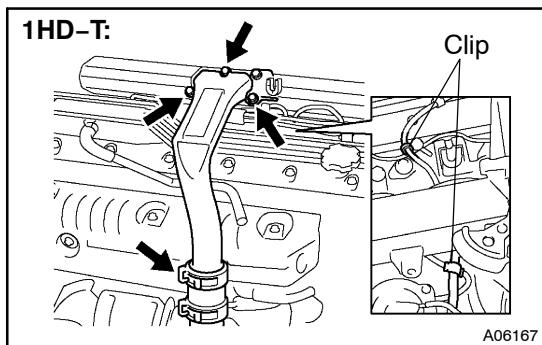


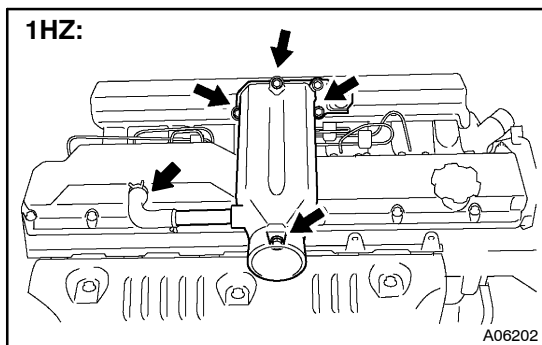


REMOVAL

1. 1HD-T:

REMOVE INTAKE PIPE ASSEMBLY

- Remove the vacuum hose and 2 clip.
- Remove the 3 bolts holding the intake pipe to the intake manifold.
- Disconnect the intake pipe assembly to the air hose and remove the intake pipe assembly and gasket.



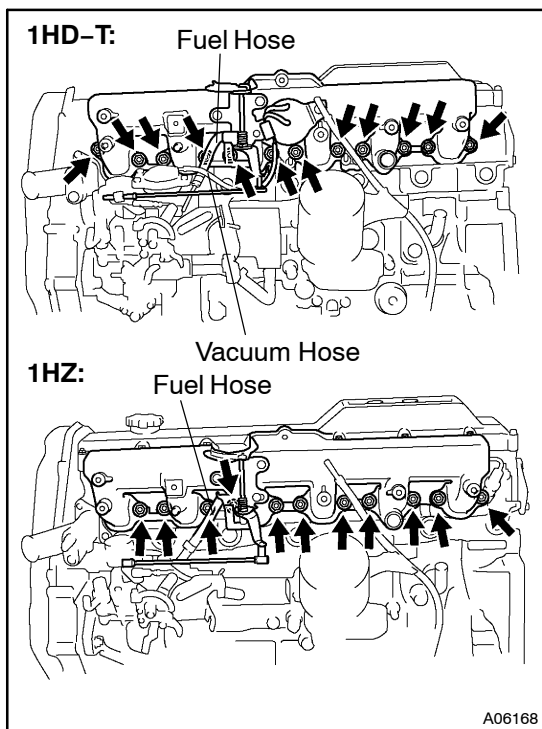
2. 1HZ:

REMOVE INTAKE PIPE ASSEMBLY

- Disconnect the PCV hose to the cylinder head cover.
- Remove the 3 bolts holding the intake pipe to the intake manifold, intake pipe assembly and insulator.

3. REMOVE INJECTION PIPE

(See page FU-7)



4. REMOVE INTAKE MANIFOLD

1HD-T:

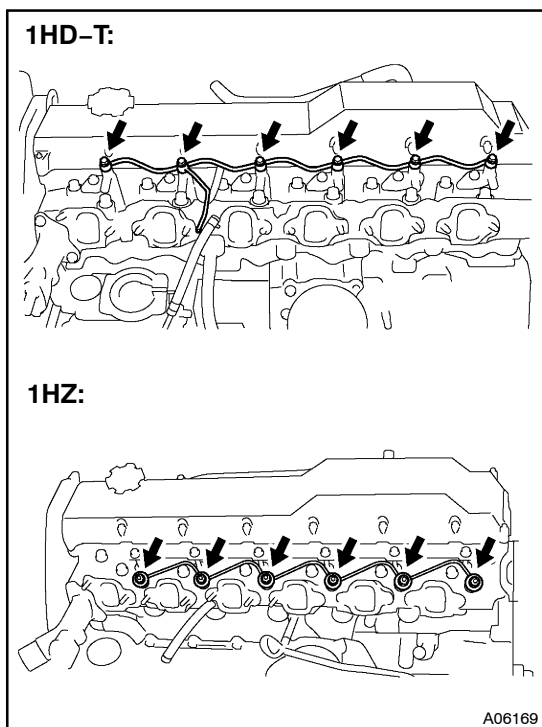
Disconnect the fuel hose to the fuel pipe and vacuum hose to the injection pump.

1HZ:

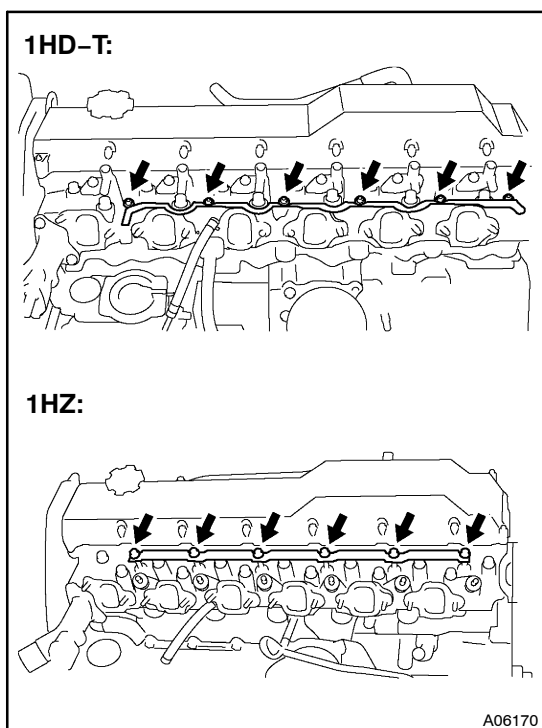
Disconnect the fuel hose to the fuel pipe.

(c) Remove the accelerator linkage.

(d) Remove the 12 nuts, 12 seals, intake manifold and 6 gaskets.

**5. REMOVE NOZZLE LEAKAGE PIPE**

- (a) 1HD-T:
Remove the 6 bolts, 12 gaskets and nozzle leakage pipe.
- (b) 1HZ:
Remove the 6 nuts, 6 gaskets and nozzle leakage pipe.

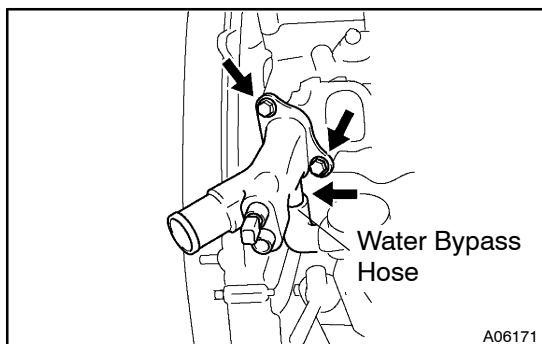
**6. REMOVE GLOW PLUG CONNECTOR AND GLOW PLUG**

- (a) Remove 6 screw grommets, 6 nuts and glow plug connector.
- (b) Remove 6 glow plugs.

7. REMOVE INJECTION NOZZLES

1HZ: (See page FU-7)

1HD-T: (See page FU-17)

**8. REMOVE WATER OUTLET**

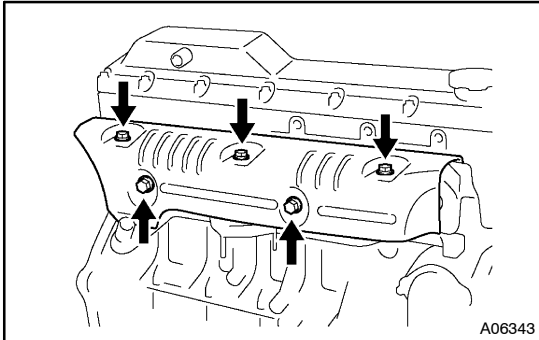
- (a) Remove the 2 nuts.
- (b) 1HD-T:
Disconnect the water bypass hose from the water outlet, gasket and remove the water outlet.
- (c) 1HZ:
Remove the water outlet and gasket.

9. **1HD-T:**
REMOVE TURBOCHARGER AND EXHAUST MANIFOLDS ASSEMBLY

(See page TC-8)

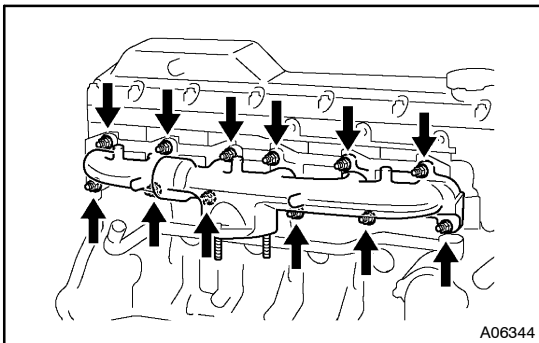
10. **1HD-T:**
REMOVE EXHAUST MANIFOLDS FROM TURBOCHARGER

(See page TC-8)



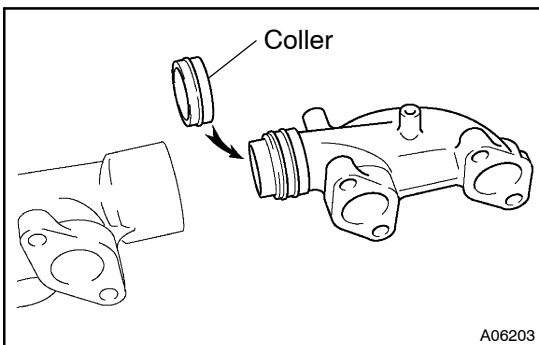
11. **1HZ:**
REMOVE HEAT INSULATOR

Remove the 5 bolts and heat insulator



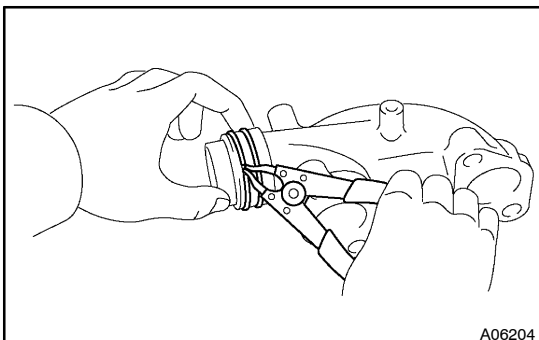
12. **1HZ:**
REMOVE EXHAUST MANIFOLDS ASSEMBLY

Remove the 12 bolts, exhaust manifold and 2 gaskets.

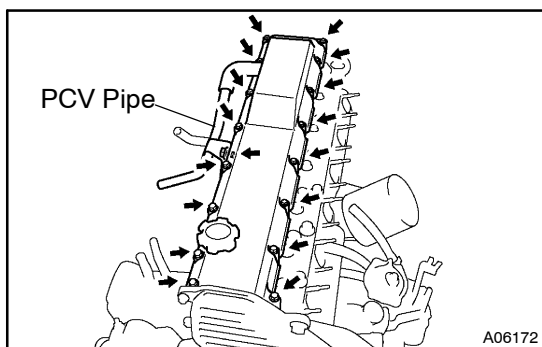


13. **SEPARATE EXHAUST MANIFOLDS**

- (a) Separate the front and rear exhaust manifolds.
- (b) Remove the collar.



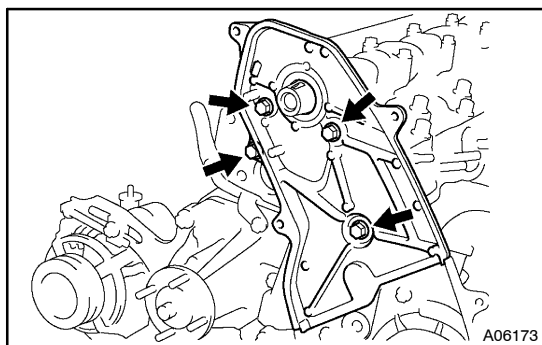
- (c) Using snap ring pliers, remove the 2 rings from the rear exhaust manifold.
- (d) Remove the O-ring materials to the rear exhaust manifold grooves.

**14. REMOVE CYLINDER HEAD COVER**

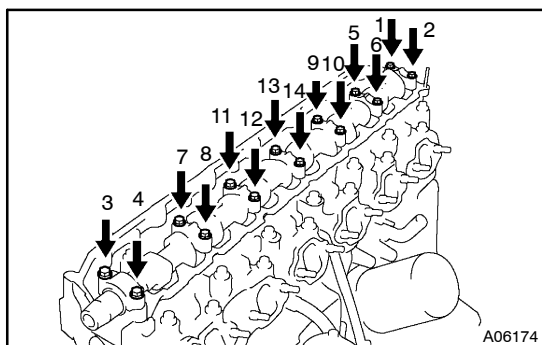
- (a) 1HD-T:
Remove the bolt and PCV pipe.
- (b) Remove the 2 nuts, 14 bolts, cylinder head cover and gasket.

15. REMOVE 2 ENGINE HANGER**16. REMOVE SEMI-CIRCULAR PLUG****17. REMOVE TIMING BELT AND PULLEYS**

(See page EM-27)

**18. REMOVE CAMSHAFT OIL SEAL RETAINER**

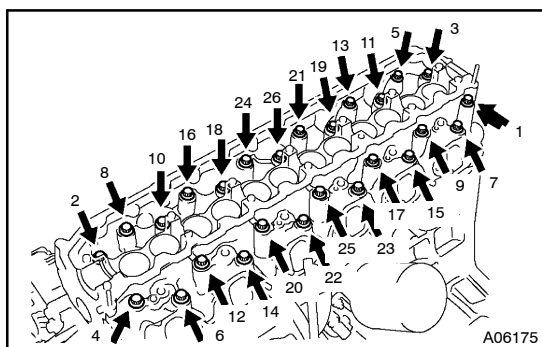
- (a) Remove the 4 bolts.
- (b) Pry out the oil seal retainer.

**19. REMOVE CAMSHAFT**

- (a) Uniformly loosen and remove the 14 bearing cap bolts in the sequence shown.
- (b) Remove the 7 bearing caps and camshaft.

HINT:

Arrange the bearing caps and bearings in correct order.

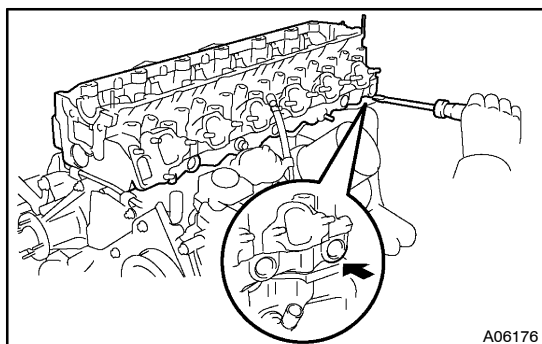
**20. REMOVE CYLINDER HEAD ASSEMBLY**

- (a) Disconnect the water bypass hose (from the injection pump) from the cylinder head.
- (b) Uniformly loosen and remove the 26 cylinder head bolts in several passes, in the sequence shown.

SST 09011-38121

NOTICE:

Head warpage or cracking could result from removing bolts in incorrect order.



- (c) Lift the cylinder head from the dowels on the cylinder block, and place the cylinder head on wooden blocks on a bench.

HINT:

If the cylinder head is difficult to lift off, pry with a screwdriver between the cylinder head and block.

NOTICE:

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