

RELIANT KITTEN REGISTER

MEWSLETTER - EIGHTEEN

September / October 1997



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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Right, after saying once before that I would not waste time apologising, I yet again got the last edition wrong! One page short, hence the picture of John King's Kitten saloon inside the back cover (see letter on page 7). A missing reference to the Index for the "Top Secret" stuff, which was on pages 11 & 12 of edition 12, and of course you might have noticed that I can't even spell Reliant!

All in all, not my best work, but I had a deadline to meet, and compromises were made - what can I say?

It was the master plan that was wrong you see - I had this sheet pinned to the wall beside the computer, with brief headings, what you may in fact now see as the index inside the front cover if my plans work out - but it stopped at page 14, W.R.O.N.G. !! So when Alan rang to say that I had got the margins wrong on the adverts pages I said just to carry on, then he rang again to say that either I had a page too many, or one too few - well I couldn't think that I could miss one out, so, Alan being desperate to try out his new colour printer - I said to put the yellow Kitten saloon on, but by the time I thought of a caption to go with it, he already had 150 of them done !

I now have a better plan - a new master plan, which should keep me right in future.

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Moira said, when proof reading the last edition, that I had got too serious, and had obviously not been feeling myself when working on it, so I have decided to try and keep my ramblings down a bit this time - don't all cheer at once - please !

I will try to include a page or two of the Register in this edition, just to prove that it is still growing, and also to satisfy my critics, who complained that not all the Rebels I know of, or indeed own, were on the register! Naughty naughty, well, perhaps not all the details are here yet, but some information is now on file.

Yes I will also try to get to grips with the software, and keep separate listings for each model, and sort them into chassis number order -one day, honest !

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Moira's car, Susie, developed a misfire last month, Alan spent his afternoon at Culzean, the venue on one of the events that the Thistle branch of the Reliant Owners' Club attend (I am still Chairman of that organisation for my sins) rebuilding the distributor for me - the baseplate thread was stripped, the one which locks the points up to maintain the gap. I had assumed, wrongly as it seems, that the 40 thou, and constantly varying, points gap, was responsible for the engine running rough. But, in spite of Alan's efforts - my hands are too clumsy to set points these days - the new base plate, points, condenser, and plugs, failed to significantly improve things, though the fuel consumption still seems to be pretty good (he said I had been running it far too weak!) - watch this space for further developments.

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Now I know that I promised to include at least part of Simon Chisholm's story in this edition, and Dick Goodall's tale also, but it looks like lack of space will again prevent me from sharing those stories with you, perhaps next time.

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There are just a few things I would like to cover, briefly before I finish:-

1. Kitten front discs, the obvious advantage is of course that they are self adjusting!
2. Rebel trunnions, yes of course oil is better, but often the years of neglect mean that oil will not go through, unless you strip the whole assembly down and clean it, and grease will (sometimes).
3. New rear springs (Kitten) , check the bolts go through the bushes before fitting the spring to the car, some of the rear ones in particular, are a very tight fit, much easier to ease them before you end up trying to get a tight one in place on the car.

Right, it is now the 21st of August, I just mailed 166 copies of edition 17 yesterday, and will be taking another 14 copies to Doune at the weekend in an effort to save on postage! Must start on the Christmas edition soon!!!

By the way, John Blagburn tells me that the last two fuel tank top ups on GUS revealed 57 and 62 M.P.G. respectively, and he cruises it in the mid fifties - I knew I shouldn't have sold that car!!!

Kitten handbrake levers

I have been threatening for some time to publish some of the material contained in the "Top Secret" document, all 80 odd pages of which are now bound and available to anyone who sends me a cheque for £9.00 payable to the Reliant Kitten Register.

The following I found to be of particular interest as the handbrake on Moira's car, while working fine, needs a lot of pressure on the lever to make it hold on a steep hill - perhaps the answer lies here -:

In April 1977 Reliant issued a service Bulletin, Number 1977/7 for the Kitten, relating to the rear brake levers. (The rear brake lever is the part to which the ends of the handbrake cable attach, and which then passes through the backplate, and operates the brake shoes,) It read as follows -:

All Kitten models from chassis number 68C/14102548 are fitted with new improved rear brake levers. The levers, 'R' part No. 91964 RH and 91965 RH are 0.49 inch (12.45mm) longer than the original 'R' part No's 20923 RH and 20933 LH.

I was very surprised that they did not simply increase the length by half an inch, I am quite certain that that is what would have happened in Rebel days, and I would love to know how they arrived at the .49 of an inch figure, Ed

The bulletin continued: Dealers must ensure, therefore, that when fitting service replacement brake levers, both sides are fitted with the latest type levers. This will then avoid any unbalanced braking operation.

Unfortunately the sketches which were included on the Bulletin showed only the overall length of the old and new levers (2.8" and 3.29" respectively, well 71.12 and 83.57mm respectively for those who have managed into the metric age. What the drawing does not tell us, though it seems apparent from the drawings is the case, is that the distance between the hole and the fulcrum pin centres have increased by a similar amount. In fairness the drawings are pretty much to scale - I will not reproduce them in here as that would mean Alan having to copy this page rather than print it, but I have measured the two drawings, and the original is indeed just a shade over 71mm long, with hole and pin centres at about 41.5mm, while the new one is 81mm long (hence my comment about them being pretty much to scale) has the centres at about 54mm, in other words about half an inch further apart. The increase of nearer 30% than 25%, must have made a fairly dramatic improvement in handbrake efficiency. Well, it must have meant a lot more pressure between the shoes and drums for a given amount of force applied to the handbrake lever. The down side of this modification / improvement, if you like, must surely be a need for more regular adjustment of the back brakes, as the total movement of the handbrake lever inside the car will not have changed, but the movement at the rear brake shoes will have been reduced by a similar percentage in relation to the bit you pull inside the car.

I have spoken to a couple of Reliant dealers about the availability of these parts, but I am told that they are no longer listed, and while the current production tricycles use a similar arrangement, I have yet to discover if they are the same as the later Kitten ones, or in fact no use to us at all.

One other fact that I would really love to know, is just how many of the early Kittens actually had the mod carried out, I'd be surprised if it was many at all, but you never know. The fact is that to describe those with the old shorter lever as early is hardly fair, as it was almost exactly half way through the production of Kittens that the mod was introduced! O.K., tell you what, I'll try and paste in the sketch / drawing here:-

Rebel round up

One thing that I have found very satisfying, is to see a car that I have owned for a number of years, and failed to actually get on the road - giving good service to a new custodian. I am thinking of John Blagburn's GUS. GUS first came to my attention in a scrap yard in Glasgow in 1988. It was an unusual scrap yard, in Helen Street, and indoors. The Rebel was blue then, and belonged to one of the yard's employees, though he had not run it for some time, and the clutch had seized. I really did not need another vehicle, and was pleased to find a buyer for it in Upper Skelmorlie, one Derek Sloan. Derek had a Rebel already and fancied another one which would be a simpler project. The one he had had been partially converted to the Robin / Kitten type of gearbox, but the conversion was incomplete - I saw that car for sale yet again last month in Greenock! As I was saying, Derek sold the car to a couple of chaps, again from Greenock as it happens, and they fitted Regal 13" wheels, repainted it red, and most of the chassis green, and somehow got it through an M.O.T. They then offered it to me for £250. Well, it looked so good, sounded quite a good engine - an 850, but with the old 750 Zenith carb. To cut the proverbial long story down a lot, I bought it, loaned it to a friend who promptly returned it saying the brakes did not work, and the engine would not pull the proverbial rice pudding skin off!

Over the next 18 months or so the car filled one of my lock-ups, Ralph Erwin spent some time helping me tune the engine a bit, and we fitted new seals to the front brake cylinders on one side, and then I ran out of energy and enthusiasm.

Roger Brodie was the next serious stimulant the car had, he even took it away and fitted a full set of new brake slave cylinders, and painted the rest of the chassis, and found the fuel tank was porous, and fitted a stainless tank, which I provided, along with the slave cylinders, but, sadly, Roger lost confidence in the car, and I got it back.

Both Robert Fairfoull, whom you probably have not heard a lot about - must nag at him to subscribe - and Phil Hallam, and Jim Spence, who regular readers will know well, were involved in storing the car, and helping with some work on it early this year.

Then John Blagburn was thinking of a Rebel, and we struck a deal. Since then, well you have read of some of John's exploits with GUS in the last edition., and he won a driving competition in it, just a bottle of champagne mind you, not the vast sums of ££££ or \$\$\$\$ that Formula 1 drivers get to go with the champagne!! (at least, he didn't say so to me!)

John has, as you would gather from the last edition, had to find and replace the brake master cylinder since getting the car. He also fitted an SU carburettor, and a new alternator, and a Kitten alloy rocker cover, I'll get a Rebel one done when we get the new batch made John, and do you a swap if you like.

While I am obviously absolutely delighted to see the car on the road again, and in the hands of someone who will look after it, it does sadden me slightly that I couldn't have done that myself, but there we are.

I am almost scared to ask how the moss encrusted hut is faring? I know that it needed a lot of work to keep it on the road, and Bruce, its new custodian, was well aware of that when he bought it from me back in June, and he did get off to a flying start with repairs and improvements, but did it pass the M.O.T. last month?

Just thinking out loud again for a moment, Eric Catt, when you read this, is it time that we advertised the Rebel Register again ? Use your name and address if you like, or mine if that suits you better. They can go on the mailing list and be included here if you like. (Provided that they pay the fee of course).

I know that many people do not make the connection between Rebels and the Kitten Register, and we really could serve them better. Can you make the necessary contacts, or would you like me to get it organised?

By the way, I think I am still waiting for the details of your Kitten.

Brian

By the way, my musical streak again - the missing song title from the *** at the end of page 8 - " This could be the start of something big "?

The others

Well, some of them at least.

Rebels and Foxes I will leave out, as they were both the predecessor, and the successor to the Kitten respectively, were built by Reliant themselves, and anyway have their own pages in here these days.

I have however been asked on occasion "What is a Jimp?" In an effort to answer the question, I have featured one on the front cover -Edition 7 - I do not however have a photograph of a Salamander, I do have a few minutes video of one, but nothing that I can readily produce in these pages (indeed it would probably take me some time to find the relevant video tape!)

I don't know how familiar you are with modern motor cars, I can always remember my late grandmother boasting that her grandson could identify every car on the road at the ripe old age of 4! I have to say that I always did get confused between the Triumph Mayflower, and the Renown, and I still can't remember which was the big one, and which the small, but could manage almost all the others.

Here we are 4 decades or so later, and I am not nearly as good as I was then. The point is, have you heard of Kia? If so you might know their Pride, yes, that's what they call their little one, the Kia Pride, well, it looks to me as if they just bought a Salamander and copied it!

So, now you might have some idea what a Salamander looks like.

I believe they were built with the disabled in mind, wheelchair access being particularly good. The doors open to 90°, right down to the bottom of the sill, actually exposing the side of the chassis. The floor is flat, making getting both people, and wheelchairs, in and out a simple matter, there being no internal sill to have to lift your feet, or anything else over, to get in and out.

The Reliant chassis was particularly suitable for this sort of vehicle, but the manufacturers wanted an automatic gearbox. So they opted for the Ford 1100 or 1300 power unit. Dave Wardman had fitted a 1600 to his which, even with the automatic gearbox, made it a flying machine! The down side of the Ford power unit, or perhaps I am getting confused with Dave's bigger one, is that the exhaust manifold is at the wrong side, that is it gets in the way of the steering column. I can't remember how Dave got round that problem, nor do I know who has that particular car now. I will drop Dave a line and see what we can learn.

The Jimp tale was sad, (see cover of edition 7) a bit like the story of the De Lorean, you remember, the stainless steel gull winged thing, made famous in "Back to the Future" ? Well, just as then, the Government loaned a sum of money to a man to allow him to enlarge his business, and, I believe, the Jimp man absconded abroad with the funds, having built just over 150 vehicles. So ended the Jimp story.

The Tempest and Vantique, yes I will show you a Vantique one day, John Box had a lovely colour brochure produced at the time, you have all seen the Tempest on the cover of edition 8, and I have another one to put on a future front cover.

Others, like the Bobcat, still to be shown, and the special on the cover of edition 11, are unique one off specials. While Tony Steven built 6 ciphers, 4 himself, (the cover of edition 8) and 2 at the Reliant factory. He knows that one other was assembled from a kit, and he did sell another kit, but does not know if it was ever completed.

What does that leave us with - oh yes, the Rebel racing brigade, I will need to find that brochure and tell you more. This company produce a racing special, on the Fox chassis, using a sealed, tuned to 50 B.H.P. 850cc Reliant engine, for track racing, a bit like stock car stuff, in as much as the rules permit physical contact between vehicles. I believe you can buy them in kit form, or as a complete vehicle, road legal, for about £7,500. Note this is all from memory, and, as you know, mine is not all that accurate sometimes.

So what is missing, well the Liege people of course, but I am getting near the bottom of the page, so I will just invite them to say a few words in the next edition - over to you, chaps

Readers Letters

Dear Brian,

July '97

Thank you for your prompt response to my request for information on the Kitten register. Please find enclosed my cheque to cover the cost of subscription, and the magazine back copies.

Although I initially bought the car as a way of protecting my Scimitar GTC from the wear and tear of every day use, and the unwelcome attentions of the small number of people out there who want to vandalise anything that is obviously someone's pride and joy, I have found it to be an ideal town car which I enjoy owning and using as my daily transport.

The economy of the little vehicle is truly amazing, for although I have not yet worked it out in M.P.G., I have worked out its W.P.T. I filled up both cars before the price increase in the recent budget (you have to save a bob or two where you can), it cost £15.50 to fill the Kitten to capacity. It was six weeks to the day since I filled it up with sixteen pounds worth of fuel. So there you have it, the fuel consumption of the little Reliant is 6 W.P.T (Weeks per tankful).

I very quickly discovered that a good sense of humour is an essential requirement for the Kitten owner. As you can see from the enclosed picture (*printed inside the rear cover of the last edition Ed*) I have had the Mickey taken out of me by my colleagues. At the time the advertising boards shown in the picture were stuck to my car I had developed a bad back, making walking painful, and bending all but impossible, so I had little choice but to drive the car home with the boards in place. At every opportunity on the short journey home I took a cautious look to see what Carlisle's other road users made of the strange vehicle I was driving, not so much as a raised eyebrow was apparent! Perhaps, unlike my colleagues, they were astute enough to spot the difference between a Kitten and a Regal van. I had been noticed though, because for weeks afterwards the neighbours kept asking if I was going into business!

John W. King - Carlisle

Thank you John, for sharing that story, and the picture, with us, (and Alan Marshall for reproducing it so cheaply for us) I hope you are keeping better now. I did notice that you don't mention the W.P.T of the GTC!! Then again the ££££ per tank on the G.T.C. probably exceeds that for the Kitten by getting on for 300%!!!

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*There follows an item that I should have included, at least the parts for sale, in the last edition - sorry Howard.*

Dear Brian,

June '97

Thank you for your prompt reply to my letter and your very interesting news letter, my application and cheque are enclosed.

The chassis I have is not galvanised, but painted, and I'm told new, and does not look as though it has been used at all.

The other items I have no use for are as follows:-

Bodyshell, with glass, all doors with glass (not fitted to shell) Propshaft, front and rear springs, top and bottom wishbones,

I purchased the Kitten in bits for the parts I needed to build the 'Liege' which by the way is supplied with a chassis, not the 'Fox' version. The seller had stripped the car for a rebuild, needed a new chassis, found one, then

for personal reasons, had to give up the idea. At the moment I'm preparing the items for the Liege mould, the kit is due in August, and will write again when I have more news.

Regards, Howard - Leicester

~~~~~

Thank you Howard, sorry again for the delay in advertising the parts, good luck with the project, we all look forward to hearing how you get on,

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*Once again I almost omitted the following, which was in the same letter from Duncan Bradford, which included the tips on Fox window channel, you remember, the chap who regularly empties his anorak pockets out once or twice a decade!*

Dear Brian,

June '97

Many thanks for your sterling work on the mag. It's great too that the group covers such a wide range of interests and abilities, not too technical (quite) but stimulating enough to keep one interested in perpetuating the (Reliant) species. I do hope they don't just graft a three wheeler back on the Fox - it's the front end that needs a bit of thinking about. Most makes of tyre still foul the front valance, for example, in spite of the amount worn away over the years, and the very looks of the thing would cause even an imminent hit and run victim to die laughing before succumbing to injury.

The Fox has had to take second place for a while, as I've part exchanged the Scimi for one that's only done 38,000 miles in 20 years, well over 100,000 less than 'mine' (I wonder how long it will be before this one becomes 'mine'). I suspect the age / low mileage will throw up one or two problems of its own - *that has certainly been my experience, Ed* -

Duncan Bradford - Norwich

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Dear Brian,

Aug.'97

Thanks for your letter of 16.7.97, I am sorry for the delay in replying, but we were making decisions on what to do with this vehicle. After careful consideration I decided to sell it to a neighbour. As the deal was about to be struck, my daughter, who is only just 16 years old, said (You've guessed it) " Dad, can I have that? " I, being the big strong father figure, who cannot be swayed once I've made up my mind, said " Oh, alright then " *Oh dear, it seems it must be true what they say about the fall in standards these days, she didn't even say please! Ed.*

I explained that she would have to get the car all done up as I was too busy. She readily agreed, explaining that as it was already a pick-up she would like it to be a sort of " Mini Monster Truck " By the time she had given me her ideas and I had given her mine, I was hooked (*Oh, I see what you mean, a Monster Pick-up Truck! Ed.*) I have already started work on it and we are determined that it will be ready for the next Classic Car Show at Breadmore House, in Fordingbrice, Hampshire, and that it will win it's class (whatever that might be) in August 1998.

I am retired early (*Me too, Ed*) But, as you can see I still manage a few odds and ends. It keeps the mind ticking over.

Please find enclosed Kitten register application form and cheque. I or my daughter will keep you informed as to how things are getting on.

L. P. Jarman - Poole

Thank you Larry for your interesting letter, my daughter is just 12 at the moment, and her Rebel has a fair way to go before it is back on the road. Mind you if I did the odd job on it, instead of thinking about it, it might make some progress!

The Rebel is much cheaper to insure than the Kitten, which is one of the reasons that I am encouraging her down that particular road.

Now, and I do not want to sound either discouraging, or like an old know-it-all here, but to put such intentions in print, well, let's just say that we will be watching progress closely.

After the tremendous rate of progress that Edna Houchin and Den made with their Rebel rebuild earlier this year, I am beginning to have my faith in home done rebuilds, completed in less than a decade, or even quarter of a century ! slowly rebuilt ! (The quarter of a century one was a Jowett Jupiter, which I first saw being restored in 1971, and the same car, belonging to the same individual, finally made it on to the road in 1995 !)

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We received a postcard from John o' Groats this morning - 28/08/97 - it reads:-

Dear All,

We did it! GUS and self arrived here at 3:00pm (26.8.97) having camped by the beach at Dornoch last night.

Great weather, great wee car\*, great holiday (No. I'm not going to Lands End next!)

Bye for now J.B. (+GUS)

\* But I wish I could turn off the heater!

*By the way John, what's wrong with Lands End?? isn't that where cars go to from JoG ? Ed. JogLe doesn't quite have the same ring to it as LeJog mind you, or does it!?! \*\*\**

## ***Cars and things for Sale or Wanted***

Wanted:- Kitten door trims, type not too important, but a matching pair, and preferably with the elasticated door pockets. Contact David Astley

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For Sale:- Webasto sliding roof, fitted to the roof of a Kitten saloon. Also an aluminium tail gate for a saloon, professionally built. Buyer collects from Harry Darby.

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30/08/97

For sale:- Kitten estate T registered rebore and new pistons, crank reground etc. clutch stainless exhaust, new rear shockers and headlights. Chassis waxoiled, Renault 5 turbo front seats, extra instruments etc, taxed and M.O.T. till November lots of spares £ 550.

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For Sale:-

Petunia the plastic puddle jumper is looking for a new home. This was the pick-up that was featured on the front cover of edition No. ?. She comes with 9 months M.O.T, a stainless steel exhaust, tow bar, roll over bar, Sharp stereo, Ford Orion Giha seats, the engine was completely overhauled, and a new chassis was fitted three years ago. Various spares by arrangement. Offers in the region of £ 750 to Steve Macdonald

Alan Osborn - 01953 884681, has a saloon rear hatch glass, black plastic headlamp surround, rubber bumpers and a Robin steering box.

Alan also has copies of the book "750 Racer" by Herber & Harvey, The what happens and how to do it book on 750 racing, includes lots of tips on tuning the Reliant engine. £19.00 incl p&p.

~~~~~

Dave Smith is breaking a Kitten saloon and estate car for spares, plus loads of other spares, including a good rolling chassis, sensible offers for anything.

Mark Wilson still has those cords piston rings, believed to be for an early Reliant engine, he also has a host of Reliant spares now, we will get a list in the fullness of time

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Wanted Fox or Kitten chassis - Eric Wallace.

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MYSTERY REBEL BUYER - buys all Rebels, no matter what condition, saloon Estate what have you. Well, not really, it's Phil Hallam, and I am looking for some Rebels ( 3 actually ).

~~~~~

September '97

For Sale, due to ill health, Maureen McAtasney is selling a Kitten estate, a partially done rebuild. The bits are all there, body seperate from chassis, which has been cleaned and welded. Complete with 5 alloy wheels

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September '97

For Sale:- 1976 Kitten estate, yellow, M.O.T. till Aug'98, good condition

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September '97

For Sale:- Alan has a very nice three wheeler, 28,000 miles from new, full M.O.T., Taxed till Aug.'98, can deliver. £850

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NOTES

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One thing I did mean to tell those who have bought new rear springs, was to check, before fitting them to the car, that you can easily fit the bolts through the bushes on the springs first! I have just fitted one to Susie, Moira's Kitten, and the rear bolt was so tight a fit in the bush that we had to cut a hole in the side of the body, in line (well, very nearly in line!) with the bolt head, to enable me to drift the bolt home. The sills on Moira's car are painted black, so I must get a rubber grommet to fill the hole - wonder if I'll ever get round to that job?!?

On the Kitten owners handbook situation, yes, thank you, I recognised it as soon as I saw one! We have a few copies available. They cost £4.50 each, including postage. Payable to the 'Reliant Kitten Register' please.

The car whose name I could not remember last time, and left the "?????" in, was the Tornado Talisman. Thank you Bill Dick for reminding me - by the way Bill, does Brenda know that the earth moved in Doune / Dunblane, while she was still in Watford? (We had a small earth tremor, 2.4 on the Richter scale the day after a trio of Reliants failed to retain the Doune Classic Challenge trophy (I was not part of the team this year!! )

The matter of a Logo for the Register remains to be resolved. Do we have any budding artists or whatever out there? I am prepared to offer a years free subscription to the Register for the best Kitten Register Logo. I need this for our promised certificates, the Web site, which I understand there have been problems with, and the possibility of a car badge or windscreen sticker.

On the subject of our Web site <http://www.uk-classic-cars.com/kitten.htm> which I know a number of you tried to access after receiving edition 17. I have today 29/08/97 spoken with Paul Williams who was good enough to set it up for us, and he is not aware of any problems, confirming that the site is in place and operational. He did suggest that some service providers do not in fact offer access to the entire Net, and so if you let me know who your service provider is, I will see if we can build up a picture. I did check, thank you Alan, that it was there, before advertising it, it even has a colour picture of some Kittens and a Rebel at Doune.

## ***Getting more Technical***

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### ***When an engine becomes a battery***

Cylinder head failure? don't immediately blame Reliant engineering. Engine coolant (we used to call it anti-freeze) is very corrosive stuff. Because of this, a good coolant includes corrosion inhibitors, which neutralise the aggressive effect. Unfortunately the inhibitors only work for two to three years, or up to 4 years if you use the new pre-mixed Trigard MPG coolants.

Have you forgotten when you last changed your car's coolant? (*No I have not! Ed*) You can be sure that it has turned into a powerful corrosive, even though it is still effective as an anti-freeze. Your head gasket then acts as the sacrificial anode in a corrosion battery, sandwiched between the alloy head, and the cast iron cylinder liners. A very unhappy time is also experienced by the core plug at the back of the cylinder head.

So, drain it away, flush out the system and buy the best quality coolant you can find. If you are a belt and braces person, you will buy new hoses, clips (stainless steel of course) and thermostat while you are at it, and do something environmentally friendly with the old coolant.

David Heywood - Norham

*Thank you David, though I'm not sure what can be done with old coolant that is environmentally friendly - Ed.*

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Colin Banister, our man in the Isle of Wight, (well, one of them at any rate!) Would like to know, either where he can get a new Kitten brake master cylinder, or alternatively which other vehicle uses the same one. Failing that, which other vehicles master cylinder will either do the job, or can easily and safely be adapted to do the task.

Can anyone help Colin?

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*Now a few words, one edition late thanks to my lack of co-ordination, from Al Osborn, our man in Thetford.*

In response to Kitreg16, some further words of information. The heated manifold (for carburettor), if you must disconnect it then do some M.P.G. tests before and after, you might be disappointed and need to reconnect it. On the Robin yes do away with it, under bonnet temp. being that much higher, but the Kitten seems to need a half way job, depending summer / winter-engine temp. etc. I did have an extra radiator that was in the water circuit at one time, and even a thermostatic water change over valve. It worked very well for a while, it was an oil thermostatic device made from cheap alloy! The hot water got it! While in the hot water so to speak, heaters that don't ! Having just passed a winter without one connected, due to it being blocked, I understand these points.

To try to get the heater to work again, connect it for reverse flow. Then, if you still have cold in the cab and are losing water it could be a blocked heater, which in turn blocks the flow from the back of the head, so the engine overheats instead! If this is the case, before you break the engine totally, take the heater out of circuit. Any better engine temp? If you don't want to get involved with heater matrix changing, now comes a silly mod. Take a Robin heater matrix, chop out the long pipe between the two matrix, replace with a piece of heater hose inc. clips. Fit a couple lengths water hose to the in and out. Mount this assembly in front of the heater fan behind the front grill, with a couple Terry clips. Pass the hoses through the fibre glass into the engine bay. Connect the hoses into the system as cooler for carb. manifold or as extra heater for cab or even as THE heater for cab. I don't say it will be fantastic, but it helps get the engine temp. down and the inside temp. up a bit. and fitting it is easier than changing a heater matrix ! Especially if you haven't got a spare.

Rear axle ratio Fox :- as it must be basically Kitten which has internals per Robin / Rialto what is wrong in choosing your ratio, finding that axle and then transferring the differential innards over ? Yes I admit not to having done it, but if you can't then there must be someone out there who can? *Perhaps it is not that simple Al, remember that the Fox has 12" wheels, and different brakes, and is a wider vehicle which may have a wider track - perhaps John Box, or Guy Stanley could help us here? Ed.* While on this subject I'd like to fit a Rialto rear axle to the Kitten, to get the bigger wheel bearings. *Just me interrupting again, do they really have different rear wheel bearings? I know that the Robin, of the era of the Kitten, uses the same front wheel bearing, and I had assumed that the same was true of the rear ones - Ed, still on the subject of wheel bearings, our man in Boddam, has just fitted new ones, and tells me that the ????? part comes complete with the felt pad bonded to the bearing, and is well worth the small increase in cost, still half what Reliant charge for the cruder one! (the sticky out 165 tyres break wheel bearings!)* But Reliants changed the Rialto Ratios several times, does any one know what ratios we had for what years?

Brakes:- I have always thought the brakes adequate for the weight of the vehicle, as the press said way back. One area that one can forget or get wrong is the brake fluid. Have you changed it lately? Might it have air or water in it? How about a good brake service, new shoes (green linings) new fluid, and take a bit of care with the

adjusting so that there is minimum pedal travel. OK now ? Discs? maybe with a 1600 or something silly, but my engines have been up to about 55bhp (rough calculations) I can cruise at 75-80 (watch that water gauge!!) and still I think the brakes are ok.

Rounded front adjusters? No problem - drill them out and fit the Mini adjusters that come in a kit form, sorry I can't say where you get the kit from. I've collected them when I see them usually old stock or at car boots. (*the Moprod kit number used to be MPK 1 I think, Ed.*) (They consist of a new eccentric cam and a set of shims to get the back pressure right)

Oil cooler:- Yes could be a good move, but ? Do you know the temp. of the oil in the first place? Having fitted an oil temp. gauge some time back I can say it is indeed an interesting gauge to play with. Firstly you can extend your warm up period using it, thus ensuring better engine life, in theory at least. (You wouldn't believe it though the way I drive at times, engine is good for 6,000 R.P.M. in 3 gears at least!) I have seen 240 F on the Motorway, that's enough.

*Just me interrupting again Al, and it all depends where you are talking about, but Alan Marshall's Kitten had 54 brake horse at the back wheels, ( according to a rolling road test ) and could pull 6,000 in top as well, which is a shade over 101 m.p.h. Indeed it was all too easy to see 7,000 to 7,500 in the intermediate gears if you were not careful, it spun so willingly. Dick Watson is not the only man in the land who can build these wee engines well, but he is up there amongst the best of them.*

Finally Fox window rubber groovy bits. Edgware Motor Accessories (In Edgware!) 0181 952 4789 have a very extensive range of rubber trims/edgings and groovy bits.

Now we've answered Kitreg16. Question? I want to change the exhaust manifold to a four/two/one, these can be made but they ain't cheap, so a batch would be the way to go. I can get a master done and/or sort out dimensions and perhaps find a company that could turn out a few, but is any one else interested? PS this is FREE power AND economy. I would also like to fit two boxes at the same time. Any one done this? I think that's enough.

*On the subject of multi-branch manifolds, I see that Reliant were using them as standard recently, though I think that the plan is to offer them as an option in future. I was told that they were manufactured in stainless steel, and I know that stainless comes in various grades, but the one I saw, on an engine going back under warranty, had a pretty rusty multi-branch down-pipe for something that was supposed to be stainless, and only a few months old.*

*On the same subject, they claim an improvement of about 1 to 1.5 B.H.P., which while it might not sound a lot, is equal to 3 or 4%, which can't be bad. I suppose it all depends what you are comparing it with, that is to say, how badly matched was the cast one you had on before! I presume that the improvement is compared to a well matched one of the traditional cast type.*

*Well, that brings us to the close of the last edition before the Christmas one, and it just depends on how many of you write to me, how busy I am, and how I am feeling, whether you will get the next edition before or after Christmas. Truth to be told, by then the Register will be out of funds, quite how I thought I could increase the magazine frequency by 50%, based on a 33% increase subscription I really don't know ! And, there he goes again, starting a sentence with a preposition - must watch that as daughter is now at High school, and likely to start correcting me !!, As I was saying, we all owe a debt of gratitude to John Pearce, for the colour front covers that we have enjoyed over the past year. Thank you John, and Susan, it is very much appreciated.*