

# GENERAL DESCRIPTION

Cooling

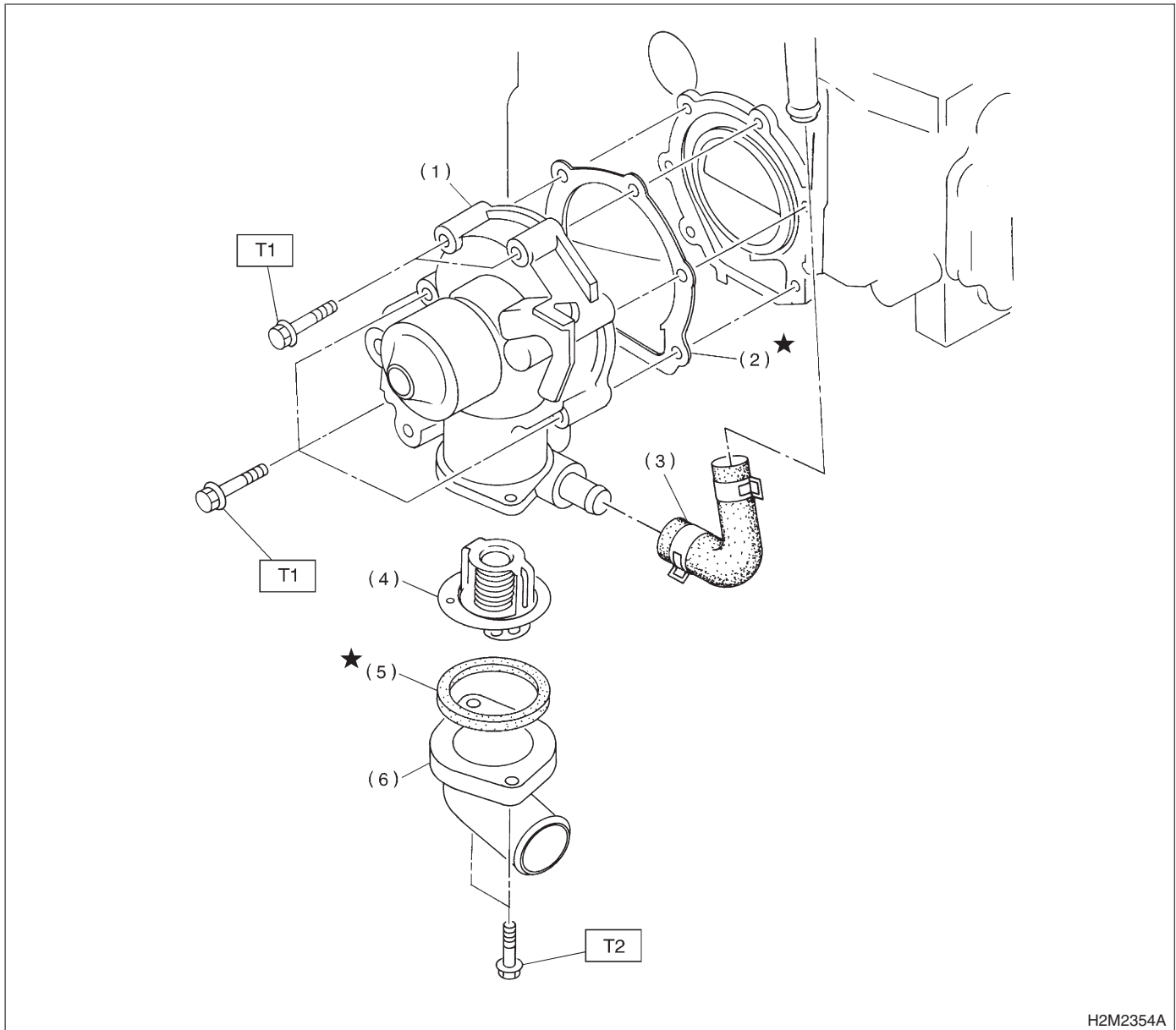
## 1. General Description S106001

### A: SPECIFICATIONS S106001E49

Cooling system			Electric fan + Forced engine coolant circulation system
Total engine coolant capacity ℓ (US qt, Imp qt)			6.2 (6.6, 5.5)
Water pump	Type		Centrifugal impeller type
	Discharge performance I	Discharge	20 ℓ (5.3 US gal, 4.4 Imp gal)/min.
		Pump speed—total engine coolant head	760 rpm — 0.3 mAq (1.0 ftAq)
		Engine coolant temperature	85°C (185°F)
	Discharge performance II	Discharge	100 ℓ (26.4 US gal, 22.0 Imp gal)/min.
		Pump speed—total engine coolant head	3,000 rpm — 5.0 mAq (16.4 ftAq)
		Engine coolant temperature	85°C (185°F)
	Discharge performance III	Discharge	200 ℓ (52.8 US gal, 44.0 Imp gal)/min.
		Pump speed—total engine coolant head	6,000 rpm — 23.0 mAq (75.5 ftAq)
		Engine coolant temperature	85°C (185°F)
	Impeller diameter		76 mm (2.99 in)
	Number of impeller vanes		8
	Pump pulley diameter		60 mm (2.36 in)
	Clearance between impeller and case	Standard	0.5 — 0.7 mm (0.020 — 0.028 in)
Limit		1.0 mm (0.039 in)	
“Thrust” runout of impeller end		0.5 mm (0.020 in)	
Thermostat	Type		Wax pellet type
	Starts to open		76 — 80°C (169 — 176°F)
	Fully opened		91°C (196°F)
	Valve lift		9.0 mm (0.354 in) or more
	Valve bore		35 mm (1.38 in)
Radiator fan	Motor		70 W (main fan) 70 W (sub fan)
	Fan diameter × Blade		320 mm (12.60 in) × 5 (main fan) 320 mm (12.60 in) × 7 (sub fan)
Radiator	Type		Down flow, pressure type
	Core dimensions		691 × 340 × 16 mm (27.20 × 13.39 × 0.63 in)
	Pressure range in which cap valve is open		Above: 108±15 kPa (1.1±0.15 kg/cm <sup>2</sup> , 15.6±2.1 psi) Below: −9.8 to −4.9 kPa (−0.1 to −0.05 kg/cm <sup>2</sup> , −1.4 to −0.7 psi)
	Fins		Corrugated fin type
Reservoir tank	Capacity		0.45 ℓ (0.5 US qt, 0.4 Imp qt)

## B: COMPONENT S106001A05

### 1. WATER PUMP S106001A0501



H2M2354A

- |                     |                      |
|---------------------|----------------------|
| (1) Water pump ASSY | (6) Thermostat cover |
| (2) Gasket          |                      |
| (3) Heater hose     |                      |
| (4) Thermostat      |                      |
| (5) Gasket          |                      |

**Tightening torque: N·m (kgf-m, ft-lb)**

**T1:**

**First:**

**12 (1.2, 8.7)**

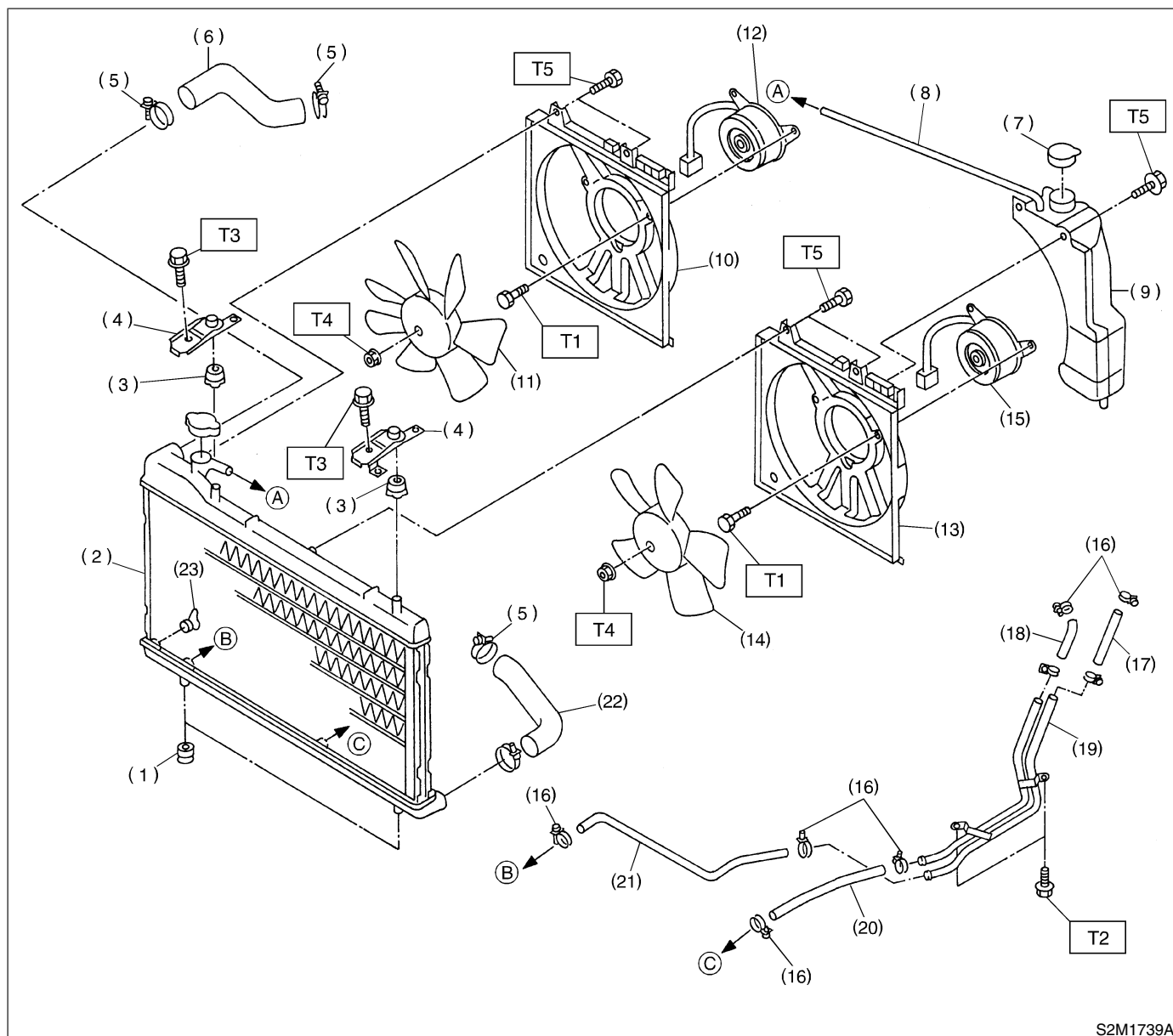
**Second:**

**12 (1.2, 8.7)**

**T2: 6.4 (0.65, 4.7)**

## 2. RADIATOR AND RADIATOR FAN

S106001A0502



S2M1739A

- |                                       |   |  |
|---------------------------------------|---|--|
| (1) Radiator lower cushion            | (13) Radiator main fan shroud             | (21) ATF inlet hose B (AT vehicles only) |
| (2) Radiator                          | (14) Radiator main fan                    | (22) Radiator outlet hose                |
| (3) Radiator upper cushion            | (15) Radiator main fan motor              | (23) Radiator drain plug                 |
| (4) Radiator upper bracket            | (16) ATF hose clamp (AT vehicles only)    |  |
| (5) Clamp                             | (17) ATF inlet hose A (AT vehicles only)  |  |
| (6) Radiator inlet hose               | (18) ATF outlet hose A (AT vehicles only) |  |
| (7) Engine coolant reservoir tank cap | (19) ATF pipe (AT vehicles only)          |  |
| (8) Over flow hose                    | (20) ATF outlet hose B (AT vehicles only) |  |
| (9) Engine coolant reservoir tank     |   |  |
| (10) Radiator sub fan shroud          |   |  |
| (11) Radiator sub fan                 |   |  |
| (12) Radiator sub fan motor           |   |  |

### Tightening torque: N·m (kgf-m, ft-lb)

**T1: 4.4 (0.45, 3.3)**

**T2: 12 (1.2, 8.7)**

**T3: 18 (1.8, 13.0)**

**T4: 3.4 (0.35, 2.5)**

**T5: 4.9 (0.50, 3.6)**

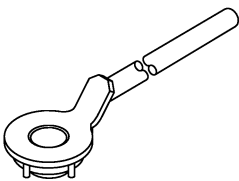
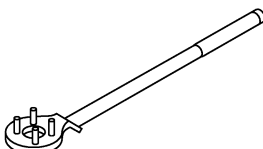
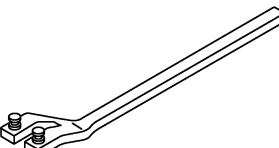
## C: CAUTION S106001A03

- Wear working 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 or dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly, and replacement.

- Be careful not to burn your hands, because each part in the vehicle is hot after running.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or safety stands at the specified points.
- Before disconnecting electrical connectors of sensors or units, be sure to disconnect negative terminal from battery.

## D: PREPARATION TOOL S106001A17

### 1. SPECIAL TOOL S106001A1701

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p>H5M0977</p>	499977300	CRANK PULLEY WRENCH	<ul style="list-style-type: none"> <li>● Used for stopping crankshaft pulley when loosening and tightening crankshaft pulley bolts.</li> <li>● For 2200 cc engine.</li> </ul>
 <p>B2M3870</p>	499977100	CRANK PULLEY WRENCH	<ul style="list-style-type: none"> <li>● Used for stopping crankshaft pulley when loosening and tightening crankshaft pulley bolts.</li> <li>● For 2500 cc engine.</li> </ul>
 <p>B2M3859</p>	499207100	CAMSHAFT SPROCKET WRENCH	Used for removing and installing camshaft sprocket.