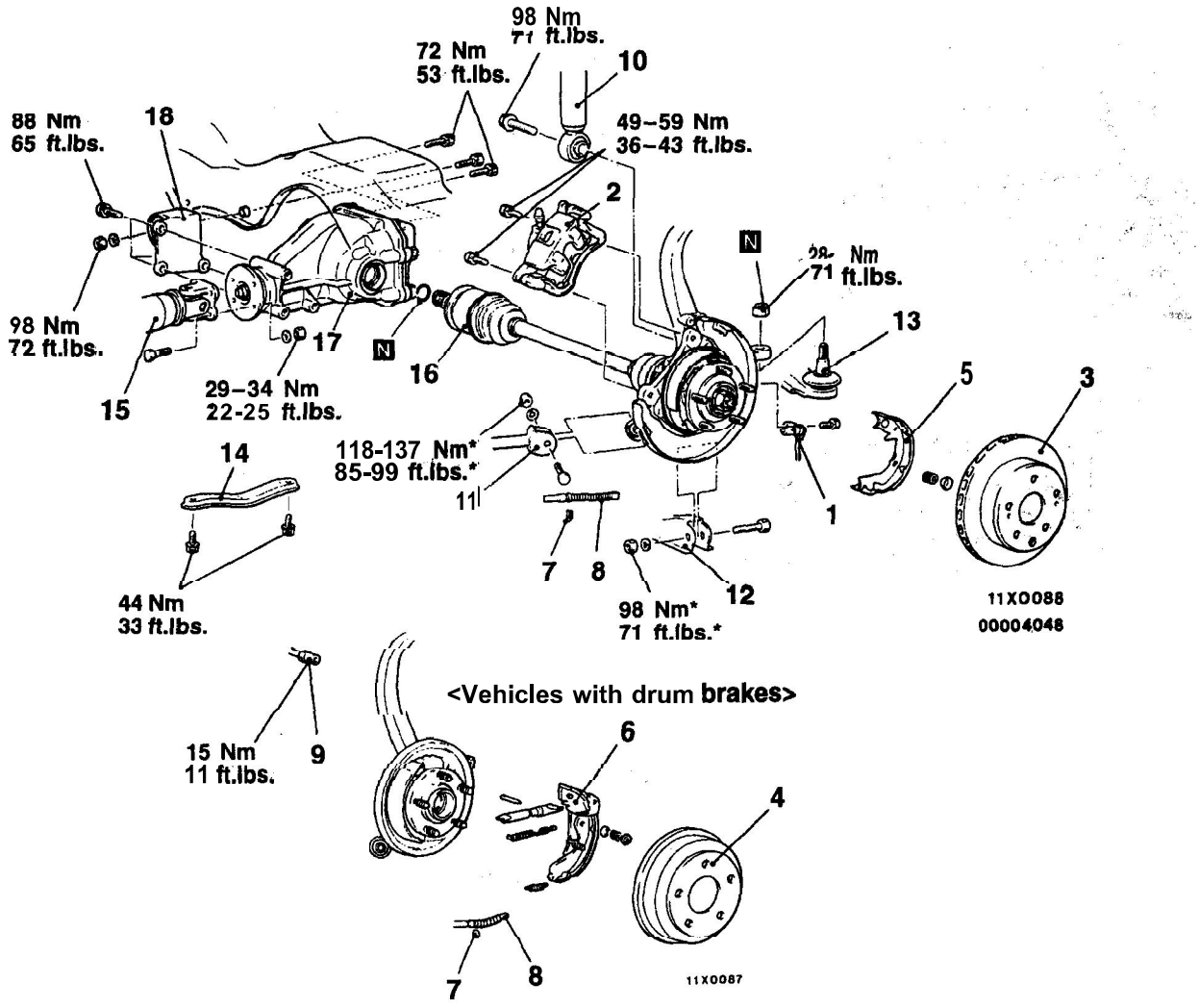
# DIFFERENTIAL CARRIER

27200200044

## REMOVAL AND INSTALLATION

**Pre-removal Operation**
- Brake Fluid Draining <Vehicles with drum brakes>
- Differential Gear Oil Draining

**Post-installation Operation**
- Differential Gear Oil Filling (Refer to P.27-16.)
- Brake Line Bleeding <Vehicles with drum brakes> (Refer to GROUP 35A–On-vehicle Service.)
- Parking Brake Adjustment (Refer to GROUP 36–On-vehicle Service.)




**Removal steps**

1. Rear wheel speed sensor <Vehicles with ABS>
2. Caliper assembly (Refer to P.27-5.)
3. Brake disc
4. Brake drum
5. Shoe and lining assembly (Refer to GROUP 36 – Parking Brake <Drum-in-disc brakes>.)
6. Shoe and lever assembly
7. Clip
8. Parking brake cable
9. Brake pipe connection
10. Shock absorber connection
11. Trailing arm connection
12. Lower arm connection
13. Toe control arm ball joint and knucle connection (Refer to P.27-7.)
14. Differential mount support
15. Propeller shaft connection ◀A▶ ▶B◀
16. Drive shaft connection ◀B▶ ▶A◀
17. Differential carrier ◀C▶
18. Differential mount bracket assembly

**Caution**
*: Indicates parts which should be temporarily tightened, and then fully tightened with the vehicle on the ground in the unladen condition.

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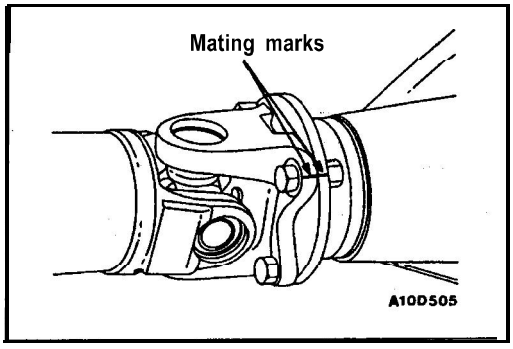


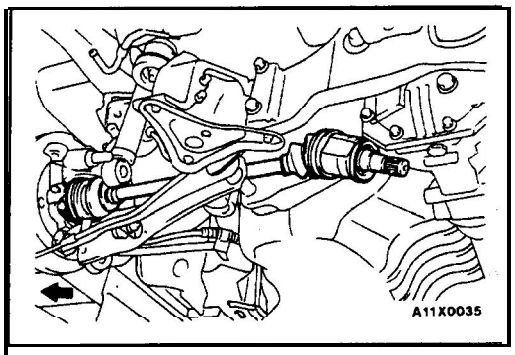


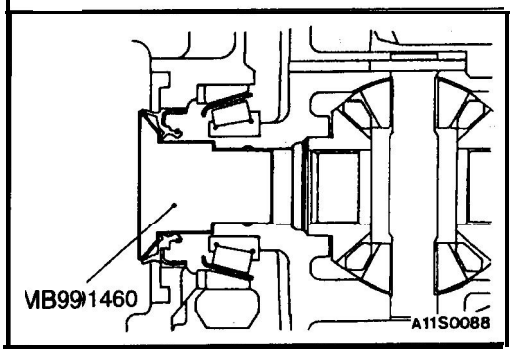


## REMOVAL SERVICE POINTS

### ◀A▶ PROPELLER SHAFT DISCONNECTION

(1) Make mating marks on the differential companion flange and flange yoke, and then separate the differential carrier assembly and the propeller shaft;
(2) Suspend the propeller shaft from the body with wire, etc, so that there are no-sharp bends.

**Caution**
**Be careful that there are no sharp bends in the propeller shaft, as they may damage the Löbro joint.**

### ◀B▶ DRIVE SHAFT DISCONNECTION

(1) Push the lower part of the knuckle to the outside of the vehicle, and then separate the drive shaft from the differential carrier. At this time, use a tire lever or similar to separate the drive shaft connection,
(2) Support the separated drive shaft with wire or similar so as not to damage the joint.

(3) Use the special tool as a cover not to let foreign objects get into the differential carrier.

### ◀C▶ DIFFERENTIAL CARRIER REMOVAL

Support the differential carrier with a jack. Then remove the connecting bolt between it and the rear crossmember and remove the differential carrier.

## INSTALLATION SERVICE POINTS

### ▶A◀ DRIVE SHAFT CONNECTION

**Caution**
**Do not damage the differential carrier 'oil seal.**

### ▶B◀ PROPELLER SHAFT CONNECTION

Connect the propeller shaft so' that the mating marks on the differential companion flange and the flange yoke are aligned.

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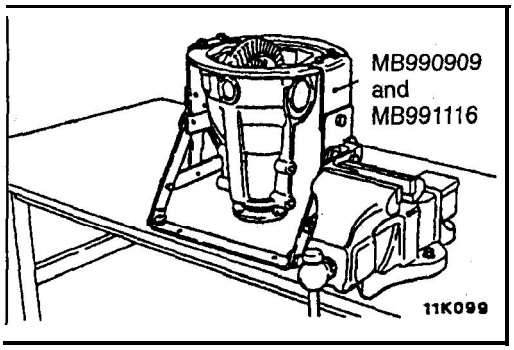
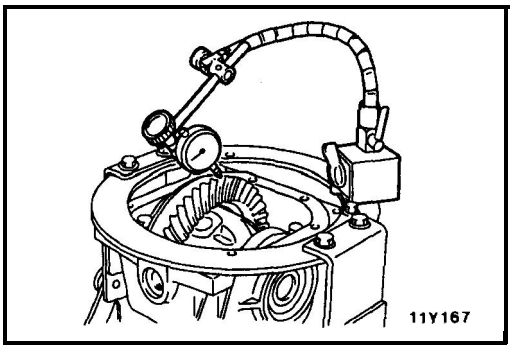



## INSPECTION BEFORE DISASSEMBLY 27200290034

Hold the special tool in a vice, and attach the differential carrier to the special tool.




### DRIVE GEAR BACKLASH CHECK

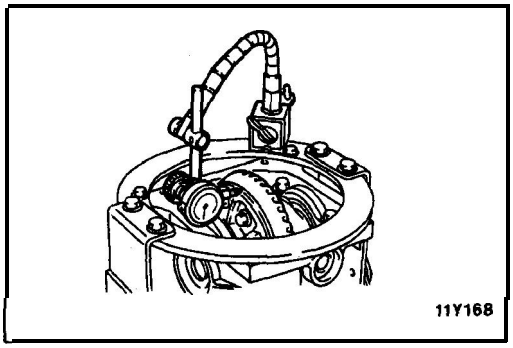
(1) With the drive pinion locked in place, measure the drive gear backlash with a dial indicator on the drive gear.

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 outside the standard value, adjust using the side bearing spacer.

NOTE
After adjustment, inspect the contact of the drive gear.




### DRIVE GEAR RUNOUT CHECK

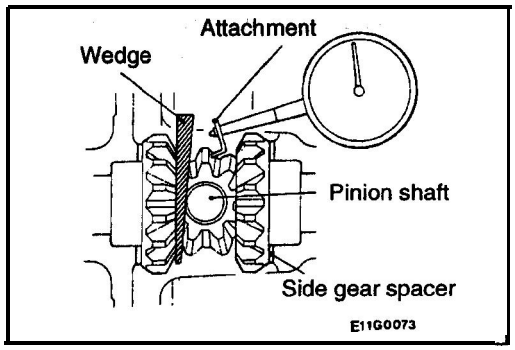
(1) Measure the drive gear runout at the shoulder on the reverse side of the drive gear.

**Limit: 0.05 mm (.002 in.)**

(2) If the runout exceeds the limit value, check that there is no foreign material between the reverse side of the drive gear and the differential case, or that there is no looseness in the drive gear mounting bolt.

(3) If step (2) is normal, change the assembly position of the drive gear and differential case, and then take another measurement.

NOTE
If adjustment is impossible, replace the differential case or the drive gear and drive pinion as a set.




## DIFFERENTIAL GEAR BACKLASH CHECK <Conventional differential>

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

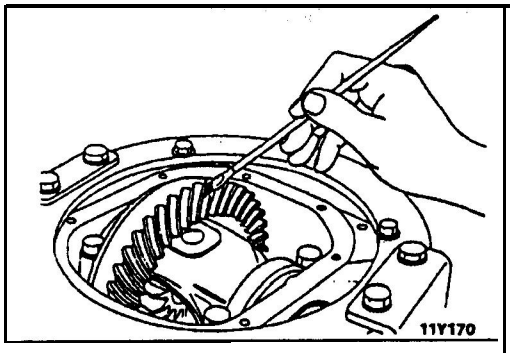
NOTE
(1) The measurement should be made for both pinion gears individually.
(2) Refer to P.27-46 for measurement of the limited slip differential gear backlash.

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

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

(2) If the differential gear backlash exceeds the limit, adjust the backlash by installing thicker side gear spacers.

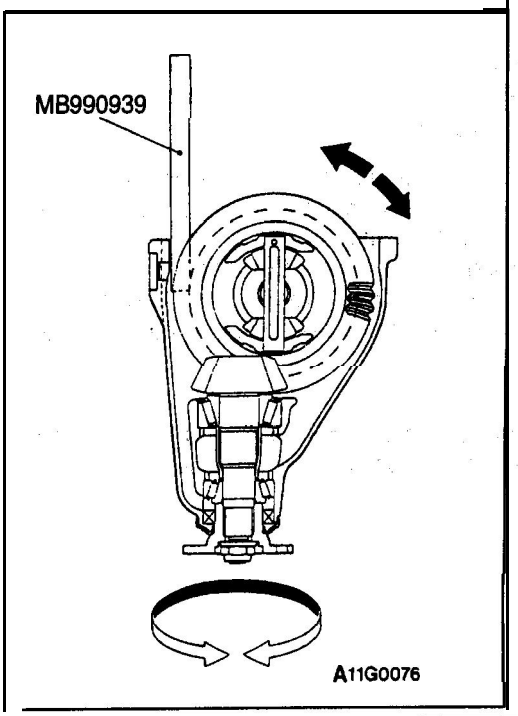
NOTE
If adjustment is impossible, replace the side gear and pinion gear as a set.




## DRIVE GEAR TOOTH CONTACT CHECK

Check the drive gear tooth contact by following the steps below.

(1) Apply a thin, uniform coat of machine blue to both surfaces of the drive gear teeth.




(2) Insert a special tool between the differential carrier and the differential case, and then rotate the companion flange by hand (once in the normal direction, and then once in the reverse direction) while applying a load to the drive gear, so that the revolution torque [approximately 2.5 – 3.0 Nm (22-27 in.lbs.)] is applied to the drive pinion.

**Caution**
**If the drive gear is rotated too much, the tooth contact pattern will become unclear and difficult to check.**

(3) Check the tooth contact condition of, the drive gear and drive pinion.

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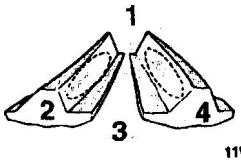
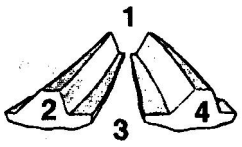
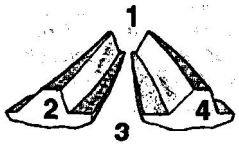
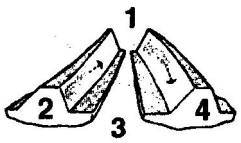
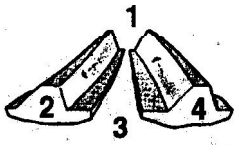
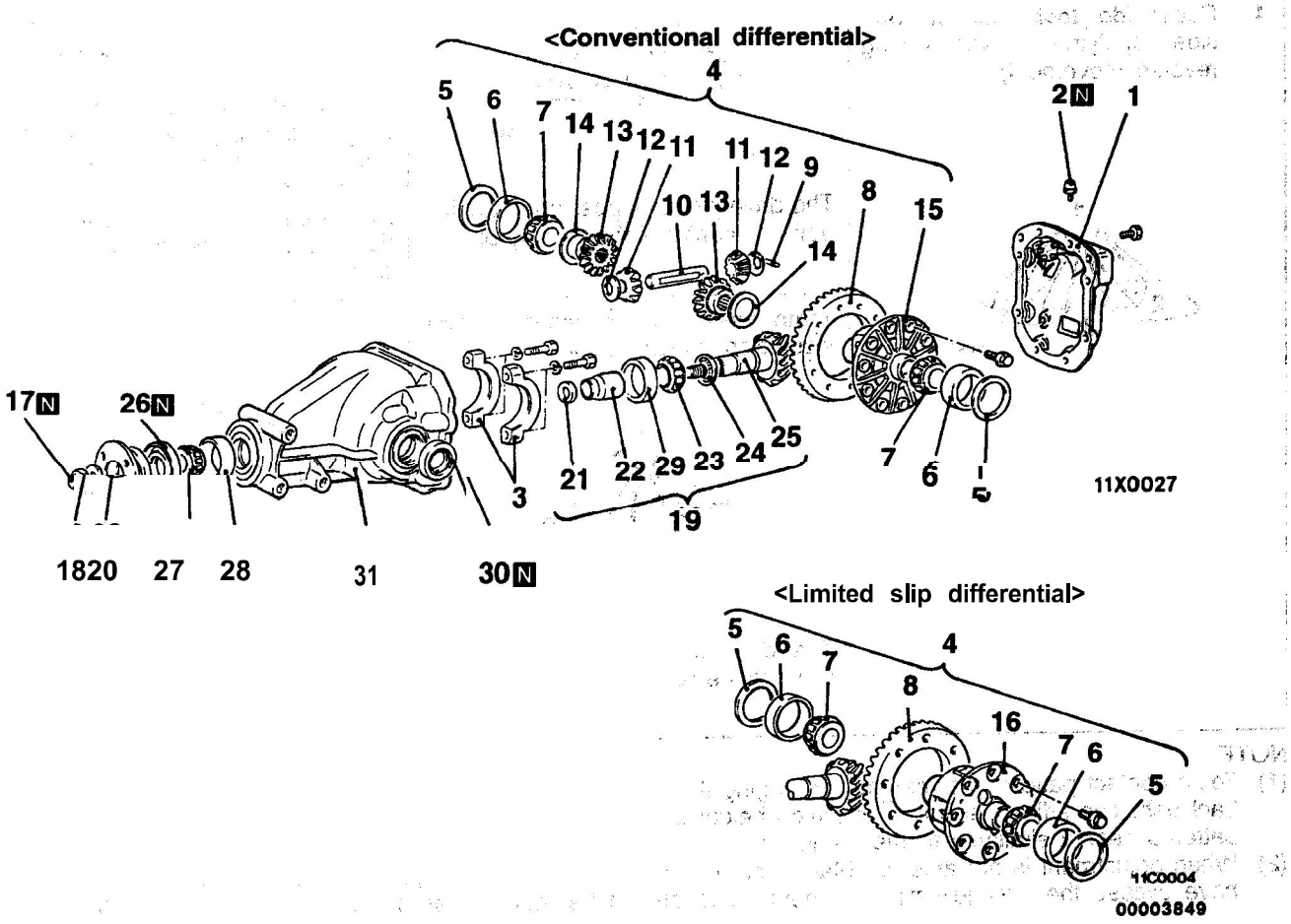
| Standard tooth contact pattern | Problem | Solution |
|---|---|---|
| 1 Narrow tooth side<br>2 Drive-side tooth surface (the side applying power during forward movement)<br>3 Wide tooth side<br>4 Coast-side tooth surface (the side applying power during reverse movement)<br>  <br>11W0115 | Tooth contact pattern resulting from excessive pinion height<br>  <br>11W0116<br>The drive pinion is positioned too far from the center of the drive gear. |  <br>11W0118<br>Increase the thickness of the pinion height adjusting shim, and position the drive pinion closer to the center of the drive gear.<br>Also, for backlash adjustment, position the drive gear farther from the drive pinion. |
| | Tooth contact pattern resulting from insufficient pinion height<br>  <br>11W0117<br>The drive pinion is positioned too close to the center of the drive gear. |  <br>11W0119<br>Decrease the thickness of the pinion height adjusting Shim, and position the drive pinion farther from the center of the drive gear.<br>Also, for backlash adjustment, position the drive gear closer to the drive pinion. |

NOTE
(1) Tooth contact pattern is a method for judging the result of the adjustment of drive pinion height and drive gear backlash. The adjustment of drive pinion height and drive gear backlash should be repeated until tooth contact patterns bear a similarity to the standard tooth contact pattern.
(2) When adjustment is not able to obtain a correct pattern, it may be judged that the drive gear and drive pinion have exceed their usage limits and both gears should be replaced as a set.

## DISASSEMBLY

27200220033

**Pre-disassembly Inspections**
- Drive Gear Backlash Check (Refer to P.27-31.)
- Drive Gear Runout Check (Refer to P.27-31.)
- Differential Gear Backlash Check (Refer to P.27-32.)
- Drive Gear Tooth Contact Check (Refer to P.27-32.)




**Disassembly steps**

- Inspection before disassembly (Refer to P.27-31.)

1. Differential cover assembly
2. Vent plug
3. Bearing cap
4. Differential case assembly
5. Side bearing spacer
6. Side bearing outer race
7. Side bearing inner race
8. Drive gear
9. Lock pin <Conventional differential>
10. Pinion shaft <Conventional differential>
11. Pinion gear <Conventional differential>
12. Pinion washer <Conventional differential>
13. Side gear <Conventional differentials
14. Side gear spacer <Conventional differential>
15. Differential case <Conventional differential>
16. Limited slip differential case assembly (Refer to P.27-46.)
17. Self-locking nut
18. Washer
19. Drive pinion assembly
20. Companion flange
21. Drive pinion front shim (for preload adjustment)
22. Drive pinion spacer
23. Drive pinion rear bearing inner race
24. Drive pinion rear shim (for pinion height adjustment)
25. Drive pinion
26. Oil seal
27. Drive pinion front bearing inner race
28. Drive pinion front bearing outer race
29. Drive pinion rear bearing outer race
30. Oil seal
31. Gear carrier

◀A▶ ◀B▶ ◀C▶ ◀D▶ ◀E▶ ◀F▶ ◀G▶ ◀H▶ ◀H▶ ◀H▶ ◀I▶

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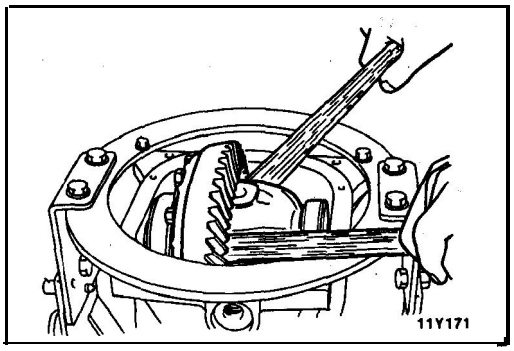
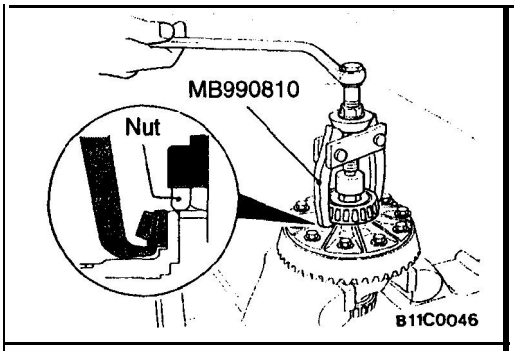



## DISASSEMBLY SERVICE POINTS

### ◀A▶ DIFFERENTIAL CASE ASSEMBLY REMOVAL

**Caution**
**Remove the differential case assembly, slowly and carefully so that the side bearing outer race is not dropped.**

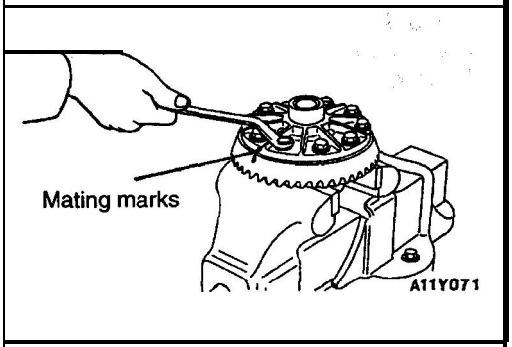
NOTE
Keep the right and left side bearings separate, so that they do not become mixed at the time of reassembly.




### ◀B▶ SIDE BEARING INNER RACE REMOVAL

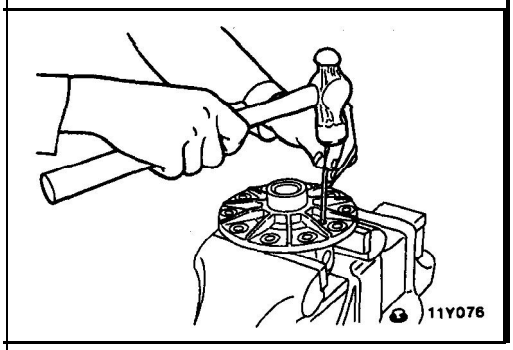
Place the nut on top of the differential case, and then use the special tool to remove the side bearing inner race.

NOTE
Attach the prongs of the special tool to the inner 'race of the side bearing through the openings in the differential case.

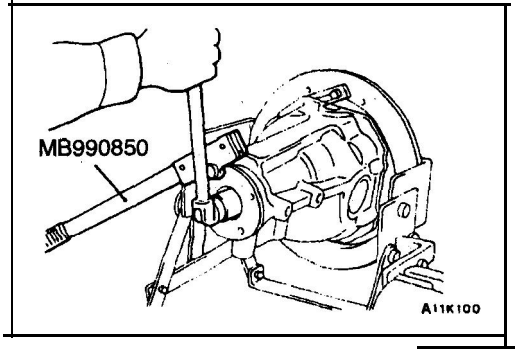



### ◀C▶ DRIVE GEAR REMOVAL

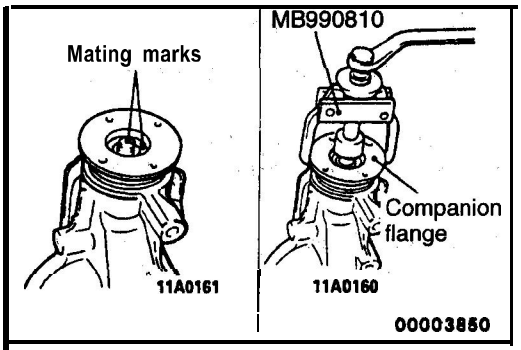
(1) Make the mating marks to the differential case and the drive gear.
(2) Loosen the drive gear attaching bolts in diagonal sequence to remove the drive gear.

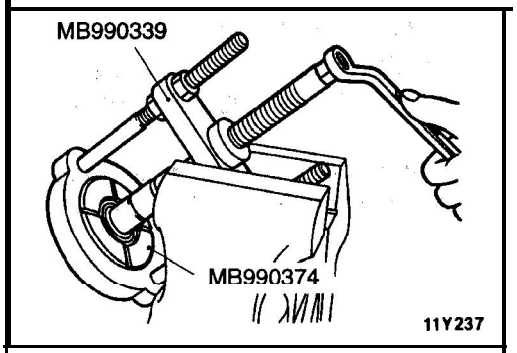


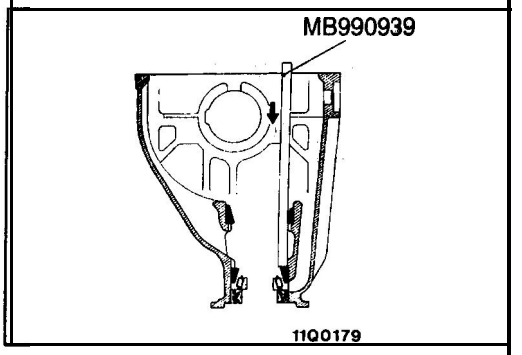

### ◀D▶ LOCK PIN REMOVAL <Conventional differential>

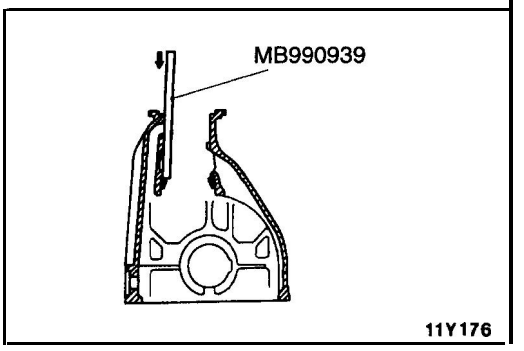



### ◀E▶ SELF-LOCKING NUT REMOVAL




### ◀F▶ DRIVE PINION ASSEMBLY REMOVAL

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

**Caution**
**Mating marks should not be made to the contact surfaces of companion flange and propeller shaft.**

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

### ◀G▶ DRIVE PINION REAR BEARING INNER RACE REMOVAL

### ◀H▶ OIL SEAL/DRIVE PINION FRONT BEARING INNER RACE/DRIVE PINION FRONT BEARING OUTER RACE REMOVAL

### ◀I▶ DRIVE PINION REAR BEARING OUTER RACE REMOVAL

## INSPECTION

27200250049

- Check the companion flange for wear or damage.
- Check the bearings for wear or discoloration.
- Check the gear carrier for cracks.
- Check the drive pinion and drive 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

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## REASSEMBLY

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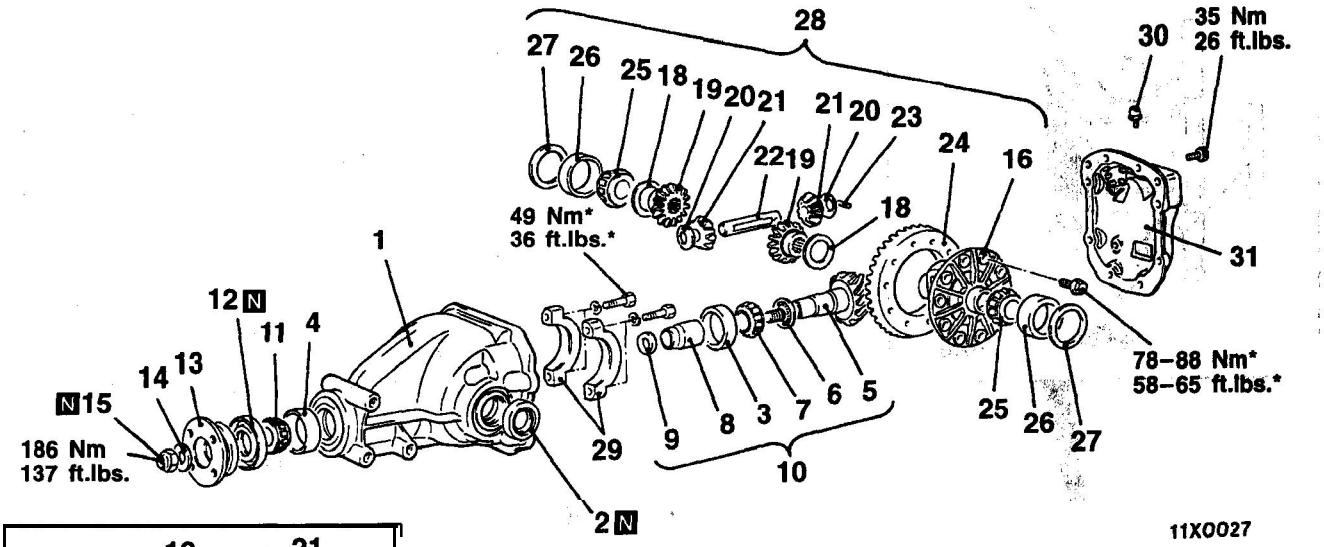
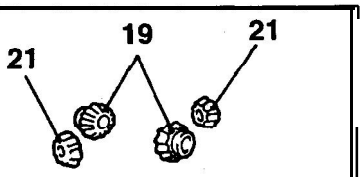
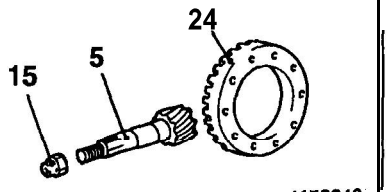
**<Conventional differential>**



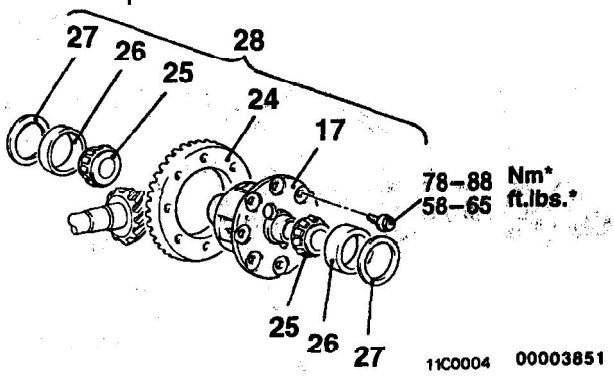




Differential gear set




Final drive gear set

**<Limited slip differential>**




**Reassembly steps**

1. Gear carrier
▶A◀ 2. Oil seal
▶B◀ 3. Drive pinion rear bearing outer race
▶B◀ 4. Drive pinion front bearing outer race
▶C◀ • Pinion height adjustment
5. Drive pinion
6. Drive pinion rear shim (for pinion height adjustment)
7. Drive pinion rear bearing inner race
6. Drive pinion spacer
▶D◀ • Drive pinion preload adjustment
9. Drive pinion front shim (for preload adjustment)
10. Drive pinion assembly
11. Drive pinion front bearing inner race
12. Oil seal
13. Companion flange
14. Washer
15. Self-locking nut
16. Differential case
17. Limited slip differential case assembly (Refer to P.27-46.)
▶E◀ • Differential gear backlash adjustment <Conventional differential>
18. Side gear spacer <Conventional differential>
19. Side gear <Conventional differential>
20. Pinion washer <Conventional differential>
21. Pinion gear <Conventional differential>
22. Pinion shaft <Conventional differential>
▶F◀ 23. Lock pin <Conventional differential>
▶G◀ 24. Drive gear
▶H◀ 25. Side bearing inner race
26. Side bearing outer race
▶I◀ • Drive gear backlash adjustment
27. Side bearing spacer
28. Differential case assembly
29. Bearing cap
30. Vent plug
31. Differential cover assembly

NOTE
● : Tightening torque with gear oil applied

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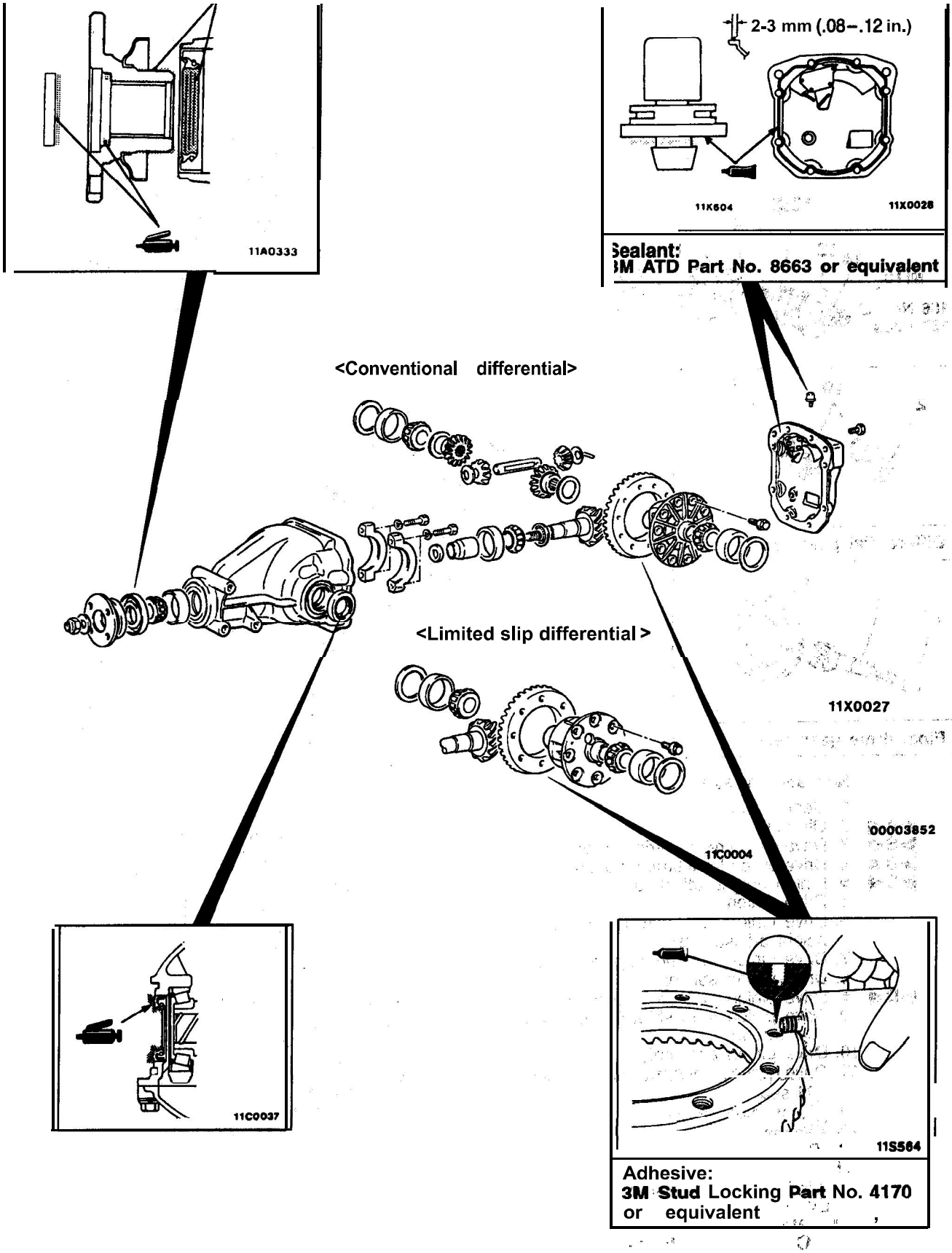


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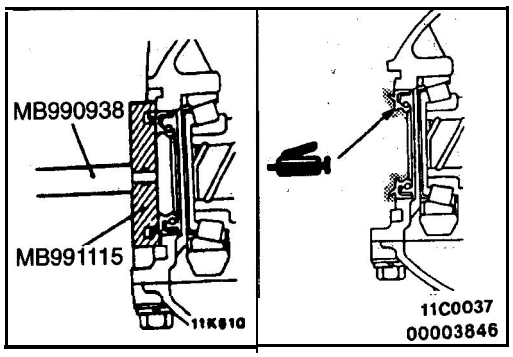
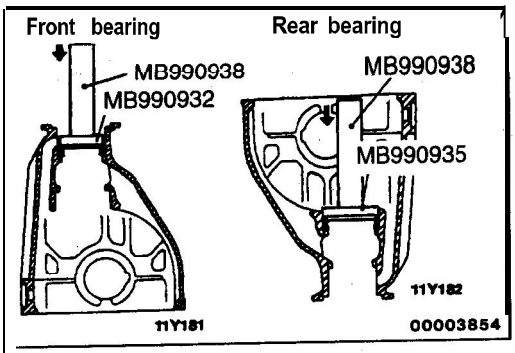



## REASSEMBLY SERVICE POINTS

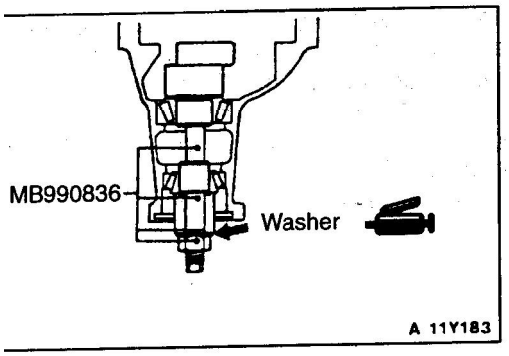
### ▶A◀ OIL SEAL PRESS FITTING

(1) With the special tool, press fit the oil seal until it is. flush with the end of the gear carrier.
(2) Apply multipurpose grease to the oil seal lip.




### ▶B◀ DRIVE PINION REAR BEARING OUTER RACE/DRIVE PINION FRONT BEARING OUTER RACE INSTALLATION

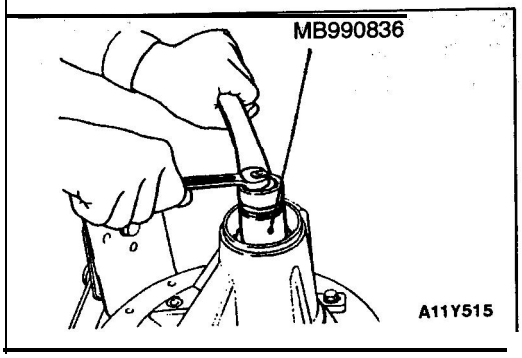
**Caution**
**Be careful not to press in the' quter race at an angle.**




### ▶C◀ PINION HEIGHT ADJUSTMENT

Adjust the drive pinion height by the following procedures:
(1) Apply a thin coat of the multipurpose grease to the mating face of the washer of the special tool.
(2) 'Install special tools and drive pinion front and rear bearing, inner. races on the gear carrier in the sequence shown in the illustration.

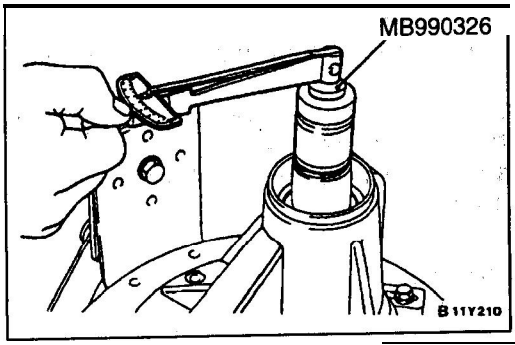
NOTE
Apply a thin coat of the multipurpose grease to the mating face of the washer of the special tool.




(3) Gradually'tighten the nut of the special tool while checking' the drive pinion turning torque until the standard value, of drive pinion turning torque is obtained.

**Standard value:'**

| Bearing classification | Bearing lubrication | Rotation torque (starting friction torque) Nm (in.lbs.) |
|---|---|---|
| New | None (with rust-pre-ventiop oil) | 0.9 – 1.2 (8–10) |
| New/reused | Gear oil--application | 0.4 – 0.5 (3–4) |




NOTE
Because the special tool cannot be turned one turn, turn it 'several times within the range that it can be turned; then, after fitting to the bearing, measure the rotation torque.

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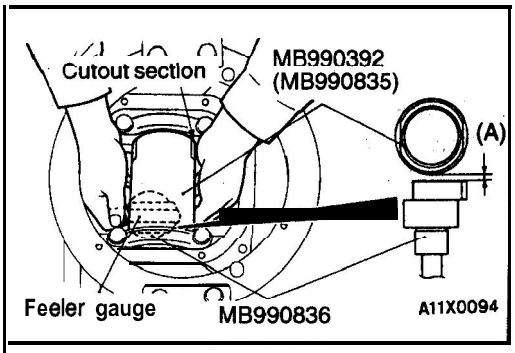
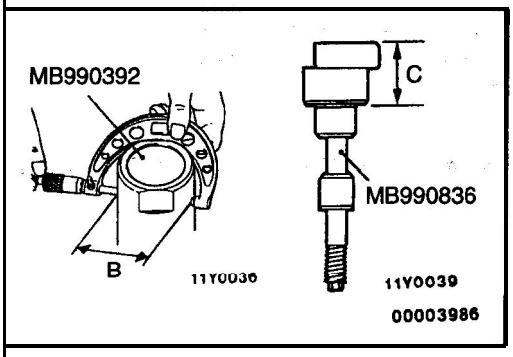
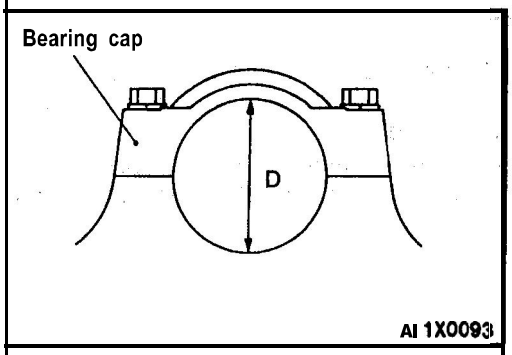



(4) Clean the side bearing seat thoroughly.
(5) Position. the special tool in the side bearing. seat of the gear carrier, and then install the bearing cap.

NOTE
When positioning the special tool', be sure that the cutout sections of the special 'tool are in the. position shown in the illustration.
And check that the special tool is in close contact with the side bearing seat.

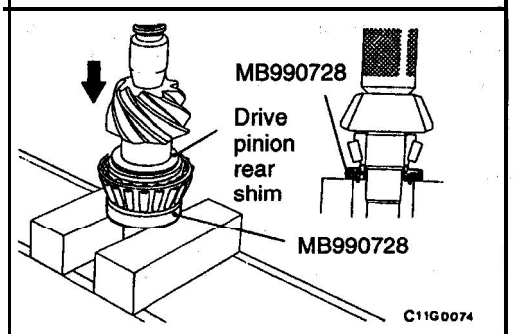



(6) Use a feeler gauge to measure the clearance (A) between the special tools.
(7) Remove the special tools (MB990392 and MB990836).
(8) Use a micrometer to measure the dimensions (B) and (C) of the special tools.

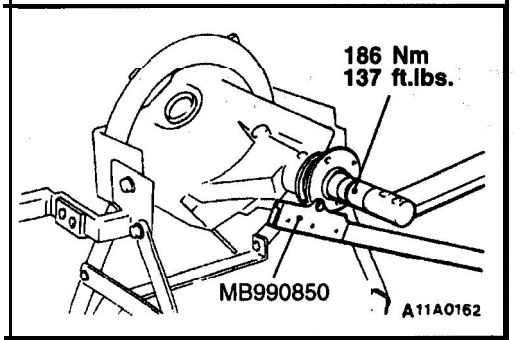



(9) Install. the. bearing cap, and then use a cylinder gage and the micrometer to measure the inside diameter D of the bearing cap as shown in the illustration.
(10) Calculate the thickness (E) of the drive pinion rear shim from the following equation, and select the shim that is' closest in thickness to this value.

$E = A + B + C - 1/2\ D - 86.00$ mm (3.39 in.)




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




### ▶D◀ DRIVE PINION PRELOAD ADJUSTMENT

Adjust the drive pinion turning torque by using the, following procedures:
(1) Fit the drive pinion front shim(s) between the drive pinion spacer and the drive pinion front bearing inner race.
(2) Tighten the companion flange to the specified 'torque, by using the special tools.

NOTE
Do not install the oil seal.

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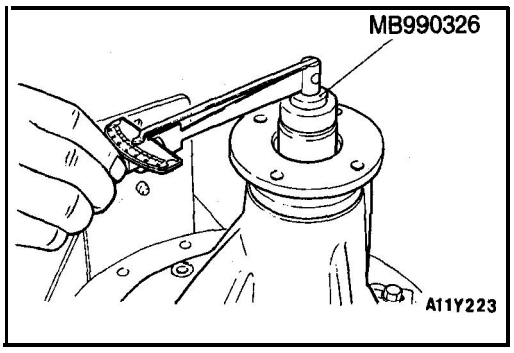


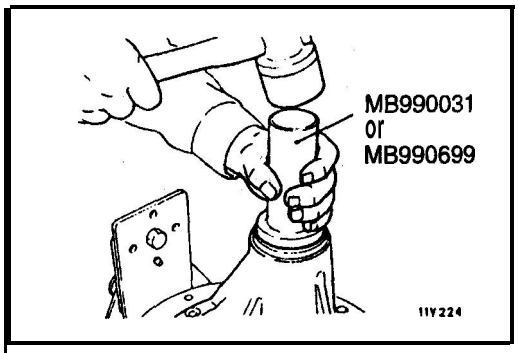

(3) Measure the drive pinion turning torque (without the oil seal) by using the special tools.

**Standard value:**

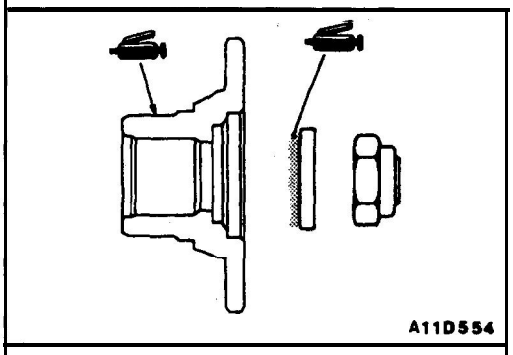
| Bearing classification | Bearing lubrication | Rotation torque (starting friction torque) Nm (in.lbs.) |
|---|---|---|
| New | None (with rust-prevention oil) | 0.9 – 1.2 (8–10) |
| New/reused | Gear oil application | 0.4 – 0.5 (3-4) |

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

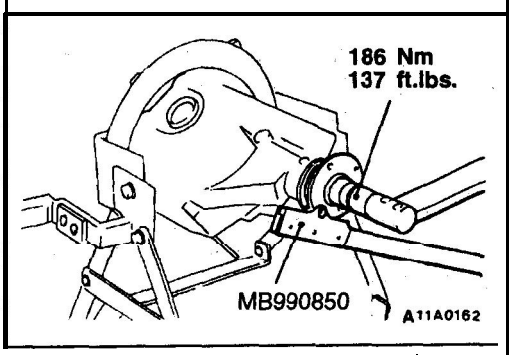
NOTE
When selecting the drive pinion front shims, if the number of shims is large, reduce the number of shims to a minimum by selecting the drive pinion spacers.




(5) Remove the companion flange and drive pinion once again. Drive the oil seal into the gear carrier front lip by using the special tool. Apply multipurpose grease to the oil seal lip.




(6) Apply a thin coat of multipurpose grease to the companion flange contacting surface of the washer and oil seal contacting surface before installing drive pinion assembly.




(7) 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.

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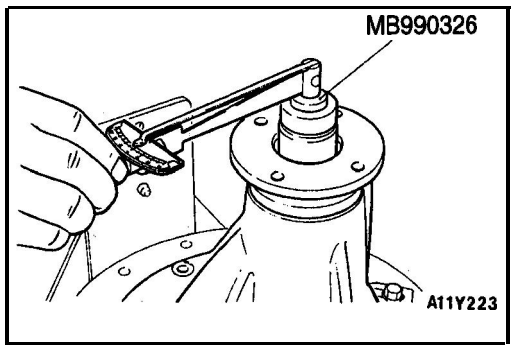
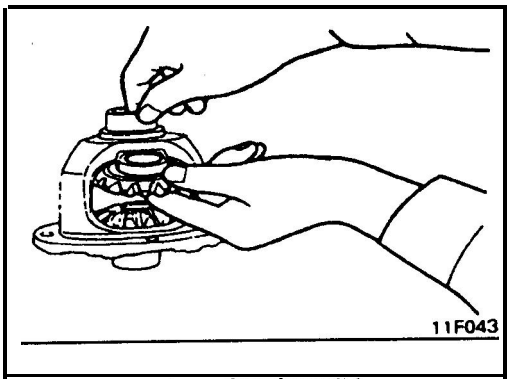


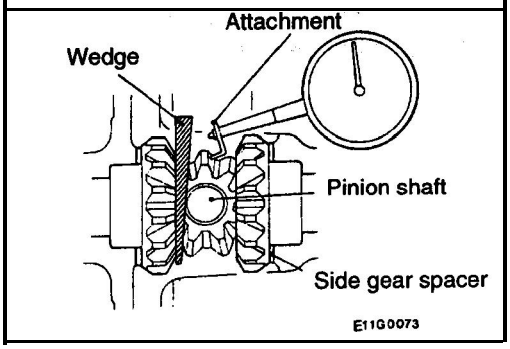

(8) Measure the drive pinion turning torque (with oil seal) by using the special tools to verify that the drive pinion turning torque complies with the standard value.

**Standard value:**

| Bearing classification | Bearing lubrication | Rotation torque (starting friction torque) Nm (in.lbs.) |
|---|---|---|
| New | None (with rust-prevention oil) | 1.0 – 1.3 (9–11) |
| New/reused | Gear oil application | 0.5 – 0.8 (4-5) |

If there is a deviation from the standard value, check whether or not there is incorrect tightening torque of the companion flange tightening self-lock nut, or incorrect fitting of the oil seal.




## ▶E◀ DIFFERENTIAL GEAR BACKLASH ADJUSTMENT <Conventional differential>

Adjust the differential gear backlash by the following procedures:

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

NOTE
(1) The measurement should be made for both pinion gears individually.
(2) Refer to P.27-45 for measurement of the limited slip differential gear backlash.

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

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

(4) If the differential gear backlash exceeds the limit, adjust the backlash by installing thicker side gear spacers.

(5) Measure the differential gear backlash once again, and confirm that it is within the limit.

NOTE
1. After adjustment, check that the backlash is less than the limit and differential "gear rotates smoothly.
2. When adjustment is impossible,' replace the side gear and the pinion gear as a set.

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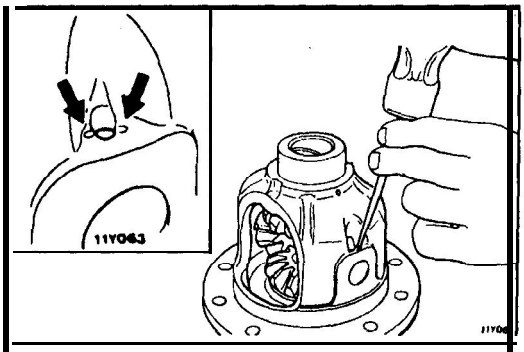
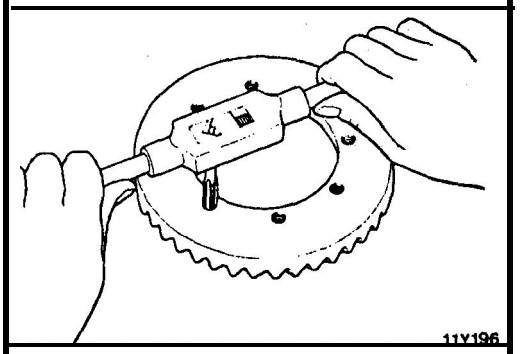


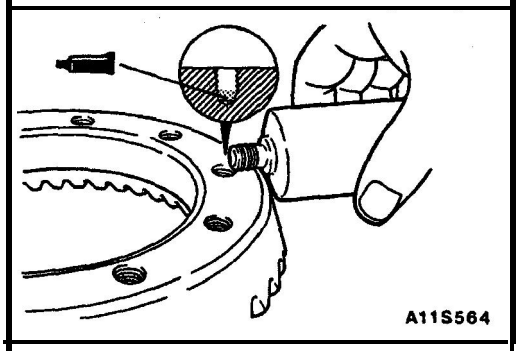

### ▶F◀ LOCK PIN INSTALLATION
<Conventional differential>

(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.




### ▶G◀ DRIVE GEAR INSTALLATION

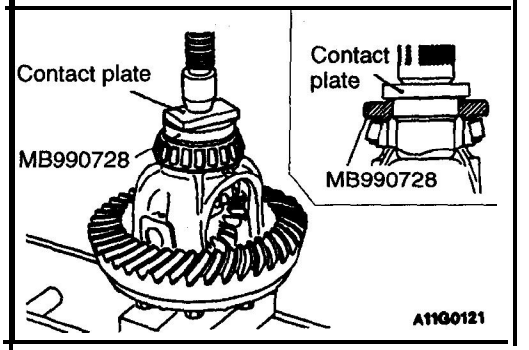
(1) Clean the drive gear attaching bolts.
(2) Remove the adhesive adhering to the threaded holes of the drive gear by turning M10 x 1.25 tap, and then clean the threaded holes by applying compressed air.



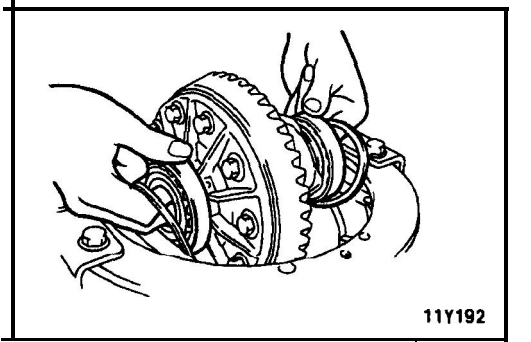

(3) Apply the specified adhesive to the threaded holes of the drive gear.

**Specified adhesive:**
**3M Stud Locking Part No. 4170' or equivalent**

(4) Install the drive gear onto the differential case with the mating marks properly aligned: Tighten the. bolts to the specified torque [80 – 90 Nm (58-65 ft.lbs.)] in a diagonal sequence.



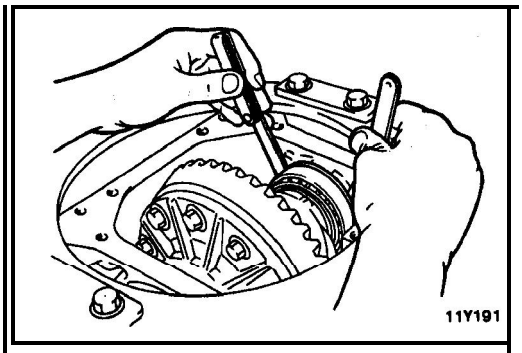

### ▶H◀ SIDE BEARING INNER RACE PRESS-FITTING



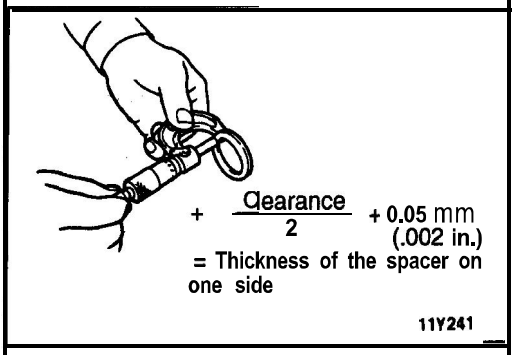

### ▶I◀ DRIVE GEAR BACKLASH ADJUSTMENT'

Adjust the drive gear backlash by the following procedures:
(1) Install the side bearing spacers,' which are thinner than those removed, to the side bearing outer races,, and then mount the differential case assembly into the gear carrier.

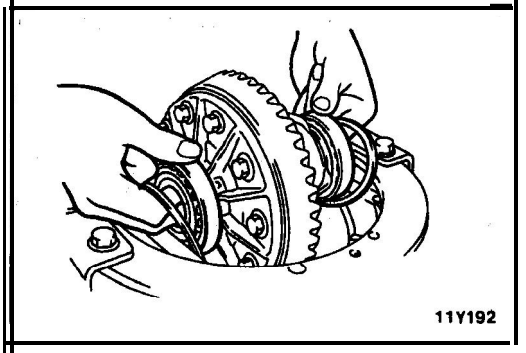
NOTE
Select side bearing spacers with the same thickness for' both the drive pinion side and the drive gear side.



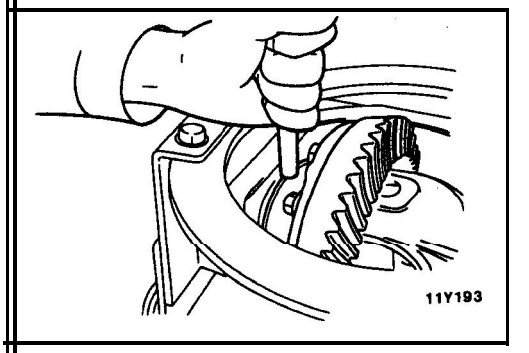

(2) Push the differential case to 'one side, and measure the clearance between the gear carrier and the side bearing.



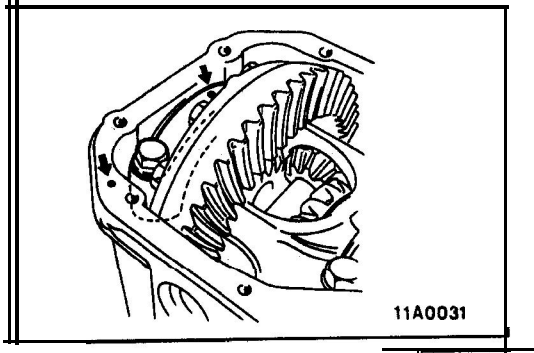

(3) Measure the thickness of the side bearing spacers on one side, select two pairs of spacers which correspond to that thickness plus one half of the clearance plus 0.05 mm, and then install one pair each to the drive pinion side and the drive gear side.



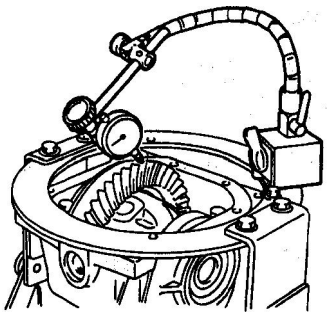

(4) Install the side bearing spacers and differential case assembly, as shown in the illustration;' to the gear carrier.

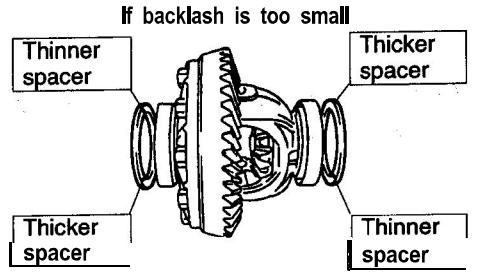



(5) Tap the side bearing spacers with a brass bar to fit them to the side bearing outer race.

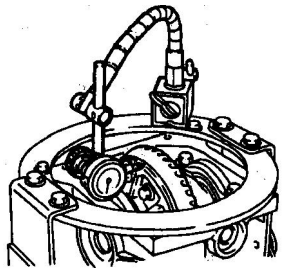



(6) Align the mating marks on the gear carrier and the bearing': cap, and then tighten the bearing cap.


11Y167



11Y194


11Y168

(7) With the drive pinion locked in place, measure the 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 (.004–.006 In.)**

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

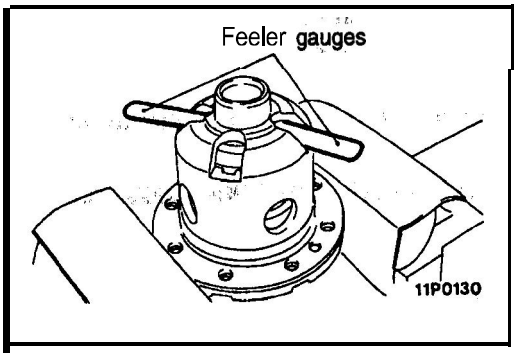
NOTE
When increasing the number of side bearing spacers, use the same number for each, and as few as possible.

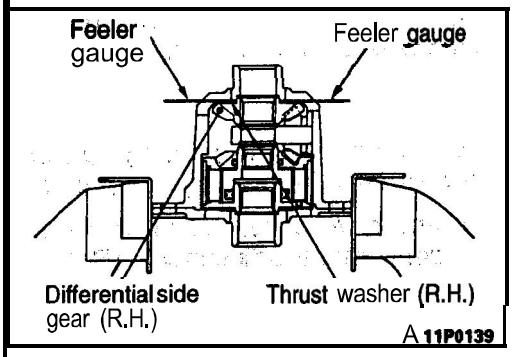
(9) Check the drive gear and drive pinion for tooth contact; If poor contact is evident, make adjustment. (Refer to P.27-32.)

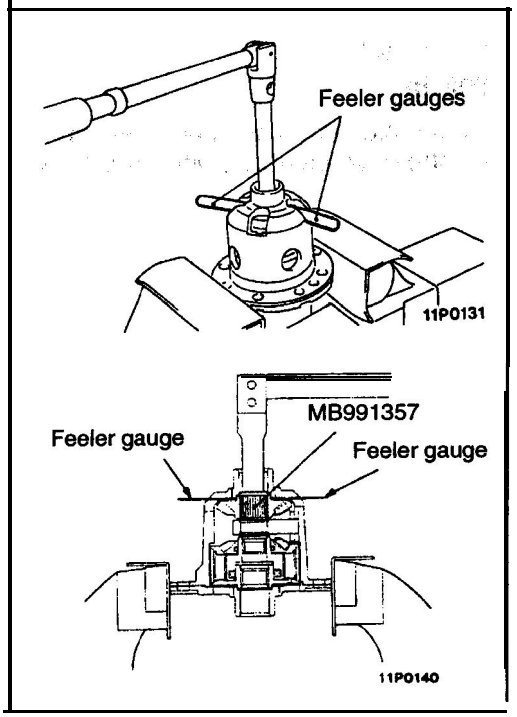
(IO) Measure the drive gear runout at the shoulder on the reverse side of the drive gear.

**Limit: 0.05 mm (.002 in.)**

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




# LSD CASE ASSEMBLY

27300160017

## INSPECTION BEFORE DISASSEMBLY

### DIFFERENTIAL GEAR BACKLASH CHECK

(1) Hold the limited slip differential case assembly in a vice with the differential side gear (R.H.) up.

**Caution**
**When the limited slip differential case is held in a vice, do not tighten excessively.**

(2) Install two 0.03 mm (.001 ih.) feeler gauges diagonally between the differential case (B) and the thrust washer (R.H.).

**Caution**
**Do not insert the feeler gauge in the oil groove provided in the differential case (B).**

(3) Insert the special tool in the splined portion of the differential' side gear (R.H.) and make sure that the side gear (R.H.) turns.

(4) Replace the feeler gauges with 0.09 mm (.004 in.) feeler: "gauges.

(5) Insert the special tool in the splined portion of the differential side gear (R.H.) and make sure that the side gear' (R.H.) does not turn.

**Standard value: Differential gear backlash**
**0.03–0.09 mm (.001–.004 in.)**

NOTE
The differential gear backlash is normal if the side gear clearance in the direction of thrust is within the standard value.

(6) If the side gear clearance in the direction of thrust is not within the standard value, remove the differential case (A) and adjust by means of thrust washer (L.H.).

| Thrust washer (L.H.) | |
|---|---|
| Part No. | Thickness mm (in.) |
| MB569243 | 0.8 (.032) |
| | 0.9 (.035) |
| | 1.0 (.039) |
| | 1.1 (.043) |
| | 1.15 (.045) |
| | 1.2 (.047) |
| | 1.25 (.049) |
| | 1.3 |
| | 1.35 (.051)/.053) |
| | 1.4 (.055) |
| | 1.5 (.059) |

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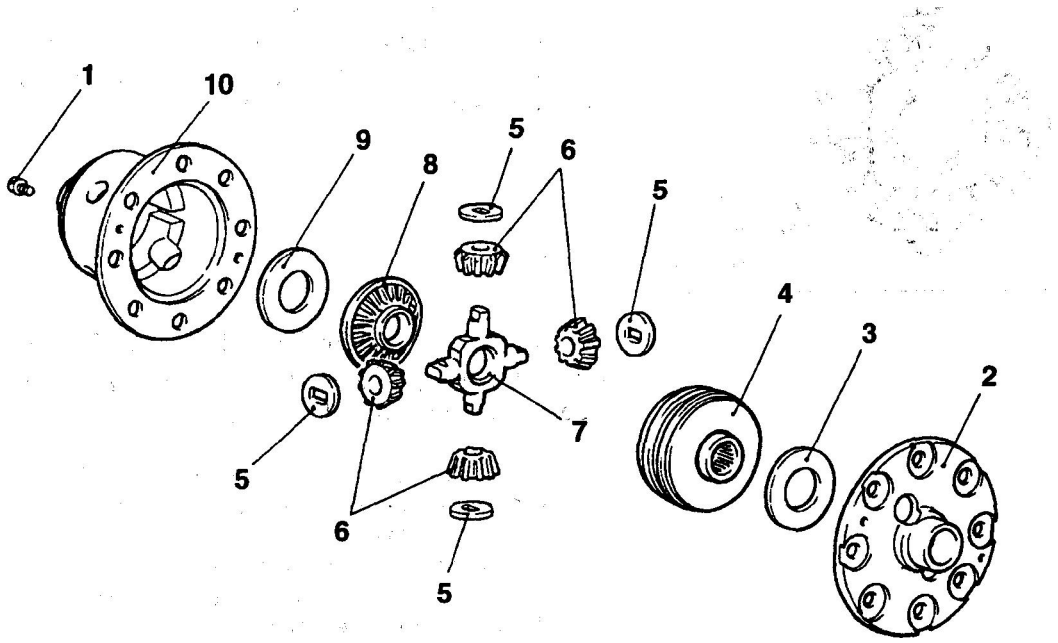
| Thrust washer (R.H.) [Reference] | |
|---|---|
| Part No. | Thickness mm (in.) |
| MB569528 | 0.8 (.032) |

NOTE
The thrust washers (L.H.) are available in a kit. Select one appropriate thrust washer from among 11 washers.

## DISASSEMBLY AND REASSEMBLY

27300140011




11P0127

**Disassembly steps**

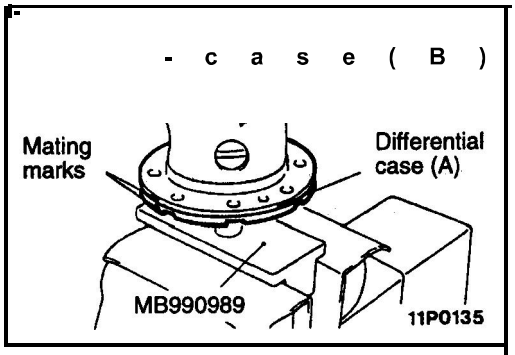
- Inspection before disassembly , (Refer to P.27-46.)
- .. Screw
- ▶A◀ 2. Differential case (A)
- ◀A▶ ▶C◀ 3. Thrust washer (L.H.)
- 4. Viscous coupling (with differential side gear: L.H.)
- ▶B◀ 5. Pinion mate washer
- ▶B◀ 6. Differential pinion mate
- 7. Differential pinion shaft
- 8. Differential side gear (R.H.)
- ◀A▶ 9. Thrust washer (R.H.)
- ▶A◀ 10. Differential case (B)

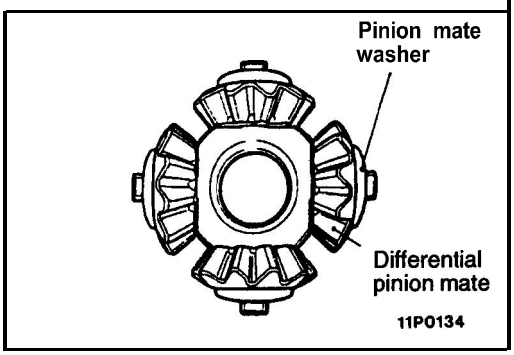
NOTE
LSD: Limited slip differential

## DISASSEMBLY SERVICE POINT

### ◀A▶ THRUST WASHER (L.H.)/THRUST WASHER (R.H.) REMOVAL

The thrust washer (L.H.) differs from the thrust washer (R.H.) in thickness.
Keep them separately from each other for reference in assembly.




## REASSEMBLY SERVICE POINTS

### ▶A◀ DIFFERENTIAL CASE (B)/DIFFERENTIAL CASE (A) INSTALLATION

Install the differential cases (A) and (B) with their mating marks in alignment.

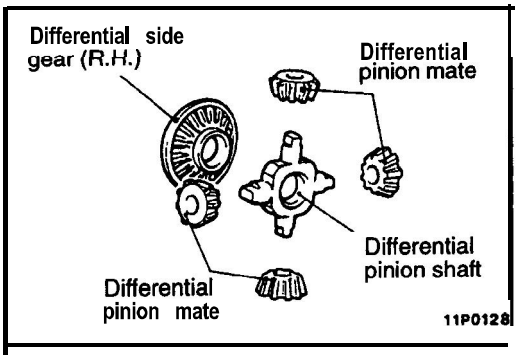
### ▶B◀ DIFFERENTIAL PINION MATE/PINION MATE WASHER INSTALLATION

Attach the differential pinion mate to the pinion shaft with the pinion washers directed as shown, then assemble them into the differential case (B).

### ▶C◀ THRUST WASHER (L.H.) SELECTION

When the differential side gear and pinion mate gear have been replaced, select the thrust washer (L.H.) by the following procedure.

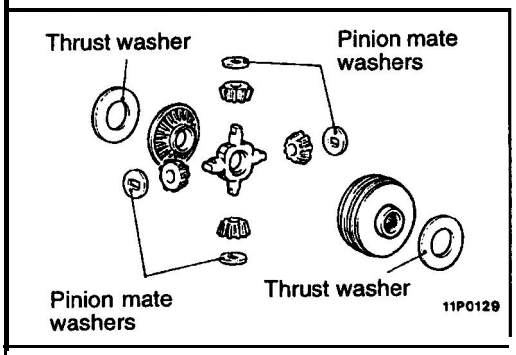
(1) Wash the differential side gear and pinion mate gear with unleaded gasoline and degrease.
(2) Assemble the thrust washers so far used, without confusing the R.H. part with the L.H. part and together with each gear, VCU, pinion mate washer and pinion shaft, to the differential cases (A) and (B), and loosely tighten the screws.
(3) Check the differential backlash, and select a thrust washer (L.H.) to obtain its standard value. (Refer to **P.27-46.**)



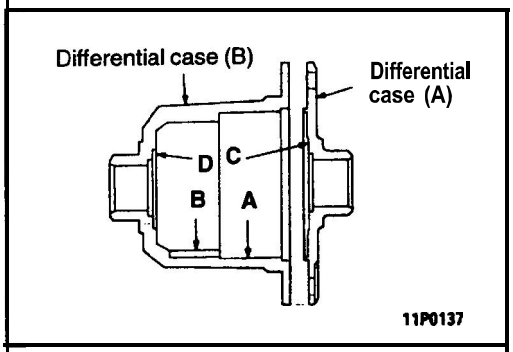

## INSPECTION

27300150014

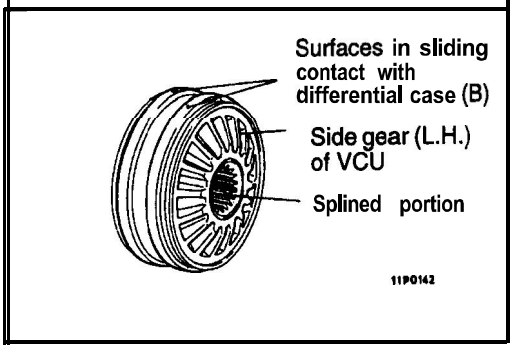
(1) Check each gear and the differential pinion shaft for wear and damage.
(2) Check the **splined** portion of the differential side gear (R.H.) for damage and shoulder.




(3) Check the sliding surfaces of the thrust washer and pinion mate washer for wear, seizure and damage.




(4) Check the sliding surfaces of the differential cases (A) and (B) for wear, seizure and damage.
A. Surface in sliding contact with VCU
B. Surface in sliding contact with pinion mate washer
C. Surface in sliding contact with thrust washer
D. Surface in sliding contact with thrust washer




(5) Check the spline of VCU for damage and shoulder and check the surface in sliding contact with the differential case (B).
(6) Check the side gear (L.H.) of VCU for wear and damage.

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