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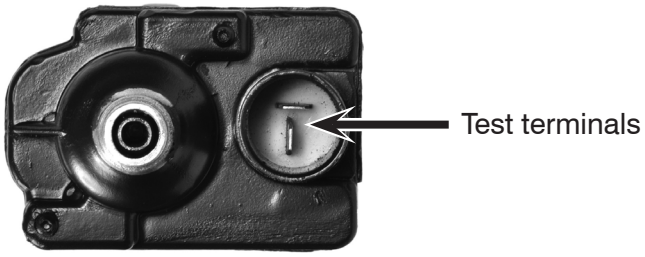
Bench Test for Case-Grounded Window Lift Motors

Application: Vehicles with electric windows using the following window motors: 42-11, 12, 13, 14, 15, 17, 18, 20.

Problem: Replacement motor seems to be shorted right out of the box.

Cause: Typical 2-terminal bench testing methods create a short, giving the appearance of a faulty motor.

Solution: Most 2-terminal or 2-wire motors are bench tested simply by applying positive and negative voltage to the respective terminals. If the motor runs in any direction and draws typically less then 5 amps (no load), it is a good motor. Because the motors listed above use the motor housing as a common ground, if power supply power and ground are applied directly to the terminals a short may result. Instead, for these motors, battery ground is applied to the housing, then +12 volts DC is applied to either terminal. When that circuit is completed, the motor should run continuously in one direction. Now put the +12 volts to the other terminal, the motor should run in the other direction.



Case-grounded Bench Test

Minimum power supply requirements: 12 volts DC, 5 amps. This test is performed with motor out of the vehicle.

1. Connect power supply ground (-12 VDC) to motor housing for all tests.
2. Connect +12 VDC to one motor terminal; the motor runs continuously in one direction.
3. Disconnect +12 VDC and connect to the other motor terminal. Motor now runs continuously in the other direction.
4. Disconnect wires. Test complete.

If motor passes bench test, check the vehicle wiring and switch. Check the window lift mechanizium for proper operation.

Note: This ProTech bulletin is supplied as technical information only and is not an authorization for repair.