

General Description

LUBRICATION

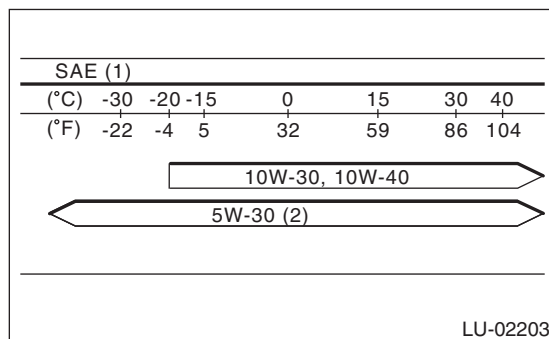
1. General Description

A: SPECIFICATION

Lubrication method			Forced lubrication
Oil pump	Pump type		Trochoid type
	Number of teeth	Inner rotor	7
		Outer rotor	8
	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.

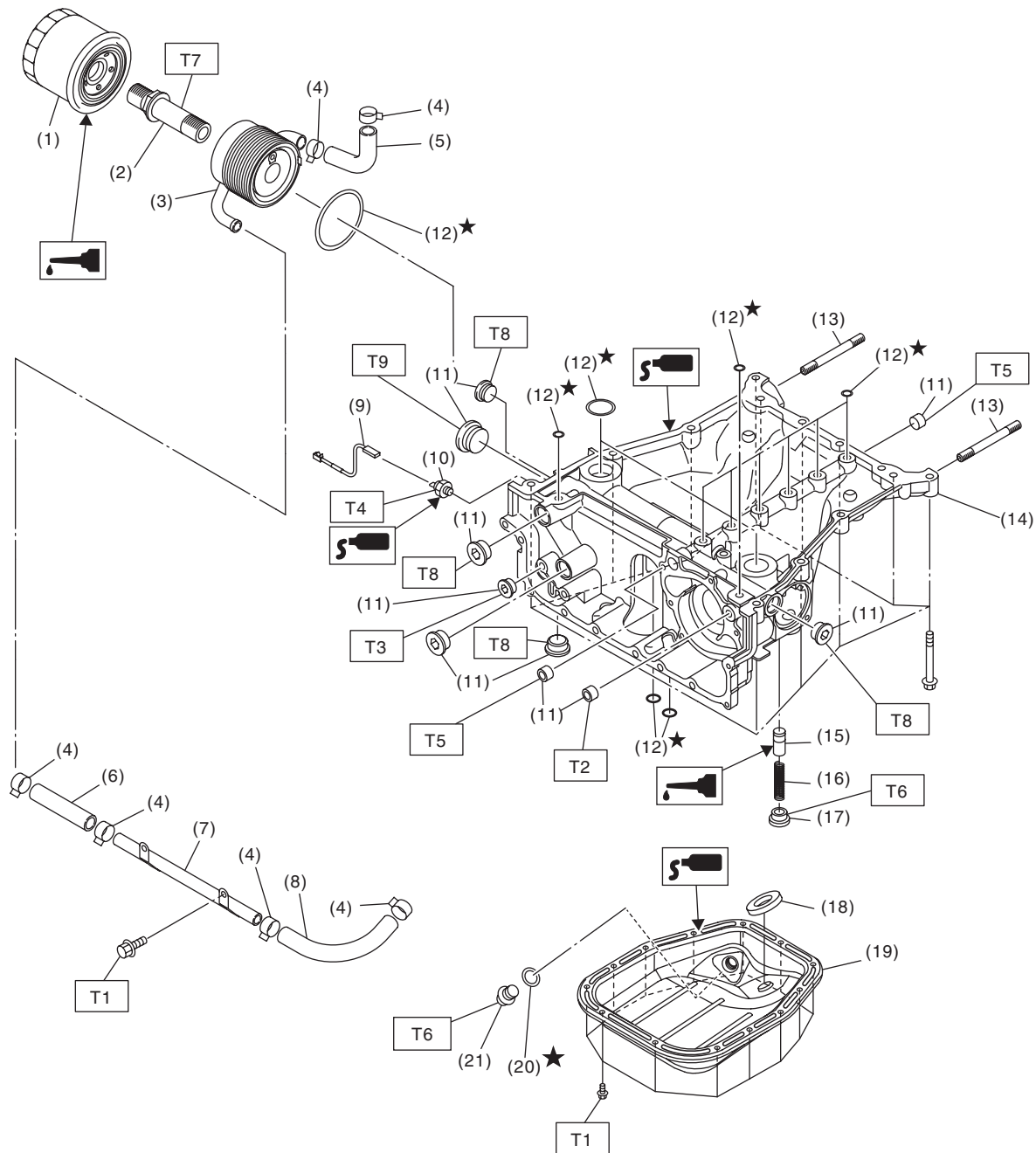
NOTE:

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



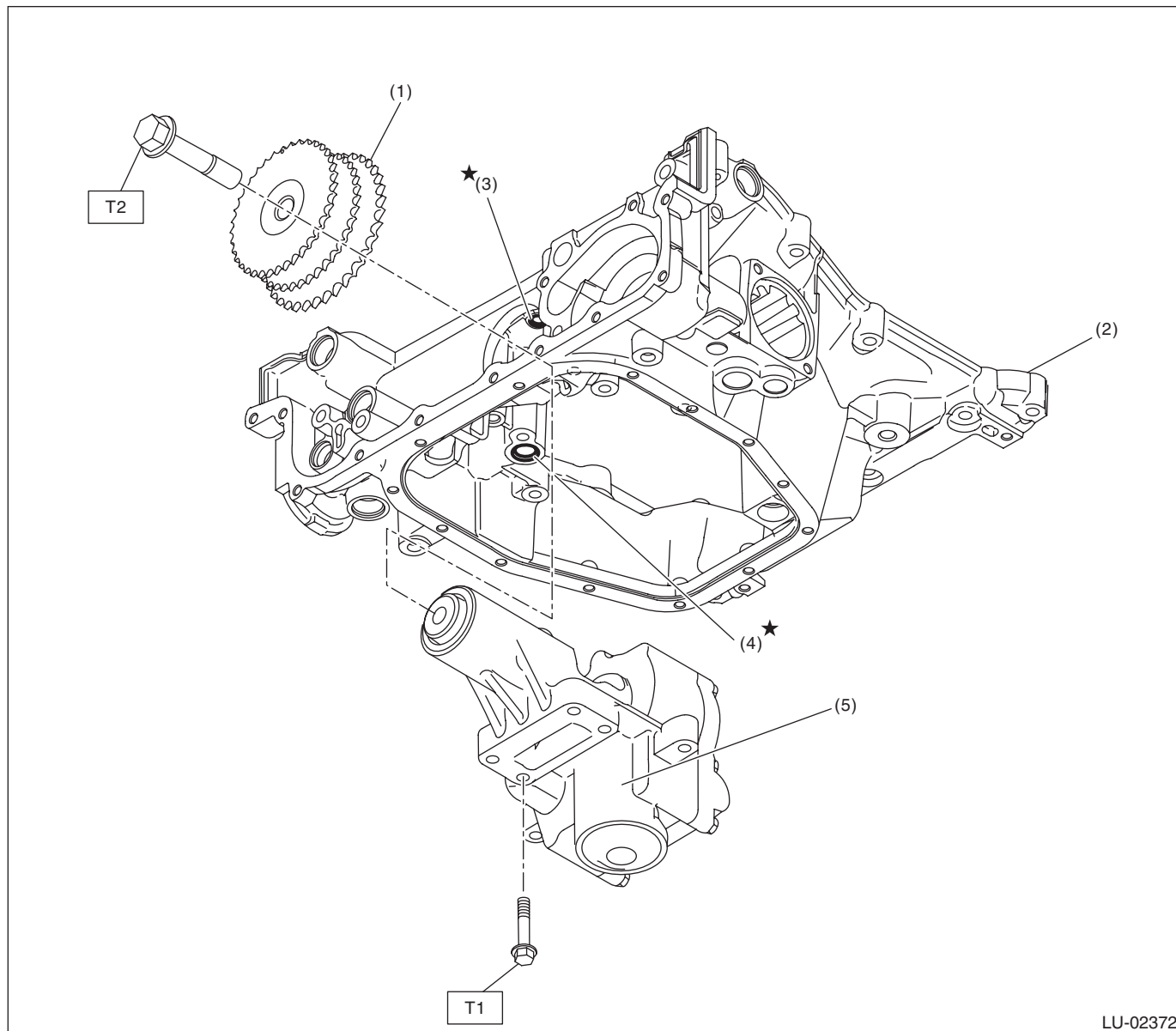
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(1) Oil filter	(12) O-ring	<i>Tightening torque:N·m (kgf-m, ft-lb)</i>
(2) Oil cooler connector	(13) Stud bolt	<i>T1: 6.4 (0.7, 4.7)</i>
(3) Oil cooler	(14) Oil pan upper	<i>T2: 17 (1.7, 12.5)</i>
(4) Clamp	(15) Relief valve	<i>T3: 23 (2.3, 17.0)</i>
(5) Water hose	(16) Relief valve spring	<i>T4: 25 (2.5, 18.4)</i>
(6) Water hose	(17) Relief plug	<i>T5: 34 (3.5, 25.1)</i>
(7) Engine oil cooler water pipe	(18) Oil pan magnet	<i>T6: 44 (4.5, 32.5)</i>
(8) Water hose	(19) Oil pan lower	<i>T7: 54 (5.5, 39.8)</i>
(9) Oil pressure switch harness	(20) Gasket	<i>T8: 60 (6.1, 44.3)</i>
(10) Oil pressure switch	(21) Drain plug	<i>T9: 90 (9.2, 66.4)</i>
(11) Plug		

2. OIL PUMP



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- (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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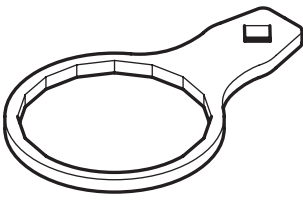
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C: CAUTION

- 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.