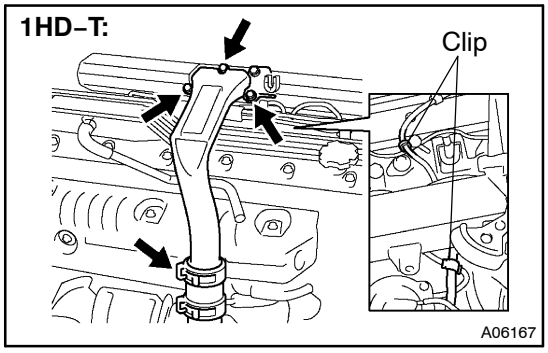
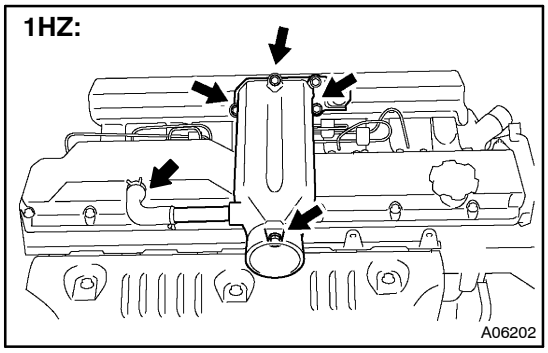
EM0WM–01

REMOVAL



1. 1HD–T:
REMOVE INTAKE PIPE ASSEMBLY

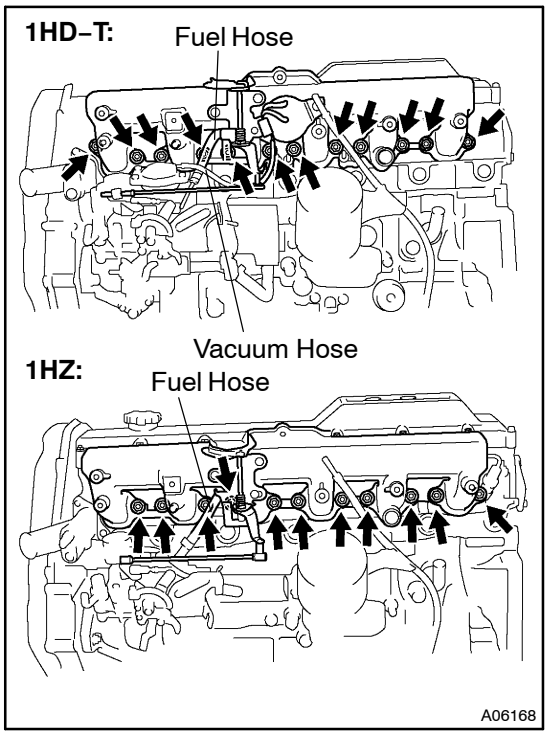
(a) Remove the vacuum hose and 2 clip.
(b) Remove the 3 bolts holding the intake pipe to the intake manifold.
(c) Disconnect the intake pipe assembly to the air hose and remove the intake pipe assembly and gasket.



2. 1HZ:
REMOVE INTAKE PIPE ASSEMBLY

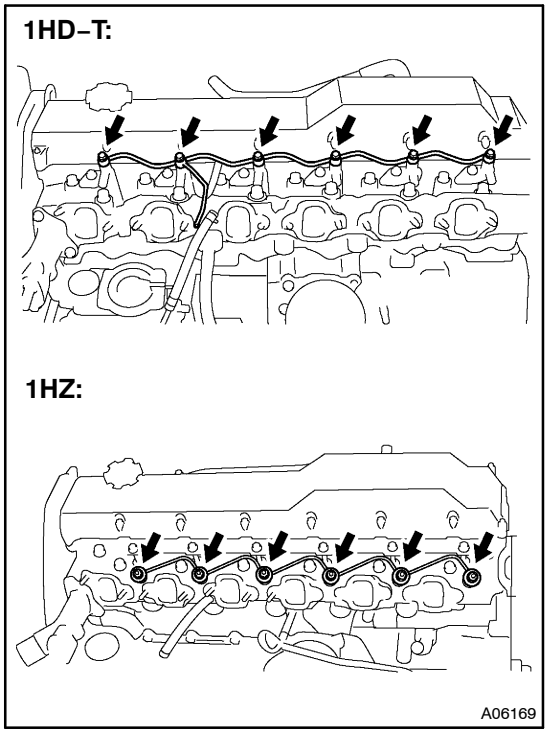
(a) Disconnect the PCV hose to the cylinder head cover.
(b) Remove the 3 bolts holding the intake pipe to the intake manifold, intake pipe assembly and insulator.

3. REMOVE INJECTION PIPE
(See page FU–7)



4. REMOVE INTAKE MANIFOLD

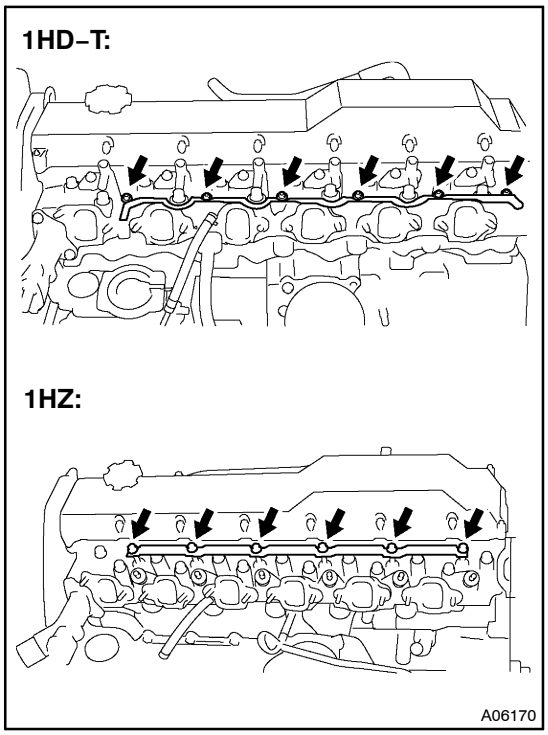
(a) 1HD–T:
Disconnect the fuel hose to the fuel pipe and vacuum hose to the injection pump.
(b) 1HZ:
Disconnect the fuel hose to the fuel pipe.
(c) Remove the accelerator linkage.
(d) Remove the 12 nuts, 12 seals, intake manifold and 6 gaskets.



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 GROW PLUG

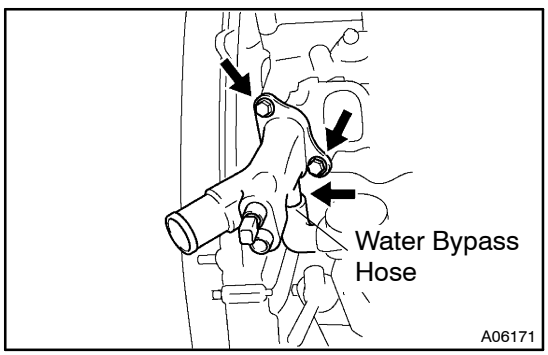
(a) Remove 6 screw grommets, 6 nuts and glow plug connector.

(b) Remove 6 glow plugs.

7. REMOVE INJECTION NOZZLES

1HZ: (See page FU–7)

1HD–T: (See page FU–17)



8. REMOVE WATER OUTLET

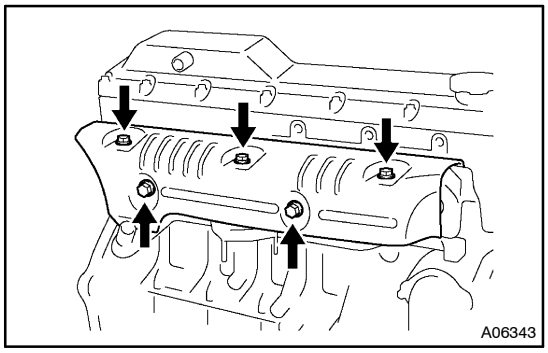
(a) Remove the 2 nuts.

(b) 1HD–T:
Disconnect the water bypass hose from the water outlet, gasket and remove the water outlet.

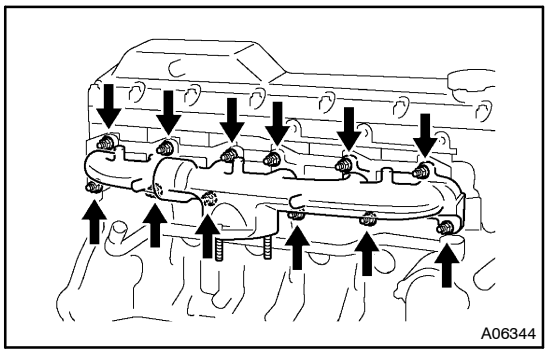
(c) 1HZ:
Remove the water outlet and gasket.

9. 1HD–T:
REMOVE TURBOCHARGER AND EXHAUST MANIFOLDS ASSEMBLY
(See page TC–8)

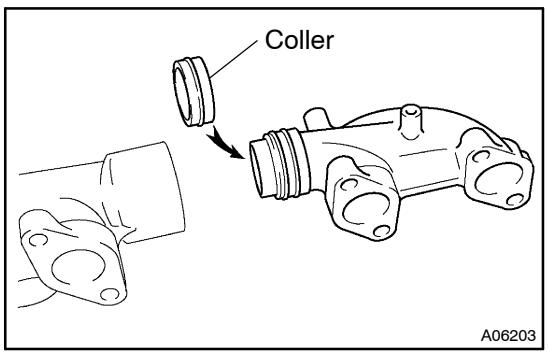
10. 1HD–T:
REMOVE EXHAUST MANIFOLDS FROM TURBOCHARGER
(See page TC–8)


A06343

11. 1HZ:
REMOVE HEAT INSULATOR
Remove the 5 bolts and heat insulator

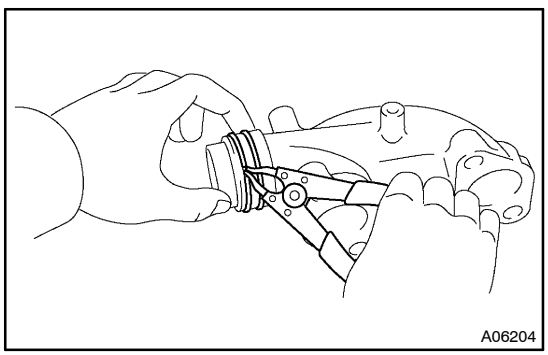

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12. 1HZ:
REMOVE EXHAUST MANIFOLDS ASSEMBLY
Remove the 12 bolts, exhaust manifold and 2 gaskets.

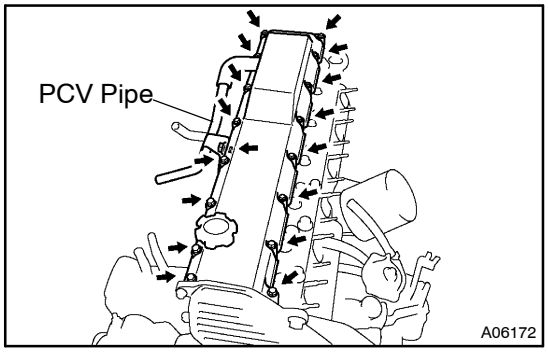


A06203

13. SEPARATE EXHAUST MANIFOLDS
(a) Separate the front and rear exhaust manifolds.
(b) Remove the collar.


A06204

(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

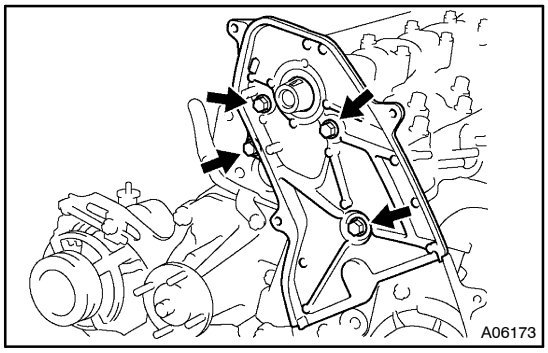
(a) 1HD–T:
Remove the bolt and PCV pipe.

(b) Remove the 2 nuts, 14 bolts, cylinder head cover and gasket.

15. REMOVE 2 ENGINE HANGER

16. REMOVE SEMI–CIRCULAR PLUG

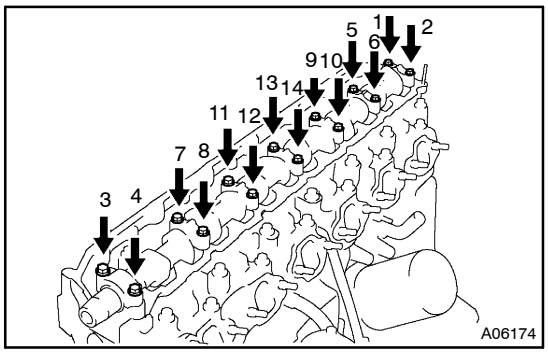
17. REMOVE TIMING BELT AND PULLEYS
(See page EM–27)



18. REMOVE CAMSHAFT OIL SEAL RETAINER

(a) Remove the 4 bolts.

(b) Pry out the oil seal retainer.

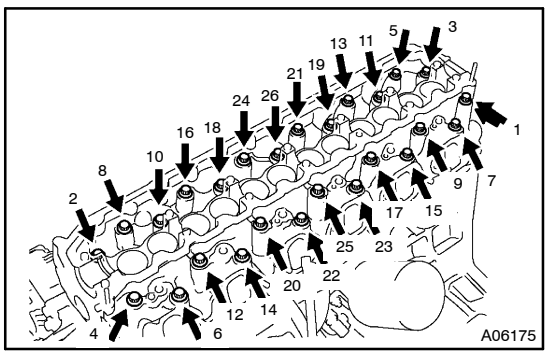


19. REMOVE CAMSHAFT

(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.

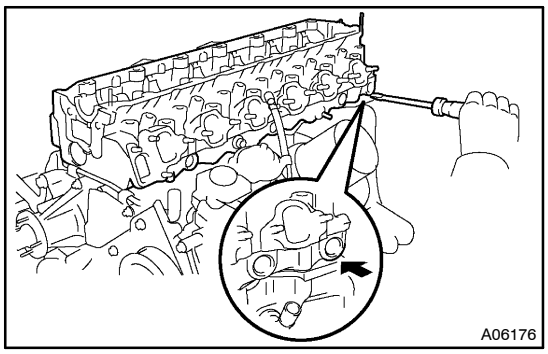


20. REMOVE CYLINDER HEAD ASSEMBLY

(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.