

ADJUSTMENT  
A.E. CO. DIAL SPEED

1. GENERAL

1.01 This practice provides the speed adjustment procedures that installer/repairmen will perform on Automatic Electric Standard and SATT dials.

1.02 This practice is reissued to include coverage for the miniature rotary dial.

1.03 Dial speed tests should be made with the central office tone dial speed testing equipment wherever possible. If this equipment is not available, testboard assistance will be necessary.

1.04 Perform all dial speed testing of foreign exchange service in conjunction with the testboard at the originating exchange.

2. TOOLS

2.01 In addition to the tools required to gain access to the dial assembly one of the following governor adjusting tools is required:

- (a) Dial pliers (Material Code No. 576445)
- (b) Spring bender (Material Code No. 580050).

3. INSPECTION

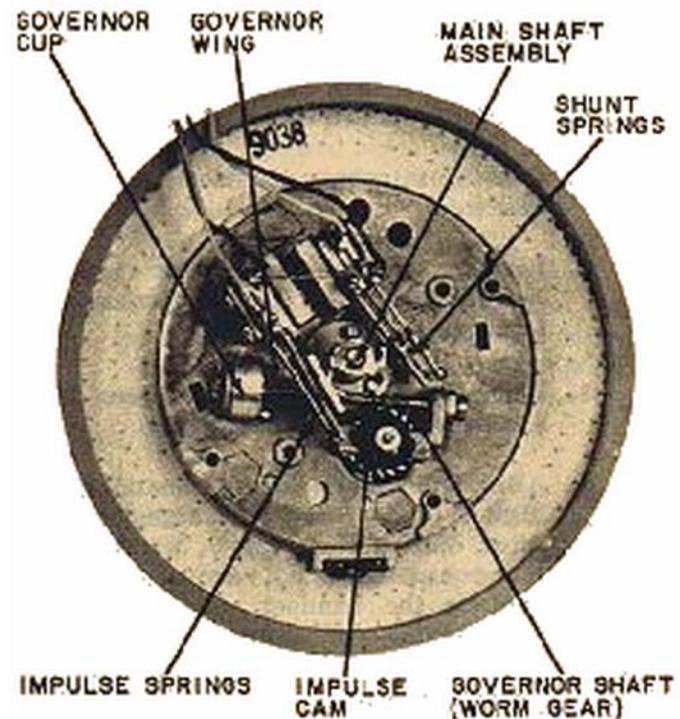
3.01 Inspect dial assembly for grease, grit, or other foreign matter that may impair its operation. If any of these conditions prevail, replace the dial.

3.02 Inspect the wiring. The wires should be arranged so that they will not interfere with any moving part.

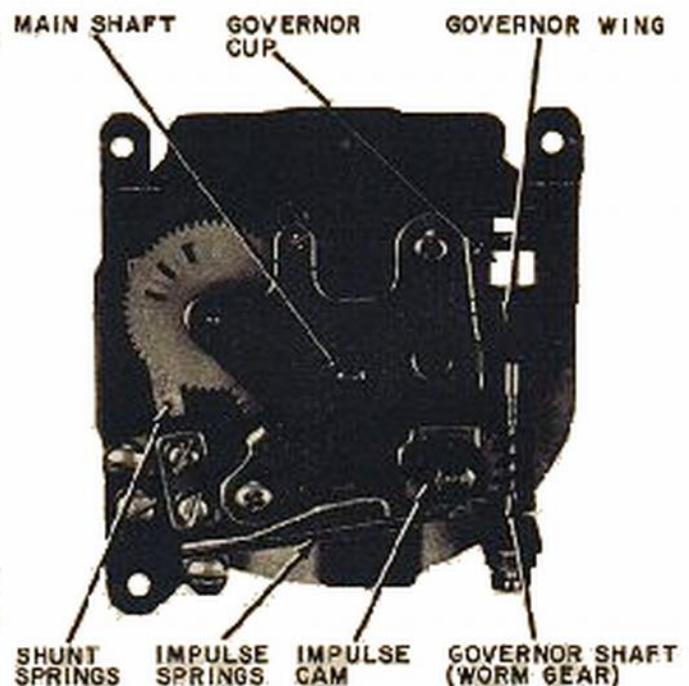
3.03 Inspect the contact springs for sharp kinks or bends and replace dial if kinks or bends are excessive.

3.04 Remove any lubricant which may be present on contacts.

3.05 Inspect governor shaft for excessive end play. The maximum end play should be barely perceptible. If excessive end play exists, replace the dial. Do not attempt adjustment of the governor shaft (refer to Figure 1).



1a. Standard Rotary Dial.



1b. Miniature Rotary Dial.

Figure 1. Inspection Points.

3.06 Inspect the governor wings (Figure 1). The wings should be formed as nearly alike as possible with the flyballs an equal distance from the governor cup. A visual inspection is sufficient in this instance.

#### 4. DIAL SPEED TESTS

4.01 To perform a test on either a standard or SATT dial, proceed as follows:

1. Remove telephone handset and listen for dial tone.
2. Dial the appropriate access code number for dial speed test equipment or dial testboard.
3. When the test number has been dialed, a steady tone should be heard.
4. After the steady tone is heard, dial the digit 0. If no BEEP (test signal) is heard after dialing the digit 0, the dial speed test equipment is not receiving impulses; replace the handset and start the test over again. (If further difficulty is experienced, the test should be made with the testboard.)
5. One of the three types of test signals should be heard:
  - (a) One BEEP - Dial speed too slow.
  - (b) Two BEEPS - Dial speed is within the required limits.
  - (c) Three BEEPS - Dial speed is too fast.
6. If the dial speed is too slow or too fast (a or c above), proceed with part 5 to adjust the dial speed to a correct two-BEEP condition.

#### 5. GOVERNOR ASSEMBLY ADJUSTMENT

5.01 The governor wings should be straight and free from any kinks or bends as nearly as possible. This becomes difficult when performing an adjustment on governor wings, so care should be exercised when making this adjustment.

5.02 Either a pair of dial pliers or a spring bender should be used as the adjusting tool. Perform the following steps (see Figures 2 and 3):

NOTE: BOTH governor wings must be adjusted.

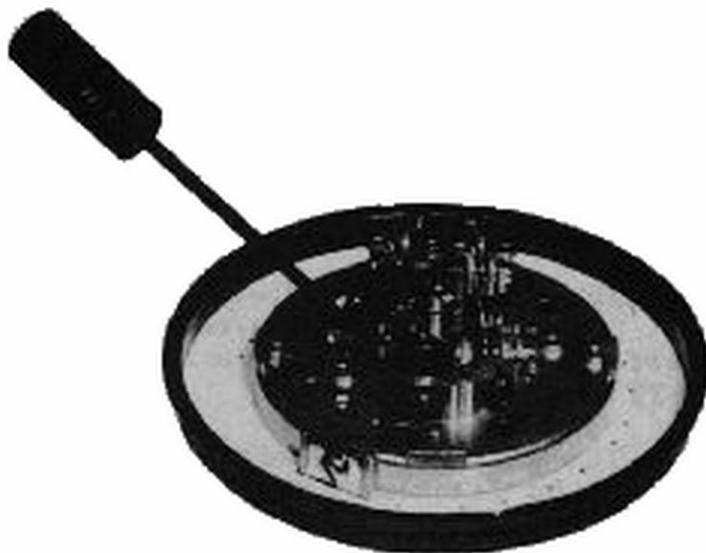


Figure 2. Correct Position of Spring Bender on Governor Wing.



Figure 3. Correct Position of Dial Pliers on Governor Wings.

#### Using Spring Bender Tool

1. Grasp one governor wing at its base with the spring bender.
2. Depending on the type of test signal heard (Paragraph 4.01, step 5), do one of the following:
  - (a) Increase speed - Use a slight inward twisting pressure until the governor wing is closer to the governor shaft.
  - (b) Decrease speed - Use a slight outward twisting pressure until the governor wing is farther away from the governor shaft.

3. Remove the spring bender from the one governor wing, grasp the other wing, and make the same adjustment as that chosen above.
4. After adjustment of both governor wings, make a dial speed check as outlined in Paragraph 4.01, steps 1 through 6.

#### Using Dial Pliers

1. Adjust both wings at the same time. Squeeze the wings together or separate them by placing the dial pliers approximately half-way along the wing.
2. Depending on the type of test signal heard (Paragraph 4.01, step 5), do one of the following:

- (a) Increase speed - Squeeze the wings together so that they are closer to the governor shaft.
- (b) Decrease speed - Force the wings apart by placing the dial pliers inside the wings and spreading until they are farther from the governor shaft.

3. If the wings are not evenly spaced from the shaft they may be adjusted as described in step 2 by using the shaft and one wing.
4. After adjustment of the governor wings, make a dial speed check as outlined in Paragraph 4.01, steps 1 through 6.