13051–01

REPLACEMENT

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

(a) Remove the 4 bolts and engine under cover No. 1.

2. REMOVE ENGINE UNDER COVER ASSY REAR

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

3. DRAIN ENGINE COOLANT (See page 16–50)

4. REMOVE FRONT WHEEL RH

5. REMOVE EXHAUST PIPE ASSY FRONT (See page 15–11)

6. REMOVE AIR CLEANER ASSY

(a) Disconnect the mass air flow meter S/A connector, dad remove the wire harness clamp.

(b) Loosen the hose clamp, and remove the air cleaner cap with air cleaner hose No. 1.

(c) Remove the air cleaner filter element.

(d) Remove the 3 bolts and air cleaner case sub–assy.

7. REMOVE RADIATOR SUPPORT SEAL UPPER

(a) Remove the 11 clips and radiator support seal upper.

8. REMOVE WIRE HARNESS (W/ COLD AREA)

(a) Remove the wire harness from the fan shroud.

9. REMOVE RADIATOR RESERVE TANK ASSY

(a) Remove the radiator reserve tank hose first, and then remove the 3 bolts and radiator reserve tank.

10. REMOVE RADIATOR HOSE NO.1

11. REMOVE FAN AND GENERATOR V BELT (See page 14–189)

HINT:

Loosen the 4 nuts for the fan with fluid coupling assy in advance.

12. REMOVE FAN SHROUD

(a) Remove the oil cooler inlet hose and outlet hose from the hose clamp. (AT TRANSMISSION)

(b) Remove the 4 nuts for the fan with fluid coupling assy and 2 bolts for the fan shroud.

(c) Remove the fan with fluid coupling assy together with the fan shroud.

13. REMOVE FAN PULLEY

14. REMOVE INTERCOOLER PROTECTOR (See page 13–30)

15. REMOVE INTERCOOLER ASSY (See page 10–31)

16. REMOVE INTAKE AIR CONNECTOR

(a) Loosen the hose clamp, and disconnect the intake air connector and remove the air hose No. 2.

17. REMOVE VISCOUS W/MAGNET CLUTCH HEATER ASSY (W/ COLD AREA)

(a) Remove the 2 hoses from the viscous heater assy.

(b) Remove the 2 bolts and viscous heater bracket No. 2.

(c) Remove the 2 bolts and the viscous heater assy.

18. REMOVE VISCOUS HEATER BRACKET SUB–ASSY (W/ COLD AREA)

(a) Disconnect the connector from cooler compressor.

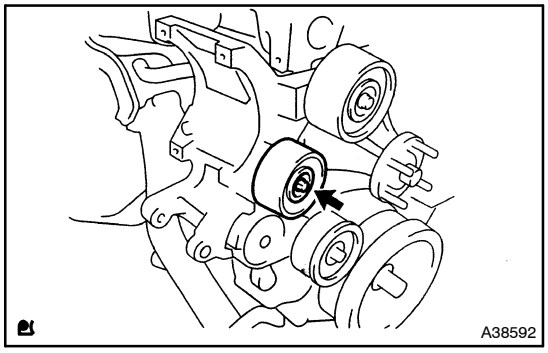
(b) Remove the 4 bolts and cooler compressor assy.

HINT:

It is not necessary that remove the hose from the cooler compressor assy when you remove the assembly. Also, you may put and hang the removeed cooler compressor to an appropriate location of the vehicle with a rope for your work in the rest of the following removal process.

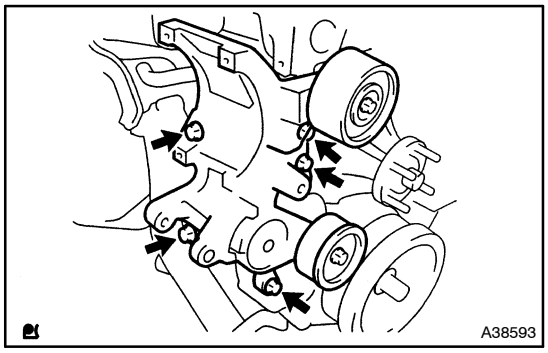
(c) Remove the 4 bolts and viscous heater bracket.

19. REMOVE GENERATOR ASSY (See page 19–40)



20. REMOVE IDLE PULLEY ASSY

(a) Remove the bolt and idle pulley assy.



21. REMOVE COMPRESSOR MOUNTING BRACKET NO.1

(a) Remove the 5 bolts and compressor mounting bracket No. 1.

22. REMOVE VENTILATION PIPE

(a) Remove the bolt and ventilation pipe.

23. REMOVE OIL LEVEL GAGE GUIDE

(a) Remove the oil level gage first, and the oil level gage guide as well.

24. REMOVE TRANSMISSION OIL FILLER TUBE SUB–ASSY (A/T TRANSMISSION)

(a) Remove the transmission oil level gauge first, and then remove the 2 bolts and transmission oil filler tube.

25. REMOVE FRONT FENDER SEAL

(a) Remove the 5 clips and front fender splash shield rear right–hand (RH).

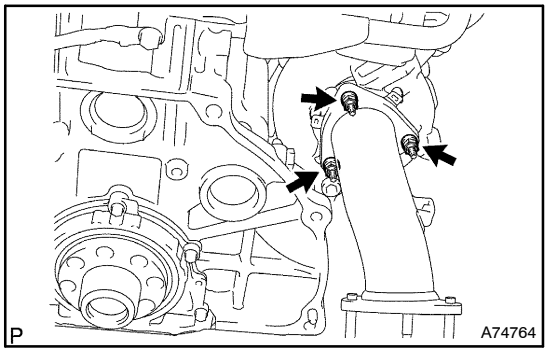
26. REMOVE TURBO INSULATOR NO.1

(a) Remove the 2 bolts and turbo insulator No. 1. (AT TRANSMISSION)

(b) Remove the 3 bolts and turbo insulator No. 1. (MT TRANSMISSION)

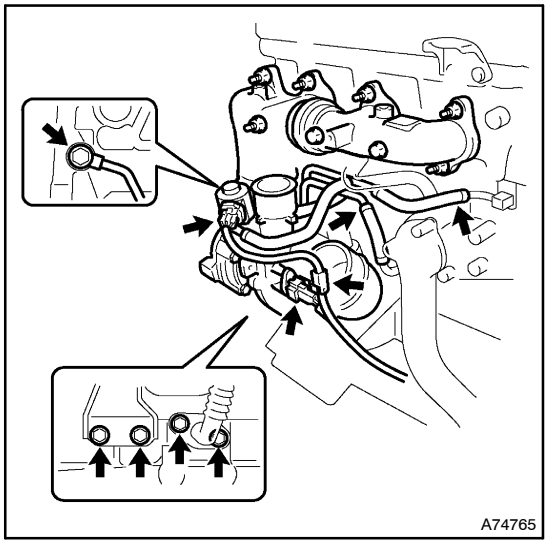
27. REMOVE EXHAUST MANIFOLD HEAT INSULATOR NO.1

(a) Remove the 3 bolts and exhaust manifold heat insulator No. 1.



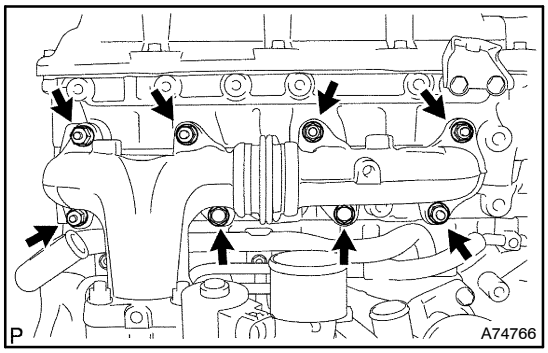
28. REMOVE TURBINE OUTLET ELBOW

(a) Remove the 3 nuts and turbine outlet elbow.

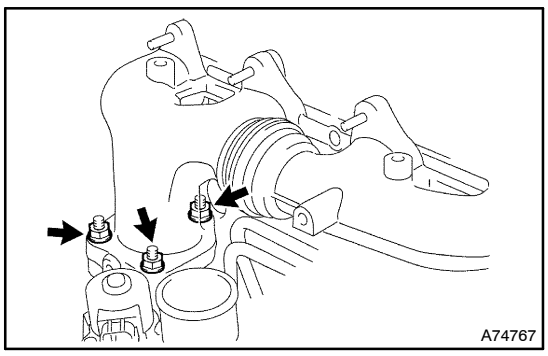


29. REMOVE TURBOCHARGER SUB–ASSY

(a) Disconnect the 2 connectors and remove the harness clamp.
(b) Remove the 2 bolts for turbocharger stay.
(c) Remove the 2 bolts for turbo oil inlet pipe.
(d) Remove the turbo oil inlet pipe union bolt.
(e) Remove the turbo water hose No. 1 and No. 2.



(f) Remove the 6 nuts, plate washers and 2 bolts for the exhaust manifold.
(g) Remove the exhaust manifold w/ turbocharger.



(h) Remove the 3 nuts and exhaust manifold from turbocharger.

(i) Remove the nut for the turbocharger, and remove the stay from turbocharger.
(j) Remove the 2 nuts and remove the inlet pipe from turbocharger.
(k) Remove the 2 nuts, and remove the inlet elbow from turbocharger.
(l) Remove the turbocharger compensate register.
  (1) Remove the 2 screws, and remove the compensate register from turbocharger.
(m) Remove the turbo water pipe No. 1.
  (1) Remove the bolt and 2 nuts, and remove the turbo water pipe No. 1 from turbocharger.

30. INSTALL TURBOCHARGER SUB–ASSY

(a) Set a new gasket and install the turbo water pipe No. 1 with the bolt and 2 nuts.
Torque:
12 N·m (122 kgf·cm, 9 ft·lbf) for nut
8.0 N·m (82 kgf·cm, 71 in.·lbf) for bolt

(b) Install the turbocharger compensate register with the 2 screws.

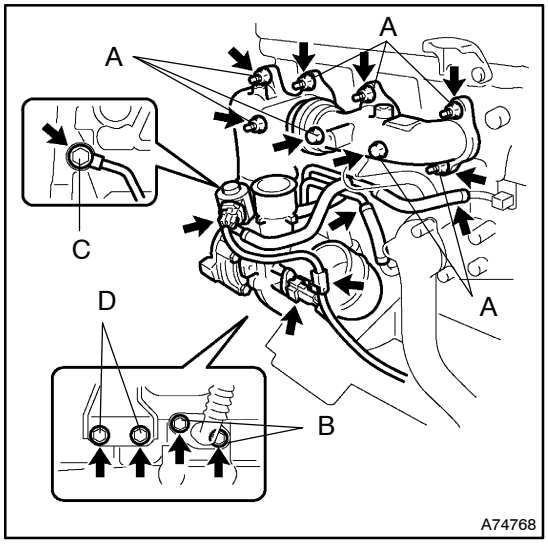
NOTICE:
Make sure that the replaced compensate register has the same number as the formerly installed compensate register's.

(c) Set a new gasket and install the compressor inlet elbow with the 2 nuts.
Torque: 19 N·m (194 kgf·cm, 14 ft·lbf)

(d) Set a new gasket and install the turbo oil inlet pipe with the 2 nuts.
Torque: 13 N·m (133 kgf·cm, 10 ft·lbf)

(e) Install the turbocharger stay with a new nut.
Torque: 24 N·m (245 kgf·cm, 18 ft·lbf)

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



(g) Set a new gasket to the engine, and install the exhaust manifold with the 6 nuts, plate washers and 2 bolts.
Torque: 52 N·m (530 kgf·cm, 38 ft·lbf) for bolt, nut A

(h) Install the turbo water hose No. 1 and No. 2.

(i) Set a new gasket, and tighten the 2 bolts for turbo oil inlet pipe.
Torque: 12 N·m (122 kgf·cm, 9 ft·lbf) for bolt B

(j) Set a new gasket, and install the turbo oil inlet union bolt.
Torque: 26 N·m (265 kgf·cm, 19 ft·lbf) for bolt C

(k) Tighten the 2 bolts for turbocharger stay.
Torque: 24 N·m (245 kgf·cm, 18 ft·lbf) for bolt D

(l) Connect the 2 connectors, and install the harness clamp.

31. INSTALL TURBINE OUTLET ELBOW

(a) Set a new gasket, and install the turbine outlet elbow with 3 new nuts.
Torque: 39 N·m (398 kgf·cm, 29 ft·lbf)

32. INSTALL EXHAUST MANIFOLD HEAT INSULATOR NO.1

(a) Install the exhaust manifold heat insulator No. 1 with the 3 bolts.
Torque: 12 N·m (122 kgf·cm, 9 ft·lbf)

33. INSTALL TURBO INSULATOR NO.1

(a) Install the turbo insulator No. 1 with the 2 bolts. (AT TRANSMISSION)
Torque: 12 N·m (122 kgf·cm, 9 ft·lbf)

(b) Install the turbo insulator No. 1 with the 3 bolts. (MT TRANSMISSION)
Torque: 12 N·m (122 kgf·cm, 9 ft·lbf)

34. INSTALL FRONT FENDER SEAL

(a) Install the front fender splash shield rear RH with the 5 clips.

35. INSTALL TRANSMISSION OIL FILLER TUBE SUB–ASSY (A/T TRANSMISSION)

(a) Set a new O–ring to the transmission oil filler tube.

(b) Install the oil filler tube with the 2 bolts.
Torque: 12 N·m (122 kgf·cm, 9 ft·lbf)

(c) Set the transmission oil level gauge.

36. INSTALL OIL LEVEL GAGE GUIDE

(a) Install a new O–ring to the oil level gage guide.

(b) Install the oil level gage guide with its bolt.
Torque: 8.0 N·m (82 kgf·cm, 71 in.·lbf)

37. INSTALL VENTILATION PIPE

(a) Install the ventilation pipe with the bolt.
Torque: 20 N·m (204 kgf·cm, 15 ft·lbf)

38. INSTALL COMPRESSOR MOUNTING BRACKET NO.1

(a) Install the compressor mounting bracket No. 1 with the 5 bolts.
Torque: 21 N·m (214 kgf·cm, 16 ft·lbf)

39. INSTALL IDLE PULLEY ASSY

(a) Install the idle pulley with the bolt.
Torque: 45 N·m (459 kgf·cm, 33 ft·lbf)

40. INSTALL GENERATOR ASSY (See page 19–40)

41. INSTALL VISCOUS HEATER BRACKET SUB–ASSY (W/ COLD AREA)

(a) Install the viscous heater bracket with its 4 bolts.
Torque: 47 N·m (479 kgf·cm, 35 ft·lbf)

(b) Install the cooler compressor assy with its 4 bolts.
Torque: 25 N·m (250 kgf·cm, 18 ft·lbf)

(c) Connect the connector to the cooler compressor assy.

42. INSTALL VISCOUS W/MAGNET CLUTCH HEATER ASSY (W/ COLD AREA)

(a) Install the viscous heater assy with its 2 bolt.
Torque: 45 N·m (459 kgf·cm, 33 ft·lbf)

(b) Install the viscous heater bracket No. 2 with its 2 bolts.
Torque: 45 N·m (459 kgf·cm, 33 ft·lbf)

43. INSTALL INTAKE AIR CONNECTOR

(a) Connect the mass air connector, and install the new air hose No. 2.

(b) Fasten the hose clamp.

44. INSTALL INTERCOOLER ASSY (See page 10–31)

45. INSTALL INTERCOOLER PROTECTOR

(a) Install the intercooler protector with the 5 bolts.
Torque: 6.0 N·m (61 kgf·cm, 53 in.·lbf)

46. INSTALL FAN PULLEY

47. INSTALL FAN SHROUD

(a) Temporarily place the fan shroud together with the fan with fluid coupling assy to the correct location inside the engine room first.

(b) Install the fan shroud to the radiator with the 2 bolts.
Torque: 5.0 N·m (51 kgf·cm, 44 in.·lbf)

(c) Install the fan with fluid coupling assy to the water pump with the 4 nuts.
Torque: 18 N·m (184 kgf·cm, 13 ft·lbf)
(d) Install the oil cooler inlet hose and outlet hose to the hose clamp. (AT TRANSMISSION)
48. INSTALL FAN AND GENERATOR V BELT (See page 14–189)
49. INSTALL RADIATOR HOSE NO.1
50. INSTALL RADIATOR RESERVE TANK ASSY
(a) Install the radiator reserve tank with the 3 bolts.
Torque: 5.0 N·m (51 kgf·cm, 44 in.·lbf)
(b) Install the radiator reserve tank hose.
51. INSTALL WIRE HARNESS (W/ COLD AREA)
(a) Install the wire harness to the fan shroud.
52. INSTALL RADIATOR SUPPORT SEAL UPPER
(a) Install the radiator support seal upper with the 11 clips.
53. INSTALL AIR CLEANER ASSY
(a) Install the air cleaner case sub–assy with its 3 bolts.
(b) Install the air cleaner filter element and air cleaner cap with air cleaner hose No. 1.
(c) Connect the intake air flow meter S/A and install the wire harness.
54. INSTALL EXHAUST PIPE ASSY FRONT (See page 15–11)
55. INSTALL FRONT WHEEL RH
Torque: 112 N·m (1142 kgf·cm, 83 ft·lbf)
56. ADD ENGINE COOLANT (See page 16–50)
57. CHECK FOR ENGINE COOLANT LEAKS
58. CHECK FOR ENGINE OIL LEAKS
59. CHECK EXHAUST LEAKAGE
60. INSTALL ENGINE UNDER COVER ASSY REAR
(a) Install the engine under cover rear with the 4 bolts.
Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)
61. INSTALL ENGINE UNDER COVER SUB–ASSY NO.1
(a) Install the engine under cover No. 1 with the 4 bolts.
Torque: 29 N·m (296 kgf·cm, 21 ft·lbf)