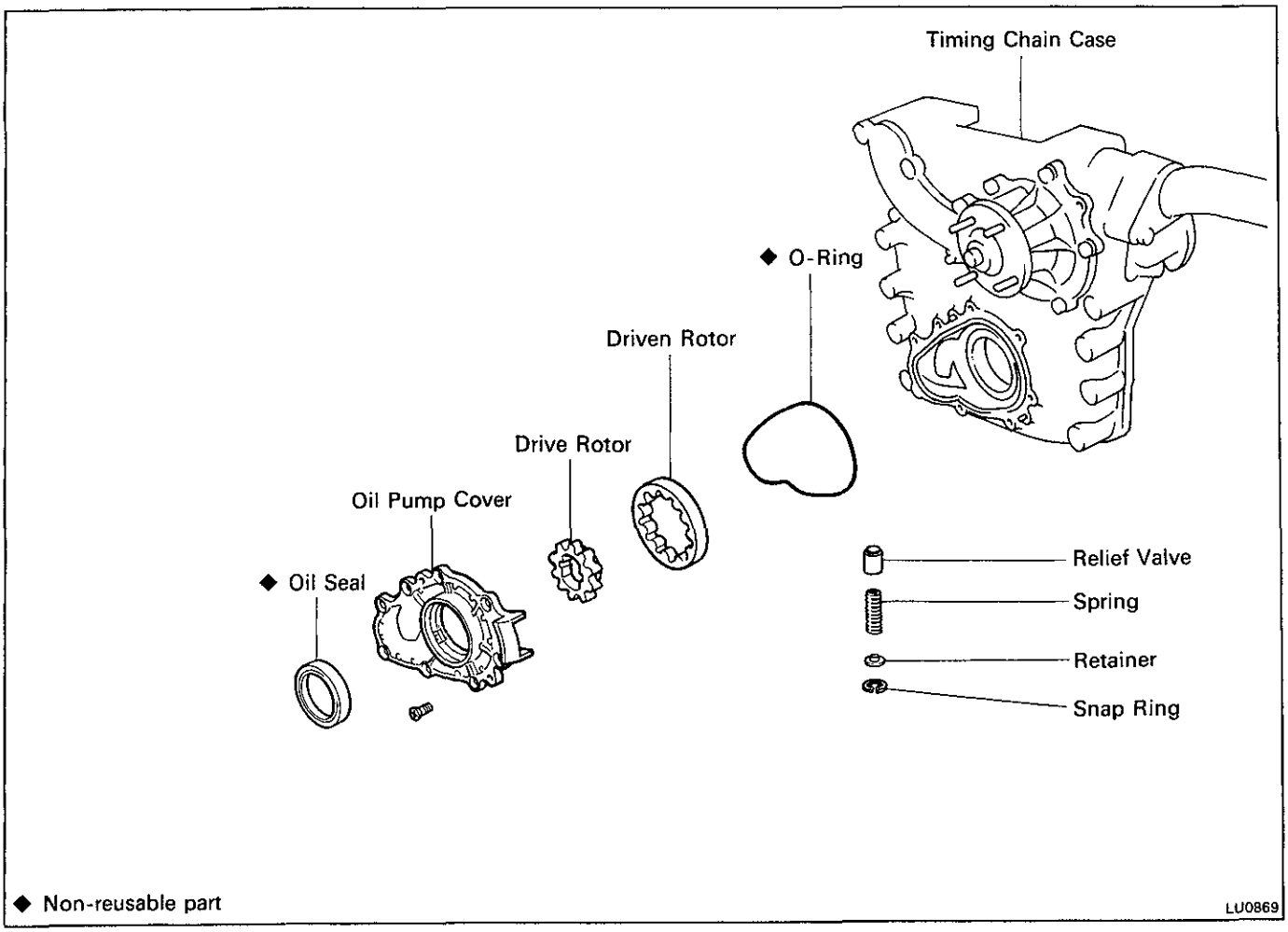
OIL PUMP

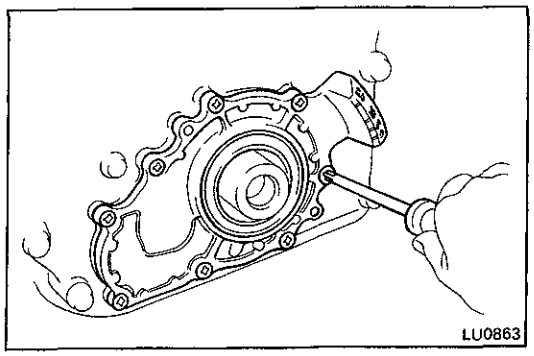
COMPONENTS



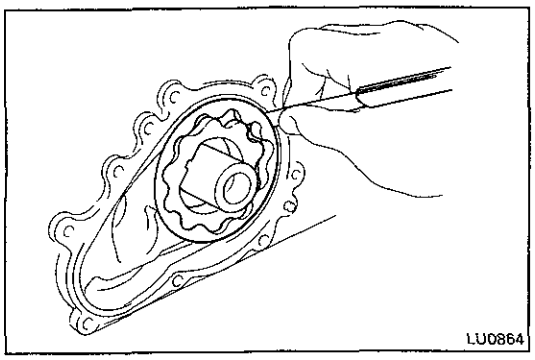
REMOVAL OF OIL PUMP COVER

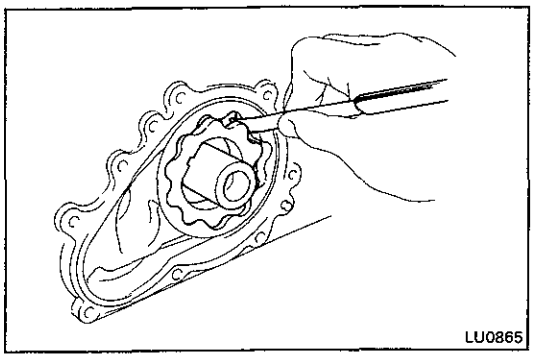
1. **REMOVE WATER PUMP PULLEY AND FLUID COUPLING (OR FAN DRIVE SHAFT) WITH FAN**
(See step 2 on page EM-73)

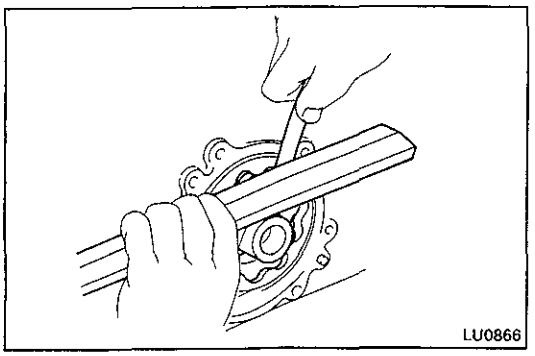
2. **REMOVE CRANKSHAFT PULLEY**
(See step 4 on page EM-73)



3. **REMOVE OIL PUMP COVER**
Remove the eight screws, oil pump cover and O-ring.







INSPECTION OF OIL PUMP

HINT: When replacing the oil pump, the oil pan and strainer should be removed and cleaned.

1. **INSPECT BODY CLEARANCE**

Using a thickness gauge, measure the clearance between the driven rotor and pump body.

Standard clearance: **0.100 – 0.175 mm (0.0039 – 0.0069 in.)**
Maximum clearance: **0.30 mm (0.0118 in.)**

If the clearance is greater than maximum, replace the oil pump rotor set and/or pump body.

2. **INSPECT TIP CLEARANCE**

Using a thickness gauge, measure the clearance between both rotor trips.

Standard clearance: **0.11 – 0.24 mm (0.0043 – 0.0094 in.)**
Maximum clearance: **0.35 mm (0.0138 in.)**

If the clearance is greater than maximum, replace the oil pump rotor set.

3. **INSPECT SIDE CLEARANCE**

Using a thickness gauge and flat block, measure the side clearance as shown.

Standard clearance: **0.03 – 0.09 mm (0.0012 – 0.0035 in.)**
Maximum clearance: **0.15 mm (0.0059 in.)**

If the clearance is greater than maximum, replace the oil pump rotor set and/or pump body.

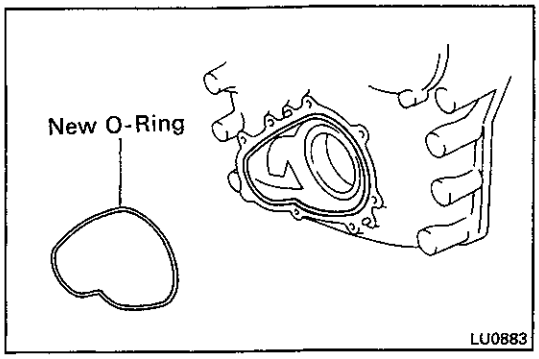
IF NECESSARY, REPLACEMENT OF OIL PUMP (TIMING CHAIN CASE)

1 **REMOVE TIMING CHAIN CASE**
(See steps 5 to 7 on pages EM-73, 74)

2. **INSTALL TIMING CHAIN CASE**
(See steps 4 to 7 on pages EM-77 to 79)

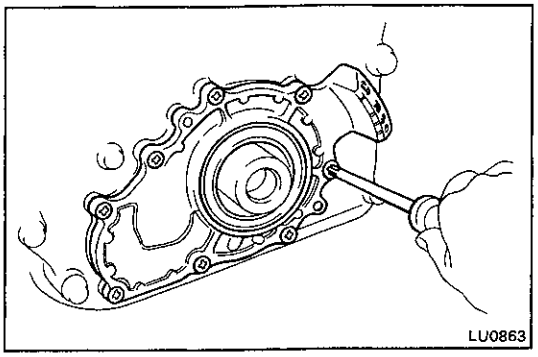
REPLACEMENT OF OIL SEAL

(See page EM-99)



INSTALLATION OF OIL PUMP COVER

1. **INSTALL OIL PUMP COVER**
   (a) Place a new O-ring into the groove of timing chain case.



   (b) Install the oil pump cover with the eight screws.
   Torque: 105 kg-cm (8 ft-lb, 10 N·m)

2. **INSTALL CRANKSHAFT PULLEY**
   (See step 8 on page EM-80)

3. **INSTALL WATER PUMP PULLEY AND FLUID COUPLING (OR FAN DRIVE SHAFT) WITH FAN**
   (See step 10 on page EM-80)