

# DEFENDER 100 TRUCK

We've been looking at the superb nut and bolt up build that is Adam's 100" Mazda SL35 TD powered defender winch truck.

We know there are plenty of trucks out there that have been modified, built up and restored. This one really does stand out. The attention to detail and design is both unusual and outstanding.

We took it for a quick shakedown just hours after it was completed and delivered to Boys' Toys HQ.



Whilst not designed for competition - this truck is a seriously capable machine designed to handle punishing terrain whilst being fun to use and simple to repair.



This machine is based on a 100" Range Rover chassis and was put together in the builder's self-built home workshop.

Power comes from a Mazda SL35 TD 4 pot truck engine, power is then transmitted by a Range Rover classic ZF4HP22 auto gearbox. This combination is pretty well bullet proof and well-matched giving unbelievable pulling power and, in turn, remarkable acceleration.

The sound through the bespoke home built stainless steel exhaust is gruff and satisfying.



The SL35 was checked over before use and thoughtfully sprayed in Gardner light grey engine enamel so any future oil or other fluid leaks can be quickly identified.

Drive shafts are upgraded to Ashcroft as are the CV joints. As is the norm this truck is fitted with ARB lockers giving fast ability to lock the diffs when you're in the mud!

Lumps and bumps are handled by Terraforma long throw shocks, coupled with 2" lift springs on the front with location cones and inner X springs on the rear axle.

It is clear a huge amount of forward planning has gone into this truck, throughout the build each stage has been thought through, materials protected and cable and hydraulic conduits put in for the later fittings throughout the build. Everything is correctly run, grommeted and nicely thought out - Adam is an excellent electrician with an eye for detail - plenty of planning and conduit runs a-plenty means less chance of damaged wiring and makes for easier repairs and additions later on.

The chassis is galvanised and then powder coated making it very easy to clean and will ensure a very long life. During the build Copex flexi-conduit has been used extensively so the cable runs are kept neat, simple and out of the way of damage. This also speeded up running the cables to wire up the vehicle initially as well as helping with maintenance.

The electrical system, as you might imagine, is beefy and well specified. Comprising two Odyssey HD batteries, charged through a T-max split charge system. Lighting comprises standard defender headlights, LED indication, and very high power LED light bars giving near daylight illumination at night. The main top light bar is full width with an output of 260W - which in modern LED terms is extremely high. This is a Chinese LED unit and its output is incredible.



The big SL35 TD painted up in Gardner light grey

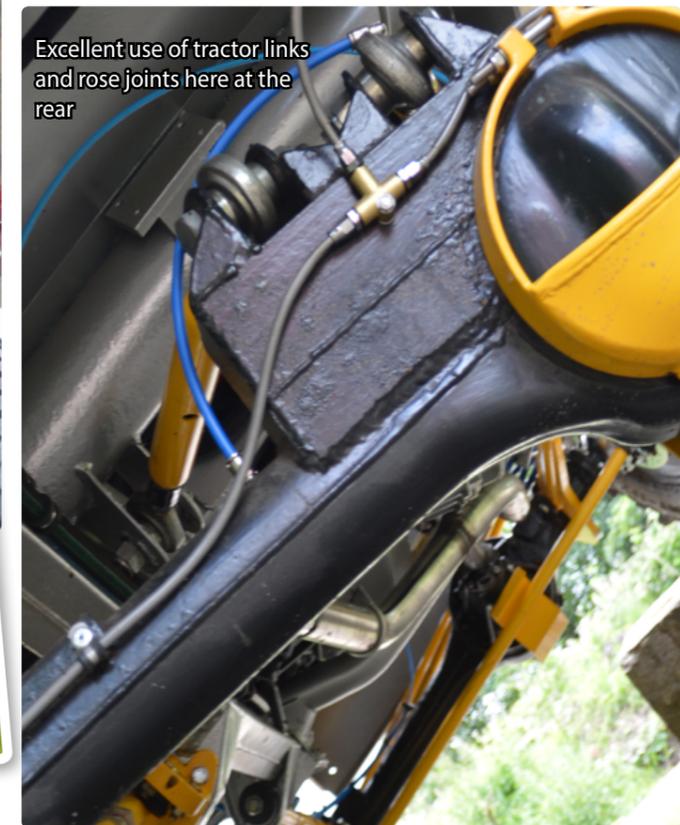
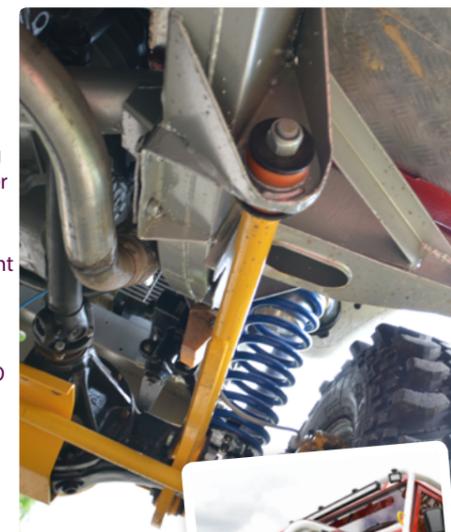


The dash like almost everything on the truck is bespoke and fully custom built from aluminium sheet, simple and well laid out with the essentials.

Winch capability is two fold, comprising a Superwinch X9 at the rear together with a front mounted hydraulic two speed Mile Marker. Both winches are wound with the much safer plasma synthetic rope. The front winch is connected to a Flowfit system of electro-controlled hydraulic spools, giving remote capability and a forward / reverse lever in the cab which is also actuated by the remote via solenoids - a nice touch. This is all driven from a front mounted v belt coupled hydraulic pump on custom made bracketry - it looks like it was originally designed to sit there on the top left of the engine even though it is not the case.



Everything that can be is stainless steel or aluminium. Everything else is well protected and big - we particularly like the use of tractor rear linkages on the rear carrier as well as lorry spring hangers used to make the line recovery eyes around the truck - very solid!



Excellent use of tractor links and rose joints here at the rear

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# SL 35TD Monster

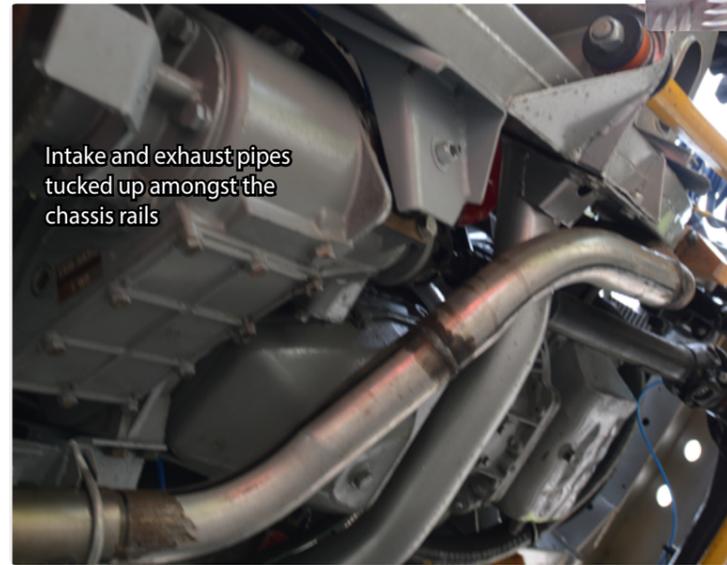
The engine is so large compared to the stock unit that clearance is within 5mm of the inner chassis rails. All of the intake and exhaust system is completely bespoke as are the cooling pipes and system.

The intake, snorkel and air intake is largely formed from pipework obtained in a universal kit on eBay - it's a mixture of reinforced flexi poly pipe and aluminium tubing.

The exhaust is of course stainless steel and runs neatly under the cab and up above head level at the rear. Both the exhaust and reinforced flexible intake pipework terminate well above head level meaning this machine will wade deeper than the driver can.



Tidy hydraulic pump install plumbed and wired up neatly to match



Intake and exhaust pipes tucked up amongst the chassis rails



The truck is currently fitted with 35" Silverstone mud terrain tyres mounted on Mach5 Beadlock rims which really do look the business and should stop it dropping a tyre when running low psi in the soft stuff.

This thing really stops, thanks to ventilated discs all round, four pot calipers on the front and two pots at the rear.

The build was apparently remarkably free of major snags, but two are of note. Mating the engine to the gearbox seemed fairly straightforward with the same splines being used, however the lengths differ and the splined shaft had to be removed and the splined section machined shorter to allow full correct engagement.



Poly race tank at the rear just in front of the radiator

The other issue of note is common with many new build cooling systems particularly when the engine and radiator are so far apart. That is a persistent air lock, as despite the expansion tank being higher than the engine because the engine is the second highest point there is a tricky air bubble present which needs to be flushed through carefully when setting up or changing the coolant.

This headache has now been flushed through but shows how tricky it can be mounting the engine up front and radiator at the rear.

Sill clearance is just over 25" giving this truck an amazing ability to climb - we clambered effortlessly over some 2 ft tall concrete blocks and the visible articulation was impressive.

This machine has been built to be capable and fun, giving the builder much enjoyment. He has no plans to compete in it - just to enjoy its use on and off road - we are jealous!



We will be serialising many key component builds in this truck - over the coming months they will be shown here in BTDT.

It was a pleasure to see this machine and have a play with it, - its capability is truly impressive and we look forward to seeing it in anger.



Serious ground clearance and articulation evident here



A good hydraulic pipe bender is a real must on a project like this

