

## Bob's Tip: DEM Controller Power Test

Understand, the Rear Differential Electronic control a/k/a computer Module (DEM) rarely fails. The pump or solenoid may fail, but not the circuit board. If your SCAN tool discloses that the vehicle's central processor cannot communicate with the DEM, it's a power or ground problem.

To eliminate a bad DEM module, use a multimeter to verify continuity between the haldex and the vehicle frame. No ground means power circuit is incomplete and the central processor cannot communicate with the DEM via the CAN bus. Solution is to remedy the ground problem.

Finding a ground, the problem is likely related to absence of power. To test for power, disconnect the 8 pin power/CAN bus connector and use a multimeter to verify B+ on pin 6. Understand, the central processing unit does not trip the relay to power the DEM unless engine speed is greater than 400 RPM.

A static power test with the ignition in the accessory position should show 0.0 volts and 13.5-14.0 volts at the connector with engine running. Finding 0.0 volts in both situations would prompt you to trace the electrical circuit backwards to check the fuse and relay in the rear fuse box and fuse in the main fuse box.

If the DEM does not work with power plus ground present, troubleshoot the CAN bus connector and/or replace the DEM with a known good unit and run the SCAN tool again to determine whether communication is present.

Volvo's DEM and all other wiring diagram can be found here:  
[https://qclt.com/html/volvo\\_ewd\\_us\\_eng/](https://qclt.com/html/volvo_ewd_us_eng/)

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