

DIAGNOSTIC TROUBLE CODE (DTC) CHARTS AND DESCRIPTIONS > P0022 - INTAKE CAMSHAFT POSITION TIMING - OVER-RETARDED (BANK 2) - DTC CHART

P0022 - INTAKE CAMSHAFT POSITION TIMING - OVER-RETARDED (BANK 2) - DTC CHART

Description: This DTC sets when the variable camshaft timing (VCT) position is over-retarded. The test fails when the camshaft timing exceeds a maximum calibrated value or remains in a retarded position.

Possible Causes:

- VCT unit to camshaft alignment
- Camshaft timing incorrectly set
- Continuous oil flow to the VCT piston chamber
- Erratic camshaft position due to low oil pressure
- Oil flow restriction in the oil passages or the VCT valve body
- variable camshaft timing bank 2 solenoid 1 (VCT21) valve stuck open
- VCT21 circuit open
- VCT21 circuit short to voltage
- VCT21 circuit short to ground
- VPWR circuit open
- Camshaft advance mechanism binding (VCT unit)
- Damaged VCT21 phaser
- Damaged camshaft position bank 2 sensor 1 (CMP21)
- CMP21 sensor circuits open
- CMP21 sensor circuits short to voltage
- CMP21 sensor circuits short to ground
- Radio frequency interference

Diagnostic Aids: This DTC may be accompanied by other DTCs. Diagnose all camshaft position (CMP) sensor DTCs first. If no CMP sensor related DTCs are present, continue to follow diagnosis for this DTC.

This DTC is a functional check of the VCT unit. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the service information , Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the service information , Engine, to check the engine timing and VCT phasers.

Application	Key On Engine Off	Key On Engine Running	Continuous Memory
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