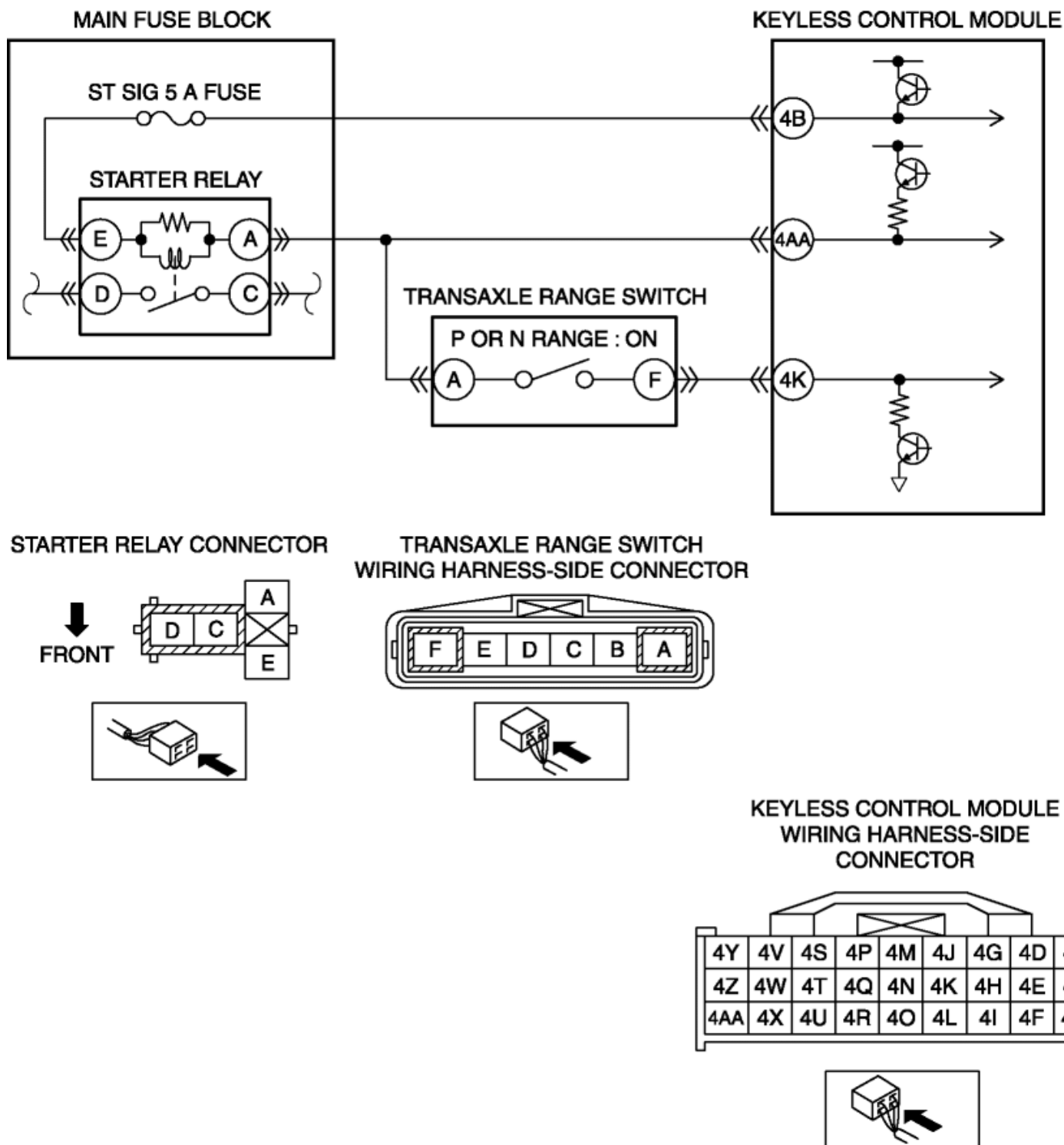


2012 - Mazda6 - Body and Accessories

DTC P0850:29 [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM]

MZR 2.5

DETECTI ON CONDI TION	- CAN and inhibitor switch signals do not correspond, while ignition is ON (engine off). - Starter monitor input circuit voltage less than 4.3 V under the following conditions: - IG1 relay output circuit is active - Shift lever is D range - Engine is not running
POSSI BLE CAUSE	- Connector or terminal malfunction - Transaxle range switch malfunction - Open circuit in related wiring harness - Keyless control module malfunction



Diagnostic Procedure

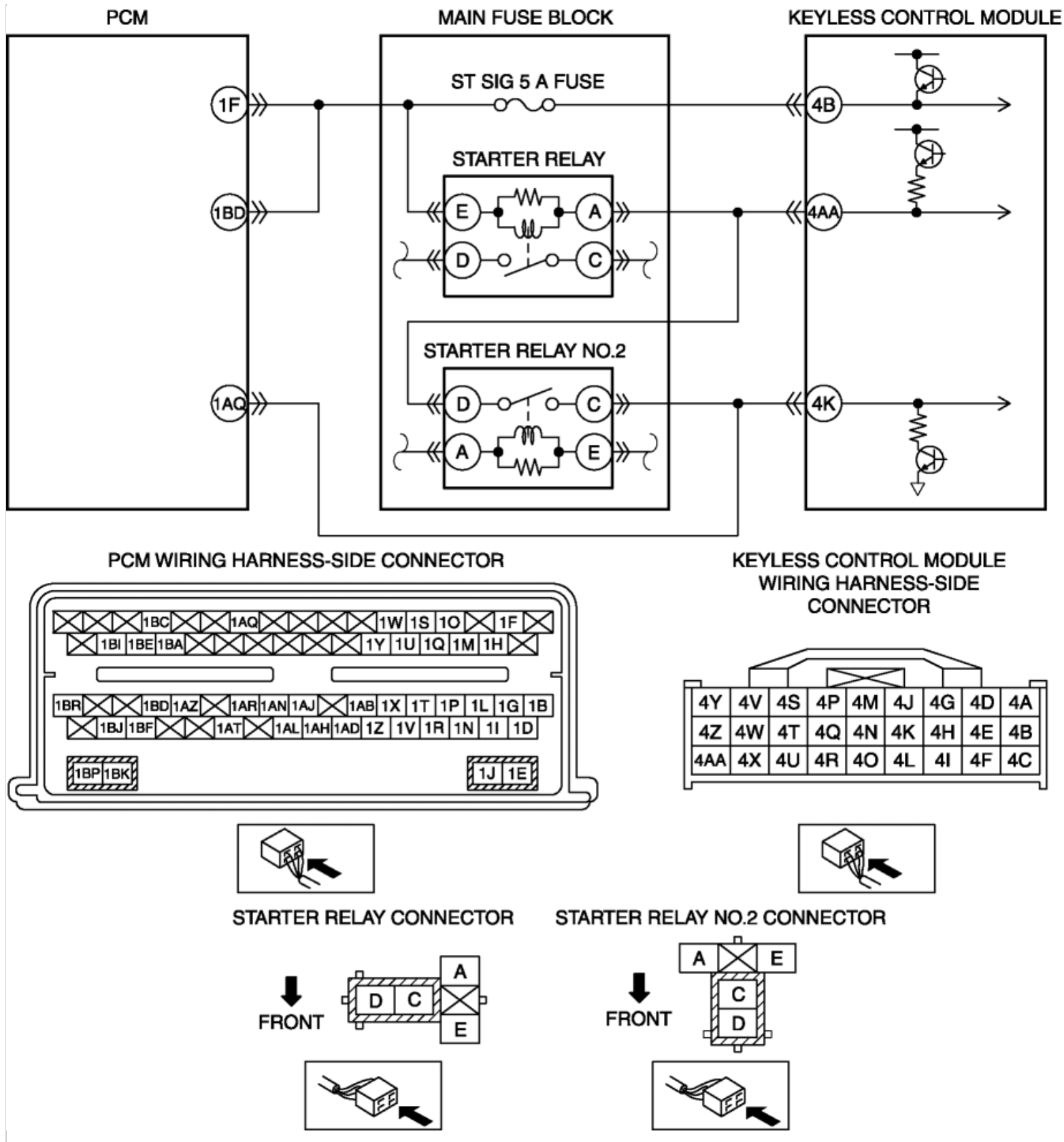
Step	Inspection	Action
1	INSPECT TRANSAXLE RANGE SWITCH CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the transaxle range switch connector.	Yes Repair or replace the connector or terminals, then go to Step 5. No Go to the next step.

	- Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?		
2	INSPECT TRANSAXLE RANGE SWITCH - Inspect the transaxle range switch. (See TRANSAXLE RANGE (TR) SWITCH INSPECTION [FS5A-EL] .) (See TRANSAXLE RANGE (TR) SWITCH INSPECTION [AY6A-EL] .) - Is there any malfunction?	Yes	Replace the transaxle range switch, then go to Step 5. (See TRANSAXLE RANGE (TR) SWITCH REMOVAL/ INSTALLATION [FS5A-EL] .) (See TRANSAXLE RANGE (TR) SWITCH REMOVAL/ INSTALLATION [AY6A-EL] .)
		No	Go to the next step.
3	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.
4	INSPECT KEYLESS CONTROL MODULE - Reconnect the disconnected connectors. - Reconnect the negative battery cable. - Bring the valid key into the vehicle. - Switch the ignition to ON (engine off). - Measure the voltage between keyless control module terminal 4AA (wiring harness-side) and body ground with the shift lever in D range. - Is the voltage more than 4 V?	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] .)
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 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.
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.

MZI 3.7 V6

DETECTION CONDITION	• CAN and inhibitor switch signals do not correspond, while ignition is ON (engine off). ▪ Starter monitor input circuit voltage less than 4.3 V under the following conditions: • IG1 relay output circuit is active • Shift lever is D range • Engine is not running
POSSIBLE CAUSE	• Starter relay No.2 malfunction • Connector or terminal malfunction • Open circuit in related wiring harness • Keyless control module malfunction



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT RELAY Switch the ignition to off.	Yes Replace the starter relay No.2, then go to Step 4.

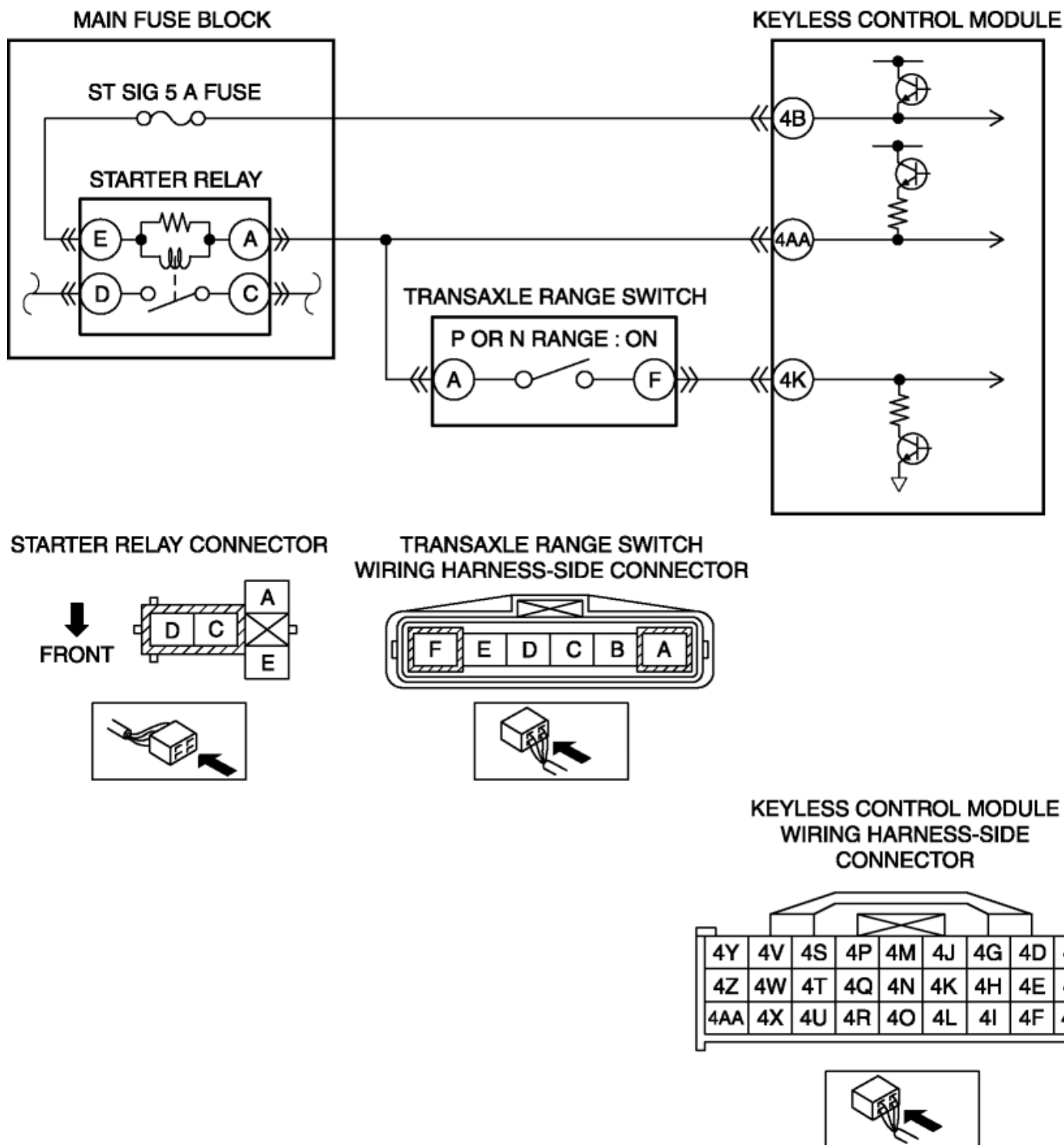
	• Disconnect the negative battery cable. • Remove the starter relay No.2. • Inspect the starter relay No.2. (See RELAY INSPECTION.) • Are there any malfunction?	No	Go to the next step.
2	INSPECT KEYLESS CONTROL MODULE CONNECTOR CONDITION • Disconnect the keyless control module connector. • Inspect the connector and terminals (corrosion, damage, pin disconnection). • Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 4.
		No	Go to the next step.
3	INSPECT KEYLESS CONTROL MODULE • Reconnect the disconnected connectors. • Reconnect the negative battery cable. • Bring the valid key into the vehicle. • Switch the ignition to ON (engine off). • Measure the voltage between keyless control module terminal 4AA (wiring harness-side) and body ground with the shift lever in D range. • Is the voltage more than 1.1 V?	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] .)
4	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.
5	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 P0850:29 [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM]

MZR 2.5

DETECTI ON CONDI TI ON	- CAN and inhibitor switch signals do not correspond, while ignition is ON (engine off). - Starter monitor input circuit voltage less than 4.3 V under the following conditions: - IG1 relay output circuit is active - Shift lever is D range - Engine is not running
POSSI BLE CAUSE	- Connector or terminal malfunction - Transaxle range switch malfunction - Open circuit in related wiring harness - Keyless control module malfunction



Diagnostic Procedure

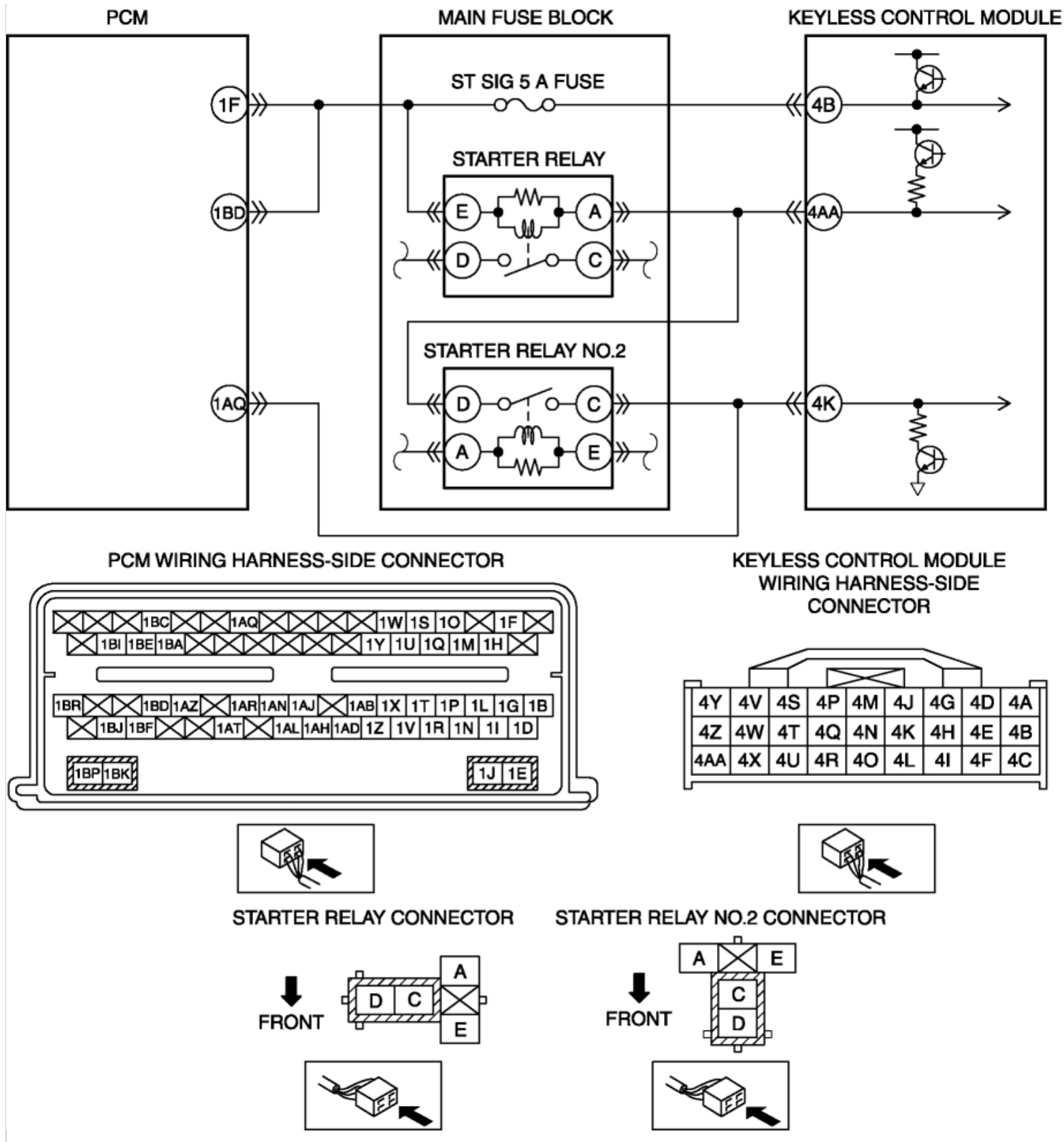
Step	Inspection	Action
1	INSPECT TRANSAXLE RANGE SWITCH CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the transaxle range switch connector.	Yes Repair or replace the connector or terminals, then go to Step 5. No Go to the next step.

	- Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?		
2	INSPECT TRANSAXLE RANGE SWITCH - Inspect the transaxle range switch. (See TRANSAXLE RANGE (TR) SWITCH INSPECTION [FS5A-EL] .) (See TRANSAXLE RANGE (TR) SWITCH INSPECTION [AY6A-EL] .) - Is there any malfunction?	Yes	Replace the transaxle range switch, then go to Step 5. (See TRANSAXLE RANGE (TR) SWITCH REMOVAL/ INSTALLATION [FS5A-EL] .) (See TRANSAXLE RANGE (TR) SWITCH REMOVAL/ INSTALLATION [AY6A-EL] .)
		No	Go to the next step.
3	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.
4	INSPECT KEYLESS CONTROL MODULE - Reconnect the disconnected connectors. - Reconnect the negative battery cable. - Bring the valid key into the vehicle. - Switch the ignition to ON (engine off). - Measure the voltage between keyless control module terminal 4AA (wiring harness-side) and body ground with the shift lever in D range. - Is the voltage more than 4 V?	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] .)
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 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.
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.

MZI 3.7 V6

DETECTION CONDITION	• CAN and inhibitor switch signals do not correspond, while ignition is ON (engine off). ▪ Starter monitor input circuit voltage less than 4.3 V under the following conditions: • IG1 relay output circuit is active • Shift lever is D range • Engine is not running
POSSIBLE CAUSE	• Starter relay No.2 malfunction • Connector or terminal malfunction • Open circuit in related wiring harness • Keyless control module malfunction



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT RELAY Switch the ignition to off.	Yes Replace the starter relay No.2, then go to Step 4.

	• Disconnect the negative battery cable. • Remove the starter relay No.2. • Inspect the starter relay No.2. (See RELAY INSPECTION.) • Are there any malfunction?	No	Go to the next step.
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 4.
		No	Go to the next step.
3	INSPECT KEYLESS CONTROL MODULE • Reconnect the disconnected connectors. • Reconnect the negative battery cable. • Bring the valid key into the vehicle. • Switch the ignition to ON (engine off). • Measure the voltage between keyless control module terminal 4AA (wiring harness-side) and body ground with the shift lever in D range. • Is the voltage more than 1.1 V?	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] .)
4	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.
5	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.

