

Reliant Kitten *Register*

NEWSLETTER 78

September - October 2007



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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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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On our cover this time is a picture which not only continues this year's trend of showing you the vehicle's owner along with the car, but also, on this occasion, is of a car you have seen before. It is the one and only FW9, not as I said the last time you saw it the FW7! Not only that, but this time it is accompanied by its current custodian, and our most recent subscriber (well he was for a couple of days, we have enjoyed 6 of them in the past 4 weeks!) Matt Greelny from Ashton-under-Lyne.

Matt plans a full restoration, and intends to put the car on the road. Wise man that he is, he has not put a date on that event, but whenever it is, we look forward to it.

I must begin with an apology, (I seem to recall once saying that I was going to stop apologising – oh well, just this one more time...) the picture of Dan's Kitten's dash, and much of it's interior, as seen in page 18 of the last edition, completely lost its meaning because I am too mean to let us have colour pictures, his dash is painted red to contrast with the black body of the car, which was why I chose to use that picture, and it was not till I collected the magazines from the printer that I realised what I had done! One day....

Oh, just one other point, the Kitten van, featured on page 21 was of course Andrew Norman's, I had thought it would be clear in the picture and so chose not to include a caption, but the picture is not so clear in B & W, sorry Andrew.

Let's not dwell on my shortcomings, at least I got it to you well before the two grumpy old men set off for Mongolia! Owen did faithfully send me regular up-dates of that adventure, and you will hear more of that epic trip in the next edition.

Now for a change I am going to have a go at someone other than the editor (or am I?) It was brought to my attention in June during a conversation with one of our readers, that he had completely misinterpreted what I had said earlier this year about our numbers. I had made mention of that fact that after over a decade of growth followed by the inevitable drop in readership, we had had an increase in the number of subscribers this year, and I made reference to our cheque to the Federation being larger this year than last, and not just because of an increase in their fees. This was somehow interpreted as me saying that there were more Kittens on the road this year than last, if only! We do not have recent figures for the numbers of cars on the road, but, sadly, I am pretty sure that that number gets smaller every year.

On the subject of misinterpretations, well, all right then, mis something else entirely, a heading in the Sunday paper caught my eye the other day, the Observer it was "Students shew a week grasp of ritten English and spell cheques" it said. Their Education Correspondent has finally come to realize what I am sure a number of us already suspected, namely, that despite increased numbers of certificates being issued to increasing numbers of students, they canny read nor write the Queen's English. Apparently one Dr. Bernard Lamb, a tutor at London's Imperial College, was so concerned that he elected to take a hand in deforestation, in fairness I doubt he realised when he chose to actually record the spelling, punctuation and simple use of the wrong words by his students, that he would require two dozen sides of A4 paper to record just over one term's mistakes in essays that had been spell checked prior to submission. Amongst the favourites were incorrect use and confusion between occurrence, occurred, occurring occur and occurs, herd and heard, been and bean and even fourth and forth, not to mention hopeless punctuation. The true horror of this is that those mistakes will be published by no less a group than the 75 highly selected undergraduates in the forthcoming journal of the Queens English Society. So shocked was he that he decided to go one better than just recording the errors, but actually published them. He goes on to report that upon discussion with a colleague, an English tutor at no less an establishment than Oxford University, who had made similar observations, that the situation was deplorable. In conclusion he remarks that the rot thus extends from top to bottom in education. Now, just remind me again, what were the three priorities when Tony Blair came to power???

I am something of a self confessed skeptic when it comes to claims that we are better qualified than ever before as a nation. I quite accept that more people than ever probably do have more qualifications than ever, my concerns are regarding the quality of those qualifications. In an

attempt to leave no one without a certificate, we have, in my opinion, lowered standards dramatically. In many cases all you need to do to pass, is turn up for class fairly regularly – tragic, but in my view, all too often the truth – I dread to think where our engineers, doctors, etc. will come from in the future – perhaps we will import them from India or China!. Those fears were reinforced recently, (I hope that most people, even those not on any way of an engineering background), will have heard of James Watt, (then again, after what I have just been saying – perhaps not!) there is a college named after him in Greenock, which recently ran an advert in the press for its engineering course – I actually laughed out loud before a tear came to my eye, the picture showed a lad in overalls proudly clutching – no not a micrometer, or some other sophisticated instrument, but a large adjustable spanner. I was so distressed that I actually rang the college, and the sympathetic individual I got on the phone suggested that the advertising people might have made a mistake and used the plumbers course picture by mistake – at least he could get a job in politics!

What we need to do is stop teaching students to pass exams, but teach them knowledge and skills, all of which would of course be much simpler if politicians would keep out of it and let the professionals get on with things instead of constantly trying to achieve headline grabbing targets.

In spite of all the above, I am reasonably confident (or am I delusional? – don't answer that!) that our aspiring engineers will rise to the challenges in spite of the system.

Right, enough from the soapbox today!, Back to things that matter – hang on, does fundamental understanding of the language not really matter? Whatever, moving on - there are I am told a couple of web sites where it is possible to check and see if a specific vehicle is currently road taxed, on the official government site you need both the make or model as well as the registration number, but apparently the RAC's site only requires the registration number. I guess I ought to spend some time checking, especially with the Rebels, there being so few of them still running, it ought not take me many hours to see which of the ones we know exist are still on the road – more work! The sites in question are:

<http://www.taxdisc.direct.gov.uk/EvlPortalApp/> (use the vehicle enquiry tab)

<http://www.rac.co.uk/web/vehicle-checks/car-data-check/>

I think, unless I change it, that you will read in the epilogue that I was planning a computer free week towards the end of July – that plan didn't work! It is now the 23rd, and having had a couple of articles from Bill Starkey I thought I'd better get them in here before they disappeared "somewhere safe"!

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Rebellious conduct - 8

The first half of 2007 has passed into history with very little to report of a spanner twirling nature. LRF 671K has been used every day for work with no complaint other than a leak from the differential input oil seal. My local Reliant specialist, Elberton garage, supplied a new seal which I quickly fitted inside the glove box, and not surprisingly, soon forgot all about! Eventually, when available time, the mood, and the weather all coincided I was allowed to attempt to re-locate the

seal to its intended position. As a matter of interest I thought I would measure exactly how much oil was left in the axle by draining it into a suitable measuring vessel. The book of words states that the axle holds 2 pints, so ~I reckoned that a 2 pint container would be more than enough. So, out with the drain plug and leave gravity and viscosity to battle it out and do the rest. The vessel was duly filled, so was half a jam jar. Plus whatever spilled onto the floor between the time the first vessel overflowed and I got the jam jar in place. To think that I had been driving around with the fear of a lack of oil on the back axle, such fears were well and truly dispelled now. This was just as well, because I couldn't budge the pinion input nut! With only car ramps to raise the rear of the Rebel, I couldn't get enough leverage under there to do the job. I refilled the axle with exactly 2 pints of oil regardless of the level / filler plug and await another day when not only the available time, mood and weather coincide, but also when I have greater working height available too.

Just a word of caution here, I did mine a decade or so ago, with the assistance of a friend's pit, the problem we had was stopping things turning, even with the handbrake on, the car in low gear, I needed said friend to sit in the car and stand on the brakes as well to get the nut to budge, and that was with a 4 foot lever, that nut is very tight indeed, Ed.

The oil leak had caused me to impose a "just to and from work" rule for the Rebel as a safety regime, at around 10 miles each way I felt it was not long enough to seriously overheat what I had feared might be a low axle oil level. With this fear dispelled I could now venture further afield. Firstly a 140 mile long journey to the West Somerset Railway, followed by a 170 mile round trip to the Brecon Mountain railway (Any guesses where my other interests may be?) The Rebel cruised easily at 50 MPH on both trips, indeed I was constantly having to lift off as the speed easily gathered through 55 to 60MPH, the noise at these higher speeds becomes just a little too frantic and tiring.

For the Brecon trip I brimmed the fuel tank before leaving, and again on my return. The 848cc engine recorded a 53MPG thirst, a figure that I was well pleased with considering some of those Welsh hills and a couple of navigational whoopsies.

One other small point, whilst performing an under bonnet check, mainly to confirm that there was indeed something left under the bonnet, I found something that had advanced plans on not being there very much longer. The SU carb dashpot was very loose, one screw hole was stripped on its thread, and the other screw very loose. Considering the previous carb troubles I suffered with a worn needle and the effect it had on smooth running, this rather obvious malady had no effect on the running that I could notice. Good job I checked when I did.

Call me a boring old whatever – *Well, I would, but you are not, Ed.* But I am going to re-ask a question through these pages that I have asked a few times before. My July 1972 registered Rebel started life as a 700cc van. One of just 29 700cc vans built I believe. However my example was converted to an estate car and later fitted with an 848cc engine, but the all syncro gearbox and hydraulic clutch seem very original to my Rebel. Legend has it that these two items appeared when the 750c engine was introduced late in 1972. How can this be? Are there any other 700cc vans on the Register that could be compared I wonder?

I know from experience from other vehicles that specification changes are not always as clear cut as the generally available literature makes out. Some updated models may not contain all the latest features that we are told apply to that model, whilst, conversely, some update features could be found on the very last of the 'old' models. Could my July 1972 van with side

windows be a very late 700cc containing the forthcoming, yet to be announced all syncro gearbox and hydraulic clutch I wonder? Although my Rebel was bought new from a dealership in Southampton, the registration number, LRF, indicates that it was first registered in Staffordshire – the home of Reliant. Does this indicate something perhaps?

There is a challenge for all those Rebel experts reading the Mewsletter, can you help please?

My own association with the Rebel is now approaching 2 years, despite the “for work only” policy that prevailed for most of the first half of 2007, my second year of Rebel ownership is going to result in higher mileage than year 1. At the end of this there is the dreaded MOT to face before year 3 gets under way at the beginning of August. I may have more to report of a spannering nature next time, but I am rather hoping not!

Terry Horler July 2007

Right Terry, I know this is not the first time you have asked, and anyone else with any knowledge please feel free to contribute to this debate. I used to believe that the change from 700 to 750 went hand in hand with the change from remote gear linkage and mechanical clutch to full syncro, without the neat remote linkage and a hydraulic clutch, and the vast majority of Rebels I have seen conform to that rule. Yours is the second one, as far as I can remember, that is on the Register with a 700 engine and a full syncro box, believed to be original equipment. From memory the other one was not a van. This highlights some of the weaknesses of our application form, it only asks for make and model, it does not go into gearbox type, few owners realised there were differences when they first came into Rebel wonderland. I used to convert hydraulic clutch Rebels to manual operation because of the difficulty and expense of getting hydraulic parts back in the 1980's and probably early 90's. I did this by changing the pedal from a mechanical one to replace the pedal on the hydraulic one, the crank on the bottom part of the pedal was different if I recall correctly. The Rebel pedals go through the floor, and pivot on a shaft through a tube through the chassis, and are in two parts screwed together by a pair of small nuts and bolts

I remember reading in official literature somewhere, possibly the parts book, but not certain about that and do not have time to look right now, that for example, the only Rebel ever fitted with an alternator, was the ambulance – and no, I have never ever anywhere else seen reference to a Rebel ambulance – but remember, they did export about 1,000 Rebels.

In short there were undoubtedly ones that slipped through the net, certainly people who have changed things over the decades, and yes, I should gather more detailed information, and be better at distributing it as well, but it is not a perfect world, one does the best one can, and as I said, feel free to chip in if you have any comments observations or thoughts. Ed.

Finally, thanks as ever Terry for the update, please keep them coming, and good luck with the MOT, though quite why it should be dreaded I am not sure, this side of a badly corroded chassis I can't think of any problem we can't solve, Ed

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Matters Tempestuous

John tells me that while I might find him with a spanner in his hand any day of the week, my chances of finding either a pen in it, or his fingers hovering near a keyboard, are remote. In other words I am not likely to get him to say much in here, other than quotes from when I speak to him.

I know that his demonstrator Tempest has now been painted and only awaits final trim and dash to complete the car.

Liege page

There were two of these wonderful wee cars advertised in the "Liege News" recently, and I think one, an uncompleted one, on e-bay. The price seems to be pretty consistent at the £7,000 mark, which I am sure must be a bit frustrating as it attaches slave labour rates to those who build them, a better paid caliber of slave from those who rebuild Rebels, Kittens and Foxes it has to be said!

Here is a picture some of you from Yorkshire might recognise, you missed that didn't you Dennis?



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## Readers Letters

Hiya Brian

Tuesday 01/05/2007

Just a line to apologise and grovel, for the 'Corporal Jones' phone call job, 'don't panic Mr. Mannering, don't panic!', regarding the rear springs, I am an idiot (ask Hazel), and would like to suggest we introduce a club award scheme 'The Grand Order of the mahogany Bogseat'.

This can be awarded on a periodical basis to whoever comes up with the biggest 'cockup', I will honorably go down as the first holder of the title, what happened was – Graham advised me to put the two rear springs on together, which was the best bet, but I couldn't because of where the car was situated, next to a semi-dead Jag with no visible means of support or movement (the Jag that is).

This meant it was a one side at a time job, starting with the nearside broken one (you still following?), now at first it looked like an impossible fit, but after a sit and a look at the problem, aided by a can of ale, the light dawned on me, the shock absorber was stopping the axle dropping to the floor (don't give up in despair Brian, this gets better in a bit, trust me, I'm an idiot).

So, when I'd got a second can of ale and disconnected the shocker the rear shackle connected as nature intended and it was done in half an hour, spring on, jobs a good'un ?.

On the nearside that is!, I then drove the little beast around my drive and back in the other way around to do the offside spring, (here's the bit where it gets better mate) we don't have one seized bolt in the offside shackle!, we have all three don't we!.

After a few more beers and a lot more of the thrutching, I got the top rear bolt, the shackle to chassis one free, this one as you know comes out onto the top of the petrol tank, the lower back shackle bolt can stay seized in the old spring until the spring is off the car and I can summon the heavy brigade to shift it.

Now all I have to do is free the inner steel collar of the bush from the front bolt, both the front spring locating bolts on this Kitten are welded to the chassis for some obscure reason, standard or what?, It looks original to me. What I really don't understand is how the offside comes to be seized? That side had a secondhand spring fitted as a temporary repair as it was 'flat' when bought by me about three or four years back, and all the bolts were copper greased so I wasn't anticipating any aggro on that side at all, so I don't know what went on there, one of life's great mysteries?

As I said on the phone and as you know, the replacement springs are four leaf as opposed to my old ones being three leaf, this is better for me as the fire engine is usually used for load shifting and trailer towing anyway, the U-bolts had plenty of length on them so the locknuts screwed down ok.

Another thing Graham Shaw told me was to wrap the leafs in 'Sylglas' plumbers tape when I have installed and oiled them, this I reckon is one of the best tips I've ever been given and is what I will do. When I've finally sorted the job.

In conclusion on the spring saga, all I can say is sorry again for the 'bum steer' I gave you and Graham, Graham rang me back and knows what the score is and that one spring is on the car, so if anyone else is struggling and needs advice from an idiot, give them my number and I will talk them through it with pleasure, it can be done one side at a time, albeit easier if the two are done together.

In the light of my problems on that offside spring, I'm glad I did them separately, otherwise I'd have probably scrapped it (only joking).

When the little red fire engine is back on the road I'll ring you as I want to mither you some more, I take it from our phone conversation that the old type of oil pressure relief valve is a disaster area? I think this one still has the old separate spring/ball/seat job in it.

The reason I got another spring from John Copestake is that I had two engines given to me by a mate who was going into a residential home and clearing out his old shed before he went.

It was he who recommended I buy a Kitten in the first place as he'd had one for a number of years until he couldn't maintain it himself any longer, however I waffle on and off the subject.

One of the engines he gave me was a newish reconditioned one, by the looks of the internals anyway, new liners and pistons etc, what had happened was he was racing along the Northwich bypass early one Sunday morning with a Morgan 'aero' three wheeler with the big J.A.P vee twin out front, you'll know the one. he was going to Oulton Park (he was a marshal).

Anyway the Kitten soiled it's litter tray, number four pot slung a leg out of bed, he didn't know what caused it, but I found out when I robbed the water pump off the engine for Hazel's little ding-a-ling, the water pump seal had failed catastrophically (stick with it Brian, we're going somewhere here, promise) and as fast as you poured water in, it came out of the front of the pump!

This had evidently caused number four to seize and hence the leg out of bed, well that's my pet theory mate, and I'm sticking to it.

The point is (we've got there) when I stripped a few bits off the engine block I noticed that the oil pressure relief valve spring had been chafing on the side and was nearly worn through, in fact it broke into two in my hand as I held it, is this what you meant by the old valve units are unreliable?, this valve was a three piece job!.

So I suppose I had better think to renewing the one in Hazel's with the later one piece unit? Also if I read the last mewsletter correctly, is there a stainless petrol tank available for the Kitten for around £60? The tank in ours is ok for now but has some corrosion around the neck of the tube into the tank itself, a common fault I believe ?.

Anyroad, I said this was 'just a line', so I'll leave you in peace, I will as I said, ring you sometime when I've sorted my present panic out and discuss the other two items with you, my regards to you and your family, and thanks once again to both you and Graham Shaw for your help and joint endeavors to keep these wonderful little motors on the road.

Regards Bill Starkey (Hazels inebriated pit crew, no 0386)

Thanks for the update Bill, glad you finally got the springs on o.k. The stainless fuel tank option is no longer something we can offer, they were about £100 15 years ago, the ones currently supplied by Reliant look galvanized, they are of Canadian origin, and seem to be of good quality. Ed.

*On the oil pressure relief valve question, yes spring wear is one problem with the original design, the other, and I have no information on which is the most prevalent fault, is the matter of the sintered iron seat for the ball, sealing properly against the alloy crankcase. I know when it is*

*really bad you can literally dig the seat out from the outside with a bent paper clip, but many people have found them tighter than that, and have used a threaded bolt, easyout, or even just an appropriately sized self tapper to catch it. Just as common a solution is the remove the sump and take off the oil pump and push it out from the inside (usually lever with an appropriately sized screwdriver in fact) technique. Ed.*

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Dear Brian,

26th June 2007

I wonder how many readers have trouble with the ignition system as fitted to their Reliant engine. Poor starting, mis-firing, uneven running, fall off in performance, etc. very often caused by poor condition or setting of the points.

There is a very reliable cure for these problems that readers may not be aware of, and which can be easily fitted to the existing distributor with very little trouble. It is an electronic system which replaces the contact breaker points and condenser with an infra-red beam of light which is interrupted by a 4 bladed (one blade per cylinder) "chopper" which fits snugly over the existing cam ~-(in place of the rotor arm). The breaking of the beam triggers the spark.

I fitted this system to my Kitten about 200,000 miles ago, and it has probed trouble free, except for a time when a garage did not understand it and damaged the infra-red unit.

Once the ignition timing is set it stays set, it is not affected by worn points etc. The starting is excellent as the spark is both stronger and consistent, and in general everything is better.

I make the usual disclaimer, that is, I have no connection with the firm or any of its employees or associated firms, I am merely a very satisfied user of their product.

If any of your readers wants to eliminate most of the usual ignition problems, then I suggest they fit a "Lumenition" ignition system. Details can be found by Googling in "Lumenition.com", or from Autocar Equipment Ltd., 49 – 51 Tiverton Street, London SE1 6NZ.

By the way, I have owned my Kitten from new, it has done 242,000 miles plus, and has made just three un-requested stops. First time was ignition failure (hence the installation of the "Lumenition" system), Second time was running out of petrol on the German Autobahn, and the third time a sudden and dramatic battery failure.

I gave the engine a complete reconditioning at 120,000 miles, it is now showing signs of being a little tired, and I am reconditioning a spare engine which I acquired from a local business which was closing down. They were going to dump it as scrap! It proves there are still vandals around.

Regards "Spider" a.k.a. Gordon Craig No. 738.

p.s. I do carry the breaker points, condenser and rotor arm in the car just in case!

*Many thanks for that "Spider", I do from time to time think that I could, if short of material, do a page or two on what we were saying in the Mewsletter say 5, 10, or even 15 years ago, but*

*then I think, no, that's cheating. Then your letter arrived and I thought, well, there you go! Back in the early days (early days of me starting the Register) my brother Alan did us a detailed write up on the Lumenition system when he fitted one to his Kitten. Reliant themselves sold an electronic option made by Lucas I believe, it was a fraction of the cost of the Lumenition system, and while arguably not as technically advanced, a considerable improvement on the standard set up. I do wonder how many Rebels, Kittens and Foxes out there still use the original Reliant ignition system. Just asking that question of those I have spoken to recently, an amazing number of people have never improved the original system, I am quite surprised!*

*There used to be a rev limiting option for the Lumenition system, and they did a special coil as well if I recall. Their gear is not cheap, but I agree that it probably is the best, and very reliable – ignorant mechanics excepted! Ed.*

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Hello Brian,

23/06/07

I am writing this to inform you our Kitten has been sold. It is a LHD Kitten Dutch registration FS-69-VB.

I sold it to Mr. David Firman of Newcastle under Lyme. So this must be (one of) the first LHD Kittens to be registered in the UK.

Please do continue my membership of the Register.

Erik Hofman - the Netherlands No. 740

*Erik, thank you for the up-date, as one of our 5 year people you and Angelique are stuck with us till 2010 at least! Ed.*

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Dear Brian,

11th July 2007

Thanks for the Mewsletter 77, arrived today. But before I could get to read the contents, my wife got there first – Whoops! “What’s this ‘got to the end of the To Do list’? “That was the ‘encouragement list’. This is the REAL list!” 3 pages – thank goodness it was double spaced.

Joking aside, my ever loving is the best moral booster there is, you know what I mean.

When a small job of chipping / scraping off rust, or the hub was stuck fast on the half shaft (are you reading this Richard Plaxton?) There she is with words of encouragement, ready to hold the part in place or pass the right tool. Or even time it just right with a cuppy. What more could one ask for!?!

As for help on the re-build, I have been having fun trying to source a rear brake mounting plate. Over 10 weeks, but after a phone conversation today it looks like the problem has been solved.

I have the diff on the bench. But even with a proper sized (big and chunky) hub puller. With the diff bolted on the bench, and using an extension pipe on my gorilla bar. Even with heat and clouting the bolt head 'hard', the hubs refuse to come away. Maybe 30 years of contact on such a slow taper has seen 'molecular transfer' (what a load of bull). I even left one fully loaded for 2 days, and even with a big whack on the bolt head – nothing!!

So I have elected to remove the bearings from the half shafts, and visit a local engineering firm who have a 60 ton press – I will not be beaten!!

All the best, Clive Angel - Royston No. 510

*Clive, thanks for the up-date – sorry I got you into bother with the task list! Need to be more careful with the Mag in future!! That said, I had been having secret correspondence with the wife of one of our readers, even went as far as having Moira address the envelope, and enclosing it with a letter I was sending to one of our guys in England for him to post so that it would not have a Scottish postmark – but still the cat got out of the bag! That right Mary? Never mind, it's all good fun.*

*What is not such good fun is this business of changing rear wheel bearings. You will have seen me mention Richard Plaxton's name – Richard does not currently own a 4 wheeled Reliant, he has had Rebels and Kittens in the past, and has done a lot of good work on them, he was trying to do a similar job on the back axle of his Regal earlier this year, and was having similar difficulties – have you resolved that yet Richard? I know too that Sandy Riddoch knew better than to try, and 'just' had the garage do it when his Reliant failed its MOT on a noisy rear wheel bearing. Now I know that in Sandy's case the bearing cost about £20 and fitting it twice that – which I have to say does not sound bad at all.*

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Right, time for a break – there is a circulating e-mail that strikes rather too close to home, I thought we would share it with you!

“Thank goodness there's a name for this disorder. Somehow I feel better, even though I have it!! Recently, I was diagnosed with A.A.A.D.D. - age Activated Attention Deficit Disorder.”  
This is how it manifests: I decide to water my garden. As I turn on the hose in the driveway, I look over at my car and decide it needs washing.

As I start toward the garage, I notice mail on the porch table that I brought up from the mail box earlier. I decide to go through the mail before I wash the car. I lay my car keys on the table, put the junk mail in the garbage can under the table, and notice that the can is full. So, I decide to put the bills back on the table and take out the garbage first.  
But then I think, since I'm going to be near the mailbox when I take out the garbage anyway, I may as well pay the bills first. I take my check book off the table, and see that there is only one check left.

My extra checks are in my desk in the study, so I go inside the house to my desk where I find the can of Coke I'd been drinking.  
I'm going to look for my checks, but first I need to push the Coke aside so that I don't accidentally knock it over. The Coke is getting warm, and I decide to put it in the fridge to keep it cool.

As I head toward the kitchen with the Coke, a vase of flowers on the counter catches my eye - they need water. I put the Coke on the counter and discover my reading glasses that I've been searching for all morning. I decide I better put them back on my desk, but first I'm going to water the flowers. I set the glasses back down on the counter, fill a container with water and suddenly spot the TV remote. Someone left it on the kitchen table.

I realise that tonight when we go to watch TV, I'll be looking for the remote, but I won't remember that it's on the kitchen table, so I decide to put it back in the den where it belongs, but first I'll water the flowers. I pour some water in the flowers, but quite a bit of it spills on the floor. So, I set the remote back on the table, get some towels and wipe up the spill.

Then, I head down the hall trying to remember what I was planning to do. At the end of the day: the car isn't washed, the bills aren't paid, there is a warm can of Coke sitting on the counter, the flowers don't have enough water, there is still only 1 check in my check book, I can't find the remote, I can't find my glasses, and I don't remember what I did with the car keys. Then, when I try to figure out why nothing got done today, I'm really baffled because I know I was busy all day, and I'm really tired.

I realise this is a serious problem, and I'll try to get some help for it, but first I'll check my e-mail.... Do me a favor. Forward this to everyone you know, because I don't remember who I've sent it to!

Don't laugh -- if this isn't you yet, your day is coming!! Mine has been here for some time!

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*Normally I would try to have the next letter in the next edition, but Clive is pressing ahead if not at a furious pace, certainly under incredible pressure, so I thought I'd just put his most recent letter in here :-*

Dear Brian,

22nd July 2007

In my last letter I spoke of the fight with the hubs on my Kitten diff, I said that "I would not be beaten". This is the tale of the fight :-

I managed to get the half shafts out of the diff tubes fairly easily. I don't possess a slide hammer, so I made a device with two 3" by 2" by 1/2" plates with a 16 diameter hole in one. With two 16" lengths of 1" by 3mm angle welded at opposite corners. (Oh Clive, you were doing so well there till you mixed your units! Ed.) By undoing the hub nut and bolting the plate with the hole in onto the half shaft, and then using a hammer on the solid plate at the other end, the bearings and the shaft slid out without any hassle.

I went to see a friend who has a big fly press. On arrival he said "I've now got a 20 Ton hydraulic press". Just the job for bearing removal etc.

I had made up two 16" lengths of 3" by 2" by 10mm steel angle with a half moon cut-out in the 2" section, to fit between the hub and the backplate. So as to bridge the backplate whilst on the press.

We set-up the first shaft in position on the press and placed a thread saver cap over the end. We also placed a chunk of 8" by 2" timber under the shaft so as to protect the splines if the shaft dropped away too quickly. (I didn't fancy filing off any burrs on those spline ends.)

We started to put pressure on. At 850psi we stopped. The bridging bars were just bending away. We took the shaft out of the press and set about cutting the back plate away with an angle grinder. Managed to cut it away so that we could get two 19mm thick steel plates under the hub flanges. We repositioned the shaft, and started to apply pressure. At 1,500 psi we paused, the look on our faces was one of concern. Very carefully and slowly we increased the pressure. At 3,000psi we stopped and discussed what action we should take. Should we hit both sides of the hub at the same time? (yes, I would have, Ed, shock often works wonders!) to shock the taper, or should we try slowly increasing the pressure? The decision was to go for a bit more pressure. (The max. pressure available on the press was 4,000psi) At 3,450psi there was this massive bang. (I mean big!) Just like a cannon going off.

The expressions on the faces gradually became less concerned to one of (bloody-hell), glad that's over.

The shaft had come out with such force that the end had buried the splines 15mm into the wood block!

After a check on the hub to see if the wheel fixing studs were still square to the hub mounting face, they were we had a good look at both parts. The taper on the shaft and the internal taper on the hub must have been so precisely matched, you could see there was a perfect matt finish all over. Probably the hub would have stayed locked to the shaft even without the key. (Yes Beans were a first class firm who employed some top rate engineers back then, Ed!)

So we set the first hub and shaft to one side and started to chop the back plate off the second shaft. Got things positioned in the press, then very carefully started to apply pressure. Pleased to say that this hub popped off at 950psi. What a relief (Yes, word had clearly got out that you were taking no prisoners! Ed.)

Now I have all the bits and pieces back on the bench, and have started to clean and check them all over.

I have a question!! The 4mm thick "U" shaped plate, with its small cut-out for that odd shaped infill, which clamps the bearing in position, and sets the back brake plate at its correct position for the brake drum. Why is it "U" shaped? What was the purpose of the notched piece? Did it happen that this diff was designed around another manufacturers parts bin?

This notched infill piece allows water and salt to get in, (even if you glue it in place) behind the back plate and into the bearing. Which makes removal of the bearings a bit of a pig's ear of a job. The bearing bores have to be cleaned up to remove rust etc. before you can think of pressing the new bearing in. No wonder the bearings are prone to seize up.

The workshop manual states "when replacing the bearing fill it with the right grease" Thank goodness for modern bearings with shields on both sides.

I am now in the process of changing three oil seals. The two end seals are no problem. But the input pinion shaft seal is a different kettle of fish. Needs gentle cutting out with a small sharp chisel, so as not to scour the seal mounting diameter. The 30 year old leather design has a steel inner ring as well as steel outer – interesting!

Yes I did mark the pinion nut and shaft end, so that I would not over crush the spacer ring on re-tightening the pinion nut.

The diff casing and tubes have been cleaned up and the steel coated with Jenolite. Once the diff has been reassembled it can be painted, and then “Bob’s your uncle”, ready to reinstall.

All the best, Clive Angel - Royston No. 510

*Many thanks for the up-date Clive, excuse my comments, I get carried away sometimes – not literally – yet!. You make it sound so easy, o.k., I realise that access to the right tools helps a lot, and I know it was far from straightforward, but you were victorious, well done. Please keep us informed of progress, oh by the way, you talk about “modern bearings”, where did you source them? Oh, just one other point, you say that the rear bearings are prone to seizing, given the age of the vehicles and the number of owners who have ever actually had to do that job, or have it done, I would take issue with that statement. Because of that I suspect that not many people reading this will know what you mean by the specific design and assembly features you describe, indeed I wondered if your axle was in fact typical? – go on people, prove me wrong – have you had first hand experience of such matters, talk to me. Ed?*

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*There follow a couple of letters from Mr. Smith, one of two individuals who do write to me several times a year, but hardly ever see their letters in print – I don’t know why that is, Norman Schofield is the other one – anyway, I will try to redress the balance a bit here, thank you both for writing, and for not complaining about the Editor’s shortcomings. Ahh, that will get a couple of those bits of paper off my desk!*

Dear Mr. Marshall

early 2007

Another year has passed and I’ve still got me Kitten, so I’m bound to renew. If / when I rebuild it is a bit of an un-known, and I must keep me estate agents happy! I’ve not been here 2 years yet, and the rents are galloping ever upward to the point were you will probably pay more for a flat.

This year I want to get a workshop built, just so I’ve got a bench to work on.

I’ve recently seen a picture of the (a) Smart car powered Kitten. Just looks like an ordinary saloon with Smart car wheels, though I think the stock engine only produces 40 bhp. Bike power in a Kitten however would be quite mad! The R1 Yamaha engine for instance produces around 160 bhp and 0 to 60 in under 5 seconds. Z Cars.org.uk would give you some idea as they specialize in bike engine conversions for cars.

Anyway, enough of me, I enclose a cheque along with my renewal form.

Yours faithfully. Mr. R. Smith - Swadlincote No. 565

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Dear Mr. Marshall

July 2007

If you are going to explore the last depths of your lock-up is there any chance of locks appearing for a Kitten saloon? Perhaps it would be hoping too much to find an ignition switch and rear window lock with the same key?

Really I shouldn't get involved but I've found one, details enclosed, that is probably too good to ignore and is in need of rescue! The owner died about 4 years ago, and the car has been virtually abandoned since then. I think that with 4 new tyres and the brakes freeing off or replacing it could be back on the road – next summer? I keep looking at my Kitten estate and thinking it needs a 2 year rebuild. It's done 45,000 miles, still has the radio blanking plate in the dash, and it is still in the original (B.L. Harvest gold) paint.

So many of the ones I used to know about have gone or been scrapped now. Even the man at the scrappy has had a clear out. He used to have 3 Rebel estates and 3 Kitten saloons and a Scimitar in the garden. The Scimitar is still there, but only 1 Rebel and Kitten now. I suppose I ought to have a cull of my three wheelers!

I enclose an s.a.e. for your reply about the matching locks and keys.

Yours faithfully, Mr. R. Smith - Swadlincote No. 565

*Thanks, I'll have a look when we get in to clear it all out, Ed.*

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Dear Brian,

I couldn't believe it when I read that Dick Goodall had a Jowett Bradford van parked next to his Kittens. I also have my Kitten stood next to my Bradford van in the shed. My other cars are a Ford Pilot and a Morris Minor campervan.

All the best James Lambert - Hull No. 639

P.S. Excellent Mag.

*Thanks James, I have been meaning for ages to send that picture on to Alan Brierley who edits the Jowetteer, (The magazine of the Jowett Car Club) one day! Ed.*

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## BRIAN BEATTIE'S 1978 KITTEN DL.

You have heard of Brian, the delivery of some of the parts he used in the body off rebuild of his Kitten was part of the justification for my trip south in January 2007 if you recall. Well, Brian has been very good at sending me pictures of his progress, and given how well most of the pictures we have had in these pages over the last couple of editions have come out, I am feeling brave enough to try some of a car in various stages of a body off rebuild, so with the story in Brian's own words, here we go :-

I have been driving Reliant Rialto's and Robins for over fifteen years. (*This is not a confessional Brian, moving on...*). Last year whilst surfing the internet I discovered for the first time that with my B1 entitlement on my 1985 full motorbike license I would be able to legally drive a Reliant Kitten. I then set about searching the internet and came across a Reliant forum "R3W." I registered (user name "robinestrealto"). On the site they have a "cars for sales" section and that's where I saw the 1978 Reliant Kitten DL for the first time.



A few days later my brother and I travelled by train from Kirkham in Lancashire to Buxton and in the train station car park the deal was done. I set off for home happily driving a four wheeler for the first time. We only got about five miles up the road before the car became sluggish and then slowed to a halt. After some "side of the road" investigation I discovered all four brakes had locked on and the drums were red hot. On looking in the boot I found several bottles of water and poured the contents onto the wheels. After about half an hour when the brake drums had cooled we rocked the car back and forth and the brakes freed off again. I then drove very slowly all the way home using only the gears as brakes. This was quite an experience through Manchester at rush hour. We finally arrived home late that night!

The next day I found the brake master cylinder arm had parted company from the housing, also the chassis was very rusty and many of the brake plates had rusted right through.

In need of parts I asked on the R3W forum and was pointed in the direction of the Kitten Register.



One of my first Mewsletters had a picture of a Kitten with the body removed. I started asking questions on the R3W forum and soon discovered that body removal was indeed the way forward.



My Mother had recently moved from Scotland to a property near my home and had a garage but no car. My father had passed on some two years previously, he had been an agricultural engineer. So armed with my father's tools and a Haynes manual, I set about the job in hand.



I have worked on the car almost every day since last August (2006), cleaning every nut and bolt, replacing all moving parts. I have bought as many new parts as I could find available, what I couldn't find new I bought reconditioned, or sanded down, rust treated, and painted myself.

Many hours have gone into the car, and the end result is going to be good, not just on the outside, but through and through. No more hiding a poor chassis and running gear under a tidy body!



The stripped out interior.



The engine was very tired so I am using an engine from a G reg Reliant Robin bought on E-bay. The engine is the best running one I have known. I have changed the gear box, flywheel etc and polished the outer casing, as you will see, as well as re-priming and giving a full engine service.



The 'new' engine and gearbox prior to installation.



The cleaned up back axle and new springs – there is a story there.

Looking closely you can also see the new fuel tank and exhaust as well as the new rear dampers of course.



The new brake pipes and front dampers, and below the re-con steering rack and new fully adjustable dampers and springs





The 'new' chassis and running gear, with the 'new' engine and



transmission in place.



The re-furbished front brakes – inside,



And outside. Note the reconditioned bottom ball joint, very clever the way these are done.

*Sorry to barge in as usual, but I have to say that Brian's positive attitude to all the situations he has had to resolve through the course of this rebuild leave me full of admiration – believe me it has not all been straight forward, but never a word of complaint have I heard, just the odd question or phone call from time to time, well done Brian, I look forward to the day the is back on the road, its future secured for many a year Ed*



The back axle with its new brakes fitted prior to installation.

The car is now only days away – August 2007 - from having the body put back on the chassis. Once that is done I will get the car running before setting about the torn roof lining and indeed refurbishing the whole interior. The seats have already been re-covered by a local firm whose work I can recommend.



I am enjoying this project immensely and am pleased to know how proud my father would have been with the good use of his tools (many belonging to his father before).

I plan to have the Kitten on the road as my "every day" vehicle by next summer (2008).



Many thanks to "Sparesman" from the R3W forum and indeed the Kitten Register for making this project possible. "Thank you Brian".

Brian Beattie - Kirkham No. 777

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## Getting Technical

Good evening Brian.

7th July 2007

For the first time in a week we have had a dry day with, I hesitate to say it sunny periods. This is more like it! I picked 2 1/2 lbs of gooseberries off the wee bush and we had stewed gooseberries and custard for pudding, delicious. It takes me back to the house I was born in with its fruit bushes and therefore fruit pies etc. in season.

Having fitted another alternator I hoped that problem was over. Well it was in part but the ignition light decided not to illuminate. If you recall the article by the late John Bowcott in Mewsletter 27. "It is essential for the warning light to be connected and work as it comes on when the ignition is switched on, because the current through it switches on the output transistor in the regulator and provides a small amount of rotor excitation. The WARNING LIGHT SHOULD BE 2.2 WATTS, if it is less the alternator cutting in speed increases. With no warning light, the alternator will not cut in till something like 4,000 R.P.M. However once it has cut in it will continue to be 'cut in' until such time as the engine stops." And so it proved. At low revs there was no alternator output but once the engine was revved it cut in. So I was able to drive to a motor factor and buy a couple of capless 12v 3w lamps, the 2.2w rating being obsolete.

Having extracted the lampholder from the speedo the next problem appeared. The bulb was stuck tight in place, perhaps it had been there for 30 years? I could not get a good grip on it. Then I had an idea and donned a pair of vinyl gloves, which proved to have a good grip on glass and the bulb soon came out. Soon a new bulb was in place but still the lamp did not light. Yes I had tested the new bulb, I've been caught that way before! The thin wire from the alternator plug goes to a bullet connector on the nearside wing. I pulled the wires out and found the bullets to be a bit green, and not with envy. Having cleaned up the bits they were reassembled after first testing with a jump lead onto the end of the wire underbonnet that the dash light was indeed working. Now the light worked better but not always. What was the problem? Easy really, I gave the alternator plug a good push and it went on a bit further. Now the ignition light worked as it should.

The used alternator I feel to be a temporary solution (only good for the next 10 years?) so I must get a price for a recon unit.

And so on to the next job, which was to remove the Kenlowe fan's supply wires from the car fusebox and wire them to the starter solenoid via an in line fuseholder. This now works OK and should, I hope, avoid the top fuse in the fusebox from blowing at inconvenient times.

And now to get materials together for the next job.....

Best Regards, Dick Goodall - Tore #157.

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*Right, as so often seems to happen in my life, I am sitting here, hardly able to see the desk – yes again! I am about to post a copy of the factory workshop manual to Ray Best, and I know that he has a tyre wear situation and is looking for help and advice, a solution even. Anyway, glancing at page 2, the top section is about steering, and it says :-*

|                      |                 |
|----------------------|-----------------|
| “Type                | Rack and pinion |
| Turning circle       | 7.32m (24ft)    |
| Castor               | 12 deg          |
| Camber               | 1 deg positive  |
| Toe-in               | Zero            |
| King Pin inclination | 9 deg”          |

*It goes on to say that that all conforms to European safety regulations.*

*So, that's fine then, except what does it all mean? I know that Ray had done a major rebuild on this car, and that it is only since then that it has developed this appetite for front tyres, indeed just the inside edge of the tyres. The tracking had been checked, twice, by a local firm, but no change. 3 or 4 thousand miles to a pair of front tyres!*

*So, back to school, doing the tracking, wheel alignment, what exactly is it all about? And what does castor angle and king pin inclination have to do with things anyway? How does the average owner measure such things?, and how does one adjust them? and, this from my own distant memory, what does Mr. Ackerman have to do with all of the above? (The answers will separate the men from the boys!)*

*There, that was a good build up was it not? All I need now are two things, someone who knows exactly what I am talking about, can answer the questions, and even more importantly, can put it into words that I (and you) can understand! (All right, that was three things – so I can't count either!) Volunteers eagerly awaited.... Oh and while we are in that area, how would it affect these things if we increased the distance between the outer ends of the top and bottom wishbones by a 16th or an 8th of an inch? I only ask because we are looking into an alternative ball joint, and it would have that affect. Let's be hearing from you, please. I can understand that moving the wishbones further apart might have some effect on king pin inclination, but I lack the knowledge to know by how much, and perhaps more importantly, what the effect would be, and what can be done to compensate for it. I know some would say 'minimal' and leave it at that, but if I am going to recommend the use of non-standard parts, particularly ones that alter the steering geometry, I need to be better informed. Ed.*

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Hiya Brian

Wednesday 18/07/07

It's that man again, (O.K., I know that we have a number of octogenarian readers, possibly even some of the guys in their 70's might remember I.T.M.A., but was that play on words the writers intention I wonder – a young editor who recalls his father, or was it grandfather? Talking about such things! I think it even pre-dated the Goon Show by a few years) just a quickie about something in the last 'mewsletter' (another good 'un) it might interest you to know that your (the, our?) magazine is asked for by all my mates, they love it and reckon your style of writing is the best in any club or professional magazine any of us get, so there mate, it's official!

Anyway ?, Reason for mithering you, I think our friend in Tore, is it Dick Goodall?, he mentioned (or somebody did ?) the fuse in the main relay feed to their electric cooling fan, and an inline fuse holder, all in the same breath.

He may be o.k. depending on two factors, the current his fan draws, and the rating of the fuse holder, if he can, he might be better measuring the current taken, as from my experience most of the el'cheapo ones you get from the local car accessory shops will not handle over 10amps, some no-where near that!

I went down that route and melted one, if I hadn't been suspicious of it in the first place we might all be down one more Kitten!, for what it's worth the in line cigarette lighter (sorry, cigar) fuse holder on my Jag (XJ12 1983) is fitted with a 10 amp fuse as standard (local scrap yard ?). Or ?,he could do what I've done, see the enclosed photo, (everybody will have to satisfy themselves that this suits their purpose) and fit a small plastic box with a hefty fuse holder in it, and a heavy duty chocolate block connector (easily available in sizes up to 'where am I 'gonna put that one ?!')

*The fan relay is attached to the harness, out of the wet !, the box is mounted likewise out of harms way on a bracket attached to the longer of the two master cylinder mounting bolts (why is one longer than the other ?, I've only just noticed that). So that you can attach a relay of course! Ed.*

The fuse holder I used came from Maplins a long while back, but they currently stock a similar one rated at 30amps, stock code KU30H priced at 69p, the major problem I had was mounting it somewhere, especially where it's dry !, as the solenoid area of the Kitten is at best a water trap, and I didn't fancy a long length of unfused cable from what is in effect the battery to a pukka auxiliary fuse box elsewhere.

I've enclosed a photo of my eventual fuse result, the small plastic boxes are available from Maplins also in various sizes, and yes it does have a lid on !.

I ran a short hefty wire down to the battery terminal on the solenoid, taking care to keep it away from any metal bits it could chafe on, as it 'aint fused up to the box !.

This might seem like overkill, but I eventually intend running the headlights through relays and the box could take more fuseholders depending on the box size, or as mine is will probably feed their relays as well.

To operate the fan I took the fan dashboard on / off switch feed from the Kittens original fusebox, using the spare output terminal, the bottom one on the fusebox as you look over the wing, on mine it only feeds the heated rear window and is off when the ignition is off, so the fan cannot accidentally be left running as ours is not on a thermostatic switch (yet) there's also an led on the dash to let us know the fan is turned on.

Let's face it Brian, our 'wee cars', like us, are not getting any younger, and an extra fuse box comes in handy, I apologise for the grotty state of 'Hazel's' engine bay, but the car gets used, I don't believe in ornamental motor cars !.

To finish this 'quickie' (don't laugh) the rear springs are on, I went round 'the little red fire engine' and checked /greased /adjusted everything while I was at it, I ended up replacing the front top shock absorber / spring unit bushes as they'd partially vanished ? (I had luckily kept some usable old ones as spares).

Welcome to Tameside, home of the speed hump !, oh and another thing, if anyone's scratching their heads as to what the metal plate the master cylinder is fitted to, briefly, I had to alter the length and positioning of the foot pedals to suit Hazel (she's a tiny person, but she explodes all around you).

We originally sat her (Hazel) on a box in the car and constructed the seat and pedal positions around her!, but the pedals were then longer and I didn't like the amount of flexing on the fibre glass bulkhead !, so we strengthened it by welding up some special plates to mount the master cylinder onto, at the bottom the plate bolts to the steering column bracket, (yes, the insurers are aware).

So that's me done, I know Dick lives somewhere a bit remote (lucky fella) and there's likely no Maplins near him. If he's stuck Brian, and hasn't resolved his fuse problem, give me a shout and I can pick the bits he needs up when I'm in Maplins next and will gladly post them to him or you with pleasure, you know where I am, we'll worry about any payment at a later date, no problem.

All the bits I used came out of my junk box, I fiddle with electronics as well, my sons are musicians and I look after their kit and old valve amplifiers, so we're thrown out of Maplins on a weekly basis !.

You might mention sometime Brian if the Register's system will accept attachments, or if it filters them out as rubbish ?, either way is fine by me mate. I'm off, take care, regards to everyone.

Bill Starkey, membership number 0386 (Hazels pit crew)

*Yes of course I sent Dick a copy of that article as soon as it arrived, and thanks for the information Bill. I was thinking about you the other day when Brian Beattie had a situation with back springs – but at that point I could not remember who it was that had the experience, thanks Graeme for keeping me right, so it goes on, and yes Bill, the system can handle attachments, Ed.*

..~..~..~..~..~..

Dear Brian,

30/7/2007

### **Fox Pi and Gravity**

The question of Speedo calibration was raised in a recent Mewsletter. When I fitted my rebuilt 750 gearbox to my Fox I found that the speedo read fast, in the ration of 12 to 10 as the drive pinion had 10 teeth and the original 12 tooth Fox pinion would not fit the 750' box. I would have been happy to put sticky tape on the glass of 111 the speedometer at 30, 40 and 50 mph (the Fox lose interest after that) and make do., but the mileage would read high causing my insurance company to get deeper into my wallet if they looked at the readings at MOT time.

I sent the speedo head to Speedy Cables of Abercrave , Swansea SA9 1SQ who did a very good job of recalibrating it. Total cost with p&p etc was about £60, they took rather more than the 20 working days they had quoted, but did an excellent job, returning it like new and set to the mileage I'd requested.

They ask you to download a questionnaire from their website and fill in some measurements. These include the rolling radius of the wheel (with the wheel on the ground), and how far the car moves in one revolution. These measurements came to 10.3" and 66". Working on these figures I calculated that Pi for Reliant is 3.204 rather than 3.141 etc as used by the rest of the world.

This came as no great surprise as I remember weighing my old three wheeler and never getting it down to the legal 8cwt. So Reliant must have worked out a different value for gravity too. It explains a lot about Reliant behavior.

All the best, Jim Lugsden - Bekenham, No.

*Thanks for that Jim, my daughter will be most upset, as part of her showing off as a child she first learnt the value of Pi to 100 decimal places, then to 250, and yes, you can still find her there on the appropriate web site – yes they even have a web site for those sad souls who have memorised Pi to hundreds of decimal places – no, I am sure it does not help her sleep at night, but your shattering revelation might keep her awake! (She had it written in felt pen round the top of her bedroom walls, it took us hours to sand it off when we re-decorated after she got a house of her own!)*

*We used to remember it to four places when I was at school, though the story went on, I can't remember any more than "See I have a rhyme..." which our teacher said we could round off to 3.142. Ed.*

*Just one thought, in defence of old values – what pressure was in the tyre at the time of the measurement? Ed.*

..~..~..~..~..~..

*Then, by e-mail, the following arrived from Duncan Bradford...*

OK, here's an old niggle I've decided I must sort out - prompted by Jim Lugsden: He's had his Fox speedo recalibrated cos he is running a non-fox speedo, with 10 teeth on the driven gear. So am I, but I was told I could just exchange it for the Fox one which has 12 teeth IIRC. I was told the teeth were held further away from the worm drive gear, so in spite of not understanding how this would work, I tried it. Well it wouldn't fit, and as I'd already overhauled the box, I carried on deducting about 15% from my speedo reading. I then thought 'Aha, maybe the bush which carries the driven gear is drilled eccentric on the Fox', so I've emailed Sparesman for info on part numbers [I do know that all the worm drives are the same]. Then Jim rang and said no, that would be too difficult, they probably used a slightly different end cover, which positioned the bush slightly differently...

At this point I throw myself at your mercies.

How do the Fox gearboxes differ? there are no identifying marks.

How does placing a pinion gear further away from a worm gear mean

that it turns more slowly? Please help, all you boffins.

This message is on R3W as well as the foxandkitten Yahoo group

Thanks, Duncan.

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## **Tales from Tore**

Hello Brian.

29th July 2007

Well it started off as a simple sort of jobs day, fix (again) the o/s headlamp (dim again) and fix one of the horns. Having reached the headlamp a wiggle of the connector on the bulb made it work. There's something odd here, and so it proved, for the spade connectors in the plastic block were rather dull to say the least. Careful prodding with a small screwdriver released them and I was able to clean them up. It would have been better to replace them but they are bigger than the standard 1/4" spades and I must visit a shop in town to get some. On reassembly the bulb lit brightly and continued to do so after all was replaced. OK so far.

Then I turned to the horns. To my surprise the one I had removed and fettled a couple of years ago was still working, its twin was the problem. I decided to remove it, the bolts had to be hacksawed through of course. I have seldom seen such a sorry looking item it was so rusty it should have been dug up on Time Team. However a Mole grip applied to the tuning screw managed to turn it. So I looked for wires to try the horn direct on the battery, and found that the terminals on the horn were absolutely crusted with green fur and dirt. It took a while with a needle file to clean them up. Eventually the relic stuttered into action and finally gave a good sound. I didn't want to replace it in its sorry state and after a good wire brushing gave it a couple of coats of Hammerite to match its twin. Murphy stepped in with rain and cold and so the paint is not yet dry, but I'll slip out and fit it before dark, tacky paint or no, these vinyl gloves are great!

Hopefully we all know the necessity of regular lubrication especially on steering ball joints, but there is one pair of parts which cannot be greased, usually. I refer to the track rod ends, which after a year or so can almost seize solid. Yes I know they are cheap to replace, but tracking costs money and time and it's a darned nuisance. I came across a couple of TREs from last years fun and games and decided to do a bit of investigation.

After pulling off the rubber boot corrosion was evident, was there ever any grease there? Having applied some oil and moving the joint by holding in the vice and hitting with a hammer (yes it WAS that tight) it eventually freed up to a degree. Would a grease point help? So a hole was drilled and tapped into the top cover, grease nipple fitted and grease pump applied. It was difficult to get grease in, obviously there are no grease grooves. Well just what is inside? After application of a grinding wheel (oh what a vandal I am, and what fun it was...) the TRE came apart. The ball inside was well pitted with corrosion though the nylon seats seemed OK.

So what can be done? I did wonder if some clever guy could mod new TREs to add a grease nipple but it seemed a lot of work. Anyway it was time for coffee so I sat down at this ol' PC and then searched the Internet. To my surprise / amazement, astonishment etc. the Morris Minor TRE appears to HAVE a grease nipple fitted as standard. Now will it fit a Kitten? If you

know, please tell me. Otherwise I may just throw caution to the winds and order one next week to see if it will suit.

Ah it's raining again, how unusual. I must say that the old gazebo erected where I park Kitty has been very useful.

Right I have wittered on for far too long, best regards, #157

~.~.~.~.~.~.~

Hello Brian,

9/8/7

Thought I'd let you know about the new suspension units which you and Duncan kindly sent so quickly.

I did some measurements and calcs. and found the spring rate to be as advertised, at about 150 lb per inch. My old ones were 166 lb per inch being 0.1" smaller in o/d but with same size wire. I wound up the adjuster to give an installed length of 7 3/4" which gave a pre load of about 300 lb a bit less than the old ones calculated 332 lb. As you suggested I gave the damper adjuster 15 "clicks" from the minimum position.

Even though the springs are a bit softer the suspension seemed firmer on these settings. At this stage I had one new unit fitted and one old one so that I was able to jump up and down on the Fox and compare the two at least subjectively.

Having fitted the second unit I set off for a test drive and found, again subjectively, that the front end was firmer which I think is an improvement. I found that they were resurfacing a piece of road near us, so, waiting for a clear gap in the traffic, I drove up the unsurfaced bit at about 35, aiming for all the drain and manhole covers and the little ramp at the end. Nothing fell off and the suspension behaved impeccably. I enjoyed it so much that I collected my friend Ron, and we did it again two up, also with excellent results, so I am very pleased with the units. I don't know if my settings are optimum but I'm happy with them.

If anyone else is fitting these units I would suggest that they oil the large adjusting nut before squashing the spring with it and use a proper "Cee" spanner. Also wind the spring up at least part way before installing the unit or the adjusting nut will foul the anti roll bar mount (at least it will on a Fox). In the interest of keeping road muck off and giving the damper adjuster some protection I fitted the units with the knob facing inwards.

Thanks again Brian and Duncan for saving my bacon.

Regards, Jim.

*Many thanks for the feedback Jim, and thanks to Jim we now have a Cee spanner that can be borrowed in future by anyone needing to do that job. Ed.*

## Spare Parts

It has been a couple of editions since I said much about spares. Duncan Bradford and Sandy Byrne have got together to commission another batch of stainless Fox window frames, these may be available by the time you read this.

As far as our own stocks go, turnover is as ever both slow and very erratic. Top ball joints are one example. We sold a pair of serviceable secondhand ones, on good wishbones, back in April. As usual this was done on an exchange basis, but I didn't check that the old units had actually been returned to Alan for re-conditioning – in the event they hadn't, and so we did not have a pair in stock when I was asked for a pair in July. (We do have top ball joints, just not on serviceable wishbones at the moment) I felt really stupid. I really need to learn to trust no-one, this will inevitably lead to me having to make a substantial surcharge if we are to ensure that old units are returned. I cannot over emphasize the importance of getting old units back. If we don't, we can't recondition them, and the whole system falls apart. As you will perhaps have gathered I am about as annoyed at myself for not checking sooner, as I am with the individual concerned.

Moving on, I had two phone calls in the space of as many days in July. Both looking for a top ball joint. Actually I had three calls, but two were from different people about the same car! So that is the last of the new ones away, and we will be getting these old units back I am assured!

The high quality poly anti roll bar bushes that we invested heavily in last year, and then sold precisely none for 9 months, suddenly I sold two pairs in a week in July. So it goes on.

We are approaching a re-order level on the front dampers and spring situation, but, again, demand is very spasmodic, and it is very difficult to make a rational judgment as to when to invest what amounts to 50% of the cash currently available in the spares fund on one item.

Kitten back springs we sell between 1 and 2 pairs a year, but need to get 10 made at a time, which brings me neatly onto the matter of Fox back springs. John Whitfield was telling me his were getting a bit thin and when was I going to have some made? Well, we just need two more of you to agree to take a pair and we will get going on that front, so talk to me if you have a Fox and will be interested in making sure that we have back springs available as well as Kitten ones. I can't put a firm price on them, spring steel prices seem to be rising faster than U.K. house prices at the moment, but we are looking at somewhere in the region of £100 a pair plus delivery. No old units needed for springs mind you!

## Sales and Wants

For Sale :-- TEMPEST TEX 912R. This Tempest is probably the most well known and successful of all the cars made to date. Built in 1991 on a 1977 Kitten chassis and running gear, it was fitted with the Tempest Cars first production body. (The red one on the original Tempest brochure)

The car was not used on the road between 1992 and 2004. It was used in production car trials on a National level and was 4 times winner of the RAC/MSA Class D National Championships.

Now in full road trim with

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- \* Many spare parts included.

Because the Tempest body was a complete factory built assembly and this car is a re-bodied Kitten, it is registered with the DVLA as a Reliant Kitten Sport, the only one of its kind. £2,250  
Please phone Jack Williams

For Sale :- 1976 Kitten Saloon. Off the road for a number of years, just two owners I think, 75,659 miles from new, with its current custodian since February 1979. A secure future is more important than £££. Brian Hardiman is the chap to talk to, Brian is in Essex.

For Sale :- Kitten chassis, never been welded, needs cleaning, £25, buyer collects. Ring Brian for details Junction 025 on the M1.

Kitten for sale :- 1976 Kitten saloon OFO 909R. Hereford Salvage Services Geoff is the man.

For Sale :- Jim Spence's Kitten spares in central Scotland.

For Sale :- some of my bits are still available, the lock-up will need to be cleared this year, so if there are any secondhand bits you may need, now would be a good time to talk to me. I will not enjoy scrapping parts that may some day be of use to someone, but I need to make progress. So if you are after anything from a dashboard to a door, a bonnet hinge to a sidelight lens, manifolds galore, give me a ring. 0141 8866117 is the number you require.

For Sale :- Bryan Ayers Kitten Sports, on the road and registered, see the cover of Mag. 68, (numbered wrongly as 67!) For a picture of the fabulous looking vehicle, contact Bryan for details. Newstead Abbey

## **EPILOGUE**

As I type it is July the 21st, This edition, at this point with no pictures included, is half full, with very little input from myself, which is good. What is not so good is the fact that the paperwork has mounted some kind of rear guard action while I was distracted with our last edition, and has, yet again, overwhelmed my desk. So I am going, major distractions excepted, to switch the computer off for a week, and see if I can make some serious progress.

O.K., that plan failed miserably. I'll lay the blame at the feet of Bill Starkey and Clive Angel who between them took half a day out of my week! Thanks guys, such input not only saves our readers from more boring words from me, but really fills me with enthusiasm, and in this case, probably means an even bigger magazine than the last two! Must check and see how close we are getting to the magic 100 grammes this time (the current maximum weight that Royal Mail let us send for a second class stamp these days). It is now the 24th of July, we are past the 10,000 word mark, 25 pages and not a single picture put in yet, can we afford the extra paper? – Of course we can.

My big concerns now are – am I going to be able to maintain this size and quality of magazine? Would it not have been smarter / safer to keep this one shorter and save the big push

for the Christmas one, which will after all include your renewal notice! Or should I remain confident in both my own abilities, and the increased number of your articles, and consider the possibility of squeezing an extra edition into this year?!? It's up to you to a not inconsiderable degree, but I am prepared to look at the feasibility.

Right, that is me just moved this lot into the 9 page A4 to 36 page A5 template, we don't use that one very often, and that excludes the front cover by the way!

That said, I really need to both deal with the paperwork, and give the lock-up contents more than just thought! All that and three car club type events that I am committed to in August, well seen this September / October edition is this far ahead in July really. (just checked, that is 11,979 words as at 29/7/07).

Time has again moved on, Moira and I escaped, at very short notice, to the Lake District for a weekend at the beginning of August – a very busy time to go there, and it was wet too! A new computer had been organized just before we left, the old one was 8 and getting tired, like cats and dogs, computers seem to age much faster than us human beings, and so I came back to the joys of having to set it up, almost a week without e-mail, a mixed blessing, mind you, it brings home to me how little I really know about these things!

And we're off again, no, not on holiday, back in harness with the Mewsletter. I just weighed a draft copy, and there is in fact room from the weight point of view for at least a couple or three more A4 sheets in the envelope, so, without further ado, I'll drop this edition into a bigger template still! I am coming round to thinking that a bigger magazine, as long as your articles keep coming, will be better than an extra edition, well, more manageable from my point of view at any rate. Your comments or thoughts on this would be of interest.

Right, I will close now, the Christmas edition calls! Take care, drive defensively, and do I really need to tell you what to do with these ball joints?

**Brian**



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