GROUP 34

REAR SUSPENSION

CONTENTS

GENERAL INFORMATION

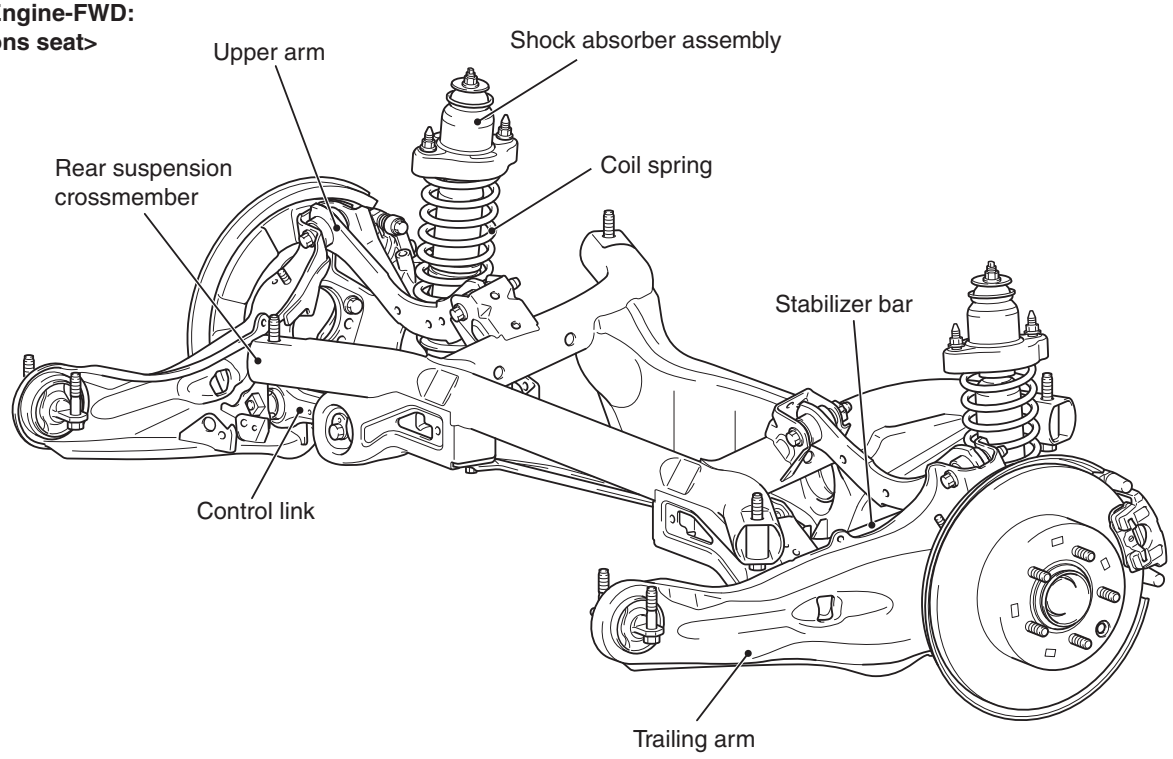
M1341000101260

A trailing arm type multi-link suspension is used. The main features are listed as follows:

- The wheel tread is enlarged to improve cornering ability.
- The roll center height is reviewed with regard to the vehicle specifications to improve the steering ability.
- A double crossmember is utilized and the upper arm, lower arm, toe control arm are jointed to the crossmember to improve the suspension alignment accuracy and maintenance performance.
- Improvement of arms installation accuracy eliminates the camber adjustment to improve maintenance performance.
- The trailing arm bushings are installed in the upper position to improve the movement of the suspension when the vehicle negotiates bumps and increase the riding comfort.
- The control link is installed in the lower position to increase the toe and camber rigidity and improve the steering ability.

CONSTRUCTION DIAGRAM

<2.4L Engine-FWD: 5 persons seat>



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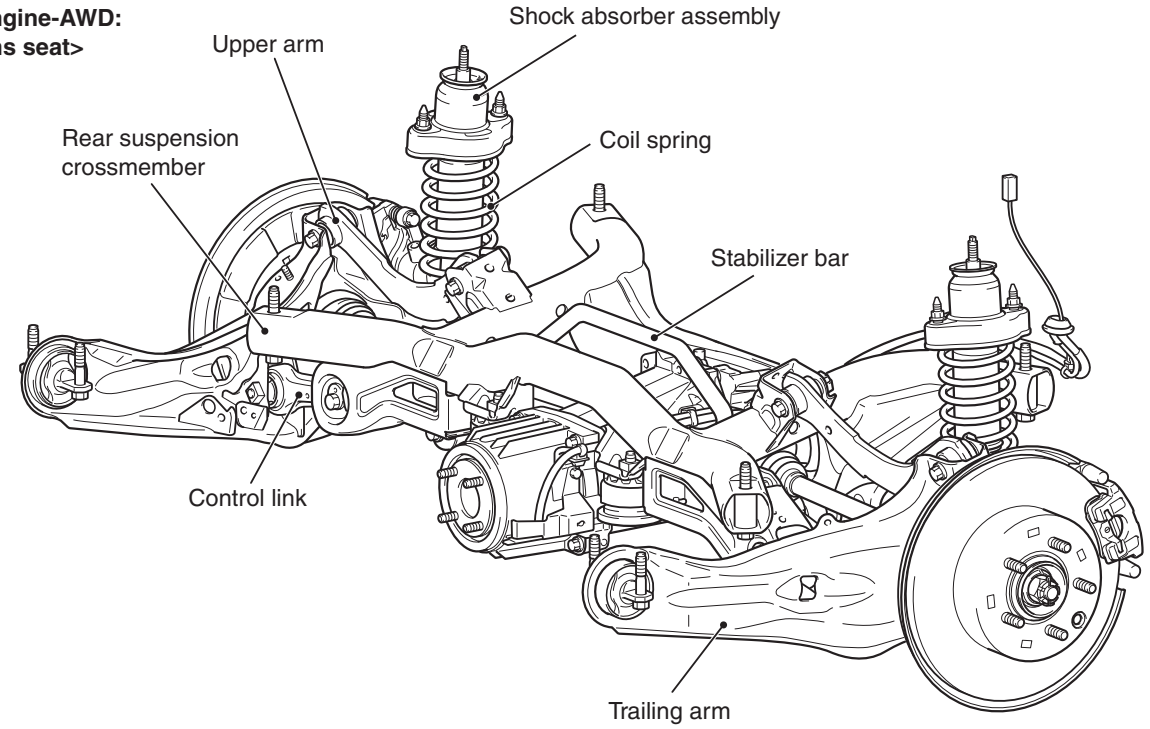
<2.4L Engine-AWD: 5 persons seat>



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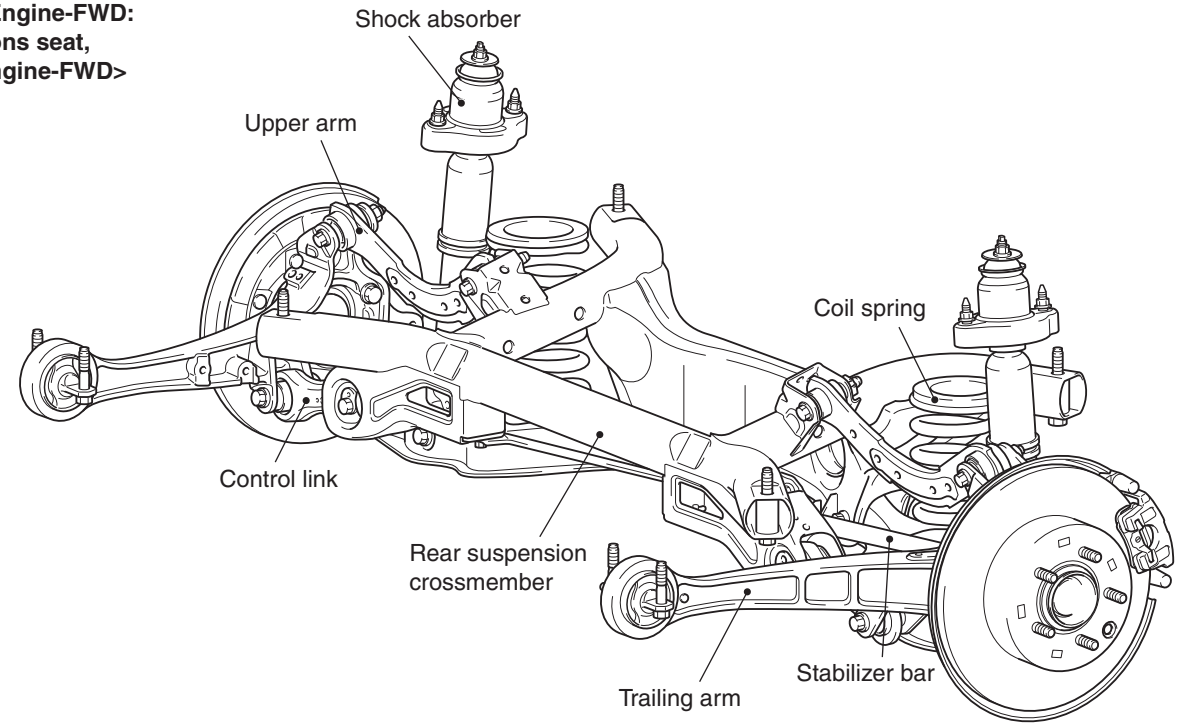
<2.4L Engine-FWD: 7 persons seat, 3.0L Engine-FWD>



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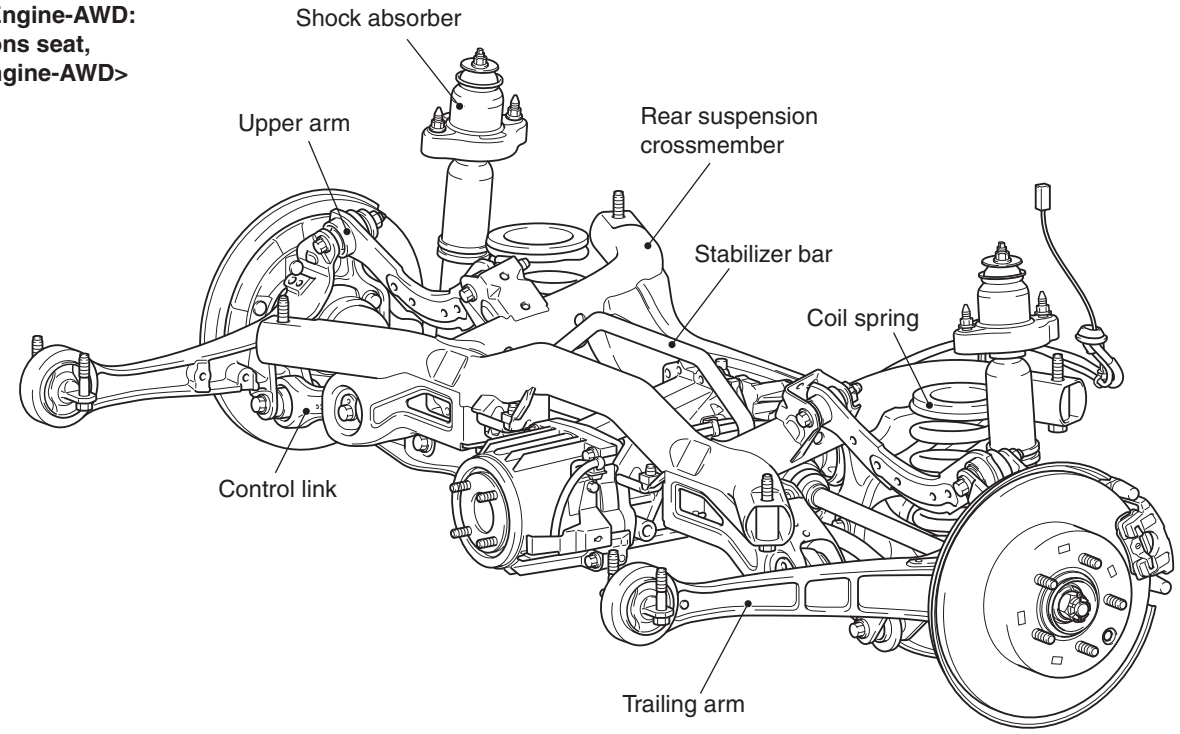
TSB Revision

<2.4L Engine-AWD:
7 persons seat,
3.0L Engine-AWD>



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FASTENER TIGHTENING SPECIFICATIONS

M1341012700426

Item	Specification
Control link	
Control link to trailing arm bolt	90 ± 9 N·m (67 ± 6 ft-lb)
Control link to trailing arm nut	71 ± 10 N·m (52 ± 2 ft-lb)
Rear height sensor to control link nut	9.5 ± 2.5 N·m (84 ± 22 in-lb)
Lower arm	
Lower arm to crossmember nut	71 ± 10 N·m (52 ± 2 ft-lb)
Lower arm to trailing arm nut	71 ± 10 N·m (52 ± 2 ft-lb)
Lower arm to stabilizer bar link nut	39 ± 6 N·m (29 ± 4 ft-lb)
Rear suspension crossmember	
Crossmember bracket mounting bolt	71 ± 10 N·m (52 ± 2 ft-lb)
Crossmember stay mounting bolt	11 ± 3 N·m (97 ± 26 in-lb)
Rear wheel speed sensor clamp bolt	11 ± 2 N·m (98 ± 17 in-lb)
Shock absorber assembly	
Shock absorber assembly to body nut	45 ± 7 N·m (33 ± 5 ft-lb)
Shock absorber assembly to lower arm nut	71 ± 10 N·m (52 ± 2 ft-lb)
Self-locking nut	25 ± 5 N·m (19 ± 3 ft-lb)

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Item	Specification
Stabilizer bar	
Stabilizer bar link nut	39 ± 6 N·m (29 ± 4 ft-lb)
Stabilizer bracket bolt	31 ± 4 N·m (23 ± 3 ft-lb)
Trailing arm	
Brake hose connection <2.4L Engine>	16 ± 3 N·m (12 ± 2 ft-lb)
Caliper assembly bolt <2.4L Engine>	55 ± 5 N·m (41 ± 3 ft-lb)
Caliper assembly bolt <3.0L Engine>	58 ± 7 N·m (43 ± 5 ft-lb)
Driveshaft nut	144 – 176 N·m (107 – 129 ft-lb)
Trailing arm to rear hub assembly bolt	95 ± 14 N·m (70 ± 10 ft-lb)
Trailing arm to brake hose bracket bolt <2.4L Engine>	13 ± 2 N·m (111 ± 22 in-lb)
Trailing arm to brake hose bracket bolt <3.0L Engine>	11 ± 2 N·m (98 ± 17 in-lb)
Trailing arm to body bolt	110 ± 11 N·m (81 ± 8 ft-lb)
Rear wheel speed sensor to trailing arm bolt	8.5 ± 1.5 N·m (76 ± 13 in-lb)
Upper arm	
Upper arm to crossmember bolt	71 ± 10 N·m (52 ± 2 ft-lb)
Upper arm to trailing arm	71 ± 10 N·m (52 ± 2 ft-lb)

GENERAL SPECIFICATIONS

M1341000200480

COIL SPRING <2.4L ENGINE>

Item	FWD		AWD	
	5 person	7 person	5 person	7 person
Wire diameter mm (in)	11 (0.4)	14 (0.6)	11 (0.4)	14 (0.6)
Average outside diameter mm (in)	91 (3.6)	101 (4.0)	91 (3.6)	101 (4.0)
Free length mm (in)	362 (14.3)	356 (14.0)	368 (14.5)	361 (14.2)

COIL SPRING <3.0L ENGINE>

Item	FWD		AWD
	5 person	7 person	
Wire diameter mm (in)	14 (0.6)	14 (0.6)	14 (0.6)
Average outside diameter mm (in)	101 (4.0)	101 (4.0)	101 (4.0)
Free length mm (in)	351 (13.8)	356 (14.0)	361 (14.2)

SERVICE SPECIFICATIONS

M1341000300960

Item	Standard value
Toe in mm (in)	3 ± 2 (0.12 ± 0.08)
Camber	–0°25' ± 0°30' (Difference between right and left within 0°30')
Stabilizer link ball joint rotation torque N·m (in-lb)	0.5 – 2.9 (4.4 – 25.7)

REAR SUSPENSION DIAGNOSIS

INTRODUCTION TO REAR SUSPENSION DIAGNOSIS

M1341013100160

If the rear suspension is faulty, the vehicle will not run straightforward or noise will occur. Incorrect wheel alignment, malfunction of shock absorber, stabilizer bar, coil spring, control arms or worn or out-of-balance will cause these problems.

REAR SUSPENSION DIAGNOSTIC TROUBLESHOOTING STRATEGY

M1341013200275

Use these steps to plan your diagnostic strategy. If you follow them thoroughly, you will be sure that you have exhausted most of the possible ways to find a rear suspension 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

M1341013500306

Symptom	Inspection procedure	Reference page
Squeaks or other abnormal noise	1	P.34-7
Poor ride	2	P.34-7
Body tilting	3	P.34-8

SYMPTOM PROCEDURES

INSPECTION PROCEDURE 1: Squeaks or other Abnormal Noise

DIAGNOSIS

STEP 1. Check for loose rear suspension installation bolts and nuts.

Q: Are the rear suspension installation bolts and nuts loose?
YES : Retighten them, and then go to Step 5.
NO : Go to Step 2.

STEP 2. Check the condition of the shock absorbers (worn bushings).

Q: Are the shock absorbers (bushings) in good condition?
YES : Go to Step 3.
NO : Replace the faulty part, and then go to Step 5.

STEP 3. Check the upper arms and/or lower arms and/or toe control arms for deformity or damage.

Q: Are the upper arms and/or lower arms and/or toe control arms in good condition?
YES : Go to Step 4.
NO : Replace the faulty part, and then go to Step 5.

STEP 4. Check the trailing arms for deformity or damage.

Q: Are the trailing arms in good condition?
YES : Go to Step 5.
NO : Replace the faulty part, and then go to Step 5.

STEP 5. Retest the system.

Q: Is the malfunction eliminated?
YES : The procedure is complete.
NO : Return to Step 1.

INSPECTION PROCEDURE 2: Poor Ride

DIAGNOSIS

STEP 1. Check for excessive tire inflation pressure.
Refer to GROUP 31, On-vehicle Service – Tire Inflation Pressure Check P.31-8.

Q: Is the tire inflation pressure correct?
YES : Go to Step 2.
NO : Adjust the pressure, and then go to Step 4.

STEP 2. Check the condition of the shock absorbers (weak or broken springs).

Q: Are the shock absorbers in good condition?
YES : Go to Step 3.
NO : Replace the faulty part, and then go to Step 4.

STEP 3. Check the stabilizer bar and/or stabilizer bar links for deformity or damage.

Q: Are the stabilizer bar and/or stabilizer bar links deformed or damaged?
YES : Replace the faulty part, and then go to Step 4.
NO : Go to Step 4.

STEP 4. Retest the system.

Q: Is the malfunction eliminated?
YES : The procedure is complete.
NO : Return to Step 1.

INSPECTION PROCEDURE 3: Body Tilting

DIAGNOSIS

STEP 1. Check for weak or deteriorated bushings.

Q: Are the bushings in good condition?
YES : Go to Step 2.
NO : Replace the faulty part, and then go to Step 5.

STEP 2. Check for weak or broken coil springs.

Q: Are the coil springs in good condition?
YES : Go to Step 3.
NO : Replace the faulty part, and then go to Step 5.

STEP 3. Check the upper arms and/or lower arms and/or toe control arms for deformity or damage.

Q: Are the upper arms and/or lower arms and/or toe control arms deformed or damaged?
YES : Replace the faulty part, and then go to Step 5.
NO : Go to Step 4.

STEP 4. Check the trailing arms for deformity or damage.

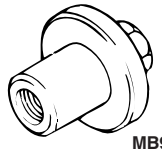
Q: Are the trailing arms deformed or damaged?
YES : Replace the faulty part, and then go to Step 5.
NO : Go to Step 5.

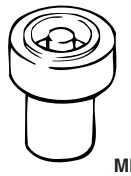
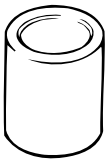
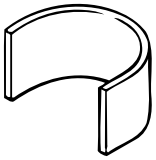
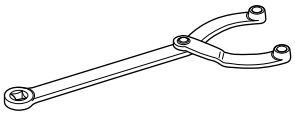
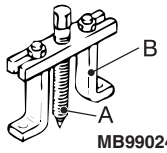
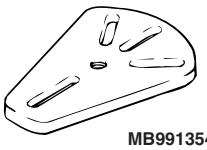
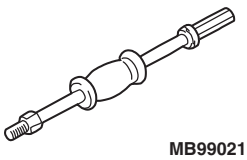
STEP 5. Retest the system.

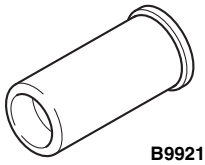
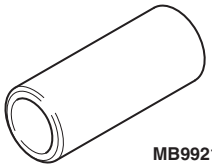
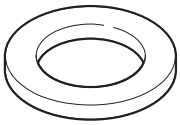
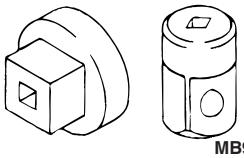
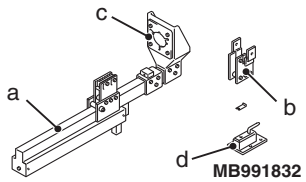
Q: Is the malfunction eliminated?
YES : The procedure is complete.
NO : Return to Step 1.

SPECIAL TOOLS

M1341000600808

Tool	Tool number and name	Supersession	Application
 MB991004	MB991004 Wheel alignment gauge attachment	MB991004-01 or General service tool	Wheel alignment measurement <AWD vehicles with aluminum wheels>

Tool	Tool number and name	Supersession	Application
 MB991447	MB992123 Arm bushing remover and installer	–	Lower arm bushing removal and press-fit
	MB991448 Bushing remover and installer base	MB991448-01	
	MB991449 Bushing remover and installer supporter	–	
 B990767	MB990767 Front hub and flange yoke holder	MB990767-01	Fixing of the hub
 MB990241AD	MB990241 Axle shaft puller A: MB990242 Puller shaft B: MB990244 Puller bar	MB990241-01 or General service tool	Rear hub assembly removal
 MB991354	MB991354 Puller body	General service tool	
 MB990211	MB990211 Slide hammer	General service tool	

Tool	Tool number and name	Supersession	Application
 B992121	MB992121 Arm bushing remover and installer	–	Trailing arm bushing removal and press-fit
 MB992125	MB992125 Arm bushing base	–	
 MB992175	MB992175 Base spacer	–	
 MB990326	MB990326 Preload socket	General service tool	Stabilizer link ball joint rotation torque measurement
 MB991832	MB991832 Spring compressor set a: MB991793 Spring compressor assembly b: MB991796 Attachment B c: MB991794 Upper plate d: MB991830 Fixture	General service tool	Rear coil spring compression

ON-VEHICLE SERVICE

REAR WHEEL ALIGNMENT CHECK AND ADJUSTMENT

M1341011000930

1. Before the wheel alignment measurement, adjust the rear suspension, wheel, and tires in good condition.
2. Park the vehicle on a level surface to measure the wheel alignment.

TSB Revision

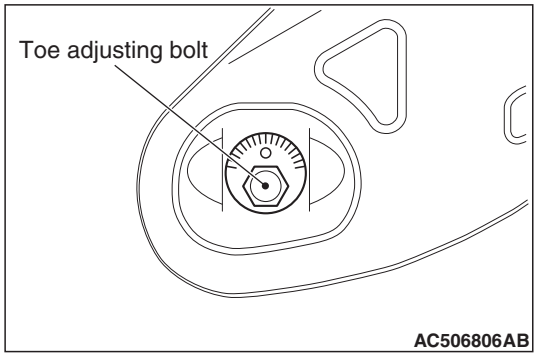
TOE-IN

Standard value: 3 ± 2 mm (0.12 ± 0.08 inch)

If it is out of the standard range, adjust as follows:
Turn the toe adjusting bolt (the mounting bolt inside the body on the control link) to adjust.

Left wheels: Clockwise → (+) Toe in
Right wheels: Clockwise → (-) Toe in

Toe-in varies approximately 2.6 mm (0.10inch) (equivalent to 0°16' of the toe angle for one side) for each scale mark.

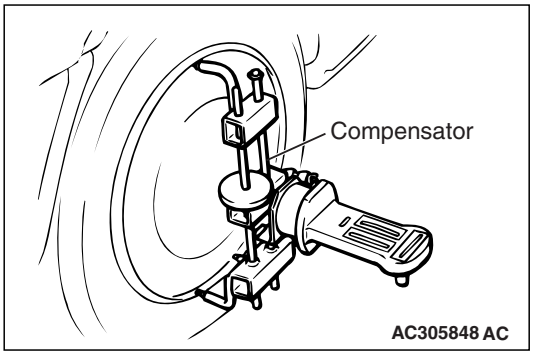


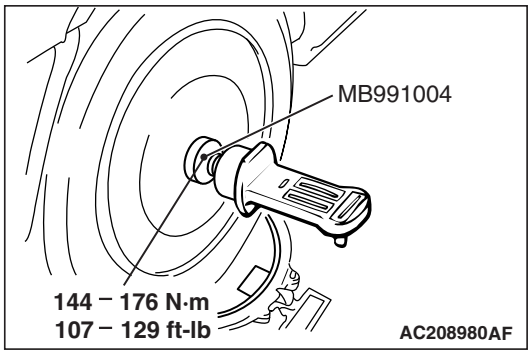
CAMBER

Standard value: −0°25' ±0°30' (difference between right and left within 0°30')

NOTE:

- *For FWD vehicles with aluminum wheels, attach the camber/caster/kingpin gauge by using a compensator.*





- *For AWD vehicles with aluminum wheels, tighten the wheel alignment gauge attachment (Special tool: MB991004) to the specified torque, then measure the camber.*
- *The camber is pre-adjusted at factory and is not adjustable.*

STABILIZER LINK BALL JOINT DUST COVER INSPECTION

M1341019100027

1. Using your fingers, press the dust cover to check for a crack or damage.
2. If the dust cover has a crack or damage, replace the stabilizer link.

   NOTE: If the dust cover has a crack or damage, the ball joint could be damaged.

CONTROL LINK, UPPER ARM AND LOWER ARM

REMOVAL AND INSTALLATION

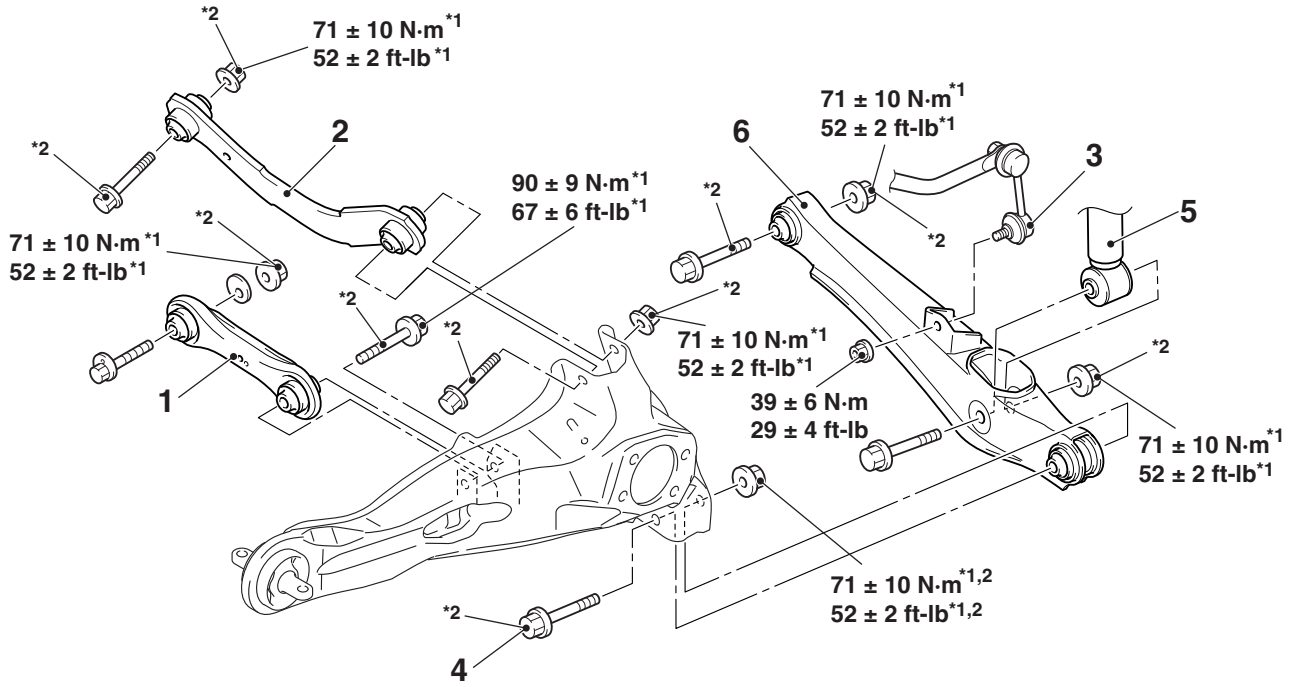
M1341004800848

⚠ CAUTION

- **The parts indicated by *1 should be temporarily tightened, and then fully tightened with the vehicle standing on the ground and the curb weight condition.**
- **The parts indicated by *2 are the bolts/nuts with friction coefficient stabilizer. In removal, ensure there is no damage, clean dust and soiling from the bearing and thread surfaces, and tighten them to the specified torque.**

Post-installation operation
- Using your fingers, press the Ball Joint Dust Cover to check for a crack or damage.
- Wheel alignment check and adjustment (Refer to P.34-10.)

<2.4L Engine: 5 persons seat>



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Control link and upper arm removal

<<A>> 1. Control link
- Fuel tank vapor hose connection (Refer to GROUP 13C, Fuel Tank P.13C-15, P.13C-20.)

>>A<< 2. Upper arm

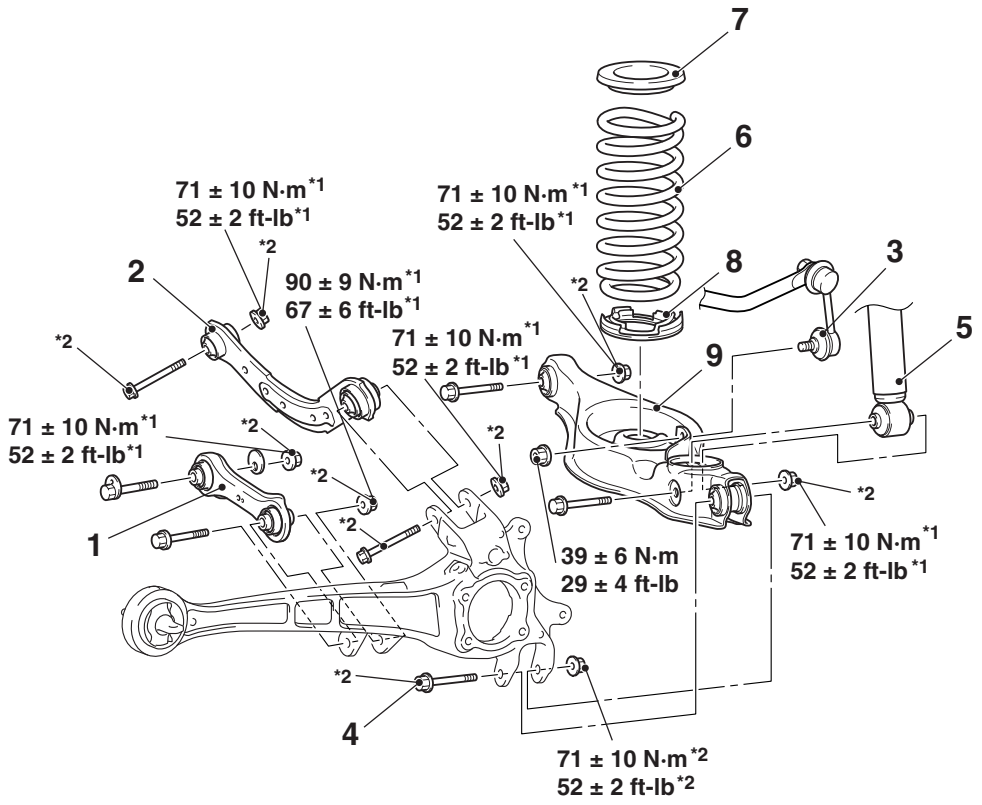
Lower arm removal steps

3. Stabilizer link connection
4. Lower arm and trailing arm connection
5. Shock absorber connection
- Rear suspension crossmember stay (Refer to P.34-38.)

6. Lower arm

TSB Revision

<2.4L Engine: 7 persons seat, 3.0L Engine>



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Control link and upper arm removal

1. Rear height sensor to control link connection <Vehicles with headlight automatic leveling system>

<<**A**>> 1. Control link

>>**A**<< 2. Upper arm

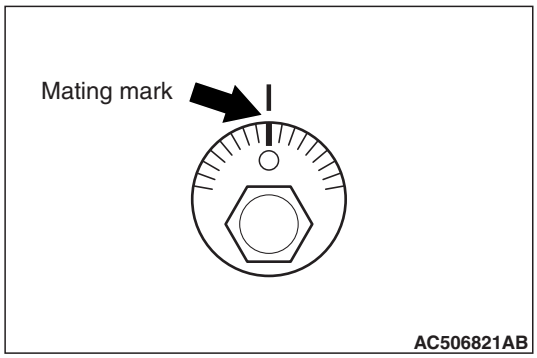
Lower arm removal steps

3. Stabilizer link connection
4. Lower arm and trailing arm connection
5. Shock absorber connection
6. Coil spring
7. Coil spring upper pad
8. Coil spring lower pad
9. Lower arm

REMOVAL SERVICE POINTS

<<A>> CONTROL LINK REMOVAL

Make a mating mark on the toe adjusting bolt, and remove the control link.



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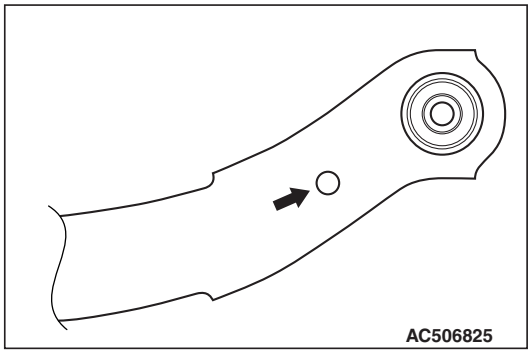
INSTALLATION SERVICE POINTS

>>A<< UPPER ARM INSTALLATION



Install the upper arm so that the hole faces the body side.

LOWER ARM BUSHING REPLACEMENT

M1341011800312

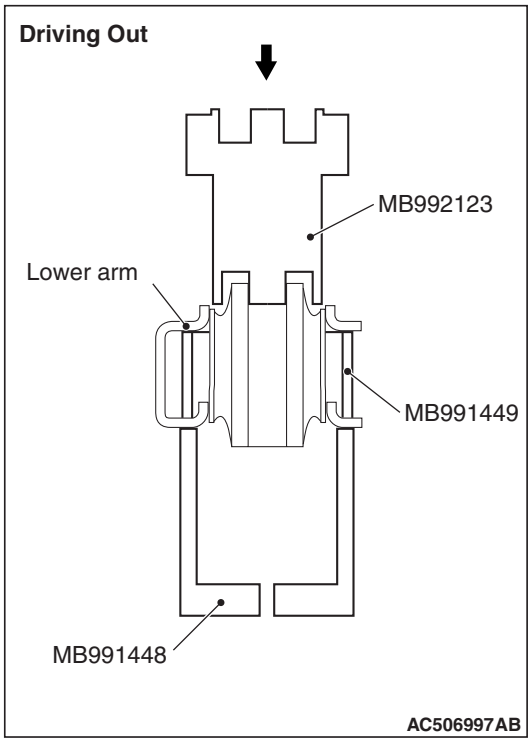
Required Special Tools:

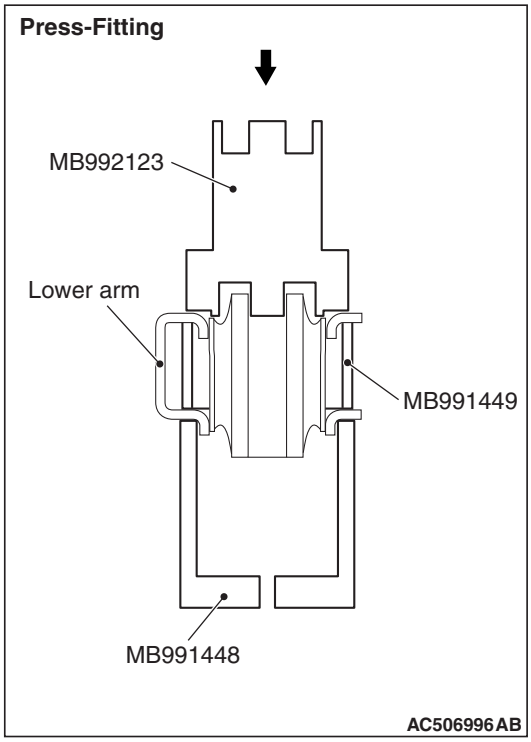
- MB992123: Arm Bushing Remover and Installer
- MB991448: Bushing Remover and Installer Base
- MB991449: Bushing Remover and Installer Supporter

⚠ CAUTION

As the bushing has different outer diameters at both ends, be careful not to confuse the removal direction with the press-fit direction.

Use the special tools MB992123, MB991448 and MB991449 to remove and press-fit the lower arm bushing.





TRAILING ARM ASSEMBLY

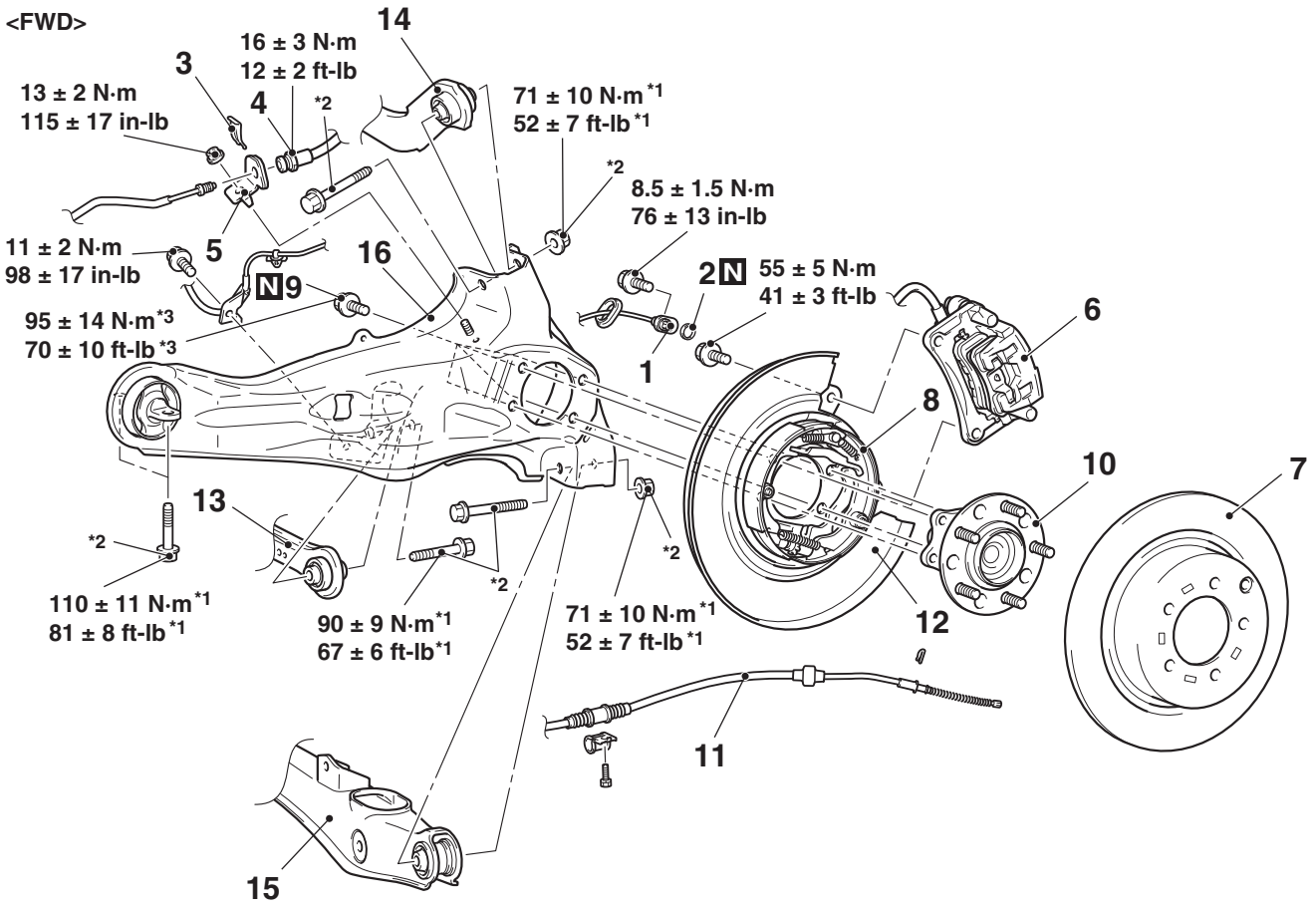
REMOVAL AND INSTALLATION <2.4L ENGINE: 5 PERSONS SEAT>

M1341004200125

⚠ CAUTION

- **The parts indicated by *1 should be temporarily tightened, and then fully tightened with the vehicle standing on the ground and the curb weight condition.**
- **The parts indicated by *2 are the bolts/nuts with friction coefficient stabilizer. In removal, ensure there is no damage, clean dust and soiling from the bearing and thread surfaces, and tighten them to the specified torque.**
- **The part indicated by *3is the bolt/nut with friction coefficient stabilizer. In removal, replace it with new one.**

Pre-removal operation	Post-installation operation
• Brake Fluid Draining (Refer to GROUP 35A, On-vehicle Service– Basic Brake System Bleeding P.35A-20.)	• Using your fingers, press the Ball Joint Dust Cover to check for a crack or damage. • Brake Fluid Refilling and Bleeding (Refer to GROUP 35A, On-vehicle Service– Basic Brake System Bleeding P.35A-20). • Wheel Alignment Check and Adjustment (Refer to P.34-10.) • Parking Brake Pedal Stroke Check and Adjustment (Refer to GROUP 36, On-vehicle Service – Parking Brake Pedal Stroke Check and Adjustment P.36-9.)



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Removal steps

1. Rear wheel speed sensor (Refer to GROUP 35B – Wheel speed sensor P.35B-189)
2. O ring
3. Clamp
4. Brake hose connection
5. Brake hose bracket

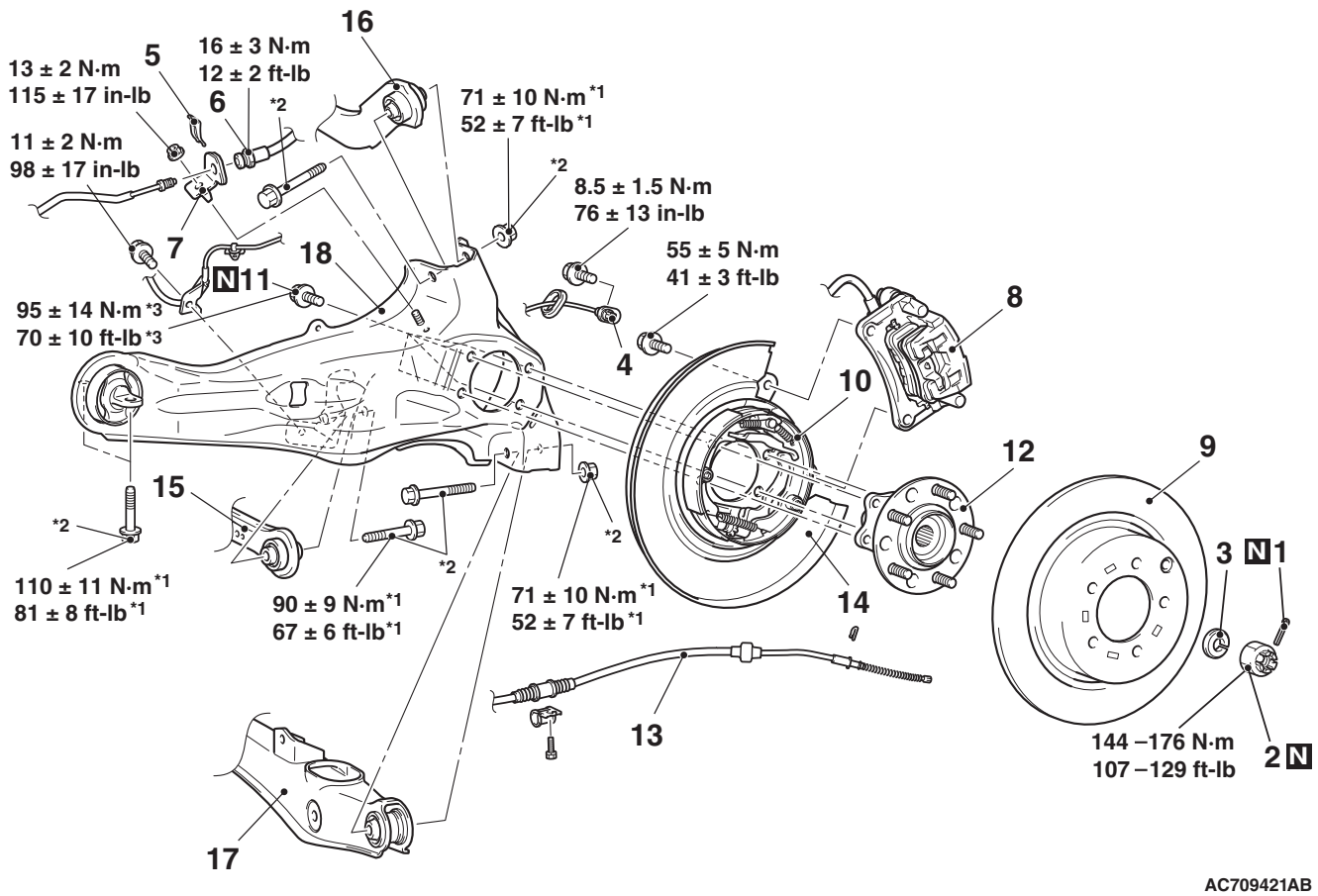
<<B>> 6. Caliper assembly

7. Brake disk
8. Shoe and lining assembly (Refer to GROUP 36, Parking Brake and Drum P.36-15.)

Removal steps (Continued)

9. Rear wheel hub assembly mounting bolt
10. Rear wheel hub assembly
11. Parking brake cable connection
12. Rear brake backing plate
13. Control link connection
14. Upper arm connection
15. Lower arm connection
16. Trailing arm assembly

<AWD>



AC709421AB

Removal steps

<<A>> >>A<< 1. Cotter pin

>>A<< 2. Driveshaft nut

>>A<< 3. Washer

4. Rear wheel speed sensor
5. Clamp
6. Brake hose connection
7. Brake hose bracket

<<B>> 8. Caliper assembly

9. Brake disk
10. Shoe and lining assembly (Refer to GROUP 36, Parking Brake and Drum P.36-18.)

Removal steps (Continued)

<<C>> 11. Rear wheel hub assembly mounting bolt

12. Rear wheel hub assembly
13. Parking brake cable connection
14. Rear brake backing plate
15. Control link connection
16. Upper arm connection
17. Lower arm connection
18. Trailing arm assembly

TSB Revision

Required Special Tools:
- MB990211: Slide Hammer
- MB990241: Rear Axle Shaft Puller
- MB990242: Puller Shaft
- MB990244: Puller Bar
- MB990767: Front Hub and Flange Yoke Holder
- MB991354: Puller Body

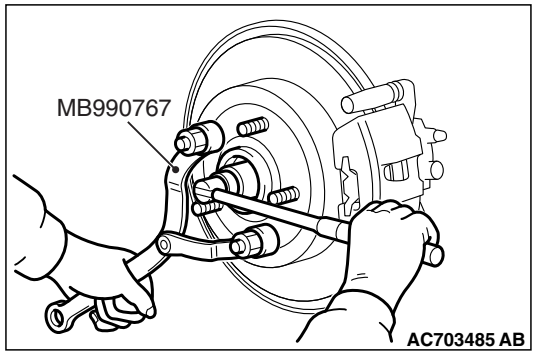
REMOVAL SERVICE POINTS

<<A>> DRIVESHAFT NUT REMOVAL

⚠ CAUTION

Do not apply the vehicle weight on the rear wheel hub assembly with the driveshaft nut loosened. Otherwise, the wheel bearing will be broken.

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

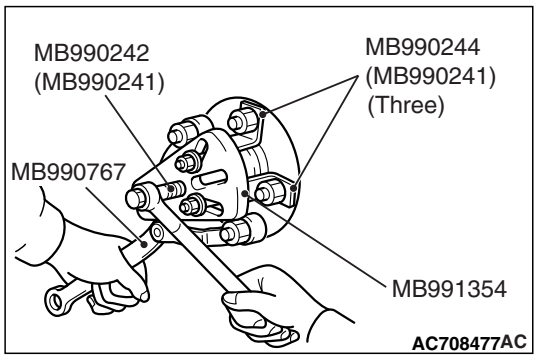


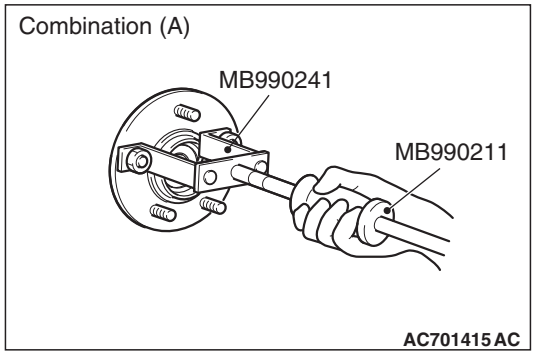
<<B>> CALIPER ASSEMBLY REMOVAL

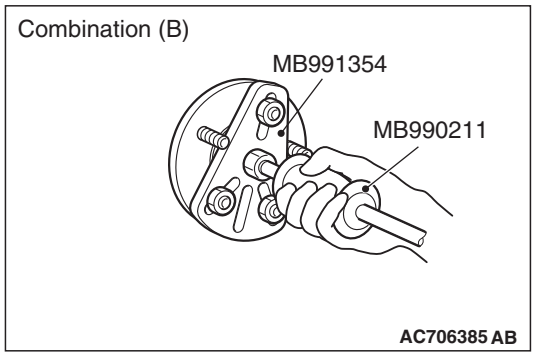
1. Remove the caliper assembly with brake hose.
2. Secure the removed caliper assembly with a wire or other similar material at a position where it will not interfere with the removal and installation of the rear wheel hub assembly.

<<C>> REAR WHEEL HUB ASSEMBLY REMOVAL

1. If the rear wheel hub assembly is seized with the rear driveshaft assembly, use special tools MB990242 and MB990244, MB991354 and MB990767 to push the rear driveshaft assembly out from the hub and then remove the rear wheel hub assembly.







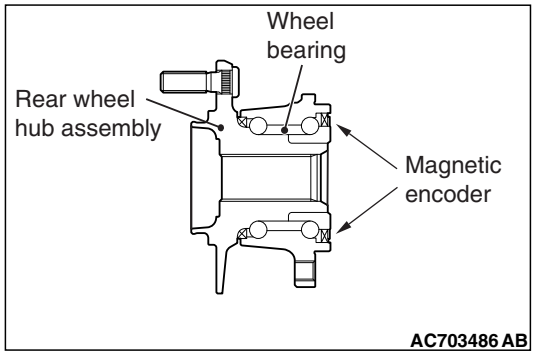
2. If the rear wheel hub assembly is seized with the knuckle, use special tools MB990211 and MB990241 {combination (A)}, or MB990211 and MB991354 {combination (B)} to remove the rear wheel hub assembly.

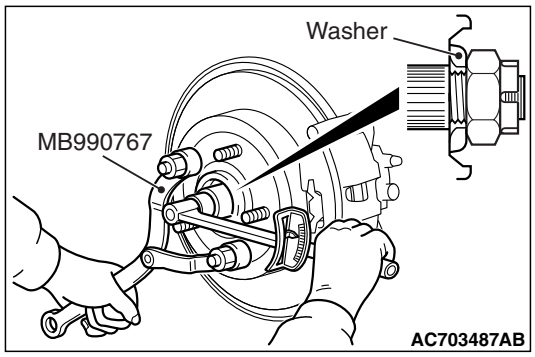
INSTALLATION SERVICE POINTS

>>A<< WASHER/DRIVESHAFT NUT INSTALLATION

⚠ CAUTION

- **The magnetic encoder collects metallic particles easily, because it is magnetized. Make sure that the magnetic encoder does not collect metallic particles. Check that there is not any trouble prior to reassembling it.**
- **When installing the drive shaft, make sure that it does not contact with the magnetic encoder (integrated with the inner oil seal) to avoid damage.**
- **Do not apply the vehicle weight on the rear wheel hub assembly before fully tightening the driveshaft nuts. Otherwise, the wheel bearing will be broken.**





1. Incorporate the driveshaft washer as shown in the figure.
2. Use special tool MB990767 to tighten the driveshaft nuts. At this time, tighten the nuts within the specified torque range considering the final tightening.

   Tightening torque: 144 – 176 N·m (107 – 129 ft-lb)
3. If the pin holes do not align with the pins, tighten the driveshaft nut [less than 200 N·m (147 ft-lb)] and find the nearest hole then bend the split ping to fit it.

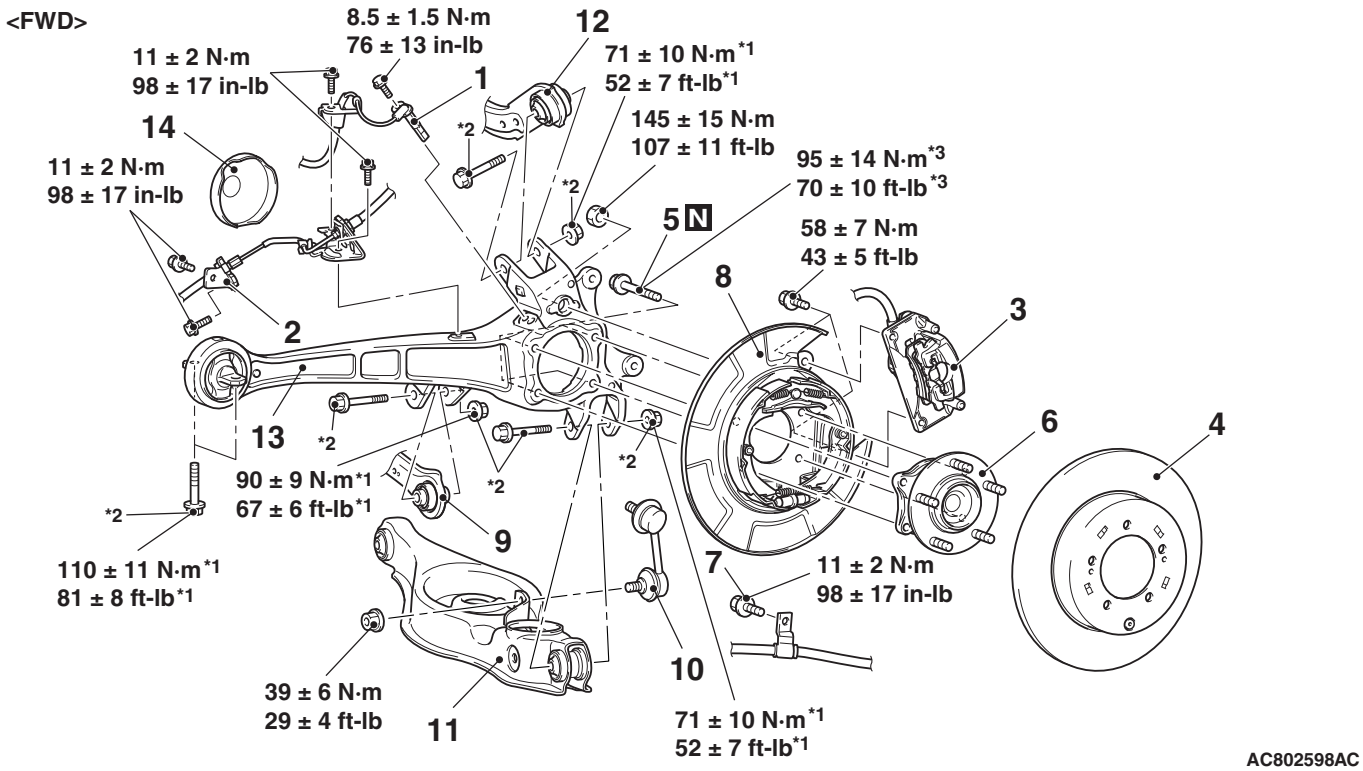
REMOVAL AND INSTALLATION <2.4L ENGINE: 7 PERSONS SEAT, 3.0L ENGINE>

M1341004200181

⚠ CAUTION

- **The parts indicated by *1 should be temporarily tightened, and then fully tightened with the vehicle standing on the ground and the curb weight condition.**
- **The parts indicated by *2 are the bolts/nuts with friction coefficient stabilizer. In removal, ensure there is no damage, clean dust and soiling from the bearing and thread surfaces, and tighten them to the specified torque.**
- **The part indicated by *3is the bolt/nut with friction coefficient stabilizer. In removal, replace it with new one.**

Pre-removal operation	Post-installation operation
• Brake Fluid Draining (Refer to GROUP 35A, On-vehicle Service – Brake Fluid Level Inspection and Bleeding P.35A-20.)	• Brake Fluid Refilling and Bleeding (Refer to GROUP 35A, On-vehicle Service– Brake Fluid Level Inspection and Bleeding P.35A-20.) • Wheel Alignment Check and Adjustment (Refer to P.34-10.) • Parking Brake Lever Stroke Check and Adjustment (Refer to GROUP 36, On-vehicle Service – Parking Brake Lever Stroke Check and Adjustment P.36-9.)



AC802598AC

Removal steps

1. Rear wheel speed sensor
2. Brake hose bracket

<<B>>

3. Caliper assembly
4. Brake disk
5. Rear wheel hub assembly mounting bolt
6. Rear wheel hub assembly
7. Parking brake cable connecting bolt

<<D>>

8. Rear brake assembly
9. Control link connection
10. Stabilizer link connection

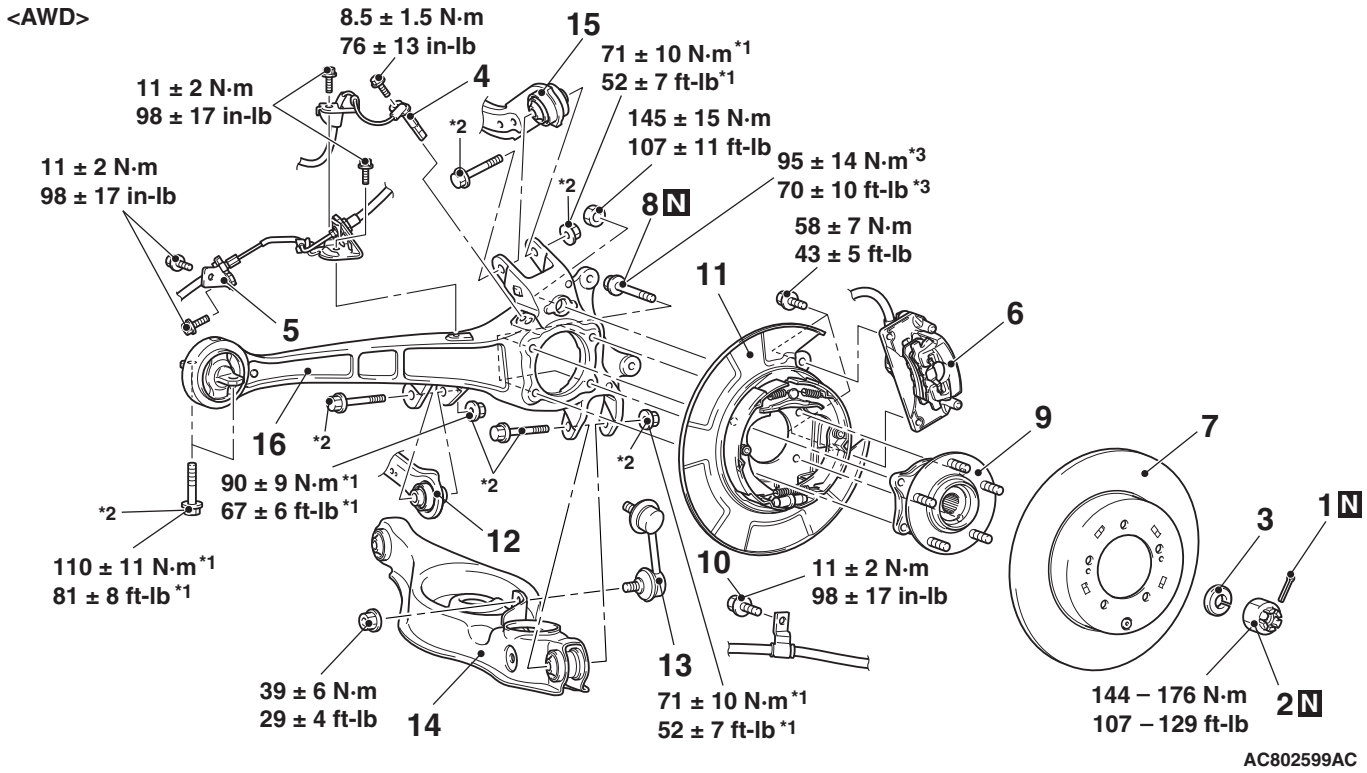
<<E>>

11. Lower arm assembly connection
12. Upper arm connection
13. Trailing arm assembly

>>A<<

14. Rear sensor cover

TSB Revision



Removal steps

1. Cotter pin

<<A>> >>B<< 2. Driveshaft nut

>>B<< 3. Washer

4. Rear wheel speed sensor
5. Brake hose bracket

<<B>> 6. Caliper assembly

7. Brake disk
   - Driveshaft (Refer to Driveshaft Removal and Installation P.27B-24.)
8. Rear wheel hub assembly mounting bolt

<<C>> 9. Rear wheel hub assembly

Removal steps (Continued)

10. Parking brake cable mounting bolt

<<D>> 11. Rear brake assembly

12. Control link connection
13. Stabilizer link connection

<<E>> 14. Lower arm assembly connection

15. Upper arm connection
16. Trailing arm assembly

Required Special Tool:

- MB990767: Front Hub and Flange Yoke Holder

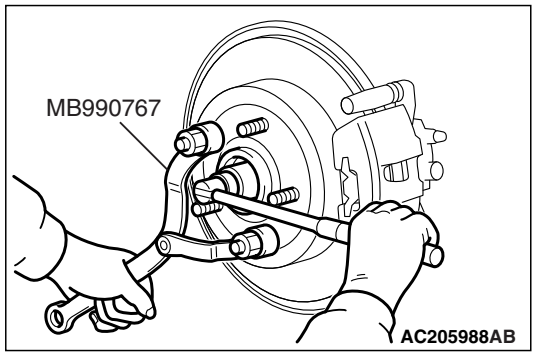
REMOVAL SERVICE POINTS

<<A>> DRIVESHAFT NUT REMOVAL

⚠ CAUTION

Do not apply the vehicle weight on the rear wheel hub assembly with the driveshaft nut loosened. Otherwise, the wheel bearing will be broken.

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



<<B>> CALIPER ASSEMBLY REMOVAL

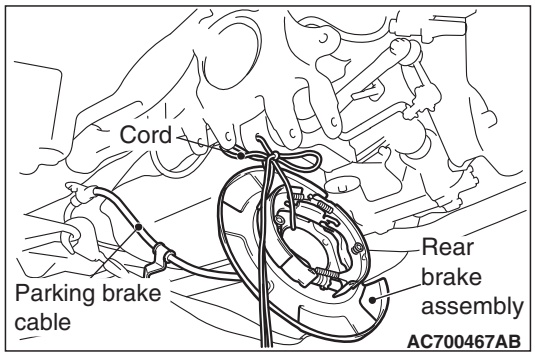
1. Remove the caliper assembly with brake hose.
2. Secure the removed caliper assembly with a wire or other similar material at a position where it will not interfere with the removal and installation of the rear wheel hub assembly.

<<C>> REAR WHEEL HUB ASSEMBLY REMOVAL

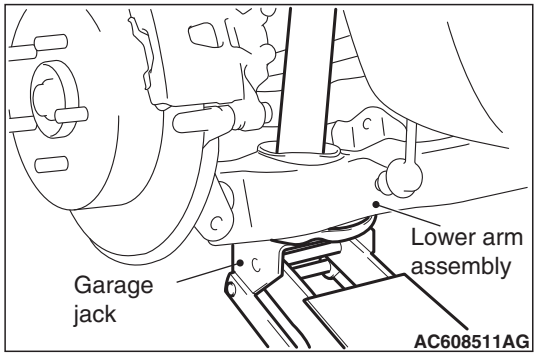
Refer to GROUP 27B, Rear Axle Hub Assembly P.27B-19.

<<D>> REAR BRAKE ASSEMBLY REMOVAL

Without separating the parking brake cable, hang the rear brake assembly at the body-side using a string.



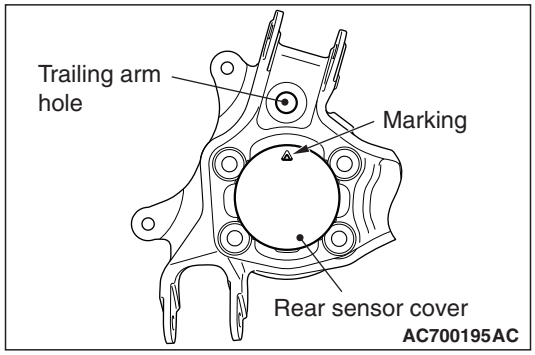
<<E>> LOWER ARM ASSEMBLY DISCONNECTION



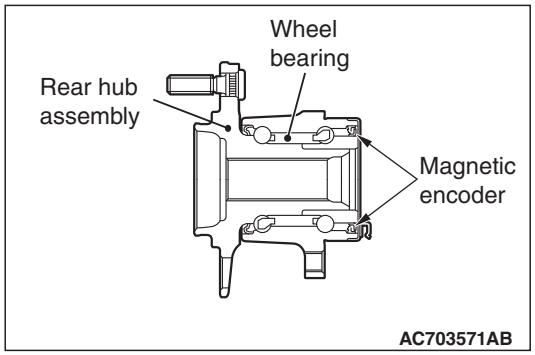
While jacking-up the lower arm with garage jack, remove the mounting bolts.

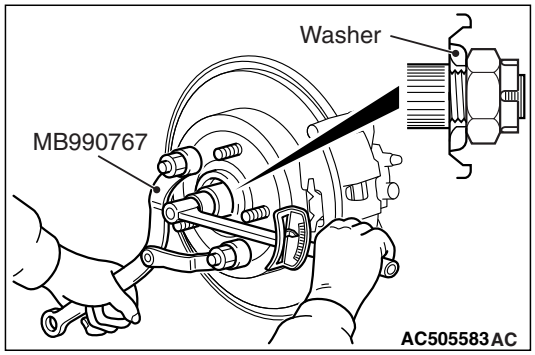
INSTALLATION SERVICE POINTS

>>A<< REAR SENSOR COVER INSTALLATION



Align the marking with trailing arm hole as shown in the figure and install the rear sensor cover.





>>B<< WASHER/DRIVESHAFT NUT INSTALLATION

⚠ CAUTION

- **Because the wheel speed detection magnetic encoder is magnetized, it collects metallic particles easily. Make sure that the magnetic encoder does not collect metallic particles. Check that there is not any trouble prior to reassembling it.**
- **When installing the drive shaft, make sure that it does not contact with the wheel speed detection magnetic encoder (integrated with the inner oil seal) to avoid damage.**
- **Do not apply the vehicle weight on the rear wheel hub assembly before fully tightening the driveshaft nuts. Otherwise, the wheel bearing will be broken.**

1. Incorporate the driveshaft washer as shown in the figure.
2. Use special tool MB990767 to tighten the driveshaft nuts. At this time, tighten the nuts within the specified torque range considering the final tightening.

   Tightening torque: 144 – 176 N·m (107 – 129 ft-lb)
3. If the pin holes do not align with the pins, tighten the driveshaft nut [less than 200 N·m (147 ft-lb)] and find the nearest hole then bend the cotter pin to fit it.

INSPECTION

M1341002300290

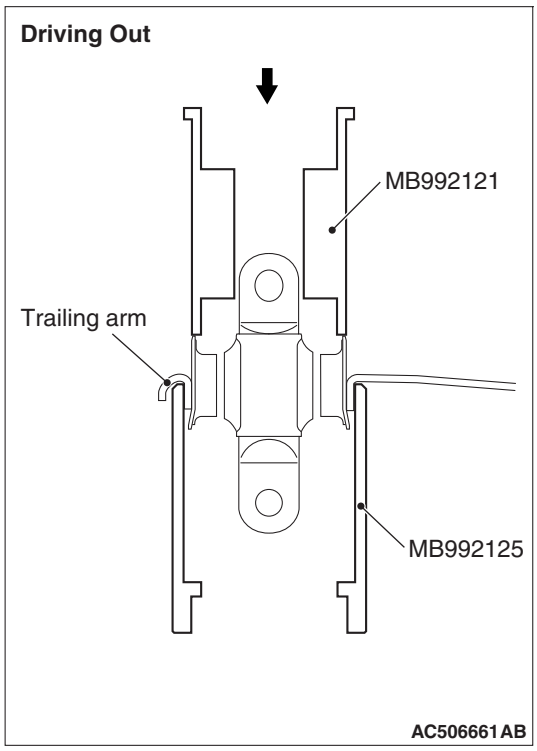
- Check the bushings for wear and deterioration.
- Check the trailing arm for bending or damage.

TRAILING ARM BUSHING REPLACEMENT <2.4L ENGINE: 5 PERSONS SEAT>

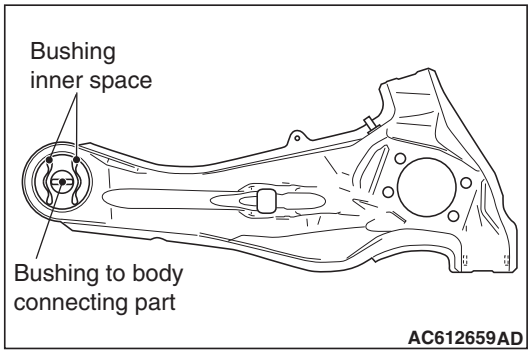
M1341011300458

Required Special Tools:

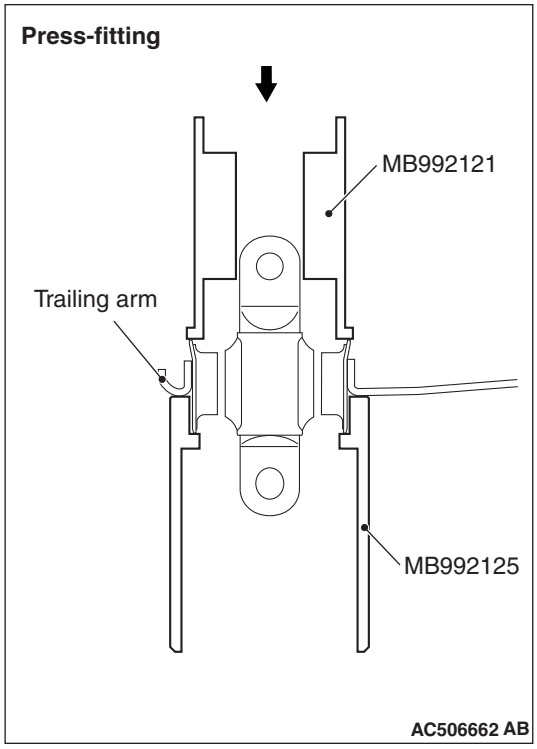
- MB992121: Arm Bushing Remover and Installer
- MB992125: Arm Bushing Base



1. Use the special tools MB992121 and MB992125 to remove the trailing arm bushing:



2. Determine the installation direction and the installation position of the trailing arm bushing.
   (1) Install so that the protruding side of the trailing arm bushing inner pipe faces inside the body.
   (2) Position horizontally the trailing arm bushing to body connecting part, and locate bushing inner space as shown in the figure.



3. Use the special tools MB992121 and MB992125 to press-fit the trailing arm bushing up to the position shown in the figure:

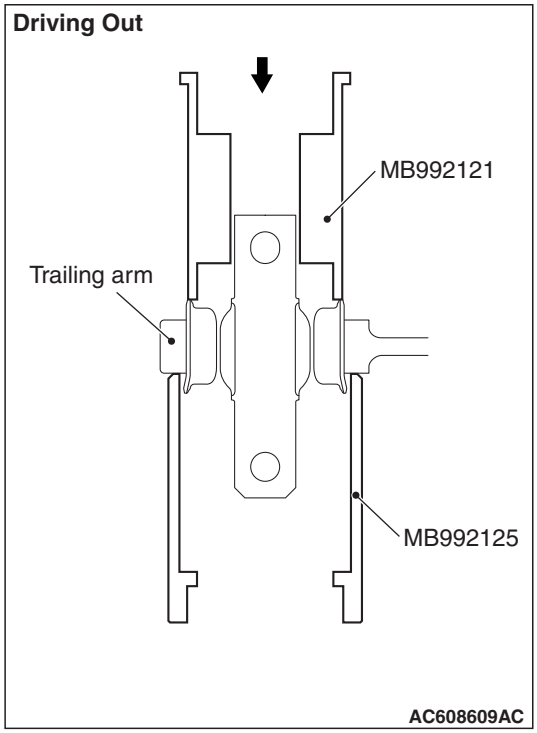
TRAILING ARM BUSHING REPLACEMENT <2.4L ENGINE: 7PERSONS SEAT, 3.0L ENGINE>

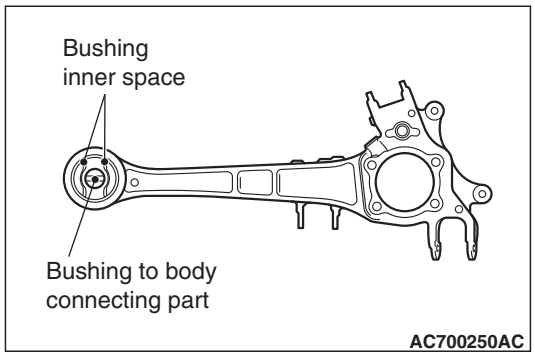
M1341011300436

Required Special Tools:

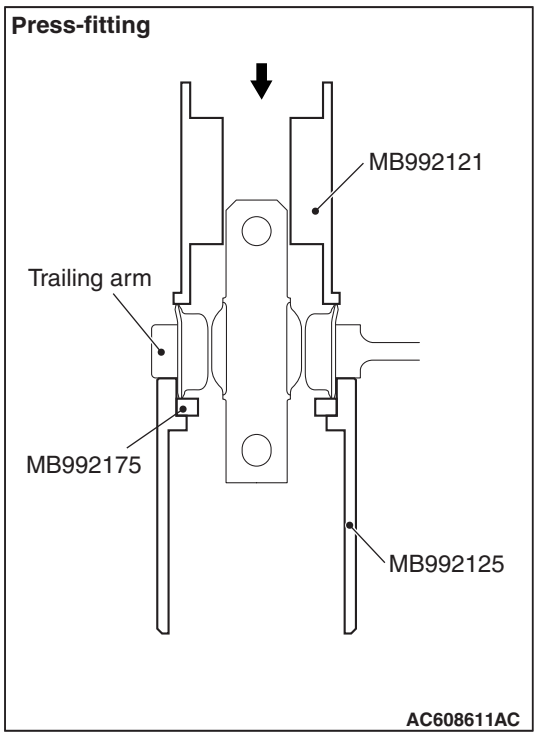
- MB992121: Arm Bushing Remover and Installer
- MB992125: Arm Bushing Base
- MB992175: Base Spacer

1. Use the special tools MB992121 and MB992125 to remove the trailing arm bushing.





2. Determine the installation direction and the installation position of the trailing arm bushing.
   (1) Install so that the protruding side of the trailing arm bushing inner pipe faces inside the body.
   (2) Position horizontally the trailing arm bushing to body connecting part, and locate bushing inner space as shown in the figure.



3. Use the special tools MB992121, MB992125 and MB992175 to press-fit the trailing arm bushing up to the position shown in the figure.

SHOCK ABSORBER ASSEMBLY

REMOVAL AND INSTALLATION

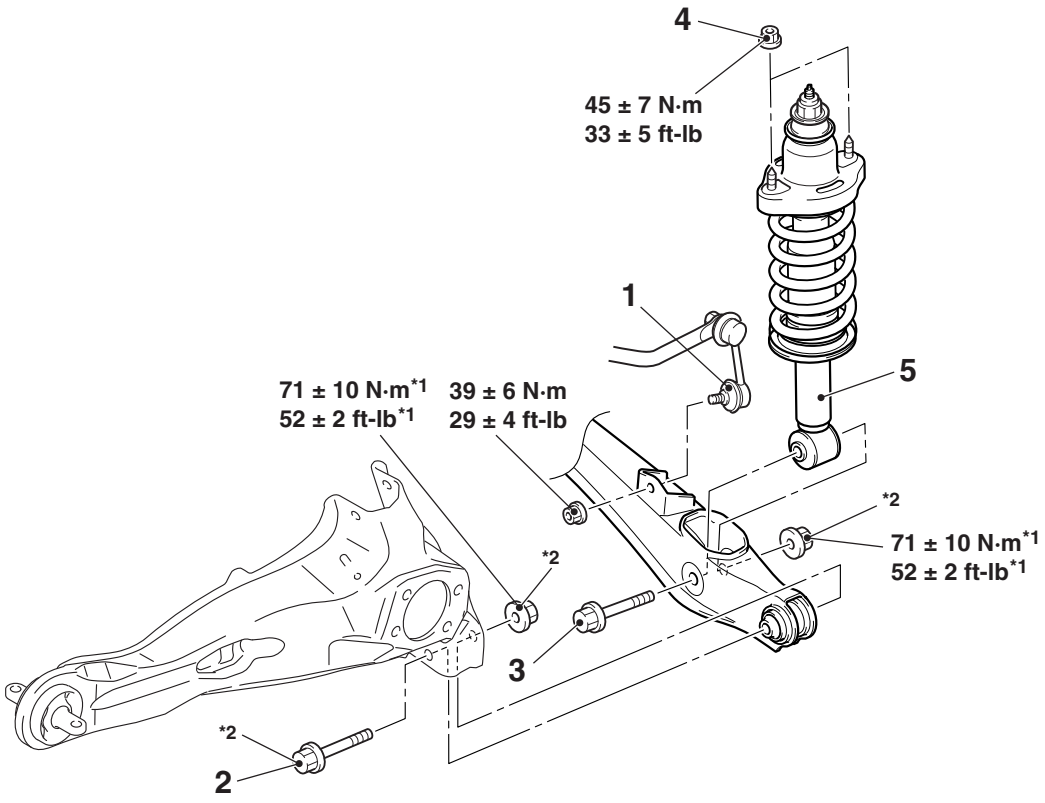
M1341002500863

⚠ CAUTION

- **The parts indicated by *1 should be temporarily tightened, and then fully tightened with the vehicle standing on the ground and the curb weight condition.**
- **The parts indicated by *2 are the bolts/nuts with friction coefficient stabilizer. In removal, ensure there is no damage, clean dust and soiling from the bearing and thread surfaces, and tighten them to the specified torque.**

Pre-removal operation	Post-installation operation
• Quarter Trim Removal (Refer to GROUP 52A – Trim P.52A-10.)	• Using your fingers, press the Ball Joint Dust Cover to check for a crack or damage. • Quarter Trim Installation (Refer to GROUP 52A – Trim P.52A-10.)

<2.4L Engine: 5 persons seat>



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Removal steps

1. Stabilizer link connection

<<A>>

2. Lower arm and trailing arm connection

Removal steps (Continued)

<<A>>

3. Shock absorber and lower arm connection

<<B>>

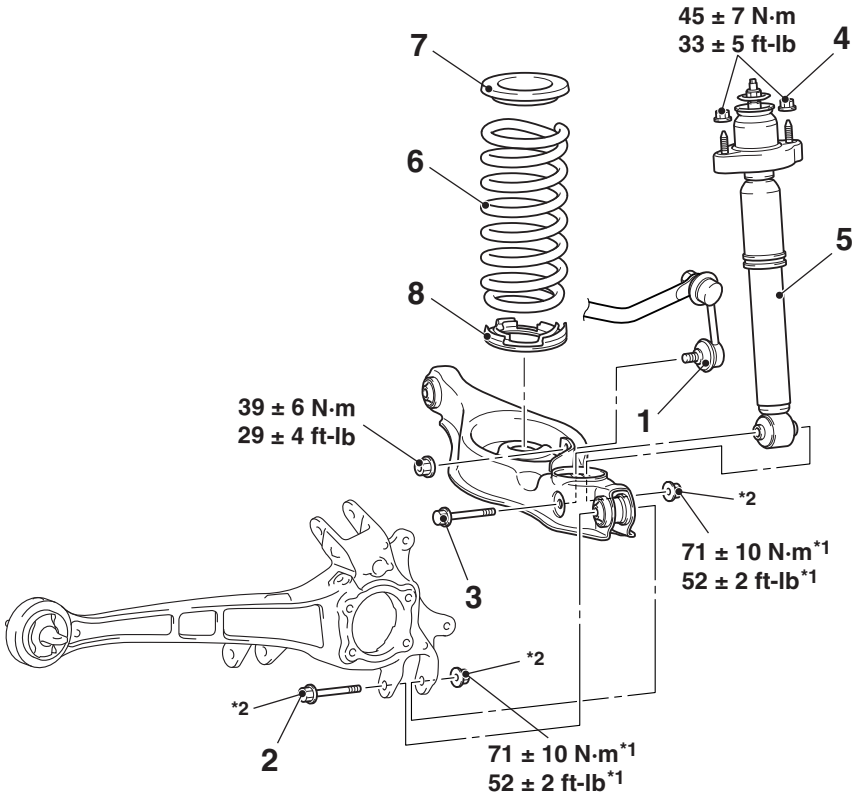
4. Shock absorber mounting nut

>>A<<

5. Shock absorber assembly

TSB Revision

<2.4L ENGINE: 7 persons seat, 3.0L ENGINE>



AC608510AD

Shock absorber removal steps

	1.	Stabilizer link connection
<<**A**>>	2.	Lower arm and trailing arm connection
<<**A**>>	3.	Shock absorber and lower arm connection
<<**B**>>	4.	Shock absorber mounting nut
	5.	Shock absorber assembly

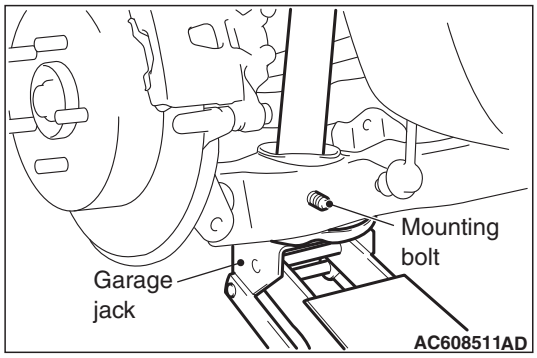
Coil spring removal steps

	1.	Stabilizer link connection
<<**A**>>	2.	Lower arm and trailing arm connection
<<**A**>>	3.	Shock absorber and lower arm connection
	6.	Coil spring
	7.	Coil spring upper pad
	8.	Coil spring lower pad

REMOVAL SERVICE POINT

<<A>> LOWER ARM AND TRAILING ARM/SHOCK ABSORBER AND LOWER ARM DISCONNECTION

While jacking-up the lower arm with the garage jack, remove the mounting bolts.



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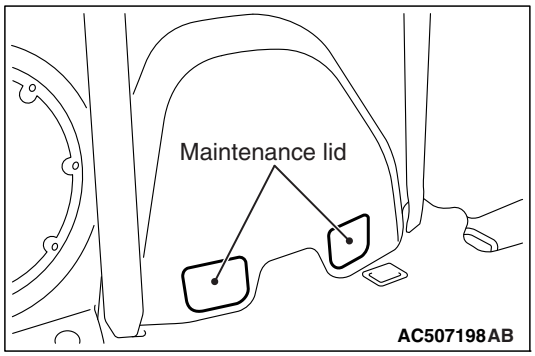
TSB Revision

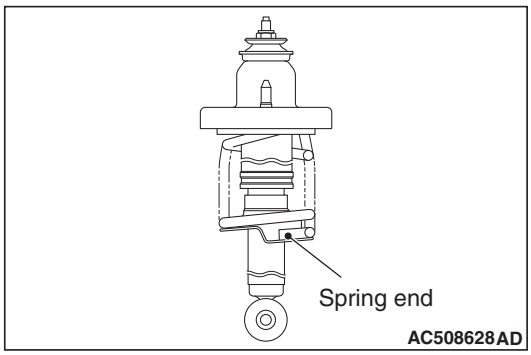
<<B>> SHOCK ABSORBER MOUNTING NUT REMOVAL



Remove the maintenance lid as shown in the figure, and then remove the shock absorber mounting nut.

INSTALLATION SERVICE POINT

>>A<< SHOCK ABSORBER ASSEMBLY INSTALLATION



Install the shock absorber assembly so that the coil spring end faces the rear of the vehicle.

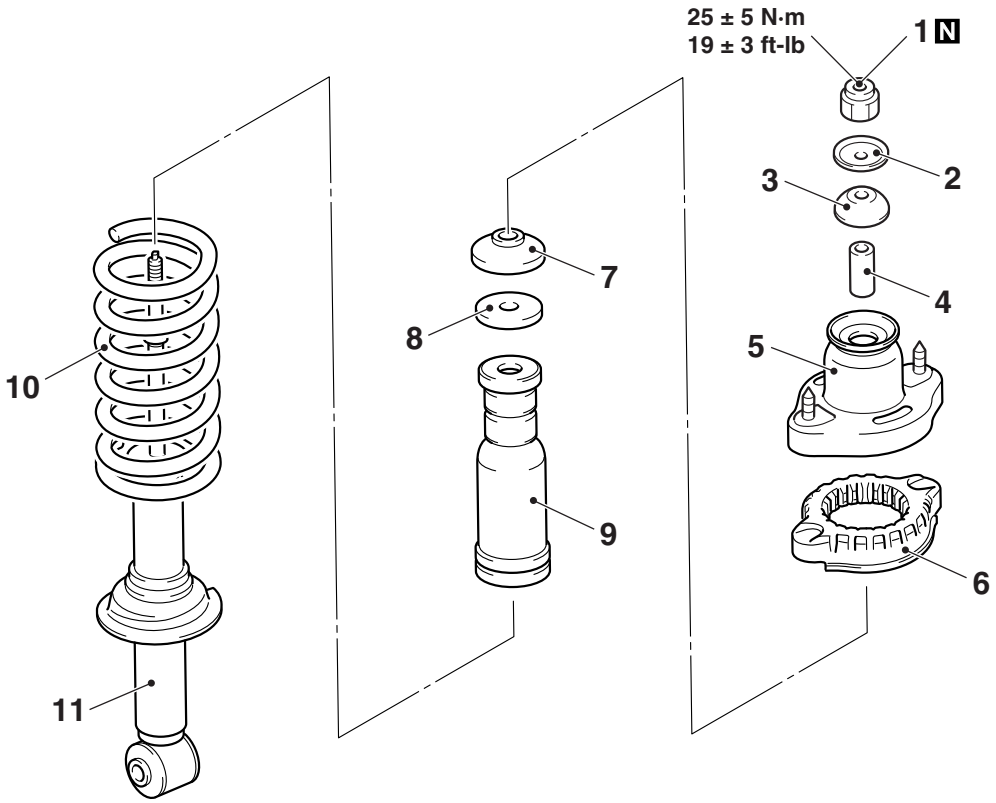
INSPECTION

M1341002600246

- Check the rubber parts for cracks and wear.
- Check the shock absorber for malfunctions, oil leakage, or abnormal noise.

DISASSEMBLY AND ASSEMBLY <2.4L ENGINE: 5 PERSONS SEAT>

M1341002700265



AC506862AB

Disassembly steps

<<**A**>> >>**B**<< 1. Self-locking nut
2. Washer
3. Bushing B
4. Collar
5. Spring upper bracket assembly
6. Spring upper pad
7. Bushing A
8. Plate
9. Bump rubber

Disassembly steps (Continued)

>>**A**<< 10. Coil spring
11. Shock absorber

Required Special Tools:

- MB991793: Spring compressor
- MB991796: Attachment B
- MB991794: Upper plate
- MB991830: Fixture

TSB Revision

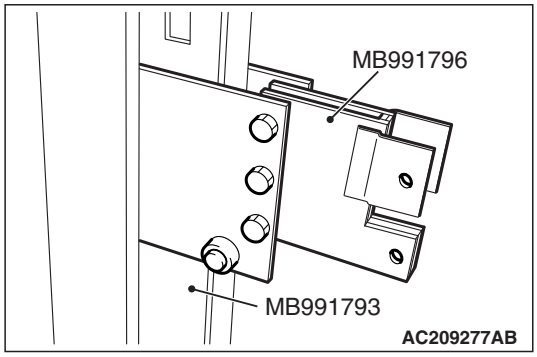
DISASSEMBLY SERVICE POINTS

<<A>> SELF-LOCKING NUT REMOVAL

⚠ CAUTION

The locking nut for the piston rod inside the shock absorber may be loose. Do not use an impact wrench to loosen the self-locking nut.

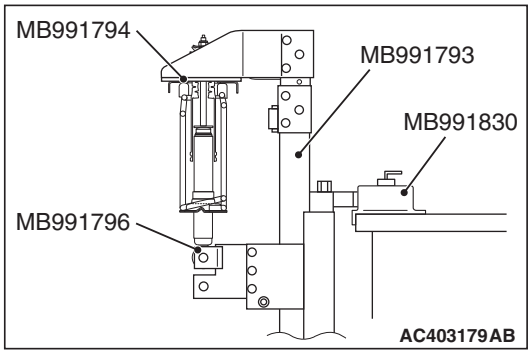
1. Install the special tool MB991796 to the special tool MB991793 as shown in the figure.



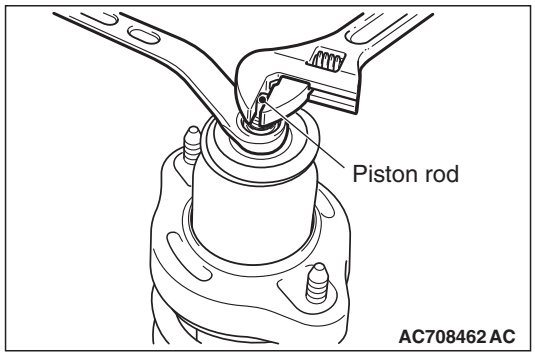
2. Set the strut assembly to special tools: MB991793, MB991796, MB991794 and MB991830.

   NOTE: Use the bolts and nuts removed from the vehicle to secure the shock absorber assembly and tighten them lightly by hand.

3. After setting the shock absorber assembly, operate the spring compressor and compress the coil spring by approximately 5 mm (0.20 in).



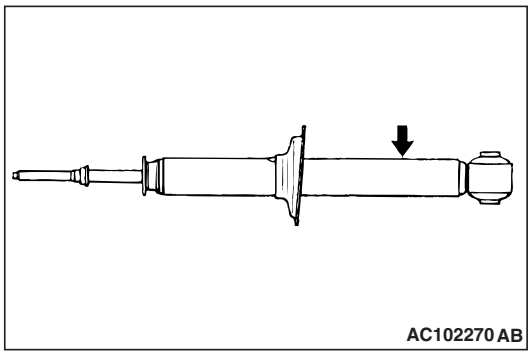
4. While holding the piston rod as shown in the figure, remove the self-locking nut.



<<B>> SHOCK ABSORBER DISPOSAL PROCEDURES

⚠ CAUTION

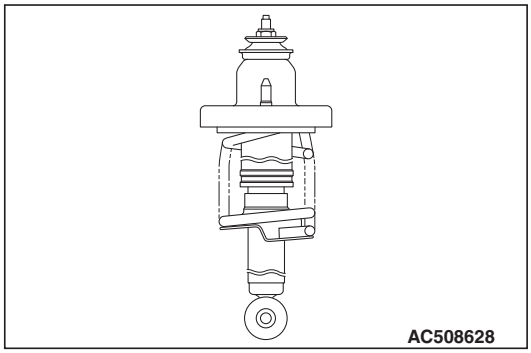
Wear the protective glasses. Although the gas is harmless, drilling chips may be blown out by the gas.


AC102270AB

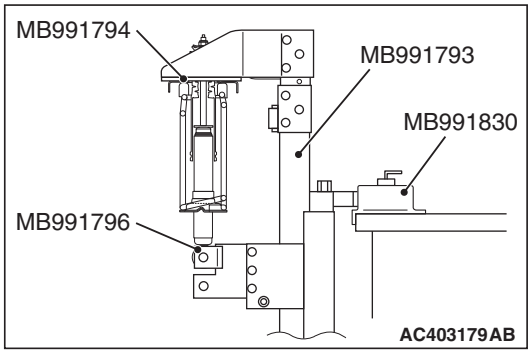
Before disposal of the shock absorber, place the shock absorber on the level surface with the piston rod extended, and make a hole of approximately 3 mm (0.12 in) in diameter at the point shown in the figure to discharge the gas.

ASSEMBLY SERVICE POINTS

>>A<< COIL SPRING INSTALLATION


AC508628

1. Install the coil spring end as shown in the figure, so that it should face the vehicle rearward.



2. Set the shock absorber to special tools: MB991793, MB991796, MB991794 and MB991830, and slowly compress the coil spring while guiding the shock absorber piston rod through the hole on the upper spring bracket by hand:

   NOTE: Use the bolts and nuts removed from the vehicle to secure the shock absorber assembly and tighten them lightly by hand.

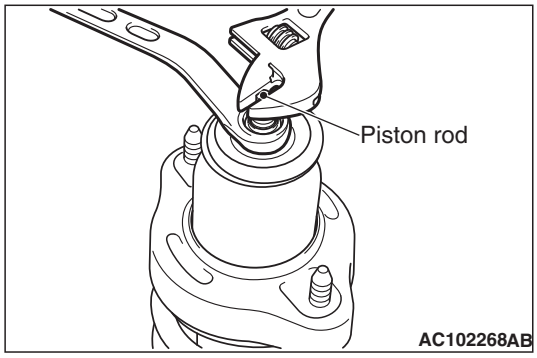
>>B<< SELF-LOCKING NUT INSTALLATION

⚠ CAUTION

The locking nut for the piston rod inside the shock absorber may be loose. Do not use an impact wrench to tighten the self-locking nut.

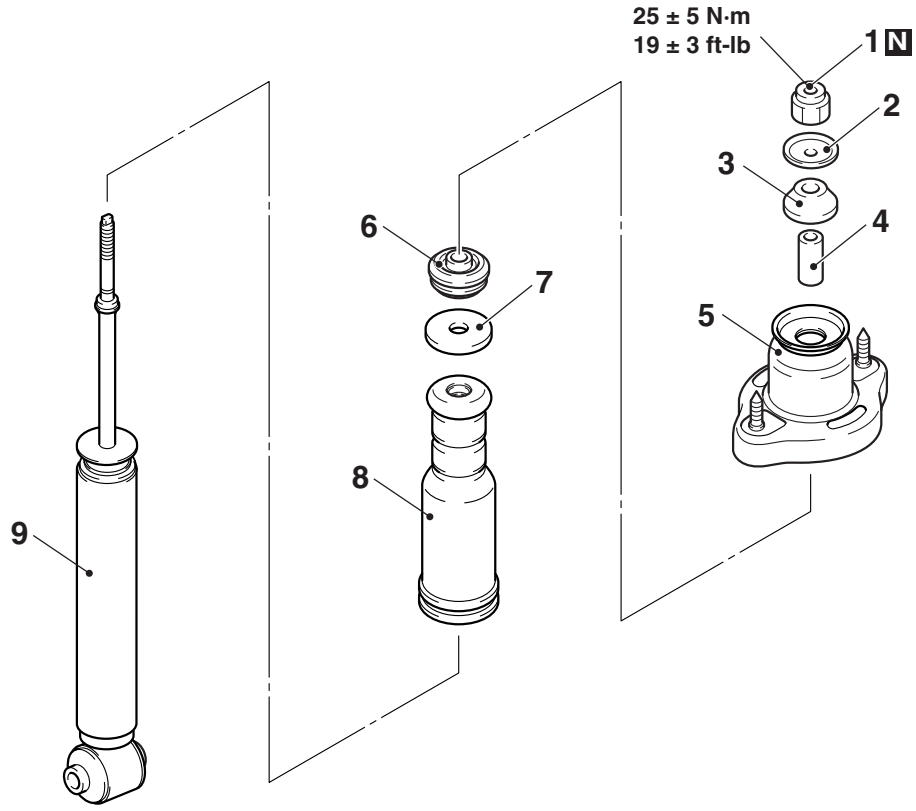
Counter the piston rod of the shock absorber as shown in the figure, and tighten the self-locking nut to the specified torque.

Tightening torque: 25 ± 5 N·m (19 ± 3 ft-lb)



DISASSEMBLY AND ASSEMBLY <2.4L ENGINE: 7 PERSONS SEAT, 3.0L ENGINE>

M1341002700232



Disassembly steps

<<**A**>> >>**A**<< 1. Self-locking nut
2. Washer
3. Bushing B
4. Collar
5. Spring upper bracket assembly

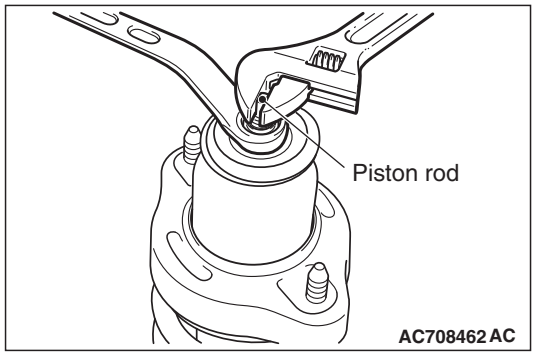
Disassembly steps (Continued)

6. Bushing A
7. Plate
8. Bump rubber
9. Shock absorber

TSB Revision

DISASSEMBLY SERVICE POINT

<<A>> SELF-LOCKING NUT REMOVAL



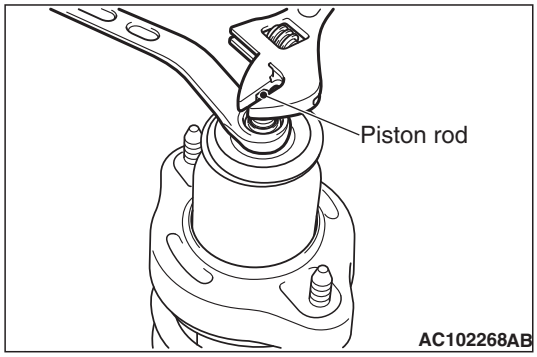
Counter the piston rod of the shock absorber as shown in the figure to remove the self-locking nut.

ASSEMBLY SERVICE POINT

>>A<< SELF-LOCKING NUT INSTALLATION

⚠ CAUTION

The locking nut for the piston rod inside the shock absorber may be loose. Do not use an impact wrench to tighten the self-locking nut.



Counter the piston rod of the shock absorber as shown in the figure, and tighten the self-locking nut to the specified torque.

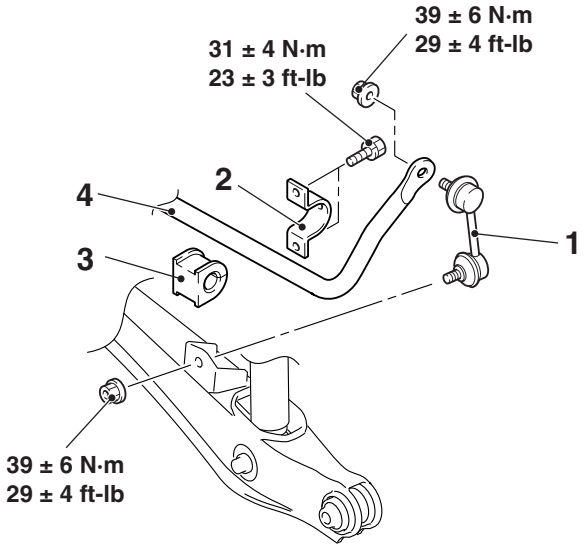
Tightening torque: 25 ± 5 N·m (19 ± 3 ft-lb)

STABILIZER BAR

REMOVAL AND INSTALLATION

M1341003000571

<2.4L Engine: 5 persons seat>



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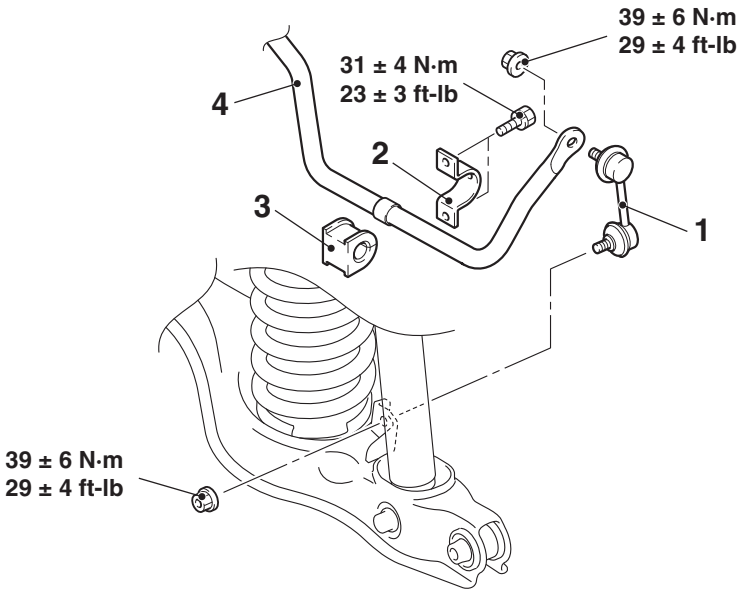
<2.4L Engine: 7 persons seat, 3.0L Engine>



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Removal steps

1. Stabilizer link
>>**A**<< 2. Stabilizer bracket
>>**A**<< 3. Bushing

Removal steps (Continued)

- Rear differential carrier assembly (Refer to GROUP 27B, Differential carrier assembly P.27B-31.)

>>**A**<< 4. Stabilizer bar

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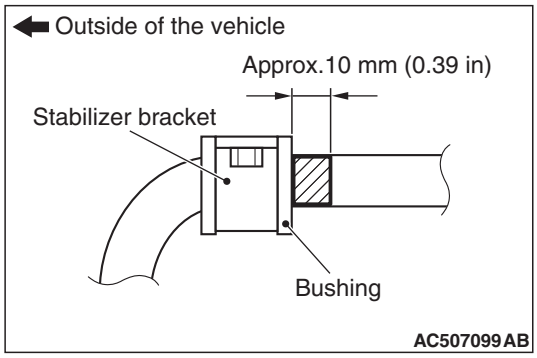
INSTALLATION SERVICE POINT

>>A<< STABILIZER BAR/BUSHING/STABILIZER BRACKET INSTALLATION

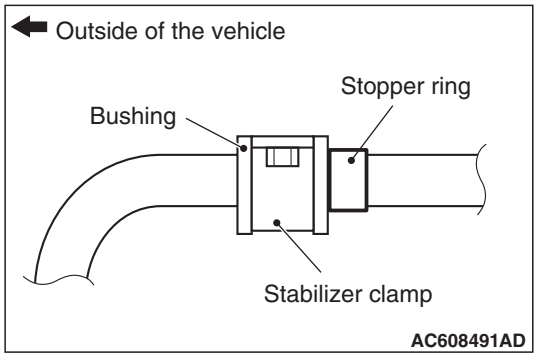
<2.4L Engine: 5 persons seat>

Position the identification mark of the stabilizer bar at the left side of the vehicle as shown in the figure, and tighten the stabilizer bracket mounting nut.



<2.4L Engine: 7 persons seat, 3.0L Engine>

Install the stabilizer bracket as shown in the figure, and tighten the stabilizer bracket mounting nut.



INSPECTION

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- Check the bushings for wear and deterioration.
- Check the stabilizer bar for deterioration or damage.
- Check all bolts for condition and straightness.

STABILIZER LINK BALL JOINT ROTATION TORQUE CHECK

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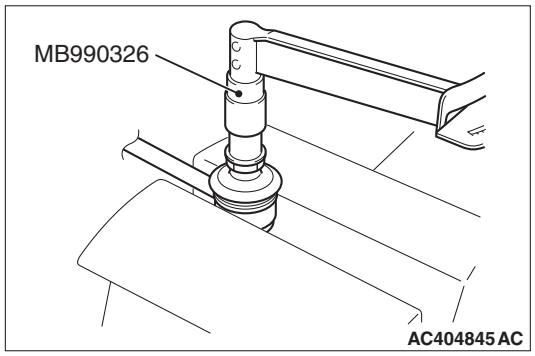

1. Move the stabilizer link ball joint stud back and forth for several times, install the stud with nut, and measure the stabilizer link ball joint rotation torque using the preload socket (Special tool: MB990326).

   Standard value: 0.5 – 2.9 N·m (4.4 – 25.7 in-lb)

2. When the measured value exceeds the standard range, replace the stabilizer link.
3. When the measured value is lower than the standard value, check the stabilizer link ball joint that there is no looseness or gritty feeling. If there is no looseness or gritty feeling, it is judged as usable.

STABILIZER LINK BALL JOINT COVER CHECK

M1341019100049

1. Using your fingers, press the dust cover to check for a crack or damage.
2. If the dust cover has a crack or damage, replace the stabilizer link.

   NOTE: If the dust cover has a crack or damage, the ball joint could be damaged. If the dust cover is damaged during maintenance, replace it.

REAR SUSPENSION CROSSMEMBER

REMOVAL AND INSTALLATION

M1341006800985

⚠ CAUTION

- **The parts indicated by * are the bolts with friction coefficient stabilizer. In removal, ensure there is no damage, clean dust and soiling from the bearing and thread surfaces, and tighten them to the specified torque.**

Pre-removal operation	Post-installation operation
• Control link arm removal (Refer to P.34-12.) • Upper arm removal (Refer to P.34-12.) • Rear suspension stabilizer bar removal (Refer to P.34-36.) • Center exhaust pipe removal (Refer to GROUP 15 – Exhaust Pipe and Muffler <4B1>P.15-22, <6B3> P.15-25.) • Driveshaft removal (Refer to GROUP 27B – Driveshaft Assembly P.27B-24.) • Rear differential assembly removal (Refer to GROUP 27B –Differential Carrier Assembly P.27B-31.)	• Rear differential assembly installation (Refer to GROUP 27B –Differential Carrier Assembly P.27B-31.) • Driveshaft installation (Refer to GROUP 27B – Driveshaft Assembly P.27B-24.) • Center exhaust pipe installation (Refer to GROUP 15 – Exhaust Pipe and Muffler <4B1>P.15-22, <6B3>P.15-25.) • Rear suspension stabilizer bar installation (Refer to P.34-36.) • Upper arm installation (Refer to P.34-12.) • Control link installation (Refer to P.34-12.) • Rear wheel alignment check and adjustment (Refer to P.34-10.)

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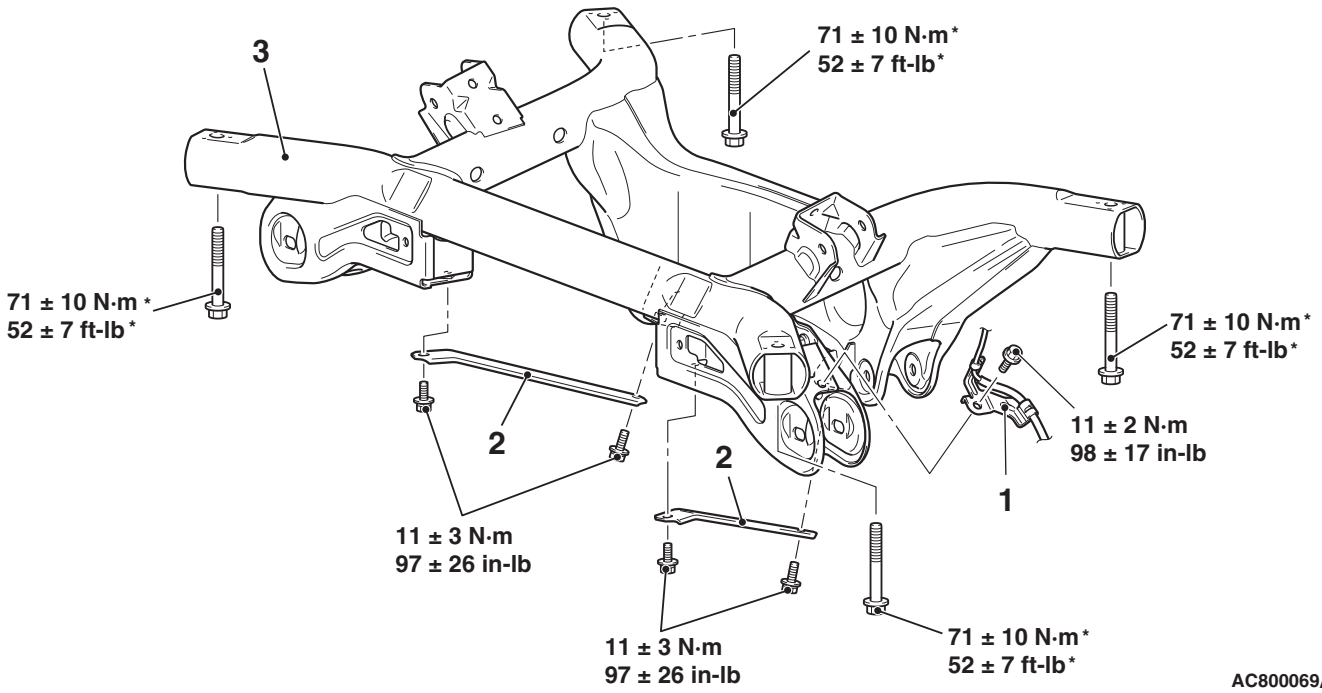

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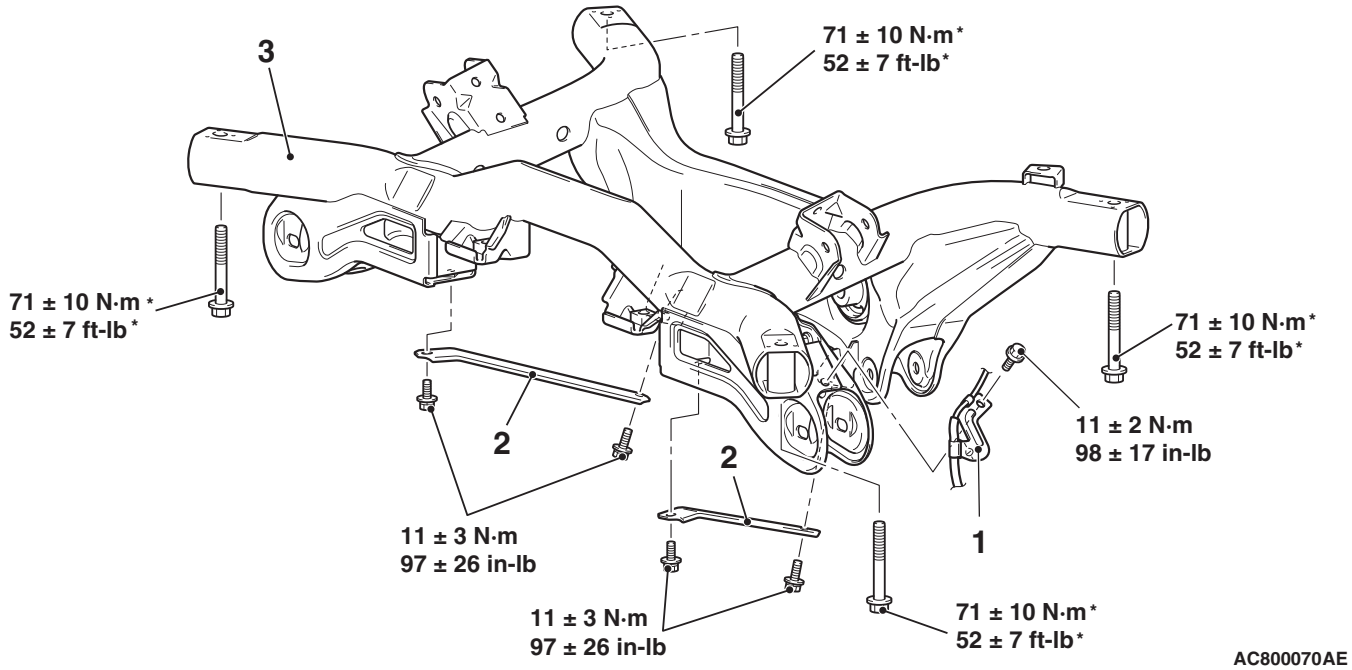


Removal steps
1. Rear wheel speed sensor clamp

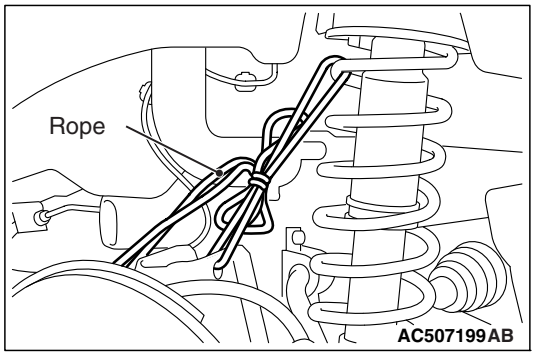
<<A>>

Removal steps (Continued)
2. Rear suspension crossmember stay
3. Rear suspension crossmember

REMOVAL SERVICE POINT

<<A>> REAR SUSPENSION CROSSMEMBER REMOVAL <2.4 L ENGINE: 5 PERSONS SEAT>

To avoid the break hose load, fix the trailing arm assembly with a rope as shown in the figure.



NOTES