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## 2016 MAZDA 5 / Premacy OEM Service and Repair Workshop Manual

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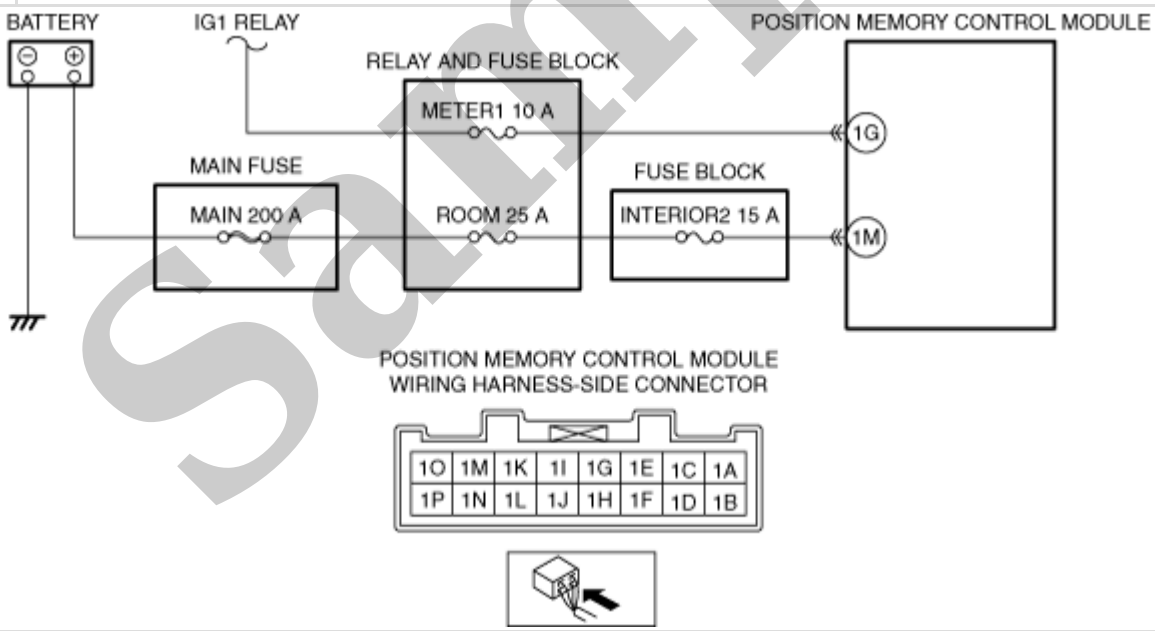
# DTC U3003:16 [POSITION MEMORY CONTROL MODULE]

SM2898906

id0902o796960

| | |
|---|---|
| **Description** | **Position memory control module (front seat) power supply voltage low input** |
| Detection condition | • Position memory control module (front seat) detects the following conditions:<br>— Position memory control module (front seat) power supply circuit (terminal 1M) voltage of 9 V or less is detected.<br>— Position memory control module (front seat) power supply circuit (terminal 1G) voltage of 6.5 V or more, 9V or less is detected for 10 s or more. |
| Fail-safe | Not applicable |
| Possible cause | • DTCs are stored in the PCM.<br>• Battery malfunction<br>• Generator malfunction<br>• Position memory control module (front seat) connector or terminal malfunction<br>• Position memory control module (front seat) power supply circuit (terminals 1G and 1M) malfunction.<br>— IG1 relay–Position memory control module (front seat) terminal 1G<br>— Battery positive terminal–Position memory control module (front seat) terminal 1M<br>• Front seat malfunction<br>— Position memory control module (front seat) malfunction |






## Diagnostic Procedure

| Step | Inspection | | Action |
|---|---|---|---|
| 7 | VERIFY IF OTHER DTCs DISPLAYED<br>• Are any other DTCs displayed? | Yes | Repair or replace the malfunctioning part according to the applicable DTC troubleshooting.<br>(See DTC TABLE [POSITION MEMORY CONTROL MODULE].) |
| | | No | DTC troubleshooting completed. |

| Step | Inspection | | Action |
|---|---|---|---|
| 3 | **INSPECT LIFT MOTOR AND POSITION SENSOR CIRCUIT FOR SHORT TO GROUND**<br>• Verify that the lift motor and position sensor and position memory control module (front seat) connectors are disconnected.<br>• Inspect for continuity between the following terminals (wiring harness-side) and body ground:<br>— Lift motor and position sensor terminal A<br>— Lift motor and position sensor terminal B<br>— Lift motor and position sensor terminal C<br>— Lift motor and position sensor terminal D<br>• Is there continuity? | Yes | Refer to the wiring diagram and verify whether or not there is a common connector between the following terminals:<br>• Position memory control module (front seat) terminal 3E–Lift motor and position sensor termina A<br>• Position memory control module (front seat) terminal 3F–Lift motor and position sensor termina B<br>• Position memory control module (front seat) terminal 3M–Lift motor and position sensor terminal C<br>• Position memory control module (front seat) terminal 3N–Lift motor and position sensor terminal D<br>**If there is a common connector:**<br>• Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to ground.<br>• Repair or replace the malfunctioning part.<br>**If there is no common connector:**<br>• Repair or replace the wiring harness which has a short to ground.<br>Go to Step 9. |
| | | No | Go to the next step. |
| 4 | **INSPECT LIFT MOTOR AND POSITION SENSOR CIRCUIT FOR SHORT TO POWER SUPPLY**<br>• Verify that the lift motor and position sensor and position memory control module (front seat) connectors are disconnected.<br>• Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)<br>• Switch the ignition ON (engine off or on).<br>• Measure the voltage at the following terminals (wiring harness-side):<br>— Lift motor and position sensor terminal A<br>— Lift motor and position sensor terminal B<br>— Lift motor and position sensor terminal C<br>— Lift motor and position sensor terminal D<br>• Is the voltage 0 V? | Yes | Go to the next step. |
| | | No | Refer to the wiring diagram and verify whether or not there is a common connector between the following terminals:<br>• Position memory control module (front seat) terminal 3E–Lift motor and position sensor termina A<br>• Position memory control module (front seat) terminal 3F–Lift motor and position sensor termina B<br>• Position memory control module (front seat) terminal 3M–Lift motor and position sensor terminal C<br>• Position memory control module (front seat) terminal 3N–Lift motor and position sensor terminal D<br>**If there is a common connector:**<br>• Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to power supply.<br>• Repair or replace the malfunctioning part.<br>**If there is no common connector:**<br>• Repair or replace the wiring harness which has a short to power supply.<br>Go to Step 9. |

# DTC B1B89:13 [POSITION MEMORY CONTROL MODULE]

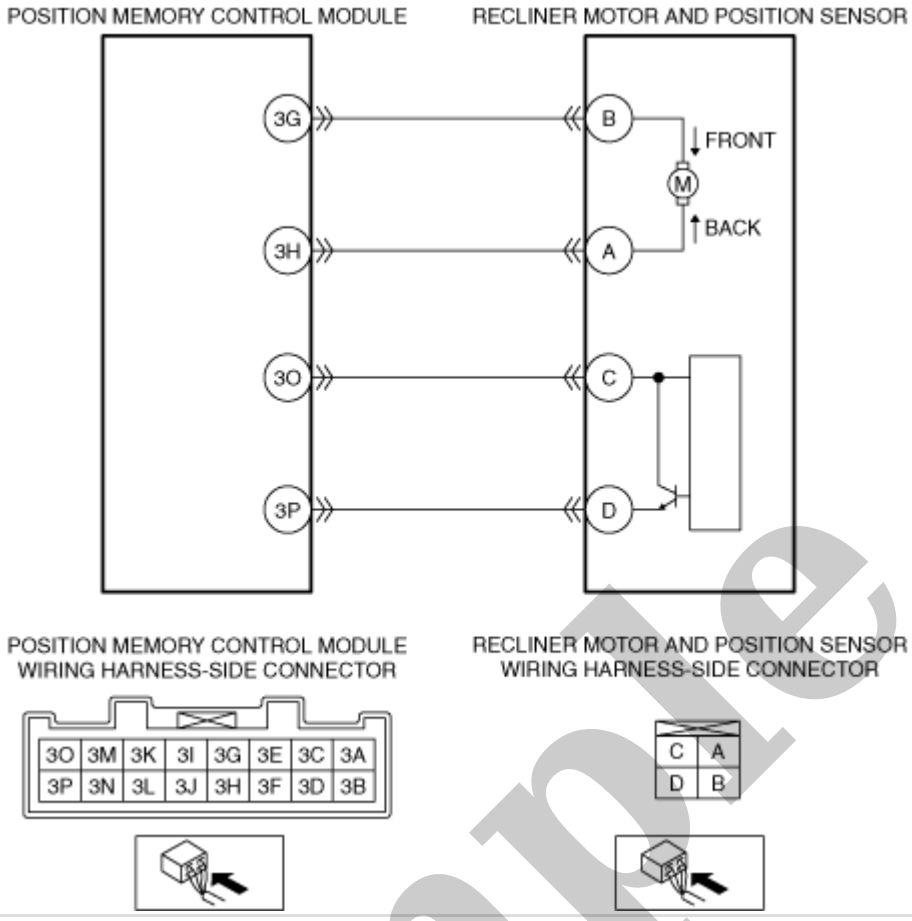
SM2898908

id0902o799860

| Description | Slide motor and position sensor circuit malfunction |
|---|---|
| Detection condition | • Position memory control module (front seat) detects the following conditions during the slide motor operation control:<br>— Detects 4 times that current flowing to the slide motor is less than 1 A.<br>— Detects for 0.2 s that there is no change in the slide sensor pulse.<br>• Position memory control module (front seat) detects any of the following conditions during the slide motor not operation control:<br>— Detects 4 times that current flowing to the slide motor exceeds 10 A.<br>— Detects 4 times that current flowing to the slide motor exceeds 1 A and a change in the slide sensor pulse 5 times within 1 s.<br>• Position memory control module (front seat) detects for 5 s that there is no change in the slide sensor pulse during the slide motor operation control. |
| Fail-safe | • Memory clearing:<br>— If there is a malfunction in the slide position sensor, clear all the memory positions.<br>• Memory seat positioning using position memory switch and remote transmitter:<br>— If there is a malfunction in the slide position sensor, inhibits all memory seat positioning.<br>— If there is a malfunction in the slide motor, inhibits slide motor seat positioning.<br>• Slide motor seat positioning using power seat switch:<br>— If there is a malfunction in the slide motor, inhibits slide motor seat positioning.<br>• Memory registration using position memory switch and remote transmitter:<br>— If there is a malfunction in the slide position sensor, inhibits the memory registration.<br>— If there is a malfunction in the slide motor and the malfunction is caused by short circuit, inhibits the memory registration. |
| Possible cause | • Slide motor and position sensor connector or terminal malfunction<br>• Position memory control module (front seat) connector or terminal malfunction<br>• Short to ground in wiring harness between the following terminals:<br>— Position memory control module (front seat) terminal 3A–Slide motor and position sensor terminal D<br>— Position memory control module (front seat) terminal 3B–Slide motor and position sensor terminal B<br>— Position memory control module (front seat) terminal 3I–Slide motor and position sensor terminal F<br>— Position memory control module (front seat) terminal 3J–Slide motor and position sensor terminal H<br>• Short to power supply in wiring harness between the following terminals:<br>— Position memory control module (front seat) terminal 3A–Slide motor and position sensor terminal D<br>— Position memory control module (front seat) terminal 3B–Slide motor and position sensor terminal B<br>— Position memory control module (front seat) terminal 3I–Slide motor and position sensor terminal F<br>— Position memory control module (front seat) terminal 3J–Slide motor and position sensor terminal H<br>• Open circuit in wiring harness between the following terminals:<br>— Position memory control module (front seat) terminal 3A–Slide motor and position sensor terminal D<br>— Position memory control module (front seat) terminal 3B–Slide motor and position sensor terminal B<br>— Position memory control module (front seat) terminal 3I–Slide motor and position sensor terminal F<br>— Position memory control module (front seat) terminal 3J–Slide motor and position sensor terminal H<br>• Front seat malfunction<br>— Slide motor and position sensor malfunction<br>• Position memory control module (front seat) malfunction |

| Step | Inspection | | Action |
|---|---|---|---|
| 5 | **INSPECT SLIDE MOTOR AND POSITION SENSOR CIRCUIT FOR OPEN CIRCUIT**<br>• Switch the ignition off.<br>• Disconnect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)<br>• Verify that the slide motor and position sensor and position memory control module (front seat) connectors are disconnected.<br>• Inspect for continuity between the following terminals (wiring harness-side):<br>— Position memory control module (front seat) terminal 3A–Slide motor and position sensor terminal D<br>— Position memory control module (front seat) terminal 3B–Slide motor and position sensor terminal B<br>— Position memory control module (front seat) terminal 3I–Slide motor and position sensor terminal F<br>— Position memory control module (front seat) terminal 3J–Slide motor and position sensor terminal H<br>• Is there continuity? | Yes | Go to the next step. |
| | | No | Refer to the wiring diagram and verify whether or not there is a common connector between the following terminals:<br>• Position memory control module (front seat) terminal 3A–Slide motor and position sensor terminal D<br>• Position memory control module (front seat) terminal 3B–Slide motor and position sensor terminal B<br>• Position memory control module (front seat) terminal 3I–Slide motor and position sensor terminal F<br>• Position memory control module (front seat) terminal 3J–Slide motor and position sensor terminal H<br>**If there is a common connector:**<br>• Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for an open circuit.<br>• Repair or replace the malfunctioning part.<br>**If there is no common connector:**<br>• Repair or replace the wiring harness which has an open circuit.<br>Go to Step 9. |
| 6 | **INSPECT SLIDE MOTOR**<br>• Inspect the slide motor. (See SLIDE MOTOR INSPECTION.)<br>• Is the slide motor normal? | Yes | Go to the next step. |
| | | No | Replace the front seat, then go to Step 9.<br>(See FRONT SEAT REMOVAL/INSTALLATION.) |
| 7 | **INSPECT POSITION MEMORY CONTROL MODULE (FRONT SEAT)**<br>• Inspect the position memory control module (front seat). (See POSITION MEMORY CONTROL MODULE INSPECTION.)<br>• Is the position memory control module (front seat) normal? | Yes | Go to the next step. |
| | | No | Replace the position memory control module (front seat), then go to Step 9.<br>(See POSITION MEMORY CONTROL MODULE REMOVAL/INSTALLATION.) |
| 8 | **VERIFY IF MALFUNCTIONING LOCATION IS SLIDE POSITION SENSOR DEPENDING ON REPEATABILITY**<br>• Always reconnect all disconnected connectors.<br>• Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)<br>• Clear the DTC for the position memory control module (front seat) using the M-MDS. (See CLEARING DTC [POSITION MEMORY CONTROL MODULE].)<br>• Operate the position memory switch to operate the seat position memory system.<br>• Retrieve the position memory control module (front seat) DTCs using the M-MDS. (See DTC INSPECTION [POSITION MEMORY CONTROL MODULE].)<br>• Is the same DTC displayed? | Yes | Replace the front seat, then go to the next step.<br>(See FRONT SEAT REMOVAL/INSTALLATION.) |
| | | No | Go to Step 10. |

| Description | Recliner motor and position sensor circuit malfunction |
|---|---|






Diagnostic Procedure

| Step | Inspection | | Action |
|---|---|---|---|
| 1 | **INSPECT RECLINER MOTOR AND POSITION SENSOR CONNECTOR**<br>• Switch the ignition off.<br>• Disconnect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)<br>• Disconnect the recliner motor and position sensor connector.<br>• Inspect the connector engagement and connection condition and inspect the terminals for damage, deformation, corrosion, or disconnection.<br>• Is the connector normal? | Yes | Go to the next step. |
| | | No | Repair or replace the connector, then go to Step 9. |
| 2 | **INSPECT POSITION MEMORY CONTROL MODULE (FRONT SEAT) CONNECTOR**<br>• Disconnect the position memory control module (front seat) connector.<br>• Inspect the connector engagement and connection condition and inspect the terminals for damage, deformation, corrosion, or disconnection.<br>• Is the connector normal? | Yes | Go to the next step. |
| | | No | Repair or replace the connector, then go to Step 9. |

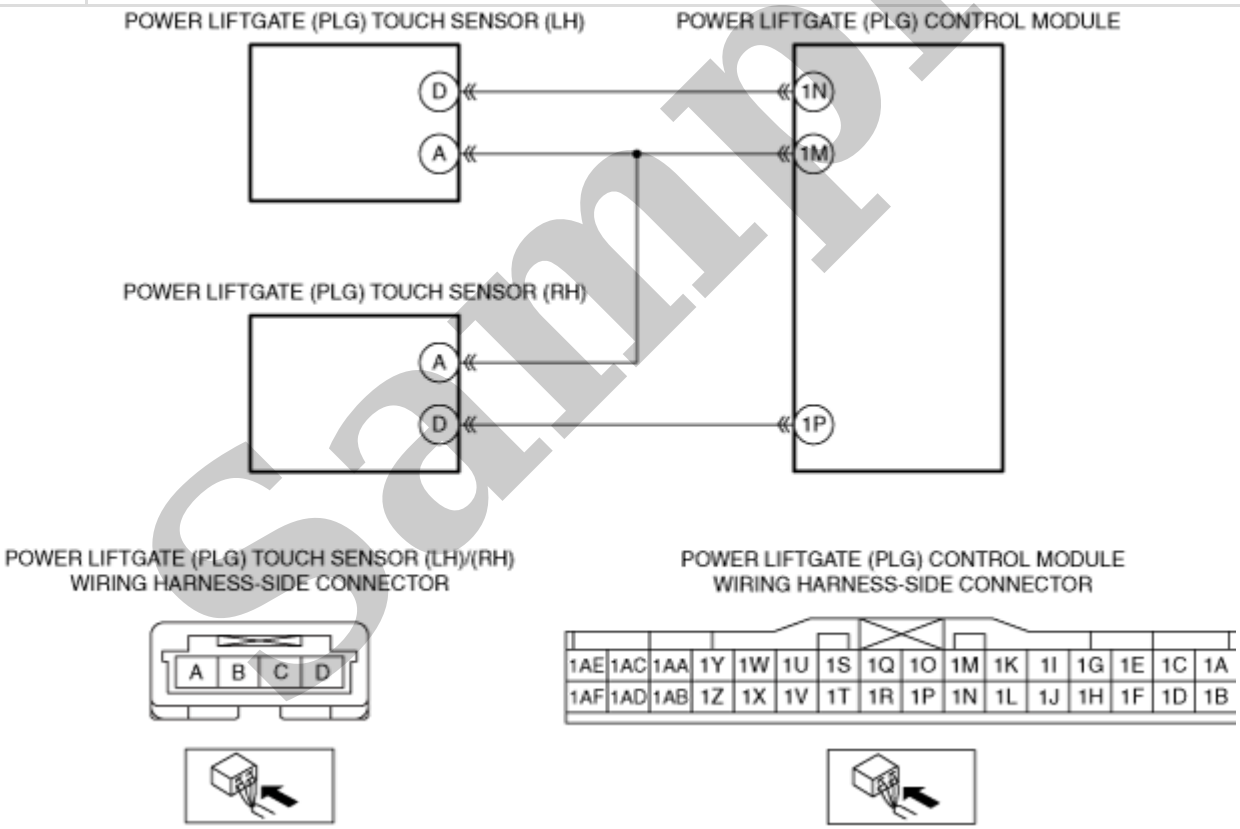
| Step | Inspection | | Action |
|---|---|---|---|
| 8 | VERIFY IF MALFUNCTIONING LOCATION IS RECLINER POSITION SENSOR DEPENDING ON REPEATABILITY<br>• Always reconnect all disconnected connectors.<br>• Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)<br>• Clear the DTC for the position memory control module (front seat) using the M-MDS. (See CLEARING DTC [POSITION MEMORY CONTROL MODULE].)<br>• Operate the position memory switch to operate the seat position memory system.<br>• Retrieve the position memory control module (front seat) DTCs using the M-MDS. (See DTC INSPECTION [POSITION MEMORY CONTROL MODULE].)<br>• Is the same DTC displayed? | Yes | Replace the front seat, then go to the next step. (See FRONT SEAT REMOVAL/INSTALLATION.) |
| | | No | Go to Step 10. |
| 9 | VERIFY THAT REPAIRS HAVE BEEN COMPLETED<br>• Always reconnect all disconnected connectors.<br>• Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)<br>• Clear the DTC for the position memory control module (front seat) using the M-MDS. (See CLEARING DTC [POSITION MEMORY CONTROL MODULE].)<br>• Operate the position memory switch to operate the seat position memory system.<br>• Retrieve the position memory control module (front seat) DTCs using the M-MDS. (See DTC INSPECTION [POSITION MEMORY CONTROL MODULE].)<br>• Is the same DTC displayed? | Yes | Repeat the inspection from Step 1.<br>• If the malfunction recurs, replace the position memory control module (front seat). (See POSITION MEMORY CONTROL MODULE REMOVAL/INSTALLATION.)<br>Go to the next step. |
| | | No | Go to the next step. |
| 10 | VERIFY IF OTHER DTCs DISPLAYED<br>• Are any other DTCs displayed? | Yes | Repair or replace the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [POSITION MEMORY CONTROL MODULE].) |
| | | No | DTC troubleshooting completed. |

# DTC B1308:11 [POWER LIFTGATE (PLG) CONTROL MODULE]

SM2898914

id0902o804740

| Description | Touch sensor circuit malfunction |
|---|---|
| Detection condition | • The power liftgate (PLG) control module detects a short to ground in the touch sensor circuit for 5 min more |
| Fail-safe | • Stops the power liftgate (PLG) system operation. |
| Possible cause | • Power liftgate (PLG) touch sensor (LH) connector or terminal malfunction<br>• Power liftgate (PLG) touch sensor (RH) connector or terminal malfunction<br>• Power liftgate (PLG) control module connector or terminal malfunction<br>• Short to ground in wiring harness between the following terminals:<br>— Power liftgate (PLG) touch sensor (LH) terminal D—Power liftgate (PLG) control module terminal 1N<br>— Power liftgate (PLG) touch sensor (RH) terminal D—Power liftgate (PLG) control module terminal 1P<br>• Power liftgate (PLG) touch sensor (LH) malfunction<br>• Power liftgate (PLG) touch sensor (RH) malfunction<br>• Power liftgate (PLG) control module malfunction |





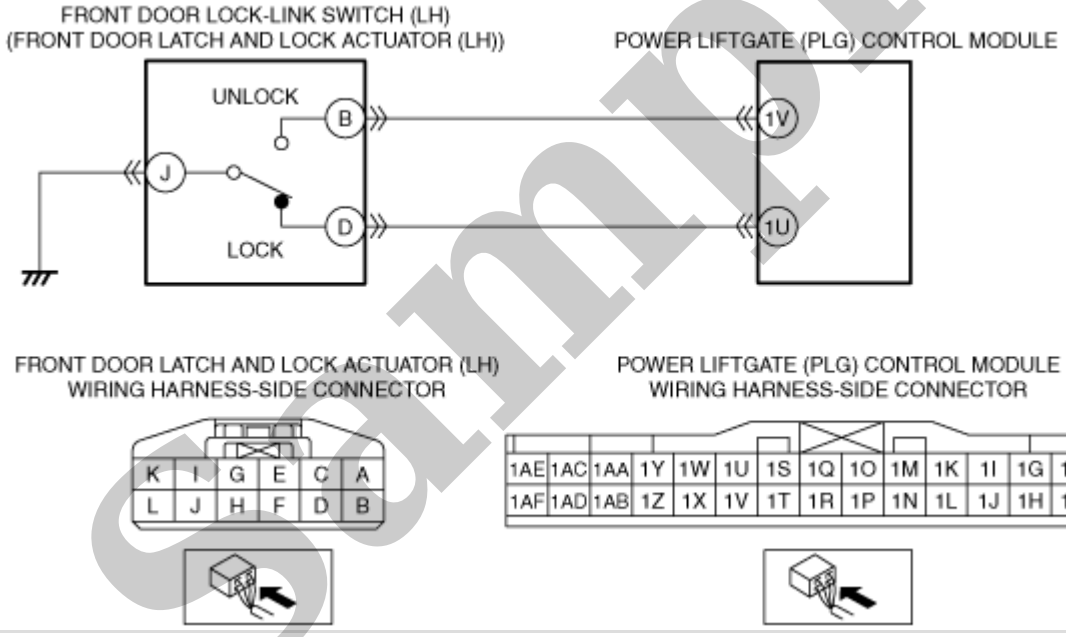

## Diagnostic Procedure

# DTC B126A:62 [POWER LIFTGATE (PLG) CONTROL MODULE]

SM2898912

id0902o804720

| | |
|---|---|
| **Description** | **Front door lock-link switch (LH) circuit malfunction** |
| Detection condition | • Power liftgate (PLG) control module detects an open circuit in the door lock-link switch (LH) circuit for 1 s or more. |
| Fail-safe | • Stops the power liftgate (PLG) system operation. |
| Possible cause | • Front door latch and lock actuator (LH) connector or terminal malfunction<br>• Open circuit in wiring harness between front door latch and lock actuator (LH) terminal J and body ground<br>• Front door lock-link switch (LH) malfunction<br>• Power liftgate (PLG) control module connector or terminal malfunction<br>• Open circuit in wiring harness between the following terminals:<br>— Front door latch and lock actuator (LH) terminal D—Power liftgate (PLG) control module terminal 1U<br>— Front door latch and lock actuator (LH) terminal B—Power liftgate (PLG) control module terminal 1V<br>• Power liftgate (PLG) control module malfunction |






**Diagnostic Procedure**