GROUP 8

REFERENCE MATERIAL

CONTENTS

BOLTED PANEL FIT AND ADJUSTMENT 8-2
- HOOD 8-2
- DOOR 8-2
- TAILGATE 8-3
- FUEL FILLER LID 8-4

INSTALLATION AND REMOVAL OF ADHESIVE COMPONENTS 8-5
- SIDE SILL GARNISH 8-5

ADJUSTMENT OF OTHER PARTS . . 8-8
- FRONT WHEEL ALIGNMENT 8-8
- REAR WHEEL ALIGNMENT 8-8
- HEADLAMP AIMING 8-9
- FOG LAMP AIMING 8-12

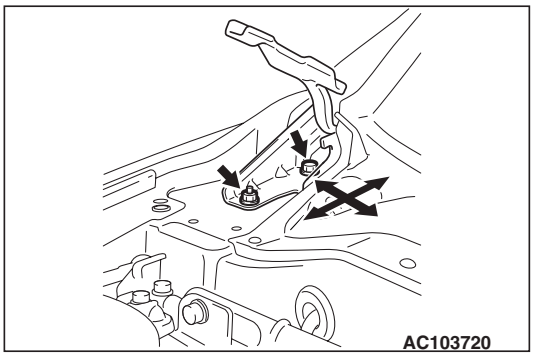
SUPPLEMENTAL RESTRAINT SYSTEM (SRS) - AIR BAG 8-14

BOLTED PANEL FIT AND ADJUSTMENT

HOOD

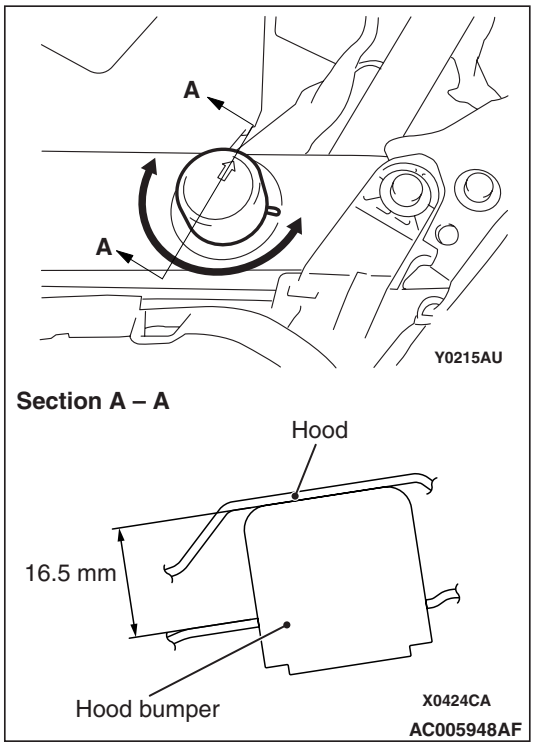
M4080005000297

HOOD FIT ADJUSTMENT

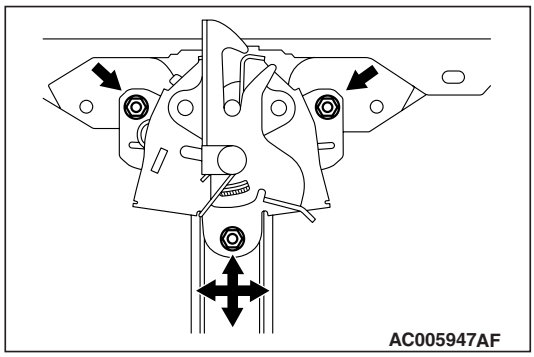


1. If the clearance between the hood and body is uneven, loosen the hood hinge mounting nut and hood hinge mounting bolt, move the hood to and fro, and left and right to adjust the hood so the clearance around the hood is even.

   Hood hinge mounting nut tightening torque: 11 ± 2 N·m
   Hood hinge mounting bolt tightening torque: 21 ± 4 N·m



2. Rotate the hood bumper by using the arrow mark on the hood bumper as a guide to adjust the hood height. If the hood bumper is rotated just one turn, the hood height changes by approximately 3 mm.



3. If the hood level, floating, unlock, lock is heavy check the cord of the release cable, loosen the hood latch mounting bolts, lift the hood latch and adjust the bite with the hood striker.

   Hood latch mounting bolts tightening torque: 9.0 ± 2.0 N·m

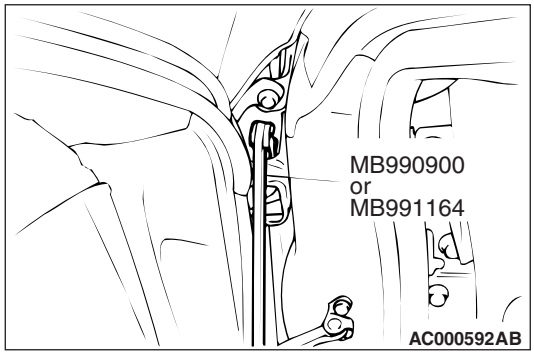
DOOR

M4080006000342

DOOR FIT ADJUSTMENT

⚠ 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.**



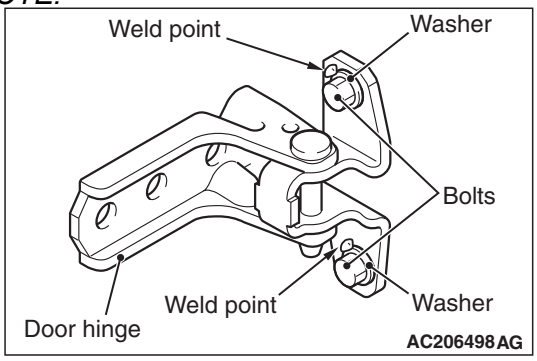
1. Use special tool MB990900 or MB991164 to loosen the hinge mounting bolts on the body side, and then adjust the clearance around the door so that it is uniform on all sides.

   Door hinge mounting bolts tightening torque: 27 ± 5 N·m

2. If a door is not flush with its surrounding panels, loosen the door-side door hinge mounting bolts and obtain the flushness by moving the door.

   Door hinge mounting bolts tightening torque: 21 ± 4 N·m

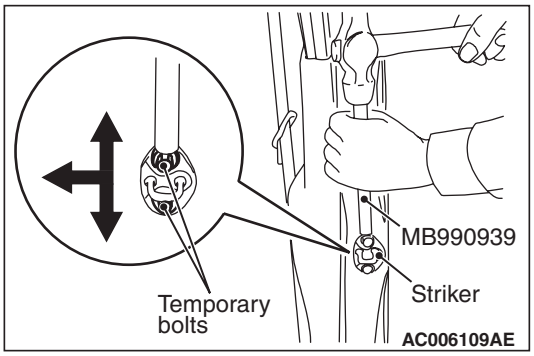
NOTE:



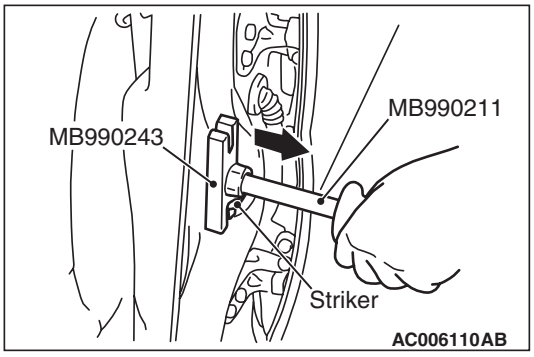
If the door hinge mounting bolts washers are welded, grind off the welding according to the procedure below beforehand.

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

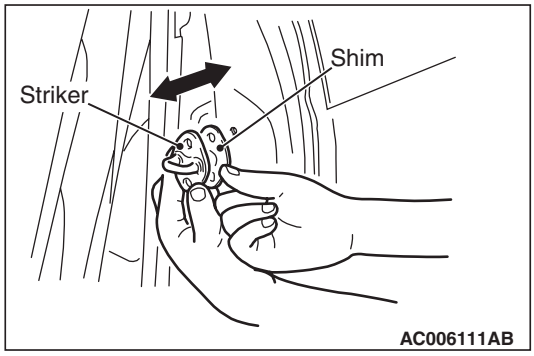
3. When the door is stiff to lock and unlock:



(1) Adjustment by using the striker (toward the inside of the vehicle and vertical direction)
Install an temporary bolts instead of the striker mounting bolt, and use special tool MB990939 and a hammer to tap the bolt to 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.

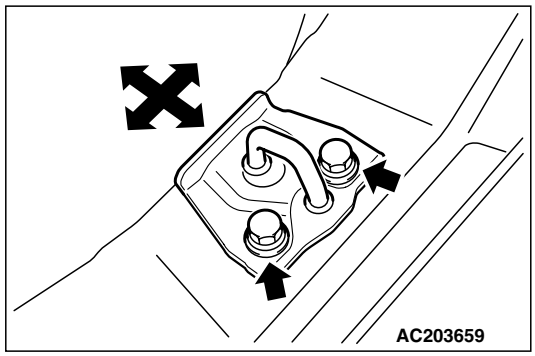
Door striker mounting bolts tightening torque: 11 ± 2 N·m

TAILGATE

M4080007000282

TAILGATE FIT ADJUSTMENT

1. If the striker and latch mesh badly, follow either of the procedures below to adjust.
   (1) If the striker is secured by the screws, replace with the replacement parts (striker; MR523105 and striker mounting bolt; MU000474).
   NOTE: The striker was secured by special screws at the factory. If the screws are reused, the striker alignment is impossible.
   (2) Loosen the bolts if the striker was secured by bolts.

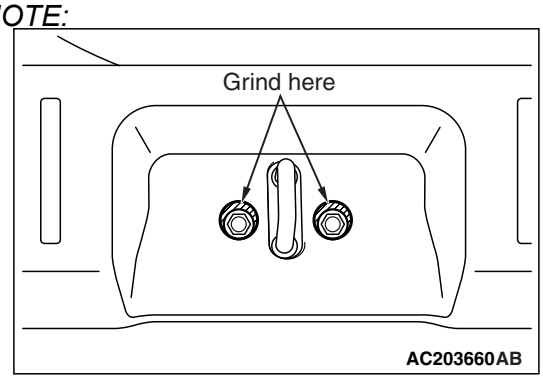


2. Move the replaced striker forward and backward or to the left and right to adjust, after bolting the striker temporarily.

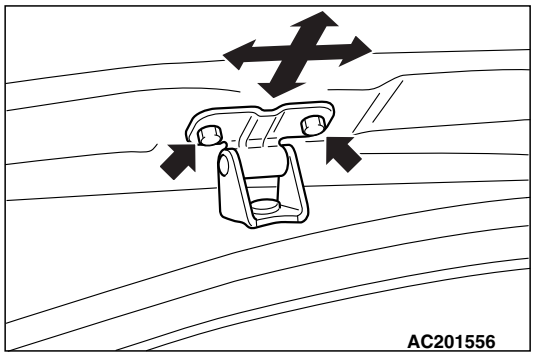
3. After adjusting, tighten the bolts to the specified torque.

   Tailgate striker mounting bolts tightening torque: 24 ± 4 N·m

   NOTE:

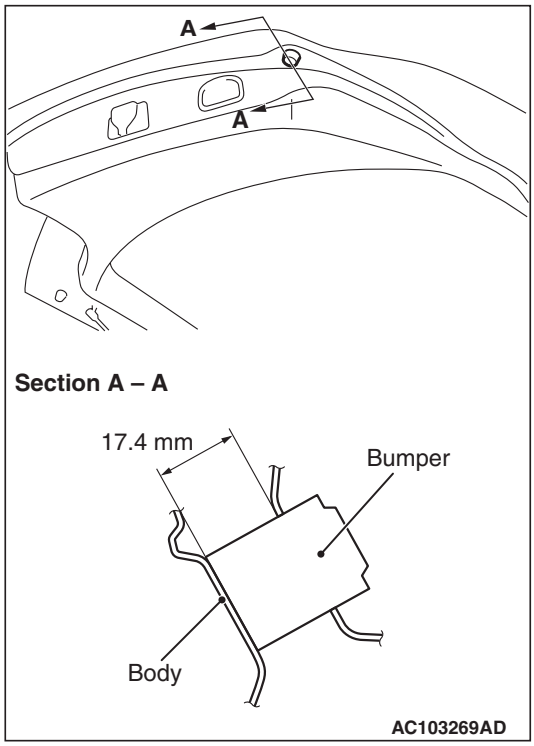


   When the bolt head interferes with the rear end trim, rasp the interference area with a round file.



4. If uneven clearance is present between tailgate and body, reposition the hinge to adjust the clearance.

   Tailgate hinge mounting bolts tightening torque: 9.0 ± 2.0 N·m

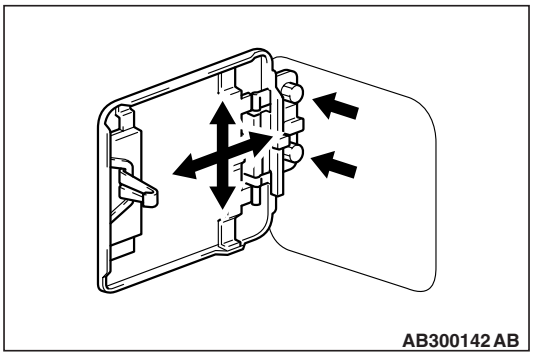


5. Turn the tailgate bumper using the arrow of the tailgate bumper as a guideline to adjust the height of the tailgate. The bumper height is altered by approximately 3 mm by turning the tailgate bumper one rotation.

FUEL FILLER LID

M4080008000229

FUEL FILLER LID FIT ADJUSTMENT



If the levelling and clearance of the fuel filler lid is uneven, loosen the fuel filler lid mounting bolts, then move and adjust the fuel filler lid.

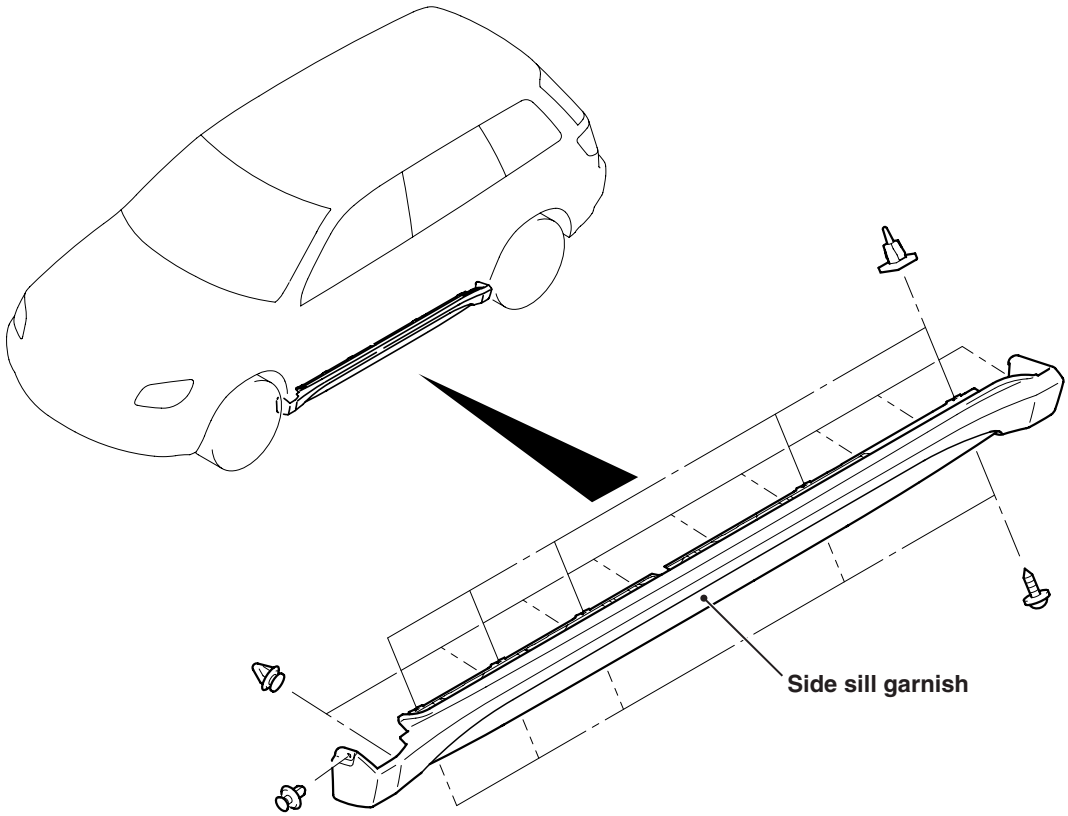
Fuel filler lid mounting bolts tightening torque: 5.0 ± 1.0 N·m

INSTALLATION AND REMOVAL OF ADHESIVE COMPONENTS

SIDE SILL GARNISH

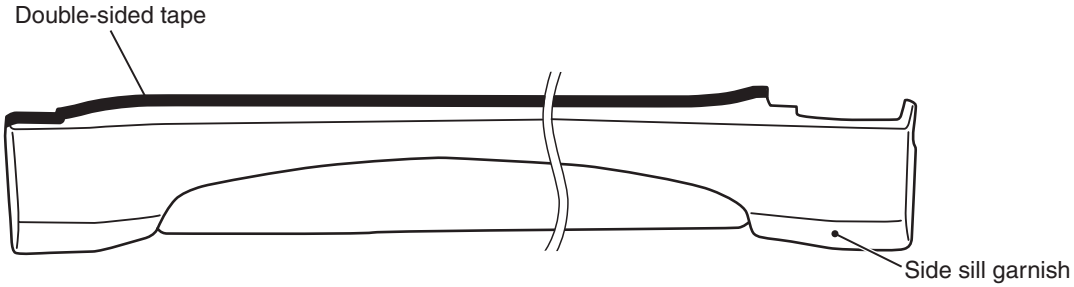
M4080012000329

<INTENSE, TURBO>



AB400095AE

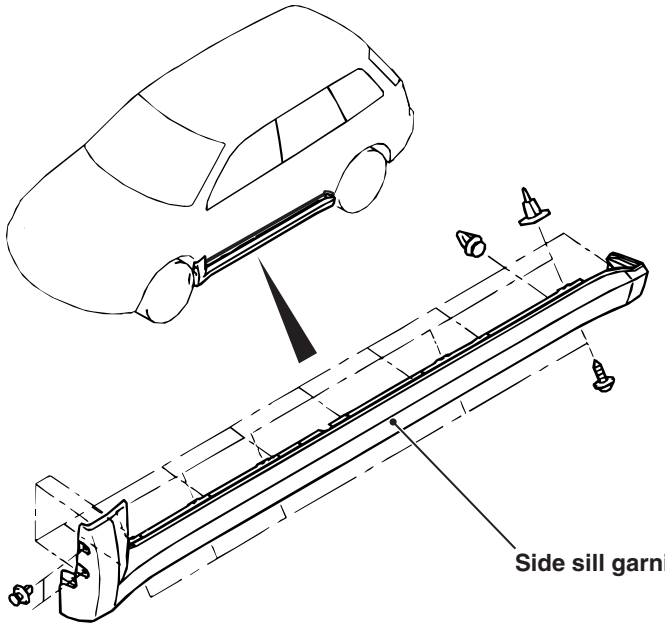
Adhesive tape position



AB400096AB

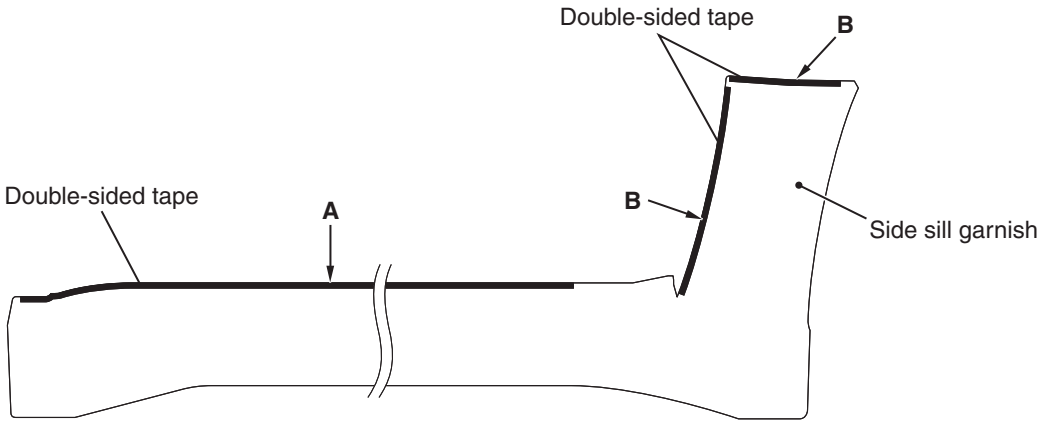
Double-sided tape: Generic products
5.0 mm width and 1.2 mm thickness

<INVITE>



AB300137AD

Adhesive tape position



AB300139AB

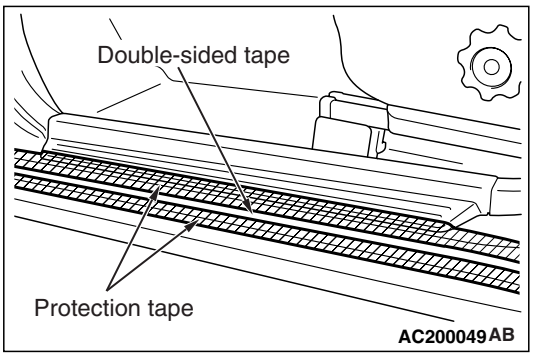
Double-sided tape: Generic products
A : 5.0 mm width, 0.8 mm thickness, B : 5.0 mm width, 1.2 mm thickness

REMOVAL

SIDE SILL GARNISH REMOVAL

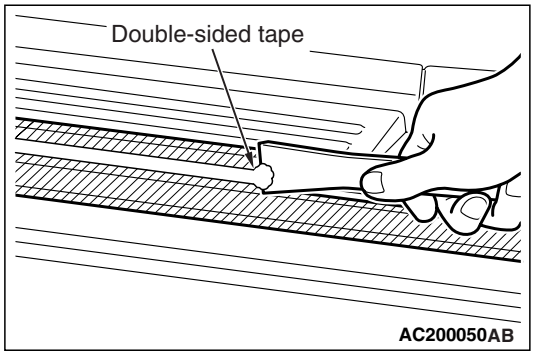
Gently lift and remove the side sill garnish. If there is any double-sided tape remaining on the side sill garnish, remove according to the following instructions.

<Remove double-side tape remaining on the body surface>



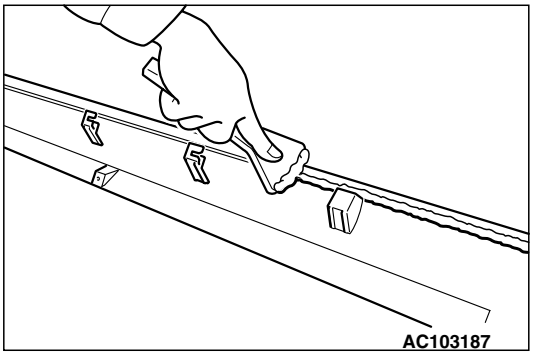
AC200049AB

1. Attach protection tape all the way along the edges of the double-sided tape which is still adhering to the body.



2. Scrape off the double-sided tape with a resin spatula as possible.
3. Peel off the protection tape.
4. Wipe the body surface and clean it with a rag moistened with isopropyl alcohol.

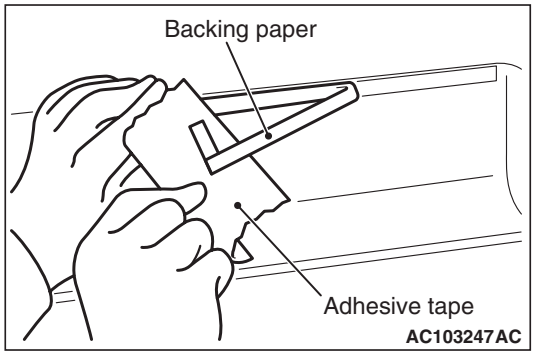
<Remove double-sided tape remaining on side sill garnish and adhere double-sided tape (when re-using side sill garnish)>



1. Scrape off the double-sided tape on the side sill garnish with a resin spatula as possible.
2. Wipe the side sill garnish surface and clean it with a rag moistened with isopropyl alcohol.
3. Remove only a small portion of the residual adhesive.
4. Adhere the double-sided tape as specified on the side sill garnish.

INSTALLATION

SIDE SILL GARNISH INSTALLATION.



1. Tear off the double-sided tape backing paper.

   NOTE: If you attach the adhesive tape to the edge of the backing paper, it will be easy to tear off.
2. Install the side sill garnish.

   NOTE: If the double-sided tape is difficult to affix in cold temperature, etc., warm the bonding surfaces of the body and side sill garnish to about 40 – 60°C before affixing the tape.
3. Firmly press in the side sill garnish.

ADJUSTMENT OF OTHER PARTS

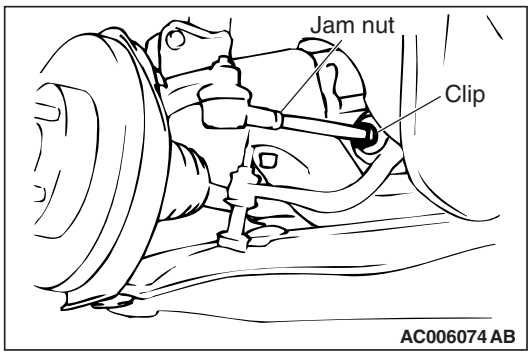
FRONT WHEEL ALIGNMENT

M4080009000329

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

TOE-IN

Standard value:
at the centre of tyre tread: 1 ± 2 mm
Toe angle (per wheel): 0°03' ± 05'



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
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:

Item	Specification
Inner wheels	34°50' ± 1°30'
Outer wheels (reference)	29°20'

TOE-OUT ANGLE ON TURNS

To check the steering linkage, especially after the vehicle has been involved in an accident or if an accident is presumed, it is advisable to check the toe-out angle on turns in addition to the wheel alignment. Conduct this test on the left turn as well as on the right turn.

Standard value:

Item	Specification
Toe-out angle on turns (inner wheel when outer wheel at 20°)	22°00' ± 1°30'

CAMBER, CASTER AND KINGPIN INCLINATION

Standard value:

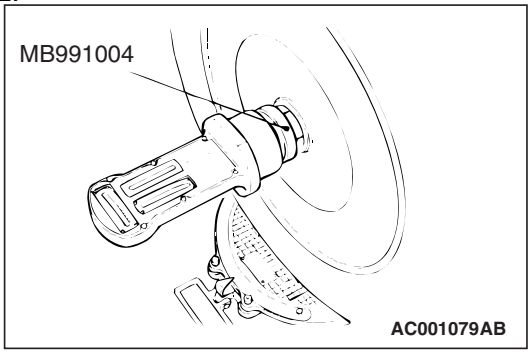
Item	Specification
Camber	- 0°10' ± 30'*
Caster	3°15' ± 30'*
Kingpin inclination	12°25' ± 1°30'

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

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

⚠ CAUTION
Never subject the wheel bearings to the vehicle load when the driveshaft nuts are loosened.

NOTE:



For vehicles with aluminium wheels, attach the camber/caster/kingpin gauge to the driveshaft by using special tool wheel alignment gauge attachment (MB991004). Tighten the special tool to the same torque 245 ± 29 N·m as the driveshaft nut.

SIDE SLIP

Measure the side slip with a side slip tester.

Standard value: 0 ± 3 mm (per 1 m)

REAR WHEEL ALIGNMENT

M4080010000174

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.

CAMBER

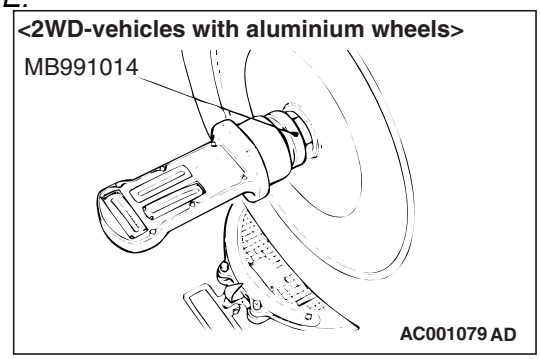
Standard value: - 0° 40' ± 30' (Left/right deviation within 30')

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

⚠ CAUTION

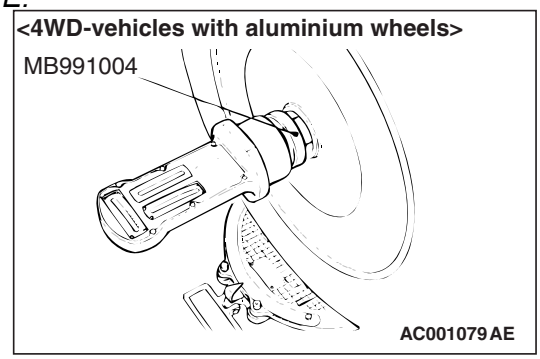
Never subject the wheel bearings to the vehicle load when the trailing arm spindle self-locking nuts (2WD), the driveshaft nuts (4WD), or the special tool wheel alignment gauge attachment (MB991004 or MB991014) are loosened.

NOTE:



For 2WD-vehicles with aluminium wheels, attach the camber/caster/kingpin gauge to the trailing arm spindle by using special tool wheel alignment gauge attachment (MB991014). Tighten the special tool to the same torque 175 ± 25 N·m as the trailing arm spindle self-locking nut.

NOTE:



For 4WD-vehicles with aluminium wheels, attach the camber/caster/kingpin gauge to the driveshaft by using special tool wheel alignment gauge attachment (MB991004). Tighten the special tool to the same torque 245 ± 29 N·m as the driveshaft nut.

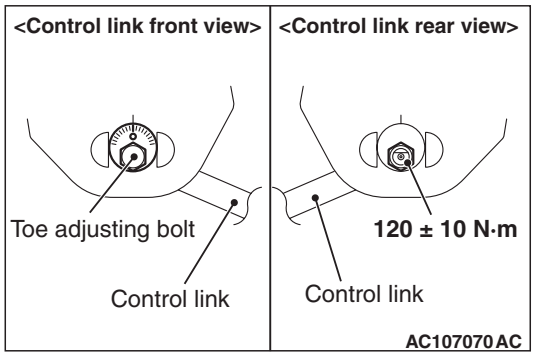
TOE-IN

Standard value:
At the centre of tyre tread: 3 ± 2 mm
Toe angle (per wheel): 0°08' ± 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 earth in the unladen condition.



Carry out adjustment by turning the toe adjusting bolt (control link mounting bolt which is located on the inner side of the body).

NOTE:

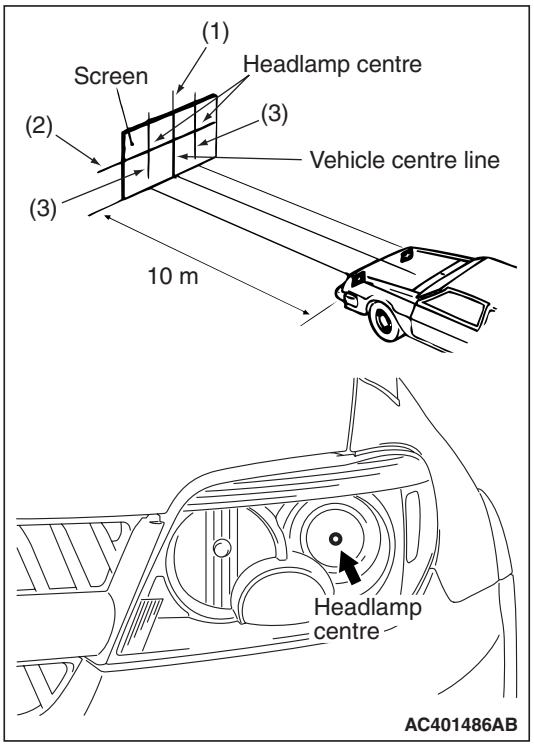
- *LH: Clockwise viewed from the front → Toe-in*
- *RH: Clockwise viewed from the front → Toe-out*
- *Turning the toe adjusting bolt by one groove of the scale, toe can be changed approximately 2.6 mm (single side toe angle equivalent to 16').*

HEADLAMP AIMING

M4080011000605

PRE-AIMING INSTRUCTIONS <LOW BEAM>

1. Inspect for badly rusted or faulty headlamp assemblies.
2. These conditions must be corrected before a satisfactory adjustment can be made.
3. Inspect tyre inflation, and adjust if it is necessary.
4. If the fuel tank is not full, place a weight in luggage room of the vehicle to simulate weight of a full tank (0.8 kg per litre).
5. There should be no other load in the vehicle other than driver or substituted weight of approximately 75 kg placed in driver's position.
6. Place the vehicle on a level floor, perpendicular to a flat screen 10 m away from the bulb centre-marks on the headlamp lens.
7. Rock vehicle sideways to allow vehicle to assume its normal position.
8. Bounce the front suspension through three (3) oscillations by applying the body weight to hood or bumper.



9. 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 centre line.
   (2) Measure the distance from the centre-marks on the headlamp lens to the floor. Transfer the measurement to the screen. Horizontal tape or mark on the screen is for reference of vertical adjustment.

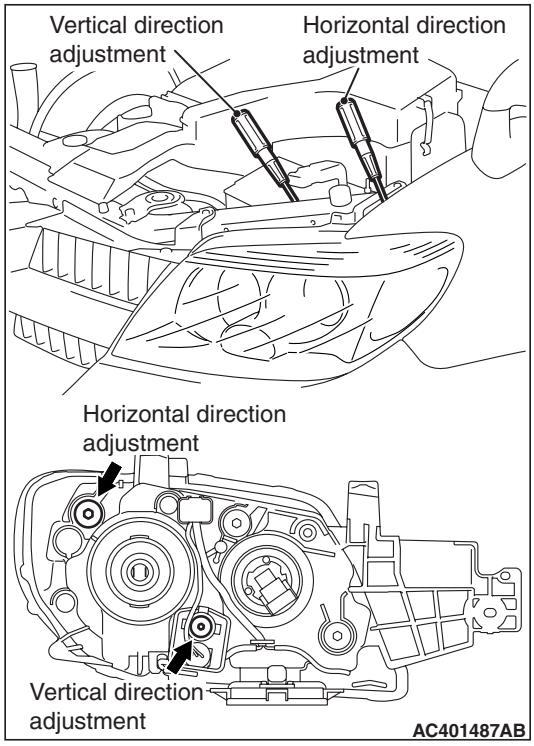
   NOTE: Height from the floor to the centre of the headlamps (Reference value): 840 mm
   (3) Measure the distance from the centre line of the vehicle to the centre of each headlamp. Transfer the measurement to the screen. Vertical tape or mark on the screen with reference to the centre line of each headlamp bulb.

HEADLAMP ADJUSTMENT <LOW BEAM>

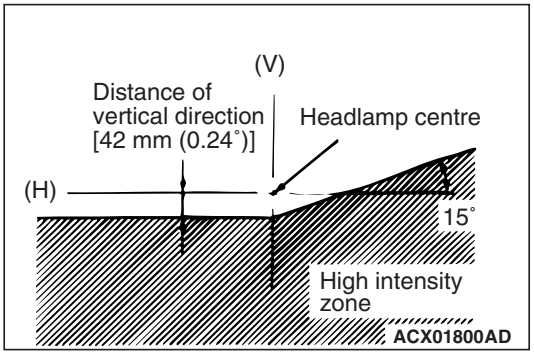
⚠ CAUTION

- **Do not cover a headlamp for more than three minutes to prevent the plastic headlamp lens deformation.**
- **When adjusting one headlamp beam, make sure that another headlamp is off by disconnecting the connector from it. When reconnecting the connector, make sure that the headlamp beam is not disturbed accidentally.**

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



2. If not the case, turn the adjusting screws to achieve the specified low-beam cut-off location on the aiming screen.



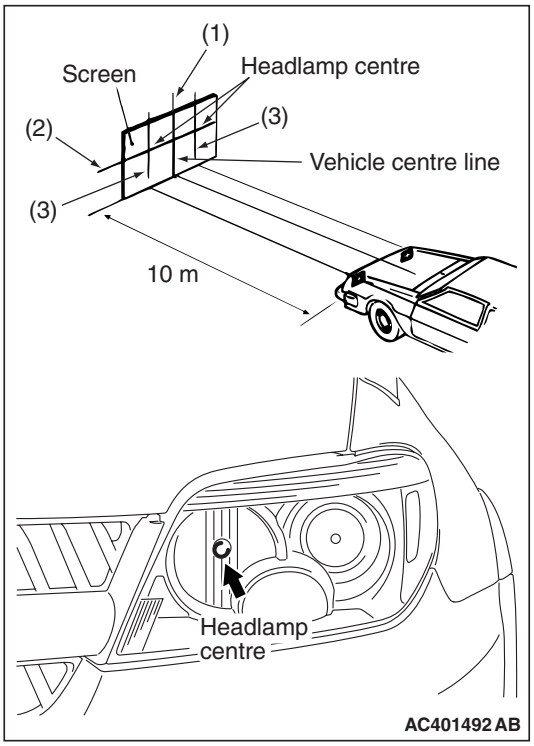
Standard value:
Vertical direction: 0.57° below horizontal (H)
Horizontal direction: Position at which the stat up point of 15° is crossed with vertical line (V)

Limit:
Vertical direction: The headlamp beam should tilt downwards by 0.17° or more.

PRE-AIMING INSTRUCTIONS <HIGH BEAM>

1. Inspect for badly rusted or faulty headlamp assemblies.
2. These conditions must be corrected before a satisfactory adjustment can be made.
3. Inspect tyre inflation, and adjust if it is necessary.

4. If the fuel tank is not full, place a weight in luggage room of the vehicle to simulate weight of a full tank (0.8 kg per litre).
5. There should be no other load in the vehicle other than driver or substituted weight of approximately 75 kg placed in driver's position.
6. Thoroughly clean the headlamp lenses.
7. Place the vehicle on a level floor, perpendicular to a flat screen 10 m away from the bulb centre-marks on the headlamp 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. 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 centre line.
    (2) Measure the distance from the centre-marks on the headlamp lens to the floor. Transfer the measurement to the screen. Horizontal tape or mark on the screen is for reference of vertical adjustment.

    NOTE: Height from the floor to the centre of the headlamps (Reference value): 840 mm

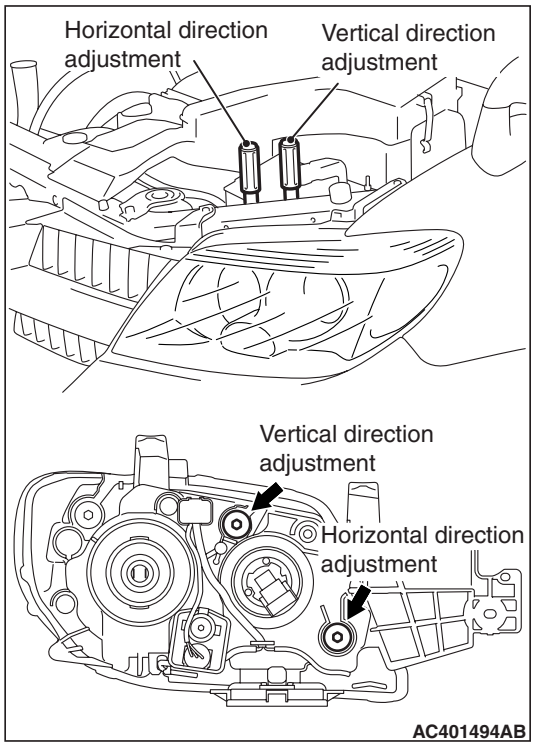
    (3) Measure the distance from the centre line of the vehicle to the centre of each headlamp. Transfer the measurement to the screen. Vertical tape or mark on the screen with reference to the centre line of each headlamp bulb.

HEADLAMP ADJUSTMENT <HIGH BEAM>

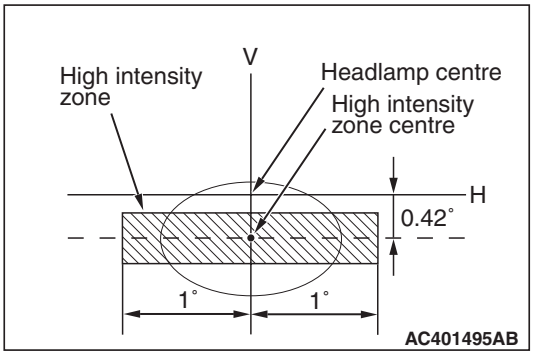
⚠ CAUTION

- **Do not cover a headlamp for more than three minutes to prevent the plastic headlamp lens deformation.**
- **When adjusting one headlamp beam, make sure that another headlamp is off by disconnecting the connector from it. When reconnecting the connector, make sure that the headlamp beam is not disturbed accidentally.**

1. The high-beam headlamp should project on the screen upper edge of the beam (cut-off).



2. If not the case, turn the adjusting screws to achieve the specified high-beam cut-off location on the aiming screen.



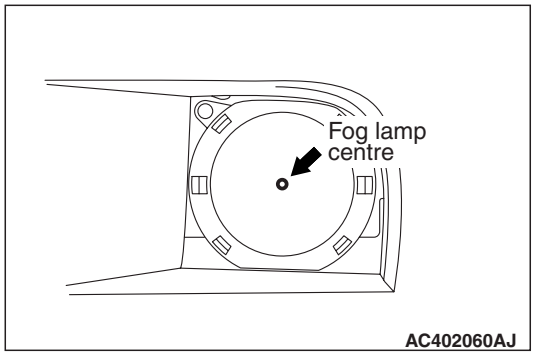
Standard value:
Vertical direction: 0.42° below horizontal (H)
Horizontal direction: High-intensity zone centre should be along the vertical line (V).
Limit:
Vertical direction: 0.09° from the standard value
Horizontal direction: The vertical headlamp beam range should be within 1°.

FOG LAMP AIMING

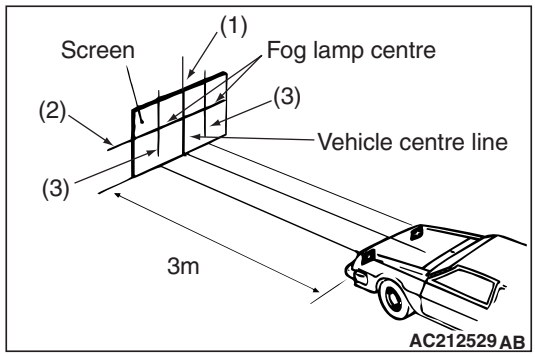
M4080013000537

PRE-AIMING INSTRUCTIONS

1. Inspect for badly rusted or faulty fog lamp assemblies.
2. These conditions must be corrected before a satisfactory adjustment can be made.
3. Inspect tyre inflation, and adjust if necessary.
4. If fuel tank is not full, place a weight in the luggage room of the vehicle to simulate weight of a full tank (0.8 kg per litre).
5. There should be no other load in the vehicle other than driver or substituted weight of approximately 75 kg placed in driver's position.
6. Thoroughly clean the fog lamp lenses.
7. Place the vehicle on a level floor, perpendicular to a flat screen 3 m away from the bulb centre-marks on the fog lamp 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.

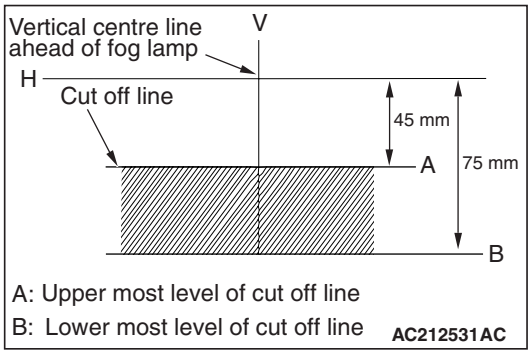


10. Measure the centre of the fog lamps as shown in the illustration.



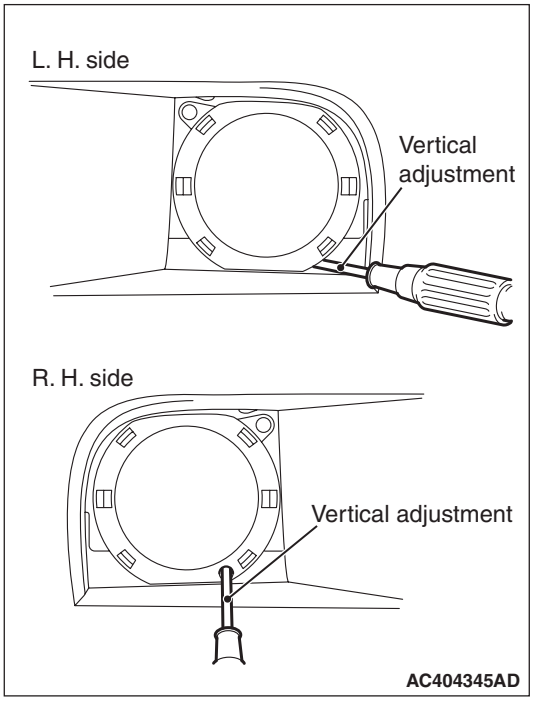
11. Four lines of adhesive tape (or equivalent markings) are required on screen or wall:
    (1) Position a vertical tape or mark so that it is aligned with the vehicle centre line.
    (2) Measure the distance from the centre of the fog lamp lens to the floor. Transfer the measurement to the screen. Horizontal tape or mark on the screen is for reference of vertical adjustment.
    (3) Measure the distance from the centre line of the vehicle to the centre of each fog lamp. Transfer the measurement to the screen. Vertical tape or mark on the screen is for reference to the centre line of each fog lamp.

FOG LAMP ADJUSTMENT



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

   Standard value: Fog lamp cut off line (Vertical direction): Within 45 mm (0.86°) to 75 mm (1.44°) below the vertical centre line ahead of fog lamp.



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 lamp beam axis exceeds the standard value, check that the mounting location or some other points are not faulty.

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) - AIR BAG

M4080016000246

⚠ ***WARNING***

- ***Improper service or maintenance of any component of the SRS and any SRS-related component, can lead to personal injury or death to service personnel (from inadvertent firing of the air bag or to the driver and passenger (from rendering the SRS inoperative).***
- ***The SRS components and seat belt with pre-tensioner should not be subjected to heat, so remove the SRS-ECU, driver's and front passenger's air bag modules, clock spring, side air bag modules, and seat belt pre-tensioner before drying or baking the vehicle after painting.***
  - ***SRS-ECU, air bag module, clock spring: 93°C or more***
  - ***Seat belt pre-tensioner :90°C or more***
- ***Service or maintenance of any SRS component and SRS-related component must be performed only at an authorized MITSUBISHI dealer.***
- ***MITSUBISHI dealer personnel must thoroughly review the chassis workshop manual, and especially its GROUP 52B - Supplemental Restraint System (SRS), before beginning any service or maintenance of any component of the SRS and any SRS-related component.***