

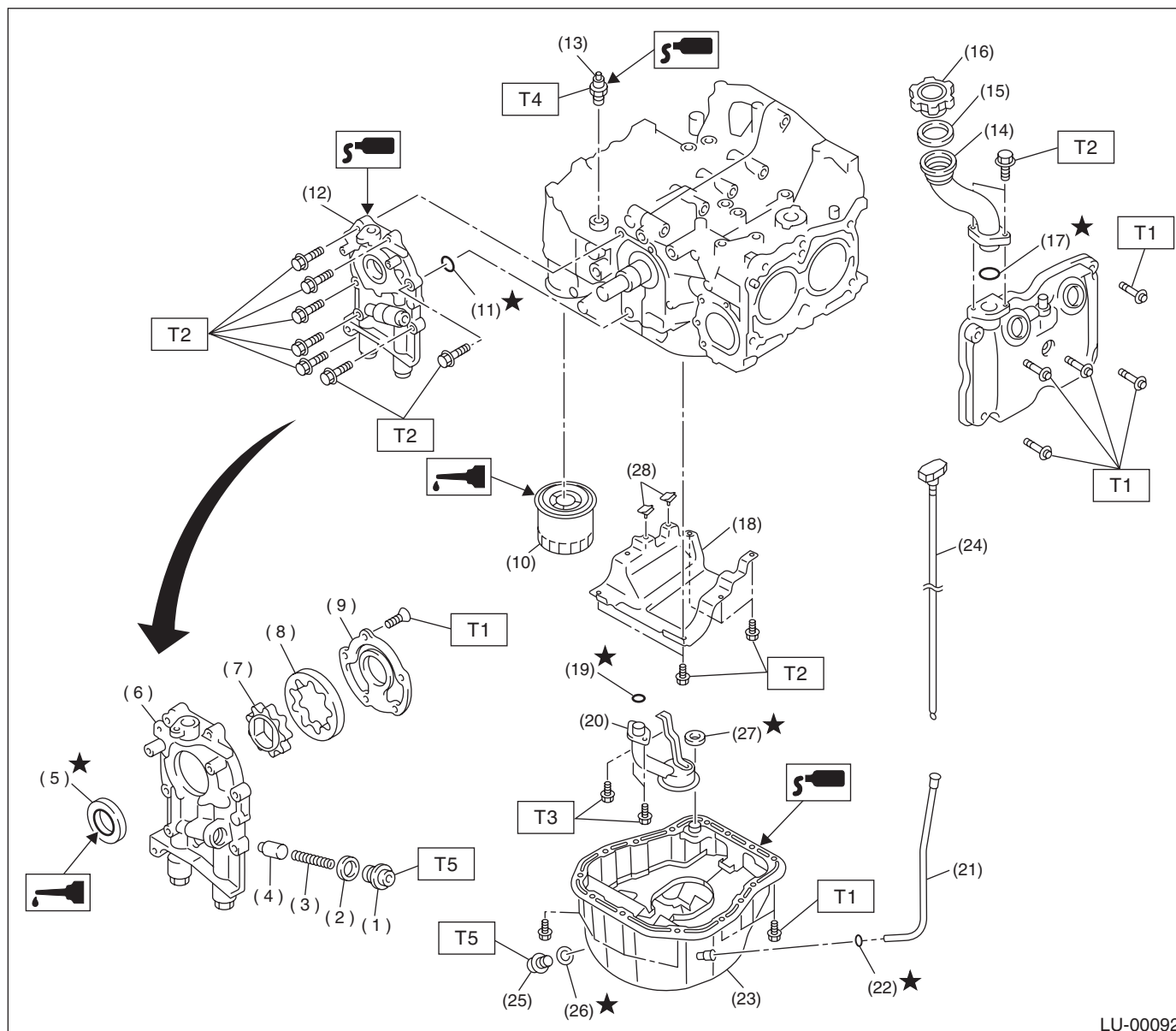
GENERAL DESCRIPTION

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 ℓ (3.4 US qt, 2.8 Imp qt)/min.
					Discharge pressure	294 kPa (3.0 kg/cm ² , 43 psi)
				Discharge flow	32.6 ℓ (34.4 US qt, 28.7 Imp qt)/min.	
			Turbo	600 rpm	Discharge pressure	98 kPa (1.0 kg/cm ² , 14 psi)
				5,000 rpm	Discharge flow	4.6 ℓ (4.9 US qt, 4.0 Imp qt)/min.
					Discharge pressure	294 kPa (3.0 kg/cm ² , 43 psi)
				Discharge flow	47.0 ℓ (49.7 US qt, 41.4 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 pres- sure 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 ℓ (4.2 US qt, 3.5 Imp qt)	
			Turbo		4.5 ℓ (4.8 US qt, 4.0 Imp qt)	

B: COMPONENT**1. NON-TURBO MODEL**

LU-00092

- (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

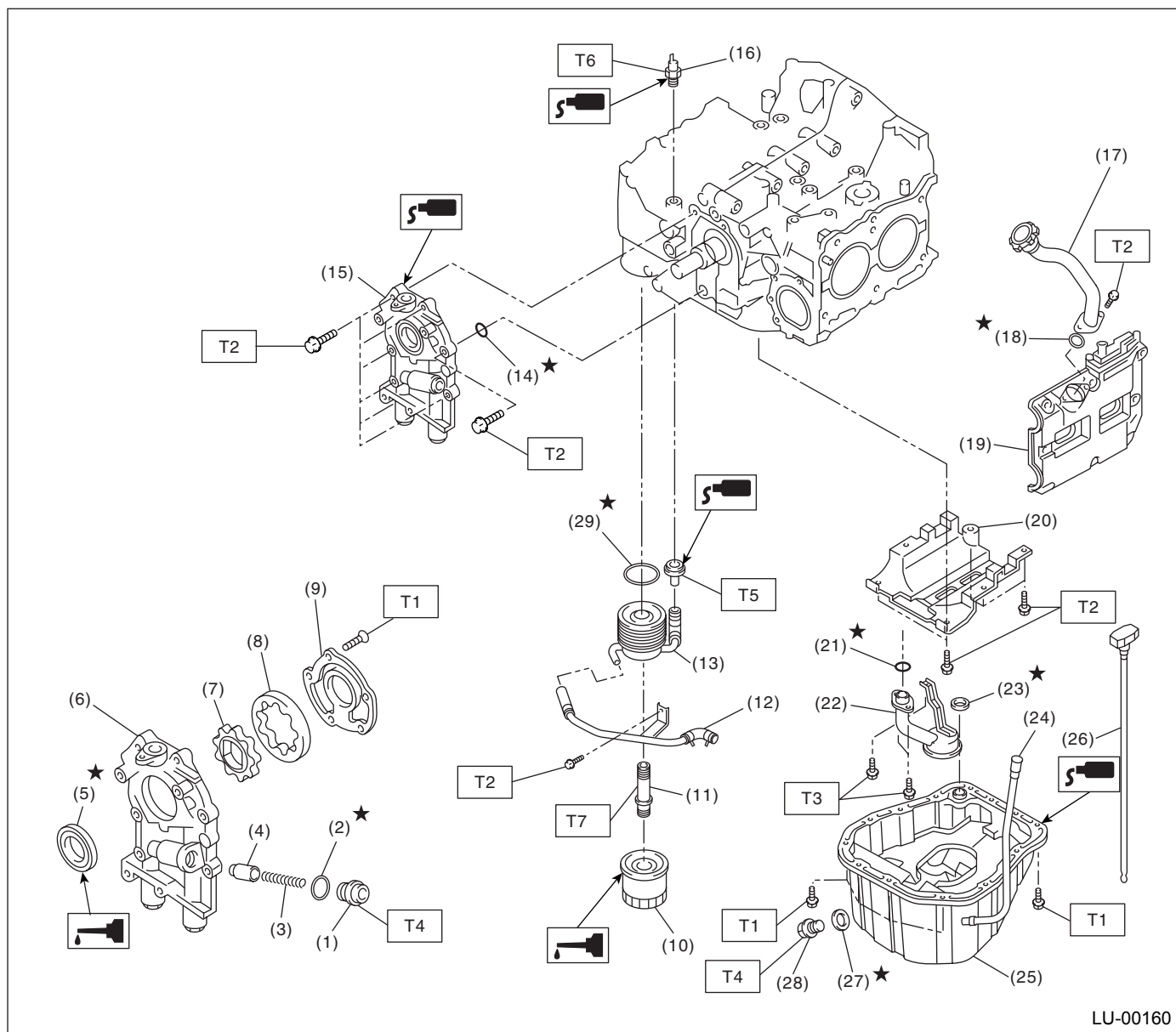
- (25) Drain plug
- (26) Metal gasket
- (27) Gasket
- (28) Seal

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)**

GENERAL DESCRIPTION

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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) |

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C: CAUTION

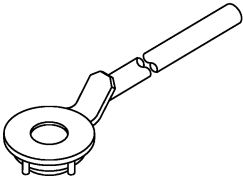
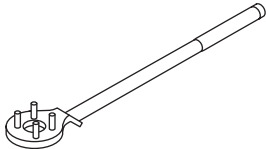
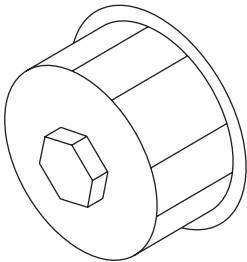
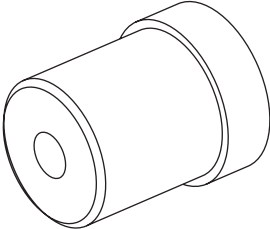
- Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust or dirt.
- Before removal, installation 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
 <p>ST-499977400</p>	499977400 (2000 cc model)	CRANKSHAFT PULLEY WRENCH	Used for stopping rotation of crankshaft pulley when loosening and tightening crankshaft pulley bolt.
 <p>ST-499977100</p>	499977100 (2500 cc model)	CRANKSHAFT PULLEY WRENCH	Used for stopping rotation of crankshaft pulley when loosening and tightening crankshaft pulley bolt.
 <p>ST-498547000</p>	498547000	OIL FILTER WRENCH	Used for removing and installing oil filter.
 <p>ST-499587100</p>	499587100	OIL SEAL INSTALLER	Used for installing oil pump oil seal.