

3

Replacement

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3

Replacement

Items marked with an asterisk (*) include SRS components; special caution is required when servicing.

The symbols in the mass production body welding diagrams and in the replacement illustrations carry the following meanings:

(Mass Production Body Welding Diagram)

	: Spot welding
	: MIG welding
	: 2-plate welding
	: 3-plate welding
	: 4-plate welding
P=	: Spot welding pitch
L=	: MIG welding length Unit: mm (in.)
()	: The number of spot welds.

(Replacement Illustration)

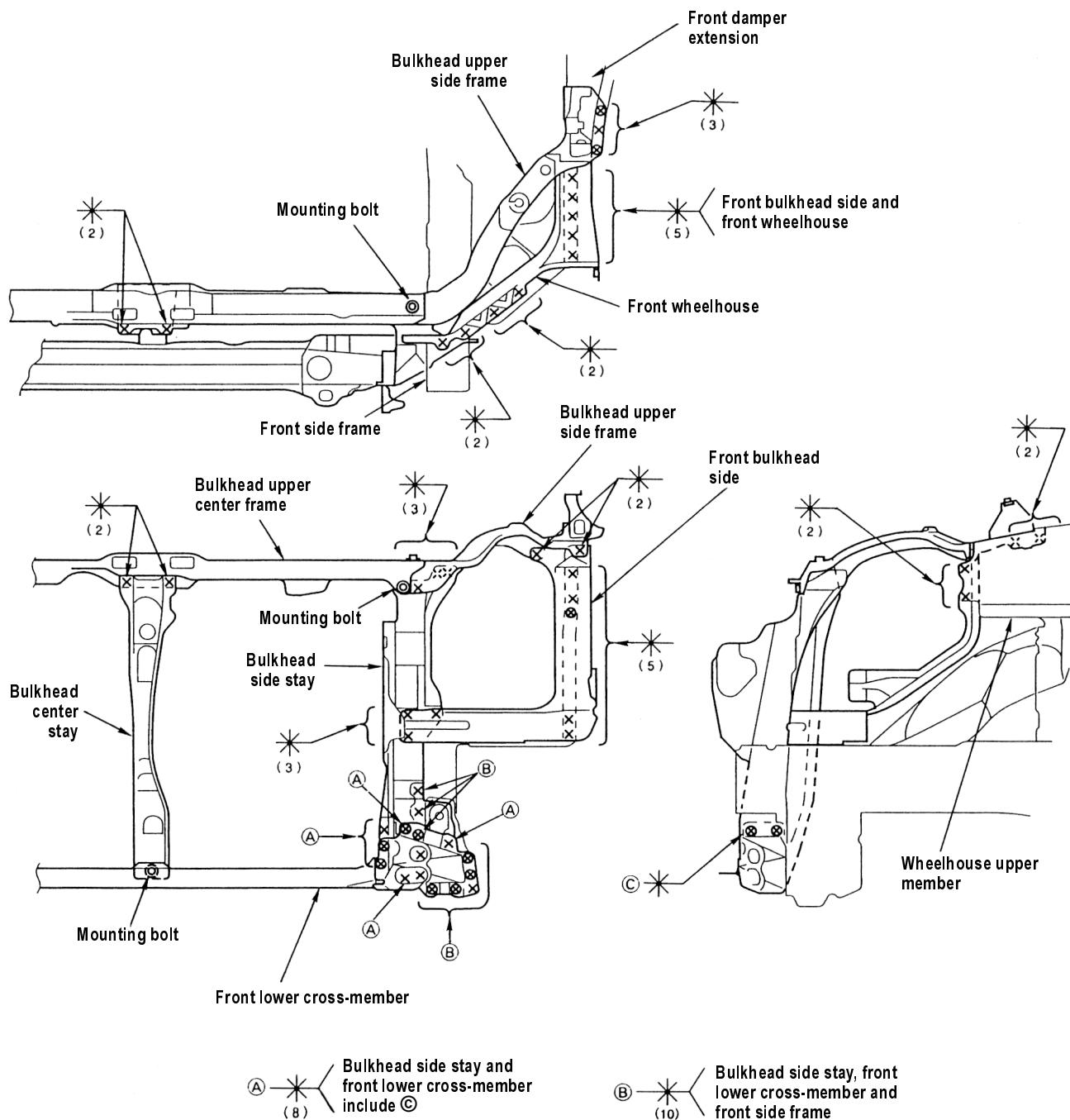
	: Spot welding
	: MIG welding

NOTE: The welding symbols in the illustrations don't show exact welding locations. For exact welding locations, refer to the mass production body welding diagrams.

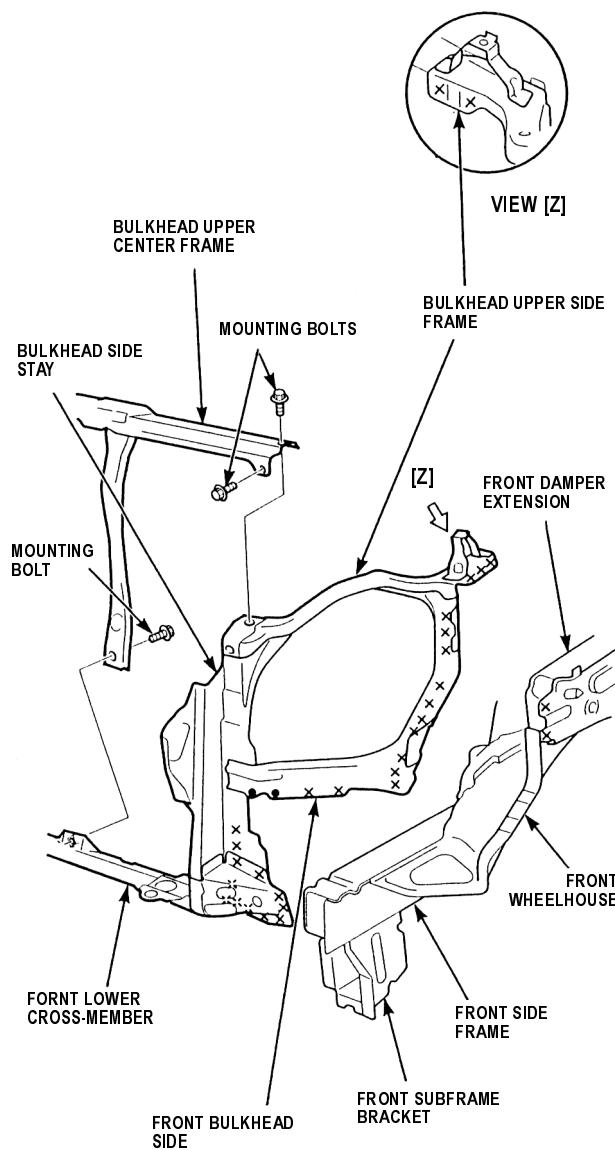
Replacement

Front Bulkhead

Mass Production Body Welding Diagram

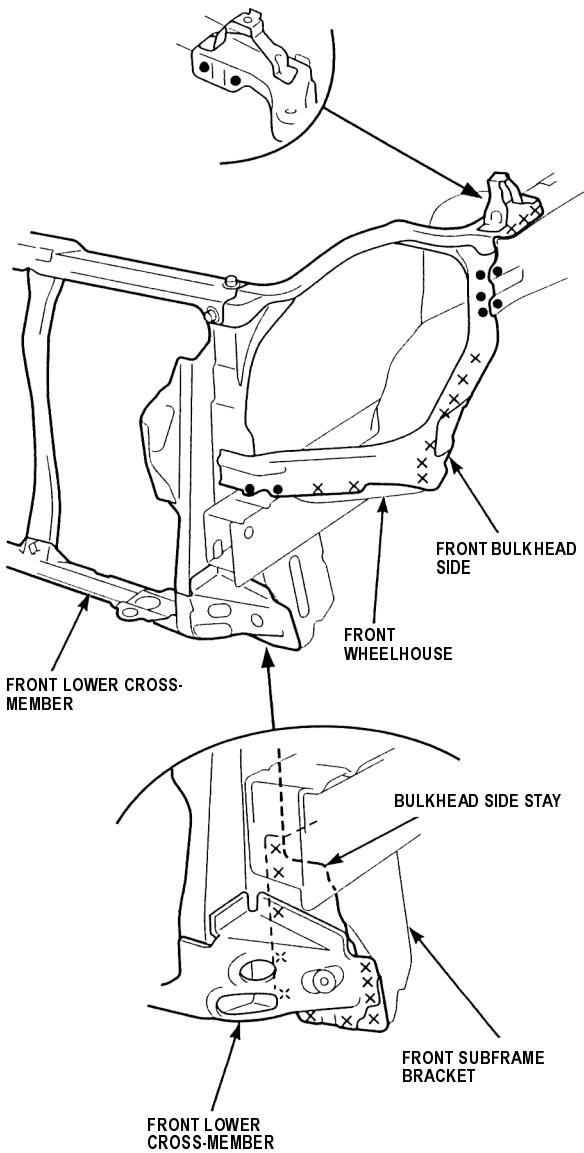


Removal



Installation

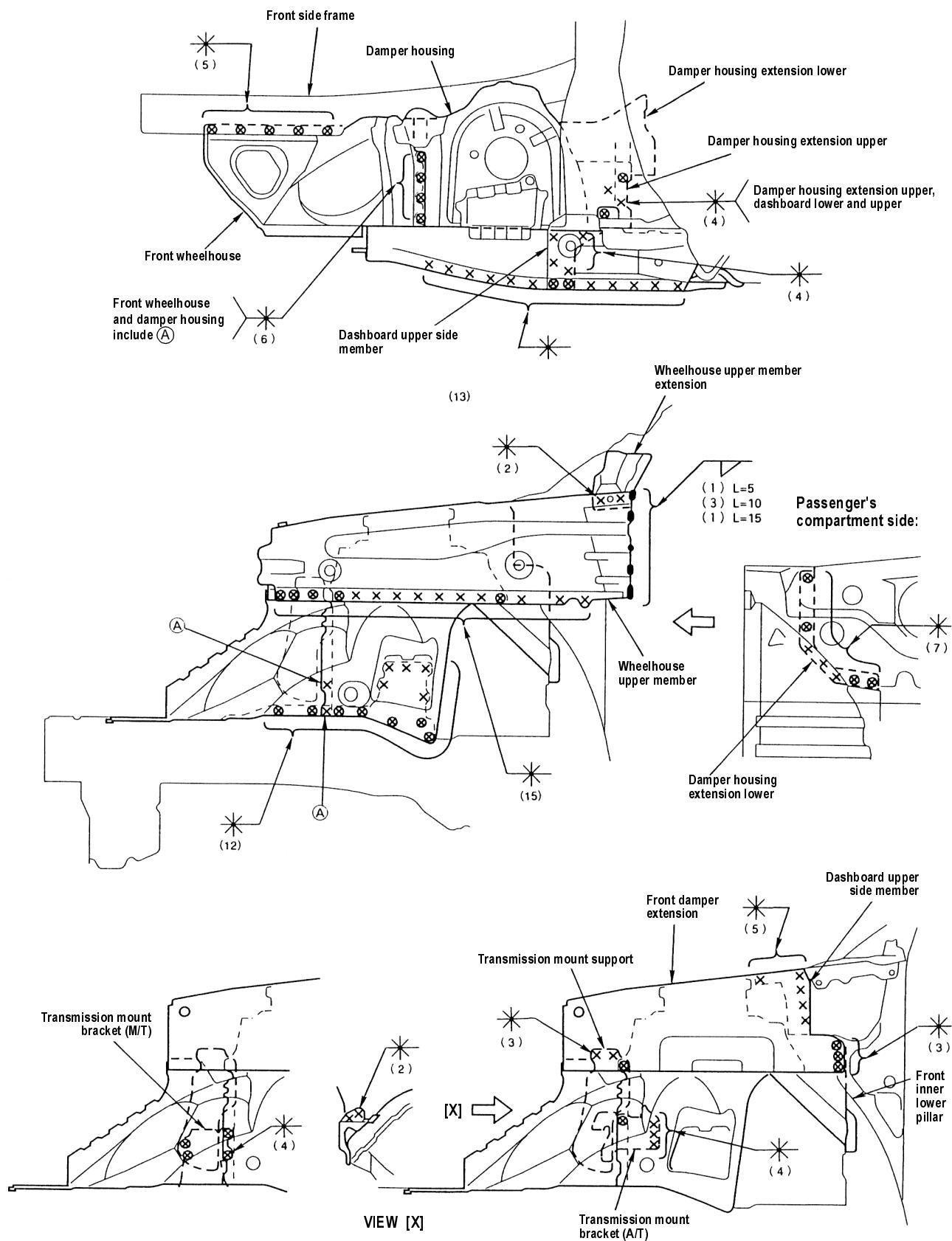
1. Set the new front bulkhead and wheelhouse upper extension into position, and measure the front compartment diagonally. Check the body dimensions (see section 4).
2. Tack weld the clamped position.
3. Temporarily install the hood, front fender, headlight, and front bumper and check for differences in level and clearance.
4. Do the main welding.



Replacement

Front Wheelhouse / Damper Housing

Mass Production Body Welding Diagram



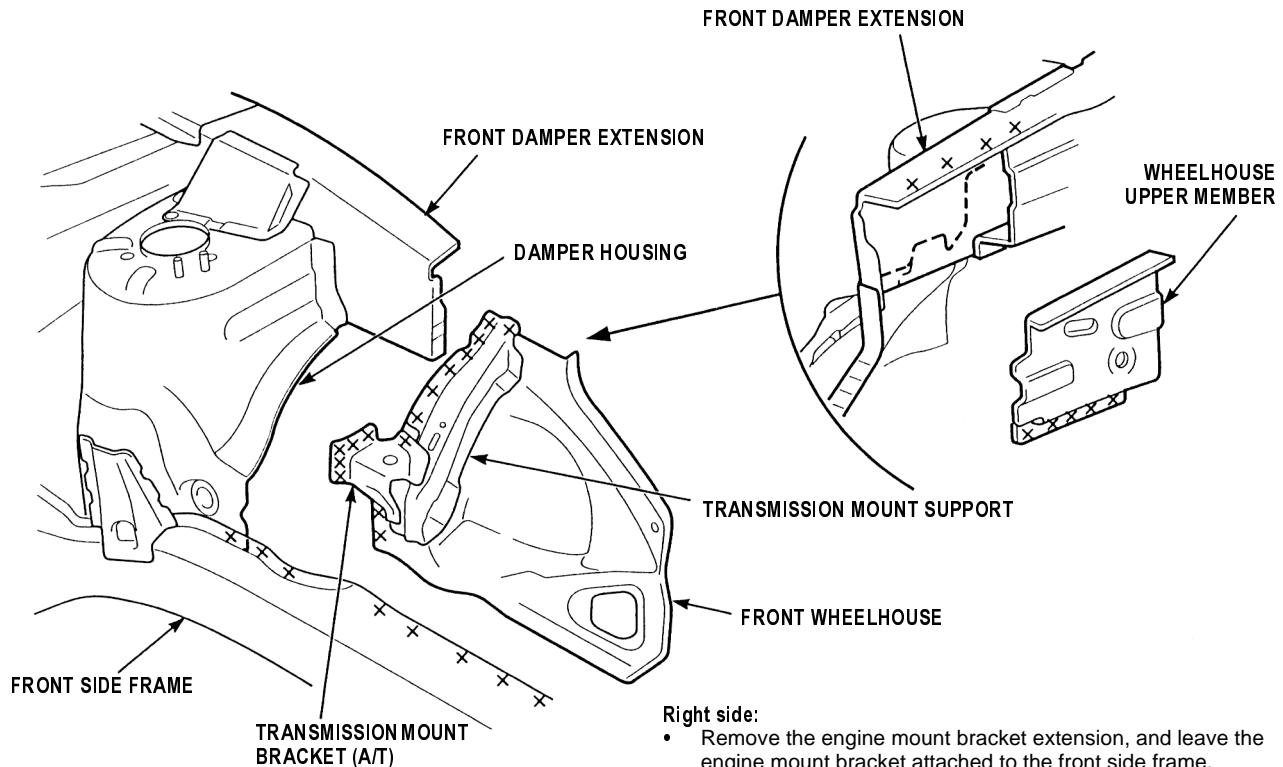
Removal

- Cut and remove the wheelhouse upper member, and replace the front wheelhouse.

- When removing the front wheelhouse

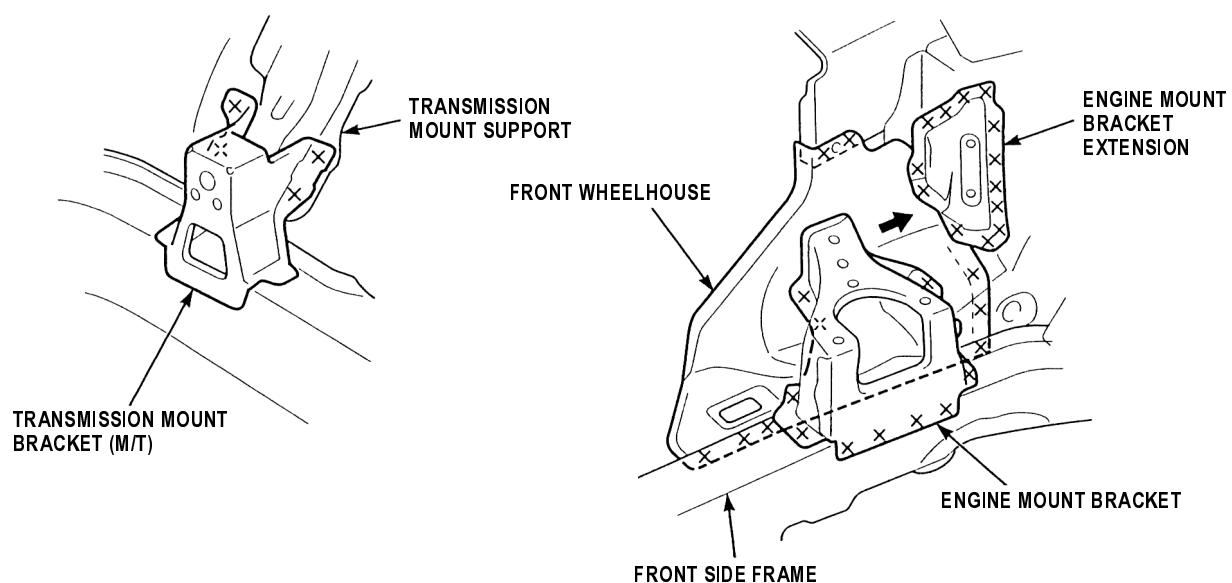
M/T: Leave the transmission mount bracket attached to the front side frame.

A/T: When replacing the front wheelhouse, support the wheelhouse and transmission mount bracket as an assembly.



Right side:

- Remove the engine mount bracket extension, and leave the engine mount bracket attached to the front side frame.
- Check the engine mount bracket position, and check for damage. If necessary, replace it.



(cont'd)

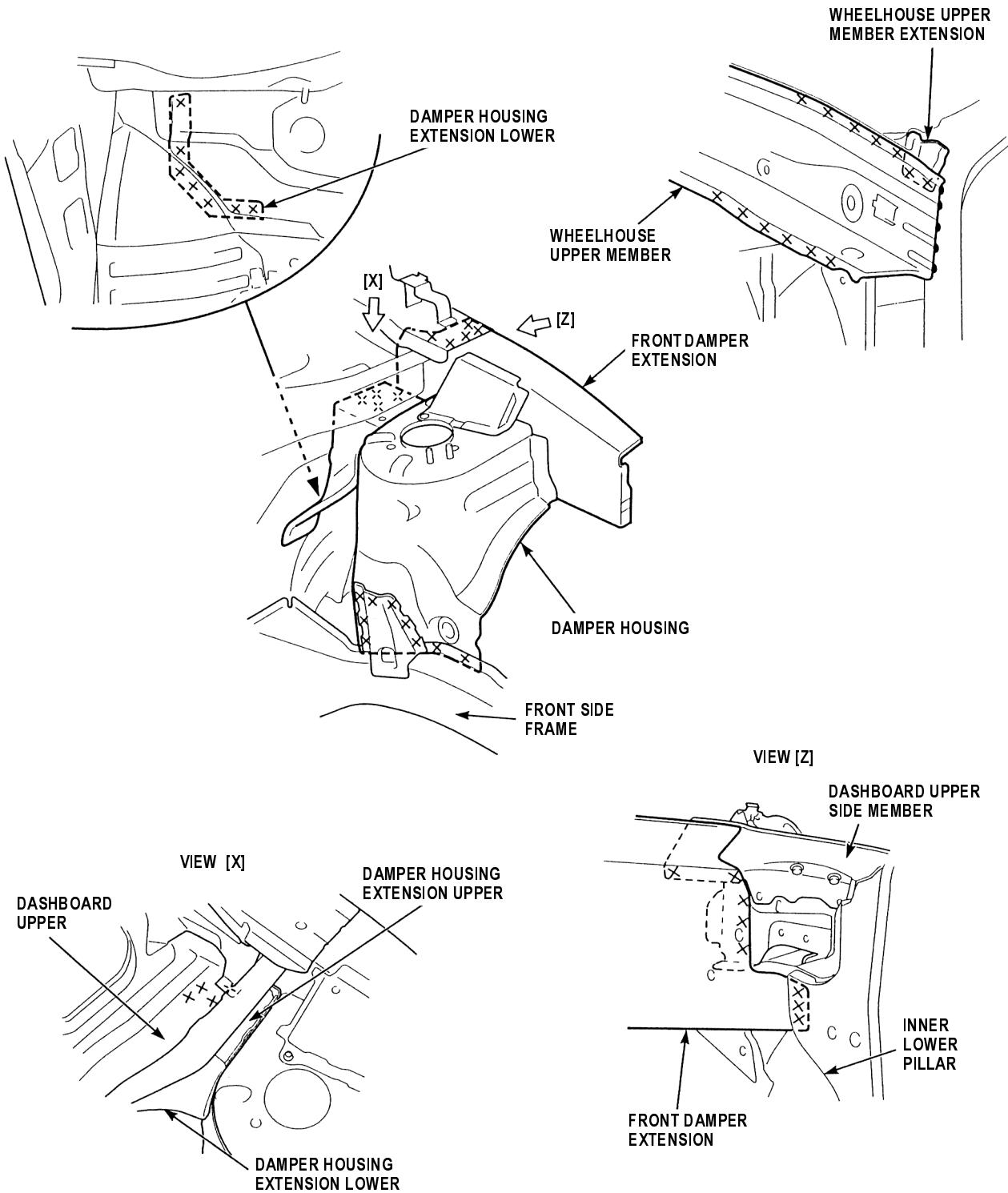
Replacement

Front Wheelhouse / Damper Housing (cont'd)

Removal (cont'd)

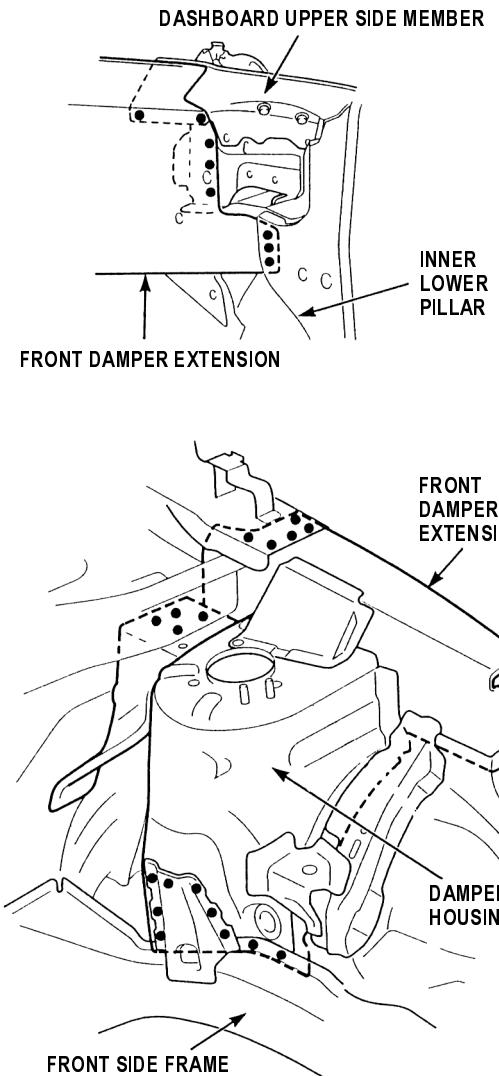
- Check the damper housing position, and check for damage.
- If necessary, remove the Wheelhouse upper member, and replace the front damper extension, damper housing, and damper housing extension as an assembly.

Passenger's compartment side:

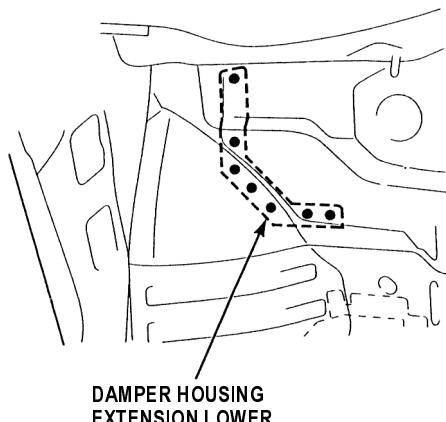


Installation

1. Set the new damper housing assembly, front wheelhouse, and front bulkhead into position, and measure the front compartment diagonally.
2. Check the body dimensions (see section 4).
3. Tack weld the clamped position.
4. Temporarily install the front subframe, and check the front side frame position.
5. Temporarily install the hood, front fender, headlight, and front bumper, and check for differences in level and clearance. Make sure the body lines flow smoothly.
6. Do the main welding.
 - Weld the damper housing and front side frame.
 - Weld the front damper extension and dashboard upper side member.

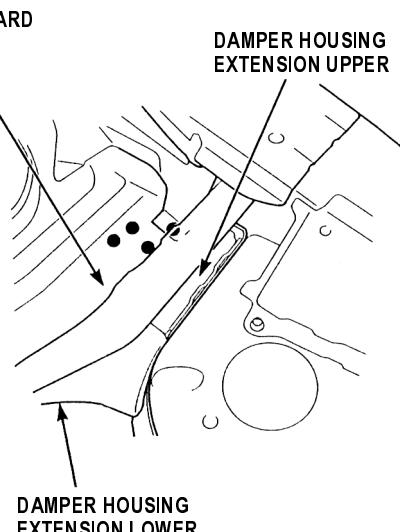


- From the passenger's compartment side, plug weld the holes in the dashboard lower, and damper housing extension lower.



DAMPER HOUSING EXTENSION LOWER

- From the dashboard upper side, plug weld the holes in the damper housing extension upper.



DAMPER HOUSING EXTENSION LOWER

(cont'd)

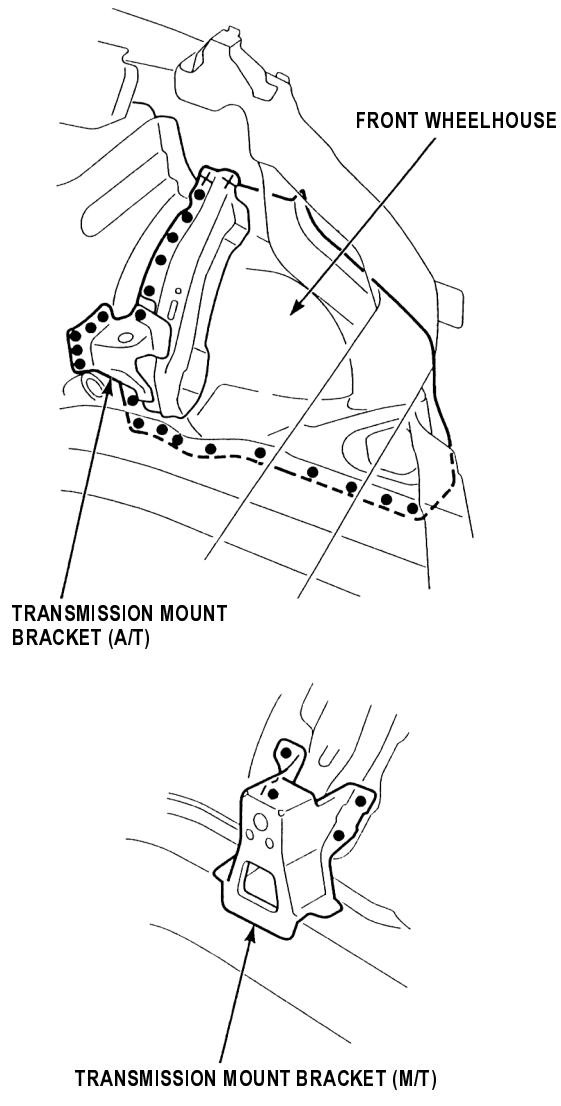
Replacement

Front Wheelhouse / Damper Housing (cont'd)

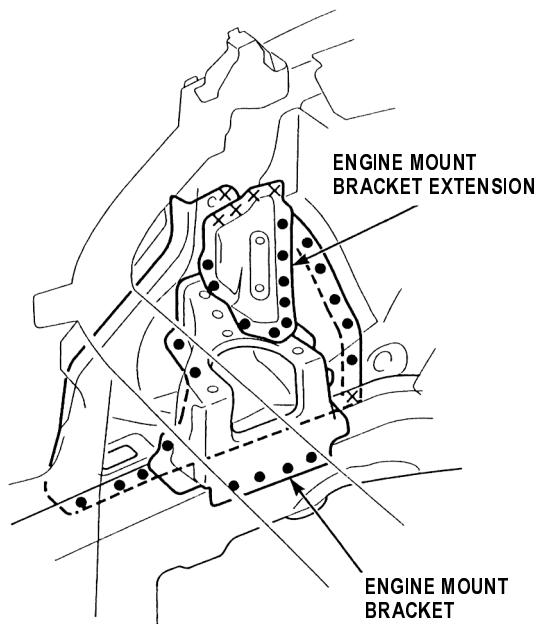
Installation (cont'd)

- Weld the front wheelhouse, damper housing, and front side frame.

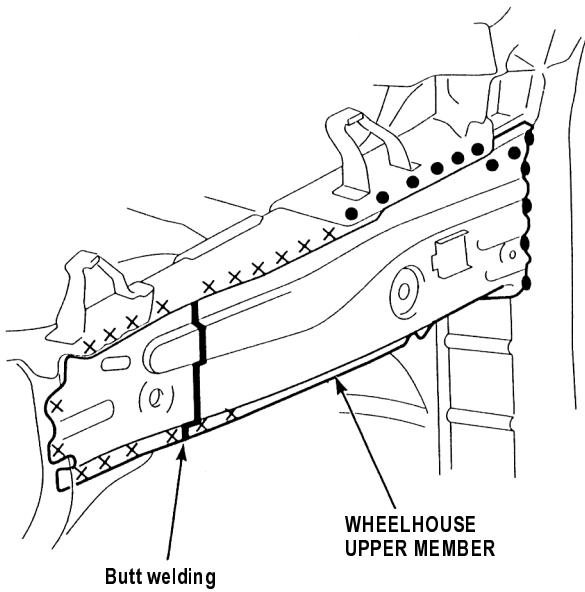
Left side:



Right side:

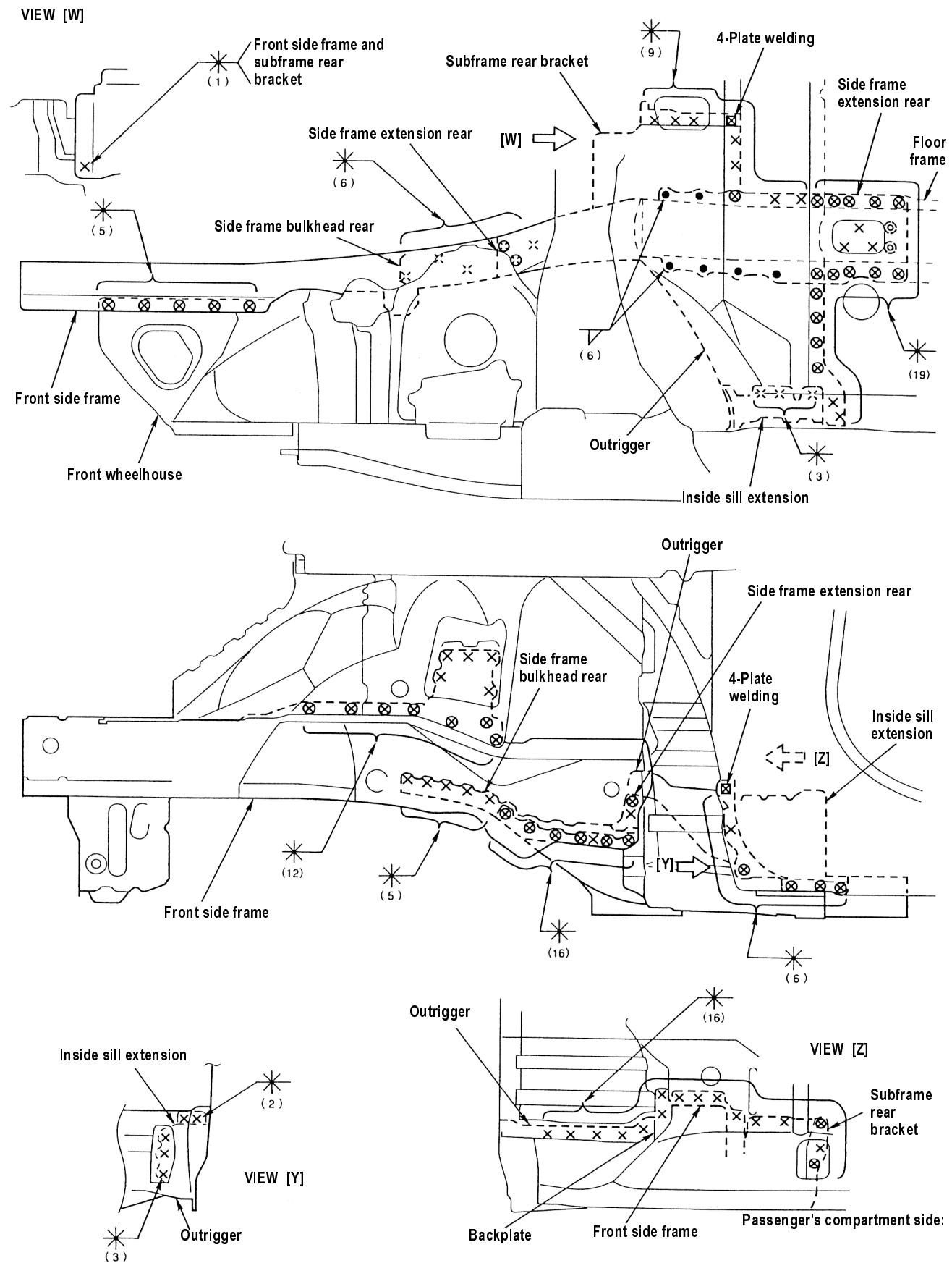


- Weld the wheelhouse upper member.



Front Side Frame / Outrigger

Mass Production Body Welding Diagram

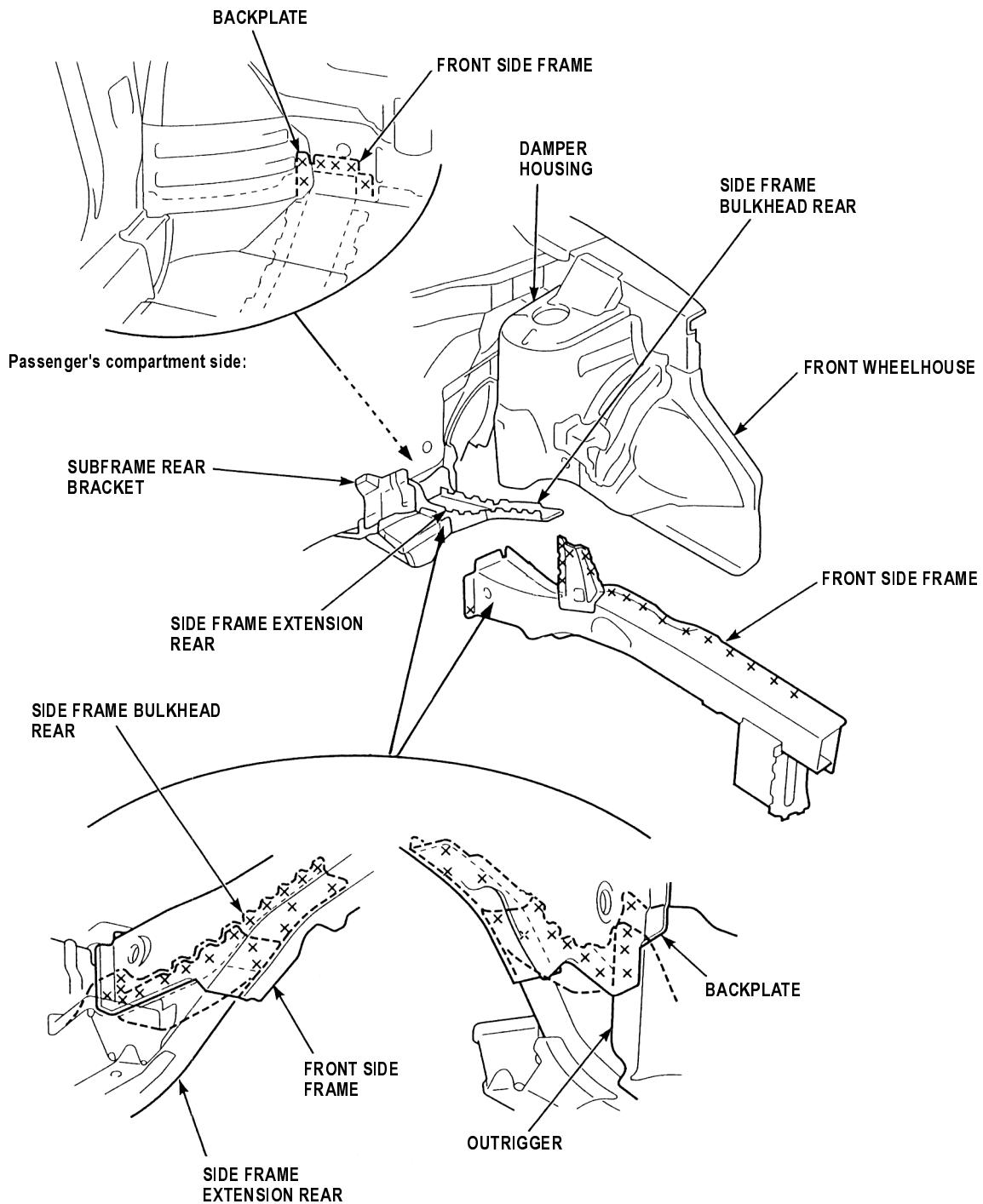


Replacement

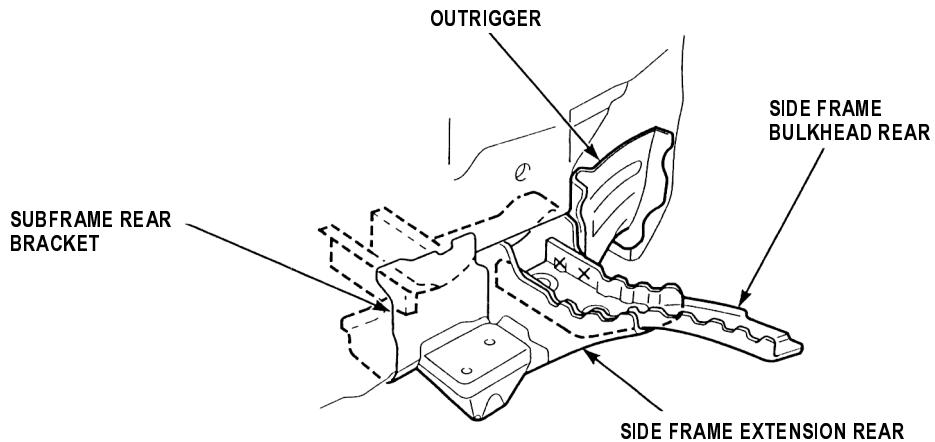
Front Side Frame / Outrigger (cont'd)

Removal

- When removing the front side frame, leave the side frame extension rear and side frame bulkhead rear attached to the dashboard lower.



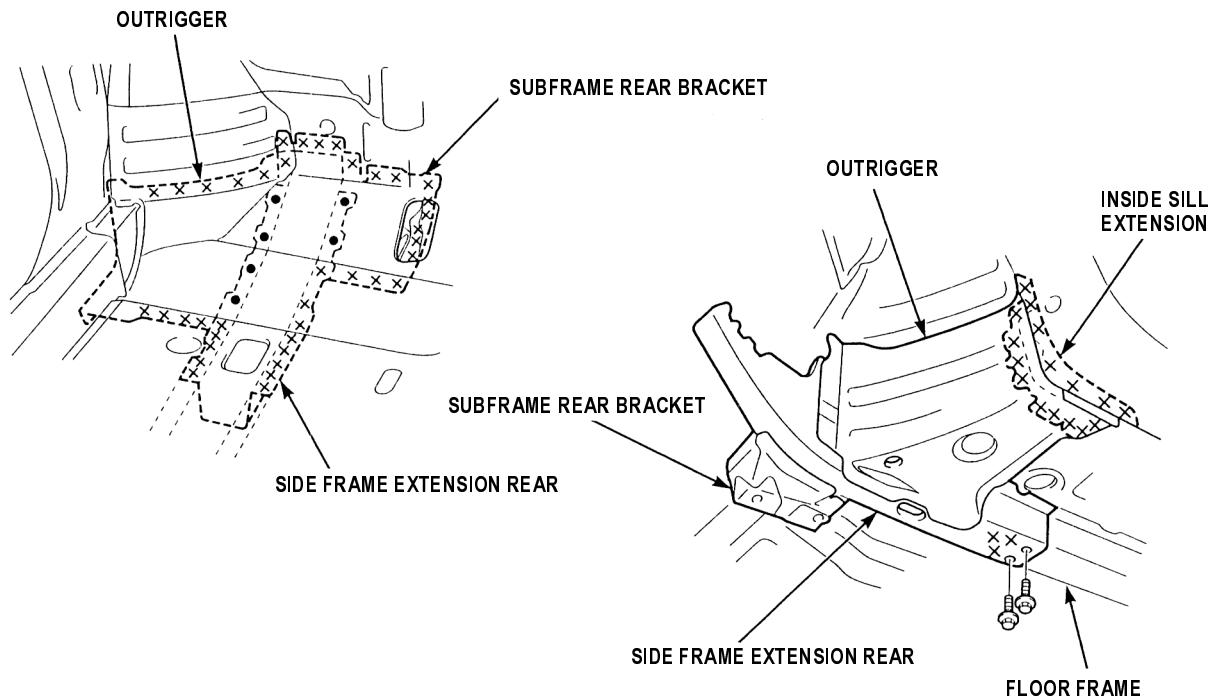
- Check the side frame bulkhead rear position, and check for damage. If necessary replace it.



- If necessary, replace the side frame extension rear, outrigger, and subframe rear bracket as an assembly.

NOTE: When removing the outrigger, leave the inside sill extension attached to the inside sill, if possible.

Passenger's compartment side:

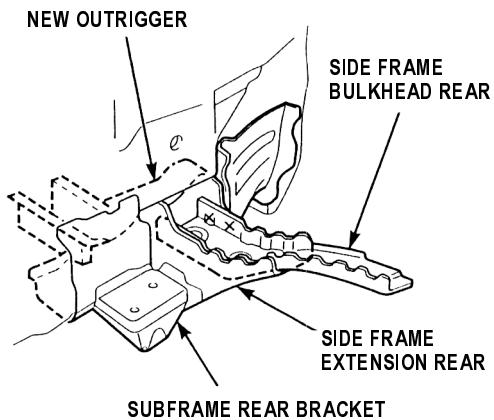


Replacement

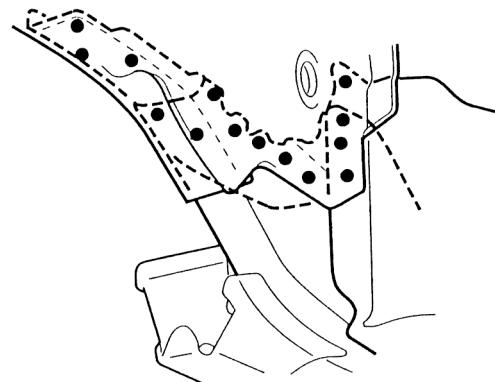
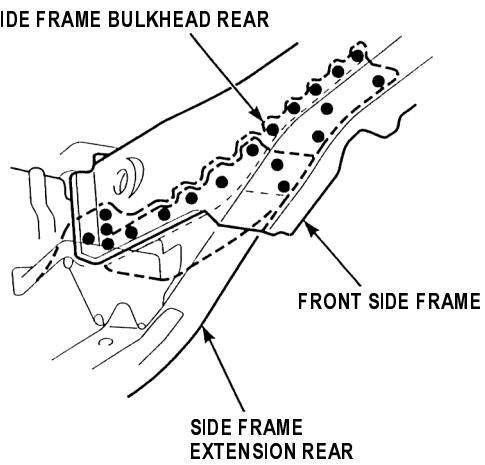
Front Side Frame / Outrigger (cont'd)

Installation

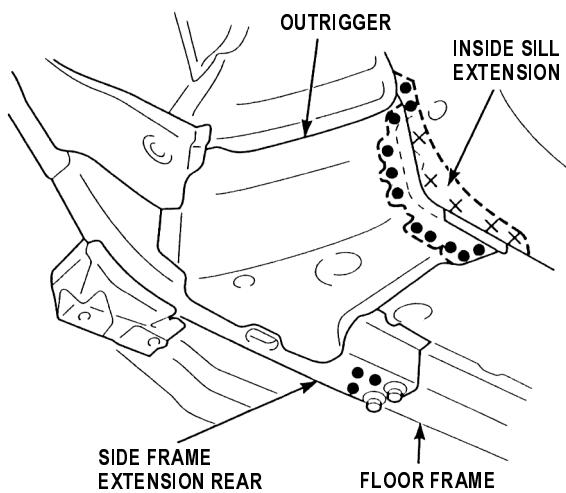
- Set the new outrigger and tack weld the new side frame bulkhead rear to the side frame extension rear.



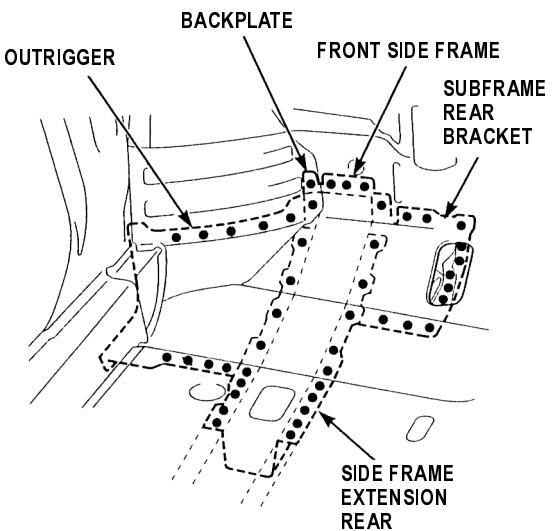
- Set the new front side frame, and front bulkhead into position, and measure the front compartment diagonally.
Check the body dimensions (see section 4).
- Tack weld the clamped position.
- Temporarily install the front subframe, and check the front side frame position.
- Temporarily install the hood, front fender, headlight, and front bumper, and check for differences in level and clearance.
Make sure the body lines flow smoothly.
- Do the main welding.
 - Plug weld the side frame extension rear, side frame bulkhead rear, and front side frame.



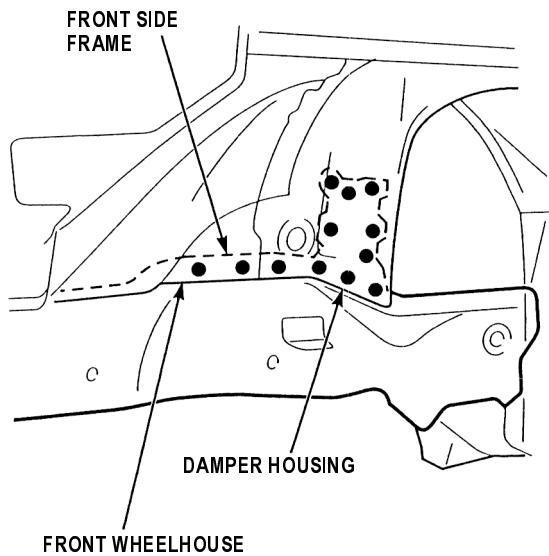
- Plug weld the inside sill extension and floor frame.



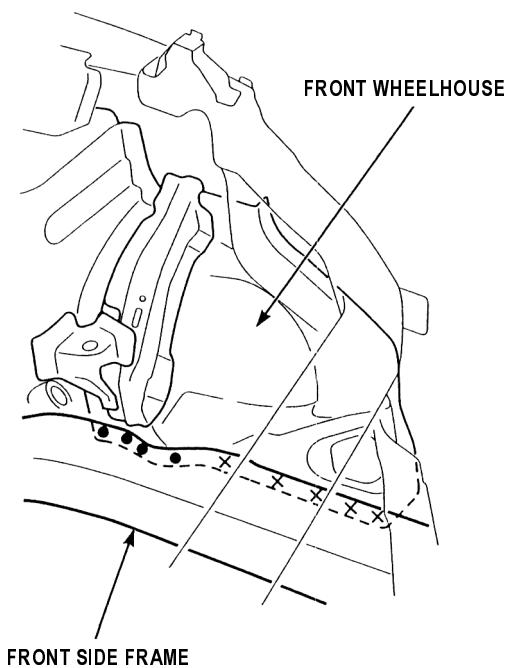
- From the passenger compartment, plug weld the dashboard lower and front floor.



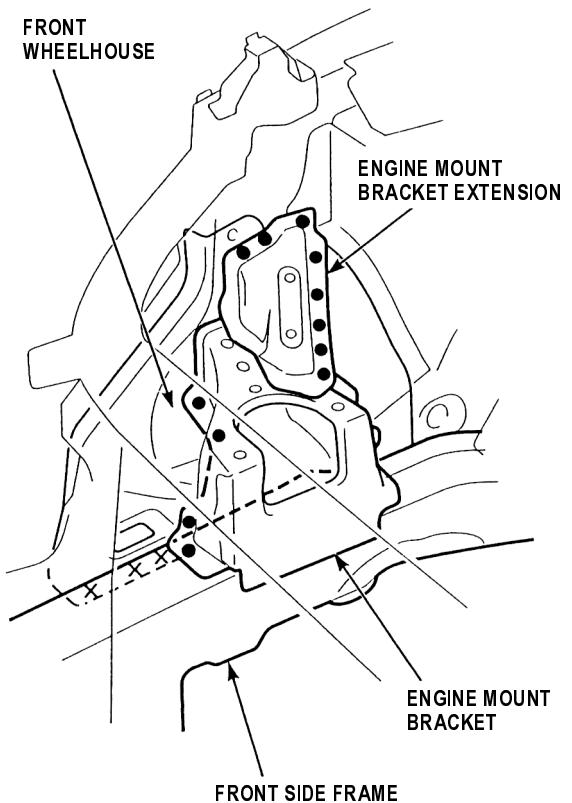
- Weld the damper housing, front wheelhouse, and front side frame.



Left side:



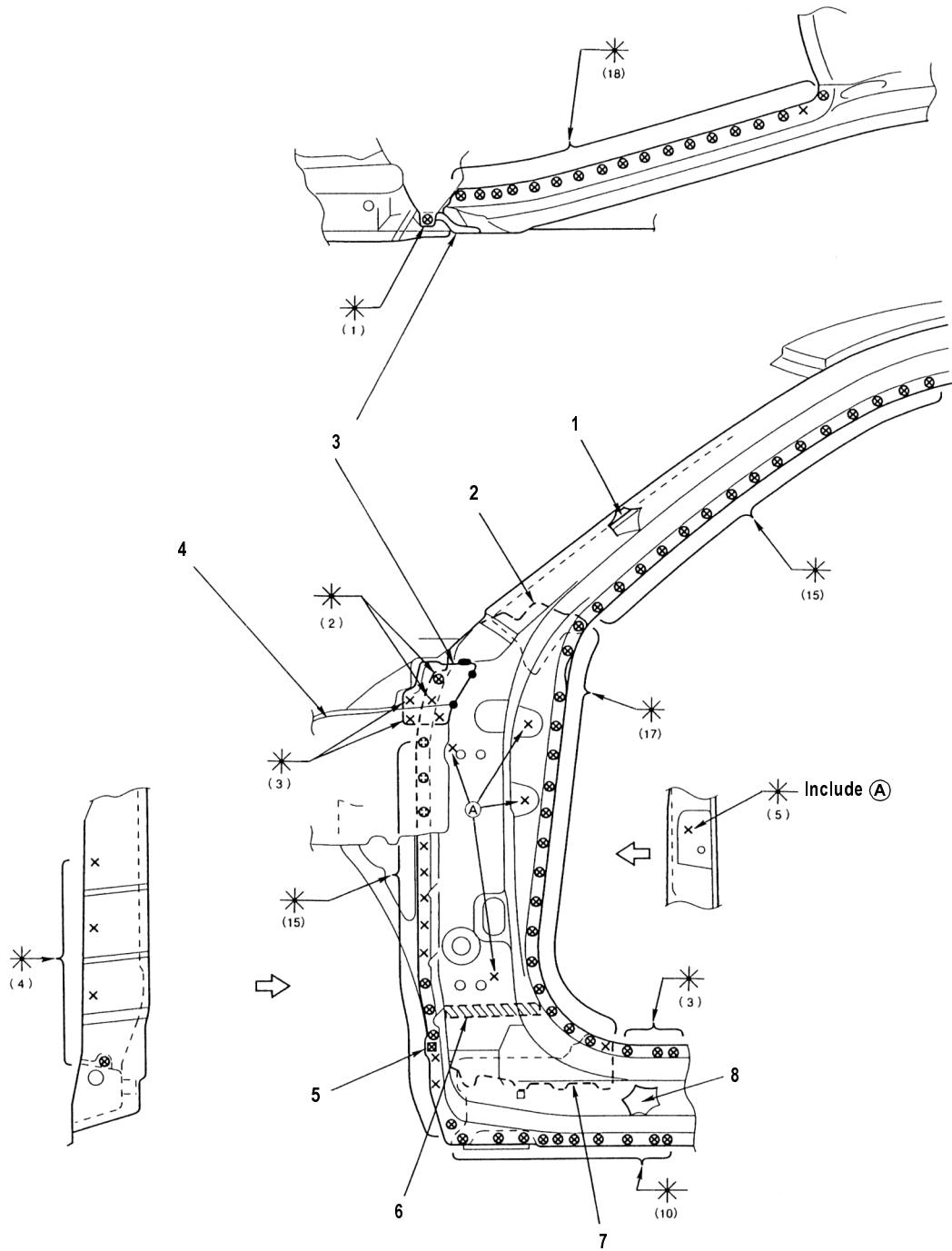
Right side:



Replacement

Front Pillar Outer Panel

Mass Production Body Welding Diagram

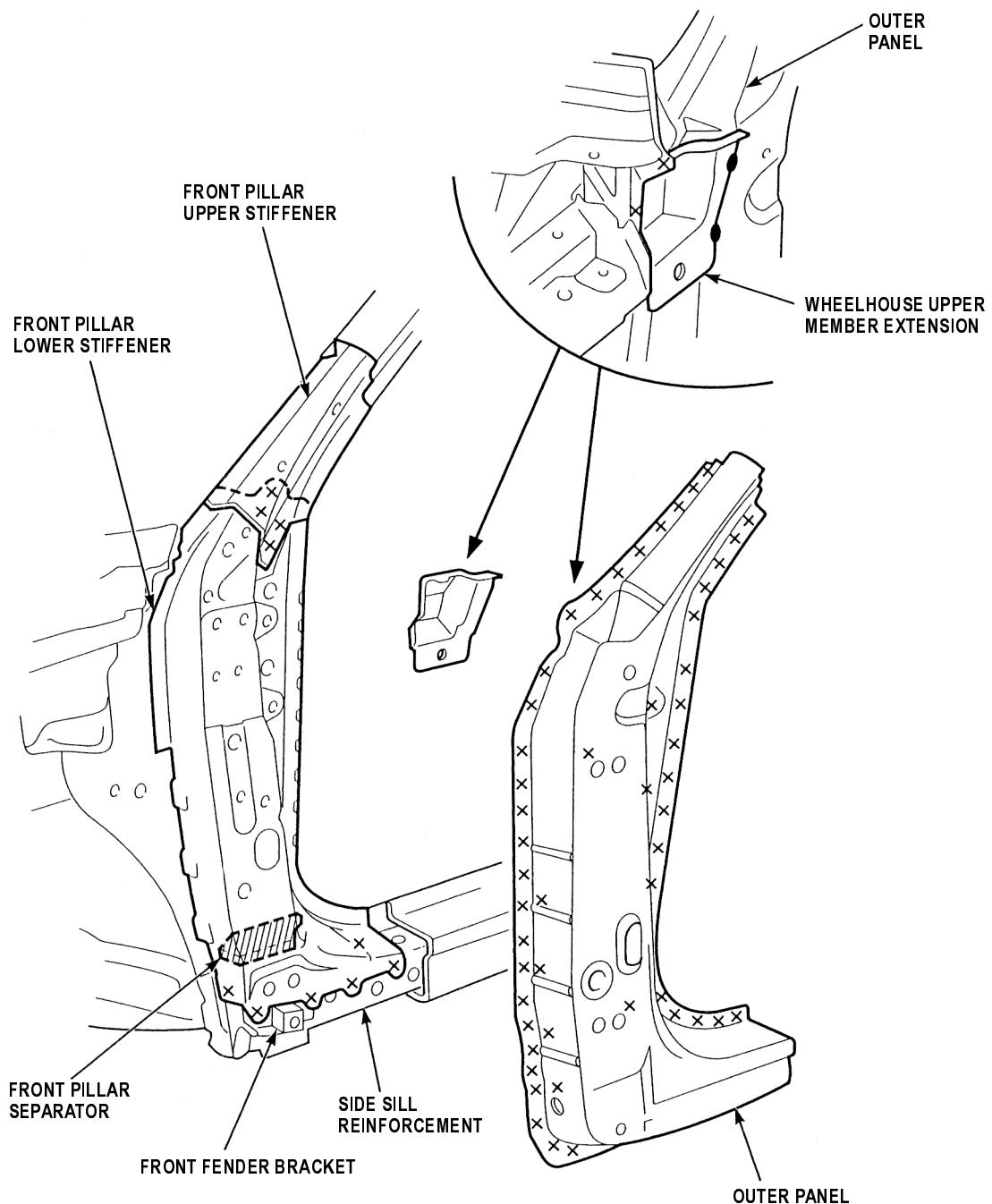


- 1 Front pillar upper stiffener
- 2 Front pillar lower stiffener
- 3 Wheelhouse upper member extension
- 4 Wheelhouse upper member (see page 4-3)

- 5 4-Plate welding
- 6 Front pillar separator
- 7 Front pillar lower stiffener
- 8 Side sill reinforcement

Removal

- Remove the wheelhouse upper member extension, and cut and pry off the front pillar outer panel, and if necessary replace the front fender bracket.
- Check the front pillar lower stiffener position, and check for damage. Replace it if necessary.
- When replacing the front pillar lower stiffener, remove the front pillar separator, and glue the insulator at the separator mounted position.
- If necessary, replace the front fender bracket.



Replacement

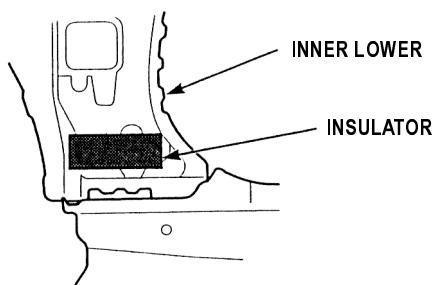
Front Pillar Outer Panel (cont'd)

Installation

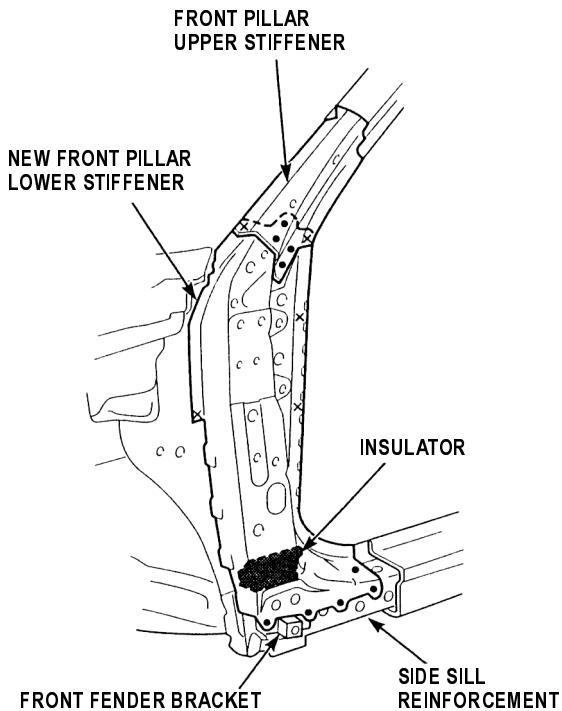
1. Glue the insulator to the inner lower as shown.

Insulator: P/N. 74416-SF1-000

Adhesive: Cemedine 366, or equivalent



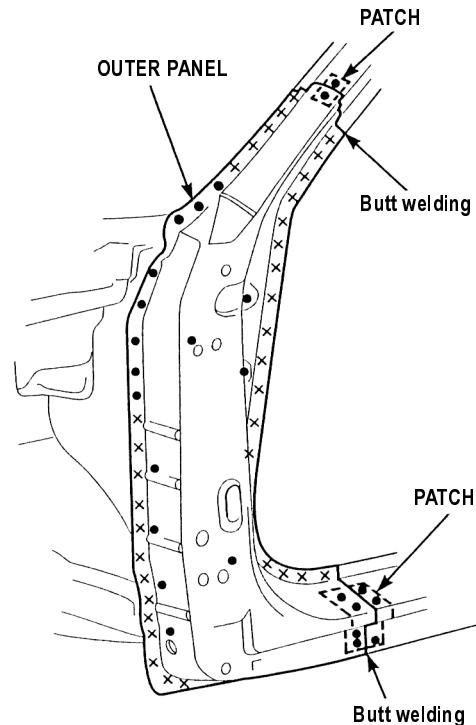
2. Set the new front pillar lower stiffener and front fender bracket into position, and tack weld the clamped position.
3. Cut the repair part (outer panel), and set it into position. Clamp the repair part, and check the body dimensions (see section 4).
4. Temporarily install the windshield, windshield side trim, door, hood, and front fender, and check for differences in level and clearance. Make sure the body lines flow smoothly.
5. Remove the repair part, and weld the front pillar lower stiffener, upper stiffener, and side sill reinforcement.



6. Clamp the repair part, and recheck the clearance and alignment of the door, front fender, and windshield.

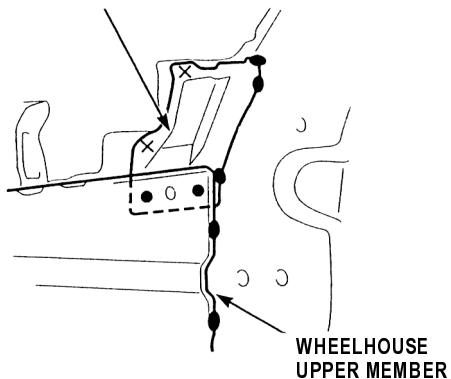
7. Do the main welding.

- Attach a patch at the cut section of the front pillar and side sill outer panel, and plug weld them.



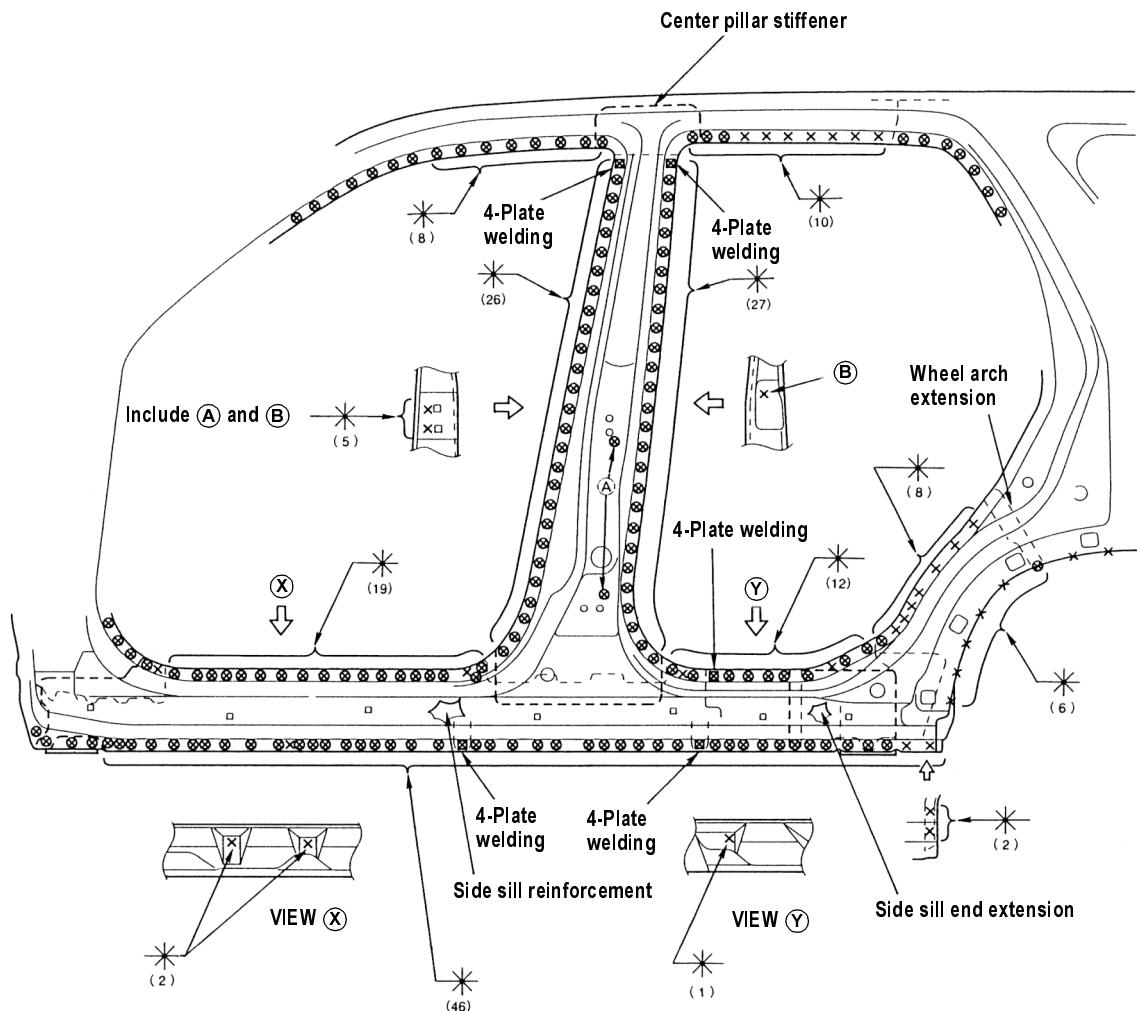
8. Weld the wheelhouse upper member extension and upper member.

WHEELHOUSE UPPER MEMBER EXTENSION



Side Sill Outer Panel

Mass Production Body Welding Diagram



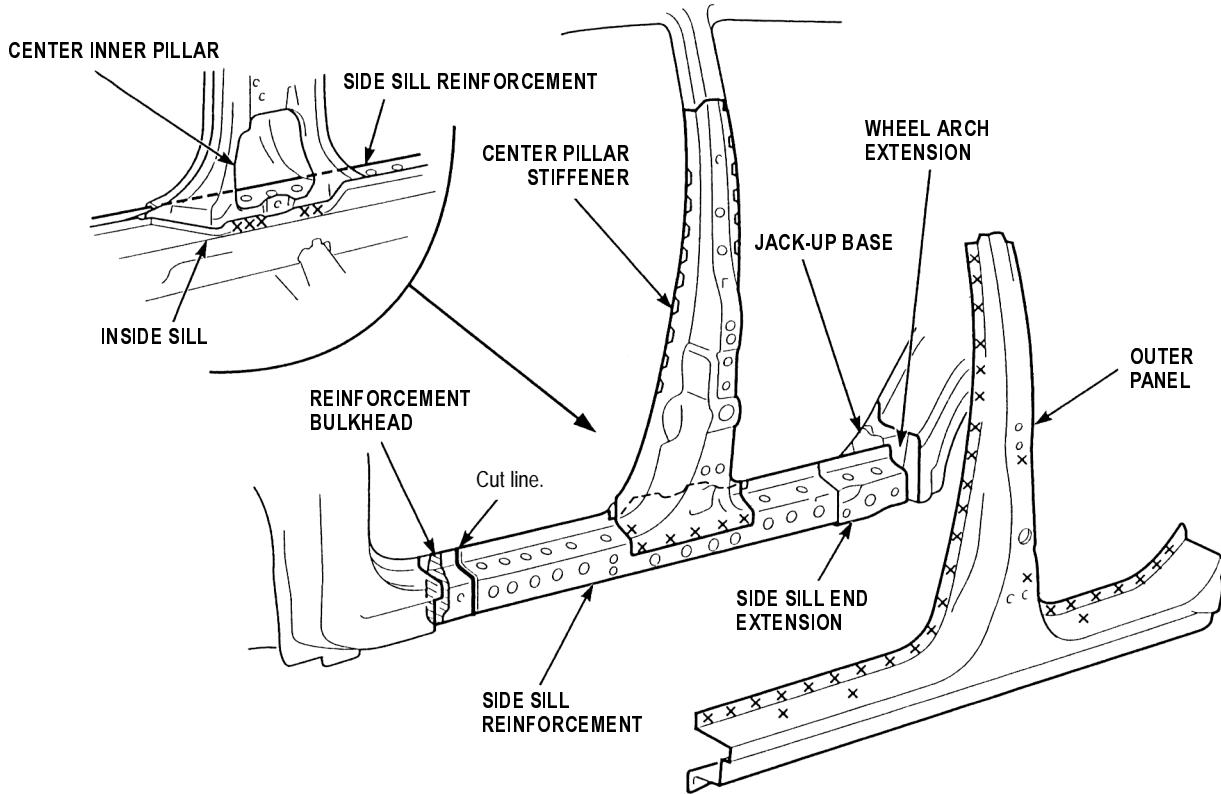
Replacement

Side Sill Outer Panel (cont'd)

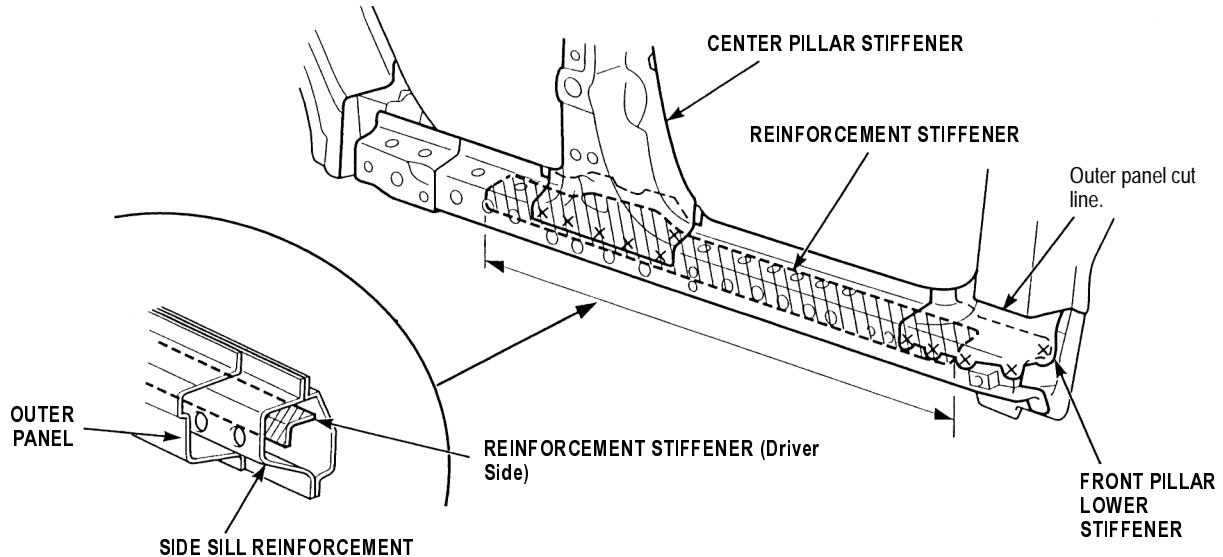
Removal

- Cut and pry off the side sill outer panel.
- Check the center pillar stiffener lower and side sill reinforcement position, and check for damage. If necessary, replace the side sill reinforcement.
- Replace the drivers side sill reinforcement as an assembly because of the way the stiffener is attached inside the side sill reinforcement.

Passenger's side:



Driver's side:

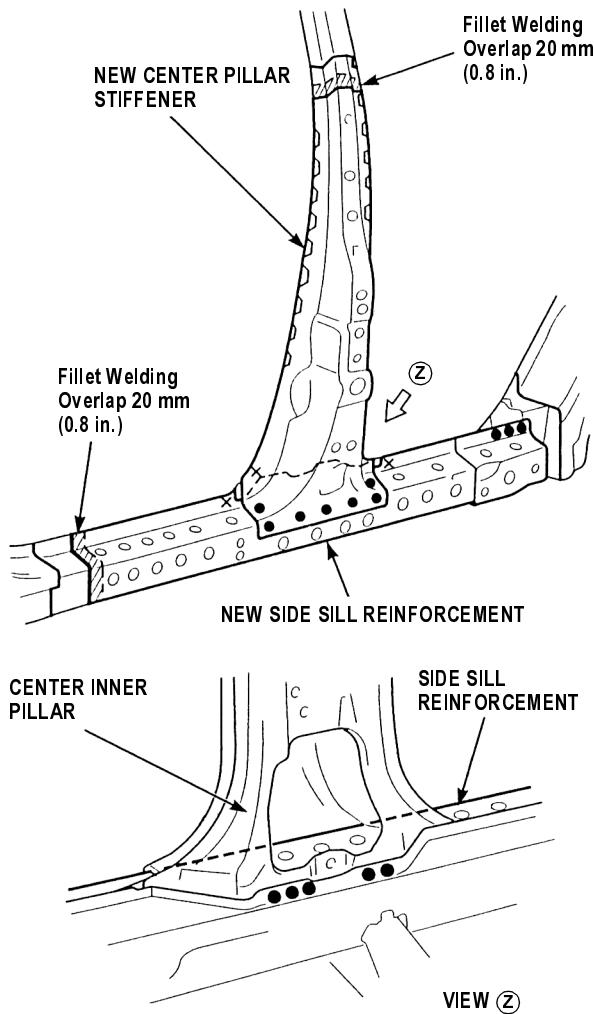


Installation

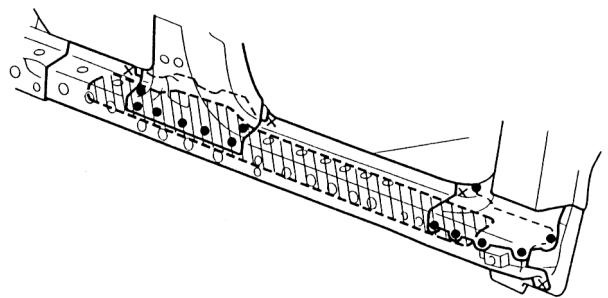
1. Cut and set the new center pillar stiffener and side sill reinforcement into position, and tack weld the clamped position.
2. Cut the repair part (outer panel), and set it into position. Clamp the repair part, and check the body dimensions (see section 4).
3. Temporarily install the door and front fender, then check for differences in level and clearance. Make sure the body lines flow smoothly.
4. Remove the repair part, and weld the center pillar stiffener, side sill reinforcement.

Passenger's side:

When replacing the side sill reinforcement, cut the new side sill reinforcement so it overlaps the body side reinforcement by 20 mm (0.8 in.), and fillet weld it.

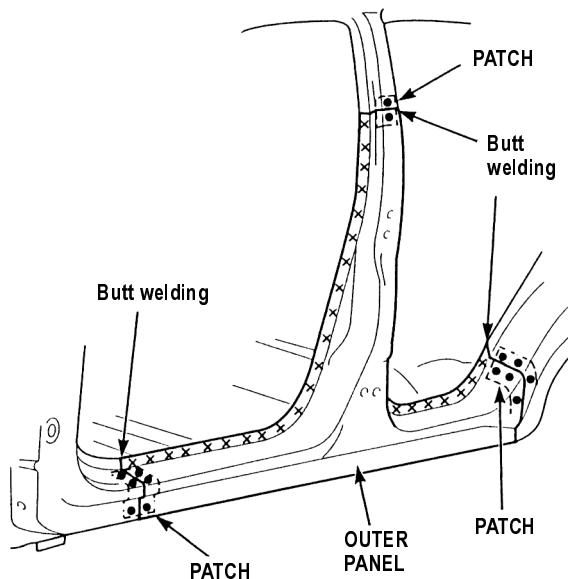


Driver's side:

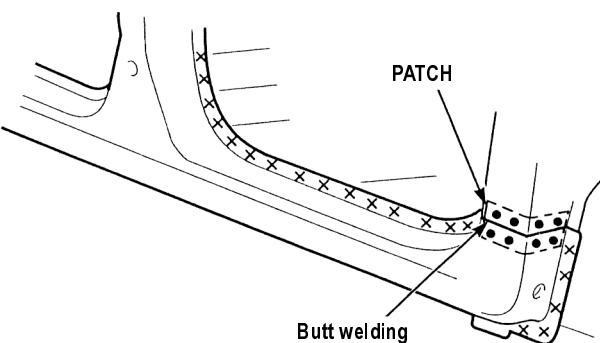


5. Clamp the repair part, and recheck the clearance and alignment of the door and front fender. Check the operation of the door.
6. Do the main welding. Make sure to attach the patch at the cut section of the front pillar, side sill, center pillar, and wheel arch, and plug weld them.

Passenger's side:



Driver's side:

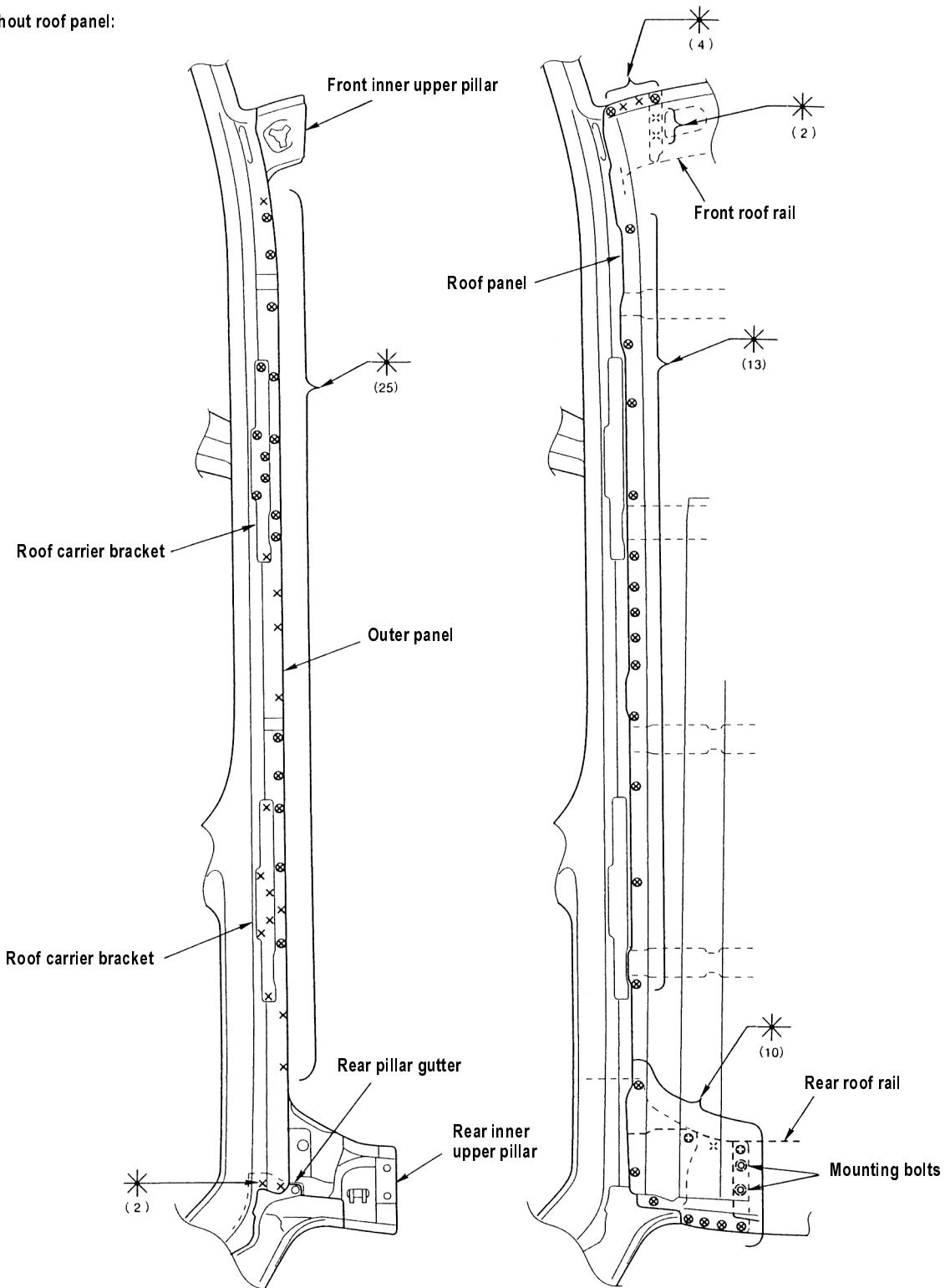


Replacement

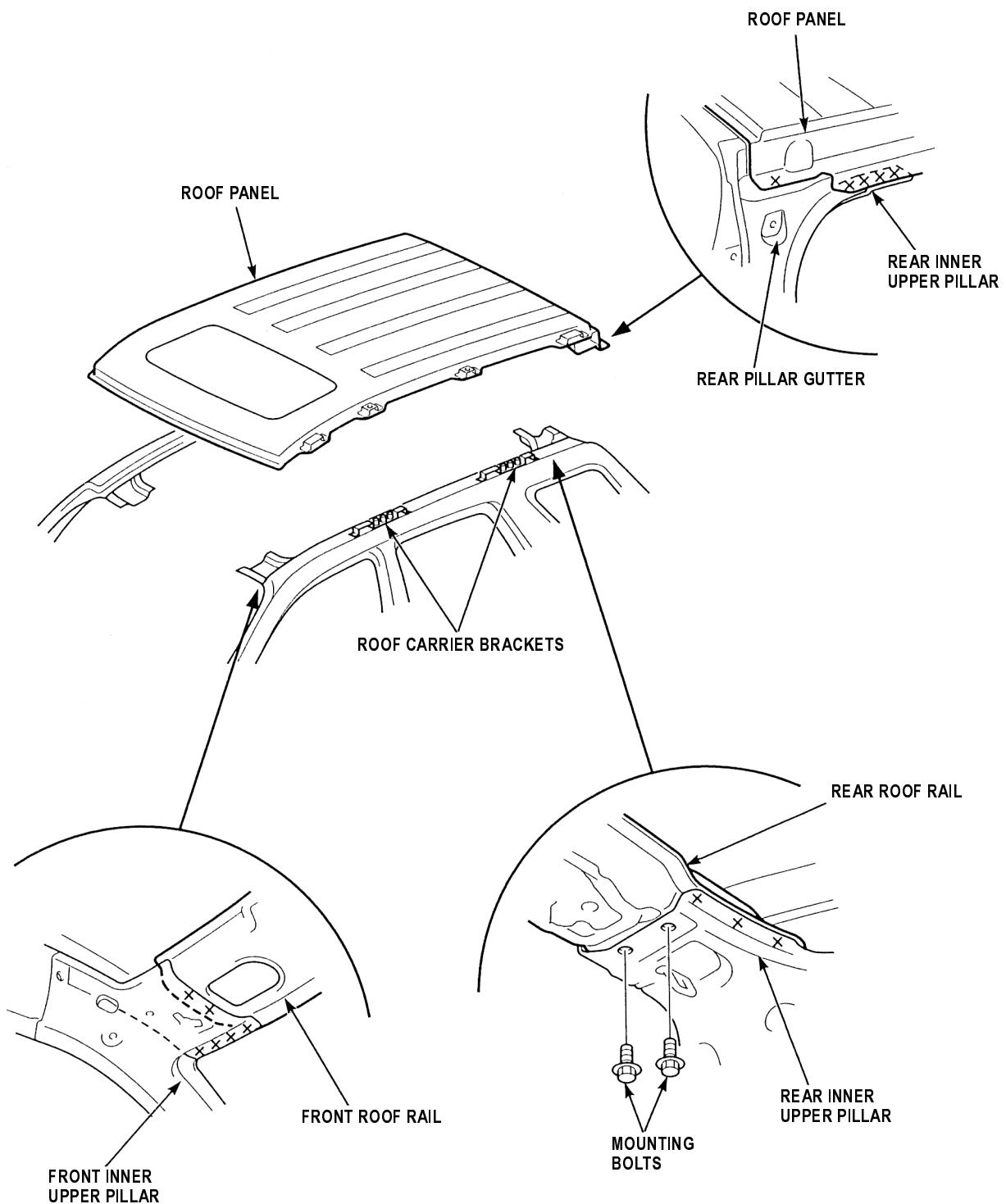
Roof Panel

Mass Production Body Welding Diagram

Without roof panel:



Removal

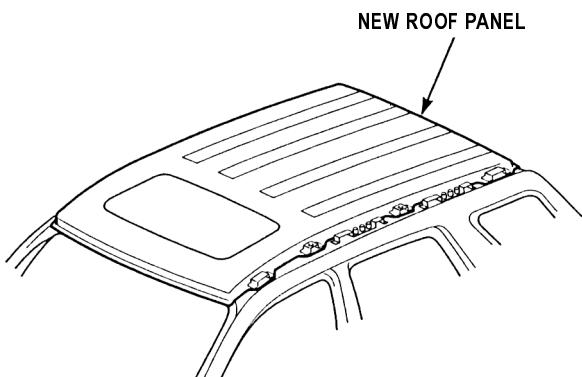


Replacement

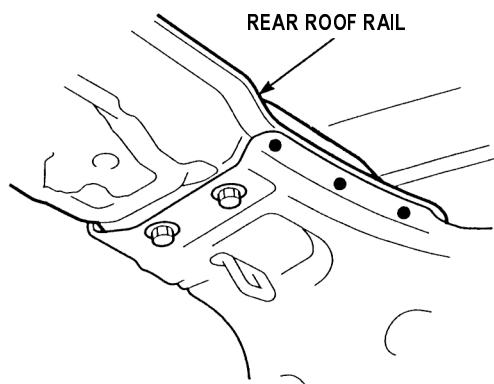
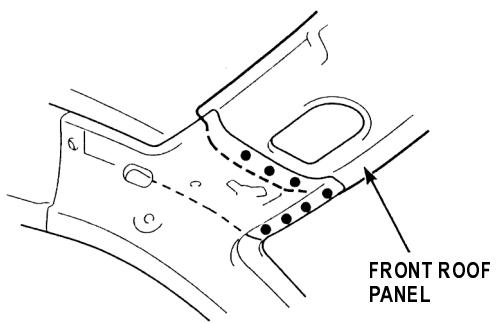
Roof Panel (cont'd)

Installation

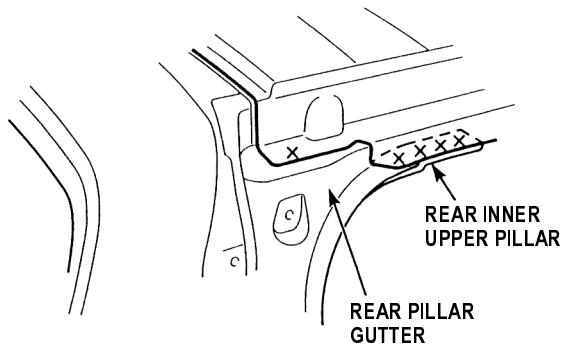
1. Set the new roof panel into position and clamp it. Check the body dimensions (see section 4).
2. Install the rear mounting bolts, and tack weld the roof panel.
3. Temporarily install the windshield, windshield side trim, roof side trim, door, and tailgate, and check for differences in level and clearance. Check the operation of the tailgate.
4. Do the main welding.



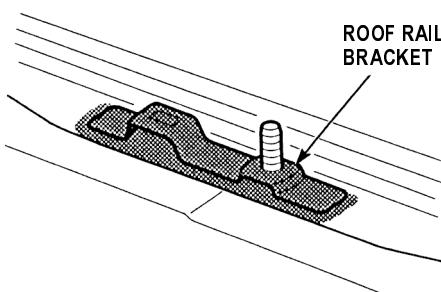
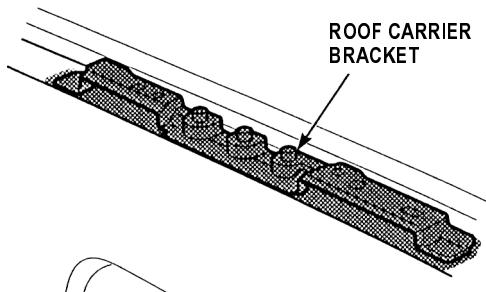
5. From inside the vehicle, plug weld the front and rear roof rails.



6. Weld the roof panel, rear pillar gutter, and rear inner upper pillar.



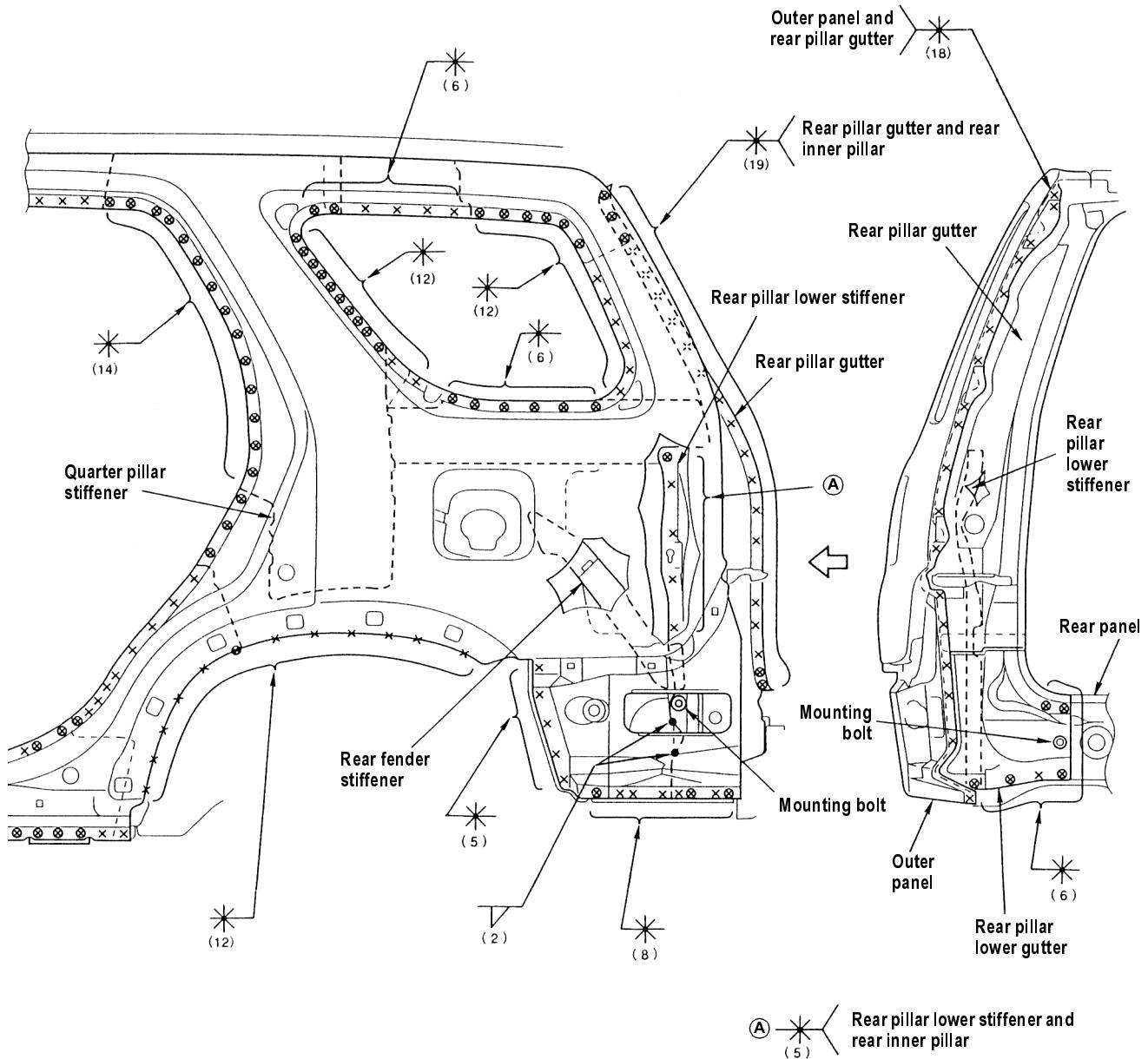
7. Apply anti-rust agent to the roof carrier brackets and roof rail brackets.



Rear Side Outer Panel

Mass Production body Welding Diagram

Left side:



(cont'd)

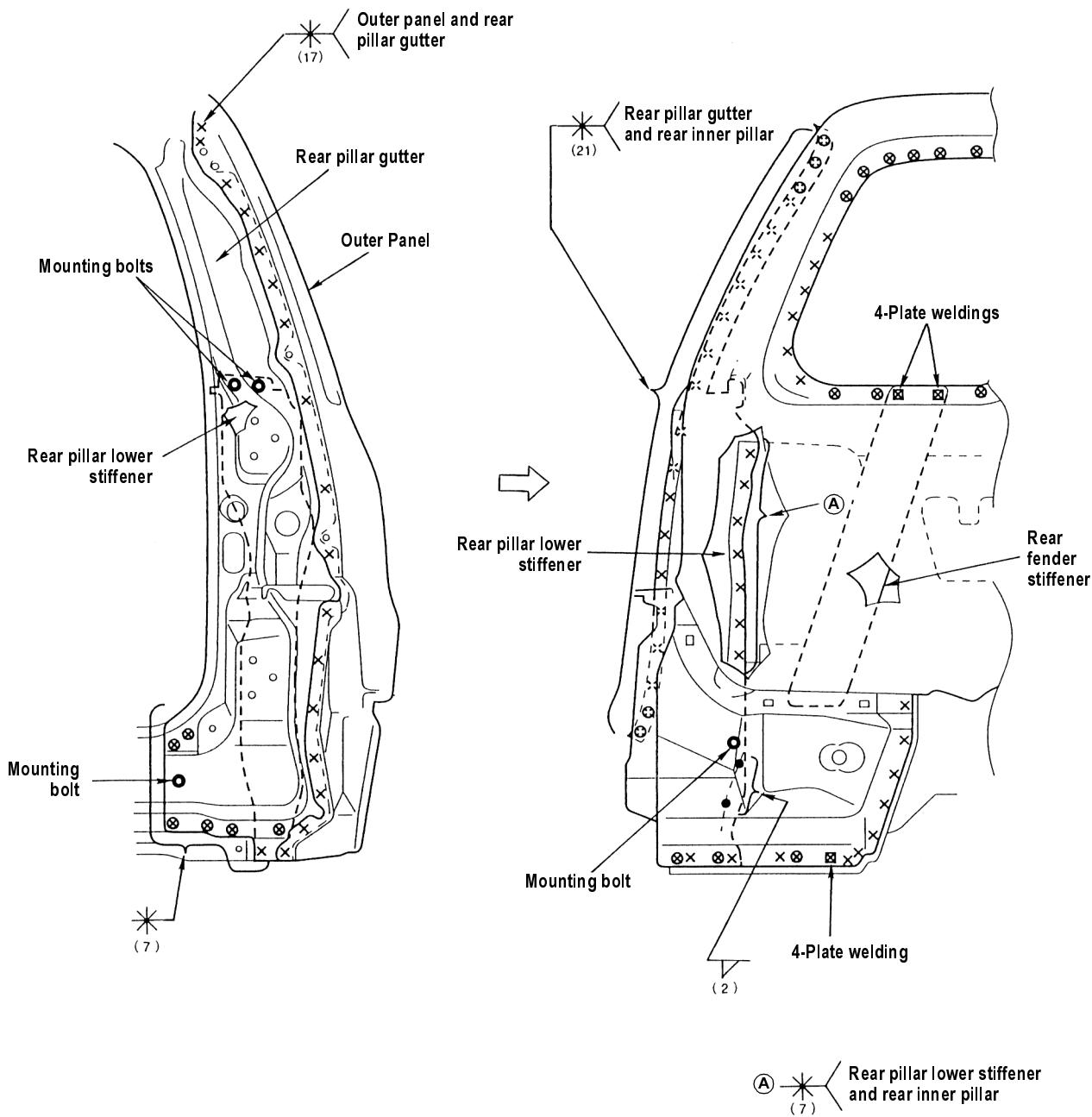
Replacement

Rear Side Outer Panel (cont'd)

Mass Production Body Welding Diagram (cont'd)

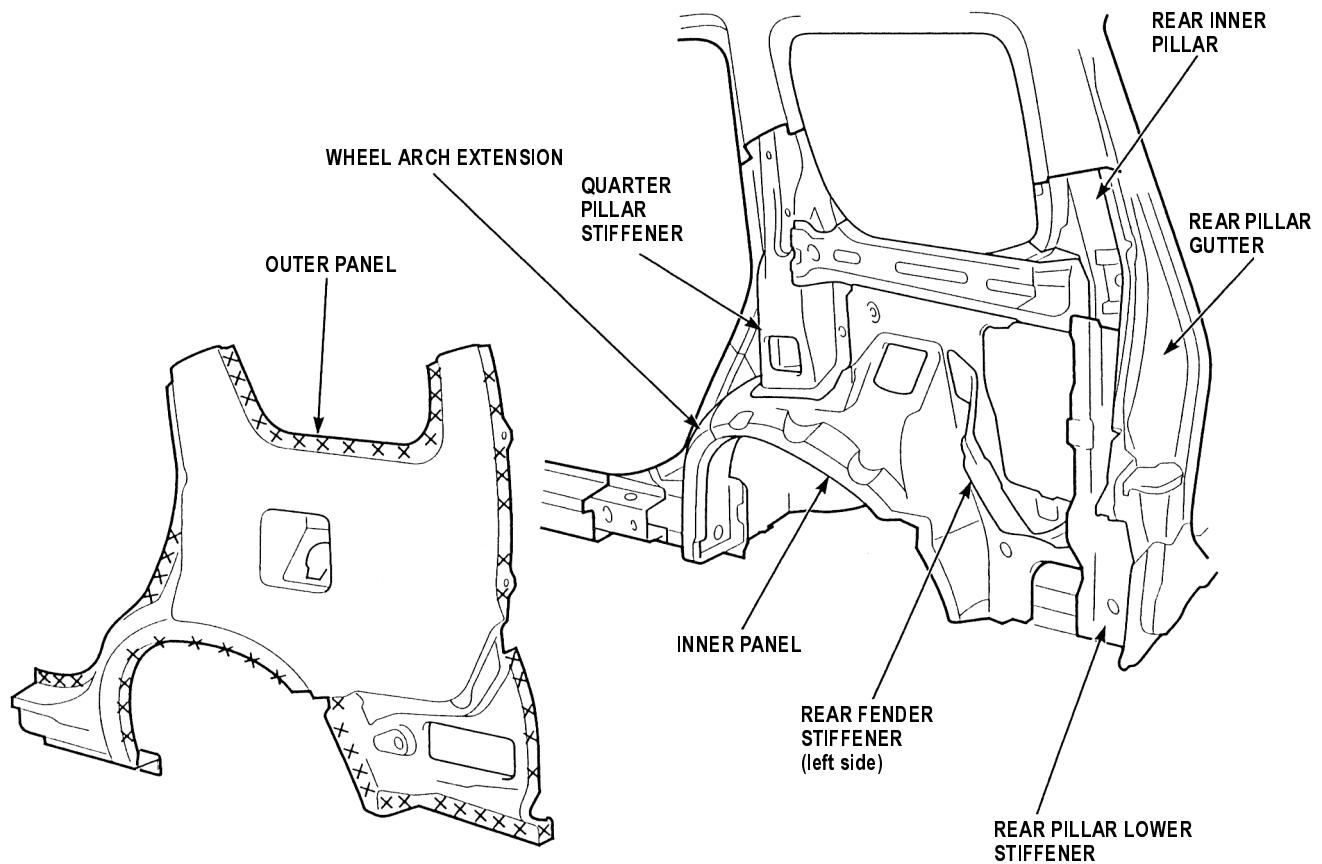
Right side:

NOTE: The left side is symmetrical.



Removal

- Cut and pry off the rear side outer panel, and if necessary replace the rear fender stiffener.



(cont'd)

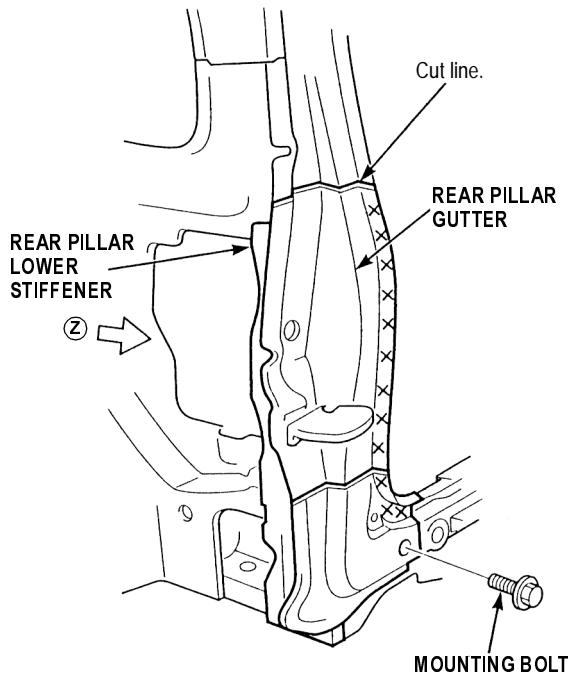
Replacement

Rear Side Outer Panel (cont'd)

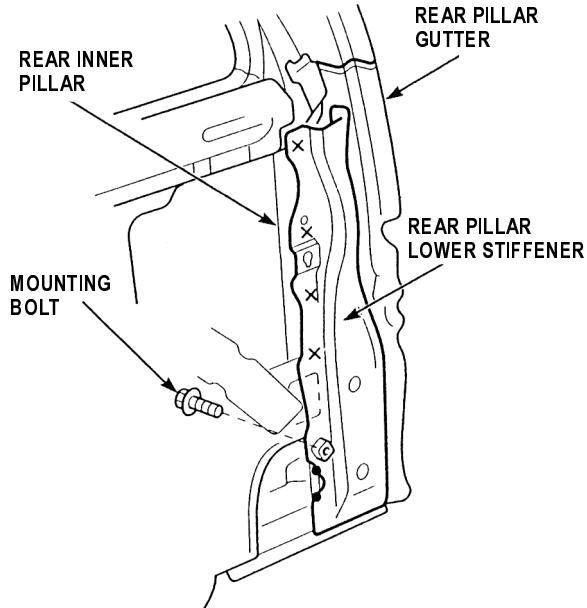
Removal (cont'd)

- Check the rear pillar gutter and rear pillar lower stiffener position, and check for damage.
- If necessary, cut the rear pillar gutter, and replace the rear pillar gutter and rear pillar lower stiffener as an assembly.

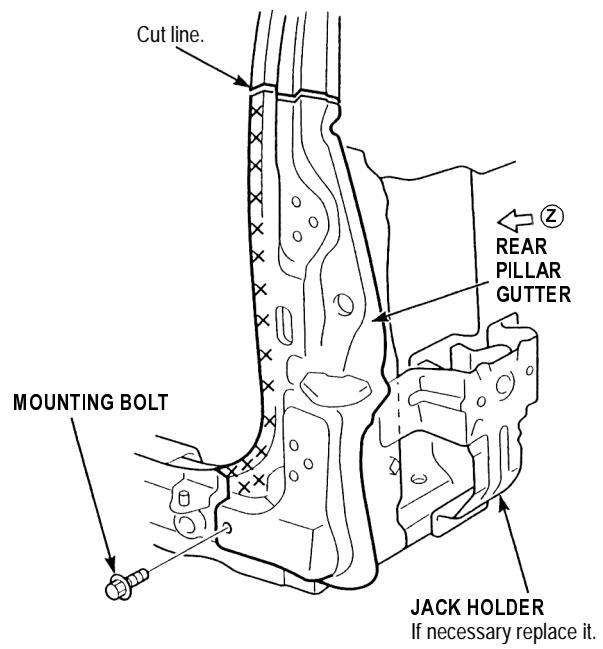
Left side:



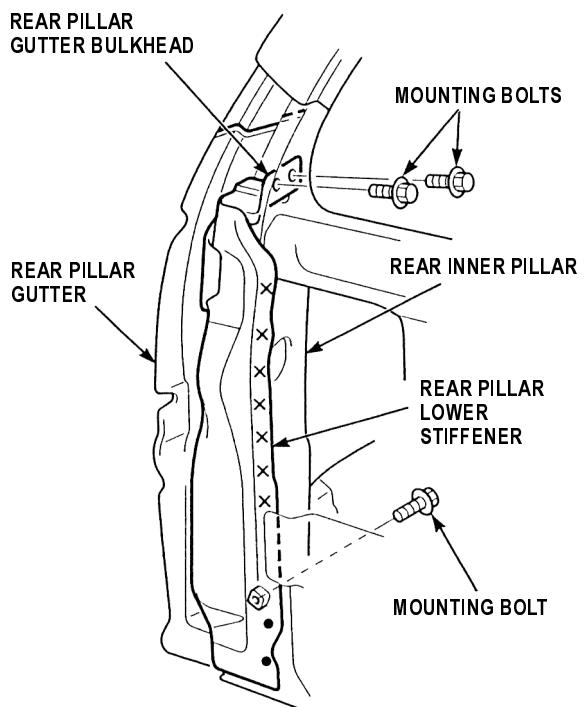
VIEW ②



Right side:



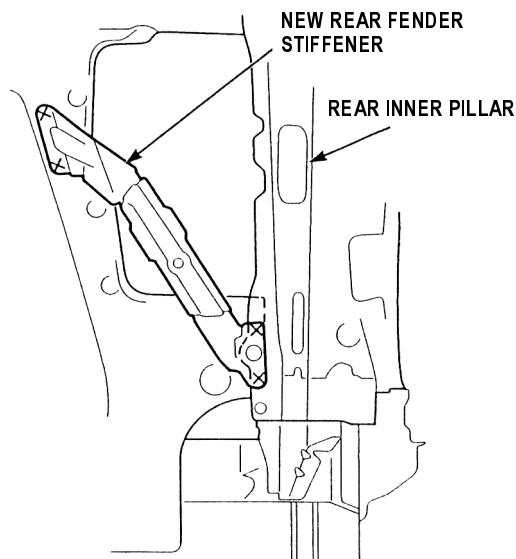
VIEW ②



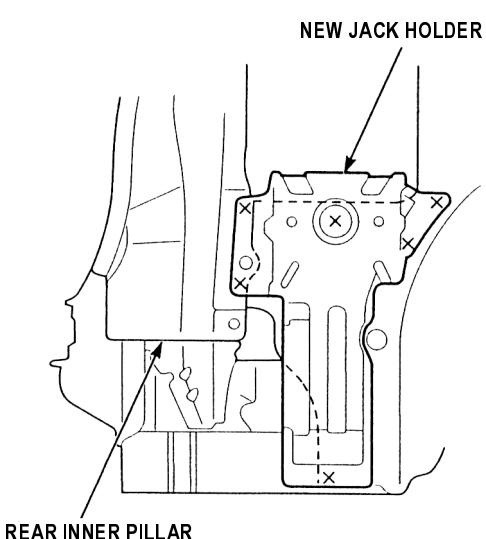
Installation

1. Check the position of the inner panel and rear inner pillar, and weld the new rear fender stiffener or new jack holder.

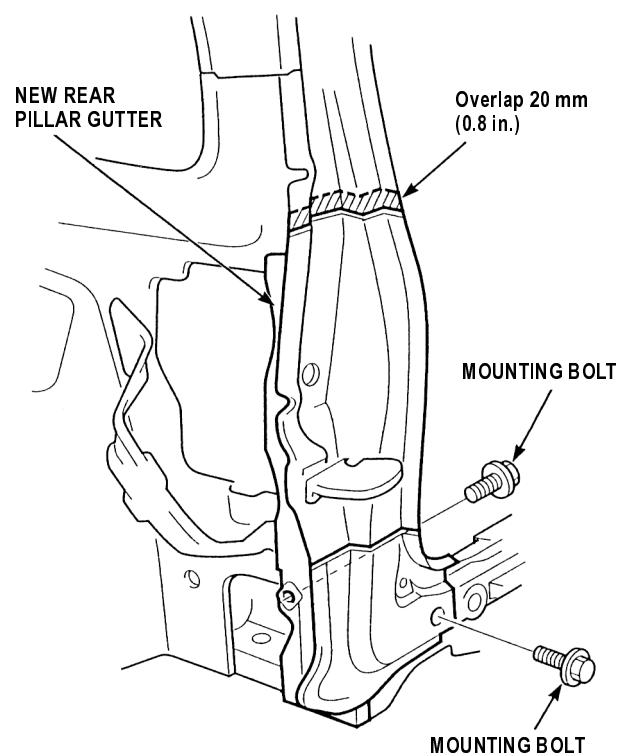
Left side:



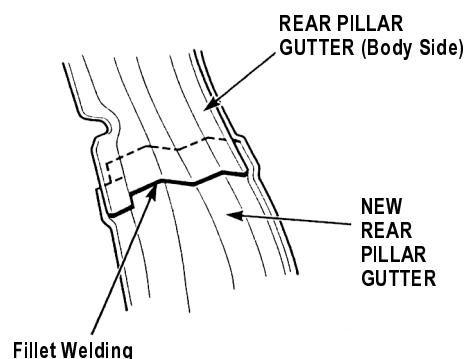
Right side:



2. Cut the new rear pillar gutter, and set it into position and install the mounting bolts.



3. Check the body dimensions (see section 4), and tack weld the rear pillar gutter.
4. Cut the repair part (outer panel), and set it into position.
5. Temporarily install the door, tailgate, taillight, and rear bumper, and check for differences in level and clearance. Make sure the body lines flow smoothly. Check the operation of the door and tailgate.
6. Remove the outer panel, and weld the new rear pillar gutter.



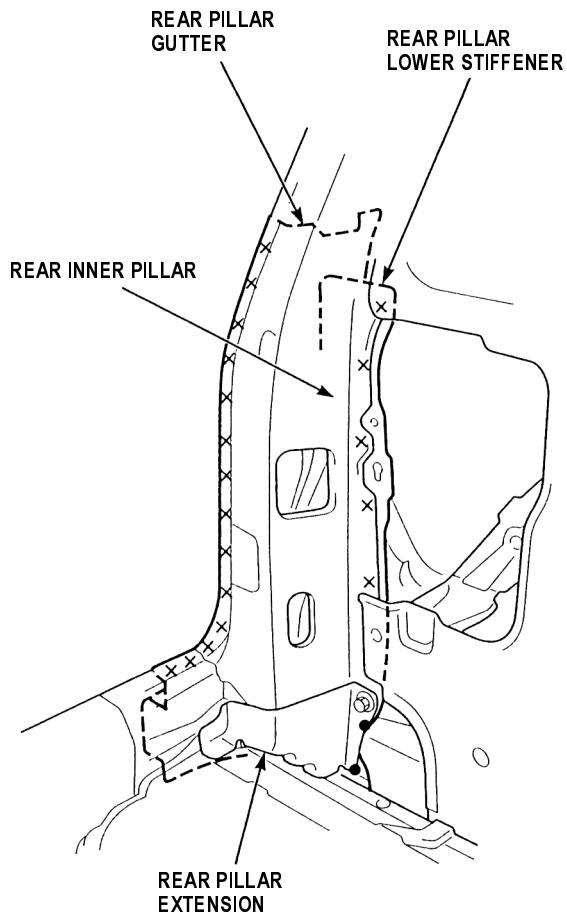
(cont'd)

Replacement

Rear Side Outer Panel (cont'd)

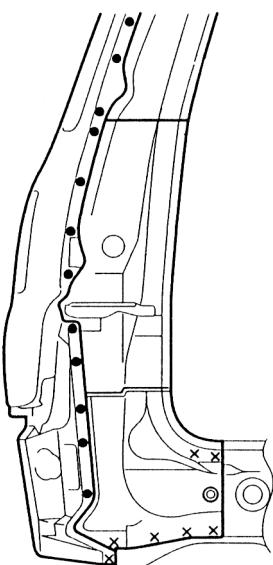
Installation (cont'd)

7. Clamp the new outer panel, and recheck the clearance and alignment of the tailgate and door.
8. Do the main welding.
 - Weld the rear pillar lower stiffener and rear pillar gutter.

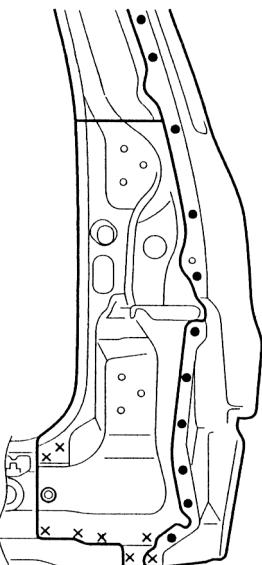


- Weld the outer panel and rear pillar gutter.

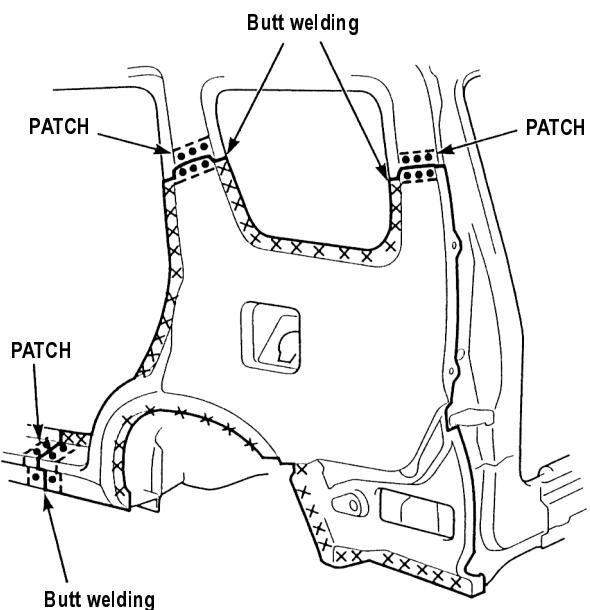
Left side:



Right side:

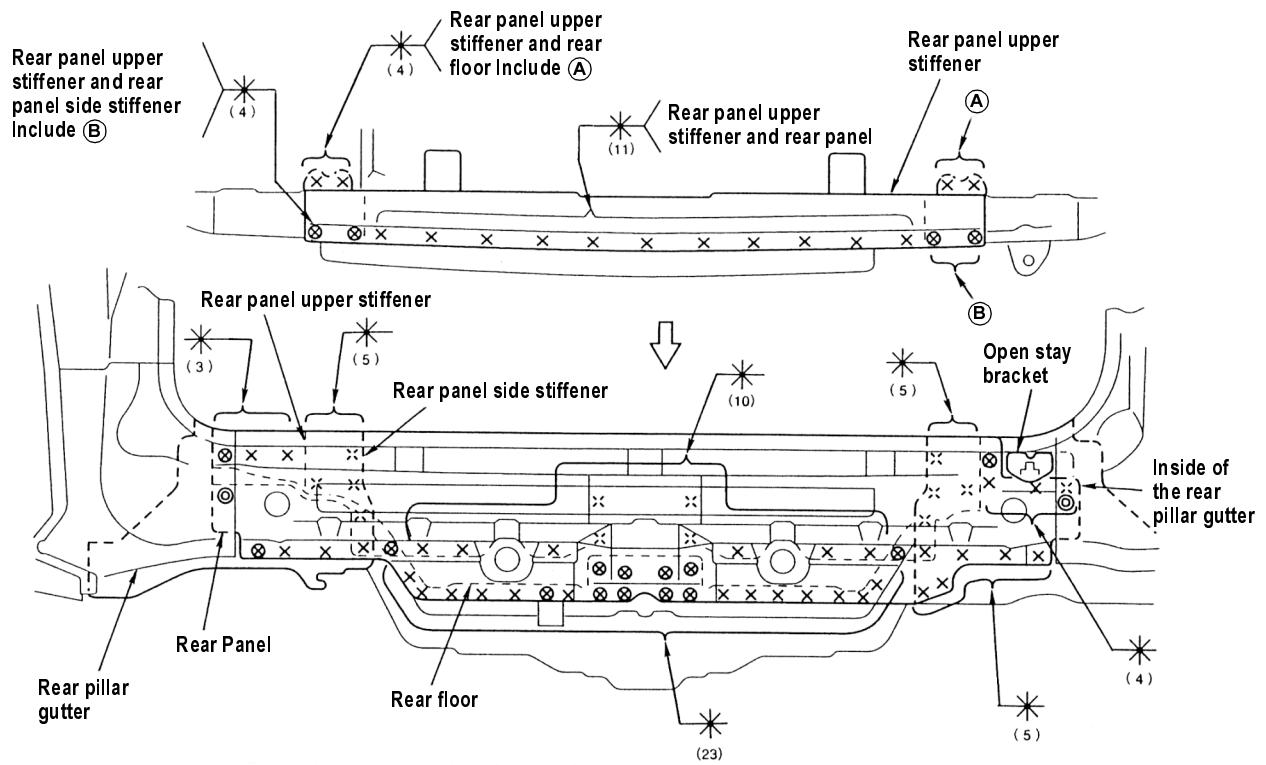


- Attach a patch at the cut section of the quarter pillar, rear pillar, side sill and plug weld them.

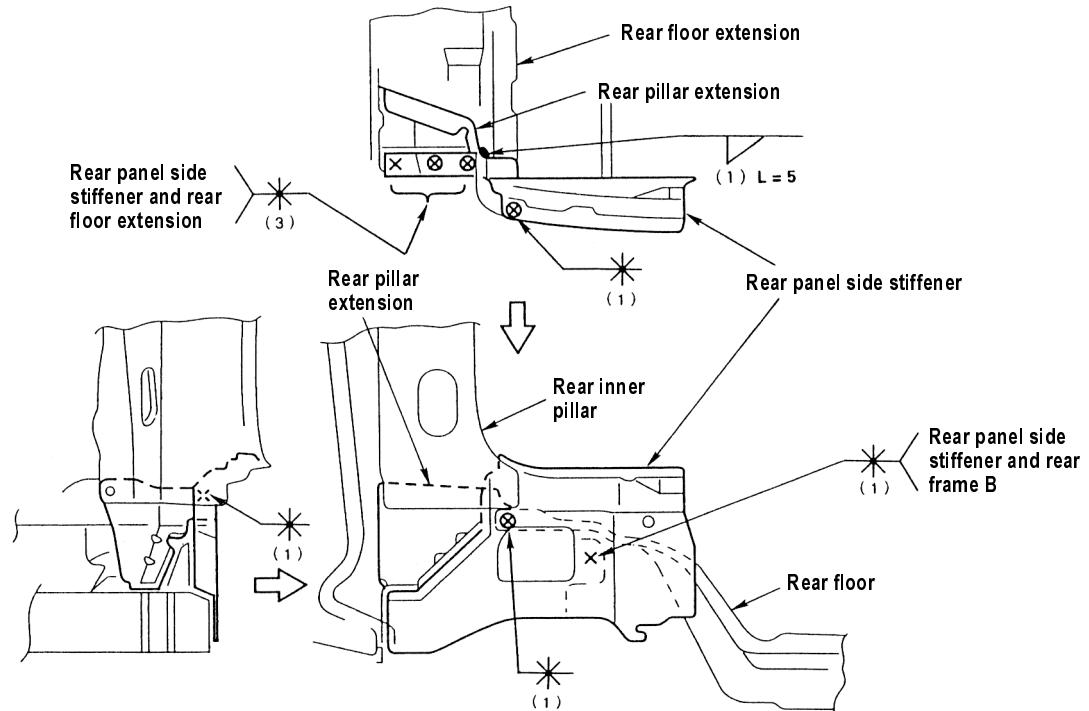


Rear Panel

Mass Production Body Welding Diagram



Rear Pillar Gutter and Rear Panel removed:

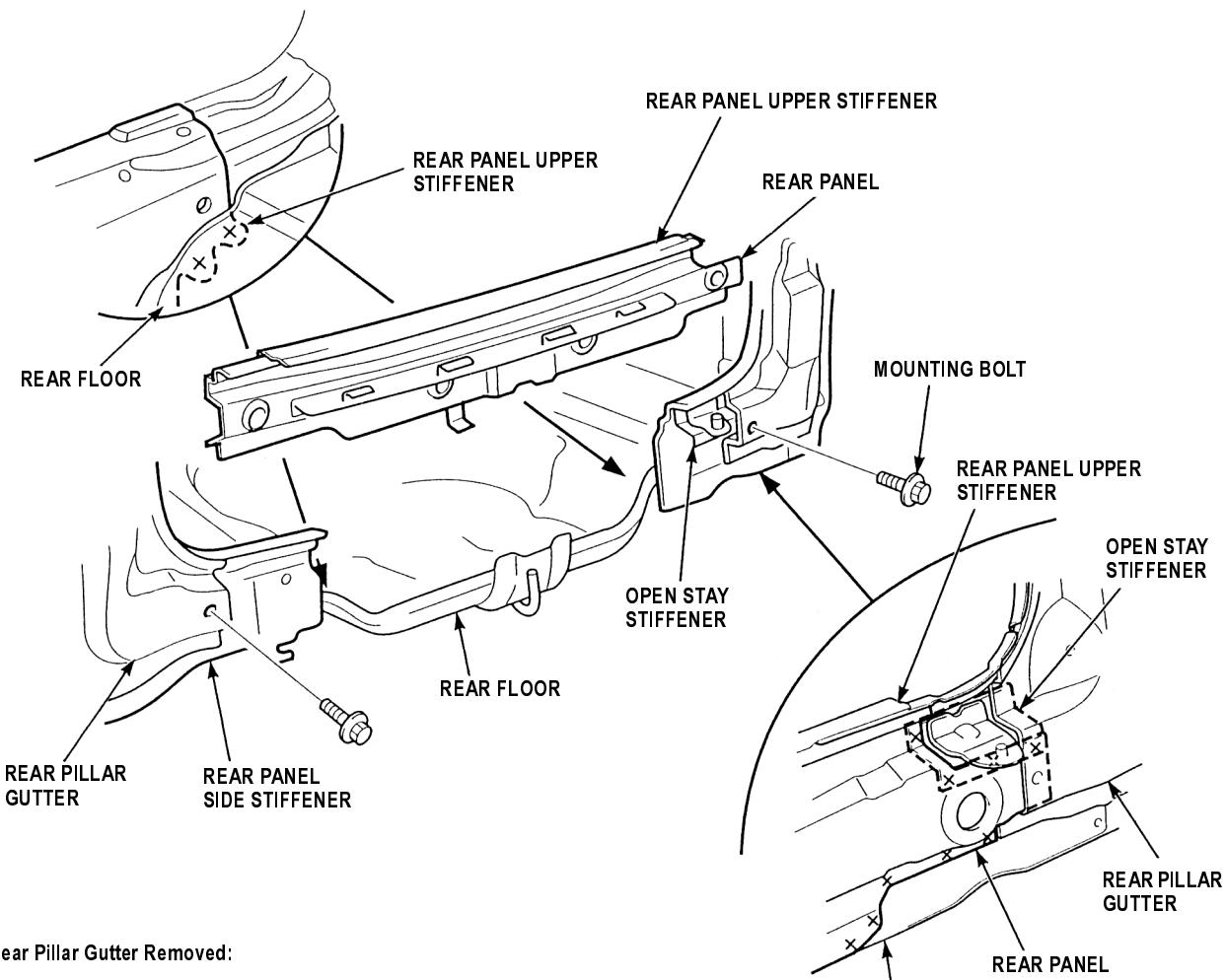


Replacement

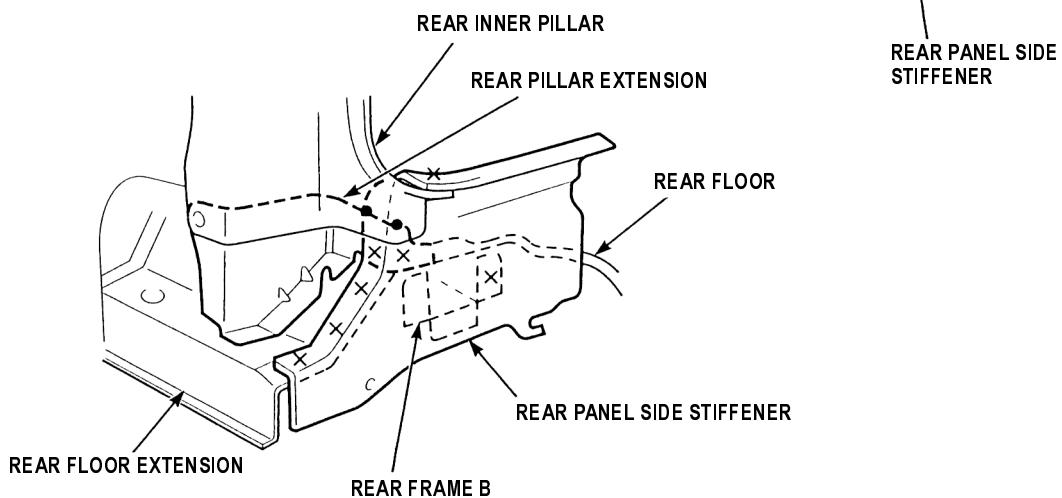
Rear Panel (cont'd)

Removal

- Remove the mounting bolts, and cut off the rear panel upper stiffener and rear panel.
- Check the rear panel side stiffener position, and check for damage.
- If necessary, cut and remove the rear pillar gutter and rear pillar lower stiffener, then replace the rear panel side stiffener.

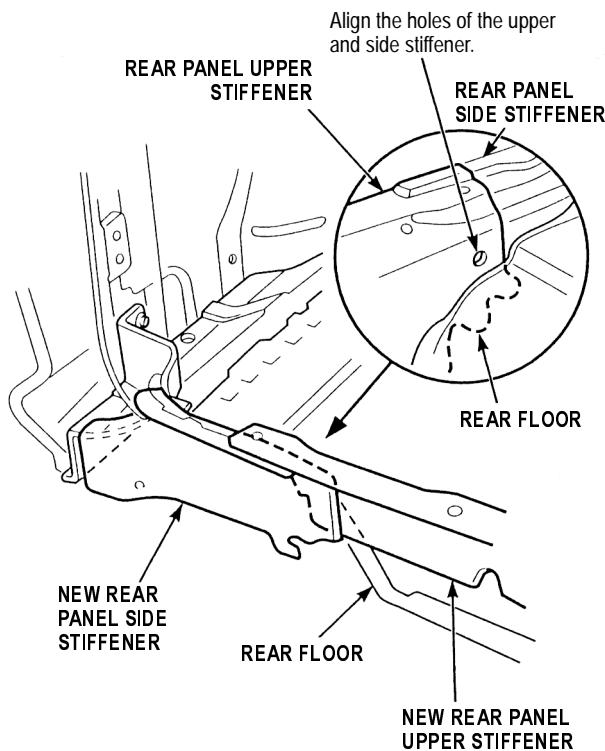


Rear Pillar Gutter Removed:



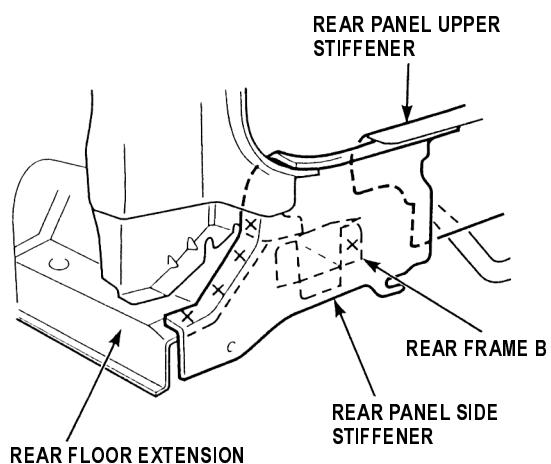
Installation

1. Check the position of the rear inner pillar, by installing the new rear panel upper stiffener and rear panel side stiffener into place.



2. Check the body dimensions ([see section 4](#)).

Weld the rear panel side stiffener, rear floor extension and rear frame B, and tack weld the rear panel upper stiffener.

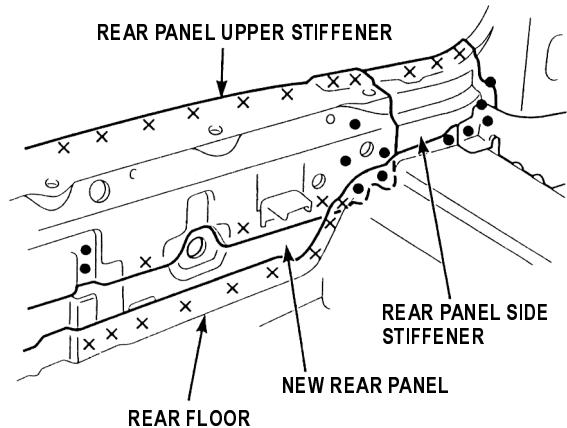


3. Set the new rear panel and new rear pillar gutter into place, then check the body dimensions ([see section 4](#)).

Tack weld the new parts.

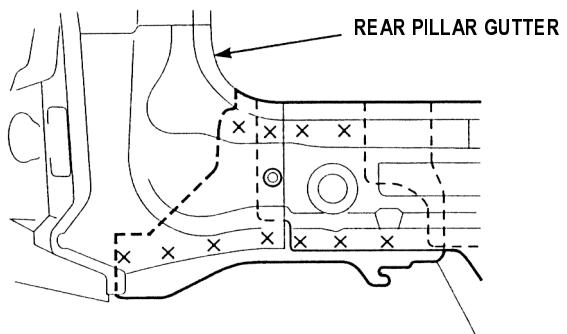
4. Temporarily install the tailgate, taillight, rear bumper, and check for differences in level and clearance. Check the operation of the tailgate.

5. Do the main welding.

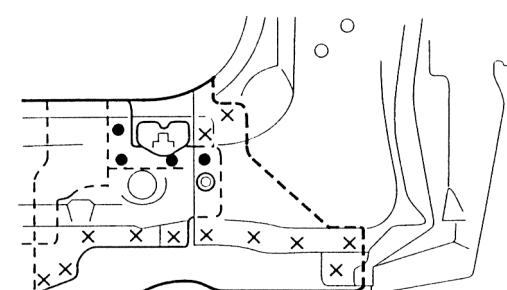


6. Weld the rear pillar gutter ([see page 3-28](#)).

Left side:



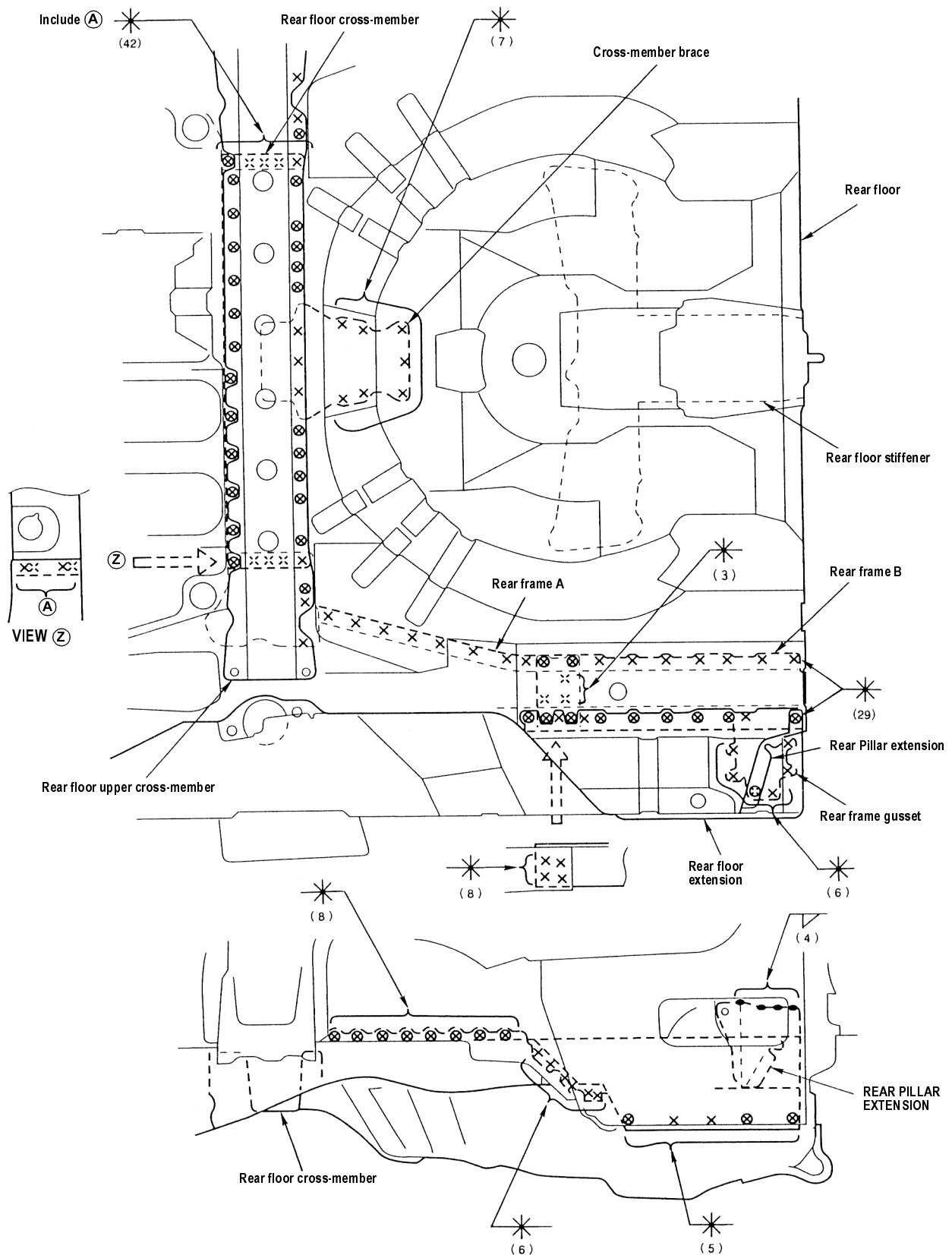
Right side:



Replacement

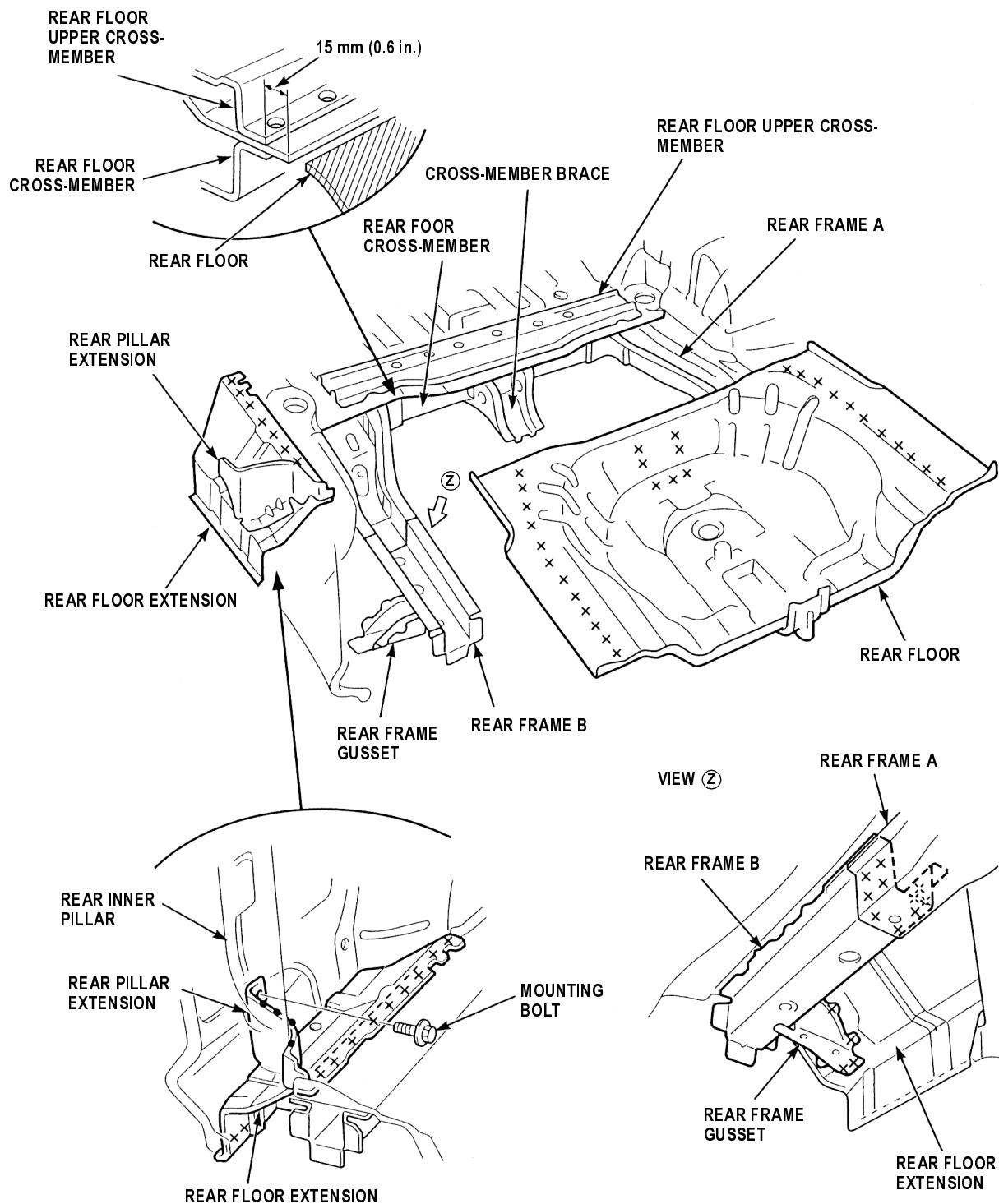
Rear Floor / Rear Floor Cross-member

Mass Production Body Welding Diagram



Removal

- Remove the rear floor extension, and cut the rear floor 15 mm (0.6 in.) from the welded flange for the rear floor upper cross-member.
- If necessary, replace the rear frame B.
- Check the rear floor cross-member position, and check for damage. If necessary replace it.

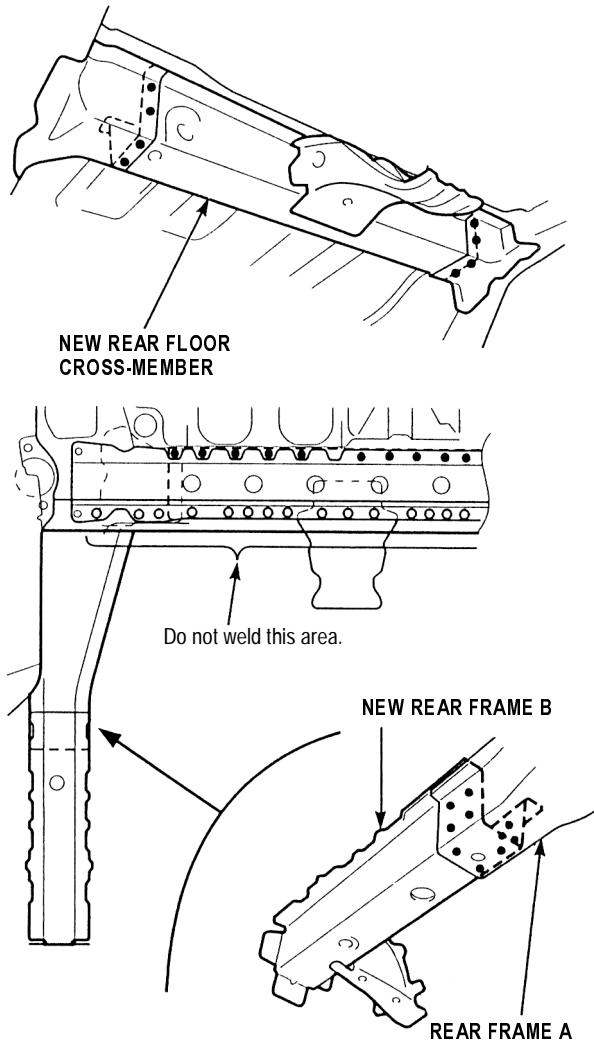


Replacement

Rear Floor / Rear Floor Cross-member (cont'd)

Installation

1. Set the new rear floor cross-member and rear frame B, into position. Check the body dimensions (see section 4).
2. Tack weld the rear cross-member and rear frame B.
3. Check the rear floor cross-member, rear frame A and B in its correct position with rear suspension, then weld them into place.

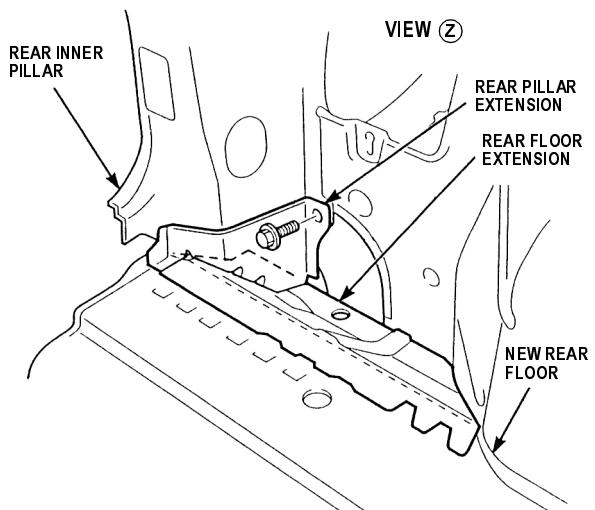
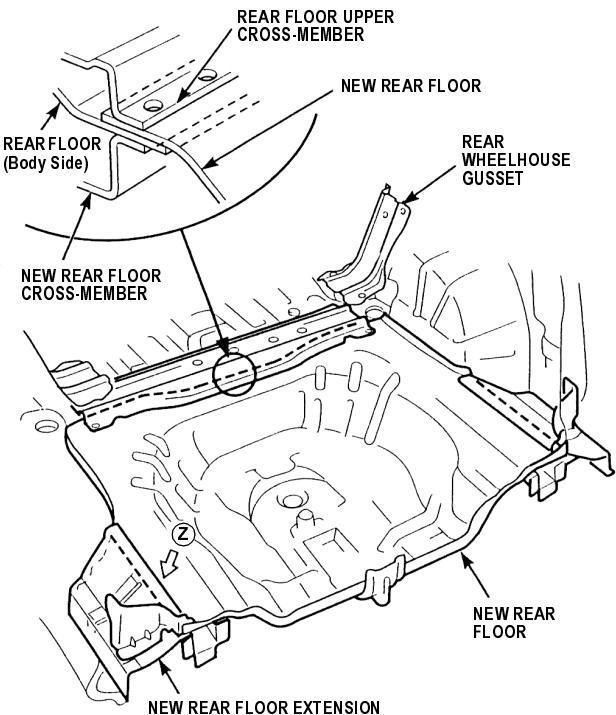


4. Set the new rear floor into position, and align it with the body.

Cut the new rear floor so it overlaps the body side floor by about 40 mm (1.6 in.).

Insert the new rear floor between the rear floor upper cross-member and rear floor (body side). Install the rear wheelhouse gusset, and check the position.

5. Install the new rear floor extension.



6. Clamp the rear panel and the rear pillar gutter together, then check the body dimensions (see section 4).

7. Do the main welding.

