

Symptom Driven Diagnosis

Blower Will Not Operate or Operates at Reduced Speed				
Test No.	Test	Test Procedure	Test Result	Action
1	Is fault 146 s010 02 or 200 s010 02 active?	—	Yes	See fault code tables, in Subject 340 , for diagnosis.
			No	Go to test no. 2.
2	Check power and ground.	Disconnect the blower motor connector. Turn ignition on. Check for voltage across pins 3 and 4 of the connector. NOTE: If system voltage is too high or too low, this may cause the blower motor to enter voltage protection mode. This will cause the blower to operate at reduced speed or stop working altogether.	12–17V (should be approx. battery voltage)	Go to test no. 3.
			0V	Check 30A blower motor fuse in PDM. Check blower motor power and ground circuits for open (circuits 98 and GND). Repair as necessary, then go to test no. 7.
			Less than 12V (not 0) or more than 17V	Blower has most likely entered voltage protection mode. Correct voltage problem as necessary, then go to test no. 7.
3	Check speed control signal at blower motor.	Disconnect the blower motor connector. Turn ignition on. Check voltage between connector pin 6 and ground while rotating the blower control switch from off to full speed. The voltage should be approximately 0V (off) to 5V+ (high).	Voltage full range (0–5V+)	Go to test no. 4.
			Voltage stays at 0V	Check speed control wire for open circuit between blower motor and FCU or ACU. If okay, check FCU/ACU. Repair/replace as necessary, then go to test no. 7.
4	Check for mechanical obstruction/locked rotor.	Remove the blower motor from the HVAC housing. Check for obstruction preventing blower from turning. Check if rotor spins freely by hand.	Obstruction	Remove obstruction as necessary, then go to test no. 7.
			Rotor locked	Replace blower motor, then go to test no. 7.
			Neither	Go to test no. 5.

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Heater and Air Conditioner, Blend Air System, Troubleshooting

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Test No.	Test	Test Procedure	Test Result	Action
5	Check voltage drop.	Remove the blower motor from the HVAC housing. Turn ignition on, set blower speed to high. Check voltage on the power and ground circuits by back-probing the blower motor connector. Check between the positive and negative battery posts. NOTE: High voltage drop may cause the blower motor to enter voltage protection mode. This will cause the blower to operate at reduced speed and, if severe enough, may stop the blower altogether.	Less than 0.2V	Go to test no. 6.
			More than 0.2V	Locate source of high resistance causing voltage drop. Repair as necessary then go to test no. 7.
6	Does the blower motor operate at all?	—	Yes	Check if blower motor feels hot and make sure there are no obstructions to airflow. If no obstructed airflow or blower feels hot, replace blower motor then go to test no. 7.
			No	Replace blower motor, then go to test no. 7.
7	Verify repair.	Verify that repair resolved the problem.	Problem resolved	Done
			Problem unresolved	Repeat test no. 1.

Table 12, Blower Will Not Operate or Operates at Reduced Speed

Diagnosis for Blower Speed is Not Available				
Test No.	Test	Test Procedure	Test Result	Action
1	Does blower operate at all?	—	Yes	Go to test no. 2.
			No	Perform the tests in Table 12.
2	Check feedback speed/diagnostic circuit.	Check for open or short circuit in blower motor feedback speed/diagnostic circuit between the blower motor and the FCU/ACU.	Circuit is open or shorted	Repair blower motor feedback speed/diagnostic circuit then, go to test no. 3.
			Circuit okay	Perform the tests in Table 12.
3	Verify repair.	Verify that repair resolved the problem.	Problem resolved	Done
			Problem unresolved	Repeat test no. 1.

Table 13, Diagnosis for Blower Speed is Not Available