1. General Description

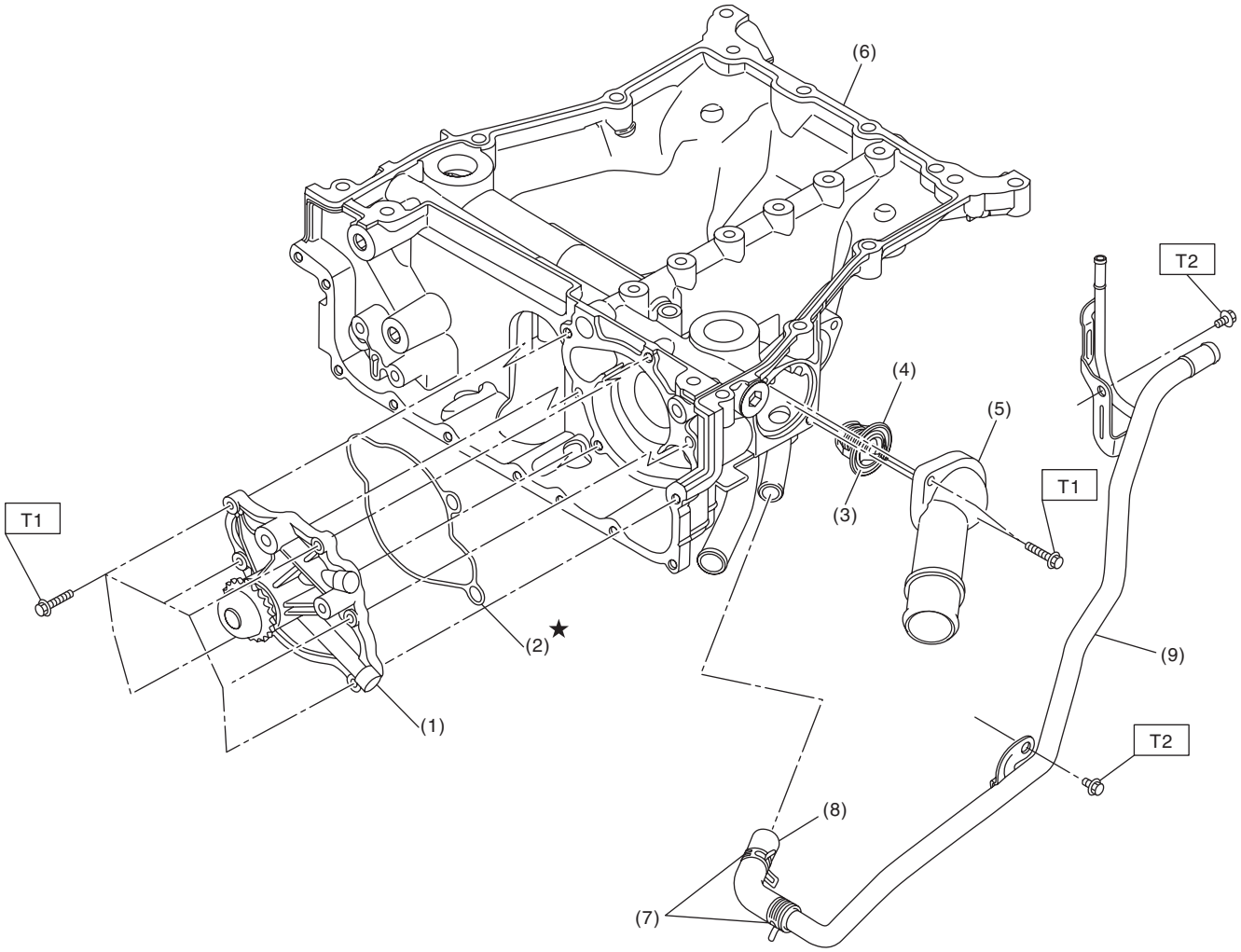
A: SPECIFICATION

Cooling system					Electric fan + Forced engine coolant circulation system
Total engine coolant capacity			ℓ (US qt, Imp qt)		6.5 (6.9, 5.7)
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			4,956 rpm — 140 kPa (14.0 mAq)
		Engine coolant temperature			80°C (176°F)
	Impeller diameter		mm (in)		66 (2.60)
	Number of impeller blades				8
	Pump sprocket outer diameter		mm (in)		60.60 (2.39)
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				Down flow, pressure type
	Core dimensions	Width × Height × Thickness	mm (in)		689.8 × 349.2 × 16 (27.16 × 13.75 × 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)
					Service limit	83 (0.85, 12)
				Negative pressure side	Standard	–1.0 — –4.9 (–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 protecting agent	Cooling system conditioner	SOA345001	—

B: COMPONENT

1. WATER PUMP AND WATER PIPE

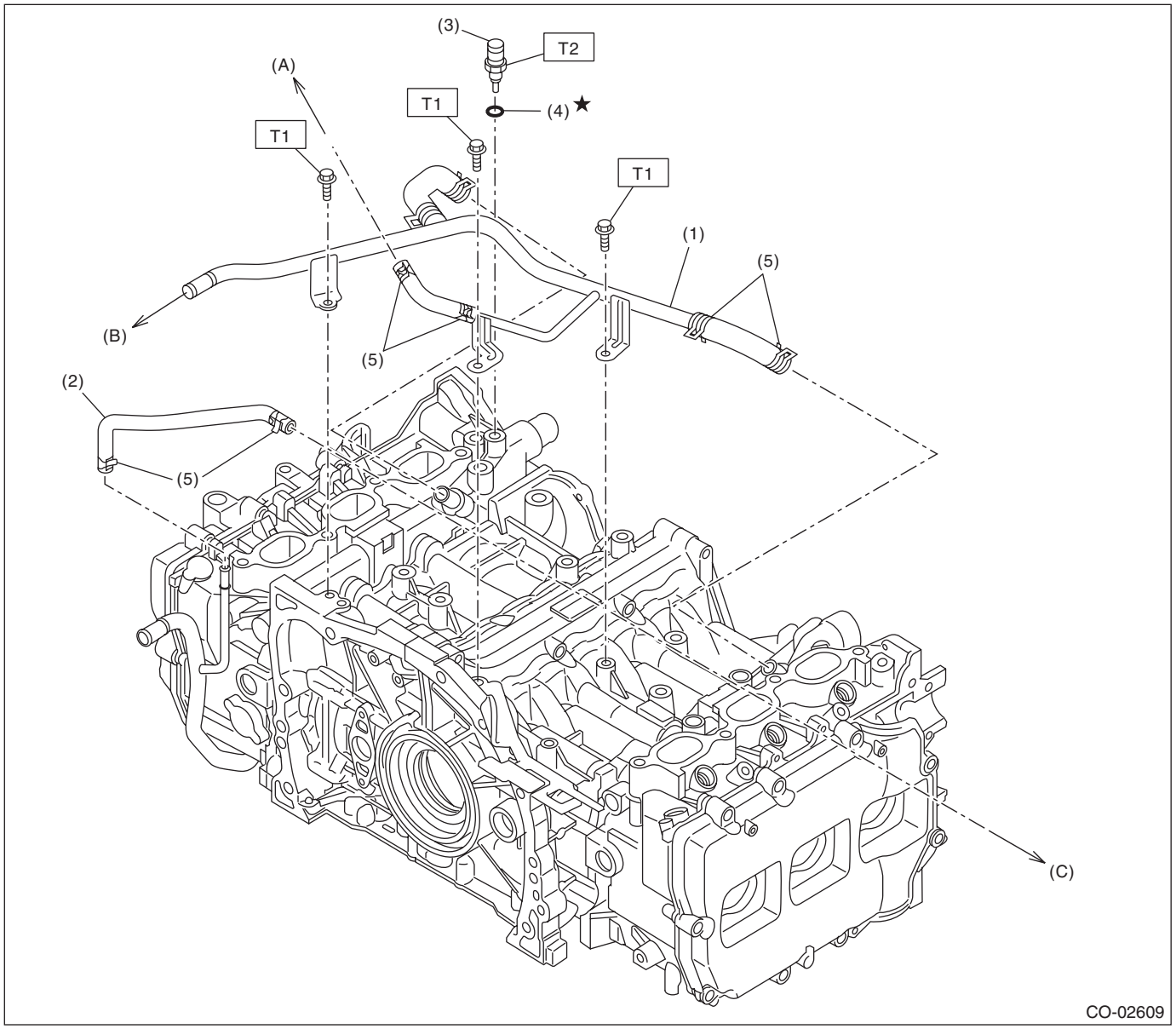


CO-02659

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

Tightening torque:N·m (kgf-m, ft-lb)
T1: 6.4 (0.7, 4.7)
T2: 16 (1.6, 11.8)

2. ENGINE COOLANT TEMPERATURE SENSOR AND HEATER HOSE



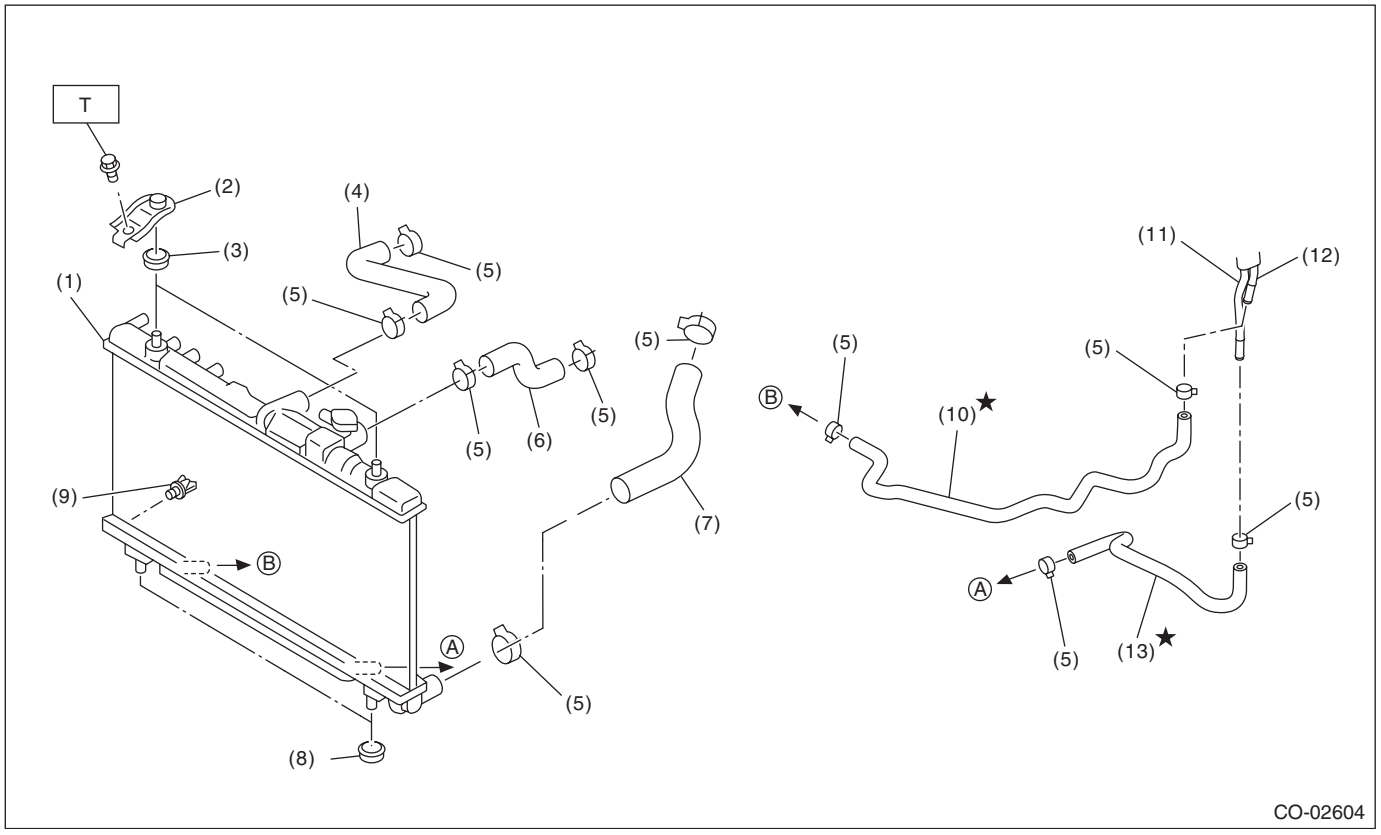
(A) To the throttle body
(B) To the heater hose on body side
(C) To the throttle body

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

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

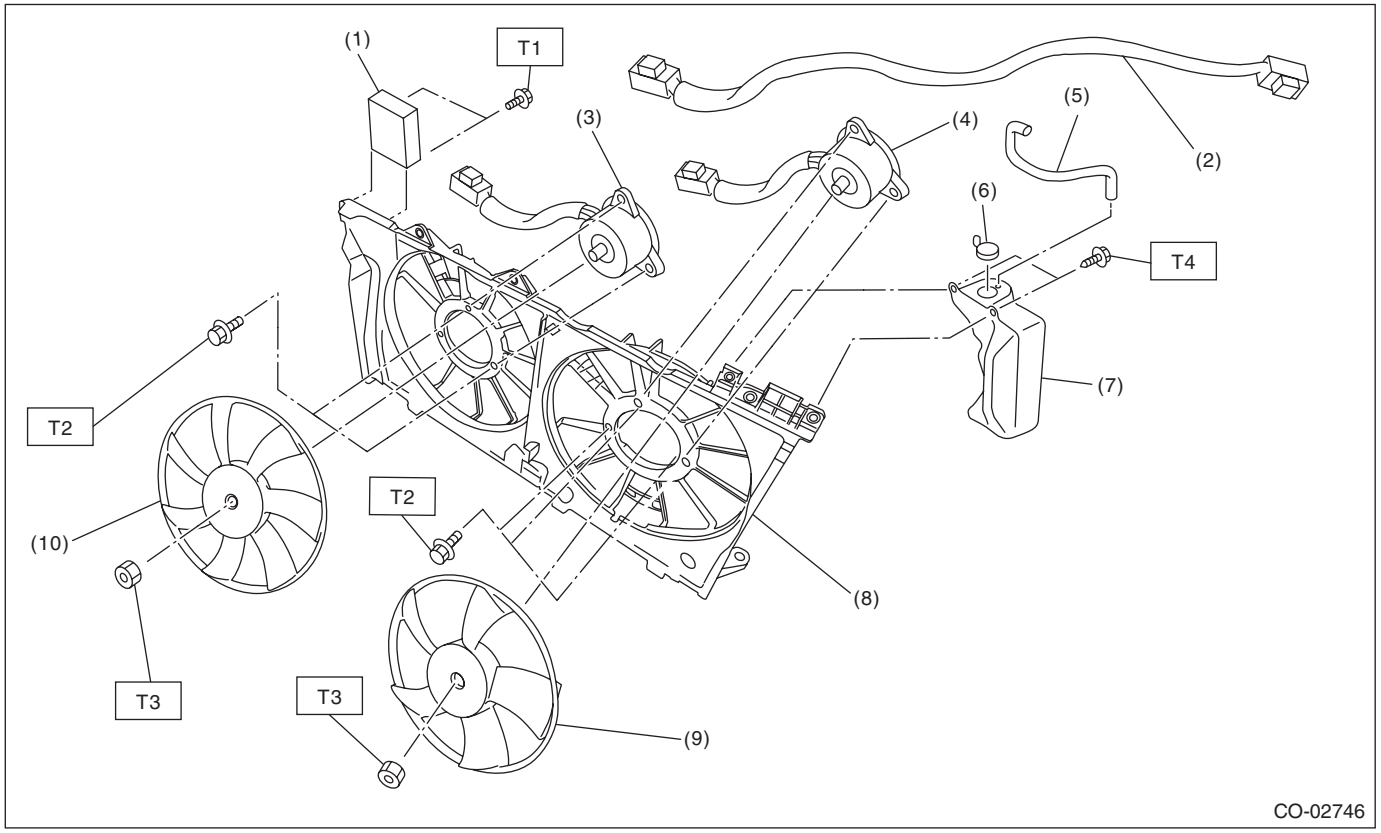
- Radiator



(1) Radiator
(2) Radiator upper bracket
(3) Radiator upper cushion
(4) Radiator upper hose RH
(5) Clip
(6) Radiator upper hose LH
(7) Radiator lower hose
(8) Radiator lower cushion
(9) Drain plug
(10) ATF hose A
(11) ATF pipe B
(12) ATF pipe A
(13) ATF hose B

Tightening torque:N·m (kgf-m, ft-lb)
T: 12 (1.2, 8.9)

- Radiator fan



(1)	Radiator fan control unit	(6)	Reservoir tank cap
(2)	Radiator fan harness	(7)	Reservoir tank
(3)	Radiator sub fan motor	(8)	Radiator fan shroud
(4)	Radiator main fan motor	(9)	Radiator main fan
(5)	Over flow hose	(10)	Radiator sub fan

Tightening torque:N·m (kgf-m, ft-lb)

T1: 2.6 (0.3, 1.9)

T2: 3.8 (0.4, 2.8)

T3: 6.3 (0.6, 4.6)

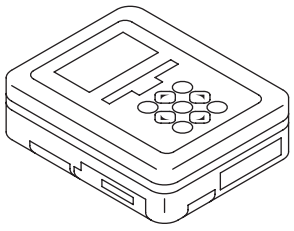
T4: 7.5 (0.8, 5.5)

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 battery.
• Prepare a container and cloth to prevent scattering of engine coolant when performing work where engine coolant can be spilled. If the fuel spills, wipe it off immediately to prevent from penetrating into floor or flowing out for environmental protection.
• 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
 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.