

Locost Builders Group of WA

February 2002 Newsletter

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UP COMING EVENTS

7th February 02:

Locost Builders Group meeting, Special Guest speaker – Charlie Urwin

17th February 02:

Avon Valley Vintage Assoc Swap Meet. Diamond Jubilee Oval, Northam, 6am onwards 9622 3799.

10th March 02:

Vintage Auto Assoc of WA 'Vintage Car & Bike Swap Meet' Bassendean Oval. Sites cost \$6, buyers from 7am cost \$2 adults, kids free. Enq Laurin 9342 3702 Ross 0412 861 811

17th March 02:

Marlows Classic car Show- Whiteman Park, Lord Street. 8am-4pm Geoff Moore 9397 5515, 0418 929 035, Sec. 9364 2998.

EDITORS COMMENT.

Well this is the first of what I hope will be a regular newsletter, as I'm doing the first one I'm afraid most of the content is from my input. This is not desirable as its not my newsletter but yours. So we need your input. Daren has given me some articles that I think are best filed for general information as they are not Locost specific and fairly volumous. What I am looking for is first hand experiences that have been tried and found to work for you and may help other builders.

Charlie Urwin of Fibreglass and Resin Sales has agreed to sponser this newsletter to start with in return for some advertising and I am editing it in return for some advertising and we will see how it progresses. But most of all I need input from you.

At the february meeting Charlie is going to chat to us about his dealings with Ron Champion as he was to become a Locost Dealer for WA and has developed fibreglass components to suit and is building chassis with a view to offering a low priced kit. He has also developed and built a racing sports car which uses a rear mounted motorcycle engine and is able to be raced in Australia in an existing class. All of which I hope he will explain to us so make sure you come along.

I will include some updates on various projects that I know of and hope you will keep us up to date on your project.

cheers for now Barrie Nelson

ps. I can be contacted on 93970962 and my address is 127 Blair road,Oakford,WA 6121.

WHERE IS WHO AT?

I have just today finished installing my steering column and connected it up to my shortened rack which I had previously installed, this completes all my steering and suspension except for some final welding. My engine and gearbox are all mounted, tailshaft, handbrake and seatbelt mountings are in and my transmission tunnel framework is completed. I have several other jobs to do before taking it apart again to panel the floor and cockpit area etc. As I work from home anyone is welcome to drop by and see how its going.

Nigel Adams is roaring ahead, he is presantly connecting up his steering column has constructed his Mark 2 all metal scuttle and has all the floor, bulkheads and transmission tunnel panels welded in. He has 2 Cobra aeats that just fit in and these just need to be trimmed. All suspension is done, he has used Jaguar rear shockies with special springs made by Boynes Springs, although he reckons that if you cut the standard springs so that you just have enough preload to keep the collets in the springs they would probably be OK. He has had Summerfield Engineering make up some 14 inch wheels so that he can increase the ground clearance under his ISUZU diesel engine. I believe he is currently working on the pedals and rollover bar.

Brian Cowie has just got a shortened rack, modified pinion flange and 4 seatbelt bushes from me so he is in the throws of fitting these. Liam got him a pair of Gaz front shockies from England and he is using Triumph Dolomite shockies on the rear.

Darren Ponton has fitted his revised top front suspension mountings and fitted his modified tailshaft (no prizes for guessing what colour its painted) and is fitting his fibreglass scuttle together with a wooden dash. He got a bit sidetracked with fibreglassing 2 rear guards and a nosecone from the moulds we have been lent to send over to the middle east, which I thought pretty generous considering he allready has his.

This is all the information I have at present.

Barrie Nelson.

BARRIERS TIPS AND TRIBULATIONS

These tips are not necessarily in any particular order depending on my memory.

The first thing I would suggest is when making the very front crossmember that you make it flat instead stepped back 3 inches as shown in the book also weld in the X brace as per local plans and then angle the ends of the chassis to to accept the slight angle from verticle. This way you will still have the 3 inch step back but it is much easier to make and the slight mismatch at the chassis ends is barely noticeable.

When Nigel brought his chassis round to set up the front suspension mountings we found that the best castor angle we could get was 1.5 degrees positive which is well short of the 5 degrees called for. I mentioned this at one of the meetings and Darren and Roland discovered there was a mistake in the drawing in that the top balljoint needs to be moved backwards approx. 19 mm to get the correct castor.

BARRIES TIPS continued.

Coincidentally I had decided to make some top suspension brackets 20mm wider as I wanted to be able to adjust the caster on my car, so if you have already made your top wishbones according to the book by using my wider brackets (or making your own) you will be able to correct the castor angle. If you have not yet made your top wishbones then make them as per the book except position the ball joint 19 mm to the rear of the car. I have made a jig for both the top and bottom front wishbones that I am happy to let builders use but I am not prepared to let you take it away, but you can use it in my workshop and use my welder. This is not because I am mean its just that these things sometimes don't come back (I have been burnt before)

I discovered recently that by using the 2 piece Corrolla tailshaft that if you separate the 2 halves and fit the front yoke to the front of the rear section (the uni joints are all the same) it ends up the right length if you are using the 1600cc Toyota engines and gearboxes. If you then remove the Escort diff, flange, you can machine it down to fit the Toyota rear flange. You will need to drill and tap the flange as there is no space to put a nut and bolt through the flange. Of course all this cost me nothing and I was able to narrow the transmission tunnel, ironic then that the tailshaft was the one thing I would have had no trouble with as I had a friend who would make one for me for free!!

I have made my shockies from Torana shockies after copying and improving on Darrens idea which he copied from an English idea. Basically it involves making a sleeve to go over the lower section of the shockie that supports the lower end of the spring and a collet type arrangement at the top to take the spring. It is hard to explain but I will gladly show you mine. The only trouble of course is that Ron says to make them 14 inches eye to eye when it should be 12 inches. Darren has used Mini fron shockies which are the same diameter but shorter which is better except that the Mini eye bushes are not up to the job and will need to be replaced with something stronger to support the weight of the car, as the eyes are fairly thin a new eye could be welded in.

If you have any first hand suggestions I will be glad to print them so that we don't all re invent the wheel. But I don't want theories ? I want tried and tested ideas that work please.

WHEELS.

As I mentioned in another article the 5.5inch steel Mk.2 escort wheels that I will be using fouled the rear suspension which I overcame. So Darren and I decided to measure all the wheels we could find, now we are not using the official inset and offset measurements as I feel they are confusing what we have done is to lay the wheel flat on the ground with the outside upwards and measured the distance from the ground up to the mating surface of where the wheel touches the brake drum/ hub flange and the results are as follows:-

5.5inch TC Cortina 4 7/8"

4.5 inch TC Cortina 3 7/8"

5.5 inch MK 2 Escort 4 7/8"

5.0 inch MK.2 Escort 4 1/4"

5.5 inch Hillman Hunter Mag Wheel 4 1/8"

There is also a 4.5 inch MK.2 Escort wheel but we didn't think anyone would be using them so we didn't bother to measure one. So it can be seen that the Hillman wheel would be the best option. It is possible that after market wheels will fit better but you will need to check before you purchase any, the problem is that the wheels have too much inset, as mentioned elsewhere the problem can be overcome with spacers or specially made wheels.

Barrie nelson and Darren Ponton.

Here is some info that could be of help to other builders. I recently did a service on one of the last of the RWD Coronas and noticed that the speedo cable had an almost rightangle drive attached to it that kept the speedo cable close to the gearbox and would therefore be ideal for our cars as you could run the cable forward alongside the gearbox thus not needing to pass it through the side of the trans tunnel and cockpit. I consequently bought one from Just Toyota for \$40 which I thought was a bit dear still it does the job perfectly. On the way home I dropped in on Nigel who is making great progress and he asked for my advice about his speedo cable which is an Isuzu and very smugly I said "fit one of these " and produced the speedo drive I had just bought which fitted his cable so I suspect the japanese cars all have the same type of speedo cable. " Well if your so smart then how do I mate the other end of the speedo cable to my Triumph speedo head " It just so happened that I had allready solved this problem when I fitted a Toyota Twincam to my Triumph Dolomite, I just broke the plastic clip off that holds the cable into the speedo head so that the metal sleeve could fit over the threaded portion of the Triumph speedo and put a small hose clamp around it which squeezed it just enough to hold it on and it is still performing ok years later. This reminded me of several other methods I have used over the years when miss matching varous gearboxes and speedos.

Another method I have used is to get the speedo cable of the gearbox and the vehicle it is to go into and carefully cut the outer cables so that they can be joined and still remain the same length. I then join them with a piece of rubber fuel hose and a couple of clamps. Luckily regardless of type of speedo head they all seem to use a square cable at the head end. I have also made cables longer using this method and making a new inner cable to suit.

I have also used yet another method and this is to simply pull the end that doesn't fit off of the outer cable as it is usually just crimped on, do the same to the other cable end and then drill the end you want to use to fit over the outer cable and super glue and crimp it on. I used this method with a P76 speedo cable which is very long , to mate up a tacho on a rear engined off road buggy and it worked great allthough I did have to almost wrap it round the chassis twice to get rid of the excess length.

If all the above fails I did see in the Castlemaine Rod Shop over east when I was there that they claim to solve any speedo problems and I believe them as they had a huge range of speedo drives.

When I fitted my Escort rear axle to my chassis I found the wheels (standard escort wheels) even with standard tyres rubbed on the radius arms and chassis brackets. I thought I would cheaply cure the problem by drilling out the spot welds between the rims and centres and move the centres inwards and reweld them, I did the same thing with some VW Combi wheels for a beach buggy years ago, so I drilled out the spot welds and bashed and bashed the centres but they would not move they must be pressed on when they are made, so on to plan B. Fit longer studs and fit spacers but I couldn't find any suitable studs untill I came across the front studs of a P76 (my friend wrecks them, hence the high usage of P76 parts) and these fit very tightly in the Escort stud holes and are much longer, you also need the P76 wheel nuts as they are a larger diameter. Nice products (thats there real name) make universal spacers in 8mm and 3mm sizes allthough I had to order them ex East.

I have almost finished my cheapskate coil over shockies and am just waiting for some springs before I finish them maybe next months article.

regards barrie.

P.S. Liam tells me you can still get Universal inner speedo cable kits from motor part shops. These have different ends you can crimp onto the inner cables. I have used these also, but didn't k now they where still available.

BUMP STEER.

For those that don't already know the Locost design allows considerable bump steer, which is not a good thing to have. When we checked the alignment of Darrens car last year we were amazed at the amount of toe out for very little suspension movement and it became obvious that the steering rack would need to be shortened and subsequent drawings for the Westfield confirmed this. Most cars have incorporated the Westfield modifications to minimize bump steer. Basically you need to remove 100mm from the inner rack and 90mm from the rack housing, and then extend the steering rods by 50mm each side.

PINION FLANGE COLLAPSABLE SPACER.

The Escort pinion has a collapsible spacer to maintain the correct pre load on the pinion bearings. If you have to remove the flange for any reason, mark the position of the nut on the shaft before you undue it, even then you will find if you get it back to exactly the same place the flange will be loose on the spline. However if you take the flange off and take the seal out you can hook the front bearing out and also the collapsible spacer. You will find that the spacer has a bulge where it has collapsed, if you slip the spacer over a pipe or solid rod and hammer the bulge flat again the spacer will now be longer. Re assemble everything and tighten back to your mark and the spacer will collapse again maintaining the preload. DO NOT over tighten as the whole procedure will have to be repeated.

FIBREGLASS WORKSHOP.

Charlie Urwin has agreed to run a workshop on a saturday that is agreeable to show us the ins and outs of fibreglass construction. This will take all day and is a hands on experience so be prepared to get sticky. A charge of \$10 is payable up front to cover the cost of lunch and a few drinks afterwards. I did a workshop with Charlie many years ago and the knowledge gained has been invaluable, particularly with regard to mixing the resin. Please contact Barrie to put your name down and pick a suitable date. phone 93970962. The workshop will be held in Charlies factory in welshpool where everything required will be to hand.

CAR TRAILER HIRE.

Barrie Nelson has a car trailer which is available for hire to members for \$10 a time, the only catch is that it is at his workshop in Oakford but the hire fee is for each time you use it not per day so if you need it for a few days thats OK. The trailer looks a bit rough but works OK has a winch and will take small to medium cars and Locosts of course. For bookings ring barrie on 93970962.

BRAKE PIPES AND WHEEL ALIGNMENT.

I have a brake pipe flaring tool and am prepared to flare your brake pipes for you at your place or mine (I won't lend it out) for free as long as I don't get used up. The same deal applies to my portable wheel alignment gear, although you will need a very flat level surface to do it on. Wheels don't matter as the gear bolts on in place of the wheels and although purely mechanical is very accurate. as always ring me on 93970962.

FOR SALE AND WANTED.

For sale all the bits you need stripped from a mk 2 Escort including wheels etc. steering rack is dismantled and inner rack has already been shortened and machined. \$150. call barrie 93970962.

For sale shortened steering rack fully assembled with new rack boots and rod extensions was factory replacement by TRW. \$240 +GST or less if suitable unit for part exchange and complete. barrie 93970962.

Chassis partly completed by PACYClub will give you a head start as you wont need set out table includes Escort diff assembly complete drum to drum (no handbrake cable) including tailshaft. \$250 barrie again on 93970962.

WANTED

5.5inch MK2 Escort wheel. Also wanted Escort MK 2 steering racks or parts. 9397 0962

FIBREGLASS & RESIN SALES PTY LTD

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