SPACE STAR

BODY REPAIR MANUAL

FOREWORD

This manual has been prepared for the use of all service mechanics engaged in the body repair service. Body dimensions, welded panel replacement procedures, body sealing application instructions, and all the other information required to provide quick and accurate body repair service are contained herein. One especially important point is the welding method. All of the vehicle's original strength and durability can be maintained by following the welding procedures contained in this manual.
Note that, in order to maximize the efficiency of the repair work, first, both the extent of the damage and the replacement parts that are needed must be calculated accurately, and then the actual work must be performed accurately and efficiently.
The publications shown on the following page are also available, and should be used in conjunction with this manual.
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Europe B.V.

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RELATED PUBLICATIONS

- TECHNICAL INFORMATION MANUAL
  Pub. No. IMXE99E1
- WORKSHOP MANUAL
  CHASSIS GROUP
  Pub. No. CMXE99E1
  ENGINE GROUP
  Pub. No. PWEE□□□□ (Looseleaf edition)
  ELECTRICAL WIRING
  Pub. No. EMXE99E1
- PARTS CATALOGUE
  N606H509D□
- BODY REPAIR MANUAL
  Pub. No. PBAE9216 (PASSENGER CARS & LIGHT COMMERCIAL VEHICLES)

MANUAL DESCRIPTION

CONTENTS

The first page of this manual contains a table of contents which lists the title and number of each group.

TEXT

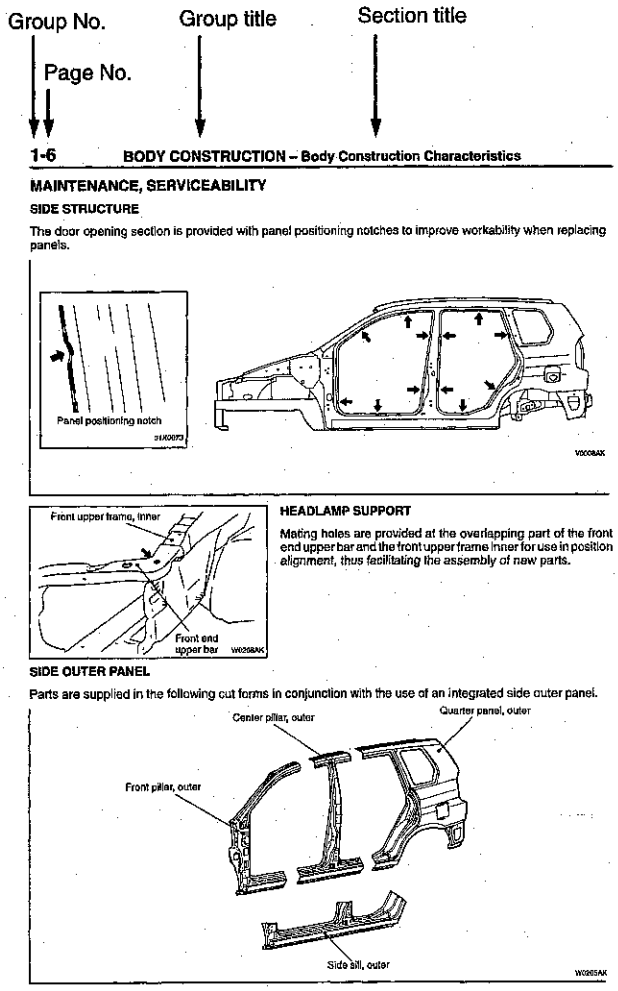
The vehicles to which the information in the text pertains are generally designated according to their body classification. In some cases, other limiting designations such as name, type of drive system, etc., are given. If there are no such limiting designations, the information can be assumed to cover all models.

PAGE NUMBERS

All pages are numbered consecutively within each group. The page numbers can be found on the upper left or right of each page.

SECTION TITLES

The section titles can be found at the upper centre of each page.



0 GENERAL

VEHICLE IDENTIFICATION 0-2
MAJOR SPECIFICATIONS 0-2

VEHICLE IDENTIFICATION

MODELS

Model Code		Engine model	Transmission model	Fuel supply system
DG1A	LNDEL6/R6	4G13-SOHC (1,299 mℓ)	F5MR1 (2WD-5M/T)	MPI
	LNDJL6			
	LNJEL6/R6			
	LNJJL6			
DG5A	LNDCL6/R6	4G93-DOHC (1,834 mℓ)	F5M42 (2WD-5M/T)	GDI
	LNDGL6			
	LNJCL6/R6			
	LNJGL6			

MAJOR SPECIFICATIONS

Items	DG1A	DG5A
	LNDEL6/R6, LNDJL6, LNJEL6/R6, LNJJL6	LNDCL6/R6, LNDGL6, LNJCL6/R6, LNJGL6
Dimensions mm		
Overall length	4030	4030
Overall width	1696, 1700*1	1696, 1700*1
Overall height (unladen)	1515, 1555*2	1515, 1555*2
Wheelbase	2500	2500
Track-front	1475	1475
Track-rear	1470	1470
Body overhang		
Front	830	830
Rear	670	670
Ground clearance (unladen)	155	140
Wheel alignment		
Front wheel alignment		
Toe-in (at the centre of tyre tread) mm	0 ± 2	
To angle (per wheel)	0° 00' ± 06'	
Camber	0° 40' ± 30'	
Caster	2° 54'	
Kingpin inclination angle	13° 36'	
Rear wheel alignment		
Toe-in (at the centre of tyre tread) mm	3 ± 2	
Toe angle (per wheel)	0° 09' ± 06'	
Camber	−0° 40' ± 30'	
Wheels and tyres		
Tyre size	175/65R14 82T	185/65R14 86H
Wheel size	14 × 5.5J	14 × 5.5J
Offset mm	46	46

*1: Vehicles with Side protector moulding.
*2: Vehicles with Roof rails.

1 BODY CONSTRUCTION

BODY COMPONENTS 1-2
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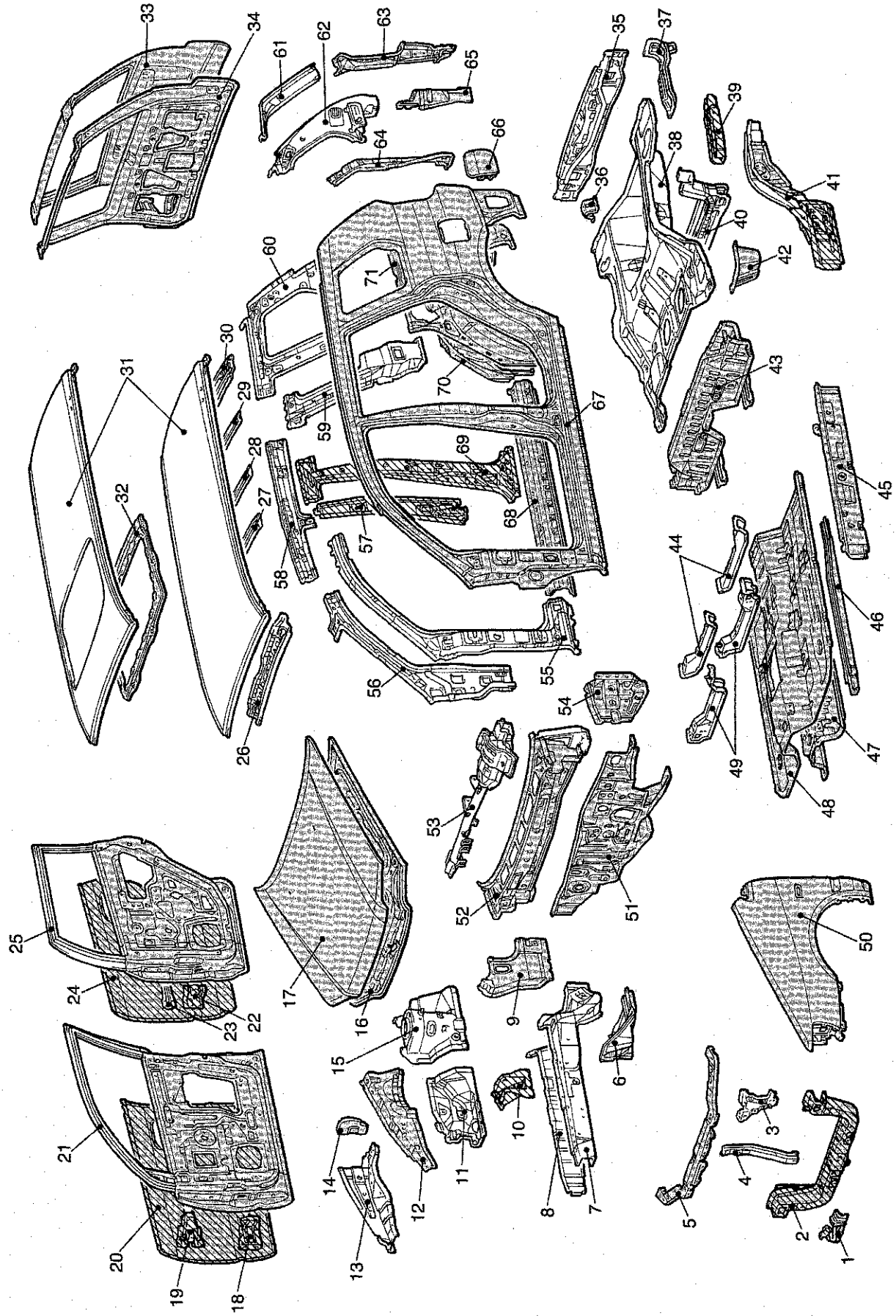
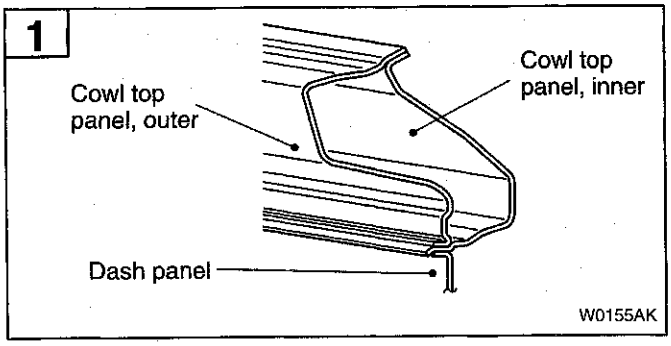
BODY COMPONENTS

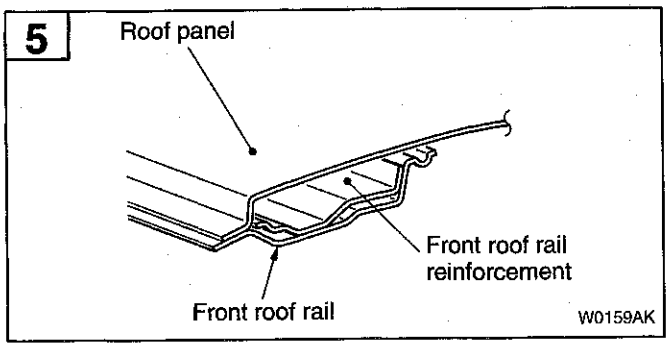


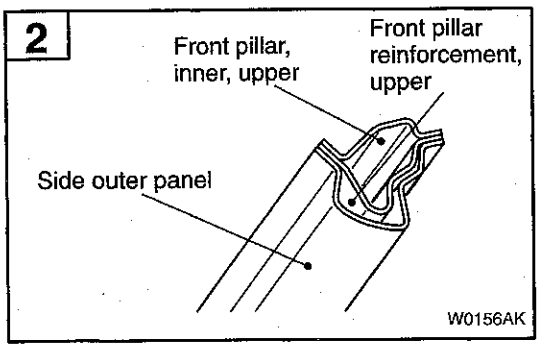
1. Towing hook bracket
2. Front end crossmember
3. Radiator reinforcement side
4. Hood lock stay
5. Front end upper bar
6. Front sidemember rear
7. Front sidemember inner
8. Front sidemember outer
9. Front floor side sill inner front
10. Engine mounting bracket
11. Front fender shield
12. Front upper frame inner
13. Front upper frame outer
14. Upper frame bulkhead
15. Spring house panel
16. Hood panel inner
17. Hood panel outer
18. Front door side door beam lower
19. Front door side door beam
20. Front door outer panel
21. Front door inner panel
22. Rear door side door beam
23. Rear door outer stiffener
24. Rear door panel outer
25. Rear door panel inner
26. Roof rail front
27. Roof bow front
28. Roof bow center
29. Roof bow rear
30. Roof rail rear
31. Roof panel
32. Roof reinforcement
33. Tailgate panel outer
34. Tailgate panel inner
35. Rear end crossmember
36. Spare tire bracket
37. Towing hook reinforcement
38. Rear floor pan
39. Rear floor sidemember extension
40. Rear floor crossmember
41. Rear floor sidemember
42. Fuel tank bracket rear
43. Rear floor extension
44. Front floor crossmember rear
45. Front floor side sill inner
46. Front floor sidemember
47. Backbone reinforcement
48. Front floor pan
49. Front floor crossmember front
50. Front fender
51. Dash panel
52. Cowl top panel
53. Front deck crossmember
54. Upper frame extension outer
55. Front pillar reinforcement
56. Front pillar inner
57. Center pillar inner
58. Roof side rail inner
59. Rear pillar reinforcement
60. Quarter inner panel upper
61. Quarter outer extension upper
62. Reargate pillar reinforcement upper
63. Quarter outer extension lower
64. Quarter inner extension
65. Reargate pillar reinforcement lower
66. Fuel filler door panel
67. Side outer panel
68. Side sill reinforcement outer
69. Center pillar reinforcement
70. Rear wheelhouse panel inner
71. Quarter inner panel lower

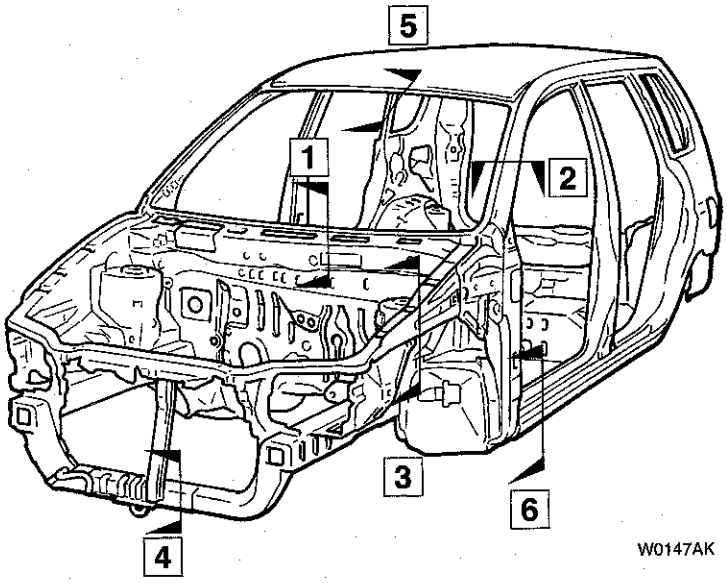
BODY CONSTRUCTION CHARACTERISTICS

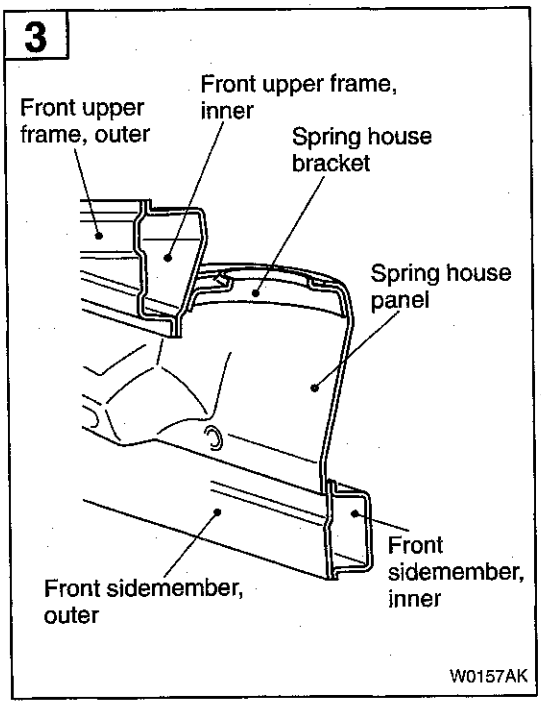
BODY MAIN CROSS-SECTIONAL VIEWS

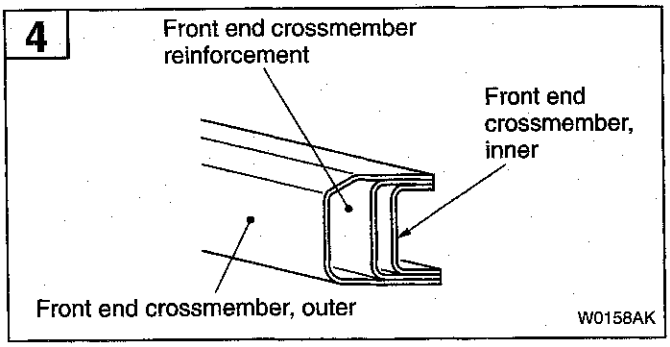


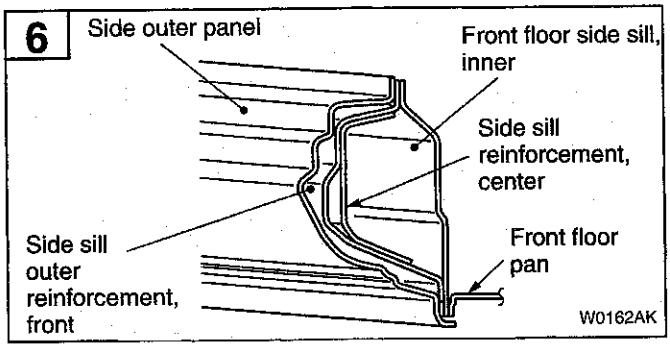


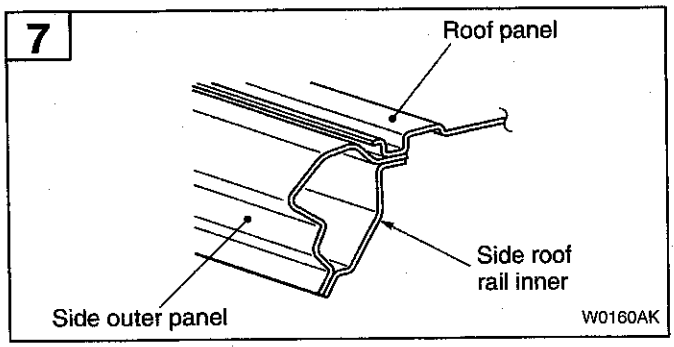








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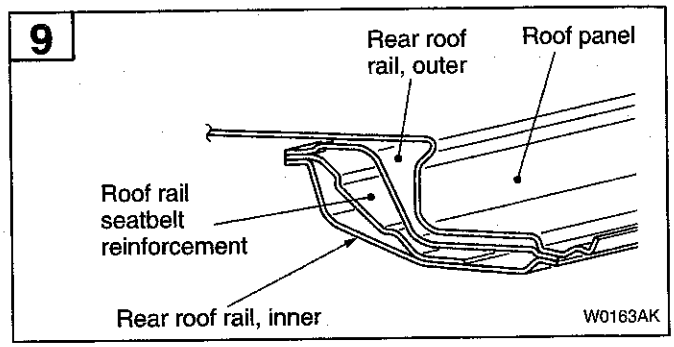
Roof panel
Side roof rail inner
Side outer panel
W0160AK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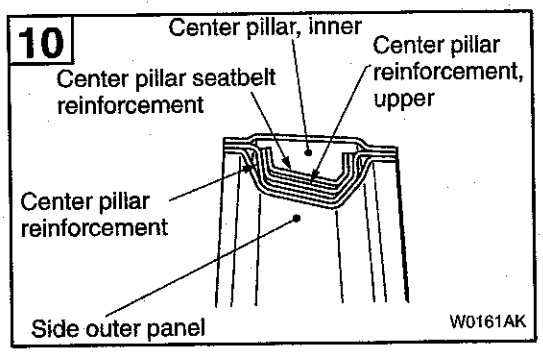
Rear roof rail, outer
Roof panel
Roof rail seatbelt reinforcement
Rear roof rail, inner
W0163AK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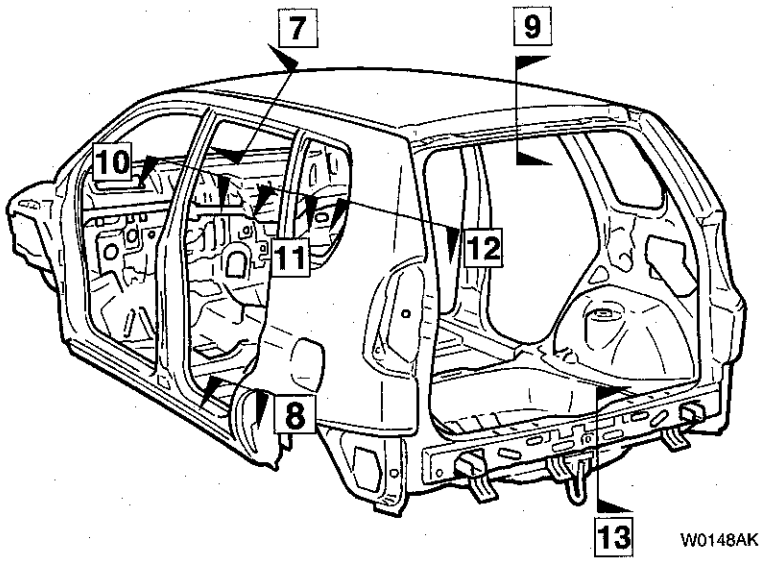
Center pillar, inner
Center pillar reinforcement, upper
Center pillar seatbelt reinforcement
Center pillar reinforcement
Side outer panel
W0161AK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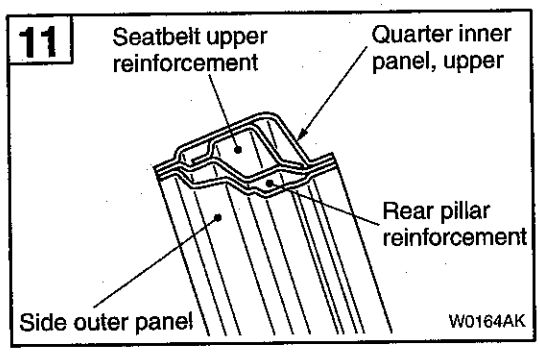
W0148AK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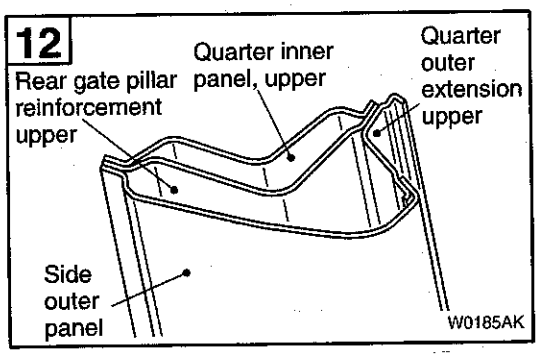
Seatbelt upper reinforcement
Quarter inner panel, upper
Rear pillar reinforcement
Side outer panel
W0164AK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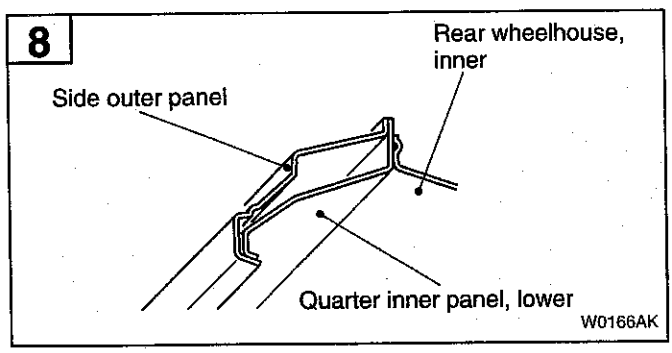
Rear gate pillar reinforcement upper
Quarter inner panel, upper
Quarter outer extension upper
Side outer panel
W0185AK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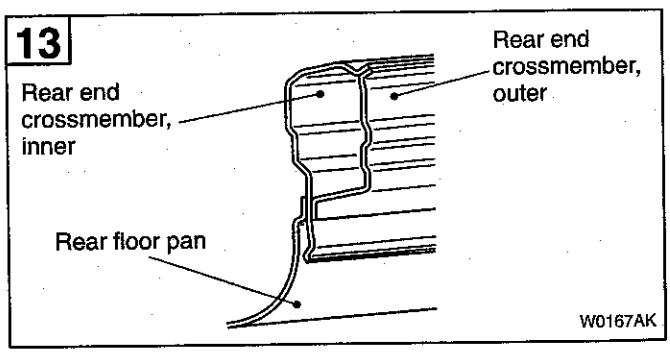
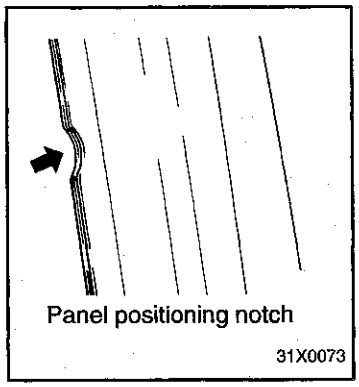
Rear wheelhouse, inner
Side outer panel
Quarter inner panel, lower
W0166AK

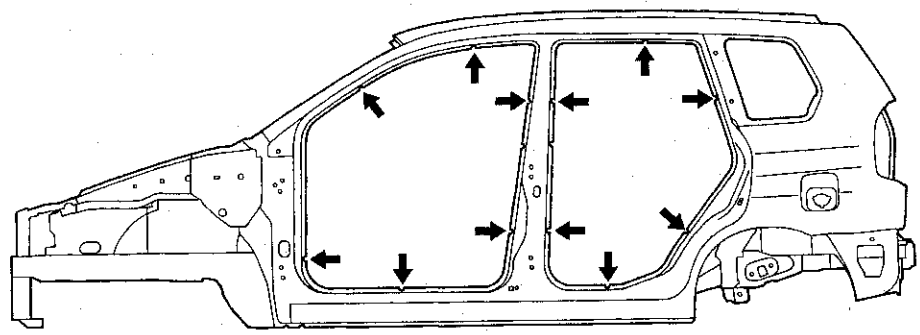

13
Rear end crossmember, outer
Rear end crossmember, inner
Rear floor pan
W0167AK

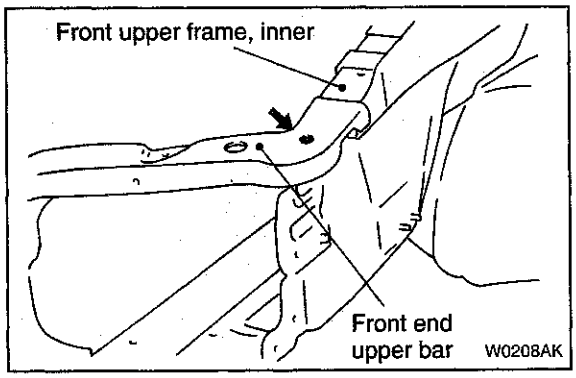
MAINTENANCE, SERVICEABILITY

SIDE STRUCTURE

The door opening section is provided with panel positioning notches to improve workability when replacing panels.





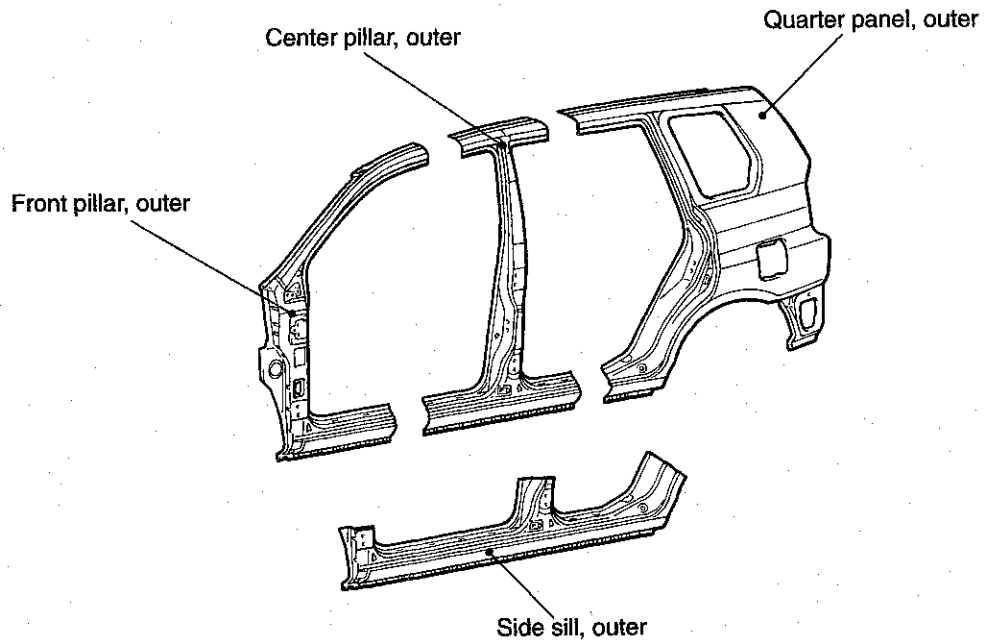


HEADLAMP SUPPORT

Mating holes are provided at the overlapping part of the front end upper bar and the front upper frame inner for use in position alignment, thus facilitating the assembly of new parts.

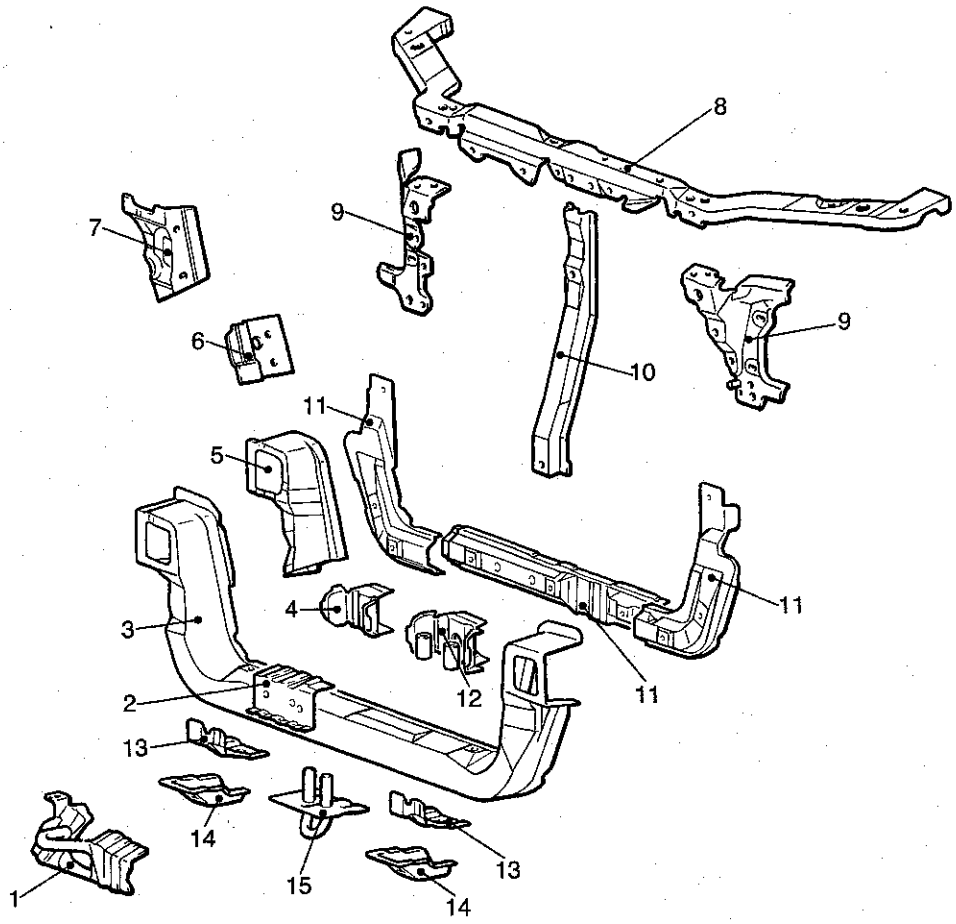
SIDE OUTER PANEL

Parts are supplied in the following cut forms in conjunction with the use of an integrated side outer panel.



FRONT BODY

HEADLAMP SUPPORT



W0179AK

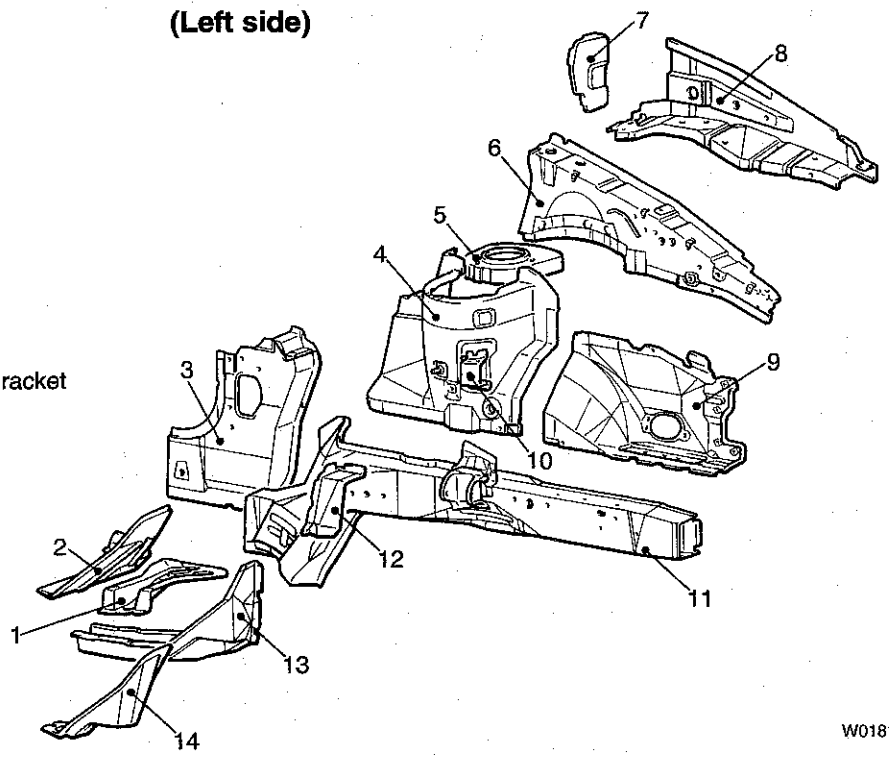
1. Towing hook
2. Towing hook bracket upper
3. Front end crossmember outer
4. Towing hook bulkhead
5. Front end reinforcement side right
6. Front end reinforcement side outer rear
7. Front end reinforcement side outer
8. Front end upper bar
9. Radiator reinforcement side
10. Hood lock stay
11. Front end crossmember inner
12. Front end crossmember reinforcement
13. Radiator bracket (A)
14. Radiator bracket (B)
15. Towing hook

FENDER SHIELD

The front sidemember has been straightened, and the reinforcements and crash beads are optimally arranged. Because of this, the front sidemember can absorb impact during collision gradually from its front end.

1. Sidemember to floor brace
2. Dash panel extension
3. Front floor side sill inner front
4. Spring house panel
5. Spring house bracket
6. Front upper frame inner
7. Upper frame bulkhead
8. Front upper frame outer
9. Front fender shield
10. Air cleaner bracket
11. Front sidemember
12. Front sidemember rear gusset
13. Front sidemember rear
14. Suspension crossmember support bracket
15. Engine mounting reinforcement
16. Engine mounting bracket

(Left side)



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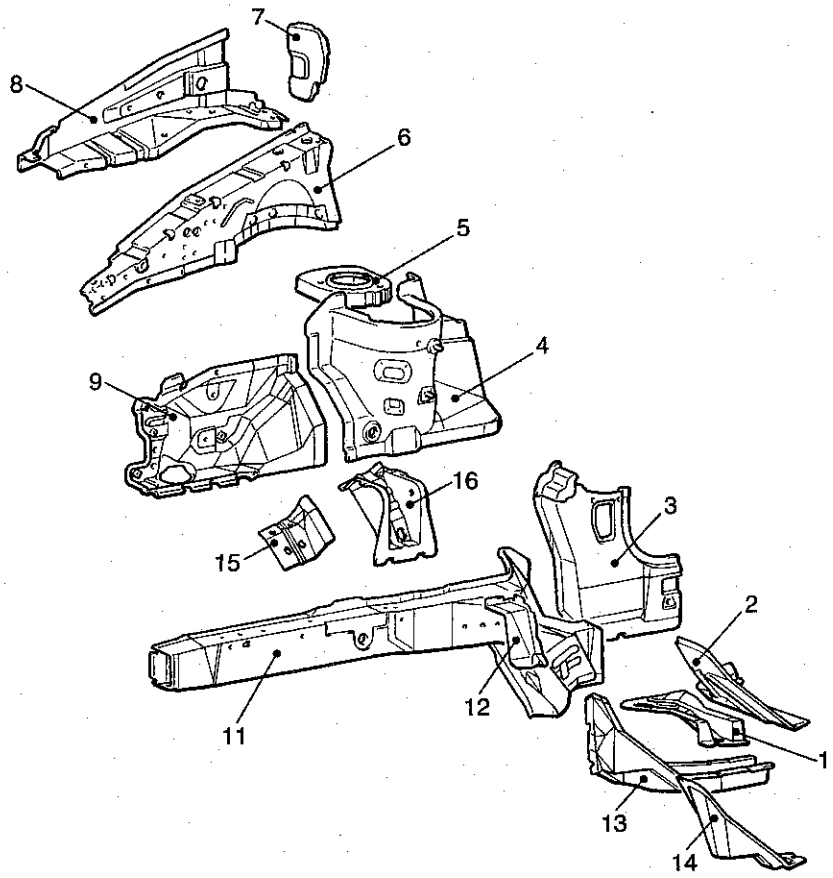
(Right side)

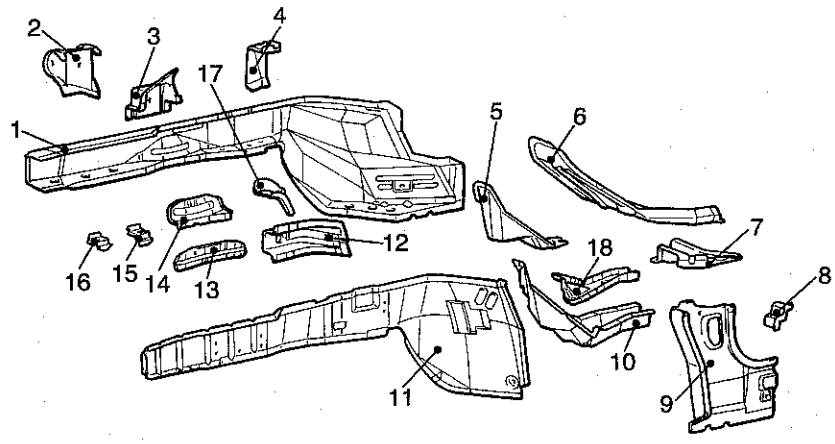


W0182AK

FRONT SIDEMEMBER REINFORCEMENTS

(Left side)

1. Front sidemember, inner
2. Transmission mounting bracket
3. Transmission mounting reinforcement
4. Front sidemember rear gusset
5. Suspension crossmember support bracket
6. Dash panel extension
7. Sidemember to floor brace
8. Side sill inner front plate
9. Front floor side sill, inner, front
10. Front sidemember, rear
11. Front sidemember, outer
12. Front sidemember reinforcement, outer, rear
13. Front sidemember outer reinforcement
14. Front sidemember inner reinforcement
15. Front bumper stay bracket (B)
16. Front bumper stay bracket (A)
17. Front sidemember reinforcement, inner, rear
18. Front sidemember reinforcement rear



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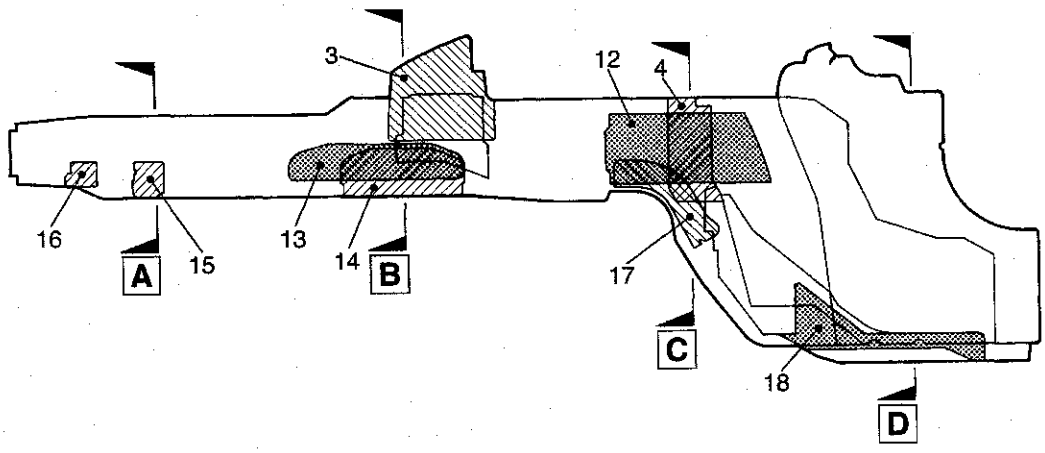

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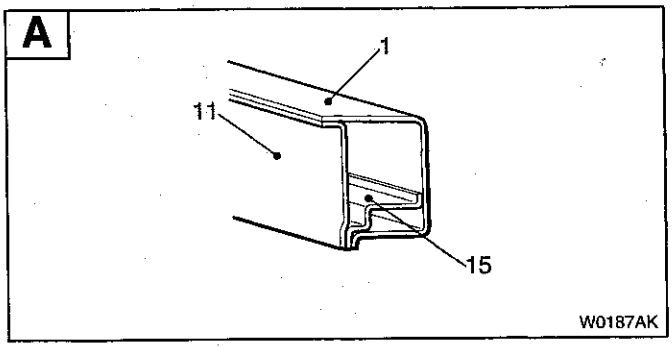

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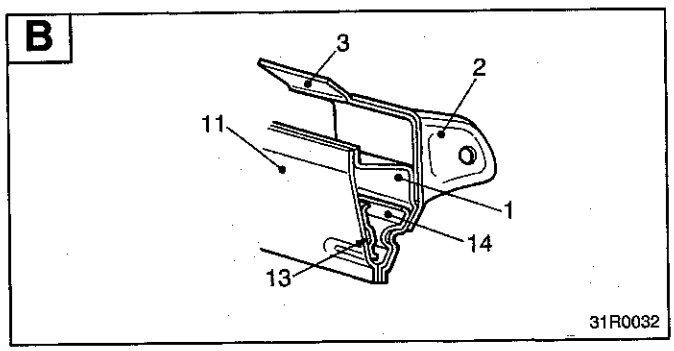

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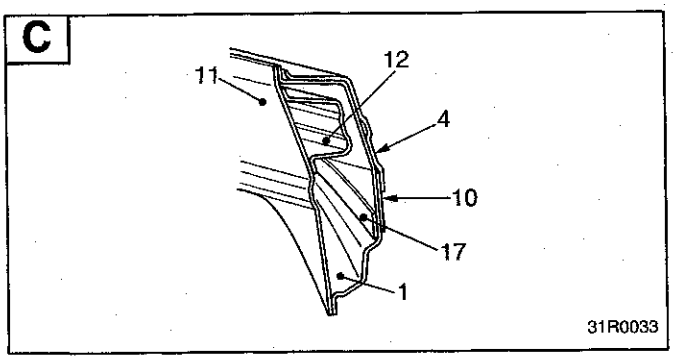

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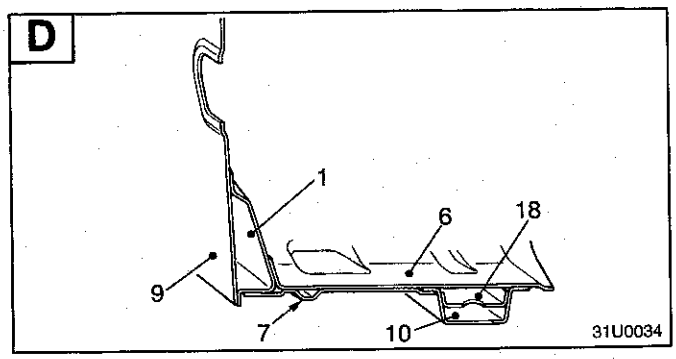
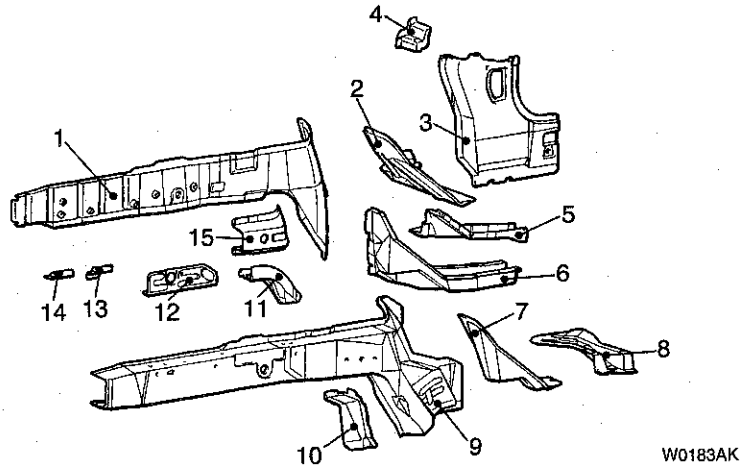


31U0034

(Right side)

1. Front sidemember, outer
2. Dash panel extension
3. Front floor side sill, inner, front
4. Side sill inner front plate
5. Front sidemember reinforcement, rear
6. Front sidemember, rear
7. Suspension crossmember support bracket
8. Sidemember to floor brace
9. Front sidemember, inner
10. Front sidemember rear gusset
11. Front sidemember reinforcement, inner, rear
12. Front sidemember inner reinforcement
13. Front bumper stay bracket (B)
14. Front bumper stay bracket (A)
15. Front sidemember reinforcement, outer, rear



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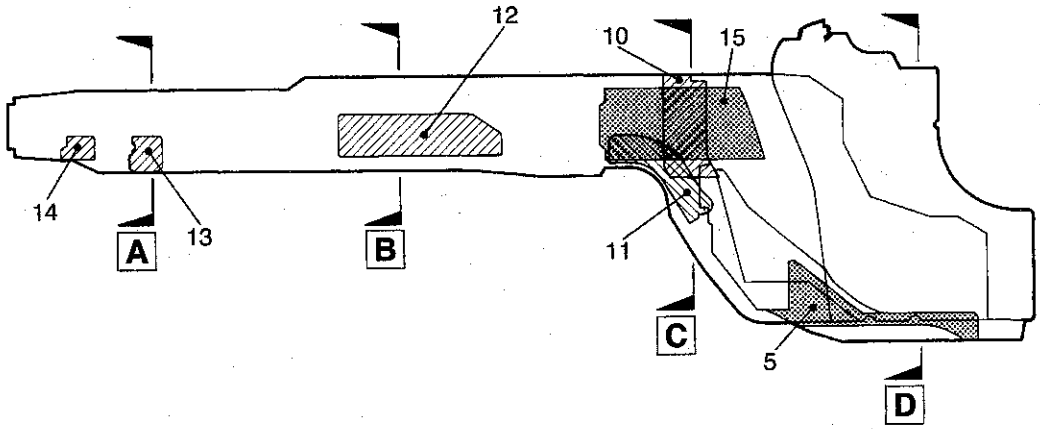

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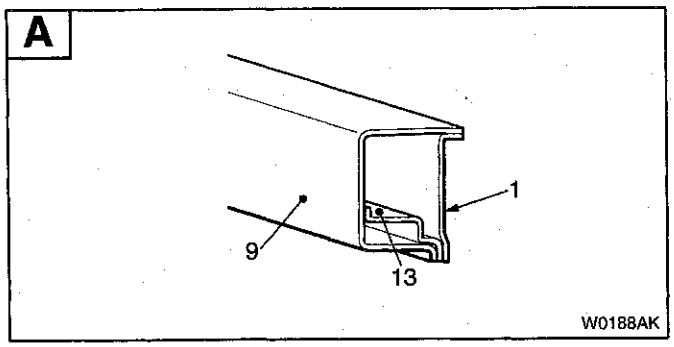

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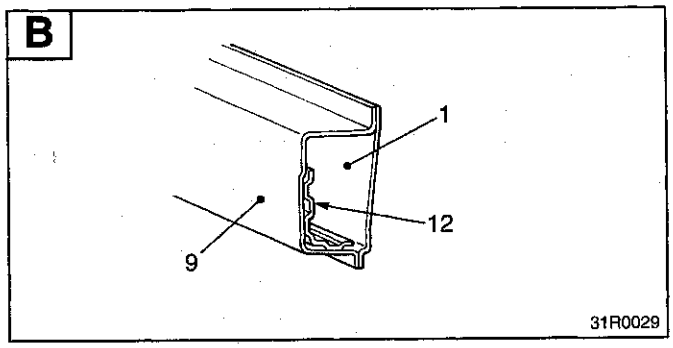
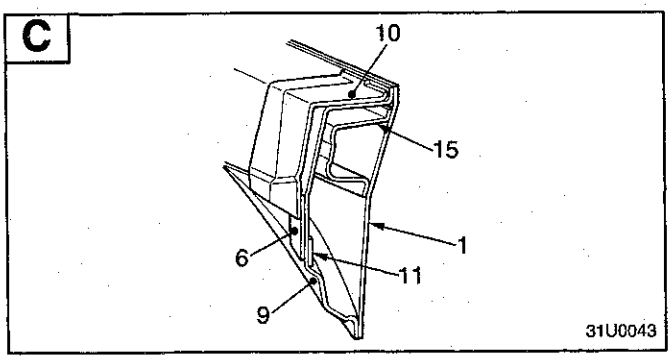
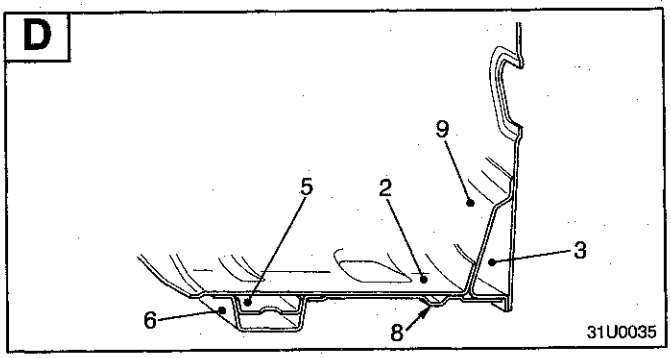


31R0029

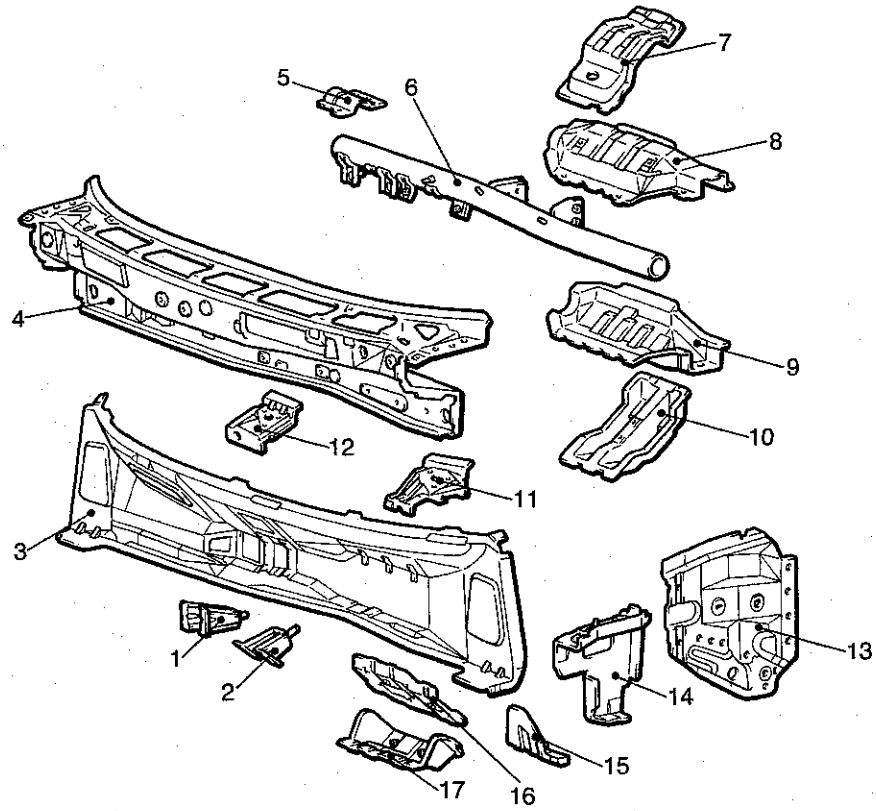


31U0043



31U0035

HEADLAMP SUPPORT

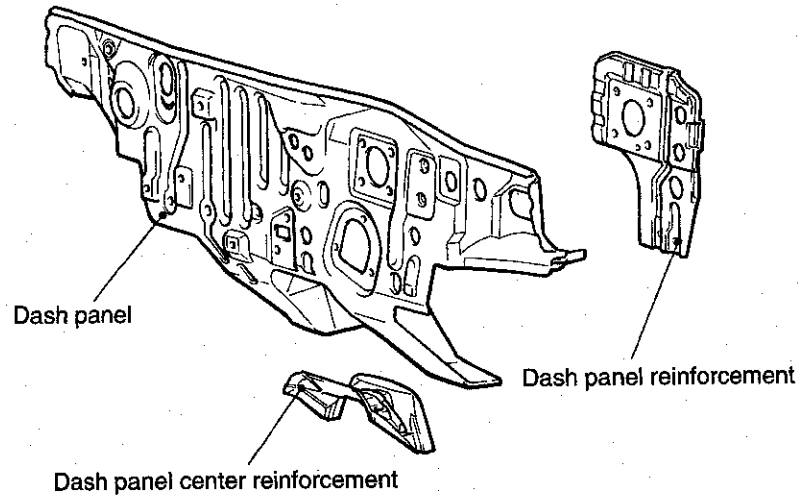


W0180AK

1. Heater (A) bracket
2. Instrument panel bracket center
3. Cowl top panel inner
4. Cowl top panel outer
5. Deck crossmember plate upper
6. Pipe
7. Steering column support bracket upper
8. Deck crossmember bracket upper
9. Deck crossmember bracket lower
10. Steering column support bracket lower
11. Wiper reinforcement
12. Wiper bracket center
13. Upper frame extension outer
14. Upper frame extension inner
15. Cowl top extension outer
16. Cowl top reinforcement inner
17. Pedal support bracket

DASH PANEL

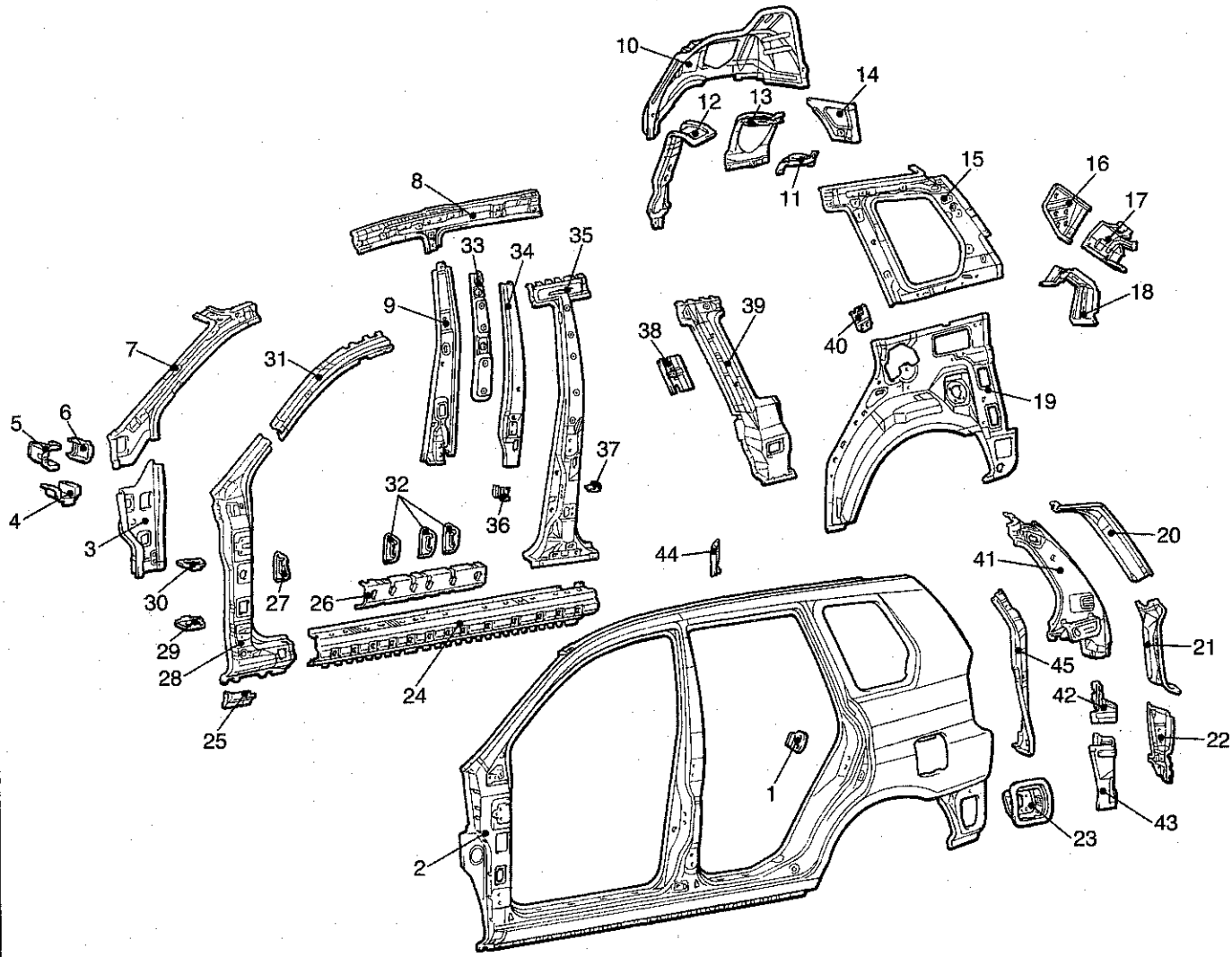
The reduction in size of the dash panel reinforcement provides a large degree of weight reduction for the vehicle body.



31U0024

SIDE BODY

SIDE STRUCTURE

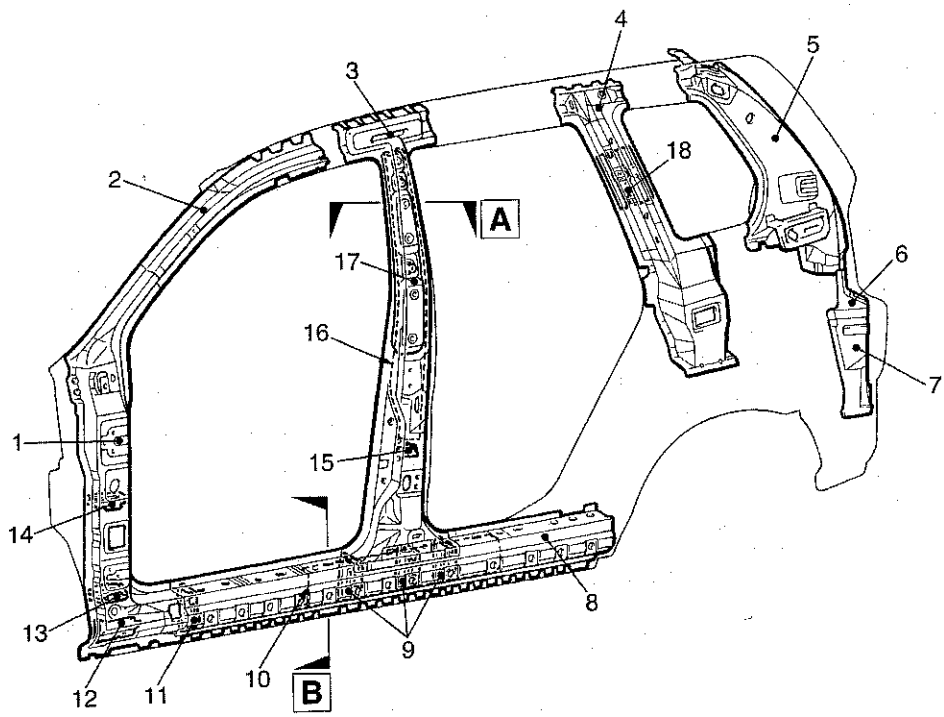


W0193AK

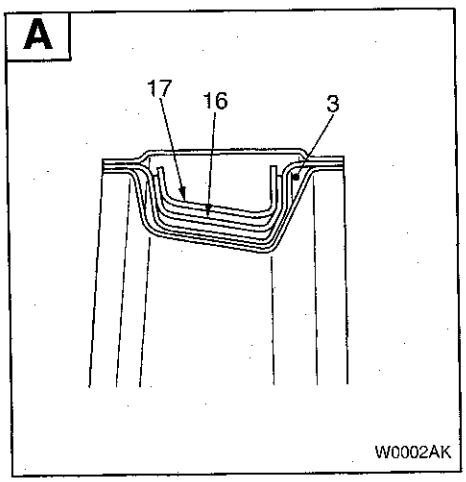
1. Striker reinforcement
2. Side outer panel
3. Front pillar inner lower
4. Crossmember bracket lower
5. Crossmember bracket front
6. Crossmember bracket rear
7. Front pillar inner upper
8. Roof side rail inner
9. Center pillar inner
10. Rear wheelhouse panel inner
11. Spring house bracket
12. Wheelhouse support
13. Spring house panel
14. Wheelhouse extension inner
15. Quarter inner panel upper
16. Cover plate
17. Jack reinforcement
18. Jack bracket
19. Quarter inner panel lower
20. Quarter outer extension upper
21. Rear combination lamp housing
22. Quarter outer extension lower
23. Fuel filler neck bracket
24. Side sill reinforcement outer
25. Front pillar bulkhead lower
26. Side sill center reinforcement
27. Side sill bulkhead front
28. Front pillar reinforcement lower
29. Front pillar side sill bulkhead
30. Front door check reinforcement
31. Front pillar reinforcement upper
32. Side sill bulkhead
33. Center pillar seatbelt reinforcement
34. Center pillar upper reinforcement
35. Center pillar reinforcement
36. Front door striker retainer
37. Rear door check bulkhead
38. Seatbelt reinforcement upper
39. Rear pillar reinforcement
40. Seatbelt reinforcement lower
41. Reargate pillar reinforcement upper
42. Reargate pillar reinforcement center
43. Reargate pillar reinforcement lower
44. Side sill plate end
45. Quarter inner extension

SIDE STRUCTURE REINFORCEMENTS

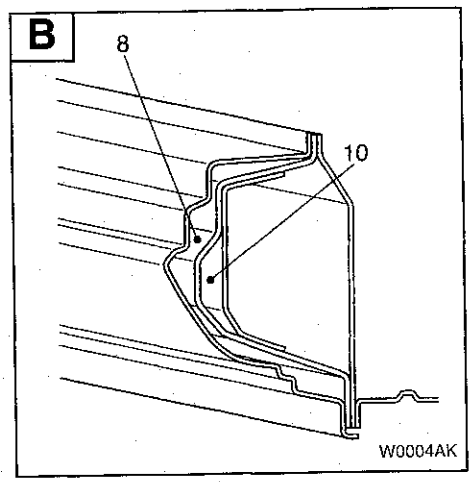
(1) A large reinforcement at the front pillar has increased joining rigidity at the side sill to improve the rigidity of the vehicle body.
(2) A large reinforcement at the center pillar has increased joining rigidity at the roof side rail and side sill to improve the rigidity of the vehicle body.
(3) The side sill has a large cross-sectional area, and large reinforcements and bulkheads have improved the rigidity of the vehicle body and resistance in the event of a side impact.



W0194AK



W0002AK



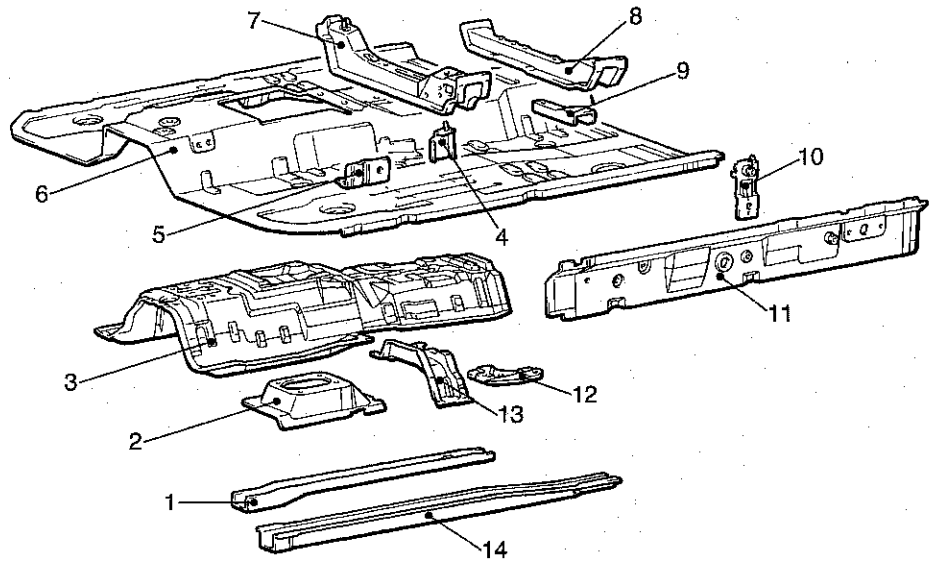
W0004AK

1. Front pillar reinforcement lower
2. Front pillar reinforcement upper
3. Center pillar reinforcement
4. Rear pillar reinforcement
5. Reargate pillar reinforcement upper
6. Reargate pillar reinforcement center
7. Reargate pillar reinforcement lower
8. Side sill reinforcement outer
9. Side sill bulkhead
10. Side sill center reinforcement
11. Side sill bulkhead front
12. Front pillar bulkhead lower
13. Front pillar side sill bulkhead
14. Front door check reinforcement
15. Rear door check bulkhead
16. Center pillar upper reinforcement
17. Center pillar seatbelt reinforcement
18. Seatbelt reinforcement upper

UNDER BODY

FRONT FLOOR

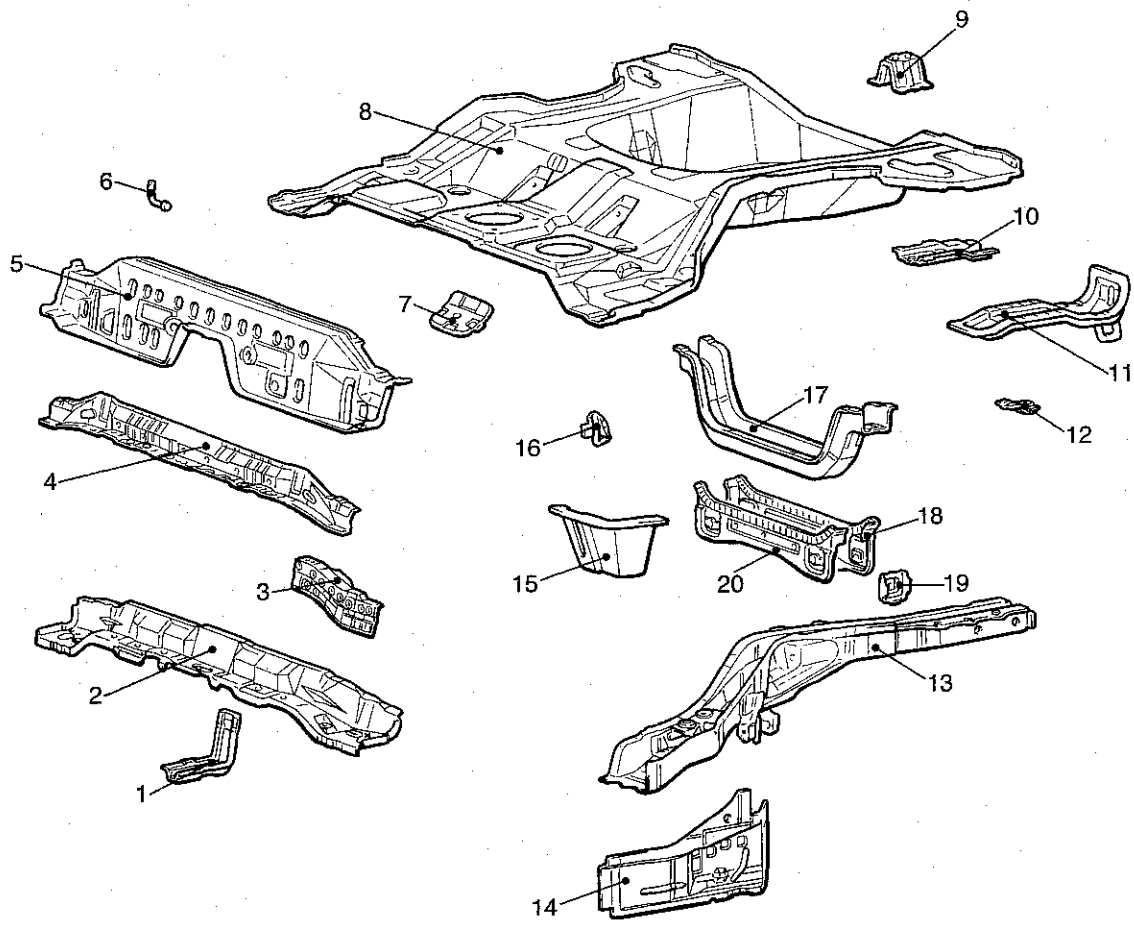
A large reinforcement at the front floor backbone (backbone reinforcement) has increased the overall rigidity of the floor together with the side sill and crossmember.



W0195AK

1. Front floor sidemember reinforcement
2. Shift lever bracket
3. Backbone reinforcement
4. Front floor crossmember bulkhead front
5. Anti zipper bracket
6. Front floor pan
7. Front floor crossmember front
8. Front floor crossmember rear
9. Front floor crossmember rear reinforcement
10. Seatbelt side bracket
11. Front floor side sill inner
12. Parking lever reinforcement
13. Backbone crossmember
14. Front floor sidemember

REAR FLOOR

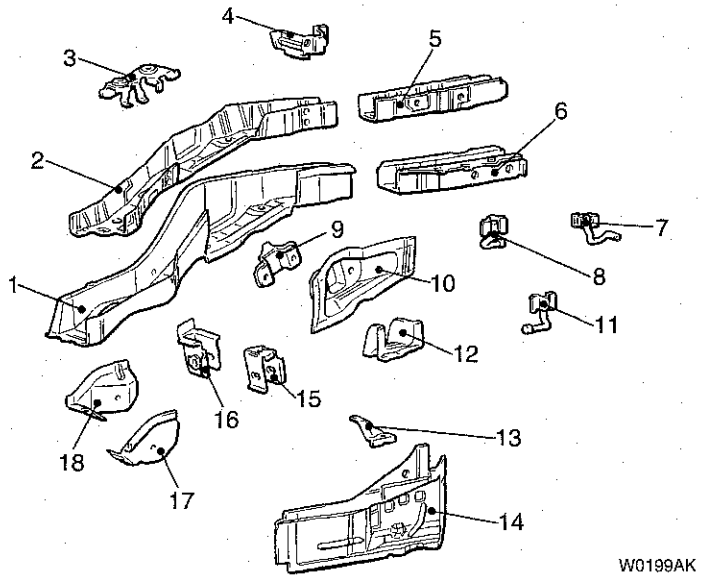


W0198AK

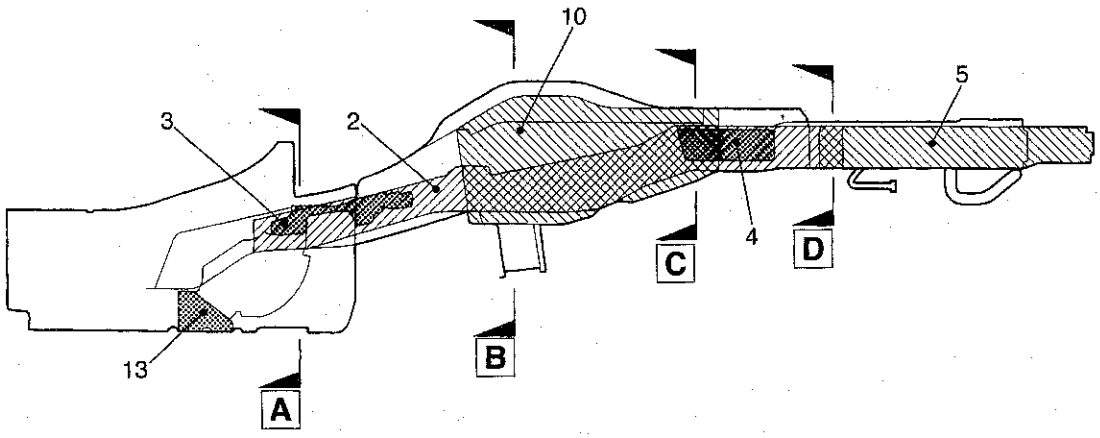
1. Front floor sidemember extension
2. Rear seat crossmember
3. Rear floor extension reinforcement
4. Rear seat crossmember reinforcement
5. Rear floor extension
6. Exhaust pipe hanger bracket (right side only)
7. Rear floor seatbelt reinforcement
8. Rear floor pan
9. Spare tire bracket
10. Towing hook reinforcement B
11. Towing hook reinforcement
12. Rear floor heat protector bracket
13. Rear floor sidemember
14. Rear floor side sill
15. Fuel tank rear bracket
16. Muffler hanger center (right side only)
17. Rear floor crossmember
18. Lower arm bracket rear
19. Lower arm bulkhead
20. Lower arm bracket front

REAR FLOOR SIDEMEMBER REINFORCEMENTS

1. Rear floor sidemember
2. Rear floor sidemember reinforcement, front
3. Rear seat bracket
4. Rear floor sidemember bulkhead
5. Rear floor sidemember reinforcement, rear
6. Rear floor sidemember extension
7. Shipping bracket (left side only)
8. Muffler hanger bracket rear (left side only)
9. Rear floor sidemember reinforcement
10. Rear floor sidemember reinforcement
11. Muffler hanger rear (right side only)
12. Rear floor crossmember extension
13. Rear floor sidemember suppport
14. Rear floor side sill
15. Toe control link reinforcement
16. Toe control link bracket
17. Trailing arm bracket, outer
18. Trailing arm bracket, inner



W0199AK



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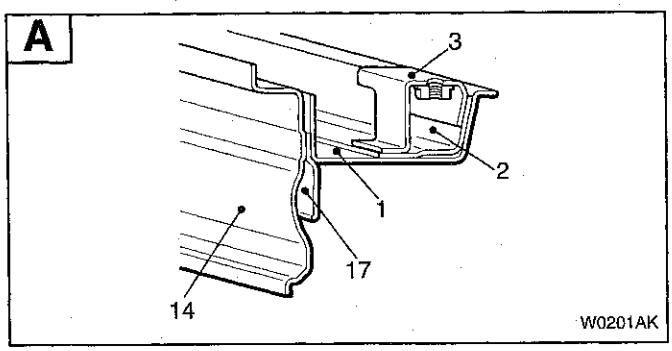
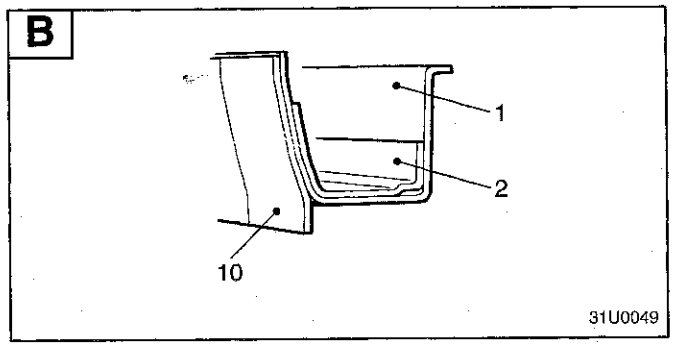
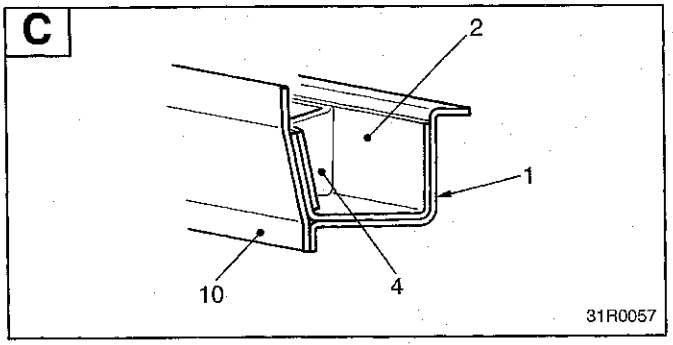


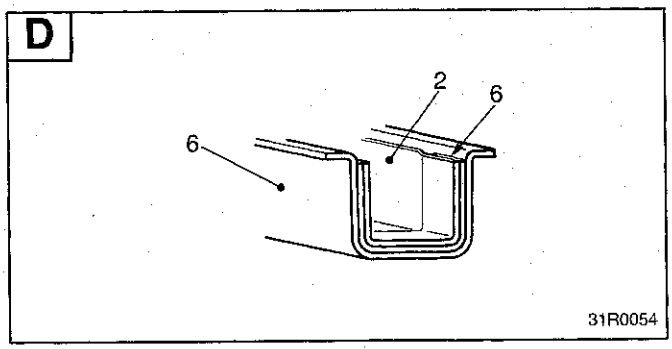
W0201AK



31U0049



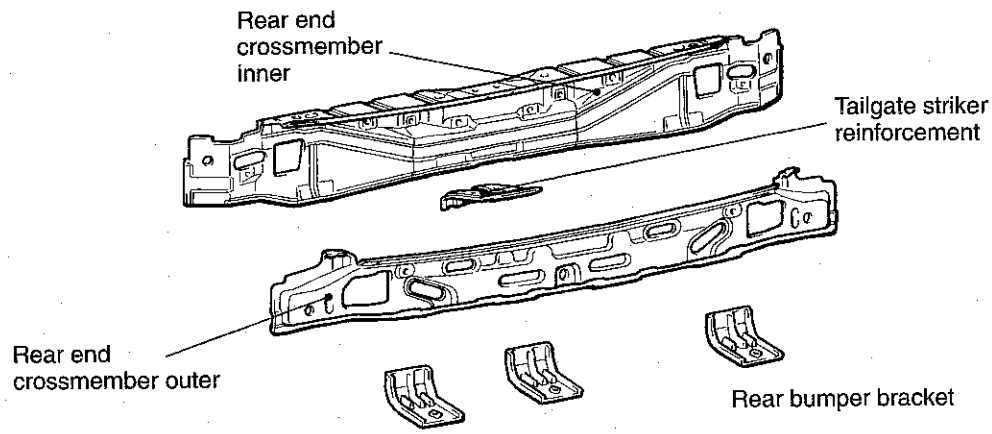
31R0057



31R0054

REAR BODY

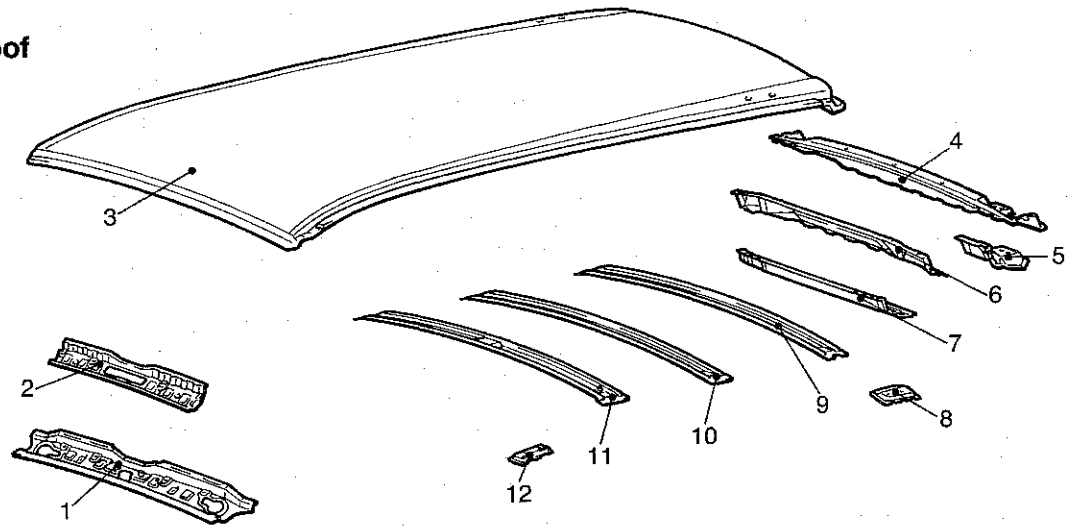
REAR END CROSSMEMBER



W0202AK

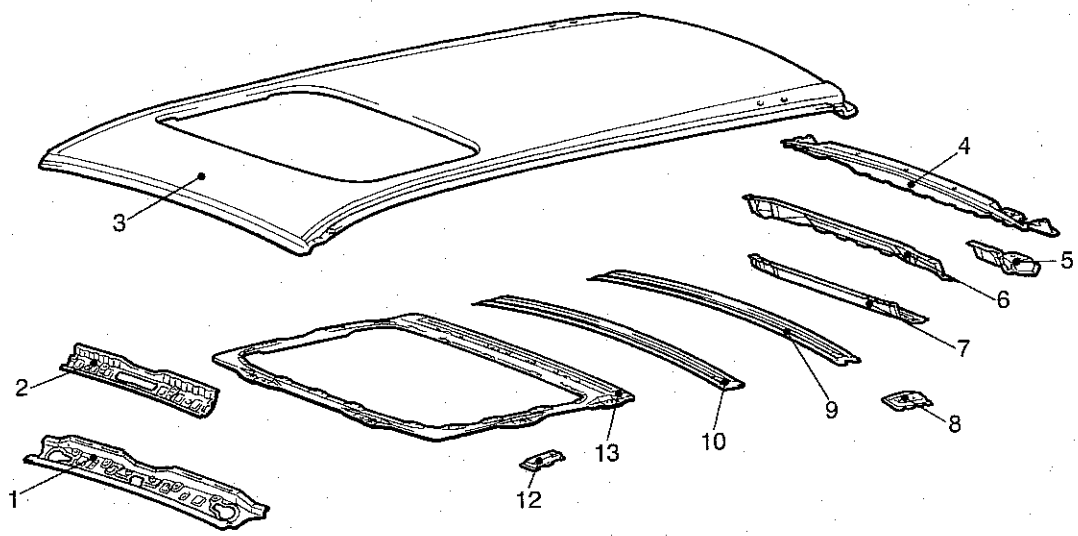
ROOF

Standard roof



W0203AK

Sunroof



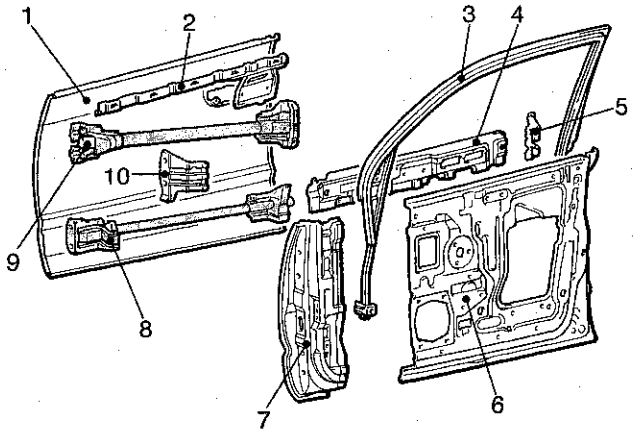
W0204AK

1. Roof rail front
2. Front roof rail reinforcement
3. Roof panel
4. Roof rail rear, outer
5. Rear roof rail hinge reinforcement
6. Rear rail seatbelt reinforcement
7. Roof rail rear, inner
8. Roof rack reinforcement (Vehicles with roof rail)
9. Roof bow, rear
10. Roof bow, center
11. Roof bow, front
12. Roof rack reinforcement, front (Vehicles with roof rail)
13. Roof panel reinforcement

DOOR

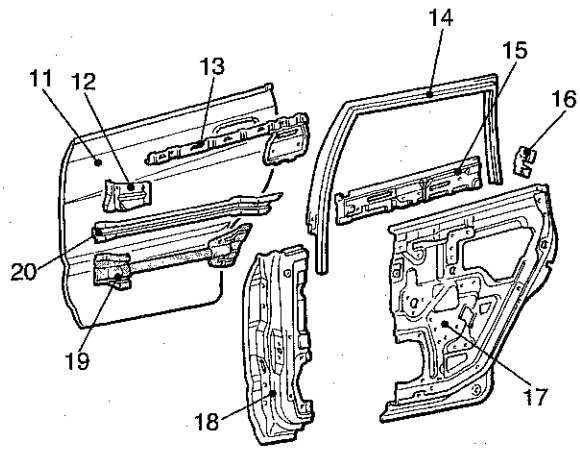
The doors have been equipped with reinforcements (side door beams) to protect the safety of passengers during a side impact.

Front door



W0206AK

Rear door

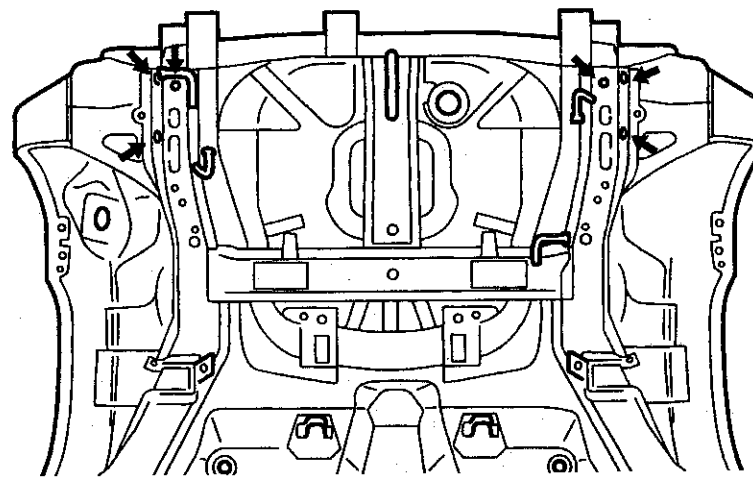


W0207AK

1. Front door outer panel
2. Front door beltline reinforcement, outer
3. Front door window sash
4. Front door beltline reinforcement, inner
5. Front door latch reinforcement
6. Front door inner panel
7. Front door hinge panel
8. Front door side door beam, lower
9. Front door side door beam
10. Front door side door beam bracket, front
11. Rear door outer panel
12. Rear door hinge reinforcement, upper
13. Rear door beltline reinforcement, outer
14. Rear door window sash
15. Rear door beltline reinforcement, inner
16. Rear door latch reinforcement
17. Rear door inner panel
18. Rear door hinge panel
19. Rear door side door beam
20. Rear door outer stiffener

TOWING BAR MOUNTING LOCATIONS

(➡: Six mounting locations)

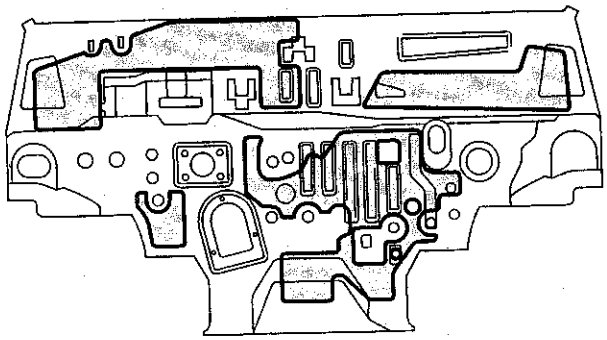


W0196AK

SILENCER APPLICATION LOCATIONS

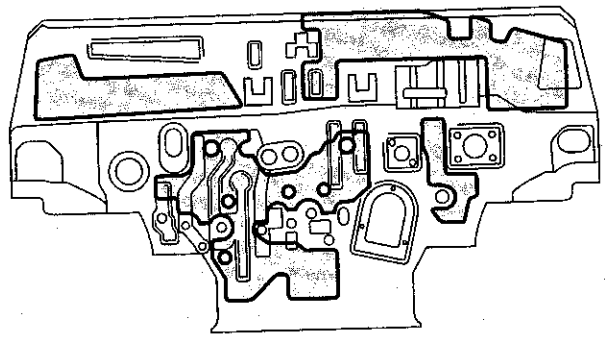
In order to reduce vibration and screen out heat from the exhaust gas, silencers (melting sheets) are applied to the top of the floor and to the passenger compartment side of the dash panel.

L. H. drive vehicles



W0189AK

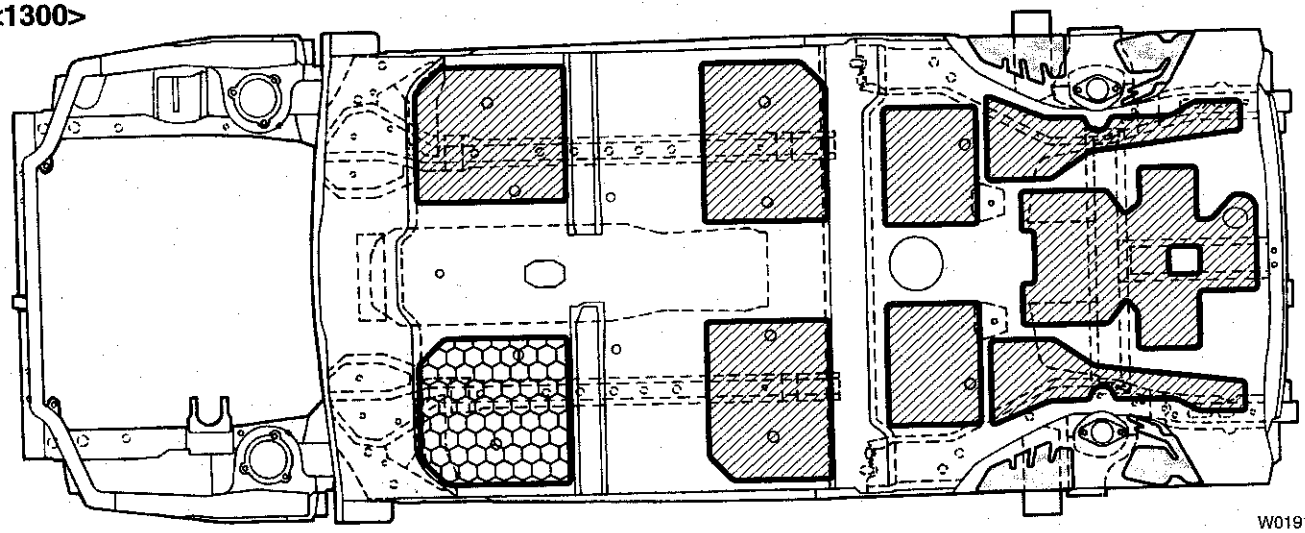
R. H. drive vehicles



W0190AK

Dash panel (Interior side)

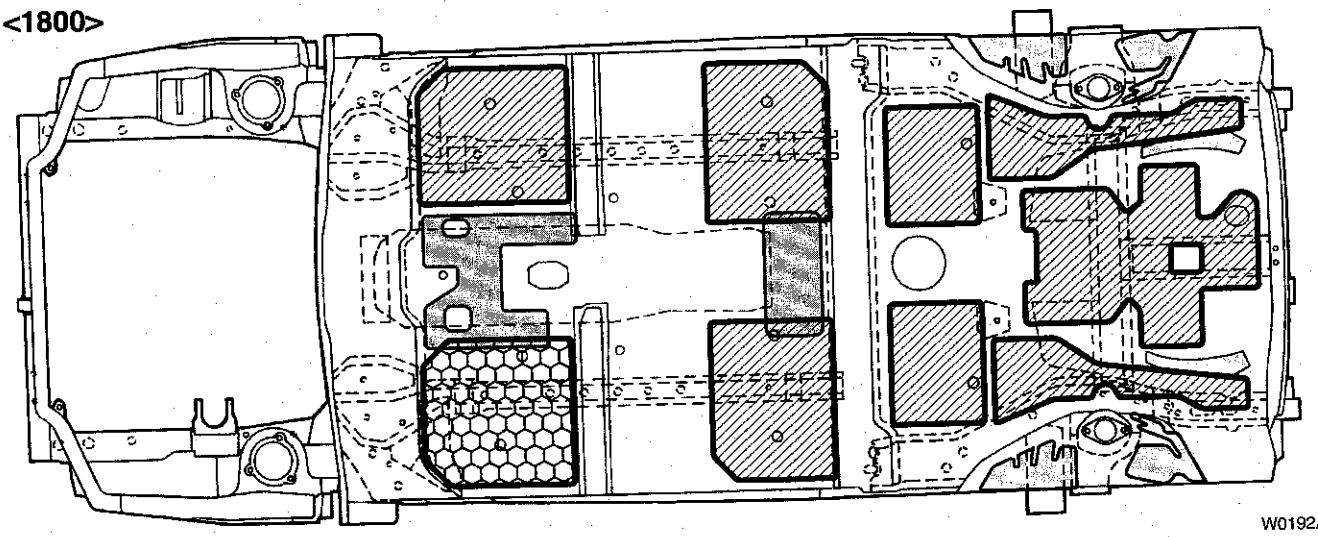
<1300>



W0191AK

Dash panel (Interior side)

<1800>



W0192AK

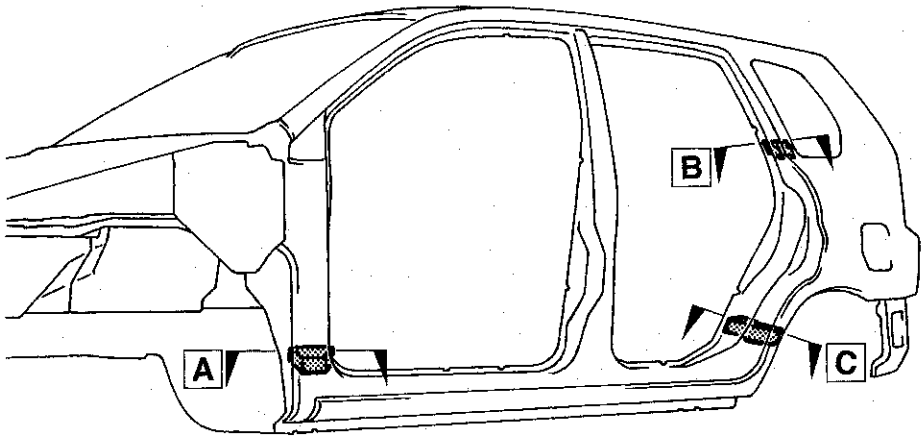
- 1.6mm thick
- 3.2mm thick (two layers of 1.6mm thick silencer.)
- 6.4mm thick (four layers of 1.6mm silencer.)
- MD-10 sheet 5.1mm thick (four layers of 1.6mm thick silencer.)

FOAMING AGENT USAGE LOCATIONS

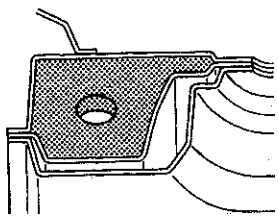
A foam-type insulation material has been filled inside the pillars, which reduces resonant transmitting inside the body structure.

Points to note when working with panels in foaming agent usage locations:
The foaming agent may ignite if it is heated, so the following points must be observed without fail.

1. Do not use a gas burner or other similar equipement to heat the areas where foaming agent has been used.
2. When cutting the areas where foaming agent has been used, use equipment (such as a pneumatic saw) which does not produce heat to make the cuts.
3. If any foaming agent is remaining at the cutting locations (on the body side), clean off all foaming agent from around the area before carrying out welding.

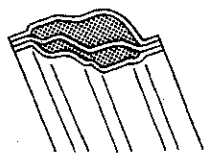


W0197AK



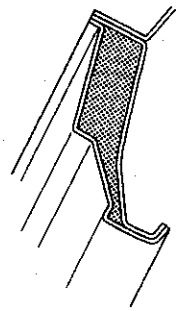
W0173AK

A



W0172AK

B



W0174AK

C

: Places filled with foam-type insulation material

2 BODY DIMENSIONS

BODY DIMENSIONS AND MEASUREMENT METHODS 2-3

TYPE A (PROJECTED DIMENSIONS) 2-4

UPPER BODY 2-4

SUSPENSION INSTALLATION DIMENSION 2-6

TYPE B (ACTUAL-MEASUREMENT DIMENSIONS) 2-8

UNDER BODY 2-8

SUSPENSION INSTALLATION DIMENSION 2-10

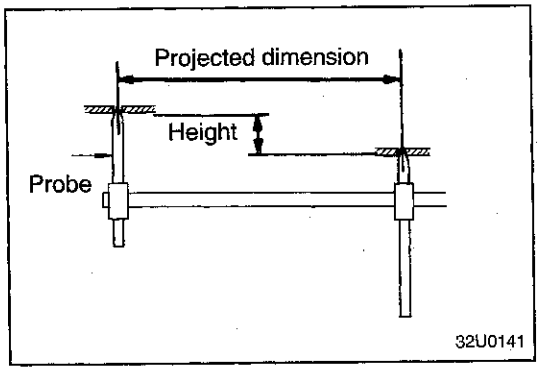
FRONT BODY 2-12

SIDE BODY 2-13

REAR BODY 2-14

INTERIOR 2-15

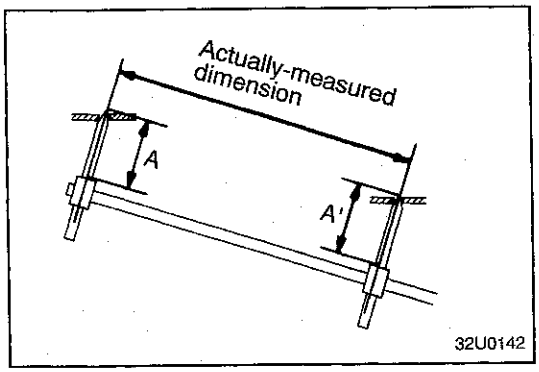
NOTES



BODY DIMENSIONS AND MEASUREMENT METHODS

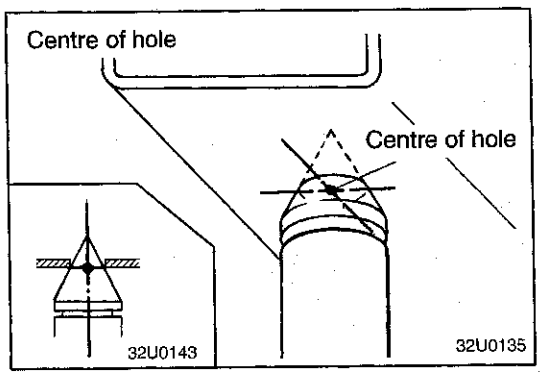
STANDARD DIMENSIONS INDICATIONS AND MEASUREMENT METHODS

(1) Type A (projected dimensions)
Indicates the dimension when a measurement location is projected onto a plane. The difference in height of the measurement points should be taken into consideration when measuring.



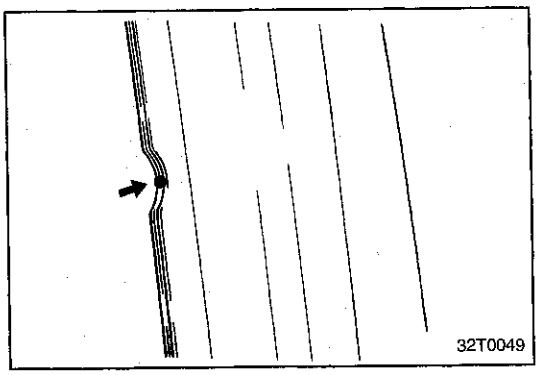
(2) Type B (actual-measurement dimensions)
Indicates the actual distance between the measurement points.
Measure using a tracking gauge or a measuring tape, etc.

NOTES
- Make the lengths of the tracking gauge probes the same (A = A').
- Do not bend or twist the measuring tape.

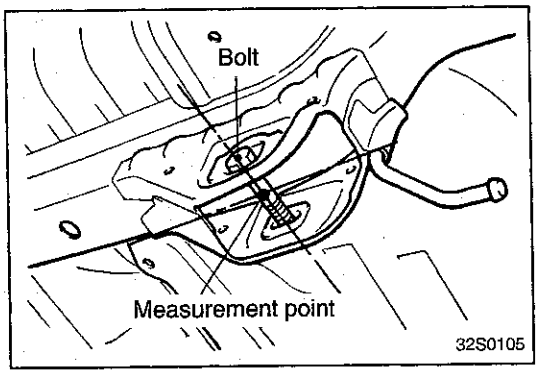


(3) Insert the tracking gauge probes securely into the measurement holes.

(4) When the standard dimensions in the illustration are enclosed by □, this indicates that the symmetrical left and right positions have the same dimensions.



(5) When using a notch for dimension measurement, make the measuring point at the centre of the notch.



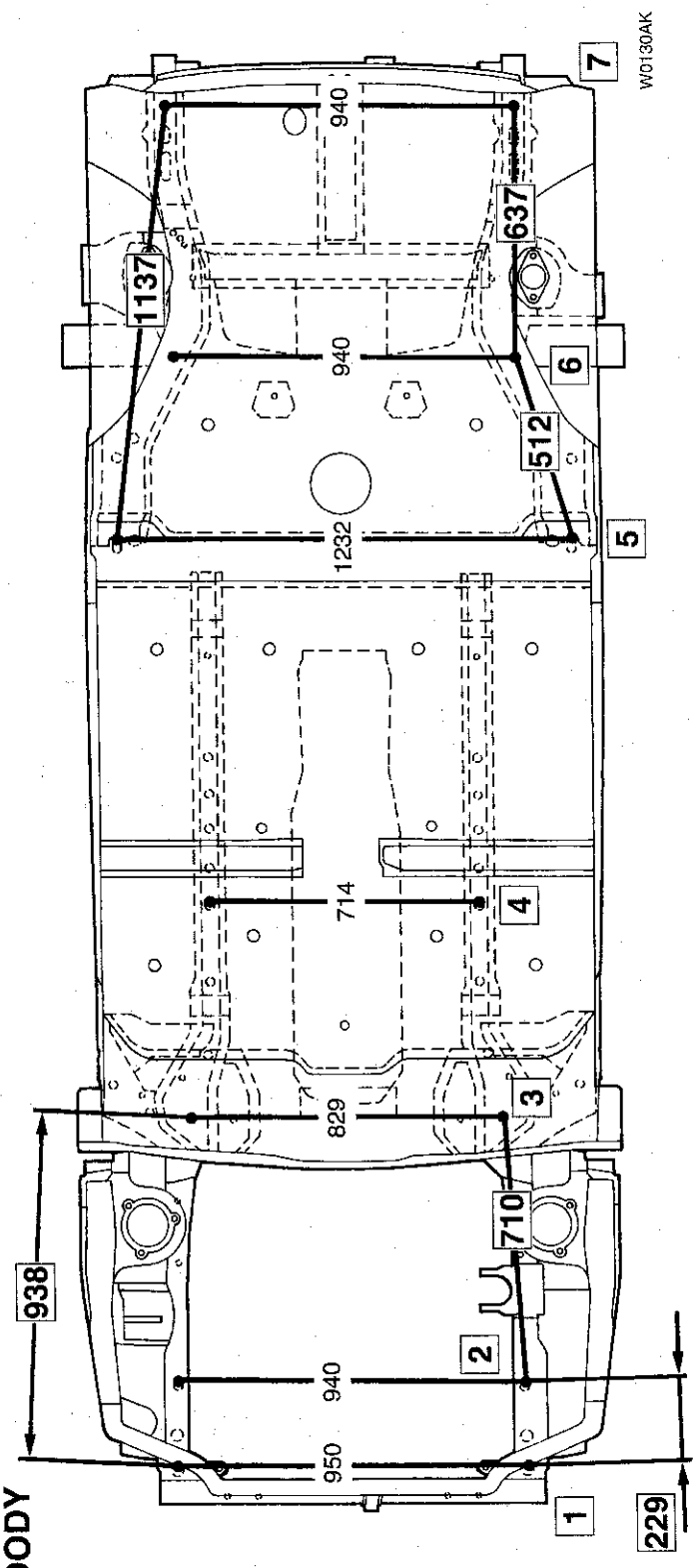
(6) When measuring the suspension mounting arm or the link mounting position, use the suspension mounting bolt as the measuring point.

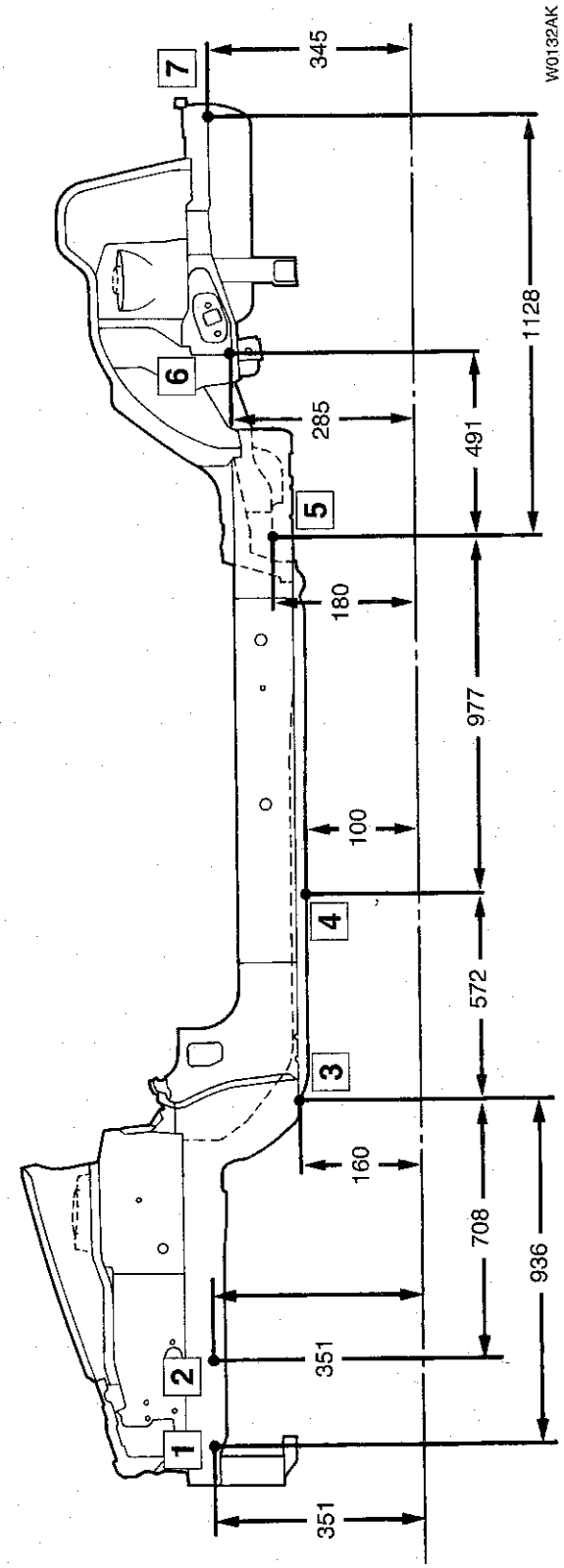
BODY CENTRE POINT

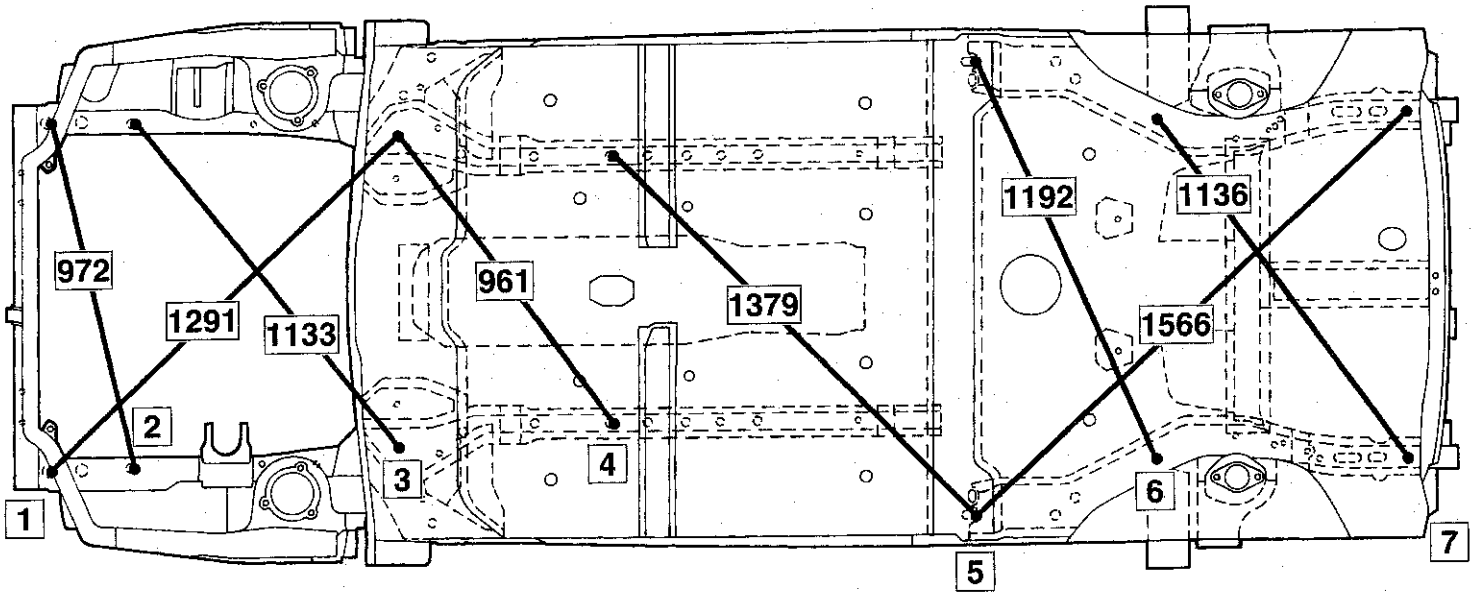
The body centre points are shown for the purpose of checking the position of the left and right symmetry locations.

TYPE A (PROJECTED DIMENSIONS)

UNDER DODY



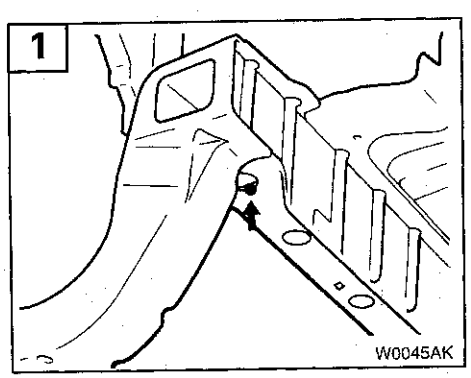




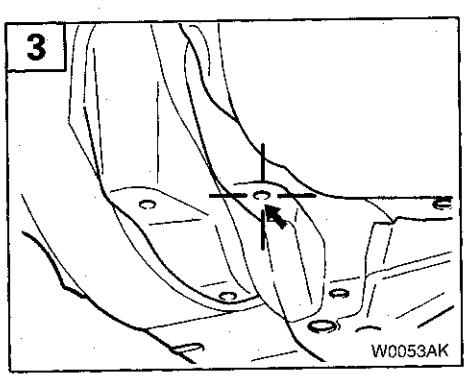
W0131AK

No.	Standard measurement point	Hole shape – Size mm	No.	Standard measurement point	Hole shape – Size mm	No.	Standard measurement point	Hole shape – Size mm
1*	Rear portion of front bumper stay mounting hole	○ – 30	4*	Rear portion of front floor sidemember positioning hole	○ – 25	6*	Centre of rear floor sidemember drain hole	○ – 20
2*	Rear portion of front sidemember positioning hole	○ – 25	5*	Rear portion of rear seat crossmember positioning hole	⬭ – 22 × 38	7*	Centre of towing bar mounting hole	○ – 14
3*	Centre of suspension crossmember mounting hole	Left: ○ – 14 Right: ○ – 18						

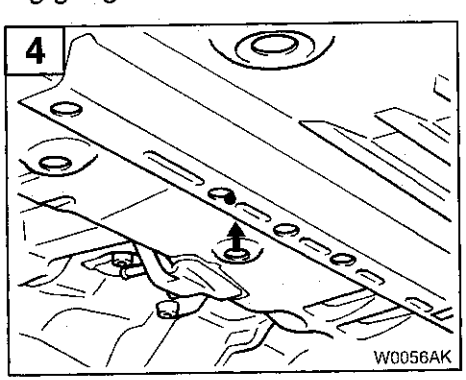
NOTE: The * mark indicates the mounting position for the frame centering gauge.



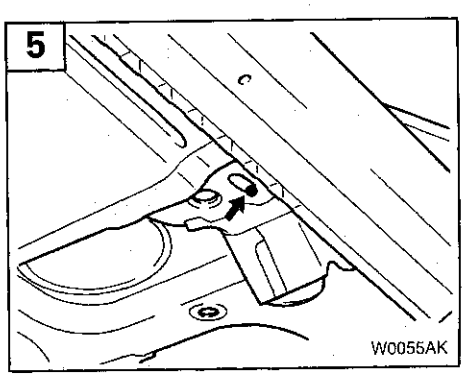
W0045AK



W0053AK

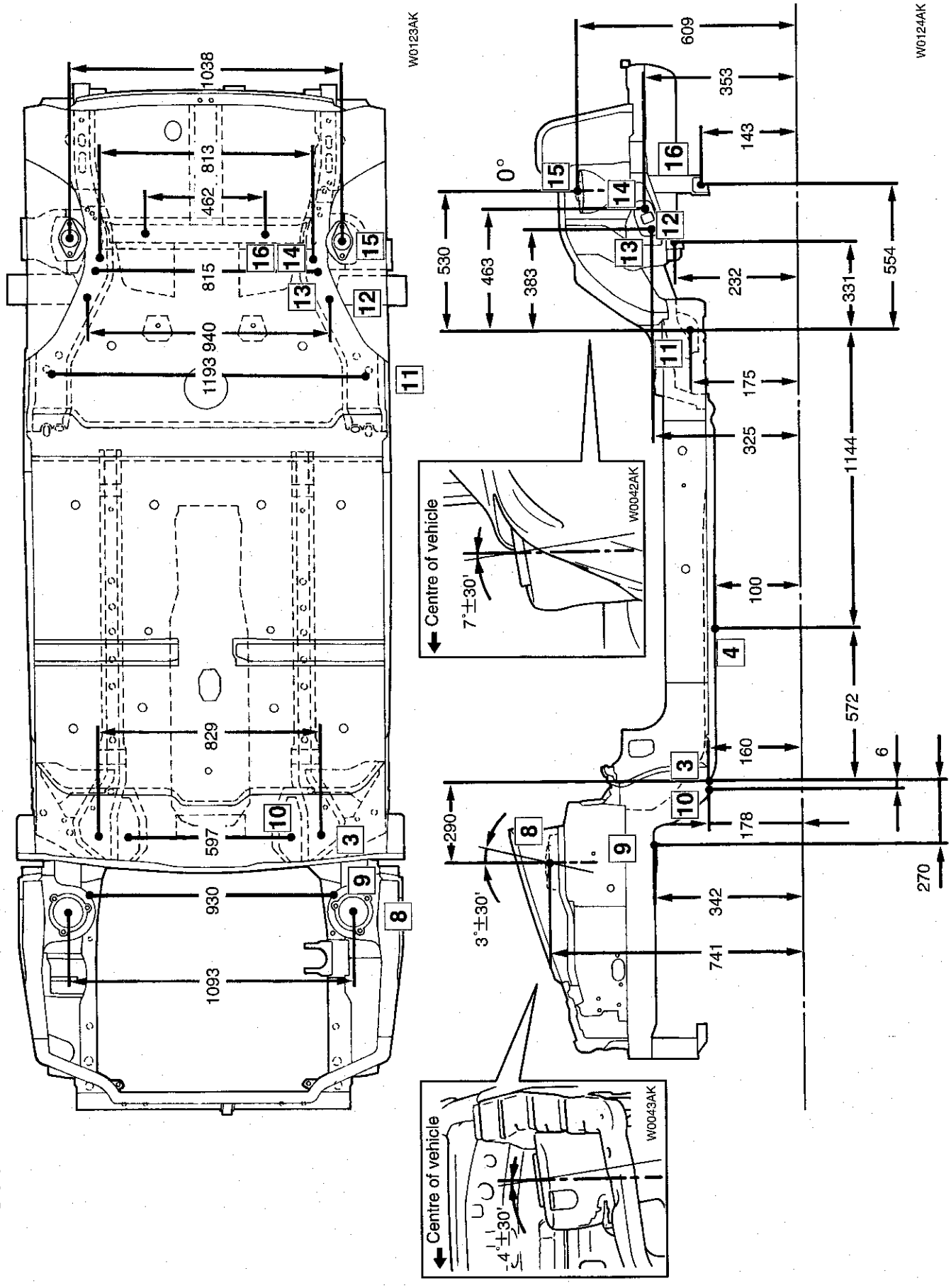


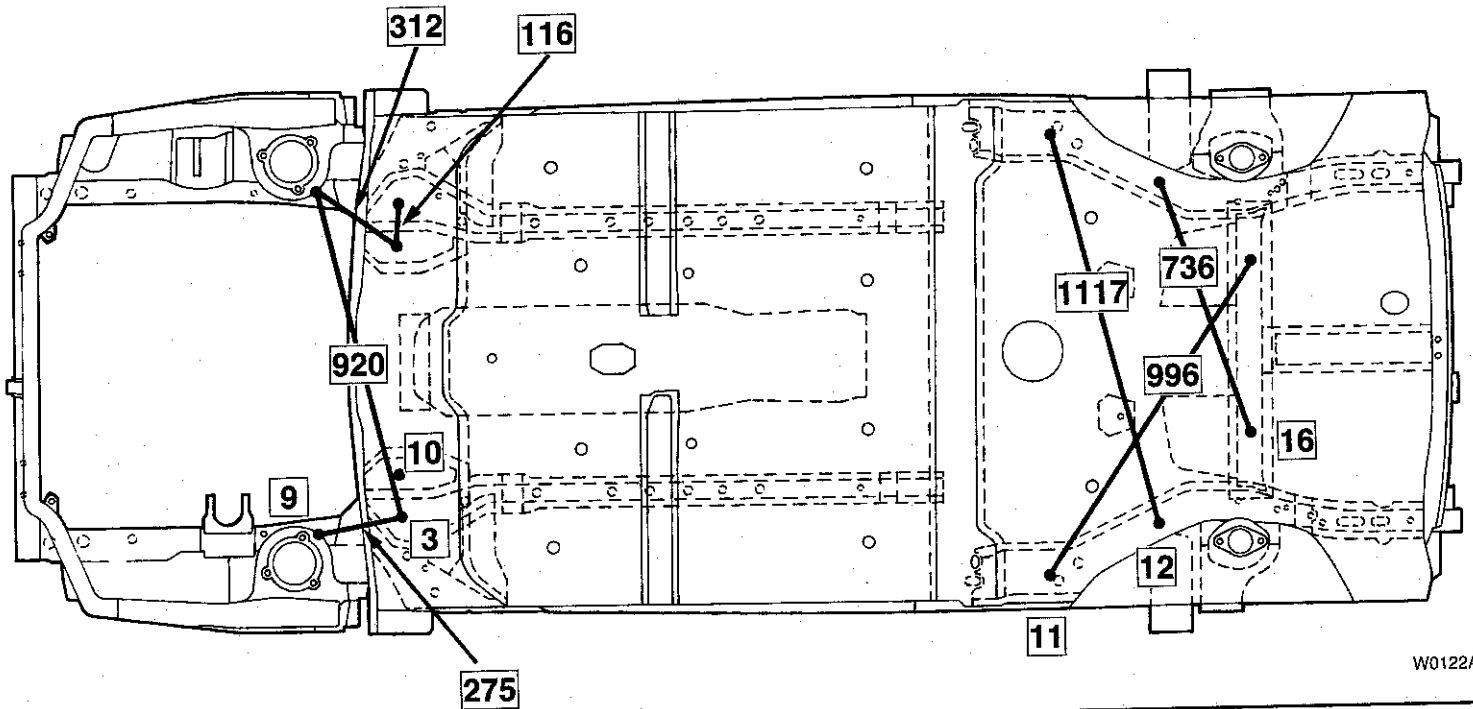
W0056AK



W0055AK

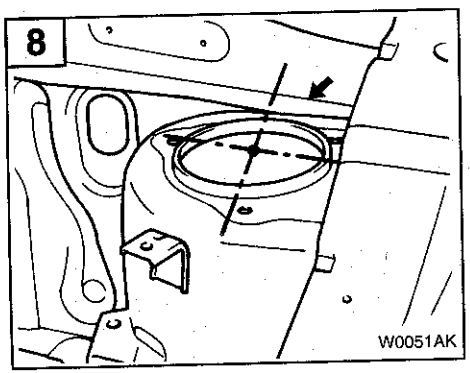
SUSPENSION INSTALLATION DIMENSIONS



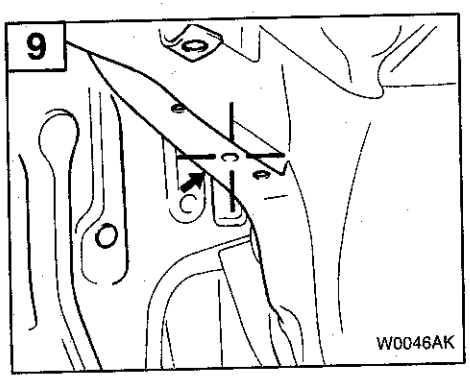


W0122AK

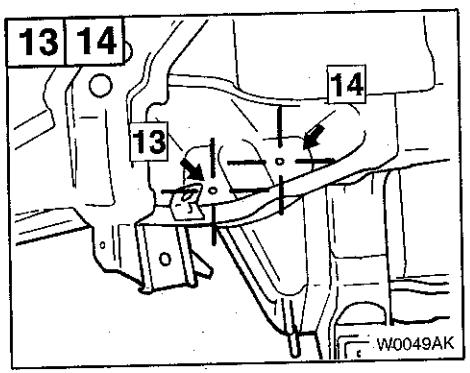
No.	Standard measurement point	Hole shape – Size mm	No.	Standard measurement point	Hole shape – Size mm	No.	Standard measurement point	Hole shape – Size mm
3	Centre of suspension crossmember mounting hole	Left: ○ – 14 Right: ○ – 18	10	Centre of suspension crossmember mounting hole	○ – 16	14	Centre of upper link mounting hole	○ – 14
4	Rear portion of front floor sidemember positioning hole	○ – 25	11	Trailing arm mounting position	—	15	Centre of rear shock absorber mounting hole	○ – 68
8	Centre of front shock absorber mounting hole	○ – 110	12	Control link mounting position	—	16	Lower arm mounting position	—
9	Centre of suspension crossmember mounting hole	○ – 25	13	Centre of upper link mounting hole	○ – 14			



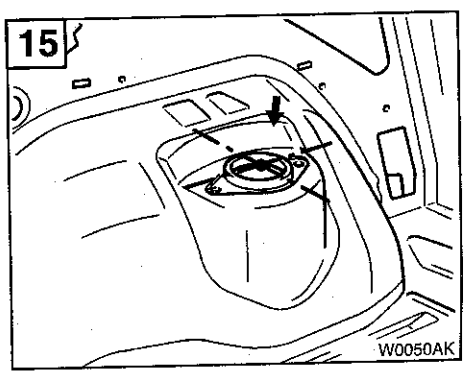
W0051AK



W0046AK



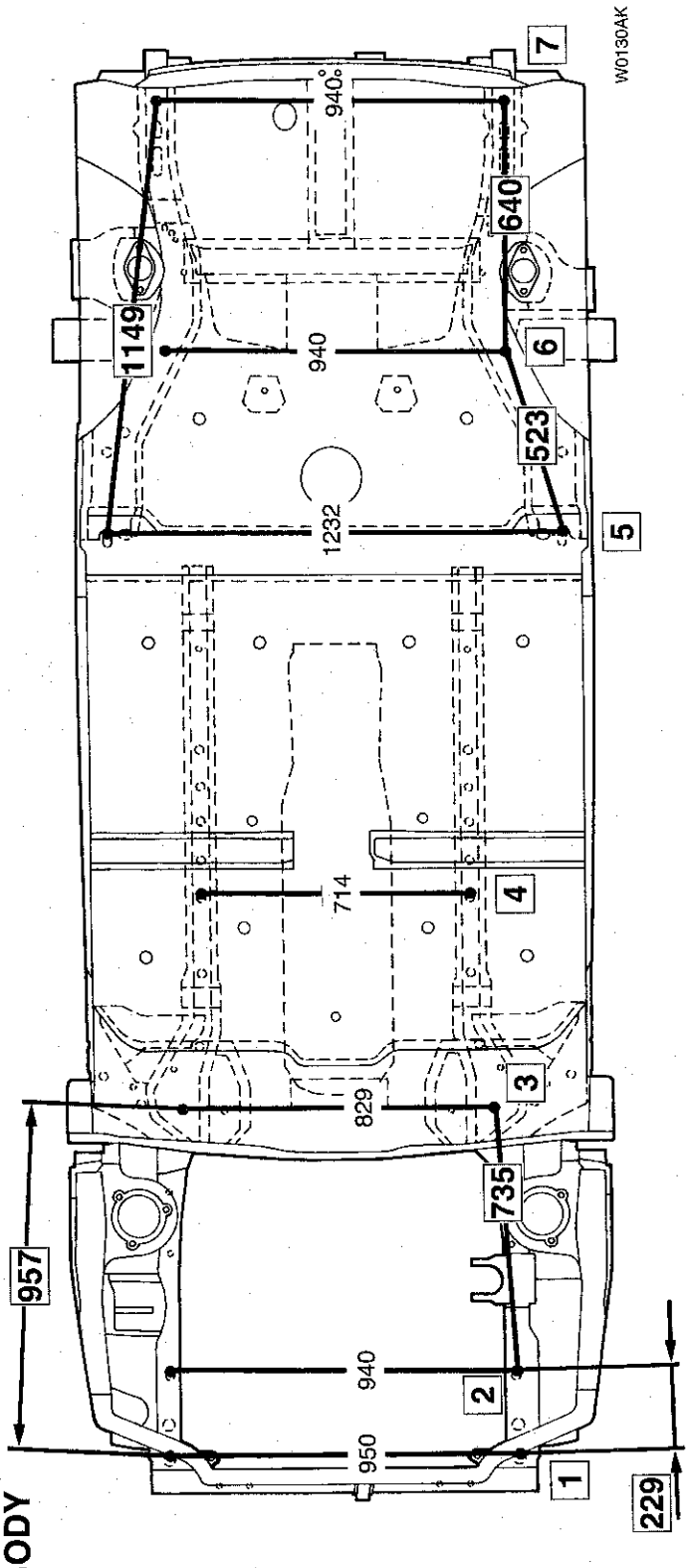
W0049AK

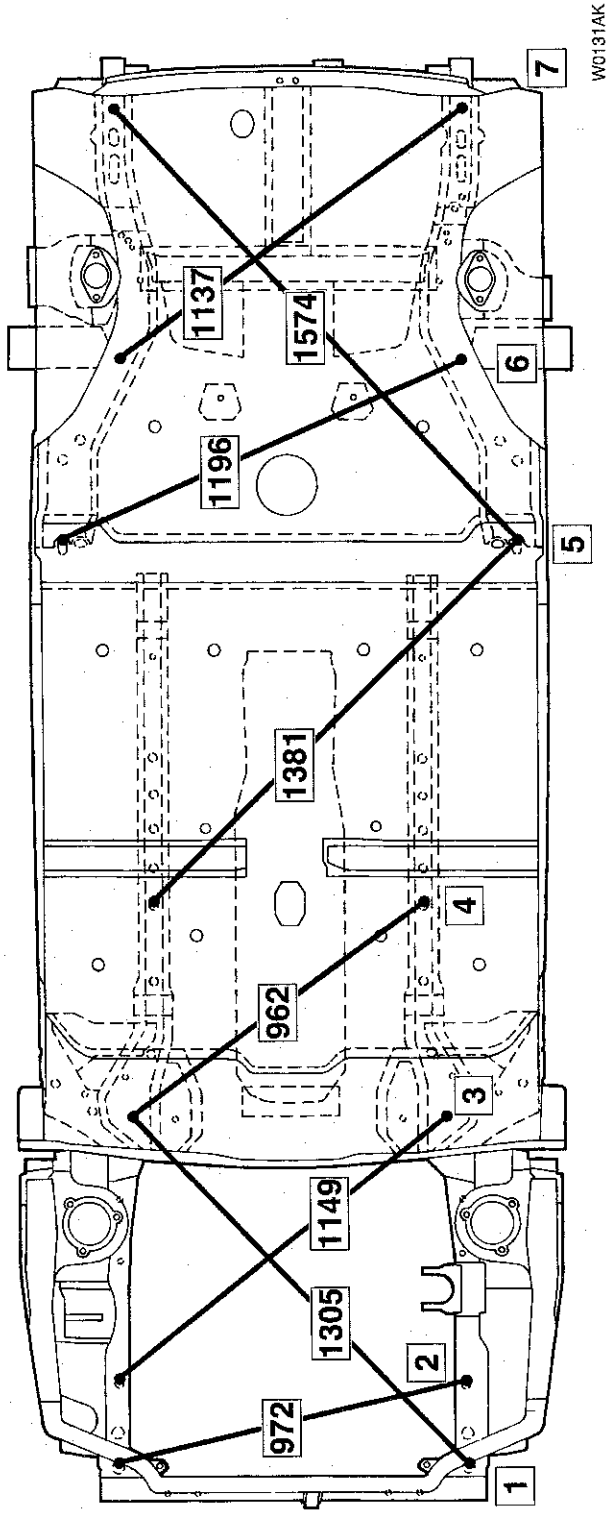


W0050AK

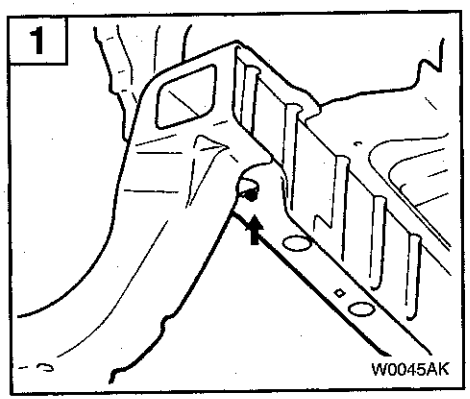
TYPE B (ACTUAL-MEASUREMENT DIMENSIONS)

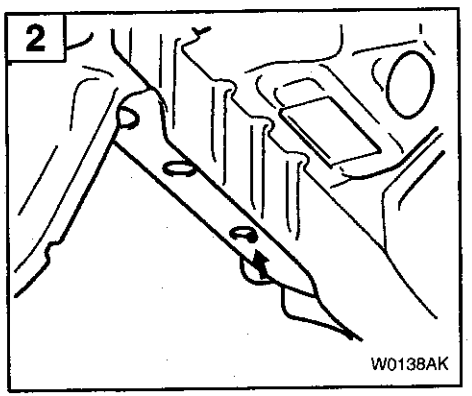
UNDER BODY

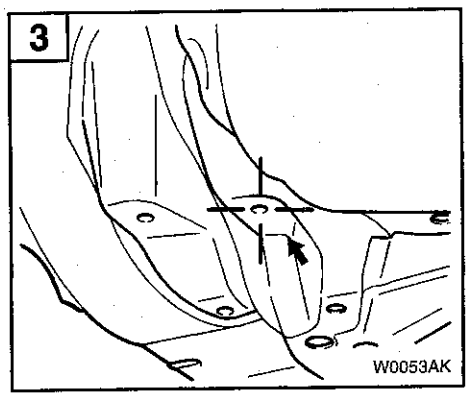


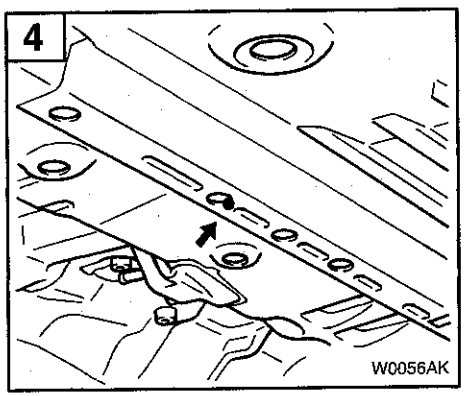


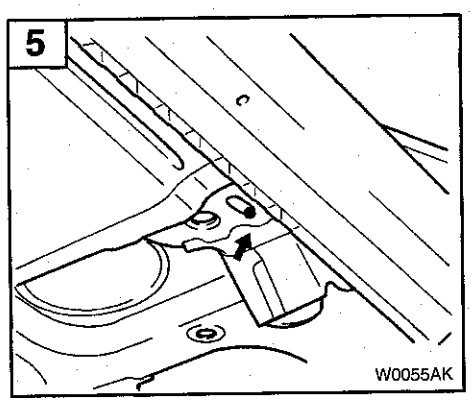
No.	Standard measurement point	Hole shape - Size mm
1	Rear portion of front bumper stay mounting hole	○ – 30
2	Rear portion of front sidemember positioning hole	○ – 25
3	Centre of suspension crossmember mounting hole	Left: ○ – 14 Right: ○ – 18
4	Rear portion of front floor sidemember positioning hole	○ – 25
5	Rear portion of rear seat crossmember positioning hole	⬭ – 22 × 38
6	Centre of rear floor sidemember drain hole	○ – 20
7	Centre of towing bar mounting hole	○ – 14

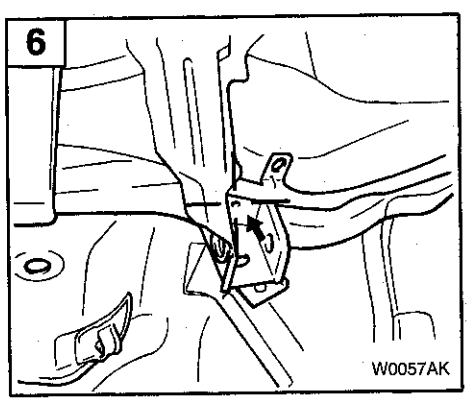


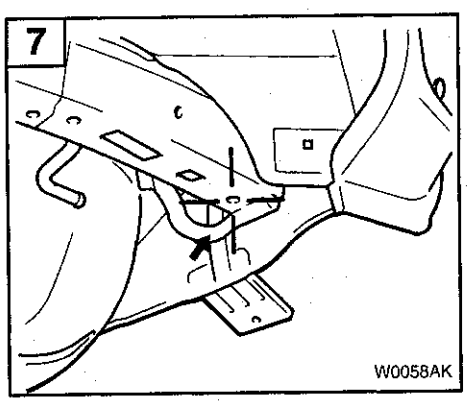




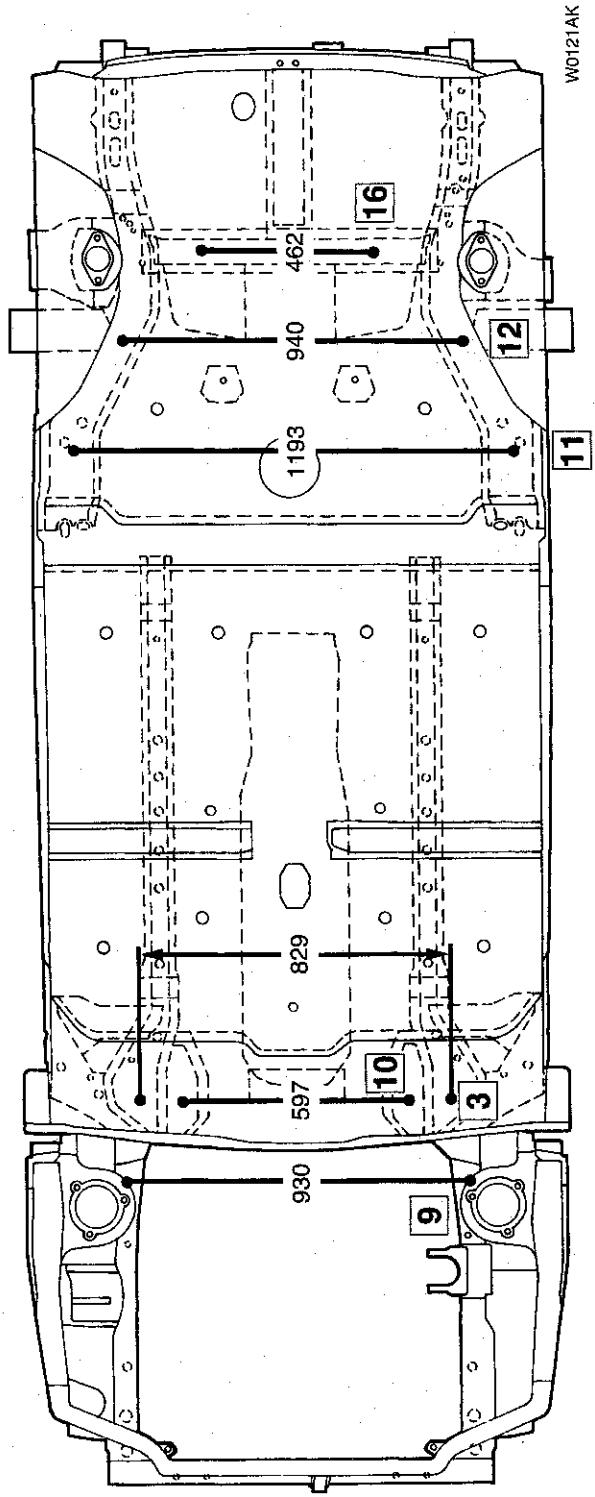


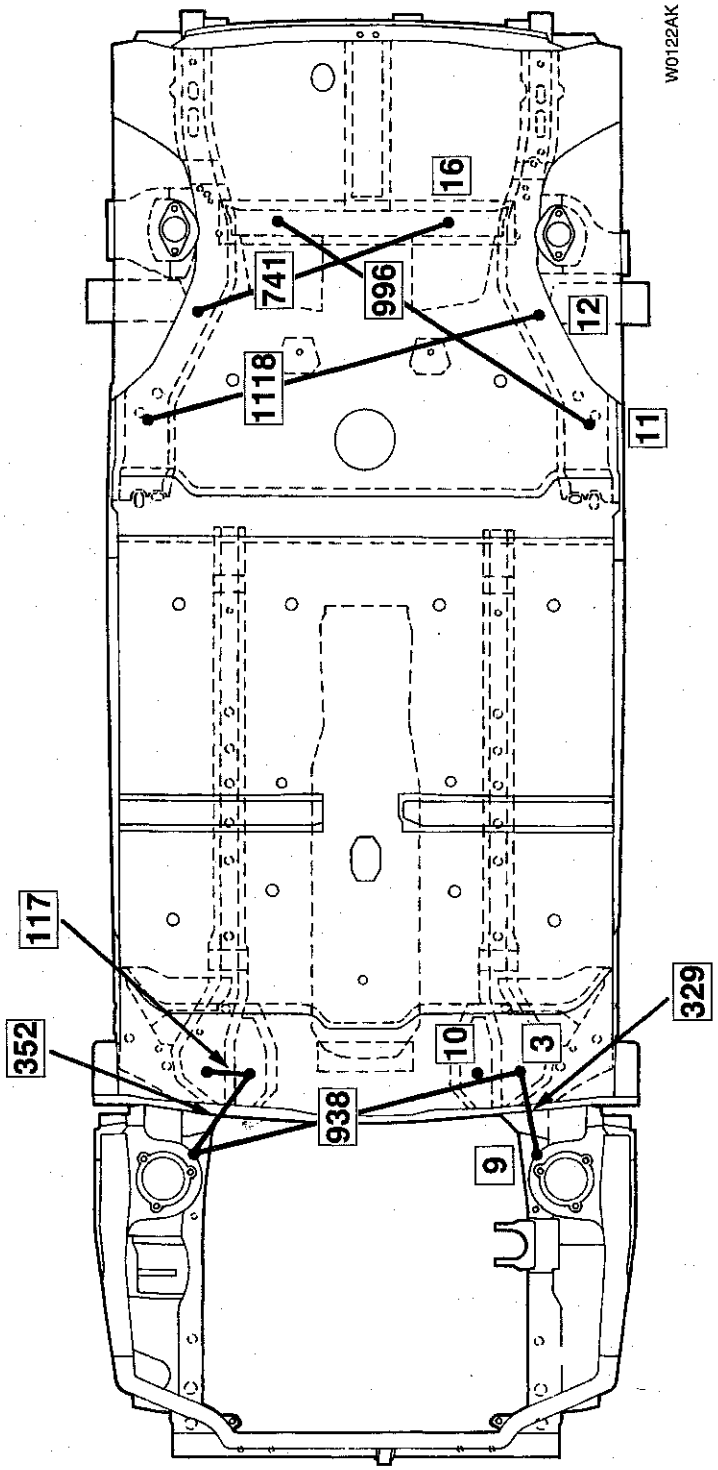




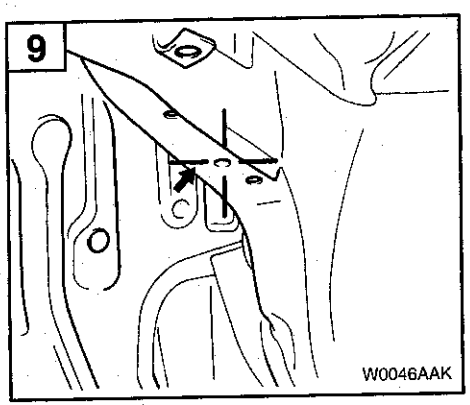


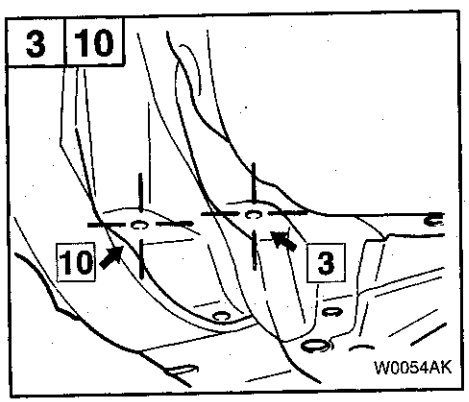
SUSPENSION INSTALLATION DIMENSIONS

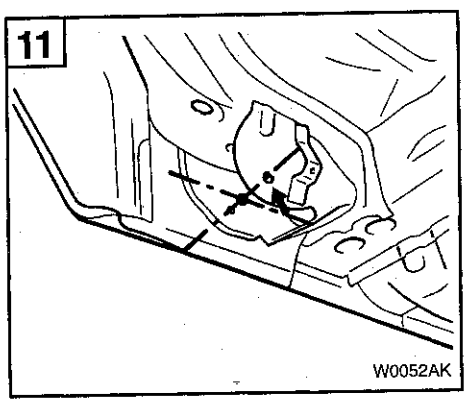


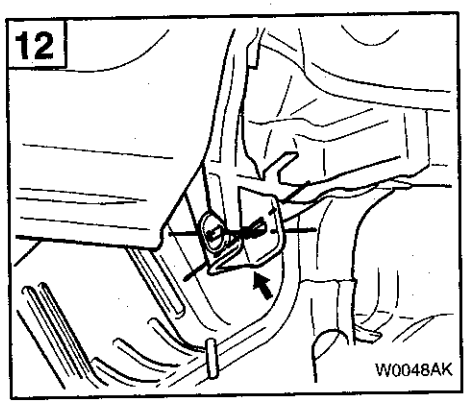


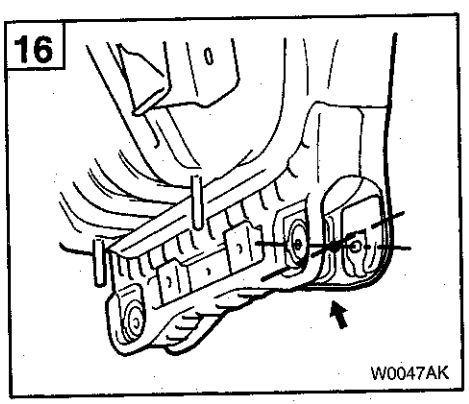
No.	Standard measurement point	Hole shape - Size mm	No.	Standard measurement point	Hole shape - Size mm	No.	Standard measurement point	Hole shape - Size mm
3	Centre of suspension crossmember mounting hole	Left: ○ – 14 Right: ○ – 18	10	Centre of suspension crossmember mounting hole	○ – 16	12	Control link mounting position	——
9	Centre of suspension crossmember mounting hole	○ – 15	11	Trailing arm mounting position	——	16	Lower arm mounting position	——



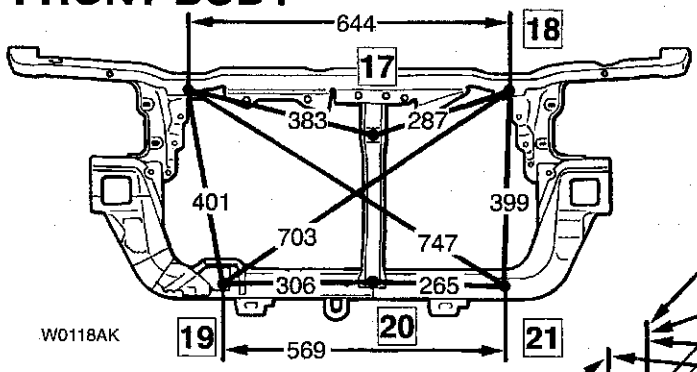


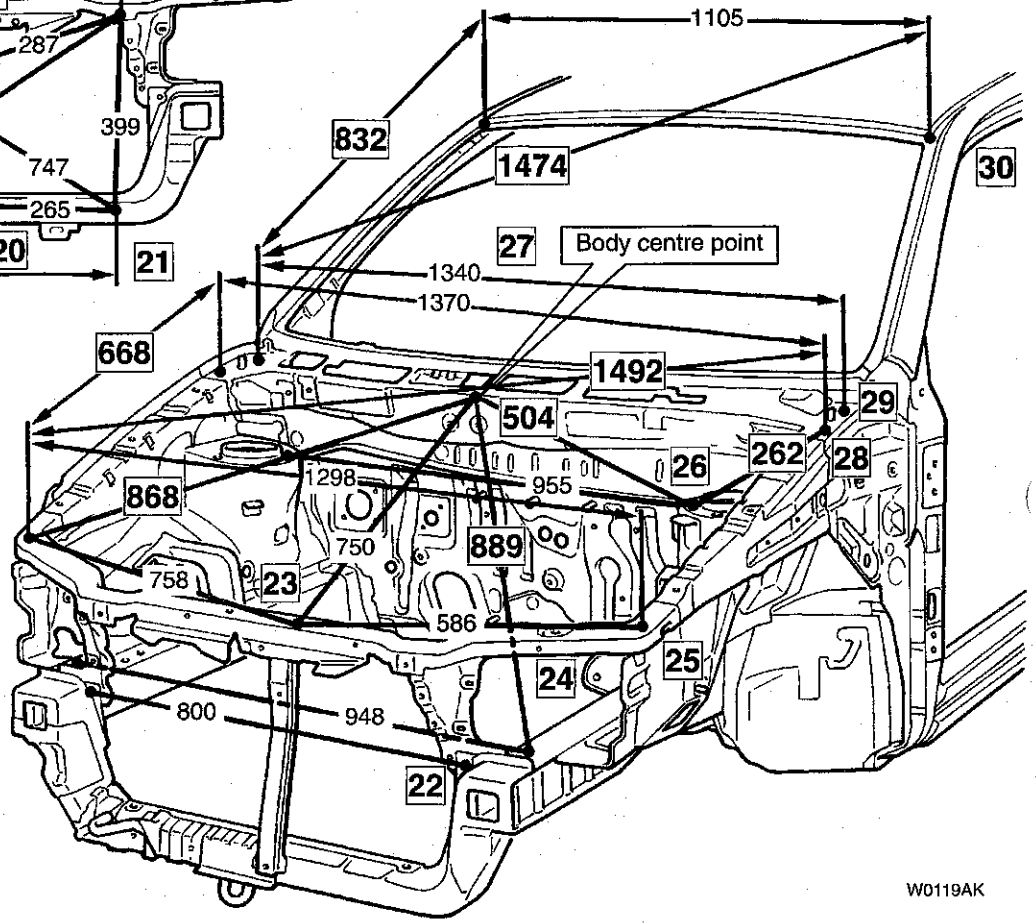




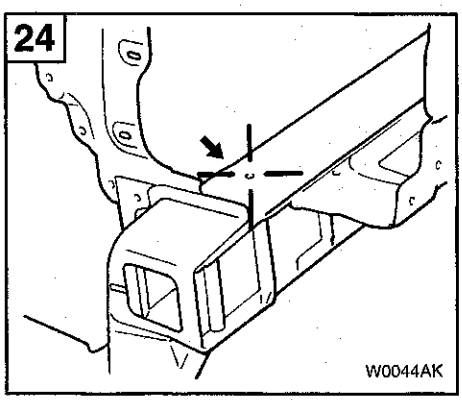


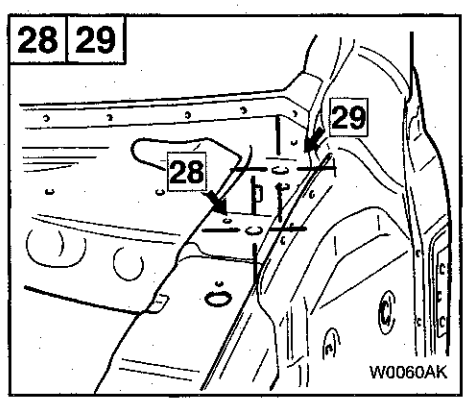
FRONT BODY

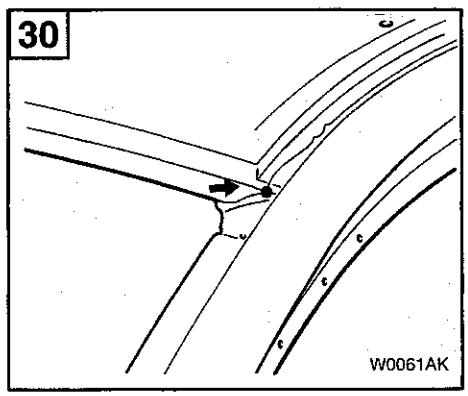




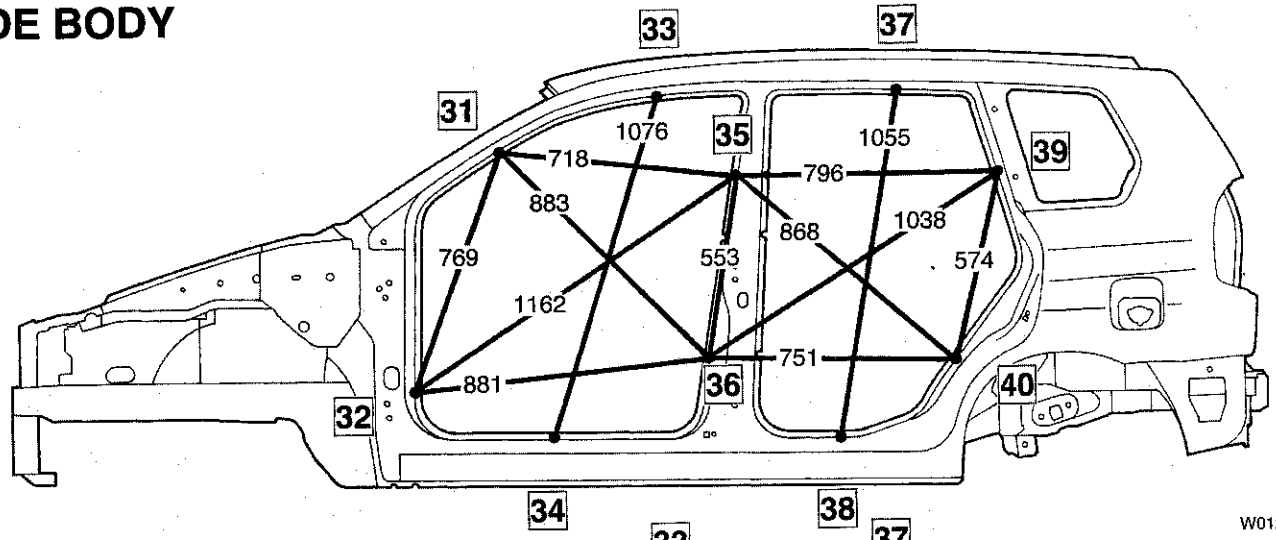
No.	Standard measurement point	Hole shape – Size mm	No.	Standard measurement point	Hole shape – Size mm
17	Centre of hood latch mounting hole	○ – 7	24	Centre of harness mounting hole	○ – 7
18	Centre of bumper mounting hole	○ – 7	25	Centre of front upper bar positioning hole	○ – 8
19	Centre of P/S oil cooler mounting hole	○ – 7	26	Centre of strut mounting hole	○ – 11.5
20	Centre of hood lock stay positioning hole	○ – 10	27	Body centre point	—
21	Centre of air guide mounting hole	○ – 7	28	Centre of front fender mounting hole	○ – 9
22	Centre of air guide mounting hole	○ – 7	29	Centre of hood hinge mounting hole	○ – 12
23	Centre of air intake duct mounting hole	○ – 7	30	Corner of roof panel	—



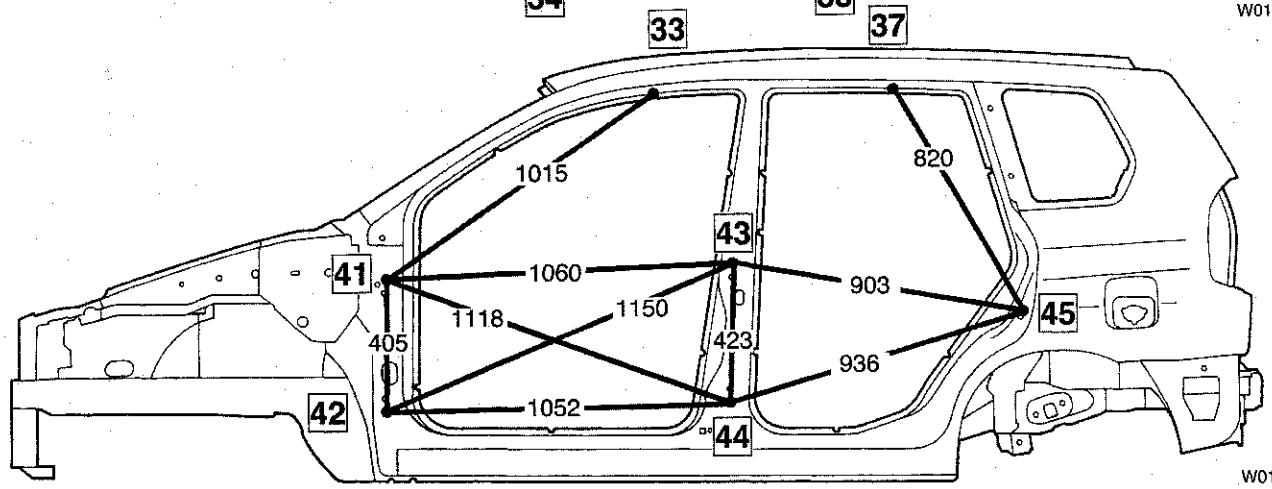




SIDE BODY

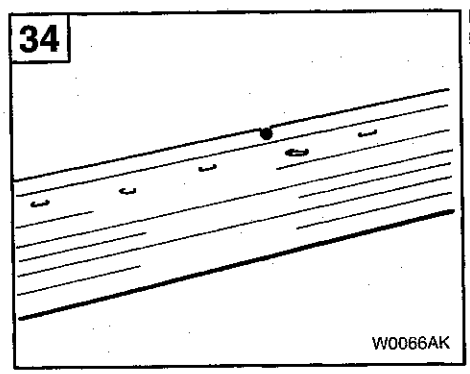


W0125AK

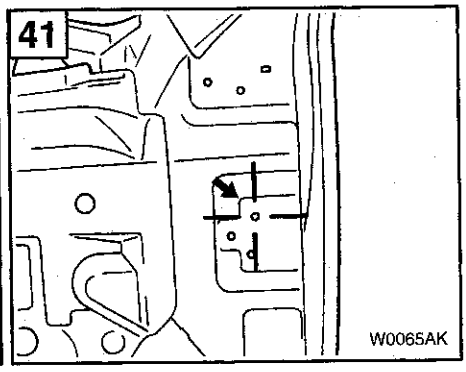


W0126AK

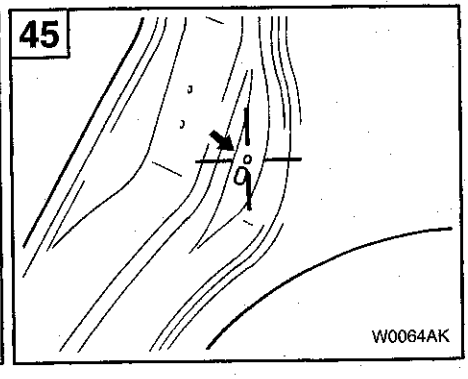
No.	Standard measurement point	Hole shape – Size mm	No.	Standard measurement point	Hole shape – Size mm
31	Front pillar positioning notch (Upper section)	—	39	Quarter panel positioning notch (Upper section)	—
32	Front pillar positioning notch (Lower section)	—	40	Quarter panel positioning notch (Lower section)	—
33	Roof side rail positioning notch (Front section)	—	41	Centre of front door hinge mounting hole (Upper section)	○ – 10
34	Side sill positioning notch (Front section)	—	42	Centre of front door hinge mounting hole (Lower section)	○ – 10
35	Center pillar positioning notch (Upper section)	—	43	Centre of rear door hinge mounting hole (Upper section)	○ – 10
36	Center pillar positioning notch (Lower section)	—	44	Centre of rear door hinge mounting hole (Lower section)	○ – 10
37	Roof side rail positioning notch (Rear section)	—	45	Centre of rear door switch mounting hole	○ – 5
38	Side sill positioning notch (Rear section)	—			



W0066AK

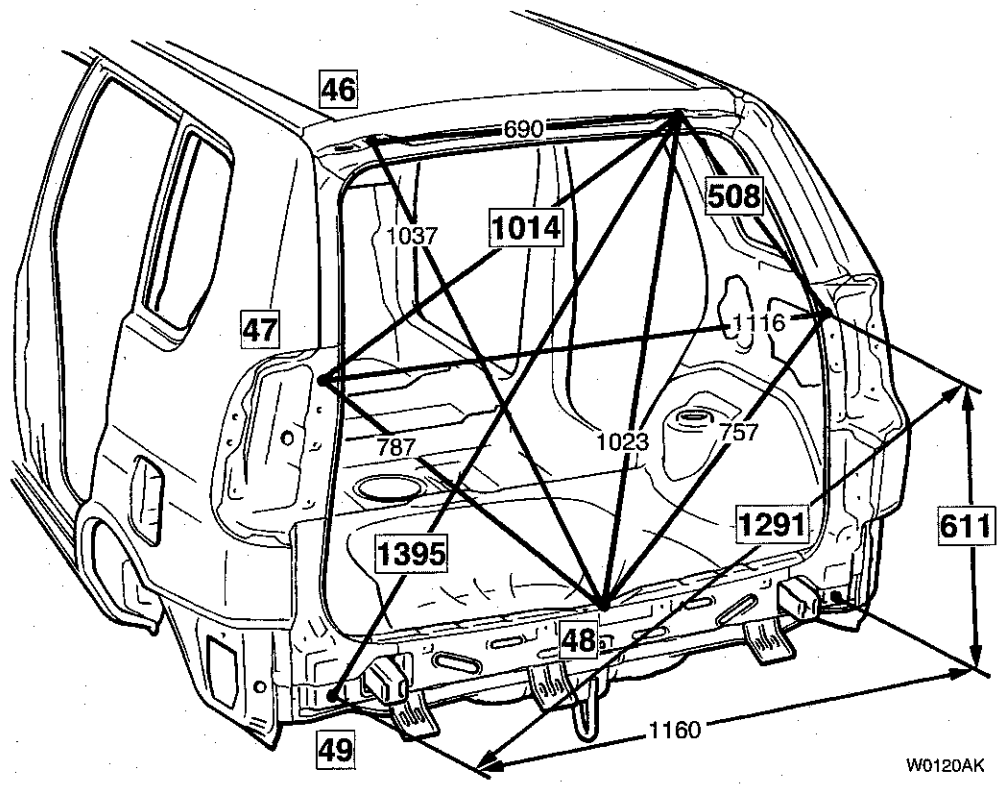


W0065AK

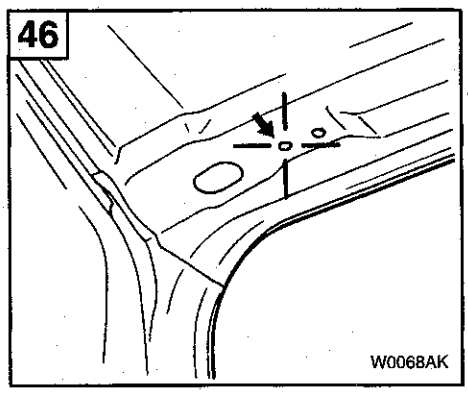


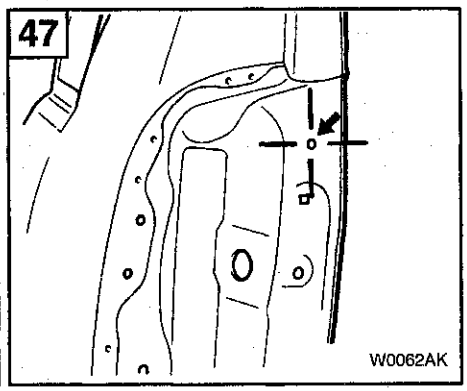
W0064AK

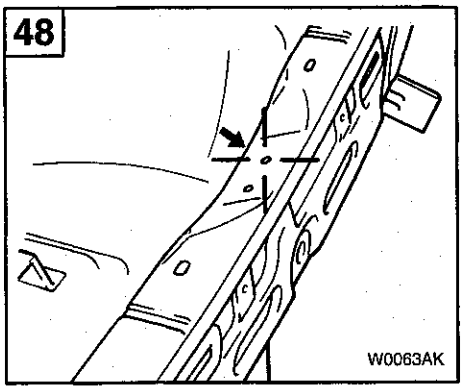
REAR BODY

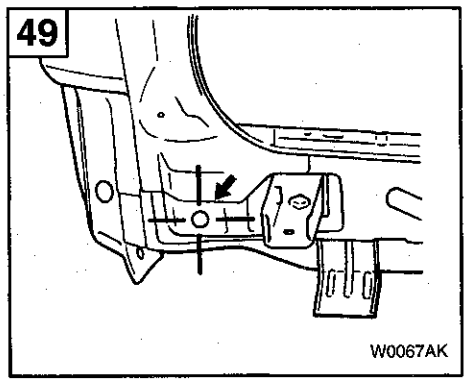


No.	Standard measurement point	Hole shape – Size mm	No.	Standard measurement point	Hole shape – Size mm
46	Centre of tailgate hinge mounting hole	○ – 12	48	Centre of tailgate striker mounting hole	○ – 8
47	Centre of tailgate gas spring mounting hole	○ – 12	49	Centre of rear end crossmember positioning hole	○ – 20

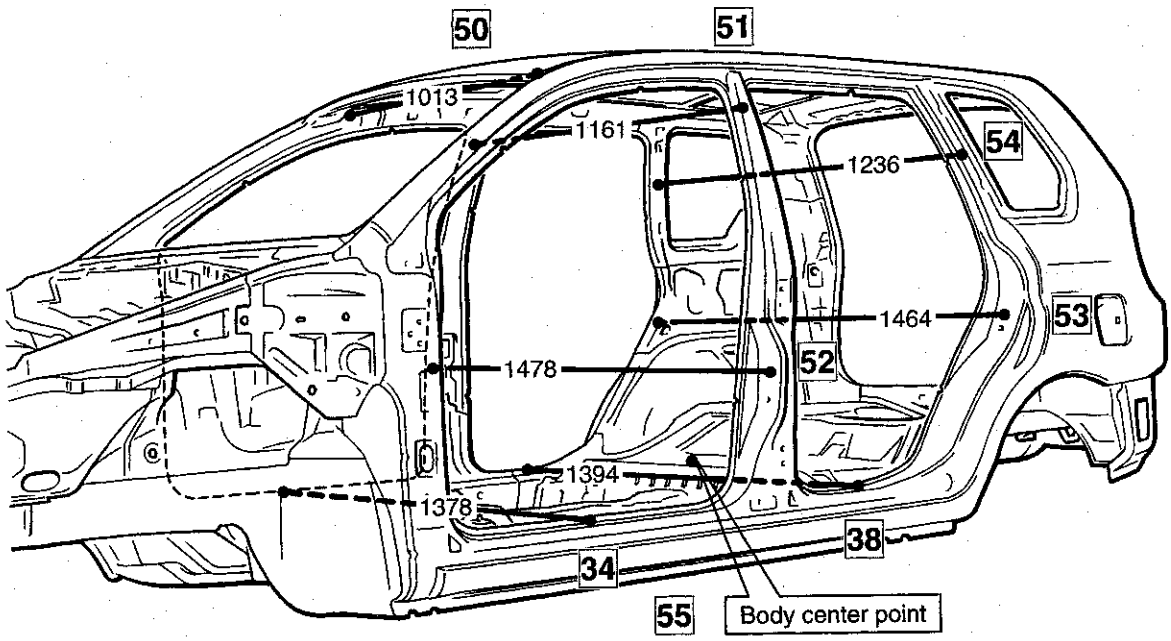






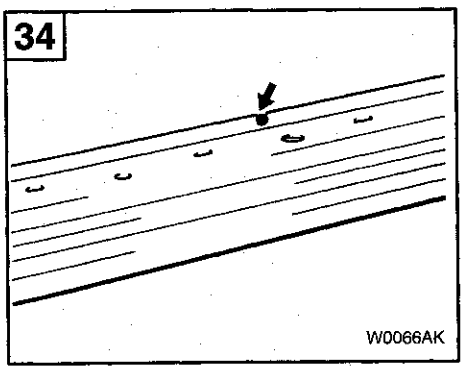


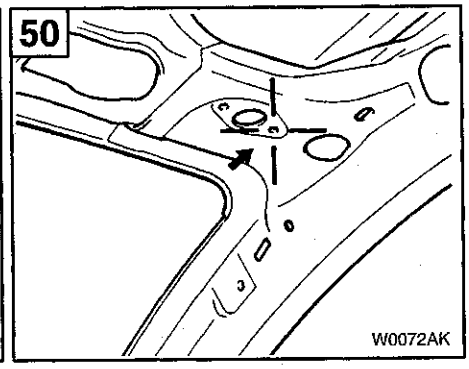
INTERIOR

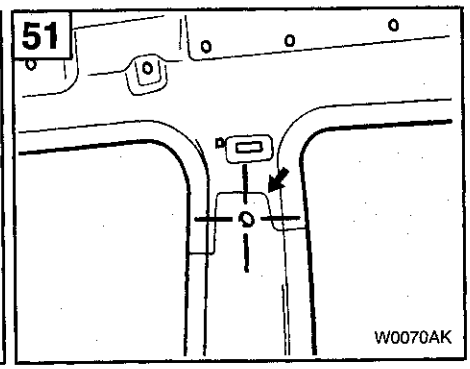


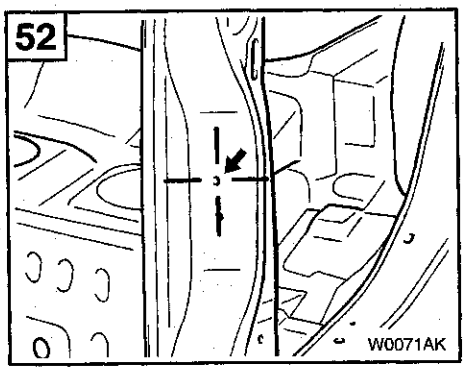
W0117AK

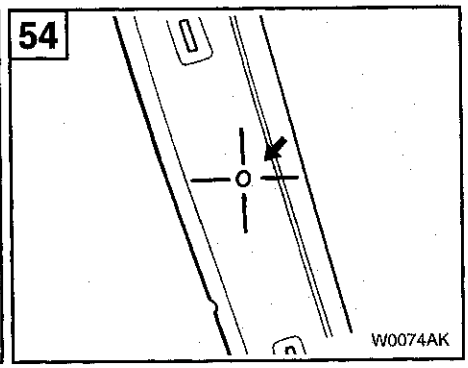
No.	Standard measurement point	Hole shape - Size mm	No.	Standard measurement point	Hole shape - Size mm
34	Side sill positioning notch (Front section)	——	52	Centre of front door striker mounting hole	○ – 15
38	Side sill positioning notch (Rear section)	——	53	Centre of rear door striker mounting hole	○ – 14
50	Centre of sunvisor mounting hole	○ – 4. 2	54	Centre of seatbelt mounting hole	○ – 16. 5
51	Centre of seatbelt anchor mounting hole	○ – 16. 5	55	Centre of seat crossmember drain hole (Body centre point)	○ – 6

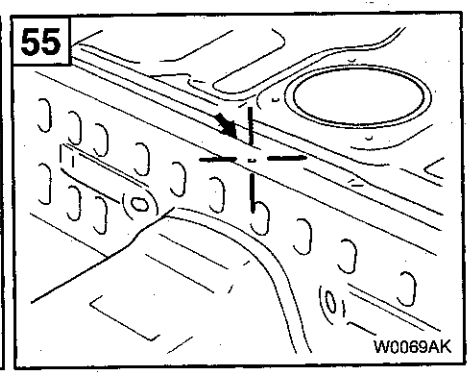












NOTES

3 WELDED PANEL REPLACEMENT

HEADLAMP SUPPORT 3-3
FENDER SHIELD 3-4
FRONT PILLAR 3-7
CENTER PILLAR 3-10
SIDE SILL 3-12
QUARTER, OUTER 3-14
REAR END CROSSMEMBER 3-18
REAR FLOOR 3-20
ROOF 3-22
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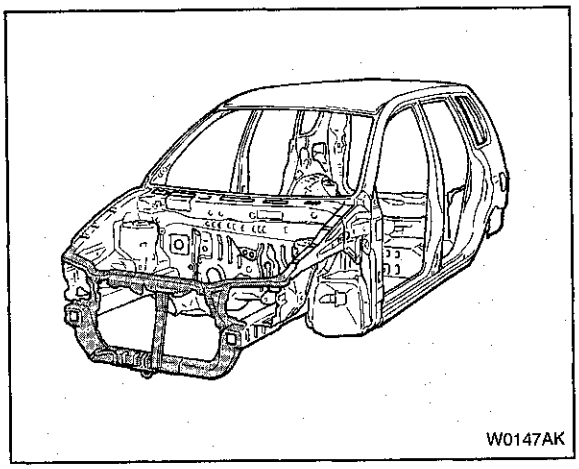
FRONT DOOR OUTER PANEL 3-26
REAR DOOR OUTER PANEL 3-27

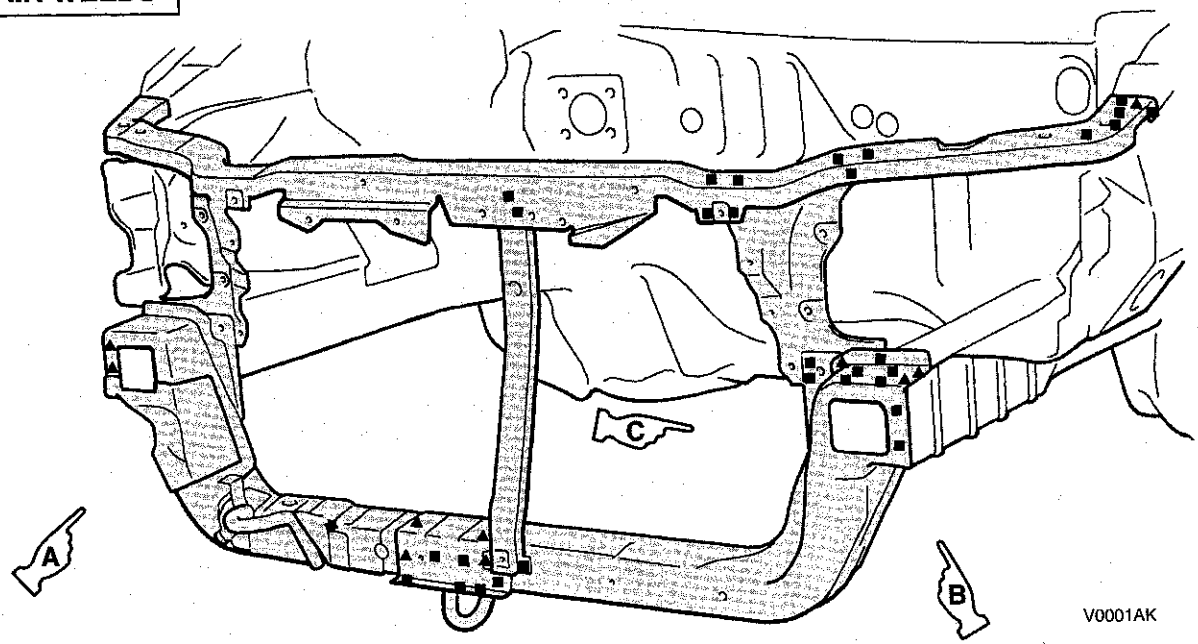
NOTES

HEADLAMP SUPPORT


W0147AK

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

REPAIR WELDS



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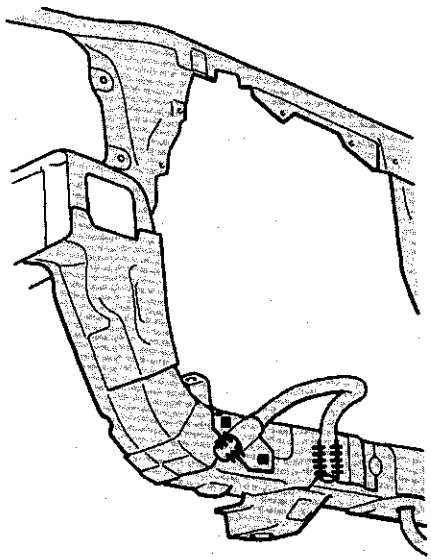
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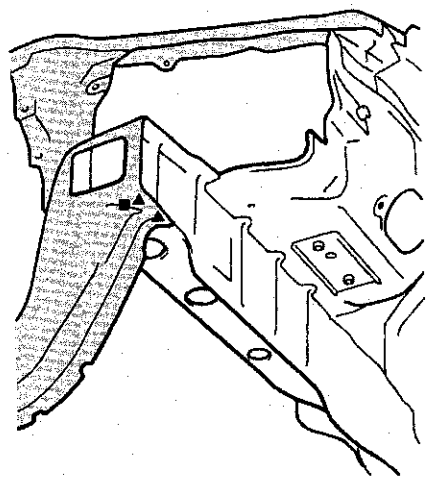
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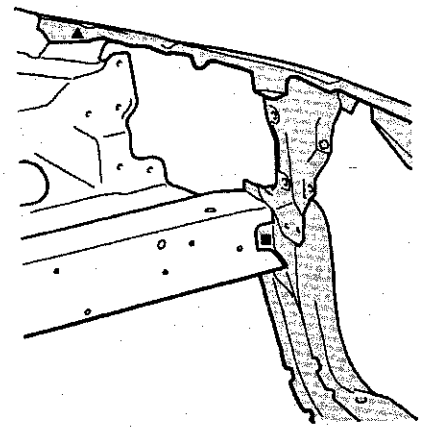
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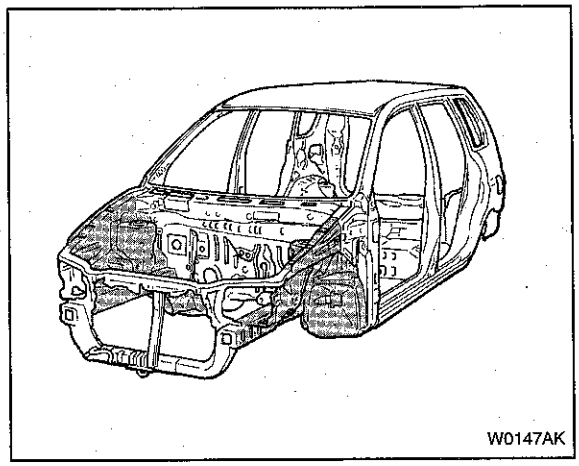
FENDER SHIELD


W0147AK

Symbol	Operation description
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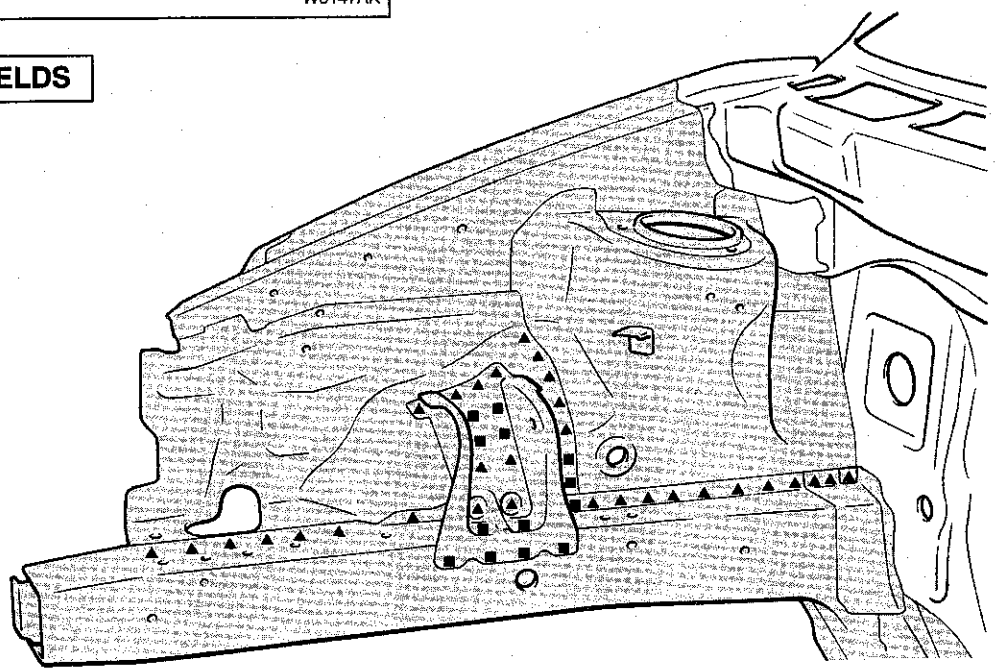
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

REPAIR WELDS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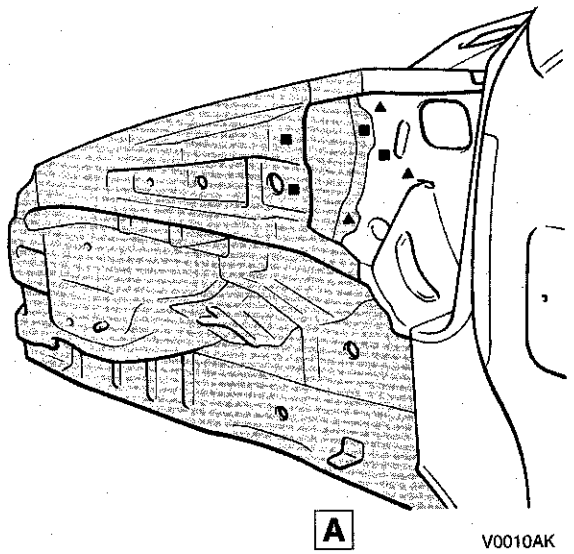
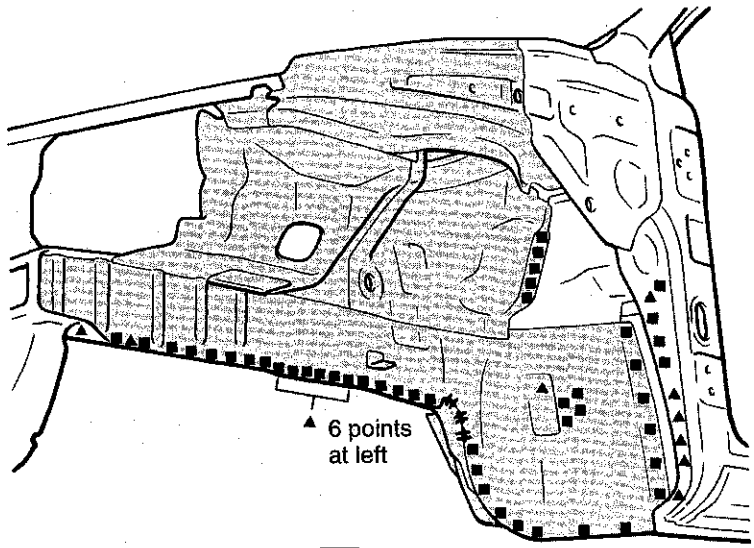


V0010AK

(View with the front upper frame extension, outer removed)

NOTE:
For the welding points with the headlamp support, see page 3-3 – HEADLAMP SUPPORT.



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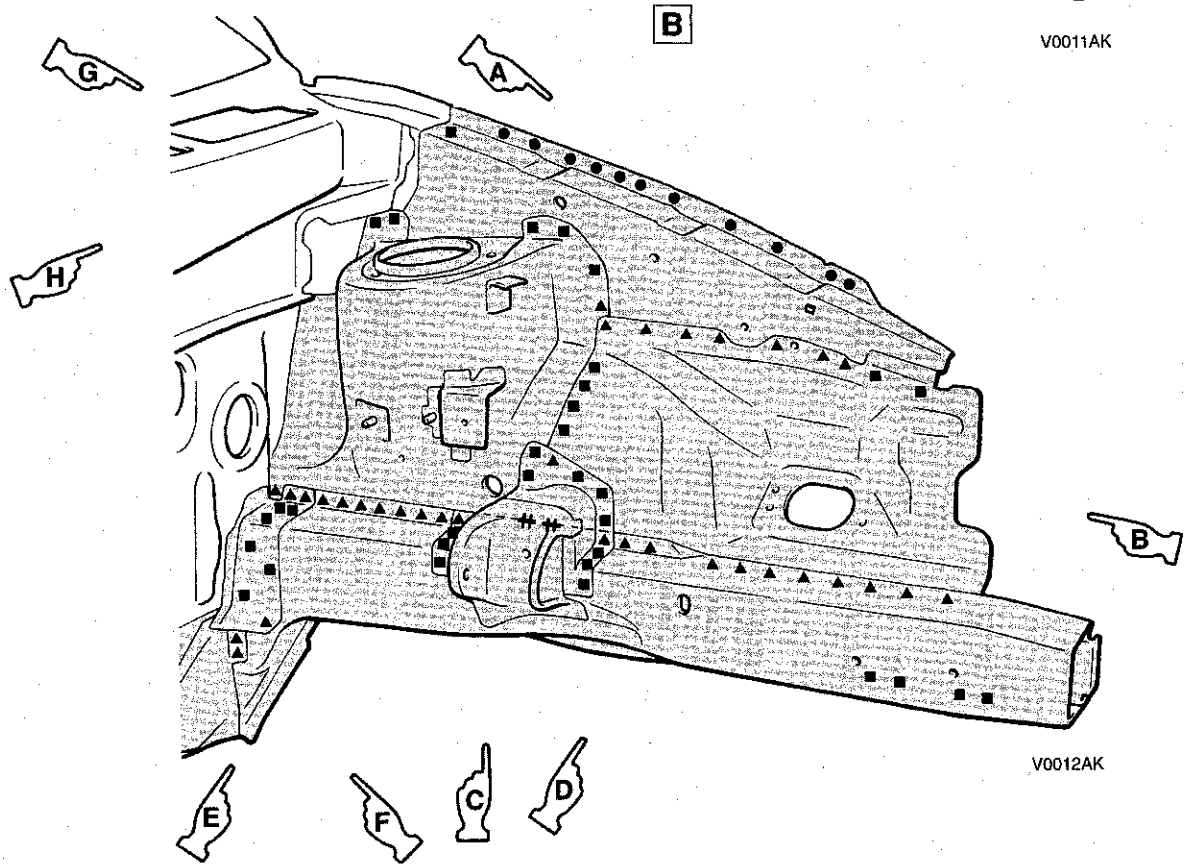

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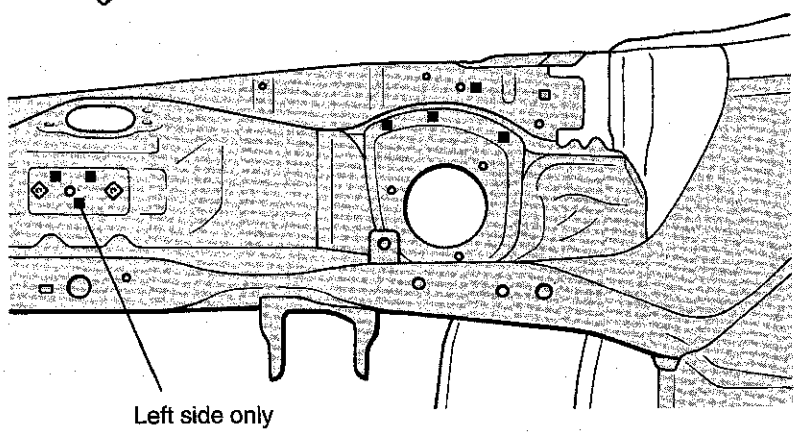

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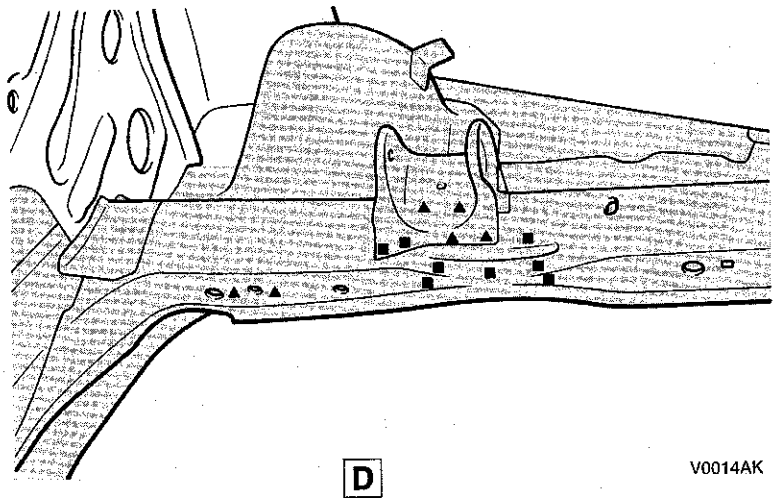

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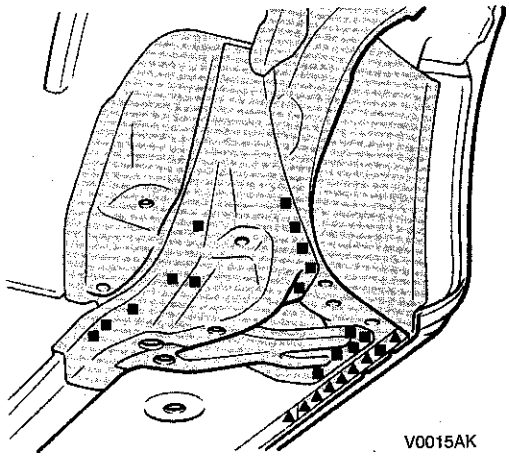

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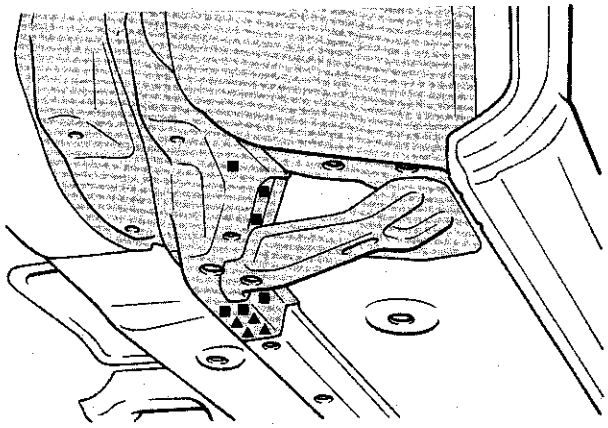

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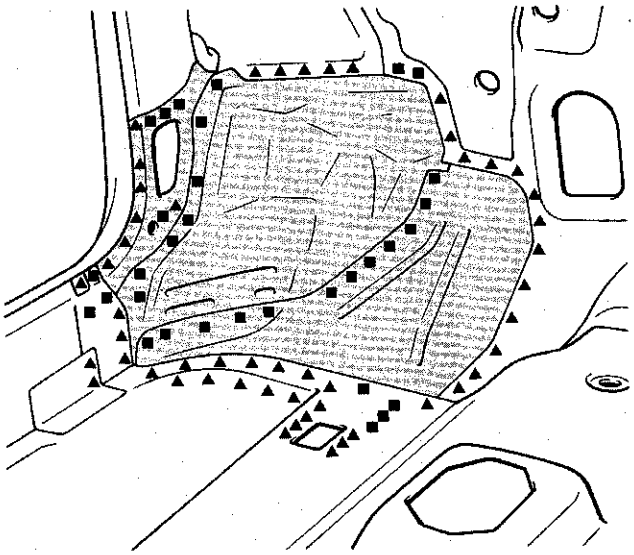

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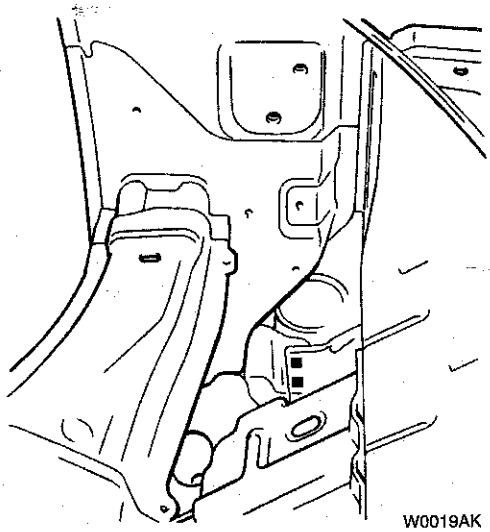
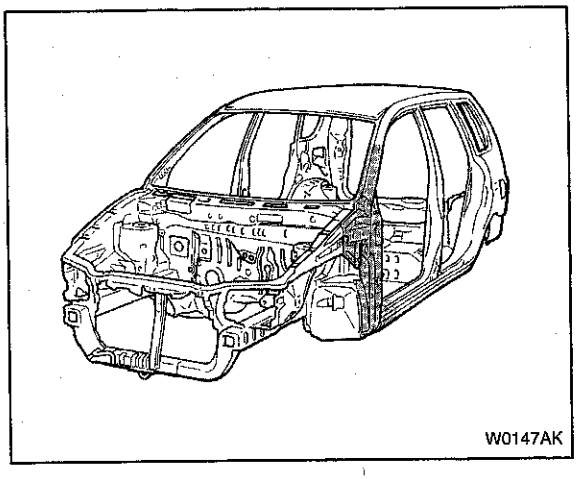


W0019AK

H

FRONT PILLAR



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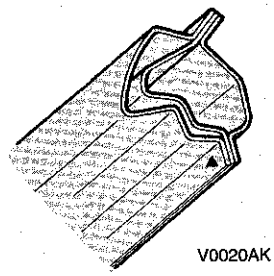
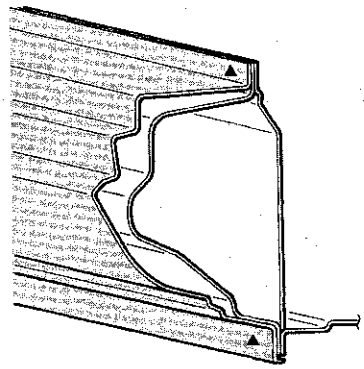
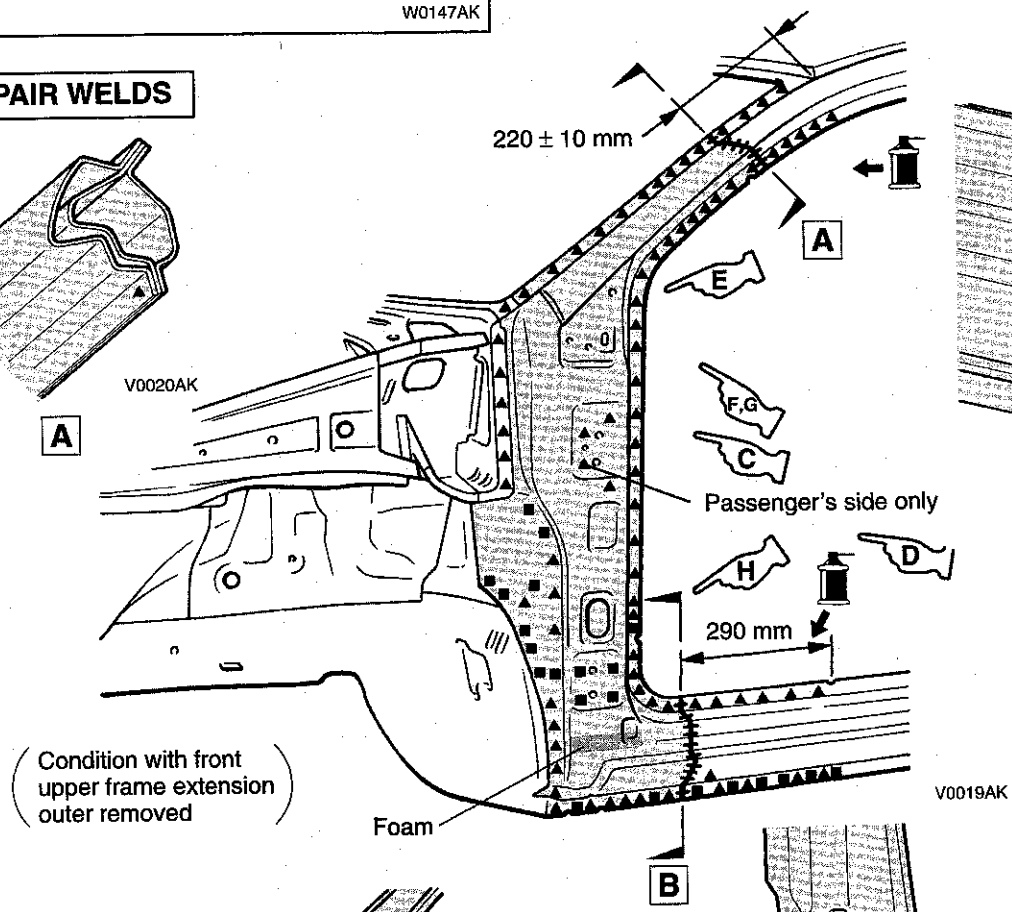
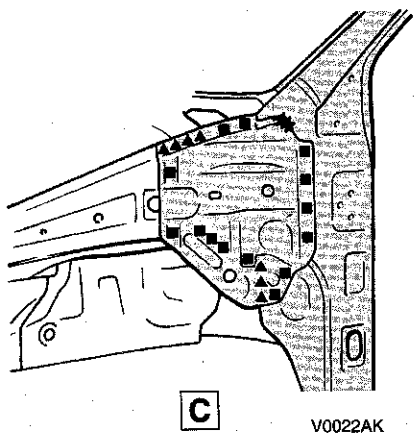
■ ■ ▲ ▲	MIG plug welding ■ indicates two panels to be welded ▲ indicates three panels to be welded
+ + + +	MIG spot welding
⫴⫴⫴⫴⫴⫴⫴⫴⫴⫴	MIG arc welding (continuous)
∞∞∞∞∞∞∞∞∞∞	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

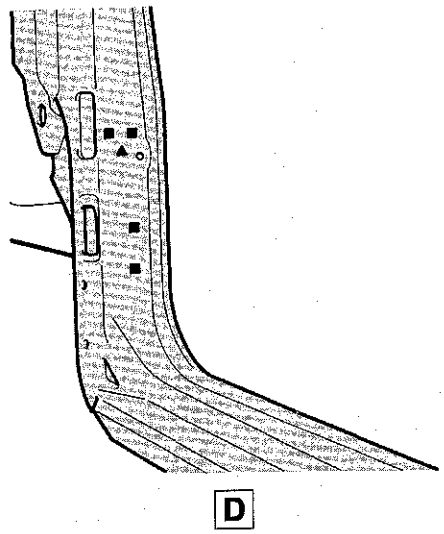
REPAIR WELDS



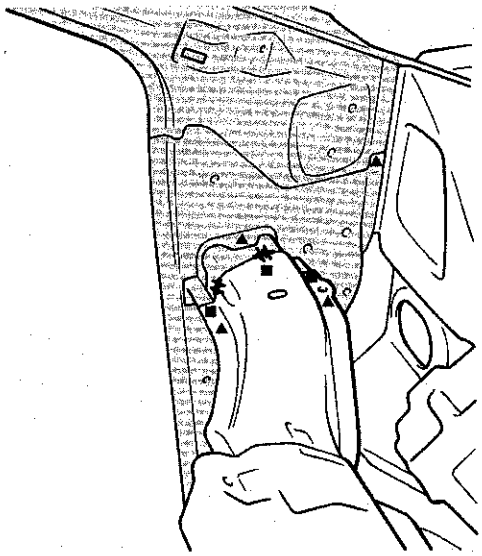








Caution
Use equipment (such as a pneumatic saw) which does not produce heat when repairing locations where foam is used, otherwise the foam may ignite.



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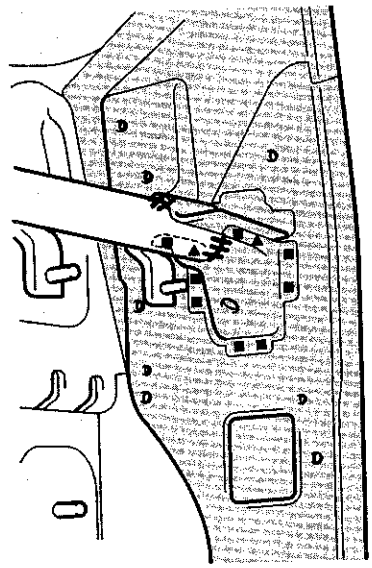
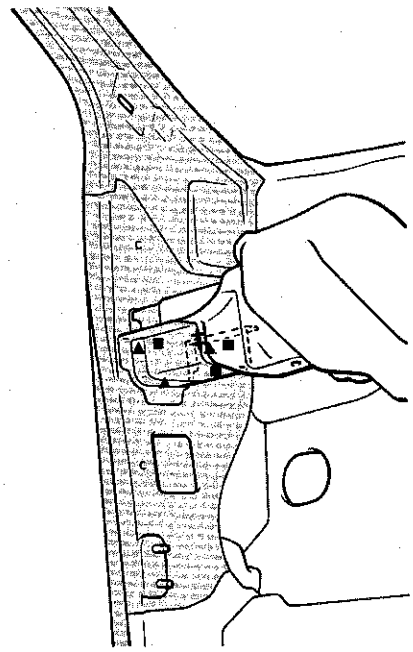


V0025AK

F (Passenger's side)



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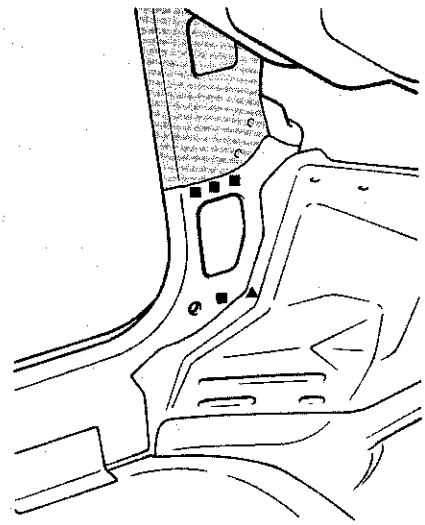


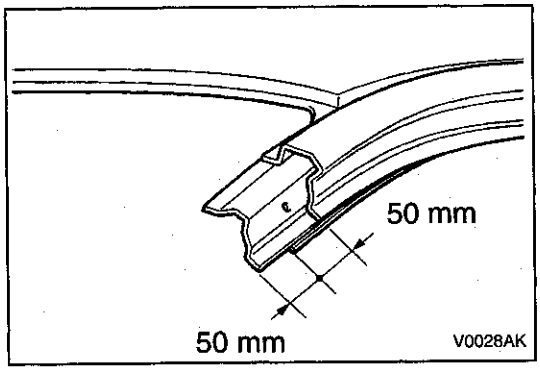
V0027AK

H

NOTES WITH REGARD TO REPAIR WORK

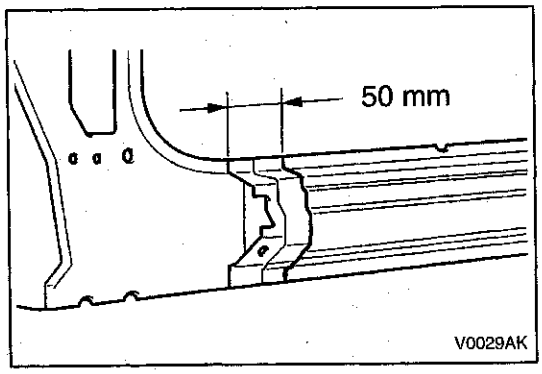
REMOVAL

(1) On the side sill, cut both the front pillar reinforcement, lower and side outer panel simultaneously.

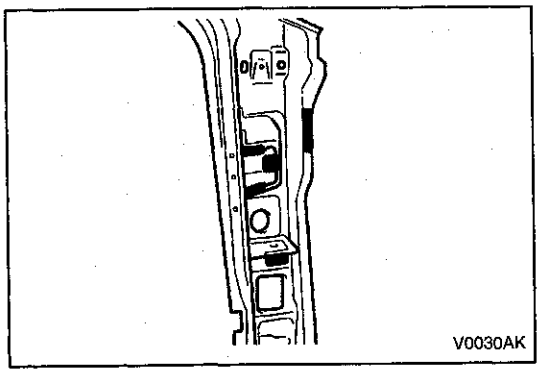


INSTALLATION

(1) On the front pillar, cut away only the front pillar, inner, upper 50 mm above the cutting position of the body side. Then, move up the cutting position by 50 mm to cut and remove only the side outer panel.

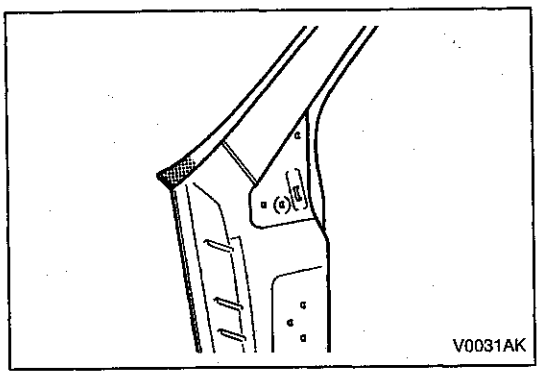


(2) On the side sill, cut away only the side outer panel 50mm behind the cutting position on the body side.

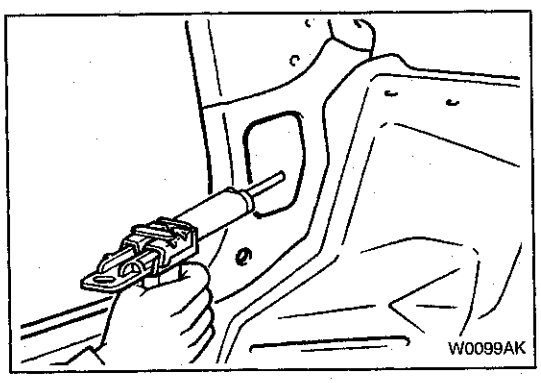


(3) Apply adhesive to the positions shown to install the front pillar reinforcement.
■ : Adhesive

Adhesive	Type	Brand
	Epoxyresin adhesive	3M DP-420



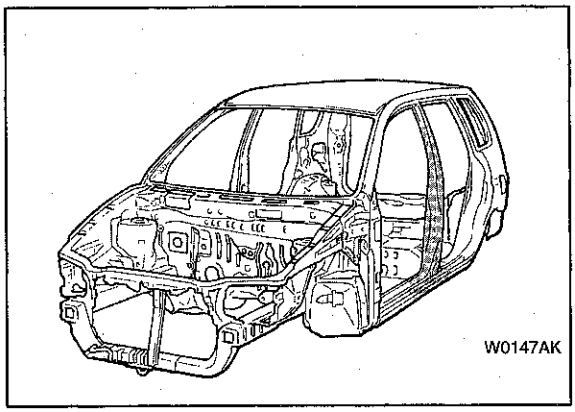
(4) Apply body sealant to the position shown to install the side outer panel.
▒ : Body sealant



(5) Inject foam with an applicator gun from the position shown.
Foam: 3M ULTRAPRO Panel foam-Yellow (Part No. 08458)
Applicator Gun (Part No. 08190 or 08191)

Caution
Warm the panel up to more than 18°C with a dryer or the like when it is cold.

CENTER PILLAR



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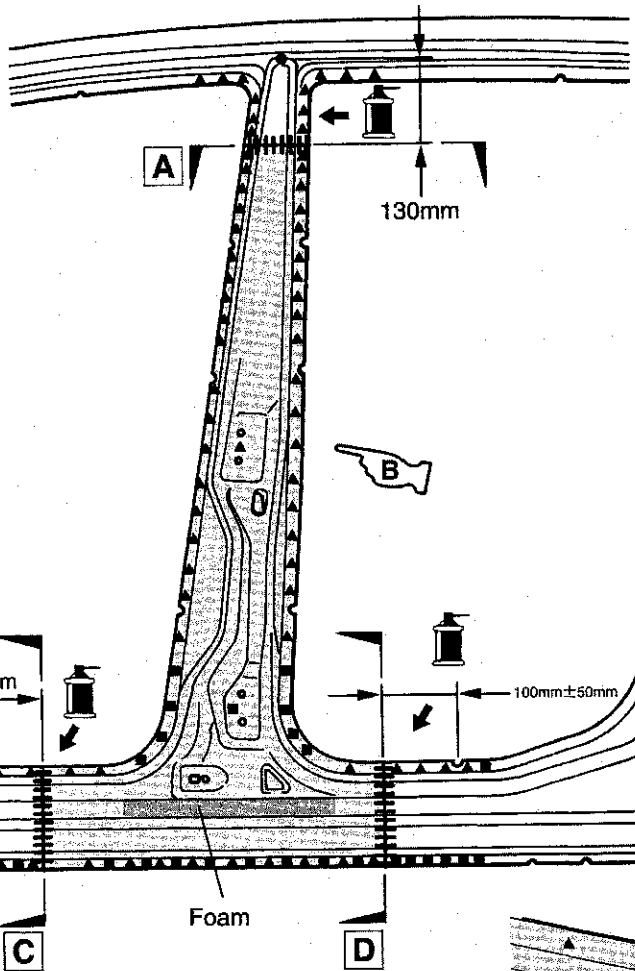
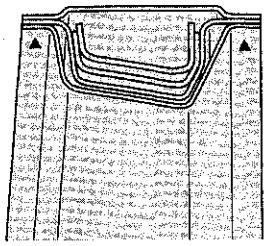
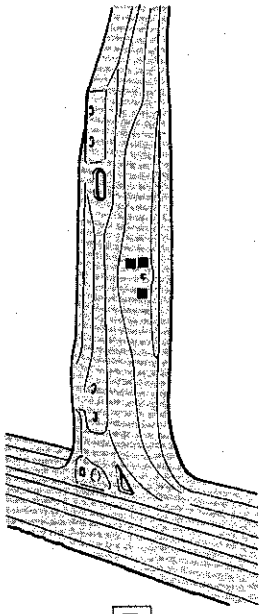
∞∞∞∞∞∞∞∞∞	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

REPAIR WELDS





W0002AK



W0003AK

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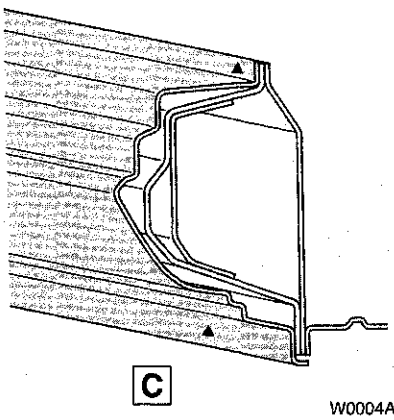

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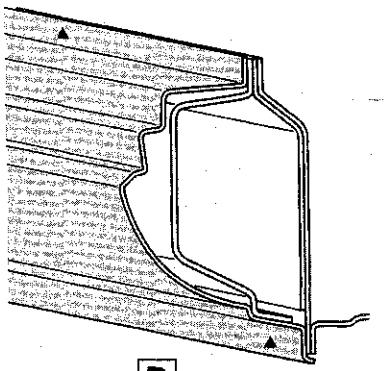
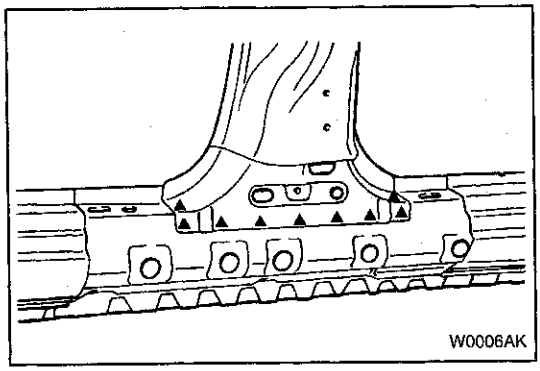


W0005AK

Caution
Use equipment (such as a pneumatic saw) which does not produce heat when repairing locations where foam is used, otherwise the foam may ignite.

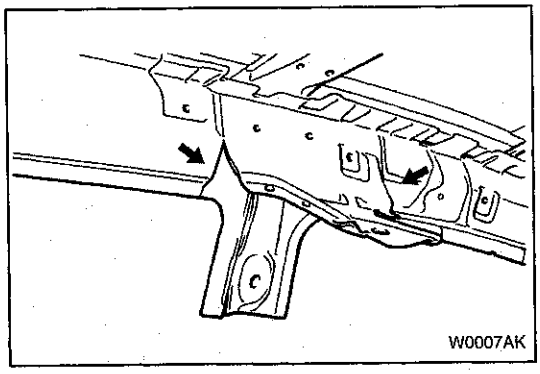

W0006AK

NOTES WITH REGARD TO REPAIR WORK

REMOVAL

(1) Roughly cut the side outer panel as shown to cut apart the welded points between the center pillar reinforcement, side sill outer reinforcement and side sill reinforcement center. Then, cut apart the welded points of the center pillar reinforcement.

(2) When cutting the center pillar, cut the side outer panel, center pillar reinforcement, center pillar reinforcement upper, center pillar seatbelt reinforcement and center pillar inner all together.

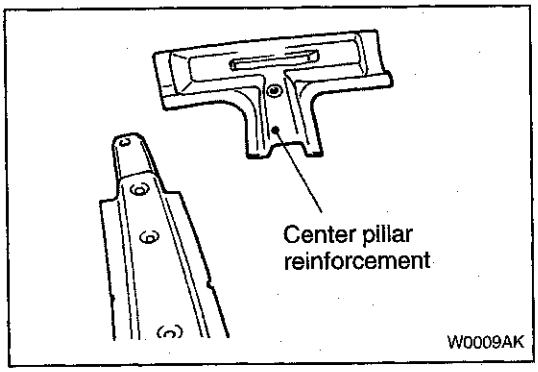

W0007AK

(3) Cut apart the roof side rail, inner as shown. Then remove the center pillar reinforcement, upper and center pillar seatbelt reinforcement still on the body.

INSTALLATION

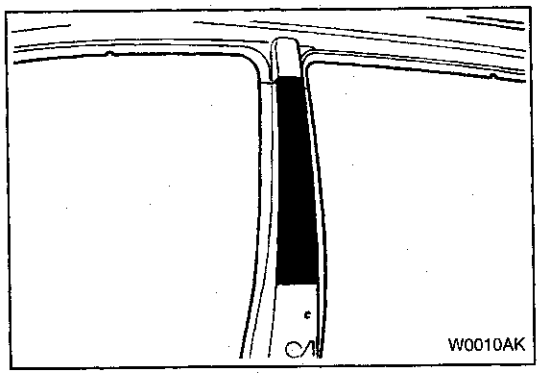
(1) On the center pillar, cut away only the side outer panel 50mm above the cutting position of the body side.

(2) When using a new center pillar reinforcement assembly, cut away the center pillar reinforcement as shown for fitting to the body.

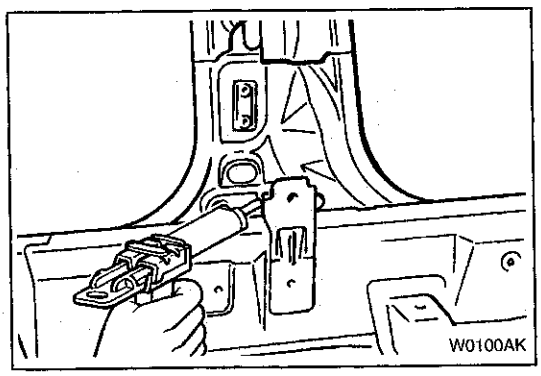


W0009AK

(3) Apply adhesive to the center pillar reinforcement as shown to install the side outer panel.
■ : Adhesive


W0010AK

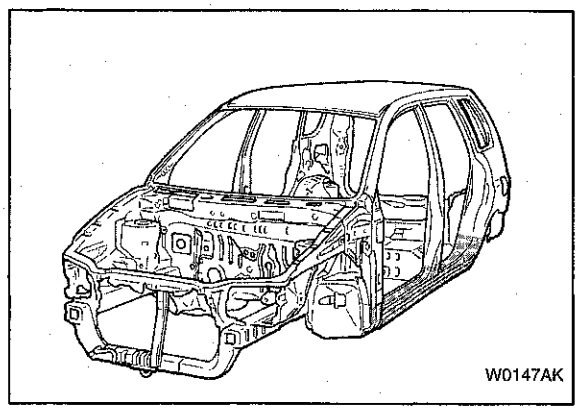
Adhesive	Type	Brand
	Epoxyresin adhesive	3M DP-420


W0100AK

(4) Inject foam with an applicator gun from the position shown.
Foam: 3M ULTRAPRO Panel foam-Yellow (Part No. 08458)
Applicator Gun (Part No. 08190 or 08191)

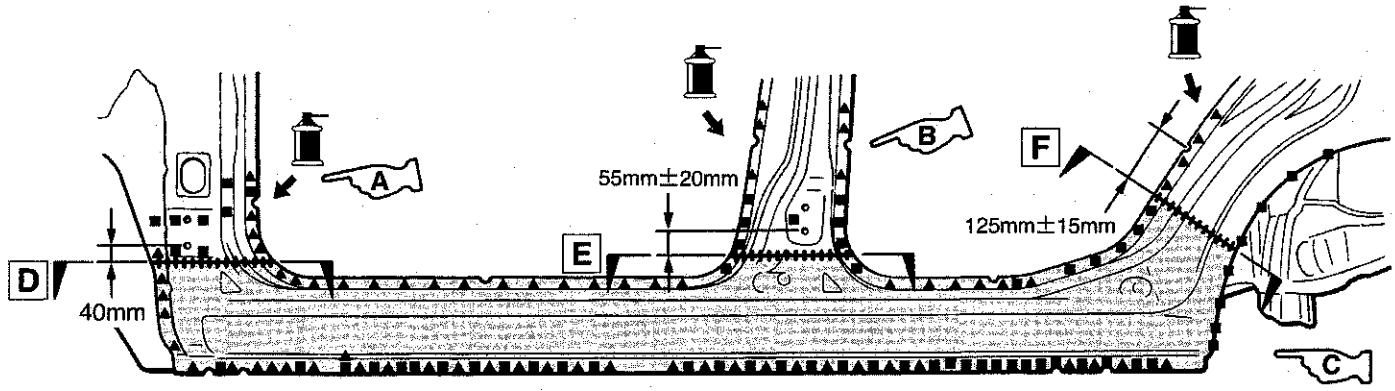
Caution
Warm the panel up to more than 18°C with a dryer as the like when it is cold.

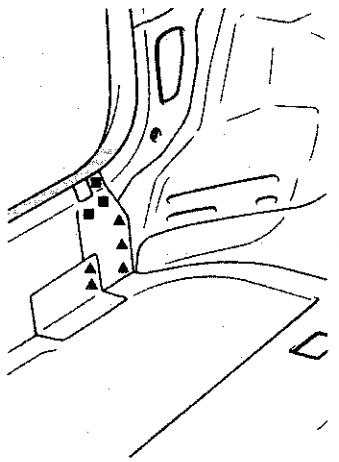
SIDE SILL



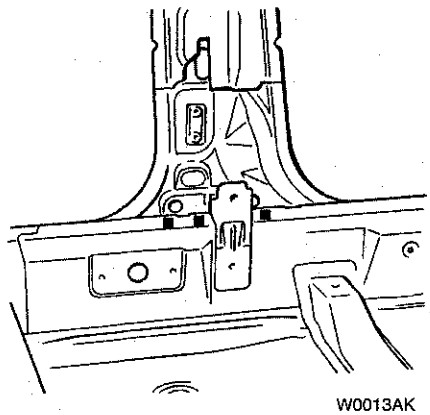
Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding ■ indicates two panels to be welded ▲ indicates three panels to be welded
+ + + +	MIG spot welding
⫴⫴⫴⫴⫴⫴⫴⫴⫴⫴	MIG arc welding (continuous)
∞∞∞∞∞∞∞∞∞	Braze welding
	Anti-corrosion agent application locations (Use access holes to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

REPAIR WELDS





A



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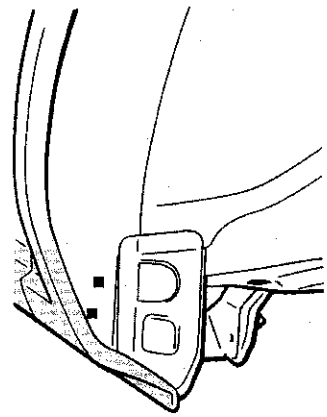

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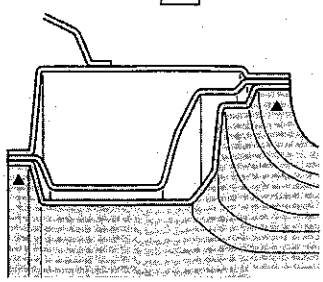

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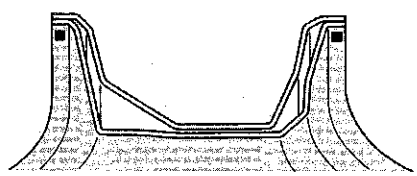
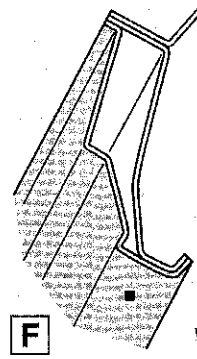


E

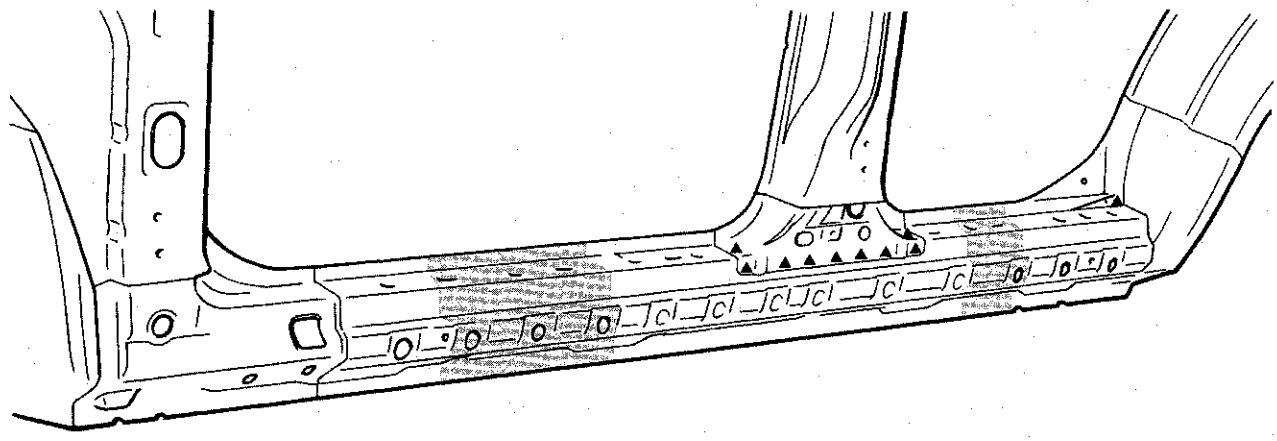


F

Caution
Use equipment (such as a pneumatic saw) which does not produce heat when repairing locations where foam is used, otherwise the foam may ignite.

NOTE
Replace parts in accordance with the extent of the damage.

Caution
Cut the side sill outer reinforcement 50mm away from the butt-welding of the side outer panel.



W0017AK

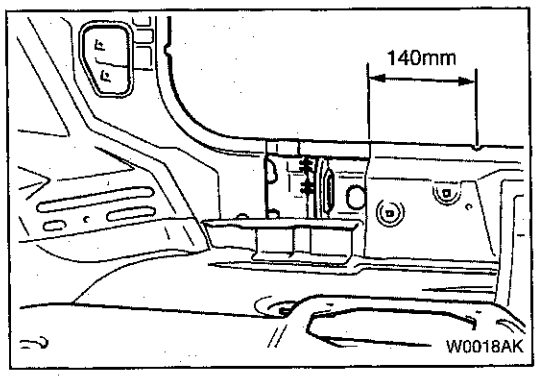
Welding points on the side sill outer reinforcement
(With the side outer panel removed)

: Area that can be cut

NOTES WITH REGARD TO REPAIR WORK

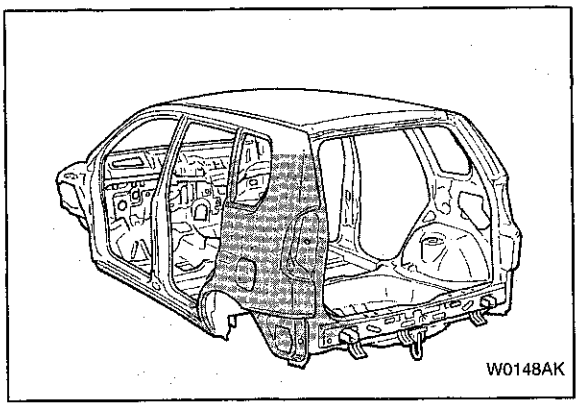
REMOVAL

Caution
Take care not to damage the front pillar reinforcement lower, center pillar reinforcement and quarter inner panel lower when cutting the side outer panel



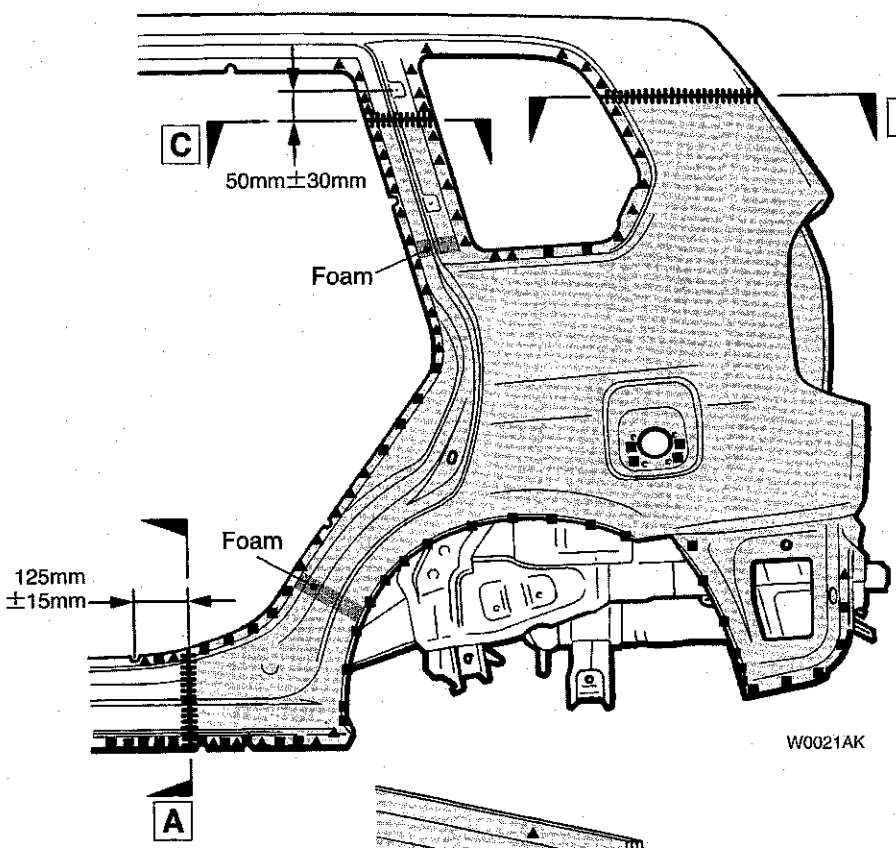
(1) In order to cut the MIG arc welding between the side sill outer reinforcement and front pillar reinforcement lower, cut the front floor side sill inner as shown in the illustration.

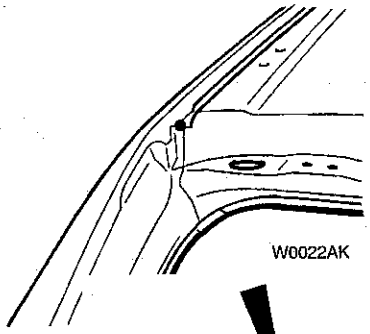
QUARTER, OUTER

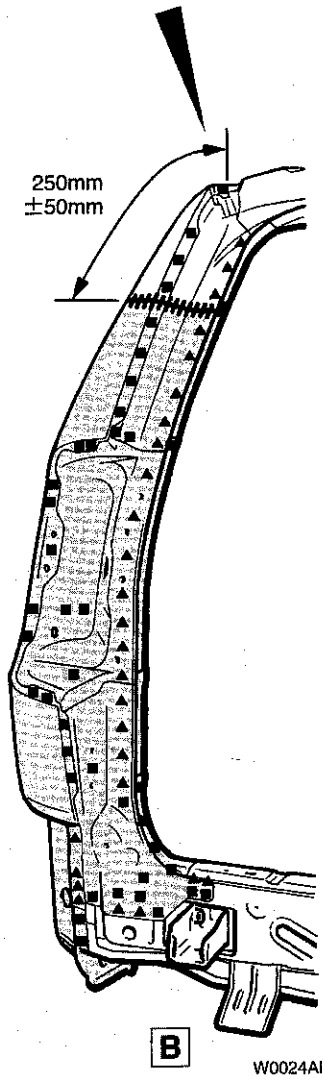


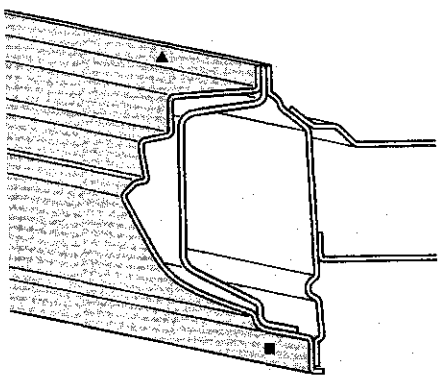
Symbol	Operation description
●●●●	Spot welding
■■▲▲	MIG plug welding ■ indicates two panels to be welded ▲ indicates three panels to be welded
+ + + +	MIG spot welding
⫴⫴⫴⫴⫴⫴⫴⫴⫴⫴	MIG arc welding (continuous)
ooooooooo	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply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

REPAIR WELDS

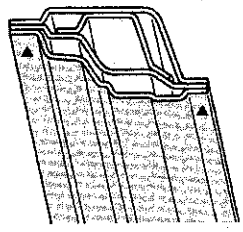






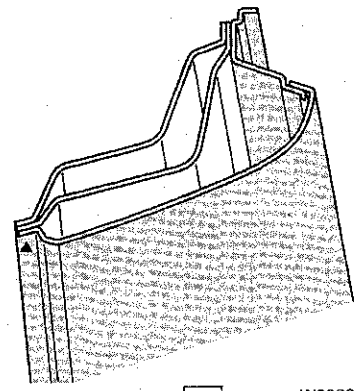


Caution
Use equipment (such as a pneumatic saw) which does not produce heat when repairing locations where foam is used, otherwise the foam may ignite.



W0025AK

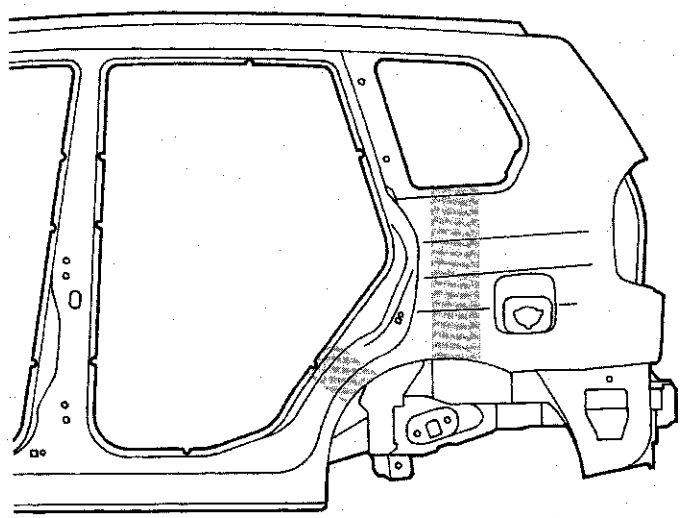
C



D W0026AK

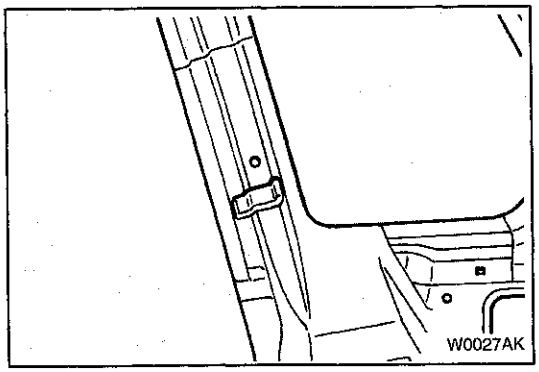
NOTE
Parts can also be replaced depending on the extent of the damage.

Caution
Avoid cutting the fuel filler neck bracket (left side).



V0008AK

: Area that can be cut

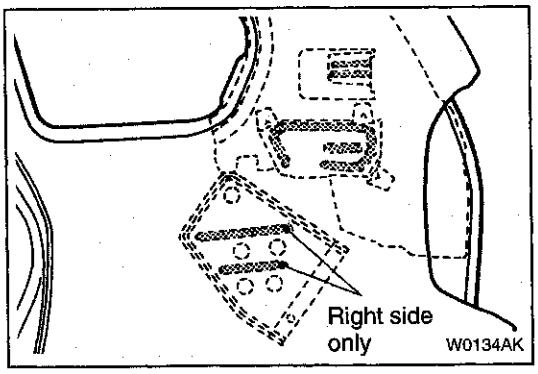


W0027AK

NOTES WITH REGARD TO REPAIR WORK

INSTALLATION

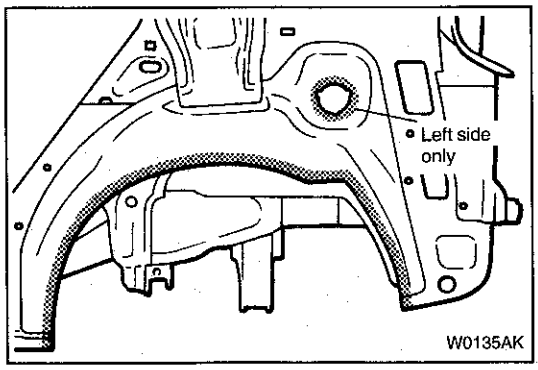
(1) Attach sponge to the rear pillar reinforcement to prevent foam from trickling.

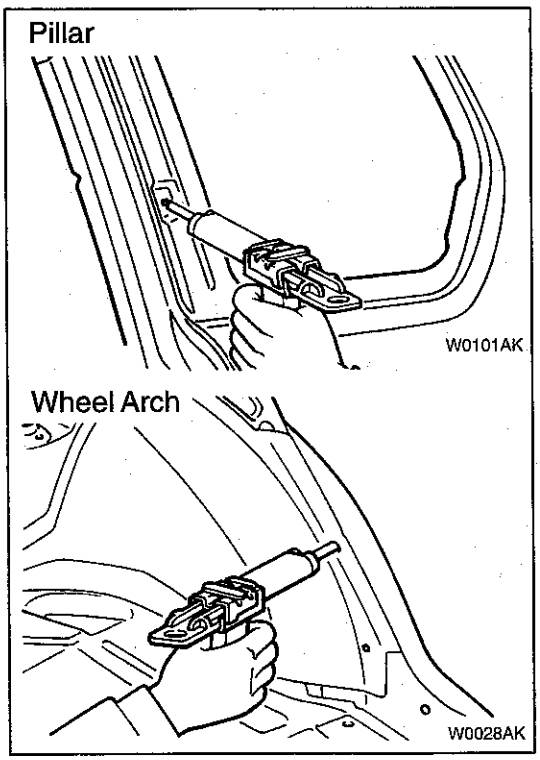


W0134AK

(2) Apply body sealant to the place shown to install the side outer panel on the body

: Body sealant



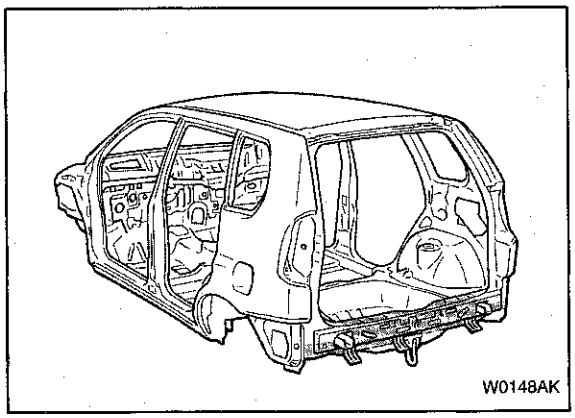


(3) Inject foam with an applicator gun from the position shown.
Foam: 3M ULTRAPRO Panel foam-Yellow (Part No. 08458)
Applicator Gun (Part No. 08190 or 08191)

Caution
Warm the panel up to more than 18°C with a dryer or the like when it is cold.

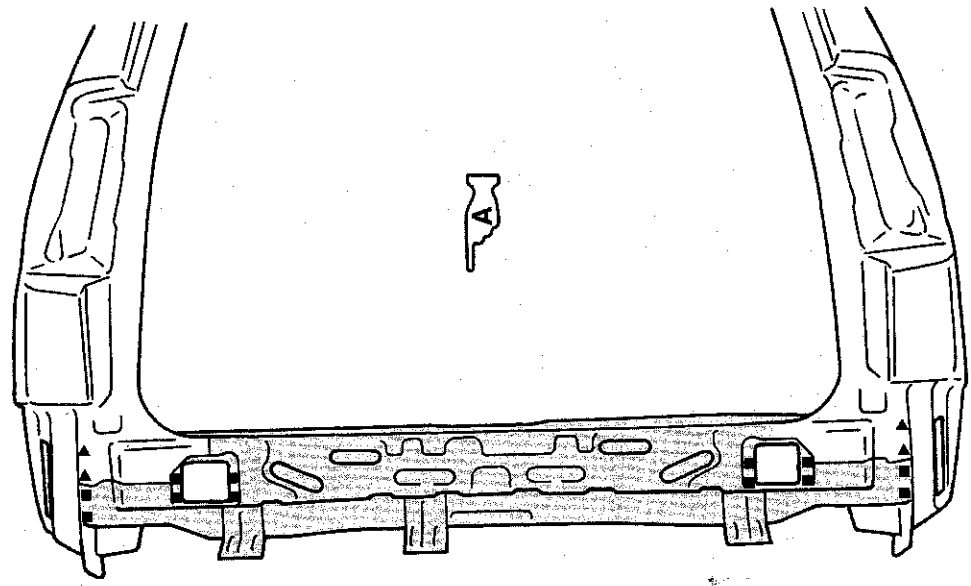
NOTES

REAR END CROSSMEMBER

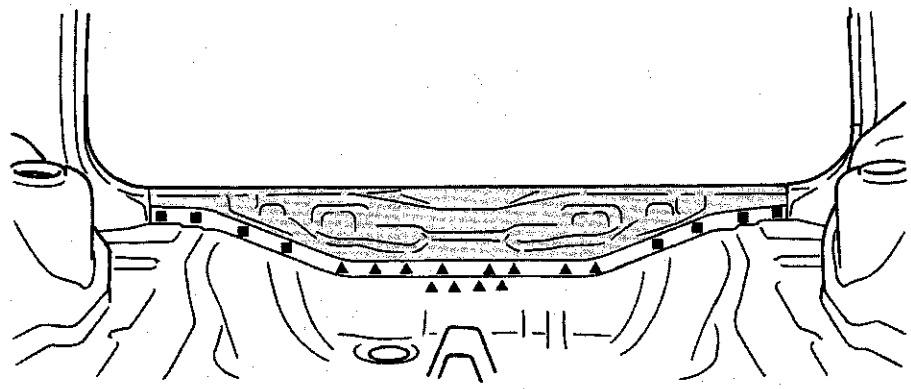

W0148AK

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

REPAIR WELDS



W0029AK


W0030AK

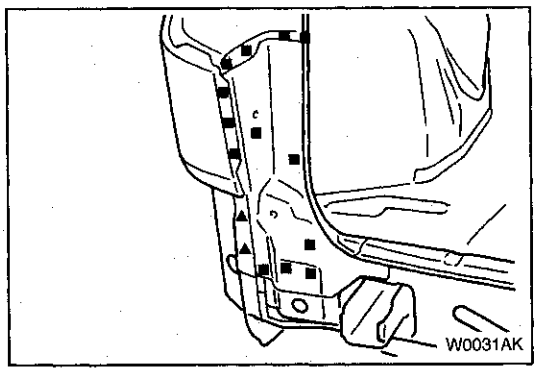
A

NOTES WITH REGARD TO REPAIR WORK

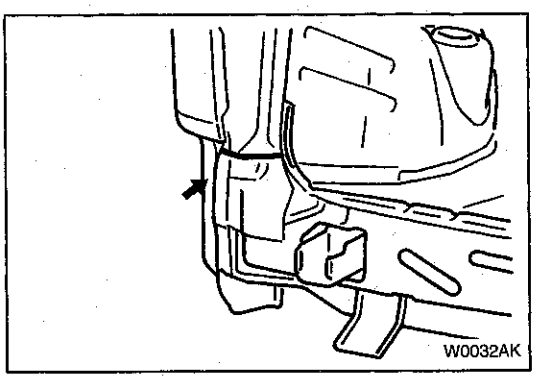
REMOVAL

(1) Remove the quarter extension, inner to get access to the rear end crossmember.

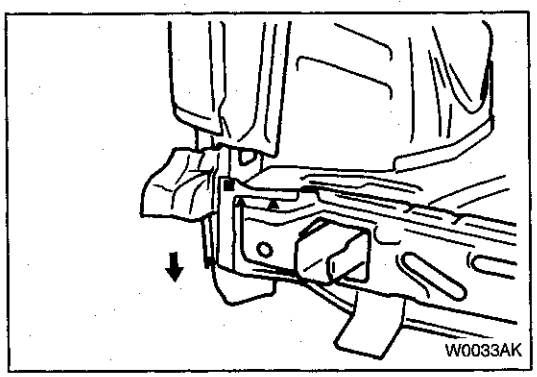
NOTE
See page 3-24, QUARTER, INNER for the welding points of the quarter extension, inner.



(2) Remove the quarter outer extension, lower.

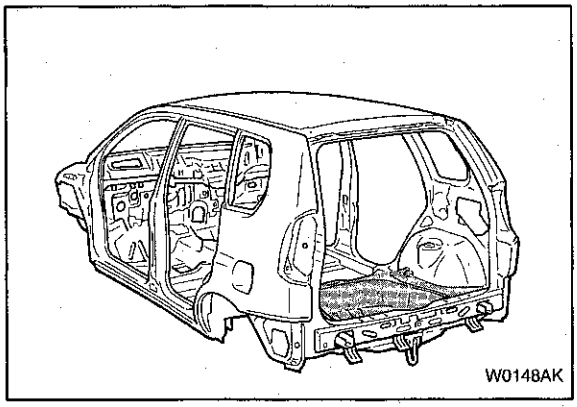


(3) Bend the rear gate pillar reinforcement, lower by making a shallow cutting in the position shown.



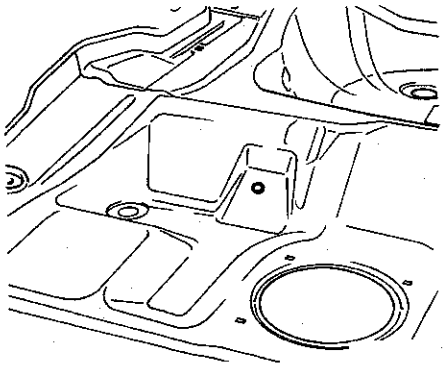
(4) Cut apart the rear end crossmember welded points and push it down to remove.

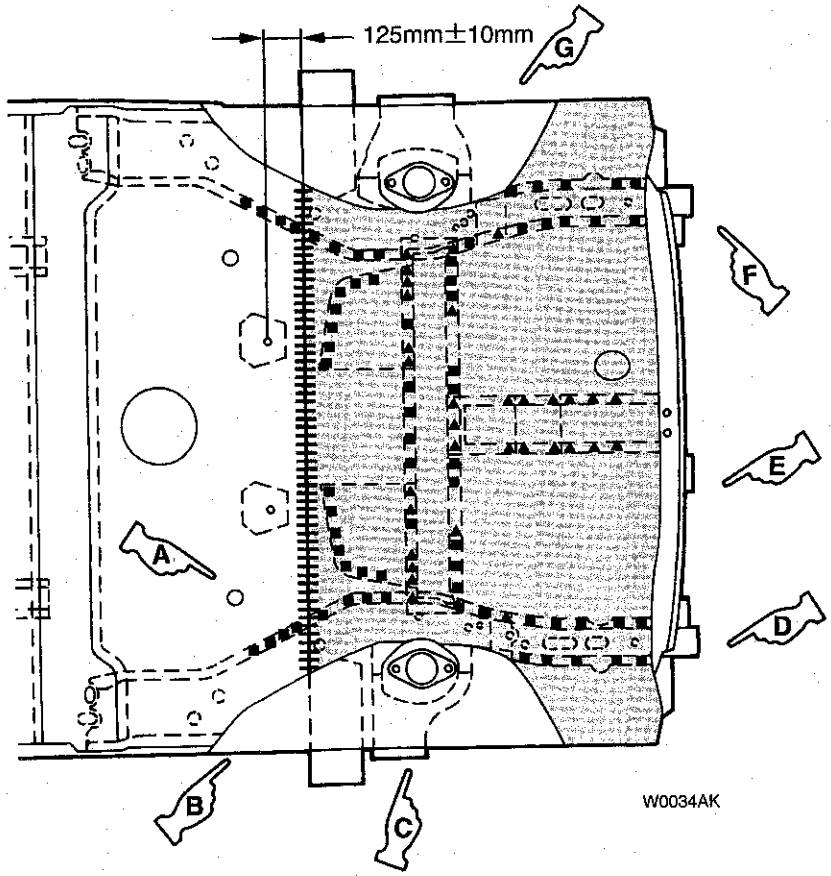
REAR FLOOR


W0148AK

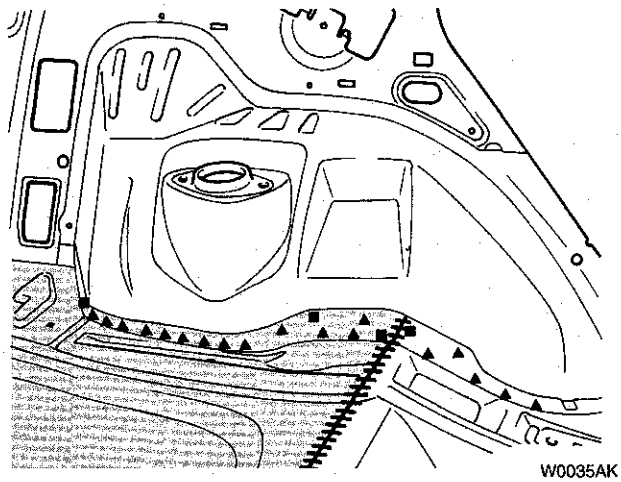
Symbol	Operation description
● ● ● ●	Spot welding
■ ■ ▲ ▲	MIG plug welding ■ indicates two panels to be welded ▲ indicates three panels to be welded
+ + + +	MIG spot welding
⫴⫴⫴⫴⫴⫴⫴⫴⫴⫴	MIG arc welding (continuous)
○○○○○○○○○○	Braze welding
	Anti-corrosion agent application locations (Use access holes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

REPAIR WELDS


W0136AK



W0034AK


W0035AK

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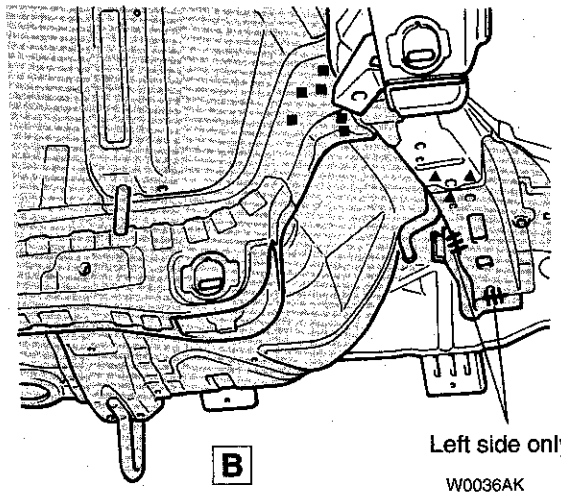
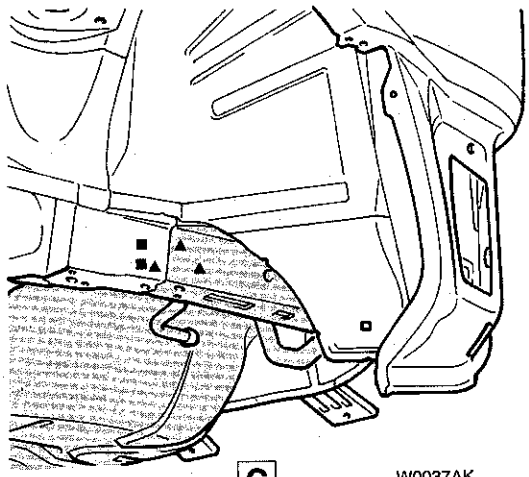
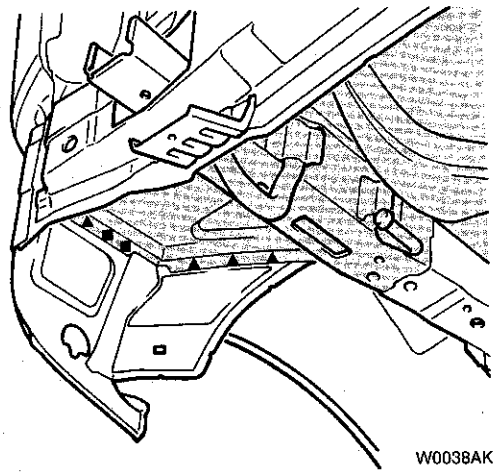


B

W0036AK

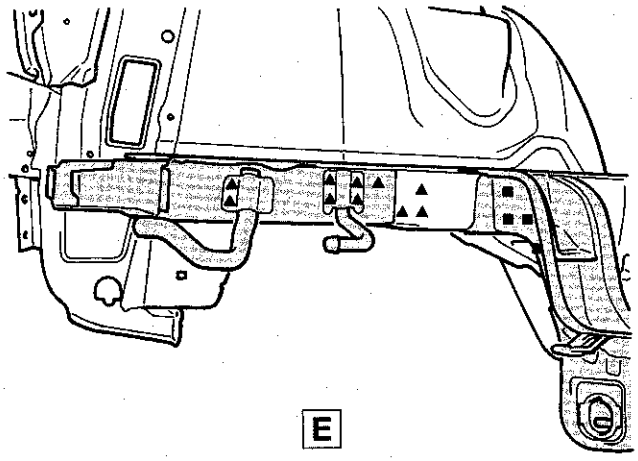


C W0037AK

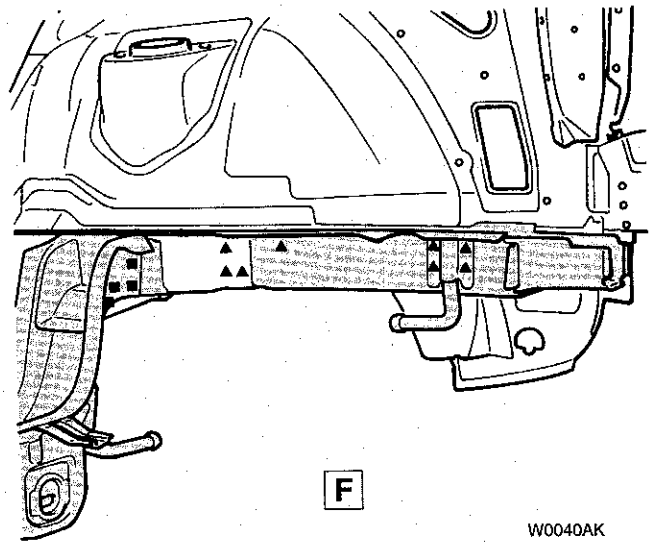


W0038AK

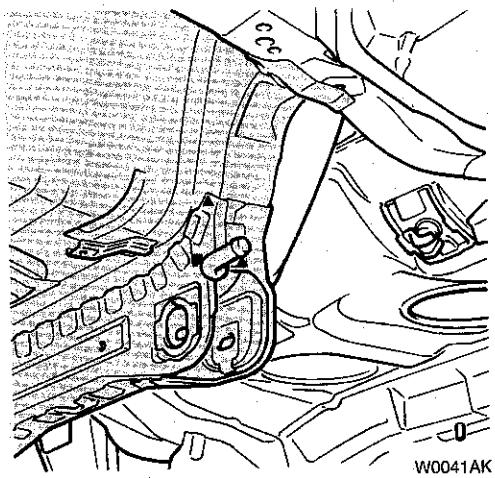
D



E W0039AK



F W0040AK



W0041AK

G

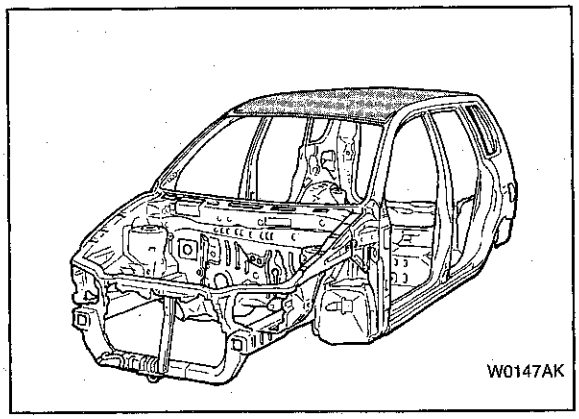
NOTES WITH REGARD TO REPAIR WORK

REMOVAL

(1) Remove the quarter extension, inner and then the rear floor.

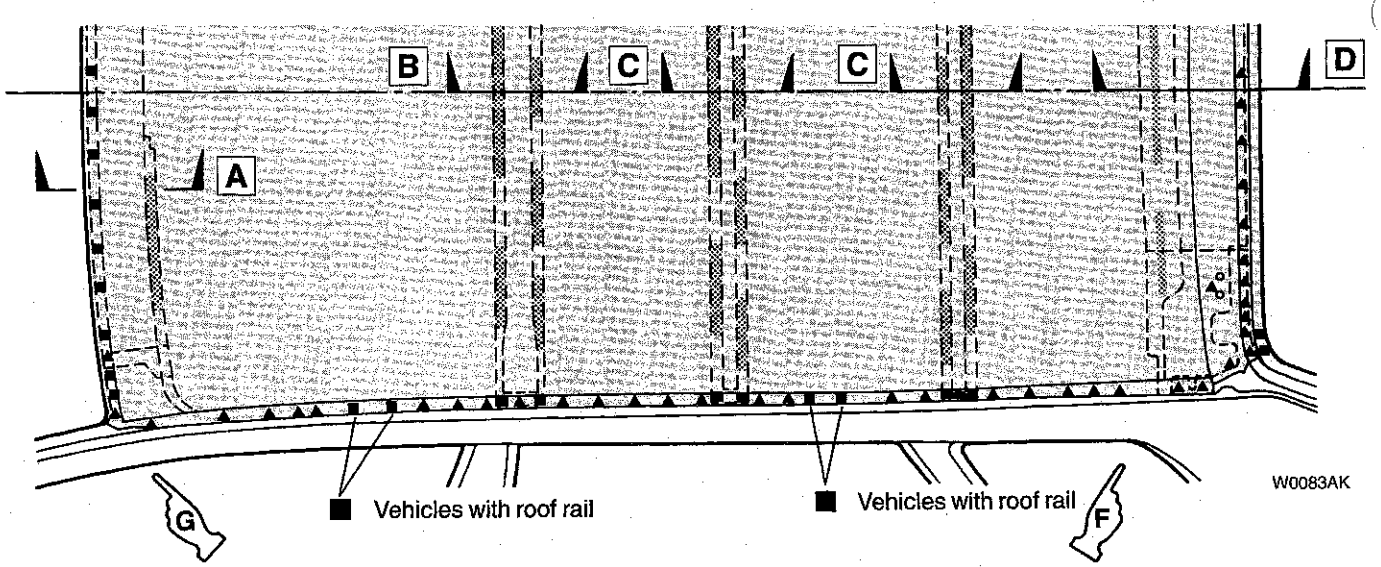
NOTE
See page 3-24, QUARTER, INNER for the welding points of the quarter extension, inner.

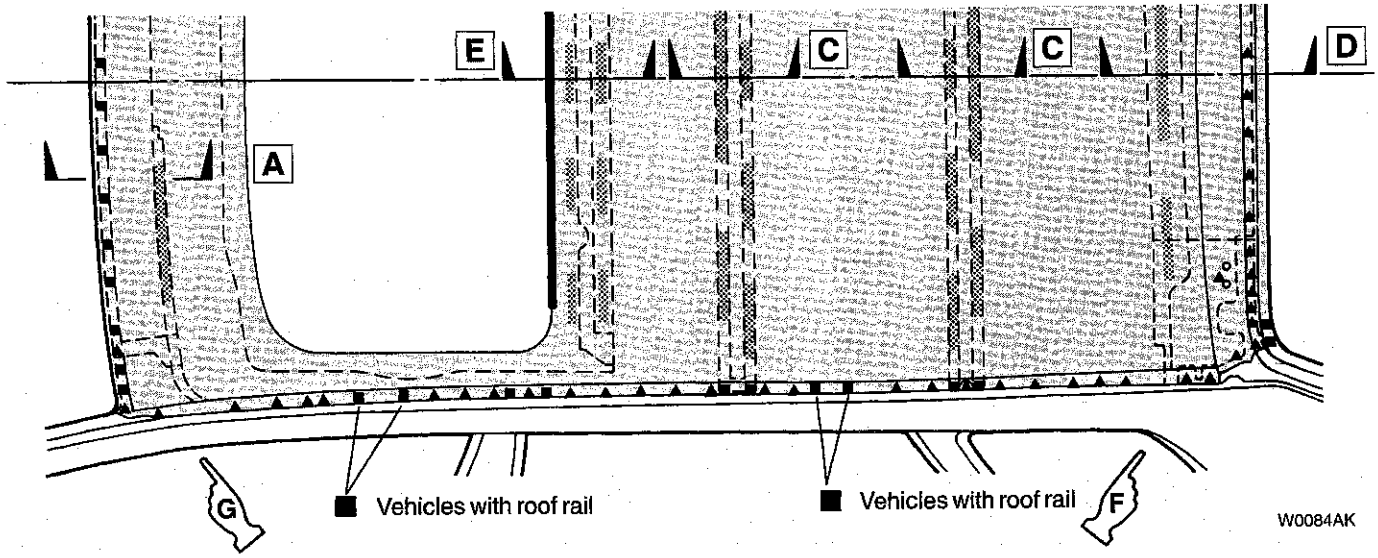
ROOF



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

REPAIR WELDS



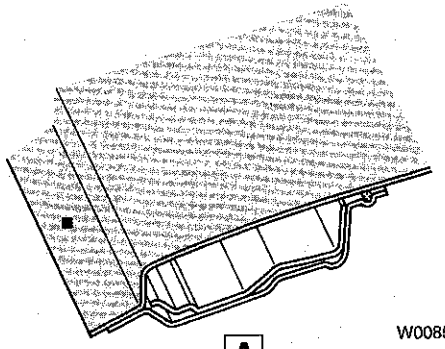


▒ : Adhesive

Adhesive	Type
	Chloroprene-base drying sealant

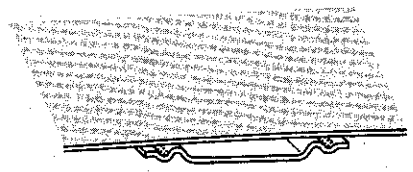
■ : Adhesive

Adhesive	Type	Brand
	Epoxyresin adhesive	3M DP-420



W0085AK

A



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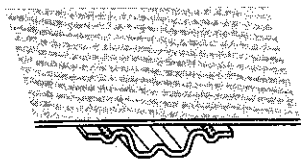

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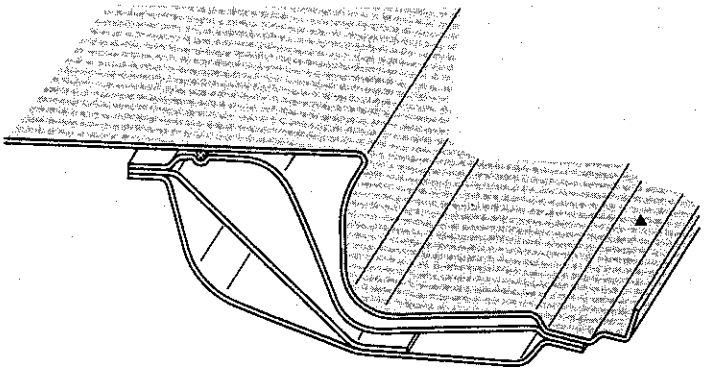

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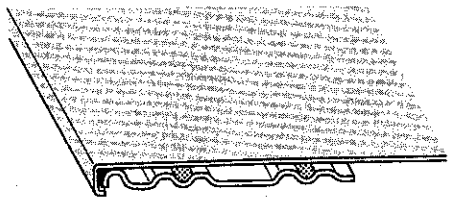

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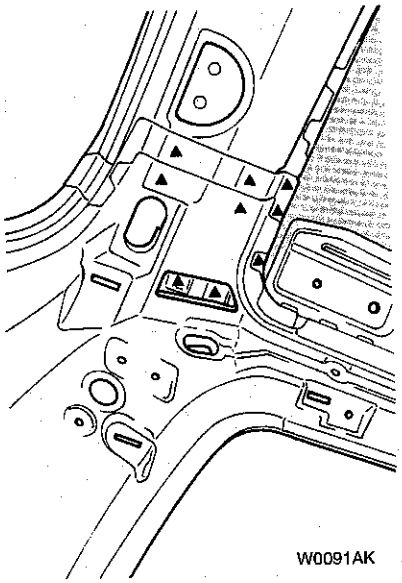

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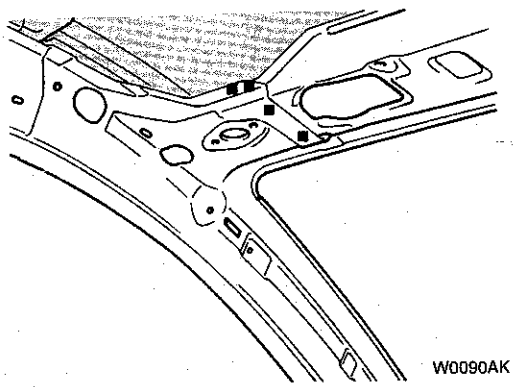

W0090AK

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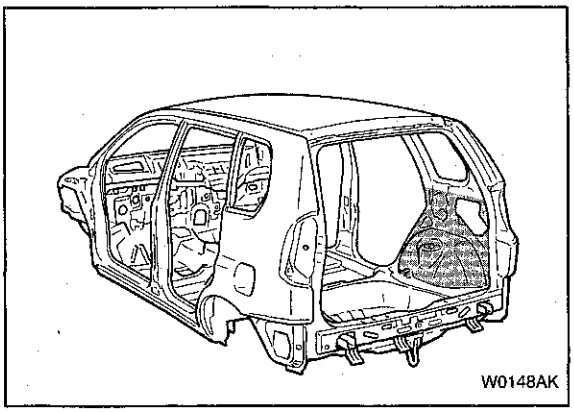
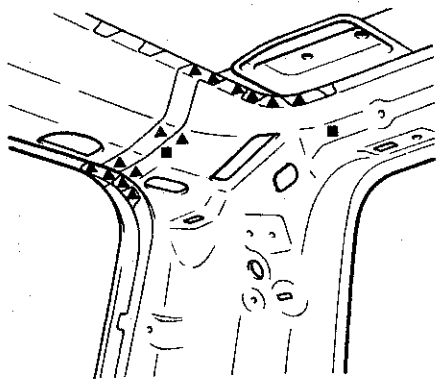
QUARTER, INNER



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

REPAIR WELDS



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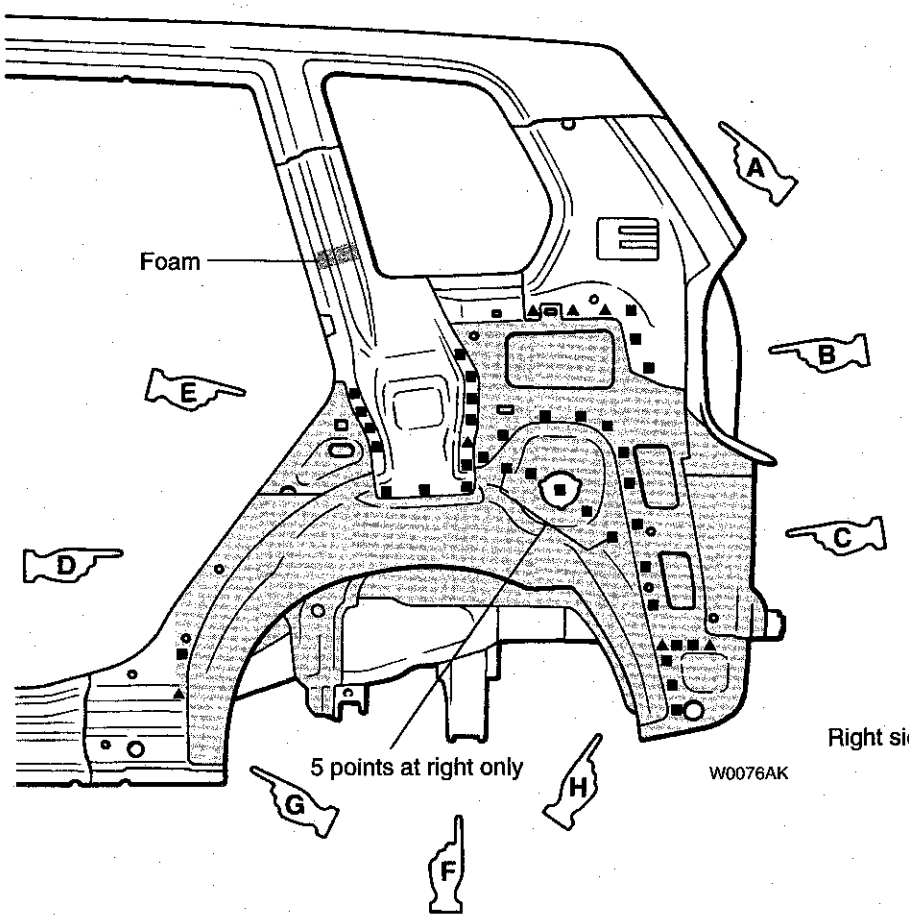
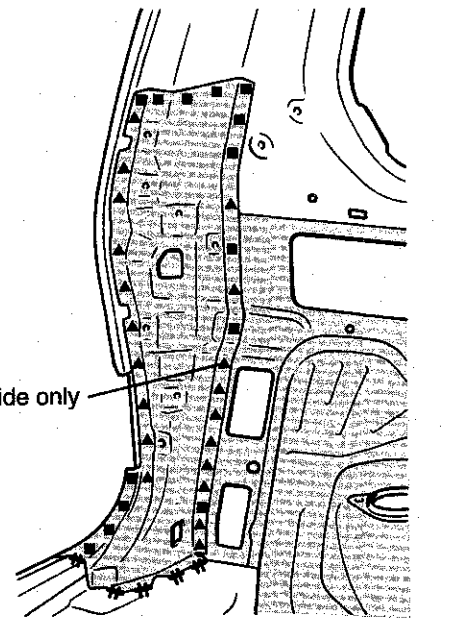


(Conditions with quarter outer removed)



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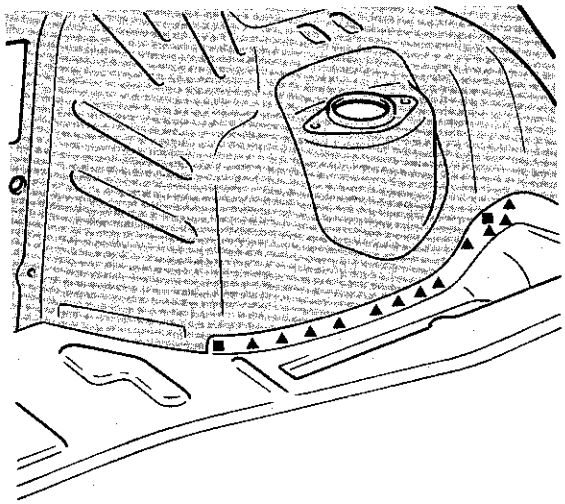

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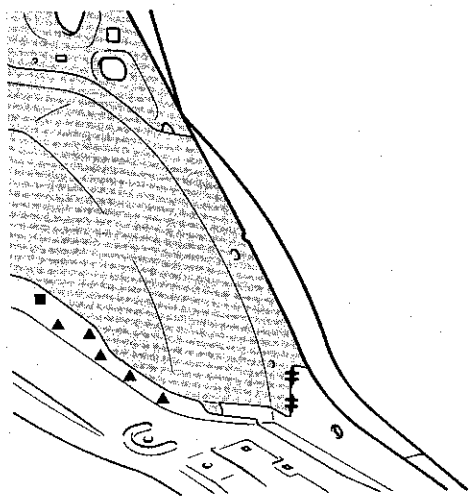

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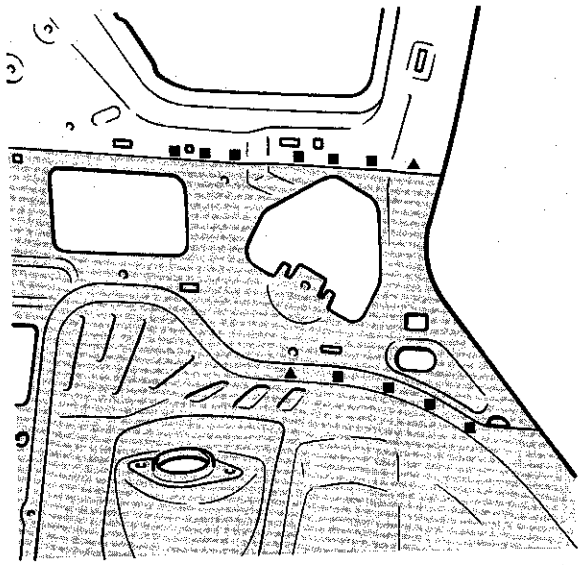

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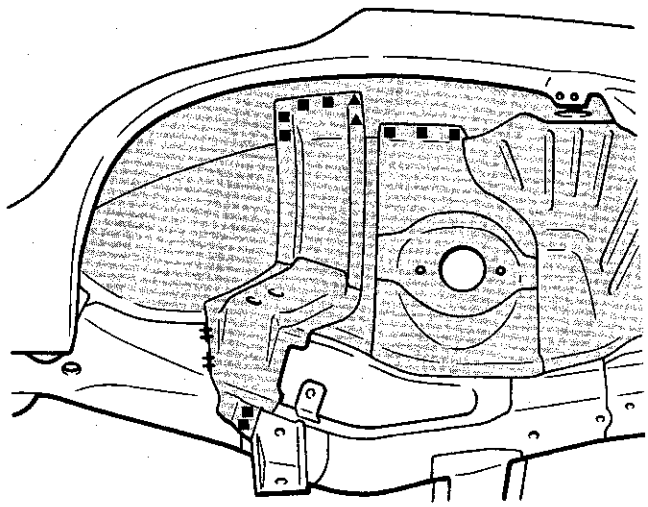

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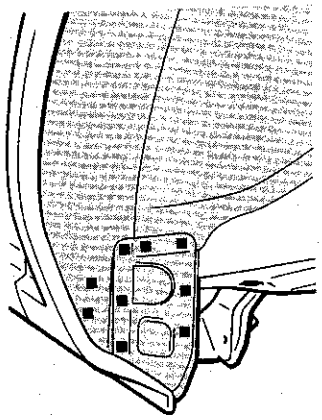

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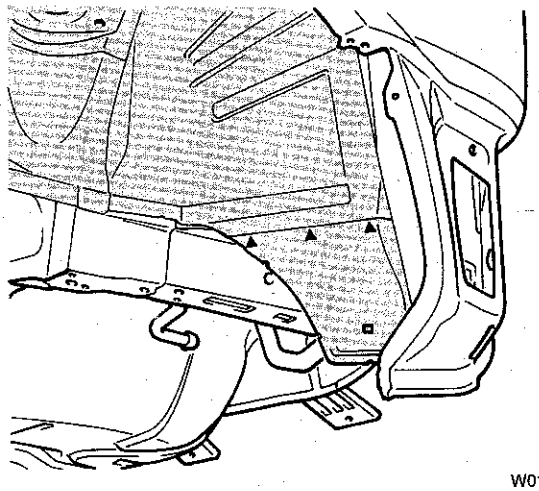
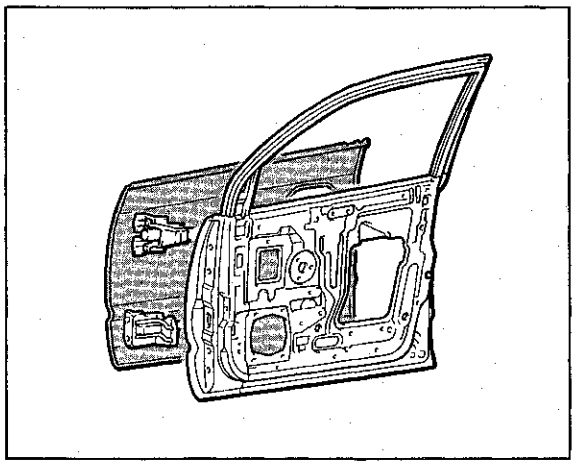
W0082AK



H

W0133AK

FRONT DOOR OUTER PANEL



Symbol	Operation description
● ● ● ●	Spot welding
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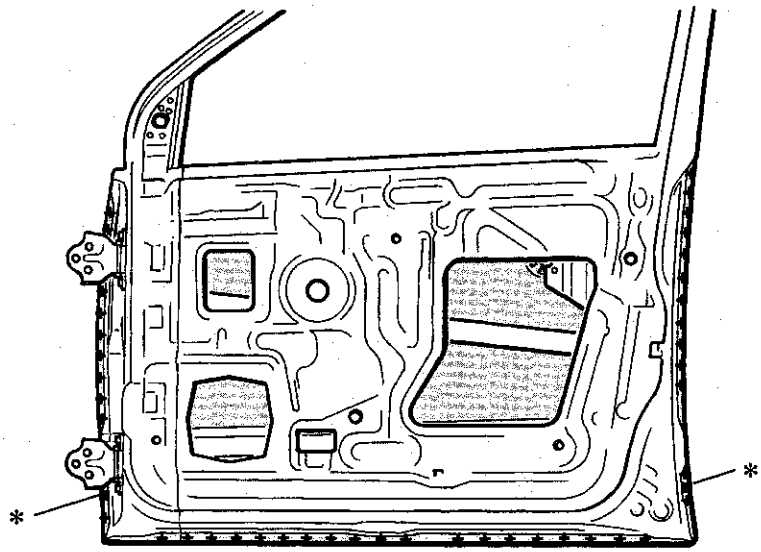
+ + + +	MIG spot welding
⫴⫴⫴⫴⫴⫴⫴⫴⫴⫴	MIG arc welding (continuous)
∞∞∞∞∞∞∞∞∞	Braze welding
	Anti-corrosion agent application locations (Use access holes to apply liberally to butt-welded joints.)

REPAIR WELDS



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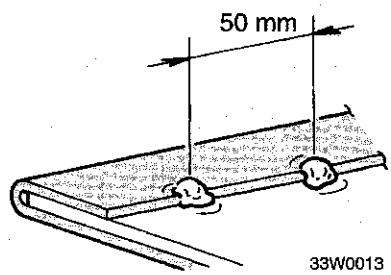

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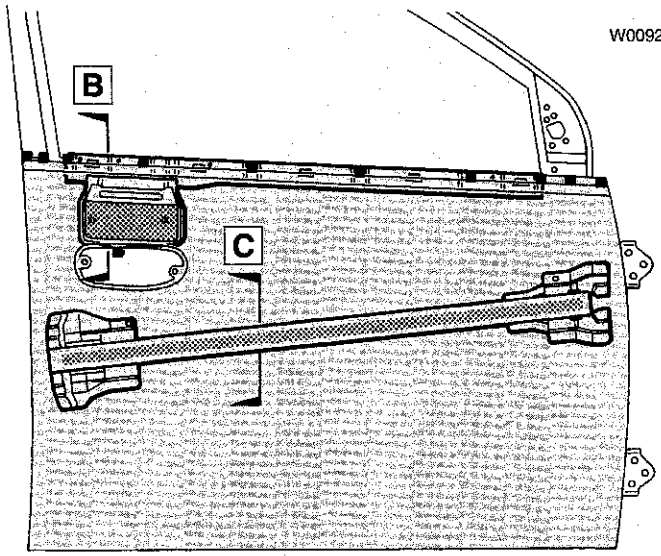
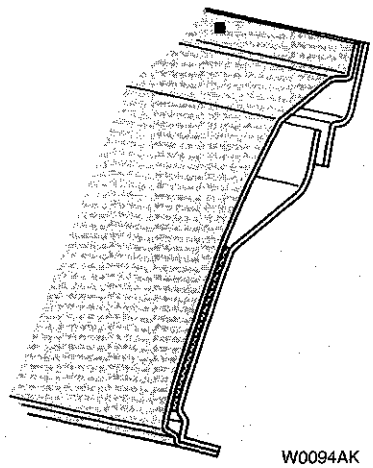


▒ : Adhesive

W0093AK



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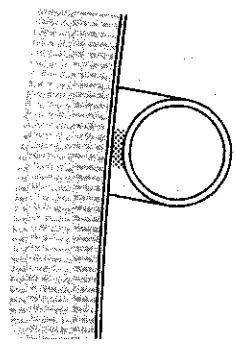


C

W0095AK

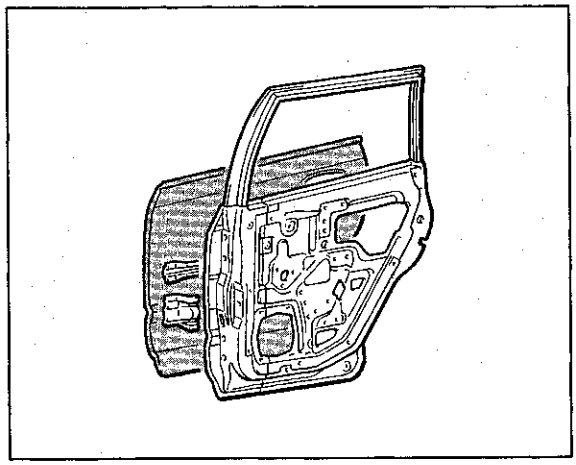
NOTES

(1) Weld point* indicates manufacturer's welding point. (Unnecessary at repair work)

(2) After hemming the door outer panel, MIG spot weld the flange overlap section at a pitch of approx. 50mm.

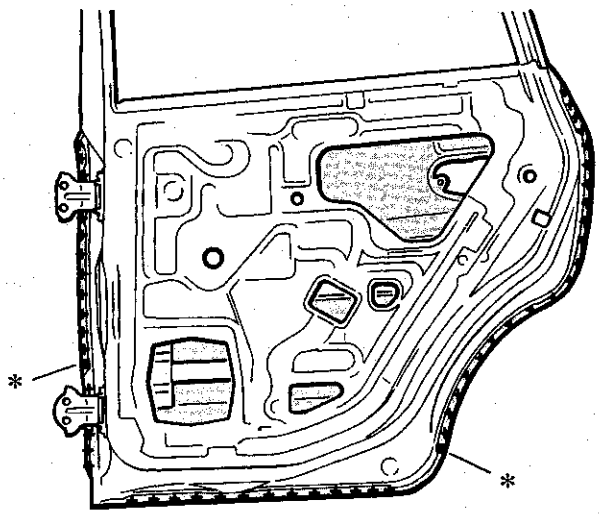
Adhesive	Type
	Chloroprene-base drying sealant

REAR DOOR OUTER PANEL



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

REPAIR WELDS



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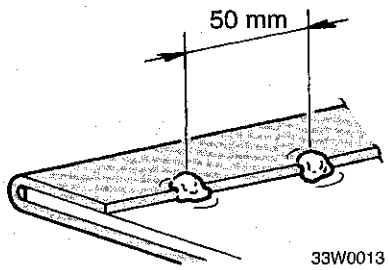

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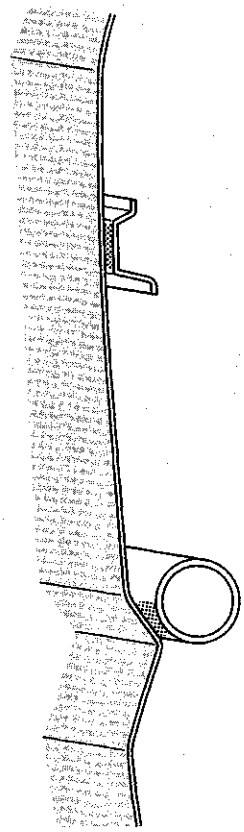

C

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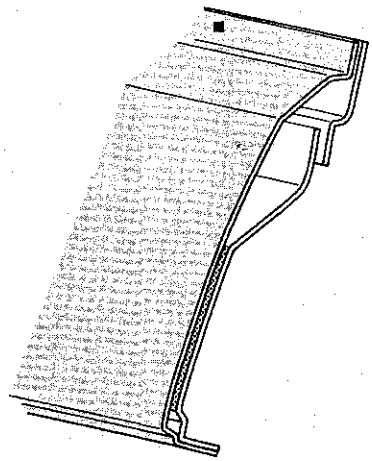

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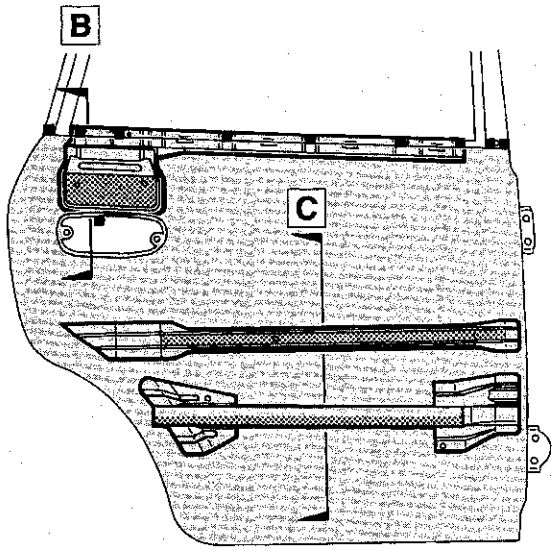


: Adhesive

W0097AK

Adhesive	Type
	Chloroprene-base drying sealant

NOTES

(1) Weld point* indicates manufacturer's welding point. (Unnecessary at repair work)

(2) After hemming the door outer panel, MIG spot weld the flange overlap section at a pitch of approx. 50 mm.

NOTES

4 CORROSION PROTECTION

BODY SEALING LOCATIONS 4-2
FLOOR 4-2
UPPER BODY 4-2
SIDE BODY 4-2
WAX INJECTION LOCATIONS 4-5
ANTICORROSION PRIMER LOCATIONS 4-7
UNDERCOAT APPLICATION LOCATIONS 4-7
UNDERBODY ANTICORROSION AGENT LOCATIONS 4-8

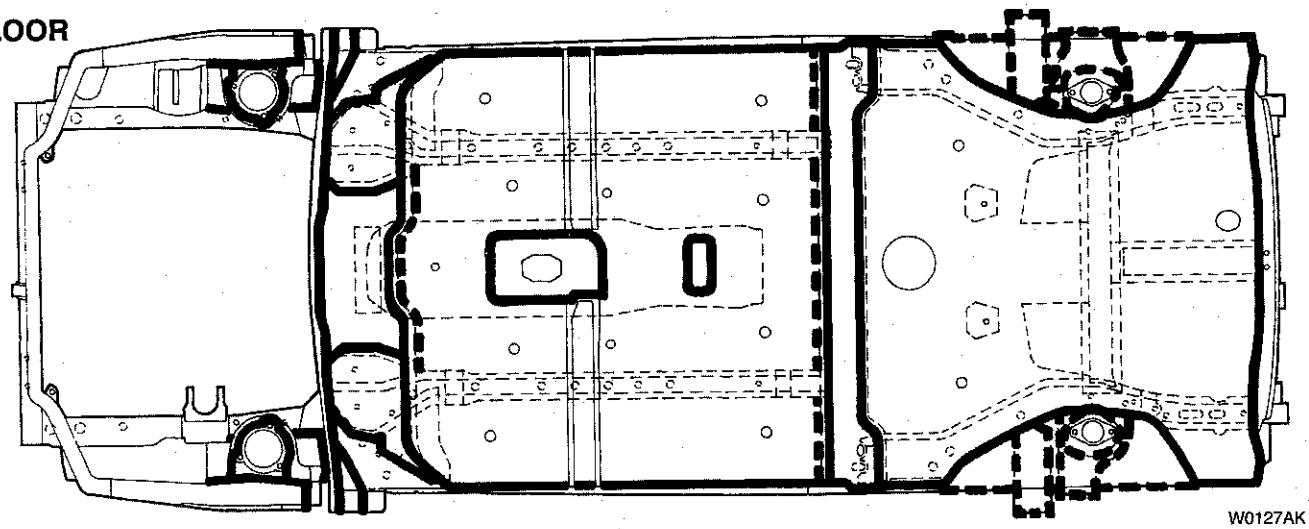
BODY SEALING LOCATIONS

NOTES WITH REGARD TO REPAIR WORK

In places where the sealant can be directly seen on surfaces such as the drip rails, pillars or clinch, and where the appearance of the paint surface is important, apply sealant or wipe away sealant after application to make the amount of sealant even. Be careful not to cover the drain hole.

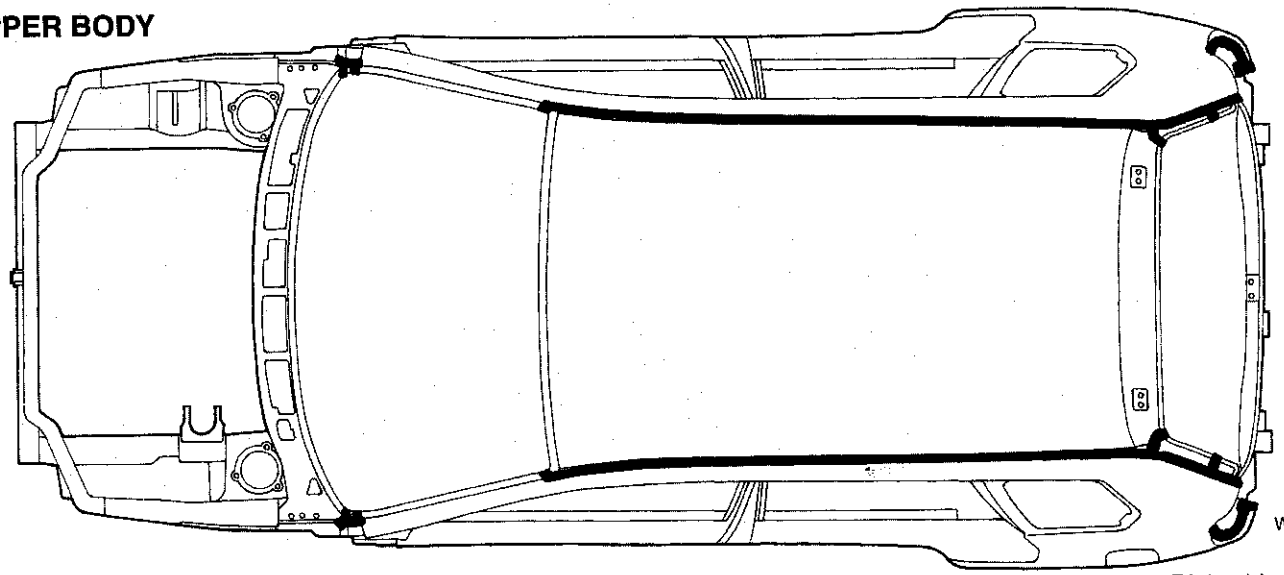
▬ ▬ ▬ Places indicated by thick dotted lines indicate application locations on the underside of the vehicle.

FLOOR



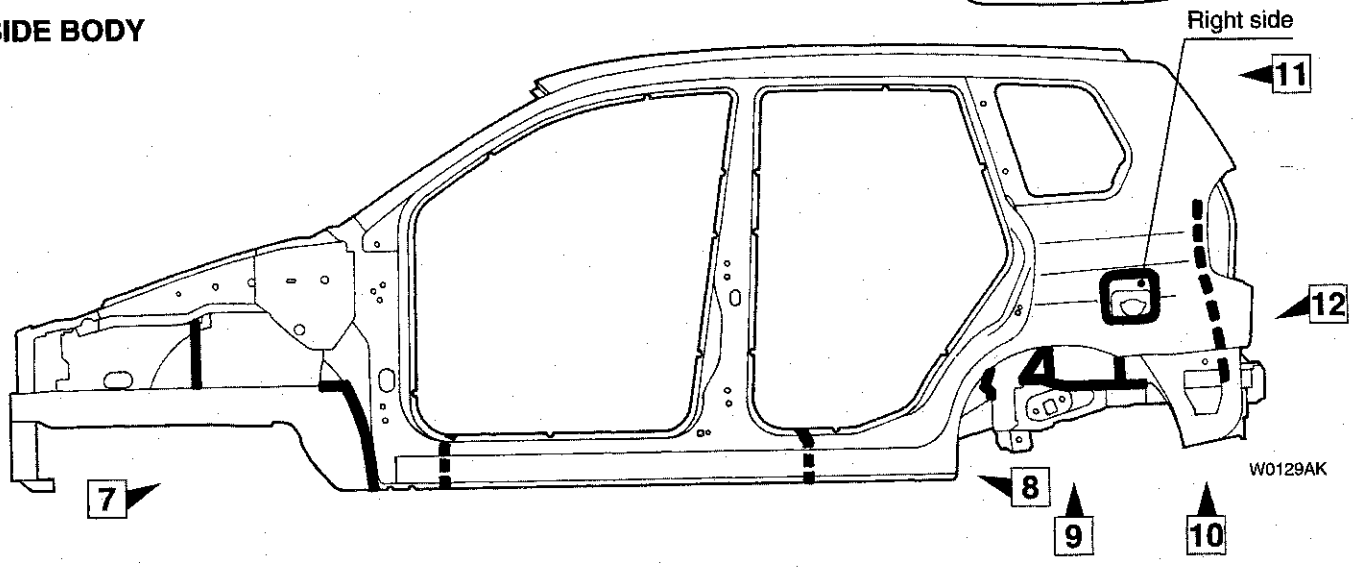
W0127AK

UPPER BODY



W0128AK

SIDE BODY



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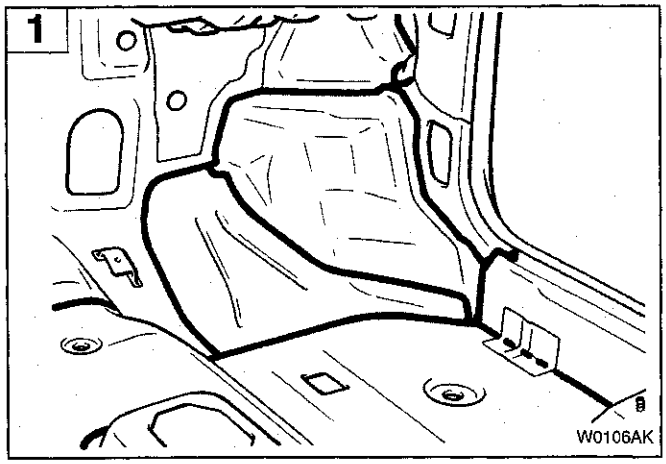
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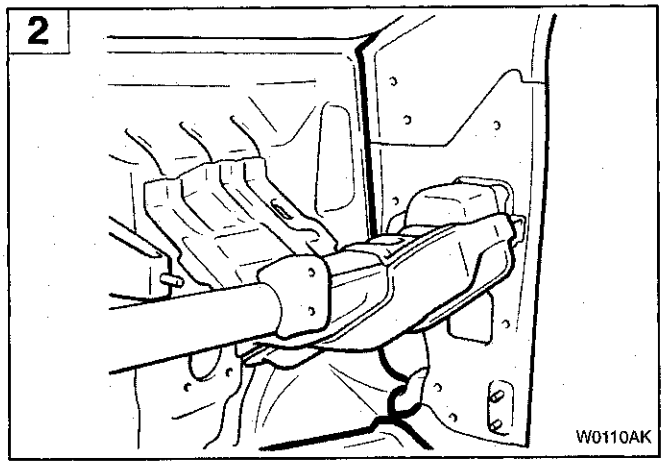
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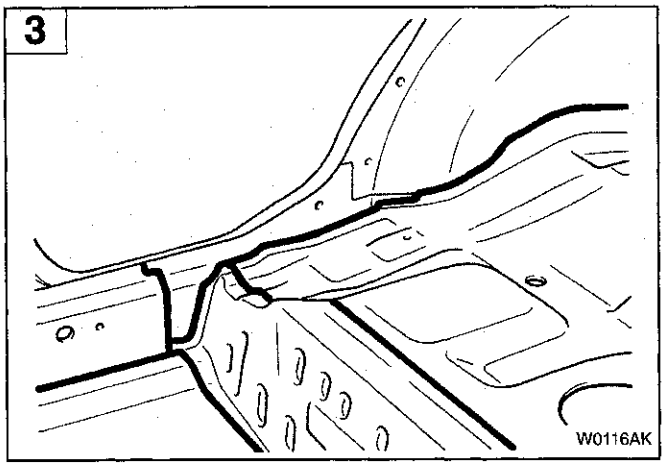
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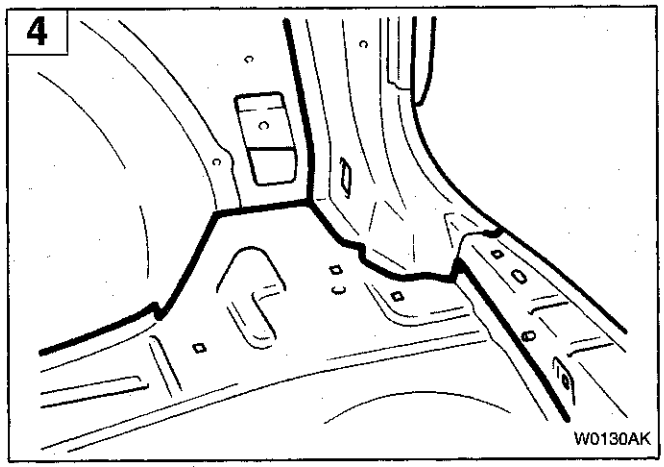
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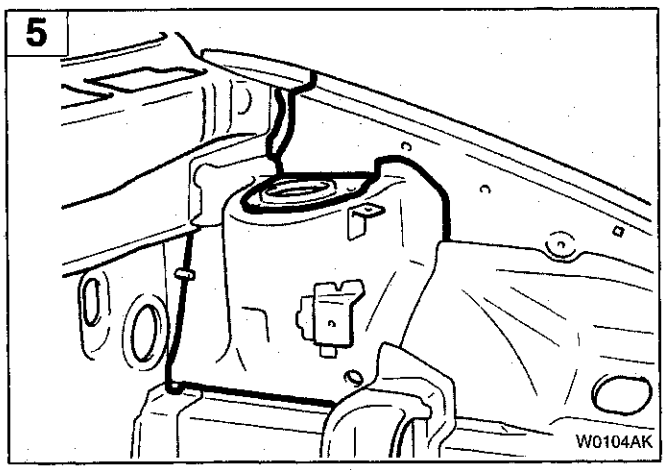
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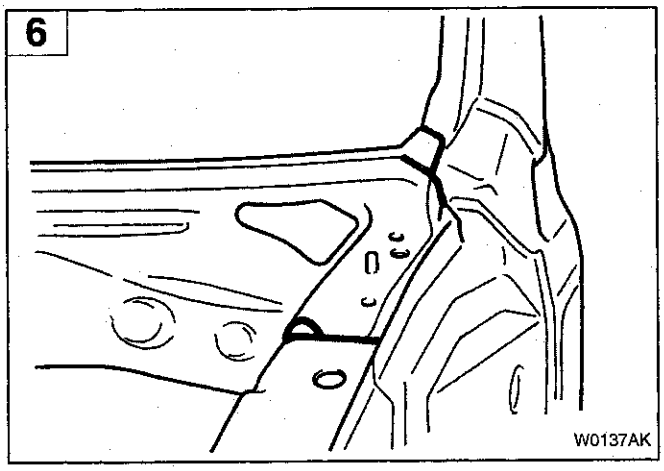
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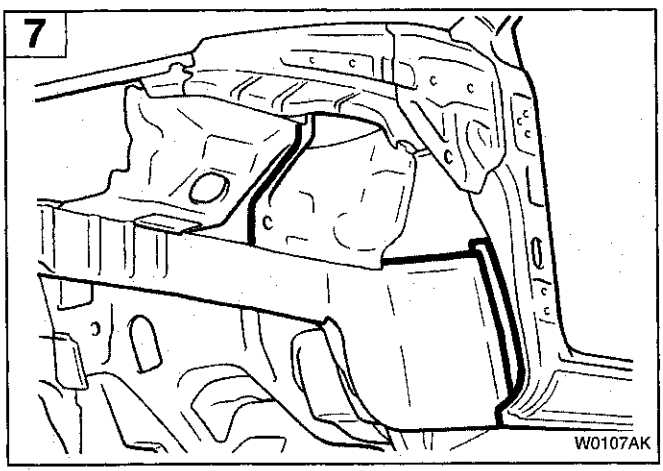
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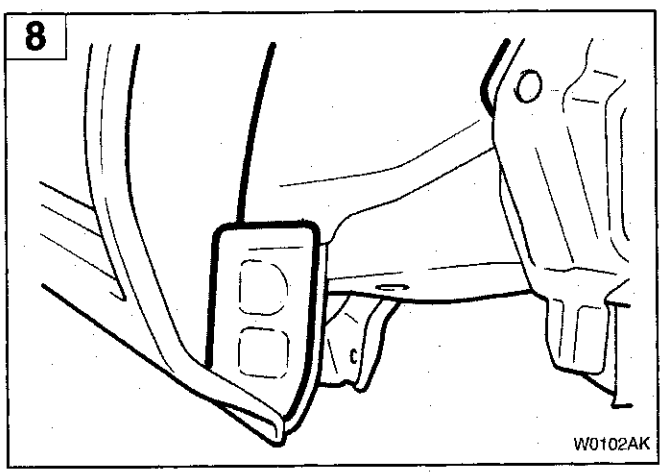
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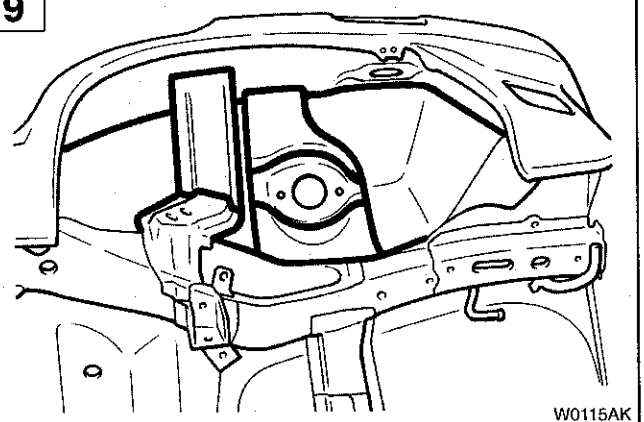

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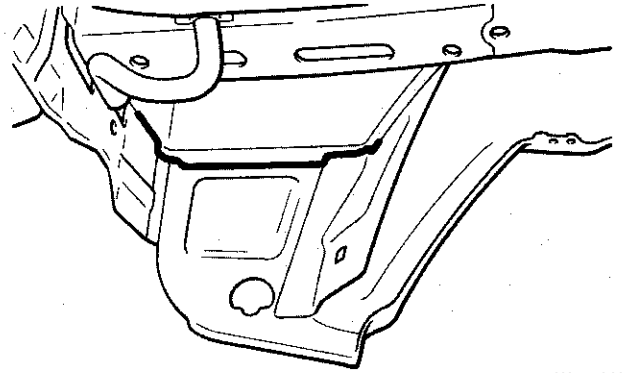

W0111AK

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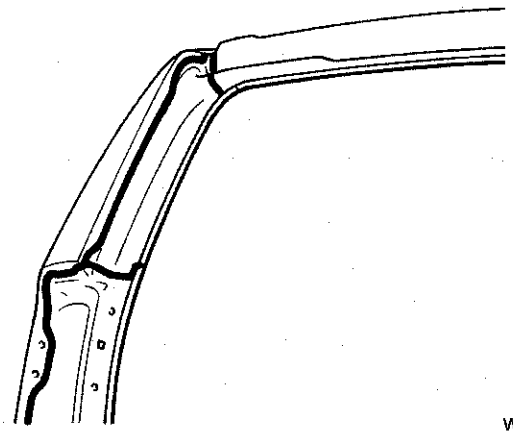

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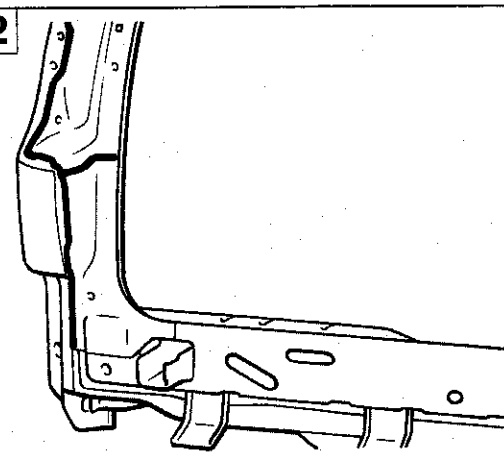
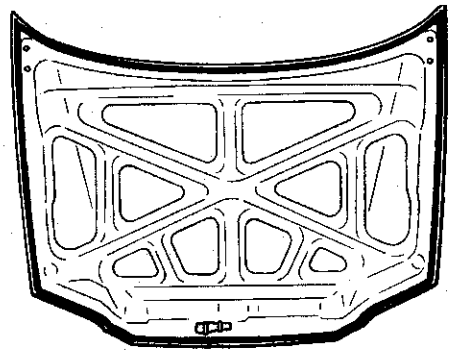


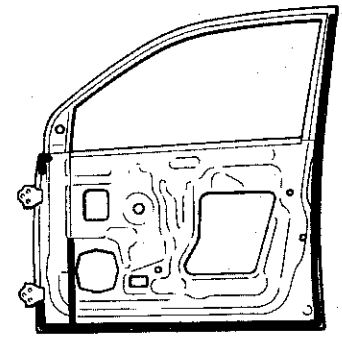
W0105AK

Hood



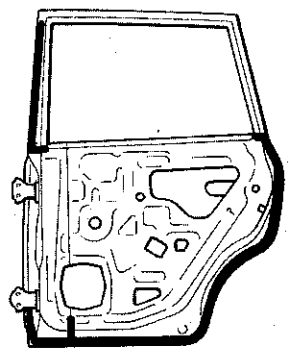
W0109AK

Front door



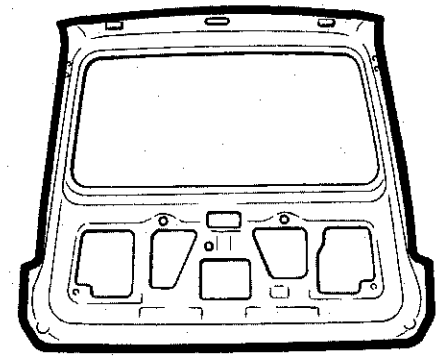
W0113AK

Rear door



W0114AK

Tailgate



W0112AK

WAX INJECTION LOCATIONS

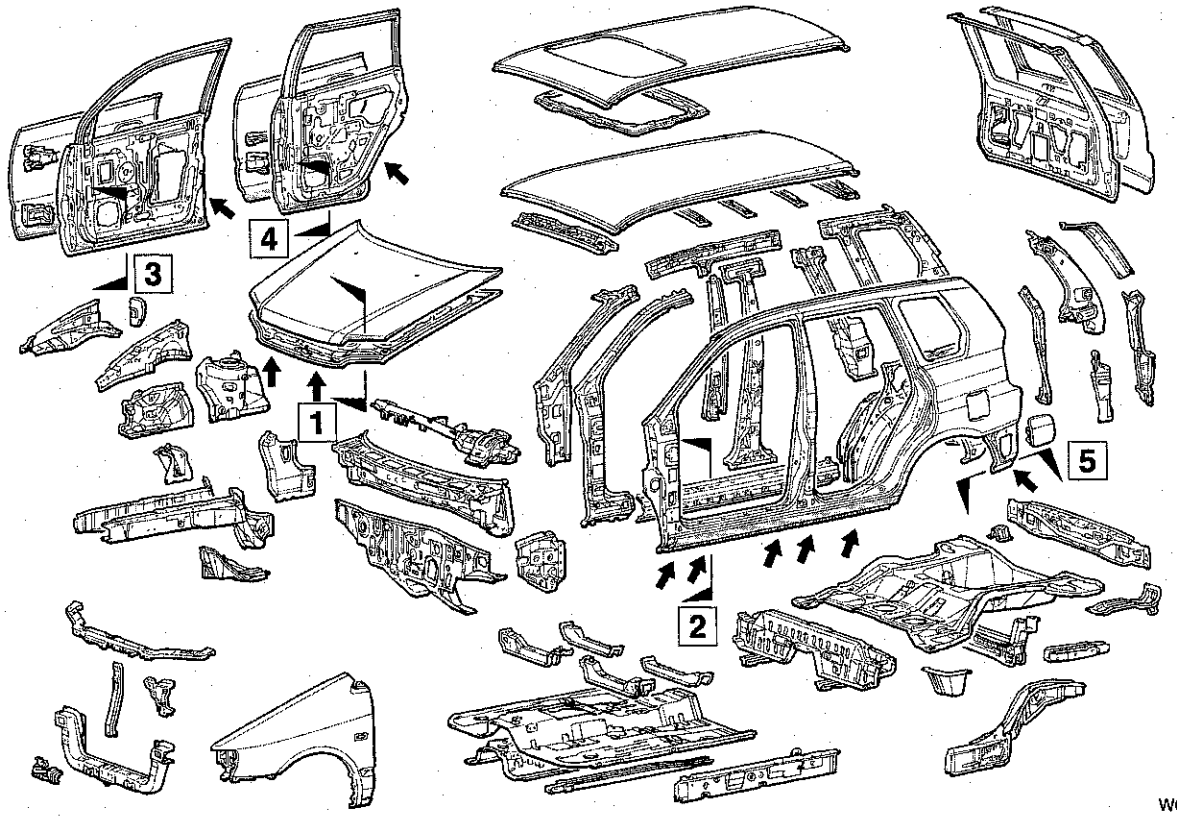
In order to provide greater corrosion resistance, wax injection has been performed for the lower areas of the vehicle, such as the frame, the side sill, and other panels which are a hollow-construction. If any of these panels are replaced, wax injection must be performed for the new parts.

Recommended wax:

- Tectyl 506, 506T or ML
- Waxoyl
- Dinitrol 3122 or 3654-1
- Mercasol 831-ML
- Terotex
- HV200PLUS or HV300

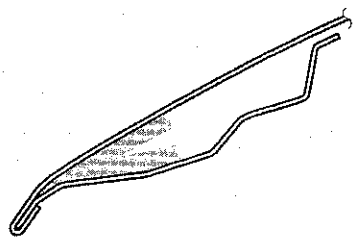
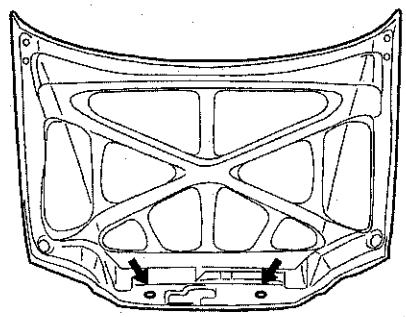
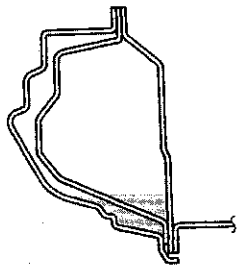
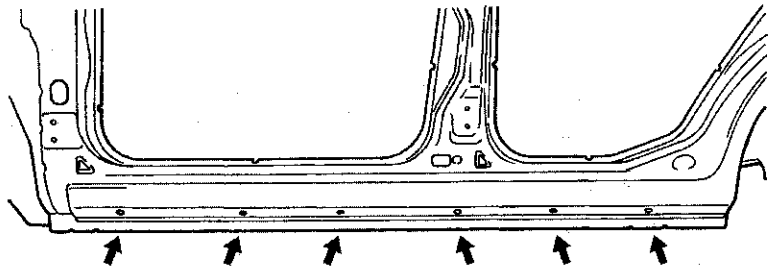
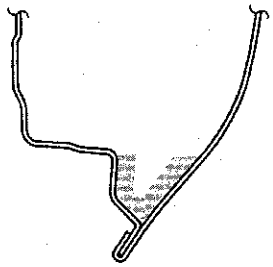
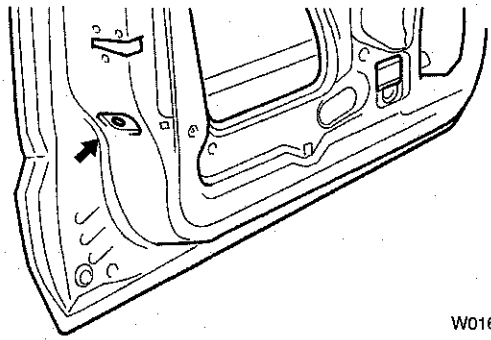
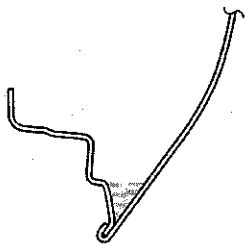
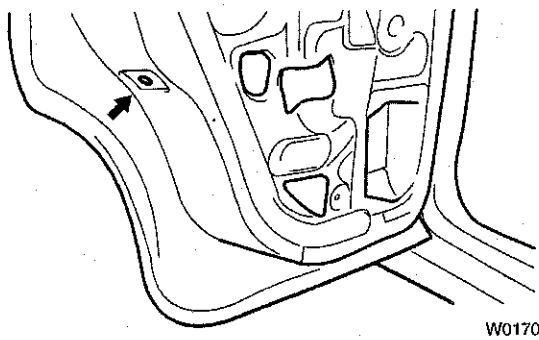
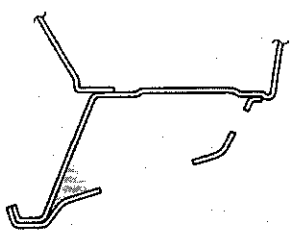
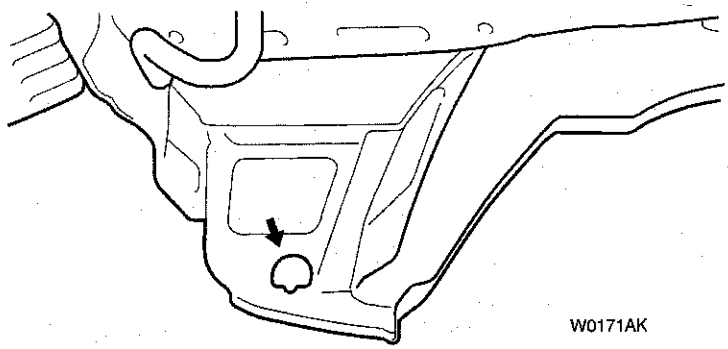
NOTES REGARDING WAX INJECTION WORK

- Be careful that the wax does not get onto other parts. Especially if wax is to be injected into the lower part of the center pillar and into the side sill, first remove the seat belt retractor and the door switch.
- For wax injection locations which have a rubber plug, do not forget to reinstall the rubber plug after the wax injection is completed.



W0141AK

NOTES
(1) ➡: Nozzle insertion openings
(2) For the numbers shown in the figure, refer to detailed illustrations with the same numbers on later pages.

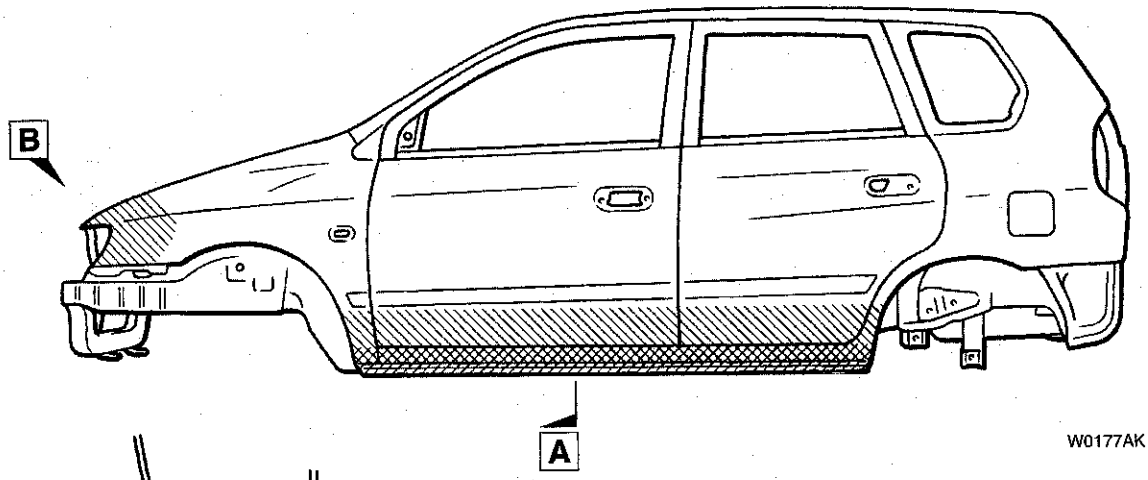
Application surfaces	⬅ : Nozzle insertion openings
1  W0153AK	 W0168AK
2  W0152AK	 W0149AK
3  W0151AK	 W0169AK
4  W0154AK	 W0170AK
5  W0150AK	 W0171AK

ANTICORROSION PRIMER LOCATIONS

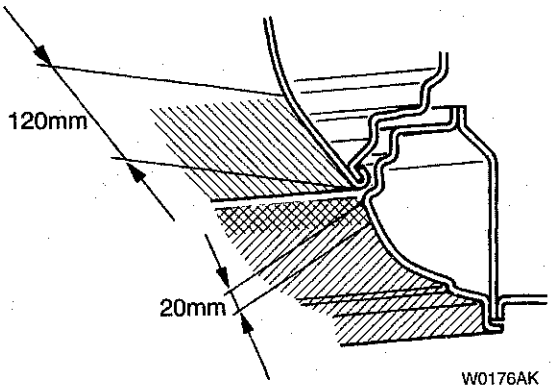
An anticorrosion primer has been applied to the side sill outer panel, the lower edge of the front fender and the lower edge of the outer quarter panel for the purposes of corrosion prevention and abrasion protection. If any of these panels are replaced, apply an anticorrosion primer between the under coat and the second coat, as shown in the following illustrations.

No.	Primer name	Recommended primer	Coating thickness
1.	Rocker panel primer	Glasurit FX89-7300 (Polyester basis) or FT90-7103 (Water basis) or equivalent	400 μm or more
2	Stone chipping resistant primer	Glasurit FX89-8101 (Polyester basis) or FT92-7102 (Water basis) or equivalent	15 μm or more

: 1
: 2

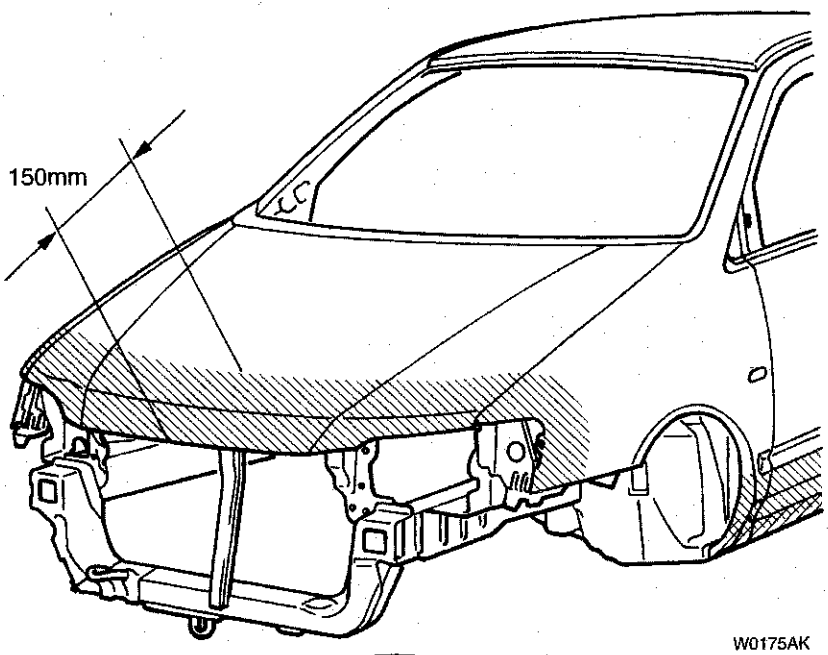


W0177AK



W0176AK

A

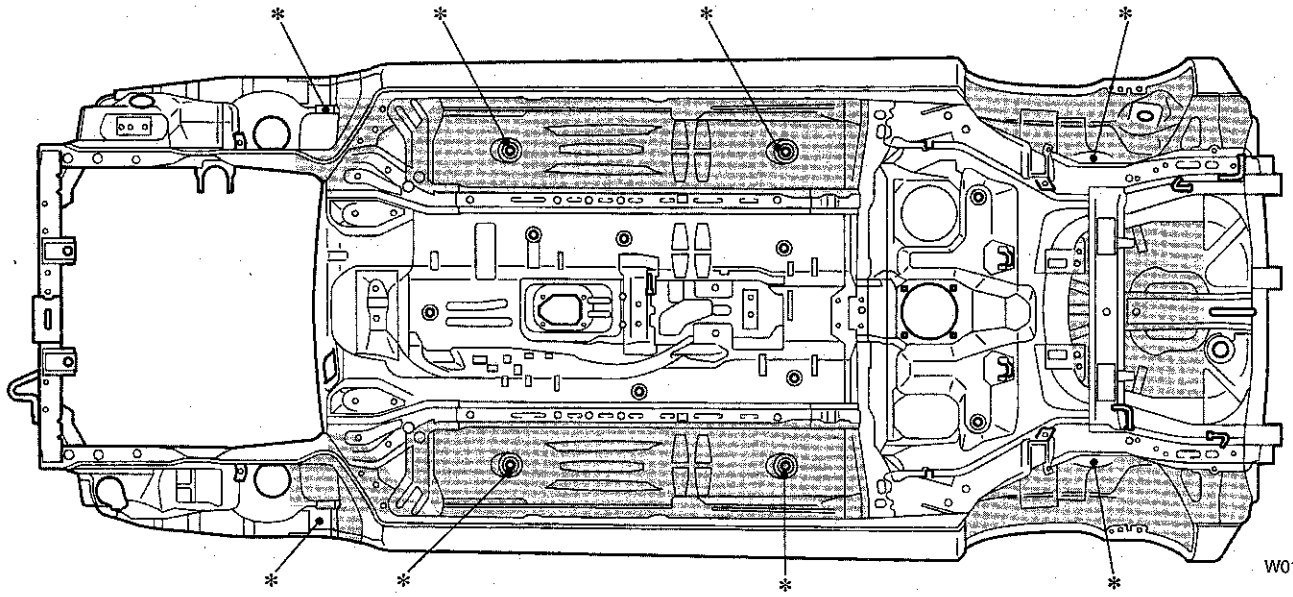


W0175AK

B

UNDERCOAT APPLICATION LOCATIONS

In order to provide rust, corrosion, chipping and vibration resistance, an undercoat is applied to certain areas of the underbody. After completing body repairs, restore this undercoat if necessary.



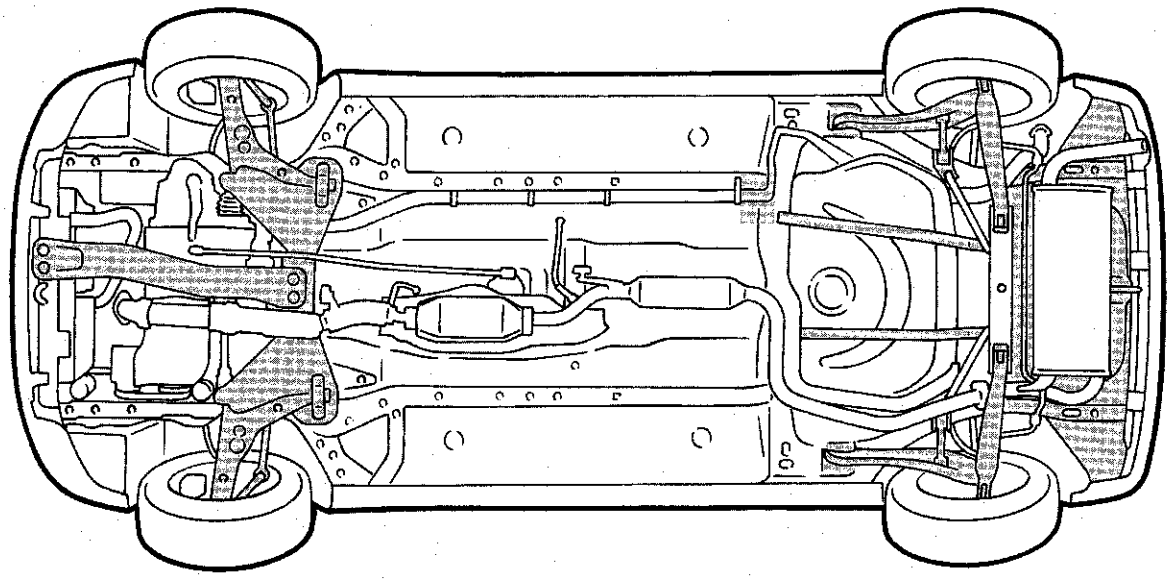
: Polyvinyl chloride base undercoating. [Film thickness of at least 0.8mm]

NOTE
Because parts are to be mounted in these locations, mask the location before applying the undercoat.

UNDERBODY ANTICORROSION AGENT LOCATIONS

In order to provide a greater corrosion resistance, underbody corrosion prevention treatment should be performed after undercoat application. After completing body repairs, restore this underbody corrosion prevention treatment as indicated in the illustration if necessary.

Recommended wax:
- Tectyl 506T, 506 or S
- Waxoyl
- Dinitrol 4954
- Terotex WAX
- Mercasol NON-DRIP



: 100 μm or more

NOTES

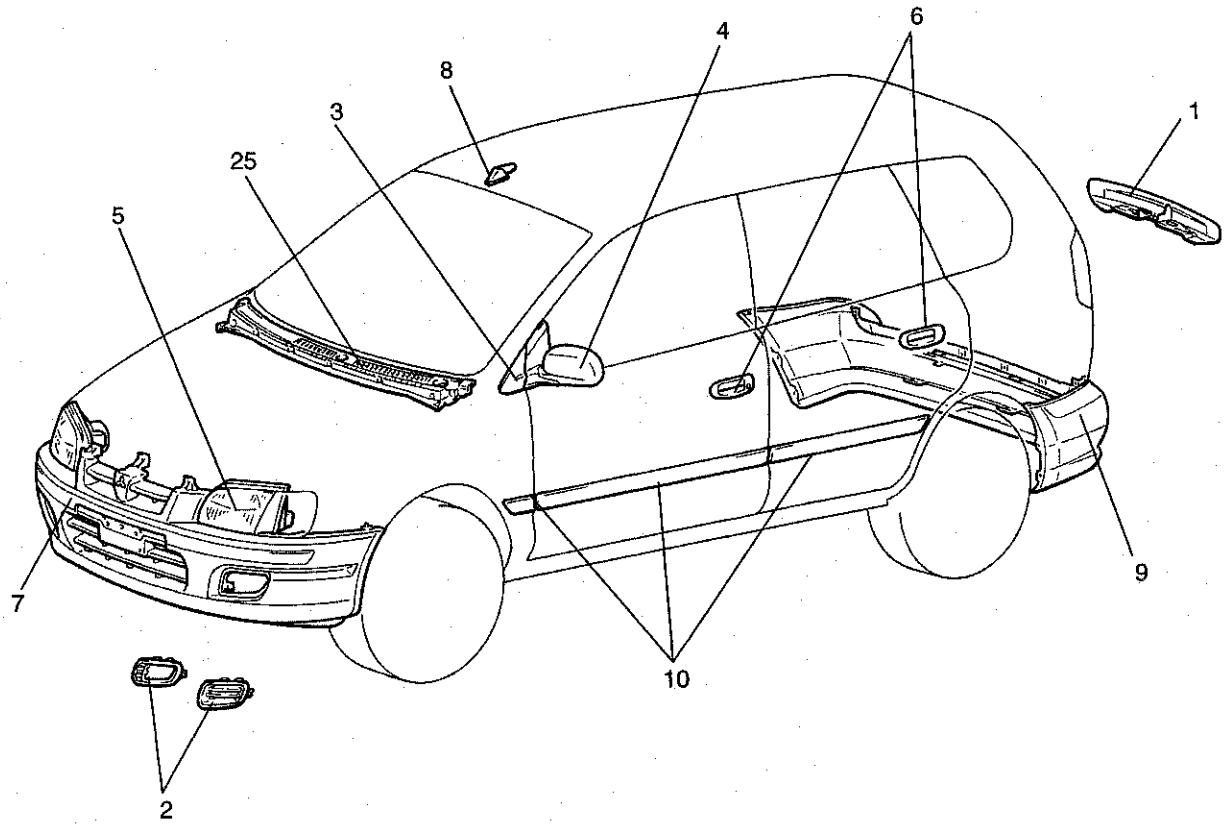
1. Take care not to permit the anticorrosion agent to come in contact with body painting, brake parts, exhaust pipes, bearing seals for rear axle and rubber parts (such as tyres and drive shaft boots).
2. If anticorrosion agent gets onto the oxygen sensor, it will cause a drop in the performance of the sensor. Cover the oxygen sensor with a protective cover when applying anti-corrosion agents and undercoats.

5 SYNTHETIC-RESIN PARTS

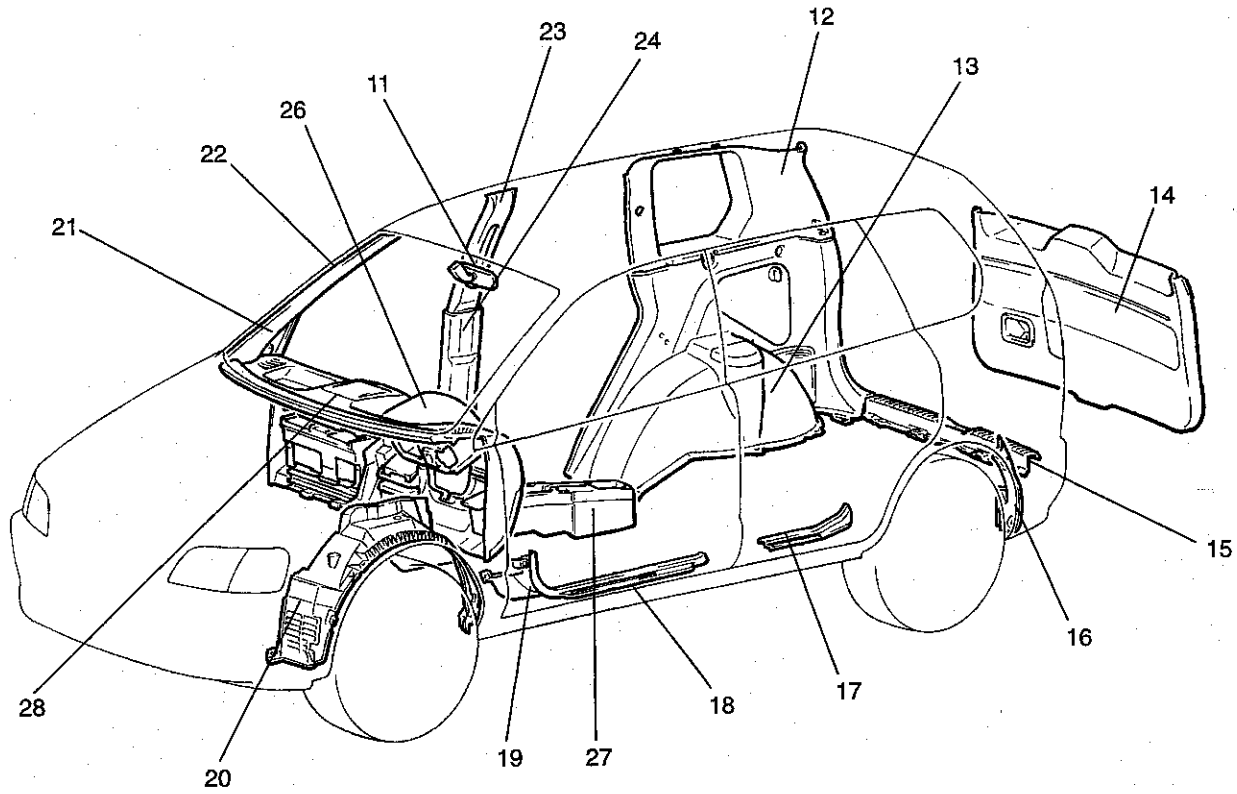
LOCATION OF SYNTHETIC-RESIN PARTS 5-2

LOCATION OF SYNTHETIC-RESIN PARTS

The location and material of each of the principal synthetic-resin parts are shown below.



W0143AK



W0144AK

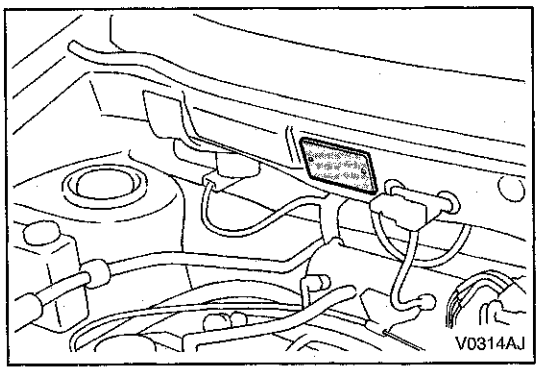
No.	Part name	Name of resin	Abbreviation	Heat - withstand temp. [°C]
1	License lamp garnish	Acrylonitonile butadiene styrene	ABS	80 - 110
2 3 4	Bezel Corner garnish Door mirror	Acrylonitrile styrene acrylate	ASA (AAS)	90
5	Head lamp	Polycarbonate	PC	130 - 140
6	Door outside handle	Polycarbonate + Polyetylene terephthalate	PC+PET (PC/PET)	130
7 8 9 10 11 12 13 14 15 16 17 18 19 20	Front bumper face Antenna base cover Rear bumper face Side protector moulding Inside rear view mirror Quarter trim, upper Quarter trim, lower Tailgate trim, lower Rear end trim cover Splash shield, rear Rear scuff plate Front scuff plate Cowl side trim Splash shield	Polypropylene	PP	80 - 120
21 22 23	Delta cover inner Front pillar trim Center pillar trim, upper	Talk filled polypropylene	PP - TD (PPF)	110 - 140
24	Center pillar trim, lower	Talk filled polypropylene (10%)	PP - TD10 (PPF)	110 - 120
25 26 27 28	Front deck garnish Meter hood Floor console Instrument panel	Talk filled polypropylene (20%)	PP - TD20 (PPF)	120 - 130

NOTES
(1) The indicated heat-resistance temperature for parts which are composed of two or more types of material is the value for the material with the lowest heat-resistance temperature.
(2) If the new material symbols designated by the ISO differ from the old symbols, both are given, with the old symbol being enclosed in brackets.
ISO: International Organization for Standardization
(3) The material symbols for synthetic resin parts are embossed on the parts in hidden places.
(4) A slash (/) in the materials symbol indicates that two different materials make 2-layer construction. A plus sign (+) indicates that the two different materials mix together.

NOTES

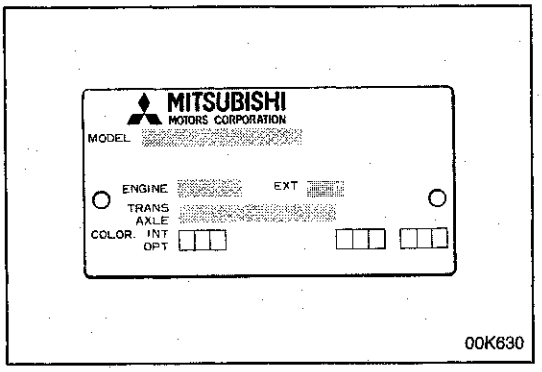
6 BODY COLOUR

BODY COLOUR CODE 6-2
BODY COLOUR CODE INTERPRETATION 6-2
BODY COLOUR CHARTS 6-2
WATER PAINT 6-2
BODY COLOURING 6-3



BODY COLOUR CODE

The body colour code is imprinted on the vehicle-information code plate, which is mounted on the underside of the hood.



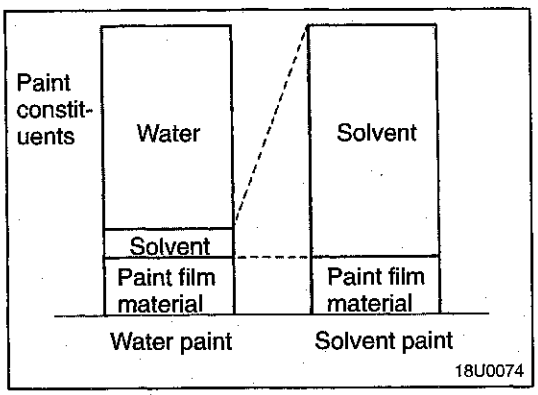
BODY COLOUR CODE INTERPRETATION

The information contained in the body colour code is explained in the body colour charts.

BODY COLOUR CHARTS

Check the vehicle's body colour code and then use this body colour chart to determine the refinishing paint supplier from which the colour can be purchased.

Paint used by manufacturer	Colour	Body colour code	Colour number	Body colour name	Composition of film	Engine compartment and luggage compartment colour	
						Colour number	Colour
	PURE SILVER	A 50	AC11150	Haag Silver	Metallic		
	LIGHT BLUE	T 26	AC11226	Ionia Blue	Solid		
	BLUE	T 46	AC11146	Scandinavia Blue	Pearl + Graphite		
	DARK GREEN	G 19	AC11219	Liege Green	Pearl		
	LIGHT TURQUOISE	G 66	AC11266	Fiji Turquoise	Solid		
	WHITE	W 41	AC11141	St. Moritz White	Solid		
	RED	R 43	AC11143	Shining Red	Solid		
	TROPICAL LIME	Y 24	AC11224	Lime Gold	Metallic		



WATER PAINT

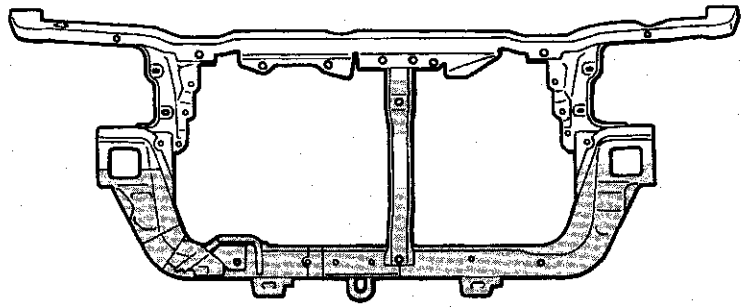
Water paint is used as top coat for metallic (pearl) colour. Adding water instead of solvent reduces the solvent that a paint emits when baking. This contributes to protecting global environment.

In addition, it is recommended that water paint is also used as a touch-up paint. That is because repaired surface matches other surfaces easily.

BODY COLOURING

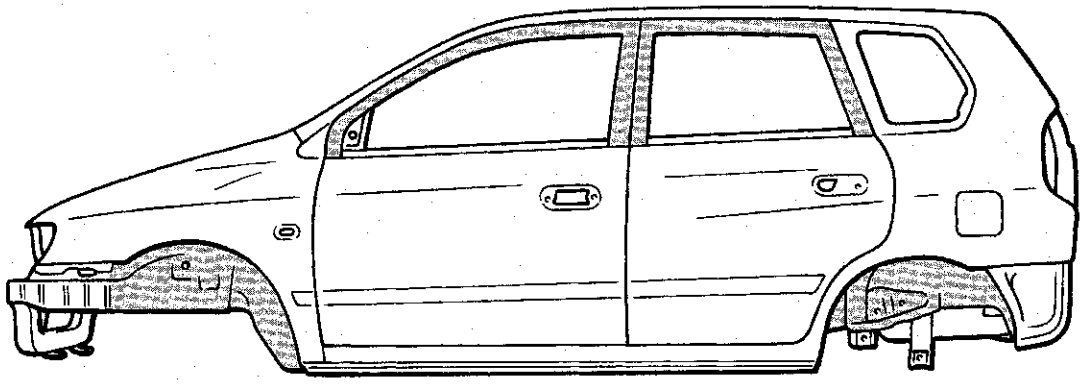
BLACK PAINT

Headlamp support



W0118AK

Door sash, Wheelhouse



: AC10657 (Black)

W0139AK

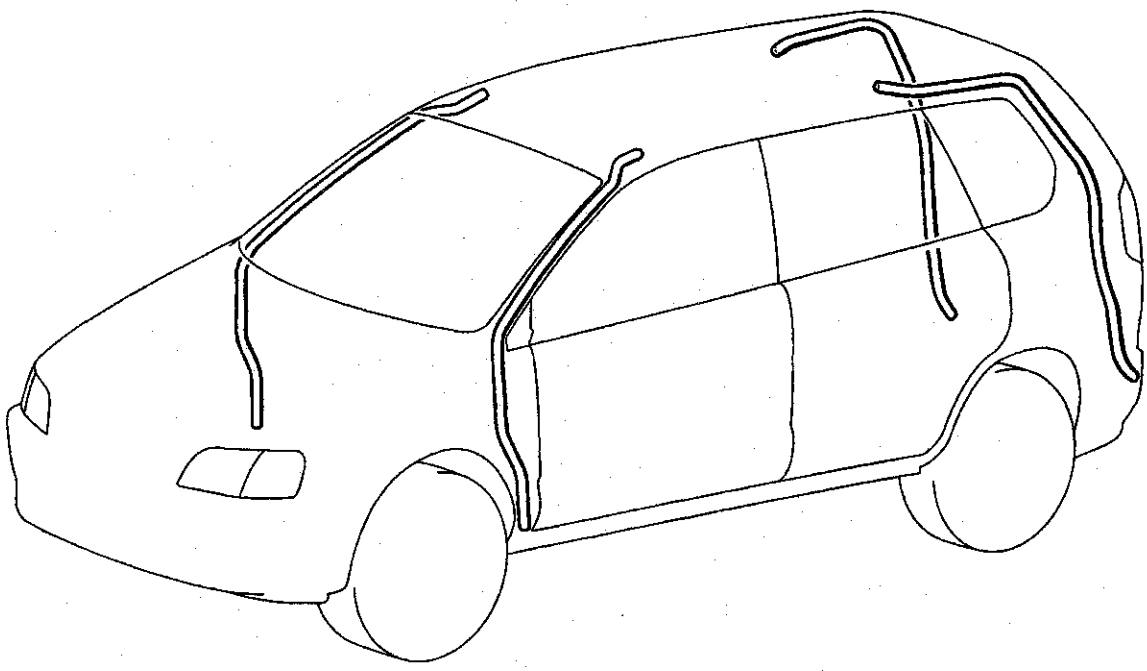
NOTES

7 WIRING AND PIPING DIAGRAM

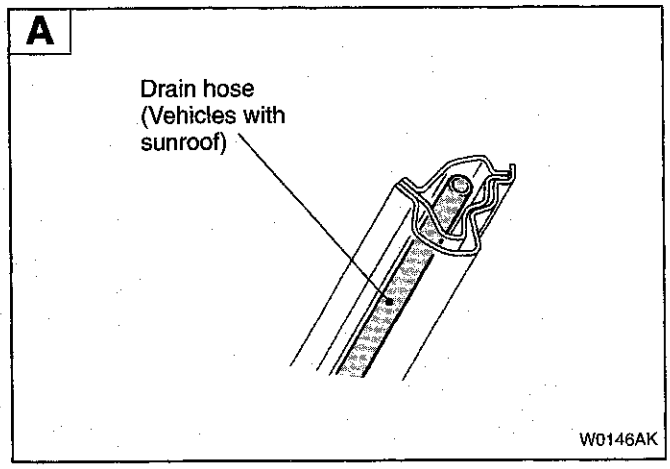
WIRING AND PIPING DIAGRAM 7-2

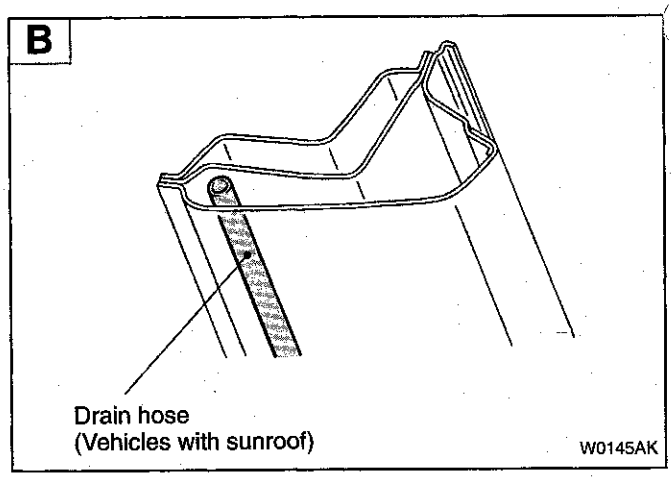
WIRING AND PIPING DIAGRAM

These are hoses routed through closed cross-section structures in some areas of the body; before cutting a panel in any of these areas, be sure to remove the hoses.



W0142AK





8 REFERENCE MATERIAL

BOLTED PANEL FIT AND AJUSTMENT 8-2
HOOD 8-2
DOOR 8-2
TAILGATE 8-3
FUEL FILLER DOOR 8-3
INSTALLATION AND REMOVAL OF ADHESIVE COMPONENTS 8-4
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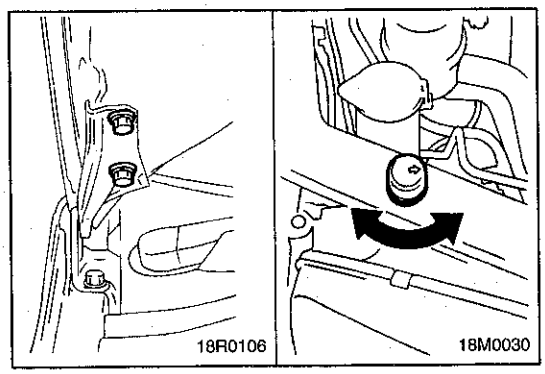
FRONT WHEEL ALIGNMENT 8-7
REAR WHEEL ALIGNMENT 8-8
HEADLAMP AIMING 8-10
FRONT FOG LAMP AIMING 8-12
SUPPLEMENTAL RESTRAINT SYSTEM (SRS) 8-13

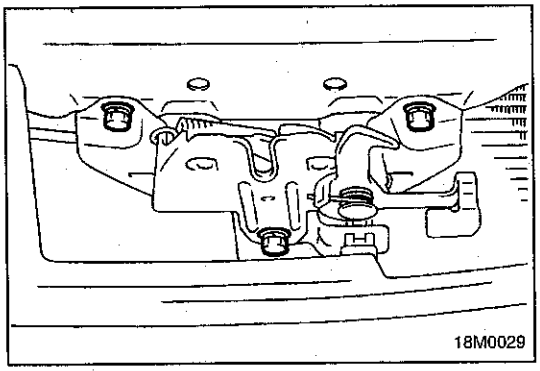


BOLTED PANEL FIT AND ADJUSTMENT

HOOD

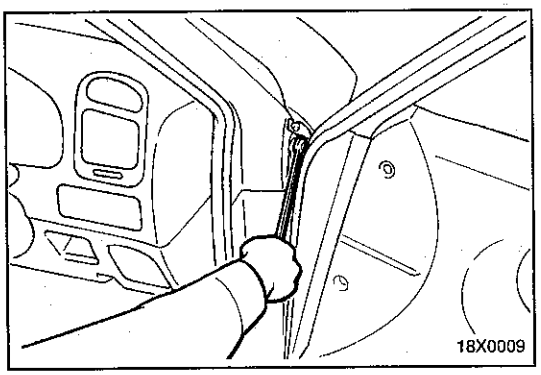
ADJUSTMENT OF HOOD FIT

1. Adjust the longitudinal and lateral positions of the hood by utilizing the oblong holes in the hinge.
2. Turn the hood bumpers either left or right to adjust the height of the hood.
3. Loosen the hood latch mounting bolts.



4. Adjust the alignment of the hood striker and the hood latch by adjusting the horizontal and vertical position of the latch and height of the hood.

Hood mounting bolt tightening torque: 12 Nm



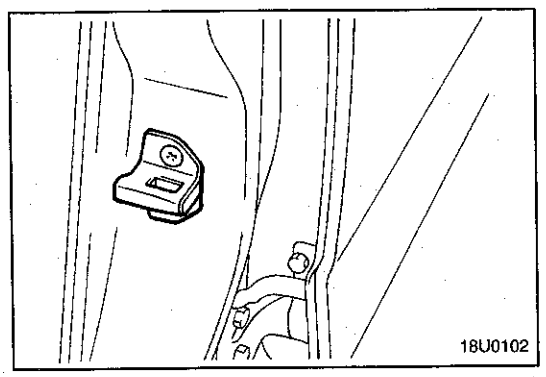
DOOR

ADJUSTMENT OF DOOR FIT

1. Use the special tool to loosen the hinge mounting bolts on the body side, and then adjust the clearance around the door so that it is uniform on all sides.
2. If there is a stepped section on the door and body, use the special tool to loosen the door hinge mounting bolts on the door side, and move the door to adjust the door fit.

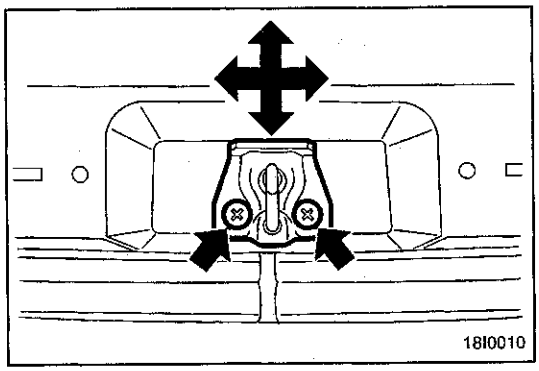
Door hinge mounting bolt tightening torque: 21 Nm

Caution
(1) Attach protection tape to the fender and door edges where the hinge is installed.
(2) Do not apply more than 98Nm of torque to the special tool (MB991164).



3. If the opening and closing of the door is stiff, adjust the linkage of the striker and the door latch with striker mounting shim, while moving the striker forward, backward or sideways.

Striker mounting bolt tightening torque: 11 Nm

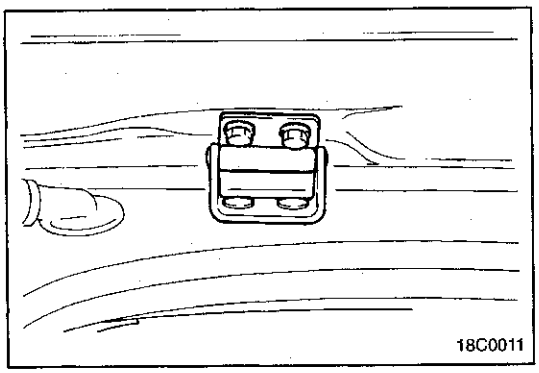


TAILGATE

ADJUSTMENT OF TAILGATE FIT

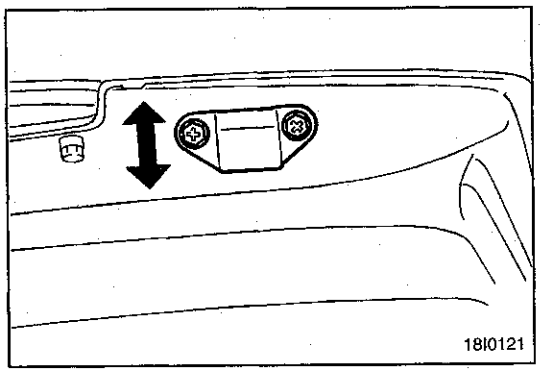
1. If the striker and the latch do not mesh properly, move the striker forward or back or to the left or right to adjust.

   Tailgate striker mounting bolt tightening torque: 9 Nm

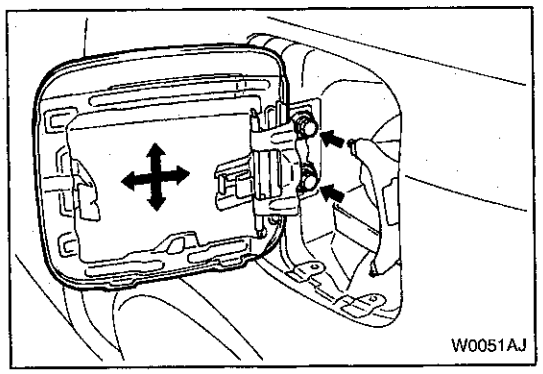


2. If the clearance all the way around the tailgate is not uniform when the tailgate is closed, adjust by moving the tailgate hinges forward or back or to the left or right until the clearance is uniform.

   Tailgate mounting bolt tightening torque: 11 Nm



3. Check the contact between the upper tailgate damper and the lower tailgate damper when the tailgate is closed. If they do not contact properly, adjust by moving the upper tailgate damper in the direction of the arrows.



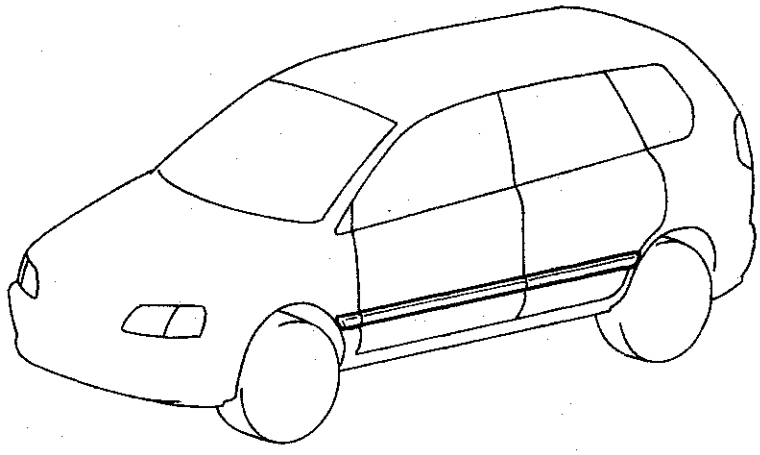
FUEL FILLER DOOR

ADJUSTMENT OF FUEL FILLER DOOR FIT

Loosen the fuel filler door mounting screw and adjust the fuel filler door so that the clearance around the fuel filler door is even without any height differences.

INSTALLATION AND REMOVAL OF ADHESIVE COMPONENTS

MOULDING



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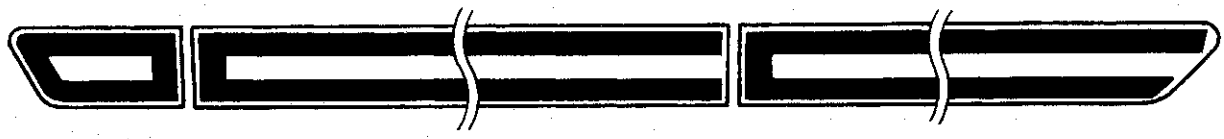
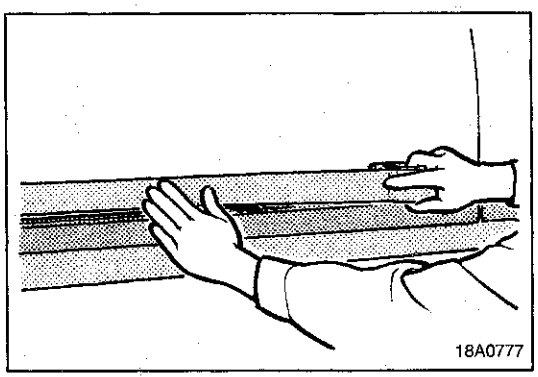


V0232AJ

Adhesive tape: 3M ATD Part No. 6382 or equivalent [12 mm wide and 0.8 mm thick]
Primer:
3M ATD Part No. 8608 Super Fast Urethane Primer or equivalent and 3M ATD Part No. 8609 Super Fast Urethane Primer or equivalent



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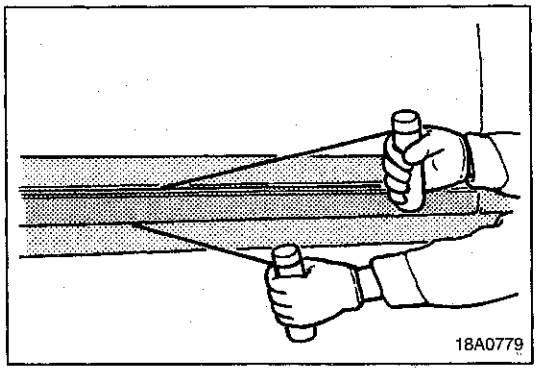
REMOVAL

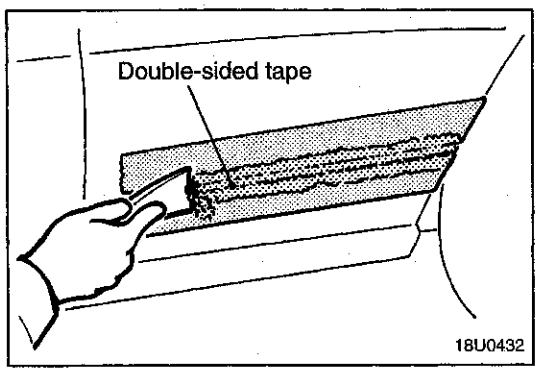
1. Attach protection tape all the way along the edges of the double-sided tape which is still adhering to the body.



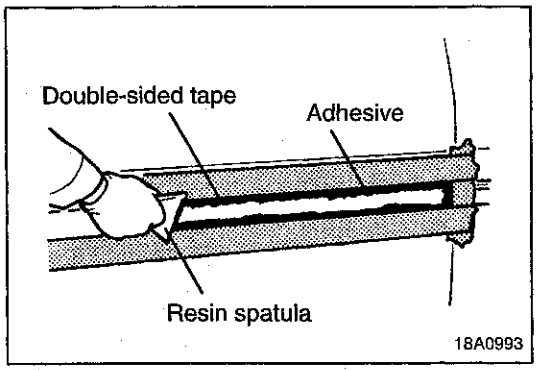
18A0779

2. Insert fishing line [ø 0.8 mm] in between the body and the moulding, and pull both ends alternately to cut the adhesive section and remove the moulding.

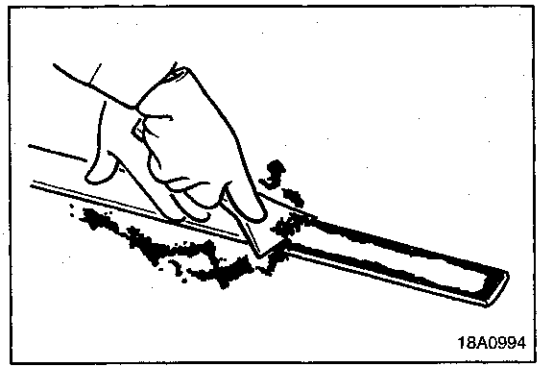
Caution
(1) If the moulding is to be reused, pull the fishing line along the edge of the body so as not to damage the edge of the moulding.
(2) If the adhesive is difficult to remove, heat it to 40°C. If moulding has become warped, it should not be reused.



3. Scrape off the double-sided tape with a resin spatula.
4. Peel off the protection tape.
5. Scrape off a small amount of the adhesive with a cutter knife.



6. Wipe the body surface clean with a rag moistened with isopropyl alcohol.

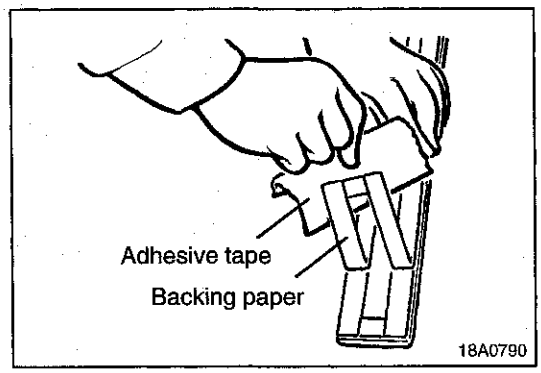


INSTALLATION

Affixing Double-sided tape to the mouldings (when reusing mouldings)

1. Scrape off the double-sided tape with a resin spatula or gasket scraper.
2. Wipe the moulding adhesion surface clean with a rag moistened with isopropyl alcohol.
3. Affix the specified double-sided tape to the side protect moulding.

Specified adhesive tape:
Double-sided tape [12 mm wide and 0.8 mm thick]



4. Remove the strip paper from the pressure sensitive double-sided tape.
NOTE
Affix double-sided tape to the end of strip paper for ease of strip paper removal.

5. Remove strip paper from the pressure sensitive double-sided tape.

   NOTE
   If it is hard to affix the double-sided tape in winter, heat the application surfaces at both the vehicle body and the side protector moulding.
   Body 40 –60°C
   Side protect moulding 20 – 30°C

6. Apply pressure fully tlo the side protector moulding.

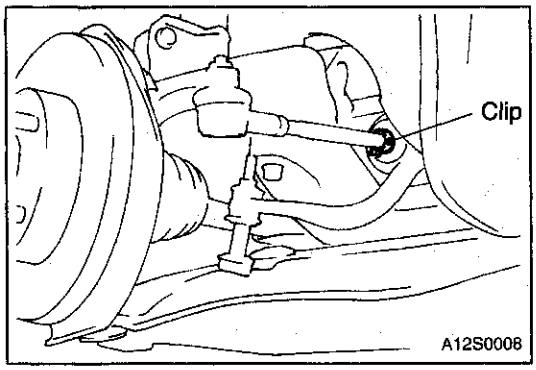
ADJUSTMENT OF OTHER PARTS

FRONT WHEEL ALIGNMENT

Measure the wheel alignment with the vehicle parked on a level surface.
The front suspension, steering system, and wheels should be serviced to normal condition prior to measurement of wheel alignment.

TOE-IN

Standard value:
At the centre of tyre tread 0 ± 2 mm
Toe angle (per wheel) 0°00' ± 06'



NOTE

1. If the toe-in is not within the standard value, adjust the toe-in by undoing the clips and turning the left and right tie rod turn buckles by the same amount (in opposite directions).
2. The toe will move out as the left turnbuckle is turned toward the front of the vehicle and the right turnbuckle is turned toward the rear of the vehicle.
   For each one turn of the left and right tie rods, the toe-in will be adjusted by approx. 1°05' (per wheel).

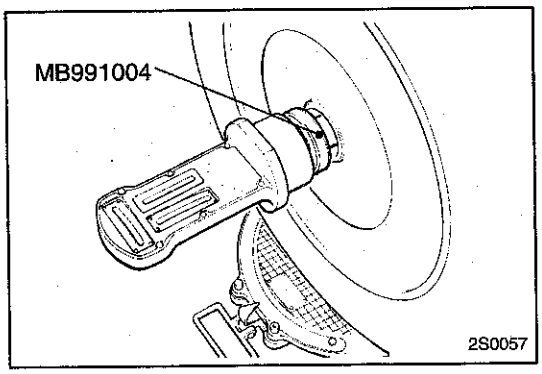
TOE-OUT ANGLE ON TURNS

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

Standard value:
21°39' (inner wheel when outer wheel at 20°)

STEERING ANGLE

Standard value:
Inner wheel 41°30'
Outer wheel 34°00'



CAMBER, CASTER AND KINGPIN INCLINATION

Standard value:
Camber 0°40' ± 30'
Caster 2°54'
Kingpin inclination 13°36'

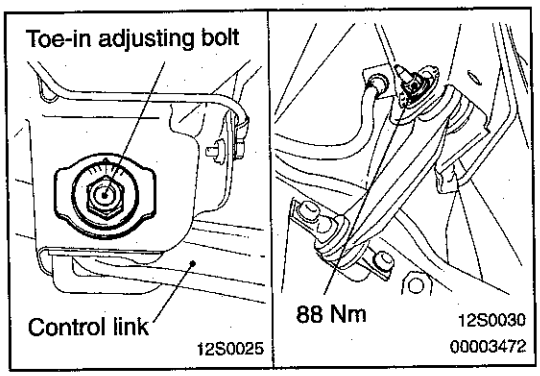
NOTES
1. Camber and caster are preset at the factory and cannot be adjusted.
2. If camber is not within the standard value, check and replace bent or damaged parts.
3. For vehicles with aluminium type wheels, attach the camber/caster/kingpin gauge to the drive shaft by using the special tool. Tighten the special tool to the same torque 216-255 Nm as the drive shaft nut.

Caution
Never subject the wheel bearings to the vehicle load when the drive shaft nuts are loosened.

REAR WHEEL ALIGNMENT

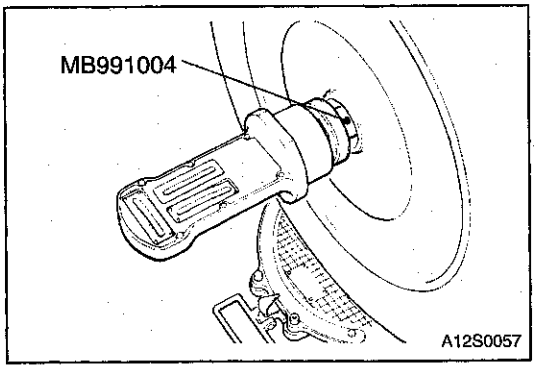
Measure the wheel alignment with the vehicle parked on level ground.
The rear suspension and wheels should be serviced to the normal condition prior to measurement of wheel alignment.

TOE-IN
Standard value:
At the centre of tyre tread 3 ± 2 mm
Toe angle (per wheel) 0°09' ± 06'



If outside the standard value, adjust by the following procedure.
1. Be sure to adjust the camber before adjusting the toe-in.
2. Adjust by turning the toe adjusting bolt (mounting bolt on the inside of the control link).
   LH: Turning clockwise → toe-in direction
   RH: Turning clockwise → toe-out direction

   The scale has gradations of approximately 2.6 mm (single side toe angle equivalent to 16').



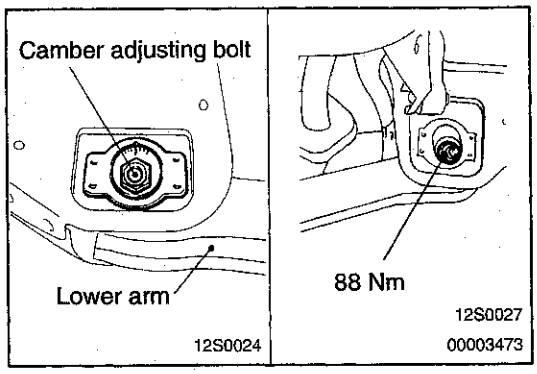
CAMBER

Standard value: -0°40' ± 30'

(The difference between the left and right wheels should be 30' or less.)

NOTE
For vehicles equipped with aluminium wheels, measure the camber after tightening the special tool (MB991004) to the specified torque 180 Nm.

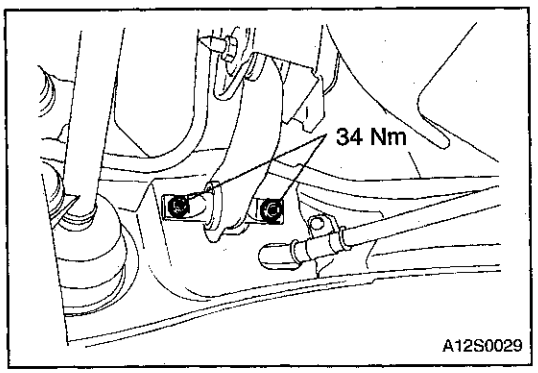
Caution
Do not apply full vehicle load to the wheel bearings when the flange nuts are loosened. Otherwise the wheel bearings will break.



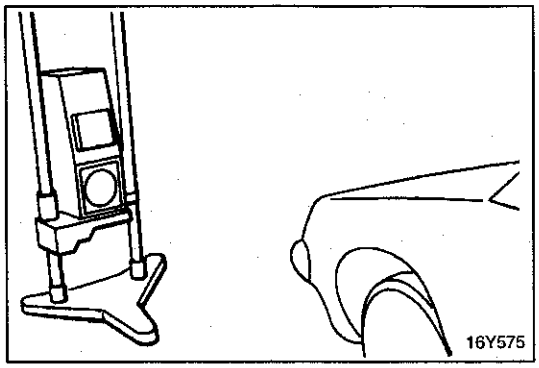
If outside the standard value, adjust by the followiung procedure.

1. Remove the connection between the control link and the trailing arm.
2. Adjust by turning the camber adjusting bolt (mounting bolt for the lower arm and rear crossmember).

   Left wheel: clockwise + camber
   Right wheel: clockwise – camber
   The scale has gradations of approximately 14'



3. Tighten the control link to the trailing arm at the specified torque.
4. After adjusting the camber, be sure to adjust the toe-in.

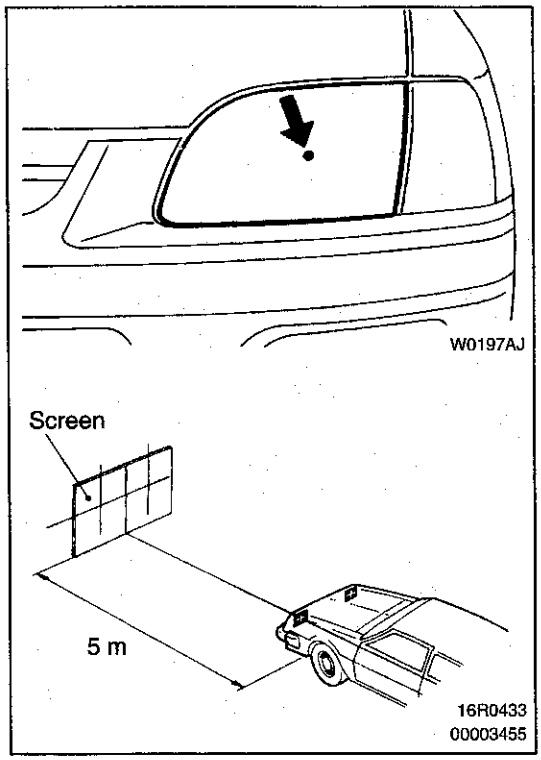


HEADLAMP AIMING

<USING A BEAMSETTING EQUIPMENT>

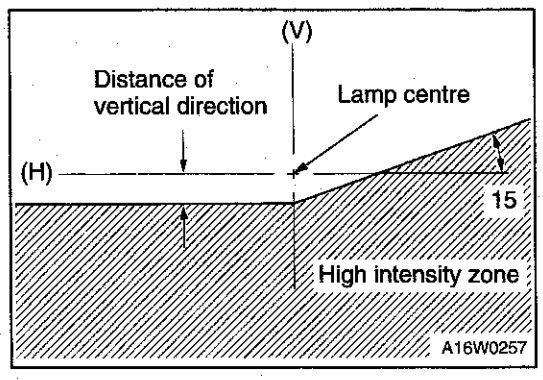
1. The headlamps should be aimed with the proper beamsetting equipment, and in accordance with the equipment manufacturer's instructions.

   NOTE
   If there are any regulations pertinent to the aiming of headlamps in the area where the vehicle is to be used, adjust so as to meet those requirements.
2. Alternately turn the adjusting screw to adjust the headlamp aiming.



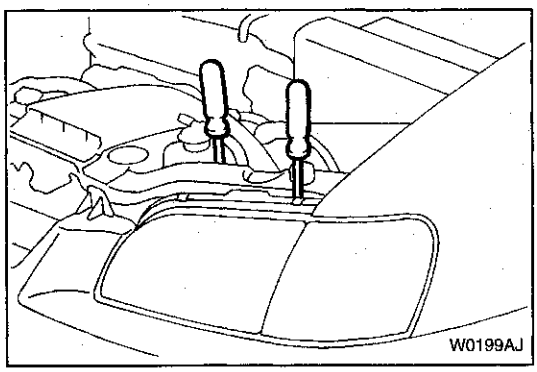
<USING A SCREEN>

1. Inflate the tyres to the specified pressures and there should be no other load in the vehicle other than driver or substituted weight of approximately 75 kg placed in driver's position.
2. Set the distance between the screen and the centre marks of the headlamps as shown in the illustration.



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

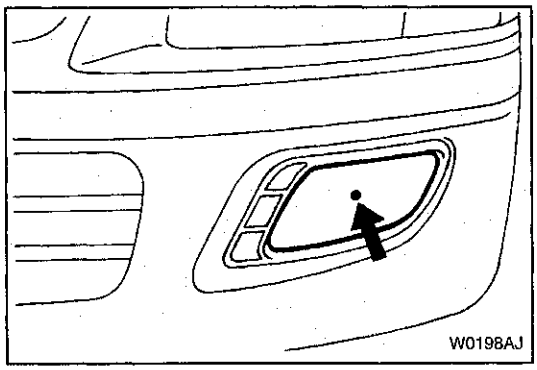
   Standard value:
   (Vertical direction)
   60 mm below horizontal (H)
   (Horizontal direction)
   Position where the 15° sloping section intersects the vertical line (V)



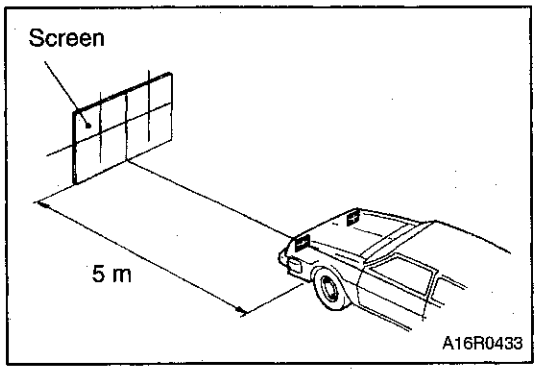
4. Alternately turn the adjusting screw to adjust the headlamp aiming.

Caution
Be sure to adjust the aiming adjustment screw in the tightening direction.

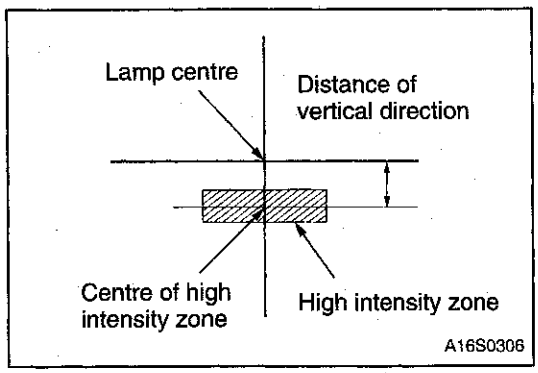
FRONT FOG LAMP AIMING



1. Measure the centre of the fog lamps, as shown in the illustration.



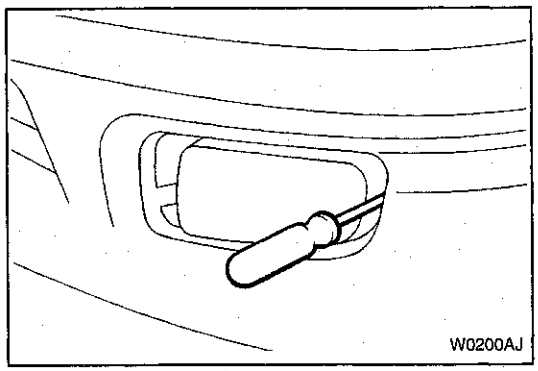
2. Set the distance between the screen and the centre of the fog lamps as shown in the illustration.
3. Inflate the tyres to the specified pressures and there should be no other load in the vehicles other than driver or substituted weight of approximately 75 kg placed in the driver's position.
4. With the engine running at 2,000 r/min, aim the fog lamp.



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

Standard value:
(Vertical direction)
100mm below horizontal (H)
(Horizontal direction)
Parallel to direction of vehicle travel

NOTE
The horizontal direction is non-adjustable. If the deviation of the light beam axis exceeds the standard value, check to be sure that the mounting location or some other point is not defective.



Caution
When making the aiming adjustment, be sure to mask those lamps which are not being adjusted.

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) – AIR BAG

WARNING!

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