

HIGH SPEED TAPE FEEDER

| CONTENTS | PAGE |
|--|------|
| 1. GENERAL DESCRIPTION | 1 |
| 2. PRINCIPLES OF OPERATION | 2 |
| 3. INSTALLATION | 2 |
| 4. ADJUSTMENTS | 3 |
| Slack Tape Sensing Assembly | |
| Tape Sensing Arm | 3 |
| Tape Sensing Arm Spring | 3 |
| Tangled or Mutilated Tape Sensing Switch | |
| Tight Tape Contacts | 4 |
| Tape Path for Typical Unwinder Application | |
| Inner Tape Guide | 5 |
| 5. LUBRICATION | 6 |
| 6. DISASSEMBLY AND REASSEMBLY | 6 |

1. GENERAL DESCRIPTION

1.01 The high speed tape feeder (see par. 4.03) is a device that unwinds tape from the center of a tape roll, and feeds it to a tape reading unit that is operating at speeds up to 1050 words per minute. This self-contained tape feeder is a slave device that responds to the needs of the tape reading unit.

1.02 The high speed tape feeder consists of a base, turntable, adjustable tape guide arms, inner tape guide, outer tape guide, and tape sensing arm (see Figure 1). It is approximately 15 inches in diameter, 6-1/2 inches in height, and weighs approximately 12 pounds.

1.03 Any length of tape is accommodated, up to 2000 feet of fully perforated tape, or 1000 feet of chadless tape. (Chadless tape, however, must be wound so that it will read from the beginning to the end of a message. Also, the chads must project from the outside circumference of the tape roll.) Five- through eight-

level tape rolls, with a minimum core diameter of three inches, are accepted.

1.04 Adjustable tape guide arms on the turntable keep the tape roll centered, and prevent it from sliding off the turntable. These adjustable arms permit the unit to accommodate a tape roll up to a maximum diameter of 12.500 inches.

2. PRINCIPLES OF OPERATION

2.01 The high speed tape feeder contains a fixed inner tape guide which guides the tape from the center of the tape roll to the outer tape guide. The outer tape guide contains a wire eyelet that permits the tape to pass through and down to the tape sensing arm.

2.02 The tape sensing arm controls the operation of the high speed tape feeder. As the tape begins to tighten around the inner tape guide, the slack tape sensing arm starts to move upward. A projection on the arm near its pivoted end allows the plunger of the associated switch to rise. With a certain amount of upward travel of the sensing arm assembly, the motor switch is actuated and the turntable is set in motion.

2.03 The rotation of the turntable by the motor is accomplished by a friction drive wheel that is spring loaded against the motor pinion and the turntable rim.

2.04 The turntable rotates the tape roll, and unwinds the tape that is wrapping around the inner tape guide. The unit continues to operate until there is enough slack tape to permit the tape sensing arm to drop sufficiently to shut off the motor switch.

2.05 The motor is also shut off if the tape sensing arm travels to its extreme upward position. This could be caused by partially torn tape or extreme distortion of the tape roll core. This action operates a double bank safety switch. One bank of the safety switch turns off the high speed tape feeder motor. The other bank of the safety switch can be so connected as to shut off the associated tape reading unit.

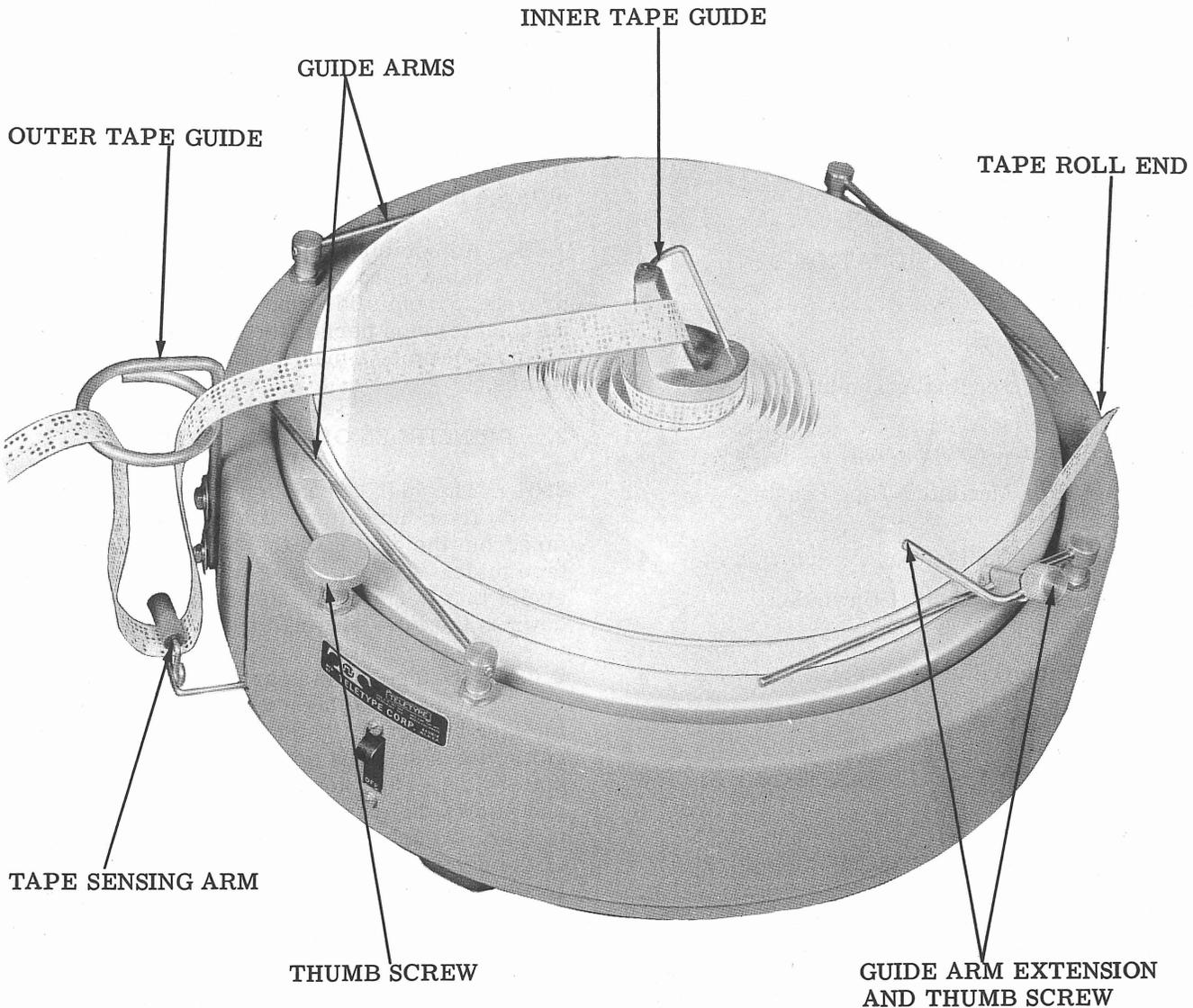


Figure 1 - High Speed Tape Feeder

3. INSTALLATION

3.01 The high speed tape feeder is packed in a cardboard carton. Unpack by cutting the carton at its sealed edges, being careful not to damage the paint finish. Observe all caution labels and instructions.

3.02 Set the unit on a table next to a tape reading unit. The front tape guide eyelet permits the tape to be fed to the left, the right, or to the front of the unit.

3.03 A shelf is available, as a modification kit, for mounting the high speed tape feeder on the side of a cabinet, if desired.

3.04 Plug in the power cord and route it so as not to interfere with the tape sensing arm. Check the operation of the turntable by turning

the ON-OFF switch to the ON position. Raise tape sensing arm approximately one inch.

3.05 Loosen the thumb screw and move the tape guide arms outward to provide sufficient room for the tape roll. Place the tape roll on the turntable so that the end of the tape at the outside diameter will be pulled, not pushed, in a clockwise direction. If chadless tape is to be used, it must be wound so that it will read from the beginning to the end of a message. Also, the chads must project from the outside circumference of the tape roll. Center the paper roll with respect to the turntable. Move the tape guide arms to within approximately 1/16 inch of the tape roll, and tighten the thumb screw. The guide arms must not squeeze or apply any pressure to the tape roll.

3.06 Thread the tape end at the center of the tape roll, through the inner tape guide, down through the outer tape guide, through the tape sensing arm, and back up and through the outer tape guide.

3.07 Mount the tape guide arm extension on the guide arm shown in Figure 1 for most effective operation. It can be adjusted for five-to eight-level tape. Loosen the thumb screw and position the extension arm parallel to and, with some to 1/16 inch clearance, above the highest surface of the tape roll.

3.08 An extra tight-tape switch is provided, to interrupt the associated tape reading unit in the event of a tight-tape condition caused by partially torn tape or by a tape snag. This switch is wired to terminals 1 and 2 of terminal block D. When connecting to a tape reading unit, pass the switch leads through the rubber grommet located next to the fuse holder.

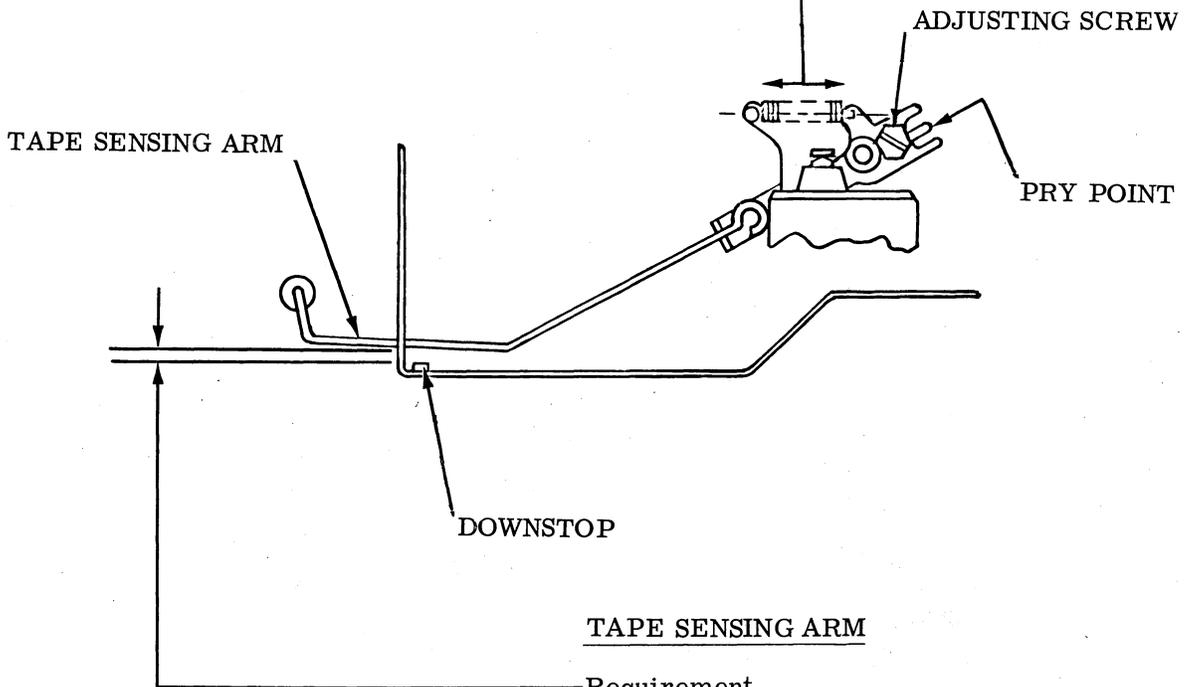
3.09 The unit will accept chadless tape only if it has been wound, as shown in Par. 4.03, so that the tape will read from beginning to end of message and so that the chads project from the outside circumference of the tape roll.

4. ADJUSTMENTS

4.01 Slack Tape Sensing Assembly

TAPE SENSING ARM SPRING

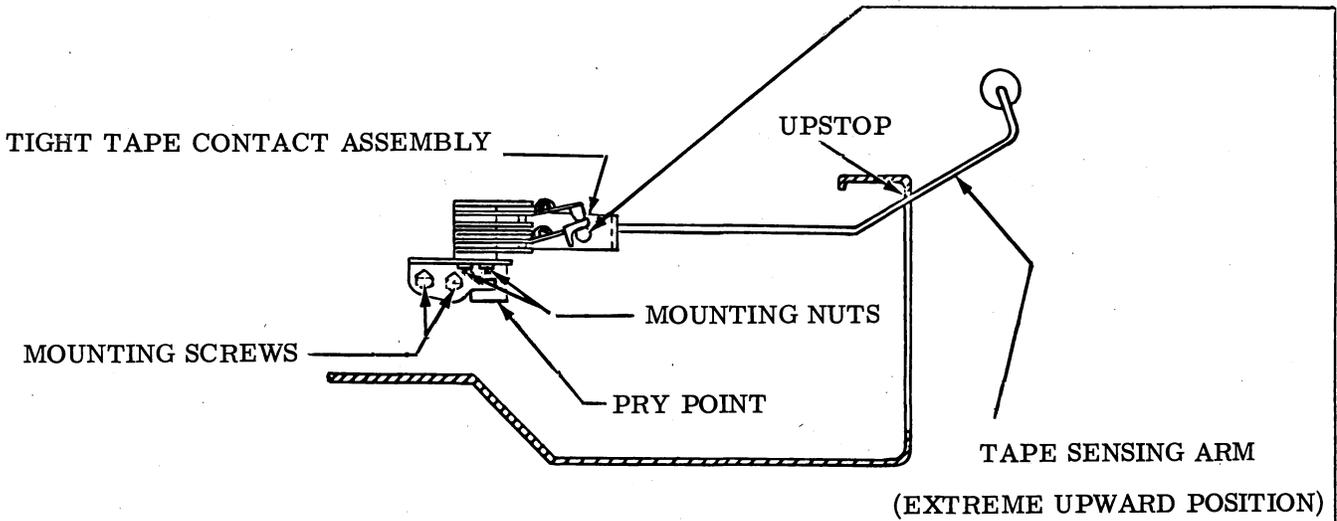
Requirement
 With tape sensing arm in its down position
 Min 16 oz---Max 22 oz
 to pull spring to its installed length.



Requirement
 With slack tape sensing arm in its lowest position, clearance between the arm and its downstop should be approximately 1/4 inch.

To Adjust
 With adjusting screw friction tight, position sensing arm by means of pry point.

4.02 Tangled or Mutilated Tape Sensing Switch



TIGHT TAPE CONTACT

To Check

With slack tape sensing arm in its extreme upward position and held against its upstop

(1) Requirement

The contact swinger extension should be centrally located with respect to tape sensing arm post.

To Adjust

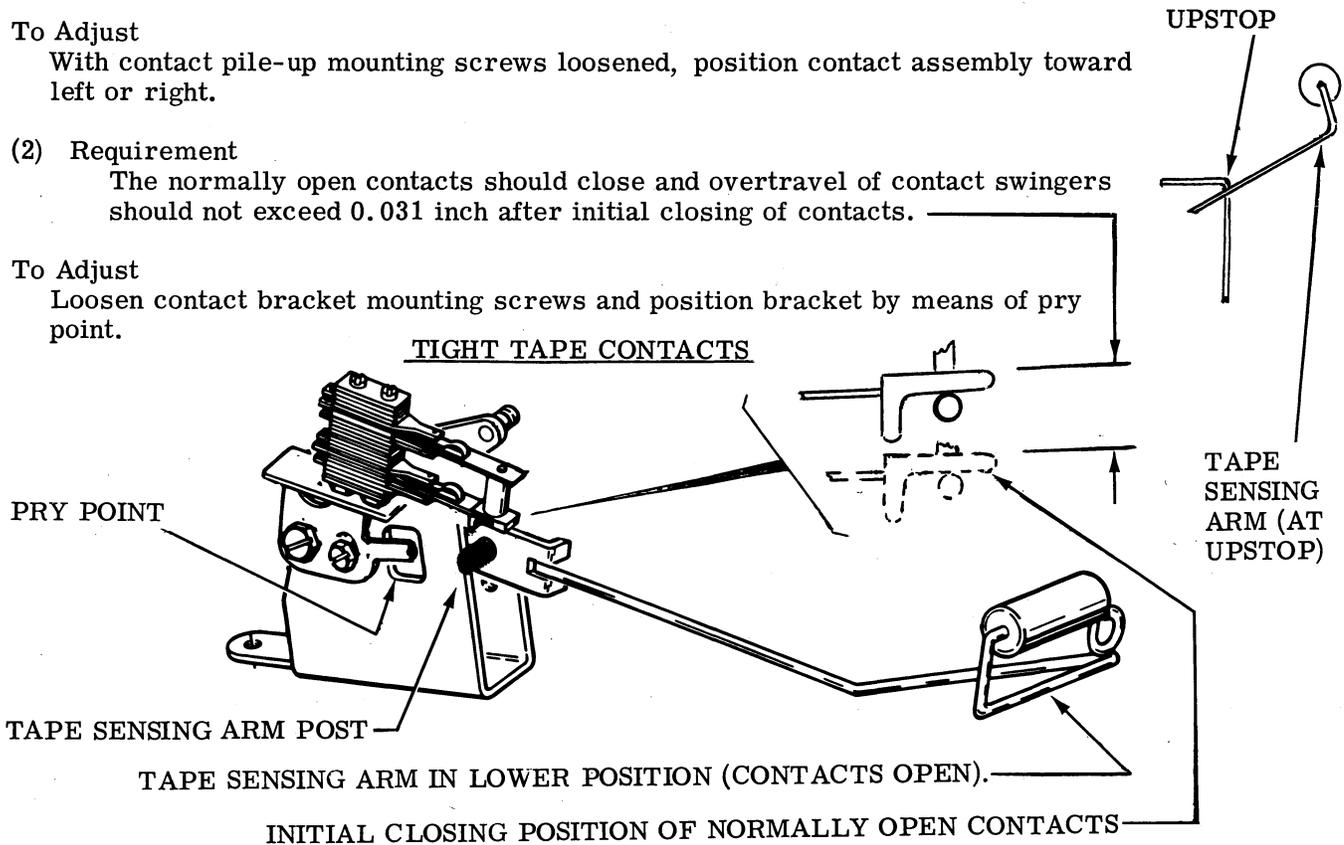
With contact pile-up mounting screws loosened, position contact assembly toward left or right.

(2) Requirement

The normally open contacts should close and overtravel of contact swingers should not exceed 0.031 inch after initial closing of contacts.

To Adjust

Loosen contact bracket mounting screws and position bracket by means of pry point.



4.03 Tape Path for Typical Unwinder Application

INNER TAPE GUIDE

To Check

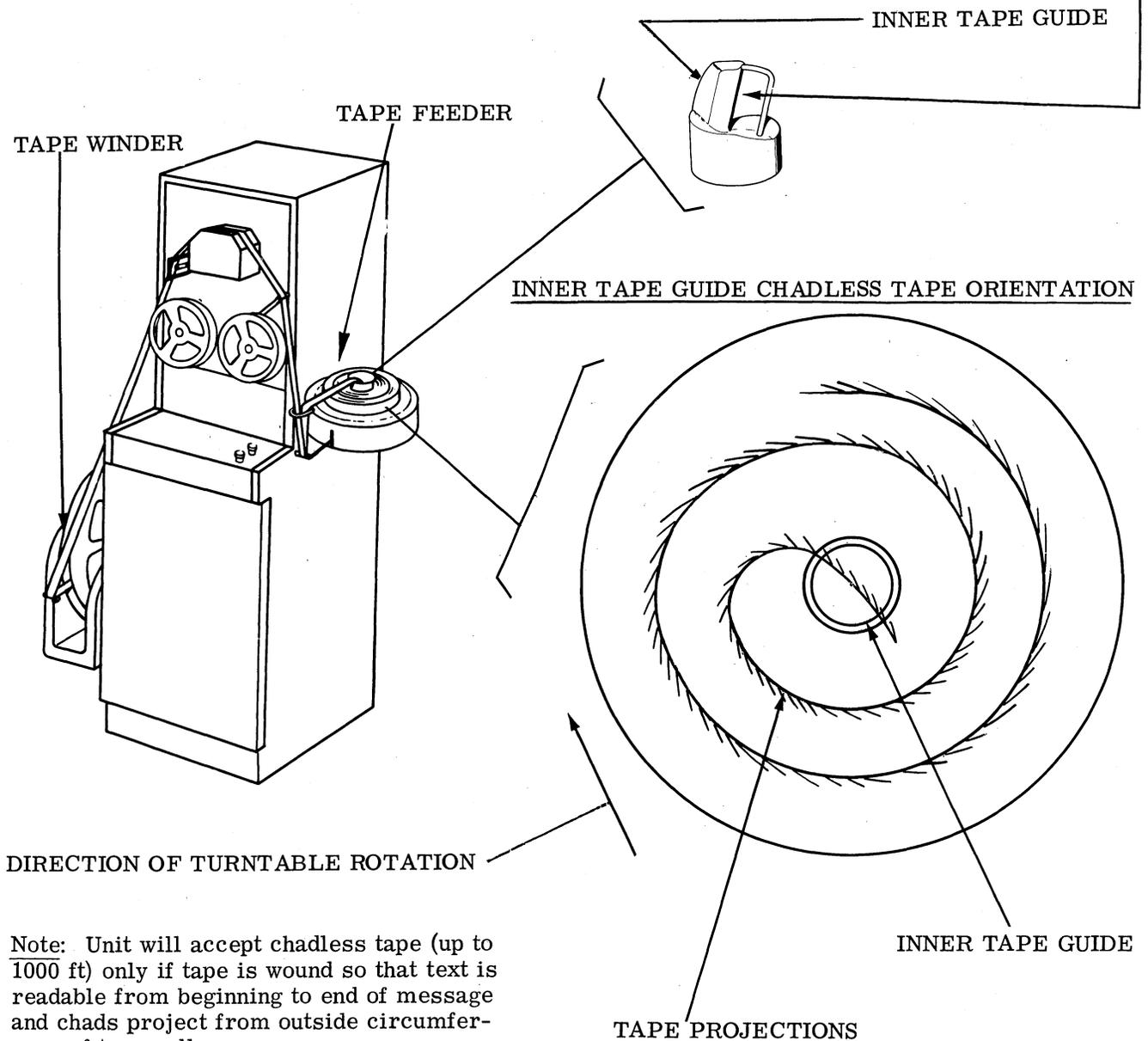
Unit under power, tape roll in place and threaded as shown. (See Figure 1.)

Requirement

As tape leaves its inner guide, tape should be approximately centrally located on guide surface. Upper edge of tape should not ride against upper portion of wire guide or its lower edge should not ride on lower outside edge of guide.

To Adjust

With inner tape guide mounting screw (under unit) loosened, rotate the guide.



Note: Unit will accept chadless tape (up to 1000 ft) only if tape is wound so that text is readable from beginning to end of message and chads project from outside circumference of tape roll.

5. LUBRICATION

5.01 Place a drop of KS7470 oil on all spring ends. Place two drops of KS7470 oil on all pivot points, sliding surfaces (except electrical contact actuators) and motor oil cups.

Note: Use precautionary measures when lubricating to avoid getting oil on the rubber coated friction drive wheel.

6. DISASSEMBLY AND REASSEMBLY

6.01 To gain access to the inside of the unit, remove the TP149700 inner tape guide by removing the TP149722 mounting screw from the bottom of the unit. Remove the outer tape guide by loosening its mounting screws. Loosen the TP149693 thumb screw and move the tape guide arms to their extreme outward position. Lift the turntable and the TP91617 shims from the unit.

6.02 Remove the TP149710 friction drive roller by removing the TP110652 retainer and TP3620 fiber washer.

Note: The TP90490 shim washer is located under the drive roller whereas the TP3620 fiber washer is above the drive roller.

6.03 To remove the TP149707 motor or the TP177853 micro switch, remove the associated mounting screws and cable connection. To reassemble, reverse the disassembly procedure.

6.04 When installing the turntable, use a narrow screwdriver or spring hook to hold the spring-loaded drive roller in position to permit proper seating of the turntable.

6.05 Position the TP149700 inner tape guide in accordance with 4.03.