2012 - Mazda6 - Engine

NO.8 ENGINE RUNS ROUGH/ ROLLING IDLE [MZI 3.7 V6]

8	ENGINE RUNS ROUGH/ROLLING IDLE
DESCRIPTION	• Engine speed fluctuates between specified idle speed and lower speed and engine shakes excessively. • Idle speed is too slow and engine shakes excessively.

POSSIBLE CAUSE	• Idle learning of drive-by-wire control system is not completed.
	• Poor fuel quality
	• Air cleaner restriction
	• Vacuum leakage
	• Disconnected electrical connectors
	• Air leakage from intake-air system parts
	• No battery power supply to PCM
	• Open or short circuit in PCM ground circuit
	• PCM DTC is stored.
	• Engine overheating
	• MAF sensor or related circuit malfunction
	• A/C system operation is improper.
	• Power steering pressure switch or related circuit malfunction
	• Erratic signal from CKP sensor
	• Ignition system malfunction
	  ▪ Ignition coil malfunction
	  ▪ Ignition coil related circuit malfunction
	  ▪ Spark plug malfunction
	• Fuel leakage from fuel injector
	• Fuel injector clogging
	• Improper operation of drive-by-wire control system
	• Inadequate fuel pressure
	  ▪ Fuel pump mechanical malfunction
	  ▪ Fuel line restriction or clogging
	  ▪ Pressure regulator malfunction (built-in fuel pump unit)
	• Fuel leakage from fuel system
	• Purge solenoid valve malfunction
	• PCV valve malfunction
	• Erratic or no signal from CMP sensor
	• Improper variable valve timing control system operation

- Low engine compression
- Improper valve timing

WARNING:

- The following troubleshooting flow chart contains the fuel system diagnosis and repair procedures. Read the following warnings before servicing the fuel system:
    - Fuel vapor is hazardous. It can easily ignite, causing serious injury and damage. Always keep sparks and flames away from fuel.
    - Fuel line spills and leakage are dangerous. Fuel can ignite and cause serious injuries or death and damage. Fuel can also irritate skin and eyes. To prevent this, always complete "BEFORE SERVICE PRECAUTION" and "AFTER SERVICE PRECAUTION " described in this manual. (See **BEFORE SERVICE PRECAUTION [MZI 3.7 V6]**.) (See **AFTER SERVICE PRECAUTION [MZI 3.7 V6]**.)

CAUTION:

- Disconnecting/connecting quick release connector without cleaning it may cause damage to fuel pipe and quick release connector. Always clean quick release connector joint area before disconnecting/connecting, and make sure that it is free of foreign material.

Diagnostic procedure

STEP	INSPECTION	RESULTS	ACTION
1	**INSPECT IF MALFUNCTION CAUSE IS DRIVE-BY-WIRE CONTROL SYSTEM IDLE LEARNING NOT PERFORMED** • Warm up the engine. • Idle the engine for **5 min.** • Is the symptom disappeared?	Yes	Symptom troubleshooting completed. (Cause of this symptom is that the idle learning of drive-by-wire control system is not completed.)
		No	Go to the next step.
2	**INSPECT RELATED PART CONDITION** • Verify the following: ▪ External fuel shut off or accessory (such as kill switch, alarm) ▪ Fuel quality (such as proper octane, contamination, winter/summer blend) ▪ No air leakage from intake-air system ▪ Proper sealing of intake manifold and components attached to intake manifold ▪ Ignition wiring ▪ Electrical connections ▪ Fuses ▪ Smooth	Yes	Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results. Repeat Step 2.

	operation of throttle valve ▪ Vacuum air leakage ▪ Air cleaner restriction ▪ PCM ground circuit (1B,1E, 1J) • Are all items normal?		
3	**VERIFY PCM DTC** • Switch the ignition to ON (Engine off). • Retrieve any DTCs using the M-MDS. (See **ON-BOARD DIAGNOSTIC TEST [MZI 3.7 V6]**.) • Are there any DTCs displayed?	Yes	DTC is displayed: • Go to the appropriate DTC inspection. (See **DTC TABLE [MZI 3.7 V6]**.)
		No	No DTC is displayed: • Go to the next step.
4	**VERIFY IF MALFUNCTION CAUSE IS OVERHEATING** • Is the engine overheating?	Yes	Go to the symptom troubleshooting "NO.17 COOLING SYSTEM CONCERNS-OVERHEATING". (See **NO.17 COOLING SYSTEM CONCERNS-OVERHEATING [MZI 3.7 V6]**.)
		No	Go to the next step.
5	**INSPECT MAF SENSOR SIGNAL** **CAUTION:** • While performing this step, always operate the vehicle in a safe and lawful manner. • When the M-MDS is used to observe monitor system status while driving, be sure to have another technician with you, or record the data in the M-MDS using the PID/DATA MONITOR AND RECORD capturing function and inspect later. • Access the PCM PID MAF using the M-MDS. (See **ON-BOARD DIAGNOSTIC TEST [MZI 3.7 V6]**.) • Drive the vehicle with monitoring PID. • Is the MAF PID within specification?	Yes	Go to the next step.
		No	Inspect for open or short circuit of MAF sensor and related wiring harness. Repair or replace the malfunctioning part according to the inspection results.
6	**DETERMINE IF MALFUNCTION CAUSE IS A/C SYSTEM OR OTHER** **NOTE:** • The following test is for engine running at rough idle with A/C on. If other symptoms exist, go to the next step. • Connect the pressure gauge to A/C low and high pressure side	Yes	Go to the next step.
		No	If the A/C is always on: • Go to the symptom troubleshooting "NO.24 A/C IS ALWAYS ON OR A/C COMPRESSOR RUNS CONTINUOUSLY". (See **NO.24 A/C IS ALWAYS ON OR A/C COMPRESSOR RUNS CONTINUOUSLY [MZI 3.7 V6]**.)

	lines. • Start the engine and idle it. • Turn the A/C switch on. • Measure low side and high side pressures. (See **REFRIGERANT PRESSURE CHECK**.) • Are pressures within specifications?		For other symptoms: • Inspect the following: ▪ Refrigerant charging amount ▪ Condenser fan operation • Repair or replace the malfunctioning part according to the inspection results.
7	**INSPECT POWER STEERING OPERATION SIGNAL** • Start the engine and idle it. • Access the PCM PID PSP using the M-MDS. (See **ON-BOARD DIAGNOSTIC TEST [MZI 3.7 V6]**.) • Does the PID indicate the correct values under trouble condition?	Yes	Go to the next step.
		No	Inspect the PSP switch operation and wiring harness between PSP switch and PCM terminal 1G. Repair or replace the malfunctioning part according to the inspection results.
8	**INSPECT CKP SENSOR** • Inspect the CKP sensor. (See **CRANKSHAFT POSITION (CKP) SENSOR INSPECTION [MZI 3.7 V6]**.) • Is there any malfunction?	Yes	Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
9	**INSPECT CMP SENSOR** • Inspect the CMP sensor. (See **CAMSHAFT POSITION (CMP) SENSOR INSPECTION [MZI 3.7 V6]**.) • Is there any malfunction?	Yes	Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
10	**INSPECT DEFORMED IN EXHAUST SYSTEM** • Visually inspect the exhaust system part. • Is there any deformed exhaust system part?	Yes	Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
11	**INSPECT IGNITION SYSTEM RELATED WIRING HARNESS** • Inspect the ignition coil related wiring harness condition (intermittent open or short circuit) for all cylinders. • Are wiring harness conditions normal?	Yes	Go to the next step.
		No	Repair or replace suspect wiring harness and connector.
12	**INSPECT IGNITION SYSTEM OPERATION** • Perform the spark test. (See **ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZI 3.7 V6]**.) • Is strong blue spark visible at	Yes	Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results.

	each cylinder?		
13	**VERIFY SPARK PLUG CONDITION** • Verify the spark plug conditions when the spark plug removed in Step 12. • Is spark plug wet, covered with carbon or grayish white?	Yes	Spark plug is wet or covered with carbon: • Inspect for fuel leakage from fuel injector. Spark plug is grayish white: • Inspect the fuel injector for clogging. Repair or replace the malfunctioning part according to the inspection results.
		No	Install the spark plugs on original cylinders. Go to the next step.
14	**INSPECT DRIVE-BY-WIRE CONTROL SYSTEM OPERATION** • Perform the drive-by-wire control system operation inspection. (See **ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZI 3.7 V6]**.) • Does the drive-by-wire control system function properly?	Yes	Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results.
15	**INSPECT FUEL LINE PRESSURE** • Install the fuel pressure gauge between the fuel pipe and fuel distributor. • Start the engine and run it at idle. • Measure the fuel line pressure during idle. (See **FUEL LINE PRESSURE INSPECTION [MZI 3.7 V6]**.) • Is the fuel line pressure correct during idle?	Yes	Go to the next step.
		No	Zero or low: • Inspect for the following: ▪ Fuel pump relay ▪ Fuel pump circuit ▪ Fuel line for clogging • If there is no malfunction, replace the fuel pump unit. (Fuel pump or pressure regulator malfunction) (See **FUEL PUMP UNIT REMOVAL/ INSTALLATION [MZI 3.7 V6]**.) High: • Replace the fuel pump unit. (Pressure regulator malfunction) (See **FUEL PUMP UNIT REMOVAL/ INSTALLATION [MZI 3.7 V6]**.)
16	**INSPECT FUEL SYSTEM FOR FUEL LEAKAGE** • Visually inspect for fuel leakage at fuel injector O-ring and fuel line. • Service if necessary. • Is the fuel line pressure held after ignition is switched to off? (See **FUEL LINE PRESSURE INSPECTION [MZI 3.7 V6]**.)	Yes	Go to the next step.
		No	Inspect the fuel injector. (See **FUEL INJECTOR INSPECTION [MZI 3.7 V6]**.) • If the fuel injector is normal, replace the fuel pump unit. (See **FUEL PUMP UNIT REMOVAL/ INSTALLATION [MZI 3.7 V6]**.)

17	**INSPECT LONG TERM FUEL TRIM** • Start the engine and idle it. • Access the PCM PIDs LONG FT1 and LONG FT2 using the M-MDS. (See **ON-BOARD DIAGNOSTIC TEST [MZI 3.7 V6]**.) • Measure the LONG FT1 PID and LONG FT2 PID at idle. • Are PID values normal?	Yes	Go to the next step.
		No	Less than the specification (too rich): • Inspect EVAP control system. • Repair or replace the malfunctioning part according to the inspection results. Greater than the specification (too lean): • Inspect for air leakage at intake-air system components. • Repair or replace the malfunctioning part according to the inspection results. ▪ If system is normal, go to the next step.
18	**DETERMINE IF MALFUNCTION CAUSE IS EVAP CONTROL SYSTEM OR OTHER** • Disconnect the vacuum hose between purge solenoid valve and intake manifold from purge solenoid side. • Plug opening end of vacuum hose. • Start the engine. • Is the starting condition improved?	Yes	Inspect the following: • Purge solenoid valve is stuck open. • EVAP control system Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
19	**INSPECT VARIABLE VALVE TIMING CONTROL SYSTEM OPERATION** • Inspect variable valve timing control system operation. (See **ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZI 3.7 V6]**.) • Does the variable valve timing control function properly?	Yes	Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results.
20	**INSPECT IF MALFUNCTION CAUSE IS PCV VALVE OR IMPROPER ENGINE COMPRESSION** • Is the engine compression correct?	Yes	Inspect the PCV valve. (See **POSITIVE CRANKCASE VENTILATION (PCV) VALVE INSPECTION [MZI 3.7 V6]**.) • If the PCV valve is normal, inspect the valve timing. • Repair or replace the malfunctioning part according to the inspection results.
		No	Inspect for cause. Repair or replace the malfunctioning part according to the inspection results.
21	Verify test results. • If normal, return to diagnostic index to service any additional symptoms. (See **SYMPTOM DIAGNOSTIC INDEX [MZI 3.7 V6]**.) • If malfunction remains, inspect related Service Bulletins and/or On-line Repair Information and perform repair or diagnosis. ▪ If vehicle is repaired, troubleshooting completed. ▪ If vehicle is not repaired or additional diagnostic information is not available, reprogram the PCM if		

	a later calibration is available. Retest.

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POSSIBLE CAUSE	• Idle learning of drive-by-wire control system is not completed.
	• Poor fuel quality
	• Air cleaner restriction
	• Vacuum leakage
	• Disconnected electrical connectors
	• Air leakage from intake-air system parts
	• No battery power supply to PCM
	• Open or short circuit in PCM ground circuit
	• PCM DTC is stored.
	• Engine overheating
	• MAF sensor or related circuit malfunction
	• A/C system operation is improper.
	• Power steering pressure switch or related circuit malfunction
	• Erratic signal from CKP sensor
	• Ignition system malfunction
	  ▪ Ignition coil malfunction
	  ▪ Ignition coil related circuit malfunction
	  ▪ Spark plug malfunction
	• Fuel leakage from fuel injector
	• Fuel injector clogging
	• Improper operation of drive-by-wire control system
	• Inadequate fuel pressure
	  ▪ Fuel pump mechanical malfunction
	  ▪ Fuel line restriction or clogging
	  ▪ Pressure regulator malfunction (built-in fuel pump unit)
	• Fuel leakage from fuel system
	• Purge solenoid valve malfunction
	• PCV valve malfunction
	• Erratic or no signal from CMP sensor
	• Improper variable valve timing control system operation

- Low engine compression
- Improper valve timing

WARNING:

- The following troubleshooting flow chart contains the fuel system diagnosis and repair procedures. Read the following warnings before servicing the fuel system:
    - Fuel vapor is hazardous. It can easily ignite, causing serious injury and damage. Always keep sparks and flames away from fuel.
    - Fuel line spills and leakage are dangerous. Fuel can ignite and cause serious injuries or death and damage. Fuel can also irritate skin and eyes. To prevent this, always complete "BEFORE SERVICE PRECAUTION" and "AFTER SERVICE PRECAUTION " described in this manual. (See **BEFORE SERVICE PRECAUTION [MZI 3.7 V6]**.) (See **AFTER SERVICE PRECAUTION [MZI 3.7 V6]**.)

CAUTION:

- Disconnecting/connecting quick release connector without cleaning it may cause damage to fuel pipe and quick release connector. Always clean quick release connector joint area before disconnecting/connecting, and make sure that it is free of foreign material.

Diagnostic procedure

STEP	INSPECTION	RESULTS	ACTION
1	**INSPECT IF MALFUNCTION CAUSE IS DRIVE-BY-WIRE CONTROL SYSTEM IDLE LEARNING NOT PERFORMED** • Warm up the engine. • Idle the engine for **5 min.** • Is the symptom disappeared?	Yes	Symptom troubleshooting completed. (Cause of this symptom is that the idle learning of drive-by-wire control system is not completed.)
		No	Go to the next step.
2	**INSPECT RELATED PART CONDITION** • Verify the following: ▪ External fuel shut off or accessory (such as kill switch, alarm) ▪ Fuel quality (such as proper octane, contamination, winter/summer blend) ▪ No air leakage from intake-air system ▪ Proper sealing of intake manifold and components attached to intake manifold ▪ Ignition wiring ▪ Electrical connections ▪ Fuses ▪ Smooth	Yes	Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results. Repeat Step 2.

	operation of throttle valve ▪ Vacuum air leakage ▪ Air cleaner restriction ▪ PCM ground circuit (1B,1E, 1J) • Are all items normal?		
3	**VERIFY PCM DTC** • Switch the ignition to ON (Engine off). • Retrieve any DTCs using the M-MDS. (See **ON-BOARD DIAGNOSTIC TEST [MZI 3.7 V6]**.) • Are there any DTCs displayed?	Yes	DTC is displayed: • Go to the appropriate DTC inspection. (See **DTC TABLE [MZI 3.7 V6]**.)
		No	No DTC is displayed: • Go to the next step.
4	**VERIFY IF MALFUNCTION CAUSE IS OVERHEATING** • Is the engine overheating?	Yes	Go to the symptom troubleshooting "NO.17 COOLING SYSTEM CONCERNS-OVERHEATING". (See **NO.17 COOLING SYSTEM CONCERNS-OVERHEATING [MZI 3.7 V6]**.)
		No	Go to the next step.
5	**INSPECT MAF SENSOR SIGNAL** **CAUTION:** • While performing this step, always operate the vehicle in a safe and lawful manner. • When the M-MDS is used to observe monitor system status while driving, be sure to have another technician with you, or record the data in the M-MDS using the PID/DATA MONITOR AND RECORD capturing function and inspect later. • Access the PCM PID MAF using the M-MDS. (See **ON-BOARD DIAGNOSTIC TEST [MZI 3.7 V6]**.) • Drive the vehicle with monitoring PID. • Is the MAF PID within specification?	Yes	Go to the next step.
		No	Inspect for open or short circuit of MAF sensor and related wiring harness. Repair or replace the malfunctioning part according to the inspection results.
6	**DETERMINE IF MALFUNCTION CAUSE IS A/C SYSTEM OR OTHER** **NOTE:** • The following test is for engine running at rough idle with A/C on. If other symptoms exist, go to the next step. • Connect the pressure gauge to A/C low and high pressure side	Yes	Go to the next step.
		No	If the A/C is always on: • Go to the symptom troubleshooting "NO.24 A/C IS ALWAYS ON OR A/C COMPRESSOR RUNS CONTINUOUSLY". (See **NO.24 A/C IS ALWAYS ON OR A/C COMPRESSOR RUNS CONTINUOUSLY [MZI 3.7 V6]**.)

	lines. • Start the engine and idle it. • Turn the A/C switch on. • Measure low side and high side pressures. (See **REFRIGERANT PRESSURE CHECK**.) • Are pressures within specifications?		For other symptoms: • Inspect the following: ▪ Refrigerant charging amount ▪ Condenser fan operation • Repair or replace the malfunctioning part according to the inspection results.
7	**INSPECT POWER STEERING OPERATION SIGNAL** • Start the engine and idle it. • Access the PCM PID PSP using the M-MDS. (See **ON-BOARD DIAGNOSTIC TEST [MZI 3.7 V6]**.) • Does the PID indicate the correct values under trouble condition?	Yes	Go to the next step.
		No	Inspect the PSP switch operation and wiring harness between PSP switch and PCM terminal 1G. Repair or replace the malfunctioning part according to the inspection results.
8	**INSPECT CKP SENSOR** • Inspect the CKP sensor. (See **CRANKSHAFT POSITION (CKP) SENSOR INSPECTION [MZI 3.7 V6]**.) • Is there any malfunction?	Yes	Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
9	**INSPECT CMP SENSOR** • Inspect the CMP sensor. (See **CAMSHAFT POSITION (CMP) SENSOR INSPECTION [MZI 3.7 V6]**.) • Is there any malfunction?	Yes	Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
10	**INSPECT DEFORMED IN EXHAUST SYSTEM** • Visually inspect the exhaust system part. • Is there any deformed exhaust system part?	Yes	Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
11	**INSPECT IGNITION SYSTEM RELATED WIRING HARNESS** • Inspect the ignition coil related wiring harness condition (intermittent open or short circuit) for all cylinders. • Are wiring harness conditions normal?	Yes	Go to the next step.
		No	Repair or replace suspect wiring harness and connector.
12	**INSPECT IGNITION SYSTEM OPERATION** • Perform the spark test. (See **ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZI 3.7 V6]**.) • Is strong blue spark visible at	Yes	Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results.

	each cylinder?		
13	**VERIFY SPARK PLUG CONDITION** • Verify the spark plug conditions when the spark plug removed in Step 12. • Is spark plug wet, covered with carbon or grayish white?	Yes	Spark plug is wet or covered with carbon: • Inspect for fuel leakage from fuel injector. Spark plug is grayish white: • Inspect the fuel injector for clogging. Repair or replace the malfunctioning part according to the inspection results.
		No	Install the spark plugs on original cylinders. Go to the next step.
14	**INSPECT DRIVE-BY-WIRE CONTROL SYSTEM OPERATION** • Perform the drive-by-wire control system operation inspection. (See **ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZI 3.7 V6]**.) • Does the drive-by-wire control system function properly?	Yes	Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results.
15	**INSPECT FUEL LINE PRESSURE** • Install the fuel pressure gauge between the fuel pipe and fuel distributor. • Start the engine and run it at idle. • Measure the fuel line pressure during idle. (See **FUEL LINE PRESSURE INSPECTION [MZI 3.7 V6]**.) • Is the fuel line pressure correct during idle?	Yes	Go to the next step.
		No	Zero or low: • Inspect for the following: ▪ Fuel pump relay ▪ Fuel pump circuit ▪ Fuel line for clogging • If there is no malfunction, replace the fuel pump unit. (Fuel pump or pressure regulator malfunction) (See **FUEL PUMP UNIT REMOVAL/ INSTALLATION [MZI 3.7 V6]**.) High: • Replace the fuel pump unit. (Pressure regulator malfunction) (See **FUEL PUMP UNIT REMOVAL/ INSTALLATION [MZI 3.7 V6]**.)
16	**INSPECT FUEL SYSTEM FOR FUEL LEAKAGE** • Visually inspect for fuel leakage at fuel injector O-ring and fuel line. • Service if necessary. • Is the fuel line pressure held after ignition is switched to off? (See **FUEL LINE PRESSURE INSPECTION [MZI 3.7 V6]**.)	Yes	Go to the next step.
		No	Inspect the fuel injector. (See **FUEL INJECTOR INSPECTION [MZI 3.7 V6]**.) • If the fuel injector is normal, replace the fuel pump unit. (See **FUEL PUMP UNIT REMOVAL/ INSTALLATION [MZI 3.7 V6]**.)

17	**INSPECT LONG TERM FUEL TRIM** • Start the engine and idle it. • Access the PCM PIDs LONG FT1 and LONG FT2 using the M-MDS. (See **ON-BOARD DIAGNOSTIC TEST [MZI 3.7 V6]**.) • Measure the LONG FT1 PID and LONG FT2 PID at idle. • Are PID values normal?	Yes	Go to the next step.
		No	Less than the specification (too rich): • Inspect EVAP control system. • Repair or replace the malfunctioning part according to the inspection results. Greater than the specification (too lean): • Inspect for air leakage at intake-air system components. • Repair or replace the malfunctioning part according to the inspection results. ▪ If system is normal, go to the next step.
18	**DETERMINE IF MALFUNCTION CAUSE IS EVAP CONTROL SYSTEM OR OTHER** • Disconnect the vacuum hose between purge solenoid valve and intake manifold from purge solenoid side. • Plug opening end of vacuum hose. • Start the engine. • Is the starting condition improved?	Yes	Inspect the following: • Purge solenoid valve is stuck open. • EVAP control system Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
19	**INSPECT VARIABLE VALVE TIMING CONTROL SYSTEM OPERATION** • Inspect variable valve timing control system operation. (See **ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZI 3.7 V6]**.) • Does the variable valve timing control function properly?	Yes	Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results.
20	**INSPECT IF MALFUNCTION CAUSE IS PCV VALVE OR IMPROPER ENGINE COMPRESSION** • Is the engine compression correct?	Yes	Inspect the PCV valve. (See **POSITIVE CRANKCASE VENTILATION (PCV) VALVE INSPECTION [MZI 3.7 V6]**.) • If the PCV valve is normal, inspect the valve timing. • Repair or replace the malfunctioning part according to the inspection results.
		No	Inspect for cause. Repair or replace the malfunctioning part according to the inspection results.
21	Verify test results. • If normal, return to diagnostic index to service any additional symptoms. (See **SYMPTOM DIAGNOSTIC INDEX [MZI 3.7 V6]**.) • If malfunction remains, inspect related Service Bulletins and/or On-line Repair Information and perform repair or diagnosis. ▪ If vehicle is repaired, troubleshooting completed. ▪ If vehicle is not repaired or additional diagnostic information is not available, reprogram the PCM if		

	a later calibration is available. Retest.

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