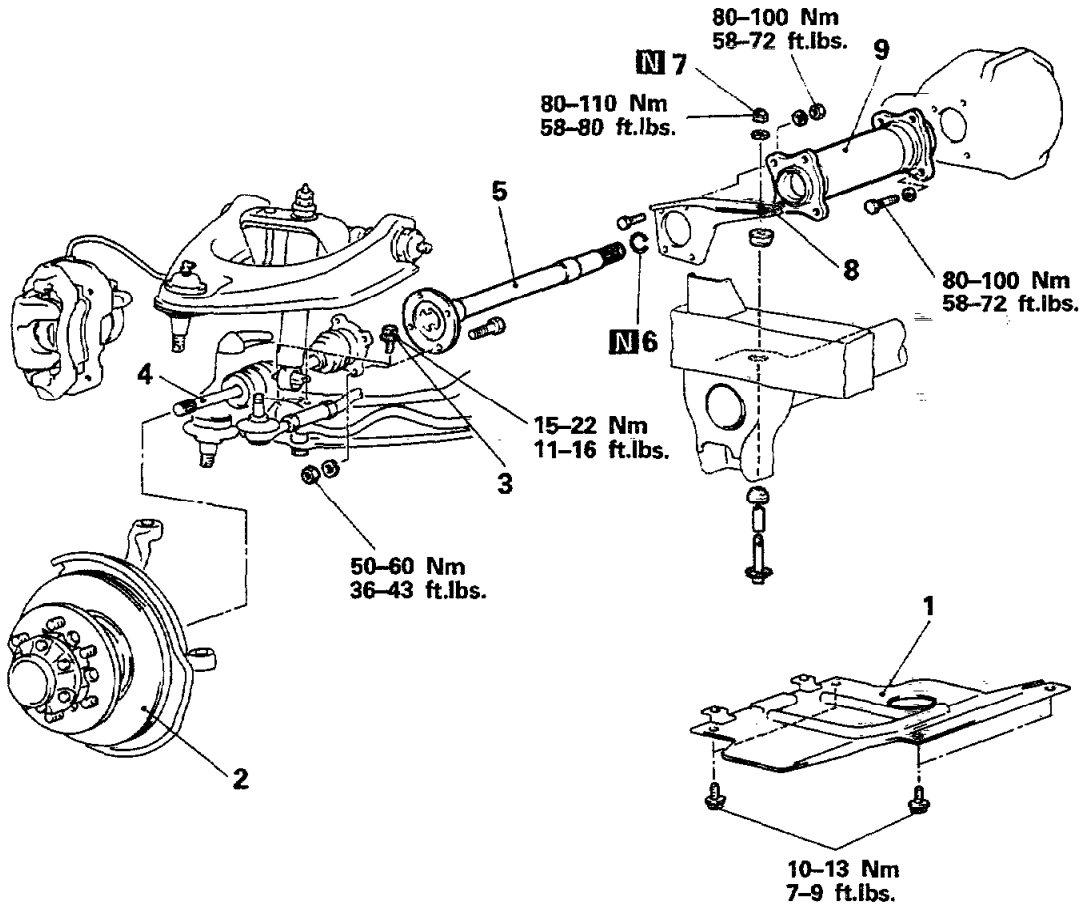


**INNER SHAFT**

**REMOVAL AND INSTALLATION**

N02RA--



11W582

**Removal steps**

1. Under cover
- ↔ ↔ 2. Front hub and knuckle assembly
- ↔ ↔ 3. Shock absorber lower mounting bolts
- ↔ ↔ 4. Drive shaft assembly (R.H.)
- ↔ ↔ 5. Inner shaft
6. Circlip
7. Self locking nut
8. Differential mounting bracket (R.H.)
9. Housing tube

**NOTE**

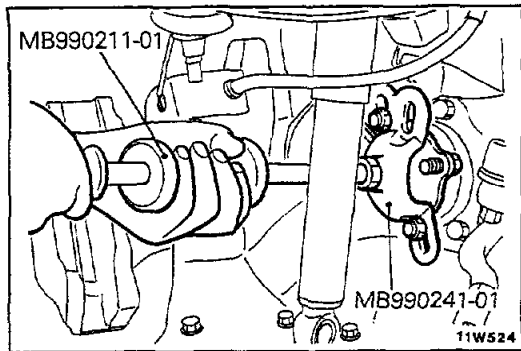
- (1) Reverse the removal procedures to reinstall.
- (2) ↔ ↔ : Refer to "Service Points of Removal".
- (3) ↔ ↔ : Refer to "Service Points of Installation".
- (4) N : Non-reusable parts

**SERVICE POINTS OF REMOVAL**

N02RBAB

**2. REMOVAL OF FRONT HUB AND KNUCKLE ASSEMBLY / 4. DRIVE SHAFT ASSEMBLY (R.H.)**

Refer to P.2-40.



**5. REMOVAL OF INNER SHAFT**

Attach the special tools to the flange of the shaft, and drive the inner shaft out from the front differential carrier.

**Caution**

1. Being careful not to scratch or scar the shock absorber with the special tool, remove the lower mounting bolts of the shock absorber, and compress the shock absorber as much as possible.
2. When pulling the inner shaft out from the front differential carrier, be careful that the spline part of the inner shaft does not damage the oil seal.

**INSPECTION**

N02RCAA

- Check the inner shaft for bend.
- Check the bearing for wear or discoloration.
- Check the housing tube for cracks.
- Check the dust seal for cracks or damage.

**SERVICE POINTS OF INSTALLATION**

N02RDAB

**5. INSTALLATION OF INNER SHAFT**

Drive the inner shaft into the front differential carrier by using the special tools.

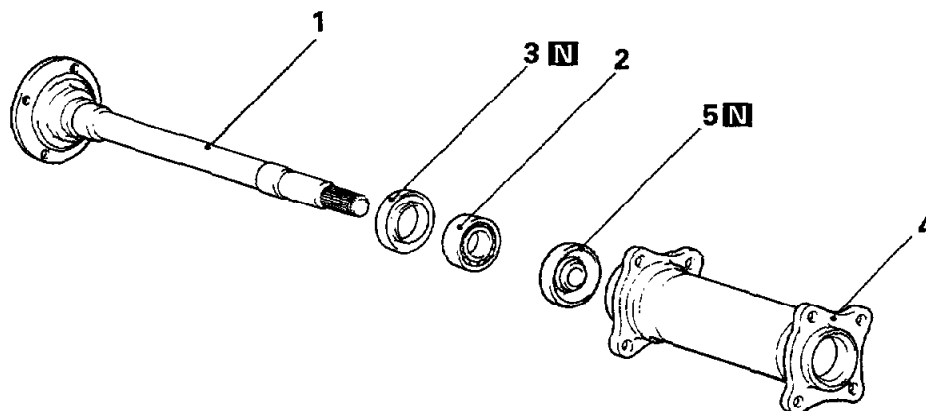
**Caution**

1. Replace the circlip which is attached to the inner shaft spline part with a new one.
2. Be careful not to damage the lip of the dust seal and oil seal.

**4. INSTALLATION OF DRIVE SHAFT ASSEMBLY (R.H.)/2. FRONT HUB AND KNUCKLE ASSEMBLY**

Refer to P.2-40.

**DISASSEMBLY AND REASSEMBLY**



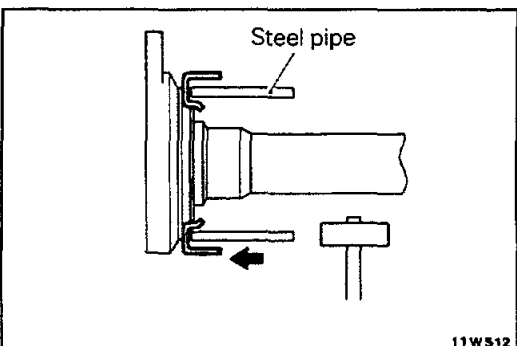
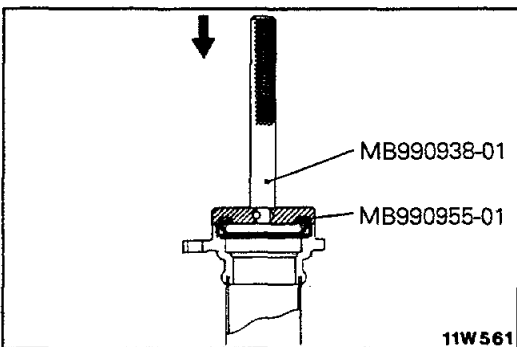
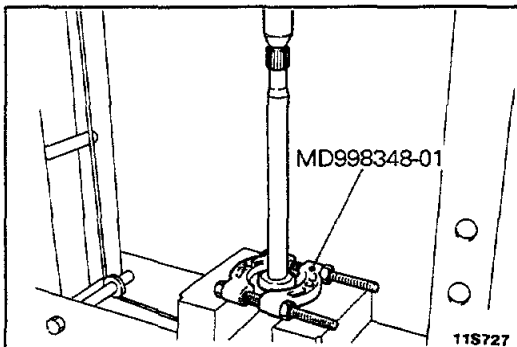
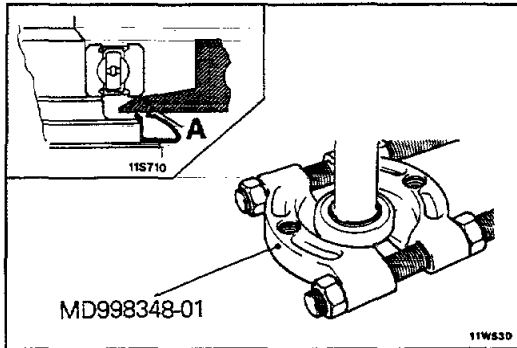
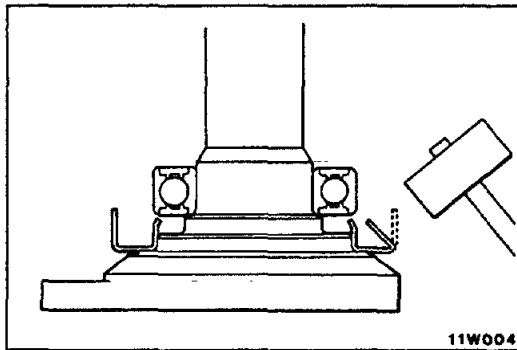
**Disassembly steps**

- 1. Inner shaft
- ◆◆◆◆ 2. Bearing
- ◆◆◆ 3. Dust cover
- ◆◆◆ 4. Housing tube
- ◆◆◆ 5. Dust seal

11W597

**NOTE**

- (1) Reverse the disassembly procedures to reassemble.
- (2) ◆◆◆ : Refer to "Service Points of Disassembly".
- (3) ◆◆◆ : Refer to "Service Points of Reassembly".
- (4) [N] : Non-reusable parts



## SERVICE POINTS OF DISASSEMBLY

N02RFAB

### 2. REMOVAL OF BEARING

- (1) Bend the outside periphery of dust cover inward with a hammer.

- (2) After the special tool has been installed as shown, tighten the nut of the special tool until the portion "A" of the special tool touches the bearing outer race.

- (3) Press out the inner shaft from the bearing.

#### Caution

Do not allow the inner shaft to drop.

## SERVICE POINTS OF REASSEMBLY

N02RHAD

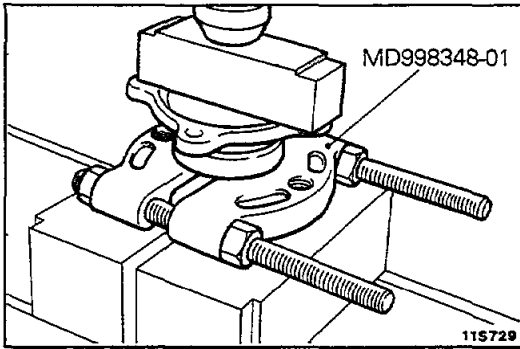
### 5. INSTALLATION OF DUST SEAL

- (1) Press-fit the new dust seal into the housing tube by using the special tools, until it is flush with the housing tube end face.
- (2) Apply the multipurpose grease to the dust seal lip.

### 3. INSTALLATION OF DUST COVER

Using a steel pipe, force a new dust cover onto the inner shaft.

Steel pipe	mm (in.)
Overall length	50 (1.97)
Outside diameter	75 (2.95)
Wall thickness	4 (.16)



**NOTE**

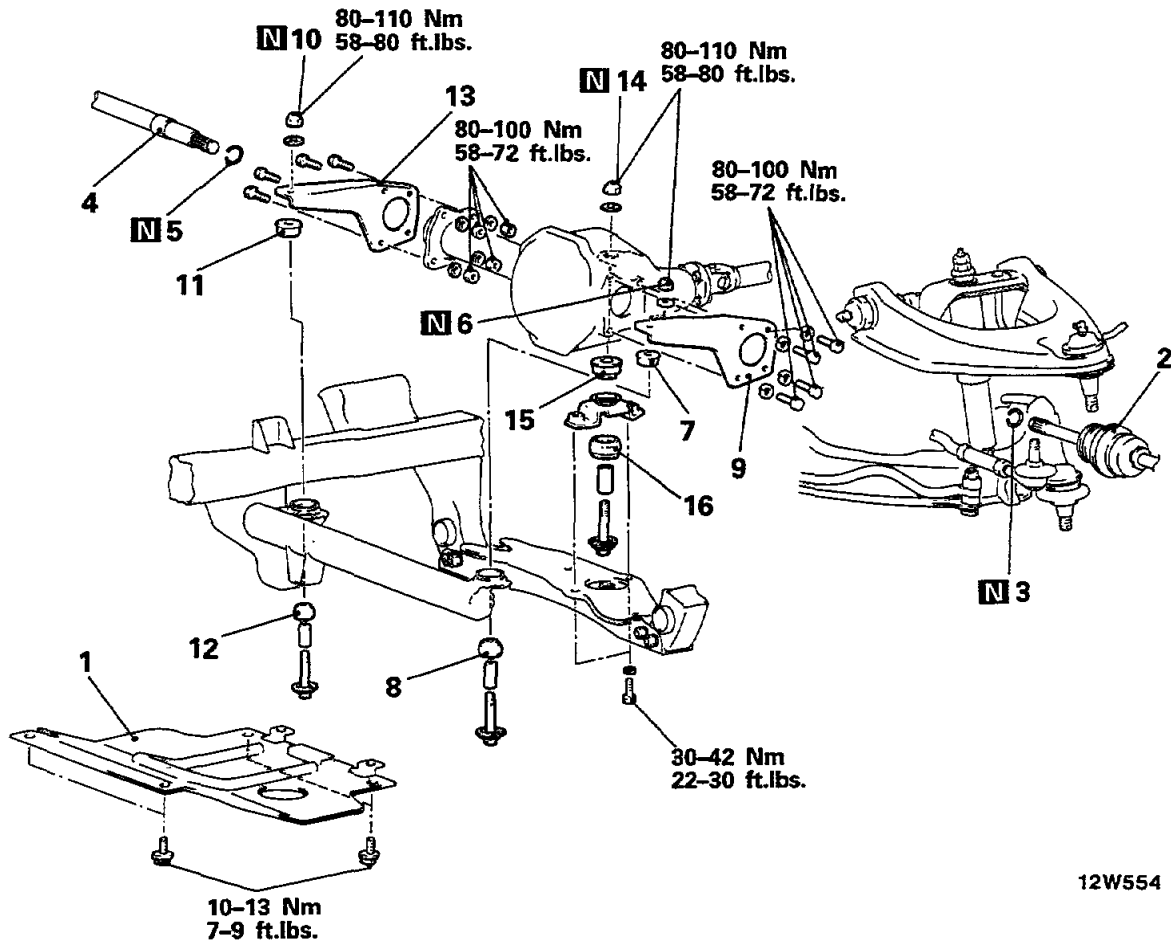
After the dust cover has been installed, apply multipurpose grease to the inside of the dust cover.

**2. INSTALLATION OF BEARING**

Using the special tool, force the bearing onto the inner shaft.

**FRONT DIFFERENTIAL MOUNTING  
REMOVAL AND INSTALLATION**

N02UA-



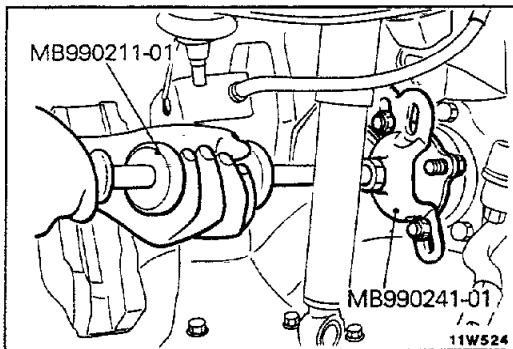
12W554

**Removal steps**

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>1. Under cover</li> <li>↔ ↔ 2. Drive shaft</li> <li>↔ ↔ 3. Circlip</li> <li>↔ ↔ 4. Inner shaft</li> <li>5. Circlip</li> <li>6. Self-locking nut</li> <li>7. Differential mounting rubber A</li> <li>8. Differential mounting rubber B</li> <li>↔ 9. Differential mounting bracket (L.H.)</li> <li>10. Self-locking nut</li> </ul> | <ul style="list-style-type: none"> <li>11. Differential mounting rubber A</li> <li>12. Differential mounting rubber B</li> <li>↔ 13. Differential mounting bracket (R.H.)</li> <li>14. Self-locking nut</li> <li>15. Differential mounting rubber C</li> <li>16. Differential mounting rubber D</li> </ul> |
|--|--|

**NOTE**

- (1) Reverse the removal procedures to reinstall.
- (2) ↔ : Refer to "Service Points of Removal".
- (3) ↔ : Refer to "Service Points of Installation".
- (4) N : Non-reusable parts

**SERVICE POINTS OF REMOVAL**

N02UBAB

**2. REMOVAL OF DRIVE SHAFT**

Refer to P. 2-40.

**4. REMOVAL OF INNER SHAFT**

Attach the special tools to the flange of the shaft, and drive the inner shaft out from the front differential carrier.

**Caution**

1. Being careful not to scratch or scar the shock absorber with the special tool, remove the lower mounting bolts of the shock absorber, and compress the shock absorber as much as possible.
2. When pulling the inner shaft out from the front differential carrier, be careful that the spline part of the inner shaft does not damage the oil seal.

**9. REMOVAL OF DIFFERENTIAL MOUNTING BRACKET (L.H.) / 13. DIFFERENTIAL MOUNTING BRACKET (R.H.)**

While supporting the differential carrier with a jack, remove the differential mounting bracket.

**NOTE**

Support the differential carrier with a jack until installing the differential mounting bracket.

**INSPECTION**

N02UCAA

- Check the differential mounting bracket for deformation and damage.
- Check the bracket for deformation and damage.
- Check the differential mounting rubber for cracks and damage.

**SERVICE POINTS OF INSTALLATION**

N02UDAA

**4. INSTALLATION OF INNER SHAFT**

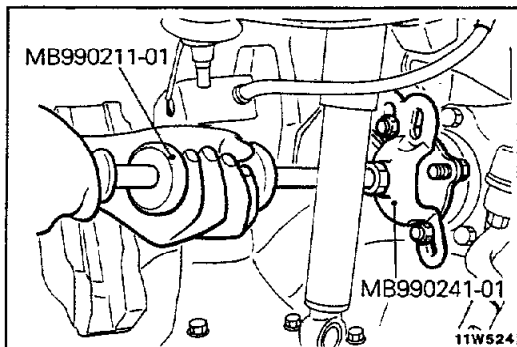
Drive the inner shaft into the front differential carrier by using the special tools.

**Caution**

Be careful not to damage the lip of the dust seal and oil seal.

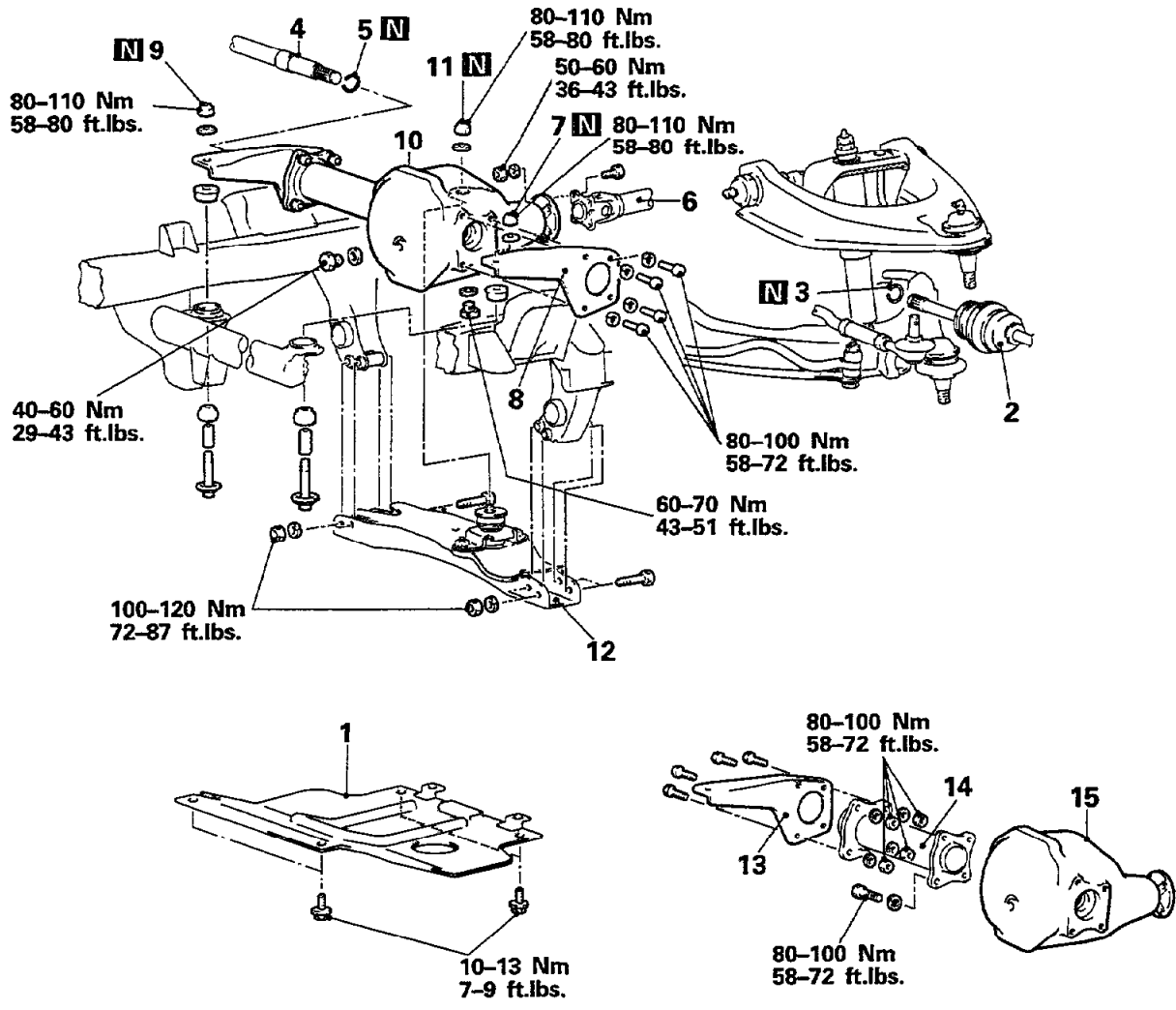
**2. INSTALLATION OF DRIVE SHAFT**

Refer to P. 2-40.



**DIFFERENTIAL CARRIER  
REMOVAL AND INSTALLATION**

N02VA--



**Removal steps**

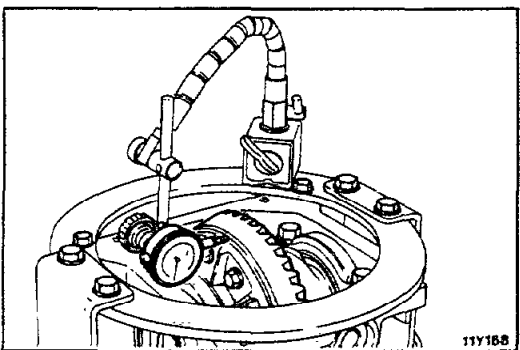
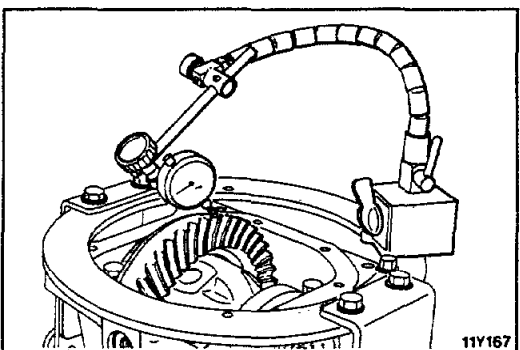
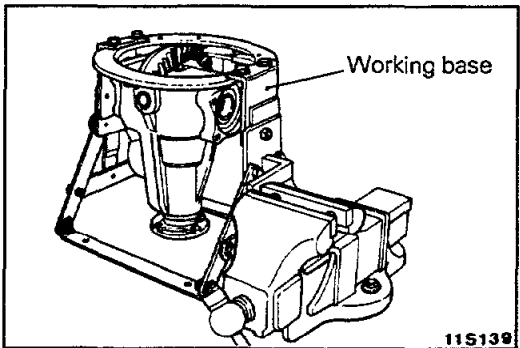
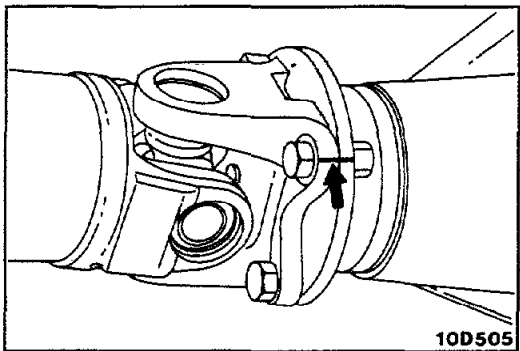
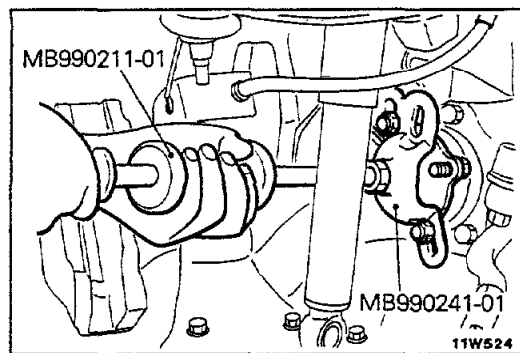
- 1. Under cover
- ◄◄ ►► 2. Drive shaft
- ◄◄ ►► 3. Circlip
- ◄◄ ►► 4. Inner shaft
- ◄◄ 5. Circlip
- ◄◄ 6. Front propeller shaft
- ◄◄ 7. Self-locking nut
- ◄◄ 8. Differential mounting bracket (L.H.)
- 9. Self-locking nut
- 10. Front suspension crossmember and front differential carrier assembly
- 11. Self-locking nut
- 12. Front suspension crossmember
- 13. Differential mounting bracket (R.H.)
- 14. Housing tube
- 15. Front differential carrier assembly

**Pre-removal Operation**  
 ● Draining of Gear Oil

**Post-installation Operation**  
 ● Supplying Gear Oil (Refer to P. 2-15.)

**NOTE**  
 (1) Reverse the removal procedures to reinstall.  
 (2) ◄◄ : Refer to "Service Points of Removal".  
 (3) ►► : Refer to "Service Points of Installation".  
 (4) **N** : Non-reusable parts

11W612



## SERVICE POINTS OF REMOVAL

N02VBAB

### 2. REMOVAL OF DRIVE SHAFT

Refer to P.2-40.

### 4. REMOVAL OF INNER SHAFT

Drive the inner shaft out from the front differential carrier.

#### Caution

1. Being careful not to scratch or scar the shock absorber with the special tool, remove the lower mounting bolts of the shock absorber, and compress the shock absorber as much as possible.
2. When pulling the inner shaft out from the front differential carrier, be careful that the spline part of the inner shaft does not damage the oil seal.

### 6. REMOVAL OF FRONT PROPELLER SHAFT

Make the mating marks on the flange yoke and the differential companion flange.

Detach the propeller shaft from the front differential carrier assembly.

### 8. REMOVAL OF DIFFERENTIAL MOUNTING BRACKET (L.H.)

While supporting the differential carrier with a jack, remove the differential mounting bracket.

## INSPECTION BEFORE DISASSEMBLY

N02VCAC

Remove the cover and gasket. Hold the working base in a vice, and install the differential carrier assembly to the working base.

## FINAL DRIVE GEAR BACKLASH CHECK

Check the final drive gear backlash by following the steps below.

- (1) With the drive pinion locked in place, measure the final drive gear backlash with a dial indicator on the drive gear.

#### NOTE

Measure at four points or more on the circumference of the drive gear.

**Standard value : 0.11–0.16 mm (.0043–.0063 in.)**

- (2) If the backlash is not within the standard value, adjust it by using the side bearing adjustment spacers.

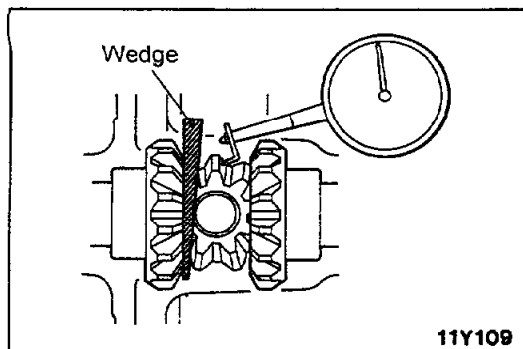
## DRIVE GEAR RUNOUT CHECK

Check the drive gear runout by following the steps below.

- (1) Measure the drive gear runout at the shoulder on the reverse side of the drive gear.

**Limit : 0.05 mm (.0020 in.)**

- (2) If the runout exceeds the limit, check for improper tightening of the drive gear and differential case.

**DIFFERENTIAL GEAR BACKLASH CHECK**

Check the differential gear backlash by following the steps below.

- (1) While locking the side gear with the wedge, measure the differential gear backlash with a dial indicator on the pinion gear.

**NOTE**

The measurement should be made for both pinion gears individually.

**Standard value : 0–0.076 mm (0–.0030 in.)**

**Limit : 0.2 mm (.008 in.)**

- (2) If the backlash exceeds the limit, adjust by using the side gear thrust spacers.

**FINAL DRIVE GEAR TOOTH CONTACT CHECK**

Refer to GROUP 3 – Differential Carrier (Inspection Before Disassembly).

**SERVICE POINTS OF INSTALLATION**

N02VDAB

**4. INSTALLATION OF INNER SHAFT**

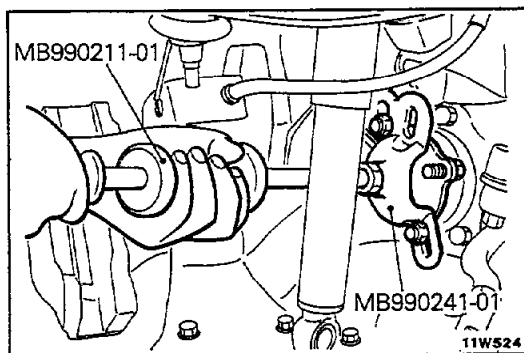
Drive the inner shaft into the front differential carrier by using the special tools.

**Caution**

**Be careful not to damage the lip of the dust seal and oil seal.**

**2. INSTALLATION OF DRIVE SHAFT**

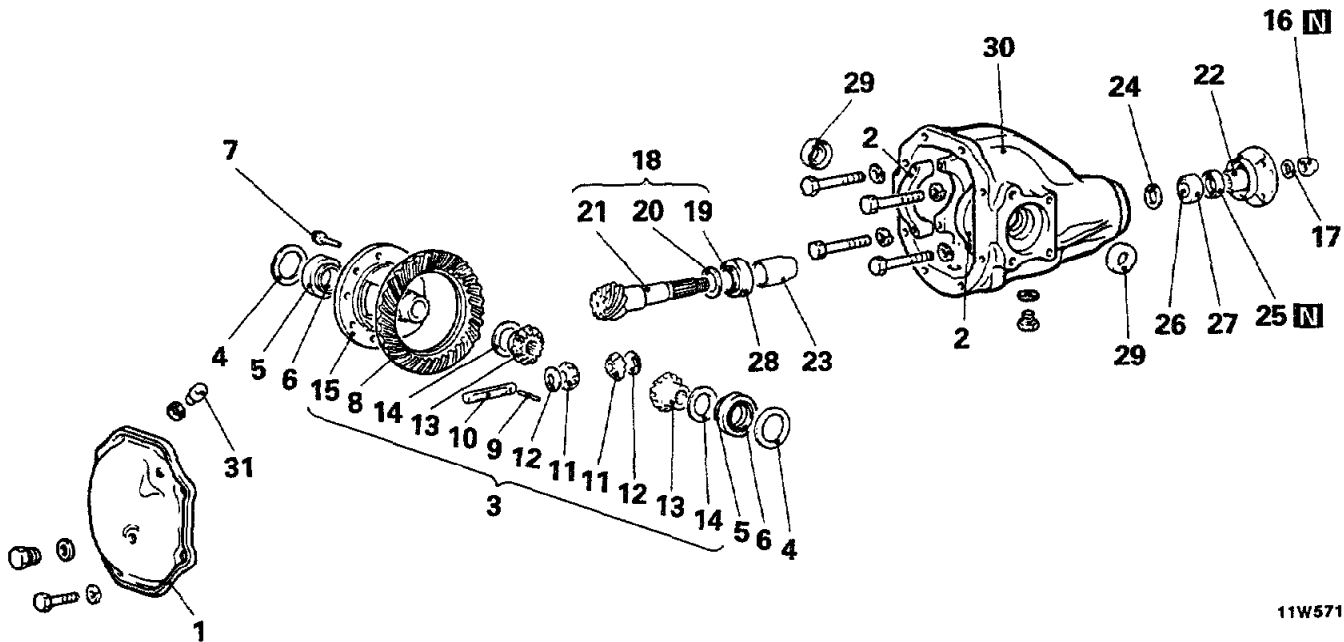
Refer to P.2-40.





DISASSEMBLY

NOZVE--



11W571

**Inspection before Disassembly**

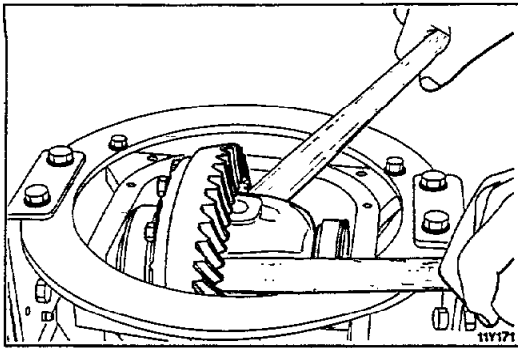
- Final Drive Gear Backlash
  - Drive Gear Runout
  - Differential Gear Backlash
  - Final Drive Gear Tooth Contact
- } Refer to P.2-54-55.

**Disassembly steps**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1. Differential cover</li> <li>2. Bearing caps</li> <li>↔ 3. Differential case assembly</li> <li>4. Side bearing adjusting spacers</li> <li>5. Side bearing outer races</li> <li>↔ 6. Side bearing inner races</li> <li>7. Bolts (10)</li> <li>↔ 8. Drive gear</li> <li>↔ 9. Lock pin</li> <li>10. Pinion shaft</li> <li>11. Pinion gears</li> <li>12. Pinion washers</li> <li>13. Side gears</li> <li>14. Side gear thrust spacers</li> <li>15. Differential case</li> <li>↔ 16. Companion flange self-locking nut</li> <li>17. Washer</li> <li>↔ 18. Drive pinion assembly</li> <li>↔ 19. Drive pinion front bearing inner race</li> </ul> | <ul style="list-style-type: none"> <li>20. Drive pinion front shim (for pinion height adjustment)</li> <li>21. Drive pinion</li> <li>22. Companion flange</li> <li>23. Drive pinion spacer</li> <li>24. Drive pinion rear shim (for preload adjustment)</li> <li>25. Oil seal</li> <li>26. Drive pinion rear bearing inner race</li> <li>↔ 27. Drive pinion rear bearing outer race</li> <li>↔ 28. Drive pinion front bearing outer race</li> <li>29. Oil seals</li> <li>30. Gear carrier</li> <li>31. Vent plug</li> </ul> |
|---|---|

**NOTE**

- (1) ↔ : Refer to "Service Points of Disassembly".
- (2) [N] : Non-reusable parts

**SERVICE POINTS OF DISASSEMBLY**

N02VFAC

**3. REMOVAL OF DIFFERENTIAL CASE ASSEMBLY**

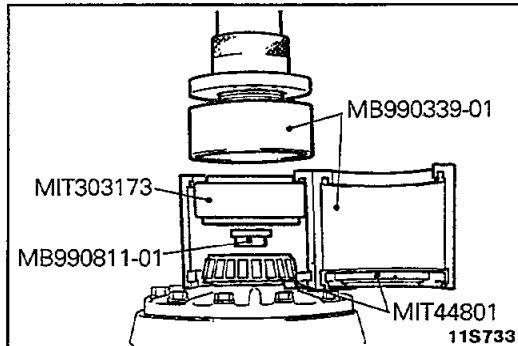
Take out the differential case assembly with a hammer handle.

**Caution**

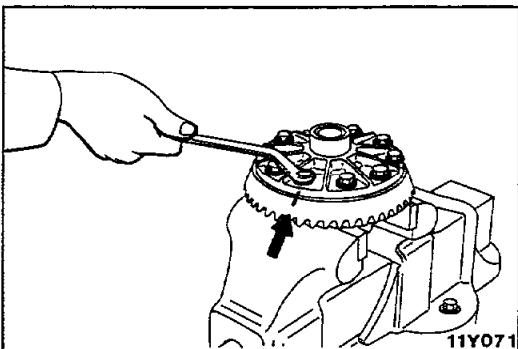
**When taking out the differential case assembly, be careful not to drop and damage the side bearing outer races.**

**NOTE**

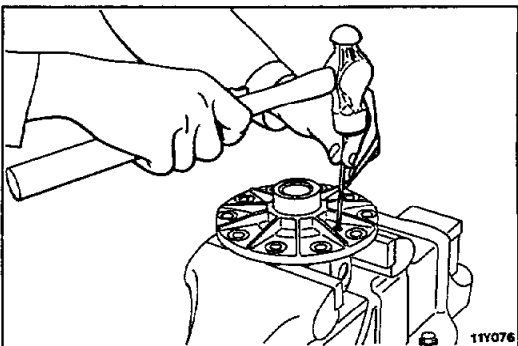
Keep the right and left side bearings and side bearing adjusting spacers separate, so that they do not become mixed at the time of reassembly.

**6. REMOVAL OF SIDE BEARING INNER RACES**

Pull out the side bearing inner races by using the special tools.

**8. REMOVAL OF DRIVE GEAR**

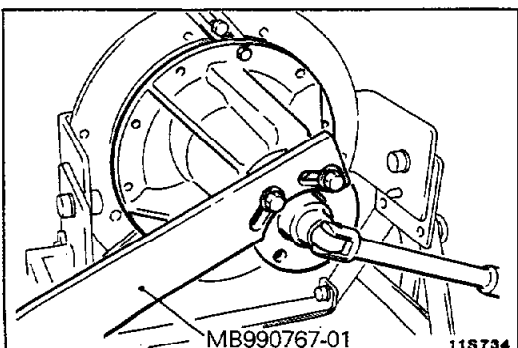
- (1) Make the mating marks to the differential case and the drive gear.
- (2) Loosen the drive gear attaching bolts in diagonal sequence to remove the drive gear.

**9. REMOVAL OF LOCK PIN**

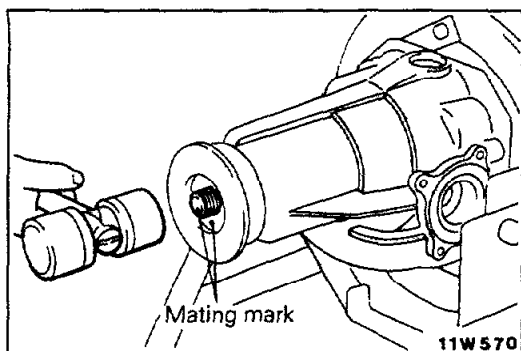
Drive out the lock pin with a punch.

**NOTE**

The removed side gears and side gear thrust spacers, left and right, should be retained for reassembly.

**16. REMOVAL OF COMPANION FLANGE SELF-LOCKING NUT**

Use the special tool to hold the companion flange and remove the companion flange self-locking nut.

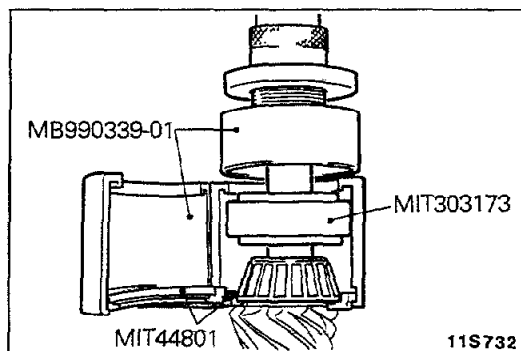
**18. REMOVAL OF DRIVE PINION ASSEMBLY**

- (1) Make mating marks on the drive pinion and companion flange.

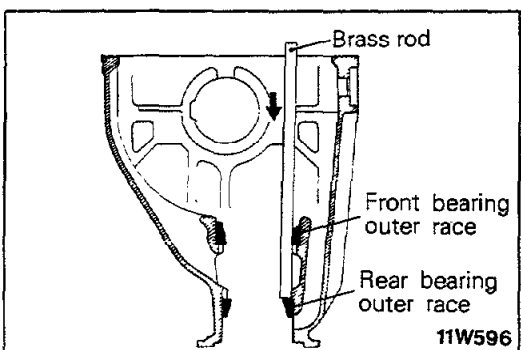
**Caution**

The mating mark made on the companion flange must not be on the coupling surface of the flange yoke and the front propeller shaft.

- (2) Drive out the drive pinion together with the drive pinion spacer and drive pinion shims.

**19. REMOVAL OF DRIVE PINION FRONT BEARING INNER RACE**

Pull out the drive pinion front bearing inner race by using the special tools.

**27. REMOVAL OF DRIVE PINION REAR BEARING OUTER RACE /28. DRIVE PINION FRONT BEARING OUTER RACE**

- (1) Drive out the drive pinion rear bearing outer race from the gear carrier by using the brass rod.
- (2) Drive out the front bearing outer race in the same manner.

**INSPECTION**

N02VGAA

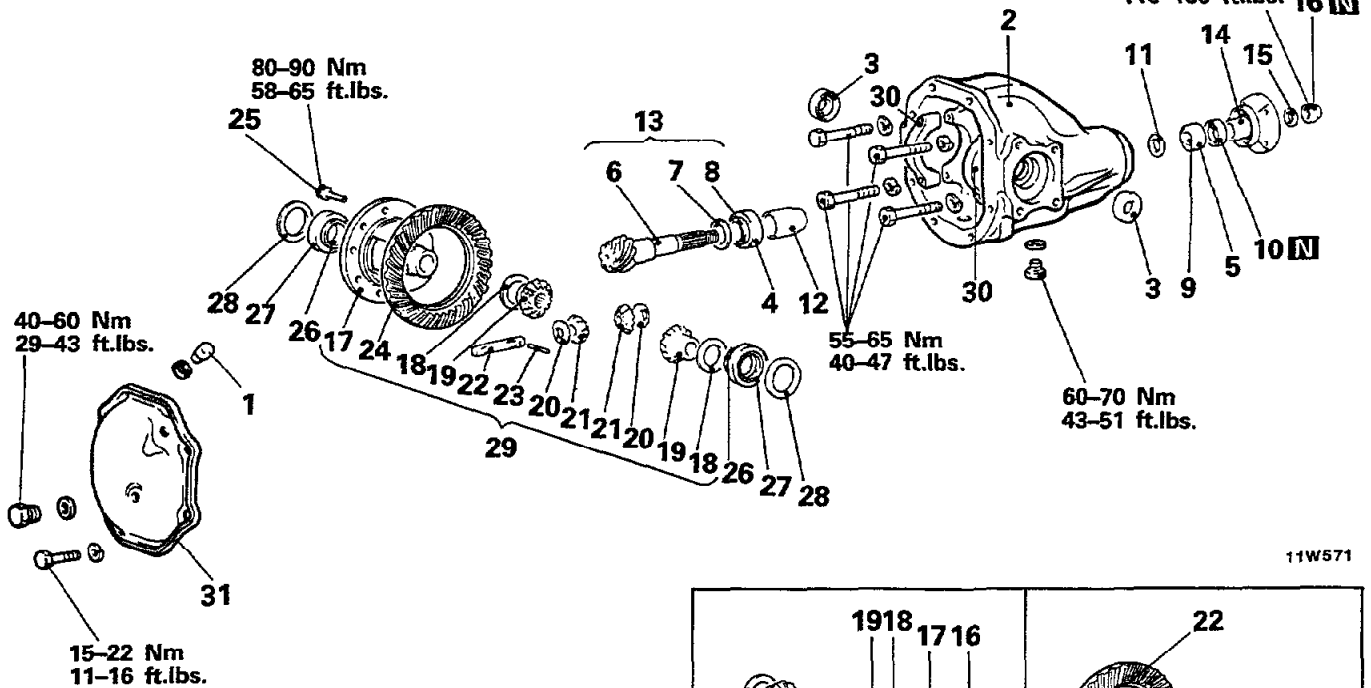
- Check the companion flange for wear or damage.
- Check the oil seal for wear or deterioration.
- Check the bearings for wear or discoloration.
- Check the gear carrier for cracks.
- Check the drive pinion and ring gear for wear or cracks.
- Check the side gears, pinion gears and pinion shaft for wear or damage.
- Check the side gear spline for wear or damage.

REASSEMBLY

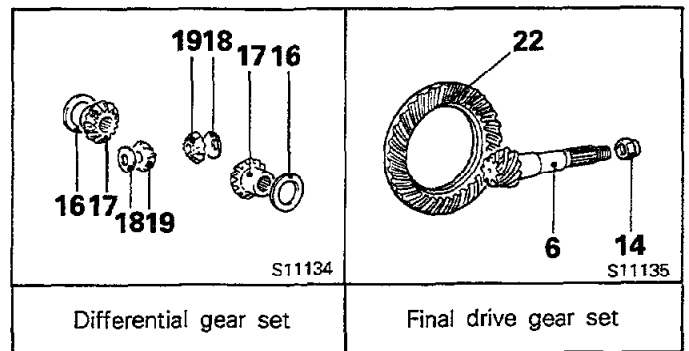
N02VH-

<3.0L Engine>  
190-250 Nm  
137-181 ft.lbs.

<2.6L Engine>  
160-220 Nm  
116-159 ft.lbs.



11W571

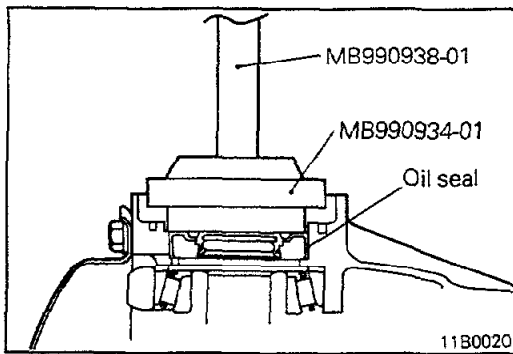


Reassembly steps

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>1. Vent plug</li> <li>2. Gear carrier</li> <li>◆◆ 3. Oil seals</li> <li>◆◆ 4. Drive pinion front bearing outer race</li> <li>◆◆ 5. Drive pinion rear bearing outer race</li> <li>◆◆ Adjustment of pinion height</li> <li>6. Drive pinion</li> <li>7. Drive pinion front shim (for pinion height adjustment)</li> <li>8. Drive pinion front bearing inner race</li> <li>◆◆ Adjustment of drive pinion preload</li> <li>9. Drive pinion rear bearing inner race</li> <li>10. Oil seal</li> <li>11. Drive pinion rear shim (for preload adjustment)</li> <li>12. Drive pinion spacer</li> <li>13. Drive pinion assembly</li> <li>14. Companion flange</li> <li>15. Washer</li> <li>16. Companion flange self-locking nut</li> <li>17. Differential case</li> </ul> | <ul style="list-style-type: none"> <li>18. Side gear thrust spacers</li> <li>19. Side gears</li> <li>20. Pinion washers</li> <li>21. Pinion gears</li> <li>◆◆ Adjustment of differential gear backlash</li> <li>22. Pinion shaft</li> <li>◆◆ 23. Lock pin</li> <li>◆◆ 24. Drive gear</li> <li>25. Bolts (10)</li> <li>◆◆ 26. Side bearing inner races</li> <li>27. Side bearing outer races</li> <li>◆◆ Adjustment of final drive gear back lash</li> <li>28. Side bearing adjusting spacers</li> <li>29. Differential case assembly</li> <li>30. Bearing caps</li> <li>◆◆ 31. Differential cover</li> </ul> |
|--|--|

NOTE

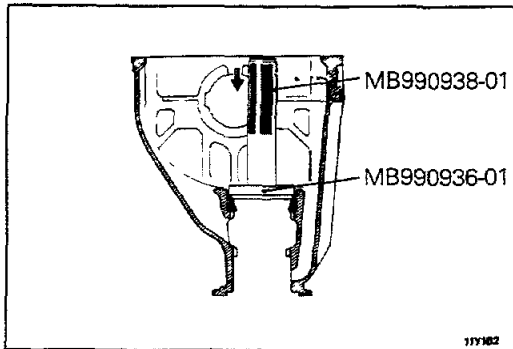
- (1) ◆◆ : Refer to "Service Points of Reassembly".
- (2) **N** : Non-reusable parts

**SERVICE POINTS OF REASSEMBLY**

N02VIAF

**3. INSTALLATION OF OIL SEALS**

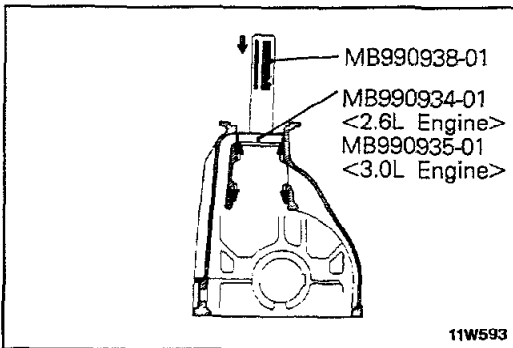
Install the oil seal with the special tool and apply a thin coat of multipurpose grease to the lip of the oil seal.

**4. INSTALLATION OF DRIVE PINION FRONT BEARING OUTER RACE**

Press-fit the drive pinion front bearing outer races into the gear carrier by using the special tools.

**NOTE**

Perform press-fitting carefully so as not to tilt the outer race.

**5. INSTALLATION OF DRIVE PINION REAR BEARING OUTER RACE**

Press-fit the drive pinion rear bearing outer races into the gear carrier by using the special tools.

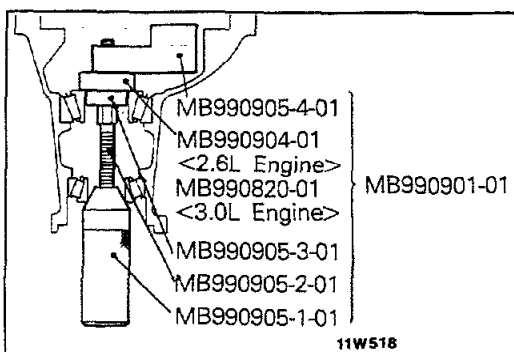
**NOTE**

Perform press-fitting carefully so as not to tilt the outer race.

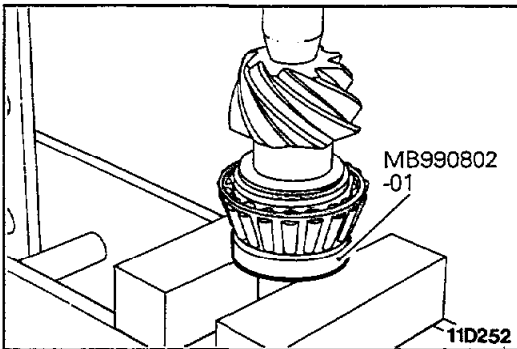
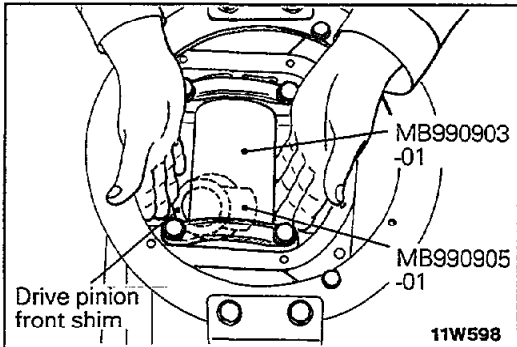
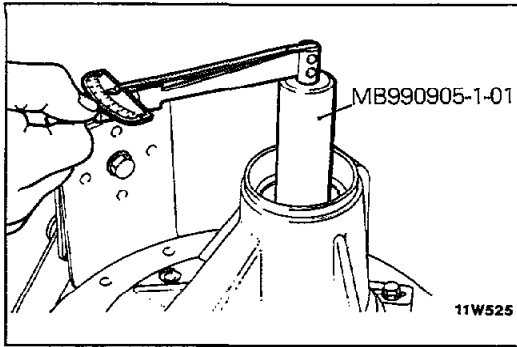
- ADJUSTMENT OF PINION HEIGHT**

Adjust the drive pinion height by the following procedures:

- (1) Install special tools and drive pinion front and rear bearing inner races to the gear carrier in the sequence shown in the illustration.



- (2) Tighten the handle of the special tool until the standard value of drive pinion rotation torque is obtained.



(3) Measure the drive pinion rotation torque (without the oil seal) by using the special tools.

**Standard value :**

<2.6L Engine>  
 0.15–0.25 Nm (1.30–2.17 in.lbs.)

<3.0L Engine>  
 0.4–0.5 Nm (3.47–4.34 in.lbs.)

**NOTE**

1. Gradually tighten the handle of the special tool while checking the drive pinion preload.
2. Because one rotation can't be made when the special tool is in contact with the gear carrier, move it a few times and, after seating the bearing, measure the rotation torque.

(4) Position the special tool in the side bearing seat of the gear carrier, and then select a drive pinion front shim of a thickness which corresponds to the gap between the special tools.

**NOTE**

1. Be sure to clean the side bearing seat thoroughly. When positioning the special tool, be sure that the cut-out sections of the special tool are in the position shown in the illustration, and also confirm that the special tool is in close contact with the side bearing seat.
2. When selecting the drive pinion front shims, keep the number of shims to a minimum.

(5) Fit the selected drive pinion front shim(s) to the drive pinion, and press-fit the drive pinion front bearing inner race by using the special tool.

● **ADJUSTMENT OF DRIVE PINION PRELOAD**

Adjust the drive pinion turning torque by using the following procedure:

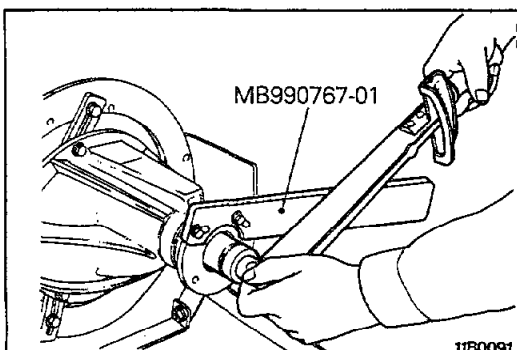
**Without Oil Seal**

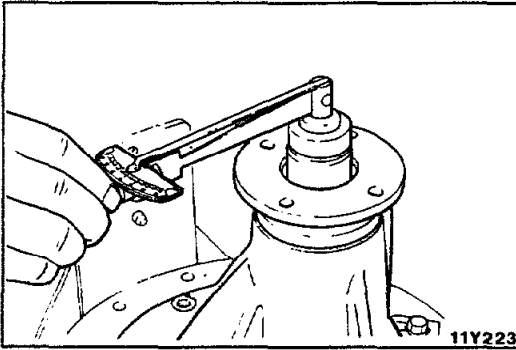
(1) Insert the drive pinion into the gear carrier, and then install, from the front side of the carrier, the drive pinion spacer, the drive pinion rear shim, the drive pinion rear bearing inner race, and the companion flange in that order.

**NOTE**

Do not install the oil seal.

(2) Tighten the companion flange to the specified torque by using the special tool.





- (3) Measure the drive pinion rotation torque (without the oil seal).

**Standard value :**

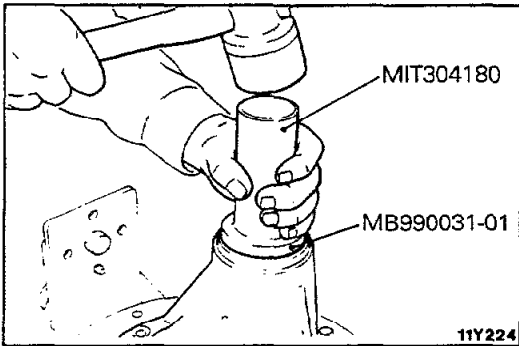
- <2.6L Engine>  
0.15–0.25 Nm (1.30–2.17 in.lbs.)
- <3.0L Engine>  
0.4–0.5 Nm (3.47–4.34 in.lbs.)

- (4) If the drive pinion rotation torque is not within the range of the standard value, adjust the preload by replacing the drive pinion rear shim(s) or the drive pinion spacer.

**NOTE**

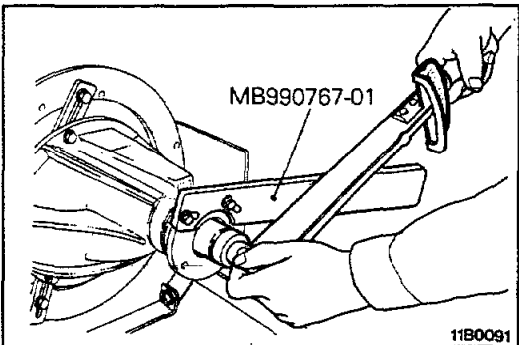
When selecting the drive pinion rear shims, if the number of shims is large, reduce the number of shims to a minimum by selecting the drive pinion spacers.

- (5) Remove the companion flange and drive pinion once again.



**With Oil Seal**

- (1) After setting the drive pinion rear bearing inner race, drive the oil seal into the gear carrier front lip by using the special tool.
- (2) Apply the multipurpose grease to the oil seal lip.



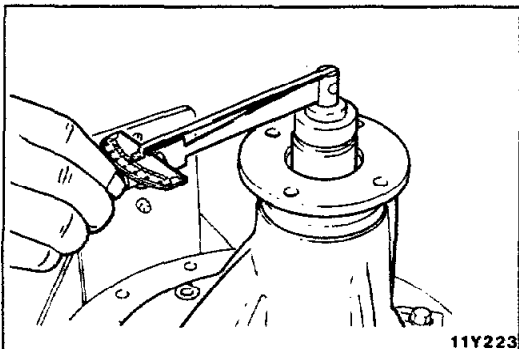
- (4) Install the drive pinion assembly and companion flange with mating marks properly aligned, and tighten the companion flange self-locking nut to the specified torque by using the special tools.

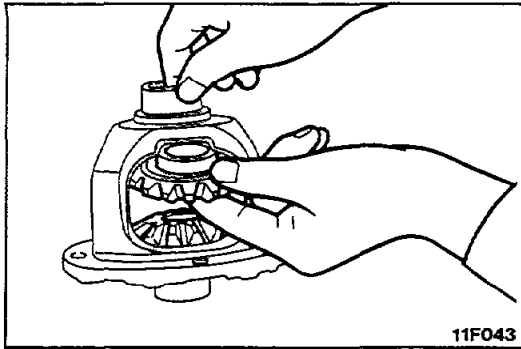
- (5) Measure the drive pinion rotation torque (with oil seal) to verify that the drive pinion preload complies with the standard value.

**Standard value :**

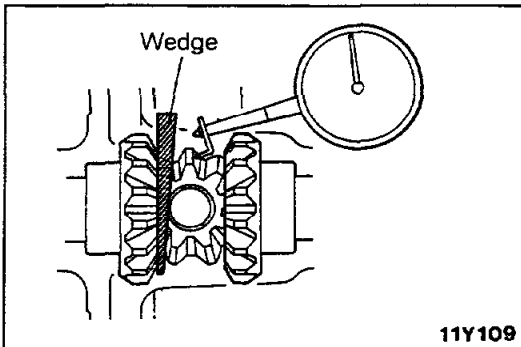
- <2.6L Engine>  
0.35–0.45 Nm (3.04–3.91 in.lbs.)
- <3.0L Engine>  
0.6–0.7 Nm (5.21–6.08 in.lbs.)

- (6) If the measured value is not within the standard value range, check for faulty installation of the oil seal or faulty tightening of the self-locking nut.

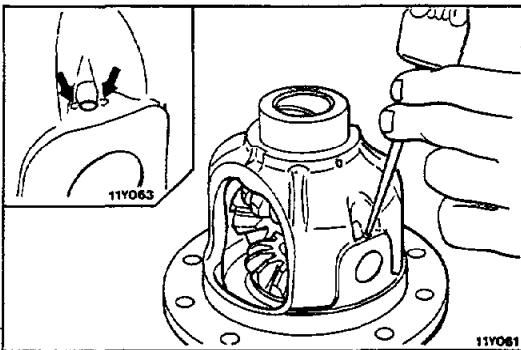




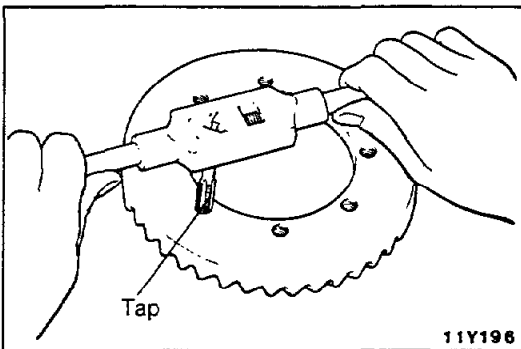
11F043



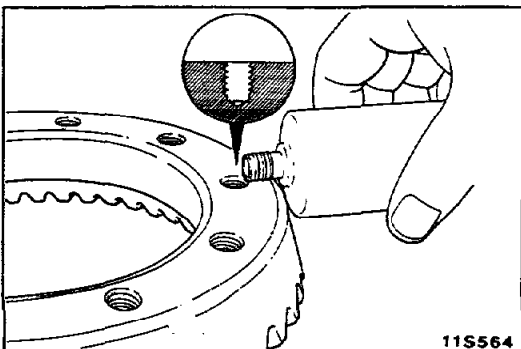
11Y109



11Y061



11Y196



11S564

### ● ADJUSTMENT OF DIFFERENTIAL GEAR BACKLASH

- (1) Assemble the side gears, side gear thrust spacers, pinion gears, and pinion washers into the differential case.
- (2) Temporarily install the pinion shaft.

#### NOTE

Do not drive in the lock pin yet.

- (3) Insert a wedge between the side gear and the pinion shaft to lock the side gear.
- (4) Measure the differential gear backlash with a dial indicator on the pinion gear.

**Standard value : 0–0.076 mm (0–.0030 in.)**

**Limit : 0.2 mm (.008 in.)**

- (5) If the differential gear backlash exceeds the limit, adjust the backlash by installing thicker side gear thrust spacers.
- (6) Measure the differential gear backlash once again, and confirm that it is within the limit.  
If adjustment is not possible, replace the side gears and pinion gears as a set.

### 23. INSTALLATION OF LOCK PIN

- (1) Align the pinion shaft lock pin hole with the differential case lock pin hole, and drive in the lock pin.
- (2) Stake the lock pin with a punch at two points.

### 24. INSTALLATION OF DRIVE GEAR

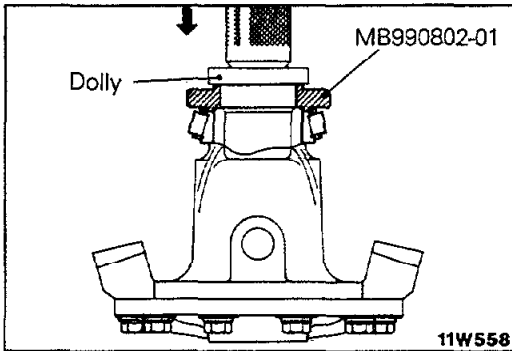
- (1) Clean the drive gear attaching bolts.
- (2) Remove the adhesive adhered to the threaded holes of the drive gear by turning the tap tool (M10 x 1.25), and then clean the threaded holes by applying compressed air.

- (3) Apply the specified adhesive to the threaded holes of the drive gear.

**Specified adhesive : 3M Adhesive stud locking 4170 or equivalent**

- (4) Install the drive gear onto the differential case with the mating marks properly aligned. Be sure to tighten the bolts to the specified torque in a diagonal sequence.





## 26. INSTALLATION OF SIDE BEARING INNER RACES

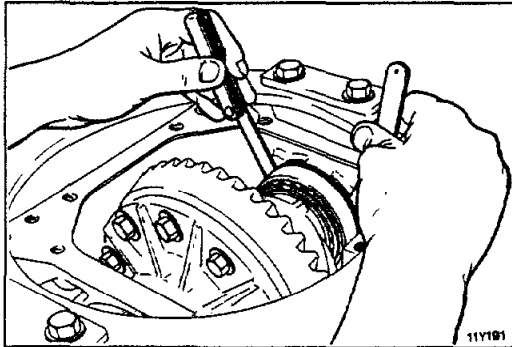
Press-fit the side bearing inner races to the differential case by using the special tool.

### ● ADJUSTMENT OF FINAL DRIVE GEAR BACKLASH

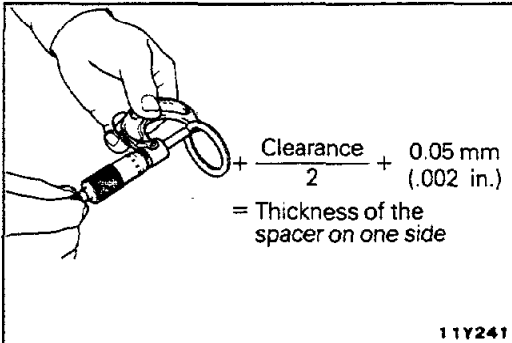
- (1) Install the side bearing adjusting spacers, which are thinner than those removed, to the side bearing outer races, and then mount the differential case assembly into the gear carrier.

#### NOTE

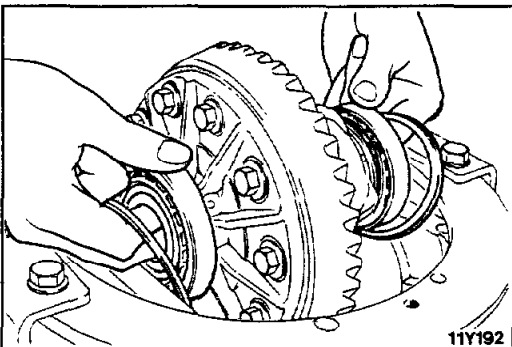
Select side bearing adjusting spacers with the same thickness for both the drive pinion side and the drive gear side.



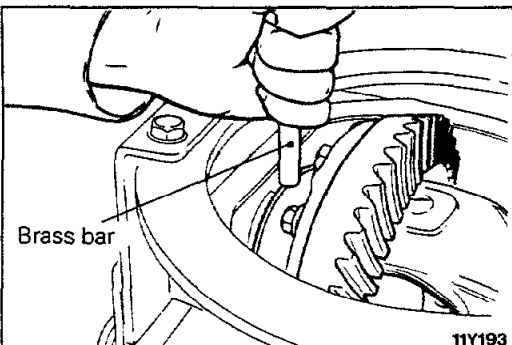
- (2) Push the differential case assembly to one side, and measure the clearance between the gear carrier and the side bearing adjusting spacer with a feeler gauge.



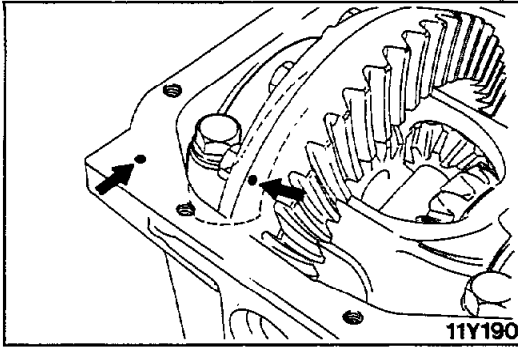
- (3) Measure the thickness of the side bearing adjusting spacers on one side, select two pairs of spacers which correspond to that thickness plus one half of the clearance plus 0.05 mm (.002 in.), and then install one pair each to the drive pinion side and the drive gear side.



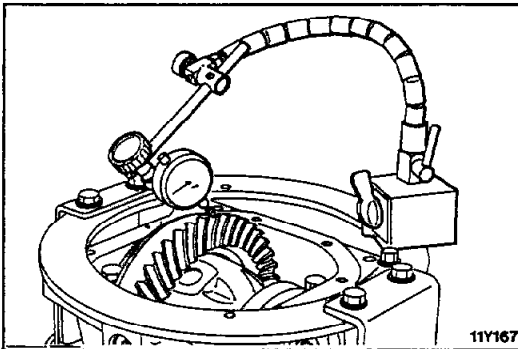
- (4) Install the side bearing adjusting spacers and differential case assembly, as shown in the illustration, to the gear carrier.



- (5) Tap the side bearing adjusting spacers with the brass bar to fit them to the side bearing outer race.



- (6) Align the mating marks on the gear carrier and the bearing cap, and then tighten the bearing cap.

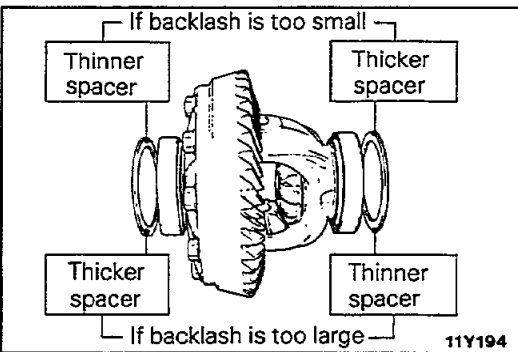


- (7) With the drive pinion locked in place, measure the final drive gear backlash with a dial indicator on the drive gear.

NOTE

Measure at four points or more on the circumference of the drive gear.

**Standard value : 0.11–0.16 mm (.0043–.0063 in.)**

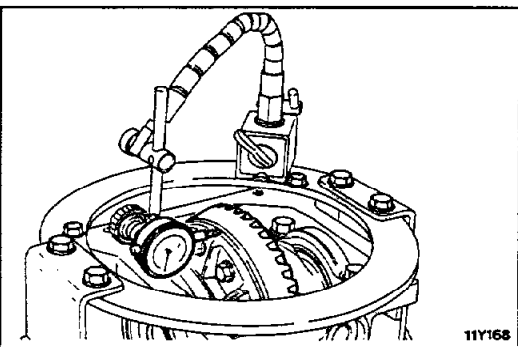


- (8) Change the side bearing adjusting spacers as illustrated, and then adjust the final drive gear backlash between the drive gear and the drive pinion.

NOTE

When increasing the number of side bearing adjusting spacers, use the same number for each, and as few as possible.

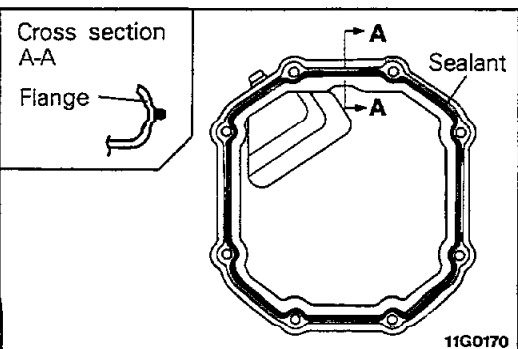
- (9) Check the drive gear and drive pinion for tooth contact. If poor contact is evident, make adjustment. [Refer to GROUP 3 – Differential Carrier (Inspection Before Disassembly)]



- (10) Measure the drive gear runout at the shoulder on the reverse side of the drive gear.

**Limit : 0.05 mm (.0020 in.)**

- (11) If the drive gear runout exceeds the limit, reinstall by changing the phase of the drive gear and differential case, and remeasure.



**31. APPLICATION OF SEALANT TO DIFFERENTIAL COVER**

Apply the specified sealant to the cover flange face as illustrated, then install the differential cover to the differential carrier.

**Specified sealant : 3M ART Part No. 8663, or equivalent**

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**NOTE**