

GROUP 34

REAR SUSPENSION

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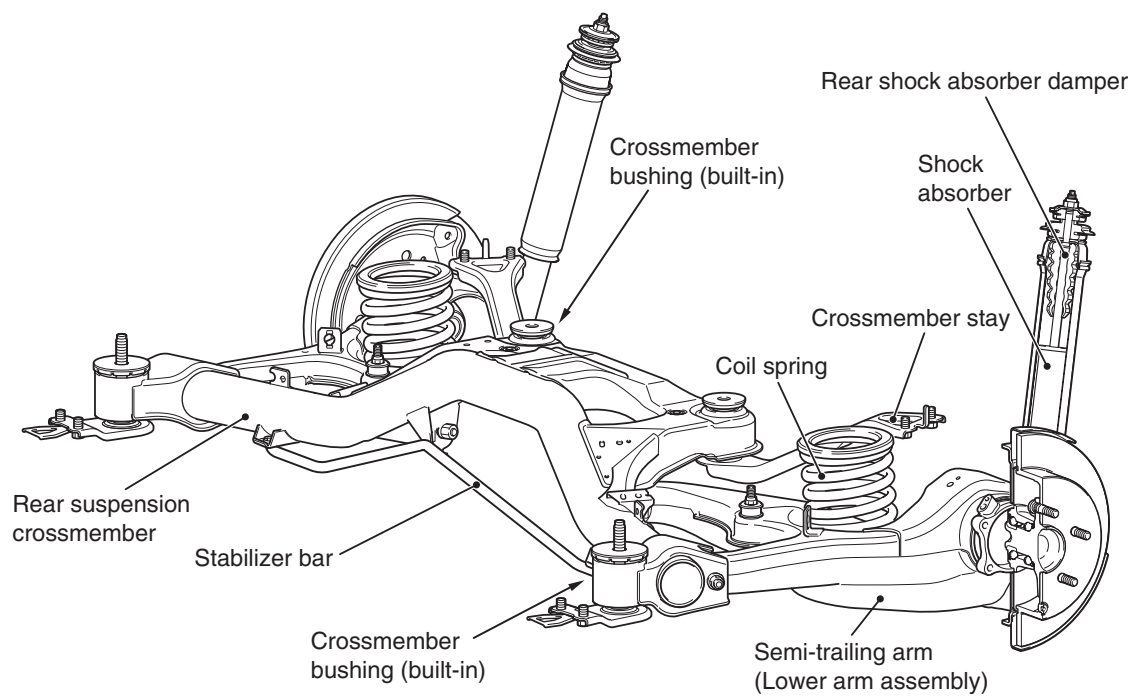
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GENERAL INFORMATION

M1341000100676

A trailing arm type multi-link suspension has been adopted as the rear suspension. The shock absorber is a hydraulic, cylindrical double-acting type.

CONSTRUCTION DIAGRAM



AC313736AB

SPECIFICATION
COIL SPRING

Item			Specification
Wire diameter mm			15
Average diameter mm			115
Free length mm	Standard	2WD	258
		4WD	263
	High ground clearance suspension		268

SERVICE SPECIFICATIONS

M1341000300476

Item		Standard value
Toe-in	At the centre of tyre tread mm	3 ± 2
	Toe-angle (per wheel)	$0^{\circ} 08' \pm 0^{\circ} 05'$
Camber (Difference between right and left within 30')	Standard	$-0^{\circ} 45' + 0^{\circ} 45' / -0^{\circ} 15'$
	High ground clearance suspension	$-0^{\circ} 05' \pm 0^{\circ} 30'$
Thrust angle		$0^{\circ} 00' \pm 0^{\circ} 15'$
Protruding length of stabilizer mounting bolt mm		14 – 16

ON-VEHICLE SERVICE

REAR WHEEL ALIGNMENT CHECK AND ADJUSTMENT

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Measure wheel alignment with an alignment equipment on level earth.

The rear suspension, wheels, and tyres should be serviced to the normal condition prior to wheel alignment measurement.

TOE-IN

Standard value:

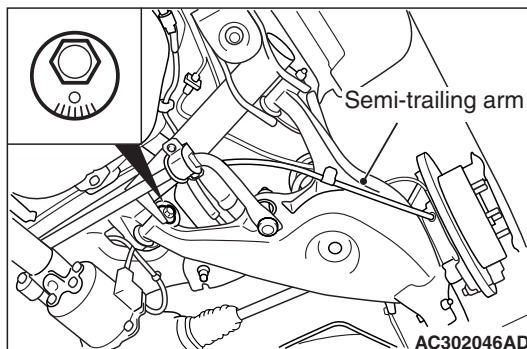
At the centre of tyre tread: 3 ± 2 mm

Toe angle (per wheel): $0^{\circ} 08' \pm 0^{\circ} 05'$

If toe-in is not within the standard value, adjust by following procedures.

CAUTION

To prevent bushings from breakage, the toe adjusting bolt should be temporarily tightened, and then fully tightened with the vehicle on the ground in the unladen condition.

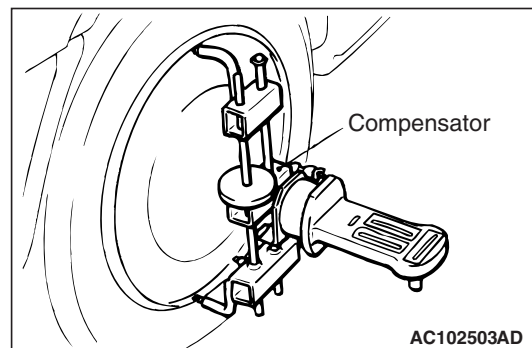


Carry out adjustment by turning the toe adjusting bolt (semi-trailing arm mounting bolt which is located on the inner side of the body).

NOTE:

- LH: Clockwise viewed from the front →Toe-in
- RH: Clockwise viewed from the front →Toe-out
- Turning the toe adjusting bolt by one groove of the scale, toe can be changed approximately 1.8 mm (single side toe angle equivalent to 0.16°)

CAMBER



Standard value:

Item	Specification
Camber	$-0^{\circ} 45' + 0^{\circ} 45' / -0^{\circ} 15'^*$ <Standard>, $-0^{\circ} 05' \pm 0^{\circ} 30'^*$ <High ground clearance suspension>

NOTE: *: difference between right and left wheels must be less than 30'

NOTE: Camber is preset at the factory and cannot be adjusted.

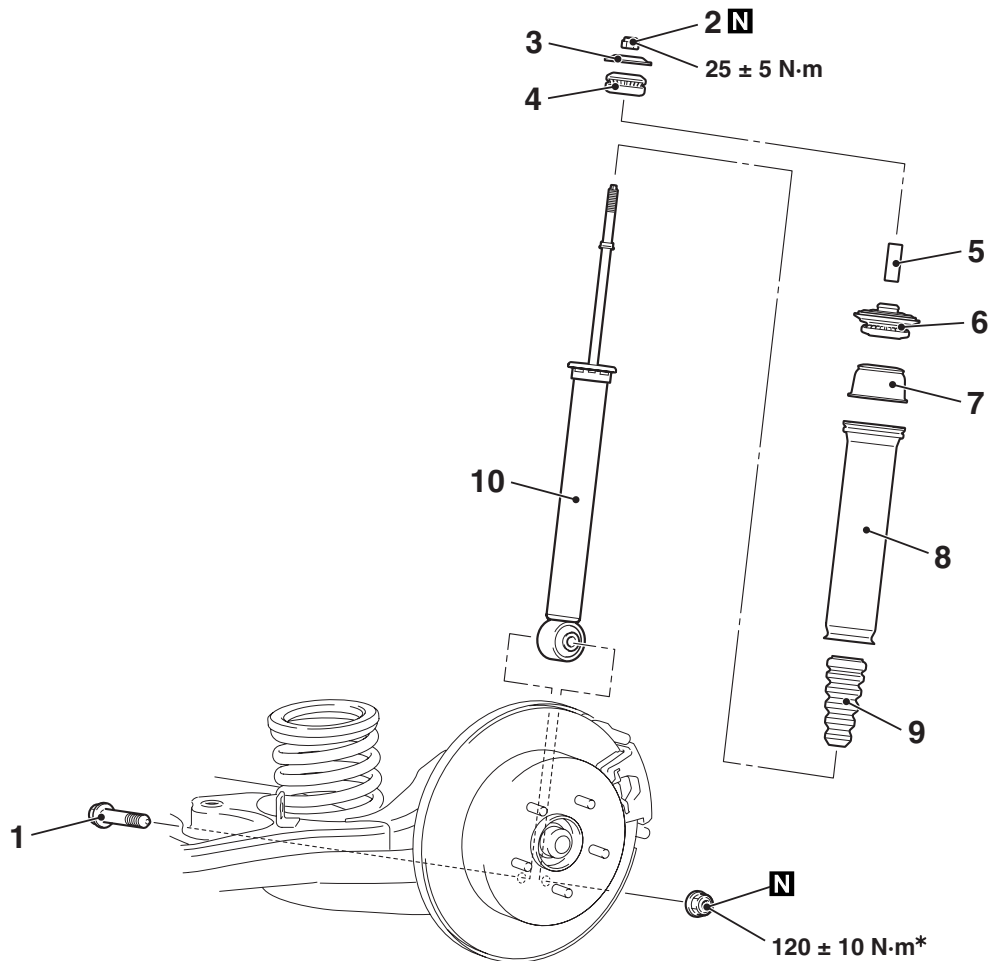
SHOCK ABSORBER ASSEMBLY

REMOVAL AND INSTALLATION

M1341002500498

CAUTION

- *: Indicates parts which should be temporarily tightened, and then fully tightened with the vehicle on the ground in the unladen condition.
- As for vehicles with headlamp auto levelling system, disconnect the height sensor from the lower arm before operation to prevent damages to the height sensor. (Refer to GROUP 54A –Height Sensor [P.54A-143.](#))



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<<A>>
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Removal steps

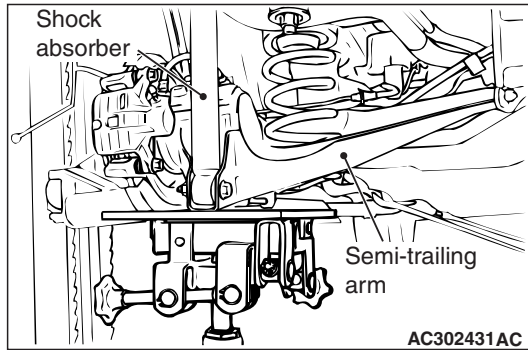
1. Rear shock absorber bolt
- Rear shock absorber service hole cover (quarter trim rear lid)
2. Rear shock absorber nut (self-locking nut)
3. Rear shock absorber washer
4. Rear shock absorber bushing
5. Rear suspension coil spring collar

Removal steps (Continued)

6. Rear shock absorber bushing
7. Rear shock absorber cup
8. Rear shock absorber cover
9. Rear shock absorber damper
10. Rear suspension shock absorber

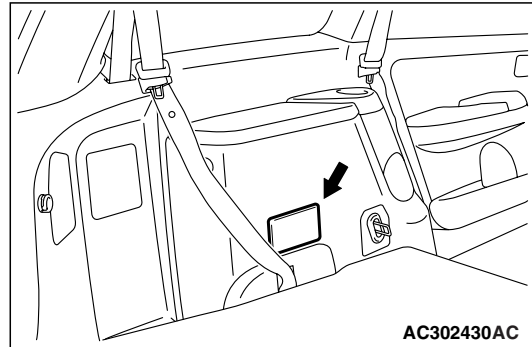
REMOVAL SERVICE POINT

<<A>> REAR SHOCK ABSORBER BOLT REMOVAL



After supporting the semi-trailing arm rear shock absorber mounting area with a jack, remove the rear shock absorber bolt.

<> REAR SHOCK ABSORBER SERVICE HOLE COVER (QUARTER TRIM REAR LID) REMOVAL



Remove the cover (lid) shown in the illustration.

INSPECTION

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

COIL SPRING

REMOVAL AND INSTALLATION

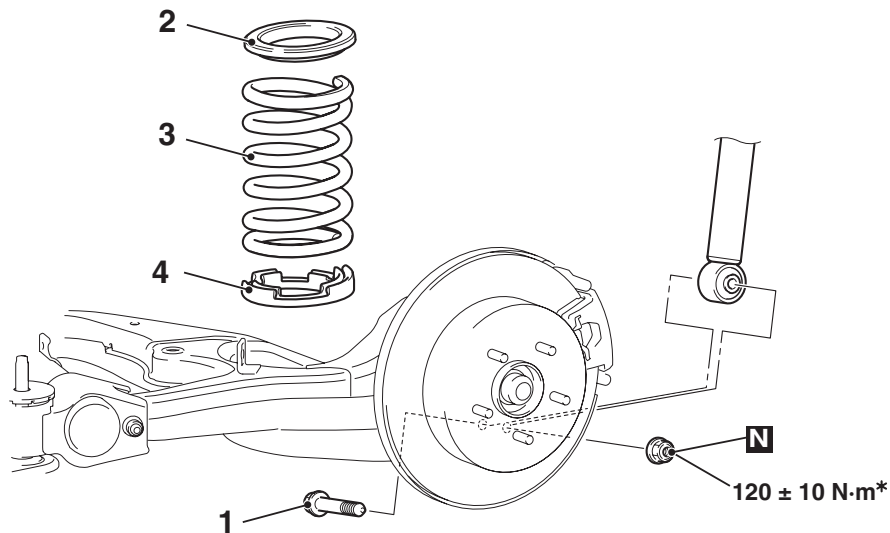
M1341018000038

CAUTION

- *: Indicates parts which should be temporarily tightened, and then fully tightened with the vehicle on the ground in the unladen condition.
- As for vehicles with headlamp auto levelling system, disconnect the height sensor from the lower arm before operation to prevent damages to the height sensor. (Refer to GROUP 54A –Height Sensor P.54A-143.)

Pre-installation and Post-installation Operation

- Stabilizer link removal and installation (Stabilizer bar and semi-trailing arm connection) (Refer to P.34-10).
- Stabilizer bushing removal and installation (Refer to P.34-10).



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<<A>>

Removal steps

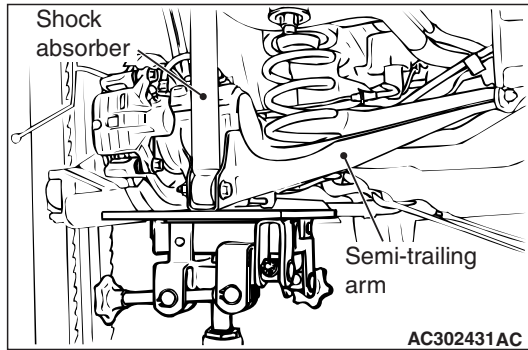
1. Rear shock absorber bolt
- Rear wheel speed sensor and brake hose clamp

Removal steps (Continued)

2. Rear suspension spring upper pad
- >>A<< 3. Rear suspension coil spring
- >>A<< 4. Rear suspension spring lower pad

REMOVAL SERVICE POINT

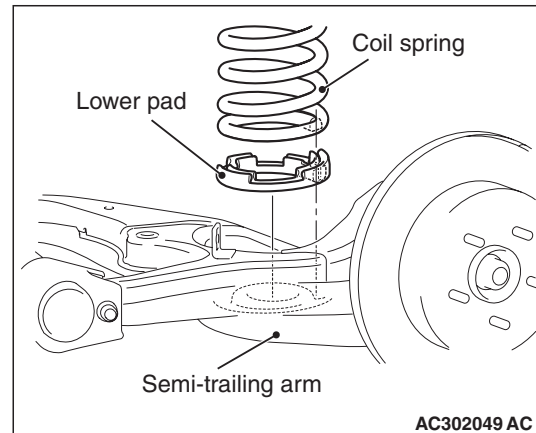
<<A>> REAR SHOCK ABSORBER BOLT REMOVAL



After supporting the semi-trailing arm rear shock absorber mounting area with a jack, remove the rear shock absorber bolt.

INSTALLATION SERVICE POINTS

>>A<< REAR SUSPENSION SPRING LOWER PAD/REAR SUSPENSION COIL SPRING INSTALLATION



Fit the lower pad into the coil spring end, and then align the bottom of coil spring with the spring seat groove of semi - trailing arm.

SEMI-TRAILING ARM ASSEMBLY (LOWER ARM ASSEMBLY)

REMOVAL AND INSTALLATION

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CAUTION

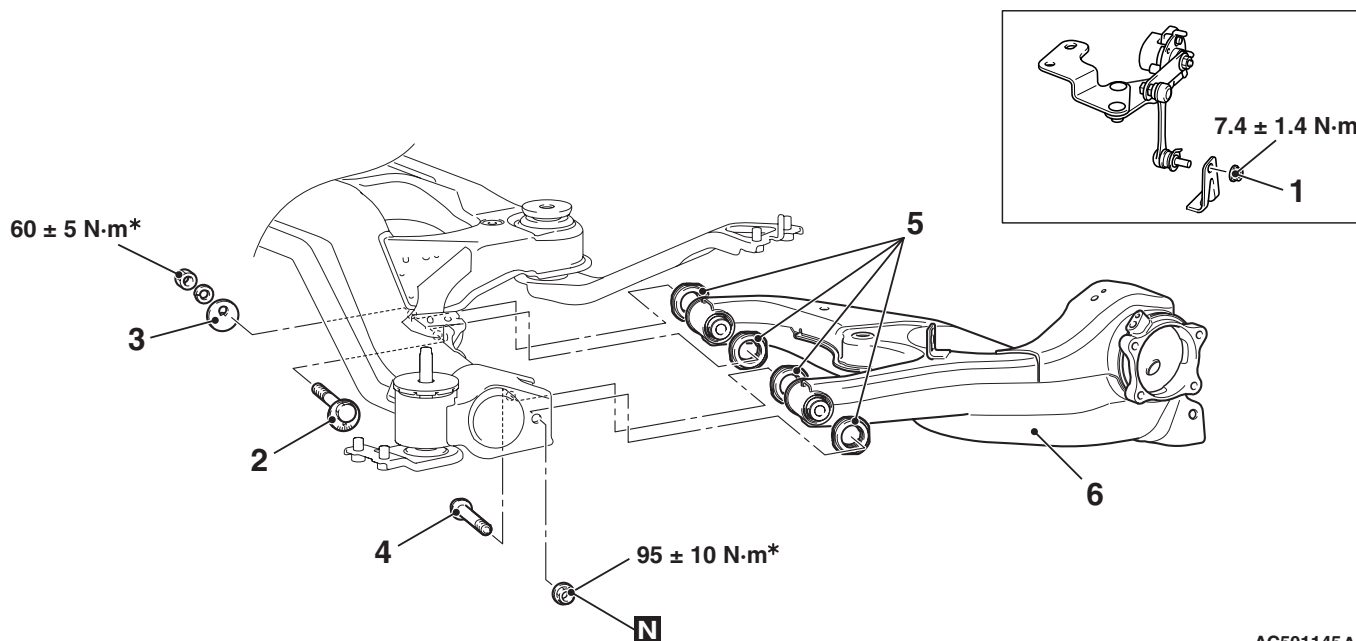
*: Indicates parts which should be temporarily tightened, and then fully tightened with the vehicle on the ground in the unladen condition.

Pre-removal Operation

- Rear Brake Caliper Assembly and Brake Disc Removal (Refer to GROUP 35A, Rear Disc Brake Assembly [P.35A-26](#)).
- Rear Hub Assembly Removal (Refer to GROUP 27, Rear Axle Hub Assembly [P.27-5](#)).
- Parking Brake Shoe and Lining Assembly Removal (Refer to GROUP 36, Parking Brake Lining and Drum [P.36-13](#)).
- Parking Brake Rear Cable Clamp and Backing Plate side disconnection (Refer to GROUP 36, Parking Brake Cable [P.36-10](#), [P.36-11](#)).
- Rear Wheel Speed Sensor Removal (Refer to GROUP 35B, Wheel Speed Sensor [P.35B-78](#)).
- Backing Plate Removal (Refer to GROUP 36, Parking Brake Lining and Drum [P.36-13](#)).
- Rear Suspension Coil Spring Removal (Refer to [P.34-6](#)).
- Rear Brake Hose Clamp disconnection

Post-installation Operation

- Rear Brake Hose Clamp connection
- Rear Suspension Coil Spring Installation (Refer to [P.34-6](#)).
- Backing Plate Installation (Refer to GROUP 36, Parking Brake Lining and Drum [P.36-13](#)).
- Rear Wheel Speed Sensor Installation (Refer to GROUP 35B, Wheel Speed Sensor [P.35B-78](#)).
- Parking Brake Rear Cable Clamp and Backing Plate side connection (Refer to GROUP 36, Parking Brake Cable [P.36-10](#)).
- Parking Brake Shoe and Lining Assembly Removal (Refer to GROUP 36, Parking Brake Lining and Drum [P.36-13](#), [P.36-11](#)).
- Rear Hub Assembly Installation (Refer to GROUP 27, Rear Axle Hub Assembly [P.27-5](#)).
- Rear Brake Caliper Assembly and Brake Disc Installation (Refer to GROUP 35A, Rear Disc Brake Assembly [P.35A-26](#)).
- Rear Wheel Alignment Check and Adjustment (Refer to [P.34-3](#)).
- Parking Brake Lever Stroke Adjustment (Refer to GROUP 36, On-vehicle Service –Parking Brake Lever Stroke Check and Adjustment [P.36-4](#)).



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Removal steps

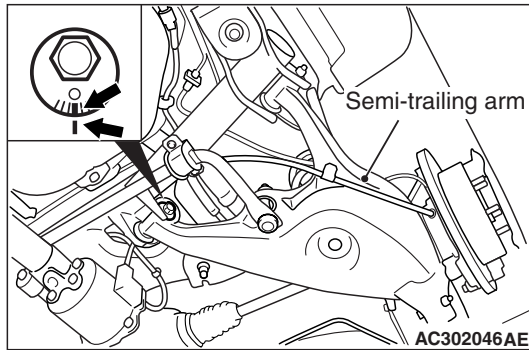
- <<A>> >>B<<
1. Rear height sensor and lower arm connection (RH) <Vehicles with headlamp auto levelling system>
 2. Rear suspension independent arm bolt
 3. Rear suspension lower arm plate

Removal steps (Continued)

- >>A<<
4. Rear suspension independent arm bolt
 5. Rear suspension trailing arm bushing stopper
 6. Semi-trailing arm assembly (lower arm assembly)

REMOVAL SERVICE POINT

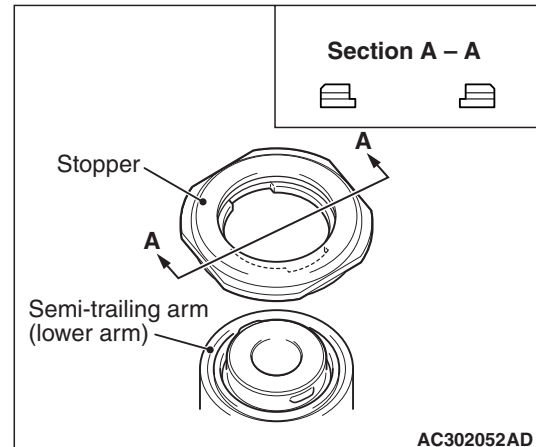
<<A>> REAR SUSPENSION INDEPENDENT ARM BOLT REMOVAL



After making the alignment marks on bolt and rear suspension crossmember, remove the bolt.

INSTALLATION SERVICE POINTS

>>A<< REAR SUSPENSION TRAILING ARM BUSHING STOPPER INSTALLATION



1. After aligning the stopper notch and semi-trailing arm (lower arm) boss, insert the stopper into the semi-trailing arm (lower arm).
2. Rotate the stopper by 90 degrees and fix it.

>>B<< REAR SUSPENSION INDEPENDENT ARM BOLT INSTALLATION

Align the mating marks and install the bolt.

INSPECTION

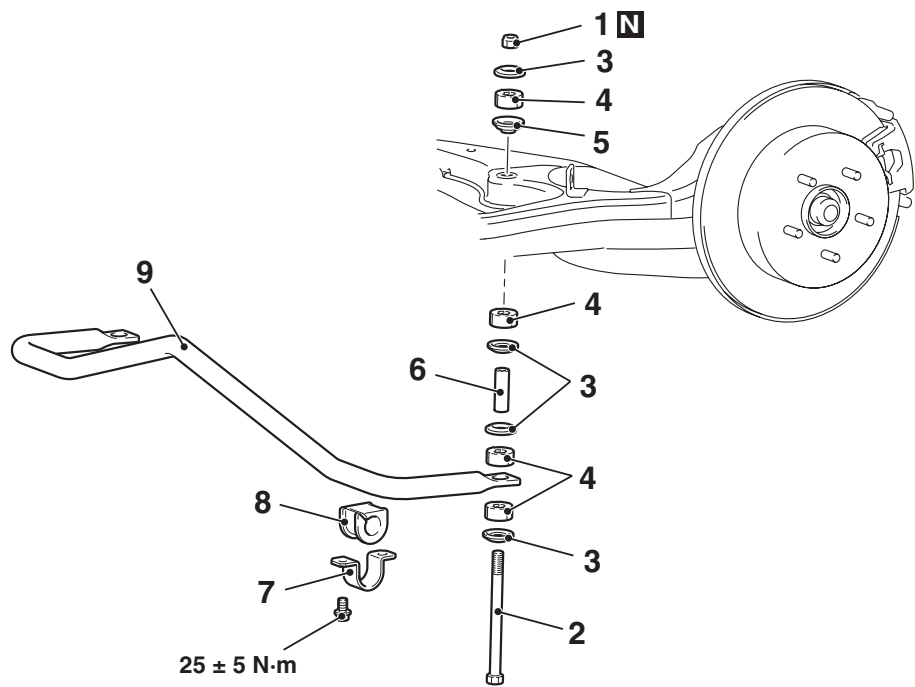
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- Check the bushings for wear and deterioration.
- Check the semi-trailing arm for bending or damage.

STABILIZER BAR

REMOVAL AND INSTALLATION

M1341003000333



AC312503AB

- >>B<<**
- Removal steps**
- 1. Self-locking nut
 - 2. Bolt
 - 3. Joint cup (A)
 - 4. Stabilizer rubber
 - 5. Joint cup (B)
 - 6. Collar

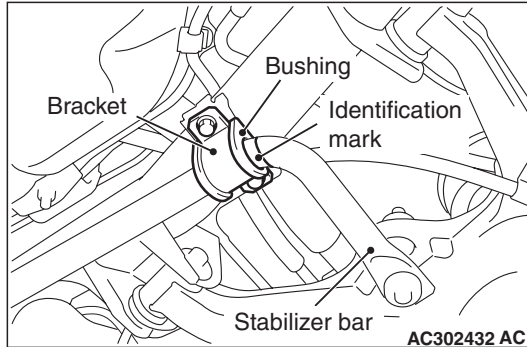
- >>A<<**
- Removal steps (Continued)**
- 7. Rear suspension stabilizer bar bracket
 - 8. Rear suspension stabilizer bar bushing
 - 9. Rear suspension stabilizer bar

INSTALLATION SERVICE POINT

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

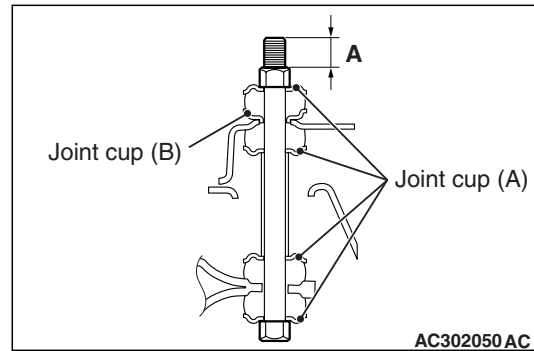
CAUTION

Tighten the front and rear bolts uniformly to prevent them from loosening.



Install the bushing and the bracket so that the stabilizer bar identification mark is located in the position shown in the illustration.

>>B<< SELF-LOCKING NUT INSTALLATION



Install the joint cup (A) and joint cup (B) as shown in the figure, and tighten the self-locking nut so that the protruding length of the stabilizer bar mounting bolt protruding part meets its standard value (A).

Standard value (A): 14 –16 mm

INSPECTION

M1341001400379

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

REAR SUSPENSION CROSSMEMBER

REMOVAL AND INSTALLATION

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CAUTION

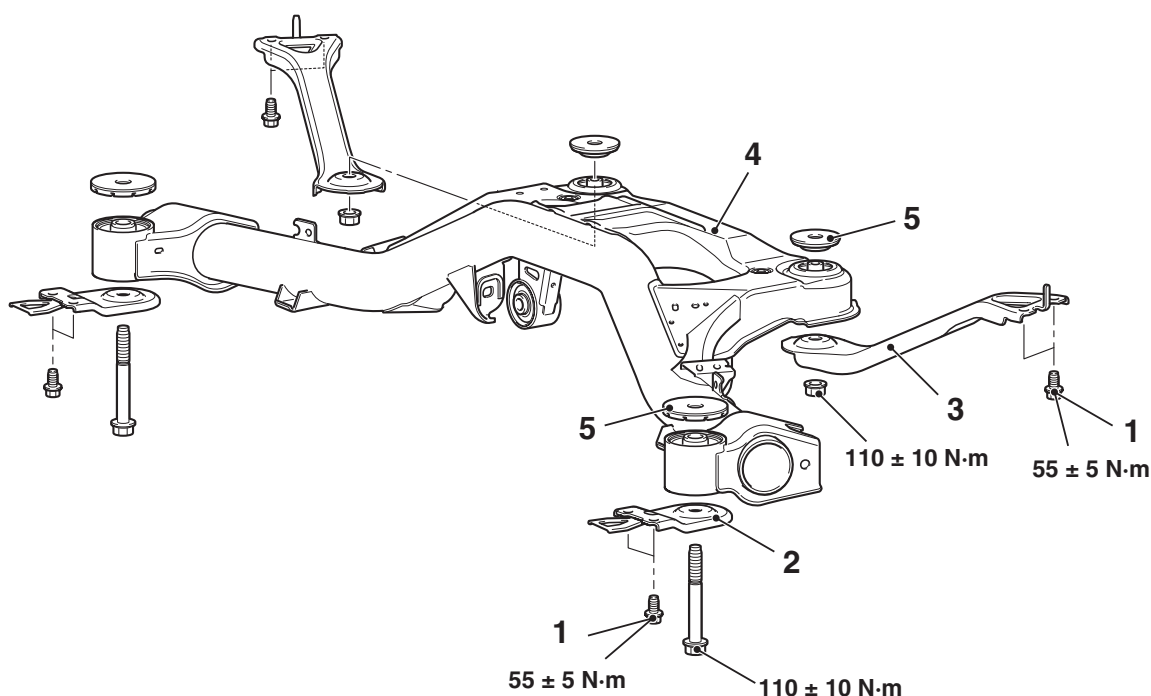
As for vehicles with headlamp auto levelling system, disconnect the height sensor from the lower arm before operation to prevent damages to the height sensor. (Refer to GROUP 54A –Height Sensor P.54A-143.)

Pre-removal Operation

- Rear Brake Hose Clamp disconnection
- Rear Brake Caliper Assembly and Brake Disc Removal (Refer to GROUP 35A, Rear Disc Brake Assembly P.35A-26).
- Parking Brake Shoe and Lining Assembly Removal (Refer to GROUP 36, Parking Brake Lining and Drum P.36-13).
- Parking Brake Rear Cable Clamp and Backing Plate side disconnection (Refer to GROUP 36, Parking Brake Cable P.36-10, P.36-11.)
- Rear Wheel Speed Sensor Removal (Refer to GROUP 35B, ABS Sensor P.35B-78).
- Rear Hub Assembly Removal (Refer to GROUP 27, Rear Axle Hub Assembly P.27-5).
- Backing Plate Removal (Refer to GROUP 36, Parking Brake Lining and Drum P.36-13).
- Rear Suspension Stabilizer Bar Removal (Refer to P.34-10).
- Rear Suspension Coil Spring Removal (Refer to P.34-6).
- Semi-trailing Arm Removal (Refer to P.34-8).
- Centre Exhaust Pipe Removal (Refer to GROUP 15, Exhaust pipe and Main Muffler P.15-9).

Post-installation Operation

- Centre Exhaust Pipe Installation (Refer to GROUP 15, Exhaust pipe and Main Muffler P.15-9).
- Semi-trailing Arm Installation (Refer to P.34-8).
- Rear Suspension Coil Spring Installation (Refer to P.34-6).
- Rear Suspension Stabilizer Bar Installation (Refer to P.34-10).
- Backing Plate Installation (Refer to GROUP 36, Parking Brake Lining and Drum P.36-13).
- Rear Hub Assembly Installation (Refer to GROUP 27, Rear Axle Hub Assembly P.27-5).
- Rear Wheel Speed Sensor Installation (Refer to GROUP 35B, ABS Sensor P.35B-78).
- Parking Brake Rear Cable Clamp and Backing Plate side connection (Refer to GROUP 36, Parking Brake Cable P.36-10, P.36-11.)
- Parking Brake Shoe and Lining Assembly Installation (Refer to GROUP 36, Parking Brake Lining and Drum P.36-13).
- Rear Brake Caliper Assembly and Brake Disc Installation (Refer to GROUP 35A, Rear Disc Brake Assembly P.35A-26).
- Rear Brake Hose Clamp connection
- Parking Brake Lever Stroke Adjustment (Refer to GROUP 36, On-vehicle Service –Parking Brake Lever Stroke Check and Adjustment P.36-4).
- Rear Wheel Alignment Check and Adjustment (Refer to P.34-3).



Removal steps

1. Rear suspension crossmember bolt
2. Rear suspension crossmember bracket
3. Rear suspension crossmember stay
4. Rear suspension crossmember
5. Rear suspension crossmember upper stopper

INSPECTION

M1341006900108

- Check the crossmember for cracks or deformation.
- Check all bolts for condition and straightness.