2001 colour scheme, picture taken at the Autosport Show that year.

A brief summary of the Beast's racing history

52 Outright Victories
24 Second places
11 Third places.

Team stepped up a gear in 2001 and on 2 occasions went International by attending the meetings at Spa in Belgium.

A big highlight of the year was at the annual Woodbridge Speed Trial day where Malcolm achieved a record speed of 184 mph-thus re-validating the Car as the fastest E-Type in the World!

The technical specification of the car is very simply a TWR Group C Le Mans car in E-type clothing. The 7.0 litre V12 engine develops in excess of 700bhp and power to the rear axle is delivered via a special Hewland gearbox. The highly polished alloy wheels are from the XJ220 Le Mans car and the carbon fibre rear spoiler is from an actual TWR Le Mans 'Silk Cut' car.

For those who are interested, there is still a website in existence for the car, http://www.fastjags.org.uk although it is not current. There is also the Pistonheads blog entitled 'Malcolm Hamilton's E-type' which has a lot of information and photographs.

My third article will be a detailed article on the rebuild.

Declining tyres reduced this even further making the last 2 laps breathtaking with the 2 cars alongside each other right up to the flag-luckily the right man won!...by 8/100ths of a second, gaining a new lap record.

As you can imagine we celebrated this hat trick of victories in style!"

For the 1999 and 2000 seasons the car, resplendent in British Racing Green coachwork and yellow wheels, was sponsored by none other than the Jaguar Enthusiasts' Club. For two years the Club sponsored two racing E-types, the other car being the 4.2 litre fhc of Mike Adams, in a matching colour scheme. The V12 was now transported in a colour co-ordinated Rob Beere lorry and the team looked incredibly professional... naturally the Jaguar Enthusiasts' Club magazine followed the teams exploits in full with very detailed reports in the following magazines; 1999 April, June, August, September, October, November, 2000 January, March, June, August, September, October, November, December 2001 January.

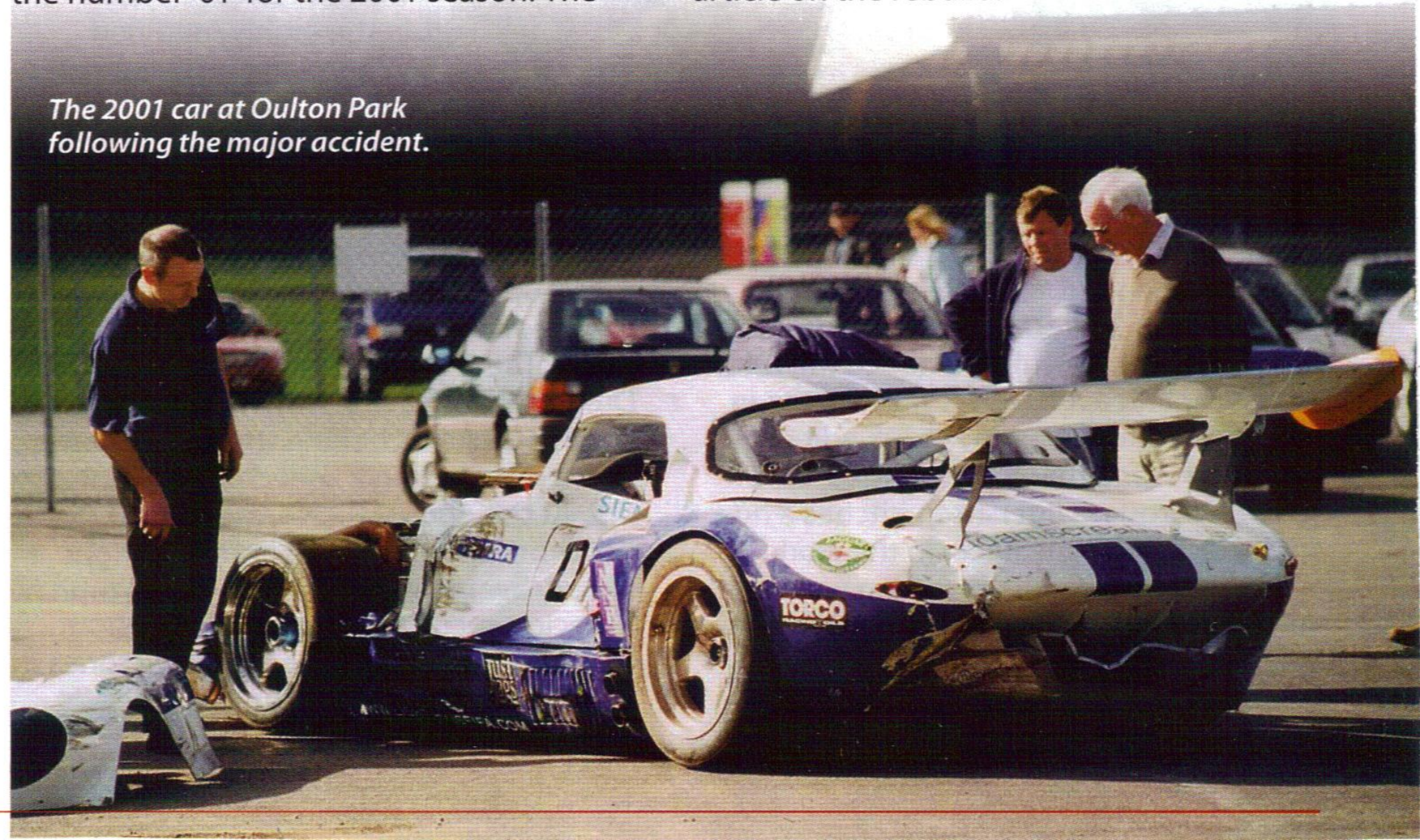
The first article in April 1999 gave a clear indication of the Jaguar Enthusiasts' Club was "Now being the home of Jaguar motorsport" and showing the cars and the transporter in their new livery.

Although outright victories eluded Malcolm in 1999 the car was back in full race order with 6 outright victories in 2000.

A copy of the race report for the AMOC meeting at Silverstone on 24th June 2000 stated that Malcolm finished second by 5.5 seconds behind the Jaguar XJ220 of Win Percy...Malcolm's average speed was 100.48 mph compared with the XJ220 average speed of 101.29 mph.

2001 as we know was the last season for Malcolm because of the disastrous accident at Oulton Park late in the year when a Porsche struck the car quite heavily on the nearside forcing Malcolm to retire. The year had in fact started off extremely well and had shown great promise of another superb season with 3 outright victories and 2 second places. The car was now in its new (and perhaps most famous) colours of pure white with 2 blue stripes and bearing the number '01' for the 2001 season. The

The car in 2000 specification under wind tunnel testing at MIRA.



The 2001 car at Oulton Park following the major accident.

The story of the fastest E-type in the world – Part 3

Peter Griffiths continues his story of this well known E-type, this month the repair, refit and the rebuild.

The accident at Oulton Park in 2001 necessitated a complete strip down in order to repair the damaged panels and the car was virtually returned to numerous boxes of its constituent parts.

Twelve years down the road, the jigsaw puzzle of 'what goes where' proved quite difficult. There is no workshop manual for a 100% bespoke race car!

When Rob Beere had the car, I guess he and Carl knew where everything went and I guess they were anticipating building it back up for the next season… obviously that plan didn't quite come off. My understanding is that with the change of Intermarque rules and loss of sponsorship meant that the car was left in Rob's workshop until better times.

The rebuild commences

After dismantling the car, (engine and gearbox out, suspension and brakes out, dry sump oil system out, interior out, etc etc.) they decided that it might be a good time to completely redesign and rebuild a new back end to lighten the car by getting rid of the normal rear cage arrangement. Rob merely started the job…. it took us two months to completely re-fabricate the rear end, beginning with a rear bulkhead and a differential suspended from the rear roll cage extension….. where do you mount the suspension? Where do you mount the petrol tank? Where do you mount the rear wing supports? I think you get the picture!

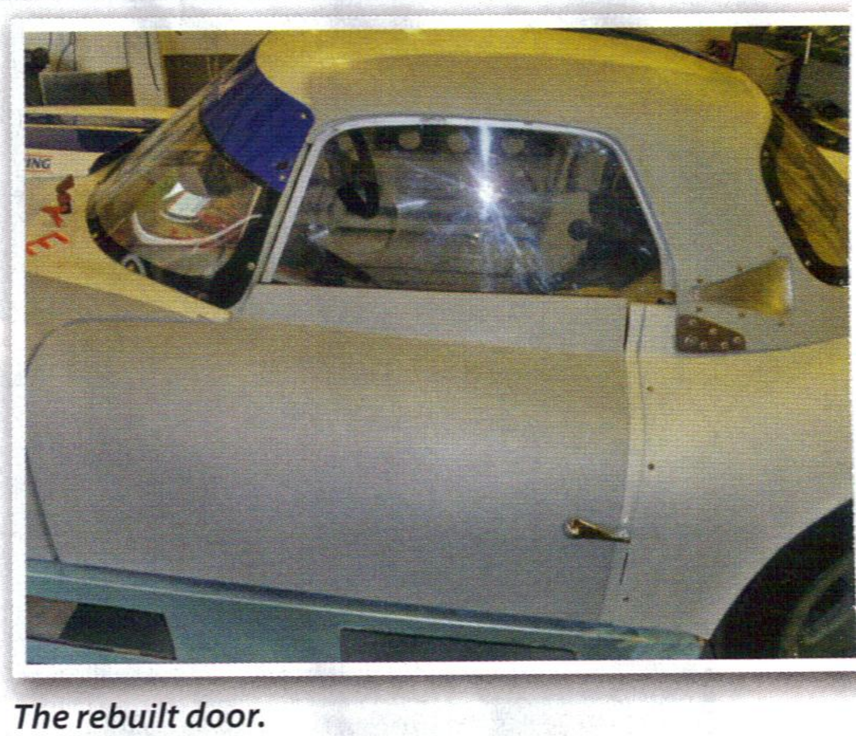
The passenger door was quite badly damaged in the accident and this was as good a start point as anything. It was disassembled in order to carry out a full repair. Sadly all the paint and sponsor decals were removed in order to accomplish this. The aluminium door was completely rebuilt and primed, hinges repaired, door A and B posts fully repaired and the door re-hung and aligned.

Other panels that were considered far too damaged to be repaired economically were removed and sent to a specialist aluminium fabricator to make duplicates. This included the offside sill including the end panels as well as all louvers within the sill and the bonnet areas. These were exceptionally well made and overall added to the car being 'better' after the accident than before.

The main area of the car that needed the most work was the rear end. As mentioned above, after the accident in 2001 it was decided to completely redesign the rear end. Although this had been started, it was perhaps only 20% complete and a further two months work was necessary to design and build a complete back end.

When I bought the car the rear bodywork was resting on the rear tyres …. Obviously the rear ride height was incorrect… indeed one side was lower than the other. The rear bodywork is one large item not separate wings, boot lid, end panels etc as in a conventional car. This was damaged in the accident and was again completely stripped of its paintwork and decals before repair and primer.

The differential was suspended from the rear roll cage which had been extended through the rear bulkhead. (The rear conventional cage had been done away with in the rear end rethink back in 2001). The suspension whilst still located at the bottom end to the half shafts the top end had no 'cage' to locate into. The top of the shock absorbers were therefore attached to specially made brackets welded to the rear bulkhead. In order to make the ride height even more adjustable, three mounting points were designed into each bracket. The totally adjustable Penske shock absorbers and oversprings could now be adjusted even further.



The rebuilt door.

The new petrol tank, a little different to the one normally fitted to E-types!

An additional strong steel plate was designed and fixed to the underside of the differential. Not only did it provide greater rigidity but it also provided extra frame mounting points and a towing eye.

Using the steel rear bulkhead as the strongest mounting base, a rear space frame was designed and constructed to take a) the petrol tank, b) the rear wing supports, and c) the rear bodywork. With the rear space frame completed we could now design a 'cardboard' petrol tank that fitted into the available space. This along with specific measurements was sent off to the aluminium specialist to create a petrol tank. What came back was truly a work of art….. and it fitted. To meet regulations it was of course foam filled.

Underneath the fibreglass one-piece rear end sat the aluminium diffuser. This was very badly damaged in the accident and could not be saved. The original damaged panels were all straightened and sent off to have identical ones made. Again, a work of aluminium art returned and the rear diffuser, now in place, helped complete and strengthen the rear end bodywork.

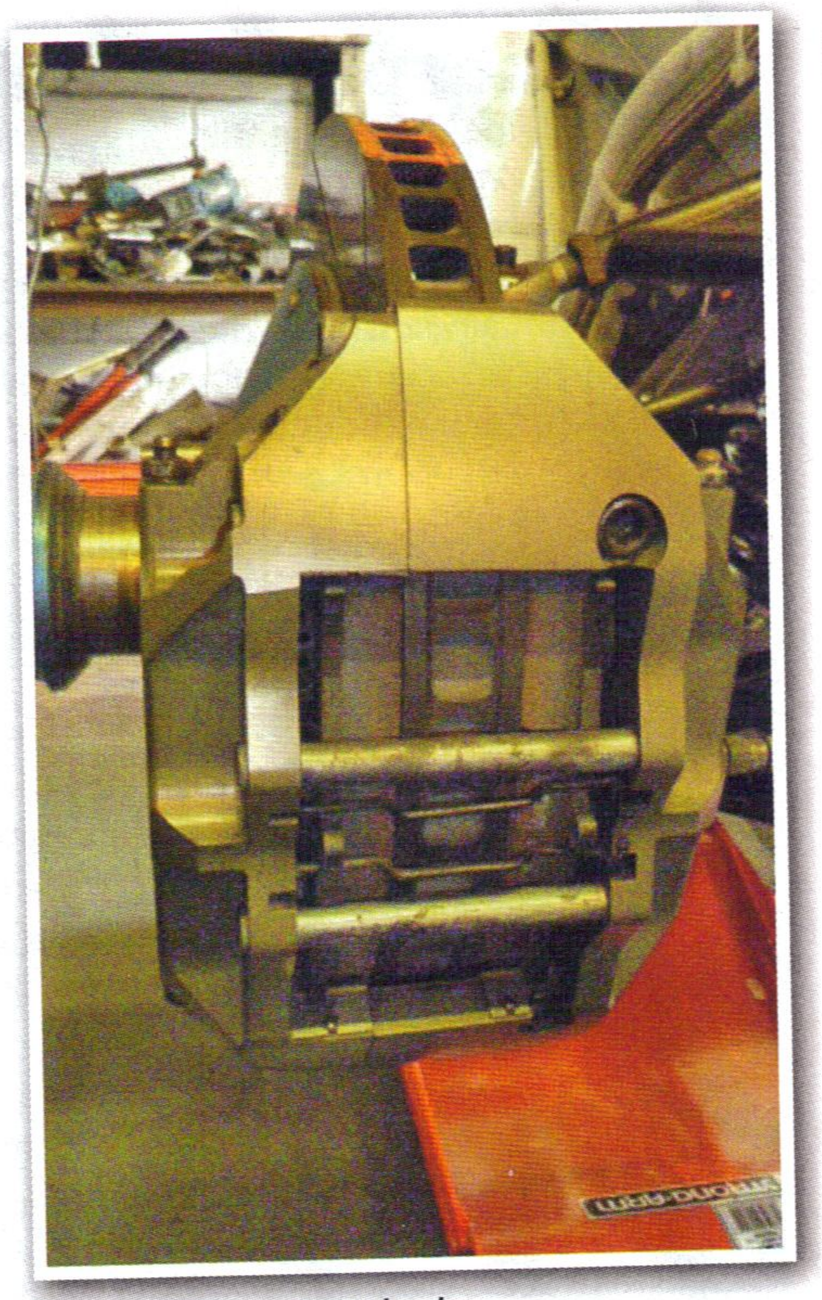
The front splitter was also badly damaged in the crash and the only way to repair it was to totally dismantle it, make identical panels and then rebuild it. Thankfully, some of the panels (and there were an awful lot) could be used again, although the plywood splitter itself had to be totally renewed.

The hard top (a very lightweight copy of a standard V12 one) suffered minor damage and this had to be repaired. Like most of the fibreglass repairs this was done using a sort of 'aluminium sandwich' to give strength to the damaged area, rather than just rely on new fibreglass and filler to do the job. These aluminium repairs, neatly riveted into place, were not painted or filled over, but simply left. I thought it looked better that way.

Naturally over the years some parts had gone missing, possibly used elsewhere and these needed sourcing. Thankfully a good spares package came with the car and overall costs were kept within reason.

New regulations

In order to make the car meet current RAC regulations additional roll bars were added. A further bracing strut was added to the rear bulkhead and a passenger door bar was also fitted. Where the roll



The massive AP 6-pot brake callipers fitted to Peter's car.

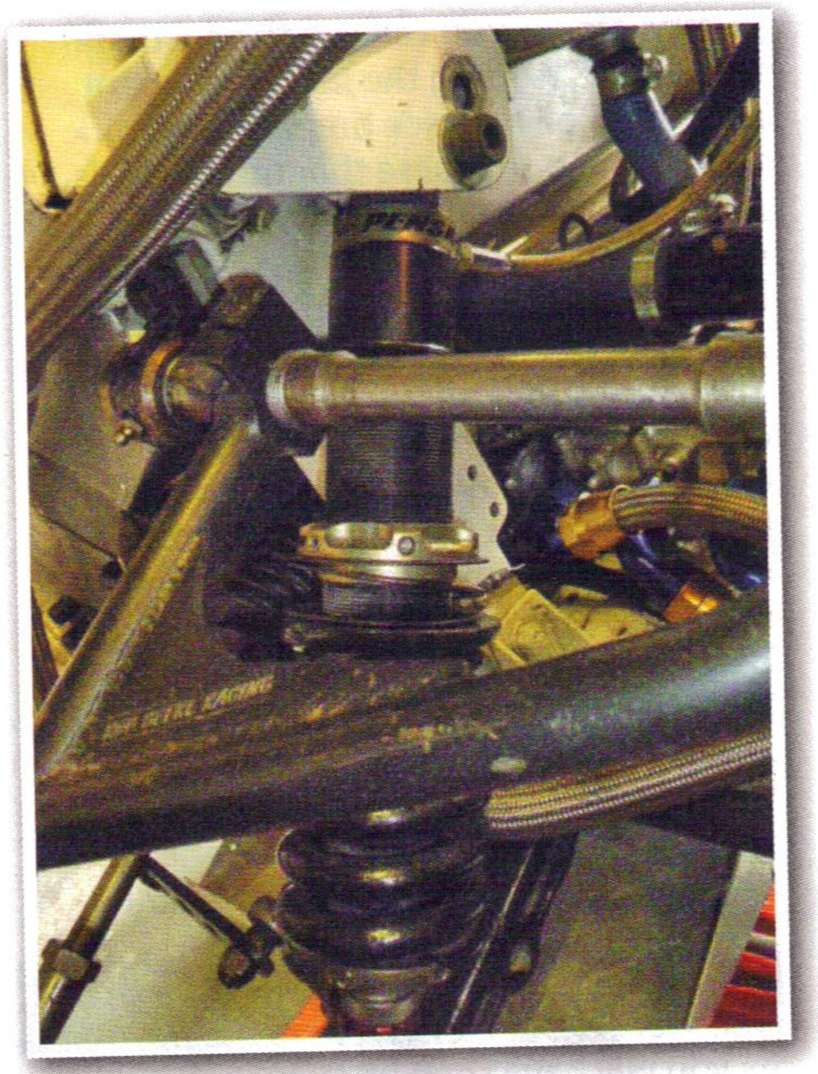
cage extended into the back end of the car numerous triangular bracing pieces were added to ensure the car was at the pinnacle of safety and rigidity.

As the engine had not run for so long this was naturally treated with a great deal of respect! We had to be sure it would turn over by hand before any real power was forced upon it.

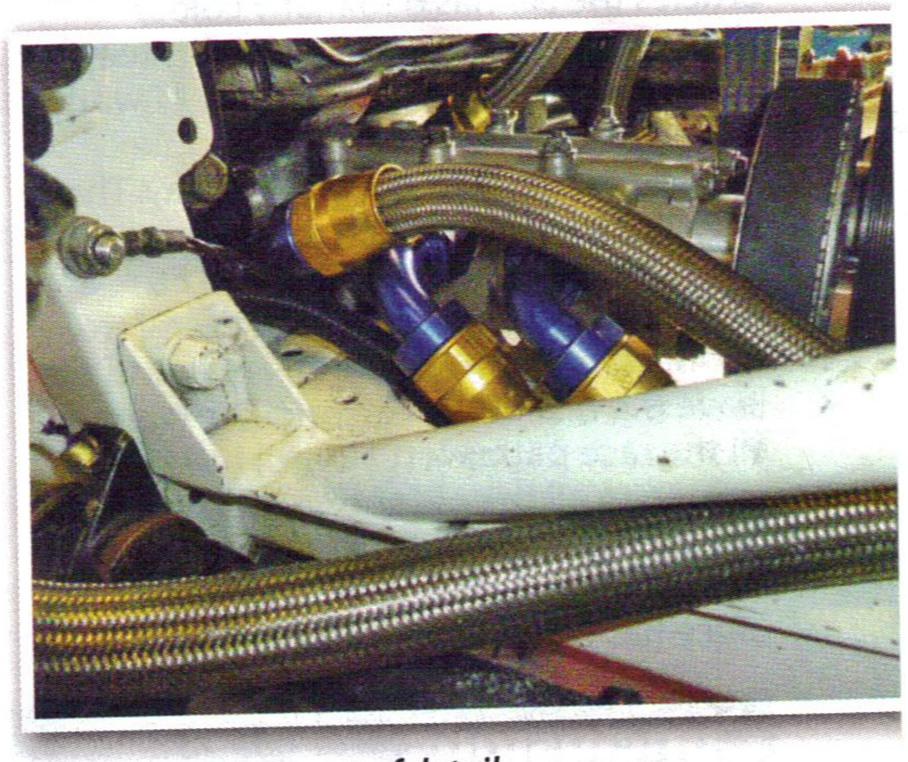
The engine was placed on a stand and tilted a few degrees to one side. Having removed all the plugs etc. very light oil / paraffin mix was drizzled into the engine on the lower side only. We did not want the oil to collect on the top of the dished pistons but merely lubricate the cylinder walls. Otherwise the engine would only smoke unnecessarily after start up until the excess oil had burned off. After a few days the engine was tilted to the other side and the procedure was repeated.

Finally and very thankfully after a week the engine was successfully turned over by hand and all felt fine.

I have done several rebuilds over the years and it never ceases to amaze me



Suspension rebuilt in progress.



The amazing amount of detail work required on such a car.

how much all those 'little parts' you didn't think about, add up to. For example…. Fibreglass, filler, primer, thinners, paint, abrasives, rivets, nuts, bolts, fasteners, steel plate and tubing, sealant, cylinder repair kits, o rings, welding wire, brake pipes, oil pipes, fuel pipes, etc etc.. Several thousand pounds 'disappears' into the 'sundries' parts list. When you then start to list more major items such as new aluminium body panels, new rear end frame work, new petrol tank, new exhaust, new fire system, new battery, new fuel

The E-type homecoming in 2013.

pumps etc etc you can see the costs start to escalate. Adding the labour element and finally all the race preparation work then I began to realise that running this race winning car is just like a Le Mans Group C car or even an F1 car … ie. A team affair with sponsorship, not a race car for an individual to take out on their own.

The dry sump oil system means that the car sits about 6" lower than a standard car. Consequently the exhausts cannot be routed under the car but have been designed to go through the widened sills on both sides of the car and exit just before the rear wheels. Those of you who have seen the car will know that it is already a good 6" wider than a standard V12 and the squared off sills leave enough space to house suitably large silencers to help maintain the Beast's decibel limit.

A lick of what paint?

As you will have seen from my previous articles the car has had many colour changes and I thought it better to keep the car in its final colour scheme of white with blue stripes … perhaps people would remember it better that way. The repaired panels as mentioned above, lost their decals and with it, I think, a little of the car's identity. I decided therefore to only repaint the repaired areas and leave the rest of the car 'original' with all the race patina left alone. I have written to all the old sponsors to try and get some replacement decals, but to date only Graham Searle at our Club's office has come through with stickers.

Conclusions

Overall the rebuild went well (well over budget as well), although there were the odd hours of panic and the often asked question Why did I start this?". Indeed, why did I buy the car in the first place…"It seemed like a good idea at the time!"

I think that if the car had not been 'rescued' when I purchased it, there may have been a chance that more bits of it may have been used for other projects and its demise may well have been past the point of no return. For example, not long after I bought it I was approached to see if I would sell one set of the spare wheels for an XJ220 project. (I declined, wanting to keep the car together as much as I could). I feel very fortunate therefore that I have played a part in bringing the car back to life so perhaps a new generation of Jaguar enthusiasts (as well as us oldies who saw it the first time around of course) can marvel at the Beast that Rob Beere and his team built and Malcolm Hamilton drove with such success between 1988 and 2001.

As this article had to go to press the car is only 95% finished and final race preparation and sorting still needs to be finished. Above all the car will need an extensive testing programme to assess the new rear end arrangement. I don't, however, foresee any problems in this area as every step of the rebuild has been done with safety and reliability in mind.

Anyone seeking further information on the car is welcome to contact me on griffiths418@btinternet.com

Current specification

- 1971 E-type V12 centre tub carrying almost a TWR Group C spec engine and running gear.
- Overall weight 1275kg.
- Bodywork is a mix of aluminium, fibreglass and carbon fibre.
- The front air dam is ply with titanium skids.
- Engine is a 7.3 litre V12 Jaguar unit developing around 750bhp and around 680ft lbs of torque. Although Rob produced engines ranging from 5.3 litres to 9 litres (!) they settled upon 7.3 litres as being the ideal balance of reliability and Bhp/Torque.

Brief spec:-

- Pistons – Cosworth / RBR.
- Crankshaft – TWR / RBR.
- Cylinder heads – TWR/RBR.
- Camshafts – TWR.
- Compression ratio – 13:1 using race fuel only.
- Carburettors – 6 x twin choke downdraught IDF Webers.
- Bespoke dry sump oil system so the engine sits approx 6" lower and further back than a standard car.
- Aluminium water radiator, oil cooler, dry sump oil tank and oil catch tank.

Electrics:-

- Battery – Varley Red Top with no alternator but with external jump lead for slave battery connected via body mounted Anderson plug.
- Front and rear side lights, brake lights, indicator lights and central diffuser light.
- Plumbed in fire extinguisher system.
- 4 point seat safety harness with Corbeau race seat.
- Removable steering wheel and power assisted steering (you do need it!)

Gearbox:-

- Special Hewland dog box with side by side shaft arrangement with lightweight flywheel and triple plate clutch. Internal slave cylinder and release bearing. This allows for extremely low ground clearance.

Rear wing:-

- Ex Jaguar Silk Cut Le Mans XJR9 made from carbon fibre.

Brakes:-

- Front. 15" AP racing discs with AP 6 pot callipers.
- Rear 13" AP racing discs with AP 4-pot callipers.
- Brake balance adjuster fitted.

Suspension:-

- Penske springs and shock absorbers on modified Jaguar linkages, fully adjustable.
- Wishbones – RBR fabricated and rose jointed specials.
- Anti roll bars – RBR special.
- Wheels – XJ220 Le mans type.
- Tyres – Dunlop 305/650R18.

Almost ready to race again.

The rear end rebuild with defuser in place.