

**T**he norm when visiting a manufacturer is to arrive make introductions, have a chat, and then be taken out to inspect an absolutely immaculate vehicle. Said vehicle is then taken for a tour whilst yours truly keeps a weather eye open for a suitable location, the drive being not so much a test drive as a search and find operation for a photographic shoot. This visit to Troll Engineering was to be a little different.

Finding Troll was not a great problem, they live, not as one might expect at the top of a hill, but in a workshop to the rear of the family business in Minehead. That is not to say that Troll Engineering is an also ran in the business stakes. Indeed, new workshop premises await the arrival of plant and machinery to enable Troll to really get things moving.

Whilst setting up the business, Peter James has utilised office space and a workshop at the rear of a shop in Minehead.

The office facilities included a computer, and putting his Bristol University engineering training to good use Peter has played with chassis design and development, using a computer aided design program. Any alterations to the chassis, spring rates, pick up points, etc. can be fed into the computer and their effects studied. Add to this over a decade of competing in Classic Car Trials, hillclimbs and sprints, and you discover that Peter James of Troll Engineering has the skills and experience to put together an excellent and well designed car.

Building a car is not something that you do everyday, in fact setting up in business to build cars is probably about as popular with bank managers as taking out an overdraft with a sawn off shotgun. It is the sort of escapade which can very easily result in financial disaster, despair and gloom. One way of avoiding all this is to set about developing your product and your business in a planned manner rather than bodging along with a kit that an ever gullible public will buy, and sorting the problems out as you go along. Buy a Troll Engineering product and you can be sure that there will be no problems with this bit or that bit not fitting properly, nobody at Troll will have to tell you to beat it with a hammer until it fits or breaks. Build the car to Peter James' specification and there will be no problems with the handling, other than the nut gripping the steering wheel.

That the cars will be built to Peter James' specification is assured, for when a client buys a chassis he or she is asked to sign an agreement that only the parts specified by Peter James will be fitted. You can fit different carbs, different exhaust, differential and gearbox, but you must use all the steering, brake and suspension parts as specified; you are also advised to use only the 1700 Crossflow engine. Asked if it was possible to fit, say, a Fiat Twin Cam, Peter said "Not to this design of car. Fitting a different engine makes all



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Having been soaked on the 'Edinburgh', the Editor ventured as far afield as Minehead to look at the Troll itself

sorts of differences to the chassis design, weight distribution is different, stress points and so on. We will do the development work on the car if a customer requires us to do so, but they will have to pay the full rate of £50 per hour."

Now the above may seem rather a narrow course to take, however, if more manufacturers took the approach of designing one car, and designing it properly then perhaps the industry would have a better image. The manufacturer who creates an Escort MkII based kit and then says that there is no problem about fitting a V8 powerplant is very shortsighted.

Troll Engineering was born out of motorsport, Classic Car Trials in particular, and has had a long gestation period. Sales so far have been by word

of mouth and some 19 Trolls have been sold, only one as a kit car. The Trolls sold so far have been bought for use as 'non-road cars', that is for use in competition. A few have since been registered, hence the chance to test drive a Troll T6E.

I had driven Ann Templeton's Troll after the 'Edinburgh' and found that even after all the punishment that the car had received it was still taut and precise. The Trolls that I was to drive today were the Troll T6E and the roadgoing prototype. The former only recently home from a Classic Car Trial and the latter a one-off prototype still requiring some refinement before being unleashed on the marketplace. No highly polished show cars here.

To start the day off at a cracking pace Peter



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suggested that we go for a blast in the roadgoing prototype, with the warning that the rear suspension was a bit firm, and the engine was running a little rough. The route chosen was up onto the moor behind Minehead, a steep climb up several hairpins and along a twisting undulating and bumpy surfaced Road. I just sat in awe of the handling of the Troll, I looked at the speedo, it

wasn't working, I looked at the road ahead and saw that it rose to a brow, I had no idea of what might be on the other side, I took a deep breath and held it, the Troll crested the hill, the road was clear, we swept around the bends, crested the hills, I admired the scenery and relaxed. The blast up the hill had been rapid and exhilarating. It was for me to drive back down into town. Having had

Peter test my nerve I commented that I wouldn't take it quite so fast. I slid into the driver's seat and felt for the pedals. Once acquainted with the ergonomics of the car I fired up the engine and slipped the close ratio box into first, in with the clutch and on with the throttle and away we rocketed, the front wheels rising and falling with the undulations on the road, the rear suspension constantly reminding us that it was a little on the stiff side. Along the moor road we flew, not quite as fast as Peter had driven on the way out, but testing nerves nonetheless, Peter knew the road and from time to time would point left or right just in time for me to brake or change down for a corner. Coming down the steep hill into Minehead I dropped into second for a hairpin and the drive locked for a moment then on with the power and round the hairpin the tyres scrabbling but the car staying under control. All in all a very forgiving car. The Troll had been thrown into bends at speeds which would have resulted in distinct lack of directional stability on lesser vehicles and took it all in its stride, this was a car in which I felt that I was part of the vehicle, It was possible to make this car go where I wanted it, when I wanted it to go. This on the unfinished prototype.

Later we nipped up Porlock Hill, skirted Exmoor and down Countisbury into Lynton. Climbing Porlock Hill we came across a few family saloons struggling to make the climb, the Trolls were dropped a into second and we roared past them as if the hill didn't exist. I was now behind the wheel of the T6E, sitting some five or six inches higher than the roadster in front. We pressed







on across the hills, opening the throttles up whenever there was an opportunity and passing the slower moving traffic with ease. It being a public road, a narrowish one to boot, it was best not to indulge in heroics, however, I did manage to get the Troll into a drift on one corner, the first time since my little mishap back in June. The sound of the tyres tearing on the road surface, the feel of the fourwheel drift brought memories back in an instant, It would have been easy to loose my nerve and the car all in one go, but I held onto both and added a little to my confidence. All too

soon we came to the coast again and slipped down the hill into Lynton for lunch.

The return journey took a route through Lorna Doone country. Narrow lanes, high hedges and a generally pedestrian pace in order to avoid dismembering some unwitting member of the public or tarmac loving sheep. Even so there were short blasts along the clearer stretches of the road. On coming to a ford and a bridge, the T6E just had to charge across the ford rather than take the more civilised bridge. I believe that there is a species of Troll which inhabits just such places in Norway.

On both these cars the steering rack was quick, 2.25 turns from lock to lock. Ideal for a track or trial car, but not so hot on a roadgoing car, where every twitch on the wheel is turned into a change of direction at the front wheels.

At this stage I have to make the rare, if not unprecedented statement that the Troll T6E is one of the finest, if not the finest car that I have driven to date. The car is basic, no carpets, no footrests, no heater, and the only weather gear a tonneau cover, but it feels like a real car, it handles, it performs and it is solid. In fact to put it simply, this





car just feels so good I could have taken one away with me.

What then makes this car so good? Well, apart from the design work that has gone into the Troll, there is the spaceframe chassis built by the same people who build Donkervoort chassis. This chassis includes all the pick up points for the suspension, engine mounts, steering column brackets et al. The body panels are largely aluminium fitted onto the chassis and turned to leave no rough edges. The dash is a flat panel with the instruments and switches fitted, the instruments all being embellished with the Troll logo. The lower edge of the dash folds around a curved crossbrace of the spaceframe, so rather than being a simple former it is part of the car's structure.

Front suspension is double wishbone with coil overs. On the T6E the ride height is set high for greater ground clearance at trials, and the lower pick up points are below the chassis, on the lower road car they are inside the chassis frame. Uprights are Spitfire for the present, with modified stub axles. Steering rack, column and anti roll bar are all Troll engineering units. The racks are specially made to have the correct length and gearing for the cars, hence the quick rack for trials cars.

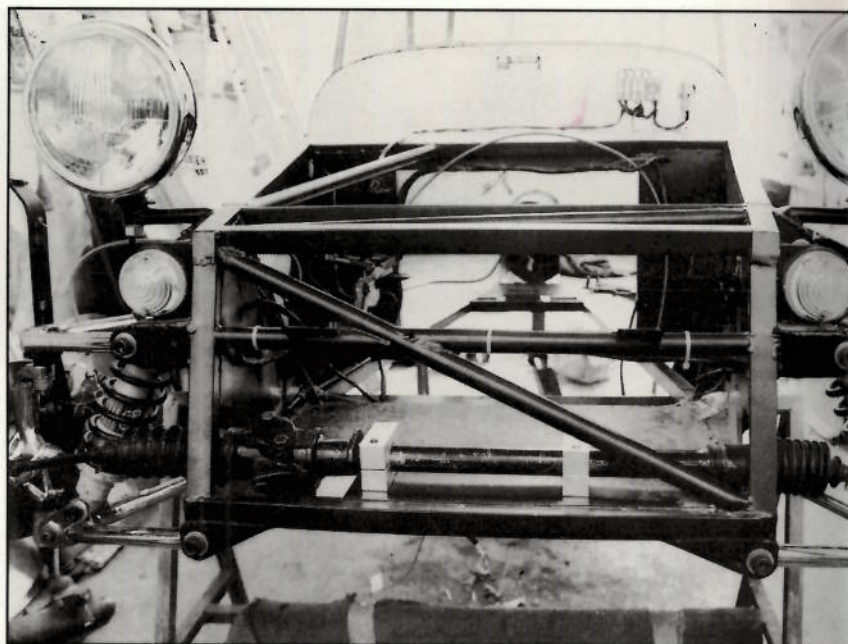
Rear suspension is four link and panhard rod, full rose jointed and adjustable, with coil over shocks. The rear diffs can be rebuilt using Troll Engineering pins with phosphor bronze facings.

As mentioned earlier the cars are designed to use 1700 Crossflow engines. These normally would have a cable operated clutch, but Troll offer a bellhousing to accept a hydraulic clutch, similar to the Lotus Cortina item. Other items fitted to the T6E which would not necessarily be fitted to road-going cars are fiddle fly off handbrakes. Steering wheels are Motolita, because Peter says they are the best.

The styling of the car is traditional - it is not a squat Lotus, nor is there any attempt to design a rather esoteric body. Rather, it is a body which comes about as a result of the purpose to which the car has been built. Aerodynamics are of a lesser importance than the ability to handle and perform under the conditions asked of the car. The result comes from a line of thought traceable back to pre-war specials through Dellow's and finally to the Troll.

Back at the office Peter went through the basic management being applied to the company. Records are being kept of every car sold and hopefully these will include records of any alterations to specification. This will enable spares to be ordered off the shelf for any particular car without any worries about sending the wrong steering rack out, for instance. Clients are also given a service card and schedule, along with a complete build up manual.

If you fancy a Troll, then you had better be prepared to pay around £15,000 for a finished car



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and a starter kit will cost you £4,522.78 plus VAT. The price may sound a little high for what appears to be a pretty basic car. However it is well designed and when built properly feels like a car rather than a collection of bits.

Of the cars sold to date, all have been trials cars. These cars acquit themselves so well in competition, it is surely only a matter of time

before we see Trolls gaining a well earned reputation as road cars as well. Regular readers will be aware that it is rare that I resort to the usual hyperbole, so if I were to say that this was the most exciting car that I had driven in the last twelve months it would either be an indication of the imminence of a blue moon, or I might just be excited about the car, ne c'est pas?

## Kit Spec: Troll

<b>Donor:</b>	No single car
<b>Chassis:</b>	Troll Engineering
<b>Body:</b>	Aluminium and GRP
<b>Engine:</b>	1700 Crossflow from Specialized Engines Ltd.
<b>Contents of kit:</b>	Almost everything that you are going to need, eventually.
<b>Build time:</b>	80-100 hours
<b>Waiting time:</b>	?
<b>Delivery service:</b>	Yes