Prepare to Finish or Fun, Adventure &Competition!Pt 3

by Andrew Pearce

Parts 1 & 2 covered the choice of car and featured the most important aim – reliability. This issue we continue looking at the same theme: preparing a car (with reference to my 2500TC) for long distance endurance rallies.

Tyres

When on long distance events over rough terrain these will be your weakest link, punctures being a constant threat to progress. Adopt the "brick out house" approach, go for a tall skinny tyre with a thick side wall, this will help with grip in loose gravel, as well as raising ground clearance. I used the best 8 ply van tyre I could afford on the World Cup rallies, rotated them between front and rear as they wore (I took two spares) not suffering one puncture. You could opt for specialist mud, snow or sand tyres but then run the risk of over-heating them on tarmac – having your knobbly bits fall off is no fun! So basically on long distance rough stuff where the regulations don't allow "competition use only tyres" you have to sacrifice grip for reliability.

Whereas, on a more traditional classic road rally, where you would expect reasonably good tarmac (albeit with the odd pot hole) you can go for a decent car tyre with good grip in all weathers, if you are doing an winter alpine rally a good idea would be to find out what sort of tyre the locals use! (As well as packing some snow chains and a thermos.)

Wheels

I wouldn't recommend alloys on rough terrain, as steel wheel rims are a lot easier to bash out with a hammer than a smashed alloy! Check your regs as many rallies won't allow oversize aftermarket wheels anyway. If you do wreck an "ally" on a "misjudged" kerb or "stealth" pot hole, you would be hard pushed to fix it, using the standard issue lump hammer I took to straighten my rims after the desert!

Strength/Protection/Safety (no, not what you are thinking!)

Strength

It's always a good idea to go with an inherently strong model of car, which I reckoned the 2500TC to be, but still saw no harm in beefing it up a little. As for the Daewoo "shopping" car? Well, it weighed almost the same as a 2CV and the metal was thinner!

The 2500TC was prepared for classic, mainly, tarmac rallies in mind, not washed out goat tracks! As we were to expect pretty indifferent roads in very remote areas of Spain and Portugal, I wanted to toughen up the car as much as possible. Again referring to the regulations and my wallet, we strengthened known weak points of the car, rear shocker mounts, chassis, around new rear spring platforms, the rear floor area (around suspension mounts).

The world cup car was going to take a lot more punishment, with a 75km test over the top of the Atlas Mountains taking on said washed out goat track, as a modern light shopping car it was going to need some help! Again referring to the regulations, we strengthened suspension mounting points and the front chassis rails, in the case of the latter making a "U" section, a "box" section by seam welding a strip along the bottom of it, sandwiched in the new "box" section were large nuts which were to provide very strong location points for the sump guard.

Protection

Sump Guard – one tip, go for the brick out house approach again! I've got a great photo of a thumb sized hole punched in the forward facing section of a home made Renault 4 sump guard, it eventually fell off somewhere in Morocco! Simply because it was too thin and flimsy! (The guard not the Renault!) I didn't fit a sump guard to the 2500TC as the event was 95% tarmac the other 5% being on smooth cobbles and farm lanes, but plans are afoot to fit one before its next event.

Now you could go down the "prodrive" route and have a fancy carbon Kevlar type thingy made. Ok if you have the money, I spent a large amount of my budget on a sheet of 7mm thick duralumin! The idea being to cover as much of the under engine area as possible, fixing it to the car using the mounts we had devised when strengthening.

As undoubtedly you will land heavily on the "nose" of the car, hit rocks, bits of the cars in front of you, oh and large stones placed in the road by locals hiding up a tree, wetting themselves laughing (?!) you need to make the forward facing part of the guard curved up, towards the bumper, as high as you can without restricting air flow to the radiator. This will help deflect nasty bits under the car, rather than them hitting "square on" into exposed bolt heads, cross braces, mounts etc. Don't forget to pack the area between the sump and the guard with something soft, i.e. foam! This is to prevent small stones sitting on the sump guard being pushed up and through the sump pan when the underside of the guard is hit hard. If the area is full of foam, the stones can't get in! Two cars went out because of this.

Tank Guards –Similar to the sump guard, if the tank is exposed protect all of the forward facing profile, use an angled plate to prevent "square on hits". I used 1mm sheet steel reinforced with Herald rubbing strips! (Or pick a car with the tank inside like the 2500TC.) Protect any exposed fuel filters in the same way. The Daewoo lost its filter spilling a lot of fuel in a very hot place, amused locals looking on, smoking the regulation Camel (dung) cigarettes! It was "get the extinguisher" out moment, (see safety section later).

It happened because in remote Morocco resurfacing means tipping a truck of shale over wet tarmac then let the cars behind flatten it! Driving at 40mph through a sea of hot sticky stones managed to batter the modern style clips holding fuel pipe to filter. They let go in the middle of an army outpost town, just after I had filled the tank to the brim. Luckily the spare filter I was carrying had clips, but I had to cover the next 100k covered in fuel, whilst having the co-driver point a fire extinguisher at me whenever I tried to light a cigarette! Later I got the chance to use a bit of aluminum stolen from inside the car to fashion a guard for the filter. Lesson learnt.

Part 4 will be in the next *Club Torque*. There's a lot to preparation isn't there? The RBRR won't need all of this though!