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)	86 × 13 (3.39 × 0.51)
	Tip clearance between inner and outer rotors		mm (in)	0.04 — 0.14 (0.0016 — 0.0055)
	Side clearance between inner rotor and pump case		mm (in)	0.020 — 0.046 (0.0008 — 0.0018)
	Case clearance between outer rotor and pump case		mm (in)	0.110 — 0.175 (0.0043 — 0.0069)
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	Total capacity (Overhaul)		ℓ (US qt, Imp qt)	7.2 (7.6, 6.3)
	When replacing engine oil and oil filter		ℓ (US qt, Imp qt)	5.7 (6.0, 5.0)
	When replacing engine oil only		ℓ (US qt, Imp qt)	5.5 (5.8, 4.8)

Recommended oil:
Items having the API standard SM "Energy Conserving" logo
ILSAC standard GF-4 Star burst mark label on the container

SAE (1)						
(°C)	-30 -20 -15	0	15	30	40	
(°F)	-22 -4 5	32	59	86	104	

10W-30, 10W-40 , 10W-50
5W-30 (2)

LU-02329

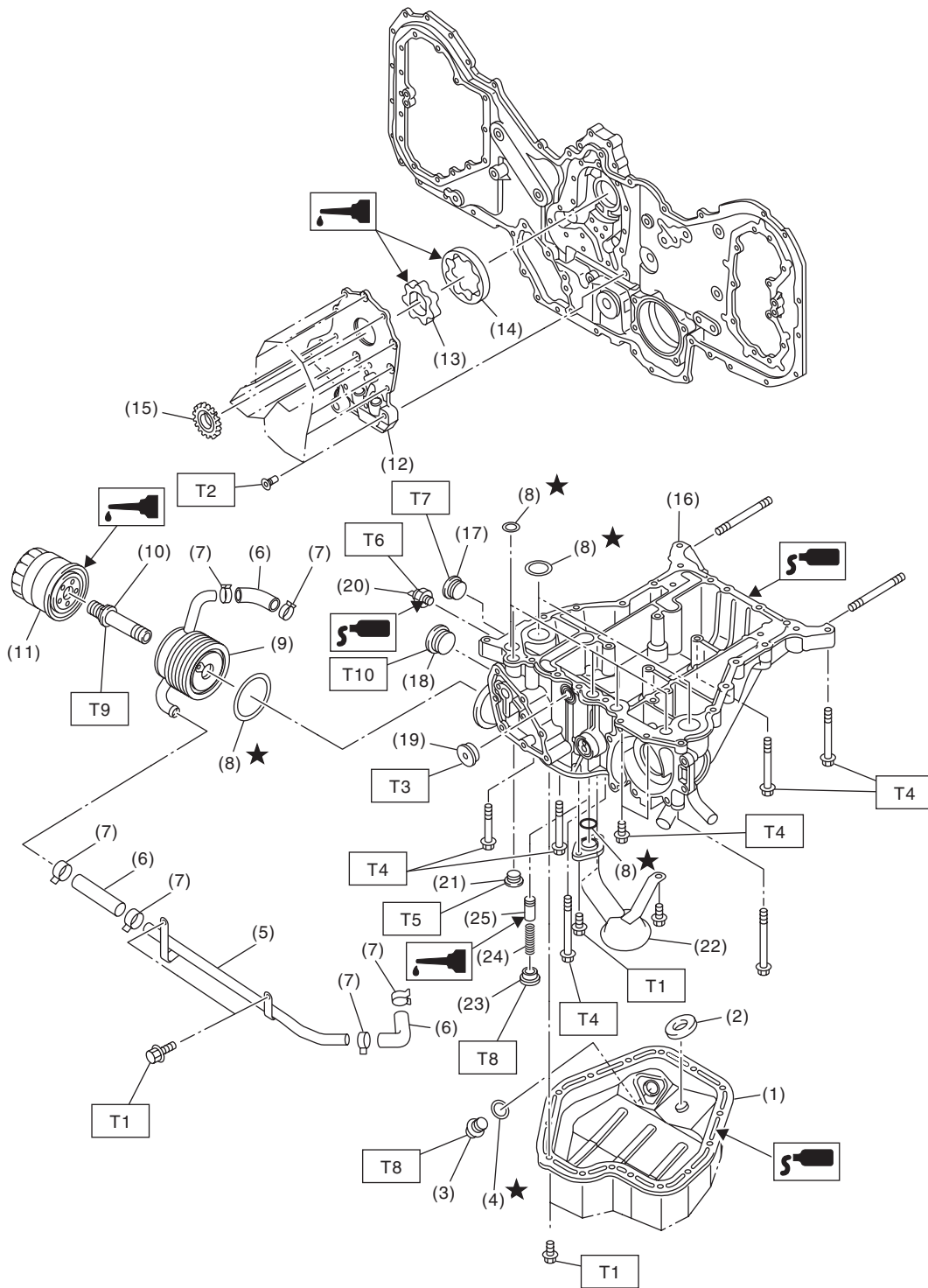(1) SAE viscosity No. and applicable temperature

(2) Recommended

CAUTION:
It is acceptable to fill an engine with oil of another brand when replacing the oil, but make sure to use an oil with an API standard and SAE viscosity number specified by Subaru.

NOTE:
If the vehicle is used in regions of high temperatures or in other severe environments, use oil with the viscosities shown below. API standard: SM or SL
SAE Viscosity No.: 30, 40, 10W-50, 20W-40, 20W-50

B: COMPONENT

LU-02282

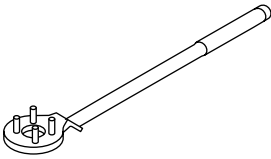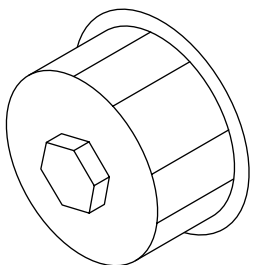| (1)	Oil pan lower	(14)	Outer rotor	**Tightening torque:N·m (kgf-m, ft-lb)**
(2)	Magnet	(15)	Crank sprocket	**T1:** *6.4 (0.65, 4.7)*
(3)	Drain plug	(16)	Oil pan upper	**T2:** *<Ref. to LU(H6DO)-8, INSTAL-LATION, Oil Pump.>*
(4)	Gasket	(17)	Plug	
(5)	Oil cooler pipe	(18)	Plug	**T3:** *16 (1.6, 12)*
(6)	Hose	(19)	Plug	**T4:** *18 (1.8, 13)*
(7)	Clamp	(20)	Oil pressure switch	**T5:** *23 (2.3, 17)*
(8)	Gasket	(21)	Plug	**T6:** *25 (2.5, 18.4)*
(9)	Oil cooler	(22)	Oil strainer	**T7:** *37 (3.8, 27)*
(10)	Oil cooler connector	(23)	Plug	**T8:** *44 (4.5, 33)*
(11)	Oil filter	(24)	Relief valve spring	**T9:** *54 (5.5, 40)*
(12)	Oil pump cover	(25)	Relief valve	**T10:** *90 (9.2, 66)*
(13)	Inner rotor			

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 the battery.

D: PREPARATION TOOL

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST-499977100	499977100	CRANK PULLEY WRENCH	Used for stopping rotation of crank pulley when removing and tightening crank pulley bolt.
 ST-498547000	498547000	OIL FILTER WRENCH	Used for removing and installing oil filter.