1304V–01

REPLACEMENT

NOTICE:

After replacing the turbocharger assembly, pour approx. 20 cm^3 (1.2 cu in.) of fresh oil into the oil inlet hole and turn the turbine wheel by hand to splash oil on the bearing.

1. REMOVE ENGINE UNDER COVER SUB–ASSY NO.1

(a) Remove the 4 bolts and engine under cover.

2. DRAIN ENGINE COOLANT (See page 16–34)

3. REMOVE INTERCOOLER ASSY (See page 13–11)

4. REMOVE EGR PIPE SUB–ASSY NO.1 (W/ EGR)(See page 12–22)

5. DISCONNECT EXHAUST PIPE ASSY FRONT (See page 15–8)

6. REMOVE TURBO INSULATOR NO.1

(a) Remove the 3 bolts and heat insulator.

7. REMOVE EXHAUST MANIFOLD HEAT INSULATOR NO.1

(a) Remove the 4 bolts and heat insulator.

8. REMOVE TURBO WATER PIPE SUB–ASSY NO.1

(a) Disconnect the 2 water by–pass hoses from the turbo water pipe.

(b) Remove the 2 nuts, bolt, water pipe and gasket.

9. REMOVE TURBINE OUTLET ELBOW

(a) Remove the 4 nuts, outlet elbow and gasket.

10. REMOVE TURBOCHARGER STAY

(a) Remove the bolt, nut and turbocharger stay.

11. REMOVE EXHAUST MANIFOLD ASSY W/ TURBOCHARGER ASSY

(a) Remove the 2 bolts and union bolt from the turbo oil pipe.

(b) Remove the 6 nuts, plate washers, 2 bolts, exhaust manifold assy w/ turbocharger and 3 gaskets.

12. REMOVE TURBO OIL INLET PIPE SUB–ASSY

(a) Remove the 2 nuts, oil pipe and gasket.

13. REMOVE TURBOCHARGER SUB–ASSY

(a) Remove the 3 nuts, exhaust manifold and gasket.

14. REMOVE COMPRESSOR INLET ELBOW

(a) Remove the 2 nuts, inlet elbow and gasket.

15. INSTALL COMPRESSOR INLET ELBOW

(a) Install a new gasket and the inlet elbow with the 2 nuts.
Torque: 19 N·m (195 kgf·cm, 14 ft·lbf)

16. INSTALL TURBOCHARGER SUB–ASSY

(a) Install a new gasket and the exhaust manifold with the 3 nuts.
Torque: 52 N·m (530 kgf·cm, 38 ft·lbf)

17. INSTALL TURBO OIL INLET PIPE SUB–ASSY

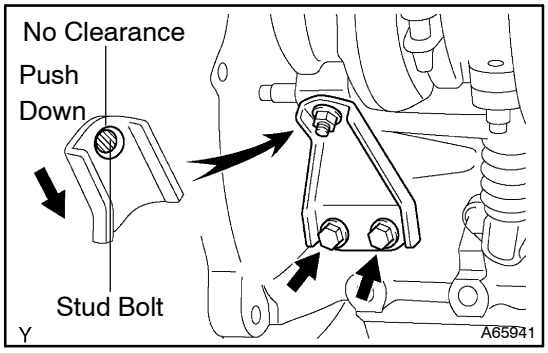
(a) Install a new gasket and the oil pipe with the 2 nuts.
Torque: 19 N·m (195 kgf·cm, 14 ft·lbf)

18. INSTALL EXHAUST MANIFOLD ASSY W/ TURBOCHARGER ASSY

(a) Install 2 new gaskets to the turbo oil pipe.

(b) Install a new gasket and exhaust manifold assy w/ turbocharger with the 6 plate washers, 6 new nuts and the 2 bolts. Uniformly tighten the nuts and bolts in several passes.
Torque: 52 N·m (530 kgf·cm, 38 ft·lbf)

(c) Install the union bolt and 2 bolts holding the oil pipe to the cylinder block.
Torque:
Union bolt 26 N·m (260 kgf·cm, 19 ft·lbf)
Bolt 12 N·m (125 kgf·cm, 9 ft·lbf)



19. INSTALL TURBOCHARGER STAY

(a) Temporarily install the turbocharger stay with the bolt and a new nut.

(b) Push down the turbocharger stay and tighten the bolt and nut.

Torque: 24 N·m (245 kgf·cm, 18 ft·lbf)

20. INSTALL TURBINE OUTLET ELBOW

(a) Install a new gasket and the outlet elbow with 4 new nuts. Uniformly tighten the nuts in several passes.

Torque: 39 N·m (390 kgf·cm, 28 ft·lbf)

21. INSTALL TURBO WATER PIPE SUB–ASSY NO.1

(a) Place a new gasket on the turbocharger with the protrusion facing upward.

NOTICE:

Be careful of the gasket installation direction.

(b) Install the water pipe with the 2 nuts and bolt.

Torque:

Nut 12 N·m (120 kgf·cm, 9 ft·lbf)

Bolt 8 N·m (80 kgf·cm, 69 in.·lbf)

(c) Connect the 2 water by–pass hoses to the turbo water pipe.

22. INSTALL EXHAUST MANIFOLD HEAT INSULATOR NO.1

(a) Install the heat insulator with the 4 bolts.

Torque: 6 N·m (65 kgf·cm, 56 in.·lbf)

23. INSTALL TURBO INSULATOR NO.1

(a) Install the heat insulator with the 4 bolts.

Torque: 6 N·m (65 kgf·cm, 56 in.·lbf)

24. CONNECT EXHAUST PIPE ASSY FRONT (See page 15–8)

25. INSTALL EGR PIPE SUB–ASSY NO.1 (W/ EGR) (See page 12–22)

26. INSTALL INTERCOOLER ASSY (See page 13–11)

27. INSTALL ENGINE UNDER COVER SUB–ASSY NO.1

(a) Install the engine under cover with the 4 bolts.

Torque: 29 N·m (300 kgf·cm, 21 ft·lbf)

28. ADD ENGINE COOLANT (See page 16–34)

29. CHECK ENGINE OIL LEVEL (See page 17–27)

30. CHECK FOR ENGINE COOLANT LEAKS (See page 16–34)

31. CHECK FOR ENGINE OIL LEAKS

32. CHECK FOR EXHAUST GAS LEAKS