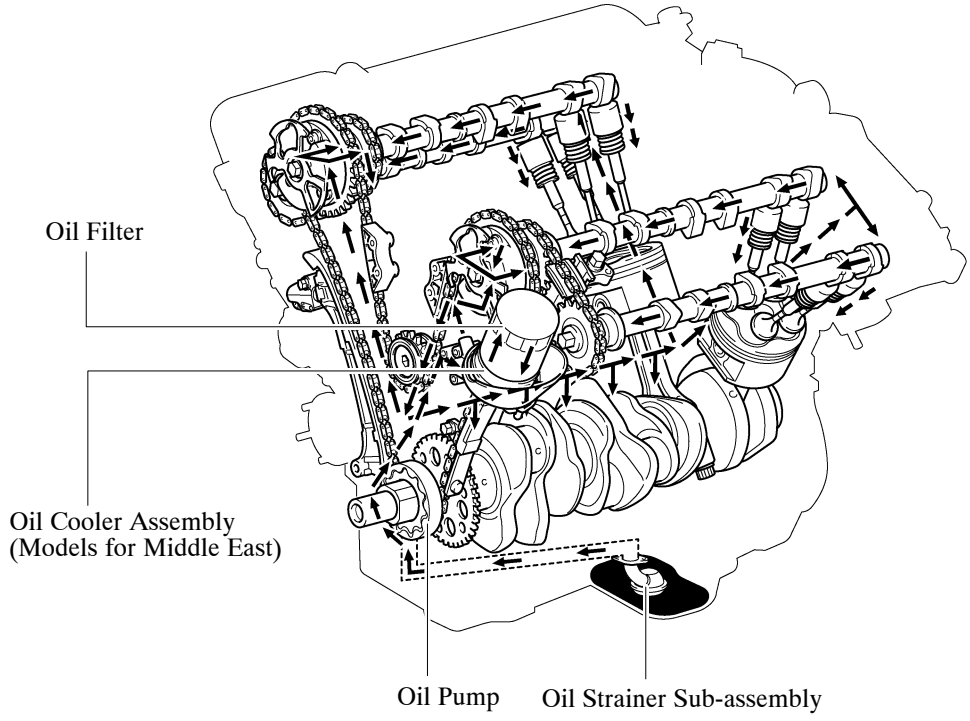
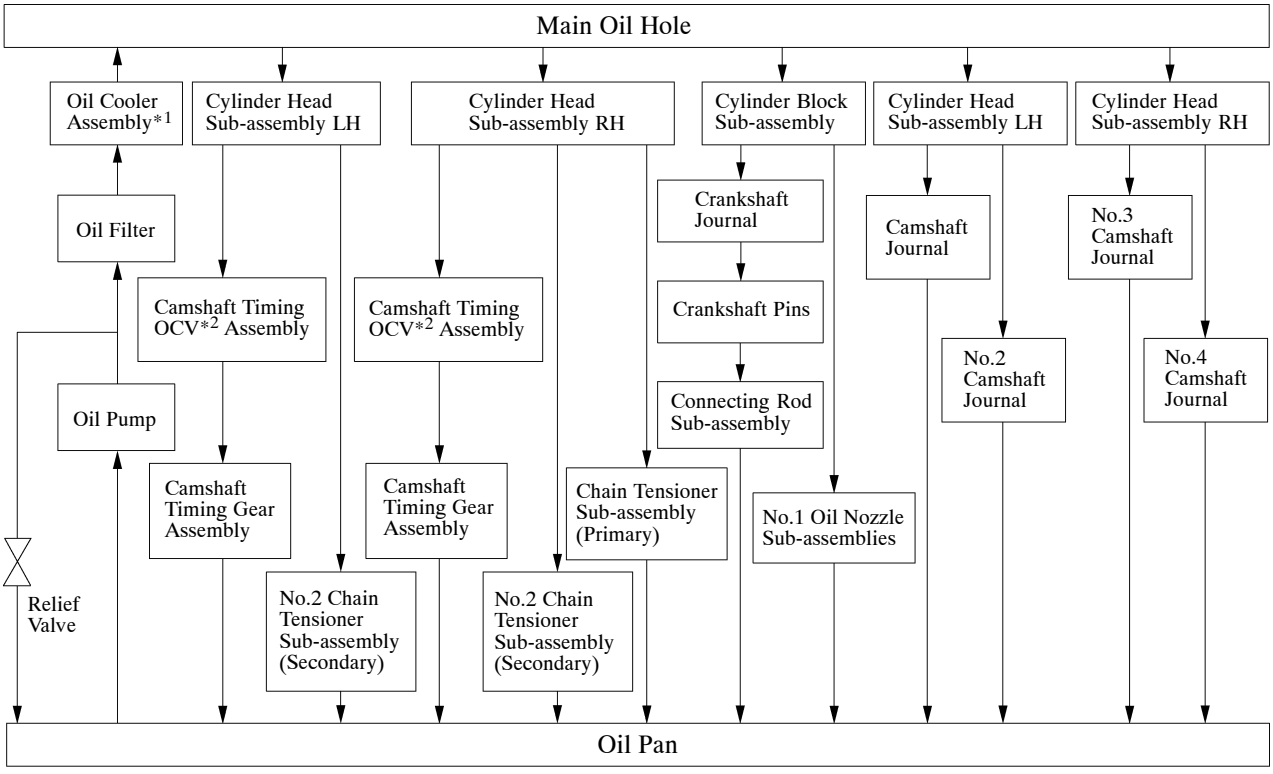
■LUBRICATION SYSTEM

1. General

- The lubrication circuit is fully pressurized and the oil passes through an oil filter.
- A cycloid rotor type oil pump is used. This oil pump is integrated with the timing chain cover sub-assembly. This pump is directly driven by the crankshaft.
- A water-cooled type oil cooler assembly is used on the models for Middle East.



2. Oil Circuit

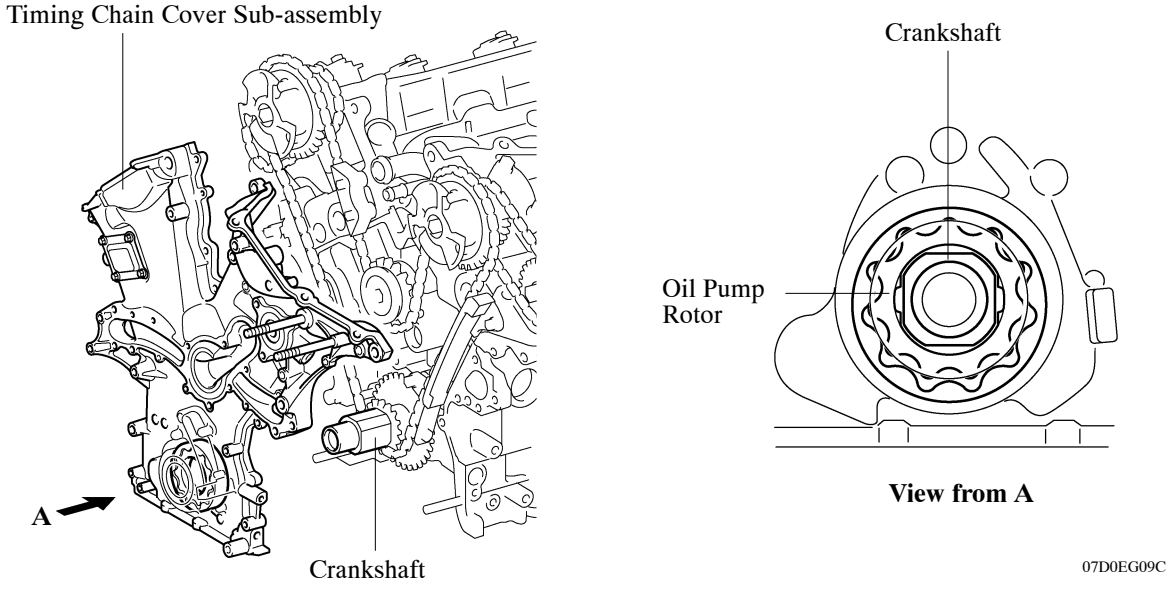


*1: Models for Middle East *2: OCV (Oil Control Valve)

07D0EG39C

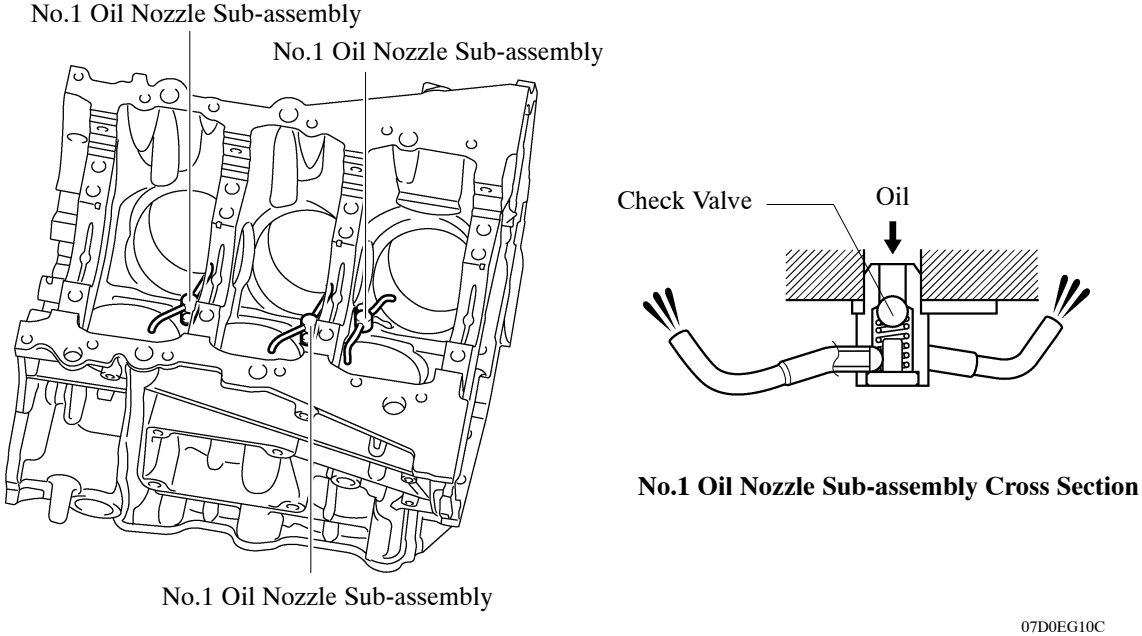
3. Oil Pump

Ordinarily, the timing chain cover sub-assembly with oil pump construction has only a single position for mounting the oil pump rotor to the crankshaft, when installing the timing chain cover sub-assembly. However, in this engine, the inner shape of the oil pump rotor and the shape of the area of the crankshaft on which the rotor is mounted are designed to provide 4 different assembly patterns. Thus, the serviceability for assembling the timing chain cover sub-assembly is improved.



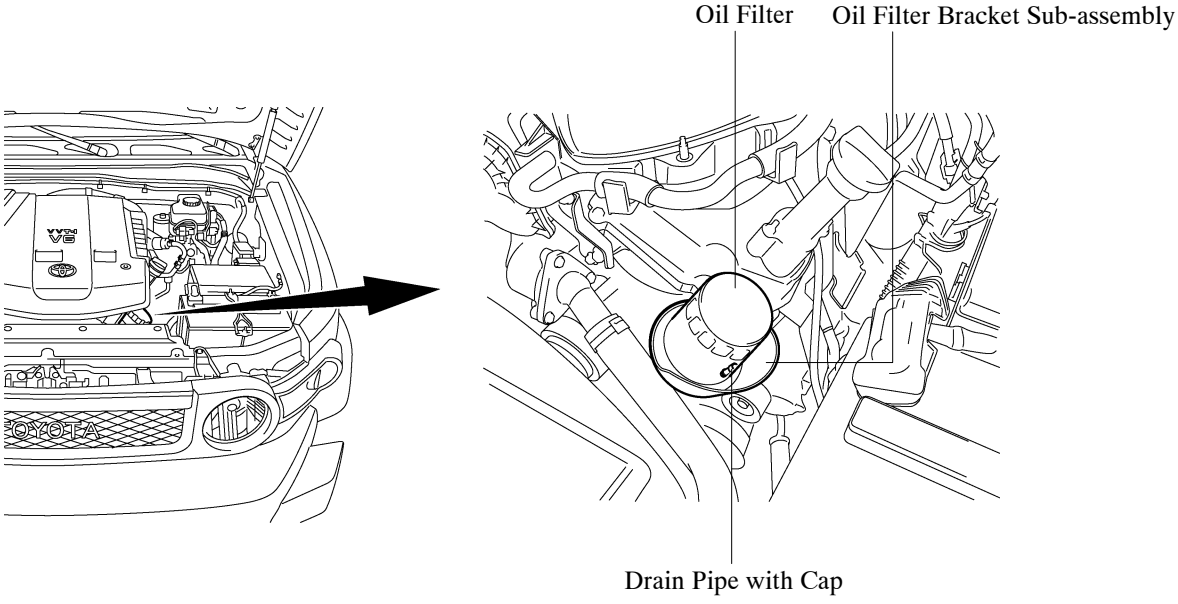
4. No.1 Oil Nozzle Sub-assembly

- No.1 oil nozzle sub-assemblies for cooling and lubricating the pistons are provided in the cylinder block sub-assembly, in the center of the right and left banks.
- These No.1 oil nozzle sub-assemblies contain a check valve to prevent oil from being fed when the oil pressure is low. This prevents the overall oil pressure in the engine from dropping.



5. Oil Filter Bracket Sub-assembly

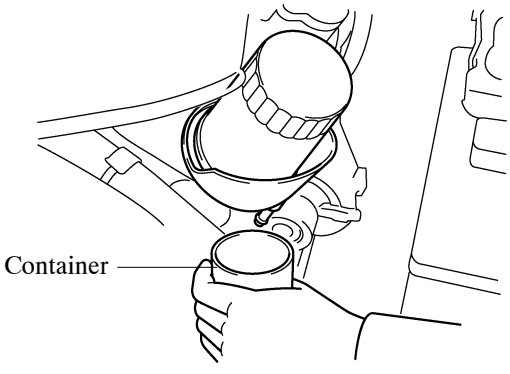
- The oil filter is mounted on an oil filter bracket sub-assembly placed on the left bank. Therefore, the oil filter can be replaced easily.
- During an oil filter replacement, the filter is removed from the top. Therefore, the oil filter bracket sub-assembly is designed to catch the oil that leaks from the oil filter. The oil that is initially caught by the oil filter bracket sub-assembly is discharged from a drain pipe that is provided underneath it.



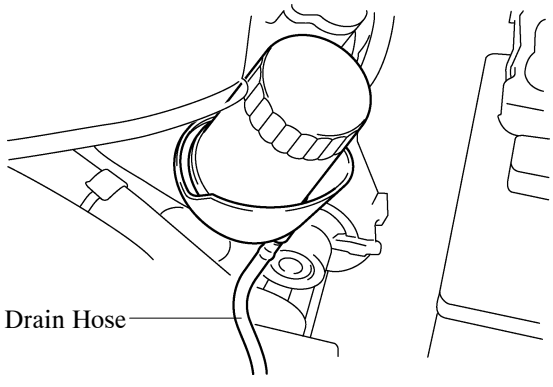
07D0EG51C

Service Tip

- Before removing the oil filter, prepare to catch the oil that will be discharged from the drain pipe. Use a container to catch the oil as illustrated below, or attach a hose to the drain pipe and catch the oil on a tray.
- After completing the oil drain operation, do not forget to reinstall the rubber cap on the drain pipe.



0240EG11C



0240EG12C