### 32 Typing Unit

#### Lubrication

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1. GENERAL

1.01 This section provides lubrication requirements for the 32 typing unit. It is reissued to include engineering changes. Marginal arrows indicate changes.

1.02 The general lubrication areas are illustrated by photographs. The specific points to receive lubricant are indicated on line drawings with appropriate textual instructions. Line drawings and textual instructions follow each photograph and are keyed to the photograph by paragraph numbers.

1.03 Thoroughly lubricate the typing unit, but avoid overlubrication that might permit the lubricant to drip or be thrown onto adjacent parts. Saturate all felt washers and oilers with oil, and apply oil to each end of all bearings.
1.04 Lubricate printer before placing it in storage, or before placing it in service if it had been stored six months or longer. Thereafter, relubricate printer at the following intervals:

**LUBRICATION INTERVAL**
(Based on 5-day Week)

<table>
<thead>
<tr>
<th>Speed (wpm)</th>
<th>0-8 hrs</th>
<th>8-16 hrs</th>
<th>16-24 hrs</th>
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<tr>
<td>60</td>
<td>39 wks</td>
<td>26 wks</td>
<td>13 wks</td>
</tr>
<tr>
<td>66</td>
<td>39 wks</td>
<td>26 wks</td>
<td>13 wks</td>
</tr>
<tr>
<td>75</td>
<td>39 wks</td>
<td>26 wks</td>
<td>13 wks</td>
</tr>
<tr>
<td>100</td>
<td>26 wks</td>
<td>13 wks</td>
<td>6 wks</td>
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Note 1: Reduce lubricating intervals 15% for a 6-day week, and 30% for a 7-day week.

Note 2: Units with serial nos. below 144,000, reduce lubricating intervals 33%. Units with serial nos. above 144,000, use above chart.

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, 2.10, 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.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
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<tr>
<td>D</td>
<td>Keep dry — no lubricant permitted.</td>
</tr>
<tr>
<td>G</td>
<td>Apply thin coat of grease (KS7471).</td>
</tr>
<tr>
<td>O</td>
<td>Oil (KS7470).</td>
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1.07 References to left, right, front, or rear, etc., consider the typist 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. 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. RINSE EACH CLEANED PART OR SUBASSEMBLY WITH SOFT, DAMP CLOTH AND BUFF WITH A SOFT, DRY CLOTH.

1.08 Tools and materials needed for teletype-writer lubrication are listed in Section 570-005-800TC.

1.09 For disassembly and reassembly information, refer to Section 574-172-702TC.

CAUTION: 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

*Refer to 1.06.

(Left Front View)
2.03 Trip Shaft

Hooks (Each End)  Springs (4)

Pivot Bearings  Shaft (6 Points)

Latching Surface  Trip Levers (2)

(Left Side View)

2.04 Codebar Clutch

Teeth  Distributor Gear
(Do not grease teeth of motor belt sprocket)

Camming Surfaces  Eccentric Cams

Interior Mechanism  All Clutches

Interior Felt Washer  All Clutches
Bearings (Both Ends)  Main Shaft

Teeth  Gear

(Top View)

*Refer to 1.06.
2.05 Motor Area

CAUTION: MOTOR START RELAY AND CAPACITOR MUST BE KEPT FREE OF LUBRICANTS.

2.06 Intermediate Gears

2.07 Function Shaft Area

(Top View)
2.08 Function Rocker Shaft

Pivot Rocker Arm
Pivot (Both Ends) Codebar Reset Lever
Pivot (Both Ends) Suppression Latch

Bearing (2) Function Shaft

Note: Replace motor and intermediate gear.

2.09 Distributor Area

(Top View)
2.10 Disc and Brushes

(Top View)

2.11 Stop Bail

(Right Side View)

2.12 Latchlever

(Right Side View)
2.13 Trip Lever

- Pivot
- Shaft (Both Ends)
- Sliding Surface
- Pivot
- Roller (Early Design) or Stud (Late Design)
- Roller Follower
- Trip Lever

Note: Replace answer-back drum.

O* Engaging Tabs (4 Places)
O Pivots
O Seat (Each End)

*Refer to 1.06.

2.14 Function Area
2.15 Function Levers

(Right Side View)

2.16 Stripper Drive Lever

(Right Side View)

2.17 Codebars

(Front View)

*Refer to 1.06.

2.18 Automatic Codebar

(Front View)

*Refer to 1.06.
2.19 Rocker and Pawls

(Left Front View)

2.20 Reset Bail

(Left Front View)
2.21 Spacing Area

2.22 Space Bellcrank

2.23 Drive Mechanism

(Right Side View)

(Left Front View)

Bellcrank
Spacing Lever
Spring
Bellcrank
Carriage Drive Ball
Front Bearings
Drive Arm
Drive Arm Ball
Drive Roller
Feed Pawl
Spacing Gear

*Refer to 1.06.
2.24 Carriage Return and Spacing Levers

Pivot
Carriage Return Lever

Pivot
Spacing Mechanism

Engaging Surface
Latch

Latching Surface
Latch

Hooks (Each End)
Latch Spring

Hooks (Each End)
Latch Spring

(Left Front View)

2.25 Spacing Mechanism - 1

Pivot
Eccentric

Engaging Surface
Spacing Lever

Latching Surface
Suppression Lever

Hooks (Each End)
Springs (3)

Pivot
Feed Pawl

Engaging Surfaces
Feed and Check Pawls

(Top View)
2.26 Spacing Mechanism - 2

Pivot
Belt Pulley
Belt and Pulley
Spacing Belt
Shaft (Remove Bracket and Retaining Ring)
Sprocket
Engaging Surface
Suppression Arm
Hooks (Each End)
Spring
Pivot
Suppression Arm
Engaging Surface
Latch Arm
Contact Surface
Spring Pulley
Pivot
Spring Pulley
Engaging Surface
Suppression Latch
Pivot
Latch
Engaging Surfaces
Latch

(Left Front View)

2.27 Carriage Area

Note: Remove ribbon mechanism and carriage return spring before lubricating. For Instructions, see Section 574-172-702TC.
2.28 Dashpot

![Front View Diagram]

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

2.29 Slides

![Left Side View Diagram]

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 Diagram]

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

Page 14
2.31 Drive Arm

Contact Surface
Contact Surfaces
Pivot
Pivot
Contact Surface
Pivot

(Right Side View)

2.32 Print Hammer

Surface
Ends (2)
Pivots (2)

Hooks (Each End)
Bearings (3)

(Right Side View)

2.33 Reset Arm

Latching Surface
Sliding Contacts

Camming Surface

(Right Side View)
2.34 Typewheel Mechanism

Note: Clean typewheel with solvent at each routine maintenance interval.

- D Printing Surface
- Typewheel
- O Hooks (Each End)
- Return Spring
- O Roller
- Return Spring
- O Upper Bearing
- Positioning Cage
- O Felt Wick
- Typewriter Shaft
- O Engaging Surfaces (2)
- Rotary Drive Lever
- O Pivot
- Pulse Link (2)
- O Contact Surface
- Power Link
- O Hooks (Each End)
- Springs (2)
- O Pivot
- Drive Arm
- O Pivot
- Power Bail
- O Bearings
- Rollers (Front and Rear - 2 Each)

(Right Side View)

2.35 Ribbon Mechanism

- O Pivot Points (2)
- Mounting Shaft
- D Slots and Rollers
- Ribbon Path
- O Felt Wick
- Feed Pawl
- O Hooks (Each End)
- Springs (3)
- O Seat (Each End)
- Torsion Springs (2)
- O Teeth
- Ratchets (2)
- O Pivot
- Feed Pawl

(Top View)
2.36 Ribbon Guide Spring

(Right Side View)

D Surfaces in Contact with Ribbon
O Seat (Each End) Springs (2)
O Sliding Contacts (2) Lifter Arm
Replace ribbon mechanism and carriage return spring.

2.37 Carriage Rear Rail

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

(Rear View)

O Rolling Surface Rear Rail
O Engaging Surface Latch
O Hook Spring
O Engaging Surface Codebar Tab

2.38 Selector Area

(Left Side View)
2.39 Blocking Levers

O Contact Surfaces
O Pivots
O Engaging Surfaces
O Contact Surfaces
O Hooks

-blocking levers
 shaft
 codebar slots
 tines
 springs

(Left Front View)

2.40 Pushlevers and Stripper Bail

O Camming Surface
O Latching Surface
O Contact Surface
O Hooks (Each End)
O Hooks (Each End)
O Pivots
O Contact Surfaces

-cam
 follower
 pushlevers
 stripper bail
 bail spring
 pushlever
 springs
 pushlevers
 blocking levers

(Left Side View)

2.41 Armature

D Hooks
D Engaging Surfaces
O Engaging Surfaces
G Engaging Surface
D Engaging Surface

-armature spring
 armature
 side plates
 armature
 armature
2.42 Selector Levers

- Tip
- Contact Surface
- Contact Surface
- Engaging Surface
- Camming Surface
- Sliding Contact
- Pivots
- Hooks (Each End)
- Hooks (Each End)

Start Lever
Locklever
Selector Levers
Selector Levers
Selector Levers
Start Lever
Levers
Start Lever Spring
Spring (9)

(Left Side View)

2.43 Latchlever and Trip Lever

- Pivots (2)
- Engaging Surface
- Latching Surface
- Hooks (Each End)
- Hooks (Each End)

Levers
Trip Lever
Latchlever
Trip Lever Spring
Latchlever Spring

(Left Side View)

2.44 Selector Clutch

- Internal Mechanism
- Camming Surface
- Bearing (Each End)

Selector Clutch
Selector Clutch
Main Shaft

*Refer to 1.06.

(Top View)
2.45 Paper Feed Area

(Rear View)

2.46 Platen

D All Surfaces Contacting Paper

D All Surfaces Contacting Ribbon

CAUTION: DO NOT CLEAN PLATEN WITH SOLVENTS.
2.47 Line Feed Mechanism

- D Teeth
- O Hooks (Each End) Spring
- O Pivots (4) Line Feed Linkage
- O Hooks (Each End) Drive Link Spring
- O Engaging Surface Upstop Bracket
- O Engaging Surface Block Lever
- O Hooks (Each End) Blocking Lever Spring

(Left Side View)

SPROCKET FEED MECHANISMS

2.48 Paper Feed Area

(Right Rear View)
2.49 Platen Mechanism

- Bearing
- Belts
- Bearing
- Bearing
- Felt Washers (2 Within Shaft)
- Pivot
- Hooks (Each End)
- Bearing
- Pivot
- Bearing

**Note:** Shaft must be disassembled.

- Pivot
- Hooks (Each End)
- Bearing

**Note:** Reassemble shaft.

- All Surfaces Contacting Ribbon
- All Surfaces Contacting Paper

- Bearing
- Hooks (Each End)
- Pivot
- Bearing
- Bearing
- Pivot

- Paper Guide
- Spring
- Paper Guide
- Paper Guide
- Spring
- Paper Guide
- Pawl

- Left and Right Plate
- Detent Lever
- Knob

*(Top View)*

*Refer to 1.06.*
2.50  Platen Drive Area

(Right Rear View)

(Left Rear View)

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

2.51  Cam, Pulley, and Gear Combination

(Top View)
2.52 Form-Out Mechanism

- Spring Hooks (Each End)
- Engaging Surface
- Engaging Surface
- Surfaces (2)
- Spring Hooks (Not Illustrated)
- Contact Surfaces
- Bearings (17 Places)
- Felt Washers (2)
- Contact Surfaces

Springs (7)
Latchlever
Trip Lever
Gear
Arm Latch
Line Feed Lever and Strip Pawl
Line Feed Lever
Shaft
Shaft
Downstop and Line Feed Extension
2.53 Line Feed Clutch

O Engaging Surface
O Engaging Surface
D Surface
O* Interior Mechanism
O Felt Washer
O Bearing
O Cam Surface
O Bearing

Latchlever
Arm
Pulley
Clutch
Clutch
Latchlever
Clutch
Pulley

*Refer to 1.06.

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.

- O Pivots (2) Armature Armature
- D Contact Surface
- O Hooks (Each End) Armature Spring
- G Latching Surface Armature Extension
- O Hooks (Each End) Lever Spring
- O Hooks (Each End) Control Lever Spring
- O Hooks (Each End) Blocking Follower Spring

3.03 Answer-Back Mechanism

Note: Replace answer-back drum.

CAUTION: DO NOT CLEAN CONTACT BLOCK WITH SOLVENTS.