

Dimensions - Body

Three Dimensional Distance -- X, Y, Z

This universal measuring system is capable of simultaneously dimensioning the length, width, and height of a datum plane. Three dimensional distances are used for both underbody and upperbody measuring.

X = Fore and aft measurements along the center line of the vehicle. An O plane is located forward of the master gage hole at the front of the vehicle 2185 mm as shown. All measurements are made from this plane toward the rear of the vehicle.

Y = Cross car dimensions. Positive values are measured from the center of the vehicle to the right side of the vehicle. Negative values are measured from the center of the vehicle to the left side. When values are not listed separately to change the side of the vehicle, you need only to change the Y dimensions to the opposite value, + or -, from what is listed.

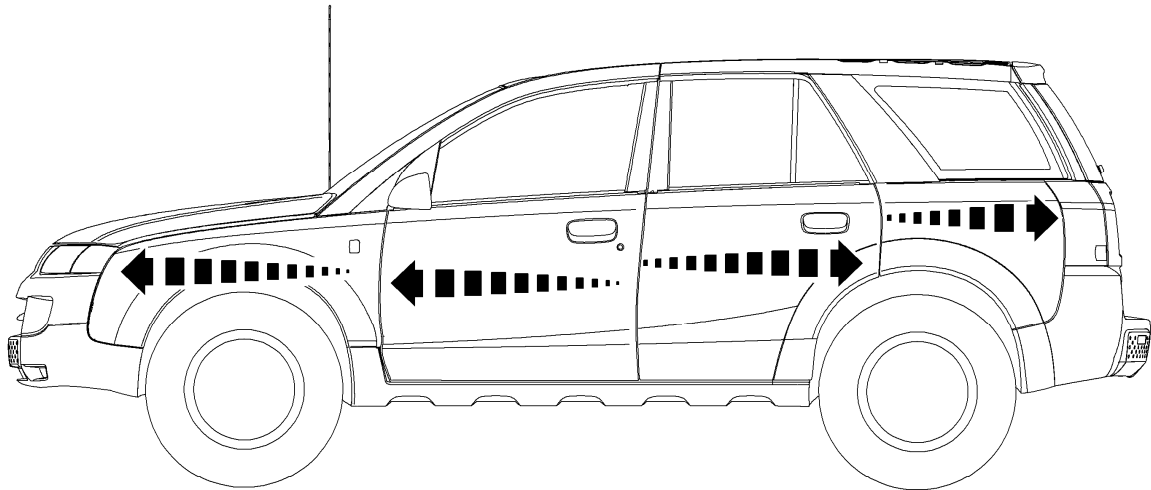
Z = Vertical measurement from the datum plane that is 368 mm below the rocker panel lower flange edge (O plane).

All dimensions are symmetrical, unless otherwise noted.

In order to properly repair the spaceframe, restore the vehicle to the XYZ dimensions, as originally built. Relational (linear) dimensions are for reference only. Use relational dimensions for diagnosis or inspection only. Relational dimensions are not as accurate as XYZ dimensions and measuring systems.

The gage holes shown are the actual fixture locations that are used to build the vehicle.

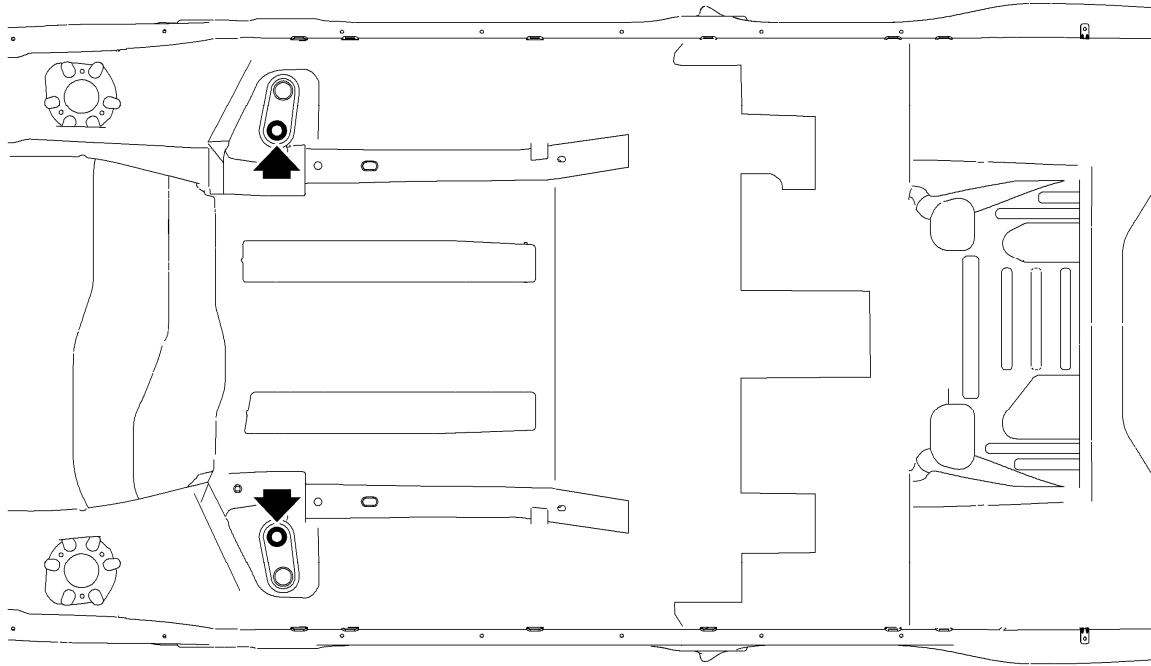
Thermal Expansion



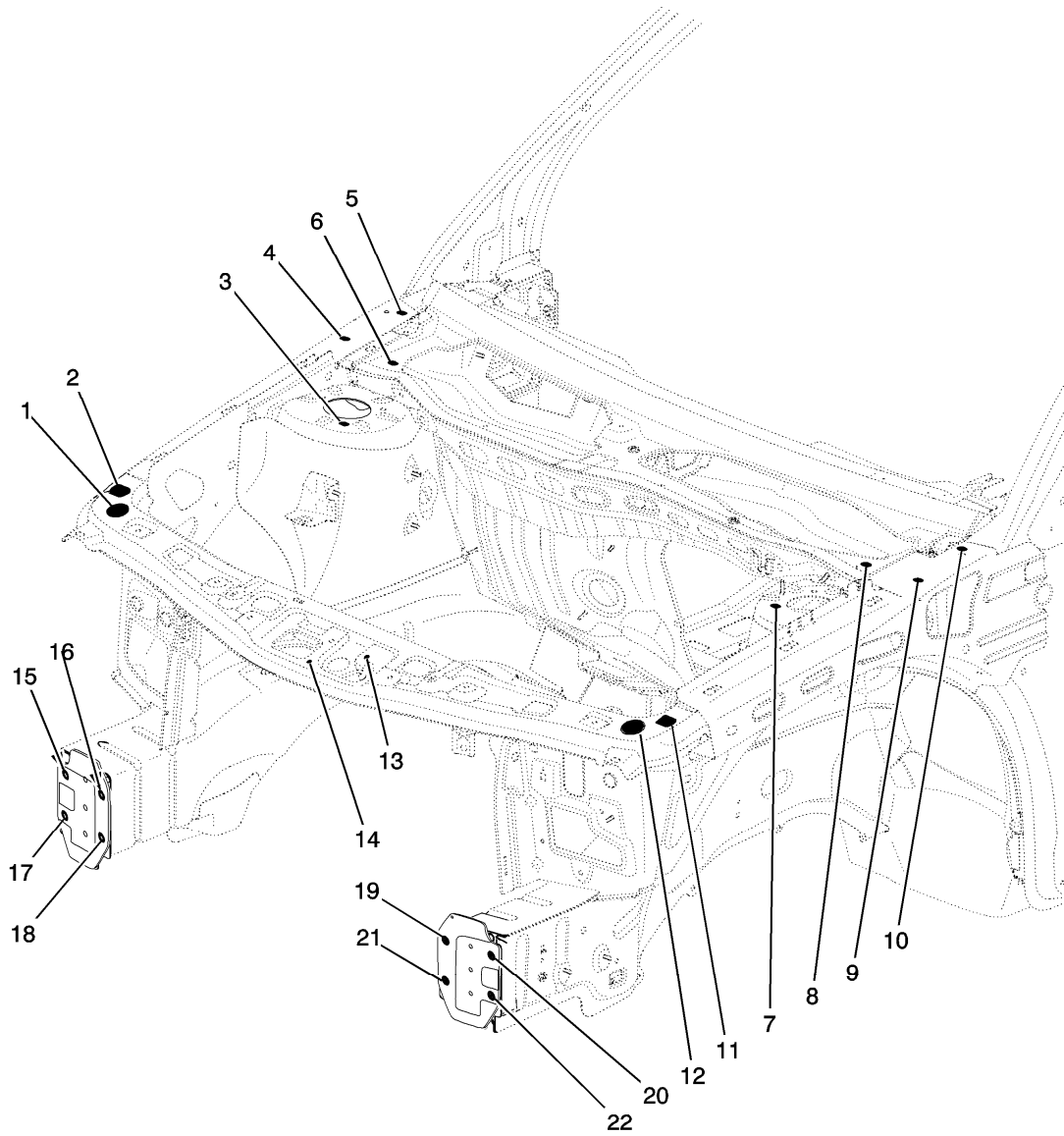
Saturn chose thermal plastic exterior body panels for their strategic advantage. Unique to this technology is the need to manage thermal expansion.

Thermal expansion allows exterior panels, e.g. fender, door quarter, to grow and contract with changes in temperature. The method in which the exterior body controls and directs this expansion is through a carefully engineered fastener system and exterior panel design. This panel design consists of a series of net and slotted holes to direct this growth. The growth is directed forward for the fender and rearward for the quarter panels. The growth of the doors is forward for the front door and rearward for the rear door.

Master Gage Holes



Front Compartment

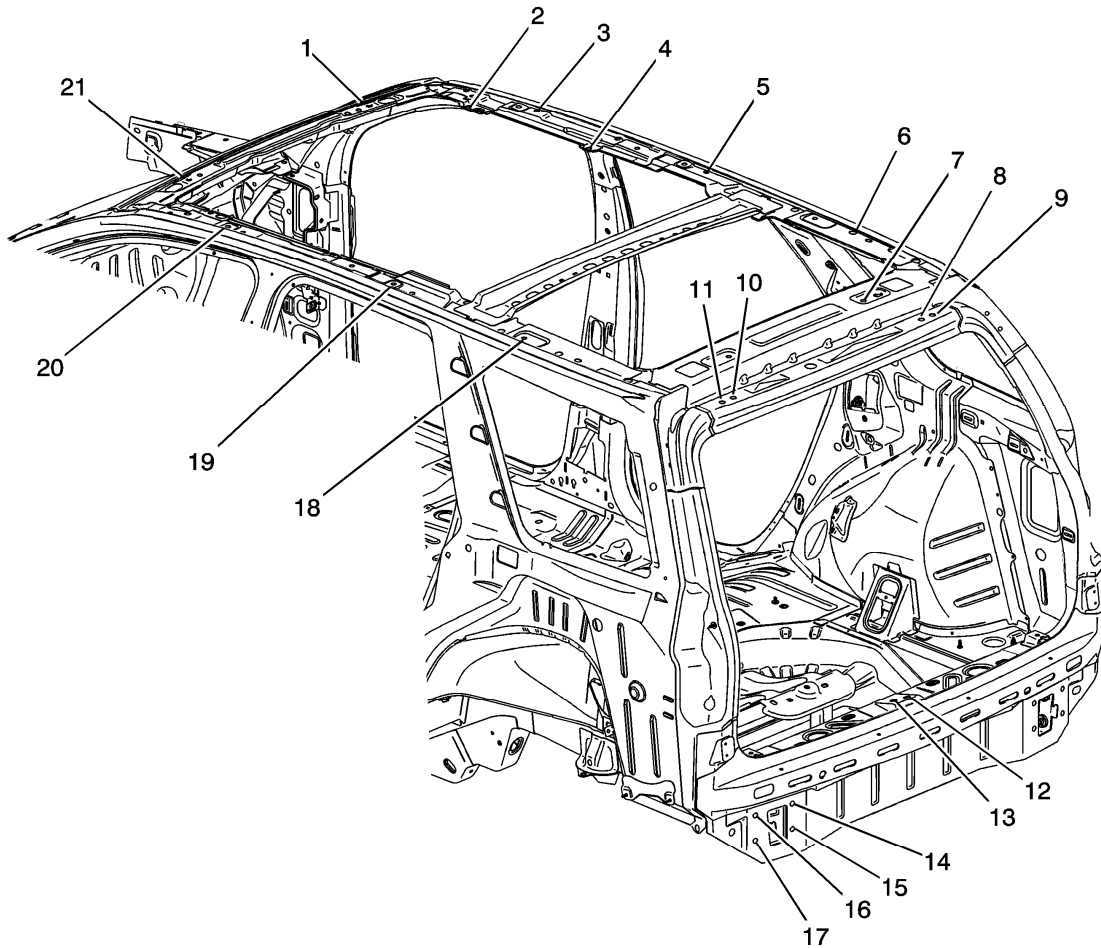


Location	Description	Length = x	Width = y	Height = z	Point to Point
1	Hood Bumper Hole	1184	649	882	x
2	Hole	1225	686	889	x
3	Strut Attachment Hole	1648	544	934	x
4	Hood Hinge Hole	1829	714	978	x
5	Hood Hinge Hole	1930	714	9989	x
6	Air Inlet Grille Attachment Hole	1849	600	975	x
7	Strut Attachment Hole	1948	- 544	934	x
8	Air Inlet Grille Attachment Hole	1813	-616	975	x
9	Hood Hinge Hole	1829	- 714	978	x
10	Hood Hinge Hole	1930	- 714	989	x
11	Hole	1225	- 689	889	x
12	Hood Bumper Hole	1184	- 649	882	x
13	Hood Striker Attachment Hole	1080	-83	869	x
14	Hood Striker Attachment Hole	1018	- 1	852	x
15	Impact Bar Attachment Hole	921	- 396	480	x
16	Impact Bar Attachment Hole	943	- 574	480	x
17	Impact Bar Attachment Hole	943	- 574	405	x
18	Impact Bar Attachment Hole	921	- 396	405	x
19	Impact Bar Attachment Hole	921	- 396	480	x
20	Impact Bar Attachment Hole	943	- 574	480	x
21	Impact Bar Attachment Hole	943	- 574	405	x
22	Impact Bar Attachment Hole	921	- 396	405	x

15 to 20	x	x	x	x	1143
18 to 21	x	x	x	x	787
2 to 11	x	x	x	x	1380
4 to 11	x	x	x	x	1527
2 to 9	x	x	x	x	1527

All dimensions are measured from a zero line, a center line, and a common datum. All dimensions are symmetrical unless otherwise specified.

Body Rear

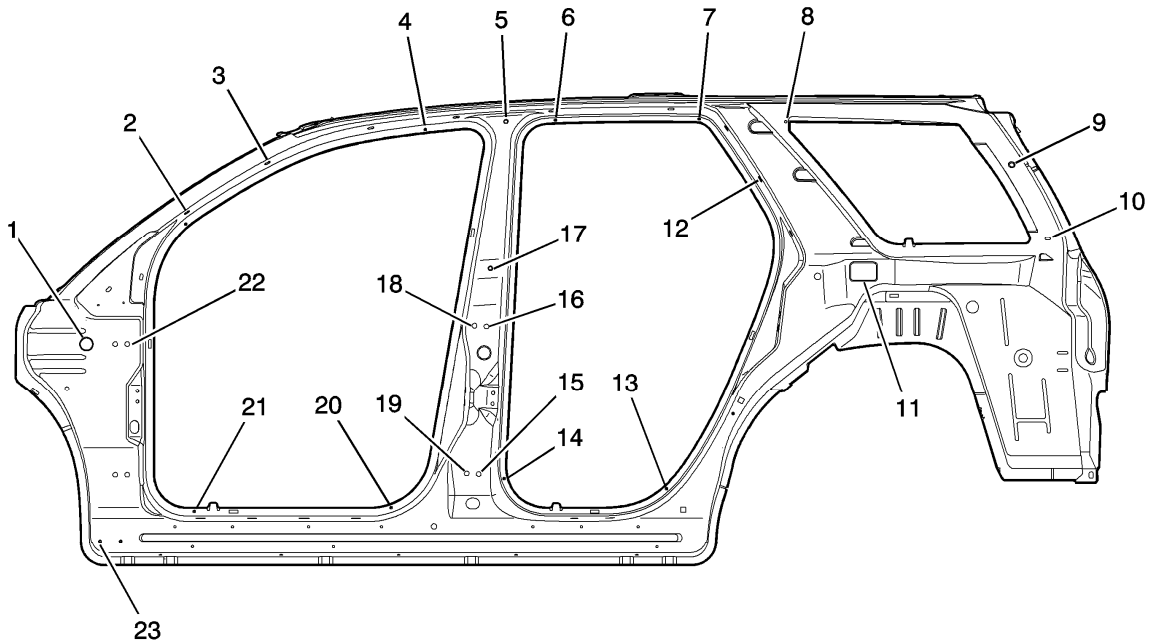


Location	Description	Length = x	Width = y	Height = z	Point to Point
1	Roof Attachment Hole	2744	- 335	1525	x
2	Hole	x	x	x	x
3	Hole	3161	546	1569	x
4	Hole	x	x	x	x
5	Hole	3790	546	1594	x
6	Hole	4335	546	1595	x
7	Roof Attachment Hole	x	x	x	x
8	Lift Gate Attachment Hole	x	x	x	x
9	Lift Gate Attachment Hole	x	x	x	x
10	Lift Gate Attachment Hole	x	x	x	x
11	Lift Gate Attachment Hole	x	x	x	x
12	Lift Gate Striker Attachment Hole	5063	19	628	x
13	Lift Gate Striker Attachment Hole	5052	-19	624	x
14	Impact Bar Attachment Hole	5102	-449	483	x
15	Impact Bar Attachment Hole	5103	-449	403	x
16	Impact Bar Attachment Hole	5084	-570	483	x
17	Impact Bar Attachment Hole	5089	-571	407	x
18	Hole	4200	-540	1595	x
19	Hole	3715	-540	1595	x
20	Hole	3100	-540	1564	x
21	Hole	2744	-335	1525	x
From 3 to 21	x	x	x	x	1081
From 3 to 19	x	x	x	x	1496
From 6 to 21	x	x	x	x	1635
From 6 to 19	x	x	x	x	1084
From 3 to 6	x	x	x	x	1157
From 19 to	x	x	x	x	1171

21					
From 5 to 20	x	x	x	x	1082

All dimensions are measured from a zero line, a center line, and a common datum. All dimensions are symmetrical unless otherwise specified.

Body Side

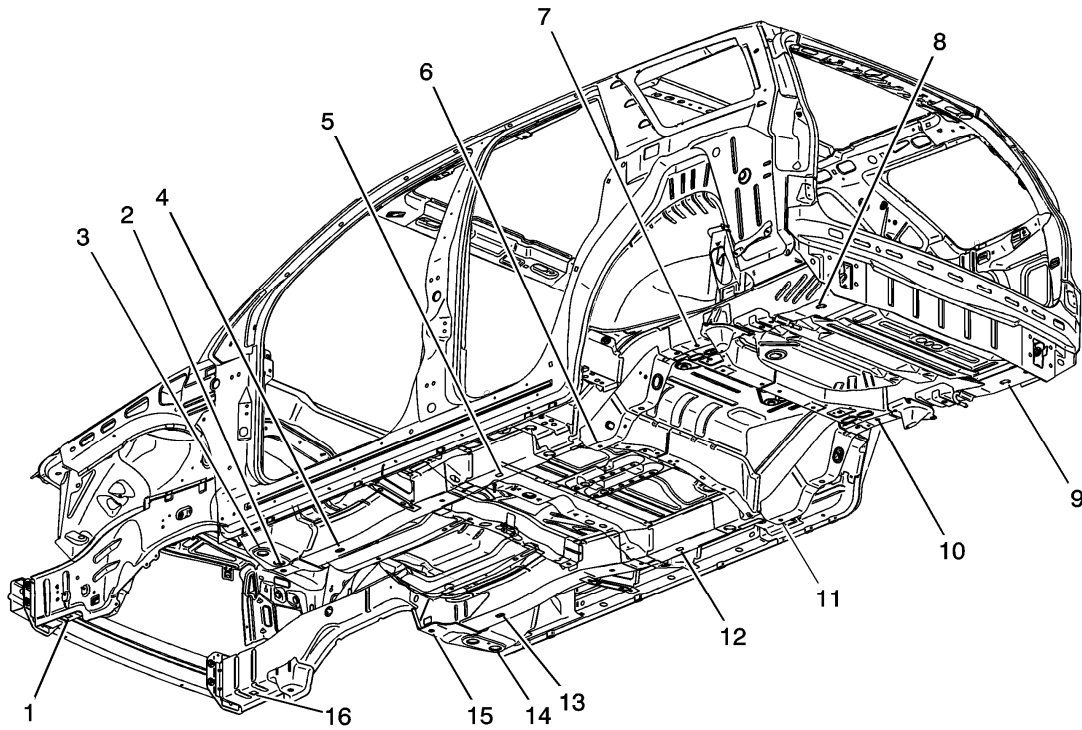


Location	Description	Length = x	Width = y	Height = z	Point to Point
1	Plug	2110	757	875	x
2	Applique Attachment Hole	2400	674	1226	x
3	Applique Attachment Hole	2639	642	1405	x
4	Die Mark	3100	591	1503	x
5	Notch	3335	606	1526	x
6	Die Mark	3480	589	1530	x
7	Die Mark	3900	595	1534	x

8	Hole	4152	643	1526	x
9	Hole	4813	673	1400	x
10	Hole	4918	733	1182	x
11	Hole	4380	777	1085	x
12	Hole	4078	704	1358	x
13	Die Mark	3805	725	450	x
14	Die Mark	3330	725	480	x
15	Rear Hinge Attachment Hole	3256	782	493	x
16	Rear Hinge Attachment Hole	3278	782	926	x
17	Hole	3290	757	1095	x
18	Rear Hinge Attachment Hole	3243	782	928	x
19	Rear Hinge Attachment Hole	3221	782	495	x
20	Die Mark	3000	725	395	x
21	Die Mark	2426	725	384	x
22	Front Hinge Attachment Hole	2229	762	875	x
23	Hole	2150	765	296	x
From 6 to 13	x	x	x	x	1125
From 7 to 15	x	x	x	x	1224
From 4 to 21	x	x	x	x	1314
From 2 to 20	x	x	x	x	1023
From 2 to 21	x	x	x	x	839
From 5 to 23	x	x	x	x	1701
From 8 to 10	x	x	x	x	842

All dimensions are measured from a zero line, a center line, and a common datum. All dimensions are symmetrical unless otherwise specified.

Underbody

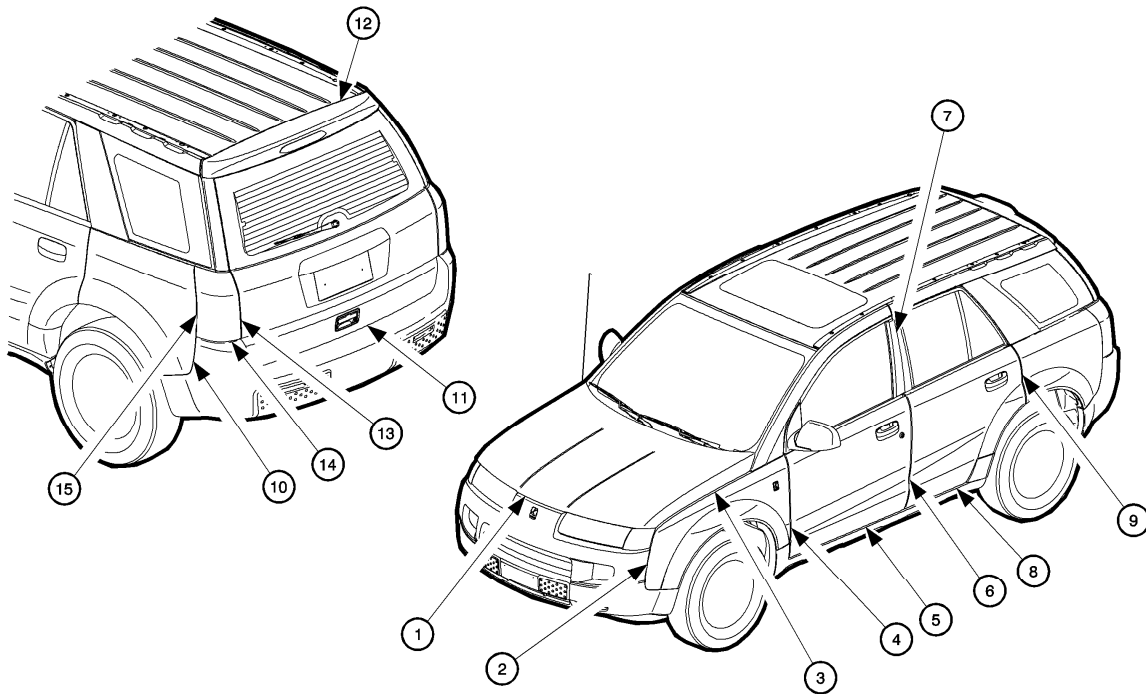


Location	Description	Length = x	Width = y	Height = z	Point to Point
1	Rear Cradle Mount Hole	1065	- 480	341	x
2	Hole	2080	- 382	232	x
3	Hole	2192	- 600	196	x
4	Hole	2404	- 414	197	x
5	Hole	3277	- 466	204	x
6	Hole	3800	- 466	153	x
7	Hole	4300	- 466	409	x
8	Hole	4943	- 475	356	x
9	Hole	4943	475	356	x
10	Hole	4300	466	409	x

11	Hole	3800	466	153	x
12	Hole	3277	466	204	x
13	Hole	2404	414	197	x
14	Hole	2192	600	196	x
15	Rear Cradle Mount Hole	2081	382	232	x
16	Hole	1065	480	341	x

All dimensions are measured from a zero line, a center line, and a common datum. All dimensions are symmetrical unless otherwise specified.

Clearance and Flushness Specifications



Location	Description	Clearance Gap	Flushness
1	Front fascia to hood	6.5-9.5 mm (0.25-0.38 in)	--
2	Front fascia to fender	1.0-3.0 mm (0.04-0.12 in)	-1.5 to 1.5 mm (-0.06 to 0.06 in)
3	Front fender to hood	6.5-9.5 mm (0.25-0.38 in)	--
4	Front fender to front door	4.50-7.5 mm (0.18-	-1.5 to 1.5 mm (-0.06 to

		0.30 in)	0.06 in)
5	Front door panel to rocker panel	4.0-10.0 mm (0.16-0.39 in)	--
6	Front door panel to rear door panel	5.0-8.0 mm (0.2-0.31 in)	-1.5 to 1.5 mm (-0.06 to 0.06 in)
7	Front door applique to rear door applique	6.5+3/-1 mm (0.26+0.12/0.04 in)	-1.5 to 1.5 mm (-0.06 to 0.06 in)
8	Rear door panel to rocker	4.0-10.0 mm (0.16-0.39 in)	--
9	Rear door panel to quarter panel	4.5-7.5 mm (0.18-0.30 in)	-1.5 to 1.5 mm (-0.06 to 0.06 in)
10	Quarter panel to rear fascia	1.0-3.0 mm (0.04-0.12 in)	-1.5 to 1.5 mm (-0.06 to 0.06 in)
11	Lift gate to rear fascia	6.0-10.0 mm (0.24-0.39 in)	--
12	Lift gate to roof panel	6.0-10.0 mm (0.24-0.39 in)	0+1/-2 mm (0+0.04/0.08 in)
13	Tail lamp to lift gate	4.0-8.0 mm (0.16-0.31 in)	0-4.0 mm (0.00-0.16 in)
14	Tail lamp to rear fascia	0-4.0 mm (0.00-0.16 in)	--
15	Tail lamp to quarter panel	0.5-3.5 mm (0.02-0.14 in)	0-3.0 mm (0-0.12 in)