

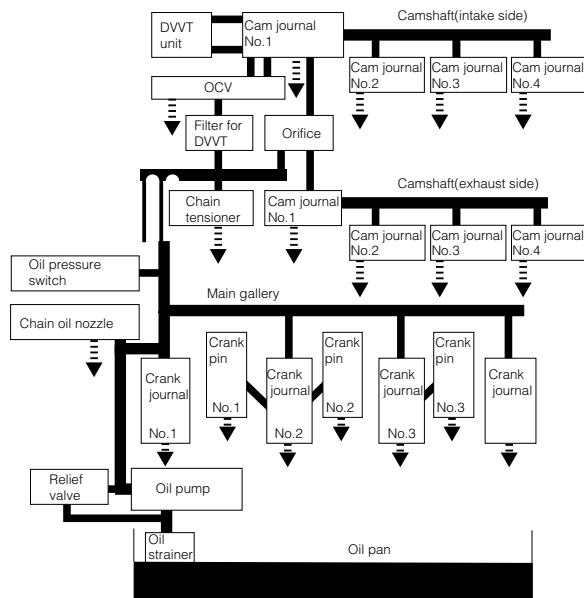
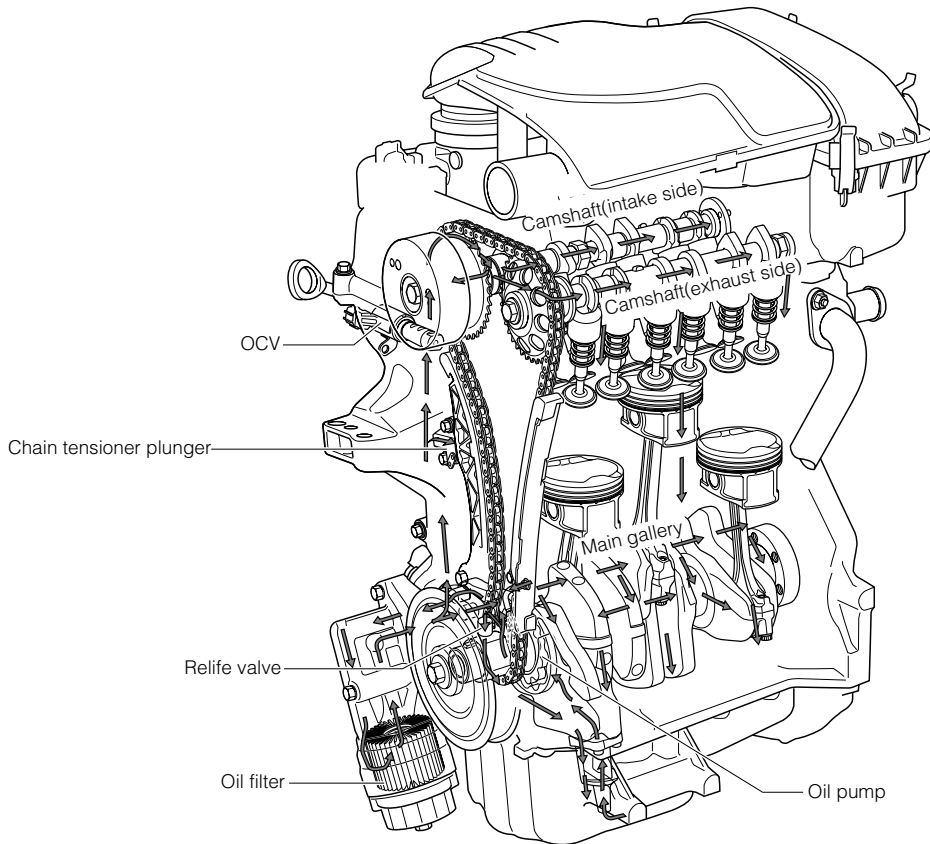
B5 LUBRICATION SYSTEM

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1KR 1 OUTLINE 1-1 DESCRIPTION

The lubrication method is a full pressure feeding filtering type. The oil stored in the oil pan is sucked up by the oil pump driven by the crankshaft, and filtered by the oil filter. Then the oil lubricates main gallery to crankshaft, around the piston, and the timing chain. On the other hand, the oil also lubricates the chain tensioner plunger, OCV of the cylinder head, DVVT, and the camshaft.

1-2 ENGINE INTERNAL LUBRICATION SYSTEM



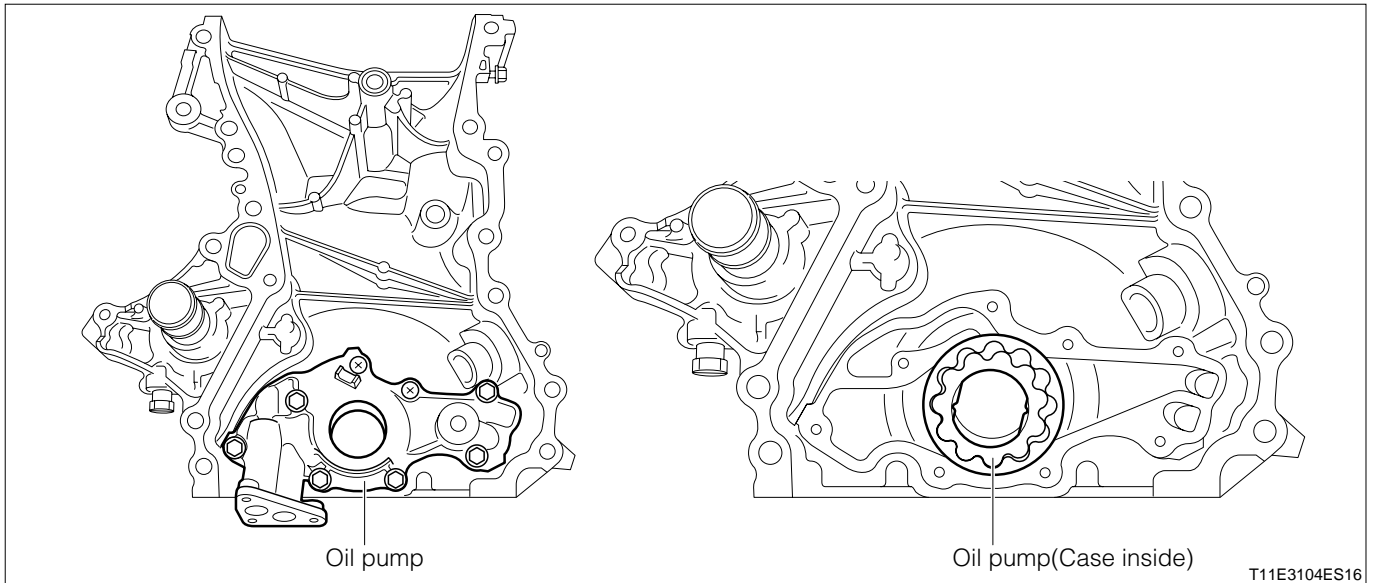
2 CONSTRUCTION AND OPERATION

2-1 OIL PUMP

A trochoid gear is adopted. The oil pump is built in the timing chain cover and driven by the crankshaft. Directly driven by the crankshaft, the auxiliary layout is downsized. The pressure loss of the oil path is reduced to optimize the discharge rate, resulting in the reduction of the mechanical loss and improved fuel consumption.

Oil pump specifications

Delivery output [at time of 6,000rpm/200kPa] (ℓ/min)	19.7 or more
Relief valve opening pressure at 3,000 rpm (kPa)	370



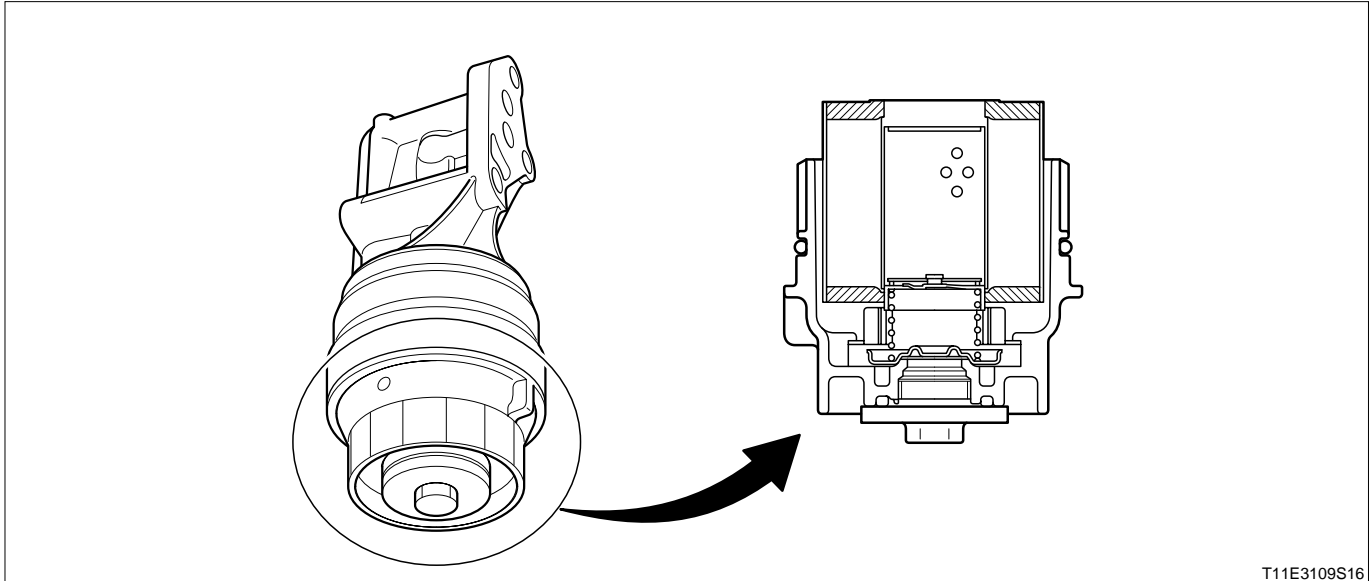
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2-2 OIL FILTER AND OIL FILTER BRACKET

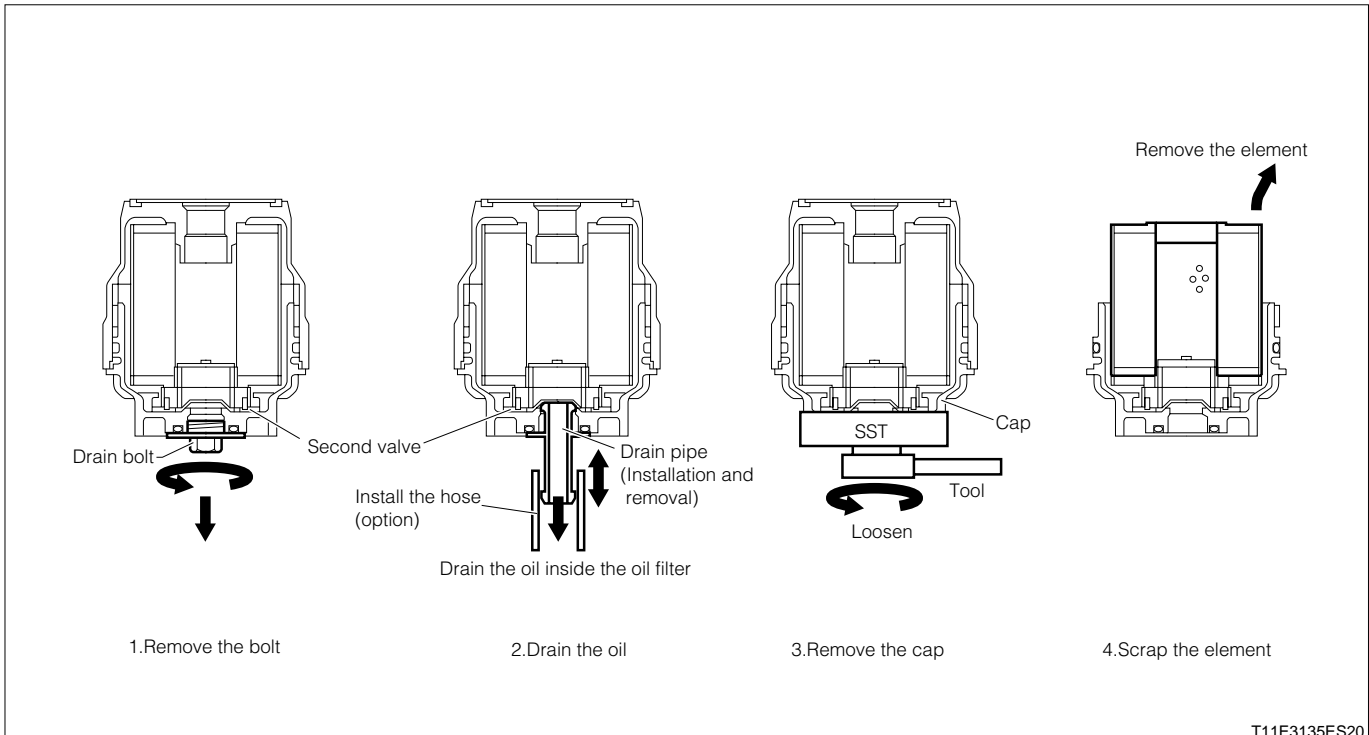
The element replacement type is adopted to be environment friendly. For easy operation, the structure is made so that the oil does not splash on the hands when replacing.

Oil filter specifications

Type	Full flow
Effective filtration area (cm ²)	630



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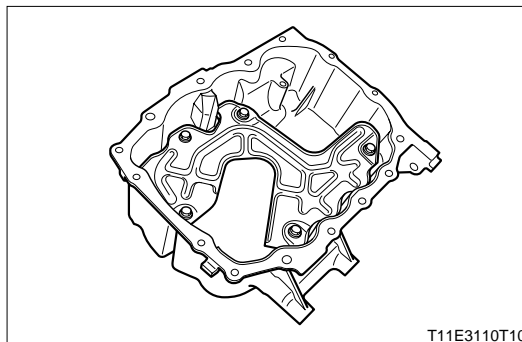


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2-3 OIL PAN AND OIL STRAINER

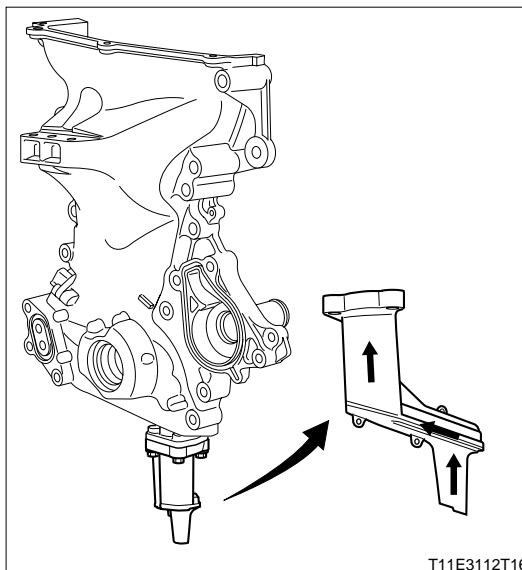
2-3-1 OIL PAN

By adopting high rigid aluminum oil pan and connecting with the transmission, joint rigidity of the power plant has been improved.



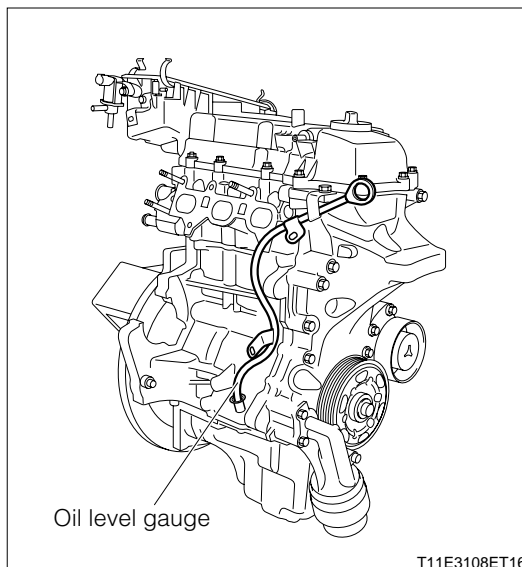
2-3-2 OIL STRAINER

Plastic oil strainer is adopted to realize weight saving. It is mounted to below the oil pump built in the timing chain cover.



2-4 OIL LEVEL GAUGE

The pipe for guide is taken out of the cylinder block. Mounting position is set to the front of the intake side.



2-5 ENGINE OIL

Engine oil specifications

Kind	SAE classification	0W-20 or 5W-30	
	API classification	SG or higher	
Capacity	Total capacity (ℓ)		3.4
	Oil pan capacity	FULL(ℓ)	3.0
		LOW(ℓ)	1.5
	Change capacity [FULL]	Except for filter (ℓ)	2.9
		Including filter (ℓ)	3.1

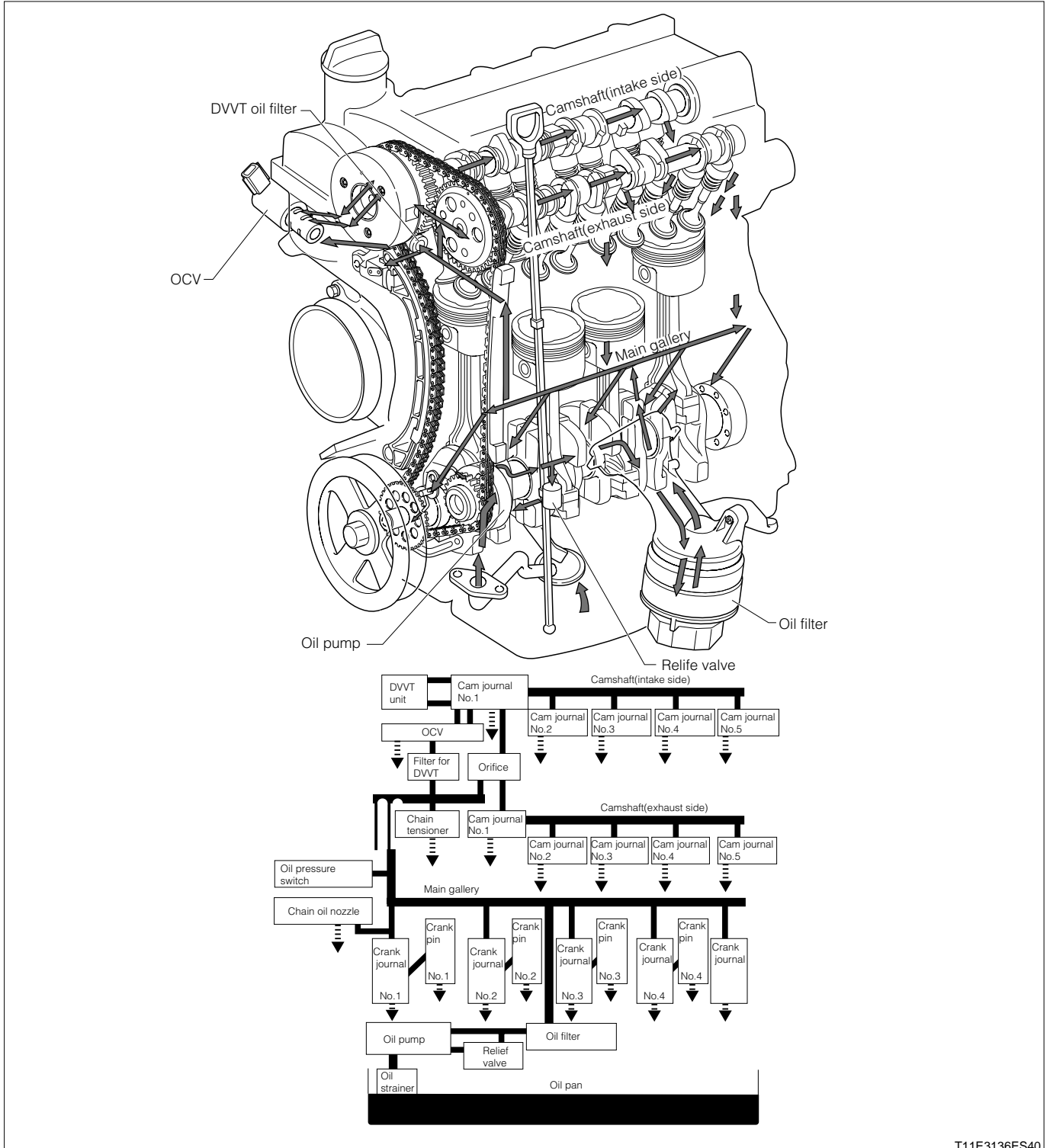
K3

1 OUTLINE

1-1 DESCRIPTION

The lubrication method is a full pressure feeding filtering type. The oil stored in the oil pan is sucked up by the oil pump driven by the timing chain, and filtered by the oil filter. Then the oil lubricates main gallery to the crankshaft, around the piston, and the timing chain. On the other hand, the oil also lubricates the cylinder head to the chain tension plunger, OCV, DVVT, and the camshaft via the orifice.

1-2 ENGINE INTERNAL LUBRICATION SYSTEM



2 CONSTRUCTION AND OPERATION

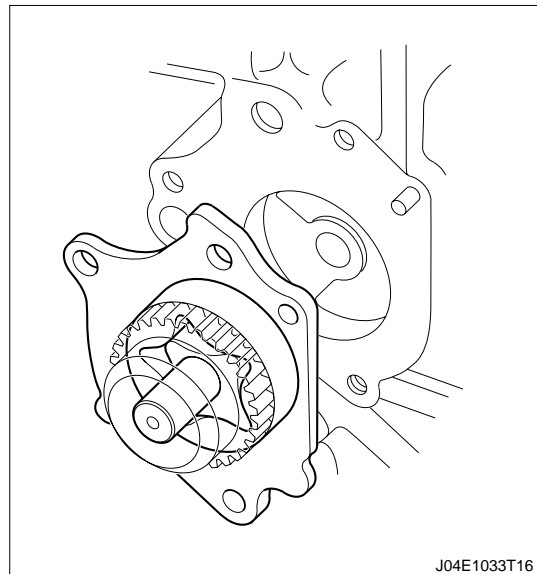
2-1 OIL PUMP

The rotor chamber and relief valve are provided in the cylinder block to create a simple structure and reduce the total length of the engine. Compact and highly efficient 4-lobe, 5-node trochoid gear system is adopted. The timing chain performs decelerating drive on the axis different from the crankshaft.

The inner relief method is employed, in which the oil level variation and air suction are restrained and the pump driving loss is reduced.

Oil pump specifications

Delivery output [at time of 5,040rpm/290kPa] (ℓ/min)	32.6 or more
Relief valve opening pressure at 2,000 rpm (kPa)	490

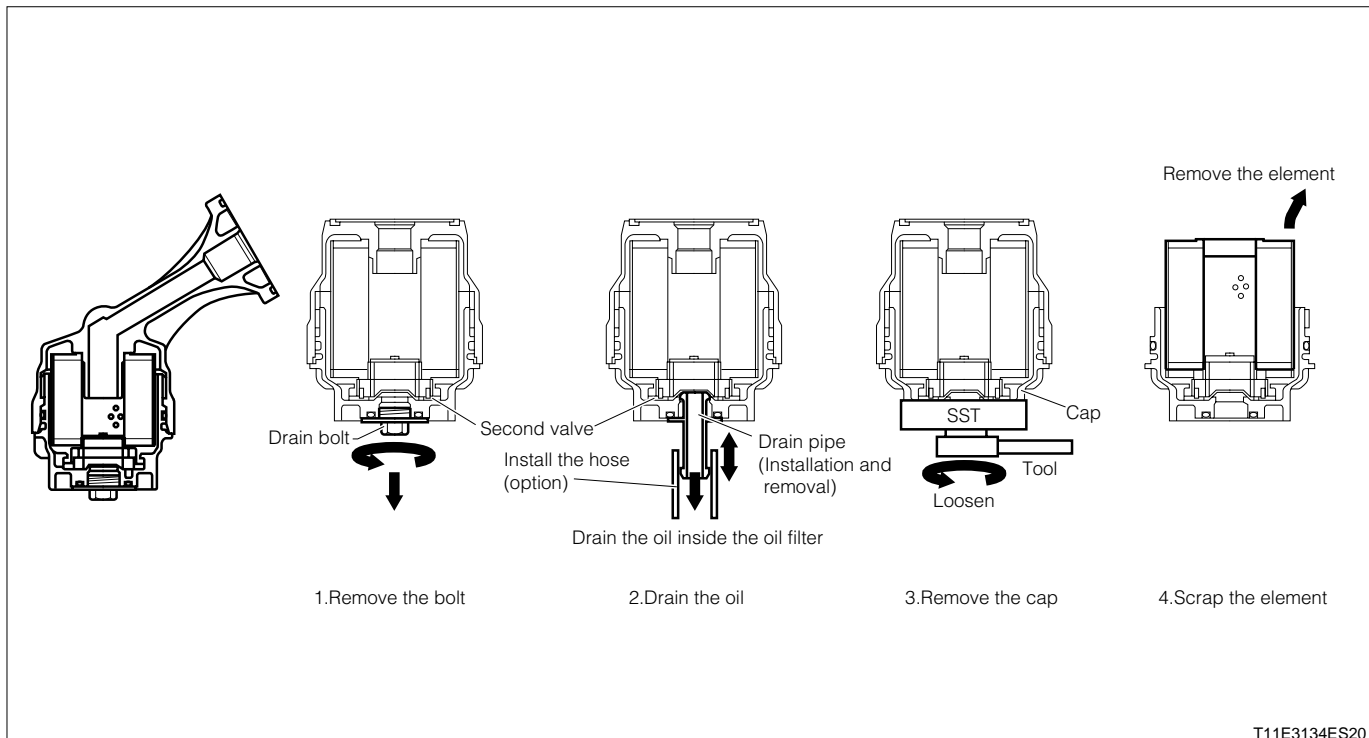


2-2 OIL FILTER AND OIL FILTER BRACKET

The element replacement type is adopted to be environment friendly. For easy operation, the structure is made so that the oil does not splash on the hands when replacing.

Oil filter specifications

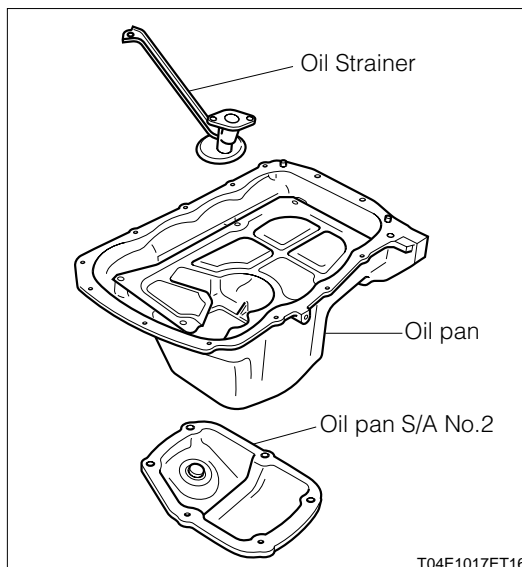
Type	Full flow
Effective filtration area (cm ²)	630



2-3 OIL PAN AND OIL STRAINER

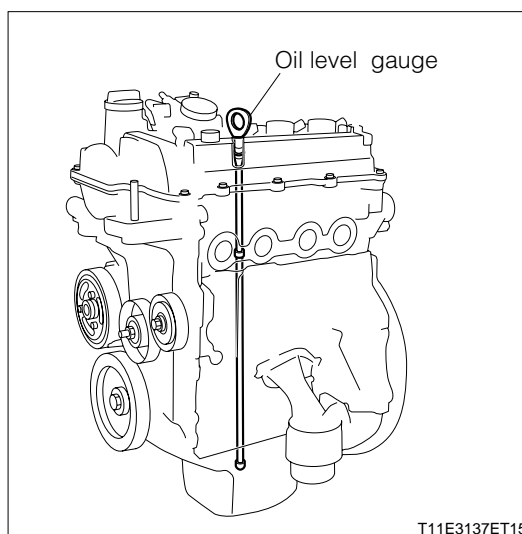
The employment of aluminum die-casting has increased the joint rigidity with the transmission, greatly reducing vibration and noise.

By adopting aluminum material, the shape can be formed more freely and the oil amount in the oil pan can be sufficiently assured. This has enhanced the reliability concerning oil deterioration and air suction when the vehicle is turning.



2-4 OIL LEVEL GAUGE

Mounting position is set to the cylinder head cover.



2-5 ENGINE OIL

Engine oil specifications

Kind	SAE classification	5W-20 or 5W-30	
	API classification	SG or higher	
Capacity	Total capacity (ℓ)		4.1
	Oil pan capacity	FULL(ℓ)	3.5
		LOW(ℓ)	2.0
	Change capacity [FULL]	Except for filter (ℓ)	3.3
		Including filter (ℓ)	3.6