

AUSTRALIA'S **NUMBER ONE** NISSAN PATROL RESOURCE

NISSAN PATROL .COM.AU

ISSUE 1 - NOV 2011

POST OF
THE MONTH

MIA

TOYOTA
DRIVER KIDNAPS
NISSAN STUBBY HOLDER



D.I.Y

MAKE YOUR
OWN SNORKEL



RECOVERY

THE FUNDAMENTALS

TIPS & TECHNIQUES * **ADVANCED RECOVERY** * BASIC GEAR
SLOPE V WEIGHT CALCULATORS - SAFETY FIRST

WHAT YOU NEED TO TAKE

WITH YOU AROUND

AUSTRALIA

COUNTRY

AB
design



0 123456 789012



NISSAN PATROL .COM.AU

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MESSAGE FROM ANDY (ADMINISTRATOR)

It's hard to believe that the forum has only been live since May 2010. That's only 18 months since the beginning and look at what we have achieved already!

With almost 150,000 posts and 5000 members we have achieved a huge success of growth in only a short period of time.

I am proud to run this forum and the strong emphasis we carry on politeness, attitude and the friendly helping nature of all the members. This attitude rubs off on all new members and I can't remember the last time we had to ban anyone for rudeness and bad attitude's as seen on many open forum's these days.

We have seen members come and go and a few selected members who have been here since the early beginnings. I'm simply amazed by the amount of post's people are generating these days and although some of you have been here for over a year now, you still carry the right attitude towards new members.

The forum has changed a bit since the beginning with new sections, strong emphasis with safety with dedicated forums and new advertisers. Thank you for everyone's ongoing support with the new forum sponsorship plan too!

I am happy to announce that we are now the world's largest resource of Nissan Patrol literature and our wealth of knowledge and downloadable information including detailed DIY's is just growing every day!

The 2012 forum meet up at Love Day in South Australia will be an absolute blast! I look forward to meeting you all and getting out and about in what Love Day has to offer. Easter 2012 will come up quick so start planning your holidays and get your Patrol's ready for a lifetime experience.

A lot of states are meeting up and convoying to Loveday so keep an eye out on the post and when the date gets closer we will organise exact times and dates to meet up in each state.

Again, thanks for all your ongoing support and above all,

Stay safe out there!

Andy



LOVEDAY 4X4

NATIONAL FORUM MEET UP

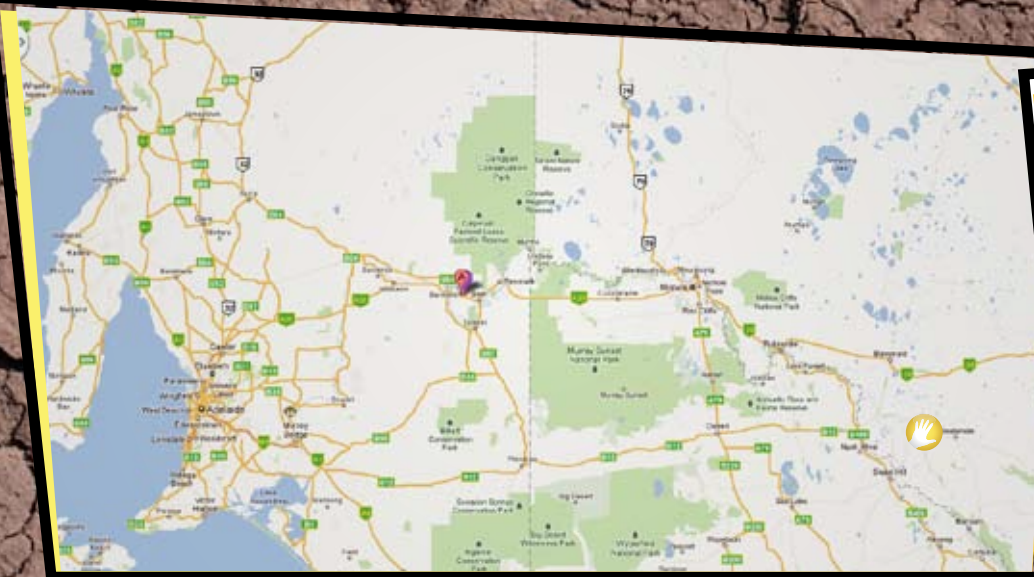
EASTER 2012

We are having our national forum meet up next year at Loveday Easter time. Everyone is welcome and it will be an amazing event. This will be a fun family event with 4wding for every skill level, plenty of laughs, big cook ups and fun for everyone. Please check out the forum for more information and we look forward to meeting you all for a lifetime experience!

LOVEDAY 4X4



Riverland of South Australia



Loveday 4x4 Adventures is a privately owned 4x4 adventure park only 2hrs east of Adelaide and 2hrs west of Mildura.

Loveday 4x4 Adventure park has everything from the quiet relaxing river camping, through to hardcore 4x4 driving.

Bring the family along with the family dog or just a group of mates. Every thing, every day for everyone.



WHAT YOU NEED TO TAKE

TOURING AU

ADDITIONAL EQUIPMENT YOU SHOULD CONSIDER WHEN TOURING AROUND AUSTRALIA

- Electrical tape.
- Cloth tape.
- Flat pliers/wire cutters.
- Pointy pliers.
- Spanners.
- Sockets.
- Screwdrivers.
- Wire cutters/crimpers and various connections.
- Multimeter.
- Fencing wire (INVALUABLE).
- Torque wrench
- Wheel nuts.
- Fuel tank repair stick.
- Infrared thermometer.
- Tyre repair kit.
- Power inverter.
- Hand winch and cable.
- Snatch strap.
- Tow strap.
- Rated shackles.
- Snatch block.
- Long handle shovel.
- Gloves (welders and riggers).
- Jumper leads.
- Welding rods.
- Welding mask (only on big outback trips).
- First aid kit.
- Zip ties (large and medium).
- Standard jack.
- Exhaust jack.
- Fire extinguishers (x2).
- Pressure water sprayer (spinifex trips).
- Torches.
- Workshop manual (ESSENTIAL).
- 3 x star pickets (for ground anchor use).
- Mash hammer.
- Large plastic tarp.
- Small plastic tarp.
- Diesel additive.
- Bug off.
- Bow saw.
- Bow saw blades.
- Compressor.
- Deflators.
- Tyre pressure guage.
- Tow hitch recovery hook.
- WD40.
- Vice grips.
- Hose clamps.
- Box cutter.
- 2nd spare wheel on roofbars (big trips only).
- Hand held GPS
- Stockings (to put over snorkel head for bugs, etc)
- Compass
- Extra food and drinks to last longer then planned
- Hard copy maps of the area

Thanks to Rohan (AKA Plasnart)



RECOVERY

THE FUNDAMENTALS

Advanced Recovery - Tips and Techniques

Basic Recovery Gear

Rated Recovery Points, Snatch Strap, 4.5t "D" Shackle, Winch, Tree Trunk Protector, Winch Extension Strap, Snatch Block, Winch Dampener Blanket, Hand Winch and Gloves.

Not everyone will carry all of this gear, some of it should be carried as personal safety equipment and the rest could be carried amongst the group if you are travelling in a convoy.

Minimum requirement with any Four Wheel Drive vehicle should be a snatch strap and pair of gloves.

Recovery of a Vehicle

Recoveries are a difficult task and should not be attempted lightly. There are risks involved to vehicles and people and all the risks should be considered before any recovery is attempted.

Check list for safety

1. Secure the Vehicle – is the vehicle in danger of sudden movement? Can I Secure it via a tether line for safety?
2. Is there a risk to people? What can I do to reduce the risk?
3. What kind of terrain is it?
 - a. Is it flat?
 - b. Is it a bog hole?
 - c. How deep is the mud that I am in?
 - d. What is the angle of slope of the hill?
 - e. What affect will the slope have on the weight of the vehicle?
 - f. What recovery gear do I have?
 - g. What is the recovery gear rated too?
 - h. How many people really need to be involved in this recovery – Can I clear the hill, move people away?
 - i. Who is in-charge? – There should only be one person in-charge of the recovery.
 - j. Ask for advice from others, don't be shy.
4. Can I lighten the load on the recovery equipment?
5. Be willing to think outside the square.

BUYING THE RIGHT WINCH

***REMEMBER
THIS, IT MIGHT
SAVE YOUR
LIFE OR YOUR
VEHICLE***



There are very few, if any, industry standards when it comes to the claims that can be made about winches and load rated gear and vehicle based winching.

Winch Manufacturers can make all sorts of claims about load rating and line speeds and the consumer will have very little if any option but to believe them. This is probably one reason why so many different brands have sprung up over the last few years – Because They Can!

Why Buy a Warn Winch for \$1700 when you can buy an Ebay Chinese copy for \$400? Please read the last paragraph and think about it hard when you are swinging off that winch cable with your family in the car on 30 degrees next time! Consider a second hand Warn for \$800 or don't go down that track.

If the local hardware store or Ebay seller had to run their winches through the NATA laboratory test or similar to prove all of the claims on the box, perhaps it wouldn't bother selling it in the first place. This isn't to say that all Asian winches are a dud, far from it! But can you tell the difference?

There are stories of some of these Asian winches being used heavily in the field and not only passing the test, but thriving. The problem is? Do you know which one? And was it built the same as the one beside it sharing the label?

Given that winching is one of the most dangerous and potentially Lethal 4WD operations you can undertake, you really want to know the risks that you face and whether your equipment is up to the task?

Before you hit the track, the smartest thing to do is to run your loaded vehicle over a weighbridge. This gives you a "Loaded weight" of your fourby and will probably be as much as 1.5 times its bare weight. Of course if you are on a big expedition your vehicle could be as much as twice its bare weight. So obviously this would be really good to work out. You are then making your decisions in relation to recovery with a true indication of weight of your vehicle.

BASIC WINCHING THE AFFECT OF SLOPE



Winching on flat ground in a straight line is pretty well as safe as houses as long as you adopt safe work practise. The load is well within the ratings of the equipment on every 4WD. But who does that?

Standing clear, Using a Winch Blanket and connecting to a Rated Recovery Point on the vehicle is all that should be needed to extract the vehicle.

How much are you really pulling up that hill when you are swing off a winch cable on a 30Degree slope? And what about when you are bogged to the axles or sitting on your belly in the mud? Sticky Otways Mud?

What if you have to winch around a corner? How do you do that?

There are basically four different types of resistance that you will encounter while off roading that affect the load on the winch. These include:

1. Surface Resistance.
2. Slope Resistance.
3. Bog Resistance.
4. Damage Resistance.

The figures below come from extensive reading and research and a dash of commonsense. As explained earlier, there is no comprehensive list of regulations for recovery that contain this information.

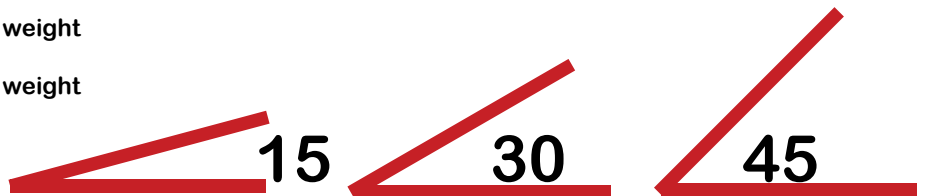
To move or pull a 4WD on a firm flat bitumen surface requires a force of just 10% of the loaded weight of the vehicle. To do the same on gravel or grass increases this to about 33% of the loaded weight of the vehicle.

Throw an incline in and that maths increases significantly. The percentages need to be added to the loaded weight and can change things dramatically and quickly increase the weight being recovered to far beyond the capacity of the equipment.

For an Incline, or Up Hill, the following extra weight should be added to the loaded weight of you vehicle as a guide:

- 15degree Slope == add +25% of the loaded weight
- 30degree Slope == add +50% of the loaded weight
- 45degree Slope == add +75% of the loaded weight

On flat ground no change is required



For a Decline, or Downhill, the following weight can be deducted from the loaded weight of you vehicle as a guide:

- 15degree Slope == subtract -25% of the loaded weight
- 30degree Slope == subtract -50% of the loaded weight
- 45degree Slope == subtract -75% of the loaded weight

BASIC WINCHING THE AFFECT OF MUD



But what if your bogged? If your fourby is bogged in the Mud then the depth of the bog will have a massive affect on the loaded weight of the vehicle.

Below is a guide only for calculating the dead weight of the vehicle when in mud.

Bogged to the Base of the Wheel Rim, you will require a pull of 100% of the load



100%

Bogged to the wheel Hub, the weight doubles! You will require a pull of 200% of the load



200%

Bogged to the Belly or the Chassis and it is x3! You will require a pull of 300% of the load



300%

And lets face it, the later is when winches are really being asked for.

Apply these weight variants to ALL of your RECOVERY gear!

Consider these variations when you are looking at your vehicle and considering how you will extract it form its position. Consider being stuck in the mud to the chassis on a 25degree slope!!!



POUNDS **V** KILOGRAMS

THE TRUE STORY

Why do we have winches on our vehicles that quote the mass weight strength of the line pull in Imperial Pounds when we are living in a Metric System of Measure.

It because the bench mark brands of winches originate in the USA where it is all about pounds.

And lets face it 8000lbs sounds much tougher than 3600kgs! Imagine the Warn High Mount called the 3.6.

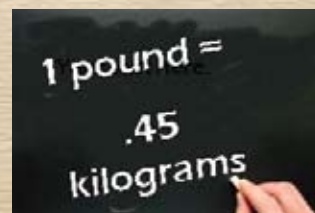
Get to know your gear and get to know it in the Metric world. Do the conversions and document them in your vehicle if you cant remember them. Send it to yourself as a text message on your phone so you never forget. This will save your life.

For the record - 1lb equals 0.454kgs, or 1kg equals 2.2lbs.



8000lbs = 3632kgs
9000lbs = 4086kgs
10,000lbs = 4540kgs
12,000lbs = 5448kgs

Scenario



So, your average GU Patrol for example has a loaded weight of 3.3t (2.2t tare by 1.5t). Your stuck to the chassis, so you will need to pull 9.9t out of the muck (3.3t x 300%)

Throw on a camper trailer (1t) and your Nissan's winch and recovery gear needs to deal with 12.9t!

NOW LOOK AT THE LIST ABOVE AND SEE THE PROBLEM YOU ARE IN!!

ENTER

THE SNATCH BLOCK

THE POWER

OF THE MULTI-LINE-PULL

We've just worked out that, by itself, your winch is in big trouble. The electric winch has many limitations and is not the be all and end all. By itself it is very handy and will give many an inexperienced four-wheel driver a false sense of security and confidence and can get you into more trouble than it can get you out of if in the wrong hands.

This is why we like to use the humble Snatch Block. You can't have too many of these. If every one has one then you may have many on a hill. This is all good. The snatch block is a rated piece of equipment that allows the cable to run over a pulley and change direction too another tree or back to the winching vehicle.

The awesome power of the Snatch Block is that as soon as you introduce a pulley within the line you HALVE the weight on the line!! Add 2 Snatch Blocks and you reduce the weight to 25% of the line weight at the hook! Add Three? Well, then you will reduce the load on the winch to 1/8th of the load on the hook. This is called a Triple Line Pull. It is slow but very effective.

Remember, every time you add a Snatch Block you halve the weight, but also halve the speed of the winch but double the power so who cares.

****Very Important..** The mathematics that we have set out here is only true if the pulley is set up to allow the pulley wheel to turn with the cable.

THE WEAKEST LINK

Remember that the main reason that we introduce Snatch Blocks is to halve the weight on the winch effectively allowing us to pull far in excess of the pulling power of the winch.

Often when Snatch Blocks are introduced the winch line is used up in the double or Triple line pull and we have to use a Winch Extension Strap. What is the rating of this strap?? The more Line pulls the more likely that you can introduce a weight beyond the breaking strain of the strap. This is very easy to do and it is disastrous.

Massive loads are placed on your recovery system when introducing Snatch Blocks; so think about all of it every time you use it, when ever you pull it out and after you pack it away!

THE FINAL CHECKLIST



Notes

- 1. Is your recovery Hook rated and to what level?
- 2. What is the breaking strain on the Winch Extension Strap?
- 3. What about the Tree Truck Protector?
- 4. The Shackle?
- 5. What does my winch cable look like?
- 6. What does it look like now?
- 7. Did I pack it away and re-spool it properly?
- 8. Have I lubricated it?
- 9. Is that winch cable that I will hang off one day just a rusty Birds nest on the front of the vehicle or re-spooled and lubricated ready for use?
- 10. Have I put any of my gear under extreme load before? And should it be replaced?

RULE NUMBER 1

Work Safely,
Protect Life.
Determine the load,
Assess the Environment.

THINK!!

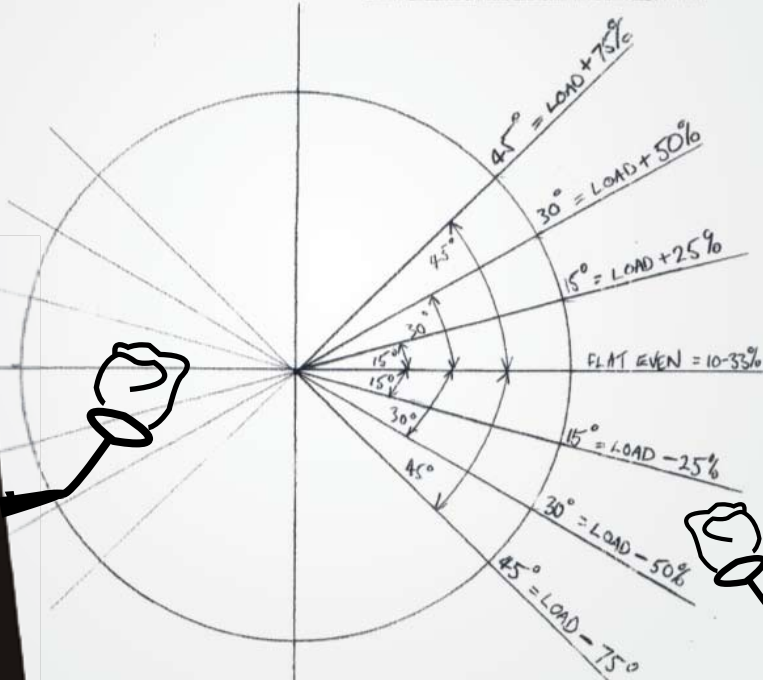
*Special thanks to Mudrunnertd and the
Australian 4WD Action for being a great Resource*

SLOPE V WEIGHT CALCULATOR



BASIC WINCHING + THE AFFECT OF SLOPE ON LOAD

INCLINE OR UPHILL - LOAD AFFECT



DECLINE OR DOWN HILL - LOAD AFFECT

kg

25°



MadComputerScientist

MISSING IN ACTION



NAME: NUBBY

HEIGHT: 120CM

WEIGHT: NOT MUCH

LAST SEEN: GRAND FINAL
DAY BBQ

PROOF OF LIFE: CONFIRMED BUT VERY DISTRAUGHT FROM OVER EXPOSURE TO TOYOTA DIS-TREATMENT AND SUBJECTION.

MORE INFORMATION BELOW...

One of our members (MudrunnerTD) has had his NissanPatrol.com.au stubby holder stolen this month from a cunning Toyota driver named Danny.

This Danny character has tormented poor Nubby and put him under extreme stress which has bought the forum to It's knees.

To make matters worse this dodgy Toyota driver has now joined the forum posting up traumatising pictures of poor Nubby being subject to riding in a Toyota, at a Toyota dealership and has also been seen in a toilet bowl.

This is an outrage to us well respected Nissan drivers and this must be stopped!

One of the first proof of life photos we received on the 2nd October 1500 hours was of Nubby doing some manly "Toyota" owner shopping. Poor Nubby was subjected to standard Toyota products needed for their day out driving which is a disgrace to our Nissan Patrol etiquette. Unfortunately this is only the beginning of this sort of treatment.



Shopping with a Toyota driver



It went down hill after this. The next few days showed us how cruel and unforgiving these Toyota drivers can be. Sticking poor Nubby in Toyota bull bars, grills, rims and even under tyres. We thought the last laugh would be on the Toyota driver hoping his CV's might pop as he drove over Nubby but thankfully the kidnapper did not risk it and Nubby lived to fight another day.

Things were looking grim after day six of this horrible kidnapping and the uncoordinated Toyota driver miss hit with the axe and cut Nubby apart. Wanting to keep the hostage alive he was raced to the emergency ward in Melbourne for further treatment. Knowing how much trouble Mr Kidnapper would be in if Nubby died he soon recovered.



Drinking with a Toyota driver

This was the last straw!

We received this photo from Mr Kidnapper of him drinking his favourite drink and using poor Nubby to house this "Manly" Toyota beverage. This is just beyond a joke and we fear for the livelihood of Nubby after this relentless trauma induced state he must be experiencing.

Stay strong Nubby!!!!

**IF YOU HAVE ANY FURTHER INFORMATION
PLEASE FEEL FREE TO CONTACT US OR THROW A
MCDONALDS THICK SHAKE OVER THE
WINDSCREEN OF THIS KIDNAPPER.**

D.I.Y.

MAKE
YOUR
OWN
SNORKEL

How to make your own 4" stainless steel snorkel

This is an easy DIY job to make your own 4" stainless steel snorkel and all up should only cost about \$200.

What you need...

1. 2m of 4" stainless steel tube. (Steel companies, etc. I purchased mine from Austral Wright Metals in Epping, Victoria for \$26 per lineal metre...Bargain!)
2. 1.5m of 4" flexi wire wound pipe. Purple Pig stores
3. 1 x 90 and 2 x 45 degree 4" rubber elbows.....Any truck parts shop.
4. 7 hose clamps to suit 4" (101mm diameter)
5. 30cm's of Rubber "U" extrusion to wrap around the cut....Clark Rubber stores.
6. Brackets to hold the 4" pipe to car and fixings....Your choice



This is based on a 4.2D GQ Patrol so instructions may differ depending on your Patrol...

After removing the pre filter, cut out a square on the inner guard enough for the 4" pipe to go through. Approx 110mm should do it. It does not have to be perfect and being a tight spot I decided to just angle grind it...

Don't forget to prime and paint any raw steel too...



We now need to locate the centre of the hole to be cut on the outside guard. Use a punch or just anything sharp to punch the centre location from inside the engine bay. You don't need to punch it all the way through, just enough to locate the mark from the outer guard. The picture below is hard to see but you can just see a small punch mark to work off from the outside.



Time to mark out the circumference of the rubber elbow that will go into the guard which can be tricky and you want to make sure It's correct...If unsure, start small and work your way out.

I found a PVC pipe with the same diameter and cut it on a 45 degree angle to almost sit exactly where the pipe will on the guard. On a GQ you are cutting it right on the bend so this was the best idea I found to get it spot on. Trace around the pipe using a whiteboard marker.



See how the circle is almost perfect and if you tried to hold the elbow on that spot you wouldn't get a perfect circle due to the wheel arch.



The 90 degree elbow that will sit in here will need to have an elongation in the hole to allow the inner radius of the 90 degree bend to sit inside too otherwise the snorkel wont sit close to the panel.

You need to measure the distance of the bend up until it runs straight again, see below...



When you have that measurement use the PVC stencil again but move it that distance to the right for your elongation of the 90 degree elbow...It sounds rough but it worked 100% on mine.

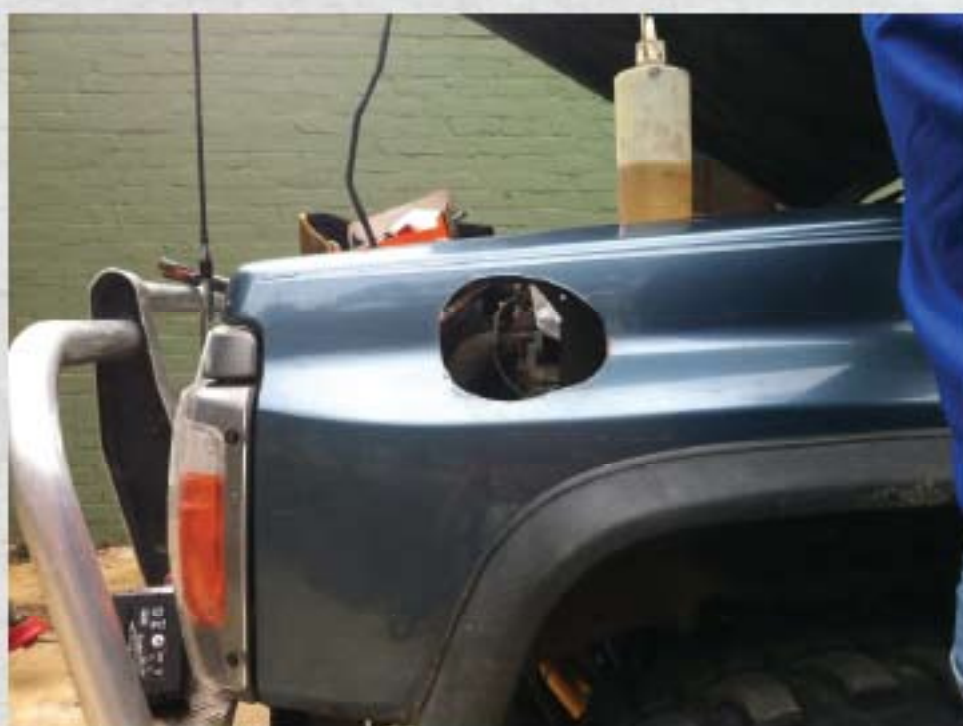


Here is the stencil drawn, ready to cut...



The fun part...lol...Cut the shape out!

I used a nibbler for this, it didnt give a perfect result but a lot safer then a hole saw or jigsaw in my opinion and after you put the trim on you can't even tell any rough corners, etc. I did file and grind some touch ups afterwards but didn't worry too much about having it perfect...



Prime, KillRust and or paint the cut. put the trim around the cut and silicone the outer trim to ensure no water can get in.



Set the pipe and 90 degree up as shown below and cut the pipe down where you want to start heading up the A pillar. As below I marked out where we cut mine. It was a whisker left of the middle of the aerial or exactly between the "O" & "L" of the PATROL badge.



The best part...Put it all together and duct tape it to your car to hold in place to hold it.



Now you need to brace it to your vehicle.

I ended up getting funky and used some brackets I had in the shed, rolled them to form around the snorkel using a treated pine post, hammer and vise grips and beat the hell out of it until it was shaped to how I wanted it.

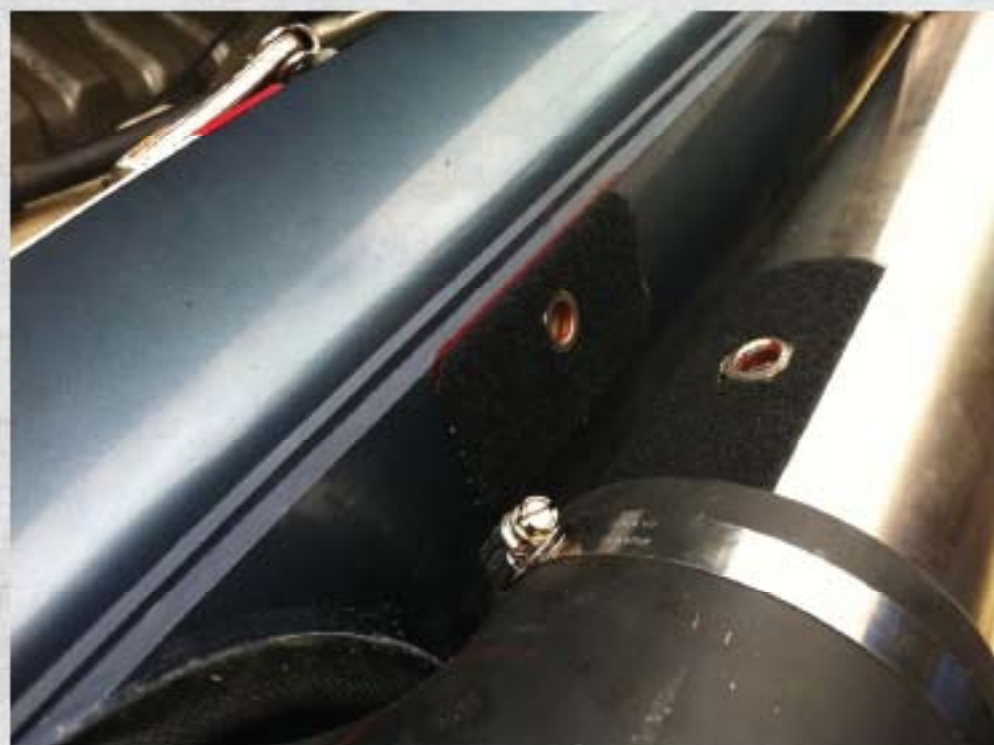
Many people simply get a Z shape bracket and fix it at the top of the pillar only so this is entirely up to you...



Drill a hole and nutsert it...



Then apply some velcro padding so the bracket doesn't end up ripping your car apart and rusting your panels for years to come...



Spray the brackets, wait for them to dry and put it all together.

See below for final result.

If you have any questions please feel free to jump on the forum.



the journey continues...



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online resource for nissan patrol enthusiasts