08–03 SYMPTOM TROUBLESHOOTING

AIR BAG SYSTEM WIRING DIAGRAM

NO.1 AIR BAG SYSTEM WARNING
LIGHT DOES NOT ILLUMINATE WHEN IGNITION SWITCH IS TURND TO ON POSITION

NO.2 AIR BAG SYSTEM WARNING LIGHT ILLUMINATES IMMEDIATELY AFTER IGNITION SWITCH IS TURND TO ON POSITION AND REMAINS ILLUMINATED

TROUBLESHOOTING INDEX

08–03 SYMPTOM TROUBLESHOOTING

AIR BAG SYSTEM WIRING DIAGRAM
FOREWORD

• Thoroughly read and understand the basic flow of troubleshooting in order to properly perform the procedures.
  (See 00–00–5 Troubleshooting Procedure.)
• Use the following flowchart to verify the cause of the trouble.

Flowchart

Note

• While performing the inspection of the past malfunction code, the applicable DTCs may be added to memory by removing or disconnecting the related parts. Inspect only the DTCs that were indicated before inspecting.
• When DTCs of present malfunction are no longer output after present and/or past malfunctions have been repaired, be sure to perform past malfunction display cancellation to prevent repair of malfunctions that have already been repaired.
SYMPTOM TROUBLESHOOTING

START

Turn ignition switch to ON position. Does air bag system warning light illuminate for approximately 6 seconds and then go off?

Yes

Confirm malfunction symptom, then troubleshoot warning light circuit of applicable malfunction, referring to TROUBLESHOOTING INDEX.

No

Measure voltage at DLC terminal SOC. Is voltage more than 3 V?

Yes

Turn ignition switch to LOCK position. Disconnect negative battery cable and wait for more than 1 minute. Remove left side side wall. Disconnect all SAS control module connectors. Connect negative battery cable. Turn ignition switch to ON position. Measure voltage at DLC terminal SOC. Is voltage approximately 12 V?

Yes

Repair or replace wiring harness between DLC terminal SOC and SAS control module connector terminal 3K.

No

[Present malfunction] Inspect DTC one by one starting from the smallest code, referring to DTC TABLE.

No

[Present malfunction] Inspect all DTCs starting from the smallest code. However, if an inspection item for a part that has already been repaired appears during the inspection, finish the inspection for that DTC at that point in time, referring to DTC TABLE.

Yes

Perform past malfunction code display cancellation, referring to FOREWORD.

No

Using jumper wire, short DLC terminal SOC to body GND, turn ignition switch to ON position. Will DTC be displayed?

Yes

Using jumper wire, short DLC terminal SOC to body GND, turn ignition switch to ON position, and perform past malfunction diagnosis. Will DTC be displayed?

No

Disconnect end of jumper wire connected to body GND to open DLC terminal SOC, and turn ignition switch to ON position. Shake related applicable wiring harnesses of applicable malfunctions. Will DTC be displayed?

No

For DTCs that are same as DTCs displayed in past malfunction diagnosis, go to YES.

Yes

For DTCs that are not displayed but were displayed in past malfunction diagnosis, go to NO.

No

END
SYMPTOM TROUBLESHOOTING

TROUBLESHOOTING INDEX

- Use the chart below to verify the symptoms of the trouble in order to diagnose the appropriate area.

<table>
<thead>
<tr>
<th>No.</th>
<th>Malfunction symptom</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Air bag system warning light does not illuminate when ignition switch is turned to ON position.</td>
<td>Malfunction in air bag system warning circuit (open circuit or short to power supply).</td>
<td>(See 08–03–4 NO.1 AIR BAG SYSTEM WARNING LIGHT DOES NOT ILLUMINATE WHENIGNITION SWITCH IS TURNED TO ON POSITION)</td>
</tr>
<tr>
<td>2</td>
<td>Air bag system warning light illuminates immediately after ignition switch is turned to ON position and remains illuminated.</td>
<td>Malfunction in air bag system warning circuit (short to ground).</td>
<td>(See 08–03–6 NO.2 AIR BAG SYSTEM WARNING LIGHT ILLUMINATES IMMEDIATELY AFTERignITION SWITCH IS TURNED TO ON POSITION AND REMAINS ILLUMINATED)</td>
</tr>
</tbody>
</table>

Note

- The following may be the cause of trouble if the symptom does not go away after the symptom troubleshooting steps are followed.
  - Simultaneous poor contact at short connector terminals B and P between METER 10 A fuse and SAS control module, and between ENGINE 10 A fuse and SAS control module.
  - Simultaneous poor contact at SAS control module connector terminals 2T and 2Q.
  - Simultaneous poor contact at SAS control module connector terminals 2E and 2H.
  - Poor contacts in wiring harness between SAS control module connector terminal 2T and ground, and between SAS control module connector terminal 2Q and ground at the same time.
  - Poor contacts or short circuits in wiring harness between METER 10 A fuse and SAS control module, and between ENGINE 10 A fuse and SAS control module at the same time.

NO.1 AIR BAG SYSTEM WARNING LIGHT DOES NOT ILLUMINATE WHEN IGNITION SWITCH IS TURNED TO ON POSITION

<table>
<thead>
<tr>
<th>No.</th>
<th>Malfunction symptom</th>
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</tr>
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<tbody>
<tr>
<td>1</td>
<td>Air bag system warning light does not illuminate when ignition switch is turned to ON position.</td>
<td>Malfunction in air bag system warning light circuit — Instrument cluster (print plate) malfunction — Air bag system warning light bulb malfunction — Poor contact in instrument cluster connector — Open or short circuit in wiring harness between instrument cluster and SAS control module — SAS control module malfunction</td>
</tr>
</tbody>
</table>

Note

- When inserting insulator between SAS control module connector terminals and short bar, insert it as shown in the figure.

- When performing an asterisked(*) troubleshooting inspection, shake the wiring harness and connectors while doing the inspection to discover the poor contact points which may be the cause of intermittent malfunctions.
- If there is a problem, check to make sure connectors, terminals and wiring harness are connected correctly and undamaged.

08–03–4
**SYMPTOM TROUBLESHOOTING**

### Diagnostic procedure

<table>
<thead>
<tr>
<th>STEP</th>
<th>INSPECTION</th>
<th>ACTION</th>
</tr>
</thead>
</table>
| 1    | **INSPECT OTHER WARNING AND INDICATOR LIGHTS CIRCUIT IN INSTRUMENT CLUSTER**  
   • Turn ignition switch to ON position.  
   • Do other warning and indicator lights illuminate? | **Yes** Turn ignition switch to LOCK position, then go to next step.  
   **No** Inspect instrument cluster power supply system and ground system, then go to Step 6. |
| 2    | **INSPECT AIR BAG SYSTEM WARNING LIGHT BULB**  
   • Disconnect negative battery cable.  
   • Remove instrument cluster.  
   (See 09–22–3 INSTRUMENT CLUSTER REMOVAL/INSTALLATION)  
   • Is air bag system warning light bulb functional? | **Yes** Reinstall it properly, then go to next step.  
   **No** Replace bulb, then go to Step 6. |
| * 3  | **INSPECT WIRING HARNESS BETWEEN SAS CONTROL MODULE AND INSTRUMENT CLUSTER FOR CONTINUITY**  
   **Warning**  
   • Handling air bag system components improperly can accidentally deploy air bag modules and pre-tensioner seat belts, which may seriously injure you.  
   Read AIR BAG SYSTEM SERVICE WARNINGS before handling air bag system components.  
   (See 08–10–3 AIR BAG SYSTEM SERVICE WARNINGS)  
   • Remove column cover.  
   • Disconnect clock spring connector.  
   • Remove glove compartment.  
   • Disconnect passenger-side air bag module connector.  
   • Disconnect driver- and passenger-side side air bag module connectors. (Vehicles with side air bag)  
   • Remove B-pillar trims.  
   • Disconnect driver- and passenger-side pre-tensioner seat belt connectors.  
   • Remove left side side wall.  
   • Disconnect all SAS control module connectors.  
   • Is there continuity between SAS control module connector terminal 2W and instrument cluster connector terminal 1R? | **Yes** Go to next step.  
   **No** Replace wiring harness, then go to Step 6. |
| * 4  | **INSPECT WIRING HARNESS BETWEEN SAS CONTROL MODULE AND INSTRUMENT CLUSTER FOR SHORT TO POWER SUPPLY**  
   **Caution**  
   • Be sure not to cause damage to short bar when inserting insulator. If short bar is damaged, you may not be able to properly inspect connection of SAS control module connector.  
   • Insert insulator between SAS control module connector terminals 2W and 2T so short bar cannot function.  
   • Turn ignition switch to ON position.  
   • Measure voltage at instrument cluster connector terminal 1R.  
   • Is voltage more than approximately 9 V? | **Yes** Replace wiring harness, then go to Step 6.  
   **No** Go to next step. |
# SYMPTOM TROUBLESHOOTING

<table>
<thead>
<tr>
<th>STEP</th>
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<tbody>
<tr>
<td>5</td>
<td>VERIFY WHETHER MALFUNCTION IS IN PRINT PLATE IN INSTRUMENT CLUSTER</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>• Is there continuity between terminals 1J and 1R of print plate on instrument cluster?</td>
<td>No</td>
</tr>
<tr>
<td>6</td>
<td>VERIFY WHETHER MALFUNCTION SYMPTOM OCCURS AFTER REPAIR OR NOT</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>• Connect all SAS control module connectors.</td>
<td>No</td>
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<td></td>
<td>• Connect driver- and passenger-side pretensioner seat belt connectors.</td>
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<td></td>
<td>• Connect driver- and passenger-side side air bag module connectors. (Vehicles with side air bag)</td>
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<td>• Connect passenger-side air bag module connector.</td>
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<td></td>
<td>• Connect clock spring connector.</td>
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<td></td>
<td>• Connect instrument cluster connector.</td>
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<td></td>
<td>• Connect negative battery cable.</td>
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<td></td>
<td>• Turn ignition switch to ON position.</td>
<td></td>
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<tr>
<td></td>
<td>• Does air bag system warning light operate properly?</td>
<td></td>
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**TROUBLESHOOTING HINTS**

- Malfunction in air bag system warning light circuit
  - Instrument cluster (print plate) malfunction
  - Malfunction of short bar between SAS control module connector terminals 2W and 2T
  - No connection in SAS control module connector
  - Short circuit in wiring harness between instrument cluster and SAS control module
  - SAS control module malfunction

**Note**

- When inserting insulator between SAS control module connector terminals and short bar, insert it as shown in the figure.

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- When performing an asterisked(*) troubleshooting inspection, shake the wiring harness and connectors while doing the inspection to discover the poor contact points which may be the cause of intermittent malfunctions.
- If there is a problem, check to make sure connectors, terminals and wiring harness are connected correctly and undamaged.
### SYMPTOM TROUBLESHOOTING

#### Diagnostic procedure

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<tr>
<td>1</td>
<td><strong>VERIFY THAT SAS CONTROL MODULE CONNECTOR IS CONNECTED</strong>&lt;br&gt;Warning&lt;br&gt;• Handling air bag system components improperly can accidentally deploy air bag modules and pre-tensioner seat belts, which may seriously injure you. Read AIR BAG SYSTEM SERVICE WARNINGS before handling air bag system components.&lt;br&gt;(See 08–10–3 AIR BAG SYSTEM SERVICE WARNINGS)&lt;br&gt;• Turn ignition switch to LOCK position.&lt;br&gt;• Disconnect negative battery cable and wait for more than 1 minute.&lt;br&gt;• Remove left side side wall.&lt;br&gt;• Are all SAS control module connectors securely connected?</td>
<td>Yes: Go to next step.&lt;br&gt;No: Reconnect connector properly, then go to Step 6.</td>
</tr>
<tr>
<td>2</td>
<td><strong>INSPECT SAS CONTROL MODULE TERMINALS 2W AND 2T</strong>&lt;br&gt;• Remove column cover.&lt;br&gt;• Disconnect clock spring connector.&lt;br&gt;• Remove glove compartment.&lt;br&gt;• Disconnect passenger-side air bag module connector.&lt;br&gt;• Disconnect driver- and passenger-side side air bag module connectors. (Vehicles with side air bag)&lt;br&gt;• Remove B-pillar trims.&lt;br&gt;• Disconnect driver- and passenger-side pre-tensioner seat belt connectors.&lt;br&gt;• Disconnect all SAS control module connectors.&lt;br&gt;• Is short bar between SAS control module connector terminals 2W and 2T bent?</td>
<td>Yes: Replace wiring harness, then go to Step 6.&lt;br&gt;No: Go to next step.</td>
</tr>
<tr>
<td>3</td>
<td><strong>INSPECT SHORT BAR HOOK OF SAS CONTROL MODULE</strong>&lt;br&gt;• Is short bar hook of SAS control module okay?</td>
<td>Yes: Go to next step.&lt;br&gt;No: Replace SAS control module, then go to Step 6.&lt;br&gt;(See 08–10–12 SAS CONTROL MODULE REMOVAL/INSTALLATION)</td>
</tr>
<tr>
<td>4</td>
<td><strong>INSPECT WIRING HARNESS BETWEEN SAS CONTROL MODULE AND INSTRUMENT CLUSTER FOR SHORT TO GROUND</strong>&lt;br&gt;• Remove instrument cluster.&lt;br&gt;(See 09–22–3 INSTRUMENT CLUSTER REMOVAL/INSTALLATION)&lt;br&gt;Caution&lt;br&gt;• Be sure not to cause damage to short bar when inserting insulator. If short bar is damaged, you may not be able to properly inspect connection of SAS control module connector.&lt;br&gt;• Insert insulator between SAS control module connector terminals 2W and 2T so short bar cannot function.&lt;br&gt;• Is there continuity between SAS (control module) connector terminal 2W and ground?</td>
<td>Yes: Replace wiring harness, then go to Step 6.&lt;br&gt;No: Go to next step.</td>
</tr>
<tr>
<td>5</td>
<td><strong>INSPECT FOR SHORT TO GROUND IN INSTRUMENT CLUSTER CIRCUIT</strong>&lt;br&gt;• Is there continuity between terminal 1R and any of following terminals of print plate on instrument cluster?&lt;br&gt;--- Terminal 1D&lt;br&gt;--- Terminal 1A&lt;br&gt;--- Terminal 2B (Without ABS or ABS/TCS)</td>
<td>Yes: Replace instrument cluster, then go to next step.&lt;br&gt;(See 09–22–3 INSTRUMENT CLUSTER REMOVAL/INSTALLATION)&lt;br&gt;No: Replace SAS control module, then go to next step.&lt;br&gt;(See 08–10–12 SAS CONTROL MODULE REMOVAL/INSTALLATION)</td>
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</tr>
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<td>6</td>
<td>VERIFY WHETHER MALFUNCTION SYMPTOM OCCURS AFTER REPAIR OR NOT</td>
<td>Yes: Complete troubleshooting, then explain repairs to customer.</td>
</tr>
<tr>
<td></td>
<td>• Connect all SAS control module connectors.</td>
<td>No: Recheck malfunction symptoms, then repeat from Step 1 if malfunction recurs.</td>
</tr>
<tr>
<td></td>
<td>• Connect driver- and passenger-side pre-tensioner seat belt connectors.</td>
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