

GENERAL DESCRIPTION

COOLING

1. General Description

A: SPECIFICATIONS

Cooling system		Electric fan + Forced engine coolant circulation system	
Total engine coolant capacity		ℓ (US qt, Imp qt) MT: Approx. 6.8 (7.2, 6.0) AT: Approx. 6.7 (7.1, 5.9)	
Water pump	Type	Centrifugal impeller type	
	Discharge performance I	Discharge	20 ℓ (5.3 US gal, 4.4 Imp gal)/min.
		Pump speed—pressure leak	760 rpm — 0.3 mAq (1.0 ftAq)
		Engine coolant temperature	85°C (185°F)
	Discharge performance II	Discharge	100 ℓ (26.4 US gal, 22.0 Imp gal)/min.
		Pump speed—pressure leak	3,000 rpm — 5.0 mAq (16.4 ftAq)
		Engine coolant temperature	85°C (185°F)
	Discharge performance III	Discharge	200 ℓ (52.8 US gal, 44.0 Imp gal)/min.
		Pump speed—pressure leak	6,000 rpm — 23.0 mAq (75.5 ftAq)
		Engine coolant temperature	85°C (185°F)
	Impeller diameter	76 mm (2.99 in)	
Number of impeller vanes	8		
Pump pulley diameter	60 mm (2.36 in)		
Clearance between impeller and case	Standard	0.5 — 0.7 mm (0.020 — 0.028 in)	
	Limit	1.0 mm (0.039 in)	
“Thrust” runout of impeller end	0.5 mm (0.020 in)		
Thermostat	Type	Wax pellet type	
	Starts to open	76 — 80°C (169 — 176°F)	
	Fully opened	91°C (196°F)	
	Valve lift	9.0 mm (0.354 in) or more	
	Valve bore	35 mm (1.38 in)	
Radiator fan	Motor	75 W (main fan) 75 W (sub fan)	
	Fan diameter × Blade	300 mm (11.81 in) × 5 (main fan) 300 mm (11.81 in) × 4 (sub fan)	
Radiator	Type	Down flow, pressure type	
	Core dimensions	691.5 × 340 × 16 mm (27.22 × 13.39 × 0.63 in)	
	Pressure range in which cap valve is open or closed	Above: 108±15 kPa (1.1±0.15 kg/cm ² , 16±2 psi) Below: -1.0 to -4.9 kPa (-0.01 to -0.05 kg/cm ² , -0.1 to -0.7 psi)	
	Fins	Corrugated fin type	
Reservoir tank	Capacity	0.5 ℓ (0.5 US qt, 0.4 Imp qt)	

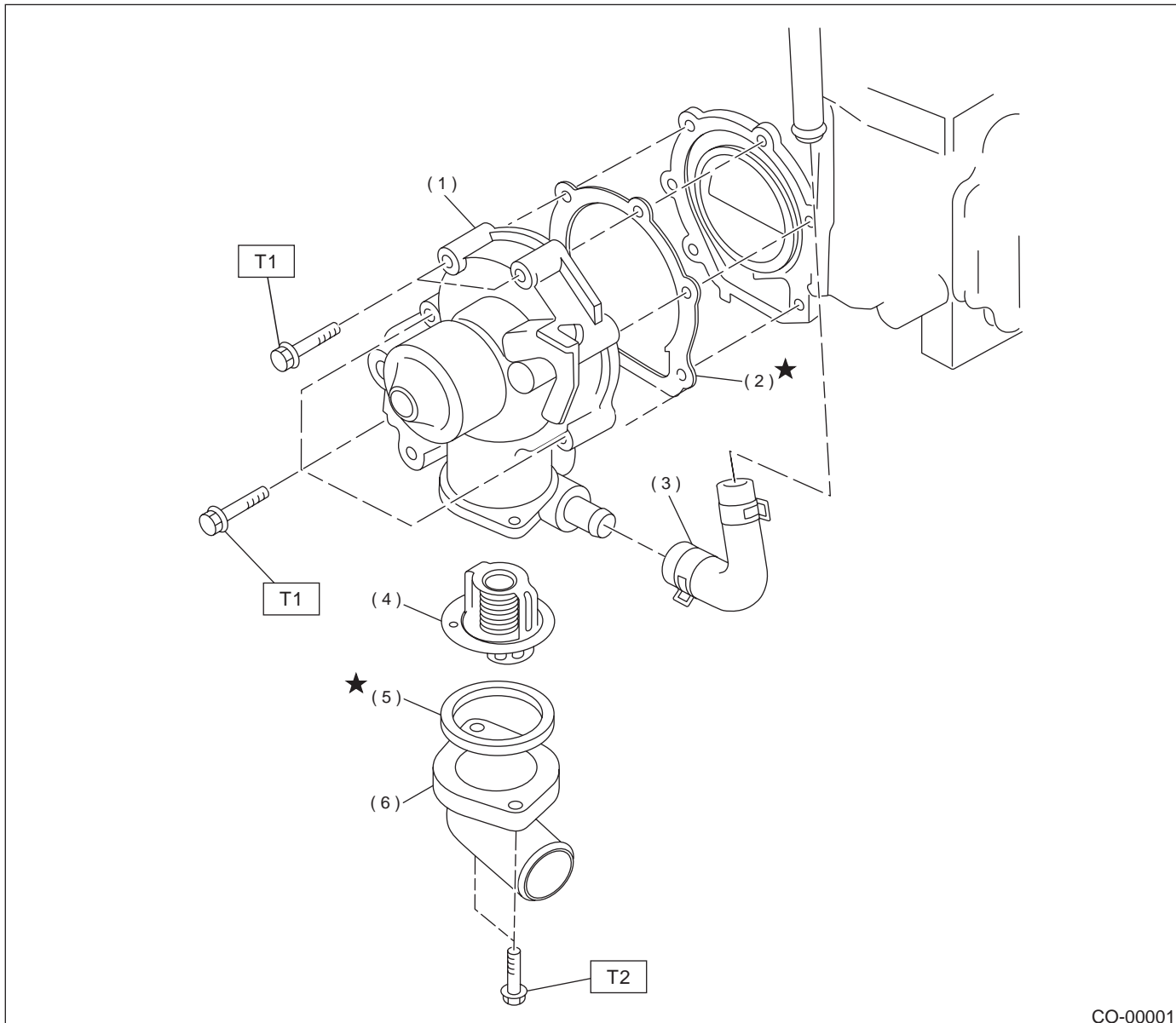
CO(H4SO)-2

GENERAL DESCRIPTION

COOLING

B: COMPONENT

1. WATER PUMP



- (1) Water pump ASSY
- (2) Gasket
- (3) Heater by-pass hose
- (4) Thermostat

- (5) Gasket
- (6) Thermostat cover

Tightening torque: N·m (kgf·m, ft·lb)

**T1: First 12 (1.2, 8.7)
Second 12 (1.2, 8.7)**

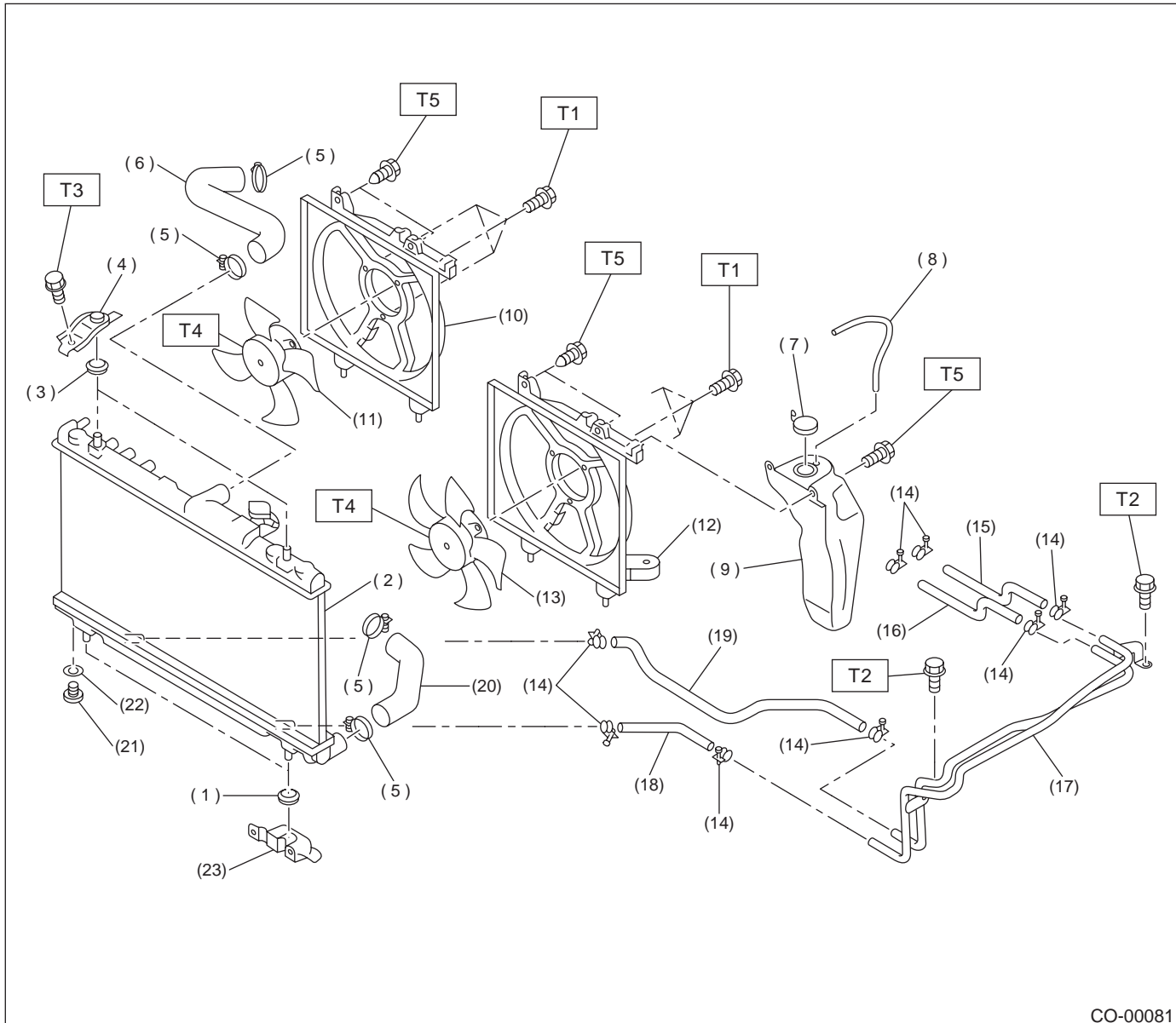
T2: 6.5 (0.66, 4.8)

CO(H4SO)-3

GENERAL DESCRIPTION

COOLING

2. RADIATOR AND RADIATOR FAN



CO-00081

- | | | |
|--|--|--|
| (1) Radiator lower cushion | (12) Main fan shroud | (19) ATF inlet hose B (AT vehicles only) |
| (2) Radiator | (13) Radiator main fan and main fan motor ASSY | (20) Radiator outlet hose |
| (3) Radiator upper cushion | (14) ATF hose clamp (AT vehicles only) | (21) Radiator drain plug |
| (4) Radiator upper bracket | (15) ATF inlet hose A (AT vehicles only) | (22) O-ring |
| (5) Clamp | (16) ATF outlet hose A (AT vehicles only) | (23) Radiator lower bracket |
| (6) Radiator inlet hose | (17) ATF pipe (AT vehicles only) | |
| (7) Engine coolant reservoir tank cap | (18) ATF outlet hose B (AT vehicles only) | |
| (8) Overflow hose | | |
| (9) Engine coolant reservoir tank | | |
| (10) Sub fan shroud | | |
| (11) Radiator sub fan and sub fan motor ASSY | | |

Tightening torque: N·m (kgf·m, ft·lb)

T1: 4.4 (0.45, 3.3)

T2: 12 (1.2, 8.7)

T3: 18 (1.8, 13.0)

T4: 3.4 (0.35, 2.5)

T5: 4.9 (0.50, 3.6)

CO(H4SO)-4

GENERAL DESCRIPTION

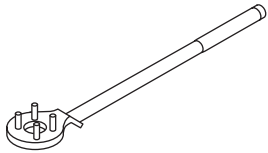
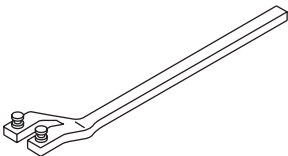
COOLING

C: CAUTION

- Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust or dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly, and replacement.

- Be careful not to burn your hands, because each part in the vehicle is hot after running.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or safety stands at the specified points.
- Before disconnecting electrical connectors of sensors or units, be sure to disconnect ground cable from battery.

D: PREPARATION TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST-499977100	499977100	CRANK PULLEY WRENCH	Used for fixing crankshaft pulley when loosening and tightening crankshaft pulley bolts.
 ST18231AA010	18231AA010	CAMSHAFT SPROCKET WRENCH	<ul style="list-style-type: none"> • Used for removing and installing camshaft sprocket. • Camshaft sprocket wrench (499207100) is also available.