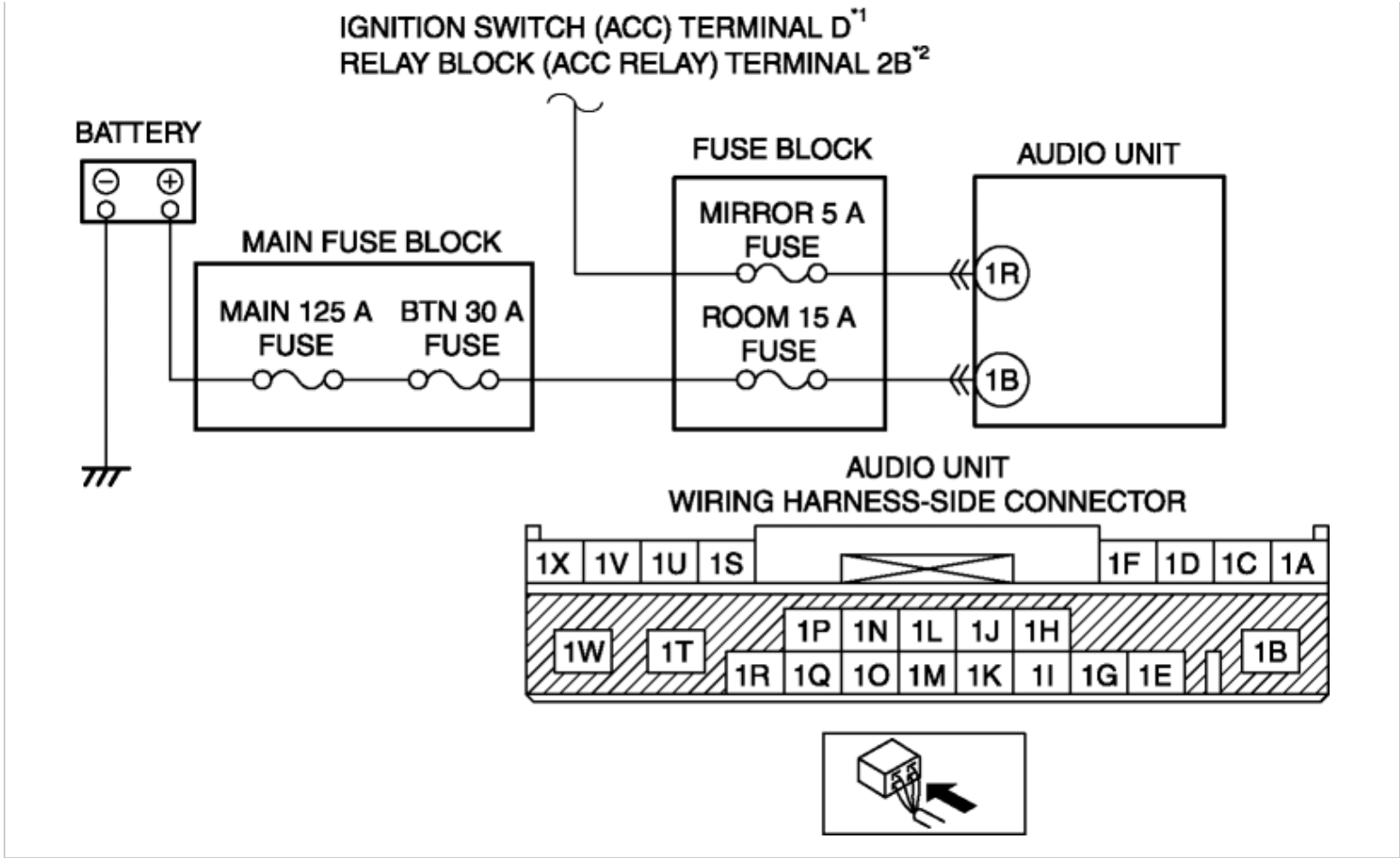


2012 - Mazda6 - Body and Accessories

DTC: 09:Er20, DEVICE CORD 09/ ERROR CORD 20 [AUDIO]

DESCRIPTION	Audio unit power supply voltage is low
DETECTION CONDITION	Audio unit power supply voltage of less than 10 V is detected continuously for 10 s .
POSSIBLE CAUSE	• PCM DTC is stored • Battery malfunction • Generator malfunction • Audio unit connector or terminals malfunction • Open circuit or short to ground in wiring harness between the following terminals: ▪ Audio unit terminal 1R—Ignition switch terminal D*¹/Relay block terminal 2B*² ▪ Audio unit terminal 1B—Battery positive terminal • Fuse malfunction • Audio unit malfunction



- *1
Vehicles without advanced keyless entry and push button start system
- *2
Vehicles with advanced keyless entry and push button start system

Diagnostic Procedure

Step	Inspection	Action
1	CONFIRM PCM DTC - Perform the DTC Reading Procedure to confirm the PCM DTC. (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 BATTERY Inspect the battery.	Yes Recharge or replace the battery, then go to Step 6. (See BATTERY RECHARGING [MZR 2.5].)

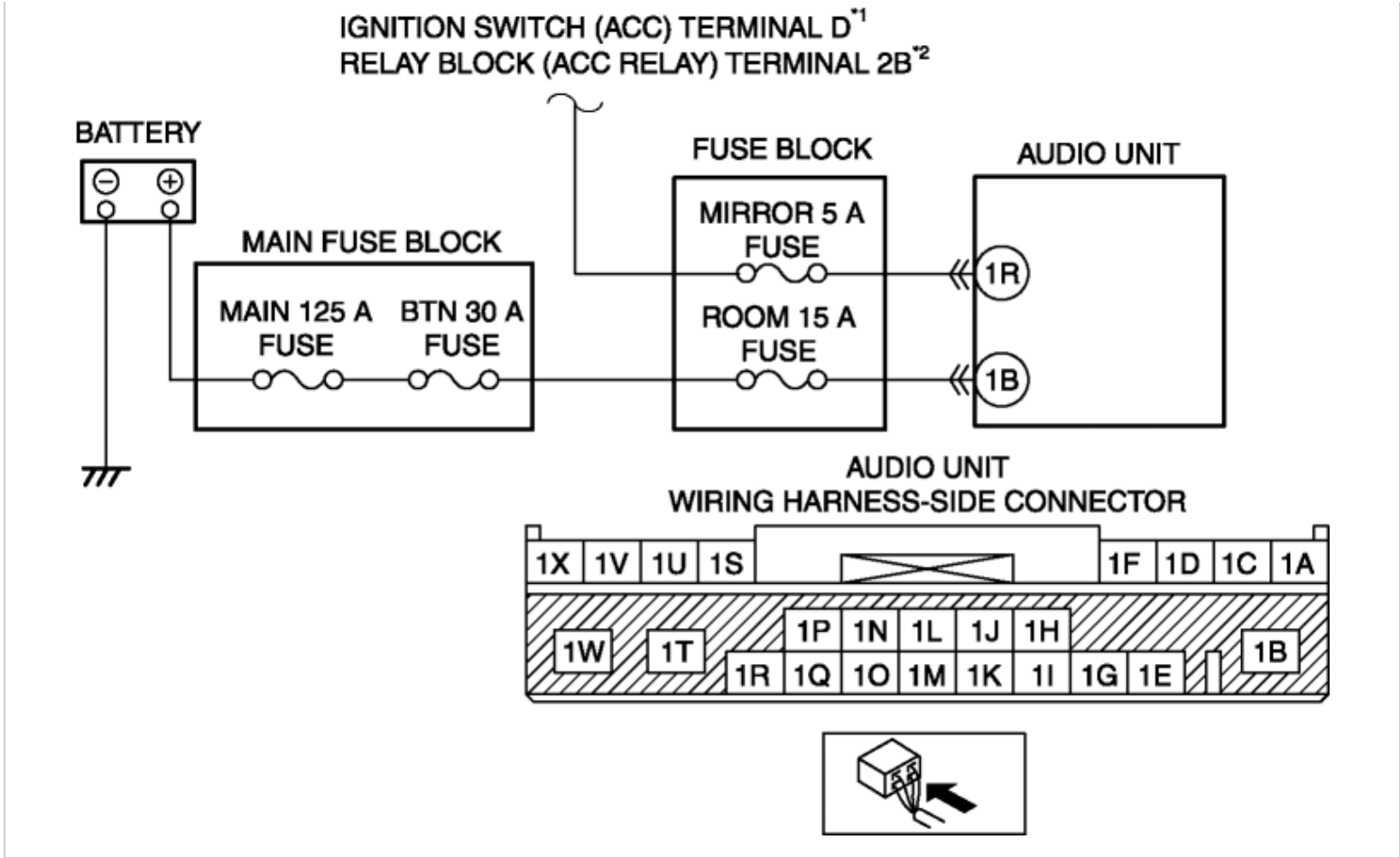
	(See BATTERY INSPECTION [MZR 2.5].) (See BATTERY INSPECTION [MZI 3.7 V6].) Is there any malfunction?	(See BATTERY REMOVAL/ INSTALLATION [MZR 2.5].) (See BATTERY RECHARGING [MZI 3.7 V6].) (See BATTERY REMOVAL/ INSTALLATION [MZI 3.7 V6].)	No Go to the next step.
3	INSPECT GENERATOR - Inspect the generator. (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 6. (See GENERATOR REMOVAL/ INSTALLATION [MZR 2.5].) (See GENERATOR REMOVAL/ INSTALLATION [MZI 3.7 V6].)	No Go to the next step.
4	INSPECT AUDIO UNIT CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the audio unit connector. - Inspect the connector for poor connection (such as damaged/pulled-out pins, and corrosion). - Is there any malfunction?	Yes Repair or replace the connector or terminal, then go to Step 6.	No Go to the next step.
5	INSPECT POWER SUPPLY CIRCUIT FOR OPEN CIRCUIT OR SHORT TO GROUND - Audio unit connector is disconnected. - Reconnect the negative battery cable. - Switch the ignition to ACC. - Measure the voltage at	Yes Go to the next step.	No If the audio unit terminal 1B or 1R voltage is not B+ : - Inspect the MAIN 125 A fuse or BTN 30 A fuse or ROOM 15 A fuse or MIRROR 5 A fuse. - If the fuse is melt: - Repair or replace the wiring harness for a possible short to ground.

	the following terminals (wiring harness-side): ▪ Audio unit terminal 1B ▪ Audio unit terminal 1R • Is the voltage B+ ?		• Replace the malfunctioning fuse. ▪ If the fuse is deterioration: • Replace the malfunctioning fuse. ▪ If the fuse is normal: • Repair or replace the wiring harness for a possible open circuit. Go to the next step.
6	VERIFY TROUBLESHOOTING COMPLETED • Switch the ignition to off. • Make sure reconnect the disconnected connectors. • Reconnect the negative battery cable. • Clear the DTC from the audio unit memory. (See CLEARING DTC [AUDIO].) • Perform the audio unit DTC inspection. (See DTC INSPECTION [AUDIO].) • Is the same DTC present?	Yes	Replace the audio unit, then go to the next step. (See AUDIO UNIT REMOVAL/ INSTALLATION .)
		No	Go to the next step.
7	VERIFY THAT NO OTHER DTCs ARE RECORDED • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [AUDIO] .)
		No	DTC troubleshooting completed.

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Diagnostic Procedure

Step	Inspection	Action
1	CONFIRM PCM DTC - Perform the DTC Reading Procedure to confirm the PCM DTC. (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 BATTERY Inspect the battery.	Yes Recharge or replace the battery, then go to Step 6. (See BATTERY RECHARGING [MZR 2.5].)

	(See BATTERY INSPECTION [MZR 2.5].) (See BATTERY INSPECTION [MZI 3.7 V6].) Is there any malfunction?	(See BATTERY REMOVAL/ INSTALLATION [MZR 2.5].) (See BATTERY RECHARGING [MZI 3.7 V6].) (See BATTERY REMOVAL/ INSTALLATION [MZI 3.7 V6].)	No Go to the next step.
3	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 6. (See GENERATOR REMOVAL/ INSTALLATION [MZR 2.5].) (See GENERATOR REMOVAL/ INSTALLATION [MZI 3.7 V6].)	No Go to the next step.
4	INSPECT AUDIO UNIT CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the audio unit connector. - Inspect the connector for poor connection (such as damaged/pulled-out pins, and corrosion). - Is there any malfunction?	Yes Repair or replace the connector or terminal, then go to Step 6.	No Go to the next step.
5	INSPECT POWER SUPPLY CIRCUIT FOR OPEN CIRCUIT OR SHORT TO GROUND - Audio unit connector is disconnected. - Reconnect the negative battery cable. - Switch the ignition to ACC. - Measure the voltage at	Yes Go to the next step.	No If the audio unit terminal 1B or 1R voltage is not B+ : - Inspect the MAIN 125 A fuse or BTN 30 A fuse or ROOM 15 A fuse or MIRROR 5 A fuse. - If the fuse is melt: - Repair or replace the wiring harness for a possible short to ground.

	the following terminals (wiring harness-side): ▪ Audio unit terminal 1B ▪ Audio unit terminal 1R • Is the voltage B+ ?		• Replace the malfunctioning fuse. ▪ If the fuse is deterioration: • Replace the malfunctioning fuse. ▪ If the fuse is normal: • Repair or replace the wiring harness for a possible open circuit. Go to the next step.
6	VERIFY TROUBLESHOOTING COMPLETED • Switch the ignition to off. • Make sure reconnect the disconnected connectors. • Reconnect the negative battery cable. • Clear the DTC from the audio unit memory. (See CLEARING DTC [AUDIO].) • Perform the audio unit DTC inspection. (See DTC INSPECTION [AUDIO].) • Is the same DTC present?	Yes	Replace the audio unit, then go to the next step. (See AUDIO UNIT REMOVAL/ INSTALLATION .)
		No	Go to the next step.
7	VERIFY THAT NO OTHER DTCs ARE RECORDED • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [AUDIO] .)
		No	DTC troubleshooting completed.