

a trailer		
The message center displays WIRING FAULT ON TRAILER	Refer to the Pinpoint Test	GO to Pinpoint Test C

DIAGNOSIS AND TESTING > AUXILIARY BRAKE SYSTEM - VEHICLES WITH: TRAILER BRAKE CONTROL > PINPOINT TESTS > PINPOINT TEST A : THE TRAILER BRAKES ARE INOPERATIVE



NOTE: Unless instructed otherwise, carry out all pinpoint tests **without** a trailer connected to the vehicle.

Refer to TRAILER/CAMPER ADAPTER for schematic and connector information.

Normal Operations and Fault Conditions

The braking energy provided to the trailer is modulated with a PWM signal which varies between 0 volt and battery voltage, according to the TBM gain setting, the higher the duty cycle the more braking power available. The TBM varies the PWM signal based on various inputs such as vehicle speed, the brake torque message, BPP switch input, the manual slider switch and the gain buttons. With the vehicle stationary and with the manual slider switch fully to the left with a gain of 10, there should be more than 11 volts supplied to the trailer tow connector. Without a trailer connected, the TBM sends a voltage pulse to the trailer tow connector every 4 seconds as a trailer connectivity test.

When the brake pedal is pressed, the normally-open BPP switch closes and sends voltage from BCM fuse 14 (10A) to BCM fuse 4 (5A). The voltage passes through the BCM fuse and continues to the TBM. The TBM receives additional information from the ABS module over the HS-CAN. If there is a problem in the ABS module preventing this information from being sent to the TBM, the TBM enters a limited operating mode. The TBM receives fused battery voltage from the BJB.

An open circuit or short to ground in the PWM signal circuit, an open or short to ground in the TBM BPP switch circuit, damaged or corroded connectors, open fuses, an internal failure of the TBM, an open or short to ground in the trailer wiring can all prevent the trailer brakes from operating.

The trailer brake system only works with electric-magnet actuated drum type brakes and electric over hydraulic brakes. If the trailer is equipped with a different style of brakes or if the trailer is not equipped with brakes, the system does not function.

Possible Sources

- Fuse
- Wiring, terminals or connectors
- TBM
- Trailer

Visual Inspection and Diagnostic Pre-checks

- Make sure BJB fuse 49 (30A) is OK.