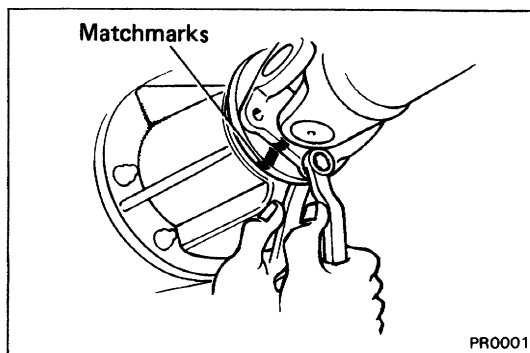
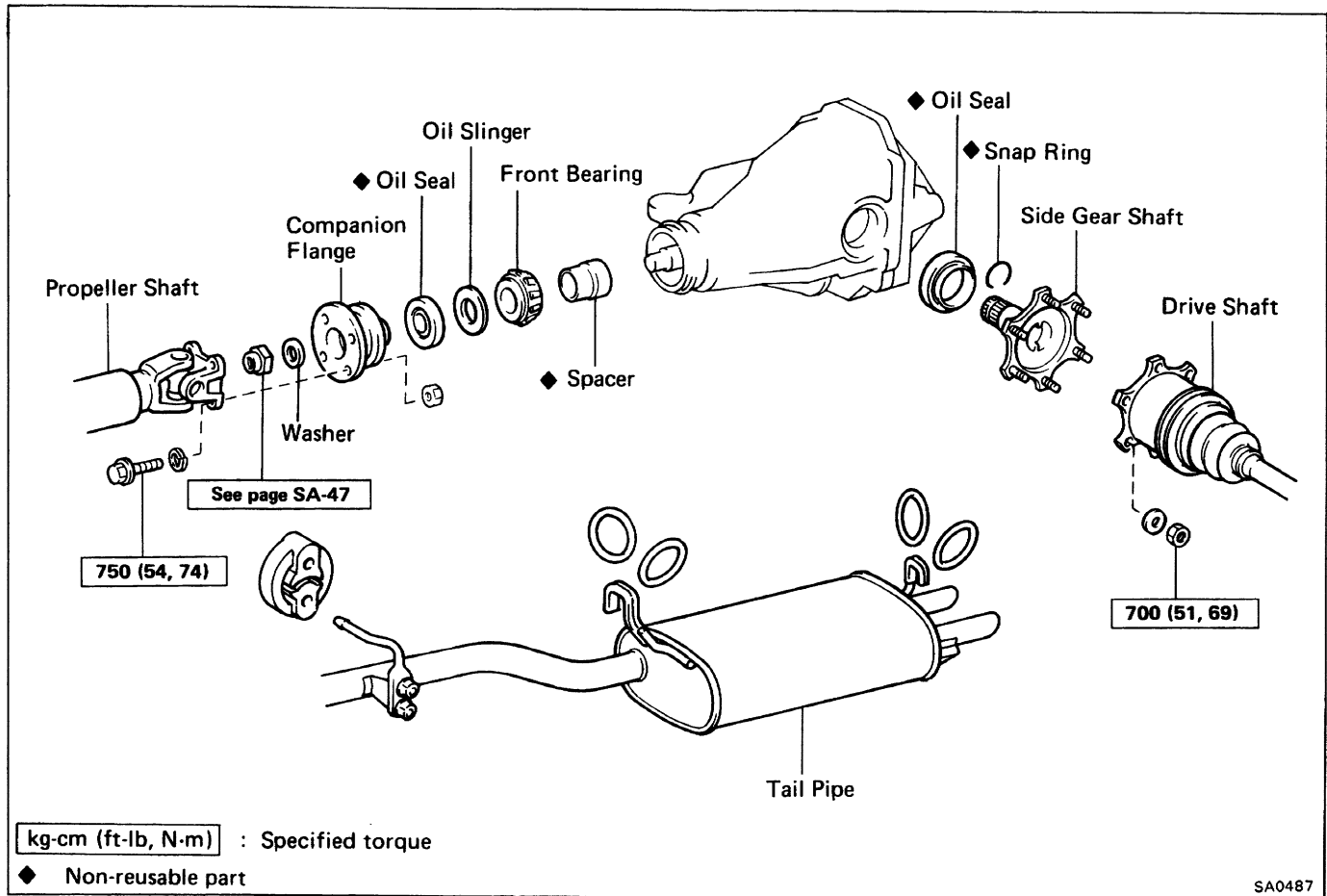


# DIFFERENTIAL

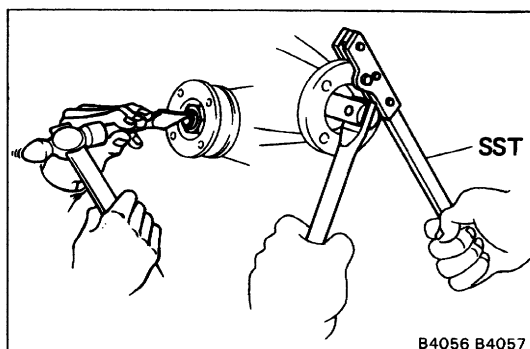
## On-Vehicle Repair

### COMPONENTS



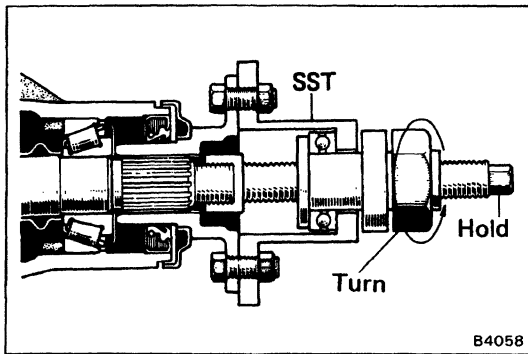
## ON-VEHICLE REPLACEMENT OF FRONT OIL SEAL

### 1. DISCONNECT PROPELLER SHAFT

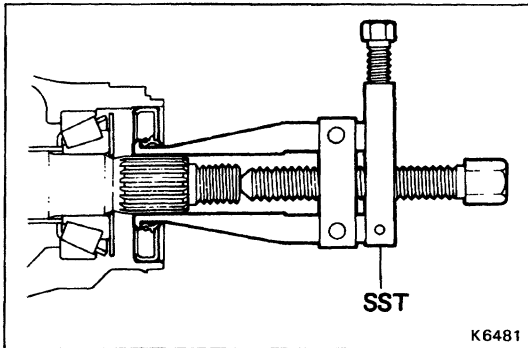


### 2. REMOVE COMPANION FLANGE

- Using a hammer and chisel, loosen the staked part of the nut.
- Using SST to hold the flange, remove the nut.  
SST 09330-00021

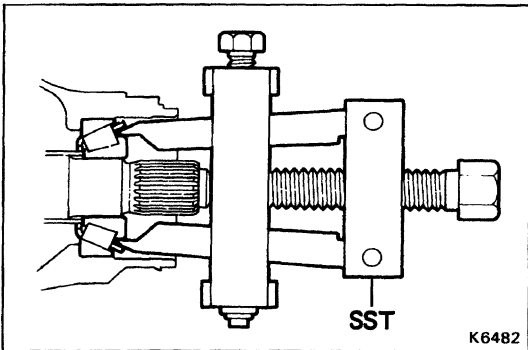


- (c) Using SST, remove the companion flange.  
SST 09557-22022 (09557-22050)



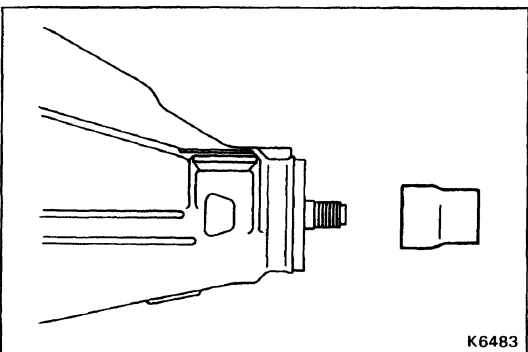
### 3. REMOVE FRONT OIL SEAL

- (a) Using SST, remove the oil seal.  
SST 09308-10010  
(b) Remove the oil slinger.



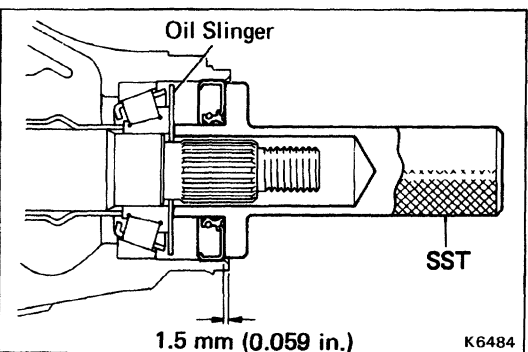
### 4. REMOVE FRONT BEARING AND BEARING SPACER

- (a) Using SST, remove the front bearing.  
SST 09556-22010  
(b) Remove the bearing spacer.  
If the front bearing is damaged or worn, replace the bearing.



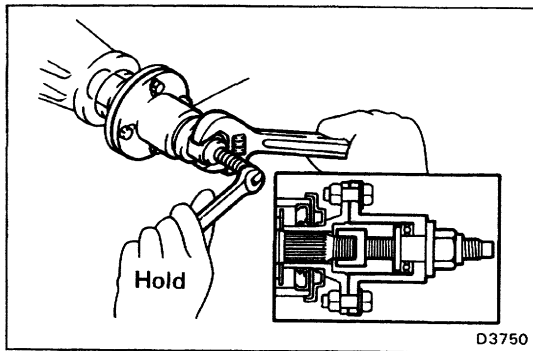
### 5. INSTALL NEW BEARING SPACER AND FRONT BEARING

- (a) Install a new bearing spacer on the shaft.  
(b) Install the front bearing on the shaft.



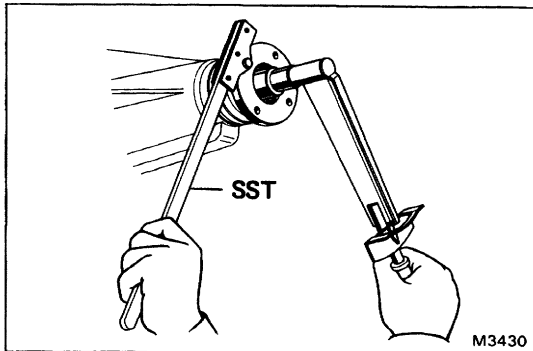
### 6. INSTALL OIL SLINGER AND NEW OIL SEAL

- (a) Install the oil slinger.  
(b) Using SST, drive in a new oil seal.  
SST 09554-30011  
**Oil seal drive in depth: 1.5 mm (0.059 in.)**  
(c) Apply MP grease to the oil seal lip.



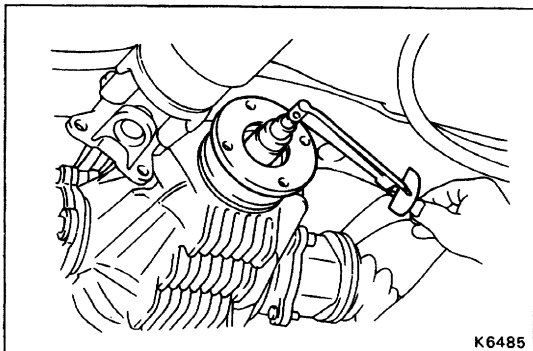
## 7. INSTALL COMPANION FLANGE

- (a) Using SST, install the companion flange on the shaft.  
SST 09557-22022 (09557-22050)



- (b) Coat the threads of a new nut with MP grease.  
(c) Using SST to hold the flange, tighten the nut.  
SST 09330-00021

**Torque: 1,850 kg-cm (134 ft-lb, 181 N-m)**



## 8. CHECK FRONT BEARING PRELOAD

Using a torque wrench, measure the preload of the backlash between the drive pinion and ring gear.

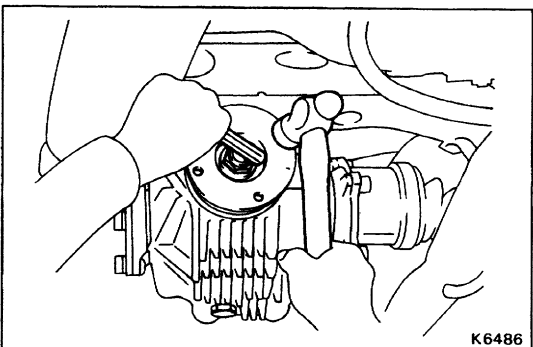
**Preload: 5 - 8 kg-cm**

**(4.3 - 6.9 in.-lb, 0.5 - 0.8 N-m)**

- If preload is greater than specification, replace the bearing spacer.
- If preload is less than specification, retighten the nut **130 kg-cm (9 ft-lb, 13 N-m)** at a time until the specified preload is reached.

If the maximum torque is exceeded while retightening the nut, replace the bearing spacer and repeat the preload procedure. Do not back off the pinion nut to reduce the preload.

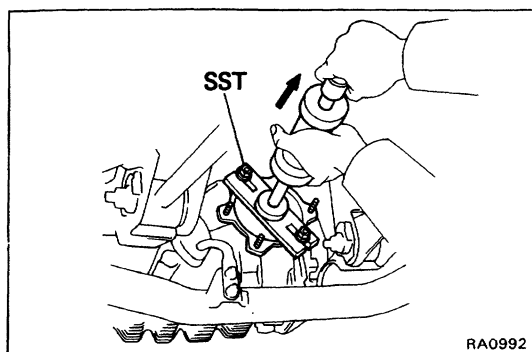
**Maximum torque: 3,450 kg-cm (250 ft-lb, 338 N-m)**



## 9. STAKE DRIVE PINION NUT

## 10. CONNECT PROPELLER SHAFT

**Torque: 750 kg-cm (54 ft-lb, 74 N-m)**



## ON-VEHICLE REPLACEMENT OF SIDE GEAR SHAFT OIL SEAL

### 1. DRAIN DIFFERENTIAL OIL

### 2. REMOVE REAR DRIVE SHAFT

(See page SA-40)

### 3. REMOVE SIDE GEAR SHAFT

(a) Using SST, remove the side gear shaft.

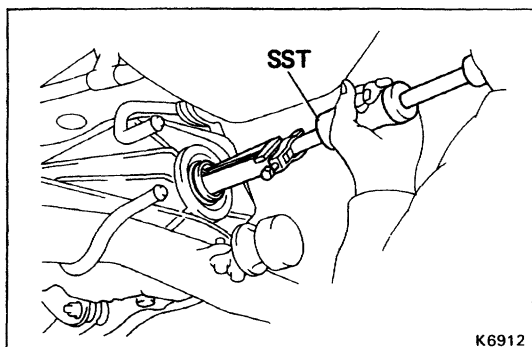
SST 09520-24010

(b) Remove the snap ring from the side gear shaft.

### 4. REMOVE SIDE GEAR SHAFT OIL SEAL

Using SST, remove the oil seal.

SST 09308-00010

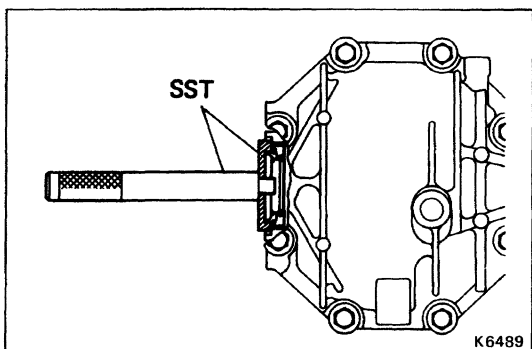


### 5. INSTALL SIDE GEAR SHAFT OIL SEAL

(a) Using SST, drive in the oil seal.

SST 09550-22011 (09550-00020, 09550-00031)

(b) Apply MP grease to the oil seal lip.



### 6. INSTALL SIDE GEAR SHAFT

(a) Install a new snap ring to the side gear shaft.

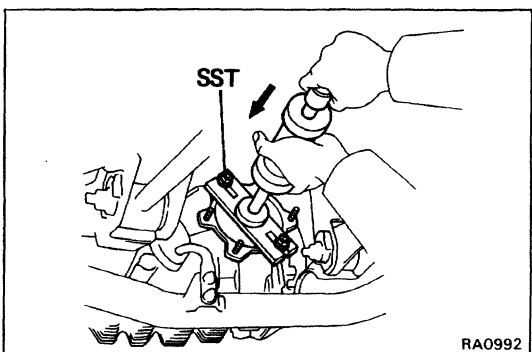
(b) Using SST, install the side gear shaft to the differential.

SST 09520-24010

### 7. CHECK INSTALLATION OF SIDE GEAR SHAFT

(a) Check that there is 2 - 3 mm (0.08 - 0.12 in.) of play in axial direction.

(b) Check that the side gear shaft will not come out by trying to pull it completely out by hand.



### 8. INSTALL DRIVE SHAFT

(See page SA-44)

### 9. CHECK DIFFERENTIAL OIL

Fill with hypoid gear oil if necessary.

**Oil grade: API GL-5 hypoid gear oil**

**or LSD oil (LSD only)**

**Viscosity: Above -18°C (0°F) SAE 90**

**Below -18°C (0°F) SAE 80W-90 or 80W**

**Capacity: 1.3 liters (1.4 US qts, 1.1 Imp. qts)**

