HIGH SPEED TAPE PUNCH UNIT (DRPE TYPE)

LUBRICATION

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1. GENERAL

1.01 This section provides lubrication information for the high speed tape punch (DRPE type). It is reissued to add and revise lubrication information according to the latest engineering changes. These include new 2400 word per minute models and variable features such as a backup mechanism, photoelectric reader (verifier), and universal punch block. Because this is a general revision, marginal arrows which indicate change have been omitted.

1.02 The high speed tape punch 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 unit just prior to placing it in service. After a few weeks of service, relubricate to make certain that all points receive lubrication. Thereafter, the lubrication interval is:

   Operating Speed (Words per Minute)  | Lubrication Interval
   -------------------------------------|---------------------
   100                                  | 2000 hr or 6 mo*
   500                                  | 400 hr or 3 mo*
   1000                                 | 200 hr or 2 mo*
   1500                                 | 150 hr or 1-1/2 mo*
   2000                                 | 75 hr or 1 mo*
   2400                                 | 40 hr or 1 mo*

   *Whichever occurs first.

1.03 Use KS7470 oil and Mobil #2 grease when lubricating this unit. See section 570-005-800TC for complete list of tools.

Note: TP143484 is a 1 lb can of Mobil #2 grease. TP145567 is the same grease in a 4 oz tube.

1.04 Saturate all spring wicks and felt oilers; lubricate friction surfaces of all moving parts. Avoid over lubrication. Prevent lubricant from getting between electrical contacts or between stepper magnet coils and armature.

1.05 The photographs indicate paragraph numbers that refer to specific line drawings of mechanisms and where these mechanisms are located on the equipment. Mechanisms in line drawings are shown upright unless otherwise specified.

1.06 The illustration symbols indicate the following lubrication directions:

O1 - Apply one drop of oil.
O2 - Apply two drops of oil, etc.
SAT - Saturate with oil (felt oilers, washers, and wicks).
FILL - Fill with oil (oil holes and oil cups).
G - Apply 1/64-inch film of grease unless directed otherwise.

1.07 After each lubrication interval, wipe off excess lubricant from upper tape guide plate and punch pins.

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2. BASIC UNIT

2.01 Front of Unit

2.02 Links and Reed Tips

- **G** Links, Guides, and Posts
- **G** Contacting Surfaces (To be coated with 1/32 inch of grease)
- **G** Links, Guides, and Posts
- **G** Contacting Surfaces (To be coated with 1/32 inch of grease)
- **G** Links, Guides, and Posts
- **G** Contacting Surface
- **O1** Sliding Surface

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2.03 Escapement Pawls, Ratchet, and Grease Retainer

SAT  Felt Washers
G    Contact Surfaces
FILL Fill Grease Retainer if Present
G    Shaft Hole - See Note
G    Spring Coils, Feed Wheel Shaft Surface
SAT  Felt Washer (Late Design)

Escapement Pawl Shaft
Escapement Pawl
Escapement Ratchet
Feed Wheel Shaft
Feed Wheel Shaft and Yield Spring
Feed Wheel Shaft

Note: If there is a hole through feed wheel shaft, apply lubricant to hole until it flows through to hole on ratchet. If there is no hole, disassemble feed and ratchet wheel assemblies as outlined in disassembly section. After re-assembly, block feed wheel center hole and two cross holes in ratchet sleeve. Apply lubricant against end of ratchet sleeve until it flows from hole in ratchet sleeve.

2.04 Pressure Roller

G    Contact Surface
O2   Each Pivot Bearing
O2   Oilite Bearing (Each End)
G    Pressure Roller Ball
G    Pressure Roller

2.05 Tape Guide Shaft

O2   Rear of Bearing
SAT  Felt Washer

Tape Guide Shaft Bearing
2.06 Bottom of Unit

2.07 Tape Guide Spring and Spur Gear

- **G**: Between Sleeve and Ratchet
- **G**: Hooks and Coils (Each End)
- **O4**: Front End
- **FILL**: Center Oil Hole (Separate Coils)
- **G**: Teeth
- **O2**: Rear Bearing
- **G**: Contact Point on Switch Plunger
- **Felt Washer**: Rear of Pivot Bearing
- **Front of Bearing**: Teeth
- **SAT**: Felt Oilier

2.08 Idler Lever and Gear

- **G**: Idler Lever
- **SAT**: Idler Lever
- **O2**: Idler Lever
- **O2**: Idler Gear
- **G**: Idler Gear

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2.09 Tape Feed Motor

2.10 Tape Puller Motor
2.12 Antireverse Pawl and Pulley

Note: The antireversal pawl is intended to operate without lubrication. Clean pawl and V-groove pulley with suitable solvent at lubricating intervals.

O1 Spring Hooks (Each End)  Antireverse Pawl Spring
O2 Lever Pivot  Antireverse Pawl and Pulley
O2 Spring Hooks (Each End)  Idler Lever Spring

2.13 Tape Sensing Lever

O1 Cam Shaft  Contact Arm
G Switch Cam  Tape Sensing Lever Switch
G Spring Hooks and Coils  Tape Sensing Lever Spring
O1 Lever Bearings  Sensing Lever
3. VARIABLE FEATURES

3.01 High Speed Tape Punch

3.02 Universal Punch Block

Note: The universal punch block lubrication procedures are the same as the standard punch mechanism. See 2.02 and 2.03.

CAUTION 1: EXCESS OIL ON PAPER TAPE MAY PREVENT DATA FROM BEING SENSED CORRECTLY.

CAUTION 2: WHEN LUBRICATING UNIVERSAL PUNCH BLOCK, DO NOT SPRAY LUBRICANT ON COVER OF LIGHT SOURCE.
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3.03 Photoelectric Reader (Verifier)

Note: The photoelectric reader (verifier) does not require lubrication.

3.04 Backup Mechanism
3.05 Switch Lever Assembly

- Bearing Surfaces
- Switch Lever Operating Post
- Contact Surfaces
- Switch Lever Hub
- Coils
- Tape Lid Spring
- Hooks (Each End)
- Tape Lid Spring
- Mating Surfaces
- Switch Lever Eccentric Post

3.06 Intermediate Shaft Assembly

- Mating Surface
- Clutch Latch-lever Release
- Mating Surface
- Clutch Disc Lug
- Gear Teeth
- Intermediate Shaft Gear
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3.07 Detent Lever and Reverse Feed Wheel
3.08 Detent Lever Assembly

- O2 Bearing Points
- O2 Bearing Point
- O1 Coils
- G Spring Hooks
- O2 Bearing Point
- Cam Roller on Detent Lever
- Hub of Detent Lever
- Detent Return Spring
- Detent Return Spring
- Hub of Detent Lever
3.09 Reverse Feed Wheel Assembly

O2 Bearing Point (Hole in shaft must be upright) Reverse Feed Wheel Driving Gear

G Fiber Gear Teeth Mating Surface Reverse Feed Wheel Driving Gear

3.10 Tape Guide Assembly
See 2.05 through 2.07
3.11 Escapement, Drive Shaft, and Trip Magnet Assemblies

(Bottom View)
3.12 Escapement Assembly (Forward Feed Wheel)
See 2.03 through 2.13

3.13 Drive Shaft Assembly

- **Spring Hooks**: Tape Guide Cam Follower Spring
- **Felt Wick**: Drive Shaft Cam Roller
- **Contact Surface**: Tape Guide Cam Follower
- **Hole (Must be Upright)**: Drive Shaft
- **Mating Surface**: Clutch Latchlever Release
- **Mating Surface**: Tape Guide Cam Clutch Disc Lugs
- **Gear Teeth Meshing Surfaces**: Drive Shaft Gear
- **Contact Surface**: Tape Guide Cam Follower
- **Felt Wick**: Tape Guide Cam Follower Arm
- **Coils**: Tape Guide Cam Follower Spring
3.14 Trip Magnet Assembly

SAT: Felt Wick
G: Armature Shaft Hinge Pin

O2: Bearing Surface
G: Armature and Trip Shaft

G: Spring Hooks
O1: Clutch Latchlever Hub

G: Stop Lever Spring Latchlever Spring Trip Lever Spring

G: Stop Lever Spring Latchlever Spring Trip Lever Spring

O1: Coils
Stop Lever Spring Latchlever Spring Trip Lever Spring