

GROUP 8

REFERENCE
MATERIAL

CONTENTS

BOLTED PANEL FIT AND ADJUSTMENT	8-2	ADJUSTMENT OF OTHER PARTS . .	8-9
HOOD	8-2	FRONT WHEEL ALIGNMENT	8-9
DOOR	8-3	REAR WHEEL ALIGNMENT	8-11
TRUNK LID <CONVERTIBLE>	8-5	HEADLIGHT AIMING	8-12
LIFTGATE <HATCHBACK>	8-6	FOG LIGHT AIMING	8-14
INSTALLATION AND REMOVAL OF ADHESIVE COMPONENTS	8-8	SUPPLEMENTAL RESTRAINT SYSTEM (SRS) - AIR BAG	8-16
GARNISHES AND MOLDINGS	8-8		

BOLTED PANEL FIT AND ADJUSTMENT

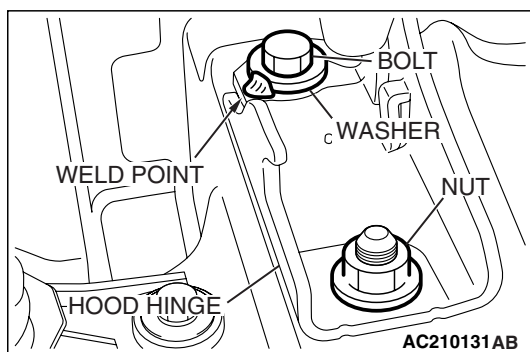
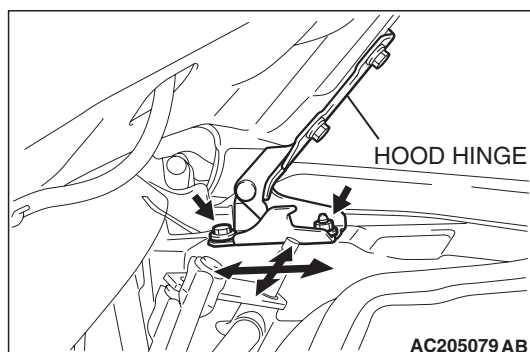
HOOD

M4080005000361

ADJUSTMENT OF CLEARANCE AROUND HOOD

Detach the fender hole cover. Then loosen the hood hinge mounting nuts and bolts as shown, and adjust the hood by moving it until the clearance around it is even.

Hood hinge mounting nut and bolt tightening torque:
 $12 \pm 2 \text{ N} \cdot \text{m}$ ($102 \pm 22 \text{ in-lb}$)



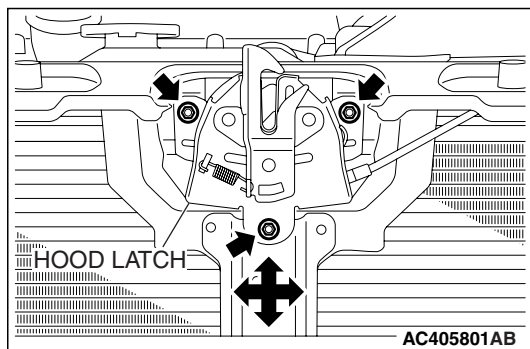
NOTE: If the hood hinge mounting bolt washers are welded, grind off the welding according to the procedure below beforehand.

1. Remove the hood hinge.
2. Use a chisel or grinder to release the hood hinge mounting bolt washer, which is welded to the hood hinge.
3. On completion, paint the affected area with a suitable touch-up brush to prevent corrosion.
4. Install the hood hinge.

ALIGNMENT OF HOOD LATCH AND STRIKER

Note the routing of the hood release cable, and then loosen the hood latch mounting bolts. Then align the latch with the striker by moving the hood latch. After alignment, ensure that the hood can be locked and unlocked correctly.

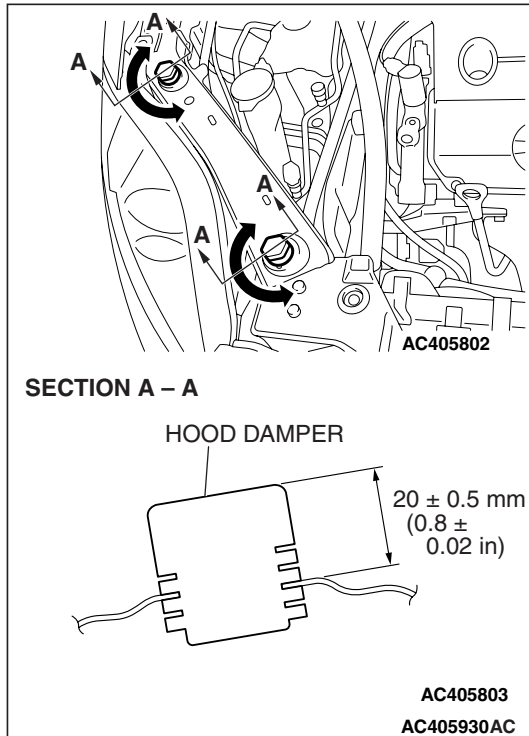
Hood latch mounting bolt tightening torque: $9.0 \pm 2.0 \text{ N} \cdot \text{m}$ ($80 \pm 17 \text{ in-lb}$)



ADJUSTMENT OF HOOD HEIGHT

Turn the hood damper until its height is as shown. If the hood height is still not even at left and right sides, turn the hood damper further until the hood height is even. The hood damper height is altered by roughly 3mm (0.1 inch) when turning the hood damper one rotation.

NOTE: If a rattling noise is heard caused by the vibration of the hood during driving, adjust the hood damper heights until the hood dampers securely contact the hood.



DOOR

M4080006000416

ADJUSTMENT OF DOOR FIT

Required Special Tools:

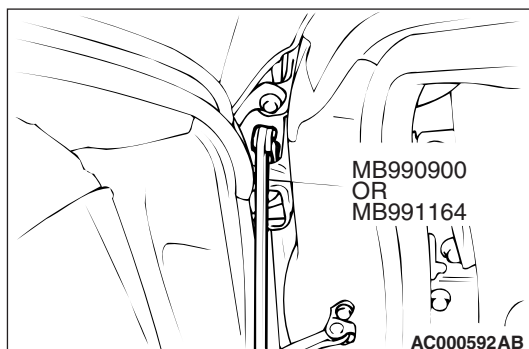
- MB990211: Slide Hammer
- MB990243: Body Puller
- MB990900 or MB991164: Door Adjusting Wrench
- MB990939: Brass Bar

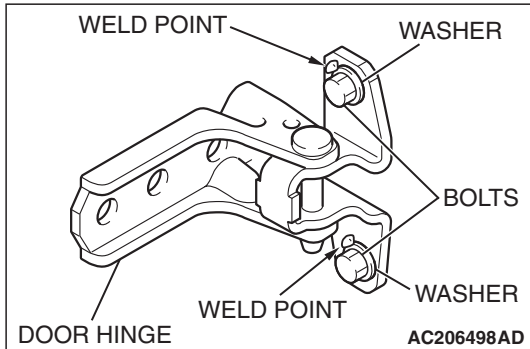
CAUTION

- Attach protection tape to the fender and door edges where the hinge is installed.
- Do not rotate special tool MB991164 with a torque of over 98 N·m (72 ft-lb).

1. Use special tool MB990900 or MB991164 to loosen the hinge mounting bolts on the body side, and then adjust the clearance around the door so that it is uniform on all sides.

Door hinge mounting bolt tightening torque: 27 ± 5 N·m (20 ± 4 ft-lb)



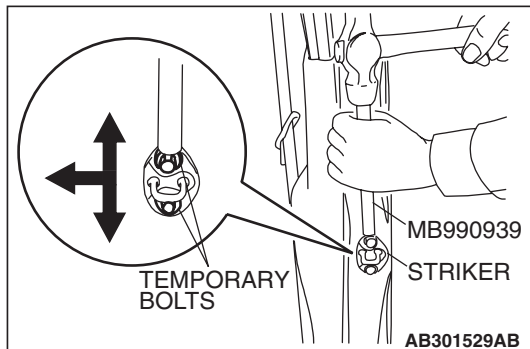


2. If a door is not flush with its surrounding panels, loosen the door-side door hinge mounting bolts and adjust the door as necessary.

Door hinge mounting bolt tightening torque: 21 ± 4 N·m (16 ± 2 ft-lb)

NOTE: If the door hinge mounting bolt washers are welded, grind off the welding according to the procedure below beforehand.

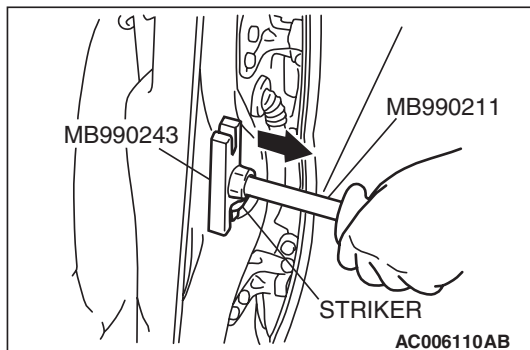
- (1) Remove the door hinge.
- (2) Use a chisel or grinder to release the door hinge mounting bolt washer, which is welded to the door hinge.
- (3) On completion, paint the affected area with touch-up paint to prevent corrosion.
- (4) Install the door hinge.



3. If the door is stiff to lock and unlock:

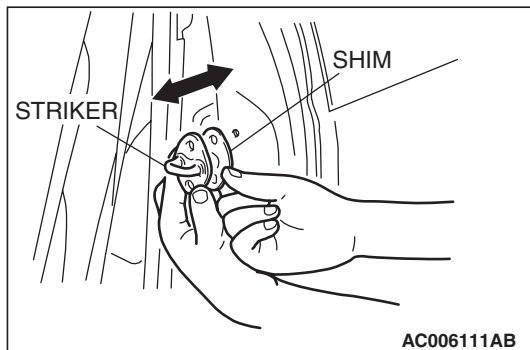
- (1) Adjustment by using the striker (vertically or toward the inside of the vehicle)

Install an temporary bolts instead of the striker mounting bolt, and use special tool MB990939 and a hammer to tap the bolt in the desired direction.



- (2) Adjustment by using the striker (toward the outside of the vehicle)

Use special tools MB990211 and MB990243 to pull the striker toward the outside of the vehicle.



- (3) Adjustment by using shims (forward and rearward)

Increase or decrease the number of shims so that the striker engages with the door latch properly.

Door striker mounting bolt tightening torque: 24 ± 3 N·m (18 ± 2 ft-lb)

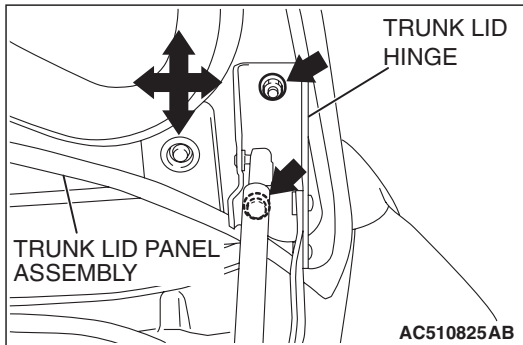
TRUNK LID <CONVERTIBLE>

M4080017000078

ADJUSTMENT OF CLEARANCE AROUND TRUNK LID

Loosen the trunk lid panel assembly mounting bolt and nut, and move the trunk lid panel assembly to make the clearance around the trunk lid even.

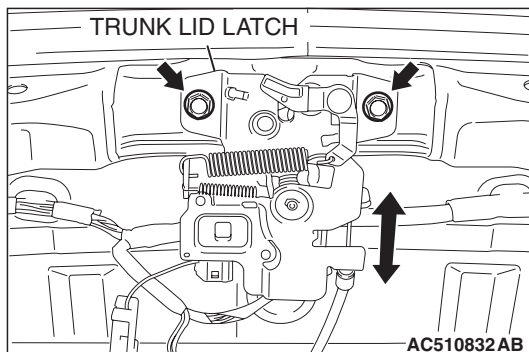
Trunk lid hinge mounting bolt and nut tightening torque: $13 \pm 2 \text{ N} \cdot \text{m}$ ($111 \pm 22 \text{ in-lb}$)



TRUNK LID LATCH ADJUSTMENT

After checking the trunk lid release cable for proper routing, loosen the trunk lid latch mounting bolts. Change the position of the trunk lid latch relative to the trunk lid striker so that trunk lid locking and unlocking effort is correct.

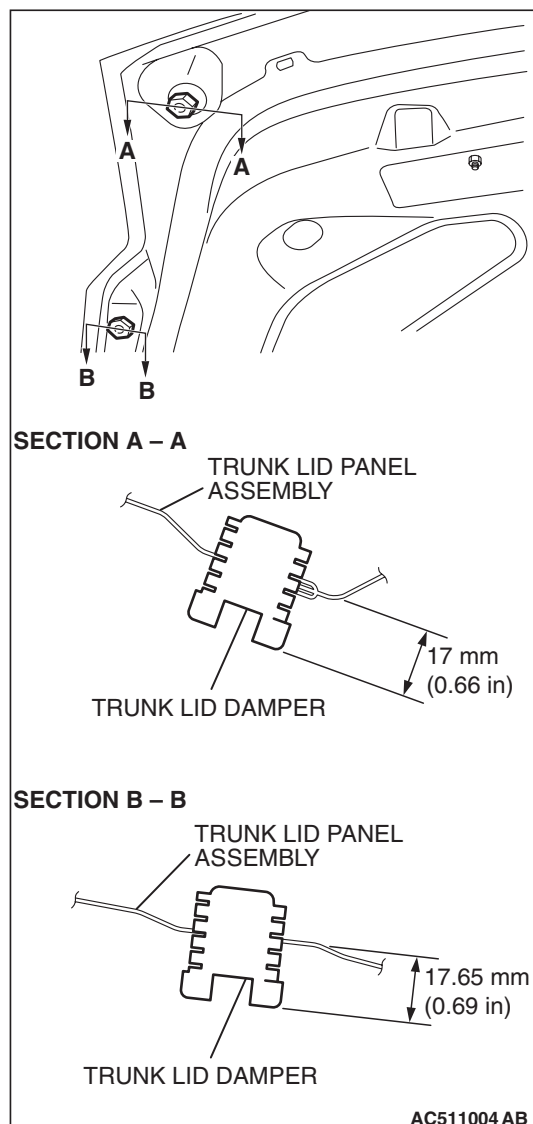
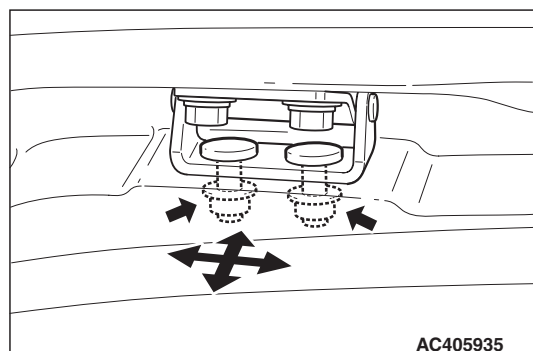
Trunk lid latch mounting bolt tightening torque: $9.0 \pm 2.0 \text{ N} \cdot \text{m}$ ($80 \pm 17 \text{ in-lb}$)



TRUNK LID HEIGHT ADJUSTMENT

Turn each trunk lid damper to achieve the height shown in the drawing is reached. If the trunk lid panel height on one side is different from that on the other side (even after the trunk lid dampers have been adjusted to the height indicated in the drawing), turn the trunk lid damper(s) slightly to make fine adjustments to the trunk lid panel height.

NOTE: When the damper is new, one full turn of the trunk lid damper changes the height approximately 3 mm. Turn it clockwise to reduce height. Turn it counterclockwise to increase height.

**LIFTGATE <HATCHBACK>****ADJUSTMENT OF CLEARANCE AROUND LIFTGATE**

Loosen the liftgate hinge mounting nuts at body side. Then adjust the liftgate to align properly.

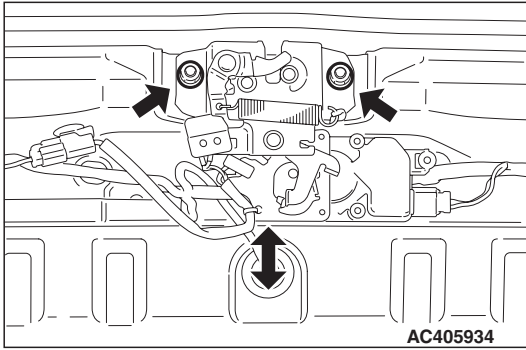
Liftgate hinge mounting nut tightening torque: 24 ± 4 N·m (18 ± 3 ft-lb)

M4080007000420

ADJUSTMENT OF LIFTGATE LATCH

After checking the liftgate release cable for proper routing, loosen the liftgate latch mounting bolts. Change the position of the liftgate latch relative to the liftgate striker so that liftgate locking and unlocking effort is correct.

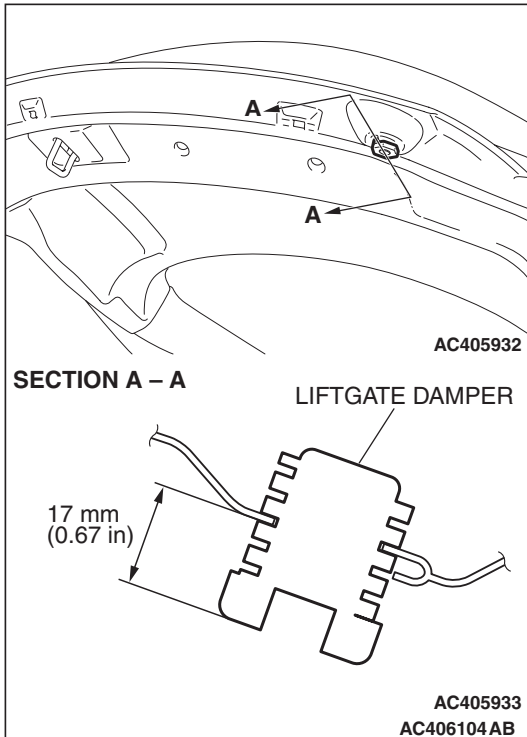
Liftgate latch mounting bolt tightening torque: 22 ± 4 N·m (16 ± 3 ft-lb)



ADJUSTMENT OF LIFTGATE HEIGHT

Turn the liftgate damper until the liftgate height is as shown. If the liftgate height is still not even at left and right sides, turn the liftgate damper further until the liftgate height is even. The liftgate damper height is altered by roughly 3 mm (0.1 inch) when turning the liftgate damper one rotation.

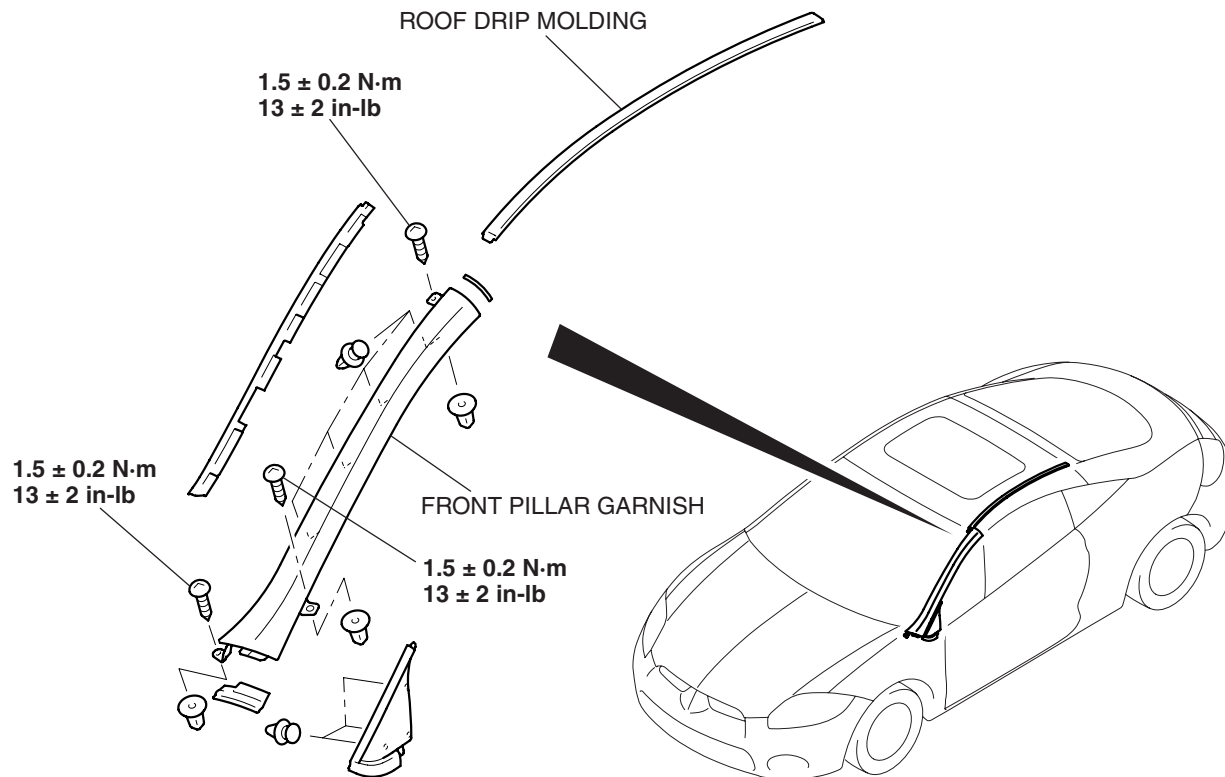
NOTE: If a rattling noise (clack) is caused by the vibration of the liftgate while driving, adjust the liftgate damper height so that the liftgate damper contacts the body securely.



INSTALLATION AND REMOVAL OF ADHESIVE COMPONENTS

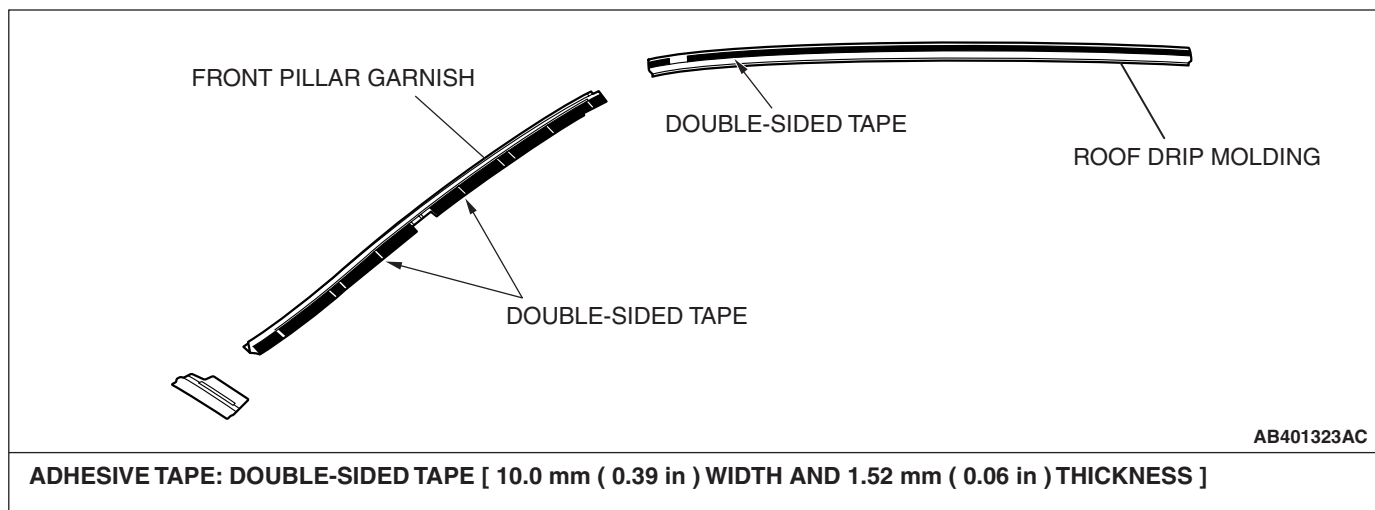
GARNISHES AND MOLDINGS

M4080020000023



AB401322AB

ADHESIVE TAPE POSITION



AB401323AC

Required Special Tool:

- MB990784: Ornament Remover

ADJUSTMENT OF OTHER PARTS

FRONT WHEEL ALIGNMENT

M4080009000396

Measure wheel alignment with alignment equipment on a level surface. The front suspension, steering system and tires should be serviced to normal condition before measuring wheel alignment.

TOE-IN

Standard value: 0 ± 3 mm (0 ± 0.12 inch)

1. Adjust the toe-in by undoing the clip and jam nut, and turning the left and right tie rod turnbuckles by the same amount (in opposite directions).

NOTE: The toe will move out as the left turnbuckle is turned toward the front of the vehicle and the right turnbuckle is turned toward the rear of the vehicle.

2. Install the clip and tighten the jam nut to the specified torque.

Tightening torque: 52 ± 2 N·m (38 ± 2 ft-lb)

3. Confirm that the toe-in is at the standard value.
4. Use a turning radius gauge to check that the steering angle is at the standard value.

STEERING ANGLE

Standard value:

$31^{\circ} 48' \pm 2^{\circ} 00'$ <Inner wheel>

$27^{\circ} 06'$ <Outer wheel (reference)>

CAMBER, CASTER AND KINGPIN INCLINATION

Required Special Tool:

- MB991004: Wheel Alignment Gauge Attachment

Standard value:

Camber: $0^{\circ} 00' \pm 30'$ (Left/right deviation within $30'$)

Caster: $3^{\circ} 00' \pm 30'$ (Left/right deviation within $30'$)

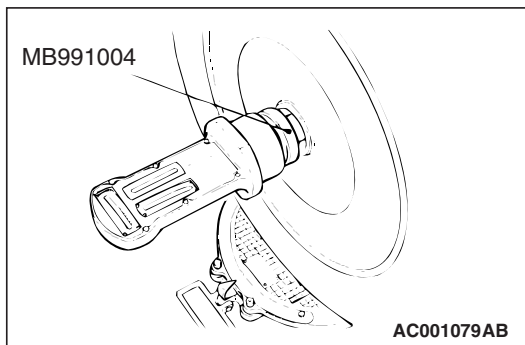
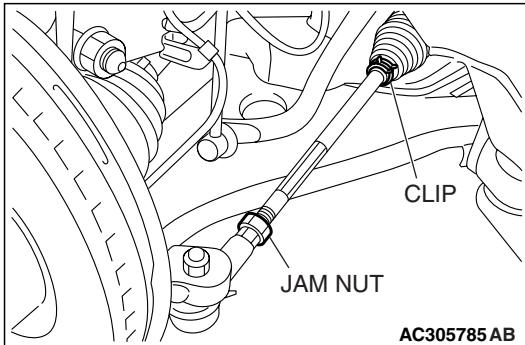
Kingpin inclination: $12^{\circ} 54' \pm 1^{\circ} 30'$

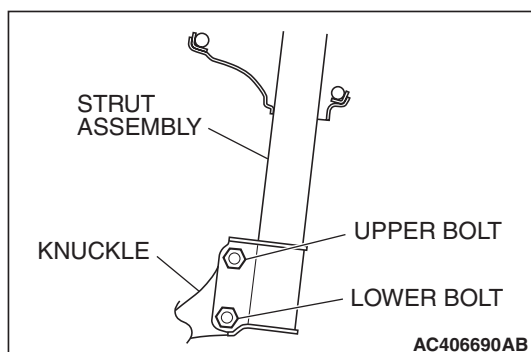
NOTE: Caster are preset at the factory and cannot be adjusted.

CAUTION

Never subject the wheel bearings to the vehicle load when the drive shaft nuts are loosened.

NOTE: Attach the camber/caster/kingpin gauge to the drive-shaft by using special tool MB991004. Tighten special tool MB991004 to the same torque 226 ± 29 N·m (167 ± 21 ft-lb) as the drive shaft nut.





If the camber is outside of the standard value, perform the following adjustment procedures.

1. Estimate how much additional camber adjustment is required. Using the table below, select the camber adjusting bolt, and then replace the knuckle and strut assembly connection bolts (upper bolt, lower bolt) with the selected bolts.

BOLT DIAMETER mm (in)		CAMBER ADJUSTING VALUE					
		0° 00'	0° 15'	0° 30'	0° 45'	1° 00'	1° 15'
Upper bolt	16.0 (0.630)	•	•				
	14.9 (0.587)			•	•		
	14.1 (0.555)					•	
	13.6 (0.535)						•
Lower bolt	16.0 (0.630)	•					
	14.9 (0.587)		•	•			
	14.1 (0.555)				•	•	
	13.6 (0.535)						•

NOTE: "•" indicates upper bolt and lower bolt combination in each selection of CAMBER ADJUSTING VALUE.

Bolts are identified in the following table:

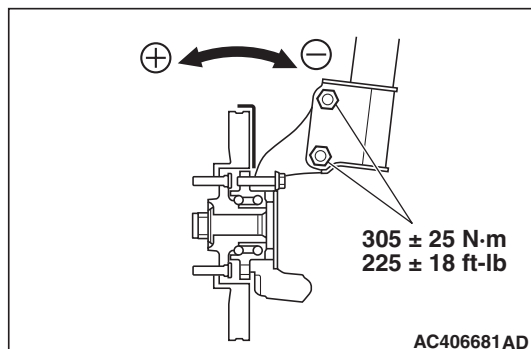
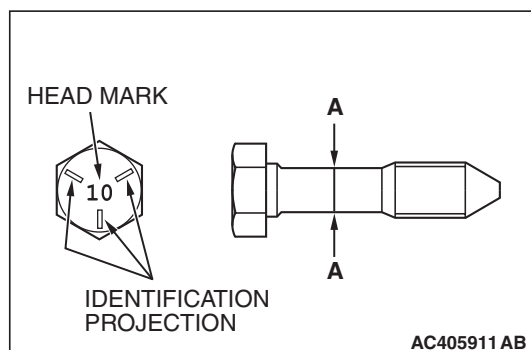
DIAMETER A mm (in)		NUMBER OF IDENTIFICATION PROJECTION
Set bolt	16.0 (0.630)	0
Adjusting bolt	14.9 (0.587)	1
	14.1 (0.555)	2
	13.6 (0.535)	3

NOTE: Set bolt is the bolt installed at factory. "10" embossed on bolt head is head mark.

2. Tighten the nuts temporarily, and then pull or push the front axle to adjust the camber.

NOTE: Pulling the upper side of the front axle to the outside of the vehicle will increase the camber. Pushing it to the inside of the vehicle will decrease the camber.

3. Tighten the nuts to 305 ± 25 N·m (225 ± 18 ft-lb).
4. Recheck the camber.



REAR WHEEL ALIGNMENT

M4080010000389

Measure wheel alignment with an alignment equipment on level ground.

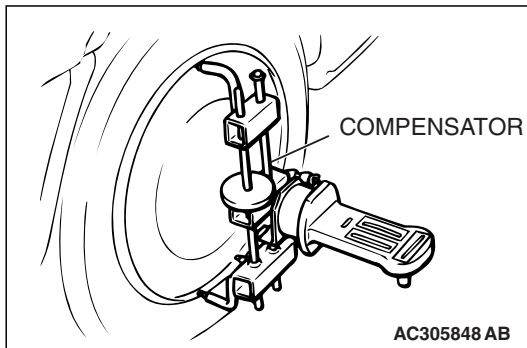
The rear suspension and tires should be serviced to the normal condition prior to wheel alignment measurement.

CAMBER

Standard value:

– 0° 50' ± 30' (Left/right deviation within 30')

NOTE: For vehicles with aluminum wheels, attach the camber/caster/kingpin gauge by using a compensator.



TOE-IN

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

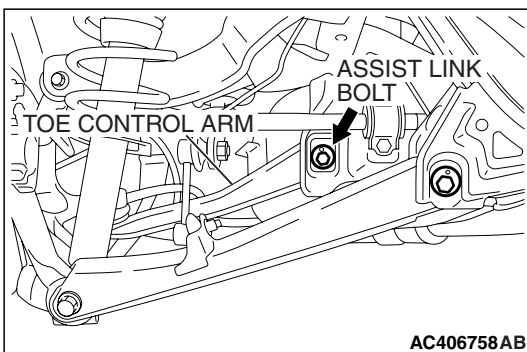
If camber and/or toe-in is not within the standard value, adjust by the following procedures.

⚠ CAUTION

- When adjusting the camber, tighten the lower arm assembly and the trailing arm assembly, not the toe control arm.
 - After adjusting the camber, be sure to adjust the toe.
1. Carry out camber adjustment by turning the assist link bolt.

NOTE:

- LH: Clockwise viewed from the rear → (–) camber
- RH: Clockwise viewed from the rear → (+) camber
- If either the camber or toe is adjusted, both should fluctuate. For the relationship between the two, refer to CAMBER AND TOE REFERENCE TABLE.



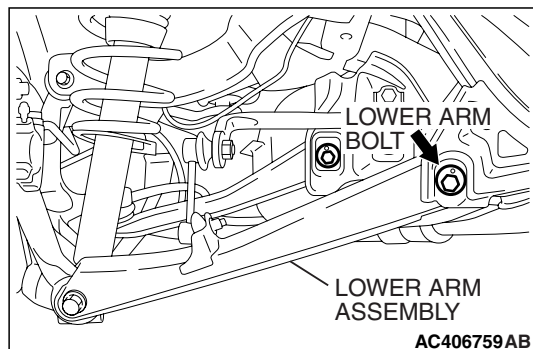
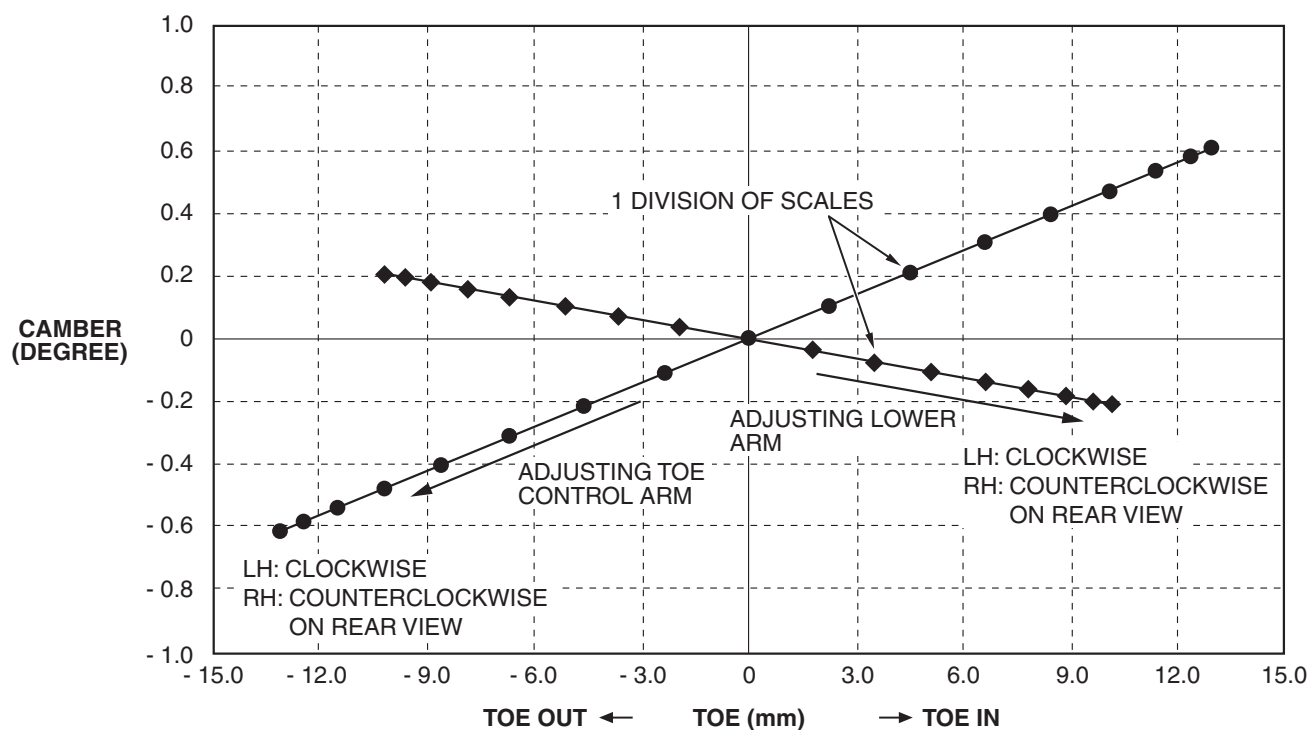
⚠ CAUTION

When adjusting the toe, tighten the toe control arm and the trailing arm assembly, not the lower arm assembly.

2. Carry out toe adjustment by turning the lower arm bolt.

NOTE:

- LH: Clockwise viewed from the rear → Toe-in
- RH: Clockwise viewed from the rear → Toe-out
- If either the camber or toe is adjusted, both should fluctuate. For the relationship between the two, refer to CAMBER AND TOE REFERENCE TABLE.

**CAMBER AND TOE REFERENCE TABLE**

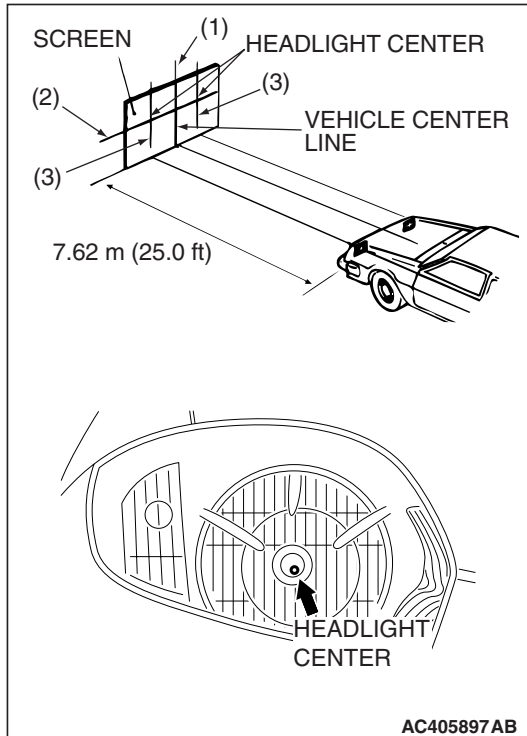
AC406159 AB

HEADLIGHT AIMING

M4080011000393

PRE-AIMING INSTRUCTIONS

1. Inspect for badly rusted or faulty headlight assemblies.
2. These conditions must be corrected before a satisfactory adjustment can be made.
3. Inspect tire inflation, and adjust if it is necessary.
4. If the fuel tank is not full, place a weight in the trunk of the vehicle to simulate weight of a full tank [3 kg (6.5 pounds) per gallon].

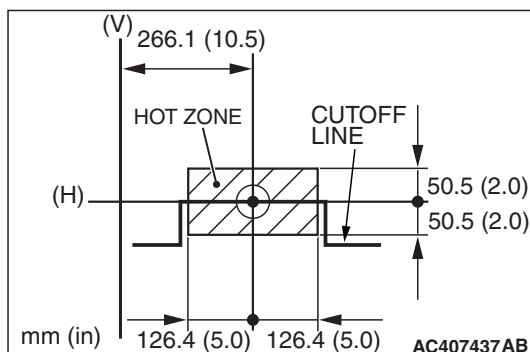
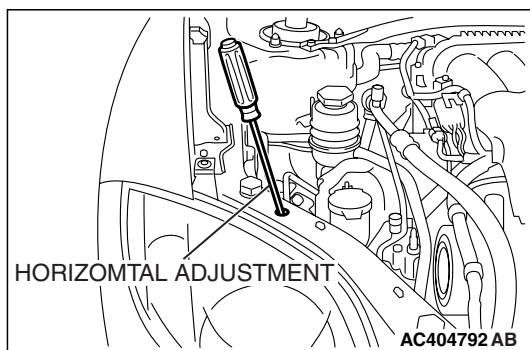
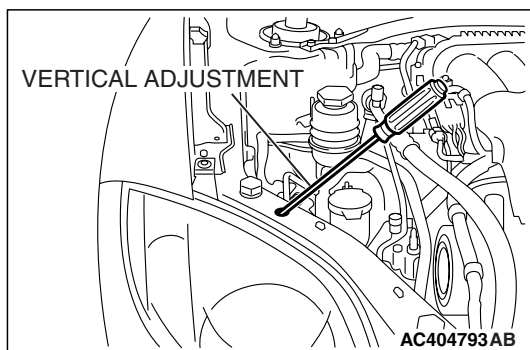


5. There should be no other load in the vehicle other than driver or substituted weight of approximately 70 kg (150 pounds) placed in driver's position.
6. Thoroughly clean headlight lenses.
7. Place the vehicle on a level floor, perpendicular to a flat screen 7.62 m (25.0 feet) away from the bulb center-marks on the headlight lens.
8. Rock vehicle sideways to allow vehicle to assume its normal position.
9. Bounce the front suspension through three (3) oscillations by applying the body weight to hood or bumper.
10. Set the distance between the screen and the bulb center marks of the headlight as shown in the illustration.
11. Four lines of adhesive tape (or equivalent markings) are required on screen or wall:
 - (1) Position a vertical tape or mark so that it is aligned with the vehicle center line.
 - (2) Measure the distance from the center-marks on the headlight lens to the floor [reference value: 646 mm (254 inches) <vehicles with 17-inch wheel> or 654 mm (257 inches) <vehicles with 18-inch wheel>]. Transfer the measurement to the screen. Horizontal tape or mark on the screen is for reference of vertical adjustment.
 - (3) Measure the distance from the center line of the vehicle to the center of each headlight. Transfer the measurement to the screen. Vertical tape or mark on the screen with reference to the center line of each headlight bulb.

HEADLIGHT ADJUSTMENT

NOTE: When adjusting headlight, disconnect the other headlight harness.

1. The low beam headlight will project on the screen upper edge of the beam (cut-off).



- Turn the adjusting screws to achieve the specified low-beam cut-off location on the aiming screen.

Standard value:

(Vertical direction) Horizontal line (H) ± 50.5 mm (± 2.0 inches) (0.38 degrees angle)

(Horizontal direction): ± 126.4 mm (± 5.0 inches) (± 0.95 degrees angle) from the axis, which is 266.1 mm (10.5 inches) (2 degrees angle) rightward from the vertical line (V)

CAUTION

Do not cover a headlight for more than three minutes to prevent the plastic headlight lens deformation.

NOTE: High-beam pattern should be correct when the low-beams are adjusted properly.

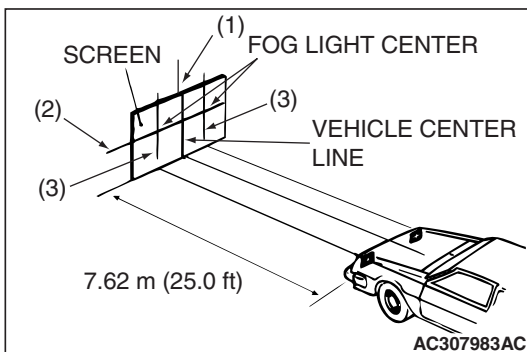
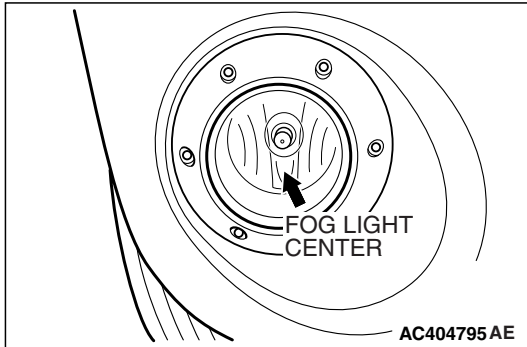
FOG LIGHT AIMING

M4080013000377

PRE-AIMING INSTRUCTIONS

- Inspect for badly rusted or faulty front fog light assemblies.
- These conditions must be corrected before a satisfactory adjustment can be made.
- Inspect tire inflation, and adjust if necessary.
- If the fuel tank is not full, place a weight in the trunk of the vehicle to simulate weight of a full tank [3 kg (6.5 pounds) per gallon].
- There should be no other load in the vehicle other than driver or substituted weight of approximately 70 kg (150 pounds) placed in driver's position.
- Thoroughly clean the front fog light lenses.
- Place the vehicle on a level floor, perpendicular to a flat screen 7.62 meters (25.0 feet) away from the bulb center-marks on the foglight lens.

8. Rock the vehicle sideways to allow the vehicle to assume its normal position.
9. Bounce the front suspension through three (3) oscillations by applying the body weight to the hood or bumper.
10. Measure the center of the front fog lights as shown in the illustration.



11. Four lines of adhesive tape (or equivalent markings) are required on screen or wall:

- (1) Position a vertical tape or mark so that it is aligned with the vehicle center line.
- (2) Measure the distance from the center of the front fog light lens to the floor. Transfer the measurement to the screen. Horizontal tape or mark on the screen is for reference of vertical adjustment.
- (3) Measure the distance from the center line of the vehicle to the center of each front fog light. Transfer the measurement to the screen. Vertical tape or mark on the screen is for reference to the center line of each front fog light.

FOG LIGHT ADJUSTMENT

1. Check if the beam shining onto the screen is at the standard value.

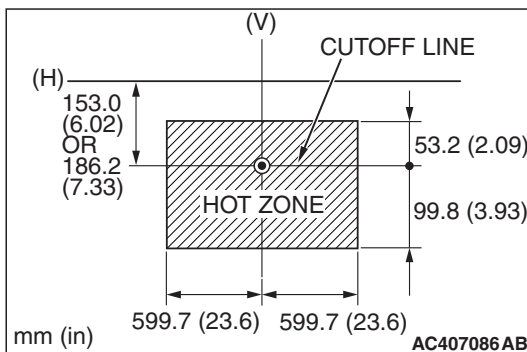
Standard value:

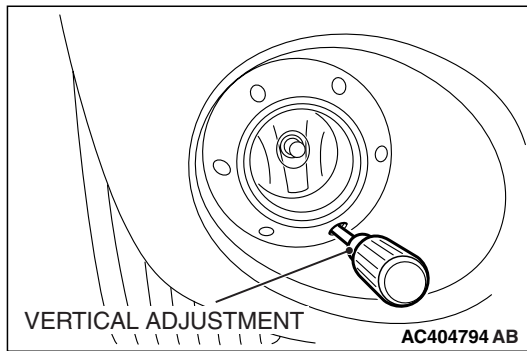
(Cutoff line direction): The horizontal line 153.0 mm (6.02 inches) (1.15 degrees angle) below the horizontal line (H) <vehicles with 17-inch wheel> or the horizontal line 186.2 mm (7.33 inches) (1.40 degrees angle) below the horizontal line (H) <vehicles with 18-inch wheel>

Limit:

(Vertical direction): Area from 53.2 mm (2.09 inches) (0.4 degrees angle) above the cutoff line to 99.8 mm (3.93 inches) (0.75 degrees angle) below the cutoff line

(Horizontal direction): Vertical line (V) ± 599.7 mm (± 23.6 inches) (± 4.5 degrees angle)





2. If it is not within the standard value range, adjust by turning the adjusting screw.

NOTE: The horizontal direction is non-adjustable. If deviation of the light beam axis exceeds the standard value, check that the mounting location or some other points are not faulty.

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) - AIR BAG

M4080016000291

⚠ WARNING

- ***Improper service maintenance of any SRS air bag can lead to unintended operations of the SRS system or serious injury.***
- ***If heat damage occurs during paint work, remove the SRS-ECU, the air bag modules, the clock spring, the front impact sensor, the side impact sensor, and the seat belt with pre-tensioner.***
 - ***SRS-ECU, air bag module, clock spring, front impact sensor, side impact sensor: 93 ° C (200 ° F) or more***
 - ***Seat belt with pre-tensioner: 90 ° C (194 ° F) or more***
- ***Service or maintenance of any SRS air bag components or related components must be performed only at an authorized MITSUBISHI dealer.***
- ***Before beginning service or maintenance of any SRS air bag components or related components, MITSUBISHI dealer personnel must thoroughly review the Service Manual (especially GROUP 52B - SRS AIR BAG).***