DI9RY–01

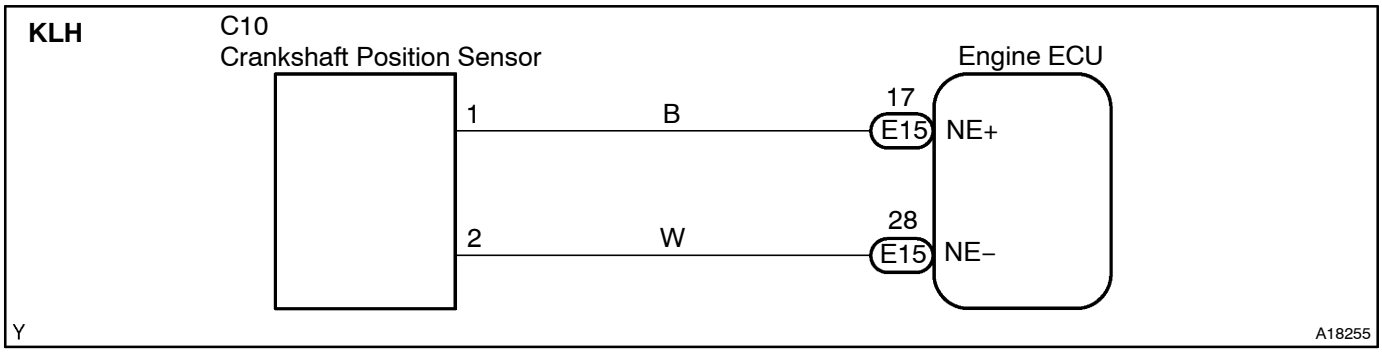
DTC	13	Engine Speed Sensor Circuit Malfunction 2 (NE Circuit)

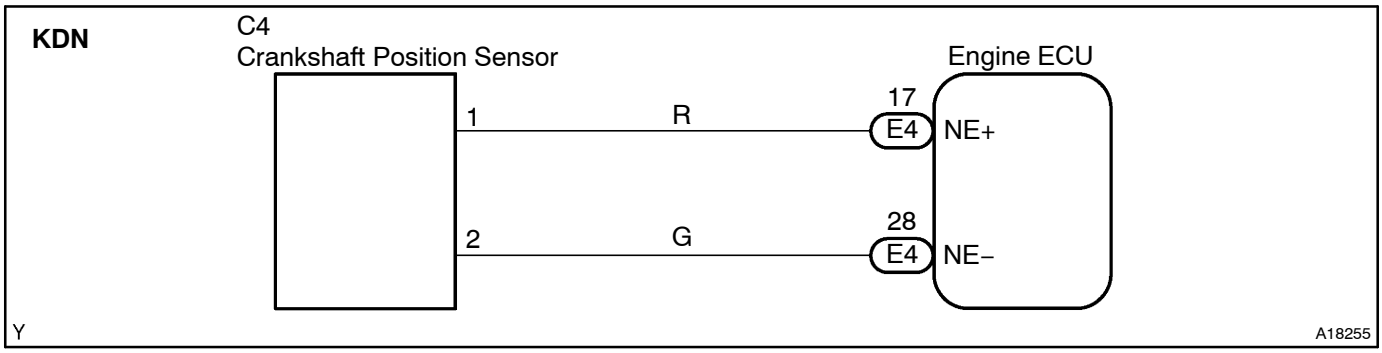
CIRCUIT DESCRIPTION

The crankshaft position sensor (NE signal) consists of a magnet, iron core and pickup coil.
The NE signal plate has 34 teeth and is installed to the crank angle sensor plate. The NE signal sensor generates 34 signals for every engine revolution. The engine ECU detects the standard crankshaft angle based on the G1 signal, the actual crankshaft angle and the engine speed by the NE signal.

DTC No.	DTC Detecting Condition	Trouble Area
13	Suddenly, sensor does not generate NE signal	• Open or short in crankshaft position sensor circuit • Crankshaft position sensor • Crank angle sensor plate • Engine ECU

WIRING DIAGRAM





INSPECTION PROCEDURE

HINT:
Read freeze frame data on the hand–held tester. Because freeze frame data 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, etc. at the time of the malfunction.

1	**Check crankshaft position sensor (See page ED–19).**

Reference: INSPECTION USING OSCILLOSCOPE
Refer to DTC 12 on page DI–25.

NG → **Replace crankshaft position sensor (See page ED–19).**

OK

2	**Check for open and short in harness and connector between engine ECU and crankshaft position sensor (See page IN–20).**

NG → **Repair or replace harness or connector.**

OK

3	**Inspect sensor installation and signal plate teeth of crank angle sensor plate.**

NG → **Reinstall sensor securely.**
Replace crank angle sensor plate.

OK

Check and replace engine ECU (See page IN–20).