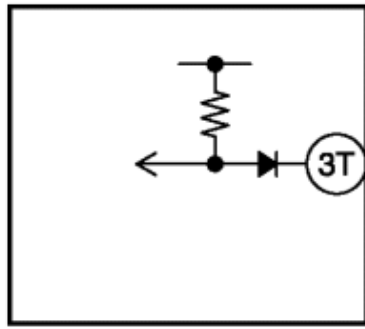


2012 - Mazda6 - Body and Accessories

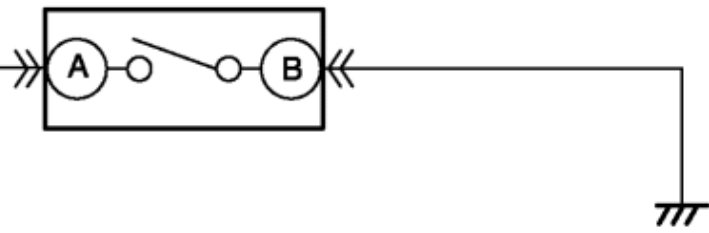
DTC P081D:62 [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM]

DETECTION CONDITION	- Neutral switch is detected as continuously ON in spite of vehicle speed increasing from 0 km/ h { 0 mph} to 10 km/ h { 6.2 mph} - CAN and neutral switch signals do not correspond
POSSI BLE CAUSE	- Connector or terminal malfunction - Open circuit in the wiring harness between neutral switch terminal A and body ground - Short to ground in the wiring harness between neutral switch terminal B and keyless control module terminal 3T - Neutral switch malfunction - Open circuit in the wiring harness between neutral switch terminal B and keyless control module terminal 3T - Keyless control module malfunction

KEYLESS CONTROL MODULE

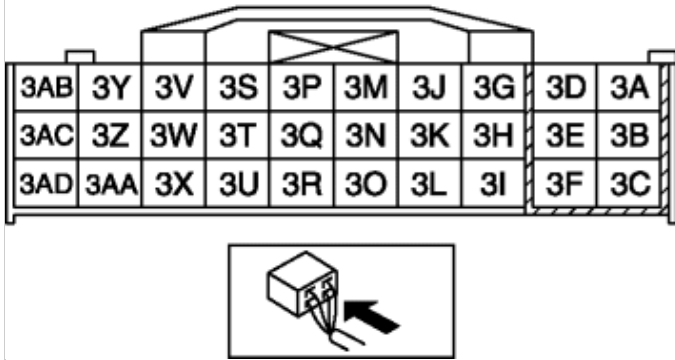


NEUTRAL SWITCH

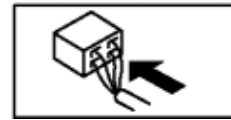
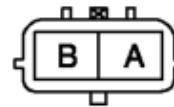


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KEYLESS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



NEUTRAL SWITCH WIRING HARNESS-SIDE CONNECTOR



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT NEUTRAL SWITCH CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the neutral switch connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes Repair or replace the connector or terminals, then go to Step 7.
		No Go to the next step.
2	INSPECT NEUTRAL SWITCH GROUND CIRCUIT FOR OPEN CIRCUIT - Inspect for continuity between neutral switch 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 7.
3	INSPECT KEYLESS CONTROL MODULE CONNECTOR CONDITION	Yes Repair or replace the connector or terminals, then go to Step 7.

	• Disconnect the keyless control module connector. • Inspect the connector and terminals (corrosion, damage, pin disconnection). • Is there any malfunction?	No	Go to the next step.
4	INSPECT NEUTRAL SWITCH POWER SUPPLY CIRCUIT FOR SHORT TO GROUND • Inspect for continuity between neutral switch terminal A (wiring harness-side) and body ground. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to ground, then go to Step 7.
		No	Go to the next step.
5	INSPECT NEUTRAL SWITCH • Inspect the neutral switch. (See NEUTRAL SWITCH INSPECTION [MZR 2.5].) • Is there any malfunction?	Yes	Replace the neutral switch, then go to Step 7. (See NEUTRAL SWITCH REMOVAL/ INSTALLATION [G66M-R] .)
		No	Go to the next step.
6	INSPECT NEUTRAL SWITCH POWER SUPPLY CIRCUIT FOR OPEN CIRCUIT • Inspect for continuity between neutral switch terminal A (wiring harness-side) and keyless control module terminal 3T (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.
7	VERIFY TROUBLESHOOTING COMPLETED • Make sure to reconnect the disconnected connectors. • Reconnect the negative battery cable. • Clear the DTC from keyless control module memory using the M-MDS. (See CLEARING DTC [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM].) • Perform the advanced keyless entry and push button start system DTC inspection using the M-MDS. (See DTC INSPECTION [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM].) • Is the same DTC present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the keyless control module, then go to the next step. (See KEYLESS CONTROL MODULE REMOVAL/ INSTALLATION [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .)
		No	Go to the next step.

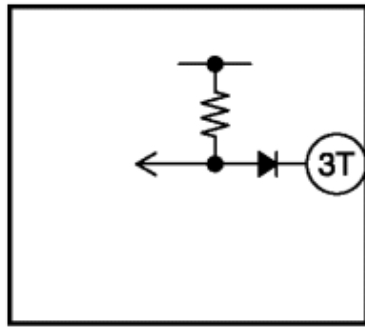
8	VERIFY THAT NO OTHER DTCs ARE PRESENT • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .)
		No	DTC troubleshooting completed.

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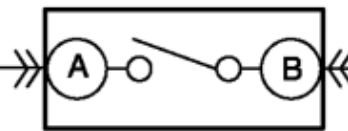
DTC P081D:62 [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM]

DETECTION CONDITION	- Neutral switch is detected as continuously ON in spite of vehicle speed increasing from 0 km/ h { 0 mph} to 10 km/ h { 6.2 mph} - CAN and neutral switch signals do not correspond
POSSI BLE CAUSE	- Connector or terminal malfunction - Open circuit in the wiring harness between neutral switch terminal A and body ground - Short to ground in the wiring harness between neutral switch terminal B and keyless control module terminal 3T - Neutral switch malfunction - Open circuit in the wiring harness between neutral switch terminal B and keyless control module terminal 3T - Keyless control module malfunction

KEYLESS CONTROL MODULE



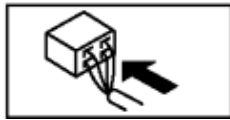
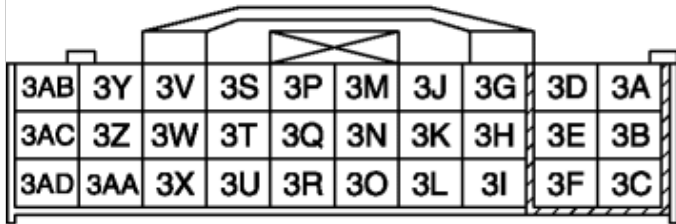
NEUTRAL SWITCH



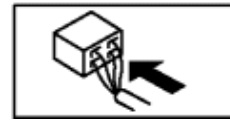
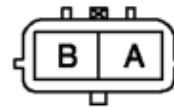
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KEYLESS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



NEUTRAL SWITCH WIRING HARNESS-SIDE CONNECTOR



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT NEUTRAL SWITCH CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the neutral switch connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes Repair or replace the connector or terminals, then go to Step 7.
		No Go to the next step.
2	INSPECT NEUTRAL SWITCH GROUND CIRCUIT FOR OPEN CIRCUIT - Inspect for continuity between neutral switch 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 7.
3	INSPECT KEYLESS CONTROL MODULE CONNECTOR CONDITION	Yes Repair or replace the connector or terminals, then go to Step 7.

	• Disconnect the keyless control module connector. • Inspect the connector and terminals (corrosion, damage, pin disconnection). • Is there any malfunction?	No	Go to the next step.
4	INSPECT NEUTRAL SWITCH POWER SUPPLY CIRCUIT FOR SHORT TO GROUND • Inspect for continuity between neutral switch terminal A (wiring harness-side) and body ground. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to ground, then go to Step 7.
		No	Go to the next step.
5	INSPECT NEUTRAL SWITCH • Inspect the neutral switch. (See NEUTRAL SWITCH INSPECTION [MZR 2.5].) • Is there any malfunction?	Yes	Replace the neutral switch, then go to Step 7. (See NEUTRAL SWITCH REMOVAL/ INSTALLATION [G66M-R] .)
		No	Go to the next step.
6	INSPECT NEUTRAL SWITCH POWER SUPPLY CIRCUIT FOR OPEN CIRCUIT • Inspect for continuity between neutral switch terminal A (wiring harness-side) and keyless control module terminal 3T (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.
7	VERIFY TROUBLESHOOTING COMPLETED • Make sure to reconnect the disconnected connectors. • Reconnect the negative battery cable. • Clear the DTC from keyless control module memory using the M-MDS. (See CLEARING DTC [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM].) • Perform the advanced keyless entry and push button start system DTC inspection using the M-MDS. (See DTC INSPECTION [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM].) • Is the same DTC present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the keyless control module, then go to the next step. (See KEYLESS CONTROL MODULE REMOVAL/ INSTALLATION [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .)
		No	Go to the next step.

8	VERIFY THAT NO OTHER DTCs ARE PRESENT • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .)
		No	DTC troubleshooting completed.