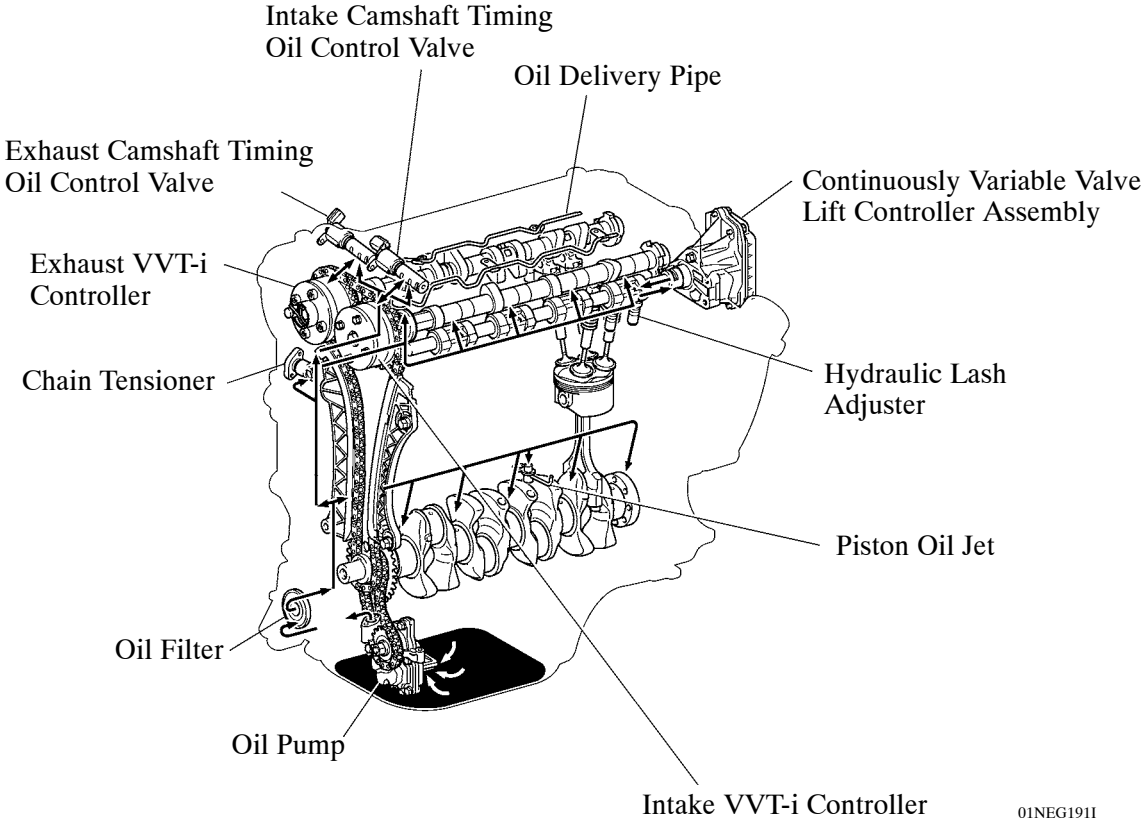
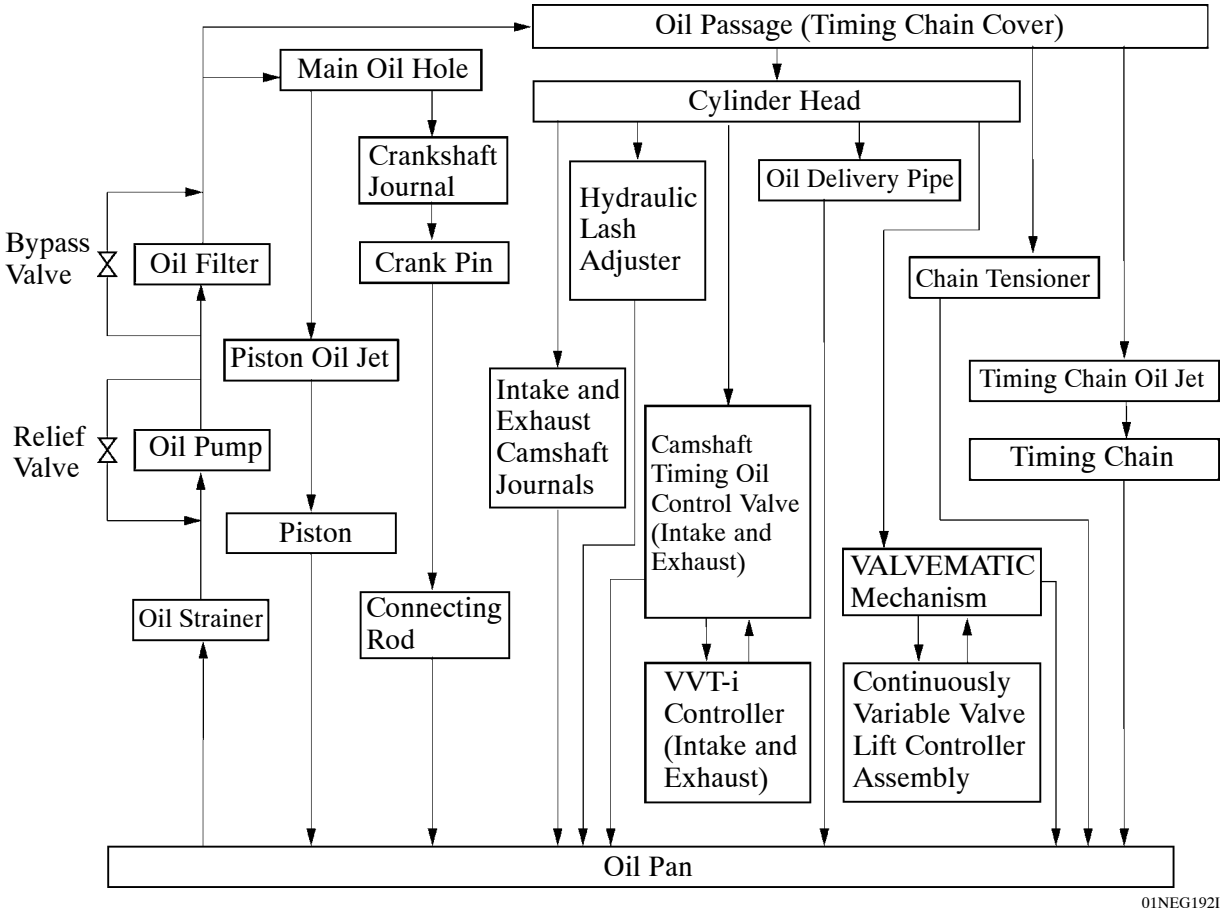
■ LUBRICATION SYSTEM

1. General

- The lubrication circuit is fully pressurized and the oil passes through an oil filter.
- The trochoid gear type oil pump is chain-driven by the crankshaft.
- This engine has an oil return system in which the oil is force-fed to the upper cylinder head and returns to the oil pan through the oil return hole in the cylinder head.
- This engine uses the Dual VVT-i system. This system is operated by the engine oil.



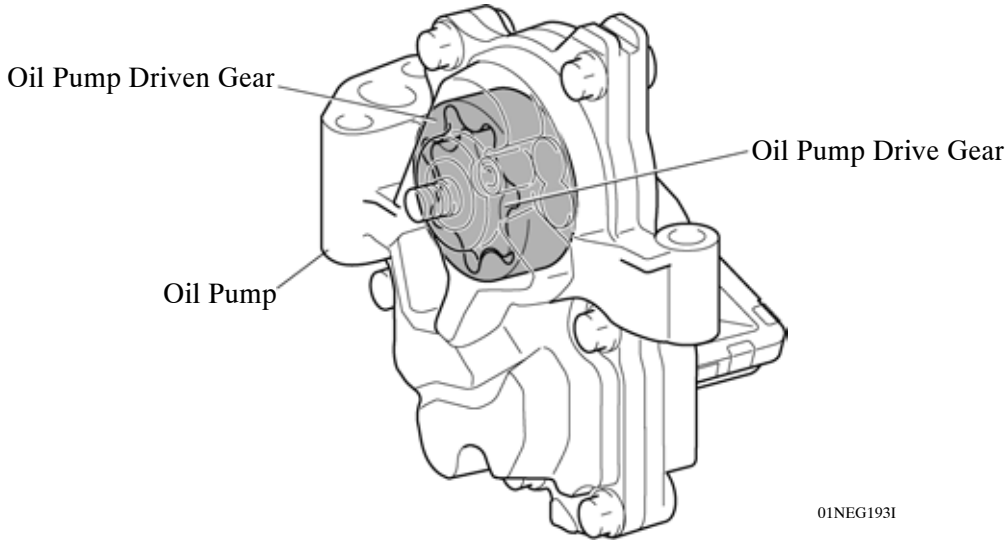
▶ **Oil Circuit** ◀



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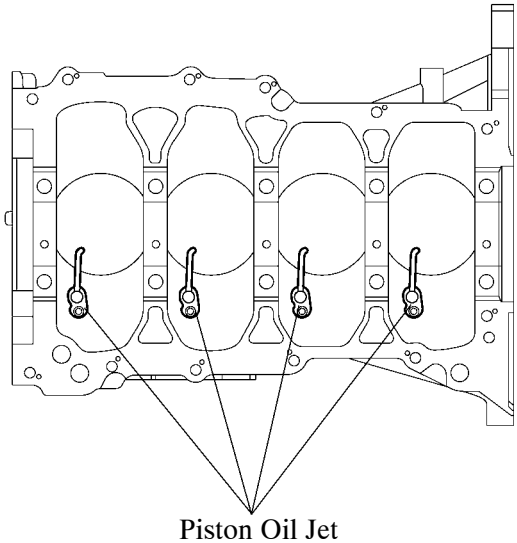
2. Oil Pump

- A variable oil discharge volume trochoid gear type oil pump assembly is used.
- In the low- and high-speed ranges, the oil pump provides the oil pressure that is necessary for operating the VALVEMATIC, Dual VVT-i, and lubrication systems. In the medium-speed range, the surplus oil pressure has been reduced in order to reduce friction.

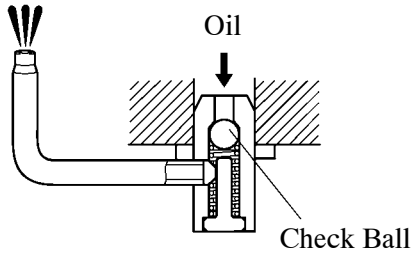


3. Piston Oil Jet

- Piston oil jets have been provided in the cylinder block for cooling and lubricating the pistons.
- These oil jets contain a check ball to prevent oil from being fed when the oil pressure is low. This prevents the overall oil pressure in the engine from dropping.



Bottom Side View

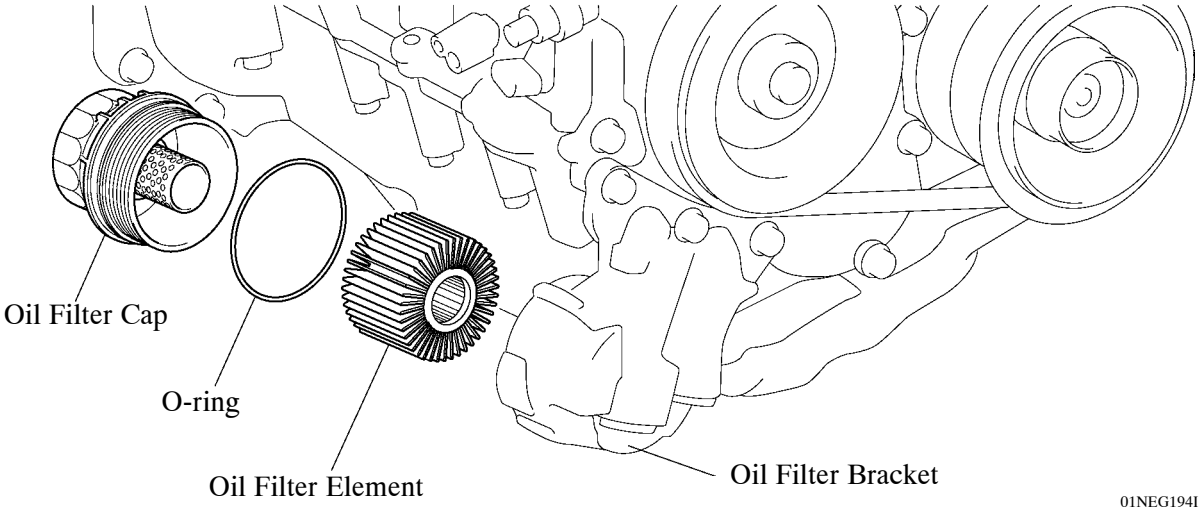


Oil Jet Cross Section

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4. Oil Filter

An oil filter with a replaceable element is used.



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