

My first own car was a DKW Munga, a former Military vehicle from the Bundeswehr. My second own car was a Willys MB, built in 1944 in good original condition. My third was a Land Rover LR88 with diesel engine.



the story of power

With the Munga I have had a lot of fun, among other things my brother and me have installed a Ford 4-stroke engine with 80 hp instead of the DKW 2-stroke engine with 38 hp. The Willys was the nicest of all of them, but the Landrover was only to big, to heavy and to slowly and so I finished the chapter of the four wheel drive cars.

The next chapter was a kit car based on a beetle chassis. Looking like a MG TD and only driven with aeroscreens it was lovely to drive, but acceleration with the VW engine was no satisfaction. So, after getting the absolution of the German TUV for the car with VW engine, we installed the engine of a Porsche 356 with 75 hp in combination with a very rare Sebring race exhaust system. Now the acceleration was

better and the sound fantastic, though much too loud. The Porsche engine died in Italy and a VW engine took its place until the end of this journey.

Back in Germany we built up a 2000 ccm Porsche 914 engine with two down drought Webers and about 110 hp. Acceleration and top speed was very good, but it was as illegal as the Porsche 356 engine.

After one year we found the right and besides legal way for more piston displacement, more cylinders and more power. The TUV agrees with our latest modification, a kit car on a beetle chassis, combined with a Ford V6 2.8 in the rear and fuel tank, water and oil coolers in the front.

I thought "this is my car", but after two years my brother told me, that two guys in Dusseldorf had started with the

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noodles cooked too long in an Italian tourist-trap, the brakes were too small and, by the way, in very bad condition.

The panels were bad done, also the interior and the grp-parts were painted in glittering "disco" violet. The gearbox was very loud and the engine not in a good condition. To summarise: Nearly everything was broken. I think, the only intention the owner had, was to drive a very loud car. But the modification was legalised in the German car papers.

After three days I got the V8 in exchange for the Caterham. The car was driven home by myself, though the cockpit was definitely too short. This was the last ride for about two years.

In this two years, for my brother and me, the car was job, duty and mission. What we wanted to achieve was a nice Lotus Seven with a tuned Rover V8 engine, with perfect handling, really good brakes, good cooling systems for water and oil and a frame and rear-axle suspension which would be stiff enough for so much power and torque. And I had to found enough place in it for me and my legs.

The car was totally dismantled, everything was laid into pieces. At first, the tubular space frame was restored and modified. To make it more stiff, tubes were hard-soldered in the side of the frame, in the area of the steering rack and the front and rear suspension. One diagonal strut in front of the steering rack, one behind and another below of it. One traverse between the rack mountings. Diagonals in every quadrangle of the two sides of the space frame.

Tubes to stiffen the area of the upper

radius arm mounting of the rear axle. The area of the mounting points of the A-frame to the lower chassis tubes at the rear corners of the cockpit was strengthened and lowered for 7 cm to get a lower seating position. The frame between cockpit and rear axle was placed back for 10 cm at the lower rear corners of the cockpit. The steering column found a for 3 cm higher position above the dashboard cross tube.

Thus the car became a long cockpit version in combination with the possibility to install engine and gearbox as far as possible in direction of the back of the car. The missing upper diagonal in the engine bay was replaced by a screwed double triangle construction in the lower engine bay. Why screwed? It is only possible "to install the car to the premounted engine gearbox combination". That means, the frame had to be lifted over the V8. When the engine gearbox combination is in place, the double triangle frame can be mounted. Last but not least a tubular framing for the transmission tunnel was built.

The next step was the rear suspension. At first the life axle from a Ford Capri 3.0 was modified for double straight radius arms. So any winch and damage of the axle caused by the torque of the engine is impossible. Next step was a better and stiffer construction of the A-frame bracket. After this all mechanical parts were renewed and adjustable shocks and springs were mounted.

Now the old V8 was installed into the engine bay, because we had to build hand made tubular manifold, as each side four

Caterham Seven import to Germany.

I had heard enough about the legendary Lotus Seven, I met the two guys a few weeks later on a fair to test if the long cockpit is long enough (I am tall enough: 1,91 M) and after one week I ordered a kit of a Caterham Seven with a Supersprint engine, life axle (de dion axles were not offered at that time), Revolution wheels and without seats and an extremely little steering wheel, because we needed any cm. Dreams came true.

One year later we found in the Germany classic car magazine "Markt" an unusual advertisement. "For sale, Lotus Seven SIII, '69, Rover V8 engine, very fast...."

It was awful. The modification was done extremely bad, the car was not driveable, the handling was like eating



in one systems. Each of the eight tubes with a length of 80 centimetres. Long nights..... After this we had to construct the extreme short silencers.

All this mounted, the pedals were modified because of the bigger bellhousing and the steering column had to reach the rack in combination with all other components. Now the first part of the column with the steering wheel has a length of about 20 cm and is mounted in two bearings, one 3 cm above the dashboard cross tube, another in a little tubular frame behind the dashboard. The next part, with a length of 28 cm, is joined with the first and the third part with universal joints. The third part of the steering column crosses the engine bay below the right tubular manifold and is mounted in front of the pedals in a bearing and joined to the rack with a third universal joint. It works easily and accurately. After all, everything was dismantled a second time, preserved and painted.

Now the brake system. The rear axle had the larger drums and brake shoes of the Capri 3.0. The front axle was modified with the complete bigger components of the Lotus Elan +2.

The front suspension was uprated with top links with adjustable canter in combination with half wishbones and adjustable shocks and springs. The original SIII radiator was modified with a high capacity net, the oil cooler is from a Mercedes 280 and is mounted on the left beside the engine. The Rover five-speed gearbox was renewed, also the complete clutch.

The Rover V8 3500 block was bought new and we tuned it up with the following components:-

- Lightened Flywheel
- Piper Cam RC 87, WCC coated
- Crane hi rev hydraulic lifters
- Adjustable pushrods for accurately setting of lifter preload
- Adjustable cloyes timing gear with duplex-chain
- Modified oil pump and base, with non stick valve, oil filter remoted
- 10.5: 1 pistons
- Vandervell heavy duty bearings

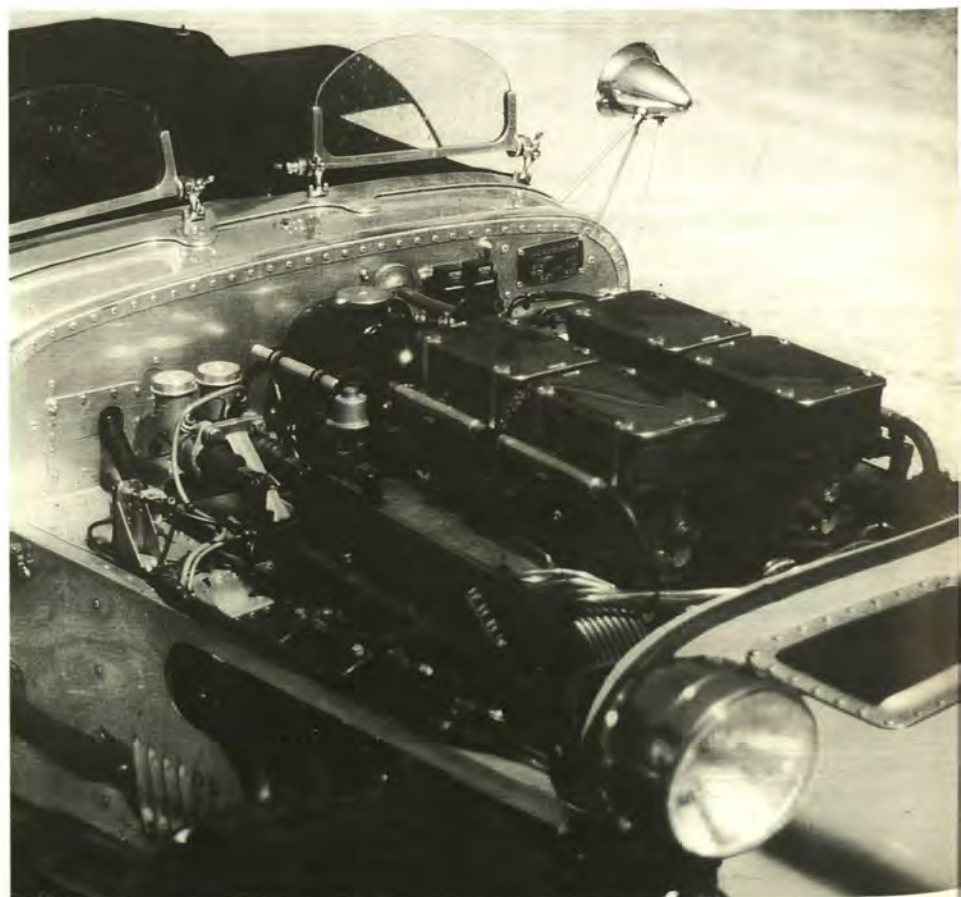
- Fully ported cylinder heads with standard sized valves
- Silicon bronze valve guides, shortened and streamlined
- Competition double valve springs
- Range Rover valve stem seals
- Fel Pro competition head gaskets
- Offenhauser 360 degrees inlet manifold
- Holley 390 cfm four barrel down drought carburettor, modified with Weber jet plates for correct jetting
- (Since 1996 Weber Alpha race fuel injection).

After all technical components were finished the next stage was the aluminium panelling. I did it by myself. All panels had to be renewed, some of them were bought, most of them were hand made, like the whole interior, the bonnet, the bonnet-bulge and parts of the side panels. Leather seats and tonneau-cover were produced by my girlfriend, the wiring renewed by my brother.

To explain the restauration it would be helpful to list the parts we had not to exchange with new ones:-

- 70% of the space frame
- wheel-hubs
- fuel tank
- speedometer
- boss of the steering wheel
- housing of the rear axle
- hand brake lever
- rocker covers
- pedals
- pedal bracket
- wheels

The first two years the car was driven with the original windscreen. Many tests with the carburation were done by ourselves. First the Rover V8 was equipped with the unmodified Holley 390 cfm, but this combination did not produce the output I was looking for. Next test was driven for about six months with a Holley dual point fuel injection. Acceleration at lower and high rpm was





ok, but there was not enough mid-range power, because the fuel injection was planned for engines with bigger piston displacement.

Next step was the construction of an inlet manifold for two Weber 40 DCOE carburetors by ourselves to install the Webers on the Offenhauser 360 degrees inlet manifold instead of the Holley 4 barrel carburetor / Holley fuel injection.

Such an inlet manifold is not available, for the carbs had to be installed in longitudinal axis on the engine, because of the design of the bonnet of the Seven. The engine was going very well after correct jetting, but one problem could not be solved. The accelerator pump-jets were too far away from the inlet valves. During these tests I was permanent looking for other solutions. The result was a modified Holley 390 cfm carburetor with jet plates from Weber which make possible correct jetting, as easily as the jetting of the Weber DCOE carburetors. This, in combination with modified secondaries, a bigger and correct jetted accelerator pump with hand made accelerator pump-cam was a real good combination with the Rover V8 engine.

So I can say: Listen, all Cobra-Replica drivers, if your car is running with a Rover V8 in combination with a not modified Holley, you are driving only a big sedan and no sportscar!

The original windscreen.... Soon I realised, that, if it starts to rain (I mean

downpours), there never was any bridge to hide for the time I used to install the hood. So I decided to install aeroscreens.

For two years the car was driven with the modified Holley, but because I needed something to play with, in winter 1994 I bought the complete Weber Alpha multipoint race fuel injection system. The installation was an interesting job, because it was not so easy to find enough space for all parts in such a small car. Also a nice work was the construction of a new bonnet bulge.

After correct adjustment the engine had 40 DIN PS (about 43 bhp) at 1000 rpm. Maximum power of the engine is 236 DIN PS (about 254 bhp) and a maximum torque of 305 Nm. Now I was satisfied with the whole combination and this is the state I am driving the car right now.

OK, I have to admit the construction of new and better leather seats and some other details like a new camshaft for the V8 after ca. 60.000 Km, because the first one was worn out. A problem which is typical for Rover engines. With the worn camshaft I drove home to Germany from Rome. I think, this is possible only with a Rover V8 engine. This happened in 1996. It was one of several nice two week travels in Europe with some friends with interesting British cars.

And for the Great Britain important subject "going on the track?" My car is not in competitive use. At first, there is

no official class for Sevens like this and my car is not prepared for official racing. But I have driven the Nurburgring, Monza, Castle Combe and the Goodwood Motor Circuit on the last day of the revival meeting in September of 1998. Many thanks to my girlfriend, she is the one who made this possible because she has a magnificent organising ability.

And because we cannot stand to play with....

- **we restored and modified another Seven SIII for a friend of us who is living in Heidelberg. Now he is the driver of the first Seven in Germany with automatic transmission (he only have a driving licence for cars with automatic transmission). Details of the car: built in '69, Borg Warner transmission of the Ford Escort S1, Supersprint engine.**
- **we found for another friend of us, who is living in a small town nearby, the Caterham of his dreams. Details: Caterham de dion built in '93, 5 x speed, sprint engine, maybe next year Rover V8 or Ford Zetec.**
- **we maintain the Caterham of Klaus "Lotus Klaus" Schamberger, who is member of the Lotus Seven Club of GB. He is a really good friend of us and, by the way, it was his idea to tell the "story of power". The Car: Caterham de dion, built in '94, 5 x speed, Vauxhall engine.**

By the way Klaus also cannot stand to play with and so he is restoring a Lotus Elan, "with a little bit of help of his friends". It will be a co-production of Klaus himself, my brother and me.

You see, in this area there is a small but enthusiastic fan club of Lotus and Caterham drivers, and I think it would be a good idea to get the membership of the Lotus Seven Club of Great Britain.

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