

2012 - Mazda6 - Engine

NO.18 COOLING SYSTEM CONCERNS-RUNS COLD [MZI 3.7 V6]

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 water temperature gauge operation - CHT sensor malfunction - Instrument cluster malfunction

Diagnostic procedure

STEP	INSPECTION	RESULTS	ACTION
1	DETERMINE IF MALFUNCTION CAUSE IS HVAC SYSTEM OR ENGINE Is customer complaint “Lack of passenger compartment heat” only?	Yes	Inspect the 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 [MZI 3.7 V6] .)
		No	Go to the next step.
3	INSPECT COOLING FAN CONTROL SYSTEM OPERATION Inspect the cooling fan control system operation. (See ENGINE CONTROL	Yes	Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results.

	SYSTEM OPERATION INSPECTION [MZI 3.7 V6] .) Does the cooling fan control system function properly?		
4	INSPECT THERMOSTAT - Remove the thermostat and inspect the operation. (See THERMOSTAT REMOVAL/ INSTALLATION [MZI 3.7 V6] .) (See THERMOSTAT INSPECTION [MZI 3.7 V6] .) - Is there any malfunction?	Yes	Inspect the water temperature gauge. (See INSTRUMENT CLUSTER INSPECTION .) If the water temperature gauge is normal, inspect the CHT sensor. (See CYLINDER HEAD TEMPERATURE (CHT) SENSOR INSPECTION [MZI 3.7 V6] .) Repair or replace the malfunctioning part according to the inspection results.
		No	Replace the thermostat. (See THERMOSTAT REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
5	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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