

GROUP 26

FRONT AXLE

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GENERAL DESCRIPTION

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The front axle consists of front hubs, knuckles, wheel bearings and driveshafts, and it has the following features:

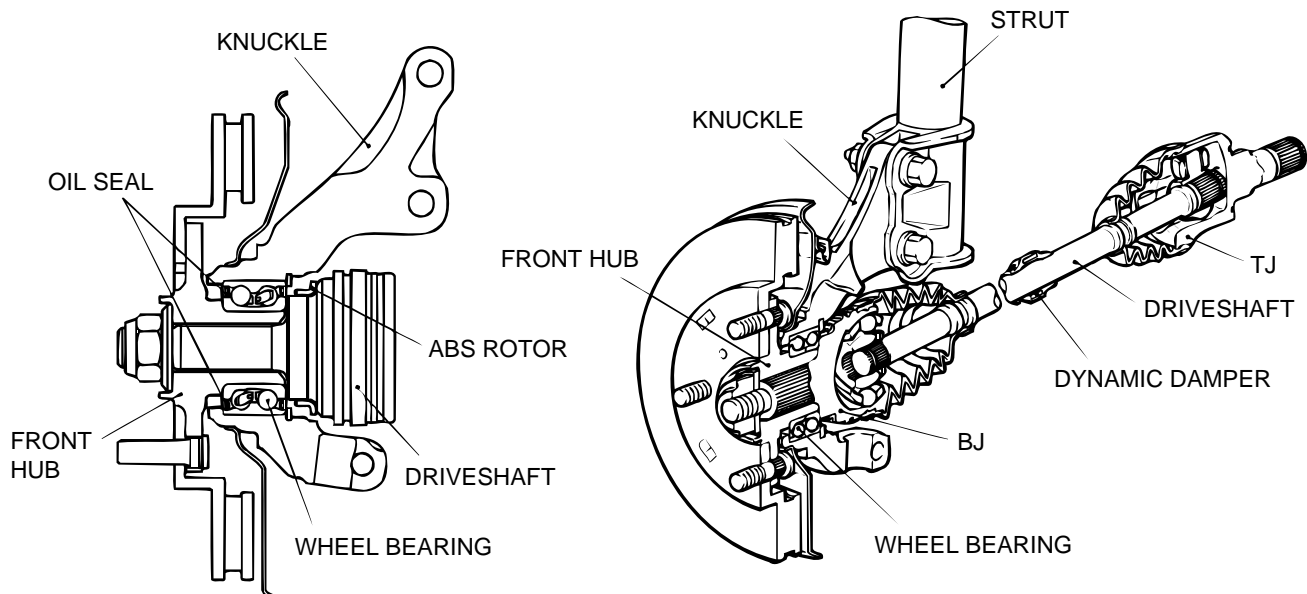
- The wheel bearing is a double-row angular contact ball bearing which incorporates the oil seals and is highly resistant to a thrust load.
- The driveshaft incorporates BJ-TJ type constant velocity joints with high transmission efficiency and low vibration and noise.

- The dynamic dampers have been mounted on the right and left driveshafts to reduce vibration.
- ABS rotors for detecting the wheel speeds are press-fitted to the BJ outer wheels in vehicles with ABS.

NOTE:

- *TJ: Tripod Joint*
- *BJ: Birfield Joint*

CONSTRUCTION DIAGRAM



AC100123AE

FRONT AXLE DIAGNOSIS

TROUBLESHOOTING STRATEGY

M1261005600091

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.

SYMPTOM CHART

M1261005700117

SYMPTOMS		INSPECTION PROCEDURE	REFERENCE PAGE
Driveshaft	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 PROCEDURE 1: Noise during Wheel Rotation

DIAGNOSIS

STEP 1. Check the wheel bearing end play.
(Refer to [P.26-7](#).)

Q: Is the wheel bearing end play within standard value?

YES : Go to step 2.

NO : Replace the part, then go to Step 4.

STEP 2. Check the driveshaft for bending.

Q: Is the driveshaft bent?

YES : Go to step 3.

NO : Replace the part. Then go to Step 4.

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

Q: Is the driveshaft assembly worn or damaged?

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

NO : There is no action to be taken.

STEP 4. Retest the system.

Q: Is the abnormal noise eliminated?

YES : The procedure is complete.

NO : Repeat from Step 1.

INSPECTION PROCEDURE 2: Noise Due to Excessive Play of Wheel in Turning Direction

DIAGNOSIS

STEP 1. Check for play in the driveshaft and side gear front hub serration or the driveshaft and front hub serration.

Q: Is the play found?

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

NO : The procedure is complete.

STEP 2. Retest the system.

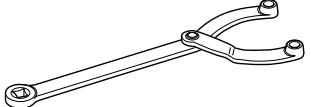
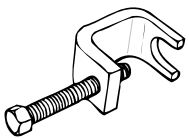
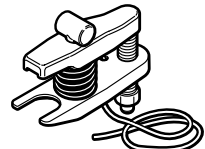
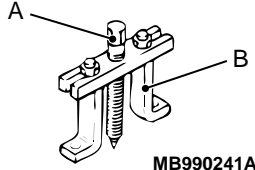
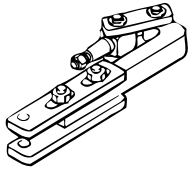

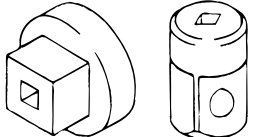
Q: Is the abnormal noise eliminated?

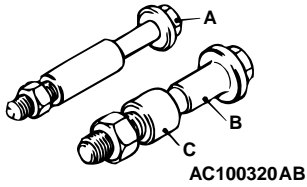
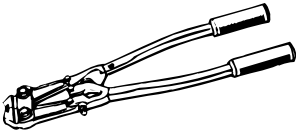
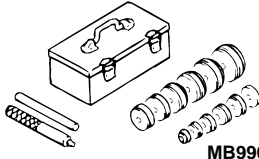

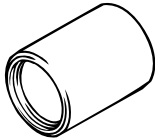
YES : The procedure is complete.

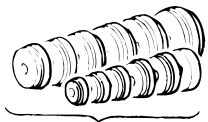
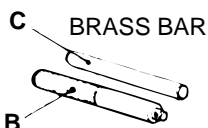
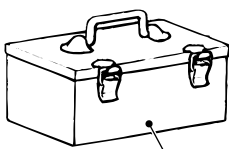
NO : Repeat from Step 1.

SPECIAL TOOLS

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TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
 B990767	MB990767 End yoke holder	MB990767-01	Fixing of the hub
 MB991618	MB991618 Hub bolt remover	General service tool	Removal of the hub bolt
 AC106827	MB991897 Ball joint remover	MB991113-01, MB990635-01 or General service tool	Knuckle and tie rod end ball joint disconnection <i>NOTE: Steering linkage puller(MB990635 or MB991113)is also used to disconnect knuckle and tie rod end ball joint.</i>
 MB990241AB	MB990241 Axle shaft puller A: MB990244 Puller shaft B: MB990242 Puller bar	MB990241-01 or General service tool	<ul style="list-style-type: none"> Removal of the driveshaft Removal of the hub
	MB991056 or MB991355 Knuckle arm bridge	MB991056-01	
	MB990685 Torque wrench	General service tool	Measurement of wheel bearing rotation starting torque
 MB990326	MB990326 Preload socket	General service tool	Measurement of wheel bearing rotation starting torque

TOOL	TOOL NUMBER AND NAME	SUPERSESION	APPLICATION
 <p>AC100320AB</p>	<p>A: MB991017 B: MB990998 C: MB991000 A, B: Front hub remover and installer C: Spacer</p>	MB990998-01	<ul style="list-style-type: none"> Provisional holding of the wheel bearing Measurement of wheel bearing rotation starting torque Measurement of wheel bearing end play MB991000, which belongs to MB990998, should be used as a spacer.
 <p>MB991561</p>	<p>MB991561 Boot band crimping tool</p>	MB991561	Resin boot band installation
 <p>MB990925</p>	<p>MB990925 Bearing and oil seal installer set</p>	MB990925-01 or General service tool	Removal of wheel bearing
 <p>MB990810</p>	<p>MB990810 Side bearing puller</p>	General service tool	Removal of the wheel bearing inner race (outside)
 <p>MB991050</p>	<p>MB991576 Base</p>	General service tool	Oil seal installation

TOOL	TYPE	TOOL NUMBER	O D mm (in)
MB990925  A INSTALL ADAPTER  C BRASS BAR B BAR (SNAP-IN TYPE)  TOOL BOX ACX02372 AB	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	MB990938	—
	C	MB990939	—

ON-VEHICLE SERVICE

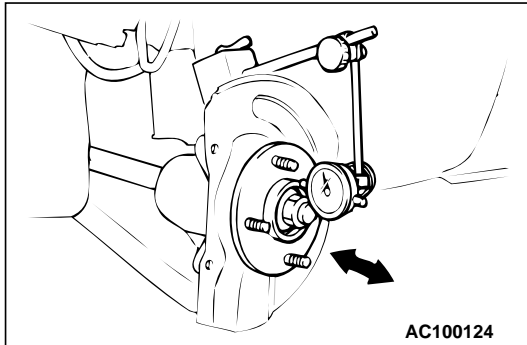
WHEEL BEARING END PLAY CHECK

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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.



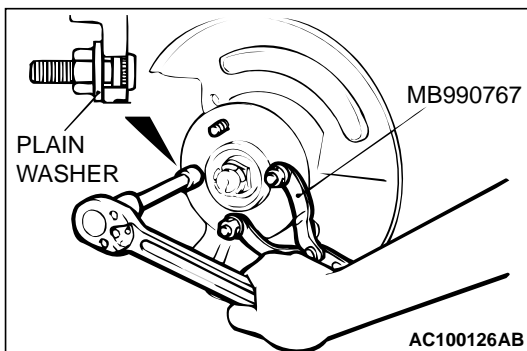
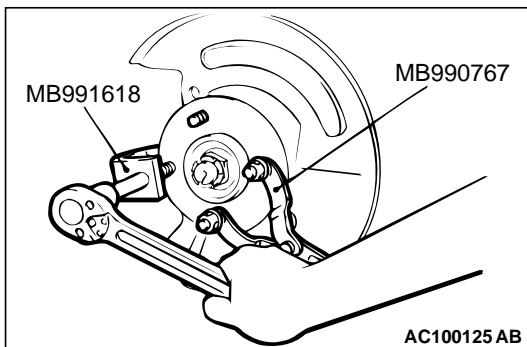
HUB BOLT REPLACEMENT

M1261001000116

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 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.

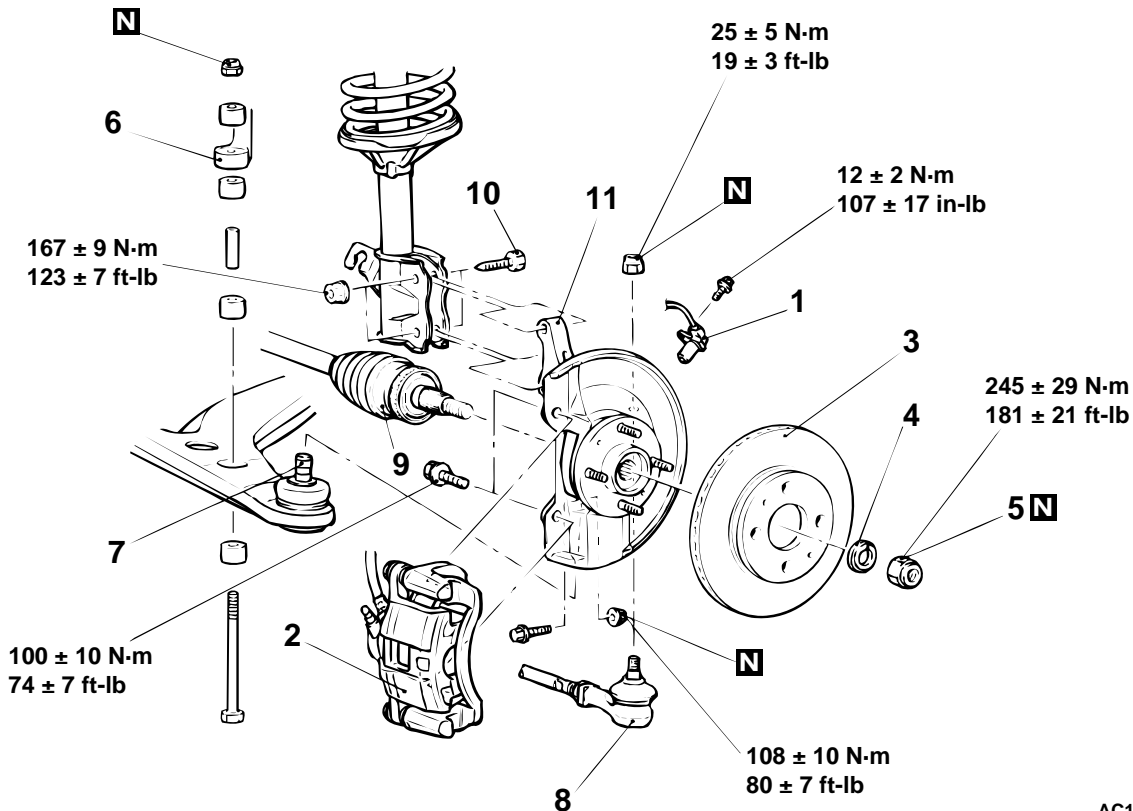
FRONT AXLE HUB ASSEMBLY

REMOVAL AND INSTALLATION

M1261001700267

Post-installation Operation

- Check the Dust Cover for cracks or damage by pushing it with your finger.



AC100127AB

REMOVAL STEPS

1. FRONT ABS SPEED SENSOR <VEHICLES WITH ABS>
2. CALIPER ASSEMBLY
3. BRAKE DISC
4. DRIVESHAFT NUT
5. WASHER
6. CONNECTION FOR STABILIZER BAR

REMOVAL STEPS (Continued)

7. CONNECTION FOR LOWER ARM BALL JOINT
8. CONNECTION FOR TIE ROD END
9. DRIVESHAFT
10. FRONT STRUT TO HUB AND KNUCKLE MOUNTING BOLT AND NUT
11. HUB AND KNUCKLE

Required Special Tools:

- MB990241: Axle shaft puller
- MB990326: Preload Socket

- MB990767: End Yoke Holder
- MB990998: Front Hub Remover and Installer
- MB991897: Ball Joint Remover

REMOVAL SERVICE POINTS

<<A>> CALIPER ASSEMBLY REMOVAL

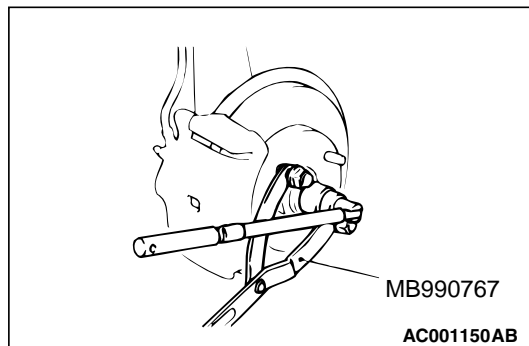
Secure the removed caliper assembly with wire, etc.

<> 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.

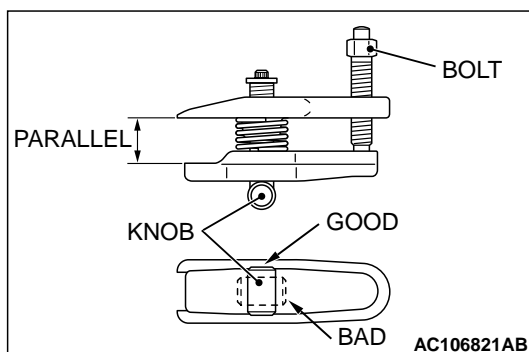
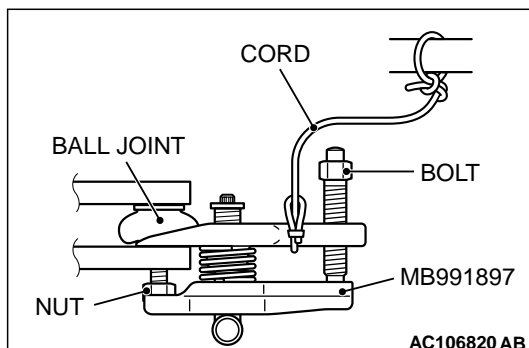


<<C>> TIE ROD END DISCONNECTION

⚠ CAUTION

- Do not remove the nut from ball joint. Loosen it and use special tool MB991897 to avoid possible damage to ball joint threads.
- Hang special tool MB991897 with cord to prevent it from falling.

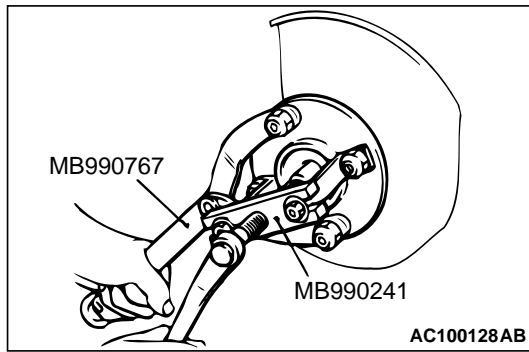
1. Install the special tool MB991897 as shown in the figure.



2. Turn the bolt and knob as necessary to make the jaws of special tool MB991897 parallel, tighten the bolt by hand and confirm that the jaws are still parallel.

NOTE: When adjusting the jaws in parallel, make sure the knob is in the position shown in the figure.

3. Tighten the bolt with a wrench to disconnect the tie rod end.

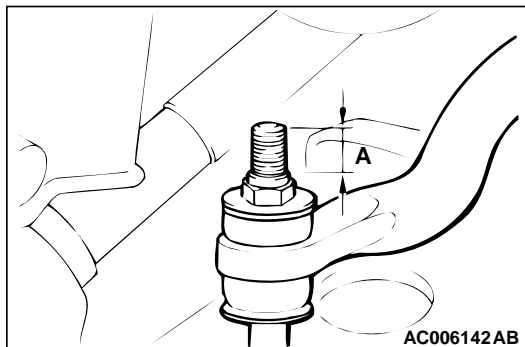
**<<D>> DRIVESHAFT REMOVAL**

Use special tools MB990241 and MB990767 to pull out the driveshaft from the hub and knuckle.

INSTALLATION SERVICE POINT**>>A<< STABILIZER BAR INSTALLATION**

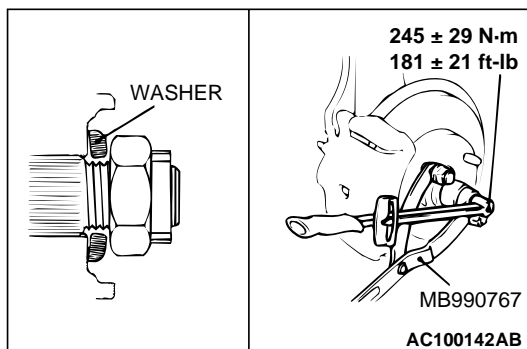
Install the stabilizer bar so that the protruding length of the stabilizer bar mounting bolt meets its standard value (A).

Standard value (A): 22 ± 1.5 mm (0.87 ± 0.06 inch)

**>>B<< WASHER/DRIVESHAFT NUT INSTALLATION**

1. Be sure to install the driveshaft washer in the specified direction.
2. Using special tool MB990767, tighten the driveshaft nut.

NOTE: Before securely tightening the driveshaft nuts, make sure there is no load on the wheel bearings. Otherwise wheel bearing will be damaged.

**INSPECTION**

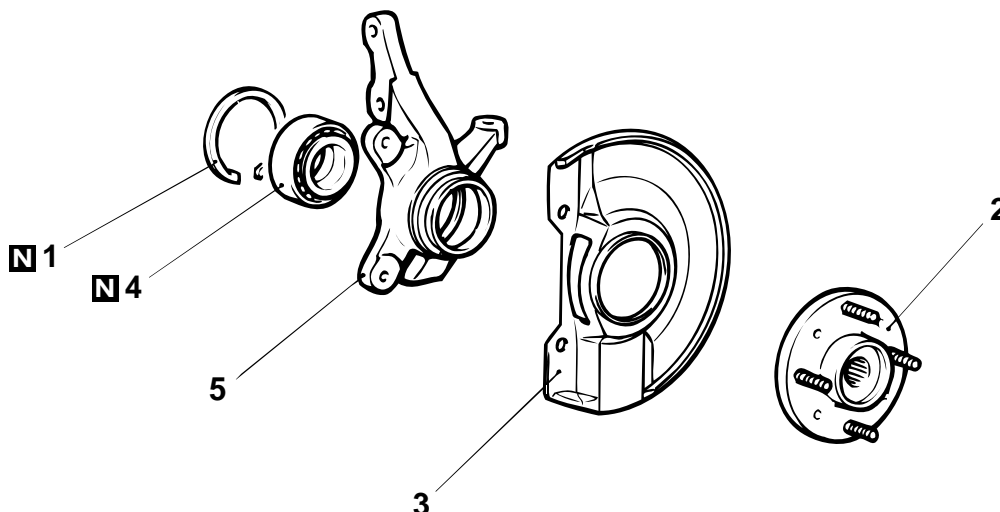
M1261001800112

- Check the hub for cracks and spline for wear.
- Check the oil seal for damage.
- Check the knuckle for cracks.
- Check for defective bearing.

NOTE: If the meshing of the wheel bearing outer race and the knuckle, or of the wheel bearing inner race and the hub, is loose, replace the bearing or damaged parts.

DISASSEMBLY AND REASSEMBLY

M1261001900120



AC100129 AB

<<A>> Disassembly steps

1. SNAP RING
2. HUB
3. DUST COVER
4. WHEEL BEARING
5. KNUCKLE

<>

Reassembly steps

5. KNUCKLE
4. WHEEL BEARING

>>A<<

1. SNAP RING
3. DUST COVER
2. HUB

>>B<<

- HUB STARTING TORQUE CHECK

>>C<<

- HUB END PLAY CHECK

Required Special Tools:

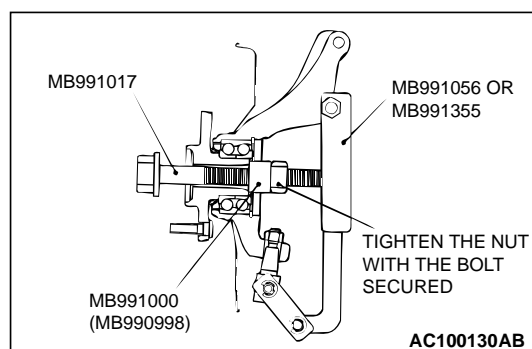
- MB990326: Preload Socket
- MB990685: Torque Wrench
- MB990810: Side bearing puller
- MB990933: Installer Adapter
- MB990938: Brass Bar
- MB991001 (MB990998): Front Hub Remover and Installer
- MB991017: Front Hub Remover and Installer
- MB991050: Rear Suspension Bush Remover and Install Base
- MB991056 or MB991355: Knuckle arm bridge

DISASSEMBLY SERVICE POINTS

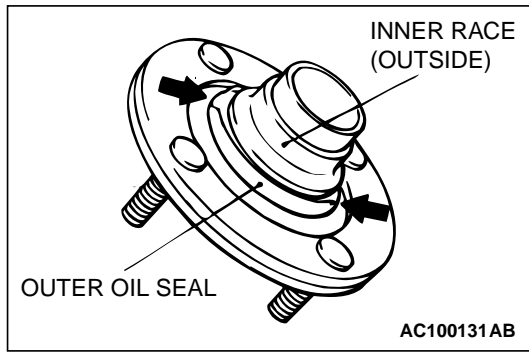
<<A>> HUB REMOVAL

⚠ CAUTION

When the hub has been removed, always replace the wheel bearing with a new part because wheel bearing frictional surface will be damaged when removing the hub. Use special tools MB991017, MB991056 or MB991355, MB991001 (MB990998) to pull out the hub from the knuckle.



AC100130AB

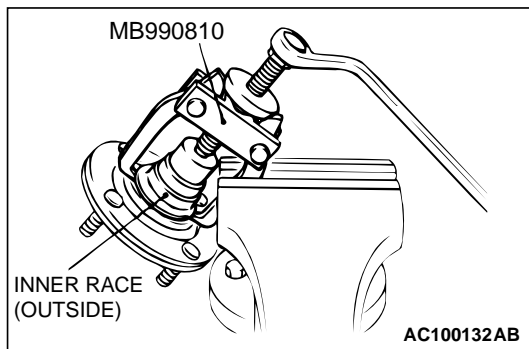


<> WHEEL BEARING REMOVAL

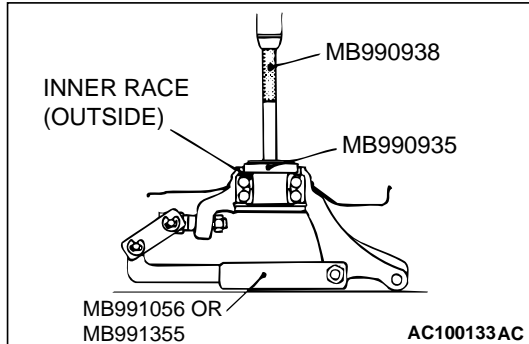
1. Crush the oil seal in two places so that the tabs of the special tool will be caught on the wheel bearing inner race (outside).

⚠ CAUTION

When removing the inner race (outside) from the hub, be careful not to let the hub drop.



2. Remove the wheel bearing inner race (outside) from the front hub by using special tool MB990810.



3. Install the inner race (outside) that was removed from the hub to the wheel bearing, and then use special tools MB990935, MB990938, MB991056 or MB991355 to remove the wheel bearing.

REASSEMBLY SERVICE POINTS

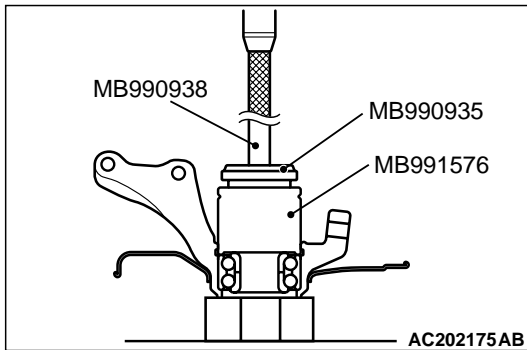
>>A<< WHEEL BEARING INSTALLATION

1. Fill the wheel bearing with multipurpose grease.
2. Apply a thin coating of multipurpose grease to the knuckle and bearing contact surfaces.

⚠ CAUTION

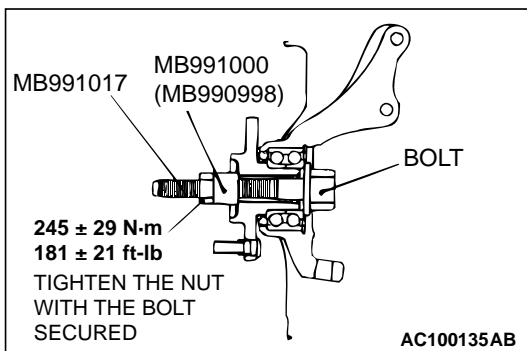
Press the outer race when pressing-in the wheel bearing. Otherwise the wheel bearing will be damaged.

3. Press-in the bearing by using special tools MB990938, MB990935, MB991576.



>>B<< HUB STARTING TORQUE CHECK

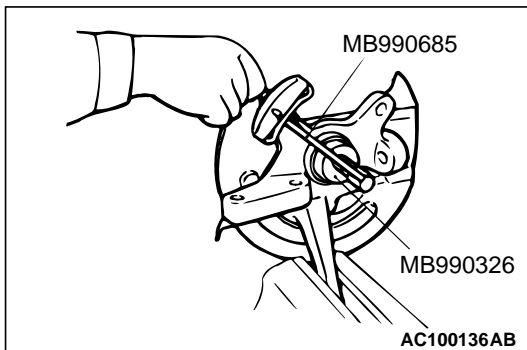
1. Tighten special tools MB991000 (MB990998) and MB991017 to the specified torque, and then press the hub into the knuckle.
2. Rotate the hub in order to seat the bearing.



3. Measure the hub starting torque by using the special tools MB990326 and MB990685.

Limit: 1.8 N·m (16 in-lb)

4. The starting torque must be within the limit and, in addition, the hub rotation must be smooth.

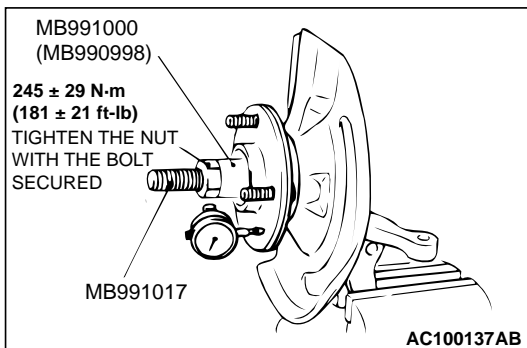


>>C<< HUB END PLAY CHECK

1. Measure to determine whether the end play of the hub is within the specified limit or not.

Limit: 0.05 mm (0.002 inch)

2. If the starting torque and hub end play are not within the limit range while the nut is tightened to 245 ± 29 N·m (181 ± 21 ft-lb), the bearing, hub and/or knuckle have probably not been installed correctly. Replace the bearing and re-install.



INSPECTION

M1261002000023

- Check the front hub and brake disc mounting surfaces for galling and contamination.
- Check the knuckle inner surface for galling and cracks.
- Check for defective bearing.

DRIVE SHAFT ASSEMBLY

REMOVAL AND INSTALLATION

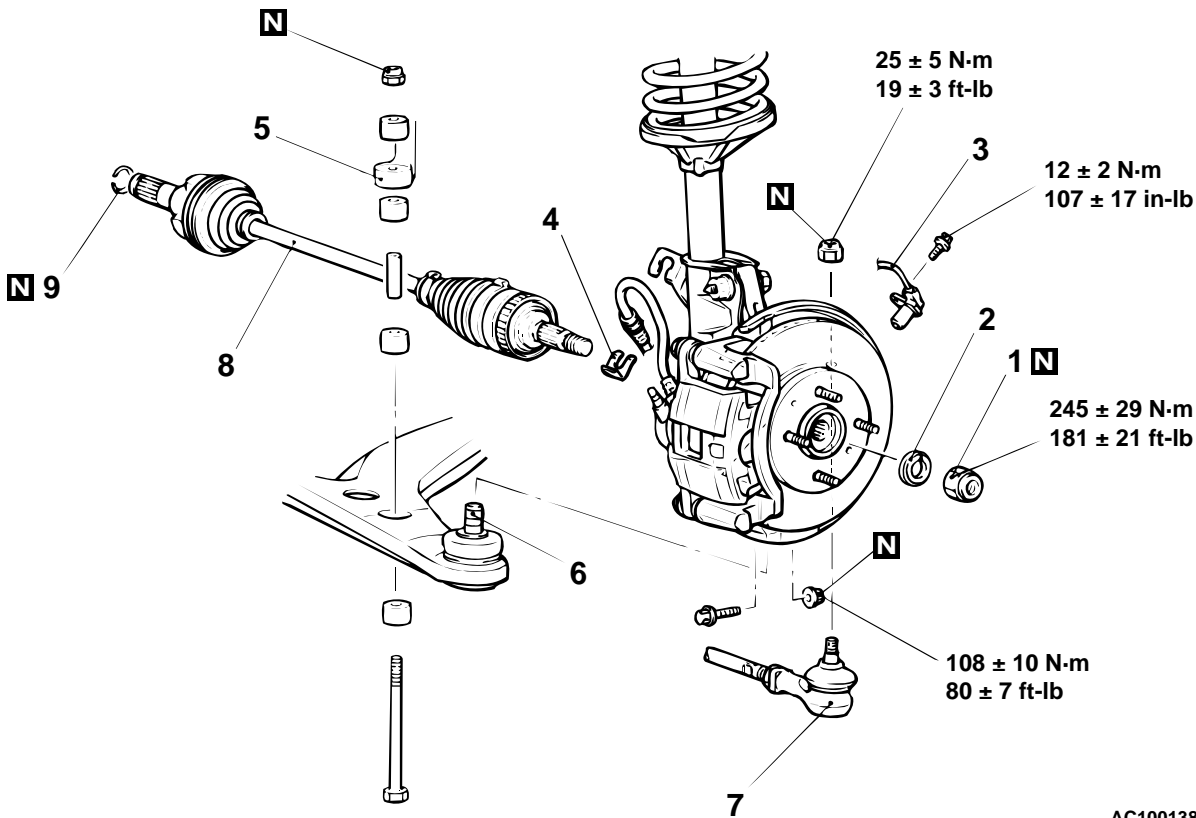
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CAUTION

For vehicles with ABS, do not strike the ABS rotors installed to the BJ outer race of driveshaft against other parts when removing or installing the drive shaft. Otherwise the ABS rotors will be damaged.

Post-installation Operation

- Check the Dust Cover for cracks or damage by pushing it with your finger.



AC100138AB

- | | | | |
|-------|-------|----|---|
| <<A>> | >>C<< | 1. | DRIVESHAFT NUT |
| | >>C<< | 2. | WASHER |
| | | 3. | FRONT SPEED SENSOR
<VEHICLES WITH ABS> |
| | >>B<< | 4. | BRAKE HOSE CRAMP |
| | | 5. | STABILIZER BAR CONNECTION |
| | | 6. | LOWER ARM BALL JOINT
CONNECTION |
| <> | | 7. | TIE ROD END CONNECTION |

- | | | | |
|-------|-------|----|------------|
| <<C>> | >>A<< | 8. | DRIVESHAFT |
| | | 9. | CIRCLIP |

Required Special Tools:

- MB990242: Puller Bar
- MB990767: End Yoke Holder
- MB990998: Front Hub Remover and Installer
- MB991897: Ball Joint Remover
- MB991354: Puller Body

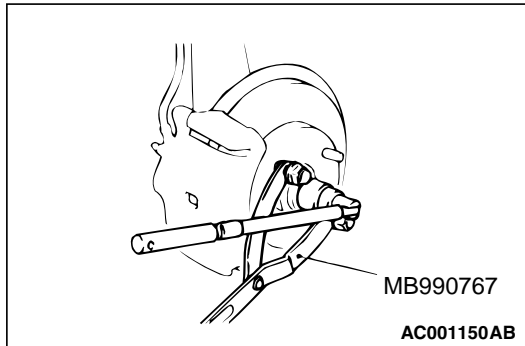
REMOVAL SERVICE POINTS

<<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.

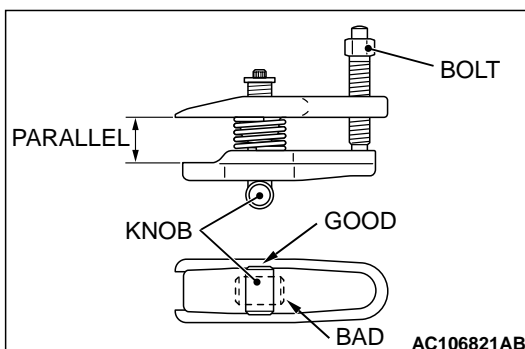
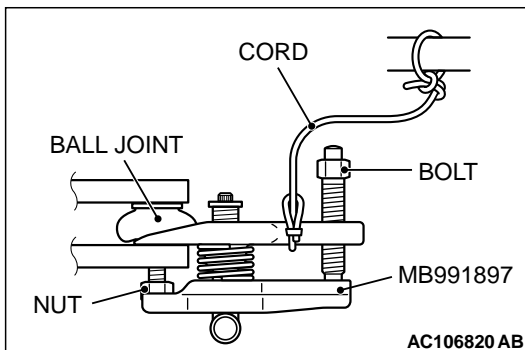


<> LOWER ARM BALL JOINT/TIE ROD END DISCONNECTION

CAUTION

- Do not remove the nut from the ball joint. Loosen it and use special tool MB991897 to avoid possible damage to the ball joint threads.
- Hang special tool MB991897 with rope or wire to prevent them from falling.

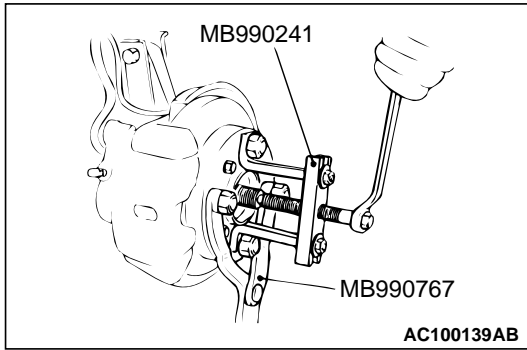
1. Install the special tool MB991897 as shown in the figure.



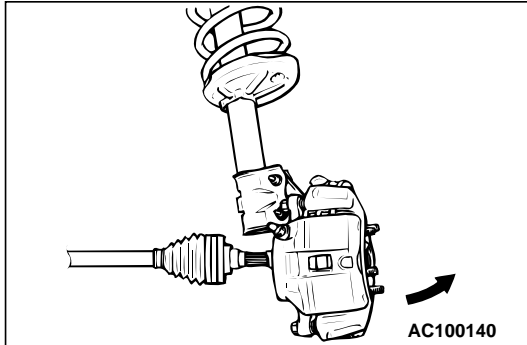
2. After turning the bolt and knob to adjust the insert arms of the special tool MB991897 in parallel, tighten the bolt by hand and confirm that the insert arms are parallel.

NOTE: When adjusting the insert arms in parallel, turn the knob in the direction shown in the figure.

3. Tighten the bolt with a wrench to disconnect the ball joint.

**<<C>> DRIVESHAFT REMOVAL**

1. Use special tools MB990241 and MB990767 to push out the driveshaft from the hub.

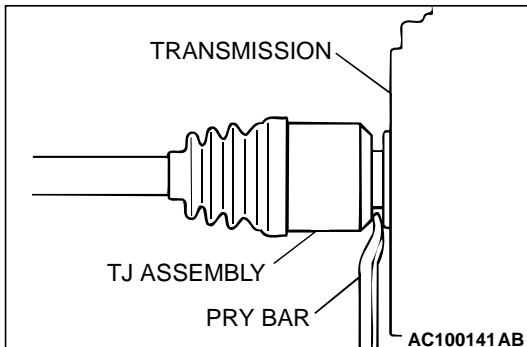


2. Remove the driveshaft from the hub by pulling the bottom of the brake disc towards you, and then remove the hub retaining bolts.

⚠ CAUTION

- Do not pull on the driveshaft; doing so will damage the TJ; be sure to use the pry bar.
- When pulling the driveshaft out from the transmission, be careful that the spline part of the driveshaft does not damage the oil seal.

3. Remove the driveshaft from the transmission by the following procedure. Insert a pry bar between the transmission case and the driveshaft, and then pry the driveshaft from the transmission.

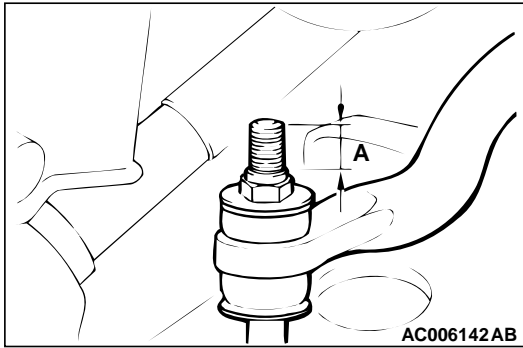
**INSTALLATION SERVICE POINTS****>>A<< DRIVESHAFT INSTALLATION****⚠ CAUTION**

Do not damage the oil seal of the transmission by the driveshaft spline.

>>B<< STABILIZER BAR INSTALLATION

Install the stabilizer bar so that the protruding length of the stabilizer bar mounting bolt meets its standard value (A).

Standard value: 22 ± 1.5 mm (0.87 ± 0.06 inch)



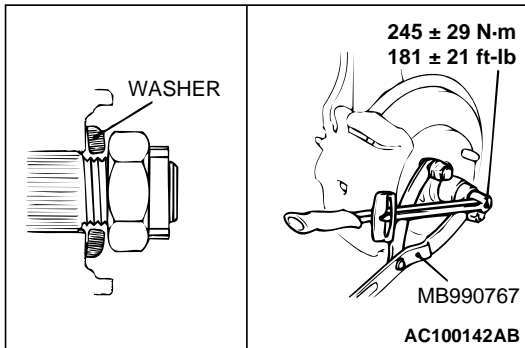
>>C<< WASHER/DRIVESHAFT NUT INSTALLATION

1. Be sure to install the driveshaft washer in the specified direction.

⚠ CAUTION

Before securely tightening the driveshaft nuts, make sure there is no load on the wheel bearings. Otherwise the wheel bearing will be damaged.

2. Using special tool MB990767, tighten the driveshaft nut.

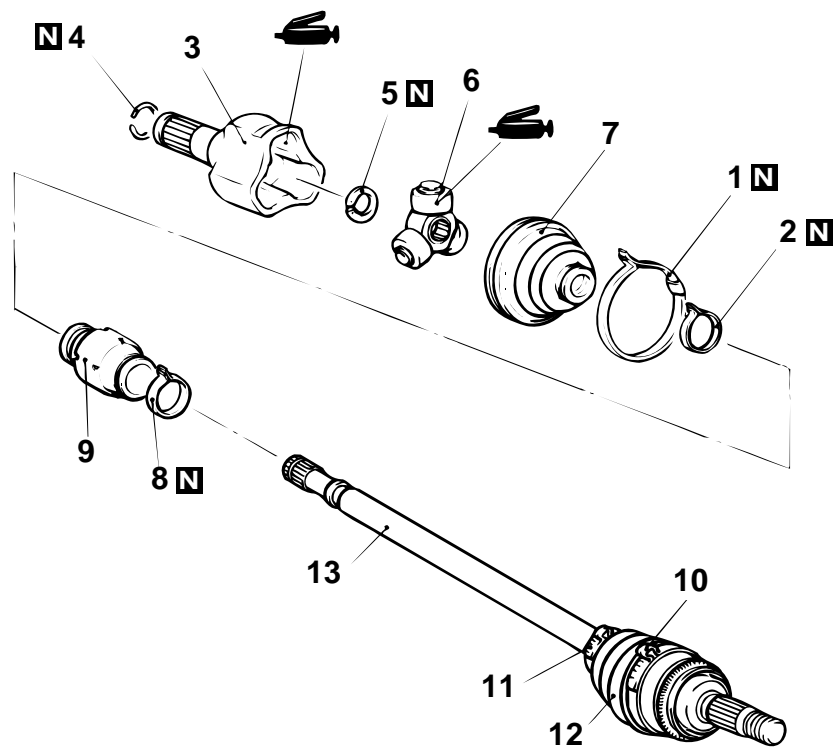


DISASSEMBLY AND ASSEMBLY

M1261003700296

CAUTION

- For vehicles with ABS, be careful not to damage the ABS rotor, which is attached to the BJ outer race during disassembly and reassembly.
- Never disassemble the BJ assembly except when replacing the BJ boot.



TJ REPAIR KIT	TJ BOOT REPAIR KIT	BJ BOOT REPAIR KIT

AC203833 AB

- DISASSEMBLY STEPS**
- >>C<< 1. TJ BOOT BAND (LARGE)
>>C<< 2. TJ BOOT BAND (SMALL)
<<A>> >>B<< 3. TJ CASE
4. CIRCLIP
5. SNAP RING
<<A>> >>B<< 6. SPIDER ASSEMBLY
<> >>A<< 7. TJ BOOT
>>A<< 8. DAMPER BAND
>>A<< 9. DYNAMIC DAMPER
10. BJ BOOT BAND (LARGE)

- DISASSEMBLY STEPS**
11. BJ BOOT BAND (SMALL)
12. BJ BOOT
13. BJ ASSEMBLY

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

DISASSEMBLY SERVICE POINTS

<<A>> TJ CASE/SPIDER ASSEMBLY REMOVAL

1. Wipe off grease from the spider assembly and the inside of the TJ case.

CAUTION

Do not disassemble the spider assembly.

2. Always clean the spider assembly when the grease contains water or foreign material.

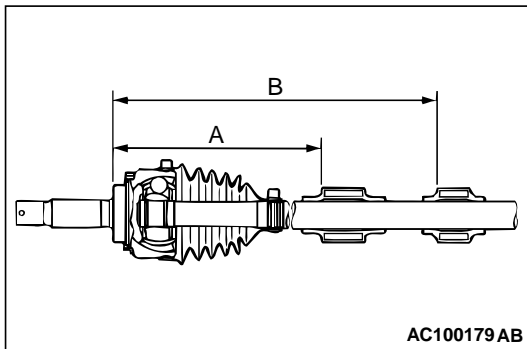
<> TJ BOOT REMOVAL

1. Wipe off grease from the shaft spline.
2. When reusing the TJ boot, wrap plastic tape around the shaft spline to avoid damaging the boot.

REASSEMBLY SERVICE POINTS

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

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

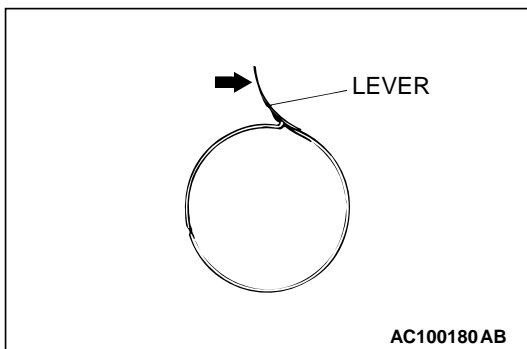


ITEM	A (LH SIDE) mm (inch)	B (RH SIDE) mm (inch)
LL, L	223±3(8.8±0.12)	428±3(16.9±0.12)
M, SPORT	223±3(8.8±0.12)	412±3(16.2±0.12)

CAUTION

- There should be no grease adhered to the rubber part of the dynamic damper.
- Be careful not to confuse the damper band with the TJ boot band (small). Locate the identification numbers stamped on the band levers.

ITEM	IDENTIFICATION NO.
Damper band	8382
TJ boot band	E687



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

>>B<< SPIDER ASSEMBLY/TJ CASE INSTALLATION

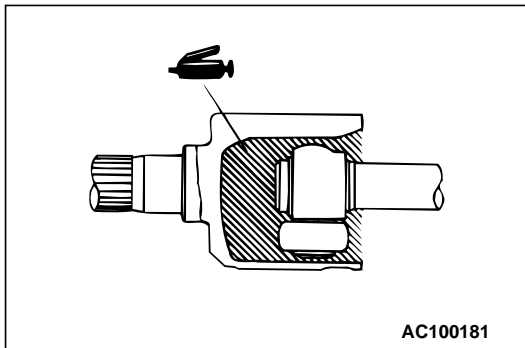
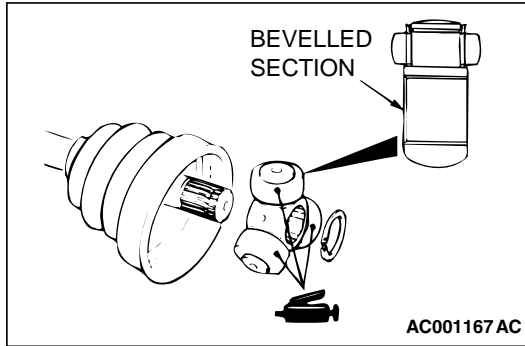
⚠ CAUTION

- The driveshaft joint use special grease. Do not mix old and new or different types of grease.
- If the spider assembly has been cleaned, take special care to apply the specified grease.

1. Apply the specified grease furnished in the repair kit to the spider assembly between the spider axle and the roller.

Specified grease: Repair kit grease

2. Install the spider assembly to the shaft from the direction of the spline bevelled section.

**⚠ CAUTION**

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

3. After applying the specified grease to the T.J. case, insert the driveshaft and apply grease one more time.

Specified grease: Repair kit grease

Amount to use:

<LL, L> LH: 145 ± 10 g (5.1 ± 0.4 oz), RH: 130 ± 10 g (4.6 ± 0.4 oz)

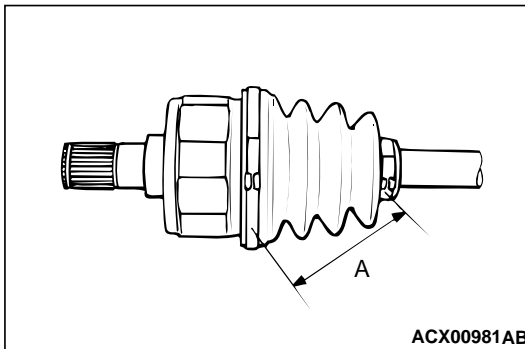
<M, SPORT> 145 ± 10 g (5.1 ± 0.4 oz)

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

>>C<< TJ BOOT BAND (SMALL)/TJ BOOT BAND (LARGE) INSTALLATION

Set the T.J. boot bands at the specified distance in order to adjust the amount of air inside the T.J. boot, and then tighten the T.J. boot bands securely.

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



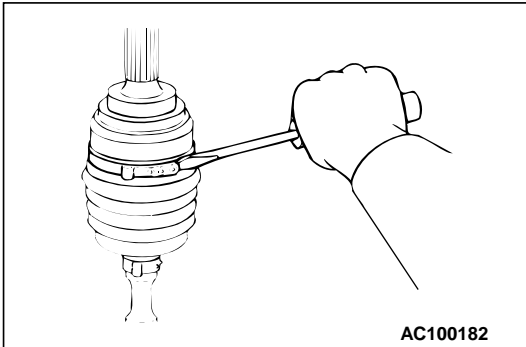
INSPECTION

M1261003800044

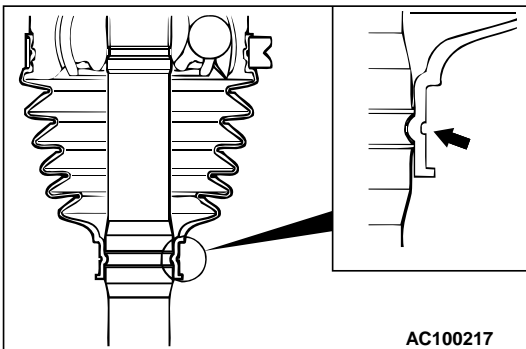
- Check the driveshaft for damage, bending or corrosion.
- Check the driveshaft spline part for wear or damage.
- Check the spider assembly for roller rotation, wear or corrosion.
- Check the groove inside TJ case for wear or corrosion.
- Check the dynamic damper for damage or cracking.
- Check the boots for deterioration, damage or cracking.
- Check the dust cover for damage or deterioration.

BJ BOOT (RESIN BOOT) REPLACEMENT

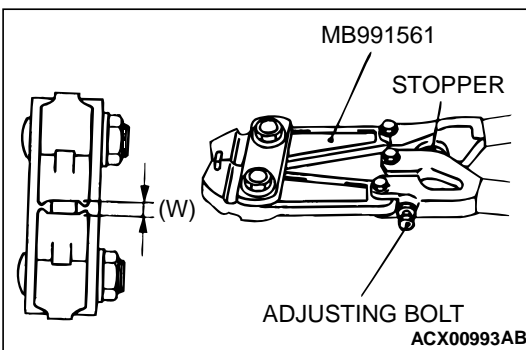
M1261005200275



1. Remove the boot bands (large and small).
NOTE: The boot bands cannot be re-used.
2. Remove the B.J. boot.
3. Wrap a plastic tape around the shaft spline, and assemble the boot band and resin boot.



4. Align the center groove on the BJ boot small end with the shaft groove.



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

Standard value (W): 2.9 mm (0.11 inch)

<If it is larger than 2.9 mm (0.11 inch)>

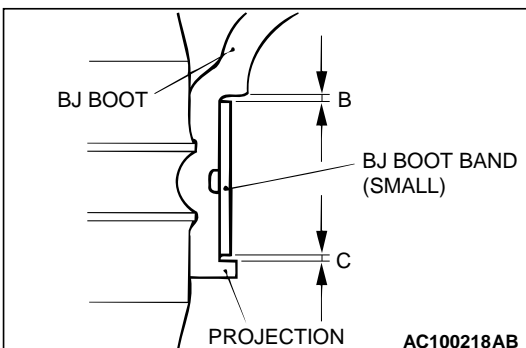
Tighten the adjusting bolt.

<If it is smaller than 2.9 mm (0.11 inch)>

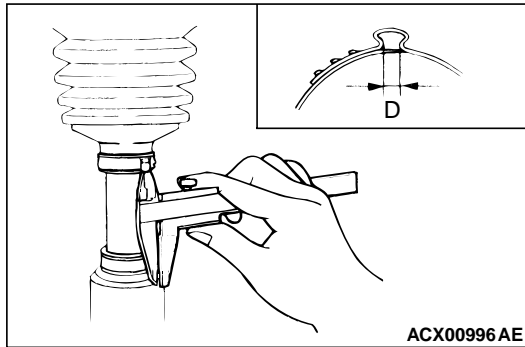
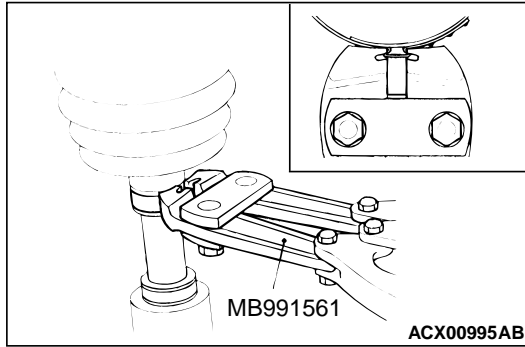
Loosen the adjusting bolt.

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

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



6. Position the BJ boot band (small) so that there are even clearance at either end (B and C).

**⚠ CAUTION**

- Secure the driveshaft in an upright position and clamp part of the boot band to be crimped securely in the jaws of the special tool MB991561.
 - Crimp the boot band until the special tool MB991561 touches the stopper.
7. Use special MB991561 tool to crimp the boot band (small).

8. Check that the crimping amount (D) of the boot band is at the standard value.

Standard value (D):

2.4 – 2.8 mm (0.10 – 2.79 mm)

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

Readjust the value of (W) in step 5 according to the following formula, and then repeat the operation in step 7.

$W = 5.5 \text{ mm (0.22 inch)} - D$

Example: If $D = 2.9 \text{ mm (0.11 inch)}$, then $W = 2.6 \text{ mm (0.10 inch)}$.

<If the crimping amount is smaller than 2.4 mm (0.10 inch)>

Remove the BJ boot band, readjust the value of (W) in step 5 according to the following formula, and then repeat the operations in steps 6 and 7 using a new BJ boot band.

$W = 5.5 \text{ mm (0.22 inch)} - D$

Example: If $D = 2.3 \text{ mm (0.09 inch)}$, then $W = 3.2 \text{ mm (0.13 inch)}$.

9. Check that the boot band is not sticking out past the place where it has been installed. If the boot band is sticking out, remove it and then repeat the operations in steps 6 to 8 using a new boot band.

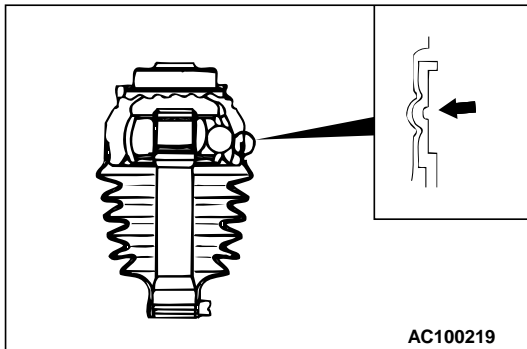
⚠ CAUTION

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

10. Fill the inside of the boot with the specified amount of the specified grease.

Specified grease: Repair kit grease

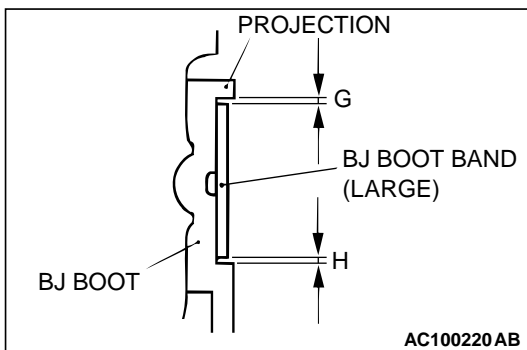
Amount to use: $95 \pm 10 \text{ g (3.4} \pm 0.4 \text{ oz)}$



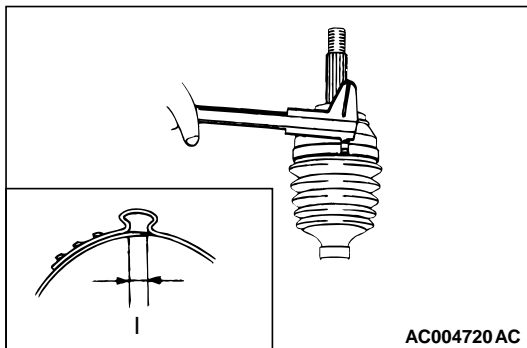
11. Align the center groove on the BJ boot big end with the shaft groove.

12. Follow the same procedure as in step 5 to adjust the size of the opening (W) on the special tool so that it is at the standard value.

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



13. Position the BJ boot band (large) so that there are even clearance at either end (G and H).



14. Use the special tool MB991561 to crimp the B.J. boot band (large) in the same way as in step 7.

15. Check that the crimping amount (I) of the boot band is at the standard value.

Standard value (I):

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 12 according to the following formula, and then repeat the operation in step 14.

$W = 5.5 \text{ mm (0.22 inch)} - I$

Example: If $I = 2.9 \text{ mm (0.11 inch)}$, then $W = 2.6 \text{ mm (0.10 inch)}$.

<If the crimping amount is smaller than 2.4 mm (0.10 inch)>

Remove the BJ boot band, readjust the value of (W) in step 12 according to the following formula, and then repeat the operations in steps 13 and 14 using a new BJ boot band.

$W = 5.5 \text{ mm (0.22 inch)} - I$

Example: If $I = 2.3 \text{ mm (0.09 inch)}$, then $W = 3.2 \text{ mm (0.13 inch)}$.

16. Check that the boot band is not sticking out past the place where it has been installed. If the boot band is sticking out, remove it and then repeat the operations in steps 13 to 15 using a new boot band.

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

M1261005400257

ITEM	SPECIFICATION
Caliper assembly bolt	100 ± 10 N·m (74 ± 7 ft-lb)
Driveshaft nut	245 ± 29 N·m (181 ± 21 ft-lb)
Front ABS speed sensor bolt	12 ± 2 N·m (107 ± 17 in-lb)
Front strut nut	167 ± 9 N·m (123 ± 7 ft-lb)
Lower arm ball joint nut	108 ± 10 N·m (80 ± 7 ft-lb)
Tie rod end nut	25 ± 5 N·m (19 ± 3 ft-lb)

GENERAL SPECIFICATIONS

M1261000200247

ITEM		SPECIFICATION
Front axle hub bearing	Type	Double row angular contact bearing
Driveshaft	Joint type	Outer
		Inner
		Birfield joint
		Tripod joint

SERVICE SPECIFICATIONS

M1261000300288

ITEM	STANDARD VALUE	LIMIT
Wheel bearing end play mm (in)	—	0.05 (0.002)
Wheel bearing rotation starting torque N·m (in)	—	1.8 (0.07)
Protruding length of stabilizer bar mounting bolt mm (in)	22 ± 1.5 (0.87 ± 0.06)	—
Setting of TJ boot length mm (in)	85 ± 3 (3.3 ± 0.12)	—
Opening dimension of the special tool (MB991561) mm (in)	When the BJ boot band (small) is crimped	1.6 (0.06)
	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)	—

LUBRICANTS

M1261000400285

ITEM		SPECIFIED LUBRICANT	QUANTITY
TJ boot grease	LL, L	Repair kit grease	LH
			RH
	M, SPORT	Repair kit grease	
BJ boot grease		Repair kit grease	