35 TYPING UNIT

LUBRICATION

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1. GENERAL

1.01 This section is reissued to include recent engineering information and to add late 35 equipment. Changes and additions are indicated by arrows placed in the margins.

1.02 The 35 Typing Unit should be lubricated as directed in this section. The figures indicate points to be lubricated and the kind and quantity of lubricant to be used. Figures 1 and 2 illustrate the general areas of lubrication on the friction feed unit and Figure 3 shows the lubrication areas on the sprocket feed unit. Lubricate the typing unit just prior to placing it in service. After a few weeks in service, re-lubricate to make certain that all points receive lubrication. Thereafter, the typing unit should be lubricated at 1500 hour intervals or every six months, whichever occurs first.
1.03 Use KS7470 oil at all locations where the use of oil is indicated. Use KS7471 grease on all surfaces where grease is indicated.

1.04 All spring wicks and felt oilers should be saturated. The friction surfaces of all moving parts should be thoroughly lubricated. Over-lubrication, however, which will permit oil or grease to drip or be thrown on other parts, should be avoided. Special care must be taken to prevent any oil or grease from getting between the selector armature and its magnetic pole faces. Keep all electrical contacts free of oil and grease.

1.05 Apply a thick film of grease to all gears and the spacing clutch reset cam plate.

1.06 Apply oil to all cams, including the camming surfaces of each clutch disk.

1.07 The photographs show the paragraph numbers referring to particular line drawings of mechanisms and where these mechanisms are located on the unit. Parts in the line drawings are shown in an upright position unless otherwise specified. Reference to left or right, up or down, front or rear, etc., apply to the unit in its normal operating position as viewed from the operator's position in front of the unit.

1.08 The illustration symbols indicate the following lubrication directions:

- 0 Apply 1 drop of oil.
- 02 Apply 2 drops of oil.
- 03 Apply 3 drops of oil.
- 020 Apply 20 drops of oil, etc.
- 0 Apply thin film of grease.
- SAT Saturate (felt oilers, washer, wicks) with oil.

Note: During each lubrication period, check the following adjustments:
1. PRINTING CARRIAGE POSITION.
2. PRINTING HAMMER BEARING STUD.
3. PRINTING HAMMER STOP BRACKET. (Also see note after PRINTING ARM adjustment.)
4. LOWER DRAW WIRE ROPE.
5. DASHPOT VENT SCREW. (Check Dashpot Transfer Slide for freeness.)
Figure 2 - 35 Typing Unit (Friction Feed), Right Rear View
2. BASIC UNIT

(FRONT VIEW)

2.01 Printing Mechanism

SAT FELT WASHERS (2 WASHERS) PRINTING HAMMER OPERATING BAIL
SAT FELT WICK SPRING WICK
G ENGAGING SURFACE SECONDARY PRINTING ARM

ENGAGING SURFACE PRINTING HAMMER STOP
ENGAGING SURFACE PRINTING HAMMER
G FELT WICK SPRING WICK
G SPRING
SAT FELT WICK SPRING OPERATING BAIL LATCH
O HOOKS - EACH END (4 SPRINGS) OPERATING BAIL LATCH
SAT FELT WASHER
O2 ENGAGING SURFACES (2 PLACES)
2.02 Printing Mechanism continued

- Hook - Each End
- Spring
- Felt Washers (3 washers)
- Printing Carriage Rollers
- Guiding Surface
- Printing Arm Extension
- Track Surface
- Printing Track
- Felt Washers (2 washers)
- Printing Arm

2.03 Type Box Carriage Mechanism

- Bearing Surface
- Type Box Carriage Latch Toggle
- Bearings (3 rollers)
- Type Box Carriage Rollers
- Hook - Each End
- Spring
- Felt Wick
- Type Box Carriage Latch
- Bearing Surface
- Type Box Carriage Link

(Rear View)
2.04 Code Bar Mechanism

(FRONT VIEW)
2.05 Code Bar Detents

![Diagram of Code Bar Detents]

2.06 Print Suppression Mechanism

![Diagram of Print Suppression Mechanism]
2.07 Paper Feed Mechanism

- PLAIN - EACH END
- BEARING SURFACE
- BEARING SURFACE (EACH END)
- TEETH (2 GEARS)
- BEARINGS (EACH END)
- BEARING SURFACES - EACH END (6 ROLLERS)
- HOOKS - EACH END
- SPRING
- PLAIN DETENT BAIL
- PAPER FINGER SHAFT
- PLAIN GEARS
- PLAIN SHAFT
- PAPER PRESSURE ROLLER SHAFTS (Wipe Off Excess Oil)
- PAPER STRAIGHTENER SHAFT
- PAPER STRAIGHTENER LEVERS
- SPRING
- RELEASE LEVER
- RELEASE LEVER LINK

(LEFT SIDE)

(LEFT REAR VIEW)
2.08 Ribbon Feed Mechanism (Left Side)

- HOOKS—EACH END
- BEARING SURFACE
- BEARING SURFACE
- FELT WASHER
- HOOKS—EACH END
- ENGAGING SURFACE
- SPRING
- RIBBON SPOOL SHAFT
- RIBBON ROLLER SHAFT
- RIBBON SPOOL SHAFT
- SPRING
- RIBBON DETENT LEVER

(LEFT SIDE)

SAT FELT WASHERS (2 WASHERS)

O2 BEARING SURFACE

G TEETH

O HOOKS—EACH END

O2 ENGAGING SURFACE

O2 BEARING SURFACES (2 PLACES)

RIBBON REVERSE LEVER

RIBBON RATCHET WHEEL

SPRING

RIBBON DETENT LEVER SHAFT

RATCHET FEED LEVER SHAFT

(REAR VIEW)

2.09 Ribbon Feed Mechanism continued

O2 BEARING SURFACE

O2 ENGAGING SURFACE

O2 ENGAGING SURFACE

G TEETH

RIBBON REVERSE LEVER

RIBBON REVERSING LEVER

RIBBON REVERSE LEVER

RIBBON REVERSE SPUR GEAR
2.10 Vertical Positioning Mechanism (Left Side)

- Bearing Surface
- Felt Washer
- Engaging Surfaces (4 Places)
- Hooks - Each End
- Engaging Surface
- Bearing Surface
- Felt Washers (2 Washers)
- Felt Wicks
- Hooks - Each End
- Ball Bearing
- Bearing Surface
- Ribbon Drive Link
- Vertical Positioning Link
- Vertical Positioning Lock Lever
- Spring
- Vertical Positioning Lever
- Ribbon Drive Link
- Vertical Positioning Lever
- Main Side Lever
- Follower Arm
- Vertical Positioning Lever
- Main Side Lever
- Follower Arm
- Spring Wick
- Spring
- Main Rocker Shaft
- Rocker Shaft Bracket
2.11 Ribbon Feed Mechanism (Right Side)

(RIGHT SIDE VIEW)

02 BEARING SURFACE  RIBBON ROLLER SHAFT
02 BEARING SURFACE  RIBBON SPOOL TOGGLE
SAT FELT WASHER  RIBBON SPOOL SHAFT
0 HOOKS-EACH END  RIBBON FEED LEVER SPRING
02 ENGAGING SURFACE  RIBBON DETENT LEVER
02 HOOKS-EACH END  RIBBON RATCHET WHEEL SPRING
TEETH  RIBBON RATCHET WHEEL
G

(REAR VIEW)

SAT FELT WASHERS  RIBBON FEED LEVER BAIL
(2 WASHERS)  RIBBON LEVER SPRING
02 BEARING SURFACE  RATCHET FEED LEVER SHAFT
0 HOOKS-EACH END  RIBBON DETENT LEVER SHAFT
02 BEARING SURFACES
02 BEARING SURFACE (2 PLACES)

2.12 Ribbon Feed Mechanism continued

(REAR VIEW)

02 ENGAGING SURFACE  RIBBON REVERSING LEVER
02 BEARING SURFACE  RIBBON REVERSE LEVERS
02 ENGAGING SURFACE  RIBBON REVERSE LEVER
G TEETH  RIBBON REVERSE SPUR GEAR
2.13 Vertical Positioning Mechanism (Right Side)
2.14 Code Bar Mechanism

02 GUIDE SLOTS
02 ENGAGING SURFACE
SHIFT LEVERS
SHIFT AND TRANSFER LEVERS
TRANSFER LEVER GUIDE BEARING

02 BEARING GUIDE SLOTS
(8 SLOTS)
SHIFT LEVER LINK ROLLERS

02 ROLLER BEARINGS
(4 ROLLERS)

0 HOOKS—EACH END
(7 SPRINGS)
SPLING

02 GUIDE SLOTS
(7 SLOTS)
INTERMEDIATE ARMS AND
TRANSFER LEVERS

02 BEARING SURFACES
(2 PLACES)
SHIFT LEVERS

02 BEARING GUIDE SLOTS
(7 SLOTS)
INTERMEDIATE ARM GUIDE
BEARING

SAT FELT WASHER
SHIFT LEVER LINK

03 OIL HOLE
SHIFT LEVER DRIVE ARM
SHAFT

2.15 Selector Mechanism

02 BEARING GUIDE SLOTS
(7 SLOTS)
PUSH LEVER GUIDE BEARING

SAT FELT WICK
SELECTOR WICK

02 ENGAGING SURFACES
(7 LEVERS)
PUSH LEVERS

02 GUIDE SLOT
WICK
MARKING LOCK LEVER

02 GUIDE SLOTS
LUBRICATOR WICK

0 HOOKS—EACH END
(14 SPRINGS)
SELECTOR AND PUSH LEVERS

FILL CUP
(AVOID AIR LOCK)
SPRINGS

LUBRICATOR RESERVOIR

02 BEARING GUIDE SLOTS
(9 SLOTS)
SELECTOR LEVER GUIDE BEARING
2.16 Selector Mechanism continued

- **G** TEETH
- **O2** BEARING SURFACE
- **O** HOOKS - EACH END
- **RANGE FINDER KNOB AND RACK**
- **CLUTCH TRIP LEVER**
- **SPRING**

2.19

2.17

2.18

2.20

(REAL VIEW)
2.19 Ribbon Reverse Mechanism

(RIGHT REAR VIEW)

2.20 Function Rocker Shaft Mechanism
2.21 Spacing Drum Mechanism

(FRONT VIEW)

(BOTTOM VIEW)
2.22 Carriage Return Mechanism

2.23 Spacing Drum Feed Mechanism

2.24 Track Guide Mechanism
2.25 Horizontal Positioning Mechanism (Front View)

SAT FELT WASHER
O2 ENGAGING SURFACE
O2 DETENTS (2 DETENTS)
O2 ENGAGING SURFACE
SAT FELT WASHERS (2 WASHERS)
O2 BEARING SURFACE

HORIZONTAL REVERSING SLIDE
HORIZONTAL REVERSING SLIDE SHIFT LEVER
DETENT BAILS
HORIZONTAL REVERSING SLIDE SHIFT LEVER
OSCILLATING RAIL SHIFT SLIDE
HORIZONTAL REVERSING SLIDE SHIFT LEVER

SAT FELT WASHERS (2 WASHERS)
O2 ENGAGING SURFACES (2 PLACES)
SAT FELT WASHERS (2 WASHERS)

OSCILLATING RAIL SHIFT SLIDE
HORIZONTAL REVERSING SLIDE
HORIZONTAL REVERSING SLIDE

2.26 Horizontal Positioning Mechanism continued

0 HOOKS—EACH END
SAT FELT WASHER
O2 ENGAGING SURFACES (3 SLIDES)

SPRING
CODE BAR BELL CRANK
HORIZONTAL MOTION STOP SLIDES

(TOP VIEW)
2.27 Horizontal Positioning Mechanism continued

O Hooks-Each End
O2 Engaging Surface (2 Slides)
O Bearing Surfaces
SAT Felt Washers (5 Washers)

Spring
Decelerating Slides
Shift Slide Drive Links
Shift Slide Drive Links

2.28 Horizontal Positioning Mechanism continued

O2 Guiding Surface
O2 Bearing Surface
SAT Felt Wick
O Hooks-Each End
SAT Felt Washer

Horizontal Positioning Lock Lever
Horizontal Lock Lever Arm Roller
Spring Wick
Spring
Horizontal Positioning Lock Lever
2.29 Horizontal Positioning Drive Mechanism

2.30 Shift Mechanism

(RIGHT SIDE)

(LEFT SIDE)

Page 24
2.31 Oscillating Mechanism

O2 BEARING SURFACE
O2 BEARING SURFACE
O2 BEARING SURFACE
SAT FELT WASHER
PULLEYS
SAT FELT WASHERS
(3 WASHERS)
SAT FELT OILER
OSCILLATING RAIL SLIDE
OSCILLATING RAIL SHIFT LINK
OSCILLATING RAIL
OSCILLATING RAIL GUIDE ARM

2.32 Oscillating Mechanism continued

O2 BEARING SURFACE
SAT FELT WASHERS
(3 WASHERS)
O2 BEARING SURFACES
(3 PLACES)
SAT FELT WASHER
PULLEYS
OSCILLATING RAIL SHIFT LINK
OSCILLATING RAIL
OSCILLATING RAIL GUIDE ARM
2.33 Main Shaft (Clutches, Gears, etc.) (Bottom View)

SAT FELT WASHER

O4 INTERNAL MECHANISM (2 CLUTCHES)

SAT FELT WICKS

DRIVE LINK

CLUTCH ASSEMBLY

G TEETH (4 GEARS)

MAIN SHAFT GEARS

O2 BEARING SURFACES (2 CLUTCHES)

CLUTCH SLEEVES

O2 BALL BEARING

MAIN SHAFT BEARING

O2 BEARING SURFACE

CLUTCH DISKS

02 BEARING SURFACE

DRIVE LINK BEARING

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2.34 Main Shaft Mechanism

2.35 Selector Cam-Clutch Assembly

2.36 Main Shaft (Clutches, Gears, etc.) continued
2.37 Spacing Mechanism

2.38 Spacing Mechanism continued

2.39 Spacing Mechanism continued
2.40 Shift Selector Mechanism

(BOTTOM LEFT VIEW)

2.41 Shift Selector Mechanism continued

(BOTTOM VIEW)

(REAR VIEW)
2.42 Line Feed Mechanism

- 0 HOOKS–EACH END
- 02 BEARING SURFACE
- 02 BEARING SURFACE
- 02 ENGAGING SURFACE
- 02 GUIDING SURFACE
- 02 GUIDING SURFACES (2 BARS)
- 02 ENGAGING SURFACE
- 0 HOOKS–EACH END
- 02 GUIDING SURFACES (2 BARS)
- 02 BEARING SURFACES (2 BEARINGS)
- G TEETH
- G TEETH
- 02 BEARING SURFACE

- SPRING
- PLATEN HAND WHEEL
- PLATEN IDLER SPUR GEAR
- PLATEN SPUR GEARS
- LINE FEED BARS
- LINE FEED BAR RELEASE LEVER
- LINE FEED BARS
- LINE FEED BAR RELEASE LEVER SPRING
- LINE FEED BAR BELL CRANK
- LINE FEED BAR ECCENTRIC BEARING
- LINE FEED CLUTCH SPUR GEAR
- LINE FEED CLUTCH SPUR GEAR SHAFT
2.43 Single-Double Line Feed Mechanism

02 PIVOT
SINGLE-DOUBLE LINE FEED LEVER

02 ENGAGING SURFACE
OPERATING ARM

02 GUIDE SURFACES
OPERATING ARM

SAT FELT WASHER
OPERATING ARM

02 ENGAGING SURFACES
STRIPPER BAIL (4 SURFACES)

02 COILS
TORSION SPRING

0 HOOKS-EACH END
SPRING

02 HOOKS-EACH END
SPRING

(LEFT SIDE VIEW)
Figure 3 - 35 Typing Unit (Sprocket Feed), Left Front View
2.44 Line Feed Mechanism (Sprocket Feed)

(right side view)

2.45 Sprocket-Feed Paper Mechanism

(right side view)

NOTE: BEFORE ATTEMPTING TO DISASSEMBLE THE 153700 PLATEN HUB, SEE DISASSEMBLY AND REASSEMBLY INSTRUCTIONS IN THE APPROPRIATE SECTION.
3. VARIABLE FEATURES

(LEFT FRONT VIEW)

(BOTTOM VIEW)
3.01 Horizontal Tabulator - Blocking Lever

SPACING DRUM

02 ENGAGING SURFACE TABULATOR STOPS
02 BEARING SURFACE TABULATOR PAWL
02 Hooks - Each End SPRINGS
02 Bearing and Guide SURFACE BLOCKING LEVER

3.02 Horizontal Tabulator - Slide Arm

02 ENGAGING SURFACE WITH BLOCKING LEVER AND BRACKET OPERATING LEVER SLIDE ARM

3.03 Horizontal Tabulator - Operating Lever

0 Hooks - Each End
02 BEARING SURFACE SLIDE ARM SPRING
02 BEARING SURFACE OPERATING LEVER SLIDE ARM
02 CONTACTING SURFACE WITH ADJUSTING PLATE OPERATING LEVER
02 BEARING SURFACE TRIP LEVER ARM LATCH BAIL
02 BEARING SURFACE OPERATING LEVER
3.04 Horizontal Tabulator - Latch Bail

- Hooks - Each End
- Latch Bail Spring

3.05 Horizontal Tabulator - Operating Lever

- Guide Surfaces
- Operating Lever
- Contact with Slide Arm
- Operating Lever
- Hooks - Each End
- Slide Arm Spring
- Operating Lever
- Bearing Surface
- Operating Lever
- Slot Camming Surface
- Operating Lever
- Bracket Contact Surface
- Operating Lever
- Felt Wick
- Spring
- Felt Washers
- Stripper Bail Shaft
- Camming Surface
- Spacing Clutch
- Restoring Cam

3.06 Horizontal Tabulator - Intermediate Bail

- Contact Surface
- Intermediate Bail
- Trip Lever Arm
- Contacting Surface
- Spacing Trip Lever Arm
- Spacing Trip Lever
- Intermediate Bail
- Contact Surface
- Intermediate Bail
- Spacing Trip Lever
- Felt Washer
- Trip Lever Arm Shaft
- Felt Washer
3.07 Bail Extension Arm

3.08 Spacing Cut-Out Transfer Ball

3.09 Vertical Tabulator and Transmitter Distributor Control Mechanism
3.10 Form Feed-out Mechanism

(O2 ENGAGING SURFACE)

FORM FEED-OUT BAIL

O PIVOT

FORM FEED-OUT BAIL

O LOOP

TORSION SPRING

FORM-OUT SOLENOID LEVER

(DO NOT OIL PLUNGER)

O PIVOT

FORM FEED-OUT LEVER

O PIVOT

O GUIDE SURFACE

NON-REPEAT SLIDE

O HOOKS-EACH END SPRING

O2 ENGAGING SURFACE SOLENOID LEVER

(LEFT FRAME VIEWED FROM RIGHT REAR)
3.11 Vertical Tabulator Mechanism (For Switched Network Service)
3.12 Local Back Space Mechanism

(FRONT VIEW)

3.13 Paper-Out Alarm Mechanism (Friction Feed)
3.14 Low Paper and Paper Out Alarm Mechanism (Sprocket Feed)

(RIGHT SIDE VIEW)

3.15 Keyboard Lock Mechanism

(UNIT UPSIDE DOWN) (RIGHT SIDE VIEW)