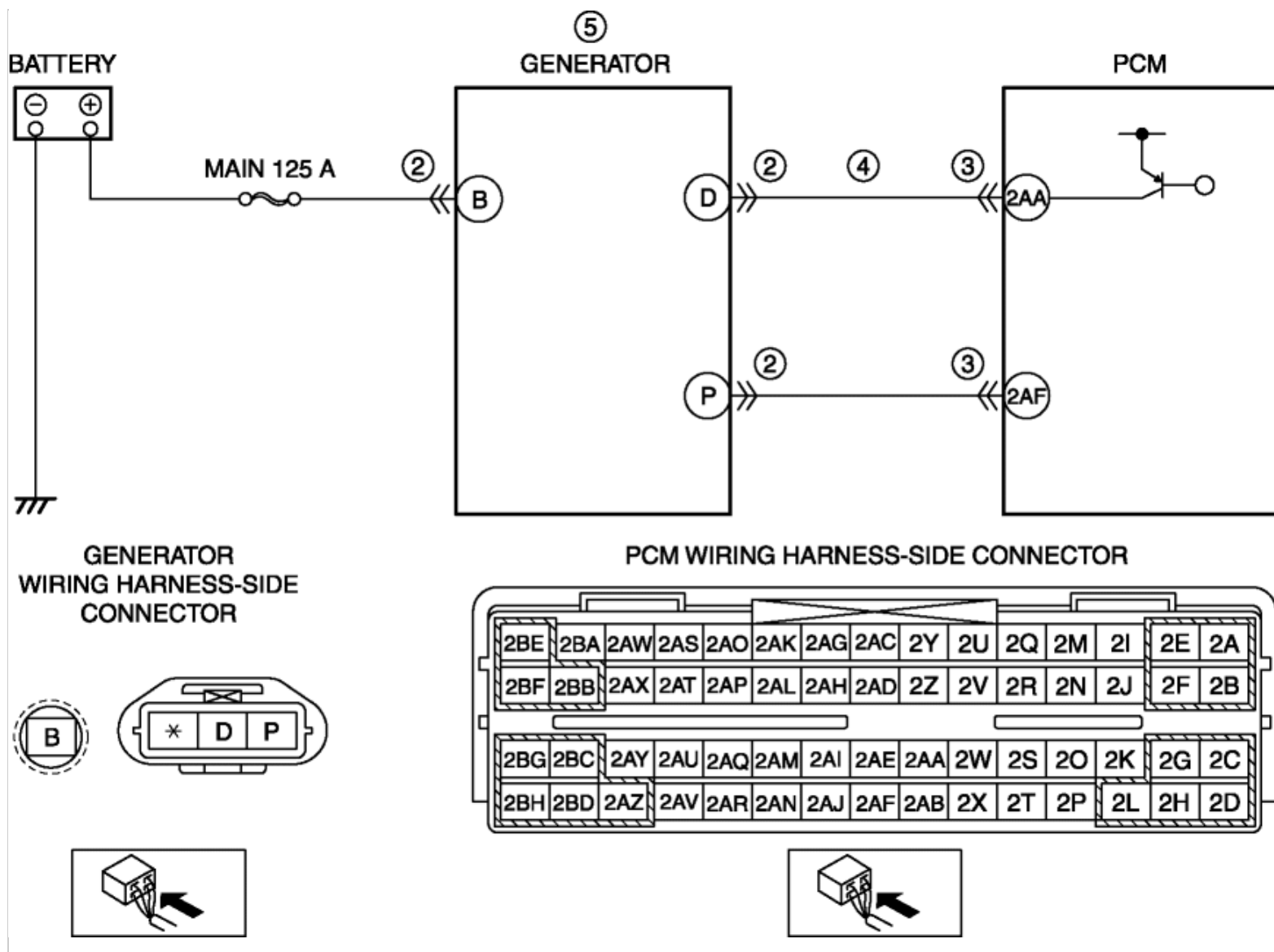


2012 - Mazda6 - Engine

DTC P2504:00 [MZR 2.5]

DTC P2504:00	Charging system voltage high
DETECTION CONDITION	- The PCM determines that the generator output voltage is above 18.5 V or battery voltage is above 16 V for 5 s while the engine running. Diagnostic support note - This is a continuous monitor (other). - The MIL does not illuminate. - FREEZE FRAME DATA (Mode2)/Snapshot data is not available. - The DTC is stored in the PCM memory.
POSSIBLE CAUSE	- Generator connector or terminal malfunction - PCM connector or terminal malfunction - Short to power supply in wiring harness between generator terminal D and PCM terminal 2AA - Generator malfunction - PCM malfunction



Diagnostic procedure

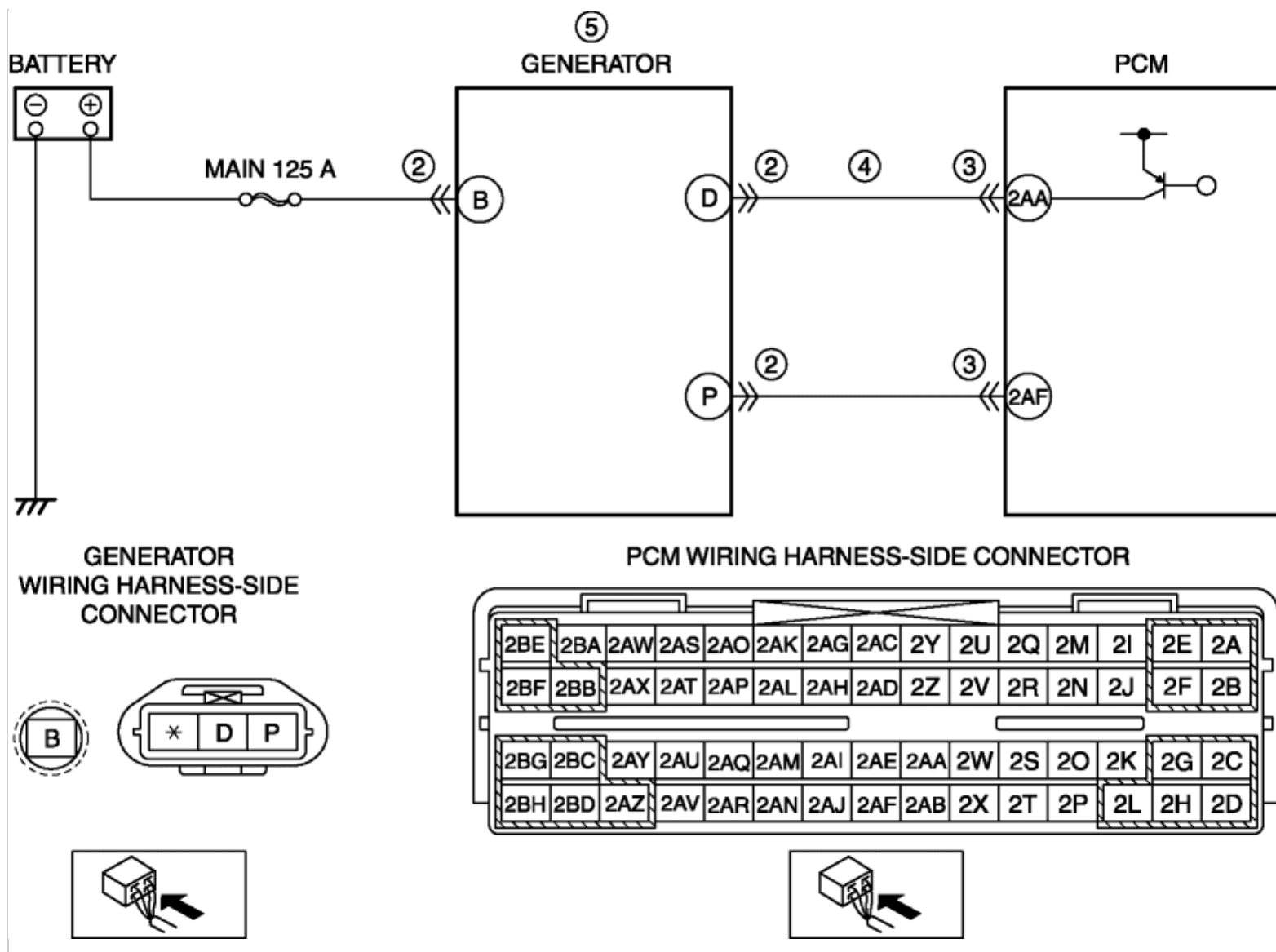
STEP	INSPECTION	ACTION
1	VERIFY RELATED REPAIR INFORMATION AVAILABILITY - Verify related Service Bulletins and/or on-line repair information availability. - Is any related repair information available?	Yes Perform repair or diagnosis according to the available repair information. If the vehicle is not repaired, go to the next step. No Go to the next step.
2	INSPECT GENERATOR CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the generator connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes Repair or replace the terminal and/or connector, then go to Step 6. No Go to the next step.
	INSPECT PCM CONNECTOR CONDITION	

3	• Disconnect the PCM connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal and/or connector, then go to Step 6.
		No	Go to the next step.
4	INSPECT GENERATOR CONTROL CIRCUIT FOR SHORT TO POWER SUPPLY • Generator and PCM connectors are disconnected. • Switch the ignition to ON (engine off). • Measure the voltage between generator terminal D (wiring harness-side) and body ground. • Is there any voltage?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to Step 6.
		No	Go to the next step.
5	INSPECT GENERATOR • Inspect the generator. (See GENERATOR INSPECTION [MZR 2.5].) • Is there any malfunction?	Yes	Replace the generator, then go to the next step. (See GENERATOR REMOVAL/ INSTALLATION [MZR 2.5] .)
		No	Go to the next step.
6	VERIFY DTC TROUBLESHOOTING COMPLETED • Make sure to reconnect all disconnected connectors. • Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [MZR 2.5].) • Perform the KOER self test. (See KOE0/ KOER SELF TEST [MZR 2.5].) • Is the same DTC present?	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM. (See PCM REMOVAL/ INSTALLATION [MZR 2.5].) Go to the next step.
		No	Go to the next step.
7	VERIFY AFTER REPAIR PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [MZR 2.5].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZR 2.5] .)
		No	DTC troubleshooting completed.

2012 - Mazda6 - Engine

DTC P2504:00 [MZR 2.5]

DTC P2504:00	Charging system voltage high
DETECTION CONDITION	- The PCM determines that the generator output voltage is above 18.5 V or battery voltage is above 16 V for 5 s while the engine running. Diagnostic support note - This is a continuous monitor (other). - The MIL does not illuminate. - FREEZE FRAME DATA (Mode2)/Snapshot data is not available. - The DTC is stored in the PCM memory.
POSSIBLE CAUSE	- Generator connector or terminal malfunction - PCM connector or terminal malfunction - Short to power supply in wiring harness between generator terminal D and PCM terminal 2AA - Generator malfunction - PCM malfunction



Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY RELATED REPAIR INFORMATION AVAILABILITY - Verify related Service Bulletins and/or on-line repair information availability. - Is any related repair information available?	Yes Perform repair or diagnosis according to the available repair information. If the vehicle is not repaired, go to the next step. No Go to the next step.
2	INSPECT GENERATOR CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the generator connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes Repair or replace the terminal and/or connector, then go to Step 6. No Go to the next step.
	INSPECT PCM CONNECTOR CONDITION	

3	• Disconnect the PCM connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal and/or connector, then go to Step 6.
		No	Go to the next step.
4	INSPECT GENERATOR CONTROL CIRCUIT FOR SHORT TO POWER SUPPLY • Generator and PCM connectors are disconnected. • Switch the ignition to ON (engine off). • Measure the voltage between generator terminal D (wiring harness-side) and body ground. • Is there any voltage?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to Step 6.
		No	Go to the next step.
5	INSPECT GENERATOR • Inspect the generator. (See GENERATOR INSPECTION [MZR 2.5].) • Is there any malfunction?	Yes	Replace the generator, then go to the next step. (See GENERATOR REMOVAL/ INSTALLATION [MZR 2.5] .)
		No	Go to the next step.
6	VERIFY DTC TROUBLESHOOTING COMPLETED • Make sure to reconnect all disconnected connectors. • Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [MZR 2.5].) • Perform the KOER self test. (See KOE/ KOER SELF TEST [MZR 2.5].) • Is the same DTC present?	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM. (See PCM REMOVAL/ INSTALLATION [MZR 2.5].) Go to the next step.
		No	Go to the next step.
7	VERIFY AFTER REPAIR PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [MZR 2.5].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZR 2.5] .)
		No	DTC troubleshooting completed.