

## Daily (sometimes) Blogg – Part 6

Thursday 31<sup>st</sup> December 2015

More garage therapy today in between cutting up a tree blown down in the recent gales. The bulk of the items needing painting have now been cleaned up and are now either in primer or in the case of the frame related stuff, painted with Hammerite. With items hung up all round the workshop there was not much scope for doing anything else for the Heinz57 project today.

However, this did give me a chance to examine the ES250/1 engine. First job was to give it a clean as it was pretty dirty; fortunately it has been standing idle so long that even the greasy muck had solidified. The crankcases still need a good soak in a solvent bath but the worst of the muck is now removed and it's a bit pleasanter to deal with. The dynamo virtually fell off is incomplete and I would say was from a much later MZ model as it does not have the adv/retard mechanism. Not a major issue as I have a spare of the right type or I could use the one already fitted to the ES175. The clutch eventually came off once I found the correct extractor. The clutch itself will need work as the outer ring is cracked but I do have a complete spare clutch that came with the ES175 and I am pretty sure that the later 5 speed clutches are a direct replacement as well.

The drive gears look to be in good condition with no chipped teeth and the thrust washers also look good with what seems to be the correct end play. The crankshaft itself spins smoothly with no unpleasant noises from main or big end bearings; the clutch taper is also fine. I fitted a gear lever and was able to select all 4 gears easily. I suspect it may have been used for sidecar work as the gearbox sprocket had 17t rather than the 21t normal for a 250. Again not a problem as I have spare gearbox sprockets in various sizes. However, I will need to locate the correct speedo drive gearbox at some point but that should not be a problem.

The engine does not have a primary drive cover but again this is not a problem as I can borrow the one from the ES175 in the short term. Out of interest, I tried a cover from a later model – probably TS250 – and it lined up perfectly so I also have a fall back plan if need be.

A 250 cylinder head and barrel came with the engine but no piston. The head is mostly in very good condition with no broken fins but it will need minor attention from that clever Mr Dixon to mill one of the stud holes flat. The barrel has a slight wear lip and according to my gauge is 1.0mm oversize. I found a TS250 70mm piston complete with rings which seems to. However, I will need to look at the spares book to see if the TS250 is a suitable replacement. Overall the engine seems quite sound and I am in two minds whether to simply clean it up and replace the missing items, or strip it completely. The only real justification for doing a complete strip is if the crank seals have gone or if any of the bearings are suspect. My inspection so far suggest all the bearings are sound and I am inclined to take a chance on the seals.

On a totally different tack, during the early part of December I was quite investigating the purchase of either a 1966 AJS 250CSR or a 1962 Matchless G5 350 from the same vendor. I have wanted to try one of the AMC lightweights for some time and I was tempted to buy both then sell on the one which found less favour. In the end a deal fell through largely because it was going to cost circa £400 to get them delivered; the bikes are in the far North of Scotland. This would have made them far more expensive than I felt they were worth. Out of the blue yesterday I received an email saying that in effect the vendor would pay the delivery charge so I am now seriously considering going ahead

with the deal. If I do then I will have to consider moving on at least one of my existing bikes as space will be at a premium I suspect the Revere will be the choice as the CB400A is doing much the same job and I prefer the armchair riding position it offers. I will also need to crack on and finish the Heinz57 rebuild or at least get it back on two wheels.

So 2015 is closing on an optimistic note as is this blog. Further instalments will continue in part 7.

### **Wednesday 30<sup>th</sup> December 2015**

Today the last of my family visitors went home and my wife was away at a dog show so I was able to indulge myself in a full day's garage therapy with a clear conscience. Not very exciting as it mainly consisted of prepping various bits of tinware and associated other bits which need painting. Very tedious but by the end of the day I had the footrests, centre stand, rear torque arm and silencer support arm hung up drying after the first coat of Hammerite. The airbox, battery cover and fork shrouds are sprayed I primer and also hung up to dry. I also made a start on the s/arm of the front suspension but did not get far as Robin Davies turned up bearing gifts. We had a long natter about things MZ and he duly admired my ES175/1. Sad thing for him was that he actually came over to visit on Monday for a ride on his outfit but we were at the cinema watching Star Wars. He stopped at a nearby transport café for a cuppa and found when he got home that he had mislaid his wallet. So he came back today to have another search and incredibly kindly brought with him about 80% of an ES250/1 engine. Even more kind, he won't take any money until I have checked it over to make sure it's sound. That will be a priority job once the paintwork is safe to move.

Going back in time a little, I rode the CB400A to Whitminster on the A38 for the annual Boxing Day bike meet. This used to be held at Tippetts Inn on the A46 just South of Nailsworth but the pub closed last year and the event moved to the Whitminster Inn in 2014. This is a good deal further for me (circa 90 mile round trip) and I was dubious about going but the weather was kind and our visitors were not due until circa 1pm so I set out early and left about 12pm getting home just in time. Lots of old friends were there and I had what I hope will be a stroke of luck in meeting up with someone who has a stock of MZ bits they want to dispose of. I will be contacting him in the New Year to go arrange to view and hopefully bring them home.

### **Thursday 24<sup>th</sup> December 2015**

I finished prepping the Heinz57 frame and turned my attention to the swinging arm. This is one which is in very good, possibly new shop soiled condition but does not have the rubber bushes or centre tubes. As luck would have it I had new rubbers and tubes but fitting them proved somewhat trying. Getting them in was not itself too difficult using the vice as a press. Getting the rubbers to centralise was another matter entirely. Either they would not go in far enough, or they started popping out the other side. Eventually after literally dozens of attempts and 2-3 hours of frustration, I did get them to fit and was then able to prep the s/arm. By contrast the painting was of frame and s/arm was fairly quick and therapeutic. As normal I used Hammerite smooth applied quite liberally with a brush then lightly sprayed it to get the brush marks out. All I need now is the patience to leave it for a few days to harden off properly. Given that we have family staying from Boxing Day to New Year that should not be too much of a problem.

### **Tuesday 22<sup>nd</sup> December 2015**

Today is the Winter Solstice and the shortest day, made even shorter by heavy cloud cover. At least now we can look forward to longer days and spring. Not really much to report. I took the TS150 for a short spin and it seemed to be performing better but the plug was still quite black. Needs a longer run but there is no incentive to ride a bike at present; though its quite warm it also seems to rain pretty much all the time. I found the original carb from the TS150 whilst looking for something else. It was really mired with congealed petroil but most of it has cleaned up well with a lot of elbow grease and patience. The only thing I will need to replace is the cut-off valve as the spring loaded tip is solid and impossible to clean.

Today I brought the heinz57 TS250 into the workshop and completely stripped it ready for a makeover. I have checked over the Mark Dicker leading link forks and made a couple of minor improvements. The bottom pivots now have grease nipples and the bushes are channelled to allow the grease the spread all round the bush. I also re-threaded and shortened the fixing bolts so they look much tidier. Prepping the frame is now under way and surface rust apart it seems to be in good nick. I am debating whether to prep and paint all the rest myself or take the easy way and get Steve the powder coater to do the more awkward bits. See how I get on over the next couple of weeks as there is no point in taking anything to him until after New Year.

Last week I ordered a set of Avon Road Rider tyres for the Velocette and they arrived today. Put them in the garage for now as they are not a priority job. I stripped a spare disk brake wheel over the weekend to provide friend Terry with an MZ rim to lace to his newly acquired Honda TLS hub. However, when we checked it turned out that my rim was a 1.85 width whereas the TS250 should have a 1.60 rim. Since it was all in bits anyway I cleaned up and painted the hub, polished the rim then rebuilt it with some shiny new spokes. This will be used on the restored heinz57 project so we have one item in the bank already. Doubt I will have much else to report with Christmas looming and I plan to open a new part of the blog for 1<sup>st</sup> January 2016 so this may be the final update to part 6. Merry Christmas and a happy healthy New Year to anyone who reads this. If the weather is kind and family commitments allow, I may make it to the Boxing Day meet at Whitminster

#### **Thursday 17<sup>th</sup> December 2015**

Today was the last mid week VMCC meeting of the year with a lunch venue at the Westbrook Inn near Bromham. I rode the TS150 trail bike over and initially it went really well but pulling away from roundabouts or road junctions it began to fluff and threaten to die if the revs were allowed to drop back to tickover level. Once caught, the engine would rev freely and pull like a train easily reaching 55-60 whenever traffic conditions allowed. Climbing Sandridge hill it also seemed to lack power at lower revs. Running at a steady speed on partial throttle opening it also seemed hesitant if you opened up slowly. Give it a fistful and it was away. My first thought was that the pilot jet was blocked (unlikely as it's a new carb) but the engine ticks over quite nicely which seems to negate that idea. Back home I examined the plug which was showing very rich. The needle was in its middle position so I have dropped it two notches to its weakest position to see what difference that makes. I need to go to Westbury tomorrow to get some paint for the heinz57 restoration so that will give me a chance to evaluate the changes.

On the way home I popped in to see Terry Dixon who has just bought a selection of 2<sup>nd</sup> hand MZ spares. Mainly he was after the Honda TLS front wheel which was included, we had a look at the other stuff and he has kept a couple of bits he will find useful, the rest is being donated to Fielding's

MZ spares emporium. In return I am going to find him an 18" MZ front rim so he can have the Honda hub laced into this.

### **Tuesday 15<sup>th</sup> December 2015**

Half way through December already and only 10 days to Christmas which is partly why the Blog has not been updated recently. Much of my recent time has been spent on decorating ready for the visitors who will be coming over the next couple of weeks. Also tidying up various things which had been on the 'todo' list for some time. In truth there is not much needs doing in the garage, the ES175 project is virtually completed, the outfit has gone and the weather is so damp and miserable there is no incentive to ride a bike anyway.

I did take the CB400 to Ham for the MZ monthly meeting on 13<sup>th</sup> but only a handful turned up and we had to stand in the carpark as there was a Christmas Market in the skittle alley and the rest of the pub was heaving. First time I have ever been there and not bought a drink and something to eat. In fact one of the major topics at the section AGM on 5<sup>th</sup> December was our continued presence at the Salutation. It was generally agreed that the new landlord is changing its character and whilst not exactly unwelcome, we can no longer rely on having somewhere to meet. The search is on for a new venue but it won't be quick as we will have to make sure everyone gets adequate notice of a change. The CB400 went well but is now badly in need of a clean as the roads were very muddy. Being lazy, I decided it could wait for a wash down until after a VMCC run on Thursday but I did give the chain a thorough greasing.

I noticed an advert on the Jampot club website for a 500cc model 18 AJS located near Bridport which I went to look last Friday. Looked ok in the rather lo res picture and the write up sounded good. However, it did not live up to the advertisement and needed more work and expenditure than I was comfortable with so I came away empty handed and put the money back into the bank. More positively, on Saturday I had a response to my wanted ad for a TS250 mudguard on the MZRC website. We have concluded a deal and it is now in its way. My plan is to paint the new guard and fit it to the Blue TS250. Its old guard will eventually finish up on the test TS250 which I plan to restore in the new year seeing as I have no other projects. I intend to paint it Blue to and will be visiting the paint shop in Westbury shortly to get a match for the blue on my other old TS250.

Only other garage activity was to replace the carb on the Trail TS150 with the BVF clone I bought a while ago. Its modelled on the later ETZ type with positive throttle adjustment for tickover and seems to work ok on a quick test ride. I may change my mind and ride it on the VMCC run on Thursday.

### **Friday 4<sup>th</sup> December 2015**

A week has gone by and I am now struggling to remember what I have actually done. Garagewise not a lot. I have done some more work on my garden test TS250 mainly adding bits that either acquired recently or found whilst searching for other things. Apart from the obvious, which can be seen in the pictures, I have removed the Powerdynamo kit and converted it back to 6v dynamo with battery using the bits I removed from the TS150 Trail bike last winter and a home made simplified wiring loom. Amazingly it all seems to work even the charge light goes out and its starts really easily. I want to keep the Powerdynamo system on the shelf ready for a more important role (though as yet I have no idea what this might be. I have christened the bike Heinz57. A rear mudguard and an air



cleaner cover are now on the shopping list. Who knows, in time it may even become a complete enough bike to be used on the road though that would rather defeat the object of the exercise.

On Wednesday we rode escort to the hearse at the funeral of a gentleman called Dennis Barton who apparently used to race bikes back in the day. We were asked by a friend of the family to do the escorting which was only for about a mile or so from his house in the village of Marston to the church at Worton. The weather was warm and dry if a bit breezy so it was no great hardship and the Velo enjoyed the ride. I noticed that the oil weep from the top of the filter chamber has now dried up which was good. Next time I change the filter I will make sure I keep exactly the same combination of washers.

Whilst in Velo mode I decided to sort out a couple of other niggles. It has a genuine Lucas Altette horn which was not working indeed not even connected. On the bench it proved to be working fine though a bit shrill on 12v. It looked a bit sad so I stripped it down cleaned up the chrome bits and repainted the rest so now it looks a million dollars. Back on the bike and wired in it now looks and sounds good. While the seat was off to deal with the horn I decided to relocate the ignition warning light to the front where it was visible from the saddle. Fiddly job as I had to make up a bracket and find somewhere to mount it then run the wires back to electrics box under the seat. Anyway it's now done. I am wondering how I can include some sort of dimmer arrangement when the lights are on as I suspect it will be a bit irritating at night.

**Saturday 28<sup>th</sup> November 2015**

Forgot to mention that my old friend Johns Matthews dropped by on Wednesday and we hunted around to try and locate bits to help him with his TS125 project. This must be the longest running MZ restoration in history, it's been underway for at least 10 years. Anyway we did find the bits he said he needed and on Friday I went over to Whitchurch (nr Bristol) to have a look and help him. Took all morning to do very little mainly because I was working in someone else's garage and could not find the right spanners, nuts & bolts and sundry other things. Plus of course some of the side panel bits just did not want to line up. We got there in the end and I must admit the bike is looking pretty tidy. If it was in my garage, it would be finished in a week!

On Thursday I stripped down the engine Roger Bibbings brought back. There was no assembly problem, it turned out to be a failed drive side crank seal. Quite why it should have suddenly failed having run perfectly well right up to the moment Roger took possession I don't know. Anyway it is now all back together ready to test. While I was at John's searching for other bits for his TS125 I found an airbox and battery tray for a TS250. As they were surplus to his needs he kindly let me have them. Examining them when I got home established that both had been in the wars but I was able to fix all the damage and the bits are now ready to be fitted to my engine test Supa5.

One other amazing thing this week was the speedo gearbox for the ES175/1. I knew I had a spare somewhere and indeed found it on Wednesday whilst looking for John's bits. Today I examined it and found that it was probably brand new but more to the point it has the correct 17/45 gearing needed for an ES175/1. I doubt any of these models were ever imported to the UK and the ES250/2 used 21/45 for solo and 15/45 for sidecar work so it was not intended for that model, How lucky was that! Anyway I will swap it over next time the ES175 is on the bike lift. The MAC Velo is scheduled for its turn on the lift as I want to fit the new Varta 12ah battery and have another go at the electric starter.

### **Wednesday 25<sup>th</sup> November 2015**

Yesterday I rebuilt Roger Bibbings original motor. Basically all I have replaced in the bottom end is the broken gear change spring, everything else seems to be perfectly ok. Even the big end which I was concerned about does in fact seem to have been replaced at some time as I found some alignment marks on the flywheels. He had provided a spare barrel/piston which I felt to be in better nick than the original one so I have fitted the spare components. I did find a couple of possible causes of noisy running. The head was very heavily carboned up and could well have been pinking at times. Also the scroll gear for tacho was badly worn and this can generate odd noises as well. Anyway its all done and he is coming down to collect it on Thursday bringing back the engine he borrowed. That too will need at least a partial strip to find out why its burning gearbox oil.

The Supa5 outfit was collected on Tuesday which enabled me to re-arrange the bikes. The ETS150 sport has been mothballed and put in the wooden shed for the winter. Its previous occupant, the TS150 trail bike is now in the workshop and will become my winter hack. The other bikes are now nicely spaced out in the rear garage so that I can get to them easily as well as to the storage shelves at the back.

Whilst tidying things up I found a bezel for the spare oval speedo I was building for the ES250 Trophy. This has enabled me to complete the rebuild of this item and to do some investigation into the effects of pre-loading the needle spring. I have now established that this is a bad thing to do. When I first tested the speedo it behaved much like the other currently in the ES250 and needed the

drill running at high speed to get much if any movement on the needle. I removed and reset the needle with just enough spring tension to make the needle return to its stop. The movement then became much more linear with the needle spinning progressively round. So now I have a good spare oval speedo and a good idea of how to fix the one already on the bike – result.

### **Monday 23<sup>rd</sup> November 2015**

On Sunday morning I decided I would sell the outfit and the deal was concluded the same day. Tony transferred the money direct into my account and within minutes I had a phone call from Nick the courier to arrange collection of the bike. It's due to be picked up on Tuesday lunchtime – bit sad to see it go but Tony was clearly regretting his decision to sell and is very pleased to get it back. It will certainly make a big difference to the amount of space in the workshop and now winter is coming on with a vengeance, it will be nice not to have to wheel the outfit in/out all the time. Just wish I had a wider rear access to the garden.

Monday was spent working on the ES175/1 and good progress made. I have fitted the original witch's nose rear light and it's all working fine. The gearbox speedo drive and cable fitted fine and the speedo is now working though almost certainly over reading as the ratios are set for a 250 with 21t sprocket and bike has a 17t sprocket. Better to over read than under read anyway. I will try the trick I used on the ES250 Trophy and use my phone gps to calibrate it. The number plate is now fitted as is the proper battery tray. I found another battery which is now in place but it is really too wide. I am pretty sure I can swap it with the battery on the ETS150 which I will try later. I fitted a couple of homemade badges to the side panels which add a bit of colour. Not entirely happy with these and I will probably swap them for TS type tank badges in due course. The only thing I did not get round to today was lining up the rear mudguard. This requires most of the back end to be removed and the holes in the mudguard to be slotted to give some movement. The sort of job you have to be in the mood for and truthfully it's purely cosmetic not going to make it go one jot better. John Matthews came to visit so that put paid to work for the afternoon though I did start it up for him. Oh yes, I removed the old black covers to reveal my new white seats. They are going to be a brute to keep clean. Rather pleased with the way it looks – hope it rides ok.



### **Saturday 21<sup>st</sup> November 2015**

Funny sort of day. Spent part of it sorting out some eBay items whose auction concluded today. The rest of the garage time was spent cleaning up the Supa5 engine. It was in a really mucky state and I hate that job but you cannot do a proper rebuild if everything isn't spotlessly clean. Still haven't found anything seriously wrong with it. The gap between piston and barrel is 5thou at the bottom and 8thou at the top just under the wear ridge. The rings are shot and need replacing but otherwise I would say it was good for a few thousand miles yet. Likewise the small end bearing and gudgeon pin are fine. Still waiting for Roger to tell me what the symptoms were.

I saw a post on the MZRC website from the former owner of my Supa5 outfit bemoaning the fact that he had sold it and seeking replacement. Obviously a quick change of heart as when I picked it up he was adamant that he was going down the modern bike route and didn't want to be tinkering with the old stuff any more. Got me thinking about how little I actually use the outfit and how much space it takes up in the workshop. Still pondering on it but I might just offer it back to him. It would free up some money for an MSS Velo which is my current pipedream.

The number plate for the ES175 arrived today – only ordered it Thursday evening so that was quick. With the bike lift clear I will bring up the ES175 to the workshop and make a start on the last few details which need sorting – must dust of the list.

### **Friday 20<sup>th</sup> November 2015**

Busy but not terribly productive day. I took the ES250 Trophy for a test ride. I used an app on my mobile phone which uses the gps to give a speed reading and was able to calibrate the bicycle speedo fitted to the Trophy – got it within 1mph s pretty good. However the mechanical speedo was just as inaccurate as ever and I am now pretty sure it's the speedo head itself, or rather the way I rebuilt it that is the root of the problem. Up to about 15-20 mph it records practically nothing but

once you get above 30 it seems to have a constant error of about 15mph. Thinking back, when I restored it I pre-tensioned the needle return spring and I may have overdone it so that it has to spin quite fast to get it moving initially. Will need to do some research about this. Anyway at least the bicycle speedo is accurate and I have noted the calibration setting so I can rest it if the battery goes flat. The other problem was a noisy engine as though something was rattling inside. My first thought was I had not shimmed the new head properly so I put another .2 shim in making the squish band around 1.6mm. This made little difference and the noise seems most apparent at low speeds. On the move it goes fine so I have left it for now.

Next on the ramp was the Velo. First job was to check the oil filter cover and seals as it is still dribbling oil from the top. Nothing obvious wrong – the filter is correctly located so I reinstated everything with a different copper washer. Running the engine it does seem to have stopped dribbling but it will need longer run with the oil warmed up to be sure. Next job was busted flush. I wanted to move the right hand footrest forward a little to get it a little closer to the gear lever. Sadly the splines are so coarse that the position it was already in was the only practical setting – da\*n.

Not sure if the third job is going to be long term successful either. The battery it came with is a Varta of the size used on the airhead boxers and is really far too big and clumsy looking for the Velo. I have replaced it with an old smaller 12v battery which works fine but is not the ideal shape for the fixing straps. I need to identify a suitable long term replacement but at least now I can turn on the LH petrol tap to provide a reserve.

Last job is another one I am not confident about. I have adjusted the front brake and put a chain spring link in the handlebar lever to get it closer to my hand. Now I can get a good grip immediately instead of trying to pull it with my fingertips initially – Velos were obviously built for real men with dinner plate hands. I will give it a road test tomorrow if the weather stays dry – a flurry of snow is forecast overnight!

Finished the day by stripping down Roger Bibbings old Supa5 engine to assess what it needs for a rebuild. Funnily enough apart from a broken gearchange spring and the need for a good clean, I did not find much wrong with it though Roger told me it was not performing very well. I have emailed Roger for more information on the issues.

#### **Thursday 19<sup>th</sup> November 2015**

Not much practical work done on the bikes and the trophy is still on the bike lift but some progress in other areas. Hunting in the garage for some speedo bits to repair a speedo, I found what I believe to be a correct speedo cable for the ES175/1 so that will save cost and delay ordering one from Germany hopefully. More important was a letter from DVLA which arrived today with the V5c for the ES175/1 – its number is 120 UYO, not very exciting but at least it's now done and without any hassle. They have classed it as a Historic and it is now taxed. I rang the insurance brokers and gave them the registration number and had an email back within an hour enclosing the insurance certificate. A number plate is now on order which should be with me by Monday. All being well I should be able to finish of the last few items on the E175 and get it on the road for a test ride early next week.

Took the Velo to Box for a VMCC lunch time meet today, still not impressed with the front brake and the oil tank still has a small leak from the top of the filter chamber. Its going on the bike lift today for some more intensive attention.

### **Monday 16<sup>th</sup> November 2015**

On Sunday I rode the Velo to the Radnor Arms at Corston, about a 40mile round trip for lunch with some VMCC friends. Bike generally went well though I did not feel that the new linings had improved the front brake over much. I will ride it regularly for a while to see if it beds down better and if not I will think about re-fitting the Honda wheel. There was also an oil leak from the top of the oil filter chamber. Tightening up the nut at the pub helped a bit but the real cause was the lack of a fibre washer. I bought one along with a couple of s/s nuts for the shock absorber mounting brackets today so that's two more little jobs done. The other thing I found was a need to adjust the footrest to get it closer to the gear pedal to make it easier to change down (pedal going up). This will have to wait until I can get the Velo on the bike lift. Hopefully this will be tomorrow as the new battery for the ES250 (which is currently on the lift) is due then. I can also give the ES250 a test ride to see if the speedo works any better.

### **Saturday 14<sup>th</sup> November 2015**

On Friday I had a visit from Roger Bibbings brining Supa5 engine which needed some attention. Main problem was a broken gear-change spring but he also felt it was rough and down on power. Having discussed the matter, he decided to leave his for repair and take home one of my previously rebuilt engines. The engine he decided on was in my test bike so we had to swap over various bits from his engine (he has a Powerdynamo system fitted) and remove mine from the frame. After he had departed, I decided to fit another of my rebuilt engines into the test bike so that it can be checked out. This is now done and the engine is running fine but riding it round the orchard is a no-no as it's so wet. I have put it back in the greenhouse, well wrapped up, until the weather improves. While it was stripped down I cleaned out the carb and as I suspected, the pilot jet was blocked. This makes a big difference to slow running and pickup smoothness.

Next on my list of back burner jobs was the ES250/2. Some time ago I bought a TS250 cylinder head as this has the sunburst fins making the Supa5 engine look more like the original 4 speed engine. I had already bored out the stud holes to 12mm so it was an easy job to swap over the heads. I left the same shims in place for my first attempt at setting the squish band. It turned out to be a perfect 1.45mm so all I had to do was torque the head down. I used some cut down Supa5 rubbers on the barrel and made up some rubber tubing from inner tube for the head to stop the fins ringing.

While the bike was on the bench I decided to investigate the speedo drive gearing. This bike has an ETZ250 rear wheel and sprocket carrier with the integral speedo drive common to all later MZs. This arrangement is essential on my Trophy as the Supa5 engine has no mountings for the gearbox driven speedo of the 4-speed engines. However, the gearing is clearly wrong as the standard ES250 speedo under-reads by a significant margin. When I checked out the existing ratio I found one revolution of the wheel turned the speedo spindle 1.75 times. Subsequent dismantling confirmed this as the driving gear had 21t and the driven spindle 12t.

I have a big box of rear wheel speedo drive bits and pieces so I patiently sorted them into various sizes. Most of the spindles had 12t and but I also had 3 with 15t. These latter would only mesh

properly with driving gears that had 27t (1.75:1 again). I found that I had a choice of driving gears all of which meshed with the 12t spindles in 21t (1.75:1 again) 23t and 24t(2:1). There are no part numbers on any of the items and the spares books do not specify the numbers of teeth for any given model so no help there. Out of interest I checked the ES250 speedo drive which Roger Badland has loaned me; it has a ratio of .823 (14/17) . This one is specified for a 21t gearbox sprocket and the back sprocket is 45t so corrected for wheel rotation it would be  $.823 * 45 / 21$  which is 1.76:1. So on the face of it my original ETZ speedo gearing was correct yet the speedo did under-read badly. I have installed a 24t driving gear with the 12t spindle gear to give 2:1 to see if that helps. Of course it could just be that the speedo itself is malfunctioning. Somewhere I have another oval ES type speedo so it may be worth looking this out.

Big disappointment this evening. I had a phone call from the chap from whom I had ordered some s/s bit for the Velo. Seems he has given up this line of business and sold all his remaining stock to Grove Classics. Bu\*\*\*r, I shall have to re-order at a higher price no doubt.

### **Wednesday 11th November 2015**

I wimped out of riding a bike to the Bristol MZRC meeting on Sunday. My excuse was that Richard Warne needed a lift as his Supa5 had electrical problems. The truth was that after a week in Egypt, I just didn't fancy getting wet and cold. Roger Badland kindly brought along a gearbox speedo drive which I can borrow for the ES175 until I find the one lost in my garage somewhere. Only slight drawback is that despite having a selection of circa 20 speedo/tacho cables, I found none with the correct fitting – sigh! They are cheap enough from Germany so I will just add one to my next order and be patient.

The ES175 passed its MoT yesterday without any advisories – yippee. I completed the V55/5 and supporting documents and this was posted (signed for) the same day. Just hope the registration process goes through smoothly. The bike itself is still in the back of the van to create some space in the workshop to attend to my other bikes. I will get back to it when the registration process is complete.

First on the list was the blue Supa5 I took to Spain. It was in need of a good clean and I have also dropped the needle by two notches (it was in the richest position for some reason). The plug was certainly indicating a very rich mixture and it was only managing around 60-65mpg in Spain against 70-80mpg for the other two Supa5s. Other than that it was in perfect condition and sounded very sweet.

On Tuesday I had visitors and got all the bikes out to show them off. This included the 1937 AJS which after a good tickle started easily enough though it smoked like a chimney for ages – obviously it had wet sumped badly in the year or so it has been idle. Just as well that I converted it to magneto ignition as the battery was almost flat. Put it on charge overnight and it seems to have recovered and the charging system still works ok. I also showed John and Willy (John's German riding buddy) the electric starter on the Velo and found that it was full of swarf again. Obviously my fix was not as good as I thought. The bike starts easily and I have never needed the electric starter except to demonstrate so I have removed the starter chain so no further damage can be caused. I will have another look at it later if time and the mood allow. The battery was also flat on the ES250 and this one did not recover after an overnight charge. Annoying but not really a problem as the bike has the Powerdyanamo system and starts/runs quite happily without a battery. I removed it from the bike

and will not bother to replace it until the spring. Both the Hondas were reluctant initially but did start in the end. The Revere has not run been since for I bought the CB400 in July. The CB400 does not like the 20/50 oil I used at the last change even though it's specified in the book. It will start eventually on the electric leg but not on the kickstarter until it has warmed up. May have to switch back to something thinner for the winter.

One of my neighbours offered me some bike bits he had squirreled away in a shed so I took the car round on Wednesday afternoon. Came back with a car full of stuff which I have sorted through and photographed. None of it is of particular use to me; I will offer it to other VMCC members first and what's left will be put on eBay. The neighbour just wanted rid of it so anything it realises will go to the Air Ambulance. One interesting item is a Norton Big4 engine which was of the type used to drive Lister 3 wheeled trucks. I am told it was running before being partly dismantled and stored so I may play around with it. Not much use in a motor cycle as it has a special extended drive side mainshaft. The other bits included a box of BSA gearbox parts, some Suzuki GT380 parts, a couple of Enfield Crusader crankcases, a Villiers 2T gear cluster and various BSA odd's ends.

### **Sunday 8<sup>th</sup> November 2015**

Now back from my diving trip to Egypt which was fantastic. Fortunately we flew into Marsa Alam airport well away from Sharm el Sheik so apart from much tighter security checks, our return flight were not delayed much. Anyway it's taken me a few days to get over the trip and sort out the inevitable things that needed attention at home. If anyone is interested, the pictures from my holiday can be viewed at:

<https://www.dropbox.com/sh/u4v4qnn4w40082z/AABkq6fhlWbFtYQgIkgjH2G3a?dl=0>

It was not till Saturday that I even went into the workshop and I have not yet ventured into the other garage or sheds. The ES175 is still looking good and I sorted out some of the remaining issues. First was the petrol tap which was leaking from the connection with the tank. Nothing obviously wrong, but I serviced another tap I had in stock and this is now fitted and leak free. I also made a proper throttle cable to replace the temporary one I first installed. This not only got rid of all the spacers but being longer overall gives a much better cable run. Last task was to fit the rubber chain guides – always a messy and difficult job. I then started up the motor which still sounds quite sweet. On Monday I will book an MoT and with that done I will be able to apply to DVLA for registration. The V55/5 form looked pretty daunting but thanks to Jerry Deeks, I now have an idiots guide to how to complete it. Something I will save for future reference should I ever feel brave enough to tackle another of these foreign imports.

There are still a few small jobs I want to do on the ES1175 – for example putting some decals or badges on the side panels, fitting the correct witches nose rear light unit which I have now restored and making or buying some better fasteners for the side panels. Oh and I need to remove the battery platform from the old frame as I am not too happy with the replacement I made. Doubtless when I actually get to ride the bike a shedload of other things will come to light.

### **Tuesday 27<sup>th</sup> October 2015**

At the 11<sup>th</sup> hour the ES175 is a runner. Tank was finished this morning and fitted. Petrol tap serviced and fitted and some petrol was poured into the tank but not much. I wondered why my foot was getting damp and realised that this tank (like many German tanks of this era) has the two sides linked by a piece of rubber tubing. I had overlooked it and pint or so of petrol was sloshing around the floor before I stopped pouring and stuck my finger over the hole. Anyway this was soon sorted out and the bike was fired up quite easily and sounds very quiet both mechanically and exhaust. Amazing because if the engine is in the same state as the cycle parts it must be a real wreck inside. Anyway here a picture. You can see others by clicking on this link:

[https://www.dropbox.com/sh/qf85sdnhw30rhxe/AACcHtAwvEuH7rx4BGc3d1\\_na?dl=0](https://www.dropbox.com/sh/qf85sdnhw30rhxe/AACcHtAwvEuH7rx4BGc3d1_na?dl=0)



Despite my ministrations there is still a leak from the petrol tap area which I didn't have time to address today so the tank has been drained for now. This evening I applied gold lining to the mudguards. There is still a lot of fine tuning to do but nothing that affects safety or MoT requirements so I hope to book it in for a test when I get back from Egypt next week. Quite pleased with how it's turned out and I do like the looks. Just hope it rides as ok to. Now to finish packing.

### **Monday 26<sup>th</sup> October 2015**

Well the bug has not been shaken off but Steve rang this morning to say the headlamp was ready for collection so it was duly picked up. By lunchtime it was back on the bike, the speedo was installed and the electrics re-connected. To my relief everything works fine. Fired with enthusiasm I knocked

off a few other jobs on the 'tidying up' list. The battery cover is now properly fixed – I had not got round to drilling and tapping the new Battery tray. Both front shock have been stripped and filled with the correct sae5 oil, the front brake arm has been re-located on its spline and I drilled holes in the handlebars ready for the indicator wires. I will not fit the indicators until after the MoT, its one less thing to worry about and they are never that clever on a 6v system.

Included in the last lot of spares was the correct orange lens for the stop light of the witches nose rear light unit. I had previously stripped and painted the body so it has now been reassembled and looks pretty good. This was a pretty expensive bit of glass nearly as much as the pair of pillion footrests but worth doing. Mine is an original rear light unit and much better made than the aftermarket units now sold in Germany. Like the indicators, this rear light will not be fitted until after its MoT's.

The bike is now pretty much complete apart from the petrol tank which was painted some while ago and has been left to harden. This evening I fitted the knee grips and applied the gold striping. I think it looks pretty good, from a distance anyway. Obviously being self adhesive stripes they are never going to be as robust or attractive as painted and lacquered stripes but they will do fine for now. Perhaps tomorrow I will get the tank fitted and take some pictures. I also need to refurbish and fit the petrol tap after which the bike should be runner.

#### **Saturday 24<sup>th</sup> October 2015**

Progress is slow at the moment as I seem to have caught a bug and don't seem to have any energy. I have rebuilt the front wheel and fitted a new tyre/tube. Whilst swapping the wheels I fitted the front mudguard and its protective nose cover. One thing I noticed was that the brake lever at the hub end seems to move a long way forward and ideally should be moved back on its splines to regain some adjustment on the cable. The brake works fine so I have left that as a fine tuning activity for later. The pillion footrests have been replaced with new ones and the rear shocks have had new chrome lower shrouds so the back end is looking pretty good.

I have also rebuilt both seats with their new rubber covers and these are back on the bike. I bought light beige ones as shown in many period pictures and indeed what was on the bike when I got it; albeit under some aftermarket black covers. With hindsight I might have been best advised to buy black rubber covers as these beige ones pick up dirt and marks far too easily. Fortunately they do clean up with fairy liquid but to keep my sanity whilst working on the bike I have re-fitted the aftermarket black covers so it looks quite scruffy at the moment. That's about it and unless I can shake of this bug I don't think much more will get done until early November when I get back from Egypt. If the weather is better tomorrow (as promised) I will take a picture to show the current position.

#### **Thursday 22<sup>nd</sup> October 2015**

All the bits I have ordered over the past few days arrived either yesterday or today so now I have no excuses. I was actually out visiting a friend yesterday so other than opening parcels, not much progress was made. Today the priority was to complete the oil change on the Velo and replace the shock absorber lower bushes. The filter went in fine and I filled the chamber with fresh oil as far as possible to speed up the process of proving I had an oil feed and return. Velos are notorious for getting air locks in the system. Not this time however. I kicked the engine over about 20 times with

the decompressor lifted to get the pumping started then switched on and within seconds we had oil coming out of the filter housing. I let it tick over for a few minutes and the oil flow continued in spurts which is correct so all is well. Replacing the shock bushes was easy enough, the only complication was removing the footrests and silencer so that I could get the die cutter in place to recut the damaged threads back to 7/16" BSF. The old nuts were something very fine possibly cycle thread. I had to make some temporary BSF nuts; these will be replaced by s/s items as soon as possible.

With the Velo sorted I turned my attention to fitting a petrol tap to the outfit. In the parcel were washers and filters needed for the job This was soon done and ½ gallon of petrol was sloshed into the tank. A little splashed on the new paintwork and it does seem to be petrol proof as there was no mark when I wiped it off. There were no leaks and the bike started easily enough so that's another job completed.

Finally I had a clear workbench to turn my attention to the seats on the ES175 as amongst the other parts received were new rubber seat covers. Both seats have now been completely stripped and the spring bases wired brushed. They are in quite good condition with only a little surface rust so they have both been given a thick coat of Hammerite and left to harden. There is a foam layer between the rubber covers and the springs. One is in near perfect condition, the other past its sell-by date. I will use the best one to complete the rebuild of the rider's seat whilst I try to source some suitable foam for the back seat. That's about it for today as it's the VMCC section AGM tonight and I have some preparation yet to do.

### **Tuesday 20<sup>th</sup> October 2015**

In truth not a lot of progress on the ES175 as I am waiting for bits and trying to get ahead with the gardening and domestic chores as I am off to Egypt next Wednesday for a week's diving. I did manage to take some pictures of the ES175 whilst moving it out of the workshop to get the Velo in for service. The clothes pegs on the front fork are to hold the rubber beading in place until the mudguard is installed. No point in doing this until the proper front wheel is in place. Still a long way to go but at least its mobile.



Main job on the Velo was to re-fit it's proper front wheel now the linings have been done. While it was apart, I remade the wheel spindle and spacers for the Honda wheel so that it can be fitted properly if I am still not happy with the Velo brake. I have also drained the engine oil, removed the filter and drained its housing as that holds at least ½ pint. Mileage for the record is 8419. Normally I would have had a replacement filter on hand but I was unsure what type was actually fitted. I read somewhere in the paperwork which came with the bike that it had been fitted with a modified oil filter assembly to minimise wet sumping. In fact the filter is a standard felt type so I have ordered one from Grove Classics along with some new rear shock bottom rubbers. When I replace these I will also be able to recut the threads on the mounting stubs to BSF. Something non-standard and not very secure is in place at present. Whilst doing this work, I also found the source of the rattle in the exhaust system. I had believed it to be a loos baffle in the silencer but in fact it was the ex-pipe touching the footrest bolt. I have spaced the silencer out a bit to create some clearance and the rattle has gone away for now.

### **Friday 16<sup>th</sup> October 2015**

Got back from Spain last Tuesday - there will be a separate write-up on this event posted on the site shortly plus some pictures so I will not duplicate it in this blog except to say we had a fantastic time. Been very busy catching up with things until today when the head bearings arrived from Robin Davis. The rest of the day was immediately re-scheduled and the ES175 now has front forks and a front wheel so its mobile at last. I have not bothered to fit he mudguard yet as it's quite big and vulnerable to knocks and scrapes. With the front wheel I was able to remove the temporary back wheel and put in the original wheel which has been respoked, fitted with a new tyre/tube and relined brake shoes. Actually I had to fit it about 4 times because I could not get the brake light to

work initially. Flushed with enthusiasm, I have also fitted the exhaust system so its now beginning to look like a proper bike. The rest of the paintwork now looks so good it made the headlight shell (which I was going to leave with its original finish) looked decidedly second rate so its gone to be powder coated as well.

Continuing the spending spree, I have ordered a number of bits from Meinzwerad and also two new seat covers from a different company I found on German eBay along with a pair of handlebar indicators. All the bits should be here by the middle of next week. The petrol tank has now been T-Cut and polished and is looking good. Still pondering on how to do the gold lining. Not sure if I feel brave enough to mask and paint it on though that is without doubt the way to get the best result. Next job is to make up the handlebars which could well be a long and tedious task.

Looking back I can see I have missed reporting on a couple of things. The engine is now in the frame and the wiring is now completed including the dipswitch. Must have done that before I went to Spain.

### **Thursday 1<sup>st</sup> October 2015**

Yesterday Steve phoned up to say that the powder coating was ready. I collected it late morning and by teatime all the bits had been fitted and are looking really good – he has done a superb job. With mudguard and headlamp in place I was able to tackle the electrics which were a sorry tangle of original and cobbled up wires. I put it all back in place and figured out which wires did what then piece by piece I replaced each wire with new cable. Each was colour matched to the later MZ standard wiring plans to avoid confusion. It's not difficult but it is very time consuming as effectively you have to do it twice. The first time to get the wires approximately the right length and position. Only then can you work out how to bundle the wires, thread them into the plastic sleeving and older on the connectors. There are two sections still to be done, the dipswitch/horn bunch and the regulator/engine bunch. I can't do these until the engine is in the frame and the handlebars are fitted. I was well pleased when everything worked as it should.

Funny how things come in waves. Later this morning I got a call from Friction Services to say my brake shoes were ready so I drove over to Keynsham to pick them up. I thought they had made a really good job of all three but they are clearly perfectionists as they offered to re-do the MZ shoes as they thought they should have done them a bit thicker. I think they will be fine but they said to bring them back if I was not happy. The Velocette brake lever barely moves before the brake operates so that should be pretty good. Now I am torn as to whether to persist with the Honda brake conversion or stick with the original wheel. Actually it's a no brainer as I have to try the Velo wheel anyway to see how well it now works. If there is no real improvement, then at least I have an alternative.

The only disappointment this week has been the fact that the head bearing have yet to arrive. I just hope they are not lost in the post. If they don't arrive by Saturday, I will email Robin to find out how he sent them. Trouble is that there will be no one at home to take delivery until at least next Thursday.

Not sure I will get much more done on the projects as I am working all day tomorrow and on Saturday I need to check over the bike one more time then take it over to Mikes to be loaded on the van. We leave on Sunday morning and I have not given any thought to packing as yet.

## **Tuesday 29<sup>th</sup> September 2015**

Couple of successes today not strictly motorcycle project related. My recently purchased motor mower has been making nasty clonking noises and I was all set to return it to the shop for a checkover but decided I should do an oil change first. To drain it I had to tip it on its side and whilst doing this I put a spanner on the bolt which holds the blade. Though nothing was obviously loose, the bolt did actually tighten up quite. When the engine was started the clonking noise had gone away. Would have been embarrassing if I had taken it back for such a simple problem! The other thing was a call from the courier around 5pm asking if he could collect the red TS250 later that evening. He turned up at 7pm and was gone within 5 minutes on his way to Truro for the night. I now have some space in the garage as the red bike with its panniers in place took up a lot of room. Other than that it was a day of pottering in the workshop doing a variety of small but essential jobs. I have made up a pair of front shock by combining the best bits from another pair. The bottom lugs on the selected pair use 10mm rather than 12mm bolts which was deliberate as I have some nice 10mm s/s bolts and the original 12mm bolts will be useful elsewhere. However, I then had to make up some bushes to sleeve down the rubber bushes in the swinging arm. Not much else I can do on the ES175 until I get the head bearings and the bits back from the powder coater. I also need to place an order from a couple of suppliers in Germany (could not find everything I need from one supplier unfortunately). As I am away from Sunday and my wife does not return from her trip to Finland until Wednesday, there is no point in placing the order until just before I go. Hopefully then they will be here when I return on 13<sup>th</sup> October.

I also decided to investigate fitting the Honda front wheel properly into the Velocette forks and have come up with an interim solution which seems to work ok; I will post a picture later. There are a couple of aspects I am not totally happy about and on reflection I can think of another solution which will address these issues.

## **Monday 27<sup>th</sup> September 2015**

I went on the Swindon section social run today riding the CB400A. Pleasant tootle round the Cotswolds and I was home by 3pm. While the engine was hot I drained the old oil and filled it with 20/50 which I bought at Shepton yesterday –for the record the speed read 24396 miles. The disturbing grating noise is still happening and I am beginning to see a pattern though not to its cause or a solution. It does not start after the bike has been running for an hour or so. Thereafter it keeps on happening even after the bike has stopped for an hour or more. The noise occurs at just over 40mph in High gear. Never noticed it in the Low gear but I don't tend to use that much. By 45mph it disappears and cruising at 50-60mph the motor is smooth and quiet. I have found the best thing is to accelerate hard through the 40mph barrier in which case the noise either does not occur at all or just momentarily. In other respects the bike goes well and I am very pleased with it. On the last two fill ups the bike has averaged over 65mpg which is very satisfactory. I am hoping that changing the oil will have a beneficial effect on the grating noise – time will tel.

I spent the remainder of the day working on the assembly of the ES175 into its new frame – at least the back end and a few other items. No major snags. The new bush I made for the rear brake spindle fitted perfectly without any need to reamer it out. Similarly the footrests and centre stand all fitted fine. Any further assembly is on hold until I get the headstock bearings from Robin. However, I did strip down the spare shock absorbers that came off Ray Cattles BK350. I may use these in place of

the originals as they have s/s lower covers and only use 10mm lower fixing bolts which will be helpful for reasons which will become clearer later.

Now that the road at Newton St Loe is open again, I was able to visit Friction Services and leave the ES175 and the Velo brake shoes for relining on Monday. At their suggestion, I took the wheels as well so that can make sure of the fit. This evening I rebuilt the back wheel of the ES175 using a set of s/s spokes from stock I also fitted a new tyre and inner tube so that s one more job ticked off the list. My memory had played tricks on me because I thought I had two sets of s/s spokes for the 16" wheels but the other set turned out to be for an 18" wheel so I will need to order some – more expense.

To keep the Veklo mobile while its wheel was away, I fitted the Honda wheel I had removed from the MZ. Whilst it looked all wrong in the MZ, it looked pretty good in the MAC and as far as I can see it's not too difficult a job to fit it properly. Very tempted to make it a permanent feature.

### **Saturday 26<sup>th</sup> September 2015**

Thursday started off rather bleakly. I stripped the ES175 to its components parts ready to rebuild it in the new frame. When I compared the old front fork with the new one it was immediately apparent that the stem diameters differed. On the old fork it was 34mm diameter over its whole width but the new fork was 34mm at the top tapering to 38mm at the bottom. This meant the bottom race would not fit. It took some time and a few emails to establish that the new fork stem actually had the same dimensions as the later ES250/2. I did manage to track one bottom race down with Phil Speakman, then Robin Davies phoned to say that he had found the original head races for my frame/fork and he has now put them in the post. So hopefully that problem is resolved though it wasted a day sorting it out. The only good thing about Thursday (in relation to the ES175 anyway) was that I now have a good pair of handlebars with virtually identical bends to the original ones which I can adapt to fit. They came as a swap for an old sidestand so everyone was happy.

Friday was mostly spent driving round the new Forest checking out the route and lunch stop for a VMCC run I am doing in mid-October. My wife and the dogs enjoyed the ride so it was time well spent. When I got back the spares book from Fred Rogers had arrived so I spent part of the evening photocopying it. It's a 1962 issue and out of interest I checked the front fork page which shows that my parallel stem was correct at that time (the bike is 1962 as well). So the change was obviously made post 1962. The spares list also confirmed Robin's belief that the crankshafts for the 175/250 and 300 are all different based on the fact that they all have separate part numbers; but no clue as to what the differences are.

Saturday was spent at Shepton Mallett helping out at the VMCC Autojumble. I shared gate duty with Jerry Deeks, the chap I bought the ES175 from so I was able to give him an update on progress. In the next batch of bikes he is importing from Hungary is a Simson AWO 425s. Be interesting to see what its like though I don't think I want another one – done that, got the t-shirt and moved on. I did agonise for a few minutes about buying a fairly tidy Puch moped from Rod Western. The price was very fair but for once common sense prevailed and I walked away. I have enough toys and in truth it would just be a diversion from the other projects.

### **Wednesday 23<sup>rd</sup> September**

An odds & ends day really. The Red TS250 is not being picked up until Thursday morning but then I got a text to say that a tyre I had ordered on Saturday was to be delivered between 10 & 11 and sure enough it arrived at 10:30. This was from a new company called MyTyres who are based in Witney as they had an even keener price than Oponeo for a 2.75x18 front tyre. However the tyre actually came from Germany. Anyway it is now fitted to the Honda brake front wheel I removed from the outfit when fitting the disk brake assembly. It is now fitted into the Blue Supa5 in place of the Honda braked wheel I fitted on Monday. The latter was rebuilt with a 2.15 width rim as it was intended to go into the outfit and accept a wider profile tyre. On the solo MZ it just looked too clumsy. The narrower rim of the other Honda braked wheel looks much better.

While my wife was out for lunch I took the opportunity to spray the tank of the ES175 in the conservatory using the black paint I bought on Monday. The garage is too cold and cellulose paint blooms if you are not careful. I am quite pleased with the way it has turned out; nNo runs and a good deep gloss even before it has been T-cut and polished. It has joined the green tank in the greenhouse for some ultra violet hardening. The ES175 frame and front fork are in the spare bedroom also hardening off. As all the key jobs are now done, I had a look at the boxes of odds&ends. The carb has now been stripped, cleaned and adjusted. Actually it looks to be in quite good condition. The rubber chain guides have also been cleaned and repaired using pieces of inner tube to reinforce the ends which were splitting. I have used this trick quite successfully before. They will be replaced eventually but it will save some cash for higher priority items right now. I also stripped the handlebars and checked over the levers. The main clamps can be used but I plan to replace the levers with the ball end type standard on the later MZs. They fit straight into the older clamps and not only look better, they are much safer in the event of a spill.

I plan to take the good half of the handlebars to Shepton on Saturday to see if I can find a cheap pair to match. If not then I will have to buy a new pair from Germany costing around £40. I have found on the same site a set of chrome covers for all 4 shocks for around £60 and rubber seat covers for circa £55 each (ouch). However these are all items which catch the eye and if not replaced will make it look pretty sad.

## **Tuesday 22<sup>nd</sup> September 2015**

I have covered quite a lot of ground in the last four days fortunately most of it productive. My friend John May called in for a chat on Friday afternoon and he was able to give me a lot of useful gen about the Colombes rally as he has done it several times in the past. On Monday evening I went over to his place to look at his latest project and to pick up a map of the Santander area which he has marked up with the routes used when he participated. We also had a look through his pictures from 2009 and 2010 and this provided quite a lot of useful information about the roads (mainly excellent) likely weather conditions and the general organisation of the event. I had already emailed the organisers asking for more information on where to sign-on etc and they provided an answer today even including a picture of the tourist office which seems to be rally HQ. So we are looking good and only 10 days or so before we go.

John's project is a BMW he is restoring to use on a trip from Tierra del Fuego to Alaska in company with his girlfriend Chris who will be riding her BMW F650 Country Cross. He plans to go in November and the bike is just a pile of parts at present. Knowing John it will not be a simple rebuild of a standard bike, he will incorporate all sorts of practical modifications which will require considerable time and effort to complete. However, he has done similar things in the past and he is a very capable

engineer so I have no doubt he will succeed. Makes our trip to Spain seem very trivial but funnily enough John now wishes he had delayed his Americas trip to allow him to do the Colombres rally as well.

Anyway back in my garage the blue Supa5 now has a new front wheel with a Honda t1s brake fitted. Not sure it's that much better than the standard MZ brake but it should be better able to cope with fade on long steep descents. I have also been assembling a list of spares to take with me. Its quite handy having us riding three identical bikes as we can share the spares.

The replacement ES175 frame and fork are both back in the garage today having been rubbed down and given a second coat of Hammerite top of with the spray can to give a nice smooth finish. They now need to be left for a while to harden off. Realistically I am unlikely to get round to this until after I get back from Spain which will be all to the good. I have also struck gold in terms of a spares book for the ES175/250. Fred Rogers has a photocopy of the list and is posting it down to me to copy – very kind of him.

I went over to a company called Rainbow in Westbury yesterday. They are paint specialists and have matched up the green on the TS250 outfit and made a spray can in Cellulose. The yellow tank given to me by Ray Cattle last week has been rubbed down, masked, given several coats of primer and left to harden for a couple of days. Today I gave it several coats of the green paint and it does seem to be a close match thank goodness. I will leave it for a couple of days then rub it down for a final coat. I also bought a spray can of black gloss cellulose which I plan to use on the ES175 tank. Having thought the matter over, I am not sure Hammerite is the right paint for that particular application. Cellulose dries within minutes so you can get a lot of paint on quickly also it can be cut and polished easily if you get runs. In theory it should be petrol proof but the shop was unclear on this point – claiming they had never been asked this question before! We shall see and I don't plan to paint the ES175 tank until I see how the new tank for the outfit turns out.

Finally, I did get an acceptable offer for the Red TS250 over the weekend and it is due to be collected tomorrow by a courier. The new owner lives in the Scottish Borders. The cash will help cover the restoration costs of the ES175 which are already spiralling out of control.

### **Friday 18<sup>th</sup> September 2015**

On Thursday we had a VMCC lunchtime meeting at the Royal Ship in Luckington – about 25 miles away. Decided it was time to give the Velo a run and it was an absolute joy to ride; did not miss a beat going or coming home. Getting it out of the garage gave me a chance to re-arrange the bikes so that those likely to be needed soonest are at the front. We have a VMCC run on Sunday and I plan to use the CB400 for that. The Blue Supa5 is also at the front as it needs a service ready for the trip to Spain. The V5c for the Red Supa5 arrived on Thursday and it focused my attention on what to do with it. On reflection decided to put it on Gumtree to see if there is any interest. I set a fairly high price and if it does not sell then I will simply mothball it until next spring.

Today I turned my attention to the replacement frame and decided to have a go at it myself with the intention of taking it for powder coating if cleaning it up proved too tedious. In fact though it was hard and grubby work it did come up quite well. In some ways it was just as well as I noticed that there was a bush missing from the nearside which supports the rear brake pedal spindle. I managed to find a suitable piece for steel which I turned down to fit inside the support arm and then drilled

14mm for the spindle. I have used a grub screw to hold it in place for now as I am not sure if its meant to be welded in situ or just a friction fit. With this done I was able to give the frame its first coat of Hammerite . So things look to be back on target though the February deadline may now be irrelevant. We have just been advised that we do not have a stand allocated for the Bristol Bike Show though we are on the reserve list. Bit of a blow as I was quite looking forward to it.

The hunt is still on for a spares book for the ES175. The MZRC regalia literature does not include anything for this model and I have found only one website which lists it for sale but its currently out of stock. There is another German website which lists a whole range of downloadable literature for MZs including spares list for the ES\*\*\*/0 and the ES\*\*\*/2 but NOT the ES\*\*\*/1; very odd. Getting my hands on one will enable me to identify parts which are common to later models and more easily available and to identify any non-standard bits fitted to my bike. One will emerge in time.

### **Wednesday 16<sup>th</sup> September 2015**

Another very wet day so I got some serious garage time in. The new front fork has been prepped and the underside now has three coats of Hammerite. It will need to harden off for a couple of days before I can paint the top side. I also finished prepping the tank and it has had three coats of primer, mainly to stop the bare metal going rusty. I have made a special adapter which will allow the RH footrest to be fitted to the new frame. In fact though the whole setup is probably not standard I think it will be better. On the LH side the existing components will fit ok. The other modification to the frame was to make a battery tray; this will bolt in place after the frame is painted. Still undecided whether to have it powder coated or paint it myself. I am having increasing problems with arthritis in my hands and its things like de-rusting and rubbing down which cause the most pain and discomfort. On the other hand doing it myself could save around £100.



So far as the bike itself is concerned I have now built up the front forks and put in a temporary front wheel so that the whole plot is mobile. Until I have made up my mind which way to go with the rebuild there is not a lot more I can do with the rolling chassis and I could do with the bike lift for other more urgent projects like getting the Supa5 ready for Spain. There are plenty of smaller components for the ES175 which can be worked on without the bike being in the workshop anyway.

### **Tuesday 15<sup>th</sup> September 2015**

I had a very successful trip to Newport today to visit Robin Davies. I came back with a replacement frame and front fork – both straight. The fork has been grit blasted some while ago and had surface rust but the metal is so thick this is of no consequence. Back Home I gave it a good rub down to make sure and tomorrow I will complete the preparation and get some paint on it. The frame appears to be from a 250/1 judging by the number though I cannot see any significant differences from my 175 frame – other than that this one is straight and has not needed any welding so far. It

does however need some work before I can get it prepped and painted. The battery tray is missing so I need to make a new one and the footrest connection on the RH side is different to my existing frame. At this point I don't know if this is a standard feature of a 250 frame or a modification by a previous owner. Either way it needs some thought on how to install the RH footrest.

What was even more useful was the information I gathered from Robin about the /1 models. It seems I was wrong in thinking I could convert a 175 barrel and head to make it a 250. Robin showed me examples of both barrels and they are quite different in terms of port size and placement. More importantly they use different crankshafts though the difference was not obvious to either of us. It may just be in the balance factor. As I was leaving Robin mentioned that he might have a 250 motor he would part with and would let me know when he has had a chance to sort out his /1 bits. I feel another trip to Newport is on the horizon. The other good thing about the trip was that my garage was right about the rogue warning light in the Renault van. Basically they said I was driving it too gently and it was getting coked up. I drove most of the way to Newport in 4<sup>th</sup> gear keeping the revs around 3500 which was just over 60mph. On the way back I used 5<sup>th</sup> gear and drove at or slightly over the legal limit to keep the revs above 3000. During the trip the warning light stayed on which I expected since my belief was that the management system would need a reset. I called into the garage on the way home to have this done and to my embarrassment when the mechanic came out with the computer to do the reset, the light had gone out anyway. Bet the fuel consumption has taken a hammering though.

Also on the way home I bought some wet&dry paper and spent an hour or so this evening rubbing down the petrol tank and the new front fork. The tank will need some more prep before it's ready to paint but is looking good.

I am now in something of a quandary over the best way to proceed. Cosmetically the old frame and fork are looking good and if all I want to do in the short term is show the bike then I could complete the rebuild with the old frame/fork fairly quickly. I don't see any point in fitting the new fork to the old frame as it will still be unrideable. It's going to take time to get the new frame ready (I may well choose to have it powder coated) and I might miss the February deadline.

### **Monday 14<sup>th</sup> September 2015**

Quite a lot of progress today. The bike is now a monowheel and is supported on its own centre stand



rather than a pile of bricks. The picture shows more clearly than words how far I have got. The back wheel is an old one (though in much better condition than the proper one) which has the old Romanian tyre fitted for now so that I can move the bike around relatively easily. In fact there is not a lot more I can do until a decision is

made on fitting replacement forks and



straightening the frame. Thankfully no new problems have emerged. I have also made a start on stripping the old paint from the petrol tank. Though a messy and smelly job ( I should have worn a face mask in hindsight), the bulk of the paint is now removed and it just needs rubbing down to get a good surface for painting. It has obviously been painted several times as the paint was really thick in some places and almost no existent in others. What was interesting was to see the original gold lining which is in a totally different place to what was visible before I started stripping. In fact I think it may have had a different coloured panels as well and I may well repaint it in that style. There are a few dents but they are more depressions than serious dents and I plan to leave them unfilled at least until the primer coats are in place to see how significant they are. Curiously these dents are on the opposite side to the impact which bent the frame and the front forks. Of course it could well be that the tank is not original to this bike – who knows what has happened to it behind the Iron Curtain for over 50 years.

One further piece of good news, Robin Davies has confirmed he has both a front fork and a frame he is willing to sell. I am going to Newport to see him tomorrow.

### **Sunday 13<sup>th</sup> September 2016**

I managed to get a second and in some cases a third coat of paint on the key components on Saturday and also remembered to strip one pair of shock absorbers to paint the bottoms. On Sunday I rode the Supa5 outfit to Ham for the Bristol MZRC monthly meeting. It went very well and gave no trouble. I suspect that the speedo is under reading as I was keeping up with the traffic quite well even though it rarely recorded more than 40mph. Certainly I felt it was going rather quicker than this and the gearing is about right as it pulled top gear up Swainswick Hill out of Bath ok. I needed the carrying capacity of the outfit as Ray Cattle kindly donated a Supa5 petrol tank to my collection of spares along with a few other odds and ends. Thanks to Ray I also now have a genuine MZ workshop manual for the ES175 – it's in German but the pictures make most operations fairly understandable and in truth there is a lot of similarity with the later 250 models.

Back home I checked the painted items and they have all hardened off nicely so I decided to make a start on reassembling the bike. The swinging arm is back in place along with the rear frame section and the shock absorbers. My plan is to get the bike built to the stage where the back wheel is in place so that it is both mobile and in a form where the frame can be straightened. Must say it's quite satisfying to see it going back together. Normally I replace the nuts & bolts with s/s items and in time I may do this. For the moment however, it is being built with using all its original fasteners; cleaned up where necessary. No special reason, it just feels the right thing to do.

I am still waiting to hear back from Robin Davies about a front fork. Looking at Roger Badding's ES250 today and talking to him about problem, we both wondered if I could use the front fork from the later model. He thinks he may have one in his loft which I could try if a correct one does not come to light.

### **Friday 11<sup>th</sup> September 2015**

On Thursday I cleared some the bike lift to use it as a table for painting the various bits of the ES175. Not my favourite job and frankly I am not very good at it – I lack the skill and patience to make a really good job. However, some of the bits I am coming up fairly well and in truth many of them will never be visible once the bike is fully assembled. The critical parts are the swinging arms, certain

parts of the main frame and things like the the rear brake lever and torque arm. I have painted the steering column assembly though with luck it will never be needed. Everything apart from the shock absorbers has now had one coat of Black Hammerite Smooth and some a second coat. The frame itself is the awkward item as there are only a few positions in which it can be held stable and these always produce blind spots which have to be touched in afterwards. I am hoping the present dry fairly warm weather continues for at least one more day as it is giving ideal conditions for painting. Hammerite is best left to weather for 2-3 weeks and I normally put the bits in the greenhouse as I fancy the ultra-violet does help to harden it off as well as being quite warm.

That will clear space to start on the petrol tank which needs to be stripped back to bare metal to stand any chance of getting a good finish; a pretty awful job.

### **Wednesday 9<sup>th</sup> September 2015**

I took the bits in the picture below over to Steve for powder coating today. I also took the main part of the rear mudguard. Because I had used underseal beneath the patches, I was not sure if Steve would be able to powder coat this or not. The oven could make it run and mess up the job or worse still drip on other jobs. Steve took is going to think about this and worst case is he will sandblast it for me to paint later. All the other frame parts and tinware I will paint myself hopefully starting quite soon.



I rode the red TS250 over to Frome today to meet up with John Hill and Simon Bowditch. Pleasant lunch and the bike went ok though it does have a few quirks which I will have to sort it I keep it longer term. It lurches badly on the overrun even with the tickover almost non-existent, the altered footrests make the rear brake lever difficult to operate and the front forks pogo when the brake is applied. Still waiting for the log book from DVLA and until that is to hand I cannot dispose of it anyway.

Late afternoon Roger Bibbings from Malvern dropped in on his way home from Longleat. We had a look round my current 'stable' and a pleasant chat about mutual interests. By the time he left it was dog walking time and too late to start any garage activity.

### **Tuesday 8<sup>th</sup> September 2015**

The ETS150 ran like a pig on the way to the MoT station this morning. It would only run at very small throttle openings and crept up to about 35mph popping and banging at times even then. I have not ridden it since the Tiddlers & Tortoises run and it was going fine at that time. It was as though the timing was all over the place and it kept knocking as though it was over advanced. It certainly did not feel like a fuel problem and the plug was a perfect shade of dark brown. Points were fine and the timing was spot on so I wondered if it was the Velleman unit which replaces the condenser. I disconnected it and reinstated the condenser and that was when I found the problem. The nut holding the wire from coil to points was missing and the wire was loose. As soon as I replaced the nut the bike ran perfectly on the condenser. I re-instated the Velleman unit and it also was fine. Doh!

This distraction, looking after poorly wife plus a visit from Mike just about disposed of the day but I did get an hour's garage therapy this evening and achieved two things. I managed to knock out the

hinge pin on the rear mudguard so that the two parts can be cleaned up and painted separately. I also modified a TS type metal rear light unit to fit the existing holes drilled in ES175 mudguard. Obviously it's not original, but the proper witches' nose unit which came with the bike is in very poor condition and frankly is pathetic to the point of being dangerous even when perfect.

### Monday 7<sup>th</sup> September 2015

Another day another dollar and having slept on the problem it does not seem quite so bad. I have put an advert on the MZRC website which may produce something though I am more optimistic that an email I sent to Robin Davies in Newport will be more fruitful. He has a /1 bike (not sure if it's a 175 or 250) and I know he has a spare 175 engine as we discussed this a while back; maybe he has other spares including a front fork? Anyway I have carried on with cleaning and prepping the various parts I plan to paint at home; I bought a large tin and two spray cans of Hammerite smooth today. I have put the powder coating of items on hold for now until the future of the bike is clearer. Those bits which are essential to get the bike back on its wheels I will prep & paint myself. If I decide to get the frame straightened it will need the swinging arm in place anyway as a reference point in the jig.

In all the gloom and despondency I have overlooked two positive items. I fitted a Supa5 crankcase



into the frame and it lined up perfectly. Not that I want to go down that road but its nice to know the option is available. I also measured the 175 cylinder head and I can see a relatively easy way to modify it to fit a 250 motor. Basically it needs an alloy head shim with an outer diameter circa 110mm and a centre hole circa 70mm and 3.5mm thick. The depth of the 175 centre spigot is 1.25mm so this would give an extra head volume of about 8.5cc which would keep the cr about the same if it was

expanded to 250cc. Nice to know it can be done if I decide to go that way though I have no idea at this time how to make the head shim; a laser cutter or CNC mill is favourite but costly.

The MoT on the ETS150 ran out on Friday so it is booked in for a test tomorrow. Gave it a checkover today and found the tyres a bit low as was the battery. Both items have been attended to so we should be good to go.



### Sunday 6<sup>th</sup> September 2015

I should have known things were going too well. The garage was becoming even more of a tip than it normally does so I spent an hour sorting through the ES175 parts and boxing them up in combinations that had some synergy in terms of order of attention. Once this was done I worked on the frame loop finishing the welding and cleaned it up ready for painting. Next on the list was the steering column and front suspension support unit. On the /2 models this is a cast alloy item but on the ES175 it's welded up pressed steel. Only when it was on the bench did I

notice that it was clearly bent into an S shape. This is a pretty substantial item so it must have been a hefty crash and someone has obviously made a valiant effort to straighten it. How successful they were in terms of keeping everything in line I don't know as yet and I will have to put it back in the frame to get a better idea. Looking at the picture, I am not overly hopeful. This puts the whole restoration project on hold for now – no point in spending any serious money on it if it can never be used safely on the road. Lost heart for today and going to do some gardening instead.



Later I decided I had to know the extent of the problem so I installed the steering column and the front and rear swinging arms and took some photos. The rods in the pictures show the relative position of the front and rear axles, the swinging arm pivot on the frame and the centre stand cross-member. They paint a very dismal picture showing that the frame itself is twisted to the left (if viewed from the front) and the steering column exacerbates this twist. Sadly this bike is never going to steer properly and will probably be lethal to try and ride without some major



surgery. Time to pull back and think my way through this.

### **Saturday 5<sup>th</sup> September 2015**

Long dirty session in the garage today cleaning and repairing various bits of the ES175. I have stripped all of the suspension units and replaced the seals in 3 of them so they are now all good to go mechanically. Cosmetically they are still a bit challenged but I can work on that later. The footrest clamps worried me as the thread was badly damaged on one of them. It was also slightly bent so trueing it up in the lathe was not possible. In the end I found that I could recut the thread to 3/8" whitworth and I also made up a special longer nut to compensate for the slightly smaller diameter. I would like to replace the entire footrest assembly but it also provides the pivot for the centre stand and this complicates the design considerably. What I have done should work for now and perhaps in time inspiration will strike. A lot of the time was spent repairing the rear mudguard. In fact most of it is in surprising good condition with only surface rust. However, the bottom section has clearly suffered from vibration and has split around the fixing hole. In fact a chunk about 2" x 1" had broken away completely. I made up a patch for the inside and an extra reinforcing patch on the outside just around the fixing point. Everything was liberally coated with underseal then riveted together.

Earlier in the day I fitted a tyre and tube to the newly built Honda front wheel and removed the Avon SM tyre from the other Honda wheel which was previously on the outfit. A couple of people have expressed interest in this wheel but I am reluctant to sell it for now. Reading the above it does not seem like much was done but it certainly occupied most of the day.

### **Friday 4<sup>th</sup> September 2015**

Yesterday I took the CB400A for a 100+miles ride with my local VMCC section. The least said about the run itself the better as we had a failure in the drop-off system early on which caused some

confusion and resulted in a few riders getting lost. One of my friends also had fuel blockage problems which took a while to sort out so we were both well late for lunch. Even the riders who got lost were at the lunch stop well before we arrived. The bike went very well apart from an odd grinding noise which I commented on once before. It did not start until we were 40-50 miles into the ride and only seemed apparent when cruising and not always then. Shut the throttle completely or wind it open to accelerate and no noises. It's not the engine itself which is quite smooth and sweet. I think it something to do with the freewheel built into the automatic clutch. I intend to just keep riding it for now on a kill or cure basis but I will give it an oil change just in case. I just hope that this was the third thing to go wrong and that there is not something worse lurking around.

Today I spent ripping the ES175 apart. Practically everything that can be taken apart has been and I am slowly working through each component cleaning and examining for broken or damaged items. There are a few things needing repair but so far nothing that I won't be able to tackle myself. A lot of the smaller items of tinware and things like the centre stand swinging arms & footrests I shall take over to be powder coated straight away. They are very fiddly to strip and prepare at home whereas Steve my powder coater has a soaking bath and shot blasting facilities which make it much easier. He has a long waiting list so they won't be back for a while which gives me time to concentrate on other things. The main frame loop I will prepare and paint myself with Hammerite Smooth. I am undecided what to do about the tank and mudguards. Spraying with Cellulose would give the best finish but powder coating would be a lot easier.

I need to compile a list of the jobs required primarily to make sure they get done in the right order. Also to ensure that things that need to be sent away are identified early as lead times for away jobs can be lengthy. My target is to have the bike at least cosmetically presentable by February 2016 for the Bristol Classic Bike Show.

On a different tack thanks to Mike Davis who picked it up from Brickwood, I now have back in the garage the front wheel with Honda TLS hub and MZ rim. It looks really good with the s/s spokes. I have a new tyre ready for it but will need to buy an inner tube. It's only about 5 weeks to the Colombes rally so I had best get on and fit it to the bike.

I have also removed the old tyres from the ES175 wheels, The inner tubes are both sound and the rubber must be 3mm thick at least, must more robust than the flimsy things we use in the UK. I am tempted to re-use one of them for the back wheel. Both wheels need attention to the spokes so they will get the s/s treatment – a salutary lesson on relative costs; I can rebuild 3 MZ wheels for less than the cost of having the Honda wheel laced professionally.

### **Wednesday 2<sup>nd</sup> September 2015**

Been busy on other things for the last 3 days so only a limited amount of time on the ES175, mostly looking and evaluating. Browsing the internet in bed last night I came across a picture of an ES175/1 which had an ES\*\*\*/2 head and barrel on the /1 crankcases so clearly this is a possible mod. Examining the various gearbox spares which came with the bike and some of my existing spares, it looks very much like the /1 gearbox is identical to the /2 and indeed the 4 speed TS250 box. All the gears, bushes, selectors and shafts look to be in very good condition. I have two complete sets so there should be no problem about getting the gearbox functioning properly if the one currently fitted proves troublesome. When I tested it on the bench it would only select 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> just like the TS250 engine I rebuilt a few weeks ago. I am beginning to think that this does not indicate a

problem, just that the boxes have to be spinning for the selectors to work. I may fit the TS250 4spd engine in my test bike to prove the point.

Searching the spares boxes I found a complete rear brake plate assembly with newish linings. This can be used as a temporary measure until I can get the original ES175 shoes relined. I have not yet stripped the front end but the front brake did not inspire confidence so I imagine its shoes will need relining as well. My search also turned up an early TS250 s/arm and a spindle. The spindle and bushes will be identical to those in the ES175 so may provide some serviceable spares. The big problem at the moment is trying to lay hands on an ES175-250/1 spares book to get part numbers. I have tried the club regalia officer and TheMZshop without success. I doubt if many were ever sold in the UK so possibly there is no English version. Guess its German eBay again.

Today I drove up to Shrewsbury to deliver the ETZ125 to my grandson and drop of some of the things they left behind during their recent visit. As usual with a teenager he did not say much but the look on his face made the trip worthwhile. I took an alternate route home to look at an AJS model 18s the 500cc single. It was very tidy and had a number of sensible mods and the owner was charming, we talked for 2 hours about things of mutual interest before even looking at the bike. I did not buy it in the end because it was not an original bike, being a 1958 350 which had at some stage been fitted with a 1955 500cc engine, gearbox and primary drive. All neatly done and I was aware of this before I went but it was clear that his price was firm and I felt unable to pay that much. Research on eBay had established that such 'mongrels' never achieve the same price as genuine 500's and often not much more than the 350's. We parted good friends and it will be interesting to see if other potential buyers share the same view. The bike had been on the Jampot website or 6 weeks and mine was the only enquiry. It is now in the printed copy of the magazine and in OBM tomorrow so it will reach the eyes of a wider audience.

Really I should have been at home today either trying to fix the washing machine or sorting out the purchase of a new one. Just to put me in my place one of the warning lights on the dashboard came on as I left Tenbury Wells. It's the same one that caused problems a couple of months ago and I decided to ignore it and carry on – but carefully. Nothing untoward happened but it will have to go into the garage soon to be fixed. Just waiting for the third thing to happen.

### **Sunday 30<sup>th</sup> August 2015**

It's been drizzling most of the day so I don't feel too guilty about spending most of it in the garage; my wife is at a dog show so she will neither know nor care anyway. Lot of work done but most of it investigative rather than constructive. I removed and dismantled the exhaust system. As I suspected it was really badly coked up the tail cone was almost solid – surprising any gas got out at all. Absolutely foul job to clean it up but it is now done and back together. The exhaust system is pretty scruffy but fortunately very sound and I discovered that a TS exhaust pipe would fit. Might be a useful piece of information later. Whilst removing the exhaust I discovered that the bottom tube which supports the silencer, the pillion footrest and the brake crossover spindle was cracked. This confirmed the need to strip the back end of the bike which was another messy job but quite straightforward. There was no damping in either of the rear shocks but I dismantled one of them and found very little oil present. I topped it up with damper fluid and it now works perfectly again. Hopefully the others will respond to the same tlc. I have removed the chain as there were a number of broken rollers in the chaincase. I would have replaced this anyway so no big deal as I am pretty



sure I have one in stock. Both sprockets look very good in fact I think they may be fairly recent replacements – the cush drive doughnut also looks new.

The rear wheel was not quite so encouraging though, the brake linings were down to the rivets and the drum was quite badly worn. I do have an ES250/2 rear wheel in good condition and when I offered this up it fitted perfectly and is identical in appearance so that sorts that problem.

However, These early bikes use different brake shoes to the later models so the ones I have in stock will not fit. I will have to add shoes to my spares required list. Filing that I will get them relined when I take the Velo wheel over to be done. There was also rather a lot of play in the s/arm when I tested it. The spindle does not look too bad though it has clearly not been lubricated for some time as it was dry. These early models use metal bushes in the s/arm rather than rubbers bushes and I have never replaced any so far. Not even sure if you can buy replacements so I may have to get some made. One possibility is the spare TS250 s/arm (which also used metal bushes) I found the other day. As far as I can recall it had minimal play so I may be able to swap bushes and spindle. Cannot just swap the complete s/arm as they are quite different in appearance and in the location method for the bottom of the shock absorbers



With everything out of the way I was able to clean up the frame and identify the crack which extends over at least half of the tube. I was able to weld about 50%, which will support it for now. The remainder will have to wait until the frame is fully stripped so I can turn it upside down to get at it. Rather makes my mind up for me on how to approach this rebuild. As it's going to need a complete strip down I may as well go the whole

hog rather than a rolling restoration. I have now also taken off the rear mudguard after first removing the wiring (which is supported in clips underneath) and the rear light. Just as well really because the wiring was frayed around the mudguard hinge and would have failed quite soon anyway. Both seats are also removed.

In between times I had a look at the spare barrel and interestingly, the stud spacing and external diameter of the sleeve are identical to a TS250. This raises the possibility of fitting a TS250 barrel, piston and head to the ES175 crankcase as an interim measure.

**Saturday 29<sup>th</sup> August 2015**

The drive down to Spaxton and back on Friday was horrendous. Traffic was heavy because it was the start of a bank Holiday weekend and there were temporary 4 way traffic lights everywhere. Anyway I found Jerry Deeks house easily enough and spend a very enjoyable couple of hours looking at the bikes he has imported and just chatting about things in general. Eventually we got down to some serious discussions about the ES175/1 and paperwork flowed in both directions to seal the purchase.



As usual the picture flatters the bike but it is substantially complete and original and does not seem to have been too badly messed with. No doubt I will revise this view as work proceeds. The engine runs and sounds quiet both mechanically and exhaust. Too quiet in some ways so I suspect the latter is well coked up. It came with a couple of boxes of spares but too early to say if any will be of use or are just the clapped out old bits previously removed. Both spare barrels appear to have undamaged fins so I should be able to replace the one currently fitted in due course. Both are 175's but they seem to have plenty of meat on the cylinder liner to allow boring out to 69mm to give 250cc. According to the owners manual (which is in Romanian so only of limited help) both engines share a common stroke of 65mm. In fact there is what looks like a 250cc piston in the spares collection.



The ES175 is now on the bike lift and I am doing a stock take of its overall condition. I have sorted out some of the electrical issues – mostly blown bulbs and corroded connections even the horn and the stoplight work. Encouragingly most of the electrics seem to be practically identical to the later

models so I should be able to find replacement for anything found unserviceable. The exceptions are the headlight where the rim and the light unit and the rear light (witches nose type) both of which are different to the later models so none of my spares will fit. Fortunately both are serviceable though a little cosmetically challenged.

I could not get the petrol to flow properly so the tank has been drained and removed for cleaning. There is a link tube underneath the frame which is a pain – a feature shared by the AWO425, the BK350 and the R26. I think I have a quick release gadget which I will fit to make it possible to remove the tank in future without draining it. I have serviced the petrol tap which seemed fairly clear – not what I was expecting given the miserly flow. Will have to examine the tank itself in more detail tomorrow.

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