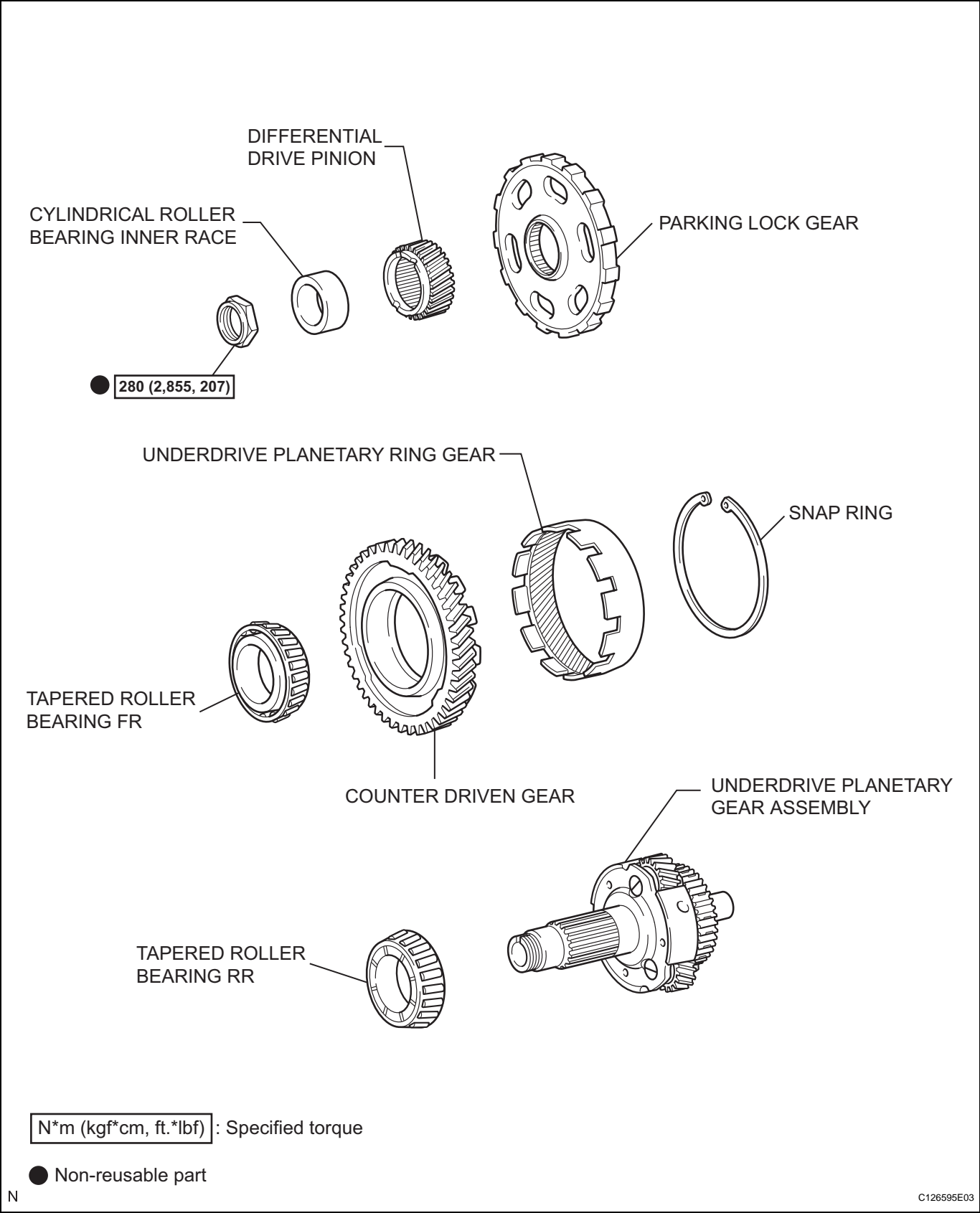


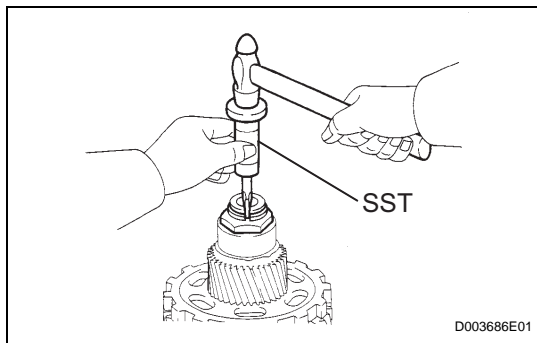
# UNDERDRIVE PLANETARY GEAR

## COMPONENTS



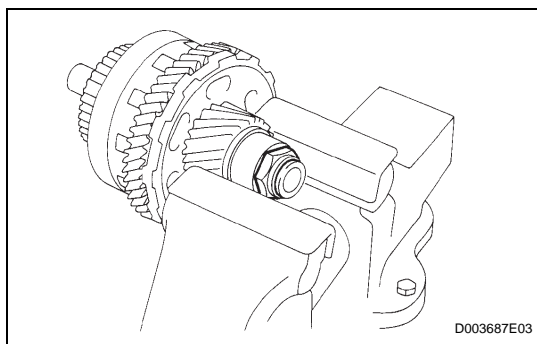
## DISASSEMBLY

### 1. REMOVE UNDERDRIVE PLANETARY GEAR PRELOAD (See page [AX-240](#))



### 2. REMOVE UNDERDRIVE INPUT SHAFT NUT SST 09930-00010 (09931-00010, 09931-00020), 09387-00050, 09564-16020

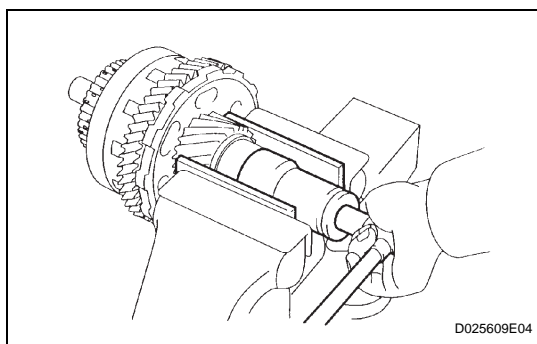
(a) Using SST, loosen the staked part of the nut.



(b) Clamp the underdrive planetary gear in soft jaw vise.

#### NOTICE:

Be careful not to damage the differential drive pinion.

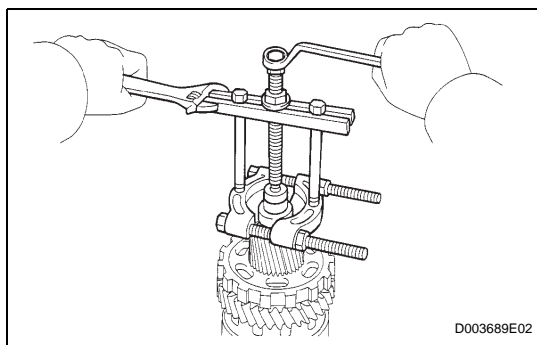


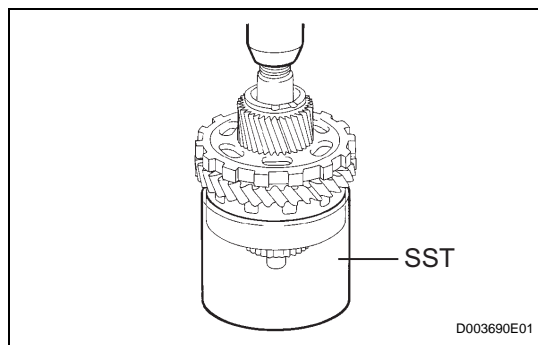
(c) Using SST, remove the lock nut.  
SST 09387-00050

### 3. REMOVE CYLINDRICAL ROLLER BEARING INNER RACE

(a) Using SST, remove the cylindrical roller bearing race inner.

SST 09950-00020, 09950-00030, 09950-60010  
(09951-00340)

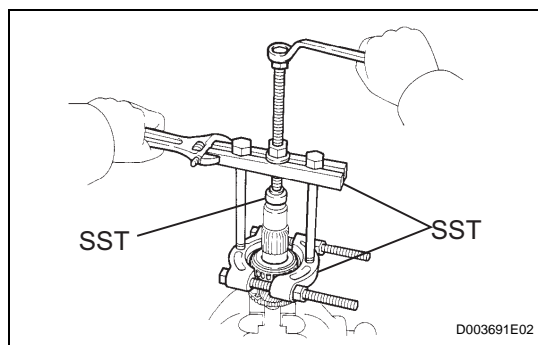




#### 4. REMOVE UNDERDRIVE PLANETARY GEAR ASSEMBLY

- (a) Using SST and a press, remove the differential drive pinion, parking lock gear, counter driven gear with underdrive planetary ring gear and front tapered roller bearing.

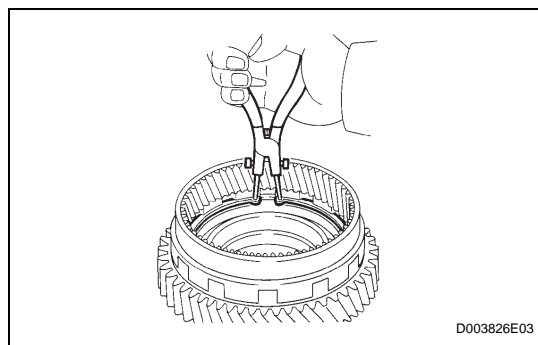
**SST 09387-00050**



- (b) Clamp the underdrive planetary gear in soft jaw vise.

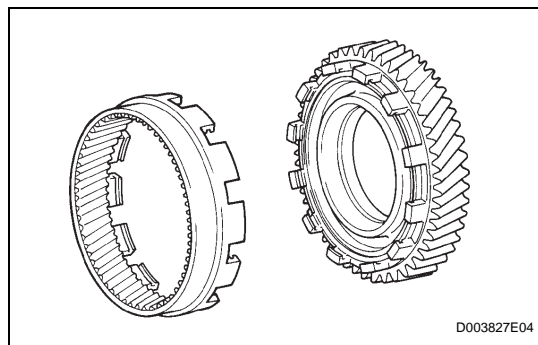
- (c) Using SST, remove the rear tapped roller bearing from the underdrive planetary gear.

**SST 09950-00020, 09950-00030, 09950-60010 (09951-00340)**



#### 5. REMOVE UNDERDRIVE PLANETARY RING GEAR

- (a) Using snap ring pliers, remove the snap ring.



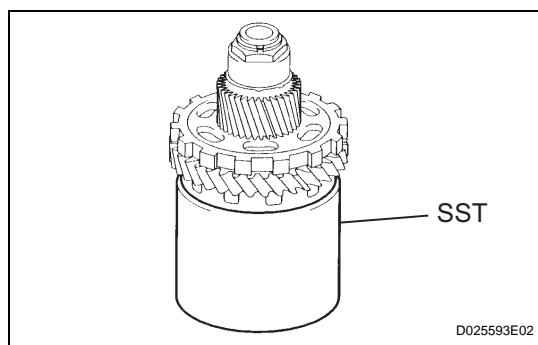
- (b) Remove the underdrive planetary ring gear from the counter driven gear.

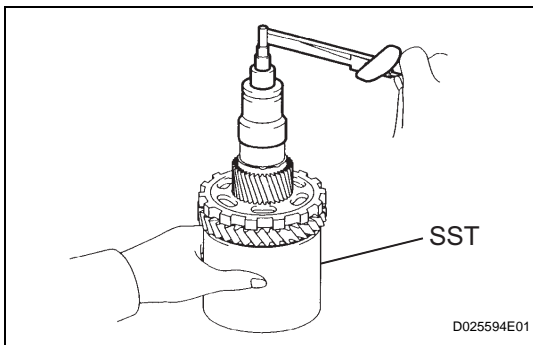
### INSPECTION

#### 1. INSPECT UNDERDRIVE PLANETARY GEAR PRELOAD

- (a) Using SST, fix the underdrive planetary gear.

**SST 09387-00050**

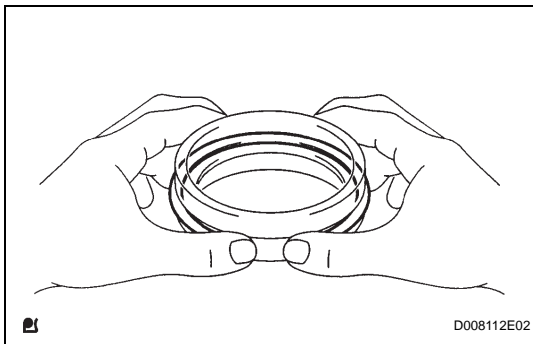




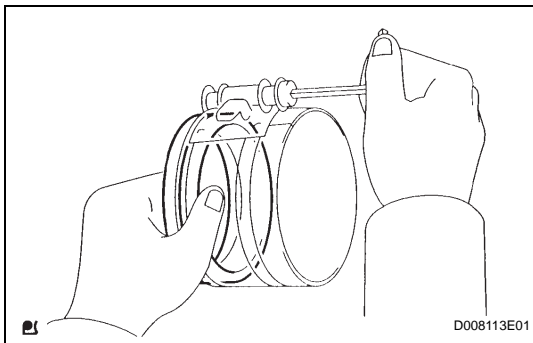
- (b) Using SST and a torque wrench, measure the turning torque of the underdrive planetary gear in place while rotating the torque wrench at 60 rpm.  
**SST 09387-00050**  
**Torque: Turning torque at 60 rpm**  
**0.10 to 4.41 N\*m (1.0 to 45 kgf\*cm, 0.9 to 39 in.\*lbf)**

**HINT:**

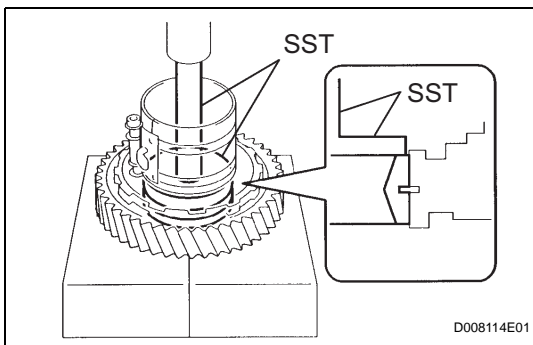
Use a torque wrench with a fulcrum length of 160 mm (6.3 in.)

**REASSEMBLY****1. INSTALL UNDERDRIVE PLANETARY RING GEAR**

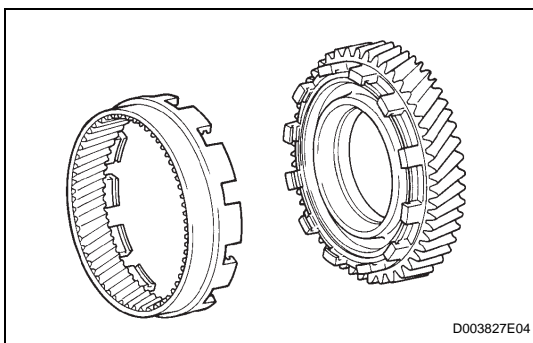
- (a) Install a new snap ring to the outer race of the tapered roller bearing.



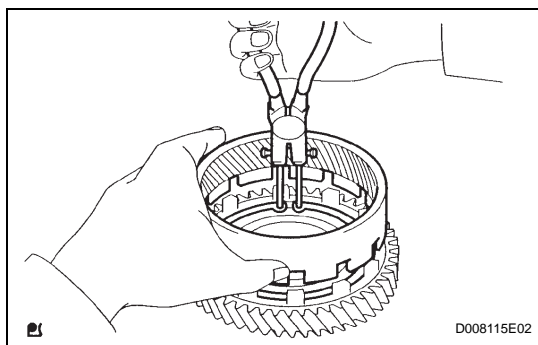
- (b) Using a piston ring compressor, squeeze the snap ring.



- (c) Using SST a press, press in the outer race of the tapered roller bearing.  
**SST 09950-60020 (09951-00890), 09950-70010 (09951-07100)**



- (d) Install the underdrive planetary ring gear to the counter driven gear.



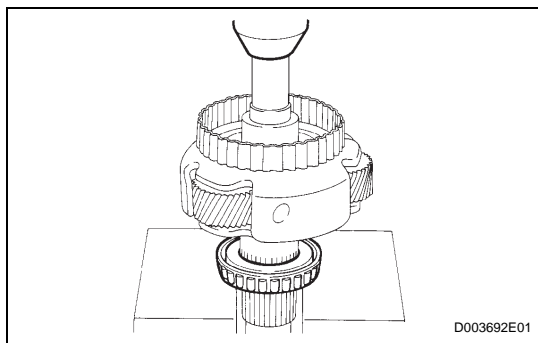
- (e) Using snap ring pliers, install the snap ring.

## 2. INSTALL UNDERDRIVE PLANETARY GEAR ASSEMBLY

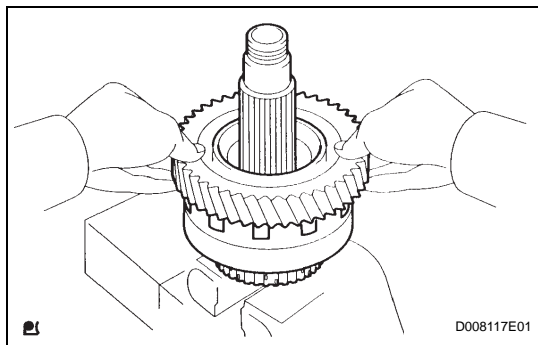
- (a) Using a press, press in the rear tapered roller bearing to the underdrive planetary gear.

**NOTICE:**

**Press in the bearing until it becomes flat at the bottom**



- (b) Install the counter driven gear with planetary ring gear to the underdrive planetary gear.

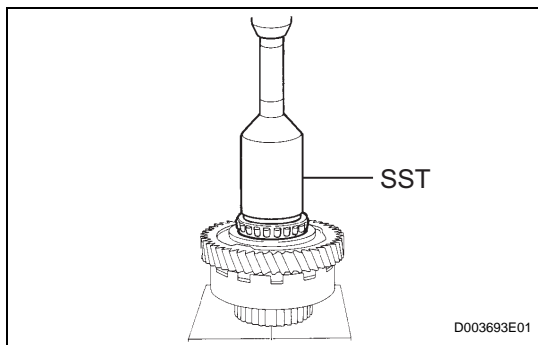


- (c) Using SST and a press, press in the front tapered roller bearing.

**SST 09214-76011**

**NOTICE:**

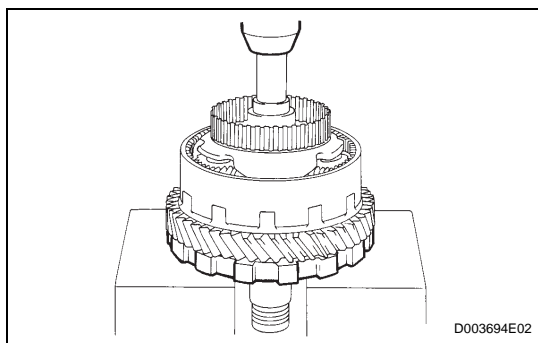
**Press in the counter driven gear while rotating it.**

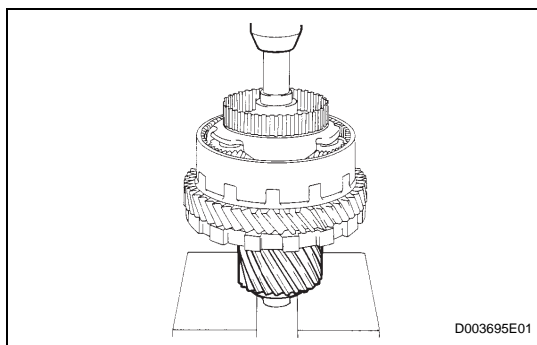


- (d) Using a press, press in the parking lock gear.

**NOTICE:**

**Press in the counter driven gear while rotating it.**

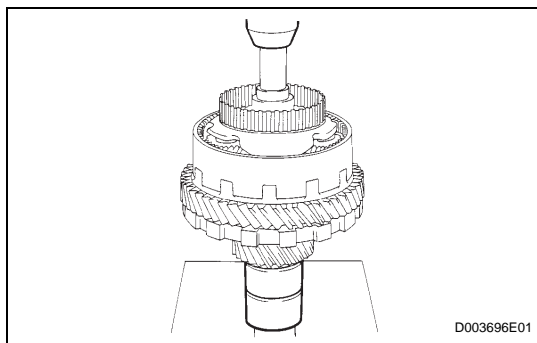




- (e) Using a press, press in the differential drive pinion.

**NOTICE:**

**Press in the counter driven gear while rotating it.**

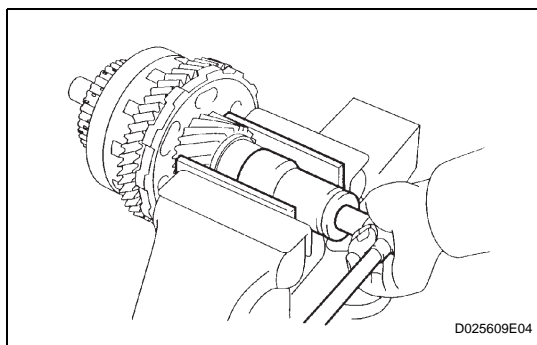


**3. INSTALL CYLINDRICAL ROLLER BEARING INNER RACE**

- (a) Using a press, press in the cylindrical roller bearing race inner.

**NOTICE:**

**Press in the counter driven gear while rotating it.**



**4. INSTALL UNDERDRIVE INPUT SHAFT NUT**

- (a) Clamp the underdrive planetary gear in a soft jaw vise.

**NOTICE:**

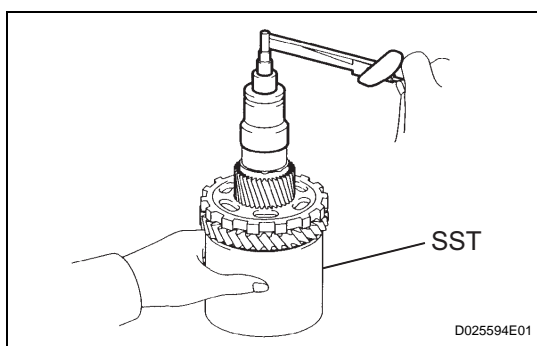
**Be careful not to damage the differential drive pinion.**

- (b) Using a socket wrench, install a new lock nut.

**Torque: 280 N\*m (2,855 kgf\*cm, 207 in.\*lbf)**

**HINT:**

Use a torque wrench with a fulcrum length of 750 mm (29.53 in.)



**5. INSPECT UNDERDRIVE PLANETARY GEAR PRELOAD**

- (a) Using SST and a torque wrench, measure the turning torque of underdrive planetary gear assembly while rotating the torque wrench at 60 rpm.

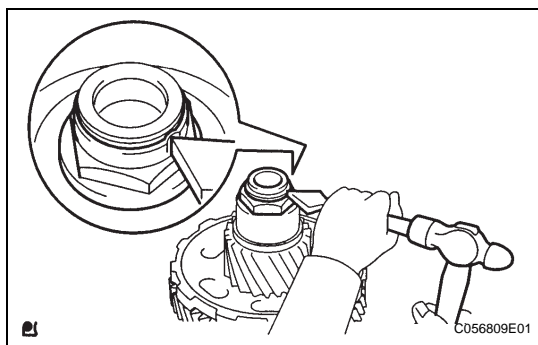
**SST 09387-00050**

**Torque: Turning torque at 60 rpm**

**0.10 to 4.41 N\*m (1.0 to 45 kgf\*cm, 0.9 to 39 in.\*lbf)**

**HINT:**

Use a torque wrench with a fulcrum length of 160 mm (6.30 in.)



- (b) Using a pin punch and a hammer, stake the lock nut.

**NOTICE:**

**Make sure that there are no cracks on the nut.**