9. Camshaft Position Sensor

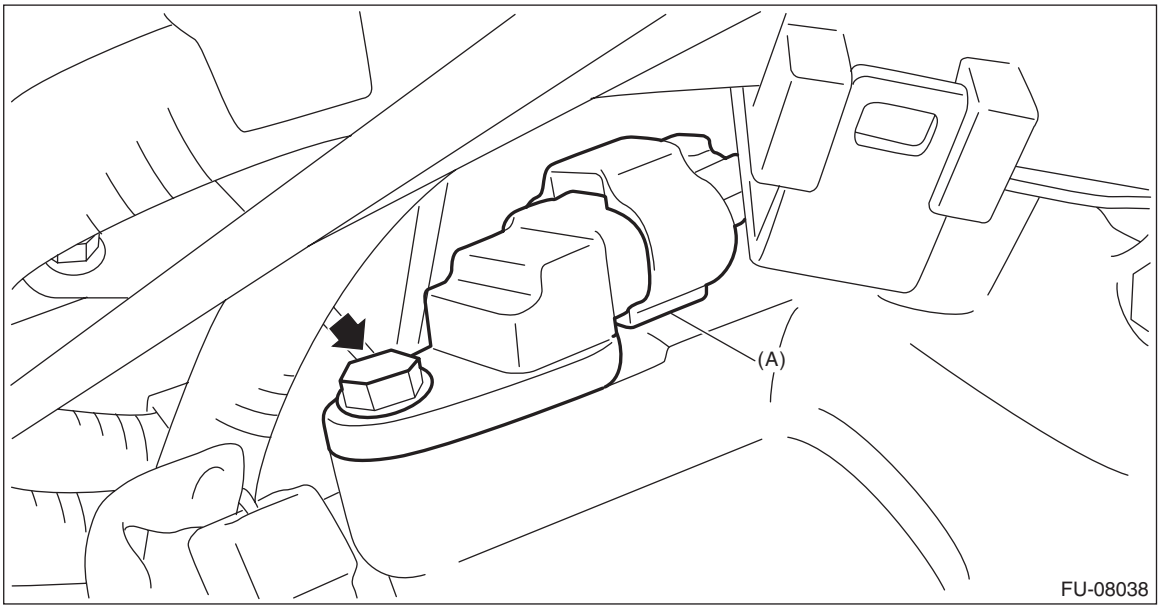
A: REMOVAL

1. INTAKE SIDE

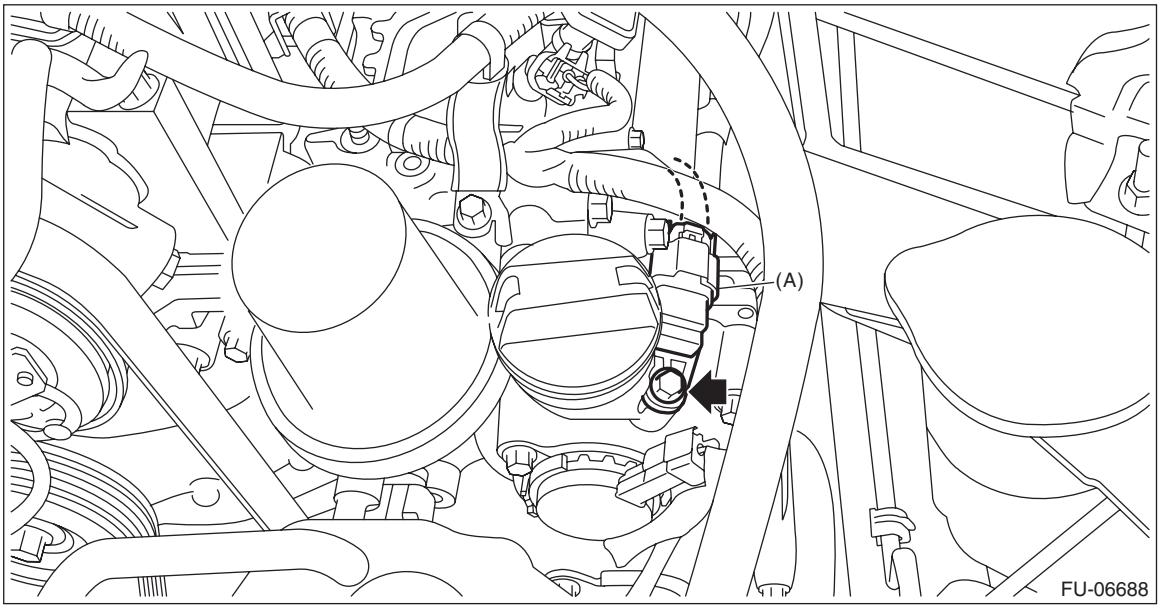
1) Disconnect the ground cable from battery. <Ref. to NT-5, BATTERY, NOTE, Note.>

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

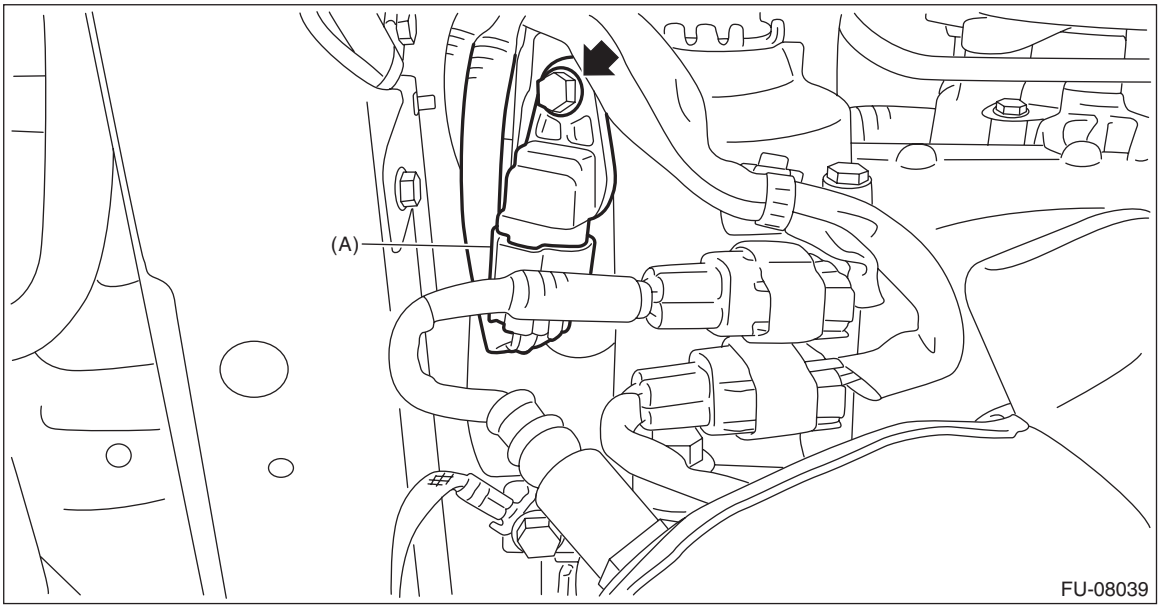


2. EXHAUST SIDE

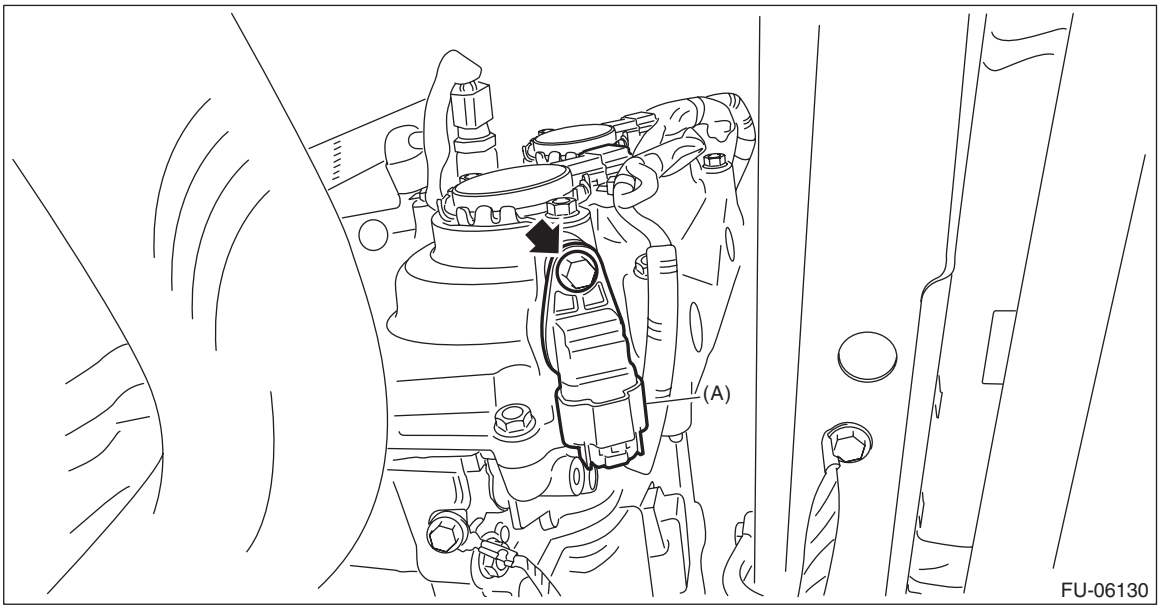
1) Disconnect the ground cable from battery. <Ref. to NT-5, BATTERY, NOTE, Note.>

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.

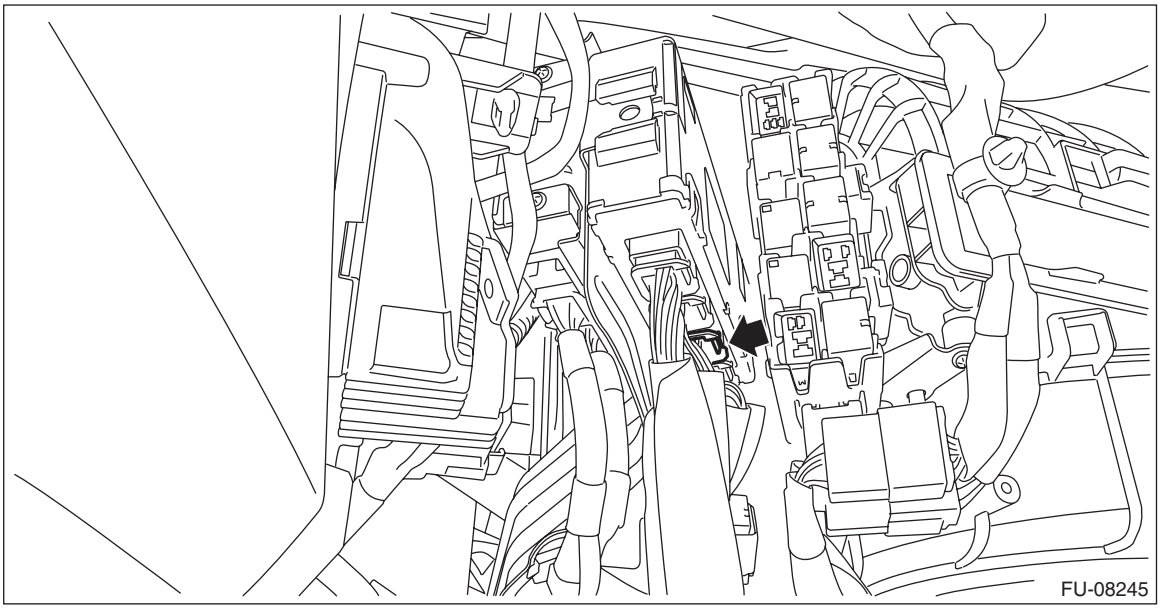
NOTE:
- Use new O-rings.
- Apply engine oil to O-ring.

Tightening torque:
6.4 N·m (0.7 kgf-m, 4.7 ft-lb)

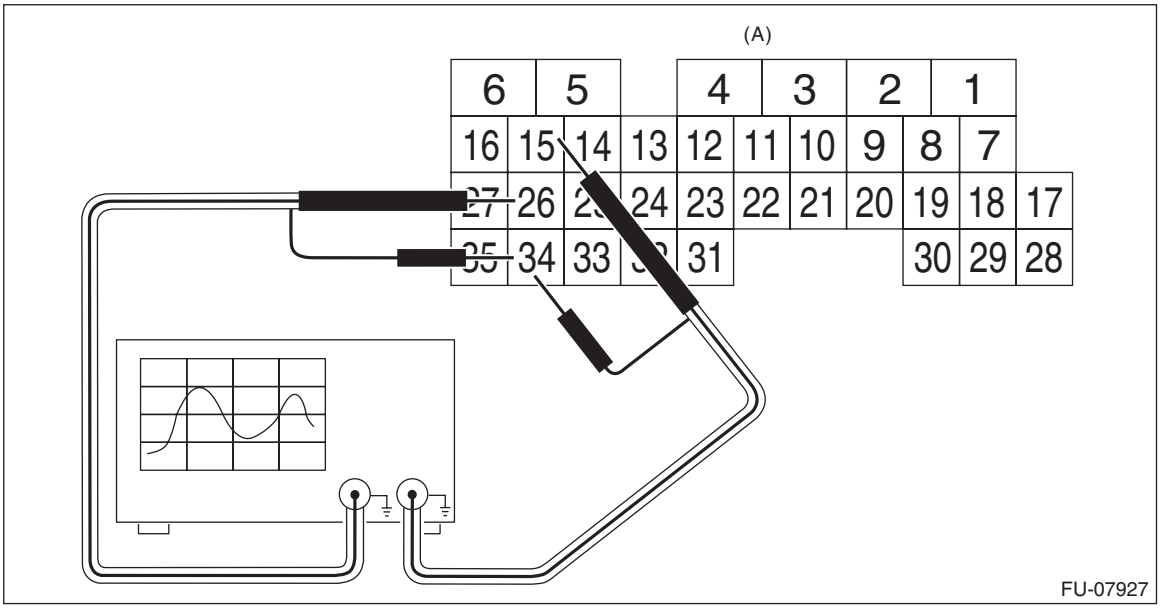
C: INSPECTION

1. CAMSHAFT POSITION SENSOR (METHOD WITH OSCILLOSCOPE)

1) Prepare an oscilloscope.
2) Remove the glove box. <Ref. to EI-78, REMOVAL, Glove Box.>
3) Connect the probe to ECM connector.

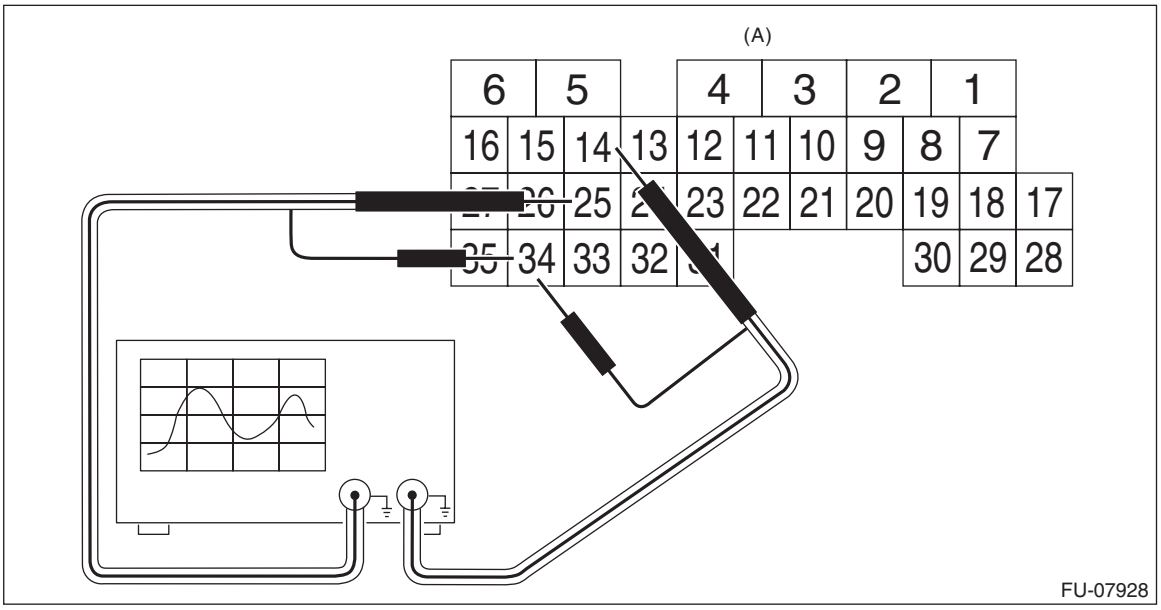


- Intake camshaft position sensor



(A) To ECM connector

- 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	–

4) Start the engine and let it idle.
5) 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.>
6) 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.