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MAINTENANCE INSTRUCTIONS SYMAT 50 OFFSET PIVOT GUIDE ELECTROMECHANICAL SERVO MOTOR AND TACHOMETER TEST

SYMAT 50 OFFSET PIVOT GUIDE ELECTROMECHANICAL SERVO MOTOR AND TACHOMETER TEST

General Information

1. MOTOR TEST

If all the correct voltage readings are present in the signal processor and the guide still fails to move the motor, the motor and cable should be checked.

REMOVE LINE POWER and disconnect the cable from the motor. With an ohmmeter, measure the resistance across the two motor brushes. There should be no more than 50 ohms and no less than 1 ohm. If the resistance is greater than 50 ohms, check the brushes for excessive wear or cracks. Replace as necessary. Visually inspect the armature through the brush holders.

If there is excessive buildup, replace the entire motor.

DO NOT attempt to disassembly the servo motor. If the resistance across the motor brushes is less than 1 ohm, replace the entire motor. If the motor checks good, check the cable for continuity and replace as necessary.

NOTE:

Tachometer and motor brushes are physically interchangeable, but are not electrically interchangeable.

2. TACHOMETER TEST

A. If the signal processor and motor seem to be operating correctly, but the guide is functioning unpredictably, then the tachometer may be faulty. Observe the system for the following symptoms:

- (1) Intermittent guiding shifts occur while in the AUTO mode.
- (2) The guide oscillates in the AUTO mode with the SENSITIVITY turned all the way down.
- (3) The guide traverses the full length of its stroke at high speed and reverses each time the guide reaches maximum stroke.

B. Locate and fix any loose, reversed, or broken connections in the tachometer cable assembly.

C. If there are no connection problems, then disconnect the cable at the tachometer and connect a voltmeter across the two tachometer

brushes. Turn the motor/tachometer using the JOG push buttons and check for a change in the voltage level displayed on the meter.

D. If there is no change in voltage, then measure the resistance across the tachometer brushes. The resistance should measure between 150 and 250 ohms for the 1.3 Amp motor. If the resistance is greater than 250 ohms (1.3 Amp motor) or less than 150 ohms (1.3 Amp motor), check the tachometer brushes for excessive wear or cracks. Replace as necessary. Visually inspect the armature through the brush holders. If there is excessive buildup, replace the entire motor/tachometer assembly.

E. Tachometer Rating:

1.3 Amp Motor : 3.25 V/1,000 rpm

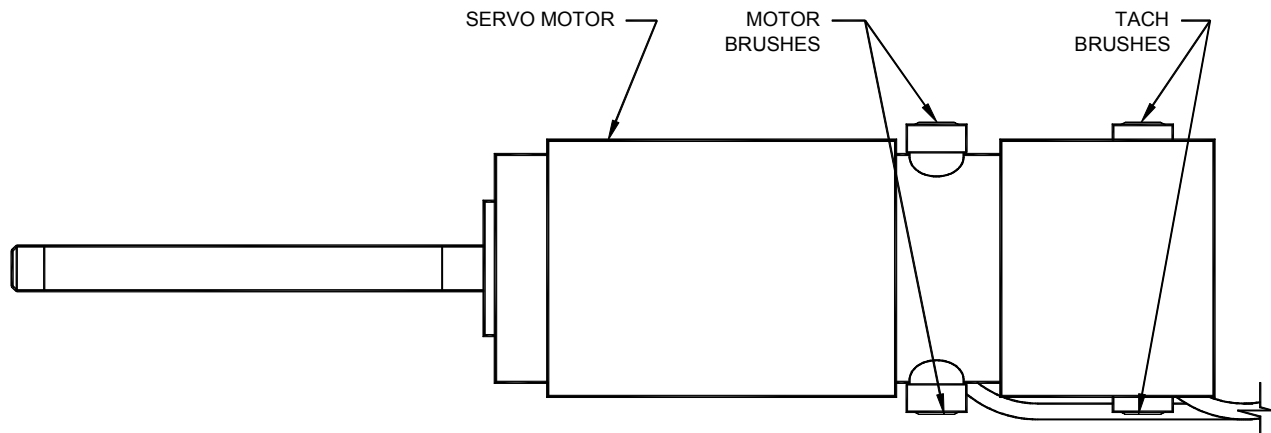


Figure 1.
SYMAT 50 OPG SERVO MOTOR