

GROUP 3

WELDED PANEL
REPLACEMENT

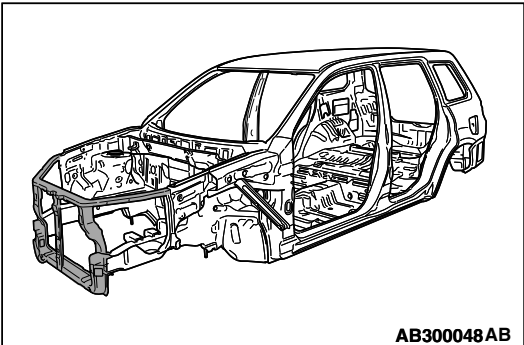
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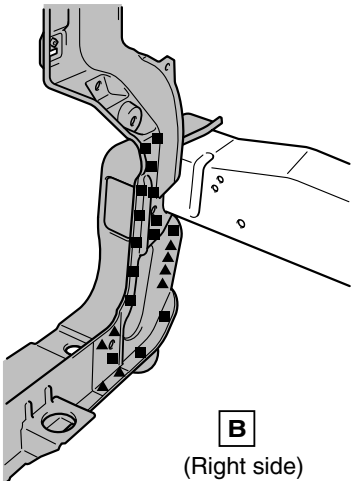
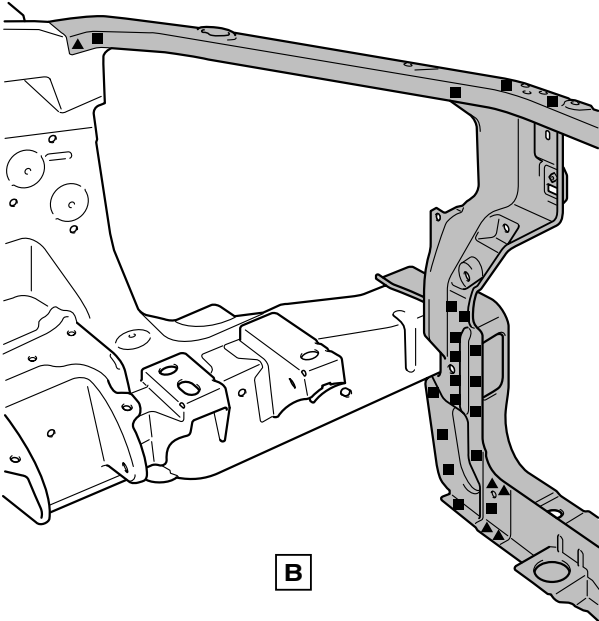
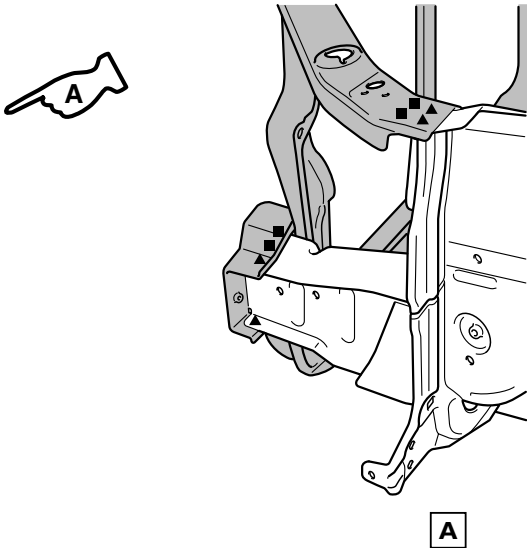
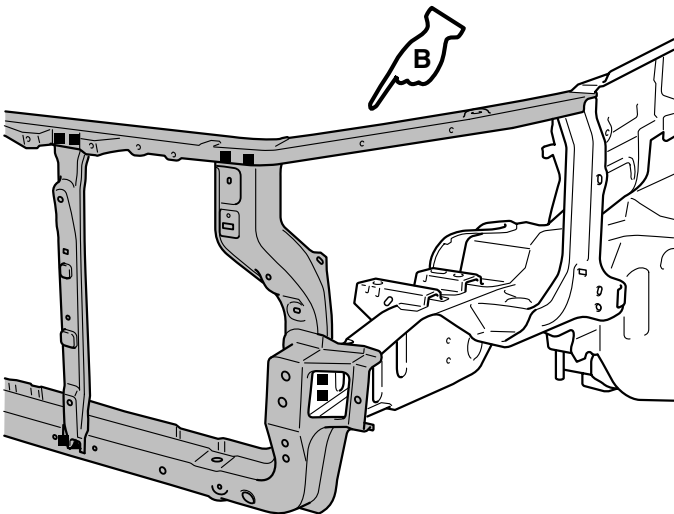
HEADLAMP SUPPORT

M4030003000144



Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding (■ : indicates two panels to be welded ▲ : indicates three panels to be welded)
+ + + +	MIG spot welding
	MIG arc welding (continuous)
ooooooo	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

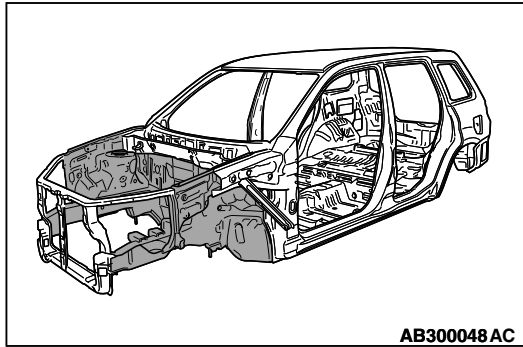
REPAIR WELDS



AB200550AD

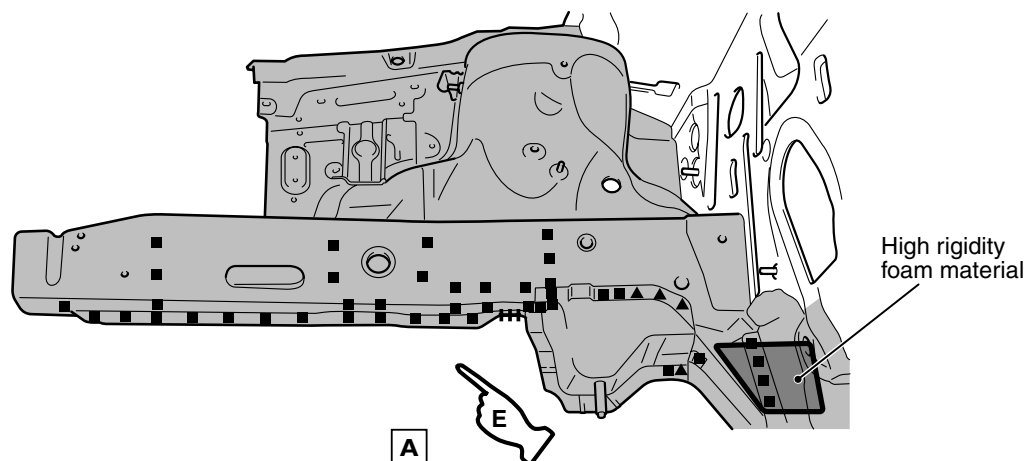
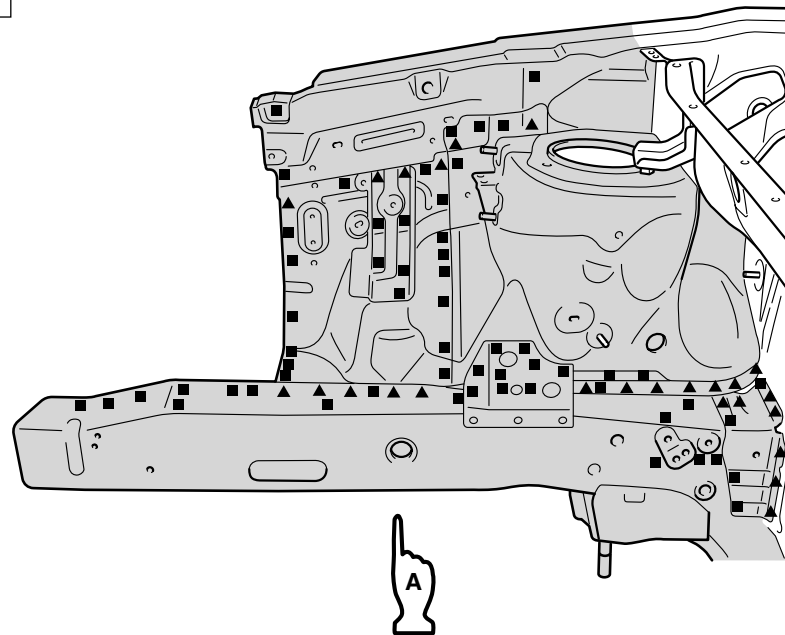
FENDER SHIELD

M4030004000136



REPAIR WELDS

Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding (■: indicates two panels to be welded ▲: indicates three panels to be welded)
++++	MIG spot welding
	MIG arc welding (continuous)
ooooooo	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)



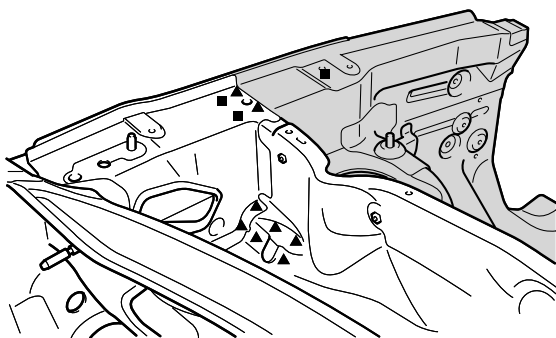
AB300038 AB

 CAUTION

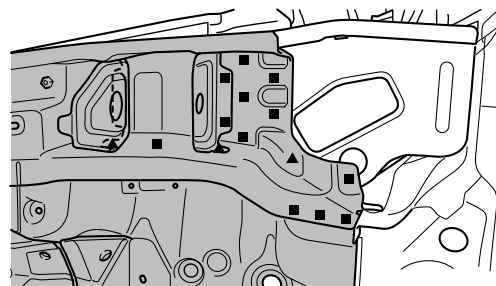
When repairing the area using foam materials do not use firing tools since the foaming materials may burn.

NOTE: .

- Refer to the Headlamp Support Section on [P.3-3](#) for the welding point with headlamp support.
- Refer to the Front Pillar Section on [P.3-10](#) for the welding points with the upper frame extension outer.

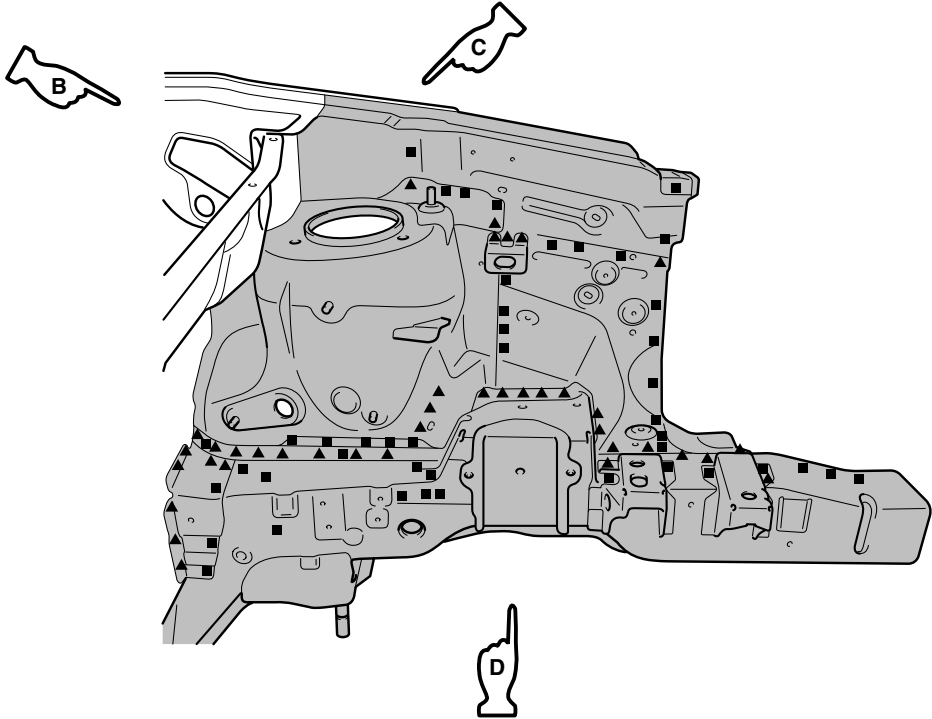


B

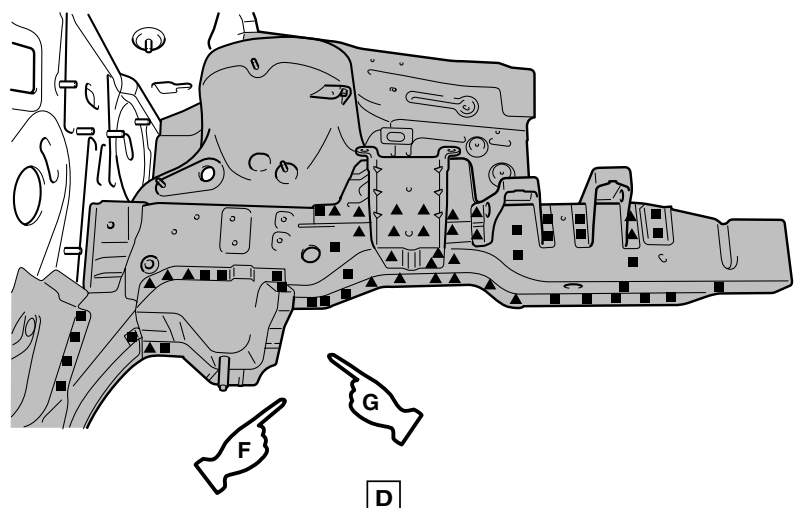


C

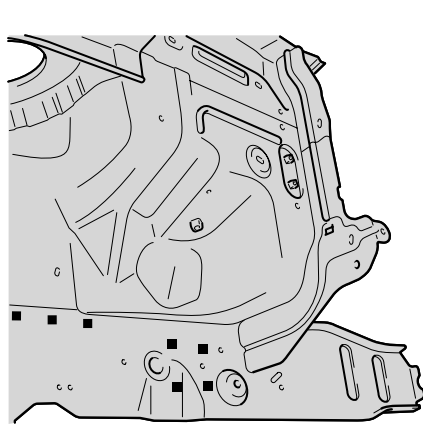
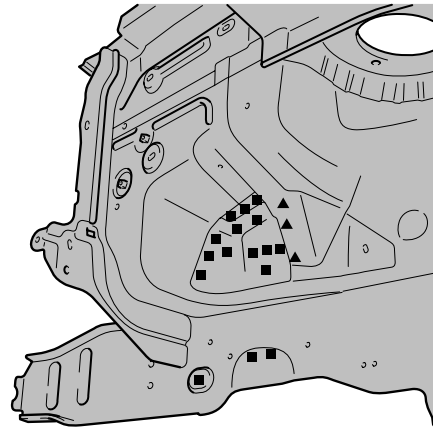
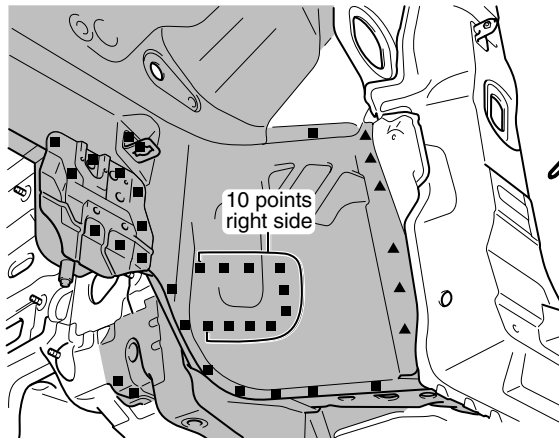
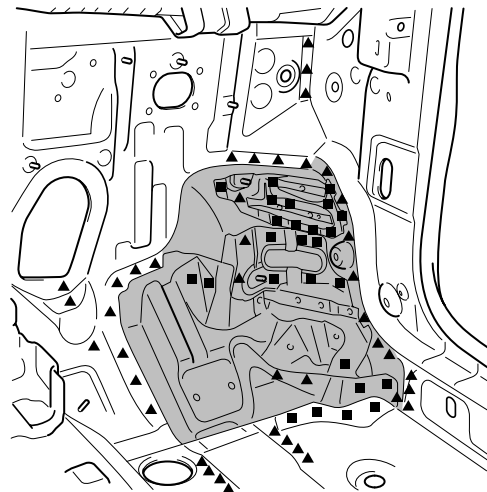
(With the upper frame extension outer removed)



D

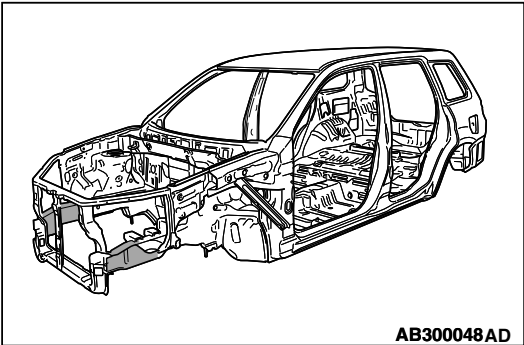


D

**E****F****G****H****I**
(Left side)**J**
(Right side)

FRONT SIDEMEMBER (PARTIAL REPLACEMENT)

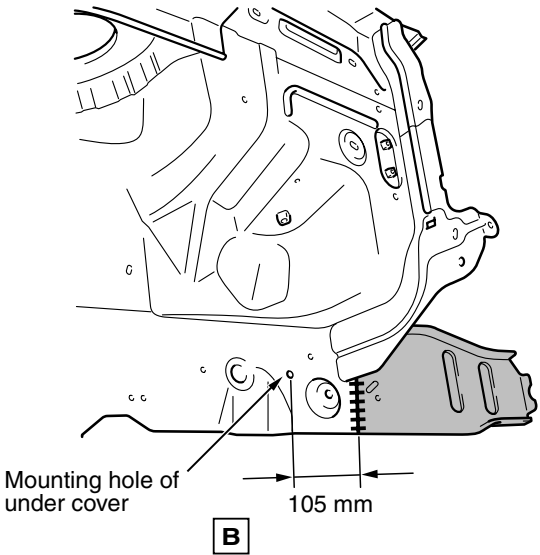
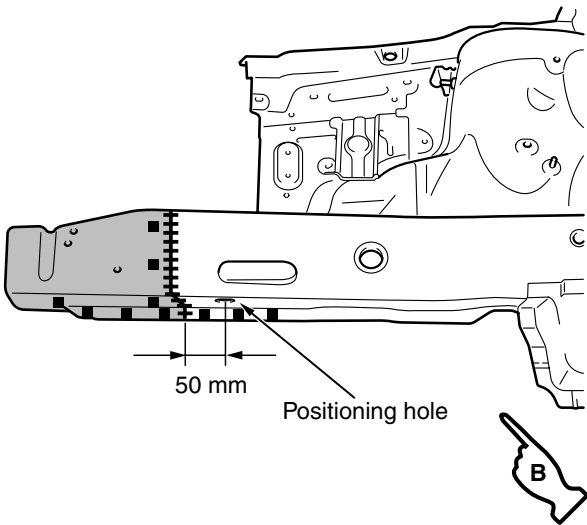
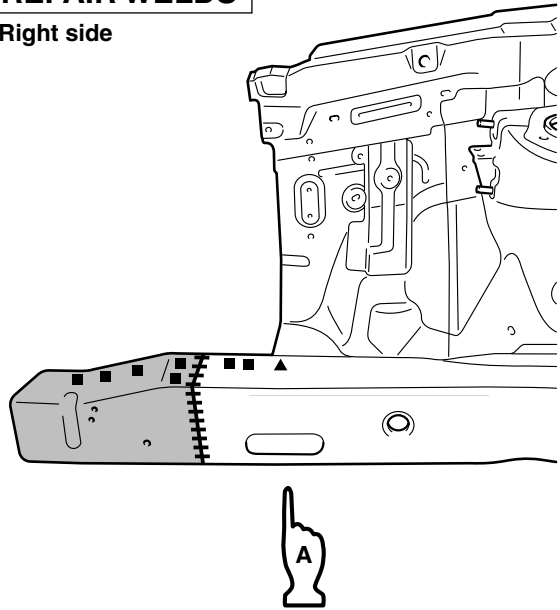
M4030000100078



Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding (■ : indicates two panels to be welded ▲ : indicates three panels to be welded)
++++	MIG spot welding
#####	MIG arc welding (continuous)
oooooooo	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

REPAIR WELDS

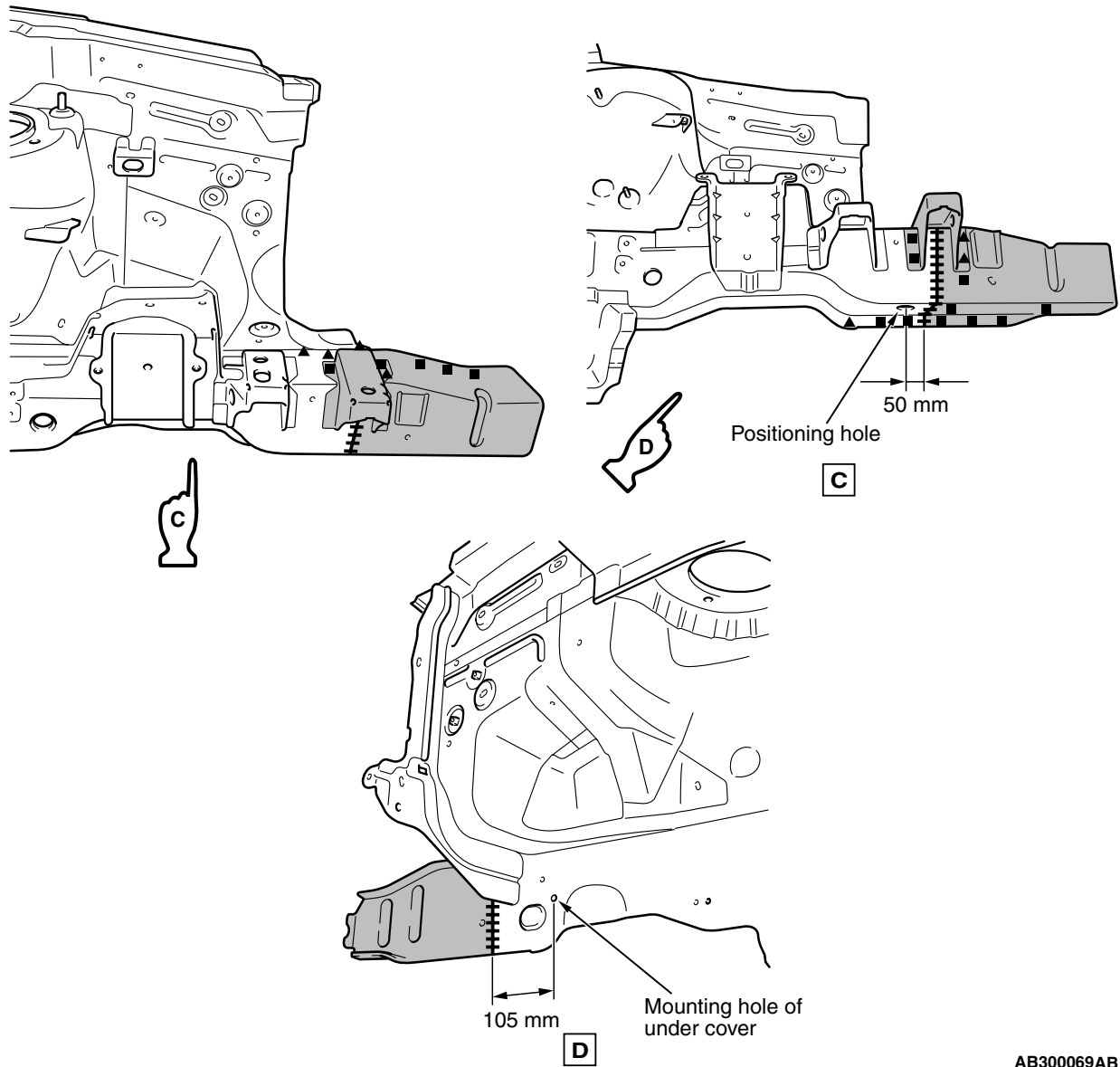
Right side



AB300023AB

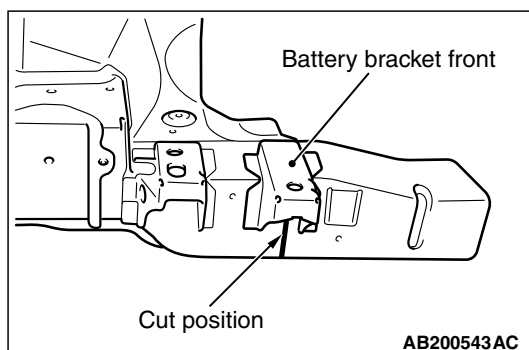
NOTE: Refer to the Headlamp Support Section on [P.3-3](#) for the welding point with headlamp support.

Left side

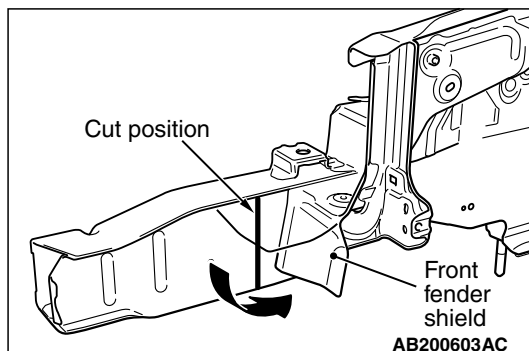


NOTE ON REPAIR WORK

REMOVAL

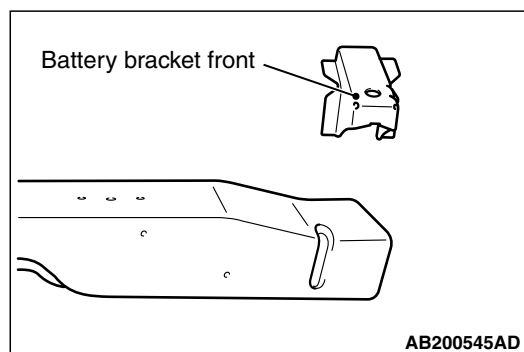


1. Remove the battery bracket front on the cut area in advance when cutting the front sidemember inner.

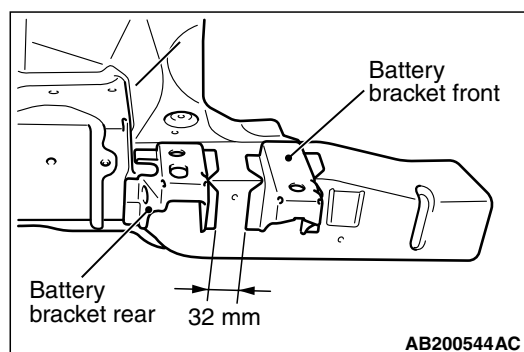


2. As shown in the figure of the instructions, bend the front fender shield on the cut area in advance, when cutting the front sidemember outer.

INSTALLATION



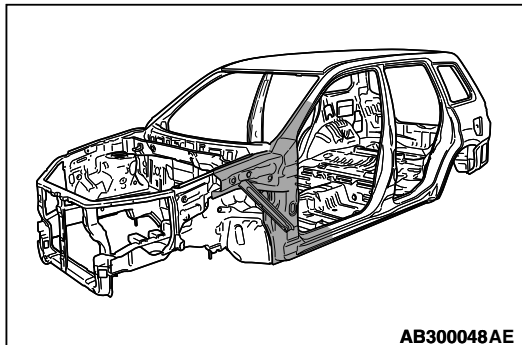
1. Remove the battery bracket front from the new front sidemember inner.



2. Assemble the front sidemember, then assemble the battery bracket front in the location of the figure of the instructions, then return the front fender shield bent back to the original state.

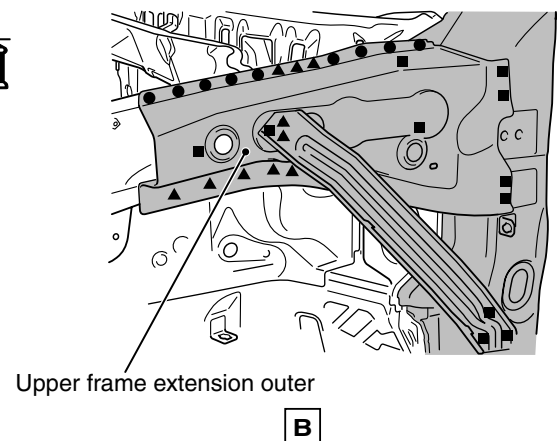
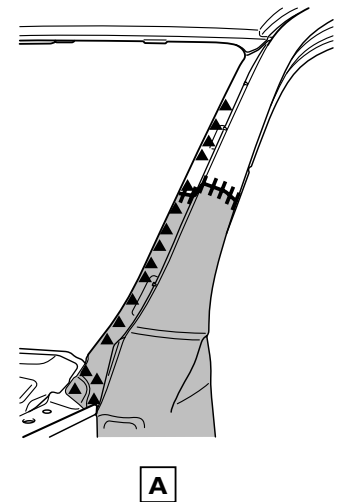
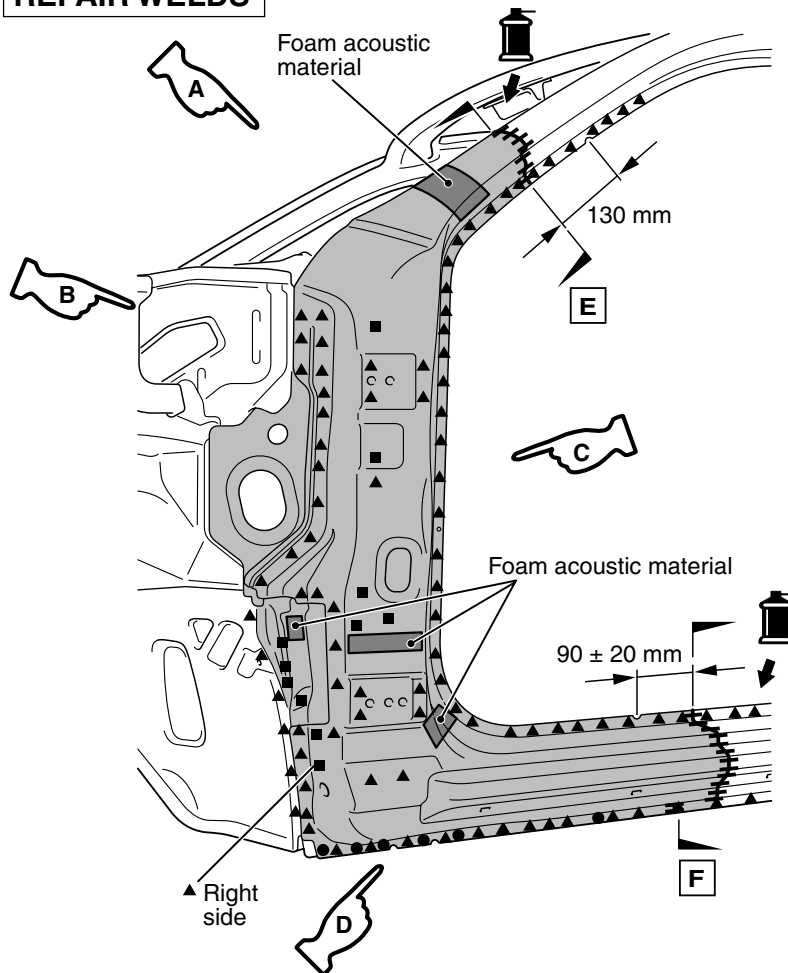
FRONT PILLAR

M4030005000184



Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding (■: indicates two panels to be welded ▲: indicates three panels to be welded)
++++	MIG spot welding
	MIG arc welding (continuous)
oooooo	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

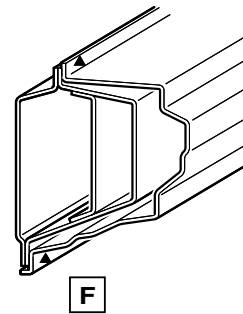
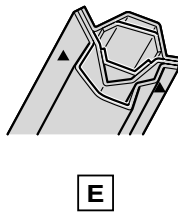
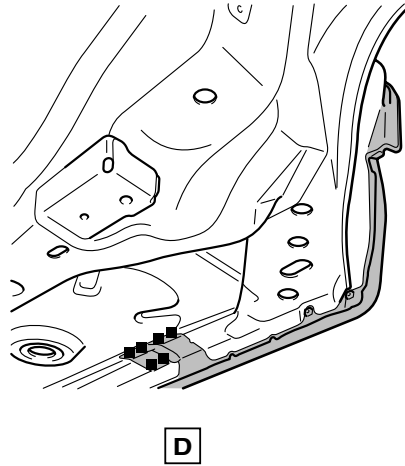
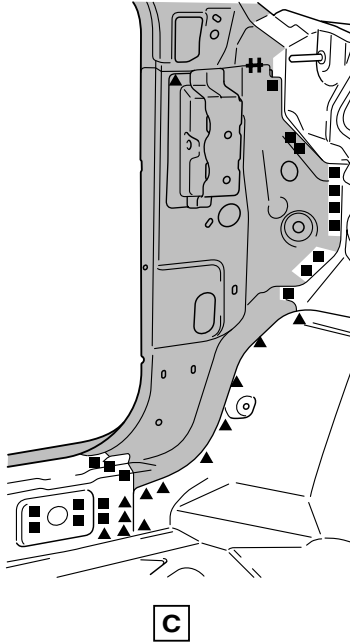
REPAIR WELDS



AB200556AB

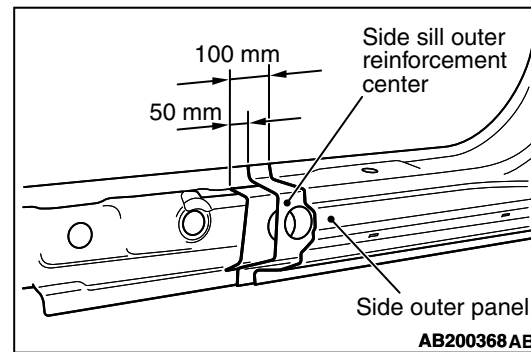
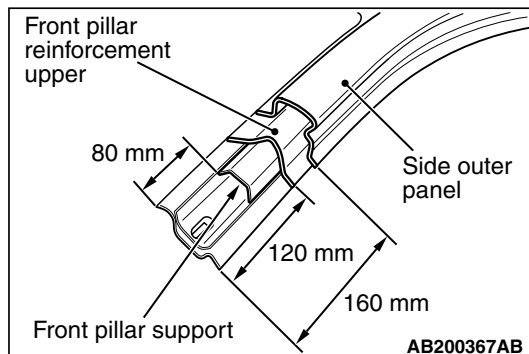
⚠ CAUTION

When repairing the area using foam materials do not use firing tools since the foaming materials may burn.



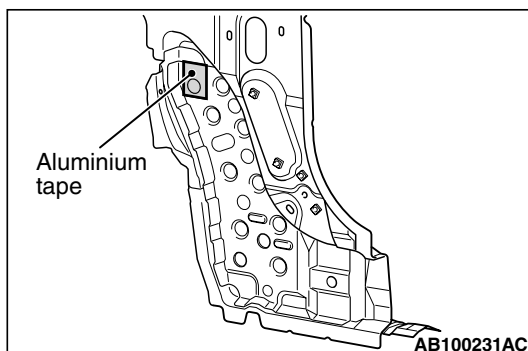
AB200566AB

NOTE ON REPAIR WORK INSTALLATION

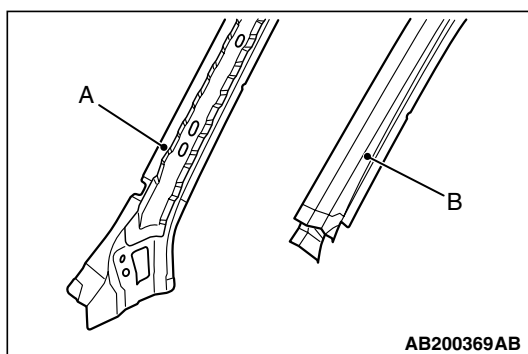


1. To reinforce the strength of the front pillar cut area, cut the side outer panel 160 mm above the front pillar cut area, 120 mm above the front pillar reinforcement upper and 80 mm above the front pillar support.

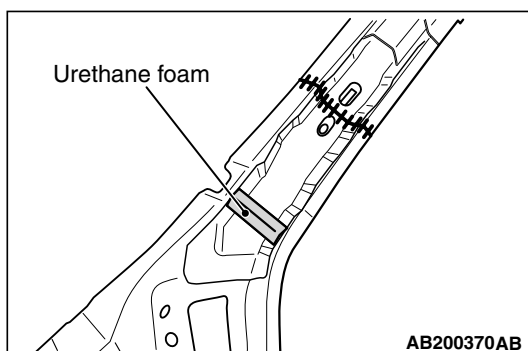
2. To reinforce the strength in the side sill cut area, cut the side outer panel 100 mm behind the side sill cut area and 50 mm behind the side sill outer reinforcement center.



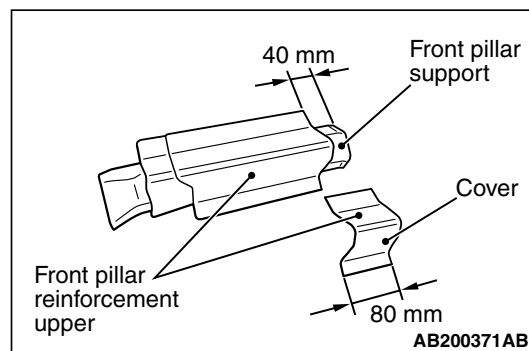
3. When assembling a new front pillar inner lower parts, cover the front pillar inner lower hole with aluminium tape since it is not possible to fill the area shown in the figure of the instructions with foam materials.



4. Divide the new front inner pillar upper parts into A (front pillar inner upper reinforcement and front pillar inner upper) and B (front pillar reinforcement upper and front pillar support).



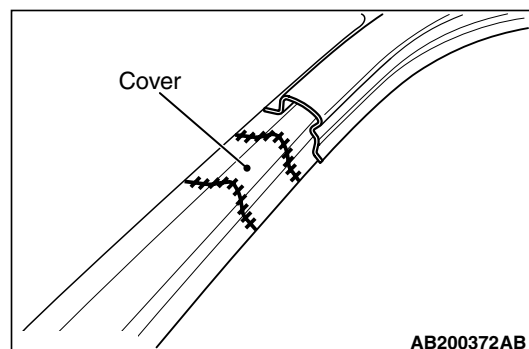
5. When assembling Part A, weld the areas shown in the figure of the instructions from the outside and inside. After assembling, to prevent the foaming materials from dripping in the area shown in the figure of the instructions, adhere urethane foam to fill (bury) the front pillar interior.



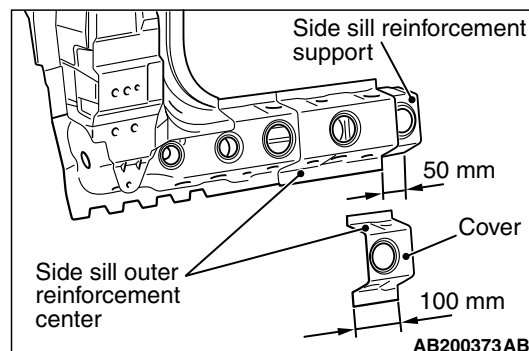
6. Cut Part B in alignment with the front pillar reinforcement on the body-side. Next, cut only the front pillar reinforcement upper 80 mm from the cut area to create a cover, then cut the front pillar support 40 mm above the front pillar reinforcement upper cut area.

CAUTION

Weld and repair the front pillar support if it is damaged.



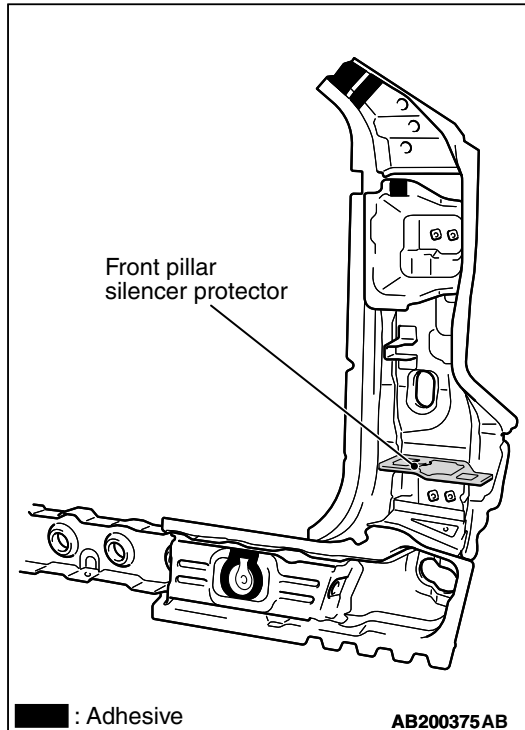
7. To assemble Part B, weld the front pillar support then weld the cover of the front pillar reinforcement upper.



8. Remove the side outer panel from the new front pillar outer parts. Cut the front pillar outer by aligning it with the side sill outer reinforcement center on the body-side. Next, cut only the side sill outer reinforcement center 100 mm forward from the cut area to create a cover, then cut the side sill reinforcement support 50 mm behind the cut area of the side sill outer reinforcement center.

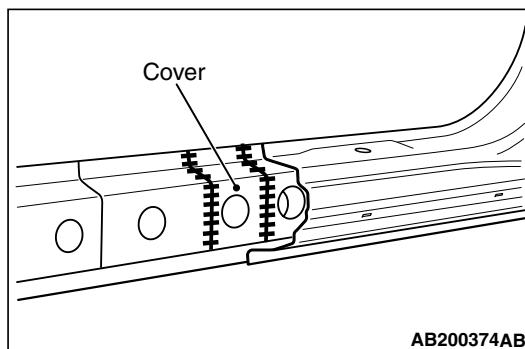
CAUTION

Weld and repair if the side sill reinforcement support is damaged.

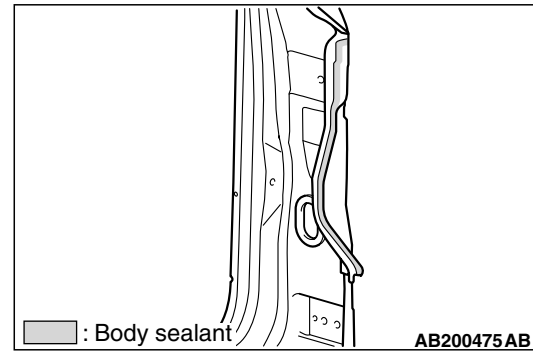


9. When assembling a new front pillar outer parts, apply a front pillar silencer protector in advance, bury the clearance with butyl tape then apply structural adhesives in the areas shown in the figure of the instructions.

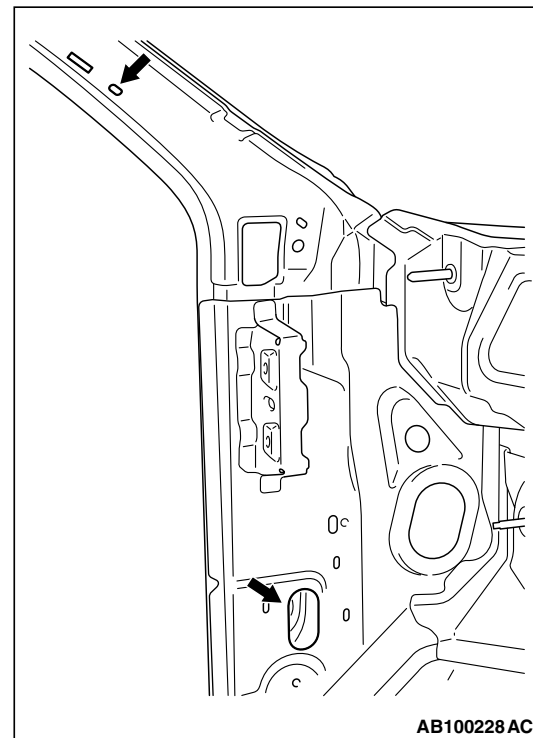
Adhesive	Type	Brand
	Epoxyayresin adhesive	3M™ Part No.8115 or equivalent



10. Weld the side sill reinforcement support then weld the cover of the side sill outer reinforcement center.

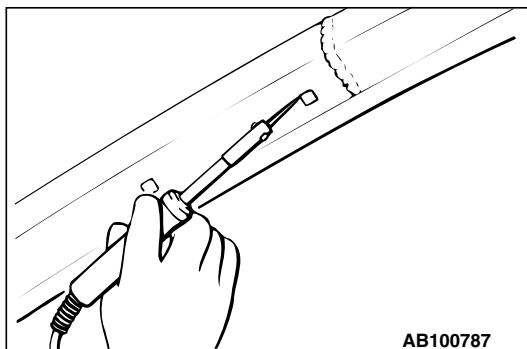


11. Apply in advance body sealant in the areas shown in the figure of the instructions when assembling the side outer panel.



12. Assemble the side outer panel, then bolt and tape the hole and flange with aluminium tape and fill the hole with foam materials as shown in the figure of the instructions.

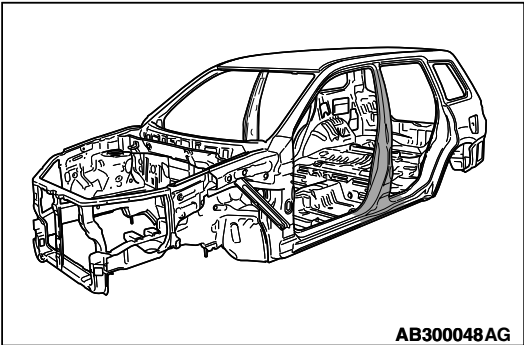
FOAM: 3M™ ULTRAPRO Panel foam-Yellow



13. Wait 2 hours after filling the foam materials to remove the bolt and aluminium tape, then melt the foam materials with a soldering gun so a clip, etc. can thoroughly be inserted in the hole filled with foam materials.

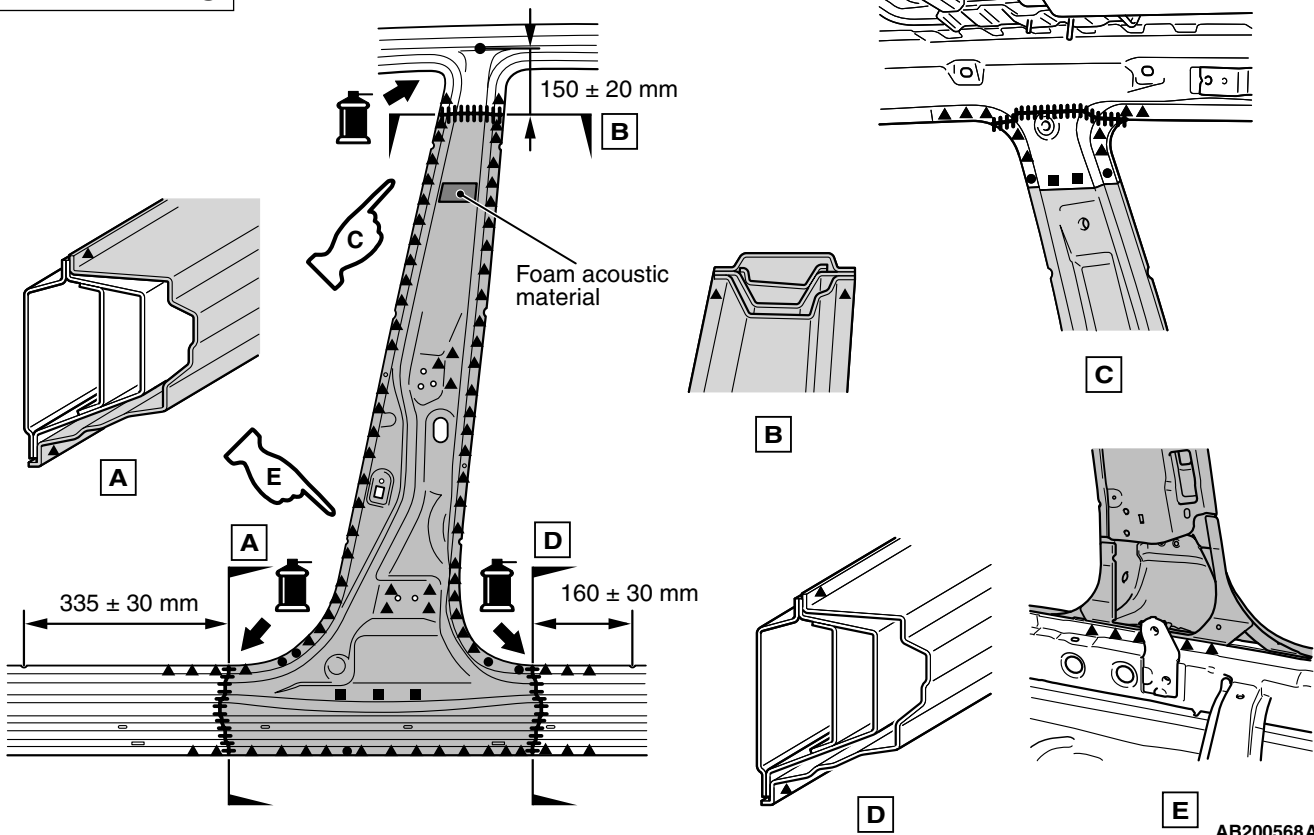
CENTER PILLAR

M4030006000121



Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding (■ : indicates two panels to be welded ▲ : indicates three panels to be welded)
++++	MIG spot welding
#####	MIG arc welding (continuous)
oooooooo	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

REPAIR WELDS

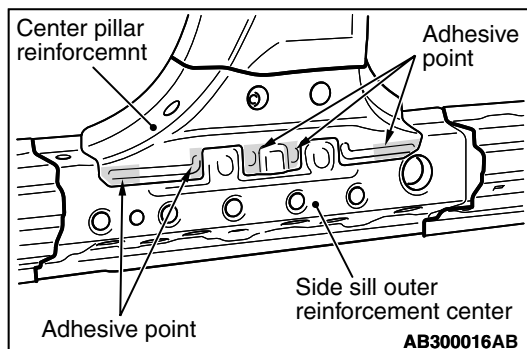


⚠ CAUTION

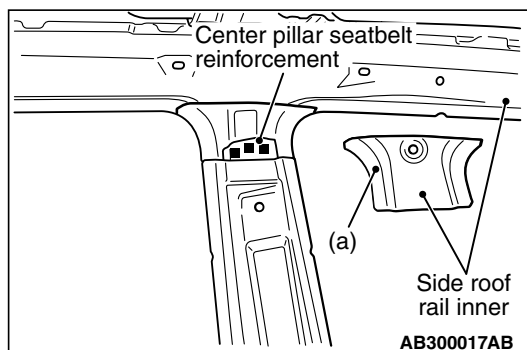
When repairing the area using foam materials do not use firing tools since the foaming materials may burn.

NOTE ON REPAIR WORK

REMOVAL



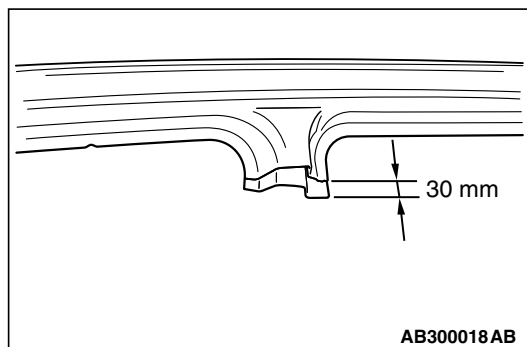
1. Since the center pillar reinforcement and side sill outer reinforcement center of the side sill is adhered together, cut the side outer panel in a place where the reinforcement joint is visible, as shown in the figure of the instructions, to remove the center pillar reinforcement.



2. To detach the welding of the center pillar seatbelt reinforcement and center pillar reinforcement, cut the lower part of the side roof rail inner as shown in the figure of the instructions.

NOTE: Hold the side roof rail inner (A) that was cut since it will be re-used.

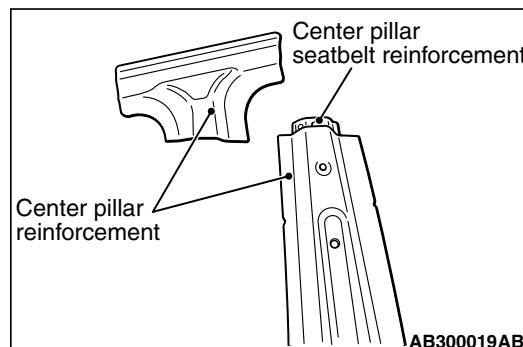
INSTALLATION



1. Remove the side outer panel and side sill outer reinforcement center from the new parts.

2. To reinforce the strength of the center pillar upper area that was cut, cut the side outer panel 30 mm above the cut area of the center pillar top part.

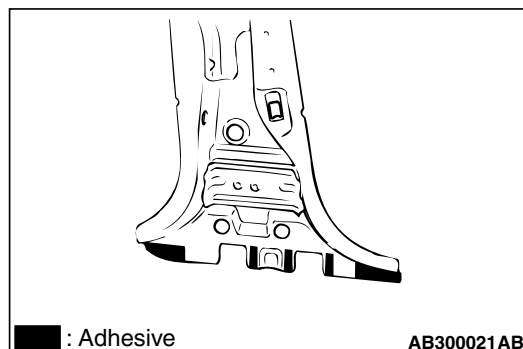
Cut the new part in the same area.



3. Cut only the center pillar reinforcement, aligned with the body-side, of the new center pillar reinforcement parts so the center pillar seatbelt reinforcement is not damaged.

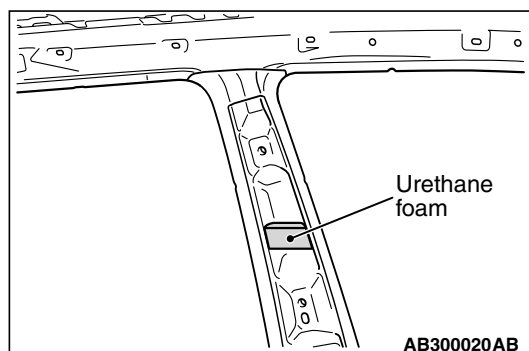
CAUTION

Weld and repair if the center pillar seatbelt reinforcement is damaged.



4. When assembling the center pillar reinforcement, apply adhesives in the areas shown in the figure of the instructions.

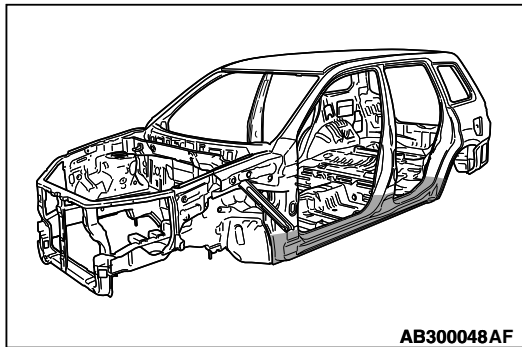
Adhesive	Type	Brand
	Epoxyayresin adhesive	3M™ Part No.8115 or equivalent



5. When assembling the center pillar inner, fill the center pillar with urethane foam since it is no longer possible to fill the areas shown in the figure of the instructions with foam materials.

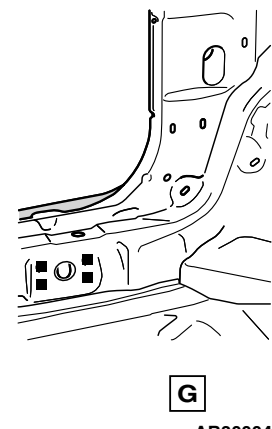
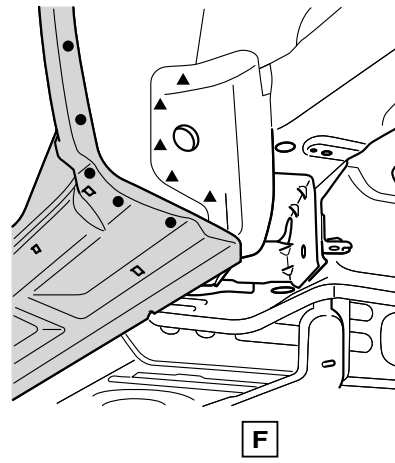
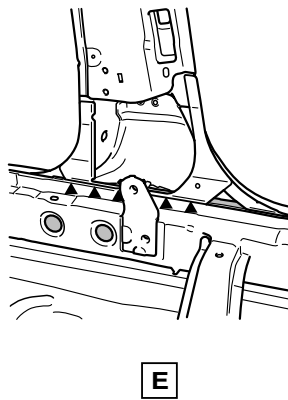
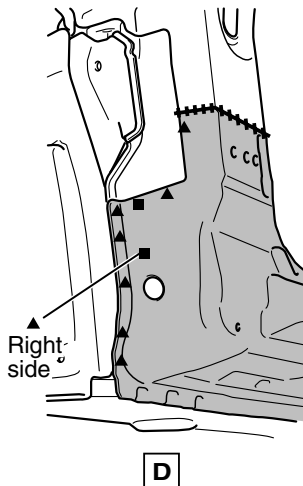
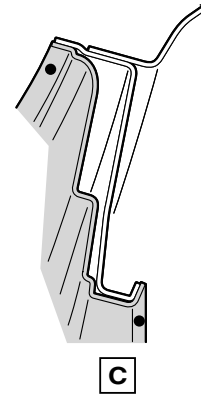
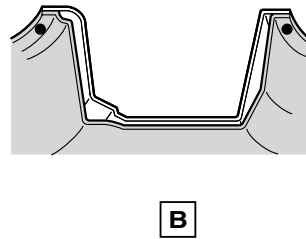
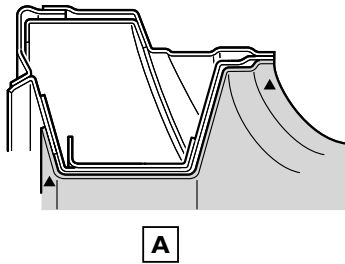
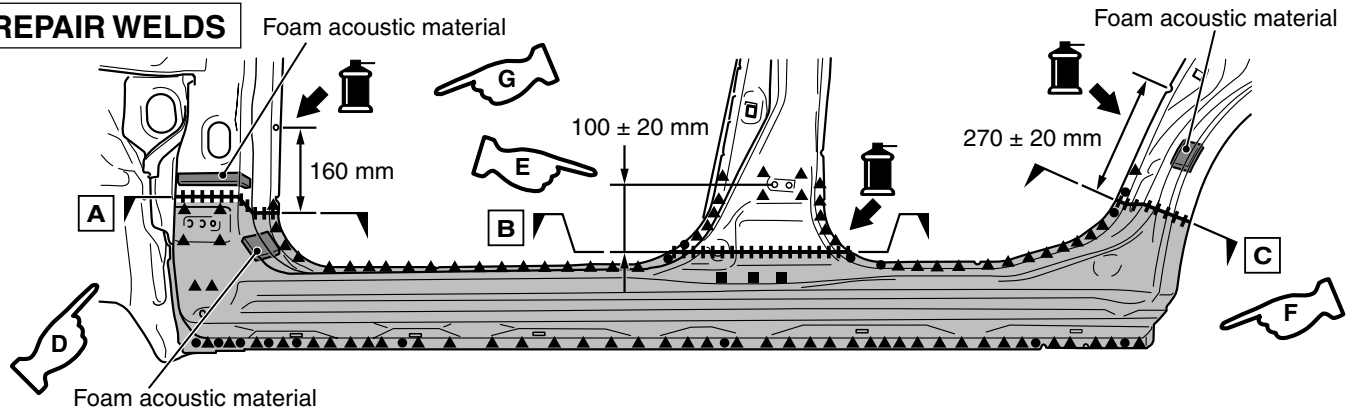
SIDE SILL

M4030007000157



Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding (■: indicates two panels to be welded ▲: indicates three panels to be welded)
++++	MIG spot welding
	MIG arc welding (continuous)
ooooo	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

REPAIR WELDS



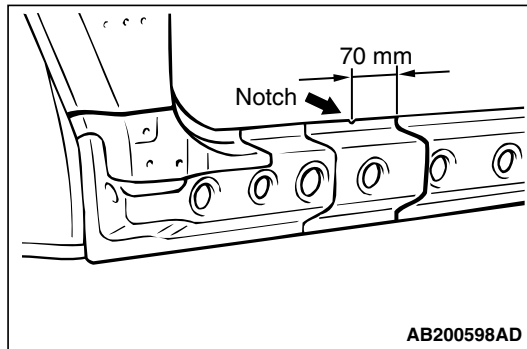
AB300040AB

⚠ CAUTION

When repairing the area using foam materials do not use firing tools since the foaming materials may burn.

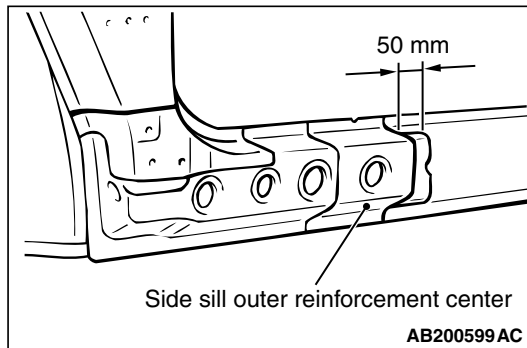
NOTE ON REPAIR WORK

REMOVAL

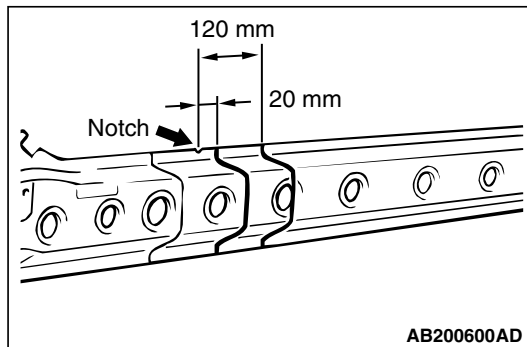


To remove the side sill outer reinforcement, cut it 70 mm behind the notch.

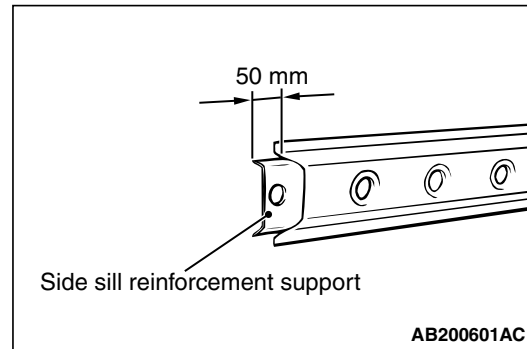
INSTALLATION



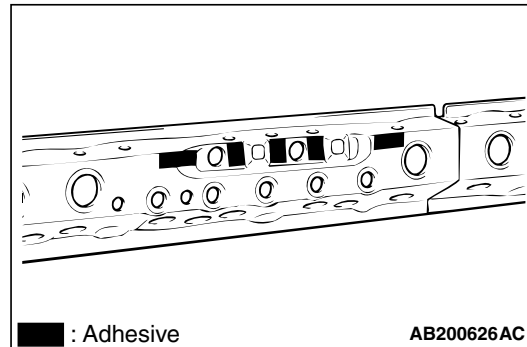
1. Cut only the side sill outer reinforcement center on the body-side, 50 mm forward of the cut area and then remove.



2. Cut only the side sill outer reinforcement center of the new side sill outer reinforcement parts from 120 mm behind the notch, then cut from another 20 mm behind the notch and remove. Re-use the parts removed.

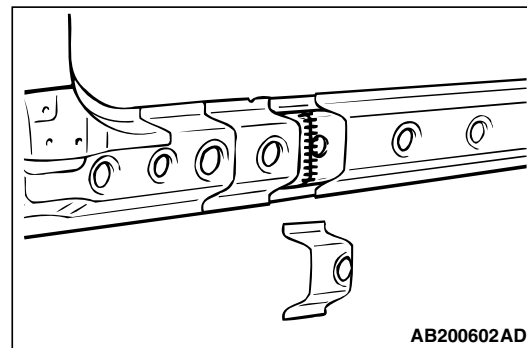


3. Cut the side sill reinforcement support 50 mm forward of the cut area of the side sill outer reinforcement center.

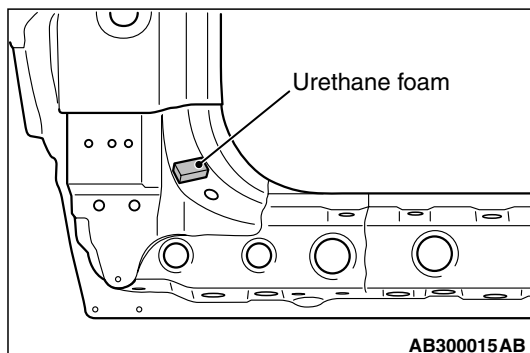


4. Adhere in advance adhesives in the areas shown in the figure of the instructions when assembling the side sill outer reinforcement.

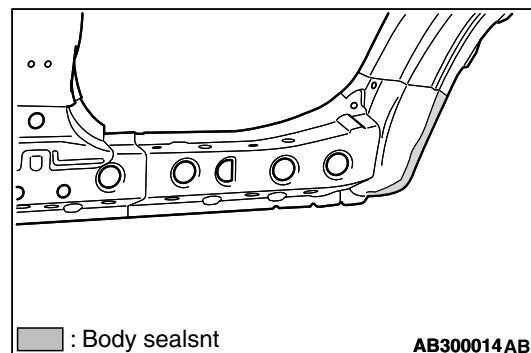
Adhesive	Type	Brand
	Epoxyayresin adhesive	3M™ Part No.8115 or equivalent



5. After assembling the new parts to the body, weld the side sill reinforcement support, then weld the part cut from the side sill outer reinforcement center.



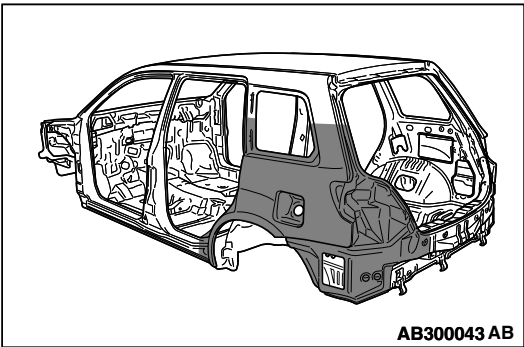
6. After assembling the side sill outer reinforcement, it is not possible to fill it with foaming materials in the areas shown in the figure of the instructions. Therefore, adhere urethane foam to bury the front pillar.



7. Apply in advance body sealant in the areas shown in the figure of the instructions when assembling the side outer panel.

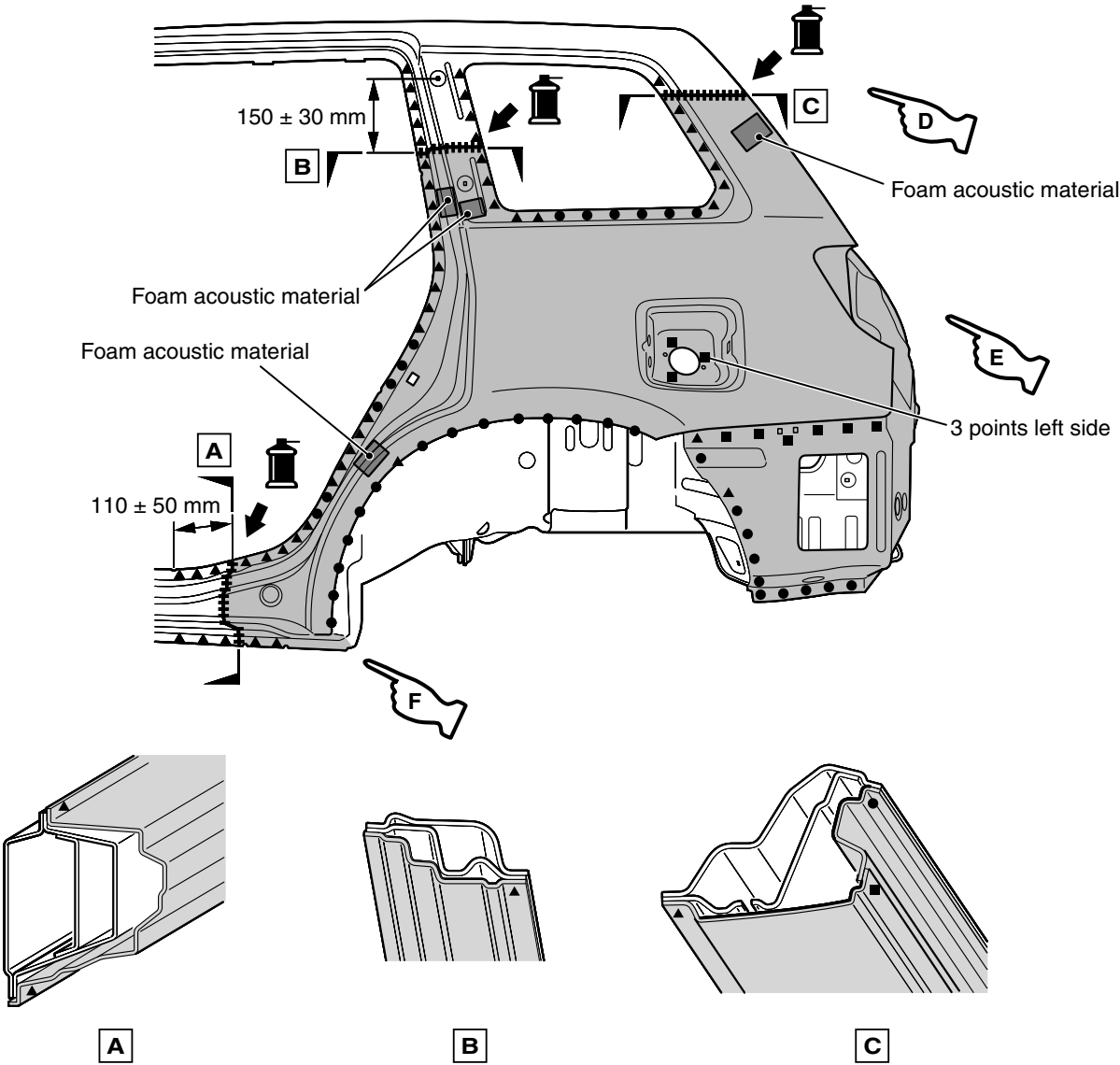
QUARTER, OUTER

M4030008000127



Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding (■: indicates two panels to be welded ▲: indicates three panels to be welded)
++++	MIG spot welding
	MIG arc welding (continuous)
oooooo	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

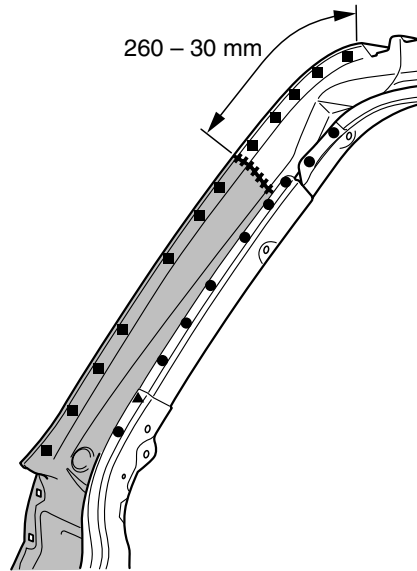
REPAIR WELDS



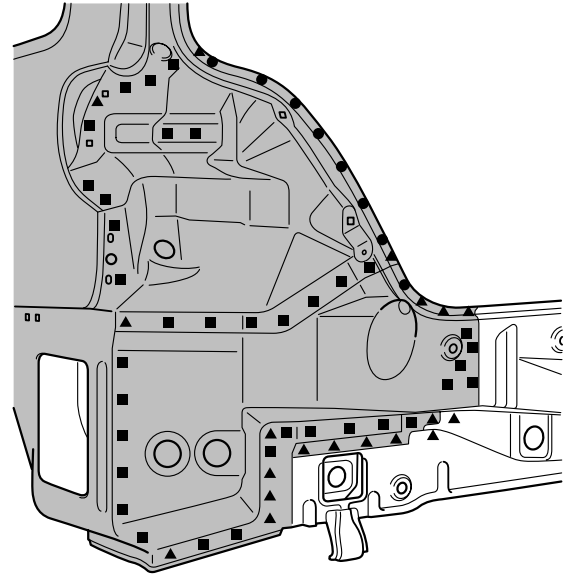
AB200608AC

CAUTION

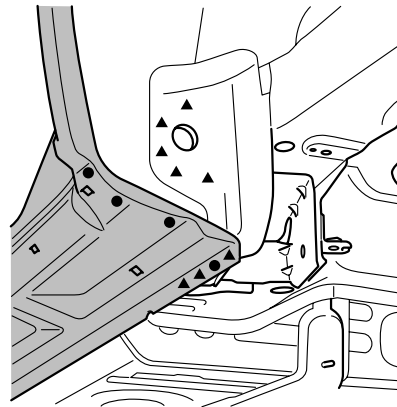
When repairing the area using foam materials do not use firing tools since the foaming materials may burn.



D



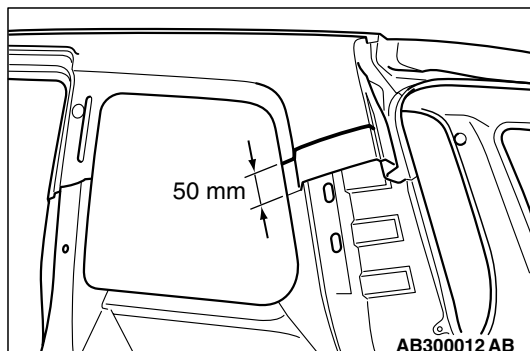
E



F

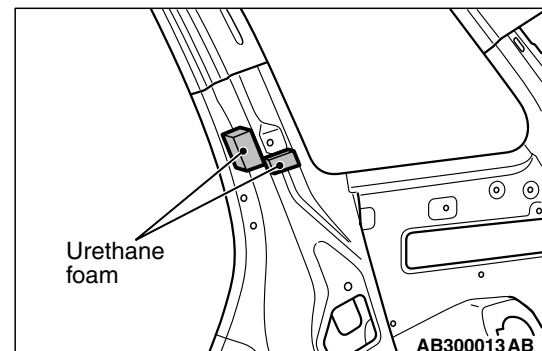
AB300009AB

NOTE ON REPAIR WORK INSTALLATION



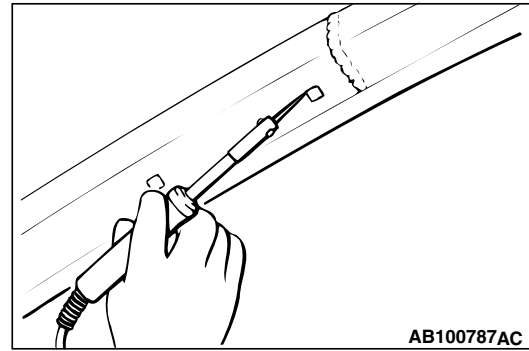
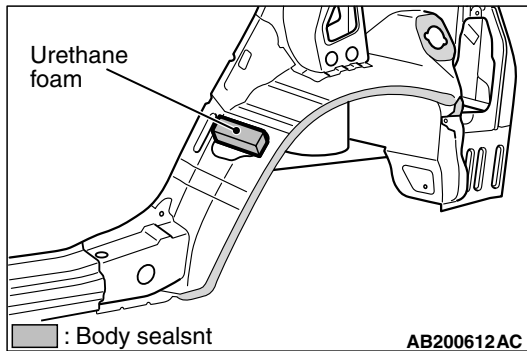
AB300012AB

1. Cut only the side outer panel from 50 mm above the cut area of the gate pillar.

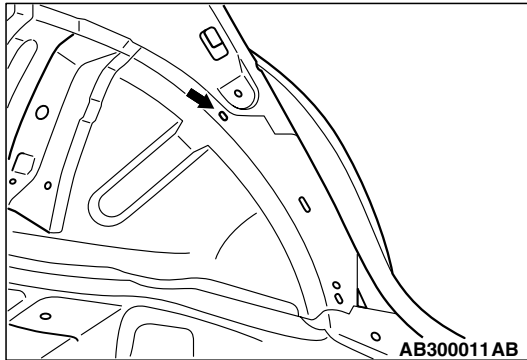


AB300013AB

2. Since it is not possible to fill the rear pillar with foam materials, apply urethane foam to bury the inside of the rear pillar.



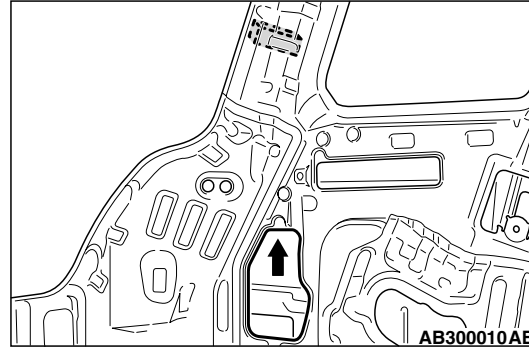
3. To prevent the foam materials from dripping, apply urethane foam to bury the inside of the wheel house arch.
4. When assembling the quarter outer panel, apply in advance body sealant to the areas shown in the figure of the instructions.



5. Assemble the quarter outer panel, bolt and tape the hole and flange with aluminum tape, then fill the hole with foam materials as shown in the figure of the instructions.

Foam: 3M™ ULTRAPRO Panel foam-Yellow

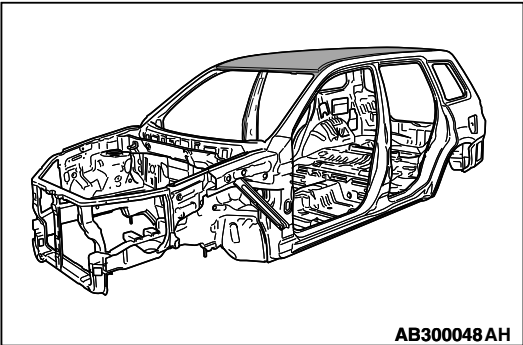
6. Wait 2 hours after filling the foam materials to remove the bolt and aluminium tape. Then melt the foam materials with a soldering gun so a clip, etc. can thoroughly be inserted in the hole that was clogged with foam materials, to bore open the hole.



7. After assembling the quarter outer panel it is not possible to fill the inside of the gate pillar with foam materials. Thus, push in urethane foam (L130 mm x W65 mm x H60 mm) from the hole up to the dotted line to bury the inside of the gate pillar, as shown in the figure of the instructions.

ROOF

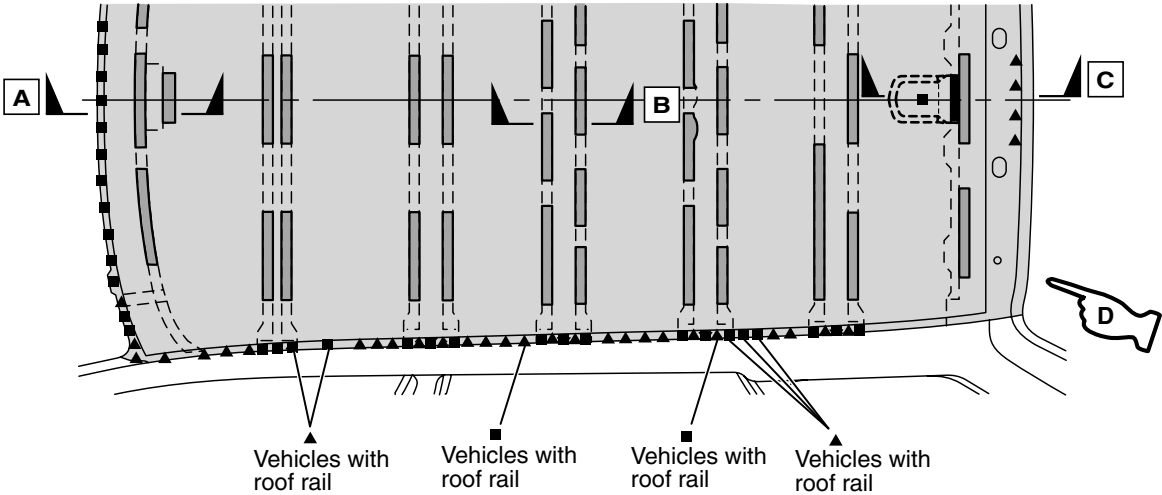
M4030011000127



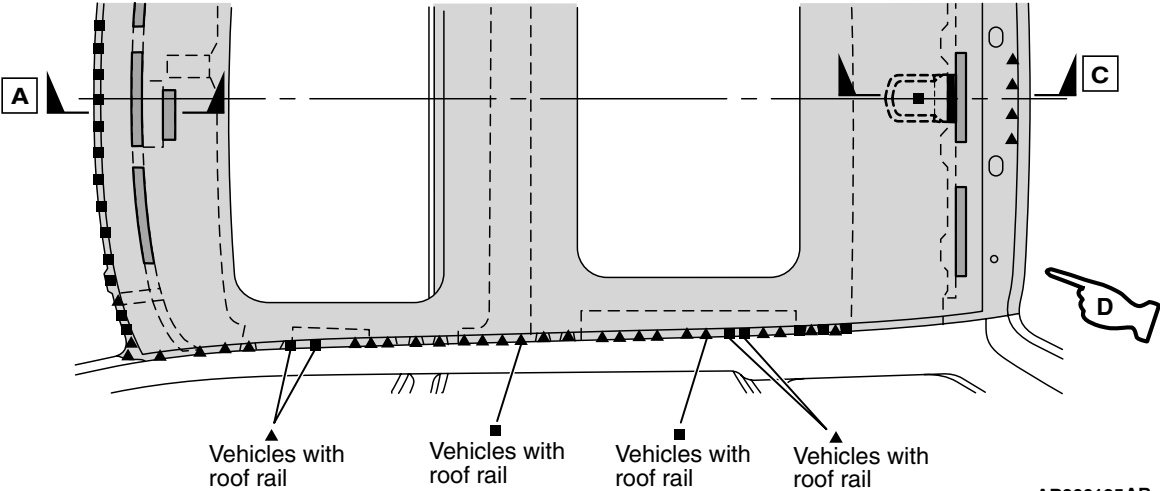
Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding (■ : indicates two panels to be welded ▲ : indicates three panels to be welded)
+ + + +	MIG spot welding
	MIG arc welding (continuous)
ooooo	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

Repair welds

Standard roof



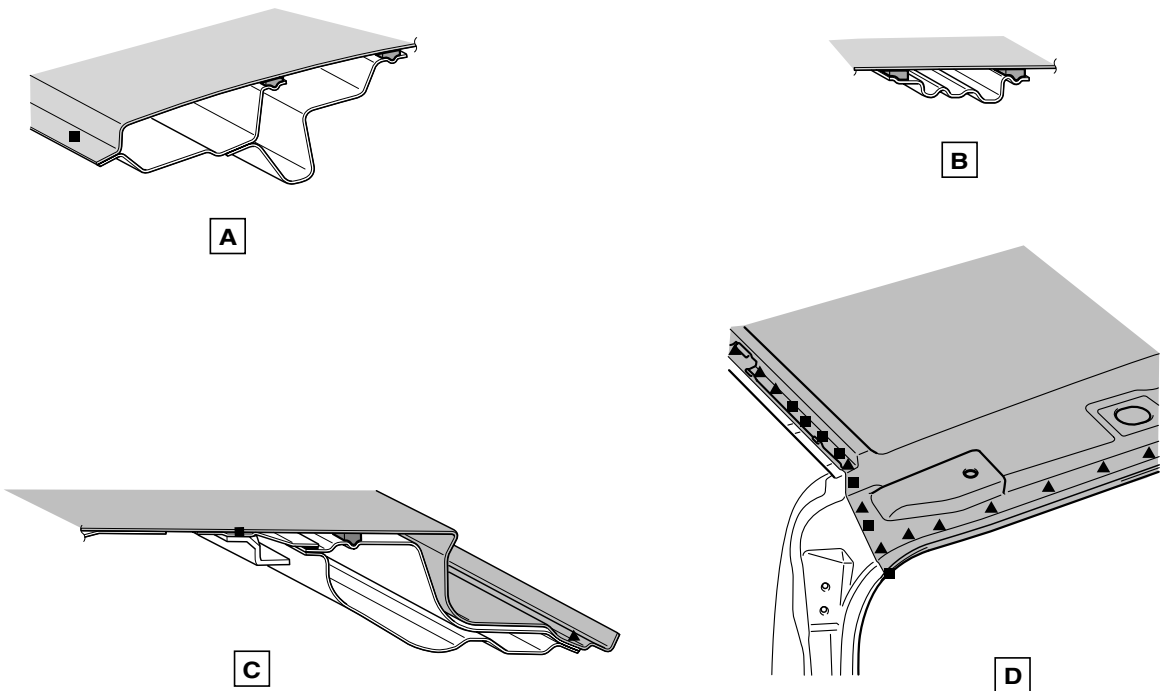
Sun roof
and roof window glass



■ : Adhesive 1
■ : Adhesive 2

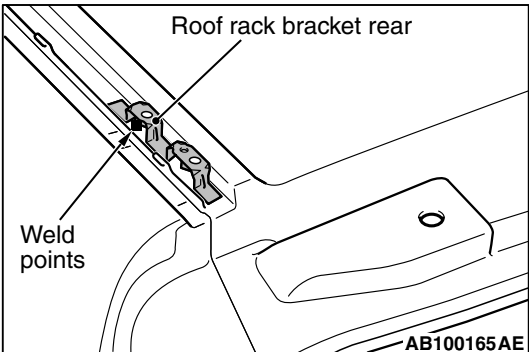
AB300125AB

Adhesive	Type	Brand
1	Urethane body sealer	3M™ Part No.8542 or equivalent
2	Epoxyayresin adhesive	3M™ Part No.8115 or equivalent



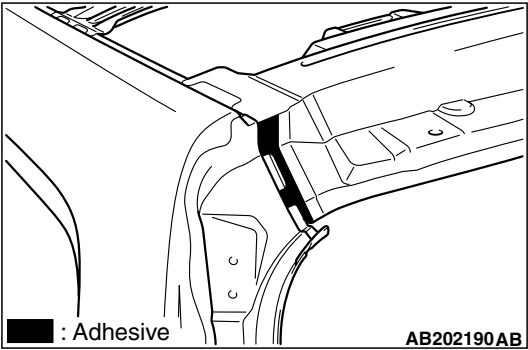
AB300182AB

NOTE ON REPAIR WORK
REMOVAL



The welding point is at the bottom of the roof rack bracket rear. Thus, remove the roof rack bracket rear and detach the welding point.

INSTALLATION



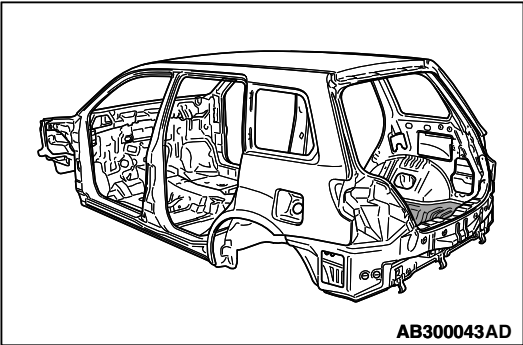
1. When assembling the roof panel, apply in advance adhesive to the areas shown in the figure of the instructions.

Adhesive	Type	Brand
	Epoxyayresin adhesive	3M™ Part No.8115 or equivalent

2. Remove the roof rack bracket rear from the new parts. Weld the roof panel. Then assemble the roof rack bracket rear.

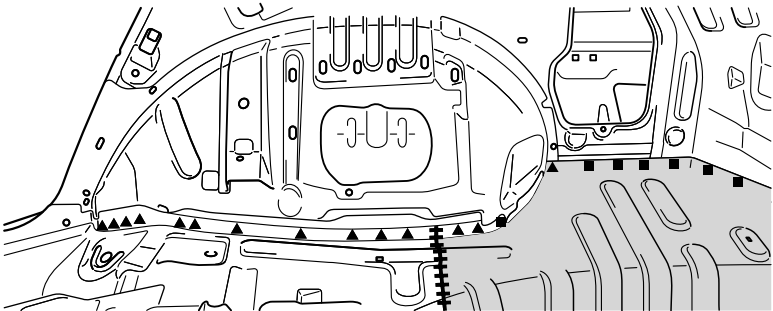
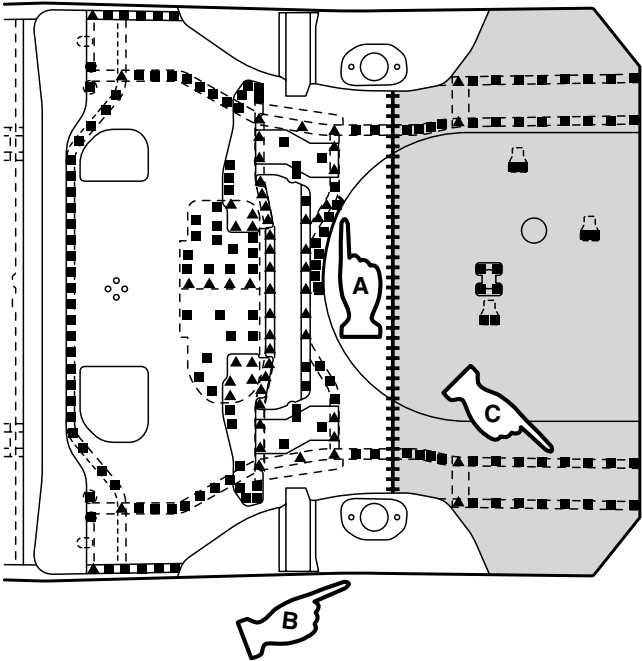
REAR FLOOR

M4030010000124



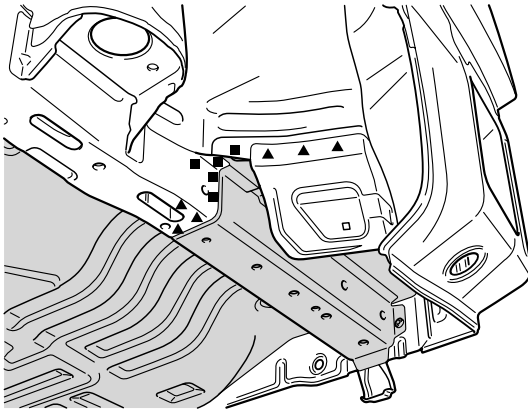
Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding (■ : indicates two panels to be welded ▲ : indicates three panels to be welded)
+ + + +	MIG spot welding
	MIG arc welding (continuous)
○ ○ ○ ○ ○ ○	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

REPAIR WELDS

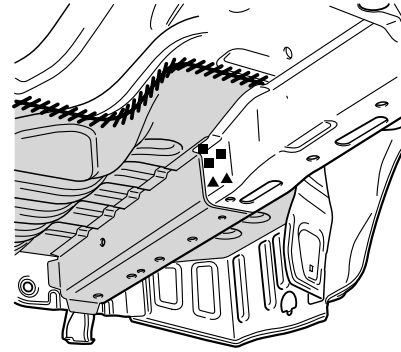


AB300126AB

NOTE: Refer to the Rear End Crossmember Section on [P.3-28](#) for the welding points with the rear end crossmember.



B

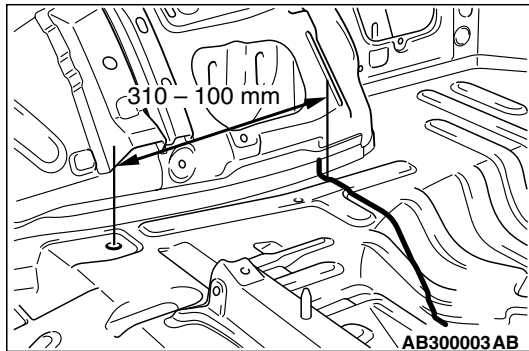


C

AB300127 AB

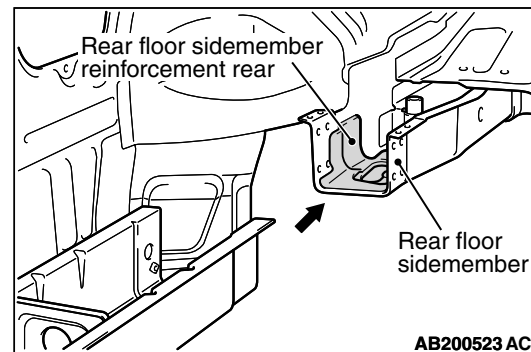
NOTE ON REPAIR WORK

REMOVAL



When cutting the rear floor pan, cut it from 310 ± 100 mm behind the back seat back assembling hole.

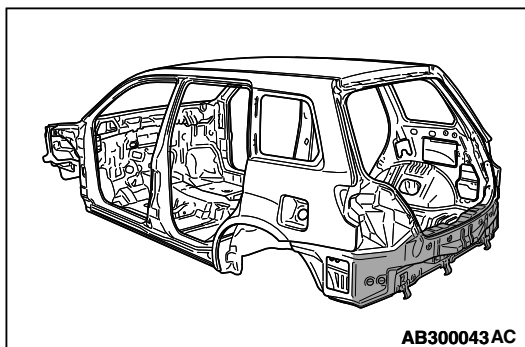
INSTALLATION



When assembling the rear floor sidemember extension (Left side), insert it between the rear floor sidemember and rear floor sidemember reinforcement rear.

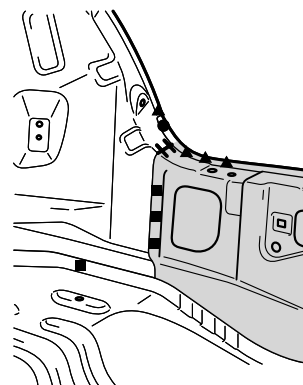
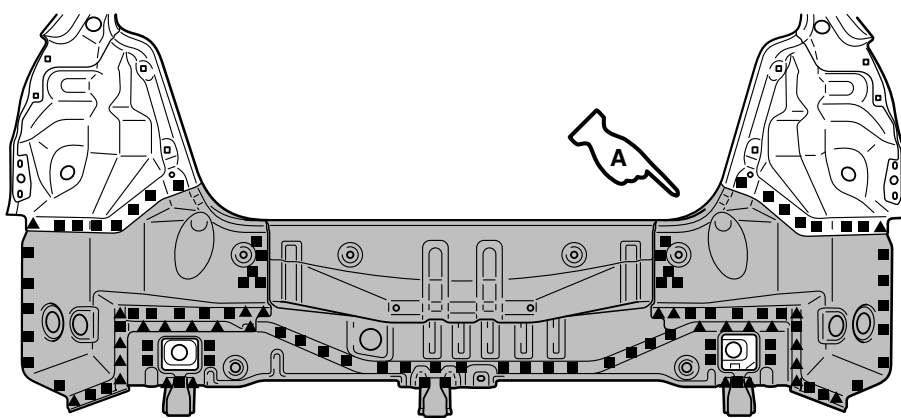
REAR END CROSSMEMBER

M4030015000107



Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding (■: indicates two panels to be welded ▲: indicates three panels to be welded)
++++	MIG spot welding
	MIG arc welding (continuous)
ooooo	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

REPAIR WELDS

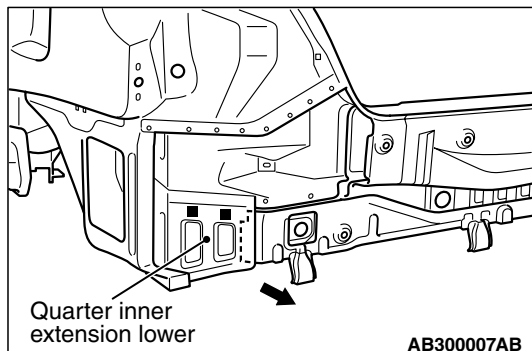


A

AB300006AB

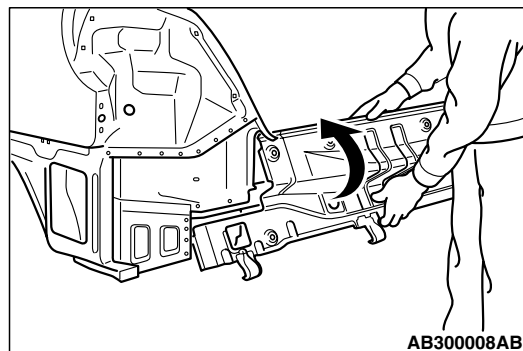
NOTE ON REPAIR WORK

REMOVAL



Quarter inner
extension lower

AB300007AB



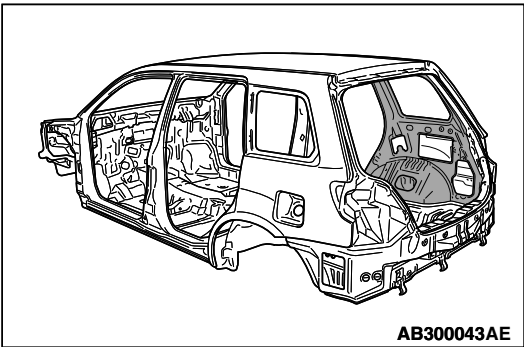
AB300008AB

1. If the rear end crossmember outer comes in contact with the quarter inner extension lower, distance the welding points from the specifications of the figure (instructions) and leave a slight clearance, then pull forward the dotted line of the rear end crossmember outer.

2. Turn the bottom portion of the rear end crossmember upward and remove, as shown in the figure of the instructions.

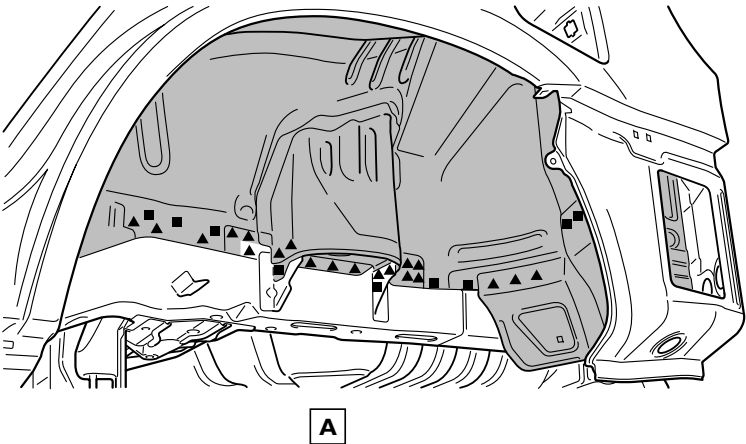
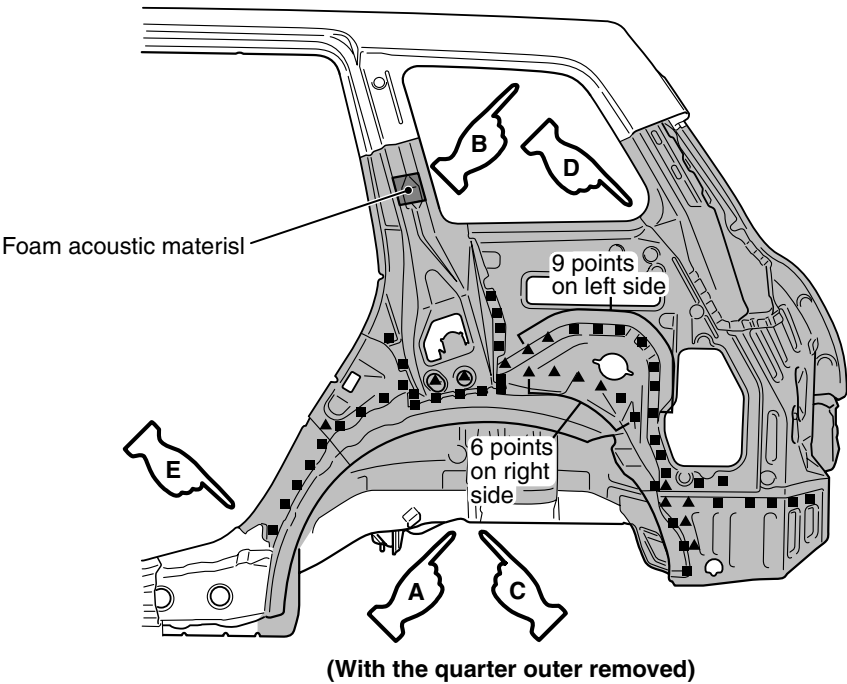
QUARTER, INNER

M4030012000120



Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding (■ : indicates two panels to be welded ▲ : indicates three panels to be welded)
++++	MIG spot welding
	MIG arc welding (continuous)
oooooo	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

REPAIR WELDS

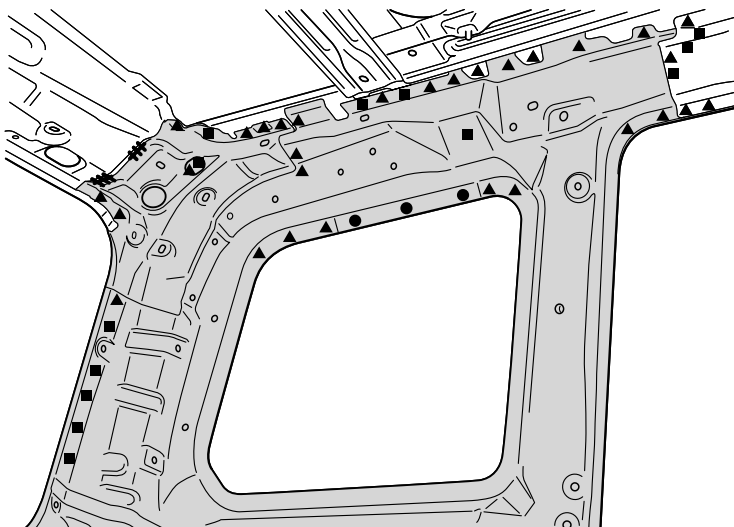
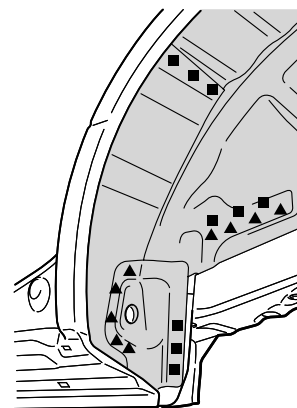
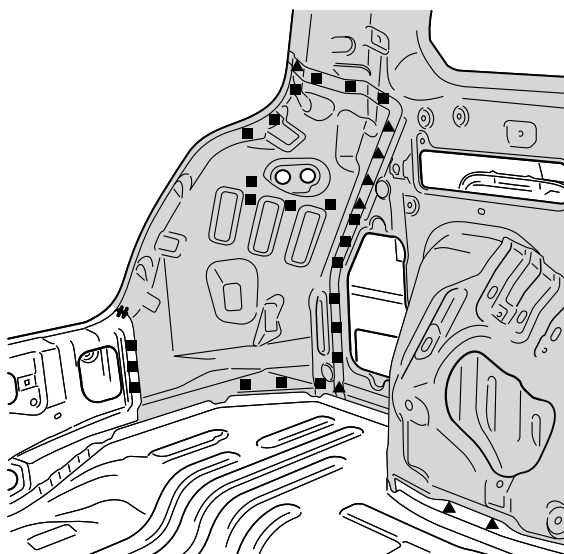
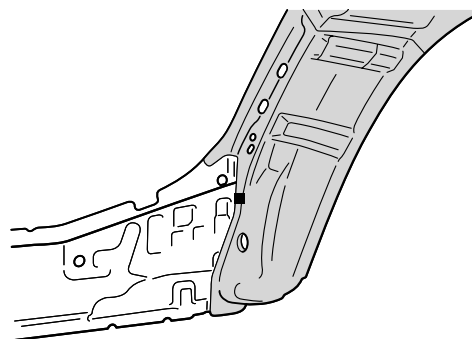


AB300141AB

CAUTION

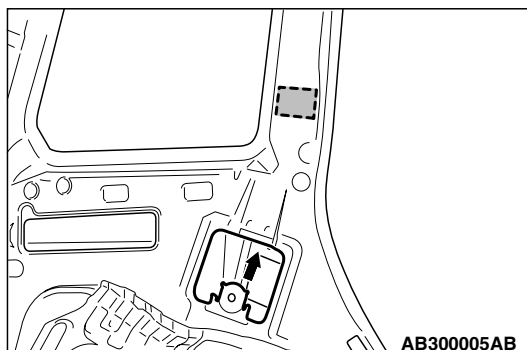
When repairing the area using foam materials do not use firing tools since the foaming materials may burn.

NOTE: Refer to the Quarter Outer Section on [P.3-21](#) for the welding points with the quarter outer.

**B****C****D****E**

(With the sill outer reinforcement rear removed)

AB200593AC

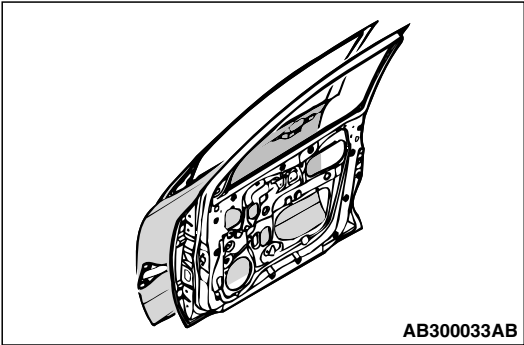
**NOTE ON REPAIR WORK
REMOVAL**

AB300005AB

After assembling the quarter inner panel it is not possible to fill the inside of the rear pillar with foam materials. Thus, push in urethane foam (L45 mm x W60 mm x H60 mm) from the hole up to the dotted line to bury the inside of the rear pillar, as shown in the figure of the instructions.

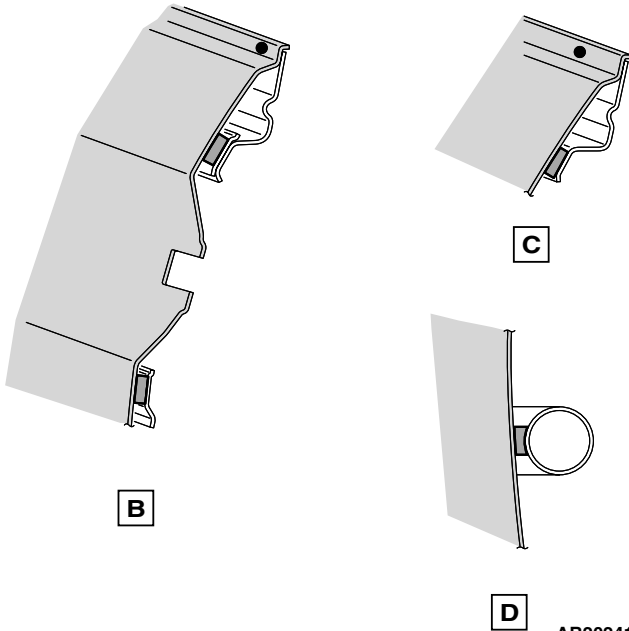
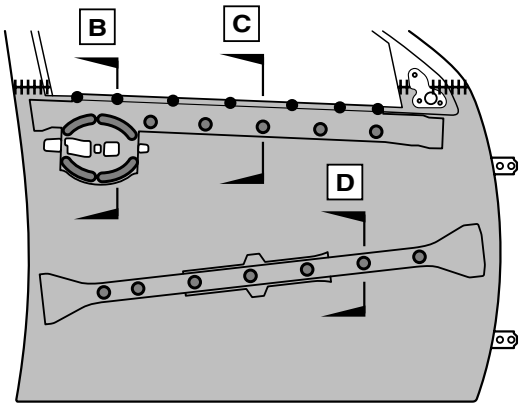
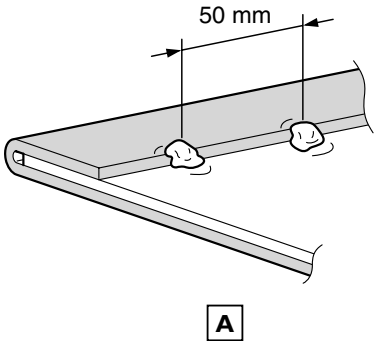
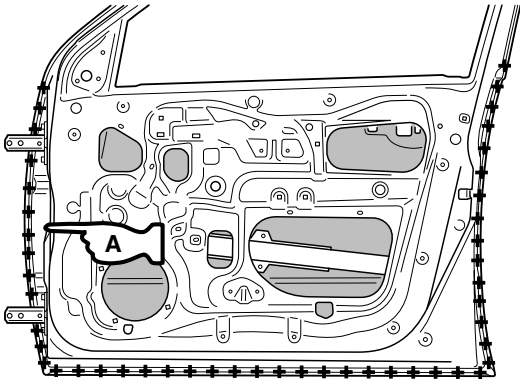
FRONT DOOR OUTER PANEL

M4030013000134



Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding (■ : indicates two panels to be welded ▲ : indicates three panels to be welded)
+ + + +	MIG spot welding
#####	MIG arc welding (continuous)
oooooooo	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

REPAIR WELDS



■ : Adhesive

AB202413AB

Adhesive	Type	Brand
	Urethane body sealer	3M™ Part No. 8542 or equivalent

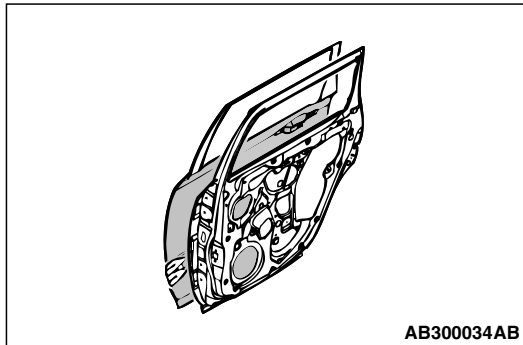
NOTE: After hemming the front door outer panel,
MIG spot weld the flange overlap section at a pitch of
50 mm.

NOTE ON REPAIR WORK
REMOVAL

Since it is difficult to replace the sash due to a
pressed door structure, cut the outer panel from the
bottom of the sash.

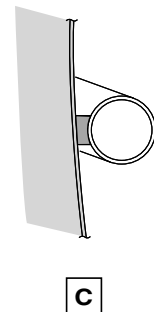
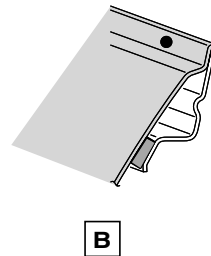
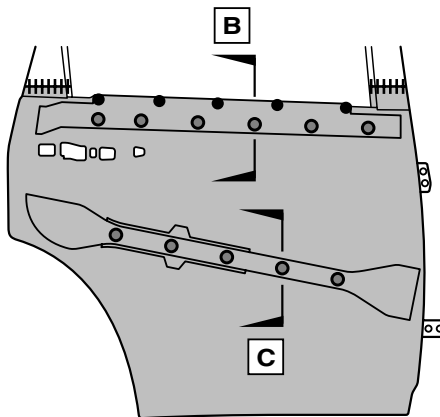
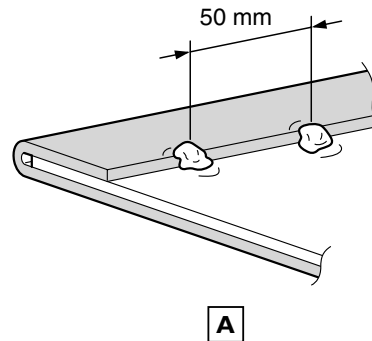
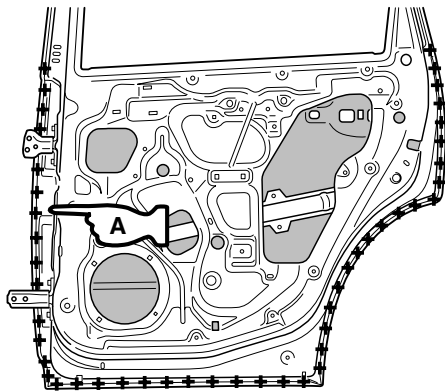
REAR DOOR OUTER PANEL

M4030014000126



Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding (■ : indicates two panels to be welded ▲ : indicates three panels to be welded)
++++	MIG spot welding
+++++	MIG arc welding (continuous)
oooooo	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

REPAIR WELDS



 : Adhesive

AB202414AB

Adhesive	Type	Brand
	Urethane body sealer	3M™ Part No. 8542 or equivalent

NOTE: After hemming the rear door outer panel, MIG spot weld the flange overlap section at a pitch of 50 mm.

NOTE ON REPAIR WORK

REMOVAL

Since it is difficult to replace the sash due to a pressed door structure, cut the outer panel from the bottom of the sash.