GROUP 26

FRONT AXLE

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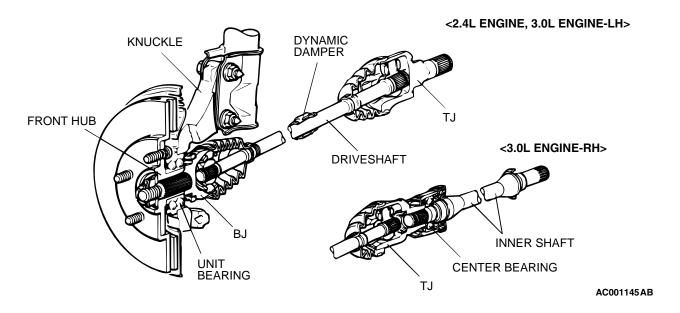
GENERAL DESCRIPTION

M1261000100206

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



FRONT AXLE DIAGNOSIS

INTRODUCTION

M1261005500157

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

TROUBLESHOOTING STRATEGY

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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

M1261005700195

SYMPTOMS		INSPECTION PROCEDURE	REFERENCE PAGE
1	Noise during wheel rotation	1	P.26-3
inner shaft	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 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: This diagnosis is complete.

NO: Repeat to Step 1.

INSPECTION PROCEDURE 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: This diagnosis is complete.

NO: Repeat to Step 1.

SPECIAL TOOLS

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TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
B990767	MB990767 End yoke holder	MB990767-01	Hub fixing
MB991618	MB991618 Hub bolt remover	General service tool	Driving out of hub bolt
AC106827	MB991897 Ball joint remover	MB991113-01, MB990635-01 or General service tool	Knuckle and tie rod end ball joint disconnection NOTE: Steering linkage puller (MB990635 or MB991113) is also used to disconnect knuckle and tie rod end ball joint.
мв990998	MB990998 Front hub remover and installer	MB990998-01 or General service tool	 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
A B 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

		PECIAL TOOLS	
TOOL	TOOL NUMBER AND NAME	SUPERSESSION	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 T	OOL NUMBER	O D mm (in)
MR000025	Δ ΙΔ	1B000026	30.0 (1.54)

TOOL	TYPE	TOOL NUMBER	O D mm (in)
MB990925	Α	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)
A INSTALL ADAPTER		MB990931	57.0 (2.24)
		MB990932	61.0 (2.40)
C BRASS BAR		MB990933	63.5 (2.50)
		MB990934	67.5 (2.66)
B BAR (SNAP-IN TYPE)		MB990935	71.5 (2.81)
		MB990936	75.5 (2.97)
		MB990937	79.0 (3.11)
	В	MB990938	_
	С	MB990939	
TOOL BOX			
ACX02372 AB			

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ON-VEHICLE SERVICE

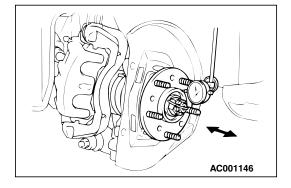
HUB END PLAY CHECK

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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.

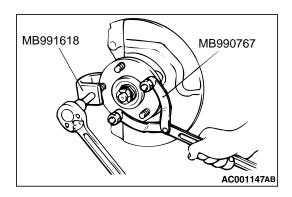


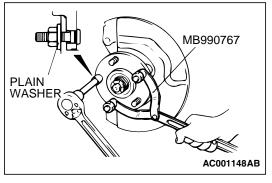
HUB BOLT REPLACEMENT

M1261001000183

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

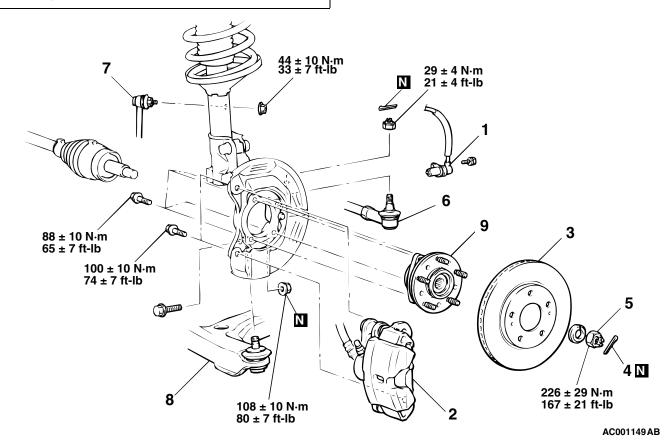
M1261001700193

⚠ 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.



<<C>>>

<<C>>

REMOVAL STEPS

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

REMOVAL STEPS (Continued)

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

Required Special Tools:

MB990326: Preload SocketMB990767: End Yoke Holder

- MB990998: Front Hub Remover and Installer
- MB991113 or MB990635: Steering Linkage Puller

REMOVAL SERVICE POINTS

<<A>> CALIPER ASSEMBLY REMOVAL

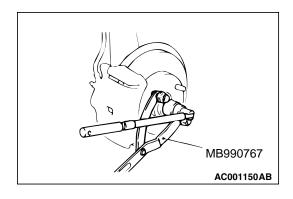
Secure the removed caliper assembly with wire, etc.

<> DRIVESHAFT NUT REMOVAL

⚠ CAUTION

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

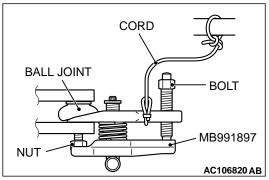
Use special tool MB990787 to fix the hub and remove the driveshaft nut.

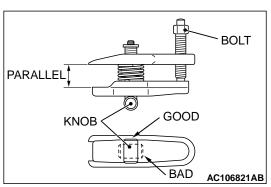


<<C>> TIE ROD END/LOWER ARM ASSEMBLY DISCONNECTION

⚠ CAUTION

- Do not remove the nut from ball joint. Loosen it and use special tool MB991897 to avoid possible damage to 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.

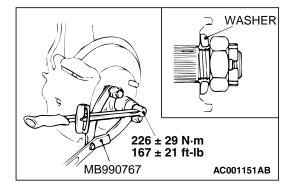
INSTALLATION SERVICE POINT

>>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.



INSPECTION

M1261001800167

WHEEL BEARING BREAKAWAY TORQUE CHECK

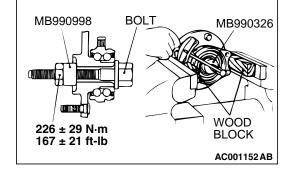
 Install the special tools MB990998 and MB990326 to the front hub assembly and tighten the nut to the specified torque.

Tightening torque: 226 \pm 29 N·m (167 \pm 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

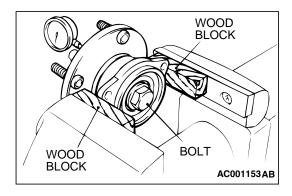
1. Install the special tool MB990998 to the front hub assembly and tighten the nut to the specified torque.

Tightening torque: 226 \pm 29 N m (167 \pm 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

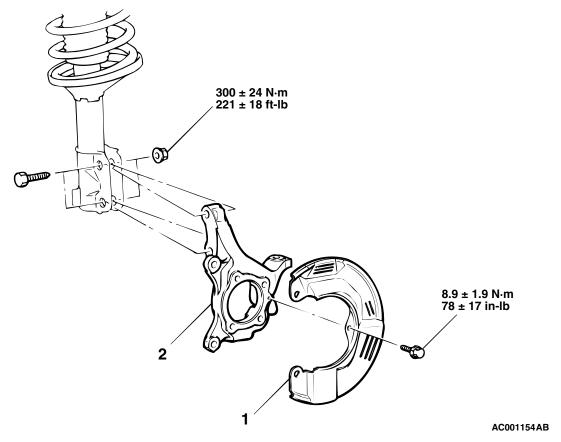
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Pre-removal Operation

• 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.)



REMOVAL STEPS

- 1. DUST SHIELD
- 2. KNUCKLE

INSPECTION

M1261002500158

Check the knuckle surface for galling and cracks.

DRIVE SHAFT ASSEMBLY

REMOVAL AND INSTALLATION

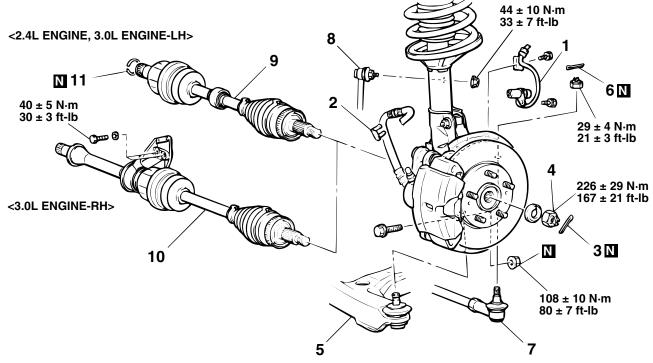
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⚠ CAUTION

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.



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REMOVAL STEPS

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

REMOVAL STEPS (Continued) > >>A<< 10. DRIVESHAFT AND INNER

- 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

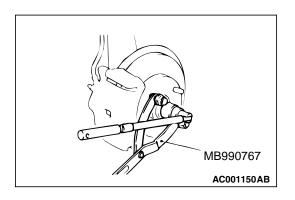
REMOVAL SERVICE POINTS

<<A>> DRIVESHAFT NUT REMOVAL



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

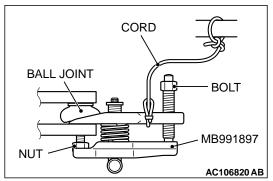
Use special tool MB990787 to fix the hub and remove the driveshaft nut.

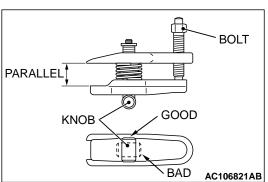


<> LOWER ARM BALL JOINT/TIE ROD END DISCONNECTION

⚠ 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.

<<C>> DRIVESHAFT/DRIVESHAFT AND INNER SHAFT REMOVAL

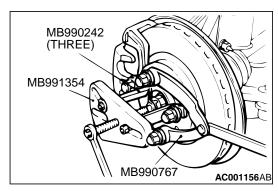
⚠ CAUTION

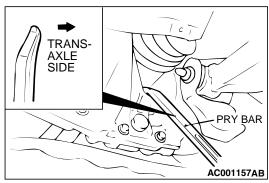
Do not damage the ABS rotor attached to the BJ outer race. <Vehicles with ABS>

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
 soal
- Do not damage the transaxle oil seal with the spline of the driveshaft.
- Insert a pry bar between the transaxle case and the driveshaft as shown to remove the driveshaft. <2.4L ENGINE, 3.0L ENGINE-LH>

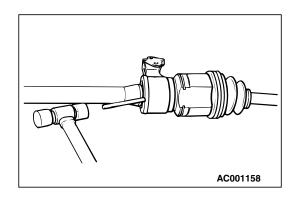




⚠ CAUTION

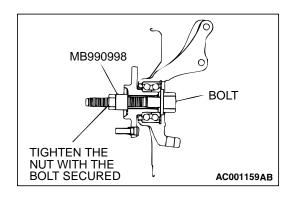
Do not damage the transaxle oil seal with the spline of the inner shaft.

- 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>

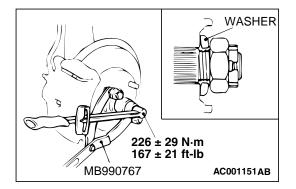
>>B<< DRIVESHAFT NUT INSTALLATION

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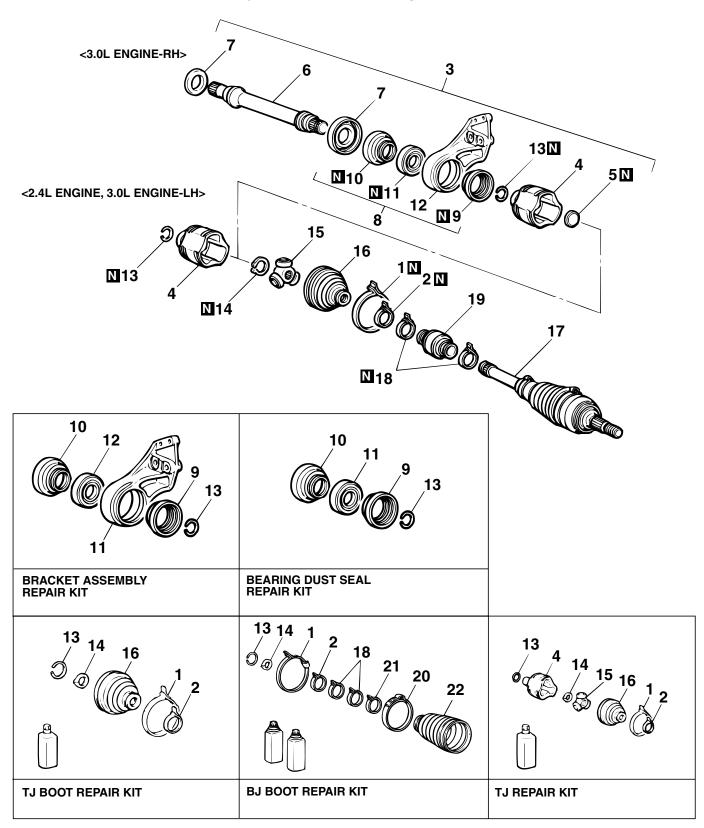
- Check the driveshaft boot for damage or deterioration.
- Check the ball joints for excessive play or poor operating condition.
- Check the spline part for wear or damage.

DISASSEMBLY AND ASSEMBLY

M1261003700207

⚠ CAUTION

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



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- >>**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</p>
 - 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

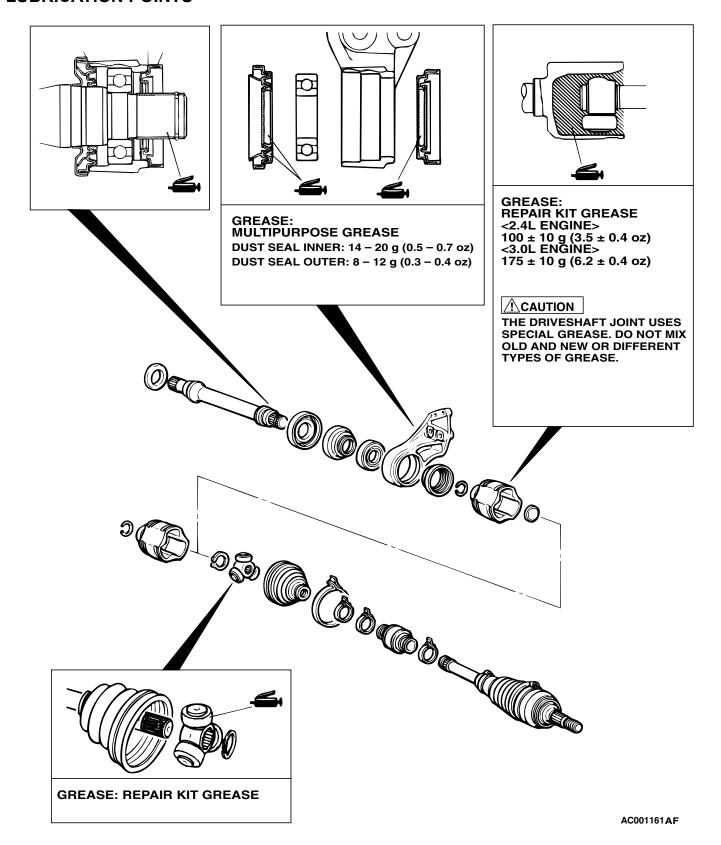
- >>A<< 18. DAMPER BAND <2.4L ENGINE, 3.0L ENGINE-LH>
- >>**A**<< 19. DYNAMIC DAMPER <2.4L ENGINE, 3.0L ENGINE-LH>
 - 20. BJ BOOT BAND (LARGE)
 - 21. BJ BOOT BAND (SMALL)
 - 22. BJ BOOT

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

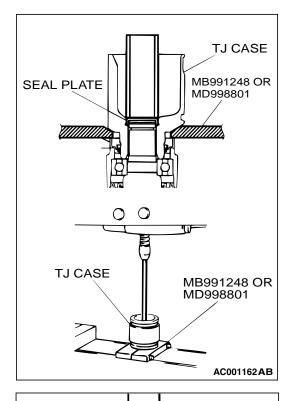


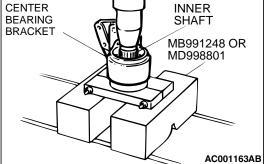
DISASSEMBLY SERVICE POINTS

<<A>> INNER SHAFT REMOVAL

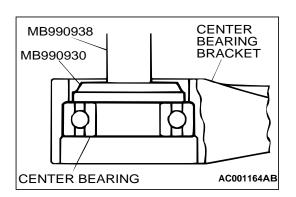
1. Use special tool MB991248 or MD998801 to remove the inner shaft assembly and the seal plate from the TJ case.

NOTE: Press the seal plate to deform it, and then press out the inner shaft.



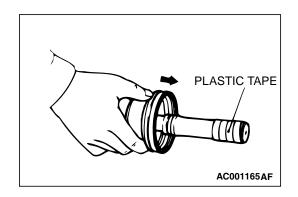


2. Use special tool MB991248 or MD998801 to remove the inner shaft from the center bearing bracket.



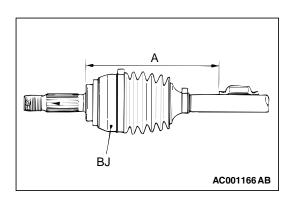
<> CENTER BEARING REMOVAL

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)	$242 \pm 3 \ (9.5 \pm 0.12)$	$254 \pm 3 \ (10.0 \pm 0.12)$

⚠ 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	2.4L ENGINE	_
	3.0L ENGINE- without ABS	Pink
	3.0L ENGINE— with ABS	Brown

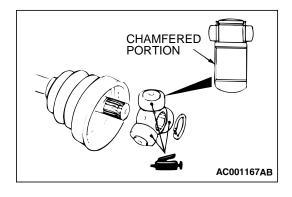
3. Wrap plastic tape around the shaft spline, and then install the TJ boot band (small) and TJ boot.

>>B<< SPIDER ASSEMBLY INSTALLATION

⚠ CAUTION

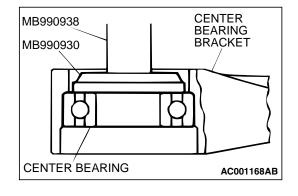
The driveshaft joint uses special grease. Do not mix old and new or different types of grease.

- 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>

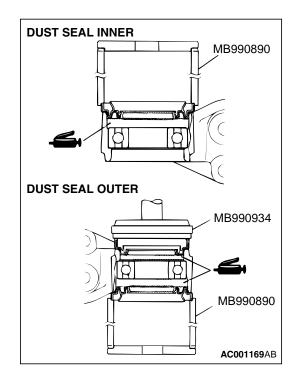
8 - 12 g (0.3 - 0.4 oz) < Dust seal outer >

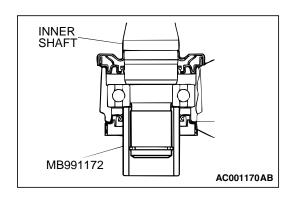


Do not damage the rubber portion of the dust seal outer surface when packing the multipurpose grease, otherwise grease will leak.

- 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.

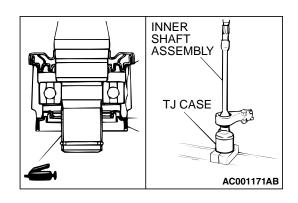
 NOTE: Do not apply the specified grease to the outside of the lip.





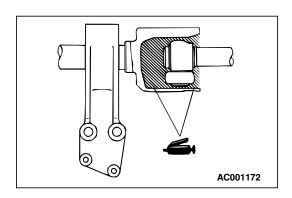
>>E<< INNER SHAFT INSTALLATION

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

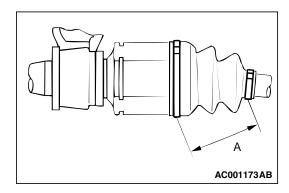
The driveshaft joint uses special grease. Do not mix old and new or different types of grease.

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 \pm 10 g (3.5 \pm 0.4 oz) <2.4L ENGINE> 175 \pm 10 g (6.2 \pm 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.



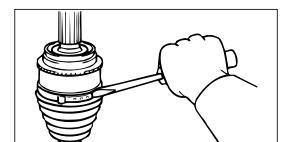
>>G<< TJ BOOT BAND (SMALL)/TJ BOOT BAND (LARGE) INSTALLATION

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 \pm 0.12 inch) <2.4L ENGINE> 90 ± 3 mm (3.5 \pm 0.12 inch) <3.0L ENGINE>

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



ACX00982 AB

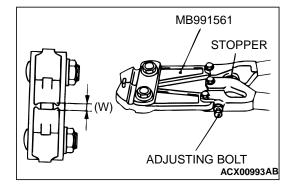
BJ BOOT REPLACEMENT

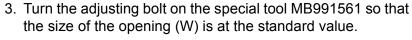
M1261005200219

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

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

2. Remove the BJ boot.



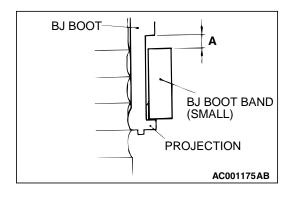


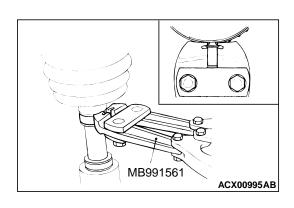
Standard value (W): 2.9 mm (0.12 inch) <If it is larger than 2.9 mm (0.12 inch)> Tighten the adjusting bolt. <If it is smaller than 2.9 mm (0.12 inch)> Loosen the adjusting bolt.

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.

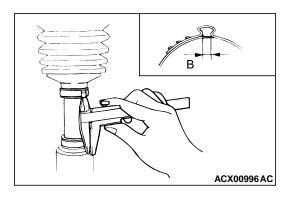
4. Place the BJ boot band (small) against the projection at the edge of the boot, and then secure it so that there is a clearance left as shown by (A) in the illustration.

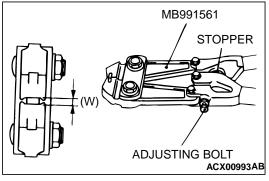


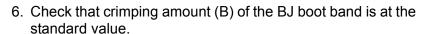


⚠ CAUTION

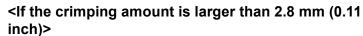
- Secure the driveshaft in an upright position and clamp the part of the BJ boot band to be crimped securely in the jaws of the special tool MB991561.
- Crimp the BJ boot band until the special tool MB991561 touches the stopper.
- 5. Use special tool MB991561 to crimp the BJ boot band (small).







Standard value (B): 2.4 – 2.8 mm (0.10 – 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 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 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.

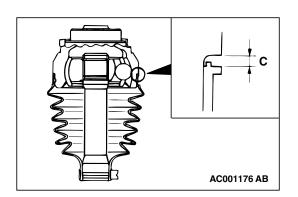
Grease quantity:

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

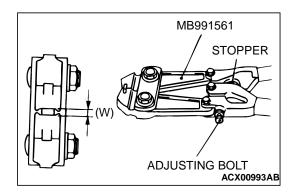
<3.0L ENGINE> 120 \pm 10 g (4.2 \pm 0.4 oz)

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)

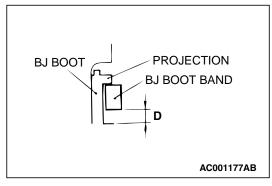


FRONT AXLE DRIVE SHAFT ASSEMBLY



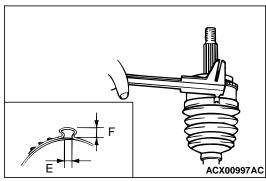
10. Follow the same procedure as in step 3 to adjust the size of the opening (W) on special tool MB991561 so that it is at the standard value.

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 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 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

M1261005400202

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

M1261000200195

ITEMS			SPECIFICATIONS
Front axle hub l	bearing	Туре	Double row angular contact bearing
Driveshaft Joint type Outer		Outer	Birfield joint
		Inner	Tripod joint

SERVICE SPECIFICATIONS

M1261000300222

ITEMS		STANDARD VALUE	LIMIT
Front hub axial play mm (in)		_	0.05 (0.002)
Setting of TJ boot length	2.4L ENGINE	85 ± 3 (3.3 ± 0.12)	-
mm (in)	3.0L ENGINE	90 ± 3 (3.5 ± 0.12)	_
Wheel bearing breakaway torque N·m (in-lb)		_	1.0 (9) or less
Opening dimension of the special tool (MB991561)	When the BJ boot band (small) is crimped	2.9 (0.12)	_
mm (in)	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 and the stepped phase of the	` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	0.1 – 1.55 (0.004 – 0.061)	_

LUBRICANTS

M1261000400218

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	$100 \pm 10 \text{ g } (3.5 \pm 0.4 \text{ oz})$
	3.0L ENGINE	Repair kit grease	175 ± 10 g (6.2 ± 0.4 oz)
BJ boot grease	2.4L ENGINE	Repair kit grease	$110 \pm 10 \text{ g } (3.9 \pm 0.4 \text{ oz})$
	3.0L ENGINE	Repair kit grease	120 ± 10 g (4.2 ± 0.4 oz)

TSB Revision

NOTES