

Diagnostic Procedure

| Diagnostic Procedure |  |     |  |  |  |
|----------------------|--|-----|--|--|--|
| STEP                 | INSPECTION   |     | ACTION   |  |  |
| 1                    | VERIFY FREEZE FRAME DATA (MODE 2)/   | Yes | Go to the next step.   |  |  |
|                      | SNAPSHOT DATA HAS BEEN RECORDED  | No  | Record the FREEZE FRAME DATA (Mode 2)/snapshot data          |  |  |
|                      | Has the FREEZE FRAME DATA (Mode 2)/  |     | on the repair order, then go to the next step.               |  |  |
|                      | snapshot data been recorded?   |     |  |  |  |
| 2                    | VERIFY RELATED SERVICE INFORMATION   | Yes | Perform repair or diagnosis according to the available       |  |  |
|                      | AVAILABILITY   |     | Service Information.   |  |  |
|                      | Verify related Service Information availability.   |     | If the vehicle is not repaired, go to the next step.         |  |  |
|                      | Is any related Service Information available?  | No  | Go to the next step.   |  |  |
| 3                    | INSPECT FUEL PUMP CONTROL MODULE   | Yes | Repair or replace the connector and/or terminals, then go to |  |  |
|                      | CONNECTOR CONDITION  |     | Step 8.  |  |  |
|                      | Switch the ignition to off.  | No  | Go to the next step.   |  |  |
|                      | Disconnect the fuel pump control module  |     |  |  |  |
|                      | connector.   |     |  |  |  |
|                      | <ul> <li>Inspect for poor connection (such as damaged/<br/>pulled-out pins, corrosion).</li> </ul> |     |  |  |  |
|                      | Is there any malfunction?  |     |  |  |  |

| STEP     | INSPECTION  |           | ACTION   |
|----------|---|-----------|--|
| 4        | INSPECT FUEL PUMP CONTROL MODULE                              | Yes       | If the short to ground circuit could be detected in the wiring                 |
|          | SIGNAL CIRCUIT FOR SHORT TO GROUND                            |           | harness:   |
|          | Verify that the fuel pump control module connector            |           | Repair or replace the wiring harness for a possible short to                   |
|          | is disconnected.  |           | ground.  |
|          | Inspect for continuity between fuel pump control              |           | If the short to ground circuit could not be detected in the                    |
|          | module terminal 1A (wiring harness-side) and                  |           | wiring harness:  |
|          | body ground.  |           | Replace the PCM (short to ground in the PCM internal                           |
|          | Is there continuity?  |           | circuit).  |
|          |   |           | (See PCM REMOVAL/INSTALLATION [SKYACTIV-G                                      |
|          |   |           | 2.0].)   |
|          |   |           | Go to Step 8.  |
| <u> </u> |   | No        | Go to the next step.   |
| 5        | INSPECT PCM CONNECTOR CONDITION                               | Yes       | Repair or replace the connector and/or terminals, then go to                   |
|          | Disconnect the PCM connector.                                 |           | Step 8.  |
|          | Inspect for poor connection (such as damaged/                 | No        | Go to the next step.   |
|          | pulled-out pins, corrosion).                                  |           |  |
| 6        | • Is there any malfunction?  INSPECT FUEL PUMP CONTROL MODULE | Voo       | Co to the next sten  |
| 0        | SIGNAL CIRCUIT FOR OPEN CIRCUIT                               | Yes<br>No | Go to the next step.  Repair or replace the wiring harness for a possible open |
|          | Verify that the fuel pump control module and PCM              | INO       | circuit, then go to Step 8.  |
|          | connectors are disconnected.                                  |           | circuit, then go to step o.  |
|          | Inspect for continuity between fuel pump control              |           |  |
|          | module terminal 1A (wiring harness-side) and                  |           |  |
|          | PCM terminal 2AM (wiring harness-side).                       |           |  |
|          | • Is there continuity?  |           |  |
| 7        | INSPECT FUEL PUMP CONTROL MODULE                              | Yes       | Replace the fuel pump control module, then go to the next                      |
|          | Reconnect all disconnected connectors.                        |           | step.  |
|          | Inspect the fuel pump control module.                         |           | (See FUEL PUMP CONTROL MODULE REMOVAL/   |
|          | (See FUEL PUMP CONTROL MODULE                                 |           | INSTALLATION [SKYACTIV-G 2.0].)  |
|          | INSPECTION [SKYACTIV-G 2.0].)                                 | No        | Go to the next step.   |
|          | Is there any malfunction?                                     |           |  |
| 8        | VERIFY DTC TROUBLESHOOTING                                    | Yes       | Repeat the inspection from Step 1.   |
|          | COMPLETED   |           | • If the malfunction recurs, replace the PCM.                                  |
|          | Make sure to reconnect all disconnected                       |           | (See PCM REMOVAL/INSTALLATION [SKYACTIV-G                                      |
|          | connectors.   |           | 2.0].)   |
|          | Clear the DTC from the PCM memory using the                   | Nia       | Go to the next step.   |
|          | M-MDS.<br>(See AFTER REPAIR PROCEDURE                         | No        | Go to the next step.   |
|          | [SKYACTIV-G 2.0].)  |           |  |
|          | Perform the KOEO or KOER self test.                           |           |  |
|          | (See KOEO/KOER SELF TEST [SKYACTIV-G                          |           |  |
|          | 2.0].)  |           |  |
|          | • Is the same DTC present?                                    |           |  |
| 9        | VERIFY AFTER REPAIR PROCEDURE                                 | Yes       | Go to the applicable DTC inspection.   |
| -        | Perform the "AFTER REPAIR PROCEDURE".                         |           | (See DTC TABLE [SKYACTIV-G 2.0].)  |
|          | (See AFTER REPAIR PROCEDURE                                   | No        | DTC troubleshooting completed.   |
|          | SKYACTIV-G 2.0].)   |           |  |
|          | Are any DTCs present?   |           |  |