

9. Camshaft Position Sensor

A: REMOVAL

1. INTAKE SIDE

1) Disconnect the ground cable from battery. <Ref. to NT-5, BATTERY, NOTE, Note.>

NOTE:

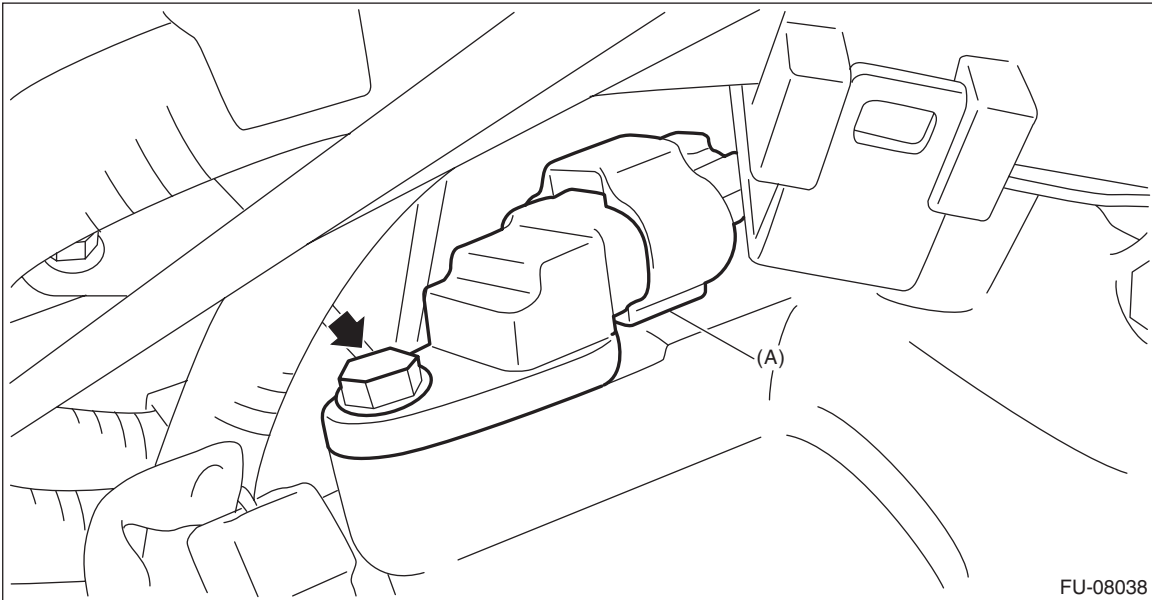
For the 12 volt engine restart battery, disconnect the ground terminal from 12V engine restart battery sensor.

2) Remove the air intake duct. (RH side only) <Ref. to IN(H4DO(HEV))-15, REMOVAL, Air Intake Duct.>

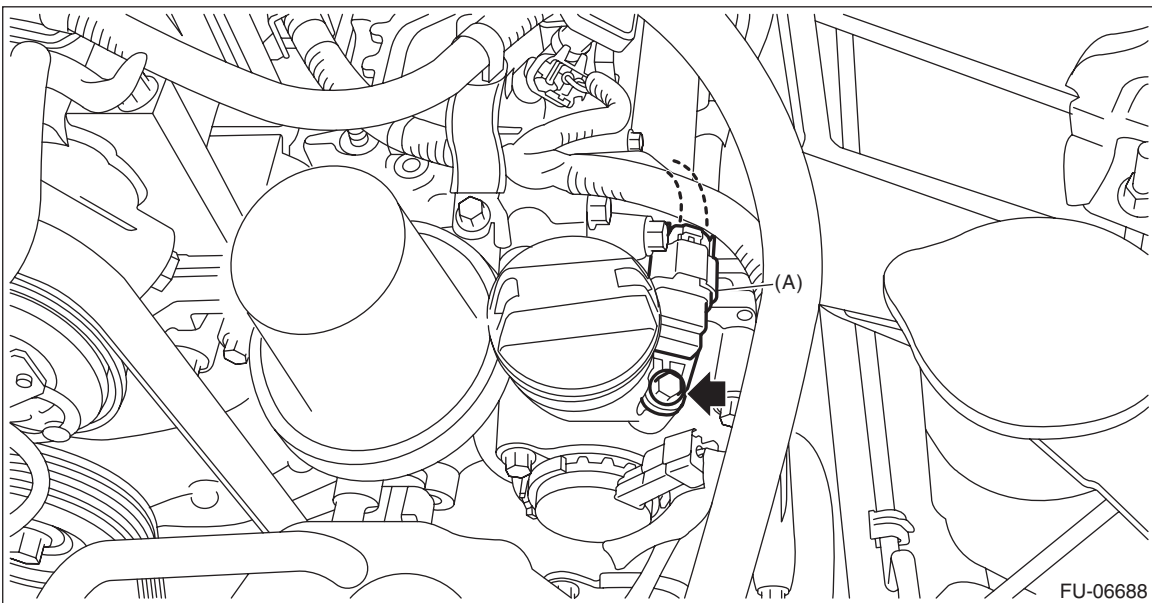
3) Remove the air intake boot No. 1. (RH side only) <Ref. to IN(H4DO(HEV))-10, AIR INTAKE BOOT NO. 1, REMOVAL, Air Intake Boot.>

4) Disconnect the connector (A) from the camshaft position sensor, and remove the camshaft position sensor from the chain cover.

- RH side



- LH side



2. EXHAUST SIDE

1) Disconnect the ground cable from battery. <Ref. to NT-5, BATTERY, NOTE, Note.>

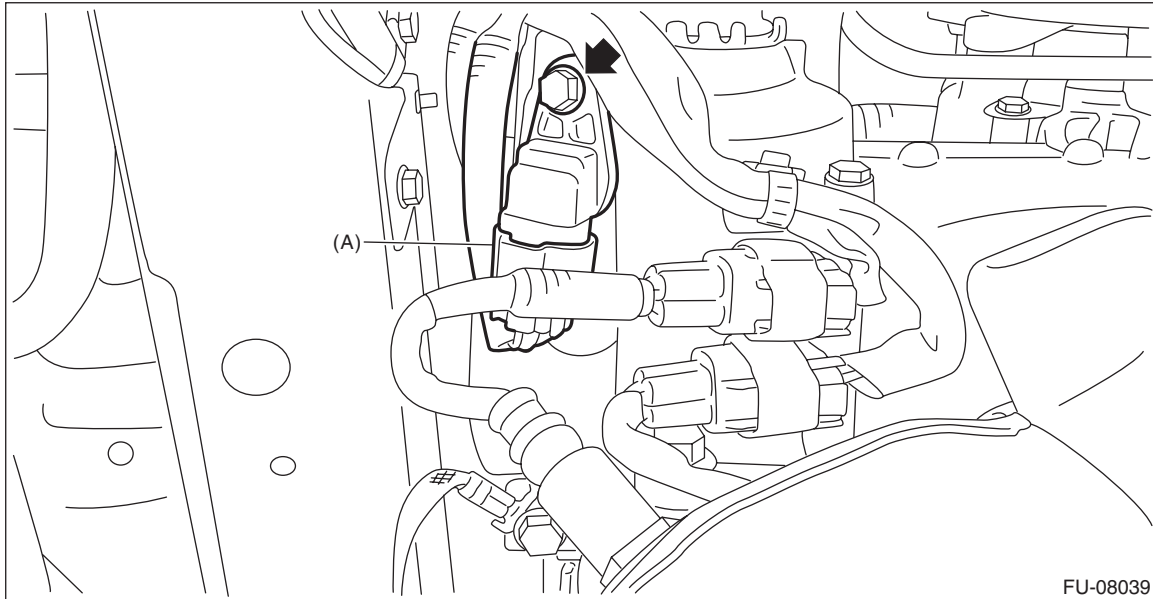
NOTE:

For the 12 volt engine restart battery, disconnect the ground terminal from 12V engine restart battery sensor.

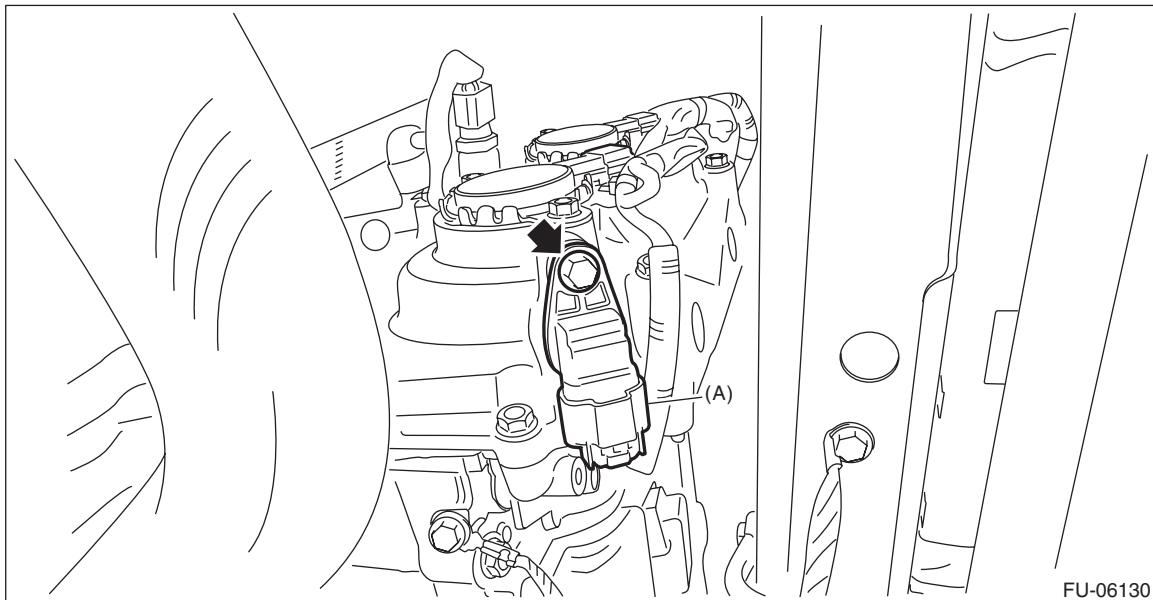
2) Remove the under cover. <Ref. to EI-32, REMOVAL, Front Under Cover.>

3) Disconnect the connector (A) from the camshaft position sensor, and remove the camshaft position sensor from the chain cover.

- RH side



- LH side



B: INSTALLATION

Install in the reverse order of removal.

NOTE:

- Use new O-rings.
- Apply engine oil to O-ring.

Tightening torque:

6.4 N·m (0.7 kgf-m, 4.7 ft-lb)

FUEL INJECTION (FUEL SYSTEMS)

1. CAMSHAFT POSITION SENSOR (METHOD WITH OSCILLOSCOPE)

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- FU-08245

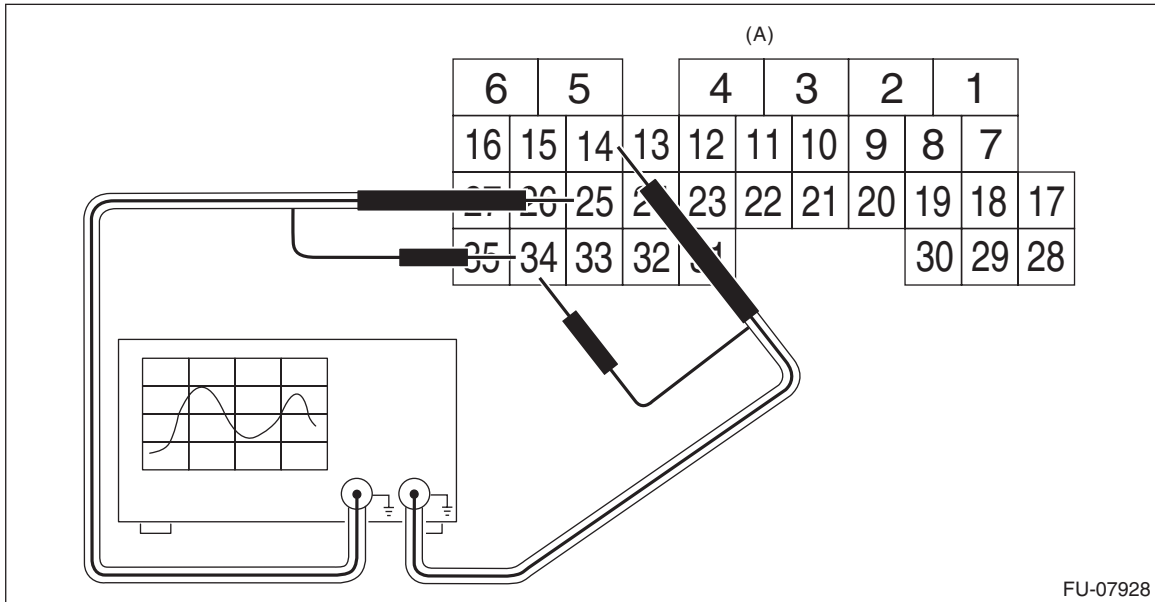
- (A)
-
- Diagram (A) illustrates a 32-pin connector with pins numbered 1 to 32. The pins are arranged in a grid: Row 1: 6, 5, 4, 3, 2, 1; Row 2: 16, 15, 14, 13, 12, 11, 10, 9, 8, 7; Row 3: 27, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17; Row 4: 35, 34, 33, 32, 31, 30, 29, 28. The circuit connections are as follows: Pin 14 is connected to a power source (represented by a battery symbol). Pin 15 is connected to a ground (represented by a ground symbol). Pin 23 is connected to a component (represented by a rectangle). Pin 24 is connected to a component (represented by a rectangle). Pin 25 is connected to a component (represented by a rectangle). Pin 26 is connected to a component (represented by a rectangle). Pin 27 is connected to a component (represented by a rectangle). Pin 33 is connected to a component (represented by a rectangle). Pin 34 is connected to a component (represented by a rectangle). Pin 35 is connected to a component (represented by a rectangle). The circuit also includes a power source, a ground, and a component that outputs a square wave signal to an oscilloscope. The oscilloscope screen shows a square wave signal.

FU(H4DO(HEV))-54

Camshaft Position Sensor

FUEL INJECTION (FUEL SYSTEMS)

- Exhaust camshaft position sensor



(A) To ECM connector

Camshaft position sensor		Terminal No.	Probe
Intake	RH	26	+
	LH	15	+
Exhaust	RH	14	+
	LH	25	+
RH and LH		34	-

- Start the engine and let it idle.
- Check the waveforms and voltage.

NOTE:

For waveform and voltage, refer to "Engine Control Module (ECM) I/O Signal". <Ref. to EN(H4DO HEV)(diag)-19, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

- After inspection, install the related parts in the reverse order of removal.

2. OTHER INSPECTIONS

Check that the camshaft position sensor has no deformation, cracks or other damages.