

INSTRUCTIONS FOR INSTALLING, OPERATING, AND
ADJUSTING THE TW200**, TW201**, TW203**, TW204** AND
TW205** MOTOR DRIVEN TAPE WINDERS

1. GENERAL

*a. The tape winders are motor driven mechanisms for winding tape from any tape perforating or transmitting unit. They may be used in place of the spring driven tape winders and with equipments operating at 60, 75, or 100 wpm (600 wpm on TW203**) speed. The TW200** is equipped with an 8 inch diameter tape reel that will accommodate 500 ft. of fully perforated tape or approximately 130 ft. of chadless tape. The tape reel is adjustable to facilitate handling 3/8, 1/2, 11/16, 7/8, and 1 inch tape. The TW201** is equipped with a non-adjustable 4 inch tape reel that will accommodate 90 ft. of fully perforated 7/8 inch tape or 50 ft. of chadless tape. The TW203**, TW204**, and TW205** are equipped with a 7-1/2" diameter plastic reel which facilitates handling 11/16", 7/8" and 1 inch tape. The 7-1/2" reel accommodates 650 ft. fully perforated or approximately 160 ft. chadless tape. The TW205** Tape Winder shall have the motor, switchboard, and ground leads terminated in a 5-pin connector plug.

*b. The tape winders consist essentially of a small aluminum cast housing, a flat steel plate attached to the housing, a motor and a tape reel. The TW204** and TW205** have an enclosure which covers from view the working parts of the winder. The motor, a tape guide arm and roller, a power switch braking wedge and wedge detent lever, and a tape stop switch and arm are mounted on the plate. The TW200**, TW203**, TW204**, and TW205** are adaptable for winding tape from the right or the left by relocation of certain parts. The TW201** winds tape from the right only. On Tape Winder TW204** and TW205** openings must be provided in the cover for left feeding. (See Figure 2 and Para. 4. c. (7).)

*c. OPTIONAL FEATURES (TW203**, TW204** AND TW205**)

(1) A 3-1/4" adapter core, Teletype Part No. 146698 (used on the plastic reel), is available to permit use of the tape with standard center unwinders having a core of 2-3/4" or less.

(2) A 4-1/2" adapter core, Teletype Part No. 146806, is available for transferring the tape from the TW203**, TW204** or TW205** tape winder to an unwinder or storage reel.

*(3) Provision has been made on the 146806 adapter to accept the 147707 reel ring. This ring is used on many business machines.

d. The double asterisk (**) designates a two letter suffix which indicates the paint finish.

2. THEORY OF OPERATION

The tape reel is driven by the motor through a gear train arrangement. When the brake operating lever is positioned to the left by hand, it closes the power switch. In this condition, the winding of tape is controlled by the tape stop switch which is in series with the power switch. The tape stop switch is actuated by the tape stop arm. As the tape slackens, the tape stop arm moves downward, due to the weight of its roller, and closes the tape stop switch. The motor then causes tape to be wound on the reel until the tension of the tape raises the tape stop arm and causes the tape stop switch to open and stop the motor. When the brake operating lever is positioned to the left, as above, it allows the braking wedge to ride the groove in the brake pulley and prevent any backward rotation of the tape reel during operation. To unwind the tape by hand, move the braking wedge out of the groove in the pulley by positioning the brake operating lever to the right. This action also releases the power switch thereby opening the motor circuit. The tape may be readily removed from the tape reel after removing the outer reel disk.

CAUTION

To avoid damaging the gear train while unwinding tape, the braking wedge must remain detented out of the groove in the brake pulley until backward rotation of the tape reel ceases.

3. INSTALLATION

For normal installation, place the tape winder in position at the left of the associated unit and plug the power cord into any available 115 volt, 60 cycle, ac power outlet. The tape winder is a portable unit but may be permanently mounted if so desired. For the TW200**, set the adjustable ring on the inner reel hub of the tape reel in accordance with the width of the tape to be wound (3/8 to 7/8 inch wide tape). Reverse the outer reel of the tape winder reel assembly for one inch wide tape.

*4. OPERATION

a. When several feet of slack tape have been accumulated, route the tape under the tape stop arm roller (TW200**, TW203**, TW204** and TW205**), over the brake operating lever, and onto the tape reel so that it will be wound in a counterclockwise direction. Rotate the tape reel a few revolutions by hand to secure the tape to the reel. See Figure 1 for tape routing.

b. When winding of tape from the left is desired (TW200** and TW203** only) the following changes must be made: (See Figure 1).

- (1) Remove the tape reel and brake pulley from the motor shaft.

(2) Remove the braking wedge, brake operating lever, and roller from the brake operating lever arm.

(3) Remove the brake operating lever arm and mount it to the left as shown by the dotted lines.

(4) Mount the wedge and brake operating lever in their original positions. Mount the roller at the left as shown by the dotted lines.

(5) Remove the front plate assembly from the housing and remove the tape stop arm from the plate.

(6) Relocate the switch, guard, and wiring as shown by the dotted lines.

(7) Mount the tape stop arm on the front plate as shown by the dotted lines. Mount the front plate assembly on the housing.

(8) Replace the brake pulley and tape reel on the motor shaft.

c. TW204** and TW205** - When winding of tape from the left is desired the following changes must be made: (See Figure 2.)

(1) Remove the tape reel from the motor shaft.

(2) Remove the front cover plate.

(3) Remove the brake operating lever arm and mount it to the left as shown by the dotted lines.

(4) Remove the front plate assembly from the housing and remove the tape stop arm from the plate.

(5) Relocate the switch, guard and wiring as shown by the dotted lines.

(6) Mount the tape stop arm on the plate as shown by the dotted lines. Mount the front plate assembly on the housing.

*(7) Make two openings in the embossed region of the front cover plate for the tape arms. (See Figure 2.)

*(8) Replace the front cover plate.

*(9) Replace the tape reel on the motor shaft.

5. LUBRICATION

a. General

*Unless otherwise specified, one or two drops of oil at the places indicated will be sufficient. Oil both loops of all helical springs. Use KS grease on all gears in accordance with Model 28 lubrication procedure.

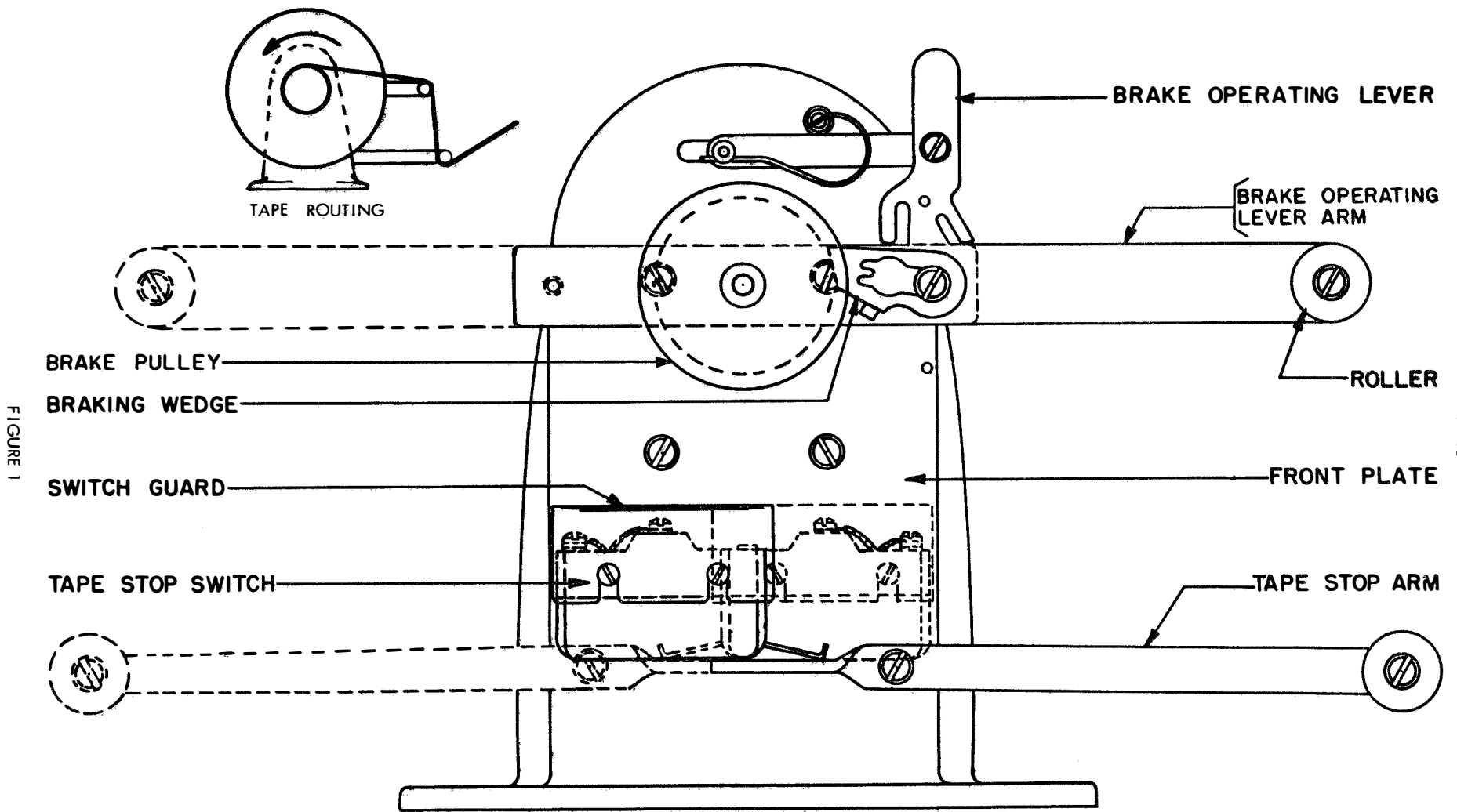
b. Mechanism

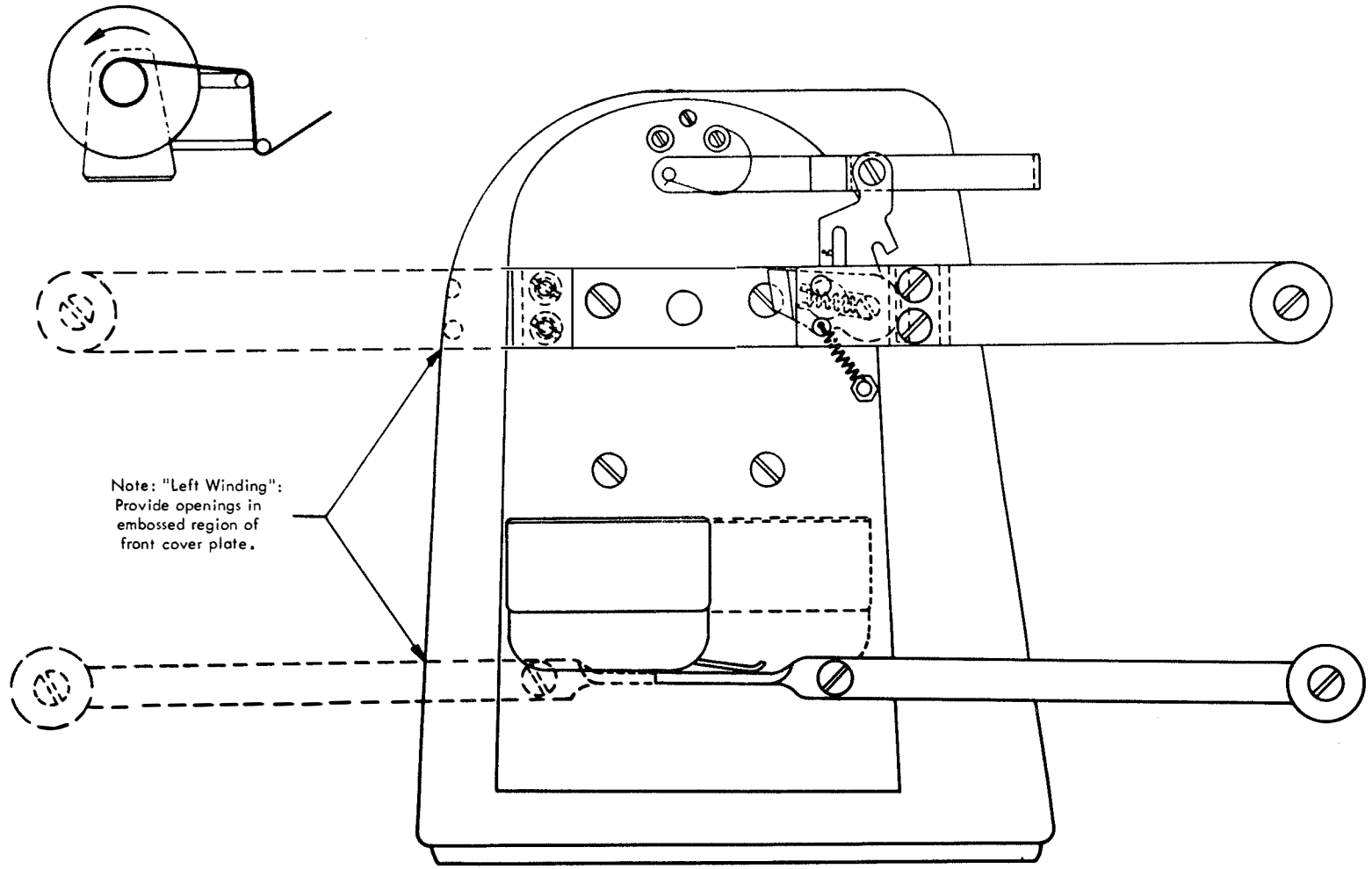
- (1) Tight tape arm pivot
- (2) Tight tape arm roller (remove excess)
- (3) Braking wedge bushing
- (4) Braking wedge bushing stud
- (5) Brake operating lever detent spring (at spring guide)

c. Motor

Bearing pivot points (front and rear plates)

* * *





Note: "Left Winding":
Provide openings in
embossed region of
front cover plate.

FIGURE 2

*6. ADJUSTMENTS

ROLLER LEAF SWITCH
REQUIREMENT

FRONT PLATE REMOVED. ROTATE THE BREAK OPERATING LEVER SLOWLY COUNTERCLOCKWISE. THE SWITCH SHALL CLOSE WITH SOME OVERTRAVEL OF THE SPRING ROLLER LEAF AS GAUGED BY EYE. ROTATE THE BREAK OPERATING LEVER SLOWLY CLOCKWISE. THE SWITCH SHALL OPEN WITH SOME OVERTRAVEL OF THE SPRING ROLLER LEAF AS GAUGED BY EYE.

TO ADJUST

POSITION ROLLER LEAF SWITCH WITH MOUNTING SCREWS LOOSENED. REPLACE THE FRONT PLATE.

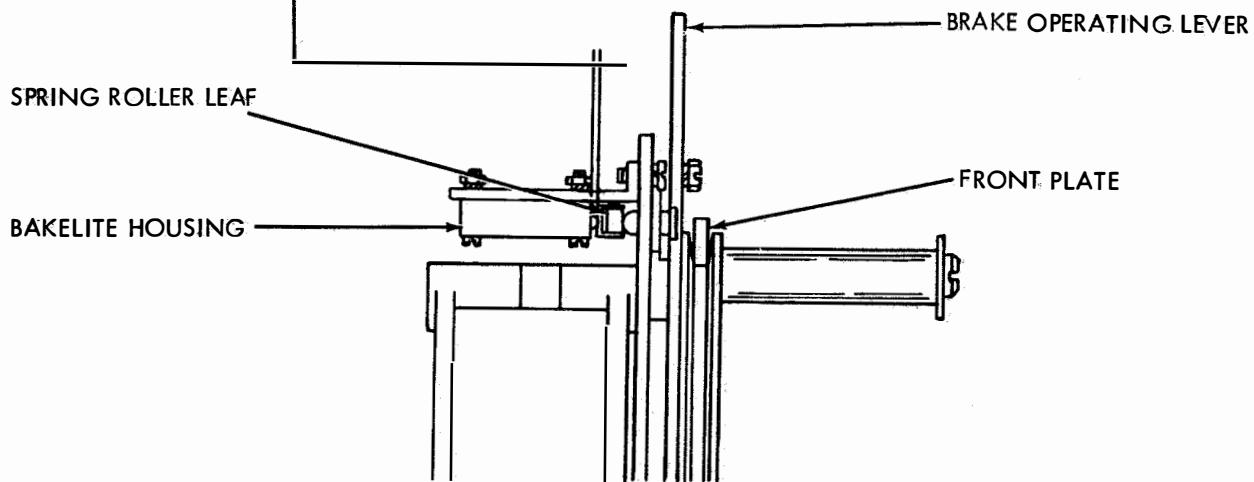


FIGURE 3

BRAKE OPERATING LEVER SPRING

(1) REQUIREMENT

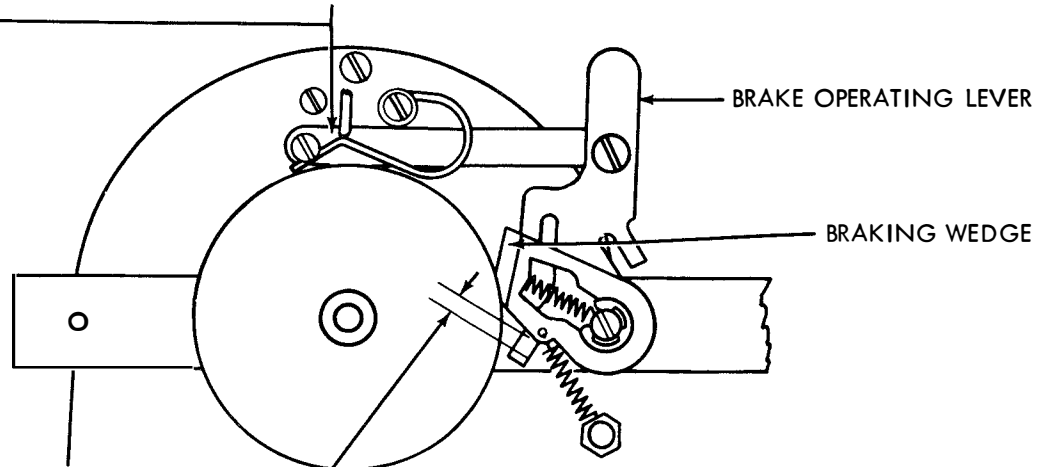
BRAKE OPERATING LEVER HELD IN EXTREME CLOCKWISE POSITION . SPRING SCALE APPLIED TO PEAK OF BRAKE OPERATING LEVER SPRING
MIN. 6 OZS. --- MAX. 8 OZS.
TO MOVE SPRING AWAY FROM ITS GUIDE.

TO ADJUST

POSITION THE SPRING IN ITS MOUNTING TO MEET THE REQUIREMENT.

(2) REQUIREMENT

THE SPRING SHALL CLEAR THE SWITCH OPERATING ARM THROUGH ITS COMPLETE TRAVEL.
TO ADJUST
BEND SPRING AWAY FROM FRONT PLATE TO MEET REQUIREMENT.



BRAKE OPERATING LEVER

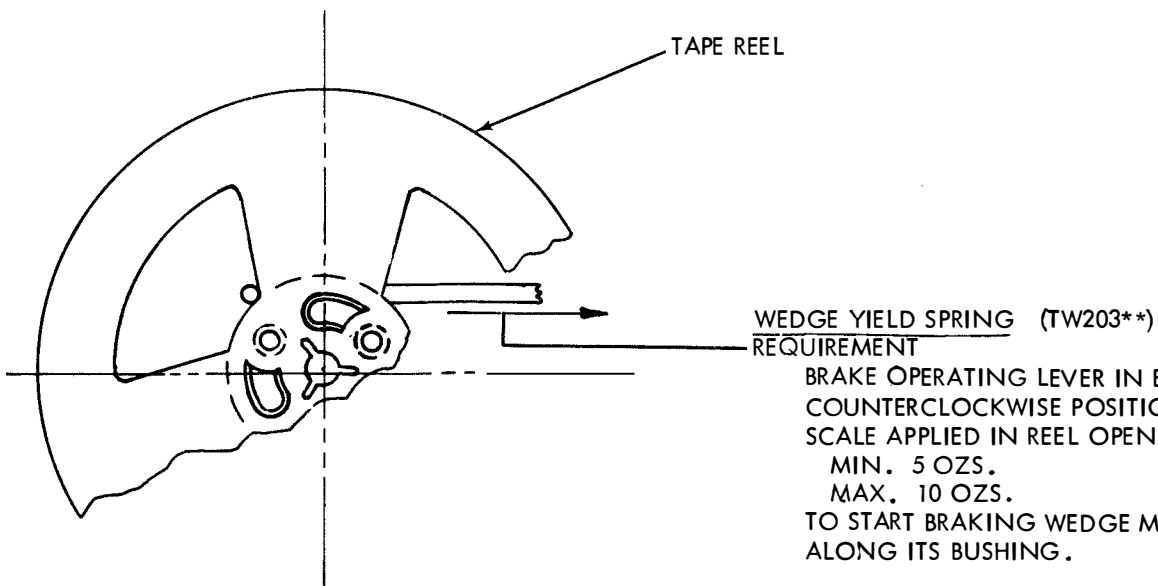
REQUIREMENT

BRAKE OPERATING LEVER POSITIONED TO LEFT , CLEARANCE BETWEEN OPERATING LEVER EXTENSION AND BOTTOM OF WEDGE SHALL BE
MIN. 0.015 INCH

TO ADJUST

POSITION OPERATING LEVER ARM IN ITS MOUNTING HOLES.

FIGURE 4



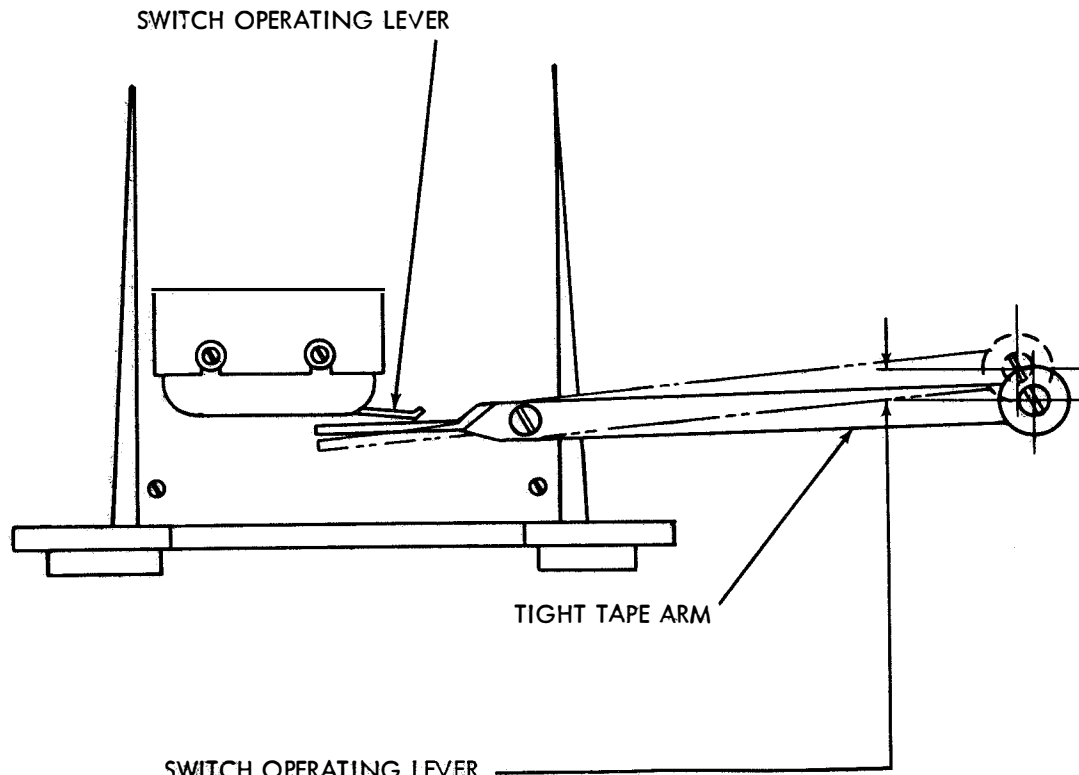
WEDGE YIELD SPRING (TW203**)
REQUIREMENT

BRAKE OPERATING LEVER IN EXTREME COUNTERCLOCKWISE POSITION.
SCALE APPLIED IN REEL OPENING
MIN. 5 OZS.

MAX. 10 OZS.

TO START BRAKING WEDGE MOVING ALONG ITS BUSHING.

FIGURE 5



SWITCH OPERATING LEVER
REQUIREMENT

MOTOR ON. TAPE ARM RAISED UNTIL
MOTOR STOPS. SIX INCH SCALE PLACED ALONG
PATH OF TAPE ARM ROLLER SCREW. LOWER
TAPE STOP ARM. THERE SHALL BE

MIN. 1/8 INCH
MAX. 1/4 INCH

DISTANCE BETWEEN THE POSITION AT WHICH THE
MOTOR STARTS AND LOWEST POINT OF ARM TRAVEL.

TO ADJUST

BEND SWITCH OPERATING LEVER TO MEET
REQUIREMENT.

FIGURE 6

WEDGE YIELD SPRING COMPRESSION (TW200** AND TW201**)

REQUIREMENT

BRAKE OPERATING LEVER IN ITS EXTREME COUNTERCLOCKWISE POSITION. A 32 OZ. SCALE HOOKED OVER ONE OF THE REEL CENTER EARS (POSTS ON THE TW201).

MIN. 5 OZS.

MAX. 10 OZS.

TO CAUSE THE BRAKING WEDGE TO START MOVING ALONG ITS BUSHING.

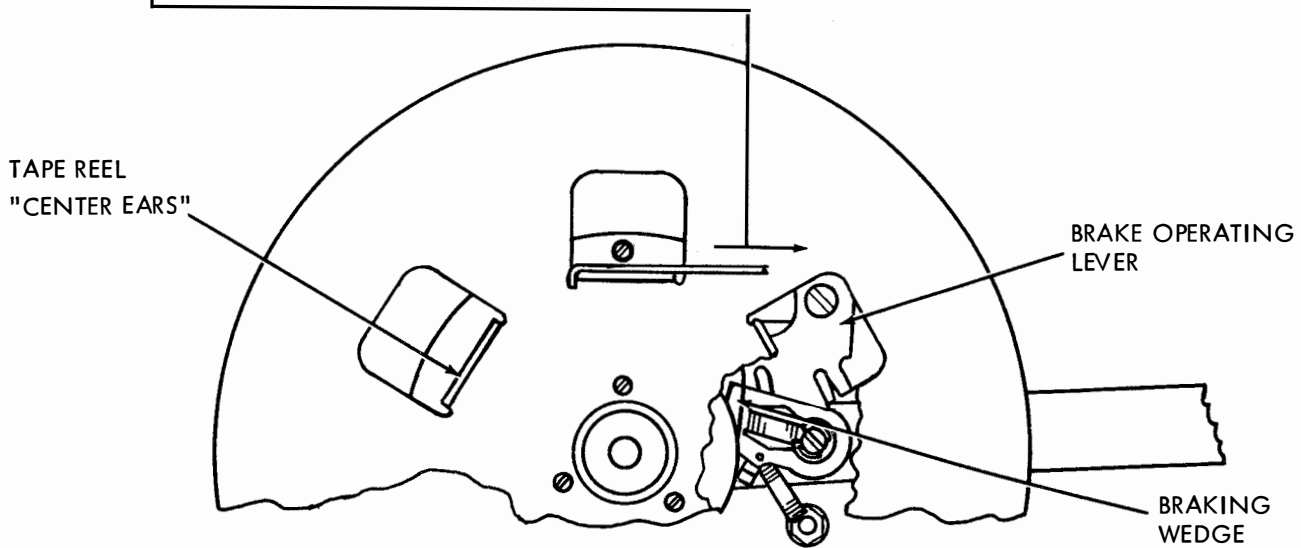


FIGURE 7

WEDGE SPRING TENSION (TW200**, TW201**, TW203** AND TW204**)

REQUIREMENT

AN 8 OZ. SCALE HOOKED UNDER THE WEDGE JUST TO THE RIGHT SIDE OF THE SPRING

MIN. 3 OZS.

MAX. 5 OZS.

TO START THE LEVER MOVING.

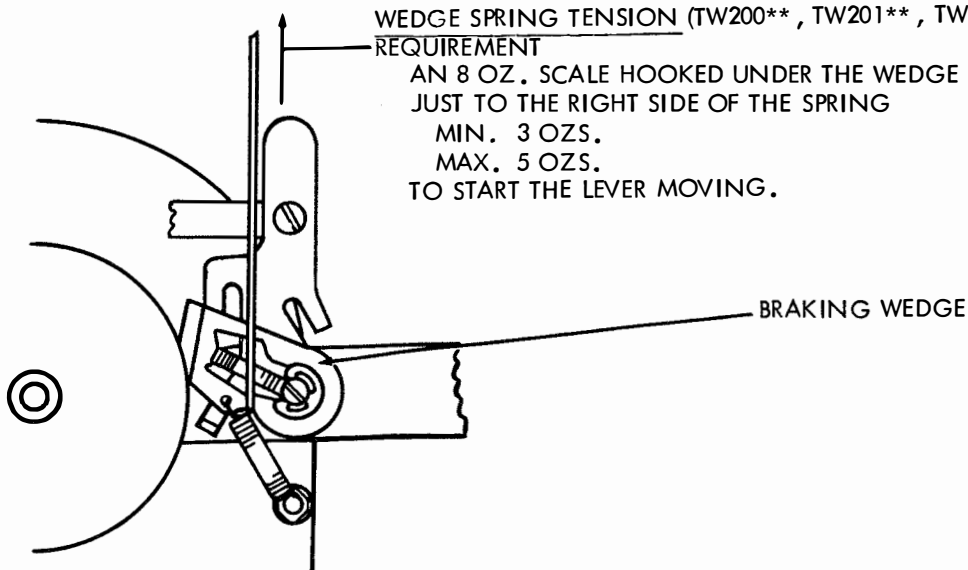


FIGURE 8

TAPE REEL (TW200** ONLY)

TO ADJUST THE REEL IN ACCORDANCE WITH THE WIDTH OF THE TAPE REMOVE THE OUTER REEL DISK AND POSITION THE COLLAR ON THE INNER REEL HUB AS FOLLOWS:

(1) 3/8" TAPE - TIGHTEN THE COLLAR SET SCREW INTO THE DRILLED SPOT ON THE REEL HUB CLOSEST TO THE REEL DISK.

(2) 1/2" TAPE - TIGHTEN THE COLLAR SET SCREW INTO THE SECOND DRILLED SPOT FROM THE REEL DISK.

(3) 11/16" TAPE - TIGHTEN THE COLLAR SET SCREW INTO THE THIRD DRILLED SPOT FROM THE REEL DISK.

(4) 7/8" TAPE - TIGHTEN THE COLLAR SET SCREW INTO THE GROOVE CLOSEST TO THE REEL DISK.

(5) 1" TAPE - REVERSE THE OUTER REEL OF THE TAPE WINDER REEL ASSEMBLY.

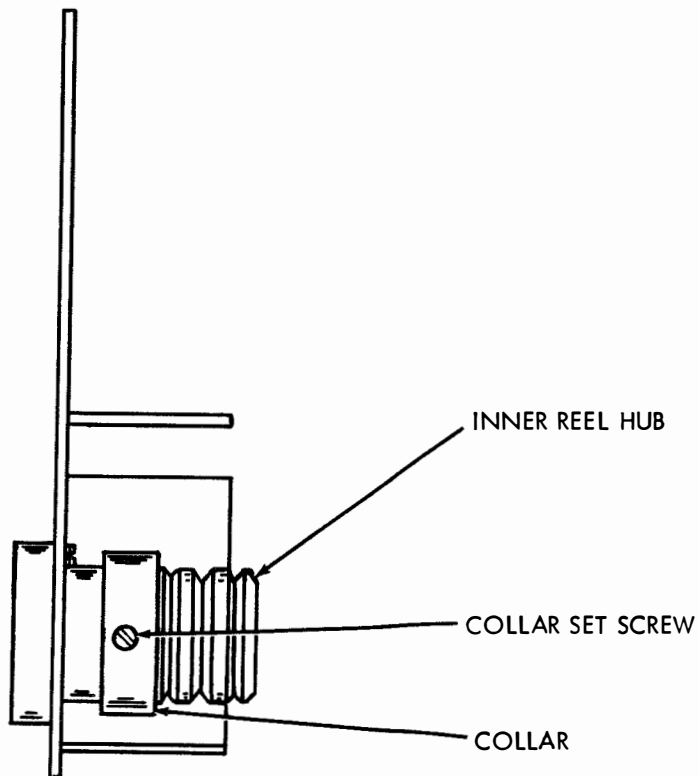


FIGURE 9