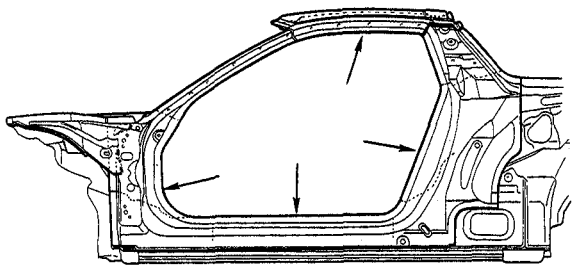
Side Panel

Replacement (cont'd)

11. Finish the welding areas.
    - Roughly grind the welds with a disc grinder. Be sure to leave the finishing allowance this time.
    - Finish grind the finishing allowance with a disc sander until it is smooth.

⚠WARNING **To prevent eye injury, wear goggles or safety glasses whenever sanding, cutting or grinding.**

- Smooth the flanged section of the door opening with a hammer and dolly.



- Take care not to grind the aluminum alloy base while roughly grinding the welds.
- Take care not to grind excessively.
- Do not press on the sanding tools excessively. If the disc face is clogged with the aluminum alloy particles, replace with a new disc.

12. Apply the sealer (see section 5).

13. Apply the paint.
    See Paint Repair section.

⚠WARNING

- **Ventilate when spraying paint. Most paint contains substances that are harmful if inhaled or swallowed. Read the paint label before opening paint container.**
- **Avoid contact with skin. Wear an approved respirator, gloves, eye protection and appropriate clothing when painting.**
- **Paint is flammable. Store in a safe place, and keep it away from sparks, flames or cigarettes.**

14. Apply anti-rust agent to the inside of the outer panel (see section 7).

15. Install the related parts.
    - Install in the reverse order of removal.
    - Check the door for proper installation and difference in level from the fenders.

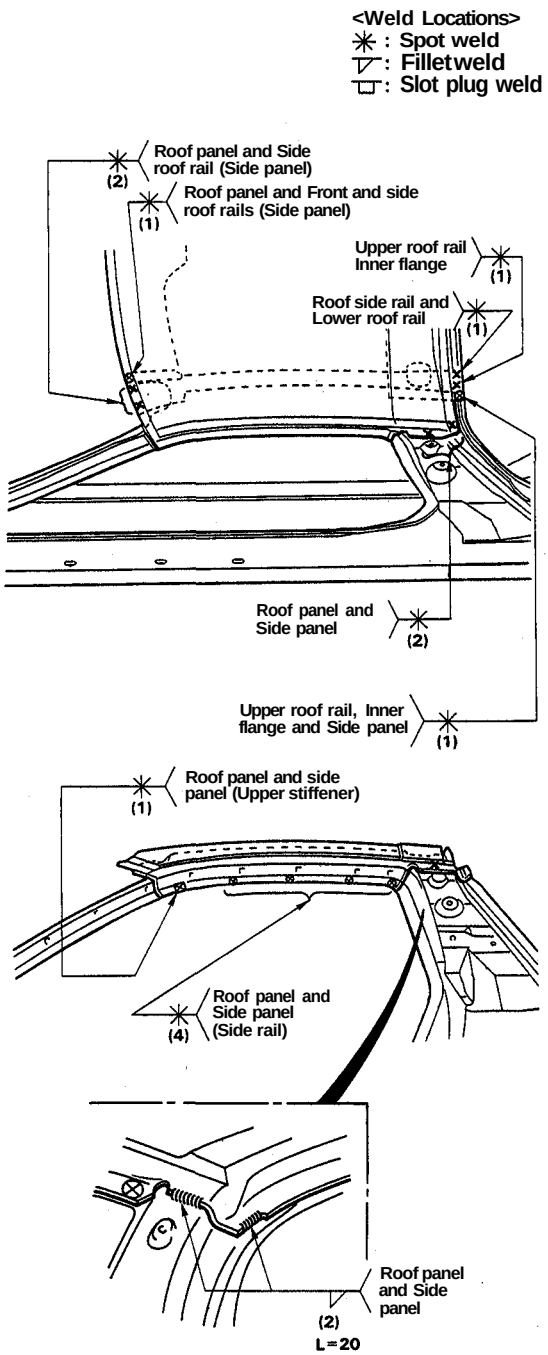
16. Clean and check
    - After installing the dashboard, check the lights, gauges, etc. for proper operation.
    - Clean the passenger compartment and check for water leaks from the roof.

Roof Panel

Description

Deformation of the roof panel is highly noticeable in terms of the vehicle's outer appearance.
Before replacing the roof rail, make sure that the body is horizontal. Before welding the roof panel, adjust the roof rail flanges so that they contact the roof panel.

Mass Production Body welding Diagram



Replacement

1. Remove the related parts.
   - Windshield
   - Rear hatch
   - Rear window
   - Sunvisors
   - Ceiling light
   - Headliner

2. Pull out and straighten the damaged area.
   - Pull out the damaged area with the frame straightener before, removing the roof panel.
   - Attach the car to the frame straightener by tightening the underbody clamps located at the jack-up points on the bottom of the side sill and the side sill side flanges.
   - To protect the car body from damage, place a piece of aluminum plate on each clamping section and tighten the clamps.
   - Before pulling out the damaged section, it might be necessary to heat the section with an acetylene torch (see page 2-31).

   NOTE: Make sure that the right and left pillars are parallel with the windshield surface. Check the door and rear hatch for proper opening and closing.

   - After pulling, check the front and center pillar position using the body dimensional drawings (see section 6).

3. Keep the body level.
   Jack up the body at the front and back and place safety stands at the four designated places of the side sills.

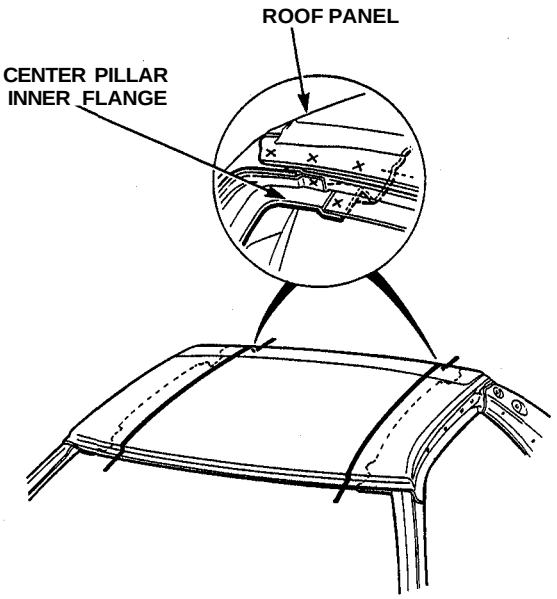
   NOTE: Refer to the NSX Service Manual for safety stand location points.

(cont'd)

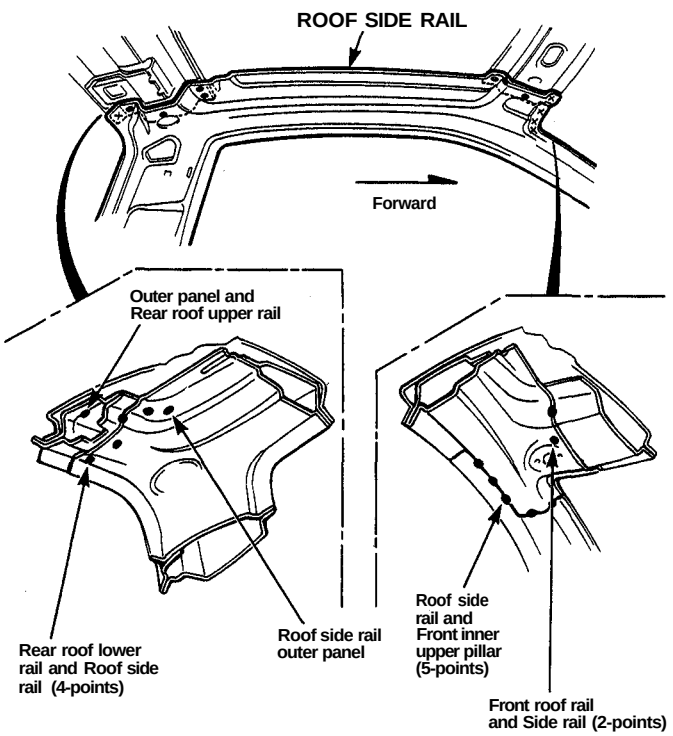
Roof Panel

Replacement (cont'd)

4. Cut off the roof panel.
   - Strike a punch in the center of the spot welds in the roof panel flange.
   - Drill the spot welds using a ø10 (3/8") spot cutter.
   - Grind the MIG fillet welds using a rotary cutter.
   - Remove the welding flange using a chisel.



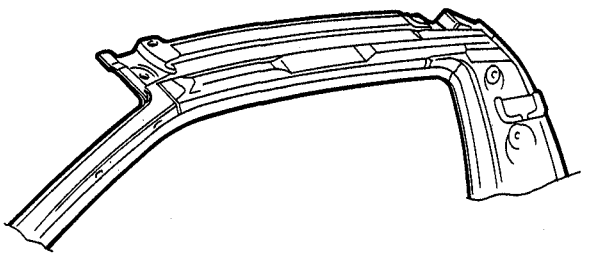
- MIG weld positions (Roof side rail inside).



- Cross section of roof rail.

5. Mold the related parts.
   Smooth the welding flange of the roof side rail with a hammer and dolly so that there is no clearance to the welding flange of the roof panel.

   NOTE: Check the reshaped parts for cracks (see page 2-29).



6. Apply paint to the underside of the new roof panel.
   See Paint Repair section.

⚠WARNING

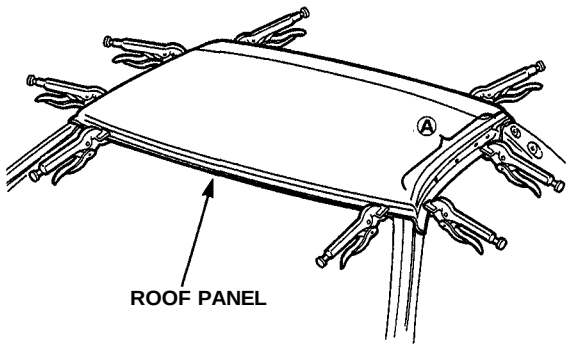
- **Ventilate when spraying paint. Most paint contains substances that are harmful if inhaled or swallowed. Read the paint label before opening paint container.**
- **Avoid contact with skin. Wear an approved respirator, gloves, eye protection and appropriate clothing when painting.**
- **Paint is flammable. Store in a safe place, and keep it away from sparks, flames or cigarettes.**

7. Set the new roof panel.
   - Drill the ø8 (5/16") plug weld holes in the welding flange of the new roof panel.
   - Remove the undercoat from the both sides of the welding section and expose the aluminum alloy base using a disc sander.

⚠WARNING **To prevent eye injury, wear goggles or safety glasses whenever sanding, cutting or grinding.**

   - Remove the paint film from the welding section of the body and clean oil contaminations with a shop towel soaked with wax and grease remover.
   - Before setting the new roof panel, remove the oxide film from the welding section of the replacement part and body using a stainless steel wire brush.

- Install the new roof panel and clamp it with the vise-grips and pliers.
- Check the welding flange for close fitting. Check the roof panel for distortion and proper installation, and check over the body dimensions.



NOTE: When performing MIG welding on section ®, make fewer holes than the number of sports originally welded.

8. Tack weld the roof panel.

⚠ WARNING To prevent eye injury and burns when welding, wear an approved welding helmet, gloves and safety shoes.

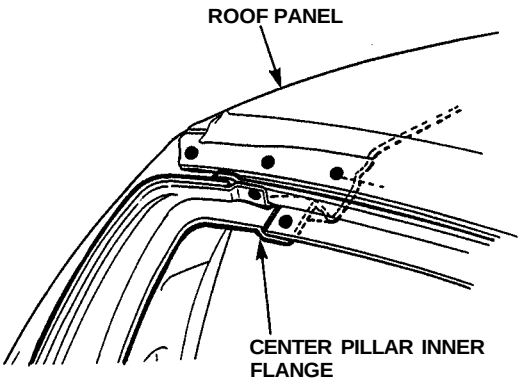
- MIG/plug weld the clamped sections to temporarily install the roof panel.
- Set the windshield and rear window, and check the roof panel for proper installation.
- Install the rear hatch, then adjust the level difference and fit.

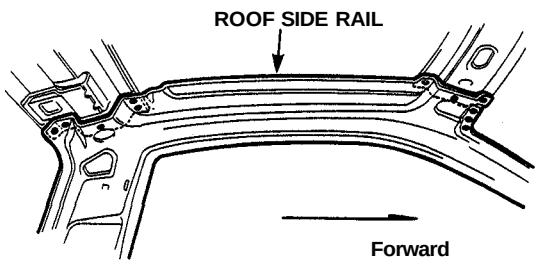
9. Perform the main welding.

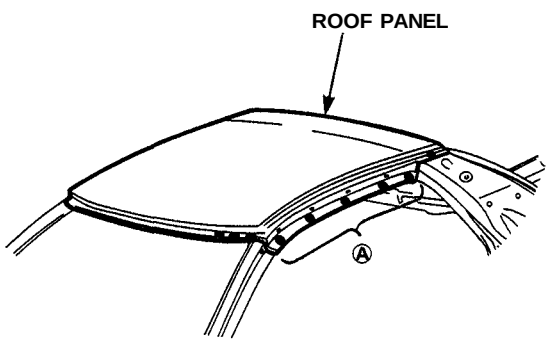
⚠ WARNING To prevent eye injury and burns when welding, wear an approved welding helmet, gloves and safety shoes.

- Before welding, perform the trial welding following the welder manufacturer's instructions.

- Remove the oxide film from the welding sections using a stainless steel wire brush.
- The applicable welding methods are MIG welding, plug welding, and fillet welding.
- Check the welding sections for cracks (see page 2-29).







(cont'd)

Roof Panel

Replacement (cont'd)

10. Finish the welding area.
    - Roughly grind the welds using a disc grinder. Be sure to leave the finishing allowance this time.
    - Finish grind the finishing allowance with a disc sander until it is smooth.

    ⚠WARNING **To prevent eye injury, wear goggles or safety glasses whenever sanding, cutting or grinding.**

    - Smooth the windshield and roof side flanges with a hammer and dolly.
    - Take care not to grind the aluminum alloy base while roughly grinding the welds.
    - Take care not to grind excessively.
    - Do not press on the sanding tools excessively. If the disc face is clogged with the aluminum alloy particles, replace with a new disc.

11. Apply the sealer (see section 5).

12. Apply the paint.
    See Paint Repair section.

    ⚠WARNING
    - **Ventilate when spraying paint. Most paint contains substances that are harmful if inhaled or swallowed. Read the paint label before opening paint container.**
    - **Avoid contact with skin. Wear an approved respirator, gloves, eye protection and appropriate clothing when painting.**
    - **Paint is flammable. Store in a safe place, and keep it away from sparks, flames or cigarettes.**

13. Apply anti-rust agent to the inside of the roof side rail.

14. Install the related parts.
    Install in the reverse order of removal.

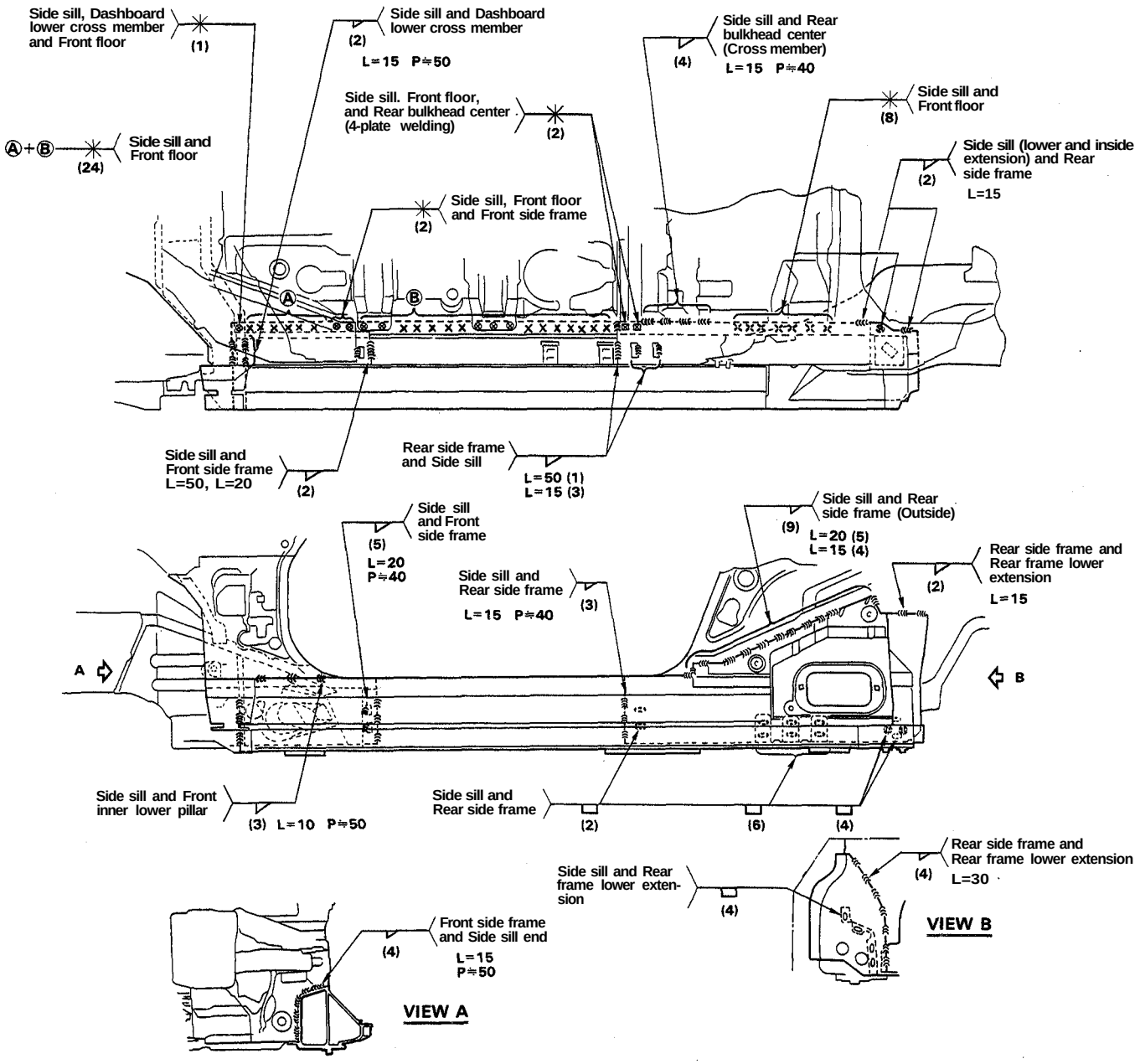
15. Check and clean.
    - Check the windshield and rear window for water leaks.
    - Check the ceiling light for lighting.
    - Clean the passenger compartment thoroughly.

Side Sill

Description

The side sill is critical for the rigidity of the body base and proper door installation. During replacement, refer to the body dimensional drawings and determine the position to set the side sill properly. Weld securely following the welder manufacturer's instructions.

Mass Production Body Welding Diagram



NOTE: Side panel removed (see page 4-21).

<Weld Locations>
✳: Spot Weld
▽: Fillet Weld
⊓: Slot plug weld

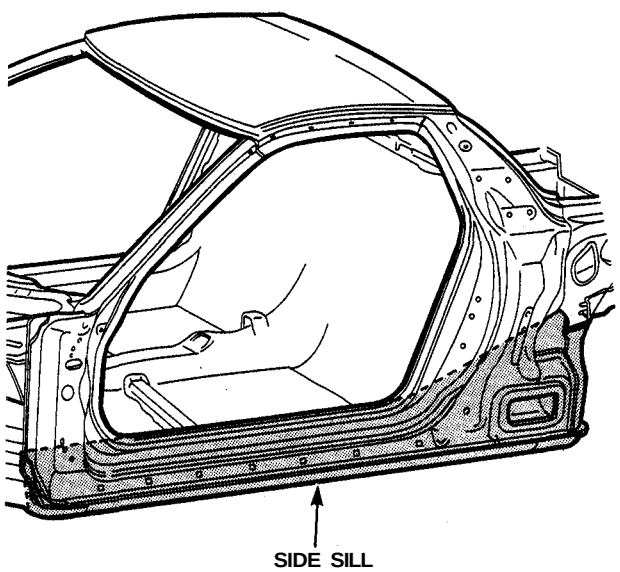
Side Sill

Replacement

1. Remove the related parts.
   - Front and rear fenders
   - Door
   - Side sill panel
   - Rear pillar panel
   - Door opening trim
   - Carpet
   - Driver's & passenger's seats
   - Seat belt
   - Fuel tank, fuel fill pipe (left side only)

⚠WARNING Do not smoke while working near the fuel system. Keep open flame away from the fuel system. If necessary, remove the fuel tank and/or lines before welding nearby. Drain fuel into an approved container.

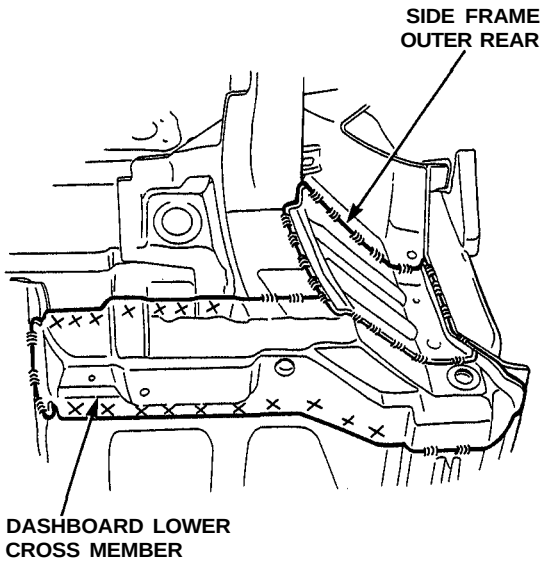
2. Pull out and straighten the damaged area.
   - Attach the car to the frame straightener by tightening the underbody clamps located at the jack-up points on the bottom of the side sill and the side sill side flanges.
   - To protect the car body from damage, place a piece of aluminum plate on each clamping section and tighten the clamps.
   - The collision damage may extend to the front floor, front pillar, etc. Check for the damaged sections carefully and pull them out with the frame straightener to reshape.
   - Before pulling out the damaged sections, it might be necessary to heat the sections with an acetylene torch (see page 2-31).



3. Peel off the undercoat.
   Heat the undercoat at the weld areas of the front floor, side frame outer rear and dashboard lower cross member with a gas torch and peel off a metal spatula.

   CAUTION: Be careful not to bum the fittings inside the passenger compartment when heating.

4. Remove the side frame outer rear and dashboard lower cross member.



5. Drill the rear frame lower extension and remove it.