

REMOVAL

1. REMOVE HOOD SUB-ASSEMBLY
2. DISCHARGE FUEL SYSTEM PRESSURE
(See Page [FU-1](#))
3. REMOVE ENGINE UNDER COVER SUB-ASSEMBLY NO.1 (for Pre Runner and 4WD Type)
 - (a) Remove the 4 bolts, then remove the engine under cover No. 1.
4. REMOVE ENGINE UNDER COVER SUB-ASSEMBLY NO.2 (for Pre Runner and 4WD Type, Regular Cab)
 - (a) Remove the 4 bolts, then remove the engine under cover No. 2.
5. DRAIN ENGINE OIL (See page [LU-3](#))
6. DRAIN ENGINE COOLANT (See page [CO-3](#))
7. REMOVE BATTERY
8. REMOVE BATTERY TRAY
9. REMOVE RADIATOR SUPPORT TO FRAME SEAL LH
(See page [CO-12](#))
10. REMOVE FAN SHROUD (See page [CO-13](#))
11. REMOVE AIR CLEANER CAP SUB-ASSEMBLY (See page [EC-14](#))
12. REMOVE AIR CLEANER FILTER ELEMENT SUB-ASSEMBLY
13. REMOVE AIR CLEANER CASE
 - (a) Remove the 3 bolts, then remove the air cleaner case.
14. SEPARATE VANE PUMP ASSEMBLY (See page [EM-21](#))
15. REMOVE RADIATOR HOSE NO.2
16. SEPARATE COMPRESSOR AND MAGNETIC CLUTCH (With Air Conditioning) (See page [EM-21](#))
17. REMOVE RADIATOR HOSE INLET
18. SEPARATE WATER HOSE SUB-ASSEMBLY (See page [EM-92](#))
19. DISCONNECT FUEL HOSE (See page [FU-11](#))
20. DISCONNECT FUEL HOSE NO.2 (See page [FU-11](#))
21. SEPARATE FUEL VAPOR FEED HOSE ASSEMBLY
(See page [EM-93](#))
22. DISCONNECT AIR INJECTION SYSTEM NO.1 HOSE
(See page [EM-93](#))
23. DISCONNECT ENGINE WIRE (See page [EM-93](#))
24. REMOVE EXHAUST PIPE ASSEMBLY TAIL (See page [EX-2](#))

25. REMOVE EXHAUST PIPE ASSEMBLY FRONT (See page [EX-2](#))

26. REMOVE MANUAL TRANSMISSION UNIT ASSEMBLY

Transmission	See page
R155	MT-6
R155F	MT-8

27. REMOVE AUTOMATIC TRANSMISSION ASSEMBLY (See Page [AT-109](#))

28. REMOVE ENGINE ASSEMBLY (See page [EM-93](#))

29. REMOVE CLUTCH COVER ASSEMBLY (for Manual Transmission)

Transmission	See page
R155	CL-30
R155F	CL-35

30. REMOVE CLUTCH DISC ASSEMBLY (for Manual Transmission)

Transmission	See page
R155	CL-30
R155F	CL-35

31. REMOVE FLYWHEEL SUB-ASSEMBLY (for Manual Transmission) (See page [EM-77](#))

32. REMOVE DRIVE PLATE & RING GEAR SUB-ASSEMBLY (for Automatic Transmission) (See page [EM-78](#))

33. REMOVE REAR END PLATE (See page [EM-66](#))

34. REMOVE INTAKE AIR CONNECTOR (See page [ES-452](#))

35. REMOVE GENERATOR ASSEMBLY (See page [CH-7](#))

36. REMOVE V-RIBBED BELT TENSIONER ASSEMBLY (See page [CO-5](#))

37. REMOVE IDLER PULLEY SUB-ASSEMBLY NO.1 (See page [EM-23](#))

38. REMOVE IDLE PULLEY ASSEMBLY W/BRACKET (With Air Conditioning) (See page [ES-446](#))

39. REMOVE CRANKSHAFT POSITION SENSOR (See page [ES-446](#))

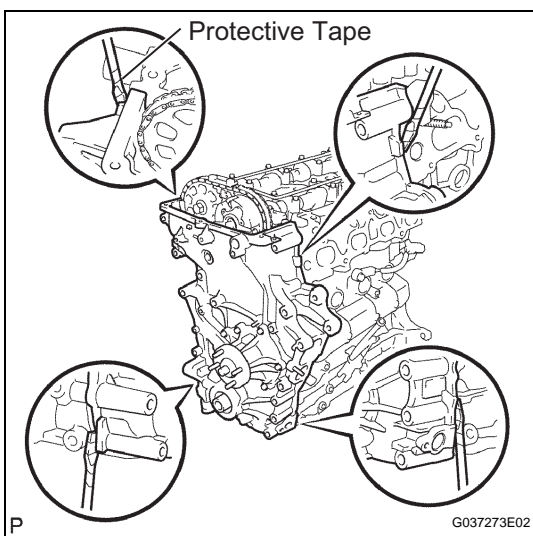
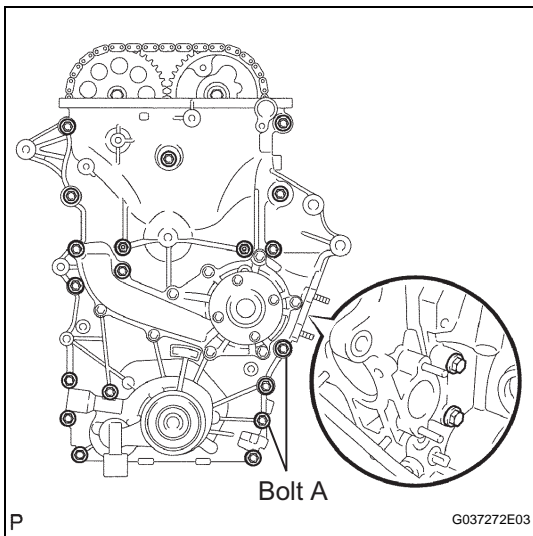
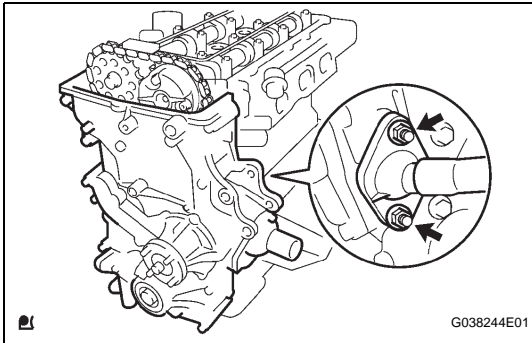
40. REMOVE CAMSHAFT POSITION SENSOR (See page [ES-444](#))

41. REMOVE INTAKE MANIFOLD TO HEAD GASKET NO. 1 (See page [ES-460](#))

42. REMOVE CYLINDER HEAD COVER SUB-ASSEMBLY (See page [EM-38](#))

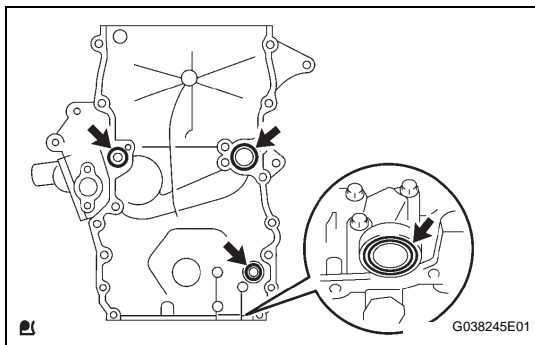
43. REMOVE CRANKSHAFT PULLEY (See page [EM-74](#))

44. REMOVE OIL LEVEL GAGE SUB-ASSEMBLY
45. REMOVE OIL PAN SUB-ASSEMBLY NO.2 (See page EM-24)
46. REMOVE OIL STRAINER SUB-ASSEMBLY (See page EM-24)
47. REMOVE OIL PAN SUB-ASSEMBLY (See page EM-25)
48. REMOVE OIL PUMP
 - (a) Remove the 2 nuts, then separate the water by-pass pipe No. 1.

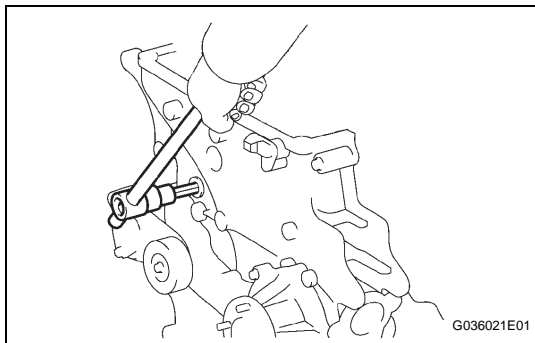


- (b) Remove the 19 bolts and 2 nuts shown in the illustration.
HINT:
If the vehicle is equipped with air conditioning, bolts A are already removed since they are for installing the idle pulley with bracket.

- (c) Remove the oil pump by prying between the oil pump and cylinder head or cylinder block with a screwdriver.
HINT:
Tape the screwdriver tip before use.
NOTICE:
Be careful not to damage the contact surfaces of the cylinder head, cylinder block and timing chain cover.



(d) Remove the 4 O-rings.

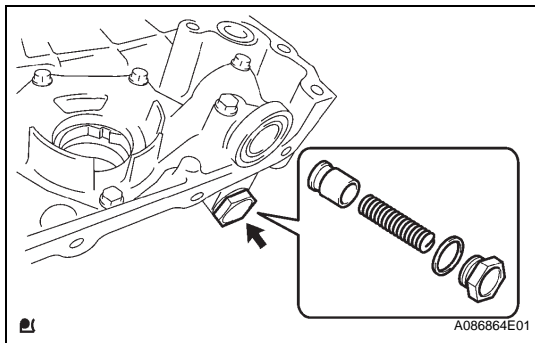


(e) Using a 10 mm socket hexagon wrench, remove the head straight screw plug.

49. REMOVE WATER INLET (See page CO-7)

50. REMOVE THERMOSTAT (See page CO-7)

51. REMOVE TIMING GEAR CASE OR TIMING CHAIN CASE OIL SEAL (See page EM-149)



DISASSEMBLY

1. REMOVE OIL PUMP RELIEF VALVE

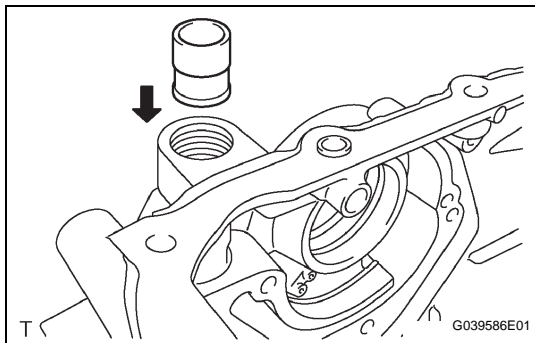
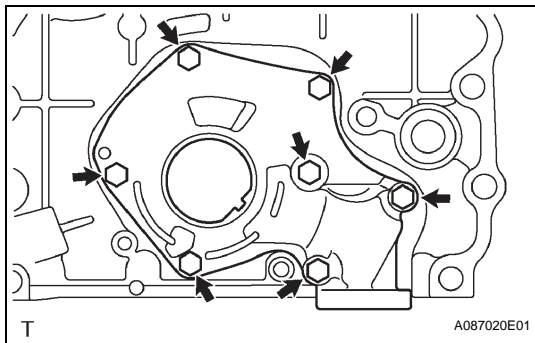
- (a) Using a 27 mm socket wrench, remove the relief valve plug and gasket.
- (b) Remove the valve spring and oil pump relief valve.

2. REMOVE OIL PUMP COVER

- (a) Remove the 7 bolts and oil pump cover.

3. REMOVE OIL PUMP ROTOR SET

- (a) Remove the oil pump rotor set from the timing chain cover.



INSPECTION

1. REMOVE OIL PUMP RELIEF VALVE

- (a) Coat the relief valve with engine oil and drop it into the relief valve hole.
- (b) Check that the relief valve falls in smoothly by its own weight.
If it does not, replace the relief valve. If necessary, replace the timing chain cover.