

General Description

LUBRICATION

1. General Description

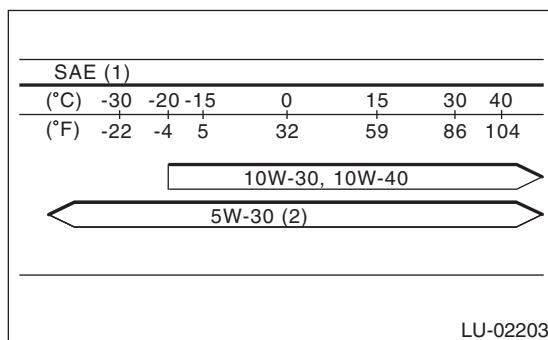
A: SPECIFICATION

Lubrication method		Forced lubrication
Oil pump	Pump type	Trochoid type
	Number of teeth	Inner rotor Outer rotor
	Outer rotor diameter × thickness	mm (in) 76 × 30.2 (2.99 × 1.19)
Oil filter	Filter type	Full-flow filter type
	Filtration area	cm ² (sq in) 1,300 (201.5)
	By-pass valve opening pressure	kPa (kg/cm ² , psi) 160 (1.63, 23.2)
	Outer diameter × width	mm (in) 80 × 75 (3.15 × 2.95)
	Installation screw specifications	M 20 × 1.5
Relief valve working pressure		kPa (kg/cm ² , psi) 708 (7.2, 102.7)
Oil pressure switch	Type	Immersed contact point type
	Operating voltage — power consumption	12 V — 3.4 W or less
	Warning light operating pressure	kPa (kg/cm ² , psi) 15 (0.15, 2.2)
	Proof pressure	kPa (kg/cm ² , psi) 980 (10.0, 142) or more
Engine oil	Capacity (at overhaul)	ℓ (US qt, Imp qt) 7.8 (8.2, 6.9)
	When replacing engine oil and oil filter	ℓ (US qt, Imp qt) 6.5 (6.9, 5.7)
	When replacing engine oil only	ℓ (US qt, Imp qt) 6.3 (6.7, 5.5)

Recommended oil:

Those with an API standard SM "Energy Conserving" logo or

ILSAC standard GF-4 "Star burst mark" label on the container



(1) SAE viscosity No. and applicable temperature

(2) Recommended

CAUTION:

When replenishing oil, it does not matter if the oil to be added is a different brand from that in the engine; however, use oil having the API standard and SAE viscosity No. designated by SUBARU.

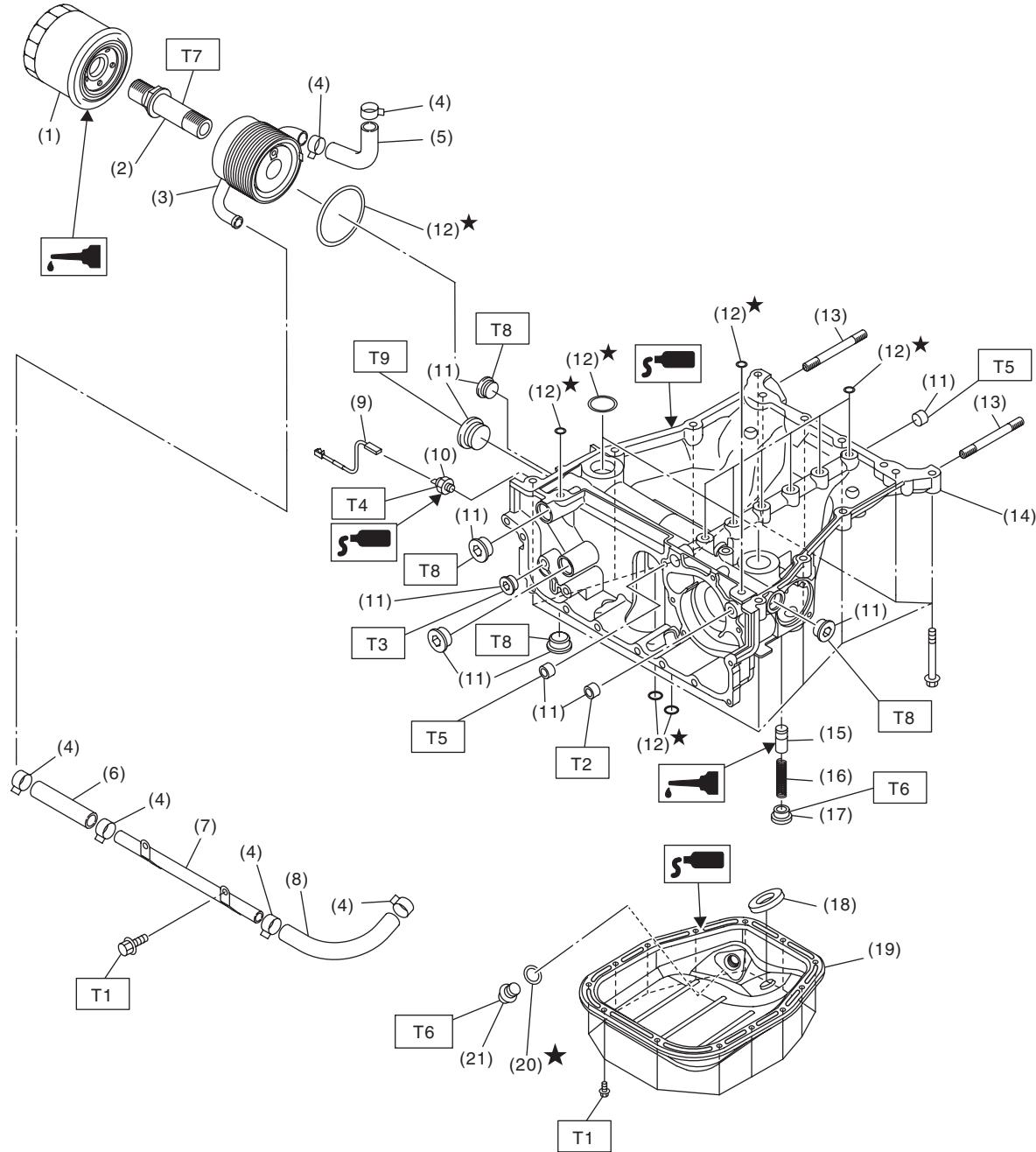
NOTE:

If the vehicle is used in areas with very high temperatures or for other heavy duty applications, the following viscosity oils must be used: API standard: SM or SL

SAE Viscosity No.: 30, 40, 10W-50, 20W-40, 20W-50

B: COMPONENT

1. OIL PAN UPPER, OIL COOLER, OIL FILTER



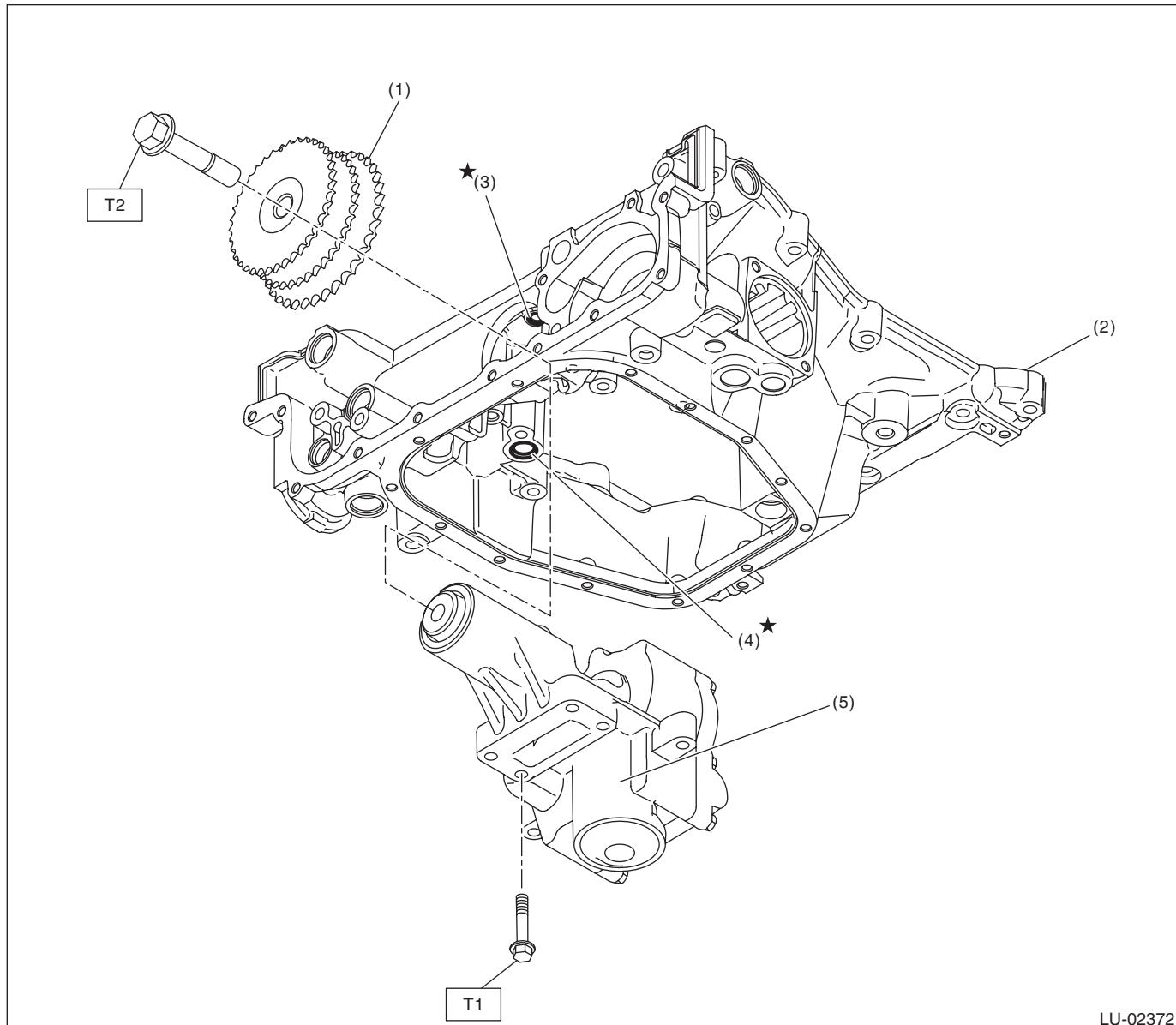
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(1) Oil filter	(12) O-ring
(2) Oil cooler connector	(13) Stud bolt
(3) Oil cooler	(14) Oil pan upper
(4) Clamp	(15) Relief valve
(5) Water hose	(16) Relief valve spring
(6) Water hose	(17) Relief plug
(7) Engine oil cooler water pipe	(18) Oil pan magnet
(8) Water hose	(19) Oil pan lower
(9) Oil pressure switch harness	(20) Gasket
(10) Oil pressure switch	(21) Drain plug
(11) Plug	

<i>Tightening torque:N·m (kgf·m, ft-lb)</i>
<i>T1: 6.4 (0.7, 4.7)</i>
<i>T2: 17 (1.7, 12.5)</i>
<i>T3: 23 (2.3, 17.0)</i>
<i>T4: 25 (2.5, 18.4)</i>
<i>T5: 34 (3.5, 25.1)</i>
<i>T6: 44 (4.5, 32.5)</i>
<i>T7: 54 (5.5, 39.8)</i>
<i>T8: 60 (6.1, 44.3)</i>
<i>T9: 90 (9.2, 66.4)</i>

2. OIL PUMP



- (1) Idler sprocket
- (2) Oil pan upper
- (3) O-ring

- (4) O-ring
- (5) Oil pump

Tightening torque: N·m (kgf·m, ft·lb)

T1: 13 (1.3, 9.6)

T2: 120 (12.2, 88.5)

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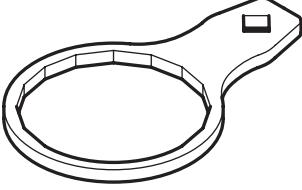
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C: CAUTION

- 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.
- Before applying liquid gasket, completely remove the old liquid gasket and degrease it.
- 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. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST18332AA020	18332AA020 (Newly adopted tool)	OIL FILTER WRENCH	Used for removing and installing oil filter.