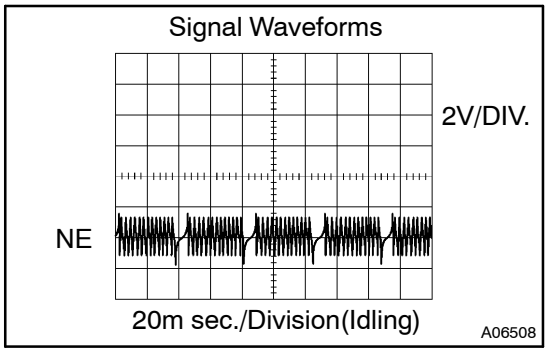
DI3WO–02

DTC	13	Engine Speed Sensor Circuit Malfunction

CIRCUIT DESCRIPTION

The engine speed sensor in the Engine Control System contains signal plate and a pickup coil for NE signal. The NE signal plate has 52 teeth and is mounted in the injection pump. The NE signal sensor generates 52 signals of engine 2 revolutions. The emission ECU detects the engine speed and cam lift position of the injection pump. The emission ECU uses NE signals for injection timing control. And NE signal is used for injection volume control, also.

DTC No.	DTC Detecting Condition	Trouble Area
13	No NE signal to emission ECU for 0.5 sec. or more at 1,000 rpm or more	• Open or short in engine speed sensor circuit • Pickup sensor • Emission ECU



Reference INSPECTION USING OSCILLOSCOPE

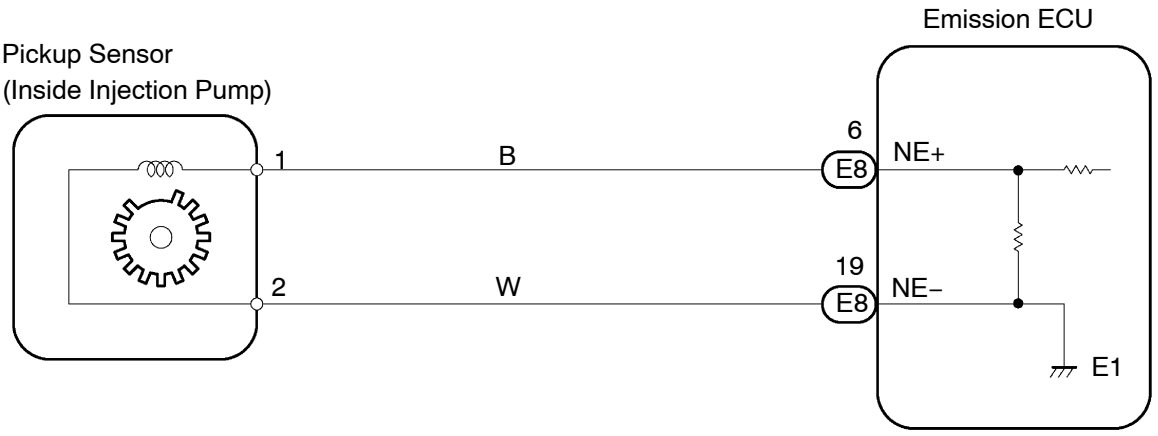
During cranking or idling, check between terminals NE+ and NE– of the emission ECU.

HINT:

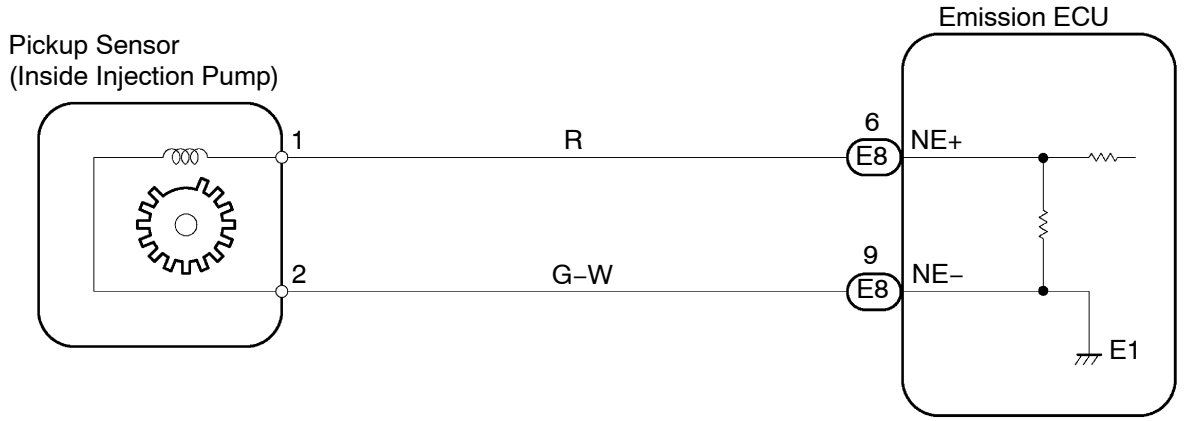
The correct waveforms are as shown.

WIRING DIAGRAM

LXH Series

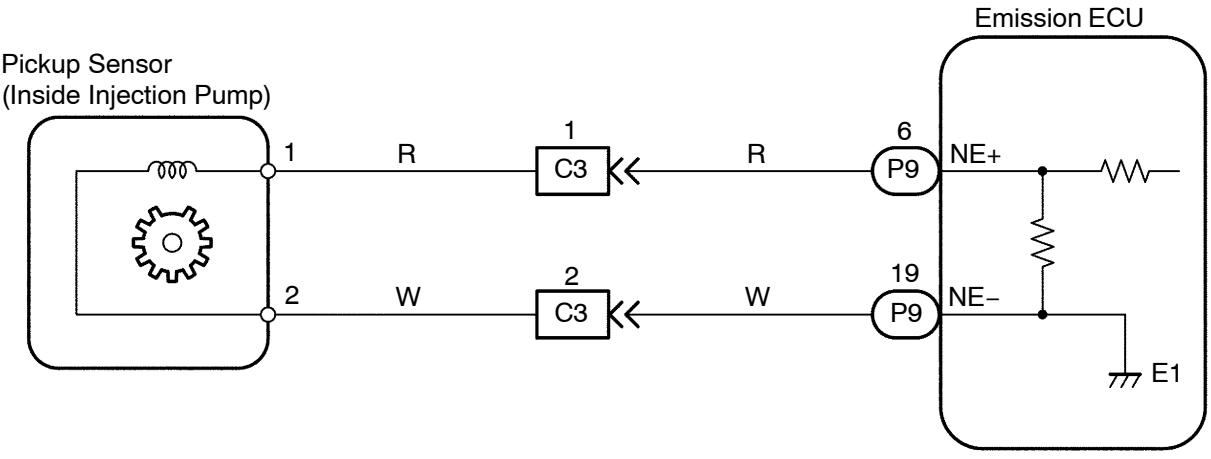


LN Series



A01923

LY Series



A07475

INSPECTION PROCEDURE

1	Check resistance of engine speed sensor (See page EC–10).

NG → Replace injection pump.

OK

2	Check for open and short in harness and connector between emission ECU and engine speed sensor (See page IN–19).

NG → Repair or replace harness or connector.

OK

3	Check sensor installation.

NG → Tighten sensor.

OK

Check and replace emission ECU.