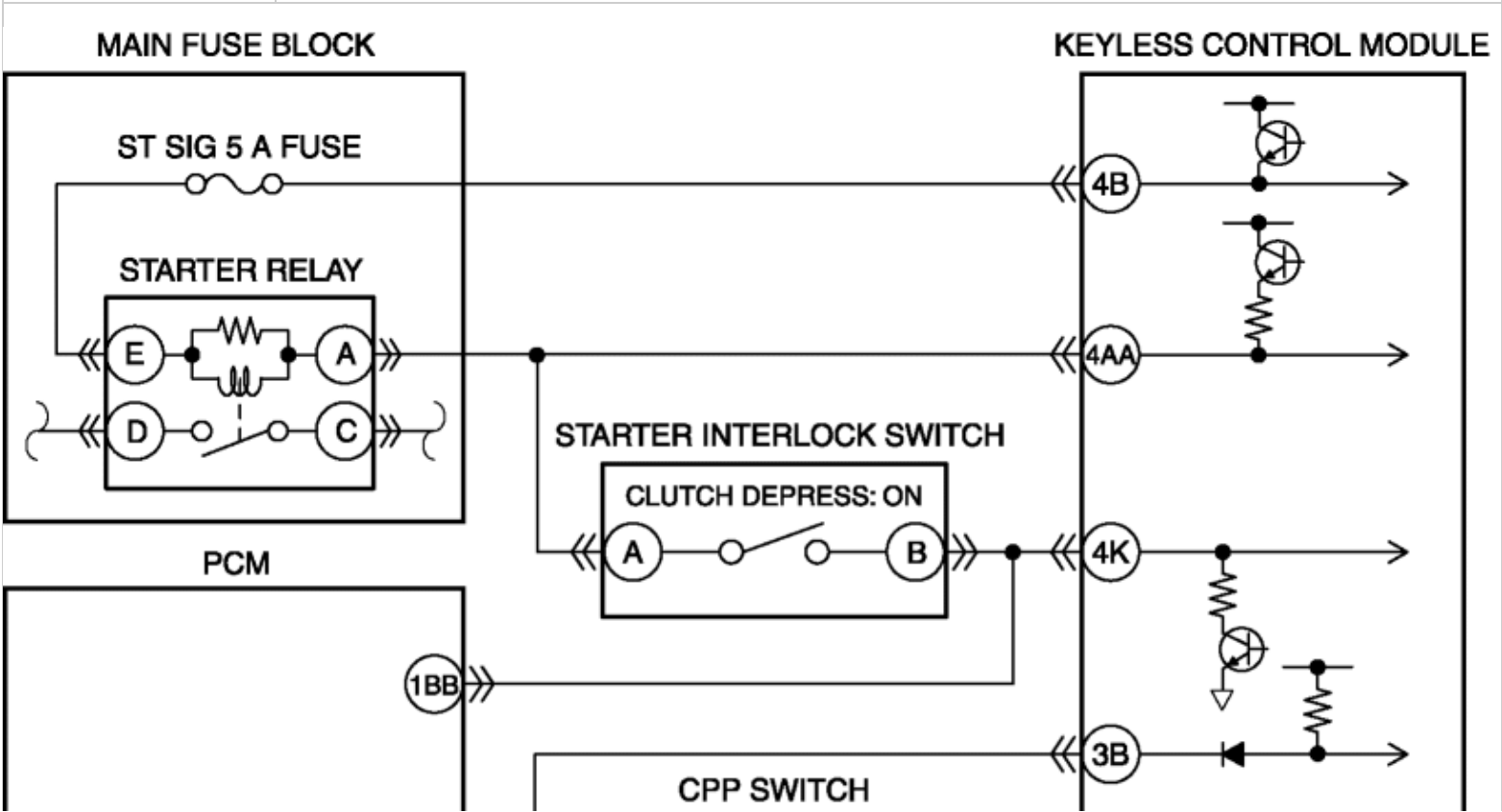
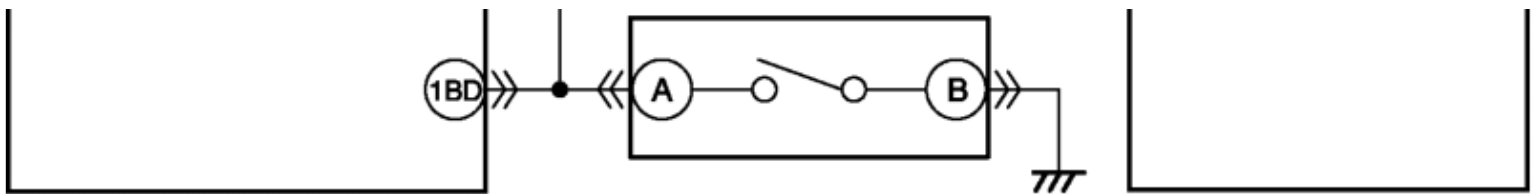


2012 - Mazda6 - Body and Accessories

DTC P1708:29 [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM]

DETECTION CONDITION	• Detect the mismatch between clutch switch and starter interlock switch. ▪ Clutch monitor input circuit voltage higher than 4.3 V under the following conditions: • IG1 relay output circuit is not active • Clutch is depressed
POSSIBLE CAUSE	• Connector or terminal malfunction • Open circuit in related wiring harness • CPP switch malfunction • Starter interlock switch malfunction • Short to ground in related wiring harness • PCM malfunction • Keyless control module malfunction

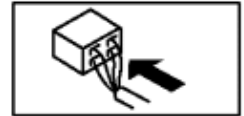
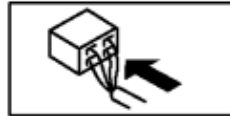
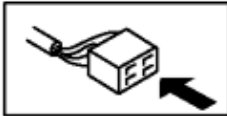
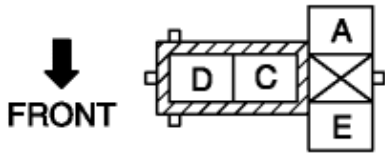




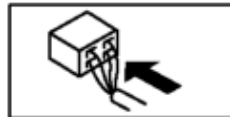
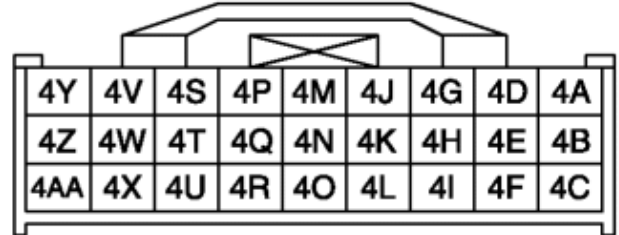
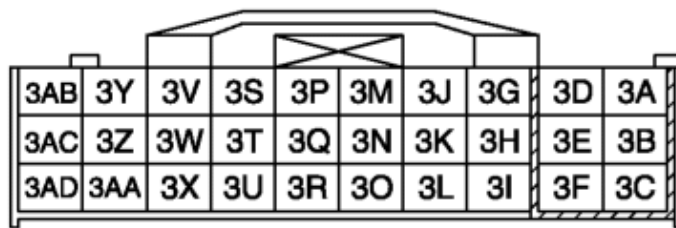
STARTER RELAY CONNECTOR

STARTER INTERLOCK SWITCH
WIRING HARNESS-SIDE
CONNECTOR

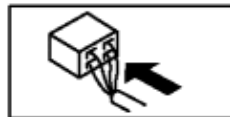
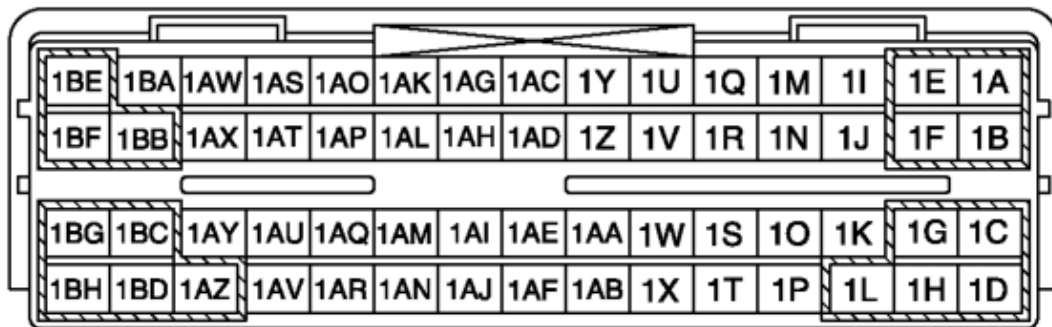
CPP SWITCH
WIRING HARNESS-SIDE
CONNECTOR



KEYLESS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



PCM WIRING HARNESS-SIDE CONNECTOR



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT CPP SWITCH CONNECTOR CONDITION Switch the ignition to off.	Yes Repair or replace the connector or terminals, then go to Step 12.

	• Disconnect the negative battery cable. • Disconnect the CPP switch connector. • Inspect the connector and terminals (corrosion, damage, pin disconnection). • Is there any malfunction?	No	Go to the next step.
2	INSPECT CPP SWITCH GROUND CIRCUIT FOR OPEN CIRCUIT • Inspect for continuity between CPP 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 12.
3	INSPECT CPP SWITCH • Inspect the CPP switch. (See CLUTCH PEDAL POSITION (CPP) SWITCH INSPECTION [MZR 2.5] .) • Is there any malfunction?	Yes	Replace the CPP switch, then go to Step 12. (See CLUTCH PEDAL REMOVAL/ INSTALLATION [G66M-R] .)
		No	Go to the next step.
4	INSPECT STARTER INTERLOCK SWITCH CONNECTOR CONDITION • Disconnect the starter interlock 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 12.
		No	Go to the next step.
5	INSPECT STARTER INTERLOCK SWITCH • Inspect the starter interlock switch. (See STARTER INTERLOCK SWITCH INSPECTION [MZR 2.5] .) • Is there any malfunction?	Yes	Replace the starter interlock switch, then go to Step 12.
		No	Go to the next step.
6	INSPECT PCM CONNECTOR CONDITION • Disconnect the PCM 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 12.
		No	Go to the next step.
7	INSPECT KEYLESS CONTROL MODULE	Yes	Repair or replace the connector or terminals,

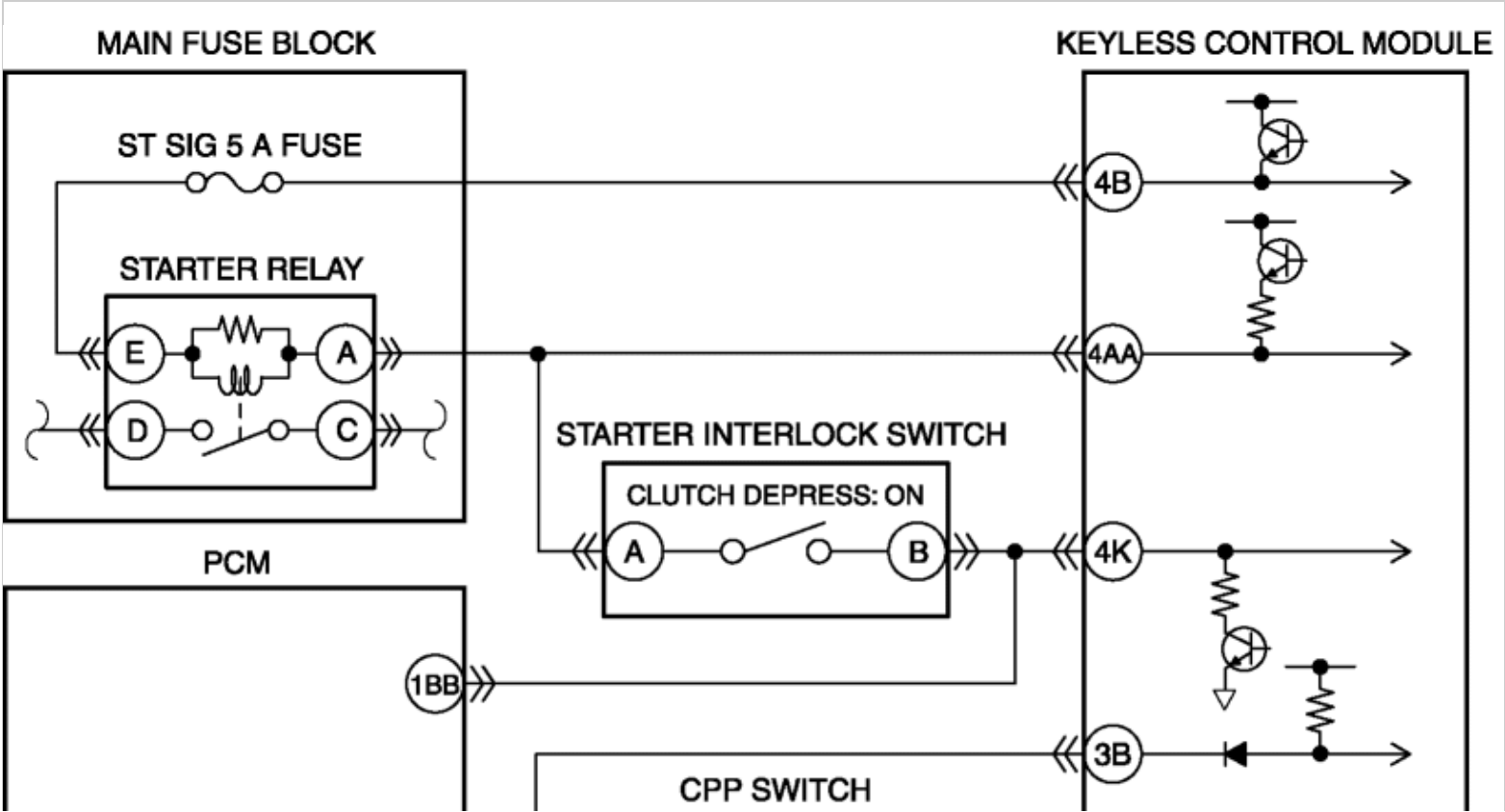
	CONNECTOR CONDITION • Disconnect the keyless control module connector. • Inspect the connector and terminals (corrosion, damage, pin disconnection). • Is there any malfunction?		then go to Step 12.
		No	Go to the next step.
8	INSPECT STARTER RELAY CIRCUIT FOR SHORT TO GROUND • Inspect for continuity between the following terminals and body ground: ▪ Starter relay terminal E (wiring harness-side) ▪ Starter relay terminal A (wiring harness-side) • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to ground, then go to Step 12.
		No	Go to the next step.
9	INSPECT STARTER RELAY CIRCUIT FOR SHORT TO GROUND • Inspect for continuity between starter interlock switch terminal B (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 12.
		No	Go to the next step.
10	INSPECT PCM • Reconnect the disconnected connectors. • Reconnect the negative battery cable. • Switch the ignition to ON. • Measure the voltage between PCM terminal 1BB (wiring harness-side) and body ground. • Is the voltage normal? (See PCM INSPECTION [MZR 2.5] .)	Yes	Go to the next step.
		No	Replace the PCM, then go to Step 12. (See PCM REMOVAL/ INSTALLATION [MZR 2.5] .)
11	INSPECT KEYLESS CONTROL MODULE • Switch the ignition to off. • Disconnect the negative battery cable. • Remove the starter relay. • Reconnect the negative battery cable. • Measure the voltage between keyless control module terminal 4AA (wiring harness-side) and body ground with the	Yes	Go to the next step.
		No	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] .)

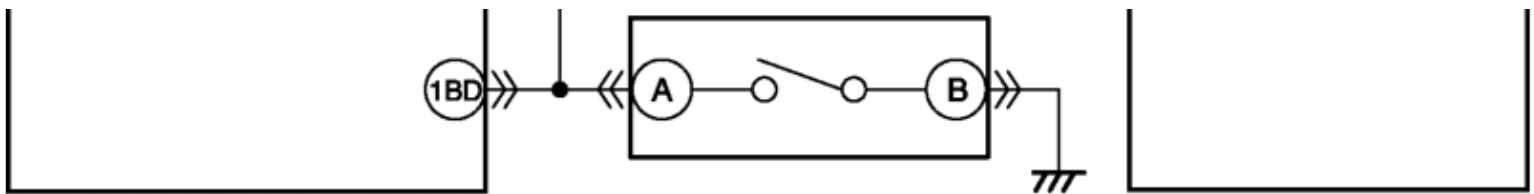
	clutch depressed:		
	Is the voltage more than 4 V?		
12	VERIFY TROUBLESHOOTING COMPLETED - Make sure to reconnect the disconnected connectors. - Reconnect the negative battery cable. - Clear the DTC from keyless control module memory using the M-MDS. (See CLEARING DTC [ADVANCED KEYLESS ENTRY AND PUSH 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.
13	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.

2012 - Mazda6 - Body and Accessories

DTC P1708:29 [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM]

DETECTION CONDITION	• Detect the mismatch between clutch switch and starter interlock switch. ▪ Clutch monitor input circuit voltage higher than 4.3 V under the following conditions: • IG1 relay output circuit is not active • Clutch is depressed
POSSIBLE CAUSE	• Connector or terminal malfunction • Open circuit in related wiring harness • CPP switch malfunction • Starter interlock switch malfunction • Short to ground in related wiring harness • PCM malfunction • Keyless control module malfunction

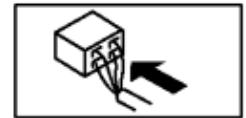
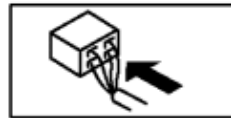
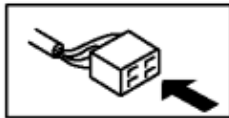
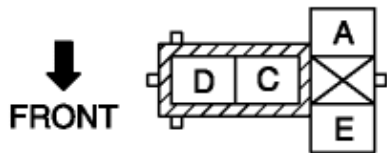




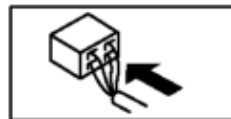
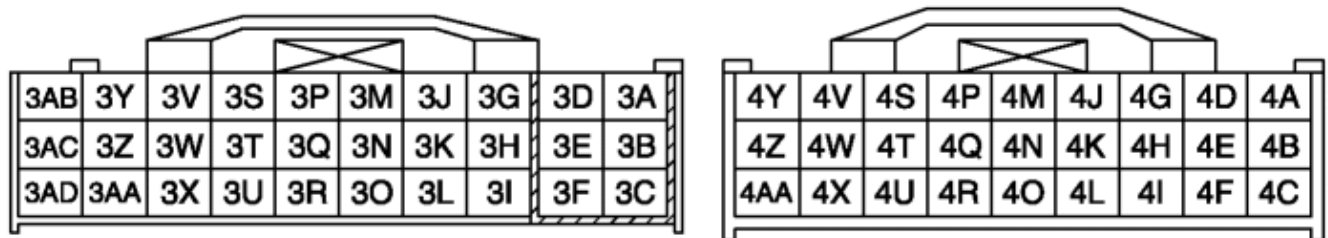
STARTER RELAY CONNECTOR

STARTER INTERLOCK SWITCH
WIRING HARNESS-SIDE
CONNECTOR

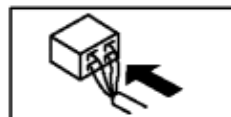
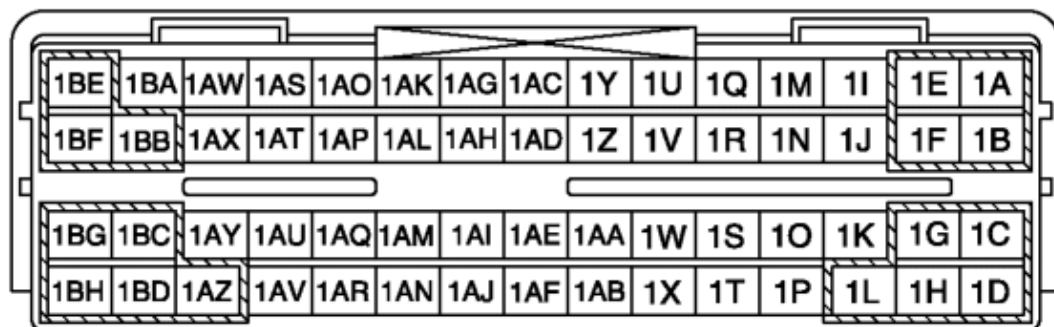
CPP SWITCH
WIRING HARNESS-SIDE
CONNECTOR



KEYLESS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



PCM WIRING HARNESS-SIDE CONNECTOR



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT CPP SWITCH CONNECTOR CONDITION Switch the ignition to off.	Yes Repair or replace the connector or terminals, then go to Step 12.

	• Disconnect the negative battery cable. • Disconnect the CPP switch connector. • Inspect the connector and terminals (corrosion, damage, pin disconnection). • Is there any malfunction?	No	Go to the next step.
2	INSPECT CPP SWITCH GROUND CIRCUIT FOR OPEN CIRCUIT • Inspect for continuity between CPP 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 12.
3	INSPECT CPP SWITCH • Inspect the CPP switch. (See CLUTCH PEDAL POSITION (CPP) SWITCH INSPECTION [MZR 2.5].) • Is there any malfunction?	Yes	Replace the CPP switch, then go to Step 12. (See CLUTCH PEDAL REMOVAL/ INSTALLATION [G66M-R] .)
		No	Go to the next step.
4	INSPECT STARTER INTERLOCK SWITCH CONNECTOR CONDITION • Disconnect the starter interlock 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 12.
		No	Go to the next step.
5	INSPECT STARTER INTERLOCK SWITCH • Inspect the starter interlock switch. (See STARTER INTERLOCK SWITCH INSPECTION [MZR 2.5].) • Is there any malfunction?	Yes	Replace the starter interlock switch, then go to Step 12.
		No	Go to the next step.
6	INSPECT PCM CONNECTOR CONDITION • Disconnect the PCM 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 12.
		No	Go to the next step.
7	INSPECT KEYLESS CONTROL MODULE	Yes	Repair or replace the connector or terminals,

	CONNECTOR CONDITION • Disconnect the keyless control module connector. • Inspect the connector and terminals (corrosion, damage, pin disconnection). • Is there any malfunction?		then go to Step 12.
		No	Go to the next step.
8	INSPECT STARTER RELAY CIRCUIT FOR SHORT TO GROUND • Inspect for continuity between the following terminals and body ground: ▪ Starter relay terminal E (wiring harness-side) ▪ Starter relay terminal A (wiring harness-side) • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to ground, then go to Step 12.
		No	Go to the next step.
9	INSPECT STARTER RELAY CIRCUIT FOR SHORT TO GROUND • Inspect for continuity between starter interlock switch terminal B (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 12.
		No	Go to the next step.
10	INSPECT PCM • Reconnect the disconnected connectors. • Reconnect the negative battery cable. • Switch the ignition to ON. • Measure the voltage between PCM terminal 1BB (wiring harness-side) and body ground. • Is the voltage normal? (See PCM INSPECTION [MZR 2.5] .)	Yes	Go to the next step.
		No	Replace the PCM, then go to Step 12. (See PCM REMOVAL/ INSTALLATION [MZR 2.5] .)
11	INSPECT KEYLESS CONTROL MODULE • Switch the ignition to off. • Disconnect the negative battery cable. • Remove the starter relay. • Reconnect the negative battery cable. • Measure the voltage between keyless control module terminal 4AA (wiring harness-side) and body ground with the	Yes	Go to the next step.
		No	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] .)

	clutch depressed:		
	Is the voltage more than 4 V?		
12	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.
13	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.