1. General Description

A: SPECIFICATION

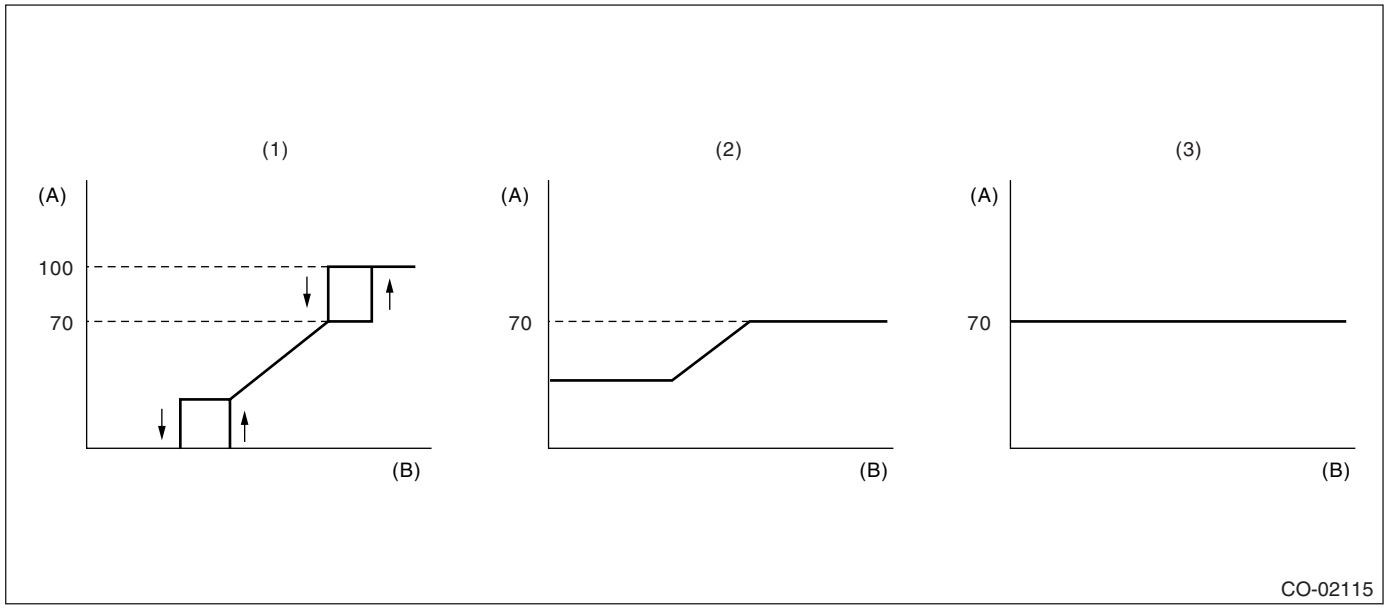
Cooling system			Electric fan + Forced engine coolant circulation system
Total engine coolant capacity		ℓ (US qt, Imp qt)	Approx. 7.2 (7.6, 6.3)
Water pump	Type		Centrifugal impeller type
	Discharge performance I	Discharge rate ℓ (US gal, Imp gal)/min	320 (84.5, 70.4)
		Pump speed — Discharge pressure	5,500 rpm — 176.5 kPa (5.0 mAq)
		Engine coolant temperature	80°C (176°F)
	Impeller diameter	mm (in)	73.2 (2.88)
	Number of impeller vanes		6
	Number of pump sprocket teeth		22
Thermostat	Type		Wax pellet type
	Starting temperature to open		80 — 84°C (176 - 183°F)
	Fully opens		95°C (203°F)
	Valve lift	mm (in)	9.0 (0.354) or more
	Valve bore	mm (in)	35 (1.38)
Radiator fan	Motor input	Main fan W	160
		Sub fan W	160
	Fan diameter / Blade	Main fan	320 mm (12.60 in)/5
		Sub fan	320 mm (12.6 in)/7
Radiator	Type		Cross flow, pressure type
	Core dimensions	Width×Height×Thickness mm (in)	674.2 × 478.6 × 27 (26.543 × 18.842 × 1.06)
	Pressure range in which cap valve is open	kPa (kg/cm^2, psi)	Above: 108±15 (1.1±0.15, 16±2) Below: The atmospheric pressure or less
	Fins		Corrugated fin type
Reservoir tank	Capacity	ℓ (US qt, Imp qt)	0.45 (0.48, 0.40)

• Outside temperature: Less than 35°C (95°F)

A/C compressor load		Engine coolant temperature		
		Increase: less than 95°C (203°F) Decrease: less than 92°C (198°F)	Increase: 95 — 101°C (203 — 214°F) Decrease: 92 — 99°C (198 — 210°F)	Increase: more than 102°C (216°F) Decrease: more than 100°C (212°F)
OFF		0%	Refer to fig. (1)	100%
ON	Middle pressure switch OFF	Refer to fig. (2)		100%
	Middle pressure switch ON	Refer to fig. (3)		100%

- **Outside temperature: 35°C (95°F) or more.**

Vehicle speed	A/C compressor load		Engine coolant temperature		
			Increase: less than 95°C (203°F) Decrease: less than 92°C (198°F)	Increase: 95 — 101°C (203 — 214°F) Decrease: 92 — 99°C (198 — 210°F)	Increase: more than 102°C (216°F) Decrease: more than 100°C (212°F)
Driving speed 19 km/h (12 MPH) or less Driving speed 10 km/h (6 MPH) or less	OFF		Refer to fig. (1)		100%
	ON	Middle pressure switch OFF	Refer to fig. (2)		100%
		Middle pressure switch ON	100%		
During acceleration: 20-69 km/h (12-43 MPH) During deceleration: 11-64 km/h (7-40 MPH)	OFF		Refer to fig. (1)		100%
	ON	Middle pressure switch OFF	100%		
		Middle pressure switch ON	100%		
During acceleration: 70-105 km/h (43-65 MPH) During deceleration: 65-103 km/h (40-64 MPH)	OFF		Refer to fig. (1)		100%
	ON	Middle pressure switch OFF	Refer to fig. (2)		100%
		Middle pressure switch ON	Refer to fig. (3)		100%
During acceleration: 106 km/h (66 MPH) or more During deceleration: 104 km/h (65 MPH) or more	OFF		Refer to fig. (1)		100%
	ON	Middle pressure switch OFF	Refer to fig. (2)		100%
		Middle pressure switch ON	Refer to fig. (3)		100%



(A) Fan speed (%)

(B) Water temperature

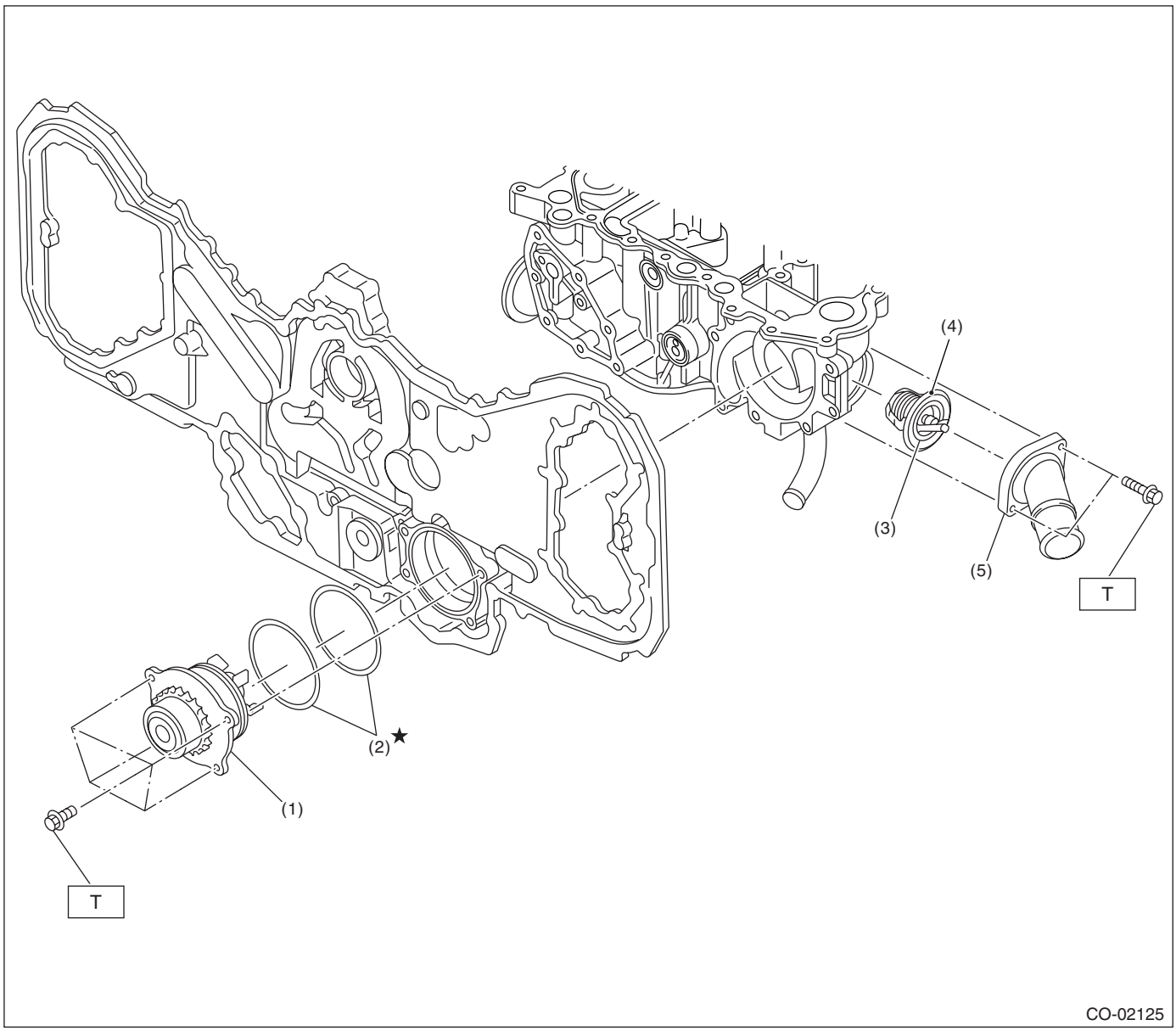
(1) A/C OFF control

(2) A/C ON control (A/C middle pressure switch OFF)

(3) A/C ON control (A/C middle pressure switch ON)

B: COMPONENT

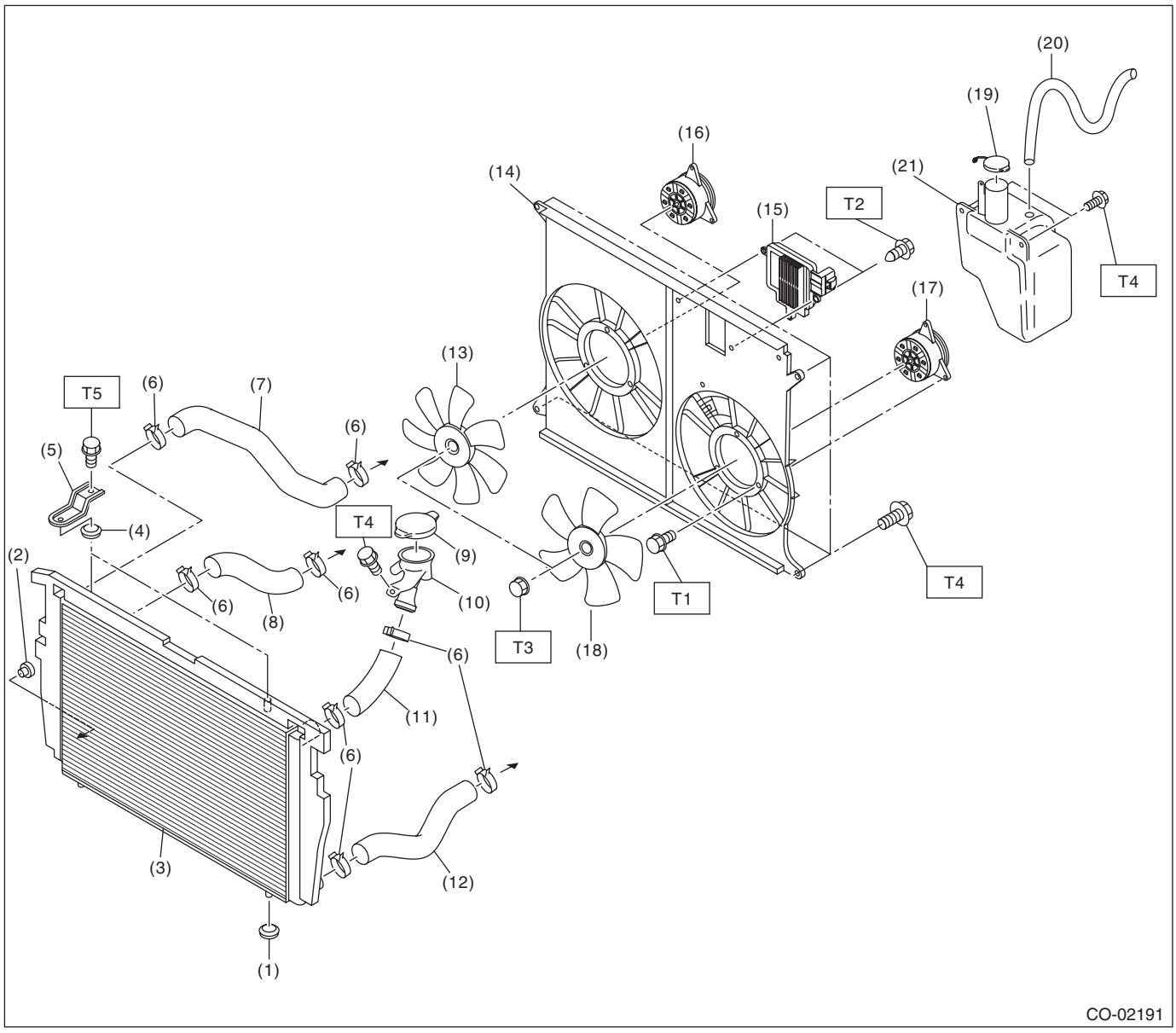
1. WATER PUMP



(1) Water pump ASSY
(2) O-ring
(3) Thermostat
(4) Gasket
(5) Thermostat cover

Tightening torque: N·m (kgf-m, ft-lb)
T: 6.4 (0.65, 4.7)

2. RADIATOR AND RADIATOR FAN



(1) Radiator lower cushion
(2) Engine coolant drain cock
(3) Radiator
(4) Radiator upper cushion
(5) Radiator upper bracket
(6) Clamp
(7) Radiator hose A
(8) Radiator hose B
(9) Radiator cap
(10) Radiator hose bracket
(11) Radiator hose B
(12) Radiator hose D
(13) Radiator sub fan
(14) Radiator fan shroud
(15) Radiator fan control unit
(16) Radiator sub fan motor
(17) Radiator main fan motor
(18) Radiator main fan
(19) Engine coolant reservoir tank cap
(20) Over flow hose
(21) Engine coolant reservoir tank

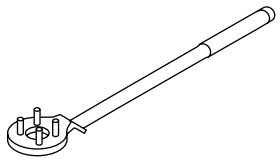
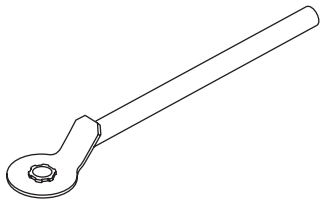
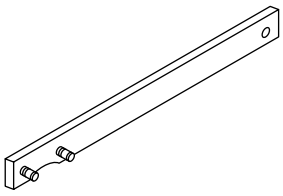
Tightening torque: N·m (kgf-m, ft-lb)
T1: 3.8 (0.39, 2.8)
T2: 2.6 (0.27, 1.9)
T3: 6.3 (0.64, 4.6)
T4: 7.5 (0.76, 5.5)
T5: 12 (1.2, 8.9)

C: CAUTION

- Wear work 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 and dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly and replacement.
- Be careful not to burn yourself, because each part on the vehicle is hot after running.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or rigid racks at the specified points.
- Before disconnecting connectors of sensors or units, be sure to disconnect the ground cable from battery.

D: PREPARATION TOOL

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST-499977100	499977100	CRANK PULLEY WRENCH	Used for stopping rotation of crank pulley when loosening and tightening crank pulley bolts.
 ST-499977500	499977500	CAM SPROCKET WRENCH	Used for removing and installing intake cam sprocket.
 ST18231AA020	18231AA020	CAM SPROCKET WRENCH	Used for removing and installing the exhaust cam sprocket.

2. GENERAL TOOL

TOOL NAME	REMARKS
Radiator cap tester	Used for measuring pressure.