

Step	Procedure	Result / Action to Take
5	<ul style="list-style-type: none"> <li>• Final Procedure</li> <li>• Perform a road test to verify repair.</li> </ul> <p>– Does the original DTC return?</p>	<p>– YES:</p> <ul style="list-style-type: none"> <li>◆ CHECK: Engine Control Module - J623- harness connector for any damaged, pushed-out pins.</li> <li>◆ REPAIR: As necessary.</li> <li>◆ If all electrical connections are OK:</li> <li>◆ REPLACE: Engine Control Module - J623- . Refer to appropriate repair manual.</li> <li>◆ Clear the DTC's. Refer to <a href="#">⇒ "3.3.4 Diagnostic Mode 04 - Erase DTC Memory", page 29</a> .</li> <li>◆ Repair is complete. Generate Readiness Code. Refer to <a href="#">⇒ "3.2 Readiness Code", page 21</a> .</li> <li>◆ Return vehicle to Customer.</li> </ul> <p>– NO:</p> <ul style="list-style-type: none"> <li>◆ Perform the diagnostic procedure for any DTC's.</li> <li>◆ If no DTC's return the repair is complete.</li> <li>◆ Return vehicle to customer.</li> </ul>

### 3.6.22 Intake Manifold Runner Control Valve - N316- , Checking

#### General Description

The intake manifold runner valve(s) are mounted on a common shaft and actuated by a vacuum cell. The partial vacuum required for actuation is supplied by the Intake Manifold Runner Control Valve - N316- . The Engine Control Module - J623- activates the Intake Manifold Runner Control Valve - N316- on the basis of a characteristic map.

#### Special tools and workshop equipment required

- ◆ Multimeter.
- ◆ Wiring Diagram.
- ◆ Scan Tool.

#### Test requirements

- Fuses OK.
- Battery voltage OK.
- Switch OFF All electrical and electronic accessories.
- Vehicles with Auto. Transmission, ensure Selector Lever position is in "P".
- Vehicles with Manual Transmission, ensure Shifter Lever position is in "N" with Parking Brake applied.
- Coolant Temperature:  $\geq 80^{\circ}$  C.
- Observe all safety precautions:  
[⇒ "1.1 Safety Precautions", page 2](#) .
- View clean working conditions:  
[⇒ "1.2 Clean Working Conditions", page 3](#) .

- For Hybrid vehicles refer to:  
⇒ ["1.3 High Voltage System General Warnings", page 4](#) .

### Test Procedure

Step	Procedure	Result / Action to Take
1	<ul style="list-style-type: none"> <li>• PERFORM: Preliminary Check to verify the customers complaint. Refer to ⇒ <a href="#">"3.1 Preliminary Check", page 20</a> .</li> <li>– Was Complaint verified?</li> </ul>	<ul style="list-style-type: none"> <li>– YES: ◆ GO TO: Step 2 ⇒ <a href="#">page 239</a> .</li> <li>– NO: ◆ GATHER more information from customer about the complaint.</li> </ul>
2	<ul style="list-style-type: none"> <li>• IGNITION: OFF.</li> <li>• DISCONNECT: Intake Manifold Runner Control Valve - N316- harness connector.</li> <li>• CHECK: Intake Manifold Runner Control Valve - N316- component connector terminals 1 to 2 for resistance.</li> <li>• SPECIFIED VALUE: 5 – 35 Ω (@ approx. 20° C).</li> <li>– Was Value obtained?</li> </ul>	<ul style="list-style-type: none"> <li>– YES: ◆ GO TO: Step 3 ⇒ <a href="#">page 239</a> .</li> <li>– NO: ◆ REPLACE: Intake Manifold Runner Control Valve - N316- . Refer to appropriate repair manual.</li> <li>◆ GO TO: Step 5 ⇒ <a href="#">page 240</a> .</li> </ul>
3	<ul style="list-style-type: none"> <li>• IGNITION: ON.</li> <li>• CHECK: Intake Manifold Runner Control Valve - N316- harness connector terminal 2 to ground for voltage.</li> <li>• SPECIFIED VALUE: Battery voltage.</li> <li>• IGNITION: OFF.</li> <li>– Was Value obtained?</li> </ul>	<ul style="list-style-type: none"> <li>– YES: ◆ GO TO: Step 4 ⇒ <a href="#">page 239</a> .</li> <li>– NO: ◆ PERFORM: Visual Inspection of wiring and component.</li> <li>◆ CHECK: Wiring for open, high resistance, short or harness connector for damage, corrosion, loose or broken terminals.</li> <li>◆ REPAIR: Faulty wiring or connector.</li> <li>◆ GO TO: Step 5 ⇒ <a href="#">page 240</a> .</li> </ul>
4	<ul style="list-style-type: none"> <li>• REMOVE: Engine Control Module - J623- . Refer to appropriate repair manual.</li> <li>• CHECK: Intake Manifold Runner Control Valve - N316- harness connector terminal 1 to the Engine Control Module - J623- harness connector T60 / 36 for resistance.</li> <li>• SPECIFIED VALUE: 0.5 Ω (± 0.3 Ω).</li> <li>– Was Value obtained?</li> </ul>	<ul style="list-style-type: none"> <li>– YES: ◆ TIP: The Intake Manifold Runner Control Valve - N316- may fail under loaded operation; please swap a known good Intake Manifold Runner Control Valve - N316- prior to continuing to the next step.</li> <li>◆ GO TO: Step 5 ⇒ <a href="#">page 240</a> .</li> <li>– NO: ◆ PERFORM: Visual Inspection of wiring and component.</li> <li>◆ CHECK: Wiring for open, high resistance, short or harness connector for damage, corrosion, loose or broken terminals.</li> <li>◆ REPAIR: Faulty wiring or connector.</li> <li>◆ GO TO: Step 5 ⇒ <a href="#">page 240</a> .</li> </ul>



Step	Procedure	Result / Action to Take
5	<ul style="list-style-type: none"> <li>• Final Procedure</li> <li>• Perform a road test to verify repair.</li> </ul> <p>– Does the original DTC return?</p>	<p>– YES:</p> <ul style="list-style-type: none"> <li>◆ CHECK: Engine Control Module - J623- harness connector for any damaged, pushed-out pins.</li> <li>◆ REPAIR: As necessary.</li> <li>◆ If all electrical connections are OK:</li> <li>◆ REPLACE: Engine Control Module - J623- . Refer to appropriate repair manual.</li> <li>◆ Clear the DTC's. Refer to <a href="#">⇒ "3.3.4 Diagnostic Mode 04 - Erase DTC Memory", page 29</a> .</li> <li>◆ Repair is complete. Generate Readiness Code. Refer to <a href="#">⇒ "3.2 Readiness Code", page 21</a> .</li> <li>◆ Return vehicle to Customer.</li> </ul> <p>– NO:</p> <ul style="list-style-type: none"> <li>◆ Perform the diagnostic procedure for any DTC's.</li> <li>◆ If no DTC's return the repair is complete.</li> <li>◆ Return vehicle to customer.</li> </ul>

### 3.6.23 Intake Manifold Runner Position Sensor - G336- , Checking

#### General Description

The Intake Manifold Runner Position Sensor - G336- monitors the position of the intake manifold runner flaps. These flaps can be adjusted open or closed to provide longer or shorter intake runners depending on ambient conditions to increase engine efficiency.

#### Special tools and workshop equipment required

- ◆ Multimeter.
- ◆ Wiring Diagram.
- ◆ Scan Tool.

#### Test requirements

- Fuses OK.
- Battery voltage OK.
- Switch OFF All electrical and electronic accessories.
- Vehicles with Auto. Transmission, ensure Selector Lever position is in "P".
- Vehicles with Manual Transmission, ensure Shifter Lever position is in "N" with Parking Brake applied.
- Coolant Temperature:  $\geq 80^{\circ}$  C.
- Observe all safety precautions: [⇒ "1.1 Safety Precautions", page 2](#) .
- View clean working conditions: [⇒ "1.2 Clean Working Conditions", page 3](#) .