

GROUP 26

FRONT AXLE

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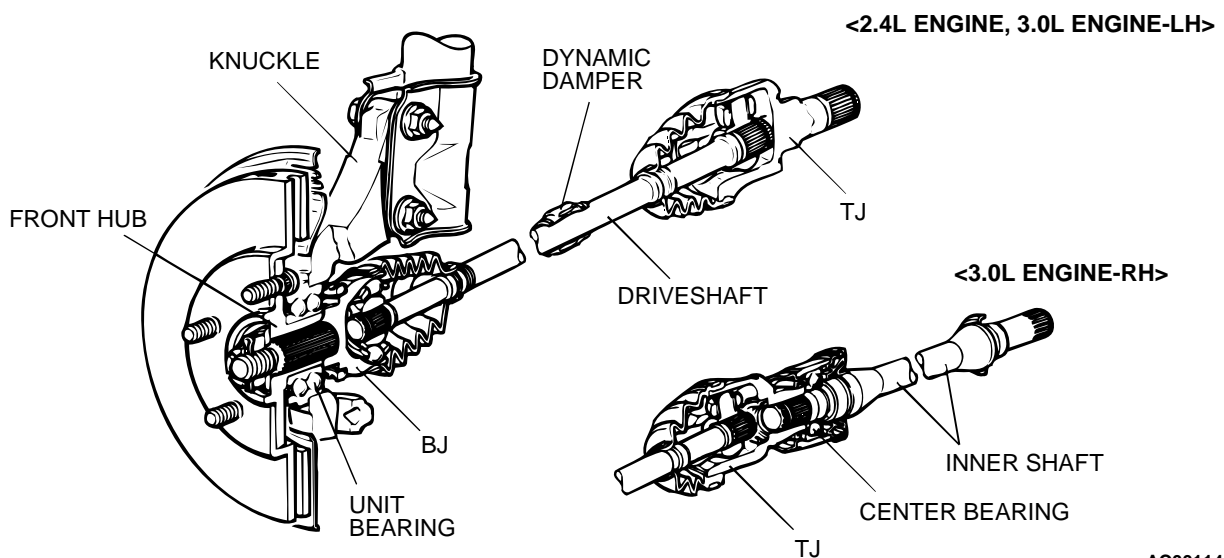
GENERAL DESCRIPTION

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FRONT AXLE

The front axle consists of a knuckle, front hub, unit bearing and drive shaft. The unit bearing is press-fitted to the front hub and bolted to the knuckle. Also, the unit bearing utilizes a double row angular contact ball bearing. The drive shaft has a tripod joint (TJ) on the transaxle side and a birfield joint (BJ) on the wheel side. A center bearing and an inner shaft have been adopted in 3.0L engine.

CONSTRUCTION DIAGRAM



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FRONT AXLE DIAGNOSIS

INTRODUCTION

Noise from driveshaft or inner shaft can be caused by a component defect.

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TROUBLESHOOTING STRATEGY

Use these steps to plan your diagnostic strategy. If you follow them carefully, you will be sure that you have exhausted most of the possible ways to find a front axle fault.

1. Gather information from the customer.

2. Verify that the condition described by the customer exists.
3. Find the malfunction by following the Symptom Chart.
4. Verify malfunction is eliminated.

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SYMPTOM CHART

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| SYMPTOMS | | INSPECTION PROCEDURE | REFERENCE PAGE |
|-------------------------|---|----------------------|----------------|
| Driveshaft, inner shaft | Noise during wheel rotation | 1 | P.26-3 |
| | Noise due to excessive play of wheel in turning direction | 2 | P.26-3 |

SYMPTOM PROCEDURES

INSPECTION PROCEDUR 1: Noise during Wheel Rotation

DIAGNOSIS

STEP 1. Check the driveshaft and inner shaft for bending.

Q: Is the driveshaft and inner shaft bent?

YES : Replace the part. Then go to Step 4.

NO : Go to step 2.

STEP 2. Check the inner shaft bearing for wear.

Q: Is the inner shaft bearing worn?

YES : Replace the bearings. Then go to Step 4.

NO : Go to Step 3.

STEP 3. Check the driveshaft assembly for wear, damage or bending.

Q: Is the driveshaft assembly worn, damaged or bent?

YES : Replace the driveshaft assembly. Then go to Step 4.

NO : There is no action to be taken.

STEP 4. Check symptoms.

Q: Is the abnormal noise eliminated?

YES : Repeat to Step 1.

NO : This diagnosis is complete.

INSPECTION PROCEDUR 2: Noise due to Excessive Play of Wheel in Turning Direction

DIAGNOSIS

STEP 1. Check for play in the inner shaft and side gear serration, the driveshaft and side gear, or the driveshaft and drive flange.

Q: Is the play found?

YES : Adjust or replace the part. Then go to Step 2.

NO : This diagnosis is complete.

STEP 2. Check symptoms.

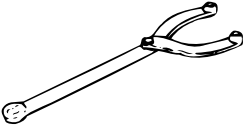
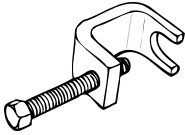
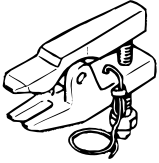
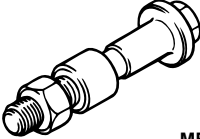
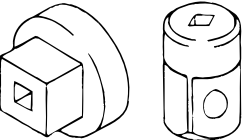
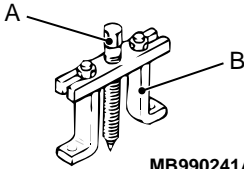

Q: Is the abnormal noise eliminated?

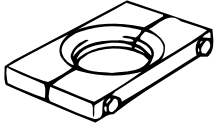
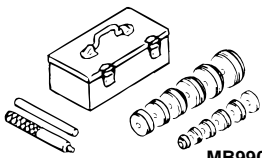
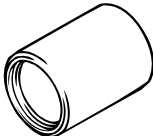
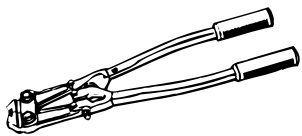
YES : Repeat to Step 1.

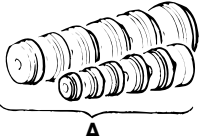

NO : This diagnosis is complete.

SPECIAL TOOLS

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| TOOL | TOOL NUMBER AND NAME | SUPERSESION | APPLICATION |
|---|---|--|---|
|  MB990767 | MB990767 End yoke holder | MB990767-01 | Hub fixing |
|  MB991618 | MB991618 Hub bolt remover | General service tool | Driving out of hub bolt |
|  MB990635 | MB990635 or MB991113 Steering linkage puller | MB991113-01, MB990635-01 or General service tool | Knuckle and tie rod end ball joint disconnection |
|  MB990998 | MB990998 Front hub remover and installer | MB990998-01 or General service tool | <ul style="list-style-type: none"> • Removal of or pressing-in the hub • Provisional holding of the wheel bearing |
|  MB990326 | MB990326 Preload socket | General service tool | Wheel bearing breakaway torque measurement |
|  MB990241AB | MB990241 Axle shaft puller A: MB990244 Puller shaft B: MB990242 Puller bar | MB990241-01 or General service tool | Drive shaft removal |
|  MB991354 | MB991354 Puller body | MB990241-01 or General service tool | Drive shaft removal |

| TOOL | TOOL NUMBER AND NAME | SUPERSESSSION | APPLICATION |
|--|--|--|--|
|  MB991248 | MB991248 or MB998801 Inner shaft remover | MD998348-01 | Inner shaft removal |
|  MB990925 | MB990925 Bearing and oil seal installer set | MB990925-01 or General service tool | Bearing removal and dust seal installation |
|  MB990890 | MB990890 Rear suspension bush base | MB990890-01 | Oil seal installation |
|  MB991561 | MB991561 Boot band crimping tool | MB991561 | Resin boot band installation |

| TOOL | TYPE | TOOL NUMBER | O D mm (in) |
|--|------|-------------|-------------|
| <p>MB990925</p>  <p>A INSTALL ADAPTER</p> <p>C BRASS BAR</p> <p>B BAR (SNAP-IN TYPE)</p>  <p>TOOL BOX ACX02372AB</p> | A | MB990926 | 39.0 (1.54) |
| | | MB990927 | 45.0 (1.77) |
| | | MB990928 | 49.5 (1.95) |
| | | MB990929 | 51.0 (2.00) |
| | | MB990930 | 54.0 (2.13) |
| | | MB990931 | 57.0 (2.24) |
| | | MB990932 | 61.0 (2.40) |
| | | MB990933 | 63.5 (2.50) |
| | | MB990934 | 67.5 (2.66) |
| | | MB990935 | 71.5 (2.81) |
| | | MB990936 | 75.5 (2.97) |
| | | MB990937 | 79.0 (3.11) |
| | | | B |
| | C | MB990939 | — |

ON-VEHICLE SERVICE

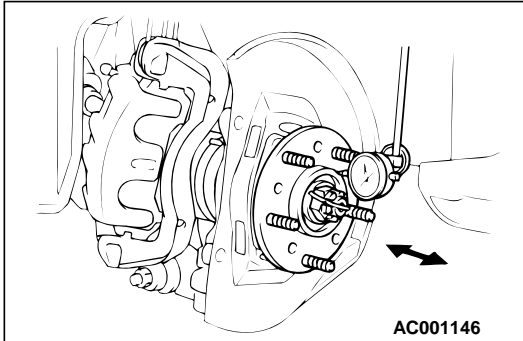
HUB END PLAY CHECK

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1. Remove the disc brake caliper and suspend it with a wire.
2. Remove the brake disc from the front hub.
3. Attach a dial gauge as shown in the illustration, and then measure the end play while moving the hub in the axial direction.

Limit: 0.05 mm (0.002 inch)

4. If end play exceeds the limit, replace the front hub assembly.



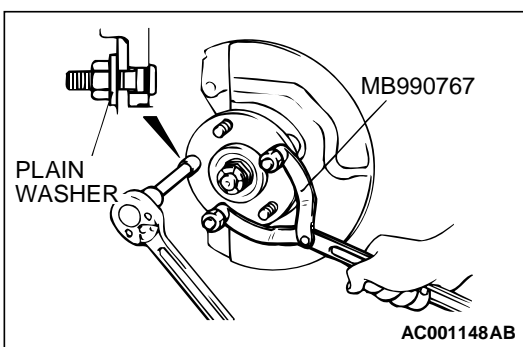
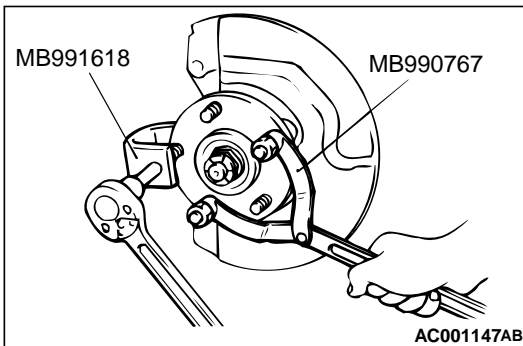
HUB BOLT REPLACEMENT

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Required Special Tools:

- MB990767: End Yoke Holder
- MB991618: Hub Bolt Remover

1. Remove the caliper assembly and suspend it with wire so that it does not fall.
2. Remove the brake disc.
3. Use the special tools MB990767 and MB991618 to remove the hub bolts.



4. Install the plain washer to the new hub bolt, and install the bolt with a nut.

FRONT AXLE HUB ASSEMBLY

REMOVAL AND INSTALLATION

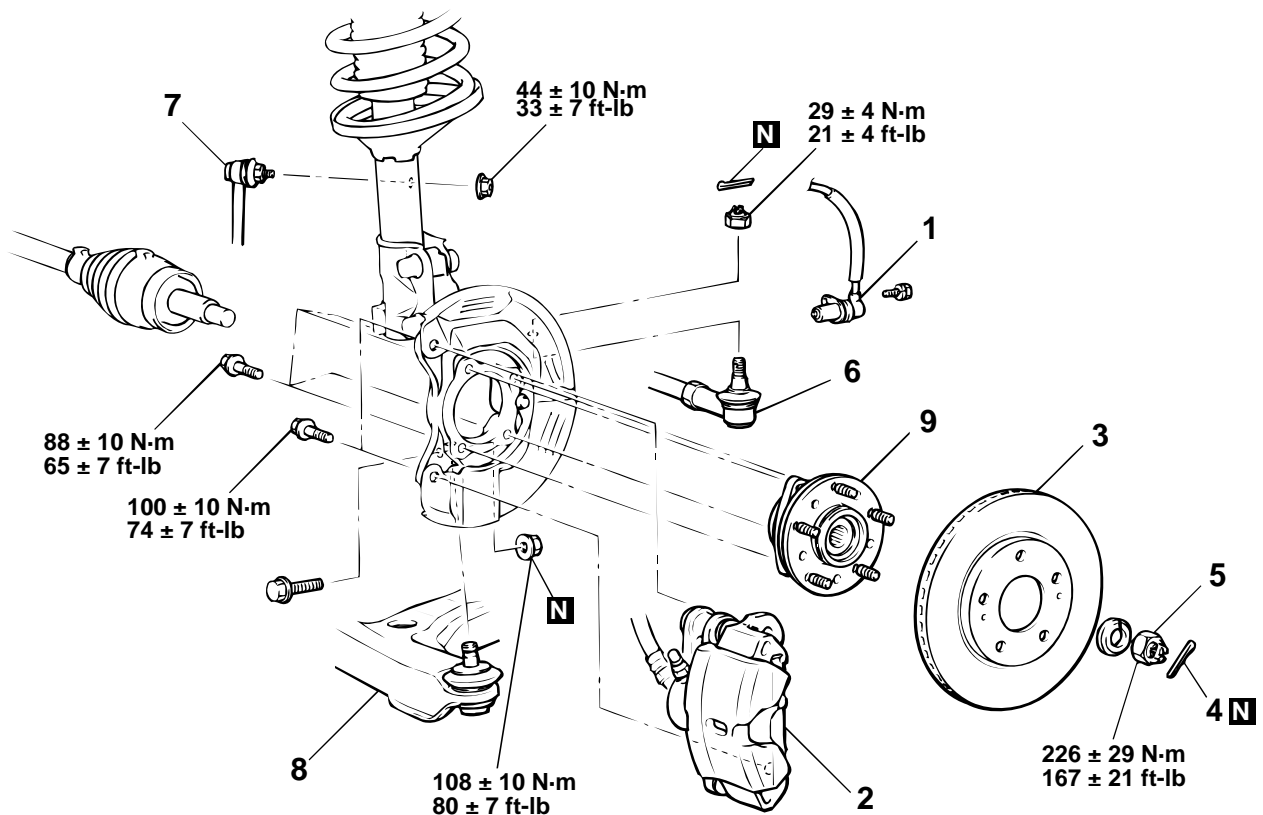
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CAUTION

- For vehicles with ABS, be careful when handling the projection at the tip of the speed sensor so as not to damage it by striking against other parts.
- The front hub assembly should not be disassembled. When removing the front hub assembly, the wheel bearing inner race may be left at the spindle side. In this case, always replace the front hub assembly, otherwise the hub will damage the oil seal, causing oil leaks or excessive play.

Post-installation Operation

- Press Dust Cover with a Finger to Check for Crack or Damage in Ball Joint Dust Cover.



AC001149 AB

REMOVAL STEPS

- <<A>>
1. FRONT SPEED SENSOR <VEHICLES WITH ABS>
 2. CALIPER ASSEMBLY
 3. BRAKE DISC
 4. COTTER PIN
- <> >>A<<
5. DRIVESHAFT NUT

REMOVAL STEPS (Continued)

- <<C>>
6. TIE ROD END CONNECTION
 7. STABILIZER LINK CONNECTION
 8. LOWER ARM ASSEMBLY CONNECTION
 9. FRONT HUB ASSEMBLY

Required Special Tools:

- MB990326: Preload Socket
- MB990767: End Yoke Holder
- MB990998: Front Hub Remover and Installer
- MB991113 or MB990635: Steering Linkage Puller

TSB Revision

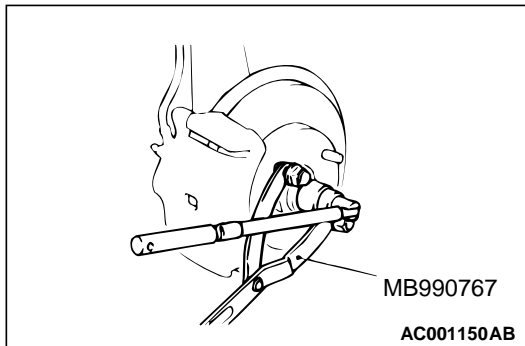
REMOVAL SERVICE POINTS**<<A>> CALIPER ASSEMBLY REMOVAL**

Secure the removed caliper assembly with wire, etc.

<> DRIVESHAFT NUT REMOVAL**⚠ CAUTION**

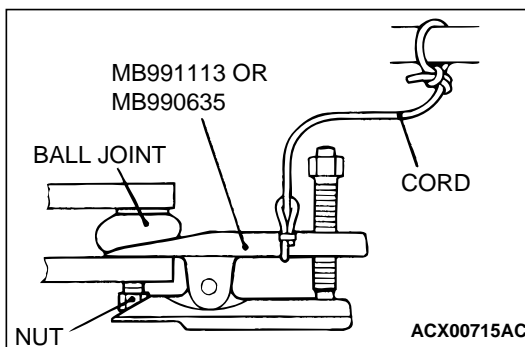
Do not apply pressure to wheel bearing by the vehicle weight to avoid possible damage when driveshaft nut is loosened.

Use special tool MB990767 to fix the hub and remove the driveshaft nut.

**<<C>> TIE ROD END/LOWER ARM ASSEMBLY DISCONNECTION****⚠ CAUTION**

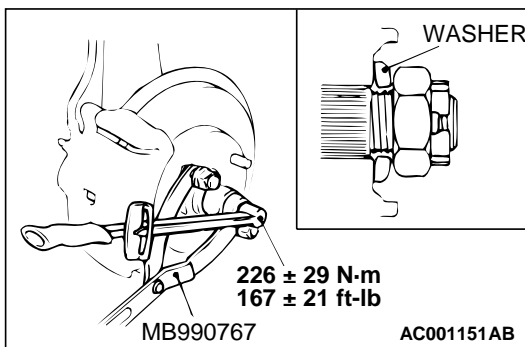
- Do not remove the nut from ball joint. Loosen it and use special tool MB991113 or MB990635 to avoid possible damage to ball joint threads.
- Hang special tool MB991113 or MB990635 with rope or wire to prevent them from falling.

Use special tool MB991113 or MB990635 to disconnect the tie rod end or lower arm assembly from the knuckle.

**INSTALLATION SERVICE POINT****>>A<< DRIVE SHAFT NUT INSTALLATION****⚠ CAUTION**

Do not apply pressure to wheel bearing by the vehicle weight to avoid possible damage before securely tightening the driveshaft nut.

1. Face the flat side of a washer to a driveshaft nut to install
2. Use special tool MB990767 to fix the hub and tighten the driveshaft nut.
3. If the position of the cotter pin holes does not match, tighten the nut up to 255 N·m (188 ft-lb) maximum.
4. Install the cotter pin in the first matching holes and bend it securely.



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INSPECTION

WHEEL BEARING BREAKAWAY TORQUE CHECK

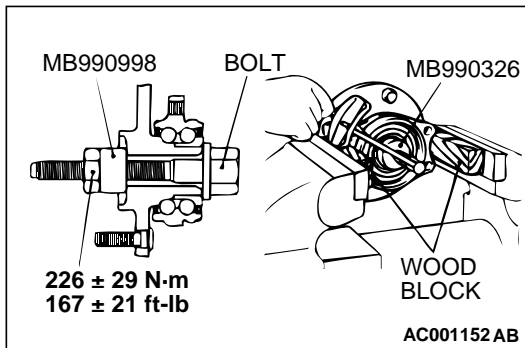
1. Install the special tools MB990998 and MB990326 to the front hub assembly and tighten the nut to the specified torque.

Tightening torque: 226 ± 29 N·m (167 ± 21 ft·lb)

2. Measure the wheel bearing breakaway torque with special tool MB990326.

Limit: 1.0 N·m (9 in·lb) or less

3. Wheel bearing breakaway torque must be under the limit value and there should be no roughness when rotating the hub.



WHEEL BEARING END PLAY CHECK

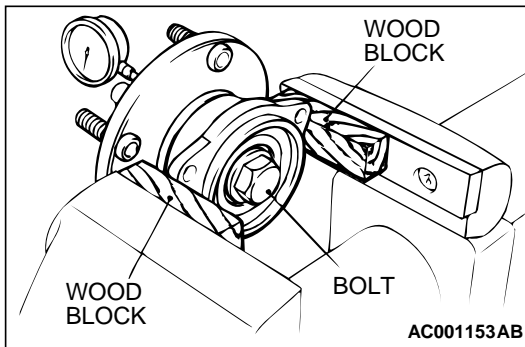
1. Install the special tool MB990998 to the front hub assembly and tighten the nut to the specified torque.

Tightening torque: 226 ± 29 N·m (167 ± 21 ft·lb)

2. Measure the play in the hub axial direction.

Limit: 0.05 mm (0.002 inch)

3. If the play exceeds the limit, replace the front hub assembly.



KNUCKLE

REMOVAL AND INSTALLATION

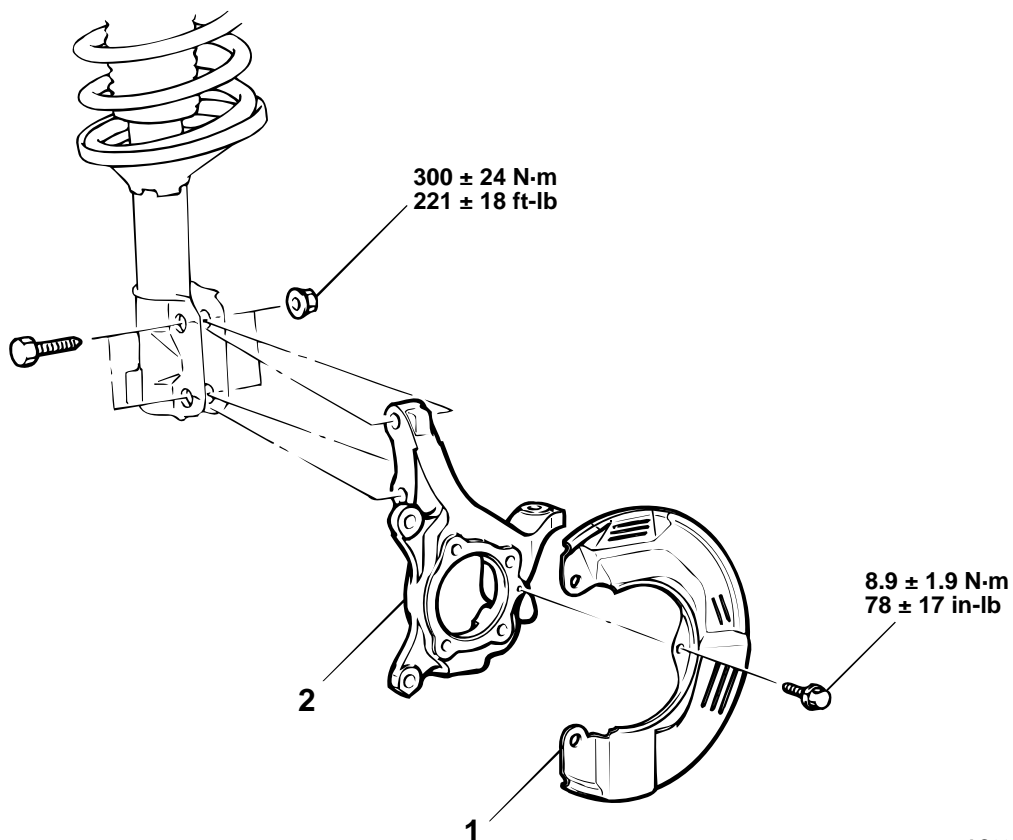
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Pre-removal Operation

- Front Hub Assembly Removal (Refer to P.26-7.)

Post-installation Operation

- Front Hub Assembly Installation (Refer to P.26-7.)
- Wheel Alignment Check and Adjustment (Refer to GROUP 33A, On-vehicle Service – Front Wheel Alignment Check and Adjustment P.33A-6.)



AC001154AB

REMOVAL STEPS

1. DUST SHIELD
2. KNUCKLE

INSPECTION

Check the knuckle surface for galling and cracks.

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DRIVE SHAFT ASSEMBLY

REMOVAL AND INSTALLATION

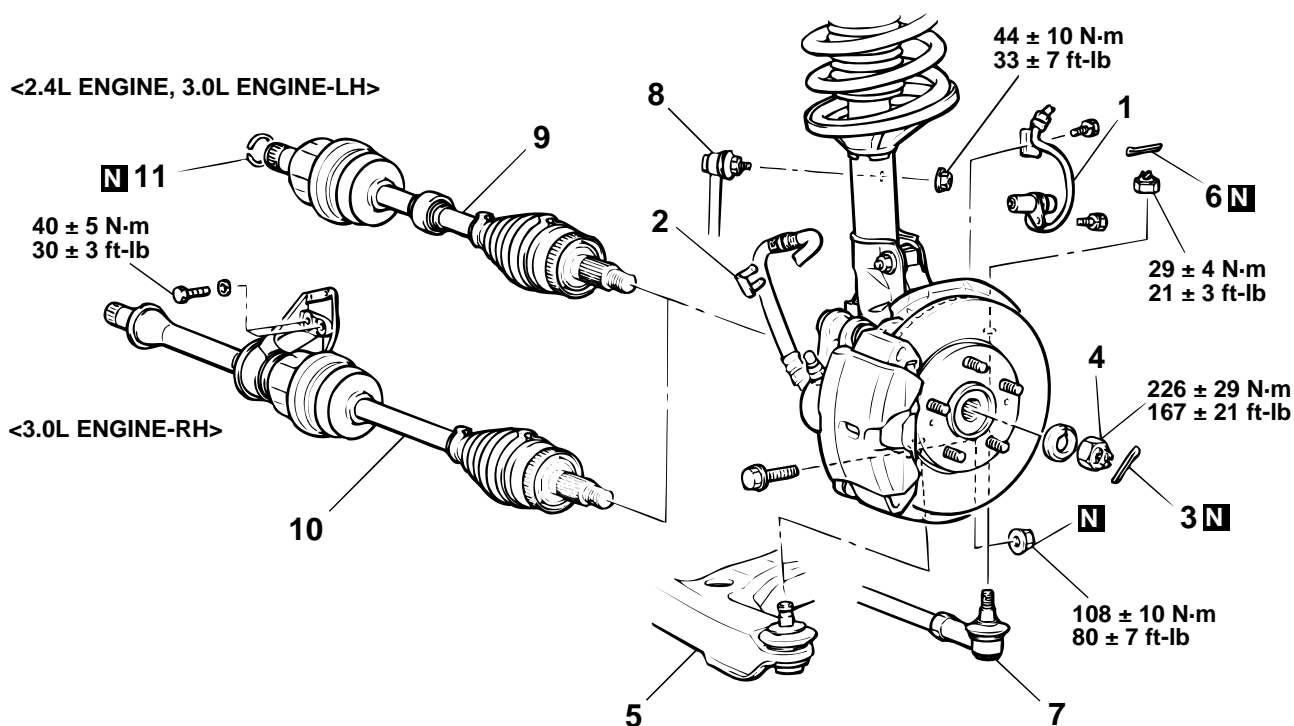
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CAUTION

For vehicles with ABS, be careful when handling the projection at the tip of the speed sensor so as not to damage it by striking against other parts.

Post-installation Operation

- Press Dust Cover with a Finger to Check for Crack or Damage in Ball Joint Dust Cover.



AC001155AB

REMOVAL STEPS

1. SPEED SENSOR CABLE CONNECTION <VEHICLES WITH ABS>
2. BRAKE HOSE CLIP
3. COTTER PIN
4. DRIVESHAFT NUT
5. LOWER ARM BALL JOINT CONNECTION
6. COTTER PIN
7. TIE ROD END CONNECTION
8. STABILIZER LINK CONNECTION
9. DRIVESHAFT

<<A>> >>B<<
<>
<>
<<C>> >>A<<

REMOVAL STEPS (Continued)

10. DRIVESHAFT AND INNER SHAFT
11. CIRCLIP

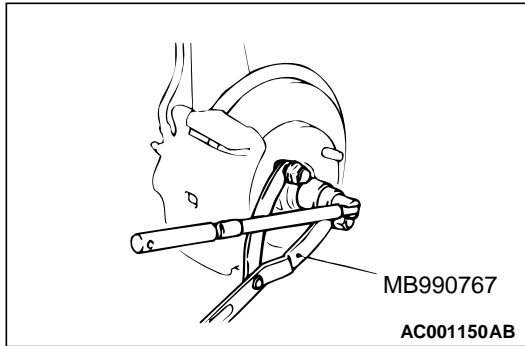
Required Special Tools:

- MB990242: Puller Bar
- MB990767: End Yoke Holder
- MB990998: Front Hub Remover and Installer
- MB991113 or MB990635: Steering Linkage Puller
- MB991354: Puller Body

REMOVAL SERVICE POINTS**<<A>> DRIVESHAFT NUT REMOVAL****⚠ CAUTION**

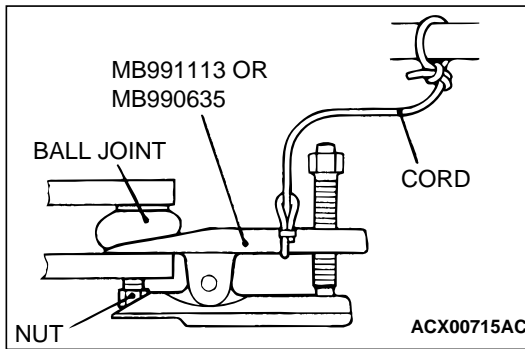
Do not apply pressure to the wheel bearing by the vehicle weight to avoid possible damage when the driveshaft nut is loosened.

Use special tool MB990767 to fix the hub and remove the driveshaft nut.

**<> LOWER ARM BALL JOINT/TIE ROD END DISCONNECTION****⚠ CAUTION**

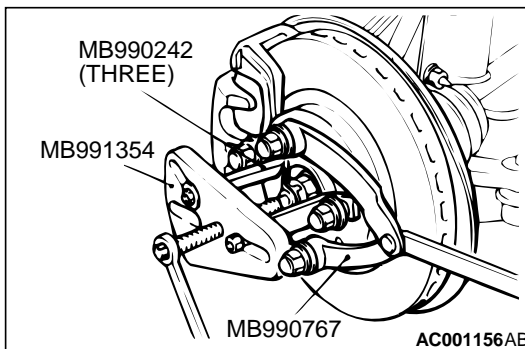
- Do not remove the nut from the ball joint. Loosen it and use special tool MB991113 or MB990635 to avoid possible damage to the ball joint threads.
- Hang special tool MB991113 or MB990635 with rope or wire to prevent them from falling.

Use special tool MB991113 or MB990635 to disconnect the lower arm ball joint or the tie rod end from the knuckle.

**<<C>> DRIVESHAFT/DRIVESHAFT AND INNER SHAFT REMOVAL****⚠ CAUTION**

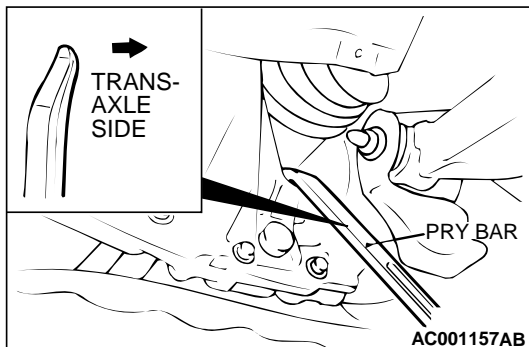
Do not damage the ABS rotor attached to the BJ outer race <Vehicles with ABS>.

1. Use special tools MB991354, MB990242 and MB990767 to push the driveshaft out from the hub.



⚠ CAUTION

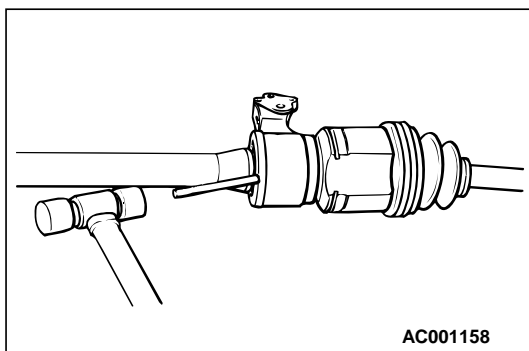
- Do not pull on the driveshaft; doing so will damage the TJ; be sure to use the pry bar.
 - Do not insert the pry bar so deep as to damage the oil seal.
 - Do not damage the transaxle oil seal with the spline of the driveshaft.
2. Insert a pry bar between the transaxle case and the driveshaft as shown to remove the driveshaft. <2.4L ENGINE, 3.0L ENGINE-LH>



⚠ CAUTION

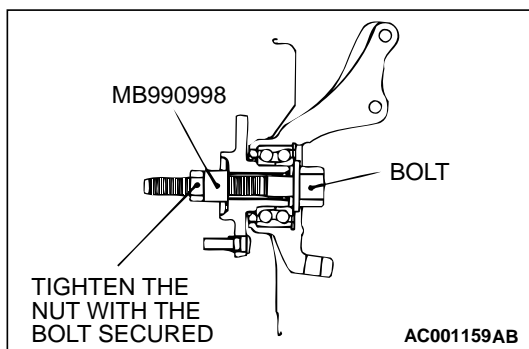
Do not damage the transaxle oil seal with the spline of the inner shaft.

3. If the inner shaft and transaxle are tightly joined, tap the center bearing bracket lightly with a plastic hammer, etc. to remove the drive shaft and inner shaft from the transaxle. <3.0L ENGINE-RH>
4. Cover the transaxle case with a shop towel to prevent foreign material from entering it.



⚠ CAUTION

Do not apply the vehicle weight to the wheel bearing while loosening the driveshaft nut. If, however, the vehicle weight must be applied to the bearing (in order to move the vehicle), temporarily secure the wheel bearing by using special tool MB990998.



INSTALLATION SERVICE POINTS

>>A<< DRIVESHAFT AND INNER SHAFT/DRIVESHAFT
INSTALLATION**⚠ CAUTION**

- Do not damage the transaxle oil seal with the spline of the shaft.
- Do not damage the ABS rotor attached to the BJ outer race <Vehicles with ABS>.

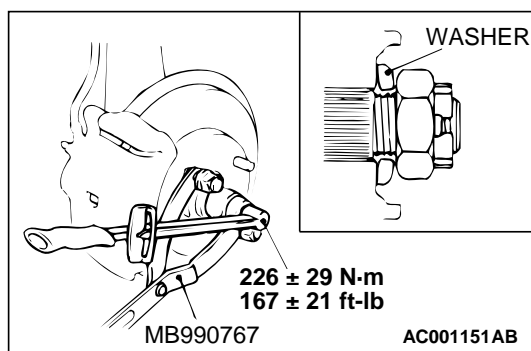
>>B<< DRIVESHAFT NUT INSTALLATION

1. Face the flat side of a washer to a driveshaft nut to install.

⚠ CAUTION

Do not apply pressure to wheel bearing by the vehicle weight to avoid possible damage when driveshaft nut is loosened.

2. Use special tool MB990767 to fix the hub and tighten the driveshaft nut.
3. If the position of the cotter pin holes does not match, tighten the nut up to 255 N·m (188 ft-lb) maximum.
4. Install the cotter pin in the first matching holes and bend it securely.



INSPECTION

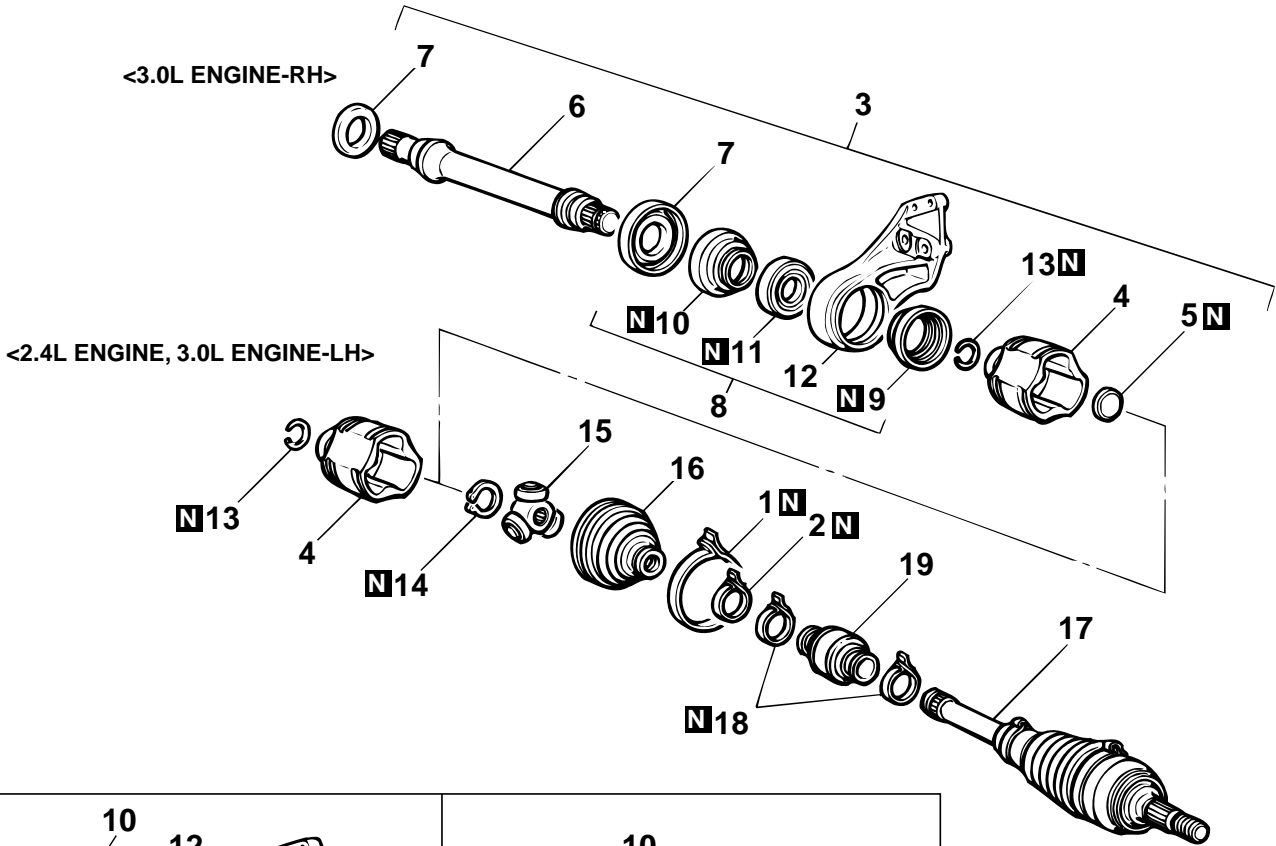
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- Check the driveshaft boot for damage or deterioration.
- Check the ball joints for excessive play or poor operating condition.
- Check the spline part for wear or damage.

DISASSEMBLY AND ASSEMBLY

CAUTION

Never disassemble the BJ assembly except when replacing the BJ boot.



| | | |
|--|---|----------------------|
| | | |
| <p>BRACKET ASSEMBLY REPAIR KIT</p> | <p>BEARING DUST SEAL REPAIR KIT</p> | |
| | | |
| <p>TJ BOOT REPAIR KIT</p> | <p>BJ BOOT REPAIR KIT</p> | <p>TJ REPAIR KIT</p> |

DISASSEMBLY STEPS

- >>G<< 1. TJ BOOT BAND (LARGE)
- >>G<< 2. TJ BOOT BAND (SMALL)
- >>F<< 3. TJ CASE AND INNER SHAFT ASSEMBLY
- 4. TJ CASE
- 5. SEAL PLATE
- <<A>> >>E<< 6. INNER SHAFT
- 7. DUST COVER
- 8. BRACKET ASSEMBLY
- >>D<< 9. DUST SEAL OUTER
- >>D<< 10. DUST SEAL INNER
- <> >>C<< 11. CENTER BEARING
- 12. CENTER BEARING BRACKET
- 13. CIRCLIP
- 14. SNAP RING
- >>B<< 15. SPIDER ASSEMBLY
- <<C>> >>A<< 16. TJ BOOT
- 17. BJ ASSEMBLY

DISASSEMBLY STEPS (Continued)

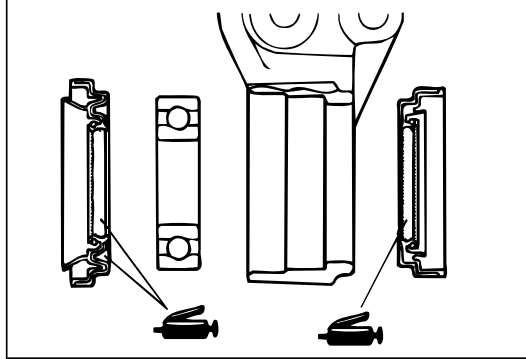
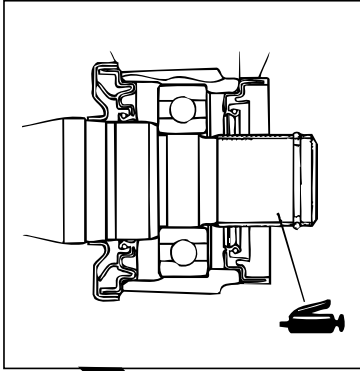
- >>A<< 18. DAMPER BAND <2.4L ENGINE, 3.0L ENGINE-LH>
- >>A<< 19. DYNAMIC DAMPER <2.4L ENGINE, 3.0L ENGINE-LH>
- 20. BJ BOOT BAND (LARGE)
- 21. BJ BOOT BAND (SMALL)
- 22. BJ BOOT

NOTE: BJ: Birfield Joint, TJ: Tripod Joint

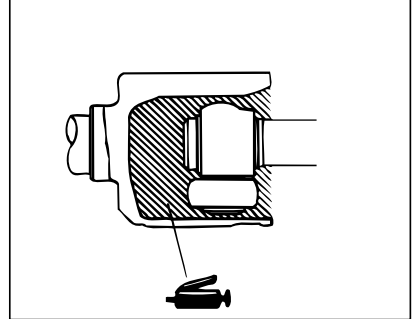
Required Special Tools:

- MB990890: Rear Suspension Bush Base
- MB990930: Installation Adapter
- MB990932: Installation Adapter
- MB990934: Installation Adapter
- MB990938: Installation Adapter
- MB991172: Adapter
- MB991248 or MD998801: Inner Shaft Remover
- MB991561: Boot Band Crimping Tool

LUBRICATION POINTS

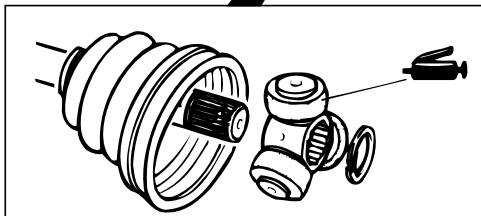
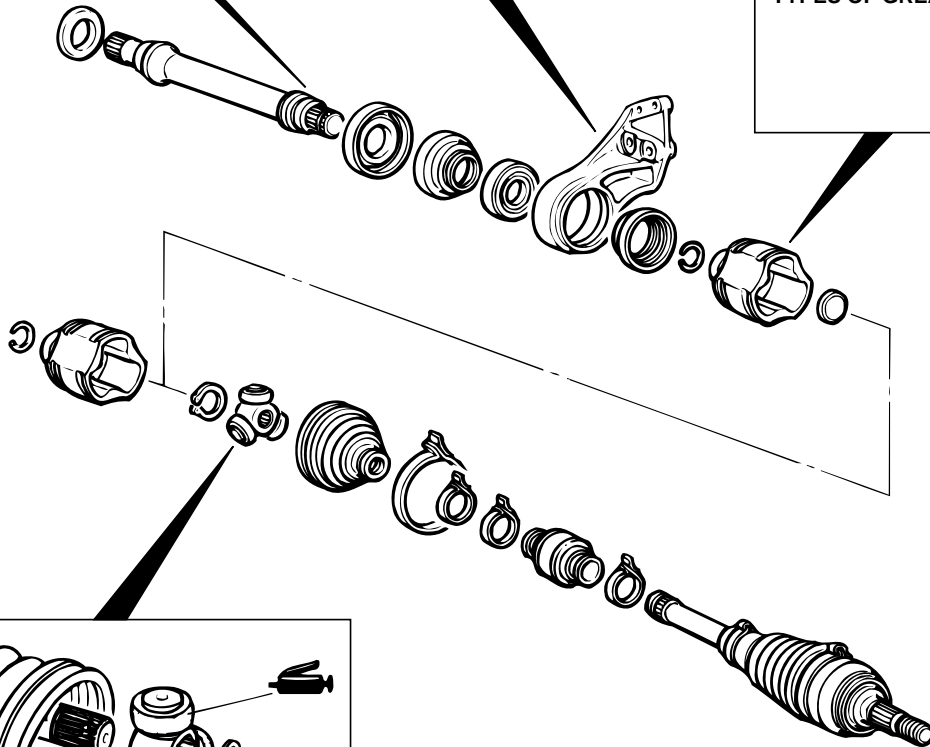


GREASE:
MULTIPURPOSE GREASE
DUST SEAL INNER: 14 – 20 g (0.5 – 0.7 oz)
DUST SEAL OUTER: 8 – 12 g (0.3 – 0.4 oz)



GREASE:
REPAIR KIT GREASE
<2.4L ENGINE>
100 ± 10 g (3.5 ± 0.4 oz)
<3.0L ENGINE>
105 ± 10 g (3.7 ± 0.4 oz)

CAUTION
THE DRIVESHAFT JOINT USES SPECIAL GREASE. DO NOT MIX OLD AND NEW OR DIFFERENT TYPES OF GREASE.



GREASE: REPAIR KIT GREASE

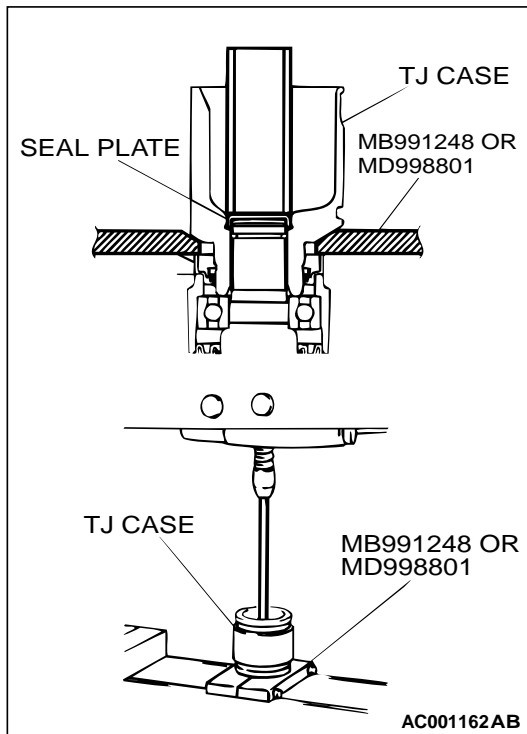
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TSB Revision

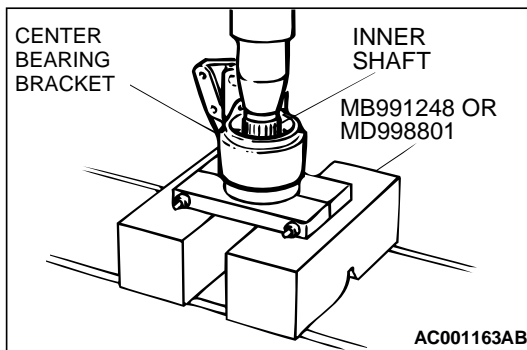
DISASSEMBLY SERVICE POINTS

<<A>> INNER SHAFT REMOVAL

1. Use special tool MB991248 or MD998801 to remove the inner shaft assembly and the seal plate from the TJ case.
NOTE: Press the seal plate to deform it, and then press out the inner shaft.

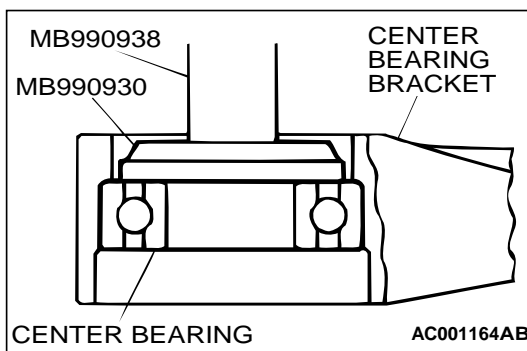


2. Use special tool MB991248 or MD998801 to remove the inner shaft from the center bearing bracket.



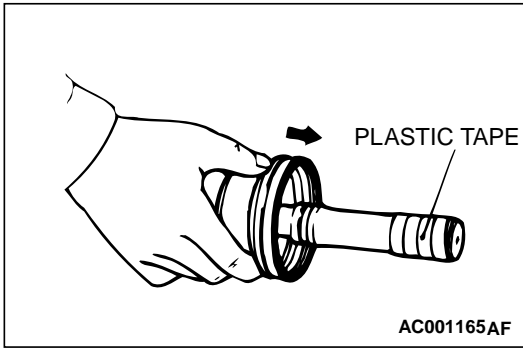
<> CENTER BEARING REMOVAL

Use special tools MB990930 and MB990938 to press the center bearing out from the center bearing bracket.



<<C>> TJ BOOT REMOVAL

Wrap plastic tape around the spline part on the BJ assembly so that the TJ boot is not damaged when they are removed.

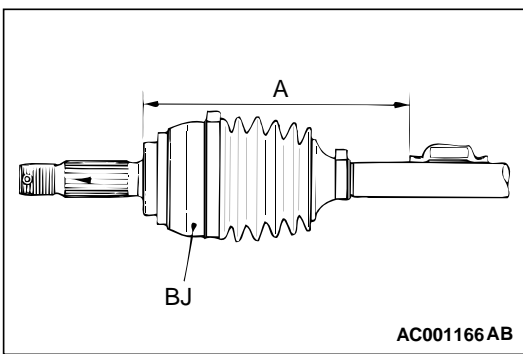


ASSEMBLY SERVICE POINTS

>>A<< DYNAMIC DAMPER/DAMPER BAND/TJ BOOT INSTALLATION

1. Install the dynamic damper in the position shown in the illustration.

| ITEMS | LH | RH |
|-----------|----------------------|-----------------------|
| A mm (in) | 242 ± 3 (9.5 ± 0.12) | 254 ± 3 (10.0 ± 0.12) |



CAUTION

- There should be no grease adhered to the rubber part of the dynamic damper.
 - The damper band and the TJ boot band (small) are different in shape. Be careful not to assemble a wrong band by identifying a color of the band.
2. Secure the damper bands.

| ITEMS | BAND COLOR |
|--------------|------------|
| Damper band | Blue |
| TJ boot band | Silver |

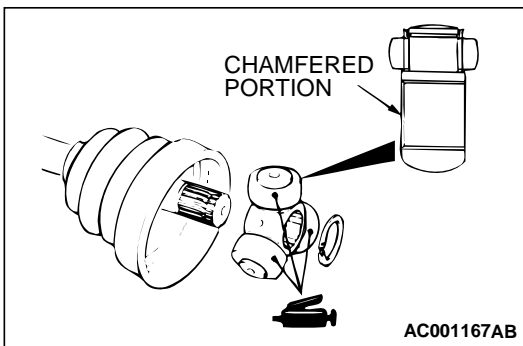
3. Wrap plastic tape around the shaft spline, and then install the TJ boot band (small) and TJ boot.

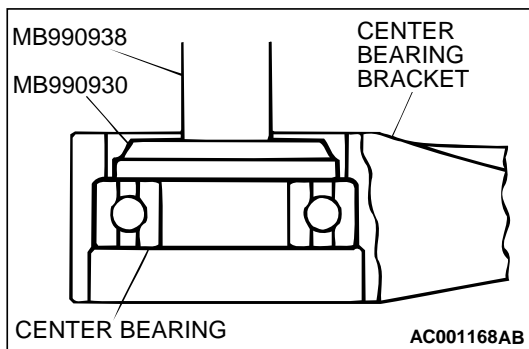
>>B<< SPIDER ASSEMBLY INSTALLATION

CAUTION

The driveshaft joint uses special grease. Do not mix old and new or different types of grease.

1. Apply the repair kit grease to the spider axles and rollers of the spider assembly.
2. Face the chamfered portion of the spider assembly's spline toward the driveshaft, and then install the spider assembly to the driveshaft.





>>C<< CENTER BEARING INSTALLATION

Use special tools MB990930 and MB990938 to press the center bearing into the center bearing bracket.

>>D<< DUST SEAL INNER/DUST SEAL OUTER INSTALLATION

1. Pack multipurpose grease in the places shown in the figure.

Quantity:

14 – 20 g (0.5 – 0.7 oz) <Dust seal inner>

8 – 12 g (0.3 – 0.4 oz) <Dust seal outer>

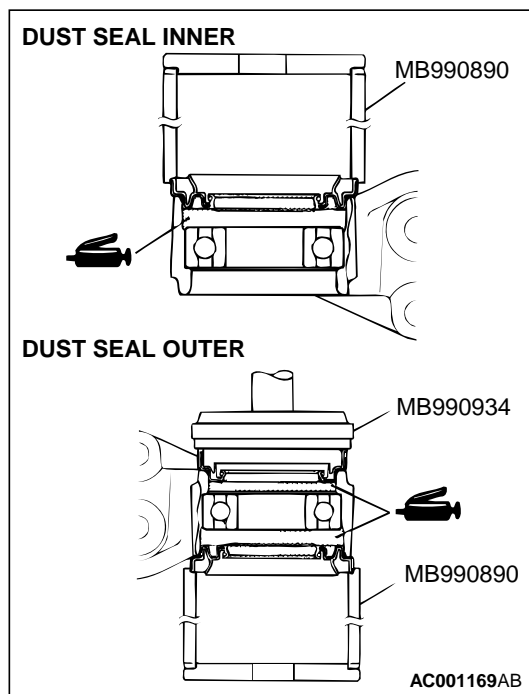
⚠ CAUTION

Do not damage the rubber portion of the dust seal outer surface when packing the multipurpose grease, otherwise grease will leak.

2. Use special tools MB990890 and MB990934 to press the oil seal into the center bearing bracket.

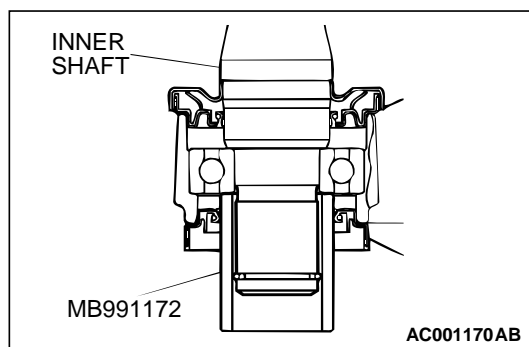
3. Apply multipurpose grease to the lip of the dust seal.

NOTE: Do not apply the specified grease to the outside of the lip.



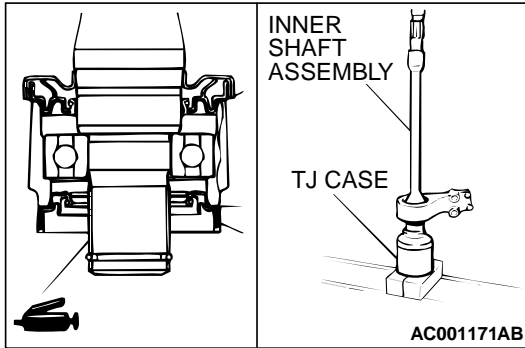
>>E<< INNER SHAFT INSTALLATION

Use special tool MB991172 to hold the center bearing inner race, and then press-in the inner shaft.



**>>F<< TJ CASE AND INNER SHAFT ASSEMBLY
INSTALLATION**

1. Apply multipurpose grease to the inner shaft serration, and then press the inner shaft assembly into the TJ case.

**⚠ CAUTION**

The driveshaft joint uses special grease. Do not mix old and new or different types of grease.

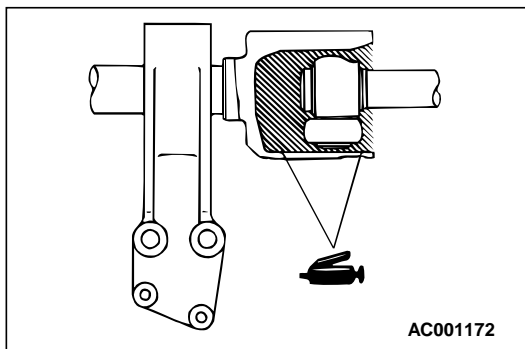
2. Fill the TJ case with repair kit grease and insert the driveshaft, and then refill the TJ case with repair kit grease.

Grease quantity:

100 ± 10 g (3.5 ± 0.4 oz) <2.4L ENGINE>

105 ± 10 g (3.7 ± 0.4 oz) <3.0L ENGINE>

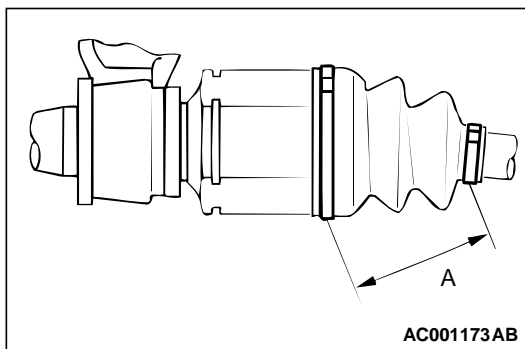
NOTE: The grease in the repair kit should be divided in half for use, respectively, at the joint and inside the boot.

**>>G<< TJ BOOT BAND (SMALL)/TJ BOOT BAND (LARGE)
INSTALLATION**

1. Position the TJ outer race so that the distance between the boot bands is at the standard value.

Standard value (A): 85 ± 3 mm (3.3 ± 0.12 inch)

2. Remove part of the TJ outer race to release the air pressure inside the boot.

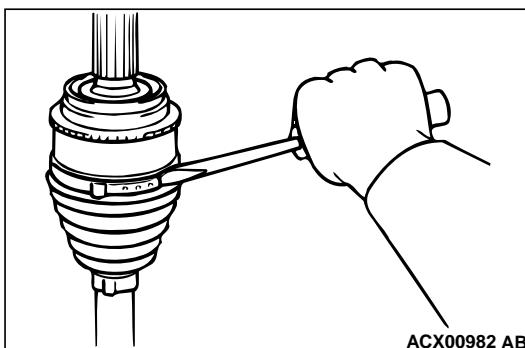
**BJ BOOT REPLACEMENT**

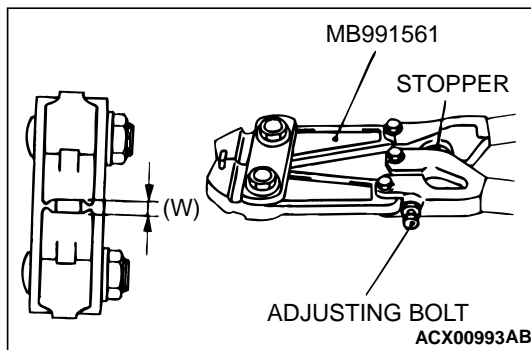
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1. Remove the boot bands (large and small).

NOTE: The BJ boot bands cannot be re-used.

2. Remove the BJ boot.





3. Turn the adjusting bolt on the special tool MB991561 so that the size of the opening (W) is at the standard value.

Standard value (W): 2.9 mm (0.12 inch)

<If it is larger than 2.9 mm (0.12 inch)>

Tighten the adjusting bolt.

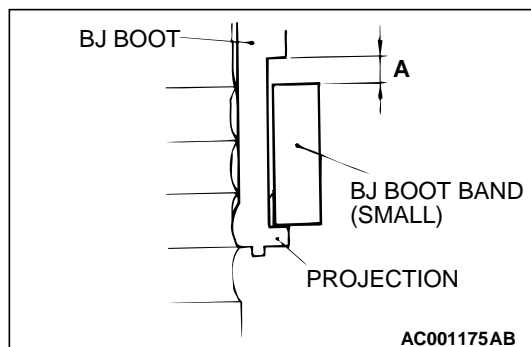
<If it is smaller than 2.9 mm (0.12 inch)>

Loosen the adjusting bolt.

NOTE: The value of W will change by approximately 0.7 mm (0.03 inch) for each turn of the adjusting bolt.

NOTE: The adjusting bolt should not be turned more than once.

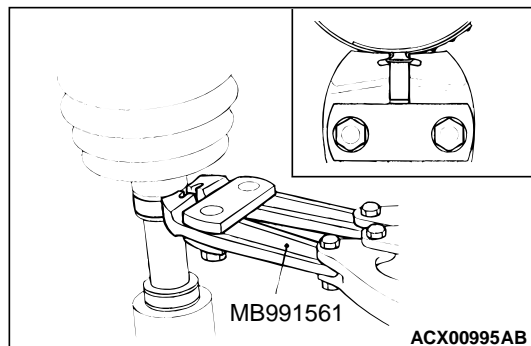
4. Place the BJ boot band (small) against the projection at the edge of the boot, and then secure it so that there is a clearance left as shown by (A) in the illustration.



⚠ CAUTION

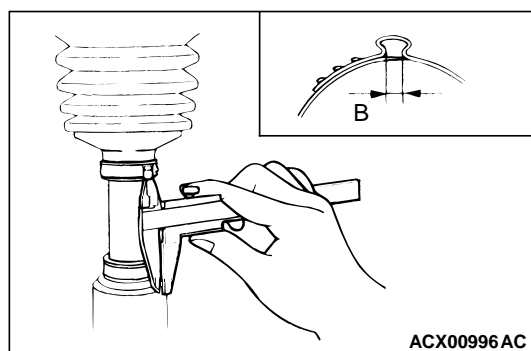
- Secure the driveshaft in an upright position and clamp the part of the BJ boot band to be crimped securely in the jaws of the special tool MB991561.
- Crimp the BJ boot band until the special tool MB991561 touches the stopper.

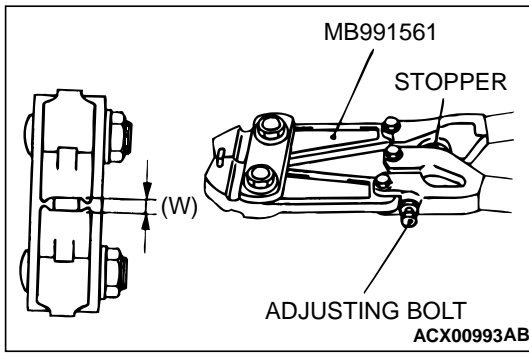
5. Use special tool MB991561 to crimp the BJ boot band (small).



6. Check that crimping amount (B) of the BJ boot band is at the standard value.

Standard value (B): 2.4 – 2.8 mm (0.10 – 0.11 inch)





<If the crimping amount is larger than 2.8 mm (0.11 inch)>

Readjust the value of (W) in step 4 according to the following formula, and then repeat the operation in step 6.

$$[W = 5.5 \text{ mm (0.22 inch)} - B]$$

Example: If B = 2.9 mm (0.11 inch), then W = 2.6 mm (0.10 inch).

<If the crimping amount is smaller than 2.4 mm (0.09 inch)>

Remove the BJ boot band, readjust the value of (W) in step 4 according to the following formula, and then repeat the operations in steps 5 and 6 using a new BJ boot band.

$$[W = 5.5 \text{ mm (0.22 inch)} - B]$$

Example: If B = 2.3 mm (0.10 inch), then W = 3.2 mm (0.13 inch).

7. Check that the BJ boot band is not sticking out past the place where it has been installed. If the BJ boot band is sticking out, remove it and then repeat the operations in steps 4 to 6 using a new BJ boot band.

CAUTION

The driveshaft joint uses special grease. Do not mix old and new grease or different types of grease.

8. Fill the inside of the BJ boot with the specified amount of the repair kit grease.

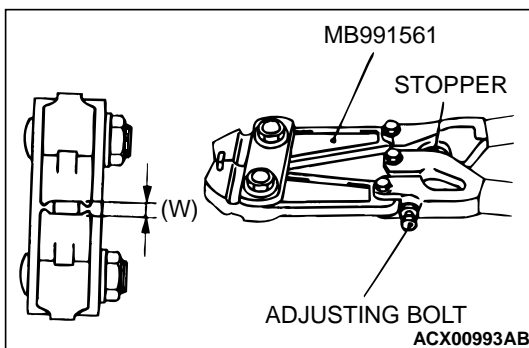
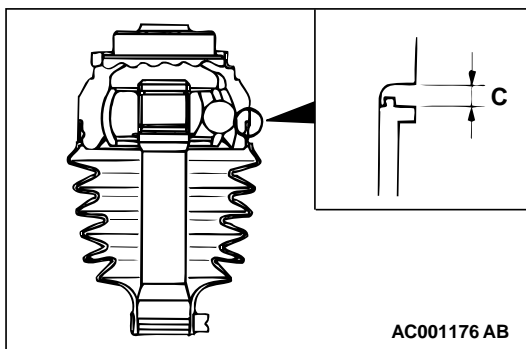
Grease quantity:

<2.4L ENGINE> 110 ± 10 g (3.9 ± 0.4 oz)

<3.0L ENGINE> 120 ± 10 g (4.2 ± 0.4 oz)

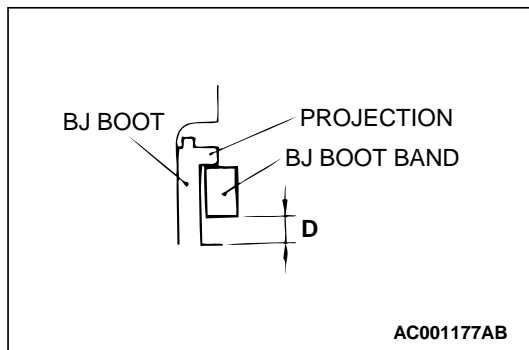
9. Install the BJ boot band (large) so that clearance (C) between it and the BJ housing is at the standard value.

Standard value (C): 0.1 – 1.55 mm (0.004 – 0.061 inch)

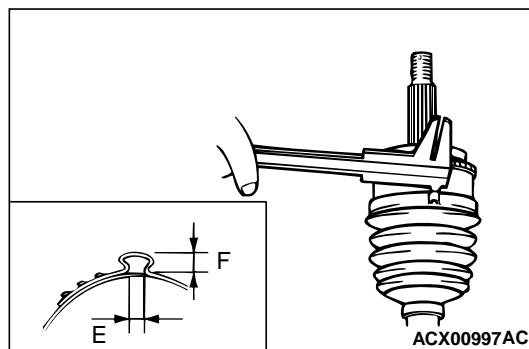


10. Follow the same procedure as in step 3 to adjust the size of the opening (W) on special tool MB991561 so that it is at the standard value.

Standard value (W): 3.2 mm (0.13 inch)



11. Place the BJ boot band (large) against the projection at the edge of the boot, and then secure it so that there is a clearance left as shown by (D) in the illustration.
12. Use special tool MB991561 to crimp the BJ boot band (large) in the same way as in step 5.



13. Check that the crimping amount (E) of the BJ boot band is at the standard value and that the crimping amount (F) of the BJ boot band is at the limited value.

Standard value (E): 2.4 – 2.8 mm (0.10 – 0.11 inch)

Limited value (F): 9.5 mm (0.40 inch)

<If the crimping amount is larger than 2.8 mm (0.11 inch)>

Readjust the value of (W) in step 10 according to the following formula, and then repeat the operation in step 12.

$$[W = 5.8 \text{ mm (0.23 inch)} - E]$$

Example: If E = 2.9 mm (0.11 inch), then W = 2.9 mm (0.11 inch).

<If the crimping amount is smaller than 2.4 mm (0.09 inch)>

Remove the BJ boot band, readjust the value of (W) in step 10 according to the following formula, and then repeat the operations in steps 11 and 12 using a new BJ boot band.

$$[W = 5.8 \text{ mm (0.23 inch)} - E]$$

Example: If E = 2.3 mm (0.10 inch) then W = 3.5 mm (0.15 inch).

14. Check that the BJ boot band is not sticking out past the place where it has been installed. If the BJ boot band is sticking out, remove it and then repeat the operations in steps 11 to 13 using a new BJ boot band.

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

M1261005400086

| ITEMS | SPECIFICATIONS |
|--------------------------------|-------------------------------|
| Caliper assembly bolt | 100 ± 10 N·m (74 ± 7 ft-lb) |
| Center bearing bolt | 40 ± 5 N·m (30 ± 3 ft-lb) |
| Driveshaft nut | 226 ± 29 N·m (167 ± 21 ft-lb) |
| Dust shield bolt | 8.9 ± 1.9 N·m (78 ± 17 in-lb) |
| Front strut nut | 300 ± 24 N·m (221 ± 18 ft-lb) |
| Knuckle and wheel bearing bolt | 88 ± 10 N·m (65 ± 7 ft-lb) |
| Lower arm ball joint nut | 108 ± 10 N·m (80 ± 7 ft-lb) |
| Stabilizer link nut | 44 ± 10 N·m (33 ± 7 ft-lb) |
| Tie rod end nut | 29 ± 4 N·m (21 ± 3 ft-lb) |

GENERAL SPECIFICATIONS

M1261000200087

| ITEMS | | SPECIFICATIONS | |
|------------------------|------------|----------------|------------------------------------|
| Front axle hub bearing | | Type | Double row angular contact bearing |
| Driveshaft | Joint type | Outer | Birfield joint |
| | | Inner | Tripod joint |

SERVICE SPECIFICATIONS

M1261000300084

| ITEMS | STANDARD VALUE | LIMIT |
|--|--|-----------------|
| Front hub axial play mm (in) | – | 0.05 (0.002) |
| Setting of TJ boot length mm (in) | 85 ± 3 (3.3 ± 0.12) | – |
| Wheel bearing breakaway torque N·m (in-lb) | – | 1.0 (9) or less |
| Opening dimension of the special tool (MB991561) mm (in) | When the BJ boot band (small) is crimped | 2.9 (0.12) |
| | When the BJ boot band (large) is crimped | 3.2 (0.13) |
| Crimped width of the BJ boot band mm (in) | 2.4 – 2.8 (0.10 – 0.11) | – |
| Clearance between the BJ boot (larger diameter side) and the stepped phase of the BJ housing mm (in) | 0.1 – 1.55 (0.004 – 0.061) | – |

LUBRICANTS

M1261000400081

| ITEMS | SPECIFIED LUBRICANTS | QUANTITY |
|-----------------|----------------------|---------------------------|
| Dust seal inner | Repair kit grease | 14 – 20 g (0.5 – 0.7 oz) |
| Dust seal outer | Repair kit grease | 8 – 12 g (0.3 – 0.4 oz) |
| TJ boot grease | 2.4L ENGINE | Repair kit grease |
| | 3.0L ENGINE | Repair kit grease |
| BJ boot grease | 2.4L ENGINE | 100 ± 10 g (3.5 ± 0.4 oz) |
| | 3.0L ENGINE | 105 ± 10 g (3.7 ± 0.4 oz) |
| BJ boot grease | 2.4L ENGINE | 110 ± 10 g (3.9 ± 0.4 oz) |
| | 3.0L ENGINE | 120 ± 10 g (4.2 ± 0.4 oz) |

TSB Revision