"DATASPEED*" TAPE-TO-TAPE SYSTEM

TAPE RECEIVER 5B

ADJUSTMENT, LUBRICATION, REMOVAL AND REPLACEMENT OF COMPONENTS

CONTENTS PAGE

1. GENERAL

1.01 This section contains adjustment, lubrication, and removal and replacement of components information for DATASPEED 5B Tape Receiver. It is reissued to add adjustments, correct existing adjustments, and add a lubrication requirement. The following TCNs have been included in this section: 885, 891, 906, 1155, and 1314. Because this is a general revision, marginal arrows used to indicate changes and additions have been omitted. This section was formerly 592-808-700.

1.02 For description, adjustment, lubrication, and removal and replacement of components for the Tape Punch Unit (DRPE), refer to Sections 582-101-105, 582-101-705, 582-101-706, and 582-101-707. For information concerning 5B Tape Receiver options, refer to Sections 582-102-121, and 582-102-122.

CAUTION: TURN OFF POWER BEFORE MAKING ANY ADJUSTMENTS TO UNIT.

1.03 Adjustment steps are given in a sequence that would be followed if a complete readjustment of the equipment were made. Parts or assemblies may be removed to simplify adjustments. If there is more than one adjustment for an illustration, follow the letter sequence (A), (B), (C), etc.

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Prepared for American Telephone and Telegraph Company by Teletype Corporation

1.04 Unless stated otherwise, left or right, front or rear, and up or down refers to normal operating position (front view). Nuts and screws are to be loosened friction tight, then tightened after the adjustment is completed.

1.05 Refer to **Section 570-005-800** for a list of adjustment tools. Punch driver card adjustments are rarely (if ever) needed. If however they are needed, an oscilloscope and a small screwdriver would be required.

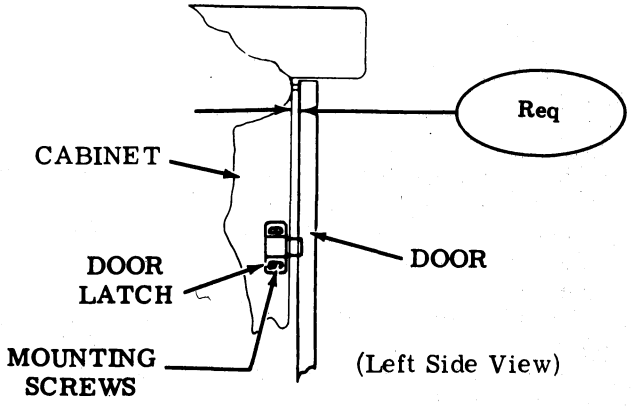
1.06 All spring tension ratings are indications, not exact values. Check readings taken in the positions shown with an accurately calibrated spring tension scale. If no tension spring adjustment procedure is given, replace spring.

1.07 Read adjustment procedures carefully before making any adjustment. Check all movable parts for possible binds before applying power.

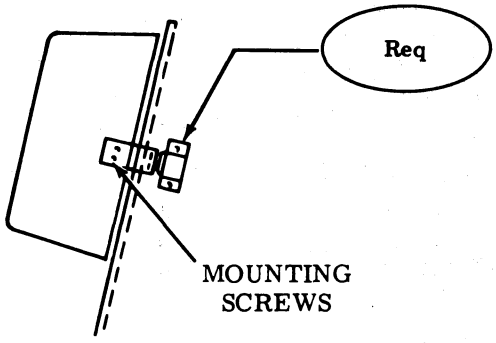
2. ADJUSTMENTS

CABINET

2.01 Cabinet Structure



(Left Side View)



(Side View)

DOOR LATCH

Requirement
Minimum clearance between door and rubber bumpers with door latched.

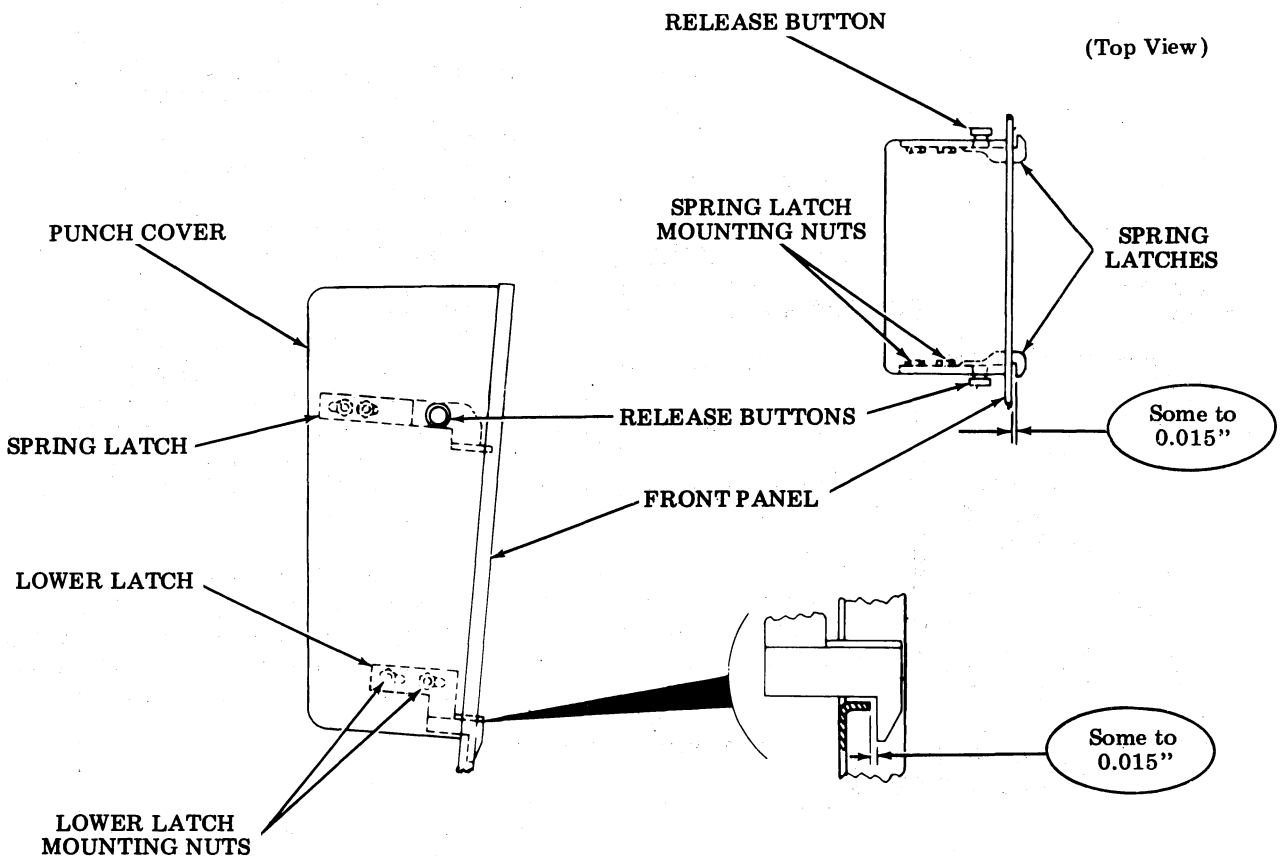
To Adjust
Loosen mounting screws. Move latch to front or rear to meet requirement. Tighten screws.

PUNCH COVER LATCHES (Magnetic)

Requirement
Cover to be held firmly against the front panel at the top and two sides.

To Adjust
Loosen mounting screws. Move magnetic latches in or out to meet requirement. Tighten screws.

2.02 Cabinet Structure (continued)



PUNCH COVER LATCHES (Mechanical)

Requirement

The four latches should hold the cover against the front panel with a front to rear movement of

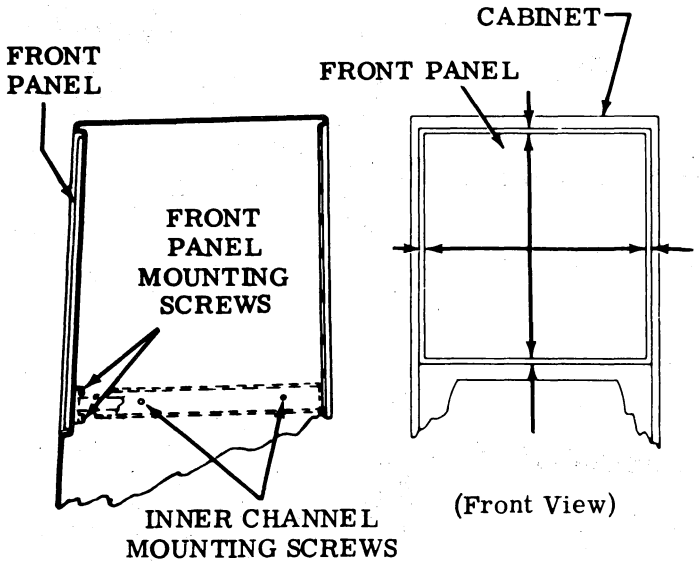
Min some---Max 0.015 inch

To Adjust

(1) With cover removed, loosen all four lower latch mounting nuts (two on each latch) to finger tight. Replace and hold cover against front panel while adjusting each lower latch to meet requirement. Being careful not to distrub any setting, remove cover (by lifting up and pulling forward) and tighten nuts. Recheck adjustment after installing cover.

(2) The spring latches are adjusted in the same manner with an added requirement that the cover shall move into a latched position without manually operating the release buttons.

2.03 Cabinet Structure (continued)



FRONT PANEL CLEARANCE

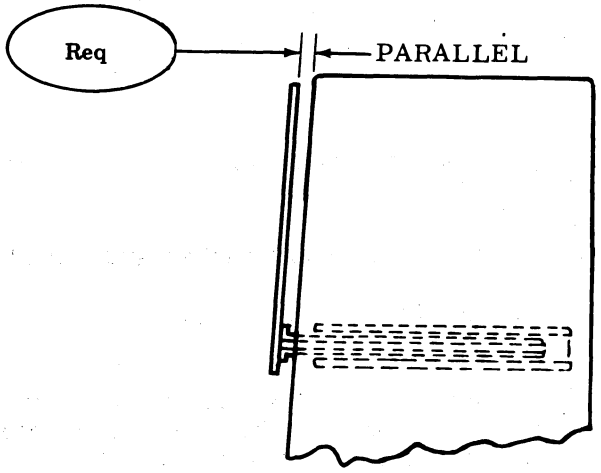
Requirement

An equal gap between front panel and cabinet shell on all four sides. Panel should be parallel to cabinet shell as viewed from side.

To Adjust

(1) Loosen left and right inner channel mounting screws. Move channels up or down until the top and bottom gap between panel and cabinet is about equal and panel is parallel. Tighten mounting screws.

(2) Loosen front panel mounting screws. Move panel left or right until gap between sides of panel and cabinet are about equal. Tighten mounting screws.



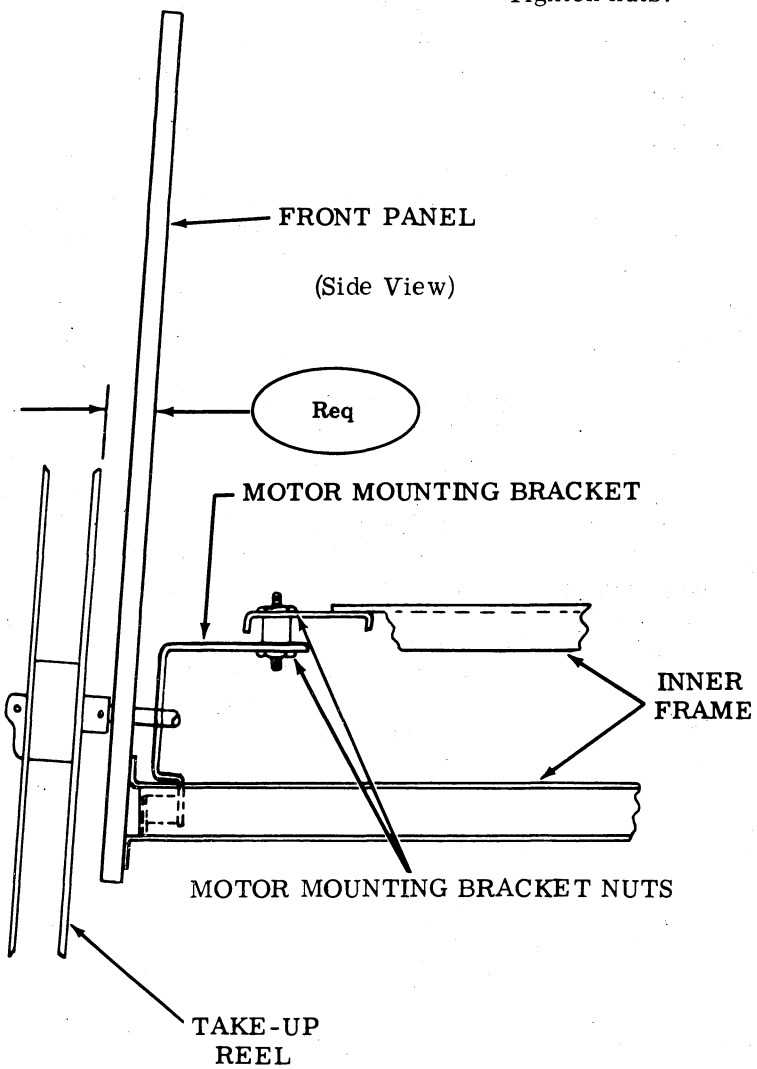
(Side View)

2.04 Tape Handling Mechanism

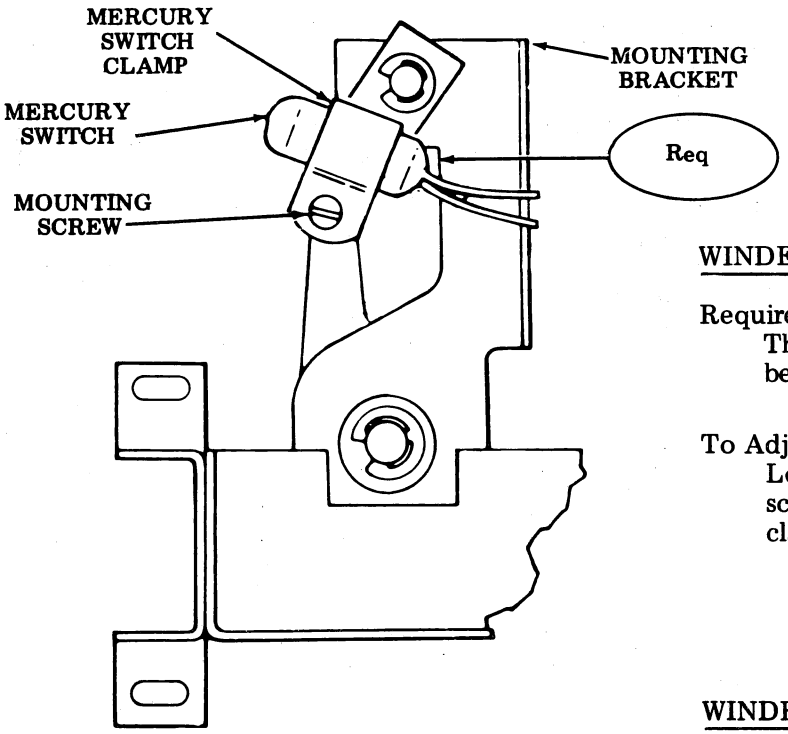
TAKE-UP REEL

Requirement
Take-up reel to be parallel to the front panel when viewed from the side of panel.

To Adjust
Loosen motor mounting bracket nuts. Move motor mounting bracket in or out to meet requirement. Tighten nuts.



2.05 Tape Handling Mechanism (continued)



(Right Side View)

WINDER SWITCH CONTACT POSITIONING

Requirement

The two mercury switch electrodes should be on the same horizontal plane.

To Adjust

Loosen mercury switch clamp mounting screw. Rotate mercury switch within the clamp to meet requirement. Tighten screw.

WINDER SWITCH POSITIONING

Requirement

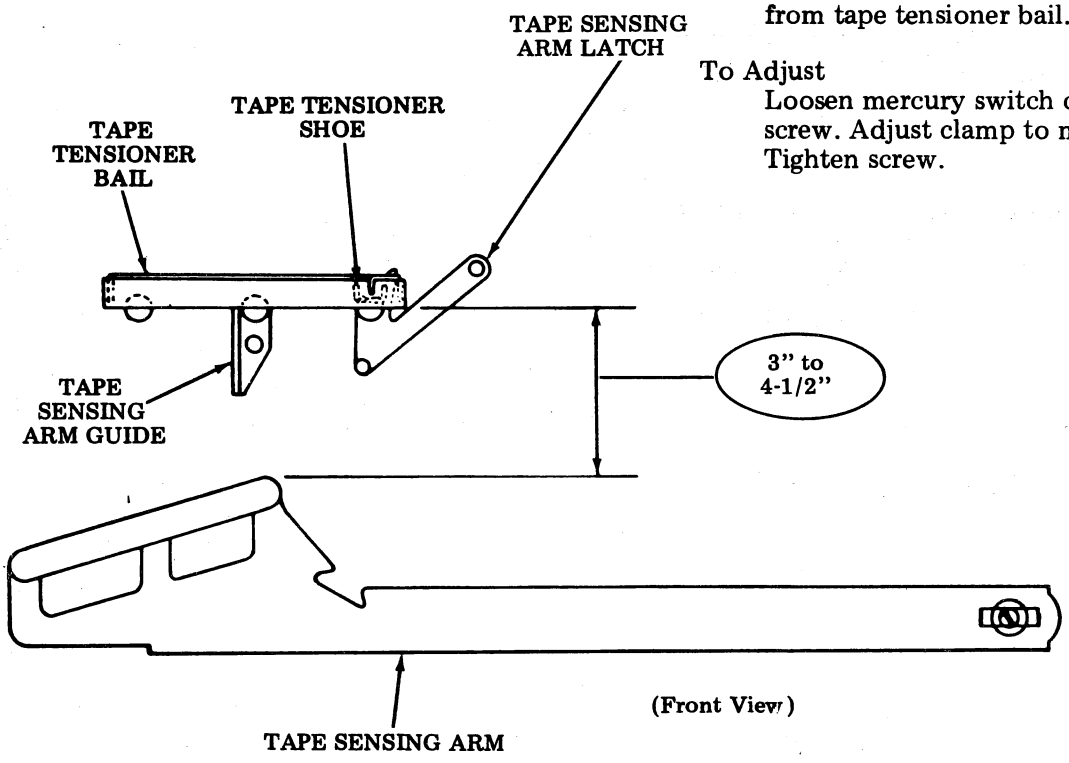
Winder motor should start when inner post on tape sensing arm is

Min 3 inch--Max 4-1/2 inch

from tape tensioner bail.

To Adjust

Loosen mercury switch clamp mounting screw. Adjust clamp to meet requirement. Tighten screw.



(Front View)

2.06 Tape Handling Mechanism (continued)

TAPE SENSING ARM CLEARANCE

(1) Requirement

With tape sensing arm in its latched position, the tape sensing arm should clear the tape tension bail and the tape maze posts.

To Adjust

Loosen tape sensing arm mounting screw. Move tape sensing arm right or left to meet requirement. Tighten screw.

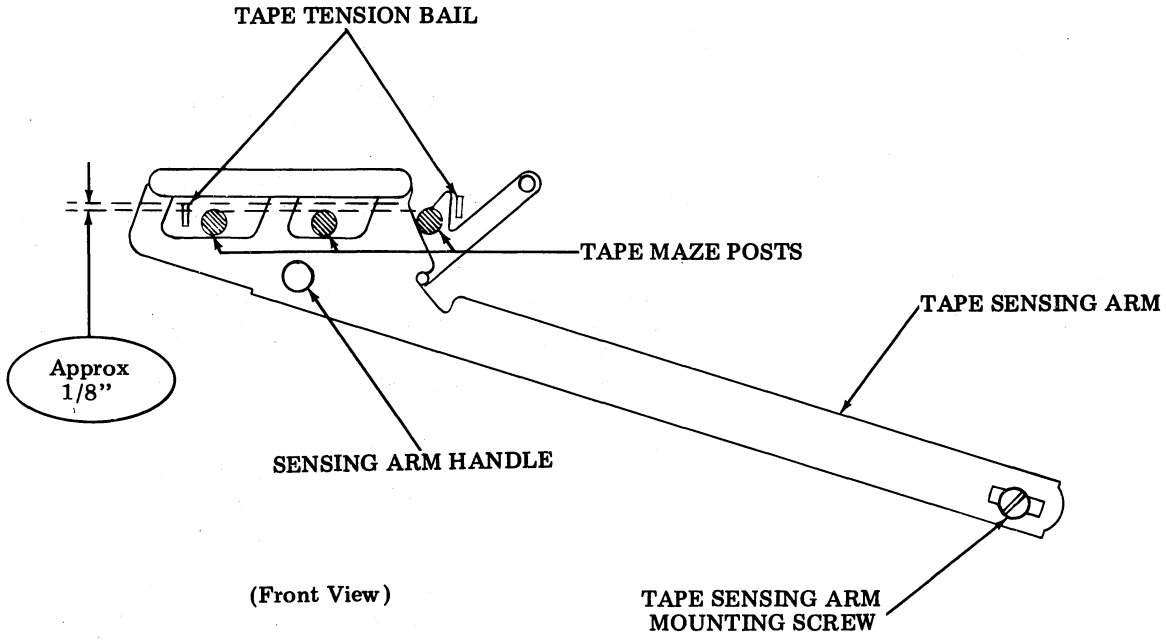
(2) Requirement

Place tape sensing arm in a latched position by lifting sensing arm handle. The opening for tape threading should be

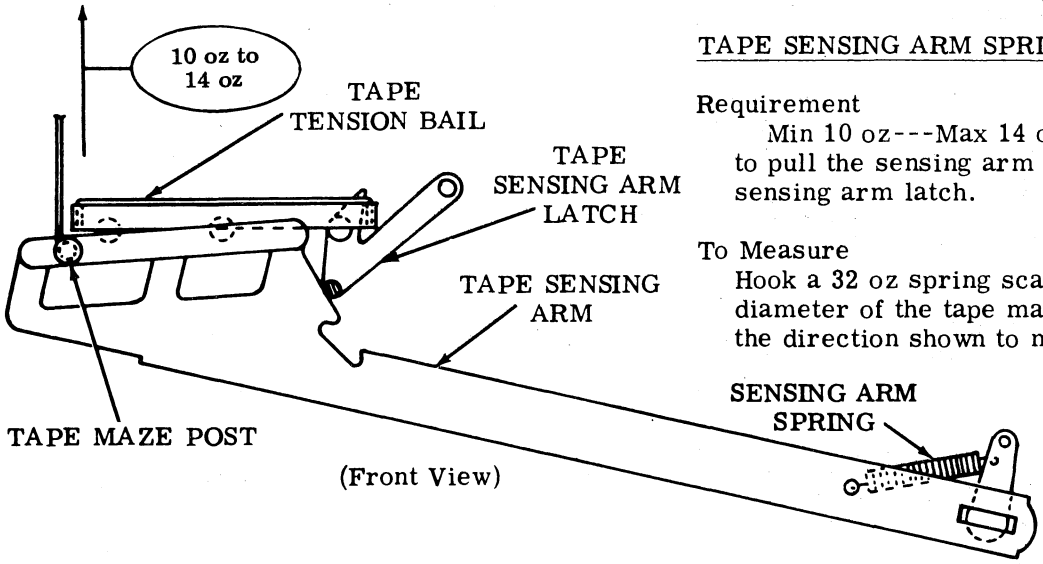
Approx 1/8 inch.

To Adjust

With mounting screw loosened, move tape sensing arm clockwise or counterclockwise to meet requirement. Tighten screw.



2.07 Tape Handling Mechanism (continued)

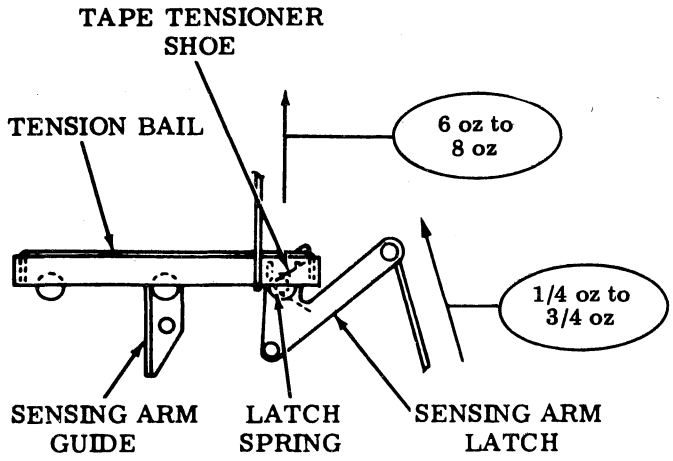


(Front View)

TAPE SENSING ARM SPRING

Requirement
Min 10 oz---Max 14 oz
to pull the sensing arm into contact with the sensing arm latch.

To Measure
Hook a 32 oz spring scale under the small diameter of the tape maze post and pull in the direction shown to meet requirement.



(Front View)

TAPE TENSION BAIL SPRING

Requirement
Min 6 oz---Max 8 oz
to lift tape tensioner shoe off its post.

To Measure
Hook a 32 oz spring scale under the bail at the tape tensioner post and lift.

TAPE SENSING ARM LATCH SPRING

Requirement
Min 1/4 oz---Max 3/4 oz
to start latch moving.

To Measure
Apply push end of an 8 oz scale to handle of latch and push in direction shown.

2.08 Tape Handling Mechanism (continued)

V-BELT TENSION

Requirement

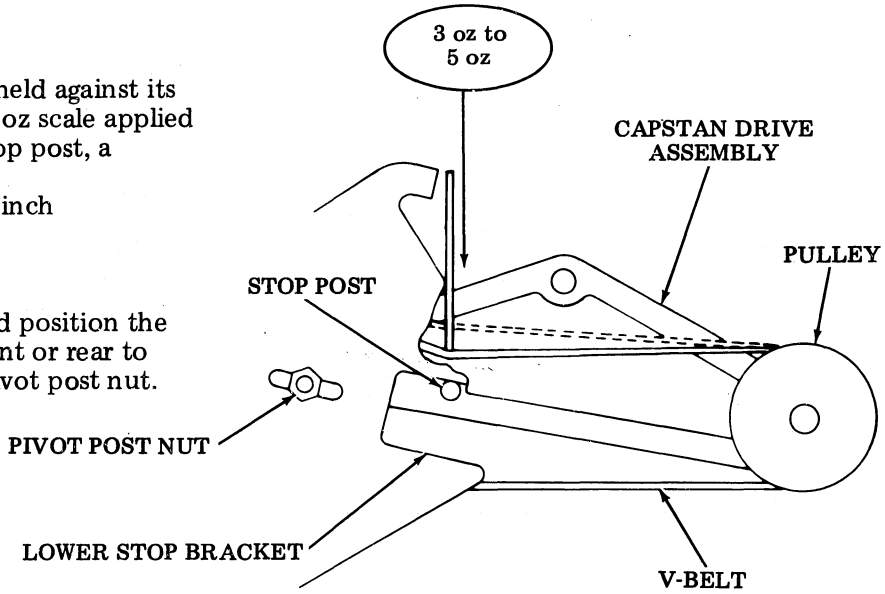
With capstan drive assembly held against its upper stop bracket, and a 32 oz scale applied to top of V-belt above the stop post, a

Min 3 oz---Max 5 oz

is needed to force V-belt 1/4 inch downward.

To Adjust

Loosen the pivot post nut and position the capstan drive assembly to front or rear to meet requirement. Tighten pivot post nut.



(Right Side View)

TAPE GUIDE LEVER

Requirement

Min 2 oz---Max 4 oz

to lift guide lever away from the drive roller.

To Measure

Hook an 8 oz spring scale under the guide lever and pull at right angles.

To Adjust

Unhook one end of guide lever spring and wind or unwind the spring to meet requirement. Return spring to its original position.

CAPSTAN CLEARANCE

Requirement

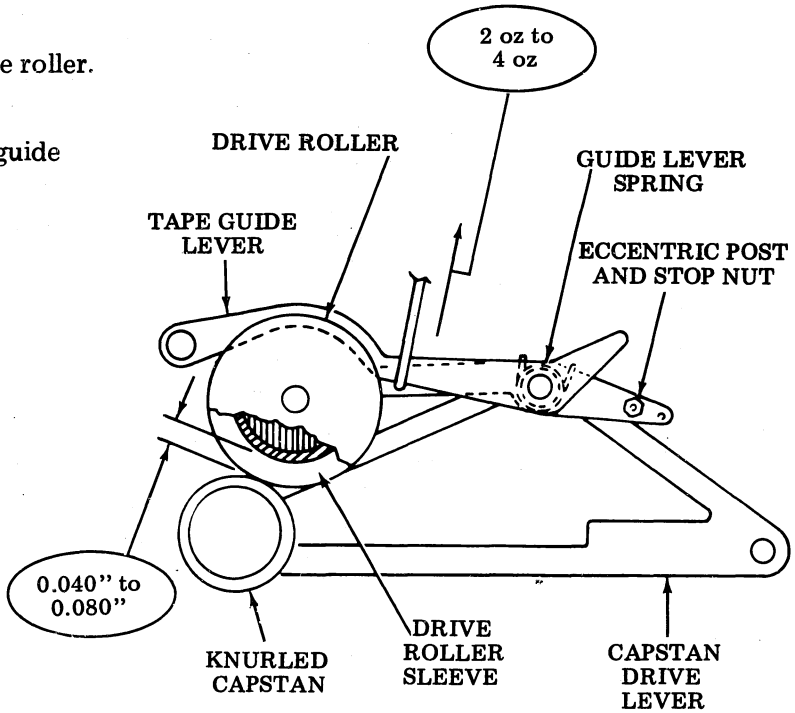
With the drive lever against its eccentric stop nut, there should be a

Min 0.040 inch---Max 0.080 inch

gap between the drive roller sleeve and the knurled capstan.

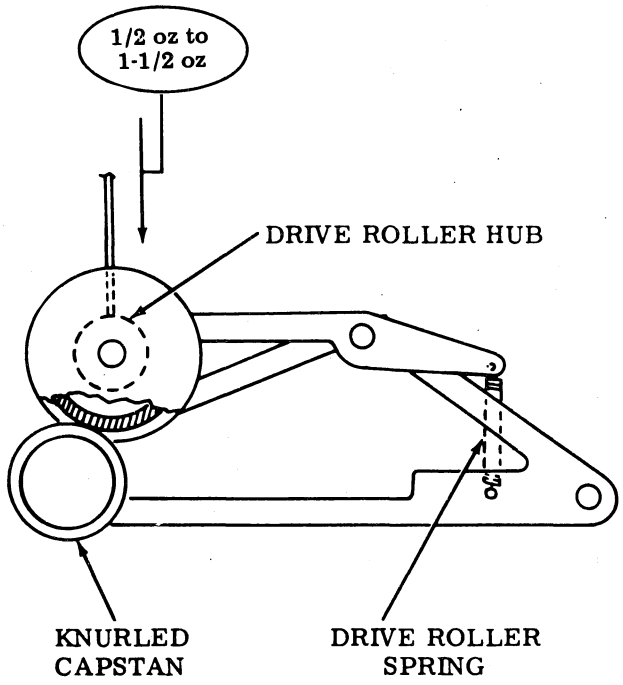
To Adjust

Loosen eccentric post stop nut. Rotate eccentric post to meet requirement. Tighten nut.



(Right Side View)

2.09 Tape Handling Mechanism (continued)

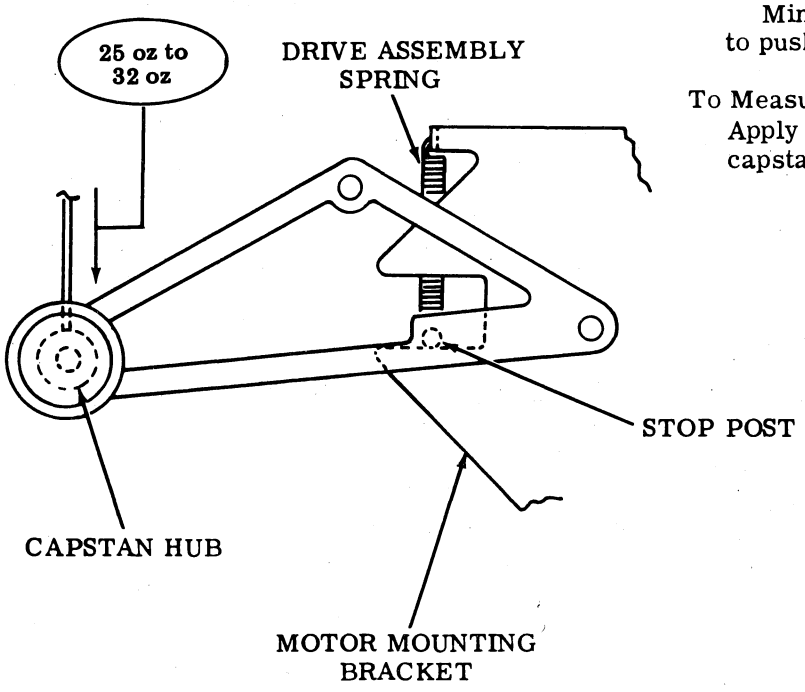


(Right Side View)

TAPE DRIVE ROLLER SPRING

Requirement
Min 1/2 oz---Max 1-1/2 oz
to engage drive roller with knurled capstan.

To Measure
Apply push end of 8 oz spring scale to drive roller hub and push in line with spring.



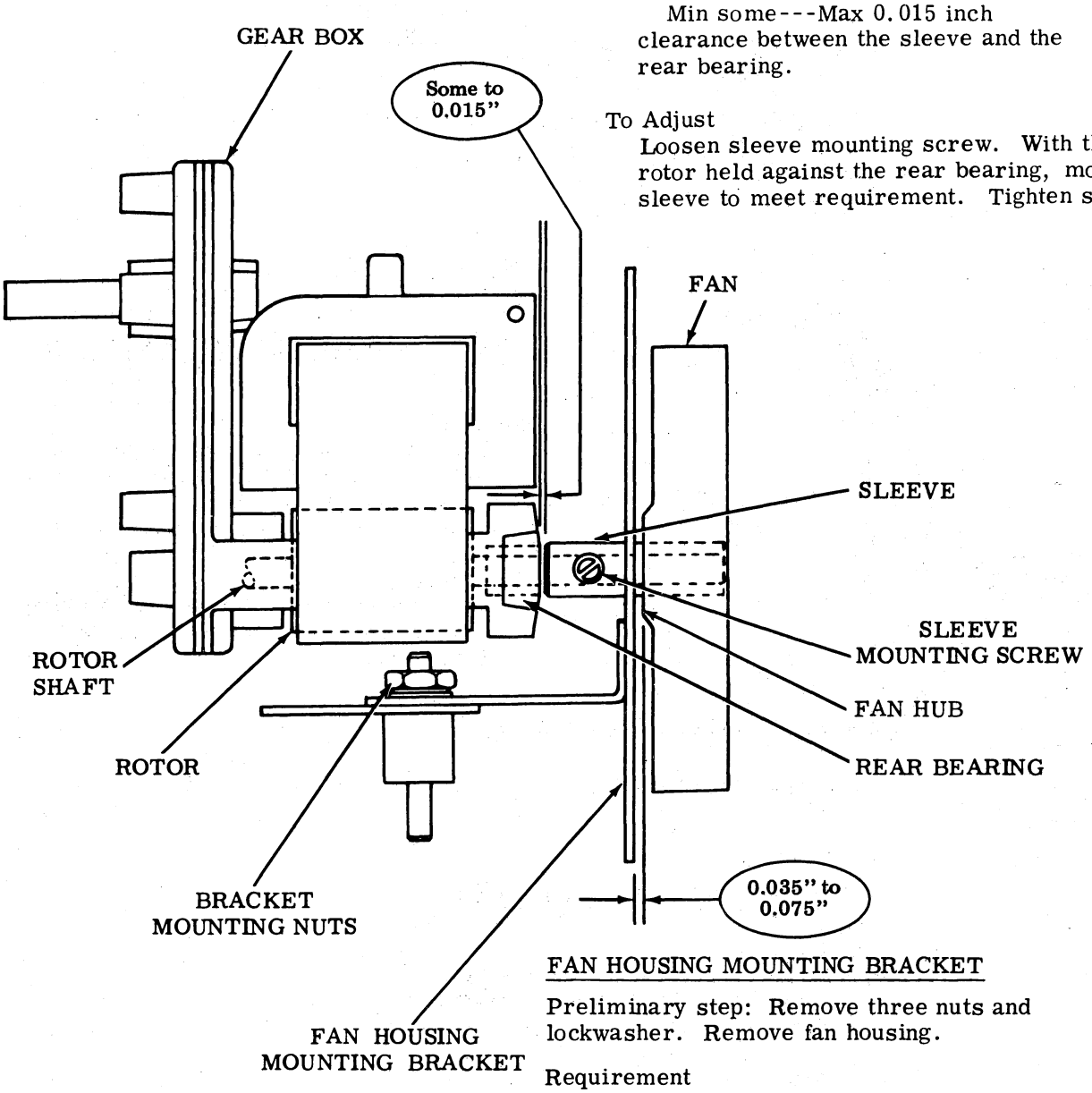
(Right Side View)

CAPSTAN DRIVE ASSEMBLY SPRING

Requirement
Min 25 oz---Max 32 oz
to push assembly to lower limit.

To Measure
Apply push end of 64 oz spring scale to capstan hub and push in line with spring.

2.10 Fan Assembly



(Rear View)

FAN SLEEVE

Requirement

With the rotor endplay taken up away from the gear box, there should be

Min some---Max 0.015 inch

clearance between the sleeve and the rear bearing.

To Adjust

Loosen sleeve mounting screw. With the rotor held against the rear bearing, move sleeve to meet requirement. Tighten screw.

FAN HOUSING MOUNTING BRACKET

Preliminary step: Remove three nuts and lockwasher. Remove fan housing.

Requirement

With the rotor shaft endplay taken up, there should be a

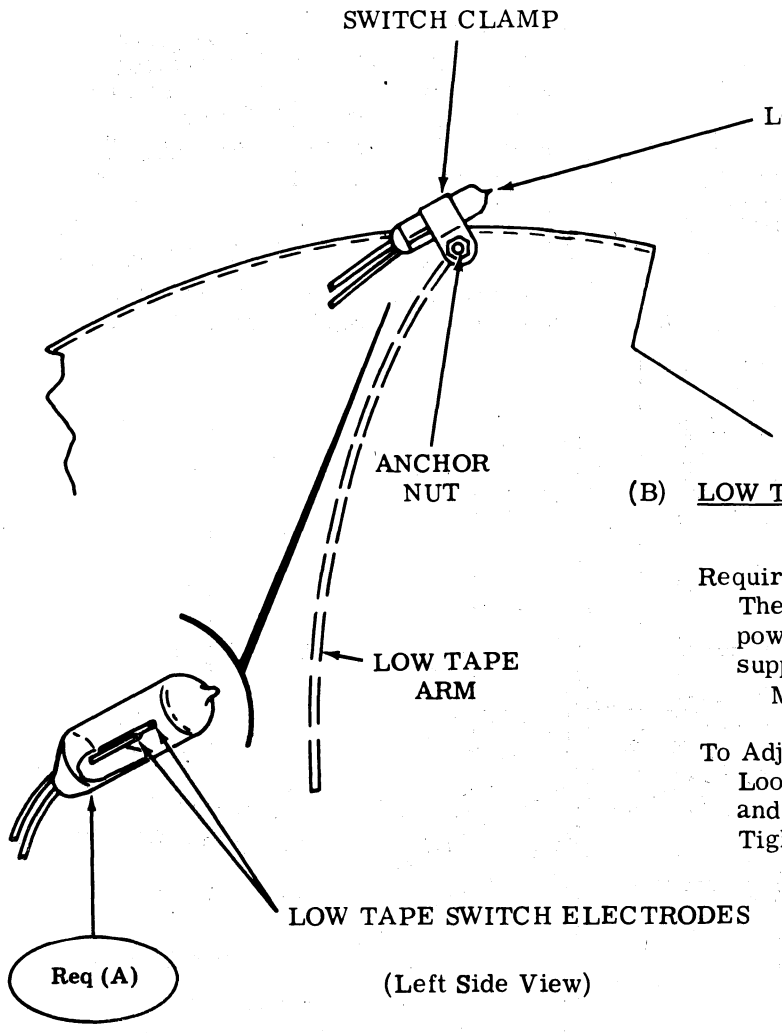
Min 0.035 inch---Max 0.075 inch

between the fan hub and fan housing mounting bracket.

To Adjust

Loosen bracket mounting nut. Move fan housing mounting bracket to meet requirement. Tighten nut. Replace fan housing, lockwashers, and nuts.

2.11 Tape Handling Mechanism (continued)



(Left Side View)

(A) LOW TAPE SWITCH ELECTRODES

Requirement
The two electrodes of the low tape switch should be on the same horizontal plane.

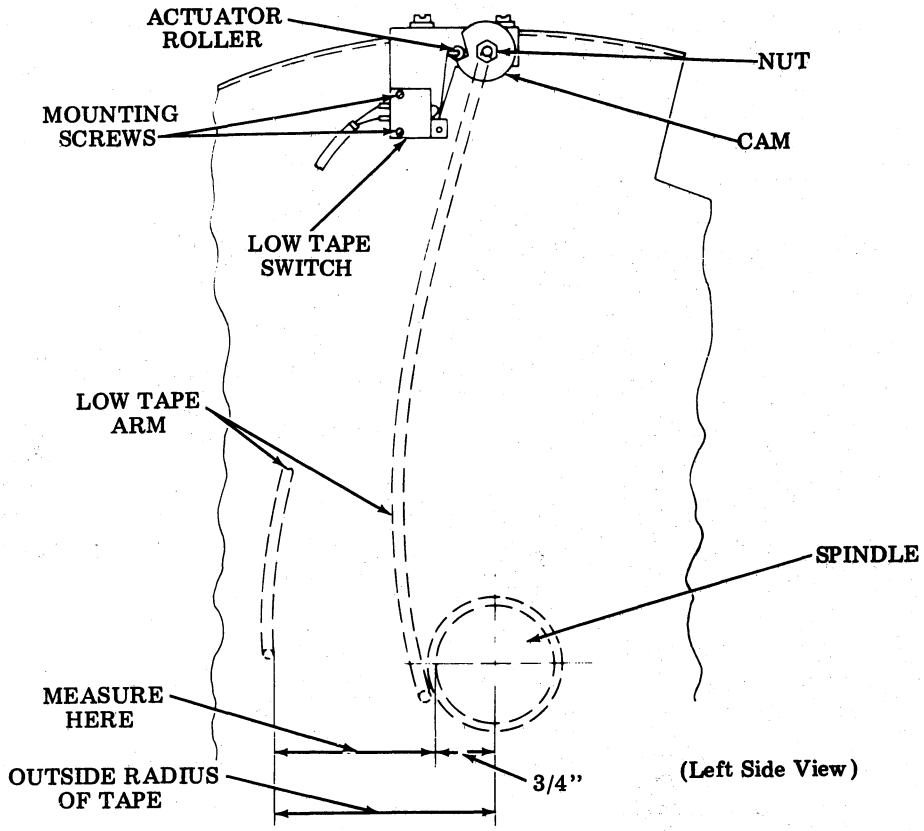
To Adjust
Loosen anchor nut. Rotate low tape switch within its clamp to meet requirement. Tighten nut.

(B) LOW TAPE SWITCH CLAMP POSITIONING

Requirement
The low tape lamp should light and the power on lamp should flash when the tape supply roll diameter is
Min 4 inch---Max less than 5 inch

To Adjust
Loosen anchor nut. Rotate switch clamp and low tape switch to meet requirement. Tighten nut.

2.12 Tape Handling Mechanism (continued)



LOW TAPE SWITCH CAM

(1) Requirement
Switch should close ±1/4 inch of the adjusted diameter (see Table below).

(2) Requirement
With actuator roller on high part of cam, the switch should open (this indicating tape in).

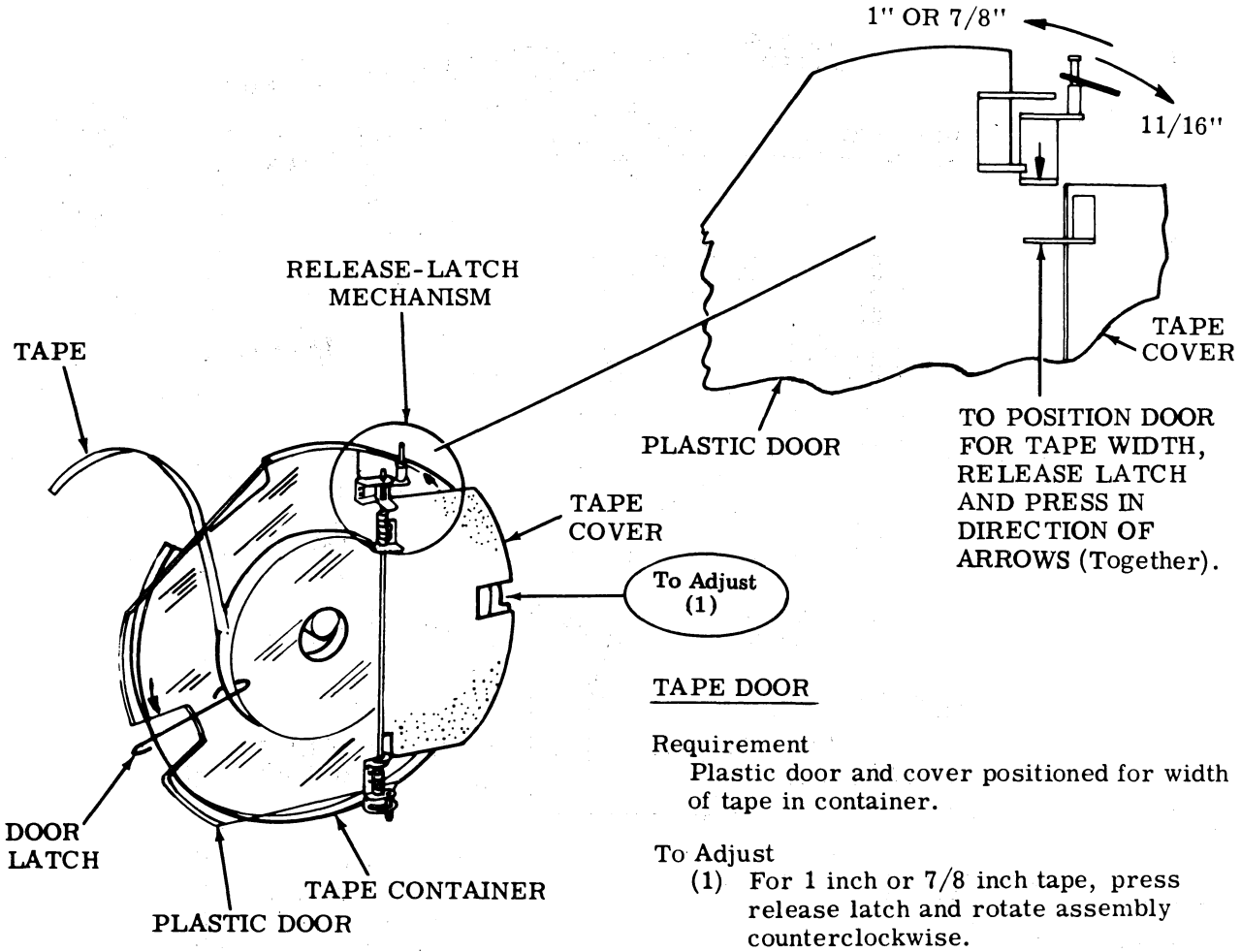
To Check
Select desired diameter (4 inch is recommended) from Table. Use corresponding spindle to low tape arm measurement.

To Adjust
Loosen switch cam nut and mounting screws. Rotate cam until switch closes. Tighten cam nut. Move switch until it opens on high part of cam. Tighten mounting screws.

TABLE (FOR 0.004" PAPER TAPE)

Diameter of Tape	Feet Left	Running Time Left	Measurement from Spindle to Arm
5"	420	11 min 12 sec	1-3/4"
4"	240	6 min 24 sec	1-1/4"
3"	90	2 min 24 sec	3/4"

2.13 Tape Handling Mechanism (continued)



TAPE DOOR

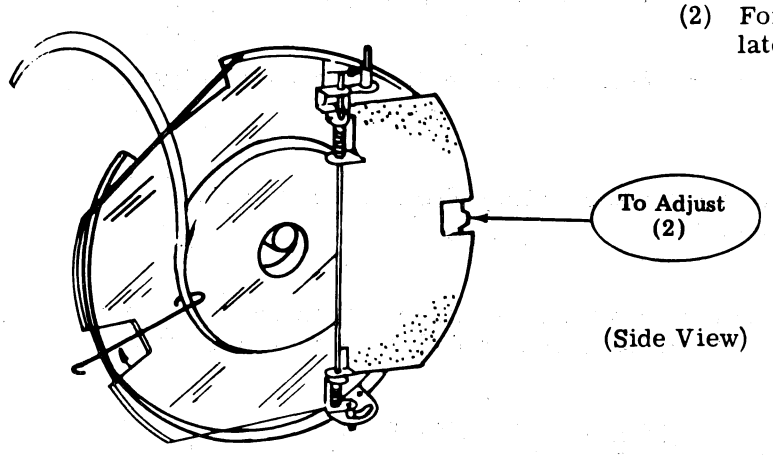
Requirement

Plastic door and cover positioned for width of tape in container.

To Adjust

(1) For 1 inch or 7/8 inch tape, press release latch and rotate assembly counterclockwise.

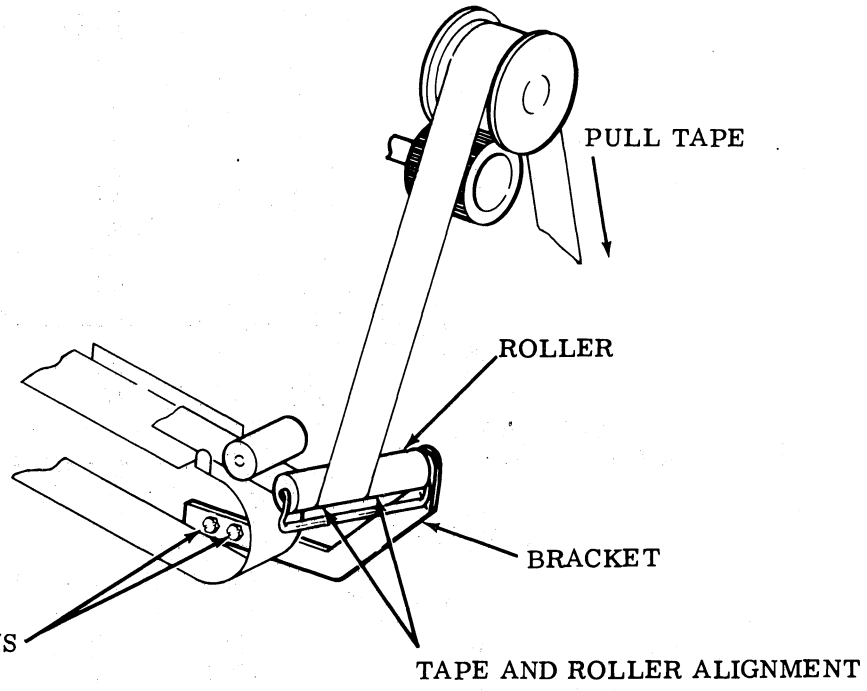
(2) For 11/16 inch tape, press release latch and rotate assembly clockwise.



(Side View)

2.14 Tape Handling Mechanism (continued)

(Front View)



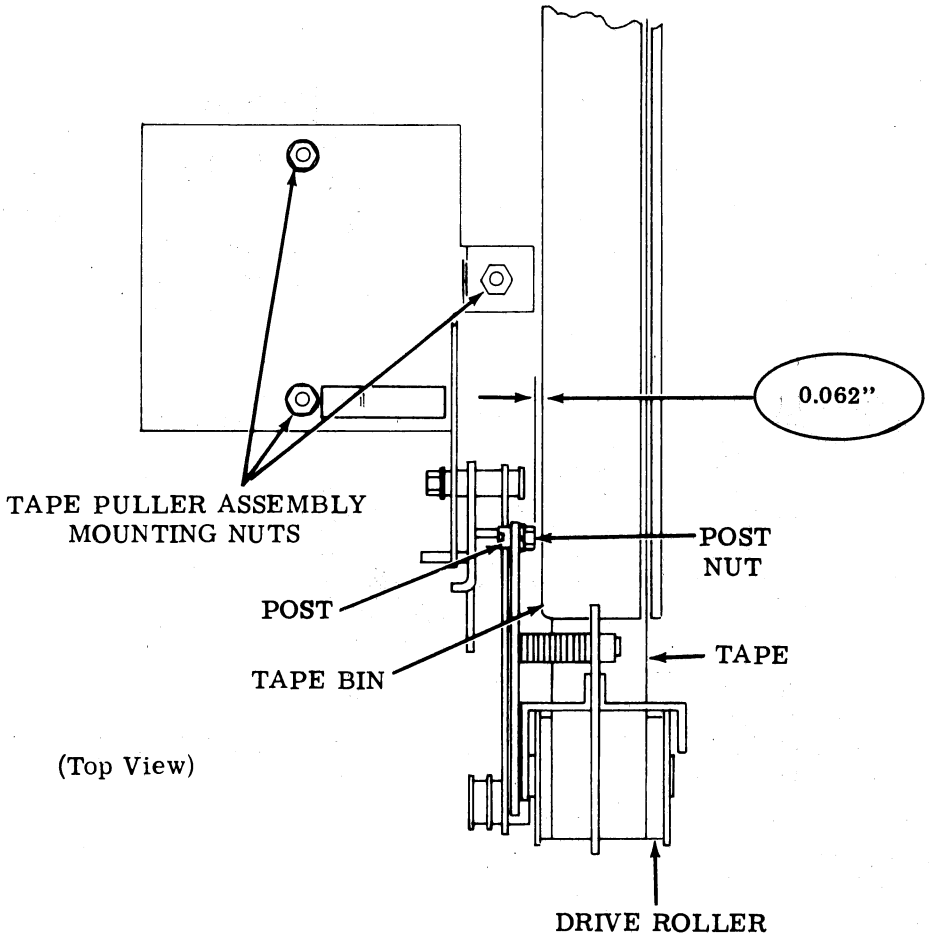
BRACKET AND ROLLER

Requirement
Tape should line up evenly on the roller.

To Check
Pull tape in direction of the arrow.

To Adjust
Loosen mounting screws. Move bracket up or down around right mounting screw to meet requirement. Tighten screws.

2.15 Tape Handling Mechanism (continued)



TAPE PULLER ASSEMBLY

(1) Requirement
There should be minimum clearance between post nut and tape bin of 0.062 inch.

(2) Requirement
The tape and drive roller should meet without damaging tape.

To Check
Install a 3000 foot roll of tape. Operate punch.

To Adjust
Loosen tape puller assembly mounting nuts. Position the tape puller assembly and check for minimum clearance. Tighten nuts and run tape. Repeat adjustment if necessary.

RECEIVER MODULE

2.16 For receiver module circuit card adjustments, refer to Section 582-101-705.

3. LUBRICATION

GENERAL

3.01 When lubricating 5B Tape Receiver, use TKS7470 oil, and a thin coat of grease TKS102 - TP108805) as directed. The following lubrication symbols show the type and amount of lubricant to be used.

O1 - One drop of oil
G - Thin coat of grease
O - As directed

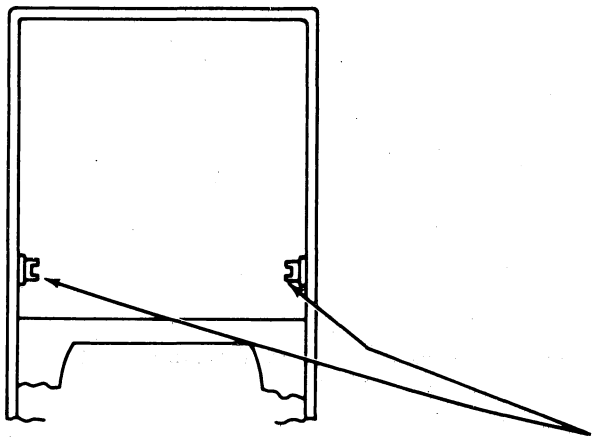
3.02 No lubrication is needed for the receiver module. Lubricate the cabinet as needed and the punch unit before it is operated, again within two weeks, and thereafter at intervals suggested for the tape punch unit.

TAPE PUNCH

3.03 Lubrication for the tape punch unit is covered in Section 582-101-706.

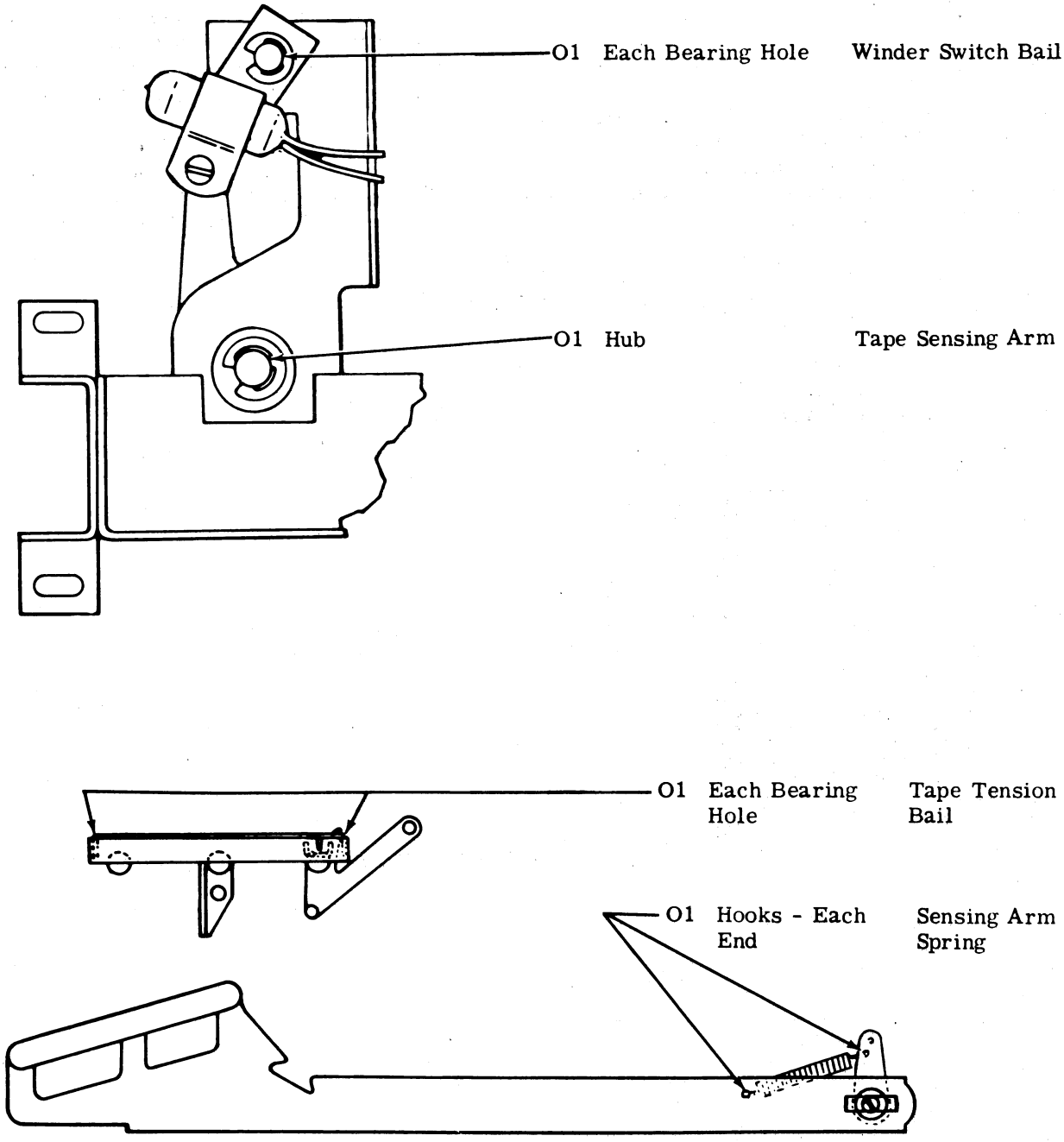
CABINET

3.04 Cabinet Structure

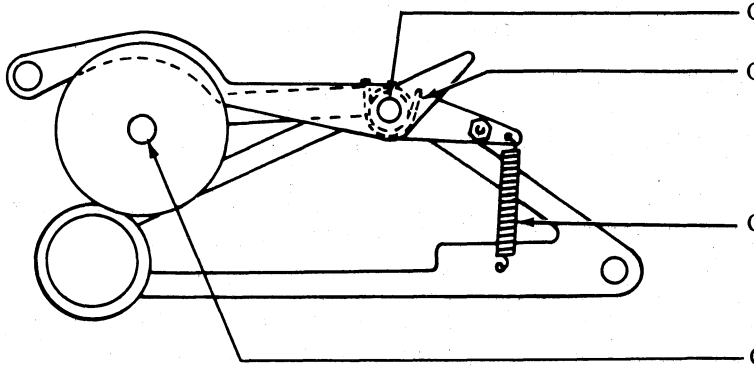


G Slides Cabinet Channels

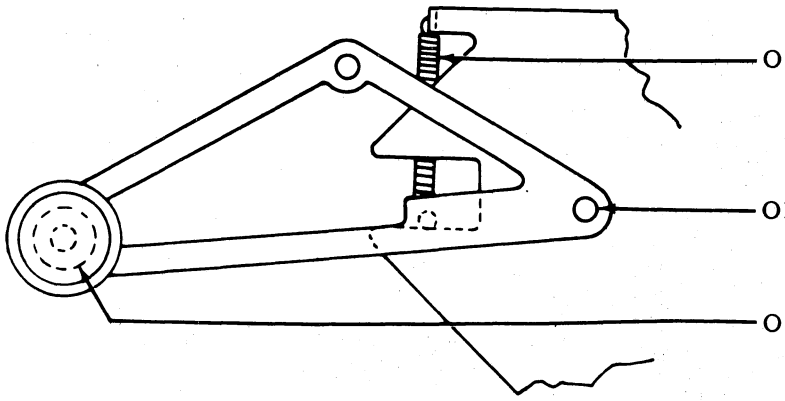
3.05 Tape Handling Mechanism



3.06 Tape Handling Mechanism (continued)

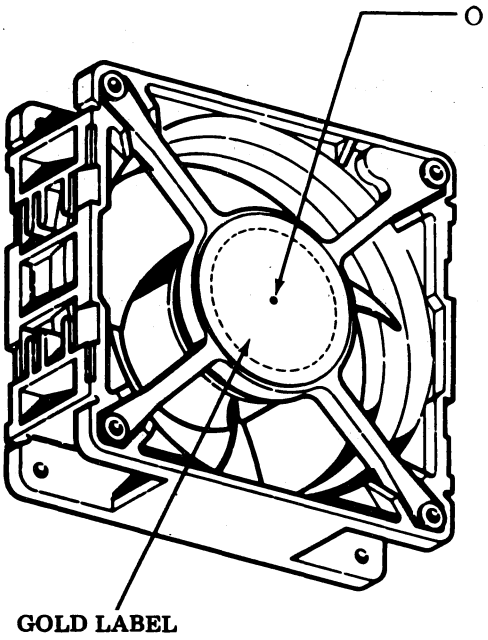


O1	Pivot	Tape Guide Lever
O1	Hooks - Each End	Guide Lever Spring
O1	Hooks - Each End	Drive Roller Spring
O1	Shaft	Drive Roller



O1	Hooks - Each End	Drive Assembly Spring
O1	Pivot	Drive Assembly
O1	Hub	Knurled Capstan

3.07 Cabinet Exhaust Fan



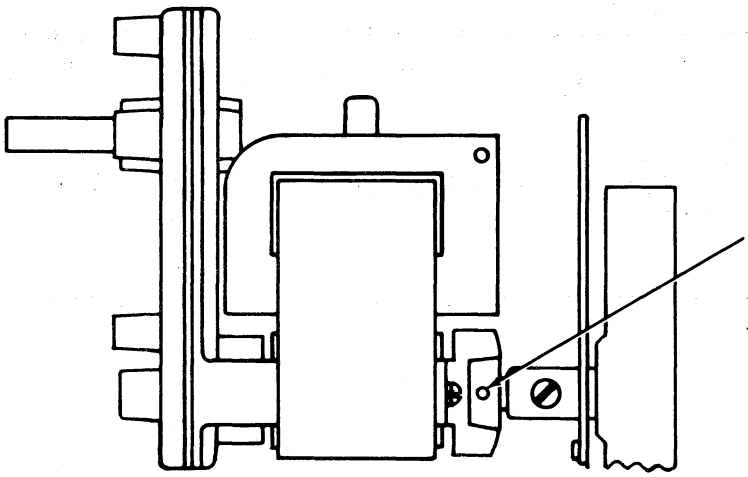
O Center of Circle on Gold Label

Note: Use a TP194853 oil injector and proceed as follows:

1. Position the needle at an angle of approximately 45° at the center of the circle on the gold label.
2. Pierce the label and the concealed self-sealing rubber cap located under the label.
3. Depress the plunger of the oil injector slowly to allow approximately 1/8 inch of oil to escape.

The above lubrication requirement should be performed once a year.

3.08 Fan Assembly



O Hole Felt Oiler

Note: Saturate with TKS7470 every six months.

RECEIVER MODULE

3.09 No lubrication is needed for the receiver module.

4. REMOVAL AND REPLACEMENT OF COMPONENTS

4.01 Removal and replacement of components for 5B Tape Receiver is straightforward and needs no instructions. Removal and replacement of components for the tape punch unit is covered in Section 582-101-707. After any replacement of components, check adjustments wherever they apply.

4.02 Disconnect external power and signal leads before dismantling equipment.