GROUP 26

FRONT AXLE

CONTENTS

GENERAL DESCRIPTION

M1261000100295

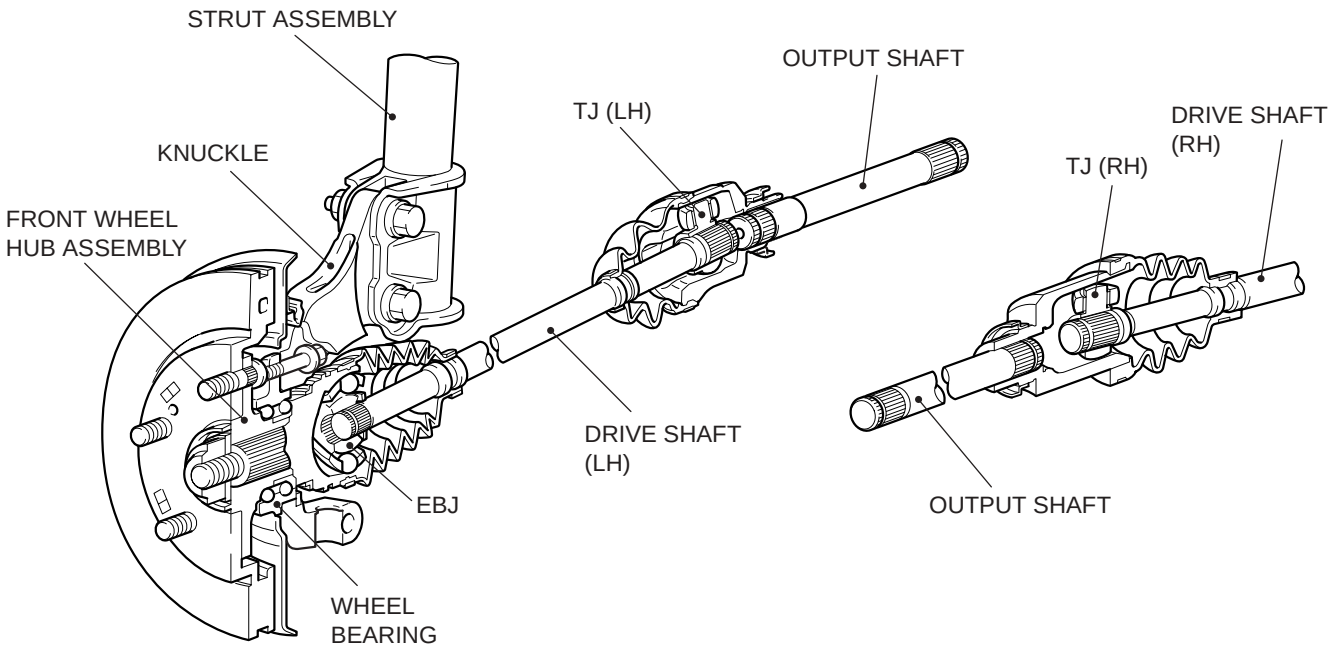
The front axle consists of front wheel hub assembly, knuckles and drive shafts, and it has the following features:

- The wheel bearing incorporates a unit ball bearing (double-row angular contact ball bearing) for reduced friction.
- The front wheel hub assembly combines the hub, wheel bearing, housing, and oil seal in a single unit for fewer parts, better rigidity, improved assembly precision, and better structural organization.
- The drive shaft on wheel side incorporates EBJ type constant velocity joint.
- The drive shaft on differential side incorporates TJ type constant velocity joint.
- ABS rotors for detecting the wheel speed are press-fitted to the EBJ.
- For environmental protection, a lead-free grease is used on the joints.

NOTE:

- *EBJ: Eight Ball Fixed Joint; Due to the use of the smaller size eight balls inside the joint, this features weight saving and compact size compared with BJ (Birfield Joint).*
- *TJ: Tripod Joint*

CONSTRUCTION DIAGRAM



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FRONT AXLE DIAGNOSIS

TROUBLESHOOTING STRATEGY

M1261005600228

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.

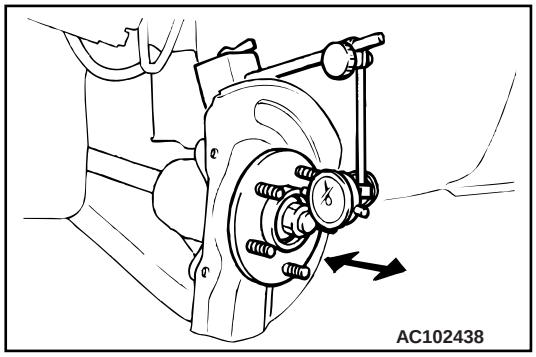
SYMPTOM CHART

M1261005700247

SYMPTOM		INSPECTION PROCEDURE	REFERENCE PAGE
Drive shaft	Noise during wheel rotation	1	P.26-3
	Noise due to excessive play of wheel in turning direction	2	P.26-4

SYMPTOM PROCEDURES

INSPECTION PROCEDURE 1: Noise during Wheel Rotation



DIAGNOSIS

STEP 1. Check the wheel bearing end play.

⚠ CAUTION

During maintenance, take care not to contact the parts or tools to the caliper because the paint of caliper will be scratched.

(1) Remove the caliper assembly 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)

Q: Is the wheel bearing end play within the limit?

YES : Go to step 2.
NO : Replace the part, then go to Step 4.

STEP 2. Check the drive shaft and inner shaft for bending.

Q: Is the drive shaft and inner shaft bent?

YES : Replace the part. Then go to Step 4.
NO : Go to step 3.

STEP3. Check the drive shaft assembly for wear or damage.

Q: Is the drive shaft assembly worn or damaged?

YES : Replace the drive shaft 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?

NO : Repeat to Step 1.
YES : The procedure is complete.

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

DIAGNOSIS

STEP 1. Check for play in the output shaft and side gear serration, or the drive shaft and front hub serration.

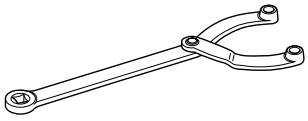
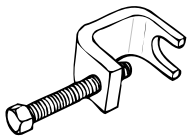
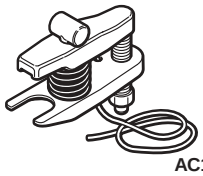
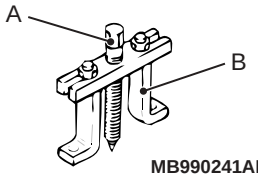
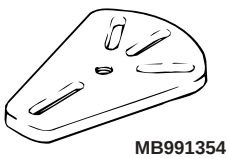
Q: Is the play found?
YES : Replace the part. Then go to Step 2.
NO : The procedure is complete.

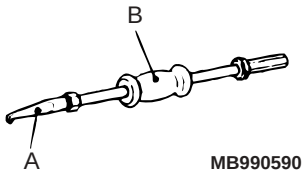
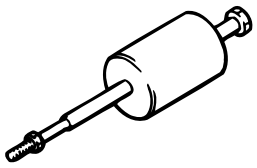
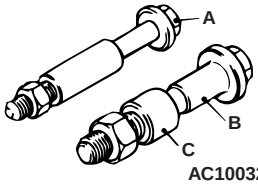
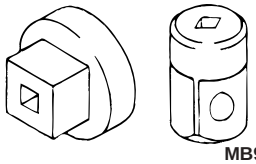
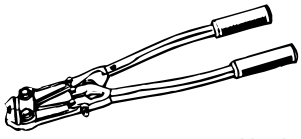
STEP 2. Retest the system.

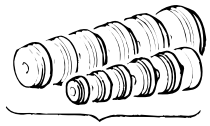
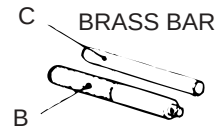
Q: Is the abnormal noise eliminated?
NO : Repeat to Step 1.
YES : The procedure is complete.

SPECIAL TOOLS

M1261000600331

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 *NOTE: Steering linkage puller (MB990635 or MB991113)is also used to disconnect knuckle and tie rod end ball joint.*
 MB990241AB	MB990241 Axle shaft puller A: MB990242 Puller shaft B: MB990244 Puller bar	MB990241-01 or General service tool	Removal of the drive shaft
 MB991354	MB991354 Puller body	General service tool	

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
	MB990590 Rear axle shaft oil seal remover A: MB990212 Adapter B: MB990211 Slide hammer	–	Removal of the front wheel hub
	MB991721 Slide hammer	–	Removal of the output shaft
	A: MB991017 B: MB990998 C: MB991000 A, B: Front hub remover and installer C: Spacer	MB990998-01	• Removal of the hub • Provisional holding of the wheel bearing • Measurement of hub starting torque • Measurement of wheel bearing end play *NOTE: MB991000, which belongs to MB990998, should be used as a spacer.*
	MB990685 Torque wrench	General service tool	Measurement of hub starting torque
	MB990326 Preload socket	General service tool	
	MB991561 Boot band crimping tool	MB991561	BJ boot (resin boot) band installation

TOOL	TYPE	TOOL NUMBER	O D mm (in)
MB990925  A INSTALLER ADAPTER	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)
 C BRASS BAR B BAR (SNAP-IN TYPE)		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	–
 TOOL BOX ACX02372AC	C	MB990939	–

ON-VEHICLE SERVICE

WHEEL BEARING END PLAY CHECK

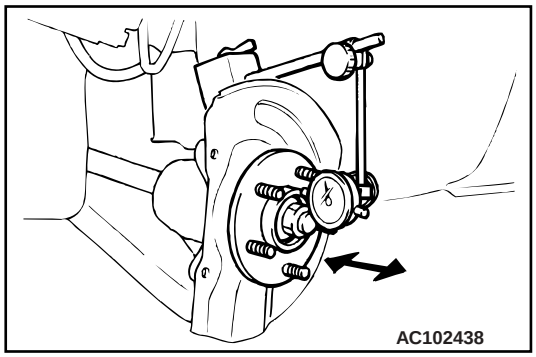
M1261000900194

⚠ CAUTION

During maintenance, take care not to contact the parts or tools to the caliper because the paint of caliper will be scratched.

1. Remove the caliper assembly 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, disassemble the front hub assembly and check the parts.
5. Install the brake disc, caliper assembly and tighten the caliper assembly mounting bolts to the specified torque 108 ± 10 N·m (80 ± 7 ft-lb).


AC102438

HUB BOLT REPLACEMENT

M1261001000257

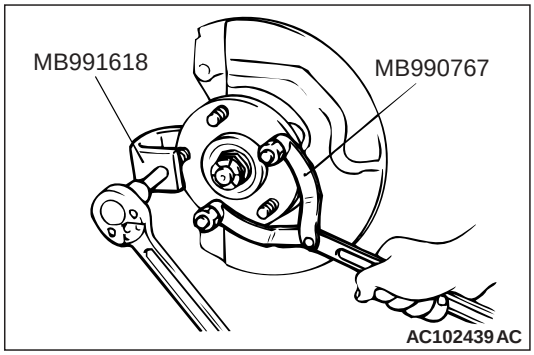
Required Special Tools:

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

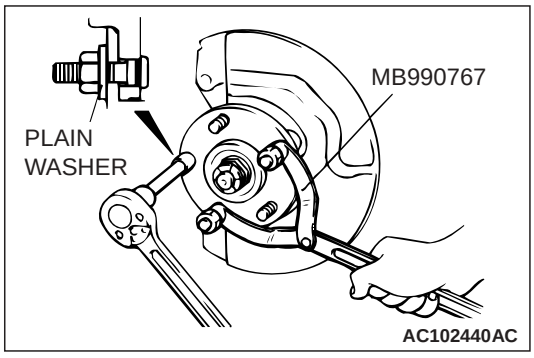
⚠ CAUTION

During maintenance, take care not to contact the parts or tools to the caliper because the paint of caliper will be scratched.

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.
5. Install the brake disc, caliper assembly and tighten the caliper assembly mounting bolts to the specified torque 108 ± 10 N·m (80 ± 7 ft-lb).



FRONT AXLE HUB ASSEMBLY

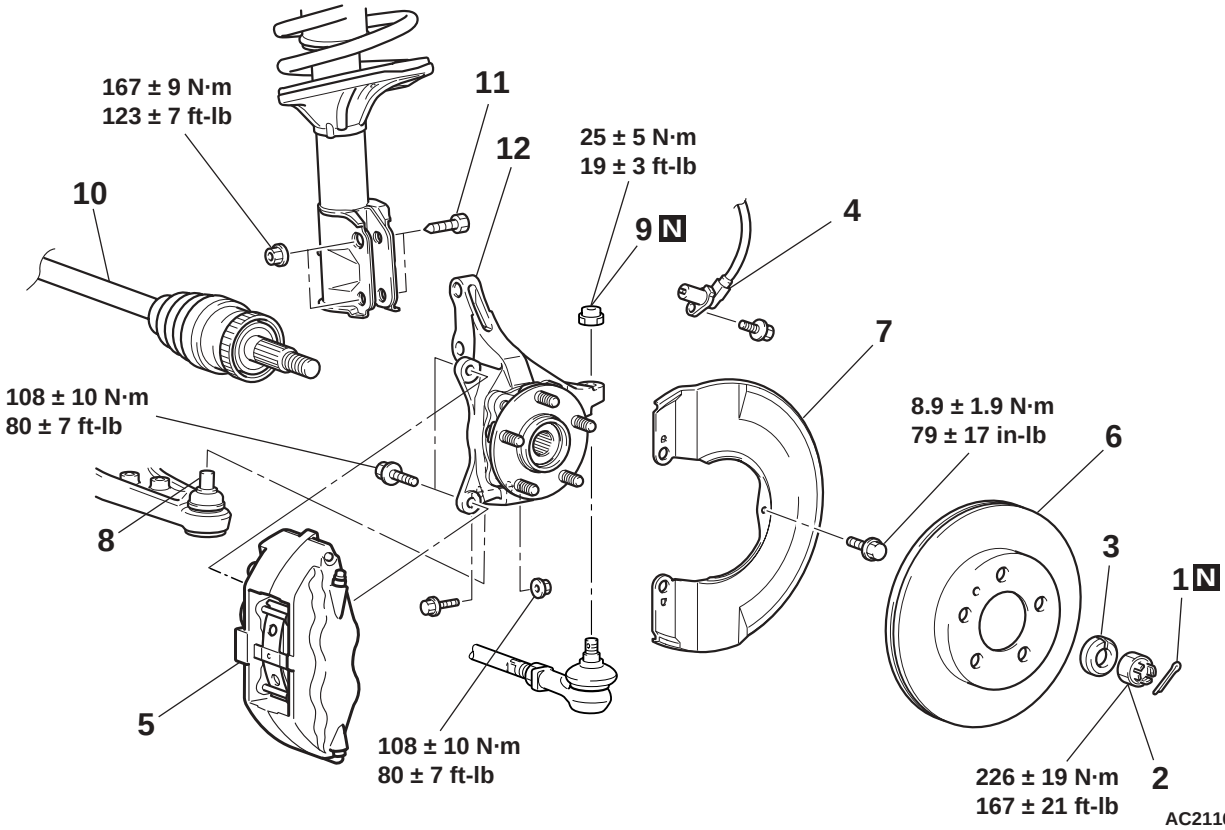
REMOVAL AND INSTALLATION

M1261001700319

⚠ CAUTION

- **Do not strike the ABS rotors installed to the EBJ outer race of drive shaft against other parts when removing or installing the drive shaft. Otherwise the ABS rotors will be damaged.**
- **Be careful not to strike the pole piece at the tip of the front ABS sensor with tools during servicing work.**
- **During maintenance, take care not to contact the parts or tools to the caliper because the paint of caliper will be scratched. And if there is brake fluid on the caliper, wipe out quickly.**

Pre-installation Operation	Post-installation Operation
• Front Under Cover, Side Under Cover Removal • Transaxle Oil Draining (Refer to GROUP00, Maintenance Service – Manual Transaxle Oil P.00-42). • Transfer Oil Draining (Refer to GROUP 00, Maintenance Service –Transfer Oil P.00-43).	• Check the dust cover for cracks or damage by pushing it with your finger. • Transfer Oil Filling (Refer to GROUP 00, Maintenance Service–Transfer Oil P.00-43). • Transaxle Oil Filling (Refer to GROUP00, Maintenance Service – Manual Transaxle Oil P.00-42). • Front Under Cover, Side Under Cover Installation



REMOVAL STEPS

1. COTTER PIN
<<A>> >>A<< 2. DRIVE SHAFT NUT
>>A<< 3. WASHER
4. FRONT ABS SENSOR
<<B>> 5. CALIPER ASSEMBLY
6. BRAKE DISC
7. DUST COVER

REMOVAL STEPS (Continued)

8. CONNECTION FOR LOWER ARM BALL JOINT
<<C>> 9. SELF LOCKING NUT (CONNECTION FOR TIE ROD END)
<<D>> 10. DRIVE SHAFT
11. FRONT STRUT TO HUB AND KNUCKLE MOUNTING BOLT
12. HUB AND KNUCKLE ASSEMBLY

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Required Special Tools:
- MB990767: End Yoke Holder
- MB990241: Axle Shaft Puller
- MB991354: Puller Body
- MB990211: Slide Hammer
- MB991897:Ball Joint Remover

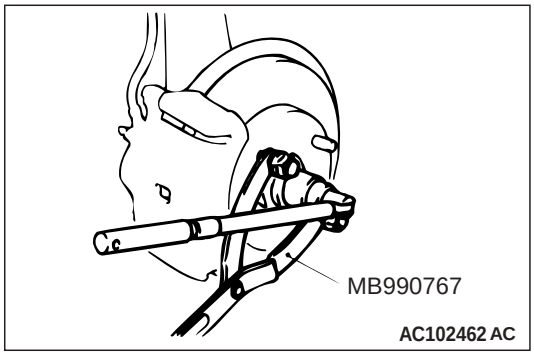
REMOVAL SERVICE POINTS

<<A>> DRIVE SHAFT NUT REMOVAL

⚠ CAUTION

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

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



<<B>> CALIPER ASSEMBLY REMOVAL

⚠ CAUTION

During maintenance, take care not to contact the parts or tools to the caliper because the paint of caliper will be scratched.

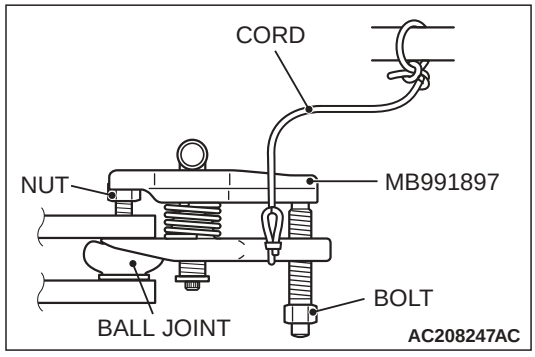
Secure the removed caliper assembly with wire, etc.

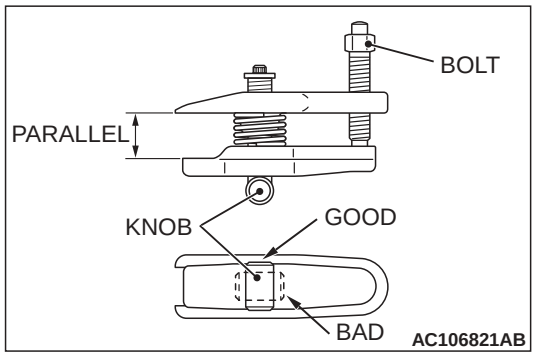
<<C>> SELF LOCKING NUT (CONNECTION FOR AND TIE ROD END) REMOVAL

⚠ 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 special tool MB991897 as shown in the figure.

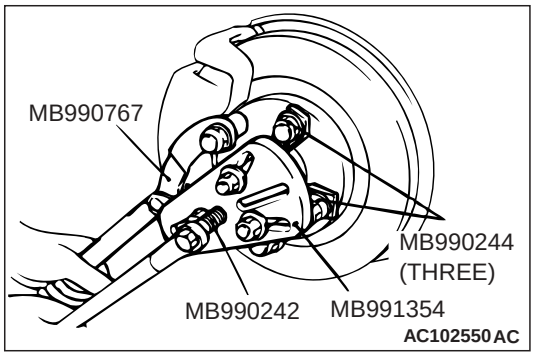




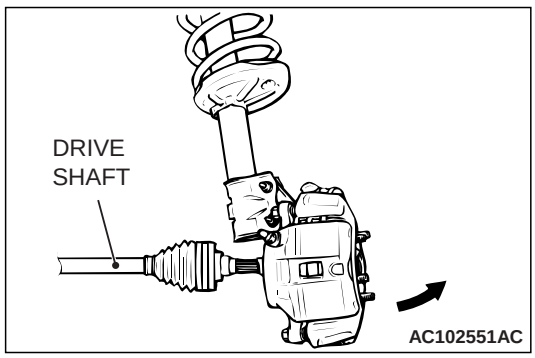
2. Turn the bolt and knob as necessary to make the jaws of special tool MB991897 parallel, tighten the bolt by hand and confirm that the jaws are still parallel.

   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 and remove the self locking nut.

<<D>> DRIVE SHAFT REMOVAL



1. Use special tools MB990241 (MB990242 and MB990244), MB991354 and MB990767 to push out the drive shaft from the hub and knuckle.



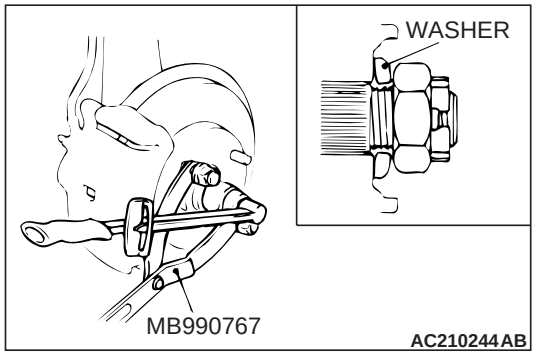
2. Withdraw the drive shaft from the hub by pulling the bottom of the hub and knuckle towards you.
3. Hang the drive shaft on the vehicle body with a rope.

INSTALLATION SERVICE POINT

>>A<< WASHER/ DRIVE SHAFT NUT INSTALLATION

⚠ CAUTION

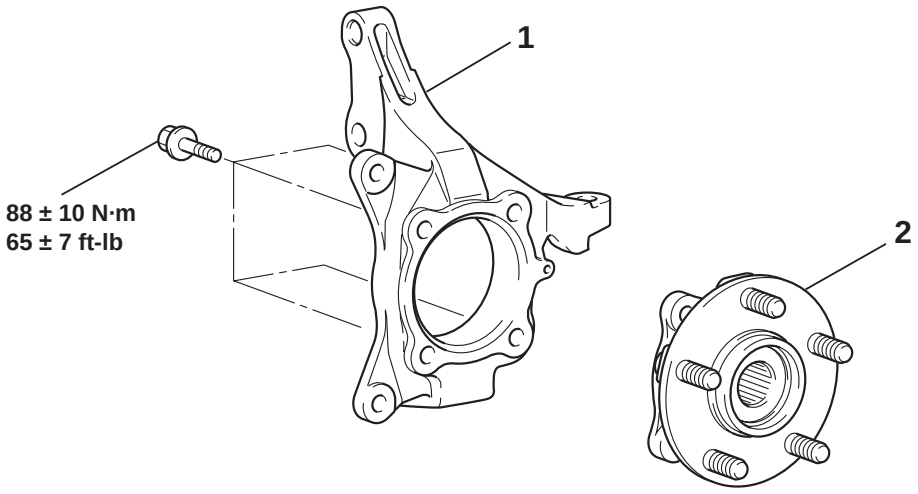
Before securely tightening the drive shaft nuts, make sure there is no load on the wheel bearings. Otherwise the wheel bearings will be damaged.



1. Be sure to install the drive shaft washer in the specified direction.
2. Using special tool MB990767, tighten the drive shaft nut to the specified torque 226 ± 19 N·m (167 ± 21 ft-lb).

DISASSEMBLY AND REASSEMBLY

M1261001900164



DISASSEMBLY STEPS

1. KNUCKLE
<<A>> 2. FRONT WHEEL HUB ASSEMBLY

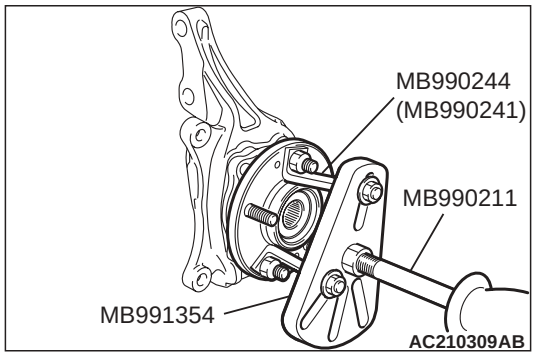
Required Special Tools:

- MB990241: Axle Shaft Puller
- MB991354: Puller Body
- MB990211: Slide Hammer

DISASSEMBLY SERVICE POINTS

<<F>> FRONT WHEEL HUB ASSEMBLY REMOVAL

1. If the front wheel hub is seized, remove the knuckle together with front wheel hub and fix them with a vise.
2. Use special tools MB990244(MB990241), MB991354 and MB990211 to pull out the front wheel hub from the knuckle.



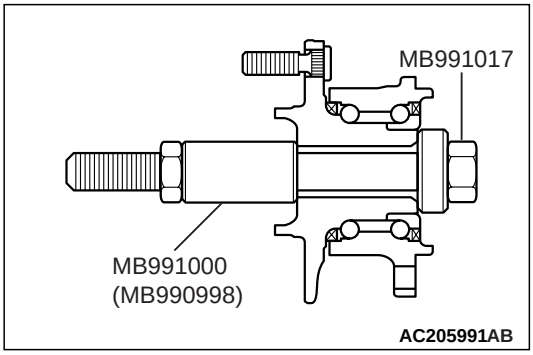
INSPECTION

M1261001800208

WHEEL BEARING ROTATION STARTING TORQUE AND AXIAL PLAYCHECK

Required Special Tools:

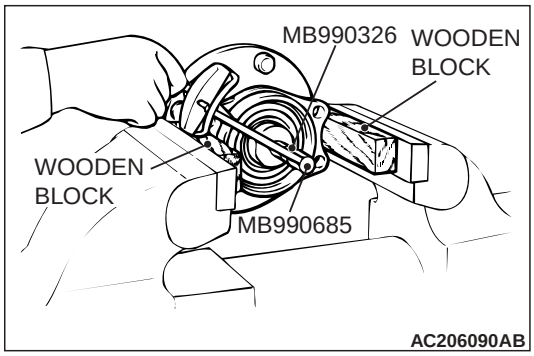
- MB990998, MB991017: Front Hub Remover and Installer
- MB990326: Preload Socket
- MB990685: Torque Wrench



1. Tighten special tools MB991000 (MB990998) and MB991017 to the specified torque.

   Tightening torque: 226 ± 19 N·m (167 ± 21 ft-lb)

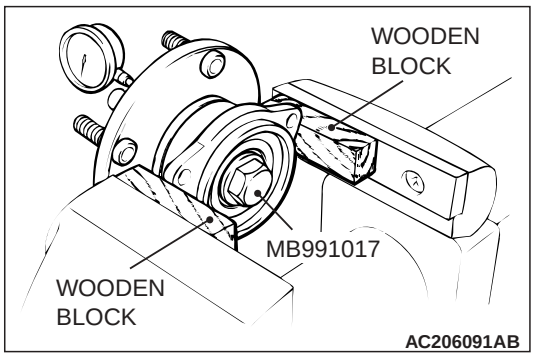
2. Hold front wheel hub assembly in a vice by way of wooden block.
3. Rotate the hub in order to seat the bearing.



4. Measure the wheel bearing rotation starting torque by using special tools MB990326 and MB990685.

   Limit: 1.03 N·m (9.12 in-lb)

5. If the rotation starting torque is not within the limit range while the nut is tightened to 226 ± 19 N·m (167 ± 21 ft-lb) and replace the front wheel bearing assembly. If there is any signs of binding or tight spots when the wheel bearing turns, replace it.



6. Measure to determine whether the wheel bearing axial play is within the specified limit or not.

   Limit: 0.05 mm (0.002 inch)

7. If the play is not within the limit range while the nut is tightened to 226 ± 19 N·m (167 ± 21 ft-lb), replace the front wheel hub assembly.

DRIVE SHAFT ASSEMBLY

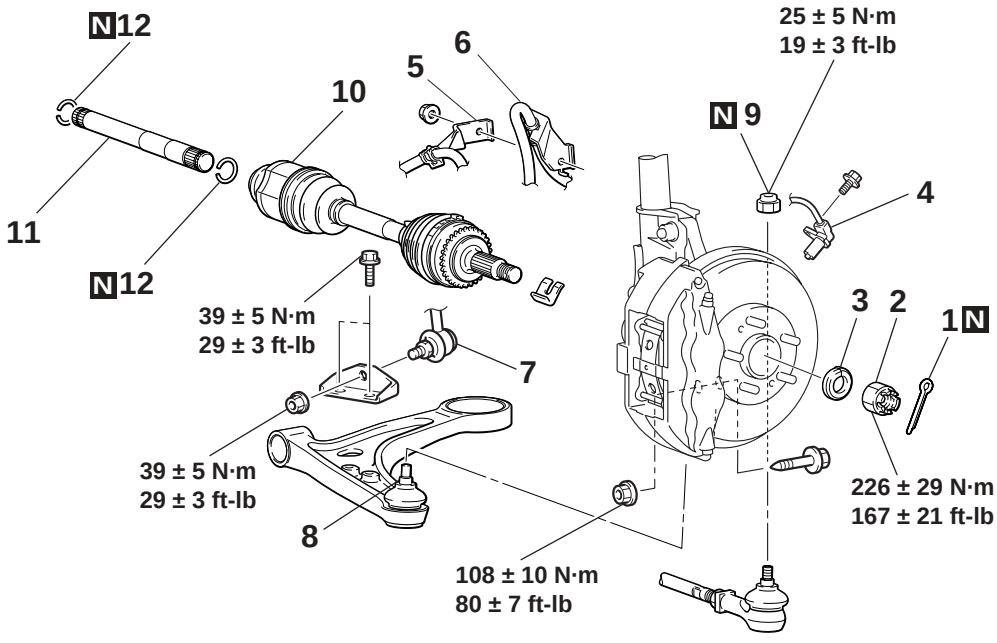
REMOVAL AND INSTALLATION

M1261003500333

⚠ CAUTION

- **Do not strike the ABS rotors installed to the EBJ outer race of drive shaft against other parts when removing or installing the drive shaft. Otherwise the ABS rotors will be damaged.**
- **Be careful not to strike the pole piece at the tip of the front ABS sensor with tools during servicing work.**
- **During maintenance, take care not to contact the parts or tools to the caliper because the paint of caliper will be scratched. And if there is brake fluid on the caliper, wipe out quickly.**

Pre-installation Operation	Post-installation Operation
• Front Under Cover, Side Under Cover Removal • Transaxle Oil Draining (Refer to GROUP00, Maintenance Service – Manual Transaxle Oil P.00-42). • Transfer Oil Draining (Refer to GROUP 00, Maintenance Service –Transfer Oil P.00-43).	• Check the dust cover for cracks or damage by pushing it with your finger. • Transfer Oil Filling (Refer to GROUP 00, Maintenance Service–Transfer Oil P.00-43). • Transaxle Oil Filling (Refer to GROUP00, Maintenance Service – Manual Transaxle Oil P.00-42). • Front Under Cover, Side Under Cover Installation



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REMOVAL STEPS

		1.	COTTER PIN
<<A>>	>>B<<	2.	DRIVE SHAFT NUT
	>>B<<	3.	WASHER
		4.	FRONT ABS SENSOR
		5.	FRONT ABS SENSOR HARNESS BRACKET
		6.	BRAKE HOSE BRACKET
		7.	STABILIZER BAR LINK CONNECTION
		8.	LOWER ARM BALL JOINT CONNECTION
<<B>>		9.	SELF LOCKING NUT (TIE ROD END CONNECTION)

REMOVAL STEPS (Continued)

<<C>>	>>A<<	10.	DRIVE SHAFT
<<D>>	>>A<<	11.	OUTPUT SHAFT
		12.	CIRCLIP

Required Special Tools:

- MB990767: End Yoke Holder
- MB991897: Ball Joint Remover
- MB990241: Axle Shaft Puller
- MB991354: Puller Body
- MB991017: Front Hub Remover and Installer
- MB991000 (MB990998): Spacer
- MB991721: Slide Hammer

TSB Revision

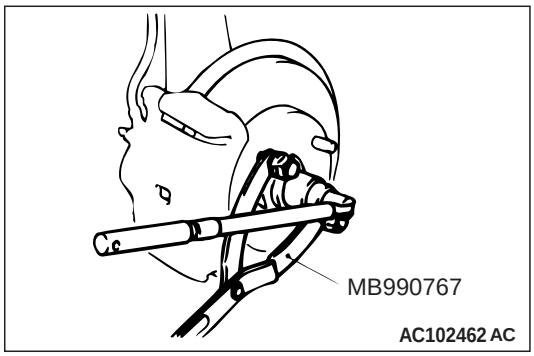
REMOVAL SERVICE POINTS

<<A>> DRIVE SHAFT NUT REMOVAL

⚠ CAUTION

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

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

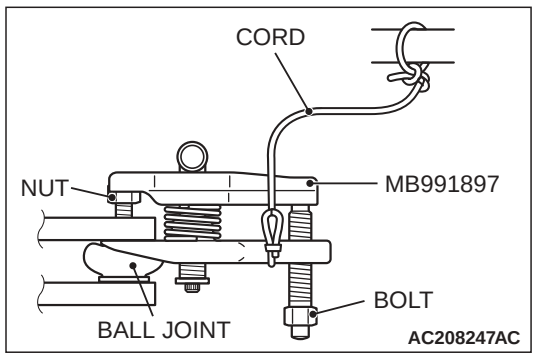


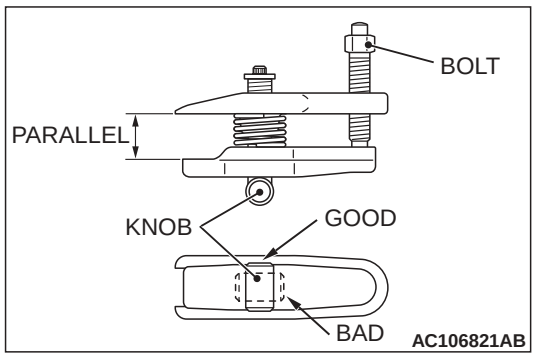
<<B> SELF LOCKING NUT (TIE ROD END CONNECTION) REMOVAL

⚠ 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 special tool MB991897 as shown in the figure.

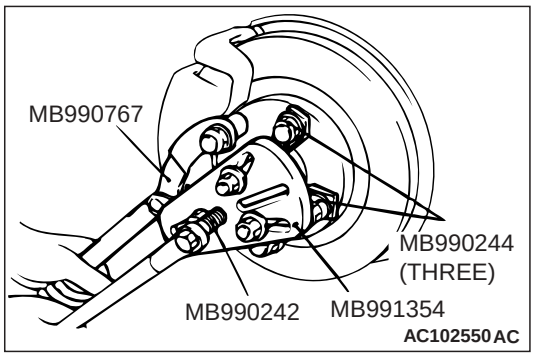




2. Turn the bolt and knob as necessary to make the jaws of special tool MB991897 parallel, tighten the bolt by hand and confirm that the jaws are still parallel.

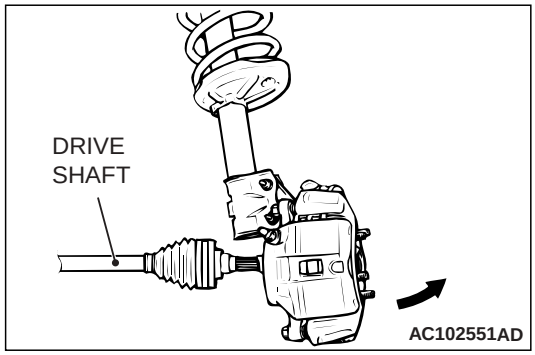
   NOTE: When adjusting the jaws in parallel, make sure the knob is in the position shown in the figure.

3. Tighten the bolt with a wrench to disconnect the tie rod end and remove the self locking nut.



<<C>> DRIVE SHAFT REMOVAL

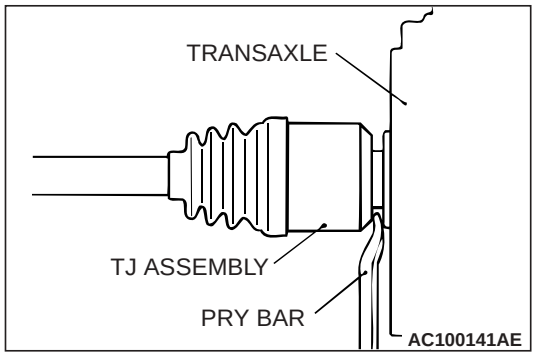
1. Use special tools MB990241 (MB990242 and MB990244), MB991354 and MB990767 to push out the drive shaft assembly from the hub.



2. Remove the drive shaft from the hub by pulling the bottom of the brake disc towards you.

⚠ CAUTION

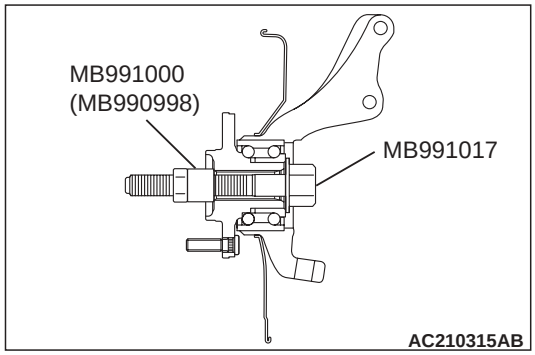
- **Do not pull on the drive shaft; doing so will damage the TJ; be sure to use the pry bar.**
- **When pulling the drive shaft out from the transaxle, be careful that the spline part of the drive shaft does not damage the oil seal.**



3. Insert a pry bar between the transaxle case and the drive shaft, and then pry and remove the drive shaft from the transaxle.

⚠ CAUTION

Do not apply pressure to the wheel bearing by the vehicle weight to avoid possible damage when the drive shaft is removed. If, however, vehicle weight must be applied to the bearing in moving the vehicle, temporarily secure the wheel bearing by using special tools MB991000 (MB990998) and MB991017.

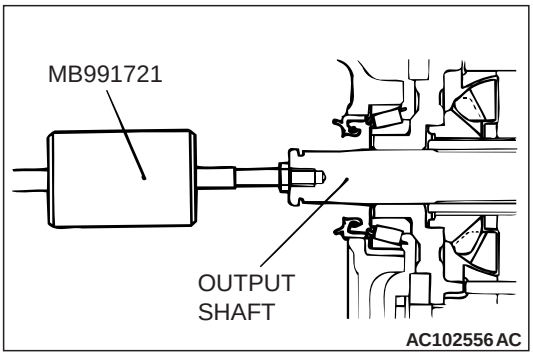


<<D>> OUTPUT SHAFT REMOVAL

⚠ CAUTION

When pulling the output shaft out from the transaxle, be careful that the spline part of the output shaft does not damage the oil seal.

Use special tool MB991721 to remove the output shaft.



INSTALLATION SERVICE POINTS

>>A<< OUTPUT SHAFT/DRIVE SHAFT INSTALLATION

⚠ CAUTION

When installing the output shaft, be careful that the spline part of the output shaft do not damage the oil seal.

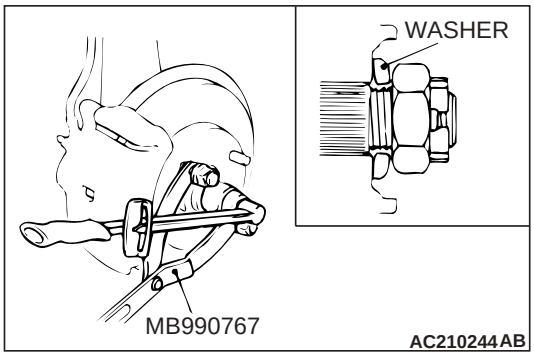
>>B<< WASHER/DRIVE SHAFT NUT INSTALLATION

1. Be sure to install the drive shaft washer in the specified direction.

⚠ CAUTION

Before securely tightening the drive shaft 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 drive shaft nut to the specified torque 226 ± 29 N·m (167 ± 21 ft-lb).

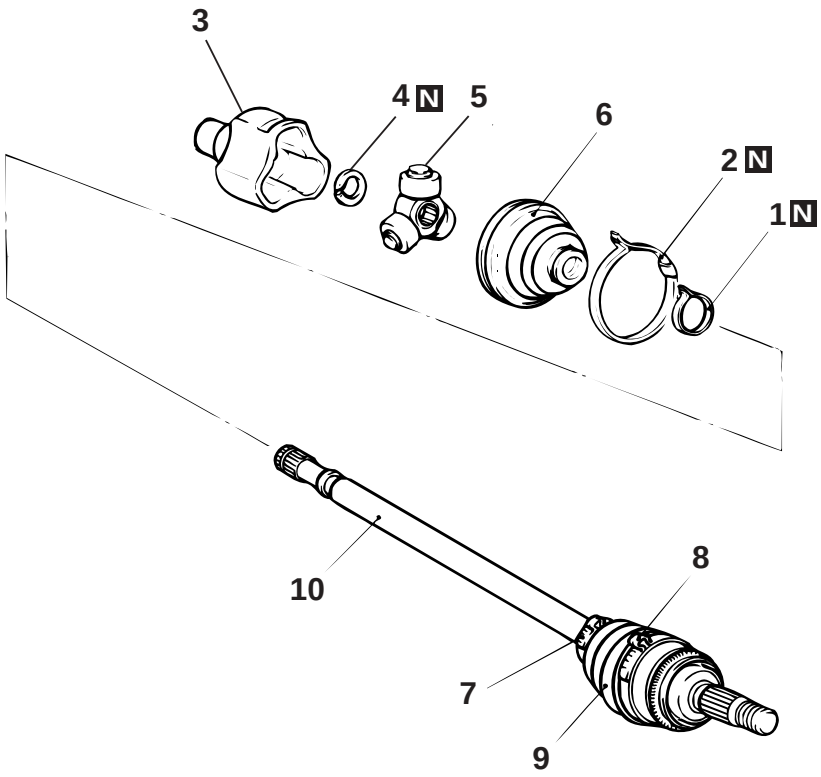


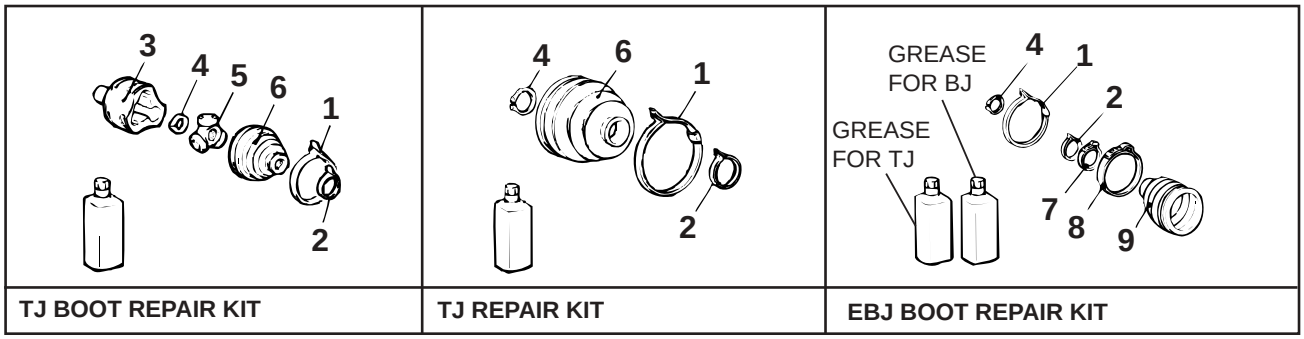
DISASSEMBLY AND ASSEMBLY

M1261003700371

⚠ CAUTION

- **Be careful not to damage the ABS rotor, which is attached to the EBJ outer race during disassembly and reassembly.**
- **Never disassemble the EBJ assembly except when replacing the EBJ boot.**





TJ BOOT REPAIR KIT	TJ REPAIR KIT	EBJ BOOT REPAIR KIT

AC211633AB

DISASSEMBLY STEPS

	>>D<<	1.	TJ BOOT BAND (LARGE)
	>>D<<	2.	TJ BOOT BAND (SMALL)
	>>C<<	3.	TJ CASE
		4.	SNAP RING
<<A>>	**>>B<<**	5.	SPIDER ASSEMBLY
<<B>>	**>>A<<**	6.	TJ BOOT
		7.	EBJ BOOT BAND (SMALL)
		8.	EBJ BOOT BAND (LARGE)

DISASSEMBLY STEPS

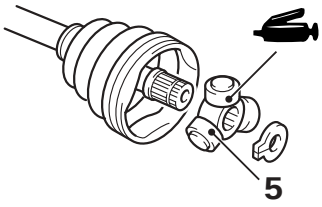
9. EBJ BOOT
10. EBJ ASSEMBLY

NOTE:

- *TJ: Tripod Joint*
- *EBJ: Eight Ball Fixed Joint*
- *For EBJ boot removal and installation, refer to* *P.26-20.*

LUBRICATION POINTS

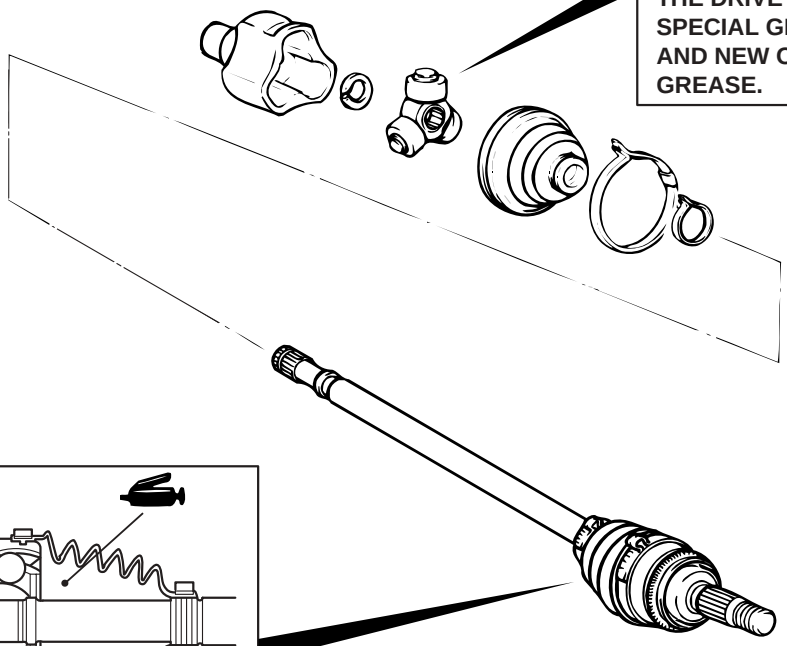
TSB Revision

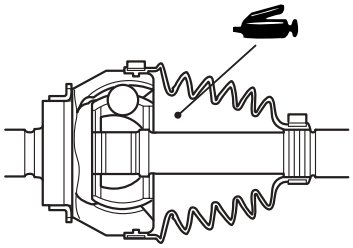


GREASE: REPAIR KIT GREASE
AMOUNT USED: 145 ± 10 g
(5.1 ± 0.3 oz)

⚠ CAUTION

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





GREASE: REPAIR KIT GREASE
AMOUNT USED: 100 ± 10 g
(3.5 ± 0.3 oz)

⚠ CAUTION

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

AC211634AB

DISASSEMBLY SERVICE POINTS

<<A>> TJ CASE/SPIDER ASSEMBLY REMOVAL

⚠ CAUTION

Do not disassemble the spider assembly.

1. Wipe off grease from the spider assembly and the inside of the TJ case.
2. Always clean the spider assembly when the grease contains water or foreign material.

<<B>> 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.

ASSEMBLY SERVICE POINTS

>>A<< TJ BOOT INSTALLATION

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

>>B<< SPIDER ASSEMBLY INSTALLATION

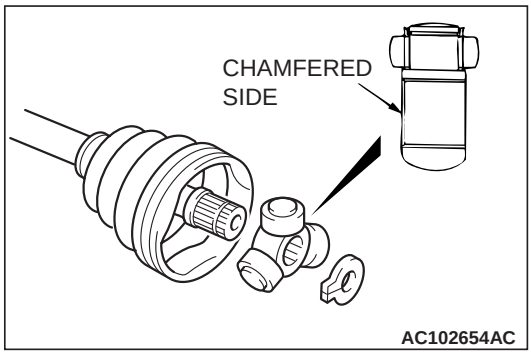
⚠ CAUTION

- **The drive shaft 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

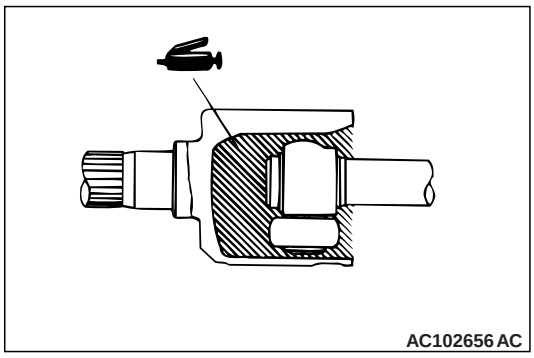
2. Install the spider assembly to the shaft from the direction of the spline chamfered side.



>>C<< TJ CASE INSTALLATION

⚠ CAUTION

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

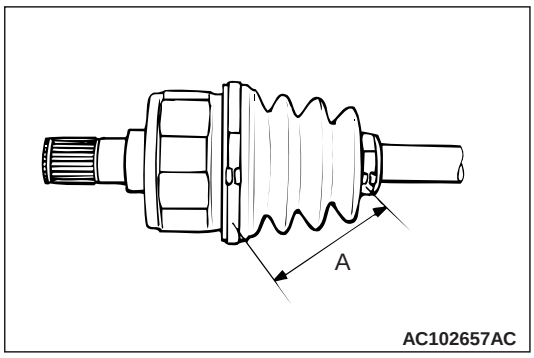

AC102656 AC

After applying the specified grease to the TJ case, insert the drive shaft and apply grease one more time.

Specified grease: Repair kit grease
Amount to use: 145 ± 10 g (5.1 ± 0.3 ounces)

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

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



AC102657AC

Set the TJ boot bands at the specified distance in order to adjust the amount of air inside the TJ boot, and then tighten the TJ boot band (small), TJ boot band (large) securely.

Standard value (A): 85 ± 3 mm (3.35 ± 0.12 inches)

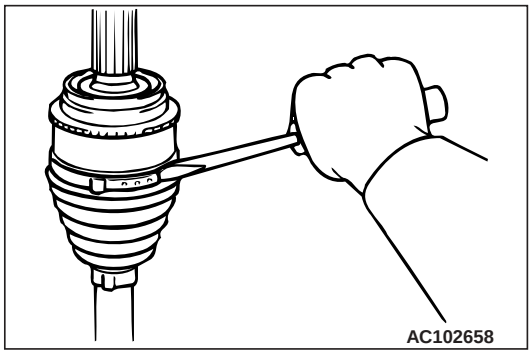
INSPECTION

M1261003800099

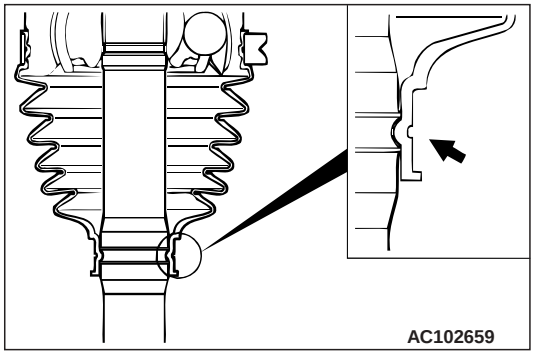
- Check the drive shaft for damage, bending or corrosion.
- Check the drive shaft spline part for wear or damage.
- Check the spider assembly for roller rotation, wear or corrosion.
- Check the groove inside TJ case for wear or corrosion.
- Check the boots for deterioration, damage or cracking.

EBJ BOOT (RESIN BOOT) REPLACEMENT

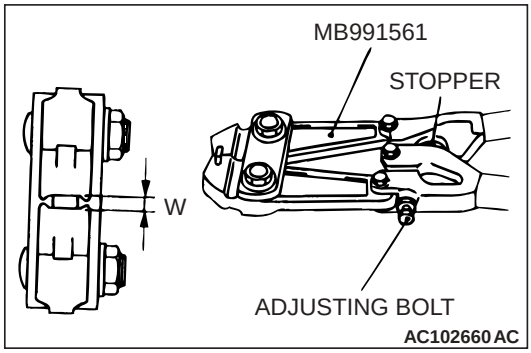
M1261005200316


AC102658

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



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

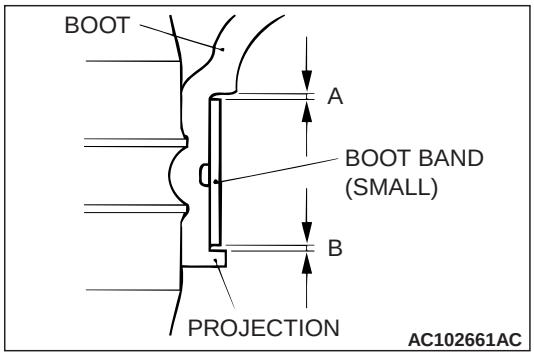


5. Turn the adjusting bolt on special tool MB991561 so that the size of the opening (W) is at the standard value.

   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 (0.03 inch) for each turn of the adjusting bolt.

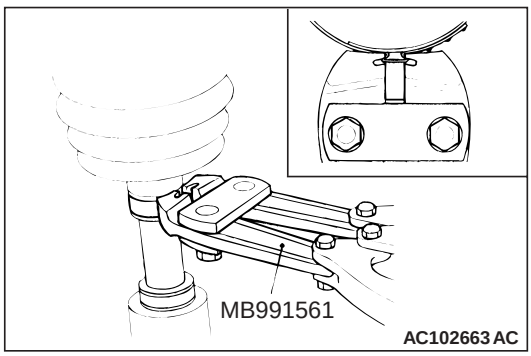
   NOTE: The adjusting bolt should not be turned more than once.



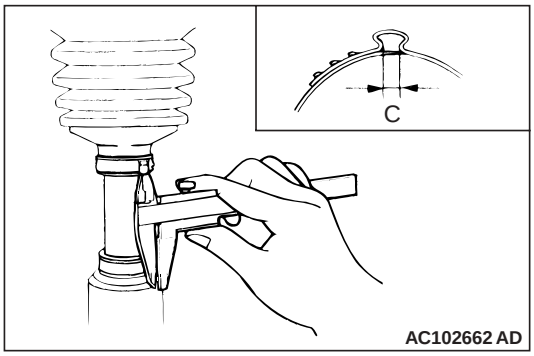
6. Position the EBJ boot band (small) so that there is even clearance at either end (A and B).

⚠ CAUTION

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



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



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

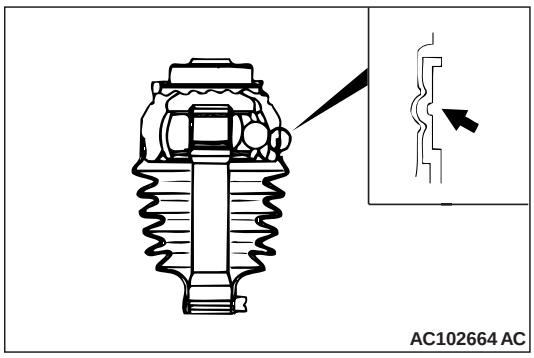
   Standard value (C): 2.4 – 2.8 mm (0.10 – 0.11 inch)
   <If the crimping amount is larger than 2.8 mm (0.11 inch)>
   Readjust the value of (W) in step 5 according to the following formula, and then repeat the operation in step 7.
   W = 5.5 mm (0.22 inch) – C
   Example: If C = 2.9 mm (0.11 inch), then W = 2.6 mm (0.10 inch).
   <If the crimping amount is smaller than 2.4 mm (0.10 inch)>
   Remove the EBJ 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 EBJ boot band.
   W = 5.5 mm (0.22 inch) – C
   Example: If C = 2.3 mm (0.09 inch), then W = 3.2 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 steps 6 to 8, using a new boot band.

⚠ CAUTION
The drive shaft 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.

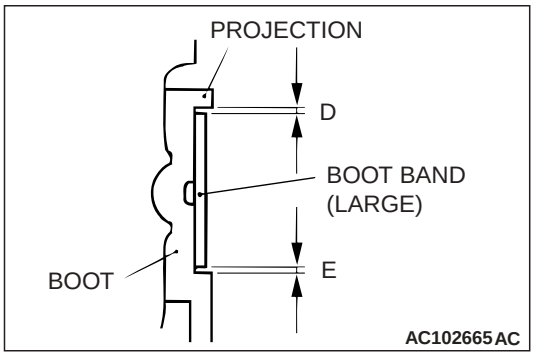
    Specified grease: Repair kit grease
    Amount to use: 100 ± 10 g (3.5 ± 0.3 ounces)



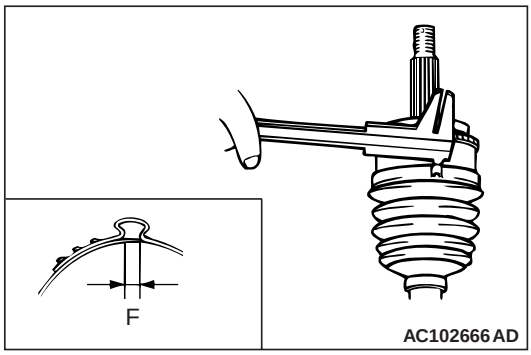
11. Align the center groove on the EBJ boot big end with the EBJ case groove.

12. Follow the same procedure as in step 5 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)



13. Position the EBJ boot band (large) so that there is even clearance at either end (D and E).



14. Use special tool MB991561 to crimp the EBJ boot band (large) in the same way as in step 7.
15. Check that the crimping amount (F) of the boot band is at the standard value.

    Standard value (F): 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 = 5.8 mm (0.23 inch) – F
    Example: If F = 2.9 mm (0.11 inch), then W = 2.9 mm (0.11 inch).
    <If the crimping amount is smaller than 2.4 mm (0.10 inch)>
    Remove the EBJ 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 EBJ boot band.
    W = 5.8 mm (0.23 inch) – F
    Example: If F = 2.3 mm (0.09 inch), then W = 3.5 mm (0.14 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 steps 13 to 15, using a new boot band.

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

M1261005400280

ITEM	SPECIFICATION
Caliper assembly bolt	108 ± 10 N·m (80 ± 7 ft-lb)
Drive shaft nut	226 ± 29 N·m (167 ± 21 ft-lb)
Dust cover bolt	8.9 ± 1.9 N·m (79 ± 17 in-lb)
Front strut nut	167 ± 9 N·m (123 ± 7 ft-lb)
Front wheel hub bolt	88 ± 10 N·m (65 ± 7 ft-lb)
Lower arm ball joint nut	108 ± 10 N·m (80 ± 7 ft-lb)
Stabilizer bar connecting nut	39 ± 5 N·m (29 ± 3 ft-lb)
Stabilizer bracket bolt	39 ± 5 N·m (29 ± 3 ft-lb)
Tie rod end nut	25 ± 5 N·m (19 ± 3 ft-lb)

GENERAL SPECIFICATIONS

M1261000200281

ITEM			SPECIFICATION
Wheel bearing	Type		Unit bearing (Double-row angular contact ball bearing)
Drive shaft	Joint type	Outer	EBJ
		Inner	TJ
	Length (joint to joint) × diameter mm (in)	Left	352.5 × 26 (13.9 × 1.0)
		Right	429.5 × 26 (16.9 × 1.0)

NOTE: The wheel bearing is part of the hub, therefore its size is not listed here.

SERVICE SPECIFICATIONS

M1261000300330

ITEM		STANDARD VALUE	LIMIT
Wheel bearing end play mm (in)		–	0.05 (0.002)
Wheel bearing rotation starting torque N·m (in-lb)		–	1.03 (9.12)
Setting of TJ boot length mm (in)		85 ± 3 (3.35 ± 0.12)	–
Opening dimension of the special tool (MB991561) mm (in)	When the BJ boot band (small) is crimped	2.9 (0.11)	–
	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

M1261000400337

ITEM	SPECIFIED LUBRICANT	QUANTITY
TJ boot grease	Repair kit grease	145 ± 10 g (5.1 ± 0.3 oz)
EBJ boot grease		100 ± 10 g (3.5 ± 0.3 oz)