

DTC	P1350	VVT SENSOR/CAMSHAFT POSITION SENSOR CIRCUIT MALFUNCTION(BANK2)
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CIRCUIT DESCRIPTION

VVT sensor RH consists of a core and a pick up coil.

On the signal plate for VVT signal, there are three convex on its outer circumference and it is fixed to the camshaft timing gear.

When the camshaft turns, the convex of the signal plate and the air-gap over the pick up coil will switch, and with this the magnetic field will change and generate electricity inside the pick up coil. In addition, VVT sensor LH adopts a sensor using a signal plate and a magnetic resistance element. By switching the air-gap of the signal plate and the sensor, ECM voltage will be converted to a rectangular wave and output as a signal.

DTC No.	DTC Detecting Condition	Trouble Area
P1350	No VVT sensor (Crank position sensor NO.1) signal to ECM during cranking at 4 sec. or more	• Open or short in VVT sensor (Crank position sensor No.1) circuit • VVT sensor (Crank position sensor No.1) • Camshaft timing gear • ECM
	No VVT sensor (Crank position sensor NO.1) signal to ECM with 5 sec. or more engine speed 600 rpm or more	
	While crankshaft rotates twice, VVT sensor (Crank position sensor NO.1) signal will be input to ECM 5 times.	

WIRING DIAGRAM

Refer to DTC P0335 on page 05-80 .

INSPECTION PROCEDURE

HINT:

- If DTC P1350 is displayed, check right bank VVT sensor (Crank position sensor No.1).
- Read freeze frame data using hand-held tester or OBD II scan tool. 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 was warmed up or not, the air-fuel ratio was lean or rich, etc. at the time of the malfunction.

1	INSPECT CRANK POSITION SENSOR NO.1 (See page 18-2)
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(a) Check waveform. (See page 05-83)

NG

REPLACE CRANK POSITION SENSOR NO.1

OK

2	CHECK HARNESS AND CONNECTOR(ECM - VVT SENSOR) (See page 05-83)
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REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

3	CHECK SENSOR INSTALLATION(CRANK POSITION SENSOR NO.1)
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TIGHTEN SENSOR

OK

4	INSPECT CAMSHAFT TIMING PULLEY
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NG	REPLACE CAMSHAFT TIMING PULLEY
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OK

CHECK AND REPLACE ECM
