

GENERAL DESCRIPTION

Lubrication

1. General Description S148001

A: SPECIFICATIONS S148001E49

| Lubrication method | | Forced lubrication | |
|--|--|--|-------------------------------------|
| Oil pump | Pump type | Trochoid type | |
| | Number of teeth | Inner rotor | 9 |
| | | Outer rotor | 10 |
| | Outer rotor diameter × thickness | | 78 × 11 mm (3.07 × 0.43 in) |
| | Tip clearance between inner and outer rotors | STANDARD | 0.04 — 0.14 mm (0.0016 — 0.0055 in) |
| | | LIMIT | 0.20 mm (0.0079 in) |
| | Side clearance between inner rotor and pump case | STANDARD | 0.02 — 0.08 mm (0.0008 — 0.0031 in) |
| | | LIMIT | 0.15 mm (0.0059 in) |
| Case clearance between outer rotor and pump case | STANDARD | 0.11 — 0.18 mm (0.0043 — 0.0071 in) | |
| | LIMIT | 0.25 mm (0.0098 in) | |
| Oil filter | Type | Full-flow filter type | |
| | Filtration area | 1,300 cm ² (201.5 sq in) | |
| | By-pass valve opening pressure | 160 kPa (1.63 kg/cm ² , 23 psi) | |
| | Outer diameter × width | 80 × 75 mm (3.15 × 2.95 in) | |
| | Oil filter to engine thread size | M 20 × 1.5 | |
| Relief valve operation pressure | | 588 kPa (6 kg/cm ² , 185 psi) | |
| Oil pressure switch | Type | Immersed contact point type | |
| | Working voltage — wattage | 12 V — 3.4 W or less | |
| | Warning light activation pressure | 15 kPa (0.153 kg/cm ² , 2.2 psi) | |
| | Proof pressure | More than 980 kPa (9.993 kg/cm ² , 142 psi) | |
| Oil capacity | Total capacity | 6.8 ℓ (7.2 US qt, 6.0 Imp qt) | |
| | Engine oil amount for refill | 5.8 ℓ (6.1 US qt, 5.1 Imp qt) | |

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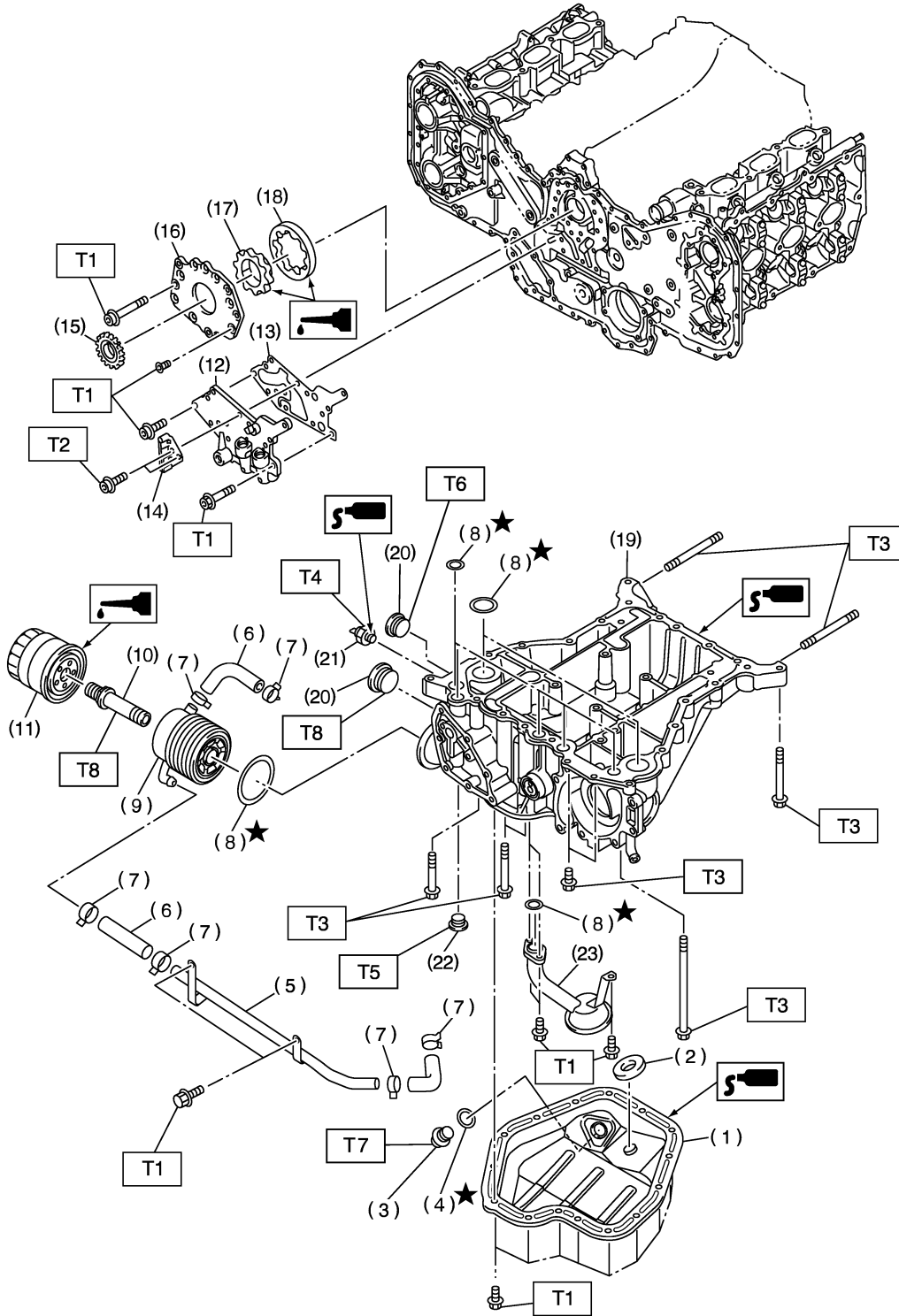
Lubrication

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B: COMPONENT S148001A05



B2M4533B

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- (1) Oil pan lower
- (2) Magnet
- (3) Drain plug
- (4) Gasket
- (5) Oil cooler pipe
- (6) Hose
- (7) Clamp
- (8) O-ring
- (9) Oil cooler
- (10) Connector
- (11) Oil filter
- (12) Relief valve case

- (13) Relief valve case gasket
- (14) Chain guide (center)
- (15) Crank sprocket
- (16) Oil pump cover
- (17) Inner rotor
- (18) Outer rotor
- (19) Oil pan upper
- (20) Plug
- (21) Oil pressure switch
- (22) Plug
- (23) Oil strainer

Tightening torque: N·m (kgf-m, ft-lb)

T1: 6.4 (0.65, 4.7)

T2: 7.8 (0.80, 5.8)

T3: 18 (1.8, 13)

T4: 25 (2.5, 18)

T5: 34 (3.5, 25)

T6: 37 (3.8, 27)

T7: 44 (4.5, 33)

T8: 54 (5.5, 40)

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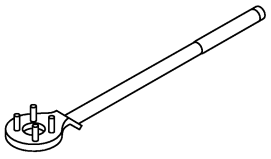
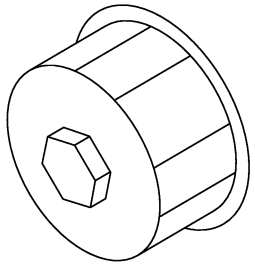
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C: CAUTION S148001A03

- 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 in 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 ground cable from battery.

D: PREPARATION TOOL S148001A17

| ILLUSTRATION | TOOL NUMBER | DESCRIPTION | REMARKS |
|---|-------------|---------------------|---|
|  <p style="text-align: right;">B2M3870</p> | 499977100 | CRANK PULLEY WRENCH | Used for stopping rotation of crankshaft pulley when loosening and tightening crankshaft pulley bolt. |
|  <p style="text-align: right;">B2M3872</p> | 498547000 | OIL FILTER WRENCH | Used for removing and installing oil filter. |

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