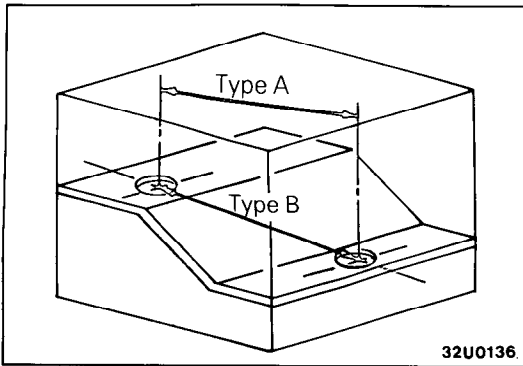


BODY AND FRAME ALIGNMENT

CONTENTS

N13AA--

BODY DIMENSIONS AND MEASUREMENT METHODS	2	TYPE A (PROJECTED DIMENSIONS)	6
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FRAME CENTERING GAGE INSTALLATION POSITIONS	4		



32U0136

BODY DIMENSIONS AND MEASUREMENT METHODS

HOW BODY DIMENSIONS ARE INDICATED N13GAAC

- (1) Type A (projected dimensions)
These dimensions are the dimensions measured when the measurement points are projected into the reference plane. These dimensions are the reference dimensions used for body alterations.
- (2) Type B (actual-measurement dimensions)
These dimensions indicate the actual linear distance between measurement points, and are the reference dimensions for use if a tracking gage is used for measurements.

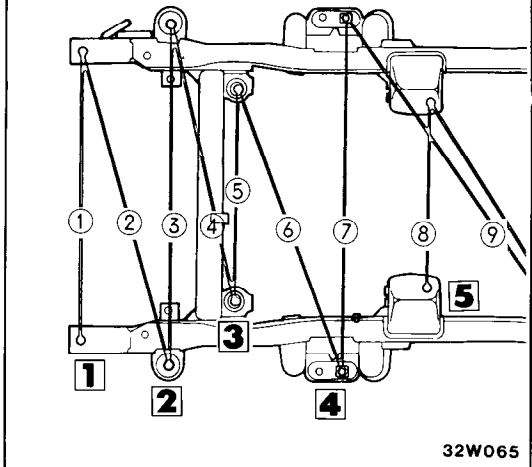
NOTE

The units given for the dimensions of both types (A and B) are mm (in.).

mm (in.)				
No.	①	②*	③	④*
Length	710 (27.95)	808 (31.83)	840 (33.07)	701 (27.59)

INDICATION OF REFERENCE DIMENSIONS

If the reference dimension number (in a circle) shown on the top line of the dimension table at left is marked with *, measurements are taken of this dimension and another which are symmetrical with respect to the car centerline.



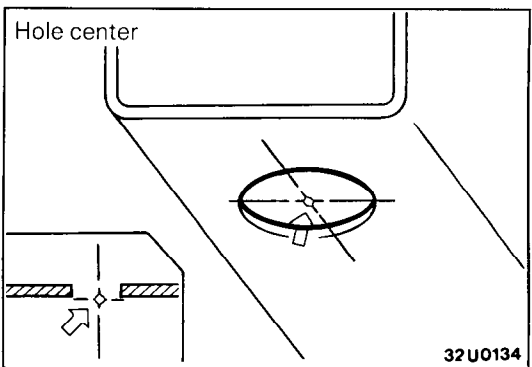
32W065

MEASUREMENT POINTS

Measurement points are used to indicate the following:

(1) Hole centers

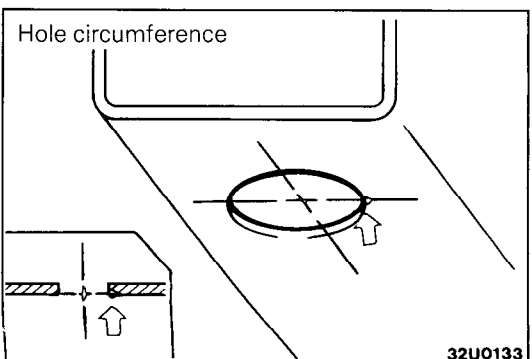
If a measurement is to be made at a hole center, the point of the surface from which the measuring instrument is applied is the measurement point.



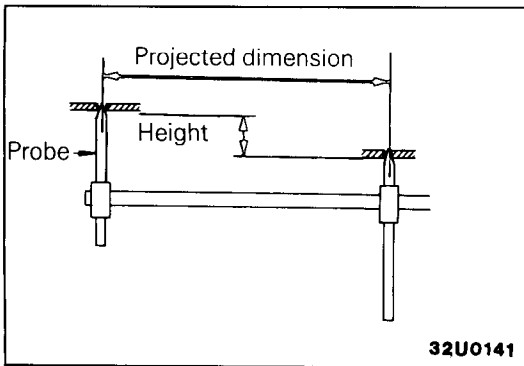
32U0134

(2) Hole circumferences

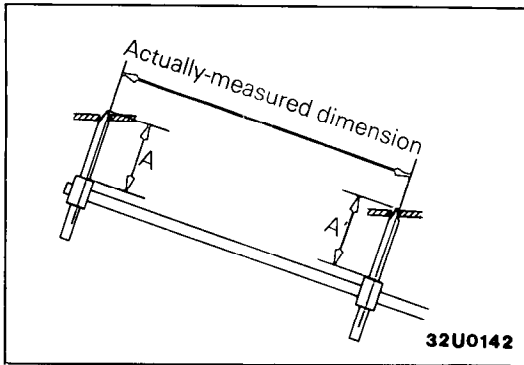
If a measurement is to be made at the circumference of a hole, the point of the hole circumference of the surface from which the measuring instrument is applied is the measurement point.



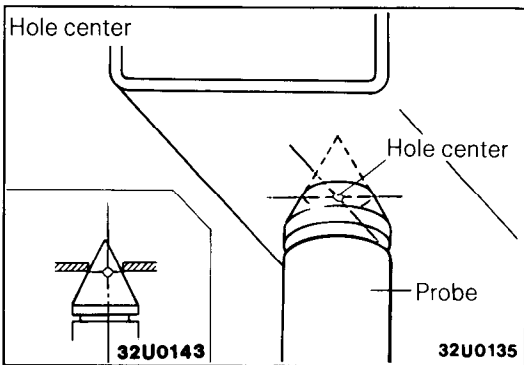
32U0133



32U0141

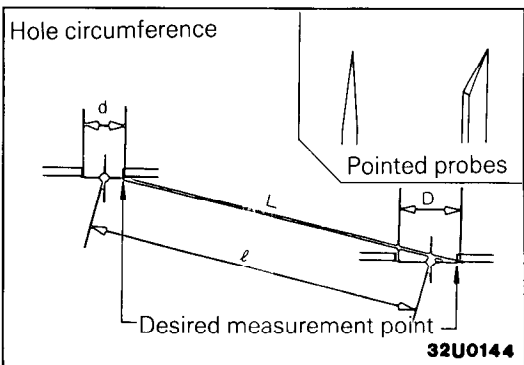


32U0142

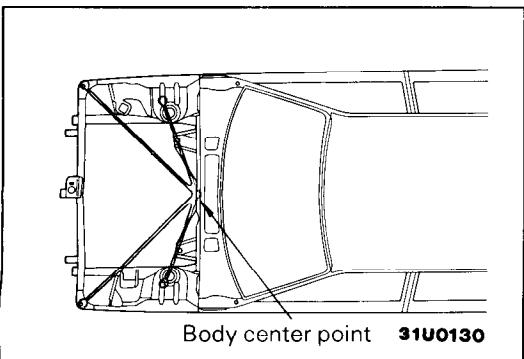


32U0143

32U0135



32U0144



Body center point 31U0130

MEASUREMENT METHODS (using a tracking gage)

NOTE

Make sure that the tracking gage used is free from play between its body and probes.

(1) Type A (projected dimensions)

If the length of the tracking gage probes are adjustable, make the measurement by lengthening one probe by the amount equivalent to the difference in height of the two surfaces.

(2) Type B (actual-measurement dimensions)

Measure by first adjusting both probes to the same length (A = A')

(3) If hole diameters are same and the probes are conical

For both Type A and Type B, insert the probes into the holes, and then make the measurement. This method of measurement should be used if the diameters of the holes in the location to be measured are the same.

(4) If hole diameters are different, or the probes are pointed

Because measurement at the hole centers is impossible, the circumferences must be used instead.

How to Determine Dimensions

Desired dimensions: $L = l + \frac{D-d}{2}$

Example: mm (in.)

Reference dimensions: $l = 600 (23.6)$

Measured hole diameters: $D = 20 (.79)$

$d = 10 (.39)$

Desired dimensions:

$$L = 600 (23.6) + \frac{20 (.79) - 10 (.39)}{2}$$

$$= 605 (23.8)$$

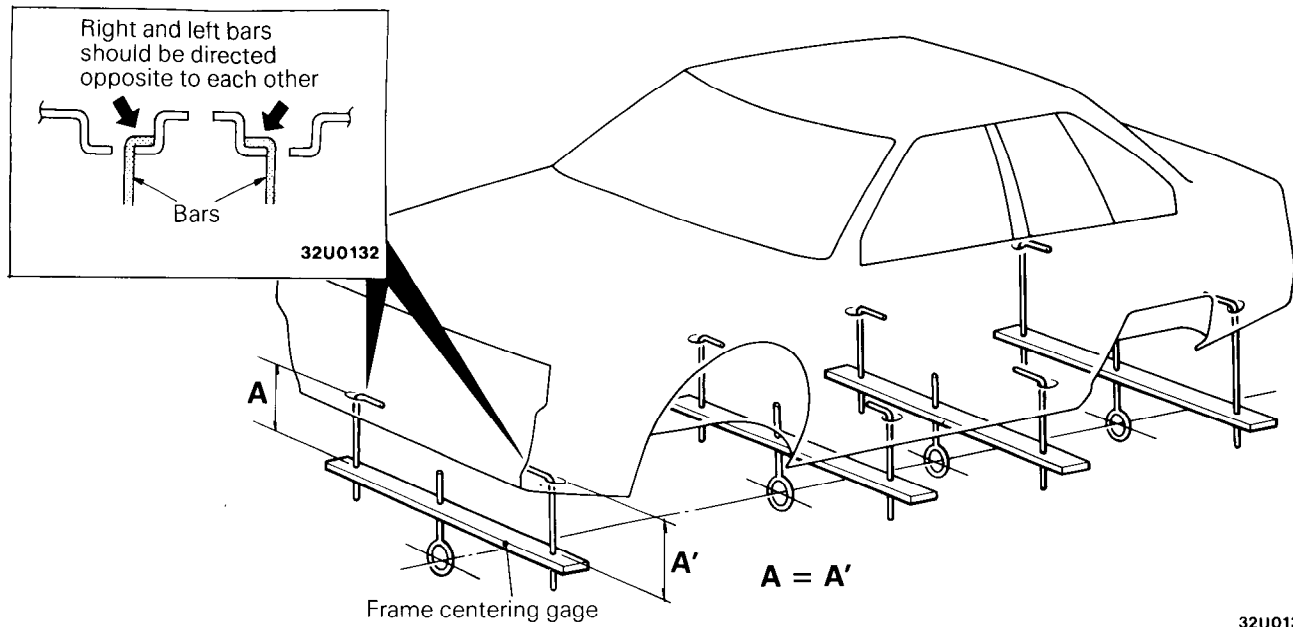
BODY CENTER POINTS

When measuring locations that should be symmetrical left and right and there are no specific instructions with regard to measurements in "Body Dimensions", the body center points should be used to confirm that the left and right measurements from these points are the same. One body center point is specified for the front of the body and another is specified for the rear.

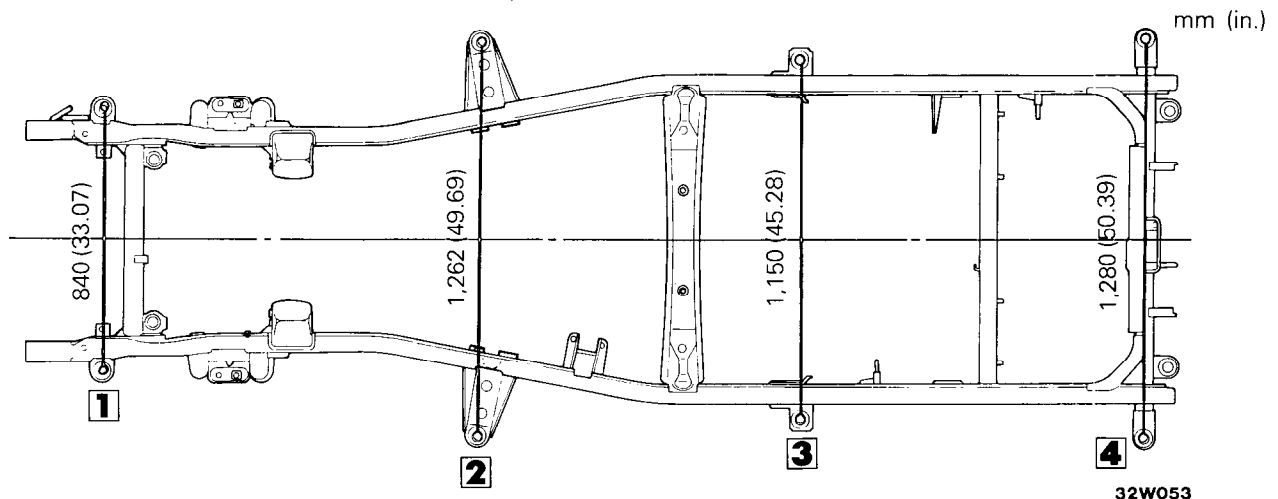
FRAME CENTERING GAGE INSTALLATION POSITIONS

N13HA--

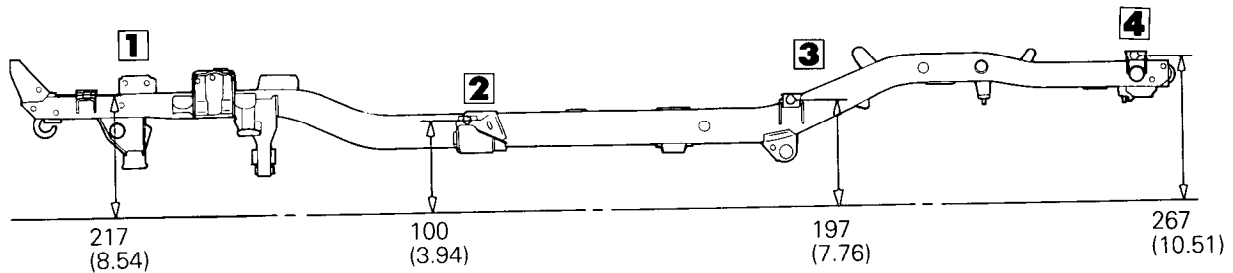
Mount the frame centering gages at locations indicated in illustration to check for horizontal and vertical bend and torsion of the body.



32U0137



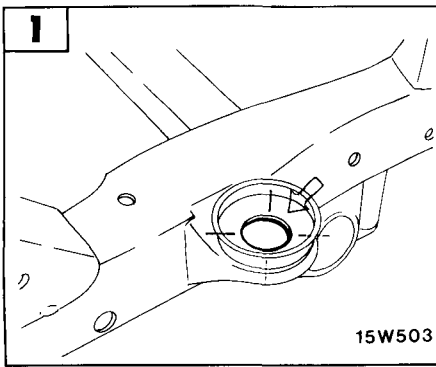
32W053



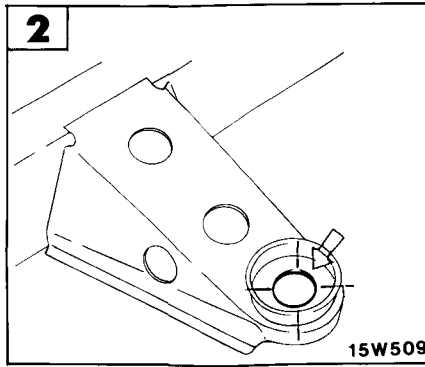
32W052

NOTE

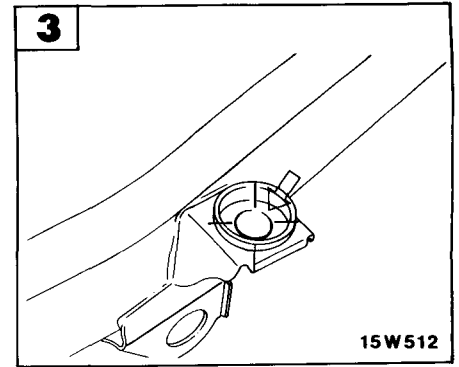
Dimensions shown in the side view are the distances from the bottom end of the panel at each measurement point, not including the panel thickness.



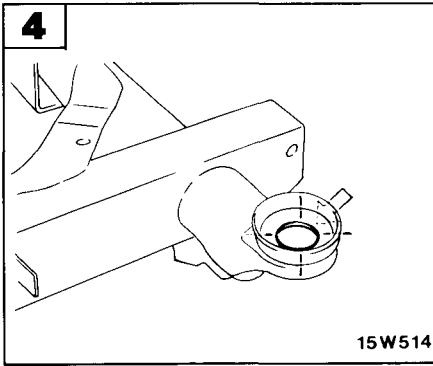
Center of body mounting hole [diameter : 30 mm (1.18 in.)]



Center of body mounting hole [diameter : 32 mm (1.26 in.)]



Center of body mounting hole [diameter : 32 mm (1.26 in.)]



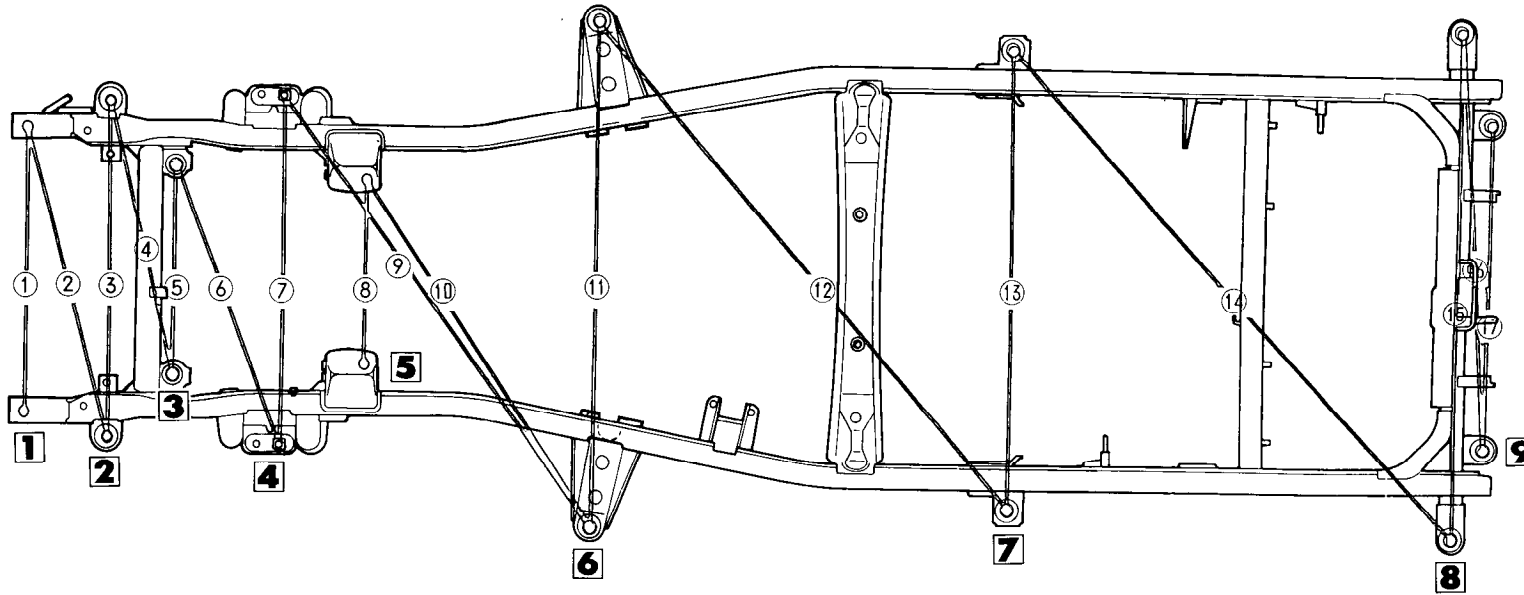
Center of body mounting hole [diameter : 32 mm (1.26 in.)]

TYPE A (PROJECTED DIMENSIONS) (1/2)

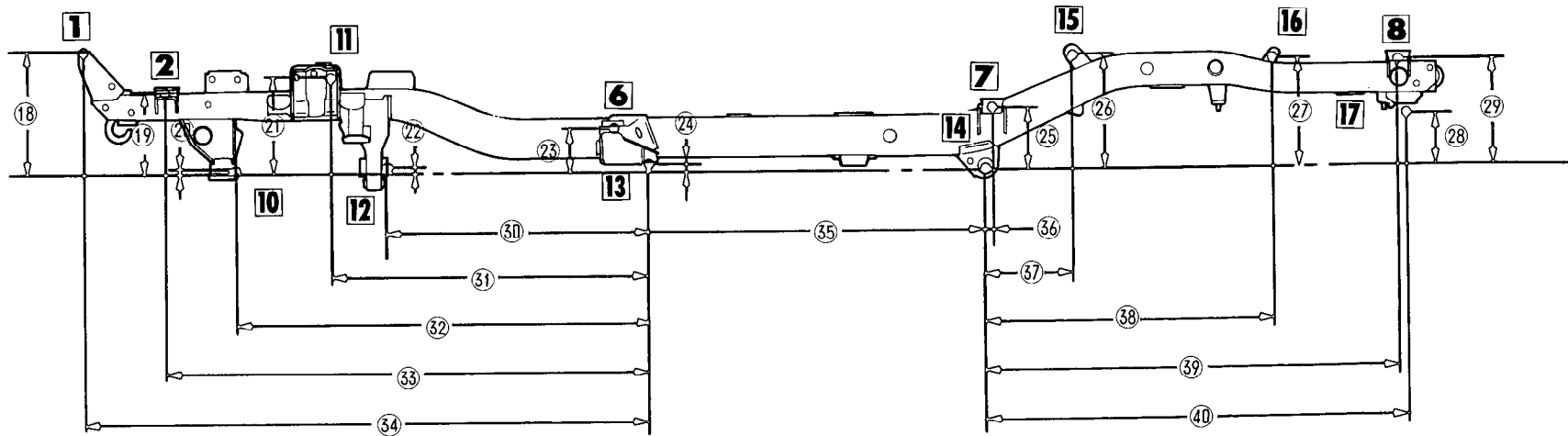
N13JA--

mm (in.)

No.	①	②*	③	④*	⑤	⑥*	⑦	⑧	⑨*	⑩*	⑪	⑫*	⑬	⑭*	⑮	⑯*	⑰	⑱	⑳	
Length	710 (27.95)	808 (31.83)	840 (33.07)	701 (27.59)	522 (20.55)	745 (29.32)	870 (34.25)	439 (17.28)	1,331 (52.40)	1,023 (40.29)	1,262 (49.68)	1,598 (62.90)	1,150 (45.28)	1,652 (65.06)	1,280 (50.39)	1,052 (41.42)	820 (32.28)	350 (13.79)	233 (9.19)	21 (.81)
No.	㉑	㉒	㉓	㉔	㉕	㉖	㉗	㉘	㉙	㉚	㉛	㉜	㉝	㉞	㉟	㊱	㊲	㊳	㊴	㊵
Length	268 (10.55)	21 (.81)	116 (4.57)	13 (.51)	163 (6.42)	310 (12.20)	300 (11.81)	160 (6.30)	283 (11.13)	734 (28.91)	880 (34.64)	1,148 (45.20)	1,332 (52.44)	1,562 (61.49)	923 (36.34)	20 (.79)	250 (9.84)	795 (31.30)	1,140 (44.88)	1,155 (45.47)

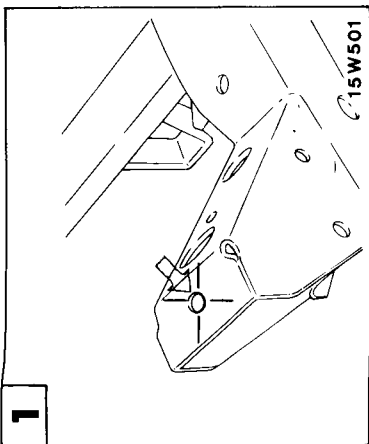


32W053



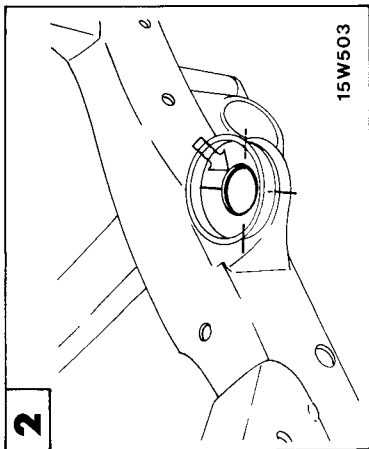
32W052

STB Revision



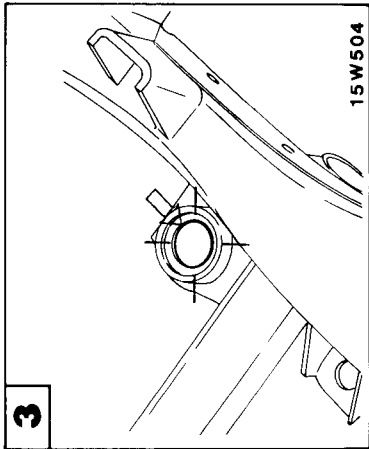
15W501

Center of front bumper mounting hole [diameter : 11 mm (.43 in.)]



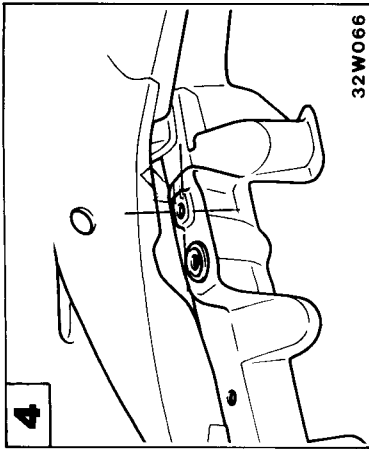
15W503

Center of body mounting hole [diameter : 30 mm (1.18 in.)]



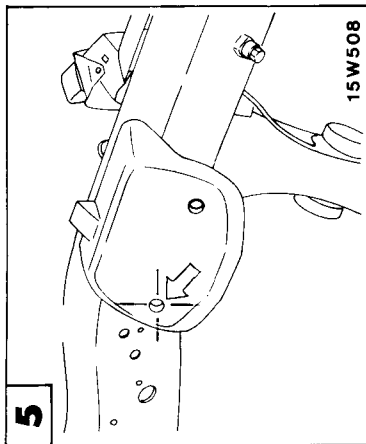
15W504

Center of differential mounting bracket hole [diameter : 34 mm (1.34 in.)]



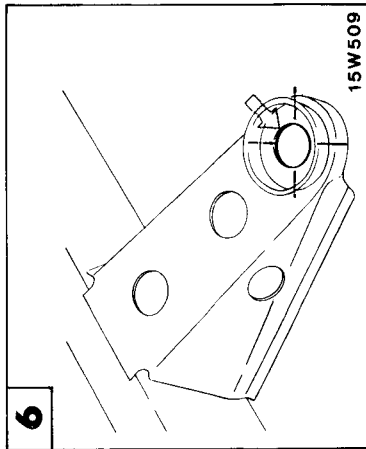
32W066

Center of brake hose mounting hole [diameter : 16 mm (.63 in.)]



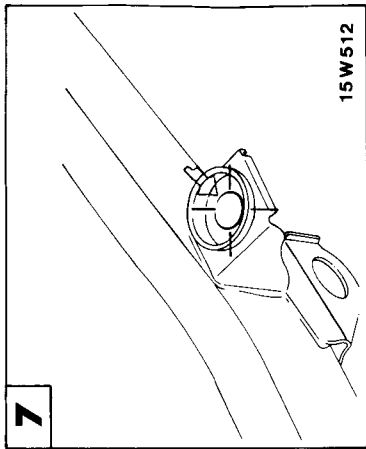
15W508

Center of engine mounting hole [diameter : 11 mm (.43 in.)]



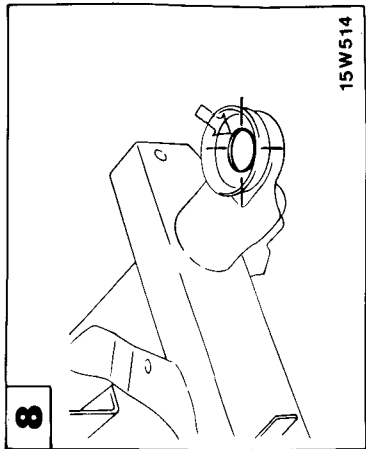
15W509

Center of body mounting hole [diameter : 32 mm (1.26 in.)]



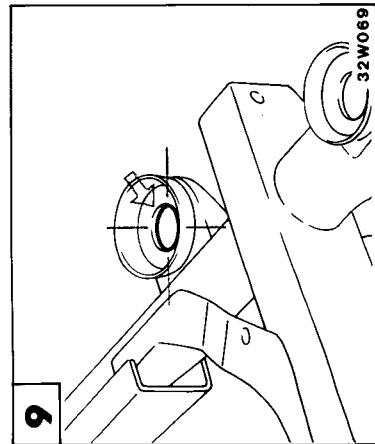
15W512

Center of body mounting hole [diameter : 32 mm (1.26 in.)]



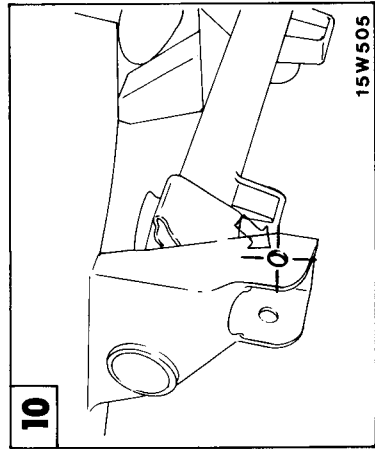
15W514

Center of body mounting hole [diameter : 32 mm (1.26 in.)]



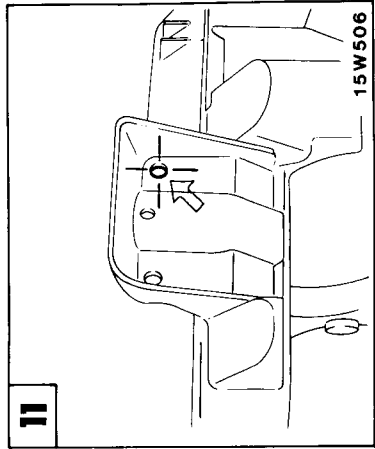
32W069

Center of body mounting hole [diameter : 30 mm (1.18 in.)]



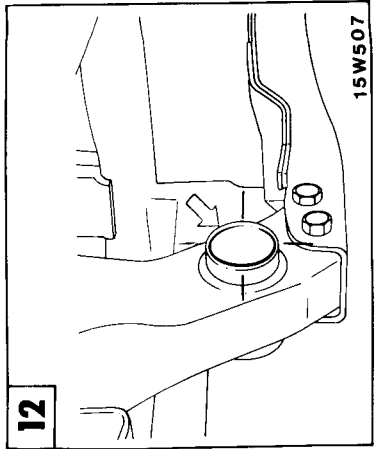
15W505

Center of lower arm (front) mounting hole [diameter : 15 mm (.59 in.)]



15W506

Center of upper arm mounting hole [diameter : 12.5 mm (.49 in.)]



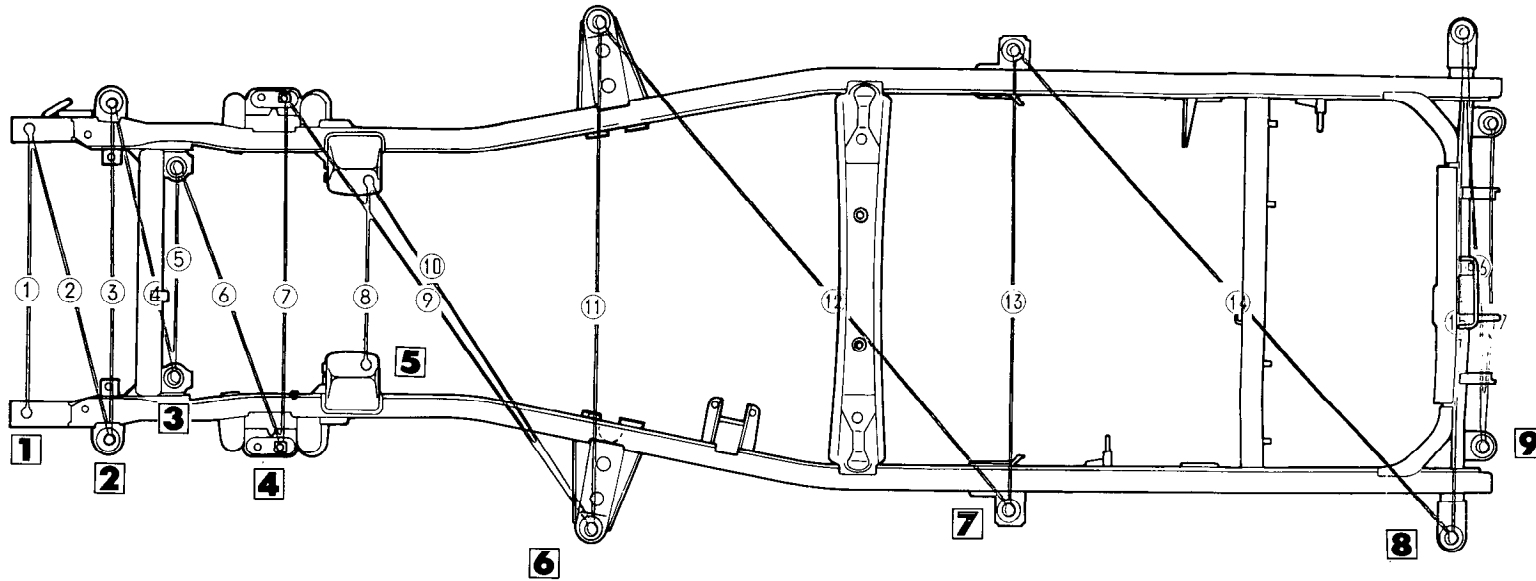
15W507

Center of lower arm (rear) mounting hole [diameter : 40 mm (1.57 in.)]

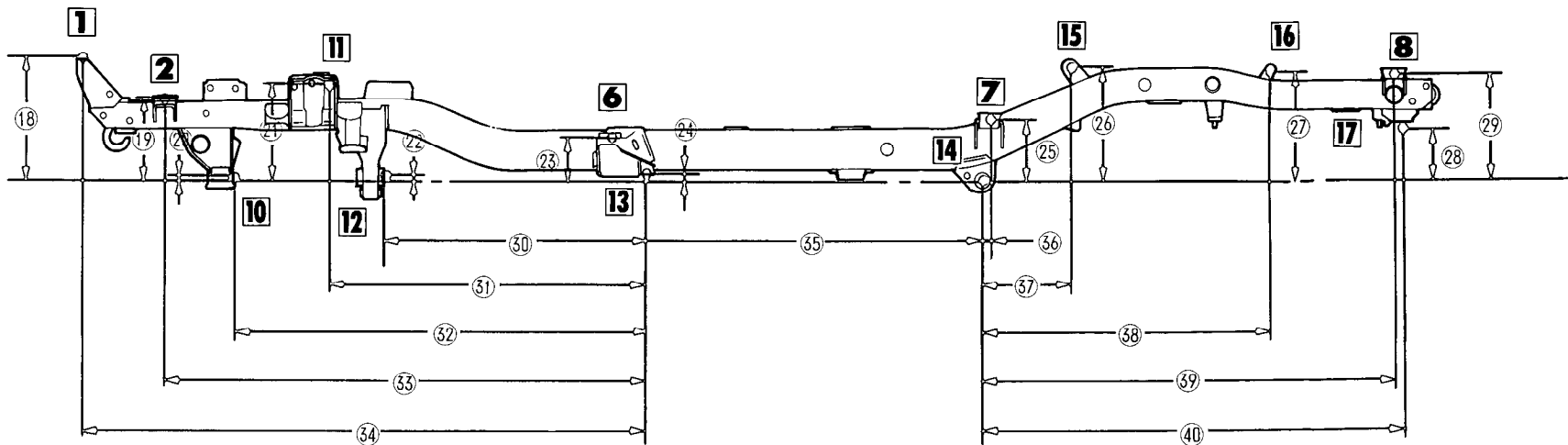
TYPE A (PROJECTED DIMENSIONS) (2/2)

mm (in.)

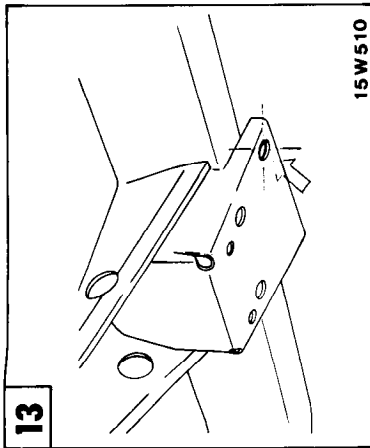
No.	①	②*	③	④*	⑤	⑥*	⑦	⑧	⑨*	⑩*	⑪	⑫*	⑬	⑭*	⑮	⑯*	⑰	⑱	⑳	
Length	710 (27.95)	808 (31.83)	840 (33.07)	701 (27.59)	522 (20.55)	745 (29.32)	870 (34.25)	439 (17.28)	1,331 (52.40)	1,023 (40.29)	1,262 (49.68)	1,598 (62.90)	1,150 (45.28)	1,652 (65.06)	1,280 (50.39)	1,052 (41.42)	820 (32.28)	350 (13.79)	233 (9.19)	21 (.81)
No.	㉑	㉒	㉓	㉔	㉕	㉖	㉗	㉘	㉙	㉚	㉛	㉜	㉝	㉞	㉟	㊱	㊲	㊳	㊴	
Length	268 (10.55)	21 (.81)	116 (4.57)	13 (.51)	163 (6.42)	310 (12.20)	300 (11.81)	160 (6.30)	283 (11.13)	734 (28.91)	880 (34.64)	1,148 (45.20)	1,332 (52.44)	1,562 (61.49)	923 (36.34)	20 (.79)	250 (9.84)	795 (31.30)	1,140 (44.88)	1,155 (45.47)



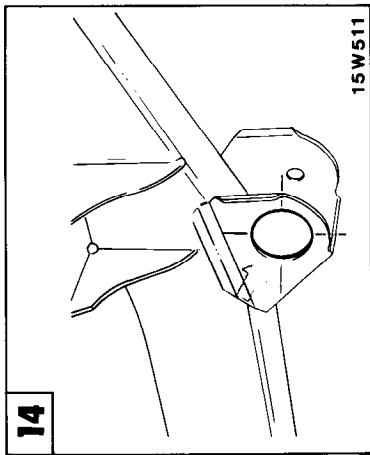
32W053



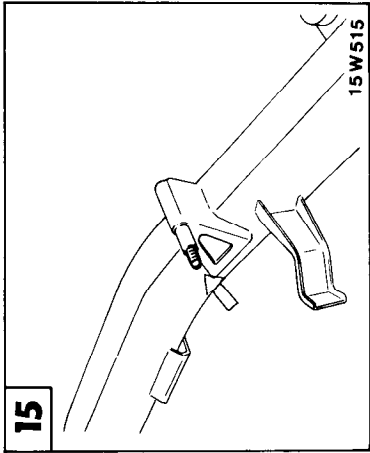
32W052



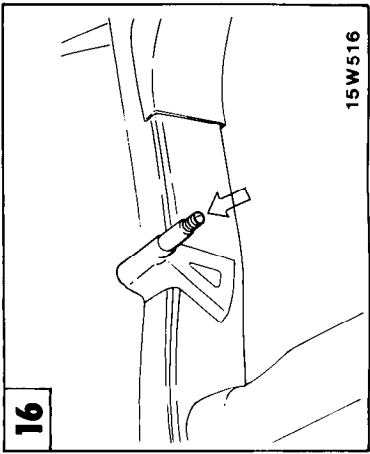
Center of No. 2 crossmember mounting hole [diameter : 14 mm (.55 in.)]



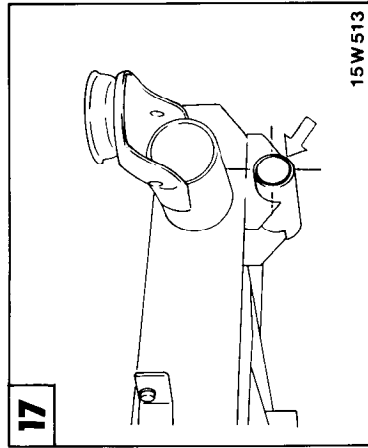
Center of rear spring (front) mounting hole [diameter : 48 mm (1.89 in.)]



Center of shock absorber mounting end (L.H.)



Center of shock absorber mounting end (R.H.)



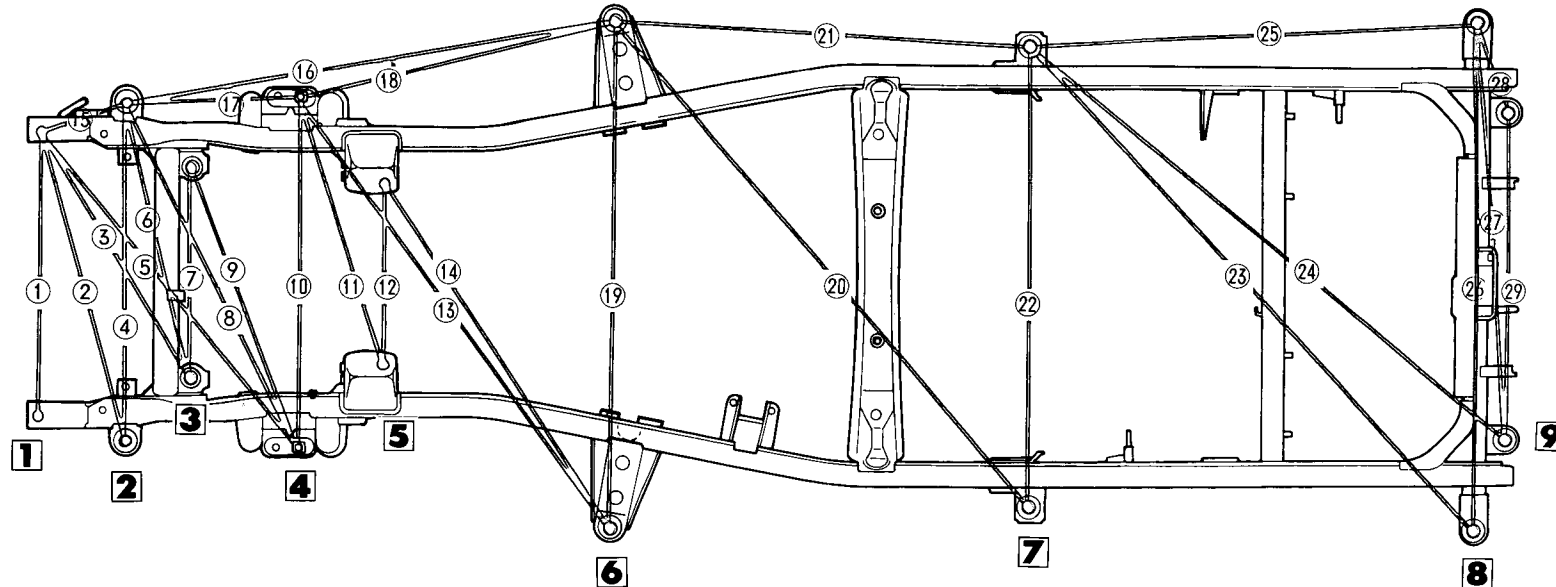
Center of rear spring shackle mounting hole [diameter : 28 mm (1.10 in.)]

TYPE B (ACTUAL-MEASUREMENT DIMENSIONS)

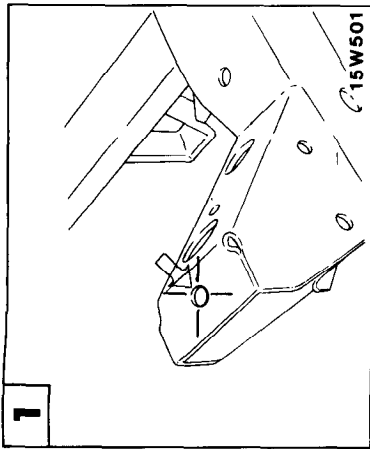
N13KA--

mm (in.)

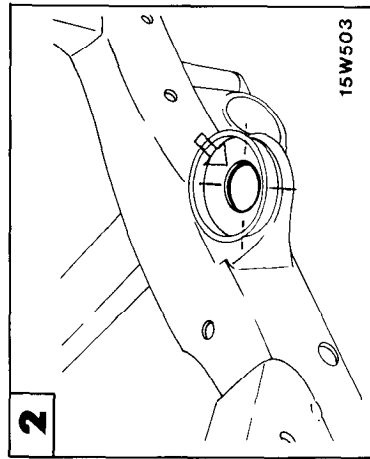
No.	①	②*	③*	④	⑤*	⑥*	⑦	⑧*	⑨*	⑩	⑪*	⑫	⑬*	⑭*	⑮	⑯	⑰	⑱	⑳*	
Length	710 (27.95)	817 (32.16)	762 (30.00)	840 (33.07)	1,031 (40.58)	707 (27.84)	522 (20.55)	959 (37.77)	758 (29.83)	870 (34.25)	695 (27.38)	439 (17.28)	1,344 (52.90)	1,031 (40.59)	266 (10.47)	1,251 (49.23)	435 (17.14)	841 (33.11)	1,262 (49.68)	1,598 (62.93)
No.	㉑	㉒	㉓*	㉔*	㉕	㉖	㉗*	㉘*	㉙											
Length	1,051 (41.36)	1,150 (45.28)	1,657 (65.23)	1,543 (60.75)	1,128 (44.42)	1,280 (50.39)	1,053 (41.44)	242 (9.53)	820 (32.28)											



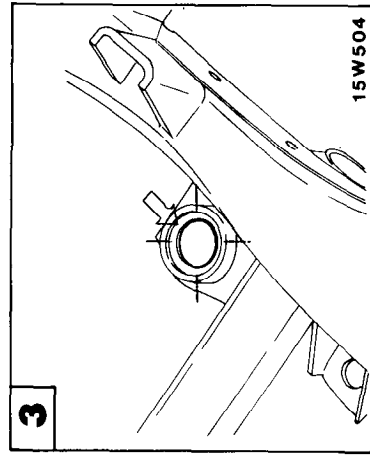
STB Revision



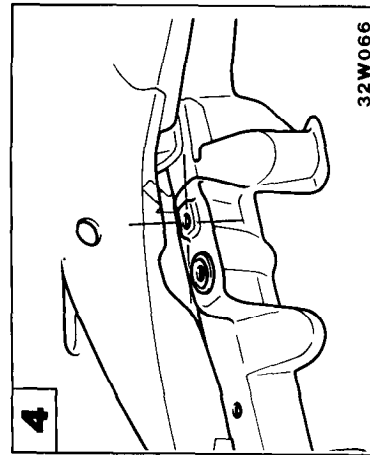
1 Center of front bumper mounting hole [diameter : 11 mm (.43 in.)]



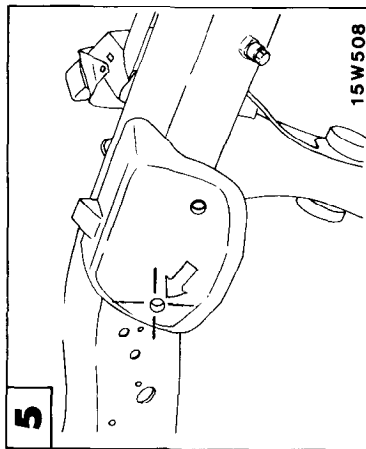
2 Center of body mounting hole [diameter : 30 mm (1.18 in.)]



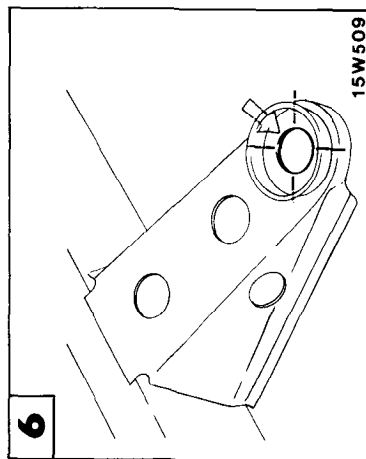
3 Center of differential mounting bracket hole [diameter : 34 mm (1.34 in.)]



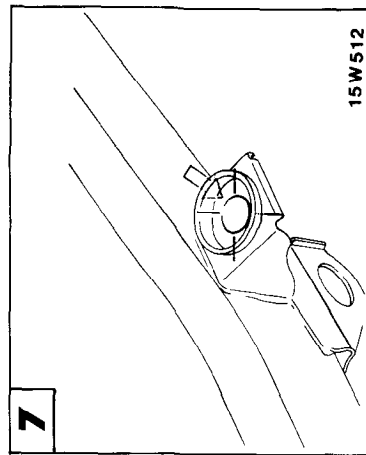
4 Center of brake hose mounting hole [diameter : 16 mm (.63 in.)]



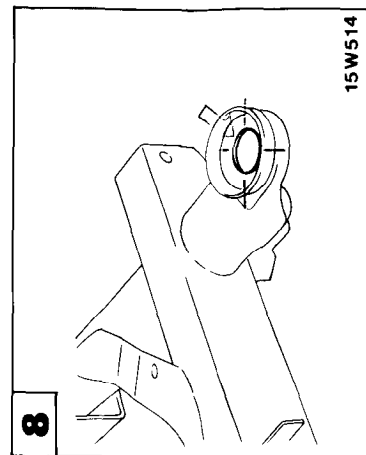
5 Center of engine mounting hole [diameter : 11 mm (.43 in.)]



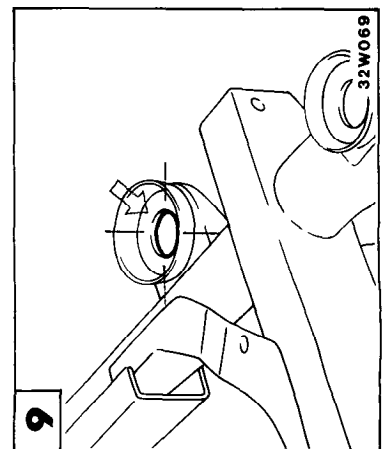
6 Center of body mounting hole [diameter : 32 mm (1.26 in.)]



7 Center of body mounting hole [diameter : 32 mm (1.26 in.)]



8 Center of body mounting hole [diameter : 32 mm (1.26 in.)]

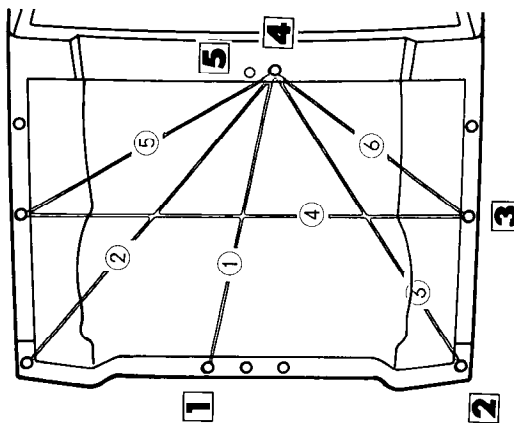


9 Center of body mounting hole [diameter : 30 mm (1.18 in.)]

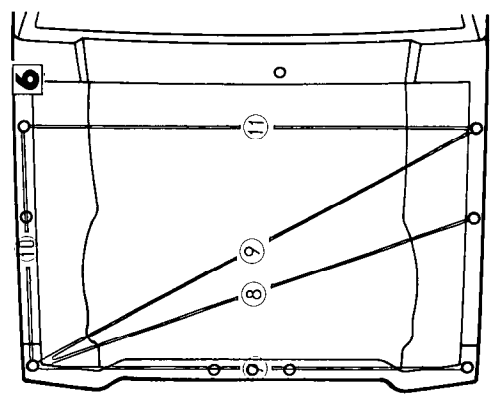
ENGINE COMPARTMENT (1/2)

mm (in.)

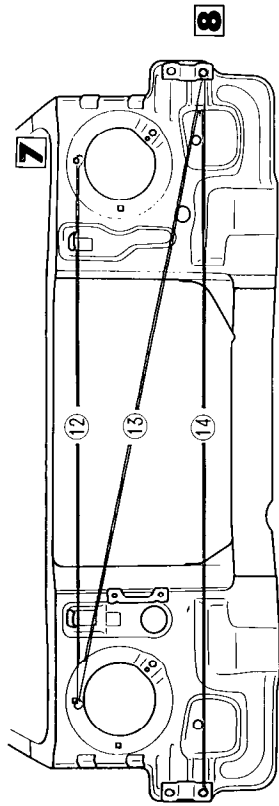
No.	①	②	③	④	⑤	⑥	⑦	⑧*	⑨*	⑩*	⑪	⑫	⑬*	⑭
Length	819 (32.24)	1,117 (43.98)	1,030 (40.55)	1,379 (54.29)	908 (35.75)	789 (31.06)	1,340 (52.76)	1,401 (55.16)	1,536 (60.47)	692 (27.24)	1,406 (55.35)	1,100 (43.31)	1,304 (51.34)	1,450 (57.09)



32W049



32W050

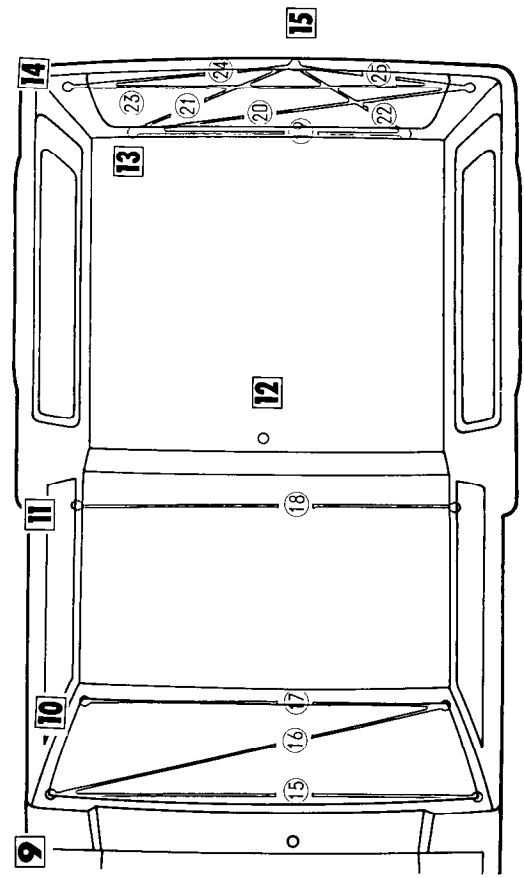


32W064

UPPER BODY

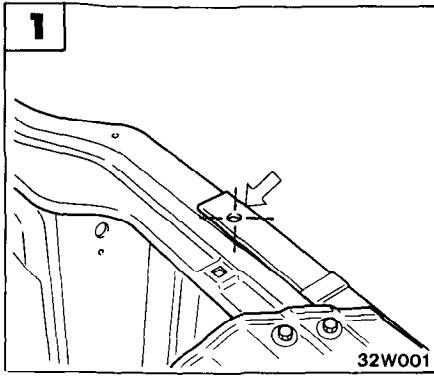
mm (in.)

No.	⑮	⑯*	⑰	⑱	⑲*	⑳	㉑	㉒	㉓	㉔	㉕
Length	1,376 (54.17)	1,401 (55.16)	1,177 (46.34)	1,243 (48.94)	909 (35.79)	1,569 (61.77)	1,243 (48.94)	1,138 (44.80)	1,594 (62.76)	953 (37.52)	671 (26.42)

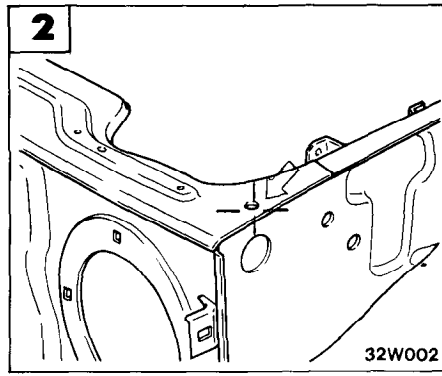


32W048

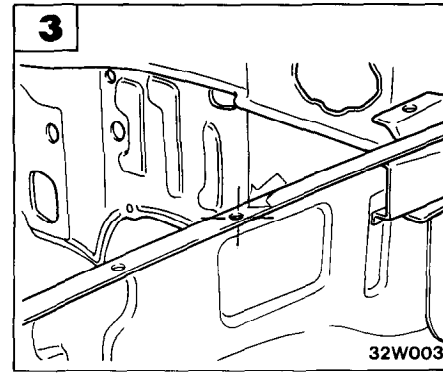
STB Revision



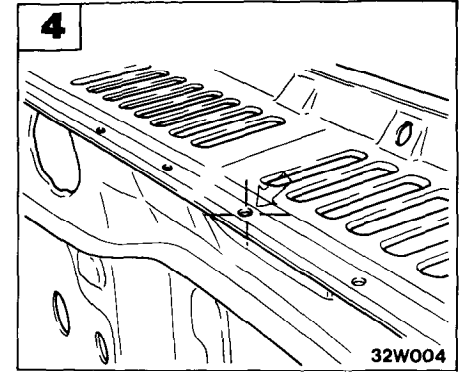
Hole in top of headlamp support [diameter : 6.6 mm (.26 in.)]



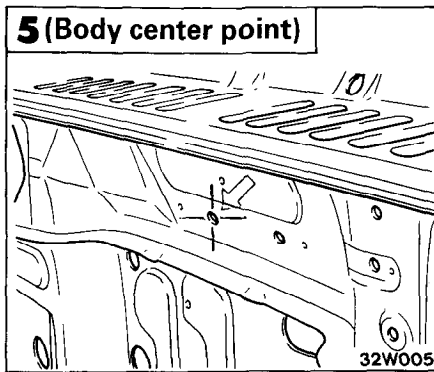
Center of fender mounting hole [diameter : 9 mm (.35 in.)]



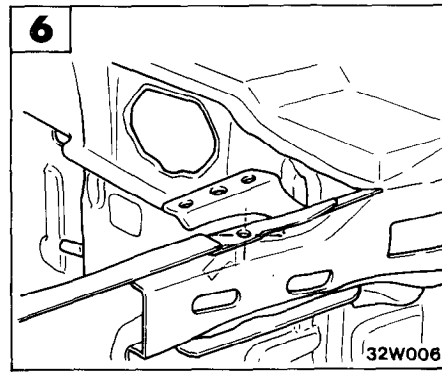
Center of fender mounting hole [diameter : 6.6 mm (.26 in.)]



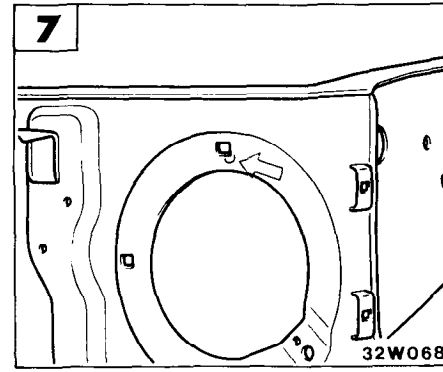
Center of weatherstrip mounting hole [diameter : 5.5 mm (.22 in.)]



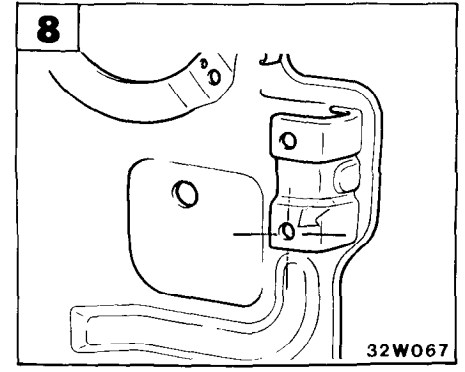
Center of accelerator cable mounting hole [diameter : 9 mm (.35 in.)]



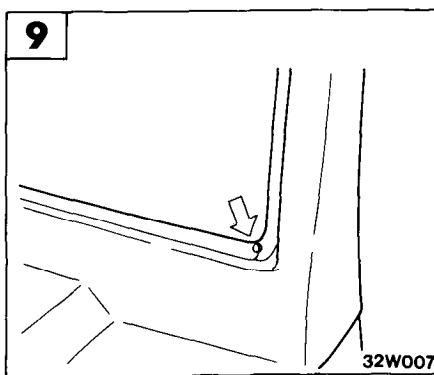
Center of fender mounting hole [diameter : 6.6 mm (.26 in.)]



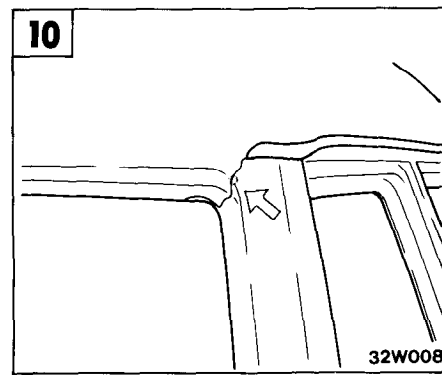
Headlight mounting hole



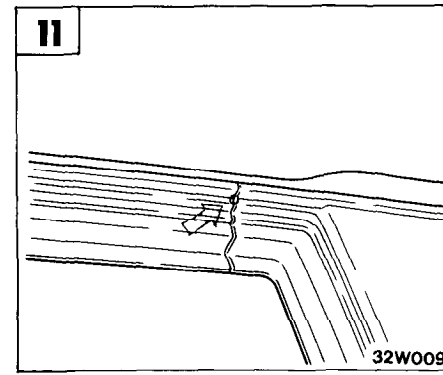
Center of front fender mounting hole [diameter : 10 mm (.39 in.)]



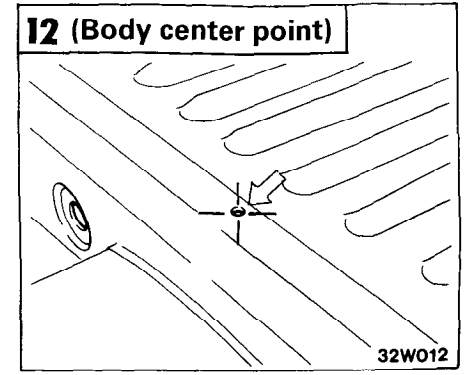
Front pillar lower part



Joint of roof and front pillar



Joint of side roof rail and quarter panel

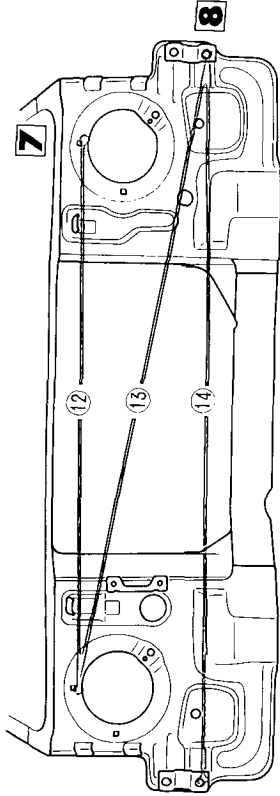
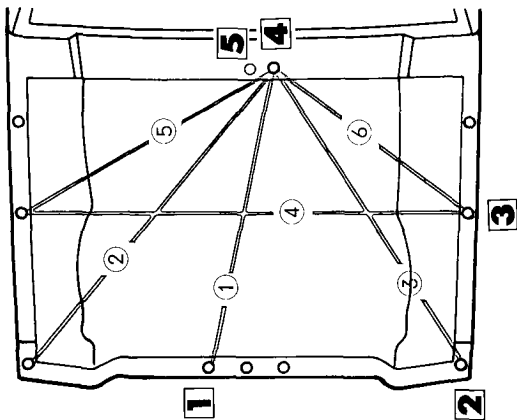


Body center point reference hole [diameter : 5 mm (.20 in.)]

ENGINE COMPARTMENT (2/2)

mm (in.)

No.	1	2	3	4	5	6	7	8*	9*	10*	11	12	13*	14
Length	819 (32.24)	1,117 (43.98)	1,030 (40.55)	1,379 (54.29)	908 (35.75)	789 (31.06)	1,340 (52.76)	1,401 (55.16)	1,536 (60.47)	692 (27.24)	1,406 (55.35)	1,100 (43.31)	1,304 (51.34)	1,450 (57.09)



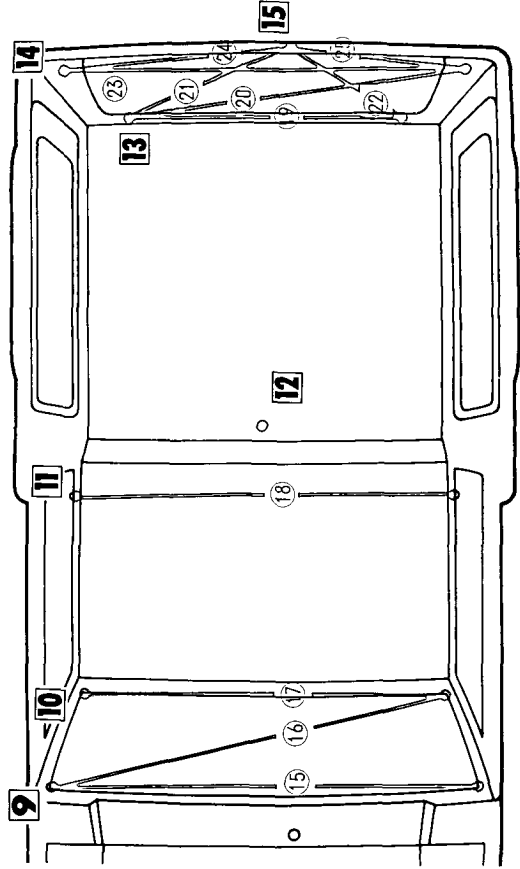
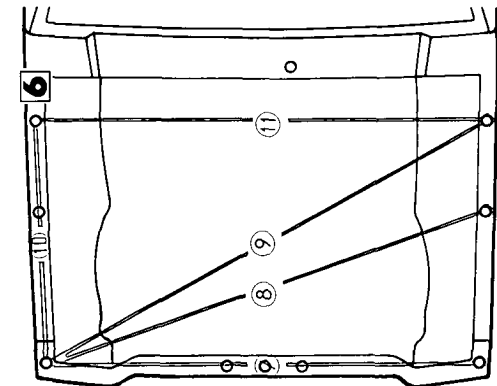
32W064

UPPER BODY

mm (in.)

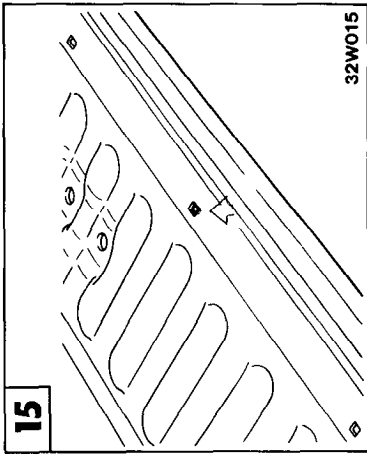
No.	15	16*	17	18	19	20*	21	22	23	24	25
Length	1,376 (54.17)	1,401 (55.16)	1,177 (46.34)	1,243 (48.94)	909 (35.79)	1,569 (61.77)	1,243 (48.94)	1,138 (44.80)	1,594 (62.76)	963 (37.52)	671 (26.42)

32W048

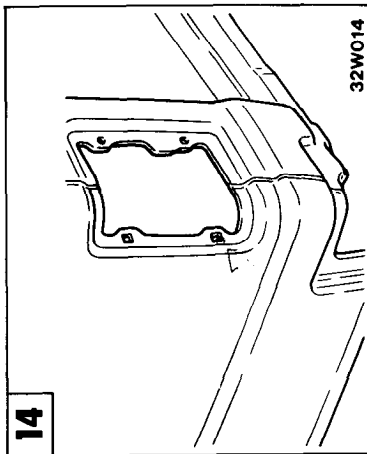


32W050

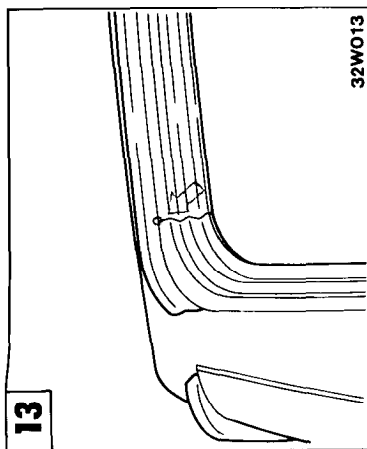
32W048



Rear scuff plate mounting hole



Rear combination lamp mounting hole



Joint of rear end panel and rear roof rail

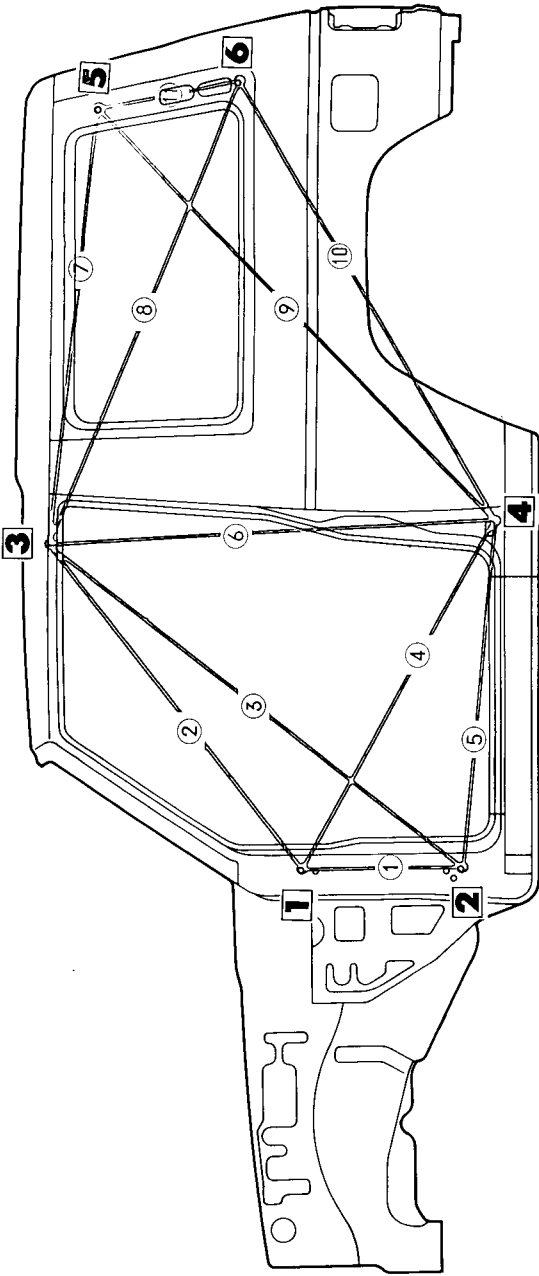
32W051

32W047

SIDE BODY

mm (in.)

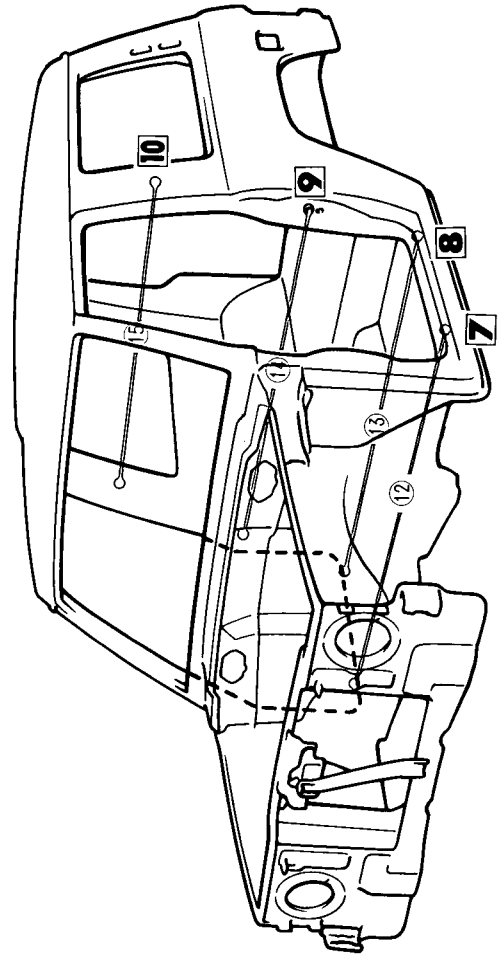
No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Length	439 (17.28)	1,193 (46.97)	1,492 (58.74)	1,080 (42.52)	951 (37.44)	1,194 (47.01)	1,114 (43.86)	1,299 (51.14)	1,589 (62.56)	1,409 (55.47)	419 (16.50)

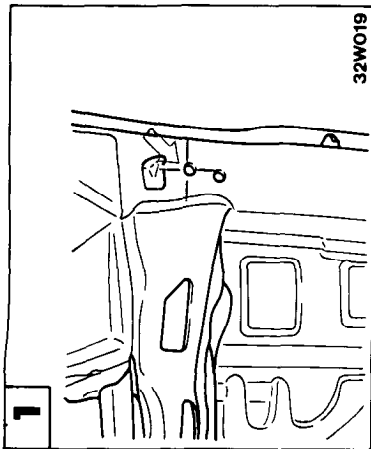


INTERIOR

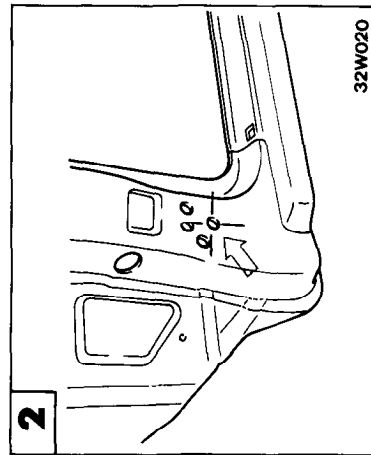
mm (in.)

No.	(12)	(13)	(14)	(15)
Length	1,514 (59.61)	1,511 (59.49)	1,483 (58.39)	1,291 (50.83)

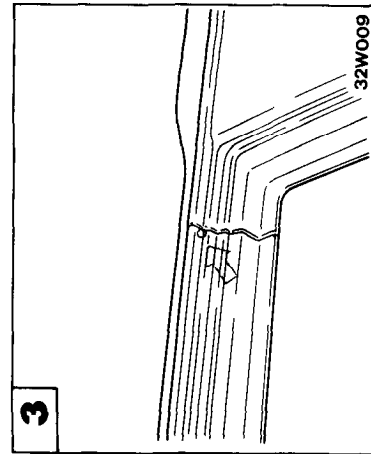




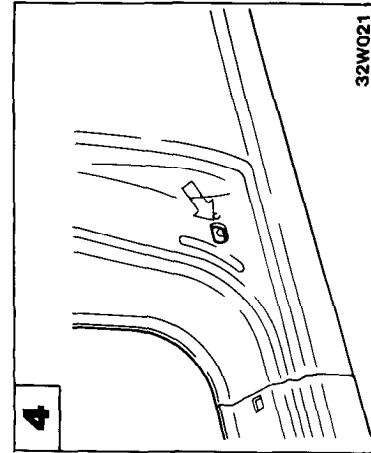
32W019
Center of front door hinge mounting hole [diameter : 11 mm (.43 in.)]



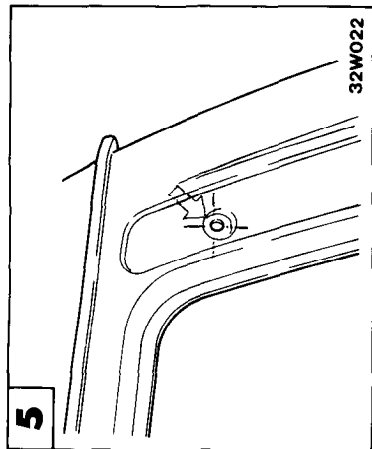
32W020
Center of front door hinge mounting hole [diameter : 11 mm (.43 in.)]



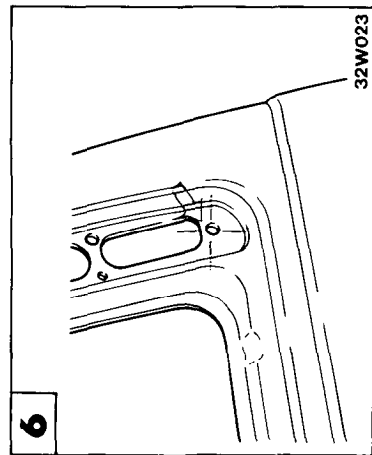
32W009
Joint of side roof rail and quarter panel



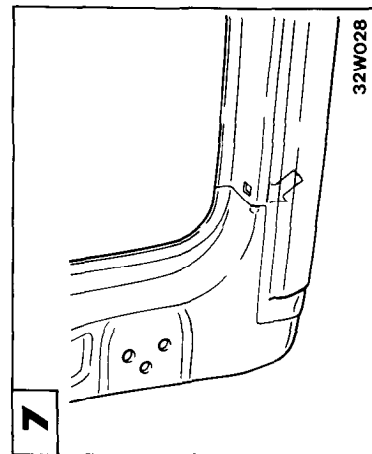
32W021
Door switch mounting hole



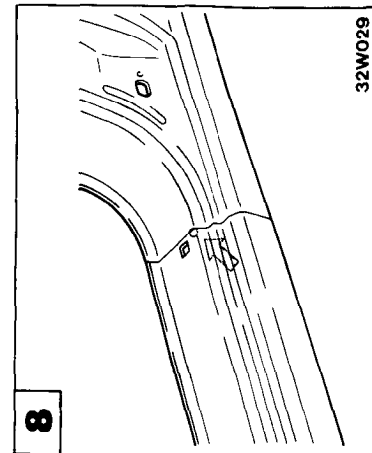
32W022
Air outlet garnish mounting hole [diameter : 9 mm (.35 in.)]



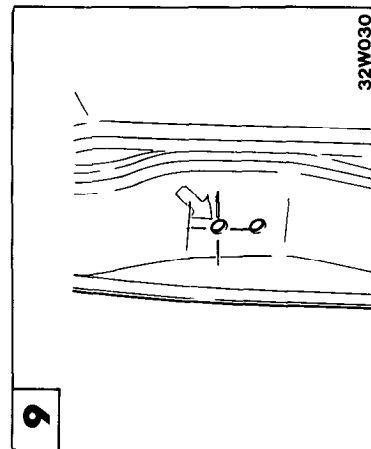
32W023
Air outlet garnish mounting hole [diameter : 9 mm (.35 in.)]



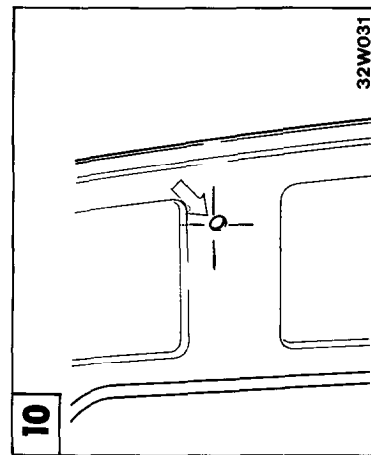
32W028
Joint of front pillar and side sill



32W029
Joint of side sill and quarter panel



32W030
Center of door striker mounting hole [diameter : 14 mm (.55 in.)]



32W031
Center of front seat belt mounting hole [diameter : 15 mm (.59 in.)]