

DTC	P0505	IDLE CONTROL SYSTEM MALFUNCTION
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CIRCUIT DESCRIPTION

The idle speed is controlled by the Electric Throttle Control System (ETCS).

ETCS is composed of the throttle motor to operate the throttle valve to connect the throttle motor with the throttle valve, the throttle position sensor to detect the opening angle of the throttle valve, the accelerator pedal position sensor to detect the accelerator pedal position, the ECM to control the ETCS and the one valve type throttle body.

The ECM controls the throttle motor to make the throttle valve opening angle properly for the target idle speed.

DTC No.	DTC Detection Condition	Trouble Area
P0505	Idle speed continues to vary greatly from target speed (2 trip detection logic)	• Throttle body assy • Air induction system • PCV hose connection • ECM

INSPECTION PROCEDURE

HINT:

Read freed frame data using hand-held tester. Because freeze frame records the engine conditions when the malfunction is detected, when troubleshooting it is useful for determining whether the vehicle was running or stopped, the engine warmed up or not, the air-fuel ratio lean or rich, etc. at the time of the malfunction.

1	CHECK OTHER DTC OUTPUT(BESIDES DTC P0505)
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(a) Read the DTC using the hand-held tester or OBD II scan tool.

YES

GO TO RELEVANT DTC CHART

NO

2	CHECK AIR INDUCTION SYSTEM
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NG

REPAIR OR REPLACE AIR INDUCTION SYSTEM

OK

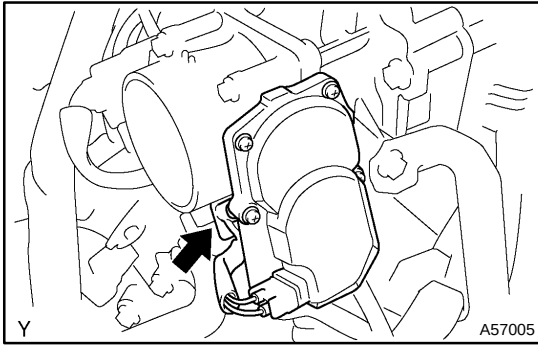
3	CHECK CONNECTION OF PCV HOSE
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REPAIR OR REPLACE PCV HOSE

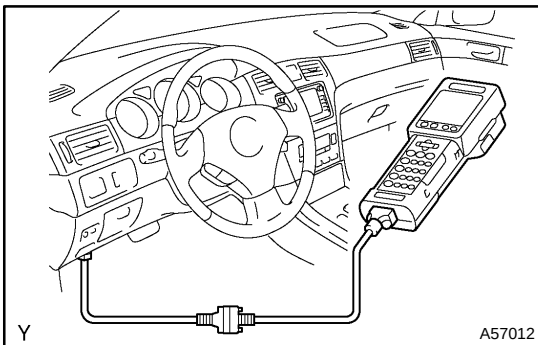
OK

4 INSPECT THROTTLE BODY ASSY



- (a) Inspect the throttle control motor for operating sound.
- (1) When turning the accelerator pedal position sensor lever, check the running sound of the motor. Also, check that there is no friction sound.

If operation is not as specified, check the throttle control motor, wiring and ECM.

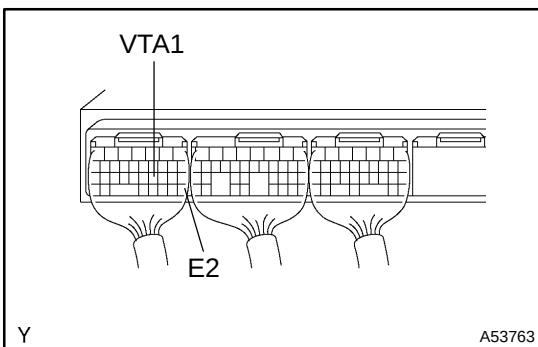


- (b) Inspect the accelerator pedal position sensor.
- (1) Connect the hand-held tester or OBDII scan tool to the DLC3.
 - (2) Check that the check engine warning light does not light up.
 - (3) When turning the accelerator pedal position sensor lever to the full-open position, check that the throttle valve opening percentage (THROTTLE POS) of the CURRENT DATA shows the standard value.

Standard throttle valve opening percentage:
60 % or more

If operation is not as specified, check that the accelerator pedal position sensor, wiring and ECM.

If you have no hand-held tester, measure voltage between terminals VTA1 and E2 of the ECM connector (See page 05-27).



- (c) Inspect the idle speed.
- (1) Start the engine and check that the MIL does not light up.
 - (2) Allow the engine to warm up to normal operating temperature.
 - (3) Turn the A/C conditioning ON to OFF, and check the idle speed.

Idle speed (Transmission in neutral): 600 ± 50 rpm

NOTICE:

Perform inspection under condition without electrical load.

- (d) After checking the above (b) to (d), perform the driving test and check that there is no sense of incongruity.

NG

REPLACE THROTTLE BODY ASSY

OK

5 CHECK HARNESS AND CONNECTOR(ECM - THROTTLE BODY ASSY)**NG****REPAIR OR REPLACE HARNESS AND CONNECTOR****OK****6 INSPECT E.F.I. THROTTLE POSITION SENSOR (See Page [10-2](#))****NG****REPLACE E.F.I. THROTTLE POSITION SENSOR****OK****7 CHECK HARNESS AND CONNECTOR(ECM - THROTTLE POSITION SENSOR)****NG****REPAIR OR REPLACE HARNESS AND CONNECTOR****OK****CHECK AND REPLACE ECM**