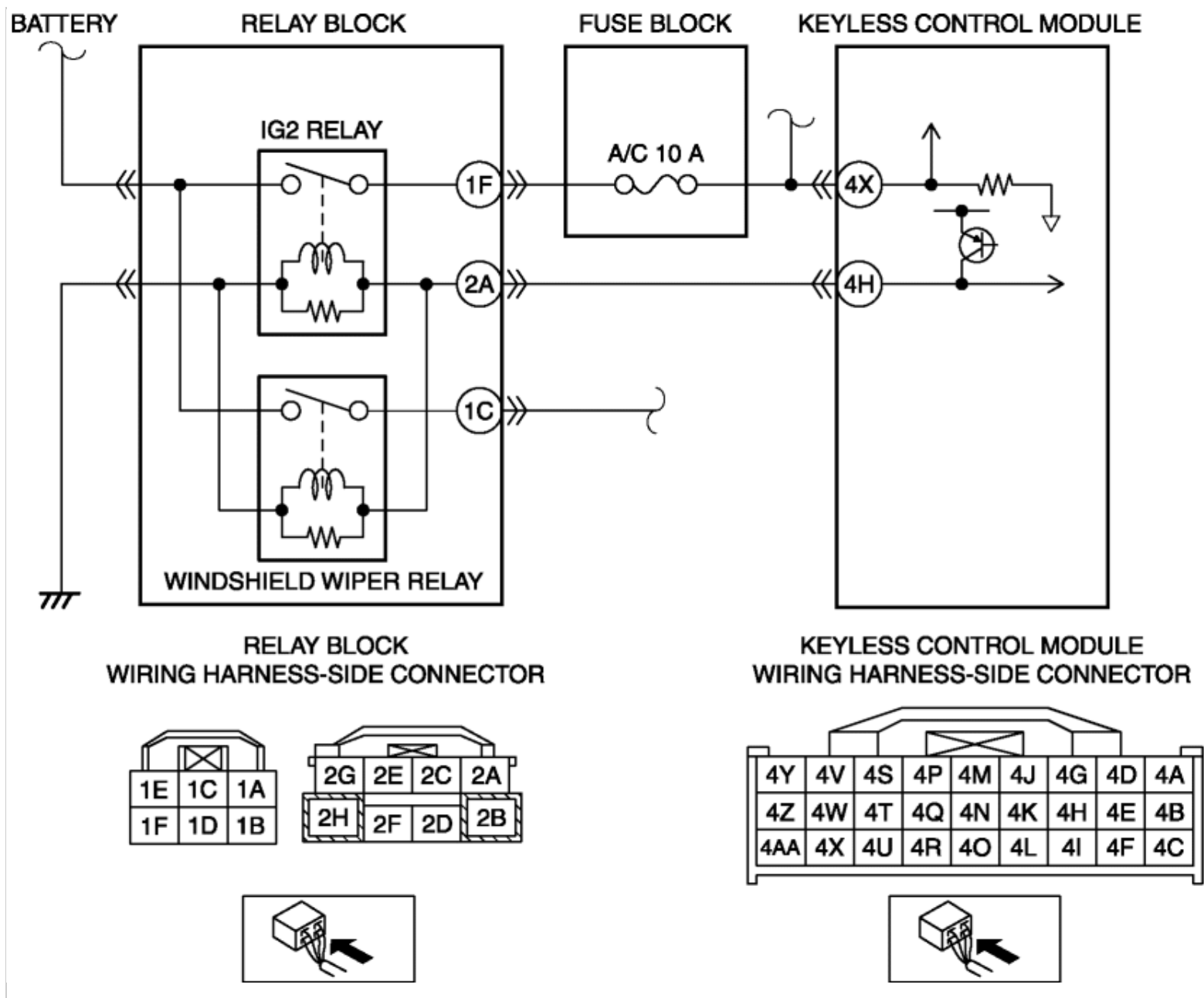


2012 - Mazda6 - Body and Accessories

DTC B112A:16 [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM]

DETECTION CONDITION	IG2 monitor input circuit voltage less than threshold (2.2—6.5 V) is detected for 1 s, while IG2 relay output circuit is active
POSSIBLE CAUSE	• A/C 10 A fuse malfunction • Connector or terminal malfunction • Short to ground in wiring harness between relay block terminal 1F and keyless control module terminal 4X • Relay block malfunction • Open circuit in wiring harness between relay block terminal 1F and keyless control module terminal 4X • Keyless control module malfunction



Diagnostic Procedure

Step	Inspection	Action
1	PERFORM DTC INSPECTION - 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].)	Yes Perform the DTC B112A:11 inspection. (See DTC B112A:11 [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM].) No Go to the next step.

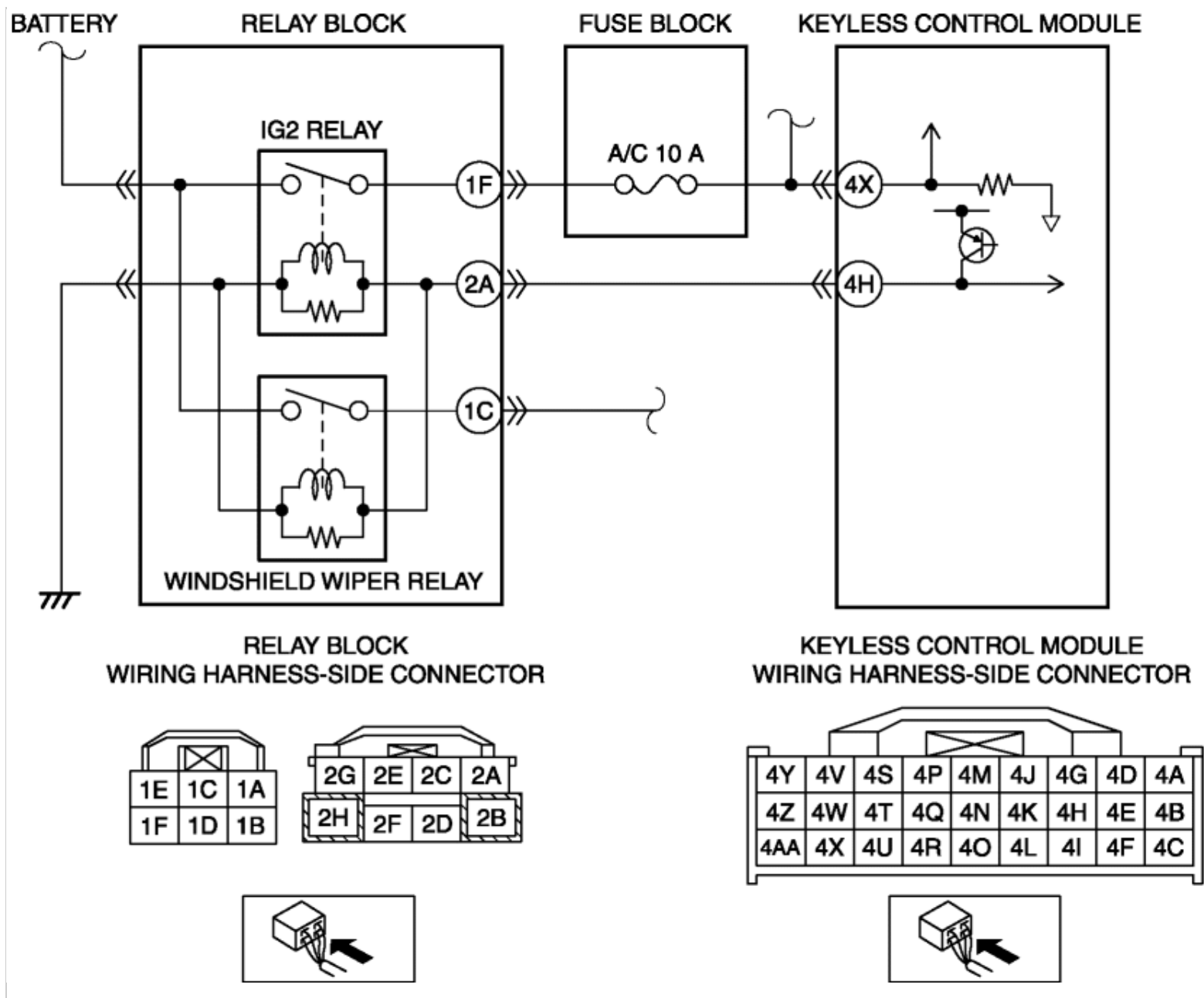
	Is the DTC B112A:11 present?		
2	INSPECT FUSE - Switch the ignition to off. - Disconnect the negative battery cable. - Remove the A/C 10 A fuse. - Inspect the A/C 10 A fuse. - Is there any malfunction?	Yes	Replace the A/C 10 A fuse, then go to Step 8.
		No	Go to the next step.
3	INSPECT RELAY BLOCK CONNECTOR CONDITION - Disconnect the relay block 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 8.
		No	Go to the next step.
4	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 8.
		No	Go to the next step.
5	INSPECT IG2 MONITOR INPUT CIRCUIT FOR SHORT TO GROUND - Install the A/C 10 A fuse. - Inspect for continuity between relay block terminal 1F (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 8.
		No	Go to the next step.
6	INSPECT RELAY BLOCK - Inspect the relay block. (See RELAY BLOCK INSPECTION [WITH ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .) - Is there any malfunction?	Yes	Replace the relay block, then go to Step 8. (See RELAY BLOCK REMOVAL/ INSTALLATION [WITH ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .)
		No	Go to the next step.
7	INSPECT IG2 MONITOR INPUT CIRCUIT FOR OPEN CIRCUIT Inspect for continuity between relay block terminal 1C (wiring harness-side) and	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to the next

	keyless control module terminal 4X (wiring harness-side). Is there continuity?		step.
8	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.
9	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 B112A:16 [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM]

DETECTION CONDITION	IG2 monitor input circuit voltage less than threshold (2.2—6.5 V) is detected for 1 s, while IG2 relay output circuit is active
POSSIBLE CAUSE	• A/C 10 A fuse malfunction • Connector or terminal malfunction • Short to ground in wiring harness between relay block terminal 1F and keyless control module terminal 4X • Relay block malfunction • Open circuit in wiring harness between relay block terminal 1F and keyless control module terminal 4X • Keyless control module malfunction



Diagnostic Procedure

Step	Inspection	Action
1	PERFORM DTC INSPECTION - 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].)	Yes Perform the DTC B112A:11 inspection. (See DTC B112A:11 [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM].) No Go to the next step.

	Is the DTC B112A:11 present?		
2	INSPECT FUSE - Switch the ignition to off. - Disconnect the negative battery cable. - Remove the A/C 10 A fuse. - Inspect the A/C 10 A fuse. - Is there any malfunction?	Yes	Replace the A/C 10 A fuse, then go to Step 8.
		No	Go to the next step.
3	INSPECT RELAY BLOCK CONNECTOR CONDITION - Disconnect the relay block 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 8.
		No	Go to the next step.
4	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 8.
		No	Go to the next step.
5	INSPECT IG2 MONITOR INPUT CIRCUIT FOR SHORT TO GROUND - Install the A/C 10 A fuse. - Inspect for continuity between relay block terminal 1F (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 8.
		No	Go to the next step.
6	INSPECT RELAY BLOCK - Inspect the relay block. (See RELAY BLOCK INSPECTION [WITH ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .) - Is there any malfunction?	Yes	Replace the relay block, then go to Step 8. (See RELAY BLOCK REMOVAL/ INSTALLATION [WITH ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .)
		No	Go to the next step.
7	INSPECT IG2 MONITOR INPUT CIRCUIT FOR OPEN CIRCUIT Inspect for continuity between relay block terminal 1C (wiring harness-side) and	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to the next

	keyless control module terminal 4X (wiring harness-side). Is there continuity?		step.
8	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.
9	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.