Subject: ABS Failure - EBC-310

Vehicle Involved: 2001 Ford Ranger 4WD V6-3.0L 4WAL Kelsey Hayes ABS

Condition: ABS FAILURE: DTC C1095

Repair Procedure: PINPOINT TEST E

1. Check the ABS pump motor: Is the pump motor on constantly? If Yes, Install a new anti-lock brake control module. Clear the DTC’s and repeat the self-test.

2. If the pump motor is not running constantly, trigger the anti-lock brake control module active command “PMP MOTOR ON” with a by-directional scan-tool. Does the pump motor operate? If yes, clear the DTC. Check the yellow ABS warning indicator while driving the vehicle above 20 mph, and brakes not applied. If the yellow ABS warning light illuminates. Install a new anti-lock brake control module. Clear the codes and test-drive.

3. If the pump motor does not operate, connect a fused 50A jumper wire between the positive battery terminal and the red ABS pump motor terminal. Connect a jumper wire between the negative battery terminal and brown ABS pump motor terminal. Is the ABS pump motor running? No, install a new HCU, and repeat the self-test.

4. If yes using a DVOM measure the voltage between the pin 9, circuit 534 (YL/LG) and ground; and between pin 20, circuit 601 (LB/PK) and ground. Are the voltages greater than 10 volts? No: Repair the circuit in question, CLEAR the DTC’s and REPEAT the self-test.

5. If the voltage is greater then 10 volts, measure the resistance between pin 8 and circuit 57 (BK), and ground. Is the resistance less than 5 ohm? NO, repair the circuit and clear the DTC’s and repeat the self-test.

6. If yes, Install a new anti-lock brake control module, and repeat the self-test.
Anti-lock Brake Control Module

Note: The anti-lock brake control module is 4x2 and 4x4 specific. Do not interchange modules.

The anti-lock brake control module is mounted to the HCU. It is an onboard diagnostic, non-repairable unit consisting of two microprocessors and the necessary circuitry for their operation. The anti-lock brake control module monitors system operation during normal driving as well as during anti-lock braking.

Anti-lock brake operation is as follows:

Under normal driving conditions, the microprocessor produces short test pulses to the solenoid valves that check the electrical system without any mechanical reaction. Impending wheel lock conditions trigger signals from the anti-lock brake control module that open and close the appropriate solenoid valves. This results in moderate pulsation in the brake pedal.

The anti-lock brake module used in 4x4 applications includes a G-sensor. It detects vehicle movements during a brake lock up event that is transferred to other wheels through the powertrain.

During normal braking, the brake pedal feel will be identical to a standard brake system.

Most faults that occur in the anti-lock brake system will be stored as a Diagnostic Trouble Code (DTC) in the keep-alive memory of the anti-lock brake control module. The DTCs can be retrieved, by following the on-board diagnostic procedures.
CAUTION: Once the new module is installed, it is necessary to configure it using the scan tool. NOTE: When the battery is disconnected and reconnected, some abnormal drive symptoms may occur while the vehicle relearns its adaptive strategy. To install, reverse the removal procedure.