

100A TELETYPEWRITER TEST DISTRIBUTOR
REQUIREMENTS AND ADJUSTMENTS

1. GENERAL

1.01 This section covers the requirements and adjustments for the 100A teletypewriter test distributor.

1.02 As the brushes wear the signals become slightly biased. To insure accuracy within about 1 per cent, it is desirable to change the brushes after about 24 hours of operating time.

1.03 To guard against operating failures, it is important that the commutator brushes, commutator segments, and slots between the segments be cleaned frequently. Refer to the section covering the general cleaning requirements for teletypewriter apparatus.

2. REQUIREMENTS AND ADJUSTMENTS

2.01 Motor Fan: The motor fan should be positioned laterally on the motor shaft so that it will turn freely when the motor is running.

To Adjust: Reposition by means of the fan setscrew.

2.02 Motor Position: When the position of the motor is properly adjusted, the motor shaft should be parallel to the base plate, and the center line of the pinion should be level with the center of the main-shaft gear. With this adjustment there should be barely perceptible backlash between the motor pinion and the main-shaft gear throughout a complete revolution of the main shaft, and there should be no excessive gear noise. Armature-shaft end play should not be confused with backlash.

To Adjust: Position the motor by means of its mounting screws.

2.03 Commutator Brushes, Trimming:

CAUTION: THE BRUSHES WILL BE DAMAGED IF THE BRUSH ARM IS ROTATED IN A COUNTERCLOCKWISE DIRECTION WHILE THE BRUSHES ARE RESTING ON THE FACE OF THE COMMUTATOR.

The brushes should be trimmed off squarely so that the entire width will rest on the commutator rings.

2.04 Commutator Brushes, Alignment: With a screwdriver inserted in the hole provided in the commutator disc, raise the brushes from the face of the commutator and rotate the brush arm counterclockwise until the trailing edge of the brush counterbalance arm is against the screwdriver. In this position the brush holder should be parallel to the inscribed white line on the commutator disc, and the ends of the brushes should line up with this inscribed line.

To Adjust: Lower the brushes and position the brushes and brush holder by means of their clamping screws.

2.05 Commutator Brushes, Pressure:

CAUTION: EXCESSIVE PRESSURE WILL WEAR BOTH THE BRUSHES AND THE COMMUTATOR SEGMENTS AND MAKE FREQUENT ADJUSTMENT NECESSARY.

With the brush-holder arm rotated so that the brushes just make good contact with their respective commutator rings, turn the eccentric stop so there is a clearance of minimum 0.025 inch, maximum 0.030 inch between the brush-holder stop post and the eccentric stop. Secure the eccentric stop in this position by means of its screw. Then rotate the brush-holder arm so that the brush-holder stop post rests against the eccentric stop. Tighten the brush-holder arm clamping screw.

2.06 Lubrication: In addition to the lubricating requirements contained in the section covering the general lubrication of teletypewriter apparatus, the parts shown below should be lubricated as follows:

Lower Brush-arm Shaft Bearing: 8 to 12 drops of oil once every three months, or after about 400 operating hours when used in intermittent service.

Motor Shaft Gear: grease

Motor Pinion: grease.

Motor Bearings (2): 3 to 6 drops of oil.

Note: The upper bearing of the brush-arm shaft is a sealed ball bearing which is packed with grease and should not be lubricated.