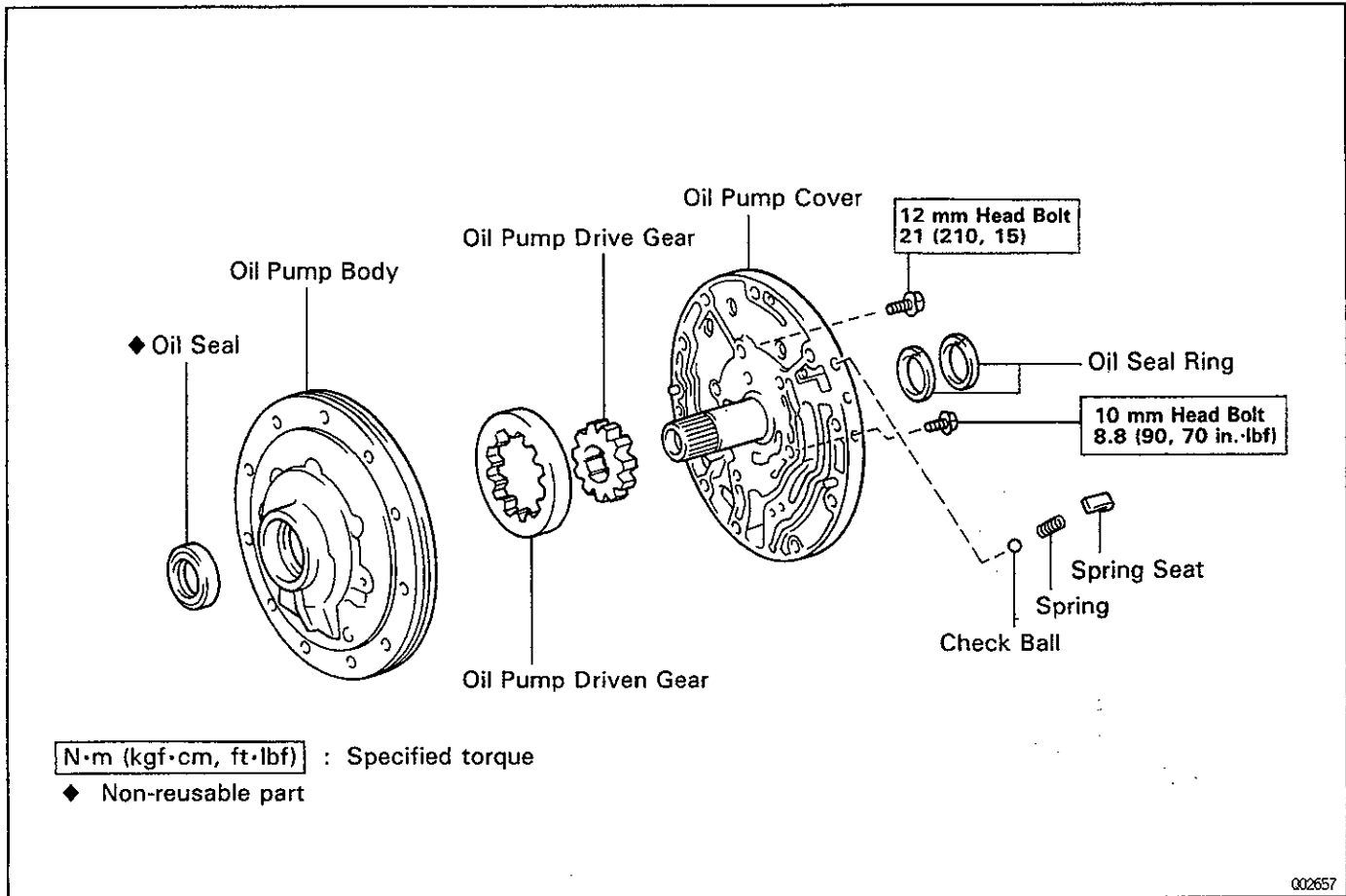


# OIL PUMP COMPONENTS

AT094-01

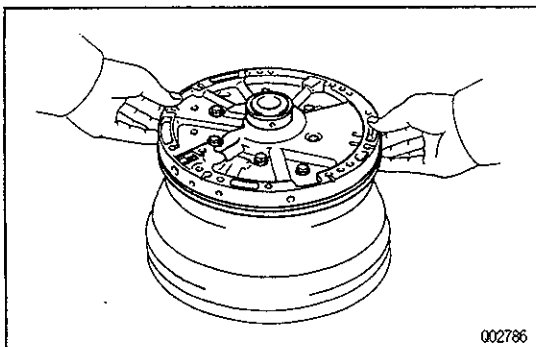
AT



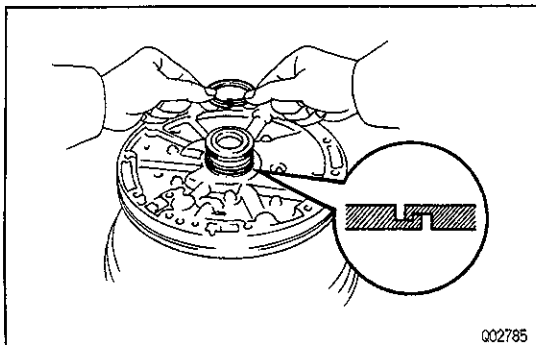
## COMPONENTS DISASSEMBLY

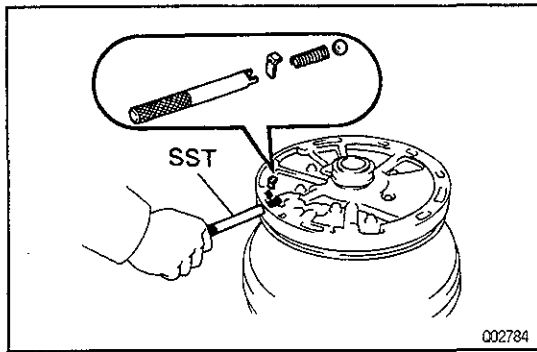
AT07W-02

### 1. USE TORQUE CONVERTER AS WORK STAND



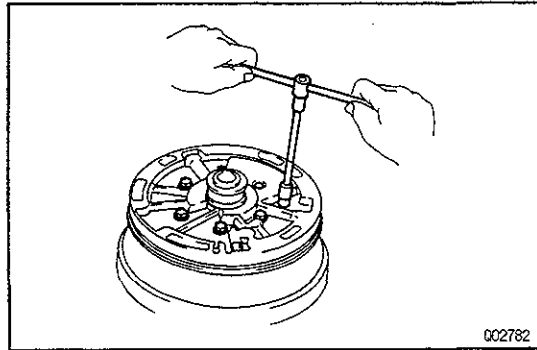
### 2. REMOVE OIL SEAL RINGS remove the two oil seal rings.



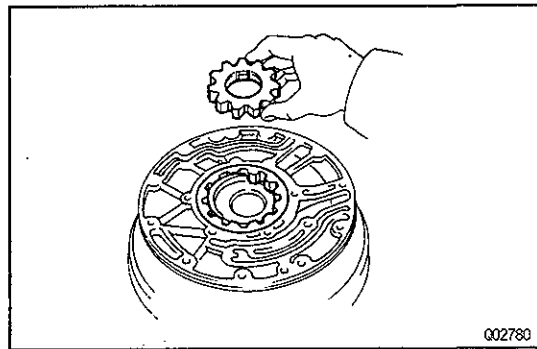


### 3. REMOVE CHECK BALL

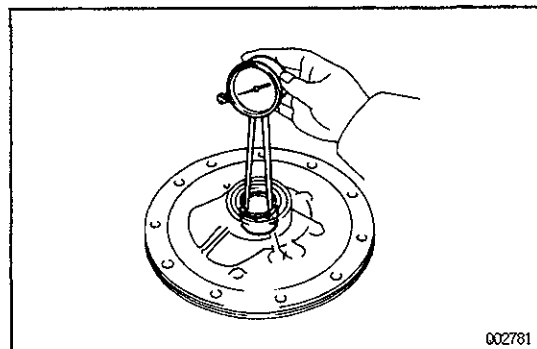
- (a) Using SST, compress the spring and remove the spring seat.  
SST 09350-36010(09350-06100)
- (b) Remove the spring and check ball.



### 4. REMOVE EIGHT BOLTS AND PUMP COVER



### 5. REMOVE OIL PUMP DRIVE AND DRIVEN GEARS



## OIL PUMP INSPECTION

AT07X-01

### 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.

**Front bushing standard inside diameter:**

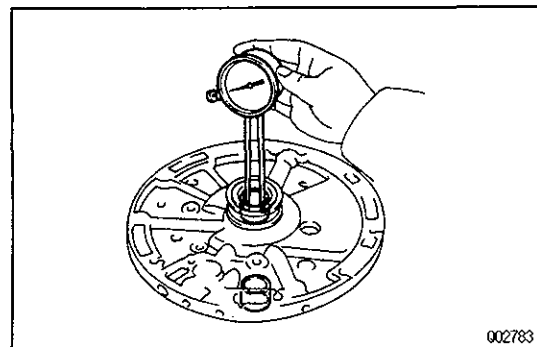
24.000–24.021 mm (0.9449–0.9457 in.)

**Rear bushing standard inside diameter:**

26.500–26.521 mm (1.0433–1.0441 in.)

**Front bushing maximum inside diameter:**

24.07 mm (0.9476 in.)

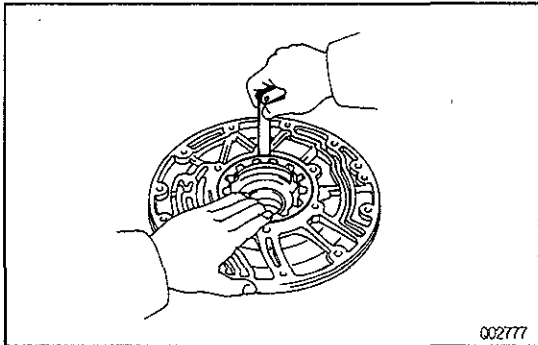


**Rear bushing maximum inside diameter:**

**26.57 mm (1.0461 in.)**

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

AT



**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.

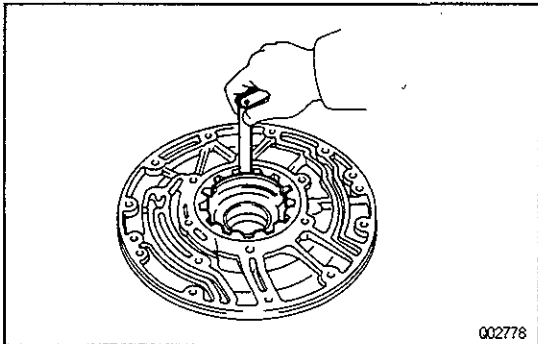
**Standard body clearance:**

**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 the 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.

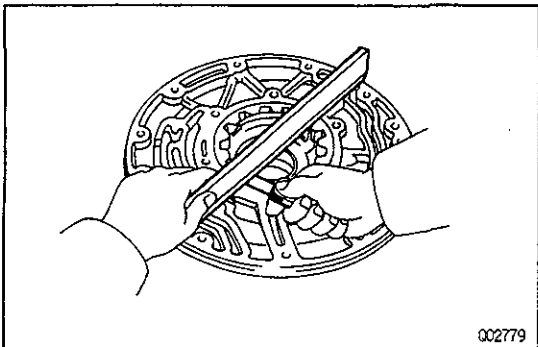
**Standard tip clearance:**

**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 the maximum, replace the gears and pump body as a set.



**5. INSPECT SIDE CLEARANCE OF DRIVE AND DRIVEN GEARS**

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 the maximum, select and replace the gears as set.

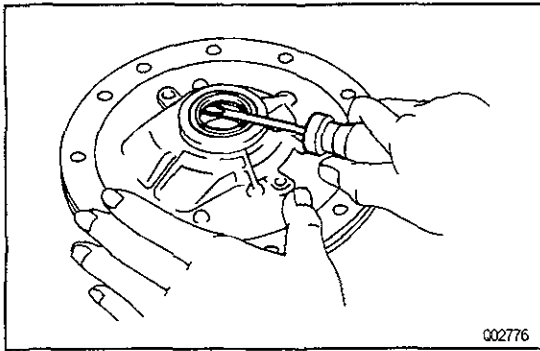
**HINT:** There are two difference thicknesses for drive and driven gears.

**Gear thickness:**

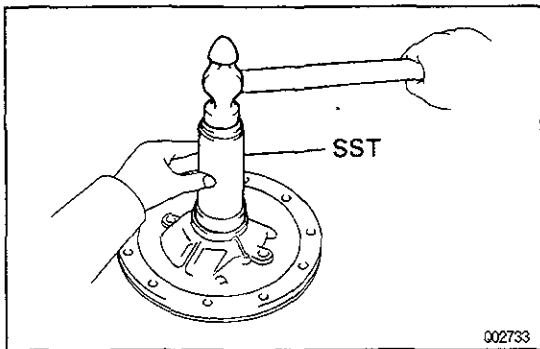
**18.435–18.450 mm (0.7258–0.7264 in.)**

**18.451–18.486 mm (0.7264–0.7278 in.)**

If necessary, replace the pump body.

**6. IF NECESSARY, REPLACE OIL SEAL**

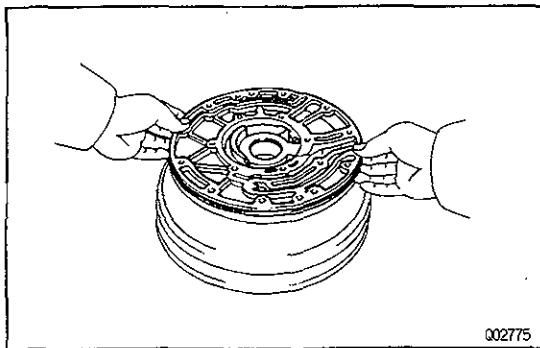
- (a) Using a screwdriver, pry off the oil seal.



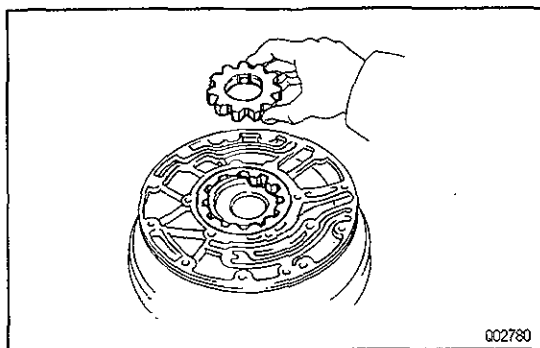
- (b) Using SST, tap in a new oil seal. The oil seal end should be with the outer edge of the pump body.

SST 09350-36010(09350-06040)

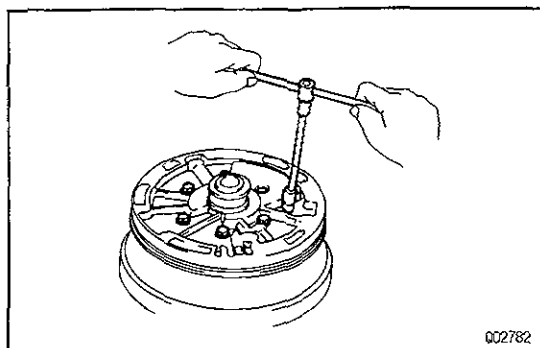
- (c) Apply MP grease to the oil seal lip.

**OIL PUMP ASSEMBLY**

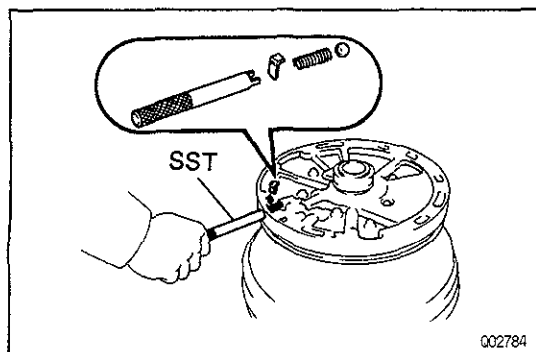
AT07Y-02

**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 oil pump body and cover.
- (b) Install the pump cover with the eight bolts.
- Torque (10 mm head bolt): 8.8 N·m (90 kgf·cm, 78 in.-lbf)
- Torque (12 mm head bolt): 21 N·m (210 kgf·cm, 15 ft-lbf)

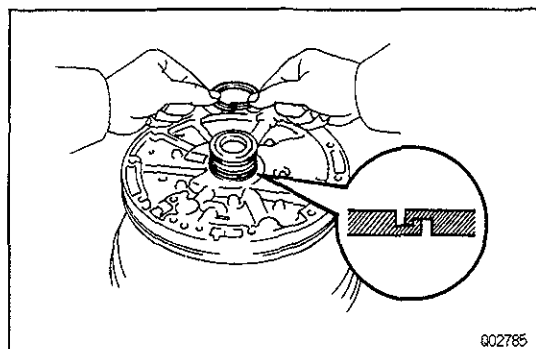


#### 4. INSTALL CHECK BALL

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

SST 09350–36010(09350–06110)

AT

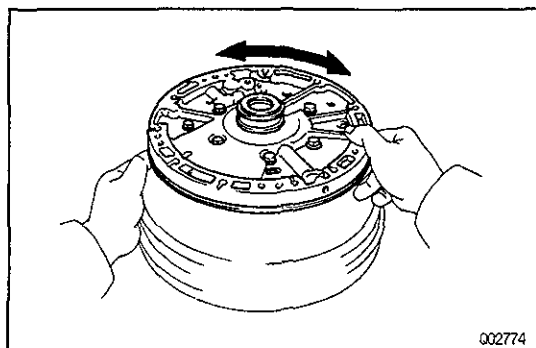


#### 5. INSTALL OIL SEAL RINGS

- (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 ROTATION

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