



BODY TECH

First published March 98

**Model GU Patrol
Body Dimensions
& Specifications**

Vehicle body repair
information prepared by
VACC Technical Services

Nissan Y61 Patrol

October 1997 - September 2001



New engines, a totally new look, more space and practicality in a package that retains all the ruggedness of its predecessors, marks the new Y61 Patrol.

The new more refined styling belies the fact that the Patrol continues to be a serious off-road vehicle. A strong separate chassis, as opposed to the monocoque construction of many four wheel drives of late, is retained. Many advancements in safety have been incorporated including the addition of crumple zones and significantly, crush sections, at the front of each chassis rail. These replaceable (weld on) sections are designed to absorb impact forces rather than transfer them to the occupants. They provide the vehicles with impact absorption characteristics more in-line with passenger vehicles.

The result is much improved crash performances, particularly in front offset crashes, where dashboard intrusion is now among best in-class. Side impact standards

are also high with the Patrol meeting European and Japanese standards that are due to be enacted later this year.

Nissan SRS airbags have triggering systems tuned to match the front body and chassis crumple zones. Nissan Genuine bull bars have been specifically designed by Nissan engineers to maintain the structural characteristics of the vehicle and are the only bull bars that have been subjected to full crash testing to confirm the correct operation of the vehicle's safety systems and compliance to ADR69/00.

During an accident there is an extremely complex interaction between the vehicle body deformation/deceleration, SRS triggering and passenger movement inside the cabin. When a major component such as bull bar or winch frame is added to the front of a vehicle, the only way to be certain that all the safety systems are operating as intended is to do a full scale crash barrier test.

Three engines are offered. A new 4.5 litre in-line 6 cylinder petrol engine with ECCS fuel injection (TB45E). A much improved 2.8 litre turbo-diesel which is Nissan's most refined and technically advanced unit to date. The RD28ETi features electronic control via Nissan's ECCS system plus a drive-by-wire throttle system. The third engine that will have limited fleet usage is the tried and true TD42 4.2 litre diesel.

Coil springs are fitted all-round (as before) but much work has been done to provide a more supple ride. Suspension travel has been increased also. Disc brakes are fitted front and back together with a load sensing valve. ABS comes with the Ti and is the first system to remain operational when the diff lock (also standard on Ti) is engaged.

TIP

When repairing Y61 Patrol always use new Nissan Genuine panels to maintain vehicle integrity.

This brochure is a reprint of the information first published in March 1998. No information has been altered or amended.

October 1997 - September 2001

WHEEL ALIGNMENT

Camber	0° 30' ± 30'
Caster	3° 30' ± 30'
Toe-in	1 mm ± 1 mm
Steering axis inclination	14° 30' ± 45'
Toe-out on turns - Outer	35° 00'
- Inner	31° 00'

DIMENSIONS (mm)

Wheelbase	2970	Overall - Length	5010
Track - Front	ST, Ti-1605 (DX-1595)	- Width	ST, Ti-1930 (DX-1840)
- Rear	ST, Ti-1625 (DX-1615)	- Height	ST, Ti-1855 (DX-1875)

SERVICE

Recommended Fluid

Capacity (L)

Engine - TB45E	API SG or SH, SAE 20W-40 or 50	7.3/7.6 w/filter
- RD28ETi	CCMD PD1 or PD2*, SAE 20W-40 or 50	5.8/6.4 w/filter
- TD42	API CC or CD, 20W-40 or 50	9.3/10.5 w/filter

**If CCMC oils are not available, API CD oils may be used; however, CCMC oils are strongly recommended if at all possible.*

Cooling system Nissan Long Life Coolant 30%

TB45E - 12.0
RD28ETi - 11.8
TD42 - 15.1

Automatic transmission Nissan ATF

Manual transmission API GL-4 or 5, SAE 70W-90

11.8 total

TB45E, TD42 - 3.8
RD28ETi - 5.1

Transfer

Nissan ATF

1.9

Differential

API GL-5 SAE 75W-90 or 80W-90

-

LSD

API GL-5, Hypoid LSD oil, SAW-140

-

Brake system

Dot 3

-

Brake bleeding

Load Sensing Valve, then longest line to shortest
Vehicles with ABS: ignition off, disconnect actuator connector

Power steering

Dexron III

Air-conditioner

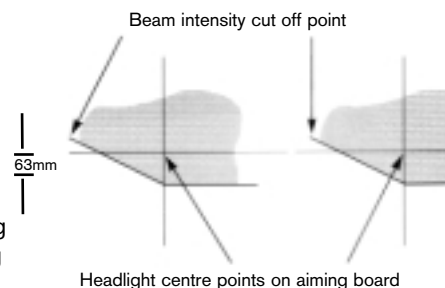
R134a

Single 800g ± 50g
Dual 1000g ± 50g

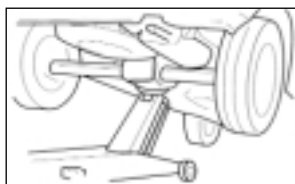
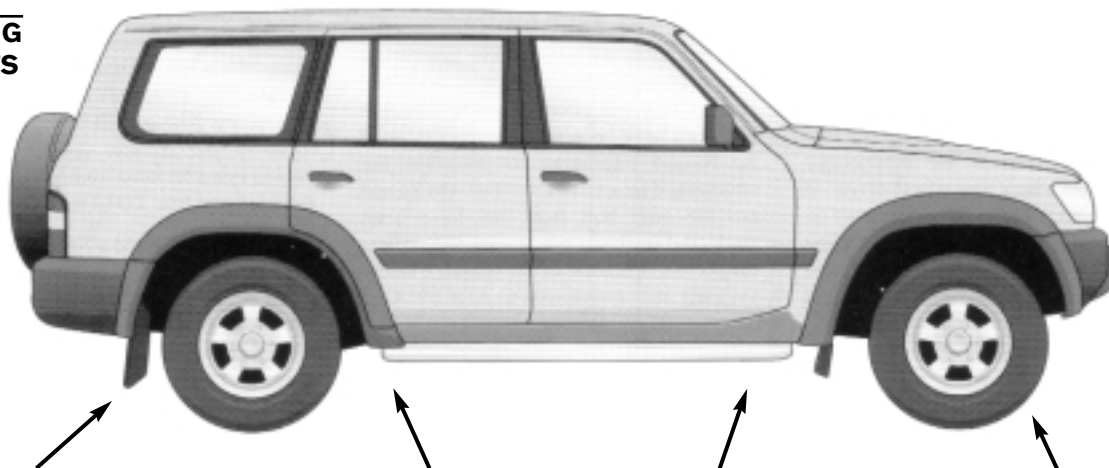
HEADLIGHT AIMING

Before performing headlight aiming, ensure the tyres are inflated to the correct pressure, the vehicle is at kerb weight and a person is seated in the driver's seat. Aiming is performed with the headlights switched to low beam. Mark the headlight centre points on the aiming board, then move the vehicle rearward so that the headlights are five metres from the aiming board. Set the beam 63 mm below the headlight centre point. Refer diagram.

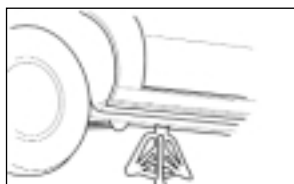
LOW BEAM



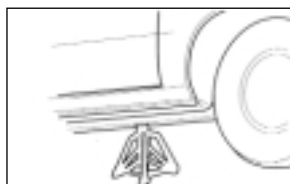
LIFTING POINTS



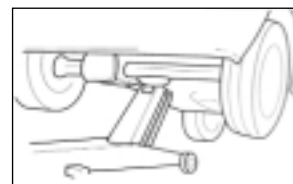
Rear jacking point:
Centre of axle housing



Rear safety stand point:
Chassis rail

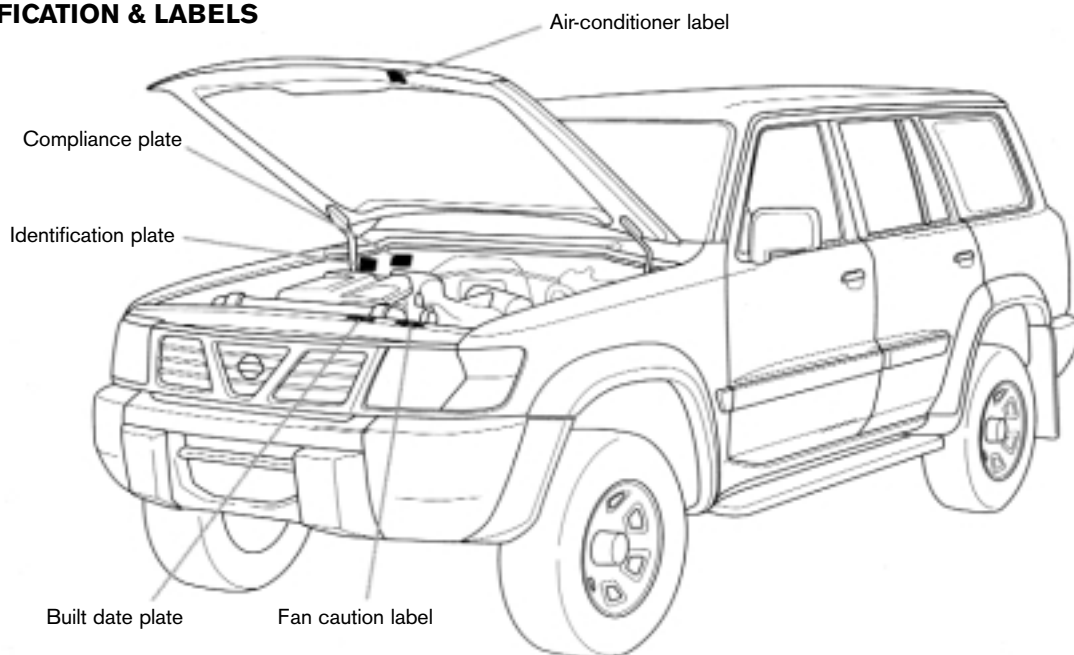


Front safety stand point:
Chassis rail

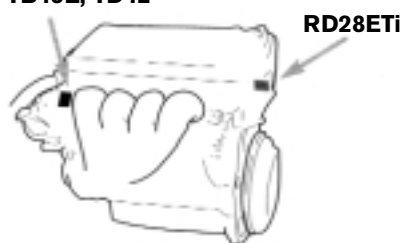


Front jacking point:
Front axle housing

IDENTIFICATION & LABELS



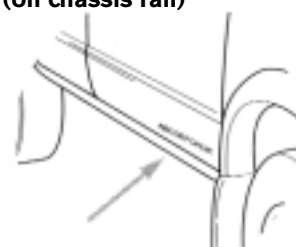
Engine number TB45E, TD42



Tyre placard



VIN (on chassis rail)



AIRBAG

A driver's airbag system is fitted to ST models and a driver and front passenger airbag system is fitted to Ti models which consist of:

- Driver airbag – mounted within the steering wheel pad,
- Clock spring connector – located at the top of the steering column,
- Passenger airbag (Ti) – located above the glovebox,
- Control module – located on floor tunnel under dash,
- Special wiring harness.

DISABLE – WHEN

Temperature of more than 80°C – always remove airbag and control modules. Repair work likely to generate sharp shocks. Steering assembly work.

Airbag circuit testing. Airbag component removal.

DISABLE – HOW

Ignition off. Disconnect battery, negative lead first and wait 3 minutes.

ENABLE

Ignition off. Reconnect battery and test for correct normal operation.

NORMAL OPERATION

Turn ignition on. Airbag warning light should illuminate for 7 seconds, then go out. If not or unsure, refer to a Nissan dealer or specialist.

AFTER DEPLOYMENT

Replace:

- Airbag module(s) – use new bolts,
- Control module – use new bolts.

Check & Replace if faulty:

- Clock spring connector,
- Steering wheel,
- Steering column,
- Wiring harness,
- Instrument panel (with passenger airbag) – check for bending, deformities or cracks around the airbag opening, airbag mountings and instrument panel mountings. If damaged, replace instrument panel and bolts.

Further information can be found in *Body Tech Supplement: June 1995* or the VACC Airbag Wall Chart.

CIRCUIT PROTECTION DEVICES

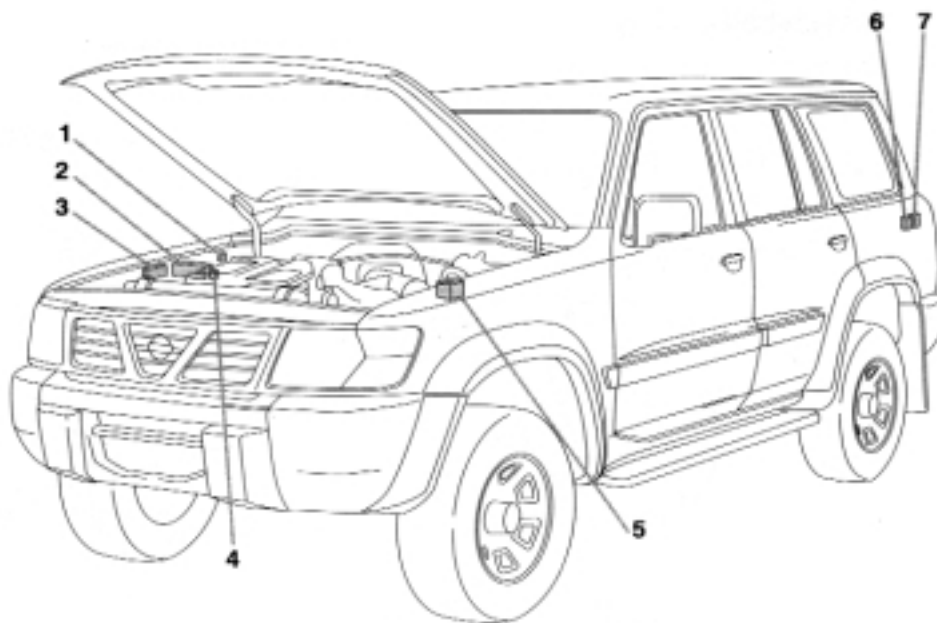
Fuses	2
Fuses	19
Fusible links	2
Circuit breaker	26

CONTROL MODULES

ABS	5
Airbag	23
Auto transmission	25
Engine (ECCS) ⁽¹⁾	11
Cruise control ⁽²⁾	20
Diff Lock	24
Glow ⁽³⁾	20
Multi-remote	30
Rear stabiliser	10
Smart entrance	22
Sub fuel tank	9

RELAYS

ABS	5
Accessory	18
Air-conditioner	3
Air-conditioner cut ⁽³⁾	3
Blower motor	17
Bulb check	3
Charge air cooler fan ⁽⁴⁾	3
Cooling fan No.1	3
Cooling fan No. 2 ⁽⁵⁾	3
Cornering lamp	3
Cruise control hold	21
ECCS	16
Fuel pump ⁽²⁾	28
Glow ⁽⁶⁾	1
Horn	3
Ignition	15
Park / neutral ⁽⁷⁾	4
Power window	27
Rear cooler	7
Rear cooler solenoid	6
Rear demist	3
Rear fog light	29
Transfer neutral	3
Wiper delay	3



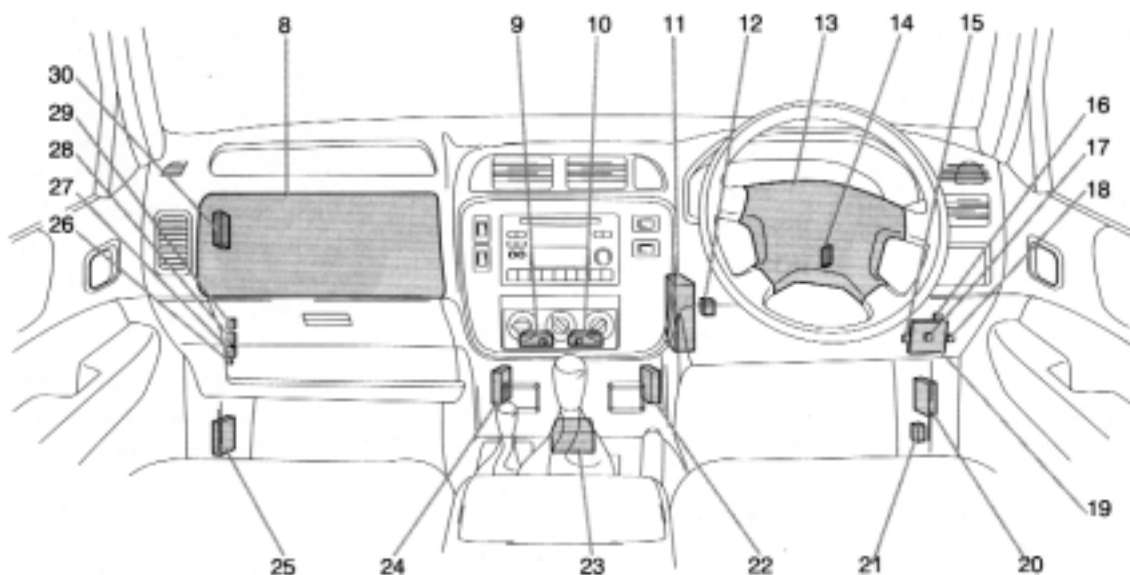
MISCELLANEOUS

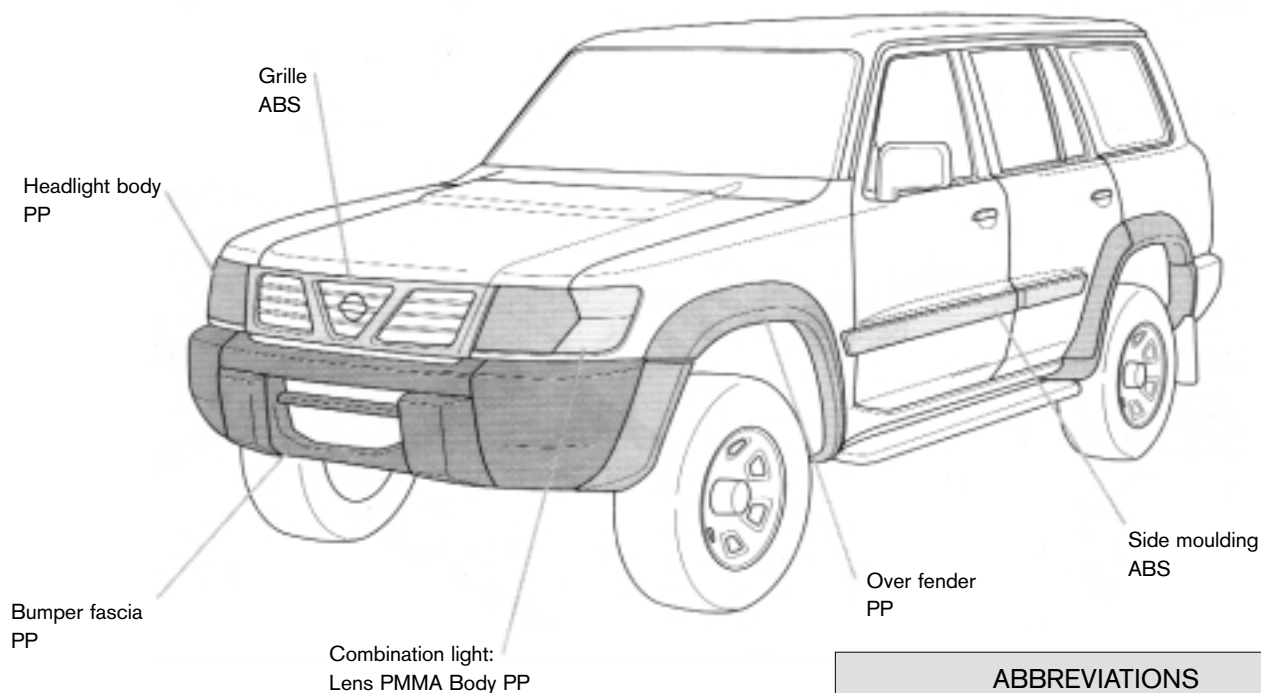
ABS actuator	5
Airbag module – driver	13
Airbag module – passenger	8
Flasher unit	12
NATs IMMU (anti-theft)	14

- (1) TB45E, RD28ETi
 (2) TB45E
 (3) TD42
 (4) RD28ETi
 (5) TB45E with M/T
 (6) Diesel
 (7) A/T with Cruise control

LOCATIONS

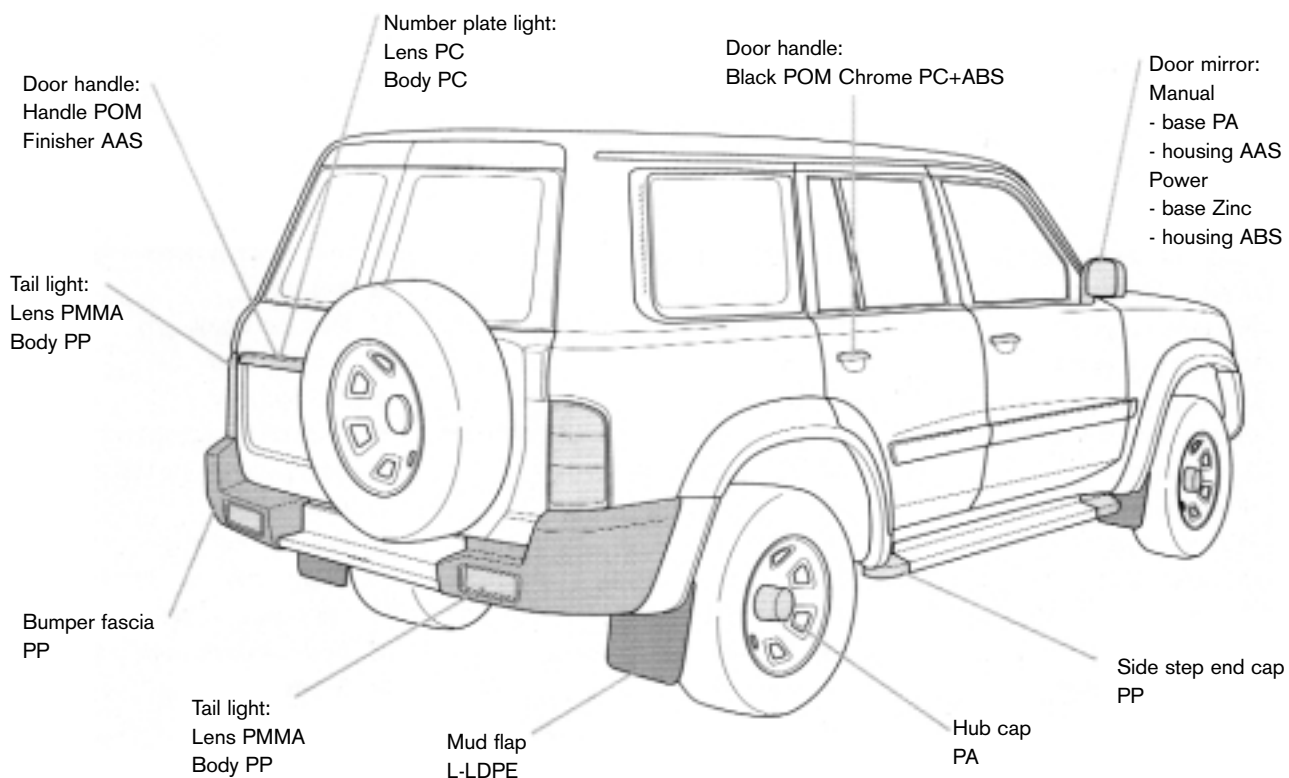
1-4	R/H inner skirt
5	L/H inner skirt
6, 7	LH quarter panel
8	Above glovebox
9, 10	Behind heater controls
11, 12	Behind dash, LH of column
13	Steering wheel pad
14	Next to ignition barrel
15-19	R/H lower dash
20, 21	R/H pillar
22-24	Behind console
25	L/H pillar
26-29	Beside glovebox
30	Behind L/H dash upper





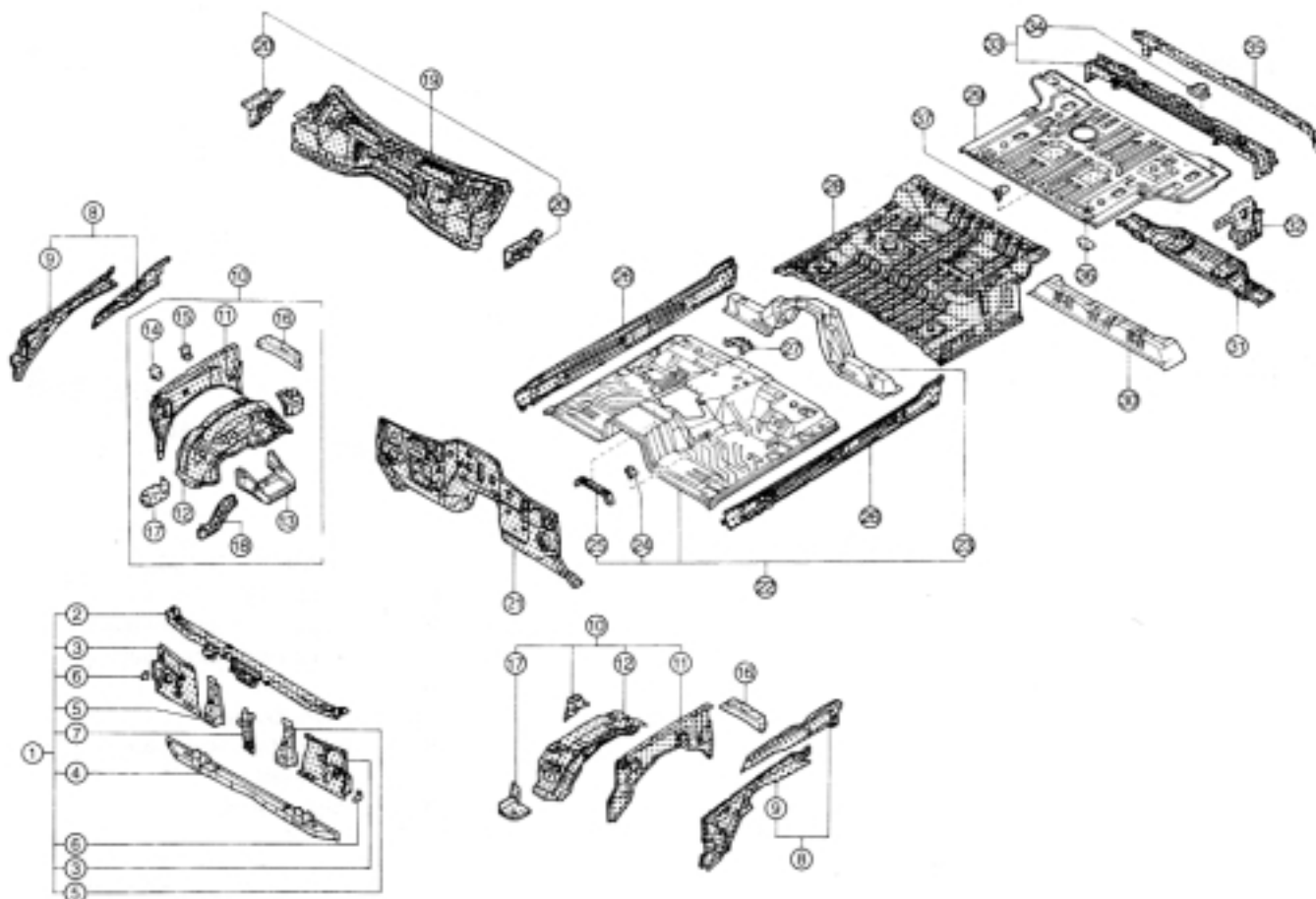
ABBREVIATIONS

AAS	Acrylonitrile acrylic styrene
ABS	Acrylonitrile butadiene styrene
L-LDPE	Linear low density polyethylene
PA	Polyamide
PC	Polycarbonate
PMMA	Polymethyl methacrylate
POM	Polyacetal
PP	Polypropylene



UNDERBODY COMPONENTS

 Indicates two-side anti-corrosive precoated steel portions



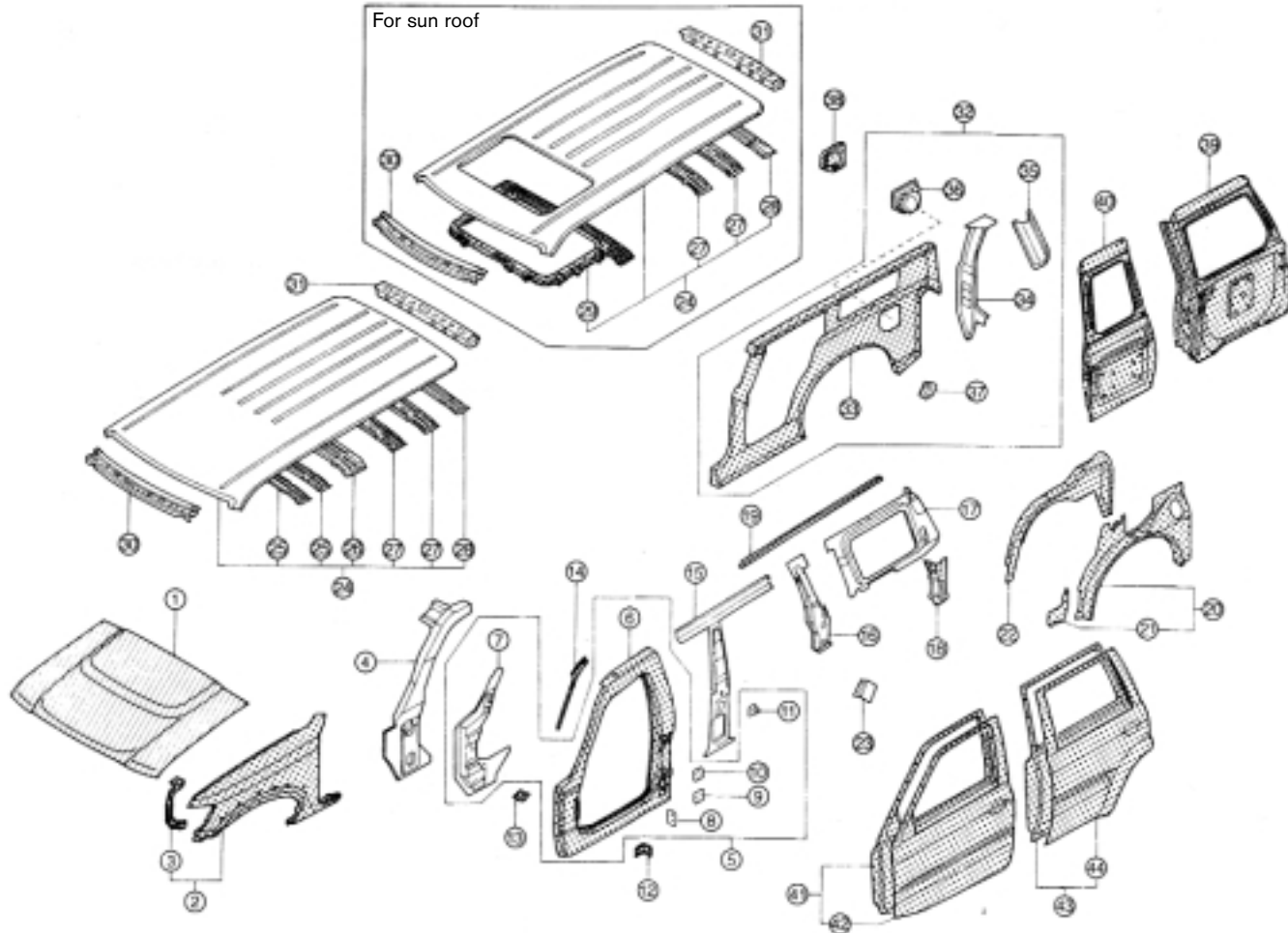
- | | | |
|-------------------------------------|---|---------------------------------------|
| 1 Radiator support assembly | 14 Front upper battery mounting reinforcement | 25 Instrument stay reinforcement |
| 2 Upper radiator support | 15 Rear upper battery mounting reinforcement | 26 Inner sill |
| 3 Side radiator support | 16 Hoodledge reinforcement gusset | 27 Front seat mounting, inner bracket |
| 4 Lower radiator support | 17 Lower front hoodledge reinforcement | 28 Rear floor, front |
| 5 Upper first body mounting bracket | 18 Battery mounting reinforcement | 29 Rear floor, rear |
| 6 Guard bracket assembly | 19 Air box assembly | 30 Rear seat crossmember assembly |
| 7 Bonnet lock stay | 20 Side cowl top | 31 Centre rear crossmember assembly |
| 8 Hoodledge reinforcement assembly | 21 Lower dash assembly | 32 Rear floor side |
| 9 Front hoodledge reinforcement | 22 Front floor assembly | 33 Rear end crossmember assembly |
| 10 Hoodledge assembly | 23 2nd crossmember assembly | 34 Tailgate striker reinforcement |
| 11 Upper hoodledge | 24 Bolt plate | 35 Outer rear end crossmember |
| 12 Lower hoodledge | | 36 Rear floor corner plate |
| 13 Battery support bracket | | 37 Bolt plate |

BODY COMPONENTS

 Indicates two-side anti-corrosive precoated steel portions

 Indicates two-side anti-corrosive steel and HSS portions

For sun roof



- | | | |
|---|------------------------------------|----------------------------------|
| 1 Bonnet | 15 Inner side roof rail | 30 Front roof rail |
| 2 Front guard | 16 Inner rear pillar reinforcement | 31 Rear roof rail |
| 3 Front guard bracket | 17 Inner side panel | 32 Outer rear body side assembly |
| 4 Inner front pillar assembly | 18 Inner back pillar assembly | 33 Outer rear body side |
| 5 Outer front body side assembly | 19 Roof drip | 34 Outer back pillar |
| 6 Outer front body side | 20 Outer rear wheelhouse | 35 Vent duct |
| 7 Outer front pillar reinforcement assembly | 21 Outer rear wheelhouse extension | 36 Fuel filler base |
| 8 Front door striker plate | 22 Inner rear wheelhouse | 37 Striker tapping retainer |
| 9 Lower centre pillar hinge brace | 23 Striker retainer | 38 Fuel filler lid |
| 10 Upper centre pillar hinge brace | 24 Roof assembly | 39 Rear door, R/H |
| 11 Check link brace | 25 No. 1 roof bow | 40 Rear door, L/H |
| 12 Front guard bracket assembly | 26 No. 2 roof bow | 41 Front door assembly |
| 13 Upper front pillar bracket assembly | 27 No. 3 roof bow | 42 Outer front door panel |
| 14 Front pillar drip | 28 No. 5 roof bow | 43 Rear door assembly |
| | 29 Roof reinforcement assembly | 44 Rear door outer panel |

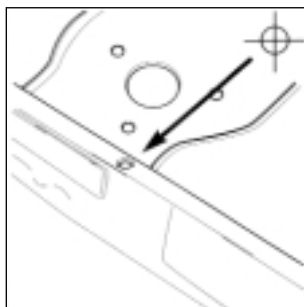
ENGINE COMPARTMENT

MEASUREMENTS (mm)

1 = 1100*	9 = 1508
2 = 722*	10 = 1521
3 = 361*	11 = 1244*
4 = 861*	12 = 983*
5 = 1087*	13 = 809*
6 = 1367*	14 = 768*
7 = 841	15 = 1516
8 = 1457	16 = 1849*

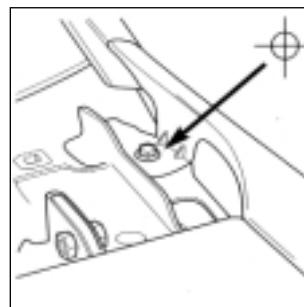
* = Identical opposite

VIEW A

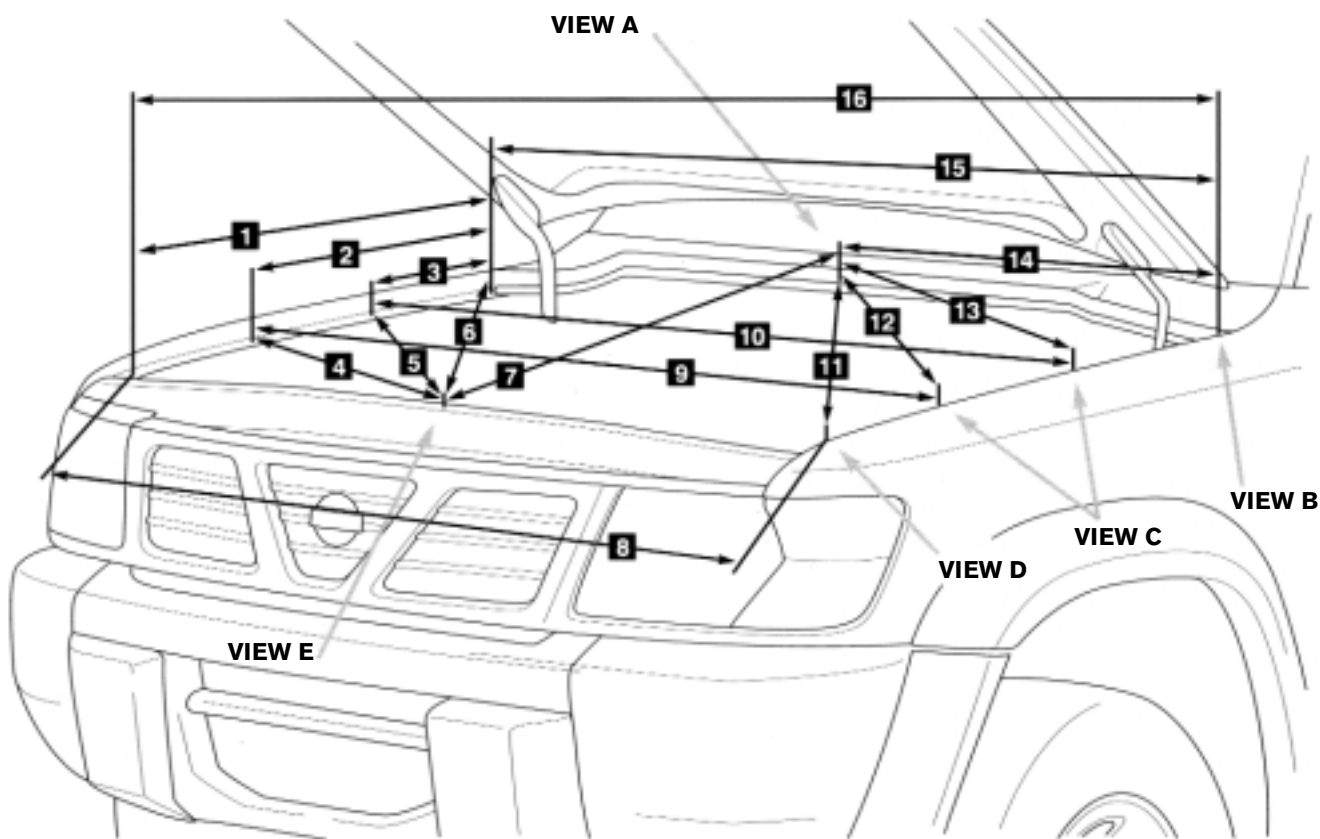


Centre,
plenum cover screw clip hole

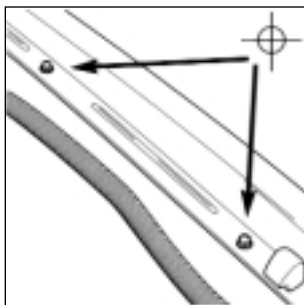
VIEW B



Centre,
front guard rear bolt hole

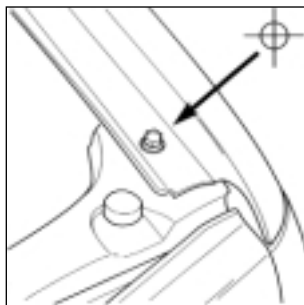


VIEW C



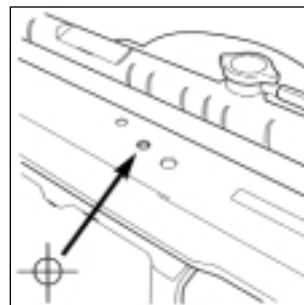
Centre,
front guard 2nd & 3rd bolt holes

VIEW D



Centre,
front guard front bolt hole

VIEW E



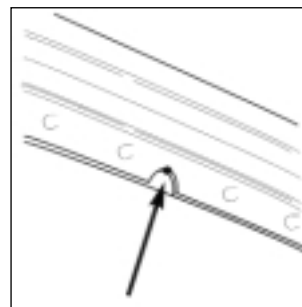
Centre,
radiator support centre hole

FRONT DOOR OPENING

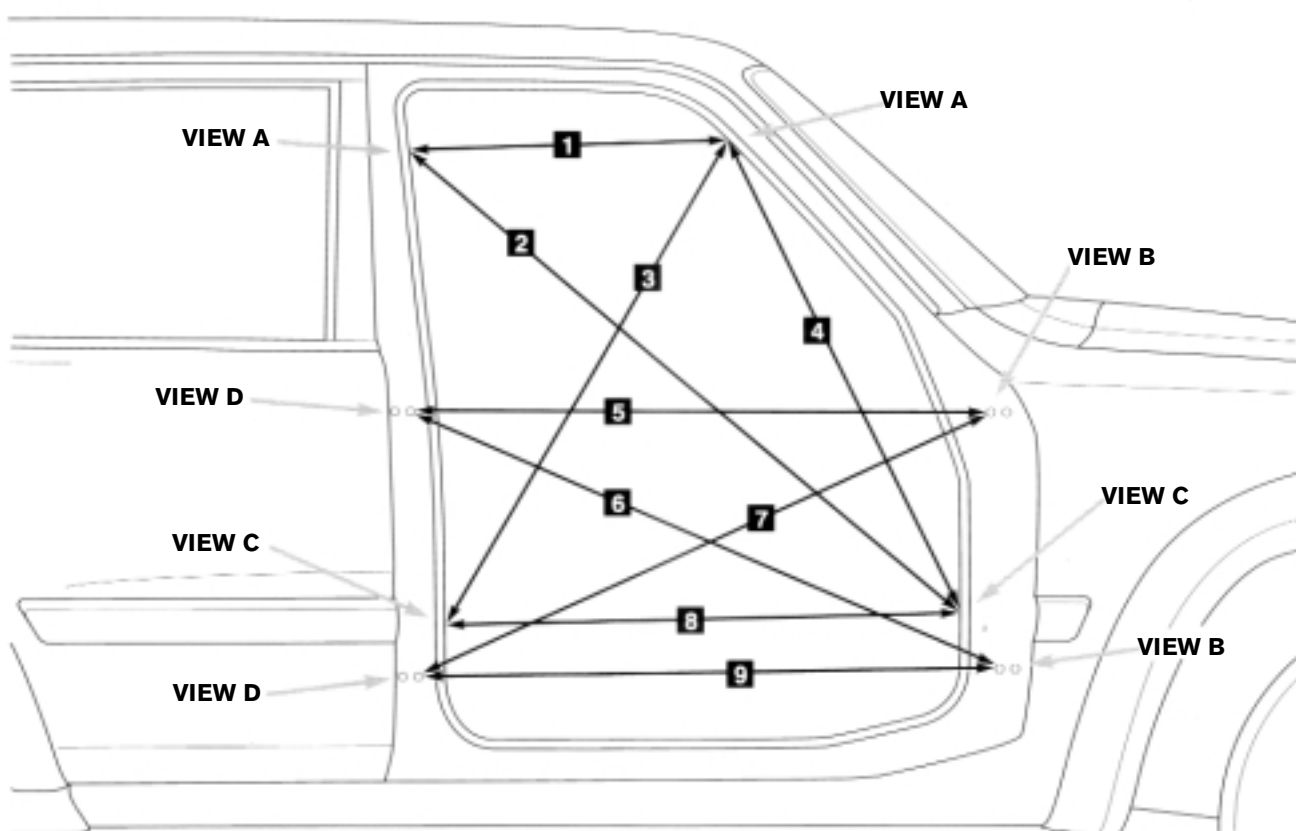
MEASUREMENTS (mm)

1 = 592	6 = 1189
2 = 1279	7 = 1167
3 = 971	8 = 913
4 = 903	9 = 1111
5 = 1132	

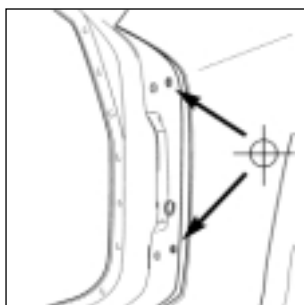
VIEW A



Centre,
alignment notch in pinchweld

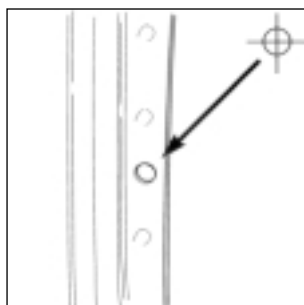


VIEW B



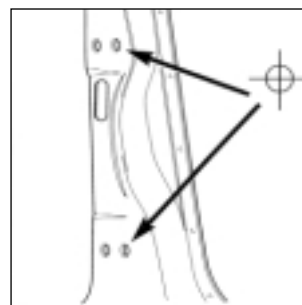
Centre,
front door hinge front bolt holes

VIEW C



Centre,
alignment hole in pinchweld

VIEW D

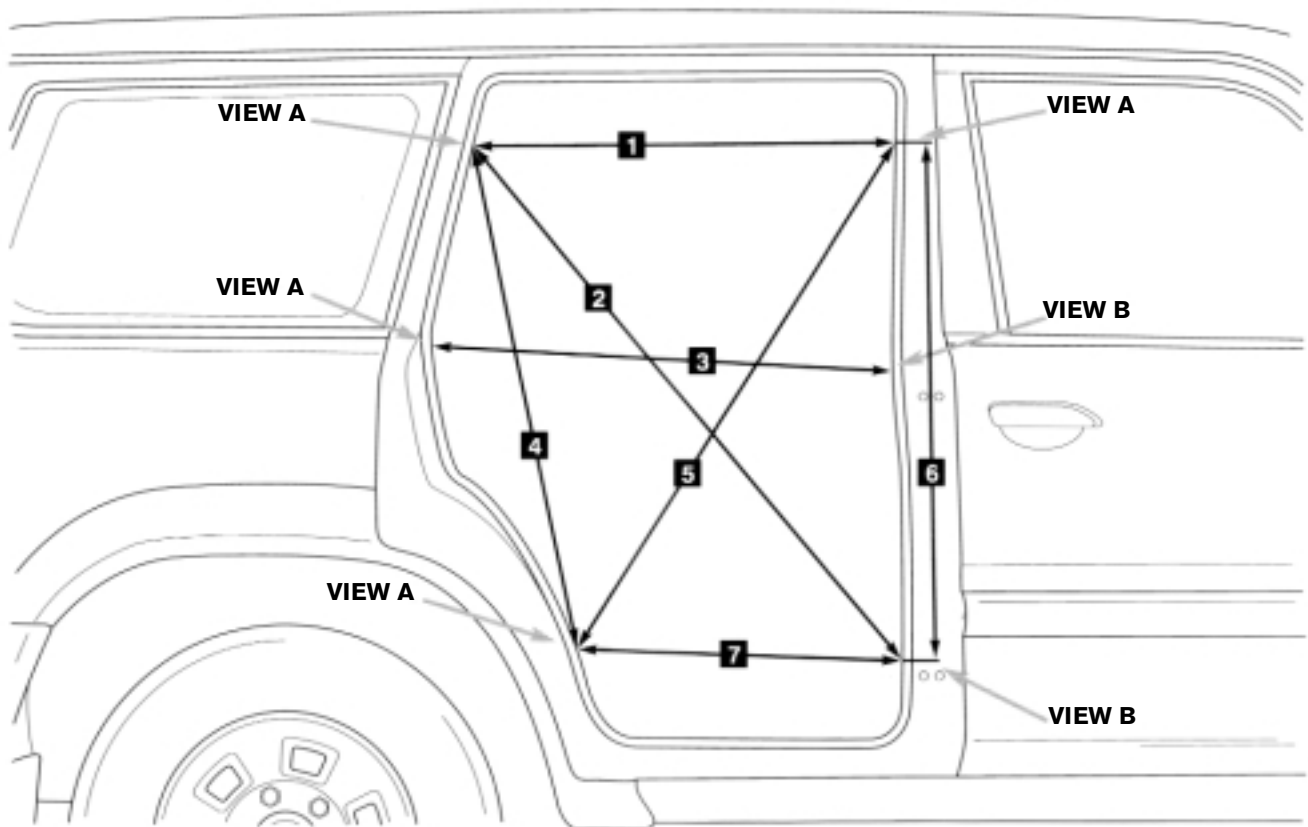


Centre,
rear door hinge front bolt holes

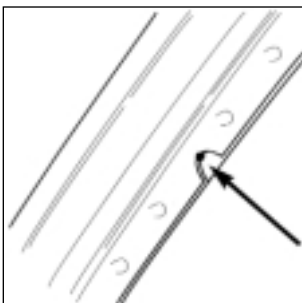
REAR DOOR OPENING

MEASUREMENTS (mm)

1 = 719	5 = 973
2 = 1106	6 = 804
3 = 792	7 = 585
4 = 825	

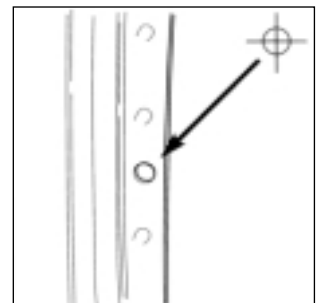


VIEW A



Centre,
alignment notch in pinchweld

VIEW B

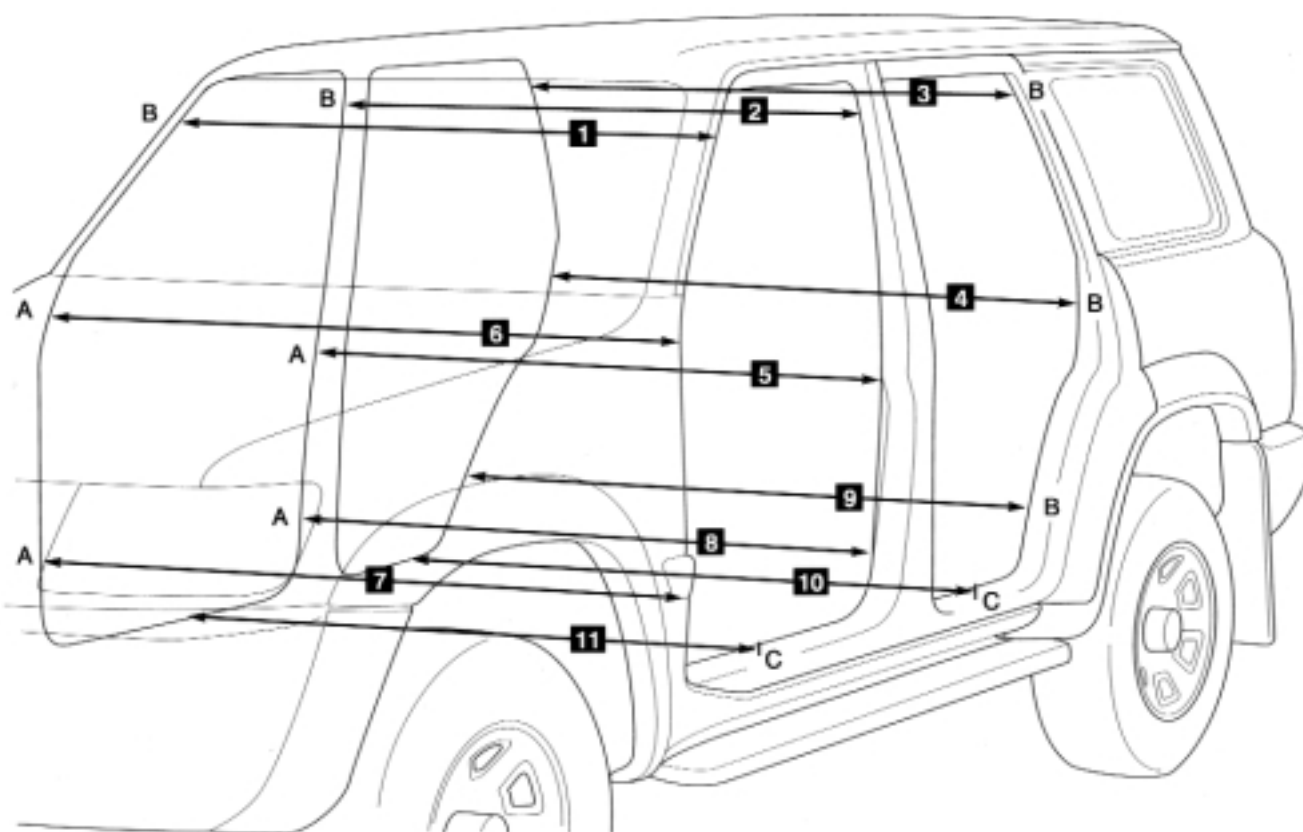


Centre,
alignment hole in pinchweld

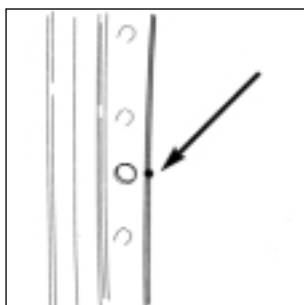
BODY WIDTH

MEASUREMENTS (mm)

1 = 1349	7 = 1492
2 = 1353	8 = 1492
3 = 1351	9 = 1492
4 = 1492	10 = 1530
5 = 1492	11 = 1530
6 = 1492	

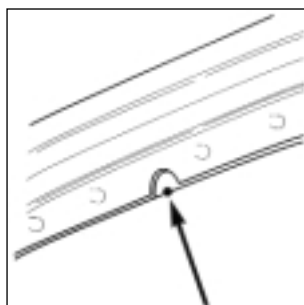


VIEW A



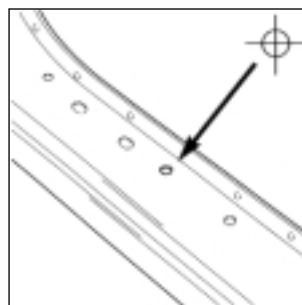
Edge,
at alignment hole in pinchweld

VIEW B



Edge,
at alignment notch in pinchweld

VIEW C



Centre,
scuff plate locating hole

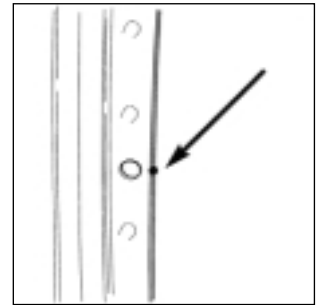
INTERIOR

MEASUREMENTS (mm)

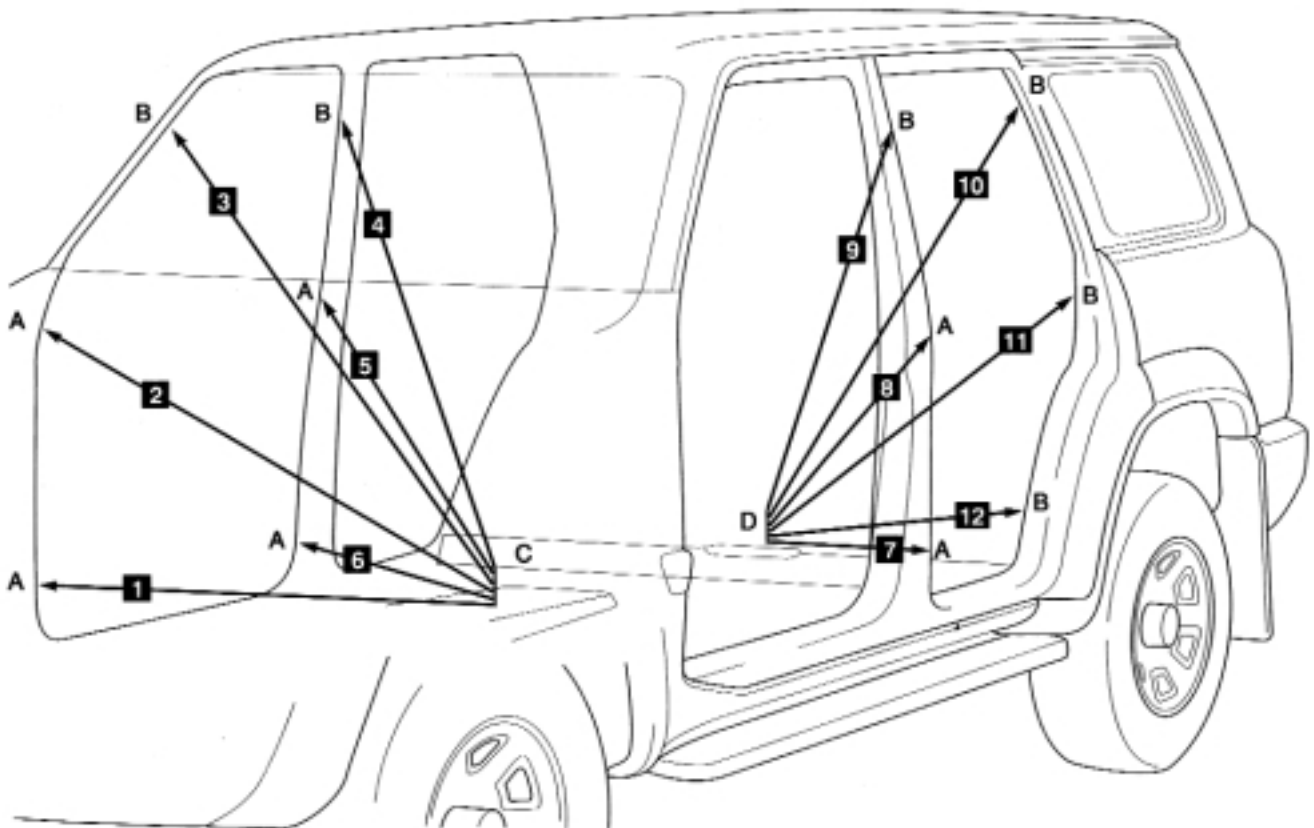
1 = 963	7 = 817
2 = 1015	8 = 950
3 = 1127	9 = 1170
4 = 1173	10 = 1222
5 = 947	11 = 1037
6 = 809	12 = 802

All identical opposite

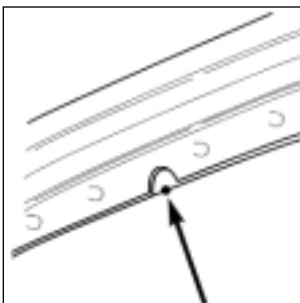
VIEW A



Edge,
at alignment hole in pinchweld

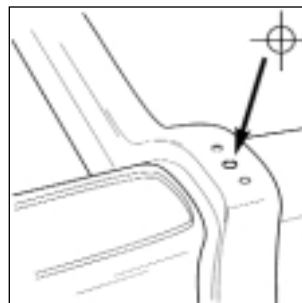


VIEW B



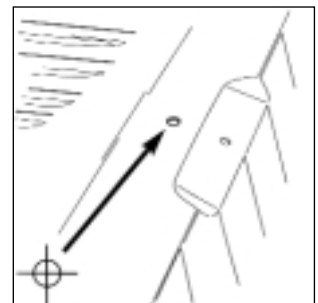
Edge,
at alignment notch in pinchweld

VIEW C



For front door opening: Centre,
centre hole on crossmember

VIEW D



For rear door opening: Centre,
centre hole under rear seat

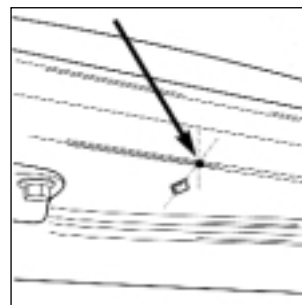
TAILGATE OPENING

MEASUREMENTS (mm)

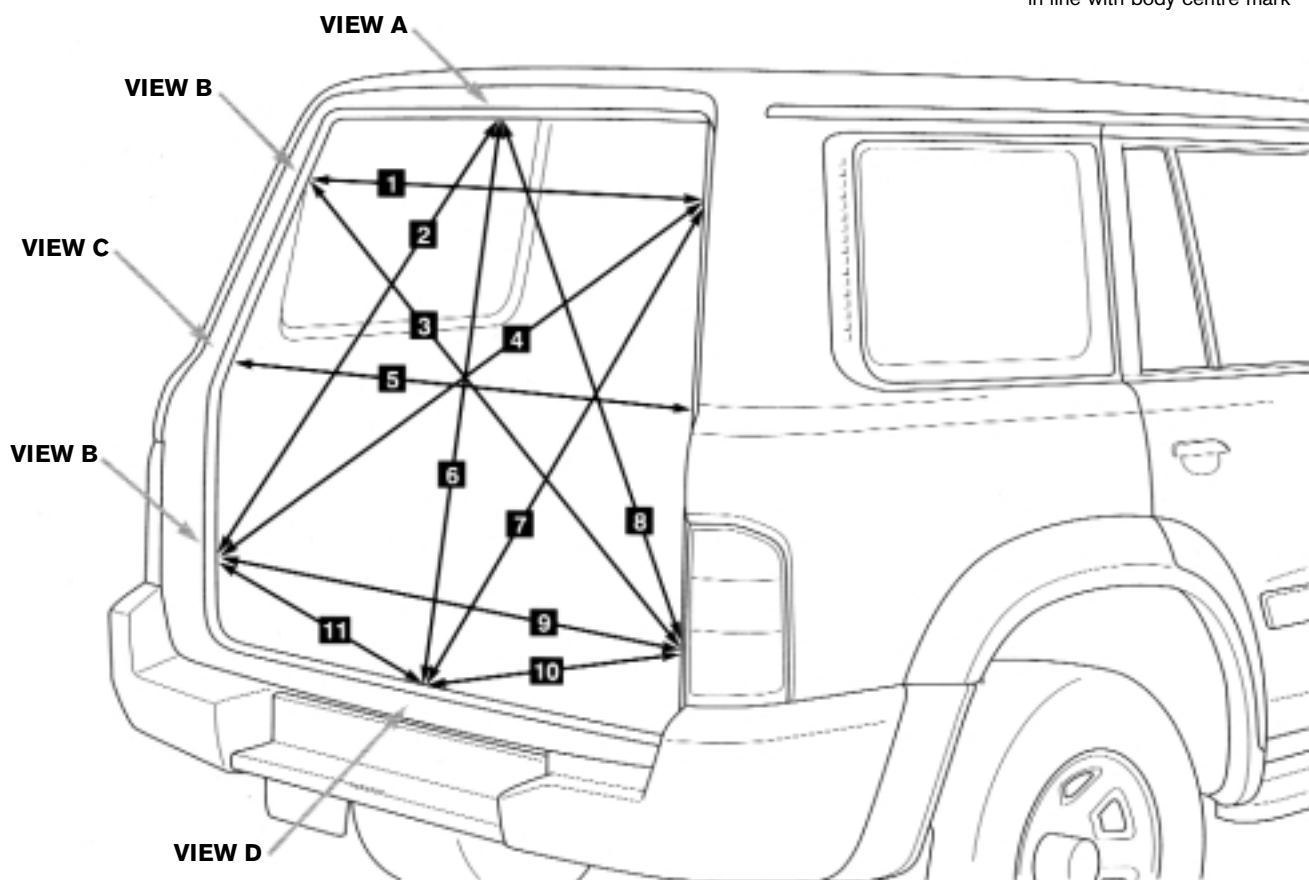
1 = 1164	5 = 1323	9 = 1349
2 = 1029	6 = 983	10 = 705
3 = 1390	7 = 1010*	11 = 719
4 = 1403	8 = 1019	

* = Identical opposite

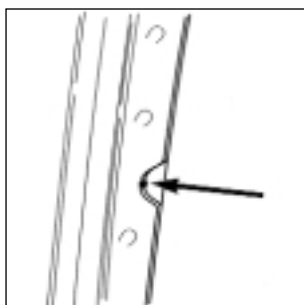
VIEW A



Corner of roof rail,
in line with body centre mark

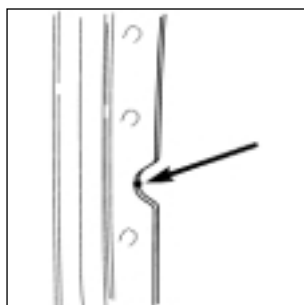


VIEW B



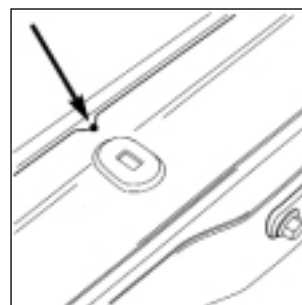
Centre,
alignment notch in pinch weld

VIEW C



Centre,
alignment notch in pinch weld

VIEW D



Centre,
alignment notch in rear panel

REAR INTERIOR

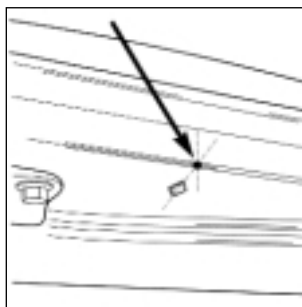
MEASUREMENTS (mm)

1 = 884 / 879#	5 = 1489*
2 = 996 / 994#	6 = 1458 / 1461#
3 = 1102*	7 = 1386 / 1400#
4 = 1266*	8 = 881*

* = Identical opposite

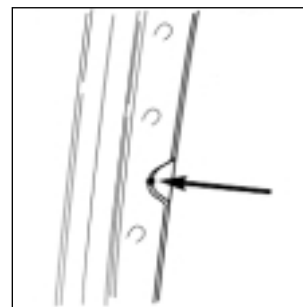
= Measured opposite

VIEW A

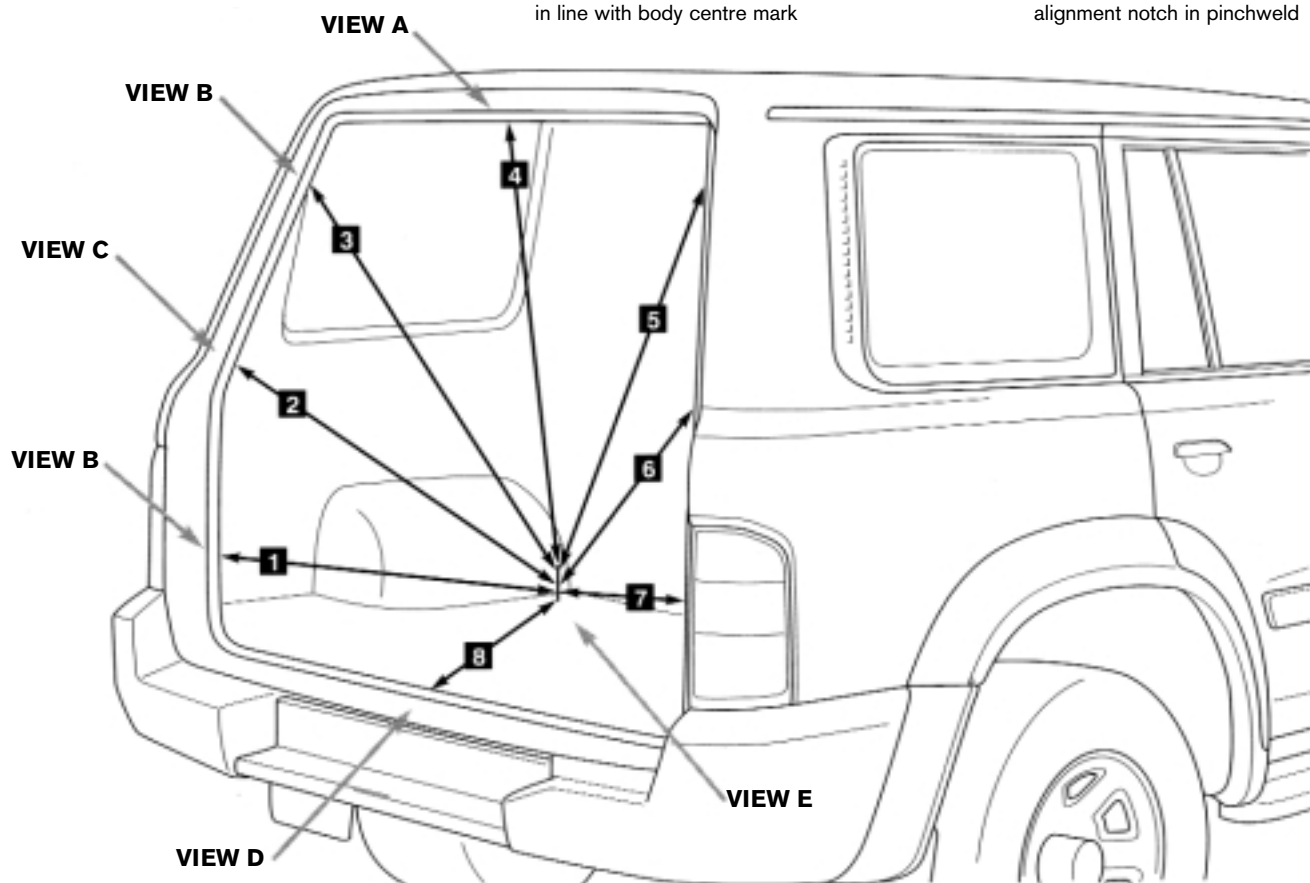


Corner of roof rail,
in line with body centre mark

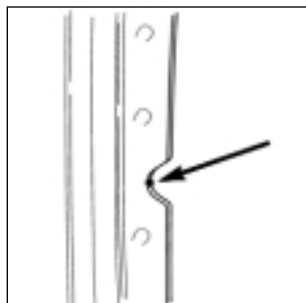
VIEW B



Centre,
alignment notch in pinchweld

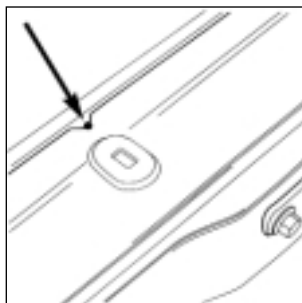


VIEW C



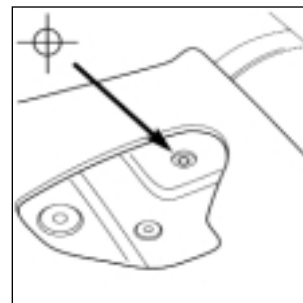
Centre,
alignment notch in pinchweld

VIEW D



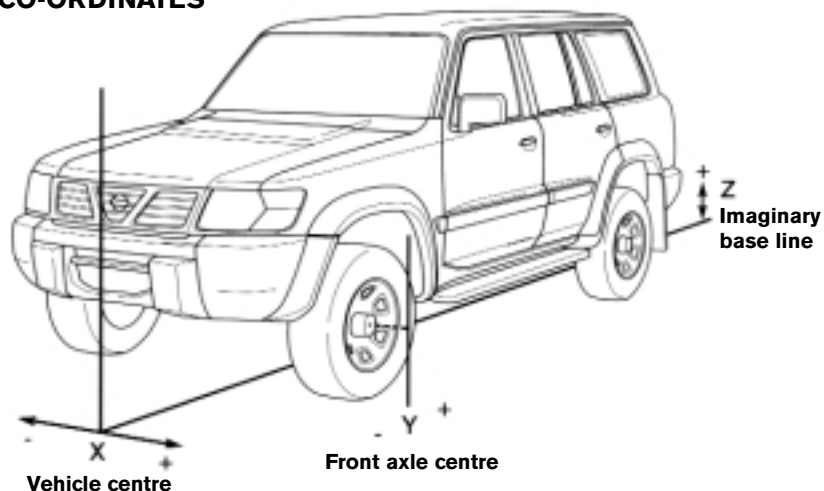
Centre,
alignment notch in rear panel

VIEW E



Centre,
child harness bolt hole

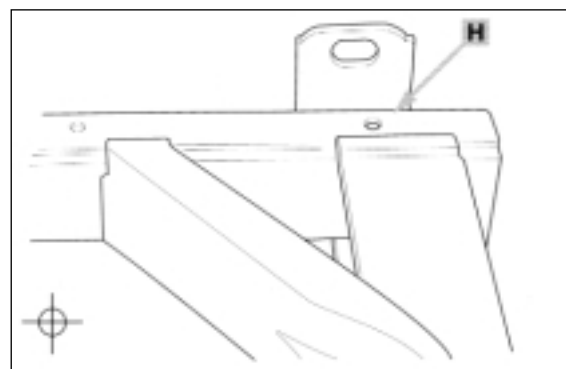
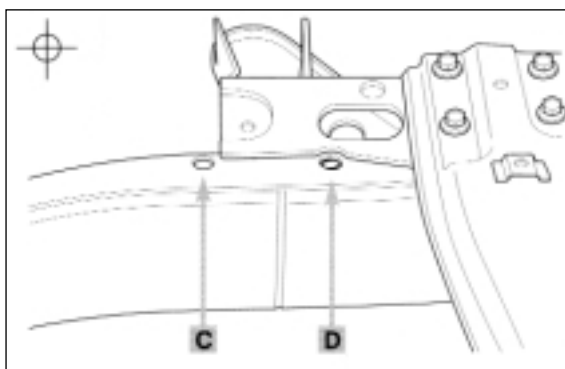
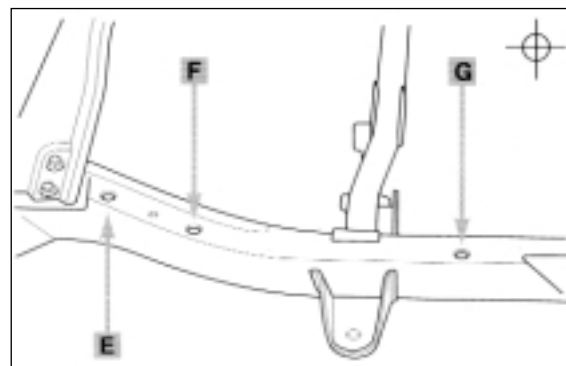
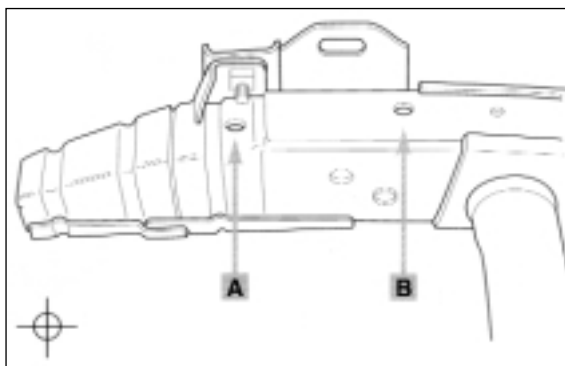
CO-ORDINATES



The co-ordinates of the measuring points are the distances measured from the standard line of X, Y and Z.

A	E
X = 350	X = 455
Y = - 665	Y = 1200
Z = 265	Z = 100
B	F
X = 360	X = 524
Y = - 525	Y = 1400
Z = 265	Z = 100
C	G
X = 362	X = 552
Y = 745	Y = 1900
Z = 100	Z = 100
D	H
X = 362	X = 545
Y = 850	Y = 3805
Z = 100	Z = 285

MEASURING POINTS

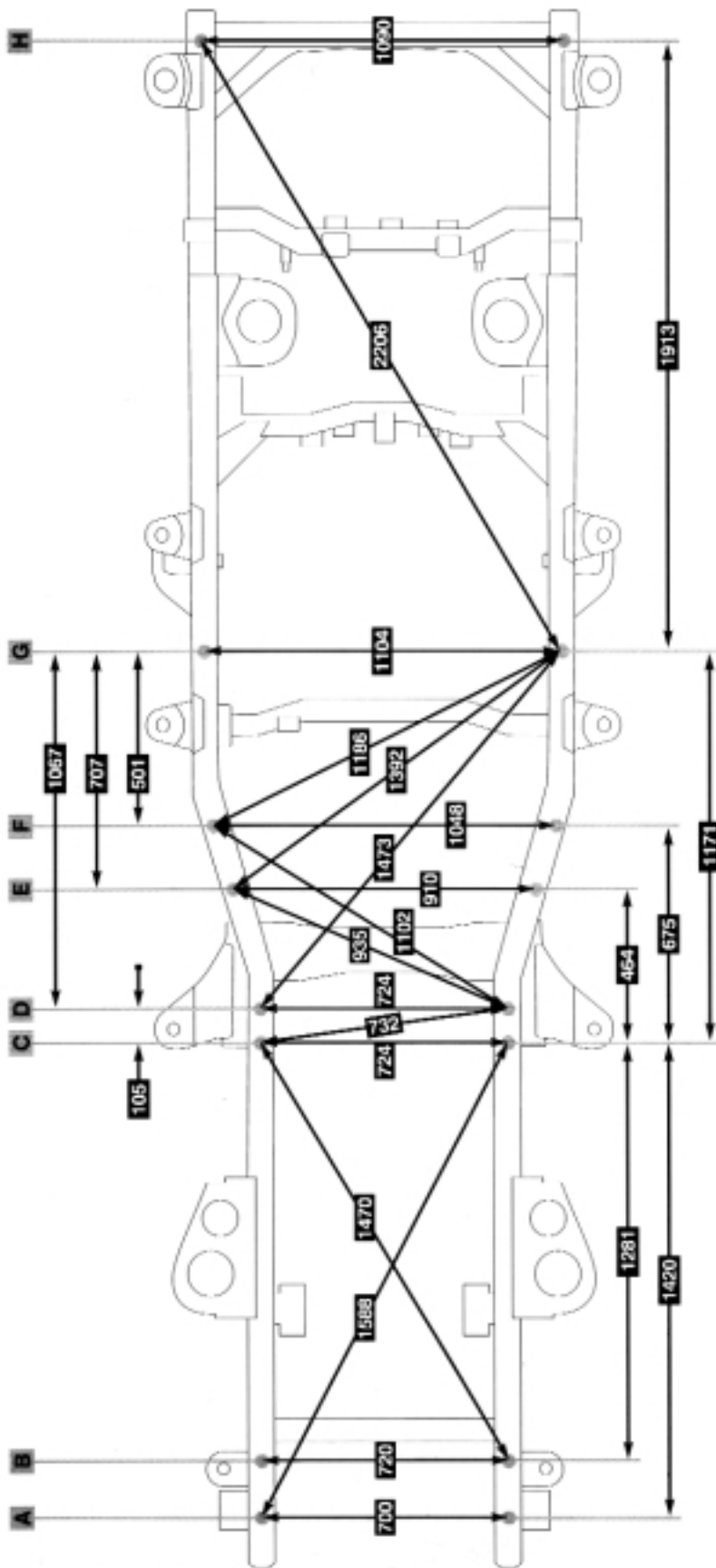


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Refer page 15 for measuring point details

