

## **SYMPTOMS - REAR WHEEL STEERING SYSTEM**

**IMPORTANT:** The following steps must be completed before using the symptom tables:

- 1. Perform the Rear Wheel Steering Diagnostic System Check before using the symptom tables in order to verify that the following conditions are true:**
  - DTCs are not set.
  - The control modules can communicate via the serial data link.
- 2. Review the system description and operation in order to familiarize yourself with the system functions. Refer to Rear Wheel Steering Description and Operation.**

### **Visual/Physical Inspection**

- Inspect for aftermarket devices which could affect the operation of the Rear Wheel Steering System. Refer to **Checking Aftermarket Accessories** in Wiring Systems.
- Inspect the easily accessible or visible system components for obvious damage or conditions which could cause the symptom.

### **Intermittent**

Faulty electrical connections or wiring may be the cause of intermittent conditions. Refer **Testing for Intermittent Conditions and Poor Connections** in Wiring Systems.

### **Symptom List**

Refer to a symptom diagnostic procedure from the following list in order to diagnose the symptom:

- **One or Multiple Rear Wheel Steering Mode Switch Indicators Inoperative**
- **One or Multiple Rear Wheel Steering Mode Switch Indicators Always On**

# ONE OR MULTIPLE REAR WHEEL STEERING MODE SWITCH INDICATORS INOPERATIVE

## Circuit Description

The rear wheel steering control module controls the ground circuit of each mode indicator individually. The lamps all share a single common input from the interior lights dimming circuit.

## Diagnostic Aids

Inspect all connections at the rear wheel steering control module and the rear wheel steering mode select switch for loose or damaged terminals or damaged wiring. Use of the Rear Wheel Steering Diagnostic System Check will help ensure there are not other conditions or DTCs.

## Test Description

The numbers below refer to the step numbers in the diagnostic table.

**2:** This step verifies that there are no other lighting concerns

**3:** This step will verify the operation of the mode lamps and the Rear Wheel Steering systems ability to change mode of operation.

## One or Multiple Rear Wheel Steering Mode Switch Indicators Inoperative

Step	Action	Yes	No
<b>Schematic Reference: <u>Rear Wheel Steering Schematics</u></b> <b>Connector End View Reference: <u>Rear Wheel Steering Connector End Views</u> in Rear Wheel Steering</b>			
1	Did you perform the Diagnostic System Check - Vehicle?	Go to <b>Step 2</b>	Go to <b><u>Diagnostic System Check - Vehicle</u></b> in Vehicle DTC Information
2	Are all other lighting systems operating properly?	Go to <b>Step 3</b>	Go to <b><u>Diagnostic System Check - Vehicle</u></b> in Vehicle DTC Information
3	1. Turn the ignition switch to the ON position. 2. Operate the rear wheel steering mode select switch while observing the mode indicator lamps.  Do the mode indicator lamps turn on/off as expected?	Go to <b><u>Testing for Intermittent Conditions and Poor Connections</u></b> in Wiring Systems	Go to <b>Step 4</b>

4	<ol style="list-style-type: none"> <li>1. Disconnect the rear wheel steering mode select switch.</li> <li>2. Turn the ignition switch to the ON position.</li> <li>3. Using the scan tool, actuate the affected indicator control circuit.</li> <li>4. Test for a ground signal at the affected indicator control circuit at the rear wheel steering mode select switch connector.</li> </ol> <p>Is a ground signal present?</p>	Go to <b>Step 6</b>	Go to <b>Step 5</b>
5	<p>Test the affected indicator control circuit for an open, high resistance or short to voltage. Refer to <b><u>Circuit Testing</u></b> and <b><u>Circuit Testing</u></b> in Wiring Systems.</p> <p>Did you find and correct a condition?</p>	Go to <b>Step 11</b>	Go to <b>Step 8</b>
6	<p>Test the four wheel steering mode indicator LED dimming signal circuit for an open or high resistance. Refer to <b><u>Circuit Testing</u></b> and <b><u>Wiring Repairs</u></b> in Wiring Systems.</p> <p>Did you find and correct a condition?</p>	Go to <b>Step 11</b>	Go to <b>Step 7</b>
7	<p>Inspect for poor connections at the harness connector of the four wheel steering mode select switch. Refer to <b><u>Circuit Testing</u></b> and <b><u>Wiring Repairs</u></b> in Wiring Systems.</p> <p>Did you find and correct the condition?</p>	Go to <b>Step 11</b>	Go to <b>Step 9</b>
8	<p>Inspect for poor connections at the harness connector of the rear wheel steering control module. Refer to <b><u>Circuit Testing</u></b> and <b><u>Wiring Repairs</u></b> in Wiring Systems.</p> <p>Did you find and correct the condition?</p>	Go to <b>Step 11</b>	Go to <b>Step 10</b>
9	<p>Replace the rear wheel steering mode select switch. Refer to <b><u>Rear Wheel Steering Mode Switch Replacement</u></b>.</p> <p>Did you complete the replacement?</p>	Go to <b>Step 11</b>	-
10	<p>Replace the rear wheel steering control module. Refer to <b><u>Control Module References</u></b> in Computer/Integrating Systems for replacement, setup, and programming.</p> <p>Did you complete the replacement?</p>	Go to <b>Step 11</b>	-
11	<ol style="list-style-type: none"> <li>1. Use the scan tool to clear any DTCs.</li> <li>2. Operate the system in order to verify the repair.</li> </ol> <p>Did you correct the condition?</p>	System OK	Go to <b>Step 3</b>

# ONE OR MULTIPLE REAR WHEEL STEERING MODE SWITCH INDICATORS ALWAYS ON

## Circuit Description

The rear wheel steering control module controls the ground circuit of each mode indicator lamp individually. The lamps all share a single common input from the interior lights dimming circuit.

## Diagnostic Aids

Inspect all connections at the rear wheel steering control module and the rear wheel steering mode select switch for loose or damaged terminals or damaged wiring. Use of the Rear Wheel Steering Diagnostic System Check will help ensure there are not other conditions or DTCs.

## Test Description

The numbers below refer to the step numbers in the diagnostic table.

**2:** This step verifies that there are no other lighting concerns.

**3:** This step will verify the operation of the mode lamps and the Rear Wheel Steering systems ability to change mode of operation.

## One or Multiple Rear Wheel Steering Mode Switch Indicators Always On

Step	Action	Yes	No
<b>Schematic Reference:</b> <u>Rear Wheel Steering Schematics</u> <b>Connector End View Reference:</b> <u>Rear Wheel Steering Connector End Views</u> in Rear Wheel Steering			
1	Did you perform the Diagnostic System Check - Vehicle?	Go to <b>Step 2</b>	Go to <b><u>Diagnostic System Check - Vehicle</u></b> in Vehicle DTC Information
2	Are all other lighting systems operating properly?	Go to <b>Step 3</b>	Go to <b><u>Diagnostic System Check - Vehicle</u></b> in Vehicle DTC Information
3	1. Turn the ignition switch to the ON position. 2. Operate the rear wheel steering mode select switch while observing the mode indicator lamps.  Do the indicators turn on/off as expected?	Go to <b><u>Testing for Intermittent Conditions and Poor Connections</u></b> in Wiring Systems	Go to <b>Step 4</b>

4	<ol style="list-style-type: none"> <li>1. Disconnect the rear wheel steering mode select switch.</li> <li>2. Test for a ground signal at the affected indicator control circuit at the rear wheel steering mode select switch connector.</li> </ol> <p>Is a ground signal present?</p>	Go to <b>Step 5</b>	Go to <b>Step 6</b>
5	<p>Test the affected indicator control circuit for a short to ground. Refer to <b><u>Circuit Testing</u></b> and <b><u>Wiring Repairs</u></b> in Wiring Systems.</p> <p>Did you find and correct the condition?</p>	Go to <b>Step 10</b>	Go to <b>Step 7</b>
6	<p>Inspect for poor connections at the harness connector of the Rear Wheel Steering Mode Select switch. Refer to <b><u>Circuit Testing</u></b> and <b><u>Wiring Repairs</u></b> in Wiring Systems.</p> <p>Did you find and correct the condition?</p>	Go to <b>Step 10</b>	Go to <b>Step 8</b>
7	<p>Inspect for poor connections at the harness connector of the rear wheel steering control module. Refer to <b><u>Circuit Testing</u></b> and <b><u>Wiring Repairs</u></b> in Wiring Systems.</p> <p>Did you find and correct the condition?</p>	Go to <b>Step 10</b>	Go to <b>Step 9</b>
8	<p>Replace the rear wheel steering mode select switch. Refer to <b><u>Rear Wheel Steering Mode Switch Replacement</u></b>.</p> <p>Did you complete the replacement?</p>	Go to <b>Step 10</b>	-
9	<p>Replace the rear wheel steering control module. Refer to <b><u>Control Module References</u></b> in Computer/Integrating Systems for replacement, setup, and programming.</p> <p>Did you complete the replacement?</p>	Go to <b>Step 10</b>	-
10	<ol style="list-style-type: none"> <li>1. Use the scan tool to clear any DTCs.</li> <li>2. Operate the system in order to verify the repair.</li> </ol> <p>Did you correct the condition?</p>	System OK	Go to <b>Step 3</b>