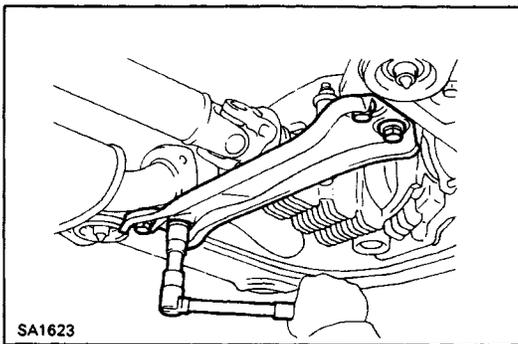
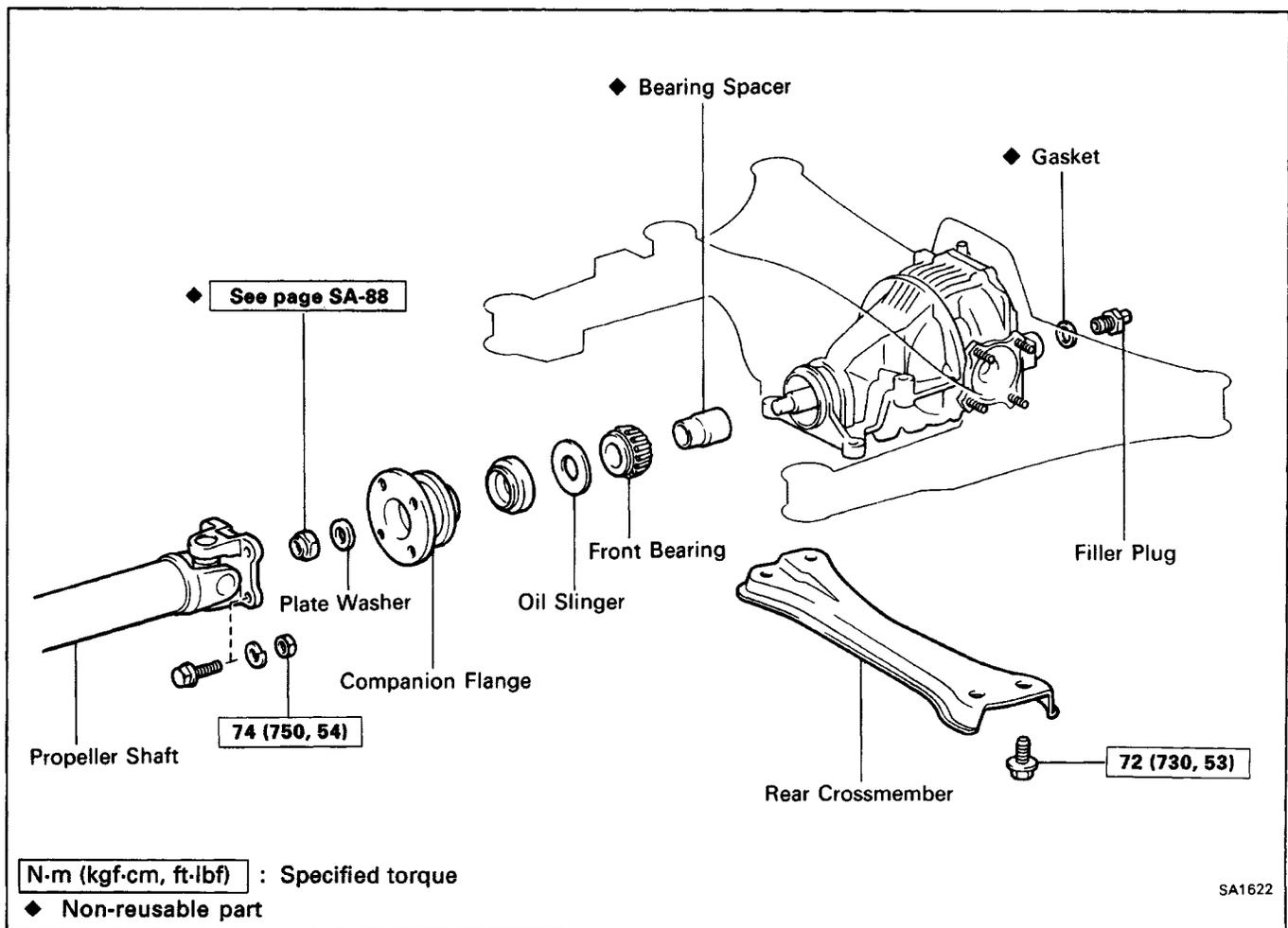
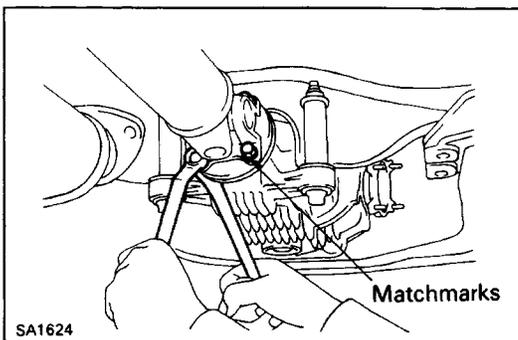


DIFFERENTIAL (4WD) On-Vehicle Repair



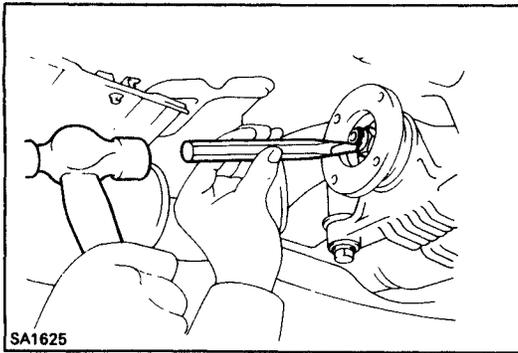
REPLACEMENT OF FRONT OIL SEAL

1. REMOVE REAR CROSSMEMBER



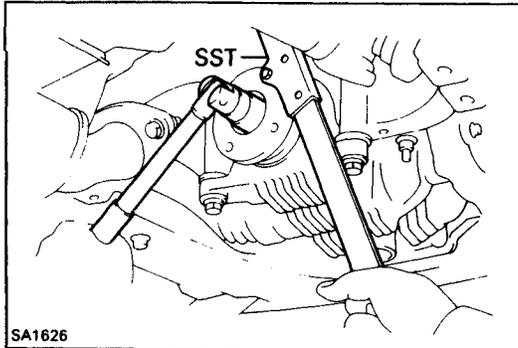
2. DISCONNECT PROPELLER SHAFT

- Place the matchmarks on the both flanges.
- Remove the four bolts, washers and nuts.
- Disconnect the propeller shaft from the differential.



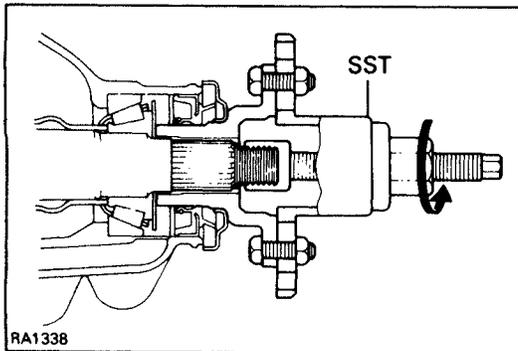
3. REMOVE COMPANION FLANGE

- (a) Using a hammer and chisel, loosen the staked part of the nut.

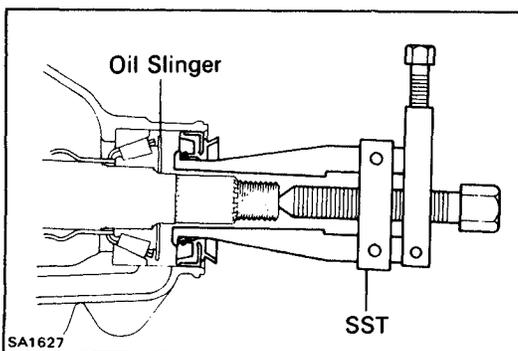


- (b) Using SST to hold the flange, remove the nut.
SST 09330-00021

- (c) Remove the plate washer.



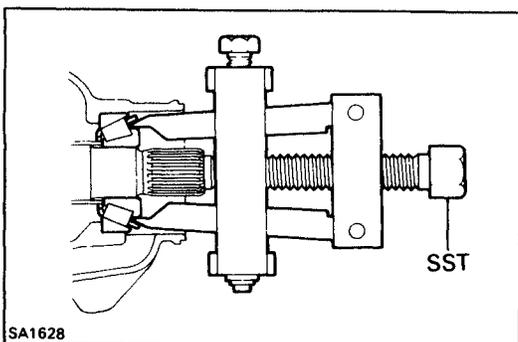
- (d) Using SST, remove the companion flange.
SST 09557-22022



4. REMOVE FRONT OIL SEAL AND OIL SLINGER

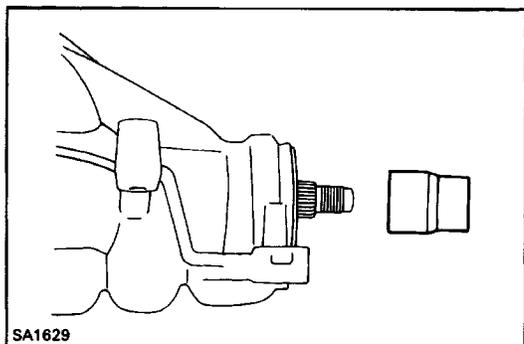
- (a) Using SST, remove the front oil seal.
SST 09308-10010

- (b) Remove the oil slinger.



5. REMOVE FRONT BEARING AND BEARING SPACER

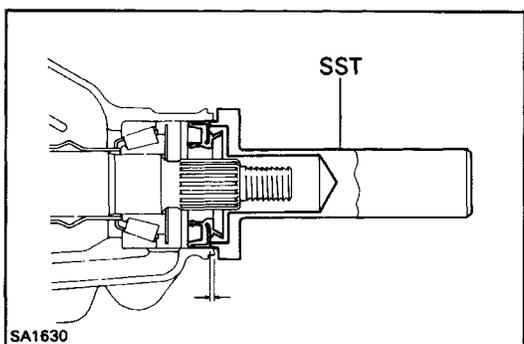
- (a) Using SST, remove the front bearing.
SST 09556-22010



(b) Remove the bearing spacer.

6. INSTALL NEW BEARING SPACER AND FRONT BEARING

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

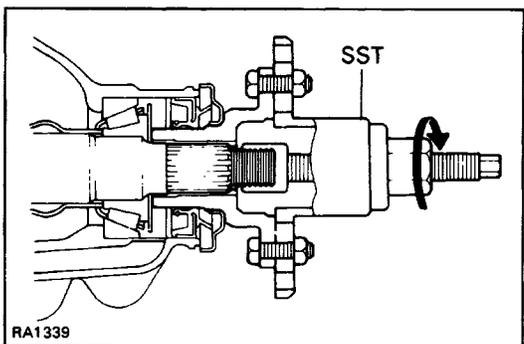


7. INSTALL OIL SLINGER AND NEW OIL SEAL

- (a) Install the oil slinger on the shaft.
 (b) Using SST, drive in a new oil seal.
 SST 09554-22010

Oil seal drive in depth: 2.0 mm (0.079 in.)

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



8. INSTALL COMPANION FLANGE

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

- (b) Install the plate washer.
 (c) Coat the threads of a new nut with gear oil.
 (d) Using SST to hold the flange, tighten the nut.
 SST 09330-00021

Torque: 108 N-m (1,100 kgf-cm, 80 ft-lbf)

9. CHECK DRIVE PINION BEARING PRELOAD

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

Preload (at starting):

New bearing 1.0 – 1.6 N-m

(10 – 16 kgf-cm, 8.7 – 13.9 in.-lbf)

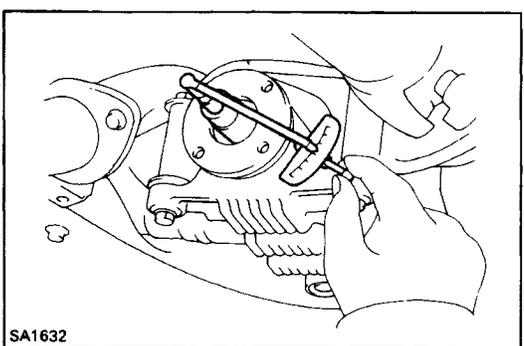
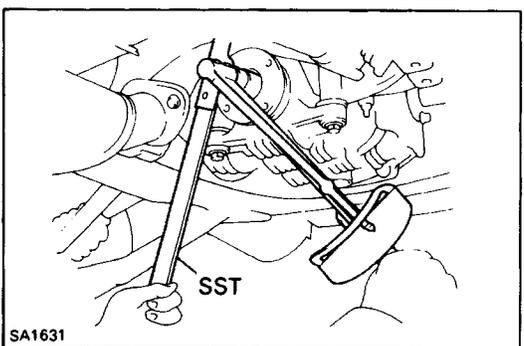
Reused bearing 0.5 – 0.8 N-m

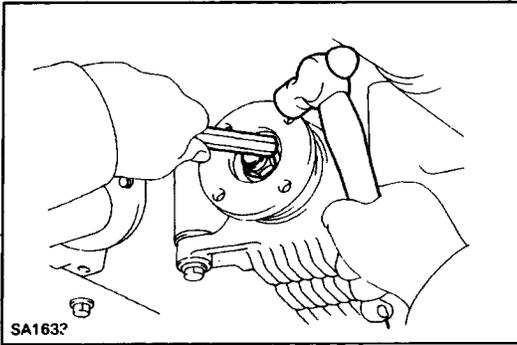
(5 – 8 kgf-cm, 4.3 – 6.9 in.-lbf)

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

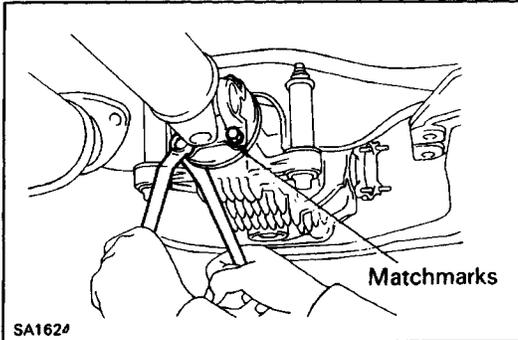
If the maximum torque is exceed while retightening the nut, replace the bearing spacer and repeat the preload procedure. Do not back off the pinion nut to reduce the preload.

Maximum torque: 235 N-m 12,400 kgf-cm, 174 ft-lbf1



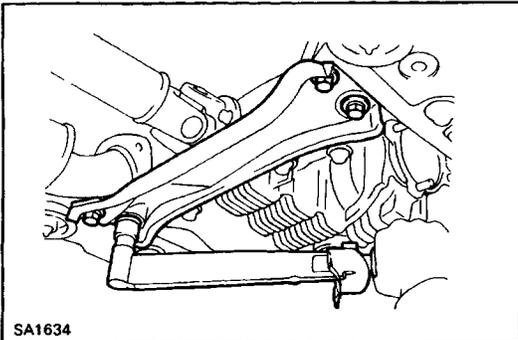


10. STAKE DRIVE PINION NUT



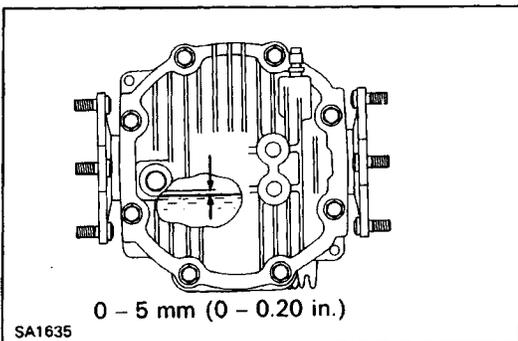
11. CONNECT PROPELLER SHAFT

- (a) Align the matchmarks on the flanges and connect the propeller shaft with the four bolts, washers and nuts.
- (b) Torque the bolts and nuts.
Torque: 74 N-m (750 kgf-cm, 54 ft-lbf)



12. INSTALL REAR CROSSMEMBER

Torque: 72 N-m (730 kgf-cm, 53 ft-lbf)



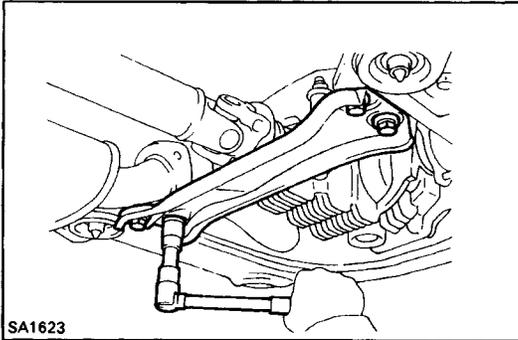
13. CHECK OIL LEVEL

Oil grade: API GL-5 hypoid gear oil

Viscosity: Above -18°C (0°F) SAE 90

Below -18°C (0°F) SAE 80W-90

Capacity: 1.1 liters (1.2 US qts, 1.0 Imp.qts)

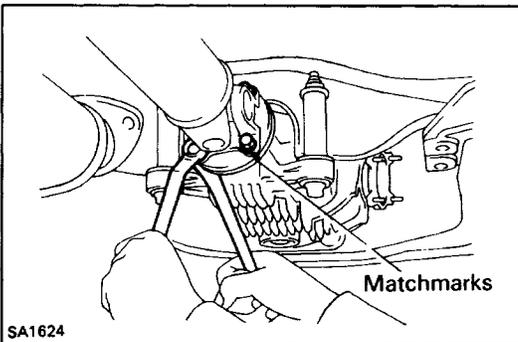


SA1623

REMOVAL OF DIFFERENTIAL

(See page SA-86)

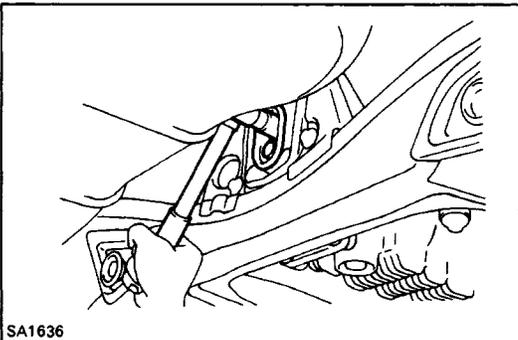
1. DRAIN DIFFERENTIAL OIL
2. REMOVE DRIVE SHAFTS (See page SA-79)
3. REMOVE REAR CROSSMEMBER



SA1624

4. DISCONNECT PROPELLER SHAFT

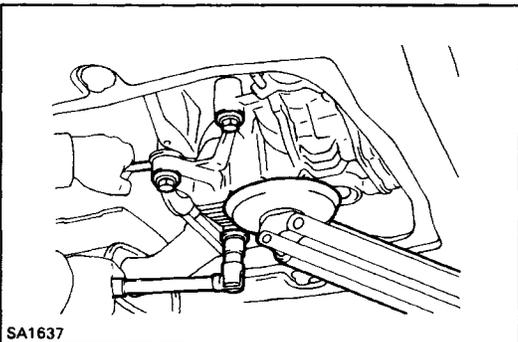
- (a) Place the matchmarks on the both flanges.
- (b) Remove the four bolts, washers and nuts.
- (c) Disconnect the propeller shaft from the differential.



SA1636

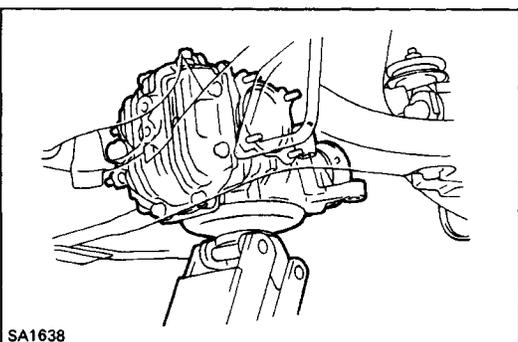
5. REMOVE DIFFERENTIAL

- (a) Jack up the differential slightly.
- (b) Remove the two bolts.



SA1637

- (c) Remove the four nuts and bolts.

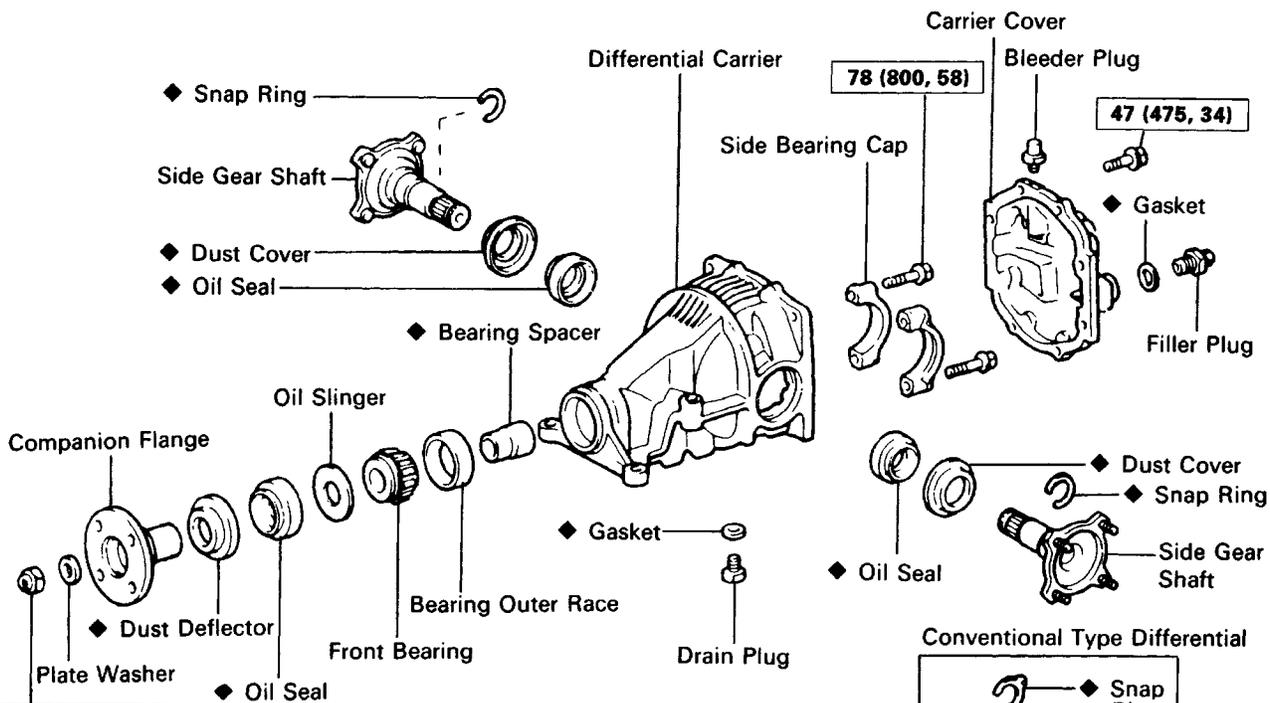
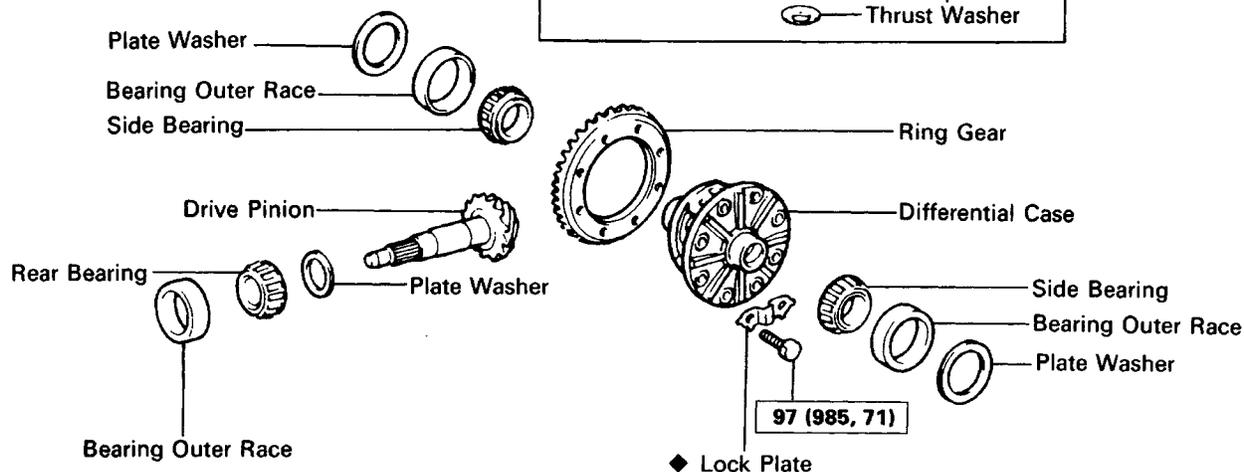
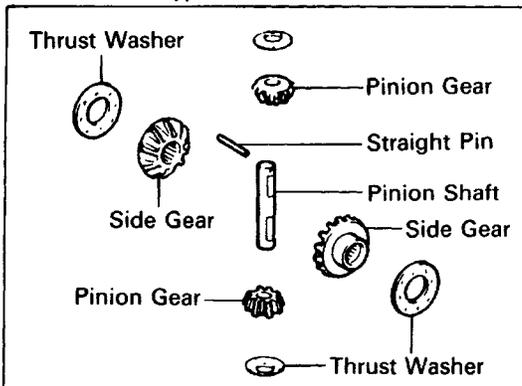


SA1638

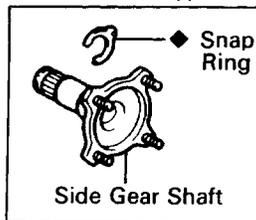
- (d) Remove the differential from the body.

DIFFERENTIAL CARRIER

Conventional Type Differential



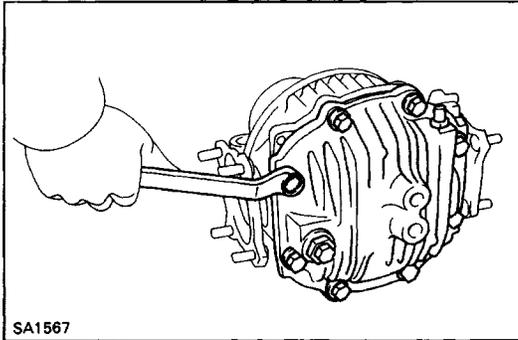
Conventional Type Differential



See page SA-102

N·m (kgf·cm, ft·lbf) : Specified torque

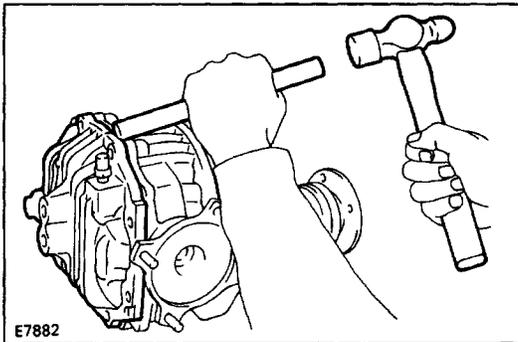
◆ Non-reusable part



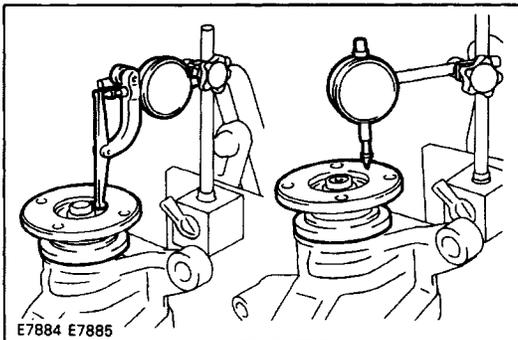
PRE-INSPECTION OF DIFFERENTIAL CARRIER

1. REMOVE DIFFERENTIAL CARRIER COVER

(a) Remove the eight bolts.



(b) Using a brass bar and hammer, separate the cover and carrier.



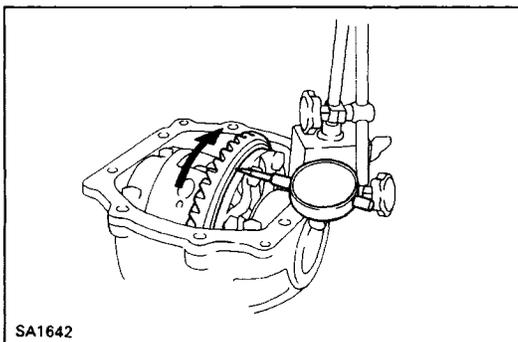
2. CHECK COMPANION FLANGE RUNOUT

Using a dial indicator, measure the lateral and radial runout of the companion flange.

Maximum lateral runout: 0.10 mm (0.039 in.)

Maximum radial runout: 0.10 mm (0.039 in.)

If the runout is greater than the maximum, replace the companion flange.

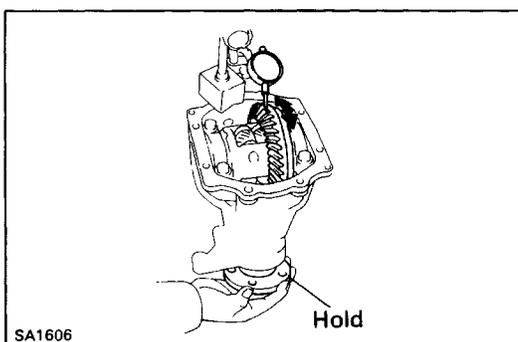


3. CHECK RING GEAR RUNOUT

Using a dial indicator, measure the runout of the ring gear.

Maximum runout: 0.07 mm (0.0028 in.)

If the runout is greater than the maximum, replace the ring gear.

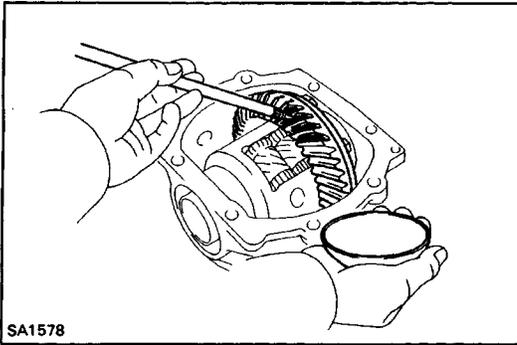


4. CHECK RING GEAR BACKLASH

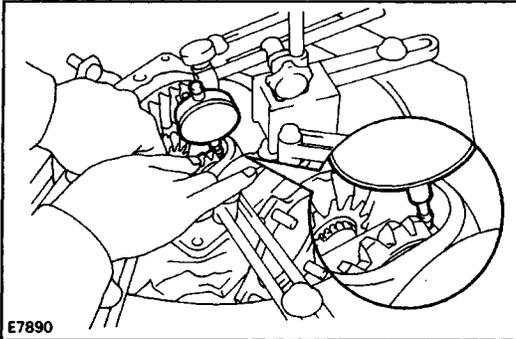
Using a dial indicator, check the backlash of the ring gear.

Backlash: 0.13 – 0.18 mm (0.0051 – 0.0071 in.)

If the backlash is not within specification, adjust the side bearing preload.



5. CHECK TOOTH CONTACT (See page SA-103)

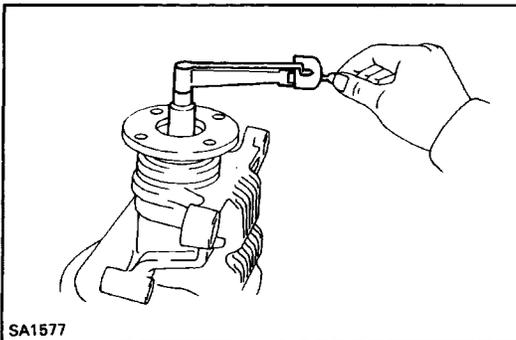


6. (CONVENTIONAL TYPE DIFFERENTIAL) CHECK SIDE GEAR BACKLASH

Using a dial indicator, check the backlash of the side gear while holding one pinion gear toward the differential case.

Backlash: 0.05 – 0.20 m m (0-0020 – 0.0079 in.)

If the backlash is not within specification, install the side gear thrust washers of diggerent thickness.



7. MEASURE DRIVE PINION PRELOAD

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

Preload (at starting):

0.5 – 0.8 N-m (5 – 8 kgf-cm, 4.3 – 6.9 in.-lbf)

8. CHECK TOTAL PRELOAD

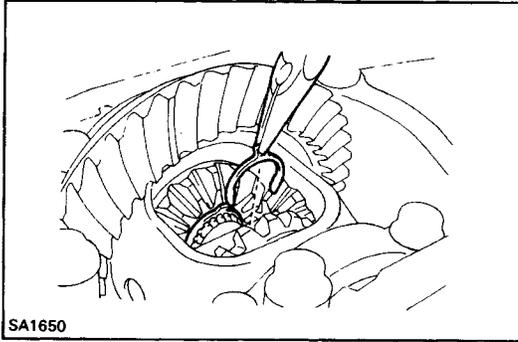
Using a torque wrench, measure the total preload.

Total preload (at starting):

In addition to drive pinion preoad

0.3 – 0.5 N-m (3 – 5 kgf-cm, 2.6 – 4.3 MAW)

If necessary disassemble and inspect a differential.



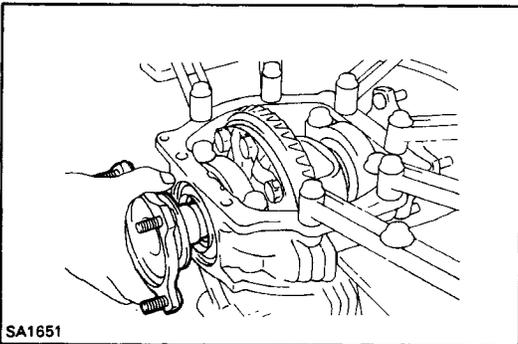
DISASSEMBLY OF DIFFERENTIAL CARRIER

1. REMOVE SIDE GEAR SHAFTS

(Conventional Type Differential)

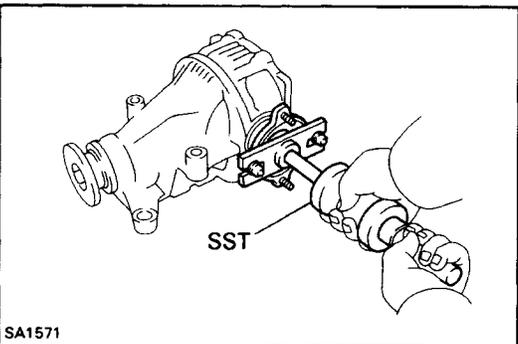
(a) Using needle nose pliers, remove the two snap ring.

(b) Pull out the two side gear shafts.

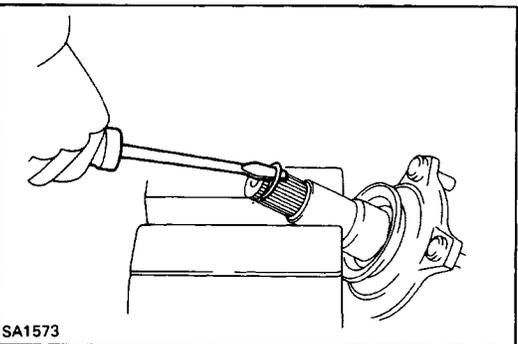


(Torque Sensing Limited Slip Differential)

(a) Using SST, drive out the side gear shaft.
SST 09520-24010

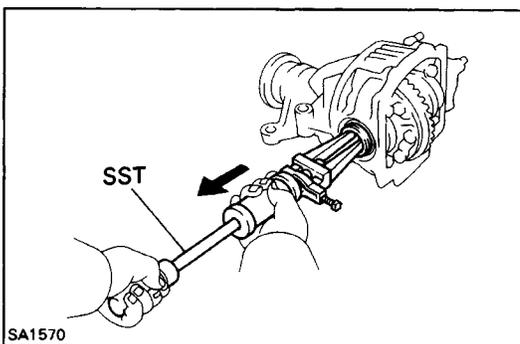


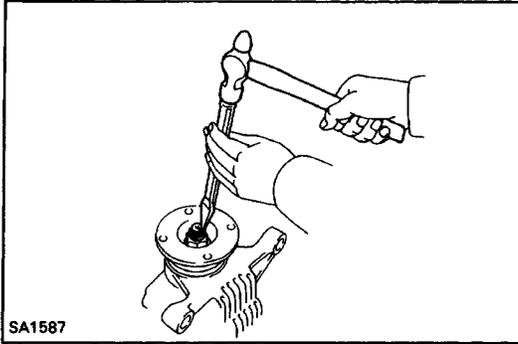
(b) Remove the snap ring from the side gear shaft.
H I N T: Use a soft jaw vise.



2. REMOVE SIDE GEAR SHAFT OIL SEALS

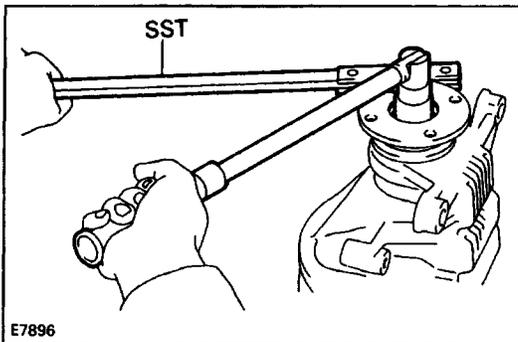
Using SST, remove the two oil seals from the housing.
SST 09308-00010



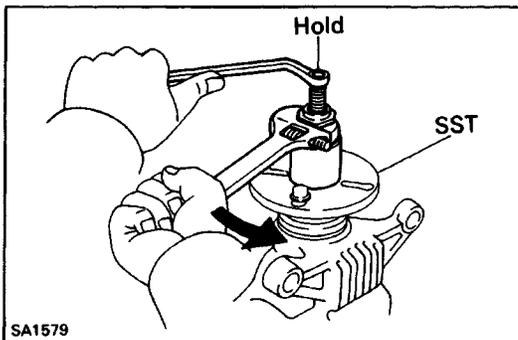


3. REMOVE COMPANION FLANGE

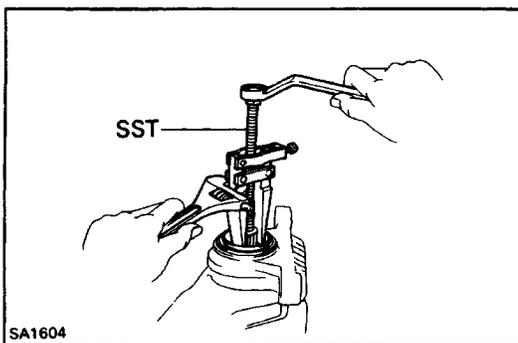
- (a) Using a hammer and chisel, loosen the staked part of the nut.



- (b) Using SST to hold the flange, remove the nut.
SST 09330-00021
(c). Remove the plate washer.

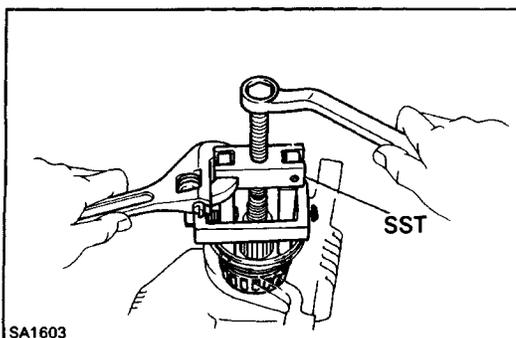


- (d) Using SST, remove the companion flange
SST 09557-22022 (09557-22040)



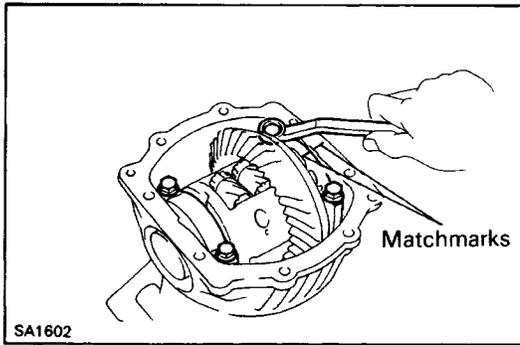
4. REMOVE FRONT OIL SEAL AND OIL SLINGER

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



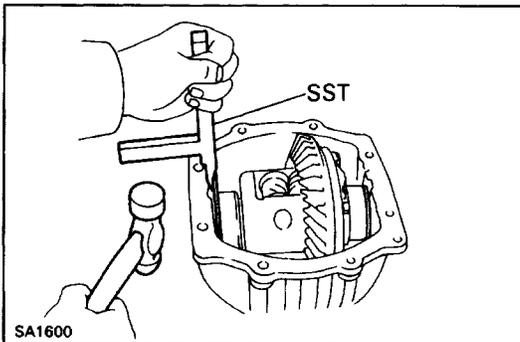
5. REMOVE FRONT BEARING AND BEARING SPACER

- (a) Using SST, remove the bearing from the housing.
SST 09556-22010
(b) Remove the bearing spacer.

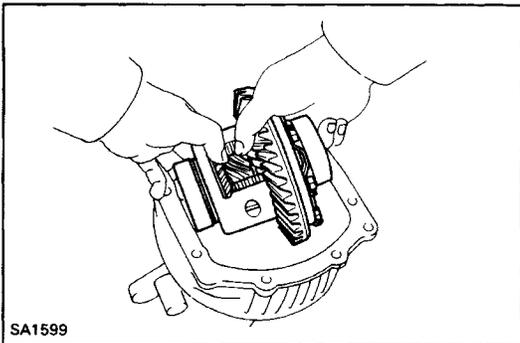


6. REMOVE DIFFERENTIAL CASE

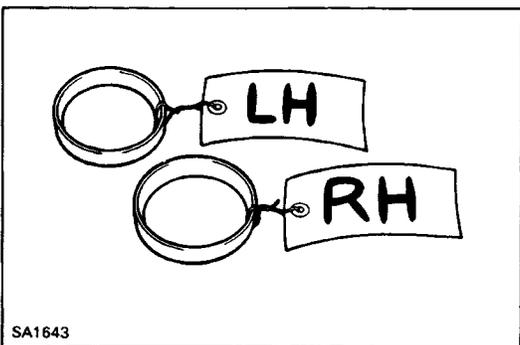
- (a) Place the matchmarks on the bearing cap and differential carrier.
- (b) Remove the two bearing caps.



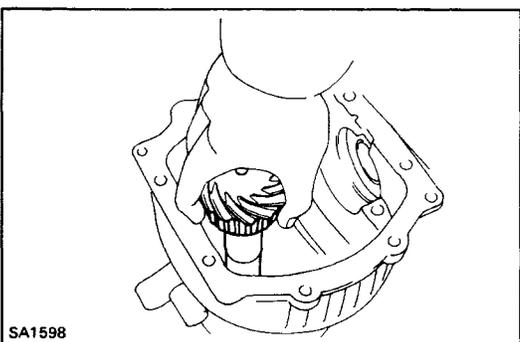
- (c) Using SST, remove the two side bearing preload adjusting plate.
SST 09504-22011
HINT: Measure the adjusting plate washer and note the thickness.



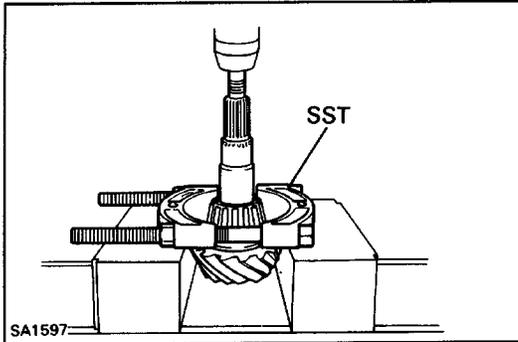
- (d) Remove the differential case and bearing outer race from the carrier.



HINT: Tag the bearing outer races to show the location for reassembly.



7. REMOVE DRIVE PINION FROM DIFFERENTIAL CARRIER



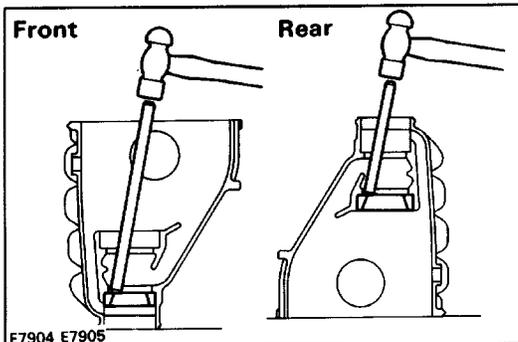
8. REMOVE DRIVE PINION REAR BEARING

- (a) Using SST and a press, remove the bearing from the drive pinion.

SST 09950-00020

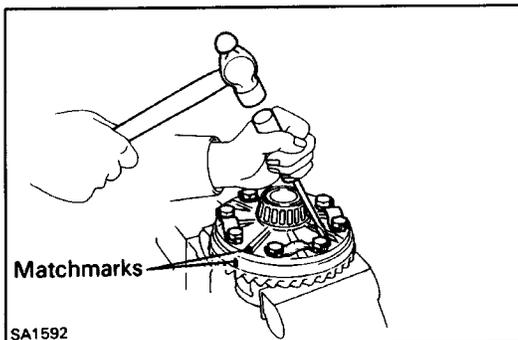
HINT: If the drive pinion or ring gear are damaged replace them a set.

- (b) Remove the plate washer.



9. REMOVE FRONT AND REAR BEARING OUTER RACES

Using a hammer and brass bar, drive out the outer races from the carrier.

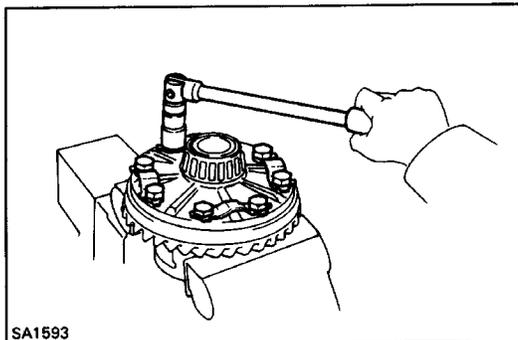


10. REMOVE RING GEAR

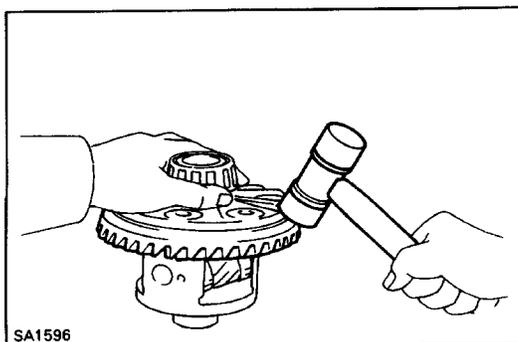
- (a) Place the matchmarks on the ring gear and differential case.

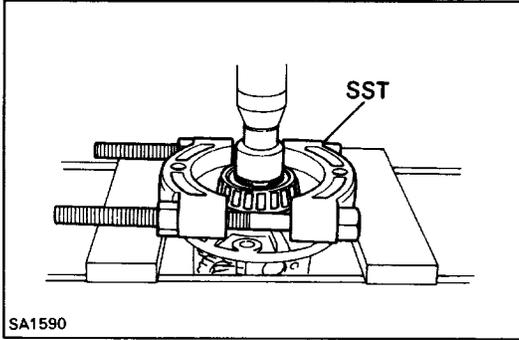
- (b) Unstake the lock plates.

- (c) Remove the eight bolts and four lock plates.



- (d) Using a plastic hammer, tap on the ring gear to separate it from differential case.

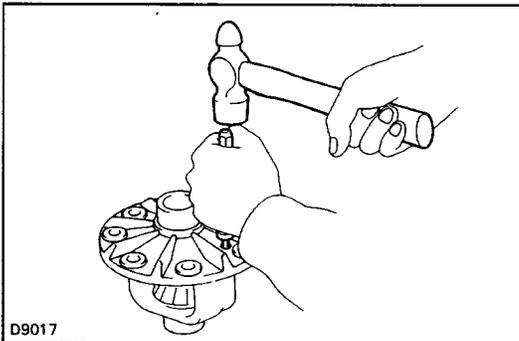




11. REMOVE SIDE BEARINGS

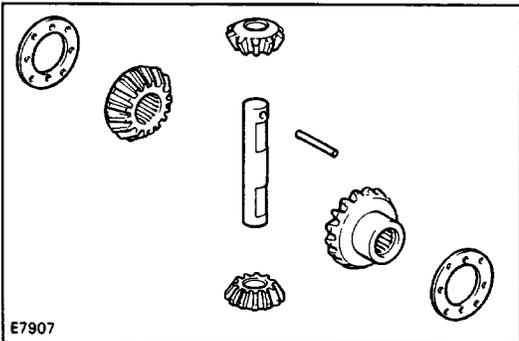
Using SST, press out two side bearings from differential case.

SST 09950-00020



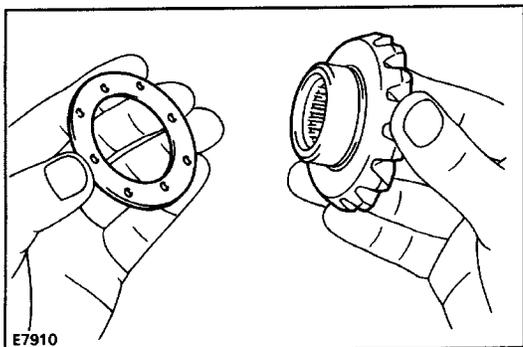
12. (CONVENTIONAL TYPE DIFFERENTIAL) DISASSEMBLE DIFFERENTIAL CASE

(a) Using a hammer and punch, drive out the straight pin.



(b) Remove the following parts from the differential case:

- Pinion shaft
- Two pinion gears
- Two side gears
- Four thrust washers

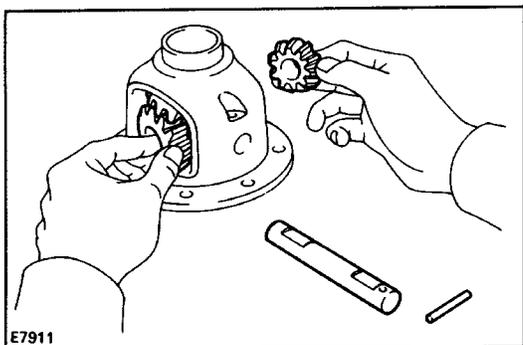


ASSEMBLY OF DIFFERENTIAL CARRIER

1. (CONVENTIONAL TYPE DIFFERENTIAL)

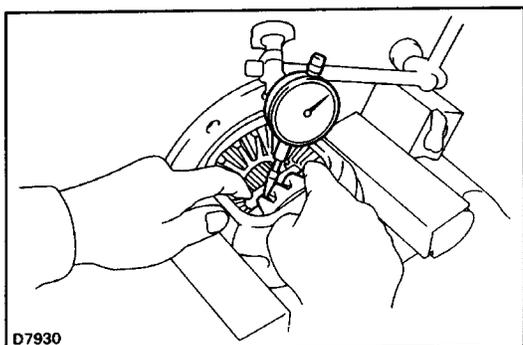
ASSEMBLE DIFFERENTIAL CASE

(a) Install the thrust washers to the side gears.



(b) Install the side gears with thrust washers and pinion gears with thrust washers.

(c) Install the pinion shaft.



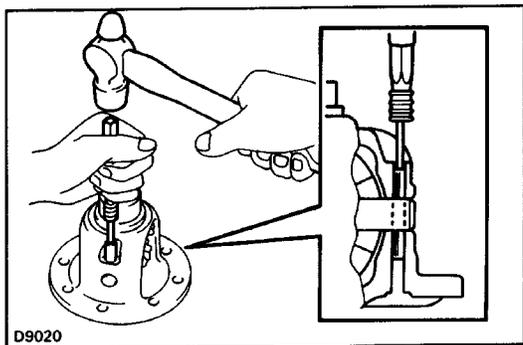
(d) Check the side gear backlash.

Measure the side gear backlash while holding one pinion gear toward the case.

Backlash: 0.05 – 0.20 mm (0.0020 – 0.0079 in.)

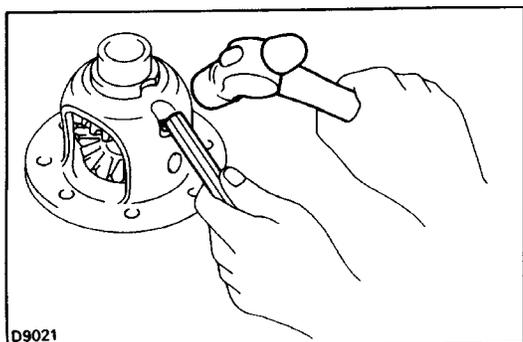
If the backlash is not within specification, install the side gear thrust washers of different thickness.

Thrust washer thickness		mm (in.)
0.95 (0.0374)		1.10 (0.0433)
1.00 (0.0394)		1.15 (0.0453)
1.05 (0.0413)		1.20 (0.0472)

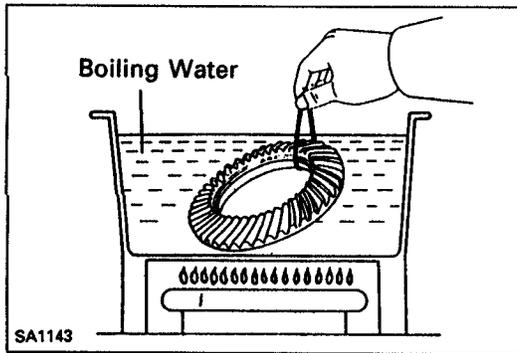


HINT: Use washers of same thickness on both the right and left sides.

(e) Using a hammer and punch, drive in the straight pin through the case and hole in the pinion shaft.

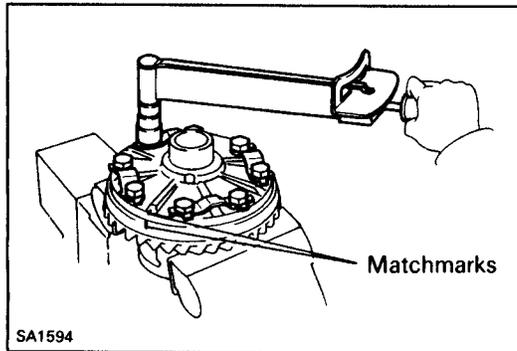


(f) Stake the case.

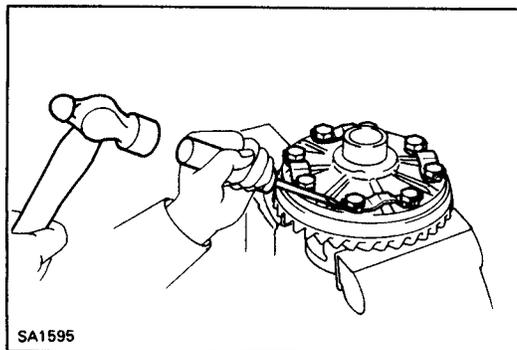


2. INSTALL RING GEAR ON DIFFERENTIAL CASE

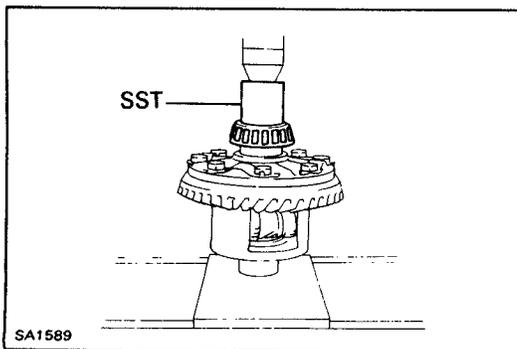
- (a) Clean the contact surface of the differential case and ring gear.
- (b) Heat the ring gear in boiling water.
- (c) After the moisture on the ring gear has completely evaporated, quickly install the ring gear to the differential case.



- (d) Align the matchmarks on the ring gear and differential case.
- (e) Temporarily install the lock plates and set bolts.
- (f) After the ring gear cools down enough, tighten the set bolts uniformly and a little at a time.
Torque: 97 N·m (985 kgf·cm, 71 ft·lbf)



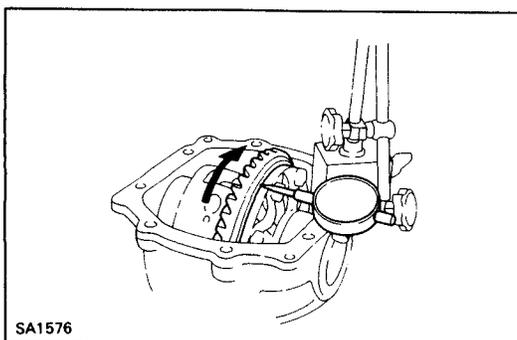
- (g) Using a hammer and drift punch, stake the lock plates.
HINT: Stake one claw flush with the flat surface of the nut. For the claw contacting the protruding portion of the nut, stake only the half on the tightening side.



3. INSTALL SIDE BEARINGS

Using a press and SST, press in the bearings into the differential case.

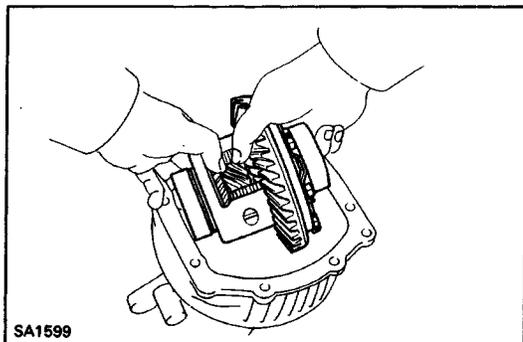
SST 09710-22020 (09710-01030)



4. CHECK RING GEAR RUNOUT

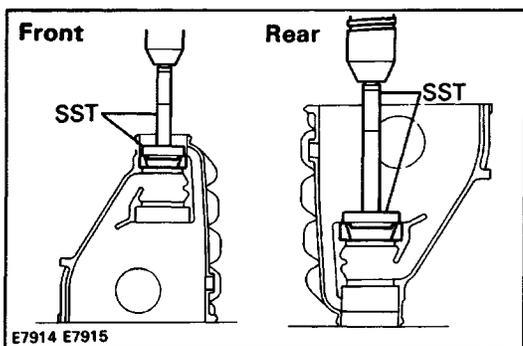
- (a) Install the differential case onto the carrier and install the plate washers to where there is no play in the bearing. (See page SA-102)
- (b) Install bearing caps. (See page SA-104)
- (c) Using a dial indicator, measure the runout of ring gear.

Maximum runout: 0.07 mm (0.0028 in.)



5. REMOVE DIFFERENTIAL CASE

- (a) Remove the four bolts and two bearing caps.
- (b) Remove the two plate washers.
- (c) Remove the differential case with bearing outer races.



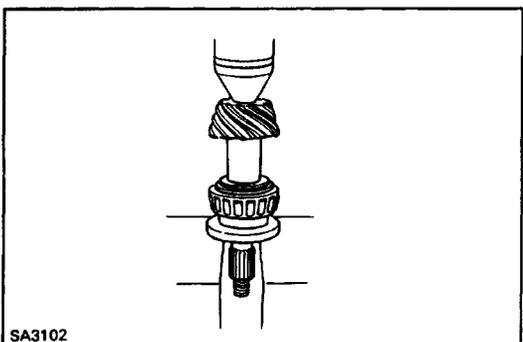
6. INSTALL FRONT AND REAR BEARING OUTER RACES

Using a press and SST, press in the front and rear bearing outer races.

SST 09608-30012

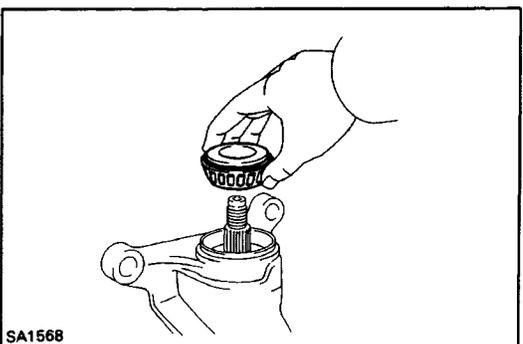
Front (09608-04020, 09608-00060)

Rear (09608-04020, 09608-04100)



7. INSTALL REAR BEARING TO DRIVE PINION

- (a) Install the plate washer on the drive pinion.
 - (b) Using a press and SST, install the rear bearing onto the drive pinion.
- SST 09506-30012

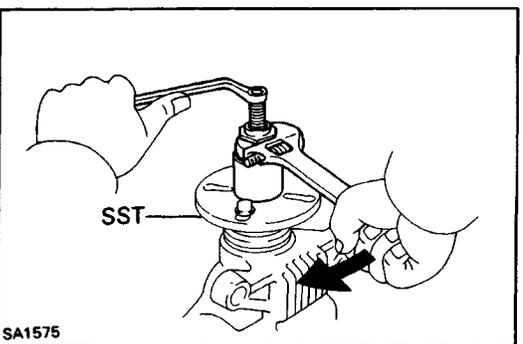


8. TEMPORARILY ADJUST DRIVE PINION PRELOAD

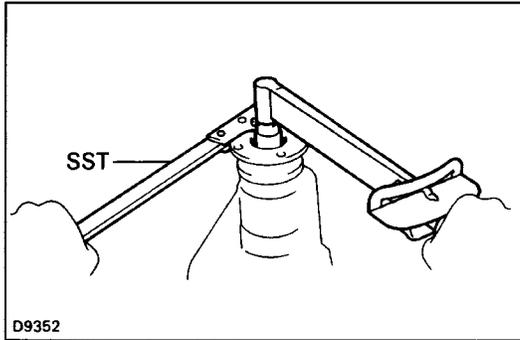
- (a) Install the following parts:

- Drive pinion
- Front bearing

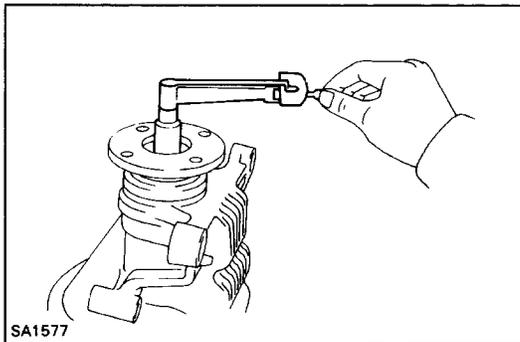
HINT: Assemble the spacer, oil slinger oil seal after adjusting the gear contact pattern.



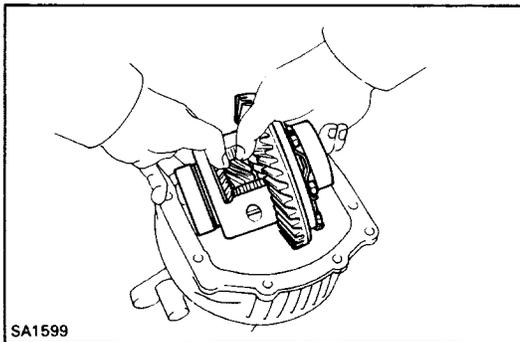
- (b) Install the companion flange with SST.
- SST 09557-22022



- (c) Adjusting the drive pinion preload by tightening the companion flange nut.
Using SST to hold the flange, tighten the nut.
SST 09330-00021

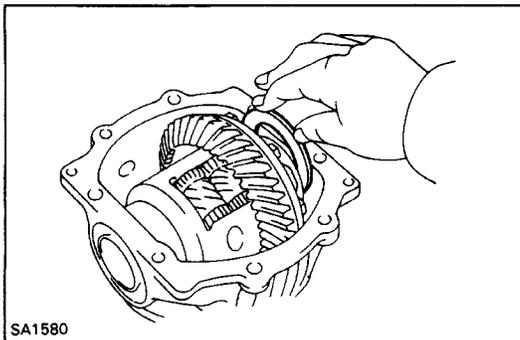


- (d) Using a torque meter, measure the preload.
Preload (at starting)
New bearing
1.0 – 1.6 N-m (10 – 16 kgf-cm, 8.7 – 13.9 in.-lbf)
Reused bearing
0.5 – 0.8 N-m (5 – 8 kgf-cm, 4.3 – 6.9 in.-lbf)



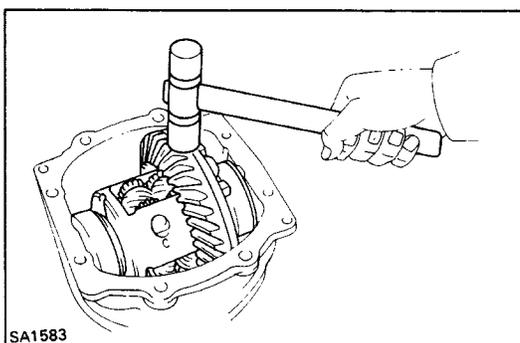
9. INSTALL DIFFERENTIAL CASE IN CARRIER

- (a) Place the bearing outer races on their respective bearings. Make sure the left and right outer races are not interchanged.
(b) Install the differential case in the carrier.

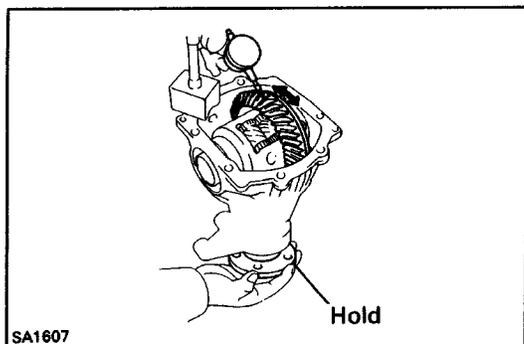


10. ADJUST RING GEAR BACKLASH

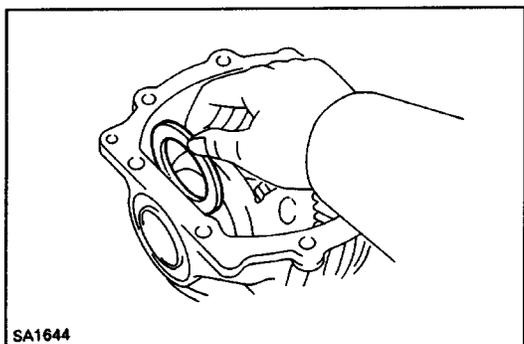
- (a) Install only the plate washer on the ring gear back side.
HINT: Insure that the ring gear has backlash.



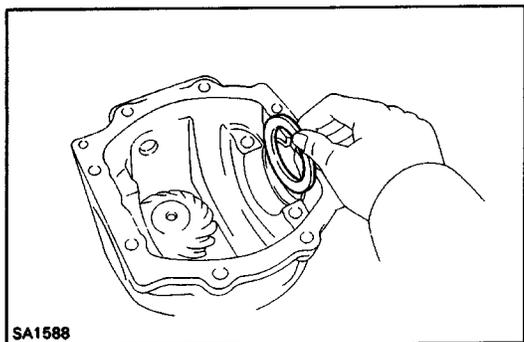
- (b) Snug down the washer and bearing by tapping on the ring gear with a plastic hammer.



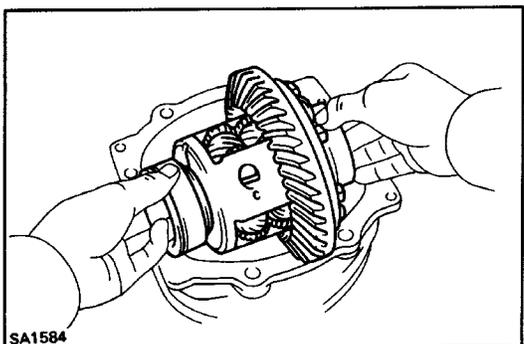
- (c) Using a dial indicator, measure the backlash.
- (d) Select a ring gear back side plate washer so that the backlash is 0.13 mm (0.0051 in.).



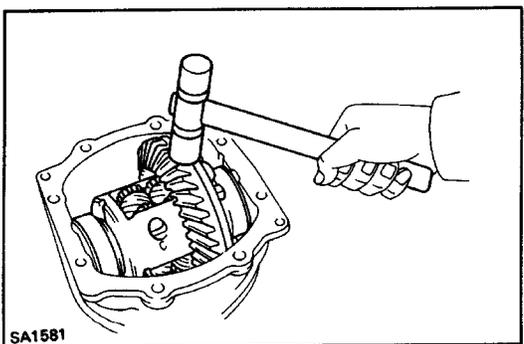
- (e) Select a ring gear teeth side washer with a thickness which eliminates any clearance between the outer race and case.
- (f) Remove the plate washer and differential case.



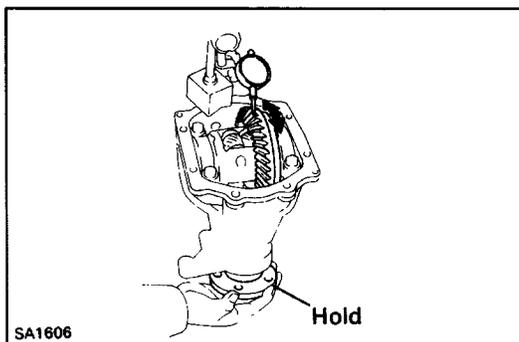
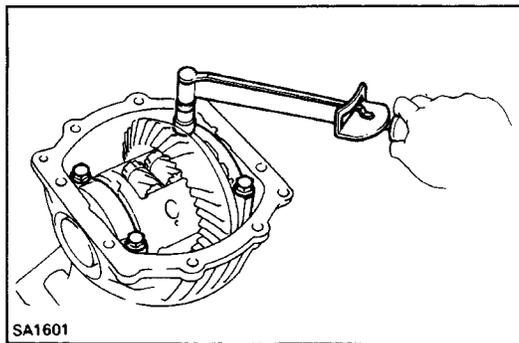
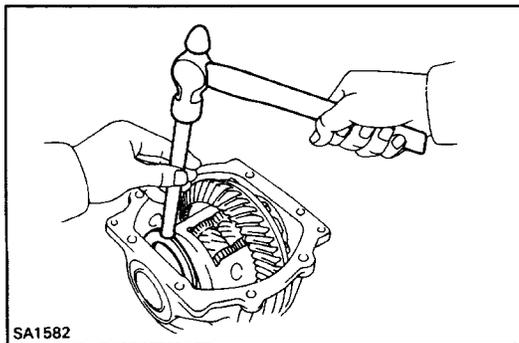
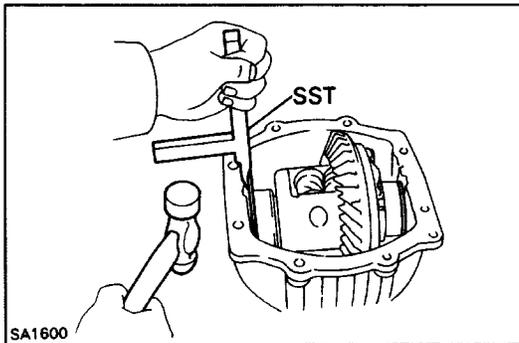
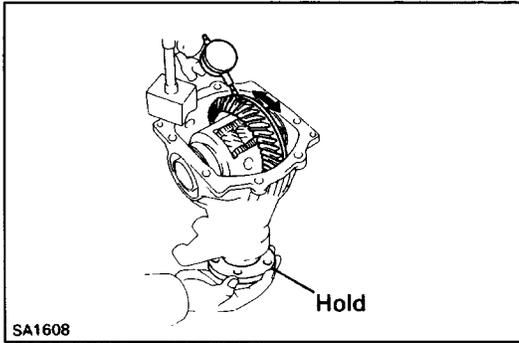
- (g) Install the plate washer into the ring gear back side.



- (h) Place the other plate washer onto the differential case together with the outer race, and install the differential case with the outer race into the carrier.



- (i) Using a plastic hammer, snug down the washer and bearing by tapping the ring gear.



- (j) Using a dial indicator, measure the ring gear backlash.

Backlash: 0.13 – 0.18 mm (0.0051 – 0.0071 in.)

- (k) If not within the specification, adjust by either increasing or decreasing the number of washers on both sides by an equal amount.

HINT: There should be clearance between the plate washer and case.

Insure that there is ring gear backlash.

11. ADJUST SIDE BEARING PRELOAD

- (a) Using SST, remove the ring gear teeth side plate washer and measure the thickness.

SST 09504-22011

- (b) Install a new washer of 0.06 – 0.09 mm (0.0024 – 0.0035 in.) thicker than the removed washer.

HINT: Select a washer which can be pressed in 2/3 of the way by finger.

- (c) Using a hammer and brass bar, tap in the side gear thrust washer.

- (d) Install the side bearing caps.

HINT: Align the matchmarks on the cap and carrier.

Torque: 78 N-m (800 kgf-cm, 58 ft-lbf)

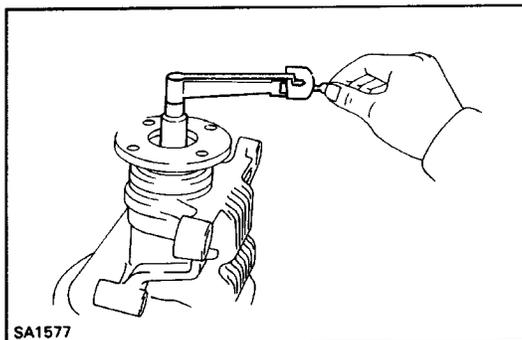
- (e) Recheck the ring gear backlash.

Backlash: 0.13 – 0.18 mm (0.0051 – 0.0071 in.)

- (f) If not within the standard, adjust by either increasing or decreasing the washers on both sides by equal amount.

HINT: The backlash will change about 0.02 mm (0.0008 in.) with 0.03 mm (0.0012 in.) alteration of the side gear thrust washer.

Washer thickness		mm (in.)
2.21-2.23 (0.0870-0.0878)	2.72-2.74 (0.1071-0.1079)	
2.24-2.26 (0.0882-0.0890)	2.75-2.77 (0.1083-0.1091)	
2.27-2.29 (0.0894-0.0902)	2.78-2.80 (0.1094-0.1102)	
2.30-2.32 (0.0906-0.0913)	2.81-2.83 (0.1106-0.1114)	
2.33-2.35 (0.0917-0.0925)	2.84-2.86 (0.1118-0.1126)	
2.36-2.38 (0.0929-0.0937)	2.87-2.89 (0.1130-0.1138)	
2.39-2.41 (0.0941-0.0949)	2.90-2.92 (0.1142-0.1150)	
2.42-2.44 (0.0953-0.0961)	2.93-2.95 (0.1154-0.1161)	
2.45-2.47 (0.0965-0.0972)	2.96-2.98 (0.1165-0.1173)	
2.48-2.50 (0.0976-0.0984)	2.99-3.01 (0.1171-0.1185)	
2.51-2.53 (0.0988-0.0996)	3.02-3.04 (0.1189-0.1197)	
2.54-2.56 (0.1000-0.1008)	3.05-3.07 (0.1201-0.1209)	
2.57-2.59 (0.1012-0.1020)	3.08-3.10 (0.1213-0.1220)	
2.60-2.62 (0.1024-0.1031)	3.11-3.13 (0.1224-0.1232)	
2.63-2.65 (0.1035-0.1043)	3.14-3.16 (0.1236-0.1244)	
2.66-2.68 (0.1047-0.1055)	3.17-3.19 (0.1248-0.1256)	
2.69-2.71 (0.1059-0.1067)	3.20-3.22 (0.1260-0.1268)	



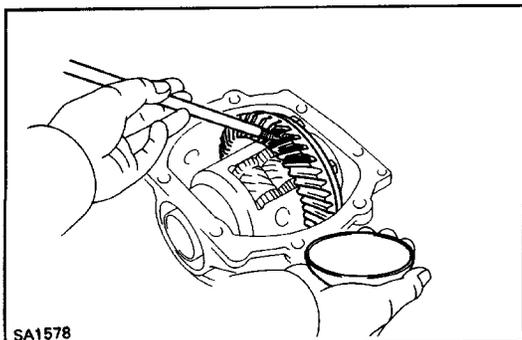
12. MEASURE TOTAL PRELOAD

Using a torque meter, measure the total preload.

Total preload (at starting):

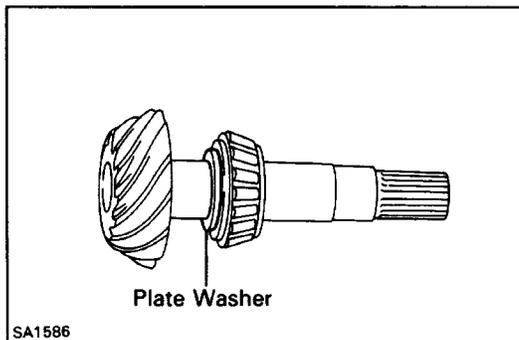
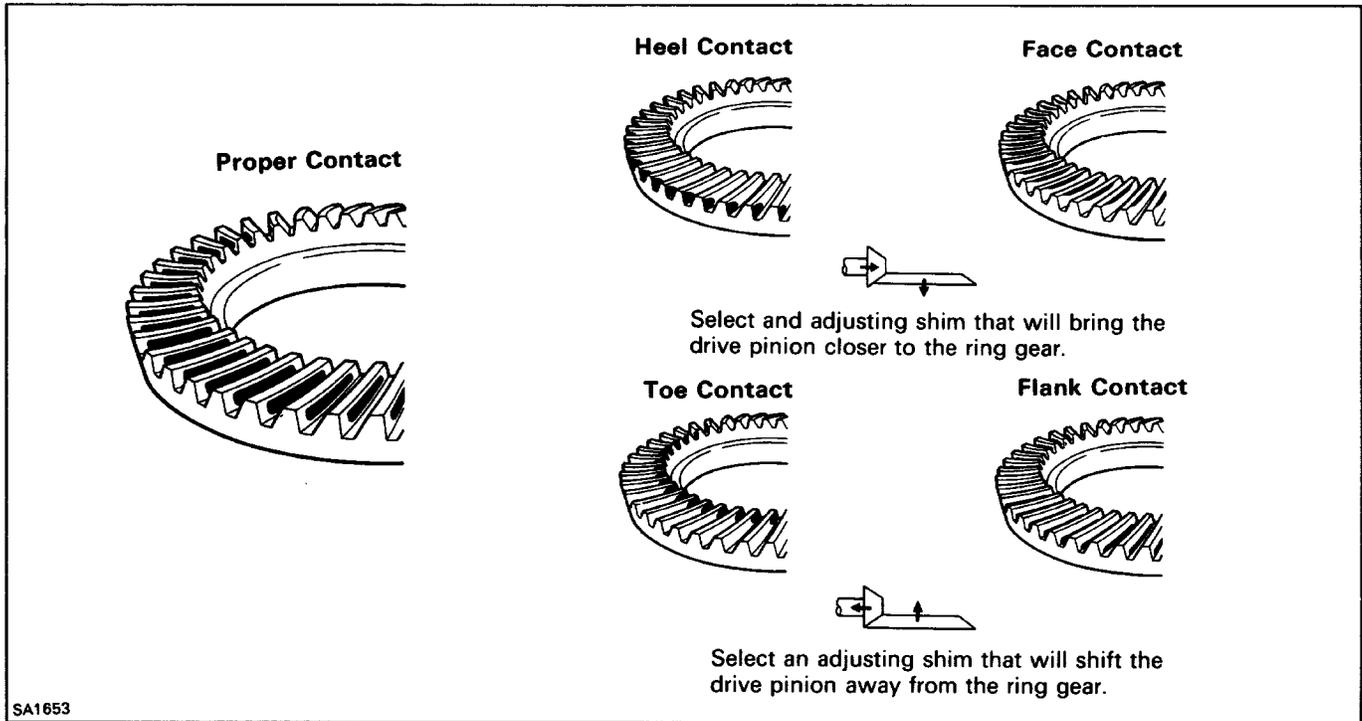
Add drive pinion preload

0.3 - 0.5 N-m (3 - 5 kgf-cm, 2.6 - 4.3 in.-lbf)



13. INSPECT TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION

- Coat 3 or 4 teeth at three different positions on the ring gear with red lead.
- Hold the companion flange firmly and rotate the ring gear in both directions.
- Inspect the tooth contact.



If the teeth are not contacting properly, use the following chart to select a proper washer for correction.

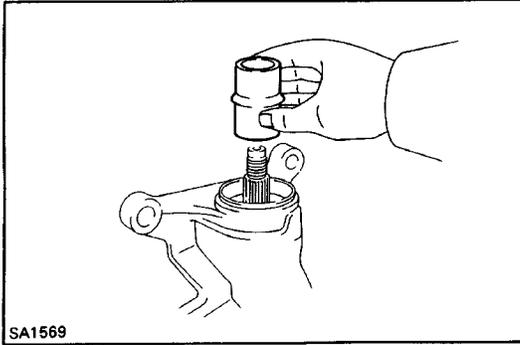
Thickness		mm (in.)
2.30 (0.0905)		2.51 (0.0989)
2.31 (0.0909)		2.52 (0.0992)
2.32 (0.0913)		2.53 (0.0996)
2.33 (0.0917)		2.54 (0.1000)
2.34 (0.0921)		2.55 (0.1004)
2.35 (0.0925)		2.56 (0.1008)
2.36 (0.0929)		2.57 (0.1012)
2.37 (0.0933)		2.58 (0.1016)
2.38 (0.0937)		2.59 (0.1020)
2.39 (0.0941)		2.60 (0.1024)
2.40 (0.0945)		2.61 (0.1028)
2.41 (0.0949)		2.62 (0.1032)
2.42 (0.0953)		2.63 (0.1035)
2.43 (0.0957)		2.64 (0.1039)
2.44 (0.0961)		2.65 (0.1043)
2.45 (0.0965)		2.66 (0.1047)
2.46 (0.0969)		2.67 (0.1051)
2.47 (0.0972)		2.68 (0.1055)
2.48 (0.0976)		2.69 (0.1059)
2.49 (0.0980)		2.70 (0.1063)
2.50 (0.0984)		2.71 (0.1067)

14. REMOVE COMPANION FLANGE

(See step 3 on page [SA-95](#))

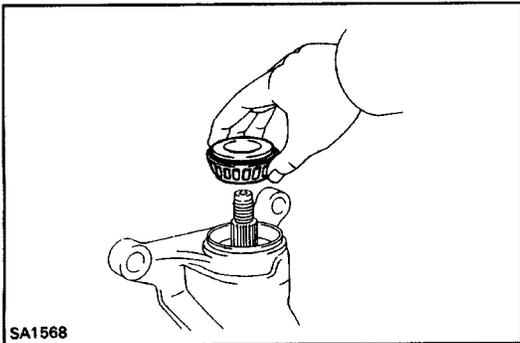
15. REMOVE FRONT BEARING

(See step 5 on page [SA-95](#))

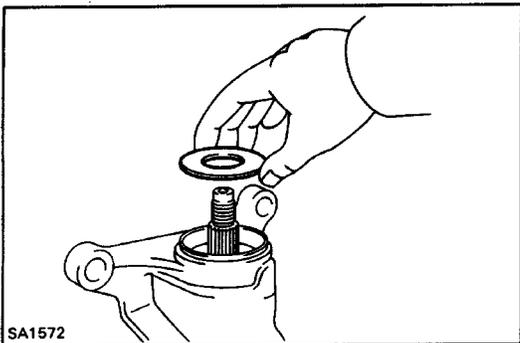


16. INSTALL NEW BEARING SPACER AND FRONT BEARING

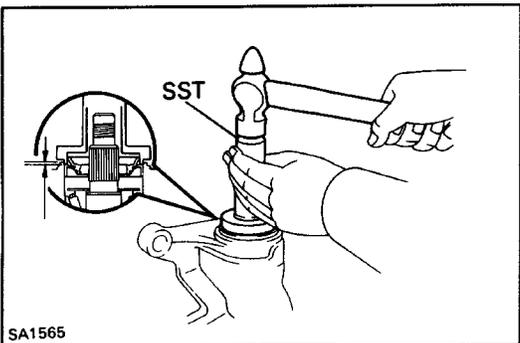
(a) Install a new bearing spacer on the drive pinion.



(b) Install the front bearing on the drive pinion.



17. INSTALL OIL SLINGER



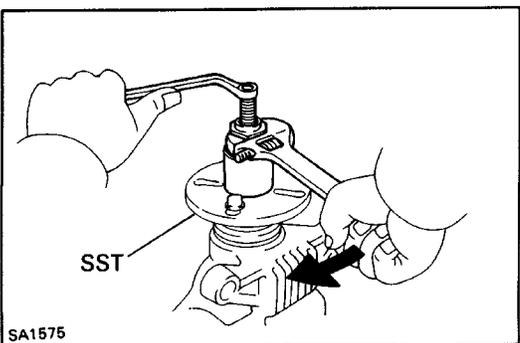
18. INSTALL NEW OIL SEAL

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

SST 09554-22010

Oil seal drive in depth: 2.0 mm (0.079 in.)

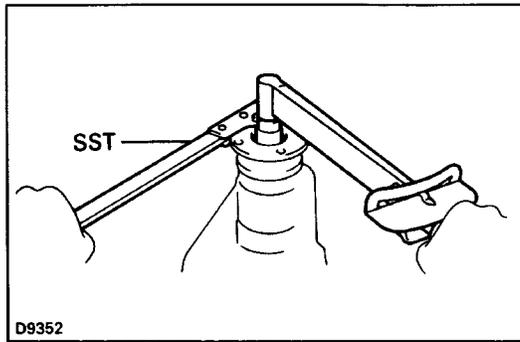
(b) Apply MP grease to oil seal lip.



19. INSTALL COMPANION FLANGE

(a) Using SST, install the companion flange on the shaft.

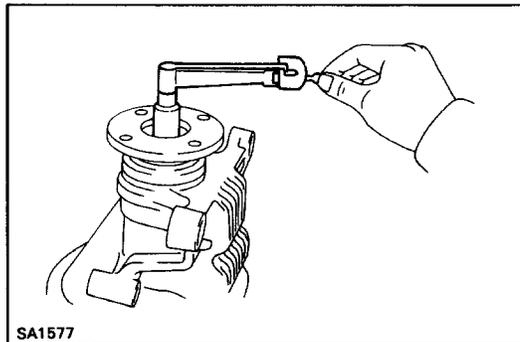
SST 09557-22022



- (b) Install the plate washer.
- (c) Coat the threads of a new nut with gear oil.
- (d) Using SST to hold the flange, tighten the nut.

SST 09330-00021

Torque: 108 N-m (1,100 kgf-cm, 80 ft-lbf)



20. CHECK DRIVE PINION BEARING PRELOAD

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

Preload (at starting):

New bearing 1.0 – 1.6 N-m

(10 – 16 kgf-cm, 8.7 – 13.9 in.-lbf)

Reused bearing 0.5 – 0.8 N-m

(5 – 8 kgf-cm, 4.3 – 6.9 in.-lbf)

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

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

Maximum torque: 235 N-m (2,400 kgf-cm, 177 ft-lbf)

21. CHECK TOTAL PRELOAD

Total preload (at starting):

Add drive pinion preload

0.3 – 0.5 N-m (3 – 5 kgf-cm, 2.6 – 4.3 in.-lbf)

22. CHECK RING GEAR BACKLASH

Using a dial indicator, check the backlash of the ring gear.

Backlash: 0.13 – 0.18 mm (0.0051 – 0.0071 in.)

If the backlash is not within specification, adjust the side bearing preload.

23. INSPECT TOOTH CONTACT BETWEEN RING GEAR

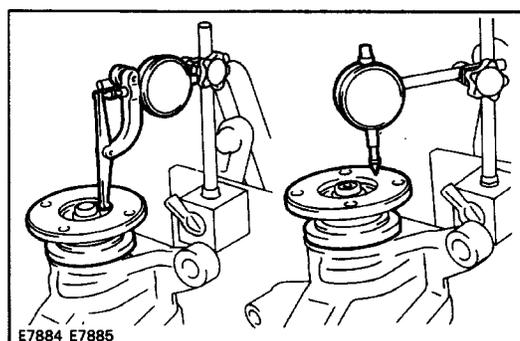
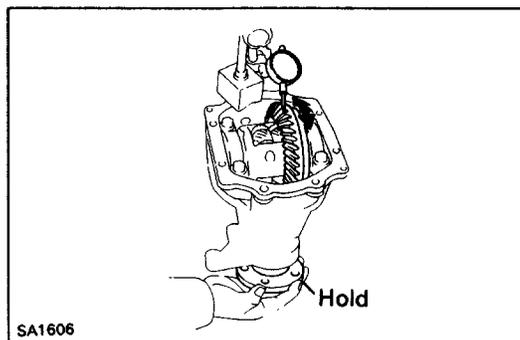
AND DRIVE PINION (See page SA-105)

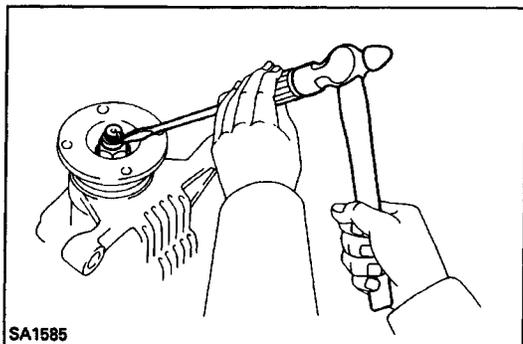
24. CHECK COMPANION FLANGE RUNOUT

Using a dial indicator, measure the lateral and radial runout of the companion flange.

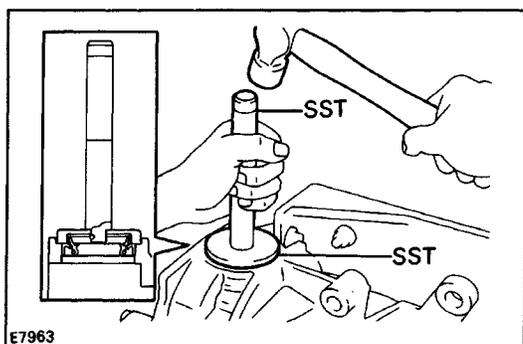
Maximum lateral runout: 0.10 mm (0.0039 in.)

Maximum radial runout: 0.10 mm (0.0039 in.)



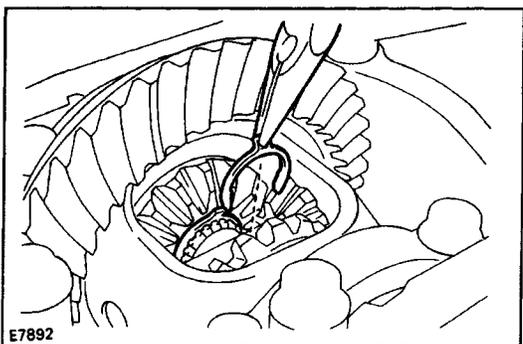


25. STAKE DRIVE PINION NUT



26. INSTALL NEW SIDE GEAR SHAFT OIL SEALS

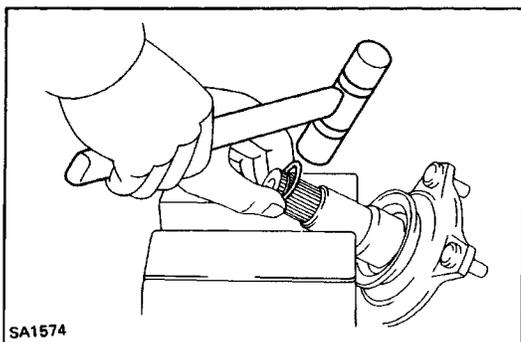
- Using SST, drive in two new oil seals until they are flush with the carrier end surface.
SST 09550-22011 (09550-00020,09550-00031)
- Coat the oil seal lips with MP grease.



27. INSTALL SIDE GEAR SHAFTS

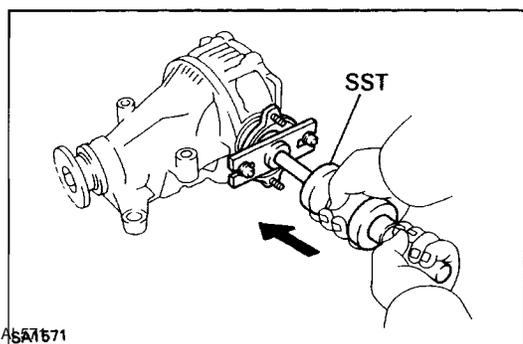
(Conventional Type Differential)

- Install the two side gear shafts to the differential case.
- Install two new shaft snap rings to the side gear shafts.

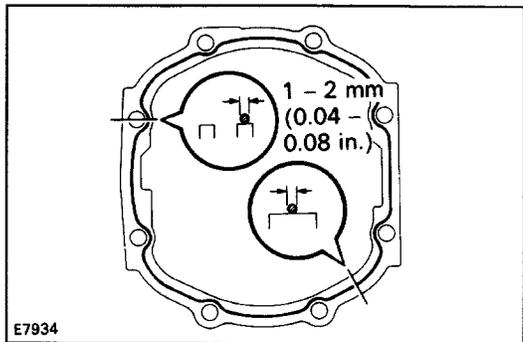


(Torque Sensing Limited Slip Differential)

- Install a new snap ring to the side gear shaft.



- Using SST, drive in the side gear shaft.
SST 09520-24010



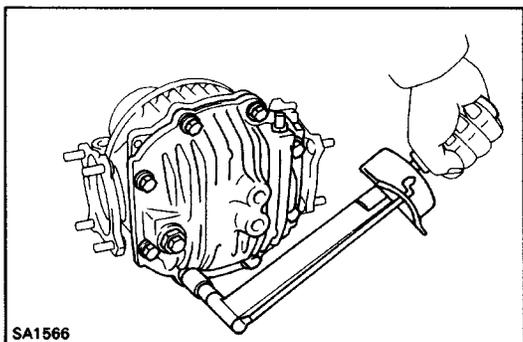
28. INSTALL DIFFERENTIAL CARRIER COVER

(a) Clean contacting surfaces of any residual packing material using gasoline or alcohol.

(b) Apply seal packing to the carrier.

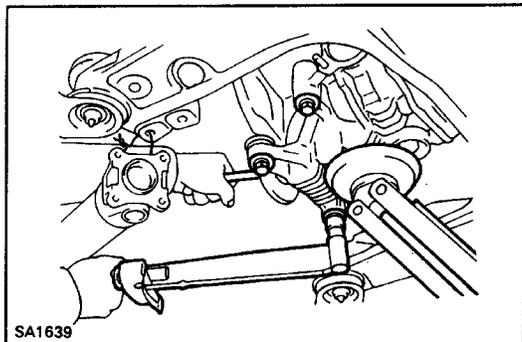
Seal packing: Part No.08826-00090, THREE BOND 1281 or equivalent

HINT: Install the carrier cover within 3 minutes after applying seal packing.



(c) Install and torque the eight set bolts.

Torque: 47 N-m (475 kgf-cm, 34 ft-lbf)

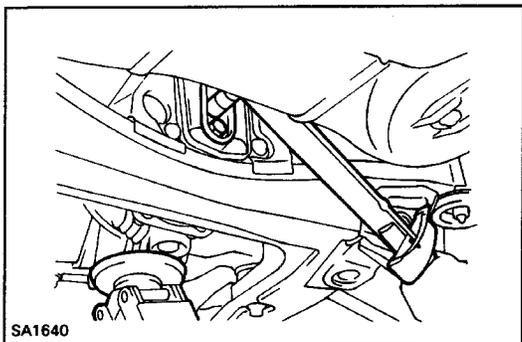


INSTALLATION OF DIFFERENTIAL

1. INSTALL DIFFERENTIAL

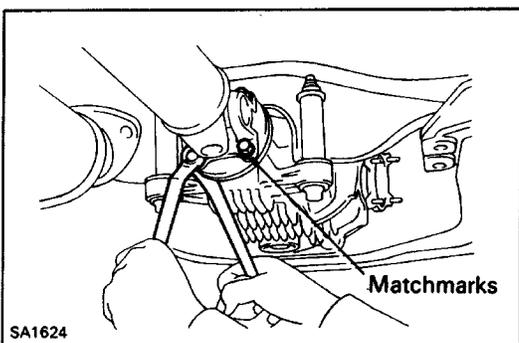
- (a) Position the differential and torque the four bolts and nuts.

Torque: 95 N-m (970 kgf-cm, 70 ft-lbf)



- (b) Install and torque the two bolts.

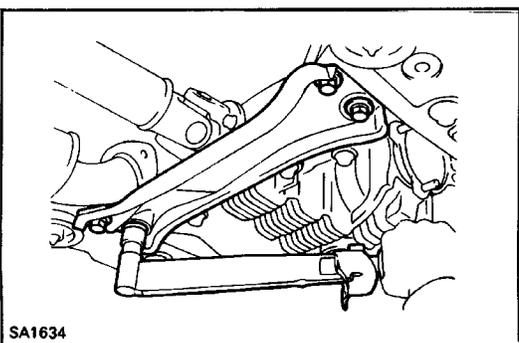
Torque: 147 N-m (1,500 kgf-cm, 108 ft-lbf)



2. CONNECT PROPELLER SHAFT

- (a) Align the matchmarks on the flanges and connect the flanges with four bolts, nuts and washers.
 (b) Torque the four bolts and nuts.

Torque: 74 N-m (750 kgf-cm, 54 ft-lbf)



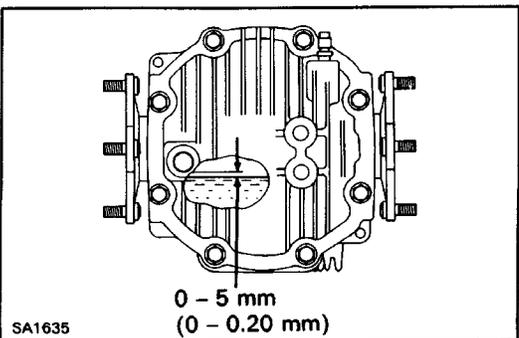
3. INSTALL REAR CROSSMEMBER

Install the rear crossmember with four bolts.

Torque: 72 N-m (730 kgf-cm, 53 ft-lbf)

4. CONNECT DRIVE SHAFTS

(See page [SA-78](#))



5. FILL DIFFERENTIAL WITH GEAR OIL

- (a) Install the drain plug with new gasket.

Torque: 49 N-m (500 kgf-cm, 36 ft-lbf)

- (b) Fill the differential with gear oil.

Oil grade: API GL-5 hypoid gear oil

Viscosity: Above -18°C (0°F) SAE 90

Below -18°C (0°F) SAE 80W-90

Capacity: 1.1 liters (1.2 US qts, 1.0 Imp.qts)

- (c) Install the filler plug with new gasket.

Torque: 39 N-m (400 kgf-cm, 29 ft-lbf)