



To Hel & Back

raising money for



and



40 countries, 30,000 miles, 2 continents, 1 trip!

PART FOUR
WITH A MONTH
OF MAJOR WORK
AND A LOT OF
EXPERT HELP,
THE BOYS
CONQUER THE
MECHANICAL
WORK.



THE 'COMPLETED WORK' LIST:

- ✓ Replaced clutch
 - ✓ Changed O-ring seal between gearbox and transfer box.
 - ✓ Changed crank-shaft oil seal
 - ✓ Replaced cracked brake servo
 - ✓ Replaced bushes on rear A-frame
 - ✓ Fitted new Bosch starter motor
 - ✓ Fitted new Bosch 100Amp alternator
 - ✓ Removed EGR unit
 - ✓ Fitted D44 steering guard
 - ✓ Fitted protective mesh/plastic in front of headlights and radiator
 - ✓ Fitted new fuel lift pump
 - ✓ Fitted new mount for rear brake T-piece over rear diff
 - ✓ Extended breather lines with high level breather kit
 - ✓ Fitted Dynema winch rope, kindly donated by Land Rover
 - ✓ Checked and adjusted valve clearances
 - ✓ Fitted new Britpart shock turrets
- Impressed? We certainly were, and pretty exhausted to boot

FRIENDS IN HIGH PLACES

As the 110's preparations continue, Tom and Carl step up their efforts and pencil in some 'face time' with some of the most influential names in the business

FOLLOWING OUR fun at Land Rover Experience the previous month, we were back down to earth with a bump, hack sawing away rusted bolts on the drive in the pouring rain. Oh the glamour of preparing a Land Rover for Africa. After a few day's work the 110 was running again and we had an appointment with another very generous sponsor.

We drove down to Draper's factory in Southampton and were treated to a quick tour around the

by
Tom Picton
and **Carl James**

Above: Defender gets dirty. Landy in its natural habitat.

factory floor. We were taken through the rigorous quality control process our tools had undergone with Clive, Draper's Marketing manager.

We collected our truckload of tools from the sons of John Draper personally, as well as meeting the MD who regaled us with stories of his own overlanding trip through Tanzania and the Congo some 30 years previously in an old Series vehicle; it's amazing where you find fellow overlanders.

We'd like to say a huge thanks

to all the guys at Draper Tools who have supplied us with all the tools we use for the Landy. A fully stocked toolbox makes life so much easier and mechanically more manageable when you have the correct tool for the job.

We turned home, now more toolled up than Rambo and popped in to see Keith Gott to collect the essential overlander's tool, the hi-lift jack. As with so many people we have met on our travels, we were given so much sound advice by Ben Gott and the guys who had all the time in the world for us to ask questions.

By the time we got home we had done 270 miles and the Landy had developed a couple more oil leaks, was making noises and we had no turbo boost. Moments like this can bring you down and make you seriously question whether your plans are possible and whether you have entirely screwed up on your vehicle choice.

After running through everything and agreeing that given the circumstances and our budget at the time, we stood by our decision and wouldn't have done anything

differently next time around. Thus we vowed to focus on each issue individually and see where we stood in a couple of week's time.

We nursed the car over to see the hugely knowledgeable Foley Brothers, Stuart and Paul, at Foley Specialist Vehicles and picked their brains as side lockers were fitted. These lockers are capable of containing all four of our jerrycans, keeping the weight lower down and saving lots of space in the back.

leaks, leaks and more leaks

Just as we were running out of space on our notepad, Paul offered to hoist the car up on the ramp and ran the rule over the ol' bus, doling out sound and sensible advice which we would do well to heed. A couple of oversights on our part were pointed out, such as leaving our aged shock turrets when we changed springs and a cracked brake servo (we hadn't seen it) but the big news was to come.

The suggestion was made – and it really was our decision – that if we had the means to do it, given its characteristics and the oil leak from

the back of the engine, the clutch and crank-shaft oil seal should be changed. Gulp.

With a Britpart clutch at home that we had planned on taking as a spare, we decided to bite the bullet and tackle one of the jobs we'd been dreading, especially having read the last issue of **LRM** featuring Alex and Katie in an £800 110 using almost two litres of oil a day as a result of a similar oil leak.

Both of our parent's will be pleased to see the back of the old crank-shaft oil seal which had done its best attempt to paint both of our brand new block-paved drives black.

Luckily for us, another overlander got in contact having seen us in **LRM**. TJ Nicolson from Better Prepared Vehicles phoned up to offer his help and his workshop and we promptly bit his hand, arm and most of his leg off.

We took the car down to TJ's workshop and dropped the gearbox down through the floor having removed all of the floor panels and disconnected all ancillary wires from the bellhousing. A fair bit of sweating and swearing followed

Top: Carl opens the bonnet and jumps on the roof to try and look like he knows what he is doing.

Above left, anti-clockwise: Down at Draper, the boys enlist some expert help; Side lockers are fitted by the brilliant Foleys Specialist Vehicles; New Britpart clutch goes in.

Above right: The 'done' list now outweighs the 'to do' list.

as the box became stuck on an unused and until then invisible exhaust mount, the entire weight seemingly supported for a time by on finger-strip of metal.

Fair play to the engineers at Solihull, they appear to have manufactured a mount possessing Herculean strength and resilience – if only the door sills were fashioned from the same stuff.

a monetary hit

All went well despite the weather's best attempts to drown us and all our brand-new tools in TJ's workshop, with regular trips up to the cottage for tea and coffee keeping the spirits up.

Unfortunately, this is where our luck ran out this month, as the next step meant the removal of the flywheel in order to change the oil seal at the back of the crankshaft.

The flywheel came off OK, but on inspection a large crack was found between two of the bolt holes. This was a major problem, as it left us with a £250 hole in our budget and unable to reassemble the car until we could



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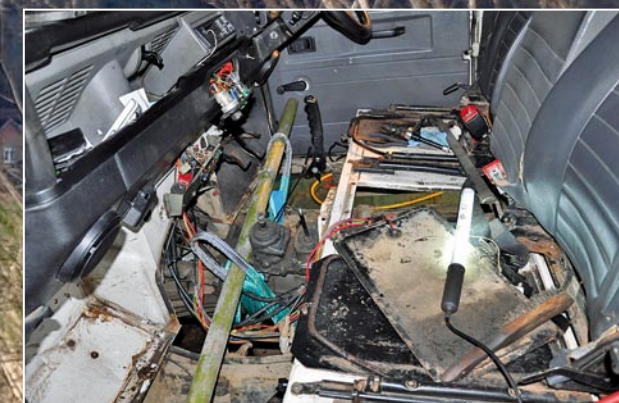
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YOU CAN FOLLOW TOM AND CARL'S EPIC JOURNEY AT WWW.TOHELANDBACK.ORG.UK AND IN FUTURE ISSUES OF LRM.



find a replacement. To further compound our misery, this all happened on a Friday, thus allowing bugger-all time to find and order a new part.

Thankfully, we have both met a lot of generous people on our travel preparations thus far, especially the boys at Britpart.

A quick call on Friday afternoon was all it took for Richard at Britpart to dig us out of a very big and expensive hole; a new flywheel was in the post for Monday. Absolutely stunning work which has saved us money we simply don't have to spend.

Crisis over, we swapped the oil seal and fitted our new Britpart flywheel, clutch plate, cover, release bearing and heavy duty clutch fork, remembering to use new bolts and smother them in Locktite. Unfortunately with a 100kg lump of metal, refitting is not simply 'the reverse of removal' as Haynes so irritatingly states.

After a quick struggle with the transmission assembly as a whole we decided to split the bellhousing and transfer box, which made life much easier. We had the job done by 5pm and spent a few hours connecting various pipes and lines. It was dark, damp and cold

Above left: Two better prepared vehicles take the limelight.

Above right: Warning – driving an overlanding vehicle with spotlights on may delude you into thinking you're Ranulph Fines.

Below left: Carl and TJ brave the awful weather to get the job done.

Below right: Tool heaven in Southampton in classic Draper blue.



but the sound of the engine firing up really lifted spirits late in the night.

Everything was torqued up in the morning and we left ourselves the rest of the day to reseat the cross member, exhaust, new Bosch starter motor, prop-shafts, speedo cable, floor, wires – you know the score.

A day of rest was sorely needed after this full-on week, but the schedule dictates that we returned to TJ's workshop and cracked on with the few remaining mechanical jobs.

To complement the A-frame ball

bushes which required more sawing, grinding, nigh on a bottle of WD40 and a good session of hammering. Finally the A-frame arms were free and the old bushes replaced with brand new Polybush ones.

We sorted our new D44 steering guard with some slight modifications to allow for the bumper. More grinding, more cutting, more filing. A big thank you Devon 4x4 for their steering guard, the ol' bus now looks like it means business.

One of the last small jobs for the

With a 100kg lump of gearbox, refitting is not just 'the opposite of removal', as Haynes so irritatingly states.

joint replacement, we decided to sort out the rear A-frame bushes, as we were told this was an oversight. Being the very last original bushes on the car, they of course proved the most difficult to remove.

We resolved to cut the old bolts out and replace them, which took a lot of crawling around under the car holding large angle grinders precariously positioned above our heads right next to brake lines. One thing we have learnt this month; setting fire to your hair is not fun.

This done, we replaced the

month was to raise all the breather lines to sit level with the top of the raised-air snorkel, thus allowing for a hell of a lot of wading with the EGR and the last of the electrical gubbins now out of the way.

The brakes have become somewhat of a bane recently, so we needed the front right caliper tested as the fault finding continued to get to the bottom of the hard right pull which occurs when the brakes are used. Tom jumped in the Civic and put the hammer down up to Birmingham to see Bigg Red

Calipers, who took the caliper apart and pronounced it to be in perfect health. Damn, back to square one.

We checked all the remaining copper brake lines and Hel braided lines for faults, but found none. We bled, re-bled, jiggled pipes, tapped reservoirs, changed the master cylinder, poured over half-a-litre of brake fluid through the front lines; still nothing.

Finally, following TJ's advice, we changed technique and built pressure in the system by pumping the brakes in an emergency-stop style before we opened the bleed screw. This time, the front right caliper discharged a milky white fluid.

But then, just as we had finished our victory dance, the last bleed screw on the last job of the day did not do up. Round and round it went, out and out came the brand new Comma DOT 4. The threads had finally given up on the callipers. Although the pistons and seals had been overhauled and the bleed screws themselves renewed, the thread within was still 13 years old.

Now, at this point it is worth reviewing something that makes Land Rovers different; the community. TJ's quick call to some like-minded enthusiasts nearby led to

an invitation to their workshop in an instant.

An emergency fix was needed to get us home. A helicoil was discounted, as was sourcing new calipers at 7pm at night. So, with the use of a lathe and a length of hexagonal steel, two bleed screws were machined in ten minutes flat. The calipers were drilled out and tapped with a larger thread to accept the bespoke screws. Absolutely superb work from these shadowy Lords of the Lathe in the dead of night got us home, a huge thank you to all involved.

living quarters

We are glad to have finally sorted ourselves into a position now where thoughts can turn to internal comforts and preparations. While we thought we had completed our under the bonnet 'to do' list, more problems kept bringing themselves to the fore as we put miles on the Landy. Give or take a few small jobs we have now moved our focus

Above left: EGR removal allows Landy to breathe while Tom admires new Britpart flywheel and hopes never to see one again.

Above right: While TJ's suggested use of the pole allowed easy gearbox removal, the boys decided it limited legroom so reverted to the original Land Rover layout.

Below: Amazing generosity, some of the companies who have made this trip possible.

to living in the car and fitting our shelving units in the back.

The batteries and safe are secured and well hidden, the fridge is secure and properly mounted and the water container is currently having a support made for it. It all sounds simple enough stuff but when doing all of this for the first time, ensuring you don't compromise power cable routing, airflow to electrical equipment and making sure everything is still flush and neat, it's easy to see where the time goes.

Without a doubt, the most noticeable change to the 110 is the sign-writing. What a stunning job completed by Sign-A-Rama in High Wycombe. We liked it so much we gave the car a polish up and took it out for a photoshoot.

The plan now is simple; get the final few bits of kit we need, and then shoot off into deepest darkest Wales for four days to see what breaks and what irritates us. Then we should have two weeks before jumping on the ferry. **LRM**

