1. General Description

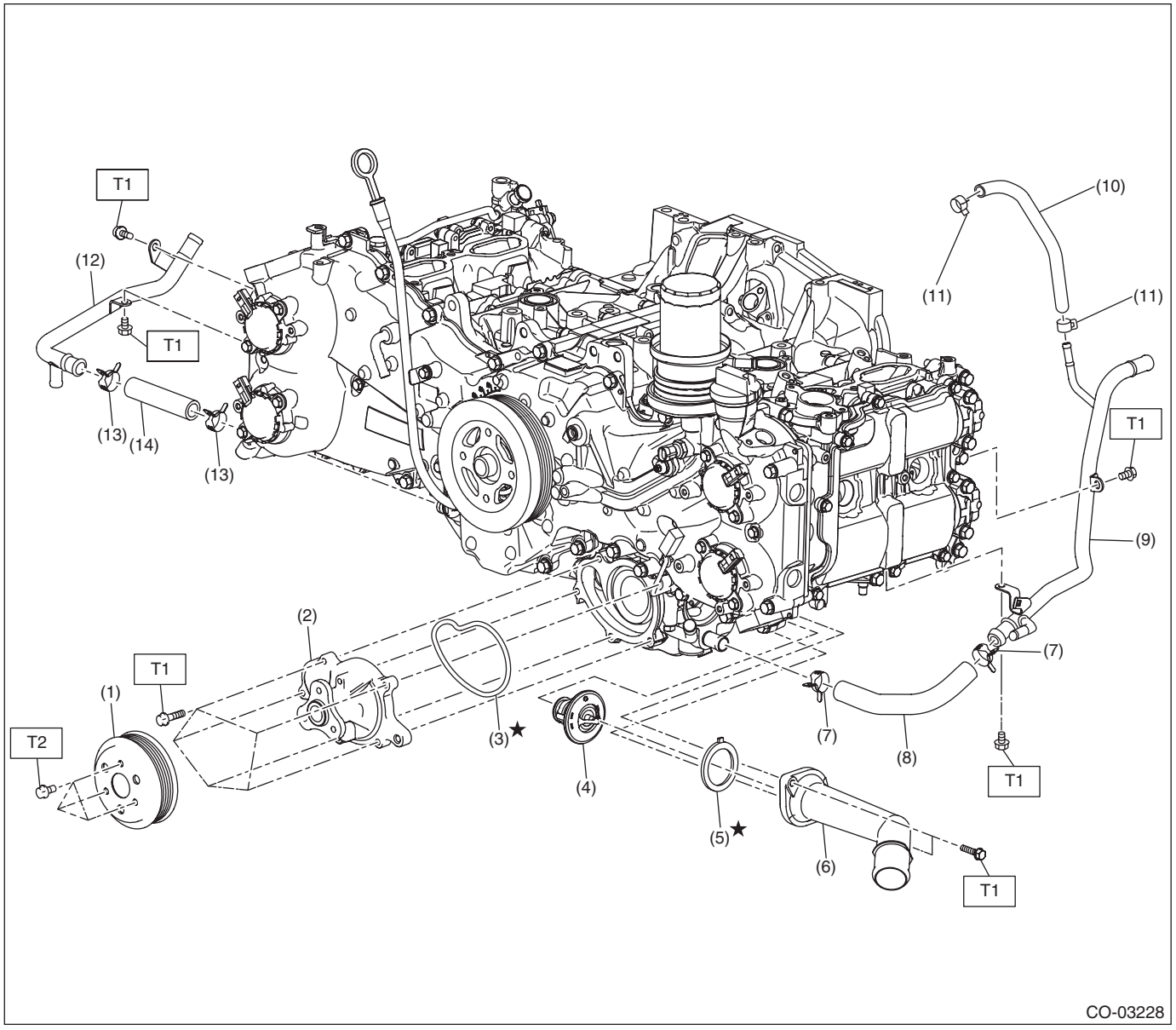
A: SPECIFICATION

Cooling system					Electric fan + Forced engine coolant circulation system
Total engine coolant capacity				L (US qt, Imp qt)	Approx. 8.9 (9.4, 7.8)
Water pump	Type				Centrifugal impeller type
	Discharge performance	Discharge rate		L (US gal, Imp gal)/min	248 (65.5, 54.6)
		Pump speed — Discharge pressure			8,580 rpm — 88 kPa (9.2 mAq)
		Engine coolant temperature			80°C (176°F)
	Impeller diameter			mm (in)	56 (2.2)
	Number of impeller vanes				7
	Pump pulley diameter			mm (in)	100 (3.9)
Thermostat	Type				Wax pellet type
	Starting temperature to open				86 — 90°C (187 — 194°F)
	Fully opens				95°C (203°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	120
		Sub fan		W	120
	Fan diameter / Blade	Main fan			318.5 mm (12.54 in)/9
		Sub fan			318.5 mm (12.54 in)/11
Radiator	Type				Down flow, pressure type
	Core dimensions	Width × Height × Thickness		mm (in)	691.3 × 340 × 27 (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



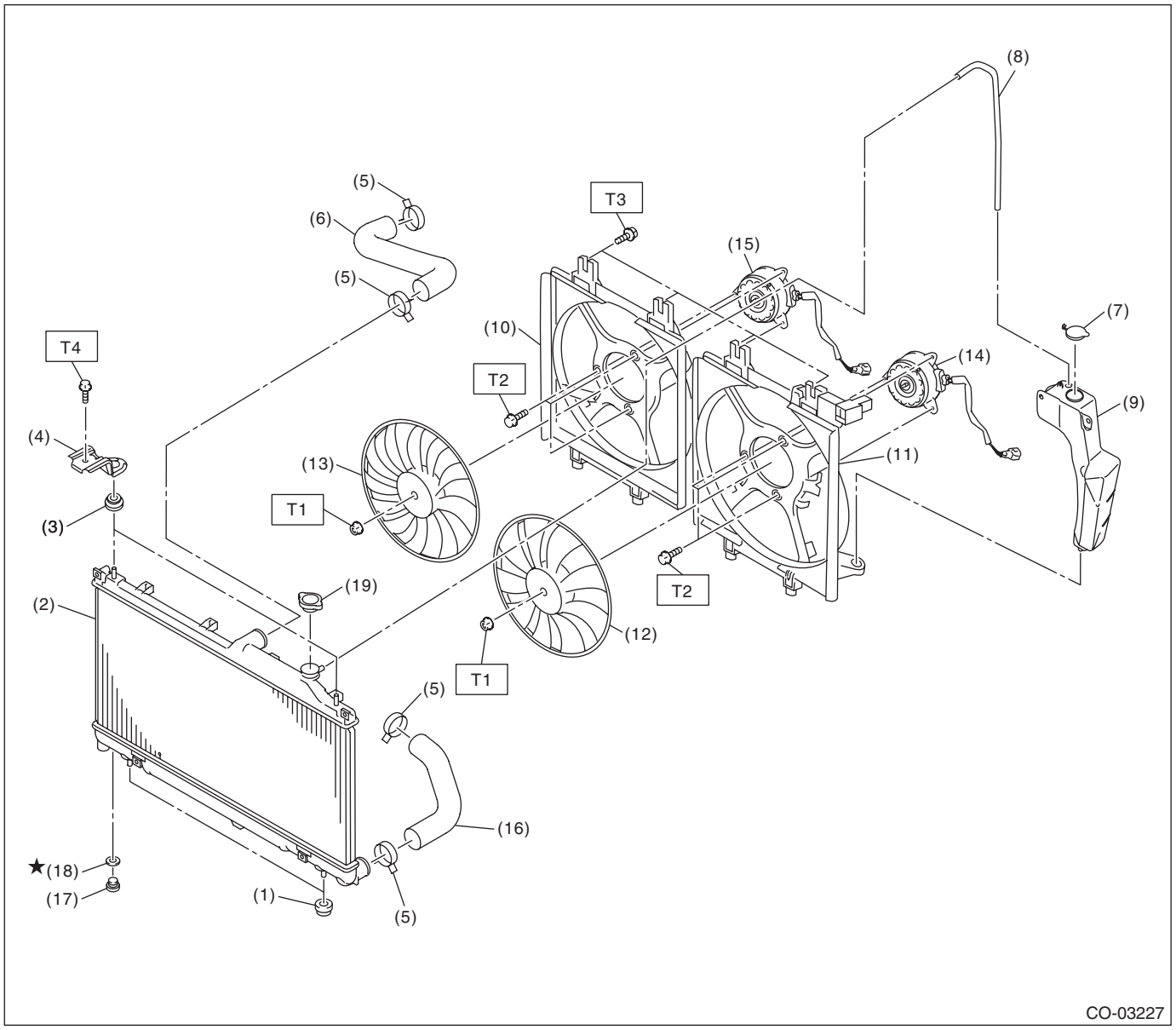
(1)	Water pump pulley	(7)	Clip	(13)	Clip
(2)	Water pump ASSY	(8)	Water pipe hose LH	(14)	Water pipe hose RH
(3)	Gasket	(9)	Water pipe LH		
(4)	Thermostat	(10)	Preheater hose		
(5)	Gasket	(11)	Clip		
(6)	Thermostat cover	(12)	Water pipe RH		

Tightening torque: N·m (kgf-m, ft-lb)

T1: 6.4 (0.7, 4.7)

T2: 14 (1.4, 10.3)

2. RADIATOR AND RADIATOR FAN



(1) Radiator lower cushion
(2) Radiator
(3) Radiator upper cushion
(4) Radiator upper bracket
(5) Clip
(6) Radiator inlet hose
(7) Engine coolant reservoir tank cap
(8) Over flow hose
(9) Engine coolant reservoir tank
(10) Radiator sub fan shroud
(11) Radiator main fan shroud
(12) Radiator main fan
(13) Radiator sub fan
(14) Main fan motor
(15) Sub fan motor
(16) Radiator outlet hose
(17) Radiator drain plug
(18) O-ring
(19) Radiator cap

Tightening torque: N·m (kgf-m, ft-lb)
T1: 3.4 (0.3, 2.5)
T2: 4.41 (0.45, 3.25)
T3: 7.5 (0.8, 5.5)
T4: 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

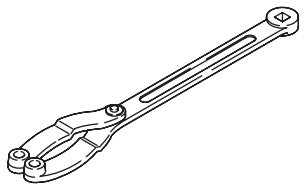
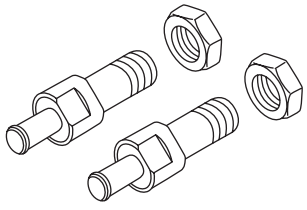
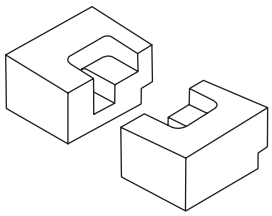
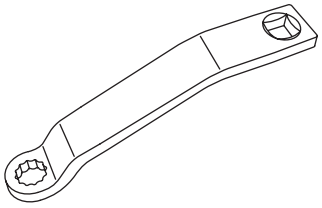
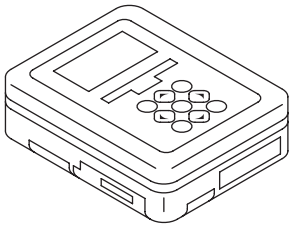
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST18355AA000	18355AA000	PULLEY WRENCH	Used for removing and installing water pump pulley.
 ST18334AA030	18334AA030	PULLEY WRENCH PIN SET	Used for removing and installing water pump pulley.

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST18632AA020	18632AA020	STAND ASSY	Used for removing and installing the water pipe assembly.
 ST73099SG000	73099SG000 (Newly adopted tool)	SPECIAL TOOL CONDENSER	Used for installing the radiator.
 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.