

GENERAL DESCRIPTION

LUBRICATION

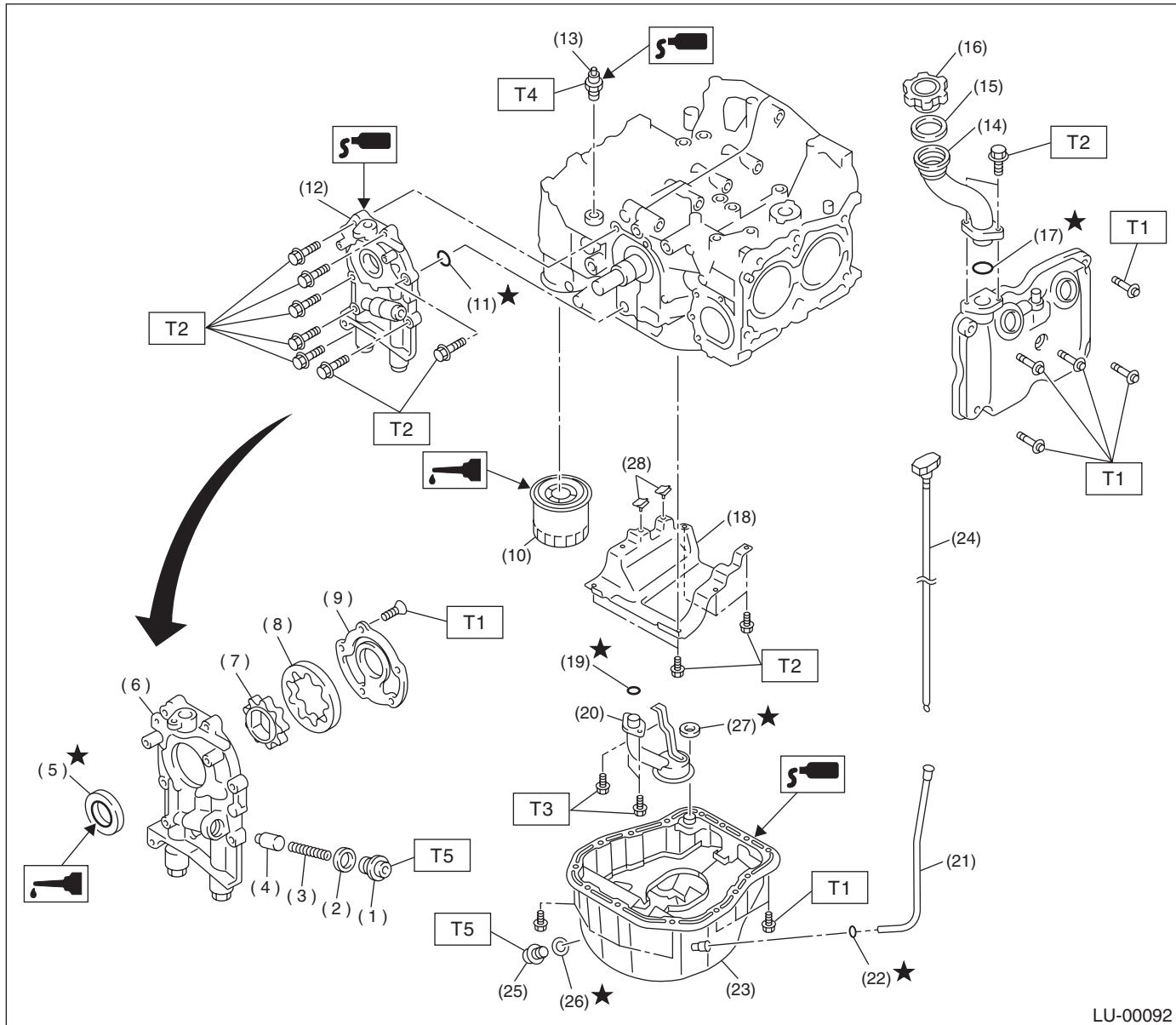
1. General Description

A: SPECIFICATIONS

Lubrication method			Forced lubrication		
Oil pump	Pump type			Trochoid type	
	Number of teeth	Inner rotor		9	
		Outer rotor		10	
	Outer rotor diameter × thickness	Non-turbo		78 × 7 mm (3.07 × 0.28 in)	
		Turbo		78 × 10 mm (3.07 × 0.39 in)	
	Tip clearance between inner and outer rotors		STD	0.04 — 0.14 mm (0.0016 — 0.0055 in)	
			Limit	0.18 mm (0.0071 in)	
	Side clearance between inner rotor and pump case		STD	0.02 — 0.07 mm (0.0008 — 0.0028 in)	
			Limit	0.12 mm (0.0047 in)	
	Case clearance between outer rotor and pump case		STD	0.10 — 0.175 mm (0.0039 — 0.0069 in)	
			Limit	0.20 mm (0.0079 in)	
	Capacity at oil temp. 80°C (176°F)	Non-turbo	600 rpm	Discharge pressure	
				98 kPa (1.0 kg/cm ² , 14 psi)	
			5,000 rpm	Discharge flow	
				3.2 ℥ (3.4 US qt, 2.8 Imp qt)/min.	
		Turbo	600 rpm	Discharge pressure	
				294 kPa (3.0 kg/cm ² , 43 psi)	
			5,000 rpm	Discharge flow	
				32.6 ℥ (34.4 US qt, 28.7 Imp qt)/min.	
	Relief valve operation pressure		Non-turbo	490 kPa (5.0 kg/cm ² , 71 psi)	
			Turbo	588 kPa (6.0 kg/cm ² , 85 psi)	
Oil filter	Type			Full-flow filter type	
	Filtration area			910 cm ² (141 sq in)	
	Bypass valve opening pressure			157 kPa (1.60 kg/cm ² , 22.8 psi)	
	Outer diameter × width			80 × 70 mm (3.15 × 2.76 in)	
	Oil filter to engine thread size			M 20 × 1.5	
Oil pressure switch	Type			Immersed contact point type	
	Working voltage — wattage			12 V — 3.4 W or less	
	Warning light activation pressure			14.7 kPa (0.15 kg/cm ² , 2.1 psi)	
	Proof pressure			More than 981 kPa (10 kg/cm ² , 142 psi)	
Oil capacity (at replacement)		Non-turbo	4.0 ℥ (4.2 US qt, 3.5 Imp qt)		
		Turbo	4.5 ℥ (4.8 US qt, 4.0 Imp qt)		

B: COMPONENT

1. NON-TURBO MODEL



- (1) Plug
- (2) Gasket
- (3) Relief valve spring
- (4) Relief valve
- (5) Oil seal
- (6) Oil pump case
- (7) Inner rotor
- (8) Outer rotor
- (9) Oil pump cover
- (10) Oil filter
- (11) O-ring
- (12) Oil pump assembly

- (13) Oil pressure switch
- (14) Oil filler duct
- (15) O-ring
- (16) Oil filler cap
- (17) O-ring
- (18) Baffle plate
- (19) O-ring
- (20) Oil strainer
- (21) Oil level gauge guide
- (22) O-ring
- (23) Oil pan
- (24) Oil level gauge

- (25) Drain plug
- (26) Metal gasket
- (27) Gasket
- (28) Seal

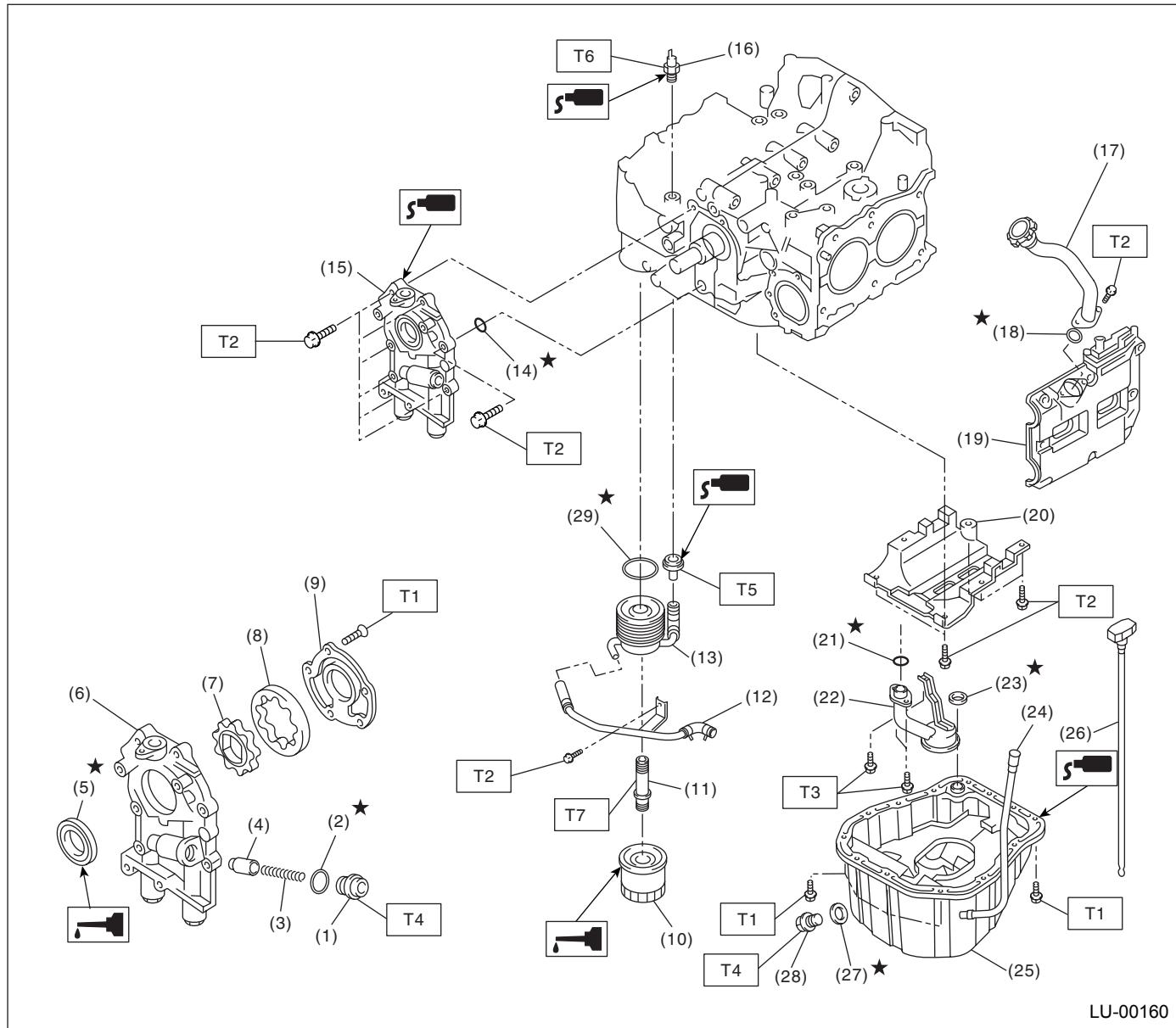
Tightening torque: N·m (kgf·m, ft·lb)

- T1: 5 (0.5, 3.6)**
- T2: 6.4 (0.65, 4.7)**
- T3: 10 (1.0, 7.2)**
- T4: 25 (2.5, 18.1)**
- T5: 44 (4.5, 32.5)**

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2. TURBO MODEL



(1) Plug	(16) Oil pressure switch
(2) Gasket	(17) Oil filler duct
(3) Relief valve spring	(18) O-ring
(4) Relief valve	(19) Rocker cover
(5) Oil seal	(20) Baffle plate
(6) Oil pump case	(21) O-ring
(7) Inner rotor	(22) Oil strainer
(8) Outer rotor	(23) Gasket
(9) Oil pump cover	(24) Oil level gauge guide
(10) Oil filter	(25) Oil pan
(11) Oil cooler connector	(26) Oil level gauge
(12) Water bypass pipe	(27) Metal gasket
(13) Oil cooler	(28) Drain plug
(14) O-ring	(29) O-ring
(15) Oil pump assembly	

Tightening torque: N·m (kgf·m, ft·lb)

T1: 5 (0.5, 3.6)
T2: 6.4 (0.65, 4.7)
T3: 10 (1.0, 7.0)
T4: 44 (4.5, 32.5)
T5: 69 (7.0, 50.9)
T6: 25 (2.5, 18.1)
T7: 54 (5.5, 40)

C: CAUTION

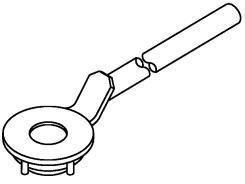
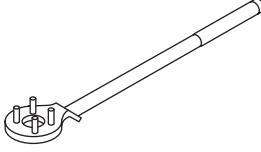
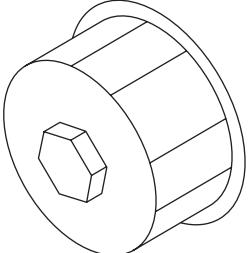
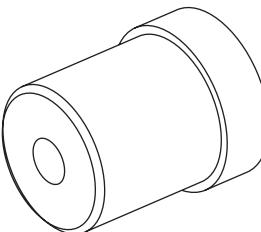
- Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust or dirt.
- Before removal, installation 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 on 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 the ground cable from battery.

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D: PREPARATION TOOL

1. SPECIAL TOOLS

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST-499977400	499977400 (2000 cc model)	CRANKSHAFT PULLEY WRENCH	Used for stopping rotation of crankshaft pulley when loosening and tightening crankshaft pulley bolt.
 ST-499977100	499977100 (2500 cc model)	CRANKSHAFT PULLEY WRENCH	Used for stopping rotation of crankshaft pulley when loosening and tightening crankshaft pulley bolt.
 ST-498547000	498547000	OIL FILTER WRENCH	Used for removing and installing oil filter.
 ST-499587100	499587100	OIL SEAL INSTALLER	Used for installing oil pump oil seal.