

The fascinating story of how the V twin Ariel was built, by Tony Harris, continues:

Ariel update VNH Pt 3



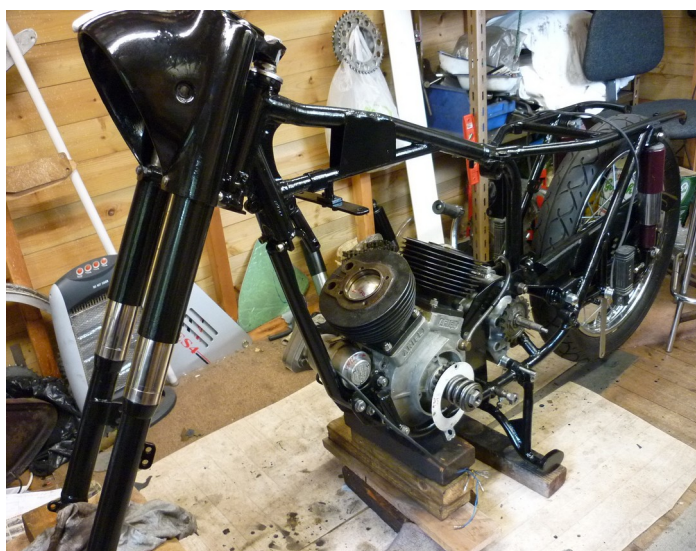
Last time I spoke about the engine modifications and updates. This time I will turn to the chassis.

As I said earlier, my original intension was always to mount the VNH engine in Ariel cycle parts, but at the time when I made the motor I didn't have anything to put it into until I purchased the donor bike off John Mitchell (Ariel magazine editor).

The bike from John had not been on the road since 1974. Although mainly complete and the engine turned over, it was loosely bolted together, just what I wanted. The bike was a mid 50's NH 350 and as the cycle parts are all the same from 350 to 650 there was no problem with the frame being too lightweight.

One of the things I didn't want to do is cut this frame as it looked in first class condition.

At the end of 2018 there was an advert hidden in another advert in OBM. This was for an Ariel swing arm frame. There was also an engine /gearbox in engine plates together with all the primary side. This was quite local to me and the guy was immigrating to Germany that week and had no room to take it or inclination to get the bike finished. The frame was pre full width rear hub so about 1955. He wanted very little for it and as I knew I had some major alterations to perform, I thought I could save altering Johns frame, so I just use the cycle parts off the NH like Guards, forks, tanks etc.



When I got the new frame home and started looking at it closely, I noticed one of the rear footrest silencer brackets was badly damaged and the gearbox bolt lugs on the bottom frame rails were way out of line. It also had no swing arm and one of the splined footrest lugs was also sheared off. (what could I expect for £25). I set the frame up on my milling machine, lining the swinging arm holes and headstock up at 90 deg to one another. I then machined the holes in the gearbox lugs out and sleeved them in line. This was not easy, (see pictures of hideous set up.)

I then cut the footrest hangers off the rear of the frame and sif bronze welded tubes in their place including rear brake stop mounts. As I didn't have rear footrests I bought a pair off Ebay for a BMW R65 for £15. These don't fall down and are far superior to the originals (and cheap).

I bought a swing arm to go with the new frame before I realised that it was the wrong one. The frame had no lugs on it for the cross over linkage to the rear brake. The brake on the 55 model is a single sided one with the lever on the drive side, the same as the chain. The later full width hub has the brake on the time side, hence the bracket on the frame for a cross over linkage. Also, the early swing-arm has an open end where the wheel fits, the later enclosed end, we live and learn.

I could have used the donor rear wheel and swing arm out of Johns bike but decided to get a single sided one with the drum on the same side as the brake lever. If I hadn't done this, I would have had to weld the brake bracket onto the frame as the later model has.

Fortunately Stan Coupland supplied a rear wheel, brake lever and the right swing arm with open ends. He's a font of Ariel knowledge, thanks Stan. Who needs a manual when Stan's about.

The holes in the engine crankcase I drilled and reamed 10mm (that's a metric dimension for those who were not converted in 1972 ish). I reamed the holes and used 10mm dia. bar to make engine bolts so the crank case halves lined up. The hole positions were standard Ariel so engine and frame all lined up. I had to move the engine over a little to line the clutch chain wheel with the engine sprocket, this meant I had to put a small cut-out into the time side bottom tube.

When I put the crankcase into the frame for the first time, minus heads and barrels, I realised the front cylinder would end up in the middle of the front down tubes because of the "V" formation, so they had to go, (not the barrels, the frame tubes, keep up). I also found out that the cylinder head, when fitted, would be under the headstock and would be in the way of the tubes, also the exhaust would hit the front wheel. The only way forward would be to move the headstock about 2" forward to get everything to line up. See pictures somewhere about to show my dilemma. A picture says a thousand words.



After measurements for headstock angles etc on my frame jig, I got the disc grinder out and took the top frame tubes and front down tubes out. After fixing the frame onto the fixture and lining the swing arm with the head stock I sleeved the top tubes and sif bronze welded these into position I then plated either side for a little extra strength.

The front down tube I have made detachable, I can now adjust the exhaust tappet on the front cylinder and keep the wheel base down. It also gives direct support and strength to the frame. The wheelbase has ended up between 58 " and 60", depending where the rear wheel is in the fork, so not to bad, just a couple of inches over standard.

I have also made a plate to bolt on the front cylinder head rocker boxes and this has a tube bolted to it and is fixed directly under the head stock so the front cylinder also reinforces the frame. More belt and braces. The whole lot is just hand painted in case I need to do any more welding for any reason, which I have.

The next thing was the fuel tank. I didn't want a gap between front the front of the seat and the rear of the tank so I cut the front tank mounts off and fabricated some more about. 1" further back. I then made some brackets for the seat to move it about 1" forward. This has closed the gap and does not look out of place when its together.

When I fitted the new swing arm, which had been black powder coated, it had so much movement in the rubber bushes



the sides were hitting the footrest mounts. I think it was a little to do with the powder coating and the fact they were over 60 years old.

I know you can get new bushes but decided to replace them with bronze ones. I know I'm not the first guy to do this but will write a little piece about this separately in case anybody else fancies doing the same.

I rebuilt the forks with new bushes and springs and used the later full width brake. I will replace this with a single sided 8" one from a BSA or such when I can find one or even a disc if I have to. I will try and keep it period though.

I think that will do this time, so next time, I will deal with fitting the engine, drive train and cycle parts.

Crich Tramway Classic Bike Show 2021.....Barry braved possible bad weather and attended

Last weekend, 3rd October I rode, in sunshine, into the site of a rather splendid museum dedicated to preserving and renovating trams which are no longer in use elsewhere.

The site is in the form of a street from possibly 100 years ago, complete with cobbles and tram lines running the full length and beyond. Either side of this street, which must be 2 or 3 hundred yards long are buildings of the period. These house shops, an exhibition, tram storage and restoration sheds, a cafe and more.

All very interesting on their own but this day several hundred classic bikes were due to arrive. I had booked my entry a few weeks ago and was determined to attend whatever the weather. However when I rode down the cobbled street at about 9.00am on my 1963 Tiger 90 there were barely a few dozen there. I parked where instructed, right at the bottom of the site, passing small groups of bikes on the way. A couple of other Triumph owners were already proudly polishing their pride and joys...although the owner of 832 FDH clearly had better things to do!



I had to have a tram ride whilst I was there. They ran regularly all day and drove about half a mile beyond where visitors could walk. Very professionally staffed by voluntary enthusiasts.

As the morning progressed more and more bikes of all makes and models arrived so by lunchtime there were a few hundred there, which I thought was not a bad turnout. However some groups had cried off because of the weather outlook. I was told that there were only half the number of bikes that attended pre Covid when it was held in the summer.

It did rain for a while around lunchtime but it is October in Britain. All exhibitors were given voting slips for the 'best in show' but how do you decide amongst a diverse collection covering all ages and types. Here are some images of the day:





Back to the future at the Long itch Diner..reports David Kendall

On a chilly but bright Sunday morning the car park of the Long itch Diner resembled a scene from Heartbeat, Grantchester, or was it back to the future..? On display was some great examples American, European and British classic cars. However the two wheel fraternity was not to be outdone, attending our pop up meeting were fine examples of Triumph, Norton, BSA, Royal Enfield and even a small James two stroke parked up on the grass. So the question is should we pay a visit again next year when there is another nostalgic car gathering at the Diner..?



Secretaries Shorts

Excellent news from the workshop. The **Tina** is running!.....not brilliantly at the moment.....but running never the less.

I was using a solid state unit in place of the condenser and which just used the points as a switch. It seemed to be working fine but I decided that I had to do something. I reinstated the points and condenser. It started first time then using my 'Tina Turner' on the flywheel! (see last month). It now starts using the kick start. When I get time I will check the points gap, carb etc.

The **T90** had been cured of most of its oil leaks thanks to a good mornings work by Steve Bradwick. However the Derbyshire trip has resulted in some leakage which may be cured by tightening down the rocker boxes and head etc. after the 200 mile run.

The **Bridgestone 100 TMX** will be on the ramp soon to sort out the transmission gremlins.

Upcoming dates for your diary:

Autumn Run Friendly Run Oct 17th

Antelope Meet Oct 24th

More details for these events will follow in the next few days.

Two Sunday breakfast meetings of Kinton's Classic Gathering are planned to take place before Xmas. Breakfast rolls and drinks will be available plus the usual cheery welcome. We may make changes to parking arrangements but Marshalls will be on hand to direct. **The dates/times are 7th Nov and Dec 11th from 10.00am.**