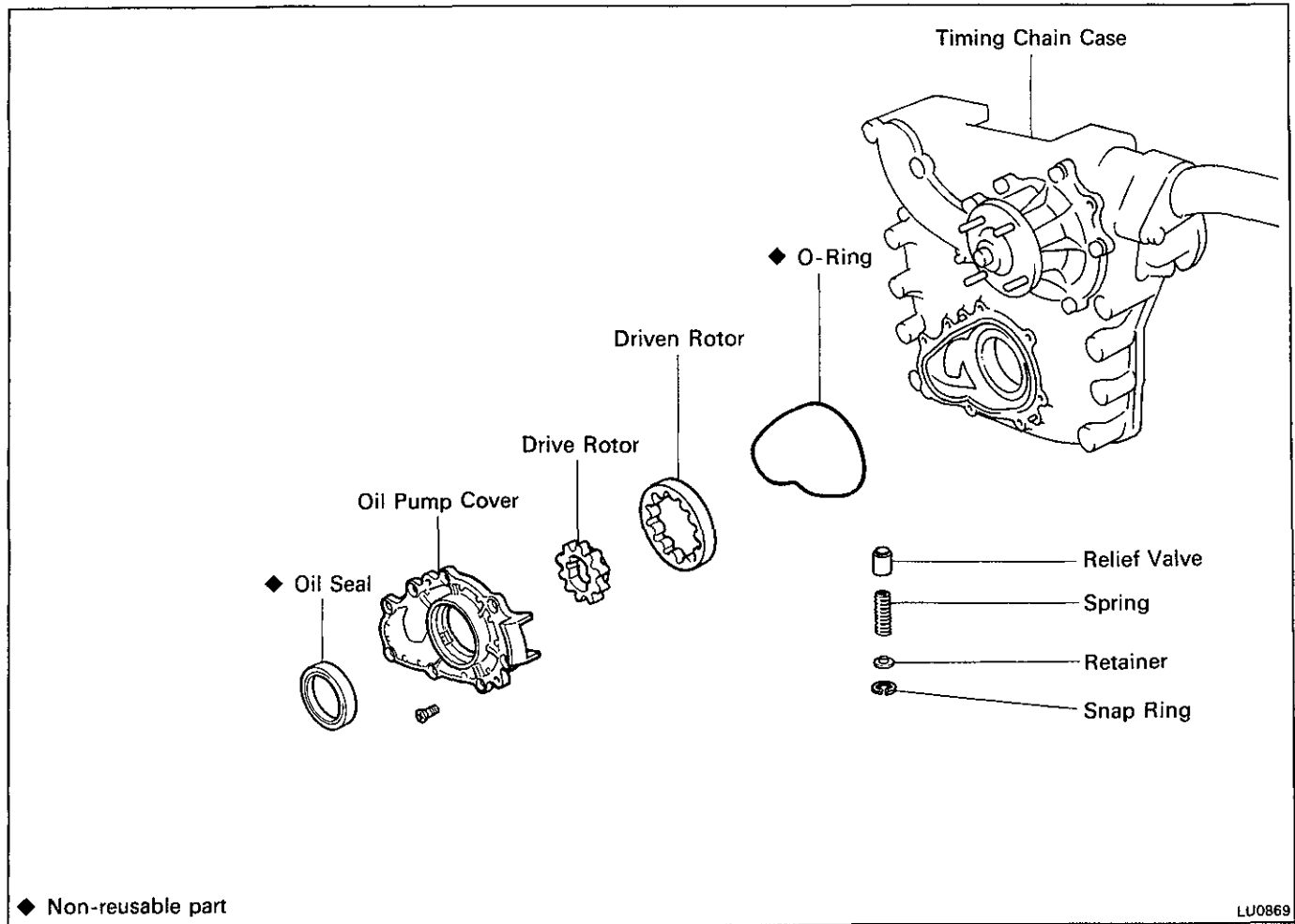
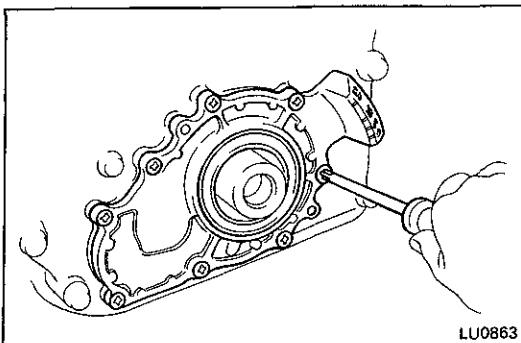


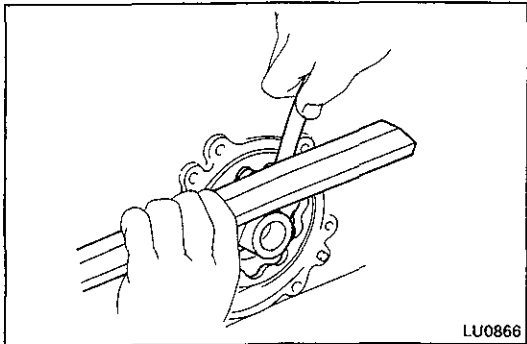
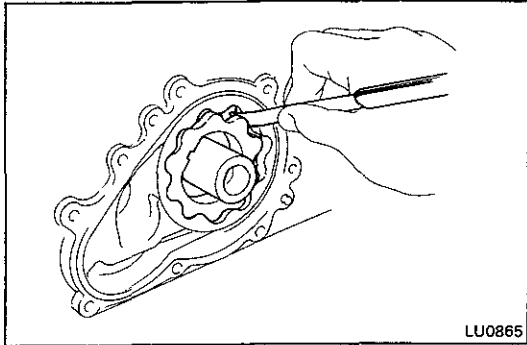
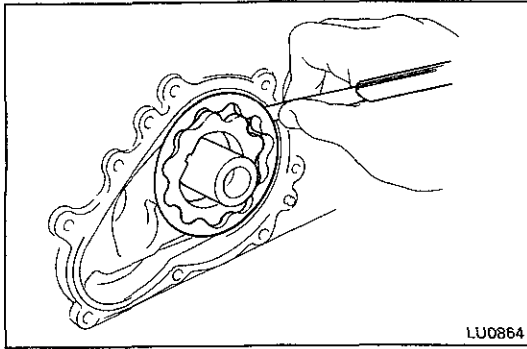
OIL PUMP COMPONENTS



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

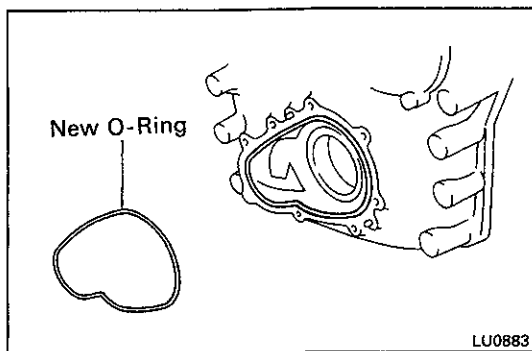
(See steps 5 to 7 on pages EM-73, 74)

2. INSTALL TIMING CHAIN CASE

(See steps 4 to 7 on pages EM-77 to 79)

REPLACEMENT OF OIL SEAL

(See page EM-99)



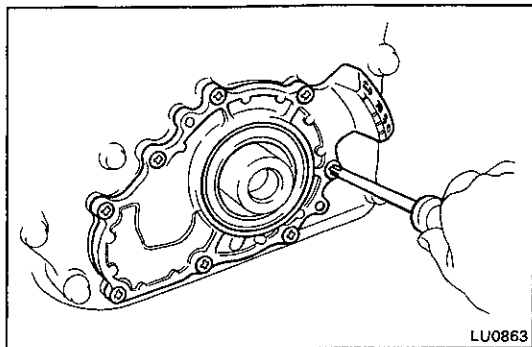
INSTALLATION OF OIL PUMP COVER

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)