

2012 - Mazda6 - Engine

DTC P1285:00, P1299:00 [MZI 3.7 V6]

DTC P1285:00 DTC P1299:00	P1285:00: Cylinder head over temperature condition P1299:00: Cylinder head over temperature protection active
DETECTION CONDITION	- P1285:00 indicates that an engine overheat condition was sensed by the CHT sensor. - P1299:00 indicates that an engine overheat condition was detected by the CHT sensor. - Fail-safe function was activated to cool the engine.
POSSIBLE CAUSE	- Low engine coolant level - Base engine malfunction - Engine cooling system malfunction - CHT sensor malfunction

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 FREEZE FRAME DATA on the repair order, then go to the next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY - Verify related Service Bulletins and/or on-line repair information availability. - Is any related Service Bulletins available?	Yes Perform repair or diagnosis according to the available Service Bulletins. If the vehicle is not repaired, go to the next step.
		No Go to the next step.
3	INSPECT COOLING SYSTEM WARNING:	Yes Go to the next step.

	• Never remove the cooling system cap or loosen the radiator drain plug while the engine is running, or when the engine and radiator are hot. Scalding engine coolant and steam may shoot out and cause serious injury. It may also damage the engine and cooling system. • Turn off the engine and wait until it is cool. Even then, be very careful when removing the cap. Wrap a thick cloth around it and slowly turn it counterclockwise to the first stop. Step back while the pressure escapes. • When you are sure all the pressure is gone, press down on the cap using the cloth, turn it, and remove it. NOTE: • If the electric cooling fan does not operate, go to the applicable DTC inspection. (See DTC TABLE [MZI 3.7 V6].) • An engine overheat condition is sensed by the CHT sensor. • Check the cooling system for: ▪ Correct coolant level ▪ Internal or external coolant leaks ▪ Blockage of the radiator ▪ Cooling fan operation • Is the cooling system normal?	No Repair if necessary. Then go to the next step.
4	INSPECT OPERATION OF THE CHT SENSOR • Run the engine until the engine temperature stabilizes. • Verify the radiator hoses are hot and the cooling system is pressurized. • Verify self-test DTCs. • Is DTC P1285:00 present?	Yes Go to the next step. No An engine overheat temperature was not detected. Repair any other DTCs if necessary.
5	INSPECT CHT SENSOR • Inspect the CHT sensor.	Yes Replace the CHT sensor, then go to the next step.

	(See CYLINDER HEAD TEMPERATURE (CHT) SENSOR INSPECTION [MZI 3.7 V6].) Is there any malfunction?	No	Go to the next step.
6	VERIFY TROUBLESHOOTING OF DTC P1285:00, P1299:00 HAS BEEN COMPLETED - Verify that all disconnected connectors are reconnected. - Switch the ignition ON (Engine off). - Clear the DTC from the PCM memory using the M-MDS. - Start the engine and run it at idle. - Retrieve DTCs using the M-MDS. - Is the PENDING CODE for this 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.
7	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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DETECTION CONDITION	- P1285:00 indicates that an engine overheat condition was sensed by the CHT sensor. - P1299:00 indicates that an engine overheat condition was detected by the CHT sensor. - Fail-safe function was activated to cool the engine.
POSSIBLE CAUSE	- Low engine coolant level - Base engine malfunction - Engine cooling system malfunction - CHT sensor malfunction

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 FREEZE FRAME DATA on the repair order, then go to the next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY - Verify related Service Bulletins and/or on-line repair information availability. - Is any related Service Bulletins available?	Yes Perform repair or diagnosis according to the available Service Bulletins. If the vehicle is not repaired, go to the next step.
		No Go to the next step.
3	INSPECT COOLING SYSTEM WARNING:	Yes Go to the next step.

	• Never remove the cooling system cap or loosen the radiator drain plug while the engine is running, or when the engine and radiator are hot. Scalding engine coolant and steam may shoot out and cause serious injury. It may also damage the engine and cooling system. • Turn off the engine and wait until it is cool. Even then, be very careful when removing the cap. Wrap a thick cloth around it and slowly turn it counterclockwise to the first stop. Step back while the pressure escapes. • When you are sure all the pressure is gone, press down on the cap using the cloth, turn it, and remove it. NOTE: • If the electric cooling fan does not operate, go to the applicable DTC inspection. (See DTC TABLE [MZI 3.7 V6].) • An engine overheat condition is sensed by the CHT sensor. • Check the cooling system for: ▪ Correct coolant level ▪ Internal or external coolant leaks ▪ Blockage of the radiator ▪ Cooling fan operation • Is the cooling system normal?	No Repair if necessary. Then go to the next step.
4	INSPECT OPERATION OF THE CHT SENSOR • Run the engine until the engine temperature stabilizes. • Verify the radiator hoses are hot and the cooling system is pressurized. • Verify self-test DTCs. • Is DTC P1285:00 present?	Yes Go to the next step. No An engine overheat temperature was not detected. Repair any other DTCs if necessary.
5	INSPECT CHT SENSOR • Inspect the CHT sensor.	Yes Replace the CHT sensor, then go to the next step.

	(See CYLINDER HEAD TEMPERATURE (CHT) SENSOR INSPECTION [MZI 3.7 V6].) Is there any malfunction?	No	Go to the next step.
6	VERIFY TROUBLESHOOTING OF DTC P1285:00, P1299:00 HAS BEEN COMPLETED - Verify that all disconnected connectors are reconnected. - Switch the ignition ON (Engine off). - Clear the DTC from the PCM memory using the M-MDS. - Start the engine and run it at idle. - Retrieve DTCs using the M-MDS. - Is the PENDING CODE for this 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.
7	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.