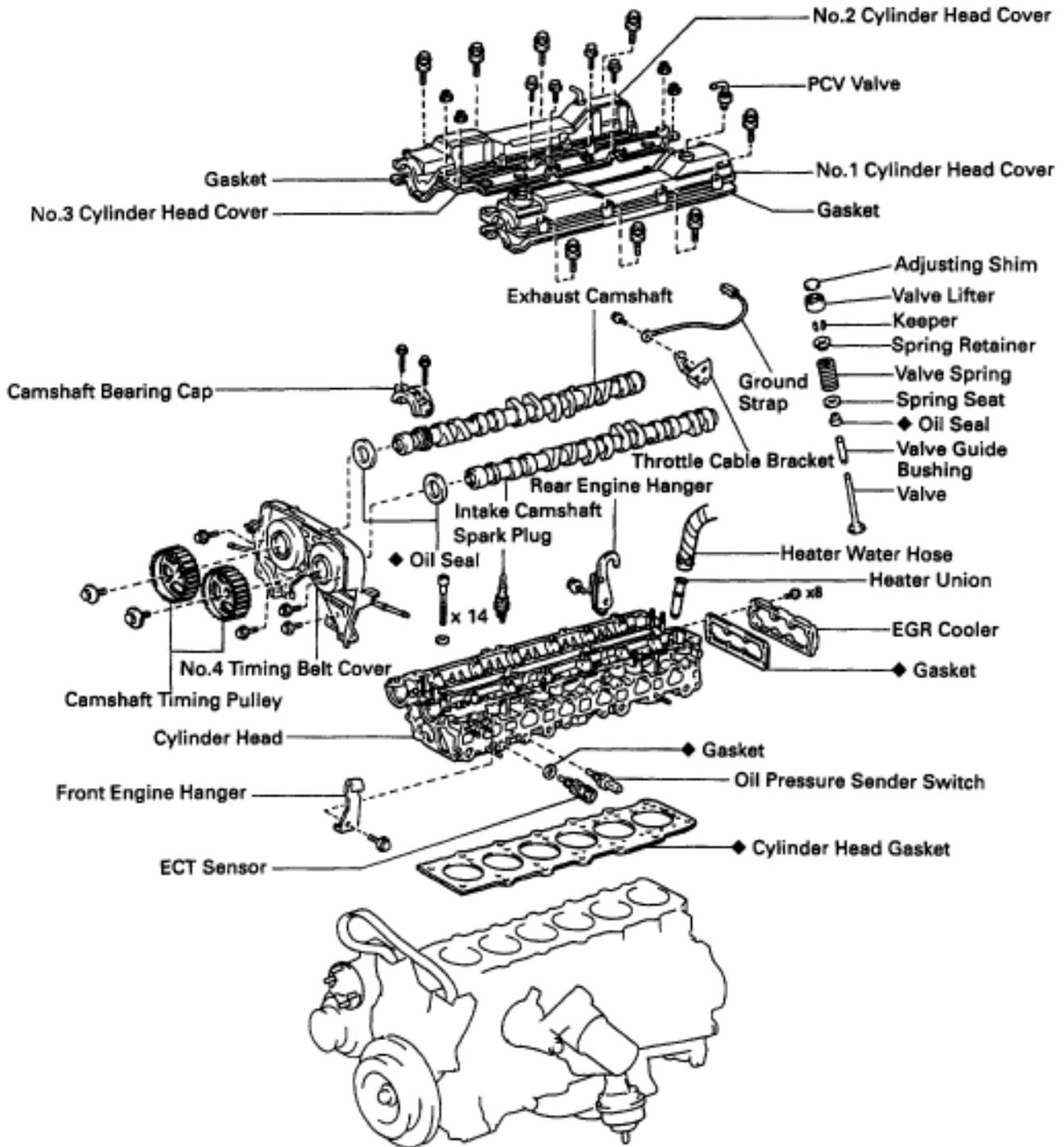


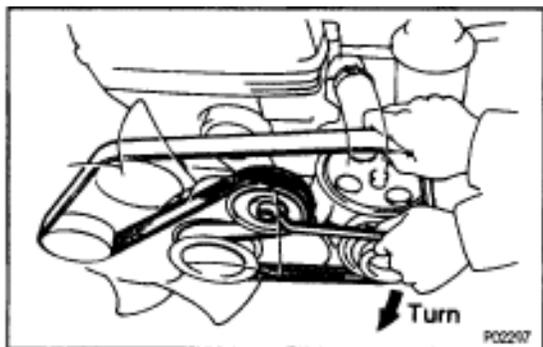
2JZ-GE



◆ Non-reusable part

CYLINDER HEAD REMOVAL (2JZ-GE)

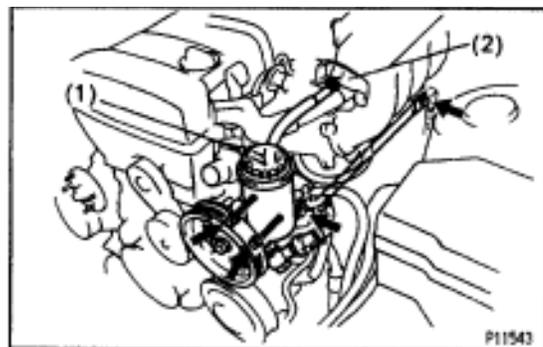
1. REMOVE ENGINE UNDER COVER
2. DRAIN ENGINE COOLANT
3. REMOVE AIR CLEANER DUCT
4. REMOVE AIR CLEANER, VAF METER AND INTAKE AIR CONNECTOR PIPE ASSEMBLY
(See step 6 in engine removal in Engine Mechanical)



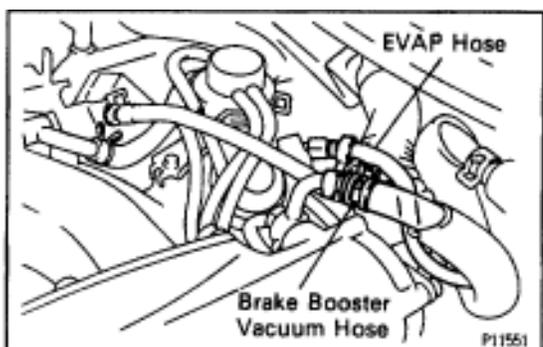
5. REMOVE DRIVE BELT
Loosen the drive belt tension by turning the drive belt tensioner clockwise, and remove the drive belt.
6. REMOVE NO.2 FRONT EXHAUST PIPE
(See step 22 in engine removal in Engine Mechanical)



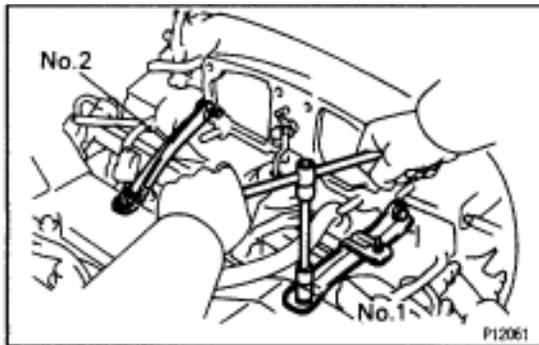
7. REMOVE EXHAUST MANIFOLDS
 - (a) Except California:
Remove the 4 nuts and manifold heat insulator.
 - (b) Disconnect the 2 (main heated) oxygen sensor connectors.
 - (c) Remove the 4 nuts, exhaust manifold and gasket.
Remove the No.1 and No.2 exhaust manifolds.



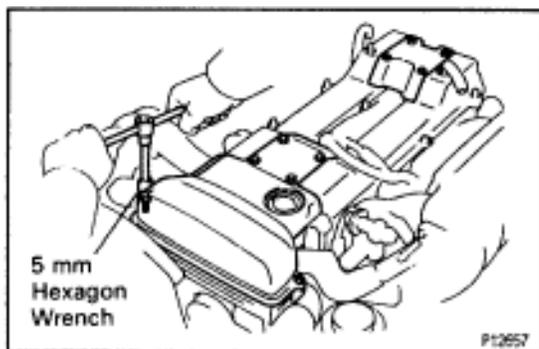
8. DISCONNECT PS PUMP WITHOUT DISCONNECTING HOSES
 - (a) Disconnect these hoses:
 - (1) Air hose from No.4 timing belt cover
 - (2) Air hose from air intake chamber
 - (b) Remove the 2 bolts, and disconnect the pump housing from the pump bracket.
HINT: Put aside the pump housing, and suspend it.
 - (c) Remove the 2 bolts and pump rear stay.



9. DISCONNECT BRAKE BOOSTER VACUUM HOSE
10. DISCONNECT EVAP HOSE
11. REMOVE THROTTLE BODY AND INTAKE AIR CONNECTOR ASSEMBLY
(See injector removal in SFI System)

**12. REMOVE AIR INTAKE CHAMBER STAYS**

- (a) Remove the bolt, nut and No.1 stay.
- (b) Remove the bolt, nut and No.2 stay.

13. REMOVE NO.2 VACUUM PIPE AND VSV ASSEMBLY**14. REMOVE NO.3 TIMING BELT COVER**

- (a) Remove the oil filler cap.
- (b) Using a 5 mm hexagon wrench, remove the 6 bolts and timing belt cover.

15. REMOVE CYLINDER HEAD REAR COVER

Using a 5 mm hexagon wrench, remove the 4 bolts and cylinder head rear cover.

16. DISCONNECT HIGH-TENSION CORDS FROM CYLINDER HEAD COVERS

(See step 4 in high-tension cords and cord clamps removal in Ignition System)

17. REMOVE DISTRIBUTOR AND CORDS ASSEMBLY

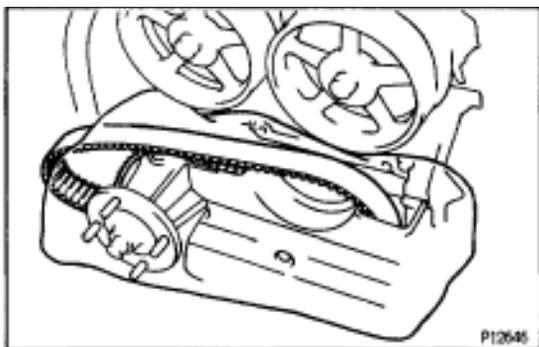
(See steps 1 to 3 in distributor removal in Ignition System)

18. REMOVE SPARK PLUGS**19. REMOVE TIMING BELT FROM CAMSHAFT TIMING PULLEYS**

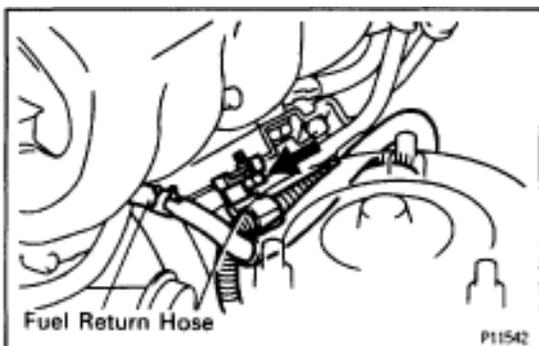
(See steps 5 to 8 in timing belt removal)

NOTICE:

- Support the timing belt, so that the meshing of the crankshaft timing pulley and timing belt does not shift.
- Be careful not to drop anything inside the timing belt cover.
- Do not allow the timing belt to come into contact with oil, water or dust.

**20. REMOVE WATER BYPASS OUTLET AND NO.1 WATER BYPASS PIPE**

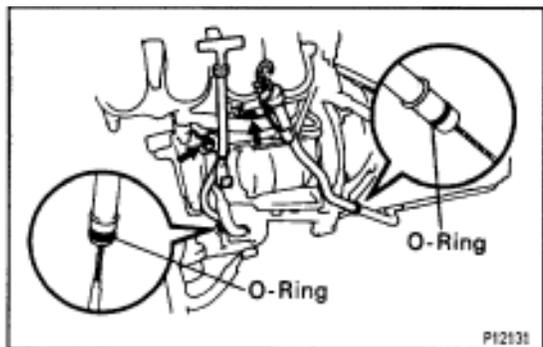
(See step 13 in water pump removal in Cooling System)

**21. DISCONNECT FUEL RETURN HOSE**

- (a) Disconnect the fuel return hose from the fuel return pipe. Plug the hose end.
- (b) Disconnect the fuel return hose from the oil dipstick guide.

22. REMOVE ENGINE WIRE BRACKET

Remove the bolt and bracket, disconnect the engine wire the intake manifold stay.

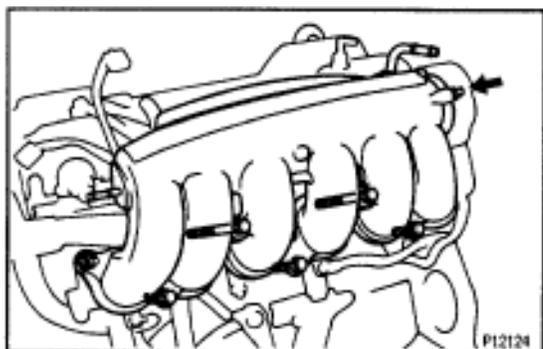


23. REMOVE OIL DIPSTICK GUIDES FOR ENGINE AND TRANSMISSION

- (a) Remove the 2 bolts.
- (b) Pull out the dipstick guide together with the dipstick.
- (c) Remove the O-ring from the dipstick guide.

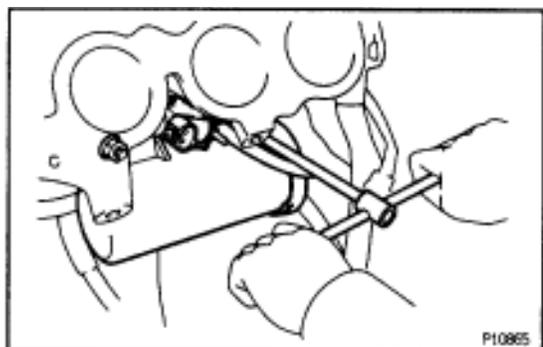
24. REMOVE STARTER

(See starter removal in Starting System)



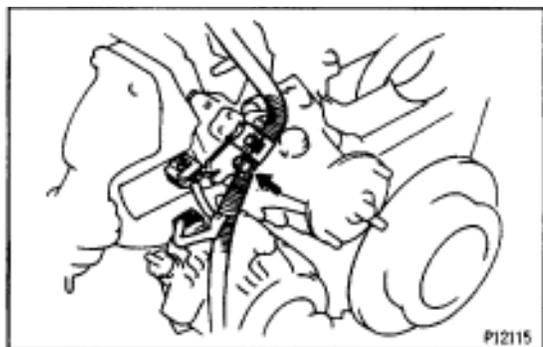
25. REMOVE AIR INTAKE CHAMBER

- (a) Except California:
Disconnect the vacuum sensing hose from the fuel pressure regulator.
- (b) Remove the bolt holding the engine wire protector to the the air intake chamber.
- (c) Remove the 5 bolts, nut, air intake chamber and gasket.



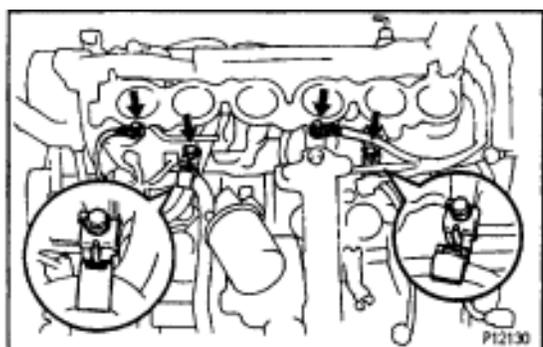
26. REMOVE VACUUM CONTROL VALVE SET

- (a) Disconnect the VSV connector.
- (b) Remove the 2 nuts and vacuum control valve set.

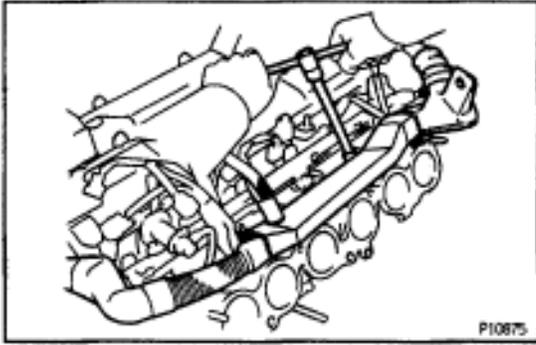


27. DISCONNECT ENGINE WIRE

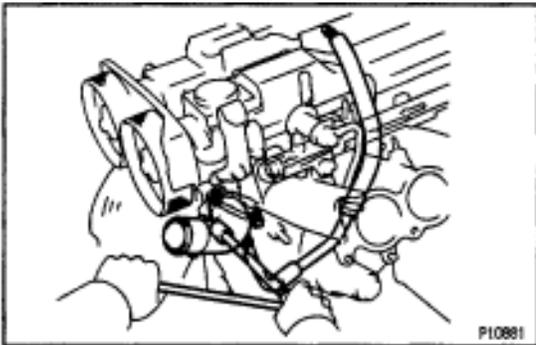
- (a) Remove the bolt, and disconnect the engine wire bracket from the water pump.



- (b) Remove the 2 bolts, and disconnect the 2 ground straps from the intake manifold.
- (c) Remove the 2 bolts, and disconnect the 2 wire clamps from the intake manifold.
- (d) Disconnect these connectors:
 - 6 injector connectors
 - ECT sensor connector
 - ECT sender gauge connector

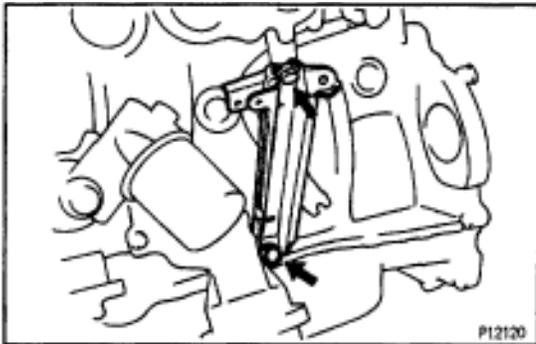


- (e) Remove the 3 nuts, and disconnect the engine wire protector from the intake manifold.



28. REMOVE WATER OUTLET AND NO.1 BYPASS HOSE ASSEMBLY

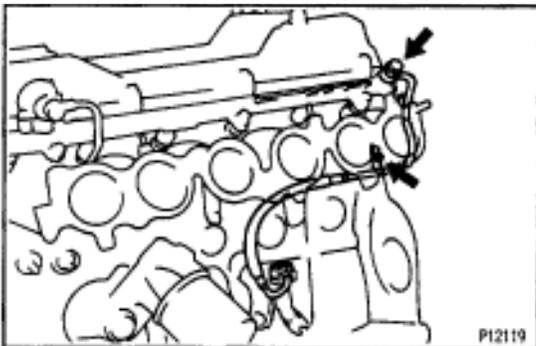
Remove the 2 nuts, bolt and water outlet.



29. REMOVE INTAKE MANIFOLD STAY

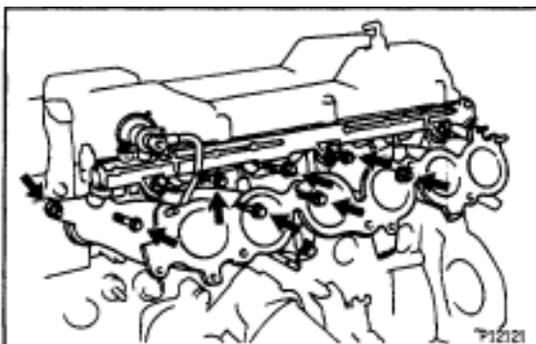
Remove the 2 bolts and manifold stay.

30. REMOVE FUEL PRESSURE PULSATION DAMPER (See step 2 in fuel pressure pulsation damper in SFI System)



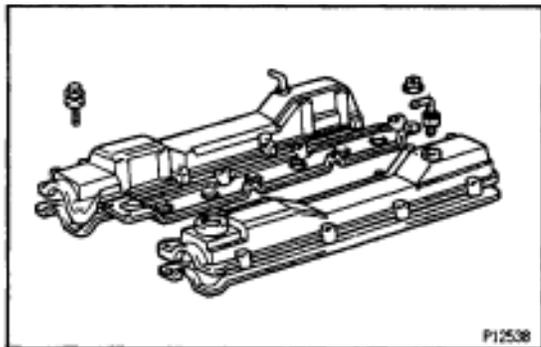
31. REMOVE FUEL INLET PIPE

- (a) Remove the clamp bolt from the intake manifold.
 (b) Remove the union bolt and 2 gaskets, and disconnect the fuel inlet pipe.



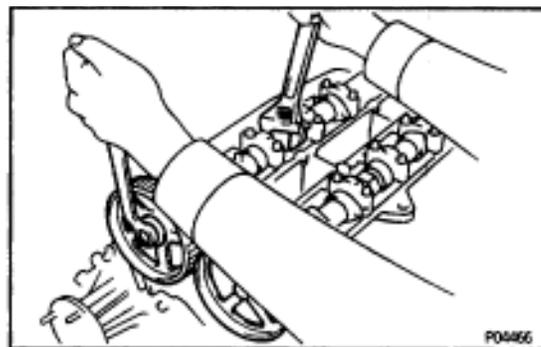
32. REMOVE INTAKE MANIFOLD AND DELIVERY PIPE ASSEMBLY

Remove the 6 bolts, 2 nuts, the intake manifold, delivery pipe assembly and gasket.



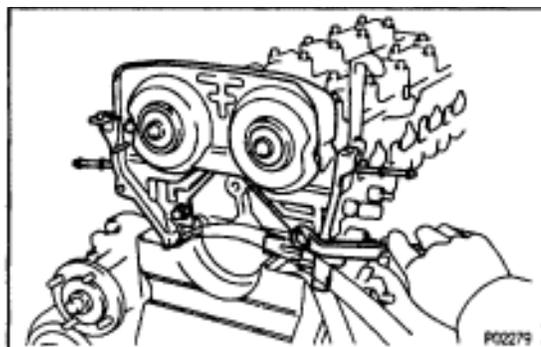
33. REMOVE NO.3, NO.1 AND NO.2 CYLINDER HEAD COVERS

- (a) Remove the PCV valve.
- (b) Remove the 4 bolts, 4 nuts and No.3 cylinder head cover.
- (c) Remove the 4 bolts, No.1 cylinder head cover and gasket.
- (d) Remove the 4 bolts, No.2 cylinder head cover and gasket.



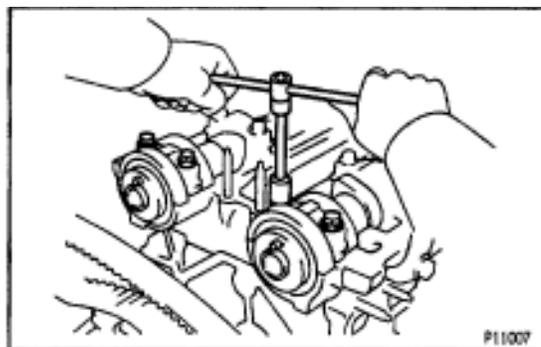
34. REMOVE CAMSHAFT TIMING PULLEYS

Hold the hexagon portion of the camshaft with a wrench, and remove the pulley mounting bolt and camshaft pulley.



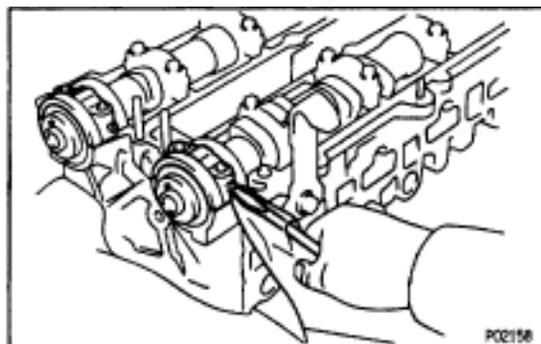
35. REMOVE NO.4 TIMING BELT COVER

Remove the 4 bolts and timing belt cover.



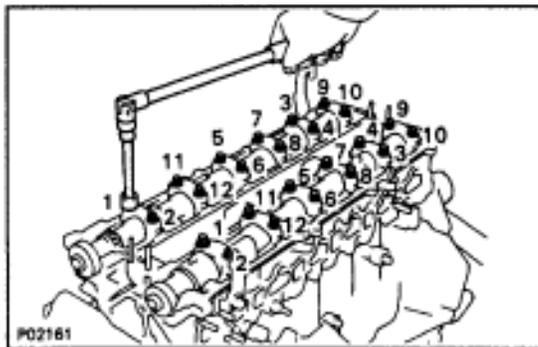
36. REMOVE CAMSHAFTS

- (a) Uniformly loosen and remove the 4 No.1 bearing cap bolts.

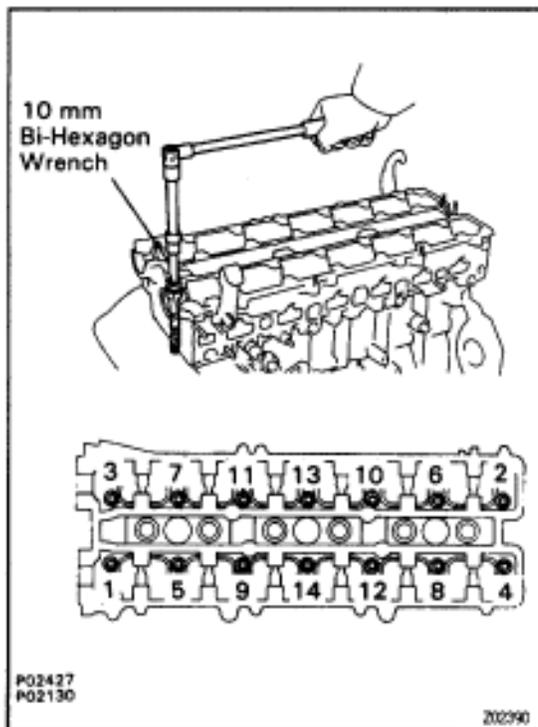


- (b) Using a screwdriver, pry out the 2 No.1 camshaft bearing caps and oil seals.

NOTICE: Be careful not to damage the cap. Tape the screwdriver tip.



- (c) Uniformly loosen and remove the 12 bearing cap bolts, in several passes, in the sequence shown, and remove the 6 bearing caps and camshaft.
- (d) Remove the intake and exhaust camshafts.

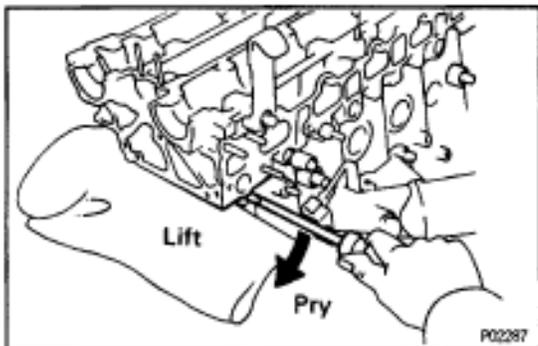


37. REMOVE CYLINDER HEAD

- (a) Using a 10 mm bi-hexagon wrench, uniformly loosen and remove the 14 cylinder head bolts, in several passes, in the sequence shown.

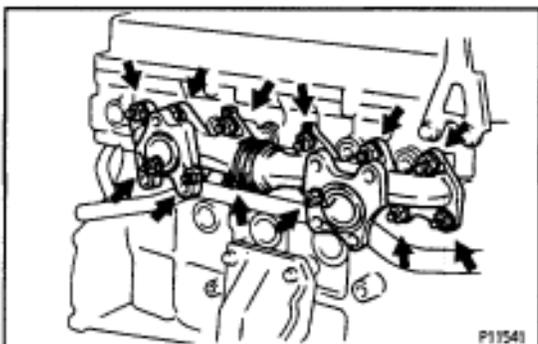
NOTICE: Cylinder head warpage or cracking could result from removing in incorrect order.

- (b) Remove the 14 plate washers.



- (c) Lift the cylinder head from the dowels on the cylinder block.
 - (d) Place the head on wooden blocks on a bench.
- If the cylinder head is difficult to lift off, pry with a screwdriver between the cylinder head and block projection.

NOTICE: Be careful not to damage the contact surfaces of the cylinder head and cylinder block.



CYLINDER HEAD REMOVAL (2JZ-GTE)

1. REMOVE TURBOCHARGER
(See turbocharger removal in Turbocharger System)
2. REMOVE EXHAUST MANIFOLD
Remove the 12 nuts, exhaust manifold and 2 gaskets.
3. M/T:
REMOVE DRIVE BELT TENSIONER DAMPER
(See step 2 in timing belt removal)