

DTC P2502 [ZJ, Z6]

B3E010202500W01

DTC P2502	Charging system voltage problem
DETECTION CONDITION	<ul style="list-style-type: none"> The PCM determines that the generator output voltage is more than 17 V or the battery voltage is less than 11 V while the engine running.
POSSIBLE CAUSE	<ul style="list-style-type: none"> Generator malfunction Battery malfunction Connector or terminal malfunction Open circuit in wiring harness between generator terminal B and battery positive terminal PCM malfunction

The diagram illustrates the electrical connections for the charging system. The GENERATOR has three terminals: D (connected to PCM 2AN), P (connected to PCM 2AR), and B (connected to the BATTERY positive terminal 5 via a 4-wire harness). The BATTERY is connected to ground (3) and has a positive terminal (5). The PCM has three terminals: 2AN, 2AR, and 1BF. The MAIN RELAY is connected to the 1BF terminal. The GENERATOR WIRING HARNESS-SIDE CONNECTOR shows terminals D, P, and B. The PCM WIRING HARNESS-SIDE CONNECTOR shows terminals 2AR and 2AN. The diagram also shows the physical connectors for the generator and PCM.

Diagnostic procedure

STEP	INSPECTION		ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED • Has FREEZE FRAME DATA been recorded?	Yes	Go to the next step.
		No	Record the FREEZE FRAME DATA on the repair order, then go to the next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY • Verify related service 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.
3	INSPECT BATTERY • Turn the ignition switch off. • Inspect the battery. (See BATTERY INSPECTION.) • Is the battery normal?	Yes	Go to the next step.
		No	Replace the battery, then go to Step 7. (See BATTERY REMOVAL/INSTALLATION [ZJ, Z6].)
4	INSPECT POOR INSTALLATION OF GENERATOR TERMINAL • Turn the ignition switch off. • Inspect the generator terminal B installation nut for looseness. • Is the nut loose?	Yes	Tighten the generator terminal B installation nut, then go to Step 7.
		No	Go to the next step.
5	INSPECT POOR INSTALLATION OF BATTERY POSITIVE TERMINAL • Inspect the battery positive terminal for looseness. • Is the terminal loose?	Yes	Connect the battery positive terminal correctly, then go to Step 7.
		No	Go to the next step.
6	INSPECT BATTERY CHARGING CIRCUIT • Disconnect the generator terminal B. • Measure the voltage between generator terminal B (wiring harness-side) and body GND. • Is the voltage B+ ?	Yes	Go to the next step.
		No	Repair or replace wiring harness between generator terminal B and battery positive terminal, then go to the next step.
7	VERIFY TROUBLESHOOTING OF DTC P2502 COMPLETED • Make sure to reconnect all connectors. • Clear DTC from memory using the WDS or equivalent. • Start the engine. • Is same DTC present?	Yes	Replace the PCM, then go to the next step. (See PCM REMOVAL/INSTALLATION [ZJ, Z6].)
		No	Go to the next step.
8	VERIFY AFTER REPAIR PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [ZJ, Z6].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [ZJ, Z6].)
		No	DTC troubleshooting completed.