

33 TYPING UNIT

LUBRICATION

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Function levers	10	1. GENERAL	
Function rocker shaft	7	1.01 This section provides lubrication re-	
Function shaft area	6	quirements for the 33 typing unit. It is	
Intermediate gears	6	reissued to provide some changes in lubrication	
Latchlever	8	requirements, add lubrication instructions for	
Latchlever and trip lever	20	the print-nonprint mechanism which is part	
Main shaft area	4	of the typing units used in No. 1 ESS-ADF	
Motor area	6	(ADNET), 85A1, 86A1, and 86B1 Selective	
Print hammer	16	Calling, and incorporate TCNs 1286, 1396, and	
Pushlevers and stripper bail	19	1642. Marginal arrows indicate changes and	
Reset arm	16	additions.	
Reset bail	11	1.02 The general lubrication areas are illus-	
Ribbon guide spring	18	trated by photographs. The specific	
Ribbon mechanism	17	points to receive lubricant are indicated on line	
Rocker and pawls	11	drawings with appropriate textual instructions.	
Selector area	18	Line drawings and textual instructions follow	
Selector clutch	20	each photograph and are keyed to the photograph	
Selector levers	20	by paragraph numbers.	
Slides	15		
Slide guideplates	15		
Spacing area	12		
Space bellcrank	12		
Spacing mechanism - 1	13		
Spacing mechanism - 2	14		
Stop bail	8		

1.03 Saturate all felt washers and oilers with oil, and apply oil to each end of all bearings. The amount of lubrication to be applied to the typing unit is left to the discretion of the craftsman.

1.04 The lubrication interval of the typing unit should be similar to the lubrication intervals of the set. The lubrication intervals for the set are dictated by the hours of use (including idle time) on a daily basis. The following charts and notes list the appropriate lubrication intervals.

LUBRICATION INTERVAL IN WEEKS —
BASED ON 5-DAY WEEK (Note 1)

INITIAL LUBRICATION			
SPEED	DAILY USE		
	0 to 8 Hours	8 to 16 Hours	16 to 24 Hours
60 WPM	3 Weeks	2 Weeks	1 Week
100 WPM	3 Weeks	2 Weeks	1 Week

REGULAR LUBRICATION (Note 2)			
SPEED	DAILY USE		
	0 to 8 Hours	8 to 16 Hours	16 to 24 Hours
60 WPM	39 Weeks	26 Weeks	13 Weeks
100 WPM	26 Weeks	13 Weeks	6 Weeks

Note 1: Reduce lubrication intervals 15 percent when usage is 6 days per week, 30 percent when usage is 7 days per week.

Note 2: Teletypewriters with typing units above 144,000 use lubrication intervals given above; sets with typing units below 144,000 reduce lubrication intervals 33 percent.

Note 3: Typing units operating at speeds between 60 and 100 wpm, use lubrication requirements for the lower of the two speeds.

Note 4: The lubrication intervals are for the set as a whole — all components of the set should be lubricated at these intervals.

Note 5: All clutch gaps should be rechecked to insure that all parts, after seating themselves, have not caused the gaps to open up. Reset if necessary.

1.05 On occasion when the printer is disassembled, apply a coat of thoroughly mixed 50 percent KS7470 oil and 50 percent KS7471 grease at places indicated below.

- Selector Cam Surfaces (2.44)
- Spacing Gear Teeth (2.23)
- Codebar Pivot Shaft (2.17 and 2.18)
- Eccentric Cams (2.02 and 2.04)
- Stop Bail Adjusting Tab (2.11)
- Platen Shaft Bearings-Sprocket Feed Units only (2.49)
- Distributor Shaft Cam Roller (Early Design) or Stud (Late Design) (2.13)
- H-Lever (2.13)

Note 1: On occasion when the clutch is disassembled, lubricate the Internal Clutch Assemblies (2.02, 2.04, 2.44, and 2.53 on Form Feed Mechanisms only) as follows: Apply a thin coat of KS7471 grease at the loops of the clutch shoe lever spring, and lubricate the internal mechanism of the clutch with KS7470 oil.

Note 2: At regular lubrication intervals lubricate the clutch mechanism with KS7470 oil only.

1.06 The textual instructions that accompany the line drawings consist of abbreviated directions, specific lubrication points, and parts affected. The meanings of the abbreviated directions (symbols) follow:

<u>Symbol</u>	<u>Meaning</u>
D	Keep dry - no lubricant permitted.
G	Apply thin coat of grease (KS7471).
O	Oil (KS7470).

1.07 References to left, right, front, or rear, etc, consider the typing unit to be viewed from a position where the carriage area faces up and the selector area is located to the viewer's left.

CAUTION: DO NOT USE ALCOHOL, MINERAL SPIRITS, OR OTHER SOLVENTS TO CLEAN PLASTIC PARTS OR PARTS WITH PROTECTIVE-DECORATIVE FINISHES. NORMALLY, A SOFT, DRY CLOTH SHOULD BE USED TO REMOVE DUST, OIL, GREASE, OR OTHERWISE CLEAN PARTS OR SUBASSEMBLIES. IF NECESSARY, A SOFT CLOTH DAMPENED WITH SOAP OR MILD DETERGENT MAY BE USED. AFTERWARDS, RINSE EACH CLEANED PART OR SUBASSEMBLY WITH SOFT, DAMP CLOTH AND BUFF WITH A SOFT, DRY CLOTH.

1.08 Materials needed for teletypewriter lubrication are listed in Section 570-004-701. Required tools are included in TP185830 maintenance tool kit and are listed in Section 570-005-800.

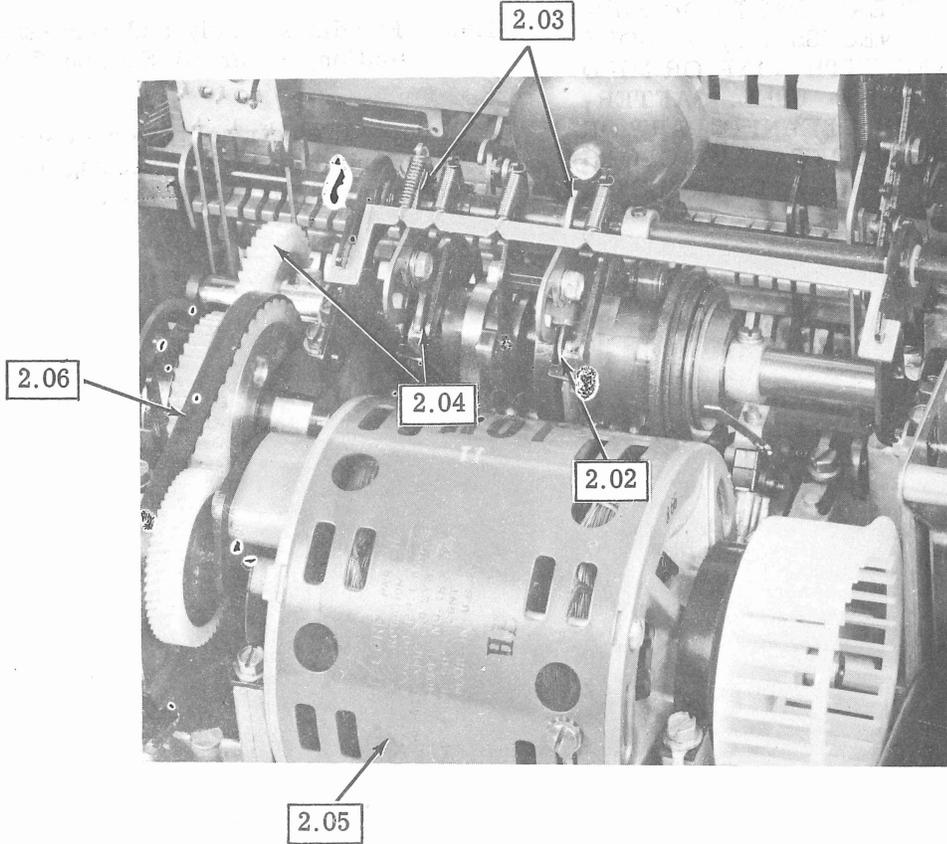
1.09 For disassembly and reassembly information, refer to Section 574-122-702.

Note: All electrical power must be removed from unit before lubricating or removing components for lubrication.

2. BASIC UNITS

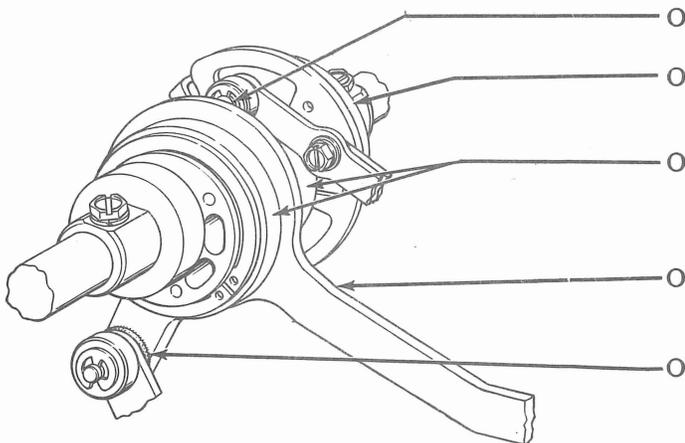
COMMON MECHANISMS

2.01 Main Shaft Area



(Rear View)

2.02 Function Clutch

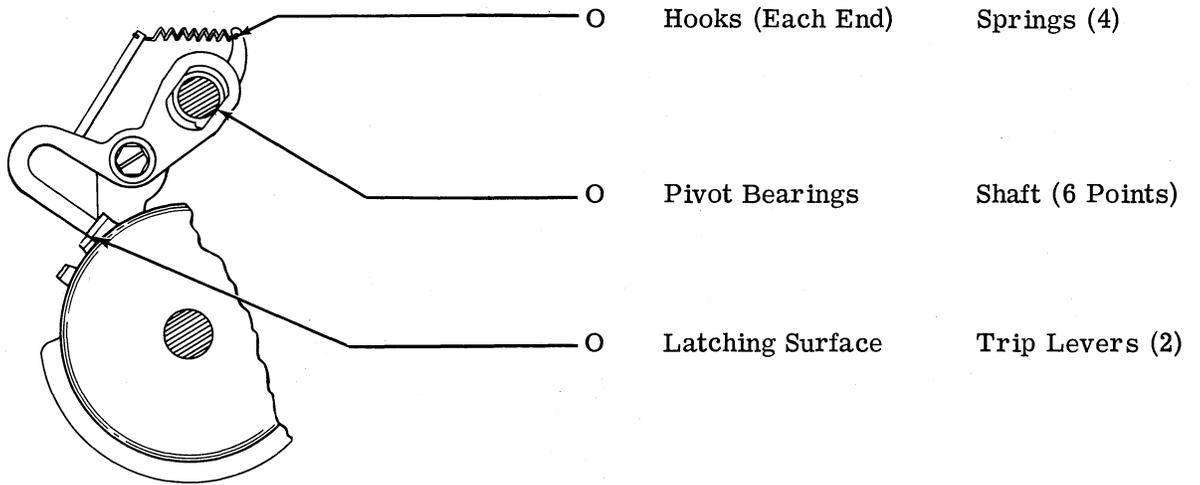


(Left Front View)

- | | | |
|----|--------------------|--------------------|
| O | Shaft (Each End) | Roller |
| O* | Internal Mechanism | Clutch |
| O* | Camming Surfaces | Eccentric Cams |
| O | Contact Surface | Carriage Drive Arm |
| O | Felt Washer | Function Drive Arm |

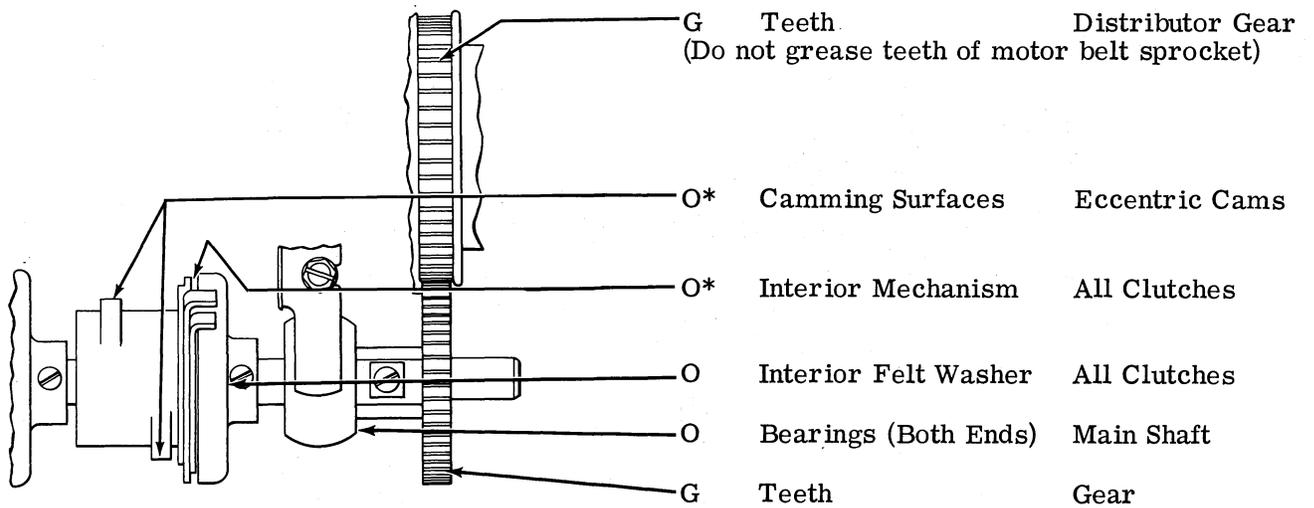
*Refer to 1.05.

2.03 Trip Shaft



(Left Side View)

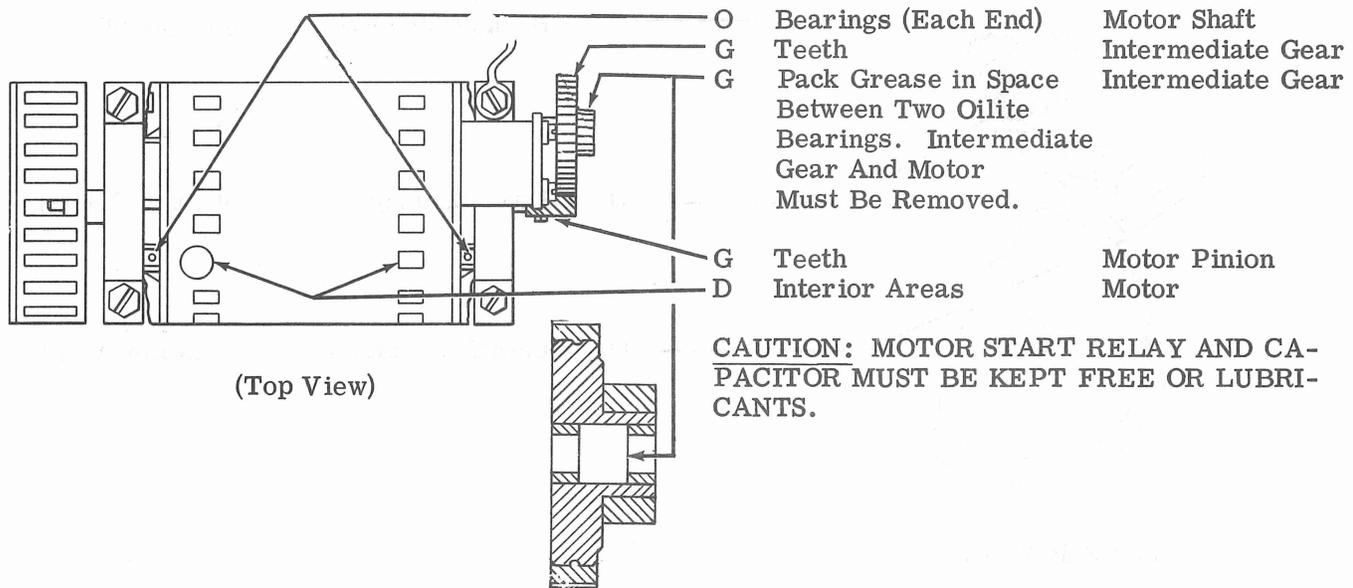
2.04 Codebar Clutch



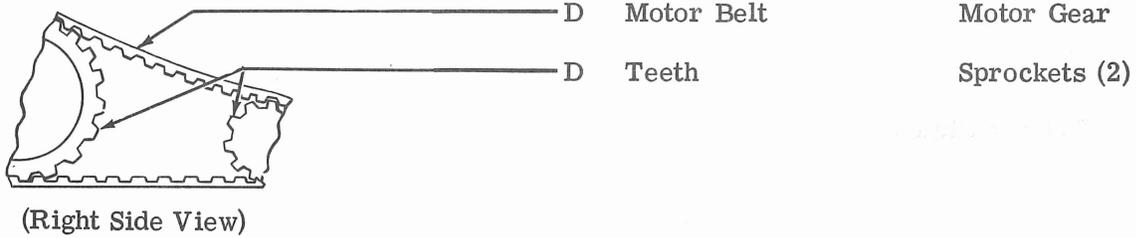
(Top View)

*Refer to 1.05.

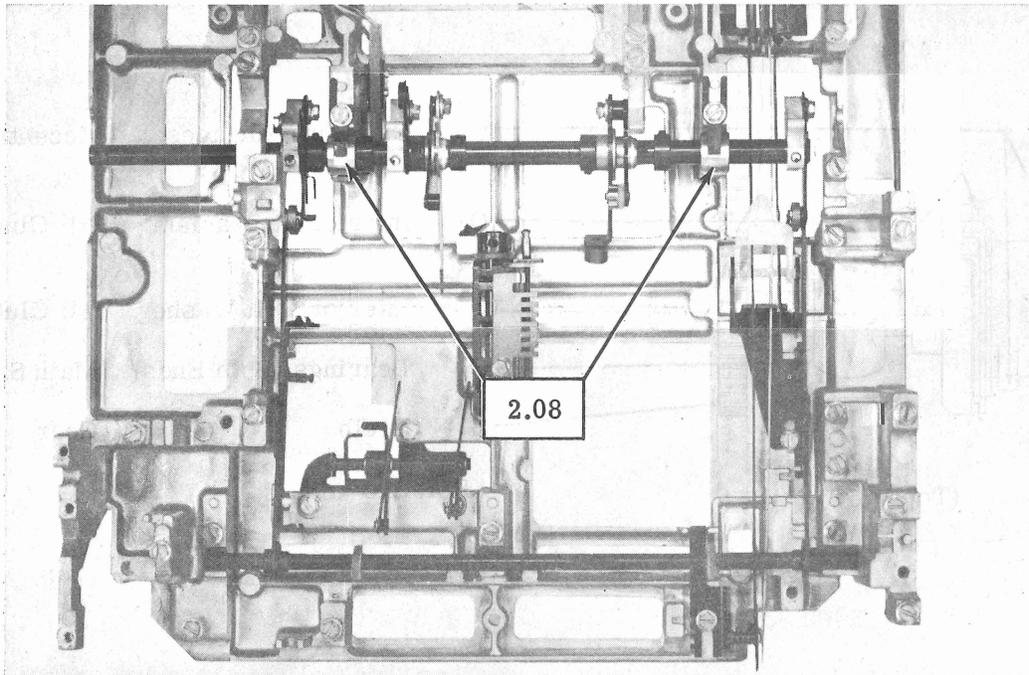
2.05 Motor Area



2.06 Intermediate Gears



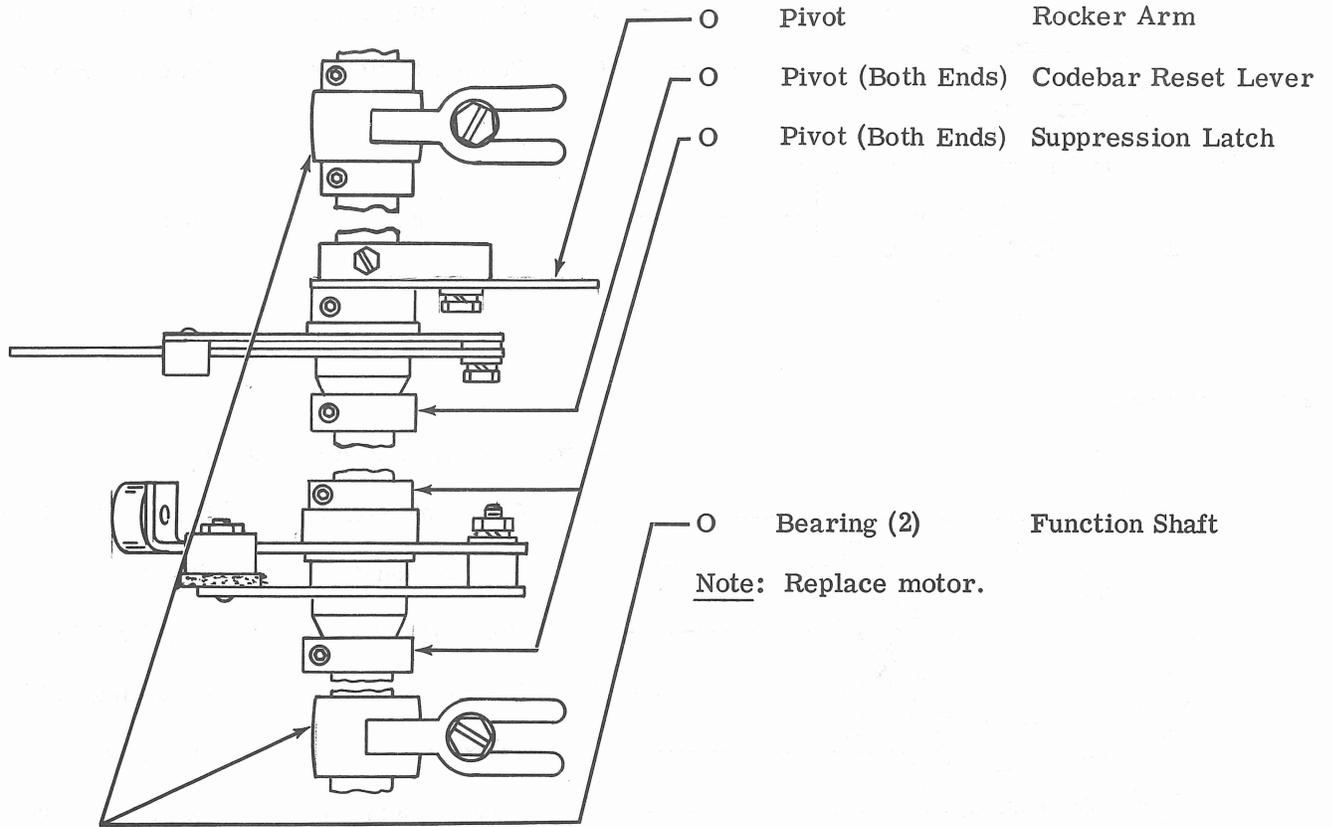
2.07 Function Shaft Area



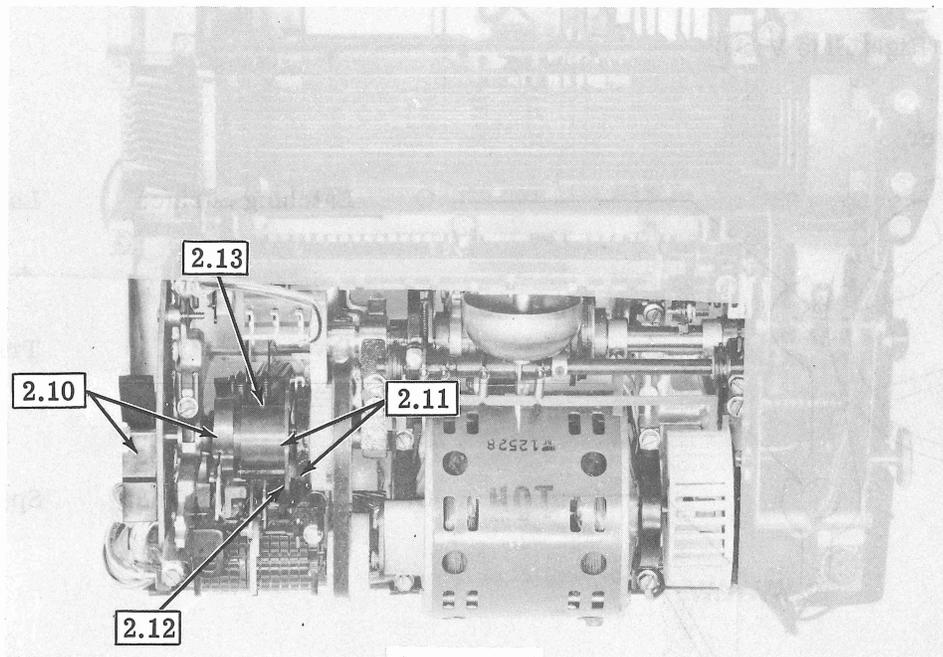
(Top View)

(Typing unit disassembled for illustration only.)

2.08 Function Rocker Shaft

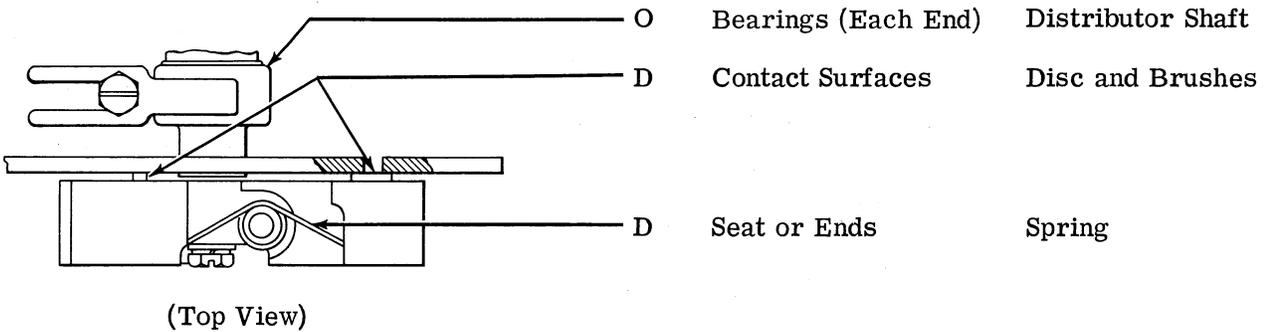


2.09 Distributor Area



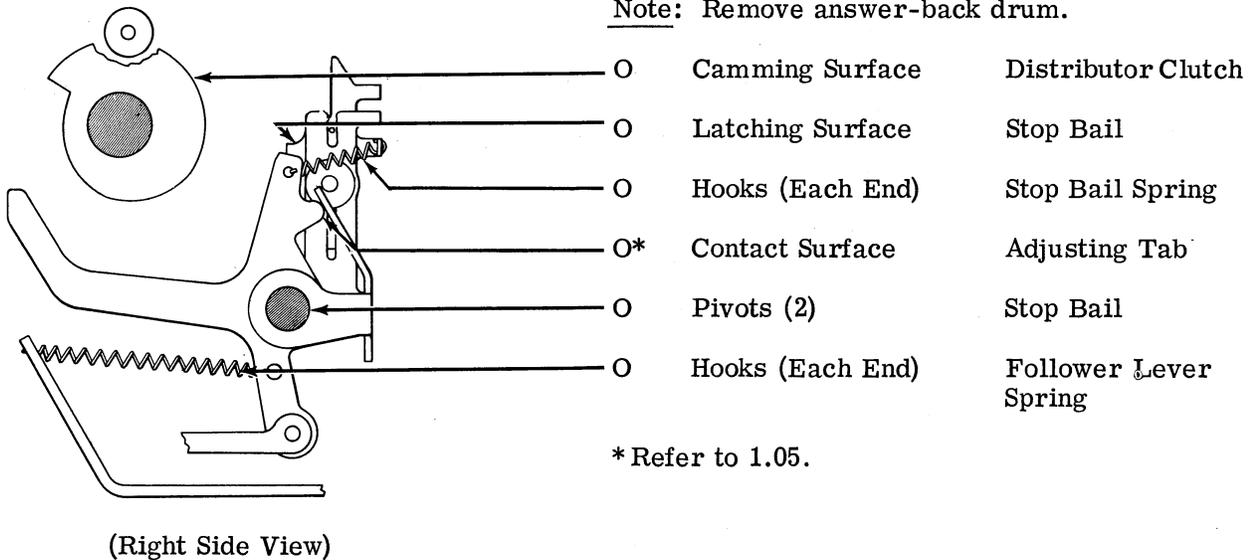
(Top View)

2.10 Disc and Brushes

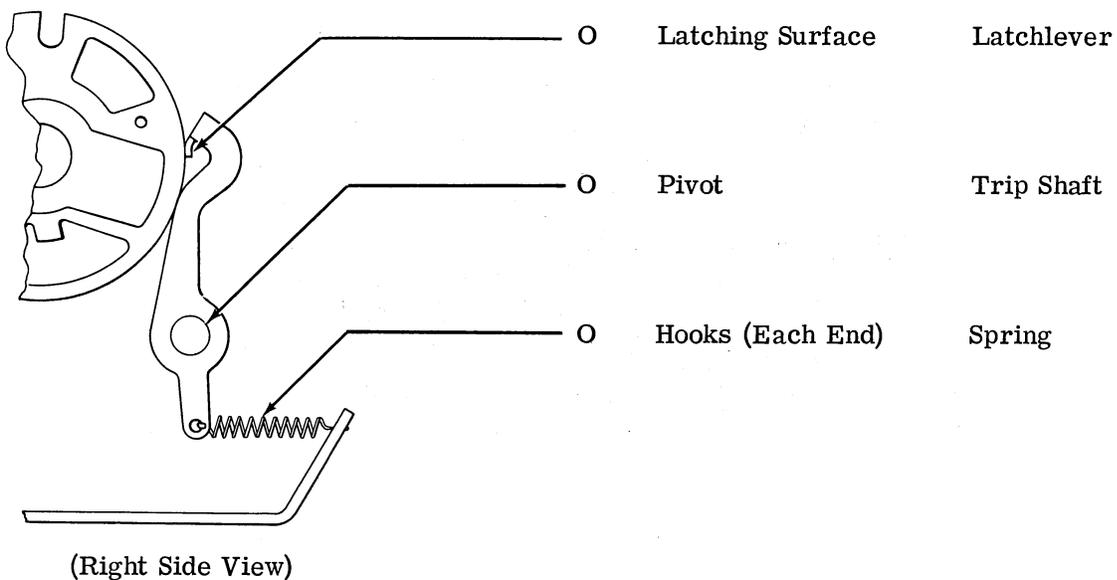


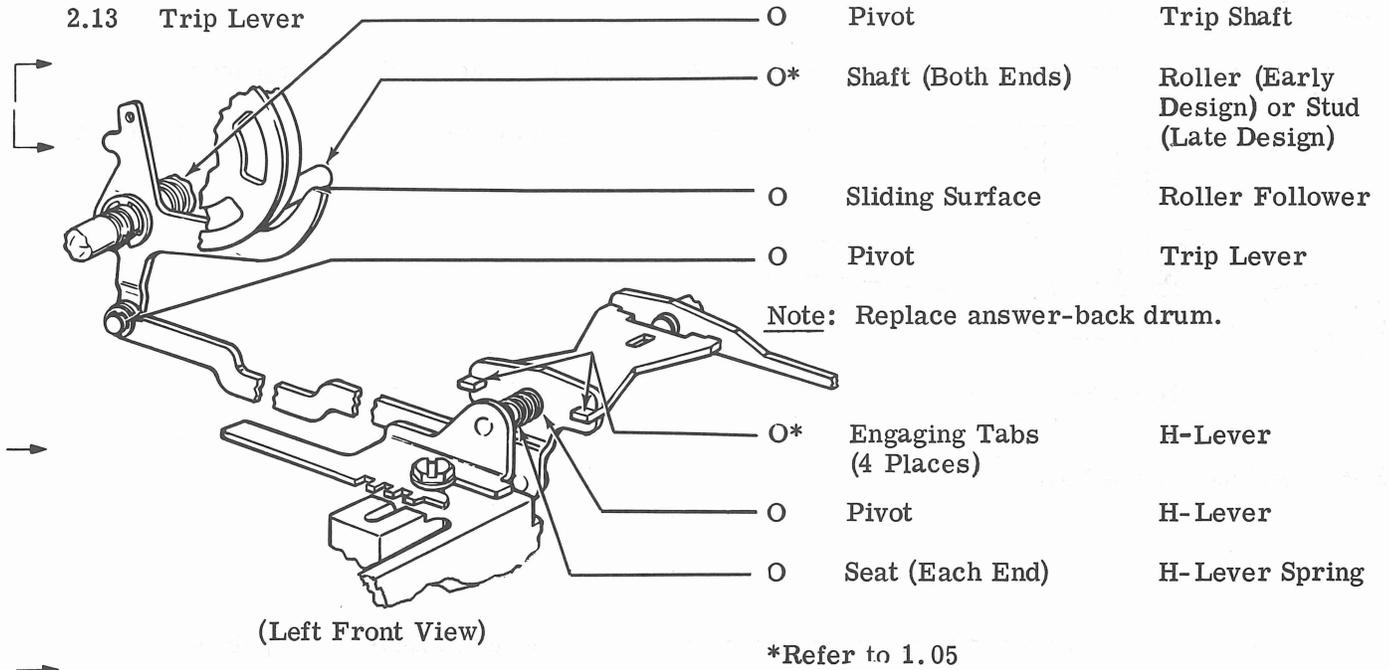
2.11 Stop Bail

Note: Remove answer-back drum.

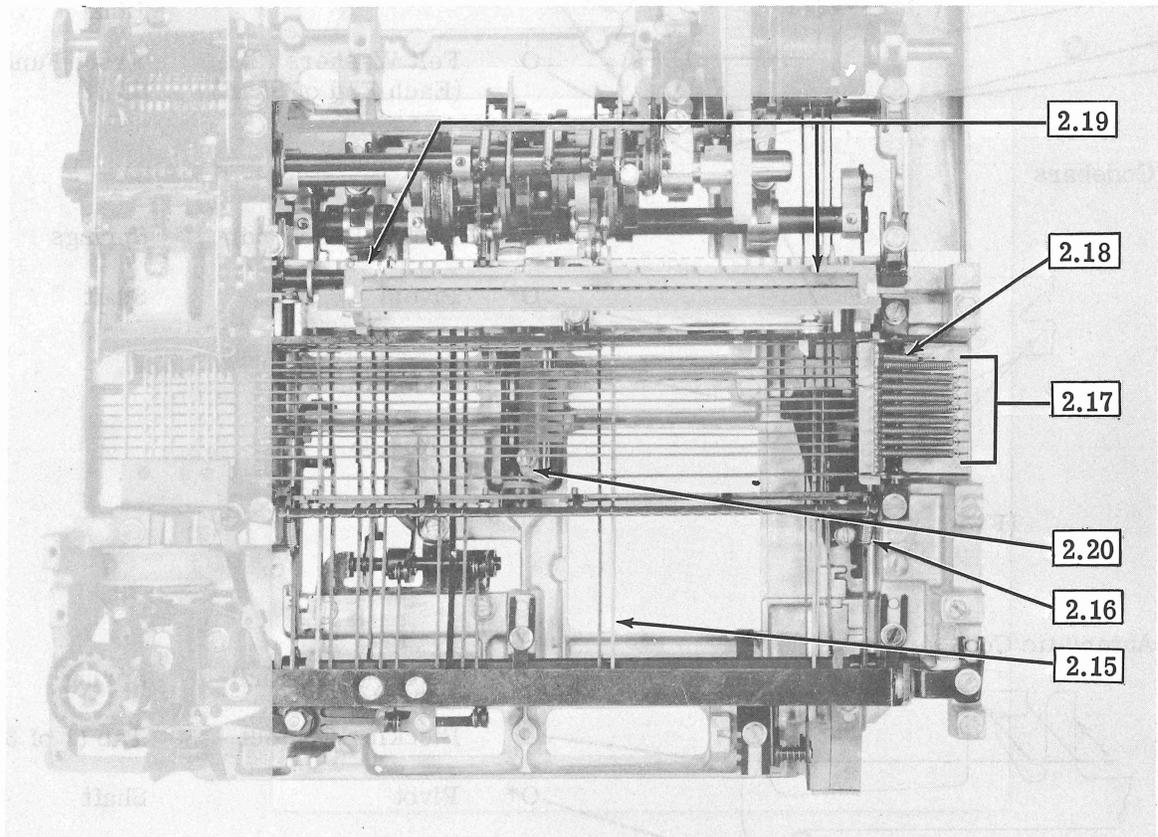


2.12 Latchlever

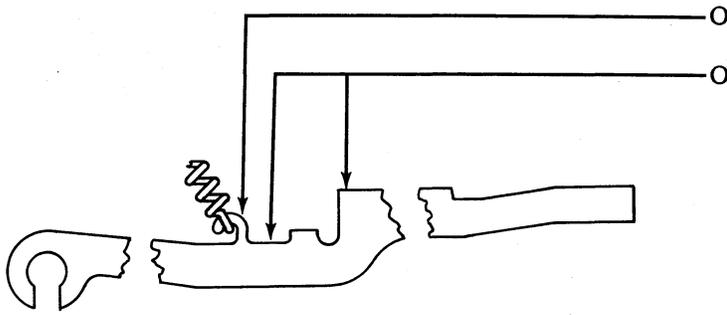




2.14 Function Area



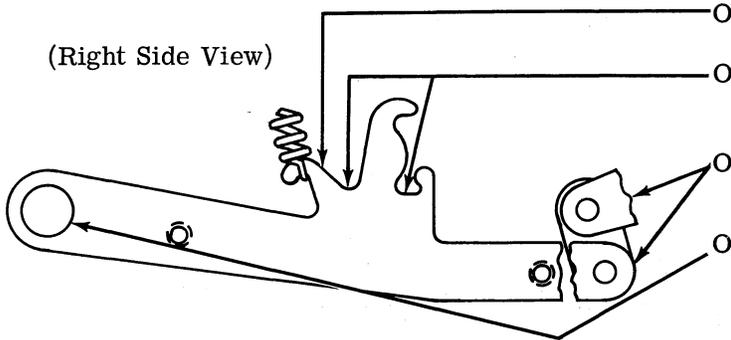
2.15 Function Levers



(Right Side View)

- O Hooks (Each End) Springs
- O Engaging Surfaces Function Levers

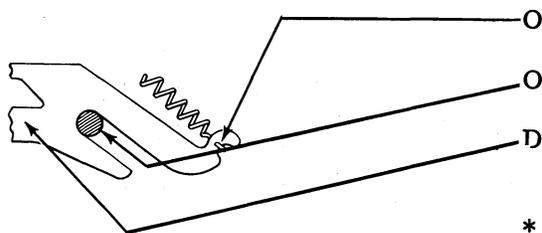
2.16 Stripper Drive Lever



(Right Side View)

- O Hooks (Each End) Springs
- O Engaging Surfaces Stripper Drive Lever
- O Pivots Stripper Drive Link
- O Felt Washers (2) (Each End of Shaft) Front Function Shaft

2.17 Codebars

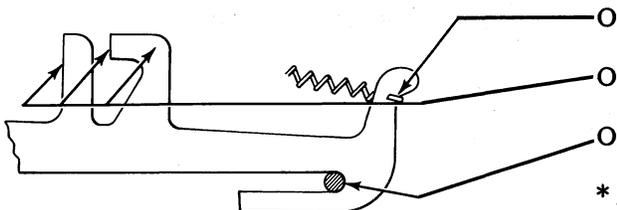


(Front View)

- O Hooks (Each End) Springs
- O* Pivots Shaft
- D Area Between Codebars

* Refer to 1.05.

2.18 Automatic Codebar

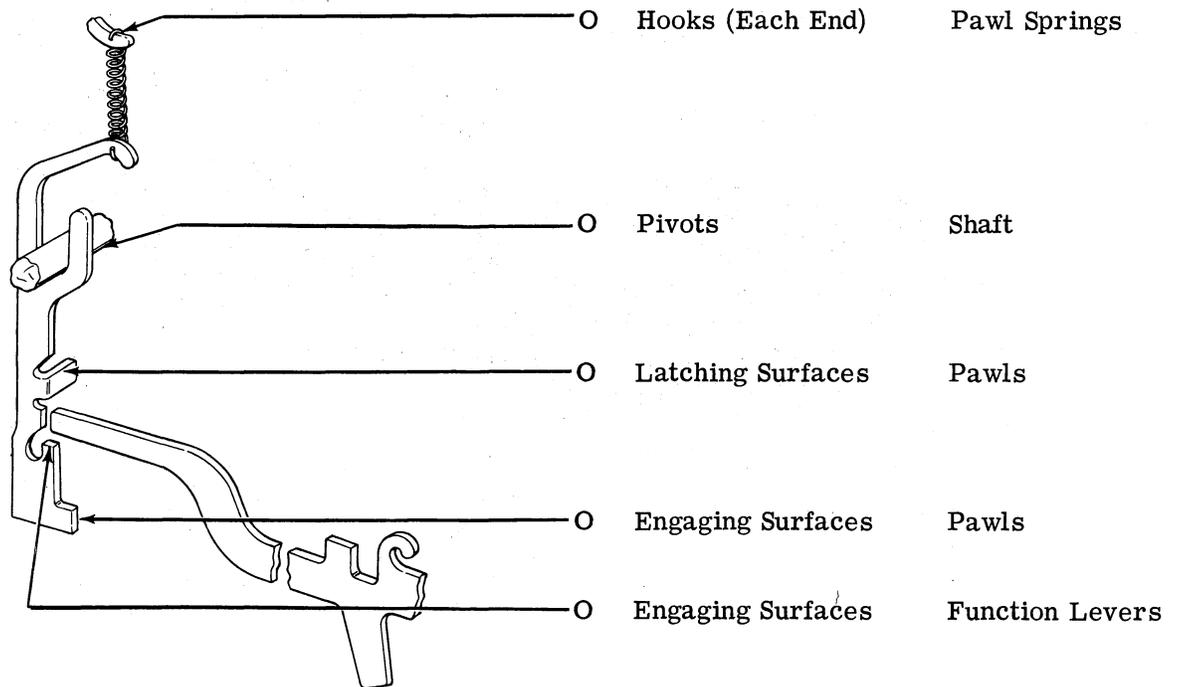


(Front View)

- O Hooks (Each End) Spring
- O Blocking Contact Tab (1 of 3)
- O* Pivot Shaft

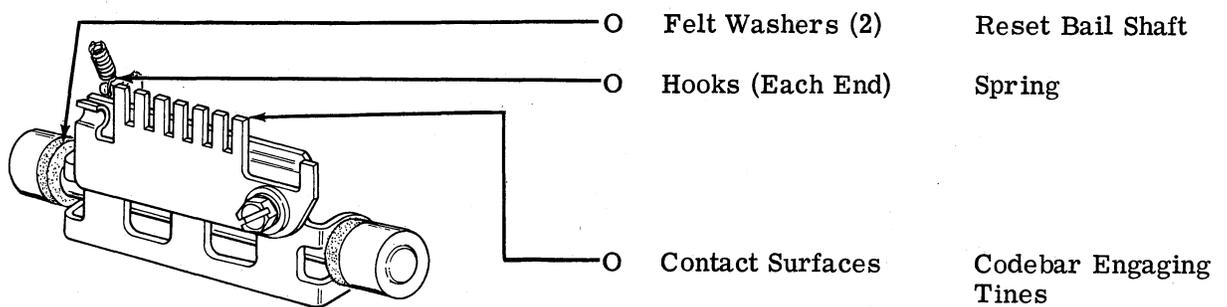
* Refer to 1.05.

2.19 Rocker and Pawls



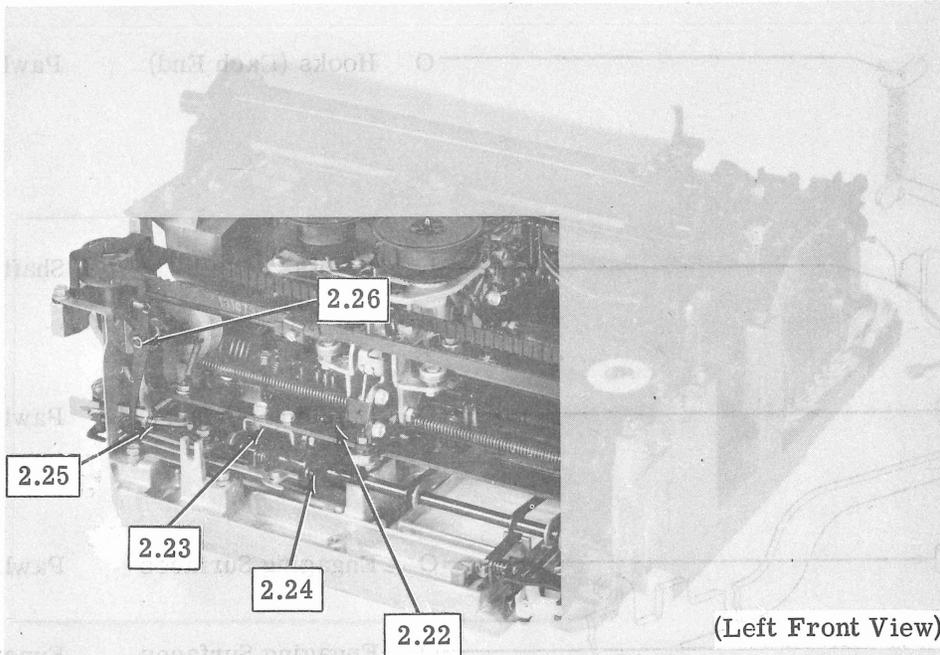
(Left Front View)

2.20 Reset Bail



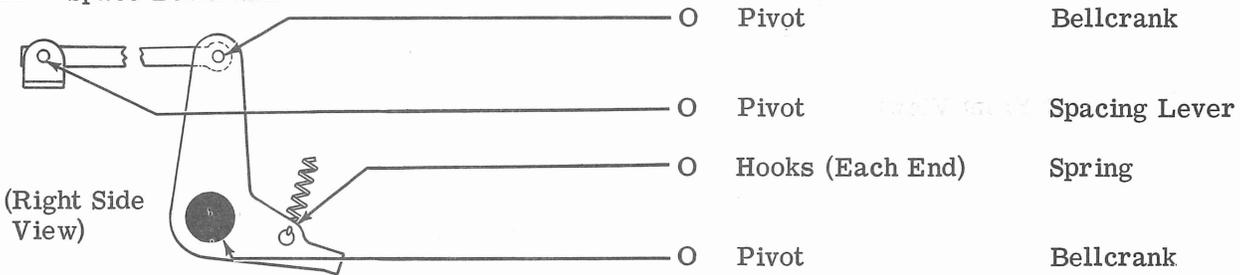
(Left Front View)

2.21 Spacing Area



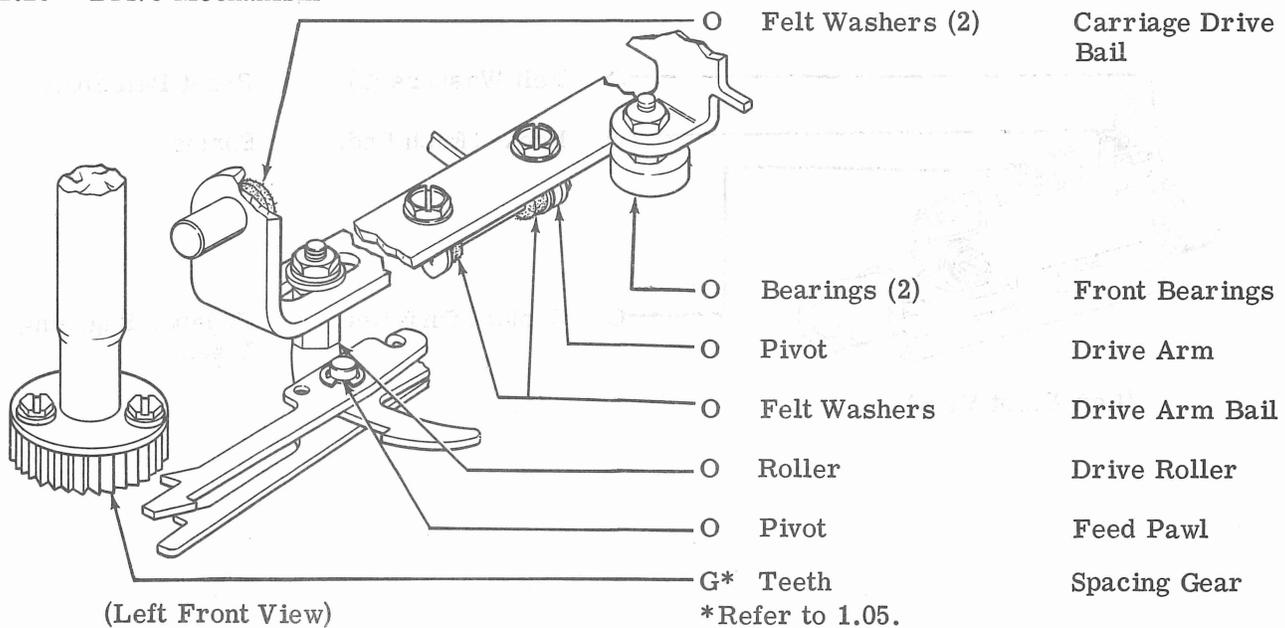
(Left Front View)

2.22 Space Bellcrank



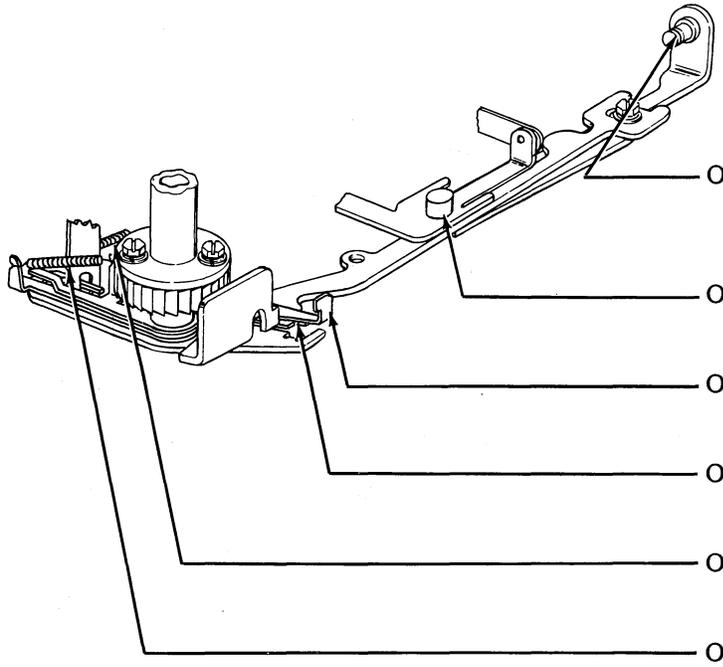
(Right Side View)

2.23 Drive Mechanism



(Left Front View)

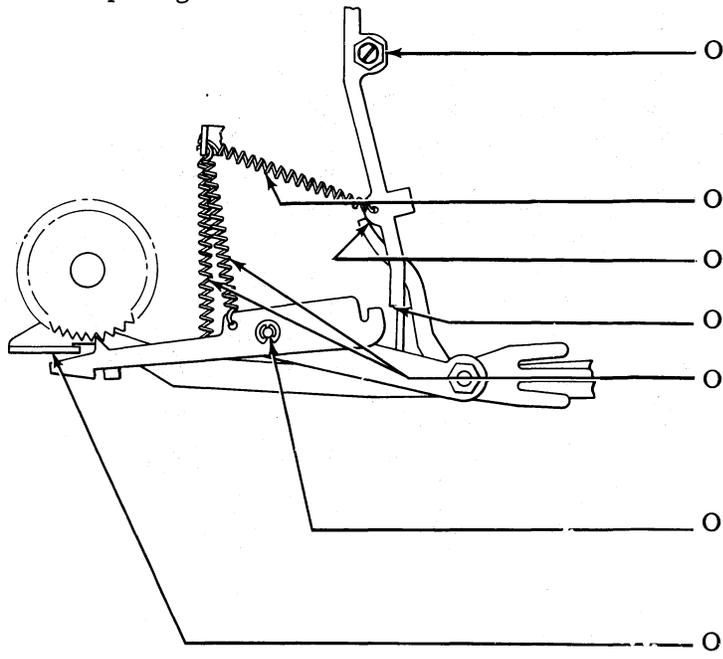
2.24 Carriage Return and Spacing Levers



- O Pivot Carriage Return Lever
- O Pivot Spacing Mechanism
- O Engaging Surface Latch
- O Latching Surface Latch
- O Hooks (Each End) Latch Spring
- O Hooks (Each End) Latch Spring

(Left Front View)

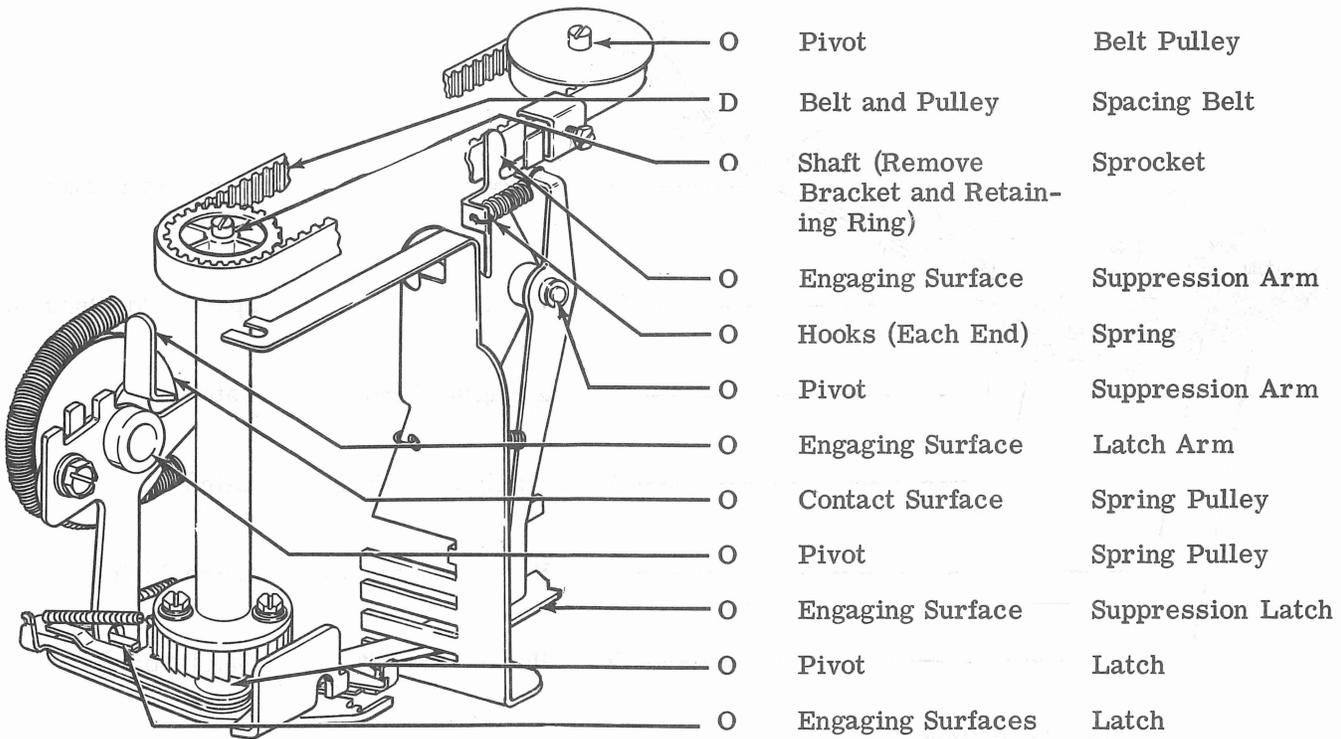
2.25 Spacing Mechanism - 1



- O Pivot Eccentric
- O Hooks (Each End) Spring
- O Engaging Surface Spacing Lever
- O Latching Surface Suppression Lever
- O Hooks (Each End) Springs (3)
- O Pivot Feed Pawl
- O Engaging Surfaces Feed and Check Pawls

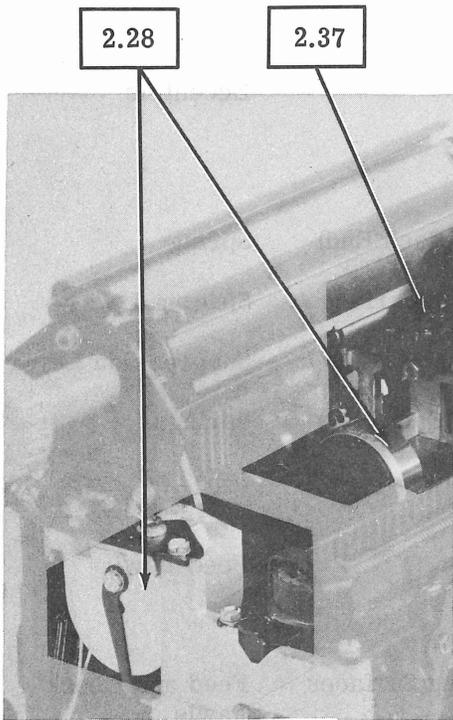
(Top View)

2.26 Spacing Mechanism - 2

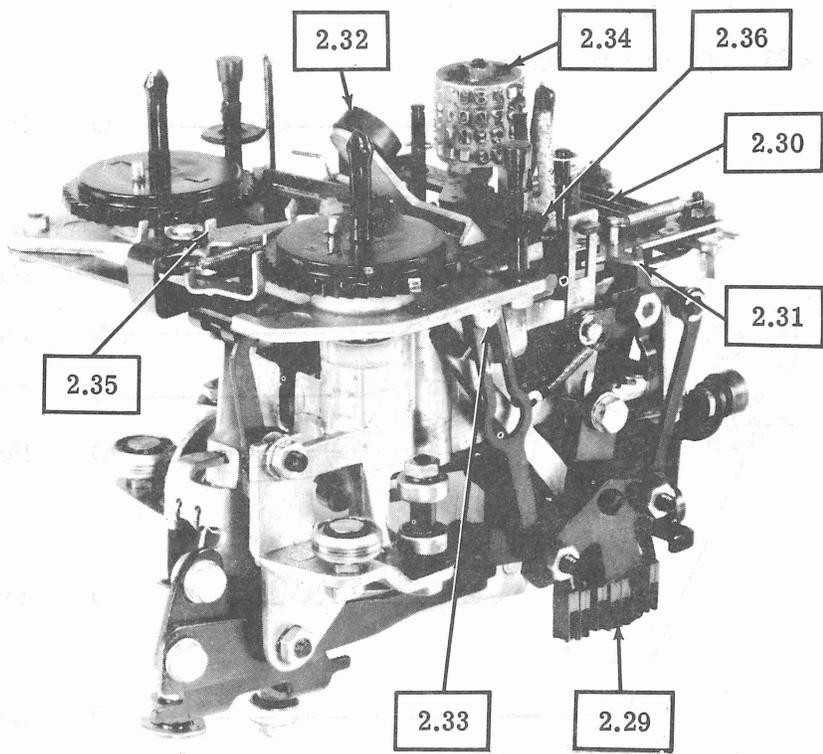


(Left Front View)

2.27 Carriage Area



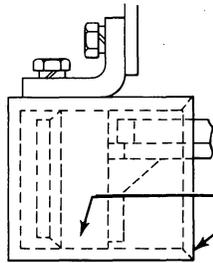
(Left Front View)



(Right Front View)

Note: Remove ribbon mechanism and carriage return spring before lubricating. For instructions, see the appropriate disassembly and reassembly section.

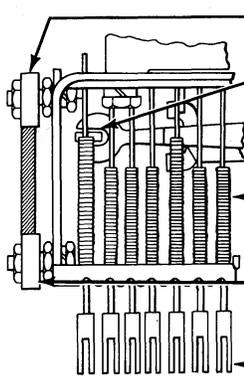
2.28 Dashpot



(Front View)

Sliding Surfaces Dashpot and Cylinder
 (Apply with oil dampened cloth. Too much lubricant will cause malfunction.)

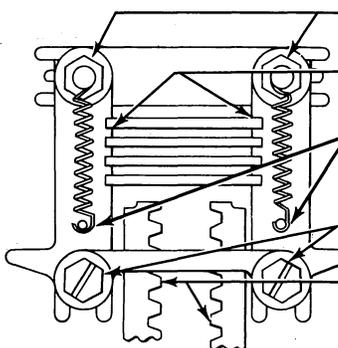
2.29 Slides



(Left Side View)

Bearing Rear Roller (Top)
 Engaging Surface Suppression Latch Fork
 Seats (Each End) Slide Guide Springs
 Bearing Rear Roller (Bottom)
 Codebar Contacts Slides

2.30 Slide Guideplates

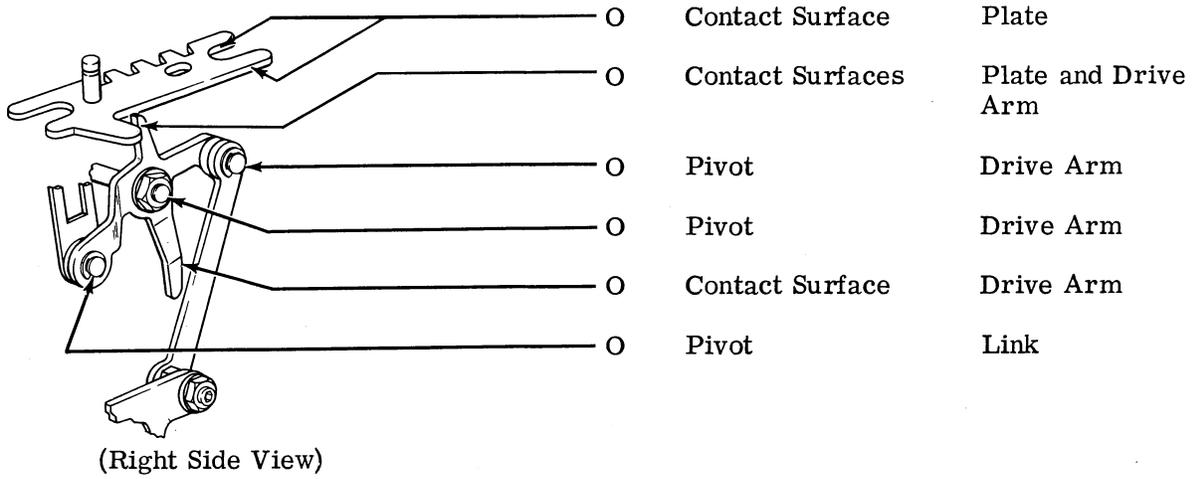


(Top View)

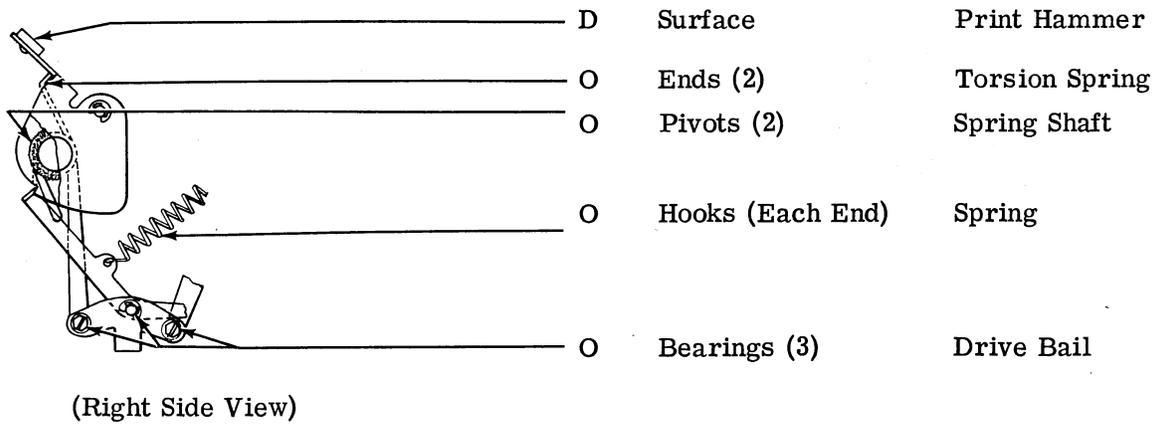
Sliding Contacts Stop Plate
 Engaging Surfaces Stop Slides
 Hooks (Each End) Springs
 Contact Points Slide Guides
 Teeth Pinion Racks

SECTION 574-122-701

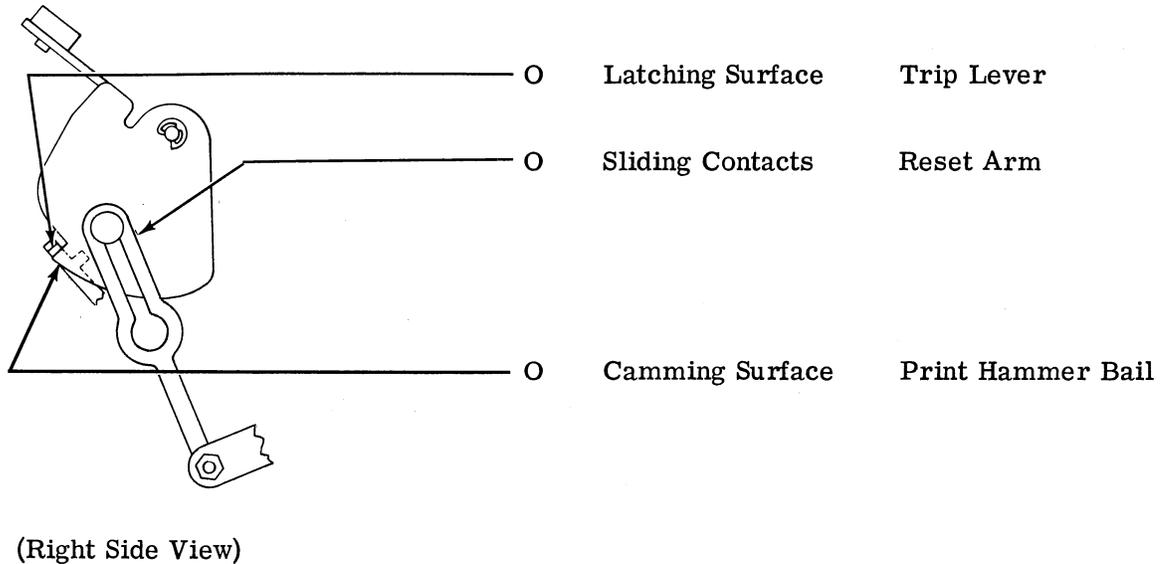
2.31 Drive Arm



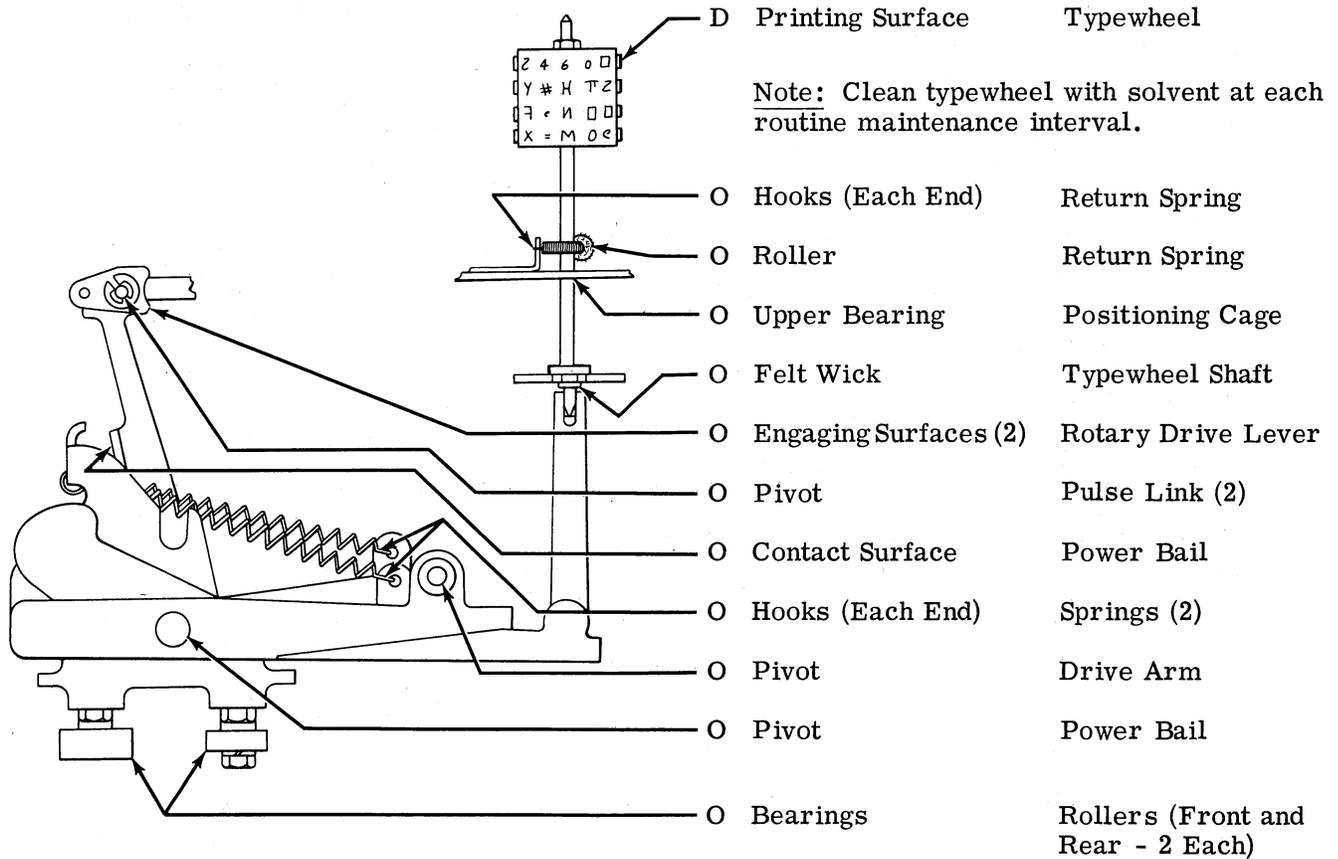
2.32 Print Hammer



2.33 Reset Arm

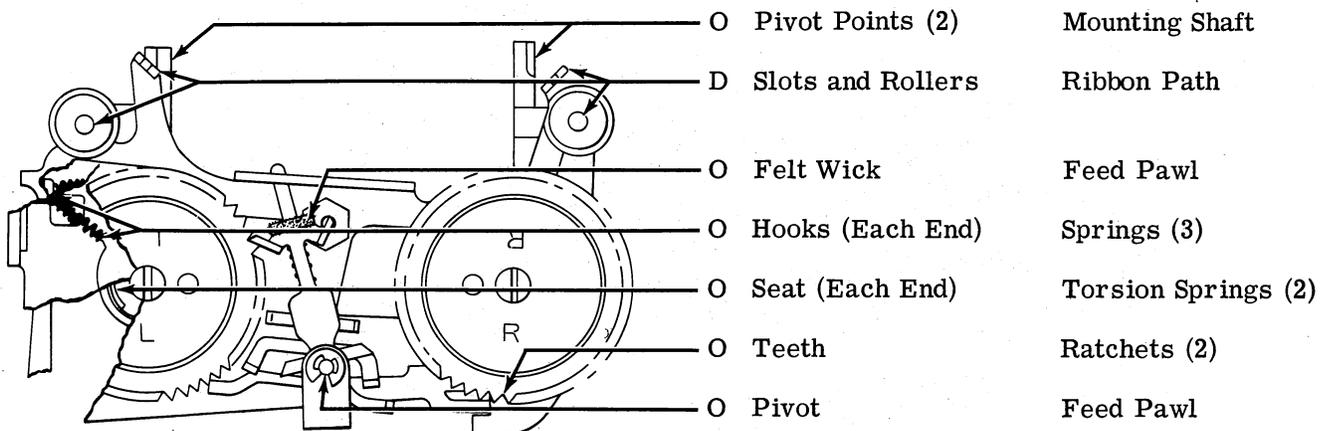


2.34 Typewheel Mechanism



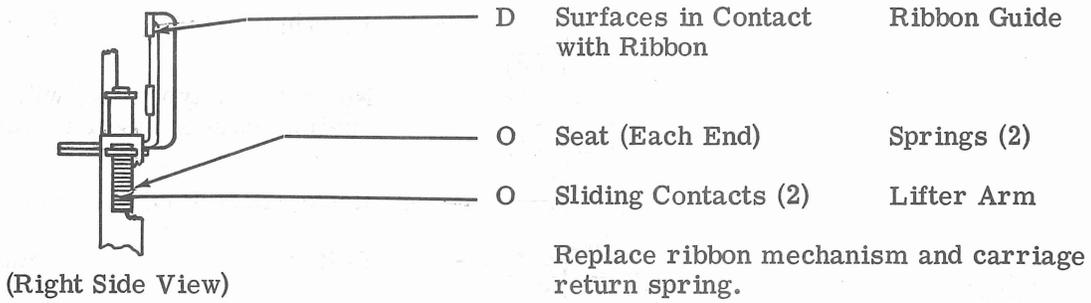
(Right Side View)

2.35 Ribbon Mechanism



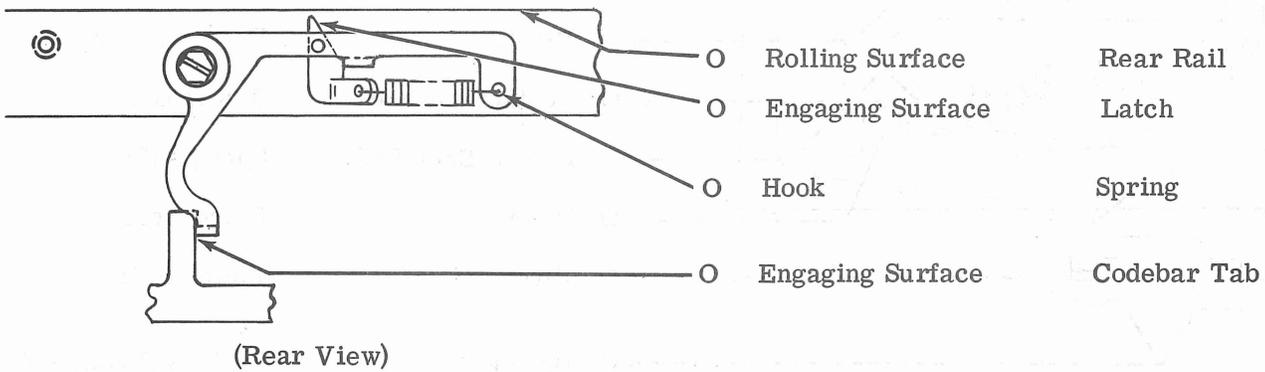
(Top View)

2.36 Ribbon Guide Spring

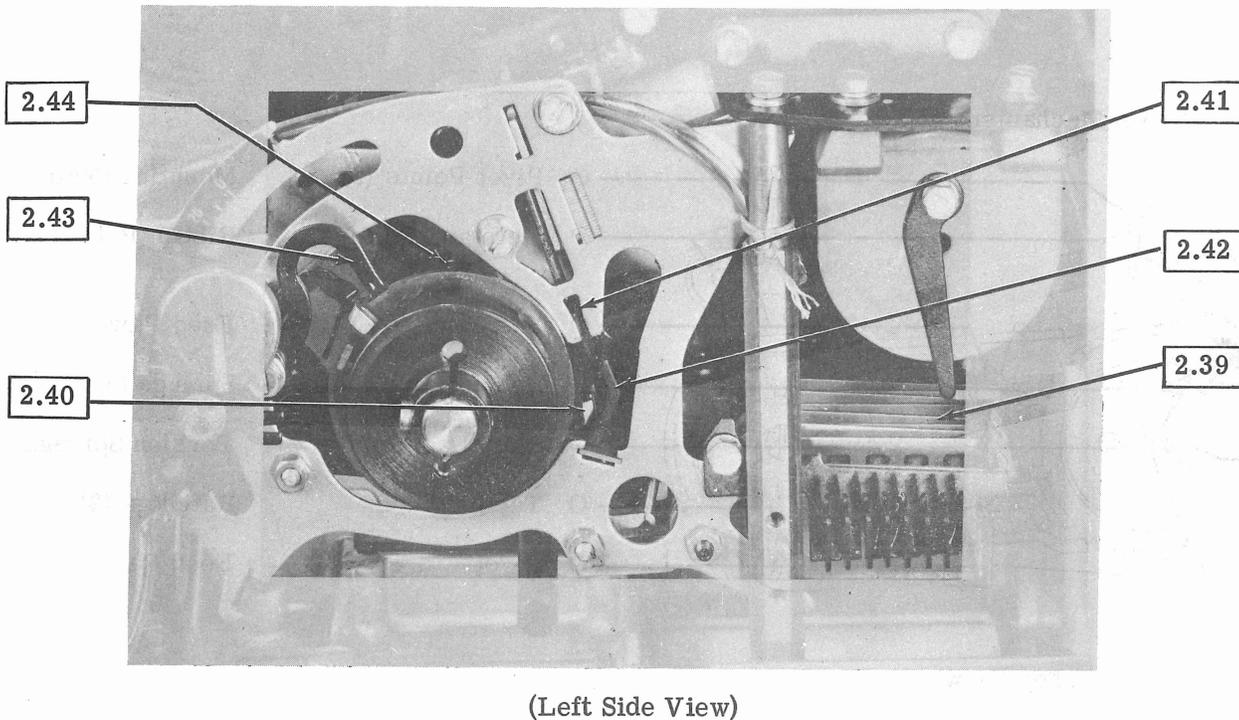


2.37 Carriage Rear Rail

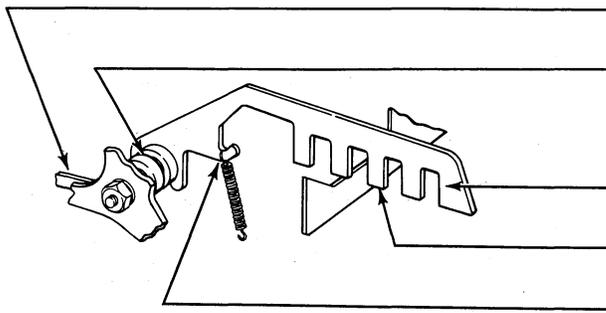
Note: These lubrication instructions apply only to typing units equipped with A TP181304 latch.



2.38 Selector Area



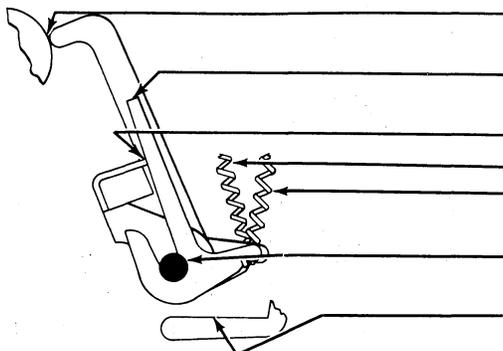
2.39 Blocking Levers



- O Contact Surfaces Blocking Levers
- O Pivots Shaft
- O Engaging Surfaces Codebar Slots
- O Contact Surfaces Tines
- O Hooks Springs

(Left Front View)

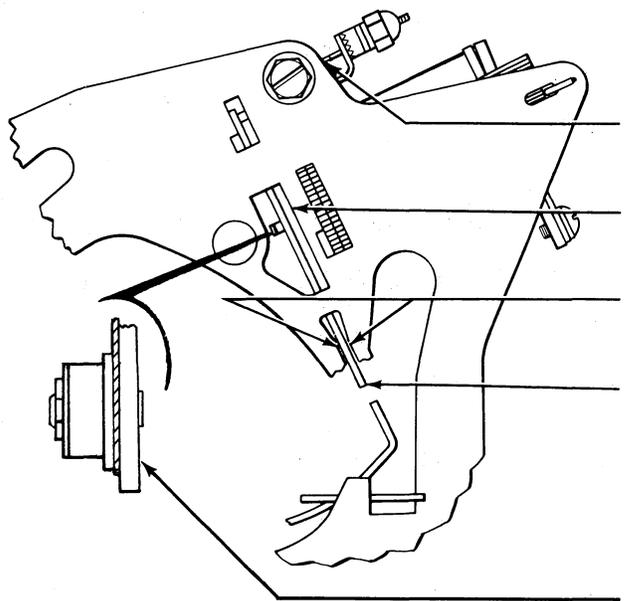
2.40 Pushlevers and Stripper Bail



- O Camming Surface Cam Follower
- O Latching Surface Pushlevers
- O Contact Surface Stripper Bail
- O Hooks (Each End) Bail Spring
- O Hooks (Each End) Pushlever
- O Pivots Springs
- O Pivots Pushlevers
- O Contact Surfaces Blocking Levers

(Left Side View)

2.41 Armature

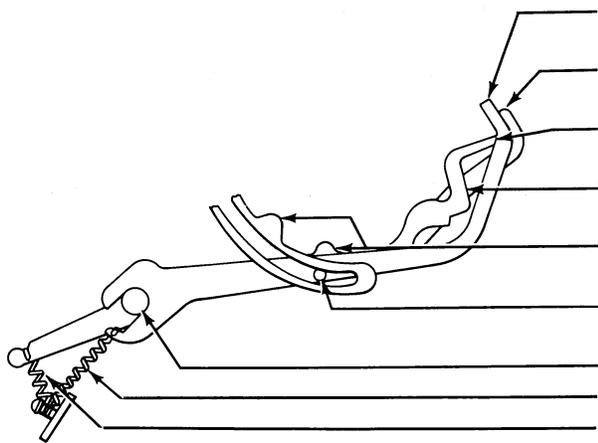


- D Hooks Armature Spring
- D Engaging Surfaces Armature
- O Engaging Surfaces Side Plates
- G Engaging Surface Armature
- D Engaging Surface Armature

(Left Side View)

SECTION 574-122-701

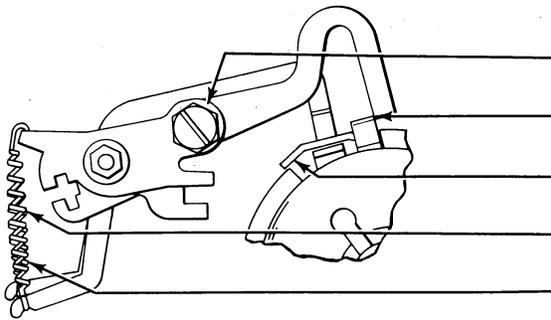
2.42 Selector Levers



(Left Side View)

- O Tip Start Lever
- O Contact Surface Locklever
- O Contact Surface Selector Levers
- O Engaging Surface Selector Levers
- O Camming Surface Selector Levers
- O Sliding Contact Start Lever
- O Pivots Levers
- O Hooks (Each End) Start Lever Spring
- O Hooks (Each End) Spring (9)

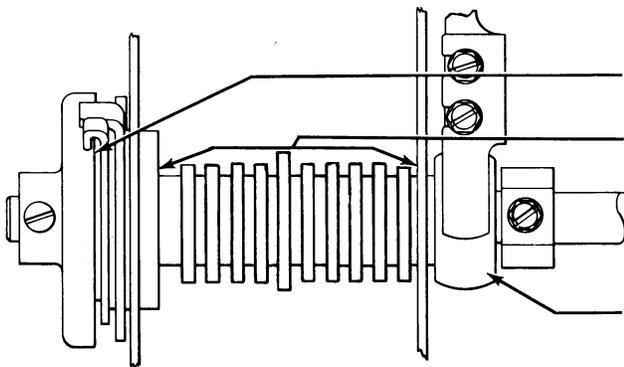
2.43 Latchlever and Trip Lever



(Left Side View)

- O Pivots (2) Levers
- O Engaging Surface Trip Lever
- O Latching Surface Latchlever
- O Hooks (Each End) Trip Lever Spring
- O Hooks (Each End) Latchlever Spring

2.44 Selector Clutch



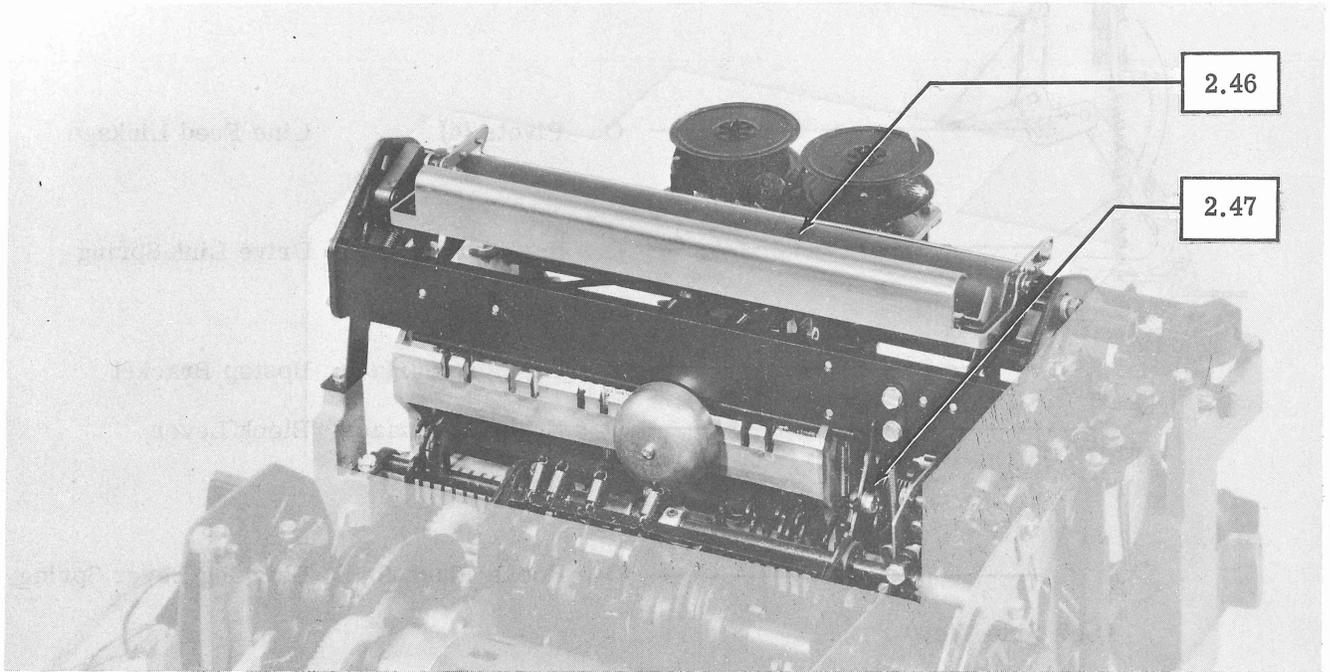
(Top View)

- O* Internal Mechanism Selector Clutch
- O* Camming Surface Selector Clutch
- O Bearing (Each End) Main Shaft

*Refer to 1.05.

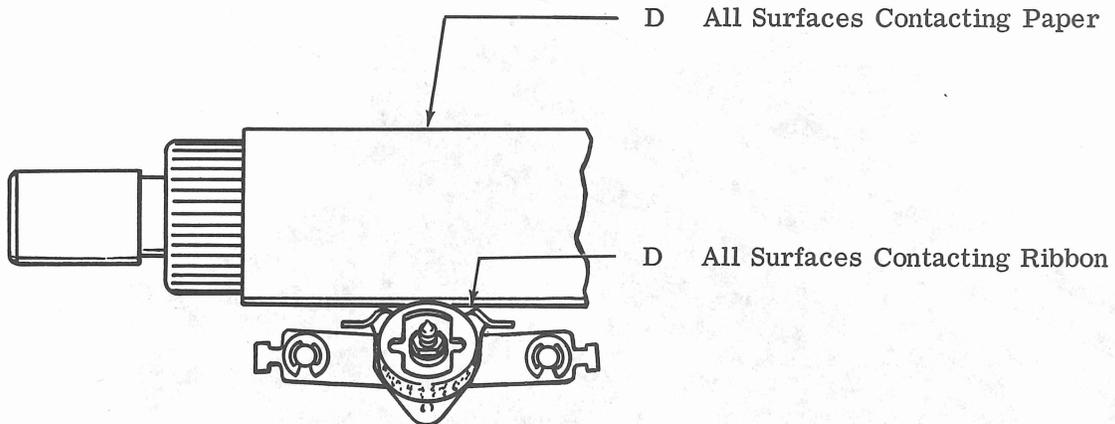
FRICION FEED MECHANISMS

2.45 Paper Feed Area



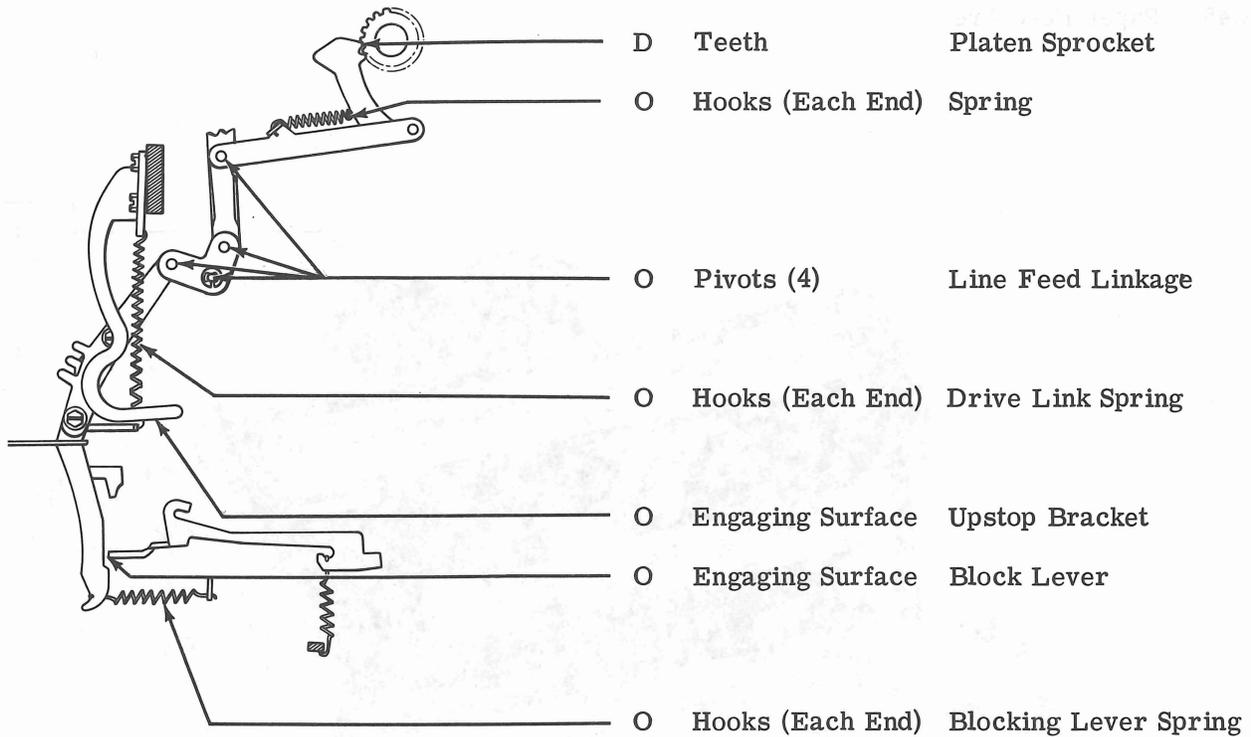
(Rear View)

2.46 Platen



CAUTION: DO NOT CLEAN PLATEN WITH SOLVENTS.

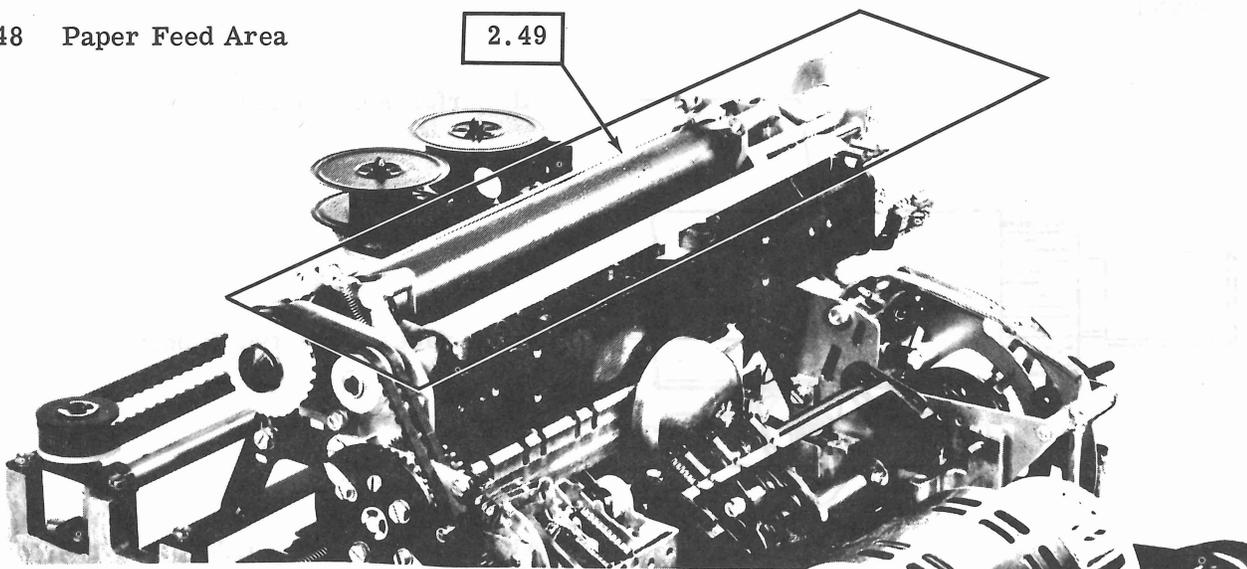
2.47 Line Feed Mechanism



(Left Side View)

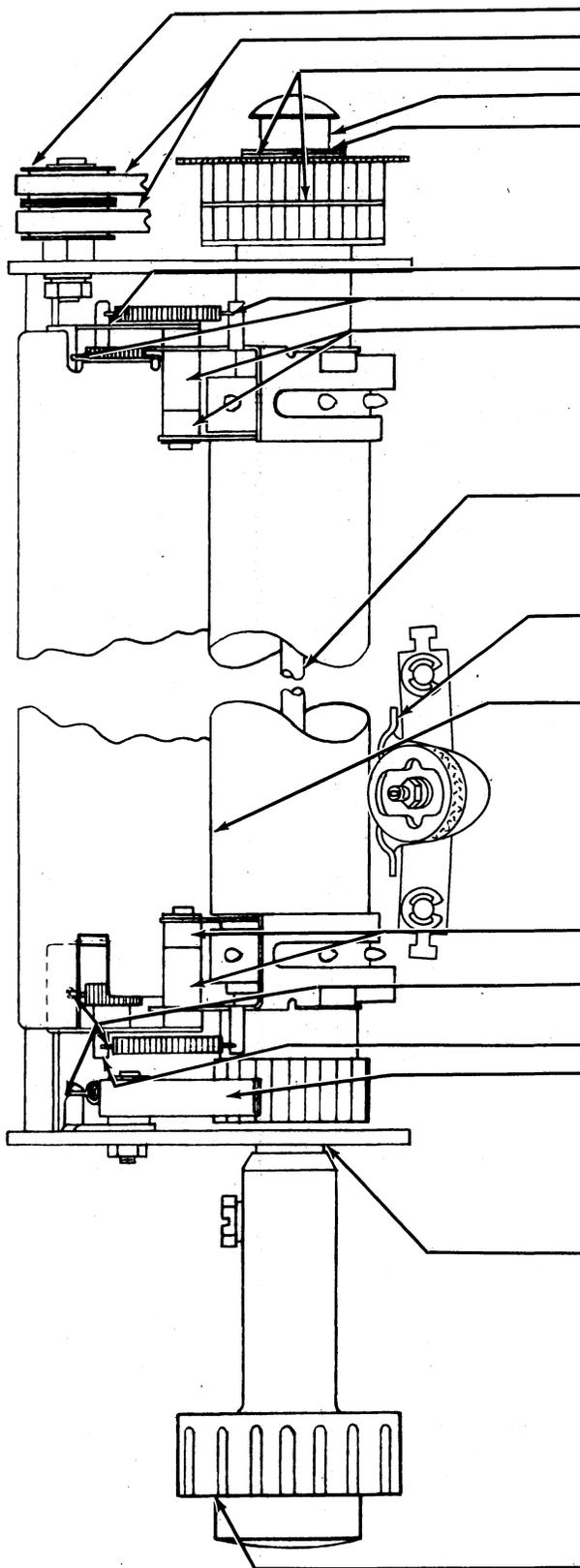
SPROCKET FEED MECHANISMS

2.48 Paper Feed Area



(Right Rear View)

2.49 Platen Mechanism



- O Bearing Idler
- D Belts Drive
- O Bearing Pulley
- O Bearing Button
- O Felt Washers Shaft
(2 Within Shaft)

Note: Shaft must be disassembled. See appropriate disassembly and reassembly section.

- O Pivot Paper Guide
- O Hooks (Each End) Spring
- O Bearing Paper Guide

- O* Bearings (Both Ends) Shaft

Note: Reassemble shaft.

- D All Surfaces Contacting Ribbon

- D All Surfaces Contacting Paper

- O Bearing Paper Guide
- O Hooks (Each End) Spring
- O Pivot Paper Guide
- O Bearing Pawl

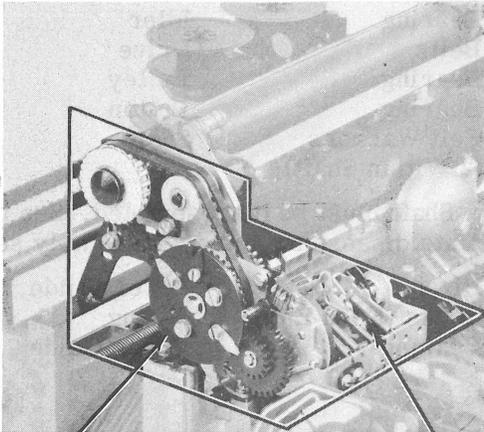
- O Bearing Left and Right Plate

- D Bearing Knob

(Top View)

*Refer to 1.05.

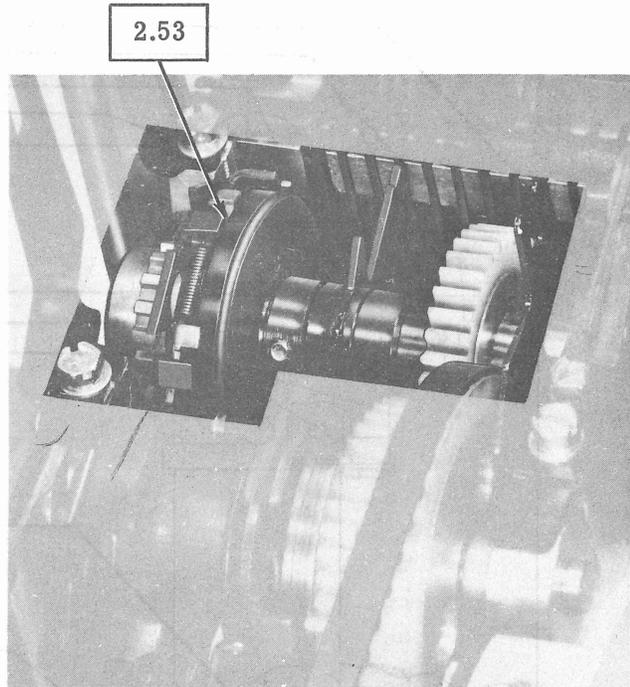
2.50 Platen Drive Area



2.51

2.52

(Right Rear View)

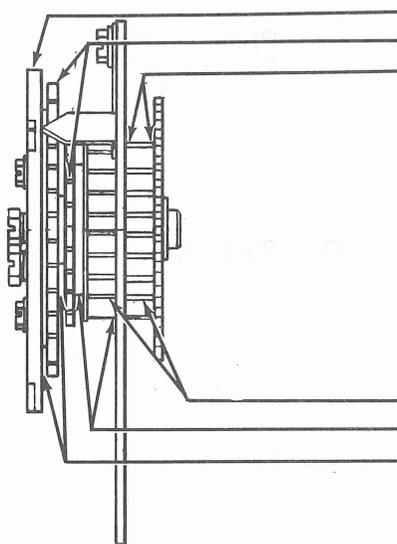


2.53

(Left Rear View)

(Form-out mechanism removed for illustration purposes. Removal for lubrication is not required.)

2.51 Cam, Pulley, and Gear Combination



- O Cam Surface
- O Gear Surface
- O Bearing

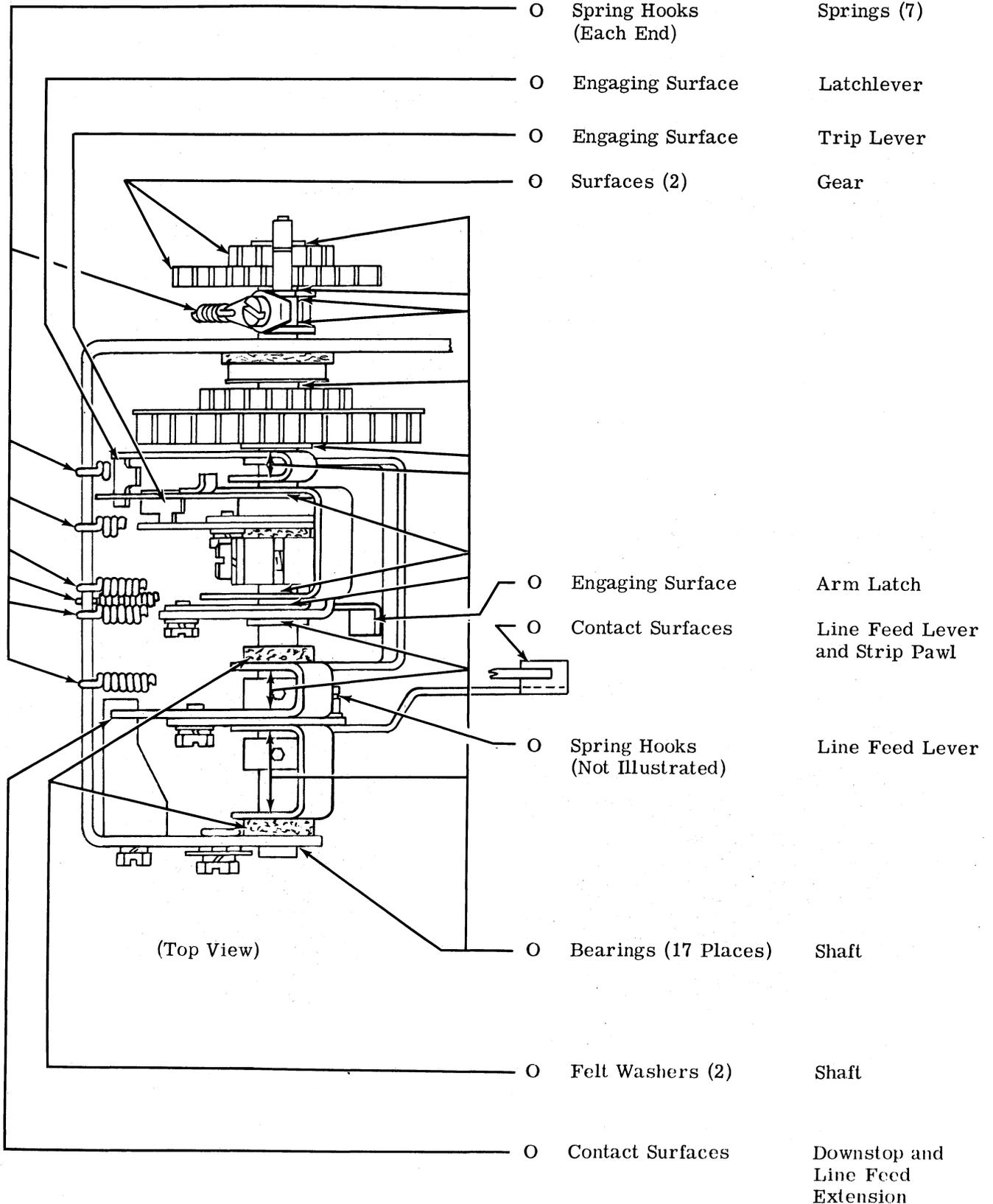
- Cam Gear
- Cam Gear
- Gear and Pulley

- D Surface
- O Bearing
- O Bearing

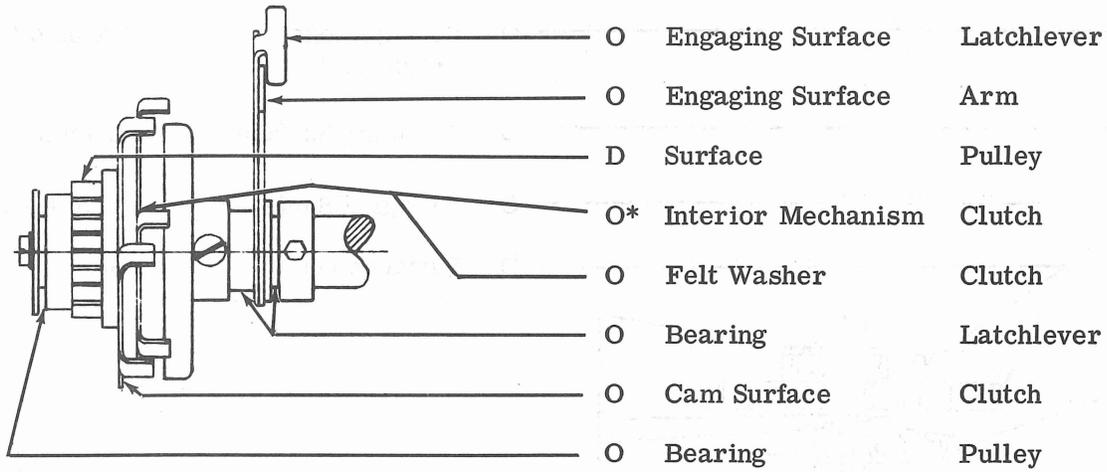
- Pulley
- Gear and Pulley
- Cam Gear

(Top View)

2.52 Form-Out Mechanism



2.53 Line Feed Clutch

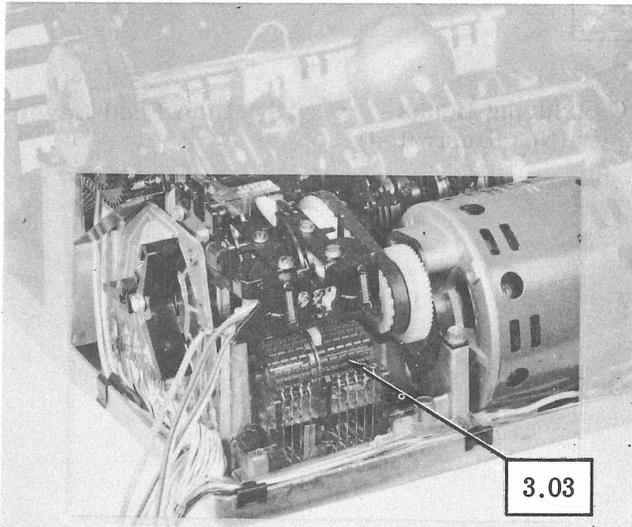


(Top View)

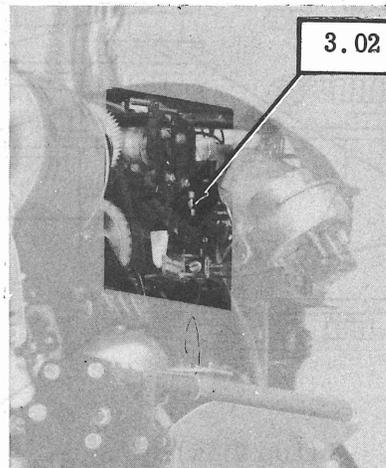
* Refer to 1.05.

3. VARIATIONS TO BASIC UNITS

3.01 Answer-Back Area



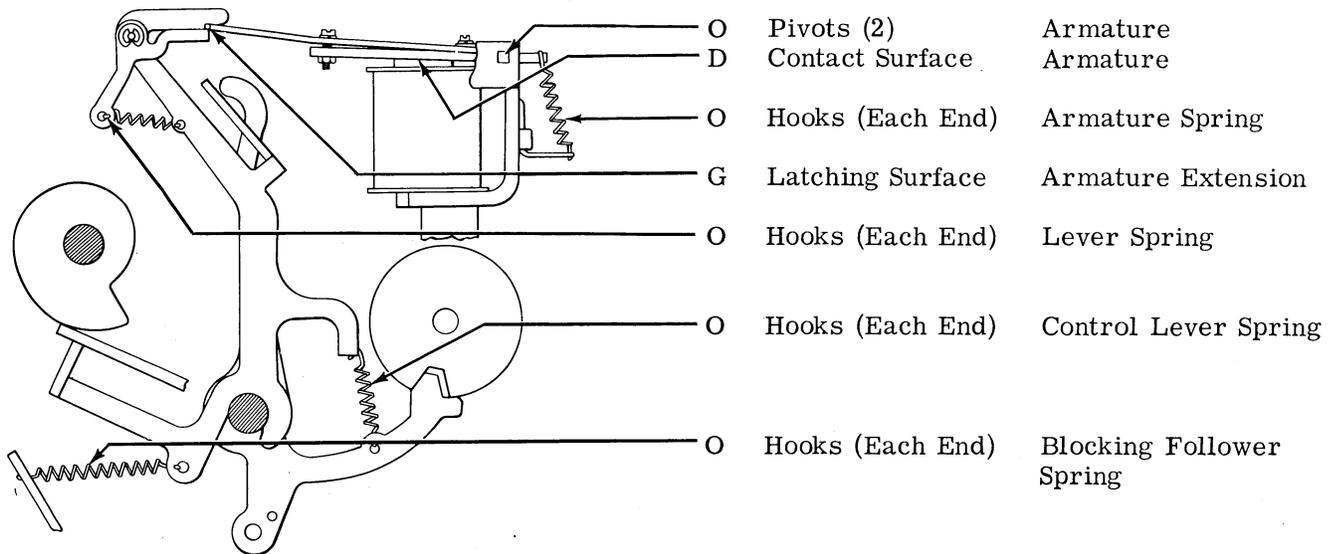
(Left Rear View)



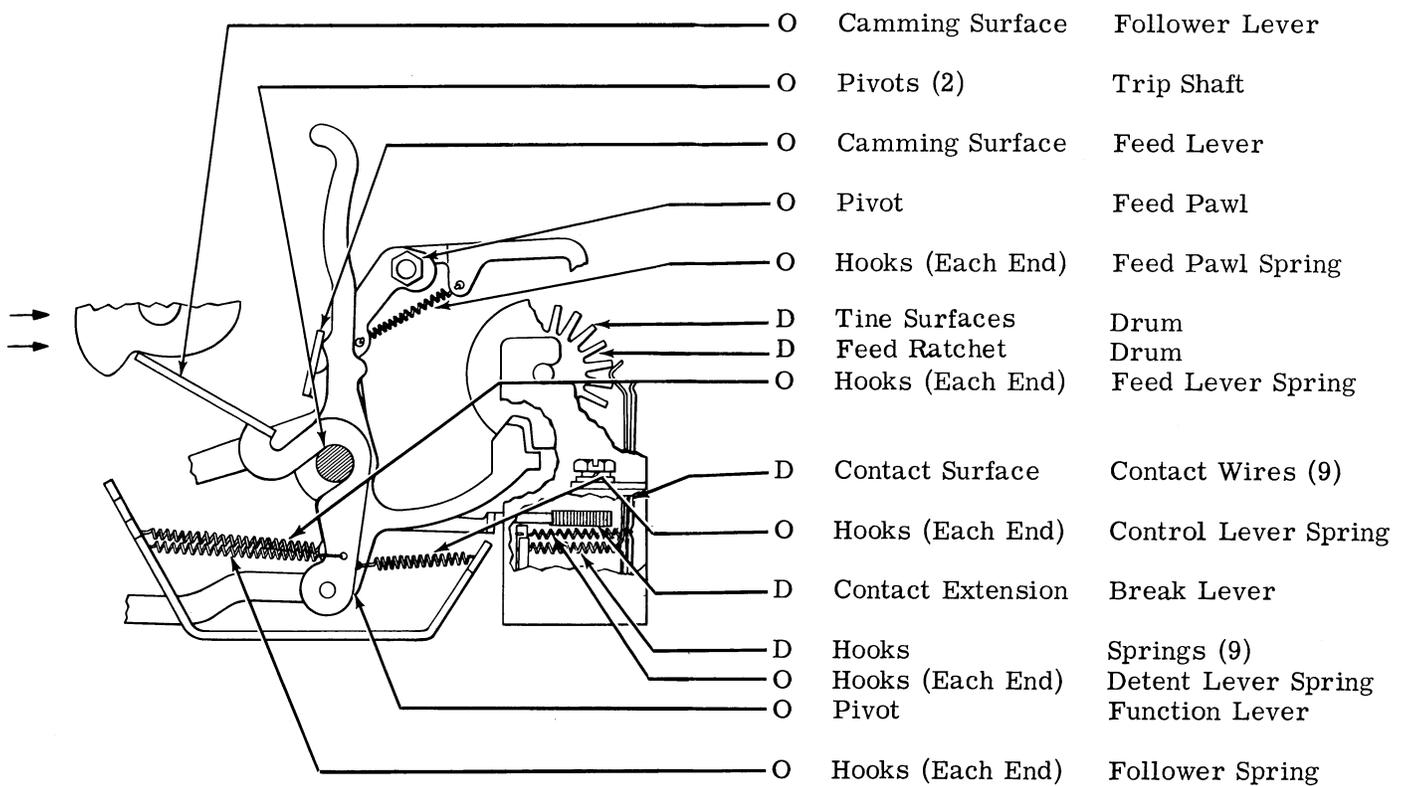
(Left Side View)

3.02 Trip Magnet

Note: Remove answer-back drum.



3.03 Answer-Back Mechanism



Note: Replace answer-back drum.

CAUTION: DO NOT CLEAN CONTACT BLOCK WITH SOLVENTS.

3.04 Print Nonprint Mechanism

