



NEED NIGHT OIL

It's all go in the Off Road Armoury workshop as Rob Butler's XTC truck continues to come together. There's still a long way to go before it's ready to take on the opposition in the AWDC's new time challenge series – and with the clock ticking down to the start of the first event, it's taking some seriously late nights to keep the build on track...

WITH THE FESTIVE SEASON out of the way, a new year has brought with it the stark realisation that the 2010 season is almost here. Towards the end of January, the AWDC's Neil Whitford sent out a group email reminding competitors that it was less than seven weeks until the first round of the XTC speed challenge championship – which certainly put the wind up a few people.

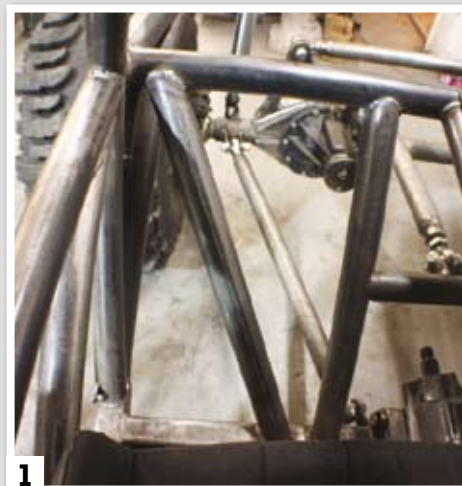
Rob Butler of the Off Road Armoury was among them. We've been following the progress of his Sgt Rock buggy for a few months now, and it always seems to be coming along in leaps and bounds. But with customers queuing up to keep the company in proper, paid-for work, the build has tended to be left until after hours... Rob actually sent these pictures through to us at 3.58am one morning. 'I've really got to pull out all the stops if I'm going to make it to the first event,' he admits.

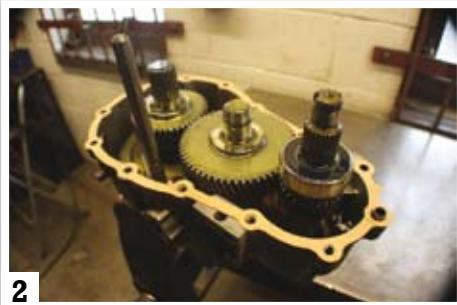
As well as putting in the hours in the workshop, he's also been to the annual AWDC prizegiving dinner to collect the trophy for finishing second overall in Class Three

during 2009's Howlin' Wolf series. 'During the event,' he says, 'I managed to have a good chat with MSA scrutineers Mark and Vic Palmer, who cleared up a couple of issues for me regarding tyres, hydro steering and helmets. There had been some confusion regarding full hydro steering for speed events, but that all got cleared up and it has been approved for XTC and challenge events only – not comp safari.'

'Vic also put me straight on tyres for XTC, meaning I can run the Boggers I'd been planning on using, as well as Maxxis Creepy Crawlers – which I wanted to have the option of fitting for super-dry, grippy events. They'll be a lot faster over the rough stuff, as they aren't as big, heavy and clumsy as the Boggers. Mark also educated me on MSA crash hat approval, allowing me to order the new lid I had been looking at as my old one was no longer allowed due to new 2010 MSA regs. There really is only one make I could wear in the buggy – so I have just ordered myself a new matt black Simpson Diamondback, which is SN2005 Approved and, more to the point, looks seriously cool.'

Once you get to the stage of thinking about crash hats and tyre choice, you're into the realm of details. That doesn't mean the hard work is all done, though. As you'll appreciate from this month's pictures, those late nights might not be over and done with quite yet. But at least the results are there for all to see...





1] When Robbo Aliperti examined the buggy a couple of months ago and gave the nod to its basic design, he asked for some extra bracing to be added in the spaceframe's floor, bulkhead and wing areas. The extra metal is seen here, further triangulating the vehicle's overall structure

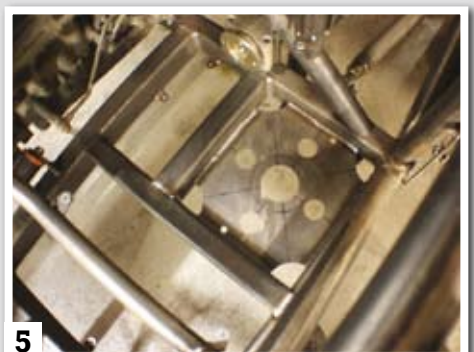
2] The transfer case is seen here during assembly. One of the Armoury's full 6.5:1 ratio boxes, naturally enough it features new pins, bearing, seals and gaskets throughout

3] Once built, the tranny is then mounted on to the back of a Grand Vitara auto box. This is done via an adaptor which was custom-built in house, using CNC laser-profiled face plates and a custom-machined connecting shaft

4] An Odyssey PC 2250 – a beast of a battery – lives on a custom tray. This is located right at the bottom of the chassis, helping to keep the centre of gravity low down wherever possible

5] The battery tray is made from 4mm steel plate, boxed in by the same 75x50mm that the bottom chassis rails are made from. With the battery itself in place, on goes the stay – also custom fabricated

6] The custom front winch tray, made from 6mm steel throughout, is home to a Warn 8274 with a Giggiepin top housing, main shaft and +40% gear ratio as well as twin 6hp Warn XP motors. It's also seen in the main picture. Rob laid the winch on its back and flipped it over for the best possible positioning, centralising it as much as possible in the front of the vehicle to aid weight distribution





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1] The engine is a Suzuki Grand Vitara 2.5-litre quad-cam V6. In standard form, this puts out just under 150bhp, but with custom headers and the exhaust opened up Rob reckons it'll do closer to 170, and a remapped ECU would take it further yet. This picture also shows the high-pressure fuel pump and filter, as well as the fuel tank being test-fitted during fabrication

2] Here's the fuel tank being built, and another view of it in what will be its final home. Fully custom built using 3mm aluminium throughout, it's positioned next to the engine and just behind the driver's seat

3] The ECU is mounted up high in a waterproof electrical box, for obvious reasons. The engine loom is all Grand Vitara, stripped of anything not needed such as the heater, lights, wipers and airbags. Rob took the precaution of testing the loom after butchering it, and had the engine turning over and sparking, meaning it's all good on the immobilised, key-coded and ignition side. Also shown here is the switch panel, which contains the ARB switches and engine and winch controls. The battery kill switch is 500A marine-grade

4] If you've been following the build over the last few months, you'll have seen the front suspension supports. Well, these are their replacements. 'I just wasn't happy with the first set of gussets,' says Rob. 'So I cut them off and fabricated these monsters. They're 4mm throughout, and come around the shock hoop and up the roll cage much further to help spread the load'

5] Here's the brake master cylinder, complete with custom push rod. With this in place, the brake pedal linkage was all complete - all that's left now is to plumb it in during final assembly

6] This is a prototype clamp for the hydraulic steering ram, featuring 15mm water jet cut and machined bolt holes. The ram will have a total of four of these holding it in position



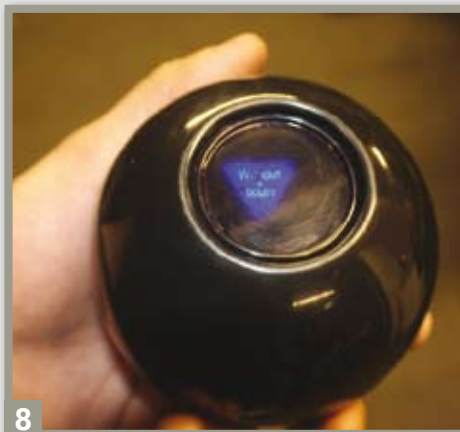
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7] A change of regs for the 2010 season meant a new helmet; hence the arrival of this Simpson Diamondback lid in matt black. Ladies and gentlemen, introducing Darth Butler...

8] 'As with any uncertain issues or important executive decisions,' says Rob, 'I always leave it up to my Magic 8-Ball. Question: Will the buggy be ready to kick ass in the first XTC event...?'