

# Reliant Kitten Register



## **NEWSLETTER 73**

November - December 2006



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

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# The Reliant Kitten Register

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Fox alternative parts list contact: Duncan Bradford

Our Mutual Aid Spares scheme is run for us by Phil Hallam

Tempest Registrar: Martin Seymour 19 Cedar Court, Churchfields,

Mewsletter pictures – should be sent to John Pearce

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.

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

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This time our front cover is graced by Lance Peake from West Yorkshire and his very tidy Fox. Lance has only had this vehicle since 2002, and I think I am right in saying it has only covered 29,000 miles. Lance brush painted the vehicle in the summer of 2006 just before this picture was taken, he used Leyland enamel that he had mixed to match the original colour, he calls it cream, I think the factory used the more up market word Champagne! Whatever it is called, nice Job Lance.

## The Registrar Speaks

Hello again, I am literally just back from dropping edition 72 off at the printers. Had a good day yesterday, I can actually see my desk, not all of it, but the bit in front of me is clear, thanks to some motivation yesterday. Keen to capitalise on this new found energy, and before things slip again, I decided that serious effort was needed. So, thanks to Duncan Bradford we can enjoy a story that matches the front cover picture, and Fred Heath for some Rebel input to give John Blagburn, (who has had an interesting fuel supply problem since we last heard from him) and Terry Horler, a break for this edition.

One matter you just might be able to help me with. I had one of the last editions of the magazine returned by the Royal Mail marked "Addressee has gone away", so I gave him a ring, well I tried to, but the number I had for him is unobtainable. Now Christopher Cappello, from Barton on Humber only joined us at the end of 2005, his car, MKH 627P used to belong to Jack Whitlock, so if you happen to know where Christopher, or the car is now, could you either let me know, or tell him I am looking for him to send on his magazines.

At the risk of this page turning into Brian's diary I can tell you that a week has passed since the top of this page, my desk is clearer now than it has been for a very long time, not only that but the overspill into the hall has been tidied, and no less than 5 boxes of paperwork have been sorted, the shredder has been emptied three times, and some long overdue letters have been written, even a missing Postal Order found – just wish I knew what I had eaten or drunk last week to bring about this much needed change of approach! Must chase the printer for the last edition.

I have, not for the first time in less than a month, been made aware of a pile of Reliant spares that will be dumped if they are not taken away, there are a couple of engines, some doors and a host of smaller parts. These situations cause me much frustration, I have a lock-up so full of such things that I can't actually get to any of them without mounting a major expedition – last year's attempts to clear out things only really allowed me to combine two lock-ups full of valuable and rare spare parts into one, making room for a car in the other one. - (notice I avoided using the less than charitable sort of words that my beloved would use to describe the contents of said lock-up!). This does raise questions that I would rather not think about, but none the less that should be addressed. I am not going to come up with the answer this week, nor am I going to get depressed about the situation, so, moving on.

Arleen's boyfriend, Colin, recently expressed surprise that people still subscribe to the Register, he had been here when I was looking for a lift to the bank – local road works have made it impossible to park anywhere near the town centre recently, 14 months they tell us the works will take, tragically long before then they will have put a number of small local businesses out of business, all in the name of progress! Anyway, the point was that we had a couple of new subscribers that week, we still sign up some every month, and while to have more than one in the same week, might be the exception rather than the rule these days, with 20 odd new subscribers this year already, things are still ticking over nicely on that front.

Oh, I must officially apologise to John Flood and John Dillon, I am not sure how I managed to get you both mixed up, I had been talking to you both at about the same time, it is John Dillon, not John Flood, who is resident in Scotland, and who owns the only scottish resident Liege. Still no men in white coats, well, I don't think so!

My next task, while this goes to the printer, is to produce your very own personal renewal notice, I happened to get my hands on some reasonably priced pale yellowish paper



last month, so that will do fine. Please complete and return it, with any corrections or amendments that are appropriate. The sooner the better from my point of view, certain other commitments, which I have made it clear I am resigning from, look like keeping me tied up into the early part on next year, so if you could help me by getting the Kitten Register's renewals over before Christmas, that would make my life simpler, thank you. Next year I will be better organised – delusional perhaps, but I hope not!

O.K., enough from me, on with the show...

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## **Rebel Round Up**

Back in May Trefor Edwards asked me for some bits for his Rebel to help keep it running, and while I did supply some of them at the time, I just uncovered his letter of that time thanking me for those parts, and reminding me that he still needed a pair of top and bottom radiator hoses. Now I don't have Rebel hoses in stock. I do have somewhere what claimed to be a Rebel top hose, but while it does have the two ends at right angles to each other, which is correct for a Rebel, it has not one 90obend, but two lesser bends in it, and it is considerably longer than I remember them being, so I have not made the expedition into the lock-up to try and find it. *If you have a Rebel top and or bottom hose that is either new or in first class condition, please let me know and I will put you in touch with Trefor. Thanks, Ed.* See, I really am getting through these bits of paper from the desk!

I know that John Blagburn recently had something in common with a certain recently retired German F1 racing driver, in that his car's fuel supply was interrupted. We all know that the German chap's mechanics solved his problem overnight, and if I can find a suitable fuel pump top, or indeed if you have one, 5 locating screws and threaded connections for the inlet and outlet pipes, we could help John out before his temporary repair gives him any bother.

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Dear Brian,

27th October 2006

I was sorry to hear of the passing of Bill Dick (Mewsletter 72), he was a regular visitor to the ROC Southern Area Rally until the mid nineties. Always a gentleman and willing to offer his advice and help in obtaining parts for my Rebel; sadly missed.

On the Rebel front, another successful year attending the ROC Rallies: Severnside, National, Southwest, Southern Area and the Nottingham Rally plus several local shows in between. As usual Rebel, wife and I covered well over 3k miles loaded up with everything including the kitchen sink (Gloria does love her domestic comforts) with little trouble and only the normal annual service to sustain and keep the Rebel in fine trim. On the way to the National Rally I remarked to Gloria how reliable the Rebel has always been (only stopped once when one of the little clips holding the throttle linkage together broke up, bit of wire made a get me home fix) since I found her in 1992. Having stopped on the M40 for fuel we had covered less than a mile when the Rebel started misfiring occasionally and getting worse by the minute. In some ways the heavy traffic that was keeping the overall speed on the motorway to less than 50mph was a blessing as I couldn't coax the Rebel to more than 40mph, and I didn't want to stop just in case I couldn't get moving again. I was cursing the bad petrol from the service station but after 25 miles the misfiring had reduced to just the occasional hiccup.

At the National I discussed the symptoms the Rebel suffered with some of the Club members; there were two schools of thought; water in the petrol from the pump on the M40, or contaminated points. As the points were the easiest option I checked and sure enough they were covered in oil, too enthusiastic with the oilcan during the annual service I presume. No more trouble since I'm glad to say, but why did the trouble start after 100 miles?

I find that it's quite remarkable how long lived our little cars are. The original owner told me that the original engine broke its crankshaft at 79k miles (although the car managed to limp home), as the car has now covered over 183k miles the replacement engine is well over the 100k mile mark. I usually stay on motorways when going some distance, it's less tiring, less stress on the car and improves the fuel consumption, overall I manage 55-60mpg.

I'm having trouble getting hold of the cheapest 20/50 oil I've always used, now I seem to be paying £6.95 for four litres, and it's a detergent oil and it goes black within 500 miles. Previously my oil would come out at 3k miles and it looked clean enough to reuse. Whatever oil is used though I just check the level, as the Rebel seems not to use oil since I had the radiator rebuilt and cured the overheating in hot weather.

On the spares front, I managed to get five air filters from Roy Allett (did he get in touch by the way?) for £17.50. Roy mentioned that he had quite a hoard of parts for Reliant engines, I sent him three magazines but heard no more. By error I picked up a pair of Rebel Estate rear springs at the Tamworth Reliant factory at the end of the LeJog in 1998, I've had them ever since taking up space but was able to pass them on to John Blagburn as he was in need and I couldn't make use of them on my saloon. As an aside, that's a good looking estate that John has on the cover of the Mewsletter 71, is that a 1968 Nordmende Globetrotter next to it?

My MOT came and went at some cost, the Rebel failed on unbalanced front brakes, I knew the pedal was a bit spongy (and had been since I changed the master cylinder in 2001 on the return from the Ireland annual rat run) but never felt any pulling to one side. I let the garage do the work; I don't find it so easy getting down to ground level any more. They did a few other jobs for me that would have meant crawling under the car. All the fluids were changed; brakes, gearbox and back axle and grease nipples attended to, I did the water, oil and filters myself. In the end I got my MOT, even the computer accepted the 558kg weight for the Rebel without a hitch, others have had some trouble in this area I hear. Driving the Rebel now feels a lot more taut, it seems I've been compensating for my lack of time to keep the car in a 'just serviced' condition.

I don't expect my engine to last forever so earlier this year I found a 701cc engine on Ebay for 99p, yes I had to make a 150 mile round trip to pick it up but when I stripped it down only the main bearings were worn. I got main and big-end bearings from Brian at GBH Vehicle Spares 01409 255464 for £60 + vat, is that a reasonable price? But I also found a reground crank and bearings to fit for £65, its amazing what you can find if you look. I'm just starting the rebuild; I'll let you know how I get on; this is the first engine I've tackled from scratch. I read the head fitting procedure in Mewsletter 71, although tedious its better to be safe than sorry, of course it will hopefully be some years before I have to complete the job.

I've also modified the inlet manifold as per Reliant Racing; I'll be fitting it soon. If it gives me the same boost in power as opening up the exhaust manifold did I'll be well pleased. I've finally got round to gathering all the bits needed for the conversion to an electric fuel pump, shame that the simple in-line filters don't seem to be available any more, it will make the job just that bit more fiddly. Anyone tried using a Dell'orto 32 FRD or Weber 32 ICH in place of the Zenith carburettor? Any advice gratefully received.

Terry Horter asks about Rebel's in print, NBF 254D is illustrated in the Encyclopedia of Cars and again in Cars that Time Forgot but this time with a write-up, hope this helps.

Regards, Fred Heath (Membership No 177)(WPC 92G)

*Now you know by now how I like to get my tuppence worth in. Firstly, many thanks Fred for taking the time to keep us informed, not to say entertained, I have to say that while you do deserve full marks for getting inside the distributor cap with the oil can, too often that little felt pad, yes, there should be one there under the rotor arm, and it should be treated to the odd drip of oil, but, as you say Fred, I guess you were too enthusiastic, or were you trying to lubricate the springs beneath the baseplate? Ed.*

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## Foxes Den

### **A SUBJECTIVE HISTORY OF THE FOX**

The Fox was conceived by John Crossthwaite, who was for several years Chief designer with Reliant, and was developed from an earlier vehicle, the Carribean Cub. This was designed as a leisure vehicle, and around 300 examples were produced by Reef Engineering on Kitten chassis and running gear for use by holiday makers in Barbados and the Seychelles. Similar in concept to the Mini Moke, it bore a strong family resemblance to the Fox as we know it, and possibly led to the idea of a multi-form vehicle which could be adapted to play different roles by adding various body parts to an essentially open-topped base vehicle.

Originally the Fox was assembled and marketed in Greece, by Meba, and initially used more Kitten components such as the axle, 10" wheels, lamp units etcetra. But eventually in 1983 Reliant saw a possible niche market for it in the U.K. At the time sportscar sales were experiencing peaks and troughs due to flushes of advertising, and building Foxes was a useful labour sink device in slack periods. Reliant did not advertise the Fox directly or give it a special launch. Instead they built 100 examples [all hard-top vans in champagne-cream paint], sent them to 100 nominated Fox dealers, and waited to see what interest was shown.

When I went for a test drive in 1983 the salesman was not enthusiastic. He felt the Fox was too noisy, basic and fragile. Like most Reliant agents the company also dealt in other makes. If I remember correctly he alleged that they only made 12.5% commission on Reliants compared to the 25 – 30% on other makes. Furthermore there were more warranty claims with Reliants, the cost of these usually coming out of this commission. Sure enough, on delivery mine had to have the bumpers finished and one sill and part of a front wing had been so poorly painted that the undercoat showed through.

The low volumes of sales may have been the reason why little development was invested in the Fox. Many owners might agree that there were areas inviting improvement such as noise levels, driving position and the fragility of some components which would not prove resilient in standing up to typical commercial use.

Perhaps too, sharper lines to the rear of the body, increasing the load area and improving access, plus a higher and more purposeful look to the front end would have helped the Fox find a more enthusiastic reception from would-be buyers and users. The Fox was aimed at small businesses and local authorities, and these as well as some utility companies

did become the main market. Their interest was not sustained however, at a time when small 'one box' design Japanese vans with low-maintenance diesel engines were becoming very competitive. It is ironic that Bedford, having donated the remaining stock of the HA van wheels to the Fox project, then adopted a Japanese design to replace the HA, and came up with the 'Rascal' for it. Was there ever a better name for a Reliant van to accompany Regent, Regal, Rebel, Robin and Rialto?

The vast majority of Foxes were built in 1983, '84 and '85 and only a few were registered after 1990. It is not certain how many in total were built in the U.K. but the original Reliant company completed 616 by October 1991, and two more were assembled from parts and numbered 630 and 631. Those last three went to John Box however, to become Vantiques, and in fact the other 615 probably included all the chassis that became Jimps, Asquith vans etcetra.

When Bean took over, 4 more chassis were produced [numbered 700, 701, 702, 703]. These were all built into Vantiques by John Box. Bean never produced any Foxes [axle supplies dried up in 1989], but they did sell the Fox project to a Russian company, who had 2 members at Reliant for a year. They also considered a Fox replacement. After Bean's demise and after Peter Hall's and Johathan Heynes' brief sorties into Reliant production another Fox revival was discussed. John Box rescued the tooling and transferred it to the new premises at Burntwood. It was scheduled to be a chassis-cab design with a close family resemblance to the front view of the contemporary Robin. Power would have been from a Lombardini diesel, with a stronger gearbox and disc brakes. Chassis no. 610 was fitted with modified suspension and brakes for assessment. At the beginning of 2002 however all production and work on new vehicles was halted.

By December 2002 [the latest date for which I have the figures] there were 161 Foxes registered as 'on the road'. There were, and probably are, at least as many resting in driveways and garages 'awaiting restoration' as they say.

The last 6 Foxes off the production line were exported minus engine and gearbox to Sweden where an electricity generating company intended using them as electrically powered promotional vehicles. It is rumored that during a 'Nuclear incident' they became contaminated and for safety were entombed in concrete for posterity to ponder upon. [What will future archaeologists deduce about us?]. While this fate is not actually verified, they are confirmed as 'destroyed'.

Closer to home, during its production life the Fox Pick-up was adopted as the base for the Tandy Fox RV motor caravan, of which around 30 were built on the Isle of Wight . Although interior space is tight and engine power only barely sufficient, the Tandy is a practical proposition and great fun. Stand-alone awnings are available, produced for the similarly shaped Citroen Romahome, which greatly enhance the camper's practicality. It's also one of the few campers to slot easily into parking bays!

The Fox rolling chassis, itself only slightly modified from that of the Kitten, was adopted for two 'vintage style' vans, the Vantique and the Asquith, as well as the Tempest sportscar, among other specials.

Although generously providing such a wide variety of opportunities for others, the Fox itself then for various reasons never quite made it as a commercial success. We are left however with a vibrant example of original design embracing simplicity, utility, adaptability, economy and durability.



I have owned for over 20 years a Fox pick-up which has done everything I asked of it, and very little that I didn't. It has been befriended as 'Timmy Truck' by local toddlers, accepted as 'cool' by their teenage brothers, and borrowed by their parents for various cargos that their Ford Mundanos weren't up to. More recently I acquired a 4-seater estate version, which now sports a custom-made convertible hood on a folding frame. This can be swapped for the estate hardtop in minutes, by use of four overcentre catches, and is exhilarating on sunny days. Most recently still, the Tandy camper has [I hope] completed the fleet.

With a few tweaks to power-output and levels of interior comfort the Fox really is a go-anywhere, do-anything vehicle concept.

Despite the evidence that it didn't quite hit the mark for various reasons it should be cherished for its many strengths bound up in a unique package. Surely a most practical, enduring, entertaining legacy of British design and engineering teamwork.

J. L. Duncan Bradford October 2004

Please regard this article as a 'live' document. If you have any useful additions or corrections feel free to let me know via the Register or Yahoo Fox and Kitten site. Updates will be written as necessary. While I claim no copyright over the above, I would be grateful if the Reliant Kitten Register and myself were regarded as the 'authorised publishers and circulators'. In any case all copies should have the date below included in order to identify the most up-to-date version should important corrections become necessary.

J. L. Duncan Bradford October 2004

*That story was part of a comprehensive bundle of information which Duncan kindly sent to me in October 2006, thanks Duncan, Ed.*

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## **Tempest News / Alternative Parts**

Brian,

Fox tie bar bushes, all I have done is to use rubber from a car trimmer. I have been running with this arrangement on my Tempest for the last 18 months and two MOT's with no problems – sample enclosed.

Lower steering column, by using one from a Rover Metro, you cut it in half, and using a length of thick walled tube to make up what you need, welding the three parts together. Yes, thanks Stuart, I had forgotten that with the Tempest having the engine and gearbox some 7" further back in the chassis, and the seats too, that the lower steering column of course is longer than the Kitten or Fox one, Ed. That said I know that John Box used to drill and pin them as well as welding them, but that did seem like a bit of belt and braces to me, no harm in being extra careful with such vital components mind you.

Anti-Roll Bar. By using the thinner roll bar there is more rubber thickness to the bush round the bar, as you can only get 1 size of rubber, and there are two? sizes of bar.

Stuart Vickers - East Yorkshire - No.683

*Starting from the back, there are certainly two sizes of anti roll, bar, three if you include the back one on some three wheelers. However you can still get all sizes of the bush, we have recently had the big ones made up in Polypropylene. They are larger externally, which goes some way to addressing the amount of material around the bar itself, and yes we have had new appropriately sized mounting brackets made up to suit.*

*On the lower steering column situation, as far as Kittens and Foxes go, we have had those in stock for a number of years now, and as you will read further on, have just have a new batch of these made. Ed.*

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## **Liege Page**

As I alluded too last time, we now have a Liege resident in Scotland, passed its SVA test in July (2006), so that is progress. Not only that, but, in the pouring rain – of course – John took the car to his 'local' DVLA folk for inspection, yes, you really need windscreen wipers on the inside of the glass as well as the outside, and they have agreed to give it an age related number. John (Dillon) I look forward to seeing you, and the car of course, any time you like, but preferably on a dry day!

I happen to know that John was in Chile early in November, hoping to look up our man there Frank Haynes, and John remarked to me not long after his arrival in San Diego (a 13 hour flight from Madrid he tells me! ) that he has recently been dreaming about being the first person to drive a Liege over the Andes – now that would make a good story.

What I failed to share with you in here last time was the workings of my mind. Paul Wheatley's Liege is called Little Lucy, after his daughter of the same name, now our dog also happens to be called Lucy, and I had this thought for a front cover picture – I am sure you can work it out. The problems on the day however were too difficult to overcome, the dog gets too excited, the daughter who will soon be into double figures on the age front, was off to a sleepover within minutes of my arrival at the Wheatley residence, and so it just was not to be – that time. Paul thanks for the hurl, I thoroughly enjoyed it.

Peter Davis has moved the Liege factory lock stock and jigs from Fladbury to it's birthplace in Bidford on Avon, welcome home Peter, I hope the move was not too stressful and that all is well. The new address is :-  
Liege Motor Company, Icknield Street, Bidford on Avon, Warwickshire, B50 4BX

The Liege Motor Company moved out of the workshop at Craycombe Farm in Fladbury on Wednesday 18th October 2006, having been there since January 1997.

Peter tells us that the priority at the moment is to re-establish room to work, catch up with some overdue paperwork, and to see that all Liege customers are supplied with the parts to complete their cars.

Liege produced parts will of course continue to be available to what he tells us is now almost 60 owners, and I thought he had stopped at 52!

*Thanks for the update Peter, and all the best.*

## **Readers letters**

Dear Brian and friends of Reliants,

12/9/06

I am still driving my 1978 Kitten DL, however while on the roads of Merseyside I get giggles, laughs, insults and derisions from the other drivers – mostly young “scousers”.

I am reminded of some of Cliff Richards hit songs :-

Can't tame the heart anymore - I am tired of the insults, I am hurt.

It's all in the game? Is this all about driving a classic Reliant?

We don't talk anymore? The neighbours have stopped talking to me!

In view of all this I am sorely tempted to give in and buy a modern respectable car!

I am still enjoying the Mewsletter and am fond of old cars. Many thanks for your help with spares for repairs.

Yours faithfully, Les Gill - Prescott No. 608

*Les, thank you for taking the time to write – regular readers may recall my own leaps of the mind into old song titles in the past – I think I am getting better, either that or my memory is getting so bad I can't even remember the old songs any more! I have to say Les that I find it slightly sad that you feel as you do about other drivers, they just don't know what they are missing. The situation regarding your neighbours however causes me much greater concern – I hope you are exaggerating and using some literary licence – never let the facts spoil a good story!*

*Delighted that you enjoy the mag, and glad to be of service, anything we can do to help keep these fine wee cars on the road is always a pleasure, and what the Register is all about. Ed.*

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Dear Brian,

October '06

I shall not be renewing my membership. Thanks for twenty years entertainment. Please do not send me the January Mewsletter as you did last year, because it will force me to renew. We sold the Kitten for £500 two years ago after running it daily since 1982.

As a parting present could you please run an advert for me.

By the way, it took two months to sell the Kitten, two years to sell the Scimitar!

Thanks, Keith White - Coventry.

*Thank you Keith, I have to say that while I know time passes quickly when you are having fun, it is not really 20 years that I have been doing this, not sure whither to be flattered or flabbergasted that you think it is that long! Your advert is on the appropriate page, for all 4 items. Thanks for letting us know what is going on, and all the best for the future (Hmm, thinks, if he would renew if I sent him the Jan / Feb edition, should I not just do so?) Ed.*

Dear Brian,

3rd Oct. 2006

It is getting close to that time of year when you will soon be printing renewal notices to send to remind us to renew our subscriptions for the coming year, and it is with regret that I must inform you that I will not be renewing my membership this time.

Due to circumstances beyond my control I have had very little time to devote to my Tempest project, and therefore I have sold it to a gentleman from the midlands. I took the opportunity to pass on your details to him, but I suspect he is a reader already. He has a number of both three and four wheeled Reliants and other cars. The Tempest should be in good hands, and I am sure it will be on the road before too long.

I would like to take the opportunity to thank you for your help and advice in the recent past, and for all your hard work on behalf of the Register and its subscribers. Thanks also for all the friends I have made through being involved with this little car. Good luck, Good health, and happy motoring.

Yours sincerely, Gordon Gillespie - Doncaster No. 612

*My thanks Gordon for letting us know what is going on. Gordon's Tempest was one of the Steve Campbell supplied kits, but sadly Gordon was unable to complete the car. Hopefully its new custodian will have more success, Ed.*

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Dear Brian,

07/10/06

With reference to your appeal for articles for the MEWS I enclose the following.

I think I mentioned previously that one of my jobs in the industry was calculating speedometer gear combinations. In some editions of the Mews, occasional mention has been made of speedo. gears, wheels and tyre sizes. The regulations in force during the period our vehicles were manufactured are as follows:- Accuracy of the speedo head +1% to +6%, tyres +1% to -1% , Speedo. must always read at least 1% fast to 13.33% fast to ensure that drivers do not unwittingly exceed the speed limit. The result of this is that the speedo. drive gears have to be calculated with a window of opportunity of only 4.8%. This is achieved by fine tuning, increasing or reducing the number of teeth in the driving gear or driven gear alternately, using a "vernier effect". If the gear combinations have been changed at any time in production, it may be because it was discovered that the regulations had been inadvertently circumvented. In the case of fitting 12" 145/70 tyres in place of 10" 145 there is a discrepancy between the nominal revs per mile of the tyres. I seem to remember that the revs per mile of 10" 145 tyres was 1080 and the 12" 145/70 was 1030, ie for a given vehicle the speedo will read approx 4.5% slower than previously, thus risking non conformance. For this reason the speedo gears had to be recalculated when this change was made to the Mini including the automatic version which had a different final drive ratio, and both the driving and driven gears had to be changed, because changing one or the other gave too coarse an increment. In most vehicle applications the one inside the gearbox is maintained constant and a "family " of driven gears is contrived to suit different tyres, and axle ratios in all cases where the drive is taken from the gearbox tailshaft.

For my part, I need to check my speedo accuracy, using the 16 posts to the mile method, as I have now changed over to the 12" 145/70, or perhaps I would rather not know!

An interesting situation has arisen with the advent of speed cameras, it means that a driver may only be travelling at 27 mph to avoid the 31mph penalty, probably to the annoyance of following drivers. In practice it is usually arranged for the speedometer to be at its most accurate at 30mph. Conversely a driver MAY be able to drive at an indicated 79 mph without breaking the law in the unlikely event that all the above items are at max limit. In this case if he drove at an indicated 70mph he would only be doing 62mph again to the annoyance of following drivers, so it may be worth checking. I do not know if vehicles manufactured in more recent years were subject to different regulations.

Going back to my early years with the Kitten, when descending a long gradient in low gear in Edale, Derbyshire, I was horrified to see in my mirror a grey smoke cloud. As I had overheated the engine on a previous occasion I guessed that I had some broken piston rings. I considered myself fortunate to have a local Reliant agent, so I ordered a set of rings, thinking to receive all the correct items. Also I decided to treat the engine to a new set of main and big end bearing shells, although it was at a relatively low mileage. All this was at some expense.

Now, I have fitted a few piston rings in my time and have the correct tool for the job. So I was bewildered that, not with any amount of tapping, would the pistons go back into the block. After a few attempts I checked out the thickness of the rings against the depth of the grooves and found that they were not deep enough. This seemed very strange as the previous owner of the car, who was a Reliant employee, had assured me that it was a works engine. In desperation I went to a local engine reconditioning specialist with a view to having the piston grooves machined deeper, expecting another load of experience. The man disappeared into the bowels of his vast emporium and magically produced a set of shallower rings. "They are old stock, you can have them for a couple of quid!" We all deserve a bit of luck sometimes.

Incidentally, on replacing the main bearing shells I realised that the rearmost ones could not be changed without removing the gearbox and flywheel, so I left this for some future rebuild. Needless to say, when I changed the clutch some years later, I completely forgot this, fortunately these bearings appear to wear very little and are probably over designed for an 850cc engine.

Another such experience occurred when I required a replacement fan / generator drive belt. When I asked for one at an accessory shop they duly consulted their charts, and supplied me with one which proved to be too short to assemble even with the alternator hard up against the block. I came to the conclusion that a larger alternator than standard had been fitted, another "factory" variation? Returning to the shop I took the next available longer belt. This time it was too LONG and would have required me to make a new adjustment strap. By specially ordering an intermediate length and yet another visit to the shop I eventually solved the problem. I think it was a 713 belt. Even so I had to take off the clamping screw and nut from the elongated slot to enable the belt to pass over the outside of the pulley during reassembly.

Regarding other spares, I think I have mentioned previously how Reliant, for a brief period specified larger front wheel cylinders. This only resulted in soon running out of adjustment due to the increased travel of the brake pedal, and in my case different size cylinders on each side due to work carried out by different people at different times. OK so you should always do both sides of a brake system, but who would have thought - Strangely the brakes did not pull to one side as a result.

I am reminded of an experience I had when in the industry. One day we were discussing a design problem and whether it should be made foolproof for the assembly track.



The Boss who did not mince words said " If they can build a car with effing discs on one side, and effing drums on the other-----!"

Problems also arise with rear wheel cylinders. Allegedly mini size. It all depends on what period in the long history of the Mini is being assumed, with the same problem of fluid displacement and pedal stroke, very little clearance for the rubber boots. Piston sizes are now usually identified by peculiar metric equivalents of the original peculiar fractional inch sizes so you need to measure with a metric micrometer or be armed with the correct converted data. The same applies to the rear brake shoes which can be too wide to suit the wear pattern of the previous shoes. This I overcame by chamfering the linings, rather than to skim the drums.

Also the anomaly of some "Vauxhall" front suspension ball joints which were supposedly used in Reliant production, but the taper angles would be incorrect, no one has yet come up with an explanation of this.

The moral of all this seems to be: don't assume that even official information is correct, not just the hearsay. Check out everything yourself.

John Player - Coventry No 323

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## **Tales from Tore**

I happen to know that Dick has yet again been successful in getting "The Ghost" through another MOT. Congratulations Dick, I look forward to the day when you have the time to bring us up to date.

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## **Getting Technical**

We seem to be a bit light on the technical department this time, and I have often thought about the dwarfs who pass buckets of fuel down the inlet when I cause the throttle to be opened wide, never more so than when in Jeff Sharrock's Jensen with the extra carb mod, but it was fun, anyway, I guess the dwarfs might be related to the gnomes mentioned below!

The following was filched shamelessly from Alan Totty on the Scimitar group [Dunc]

The basic secret of carb function is that inside each carb are thousands of tiny gnomes; each with a small bucket. As you open the throttle, more of these gnomes are allowed out of their house and into the float bowl, where they fill the buckets and climb up the carb's passages to the intake, where they empty their buckets into the air stream.

But, if you don't ride the bike for a while, bad things can happen. Tiny bats take up residence in the chambers of the carb, and before long the passages are plugged up with guano. This creates a gnome traffic jam, and so not enough bucketfuls of fuel can get to the engine. If it gets bad enough, the gnomes simply give up and go take a nap. The engine won't run at all at this point. Sometimes you'll have a single dedicated gnome still on the job, which is why the bike will occasionally fire as the gnome tosses his lone bucket load down the intake.

There has been some research into using tiny dwarves in modern carbs. The advantage is that unlike gnomes, dwarves are miners and can often re-open a clogged passage. Unfortunately, dwarves have a natural fear of earthquakes, as any miner should. In recent tests, the engine vibrations caused the dwarves to evacuate the Harley Davidson test vehicle and make a beeline for the nearest BMW dealership.

Sadly, BMW's are fuel injected and so the poor dwarves met an unfortunate end in the rollers of a Bosch fuel pump.

Other carb problems can also occur. If the level of fuel in the float bowl rises too high, it will wipe out the Section 8 gnome housing in the lower parts of the carb. The more affluent gnomes build their homes in the diaphragm chamber, and so are unaffected. This is why the bike is said to be "running rich".

If the fuel bowl level drops, then the gnomes have to walk farther to get a bucketful of fuel. This means less fuel gets to the engine. Because the gnomes get quite a workout from this additional distance, this condition is known as "running lean".

The use of the device known only as the 'choke' has finally been banned by PETG (People for the Ethical Treatment of Gnomes) and replaced by a new carb circuit that simply allows more gnomes to carry fuel at once when the engine needs to start or warm up. In the interests of decorum, I prefer not to explain how the 'choke' operated. You would rather not know anyway.

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## **From the net**

*There follows a number of exchanges that took place in September 2006, interspersed by some of my comments – in italics – Ed.*

Hi All, Just a thought as the winter is coming up about improving the heater in the Kitten as it has never been that effective, especially in cold weather on long journeys. The matrix on mine has been taken out previously and taken apart and flushed by a radiator company so there should not be much sludge / scale in there and there are new hoses on too. I'm also going to lag the outside of the heater box and vent hoses to make sure the loss of heat is kept to a minimum.

However, I wonder whether anyone has tried making the heater part of the carb heater circuit in that taking the outlet pipe from the carb to the heater and from there back to the water pump, in which case the return from the top of the cylinder head would go straight to the pump. I wonder whether this would work and if it holds any advantages? Are there different temp thermostats that people use?

Your thoughts welcomed. Cheers Martin

Now I thought we had covered this heating business pretty thoroughly in the past. As I remember it there are two main situations to look at, first is the temperature and flow of the coolant, or heatant, if that is a word, through the heater matrix. This is governed by things like the temperature of the engine coolant, the freedom of restrictions to flow, the efficiency of the pump, and of course the absence of air in the system. The biggest issue I think however is the second point, and that is to make absolutely certain that the relatively sophisticated cold and

warm air blending system that is used on Kittens and Foxes is not letting any cold air in when you are wanting hot out! The sponge material originally used as the flap seal has, I should imagine, long disintegrated from most of our vehicles over the quarter of a century or so they have been about, and I seem to remember, was it Graeme Shaw? doing us a good article on checking that the flap was working and the operating levers were set correctly, and someone, not sure who it was, recommended closing the flap fully with a self tapper inserted from the engine bay in the winter – only problem I would have with that is that I would forget I had done it, and come the spring be wondering why I could not get cold air through!

Sounds worth trying, connecting the heater via the carb heat-exchanger, but I somehow don't think it will do too much. Guess the Fox set up is the same as the Kitten, and I've never had much joy either. The blue Fox I've had from new, and has always been poor. When I got the red Fox it was much better, but one winter it became as poor as the blue one. I took out the matrix & cleaned it, replaced foam etc, but no joy. Checked the metal pipework was clear - no difference, likewise reversing the flow. Then I got the camper, and it is a revelation! Excellent heater. Why? I just don't know. If you can find a better blower fan it would help. The red Fox had an Italian one similar to the original which blew a lot better, but fell apart. I have spent hours scouring scrapyards trying to find a suitable replacement to no avail. Landrovers at least until recently used the same blower so I got one from a scrapper, thinking it may have a higher-powered motor, likewise the Scimitar, but they are all the same. The one in the camper does have a much older [1950's?] metal version of the Smith's blower, and I rather think it may be more powerful. It seems to be, if you hold your hand in front of the outlet, but then things like that are a bit subjective!

Good luck, and I guess everyone will be interested if you can find an improvement before winter sets in... Dunc

Hi Martin, I'd advise fitting an inline pump to the heater hose as this will ensure a good supply of water passes through the unit. The main problem with the position of the pipes is that it can easily get an air lock in it so stopping the water flow almost completely. John

That's a good point: I found the biggest difference was when I routed the heater hose below the air trunking when it used to go over the top. I had a slight head-gasket leak at the time, and after a certain mileage the gassing caused an air-lock at what was actually the highest point in the circulation, and at a part where it was not under forced flow.

You've also reminded me that I came to the conclusion that the camper heater could be better just because it happens to have a water pump with a better impeller than the others - I've noticed they vary!

The thermostats I use are 88 degree ones - which I test in a pan with the jam thermometer when no-one's looking... D

Aha - I've just thought: If you were to connect the heater and the carb in one circuit you'd be reducing the total flow through the water pump because you'd only be using one connection. Wouldn't that affect the overall flow? Dunc.

I don't think that the blower is necessarily the problem as one that pushes more air over the matrix (especially if it is very cold air) is surely going to make the temperature of the air coming out colder(?) Interesting about fitting another in line pump for the heater side, has anyone actually tried this? Martin

*And so it goes on, lots of ideas and a number of observations and potential solutions. I know that Duncan has, in the Fox with the bad heater, a new engine, so we know that not only does it have no sediment in the block, (yes we can be sure of that, it was John Box who built that particular engine) but a new water pump as well, so it is not unreasonable to assume that that rules out two of the potential problems in that vehicle, yet it still had a poor heater. John Copestake it was who recommended the fitting of an additional water pump, and that got me wondering just what is involved there?*

*Air locks are I think a potential problem both by their presence, and indeed the difficulty of detecting them. I guess this one will return to haunt us every autumn unless we can find an effective solution – at an acceptable lever of effort and cost.*

*When I told John Blagburn about all this, suggested that the simple solution was to get every Kitten and Fox owner who is unhappy with their heater performance to use a Rebel estate for one winter, and they would never complain about it again!*

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## **Spares update**

As I write I am having to come to terms with the fact that I have spent more of our spares fund in the past couple of months than I have spent in a year before! This has come about because of a number of things happening at the same time, and the fact that I am trying to simplify my life, and so am trying to avoid extra work, and indeed increased costs.

I am deeply indebted to Alan and Graeme Shaw and Duncan Bradford in particular for their willingness to help. I know that there have been other offers of help, and it is my fault that they have not been taken advantage of, things like the stock of headlights for instance, moving them on to a new custodian really wants to wait till I am going south, with room in the car, because I really do not want to parcel them all up in case of damage in transit. One day I will get there.

Sales of front dampers this year have exceeded my clearly inaccurate predictions threefold, causing us to order them not twice but three times in 6 months, (and I told Duncan when he offered to take them on for us, that we only sold a few a year) and my desire to try and keep a stock of components that are no longer available through the trade has caused me to be less than prudent with the fund – hopefully in the long term this will in fact prove to have been a very prudent decision– time will tell. I bought more dampers than usual last time, both because of the extraordinary demand over the summer, and because of an impending price increase in the new year. And guess what – since they arrived in October we have sold not a single pair! Same with back springs, which I knew were slow moving, but the price had gone up so much that I thought if we didn't do it now, we might never be able to afford to stock them again.

This year, indeed since August, we have had back and front springs manufactured, front dampers and lower steering columns too, also lower wishbones and Kitten front struts, good quality front suspension bushes, including anti roll bar ones, and new brackets for them as well, and the Fox tie bar bushes Duncan uses and recommends, and a record number of steering racks and ball joints re-conditioned. All in all an expenditure of the entire fund in a couple or three months. On one front that takes pressure off, no money means no decisions needed as to what to spend it on next! Thanks to a number of our readers we now have a

sufficient stock of serviceable top wishbones that I can avoid having to make a decision about them for the time being.

So, I can relax, sit back, and wait to discover what the next difficult bit we have not thought of yet comes to light – should make for an easy life for a wee while at least.

As ever, if there is something you need to keep the car on the road, don't hesitate to give me a ring, I'm not saying we will have the answer, but the more we know, the better chance there is of a solution being found.

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## **Sales & Wants**

For Sale :- Rare one this, a one owner from new Kitten saloon in Yellow. Only covered about 30,000 miles, and only for sale due to poor health. The car is on SORN, but is MOT'd, and just had new front dampers and springs fitted for it's MOT. Contact Dr. Grace Dick

Another rare situation – three Kittens – free to a good home, off the road for a while, but complete and believed o be sound underneath. Contact Alan for details., You will need to collect them, most likely with a trailer, and the situation is urgent, as the council will scrap them if we can't re-home them. Bournemouth.

For Sale :- 71 issues of the Kitten Register Mewsletter £30. 94 Issues of Slice £50. New Kitten front backplate with adjusters £15, New Kitten lower wishbone with bushes £15. all plus postage. Keith White, Coventry

For Sale :- Tempest Kit 1 by John Box. Taxed and tested as seen on the cover of Mewsletter 64, May 2006. Complete with A frame and light board, ideal for towing behind a motor home to go round the car shows. £3,750.00 For more details ring Stuart Vickers

For Sale :- 750cc Reliant engine and early Rebel gearbox with remote gearchange. Also an engine, doors and a windscreen. Offers to Mike Hine. Can deliver between Cornwall and London area.

For Sale :- Rebel Estate car, partial rebuild nearly complete, full respray , new exhaust and lots of spares contact Roy Smith in Yorkshire.

For Sale :- Fox chassis and all parts needed for a rolling chassis, and engine, gearbox, steering and wiring loom, just the thing if you are thinking of building a Tempest £350.00. For more details ring Stuart East Yorkshire.

For Sale ;- My 1971 Rebel Saloon, "Purple Ronnie" MOT and taxed till June 2007 (It is road tax exempt). 850cc engine, rebuilt gearbox, S.S. exhaust Jobs done include chassis, brakes and hoses, engine, clutch, seats, loads spent, receipts available, lovely little car, cosmetics to finish. £450 o.v.n.o. Telephone Eddy - Leeds

For Sale : - a Salamander, in need of TLC, so if it's an automatic you are after contact John Melody of Preston for details and to make him an offer for this rare vehicle.

For Sale :- 5 Reliant Kitten alloy wheels £100.00. ring Stuart. East Yorkshire



For Sale :- 4 steel wheels painted silver with brand new Kumho 145/80R10 tyres. Contact Brian for details 0141 8866117

Wanted :- Kitten or Robin / Rialto gearbox, contact Bob Culver. Herts area.

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## Epilogue

Thanks to Duncan Bradford and John Player I had this edition half finished by the middle of October, and had hardly typed a word myself – too easy! Seriously though, if you can contribute, and better yet do so electronically, it saves me a whole lot of time, effort and frustration – yes, that is a good thing!

On, while I remember, not a huge amount of progress here, but a little, the Smart powered Kitten, it did / does exist, entered in the October 2004 Atlas Sahara and the September 2005 Monte-Carlo Sportscar Challenge Endurance rallies organised by Peter Davis of Liege fame, (well that is how I know him, I think he would rather be thought of in connection with Ginettas and other things!) was driven and navigated by Dick Brenton and Peter Johnson respectively, if you know them please get in touch. That said the entry list shows the car as a Reliant Special powered by Smart, so I have no idea what it looks like!

I am sure that I will not have failed to make mention of the fact somewhere in these pages already, but your very own individual membership renewal notice should be enclosed, and while I am stepping down from my post as membership secretary of a certain other car club, they have not at the time of writing organised my successor, and so I will have to collect their renewals in the meantime, the sooner you attend to this one the better from my point of view, and hopefully I can get ours out of the way before the SWTVC's ones begin arriving. Your help with this will be greatly appreciated.

So, with thanks to those who have helped fill this edition, it only remains for me to wish you festive good wishes, remind you about the lubrication of appropriate areas, and safe motoring for the remainder of 2006, and beyond.

*Brian*

*Resin  
Rockets*

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