1. General Description

A: SPECIFICATION

Cooling system			Electric fan + Forced engine coolant circulation system
Total engine coolant capacity		ℓ (US qt, Imp qt)	Approx. 7.6 (8.0, 6.7)
Water pump	Type		Centrifugal impeller type
	Discharge performance	Discharge rate ℓ (US gal, Imp gal)/min	240 (63.4, 52.8)
		Pump speed — Discharge pressure	4,960 rpm — 140 kPa (14 mAq)
		Engine coolant temperature	80°C (176°F)
	Impeller diameter	mm (in)	66 (2.60)
	Number of impeller vanes		8
	Number of pump sprocket teeth		23
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	200
		Sub fan W	200
	Fan diameter / Blade	Main fan	320 mm (12.6 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:88.3±14.7 (0.9±0.15, 13±2) Below: The barometric pressure or less
	Fins		Corrugated fin type
Reservoir tank	Capacity	ℓ (US qt, Imp qt)	0.45 (0.48, 0.40)

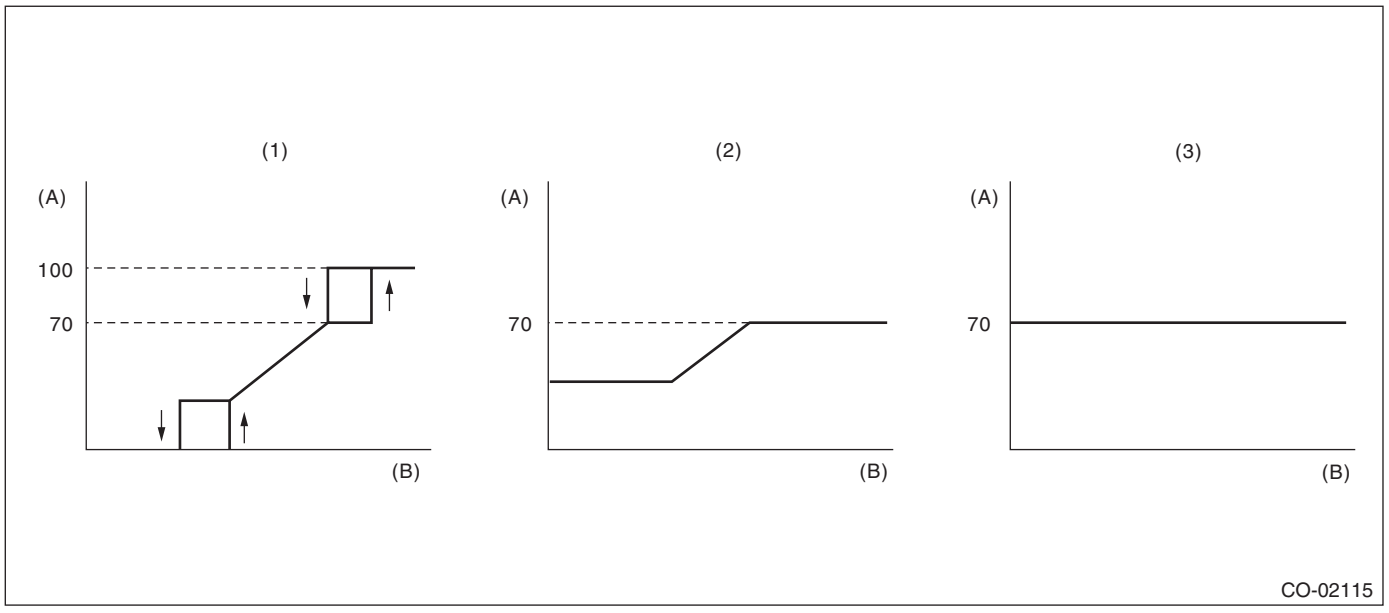
Coolant	Recommended materials	Item number	Alternative
Coolant	SUBARU coolant	000016218	Phosphoric acid (non-amine) type
Water for dilution	Distilled water	—	Soft water or tap water
Cooling system protective agent	Cooling system conditioner	SOA345001	None

• 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: 98 — 101°C (203 — 214°F) Decrease: 92 — 99°C (198 — 210°F)	Increase: 102°C (216°F) or more Decrease: 100°C (212°F) or more
OFF		0%	(1) See the figure	100%
ON	Middle pressure switch OFF	(2) See the figure		100%
	Middle pressure switch ON	(3) See the figure		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: 102°C (216°F) or more Decrease: 100°C (212°F) or more
During acceleration 19 km/h (12 MPH) or less During deceleration 10 km/h (6 MPH) or less	OFF		(1) See the figure		100%
	ON	Middle pressure switch OFF	(2) See the figure		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		(1) See the figure		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		(1) See the figure		100%
	ON	Middle pressure switch OFF	(2) See the figure		100%
		Middle pressure switch ON	(3) See the figure		100%
During acceleration: 106 km/h (66 MPH) or more During deceleration: 104 km/h (65 MPH) or more	OFF		(1) See the figure		100%
	ON	Middle pressure switch OFF	(2) See the figure		100%
		Middle pressure switch ON	(3) See the figure		100%



(A) Fan speed (%)

(B) Coolant temperature

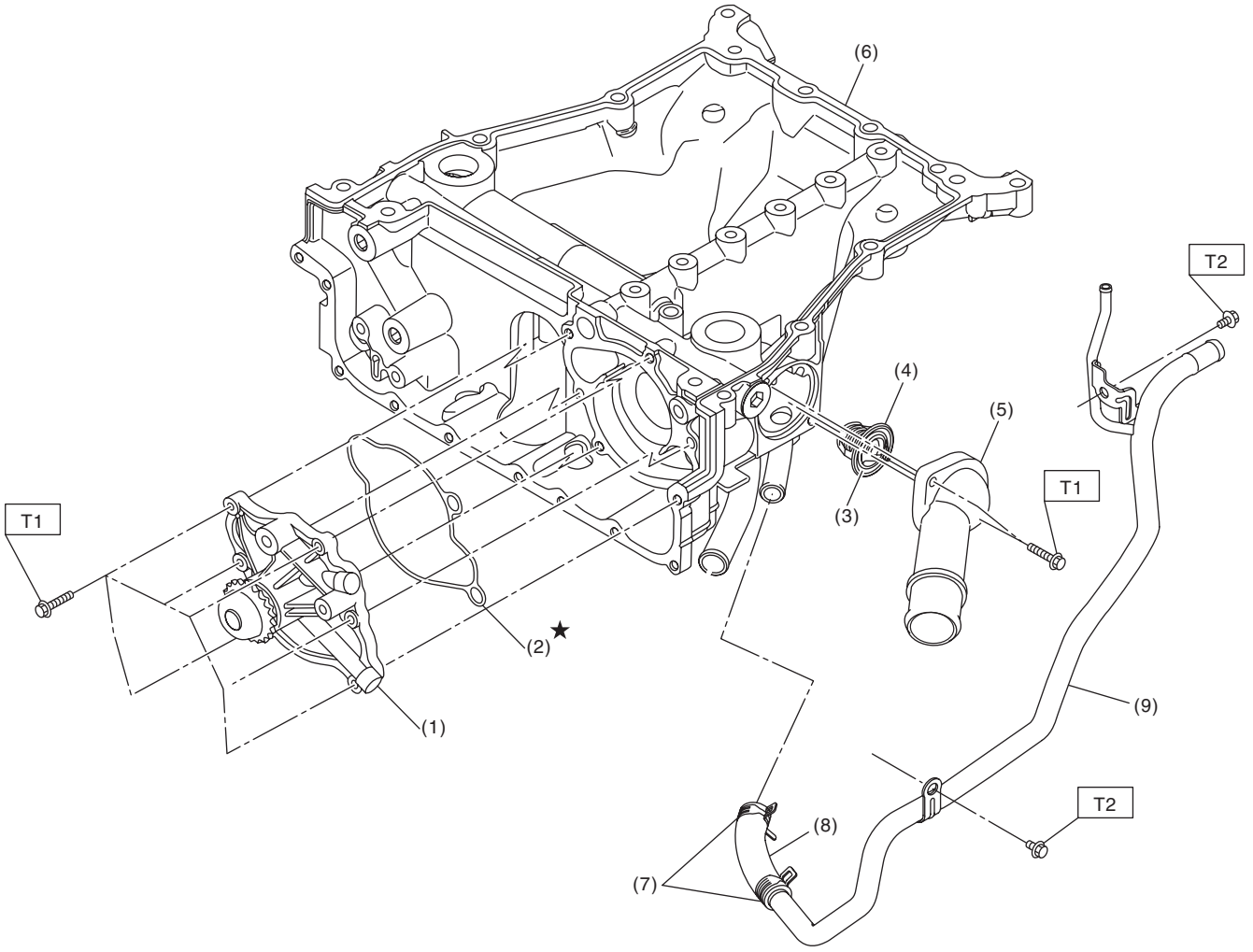
(1) A/C OFF control

(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 & WATER PIPE

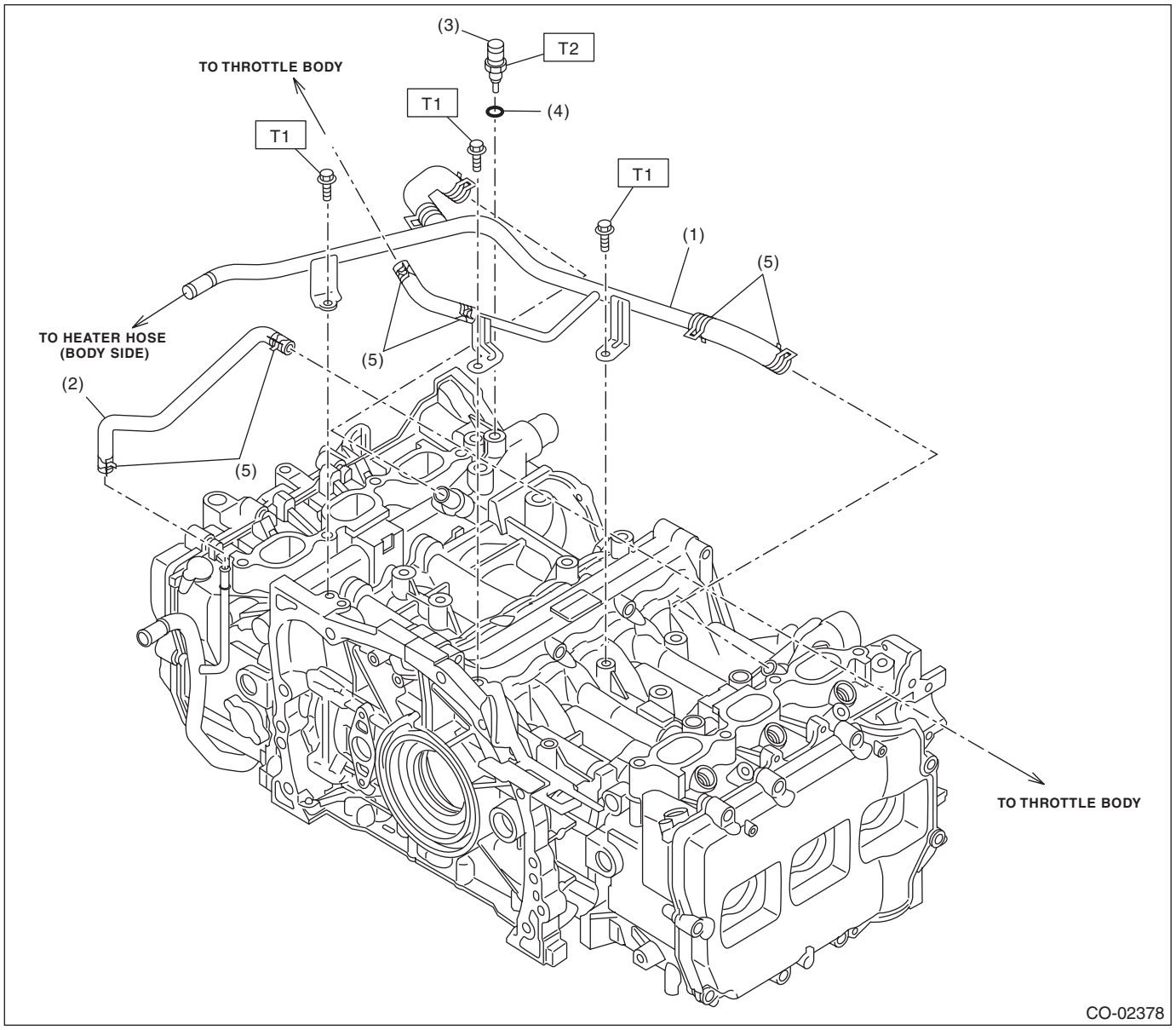


CO-02339

(1) Water pump ASSY
(2) O-ring
(3) Thermostat
(4) Gasket
(5) Thermostat cover
(6) Oil pan upper
(7) Clamp
(8) Hose
(9) Water return pipe

Tightening torque:N·m (kgf-m, ft-lb)
T1: 6.4 (0.65, 4.7)
T2: 16 (1.6, 11.8)

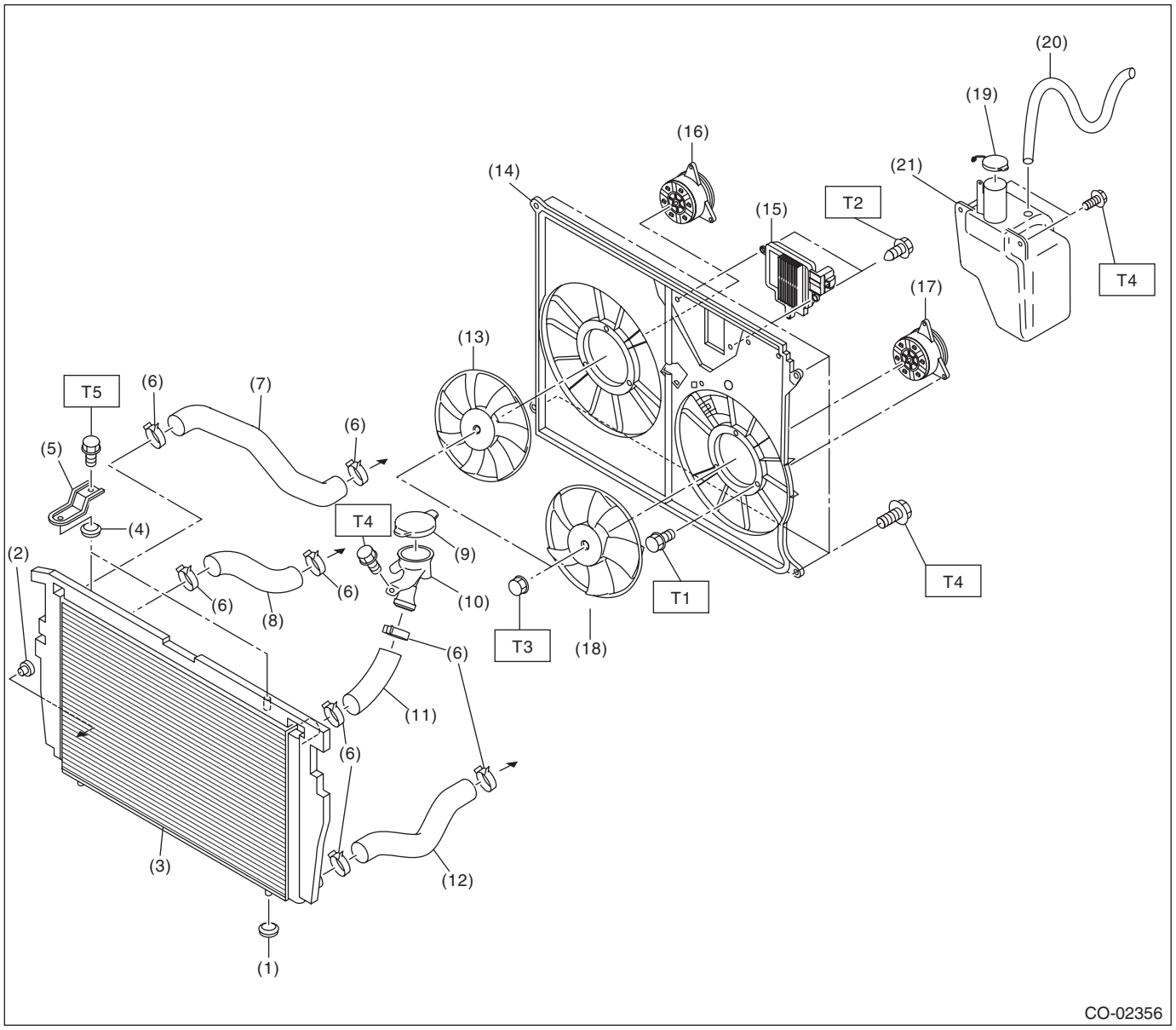
2. ENGINE COOLANT TEMPERATURE SENSOR & HEATER HOSE



(1)	Heater hose pipe	(4)	Gasket
(2)	Preheater hose	(5)	Clamp
(3)	Engine coolant temperature sensor		

Tightening torque:N·m (kgf-m, ft-lb)	
T1:	*19 (1.9, 14.0)*
T2:	*22 (2.2, 16.2)*

3. 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 C
(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 appropriate work clothing, including a cap, protective goggles and protective shoes when performing any work.
- 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.
- Vehicle components are extremely hot after driving. Be wary of receiving burns from heated parts.
- 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 the battery.

D: PREPARATION TOOL

1. GENERAL TOOL

TOOL NAME	REMARKS
Radiator cap tester	Used for measuring pressure.