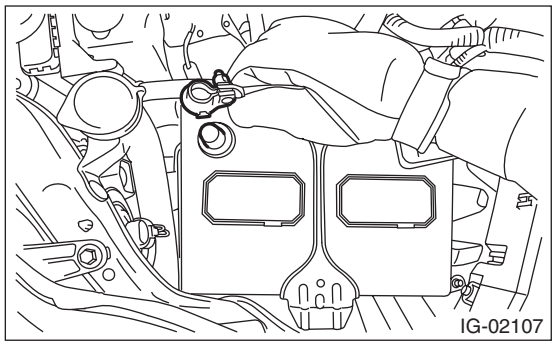
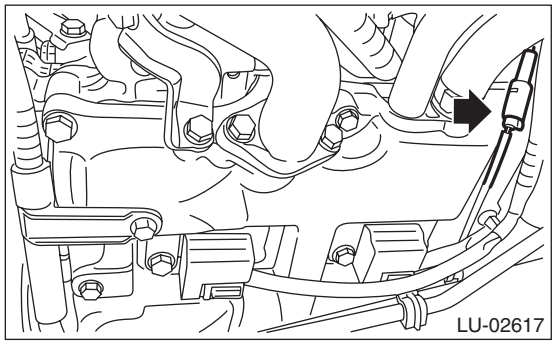
12.Oil Level Switch

A: REMOVAL

1) Disconnect the ground cable from battery.

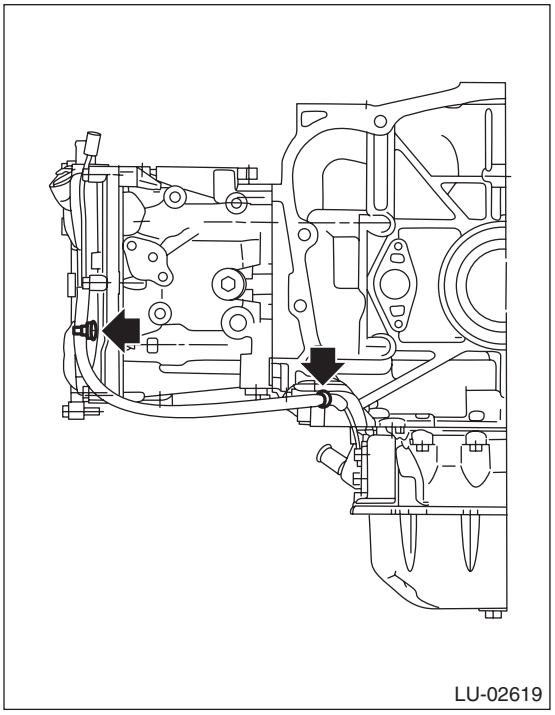

IG-02107

2) Lift up the vehicle.
3) Remove the under cover. <Ref. to EI-35, REMOVAL, Front Under Cover.>
4) Drain the engine oil. <Ref. to LU(H4SO)-13, REPLACEMENT, Engine Oil.>
5) Disconnect the connector of the oil level switch from the engine harness.

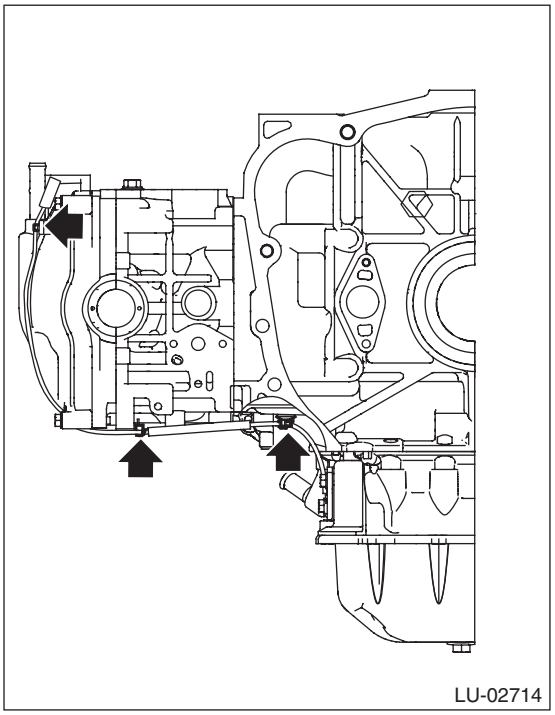

LU-02617

6) Remove the clip holding the oil level switch harness.

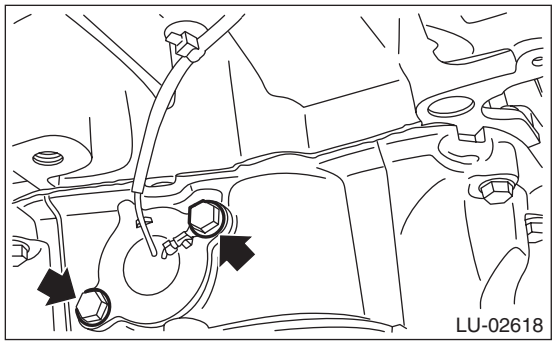
- Turbo model


LU-02619

- Non-turbo model


LU-02714

7) Remove the oil level switch from the cylinder block lower.

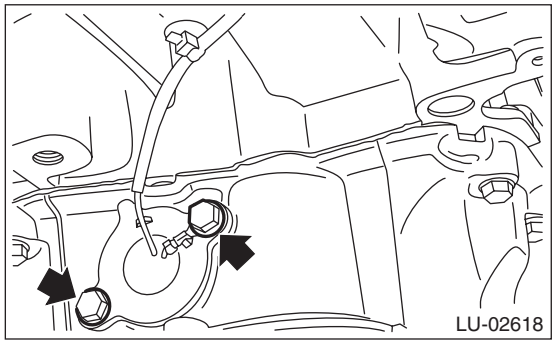


B: INSTALLATION

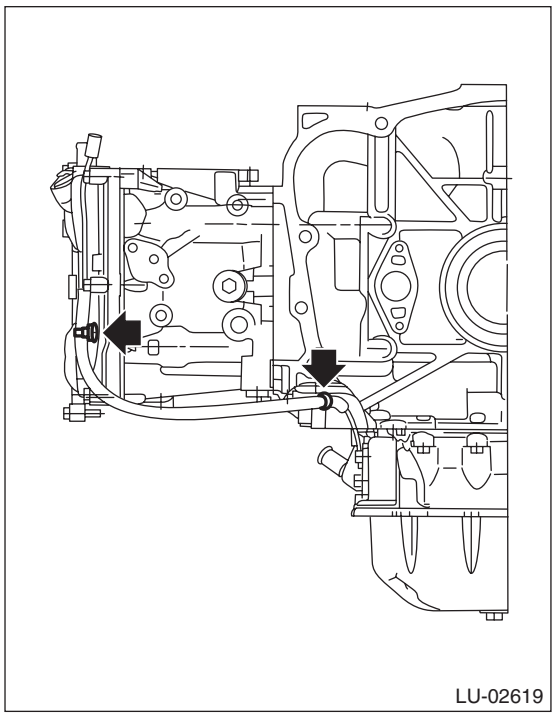
1) Install the oil level switch to the cylinder block lower.

NOTE:
- Use new O-rings.
- Apply a coat of engine oil to the O-rings.

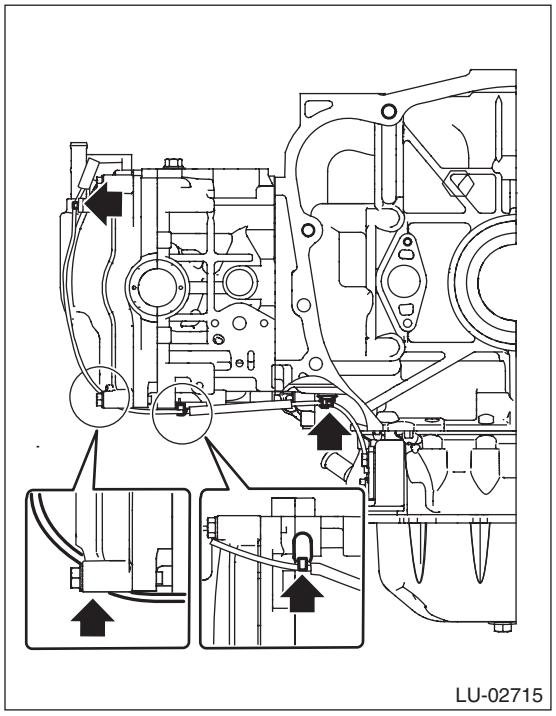
Tightening torque:
6.4 N·m (0.7 kgf-m, 4.7 ft-lb)



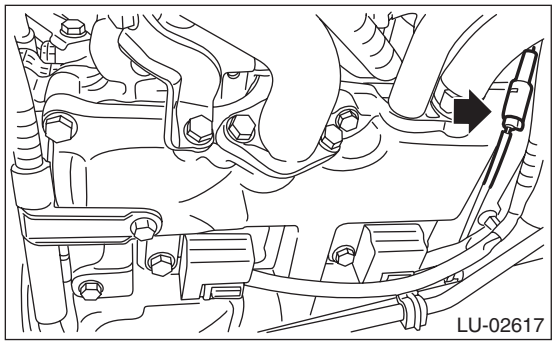
2) Hold the oil level switch harness with the clip.
- Turbo model



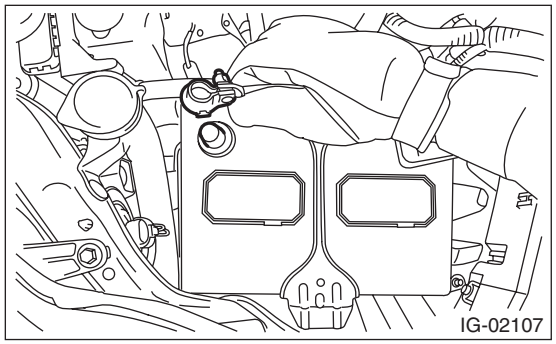
- Non-turbo model



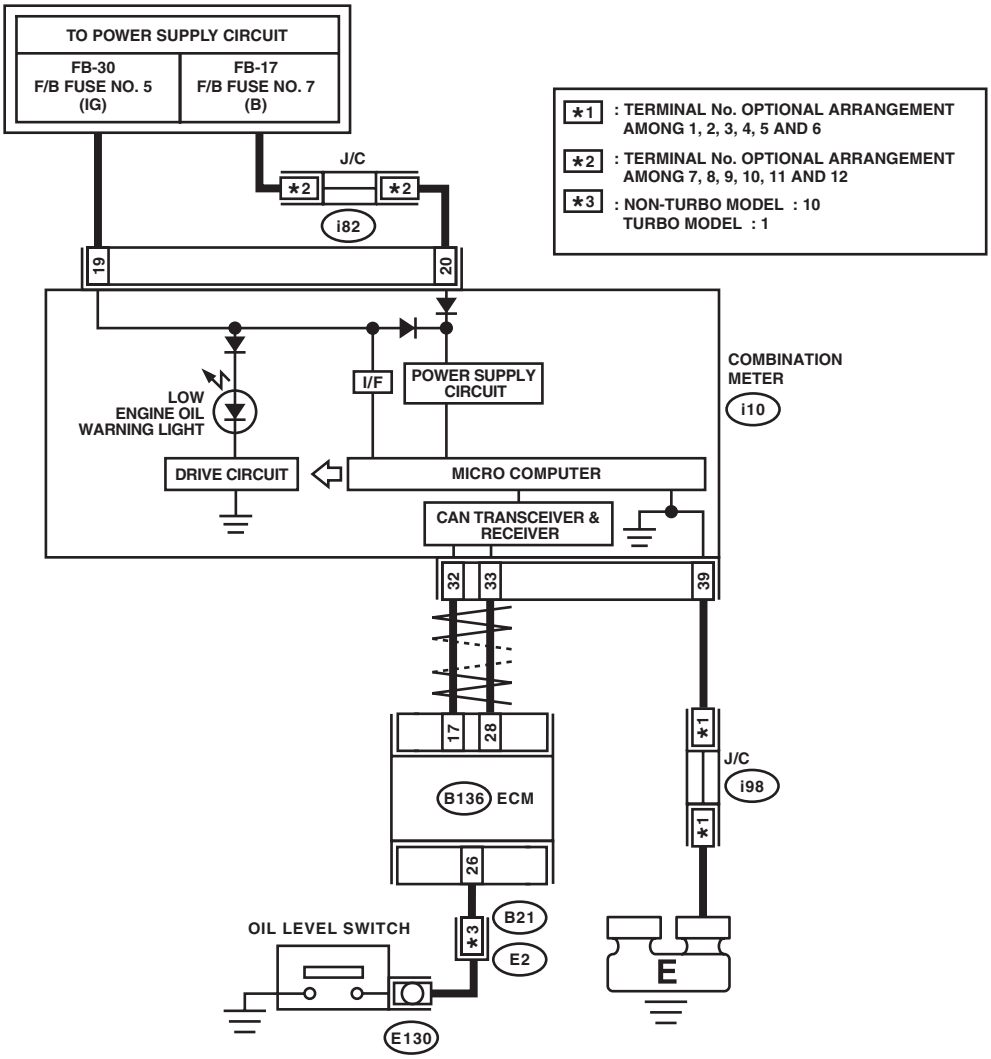
3) Connect the connector of the oil level switch to the engine harness.

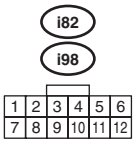


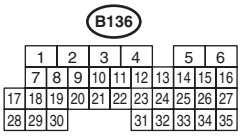
4) Install the under cover. <Ref. to EI-35, INSTALLATION, Front Under Cover.>
5) Lower the vehicle.
6) Refill the engine oil. <Ref. to LU(H4SO)-13, REPLACEMENT, Engine Oil.>
7) Check the engine oil level. <Ref. to LU(H4SO)-13, INSPECTION, Engine Oil.>
8) Connect the battery ground terminal.

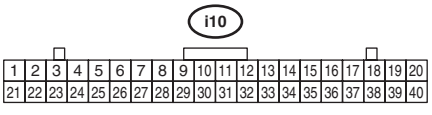


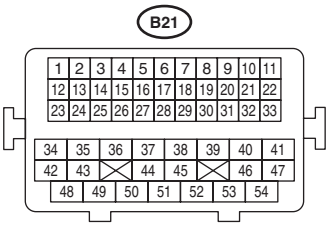
C: WIRING DIAGRAM











LU-02653

D: INSPECTION

1. INSPECTION WHILE OIL LEVEL SWITCH WARNING LIGHT IS ON

Step	Check	Yes	No
1 **CHECK ENGINE OIL LEVEL.**	Is engine oil level normal?	Go to step **2**.	Replace engine oil or refill, and check again while the oil level is normal condition. <Ref. to LU(H4SO)-13, REPLACEMENT, Engine Oil.> To turn off the oil level warning light, install the spare fuse at the delivery (test) mode fuse in the main fuse box. Then turn the ignition switch to ON (engine off) again, to confirm the warning light turns off. Remove the spare fuse installed to finish this step. NOTE: The engine oil level switch is normal, if the low engine oil level warning light turns off with the delivery (test) mode fuse installed.
2 **CHECK LAN SYSTEM.**	Has a DTC of the LAN system been input?	Perform the diagnosis according to DTC.	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK OIL LEVEL SWITCH CIRCUIT.** 1) Turn the ignition switch to ON (engine OFF). 2) Read the current data for engine in the Subaru Select Monitor to confirm the item for "Oil level switch". <Ref. to EN(H4SO)(diag)-34, READ CURRENT DATA FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H4DOTC)(diag)-36, READ CURRENT DATA FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.>	Is the "Oil level switch" signal displayed in Subaru Select Monitor HIGH?	To turn off the oil level warning light, install the spare fuse at the delivery (test) mode fuse in the main fuse box. Then turn the ignition switch to ON (engine off) again, to confirm the warning light turns off. Remove the spare fuse installed to finish this step. NOTE: The engine oil level switch is normal, if the low engine oil level warning light turns off with the delivery (test) mode fuse installed.	Go to step **4**.
4	**CHECK COMBINATION METER.** Perform the self-diagnosis of combination meter to check if there are any faults in the combination meter. <Ref. to IDI-6, OPERATION, Combination Meter System.>	Is combination meter OK?	Go to step **5**.	Replace the combination meter. <Ref. to IDI-20, REMOVAL, Combination Meter.>
5	**CHECK SECURE CONNECTION OF CONNECTOR BETWEEN ENGINE HARNESS AND OIL LEVEL SWITCH.**	Is there any insecure connection?	Remedy the connection condition. Then, to turn off the oil level warning light, install the spare fuse at the delivery (test) mode fuse in the main fuse box. Then turn the ignition switch to ON (engine off) again, to confirm the warning light turns off. Remove the spare fuse installed to finish this step. NOTE: The engine oil level switch is normal, if the low engine oil level warning light turns off with the delivery (test) mode fuse installed.	Go to step **6**.

	Step	Check	Yes	No
6	**CHECK OIL LEVEL SWITCH.** 1) Deliberately short circuits by connecting the engine harness connector terminal and chassis ground. 2) Turn the ignition switch to ON (engine OFF). 3) Read the current data for engine in the Subaru Select Monitor to confirm the item for "Oil level switch". <Ref. to EN(H4SO)(diag)-34, READ CURRENT DATA FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H4DOTC)(diag)-36, READ CURRENT DATA FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> ***Connector & terminal*** ***(E130) No. 1 — Chassis ground:***	Is the "Oil level switch" signal displayed in Subaru Select Monitor HIGH?	Replace the oil level switch. <Ref. to LU(H4SO)-35, REMOVAL, Oil Level Switch.>	Go to step **7**.
7	**CHECK SECURE CONNECTION OF CONNECTOR BETWEEN BULKHEAD HARNESS AND ENGINE HARNESS.**	Is there any insecure connection?	Remedy the connection condition. Then, to turn off the oil level warning light, install the spare fuse at the delivery (test) mode fuse in the main fuse box. Then turn the ignition switch to ON (engine off) again, to confirm the warning light turns off. Remove the spare fuse installed to finish this step. NOTE: The engine oil level switch is normal, if the low engine oil level warning light turns off with the delivery (test) mode fuse installed.	Go to step **8**.
8	**CHECK ENGINE HARNESS.** 1) Disconnect the connector on the oil level switch side for the engine harness. 2) Disconnect the connector on the bulkhead harness side for the engine harness. 3) Measure the resistance between connector terminals. ***Connector & terminal*** ***•Non-turbo model*** ***(E2) No. 10 — (E130) No. 1:*** ***•Turbo model*** ***(E2) No. 1 — (E130) No. 1:***	Is the resistance less than 1 Ω?	Go to step **9**.	Repair or replace the open circuit of engine harness.

	Step	Check	Yes	No
9	**CHECK SECURE CONNECTION OF CONNECTOR BETWEEN ENGINE CONTROL MODULE (ECM) AND BULKHEAD HARNESS.** Remove the glove box lid assembly. <Ref. to EI-65, REMOVAL, Glove Box.>	Is there any insecure connection?	Remedy the connection condition. Then, to turn off the oil level warning light, install the spare fuse at the delivery (test) mode fuse in the main fuse box. Then turn the ignition switch to ON (engine off) again, to confirm the warning light turns off. Remove the spare fuse installed to finish this step. NOTE: The engine oil level switch is normal, if the low engine oil level warning light turns off with the delivery (test) mode fuse installed.	Go to step **10**.
10	**CHECK BULKHEAD HARNESS.** 1) Remove the glove box lid assembly. <Ref. to EI-65, REMOVAL, Glove Box.> 2) Disconnect the engine control module (ECM) side connector for the bulkhead harness. 3) Disconnect the engine harness connectors from the bulkhead harness. 4) Measure the resistance between connector terminals. ***Connector & terminal*** ***•Non-turbo model*** ***(B136) No. 26 — (B21) No. 10:*** ***•Turbo model*** ***(B136) No. 26 — (B21) No. 1:***	Is the resistance less than 1 Ω?	Replace the engine control module (ECM). <Ref. to FU(H4SO)-41, REMOVAL, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-58, REMOVAL, Engine Control Module (ECM).>	Repair or replace the open circuit of the bulkhead harness.

2. OTHER INSPECTIONS

1) Check that the oil level switch does not have deformation, cracks, or damage.
2) Check the oil level switch installation part for oil leakage and oil seepage.