

2012 - Mazda6 - Body and Accessories

NO.4 AFTER ENGINE START, ELECTRICAL DEVICES DO NOT OPERATE [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM]

4	After engine start, electrical devices do not operate
DESCRIPTION	Possible cause related to non-operation of electrical devices (such as blower motor, rear wiper) with ignition switched to IG ON (IG2), after engine start.
Possible Causes	- Open or short circuit in wiring harness between battery and relay block (IG2 relay) and each part - Fuse burnt out (short to ground in related wiring harness) - Open circuit in wiring harness between keyless control module and relay block (IG2 relay) - Block relay (IG2 relay) malfunction (stuck open) - Keyless control module malfunction

Diagnostic Procedure

Step	Inspection	Action
1	Do the electrical devices operate with the ignition is switched to ACC, IG ON (IG1)?	Yes Go to the next step.
		No Go to symptom troubleshooting procedure "No.3 Push button start does not operate".
2	- Disconnect the keyless control module connector. - Connect battery positive voltage to the following connector terminal on the keyless control module vehicle wiring harness side. - Terminal 4H (IG2) - Measure the voltage of the following connector terminal on the keyless control module vehicle wiring harness side.	Yes Replace the keyless control module. (See KEYLESS CONTROL MODULE REMOVAL/ INSTALLATION [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .) After replacement, go to Step 7.
		No Go to the next step.

	▪ Terminal 4X (IG2)		
	• Is the voltage B+?		
3	• Leave the keyless control module connector disconnected. • Disconnect the relay block connector. • Verify the continuity between the following connector terminals on the vehicle wiring harness side: ▪ Between keyless control module terminal 4X and relay block terminal 1F (6-pin) (IG2 monitor). ▪ Between keyless control module terminal 4H and relay block terminal 2A (8-pin) (IG2 relay primary power supply). • Can continuity be verified?	Yes	Go to the next step.
		No	After repairing for an open circuit in the wiring harness, go to Step 7.
4	• Leave the relay block connector disconnected. • Verify the continuity between connector terminal 2C (8-pin) on the relay block vehicle wiring harness side and ground. • Can continuity be verified?	Yes	Go to the next step.
		No	Repair for an open circuit in the wiring harness. Inspect and repair the ground point. After repair procedure, go to Step 7.
5	• Leave the relay block connector disconnected. • Measure the voltage of connector terminal 1A (6-pin) and terminal 1E (6-pin) on the relay block vehicle wiring harness side. • Is the voltage B+?	Yes	Go to the next step.
		No	After repairing for an open circuit in the wiring harness, go to Step 7.
6	• Inspect the relay block. (See RELAY BLOCK INSPECTION [WITH ADVANCED KEYLESS ENTRY	Yes	• Replace the keyless control module. (See KEYLESS CONTROL

	AND PUSH BUTTON START SYSTEM] .) • Is the relay block normal?		MODULE REMOVAL/ INSTALLATION [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .) • After replacement, go to the next step.
		No	Replace the relay block, then go to the next step.
7	• Do the electrical devices (such as blower motor, rear wiper) operate normally after starting the engine?	Yes	Troubleshooting completed. Explain the contents of the servicing to the customer.
		No	If the malfunction has not been resolved, repeat the inspection from Step 1.

2012 - Mazda6 - Body and Accessories

NO.4 AFTER ENGINE START, ELECTRICAL DEVICES DO NOT OPERATE [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM]

4	After engine start, electrical devices do not operate
DESCRIPTION	Possible cause related to non-operation of electrical devices (such as blower motor, rear wiper) with ignition switched to IG ON (IG2), after engine start.
Possible Causes	- Open or short circuit in wiring harness between battery and relay block (IG2 relay) and each part - Fuse burnt out (short to ground in related wiring harness) - Open circuit in wiring harness between keyless control module and relay block (IG2 relay) - Block relay (IG2 relay) malfunction (stuck open) - Keyless control module malfunction

Diagnostic Procedure

Step	Inspection	Action
1	Do the electrical devices operate with the ignition is switched to ACC, IG ON (IG1)?	Yes Go to the next step.
		No Go to symptom troubleshooting procedure "No.3 Push button start does not operate".
2	- Disconnect the keyless control module connector. - Connect battery positive voltage to the following connector terminal on the keyless control module vehicle wiring harness side. - Terminal 4H (IG2) - Measure the voltage of the following connector terminal on the keyless control module vehicle wiring harness side.	Yes Replace the keyless control module. (See KEYLESS CONTROL MODULE REMOVAL/ INSTALLATION [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .) After replacement, go to Step 7.
		No Go to the next step.

	▪ Terminal 4X (IG2)		
	• Is the voltage B+?		
3	• Leave the keyless control module connector disconnected. • Disconnect the relay block connector. • Verify the continuity between the following connector terminals on the vehicle wiring harness side: ▪ Between keyless control module terminal 4X and relay block terminal 1F (6-pin) (IG2 monitor). ▪ Between keyless control module terminal 4H and relay block terminal 2A (8-pin) (IG2 relay primary power supply). • Can continuity be verified?	Yes	Go to the next step.
		No	After repairing for an open circuit in the wiring harness, go to Step 7.
4	• Leave the relay block connector disconnected. • Verify the continuity between connector terminal 2C (8-pin) on the relay block vehicle wiring harness side and ground. • Can continuity be verified?	Yes	Go to the next step.
		No	Repair for an open circuit in the wiring harness. Inspect and repair the ground point. After repair procedure, go to Step 7.
5	• Leave the relay block connector disconnected. • Measure the voltage of connector terminal 1A (6-pin) and terminal 1E (6-pin) on the relay block vehicle wiring harness side. • Is the voltage B+?	Yes	Go to the next step.
		No	After repairing for an open circuit in the wiring harness, go to Step 7.
6	• Inspect the relay block. (See RELAY BLOCK INSPECTION [WITH ADVANCED KEYLESS ENTRY	Yes	• Replace the keyless control module. (See KEYLESS CONTROL

	AND PUSH BUTTON START SYSTEM] .) • Is the relay block normal?		MODULE REMOVAL/ INSTALLATION [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .) • After replacement, go to the next step.
		No	Replace the relay block, then go to the next step.
7	• Do the electrical devices (such as blower motor, rear wiper) operate normally after starting the engine?	Yes	Troubleshooting completed. Explain the contents of the servicing to the customer.
		No	If the malfunction has not been resolved, repeat the inspection from Step 1.