1. General Description

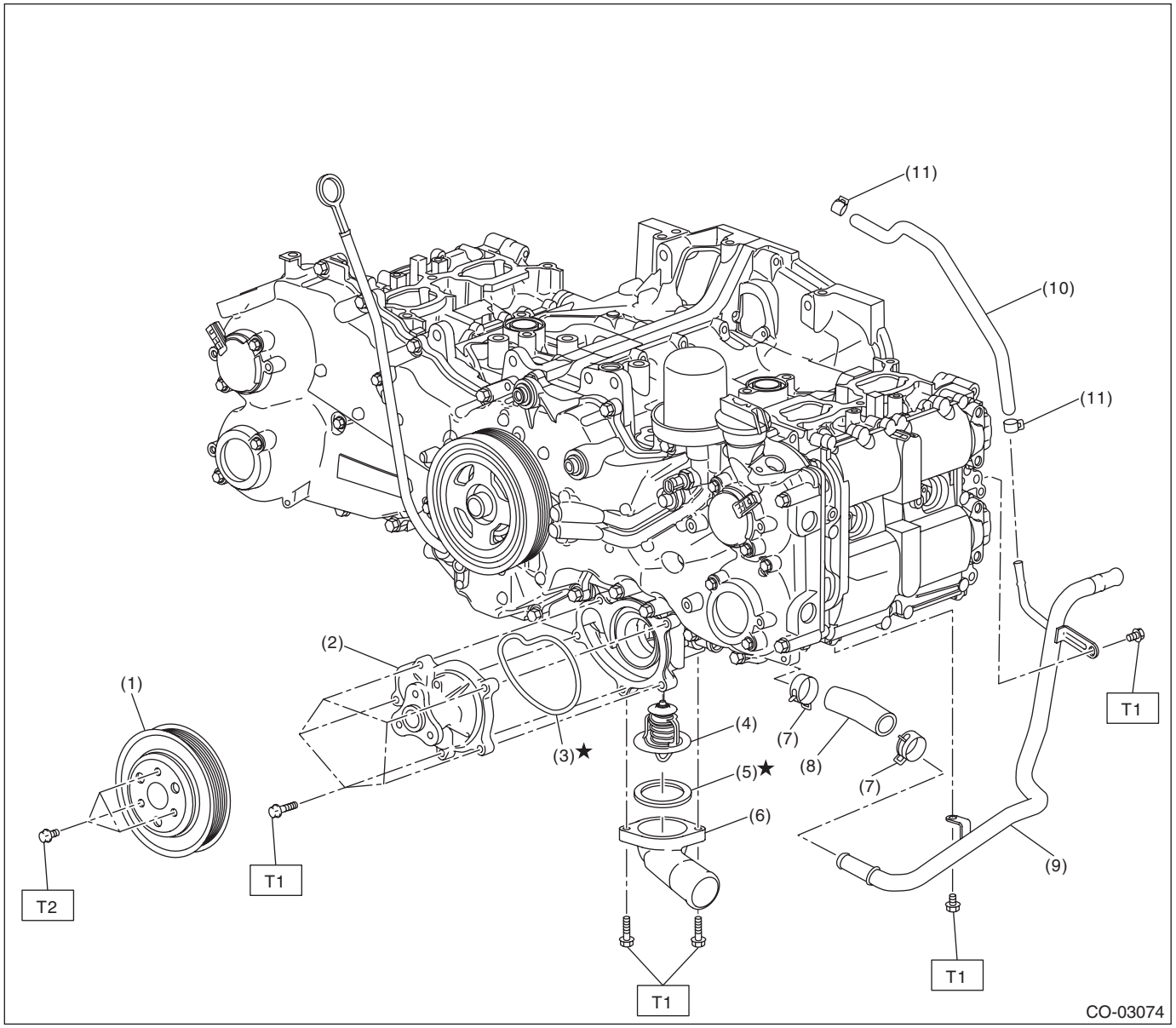
A: SPECIFICATION

Cooling system				Electric fan + Forced engine coolant circulation system
Total engine coolant capacity	L (US qt, Imp qt)	CVT model		Approx. 7.5 (7.9, 6.6)
		MT model		Approx. 7.6 (8.0, 6.7)
Water pump	Type			Centrifugal impeller type
	Discharge performance	Discharge rate L (US gal, Imp gal)/min.		230 (60.8, 50.6)
		Pump speed — Discharge pressure		6,600 rpm — 211.0 kPa (22 mAq)
		Engine coolant temperature		80°C (176°F)
	Impeller diameter mm (in)			60 (2.36)
	Number of impeller vanes			7
	Pump pulley diameter mm (in)			130 (5.12)
Thermostat	Type			Wax pellet type
	Starting temperature to open			87 — 91°C (189 — 196°F)
	Fully opens			98°C (208°F)
	Valve lift mm (in)			8.0 (0.315) or more
	Valve bore mm (in)			32 (1.26)
Radiator fan	Motor input	Main fan W		90
		Sub fan W		90
	Fan diameter / Blade	Main fan		300 mm (11.81 in)/4
		Sub fan		300 mm (11.81 in)/5
Radiator	Type			Down flow, pressure type
	Core dimensions	Width × Height × Thickness mm (in)		687.4 × 340 × 16 (27.06 × 13.39 × 0.63)
	Pressure range in which cap valve is open kPa (kg/cm^2, psi)	Positive pressure side	Standard	93 — 123 (0.95 — 1.25, 14 — 18)
			Limit	83 (0.85, 12)
		Negative pressure side	Standard	–1.0 to –4.9 or less (–0.01 — –0.05, –0.1 — –0.7)
	Fins			Corrugated fin type
Reservoir tank	Capacity L (US qt, Imp qt)			0.45 (0.48, 0.40)

	Recommended materials	Item number	Alternative
Coolant	SUBARU SUPER COOLANT (Concentrated type)	—	—
	SUBARU SUPER COOLANT (Diluted type)	K0670Y0001	
Water for dilution	Distilled water	—	Soft water or tap water
Cooling system protective agent	Cooling system conditioner	SOA345001	—

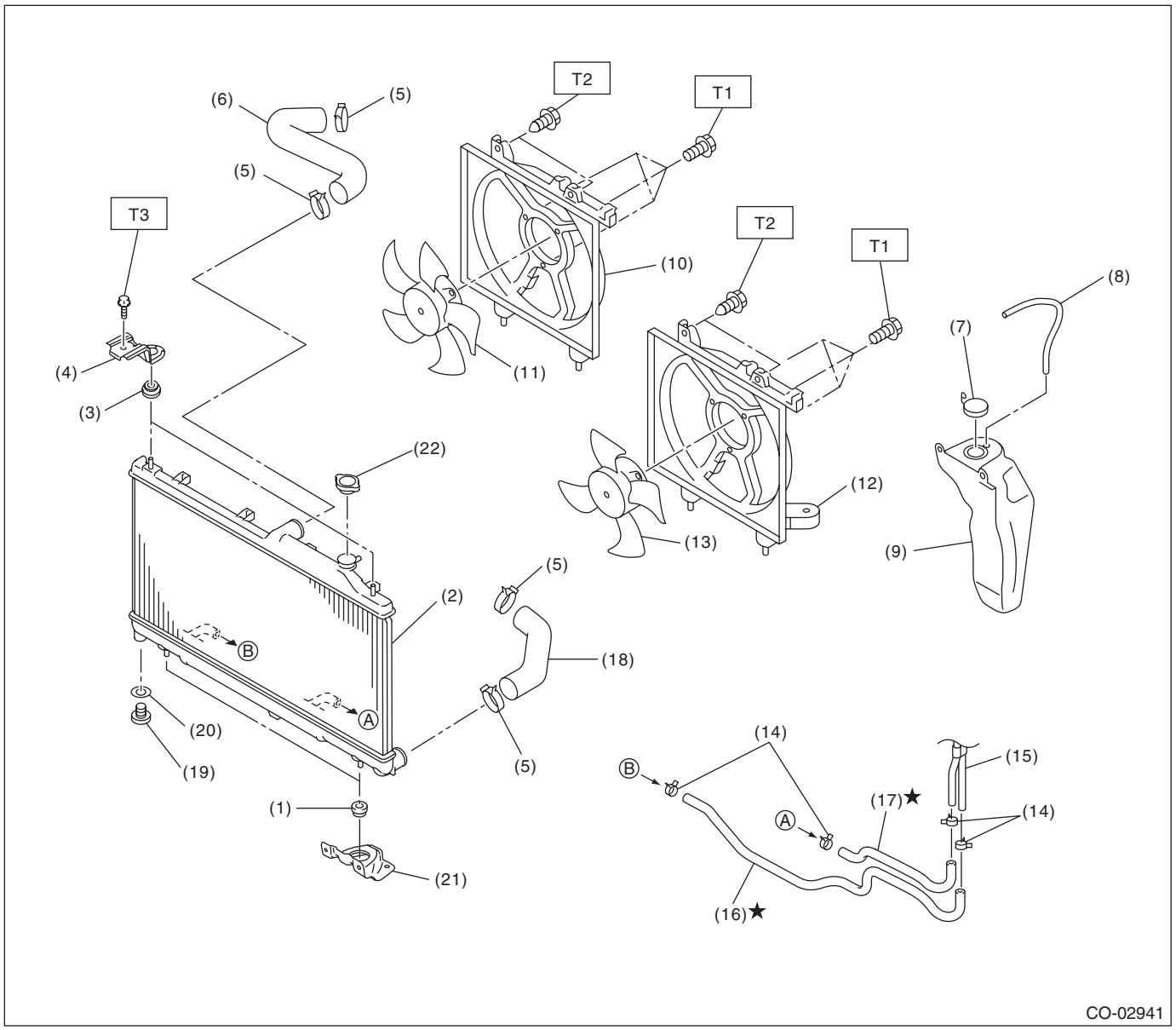
B: COMPONENT

1. WATER PUMP



(1)	Water pump pulley	(6)	Thermostat cover	(11)	Clip
(2)	Water pump ASSY	(7)	Clip		
(3)	Gasket	(8)	Water pipe hose	***Tightening torque: N·m (kgf-m, ft-lb)***	
(4)	Thermostat	(9)	Water pipe ASSY	***T1: 6.4 (0.7, 4.7)***	
(5)	Gasket	(10)	Preheater hose	***T2: 14 (1.4, 10.3)***	

2. RADIATOR & RADIATOR FAN



(1)	Radiator lower cushion	(10)	Radiator sub fan shroud	(19)	Radiator drain plug
(2)	Radiator	(11)	Radiator sub fan, radiator sub fan motor ASSY	(20)	O-ring
(3)	Radiator upper cushion	(12)	Radiator main fan shroud	(21)	Radiator lower bracket
(4)	Radiator upper bracket	(13)	Radiator main fan, radiator main fan motor ASSY	(22)	Radiator cap
(5)	Clip	(14)	CVTF hose clip (CVT model)		
(6)	Radiator inlet hose	(15)	CVTF pipe (CVT model)		
(7)	Engine coolant reservoir tank cap	(16)	CVTF radiator inlet hose (CVT model)		
(8)	Over flow hose	(17)	CVTF radiator outlet hose (CVT model)		
(9)	Engine coolant reservoir tank	(18)	Radiator outlet hose		

Tightening torque: N·m (kgf-m, ft-lb)

T1: 5 (0.5, 3.7)

T2: 7.5 (0.8, 5.5)

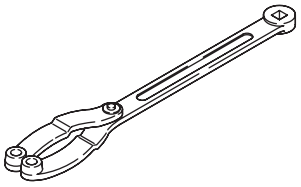
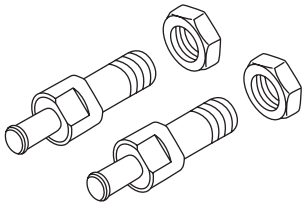
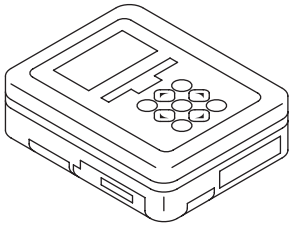
T3: 12 (1.2, 8.9)

C: CAUTION

- Prior to starting work, pay special attention to the following:
  1. Always wear work clothes, a safety cap, protective shoes. Additionally, wear a helmet, protective goggles, etc. if necessary.
  2. Protect the vehicle using a seat cover, fender cover, etc.
  3. Prepare the service tools, clean cloth, containers to catch grease and oil, etc.
- Prepare a container and cloth to prevent scattering of engine coolant when performing work where engine coolant can be spilled. If the oil spills, wipe it off immediately to prevent from penetrating into floor or flowing out for environmental protection.
- Vehicle components are extremely hot immediately after driving. Be wary of receiving burns from heated parts.
- When performing a repair, identify the cause of trouble and avoid unnecessary removal, disassembly and replacement.
- Before disconnecting connectors of sensors or units, be sure to disconnect the ground cable from battery.
- Always use the jack-up point when the shop jacks or rigid racks are used to support the vehicle.
- Remove contamination including dirt and corrosion before removal, installation, disassembly or assembly.
- Keep the removed parts in order and protect them from dust and dirt.
- All removed parts, if to be reused, should be reinstalled in the original positions with attention to the correct directions, etc.
- Bolts, nuts and washers should be replaced with new parts as required.
- Be sure to tighten the fasteners including bolts and nuts to the specified torque.
- Follow all government and local regulations concerning disposal of refuse when disposing engine coolant.

D: PREPARATION TOOL

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST18355AA000	18355AA000	PULLEY WRENCH	Used for removing and installing water pump pulley.
 ST18334AA030	18334AA030	PULLEY WRENCH PIN SET	Used for removing and installing water pump pulley.
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Radiator cap tester	Used for checking radiator and radiator cap.