BELL SYSTEM PRACTICES
Teletypewriter and Data Stations

SECTION P34.514
Teletypewriter and Data Stations

28F, 28G-TYPE, 28LA, AND 28LB TRANSMITTER-DISTRIBUTOR UNITS
LUBRICATION

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1. GENERAL .................................................. 1.01-1.05
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1. GENERAL

1.01 This section contains the detailed lubrication procedures for the 28F, 28G-type, 28LA, and 28LB transmitter-distributor units. The information herein, together with that in the section covering general information and routines for lubrication of teletypewriter apparatus, provides for the complete lubrication of these units.

1.02 This section is reissued to add lubrication procedures for the intermediate gear assembly and for storing-switch mechanism (transfer contacts) (8-level unit) and to bring the section generally up to date.

1.03 The lubricants to be used and their methods of application are those given in the general lubrication section. The lubrication symbols used herein are the same as those given in the general section except that in this section the symbol O is used to mean only one drop of oil, O2 to mean two drops of oil, and G to mean that a thin film of grease should be applied at the points indicated.

1.04 Lubrication of the apparatus before it is placed in service should be governed by the principles given in the section covering preparation of teletypewriter apparatus for installation. After a few weeks in operation, the unit should

*Common to 5-level and 8-level units, unless otherwise indicated.
ordinarily be relubricated to make sure that all the specified points have received lubricant. Thereafter, because of varying conditions at each station, the unit should be relubricated as often as specified by local instructions. The following lubrication schedule may be used as a guide.

<table>
<thead>
<tr>
<th>Operating Speed (Words per Minute)</th>
<th>Lubrication Interval (Whichever Occurs First)</th>
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<td>60</td>
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</tbody>
</table>

**Note:** On the 8-level transmitter-distributor unit, the clutch felt washers should be saturated with oil before the unit is placed in service and resaturated after every 500 hours of operation.

1.05 Unless otherwise indicated, the lubrication procedures in Part 2 of this section are common to both the 5-level and the 8-level transmitter-distributor units.
2. PARTS TO BE LUBRICATED

2.01 Distributor- and Sensing-shaft Assemblies, Feed-pawl Mechanism, Tape-out and Control Mechanism, etc.

(Top View)
2.02 Intermediate Gear Assembly

- G TEETH
- G TEETH
- G TEETH
- MOTOR PINION
- INTERMEDIATE GEAR
- TRANSMITTER DISTRIBUTOR DRIVING GEAR
2.03 Distributor- and Sensing-shaft Assemblies

- Gears (2)
- Clutch
- Oil holes (2)
- Cam sleeve
- Felt wicks
- Idler gear shaft
- Bearings (4)
- Hook each end
- Clutch shoe lever spring
- Felt wicks (4)
- Hook each end
- Clutch shoe
- Felt wick 2 places
- Hook each end
2.04 Distributor-contact Mechanism

- **O**: Hooks - Each End (7 Springs)
  - Contact Rocker Spring

- **G**: Pivot Surface (7 Rockers)
  - Contact Rocker

- **O**: Camming Surfaces (7 Levers)
  - Cam Follower Lever

- **O**: Guide Slot (7 Levers)
  - Cam Follower Lever

- **G**: Engaging Surfaces (7 Rockers)
  - Contact Rocker

- **O**: Loops (7 Springs)
  - Compression Spring

- **O**: Hooks - Each End (7 Springs)
  - Cam Follower Spring

- **O**: Bearing Surface
  - Cam Follower Lever
2.05 Feed-pawl Mechanism

- SAT FELT WASHER
- FEED LEVER ROLLER
- FEED WHEEL RATCHET
- FEED WHEEL SHAFT
- FEED WHEEL RATCHET
- FEED WHEEL DETENT
- O HOOKS - EACH END
- FEED PAWL SPRING
- O PIVOT - SURFACE
- DETENT ECCENTRIC BUSHING
- O HOOKS - EACH END
- DETENT LEVER SPRING
- O2 PIVOT POINTS
- FEED LEVER BAIL
- O ENGAGING SURFACE
- FEED LEVER EXTENSION
- O GUIDE SLOT
- FEED LEVER
- SAT FELT WASHER
- FEED LEVER SHAFT
2.06 Latch- and Pusher-bail Stripper

- LATCH STRIPPER BAIL
- LATCH STRIPPER BAIL ROLLER
- LATCH AND PUSHER STRIPPER BAIL
- STRIPPER SHAFT
- PUSHER LEVER
- LATCH LEVER
- CAM AND ROLLER ASSEMBLY
- PUSHER STRIPPER BAIL ROLLER
- PUSHER STRIPPER BAIL SPRING
Tape-sensing Mechanism

- Sliding Surface
- Hooks - Each End
- Pivot
- Hooks - Each End
- Bearing Surface
- Engaging Surface
- Sat Felt Washer
- Cam Surface
- Bearing Surface
- Sensing Pins
- Sensing Bail Spring
- Sensing Pin Assembly
- Sensing Pin Spring
- Sensing Pin Assembly
- Sensing Bail
- Sensing Bail Roller
- Sensing Cams
- Sensing Bail
2.10 Distributor- and Sensing-shaft Trip Mechanisms and Storing-switch Mechanism (Bottom View)
2.11 Distributor- and Sensing-shaft Trip Mechanisms

- CAM SURFACE
- HOOKS - EACH END
- FELT WASHER
- SAT
- PIVOT
- CLUTCH DISK
- LATCH LEVER SPRING
- TRIP LEVER SHAFT
- ARMATURE SPRING
- TRIP LEVER SPRING
- ARMATURE HINGE
2.12 Storing-switch Mechanism (Nontransfer Contacts) (5-level Unit)
2.13 Storing-switch Mechanism (Transfer Contacts) 8-level Unit

- G BAKELITE SURFACE
- CONTACT LEVER SLIDES
- G BAKELITE SURFACE
- TRANSFER CONTACT SWINGER PADS

NOTE: KEEP CONTACTS FREE OF GREASE
NOTE: THE OIL DEPTH SHALL NOT EXCEED 7/8 INCH. (THE TP96364, 0.010-INCH THICK, FLAT GAUGE FROM THE TP117781 SET OF GAUGES IN THE TOOL KIT MAY BE USED AS A DIP STICK TO DETERMINE THE OIL DEPTH.)
2.15 Tape-guide Plate, Cover Plate, Tight-tape Slidearm Assembly, and Start-Stop Slidearm Assembly (Bottom View)
28F, 28G-TYPE, 28LA, AND 28LB TRANS.

MITTER-DISTRIBUTOR UNITS

FRONT & REAR PLATE

DETENTING NUTS AND SPRINGS

COVER PLATE DENTENTS

FACE ENGAGING SURF.

SLIDING SURFACE

Cover Plate (5-Level Unit)
2.18 Tight-tape Slidearm Assembly

- HOOKS EACH END
- YIELD SPRING
- PIVOT
- INTERMEDIATE BAIL
- SLIDING SURFACE
- INTERMEDIATE BAIL
- PIVOT
- SLIDE ARM
2.20 Tape Pullback, Tape Runout, and Additional Tight-tape Mechanisms (8-level Unit)

G CONTACTING SURFACE CONTACT ACTUATORS (3) (EVERY 500 HRS)

SAT FELT WASHER

SAT FELT WASHERS

EARLY UNITS DO NOT HAVE THIS FELT WASHER. OIL BEARING POINT EVERY 500 HRS.
3. ASSOCIATED BELL SYSTEM PRACTICES

3.01 Other Bell System Practices that may be required in connection with this section are listed in Section P34.001, Alphabetical Index of 28-type Equipment, Bell System Practices, and Associated 28 ASR Station Drawings.
1. GENERAL

1.001 This addendum supplements Section P34.514, Issue 1.

1.002 This addendum is issued to include the lubrication for
the 28LA transmitter-distributor unit and to add the code of this unit to the section title, to provide a note regarding the depth to which the oil reservoirs should be filled, and to remove information (1.04 and 1.05 of the section) that is covered in the general lubrication section.

1.003 Since certain mechanisms of the 28LA transmitter-distributor unit are similar to those of the 28F, 28G, or 28G-1 transmitter-distributor unit, many of the lubrication procedures are generally the same. To avoid duplication of information on these common routines which are already given in the section proper, this addendum is arranged so as to provide a list of the common lubrication procedures, the sequence in which they should be performed on a 28LA transmitter-distributor unit, and a reference to the specific paragraph which contains the particular lubrication procedure.

The following changes apply to Part 1 of the section:

(a) 1.01, 1.02, and 1.03—revised
(b) 1.04 and 1.05—omitted

1.01 This section contains the detailed lubrication procedures for the 28F, 28G, 28G-1, and 28LA transmitter-distributor units. The information herein, together with that in the section entitled Teletypewriter Apparatus, Lubrication, General Information and Routines, provides for the complete lubrication of these units.

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1.02 The lubricants to be used and their methods of application are those given in the general lubrication section. The lubrication symbols used herein are the same as those in the general section except that the symbol O is used in this practice to mean only one drop of oil, 02 to mean two drops of oil, and G to mean a thin film of grease should be applied at the points indicated.

1.03 Lubrication of the apparatus before it is placed in service should be governed by the principles given in the section entitled Preparation of Teletypewriter Apparatus for Installation. After a few weeks in operation, the unit should ordinarily be relubricated to make sure that all the specified points have received lubricant. Thereafter, because of varying conditions at each station, the unit should be relubricated as often as specified by local instructions. The following lubrication schedule may be used as a guide.

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Note: On the 28LA transmitter-distributor unit, the clutch felt washers should be saturated with oil before the unit is placed in service and resaturated after every 500 hours of operation.

2. PARTS TO BE LUBRICATED

The following changes apply to Part 2 of the section: (a) 2.01.1 and 2.18—added

2.01.1 The lubrication procedures for the following parts, in addition to those in 2.18, apply to the 28LA transmitter-distributor unit.
<table>
<thead>
<tr>
<th>Lubrication Sequence</th>
<th>Part To Be Lubricated</th>
<th>Covered In (See Note 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Intermediate Gear Assembly</td>
<td>BSP P34.540, Issue 1, 2.02</td>
</tr>
<tr>
<td>(2)</td>
<td>Distributor- and Sensing-shaft Assemblies</td>
<td>2.02</td>
</tr>
<tr>
<td>(3)</td>
<td>Distributor-contact Mechanism</td>
<td>2.03</td>
</tr>
<tr>
<td>(4)</td>
<td>Feed-pawl Mechanism</td>
<td>2.04</td>
</tr>
<tr>
<td>(5)</td>
<td>Latch- and Pusher-bail Stripper</td>
<td>2.05</td>
</tr>
<tr>
<td>(6)</td>
<td>Tape-out and Control Mechanism</td>
<td>2.06</td>
</tr>
<tr>
<td>(7)</td>
<td>Tape-sensing Mechanism</td>
<td>2.07</td>
</tr>
<tr>
<td>(8)</td>
<td>Pusher Levers</td>
<td>2.08</td>
</tr>
<tr>
<td>(9)</td>
<td>Distributor- and Sensing-shaft Trip Mechanisms</td>
<td>2.10</td>
</tr>
<tr>
<td>(10)</td>
<td>Oil Reservoir</td>
<td>2.12 &amp; Note 2</td>
</tr>
</tbody>
</table>

**Note 1:** These paragraphs are in the section proper unless otherwise indicated.

**Note 2:** The oil depth shall not exceed $\frac{3}{8}$ inch. (The TP96364, 0.010-inch thick, flat gauge from the TP117781 set of gauges in the tool kit may be used as a dip stick to determine the oil depth.)

| (11)                | Tape-guide Plate                            | 2.14                    |
| (12)                | Tight-tape Slidearm Assembly                | 2.16                    |
| (13)                | Start-stop Slidearm Assembly                | 2.17                    |
2.18 Tape Pullback, Tape Runout, and Additional Tight-tape Mechanisms (28LA Transmitter-Distributor Unit)

- CONTACTING SURFACE
  (EVERY 500 HRS.)
- CONTACT ACTUATORS (3)
- SAT FELT WASHER

NOTE
ON EARLY UNITS WITHOUT
THIS HIDDEN FELT WASHER,
OIL BEARING SURFACES
EVERY 500 HOURS.