



MEWSLETTER 105

March - April 2012

Edited and distributed by Brian W Marshall,
16 Glendee Gardens, Renfrew, PA4 0AL

☎ 0141 886 6117 www.info@kitreg.org.uk



Dave Richmond's completely unmolested 1969 Rebel saloon. Totally unrestored this fine wee car has had just three owners from new. Still in the original "Greenstone" paint it also still has the original 700cc engine. Dave also owns a similarly original and immaculate Fox that he purchased brand new!!

The Register caters for all the under 1 litre Reliant 4-wheeled vehicles plus all of their derivatives: Foxes, Rebels, Tempests, Salamanders, Ciphers, Jimps, Asquiths, Vantiques and all other specials including the Liege.....



The Reliant Kitten Register

Rebel parts stock held by: - Adrian Hanwell

New Kitten / Fox / Rebel parts stock held by Brian Marshall

E-Mail info@kitreg.org.uk

Rebel alternative parts list contact: John Blagburn

E-mail: wirelessjohn@googlemail.com

Kitten alternative parts list: ****Situation vacant****. Contact the Editor to volunteer.

Fox alternative parts list contact: Duncan Bradford, 52 St. Phillips Road, Norwich, NR2 3BN.

E-Mail hidunc@ntlworld.com

Our Mutual Aid Spares scheme is run for us by Phil Hallam 4, Greenhead Holding, Stevenston, Ayrshire KA20 4JX

Tempest Registrar: Martin Seymour 19 Cedar Court, Churchfields, South Woodford, London E18 2QU

E-mail mseymour@freenetname.co.uk

Mewsletter pictures – should be sent to John Pearce at Toddbury Farm, Slapton Road, Lt Billington, Beds. LU7 9BP

E-mail john@atodini.co.uk

The Register is a member of the FBHVC, which monitors UK & EU legislation and lobbies on our behalf to protect our freedom to use vehicles of all ages on the roads. Readers are invited to show their own support of this worthy cause by becoming members in their own right. Contact the editor for details.

It should be noted that opinions and ideas, information and advice printed in this publication are as recommended by our readers and others, and, while believed to be accurate and correct, such information is given in good faith, and it does not necessarily have the approval of the Reliant Kitten Register, and cannot be guaranteed by either the Editor, or the Reliant Kitten Register. Owners must satisfy themselves as to the suitability of any suggestions made within these pages, as no responsibility can be accepted.

Web page: <http://www.kitreg.org.uk> or have a look at <http://www.reliantkitten.co.uk>

Dinky Cars

RELIANT SPECIALIST

Wennington Marsh Farm, Wennington Road

Rainham Essex RM13 9EE

Tel: 07958 246891

**SALES, SPARES, REPAIRS,
ENGINE RECONDITIONING**

Index

Page 3	Index
Page 4	Thoughts from the Registrar
Pages 5 – 12	Rebel Resurrection Part 1 – by Simon Hodges
Pages 13 – 18	The Hollingworth Kitten Saga - Part 5 by Neil Kirkland
Pages 18 - 19	Update from Switzerland – by Patrick Vallat
Page 20	Foxes Den
Page 21- 23	A story of engineering... Amusement!
Page 23	Something fishy! How many doors in a Kitten?
Pages 24 – 28	Getting technical
Pages 29 & 30	A rare opportunity – by John Box
Pages 30 & 31	Epilogue – a radical proposal!

Now see, that's life, I have no sooner suggested we would reduce the Mewsletter size by a page, when

I had a rare treat at the end of January, Simon Hodges very kindly sent me the story of his Rebel's recent history, (over 4,000 words, almost half of your average Mewsletter, and that's without the pictures!) complete with over 30 pictures,

of his Rebel restoration operation. Another case where the two words – thank you – seem so inadequate.

Simon is one of a number of people doing major rebuilds who I live in hope of hearing from, and he was the first this year to oblige. My only problem now is to decide how many parts to break it down into – 3 or 4 were my first thoughts! We will see. Thanks Simon, and well done.

Some readers may have noticed my confusion in the supplementary sheet last time regarding my class / hand stamps. I did manually correct the error for those to whom it was relevant (those late renewing) and the error was corrected from copy 220 on, so a few of them were correct – the dangers of skipping proof reading!

While in confessional mode a couple of our 5 year subscribers did not get a membership card with the correct – 2015 – expiry date. My fault entirely. Son-in-law, Colin, had offered to modify the database to cope with 5 year subscribers, so I tried to reap the saving of only producing one card for the next 4 years for those individuals, thus saving myself the work and expense of producing some 140 or so membership cards over the next 4 years, well it seemed like a good idea at the time, and were it not for my clumsiness, it would have worked very well. As it is, I only got 95% of the job done, and now have a dilemma – the simple fact is it looks as though I will just continue to issue an annual card to the individuals concerned.

Then to compound my woes, I received a wee note from Mike Butler, who pointed out to me that he had his membership card, and didn't need an extra one – belonging to someone else! Thanks for returning it Mike – oh dear! One day I'll get properly organised!

I see that the two tone, blue and white Rebel estate NRF 520L which has changed hands through e-bay several times over the last few years, has attracted a bid of £1,200, still in my opinion a fraction of their true worth, but at least another one over the £1,000 mark. Thanks to Adrian Hanwell for drawing it to my attention.

Right, enough of the confessions and diversions. I seem to have failed to include anything from the Federation this time, I'll get onto that for the next edition shortly. I know that a number of you are individual members, and so are well informed. I also seem to have failed in my efforts to delegate the task of choosing which gems from them to include within these pages – if you would be up for doing that and do not currently receive a personal copy of their excellent publication – “Federation News” , just let me know – I can soon put that right.

Rebel Resurrection.

By **Simon Hodges**

Part one – background and beginning.

In early May 2011 I found myself with some savings in the bank and a hankering for another Reliant project: one Reliant is never enough!

I really wanted another 4-wheeler; something to complement my 1978 Kitten estate which I have owned for the last two years and covered over 21,000 miles in. I was not looking to build a fully restored show-winner, but simply a useable car that could be driven every day and that would be reliable. Having another car would also give me the opportunity to spend some time giving the Kitten some much needed TLC. Having given it some thought, I decided that a Rebel saloon project would certainly fit the bill, but resigned myself to a long wait for a suitable car to turn up. To broaden my search, I phoned a very good friend of mine and a member of the Notts ROC, Adam, who lives in Wakefield, and asked him to keep his eyes and ears open for any Rebel saloon projects that might appear; I wasn't holding my breath.....

To my complete surprise I got a phone call back from Adam just half an hour later to say he thought he had found a suitable vehicle in a classic car ad: a 1973 Rebel 750 saloon, 31,000 miles, which had been stood in garage in Grimsby for 15 years for £250. He said the ad was a few months old but worth a try. I took the number and phoned the guy. Yes the car was still for sale!

The owner told me that he had owned the car since 1975 and then his daughter drove it after she passed her test. She had a fondness for the car, having been driven around in it as a child. She then bought a 'modern' car and the Rebel, or 'The Jelly Bean' as they affectionately called her, ended up being put in the garage in 1996 and almost forgotten about. John, the owner, also pointed out that the paint on the roof was flaking. The car sounded honest enough and the price seemed fair.

Although I am based in South London/Kent, I told John that I was very interested and I would somehow arrange to view the car.

I then phoned another friend of mine, Steve, in Newark (another Notts ROC member) and asked if he could view the car on my behalf, to which he agreed. The

viewing took place a few days later with Steve at the car and me 200 miles away on the end of a telephone asking questions and receiving phone pictures in return (isn't technology great at times?).

Anyway, I decided to buy the car and a price of £240 was agreed. With the help of a third friend, Kevin (Notts ROC) from Louth, Steve's car, and a borrowed trailer, the Rebel 'Jelly Bean' arrived on 31st May 2011.



As it arrived..

The first thing I noticed was the paintwork; the majority of the car was still sporting its original turquoise livery, but most of the roof and a large section of the bonnet was missing its paint. On closer inspection, large areas of the paintwork were noticeably blistered and flaking. Anyone who knows my Kitten knows that paintwork isn't really a concern to me, especially on a fibreglass car and considering that most un-restored Rebels I've seen have had 'paint issues' it wasn't really unexpected. There were also a number of cracks and minor chips and scratches on the bodywork, but again for a car that was knocking on 40 years old, I was more than pleased with the body. At least there was no rust!



After a wash..

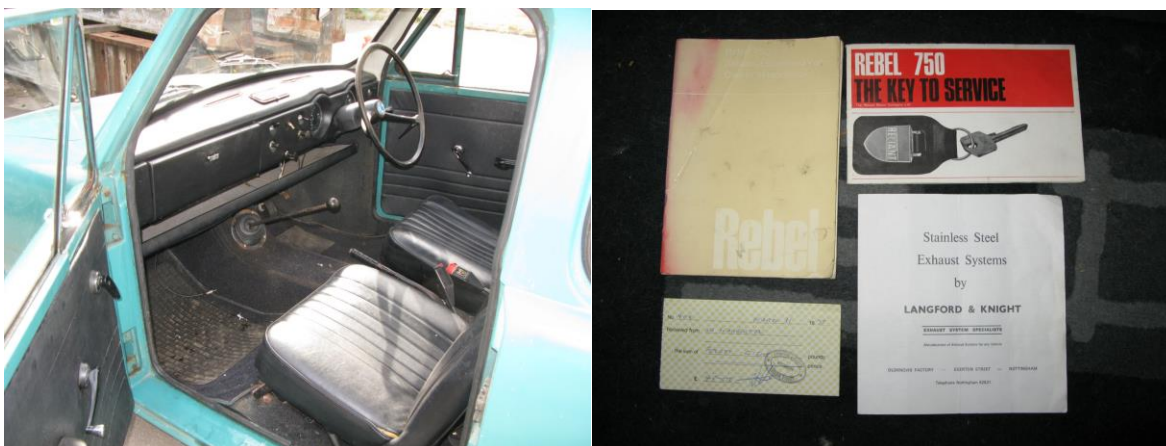
The tyres were cracked and perished, but this was only to be expected; at least they had air in. I would be replacing all the tyres anyway. The brake and clutch pedals were seized, as was the handbrake.

The engine bay was very scruffy with most of the ancillaries being rusty, but on the plus side it seemed 90% complete and original with the engine turning over freely by hand, which is always a good sign.



Underneath, the chassis looked to be in good condition. The previous owner had worked for Ziebart and the car had been regularly under-sealed by the company. This had all dried out and was flaking off but underneath, although it appeared to be rusty, it seemed quite solid. Best of all, however, was the full stainless steel exhaust system....

The interior was in an extremely good condition. Unfortunately the driver's seat had some damage, but everything else appeared almost as new, albeit with a covering of mildew and mould from standing in a garage for 15 years.



There was also 15 years worth of dirt and grime on the outside of the car, and what appeared to be cat footprints in the dirt on the back window. The 'chrome' bumpers also seemed to be in quite poor condition.

Also included with the car was the handbook, the original service manual and a receipt with literature from 1975 for the stainless steel exhaust system. It was nice to have these original documents still with the car. In the boot was a good-looking spare tyre and a selection of ignition points, bulbs, thermostat gaskets, fuses and other 'handy spares' as well as a set of very scabby-looking wheel trims.

Having given the car a good looking over, I decided to make a list of jobs that needed to be done; that way, I thought, I would be less likely to forget things. It also gave me the opportunity to work out what parts I needed to purchase. The list started small, but started to grow as in my mind I worked my way along the car from front to back. Soon it extended onto a second page and a separate list had to be started for jobs inside the car.

A good clean was the first order of the day, so out with the bucket and sponge; soon the layer of filth was off the car and on the ground. The little car certainly looked better for its bath. I gave the interior a quick clean with a mould removing spray to tackle the worst of the mildew.

Having cleaned the car, a few things were obvious: the missing paint on the roof had been assisted by the previous owner as a number of scraper gouge marks were present in the fibreglass. On the plus side, the bumpers weren't as bad as I had first thought. They had been covered in a layer of protective grease and although it looked nasty, it appeared to be doing its job. After I cleaned a small section I was pleased to see that the chrome underneath appeared to be in fair condition. I decided to leave the rest of the grease in place as shiny bumpers were not top of the list, not by a long way.....



The first proper job was to jack the car up and put her on axle stands. I removed the wheels to expose a very rusty-looking front suspension. Giving all the nuts and bolts a good soaking of Plus-Gas, I prepared myself for the filthy task of cleaning the chassis.





Because the car was being stored where I work, I only had a few hours a week to work on her so progress was slow. Using a scraper and wire brush, I removed all the old under-seal and rust from the chassis and fuel tank. I was surprised to find large sections of shiny steel on the chassis in the areas where the under-seal had remained. After removing the axle, the brake and clutch master cylinders and all brake pipes, the chassis was repainted with a modern under-seal which should stay flexible.



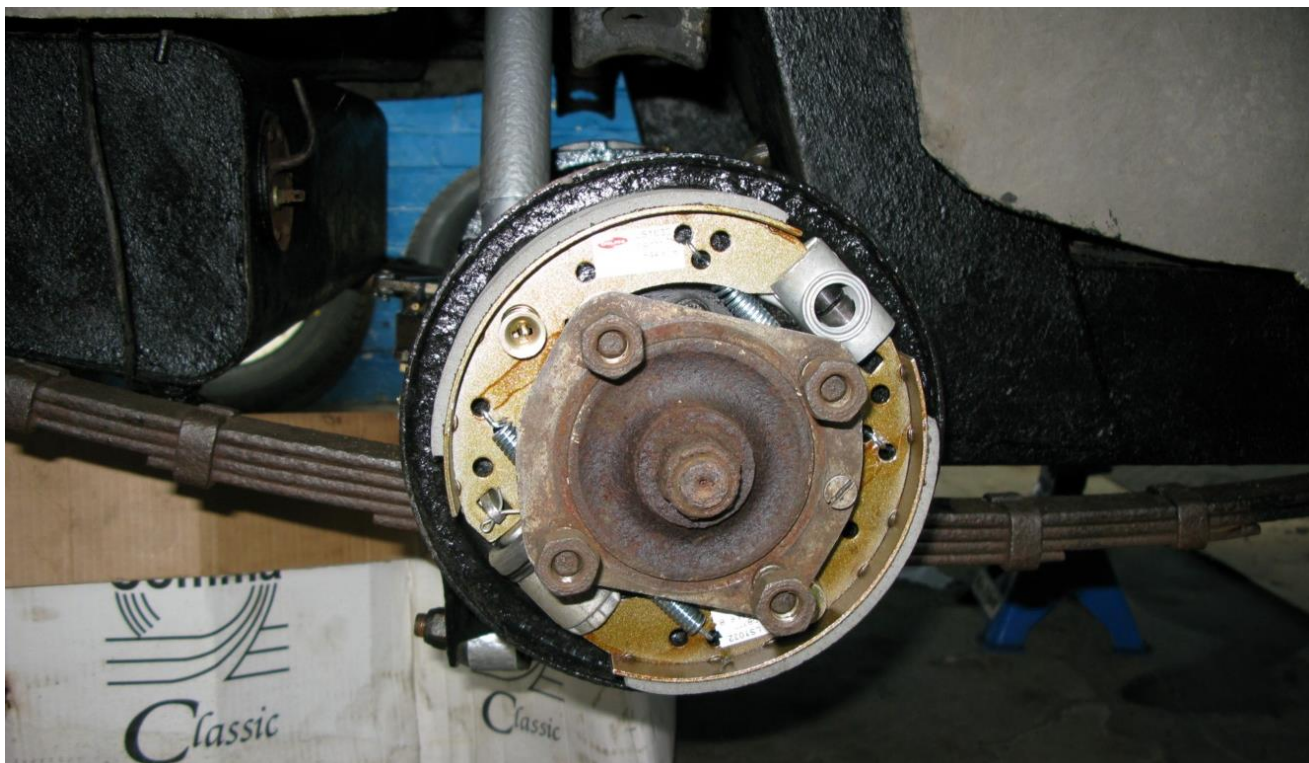
The axle was taken home for cleaning and repainting.

The rear brakes were disassembled. I was forced to scrap the handbrake mechanism due to excessive rust on the rods and the cable was binned due to serious fraying.

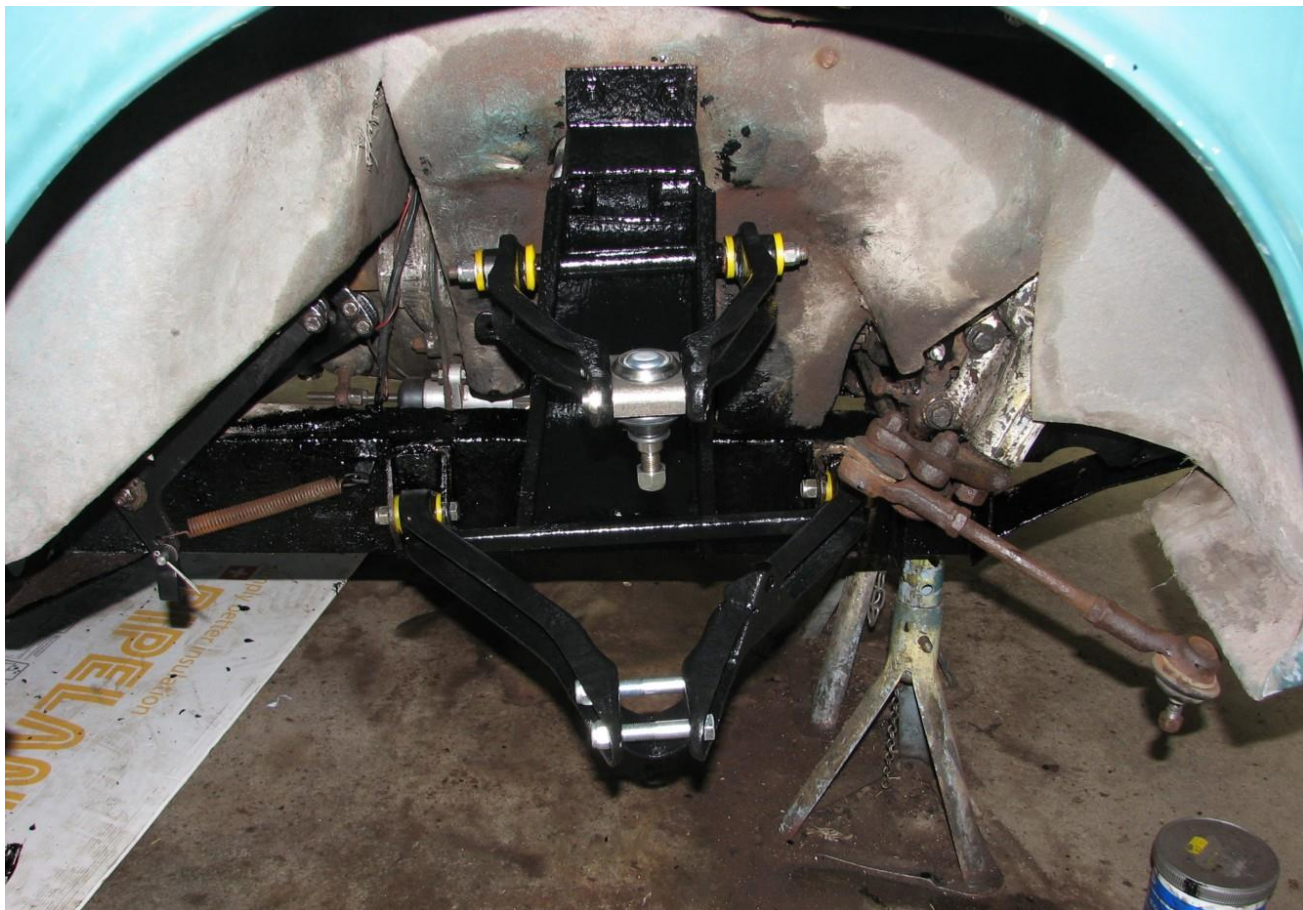
The front brakes came apart without difficulty, the only problem being a seized front drum. It already had damage to the edge of it, where I suspect attempts to remove it in the past had failed. After inflicting some damage of my own, the drum did eventually relinquish its hold and came off. The front brake shoes were literally down to the metal; the brake lining was so thin it was peeling away and had holes in places!

The Plus-Gas had certainly done its job. The front suspension to my surprise actually came apart very easily; most of the bolts only had rust on the exposed parts. Amazingly, only one bush was seized onto a bolt which the Dremel soon put paid to.

The rear leaf springs were cleaned and oiled, and the freshly painted axle was fitted using new 'U' bolts and nylock nuts. The rear shocks were in good functioning condition although very rusty. Replacements, however, proved very difficult to find; there were plenty of options listed on the 'Rebel Alternative Parts List' none of which seemed to bear any resemblance to the ones on the car, or indeed, each other. So for now the old units have been thoroughly cleaned and painted and I'll keep my eyes open at auto-jumbles for replacements.



I stripped, cleaned and painted the front wishbones and brake plates, and fitted all new yellow (why yellow?) poly bushes. The upper ball joints were replaced and the lower trunions rebuilt. As new front shocks proved impossible to source, I used shocks designed for use on a Reliant 3- wheeler and adapted the bottom bush to suit the Rebel. This involved turning up some spacers on a lathe to reduce the hole diameter and increase the width of the bottom bush. All the bolts in the front suspension assembly were replaced with new items and nylock nuts.



Right, that is nigh on half of this edition devoted to Simon's project, and that after splitting it into roughly 3 parts! That said I have used almost half of the pictures, ahh, the joys of editing with plenty of material – Thank you again Simon, and everyone else who made this one so easy for me, your efforts are appreciated. Ed.

The Hollingworth Kitten Saga part 5

Body Beautiful? By Neil Kirkland

I decided for space reasons to leave the body on the chassis temporarily and attack the paintwork. Actually paintwork is a rather loose term it is actually more a collection of pox, pits and dimples joined together with some dull brown stuff.

Job 4 : The Paint.

The paint on the car is badly blistered and I do mean badly. The entire surface of the car is covered in spots or pimples, some areas have more than others. Standing back I noticed that the blisters were pretty dominant especially around joints i.e. where car panels had been put together, far more dominant than elsewhere.



The above image is the leading edge (above the grill location), this is just an example but all the cars seam areas are in a similar state, even the larger flat areas have a large quantity of 'spots'.

I tried a variety of attacks on the micro blistering from simple sanding to outright gouging of the blisters with a small electrical screwdriver, I came to a conclusion, there is no liquid in these blisters, this may not be what I thought.

I spoke with a couple of fibreglass experts and the consensus was that the fibreglass had not properly cured before the paint was applied, this seems logical but this means the damage goes all the way down. The only fix according to the pro's is to remove all paint, and I do mean all, if these are hydrolysis (water penetration) blisters then the gel coat needs removing too in order to get it dried out.

Since removing all paint is the name of the game there is no point pussyfooting, the glass needs to come out along with trim I really had no intention of removing, it never goes back how it was, but in for a penny in for a serious financial kicking, all the glass came out easily, that's a worry. I'll remove the trim only if I can't avoid it.

The window rubber is shot, cracked and flaking, it is in far worse condition than its outward appearance when in the car indicated, I won't be re-using it voluntarily, that's for sure.

I telephoned around a few places and finally found one prepared to 'make' the profile, that is providing I buy a minimum amount, a large amount. Then I need to learn how to form and splice, won't this be fun, well that's a job for later, first I need the source materials.

To get the profile made the manufacturer needs a sample cross section, so do I destroy mine even more? I decided the answer was an emphatic no, they will if I am given no choice be put back into service. At this point I approached the world (for world read internet) asking for somebody's old and clearly past it side rubbers the response was underwhelming in the extreme, lots of promises, no deliveries. Alas I am a long way from needing window rubbers so this task drops off the priority list for now.

Stripping paint off fibreglass is hard, real hard, most of the available chemicals are as eager to dissolve the car as the paint, the chemicals that don't are expensive and slow, not to mention cleaning up after them is a real drag, did I mention slow. These slow coach chemicals also bring with them a conflict of interest and that is the cleanup afterwards which centres around one thing you don't want on exposed fibreglass ... water !

I don't have ovens and dehumidification chambers so I guess we are doing this the hard way, I went through a dozen scraper types before settling on a 'Glass hob Scraper', works well and half the car is now stripped, I also made everything nice and flat, couldn't feel any little blisters etc, until January that is, and they're back, I can't print here what I said at the time!



The blisters are back

I need to work out a permanent fix for this blistering business, I am currently investigating more ways to approach this because I am not about painting the car every year. If it is moisture, I think that some sort of penetrative epoxy sealer will be needed, there is a lot of 'white' exposed glass under the car, especially in the wheel arches, whether that can cause a blister on the roof is debateable but the blisters are coming from somewhere.

Progress Stalls : or bloody cold weather = COWARD !

Yes I'm a wimp, I hate the cold, I admit it I am weak, so I didn't visit the garage for many days, in fact I haven't made any progress since December so the car remains 50% stripped. Spent a little time doing a little clean up, you can't imagine how much dust removing paint and sanding creates, the damn dust gets everywhere so since I will be spraying paint in the garage too so I have expended a few hours cleaning up.

Need to find a better way of working to keep the mess down, very damp in the garage too so I need a solution for that.

I also cleaned up all the dashboard instruments, cleaned up and polished the grill, all warm and cosy sat at my desk watching a movie or three.

More Spending : More bits.

- Acquired new old stock SU carb with the dual pipe float chamber i.e. overflow back to tank.
- Acquired new old stock Girling Master Cylinder (single circuit).
- Acquired new old stock bottom ball joints (how much !!).
- Large number of new old stock interior trim parts (helps to identify the proper colour since car is badly faded – didn't know how faded till I got the parts).
- Various other new old stock ancilliary items such as handbrake cable, clutch cable, suspension bushes.

More Spending : More Tools.

- Had to replace compressor, my trusty old Ingersol Rand keeps running out of puff.

Good note :

This is the engine block before – notice the corrosion pitting that goes nearly all the way through, there was a corresponding patch on the rear face of the block where it had become porous and started to leak. The aluminium in the area was almost 'crystalline' in nature and could be picked off like little grains of sand.



And the following is after :-



The image over is the rear of the block, porous area all fixed.



I am now hoping that the liner will provide the necessary 'structure' and seal where it is located since the repair of this area is pretty much impossible unless I am prepared to rebores and reface the liner location.

The area in the image over the page shows the area around the water pump which was also badly pitted, you can still see some evidence of the pitting but it has been mostly eradicated.



So the next time that somebody says that these things can't be fixed, laugh in their face, because you now know better.

Hours expended on car to date 117, cost so far (excluding car purchase) £1401.22

Neil Kirkland - No. 916 from Cheshire (AKA Garfield)

Good morning Brian,

March 4th 2012

Sorry for the delay in payment for membership fee, I had so many things in head at the end of last year, I changed job.

After 15 years working on cars, I am back to earthmoving machines and tractors, I had worked in that side of engineering when I was 25.

I am happy with the change, cars are no more fun to work on.

My blue Kitten is always running as good as a modern car, I use it much more now, my new job is 10 miles from home and I come back at midday for lunch, so it is 40 a day with 35 on motorway, when the sun comes back, I will ride my Norton and Triumph bikes on the mountain road to work, wonderfully twisty and empty because of motorway.

Some technical stuff :-

Concerning the mini drums, I have a pair at the front, ten minutes machining on my old Myford lathe, and they work perfectly since many years.

Another thing I never heard of in Mewsletter is the burning of the contacts in the headlamps dipswitch.

I solved the problem some years ago in using a Volkswagen Golf headlamp relay actuated by the original dipswitch. Instead of having high current flowing through the small contacts, there is only relay commanding power , so no more blackened contacts. The relay can be found in every scrapyards, is small, changing from high beam to dipped every time you pull the lever and really easy to install under the dash. Before that improvement, I had to file the contacts every year.

Another thing concerning cooling, I have tried many things in the past, but now, I have fitted a Mini aluminium radiator (Minispares in Potters Bar) , no more fan, and an old Fiat Panda electric blower with the fan inverted on his axle and mounted behind the grill on the radiator front, switched by a temperature sender (Fiat again) fitted at the base of the radiator (the same tread as the plug provided in the radiator) and a switch on the dash for my peace of mind. It is simple, very effective even in summer in traffic jam and without fan in the way, you can turn the engine with a 9/16 spanner to adjust valves and ignition contacts.

Otherwise, I spend time at weekend restoring my Marcos. Yesterday, I fitted and adjusted the newly painted bonnet with the help of my two sons, a lovely sunny spring day, two weeks after 15 days of minus 20°C snowy period, with British vehicle driving friends coming for a chat and a pint. I attach a picture of the fitted bonnet with the cheque and yellow card sent today to you.

Give my best wishes to your family.

Regards, Patrick N° 702 - Switzerland

.....

Foxes Den

I am sure you know how easily I get confused these days, my memory being the main culprit – well, that’s my story.... Les Smith from Ashford (which is of course in Kent) has, as you know, been a regular contributor to these pages, and you have seen many pictures of his well maintained Fox often within these pages, and on the cover.

Well Clive Smith, another Fox owner, (his other car is a Scimitar GTE), lives in Alyesford in Kent, and he has kindly sent me some pictures of his really smart and pretty original red Fox.

What I am wondering of course is just how many chaps called Smith who live in a Kent village that begins with an “A” and ends in “ford” don’t run a Fox? Is it any wonder I get confused?!?

Enough waffle, here are the words Clive kindly sent along with the pictures, you will in fact see them another time! (I was going to use one on the front cover of the next edition, but John tells me we have had enough red Foxes on the cover for a while!)

Dear Brian,

28.1.12

Here are a few photos of my Fox I said I would send you. I’ve owned it from the 5th of July 2009 and use it as my everyday transport, though I do have a Scimitar GTE.

The Fox is in quite good condition having only had 2 previous owners, and only done around 52,000 miles. The second owner had it resprayed and fitted rear side windows, otherwise it is very original.

I also use it for camping holidays and have taken it twice to the north of Scotland without any problems. I find it a very economical and useful vehicle and hope to keep it long term.

Yours, Clive Smith - Larkfield , Aylesford - No. 900

Anyway, here is a collection of Fox pictures, I'll save Clive's for next time!



A Short Story for Engineers

A toothpaste factory had a problem: they sometimes shipped empty boxes, without the tube inside. This was due to the way the production line was set up, and people with experience in designing production lines will tell you how difficult it is to have everything happen with timings so precise that every single unit coming out of it is perfect 100% of the time.

Small variations in the environment (which can't be controlled in a cost-effective fashion) mean you must have quality assurance checks smartly distributed across the line so that customers all the way down to the supermarket don't get cheated off and buy another product instead.

Understanding how important that was, the CEO of the toothpaste factory got the top people in the company together and they decided to start a new project, in which they would hire an external engineering company to solve their empty boxes problem, as their engineering department was already too stretched to take on any extra effort.

The project followed the usual process: budget and project sponsor allocated, RFP, third-parties selected, and six months (and £5 million) later they had a fantastic solution - on time, on budget, high quality and everyone in the project had a great time. They solved the problem by using high-tech precision scales that would sound a bell and flash lights whenever a passing toothpaste box would weigh less than it should. The line would stop, and someone had to walk over and yank the defective box out of it,

A while later, the CEO decides to have a look at the ROI of the project: amazing results! No empty boxes ever shipped out of the factory after the scales were put in place. Very few customer complaints, and they were gaining market share. "That's some money well spent!" - he said, before looking closely at the other statistics in the report.

It turns out, the number of defects picked up by the scales was 0 after three weeks of production use. It should've been picking up at least a dozen a day, so maybe there was something wrong with the report. He filed a bug against it, and after some investigation, the engineers came back saying the report was actually correct. The scales really weren't picking up any empty box's at that point.

Puzzled, the CEO went down to the factory, and walked up to the part of the line where the precision scales were installed.

A few feet before the scale, there was a £15 desk fan, blowing the empty boxes off of the belt and into a bin.

"Oh, that," said one of the workers when asked about it - "One of the guys put it there 'cause he was tired of walking over every time that blasted bell rang!".

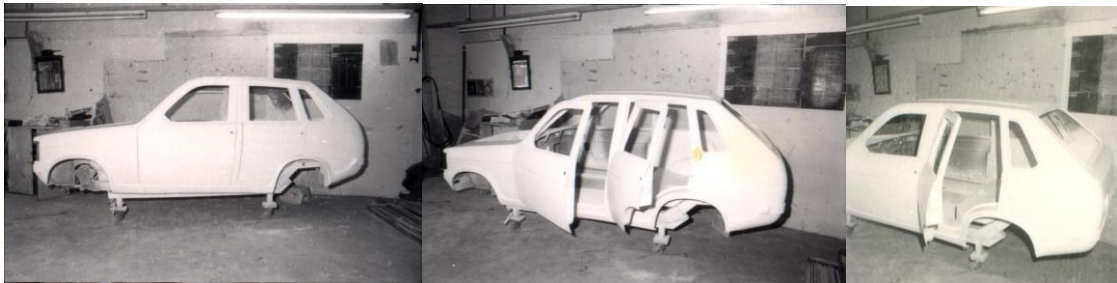
.....

Something fishy!

What do you call a Kitten with 4 doors?

My thanks to David Poole for the following tantalising insight into what might have been (or possibly even was?).

More questions than answers. I know that I should know about these things, but folklore abounds, and I am not in possession of all the facts – you know by now I am sure what my memory is like these days, however, these pictures and illustrations were too good to ignore – yes I should do more research, but time (and frustratingly) energy are in short supply. So, on the basis that half a loaf is better than no bread at all – feast your eyes and imagination on these :-



They are of course the Dolphin, but did they get beyond the prototype stage in 4 door form?

.....

Getting Technical

The inlet modifications-again.

I read with interest John Whitfield's article in last issue. His words on Ethanol need to be noted. I haven't personally been inconvenienced by Ethanol 'yet' but we need to be aware.

Now I must question a few of John's statements. 'But I don't think you can expect maximum economy and performance at the same time'. Oh yes you can! Bear in mind that we are dealing with a very basic 4 stroke petrol engine, in a rather modest level of tune. From this if we take on simple tuning – i.e. gas flowing, raising compression ratio, 4 branch exhaust (of correct 'road' design), electronic ignition, electric fan, attention to the SU carb, even a cam change but staying with a 'road' cam then you are mostly increasing the efficiency of the engine and you will get economy, provided your tuning is done properly and you keep to the same modest usage of the throttle that you did when it was 'untuned'.

Multi carbs, race cams, blowers, Turbos etc will of course boost the power for short term usage only and petrol to a high usage. BUT at the stage of tune we deal with in these pages, economy will come with some modest power improvements. When I started with my first Kitten I did 39 mpg and couldn't top 55 mph-poor untrained engine! Now nearly 30 years later I still have poor mpg as a I removed the vacuum advance years ago, but the Erddig do had me doing 47 mpg two up with full camping gear and cruising in the 60s. I often pass 70 mph in third still with consumption in the mid 40s.

Some years ago we fitted a Piper road cam, (not in my present engine unfortunately) this gave an alleged 8 bhp boost, cooler engine temp and less petrol consumption. But of course we used the extra performance hence mpg stayed again in the 40-50s.

John also noted 'Altering the distributor could also potentially cause expensive damage to the engine from pinking or pre ignition'. Again sorry John, can't agree. First you have to have some basic engine understanding, you must understand that the Reliant figure for ignition timing of TDC or 10 before is only a fully retarded (tickover) timing and is no way crucial!! What is crucial is the fully advanced timing. Dependant on the A/R mechanism and also interacted with the Vacuum advance. Now this figure is never quoted you have to work it out yourself (I think it is about 34deg) You only get to fully advanced ignition above 3K revs so any experimenting you do has to be aware of this. Many years ago I altered the advance retard springs, first attempt was poor, went home and thought about it, next attempt got

the improvement I was after. I learned. Often my experiments end in the scrap bin, but eventually we got results and then I hopefully relay that to you the readers. I have never had any expensive failures directly due to modifications.

Now John seems to think that Reliant mostly got it right, so perhaps we shouldn't be interfering, sorry John can't agree. Reliant did NOT fit any carb heat insulation spacer - they should have done. Reliant did not fit any flair on the carb input - they should have done. Reliant couldn't be bothered to remove casting flash in the cast exhaust manifold - they should have done.

Then John has made some points re altering inlet manifolds, he says that 'drilling holes between two inlet tracts may be counter productive'. I am not sure if John is here alluding to my inlet manifold mods or the RR (Rebel Racing) one. I have already justified my modifications in these pages, and I know it works - read article in earlier Mewsletter. As for the RR one, I have heard quite a lot of people saying it works for them, but nobody has explained in full detail how! Yes I have heard the RR story about the racing engine and its failings that were put right with this mod. But that does NOT make it any real use on a standard engine.

So to try to finalise these ramblings, the Reliant engine is a lovely little runner but it can be very easily made to be a Super little runner with attention to the small details that Reliant couldn't be bothered about, and some basic 4 stroke understanding.

Mid Norfolk Ramblings, ALAN O.

.....

Reliant engine bore wear – or the lack thereof

Dear Brian,

March 2012

Graeme's 1976 Kitten, having developed a tendency for creating an oil-and-water emulsion leading to crankcase breathing and carburettor malfunction clearly needed rectification.

We removed the cylinder head. Evidence of a water leak from one of the waterways to a cylinder was discovered. A new gasket, properly squeezed, cured the problem.

In our opinion, the head nuts had not been re-tightened since the car left the factory.

The cylinder bores were found to be undamaged and everywhere were within half a thousandth of an inch of the listed 2.46", this after 180.000 miles. A slight ridge at the top (spark plug side) of each bore, evidently of burnt oil, was left alone.

A similar leak in our local Mountain Rescue team's Land Rover left enough water in one cylinder to bend a connecting rod on the compression stroke!

Saving misfortune or abuse I do not think it would be possible to wear out these Reliant liners during an average persons lifetime mileage. Their hardness, and the smaller mass and heat capacity of the aluminium crankcase and cylinder head compared to the usual (easily machined) cast iron, make for longevity. The quicker the dilute acid condensate is vaporized, the better.

The era of sandblast cleaned spark plugs seems to be over. I once had a set done, and put them away in a tin where they rattled about gently for a year . Opening the tin revealed a good pinch of sand from the supposedly cleaned plugs. Others may not have been so lucky.

Alan (Shaw)

Now if only Alan had the time to spell out for us what exactly the procedure he feels one ought to follow to "properly squeeze" a head gasket. Just how often do you tighten it down? and after what length of time? (I avoid the word mileage – I know that Phil Hallam set off in his Rebel for the NEC, some 300 miles or so, having rebuilt its engine and covered less than 5 miles in the car before setting off on the long run south, yet he had torqued the head down satisfactorily – he never did tell me how many hours running the engine did between re-tightening the nuts – nor how much fuel he burned in the process, but the car did the 600 odd mile round trip with no problems.

Alan and Graeme, father and son, currently own 3 Kittens, two of them from new, and have between them nigh on half a million miles experience of these wee cars and their wonderful engines.

I did ask Alan the question, and by return of post came the following - thank you Alan.

Dear Brian,

14-03-12

"Properly squeezed" means the cylinderhead nuts tightened to maker's spec., and done again at – and in my opinion, before – the recommended mileage.

This is specially important with alloy heads. An iron head expands about as much as the steel studs that hold it down, so when it and the studs get hot, the squeeze on the gasket stays about the same. The aluminum alloy however expands about twice as much, or would like to, which compresses the gasket a bit more and leaves things not as tight as they should be when the engine cools down. After a couple of follow-up tightenings the gasket quits collapsing, and from then on the studs have to stretch and the alloy compress and like it.

Alan

This might be a good place to remind everyone about the updated torque recommendations, the 25 ft lbs only applies to only 10 of the 12 studs, the other two should only be pulled down to 20 ft lbs. (Nos.11 and 12) – you have been warned! Ed.

Fox side exit exhausts – a cheap solution

By Keith Gittus March 2012

Hi Brian, the following information may be of use to Fox and Tandy/Fox camper owners who want a cheap and effective side exit exhaust?



I have this exhaust setup on both our Foxes and have now fitted the same to my Tandy/ Fox camper. Firstly you need to know someone who can weld to alter your exhaust manifold to have a 1 1/2" diameter outlet and brackets for hanging the silencer. The silencer box is from a MG Midget 1500cc available on Ebay for around £25. This is mounted upside down, supported from the original chassis bracket in front of the axle.



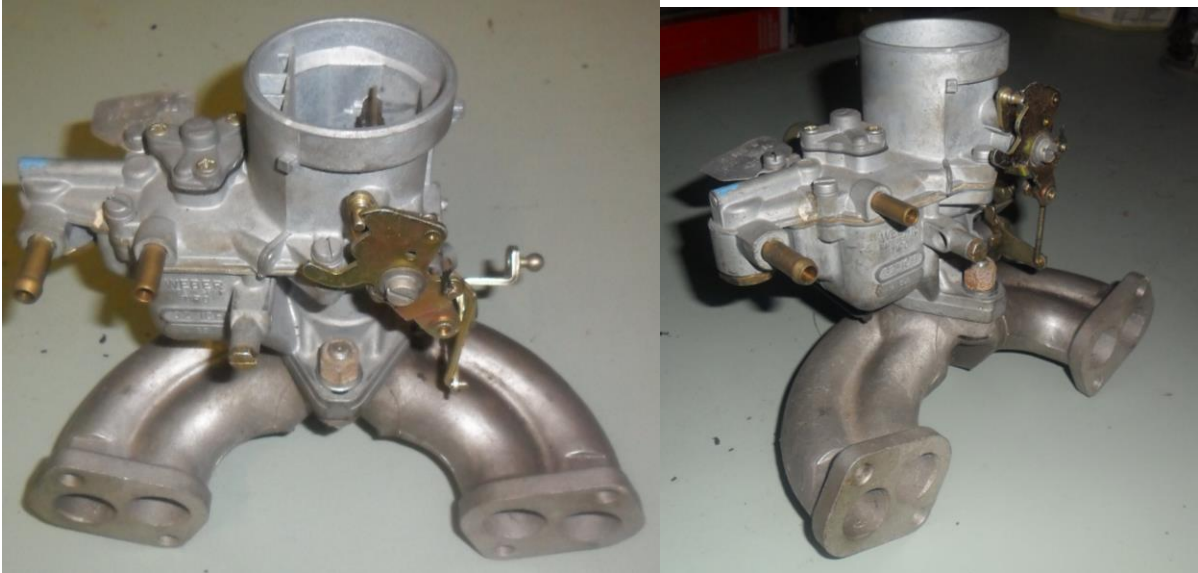
You will have to make a bracket and fix to the front rear spring hanger retaining bolt. The silencer box will need hanger brackets welding to the top surface, so the silencer can be hung squarely using Landrover rubber exhaust hangers. The distance between the manifold and the silencer is 40", and you will need a tube which is 1 1/2" diameter opened up on the one end 1 5/8" diameter to go over the manifold. Can be an extra tube welded over the end or buy a length of pipe from an exhaust supplier who will use a pipe expander to increase the diameter on the end. When assembled on to your Fox you will need to shorten the exit pipe to stop people walking into it.

Hope this helps explain the pictures. Keith (0154)

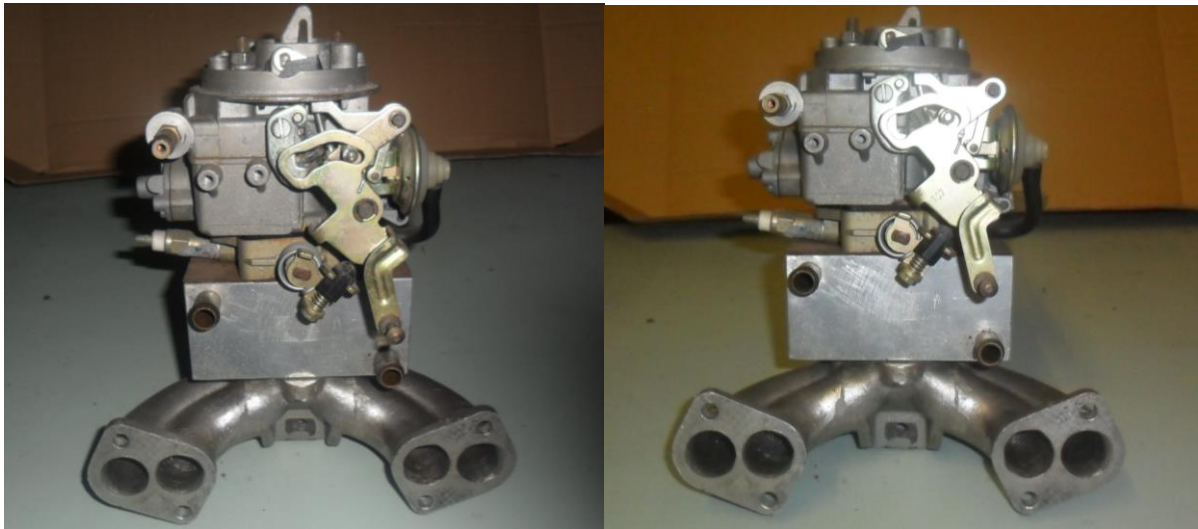


A unique opportunity.

Disposal of carbs from Reliant development programme.



Item 1 :- Weber 32 ICH D.D. with air filter – (not shown)

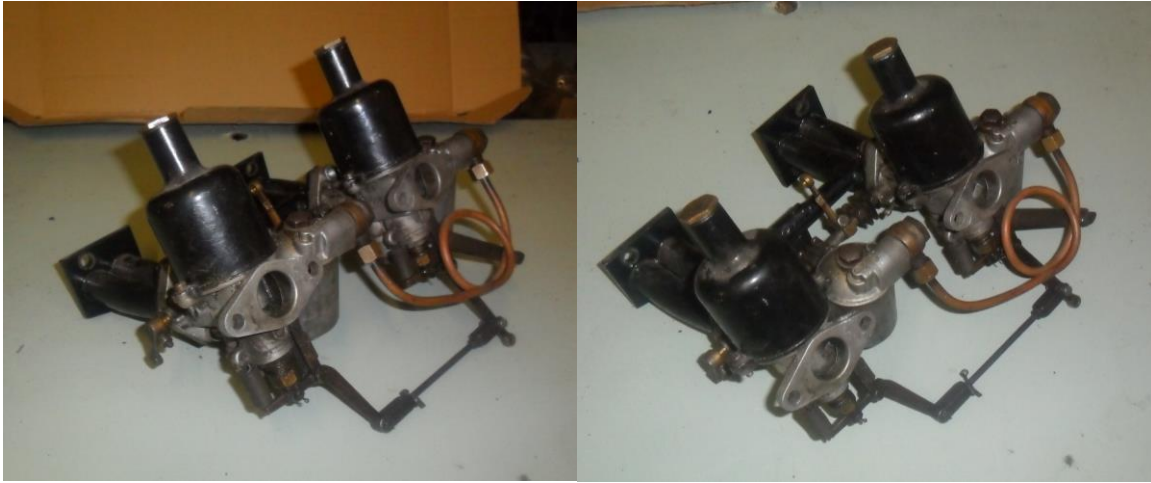


Item 2 :- Weber 32 TL MI AI DD Detox with heated adaptor and air filter.

Item 1. £35, item 2. £45, item 3 (see over the page). £60. All plus postage.

Contact John Box.

~~~~~



Item 3 :- Twin 1" SU SD on fabricated manifold with balance pipe.

~~~~~

Sales and Wants

See separate sheet enclosed

~~~~~

## Epilogue

While I remember, I must confess to being a bit out of touch in certain areas these days. Colin White asked me the other day if I knew where he could get some April yellow cellulose paint to tidy up his Kitten once the weather improves, as he was having difficulty locating any. The fact is that I don't know. If you can help, please get in touch.

I know that Martin Seymour is looking to sell his Tempest, and so I guess we will be looking for a new Tempest Registrar. Martin's details you will find inside the front cover. Martin is one of that rare select group of individuals who runs his Kitten as his daily transport, and does a high annual mileage in it, but work commitments are making it quite impossible for him to progress with the Tempest on top of everything else.

Just a thought, but reading this (whole thing) over, I wondered if Neil Kirkland's blistering problem might be addressed by Malcolm Rush's method of painting? Also Neil – I really ought to get magazine indexing sorted and up-to-date, but there was a good substitute windscreen rubber identified a year or so back, we did report on it at the time, can someone please remind me of the details? Ed,

We seem (I know I shouldn't say such thoughts out loud) to have less demand for steering racks these days – perhaps a reflection of how few folk do high mileages in their Kittens and Foxes these days – or indeed how good a job Alan does of the reconditioning the worn ones.

Whatever, I have for years kept them in the loft, but am having to consider emptying it out while I can still get up there, so a custodian for the racks, which need lubricating and the bellows fitting prior to dispatch, is something I probably need to be looking for – I await your telephone call or email.

Always thinking ahead as you know, the matter of subscription rates in the future. I am constantly frustrated by the compromises we all have to make in life, and the absence of colour pictures in the Mewsletter is a matter of some considerable regret – what if we hiked the subs to £20 a year and enjoyed full colour? (no, that would not actually cover it, but it would go some way to doing so, and we have enough put by to bridge the gap for a year or so) Your thoughts awaited. I might tempt you with a sample!!

Right, MKII grandson arrived on time 1/3/12, Ethan by name, 8 lbs exactly by weight, all doing well, but taking up time! Till next time take care, and please, lubricate

things! *Brian*

~~~~~

Resin Rockets

Reliant engine tuning for economy or whizz, not quite halfshaft breaking torque, but optimising the Reliant 850 so that its full potential is achieved.



Manifolds optimised

Heads tuned, including attention to valves

Carburettor gas flowed

Rockers realigned and lightened



Large selection of good used Kitten and general Reliant spares available, just ask for details. Also new wiring bits

- all the funny coloured cables and crimps with electrical advice

Al Osborn 35 Griston Road, Watton, Thetford. IP25 6DN
01953-884681

www.aoservices.co.uk

GRAHAM WALKER LIMITED



28 Bumpers Lane
Sealand Road Ind Est
CHESTER CH1 4LT



**RETAIL AND TRADE SUPPLIERS OF
RELIANT PARTS WORLDWIDE
ROBINS TO SCIMITARS**

**OVER 10,000 LINES STOCKED
MAIL ORDER PARTS ARE OUR SPECIALITY
NEXT DAY NATIONWIDE DELIVERY SERVICE**



**SHOP BY PHONE FOR FAST MAIL ORDER
ORDERS RECEIVED BY 4.00PM WILL BE DISPATCHED
SAME DAY**

ALL MAJOR CREDIT CARDS ACCEPTED

TELEPHONE

Mail Order: 01244 381777 - 7 Lines

Fax No: 01244 381262

OPEN

**Monday - Friday
8.00 am - 6.00 pm**

**Saturday
9.00 am - 1.00 pm**

WEB : www.grahamwalker.co.uk **E.Mail :** tracey.jones@grahamwalker.easynet.co.uk

**COMPARE OUR PRICES, OUR QUALITY AND OUR SERVICE
FULL WORKSHOP FACILITIES AVAILABLE**

MOTOR INSURANCE

IMMEDIATE COVER FROM THE SPECIALISTS



Free quotation
Payment by Credit Card
Payment by instalments



Underwritten by a leading UK insurer or at Lloyd's
High quality advice from trained staff
Nationwide Service
Fast, efficient claims handling

Phone Us on 01530 270574