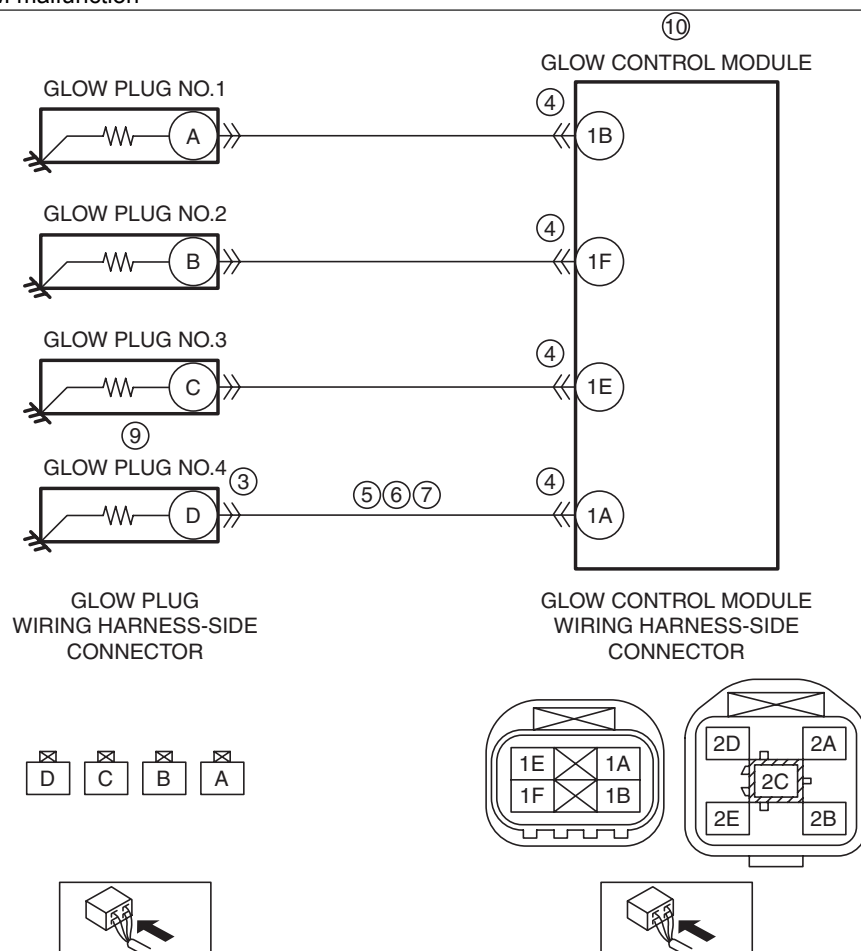


|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DTC<br/>P0674:00</b>        | <b>Glow plug No.4 control circuit problem</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>DETECTION<br/>CONDITION</b> | <ul style="list-style-type: none"> <li>• If the input voltage is <b>below 5 V</b> for <b>5 s</b>, the PCM determines that the glow plug No.4 circuit problem.</li> </ul> <p><b>MONITORING CONDITIONS</b></p> <ul style="list-style-type: none"> <li>— Battery voltage: <b>8—20 V</b></li> <li>— Detects that the output duty value of the glow plug is <b>10 to 90 %</b> for <b>1 s or more</b>.</li> </ul> <p><b>Diagnostic support note</b></p> <ul style="list-style-type: none"> <li>• This is a continuous monitor (CCM).</li> <li>• The check engine light illuminates if the PCM detects the above malfunction condition during the first drive cycle.</li> <li>• FREEZE FRAME DATA (Mode 2)/Snapshot data is available.</li> <li>• DTC is stored in the PCM memory.</li> </ul> |
| <b>FAIL-SAFE<br/>FUNCTION</b>  | <ul style="list-style-type: none"> <li>• Inhibits engine-stop by operating the i-stop function.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>POSSIBLE<br/>CAUSE</b>      | <ul style="list-style-type: none"> <li>• Glow plug No.4 connector or terminals malfunction</li> <li>• Glow control module connector or terminals malfunction</li> <li>• Open circuit in wiring harness between glow plug No.4 terminal D and glow control module terminal 1A</li> <li>• Short to ground in wiring harness between glow plug No.4 terminal D and glow control module terminal 1A</li> <li>• Short to power supply in wiring harness between glow plug No.4 terminal D and glow control module terminal 1A</li> <li>• PCM connector or terminals malfunction</li> <li>• Glow plug No.4 malfunction</li> <li>• Glow control module malfunction</li> <li>• PCM malfunction</li> </ul>                                                                                      |



## Diagnostic Procedure

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                |     | ACTION                                                                                                                                |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>VERIFY FREEZE FRAME DATA (MODE 2)/<br/>SNAPSHOT DATA HAS BEEN RECORDED</b> <ul style="list-style-type: none"> <li>Has the FREEZE FRAME DATA (Mode 2)/ snapshot data been recorded?</li> </ul>                                                                                                                                                                                          | Yes | Go to the next step.                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No  | Record the FREEZE FRAME DATA (Mode 2)/snapshot data on the repair order, then go to the next step.                                    |
| 2    | <b>VERIFY RELATED SERVICE INFORMATION<br/>AVAILABILITY</b> <ul style="list-style-type: none"> <li>Verify related Service Information availability.</li> <li>Is any related Service Information available?</li> </ul>                                                                                                                                                                      | Yes | Perform repair or diagnosis according to the available Service Information.<br>• If the vehicle is not repaired, go to the next step. |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No  | Go to the next step.                                                                                                                  |
| 3    | <b>INSPECT GLOW PLUG NO.4 CONNECTOR<br/>CONDITION</b> <ul style="list-style-type: none"> <li>Switch the ignition off.</li> <li>Disconnect the glow plug No.4 connector.</li> <li>Inspect for poor connection (such as damaged/ pulled-out pins, corrosion).</li> <li>Is there any malfunction?</li> </ul>                                                                                 | Yes | Repair or replace the connector and/or terminals, then go to Step 11.                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No  | Go to the next step.                                                                                                                  |
| 4    | <b>INSPECT GLOW CONTROL MODULE<br/>CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Disconnect the glow control module connector.</li> <li>Inspect for poor connection (such as damaged/ pulled-out pins, corrosion).</li> <li>Is there any malfunction?</li> </ul>                                                                                                         | Yes | Repair or replace the connector and/or terminals, then go to Step 11.                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No  | Go to the next step.                                                                                                                  |
| 5    | <b>INSPECT GLOW PLUG NO.4 CONTROL<br/>CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>Verify that the glow plug No.4 and glow control module connectors are disconnected.</li> <li>Inspect for continuity between glow plug No.4 terminal D (wiring harness-side) and glow control module terminal 1A (wiring harness-side).</li> <li>Is there continuity?</li> </ul> | Yes | Go to the next step.                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No  | Repair or replace the wiring harness for a possible open circuit, then go to Step 11.                                                 |
| 6    | <b>INSPECT GLOW PLUG NO.4 CONTROL<br/>CIRCUIT FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>Verify that the glow plug No.4 and glow control module connectors are disconnected.</li> <li>Inspect for continuity between glow plug No.4 terminal D (wiring harness-side) and body ground.</li> <li>Is there continuity?</li> </ul>                                        | Yes | Repair or replace the wiring harness for a possible short to ground, then go to Step 11.                                              |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No  | Go to the next step.                                                                                                                  |
| 7    | <b>INSPECT GLOW PLUG NO.4 CONTROL<br/>CIRCUIT FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>Verify that the glow plug No.4 and glow control module connectors are disconnected.</li> <li>Switch the ignition ON (engine off).</li> <li>Measure the voltage at the glow plug No.4 terminal D (wiring harness-side).</li> <li>Is the voltage 0 V?</li> </ul>         | Yes | Go to the next step.                                                                                                                  |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No  | Repair or replace the wiring harness for a possible short to power supply, then go to Step 11.                                        |
| 8    | <b>INSPECT PCM CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>Switch the ignition off.</li> <li>Disconnect the PCM connector.</li> <li>Inspect for poor connection (such as damaged/ pulled-out pins, corrosion).</li> <li>Is there any malfunction?</li> </ul>                                                                                                           | Yes | Repair or replace the connector and/or terminals, then go to Step 11.                                                                 |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No  | Go to the next step.                                                                                                                  |
| 9    | <b>INSPECT GLOW PLUG NO.4</b> <ul style="list-style-type: none"> <li>Inspect the glow plug No.4.<br/>(See GLOW PLUG INSPECTION [SKYACTIV-D 2.2].)</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                                                           | Yes | Replace the glow plug No.4, then go to Step 11.<br>(See GLOW PLUG REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)                             |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No  | Go to the next step.                                                                                                                  |
| 10   | <b>INSPECT GLOW CONTROL MODULE</b> <ul style="list-style-type: none"> <li>Inspect the glow control module.<br/>(See GLOW PLUG CONTROL MODULE REMOVAL/ INSPECTION [SKYACTIV-D 2.2].)</li> <li>Is there any malfunction?</li> </ul>                                                                                                                                                         | Yes | Replace the glow control module, then go to the next step.<br>(See GLOW PLUG CONTROL MODULE REMOVAL/ INSTALLATION [SKYACTIV-D 2.2].)  |
|      |                                                                                                                                                                                                                                                                                                                                                                                           | No  | Go to the next step.                                                                                                                  |

| STEP | INSPECTION                                                                                                                                                                                                                                                                                                                                                                                            | ACTION |                                                                                                                                                                 |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11   | <b>VERIFY DTC TROUBLESHOOTING COMPLETED</b> <ul style="list-style-type: none"> <li>• Always reconnect all disconnected connectors.</li> <li>• Clear the DTC from the PCM memory using the M-MDS.<br/>(See AFTER REPAIR PROCEDURE [SKYACTIV-D 2.2].)</li> <li>• Perform the DTC Reading Procedure.<br/>(See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].)</li> <li>• Is the same DTC present?</li> </ul> | Yes    | Repeat the inspection from Step 1.<br>• If the malfunction recurs, replace the PCM.<br>(See PCM REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)<br>Go to the next step. |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     | Go to the next step.                                                                                                                                            |
| 12   | <b>VERIFY AFTER REPAIR PROCEDURE</b> <ul style="list-style-type: none"> <li>• Perform the "AFTER REPAIR PROCEDURE".<br/>(See AFTER REPAIR PROCEDURE [SKYACTIV-D 2.2].)</li> <li>• Are any DTCs present?</li> </ul>                                                                                                                                                                                    | Yes    | Go to the applicable DTC inspection.<br>(See DTC TABLE [SKYACTIV-D 2.2].)                                                                                       |
|      |                                                                                                                                                                                                                                                                                                                                                                                                       | No     | DTC troubleshooting completed.                                                                                                                                  |