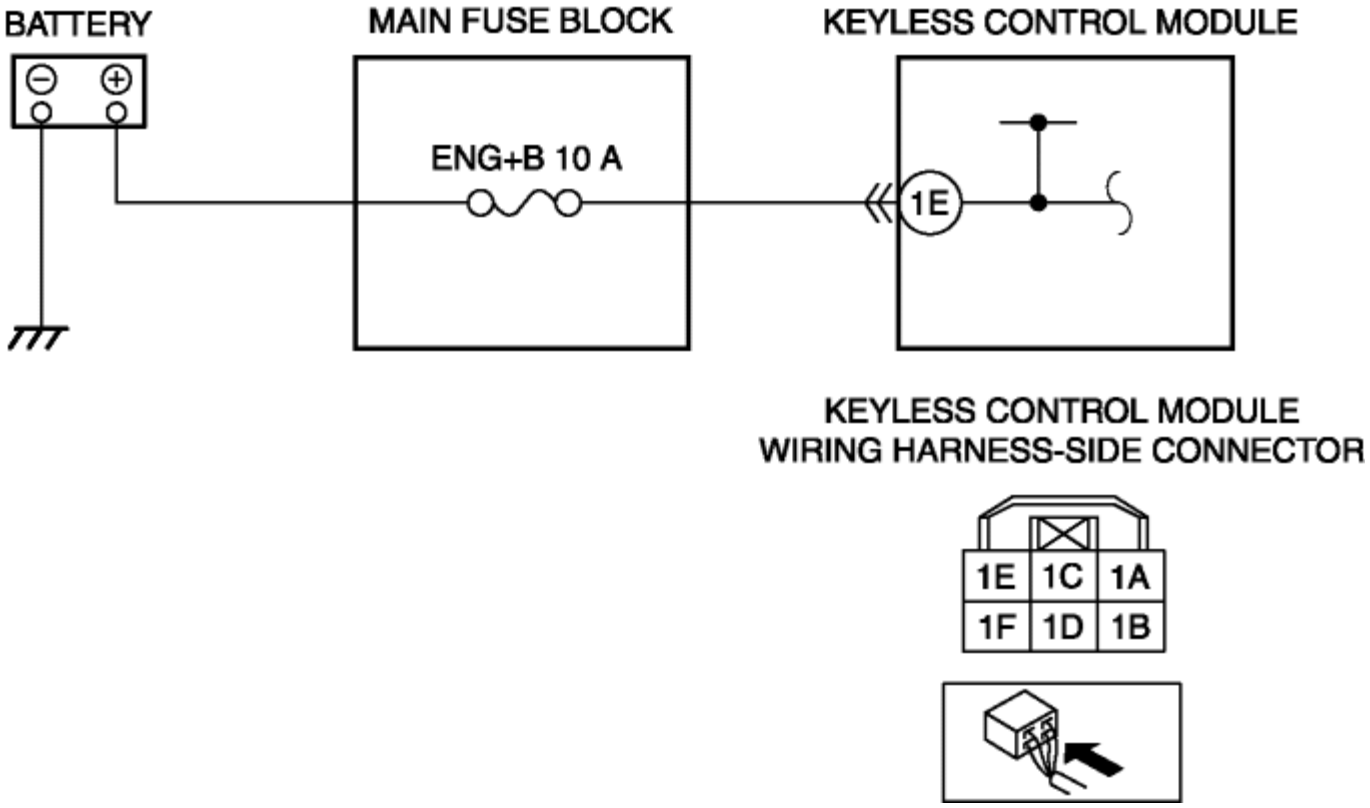
2012 - Mazda6 - Body and Accessories

DTC P1794:16, P1794:17 [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM]

DETECTION CONDITION	**P1794:16**	Battery power supply circuit (+B2) voltage **less than 9 V** is detected for **10 s**
	P1794:17	Battery power supply circuit (+B2) voltage **higher than 16 V** is detected for **0.5 s,** while engine is running
POSSIBLE CAUSE	• ENG+B 10 A fuse malfunction • Battery malfunction • Generator malfunction • Connector or terminal malfunction • Short to ground in wiring harness between battery positive terminal and keyless control module terminal 1E • Open circuit in wiring harness between battery positive terminal and keyless control module terminal 1E • Keyless control module malfunction	



Diagnostic Procedure

Step	Inspection		Action
1	**PERFORM PCM DTC INSPECTION** • Perform the PCM DTC inspection using the M-MDS. (See **ON-BOARD DIAGNOSTIC TEST [MZR 2.5]**.) (See **ON-BOARD DIAGNOSTIC TEST [MZI 3.7 V6]**.) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See **DTC TABLE [MZR 2.5]**.) (See **DTC TABLE [MZI 3.7 V6]**.)
		No	Go to the next step.
2	**INSPECT FUSE** • Switch the ignition to off. • Disconnect the negative battery cable. • Remove the ENG+B 10 A fuse. • Inspect the ENG+B 10 A fuse. • Is there any malfunction?	Yes	Replace the ENG+B 10 A fuse, then go to Step 7.
		No	Go to the next step.

3	**INSPECT BATTERY** • Inspect the battery. (See **BATTERY INSPECTION [MZR 2.5]**.) (See **BATTERY INSPECTION [MZI 3.7 V6]**.) • Is there any malfunction?	Yes	Recharge or replace the battery, then go to Step 7. (See **BATTERY RECHARGING [MZR 2.5]**.) (See **BATTERY RECHARGING [MZI 3.7 V6]**.) (See **BATTERY REMOVAL/ INSTALLATION [MZR 2.5]**.) (See **BATTERY REMOVAL/ INSTALLATION [MZI 3.7 V6]**.)
		No	Go to the next step.
4	**INSPECT GENERATOR** • Inspect the generator. (See **GENERATOR INSPECTION [MZR 2.5]**.) (See **GENERATOR INSPECTION [MZI 3.7 V6]**.) • Is there any malfunction?	Yes	Replace the generator, then go to Step 7. (See **GENERATOR REMOVAL/ INSTALLATION [MZR 2.5]**.) (See **GENERATOR REMOVAL/ INSTALLATION [MZI 3.7 V6]**.)
		No	Go to the next step.
5	**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 7.
		No	Go to the next step.
6	**INSPECT BATTERY POWER SUPPLY CIRCUIT (+B2) FOR SHORT TO GROUND OR OPEN CIRCUIT** • Install the ENG+B 10 A fuse. • Reconnect the negative battery cable. • Measure the voltage between keyless control module terminal 1E (wiring harness-side) and body ground. • Is there any voltage?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible short to ground or open circuit, then go to the next step.

7	**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.
8	**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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DETECTION CONDITION	**P1794:16**	Battery power supply circuit (+B2) voltage **less than 9 V** is detected for **10 s**
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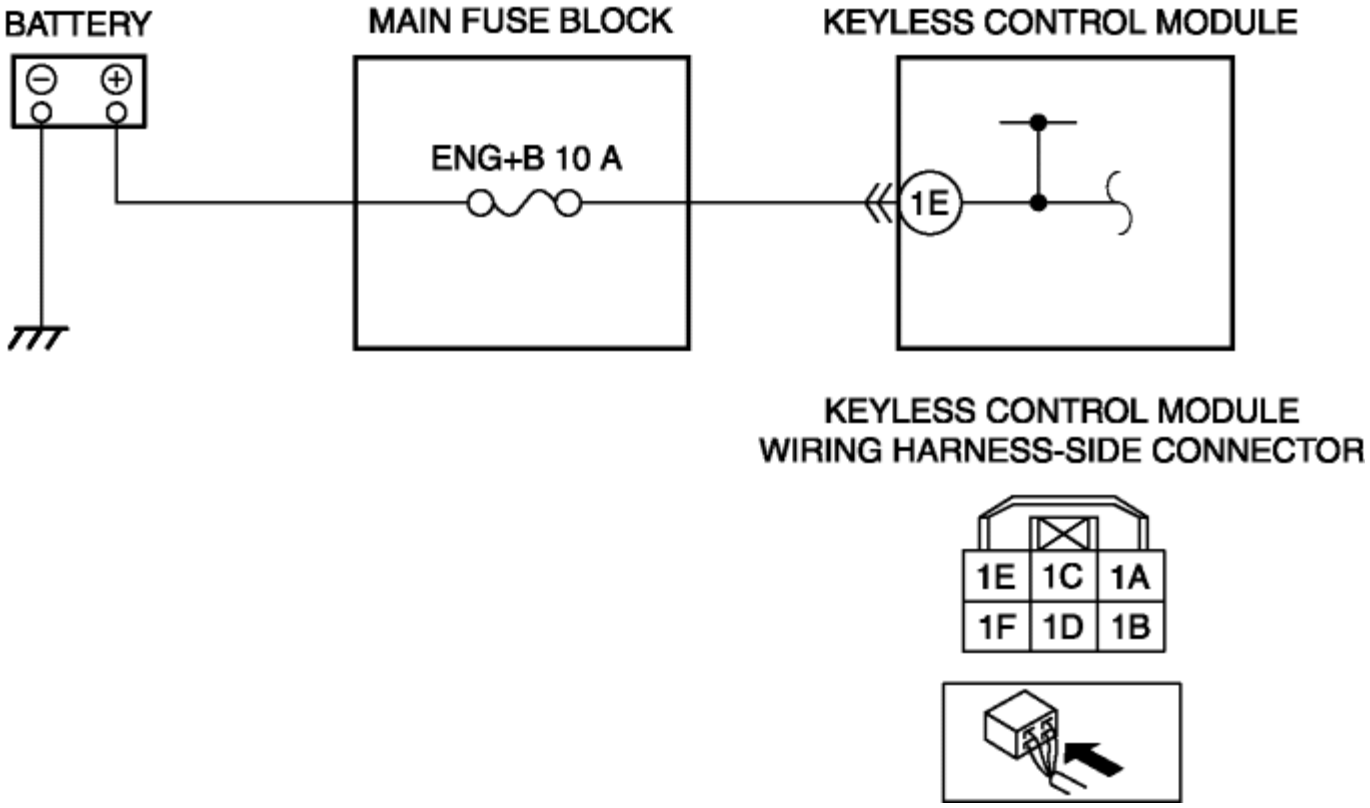
POSSIBLE CAUSE	• ENG+B 10 A fuse malfunction • Battery malfunction • Generator malfunction • Connector or terminal malfunction • Short to ground in wiring harness between battery positive terminal and keyless control module terminal 1E • Open circuit in wiring harness between battery positive terminal and keyless control module terminal 1E • Keyless control module malfunction	



Diagnostic Procedure

Step	Inspection		Action
1	**PERFORM PCM DTC INSPECTION** • Perform the PCM DTC inspection using the M-MDS. (See **ON-BOARD DIAGNOSTIC TEST [MZR 2.5]**.) (See **ON-BOARD DIAGNOSTIC TEST [MZI 3.7 V6]**.) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See **DTC TABLE [MZR 2.5]**.) (See **DTC TABLE [MZI 3.7 V6]**.)
		No	Go to the next step.
2	**INSPECT FUSE** • Switch the ignition to off. • Disconnect the negative battery cable. • Remove the ENG+B 10 A fuse. • Inspect the ENG+B 10 A fuse. • Is there any malfunction?	Yes	Replace the ENG+B 10 A fuse, then go to Step 7.
		No	Go to the next step.

3	**INSPECT BATTERY** • Inspect the battery. (See **BATTERY INSPECTION [MZR 2.5]**.) (See **BATTERY INSPECTION [MZI 3.7 V6]**.) • Is there any malfunction?	Yes	Recharge or replace the battery, then go to Step 7. (See **BATTERY RECHARGING [MZR 2.5]**.) (See **BATTERY RECHARGING [MZI 3.7 V6]**.) (See **BATTERY REMOVAL/ INSTALLATION [MZR 2.5]**.) (See **BATTERY REMOVAL/ INSTALLATION [MZI 3.7 V6]**.)
		No	Go to the next step.
4	**INSPECT GENERATOR** • Inspect the generator. (See **GENERATOR INSPECTION [MZR 2.5]**.) (See **GENERATOR INSPECTION [MZI 3.7 V6]**.) • Is there any malfunction?	Yes	Replace the generator, then go to Step 7. (See **GENERATOR REMOVAL/ INSTALLATION [MZR 2.5]**.) (See **GENERATOR REMOVAL/ INSTALLATION [MZI 3.7 V6]**.)
		No	Go to the next step.
5	**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 7.
		No	Go to the next step.
6	**INSPECT BATTERY POWER SUPPLY CIRCUIT (+B2) FOR SHORT TO GROUND OR OPEN CIRCUIT** • Install the ENG+B 10 A fuse. • Reconnect the negative battery cable. • Measure the voltage between keyless control module terminal 1E (wiring harness-side) and body ground. • Is there any voltage?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible short to ground or open circuit, then go to the next step.

7	**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.
8	**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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