

## Code 67

A code 67 is generated when the ABS ECU detects the ABS Pump Motor has run when it was not called for, or if the ABS Pump Motor runs longer than it should during system prove-out.

### Description

Code 67 is generated by the ABS ECU's detection of an ABS Pump Motor Speed Sensor signal when the pump is not supposed to be running or if the ABS Pump Motor Runs longer than it should during system prove-out. The ABS ECU constantly monitors the voltage signal on pins 31 and 49 from the ABS Pump Motor Speed Sensor. If the ECU detects voltage on these pins but has not called for the ABS Pump Motor operation, a code 67 will be set and the ABS Indicator will be illuminated. Also, when the system is initially powered up and the vehicle reaches 19 MPH (7 MPH on 1992 and earlier Vehicles), the ABS ECU runs the pump motor momentarily and checks the Speed Sensor Voltage. If the ECU detects voltage on pins 31 and 49 after it has run the pump prove-out check, a Code 67 can be generated. A code due to this condition is usually caused by the pump motor taking too long to stop, usually a condition that exists with higher mileage vehicles in which the pump tolerances have opened slightly due to normal wear.

### Possible Contributing Conditions/ Vehicle Wiring Concerns

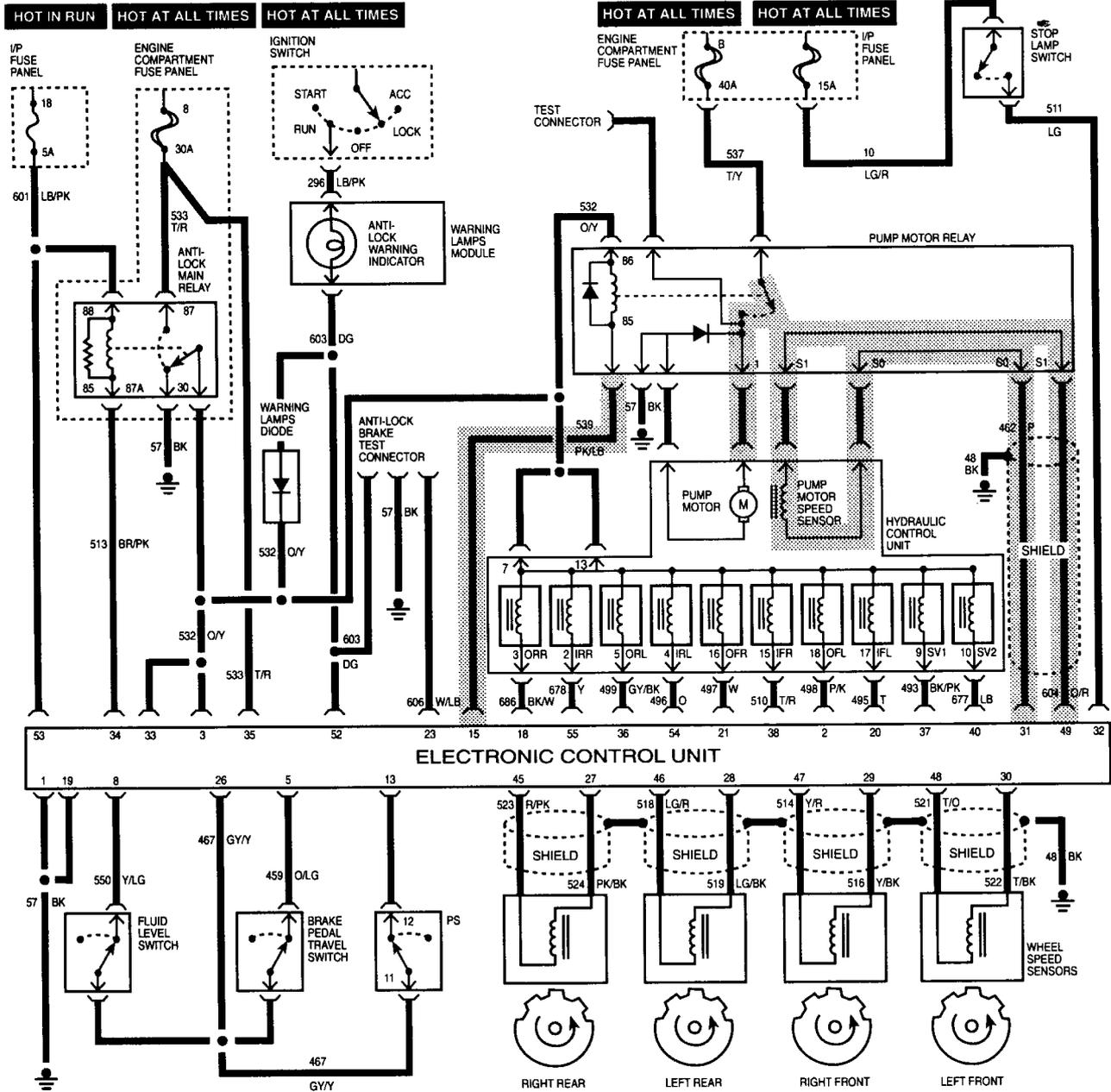
If a Code 67 is generated during Pump Motor prove-out check (19 mph on 1993 and later vehicles and 7 mph on 1992 and earlier vehicles) the possible cause of this condition is:

- The ABS Pump tolerances have opened slightly over time, thus allowing the motor to take longer to come to rest after the relay has been unlatched. The only fix for this condition is replacement of the ABS Pump Assembly.

The following tests should be performed for a code 67 if the ABS Lamp comes on immediately after the initial key cycle or while driving any time other than when the ABS ECU runs the Pump prove-out check at 19 mph (7 mph on 1992 and earlier vehicles). The EEC-IV breakout box and the ABS test adapter (T90P-50-ALA) should be installed and all tests done using a DVOM.

- Jumper pins 19 to 34, cycle ignition "ON", and check for the ABS Pump Motor operation. If the pump motor runs, a short to ground is present on the circuit between the ABS Pump Relay and pin 15 at the ECU.

# Code 67



**NOTE:** Refer to appropriate system schematic and/or EVTM for more detailed circuit number/color and connector numbers/locations, if necessary.

TEST STEP		RESULT	ACTION TO TAKE
67-1	<b>VERIFY PUMP MOTOR CONDITION</b> <ul style="list-style-type: none"> <li>Vehicle standing still.</li> <li>Check to see if pump runs with ignition in either ON or OFF position.</li> </ul>	Yes - pump runs with ignition OFF.	REPLACE pump motor relay. GO to 67-5.
	<ul style="list-style-type: none"> <li>Does pump run? (with ignition ON or OFF)</li> </ul>	Yes - pump runs only with ignition ON.	GO to 67-2.
		No	GO to 67-3.
67-2	<b>CHECK PUMP TRIGGER CIRCUIT FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Ignition OFF</li> <li>Install Rotunda Breakout Box 014-00322 or equivalent and T90P-50-ALA adapter.</li> <li>Check for continuity between Breakout Box Pins 15 + 60.</li> </ul>	Yes	REPAIR short to ground on circuit that runs from pump motor relay to ECU pin #15. GO to 67-5.
	<ul style="list-style-type: none"> <li>Is there continuity?</li> </ul>	No	GO to 67-4.
67-3	<b>CHECK FOR REPEATABILITY OF FAILURE</b> <ul style="list-style-type: none"> <li>NOTE: The system will run a self-check of the pump motor speed sensor the first time that vehicle speed reaches either 11 kph (7 mph) on 1990-1992 model years or 30 kph (19 mph) on 1993-1996 model years.</li> <li>Start vehicle and drive through the applicable pump check speed. Repeat this a few times. NOTE: You must stop the vehicle and turn the ignition OFF to repeat this check.</li> </ul>	Yes	REPLACE pump & motor assembly. GO to 67-5.
	<ul style="list-style-type: none"> <li>Does the ABS light come on each time the vehicle reaches the pump check speed and the ECU stores a code 67?</li> </ul>	No	GO to 67-4.
67-4	<b>FAULT FOR CODE 67 NOT PRESENT AT THIS TIME.</b> <b>WHICH OF THE FOLLOWING CONDITIONS EXIST?</b>		
	1.) ABS Light ON steady and no other codes exist. 2.) ABS Light ON steady with other DTC's present. 3.) ABS Light comes ON intermittently.		GO to Test NC-1. GO to Test for next DTC. GO to Intermittent Test Procedures.
67-5	<b>REPAIR VERIFICATION</b> <ul style="list-style-type: none"> <li>Verify that ABS Light is out.</li> <li>Run Self-Test to prepare ECU for DTC erasure.</li> <li>Test drive vehicle - DTC's will erase when vehicle speed reaches approximately 30 mph providing ABS Light does not come ON. Vehicle is repaired if light does not come ON and ABS performs correctly.</li> </ul>	Vehicle repaired.	Return vehicle to customer.
		ABS concern still exists. Which of the following concerns exist? 1.ABS Light ON steady and no other DTC's exist.	GO to Test NC-1.
		2.ABS Light ON and other DTC's present.	GO to Test for next DTC.
		3.ABS Light comes ON intermittently.	GO to Intermittent Test Procedures.
		4.ABS or TA false cycles.	GO to False Cycling Procedures.