

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		78 × 10 mm (3.07 × 0.39 in)	
	Tip clearance between inner and outer rotor	STANDARD	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	STANDARD	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	STANDARD	0.10 — 0.175 mm (0.0039 — 0.0069 in)	
		LIMIT	0.20 mm (0.0079 in)	
	Capacity at 80°C (176°F)	600 rpm	Discharge pressure	98 kPa (1.0 kg/cm ² , 14 psi)
			Discharge quantity	4.6 ℓ (4.9 US qt, 4.0 Imp qt)/min.
		5,000 rpm	Discharge pressure	294 kPa (3.0 kg/cm ² , 43 psi)
Discharge quantity			47.0 ℓ (49.7 US qt, 41.4 Imp qt)/min.	
Relief valve operation pressure			588 kPa (6.0 kg/cm ² , 85 psi)	
Oil filter	Type		Full-flow filter type	
	Filtration area		800 cm ² (124 sq in)	
	By-pass valve opening pressure		160 kPa (1.63 kg/cm ² , 23.2 psi)	
	Outer diameter × width		68 × 65 mm (2.68 × 2.56 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)			4.5 ℓ (4.8 US qt, 4.0 Imp qt)	

C: CAUTION

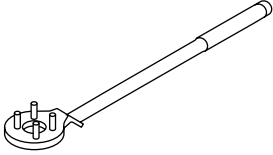
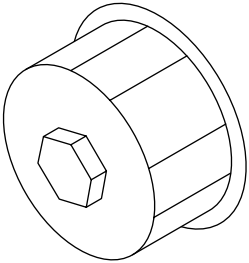
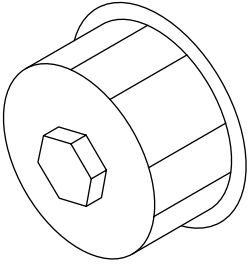
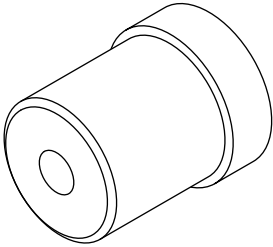
- Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust or dirt.
- Before removal, installation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

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D: PREPARATION TOOL

1. SPECIAL TOOLS

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 <p style="text-align: center;">ST-499977100</p>	499977100	CRANKSHAFT PULLEY WRENCH	Used for stopping rotation of crankshaft pulley when loosening and tightening crankshaft pulley bolt.
 <p style="text-align: center;">ST18332AA000</p>	18332AA000	OIL FILTER WRENCH	Used for removing and installing oil filter. (Outer diameter: 68 mm (2.68 in))
 <p style="text-align: center;">ST18332AA010</p>	18332AA010	OIL FILTER WRENCH	Used for removing and installing oil filter. (Outer diameter: 65 mm (2.56 in))
 <p style="text-align: center;">ST-499587100</p>	499587100	OIL SEAL INSTALLER	Used for installing oil seal to oil pump.