

BELL SYSTEM PRACTICES  
Teletypewriter and Data Stations

ADDENDUM P34.004  
Issue 1, May, 1958  
AT&T Co Standard

## MOTORS AND GOVERNORS

### 28 TELETYPEWRITER

### REQUIREMENTS AND PROCEDURES

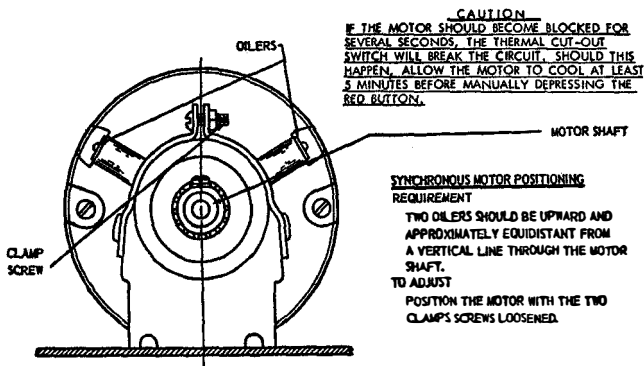
#### 1. GENERAL

- 1.001 This addendum supplements Section P34.004, Issue 1.  
1.002 This addendum is issued to add a caution on the operation of synchronous motors.

#### 2. REQUIREMENTS AND ADJUSTING PROCEDURES

The following paragraph replaces Paragraph 2.02 of the Section.

##### 2.02 Synchronous Motor



ADDENDUM  
P34.004

Page 1  
1 Page

MOTORS AND GOVERNORS  
28 TELETYPEWRITER  
REQUIREMENTS AND PROCEDURES



Vertical text or markings on the right edge of the page.



**BELL SYSTEM PRACTICES**  
**Teletypewriter and Data Stations**

**SECTION P34.004**  
**Issue 2, July, 1959**  
**AT&T Co Standard**

# **MOTORS AND GOVERNORS**

## **28 TELETYPEWRITER**

### **REQUIREMENTS AND PROCEDURES**

<b>CONTENTS</b>	<b>PAR. NO.</b>
1. GENERAL .....	1.01-1.03
2. REQUIREMENTS AND ADJUSTING PROCEDURES .....	2.01-2.04
Governor	
Governor-brush spring .....	2.04
Governor contact .....	2.03
Governor-contact backstop .....	2.03
Motors	
Governed-motor positioning .....	2.03
Governed-motor-speed adjustment .....	2.04
Synchronous-motor positioning .....	2.02
3. REFERENCE TO BELL SYSTEM PRACTICES	

#### **1. GENERAL**

1.01 This section contains the requirements and adjusting procedures for motors and governors used in the 28 teletypewriter. The general teletypewriter requirements are given in Section P30.012.

**Caution:** The electric power should be disconnected before the apparatus is removed from its protective housing. Where operation of the apparatus, after its removal from the housing, is required, power should be applied with appropriate precautionary measures taken to prevent accident.

**MOTORS AND GOVERNORS**  
**28 TELETYPEWRITER**  
**REQUIRE-**  
**MENTS**  
**P34.004** **AND PRO-**  
**CEDURES**

1.02 This section is reissued to:

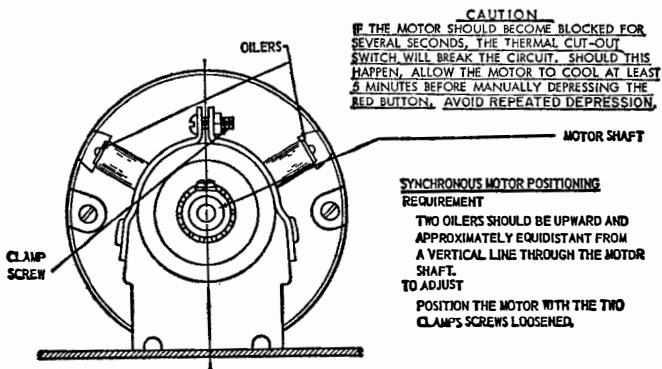
- (a) incorporate the addendum.
- (b) add to the caution in 2.02 the words on avoiding repeated depression of the red button.
- (c) revise 2.04 on the use of tuning forks.
- (d) add the reference to Bell System Practices.

1.03 Changes are indicated by marginal arrows.

## 2. REQUIREMENTS AND ADJUSTING PROCEDURES

2.01 The following figures show the adjusting tolerances, positions of moving parts, and spring tensions.

### 2.02 Synchronous Motor

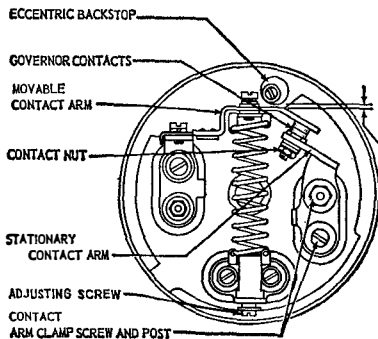


## 2.03 Governed Motor

### GOVERNED MOTOR POSITIONING

#### REQUIREMENT

MOTOR SHOULD BE CENTRALLY POSITIONED IN ITS RUBBERMOUNTS SO AS TO PROVIDE AT LEAST 0.020 INCH CLEARANCE BETWEEN THE MOTOR HOUSING AND THE CRADLE AT THE GOVERNOR END. THE CABLE SHOULD ALSO CLEAR THE GROMMET IN THE SCREEN BY AT LEAST 0.030 INCH.



### A. GOVERNOR CONTACT

#### REQUIREMENT

THE CONTACTS SHOULD MEET SQUARELY AND NOT OVERLAP MORE THAN 0.010 INCH.

#### TO ADJUST

POSITION THE STATIONARY CONTACT AND CONTACT ARM WITH THE CLAMP SCREW AND POST LOOSENED.

### B. GOVERNOR CONTACT BACKSTOP

#### REQUIREMENT

CLEARANCE BETWEEN THE MOVABLE CONTACT ARM AND ITS ECCENTRIC BACKSTOP.

MIN. 0.020 INCH

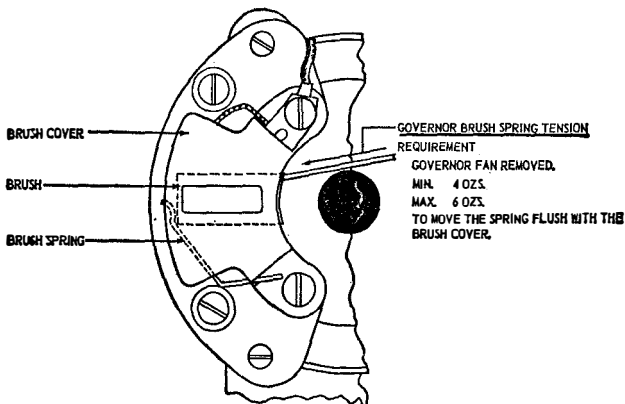
MAX. 0.040 INCH

#### TO ADJUST

ROTATE THE ECCENTRIC BACKSTOP WITH CLAMPING SCREW LOOSENED.

## 2.04 Motor Governor-brush and Motor Speed

7

GOVERNED MOTOR SPEED ADJUSTMENTREQUIREMENT

(PRELIMINARY SETTING) WITH THE TARGET ILLUMINATED AND VIEWED THROUGH THE VIBRATING SHUTTERS OF THE TPI03628 TUNING FORK (87.6 VPS), THE SPOTS ON THE 6-SPOT TARGET SHOULD APPEAR STATIONARY WHILE ROTATING.

(FINAL SETTING) NOW WITH THE SPEED SLIGHTLY INCREASED AND THE TARGET ILLUMINATED AND VIEWED THROUGH THE VIBRATING SHUTTERS OF THE FORK, THE SPOTS ON THE 35-SPOT TARGET SHOULD APPEAR STATIONARY WHILE ROTATING.

THE 4-SPOT TARGET IS FOR USE WITH A NON-BELL TUNING FORK (120 VPS).

TO ADJUST

STOP THE MOTOR AND TURN THE ADJUSTING SCREW AS INDICATED ON THE GOVERNOR COVER.

NOTE

IT IS POSSIBLE TO ADJUST THE MOTOR AT SOME MULTIPLE OF THE CORRECT SPEED. TO CHECK FOR CORRECT SPEED, HAVE THE TYPE BOX CARRIAGE AT THE LEFT MARGIN, SET UP ANY CHARACTER ON THE SELECTOR AND MANUALLY TRIP THE TYPE BOX CLUTCH TRIP LEVER. IF THE UNIT IS EQUIPPED WITH GEAR FOR 60 SPEED OPERATION, IT SHOULD PRINT 70 CHARACTERS IN 10 SECONDS; WITH 75 SPEED GEARS - 44 CHARACTERS IN 5 SECONDS; WITH 100 SPEED GEARS - 57 CHARACTERS IN 5 SECONDS.

## 3. REFERENCE TO BELL SYSTEM PRACTICES

Teletypewriter Apparatus, Speed Regulation

P30.020, J