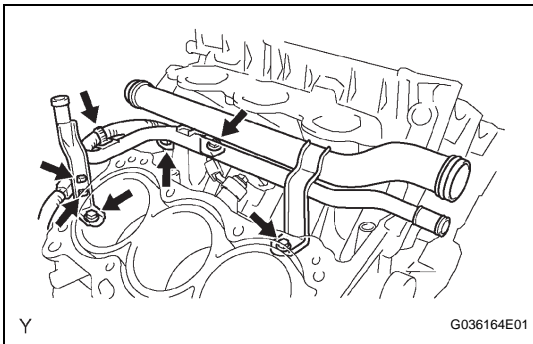
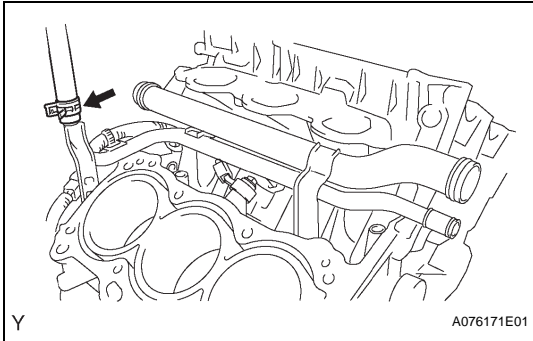


KNOCK SENSOR (for 4WD and Pre-Runner)

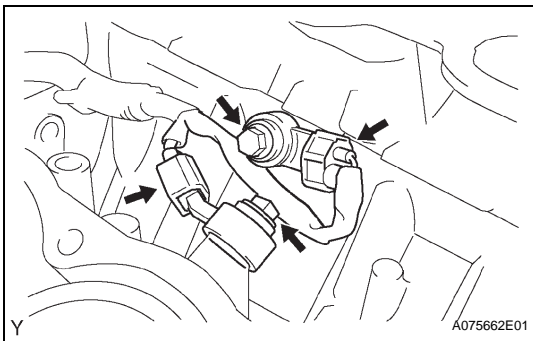
REMOVAL

1. DISCHARGE FUEL SYSTEM PRESSURE
(See page [FU-1](#))
2. REMOVE BATTERY
3. DRAIN ENGINE COOLANT (See page [CO-3](#))
4. DRAIN ENGINE OIL (See page [LU-4](#))
5. REMOVE POWER STEERING LINK ASSEMBLY
(See page [PS-53](#))
6. REMOVE DIFFERENTIAL CARRIER ASSEMBLY FRONT (4WD DRIVE TYPE)
(See page [DF-19](#))
7. REMOVE TIMING CHAIN OR BELT COVER SUB-ASSEMBLY
(See page [LU-34](#))
8. REMOVE CHAIN SUB-ASSEMBLY
9. REMOVE COOL AIR INLET NO.1
(a) Remove the 2 bolts, then remove the cool air inlet.
10. REMOVE EXHAUST FRONT PIPE ASSEMBLY NO.2
(See page [EX-3](#))
11. REMOVE EXHAUST PIPE ASSEMBLY FRONT (See page [EX-3](#))
12. REMOVE MANIFOLD STAY
(a) Remove the 6 bolts, then remove the 2 exhaust manifold stays.
13. REMOVE EXHAUST MANIFOLD SUB-ASSEMBLY RH
(See page [EM-115](#))
14. DISCONNECT FUEL PIPE SUB-ASSEMBLY NO.1
(See page [FU-13](#))
15. DISCONNECT FUEL PIPE SUB-ASSEMBLY NO.2
(See page [FU-13](#))
16. REMOVE INTAKE MANIFOLD (See page [EM-115](#))
17. REMOVE WATER BY-PASS JOINT RR (See page [EM-115](#))
18. REMOVE CHAIN VIBRATION DAMPER NO.1 (See page [EM-158](#))
19. REMOVE CAMSHAFT TIMING GEARS AND NO.2 CHAIN (RH BANK) (See page [EM-116](#))
20. REMOVE CHAIN TENSIONER ASSEMBLY NO.2 (See page [EM-116](#))
21. REMOVE CAMSHAFTS (See page [EM-116](#))

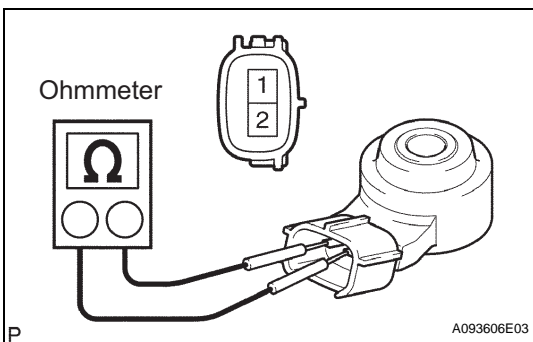
22. REMOVE CAMSHAFT BEARING NO.2
23. REMOVE CYLINDER HEAD SUB-ASSEMBLY (See page EM-117)
24. DISCONNECT HEATER WATER INLET HOSE



25. REMOVE WATER OUTLET PIPE NO.1
 - (a) Remove the 4 wire harness clamps.
 - (b) Remove the 3 bolts and water outlet pipe.



26. REMOVE KNOCK CONTROL SENSOR
 - (a) Disconnect the 2 knock sensor connectors.
 - (b) Remove the 2 bolts and 2 knock sensors.



INSPECTION

1. INSPECT KNOCK SENSOR
 - (a) Check the resistance.
 - (1) Using an ohmmeter, measure the resistance between the terminals.

Resistance Standard

Tester Connection	Specified Condition
1 (Ground) - 2 (Output)	120 to 180 Ω at 20°C (68°F)

If the result is not as specified, replace the knock sensor.