



LOCKED ROTOR STATE TEST FOR POWER GEAR® CONTROL BOXES

TI-266

STEPS

Purpose

This test will check for the Step Control Box being in the Locked Rotor State. This is when the Step Control Box does not send out voltage to the Step motor on the 2-wire motor plug.

Perform the testing of the 4-way connector in Kwikiee Step Control Testing Procedures, document # 82-ST0500, before proceeding with this test.

This TI affects the following Power Gear Control Boxes:

- 9090510000
- 909510001
- 1510000140
- 1510000158
- 1510000172

Resources

- Voltmeter

Instructions

Power Gear Documentation		
Document #	Manual #	Description
1422279	888	Electric Step Owner's Manual # 888
82-ST0501		Step Identification Guide Tip Sheet
82-0502		Removal and replacement of the step motor for 9010000462, 9010000464, 9010000465 and 9010000466 Revolution Series
30100002262		Owner's Manual for Revolution Series Steps with control boxes 1510000140 and 1510000172

Locked Rotor State

The control box provides operational power to start, stop and reverse the motor. Current sensing determines the end-of-cycle.

A secondary time-out feature stops the motor in the event that the Step Control Box does not reach and sustain the current limit.

After the Step Control current limits, or times out, the Step Control will electrically lock the motor's rotor. The Step Control Box will remain in the Locked Rotor State until the next Step Control actuation signal conditions are met.

Unlocking the Step Control Box From the Locked Rotor State

1. Unplug the 2-step Control plug from the motor.
2. Verify the Step Control Box's lockout switch is in the correct position (no voltage on the white wire) for this test. Verify voltage status by checking the white wire at the 4-way connector for voltage. If there is voltage, move the switch to the other position and recheck.
3. Using a voltmeter set on DC Voltage, check for voltage on the 2-pin Step Control plug that was unplugged in step 1. There will be voltage on the red lead and ground on the yellow lead during Step Extension (door open). This condition is reversed on Step Retraction (door closed).
4. Cycle the entry door open and closed a minimum of six cycles, pausing 3-5 seconds between each complete cycle. This gives the step control internal relays enough time to reset.
5. When voltage is detected on the 2-pin motor plug, the Step Control Box is now out of the Locked Rotor State. Plug the 2-pin Step Control plug back into the motor.

If after the six cycles there is still no voltage detected on the 2-pin connector, replace the Step Control Box.

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