

CIRCUIT INSPECTION

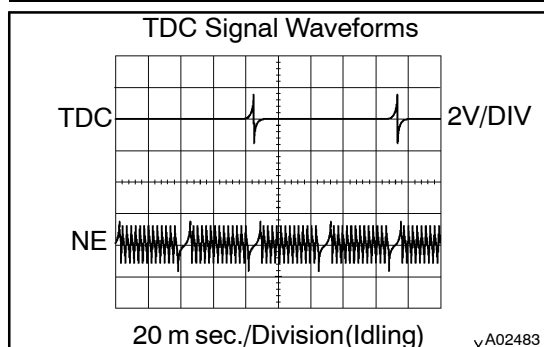
DTC	12	Crankshaft Position Sensor Circuit Malfunction
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CIRCUIT DESCRIPTION

The crankshaft position sensor contains a signal plate and a pickup coil for TDC signal. The TDC signal plate has 1 tooth on its outer circumference. The TDC signal sensor generates 1 signal for every engine revolution. The engine ECU detects the top dead center by the TDC signals.

The engine speed sensor contains a signal plate and a pickup coil for NE signal. The NE signal plate has 64 teeth and is mounted in the injection pump. The NE signal sensor generates 64 signals of 2 engine revolutions. The engine ECU uses TDC signal and NE signals for injection timing control. And NE signal is used for injection volume control, as well.

DTC No.	DTC Detecting Condition	Trouble Area
12	No TDC signal to engine ECU at 400 rpm or more	• Open or short in crankshaft position sensor circuit • Crankshaft position sensor • Engine ECU



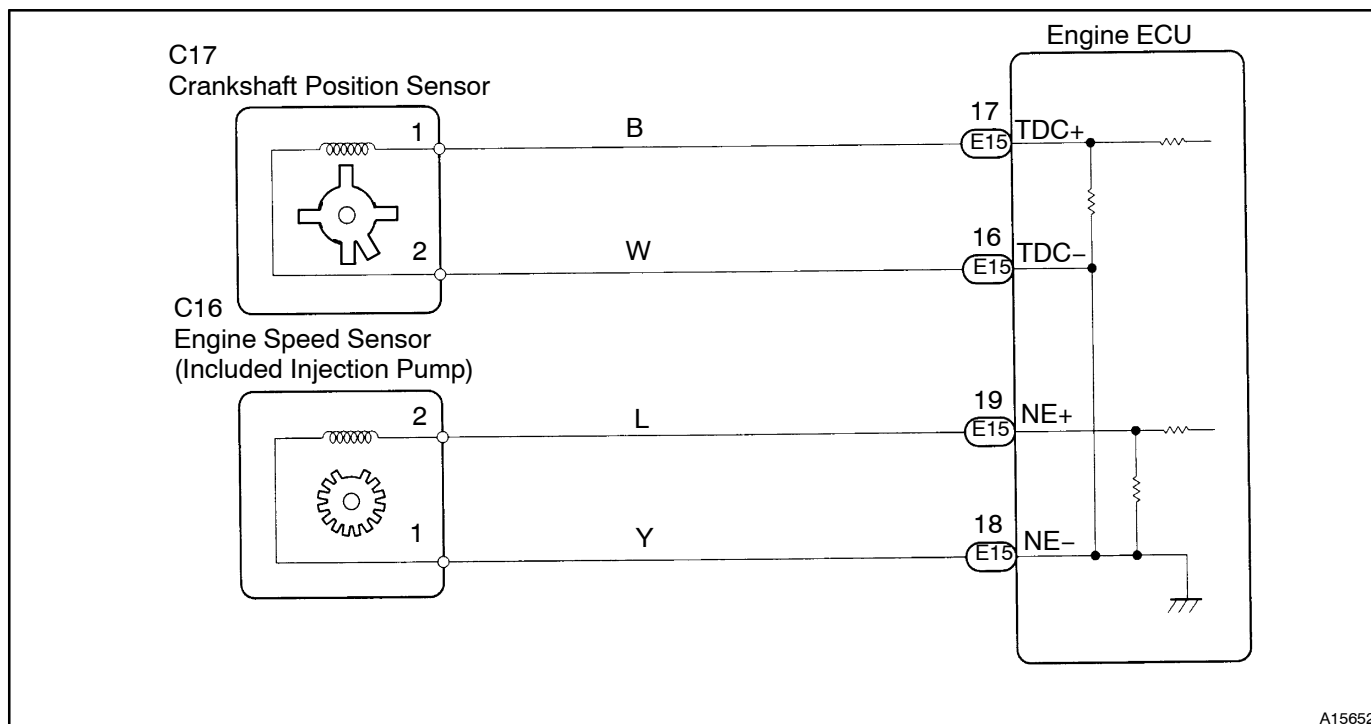
Reference: INSPECTION USING OSCILLOSCOPE

During cranking or idling, check the waveform between terminals TDC+ and TDC- of the engine ECU.

HINT:

The correct waveforms are as shown in the illustration.

WIRING DIAGRAM



INSPECTION PROCEDURE

