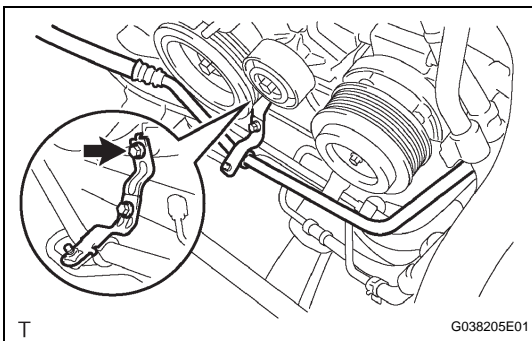
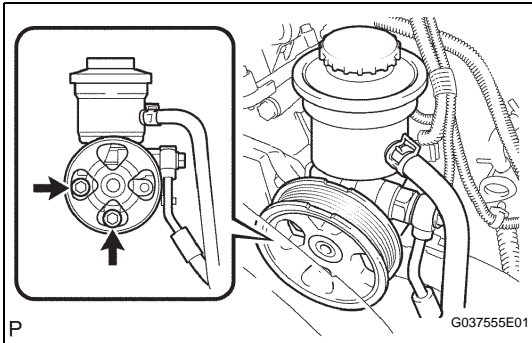
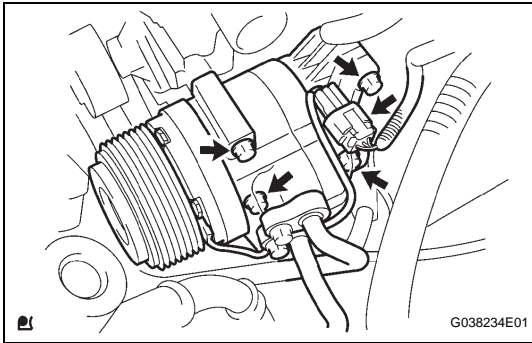


REMOVAL

1. REMOVE HOOD SUB-ASSEMBLY
2. DISCHARGE FUEL SYSTEM PRESSURE
(See page [FU-1](#))
3. REMOVE NO. 1 ENGINE UNDER COVER SUB-ASSEMBLY (for 4WD and Pre-Runner)
 - (a) Remove the 4 bolts, then remove the No. 1 engine under cover.
4. REMOVE NO. 2 ENGINE UNDER COVER SUB-ASSEMBLY (for 4WD and Pre-Runner, Regular Cab)
 - (a) Remove the 4 bolts, then remove the No. 2 engine under cover.
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
 - (a) Disconnect the vane pump connector.
 - (b) Remove the 2 bolts, then separate the vane pump.
HINT:
Do not disconnect the hose. Hang the vane pump with a rope.
15. REMOVE NO. 2 RADIATOR HOSE
16. SEPARATE COMPRESSOR AND MAGNETIC CLUTCH (w/ Air Conditioning System)
 - (a) Remove the bolt shown in the illustration.





- (b) Disconnect the compressor and magnetic clutch connector.
- (c) Remove the 4 bolts, then separate the compressor and magnetic clutch.

HINT:

Do not disconnect the hose. Hang the vane pump with a rope.

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 NO. 1 AIR INJECTION HOSE (See page [EM-93](#))

23. DISCONNECT ENGINE WIRE (See page [EM-93](#))

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

25. REMOVE FRONT EXHAUST PIPE ASSEMBLY (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)

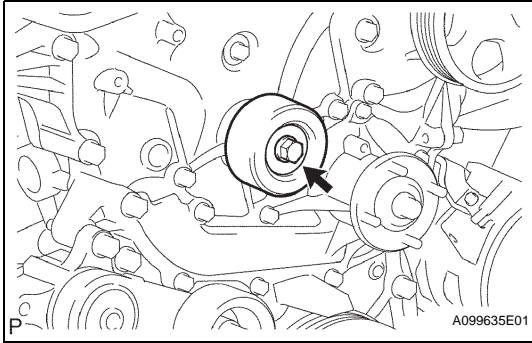
Transmission	See page
R155	CL-30
R155F	CL-35

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 AND RING GEAR SUB-ASSEMBLY (for Automatic Transmission) (See page [EM-78](#))

**33. REMOVE REAR END PLATE**

- (a) Remove the 2 bolts, then remove the rear end plate.

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 NO. 1 IDLER PULLEY SUB-ASSEMBLY**

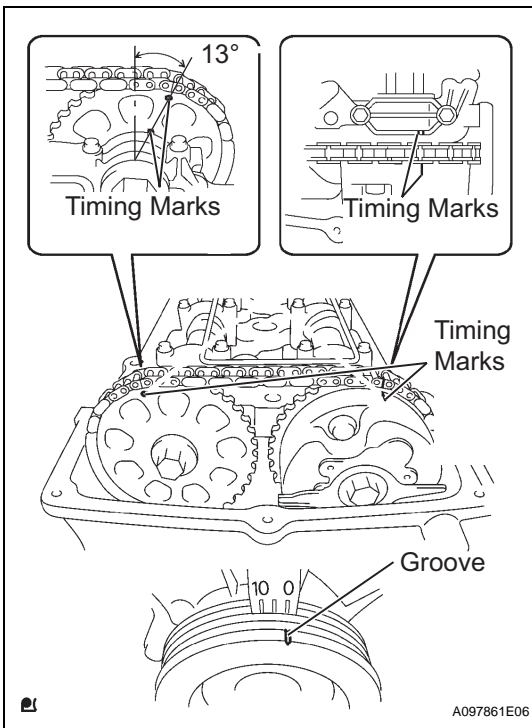
- (a) Remove the bolt and No. 1 idler pulley sub-assembly.

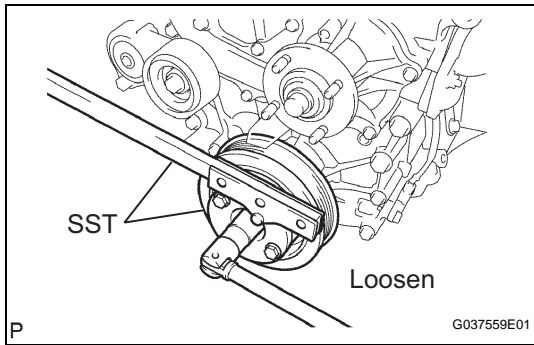
38. REMOVE IDLE PULLEY ASSEMBLY WITH BRACKET (w/ Air Conditioning System) (See page ES-446)**39. REMOVE CRANKSHAFT POSITION SENSOR (See page ES-444)****40. REMOVE CAMSHAFT POSITION SENSOR (See page ES-444)****41. REMOVE NO. 1 INTAKE MANIFOLD TO HEAD GASKET (See page ES-463)****42. REMOVE CYLINDER HEAD COVER SUB-ASSEMBLY (See page EM-38)****43. REMOVE CRANKSHAFT PULLEY**

- (a) Set the No. 1 cylinder to the TDC/ compression.
- (1) Turn the crankshaft pulley clockwise and align its timing mark notch with the timing mark "0".
 - (2) Check that the timing marks of the camshaft timing gear are located as illustrated.

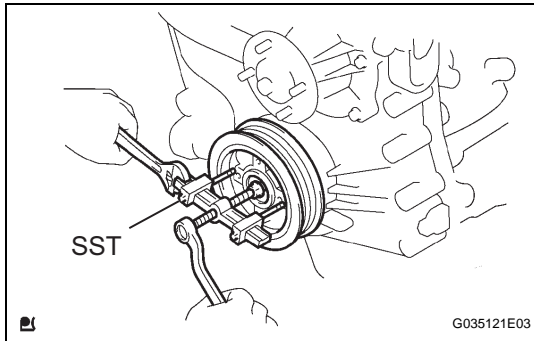
HINT:

If not, turn the crankshaft to align the marks.



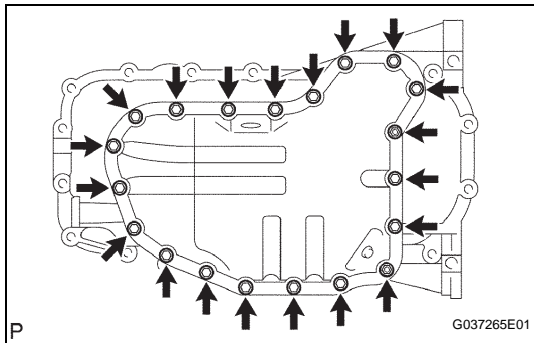


- (b) Using SST, loosen the crankshaft pulley bolt.
SST 09213-54015 (91651-60855), 09330-00021
HINT:
 Loosen the crankshaft pulley bolt until only 2 or 3 threads are still installed in the crankshaft.



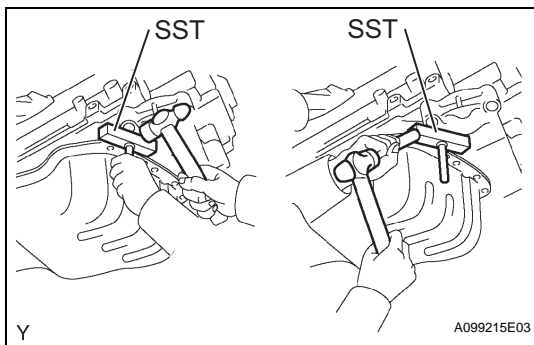
- (c) Using SST, remove the crankshaft pulley and crankshaft pulley bolt.
SST 09950-50013 (09951-05010, 09952-05010, 09953-05010, 09954-05021)

44. REMOVE OIL LEVEL GAGE SUB-ASSEMBLY

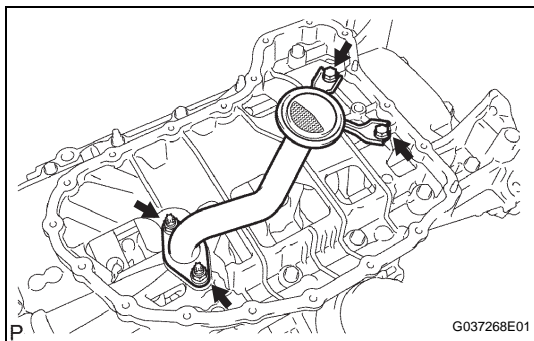


45. REMOVE NO. 2 OIL PAN SUB-ASSEMBLY

- (a) Remove the 18 bolts and 2 nuts.

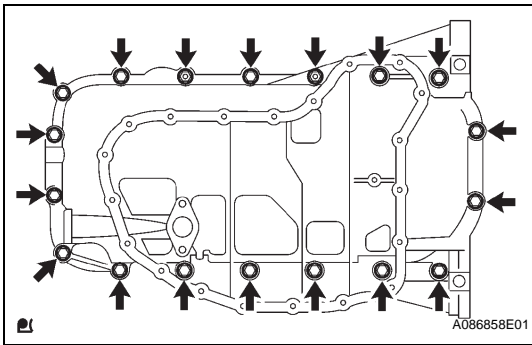


- (b) Insert the blade of SST between the pans. Cut through the applied sealer and remove the oil pan.
SST 09032-00100
NOTICE:
 Be careful not to damage the contact surface of the oil pans.

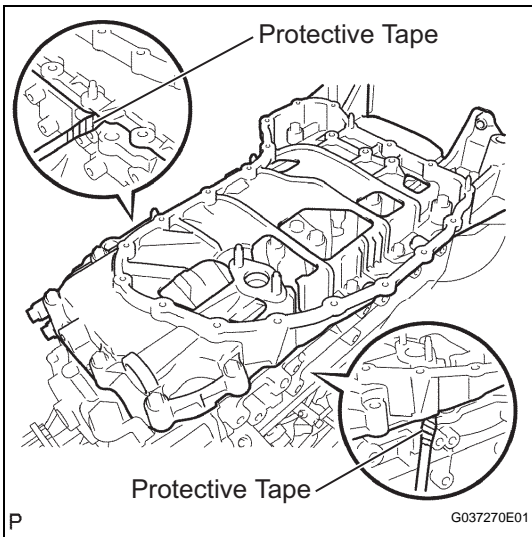


46. REMOVE OIL STRAINER SUB-ASSEMBLY

- (a) Remove the 2 bolts, 2 nuts, oil strainer and gasket.

**47. REMOVE OIL PAN SUB-ASSEMBLY**

- (a) Remove the 16 bolts and 2 nuts.



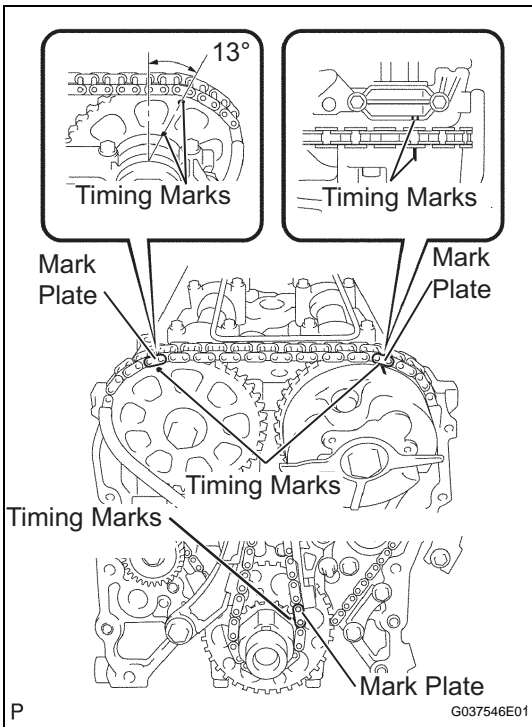
- (b) Remove the oil pan by prying between the oil pan and cylinder block with a screwdriver.

HINT:

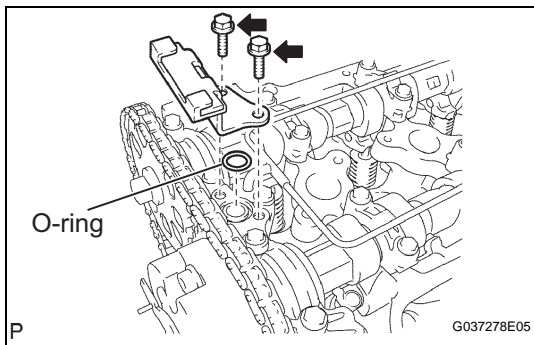
Tape the screwdriver tip before use.

NOTICE:

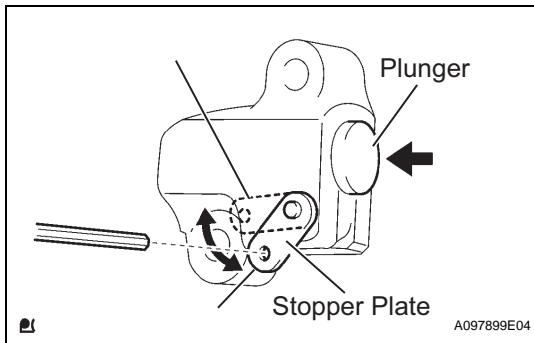
Be careful not to damage the contact surfaces of the cylinder block and oil pan.

48. REMOVE TIMING CHAIN COVER (See page [LU-21](#))**49. REMOVE TIMING CHAIN GUIDE**

- (a) Make sure that each matchmark is in the position shown in the illustration.

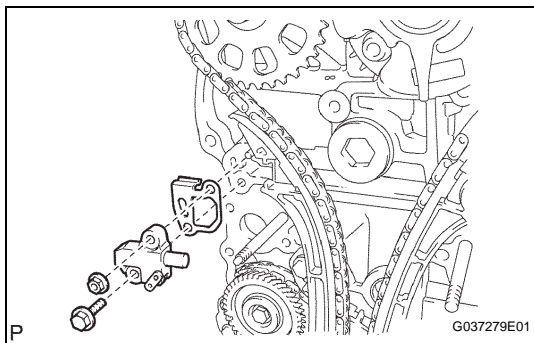


(b) Remove the 2 bolts, timing chain guide and O-ring.



50. REMOVE NO. 1 CHAIN TENSIONER ASSEMBLY NOTICE:

- When the chain tensioner is removed, do not rotate the crankshaft.
 - When the chain is removed and the camshaft needs to be rotated, rotate the crankshaft 90° to the right.
- (a) Move the stopper plate upward to release the lock, and push the plunger deep into the tensioner.
 - (b) Move the stopper plate downward to set the lock, and insert a 3.0 mm (0.118 in.) diameter bar into the stopper plate hole.
 - (c) Remove the bolt, nut, chain tensioner and gasket.



51. REMOVE CHAIN TENSIONER SLIPPER

- (a) Remove the bolt and tensioner slipper.

