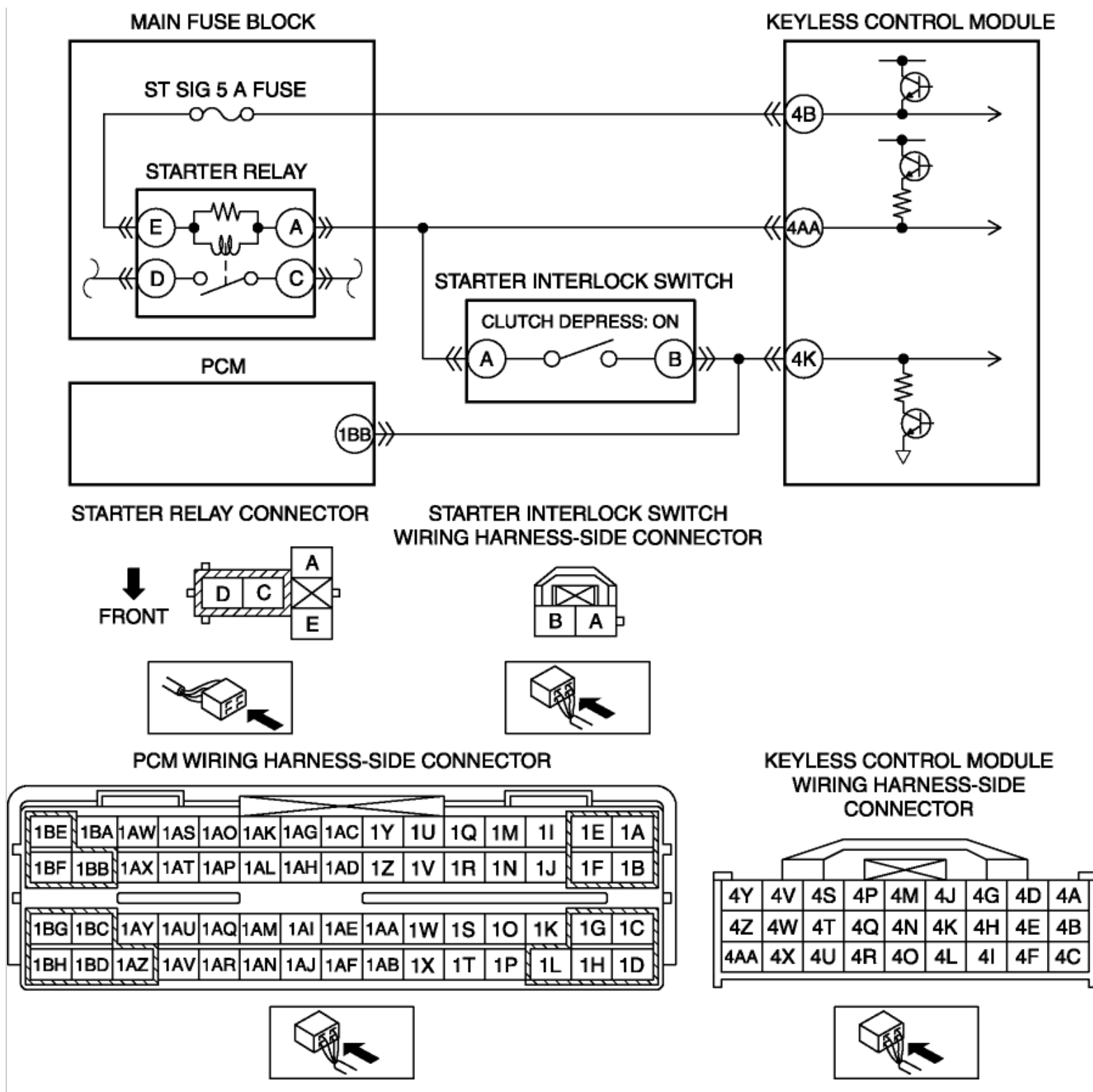


2012 - Mazda6 - Body and Accessories

DTC P0615:12 [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM]

DESCRIPTION	• Short to power supply in starter circuit
DETECTION CONDITION	• Detect that the voltage of starter relay is higher than the specification. ▪ Feedback voltage of starter relay output circuit higher than 6 V is detected under the following conditions: • IG1 relay output circuit is not active • Clutch is depressed
POSSI BLE CAUSE	• Starter relay malfunction • Connector or terminal malfunction • Short to power supply in related wiring harness • Keyless control module malfunction



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT RELAY - Switch the ignition to off. - Disconnect the negative battery cable. - Remove the starter relay.	Yes Replace the starter relay, then go to Step 5.
		No Go to the next step.

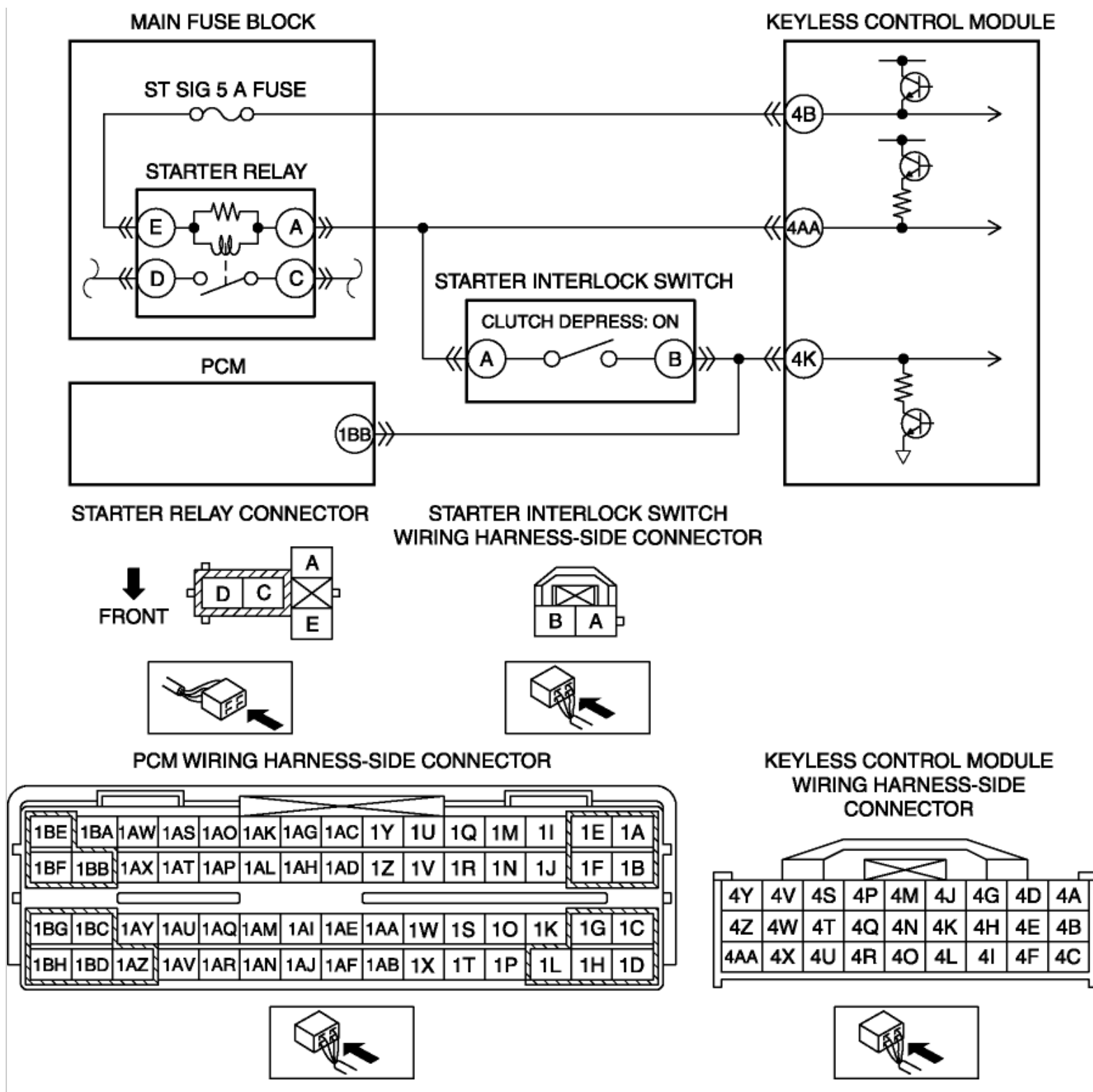
	- Inspect the starter relay. (See RELAY INSPECTION.) - Is there any malfunction?		
2	INSPECT KEYLESS CONTROL MODULE CONNECTOR CONDITION - Disconnect the keyless control module connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 5.
		No	Go to the next step.
3	INSPECT STARTER RELAY OUTPUT CIRCUIT FOR SHORT TO POWER SUPPLY - Install the starter relay. - Reconnect the negative battery cable. - Measure the voltage between the following terminals and body ground: - Starter relay terminal E (wiring harness-side) - PCM terminal 1F (wiring harness-side) - Is there any voltage?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to Step 5.
		No	Go to the next step.
4	INSPECT KEYLESS CONTROL MODULE - Switch the ignition to off. - Disconnect the negative battery cable. - Remove the starter relay. - Reconnect the keyless control module connector. - Reconnect the negative battery cable. - Measure the voltage between keyless control module terminal 4B (wiring harness-side) and body ground with the clutch depressed. - Is the voltage more than 6 V?	Yes	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.
5	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	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.

	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?		
6	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 P0615:12 [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM]

DESCRIPTION	• Short to power supply in starter circuit
DETECTION CONDITION	• Detect that the voltage of starter relay is higher than the specification. ▪ Feedback voltage of starter relay output circuit higher than 6 V is detected under the following conditions: • IG1 relay output circuit is not active • Clutch is depressed
POSSI BLE CAUSE	• Starter relay malfunction • Connector or terminal malfunction • Short to power supply in related wiring harness • Keyless control module malfunction



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT RELAY - Switch the ignition to off. - Disconnect the negative battery cable. - Remove the starter relay.	Yes Replace the starter relay, then go to Step 5. No Go to the next step.

	- Inspect the starter relay. (See RELAY INSPECTION.) - Is there any malfunction?		
2	INSPECT KEYLESS CONTROL MODULE CONNECTOR CONDITION - Disconnect the keyless control module 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 5.
		No	Go to the next step.
3	INSPECT STARTER RELAY OUTPUT CIRCUIT FOR SHORT TO POWER SUPPLY - Install the starter relay. - Reconnect the negative battery cable. - Measure the voltage between the following terminals and body ground: - Starter relay terminal E (wiring harness-side) - PCM terminal 1F (wiring harness-side) - Is there any voltage?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to Step 5.
		No	Go to the next step.
4	INSPECT KEYLESS CONTROL MODULE - Switch the ignition to off. - Disconnect the negative battery cable. - Remove the starter relay. - Reconnect the keyless control module connector. - Reconnect the negative battery cable. - Measure the voltage between keyless control module terminal 4B (wiring harness-side) and body ground with the clutch depressed. - Is the voltage more than 6 V?	Yes	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.
5	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	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.

	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?		
6	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.