## MOTOR UNITS

### ADJUSTMENTS

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2. MINIATURIZED SYNCHRONOUS MOTOR UNITS

2.01 Motor Positioning

(A) MOTOR POSITIONING

Requirement
Position motor so that leads are approx. 30° from center line with oil holes up.

To Adjust
With mounting strap screws loosened, rotate motor.

Note: If necessary, position bracket with bracket screws loosened.

(B) MOTOR GEAR

Requirement
Barely perceptible amount of backlash between the motor driving gear and the main shaft driven gear at the point where backlash is least.

To Adjust
Raise or lower the gear end of the motor by means of the adjusting studs with their lock nuts loosened.

CAUTION: IF THE MOTOR SHOULD BECOME BLOCKED FOR SEVERAL SECONDS, THE THERMOSTATIC CUTOUT SWITCH WILL OPEN THE CIRCUIT. SHOULD THIS HAPPEN, ALLOW MOTOR TO COOL AT LEAST 5 MINUTES BEFORE MANUALLY RESETTING THE SWITCH BY DEPRESSING THE RED BUTTON. AVOID REPEATED RESETTING.
2.02 Motor Shield

(FRONT VIEW)

(1) Requirement
Equal clearance between front and rear ends of motor and motor shield.

(TOP VIEW)

(2) Requirement
Clearance between motor shield and motor mounting bracket should be
Min 0.062 inch

To Adjust
Position motor shield with its mounting screws loosened.

MOTOR SHIELD (IF SO EQUIPPED)
2.03 Air Ducts and Capacitor Position

**AIR DUCTS (2) (IF SO EQUIPPED)**

**Requirement**
Equally spaced about exhaust ports. Top edge of ducts to be parallel with motor bracket.

**To Adjust**
Loosen mounting screws and position ducts.

**RELAY**

**NUT PLATE**

**NUT PLATE SCREW (2 PLS.)**

**CAPACITOR POSITION**

**Requirement**
Max 1/2 inch between motor bracket and end of capacitor.

**To Adjust**
Position relay and capacitor with motor removed from motor bracket and nut plate and clamp screws loosened.
3. STANDARD AND HEAVY DUTY SYNCHRONOUS MOTOR UNITS

3.01 Motor Positioning

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**MOTOR POSITIONING**

(1) **Requirement (Upright Mounted Motors)**
Oilers should be upward and approximately equidistant from a vertical line through motor shaft.

(2) **Requirement (Inverted Mounted Motors)**
Oilers should be downward and approximately equidistant from a vertical line through motor shaft.

To Adjust
Position motor with clamp screws (2) loosened.

**MOTOR ADJUSTING STUD (IF SO EQUIPPED)**

Requirement
Barely perceptible backlash between drive gear and driven gear at point where backlash is least.

To Adjust
With lock nut loosened, position adjusting stud. Tighten nut while holding stud in position.

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CAUTION: IF MOTOR BECOMES BLOCKED FOR SEVERAL SECONDS, THERMOSTATIC CUTOUT SWITCH (ON UNITS SO EQUIPPED) WILL BREAK CIRCUIT. SHOULD THIS HAPPEN, ALLOW MOTOR TO COOL AT LEAST 5 MINUTES BEFORE DEPRESSING RED RESET BUTTON. AVOID REPEATED RESETTING.
4. SERIES GOVERNED MOTOR UNITS

4.01 Motor Positioning and Governor

MOTOR POSITIONING (NOT ILLUSTRATED)

Requirement
Motor should be centrally positioned in its rubber mounts so as to provide at least 0.020 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 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.

(B) 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.

CAUTION: EXCESSIVE PRESSURE AGAINST GOVERNOR COVER ASSEMBLY DURING REMOVAL MAY DAMAGE SCREENED WINDOW.
4.02 Motor Governor

- Note: Replace governor brushes that have worn to a length of approximately 15/32 inch (2/3 of original length).

(B) MOTOR SPEED

Requirement
With target illuminated and viewed through the vibrating shutters of a 120 vps turning fork the spots on the 4-spot target should appear stationary while rotating. With target illuminated and viewed through the vibrating shutters of an 87.6 vps tuning fork the spots on the 6-spot target should appear stationary while rotating and with speed slightly increased the spots on the 35 spot target should appear stationary.

To Adjust
Stop the motor and turn the adjusting screw as indicated on governor cover. For units with screened governor covers, stop the motor, remove the TP152035 plug from cover. Turn adjusting screw as indicated on periphery of target.

Note: It is possible to adjust the motor at some multiple of the correct speed. To check motor speed when used with a page printer, return typebox carriage to left margin, set up any character in selector and manually trip typebox clutch trip lever. Printing should occur as follows:

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<td>70</td>
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