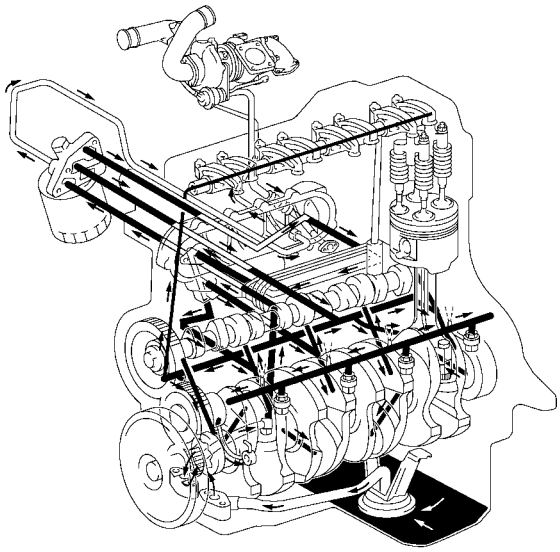
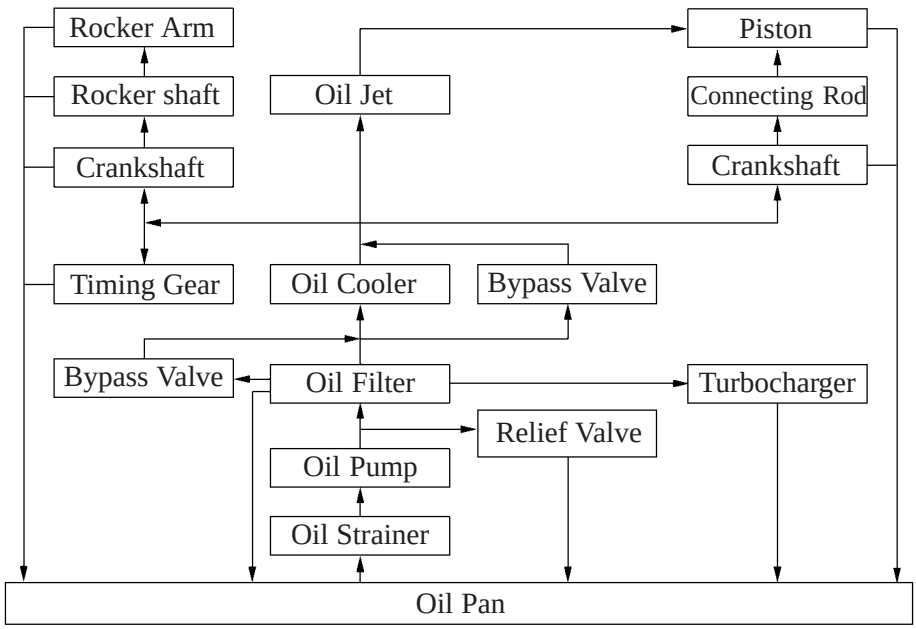
■LUBRICATION SYSTEM

1. General

- The lubrication system is the full-pumping, full-filtering type.
- This system uses low-viscosity oil that enables the engine to operate with minimal friction loss. To reduce the running cost, the maintenance intervals have been extended as a result of the optimization of the engine proper to reduce PM (particulate matter) emissions, and the adoption of a highly efficient oil filter.
- The oil filter is the bypass, full-flow, twin-element type that supports the high power output and the EGR of the engine.
- All engines have adopted an oil cooler and oil nozzles for cooling the pistons.

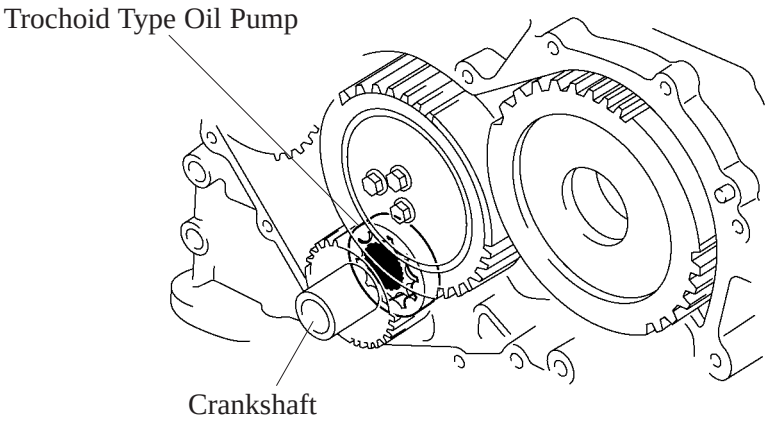


▶ System Diagram ◀



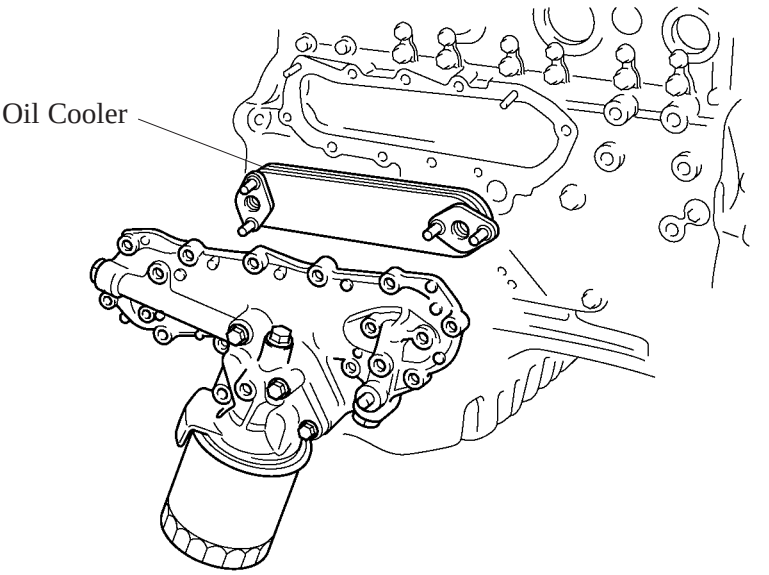
2. Oil Pump

The trochoid type oil pump, which is located in front of the cylinder block, is driven directly by the crankshaft.



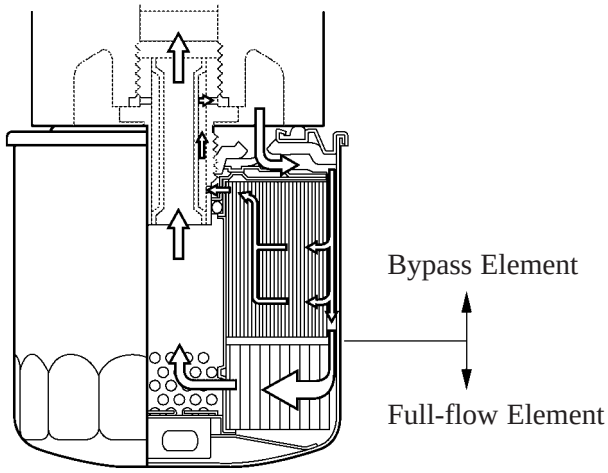
3. Oil Cooler

The oil cooler is located in the water jacket on the right side of the cylinder block to support the high power output of the engine and ensure reliability.



4. Oil Filter

- A twin-element type oil filter that supports the high power output of the engine and low-emission performance has been adopted.
- The twin-element type oil filter consists of a full-flow element and a bypass element that are composite-formed into a single cartridge.
- The oil that has been filtered through the full-flow element lubricates and cools the interior of the engine and returns to the oil pan.
- The oil that has been filtered through the bypass element returns directly to the oil pan in order to maintain the oil in the oil pan in the normal state at all times.



5. Oil Nozzle

- Oil nozzles are provided in the cylinder block to cool the pistons and the periphery of the pistons and lubricate the cylinders.
- To enhance the cooling performance of the piston head, a cooling channel has been provided in each piston.
- Each nozzle contains an oil check valve, which cuts oil supply to the oil nozzle when the oil pressure is low, in order to prevent the oil pressure of the entire engine from being reduced.
- Oil nozzle (with built-in check valve)

