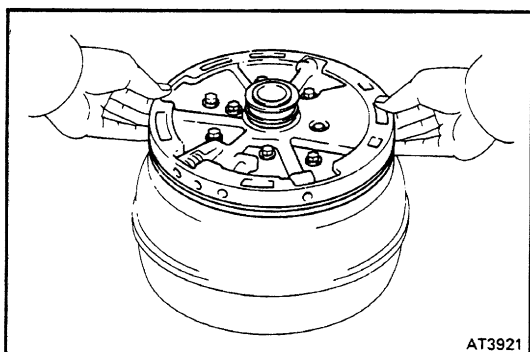
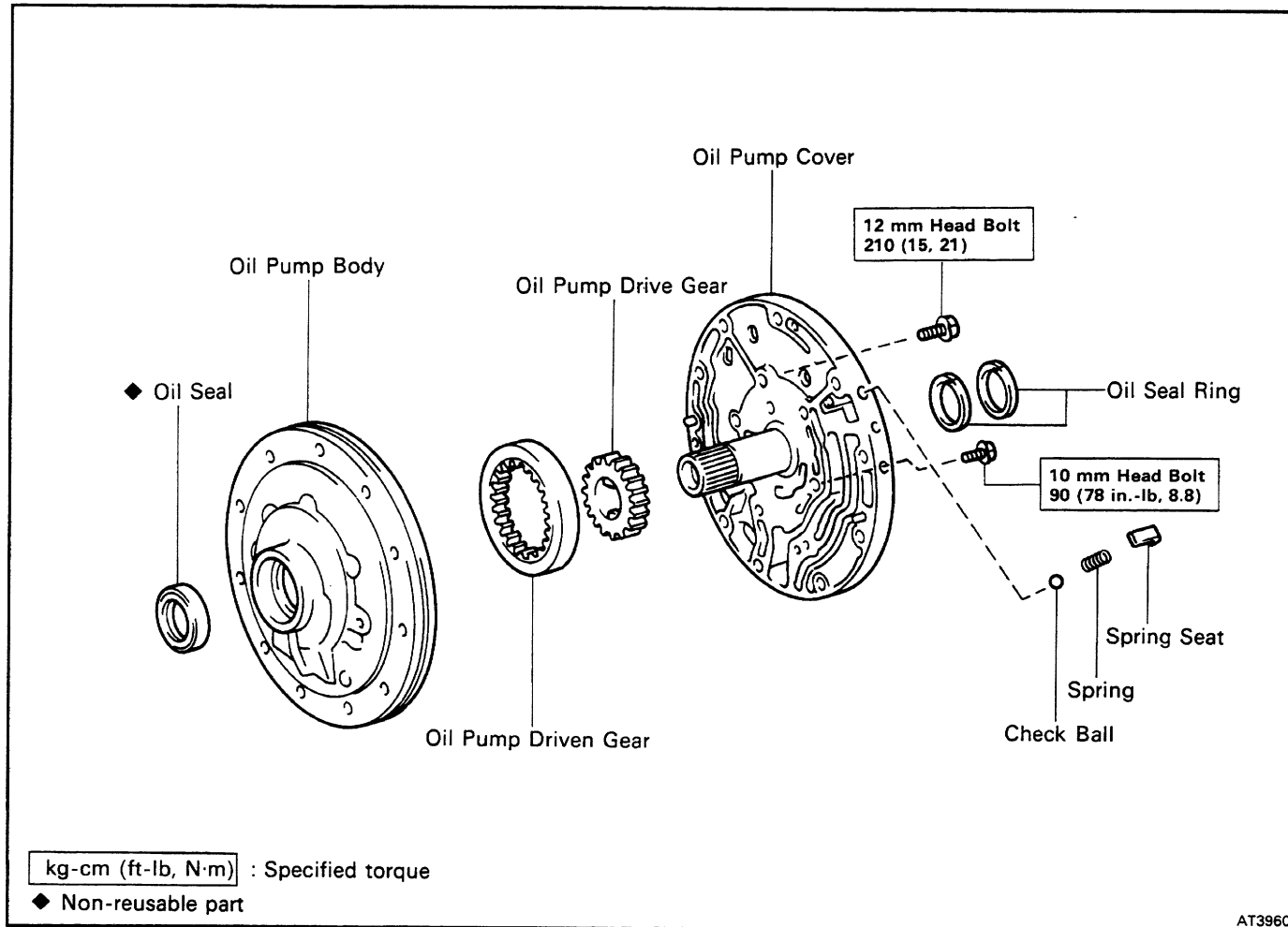
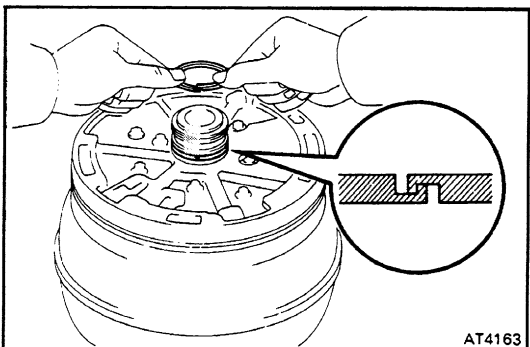


Oil Pump COMPONENTS



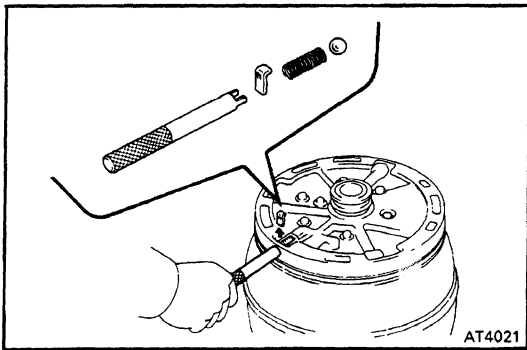
DISASSEMBLY OF OIL PUMP

1. USE TORQUE CONVERTER AS WORK STAND



2. REMOVE OIL SEAL RINGS

Remove the two oil seal rings.

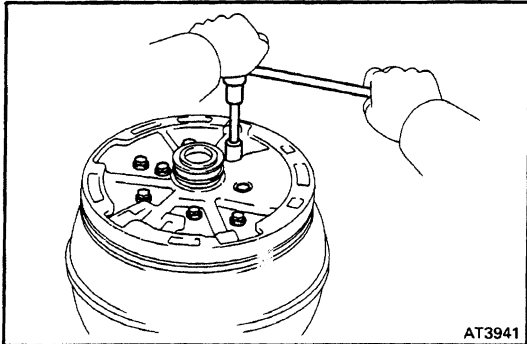


3. REMOVE CHECK BALL

- (a) Using SST, compress the spring and remove the spring seat.

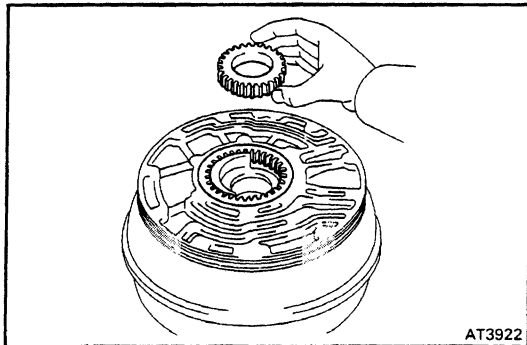
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- (b) Remove the spring and check ball.

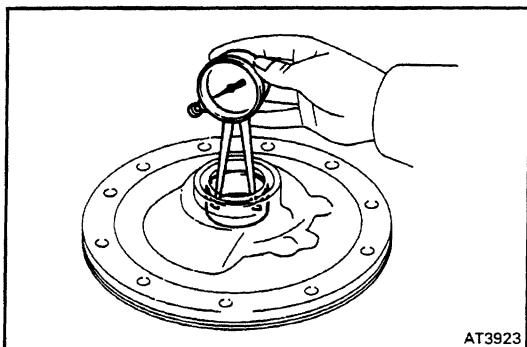


4. REMOVE OIL PUMP COVER

Remove the eight bolts and pump cover.



5. REMOVE OIL PUMP DRIVE AND DRIVEN GEARS



INSPECTION OF OIL PUMP

1. INSPECT BUSHING OF OIL PUMP BODY

Using a dial indicator, measure the inside diameter.

Standard inside diameter: 42.050 – 42.075 mm

(1.6555 – 1.6565 in.)

Maximum inside diameter: 42.13 mm (1.6587 in.)

If the inside diameter is greater than maximum, replace the pump body.

2. INSPECT BUSHINGS OF OIL PUMP COVER

Using a dial indicator, measure the inside diameter.

Standard inside diameter:

Front 24.000 – 24.021 mm

(0.9449 – 0.9457 in.)

Rear 26.500 – 26.521 mm

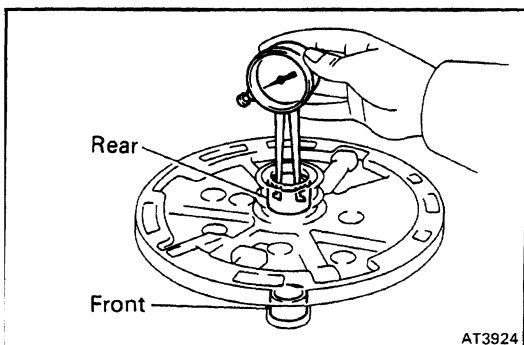
(1.0433 – 1.0441 in.)

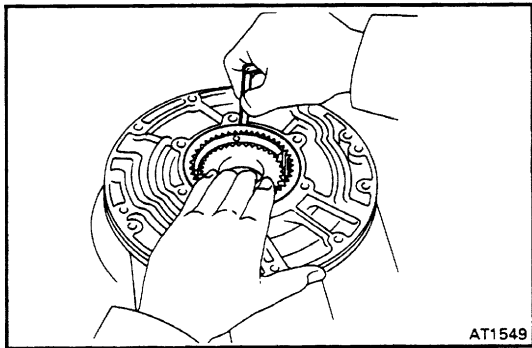
Maximum inside diameter:

Front 24.07 mm (0.9476 in.)

Rear 26.57 mm (1.0461 in.)

If the inside diameter is greater than maximum, replace the pump cover.





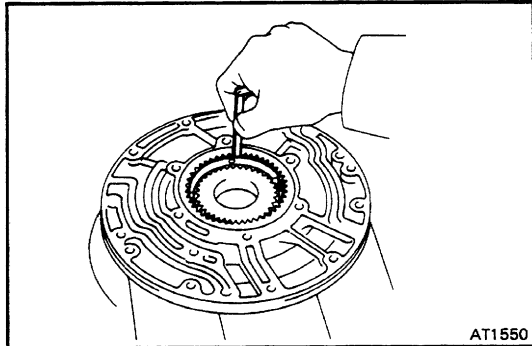
3. INSPECT BODY CLEARANCE OF DRIVEN GEAR

- (a) Push the driven gear to one side of the body.
- (b) Using a feeler gauge, measure the clearance between the driven gear and body.

Standard body clearance: 0.07 – 0.15 mm
(0.0028 – 0.0059 in.)

Maximum body clearance: 0.3 mm (0.012 in.)

If the body clearance is greater than maximum, replace the gears and pump body as a set. .



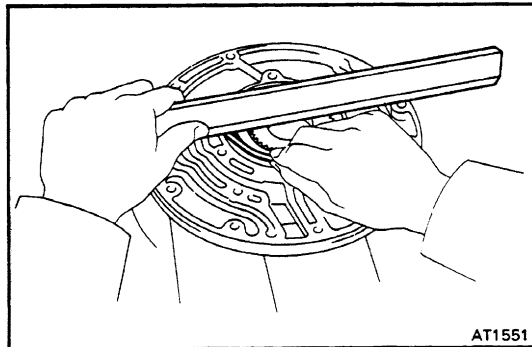
4. INSPECT TIP CLEARANCE OF DRIVEN GEAR

Using a feeler gauge, measure the clearance between the gear teeth and the crescent-shaped part of the pump body.

Standard tip clearance: 0.14 – 0.24 mm
(0.0055 – 0.0094 in.)

Maximum tip clearance: 0.3 mm (0.012 in.)

If the tip clearance is greater than maximum, replace the gears and pump body as a set.



5. INSPECT SIDE CLEARANCE OF DRIVE AND DRIVEN G EARS

Using a steel straight edge and a feeler gauge, measure the clearance between the gears and steel straight edge.

Standard side clearance: 0.02 – 0.05 mm
(0.0008 – 0.0020 in.)

Maximum side clearance: 0.1 mm (0.004 in.)

If the side clearance is greater than maximum, select and replace the gears as a set.

HINT: There are two different thicknesses for drive and driven gears.

Gear thickness:

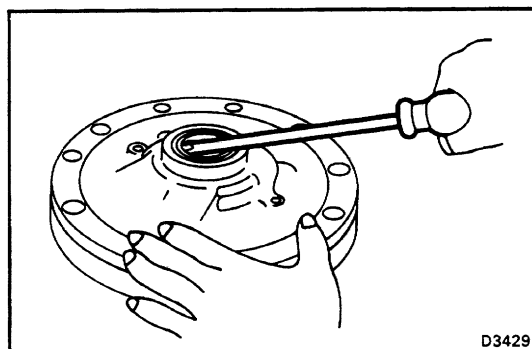
18.435 – 18.450 m m (0.7258 – 0.7264 in.)

18.451 – 18.486 m m (0. 7264 – 0.7278 i n .)

If necessary, replace the pump body.

6. IF NECESSARY, REPLACE OIL SEAL

- (a) Using a screwdriver, pry off the oil seal.

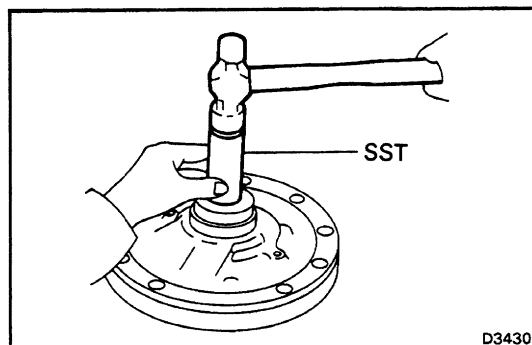


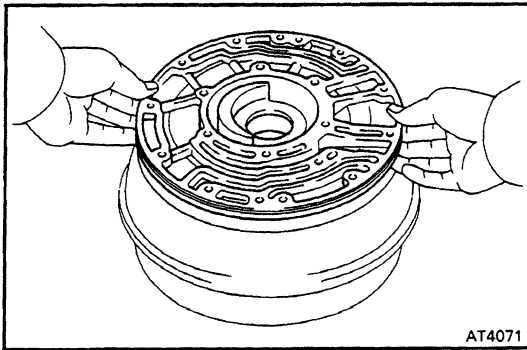
- (b) Using SST, tap in a new oil seal.

The oil seal end should be flushed with the outer edge of the pump body.

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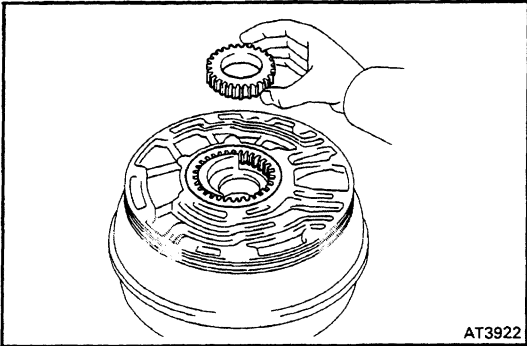
- (c) Apply MP grease to the oil seal lip.





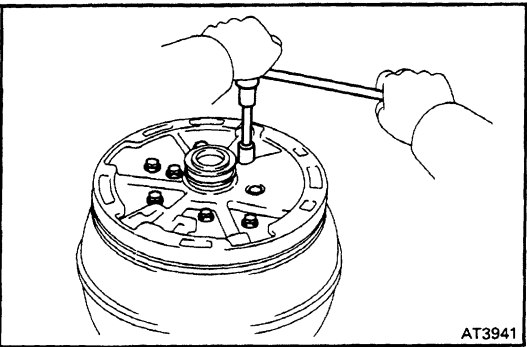
ASSEMBLY OF OIL PUMP

1. PLACE OIL PUMP BODY ONTO TORQUE CONVERTER



2. INSTALL DRIVEN AND DRIVE GEARS TO OIL PUMP BODY

- (a) Coat the driven and drive gears with ATF.
- (b) Install the driven and drive gears.



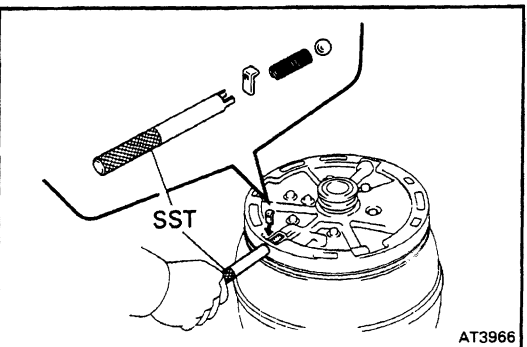
3. INSTALL OIL PUMP COVER TO OIL PUMP BODY

- (a) Align the bolt holes of the pump body and cover.
- (b) Install the pump cover with the eight bolts.

Torque:

10 mm head bolt 90 kg-cm (78 in.-lb, 8.8 N-m)

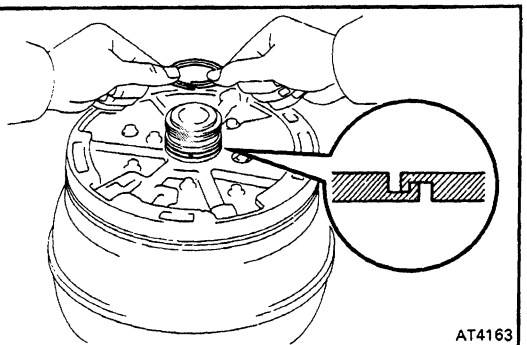
12 mm head bolt 210 kg-cm (15 ft-lb, 21 N-m)



4. INSTALL CHECK BALL

- (a) Install the check ball and spring.
- (b) Using SST, compress the spring and install the spring seat.

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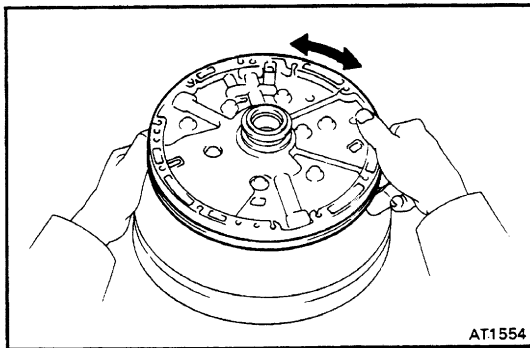


5. INSTALL OIL SEAL RINGS

- (a) Coat the two oil seal rings with ATF.
- (b) Contract the oil seal rings, and install them onto the stator shaft.

NOTICE: Do not spread the ring ends too much.

HINT: After installing the oil seal rings, check that they rotate smoothly.

**6. CHECK OIL PUMP DRIVE GEAR ROTATION**

Make sure the drive gear rotates smoothly when installed to the torque converter.