

LUBRICATION SYSTEM

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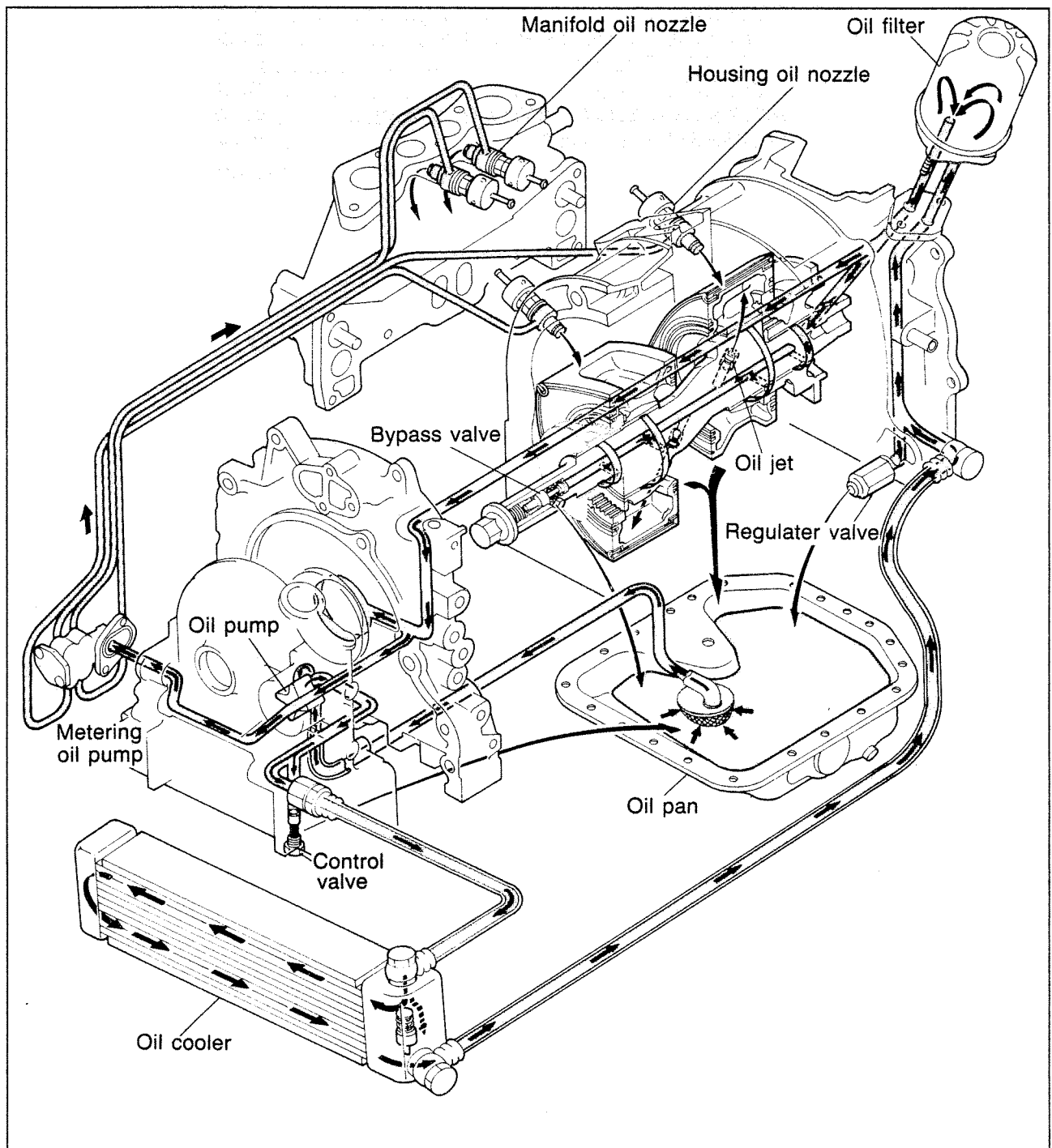
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OUTLINE

OUTLINE OF CONSTRUCTION

1. A bypass valve has been provided inside the eccentric shaft in order to increase the warm-up capability of the engine.
2. The metering oil pump sends oil to the intake manifold and the combustion chamber for a total of 4 places to improve the engine durability.
3. The volume of discharge of the oil pump during high rotation has been increased to further improve engine reliability.
4. An air-cooled oil cooler has been equipped on the cross-member.

STRUCTURAL VIEW



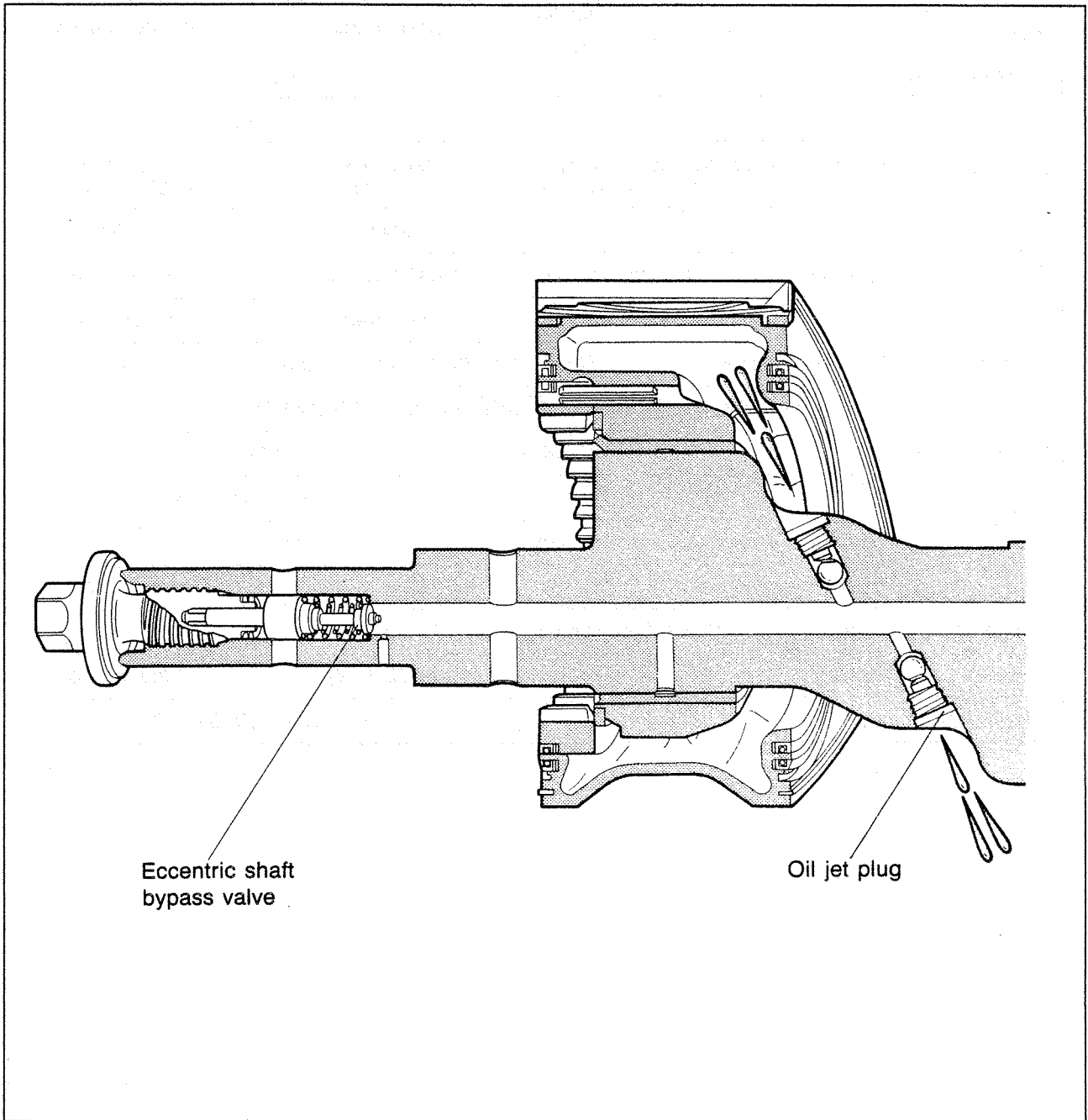
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SPECIFICATIONS

Item		Model	New model	Previous model
Lubrication system			Force-fed	
Oil pump	Type		Trochoid	
	Diameter X Width: Number of rotors mm x mm (in x in)		50 x 12.5 (1.97 x 0.49) : 2	40 x 17.5 (1.57 x 0.69) : 2
	Driven ratio		0.666	0.742
Control valve relief pressure		kPa(kg/cm ² , psi)	1,080(11.0,156)	882(9.0, 128)
Oil cooler	Type		Air-cooled	Water-cooled
	Relief temperature	°C(°F)	60 ~ 65 (140 ~ 149) or below	—
	Relief pressure differential	kPa(kg/cm ² , psi)	349(3.56, 50) at 60°C(140°F)	—
Regulator valve pressure		kPa(kg/cm ² , psi)	490(5.0, 71)	
Oil filter	Type		Full-flow, paper filter	
	Relief pressure differential	kPa (kg/cm ² , psi)	98 (1.0, 14)	
Oil capacity	Total (dry engine)	liters(US qt, Imp qt)	5.8(6.1, 5.1)	4.6(4.9, 4.0)
	Oil pan	liters (US qt, Imp qt)	4.4(4.7, 3.9)	4.2(4.4, 3.7)
	Oil filter	liters(US qt, Imp qt)	0.3(0.32, 0.26)	0.3(0.32, 0.26)
Engine oil grade			API service SD, SE or SF	

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ECCENTRIC SHAFT BYPASS VALVE



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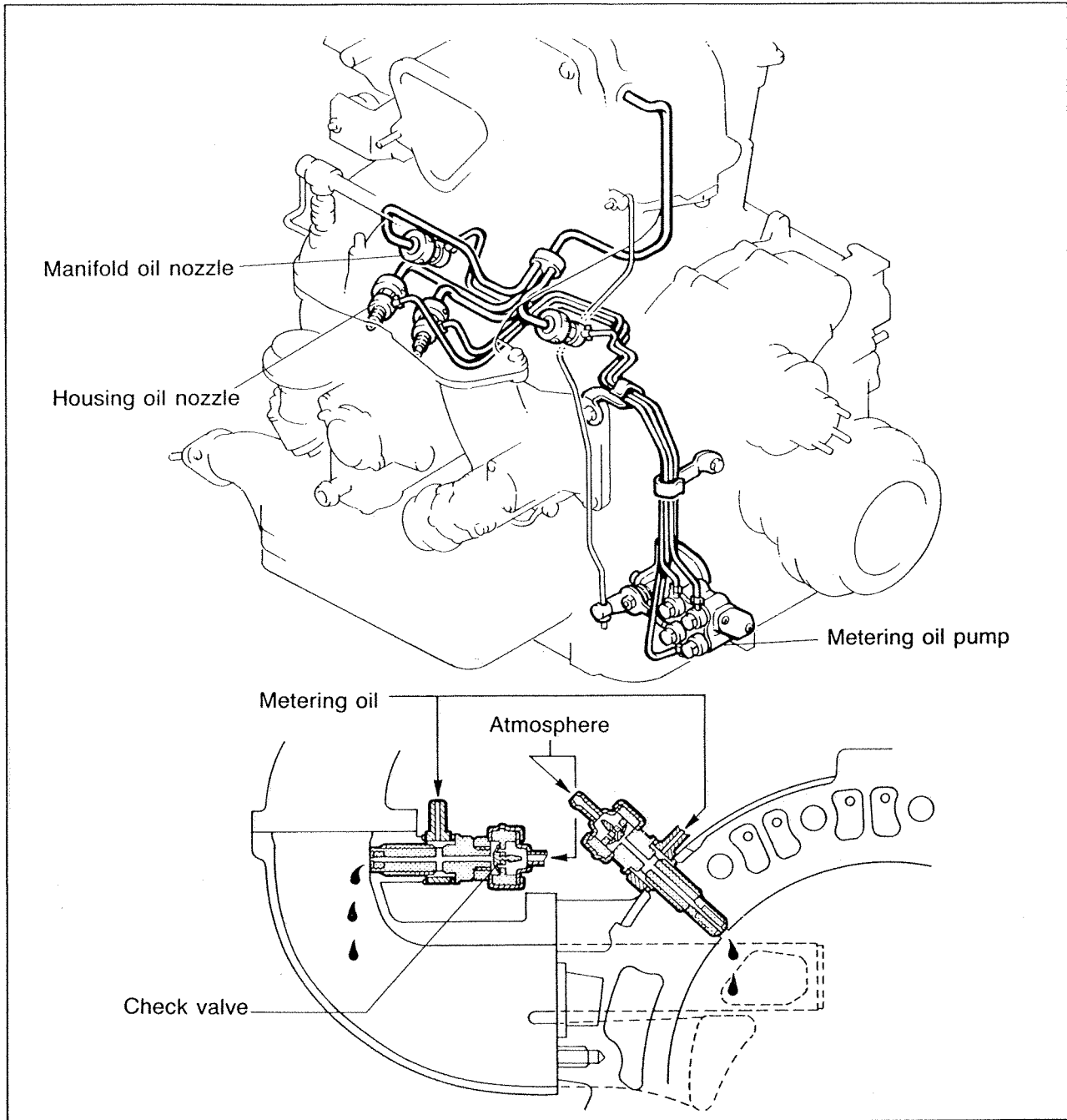
A bypass valve has been provided inside the eccentric shaft in order to increase the warm-up capability of the engine.

Consequently, the oil for rotor cooling is not jet-sprayed until the engine is warmed up.

Wax-type thermo pellets are used in the bypass valve. When the oil temperature is at or below the operation temperature, the valve opens, causing the oil within the shaft to escape.

Valve closing temperature: 60°C (140°F)

METERING OIL PUMP



57G02X-504

Engine oil sent from the metering oil pump is supplied into the intake manifold and also directly into the combustion chamber to lubricate the rotor housing trochoid surface and apex seal, where lubrication conditions are most severe.

The oil nozzle has a one-way check valve which acts as all air bleed to prevent excessive suction of oil and to atomize the oil.

When vacuum is created in the combustion chamber and intake manifold during the suction period, the check valve is pulled open and allows air to mix with the oil. During the compression period, pressure is applied and the valve closes to prevent back flow of the oil into the connecting hose.