# 28 PERFORATOR-TRANSMITTER BASE

## LUBRICATION

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## 1. GENERAL

1.01 This section has been revised to include recent engineering changes and additions, and to rearrange the text so as to bring the section generally up-to-date. Since this is an extensive revision, marginal arrows ordinarily used to indicate changes have been omitted.

1.02 The 28 Perforator-Transmitter Base 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. Lubricate the keyboard just prior to placing it in service. After a few weeks in service, relubricate to make certain that all points receive lubrication. The following lubrication schedule should be followed thereafter:

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<th>LUBRICATION INTERVAL</th>
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<tr>
<td>IN WORDS PER MINUTE</td>
<td>3000 hr or 1 yr*</td>
</tr>
<tr>
<td>60</td>
<td>2400 hr or 9 mo*</td>
</tr>
<tr>
<td>75</td>
<td>1500 hr or 6 mo*</td>
</tr>
<tr>
<td>100</td>
<td>150</td>
</tr>
<tr>
<td>150</td>
<td>1000 hr or 6 mo*</td>
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*Whichever occurs first.

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1.03 Use TP88970 oil at all locations where the use of oil is indicated. Use TP88973 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 electrical contacts.

1.05 Apply a thick film of grease to all gears.

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

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.

1.08 The illustration symbols indicate the following lubrication directions:

- O  Apply 1 drop of oil.
- O2 Apply 2 drops of oil.
- O3 Apply 3 drops of oil.
- O20 Apply 20 drops of oil, etc.
- G Apply thin film of grease.
- SAT Saturate (felt oilers, washers, wicks) with oil.

Figure 1 - 28 Perforator-Transmitter Base
2. LUBRICATION

2.01 KEYBOARD
NOTE: REST PERFORATOR TRANSMITTER BOTTOM SIDE UP.

2.02 SPACE BAR MECHANISM

2.03 KEYLEVER MECHANISM
2.04 BREAK LEVER MECHANISM

ENGAGING SURFACE
BREAK KEY LEVER

BEARING SURFACE
FUNCTION LEVER

CONTACT SURFACE
BREAK LEVER

2.05 CODE LEVER MECHANISM

CONTACTING SURFACE (32 LEVERS)
CODE LEVER UNIVERSAL BAIL

GUIDE SLOTS (32 LEVERS)
CODE LEVERS

FELT WASHERS (6 WASHERS)
CODE LEVER SHAFT

BEARING SURFACES (32 WEDGES)
LOCK BALL TRACK

HOOKS-EACH END (40 SPRINGS)
SPRING

2.06 KEYBOARD LOCK MECHANISM

GUIDE SLOT
KEYBOARD LOCK PLUNGER

HOOKS-EACH END
SPRING

BEARING SURFACE
KEYBOARD LOCK LEVER

ENGAGING SURFACE
KEYBOARD LOCK FUNCTION LEVER

BEARING SURFACE
FUNCTION BAIL
2.07 EXTENSION BASKET MECHANISM
NOTE: REST PERFORATOR TRANSMITTER BOTTOM SIDE UP.

2.08 DETENT LEVER MECHANISM

0 BEARING SURFACES (FRONT AND REAR)
0 BEARING SURFACE
0 HOOKS-EACH END
0 BEARING SURFACE

CONTROL CAM
DETENT LEVER
SPRING
ROLLER

2.09 SELECTOR LEVER MECHANISM

0 HOOKS-EACH END (2 SPRINGS)
0 SLIDING SURFACE
0 BEARING SURFACE
0 BEARING SURFACE
0 CAMMING SURFACE

SPRINGS
RESET LEVER
KEYBOARD CONTROL SELECTION LEVER
RESET CAM Follower AND RESET LEVER
RESET CAM Follower
SECTION 573-117-701

2.10 CODE BAR EXTENSION BAIL MECHANISM

- CAMMING SURFACE
- HOOKS-EACH END
- SLIDING SURFACE (2 PLACES)
- ENGAGING SURFACES (TWO PLACES)
- SLIDING SURFACE
- SLIDING SURFACE
- GUIDE SURFACES (5 EXTENSIONS-TWO PLACES)
- HOOKS-EACH END (5 SPRINGS)
- CONTACT SURFACE (5 EXTENSIONS)
- CONTACT SURFACE
- COMPRESSION SPRING-EACH END
- CONTACT SURFACE
- ENGAGING SURFACE
- BEARING SURFACE
- CONTACT SURFACE
- BEARING SURFACE AND SLIDING SURFACE
- CONTACT SURFACE (BOTH SIDES)
- SLIDING SURFACE
- SLIDE ROLLER
- SPRING
- LEVER AND EXTENSION
- LEVER
- LEVER
- CONTROL CAM
- CODE BAR EXTENSIONS
- SPRINGS
- CODE BAR EXTENSION
- CLUTCH TRIP BAR LINK EXTENSION
- LINK GUIDE PIN
- TRIP BAR LINK LATCH
- CLUTCH TRIP BAR LINK
- TRIP BAR LINK LATCH
- BELLCRANK
- BELLCRANK AND CLUTCH TRIP BAR LINK
- BELLCRANK
- CLUTCH TRIP BAR LINK

2.11 CODE BAR EXTENSION MECHANISM

2.12 CLUTCH TRIP BAR LINK MECHANISM
2.13 CODE BAR AND LOCAL LINE FEED MECHANISM
NOTE: REST PERFORATOR IN UPRIGHT POSITION.

2.14 CODE BAR MECHANISM

HOOKS-EACH END
(8 SPRINGS)

GUIDE SLOTS
(LEFT AND RIGHT-
TOP AND
BOTTOM)

CODE BAR GUIDES

0

SPRING

2.15 CODE LEVER UNIVERSAL BAIL MECHANISM

HOOKS-EACH END

BEARING SURFACE

CODE LEVER UNIVERSAL BAIL

0

02

SPRING
2.16 LOCAL CARRIAGE RETURN MECHANISM

2.17 SIGNAL GENERATOR MECHANISM
NOTE: REST PERFORATOR IN UPRIGHT POSITION.

2.18 NON-REPEAT LEVER MECHANISM

(REAR VIEW)

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2.19 CLUTCH TRIP BAR MECHANISM

2.20 TRANSFER LEVER MECHANISM

2.21 CONTACT BOX

DISASSEMBLY: REMOVE NUT AND LOCK WASHER SECURING CONTACT BOX COVER AND REMOVE COVER.
2.22 TRANSFER BAIL MECHANISM

SAT  FELT WASHERS (2 WASHERS)  LATCHES
G   ENGAGING SURFACES  TRANSFER BAIL
0   HOOKS—EACH END (2 SPRINGS)  SPRING
02  BEARING SURFACE (EACH END)  TRANSFER BAIL
SAT  OIL WICK  TRANSFER BAIL

2.23 KEYBOARD CLUTCH MECHANISM

02  LATCHING SURFACE  CLUTCH STOP LEVER AND CLUTCH LATCH LEVER
0   HOOKS—EACH END (2 SPRINGS)  SPRING
SAT  FELT WASHERS (2 FRONT & REAR)  CLUTCH TRIP BAIL

2.24 LOCK BAR LATCH MECHANISM

0   BEARING SURFACE  LOCK BAR LATCH

2.25 MARGIN INDICATING MECHANISM

0   BEARING SURFACE  SWITCH LEVER
0   HOOKS—EACH END  SPRING
2.29 SIGNAL GENERATOR MECHANISM continued
NOTE: REST PERFORATOR TRANSMITTER IN UPRIGHT POSITION.

2.30 LOCKING BAIL MECHANISM

0 HOOKS—EACH END SPRING
SAT FELT WASHERS (2 WASHERS — FRONT AND REAR) LOCKING BAIL POST
SAT FELT WICK CAMMING SURFACES
0 GUIDE SLOTS (3 SLOTS) LOCKING BAIL
2.34 CHARACTER COUNTER AND ELECTRICAL LINE BREAK MECHANISMS
NOTE: REST PERFORATOR TRANSMITTER IN UPRIGHT POSITION

2.35 CHARACTER COUNTER MECHANISM continued
2.36 CHARACTER COUNTER MECHANISM continued

CONTACT SURFACE
BEARING SURFACE
BEARING SURFACE
TEETH
ENGAGING SURFACES (2 PLACES)
HOOKS-EACH END (3 SPRINGS)
BEARING SURFACE
BEARING SURFACE
ENGAGING SURFACES (3 SURFACES)

ANTI-BOUNCE LATCH
ANTI-BOUNCE LATCH
RATCHET DRUM
RATCHET
RESET LEVER EXTENSION
SPRING
RESET BAIL
DRIVE LEVER FEED BAIL
DRIVE LEVER FEED BAIL & RESET BAIL

2.37 ELECTRICAL LINE BREAK MECHANISM

HOOKS-EACH END
CONTACT SURFACE
BEARING SURFACE

SPRING
SENSITIVE SWITCH
BREAK LEVER

2.38 LOCAL PAPER FEED-OUT MECHANISM

ENGAGING SURFACE
HOOKS-EACH END
BEARING SURFACE
ENGAGING SURFACE

LOCAL LINE FEED TRIP LINK
SPRING
LEVER
MAGNETIC BLOWOUT SWITCH
2.39 REPEAT-ON-SPACE MECHANISM
NOTE:
REST PERFORATOR TRANSMITTER IN UPRIGHT POSITION.

2.40 REPEAT-ON-SPACE

- HOOKS-EACH END
- SPRING
- BEARING SURFACE-EACH END
- LEVER
- ENGAGING SURFACES
- LEVER
2.41 SYNCHRONOUS PULSE

2.42 CODE BAR GUIDE

2.43 SYNCHRONOUS PULSED MAGNET MECHANISM

2.44 CONTACT SWINGER

FRONT

GUIDE SLOTS (LEFT, RIGHT, TOP AND BOTTOM)

HOOKS-EACH END UNIVERSAL CODE BAR SPRING

HOOKS-EACH END CLUTCH TRIP BAR SPRING

FELT WASHERS ARMATURE-PIVOT

ENGAGING SURFACE
2.45 REMOTE CONTROL GEAR SHIFT

SAT FELT WICK

TRANSMITTER POWER TAKE-OFF

G GEAR TEETH

TEN GEARS (ASR KEYBOARD) INCLUDING MOTOR PINION

TRANSMITTER POWER TAKE-OFF

DRIVEN GEAR BEARINGS

O2 OILITE BEARINGS (2)
(OIL EACH SIDE OF BEARINGS)

O2 BEARING POINTS ARMATURE SHAFT

O2 OILITE BEARINGS (2) IDLER GEAR BEARINGS
(OIL EACH SIDE OF BEARINGS)

O CLUTCH SPRINGS AND HUBS
(APPLY LIGHT FILM DURING REASSEMBLY)

O2 OILITE BEARING WASHERS (4) SPRING CLUTCHES

O2 OILITE BEARINGS (2) 60 AND 100 WPM DRIVER GEAR
(OIL EACH SIDE OF BEARINGS) BEARINGS

SAT FELT WICKS (2) SPRING CLUTCHES

SAT FELT WICK IDLER GEAR

O LOOPS - EACH END ARMATURE SPRING
2.46 TIME DELAY MECHANISM

- SAT
- G
- O2
- SAT
- G
- O2
- SAT

- FELT WASHER
- ECCENTRIC FOLLOWER PAWL
- BEARING SURFACE
- ECCENTRIC FOLLOWER PAWL
- GUIDE SLOT
- ECCENTRIC FOLLOWER PAWL
- FELT WASHER
- LATCH PAWL
- TEETH (2 WHEELS)
- RATCHET WHEELS
- BEARING SURFACE
- RATCHET WHEEL SHAFT EACH END
- FELT WASHER
- CONTACT PAWL
- ENGAGING SURFACE
- ECCENTRIC FOLLOWER PAWL
- FELT WASHER
- LATCH LEVER
- HOOKS - EACH END
- SPRING (3 SPRINGS)
2.47 ANSWER-BACK MECHANISM

2.48 ANSWER-BACK — SENSING LEVER MECHANISM

- CAMMING SURFACES (5 PLACES)
- BEARING SURFACE
- BEARING SURFACE
- HOOK — EACH END
- BEARING SURFACE
- HOOKS — EACH END (5 SPRINGS)
- HOOK — EACH END
- SENSING LEVERS
- DETENT LEVER
- DETENT LEVER AND ROLLER
- SPRING
- DETENT LEVER ROLLER
- SPRINGS
- SPRING

2.49 ANSWER-BACK — ARMATURE MECHANISM

- HOOK — EACH END
- BEARING SURFACES (2 PLACES)
- SPRING
- ARMATURE AND SHAFT
2.50 ANSWER-BACK — STOP LEVER

- CONTACTING SURFACE
- LATCH AND STOP LEVER
- LATCHING SURFACE
- LATCH AND STOP LEVER
- CAMMING SURFACE
- STOP LEVER
- BEARING SURFACE (2 PLACES)
- STOP LEVER AND LEVER PIVOT

(FRONT VIEW)
2.51 ANSWER-BACK — CODE BARS AND SENSING LEVERS

- ENGAGING SURFACES (5 PLACES)
- BEARING SURFACE (BOTH SIDES)
- BEARING SURFACES (5 LEVERS)
- GUIDING SURFACES (5 PLACES)
- SENSING LEVERS AND CODE BARS
- LEVERS PIVOT AND SIDE PLATE
- SENSING LEVERS AND LEVERS PIVOT
- SENSING LEVERS AND MOUNTING PLATE

(TOP VIEW)

2.52 ANSWER-BACK — DRIVING MECHANISM

- O2 BEARING SURFACE
- O HOOK - EACH END
- O ENGAGING SURFACE
- O SHAFT
- O2 BEARING SURFACE (2 PLATES)
- O ENGAGING SURFACE
- O2 BEARING SURFACE
- O ENGAGING SURFACE
- ECCENTRIC STUD AND DRIVE LINK
- SPRING
- BLOCKING LEVER AND STOP LEVER
- DRIVE PLATE SHAFT AND SIDE PLATE
- DRIVE LINK AND STUD
- BLOCKING LEVER AND LEVER PIVOT
- BLOCKING LEVER AND EXTENSION

FRONT VIEW
2.53 ANSWER-BACK — STEPPING PAWL

- O2 BEARING SURFACE
- STEPPING PAWL AND ECCENTRIC STUD
- CONTACTING SURFACES
- STEPPING PAWL AND CODE BLADES
- HOOK - EACH END
- SPRING
- CONTACTING SURFACE
- ADJUSTING SCREW
- CONTACTING SURFACE
- LEVER AND LATCH

2.54 ANSWER-BACK — KEYBOARD LOCK BAIL MECHANISM

- O ENGAGING SURFACES
- ECCENTRIC AND LOCK LEVER
- BEARING SURFACES
- FUNCTION LEVER AND BAIL
- CONTACTING SURFACE
- "HERE IS" LEVER AND BAIL

(BOTTOM VIEW)