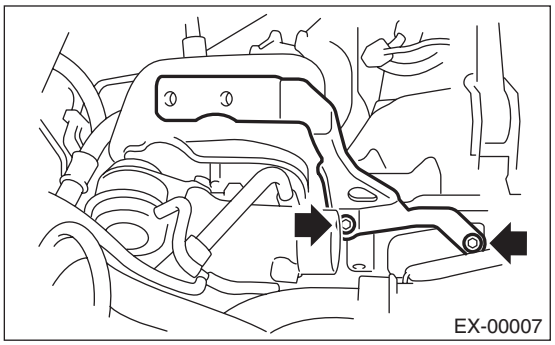
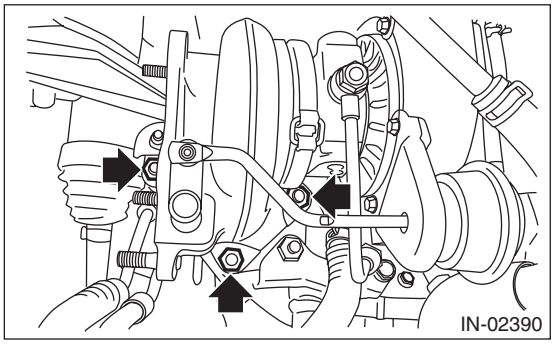
7. Turbocharger

A: REMOVAL

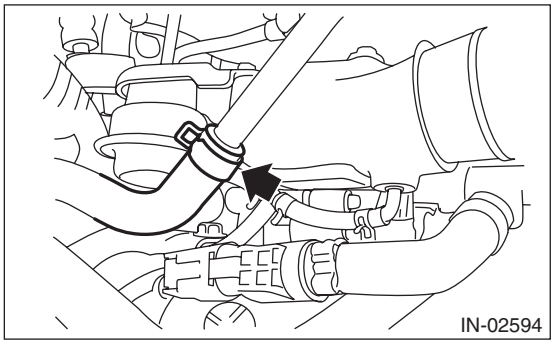
1) Disconnect the ground cable from battery.
2) Drain approximately 3.0 L (3.2 US qt, 2.6 Imp qt) of coolant. <Ref. to CO(STI)-13, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
3) Lower the vehicle.
4) Remove the intercooler. <Ref. to IN(STI)-13, REMOVAL, Intercooler.>
5) Remove the intercooler stay RH No. 2.


EX-00007

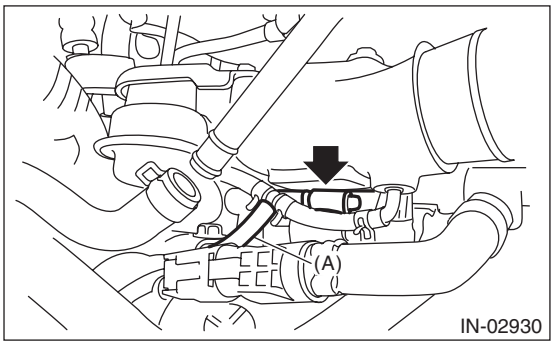
6) Remove the center exhaust pipe. <Ref. to EX(STI)-7, REMOVAL, Center Exhaust Pipe.>
7) Lower the vehicle.
8) Remove the joint pipe from the turbocharger.


IN-02390

9) Disconnect the engine coolant hose from the upper side of the water pipe.


IN-02594

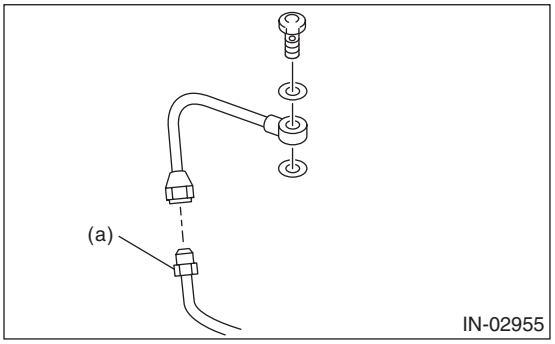
10) Disconnect the air control hose (A), and loosen the clamp holding the intake duct to the turbocharger.



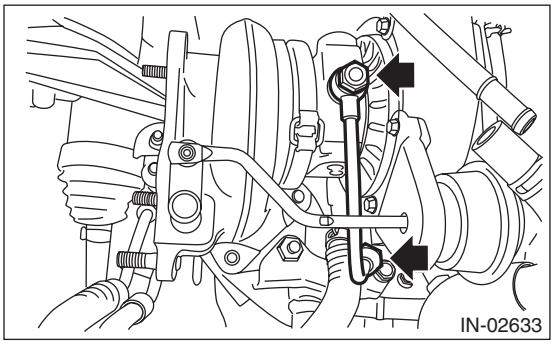
IN-02930

11) Remove the oil inlet pipe from the turbocharger.

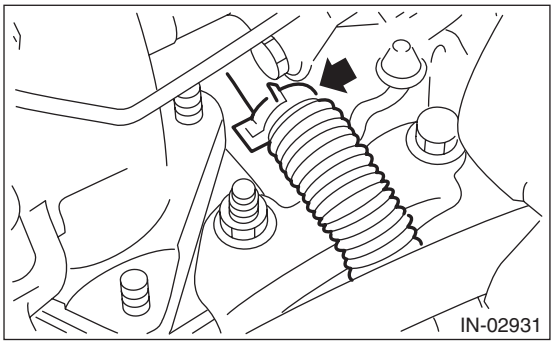
CAUTION:
In order to prevent damaging the oil pipe on the cylinder head side, fix the section (a) shown in the figure when loosing the oil inlet pipe flare nut, and avoid the part from rotating together while loosening the nut.



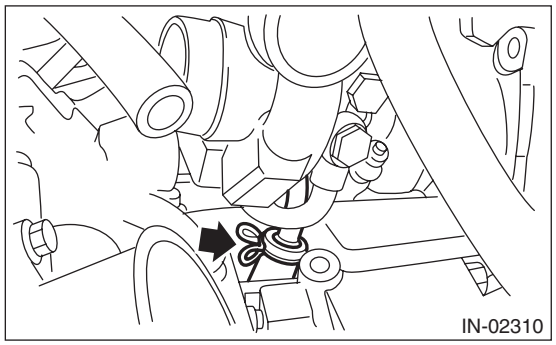
IN-02955


IN-02633

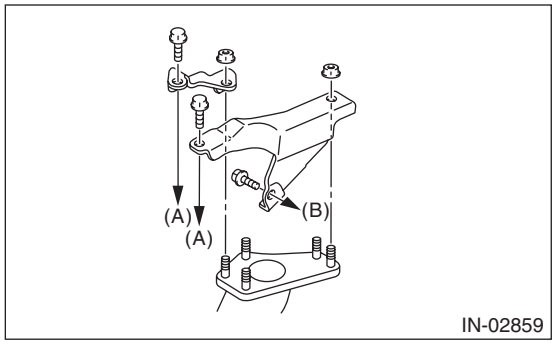
12) Disconnect the engine coolant hose from the lower side of the water pipe.


IN-02931

13) Disconnect the oil outlet hose from the oil outlet pipe, and remove the turbocharger.



14) Remove the turbocharger stay.

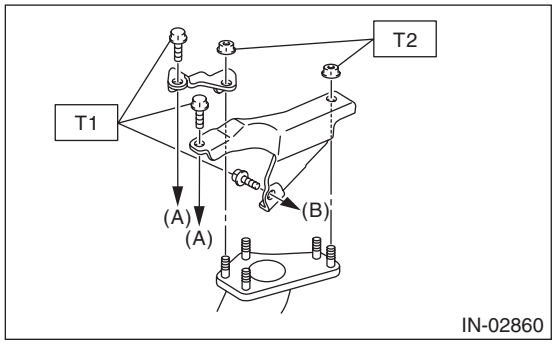


(A) To cylinder head RH
(B) To cylinder block RH

B: INSTALLATION

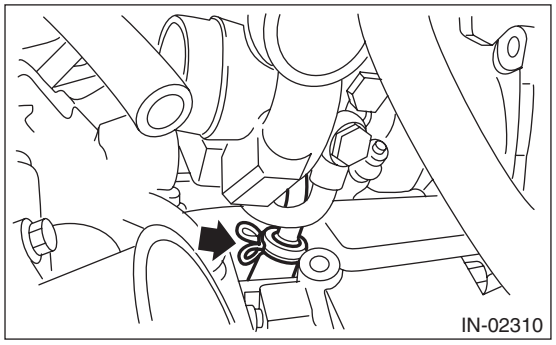
1) Install the turbocharger stay.

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)

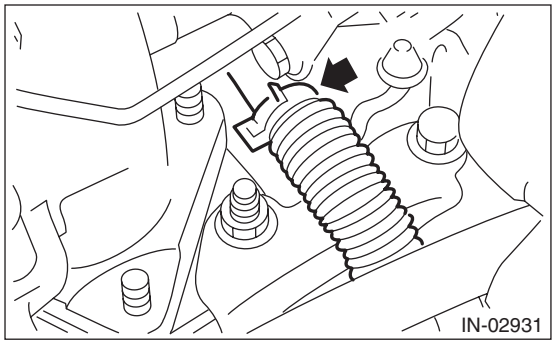


(A) To cylinder head RH
(B) To cylinder block RH

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

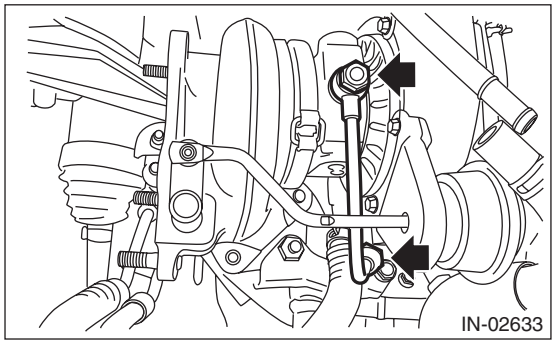


3) Connect the engine coolant hose to the lower side of the water pipe.



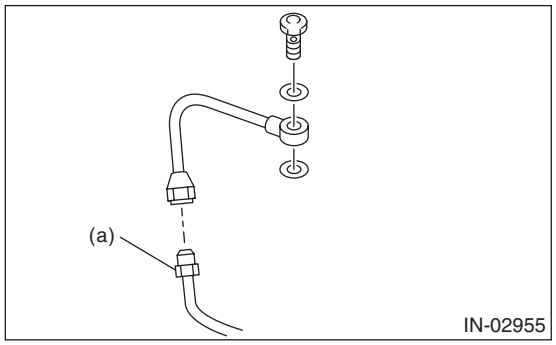
4) Temporarily tighten the union bolts and flare nuts which secure the oil inlet pipe to the turbocharger.

NOTE:
Use a new gasket.

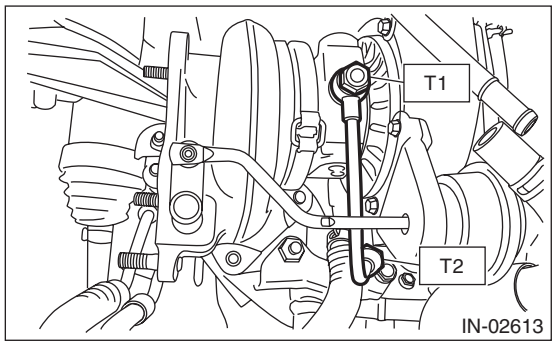


5) Tighten the union bolts and flare nuts which secure the oil inlet pipe to the turbocharger.

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.

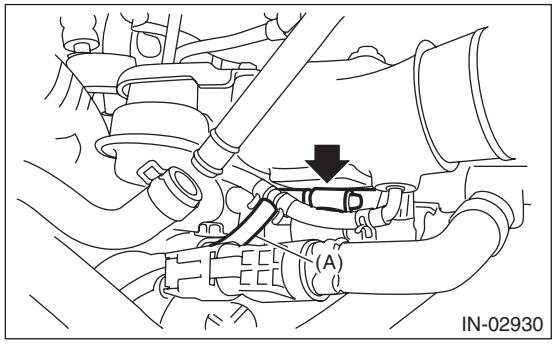


Tightening torque:
T1: 16 N·m (1.6 kgf-m, 11.8 ft-lb)
T2: 20 N·m (2.0 kgf-m, 14.8 ft-lb)

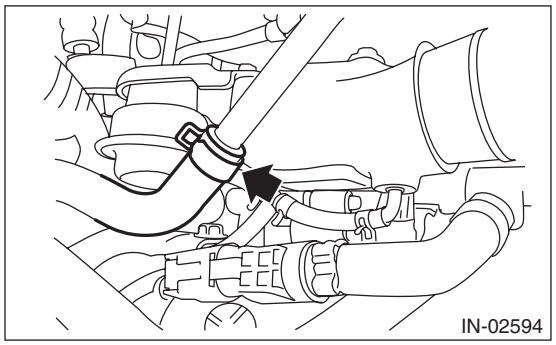


6) Connect the air control hose (A), and install the intake duct to the turbocharger.

Tightening torque:
3 N·m (0.3 kgf-m, 2.2 ft-lb)



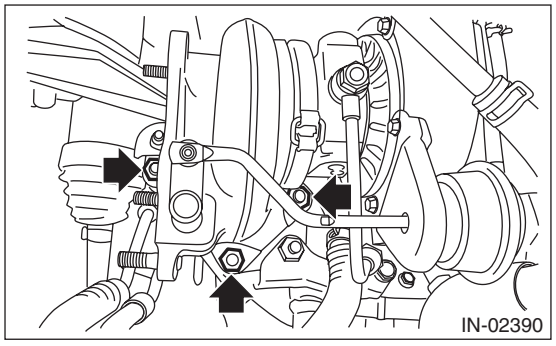
7) Connect the engine coolant hoses to the upper side of the water pipe.



8) Install the joint pipe to turbocharger.

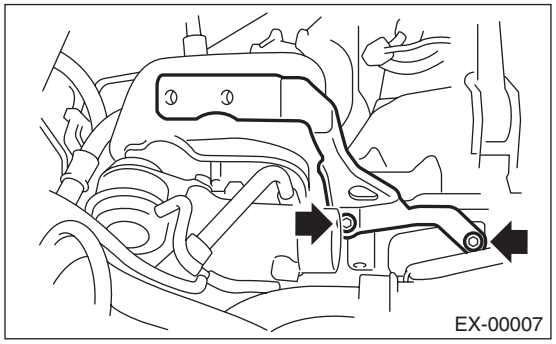
NOTE:
Use a new gasket.

Tightening torque:
42.5 N·m (4.3 kgf-m, 31.3 ft-lb)



9) Lift up the vehicle.
10) Install the center exhaust pipe. <Ref. to EX(STI)-8, INSTALLATION, Center Exhaust Pipe.>
11) Lower the vehicle.
12) Install the intercooler stay RH No. 2.

Tightening torque:
16 N·m (1.6 kgf-m, 11.8 ft-lb)

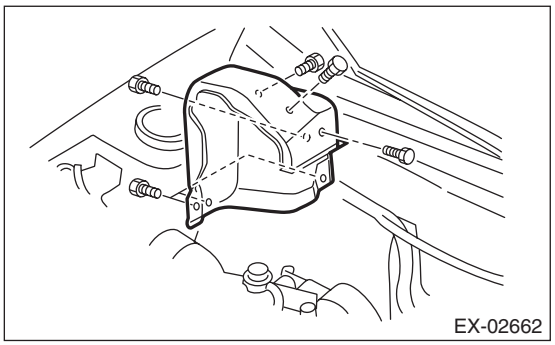


13) Install the intercooler. <Ref. to IN(STI)-14, INSTALLATION, Intercooler.>
14) Connect the battery ground terminal.
15) Fill engine coolant. <Ref. to CO(STI)-13, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>

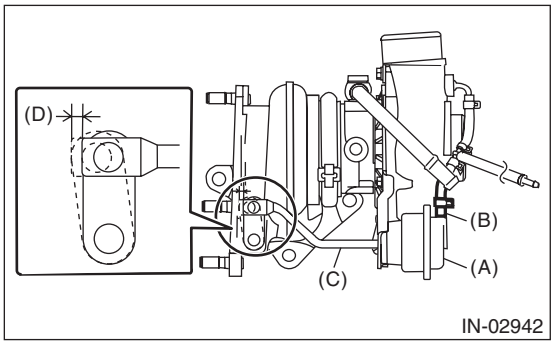
C: INSPECTION

1. WASTE GATE ACTUATOR

1) Remove the intercooler. <Ref. to IN(STI)-13, REMOVAL, Intercooler.>
2) Remove the turbocharger upper cover.



3) Remove the boost hose (B) from the waste gate actuator (A) of the turbocharger, 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

4) Pressurize slowly with the Mighty Vac, and measure the pressure when the control rod stroke (D) becomes 2 mm (0.08 in). If it is not within the standard, replace the turbocharger assembly.

CAUTION:
Do not pressurize over 89.9 kPa (0.92 kg/cm^2, 13.0 psi) to prevent damaging the waste gate actuator.

Operating pressure (control rod stroke 2 mm (0.08 in)):
Standard
74.7 — 80.8 kPa (0.76 — 0.82 kg/cm^2, 10.8 — 11.7 psi)

5) 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. OTHER INSPECTIONS

1) Check that the turbocharger, turbocharger stay and pipe have no deformation, cracks or other damages.
2) Check that the hose and intake duct have no cracks, damage or loose part.
3) Check that there are no oil leakage or water leakage from the pipe attachment section.