1. General Description

A: SPECIFICATIONS

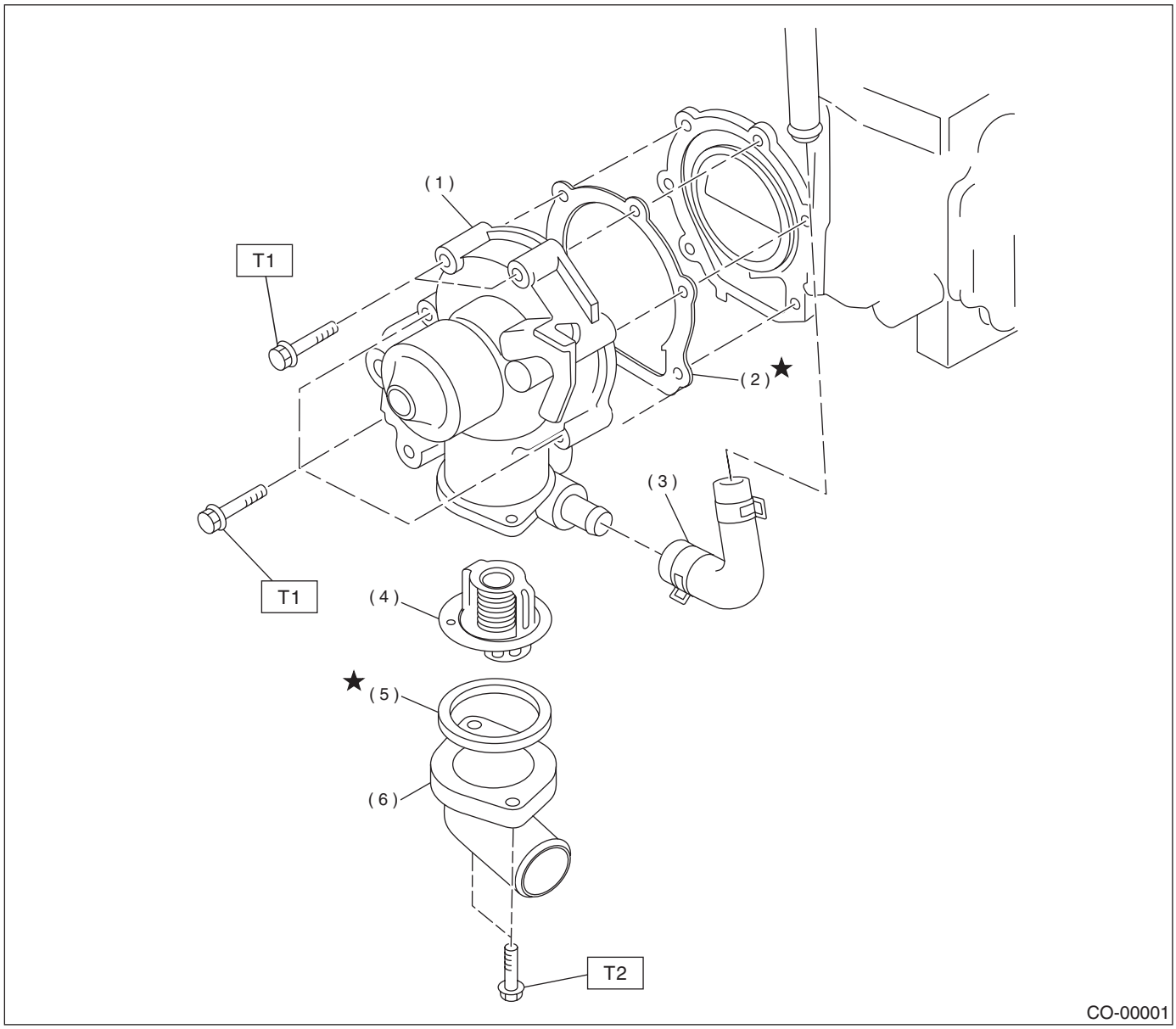
Model			Non-turbo	Turbo
Cooling system			Electric fan + Forced engine coolant circulation system	
Total engine coolant capacity ℓ (US qt, Imp qt)			MT: Approx. 7.0 (7.4, 6.2) AT: Approx. 6.9 (7.29, 6.07)	MT: Approx. 7.7 (8.14, 6.78) AT: Approx. 7.6 (8.03, 6.69)
Water pump	Type		Centrifugal impeller type	
	Discharge performance I	Flow rate	20 ℓ (5.3 US gal, 4.4 Imp gal)/min.	
		Pump speed—discharge pressure	700 rpm — 2.9 kPa (0.3 mAq 1.0 ftAq)	
		Engine coolant temperature	85°C (185°F)	
	Discharge performance II	Flow rate	100 ℓ (26.4 US gal, 22.0 Imp gal)/min.	
		Pump speed—discharge pressure	3,000 rpm — 49.0 kPa (5.0 mAq 16.4 ftAq)	
		Engine coolant temperature	85°C (185°F)	
	Discharge performance III	Flow rate	200 ℓ (52.8 US gal, 44.0 Imp gal)/min.	
		Pump speed—discharge pressure	6,000 rpm — 225.4 kPa (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	Main fan	70 W	120 W
		Sub fan	70 W	120 W
	Fan diameter × Blade		320 mm (12.60 in) × 5 (main fan) 320 mm (12.60 in) × 7 (sub fan)	
Radiator	Type		Down flow, pressure type	
	Core dimensions		*1 691.5 × 340 × 16 mm (27.22 × 13.39 × 0.63 in)	*2 691.5 × 340 × 27 mm (27.22 × 13.39 × 1.06 in)
	Pressure range in which cap valve is open		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)	

*1: Non-turbo model and turbo AT model
*2: Turbo MT model

B: COMPONENT

1. WATER PUMP

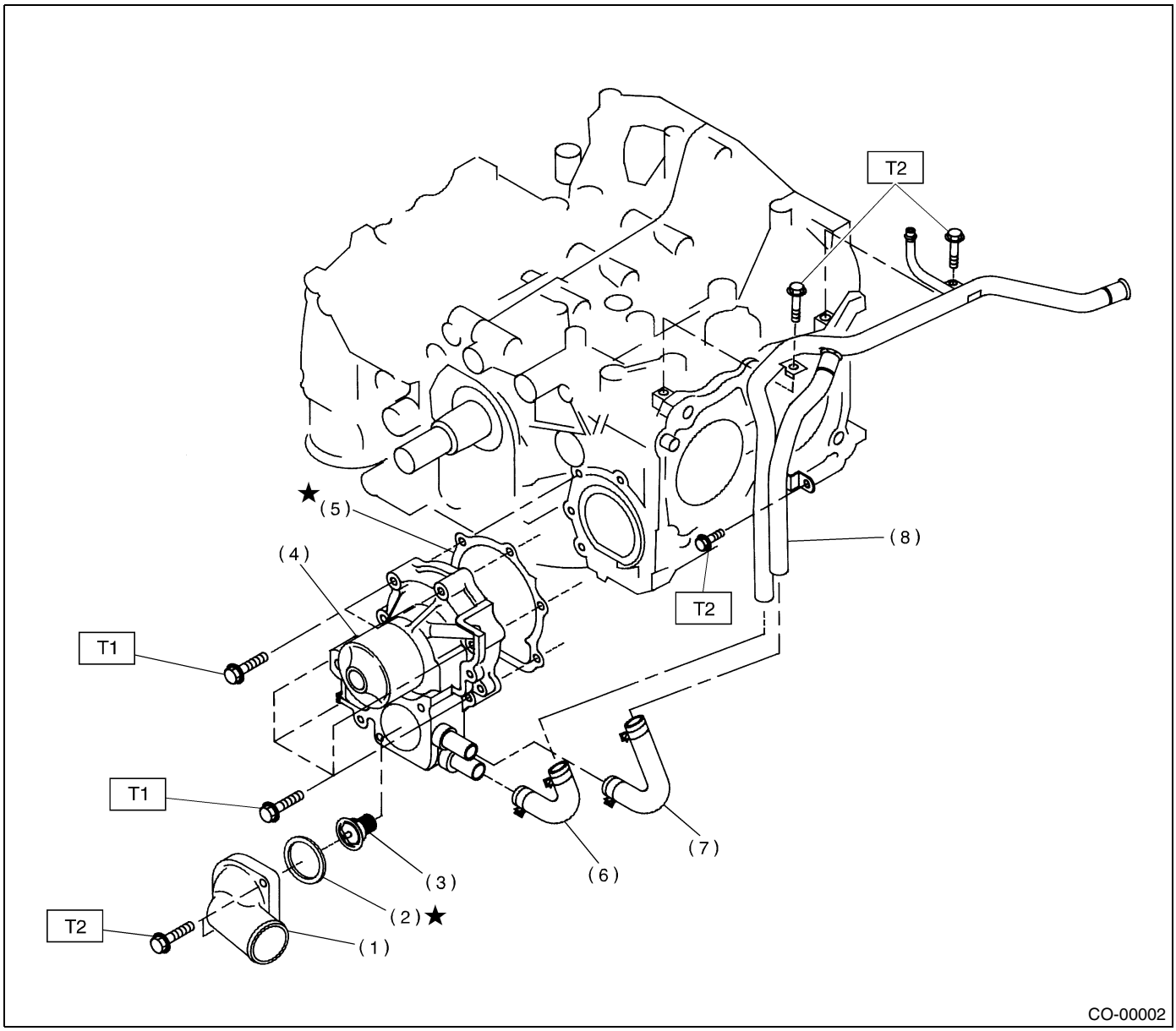
• NON-TURBO MODEL



(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)

• TURBO MODEL

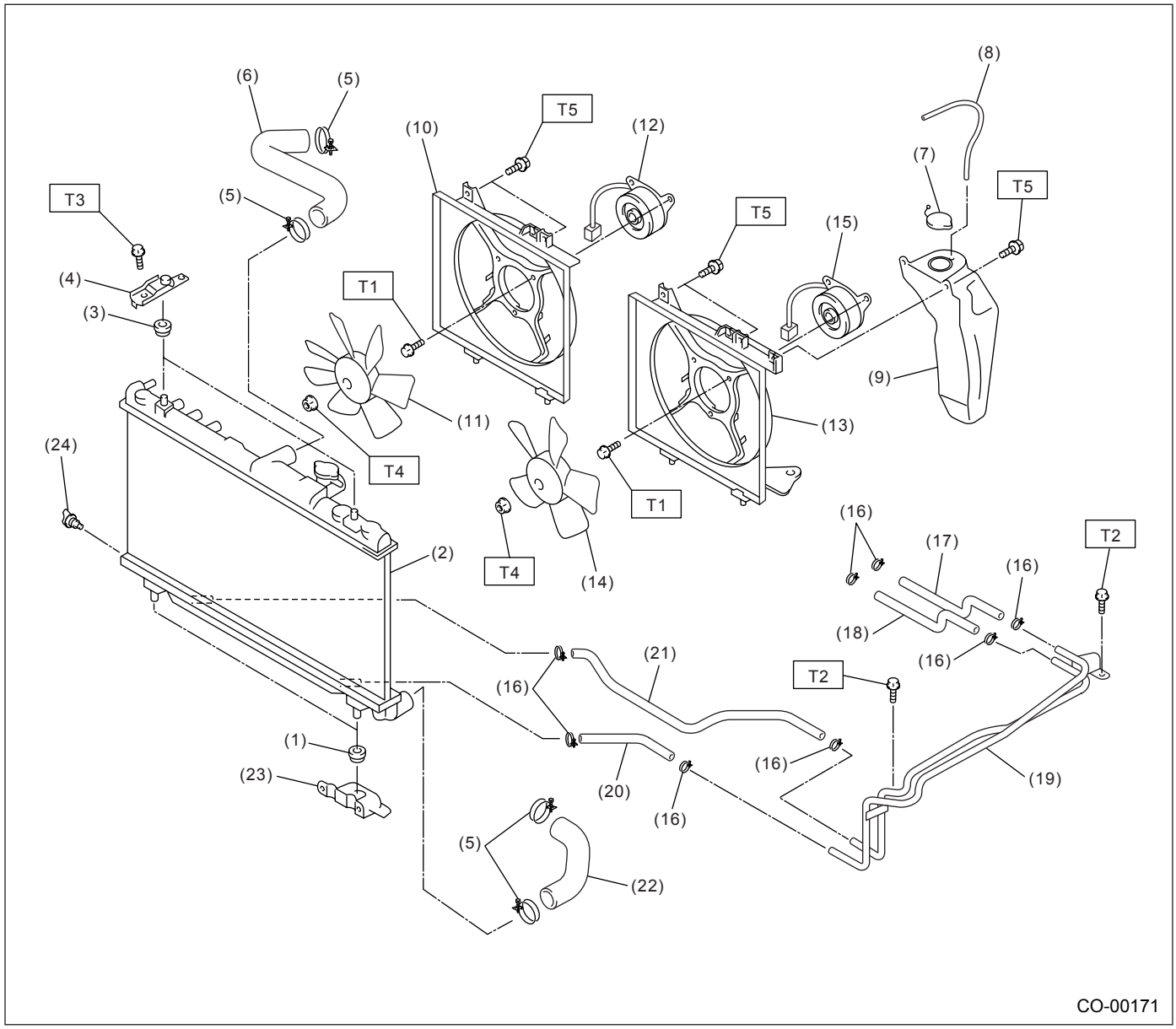


(1) Thermostat cover
(2) Gasket
(3) Thermostat
(4) Water pump ASSY
(5) Gasket
(6) Header by-pass hose
(7) Coolant filler tank by-pass hose
(8) Water by-pass pipe

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)

2. RADIATOR AND RADIATOR FAN

• NON-TURBO MODEL

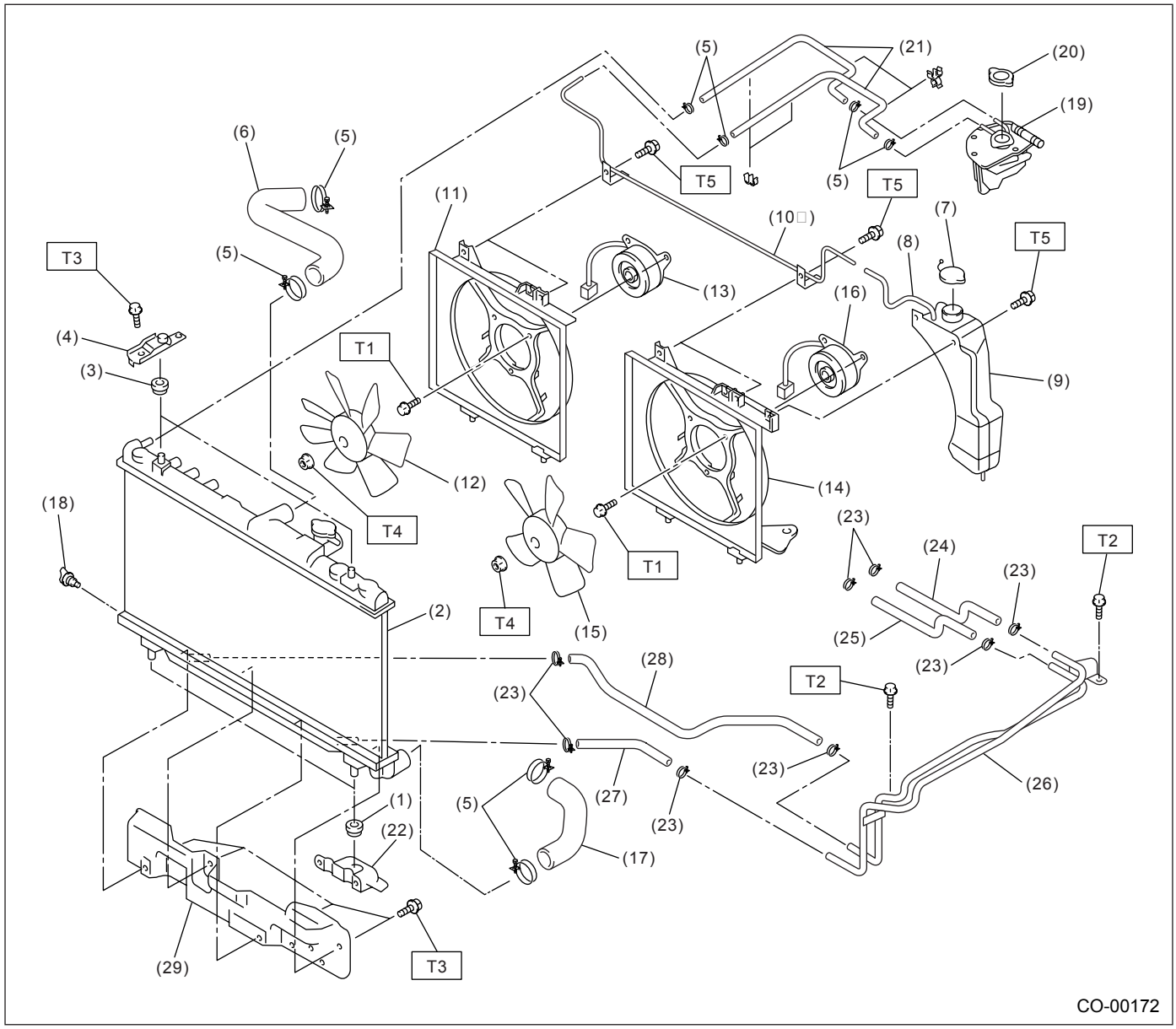


CO-00171

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

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)*

• TURBO MODEL



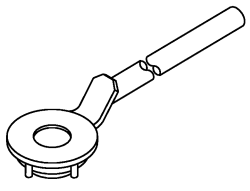
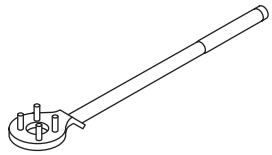
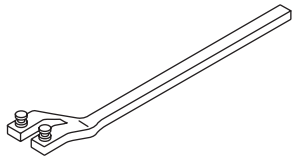
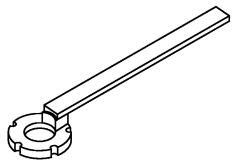
(1) Radiator lower cushion
(2) Radiator
(3) Radiator upper cushion
(4) Radiator upper bracket
(5) Clamp
(6) Radiator inlet hose
(7) Engine coolant reservoir tank cap
(8) Over flow hose
(9) Engine coolant reservoir tank
(10) Over flow pipe
(11) Sub fan shroud
(12) Radiator sub fan
(13) Radiator sub fan motor
(14) Main fan shroud
(15) Radiator main fan
(16) Radiator main fan motor
(17) Radiator outlet hose
(18) Radiator drain plug
(19) Engine coolant filler tank
(20) Engine coolant filler tank cap
(21) Engine coolant hose
(22) Radiator lower bracket
(23) ATF hose clamp (AT vehicles only)
(24) ATF inlet hose A (AT vehicles only)
(25) ATF outlet hose A (AT vehicles only)
(26) ATF pipe (AT vehicles only)
(27) ATF inlet hose B (AT vehicles only)
(28) ATF outlet hose B (AT vehicles only)
(29) Radiator under cover

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)

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 negative terminal from battery.

D: PREPARATION TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST-499977400	499977400	CRANK PULLEY WRENCH	Used for stopping crankshaft pulley when loosening and tightening crankshaft pulley bolts. (Turbo model)
 ST-499977100	499977100	CRANK PULLEY WRENCH	Used for stopping crankshaft pulley when loosening and tightening crankshaft pulley bolts. (Non-turbo model)
 ST18231AA010	18231AA010	CAMSHAFT SPROCKET WRENCH	Used for removing and installing camshaft sprocket. (Non-turbo LH side and Turbo LH side intake) • Also the CAMSHAFT SPROCKET WRENCH (499207100) can be used. (Non-turbo LH side only)
 ST-499207400	499207400	CAMSHAFT SPROCKET WRENCH	Used for removing and installing camshaft sprocket.