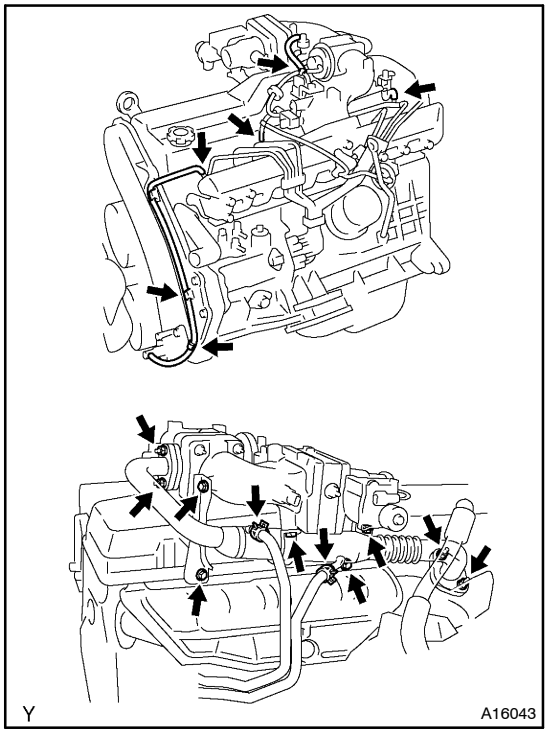
EM0WT–02

REMOVAL



1. REMOVE INTAKE PIPE ASSEMBLY

(a) Disconnect the vacuum hose to the clamp and timing belt cover.

(b) Disconnect the 5 vacuum hoses to the No.2 cylinder head cover.

(c) Remove the 2 nuts and gasket from the EGR cooler pipe.

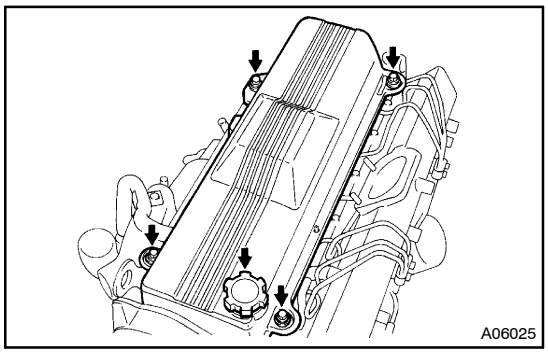
(d) Remove the 4 bolts and 2 intake pipe assembly brackets.

(e) Remove the 2 bolts, 2 nuts, gasket and intake pipe assembly.

2. REMOVE EGR COOLER PIPE

(a) Disconnect the 2 water hoses from the EGR cooler pipe.

(b) Remove the bolt, 2 nuts, gasket and EGR cooler pipe from the intake pipe assembly.



3. REMOVE NO.2 CYLINDER HEAD COVER

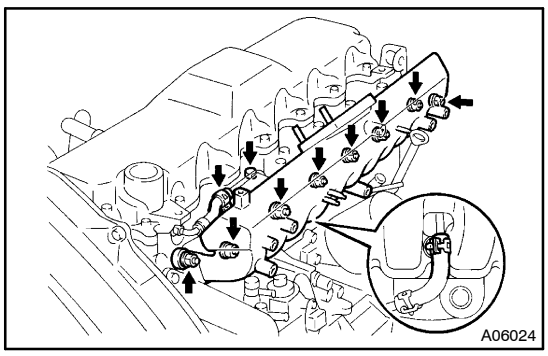
(a) Remove the oil filler cap.

(b) Remove the 4 bolts and cylinder head No.2 cover.

4. REMOVE INJECTION PIPE

(See Pub. No. RM617E, on page FU–33)

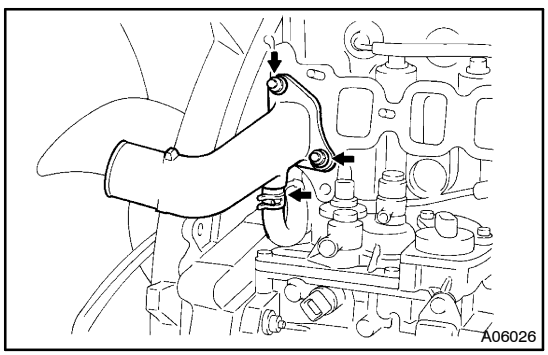
5. REMOVE 2 INTAKE MANIFOLD INSULATOR



6. REMOVE INTAKE MANIFOLD WITH INTAKE AIR CONTROL VALVE

(a) Remove the fuel hose from the injection pump.

(b) Remove the 8 nuts, 8 seal washers, 4 gaskets and intake manifold insulator with the intake air control valve.



7. REMOVE WATER OUTLET

(a) Disconnect the water bypass hose from the water outlet.

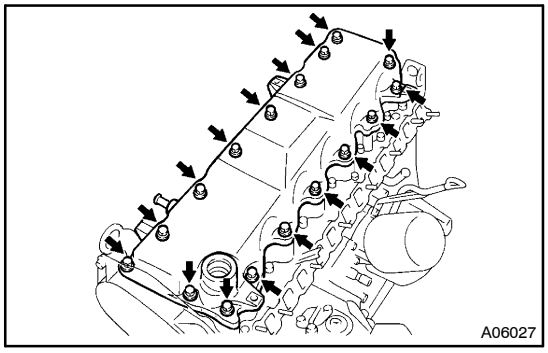
(b) Remove the 2 bolts, water outlet and gasket.

8. REMOVE TURBOCHARGER AND EXHAUST MANIFOLD ASSEMBLY

(See page TC–7)

9. REMOVE EXHAUST MANIFOLD FROM TOURBOCHARGER

(See page TC–7)

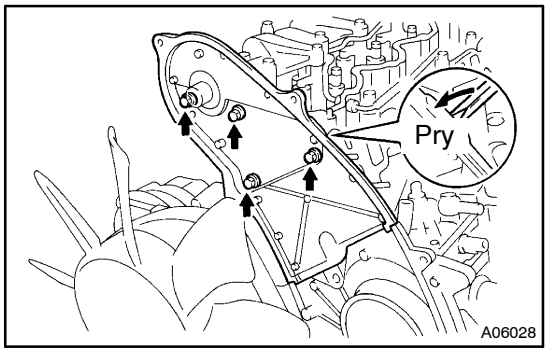


10. REMOVE NO.1 CYLINDER HEAD COVER

Remove the 17 bolts, 17 seal washers, No.1 cylinder head cover and gasket.

11. REMOVE TIMING BELT AND PULLEY

(See page EM–3)

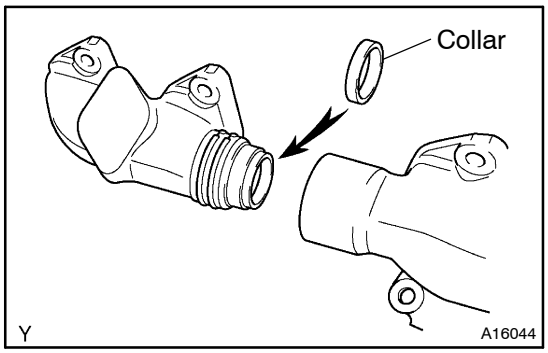


12. REMOVE CAMSHAFT OIL SEAL RETAINER

(a) Remove the 4 bolts.

(b) Pry out the oil seal retainer.

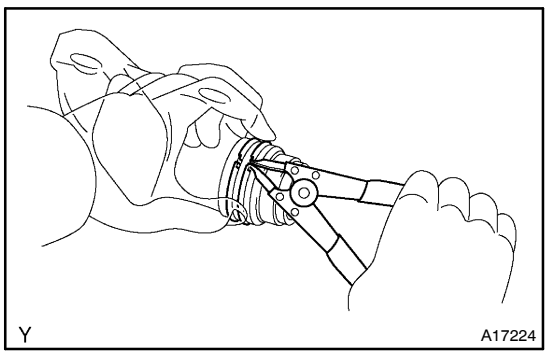
13. REMOVE 2 ENGINE HANGER



14. SEPARATE EXHAUST MANIFOLDS

(a) Separate the front and rear exhaust manifolds.

(b) Remove the collar.



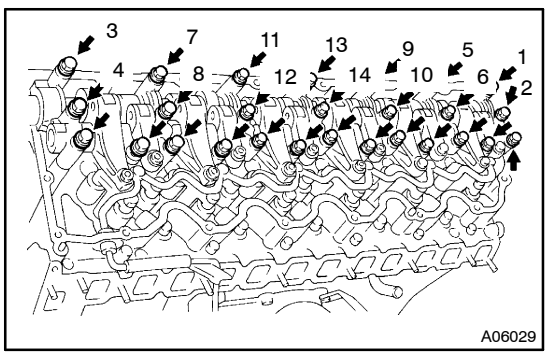
(c) Using snap ring pliers, remove the 2 rings from the rear exhaust manifold.

(d) Remove all the O–ring materials from the rear exhaust manifold grooves.

15. REMOVE SEMI–CIRCULAR PLUG

16. REMOVE INJECTION NOZZLES

(See Pub. No. RM617E, on page FU–33)



17. REMOVE CAMSHAFT BEARING CAPS, VALVE ROCKER ARMS, NOZZLE HOLDER CLAMPS, ROCKER SHAFT ASSEMBLY AND CAMSHAFT

(a) Remove the 13 bolts.

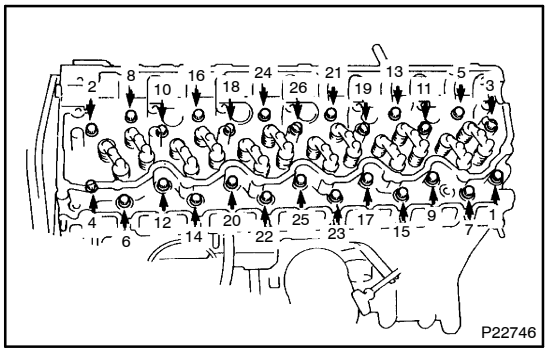
(b) Uniformly loosen and remove the 14 other bolts in several passes, in the sequence shown.

(c) Remove the 7 bearing caps, 12 rocker arms, 6 holder clamps, rocker shaft assembly and 7 upper camshaft bearings.

- Keep the bearing caps, rocker arms and nozzle holder clamps installed with the rocker shaft.
- Keep the bearings inserted with the bearing cap.

(d) Remove the camshaft, thrust plate and 7 lower camshaft bearings.

HINT:
Arrange the bearings in correct order.

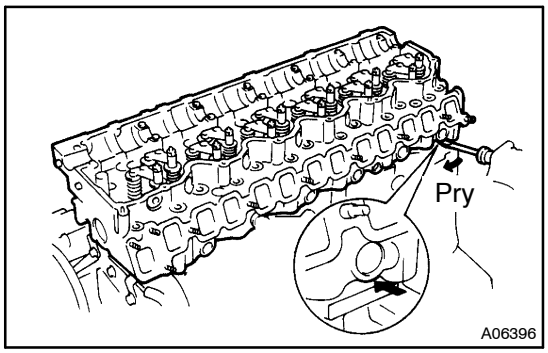


18. REMOVE CYLINDER HEAD ASSEMBLY

(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.

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.