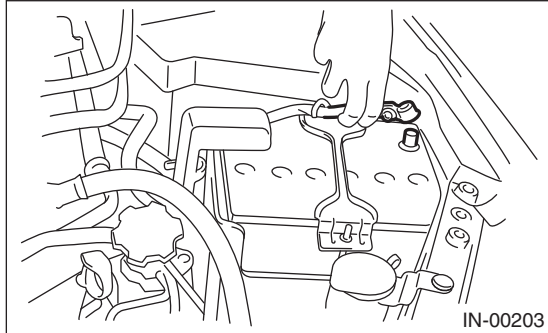


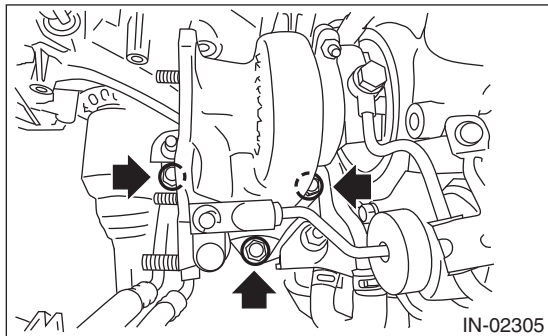
7. Turbocharger

A: REMOVAL

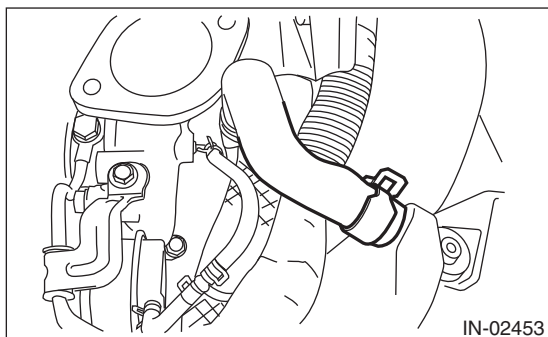
- 1) Set the vehicle on a lift.
- 2) Remove the collector cover.
- 3) Disconnect the ground cable from the battery.



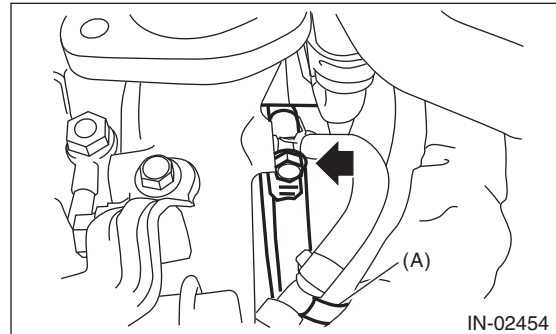
- 4) Lift up the vehicle.
- 5) Drain approximately 3.0 ℓ (3.2 US qt, 2.6 Imp qt) of coolant. <Ref. to CO(H4DOTC)-13, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
- 6) Lower the vehicle.
- 7) Remove the intercooler. <Ref. to IN(H4DOTC)-11, REMOVAL, Intercooler.>
- 8) Remove the center exhaust pipe. <Ref. to EX(H4DOTC)-7, REMOVAL, Center Exhaust Pipe.>
- 9) Lower the vehicle.
- 10) Separate the turbocharger joint pipe from turbocharger.



- 11) Disconnect the engine coolant hose which is connected to coolant filler tank.



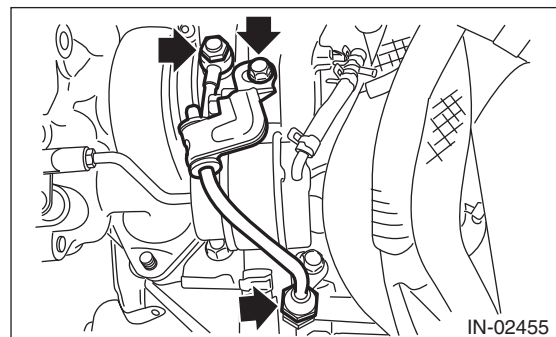
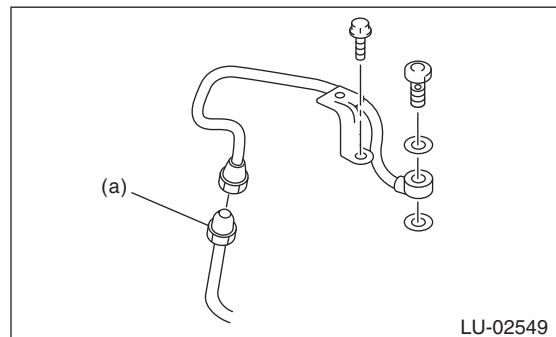
- 12) Disconnect the air control hose (A), and loosen the clamp that holds the turbocharger on the intake duct.



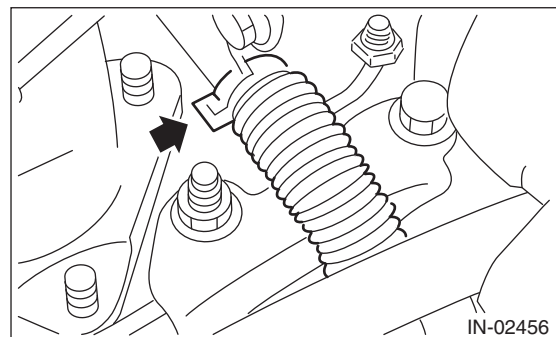
- 13) Remove the oil inlet pipe from the turbocharger.

CAUTION:

In order to prevent damaging the oil pipe on the cylinder head side, fix the section (a) shown in the figure when loosening the oil inlet pipe flare nut, and avoid the part from rotating together while loosening the nut.



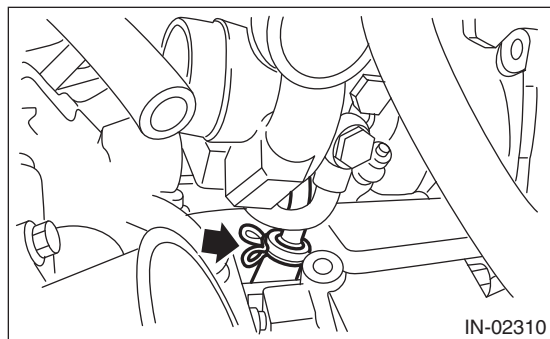
- 14) Disconnect the engine coolant hose from the water pipe.



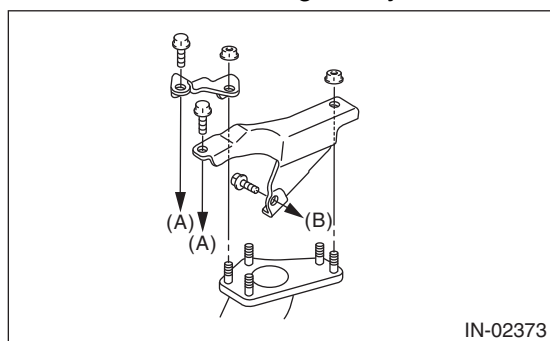
Turbocharger

INTAKE (INDUCTION)

- 15) Disconnect the oil outlet hose from the oil outlet pipe.



- 16) Take out the turbocharger from engine compartment.
17) Remove the turbocharger stay.



- (A) To cylinder head RH
(B) To cylinder block RH

B: INSTALLATION

CAUTION:

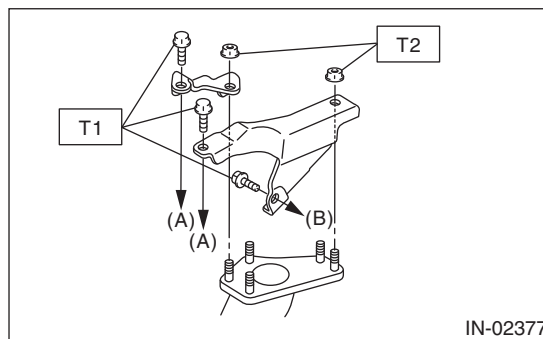
When replacing the turbocharger, check the filter part of union screw for clogging. <Ref. to LU(H4DOTC)-24, INSPECTING UNION SCREW WITH FILTER, INSPECTION, Oil Pipe.>

- 1) Install the turbocharger stay.

Tightening torque:

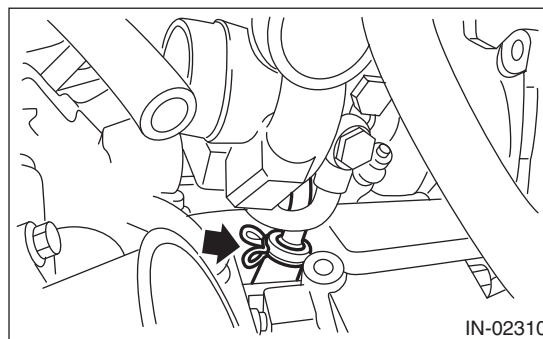
T1: 33 N·m (3.4 kgf-m, 24.3 ft-lb)

T2: 42.5 N·m (4.3 kgf-m, 31.3 ft-lb)

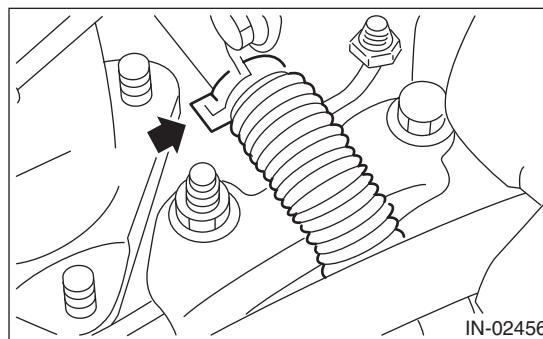


- (A) To cylinder head RH
(B) To cylinder block RH

- 2) Connect the oil outlet hose to the oil outlet pipe.



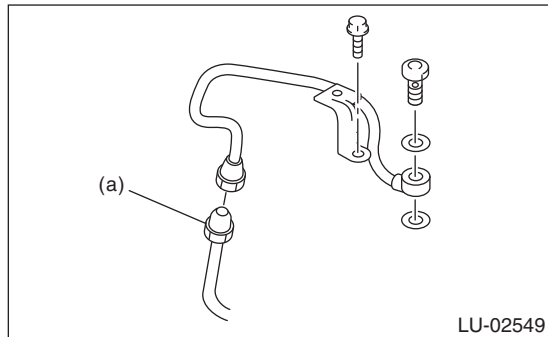
- 3) Connect the engine coolant hoses to the water pipe.



4) Install the oil inlet pipe to the turbocharger.

CAUTION:

In order to prevent damaging the oil pipe on the cylinder head side, fix the section (a) shown in the figure when tightening the oil inlet pipe flare nut, and avoid the part from rotating together while tightening the nut.

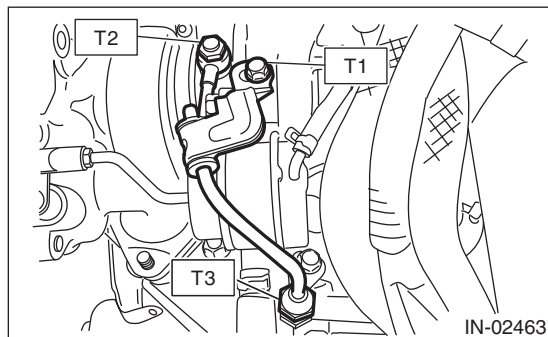


Tightening torque:

T1: 5 N·m (0.5 kgf-m, 3.7 ft-lb)

T2: 16 N·m (1.6 kgf-m, 11.8 ft-lb)

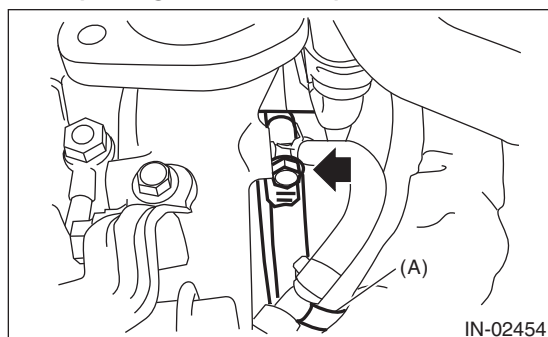
T3: 20 N·m (2.0 kgf-m, 14.5 ft-lb)



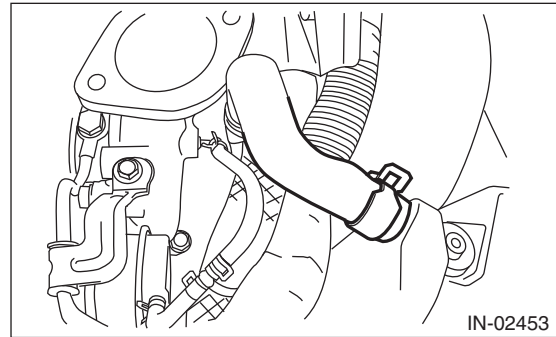
5) Connect the air control hose (A), and install the turbocharger to the intake duct.

Tightening torque:

3 N·m (0.3 kgf-m, 2.2 ft-lb)



6) Connect the engine coolant hose which is connected to the coolant filler tank.



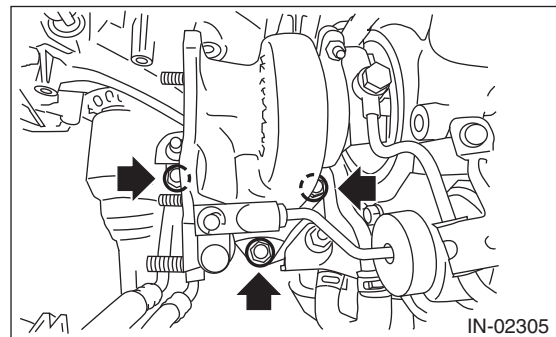
7) Install the joint pipe to turbocharger.

NOTE:

Replace the gasket with a new part.

Tightening torque:

42.5 N·m (4.3 kgf-m, 31.3 ft-lb)



8) Lift up the vehicle.

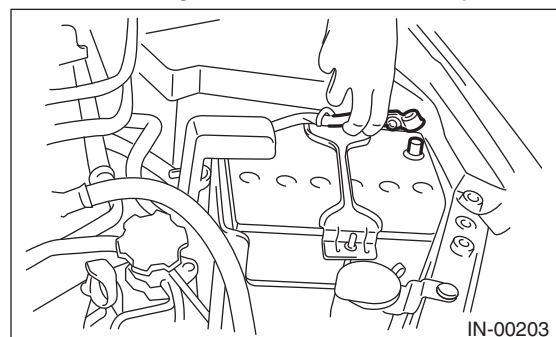
9) Install the center exhaust pipe. <Ref. to EX(H4DOTC)-8, INSTALLATION, Center Exhaust Pipe.>

10) Lower the vehicle.

11) Install the intercooler. <Ref. to IN(H4DOTC)-12, INSTALLATION, Intercooler.>

12) Fill engine coolant. <Ref. to CO(H4DOTC)-13, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>

13) Connect the ground cable to battery.

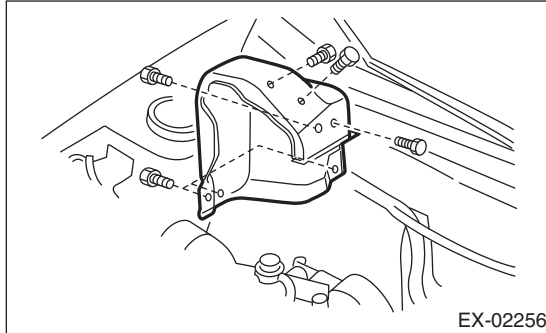


14) Install the collector cover.

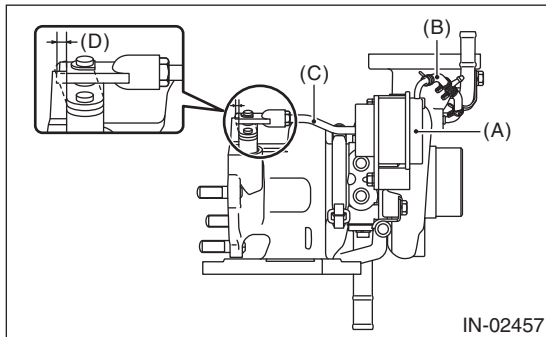
C: INSPECTION

1. WASTE GATE ACTUATOR

- 1) Remove the collector cover.
- 2) Remove the intercooler. <Ref. to IN(H4DOTC)-11, REMOVAL, Intercooler.>
- 3) Remove the turbocharger upper cover.



- 4) Remove the boost hose (B) from the waste gate actuator (A) of the turbo charger, and connect the Mighty Vac to the waste gate actuator (A).



- (A) Waste gate actuator
- (B) Boost hose
- (C) Control rod
- (D) Control rod stroke

- 5) Pressurize slowly with the Mighty Vac, and measure the pressure when the control rod stroke (D) becomes 1 mm (0.04 in). If it is not within the standard, replace the turbocharger assembly.

CAUTION:

Do not pressurize over 56.0 kPa (0.57 kgf/cm², 8.12 psi) to prevent damaging the waste gate actuator.

Control pressure

(Control rod stroke 1 mm (0.04 in)):

Standard value

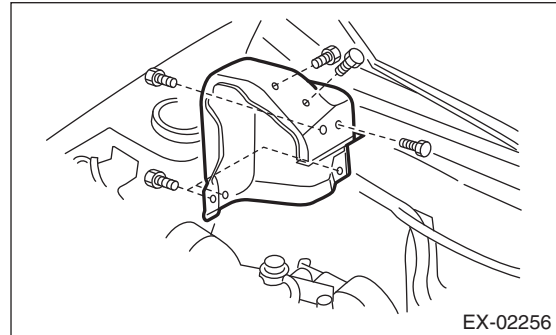
44.0 — 46.6 kPa

(0.45 — 0.48 kgf/cm², 6.38 — 6.76 psi)

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

Tightening torque:

7.5 N·m (0.8 kgf-m, 5.5 ft-lb)



2. OIL PIPE AND WATER PIPE

- Check that there are no oil leaks or water leaks from the pipe attachment section.
- Check for cracks or loose connections.