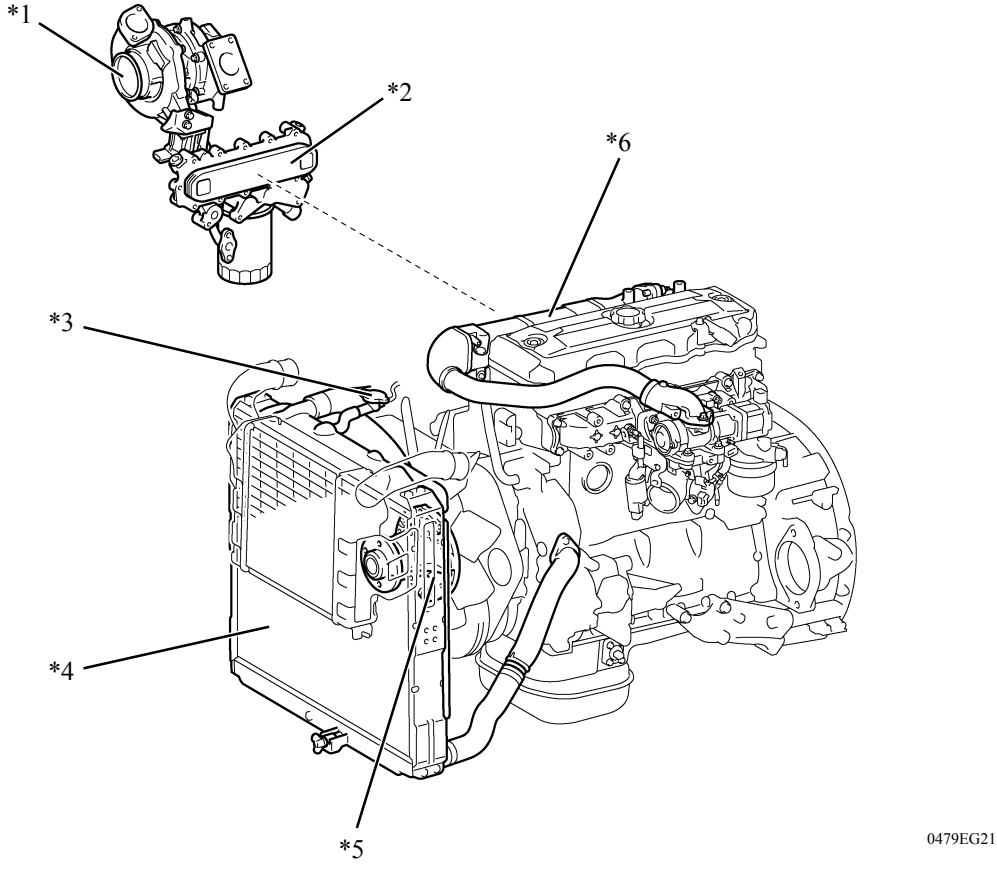
COOLING

■ GENERAL

1. General

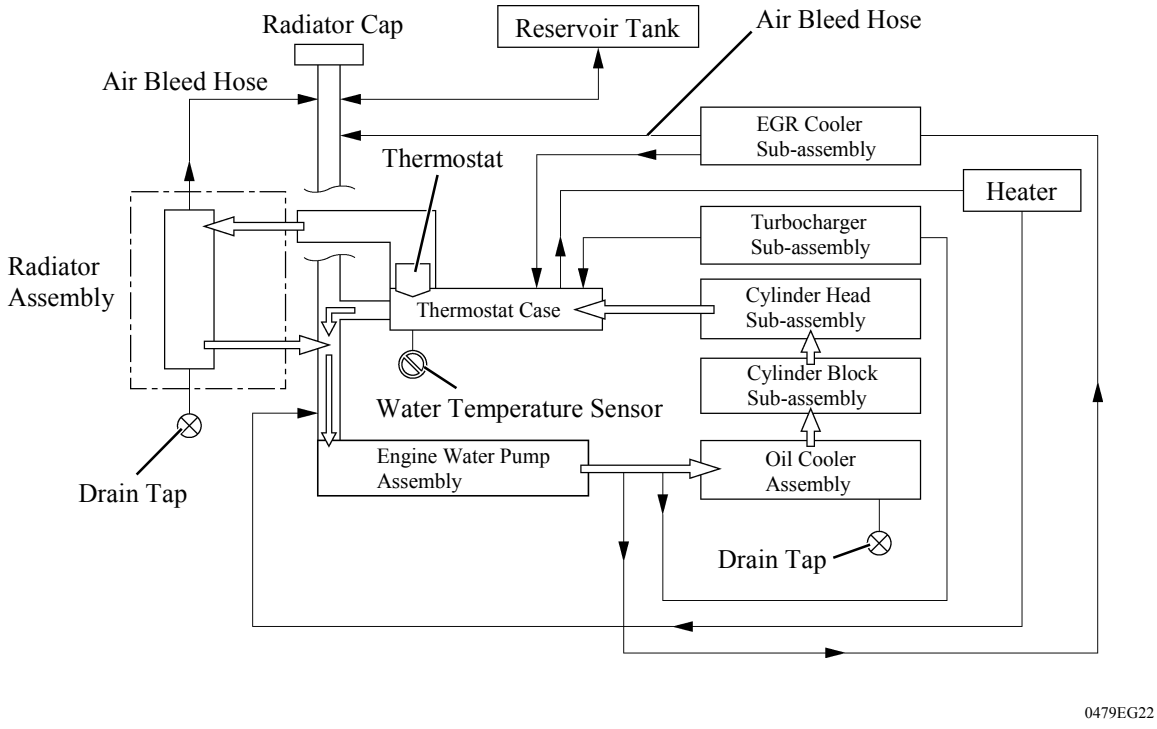
An outlet thermostat type, water-cooled, pressurized circulation cooling system that uses a thermostat with a bypass valve at the water outlet is used.

- The valve opening temperature of the thermostat is set to 82°C.
- The engine water pump assembly is mounted in front of the cylinder block sub-assembly and is driven by the V-belt.
- A radiator with an aluminum core is used for weight reduction and high recyclability. An air bleed hose has been provided between the radiator tank and the radiator cap to facilitate the bleeding of air from the cooling circuit.
- The cooling performance target value (target engine coolant temperature, etc.) has been reviewed to improve the efficiency of the engine.
- The system also circulates coolant through the turbocharger sub-assembly and the oil cooler assembly in order to cool them.
- TOYOTA genuine SLLC (Super Long Life Coolant) is used.



Text in Illustration

*1	Turbocharger Sub-assembly	*2	Oil Cooler Assembly
*3	Radiator Cap	*4	Radiator Assembly
*5	Engine Water Pump Assembly	*6	EGR Cooler Sub-assembly



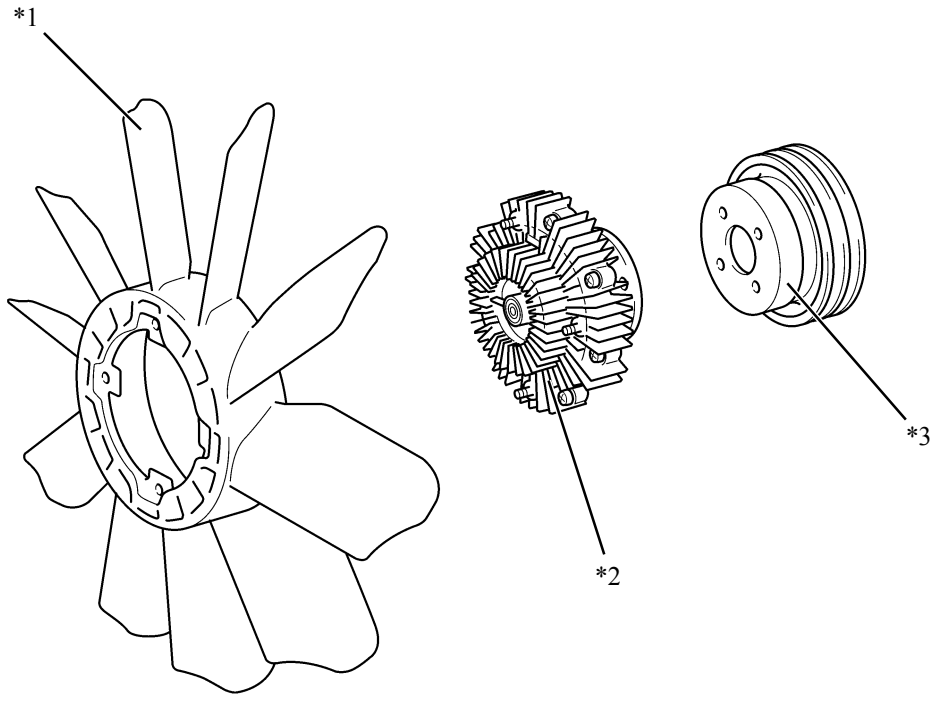
Capacity	without Heater	13.0 liters (13.7 US qts, 11.4 Imp. qts)
	with Front and Rear Heaters	14.1 liters (14.9 US qts, 12.4 Imp. qts)
Type		TOYOTA Genuine SLLC or equivalent as shown as below*
Color		Pink
Maintenance Interval	First Time	160000 km (100000 miles)
	Subsequent	Every 80000 km (50000 miles)

SLLC is pre-mixed (50% coolant and 50% deionized water). Therefore, no dilution is needed when SLLC is added or replaced.

*: Similar high quality ethylene glycol based non-silicate, non-amine, non-nitrite, and non-borate coolant with long-life hybrid organic acid technology (coolant with hybrid organic acid technology consists is a combination of low phosphates and organic acids)

2. Cooling Fan

- A cooling fan with an outer diameter of 450 mm and 10 blades is used.
- A large-diameter fluid cooling assembly is used to improve the transmission of torque to the cooling fan.



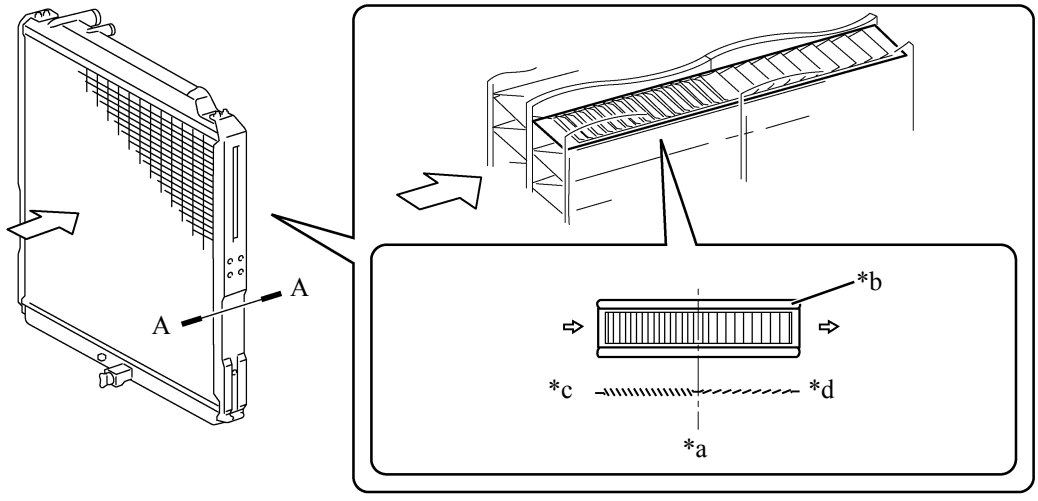
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Text in Illustration

*1	Cooling Fan	*2	Fluid Cooling Assembly
*3	Water Pump Pulley	-	-

3. Radiator

- Longitudinally asymmetric louver fins are used in the radiator core. This achieves a large tube heat dissipation surface area and ensures a high amount of heat dissipation.
- A radiator with an aluminum core is used for weight reduction and high recyclability.



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Text in Illustration

*a	A-A Cross Section	*b	Longitudinally Asymmetric Louver Fins
*c	Front	*d	Rear
⇨ 0479EG28	Air	-	-