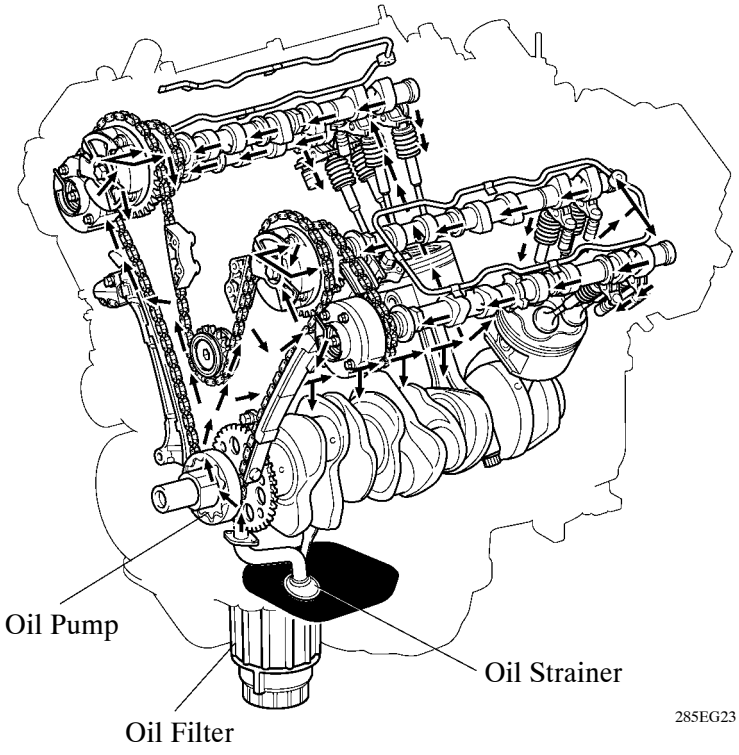
5. Lubrication System

General

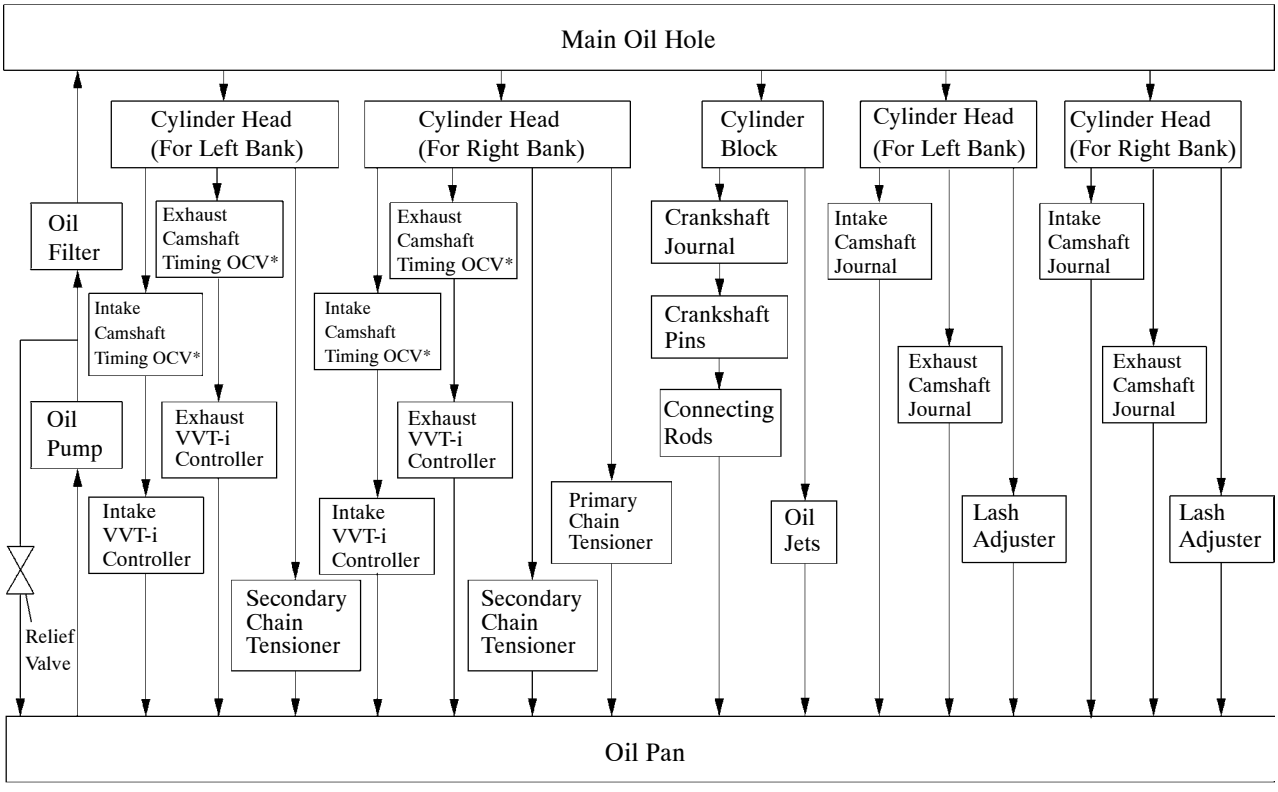
- The lubrication circuit is fully pressurized and all oil passes through an oil filter.
- A cycloid rotor type oil pump is used.



▶ Oil Capacity ◀

Dry	6.8 Liters (7.2 US qts, 6.0 Imp. qts)
With Oil Filter	6.1 Liters (6.4 US qts, 5.4 Imp. qts)
Without Oil Filter	5.7 Liters (6.0 US qts, 5.0 Imp. qts)

▶ Oil Circuit ◀

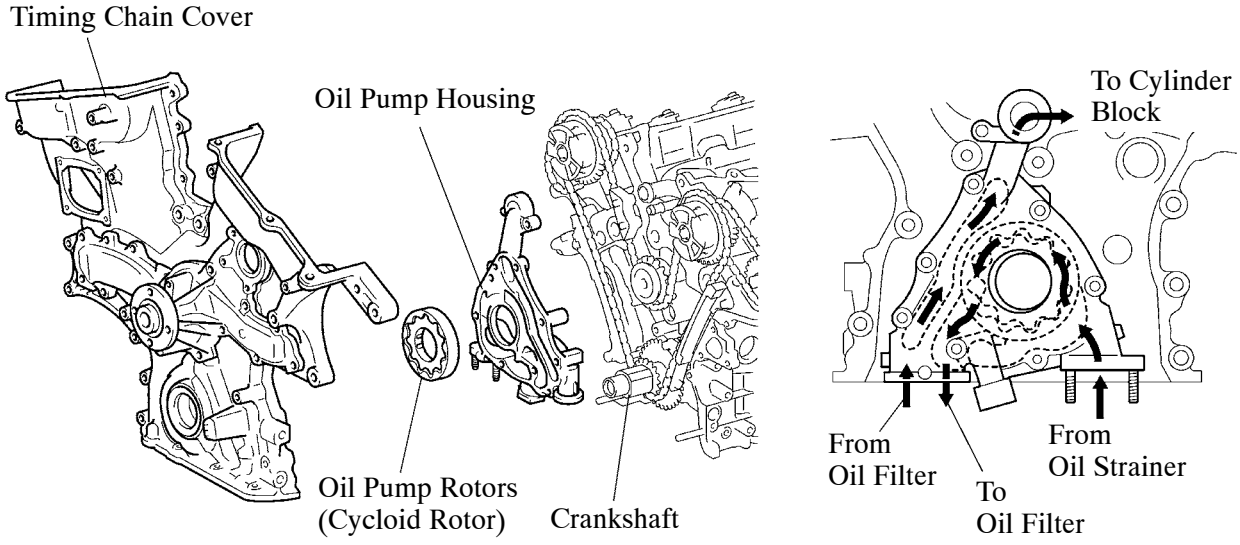


*: Oil Control Valve

285EG77

Oil Pump

- A compact cycloid rotor type oil pump directly driven by the crankshaft is used.
- This oil pump uses an internal relief method which circulates relief oil to the suction passage in the oil pump. This aims to minimize oil level change in the oil pan, reduce friction, and reduce air mixing rate in the oil.

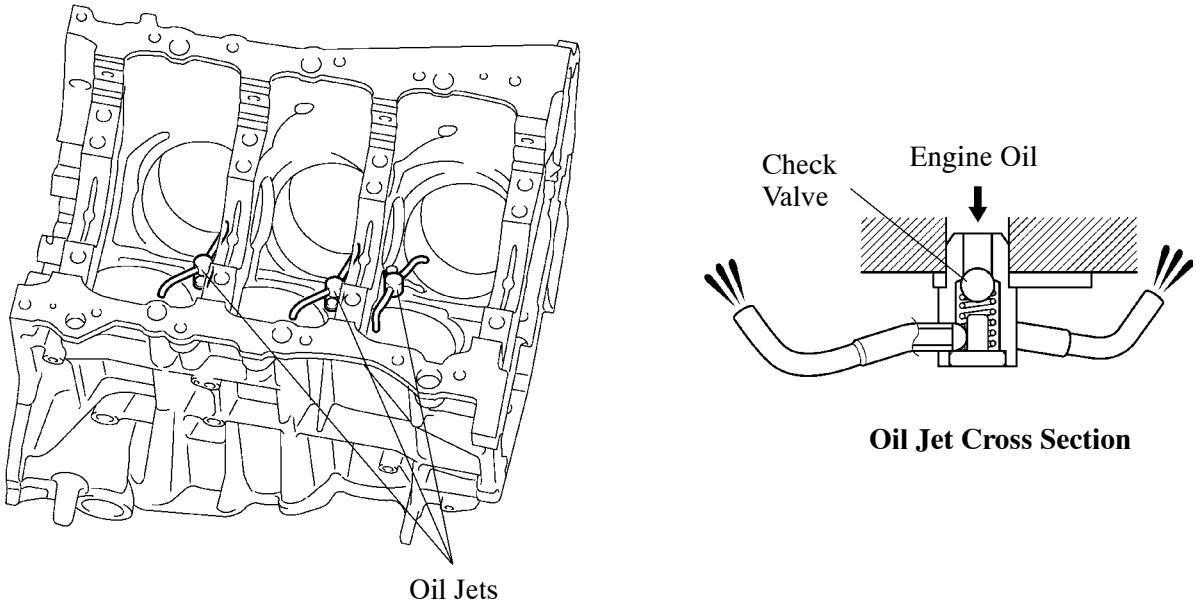


Oil Passage in Oil Pump

285EG24

Oil Jet

- Oil jets for cooling and lubricating the pistons have been provided in the cylinder block, in the center of the right and left banks.
- These oil jets 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.

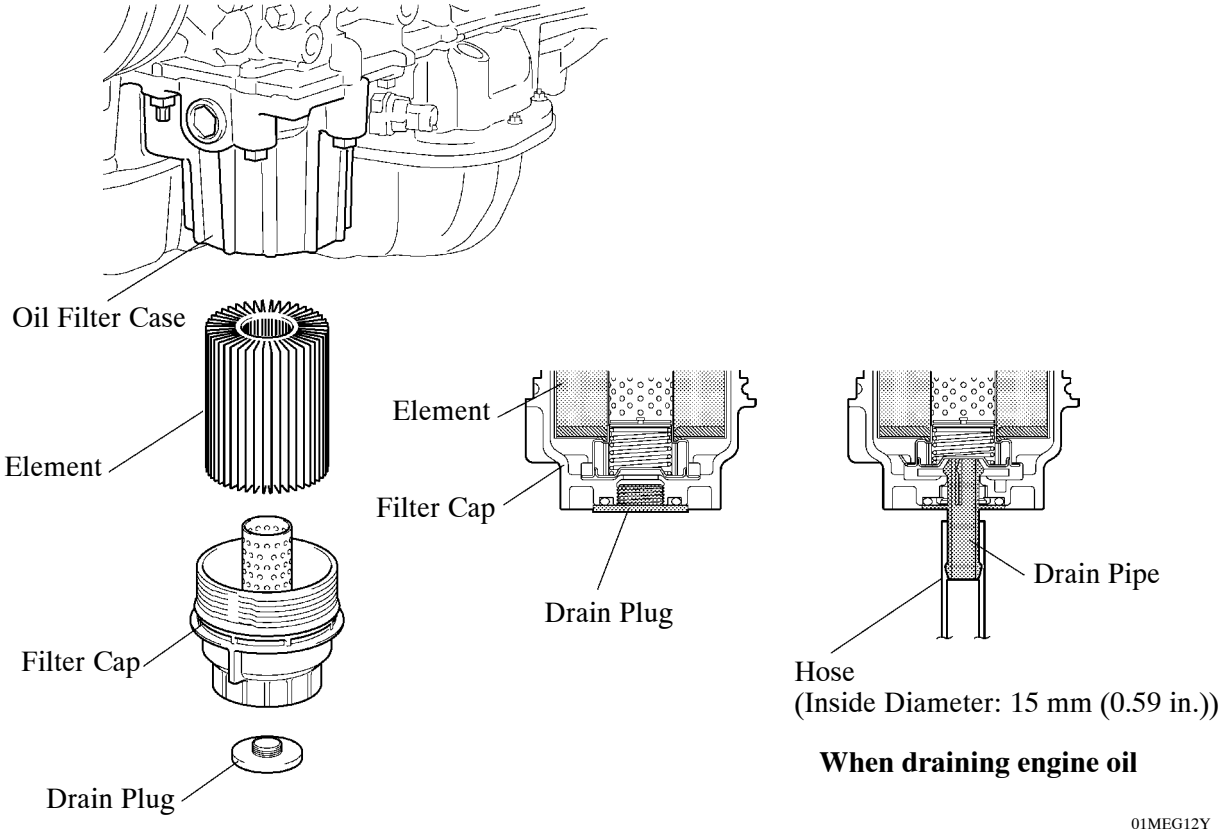


Oil Jet Cross Section

285EG25

Oil Filter

- An oil filter with a replaceable element is used. The element uses a high-performance filter paper to improve filtration performance. It is also combustible for environmental protection.
- An aluminum alloy filter cap is used to extend its life.
- This oil filter has a structure which can drain the engine oil remaining in the oil filter. This prevents engine oil from spattering when replacing the element and allows the technician to work without touching hot engine oil.



When draining engine oil

01MEG12Y

Service Tip

- The engine oil in the oil filter can be drained by removing the drain plug and inserting the drain pipe supplied with the element into the oil filter. For details, refer to the RAV4 Repair Manual Supplement.
- The engine oil maintenance interval for a model that has an oil filter with a replaceable element is the same as that for the conventional model.