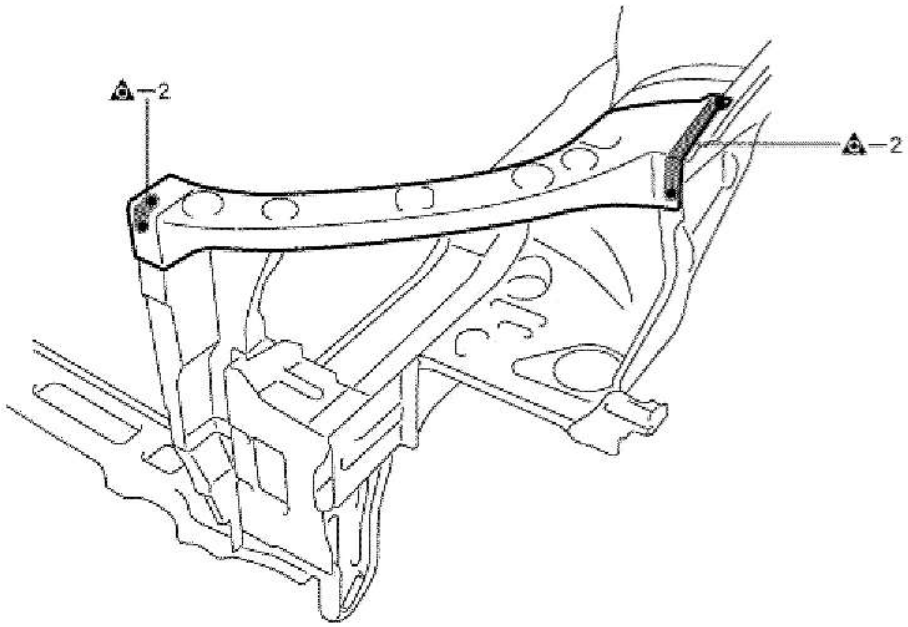
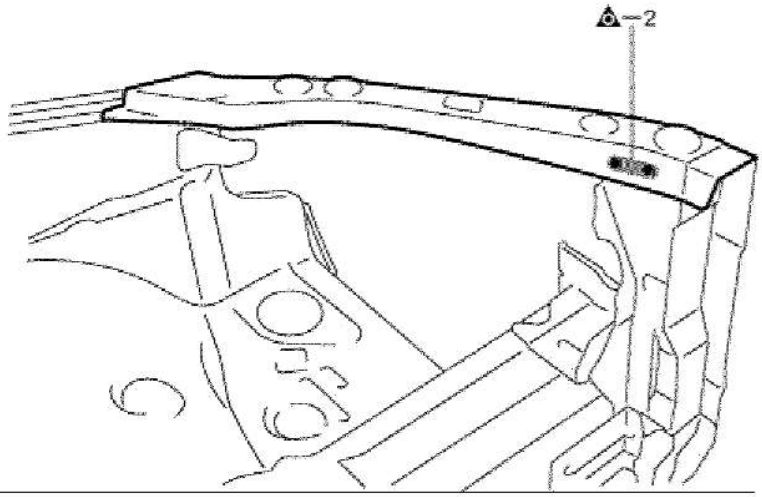
# RADIATOR UPPER SUPPORT (ASSY)



F14459-A

## REMOVAL



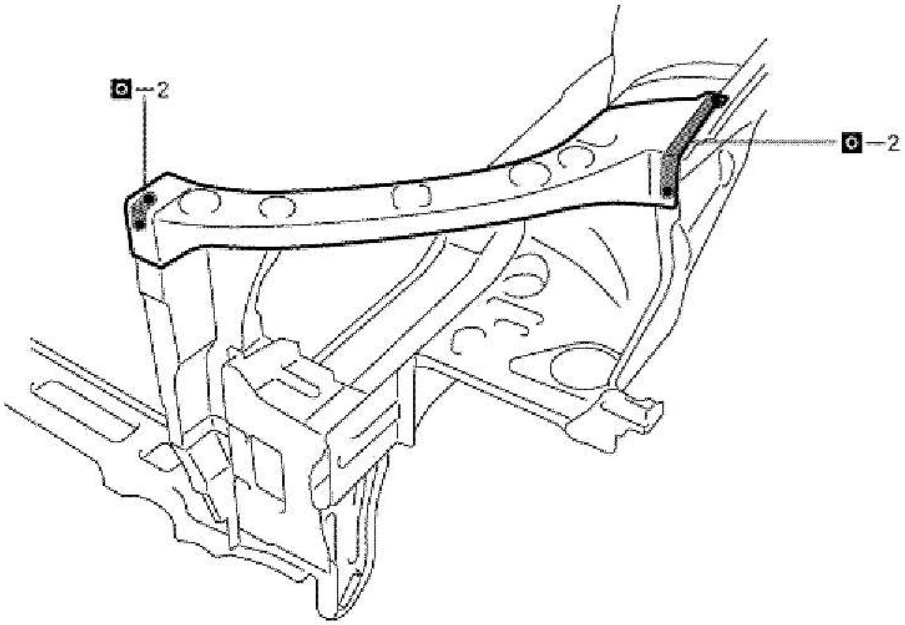



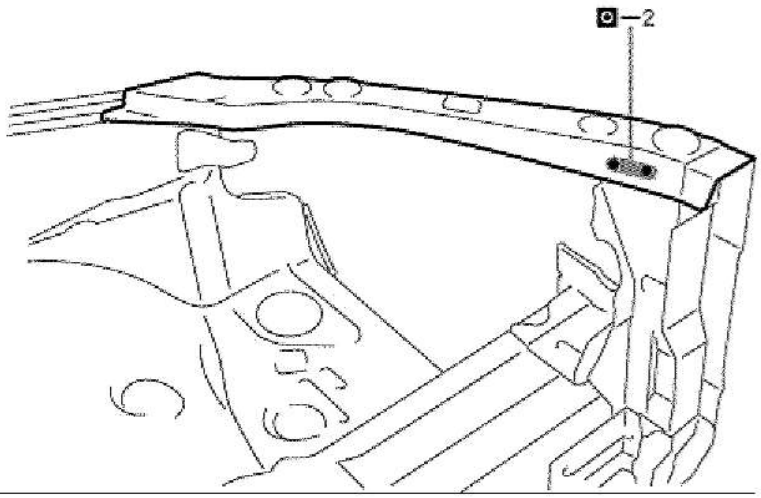

F14459

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14460

cardiagn.com

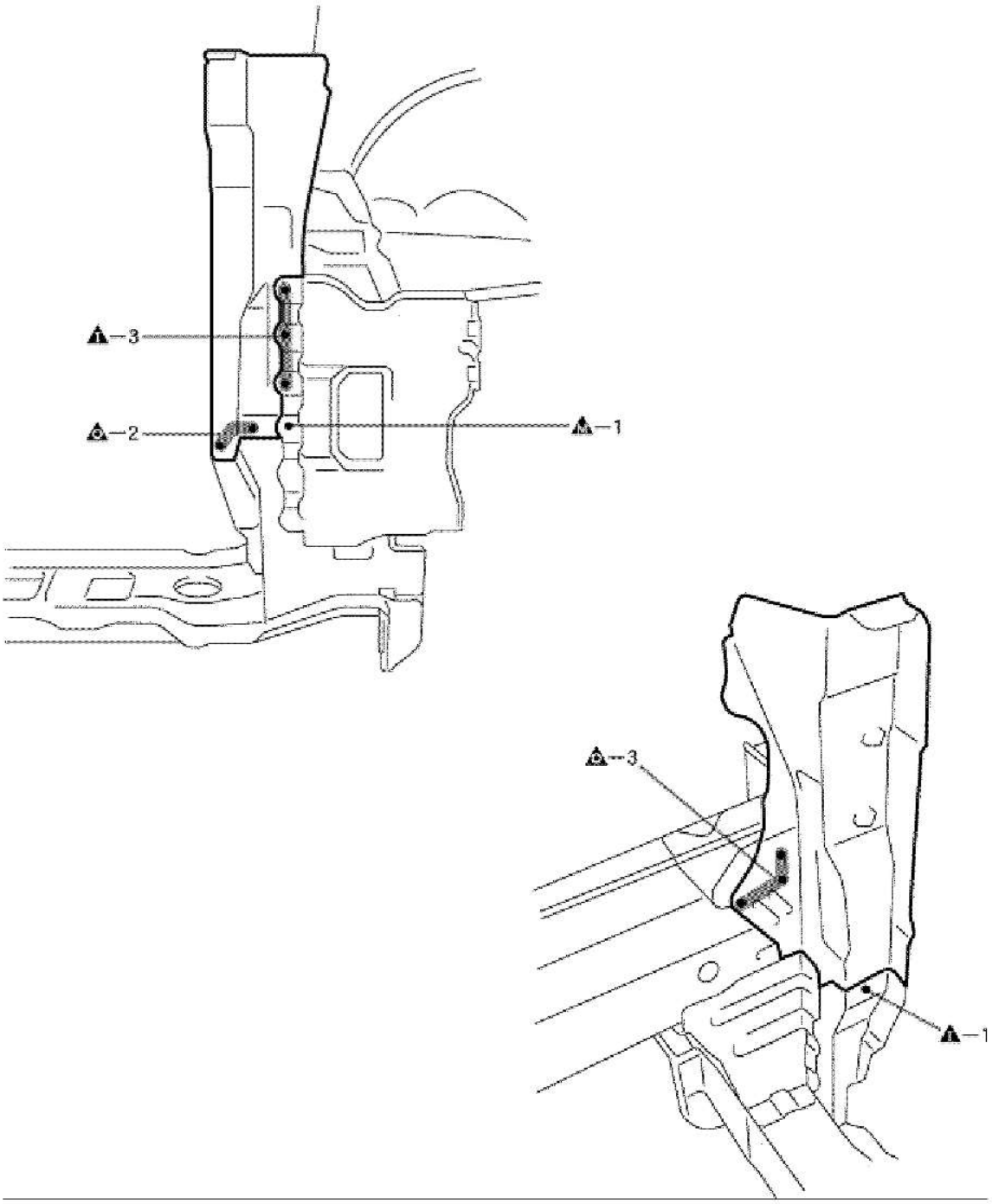
# RADIATOR SIDE SUPPORT (ASSY)



F14461-A

**REMOVAL**

With the radiator upper support removed.

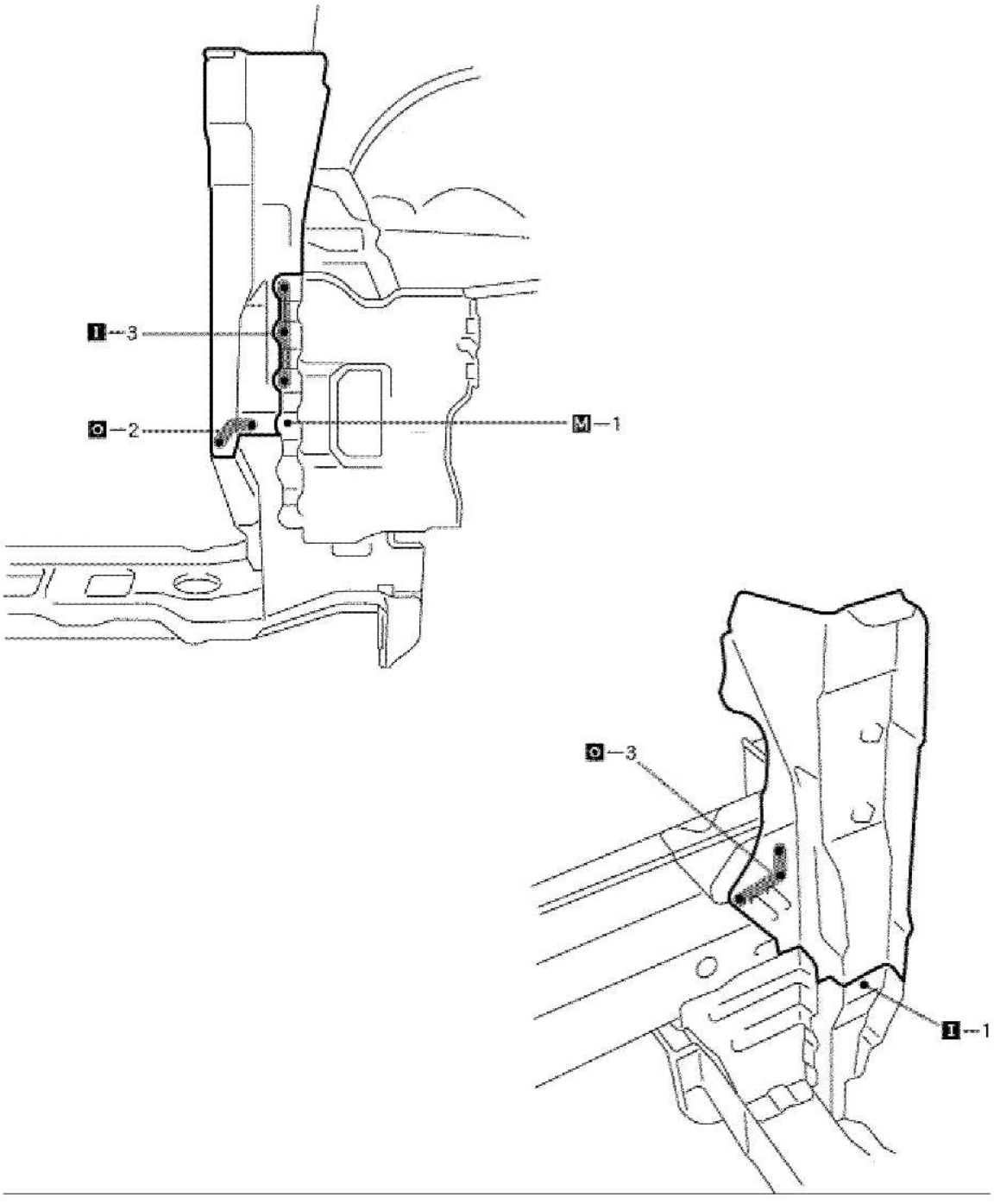



F14461

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14462

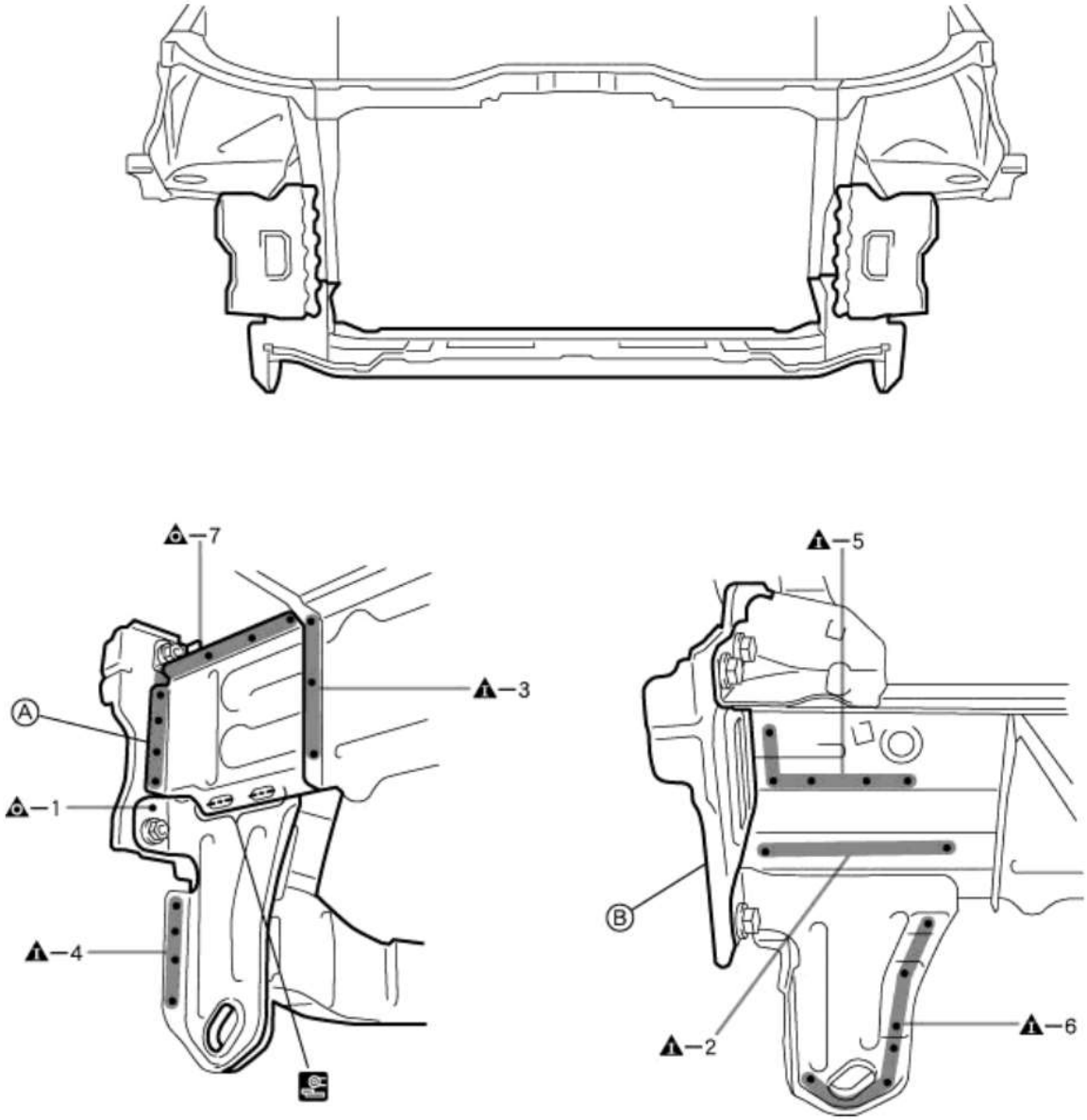
cardiagn.com

# FRONT CROSSMEMBER (ASSY)

## REMOVAL



F14463-A




F14463

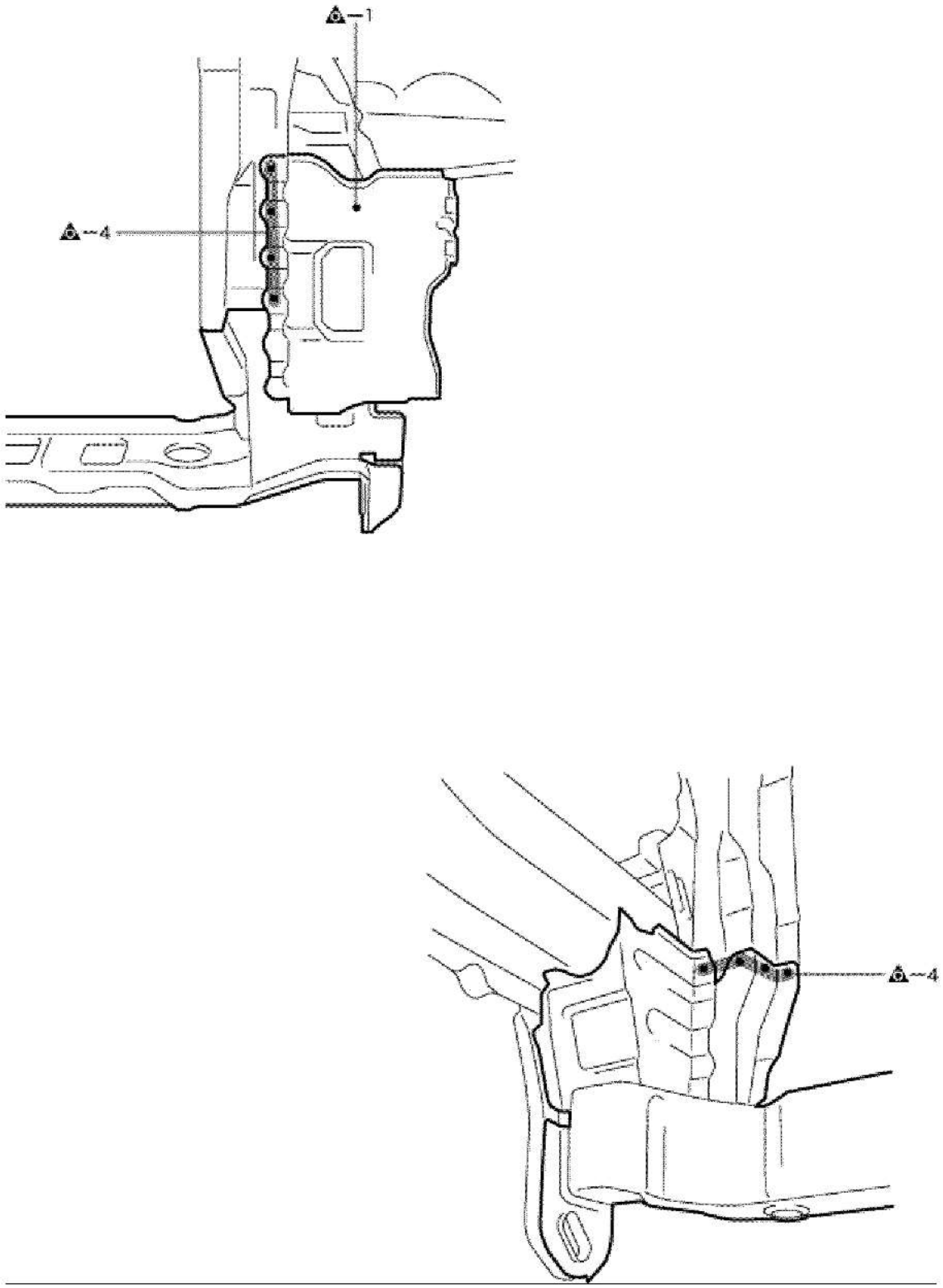
**POINT**

1 After removing the Ⓐ, remove the front crossmember.
2 Remove the Ⓑ at the same time.

**PART NAME**

Ⓐ Front Side Member Extension Ⓑ Front Side Member Rear Plate

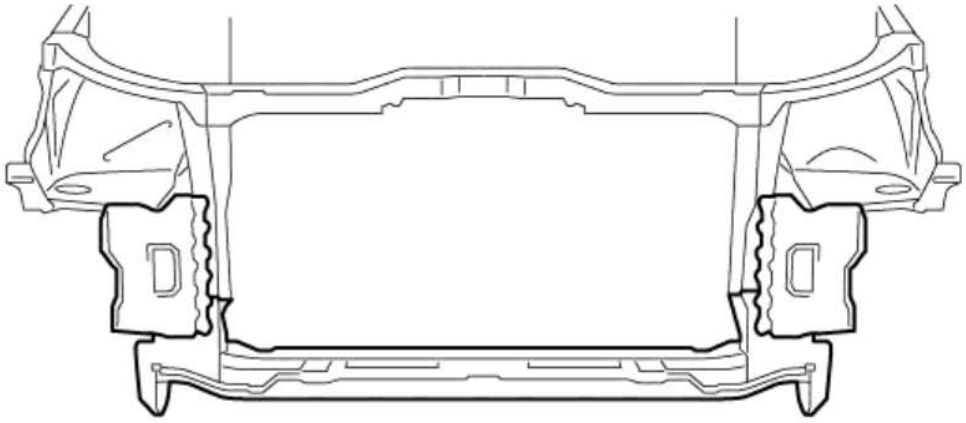
cardiagn.com

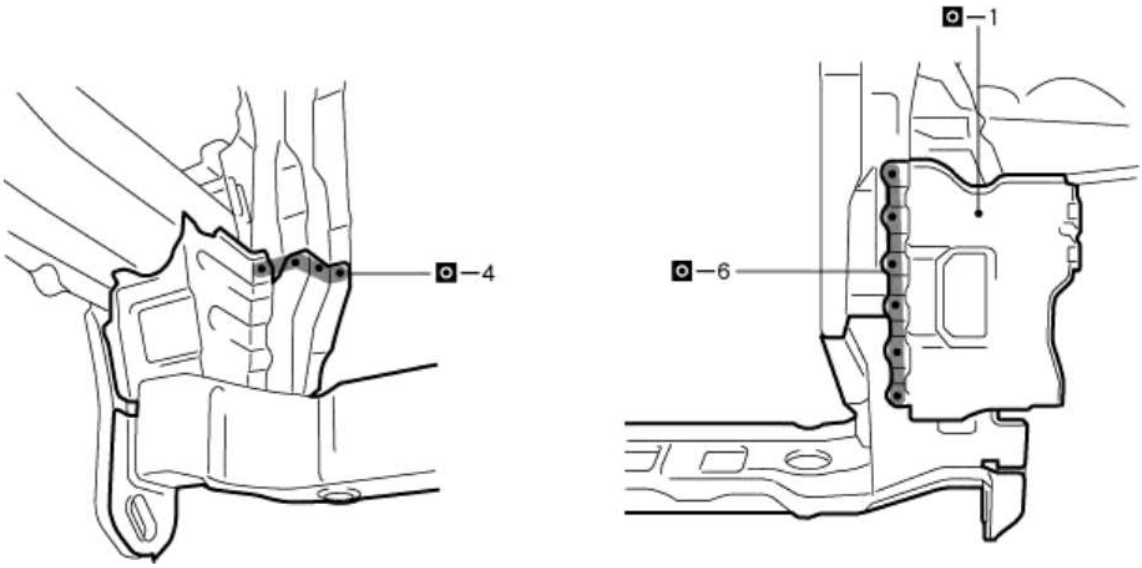



cardiagn.com

**INSTALLATION**

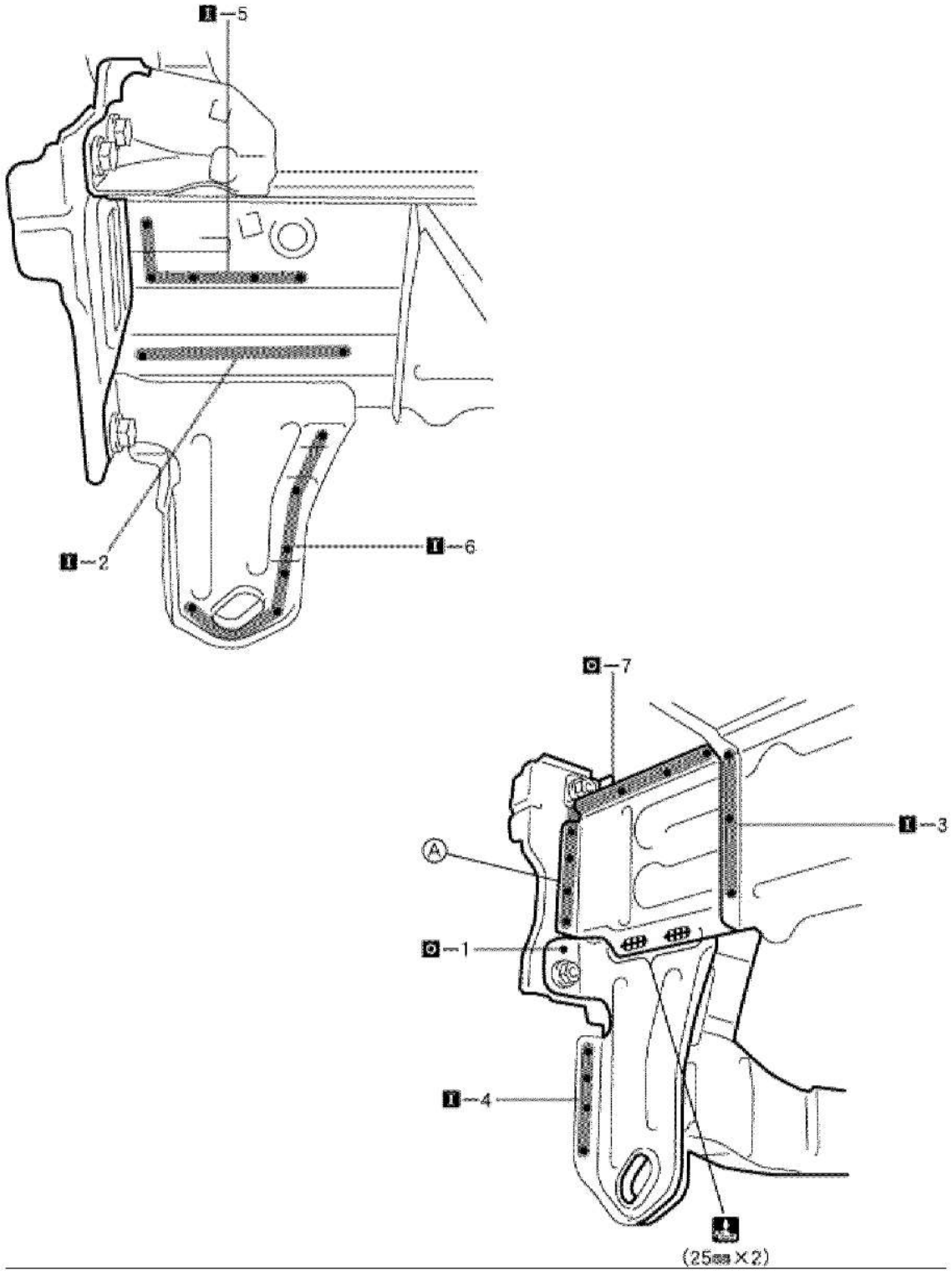
- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.






F14465

cardiagn.com




F14466

**POINT**

1 After installing the new parts, install the Ⓐ.

**PART NAME**

Ⓐ Front Side Member Extension
25mm (0.98in.)

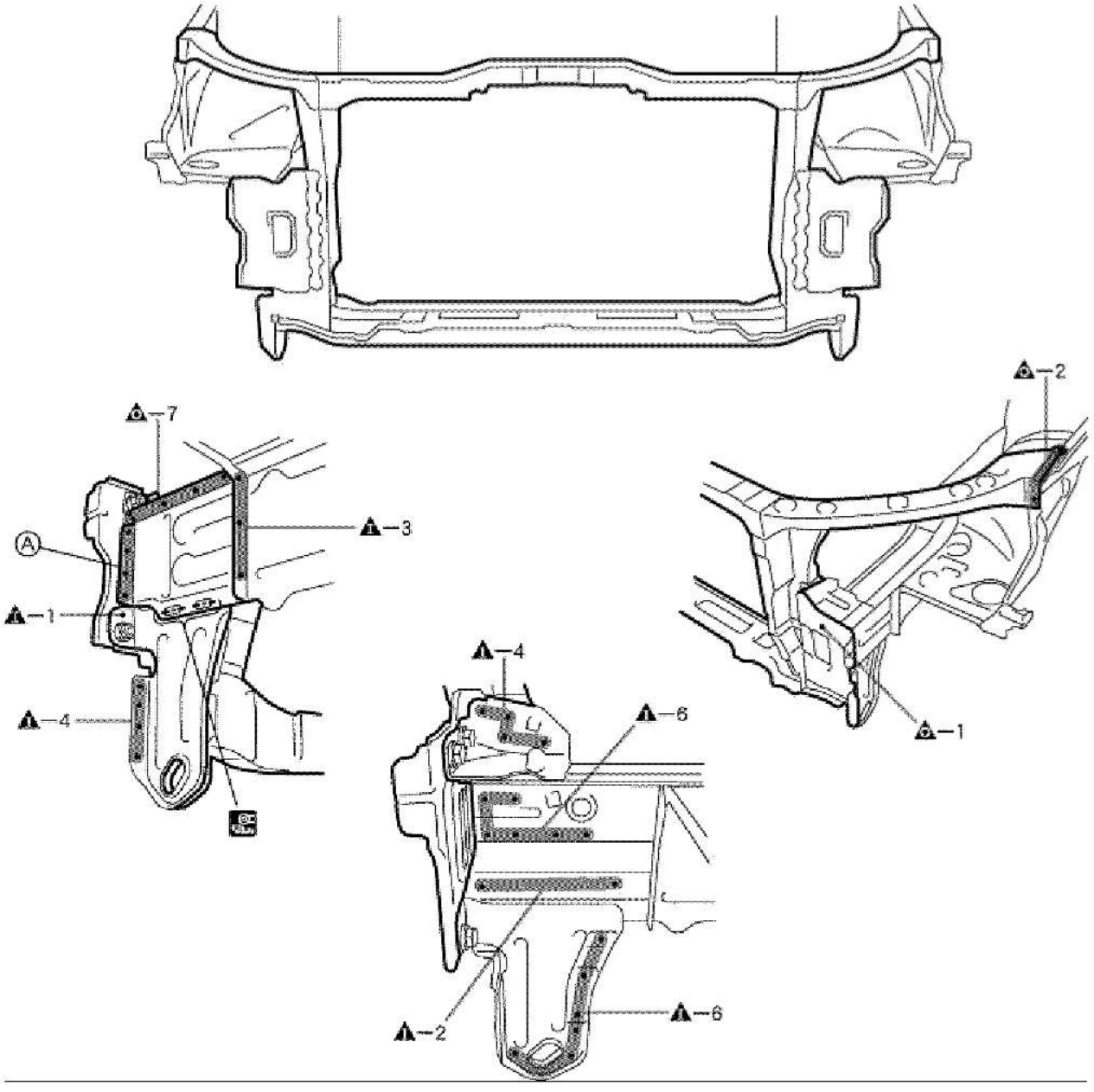
cardiagn.com

# RADIATOR SUPPORT (ASSY)



F14467-A

## REMOVAL




F14467

**POINT**

1 After removing the Ⓐ, remove the radiator support.

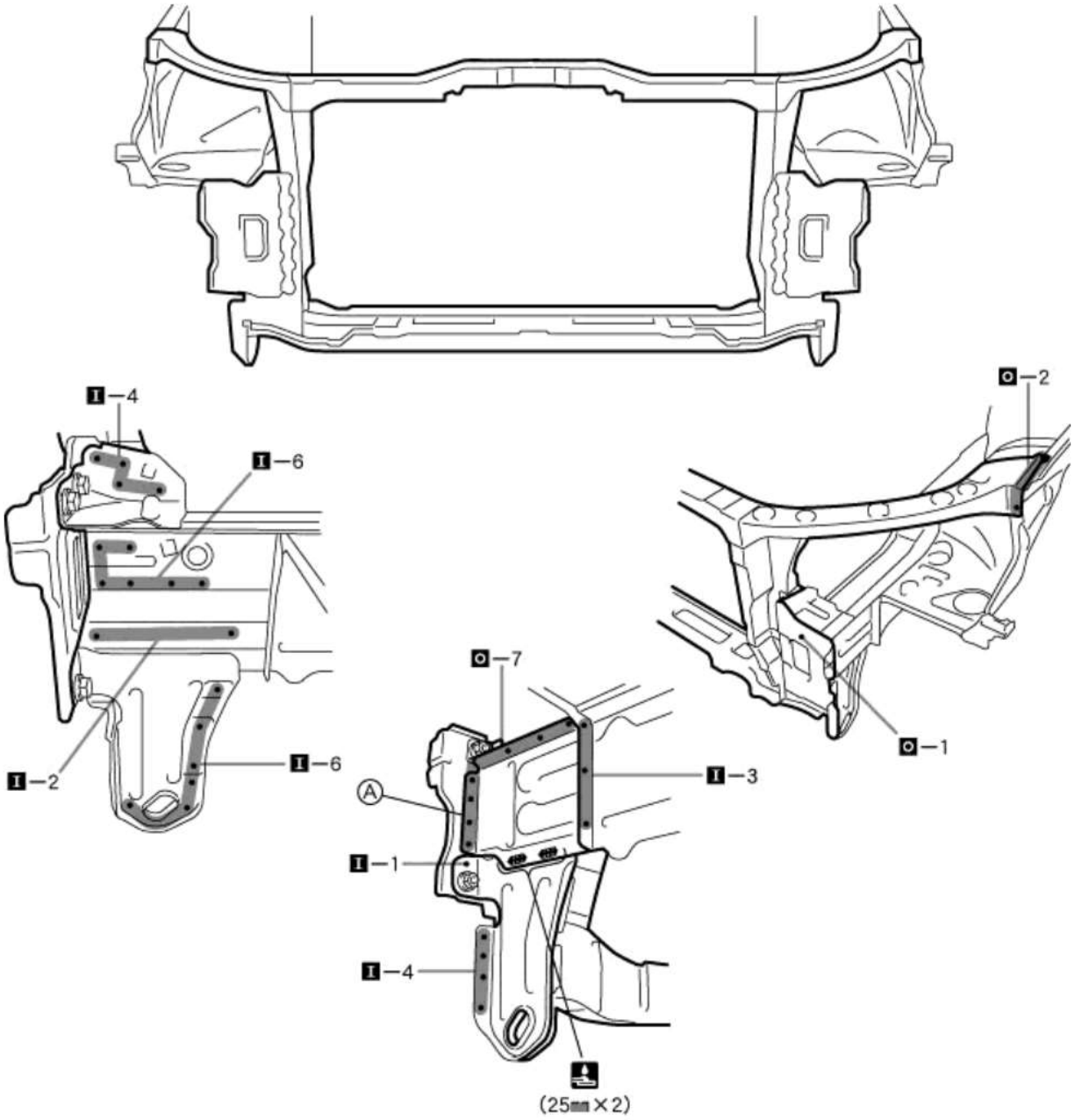
**PART NAME**

Ⓐ Front Side Member Extension

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14468

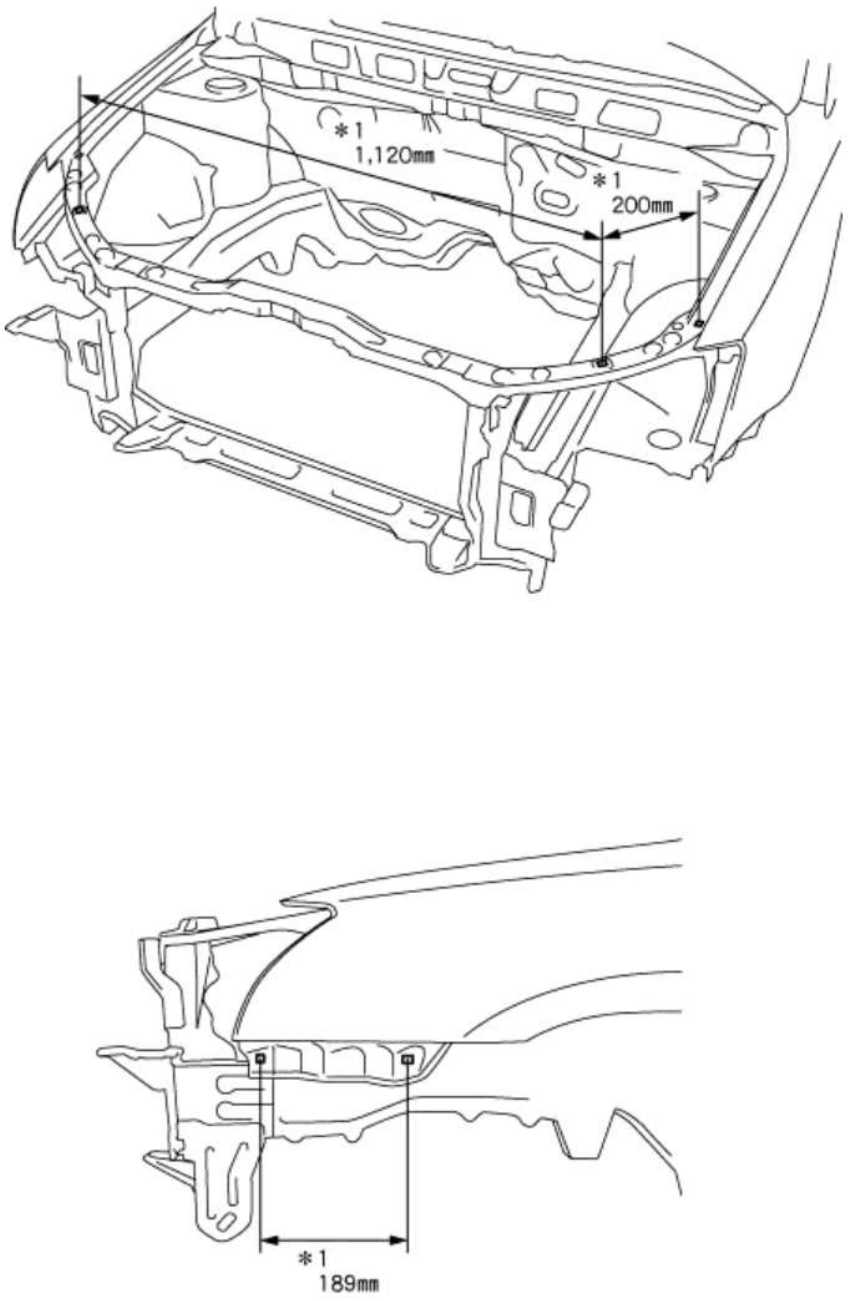
**POINT**

1 After installing the new parts, install the Ⓐ.

**PART NAME**

Ⓐ Front Side Member Extension
25mm (0.98in.)

cardiagn.com




F14469

**POINT**

1 *1: The value is reference value.

189mm (7.44in.) 200mm (7.87in.) 1,120mm (44.09in.)

cardiagn.com

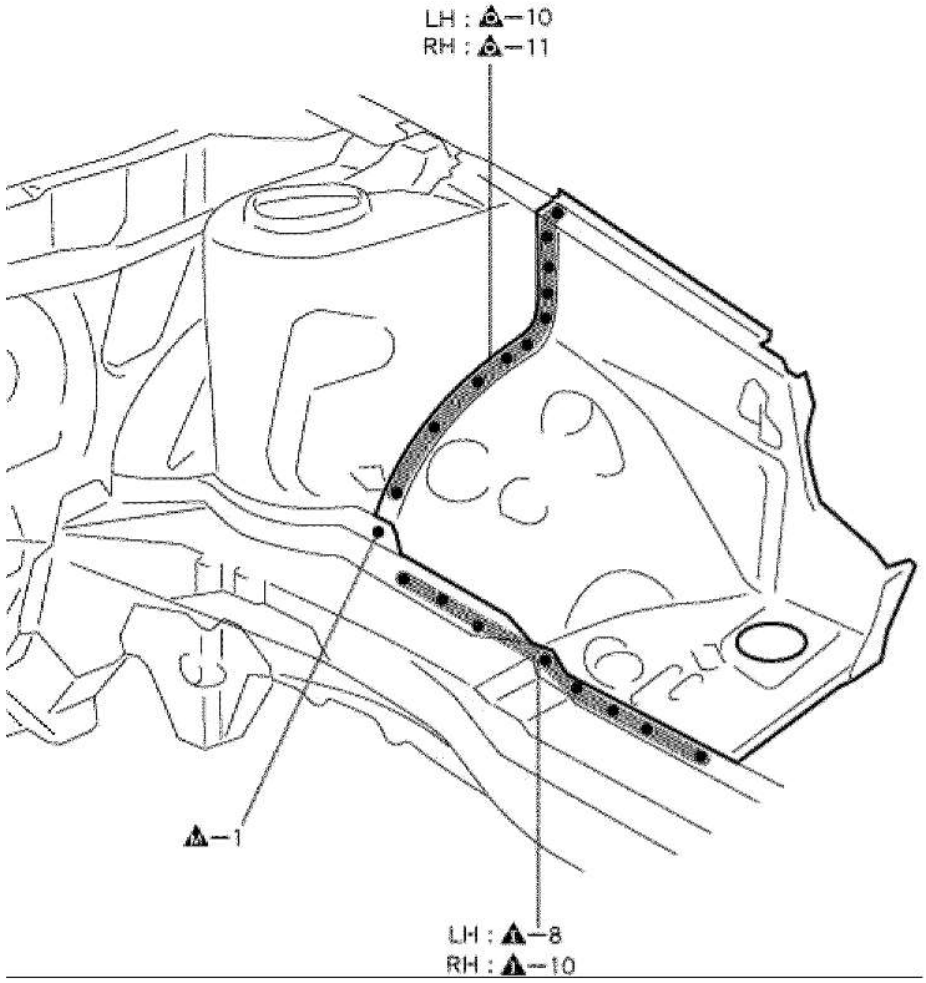
# FRONT FENDER FRONT APRON (ASSY)



F14470-A

**REMOVAL**

With the radiator upper support removed.

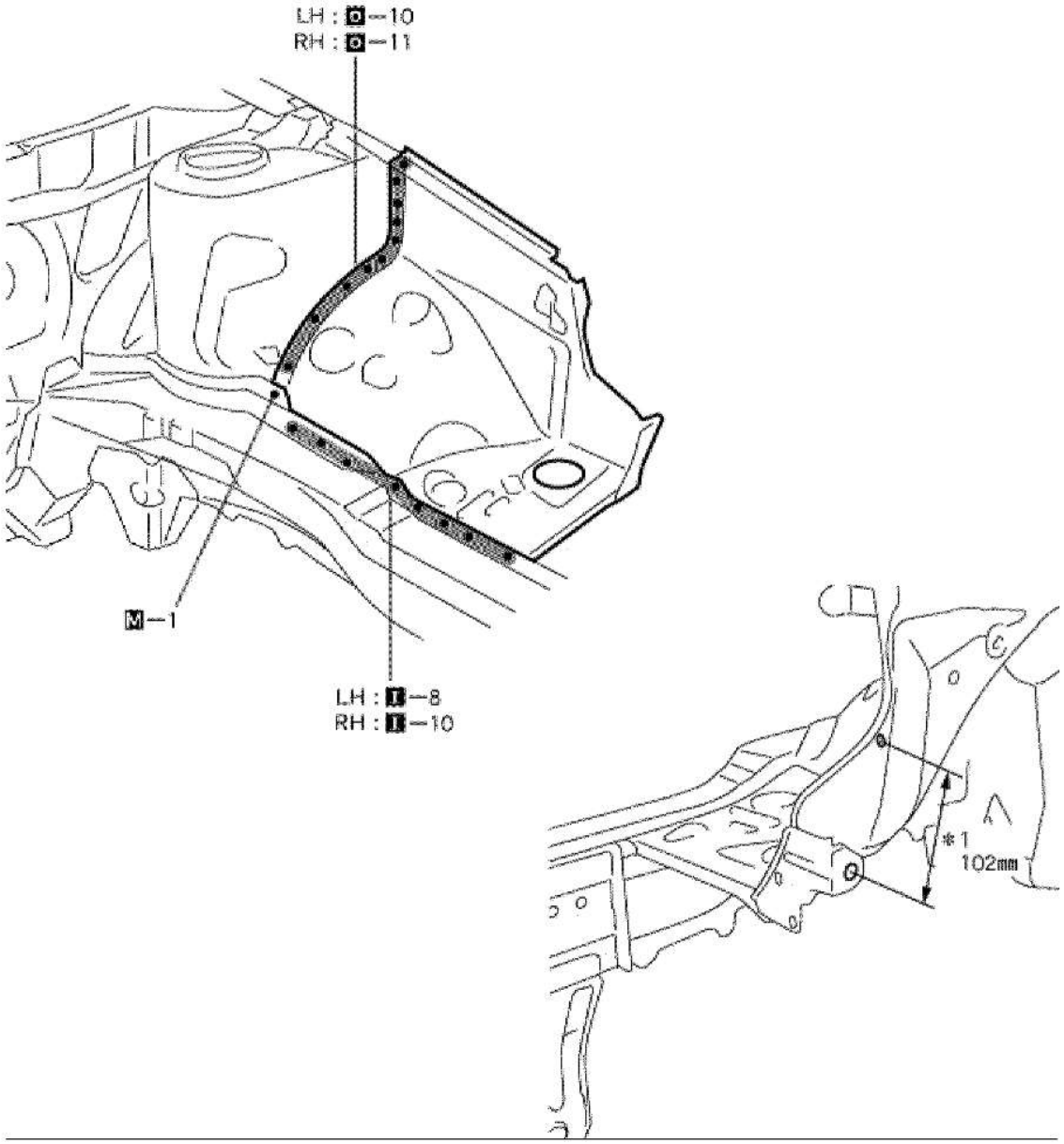



F14470

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14471

**POINT**

1 *1: The value is reference value.

102mm (4.02in.)

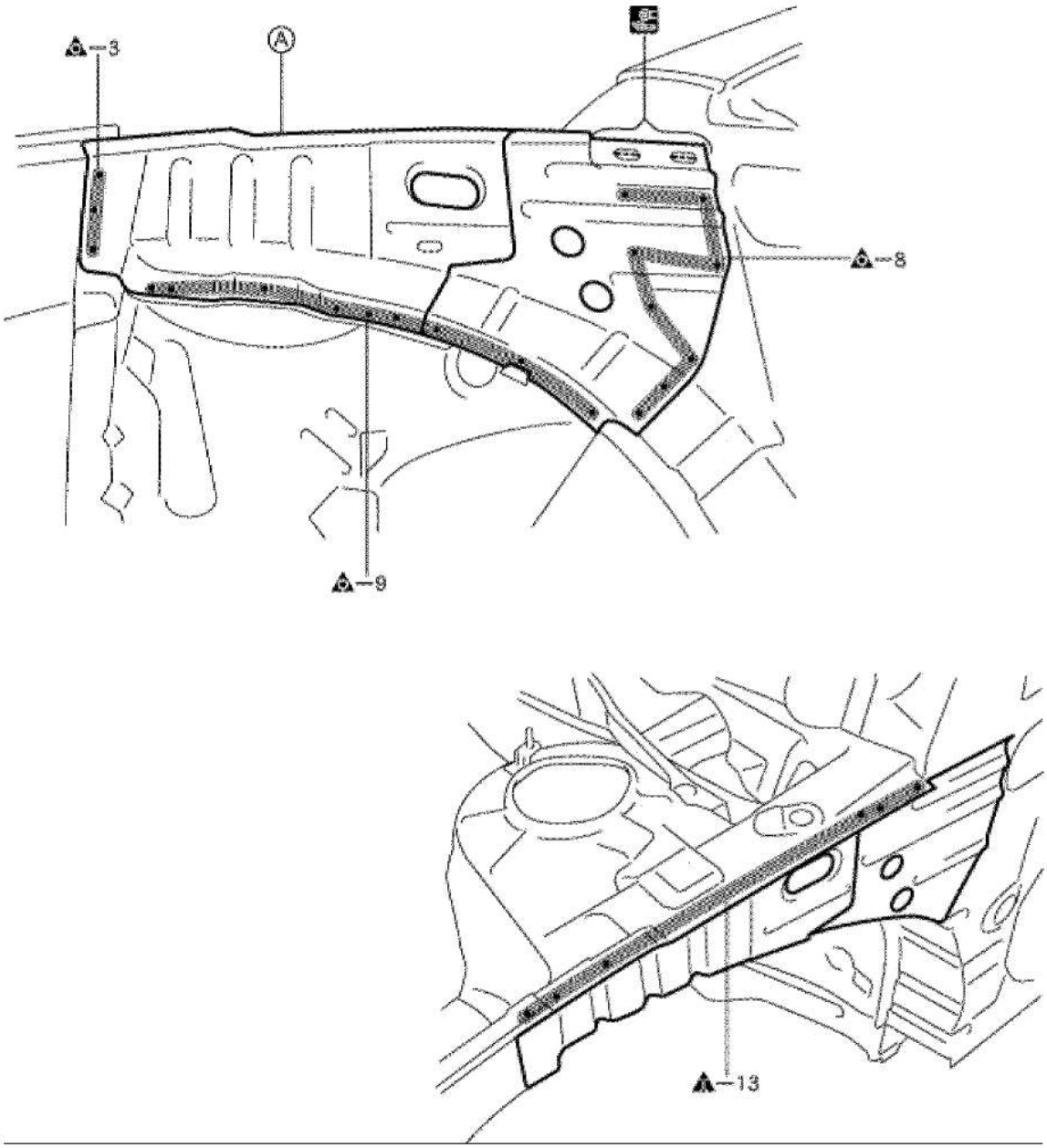
cardiagn.com

# COWL TOP SIDE PANEL (ASSY)



F14472-A

## REMOVAL




F14472

**POINT**

1 Remove the Ⓐ at the same time.

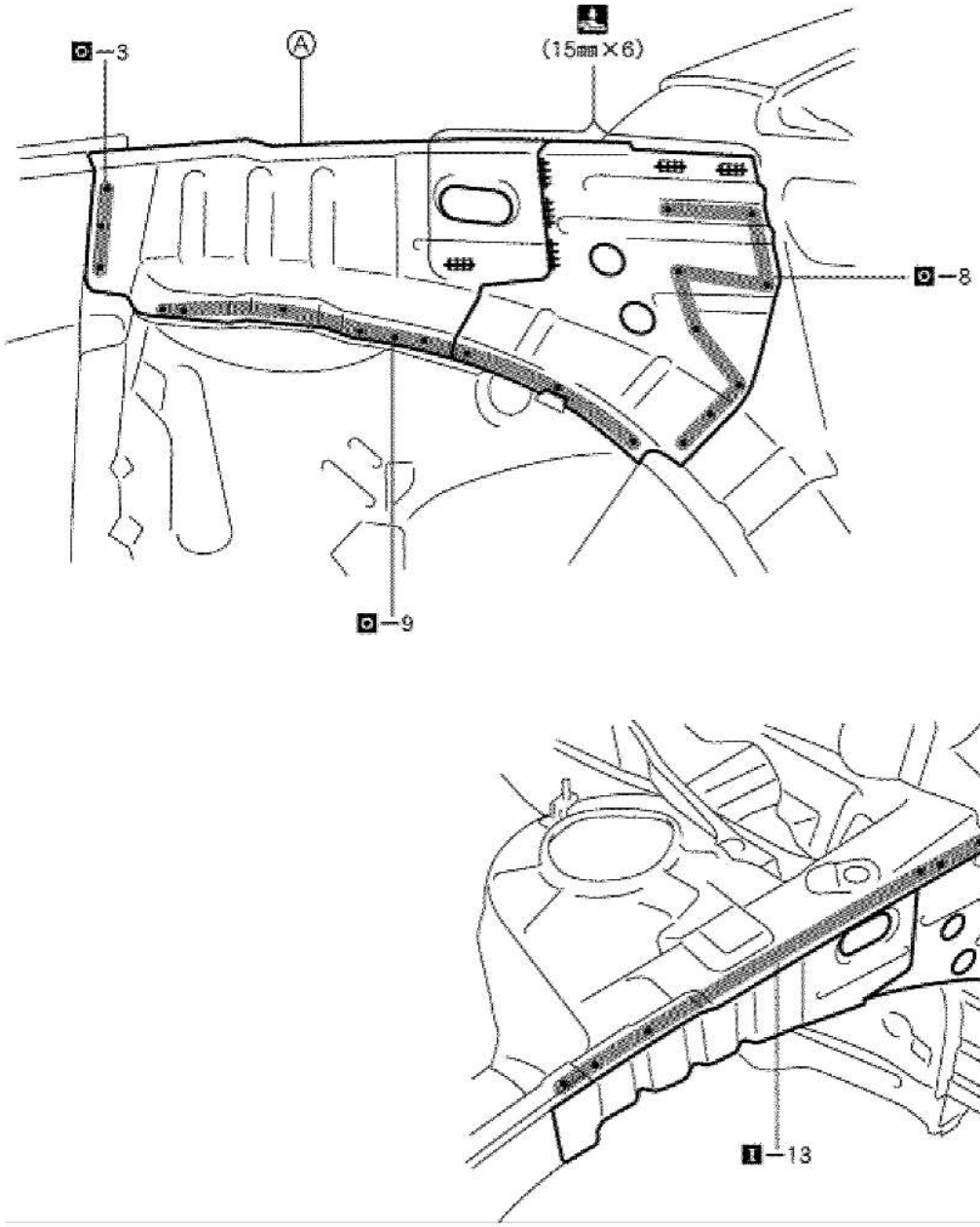
**PART NAME**

Ⓐ Cowl Top To Apron Brace

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**PART NAME**

Ⓐ Cowl Top To Apron Brace

15mm (0.59in.)

cardiagn.com

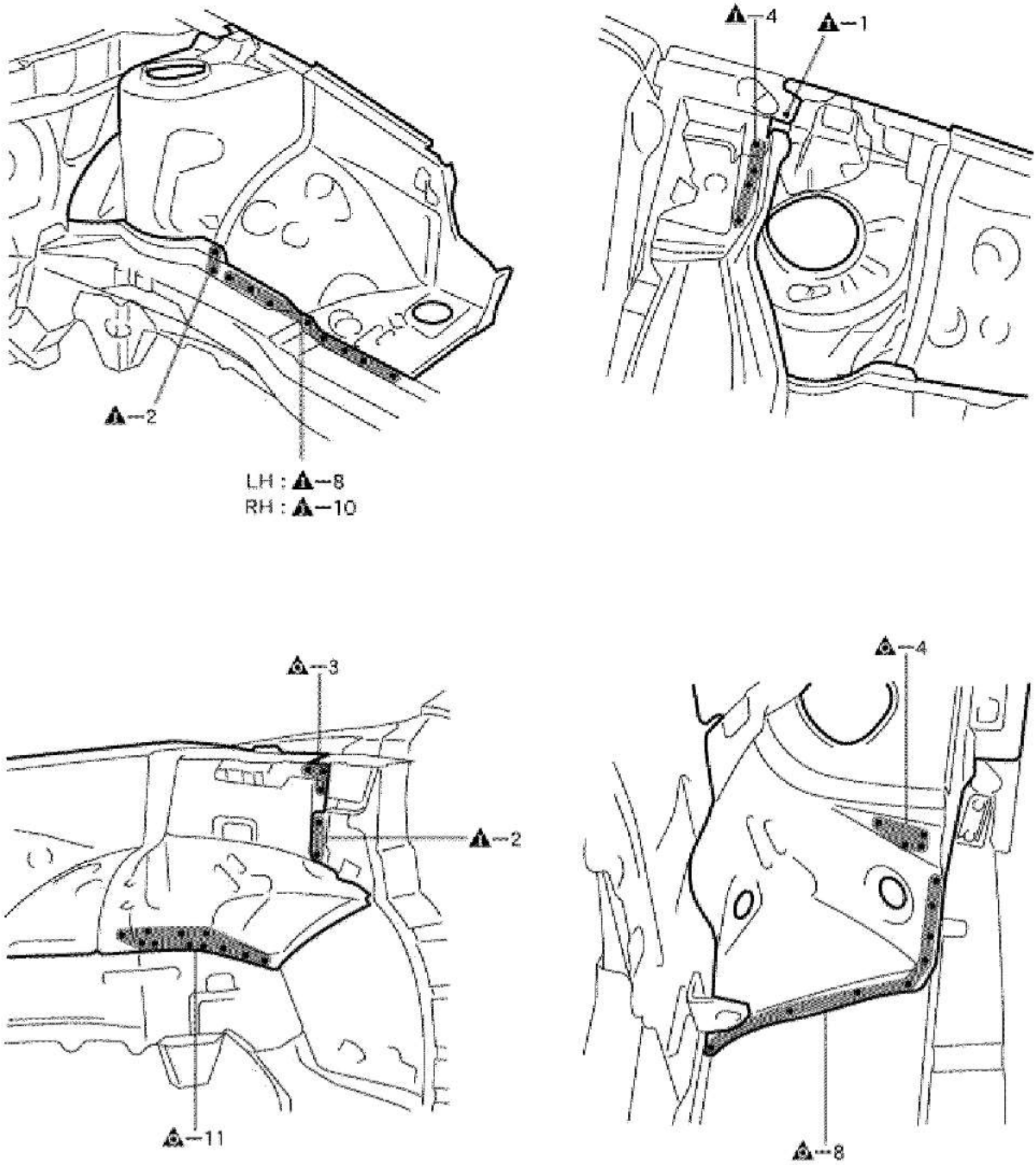
# FRONT FENDER APRON (ASSY)



F14474-A

**REMOVAL**

With the radiator upper support, cowl top side panel removed.

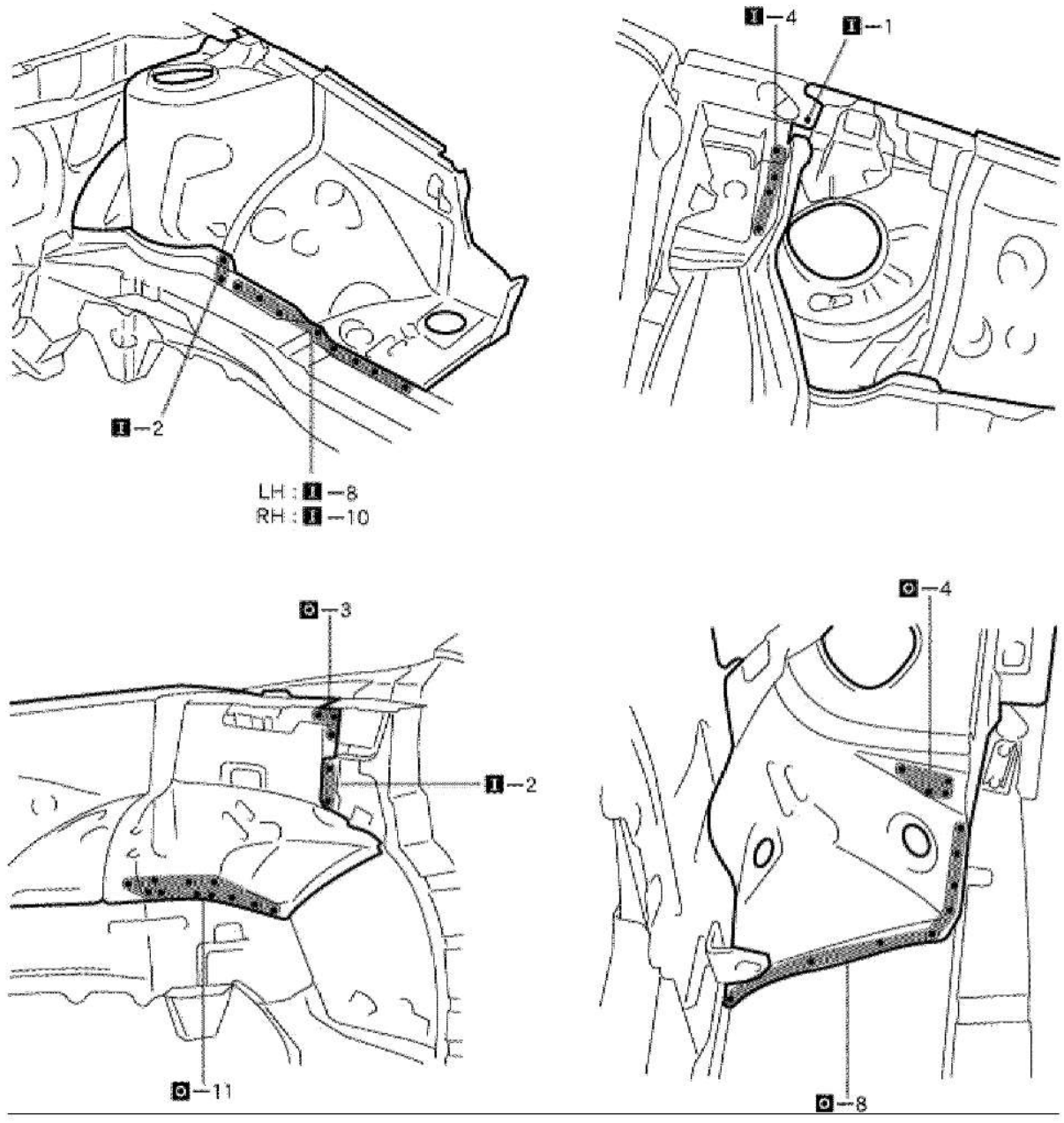



F14474

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14475

**POINT**

1 Make sure each measurement is correct, as this parts affects the front wheel alignment.

cardiagn.com

# FRONT SIDE MEMBER (CUT-P)

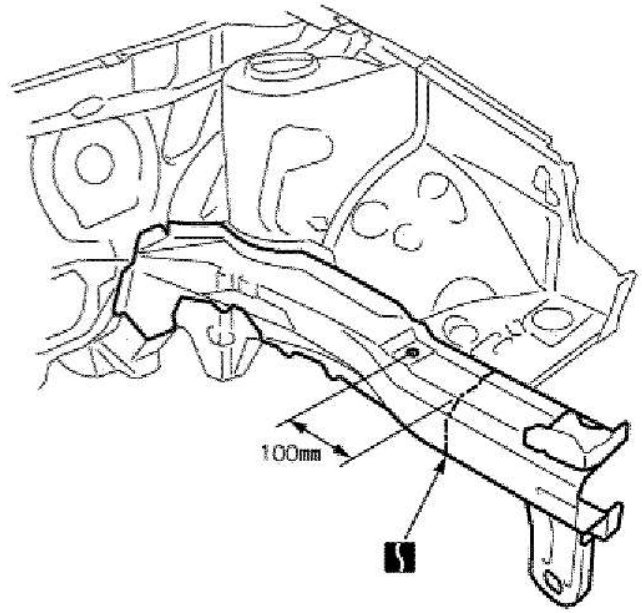


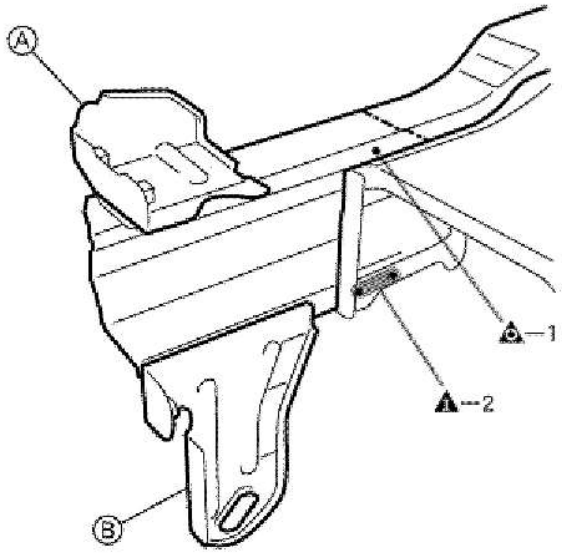
F14476-A

**REMOVAL**

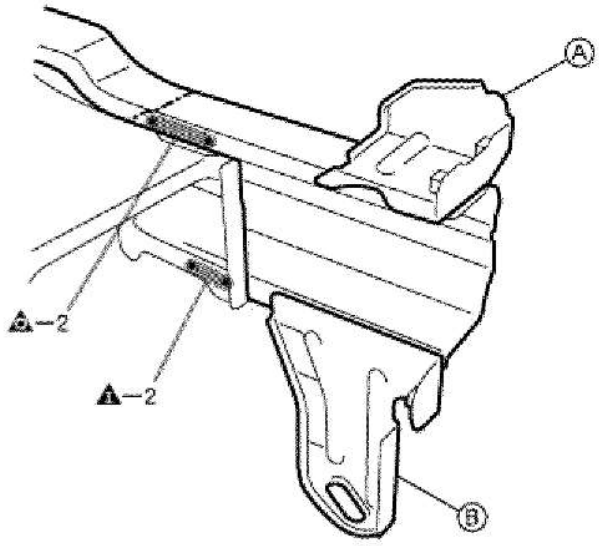
With the radiator side support, front crossmember removed.

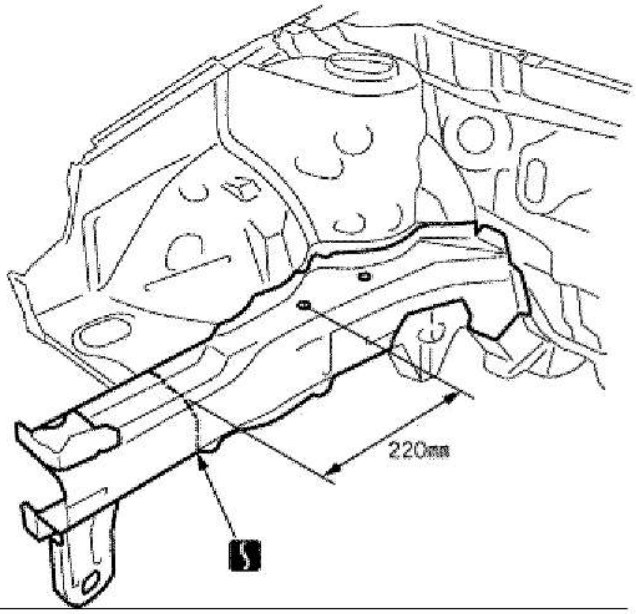
(LH)




(RH)




F14476

**PART NAME**

Ⓐ Front Side Member Support Ⓑ Front Side Member Front Plate

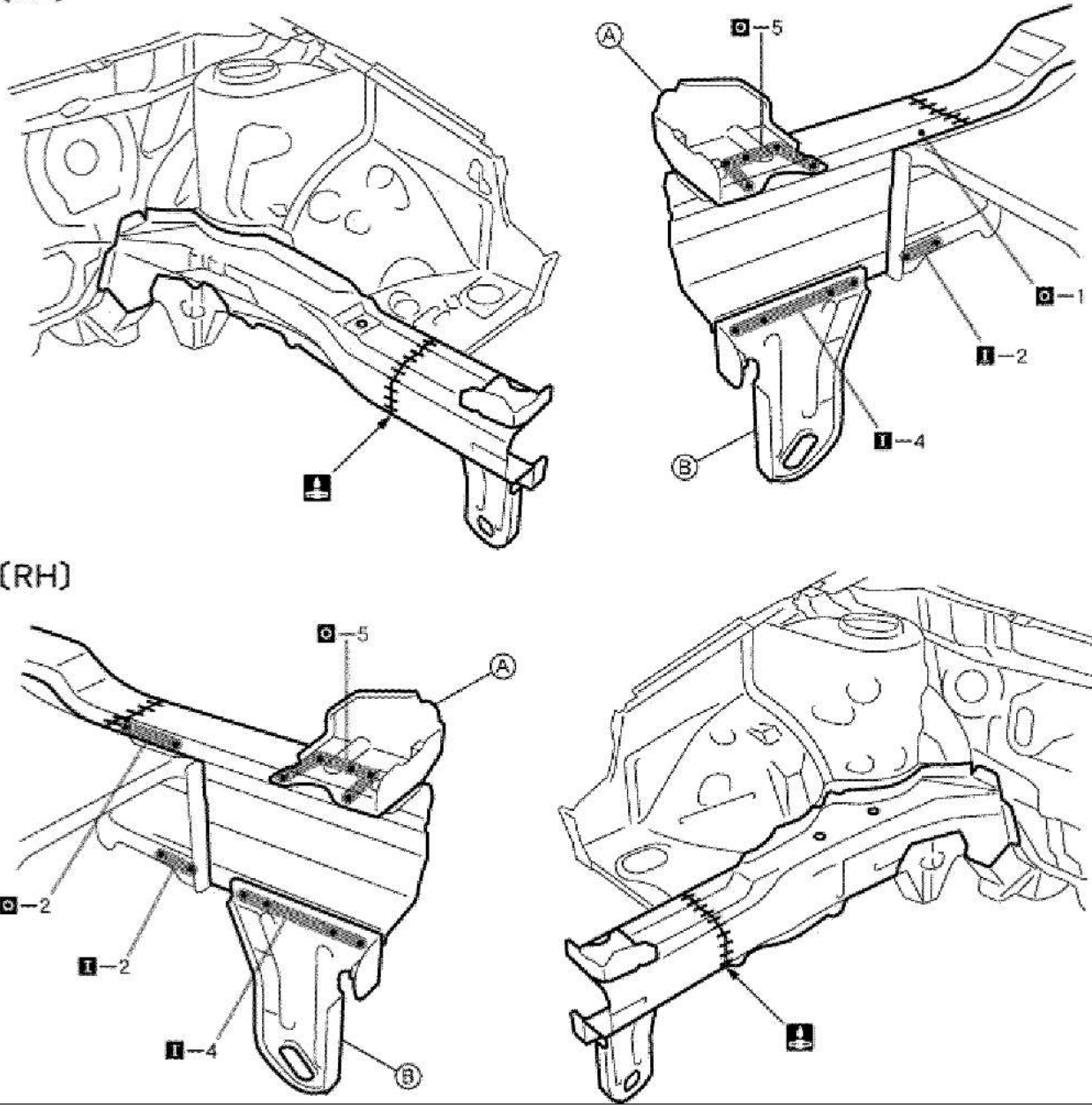
100mm (3.94in.) 220mm (8.66in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.

(LH)




F14477

**PART NAME**

Ⓐ Front Side Member Support Ⓑ Front Side Member Front Plate

cardiagn.com

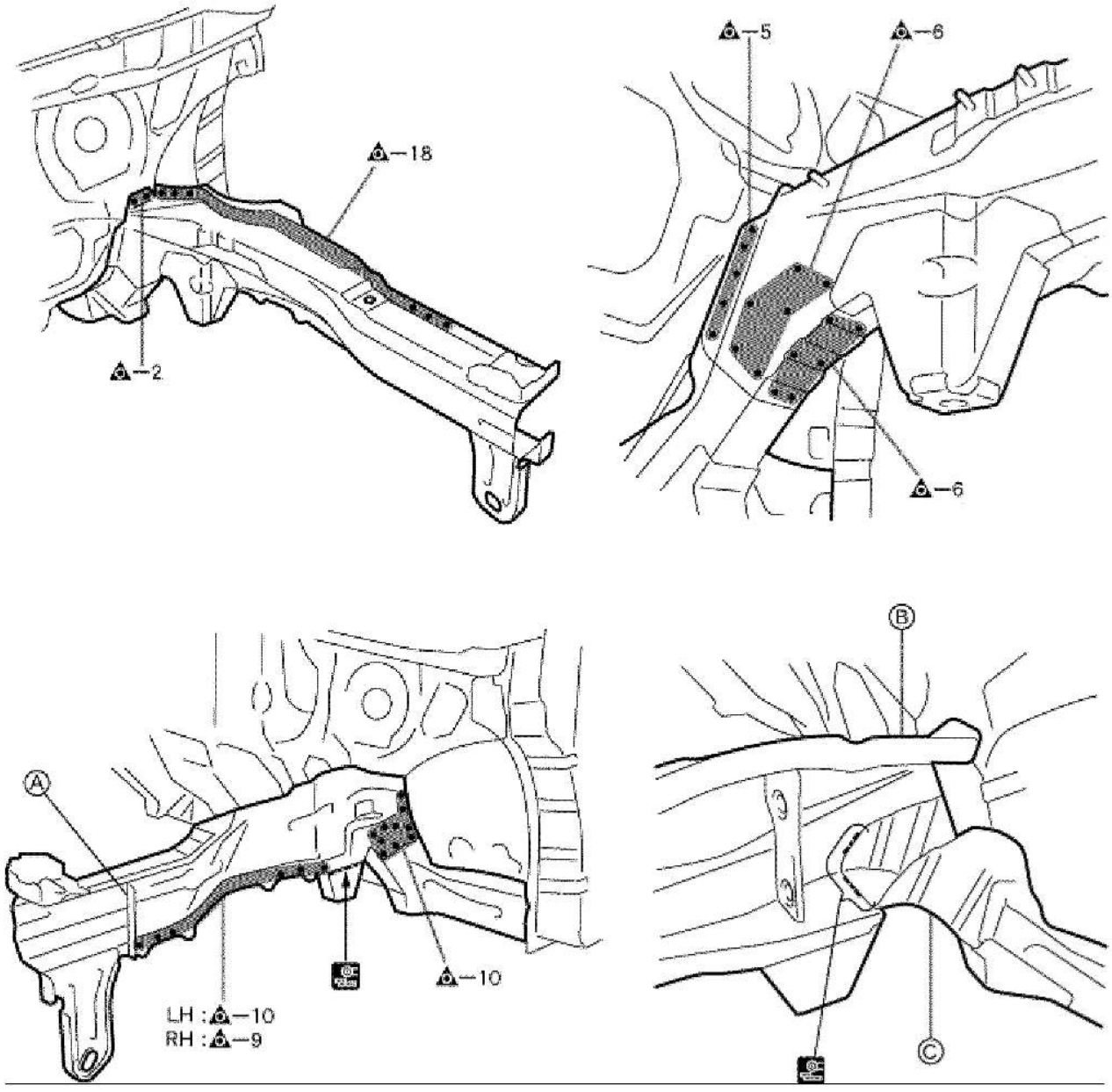
# FRONT SIDE MEMBER (CUT-H)



F14478-A

**REMOVAL**

With the front crossmember, front fender apron removed.




F14478

**POINT**

1 Separate Ⓑ and Ⓒ at the welded part, and then remove the front side member.

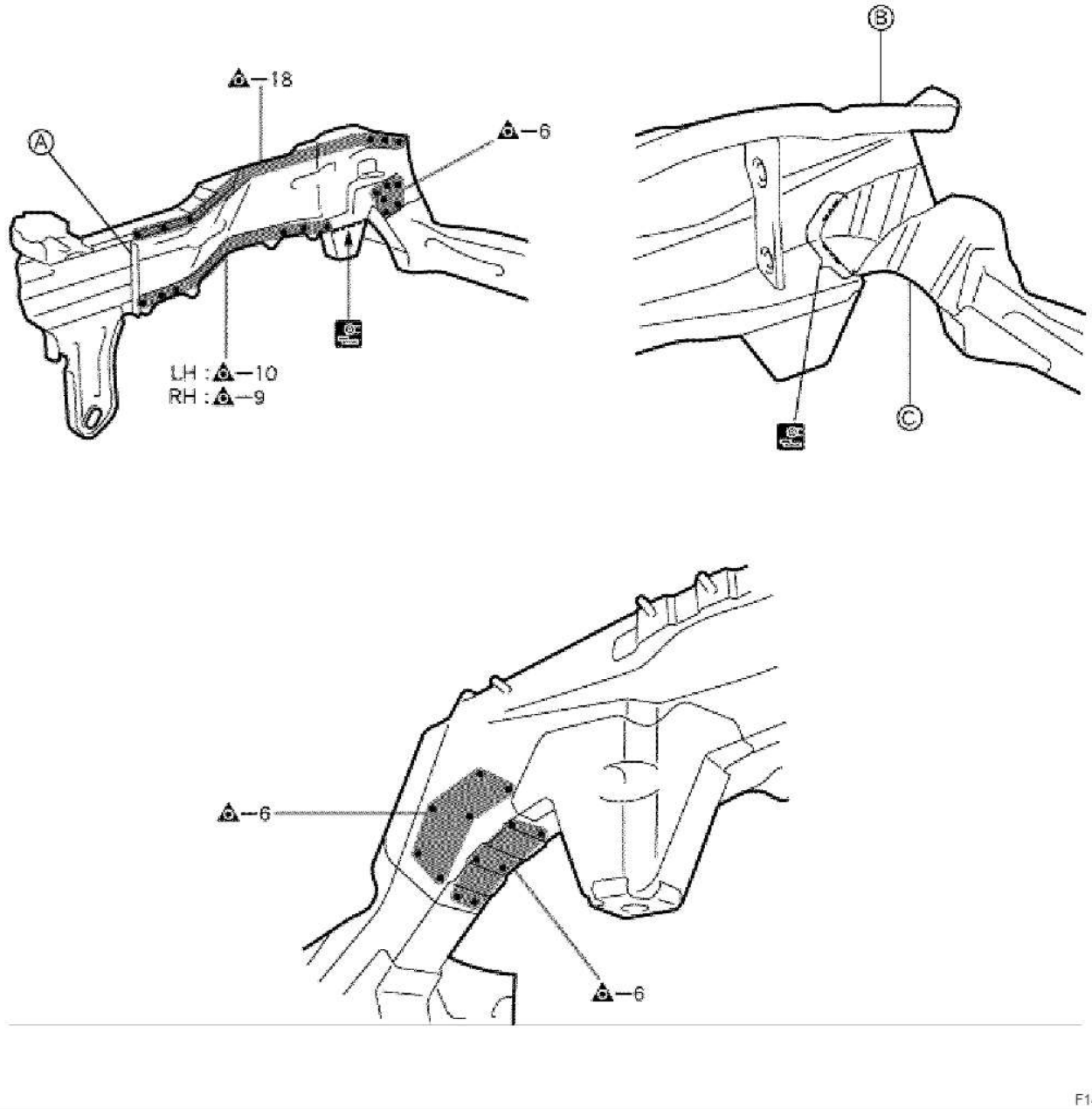
**PART NAME**

Ⓐ Front Side Member Outer Plate
Ⓑ Front Side Inner Member
Ⓒ Front Side Inner Rear Member

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14479

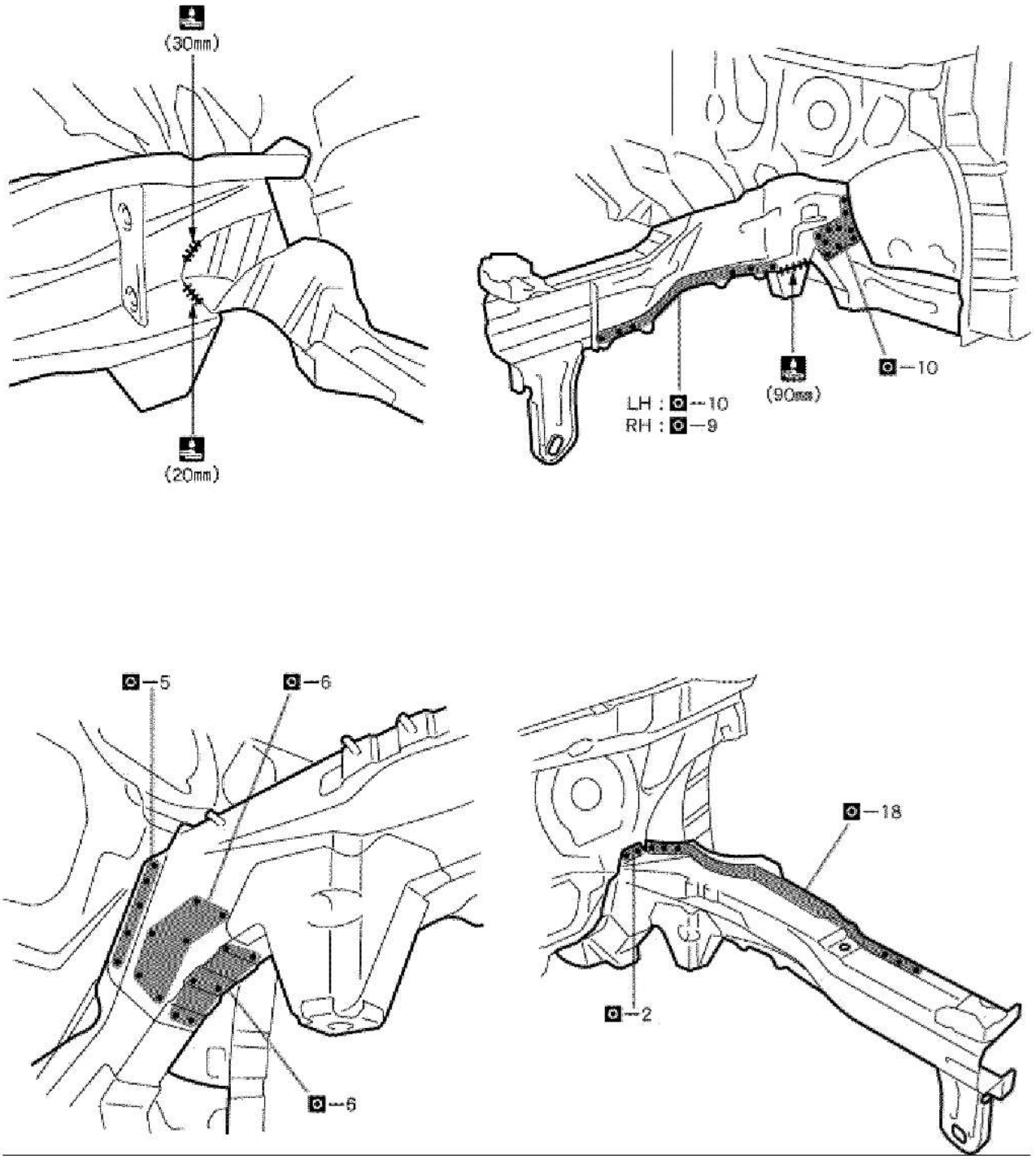
**POINT**

1 Remove the Ⓐ from the new parts. And then, separate the Ⓑ and Ⓒ at the welded part.

**PART NAME**

Ⓐ Front Side Member Outer Plate Ⓑ Front Side Inner Member
Ⓒ Front Side Inner Rear Member

cardiagn.com




**POINT**

1 Install Ⓐ and Ⓑ removed from the new parts to the vehicle.

20mm (0.79in.) 30mm (1.18in.) 90mm (3.54in.)

cardiagn.com

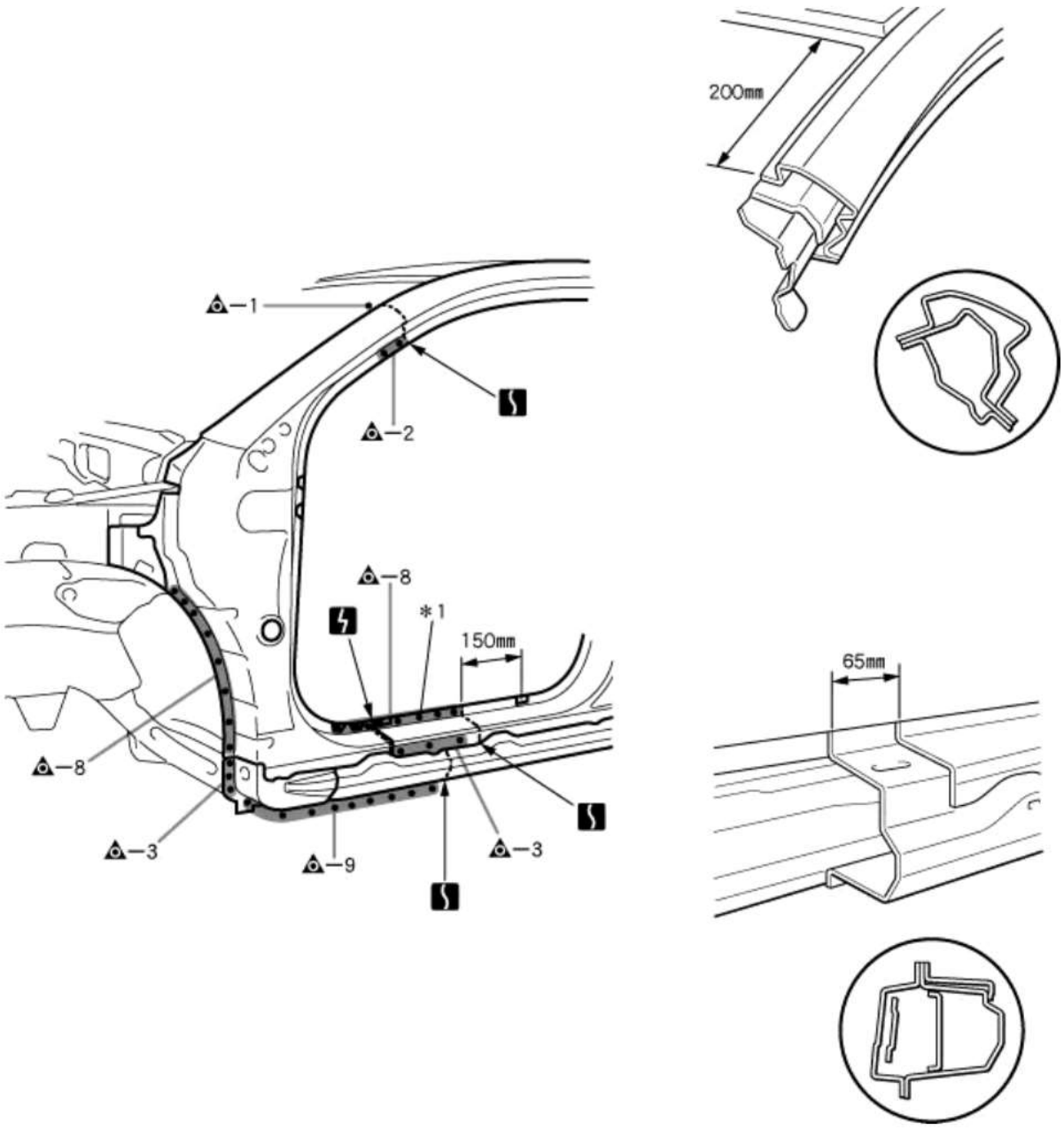
# FRONT BODY PILLAR (CUT)



F14481-A

**REMOVAL**

With the cowl top side panel removed.



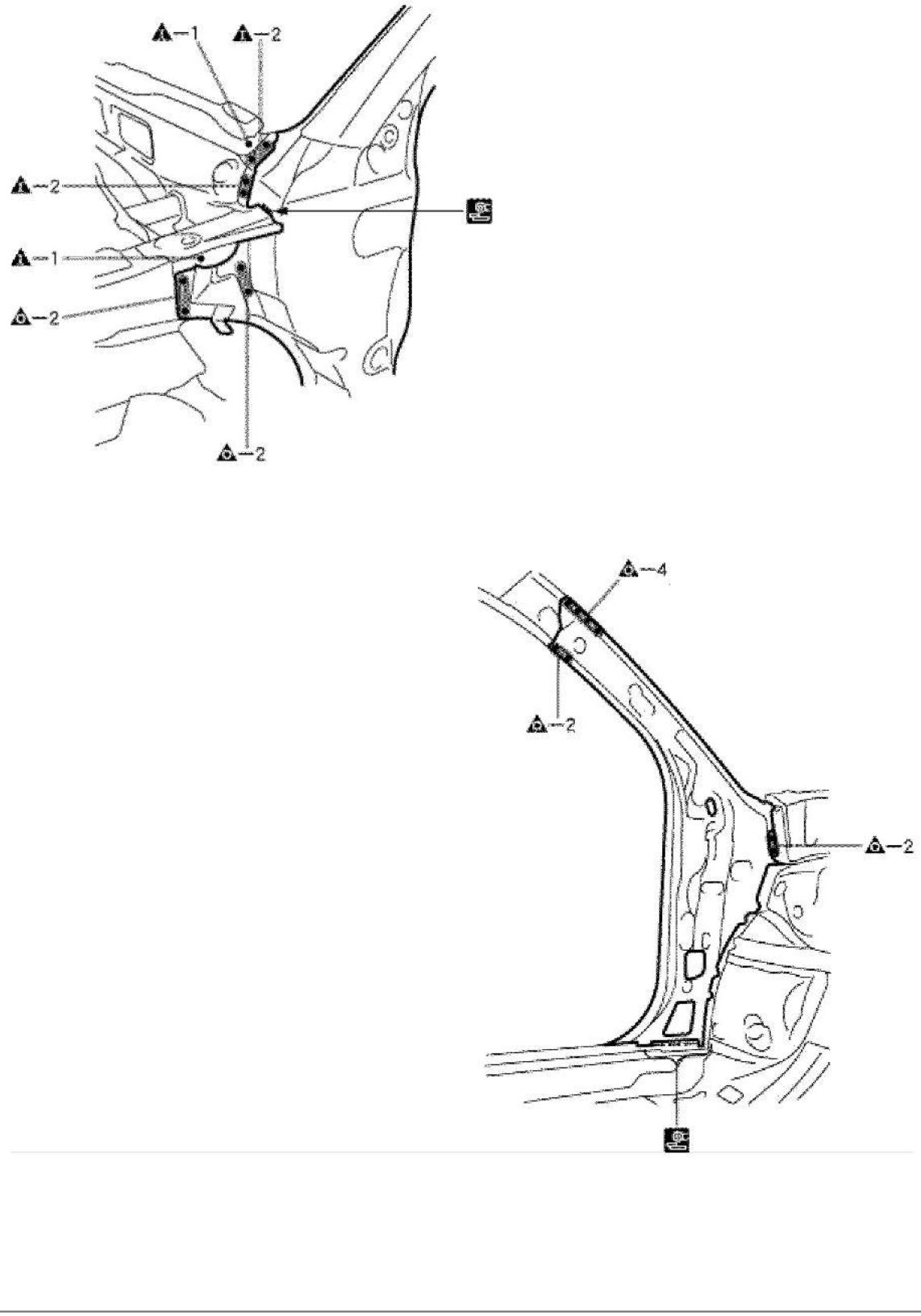

F14481

**POINT**

1 *1: This part of the outer panel is reused, because the rocker panel section is cut off at the rear position behind the supplied parts cut position of the outer panel.

65mm (2.56in.) 150mm (5.91in.) 200mm (7.87in.)

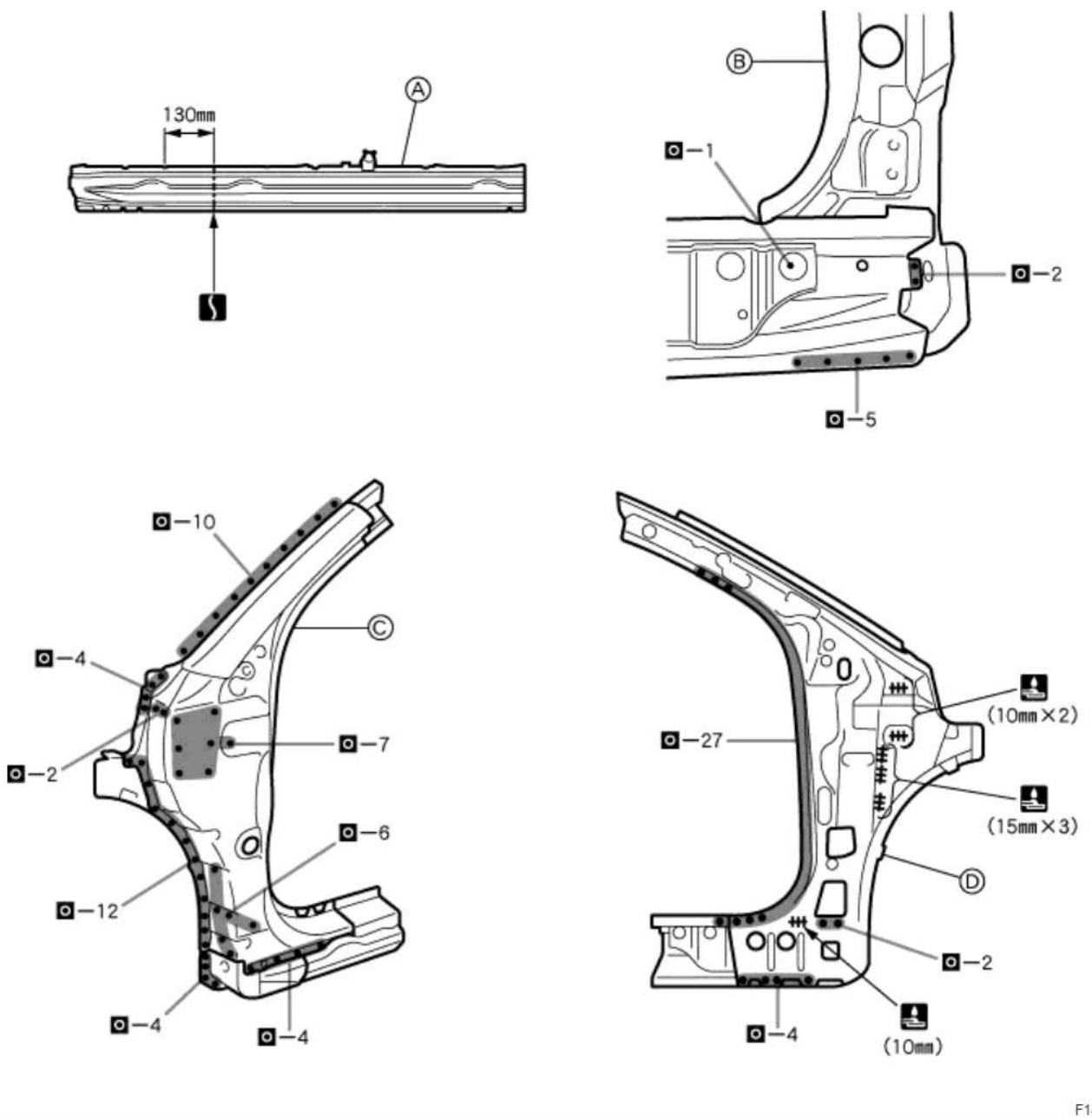
cardiagn.com




cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**POINT**

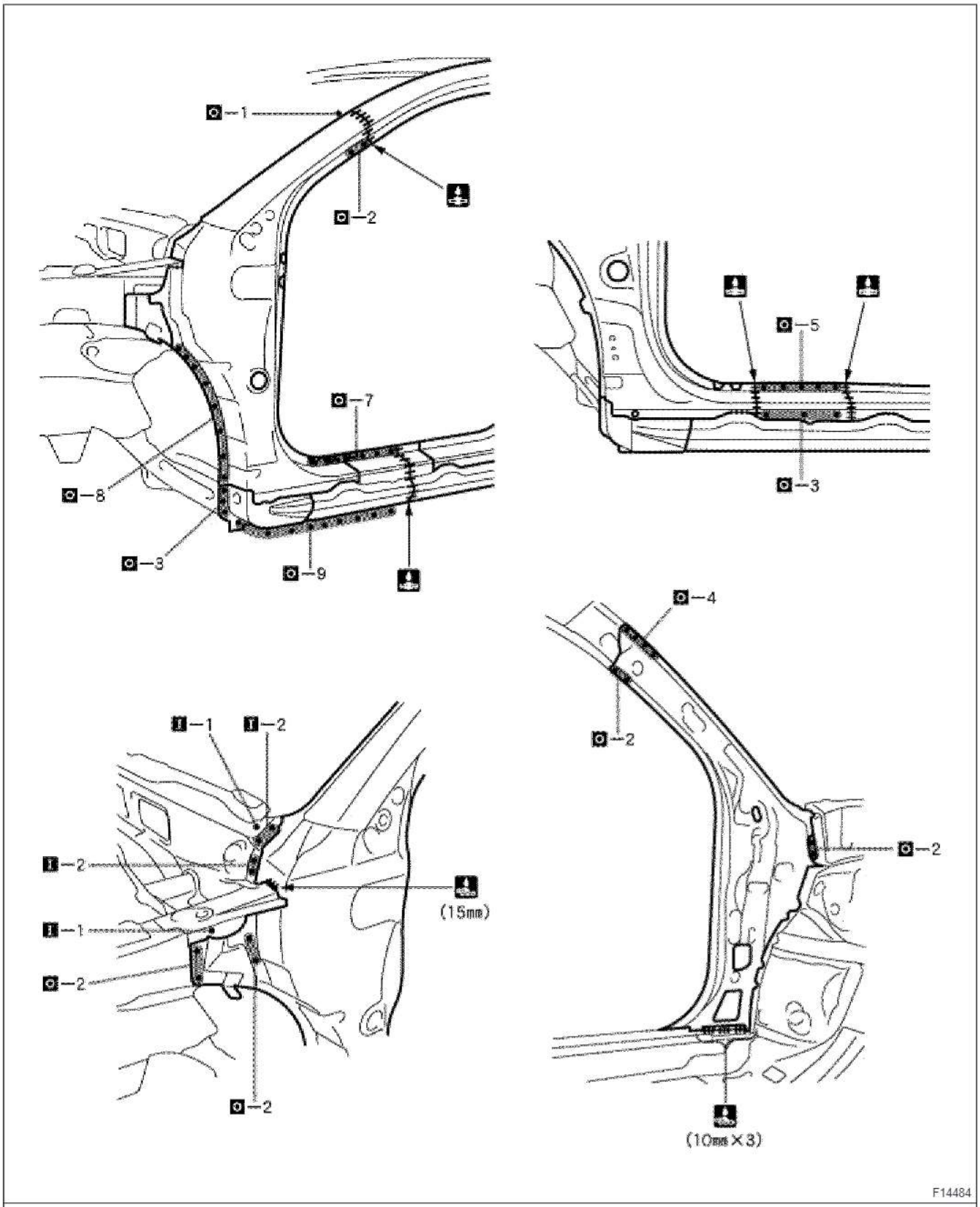
1 Before temporarily installing the new parts, weld the Ⓐ, Ⓑ, Ⓒ and Ⓓ with standard points.

**PART NAME**

Ⓐ Rocker Outer Reinforce Ⓑ Front Body Pillar Upper Reinforce Ⓒ Pillar Outer Ⓓ Pillar Inner

10mm (0.39in.) 15mm (0.59in.) 130mm (5.12in.)

cardiagn.com




10mm (0.39in.) 15mm (0.59in.)

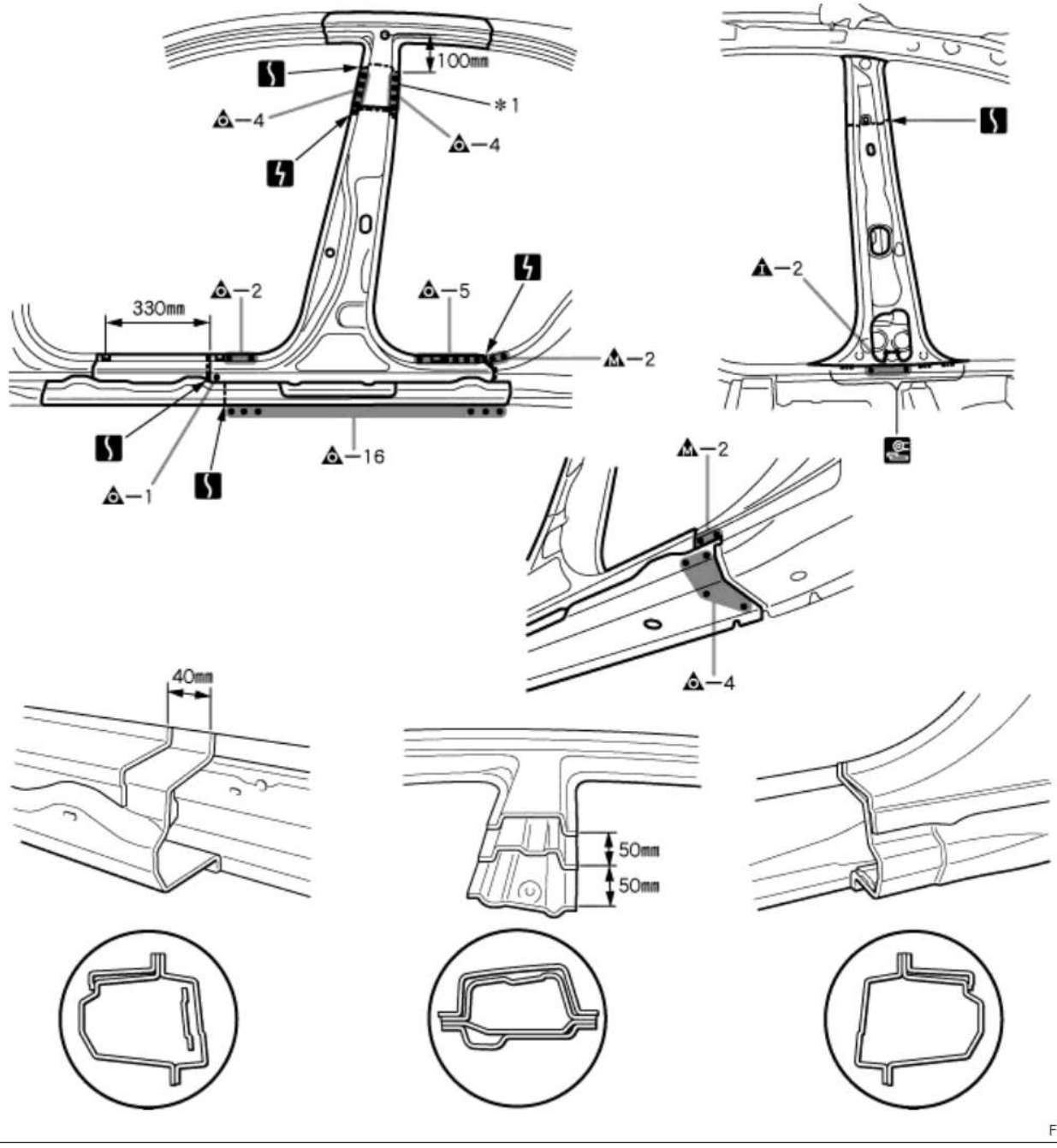
cardiagn.com

# CENTER BODY PILLAR (CUT)

## REMOVAL



F14485-A




F14485

**POINT**

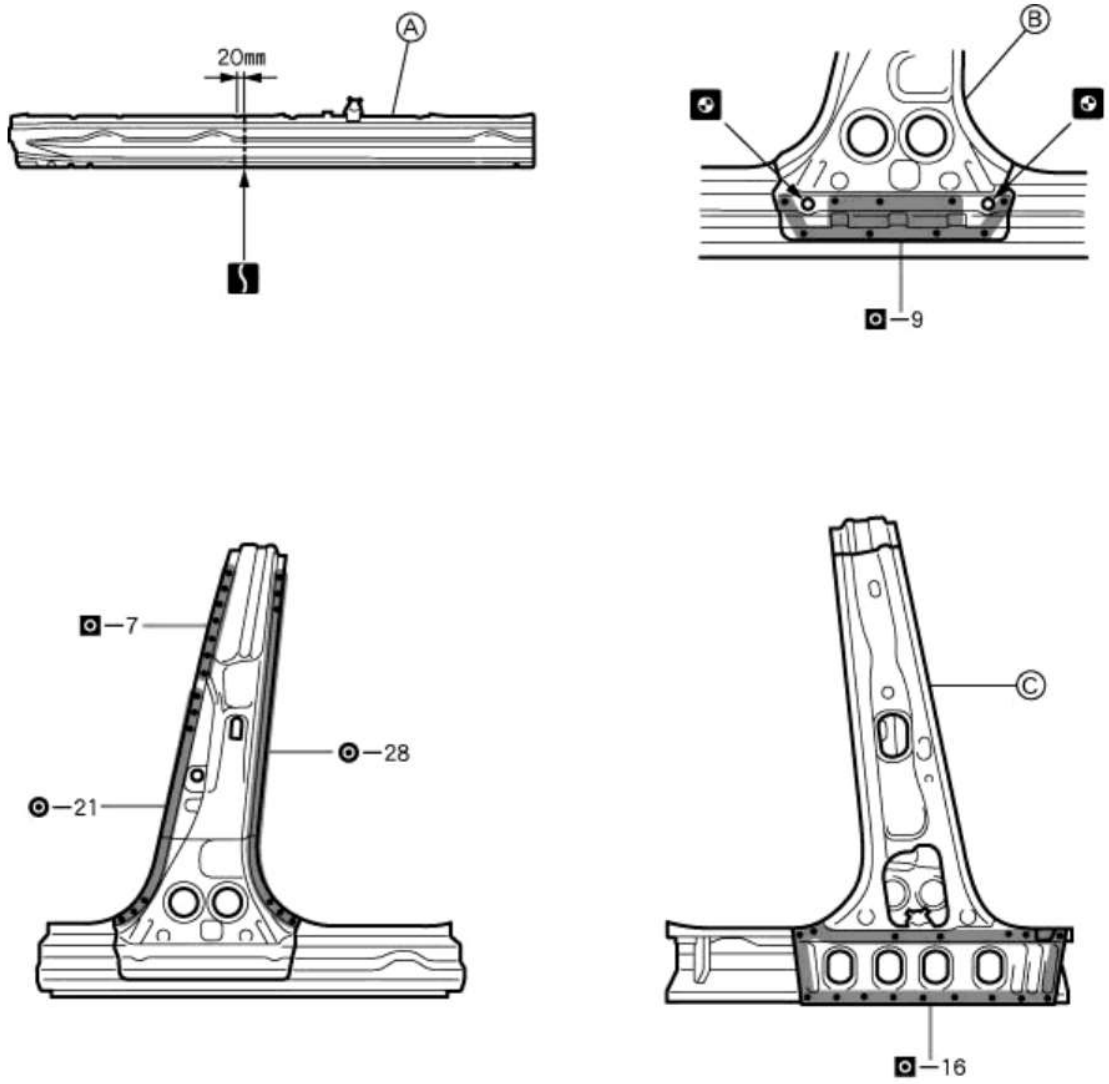
1 *1: This part of the outer panel is reused, because the center pillar section is cut off at the upper position above the supplied parts cut position of the outer panel.

40mm (1.57in.) 50mm (1.97in.) 100mm (3.94in.) 330mm (12.99in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14486

**POINT**

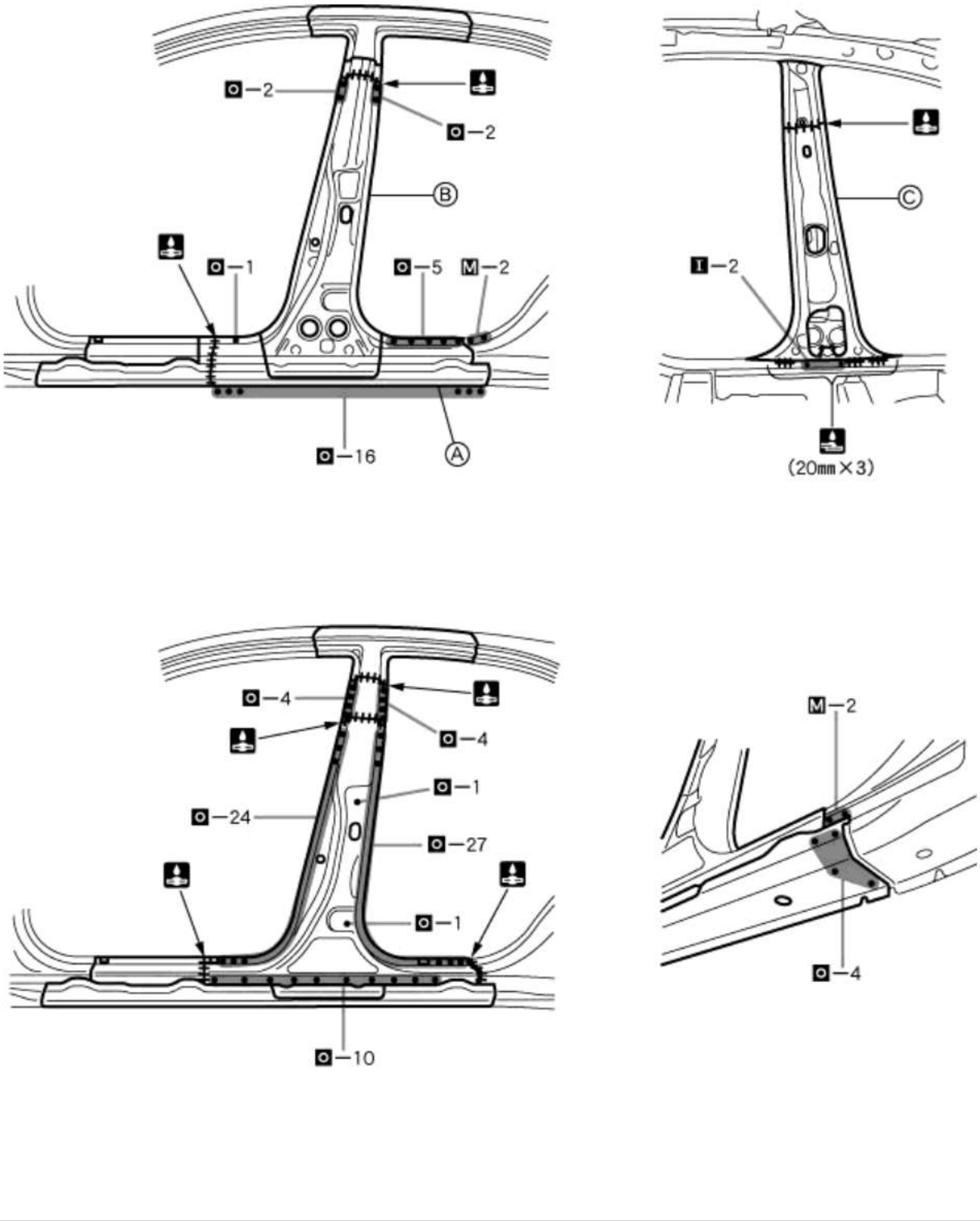
1 Before temporarily installing the new parts, weld the Ⓐ, Ⓑ and Ⓒ with standard points.

**PART NAME**

Ⓐ Rocker Outer Reinforce Ⓑ Center Body Pillar Reinforcement Ⓒ Center Body Inner Pillar

20mm (0.79in.)

cardiagn.com




**POINT**

2 After welding the Ⓐ, Ⓑ and Ⓒ to the vehicle install the outer panel.

**PART NAME**

Ⓐ Rocker Outer Reinforce Ⓑ Center Body Pillar Reinforcement Ⓒ Center Body Inner Pillar

20mm (0.79in.)

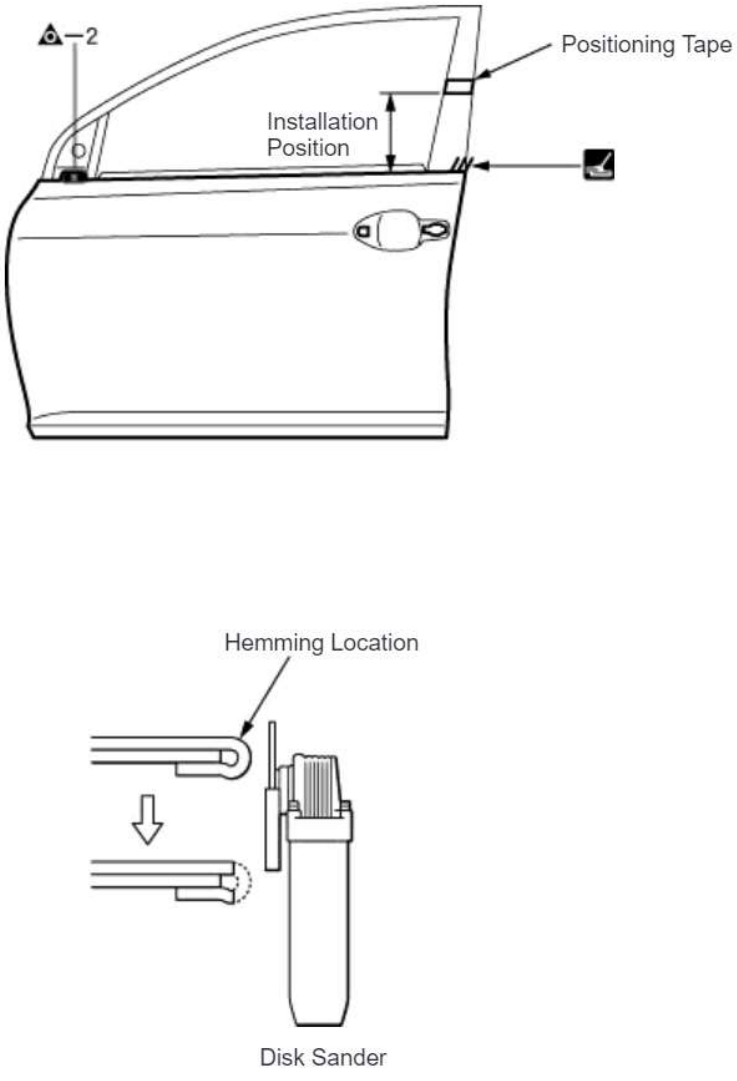
cardiagn.com

# FRONT DOOR OUTER PANEL (ASSY)



F14488-A

## REMOVAL




F14488

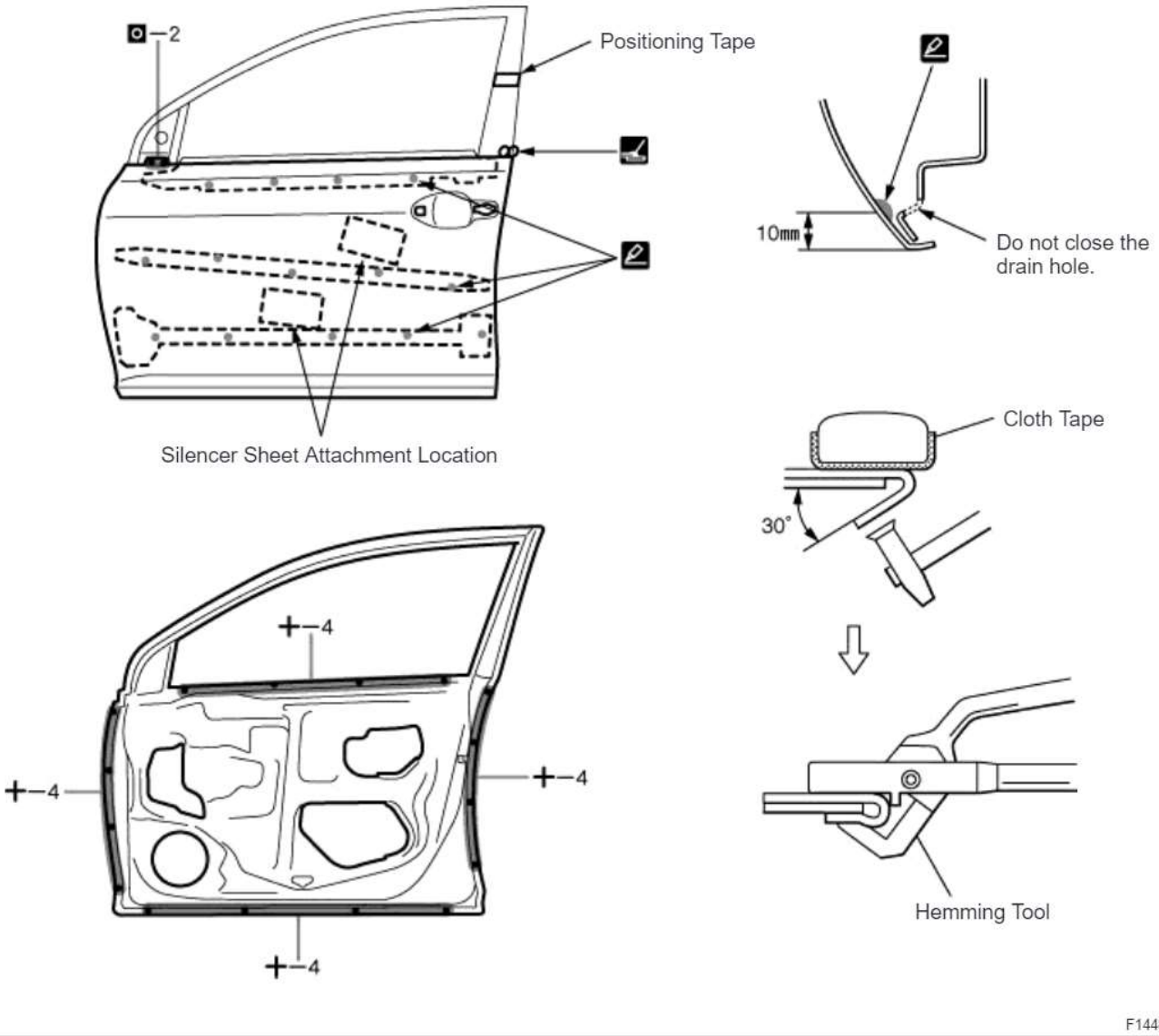
**POINT**

1 Before removing the outer panel, make the installation position with a tape.
2 After grinding off the hemming location, remove the outer panel.

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**POINT**

1 Before temporarily installing the new parts, apply body sealer to the reinforcement, side impact protection beam and back side of the new parts.
*HINT:*
*1) Apply sealer evenly about 10mm (0.39in.) from the flange and 3mm (0.12in.) in diameter to the outer panel and apply just enough sealer for the reinforcement and side impact protection beam to make contact.*

2 Bend the flange hem about 30° with a hammer and dolly, then fasten tightly with a hemming tool.
*HINT:*
*1) Perform hemming in three steps, being careful not to warp the panel.*
*2) If a hemming tool cannot be used, hem with a hammer and dolly.*

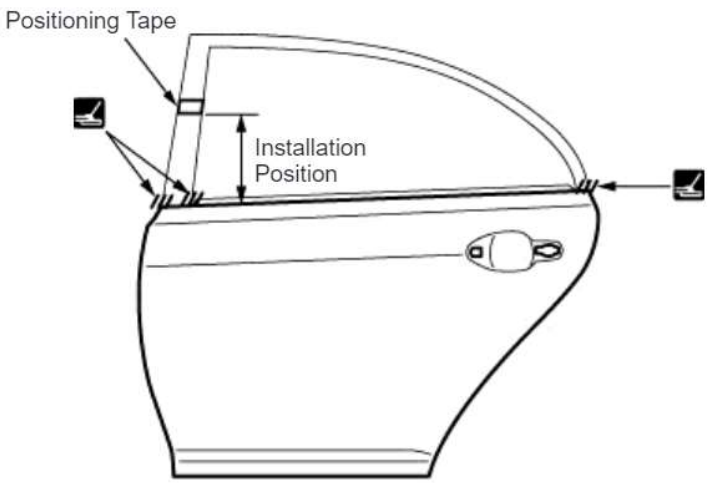
cardiagn.com

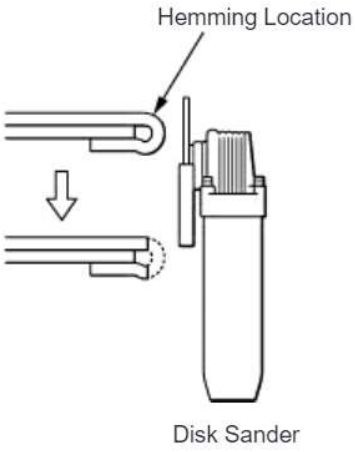
# REAR DOOR OUTER PANEL (ASSY)



F14490-A

## REMOVAL




F14490

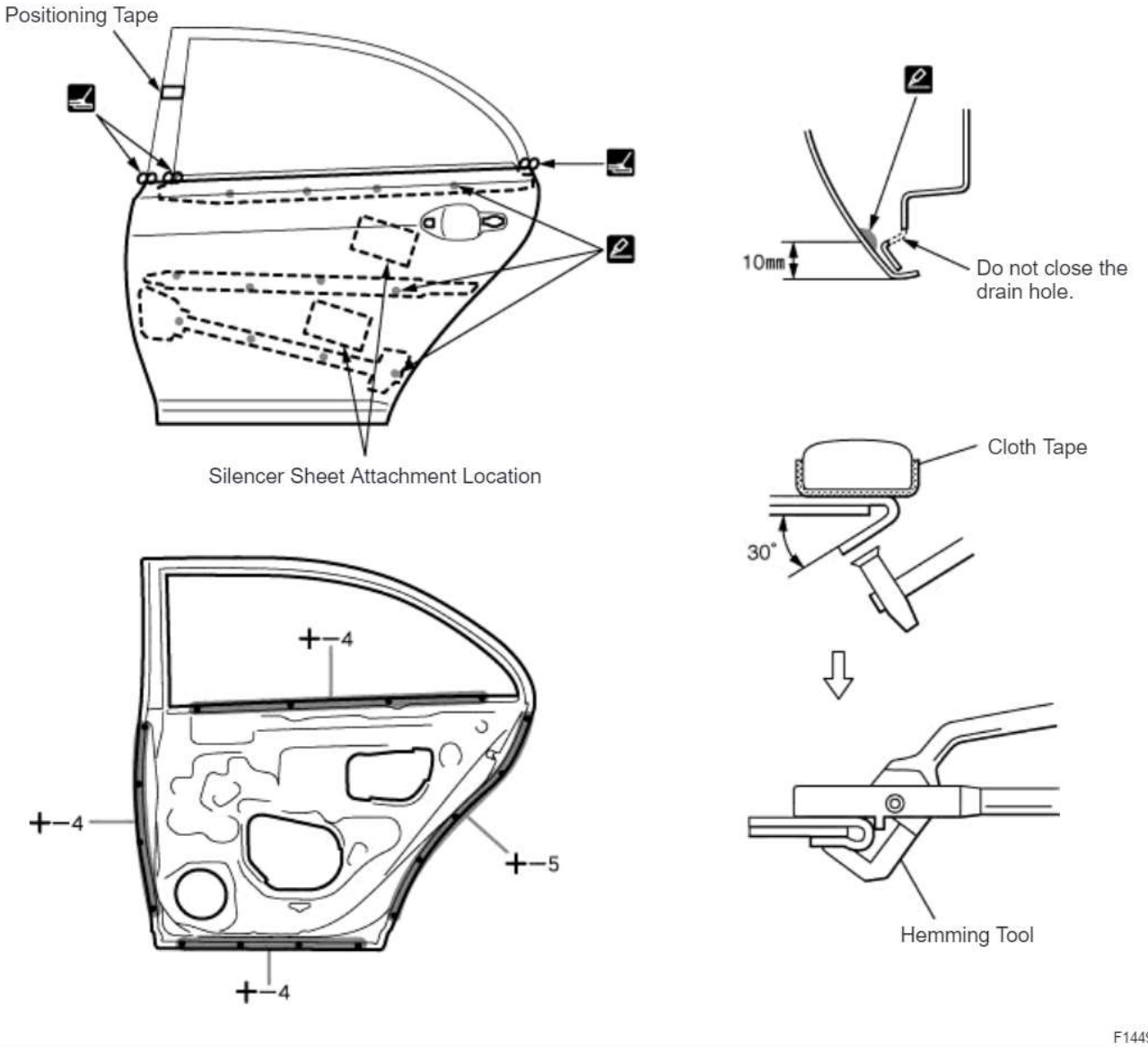
**POINT**

1 Before removing the outer panel, make the installation position with a tape.
2 After grinding off the hemming location, remove the outer panel.

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**POINT**

1 Before temporarily installing the new parts, apply body sealer to the reinforcement, side impact protection beam and back side of the new parts.
*HINT:*
*1) Apply sealer evenly about 10mm (0.39in.) from the flange and 3mm (0.12in.) in diameter to the outer panel and apply just enough sealer for the reinforcement and side impact protection beam to make contact.*

2 Bend the flange hem about 30° with a hammer and dolly, then fasten tightly with a hemming tool.
*HINT:*
*1) Perform hemming in three steps, being careful not to warp the panel.*
*2) If a hemming tool cannot be used, hem with a hammer and dolly.*

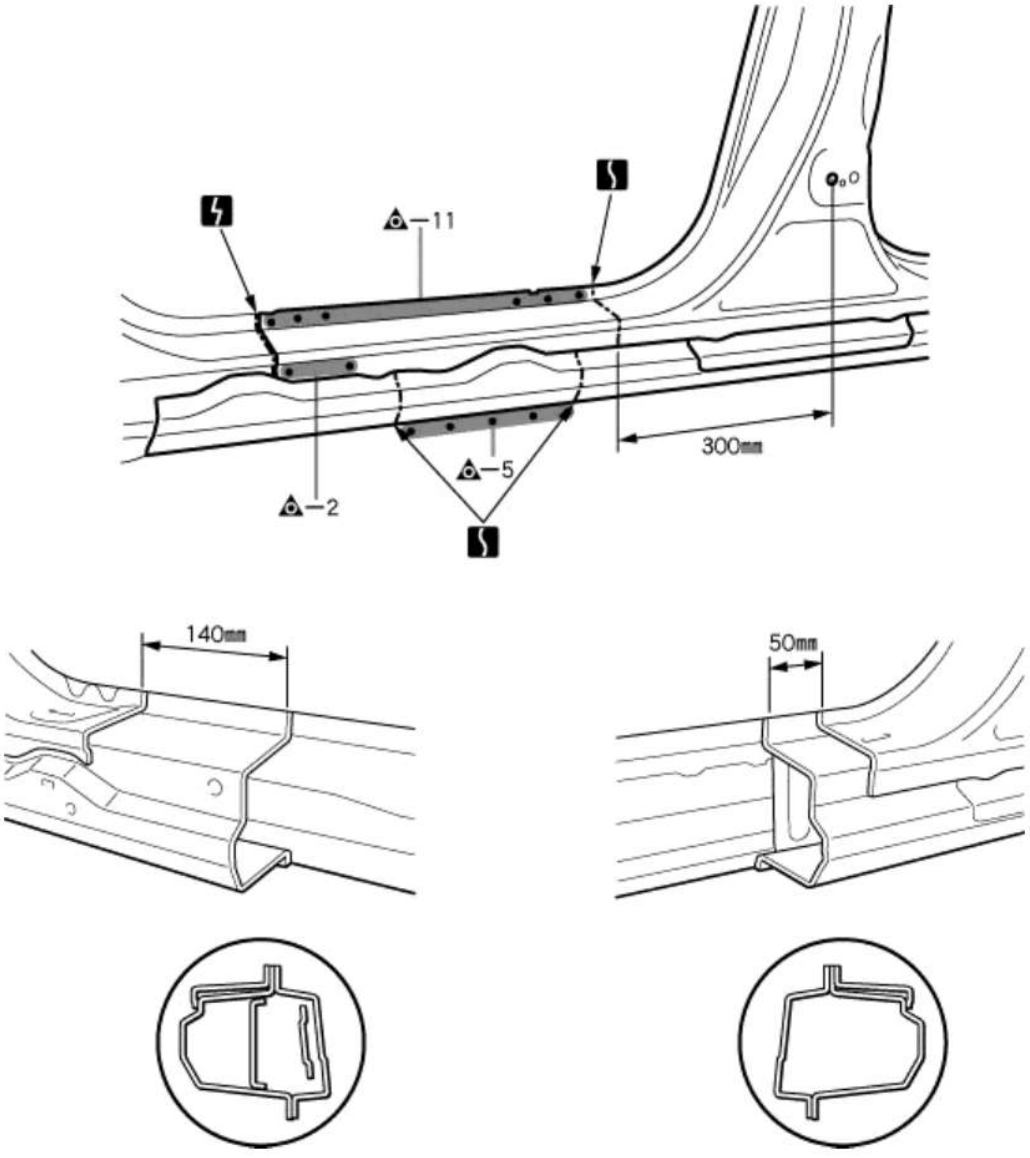
cardiagn.com

# ROCKER OUTER PANEL (CUT-H)

## REMOVAL



F14492-A



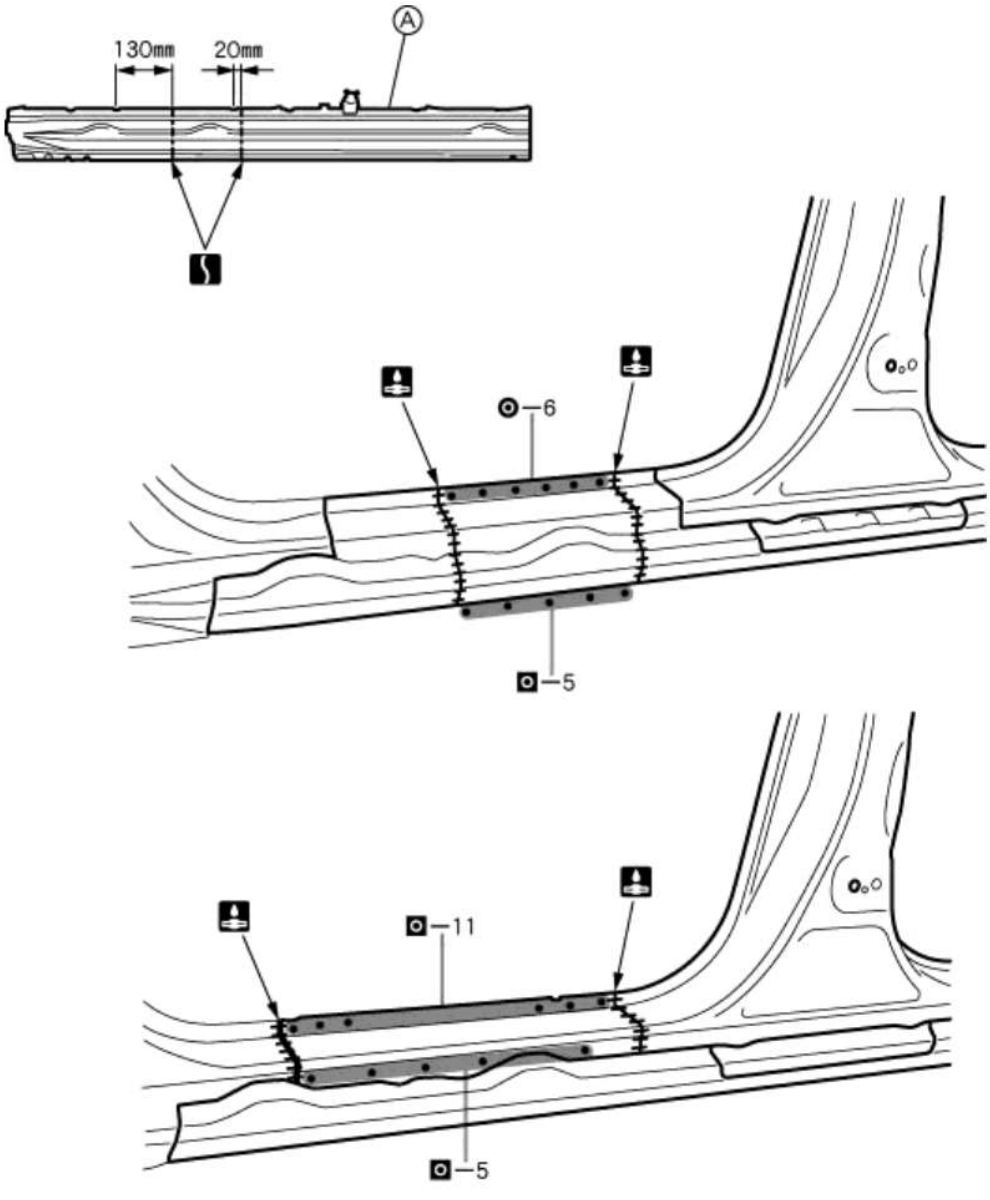

F14492

50mm (1.97in.) 140mm (5.51in.) 300mm (11.81in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14493

**POINT**

1 After welding the Ⓐ to the vehicle install the outer panel.

**PART NAME**

Ⓐ Rocker Outer Reinforce

20mm (0.79in.) 130mm (5.12in.)

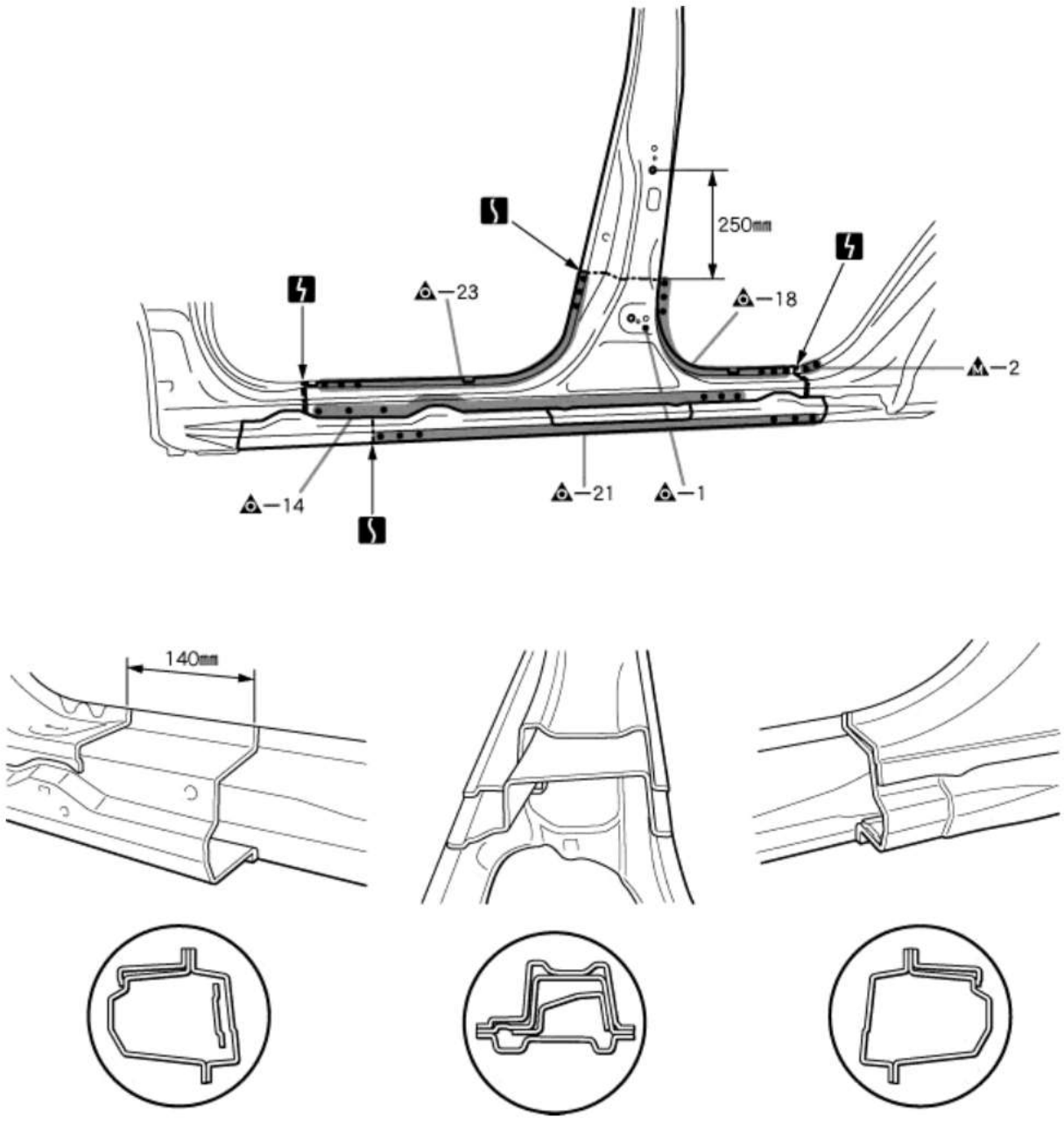
cardiagn.com

# ROCKER OUTER PANEL (CUT)

## REMOVAL



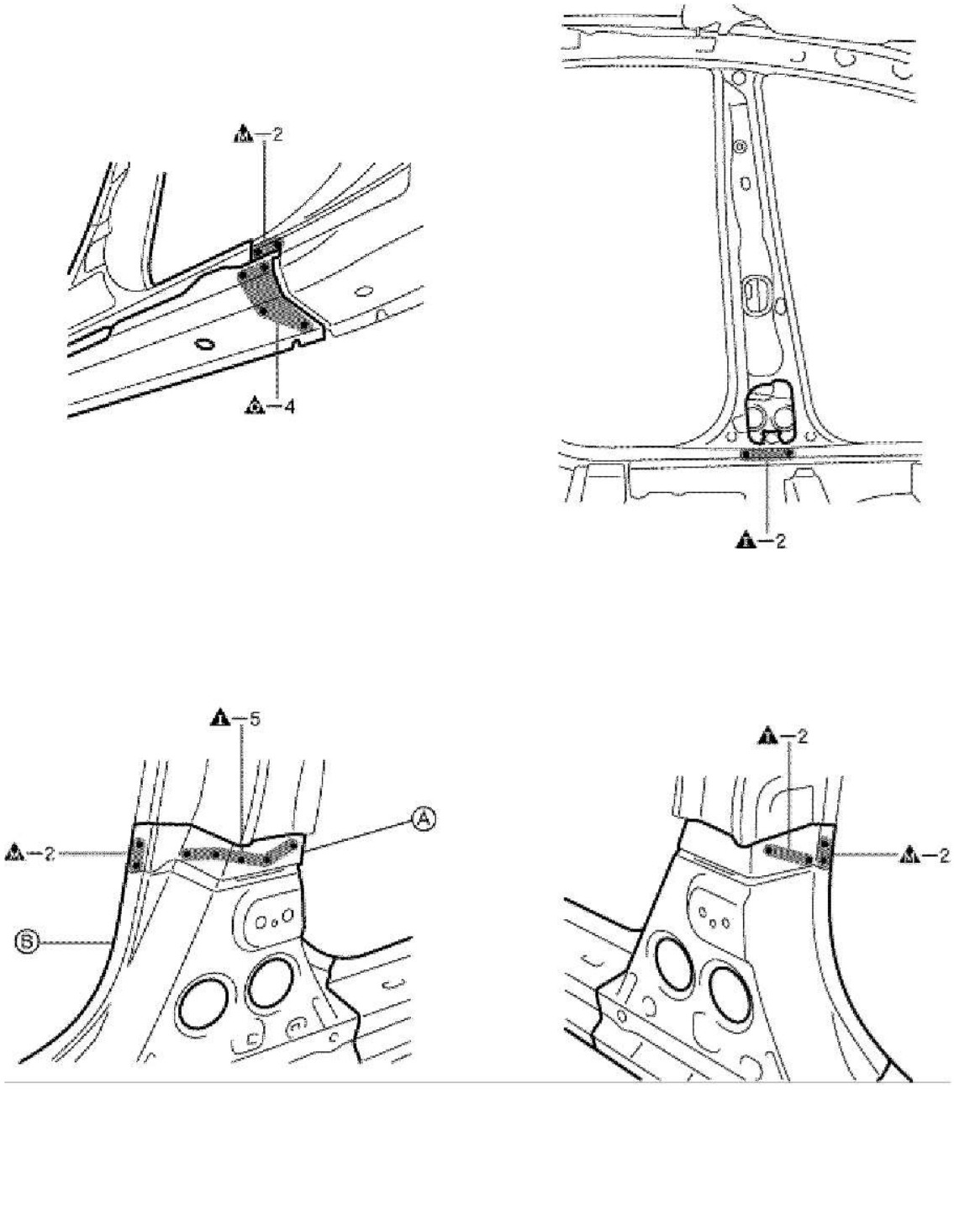
F14494-A




F14494

140mm (5.51in.) 250mm (9.84in.)

cardiagn.com




F14495

**POINT**

1 Leave the Ⓐ to the vehicle, remove the Ⓑ.

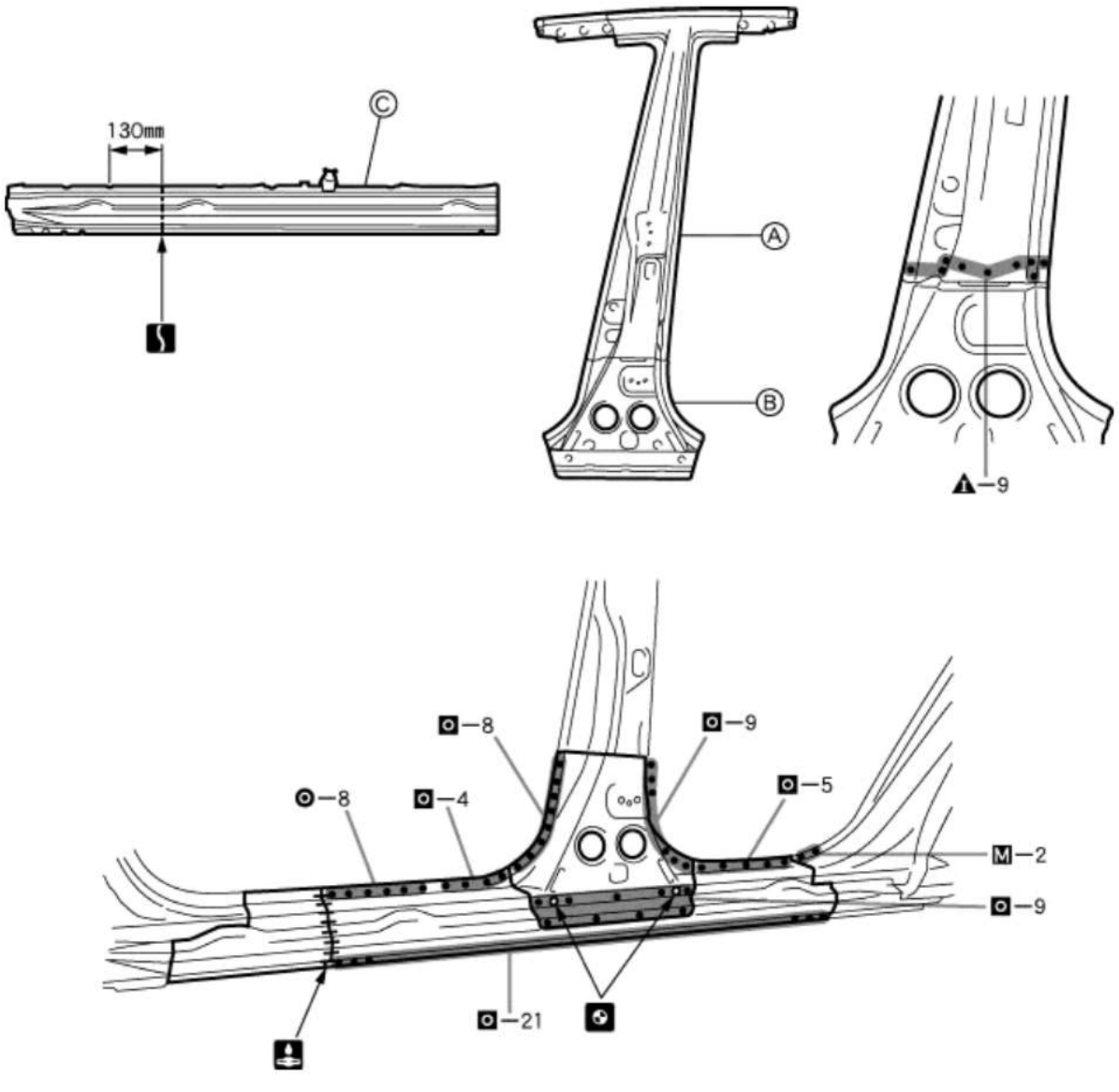
**PART NAME**

Ⓐ Center Body Pillar Reinforcement Ⓑ Center Body Pillar Outer Reinforcement

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**POINT**

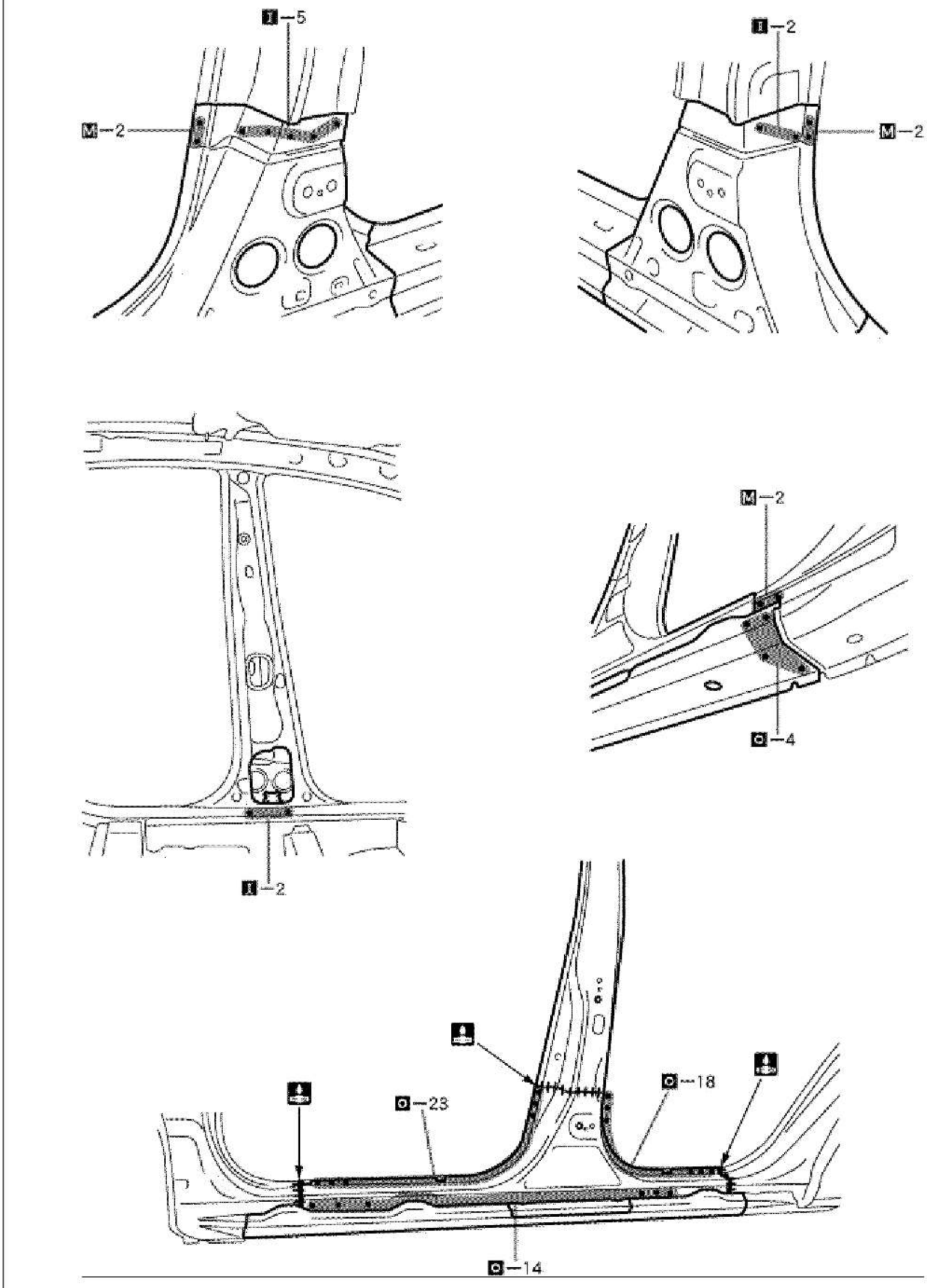
1 Remove the Ⓑ from the Ⓐ.
2 After welding the Ⓑ and Ⓒ to the vehicle install the outer panel.
3 Determine the position of the new parts by the assembly marks of the Ⓑ and Ⓒ.

**PART NAME**

Ⓐ Center Body Pillar Reinforcement
Ⓑ Center Body Pillar Outer Reinforcement
Ⓒ Rocker Outer Reinforce

130mm (5.12in.)

cardiagn.com




cardiagn.com

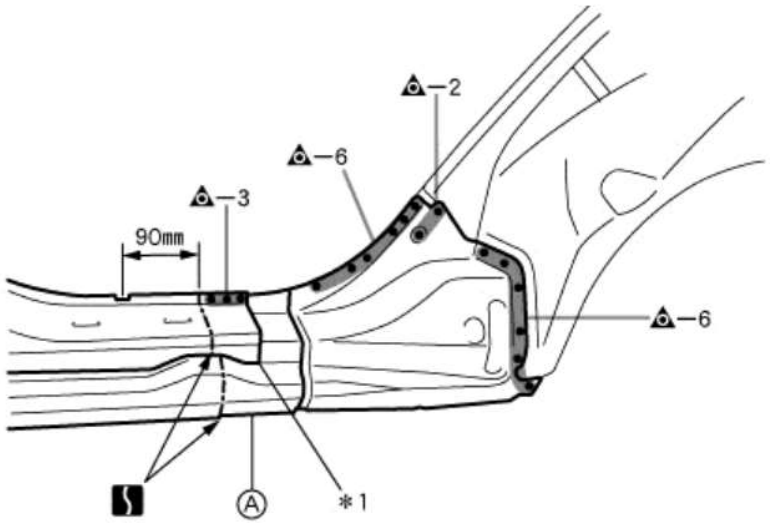
# NO.1 LOWER OUTER RAIL (ASSY)

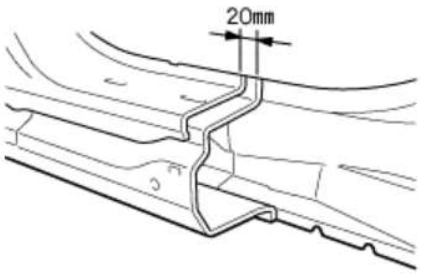


F14498-A

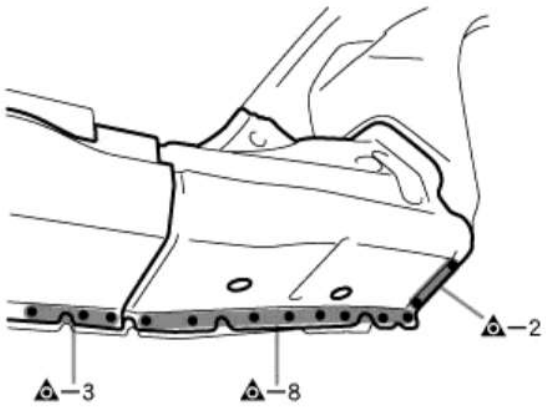
**REMOVAL**

With the quarter panel removed.






F14498

**POINT**

1 *1: This part of the outer panel is reused, because the rocker panel section is cut off at the front position in front of the supplied parts cut position of the outer panel.

**PART NAME**

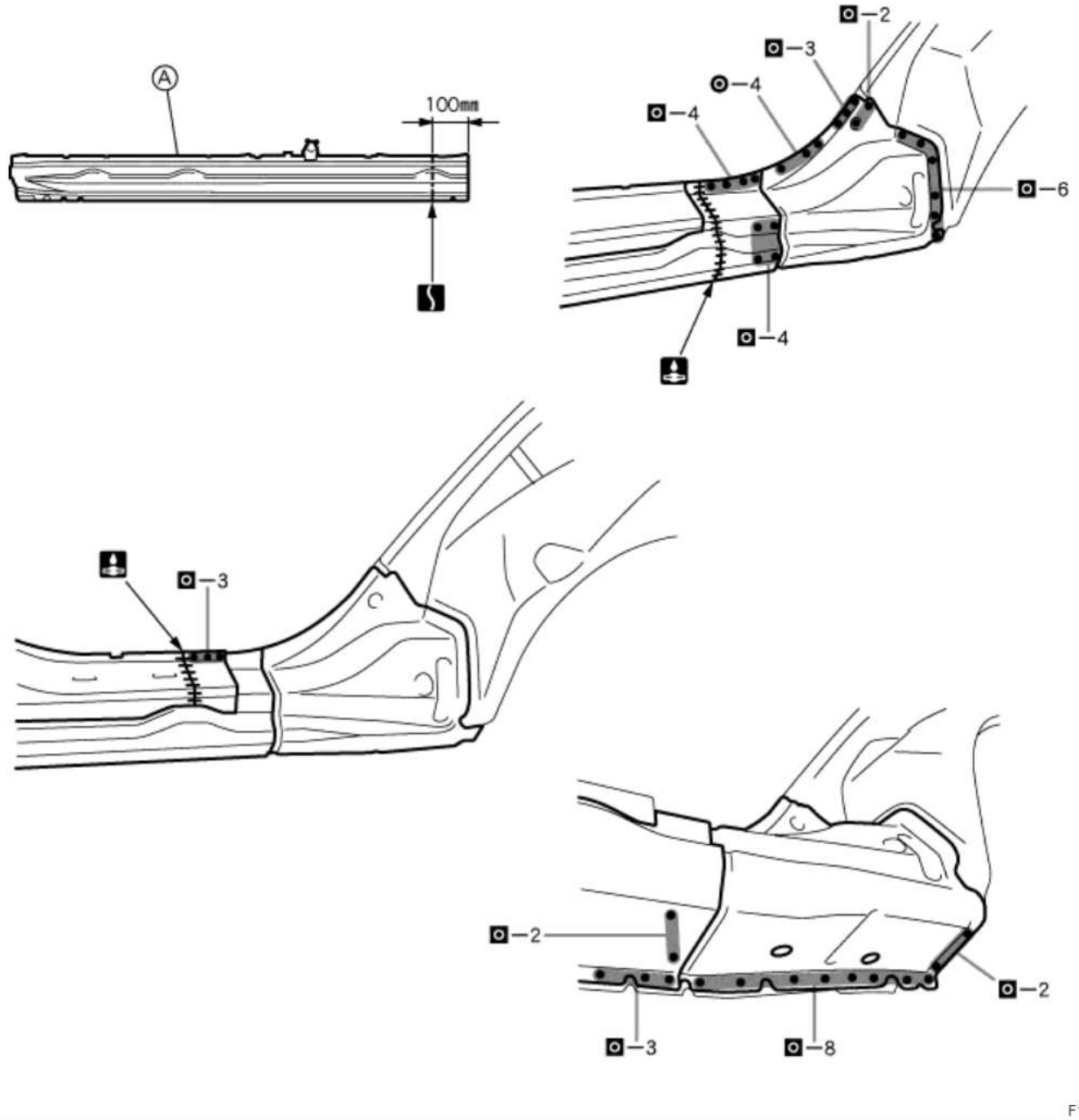
Ⓐ Rocker Outer Reinforce

20mm (0.79in.) 90mm (3.54in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**PART NAME**

Ⓐ Rocker Outer Reinforce

100mm (3.94in.)

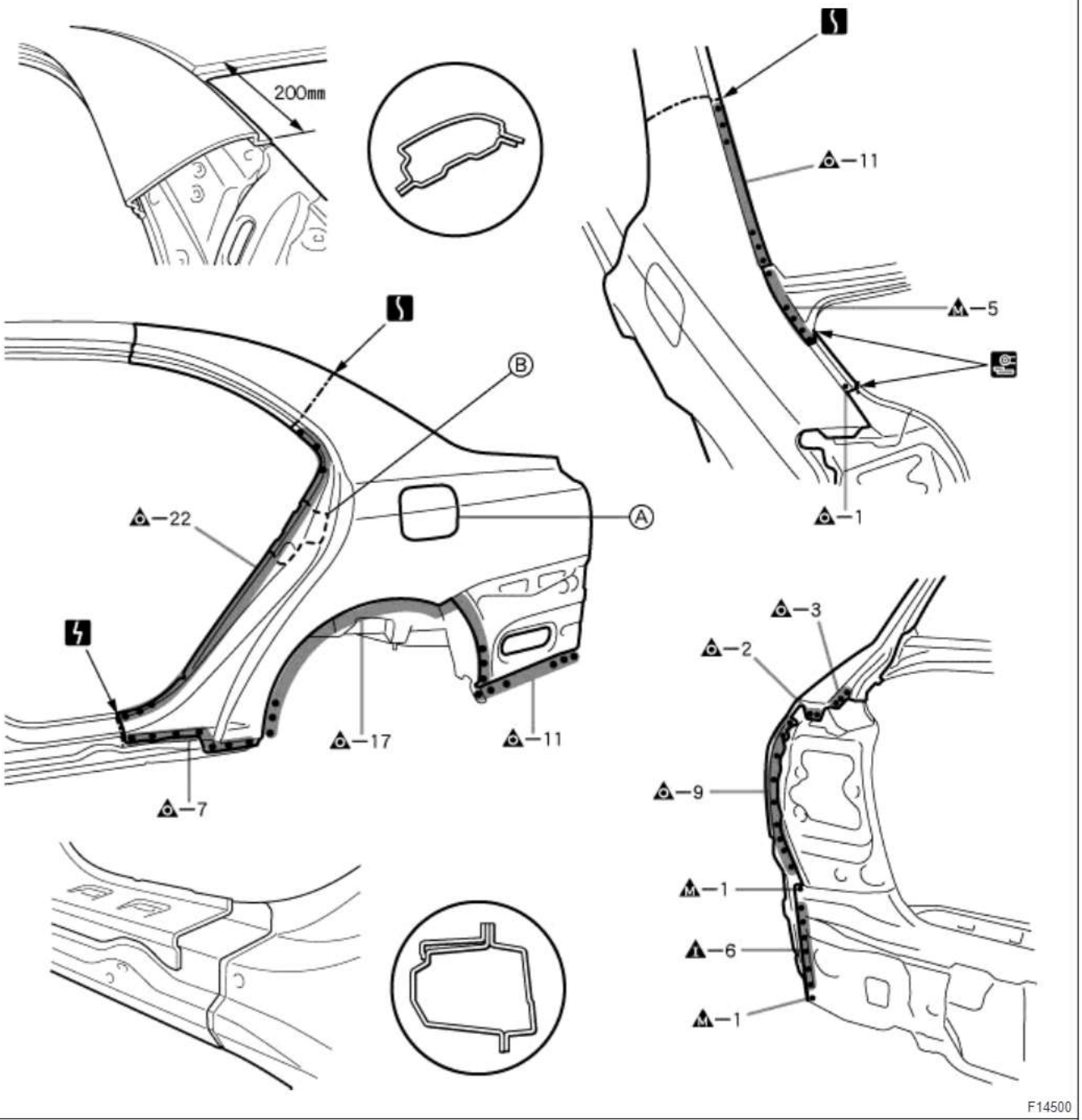
cardiagn.com

# QUARTER PANEL (CUT): Sedan



F14500-A

## REMOVAL




F14500

**POINT**

1 Remove the Ⓑ at the same time.

**PART NAME**

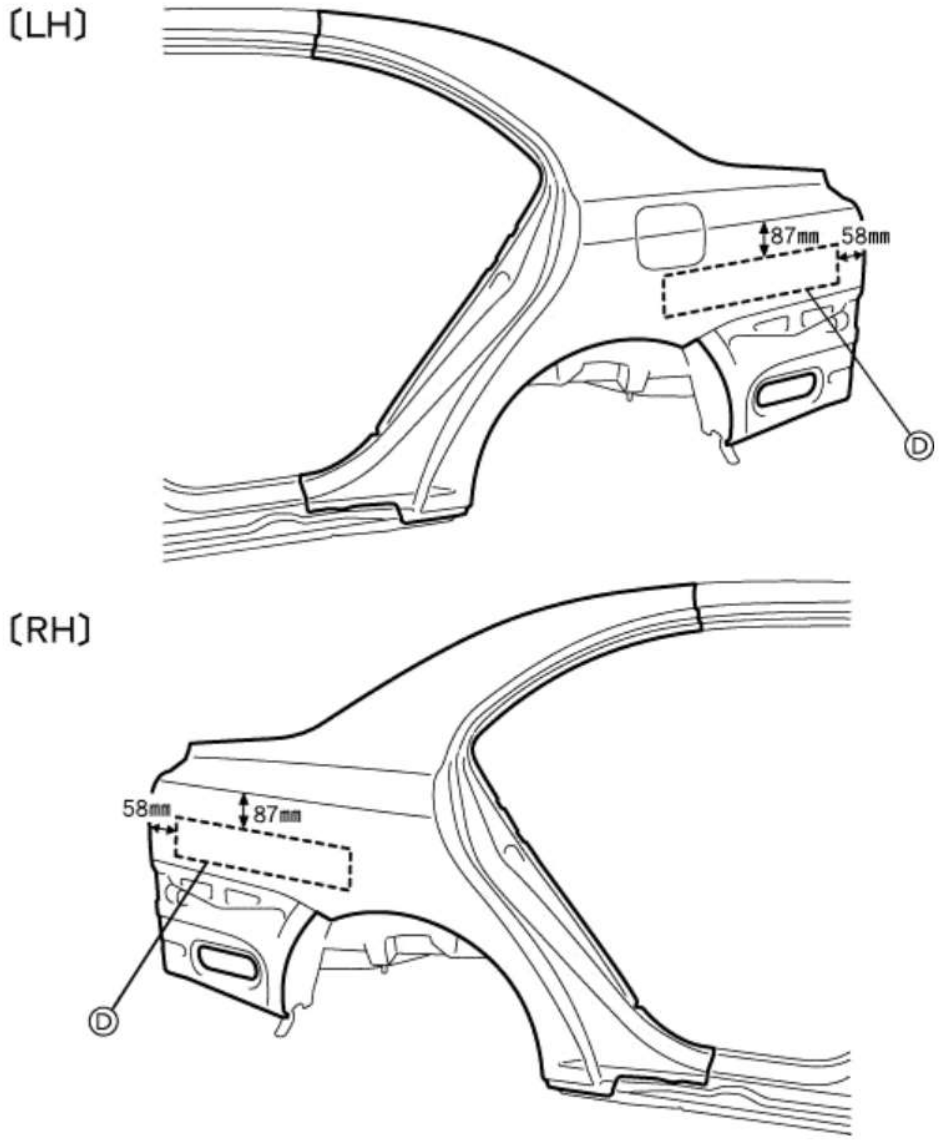
Ⓐ Fuel Filler Opening Lid Ⓑ Quarter Lock Pillar

200mm (7.87in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**POINT**

1 Before initial spot welding the new parts, attach the quarter panel silencer sheet to the inside of the quarter panel, at the position indicated on the diagram above.
*HINT:*
*1) Use the quarter panel silencer sheet (Part No. 67813-44010).*

**PART NAME**

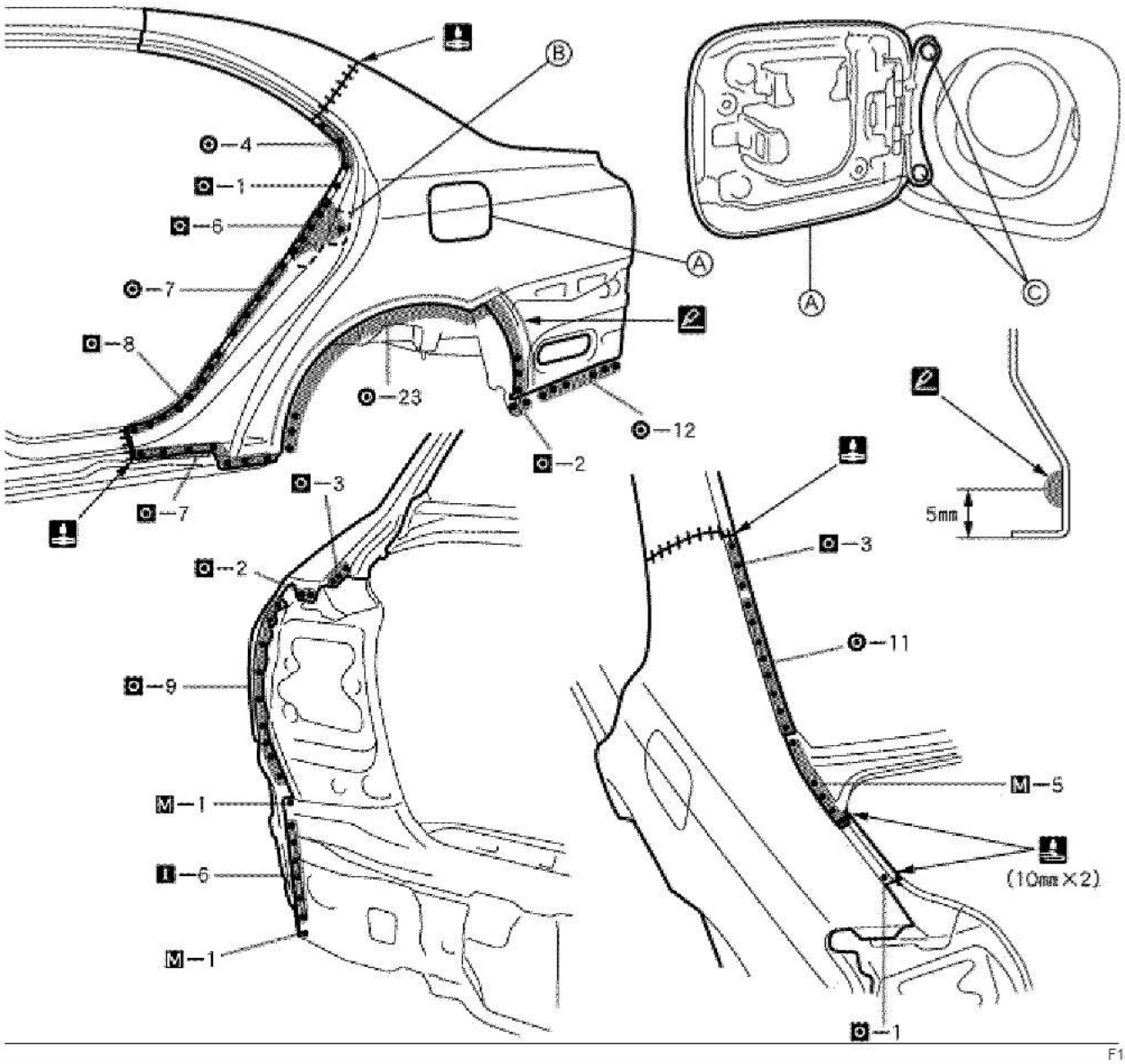
Ⓐ Quarter Panel Silencer Sheet

58mm (2.28in.) 87mm (3.43in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**POINT**

1 Before temporarily installing the new parts, apply body sealer to the wheel arch.
*HINT:*
*1) Apply body sealer about 5mm (0.20in.) from the flange, avoiding any oozing.*
*2) Apply sealer evenly, about 3 – 4mm (0.12 – 0.16in.) in diameter.*

2 Use waterproof rivets for the Ⓐ installation.
*HINT:*
*1) Apply the body sealer before installing the Ⓐ.*

**PART NAME**

Ⓐ Fuel Filler Opening Lid Ⓑ Quarter Lock Pillar Ⓒ Waterproof Rivets

10mm (0.39in.)

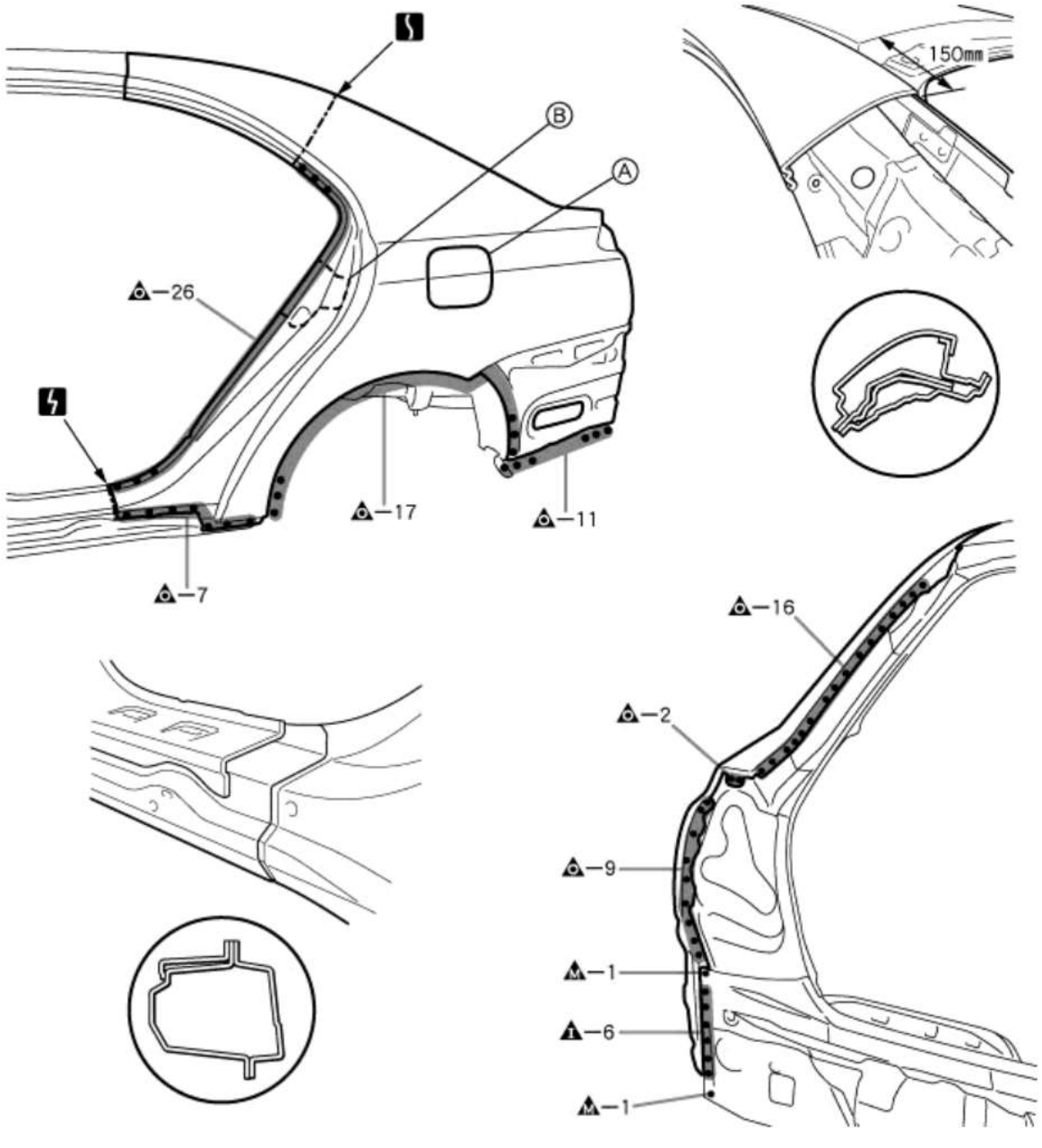
cardiagn.com

# QUARTER PANEL (CUT): Liftback



F14603-A

## REMOVAL




F14603

**POINT**

1 Remove the Ⓑ at the same time.

**PART NAME**

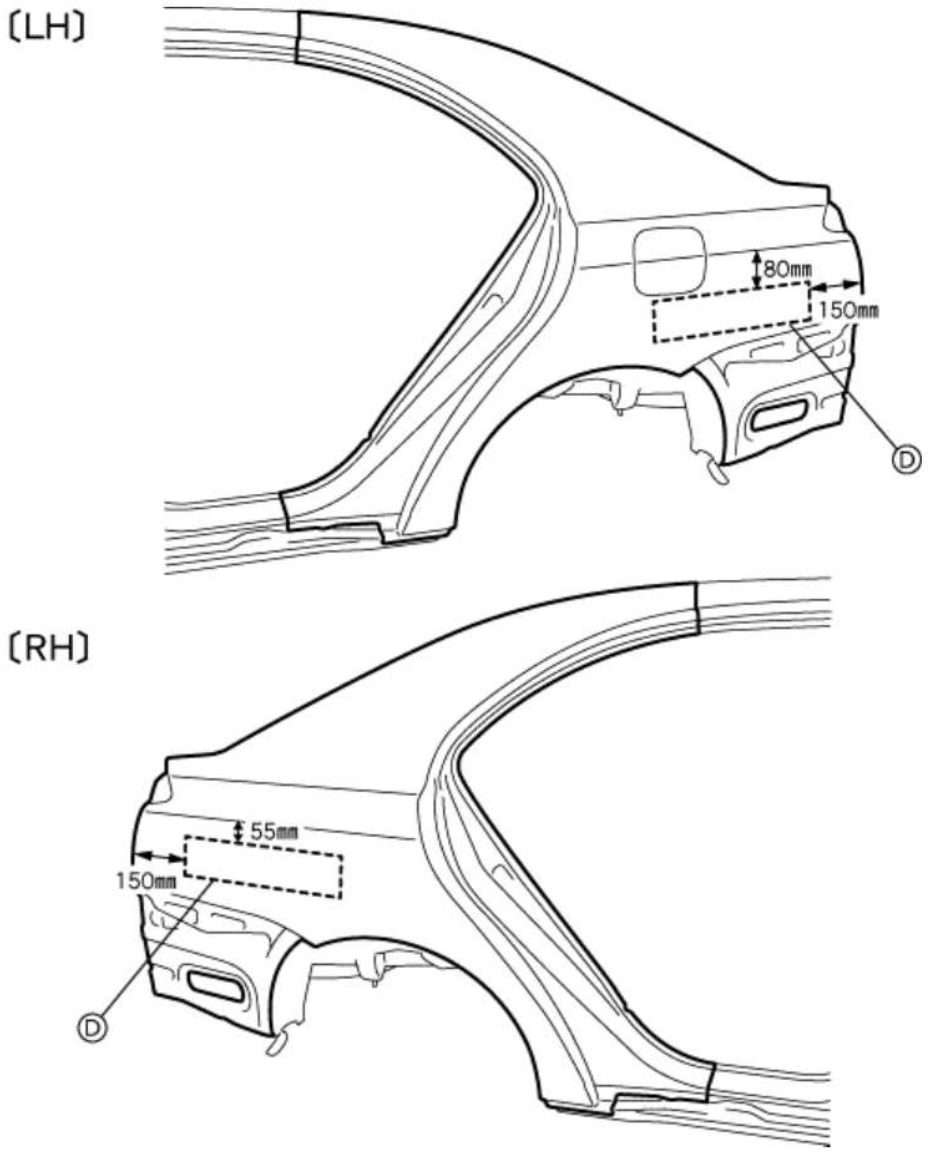
Ⓐ Fuel Filler Opening Lid Ⓑ Quarter Lock Pillar

150mm (5.91in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14625

**POINT**

1 Before initial spot welding the new parts, attach the quarter panel silencer sheet to the inside of the quarter panel, at the position indicated on the diagram above.
*HINT:*
*1) Use the quarter panel silencer sheet (Part No. 67813-44010).*

**PART NAME**

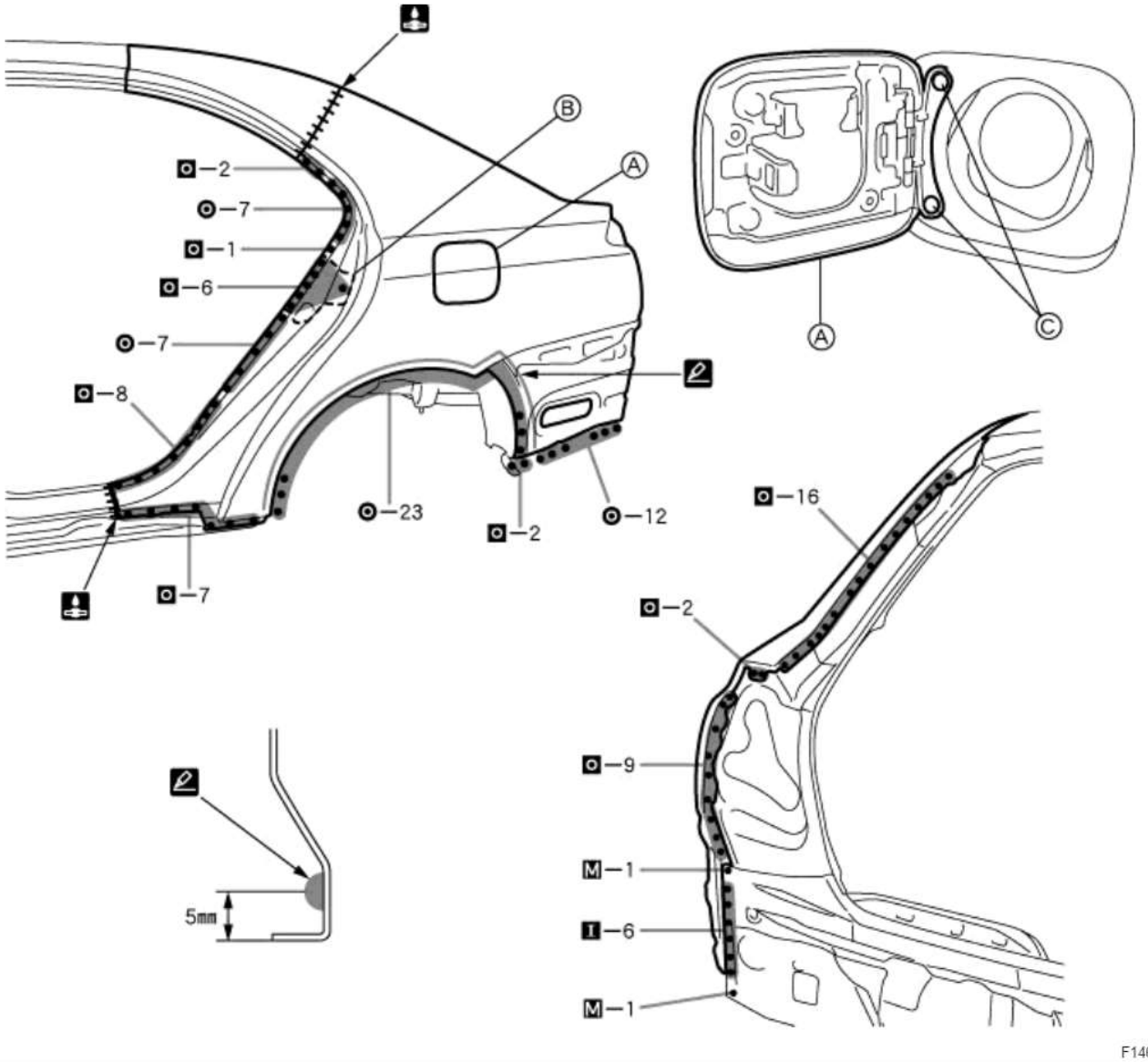
Ⓐ Quarter Panel Silencer Sheet

55mm (2.17in.) 80mm (3.15in.) 150mm (5.91in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**POINT**

1 Before temporarily installing the new parts, apply body sealer to the wheel arch.
*HINT:*
*1) Apply body sealer about 5mm (0.20in.) from the flange, avoiding any oozing.*
*2) Apply sealer evenly, about 3 – 4mm (0.12 – 0.16in.) in diameter.*

2 Use waterproof rivets for the Ⓐ installation.
*HINT:*
*1) Apply the body sealer before installing the Ⓐ.*

**PART NAME**

Ⓐ Fuel Filler Opening Lid Ⓑ Quarter Lock Pillar Ⓒ Waterproof Rivets

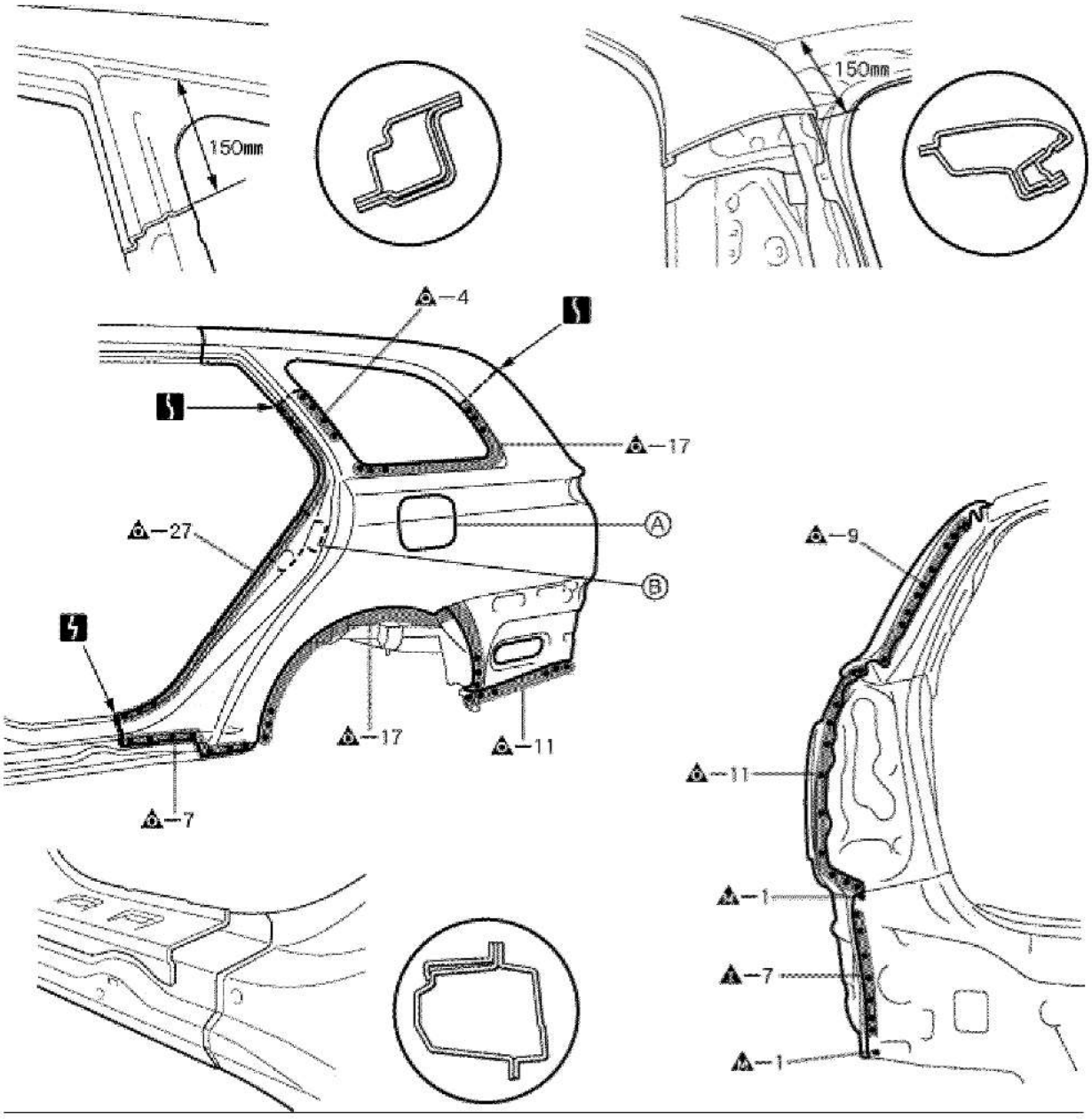
cardiagn.com

# QUARTER PANEL (CUT): Wagon



F14605-A

## REMOVAL




F14605

**POINT**

1 Remove the Ⓑ at the same time.

**PART NAME**

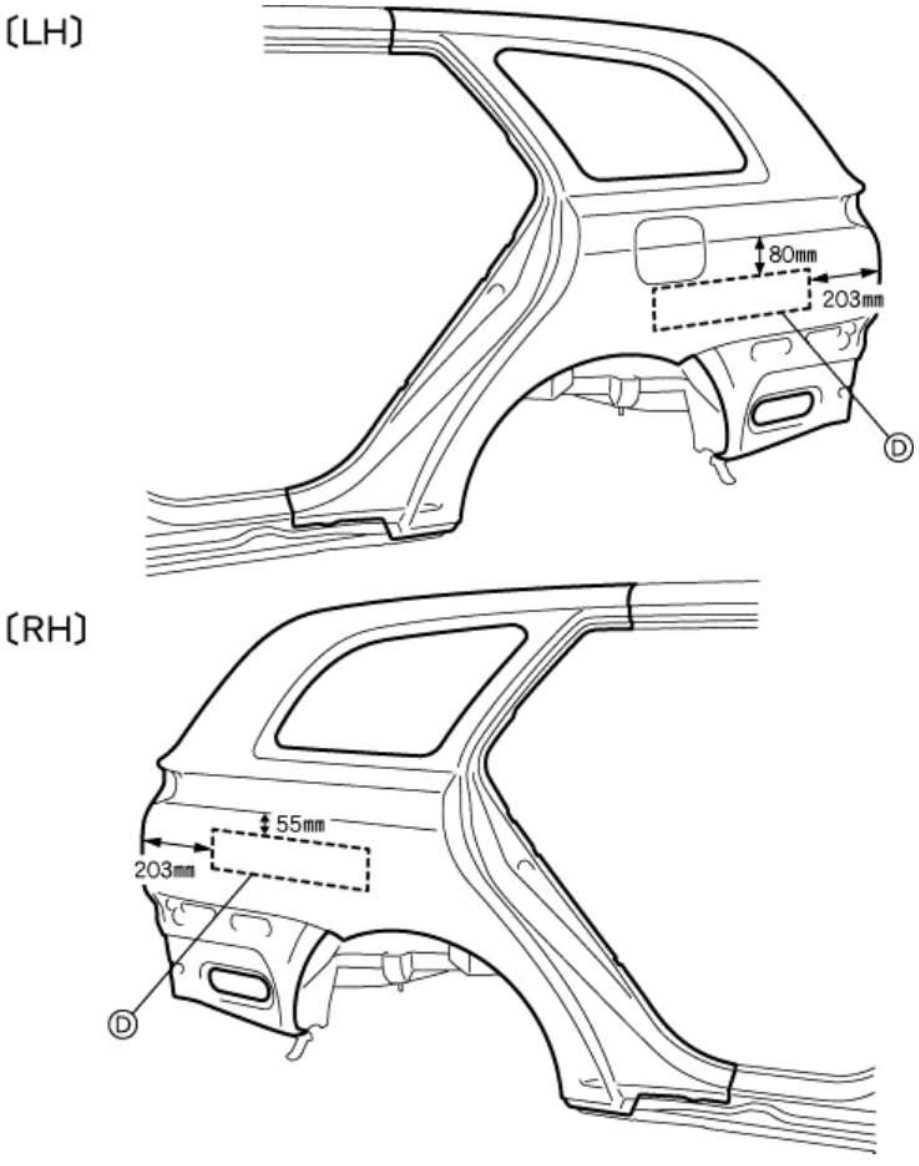
Ⓐ Fuel Filler Opening Lid Ⓑ Quarter Lock Pillar

150mm (5.91in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**POINT**

1 Before initial spot welding the new parts, attach the quarter panel silencer sheet to the inside of the quarter panel, at the position indicated on the diagram above.
*HINT:*
*1) Use the quarter panel silencer sheet (Part No. 67813-44010).*

**PART NAME**

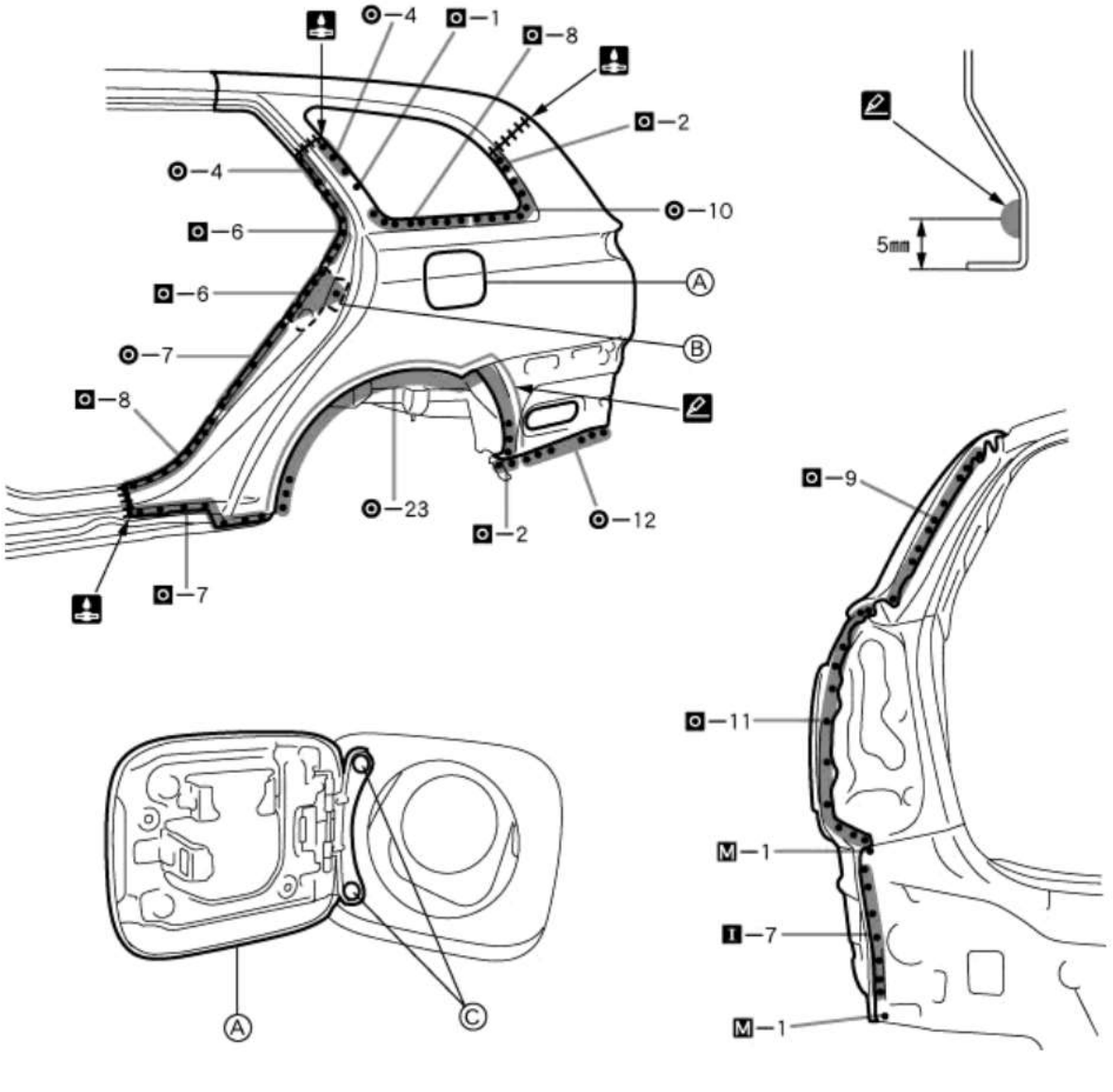
Ⓐ Quarter Panel Silencer Sheet

55mm (2.17in.) 80mm (3.15in.) 150mm (5.91in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**POINT**

1 Before temporarily installing the new parts, apply body sealer to the wheel arch.
*HINT:*
*1) Apply body sealer about 5mm (0.20in.) from the flange, avoiding any oozing.*
*2) Apply sealer evenly, about 3 – 4mm (0.12 – 0.16in.) in diameter.*

2 Use waterproof rivets for the Ⓐ installation.
*HINT:*
*1) Apply the body sealer before installing the Ⓐ.*

**PART NAME**

Ⓐ Fuel Filler Opening Lid Ⓑ Quarter Lock Pillar Ⓒ Waterproof Rivets

cardiagn.com

# QUARTER WHEEL HOUSING OUTER PANEL (ASSY): Sedan

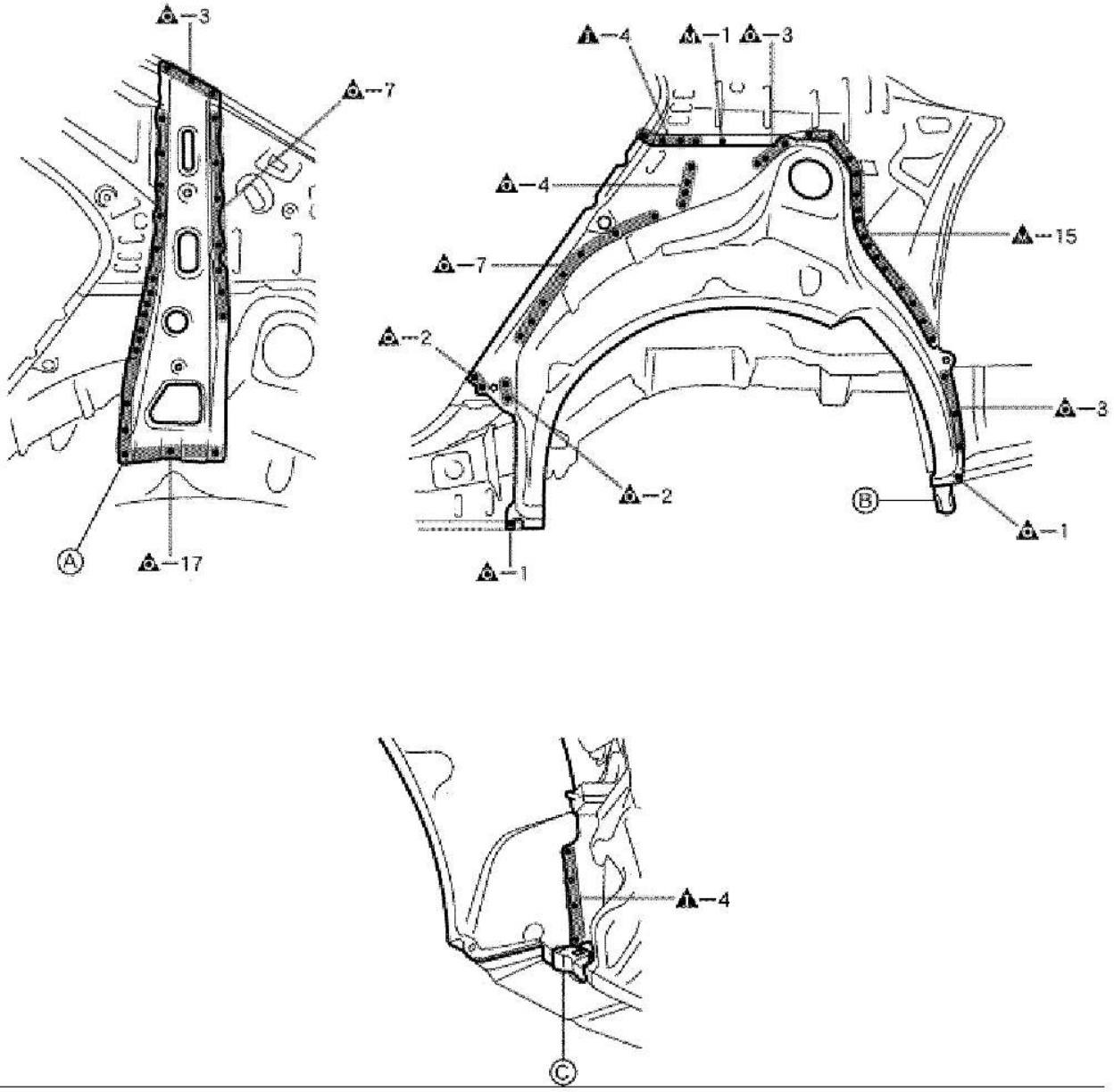


F14607-A

**REMOVAL**

With the quarter panel, No.1 lower outer rail removed.

(LH)




F14607

**POINT**

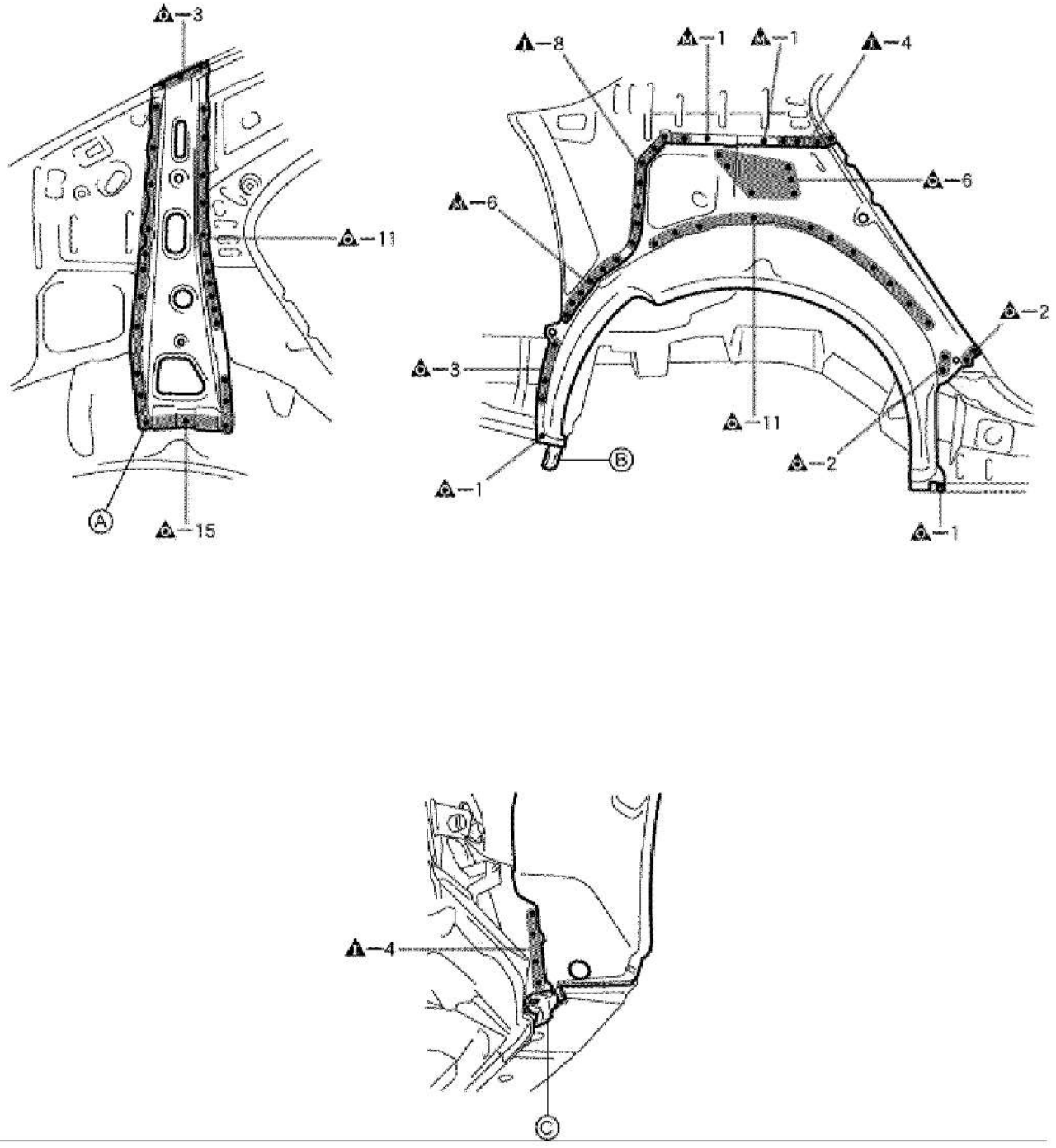
1 After removing the Ⓐ, remove the quarter wheel housing outer panel.

**PART NAME**

Ⓐ Roof Side Outer Panel Ⓑ Rear Bumper Side Bracket Ⓒ Rear Wheel Opening No.1 Bracket

cardiagn.com

(RH)




F14608

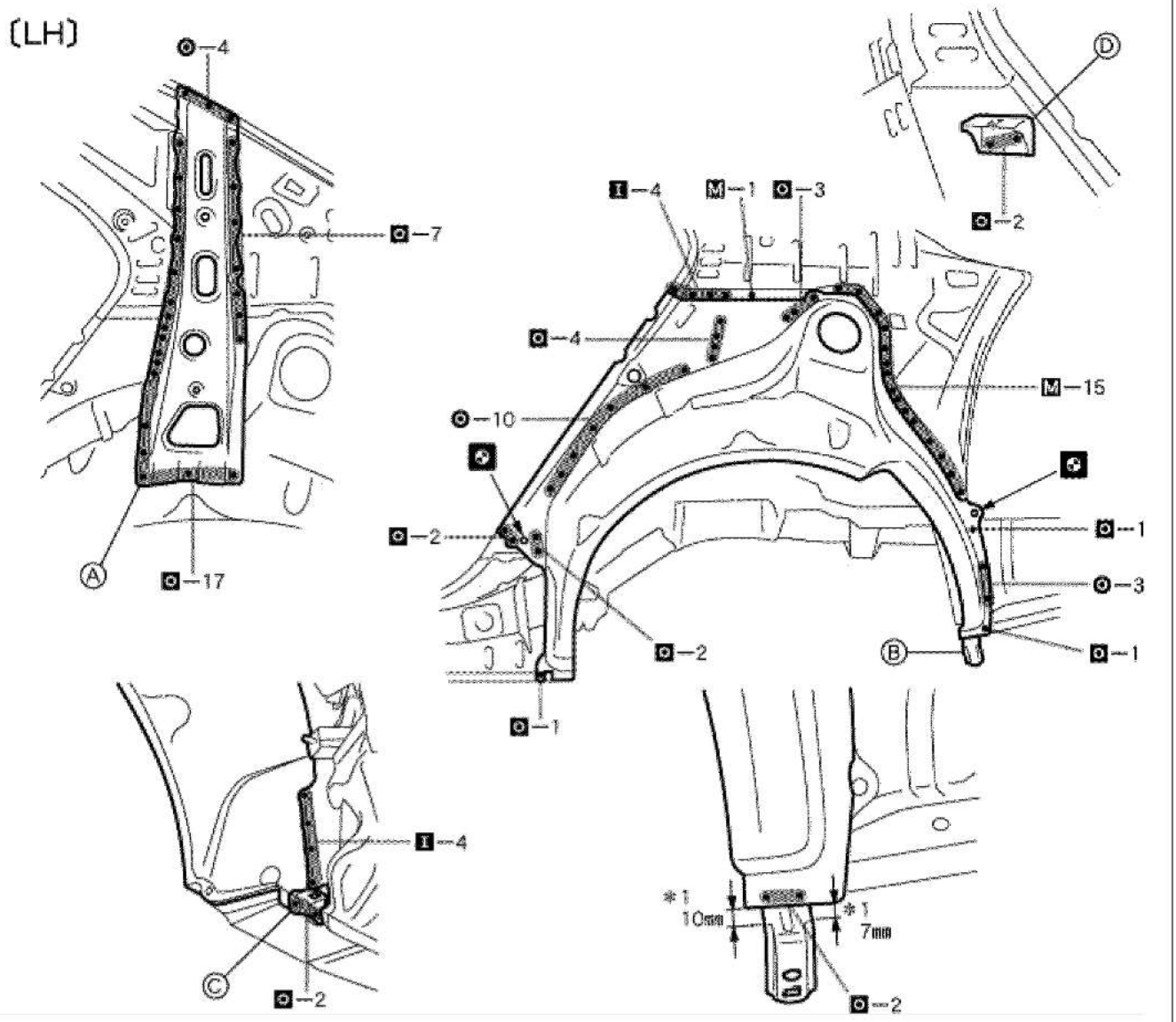
**PART NAME**

Ⓐ Roof Side Outer Panel Ⓑ Rear Bumper Side Bracket Ⓒ Rear Wheel Opening No.1 Bracket

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14609

**POINT**

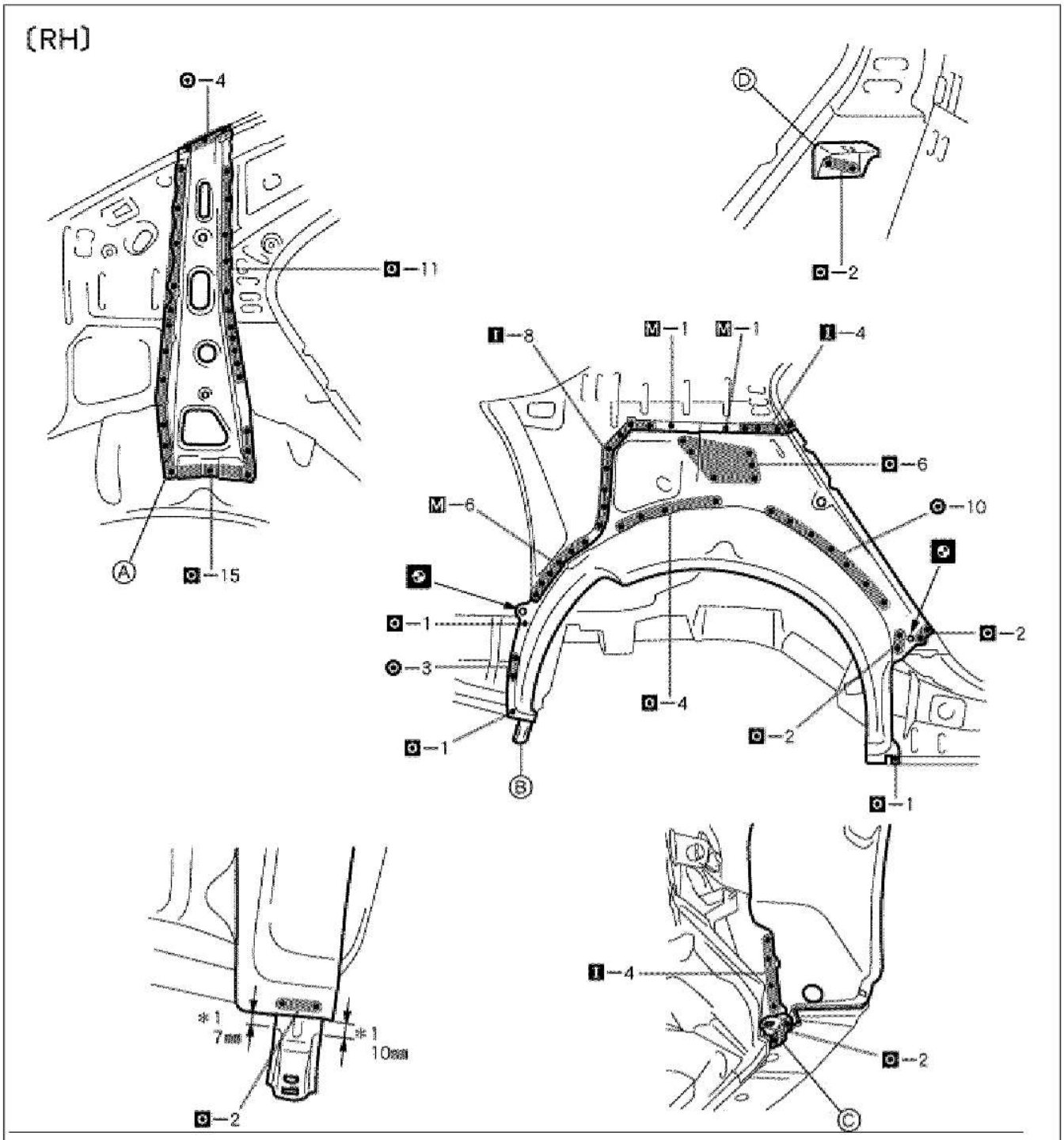
1 Determine the position of the new parts by assembly marks of the inner and outer panels.
2 *1: The value is reference value.

**PART NAME**

Ⓐ Roof Side Outer Panel Ⓑ Rear Bumper Side Bracket Ⓒ Rear Wheel Opening No.1 Bracket
Ⓓ Rear Seat Back Stopper Bracket

7mm (0.28in.) 10mm (0.39in.)

cardiagn.com




F14610

**POINT**

1 Determine the position of the new parts by assembly marks of the inner and outer panels.
2 *1: The value is reference value.

**PART NAME**

Ⓐ Roof Side Outer Panel Ⓑ Rear Bumper Side Bracket Ⓒ Rear Wheel Opening No.1 Bracket
Ⓓ Rear Seat Back Stopper Bracket

7mm (0.28in.) 10mm (0.39in.)

cardiagn.com

# QUARTER WHEEL HOUSING OUTER PANEL (ASSY): Liftback

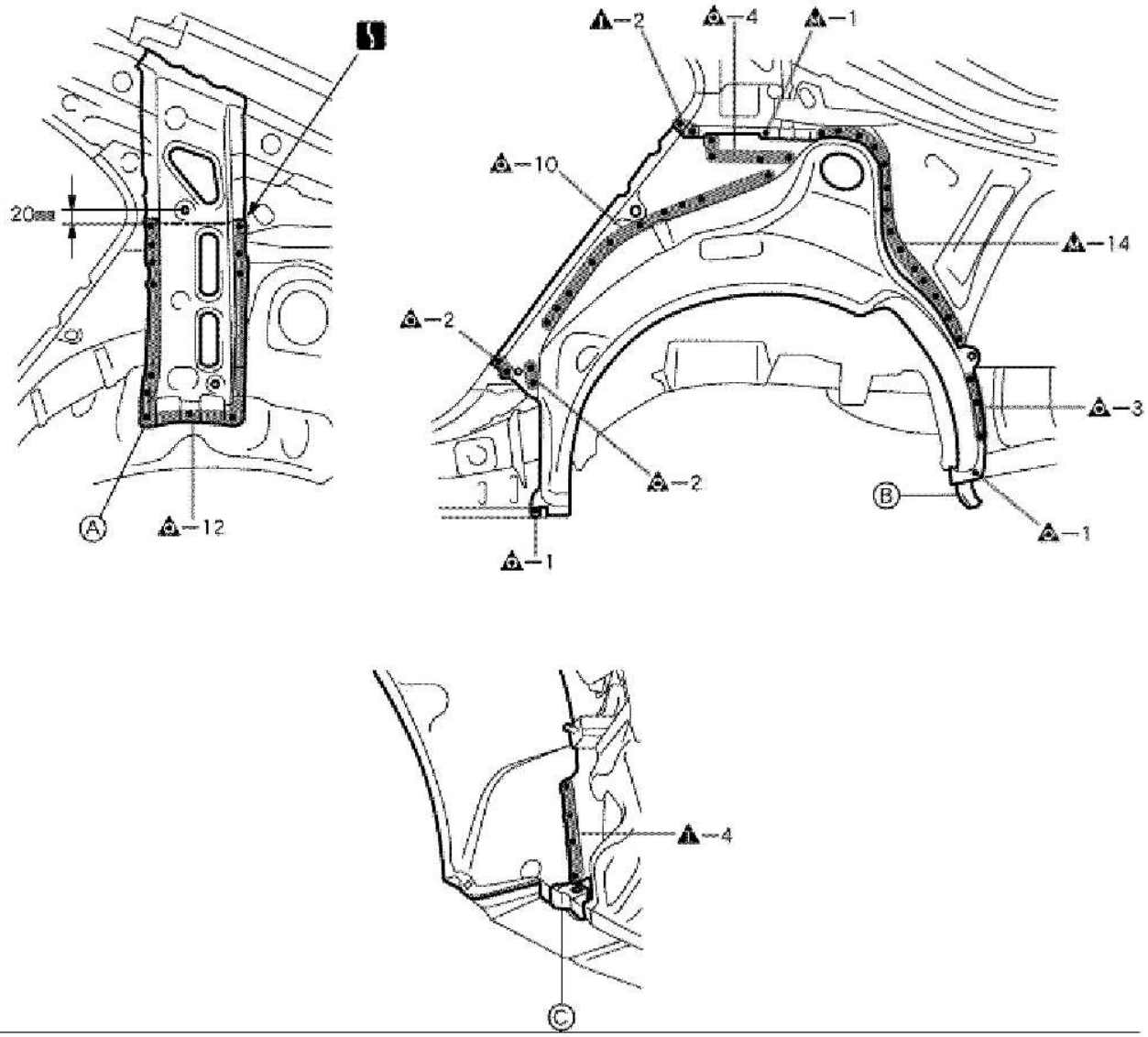


F14611-A

**REMOVAL**

With the quarter panel, No.1 lower outer rail removed.

(LH)




F14611

**POINT**

1 After removing the Ⓐ, remove the quarter wheel housing outer panel.

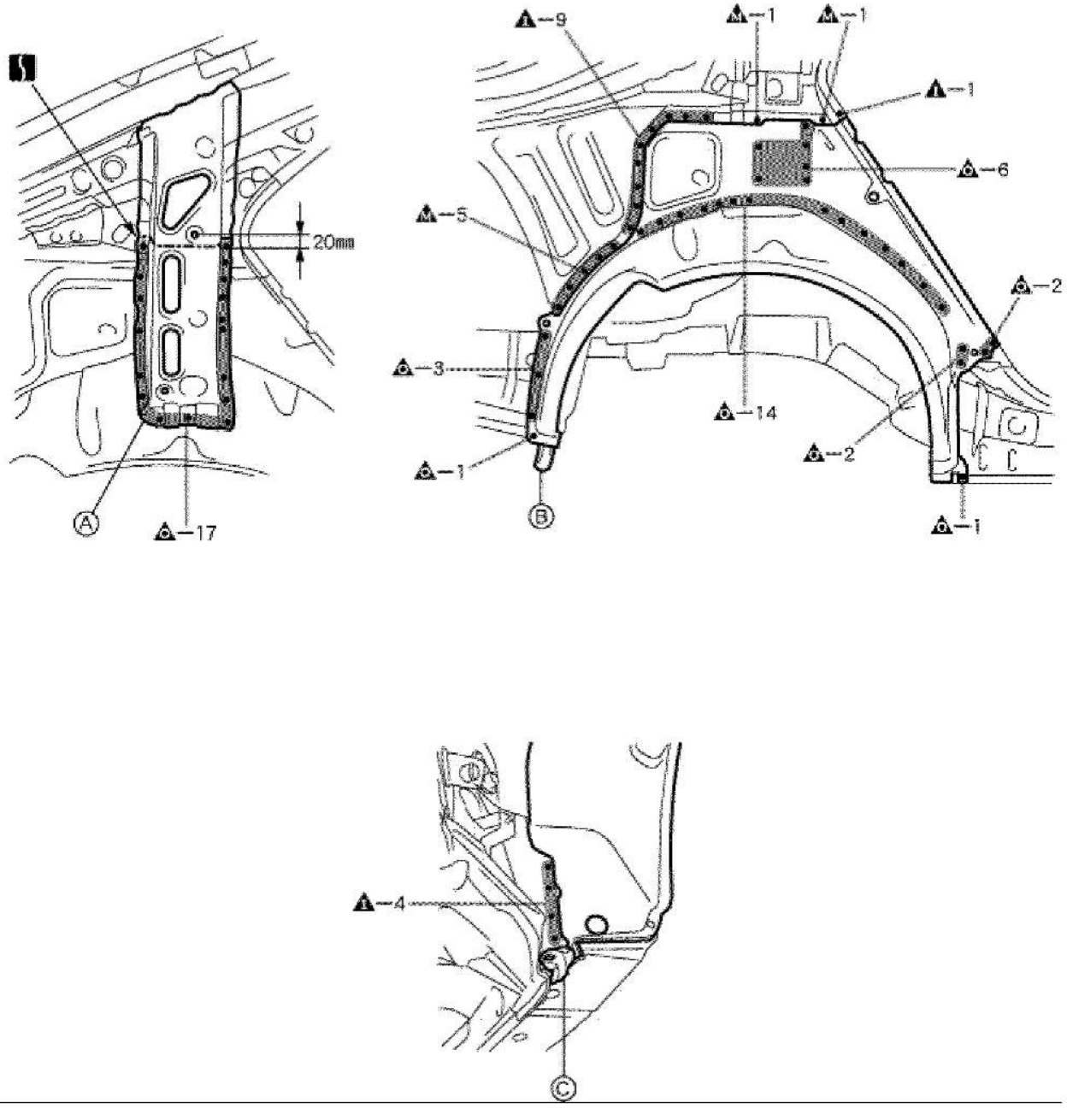
**PART NAME**

Ⓐ Roof Side Outer Panel Ⓑ Rear Bumper Side Bracket Ⓒ Rear Wheel Opening No.1 Bracket

20mm (0.79in.)

cardiagn.com

(RH)




F14612

**PART NAME**

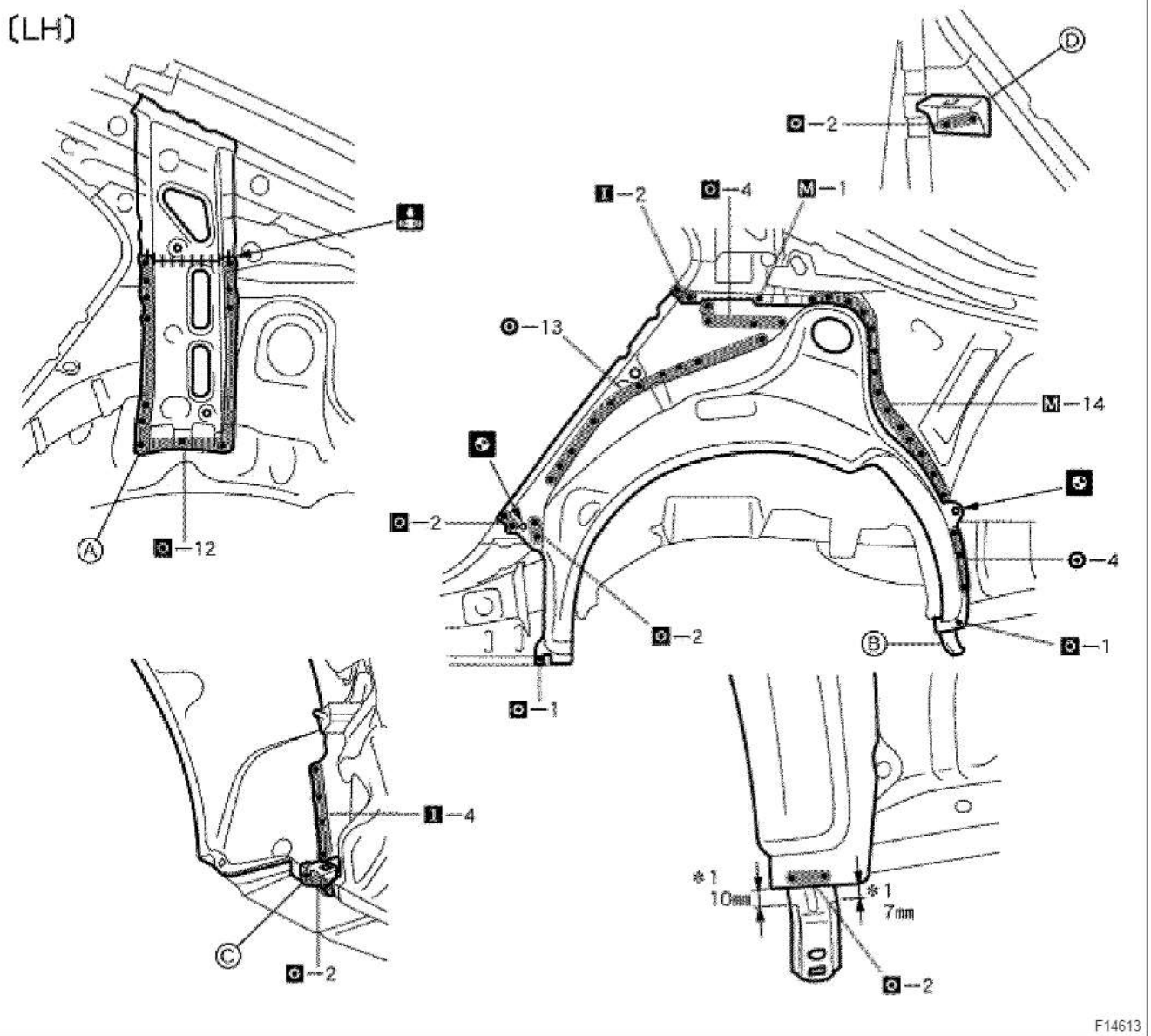
Ⓐ Roof Side Outer Panel Ⓑ Rear Bumper Side Bracket Ⓒ Rear Wheel Opening No.1 Bracket

20mm (0.79in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**POINT**

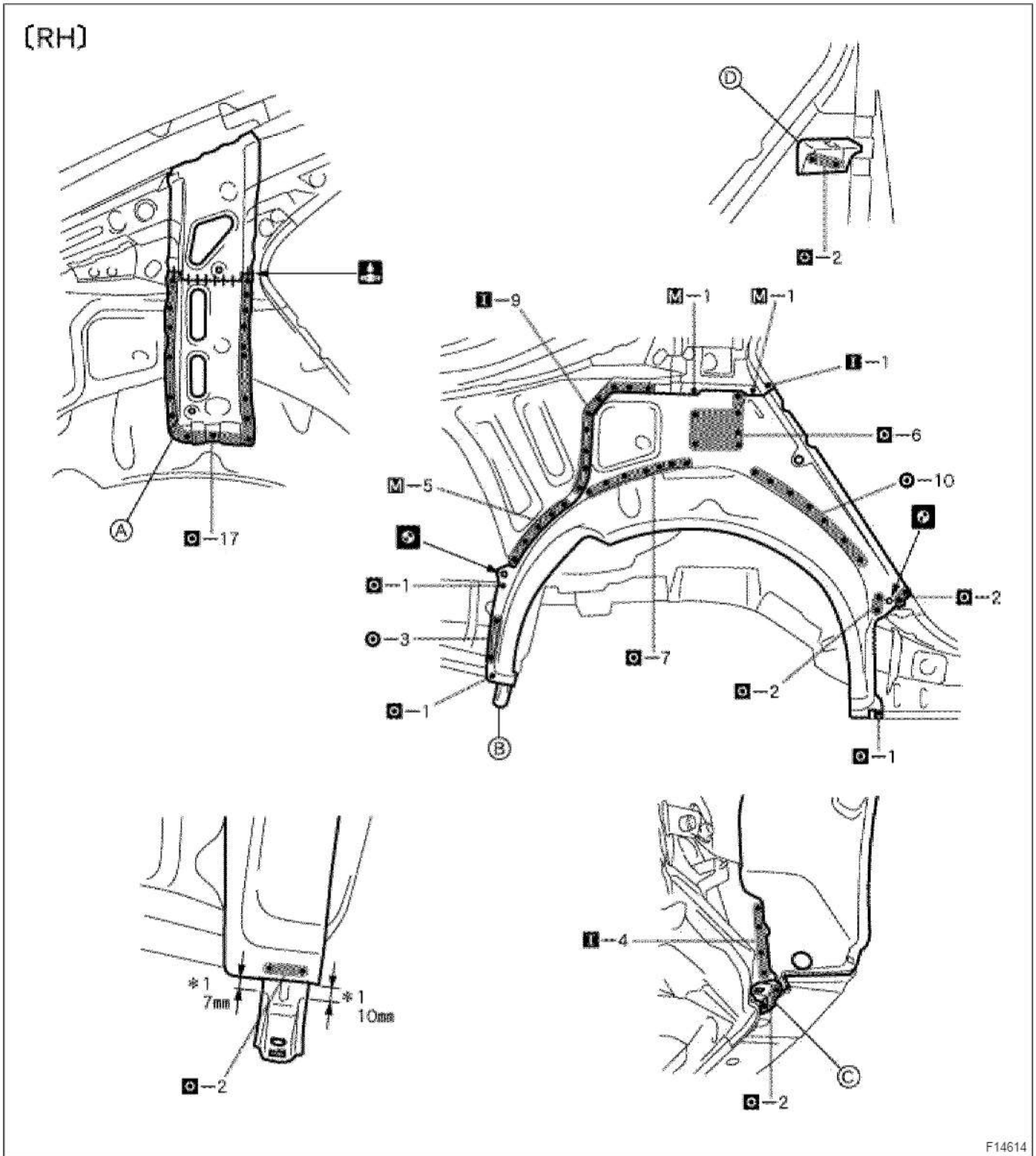
1 Determine the position of the new parts by assembly marks of the inner and outer panels.
2 *1: The value is reference value.

**PART NAME**

Ⓐ Roof Side Outer Panel Ⓑ Rear Bumper Side Bracket Ⓒ Rear Wheel Opening No.1 Bracket
Ⓓ Rear Seat Back Stopper Bracket

7mm (0.28in.) 10mm (0.39in.)

cardiagn.com




**POINT**

1 Determine the position of the new parts by assembly marks of the inner and outer panels.

2 *1: The value is reference value.

**PART NAME**

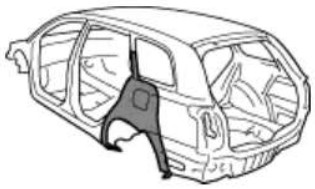
Ⓐ Roof Side Outer Panel Ⓑ Rear Bumper Side Bracket Ⓒ Rear Wheel Opening No.1 Bracket

Ⓓ Rear Seat Back Stopper Bracket

7mm (0.28in.) 10mm (0.39in.)

cardiagn.com

# QUARTER WHEEL HOUSING OUTER PANEL (ASSY): Wagon

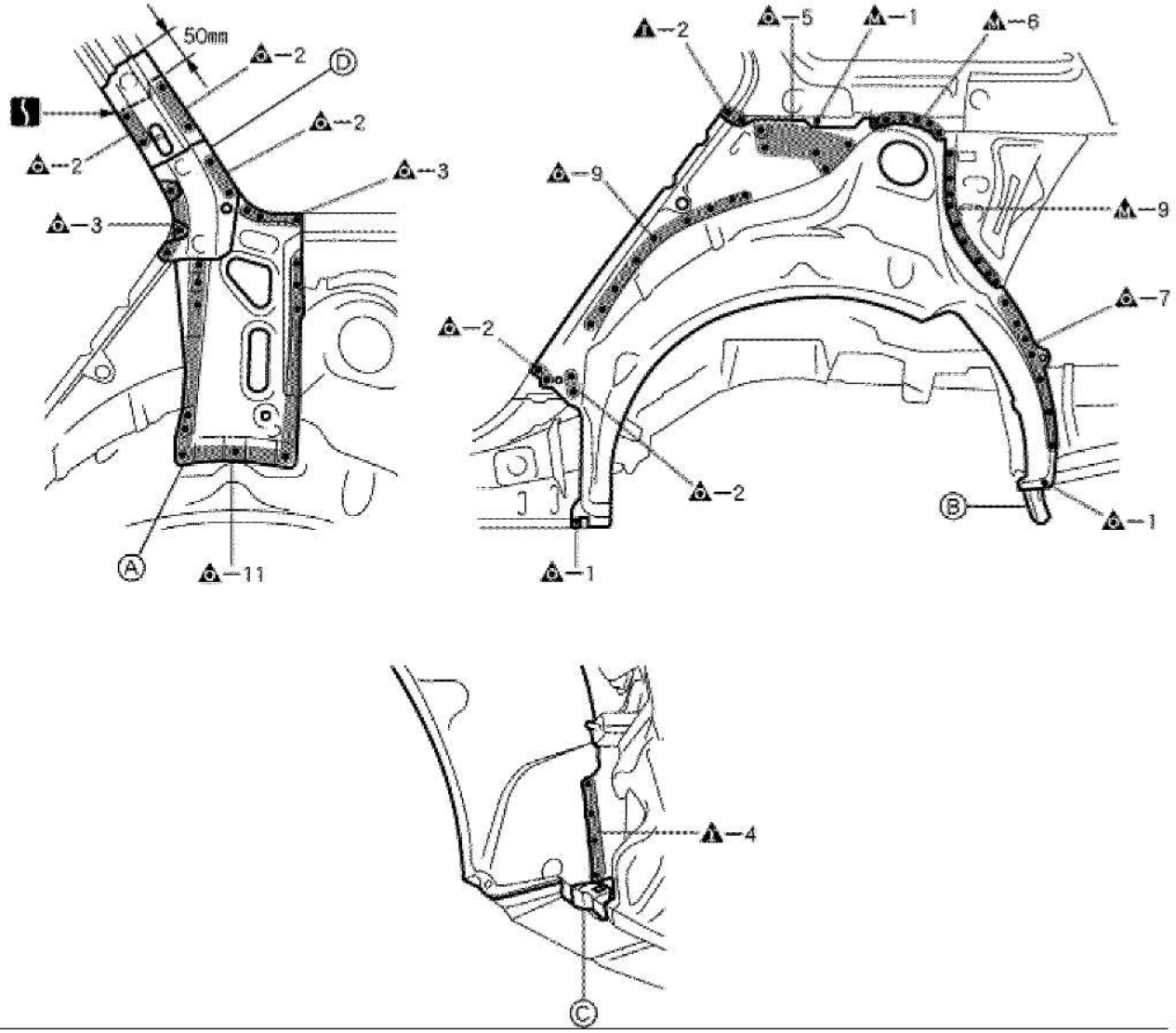


F14615-A

**REMOVAL**

With the quarter panel, No.1 lower outer rail removed.

(LH)




F14615

**POINT**

1 After removing the Ⓐ and Ⓓ, remove the quarter wheel housing outer panel.

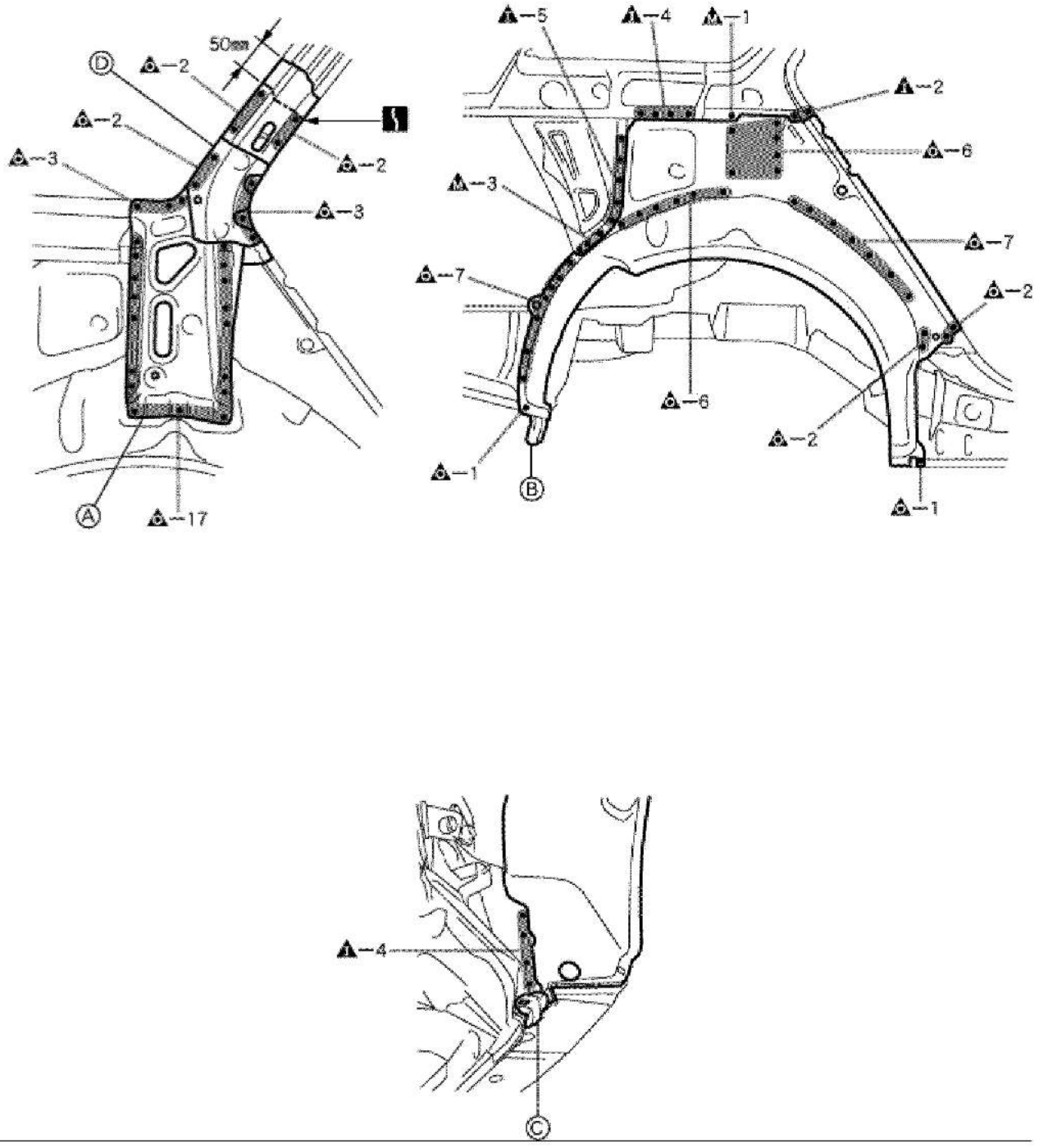
**PART NAME**

Ⓐ Roof Side Outer Panel Ⓑ Rear Bumper Side Bracket Ⓒ Rear Wheel Opening No.1 Bracket
Ⓓ Roof Side Inner Front Extension

50mm (1.97in.)

cardiagn.com

(RH)




F14616

**PART NAME**

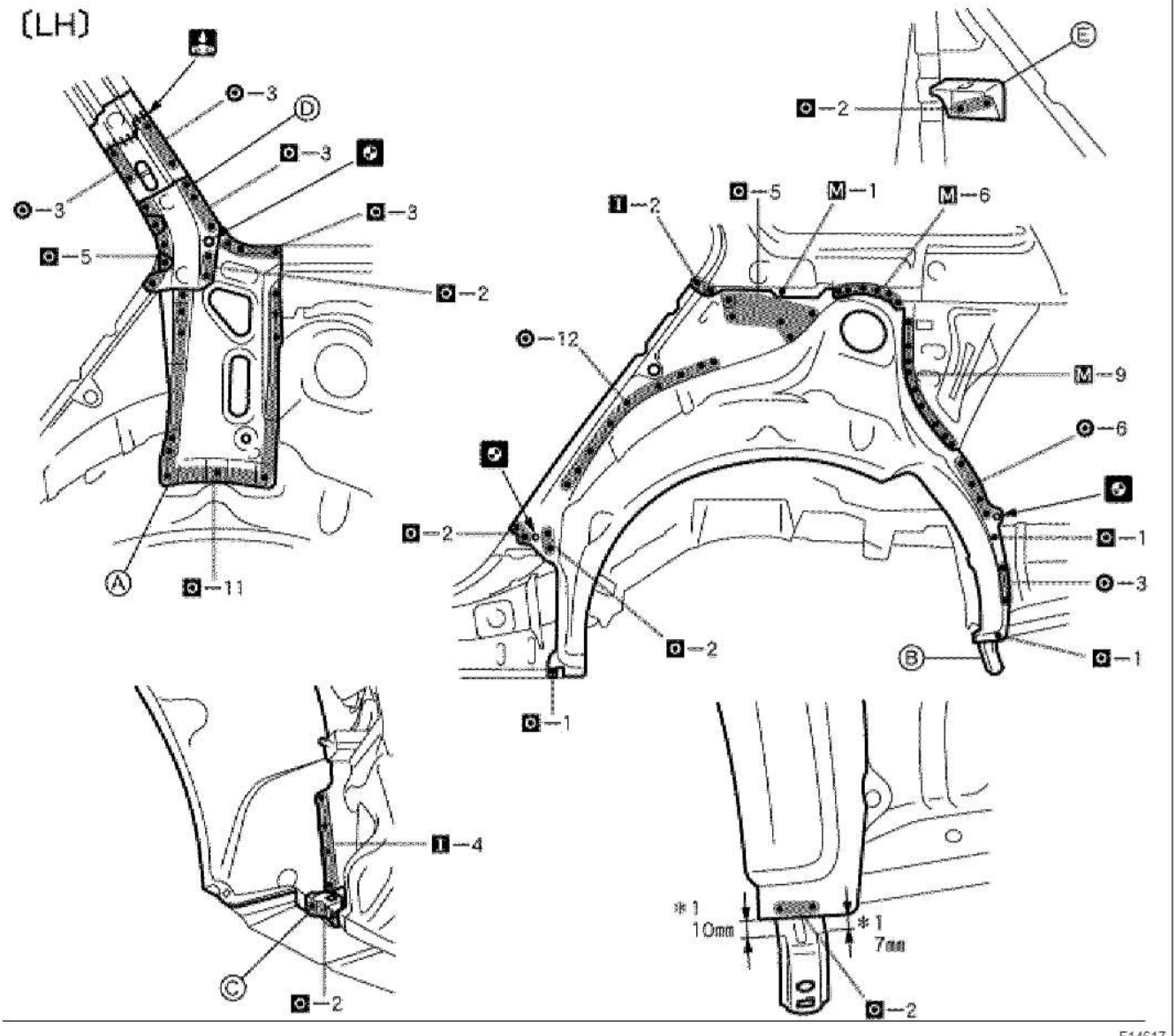
Ⓐ Roof Side Outer Panel Ⓑ Rear Bumper Side Bracket Ⓒ Rear Wheel Opening No.1 Bracket
Ⓓ Roof Side Inner Front Extension

50mm (1.97in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**POINT**

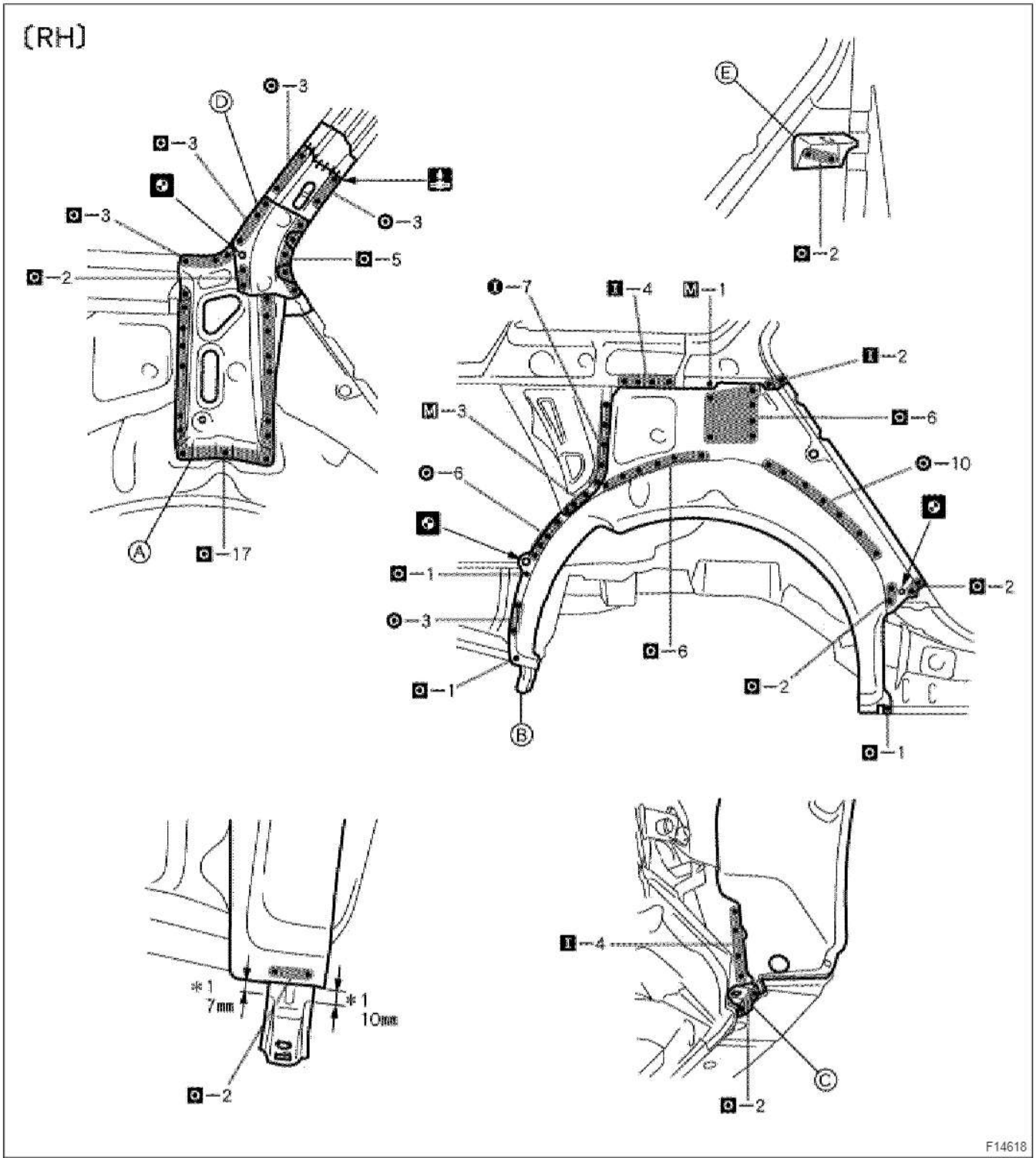
1 Determine the position of the new parts by assembly marks of the inner and outer panels.
2 *1: The value is reference value.

**PART NAME**

Ⓐ Roof Side Outer Panel Ⓑ Rear Bumper Side Bracket Ⓒ Rear Wheel Opening No.1 Bracket
Ⓓ Roof Side Inner Front Extension Ⓔ Rear Seat Back Stopper Bracket

7mm (0.28in.) 10mm (0.39in.)

cardiagn.com




**POINT**

1 Determine the position of the new parts by assembly marks of the inner and outer panels.
2 *1: The value is reference value.

**PART NAME**

Ⓐ Roof Side Outer Panel Ⓑ Rear Bumper Side Bracket Ⓒ Rear Wheel Opening No.1 Bracket
Ⓓ Roof Side Inner Front Extension Ⓔ Rear Seat Back Stopper Bracket

7mm (0.28in.) 10mm (0.39in.)

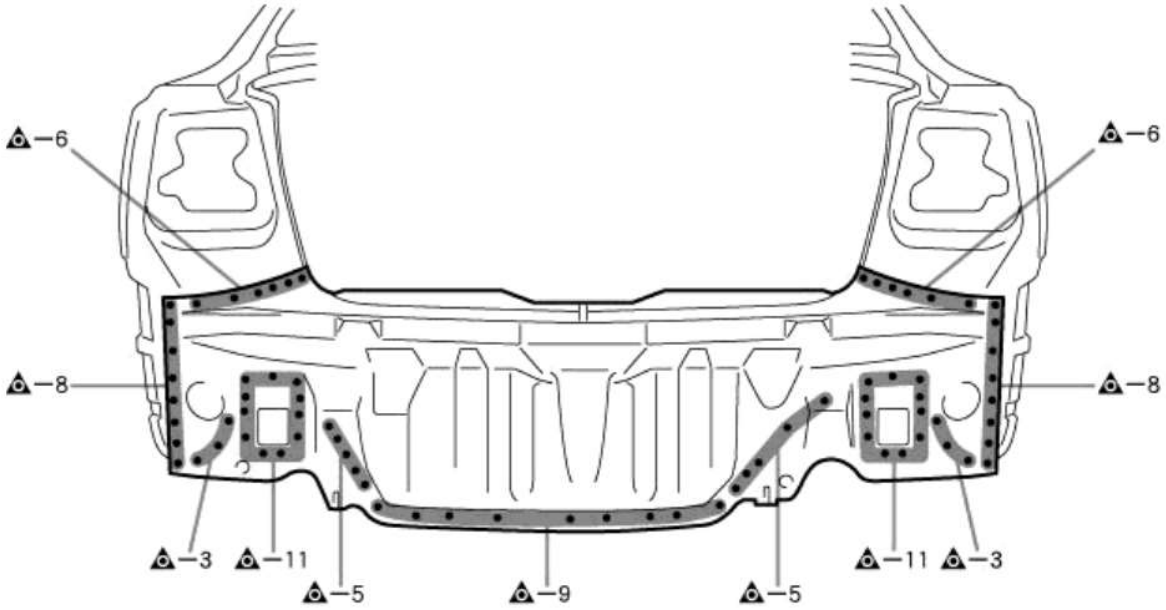
cardiagn.com

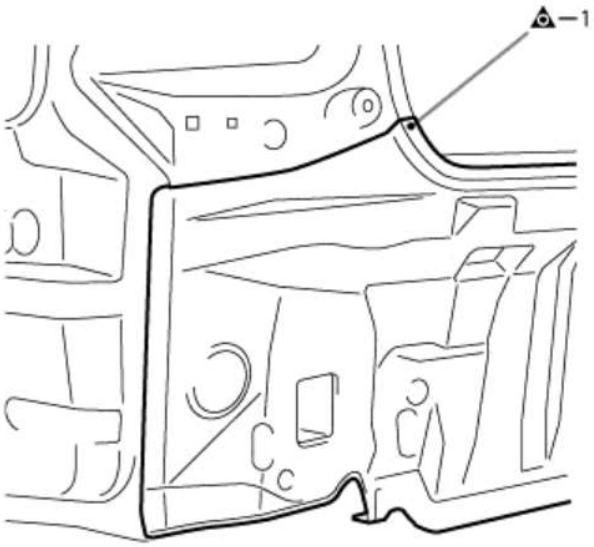
# BODY LOWER BACK PANEL (ASSY): Sedan, Liftback



F14420-A

## REMOVAL



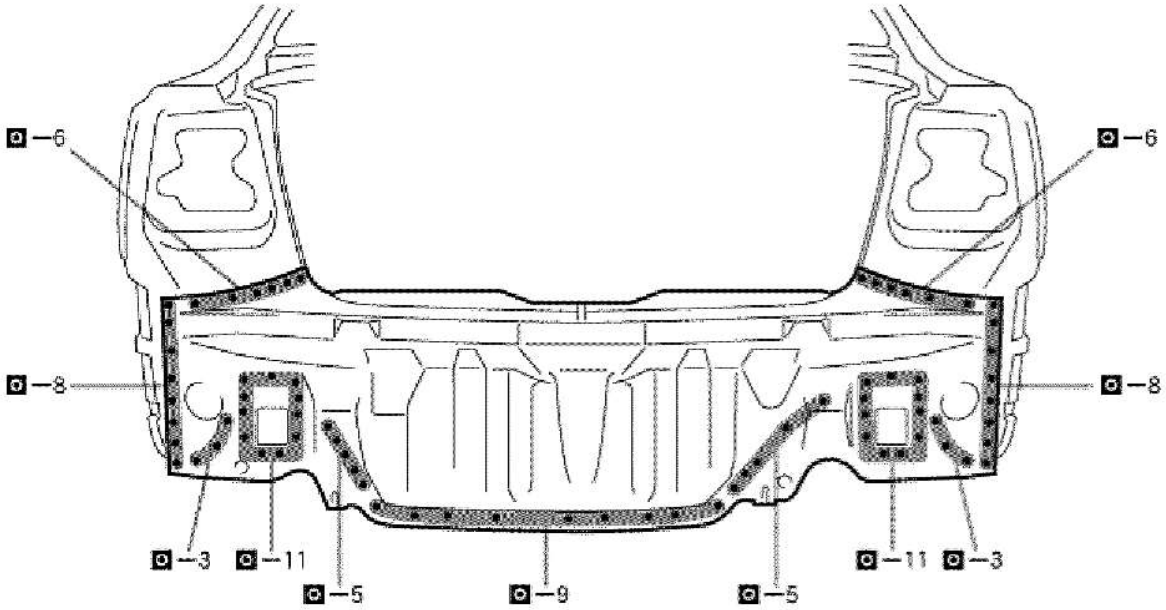



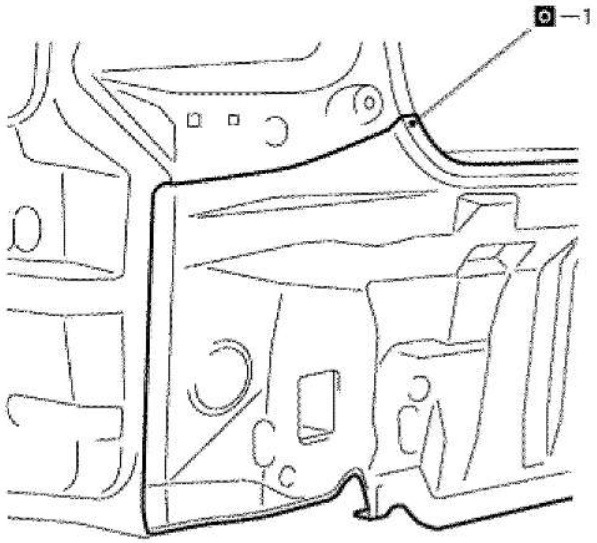

F14420

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14421

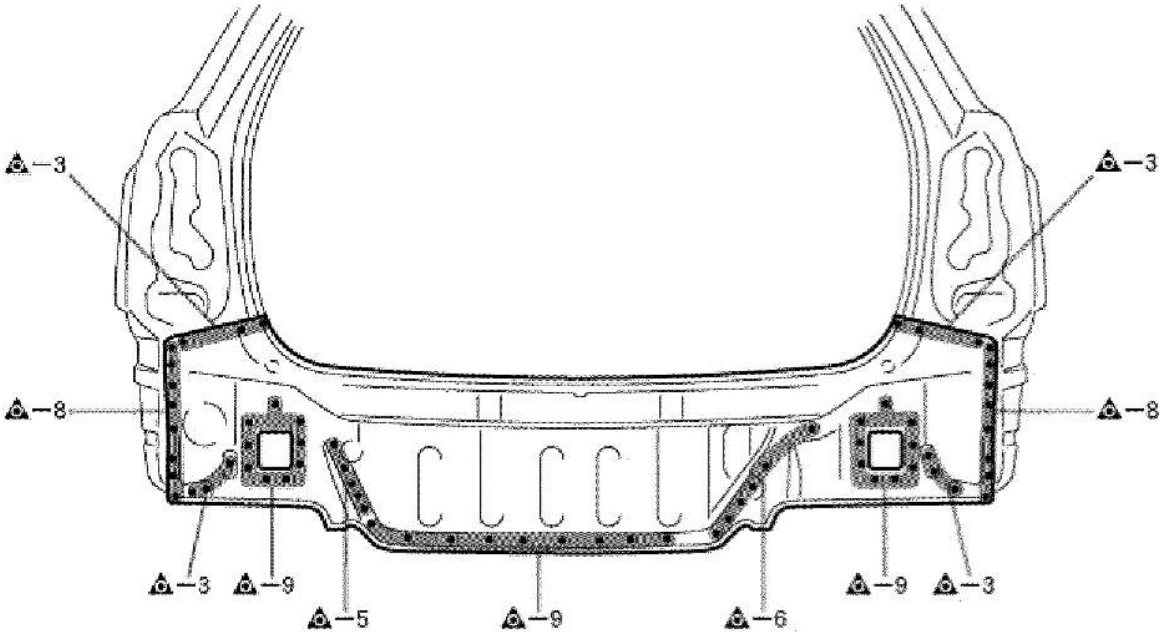
cardiagn.com

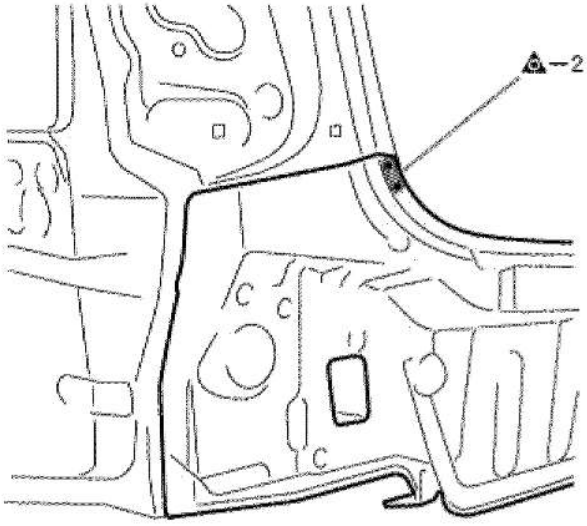
# BODY LOWER BACK PANEL (ASSY): Wagon



F14422-A

## REMOVAL



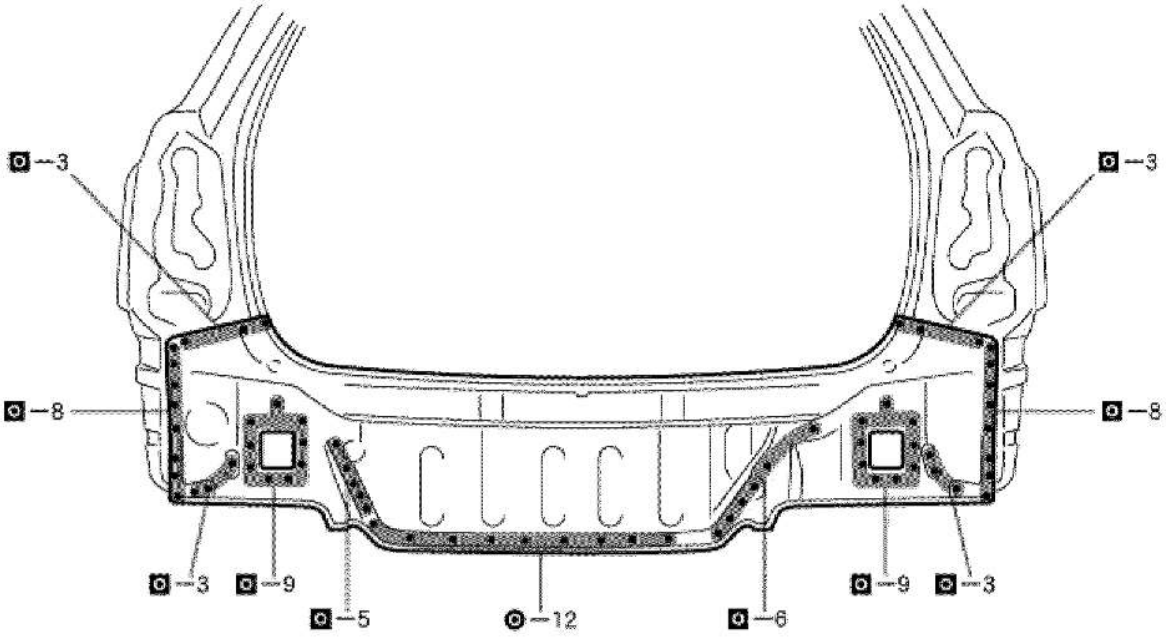



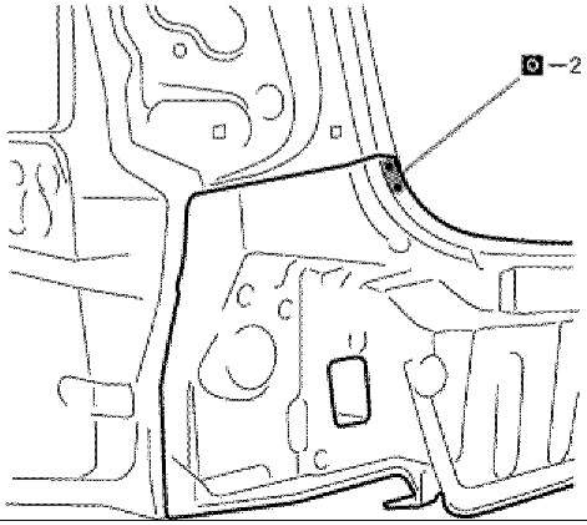

F14422

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14423

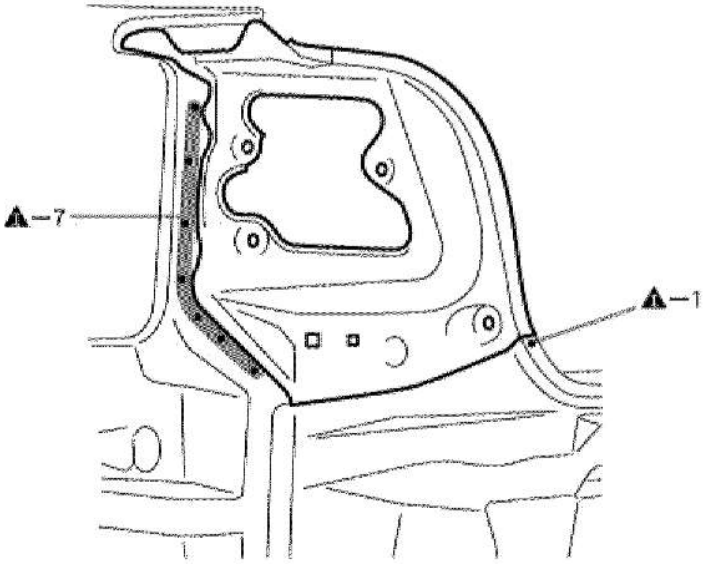
cardiagn.com

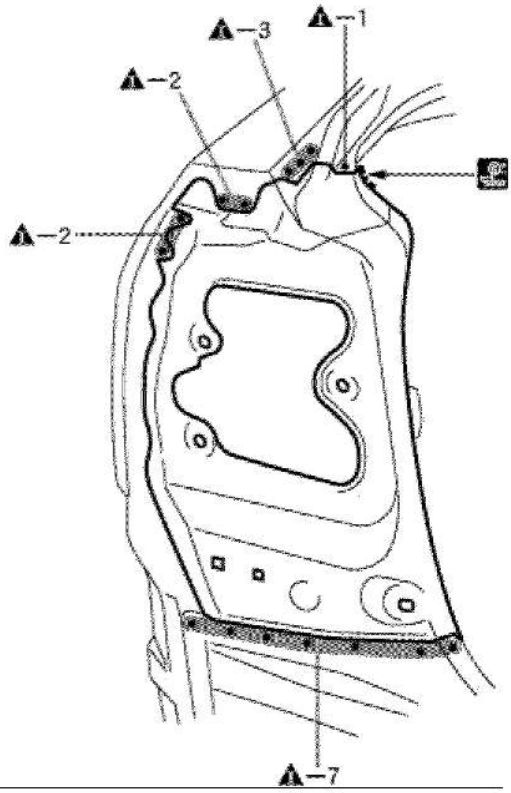
# QUARTER PANEL END HOUSING (ASSY): Sedan



F14424-A

## REMOVAL



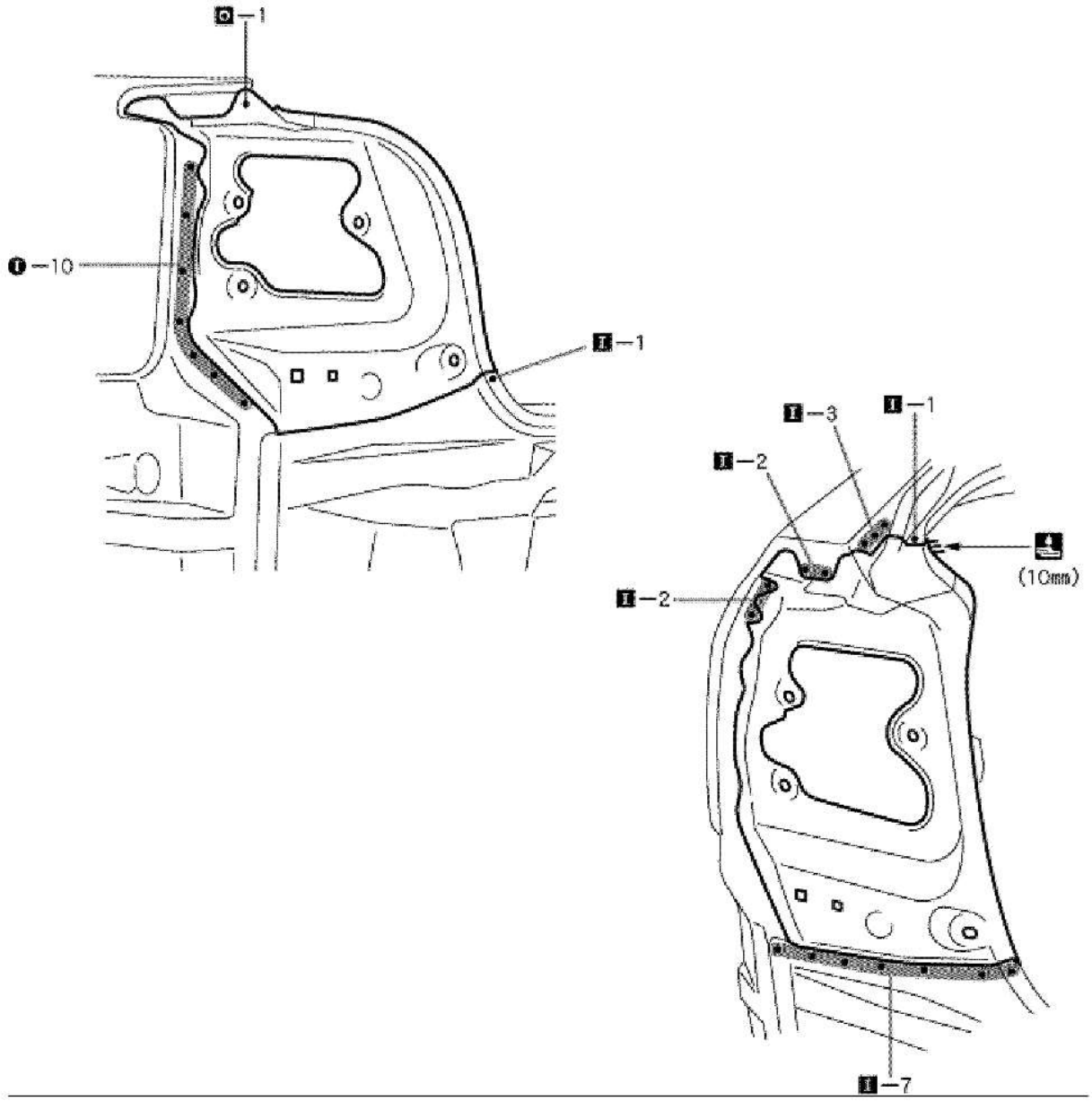




F14424

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14425

10mm (0.39in.)

cardiagn.com

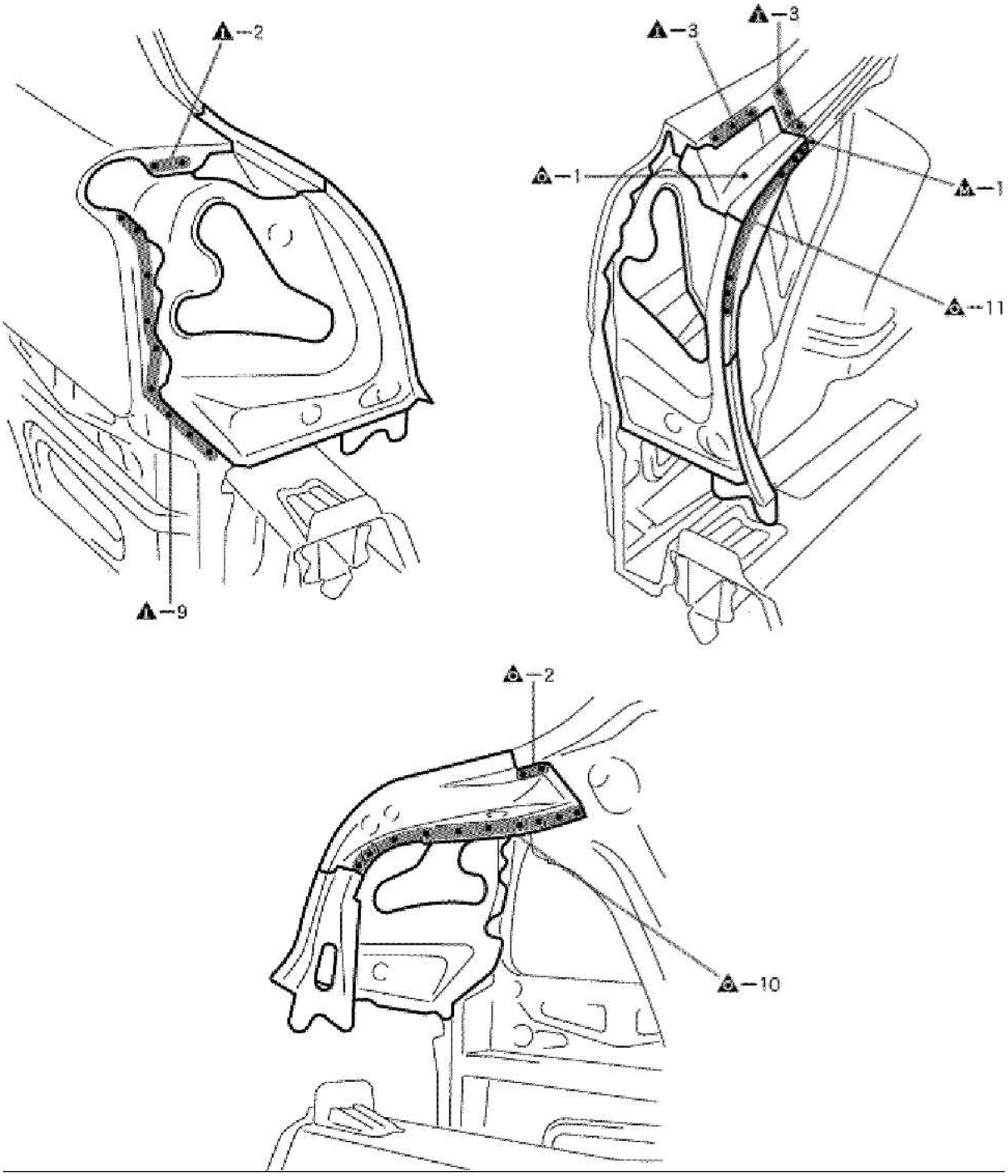
# QUARTER PANEL END HOUSING (ASSY): Liftback



F14430-A

**REMOVAL**

With the body lower back panel removed.

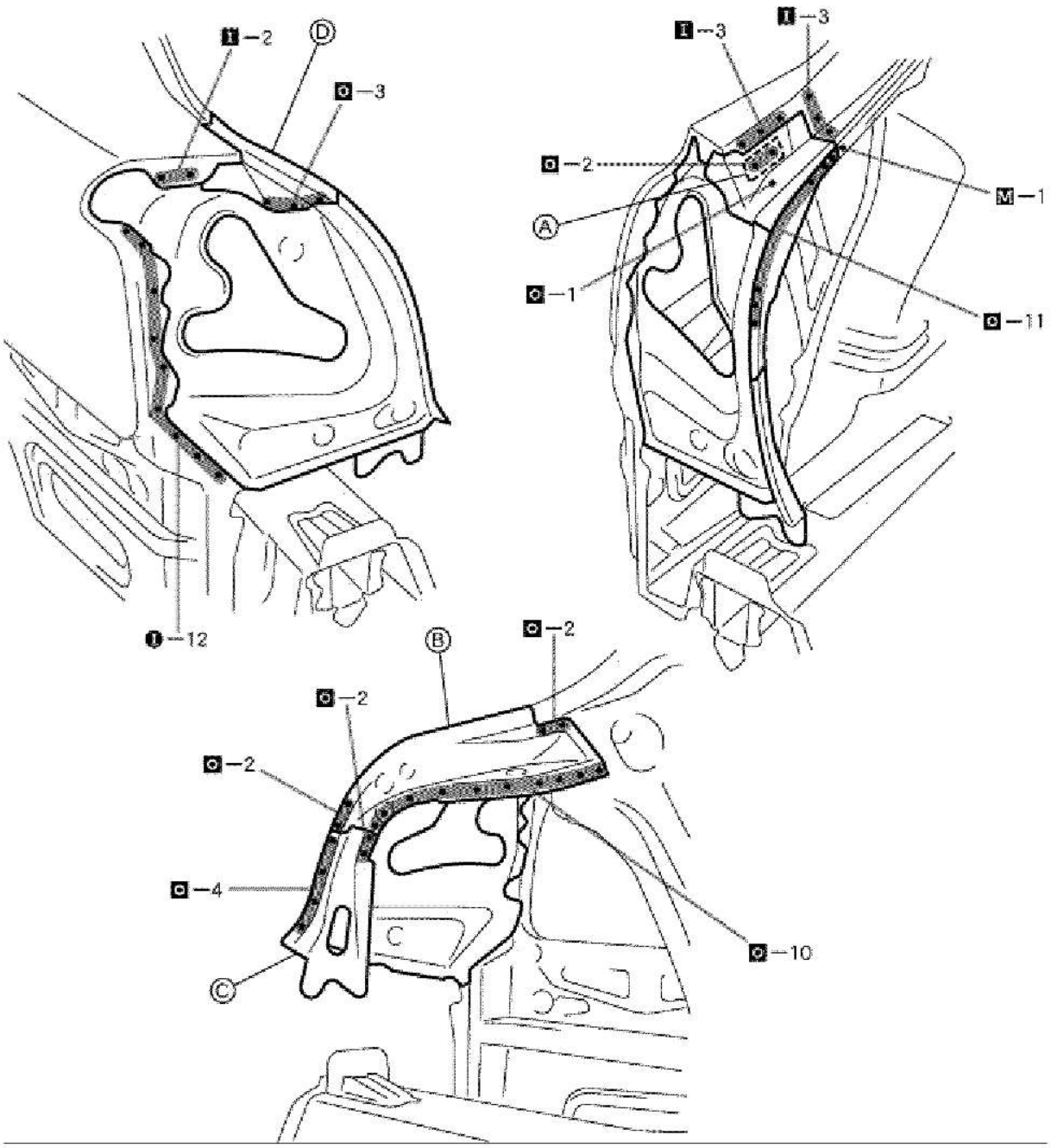



F14430

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14431

**PART NAME**

Ⓐ Back Door Opening Lower Reinforcement
Ⓑ Roof Side Inner Lower Panel
Ⓒ Quarter Panel Rear Lower Extension
Ⓓ Back Door Opening Trough

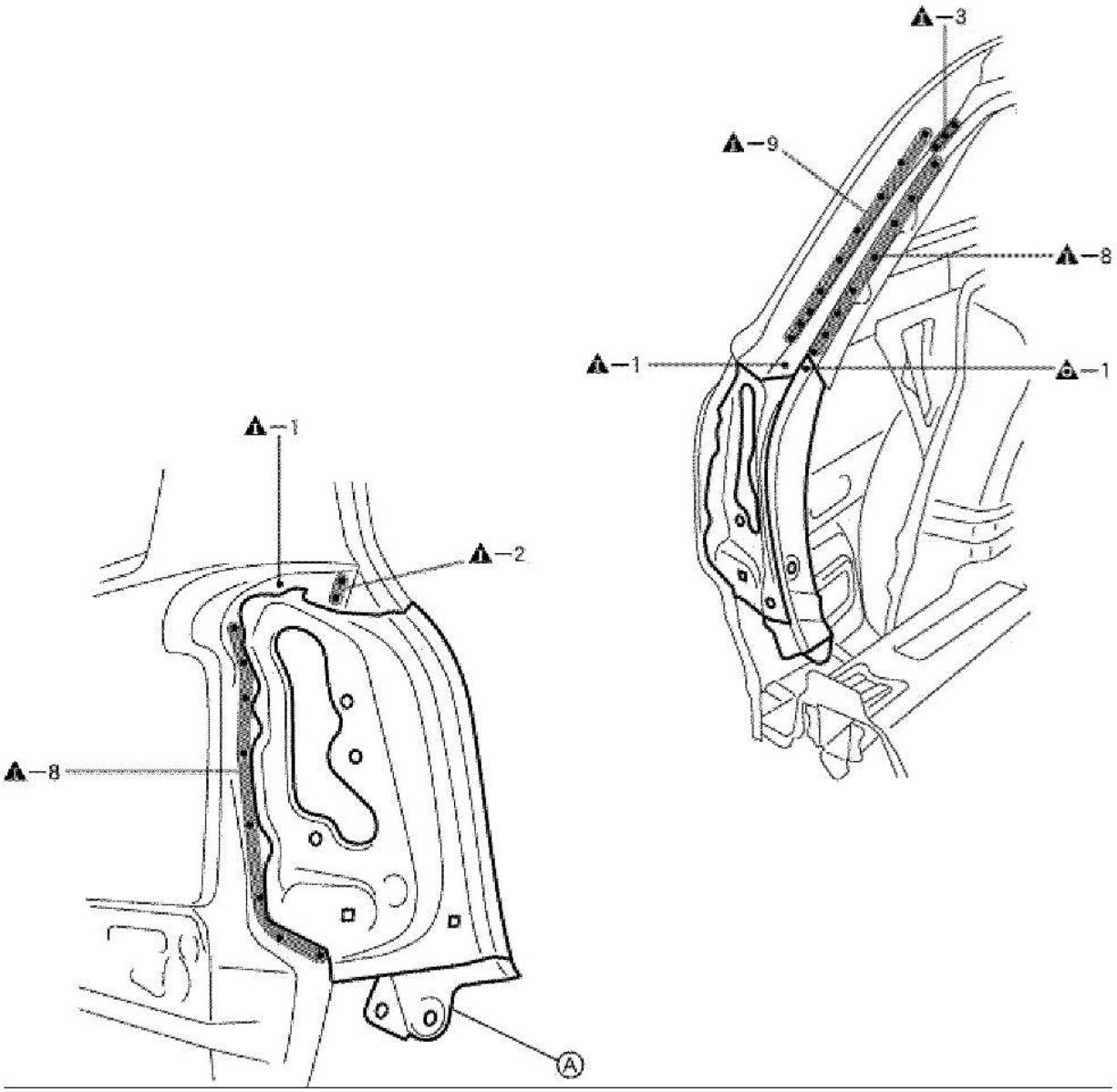
cardiagn.com

# QUARTER PANEL END HOUSING (ASSY): Wagon



F14426-A

**REMOVAL**
With the body lower back panel removed.




F14426

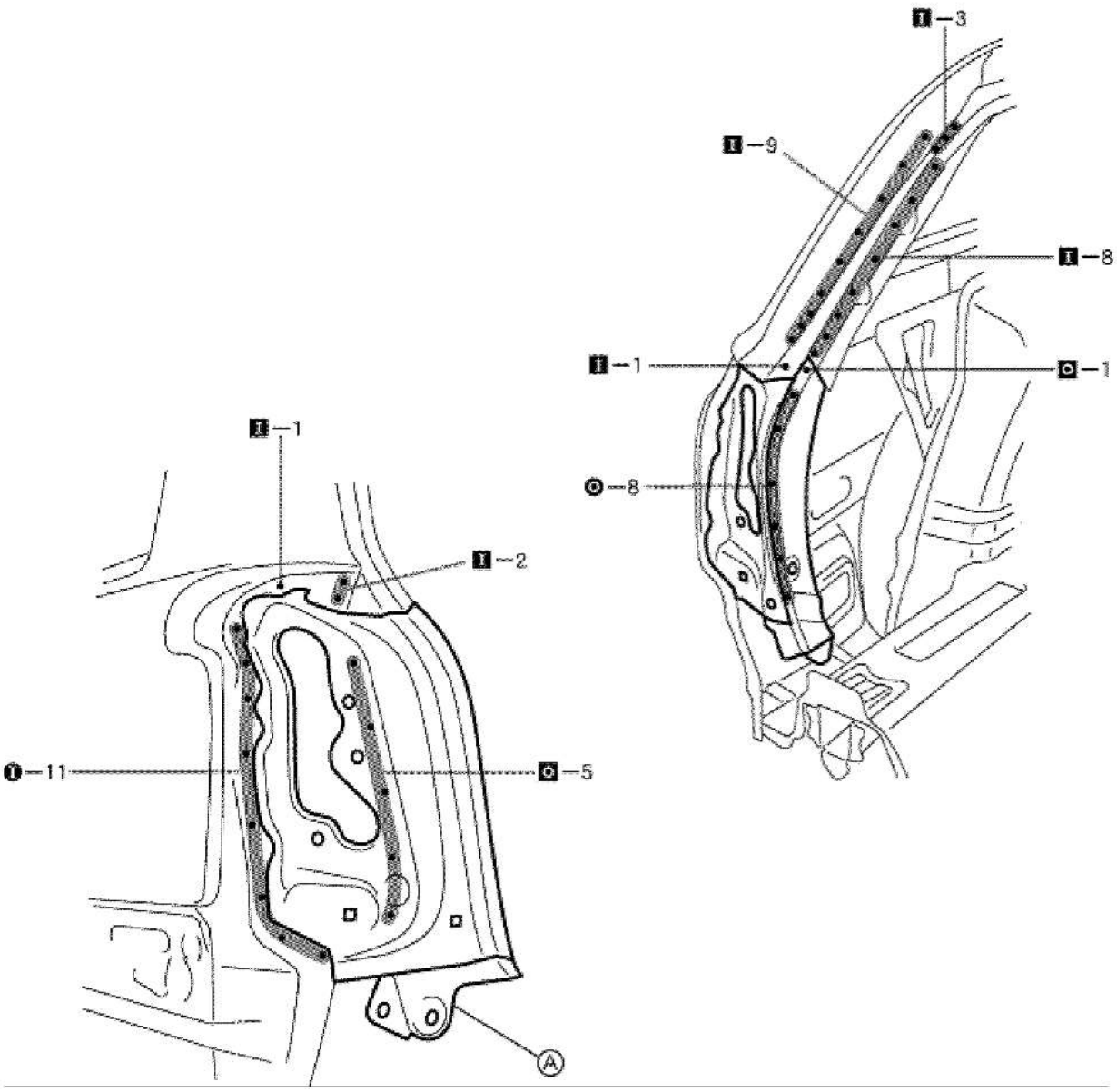
**POINT**
1 Remove the Ⓐ at the same time.

**PART NAME**
Ⓐ Roof Side Inner Lower Panel

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14427

**PART NAME**

Ⓐ Roof Side Inner Lower Panel

cardiagn.com

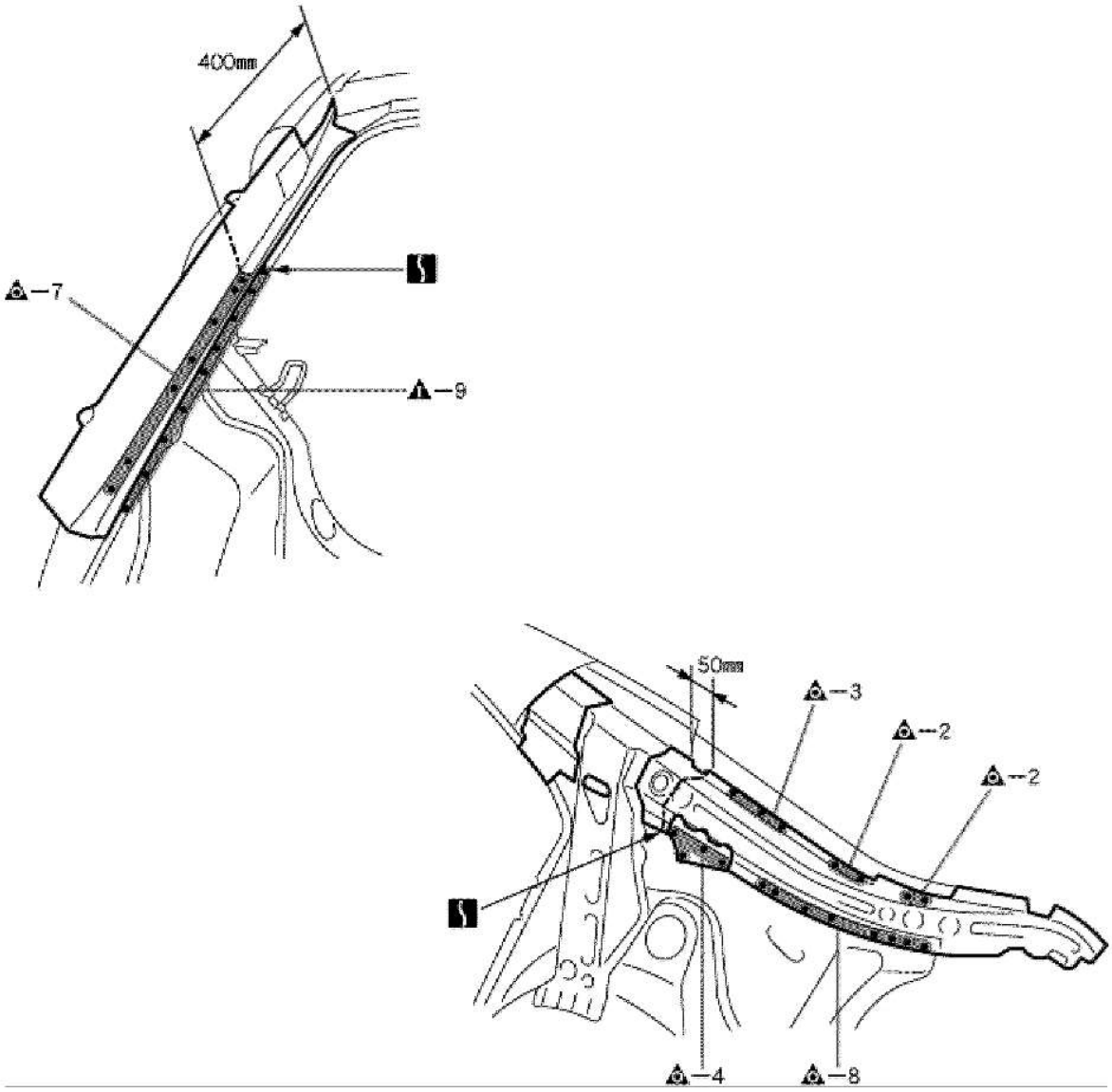
# BACK DOOR OPENING SIDE REINFORCEMENT (ASSY): Liftback



F14428-A

**REMOVAL**

With the quarter panel, quarter panel end housing removed.



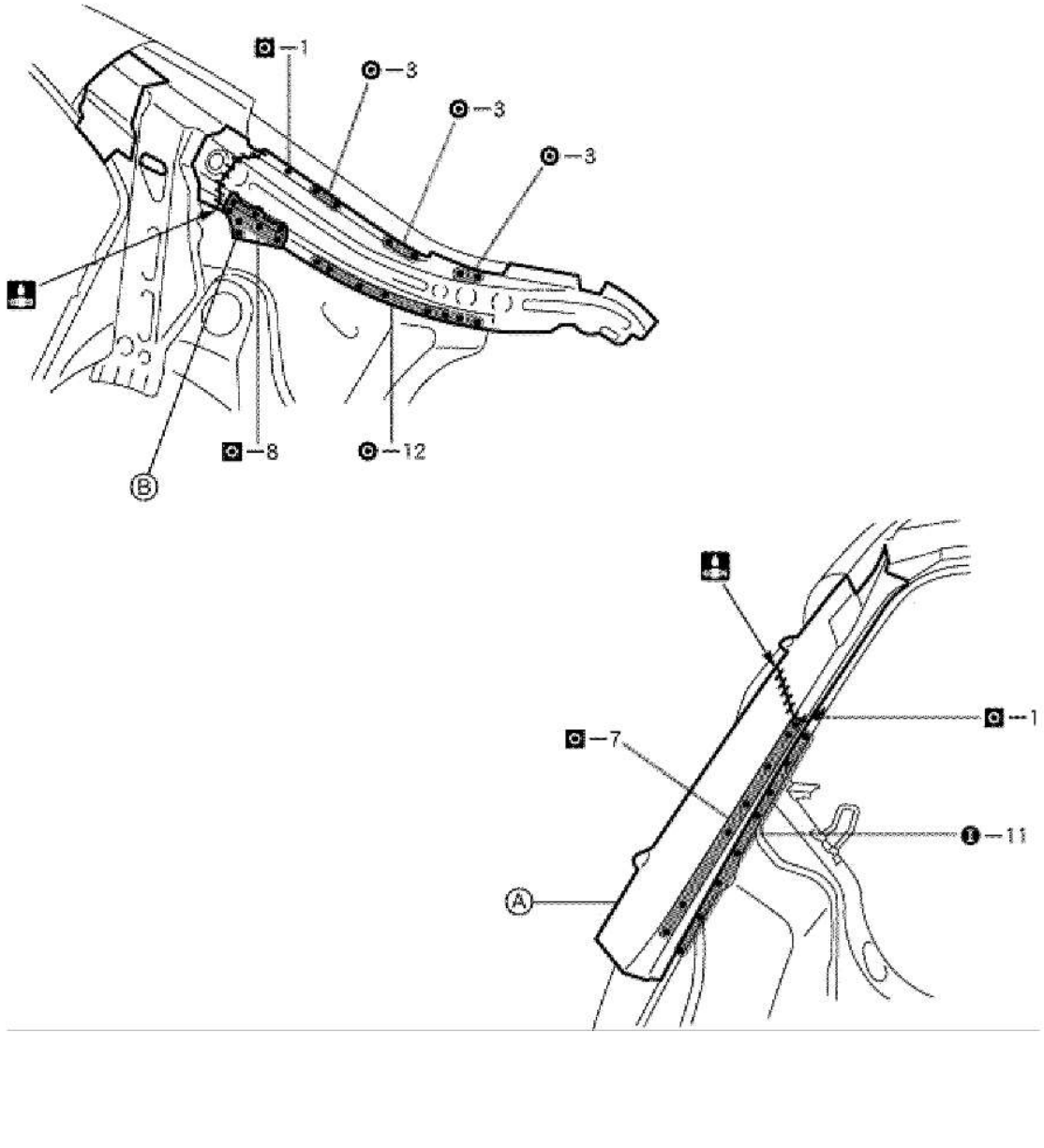

F14428

50mm (1.97in.) 400mm (15.75in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**PART NAME**

Ⓐ Quarter Panel Rear Extension
Ⓑ Belt Anchor To Roof Side Inner Reinforcement

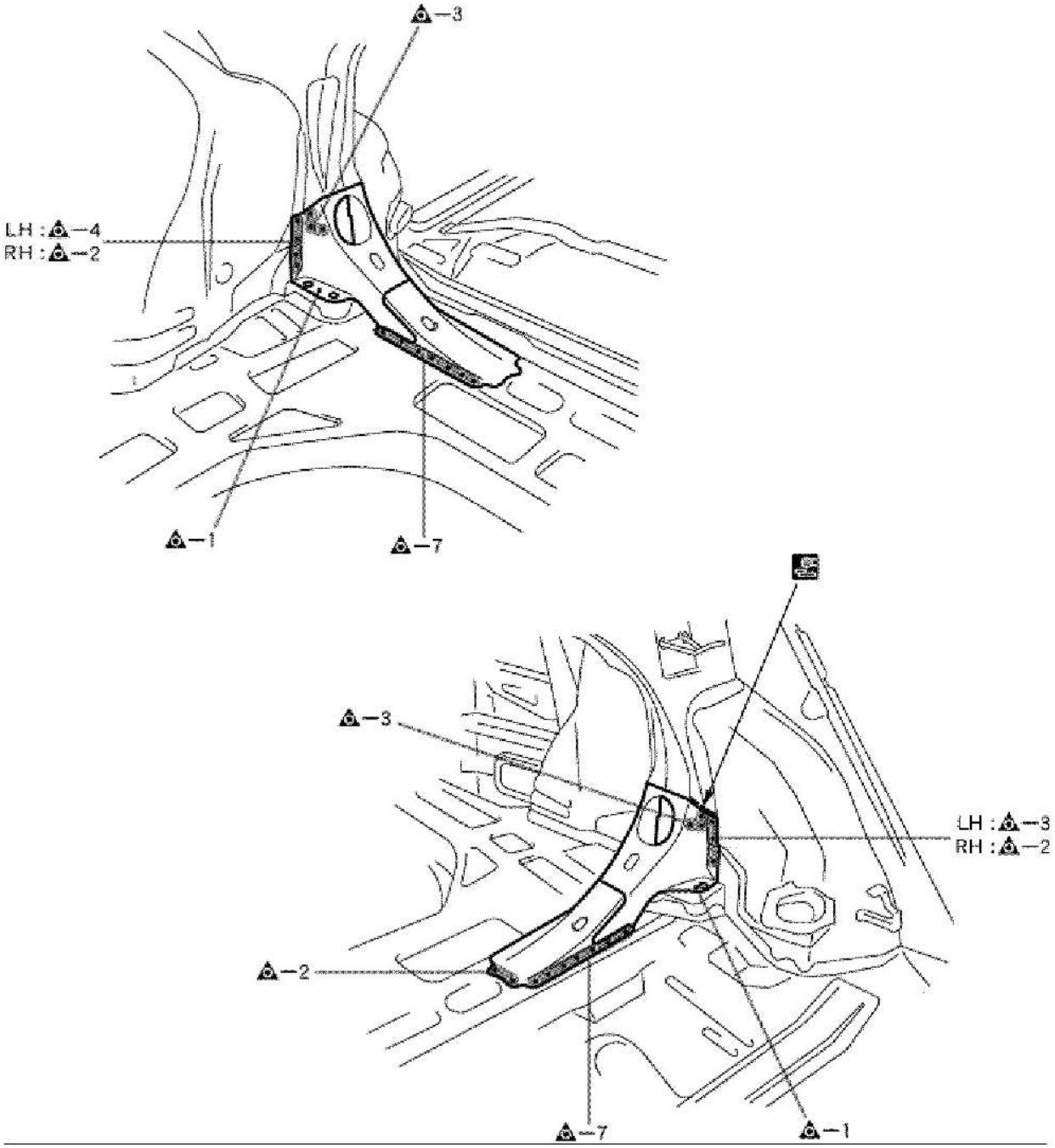
cardiagn.com

# REAR ABSORBER MOUNTING NO.1 BRACKET (ASSY): Sedan



F14432-A

## REMOVAL

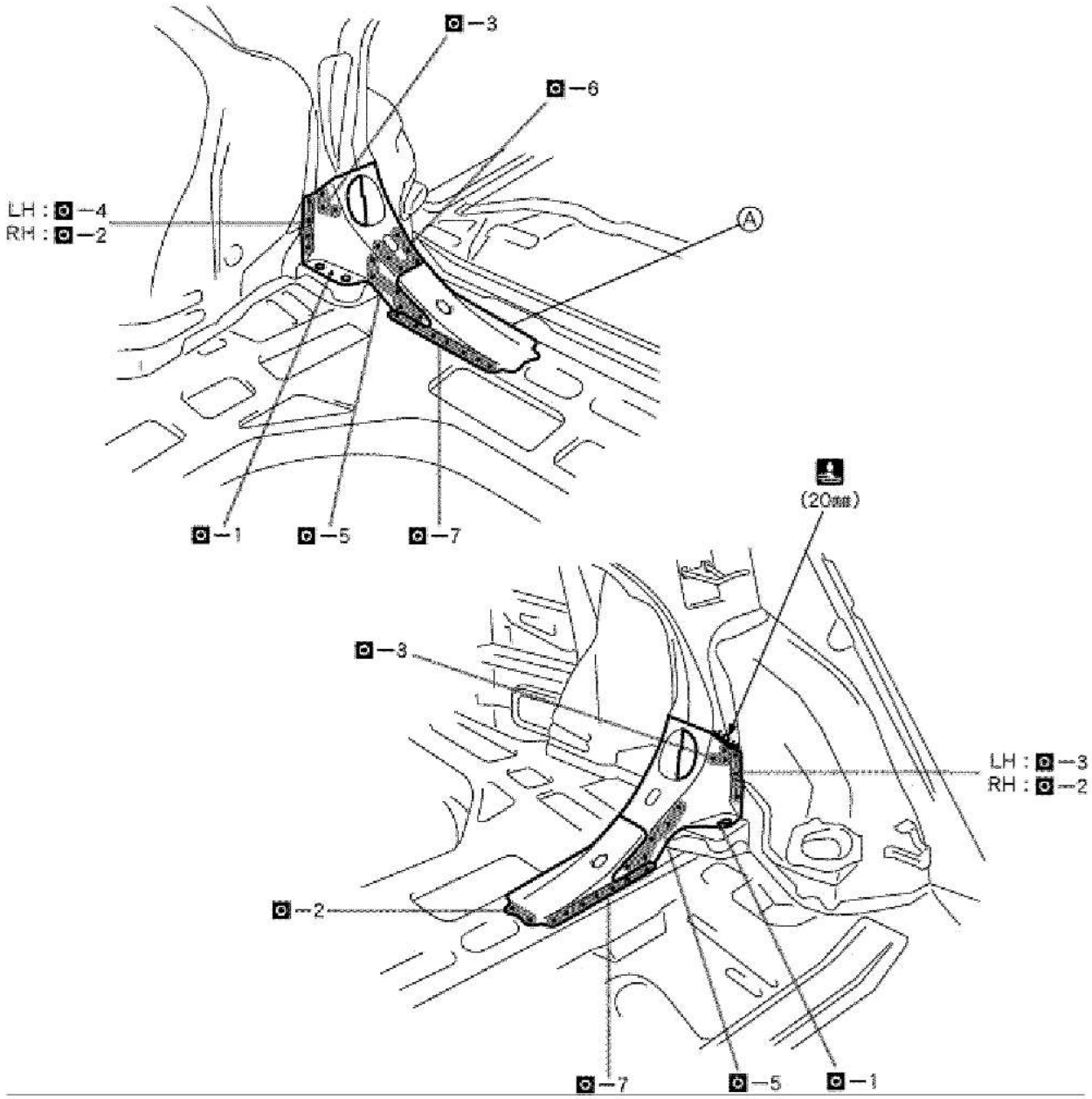



F14432

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.

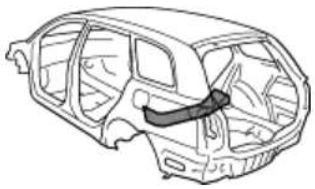



**PART NAME**

Ⓐ Rear Bumper Arm Bracket

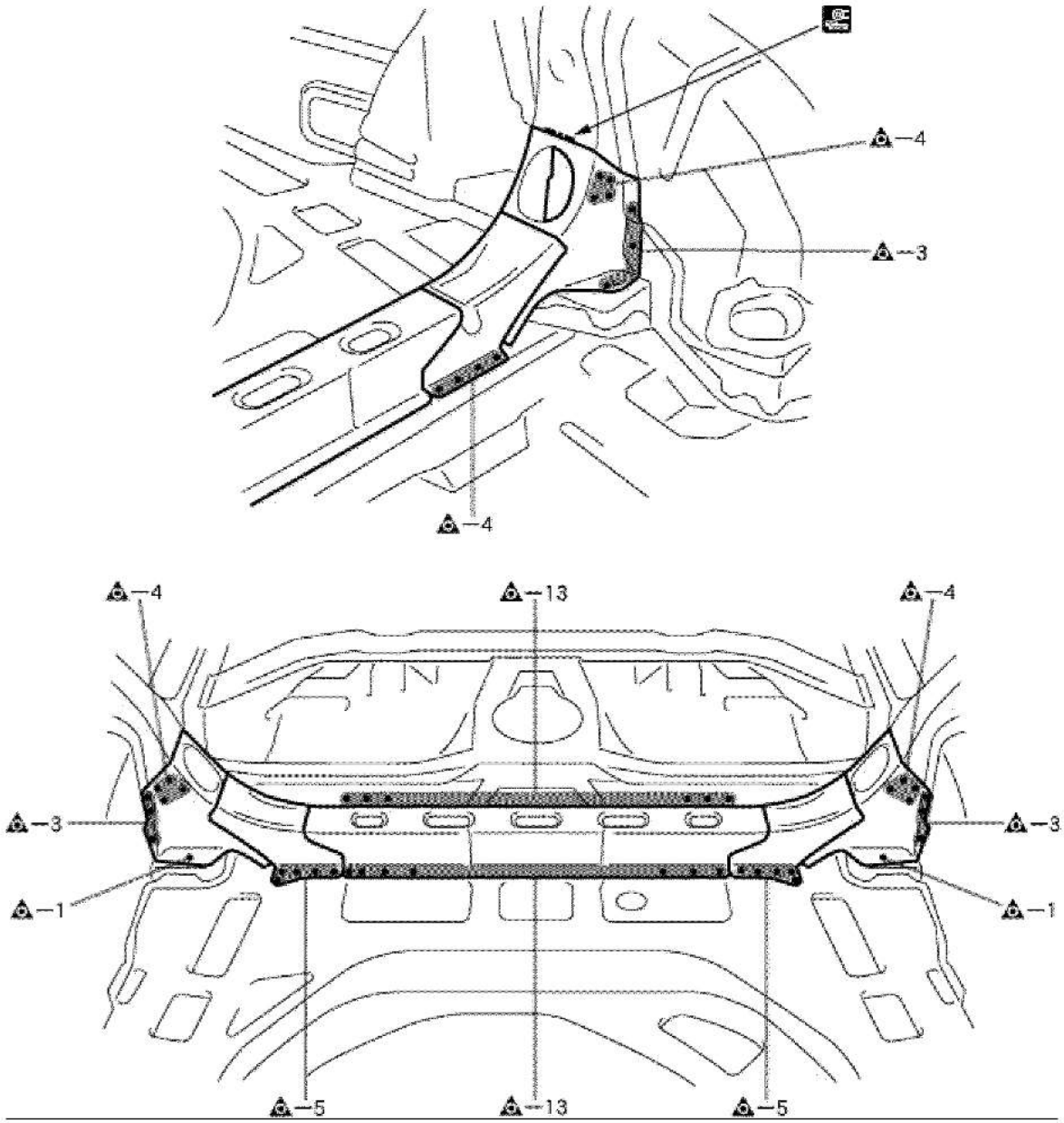
cardiagn.com

# REAR FLOOR CENTER CROSSMEMBER (ASSY): Liftback, Wagon



F14434-A

## REMOVAL

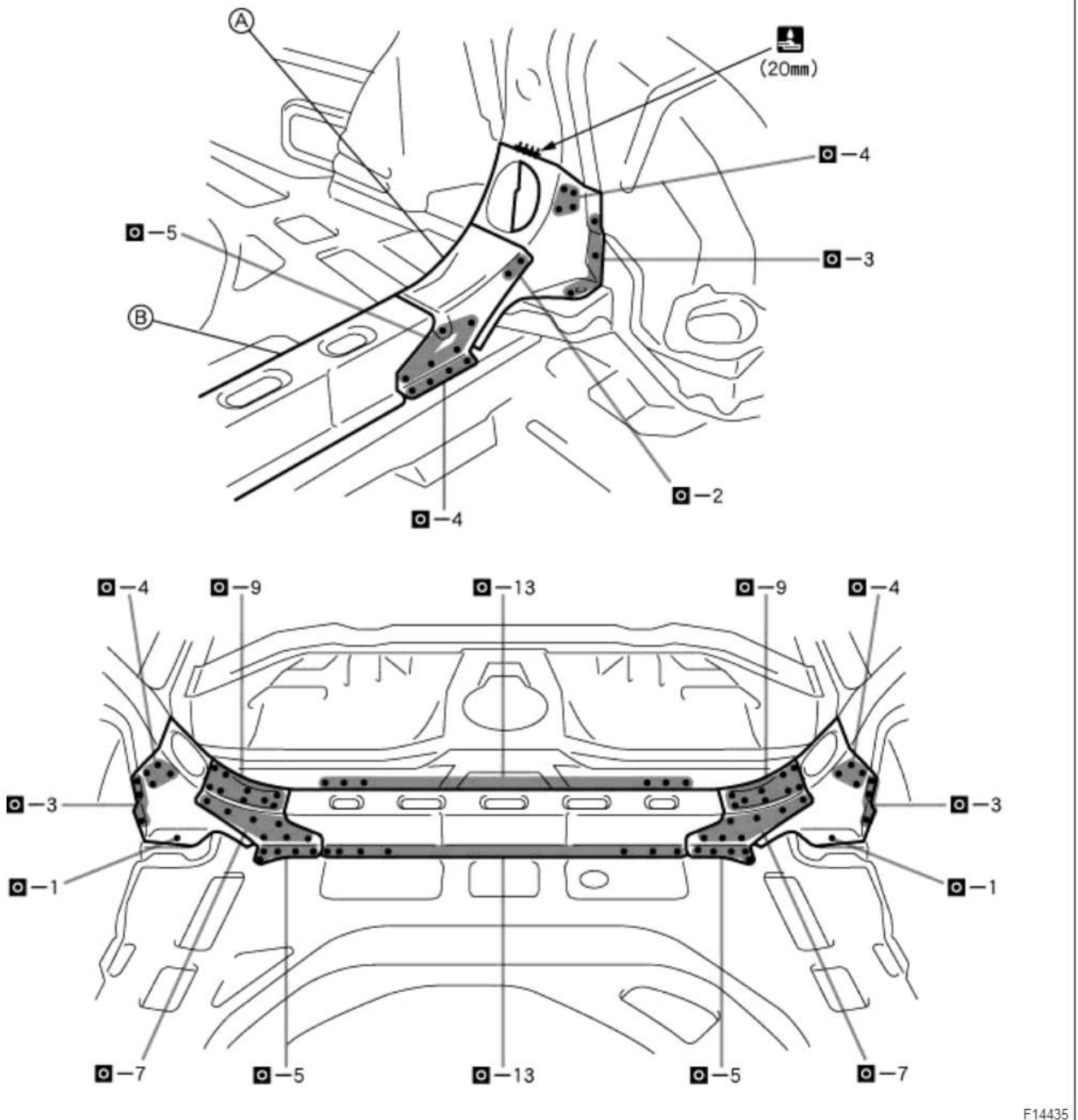



F14434

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.



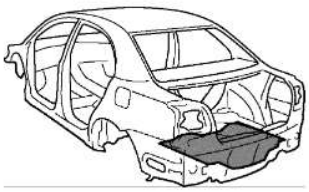

**PART NAME**

Ⓐ Rear Seat Back Hinge Mounting Bracket Ⓑ Rear Absorber Housing Bracket

20mm (0.79in.)

cardiagn.com

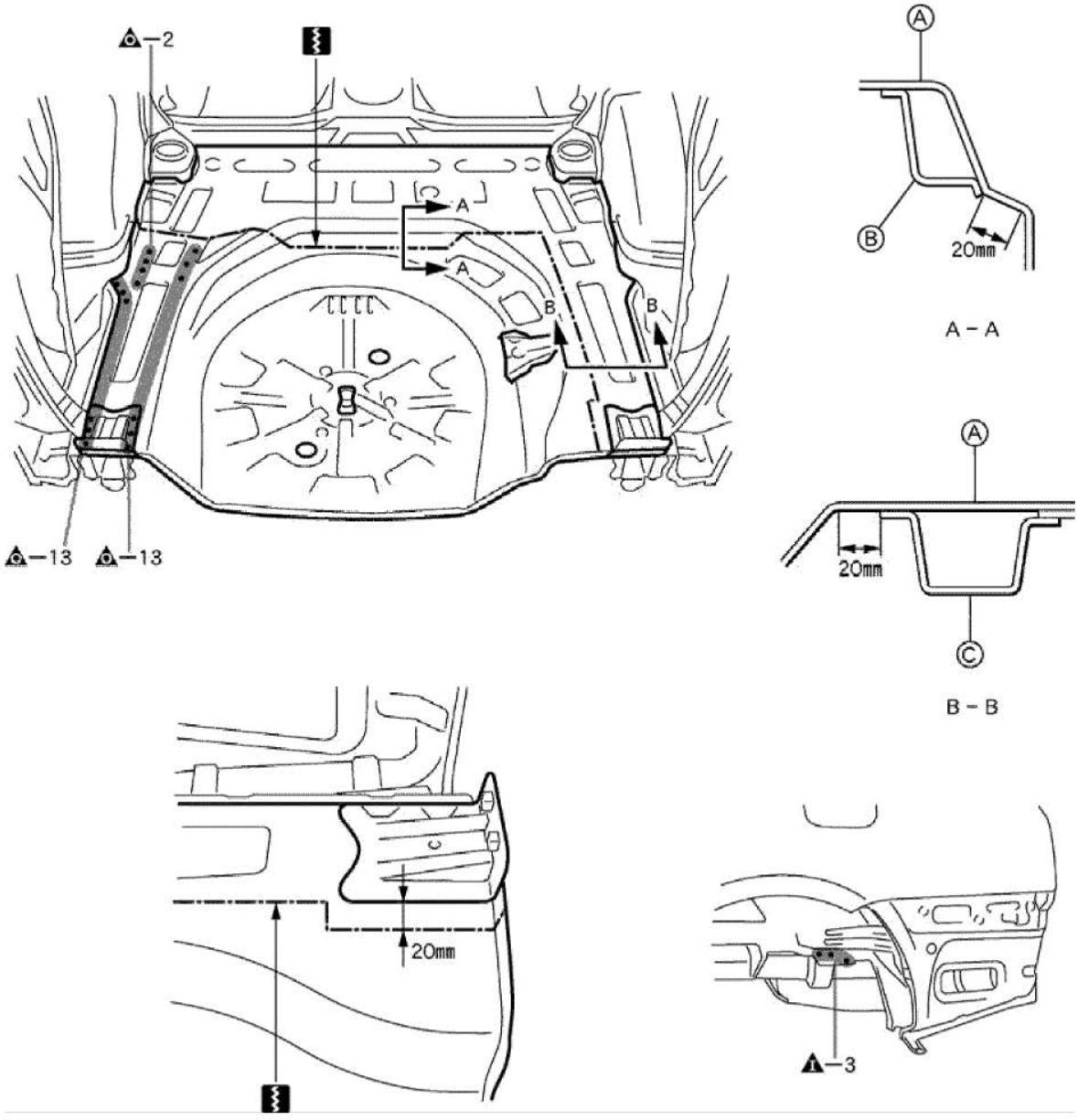
# REAR FLOOR PAN (CUT)



F14621-A

**REMOVAL**

With the body lower back panel removed.




F14621

**POINT**

1 Cut the Ⓐ at the location shown below.

**PART NAME**

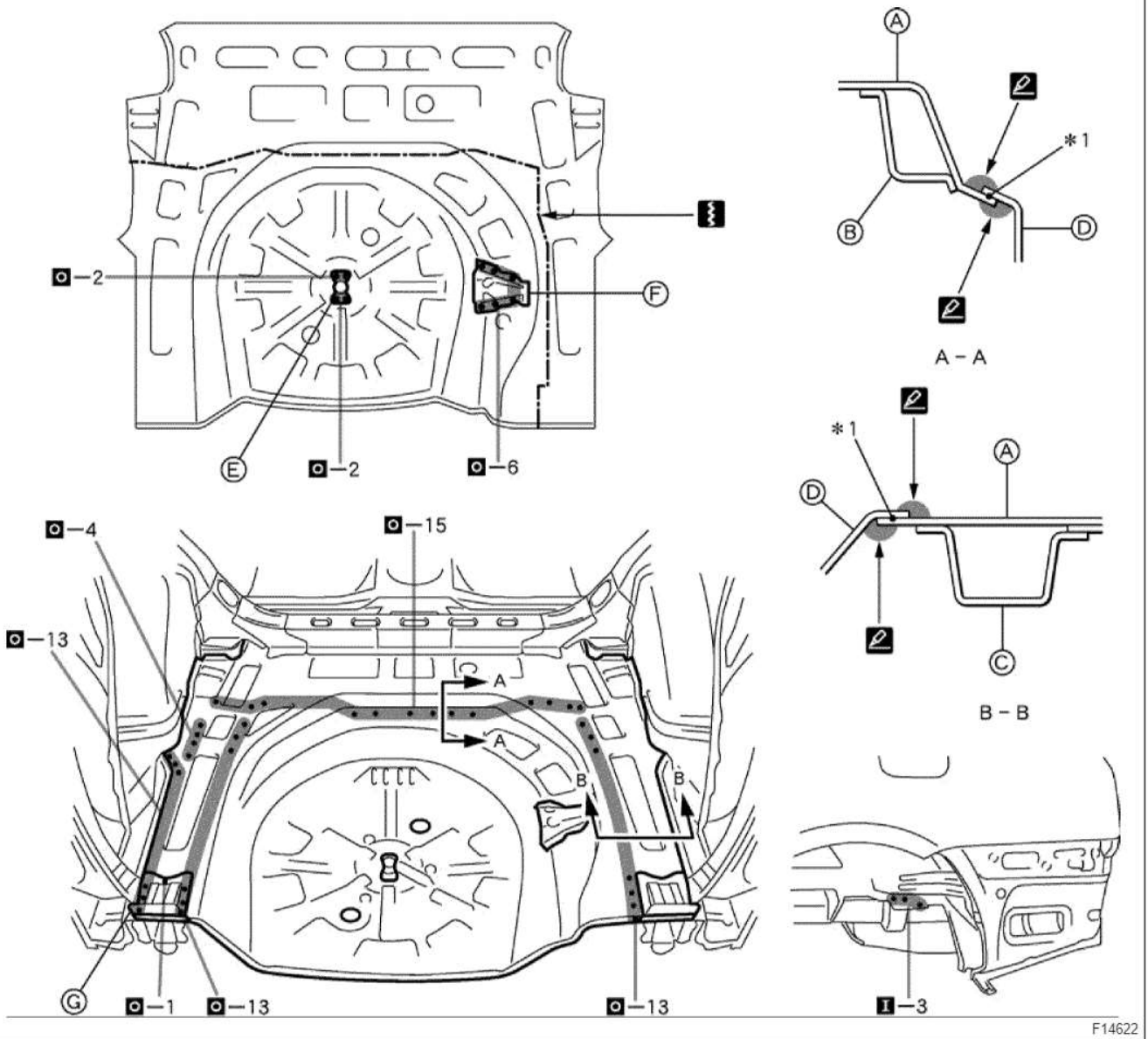
Ⓐ Rear Floor Pan Ⓑ Rear Floor No.3 Crossmember Ⓒ Rear Floor Side Rear Member

20mm (0.79in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14622

**POINT**

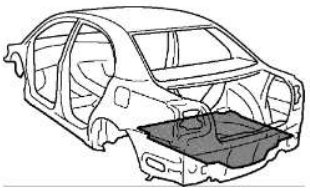
1 Cut the Ⓓ for the Ⓐ at the location as shown below.
2 *1: Plug weld the overlapping portion of the Ⓓ.
*HINT:*
*1) Be sure the portion to be welded are align and not loose.*
3 Coat the overlapping opening portion from the both sides with body sealer.

**PART NAME**

Ⓐ Rear Floor Pan Ⓑ Rear Floor No.3 Crossmember Ⓒ Rear Floor Side Rear Member
Ⓓ New Parts Ⓔ Spare Wheel Clamp Bracket Ⓕ Jack Carrier
Ⓖ Rear Floor Pan Reinforcement

cardiagn.com

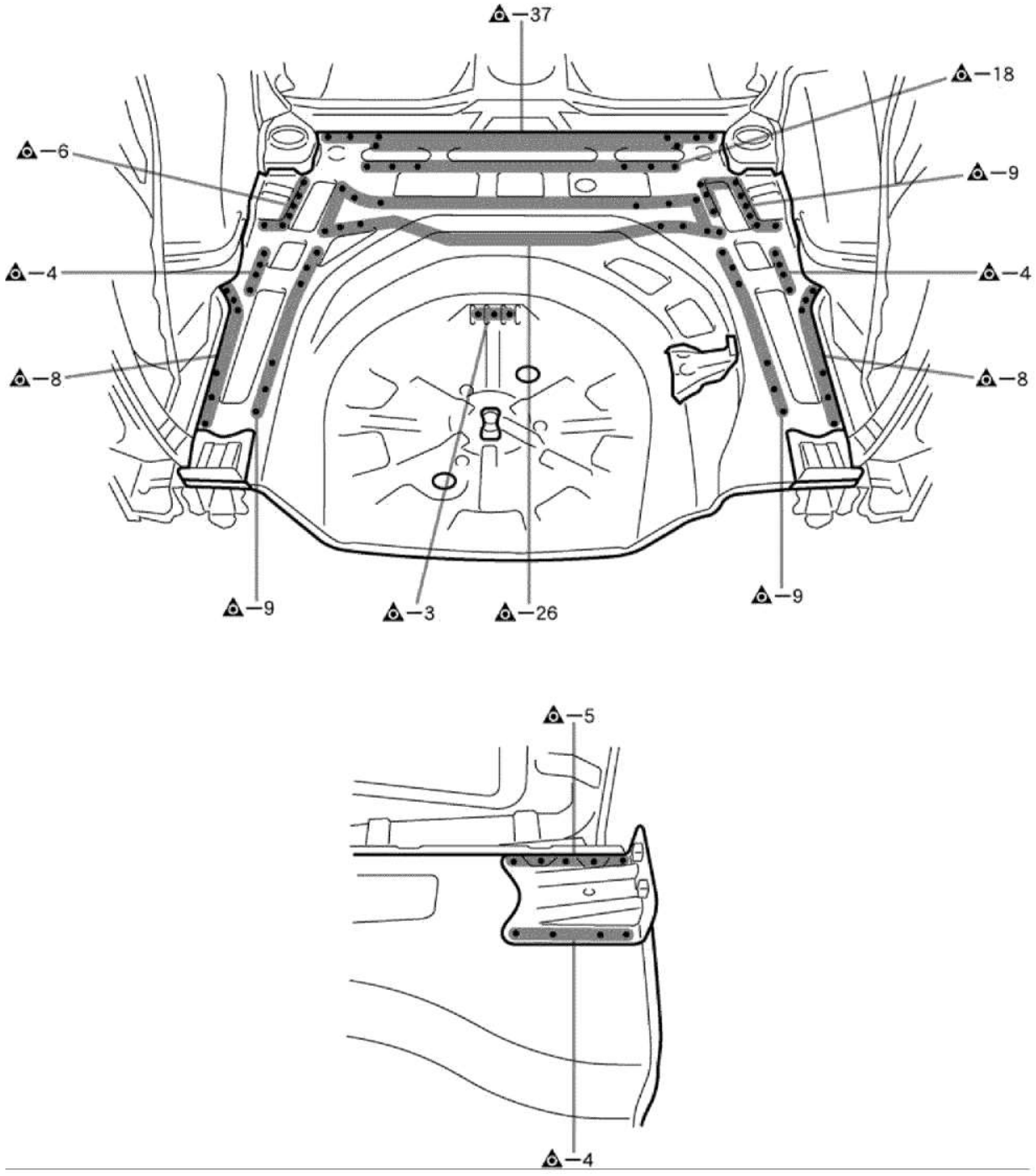
# REAR FLOOR PAN (ASSY)



F14436-A

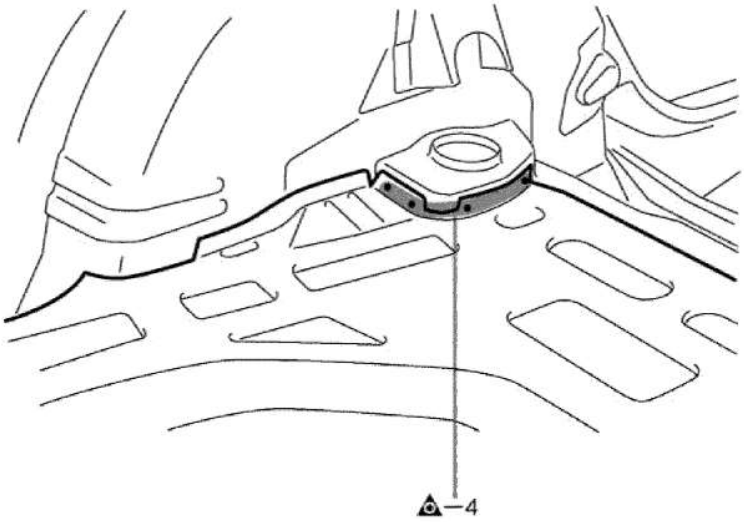
**REMOVAL**

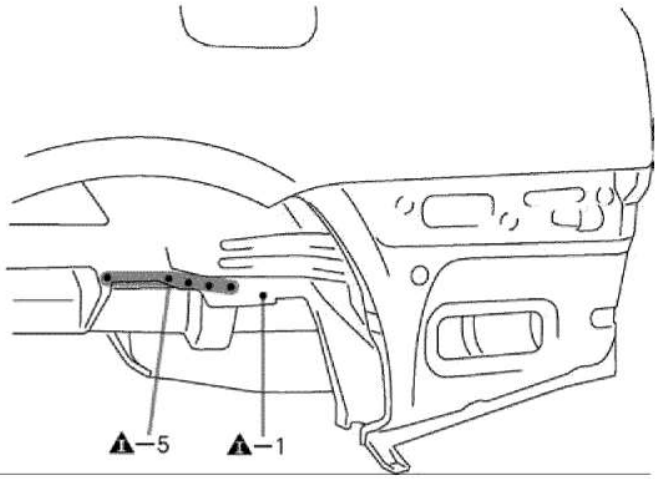
With the body lower back panel, rear absorber No.1 bracket (sedan), rear floor center crossmember (liftback, wagon) removed.




F14436

cardiagn.com



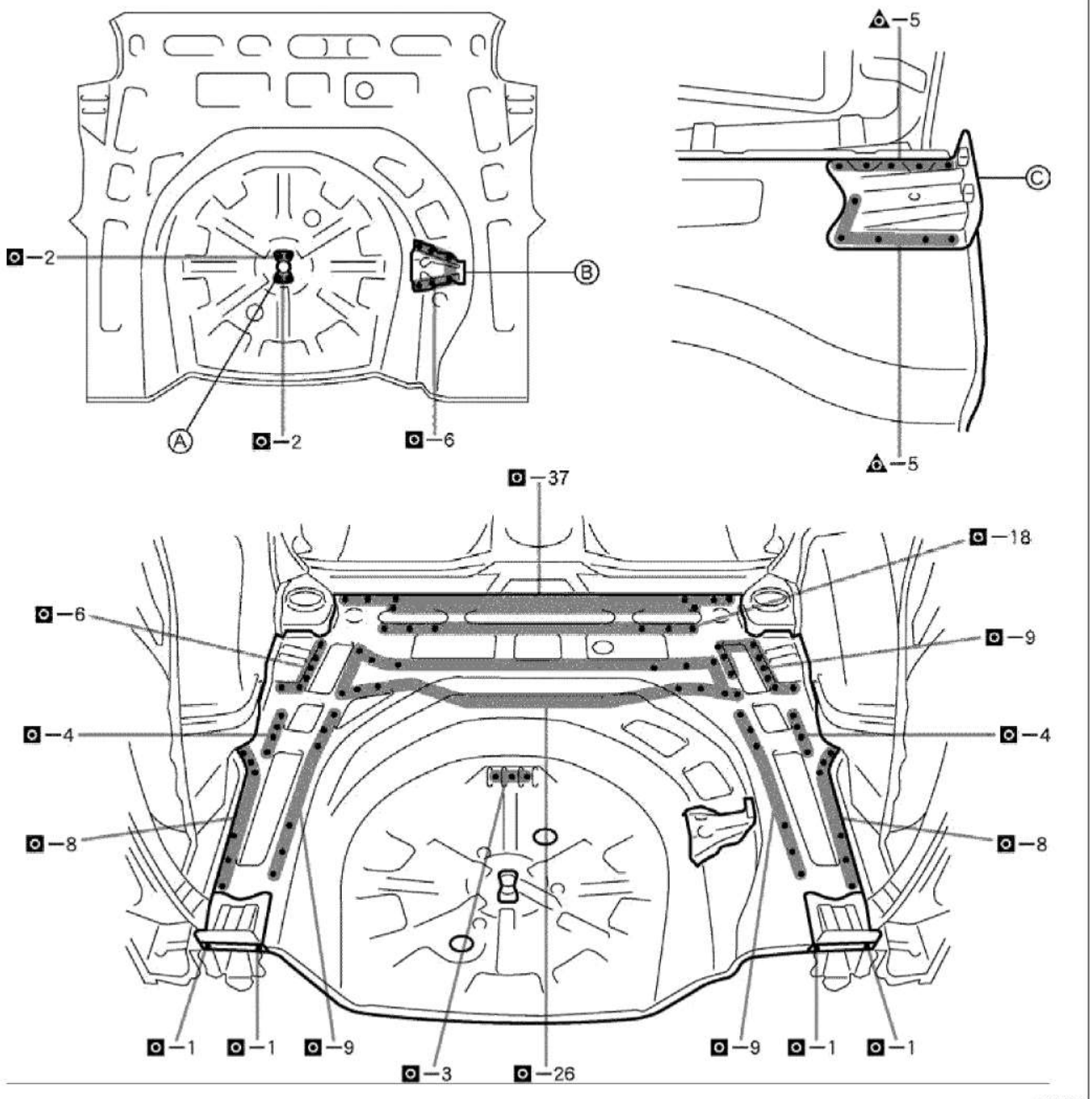




F14631

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.

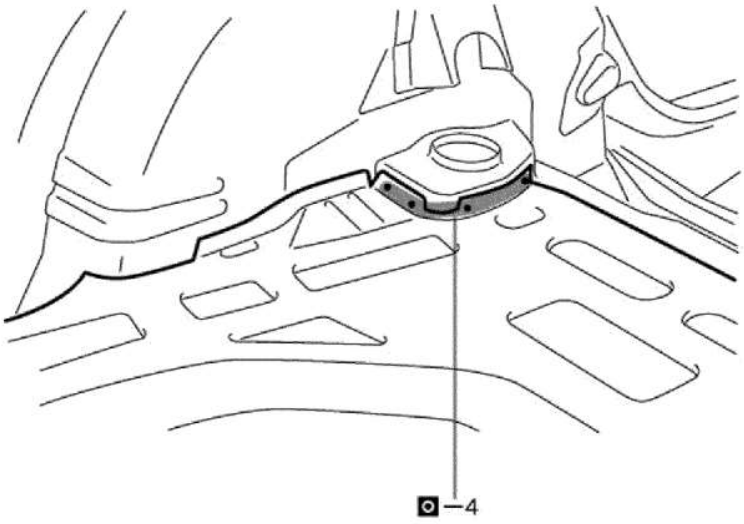


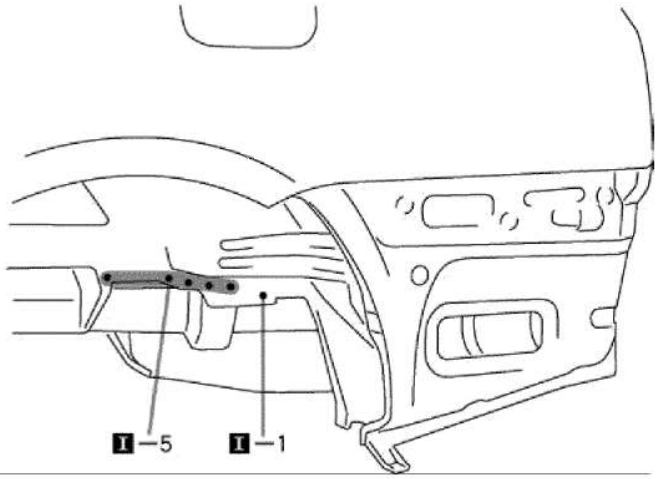

F14437

**PART NAME**

Ⓐ Spare Wheel Clamp Bracket Ⓑ Jack Carrier Ⓒ Rear Floor Pan Reinforcement

cardiagn.com

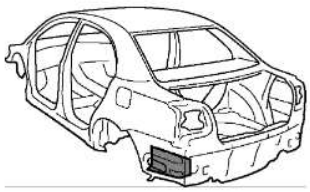



F14438

cardiagn.com

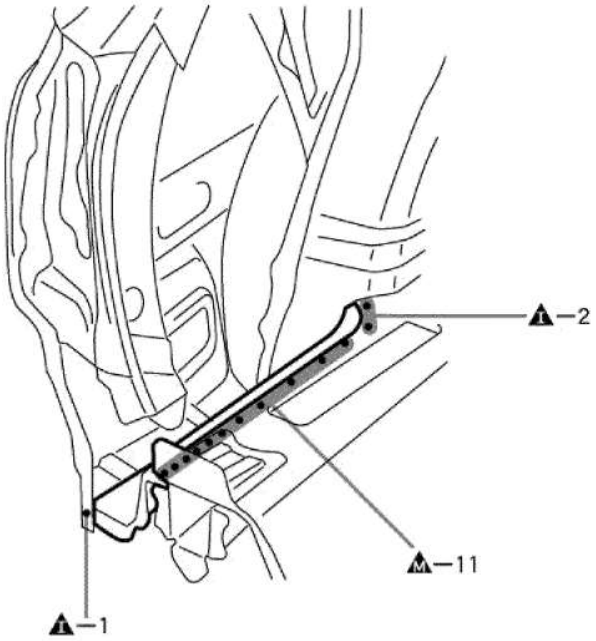
# REAR FLOOR SIDE PANEL (ASSY)

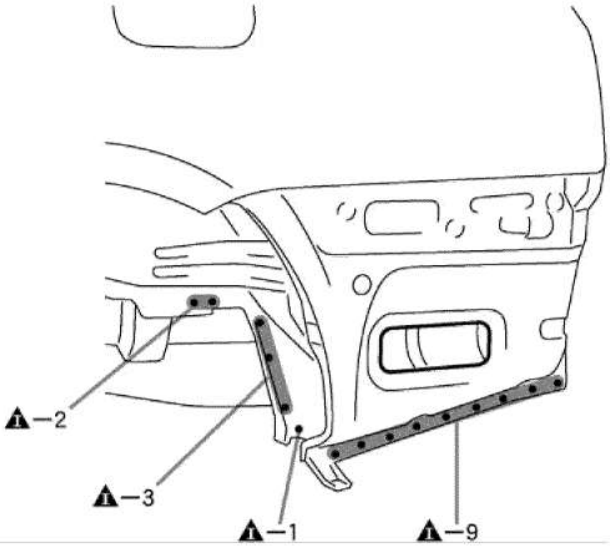


F14439-A

**REMOVAL**

With the body lower back panel removed.



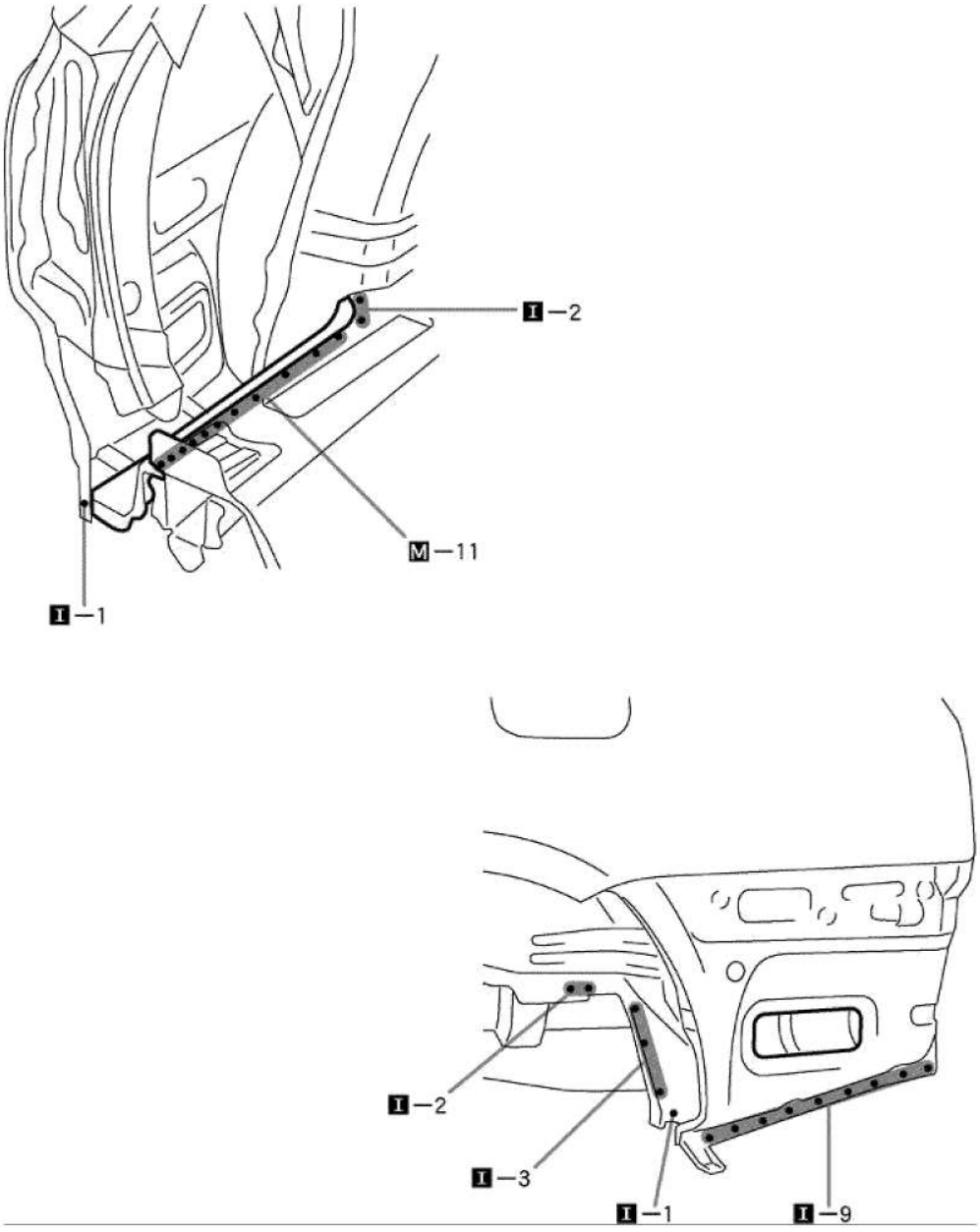




F14439

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.

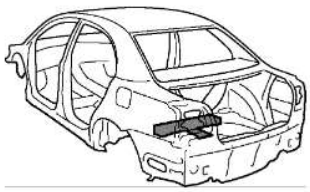



F14440

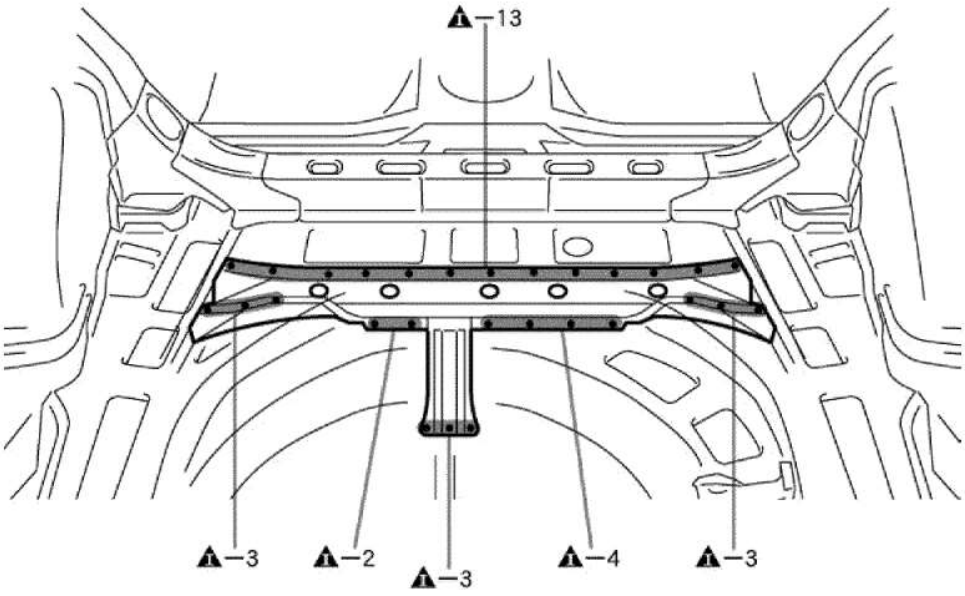
cardiagn.com

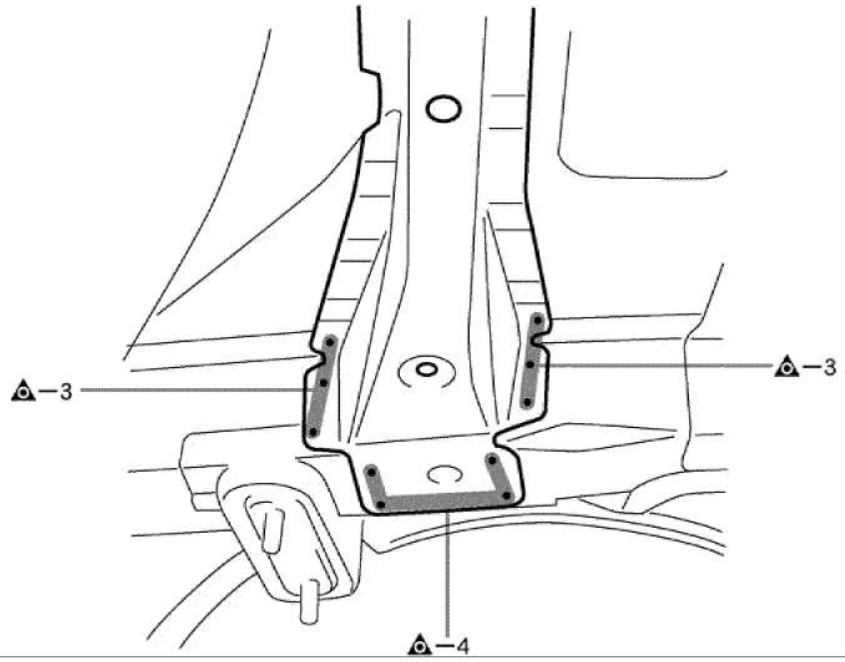
# REAR FLOOR NO.3 CROSSMEMBER (ASSY)

## REMOVAL



F14441-A



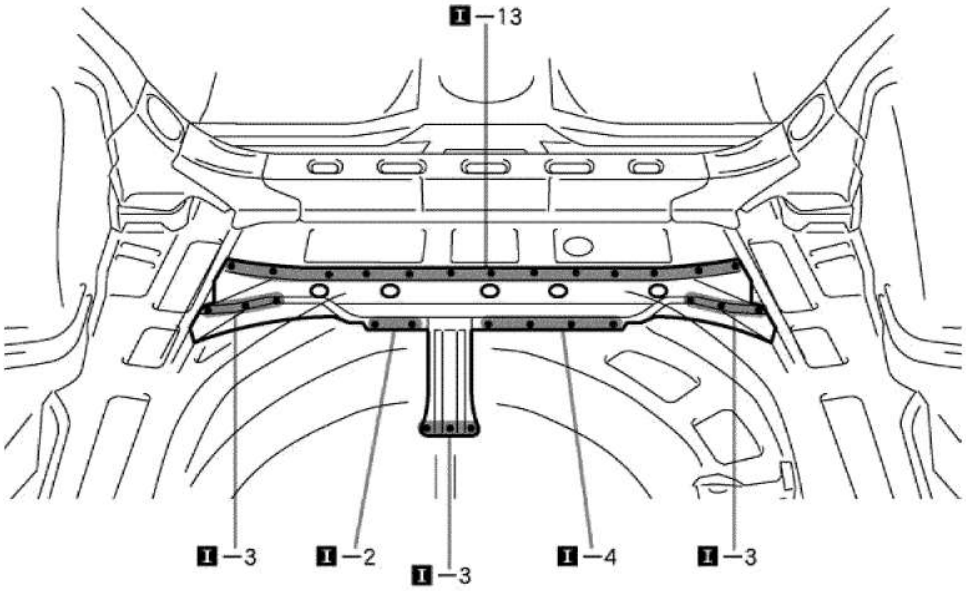



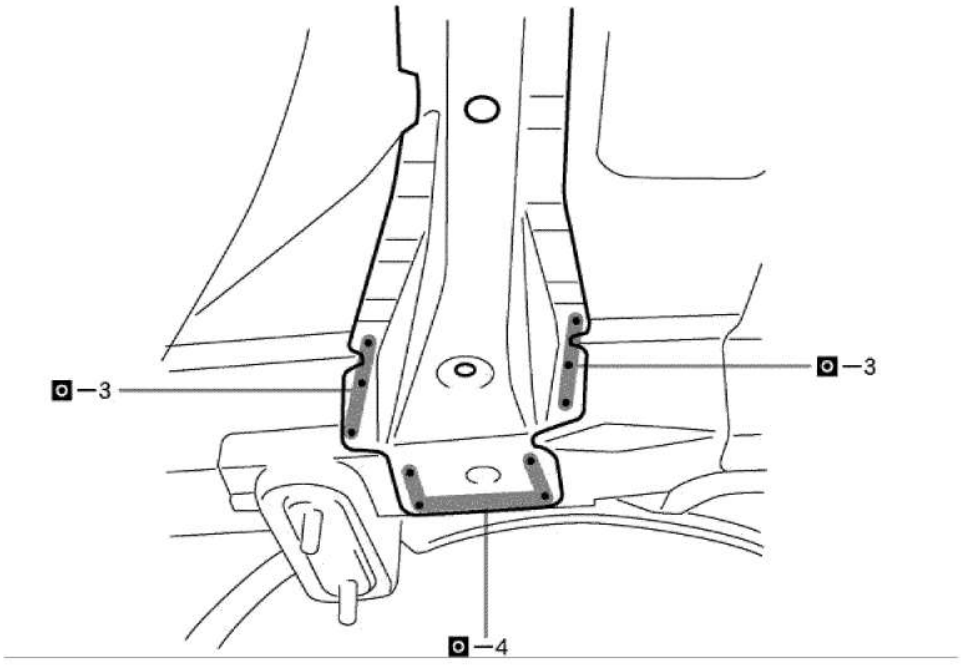

F14441

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.

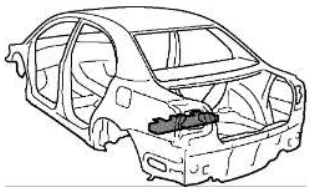



F14442

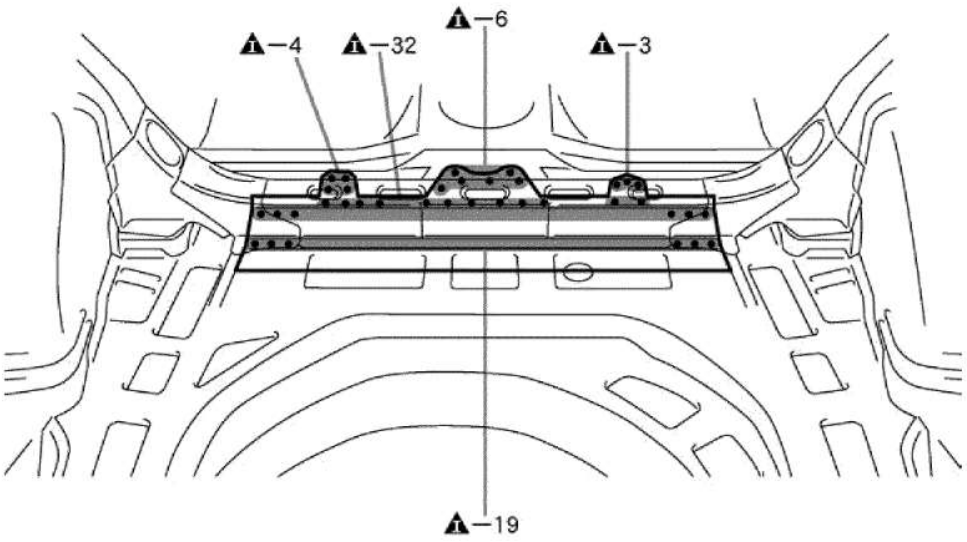
cardiagn.com

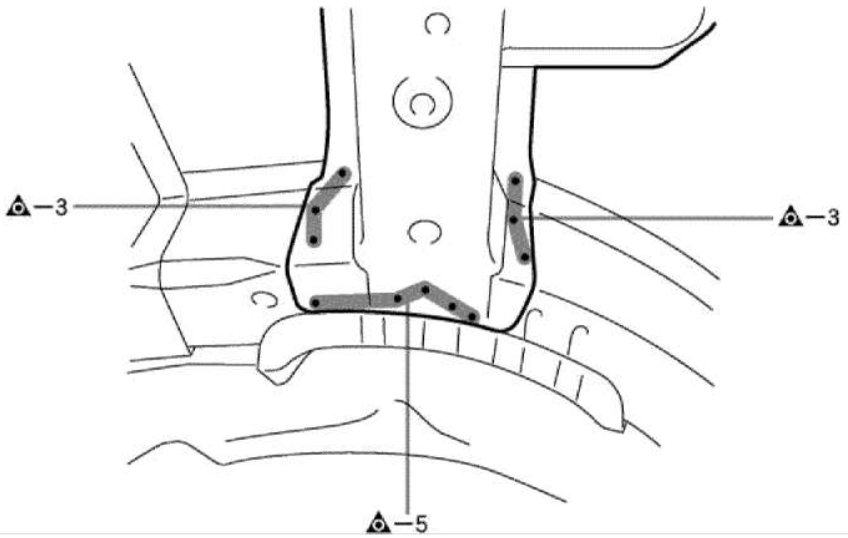
# REAR FLOOR NO.2 CROSSMEMBER (ASSY)



F14445-A

## REMOVAL



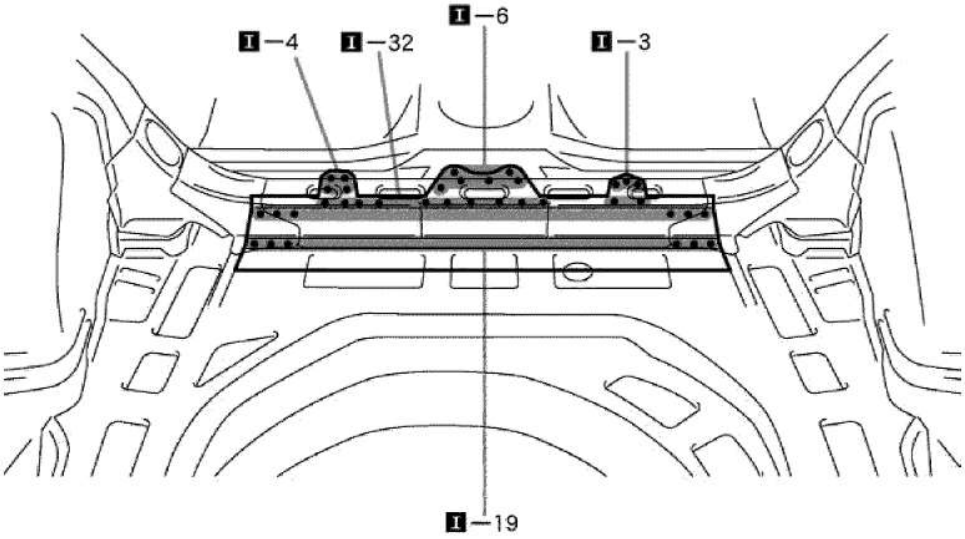



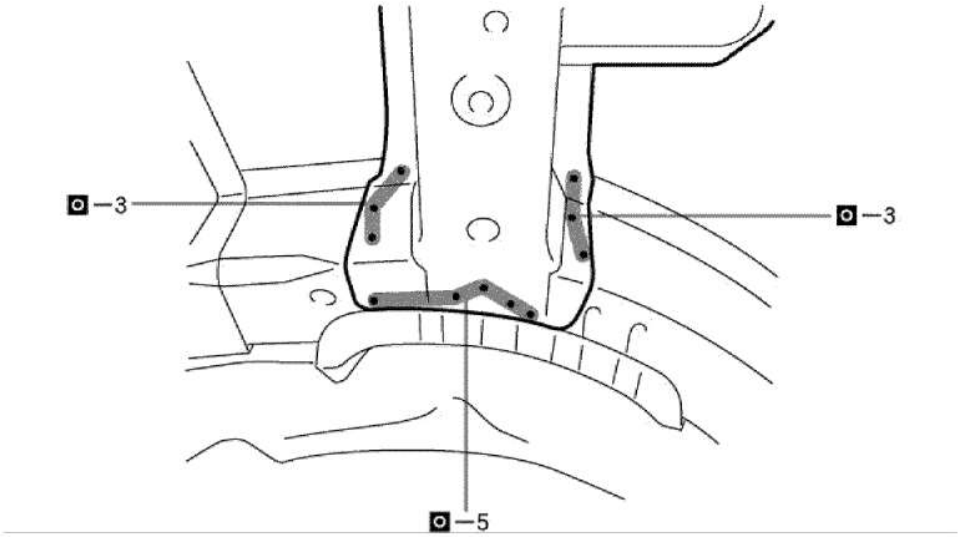

F14445

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.

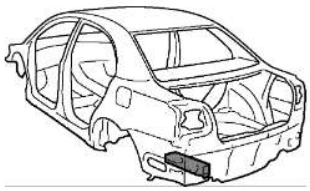



F14446

cardiagn.com

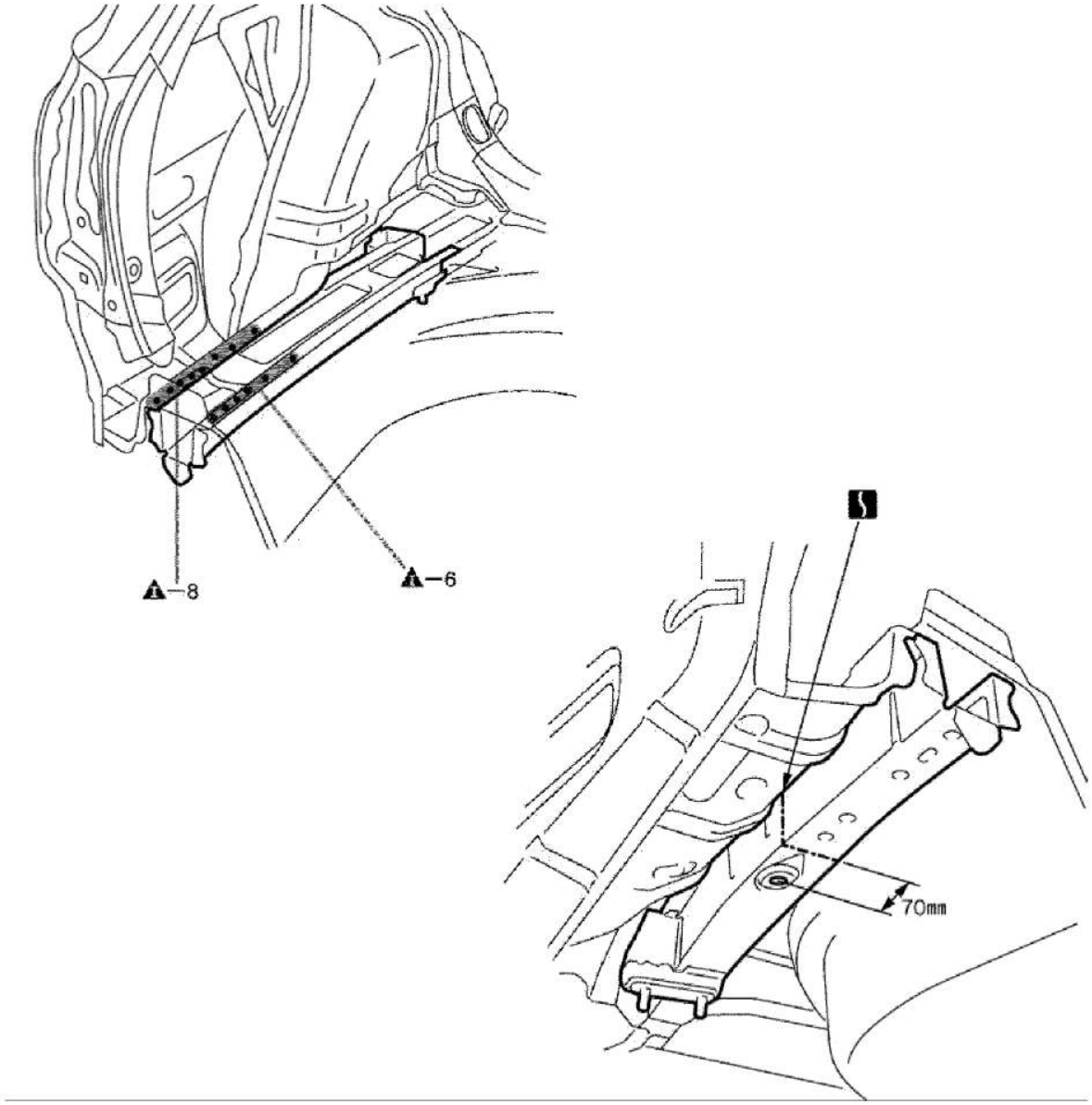
# REAR FLOOR SIDE REAR MEMBER (CUT-P)



F14627-A

**REMOVAL**

With the body lower back panel removed.



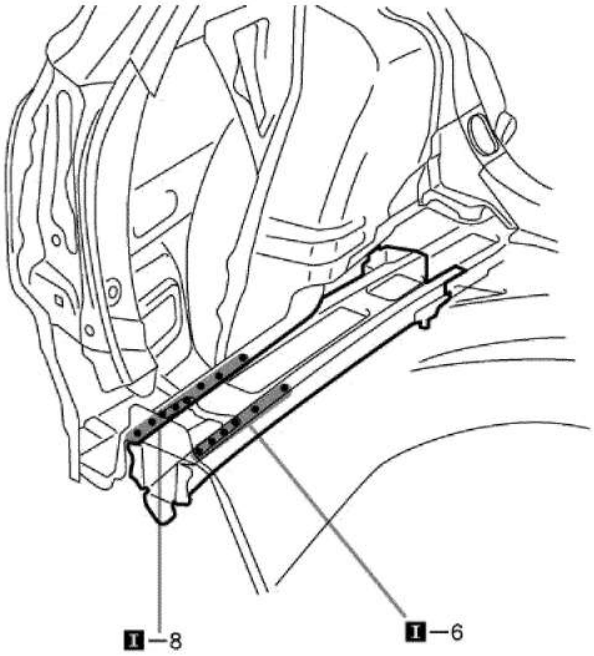

F14627

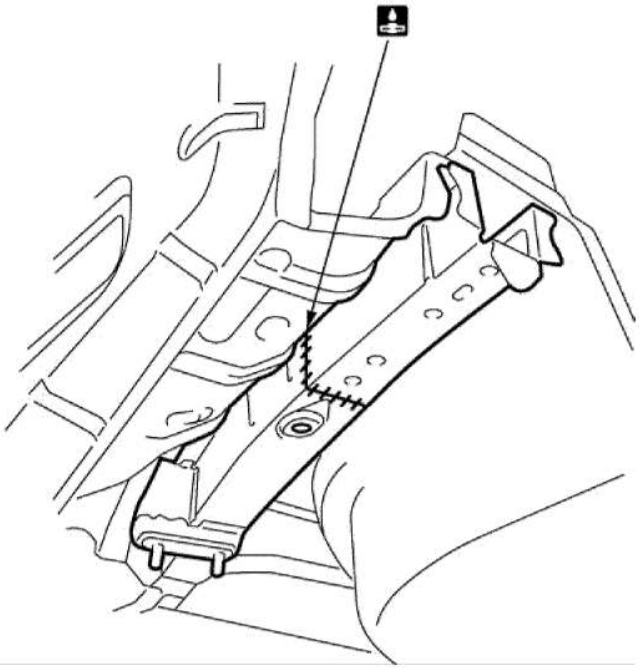
70mm (2.76in.)

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.

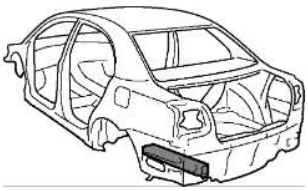


F14628

cardiagn.com

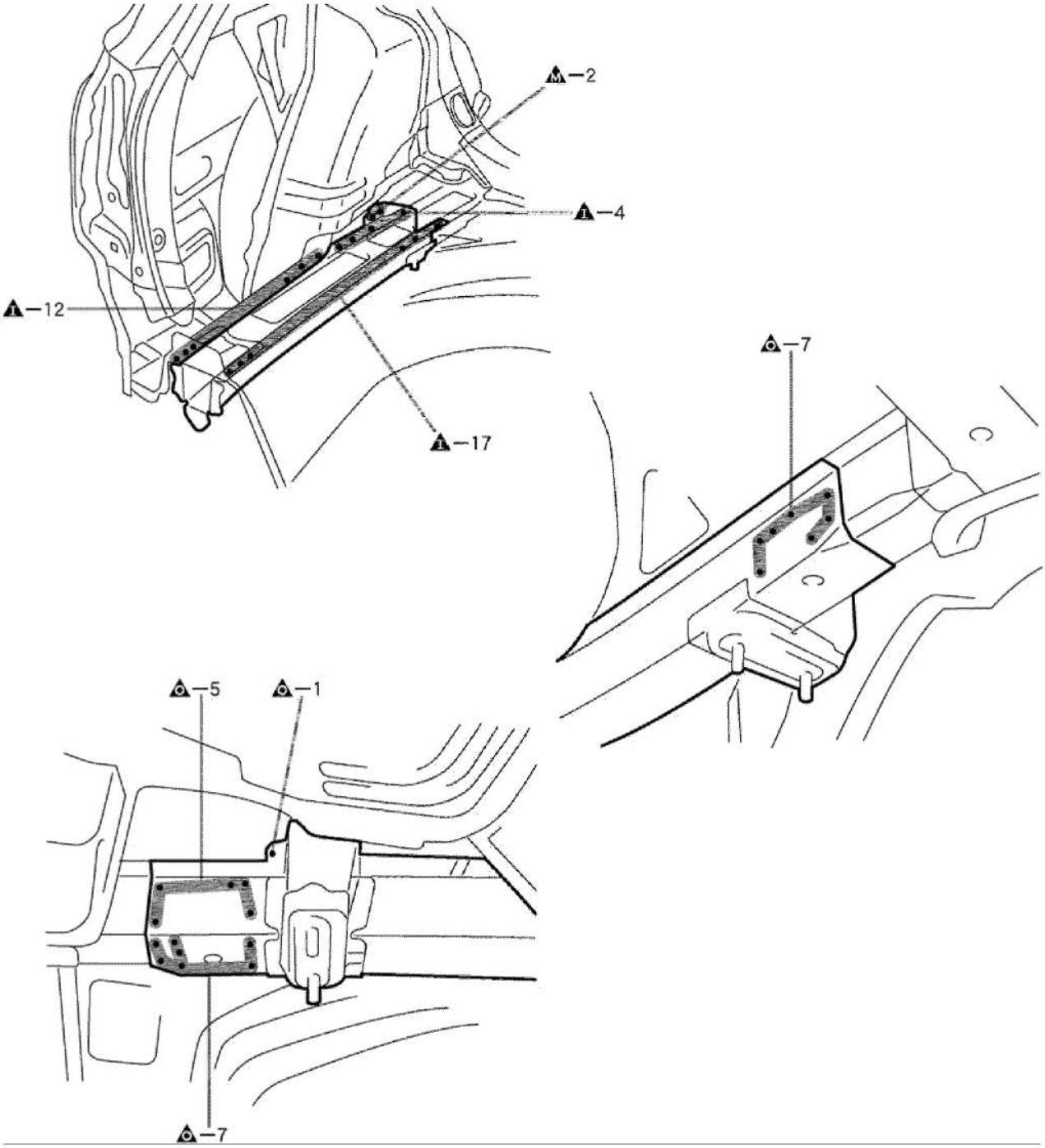
# REAR FLOOR SIDE REAR MEMBER (ASSY)



F14443-A

**REMOVAL**

With the body lower back panel, rear floor No.3 crossmember removed.

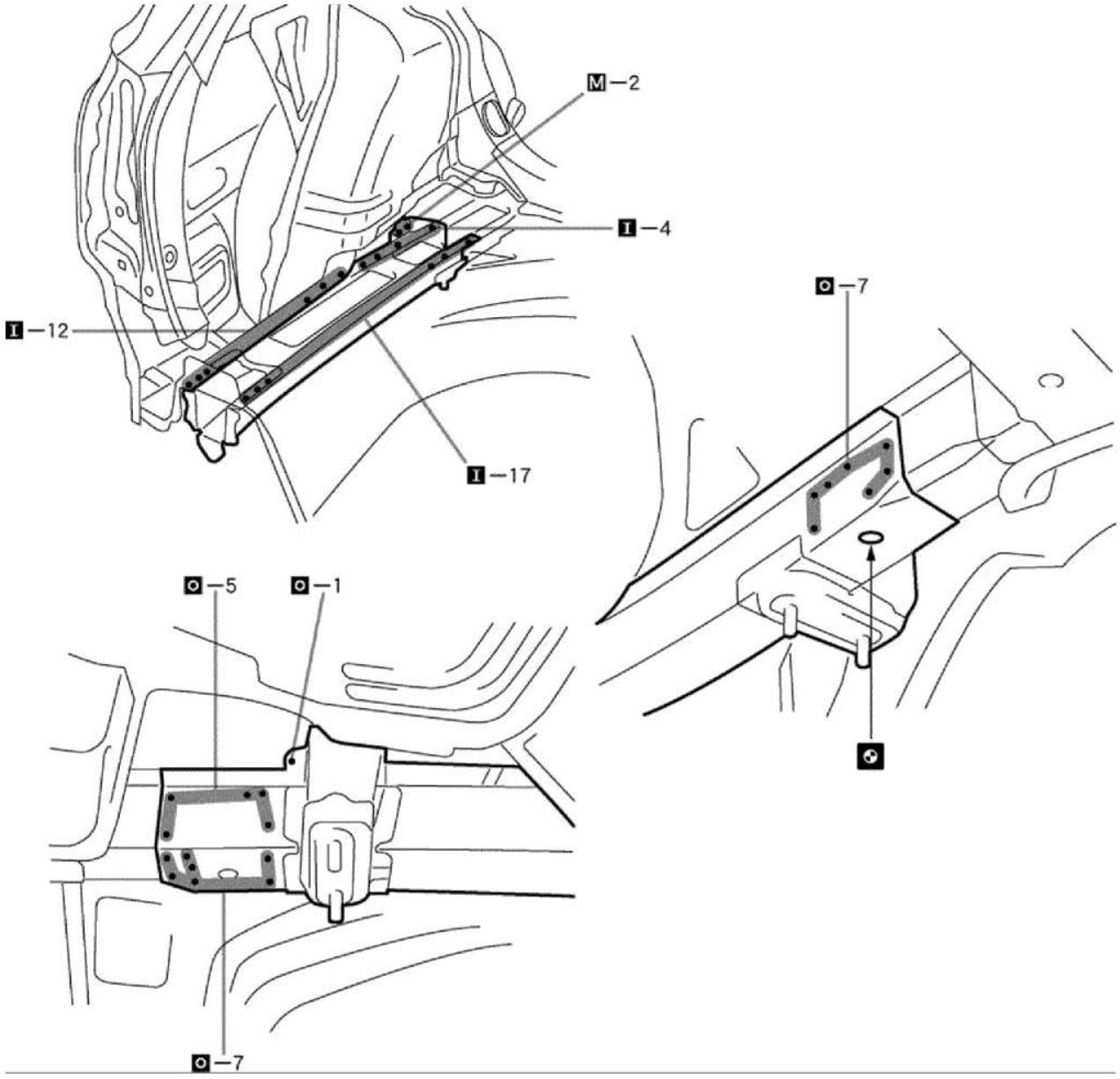



F14443

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14444

**POINT**

1 Determine the position of the new parts by assembly marks of the inner and outer panels.

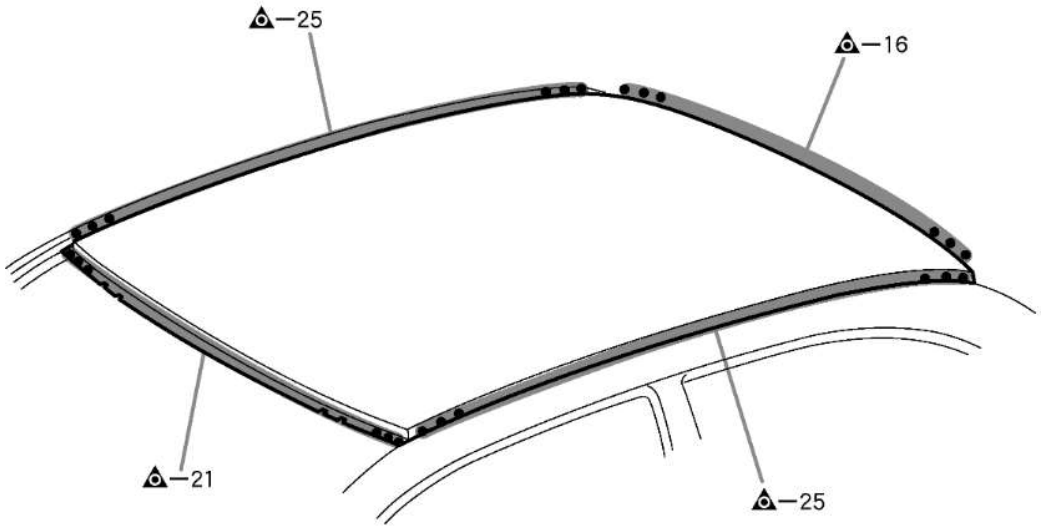
cardiagn.com

# ROOF PANEL (ASSY): Sedan w/o Sun Roof

## REMOVAL



F14447-A

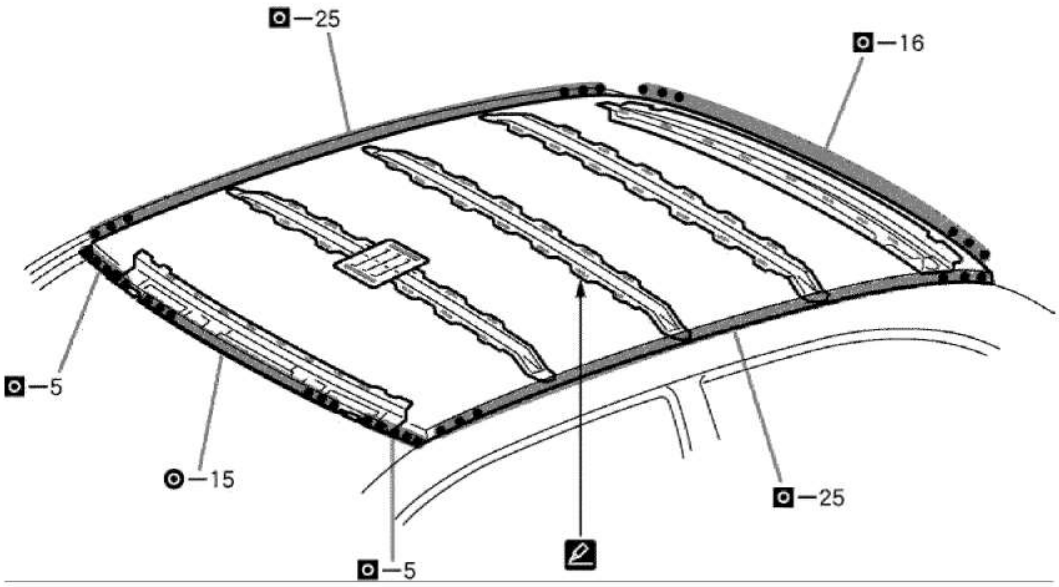



F14447

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14448

**POINT**

1 Before temporarily installing the new parts, apply body sealer to the windshield header panel, roof panel reinforcement and back window frame.
*HINT:*
*1) Apply just enough sealer for the new parts to make contact.*

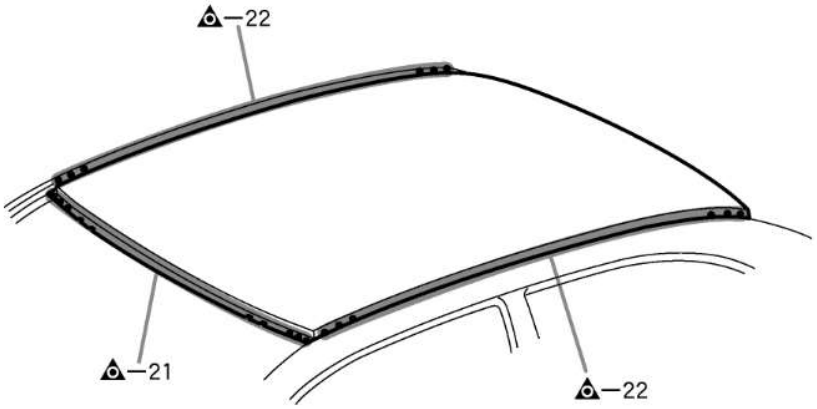
cardiagn.com

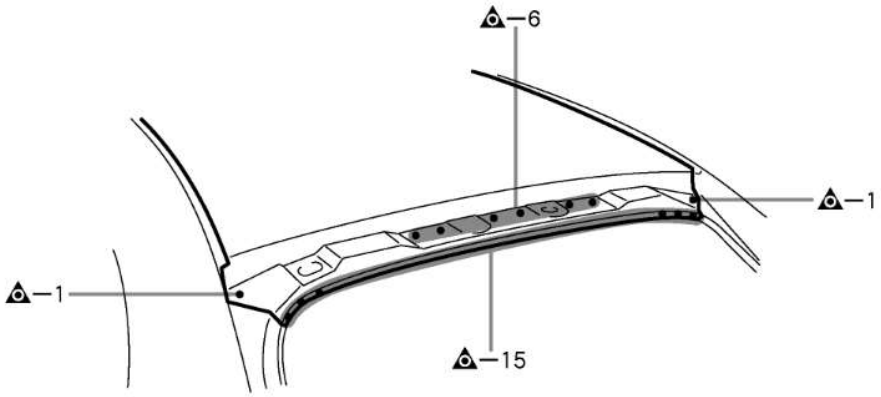
# ROOF PANEL (ASSY): Liftback w/o Sun Roof



F14451-A

## REMOVAL



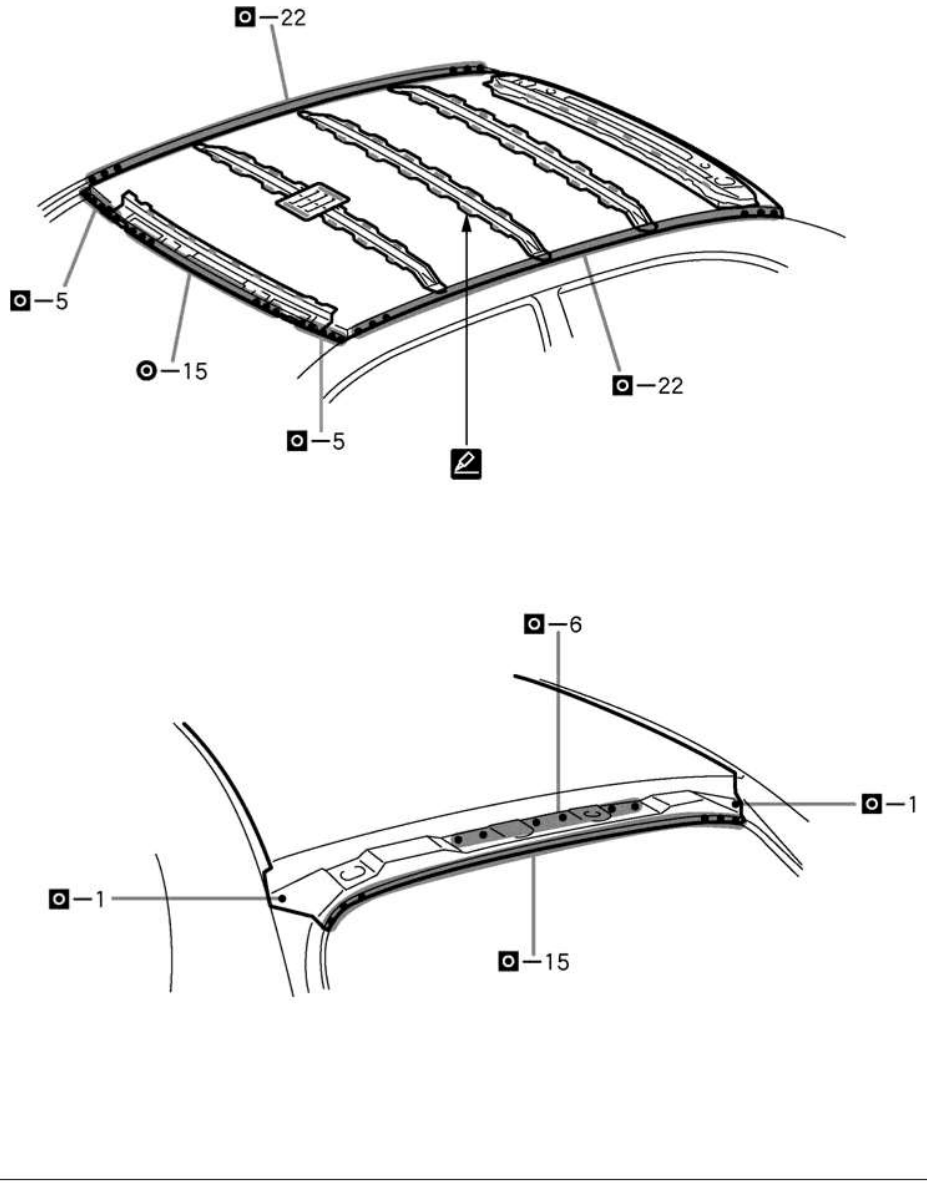




F14451

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14452

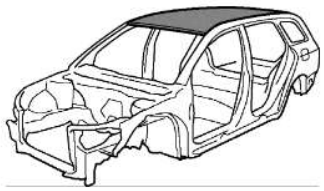
**POINT**

1 Before temporarily installing the new parts, apply body sealer to the windshield header panel, roof panel reinforcement and back door opening frame.
*HINT:*
*1) Apply just enough sealer for the new parts to make contact.*

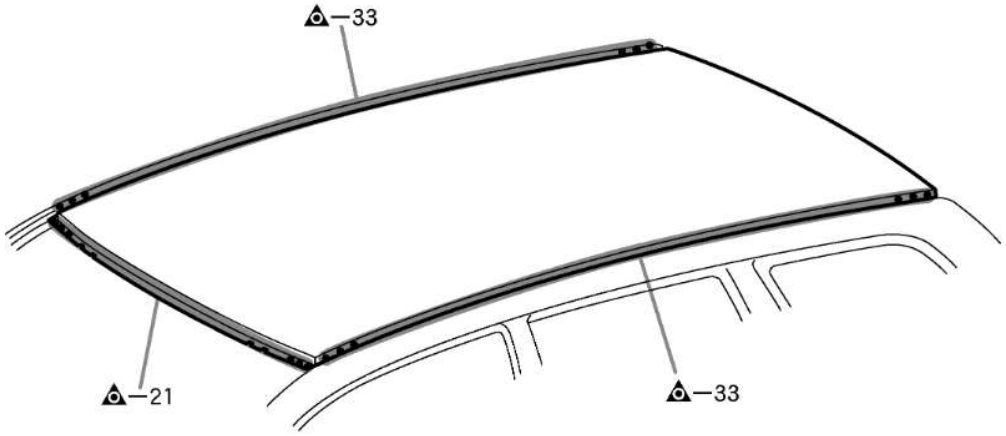
cardiagn.com

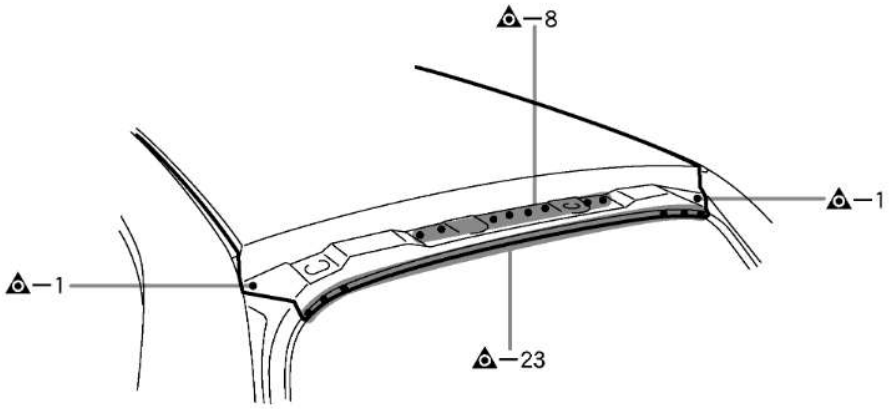
# ROOF PANEL (ASSY): Wagon w/o Sun Roof

## REMOVAL



F14455-A



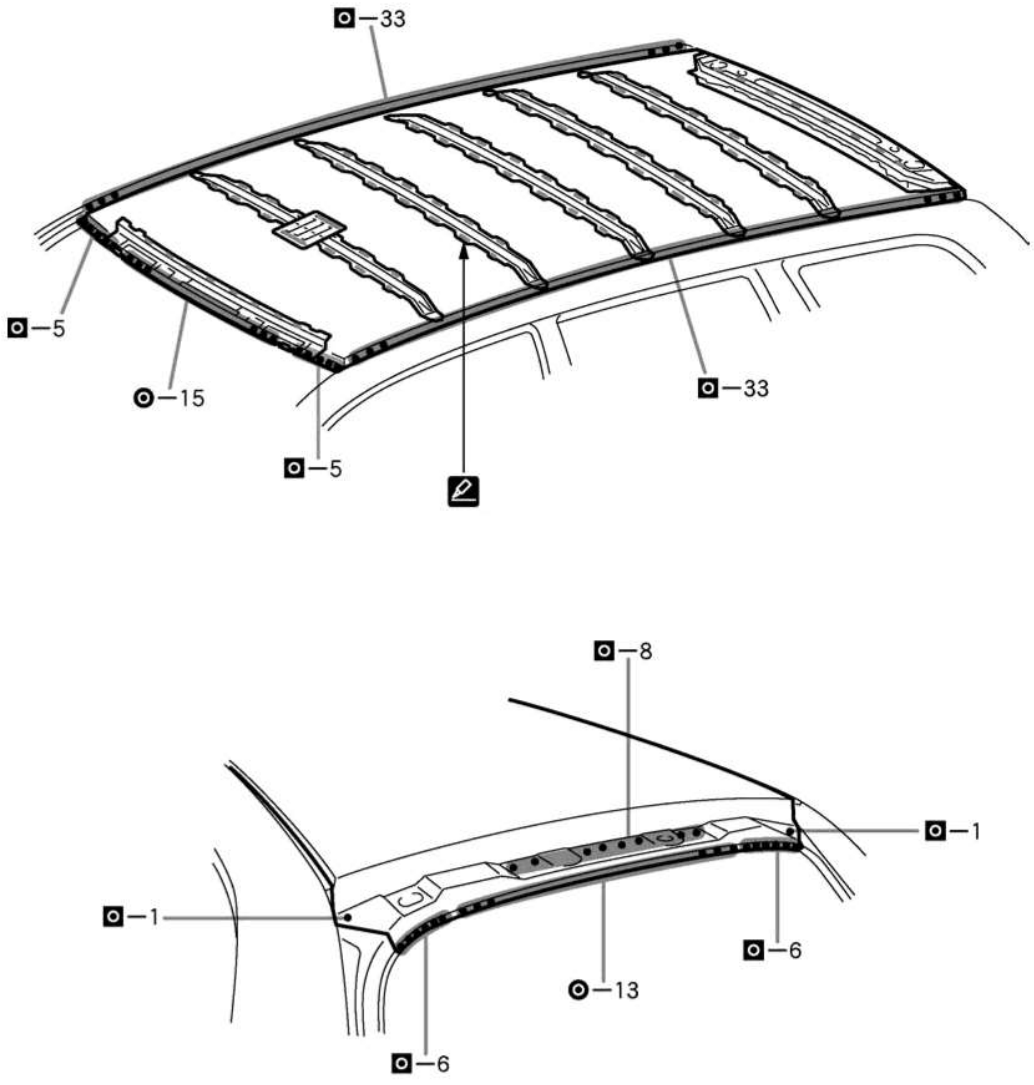




F14455

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14456

**POINT**

1 Before temporarily installing the new parts, apply body sealer to the windshield header panel, roof panel reinforcement and back door opening frame.
*HINT:*
*1) Apply just enough sealer for the new parts to make contact.*

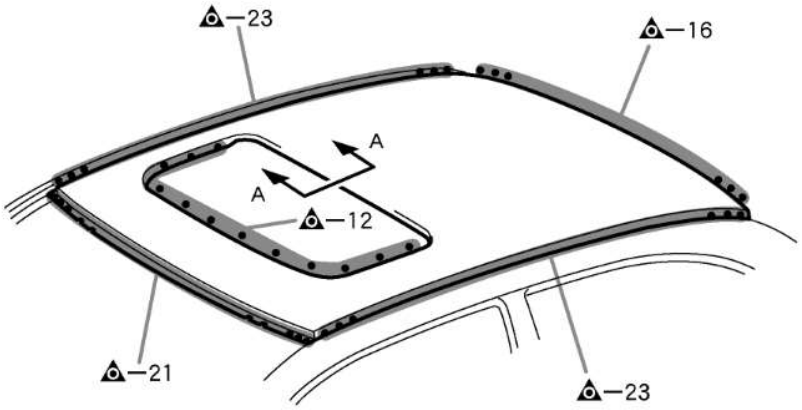
cardiagn.com

# ROOF PANEL (ASSY): Sedan w/ Sun Roof



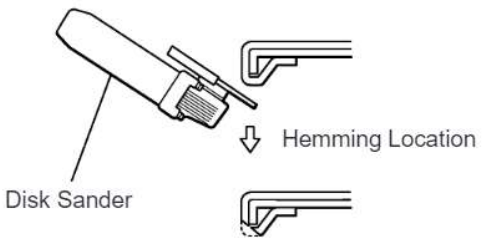
F14449-A

## REMOVAL




A - A

[If reusing the roof panel reinforcement]

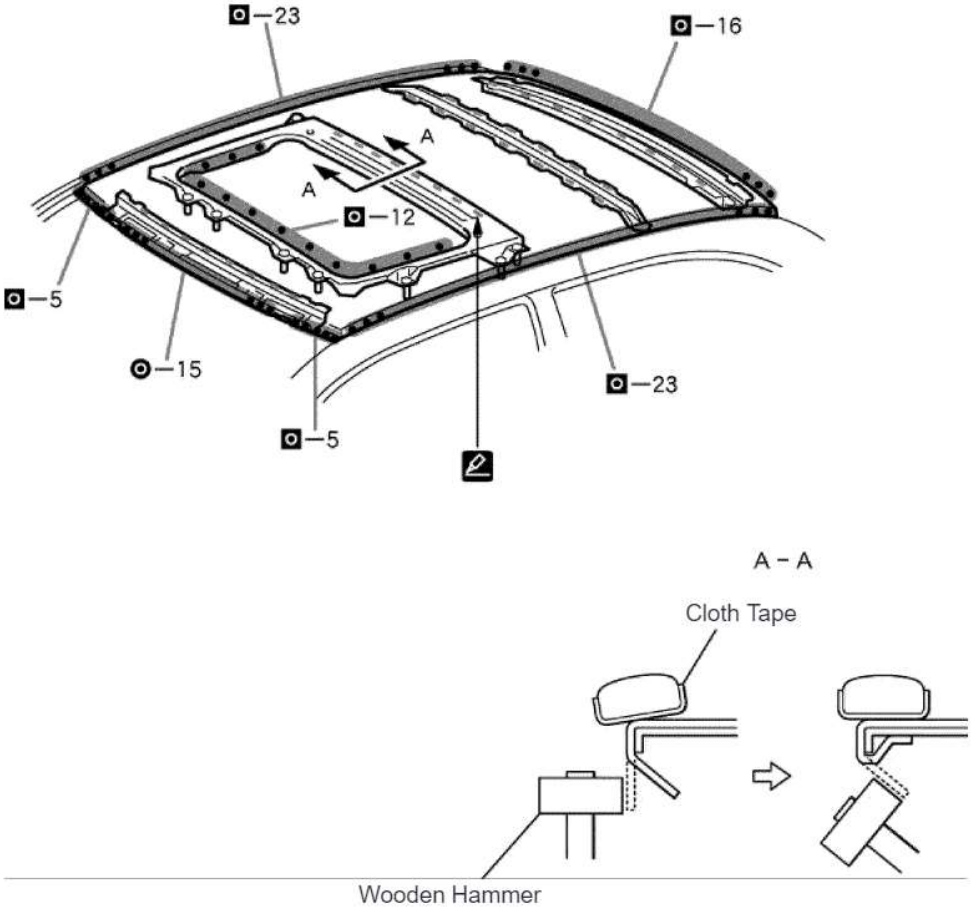



F14449

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




F14450

**POINT**

1 Before temporarily installing the new parts, apply body sealer to the windshield header panel, roof panel reinforcement and back window frame.
*HINT:*
*1) Apply just enough sealer for the new parts to make contact.*

2 Bend the flange hem with a wooden hammer and dolly.
*HINT*
*1) Perform hemming three steps, being careful not to warp the panel.*

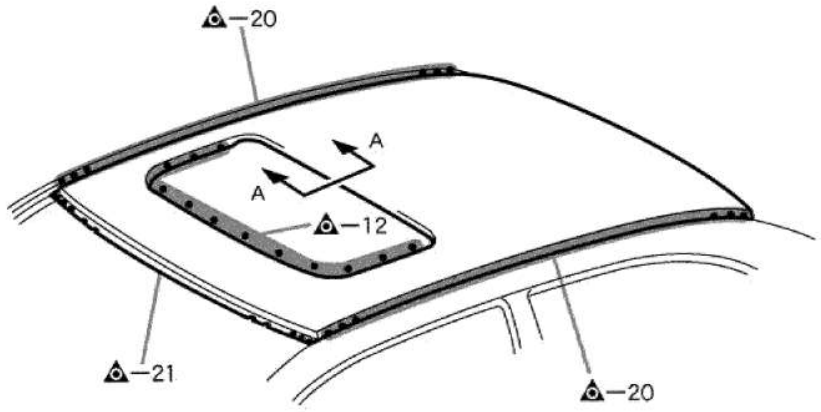
cardiagn.com

# ROOF PANEL (ASSY): Liftback w/ Sun Roof



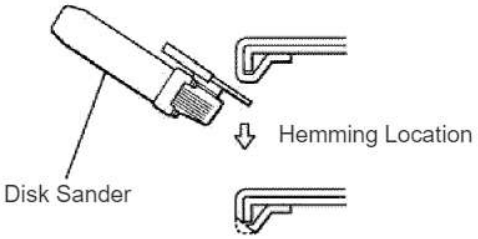
F14453-A

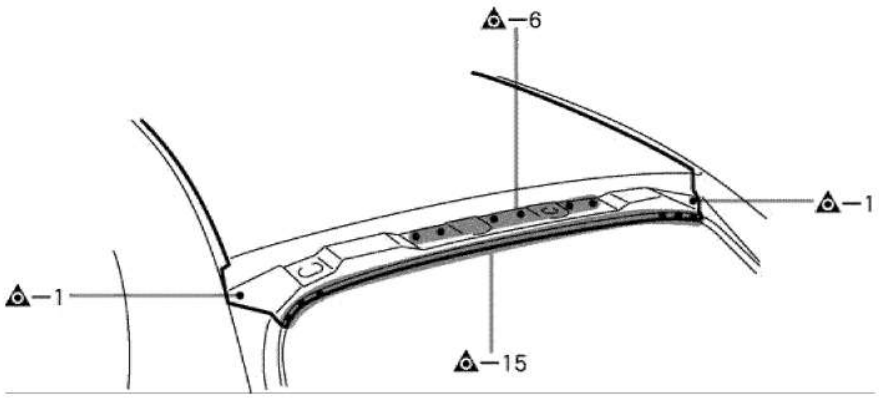
## REMOVAL




A - A

[If reusing the roof panel reinforcement]



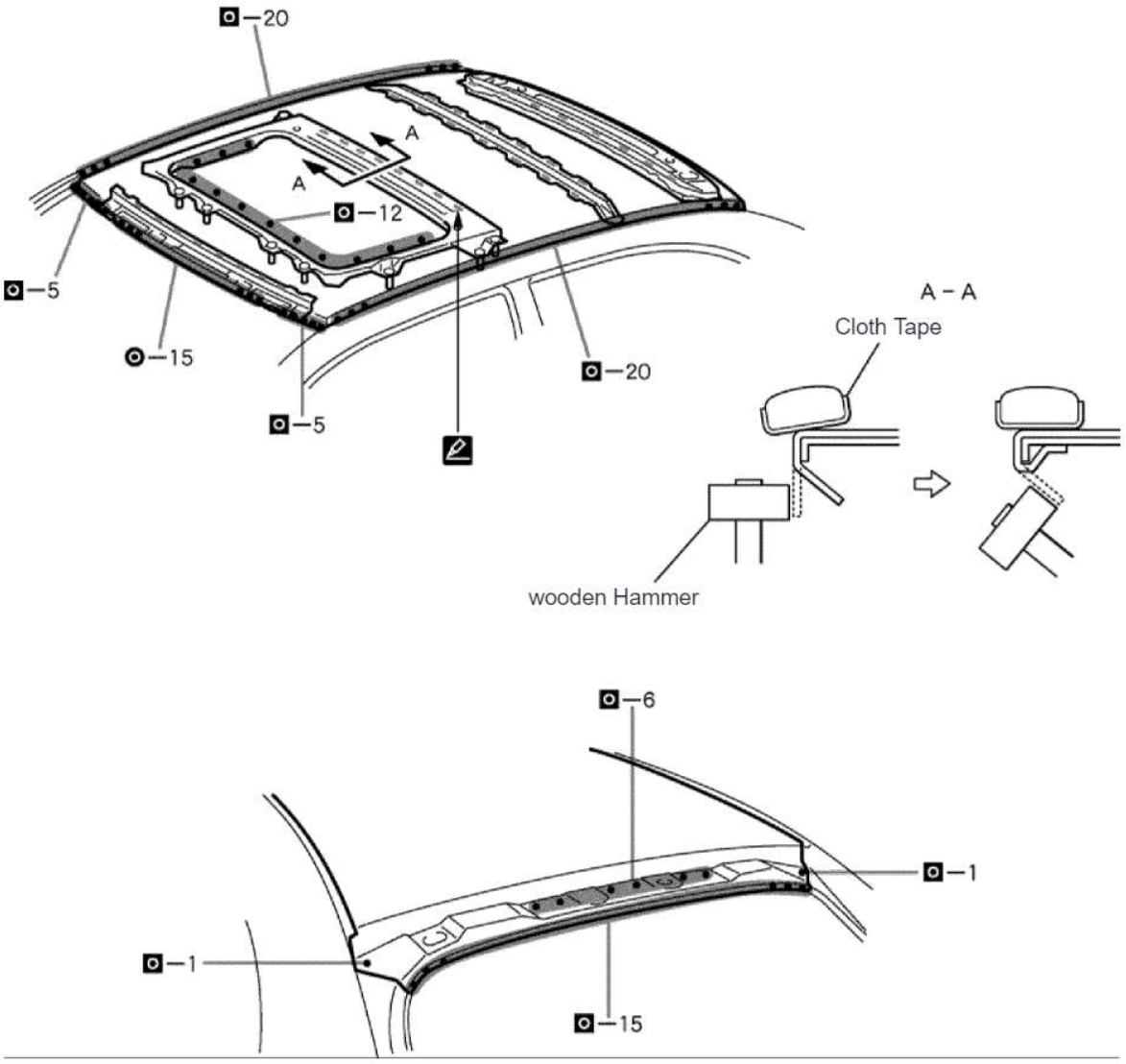




F14453

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.




**POINT**

1 Before temporarily installing the new parts, apply body sealer to the windshield header panel, roof panel reinforcement and back door opening frame.
*HINT:*
*1) Apply just enough sealer for the new parts to make contact.*

2 Bend the flange hem with a wooden hammer and dolly.
*HINT*
*1) Perform hemming three steps, being careful not to warp the panel.*

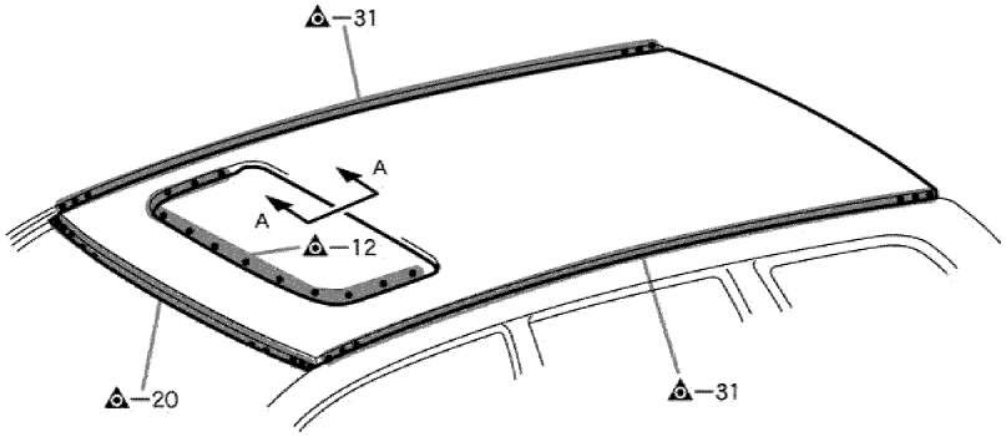
cardiagn.com

# ROOF PANEL (ASSY): Wagon w/ Sun Roof



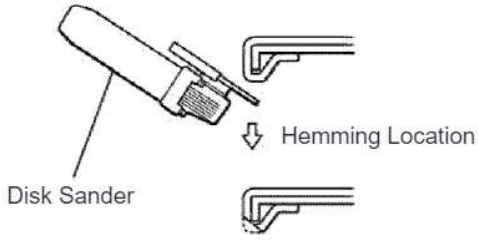
F14457-A

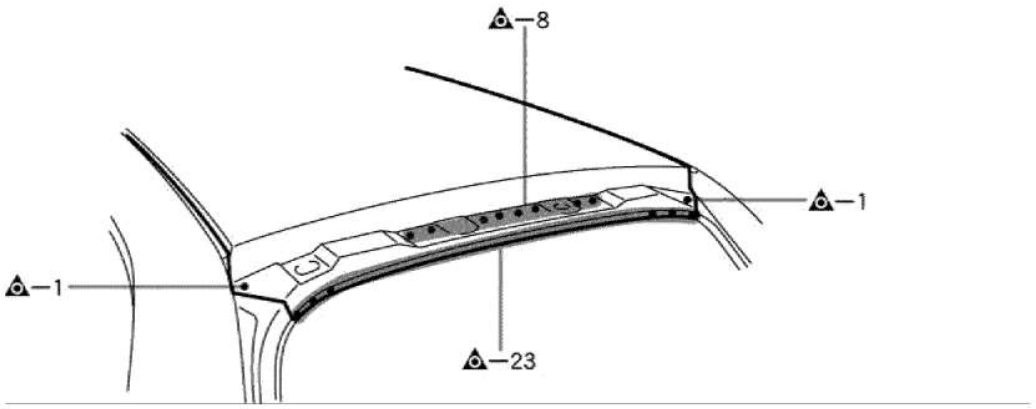
## REMOVAL




A - A

[If reusing the roof panel reinforcement]



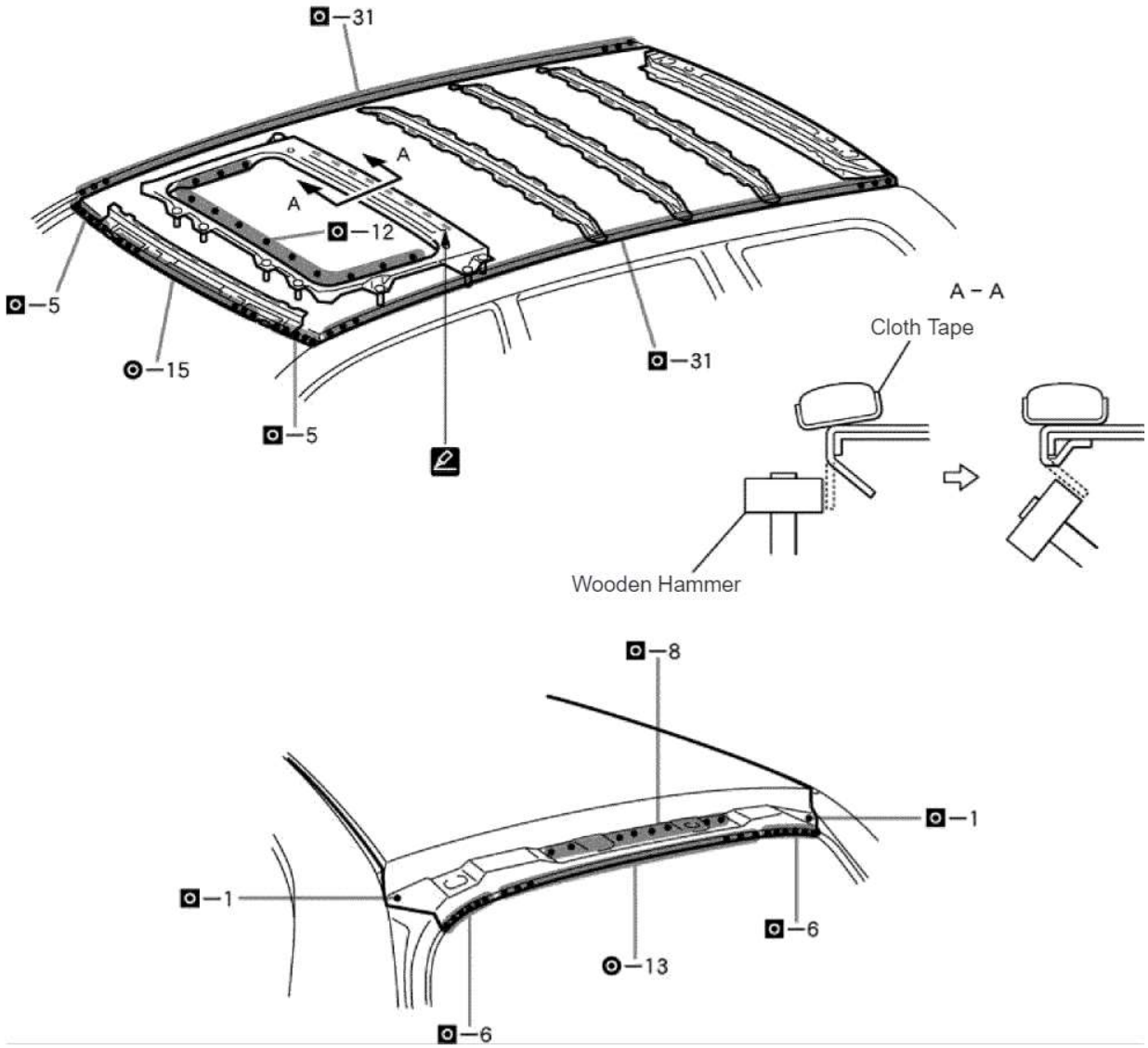




F14457

cardiagn.com

**INSTALLATION**

- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fitting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.



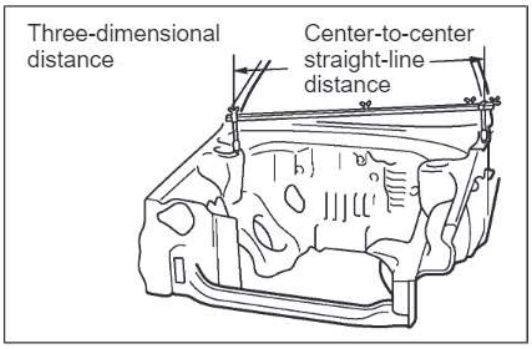

F14458

**POINT**

1 Before temporarily installing the new parts, apply body sealer to the windshield header panel, roof panel reinforcement and back door opening frame.
*HINT:*
*1) Apply just enough sealer for the new parts to make contact.*

2 Bend the flange hem with a wooden hammer and dolly.
*HINT*
*1) Perform hemming three steps, being careful not to warp the panel.*

cardiagn.com



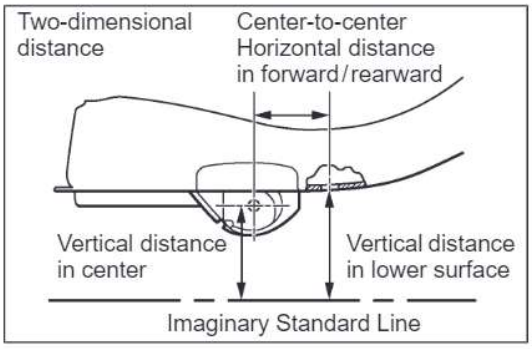

# GENERAL INFORMATION

## 1. BASIC DIMENSIONS

(a) There are two types of dimensions in the diagram.

(1) (Three-dimensional distance)

- Straight-line distance between the centers of two measuring points.

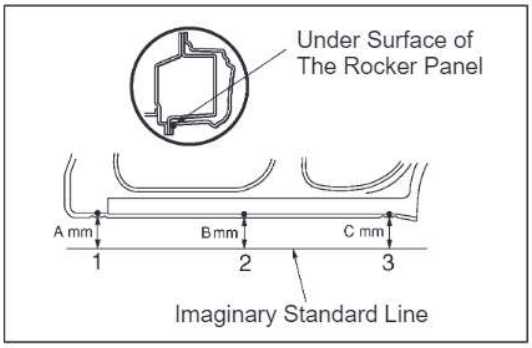



(2) (Two-dimensional distance)

- Horizontal distance in forward/rearward between the centers of two measuring points.
- The height from an imaginary standard line.

(b) In cases in which only one dimension is given, left and right are symmetrical.

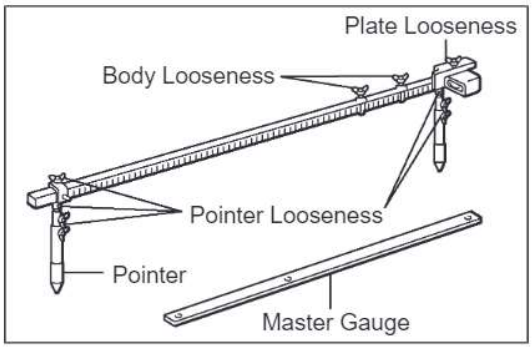
(c) The dimensions in the following drawing indicate actual distance. Therefore, please use the dimensions as a reference.




(d) The line that connects the places listed below is the imaginary standard line when measuring the height. (The dimensions are printed in the text.)

| SYMBOL | Name |
|---|---|
| 1 | The place that was lowered A mm from the under surface of the rocker panel centered on the front jack up point. |
| 2 | The place that was lowered B mm from the under surface of the rocker panel centered between 1 and 3. |
| 3 | The place that was lowered C mm from the under surface of the rocker panel centered on the rear jack up point. |

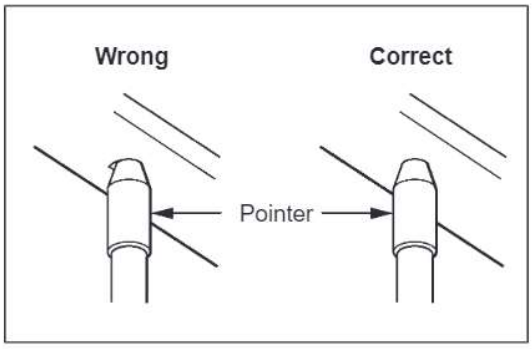
cardiagn.com




## 2. MEASURING

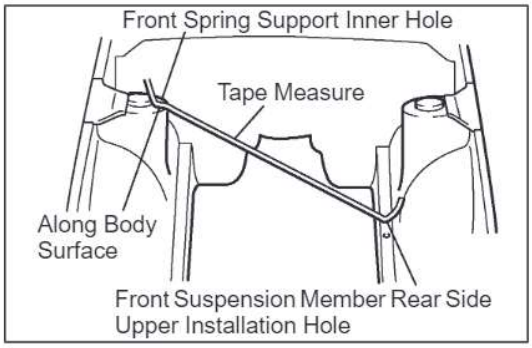
(a) Basically, all measurements are to be done with a tracking gauge. For portions where it is not possible to use a tracking gauge, a tape measure should be used.

(b) Use only a tracking gauge that has no looseness in the body, measuring plate, or pointers.




*HINT:*

*1) The height of the left and right pointers must be equal.*
*2) Always calibrate the tracking gauge before measuring or after adjusting the pointer height.*
*3) Take care not to drop the tracking gauge or otherwise shock it.*
*4) Confirm that the pointers are securely in the holes.*




(c) When using a tape measure, avoid twists and bends in the tape.

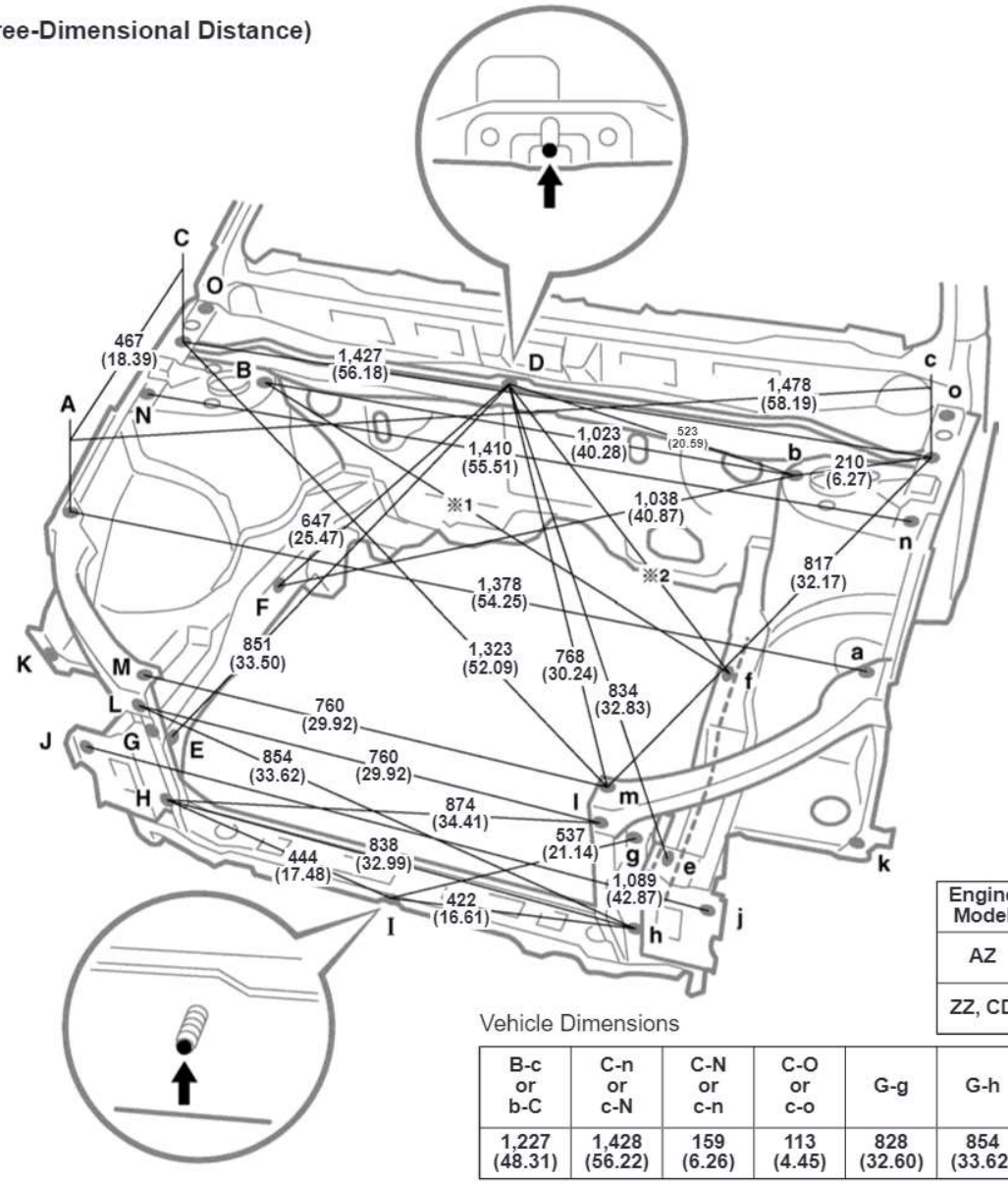
(d) When tracking a diagonal measurement from the front spring support inner hole to the suspension member upper rear installation hole, measure along the front spring support panel surface.

cardiagn.com

# BODY DIMENSION DRAWINGS

## ENGINE COMPARTMENT

(Three-Dimensional Distance)




| Engine Model | ※1 | ※2 |
|---|---|---|
| AZ | 1,022 (40.24) | 625 (24.61) |
| ZZ, CD | 1,010 (39.76) | 606 (23.86) |

Vehicle Dimensions

| B-c or b-C | C-n or c-N | C-N or c-n | C-O or c-o | G-g | G-h | g-H |
|---|---|---|---|---|---|---|
| 1,227 (48.31) | 1,428 (56.22) | 159 (6.26) | 113 (4.45) | 828 (32.60) | 854 (33.62) | 876 (34.49) |

| I-j | I-J | J-L | j-l | K-k | N-o or n-O | N-O or n-o |
|---|---|---|---|---|---|---|
| 593 (23.35) | 607 (23.90) | 250 (9.84) | 240 (9.45) | 1,439 (56.65) | 1,452 (57.17) | 272 (10.71) |

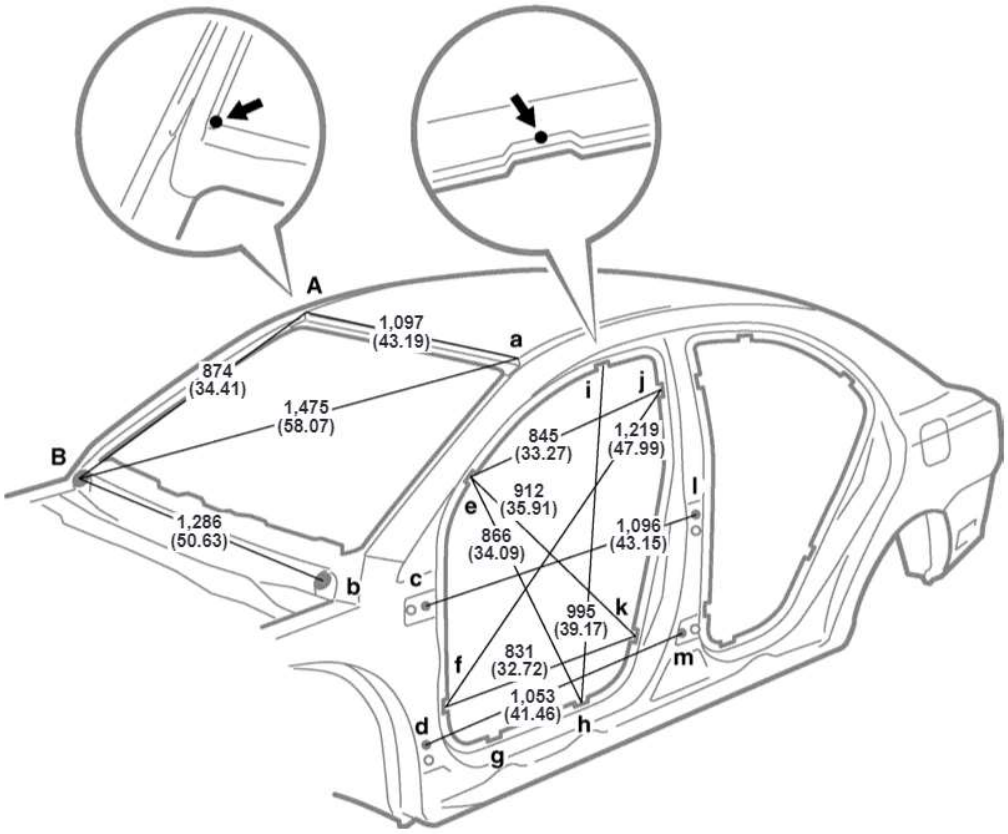
mm (in.)

| Symbol | Name | Hole dia. | Symbol | Name | Hole dia. |
|---|---|---|---|---|---|
| A, a | Front fender installation nut | 6 (0.24) nut | I | Hood lock brace installation bolt | 6 (0.24) bolt |
| B, b | Front spring support hole-inner | 11 (0.43) | J, j | Front side member rear plate standard hole | 13 (0.51) |
| C, c | Front fender installation nut | 6 (0.24) nut | K, k | Front fender extention standard hole | 7 (0.28) |
| D | Cowl top inner panel standard hole | — | L, l | Radiator upper support installation nut | 6 (0.24) nut |
| E, e | Front side member standard hole | 18 (0.71) | M, m | Radiator upper support installation nut | 6 (0.24) nut |
| F | Front side member standard hole | 12 (0.47) | N, n | Front apron to cowl side upper member standard hole | 10 (0.39) |
| f | Engine mounting installation nut | 10 (0.39) nut | | | |
| G, g | Radiator support standard hole | 10 (0.39) | O, o | Hood hinge installation nut | 8 (0.31) nut |
| H, h | Front crossmember side gusset standard hole | 10 (0.39) | — | — | — |

cardiagn.com

# BODY OPENING AREAS (Side View: Front)
## All

(Three-Dimensional Distance)




Vehicle Dimensions Left ↔ Right

| E-e | F-f | G-g | H-h | I-i | J-j | K-k |
|---|---|---|---|---|---|---|
| 1,323 (52.09) | 1,411 (55.55) | 1,419 (55.87) | 1,419 (55.87) | 1,157 (45.55) | 1,265 (49.80) | 1,420 (55.91) |

| E-f or e-F | E-h or e-H | E-j or e-J | F-j or f-J | F-k or f-K | H-i or h-I | J-k or j-K |
|---|---|---|---|---|---|---|
| 1,493 (58.78) | 1,621 (63.82) | 1,545 (60.83) | 1,808 (71.18) | 1,641 (64.61) | 1,622 (63.86) | 1,540 (60.63) |

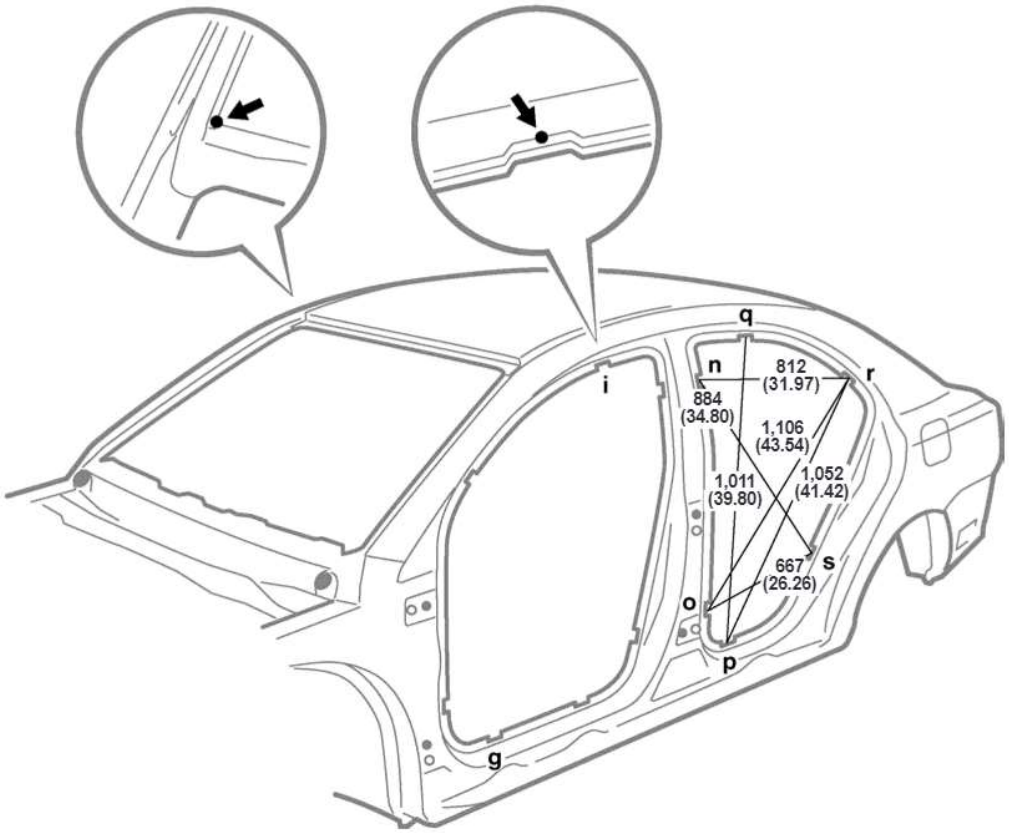
mm (in.)

| Symbol | Name | Hole dia. | Symbol | Name | Hole dia. |
|---|---|---|---|---|---|
| A, a | Roof panel corner | — | H, h | Rocker panel assembly mark | — |
| B, b | Wiper link installation nut | 6 (0.24) nut | I, i | Roof side rail assembly mark | — |
| C, c | Front door hinge installation nut | 8 (0.31) nut | J, j | Center body pillar assembly mark | — |
| D, d | Front door hinge installation nut | 8 (0.31) nut | K, k | Center body pillar assembly mark | — |
| E, e | Front body pillar assembly mark | — | L, l | Rear door hinge installation nut | 8 (0.31) nut |
| F, f | Front body pillar assembly mark | — | M, m | Rear door hinge installation nut | 8 (0.31) nut |
| G, g | Rocker panel assembly mark | — | — | — | — |

cardiagn.com

# BODY OPENING AREAS (Side View: Rear)
## Sedan, Liftback

(Three-Dimensional Distance)




Vehicle Dimensions Left ↔ Right

| N-n | O-o | P-p | Q-q | R-r | S-s |
|---|---|---|---|---|---|
| 1,267 (49.88) | 1,420 (55.91) | 1,419 (55.87) | 1,151 (45.31) | 1,309 (51.54) | 1,409 (55.47) |

| G-p or g-P | I-q or i-Q | N-r or n-R | N-s or n-S | O-s or o-S | P-q or p-Q | R-s or r-S |
|---|---|---|---|---|---|---|
| 1,759 (69.25) | 1,338 (52.68) | 1,522 (59.92) | 1,602 (63.07) | 1,564 (61.57) | 1,630 (64.17) | 1,496 (58.90) |

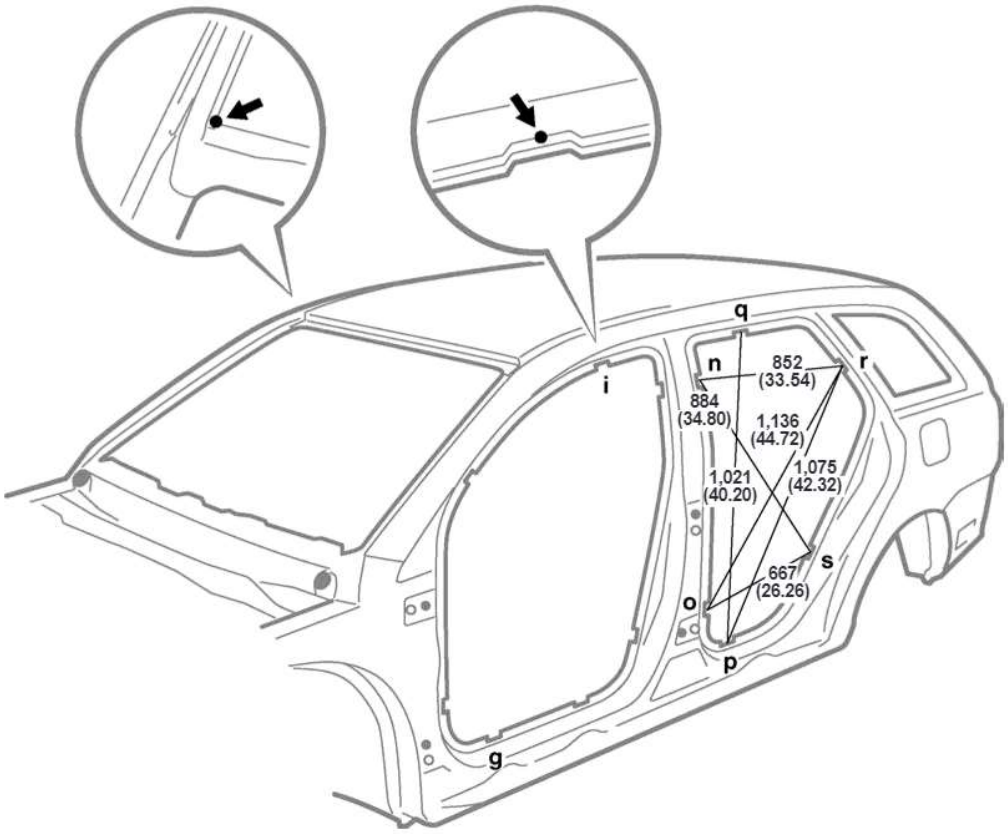
mm (in.)

| Symbol | Name | Hole dia. | Symbol | Name | Hole dia. |
|---|---|---|---|---|---|
| G, g | Rocker panel assembly mark | — | P, p | Rocker panel assembly mark | — |
| I, i | Roof side rail assembly mark | — | Q, q | Roof side rail assembly mark | — |
| N, n | Center body pillar assembly mark | — | R, r | Quarter panel assembly mark | — |
| O, o | Center body pillar assembly mark | — | S, s | Quarter panel assembly mark | — |

cardiagn.com

# BODY OPENING AREAS (Side View: Rear)
## Wagon

(Three-Dimensional Distance)




Vehicle Dimensions Left ↔ Right

| N-n | O-o | P-p | Q-q | R-r | S-s |
|---|---|---|---|---|---|
| 1,267 (49.88) | 1,420 (55.91) | 1,419 (55.87) | 1,140 (44.88) | 1,311 (51.61) | 1,409 (55.47) |

| G-p or g-P | I-q or i-Q | N-r or n-R | N-s or n-S | O-s or o-S | P-q or p-Q | R-s or r-S |
|---|---|---|---|---|---|---|
| 1,759 (69.25) | 1,333 (52.48) | 1,545 (60.83) | 1,602 (63.07) | 1,564 (61.57) | 1,631 (64.21) | 1,502 (59.13) |

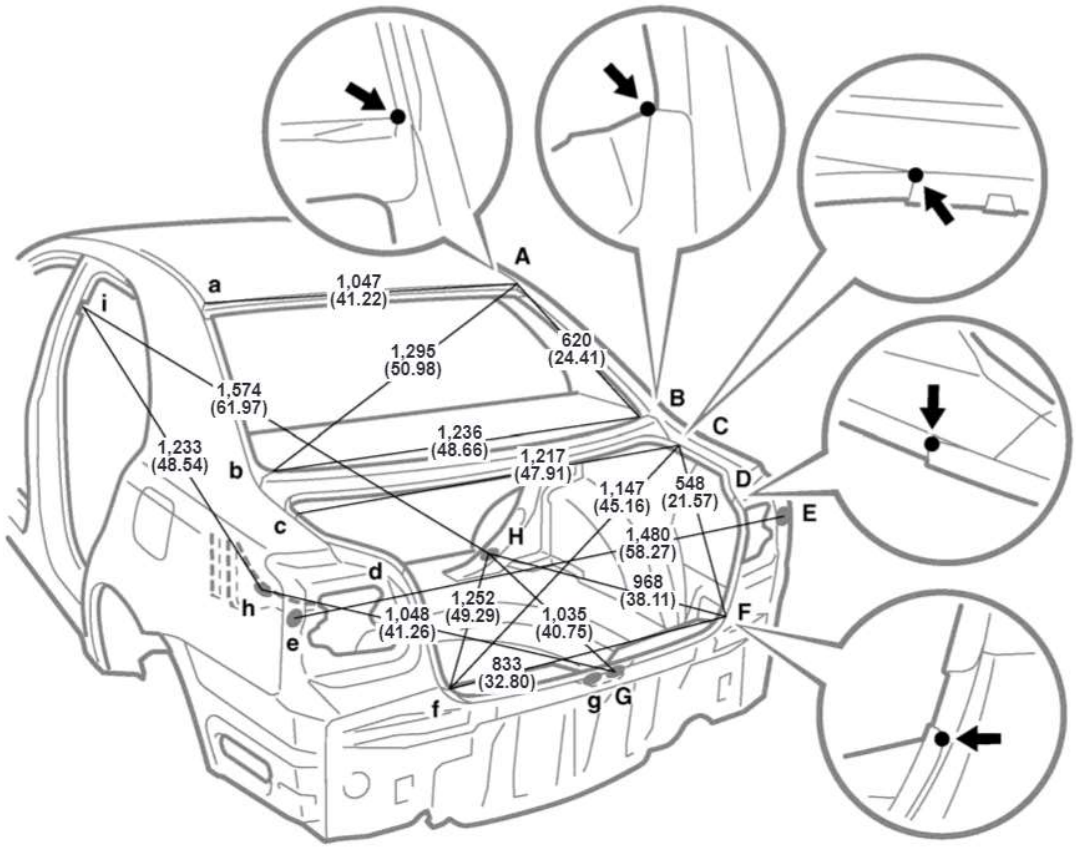
mm (in.)

| Symbol | Name | Hole dia. | Symbol | Name | Hole dia. |
|---|---|---|---|---|---|
| G, g | Rocker panel assembly mark | — | P, p | Rocker panel assembly mark | — |
| I, i | Roof side rail assembly mark | — | Q, q | Roof side rail assembly mark | — |
| N, n | Center body pillar assembly mark | — | R, r | Quarter panel assembly mark | — |
| O, o | Center body pillar assembly mark | — | S, s | Quarter panel assembly mark | — |

cardiagn.com

# BODY OPENING AREAS (Rear View)
## Sedan

(Three-Dimensional Distance)




Vehicle Dimensions Left ↔ Right

| D-d | H-h |
|---|---|
| 1,084 (42.68) | 754 (29.69) |

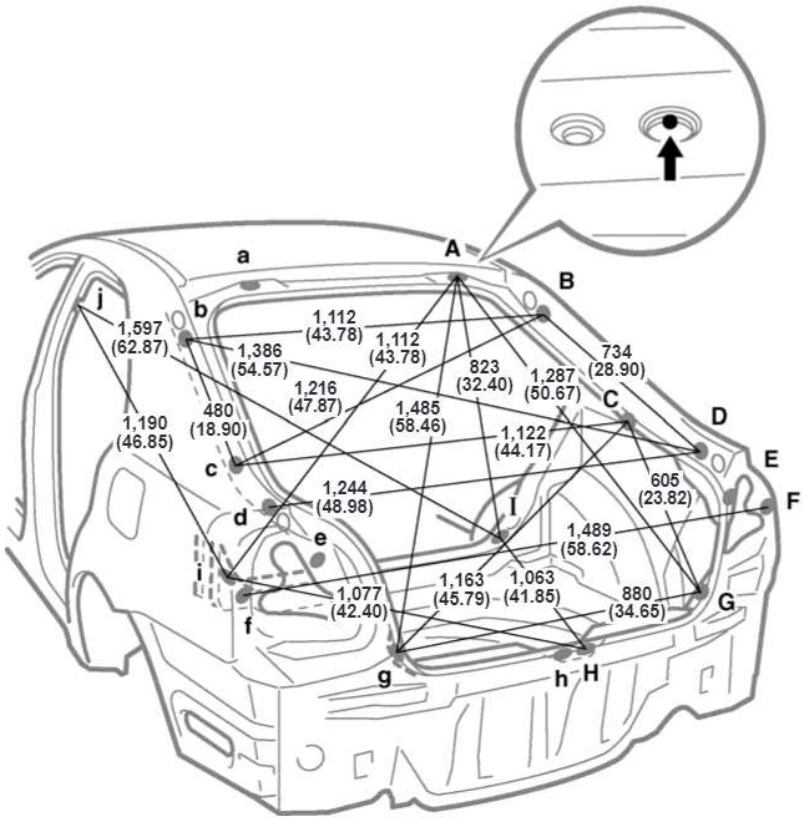
mm (in.)

| Symbol | Name | Hole dia. | Symbol | Name | Hole dia. |
|---|---|---|---|---|---|
| A, a | Roof panel corner | — | E, e | Quarter panel standard hole | 10 (0.39) |
| B, b | Upper back reinforcement / Quarter panel adjoining portion | — | F, f | Body lower back panel reinforcement / Quarter panel end housing adjoining portion | — |
| C, c | Quarter panel / Upper back reinforcement adjoining portion | — | G, g | Back door lock striker installation nut | 8 (0.31) nut |
| | | | H, h | Deck hook installation nut | 6 (0.24) nut |
| D, d | Quarter panel end housing / Luggage compartment opening trough adjoining portion | — | I, i | Center body pillar assembly mark | — |
| | | | — | — | — |

cardiagn.com

# BODY OPENING AREAS (Rear View)
## Liftback

(Three-Dimensional Distance)




Vehicle Dimensions Left ↔ Right

| E-e | G-i or g-I | G-I or g-i | I-i |
|---|---|---|---|
| 1,165 (45.87) | 1,290 (50.79) | 937 (36.89) | 896 (35.28) |

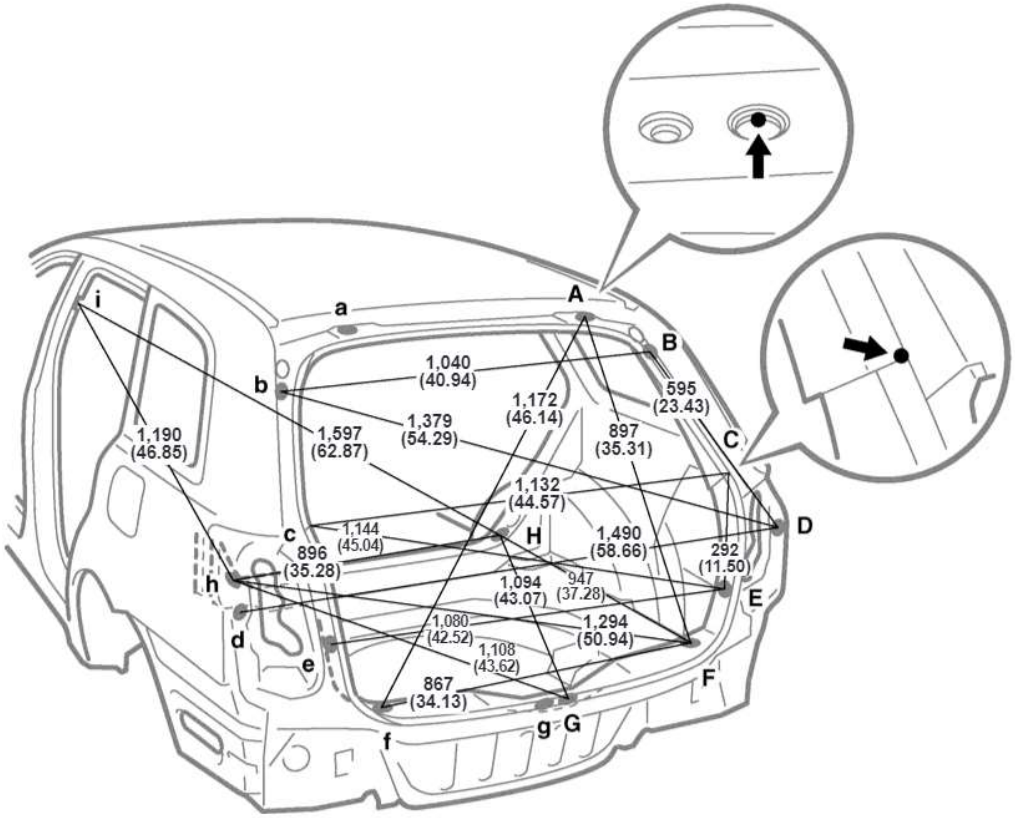
mm (in.)

| Symbol | Name | Hole dia. | Symbol | Name | Hole dia. |
|---|---|---|---|---|---|
| A, a | Back door hinge installation hole-outer | 12 (0.47) | F, f | Quarter panel standard hole | 10 (0.39) |
| B, b | Back door damper stay installation nut | 6 (0.24) nut | G, g | Deck side rear garnish installation hole | 8.5 (0.335) |
| C, c | Luggage compartment trim side cover installation hole | 8.5 (0.335) | H, h | Back door lock striker installation nut | 8 (0.31) nut |
| | | | I, i | Deck hook installation nut | 6 (0.24) nut |
| D, d | Back door stopper installation nut | 5 (0.20) nut | J, j | Center body pillar assembly mark | — |
| E, e | Quarter panel end housing standard hole | 10 (0.39) | — | — | — |

cardiagn.com

# BODY OPENING AREAS (Rear View)
## Wagon

(Three-Dimensional Distance)



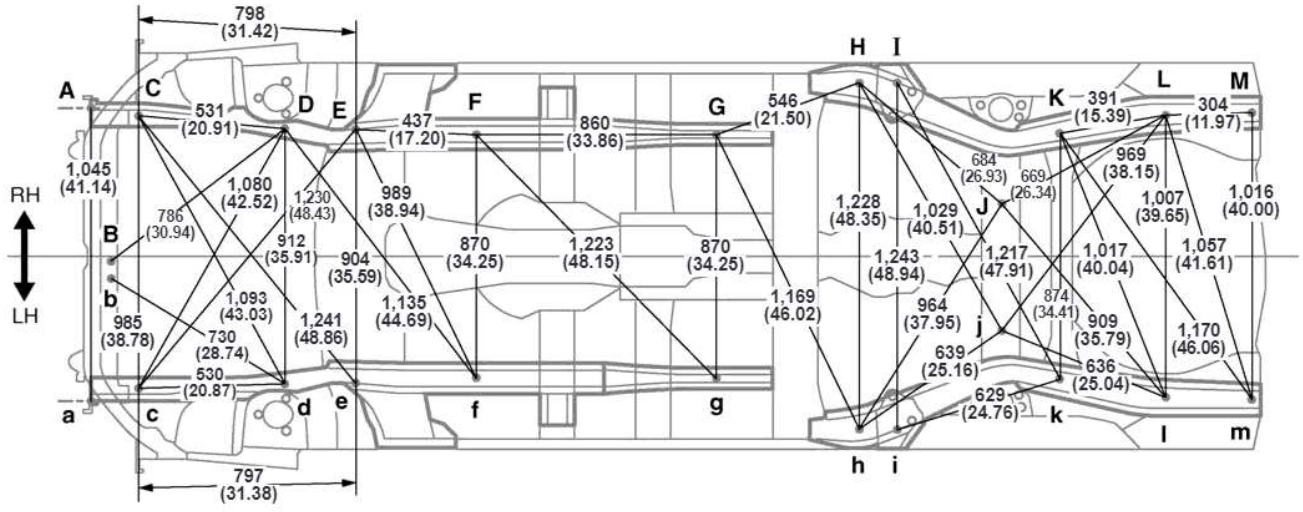

mm (in.)

| Symbol | Name | Hole dia. | Symbol | Name | Hole dia. |
|---|---|---|---|---|---|
| A, a | Back door hinge installation hole | 12 (0.47) | E, e | Deck side rear garnish installation hole | 8.5 (0.335) |
| B, b | Back door damper stay installation nut | 6 (0.24) nut | F, f | Deck side rear garnish installation hole | 7 (0.28) |
| C, c | Roof side inner panel / Roof side inner lower panel adjoining portion | — | G, g | Back door lock striker installation nut | 8 (0.31) nut |
| | | | H, h | Deck hook installation nut | 6 (0.24) nut |
| D, d | Quarter panel standard hole | 10 (0.39) | I, i | Center body pillar assembly mark | — |

cardiagn.com

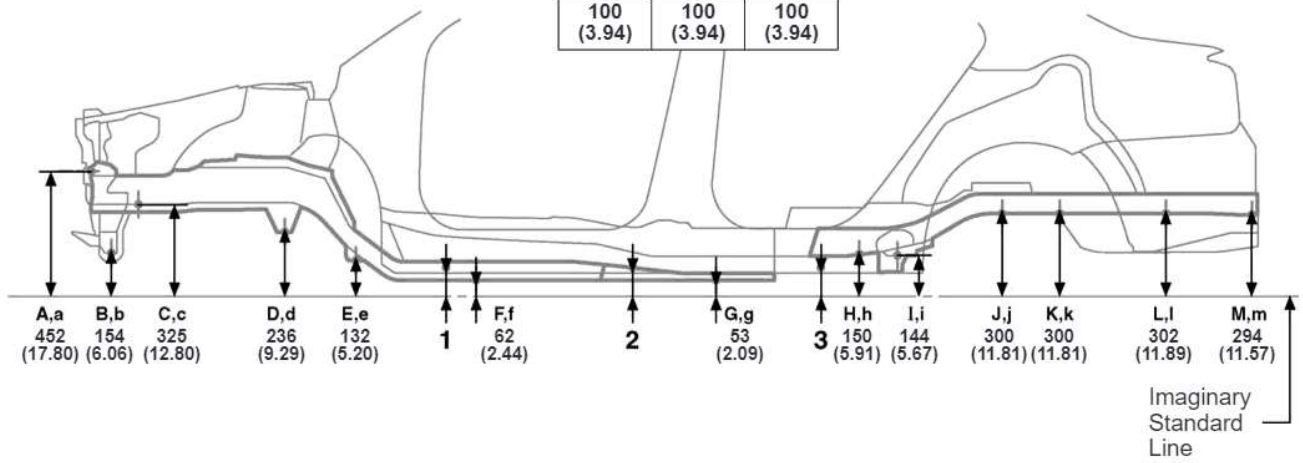
# UNDER BODY

(Three-Dimensional Distance)




Front

| 1 | 2 | 3 |
|---|---|---|
| 100 (3.94) | 100 (3.94) | 100 (3.94) |



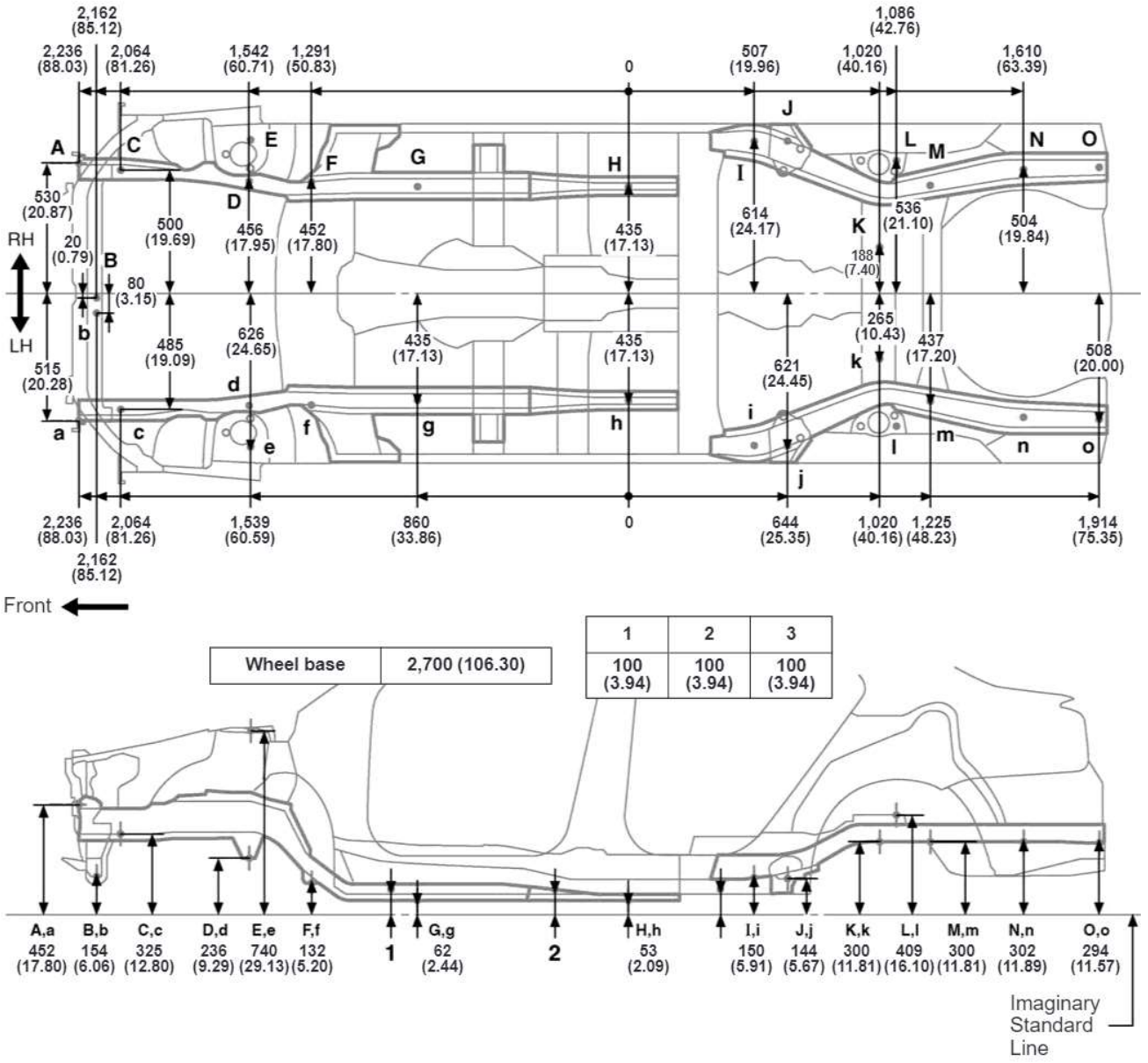

mm (in.)

| Symbol | Name | Hole dia. | Symbol | Name | Hole dia. |
|---|---|---|---|---|---|
| A, a | Front bumper reinforcement installation nut | 10 (0.39) nut | H, h | Rear floor side member standard hole | 25 (0.98) |
| B, b | Center member installation nut | 10 (0.39) nut | I, i | Rear suspension arm installation nut | 12 (0.47) nut |
| C, c | Front side member standard hole | 18 (0.71) | J, j | Rear floor No.2 crossmember standard hole | 10 (0.39) |
| D, d | Front suspension member installation nut | 16 (0.63) nut | K, k | Rear suspension member installation nut | 14 (0.55) nut |
| E, e | Front suspension member installation nut | 14 (0.55) nut | L, l | Rear floor side member standard hole | 18 (0.71) |
| F, f | Front side member standard hole | 18 (0.71) | M, m | Transport hook installation nut | 12 (0.47) nut |
| G, g | Front floor under reinforcement standard hole | 10 (0.39) | — | — | — |

cardiagn.com

## UNDER BODY (Cont'd)

(Three-Dimensional Distance)



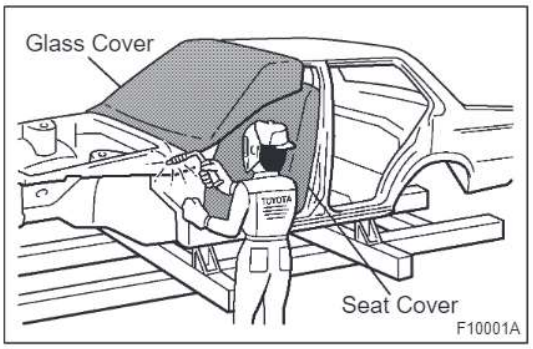

mm (in.)

| Symbol | Name | Hole dia. | Symbol | Name | Hole dia. |
|---|---|---|---|---|---|
| A, a | Front bumper reinforcement installation nut | 10 (0.39) nut | I, i | Reaer floor side member standard hole | 25 (0.98) |
| B, b | Center member installation nut | 10 (0.39) nut | J, j | Rear suspension arm installation nut | 12 (0.47) nut |
| C, c | Front side member standard hole | 18 (0.71) | K, k | Rear floor No.2 crossmember standard hole | 10 (0.39) |
| D, d | Front suspension member installation nut | 16 (0.63) nut | L, l | Rear spring support hole-rear outer | 15 (0.59) |
| E, e | Front spring support hole-outer | 11 (0.43) | M, m | Rear suspension member installation nut | 14 (0.55) nut |
| F, f | Front suspension member installation nut | 14 (0.55) nut | N, n | Rear floor side member standard hole | 18 (0.71) |
| G, g | Front side member standard hole | 18 (0.71) | O, o | Transport hook installation nut | 12 (0.47) nut |
| H, h | Front floor under reinforcement standard hole | 10 (0.39) | — | — | — |

cardiagn.com

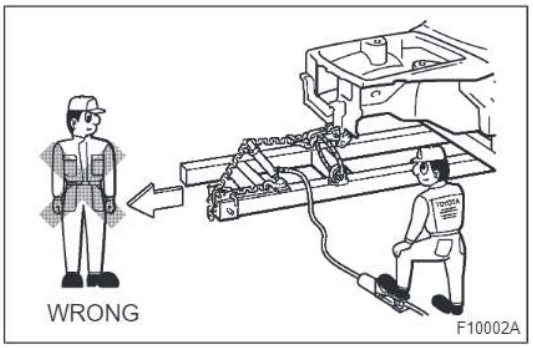
# GENERAL REPAIR INSTRUCTIONS

## 1. WORK PRECAUTIONS



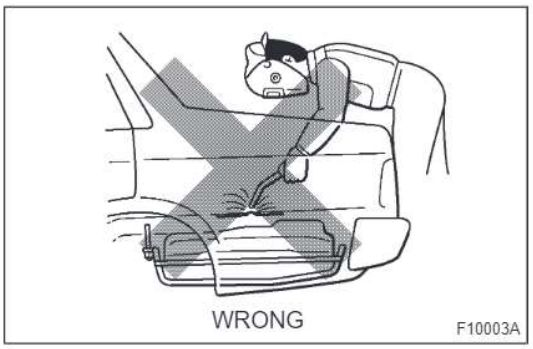

(a) VEHICLE PROTECTION

(1) When welding, protect the painted surfaces, windows, seats and carpet with heat resistant, fire-proof covers.



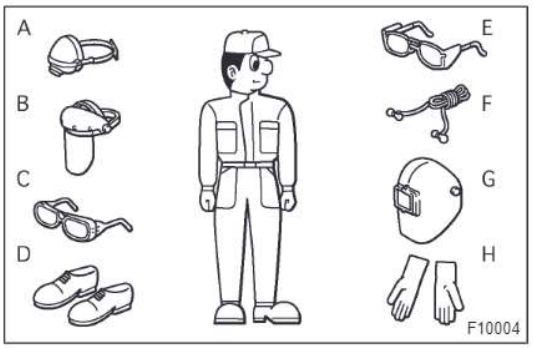

(b) SAFETY

(1) Never stand in direct line with the chain when using a puller on the body or frame, and be sure to attach a safety cable.




(2) Before performing repair work, check for fuel leaks. If a leak is found, be sure to close the opening totally.

(3) If it is necessary to use a flame in the area of the fuel tank, first remove the tank and plug the fuel line.




(c) SAFETY WORK CLOTHES

(1) In addition to the usual mechanic's wear, cap and safety shoes, the appropriate gloves, head protector, glasses, ear plugs, face protector, dust-prevention mask, etc. should be worn as the situation demands.

| Code | Name |
|---|---|
| A | Dust-Prevention Mask |
| B | Face Protector |
| C | Eye Protector |
| D | Safety Shoes |
| E | Welder's Glasses |
| F | Ear Plugs |
| G | Head Protector |
| H | Welder's Gloves |

cardiagn.com

## 2. HANDLING PRECAUTIONS OF PLASTIC BODY PARTS

(1) The repair procedure for plastic body parts must conform with the type of plastic material.

(2) Plastic body parts are identified by the codes in the following table.

(3) When repairing metal body parts adjoining plastic body parts (by brazing, frame cutting, welding, painting etc.), consideration must be given to the property of the plastic.

| Code | Material name | Heat* resistant temperature limit °C (°F) | Resistance to alcohol or gasoline | Notes |
|---|---|---|---|---|
| AAS | Acrylonitrile Acrylic Styrene | 80 (176) | Alcohol is harmless if applied only for short time in small amounts (e.g., quick wiping to remove grease). | Avoid gasoline and organic or aromatic solvents. |
| ABS | Acrylonitrile Butadiene Styrene | 80 (176) | Alcohol is harmless if applied only for short time in small amounts (e.g., quick wiping to remove grease). | Avoid gasoline and organic or aromatic solvents. |
| AES | Acrylonitrile Ethylene Styrene | 80 (176) | Alcohol is harmless if applied only for short time in small amounts (e.g., quick wiping to remove grease). | Avoid gasoline and organic or aromatic solvents. |
| ASA | Acrylonitrile Styrene Acrylate | 80 (176) | Alcohol is harmless if applied only for short time in small amounts (e.g., quick wiping to remove grease). | Avoid gasoline and organic or aromatic solvents. |
| CAB | Cellulose Acetate | 80 (176) | Alcohol is harmless if applied only for short time in small amounts (e.g., quick wiping to remove grease). | Avoid gasoline and organic or aromatic solvents. |
| EPDM | Ethylene Propylene | 100 (212) | Alcohol is harmless. Gasoline is harmless if applied only for short time in small amounts. | Most solvents are harmless but avoid dipping in gasoline, solvents, etc. |
| FRP | Fiber Reinforced Plastics | 180 (356) | Alcohol and gasoline are harmless. | Avoid alkali. |
| EVA | Ethylene Acetate | 70 (158) | Alcohol is harmless if applid only for short time in small amounts (e.g., quick wiping to remove grease). | Avoid gasoline and organic or aromatic solvents. |
| PA | Polyamide (Nylon) | 80 (176) | Alcohol and gasoline are harmless. | Avoid battery acid. |
| PBT | Polybutylene Terephthalate | 160 (320) | Alcohol and gasoline are harmless. | Most solvents are harmless. |
| PC | Polycarbonate | 120 (248) | Alcohol is harmless. | Avoid gasoline brake fluid, wax, wax removers and organic solvents. Avoid alkali. |

*Temperatures higher than those listed here may result in material deformation during repair.

cardiagn.com

| Code | Material name | Heat* resistant temperature limit °C (°F) | Resistance to alcohol or gasoline | Notes |
|---|---|---|---|---|
| PE | Polyethylene | 80 (176) | Alcohol and gasoline are harmless. | Most solvents are harmless. |
| PET | Polyethylene Terephthalate | 75 (167) | Alcohol and gasoline are harmless. | Avoid dipping in water. |
| PMMA | Polymethyl Methacrylate | 80 (176) | Alcohol is harmless if applied only for short time in small amounts. | Avoid dipping or immersing in alcohol, gasoline, solvents, etc. |
| POM | Polyoxymethylene (Polyacetal) | 100 (212) | Alcohol and gasoline are harmless. | Most solvents are harmless. |
| PP | Polypropylene | 80 (176) | Alcohol and gasoline are harmless. | Most solvents are harmless. |
| PPO | Modified Polyphenylene Oxide | 100 (212) | Alcohol is harmless. | Gasoline is harmless if applied only for quick wiping to remove grease. |
| PS | Polystyrene | 60 (140) | Alcohol and gasoline are harmless if applied only for short time in small amounts. | Avoid dipping or immersing in alcohol, gasoline, solvents, etc. |
| PUR | Polyurethane | 80 (176) | Alcohol is harmless if applied only for very short time in small amounts (e.g., quick wiping to remove grease). | Avoid dipping or immersing in alcohol, gasoline, solvents, etc. |
| PVC | Polyvinylchloride (Vinyl) | 80 (176) | Alcohol and gasoline are harmless if applied only for short time in small amounts (e.g., quick wiping to remove grease). | Avoid dipping or immersing in alcohol, gasoline, solvents, etc. |
| SAN | Styrene Acrylonitrile | 80 (176) | Alcohol is harmless if applied only for short time in small amounts (e.g., quick wiping to remove grease). | Avoid dipping or immersing in alcohol, gasoline, solvents etc. |
| TPO | Thermoplastic Olefine | 80 (176) | Alcohol is harmless. Gasoline is harmless if applied only for short time in small amounts. | Most solvents are harmless but avoid dipping in gasoline, solvents, etc. |
| TPU | Thermoplastic Polyurethane | 80 (176) | Alcohol is harmless if applied only for short time in small amounts (e.g., quick wiping to remove grease). | Avoid dipping or immersing in alcohol, gasoline, solvents, etc. |
| TSOP | TOYOTA Super Olefine Polymer | 80 (176) | Alcohol and gasoline are harmless. | Most solvents are harmless. |
| UP | Unsaturated Polyester | 110 (233) | Alcohol and gasoline are harmless. | Avoid alkali. |

*Temperatures higher than those listed here may result in material deformation during repair.

cardiagn.com

## 3. LOCATION OF PLASTIC BODY PARTS

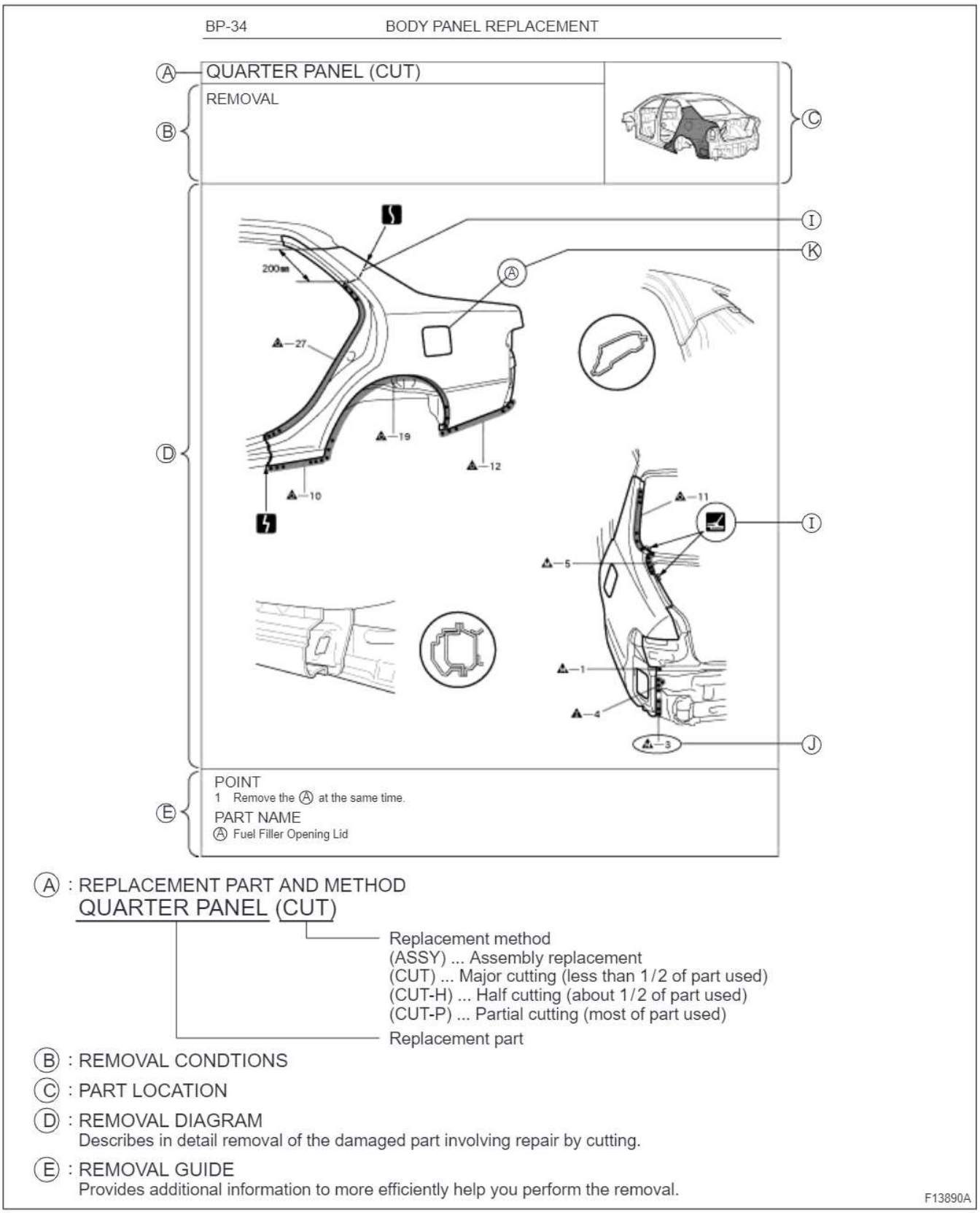
| Parts Name | Code |
|---|---|
| Radiator Grille | ABS/ASA |
| Front Bumper Cover | TSOP |
| Front Spoiler | TSOP |
| Front Bumper Side Moulding | TSOP |
| Headlight Washer Nozzle Cover | PC/ABS |
| Headlight | PC/PP |
| Fog light | PP |
| Side Turn Signal Light | PMMA/ABS |
| Outer Rear View Mirror | ASA |
| Roof Rack Leg Cover (Wagon Only) | ABS |
| Door Outside Handle | PC/PBT/PA |
| Door Outside Moulding | PP/EPDM |
| Body Rocker Panel Moulding | PP |
| Rear Combination Light | PMMA/PC/ABS |
| Rear Spoiler (Wagon Only) | ABS |
| Center Stop Light (Wagon Only) | PMMA/ABS |
| Luggage Compartment Door Outside Garnish | ABS |
| License Plate Light | PMMA/ABS |
| Rear Bumper Cover | TSOP |
| Rear Bumper Side Moulding | TSOP |

- Resin material differs with model.
/ Made up of 2 or more kinds of materials.

cardiagn.com

# HOW TO USE THIS MANUAL

## 1. BODY PANEL REPLACEMENT THIS MANUAL




Ⓐ : REPLACEMENT PART AND METHOD

QUARTER PANEL (CUT)

- QUARTER PANEL — Replacement part
- (CUT) — Replacement method
  - (ASSY) ... Assembly replacement
  - (CUT) ... Major cutting (less than 1/2 of part used)
  - (CUT-H) ... Half cutting (about 1/2 of part used)
  - (CUT-P) ... Partial cutting (most of part used)

Ⓑ : REMOVAL CONDTIONS

Ⓒ : PART LOCATION

Ⓓ : REMOVAL DIAGRAM
Describes in detail removal of the damaged part involving repair by cutting.

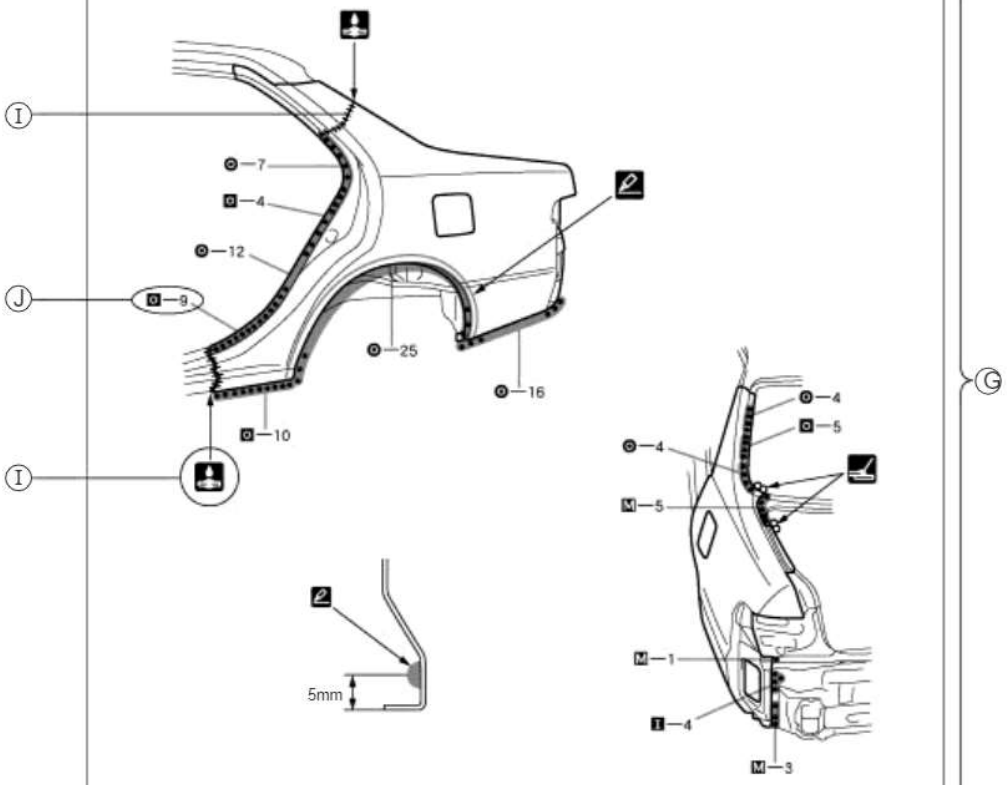
Ⓔ : REMOVAL GUIDE
Provides additional information to more efficiently help you perform the removal.

F13890A

cardiagn.com

INSTALLATION
- Temporarily install the new parts and measure each part of the new parts in accordance with the body dimension diagram. (See the body dimension diagram)
- Inspect the fiting of the related parts around the new parts before welding. This affects the appearance of the finish.
- After welding, apply the polyurethane foam to the corresponding parts.
- After welding, apply body sealer and under-coating to the corresponding parts.
- After applying the top coat layer, apply anti-rust agent to the inside of the necked section structural weld spots.

(F)




(G)

POINT
1 Before temporarily installing the new parts, apply body sealer to the wheel arch.
*HINT:*
*1) Apply body sealer about 5mm (0.20in.) front the flange, avoiding any oozing.*
*2) Apply sealer evenly, about 3 – 4mm (0.12 – 0.16in.) in diameter.*
*3) For other sealing points, refer to section PC.*

PART NAME
Ⓐ Fuel Filler Opening Lid Ⓑ Waterproof Rivet

(H)

(F) : INSTALLATION CONDITIONS

(G) : INSTALLATION DIAGRAM
Describes in detail installation to the new part involving repair by welding and/or cutting, but excluding painting.

(H) : INSTALLATIOLN GUIDE
Provides additional information to more efficiently help you perform the installation.

(I) : SYMBOLS
(See page IN-7)

(J) : ILLUSTRATION OF WELD POINTS
Weld method and panel position symbols (See page IN-9)

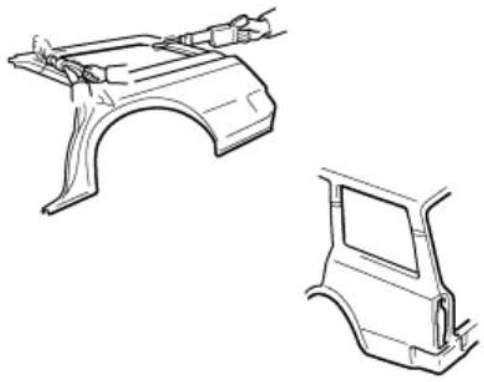
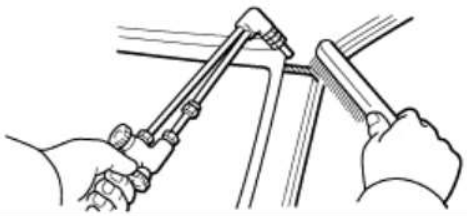
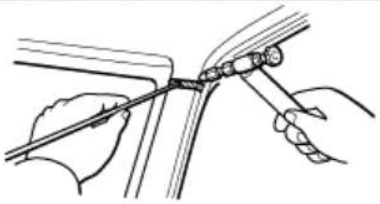
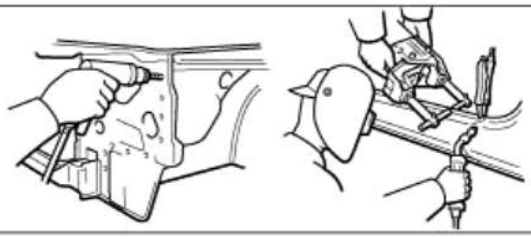
(K) : PART NAME

F13891A

cardiagn.com

## 2. SYMBOLS

The following symbols are used in the welding diagrams in section BP of this manual to indicate cutting areas and the types of weld required.

| SYMBOLS | | MEANING | ILLUSTRATION |
|---|---|---|---|
| | | CUT AND JOIN LOCATION (SAW CUT) |  |
| | | CUT AND JOIN LOCATION (Cut Location for Supply Parts) | |
| | | CUT LOCATION | |
| | | CUT WITH DISC SANDER, ETC. | |
| | | BRAZE (Removal) |  |
| | | BRAZE (Installation) |  |
| | — | WELD POINTS |  |
| | — | SPOT WELD OR MIG PLUG WELD (See Page IN-9) | |
| | | CONTINUOUS MIG WELD (BUTT WELD) |  |
| | | CONTINUOUS MIG WELD (TACK WELD) | |
| | | BODY SEALER |  F13893A |

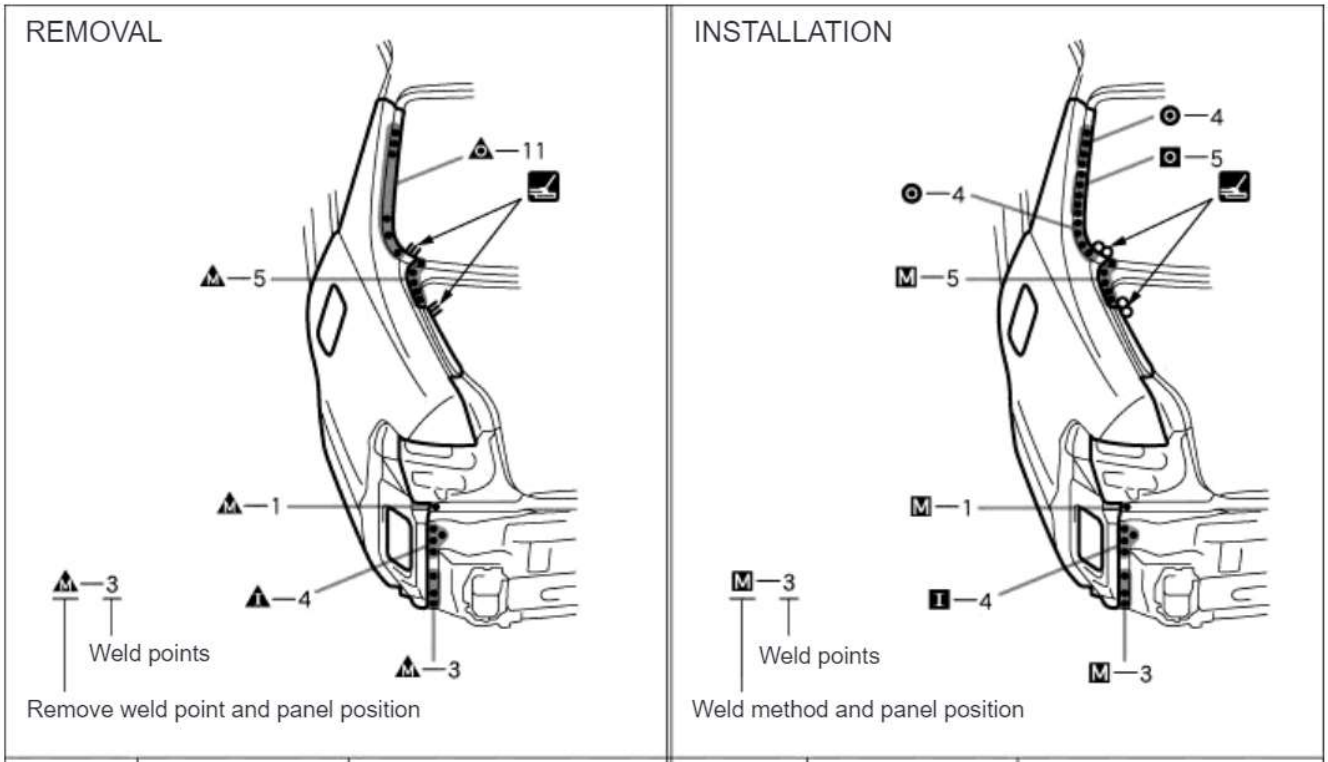
cardiagn.com

| SYMBOLS | | MEANING | ILLUSTRATION |
|---|---|---|---|
| — | | Assembly Mark | |
| | — | BODY SEALER (Flat Finishing) |  |
| | — | BODY SEALER (No flat Finishing) |  |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | F13894A |

cardiagn.com

## 3. ILLUSTRATION OF WELD POINT SYMBOLS

**EXAMPLE:**




| SYMBOLS | MEANING | ILLUSTRATION |
|---|---|---|
| O M I | Remove Weld Points | |
| O | (Outside) | |
| M | (Middle) | |
| I | (Inside) | |

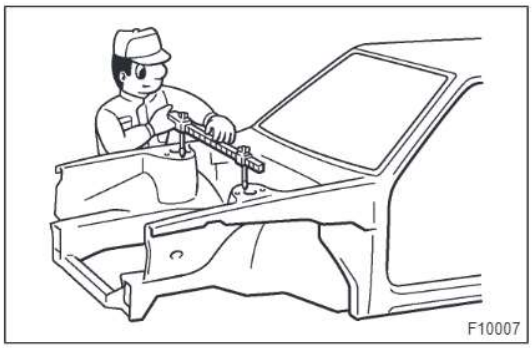
*HINT: Panel position symbols are as seen from the working posture.*

| SYMBOLS | MEANING | ILLUSTRATION |
|---|---|---|
| O M I | Spot Weld | |
| O M I | MIG Plug Weld | |
| + | Spot MIG Weld | |

F13892A

cardiagn.com

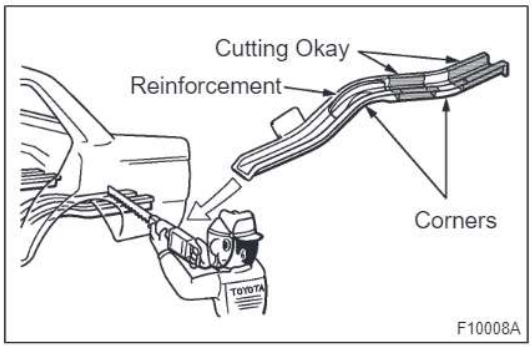
# PROPER AND EFFICIENT WORK PROCEDURES


F10007

## 1. REMOVAL

(a) PRE-REMOVAL MEASURING

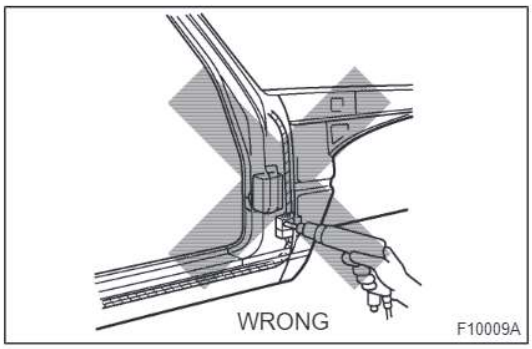
(1) Before removal or cutting operations, take measurements in accordance with the dimension diagram. Always use a puller to straighten a damaged body or frame.



F10008A

(b) CUTTING AREA

(1) Always cut in a straight line and avoid reinforced area.

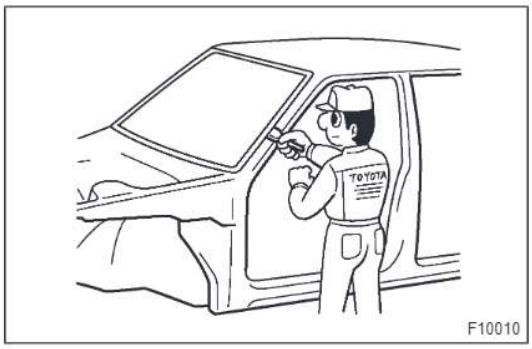


F10009A

(c) PRECAUTIONS FOR DRILLING OR CUTTING

(1) Check behind any area to be drilled or cut to insure that there are no hoses, wires, etc., that may be damaged.

*HINT: See "Handling Precautions on Related Components" on page IN-15.*



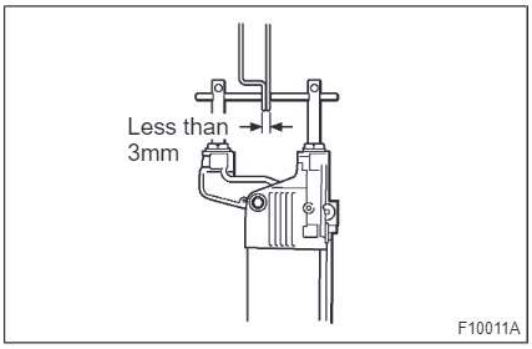
F10010

(d) REMOVAL OF ADJACENT COMPONENTS

(1) When removing adjacent components, apply protective tape to the surrounding body and your tools to prevent damage.

*HINT: See "Handling Precautions on Related Components" on page IN-15.*

cardiagn.com

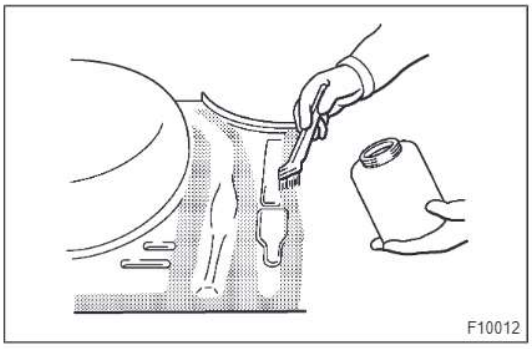



## 2. PREPARATION FOR INSTALLATION

(a) SPOT WELD POINTS

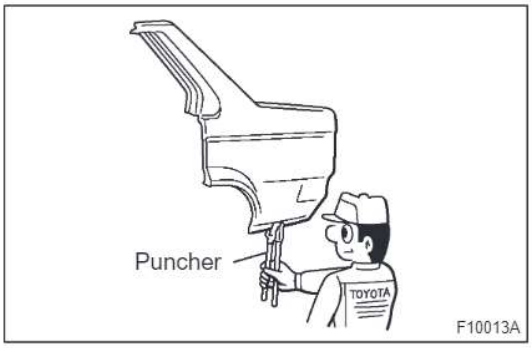
(1) When welding panels with a combined thickness of over 3mm (0.12in.), use a MIG (Metal Inert Gas) welder for plug welding.

*HINT: Spot welding will not provide sufficient durability for panels over 3mm (0.12in.) thick.*




(b) APPLICATION OF WELD-THROUGH PRIMER (SPOT SEALER)

(1) Remove the paint from the portion of the new parts and body to be welded, and apply weld-through primer.

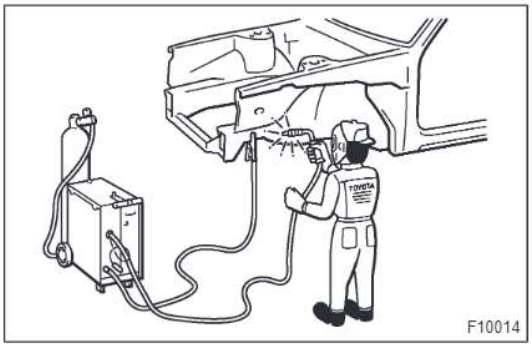



(c) MAKING HOLES FOR PLUG WELDING

(1) For areas where a spot welder cannot be used, use a puncher or drill to make holes for plug welding.

**REFERENCE:** mm (in.)

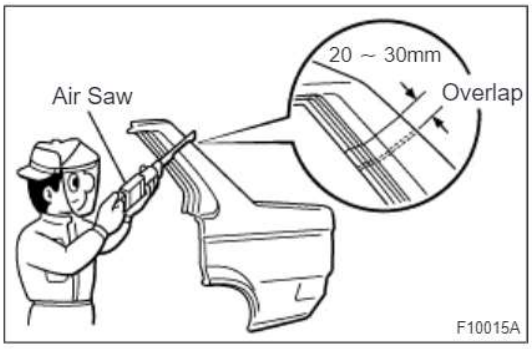
| Thickness of welded portion | Size of plug hole |
|---|---|
| 1.0 (0.04) under | 5 (0.20) ø over |
| 1.0 (0.04) – 1.5 (0.06) | 6.4 (0.26) ø over |
| 1.5 (0.06) over | 8 (0.31) ø over |




(d) SAFETY PRECAUTIONS FOR ELECTRICAL COMPONENTS

(1) When welding, there is a danger that electrical components will be damaged by the electrical current flowing through the body.

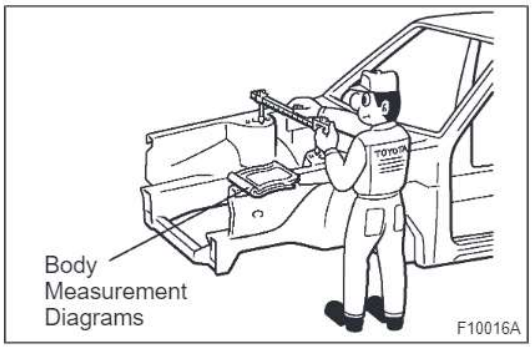
(2) Before starting work, disconnect the negative terminal of the battery and ground the welder near the welding location of the body.




(e) ROUGH CUTTING OF JOINTS

(1) For joint areas, rough cut the new parts, leaving 20 – 30mm (0.79 – 1.18in.) overlap.

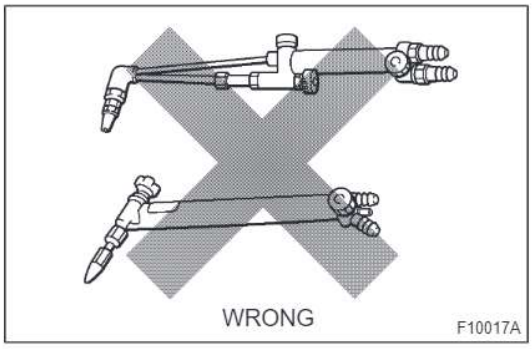
cardiagn.com




## 3. INSTALLATION

(a) PRE-WELDING MEASUREMENTS

(1) Always take measurements before installing underbody or engine components to insure correct assembly. After installation, confirm proper fit.

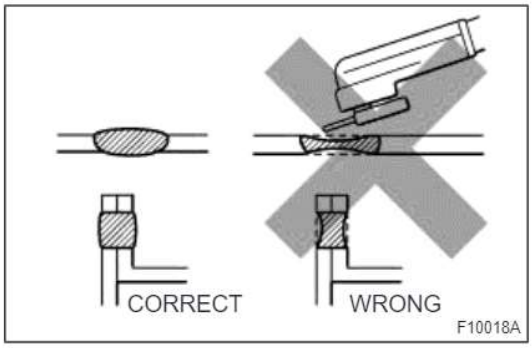



(b) WELDING PRECAUTIONS

(1) The number of welding spots should be as follows.

Spot weld: 1.3 X No. of manufacturer's spots.
Plug weld: More than No. of manufacturer's plugs.

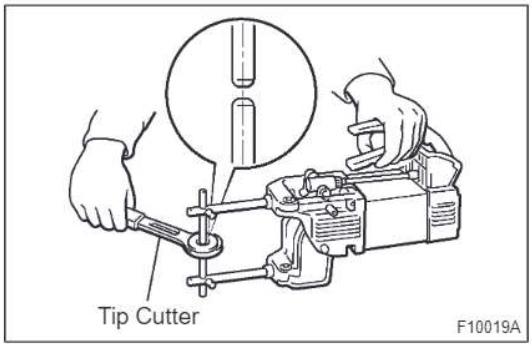
(2) Plug welding should be done with a MIG (Metal Inert Gas) welder. Do not gas weld or braze panels at areas other than specified.




(c) POST-WELDING REFINISHING

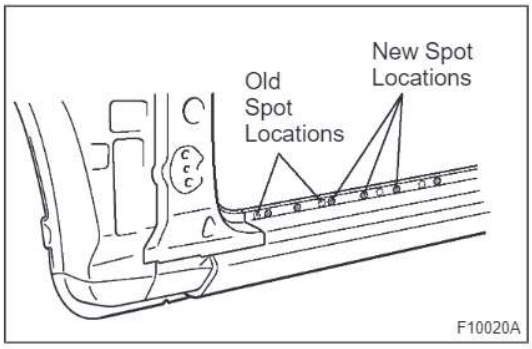
(1) Always check the welded spots to insure they are secure.

(2) When smoothing out the weld spots with a disc grinder, be careful not to grind off too much as this would weaken the weld.




(d) SPOT WELD LOCATIONS

(1) Try to avoid welding over previous spots.

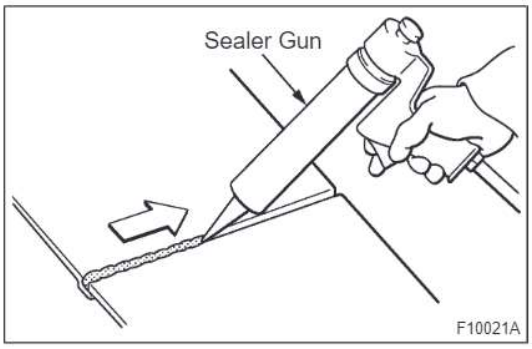



(e) SPOT WELDING PRECAUTIONS

(1) The shape of the welding tip point has an effect on the strength of the weld.

(2) Always insure that the seams and welding tip are free of paint.

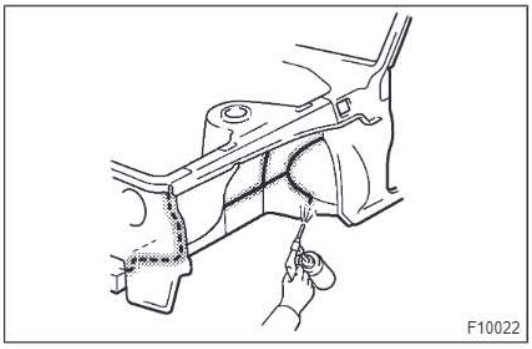
cardiagn.com




## 4. ANTI-RUST TREATMENT

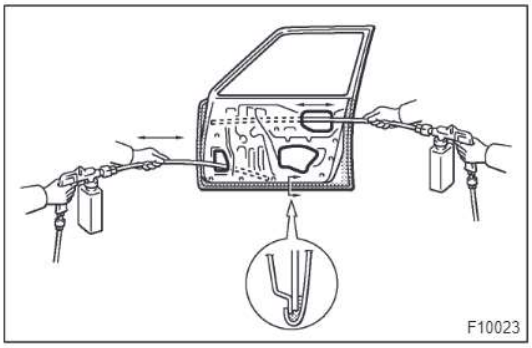
(a) BODY SEALER APPLICATION

(1) For water-proofing and anti-corrosion measures, always apply the body sealer to the body panel seams and hems of the doors, hoods, etc.




(b) UNDERCOAT APPLICATION

(1) To prevent corrosion and protect the body from damage by flying stones, always apply sufficient undercoat to the bottom surface of the under body and inside of the wheel housings.




## 5. ANTI-RUST TREATMENT AFTER PAINTING PROCESS

(a) ANTI-RUST AGENT (WAX) APPLICATION

(1) To preserve impossible to paint areas from corrosion, always apply sufficient anti-rust agent (wax) to the inside of the hemming areas of the doors and hoods, and around the hinges, or the welded surfaces inside the boxed cross-section structure of the side member, body pillar, etc.

cardiagn.com

## 6. ANTI-RUST TREATMENT BY PAINTING

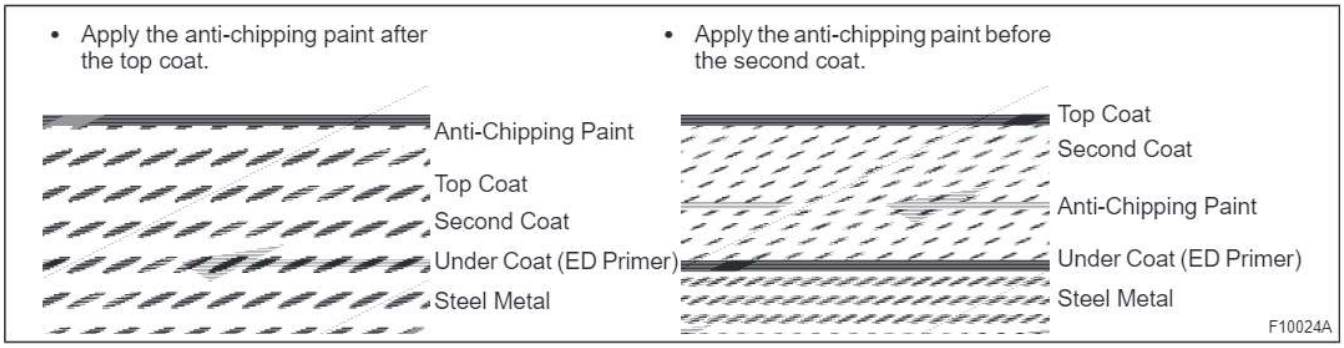
**REFERENCE:**

Painting prevents corrosion and protect the sheet metal from damage. In this section, anti-chipping paint only for anti-corrosion purpose is described.

(a) ANTI-CHIPPING PAINT

(1) To prevent corrosion and protect the body from damage by flying stones, etc., apply anti-chipping paint to the rocker panel, wheel arch areas, balance panel, etc.

*HINT:*
*Depending on the model or the application area, there are cases where the application of anti-chipping paint is necessary before the second coat or after the top coat.*




cardiagn.com

# HANDLING PRECAUTIONS ON RELATED COMPONENTS

## 1. BRAKE SYSTEM

The brake system is one of the most important safety components. Always follow the directions and notes given in section BR of the repair manual for the relevant model when handling brake system parts.

*NOTICE: When repairing the brake master cylinder or TRAC system, bleed the air out of the TRAC system.*

## 2. DRIVE TRAIN AND CHASSIS

The drive train and chassis are components that can have great effects on the running performance and vibration resistance of the vehicle. After installing components in the sections listed in the table below, perform alignments to ensure correct mounting angles and dimensions. Particularly accurate repair of the body must also be done to ensure correct alignment.

*HINT: Correct procedures and special tools are required for alignment. Always follow the directions given in the repair manual for the relevant model during alignment and section DI of this section.*

| Component to be aligned | Section of repair manual for relevant model |
|---|---|
| Front Wheels | Front Suspension (26) section |
| Rear Wheels | Rear Suspension (27) section |

## 3. COMPONENTS ADJACENT TO THE BODY PANELS

Various types of component parts are mounted directly on or adjacently to the body panels. Strictly observe the following precautions to prevent damaging these components and the body panels during handling.

- Before repairing the body panels, remove their components or apply protective covers over the components.
- Before prying components off using a screwdriver or a scraper, etc., attach protective tape to the tool tip or blade to prevent damaging the components and the body paint.
- Before removing components from the outer surface of the body, attach protective tape to the body to ensure no damage to painted areas.

  *HINT: Apply touch-up paint to any damaged paint surfaces.*
- Before drilling or cutting sections, make sure that there are no wires, etc. on the reverse side.

## 4. ECU (ELECTRONIC CONTROL UNIT)

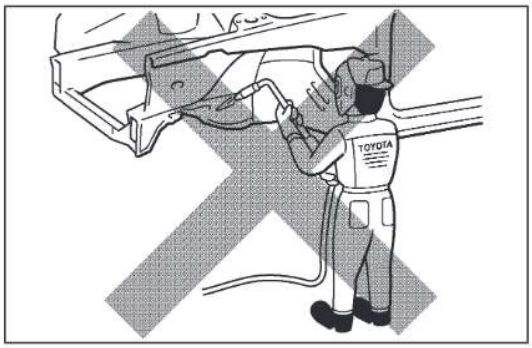
Many ECUs are mounted in this vehicle.
Take the following precautions during body repair to prevent damage to the ECUs.

- Before starting electric welding operations, disconnect the negative (–) terminal cable from the battery.
  When the negative (–) terminal cable is disconnected from the battery, memory of the clock and audio systems will be cancelled. So before starting work, make a record of the contents memorized by each memory system. Then when work is finished, reset the clock and audio systems as before.
  When the vehicle has tilt and telescopic steering, power seat and outside rear view mirror, which are all equipped with memory function, it is not possible to make a record of the memory contents.
  So when the operation is finished, it will be necessary to explain this fact to the customer, and request the customer to adjust the features and reset the memory.
- Do not expose the ECUs to ambient temperatures above 80°C (176°F).

  *NOTICE: If it is possible the ambient temperature may reach 80° C (176° F) or more, remove the ECUs from the vehicle before starting work.*
- Be careful not to drop the ECUs and not to apply physical shocks to them.

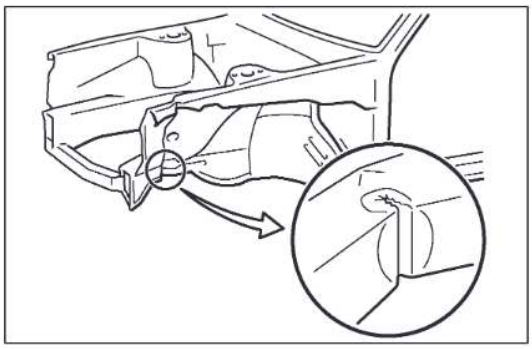
cardiagn.com

# PRECAUTIONS FOR REPAIRING BODY STRUCTURE PANELS




## 1. HEAT REPAIR FOR BODY STRUCTURE PANELS

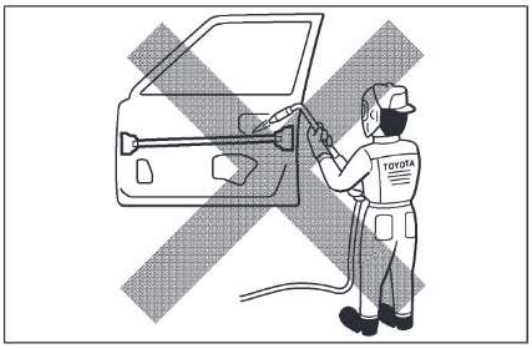
Toyota prohibits the use of the heat repair method on body structure panels when repairing a vehicle damaged in a collision.
Panels that have high strength and rigidity, as well as a long life span for the automobile body are being sought after.
At Toyota, in order to fulfill these requirement, we use high tensile strength steel sheets and rust preventive steel sheets on the body.
High tensile steel sheets are made with alloy additives and a special heat treatment in order to improve the strength.
To prevent the occurrence of rust for a long period of time, the surface of the steel is coated with a zinc alloy.
If a body structure parts are heat repaired with an acetylene torch or other heating source, the crystalline organization of the steel sheet will change and the strength of the steel sheet will be reduced.
The ability of the body to resist rust is significantly lowered as well since the rust resistant zinc coating is destroyed by heat and the steel sheet surface is oxidized.

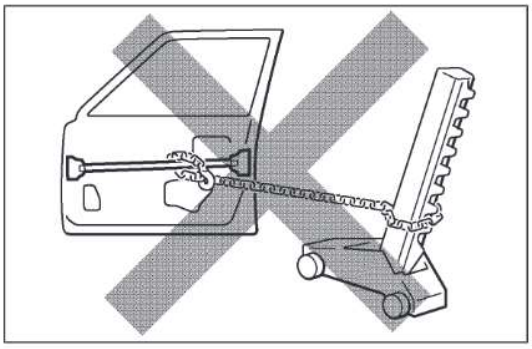


## 2. STRUCTURE PANEL KINKS

A sharp deformation angle on the panel that cannot be returned to its original shape by pulling or hammering is called a kink.
Since structure parts were designed to exhibit a 100% performance when they were in their original shape, if they are deformed in an accident, or if the deformed parts are repaired and reused, they become unable to exhibit the same performance as intended in the design.
It is necessary to replace the part where the kink has occurred.

cardiagn.com



## 3. IMPACT BEAM REPAIR

The impact beam and bracket are necessary and important parts in maintaining a survival space for passengers in a side collision.

For impact beam, we use special high tensile strength steel.

The high tensile strength steel maintains its special crystalline organization by heat treatment or alloy additives.

Since these parts were designed to exhibit a 100% performance when they were in their original shape, if they are deformed in an accident, or if the deformed parts are repaired and reused, they become unable to exhibit the same performance as intended in the design.

It is necessary to replace the door assembly when impact beam or bracket is damaged.

cardiagn.com

# ABBREVIATIONS USED IN THIS MANUAL

For convenience, the following abbreviations are used in this manual.

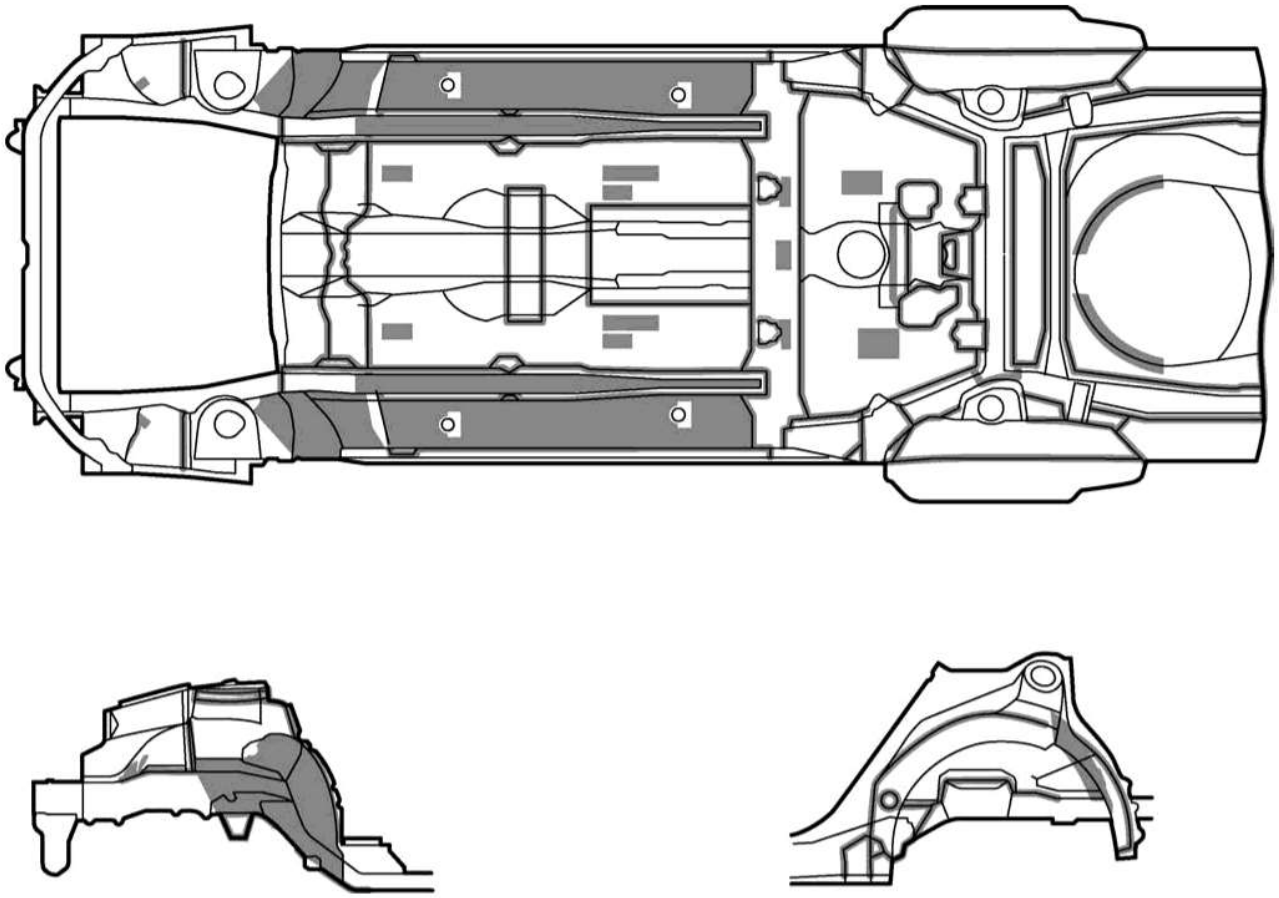
| | |
|---|---|
| ABS | Antilock Brake System |
| A/C | Air Conditioner |
| assy | assembly |
| ECT | Electronic Controlled Transmission |
| ECU | Electronic Control Unit |
| e.g. | Exempli Gratia (for Example) |
| Ex. | Except |
| FWD | Front Wheel Drive Vehicles |
| 4WD | Four Wheel Drive Vehicles |
| in. | inch |
| LH | Left-hand |
| LHD | Left-hand Drive |
| MIG | Metal Inert Gas |
| M/Y | Model Year |
| PPS | Progressive Power Steering |
| RH | Right-hand |
| RHD | Right-hand Drive |
| SRS | Supplemental Restraint System |
| SSM | Special Service Materials |
| w/ | with |
| w/o | without |

cardiagn.com

# BODY PANEL UNDERCOATING AREAS

*HINT:*

1) *First wipe off any dirt, grease or oil with a rag soaked in a grease, wax and silicone remover.*
2) *Cover the surrounding areas with masking paper to avoid coating unnecessary areas. If other areas are accidently coated, wipe off the coating immediately.*
3) *Apply the first coating of undercoat to all welded areas and panel joints, then apply a second coat over the entire area.*
4) *Do not coat parts which become hot, such as the tailpipe, or moving parts, such as the propeller shaft.*
5) *Besides the locations described below, apply undercoating to all weld points under the body to insure corrosion prevention.*
6) *Be sure to seal the edge of the flange of the member and bracket with undercoating.*
7) *If undercoat is damaged by peeling, cracks, etc., be sure to repair as necessary.*
8) *Before the undercoat apply sealer allowing rust prevention to be attained.*



F14411

**REFERENCE**

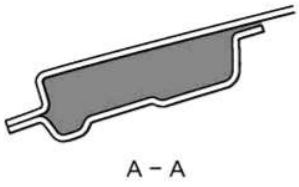
Referring to the notes above, undercoating should be applied according to the specifications for your country.

cardiagn.com

# FOAMED MATERIAL APPLICATION AREAS

The sections shown in the figure below are filled with foamed material to provide noise insullation.
After repairing these sections or their peripheries, refill with foamed materials
*HINT:*
*1) Use the service holes located on the reverse side of the body panel to refill with foamed materials.*
*2) When handling foamed material, follow the directions of the material's manufacturer.*

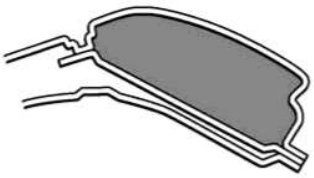
[Sedan]



A – A



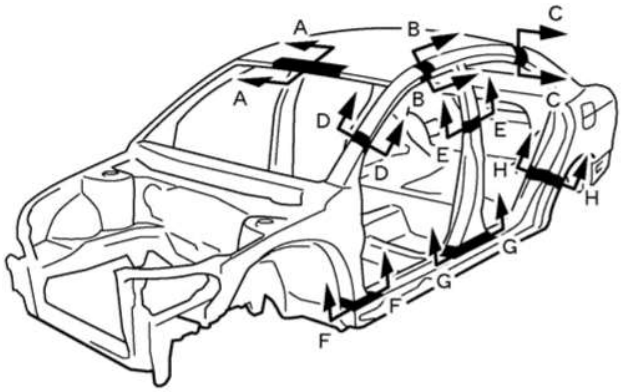
B – B



C – C

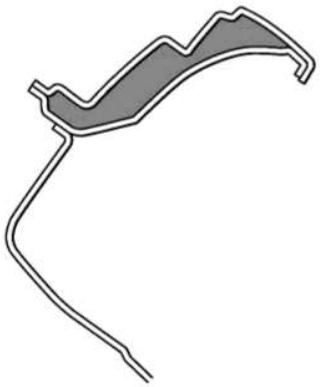


D – D





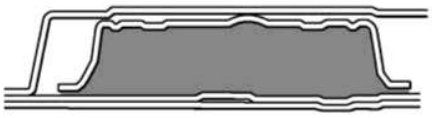

E – E



H – H



F – F

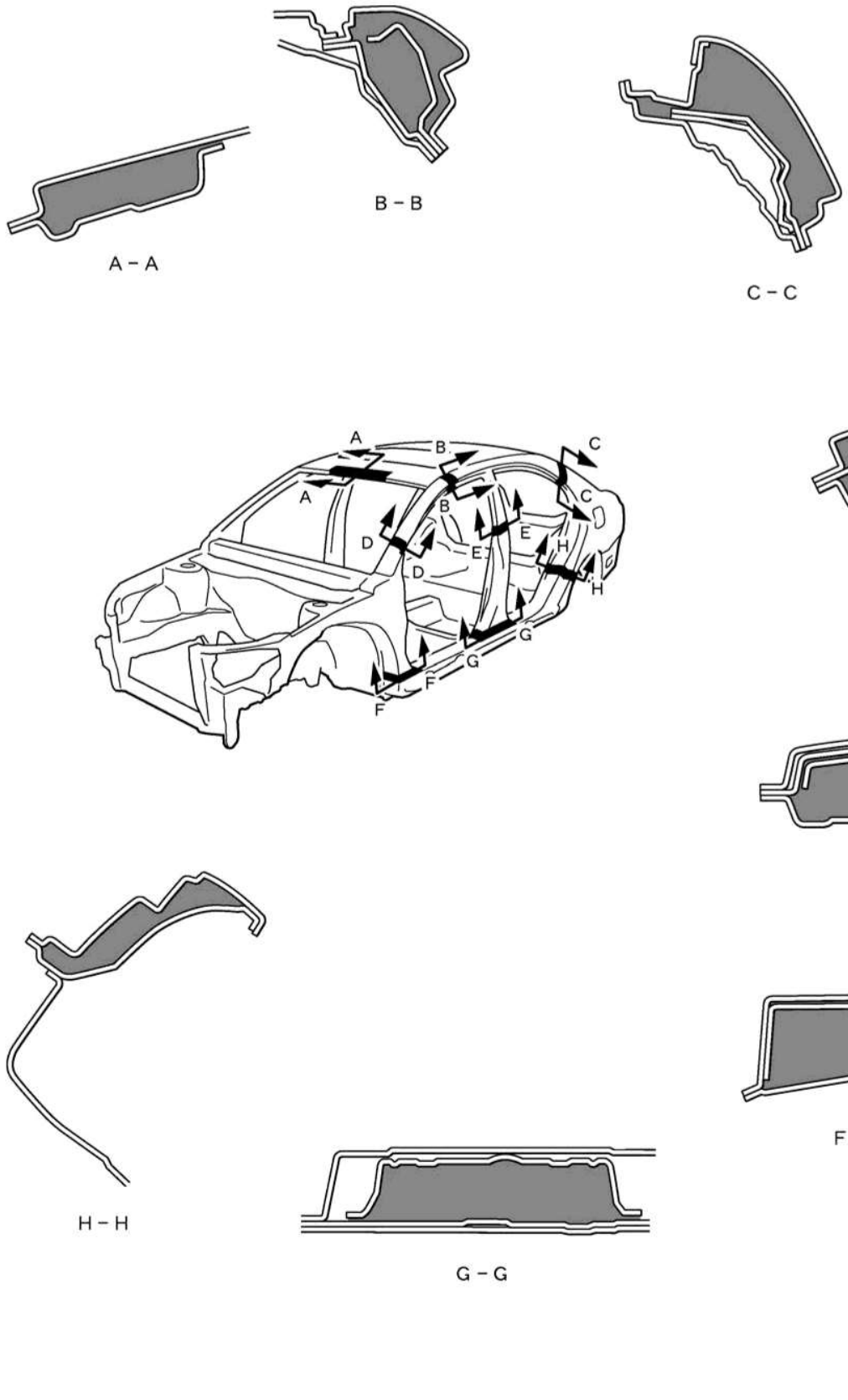


G – G

F14415

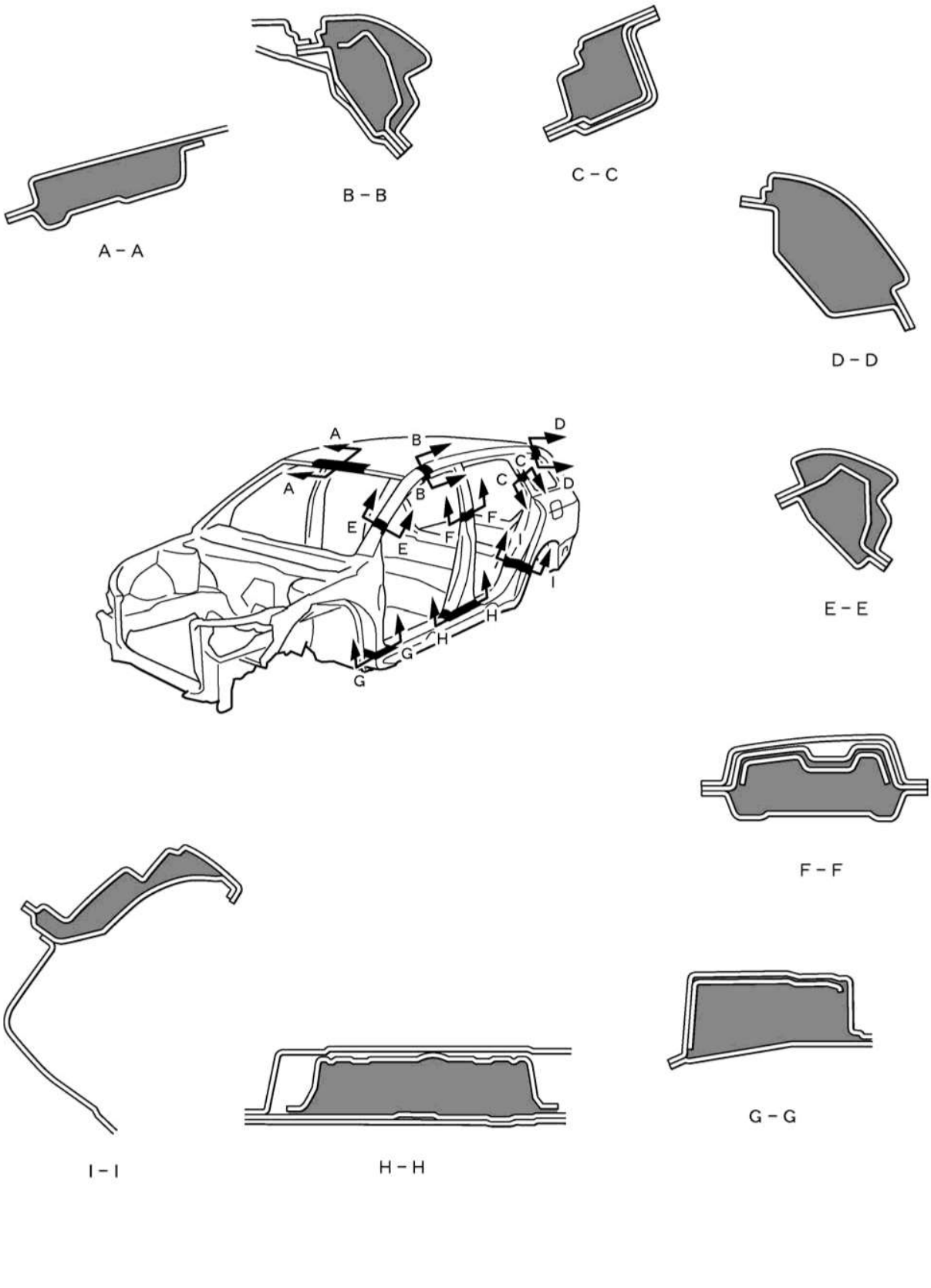
cardiagn.com

[Liftback]




cardiagn.com

[Wagon]

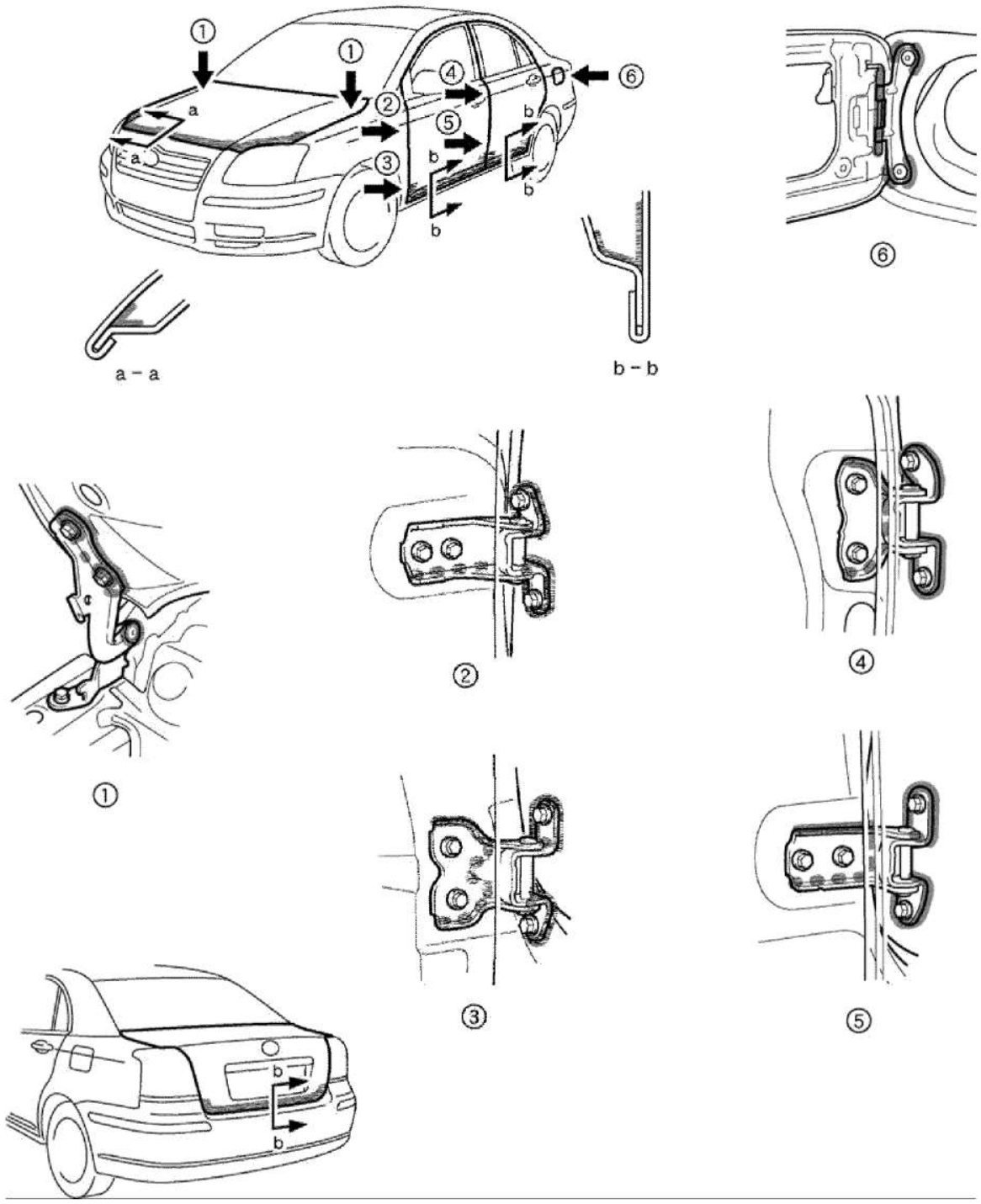



cardiagn.com

# BODY PANEL ANTI-RUST AGENT (WAX) APPLICATION AREAS

*HINT:*
*1) Whenever adjusting the doors and hoods, apply anti-rust agent (wax) around the hinges.*
*2) Even if partially repairing a part, apply anti-rust agent (wax) over the entire application area of the part.*
*3) Wipe off the anti-rust agent immediately with a rag soaked in a grease, wax and silicone remover, if accidently applied to other areas.*

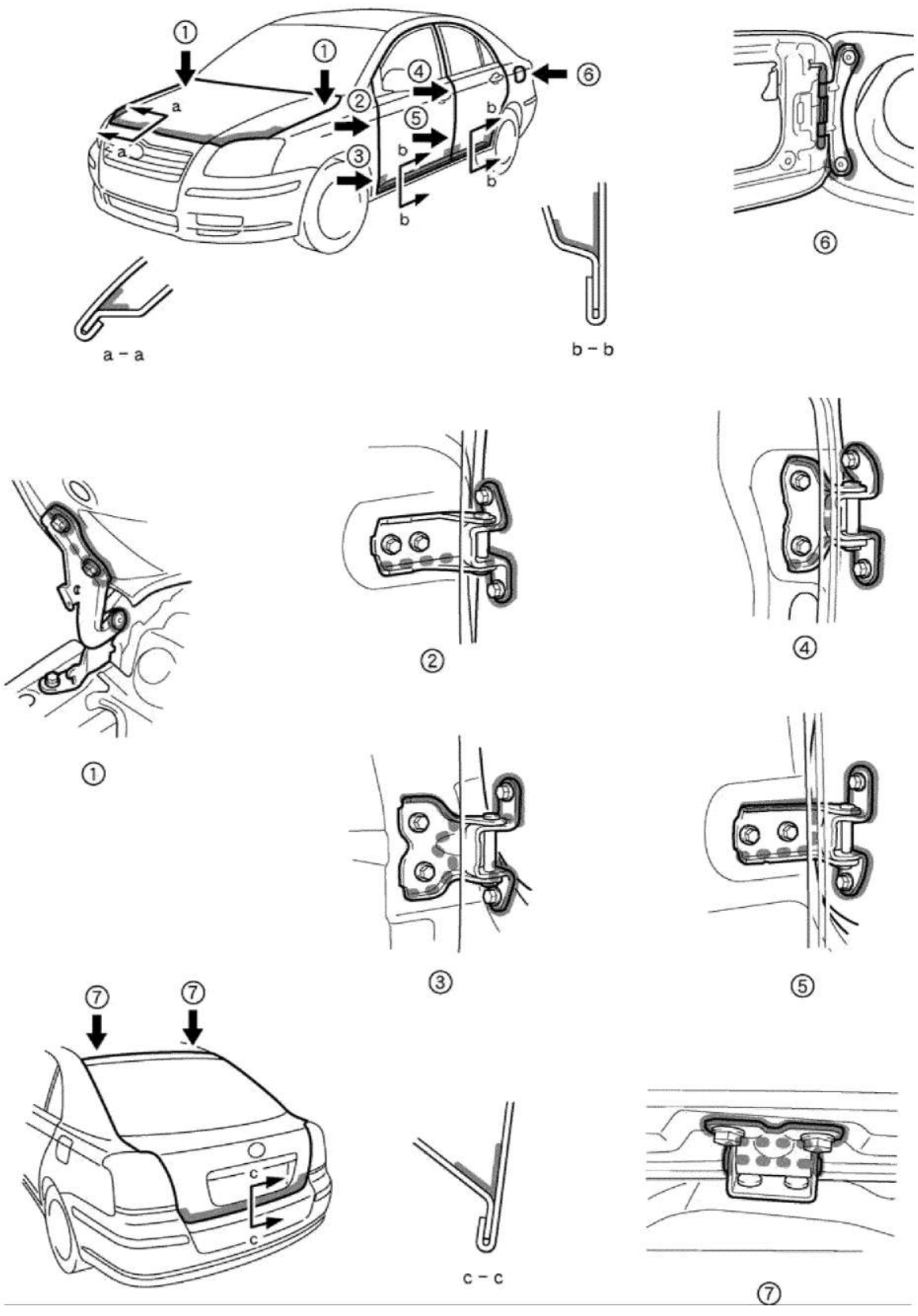
[Sedan]




F14412

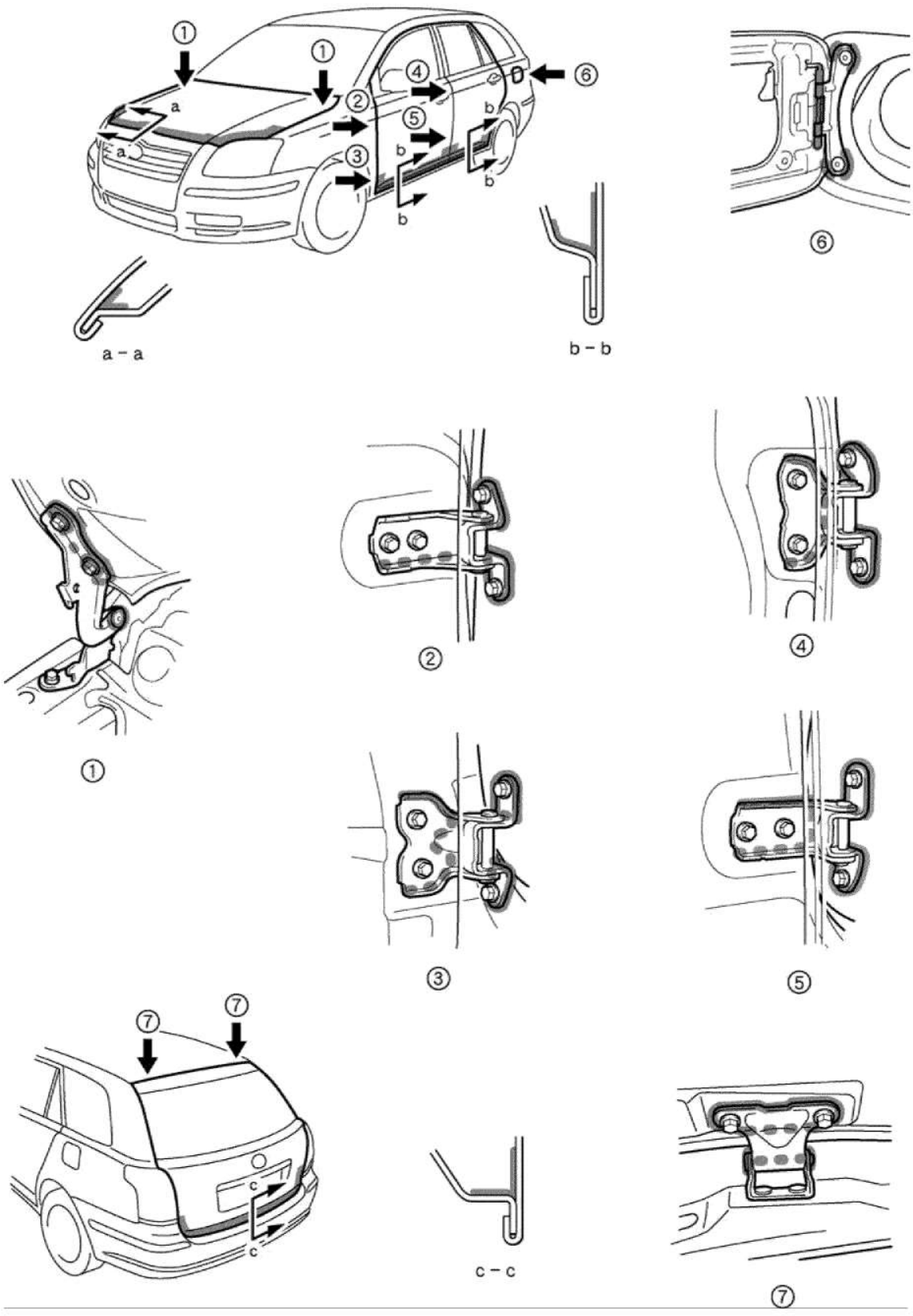
cardiagn.com

[Liftback]



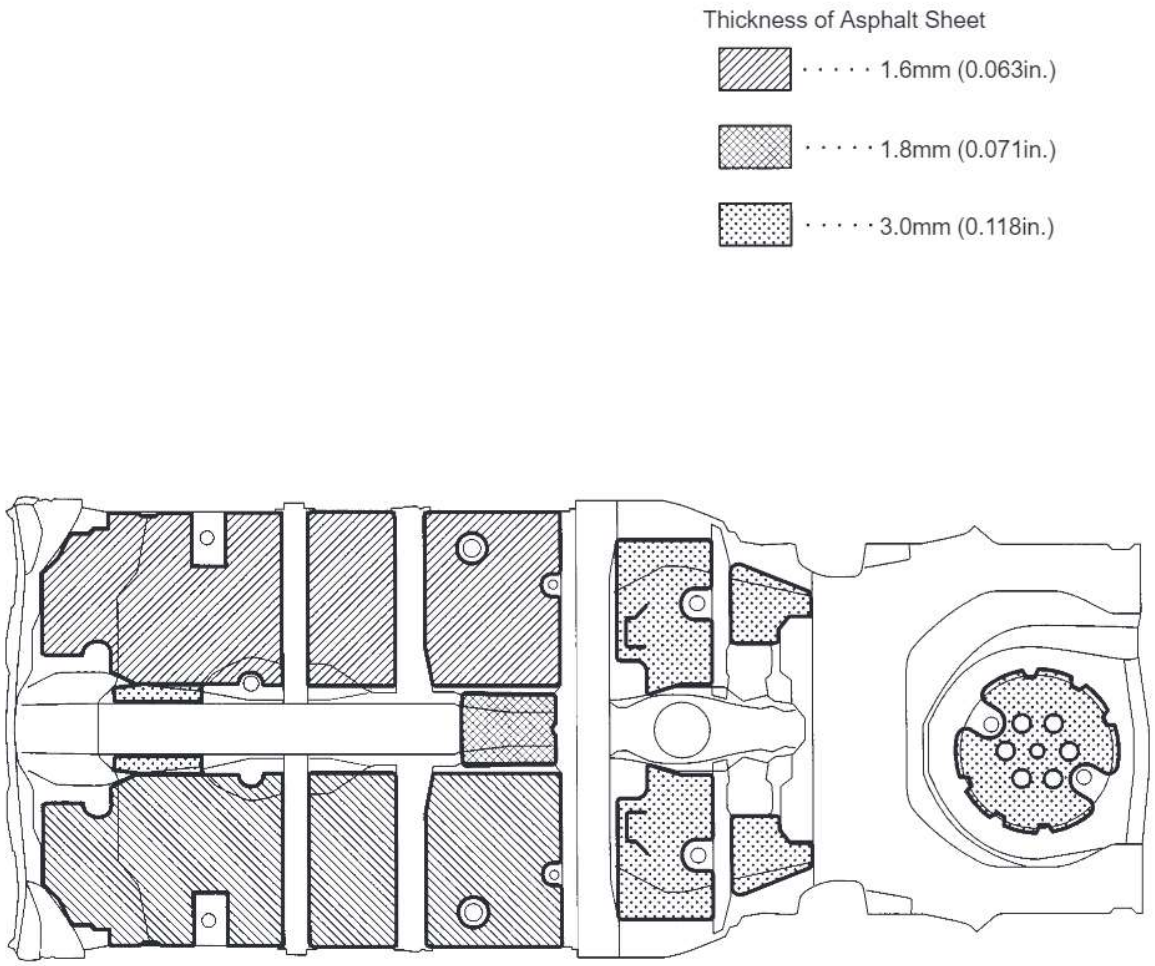

cardiagn.com

[Wagon]




cardiagn.com

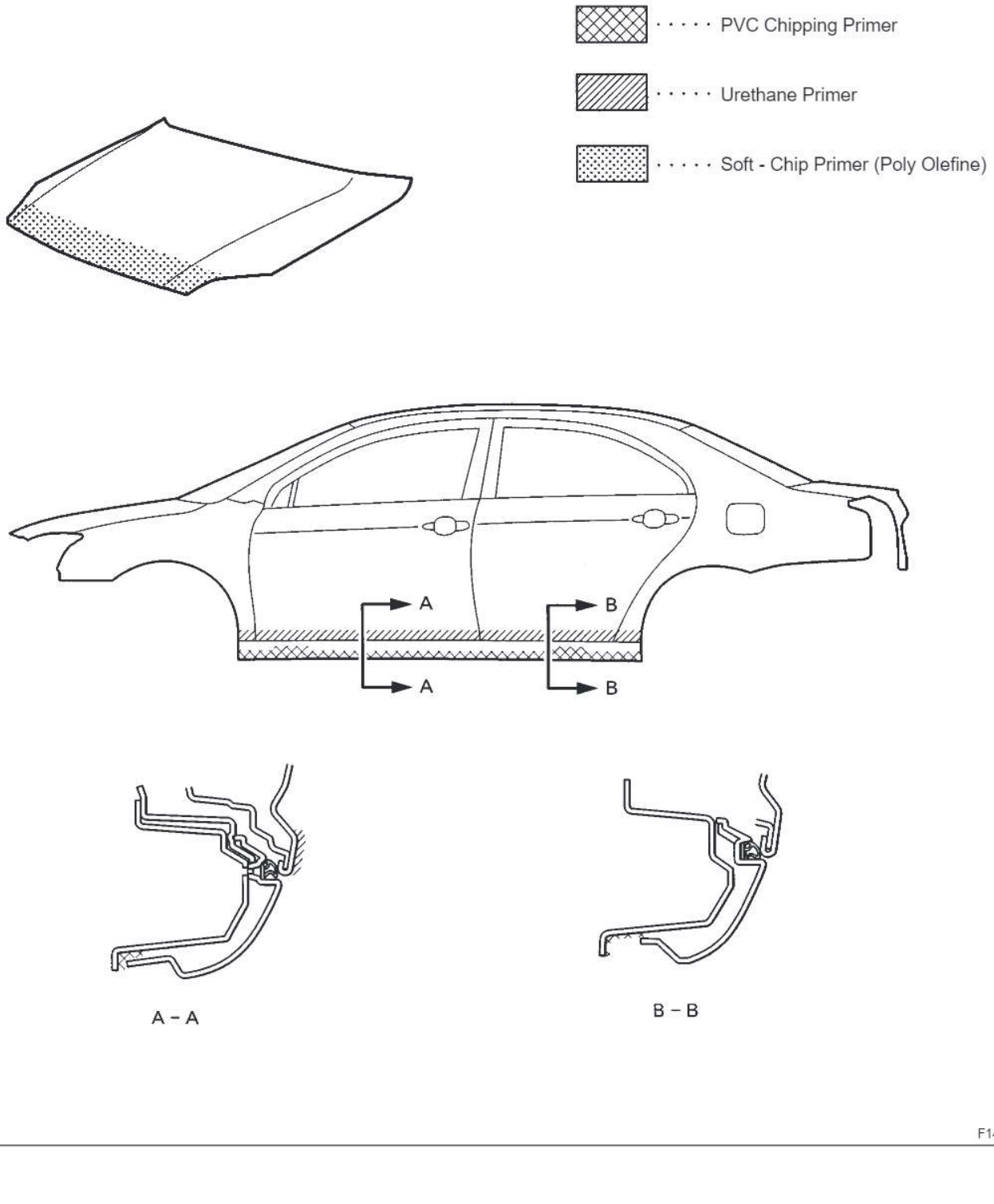
# SILENCER SHEET INSTALLATION AREAS




cardiagn.com

# BODY PANEL ANTI-CHIPPING PAINT APPLICATION AREAS

*HINT:*
*1) Anti-chipping paint should be applide to some areas before the second coat and to others after the top coat.*
*2) If other areas are accidentally coated, wipe of the paint immediately with a rag soaked in grease, wax and silicone remover.*




cardiagn.com