

2012 - Mazda6 - Engine

DTC P0620:00 [MZI 3.7 V6]

DTC P0620:00	Generator control circuit
DETECTION CONDITION	• The PCM reads the generator and sends a DTC through the network when the generator indicates a concern.
POSSIBLE CAUSE	• Drive belt misadjustment • Open circuit between generator terminal B and battery positive terminal • Short to power supply between generator terminal LI and PCM terminal 1O • Short to ground between generator terminal LI and PCM terminal 1O • Connector or terminal malfunction • Open circuit between generator terminal LI and PCM terminal 1O • Generator malfunction • PCM malfunction

	• Verify related Service Bulletins and/or on-line repair information availability. • Is any related Service Bulletins available?		• If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	INSPECT DRIVE BELT CONDITION • Verify that drive belt auto tensioner indicator mark does not exceed limit. • Is drive belt normal?	Yes	Go to the next step.
		No	Replace and/or adjust drive belt, then go to Step 12. (See DRIVE BELT REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
4	INSPECT GENERATOR TERMINAL FOR POOR INSTALLATION • Switch the ignition off. • Inspect generator terminal B for looseness. • Are there any malfunction?	Yes	Connect generator terminal B correctly, then go to Step 12.
		No	Go to the next step.
5	INSPECT GENERATOR CIRCUIT FOR SHORT TO POWER SUPPLY • Switch the ignition ON (Engine off). • Measure voltage between generator terminal LI (wiring harness-side) and body ground. • Is voltage B+ ?	Yes	Repair or replace suspected part, then go to Step 12.
		No	Go to the next step.
6	INSPECT GENERATOR CIRCUIT FOR SHORT TO GROUND • Inspect for continuity between generator terminal LI (wiring harness-side) and body ground. • Is there continuity?	Yes	Repair or replace suspected part, then go to the next step.
		No	Go to the next step.
7	INSPECT PCM CONNECTOR FOR POOR CONNECTION • Switch the ignition off. • Inspect for poor connection (such as damaged/pulled-out terminals, corrosion). • Are there any malfunction?	Yes	Repair or replace suspected part, then go to Step 12.
		No	Go to the next step.
8	INSPECT GENERATOR CIRCUIT FOR OPEN CIRCUIT • Inspect for continuity between generator terminal LI (wiring harness-side) and PCM terminal 1O (wiring harness-side) • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace suspected part, then go to Step 12.
9	INSPECT BATTERY POSITIVE TERMINAL FOR POOR INSTALLATION	Yes	Connect the battery positive terminal correctly, then go to Step 12.

	• Switch the ignition off. • Inspect the battery positive terminal for looseness. • Is there any malfunction?	No	Go to the next step.
10	INSPECT GENERATOR CIRCUIT FOR OPEN CIRCUIT • Inspect continuity between generator terminal B (wiring harness-side) and battery positive terminal (wiring harness-side). • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace suspected part, then go to Step 12.
11	INSPECT GENERATOR • Inspect the generator. (See GENERATOR INSPECTION [MZI 3.7 V6] .) • Is there any malfunction?	Yes	Replace the generator, then go to the next step. (See GENERATOR REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
		No	Go to the next step.
12	VERIFY TROUBLESHOOTING OF DTC P0620:00 HAS BEEN COMPLETED • Verify that all disconnected connectors reconnected. • Clear the DTC from the PCM memory using the M-MDS. • Perform the KOEO or KOER self-test. (See KOEO/ KOER SELF TEST [MZI 3.7 V6] .) • Is the PENDING CODE for the DTC present?	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM. (See PCM REMOVAL/ INSTALLATION [MZI 3.7 V6] .) Go to the next step.
		No	Go to the next step.
13	VERIFY AFTER REPAIR PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [MZI 3.7 V6] .) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZI 3.7 V6] .)
		No	Troubleshooting completed.

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POSSIBLE CAUSE	• Drive belt misadjustment • Open circuit between generator terminal B and battery positive terminal • Short to power supply between generator terminal LI and PCM terminal 1O • Short to ground between generator terminal LI and PCM terminal 1O • Connector or terminal malfunction • Open circuit between generator terminal LI and PCM terminal 1O • Generator malfunction • PCM malfunction

	• Verify related Service Bulletins and/or on-line repair information availability. • Is any related Service Bulletins available?		• If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	INSPECT DRIVE BELT CONDITION • Verify that drive belt auto tensioner indicator mark does not exceed limit. • Is drive belt normal?	Yes	Go to the next step.
		No	Replace and/or adjust drive belt, then go to Step 12. (See DRIVE BELT REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
4	INSPECT GENERATOR TERMINAL FOR POOR INSTALLATION • Switch the ignition off. • Inspect generator terminal B for looseness. • Are there any malfunction?	Yes	Connect generator terminal B correctly, then go to Step 12.
		No	Go to the next step.
5	INSPECT GENERATOR CIRCUIT FOR SHORT TO POWER SUPPLY • Switch the ignition ON (Engine off). • Measure voltage between generator terminal LI (wiring harness-side) and body ground. • Is voltage B+ ?	Yes	Repair or replace suspected part, then go to Step 12.
		No	Go to the next step.
6	INSPECT GENERATOR CIRCUIT FOR SHORT TO GROUND • Inspect for continuity between generator terminal LI (wiring harness-side) and body ground. • Is there continuity?	Yes	Repair or replace suspected part, then go to the next step.
		No	Go to the next step.
7	INSPECT PCM CONNECTOR FOR POOR CONNECTION • Switch the ignition off. • Inspect for poor connection (such as damaged/pulled-out terminals, corrosion). • Are there any malfunction?	Yes	Repair or replace suspected part, then go to Step 12.
		No	Go to the next step.
8	INSPECT GENERATOR CIRCUIT FOR OPEN CIRCUIT • Inspect for continuity between generator terminal LI (wiring harness-side) and PCM terminal 1O (wiring harness-side) • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace suspected part, then go to Step 12.
9	INSPECT BATTERY POSITIVE TERMINAL FOR POOR INSTALLATION	Yes	Connect the battery positive terminal correctly, then go to Step 12.

	• Switch the ignition off. • Inspect the battery positive terminal for looseness. • Is there any malfunction?	No	Go to the next step.
10	INSPECT GENERATOR CIRCUIT FOR OPEN CIRCUIT • Inspect continuity between generator terminal B (wiring harness-side) and battery positive terminal (wiring harness-side). • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace suspected part, then go to Step 12.
11	INSPECT GENERATOR • Inspect the generator. (See GENERATOR INSPECTION [MZI 3.7 V6] .) • Is there any malfunction?	Yes	Replace the generator, then go to the next step. (See GENERATOR REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
		No	Go to the next step.
12	VERIFY TROUBLESHOOTING OF DTC P0620:00 HAS BEEN COMPLETED • Verify that all disconnected connectors reconnected. • Clear the DTC from the PCM memory using the M-MDS. • Perform the KOEO or KOER self-test. (See KOEO/ KOER SELF TEST [MZI 3.7 V6] .) • Is the PENDING CODE for the DTC present?	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM. (See PCM REMOVAL/ INSTALLATION [MZI 3.7 V6] .) Go to the next step.
		No	Go to the next step.
13	VERIFY AFTER REPAIR PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [MZI 3.7 V6] .) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZI 3.7 V6] .)
		No	Troubleshooting completed.