DTC P0850:00 [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

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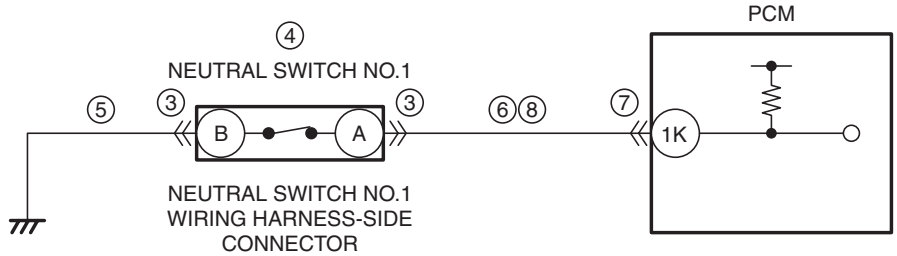
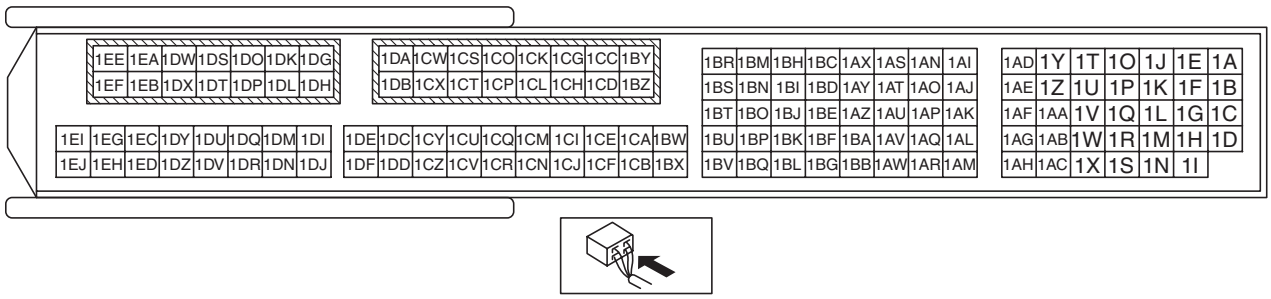
DTC P0850:00	Neutral switch No.1 input circuit problem
DETECTION CONDITION	• The PCM monitors changes in input voltage from the neutral switch No.1. If the PCM does not detect a voltage change while driving the vehicle at a vehicle speed **above 30 km/h {19 mph}** and clutch pedal is pressed and released **10 times** repeatedly, the PCM determines that the neutral switch No.1 circuit has a malfunction. **Diagnostic support note** • This is a continuous monitor (CCM). • The check engine light illuminates if the PCM detects the above malfunction condition in two consecutive drive cycles or in one drive cycle while the DTC for the same malfunction has been stored in the PCM. • PENDING CODE is available if the PCM detects the above malfunction condition during the first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	Not applicable
POSSIBLE CAUSE	• Neutral switch No.1 connector or terminals malfunction • Neutral switch No.1 malfunction • Open circuit in wiring harness between neutral switch No.1 terminal B and body ground • Short to ground in wiring harness between neutral switch No.1 terminal A and PCM terminal 1K • PCM connector or terminals malfunction • Open circuit in wiring harness between neutral switch No.1 terminal A and PCM terminal 1K • PCM malfunction



PCM WIRING HARNESS-SIDE CONNECTOR



Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED** • Has the FREEZE FRAME DATA (Mode 2)/ snapshot data been recorded?	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	**VERIFY RELATED SERVICE INFORMATION AVAILABILITY** • Verify related Service Information availability. • Is any related Service Information available?	Yes	Perform repair or diagnosis according to the available Service Information. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.

STEP	INSPECTION		ACTION
3	**INSPECT NEUTRAL SWITCH NO.1 CONNECTOR CONDITION** • Switch the ignition off. • Disconnect the neutral switch No.1 connector. • Inspect for poor connection (such as damaged/ pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the connector and/or terminals, then go to Step 9.
		No	Go to the next step.
4	**INSPECT NEUTRAL SWITCH NO.1** • Inspect the neutral switch No.1. (See NEUTRAL SWITCH INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • Is there any malfunction?	Yes	Replace the neutral switch No.1, then go to Step 9. (See NEUTRAL SWITCH REMOVAL/INSTALLATION [C66M-R, C66MX-R].)
		No	Go to the next step.
5	**INSPECT NEUTRAL SWITCH NO.1 GROUND CIRCUIT FOR OPEN CIRCUIT** • Verify that the neutral switch No.1 connector is disconnected. • Inspect for continuity between neutral switch No. 1 terminal B (wiring harness-side) and body ground. • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 9.
6	**INSPECT NEUTRAL SWITCH NO.1 SIGNAL CIRCUIT FOR SHORT TO GROUND** • Verify that the neutral switch No.1 connector is disconnected. • Inspect for continuity between neutral switch No. 1 terminal A (wiring harness-side) and body ground. • Is there continuity?	Yes	If the short to ground circuit could be detected in the wiring harness: • Repair or replace the wiring harness for a possible short to ground. If the short to ground circuit could not be detected in the wiring harness: • Replace the PCM (short to ground in the PCM internal circuit). (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) Go to Step 9.
		No	Go to the next step.
7	**INSPECT PCM CONNECTOR CONDITION** • Disconnect the PCM connector. • Inspect for poor connection (such as damaged/ pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the connector and/or terminals, then go to Step 9.
		No	Go to the next step.
8	**INSPECT NEUTRAL SWITCH NO.1 SIGNAL CIRCUIT FOR OPEN CIRCUIT** • Verify that the neutral switch No.1 and PCM connectors are disconnected. • Inspect for continuity between neutral switch No. 1 terminal A (wiring harness-side) and PCM terminal 1K (wiring harness-side). • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to the next step.
9	**VERIFY DTC TROUBLESHOOTING COMPLETED** • Always reconnect all disconnected connectors. • Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • Drive the vehicle **above 30 km/h {19 mph}** and stop the vehicle. • Depress and release the clutch pedal **more than 10 times** during drive cycle. • Perform the Pending Trouble Code Access Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • Is the PENDING CODE for this DTC present?	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) Go to the next step.
		No	Go to the next step.

STEP	INSPECTION		ACTION
10	**VERIFY AFTER REPAIR PROCEDURE** • Perform the “AFTER REPAIR PROCEDURE”. (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
		No	DTC troubleshooting completed.