

RODEO

ENGINE

ENGINE LUBRICATION (Y22SE 2.2L)

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Service Precaution

WARNING: THIS VEHICLE HAS A SUPPLEMENTAL RESTRAINT SYSTEM (SRS). REFER TO THE SRS COMPONENT AND WIRING LOCATION VIEW IN ORDER TO DETERMINE WHETHER YOU ARE PERFORMING SERVICE ON OR NEAR THE SRS COMPONENTS OR THE SRS WIRING. WHEN YOU ARE PERFORMING SERVICE ON OR NEAR THE SRS COMPONENTS OR THE SRS WIRING, REFER TO THE SRS SERVICE INFORMATION. FAILURE TO FOLLOW WARNINGS COULD RESULT IN POSSIBLE AIR BAG DEPLOYMENT, PERSONAL INJURY, OR OTHERWISE UNNEEDED SRS SYSTEM REPAIRS.

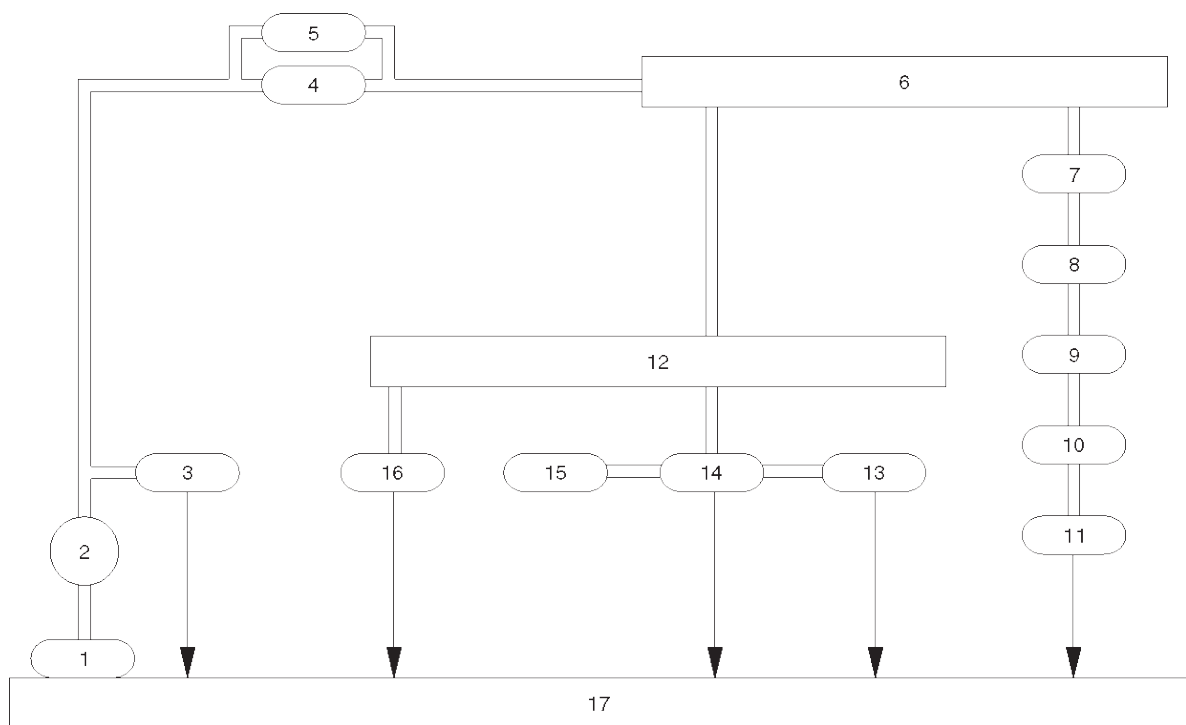
CAUTION: Always use the correct fastener in the proper location. When you replace a fastener, use **ONLY** the exact part number for that application. ISUZU will call out those fasteners that require a replacement after removal. ISUZU will also call out the fasteners that require thread lockers or thread sealant. **UNLESS OTHERWISE SPECIFIED**, do not use supplemental coatings (Paints, greases, or other corrosion inhibitors) on threaded fasteners or fastener joint interfaces. Generally, such coatings adversely affect the fastener torque and the joint clamping force, and may damage the fastener. When you install fasteners, use the correct tightening sequence and specifications. Following these instructions can help you avoid damage to parts and systems.

General Description

A gear type oil pump is directly driven by the crankshaft and draws oil from the oil pan, via the suction pipe. The oil pressure created allows the oil to flow through the oil filter into the main oil gallery in the cylinder block. An oil pump pressure relief valve and oil filter bypass valve are incorporated in the system.

From the main oil gallery in the cylinder block, the cylinder head and crankshaft main bearings are supplied with oil.

The camshaft bearings and hydraulic tappets are supplied through the main feed galleries in the cylinder head. Vent valves allow air to be expelled from the oil galleries in the cylinder head. The balance shaft journals are directly fed from the crankshaft main bearings. The connecting rod bearings are fed via passages in the crankshaft. The oil returns to the oil pan via passages in the cylinder block.



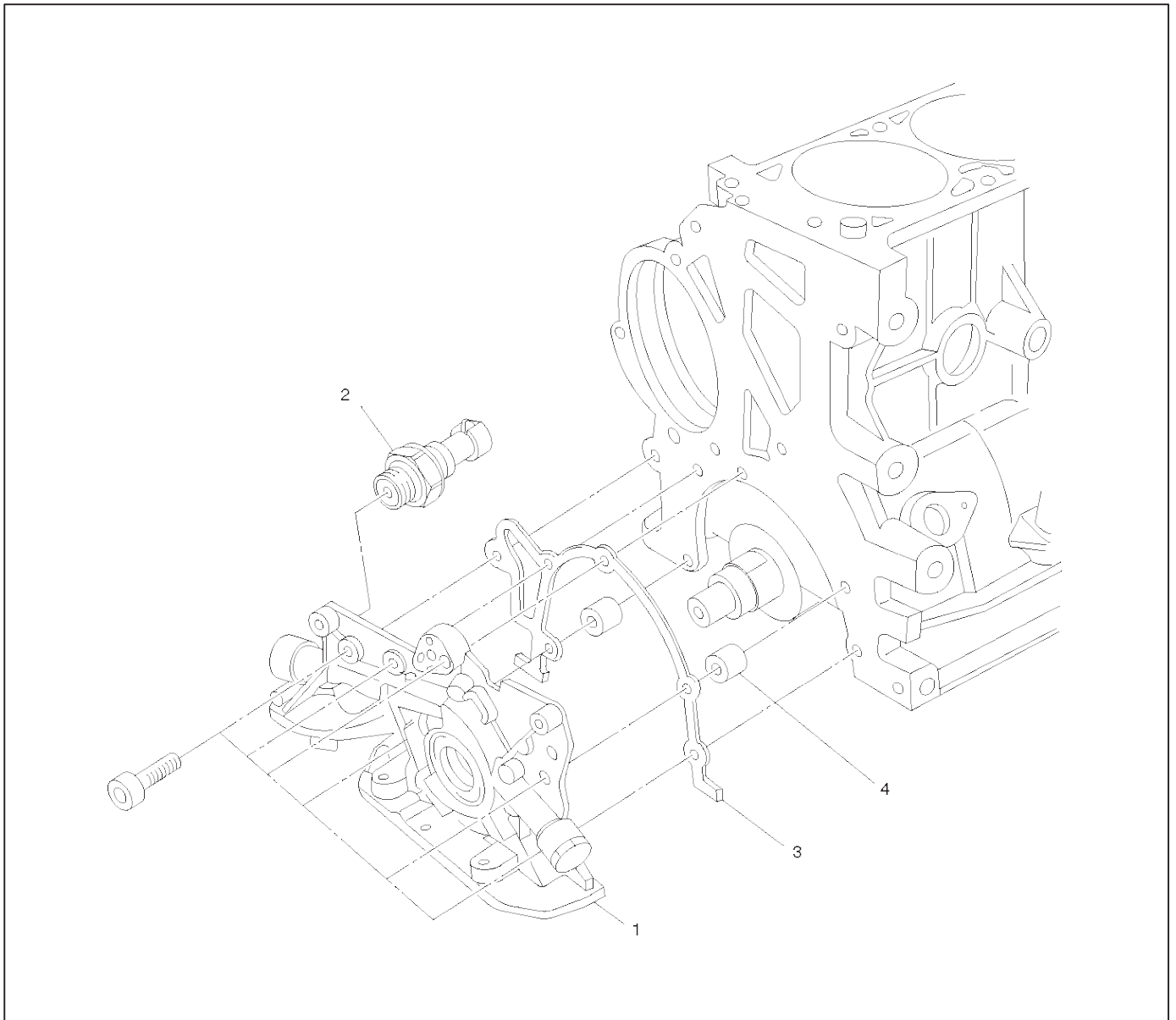
C06RW004

Legend

- | | |
|------------------------|---|
| (1) Oil Strainer | (9) Connecting Rod Bearing |
| (2) Oil Pump | (10) Connecting Rod |
| (3) Relief Valve | (11) Piston |
| (4) Oil Filter | (12) Oil Gallery; Cylinder Head |
| (5) Safety Valve | (13) Camshaft |
| (6) Oil Gallery | (14) Camshaft Journal |
| (7) Crankshaft Bearing | (15) Tappet (HLA = Hydraulic Lash Adjuster) |
| (8) Crankshaft | (16) Vent Valve |
| | (17) Oil Pan |

Oil Pump

Oil Pump and Associated Parts



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Legend

- (1) Oil Pump Assembly
- (2) Oil Pressure Switch

- (3) Gasket
- (4) Sleeve

Disassembly

1. Remove crankshaft timing pulley.
2. Remove oil pan.
3. Remove oil pan support.
4. Remove oil strainer.
5. Remove oil pump assembly.
6. Remove oil pressure switch.
7. Remove gasket.
8. Remove sleeve.

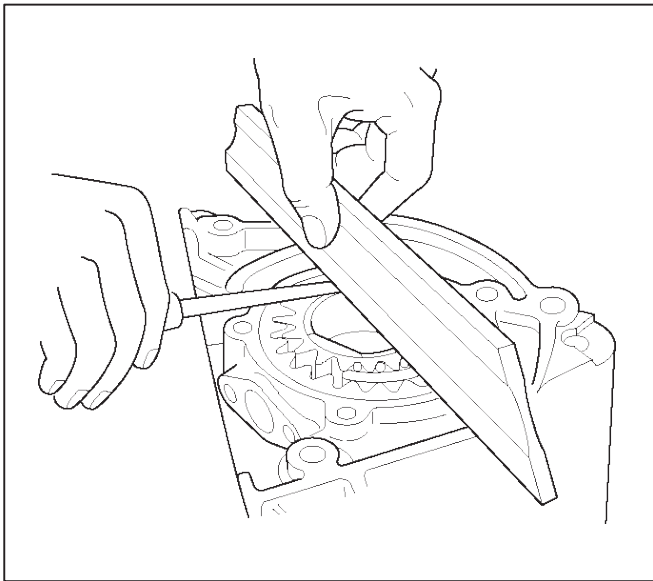
Inspection and Repair

CAUTION: Make necessary correction or parts replacement if wear, damage or any other abnormal conditions are found through inspection.

Body and Gears

The pump assembly must be replaced if one or more of the wrong conditions is discovered during inspection:
Indentation of gear pair — use feeler strip and straight edge.

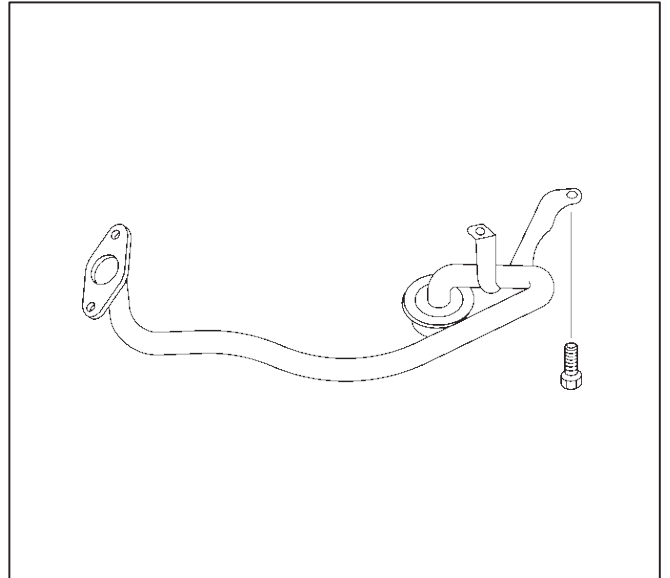
**Dimension : 0.03 mm to 0.10 mm
(0.0012 to 0.0039 in)**



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Oil Strainer

Check the oil strainer for cracking and scoring. If cracking and scoring are found, the oil strainer must be replaced.



051R100003

Reassembly

1. Install oil pressure switch to the oil pump.
Torque : 40 N·m (30 lb ft)
2. Install the oil pump with the sleeve and the gasket.
Torque : 6 N·m (52 lb in)
3. Install oil strainer.
Torque : 8 N·m (69 lb in)
4. Install oil pan support.
Torque : 20 N·m (14 lb ft)
5. Install the oil pan.
1st step: 8 N·m (69 lb in)
6. Install crankshaft timing pulley.
Tighten the bolts in 2 steps:
1st step: 130 N·m (94 lb ft)
2nd step: 45°