARANCE**Requirement**

Clearance between platen and recorder manifold should be

Min 0.584 inch-- -Max 0.594 inch

To Adjust

Remove recorder tank cover. Loosen four mounting screws on left and right side brackets, attached to paper transport, which mount the recording head to paper transport. Retighten top mounting screws friction tight. Place go-no-go gauge (TP331041) between front edge of left end of manifold and the platen. Use pry slot to position manifold against gauge. Tighten top mounting screw on left side. Place gauge between right side of manifold and the platen, and use pry slot to position manifold against gauge. Tighten the two mounting screws on right side plate, and bottom screw on left side plate. Check platen-manifold clearance from right to left using go-no-go gauge. Refine adjustment, if necessary, and replace tank cover.



3. LUBRICATION

3.01 The general servicing interval for the recorder and paper transport mechanisms is 5000 operating hours or 1000 rolls of paper run through the transport, whichever occurs first. At this point the unit should be disassembled, cleaned, lubricated, reassembled, and adjusted.

3.02 The following are secondary servicing intervals at which time partial servicing should be accomplished. The secondary servicing intervals are necessary because of the need for: (1) paper lint accumulation, dependent maintenance, and (2) time dependent maintenance.

(a) At 6 month intervals or 100 rolls of paper run through the machine, whichever comes first, perform the following:

- (1) Clean and lubricate the escapement wheel and escapement pawl.
- (2) Oil (2 drops) the line feed bearings.
- (3) Disassemble, clean, reassemble, adjust, and lubricate the paper tensioner assembly.
- (4) Clean the paper tensioner pressure roller (nylon covered) with a shop towel (TP310397) moistened with trichloroethylene.

(5) Check to see if any ink or lubricant has dripped onto the escapement armature or magnet pole faces; if it has, clean them thoroughly.

(b) At the general servicing interval, or when servicing is required due to improper operation, the following parts should be checked for wear or cracks:

- (1) Escapement wheel
- (2) Escapement pawl
- (3) Escapement pawl pivot shaft

- (4) Line feed roller (rubber covered)
- (5) Pre-paper puller roller (rubber covered)
- (6) "O" rings on paper tensioner roller
- (7) All drive belts (line feed, paper tensioner, and pre-paper puller).

CAUTION: REMOVE POWER FROM SET BEFORE AN ATTEMPT IS MADE TO INSPECT, LUBRICATE, OR CLEAN ANY PORTION OF THE UNIT.

3.03 The photograph shows paragraph numbers referring to particular line drawings of mechanisms and illustrates the location of these mechanisms on the unit. Parts are shown in an upright position, viewed from the front of the unit, unless otherwise specified.

3.04 Spring loops, felt washers, and certain shafts should be oiled. The friction surfaces of all exposed moving parts should be lubricated; however, overlubrication should be avoided. Exercise care to prevent oil or grease from getting between magnet armature pole faces. Keep all electrical contacts free of ink, oil, or grease. Also, keep the cover gasket free of contamination.

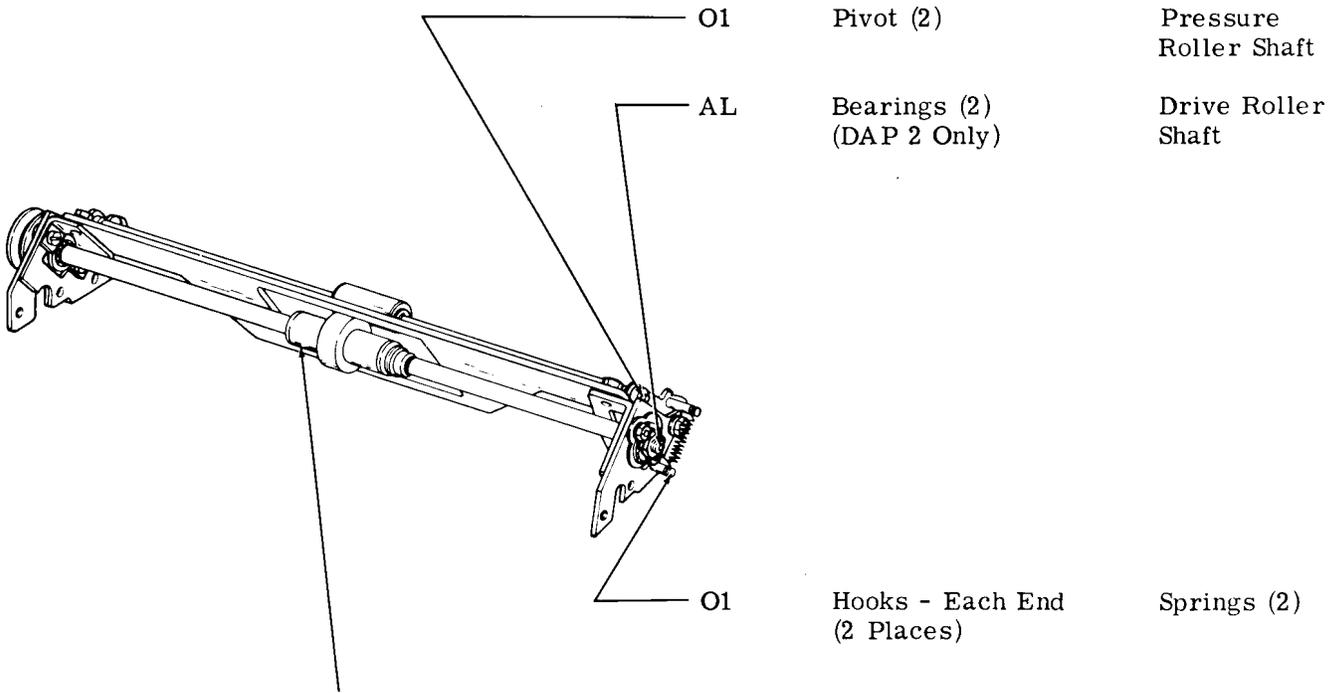
3.05 Refer to Section 570-005-800TC for lubricant ordering information.

3.06 The following symbols are used to indicate the type and amount of lubricant required:

<u>Symbol</u>	<u>Meaning</u>
O1	One drop of oil (KS7470)
O2	Two drops of oil (KS7470)
O3	Three drops of oil (KS7470)
G	Thin coat of tacky grease (TP145867)
AL	Areo Lubriplate (TP301313) or Lubriplate 105 (TP108805)
D	Keep dry — do not lubricate

Note: Before lubricating, remove old lubricant and clean parts wherever possible.

3.10 Tensioner Mechanism (Latest Design)

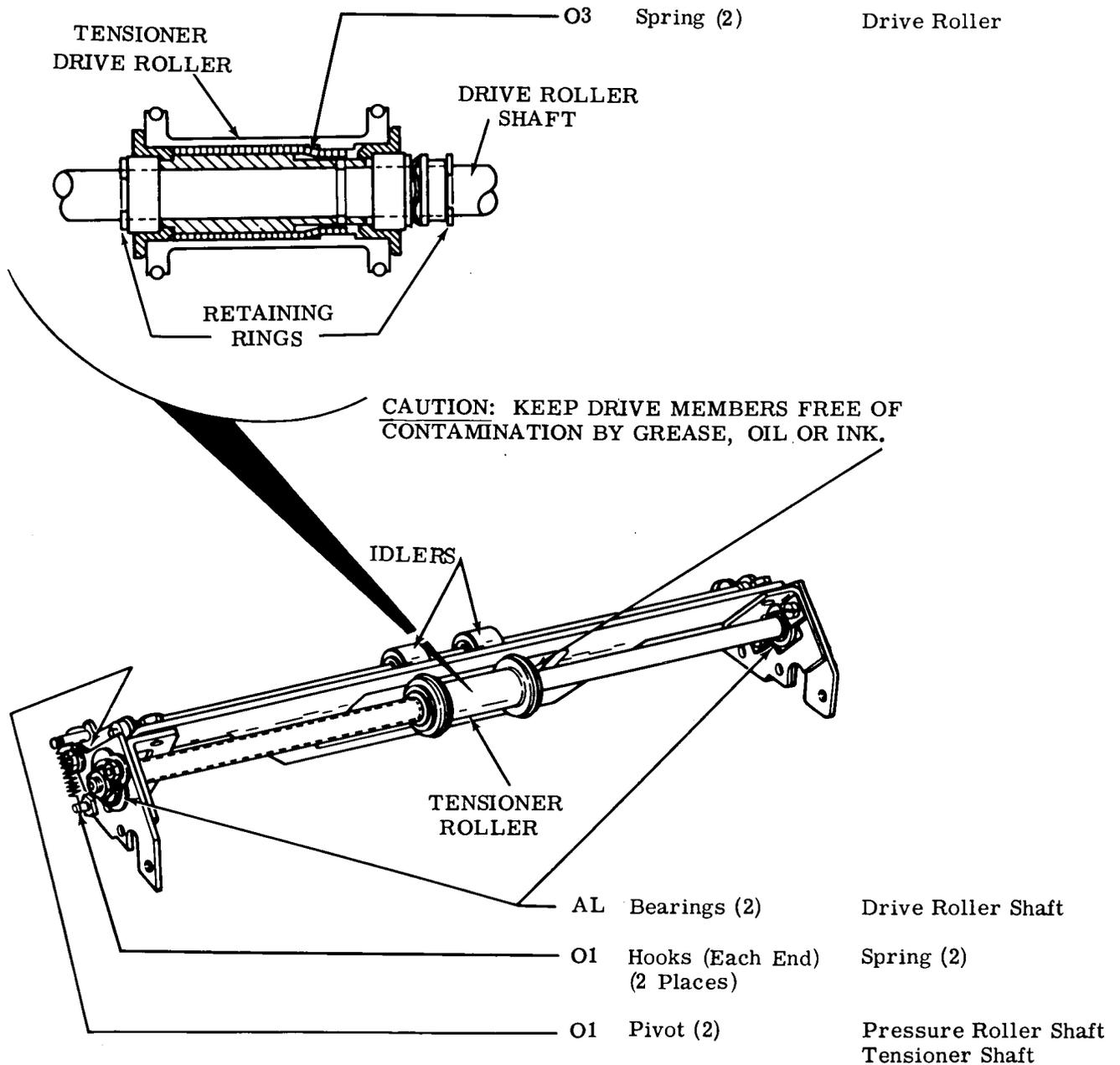


DRIVE ROLLER ASSEMBLY IS PERMANENTLY LUBRICATED AND SHOULD NOT REQUIRE ANY ADDITIONAL LUBRICANT.

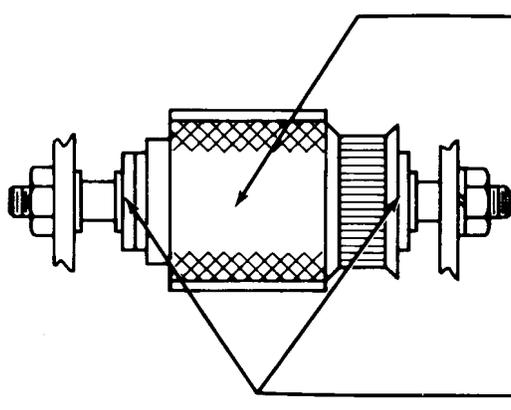
CAUTION: DO NOT USE ANY SOLVENTS TO CLEAN THIS ASSEMBLY.

3.101 Tensioner Mechanism (Early Design)

Note: Disassemble paper tensioner to facilitate lubrication.
Procedure — remove tensioner shaft assembly from printer and remove retaining ring from each end of roller assembly. Rotate drive roller counterclockwise while holding shaft stationary and exerting approximate 8 ounces pull to separate the shaft and roller. Clean and oil; then reassemble in the reverse order.



3.11 Pre-Paper Puller Roller Assembly

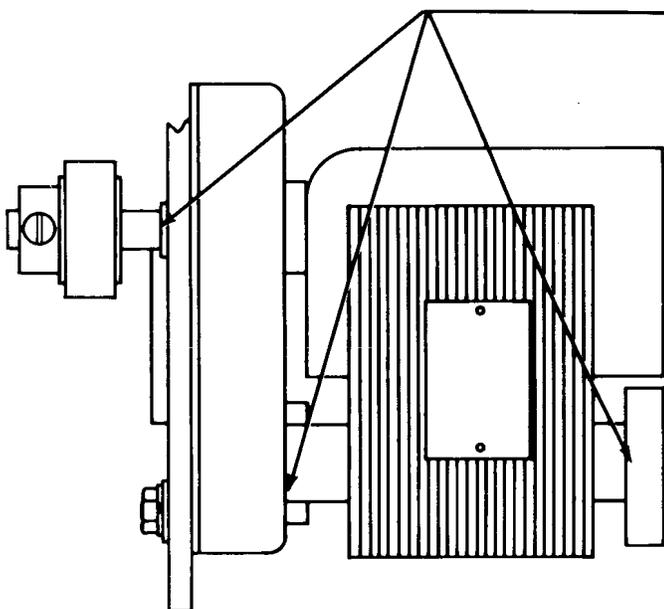


Fill Cavity One-Way Clutch

Note: In order to lubricate the one-way clutch and roller bearings, the roller assembly must be disassembled from its shaft.

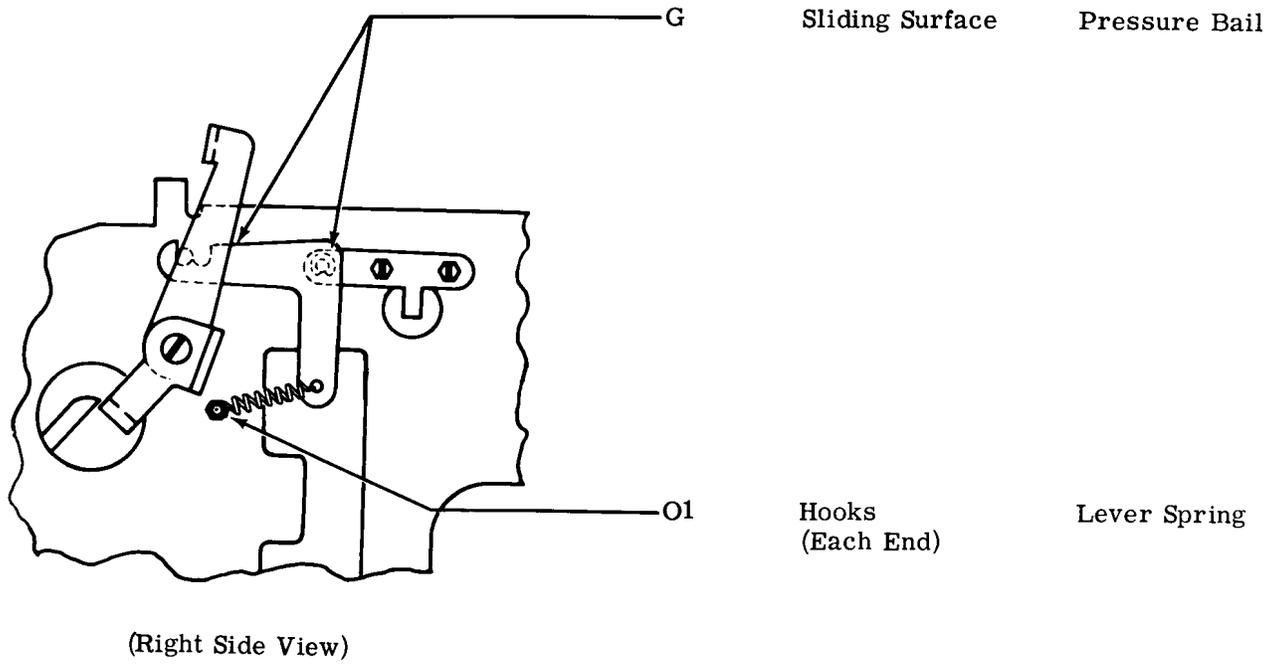
Bearings (2) Roller Bearings

3.12 Pre-Paper Puller Motor Assembly

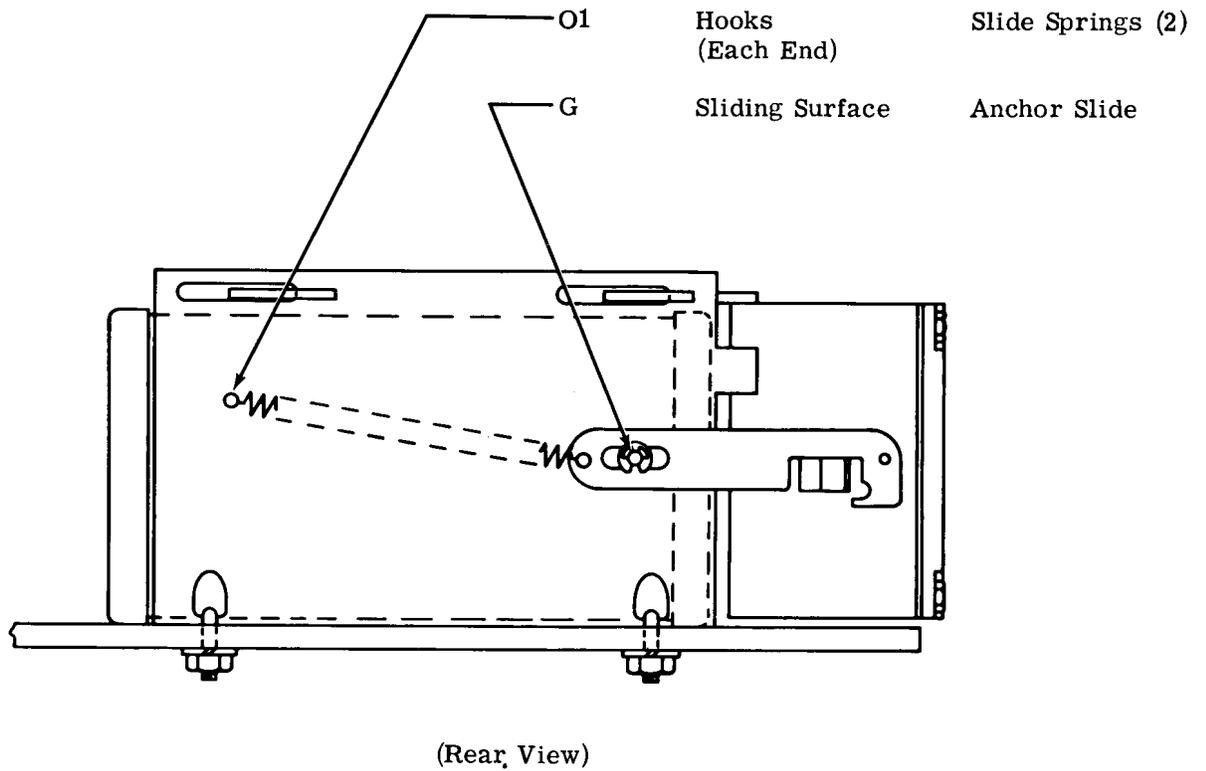


Bearings (3) Motor Bearings

3.16 Right Side Frame (Early Design)



3.17 Power Supply Cap Retainers



3.18 Right Side Frame (Latest Design)

