

2012 - Mazda6 - Engine

NO.18 COOLING SYSTEM CONCERNS-RUNS COLD [MZR 2.5]

18	COOLING SYSTEM CONCERNS—RUNS COLD
DESCRIPTION	Engine takes excessive time to reach normal operating temperature.
POSSIBLE CAUSE	- A/C and heater system malfunction - Thermostat malfunction - Cooling fan system malfunction - Improper indication of water temperature gauge - ECT sensor malfunction - Instrument cluster (water temperature gauge) malfunction

Diagnostic procedure

STEP	INSPECTION	RESULTS	ACTION
1	DETERMINE IF MALFUNCTION CAUSE IS HVAC SYSTEM OR ENGINE Is the customer complaint "Lack of passenger compartment heat" only?	Yes	Inspect A/C and heater system. Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
2	VERIFY IDLE SPEED Does the engine speed continue at fast idle?	Yes	Go to the symptom troubleshooting "NO.9 FAST IDLE/RUNS ON". (See NO.9 FAST IDLE/ RUNS ON [MZR 2.5] .)
		No	Go to the next step.
3	INSPECT COOLING FAN CONTROL SYSTEM OPERATION Inspect the cooling fan control system operation.	Yes	Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results.

	(See ENGINE CONTROL SYSTEM OPERATION INSPECTION [MZR 2.5].) Does the cooling fan control system function properly?		
4	INSPECT THERMOSTAT - Cool down the engine. - Remove the thermostat and inspect operation. (See THERMOSTAT REMOVAL/ INSTALLATION [MZR 2.5].) (See THERMOSTAT INSPECTION [MZR 2.5].) - Is the thermostat normal?	Yes	Inspect the water temperature gauge. (See INSTRUMENT CLUSTER INSPECTION.) Repair or replace the malfunctioning part according to the inspection results. - If the water temperature gauge is normal, inspect the ECT sensor. (See ENGINE COOLANT TEMPERATURE (ECT) SENSOR INSPECTION [MZR 2.5].) - Repair or replace the malfunctioning part according to the inspection results.
		No	Replace the thermostat. (See THERMOSTAT REMOVAL/ INSTALLATION [MZR 2.5].)
5	- Verify test results. - If normal, return to diagnostic index to service any additional symptoms. (See SYMPTOM DIAGNOSTIC INDEX [MZR 2.5].) - 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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