

Re-Commissioning a 1929 500cc Twin Port BSA Sloper

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The background:

This is one of several bikes that I have worked on to prepare for sale on behalf of a good friend. Bill was known to many as the owner of Classic Bikes UK and the BSA was one a number that he retained when he retired in circa 2016. He was also an active member of the Swindon Moonraker and West Wilts VMCC sections and, along with Mike Davies and Terry Dixon a regular riding buddy. Taking part in WRRTC events, section holidays, several trips to Spain for the Colombres Rally as well as section social runs. Bill had been poorly for 18 months or so; was diagnosed with Motor Neurone Disease in early 2022 and is now wheelchair bound. Slowly but surely he is divesting himself of his collection of over 20 bikes with the help of myself and others. Sadly he died in February 2023, I am the only remaining member of the Stazi Team – read my Colombres adventures



The photo was taken at Bill's house when I collected it on 14th July 2022. It's quite a handsome beast but pictures often flatter and there are a number of cosmetic issues not readily apparent plus of course its mechanical condition is totally unknown as yet. It was last run about 4-5 years ago when Bill used it on the Moonraker Trial. Not for long as it nipped

up on him at Broad Hinton. When it cooled down he rode it back to Oak Farm and it has not run since.

This is a bike with a lot of local history as it was previously owned by Peter Taylor from Calne who is reputed to have used it extensively, including at least one E2E and by all accounts rode it hard. Unfortunately the only paperwork that now exists for the bike is the V5c. As Peter died about 5 years ago I cannot pick his brains. According to the factory records it was shipped to Sleightolmes garage in Trowbridge on 5th September 1929 and the frame and engine are original. It still bears its original Wiltshire registration and does not seem to have left the county. Sleightolmes closed many years ago but I spent a lot of time as a teenager in the early 1960s drooling over their bikes; none of which I could afford. Though shipped in 1929 it is actually a 1930 specification model confirmed by the unique for that year engine and frame number prefixes and the cast beam that replaced the top tubes of earlier models. Overall it seems fitting somehow that it should come to me to be re-commissioned.

First Impressions:

Though somewhat sad looking at present, the bike shows all the signs of a good quality restoration at some time in the past and much of it will probably clean up well. I assume that Peter restored the bike probably finishing it in 2001 as that is when it was first put on the DVLA computer system. Fortunately with its original number and even more fortunately it is non-transferable.

The bike feels quite heavy to push around compared to my AJS K12 but this may improve once I have serviced it. Tyres are Avon Speedmaster at the front and SM Mk 11 at the rear. They have plenty of tread but the likely date from 2001 or even earlier and the sidewalls are cracking. They will need to be replaced.

The seat cover is quite tatty and the whole seat looks very low and slopes downwards at the rear. Hopefully this is adjustable. Only a rear stand is fitted and requires quite an effort. A sidestand would be a very worthwhile accessory; in the meantime I am using the side prop I made for the K12.

Something odd about the headlamp as the rim and light unit are held in place with gaffer tape. I wonder what horrors will be revealed. It is fitted with a full electric lighting system and impressive Bosch horn with the battery powered by a Lucas Magdyno system. Such a system was available when the bike was new but the magdyno unit fitted is the later MO1 type. The headlight is almost certainly not original to this bike though of the period. It has the ammeter at the rear a 3 position lighting switch and looks to be about 6.5". It would originally have been 8".

There are two foot brake pedals. The right hand pedal is connected by a rod to the rear brake. The left hand pedal has a cable which is taped to the top of the forks. This needs to be investigated but not an urgent item. Of more concern is the front brake lever which has

probably been modified in a spill as it has a 90 degree bend making it quite hard to use effectively. Both brakes do work and seem adequate in size (circa 7"); how well is another matter.

The petrol tank is in very good condition externally with nice paint and perfect transfers. Inside not so good as it seems to have been lined and this material is now peeling off. There is a small amount of petrol in the bike and no obvious signs of leakage but this along with the seized petrol tap will be one of the first things to be investigated.

There is no speedo fitted nor any mechanism for driving one. Later models did have a speedo gearbox driven by the front wheel but the back plate on this bike has no such fitting. Not really an issue as very good bicycle speedos are now available for only a few pounds.

The engine is not seized but is very hard to kick over. I suspect more to do with old 50sae oil rather than a consequence of it nipping up. There is a proper mechanical oil pump which feeds oils to the big end via a drilling and then lubricates the rest of the engine by splash/mist. The oil tank is in the crankcase and the flywheels return the surplus to the tank _ or are supposed too. Strangely there is an oil feed regulator to adjust the flow rate between pump and engine and it may be that incorrect setting of this was the cause of it nipping up when last used. All will be revealed in due course.

Day 1 (15th July 2022):

First task was to drain the old oil. There are two drain plugs hidden behind the lower left hand frame tube. One drains the oil tank and the other the crankcase. The tank produced about 1.5 pints of black heavy oil but no evidence worrying metallic particles. The crankcase contained no oil suggesting that the flywheels were doing their job of returning the oil to the tank. This was just as well as getting that drain plug back in was very difficult. The tank one was a little easier. The tank was filled with fresh 20/50 oil for now. Thicker monograde will be used later once the engine has run and hopefully loosened up. On checking the oil regulator, I found it to be only a $\frac{1}{4}$ turn open whereas the manual suggests $\frac{1}{2}$ to $\frac{3}{4}$ for normal use. I have set it to $\frac{3}{4}$ for now and this should resolve the nipping up problem going forward.

Next task was to sort the fuel system. The petrol tap was very stiff and was clearly blocked as there was no feed even after I put in small amount of fuel. I found a spare tap of the same design in my spares box and this was fitted along with a new fibre washer. I also added a small extension tube so that the feed was about $\frac{3}{4}$ " above tank bottom to reduce chances of any rubbish getting to the carb. This has clearly been a problem as there was a filter in the fuel line and it was blocked. For now I have fitted a new petrol pipe and checked that fuel made it to the float chamber and that the float needle was working. All now well in that department. At some point the tank will have to come off to be properly cleaned and may need resealing if any leaks are apparent. So far I have not found any. Don't know if the

amal carb is the original, it certainly looks of the period but strangely it has no tickover adjuster screw, just a mixture adjuster screw.

Third task was the ignition system. The head clearly had an 18mm plug as standard but a 14mm adapter is now in place and an NGK 7ES plug is fitted. It looked ok but no spark was evident. However, after cleaning the points I did get a spark and the advance/retard mechanism also works. Ever hopeful, I flooded the carb, set the ignition to half retard and gave it a few kicks and wonder of wonders it started. Fair amount of smoke initially but this soon settled down and there is just a whiff now from around the cylinder head. If you click the picture below it can be heard running – result.



The video makes the engine sound more clattery than it does in reality so I don't think it has suffered over much from nipping up. I still need to check the tappets and the ignition timing though I suspect both will be fine. It is of course running on 20/50 oil and the correct thicker oil will probably reduce the noise a bit. Puzzled by the steady tickover given there is no adjuster.

Now to look at the electrics. The observant will notice that there is a temporary battery fitted in place of the original. This was a modern 6V 5ah type located inside an old Chloride casing to look authentic; it was well beyond its sell-by date. When first fitted I found we had a working headlight both dip and main though quite dim to the point where I wondered if it was a 12v bulb. There was a tail light and the horn worked but no pilot light. The rear light unit has no provision for a stop light and none is fitted and is probably not a legal requirement given the age of the bike. I need to check

but if the bike is to be used in anger especially on VMCC runs, it would be prudent to fit one. The ammeter showed a discharge of the correct scale when the lights were on but disappointingly there was no charge when the engine was running. I need to refer to a manual about checking a dynamo so that is a back burner issue for now. With luck it is simply lack of residual magnetism which is an easy fix.

The final thing looked at today was the odd headlamp arrangement. When I peeled off the gaffer tape it revealed what turns out to be a correct rim for this shell. The fitting is not one I have come across previously. There are three equidistant slots in the shell and the rim has three pins which engage the slots. This is turned to lock the rim in place bayonet fashion. However, the headlight unit itself is from a Japanese bike and does not fit the rim very well and the 'W' clips used were preventing the rim pushing onto the shell correctly to engage the bayonet. At least that is my diagnosis as when I offered up the bare rim it would lock in place correctly. Eventually I found that by using just two 'W' clips strategically placed I could get the rim to engage and lock. However, that is not a long term solution so another work in progress. I did have more success with the pilot bulb, this was a broken earth wire and easily fixed. Curiously, though I do not see an obvious direct link, the main headlight bulb was brighter after this fix. The actual headlight bulb is a 6v 25w type but with a very narrow fitting specific to this light unit – almost certainly there will be no 6v led options in this size. However, for the moment the headlight is fitted without the need for gaffer tape and works.

Second Day – 17th July 2022.

Not quite so productive a day and a few more things to add to the 'to be sorted' list. Initially I spent some time cleaning the bike to get rid of the dust, oil and grease that had accumulated over the years. Cleaning it also brings into focus things not previously noted. I also applied the grease gun to the various the nipples, mostly it must be said on the girder forks.

I took it for a brief ride round the orchard which threw up a problem with the seat. Though I had carefully adjusted it yesterday, as soon as I hit a bump the seat tilted back to its 'as found' position. Clearly this is an ongoing problem and needs a different approach. For the moment it's a bodge using a piece of wood between the base of the seat and the frame tubes. The picture shows what I mean. This is not the permanent solution, eventually it will need something a bit more elegant but it should sort the problem for now. The other issue is that the special tube that fits into the frame top tube is quite short and severely limits how high the seat can be raised. David Spencer sent me a picture of his seat and his can be raised much higher. I suspect the tube on this bike is not an original item. Or just possibly it is fitted the wrong way round.



I also tried flashing the dynamo today to see if that would get it started. No joy so it will have to be a partial strip down to check the brushes and connections accessible whilst still on the bike.

Riding the bike the steering feels heavy, not sure if this is normal or indicates a problem with the steering head bearings. The good news is that the gears all select and the clutch and brakes work so a brief test on the road is feasible.

I checked the tappets. The inlet is probably correct, the exhaust is way too wide. However, adjustment will have to wait until I have the tank off.

The front brake lever however badly needs attention. I think it's brass and I need to seek advice on how to straighten it safely. Presumably it should be like the clutch lever.



Day 3 (18th July 2022)

Today and tomorrow are forecast to be the hottest temperatures ever seen in the UK possibly approaching 40 degrees centigrade. I made an early start on a couple of jobs but by 11am it was too hot to work outside even under the trees. However, I have had what I think is one success and one confirmation of a problem.

I removed the seat and reversed the seat tube and this seems to have resolved the saddle problem. The saddle sits higher which is much better for me and the amount of leverage that exacerbated the tilting is much less. A test ride round the orchard even over the bumpy bits did not cause it to tilt. It now looks more like the pictures of other Slopers I have found on the internet. In the picture you can

also see my patent side stand. It can stay on the bike as it rests on the redundant LH brake pedal when not in use.



The other job tackled today was the dynamo. They are quite easy to remove from the top of the magneto so rather than fiddle around on my knees, I took the whole thing to the workshop. After cleaning the commutator and brushes, I was able to get it functioning as an electric motor. However, I could not get it to produce any current when driven. It is back on the bike for now and the new owner will have to budget for a professional dynamo rebuild.


One bright spot. The front brake lever is not brass as a magnet stuck to it. Should be feasible to heat and bend it to a better shape.

Day 4 (22nd July 2022): I don't work on the Sloper every day as life gets in the way sometimes. It's now just over a week since I picked up the bike with perhaps the equivalent of 1.5 to 2 whole days actually spent working on it. Today was its first test ride on the road. My circuit is about 2 miles but in a circle round the house so never too far if it needs to be pushed home. In fact it did not miss a beat and seems quite powerful, though I rode it somewhat timidly. Nothing fell off and it was quite comfortable, my saddle fix survived bouncing over the sleeping policemen which was good. The only downside was the ponderous steering which made it reluctant to go round corners comfortably, especially roundabouts. It also felt like it was weaving at slow speeds. I don't know as yet whether this is normal for a BSA of this era or indicates something amiss which needs correcting. I rather hope the latter because if this is normal then it's not the bike for me. I have consulted friends by email and await comments.

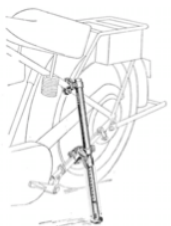
Day 5 (23rd July 2022): I have solved the problem of the ponderous steering. I lifted the front end on my scissor jack; what a useful bit of kit that has turned out to be. This established that the steering itself was very stiff. Working it back and forth gave a marginal improvement as the grease loosened up. However, the real problem was the adjustment of the head bearings which was far too tight. Once slackened off the forks would move from straight ahead to full right or left turn under their own weight. The bike behaved fine on roundabouts on a second test ride and the weaving has gone as well. Phew, that was a relief.

Another minor improvement today as well. The battery I am using is marginally too big for the Chloride case that came with the bike but I had another one on the shelf that was fine. So the battery is now refitted to the bike and looks correct to period.

Day 6 (28th July 2022). Not able to spend time working on the Sloper every day so working days and elapsed time are different. Though I have not actually been working on the bike for the past few days, I have been doing research and spending money. On order I now have a new saddle cover, a new headlamp glass and a Vintele stand. The picture below shows how this will fit and the design goes back to the late 1920's so very much in period; though of course this is a modern reproduction. Not absolutely sure it will fit due to the twin silencers but I sent the maker pictures and dimensions and he thinks it's worth a try. He is providing a slightly longer bottom fitting which should help. Worst case I send it back and get a refund. Fitting any other sort of side stand will be difficult because the nearside pipe & silencer get in the way. The alternative type which clamp to the bottom frame tube present just as much of an issue and I have never had much confidence in them as they can rotate unless you drill the frame tube for a locking bolt; and even this is not always successful.

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Today I decided to tackle the bent front brake lever. A bit more fiddly than I was expecting as the cable does not have a nipple at the lever end. Instead the cable threads through what is in effect a solderless nipple. This is actually a design feature as there is no slot in the lever to take the cable when a nipple is attached. Anyway it came apart easily enough and I took the whole lever assembly to the workshop put it in the vice and applied lots of heat. Very cautiously I tightened the vice and straightened the lever. The old cable was quite frayed at the lever end and impossible to thread through the solderless nipple so I made a new one plus a spare for the toolbox. The lever also polished up rather well. It no longer has any plating so will need to be polished regularly else it will rust but looks good now. Relief to have this job behind me, I was afraid it would crack.



Day 7 (1st August 2022): All the bits I ordered turned up together so a happy bunny today. The new seat cover seems quite well made but the felt was perhaps a little thin so I cut a piece of old carpet to sit on top of the spring to pad it out a bit. Looks much better.

The new light unit was more of a problem. It has a flat lens, which was almost certainly correct for the period but it was a tight squeeze to fit the led bulb. The front part of the led (which is a metal heat sink) is just touching the glass. I think it will be ok but time will tell. It was also a struggle to get the 'W' clips to hold the unit in the rim, The legs are not really long enough. After struggling for ages I solved the problem by putting a piece of rubber under each clip to increase the tension – sorted. The only thing not sorted satisfactorily is the sidelight. The sidelight bulb holder on the bike does not match the new light unit and I could not find a suitable replacement in my spares. In the end I tucked it away inside the headlight and left it for now. The led headlight is mainly intended for daylight running and possibly a very rare night time trip. Really the side (Parking) light serves very little purpose especially as the led main light uses so little current. I'll put the job on the back burner until such time as a suitable bulb holder turns up.

The big job was to fit the new Vintele side stand. It was a bit of a struggle to get the fixings in the correct position and I had several goes before I was happy with the result. As Mick Hall (the supplier) suggested, I did need to use a spacer on the bottom fixing for the stand to clear the silencer. I may revisit this as I have since thought of a possible way to obviate the need for a spacer. So overall a good day and several things ticked off the bucket list. All three things are visible in the picture below.



Day 8 (3rd August 2022)

No specific progress to report but one odd event. I was showing the Sloper to my son and when I started the engine, I noticed that the ammeter was showing activity. Only the needle was moving towards discharge rather than charge. No idea why as yet but signs of life from the dynamo are of course very welcome. Addendum: I had an inspiration and repolarised the dynamo by flashing the field coil via the cut-out. When I restarted the engine the ammeter showed a charge so that worked. But then it stopped working again so only a partial success.

Day 9 (6th August 2022)

Just a quick update today. The clamps and mirrors have both now arrived and I fitted one today as you can see in the picture. The mirrors were supposed to be long stem and are barely adequate but will I think work ok. Now feel safe to take the bike out for a longer ride. I have a second clamp and mirror, pondering on whether to fit that on the LH side.



Day 10 (20th August 2022)

Busy on other things so the Sloper has been neglected for a while. However, today I decided to try out the longer bottom bracket that Mick kindly included with my Vintele kit. It was included in the box that contained the unpainted kit which I only discovered much later. That kit, minus the long bracket has since been passed on to David Spencer and is now fitted to his Sloper. The longer bracket is a perfect fit and does away with the need for a spacer.



The next thing needing attention is the petrol tank. The bike has become increasingly difficult to start and will no longer tick over reliably. My suspicion is that the crumbling tank sealant is blocking the jets in the carb, particularly the pilot jet. To remove the carb the tank has to be taken off so I may as well tackle both at the same time.

Day 11 – (29th August 2022)

I have been busy with other things but the Sloper came to the top of the list today. I tried cleaning the carb in situ with carb cleaner but it had little effect. I also drained the tank and refilled with a 5l of fresh fuel. No noticeable improvement in starting and even when it did fire up it would not tickover or run at all at low revs. All the symptoms of a blocked pilot jet I reckoned. Only problem is that these early Amal carbs do not have a pilot jet you can remove and clean, it is just a drilling in the jet block. Nothing for it but to remove the tank to get at the carb so it could be stripped on the bench. Actually this was not that difficult, the gear change gate is only held by two bolts and hangs out of the way once loose. The tank itself is fixed with four studs and nuts and they were easy to get at. Just wish I had not put in all that fuel.

Before starting work on the carb, I had an epiphany. I have a fully restored 276 carb waiting to be fitted to the Velo MAC. It is only 15/16" (the Sloper carb is 1 1/16") but that should not matter for the purposes of starting and tickover. Being basically the same type of carb the existing throttle cable fitted so it was an easy job. Best of all, the bike started first kick with just a tickle (did not bother to connect the choke) and settled to a steady tickover that could be slowed right down to a

donk-donk-donk by playing with the magneto a/r and the tickover adjuster; It also revved cleanly when fully advanced That at least established the problem was fuel related which was a good result.

Stripping the old carb was pretty straightforward. It was very dirty and clearly quite worn; especially the slide. The body is brass rather than Mazak which I suppose is a good thing. I don't really know if the pilot jet orifices were blocked or not as stripping it almost certainly disturbed any blockage. Certainly now everything is clean and the orifices are all clear. Reassembling I found that the slide was reluctant to drop smoothly into the body. Took it apart again and with the jet block removed the slide moves freely in the body and also up and down the jet block. When I put it back together and the slide was still stiff – b*****r. There is also another problem or perhaps feature is more accurate. There is no provision on the body for the tickover adjuster screw, though there is a cutaway in the jet block for it. I guess the tickover speed is set with the cable adjuster like some of the older MZs. For the moment I have put the carb to one side as I suspect it will need to go to Bill Harley for a refurbish and I would prefer to avoid that cost for now, August is a very expensive month in the Fielding household.

I seem to have two short term alternatives. Run the bike with the smaller carb currently fitted and see how it behaves. I floated this idea on the Sloper Facebook group and nobody rejected the idea. One sensible suggestion was to check the plug regularly to make sure the engine was not running week. Another possible alternative is to try the Amal Monobloc I have on the shelf. This is the correct bore size and appears to be in good condition with a new chrome slide. I will give it a try tomorrow and check the tappets (3thou in & ex).

Day 12 – Tuesday 30th August

I did the tappets whilst the tank was off. The inlet was a bit slack and the exhaust was a tad tight. Both now set to .003". I also fitted the Monobloc carb and this seemed to work ok but then I found the slide was jamming at times when near fully open. Not something I would want to happen on the road so I have put that aside for now.

I refitted the 276 carb and it was reluctant to start; then I found it was flooding so no wonder. It worked fine if you ran the bike with the lid off the float chamber so it was not the needle or seat. I found a small burr on the top of the needle and there seemed to be a ridge inside the seating in the top. Cleaned up both and all was well. With the bike back together I took it for a test ride. No issues and it seemed to have enough power for my purposes anyway despite the smaller carb. Without really trying it clocked 44mph up my test hill and would probably have gone faster. I stopped to pick up some shopping and it restarted first kick and the tickover is slow and steady. Just what you need on a bike with a hand gear change.

I checked the plug when I got back and it does look a little pale. The carb currently has a 130 main jet (correct for the MAC which is a 350). The original carb has a 170 main jet which I will try but I think this may be too large. I will ask around to see if anyone has some 276 jets in the 140-160 range I could borrow to experiment. But overall a successful day.

Day 13 - Thursday 1st September 2022.

A curates egg day, good and bad in parts. The good part is that I visited Reg Eyre this morning for a natter and to talk over the Sloper issues. He agreed that I should try a larger main jet and managed

to find a 150 in his spares box. This is duly fitted and I plan to give the bike a test ride tomorrow to see if it improves matters. The bad part is that I managed to drop the 130 main jet and so far have not been able to find it – doh.

However, there is progress on another front. The sticking slide in the Monobloc carb is now fixed. When I checked it, I found that it was slightly oval. Only a few thou but enough to cause the problem. Being hard chromed I could not file or polish it to size so I took a chance and gently squeezed it in the vice (with some soft plates to protect it). After the second attempt the slide drops in without sticking so the Monobloc is now a viable alternative. No success so far in repairing the original carb though. I am reluctant to spend £60 plus having it repaired even assuming Bill Harley can work his magic on it. With a hand gear change you really need an engine with a reliable tickover as the throttle hand is also used for gear changing. I did look up the price of a new 276 carb but at £460 it would be well outside my comfort zone. Anyway, they are out of stock at present.

Day 14 – 4th September 2022

Things got better today. I found the missing 130 jet, it was lying in plain sight exactly where I had left it and why on earth I could not see it yesterday I have no idea. A 3 mile test run suggests the bigger main jet has improved the mixture, the plug looks a much healthier colour though with modern petrol it is often difficult to tell. I'll check regularly and maybe try the 170 jet if it still looks weak.

I also now have a single pipe banjo petrol fitting for the Monobloc carb. More to the point, I found and fixed the reason for the slide sticking. Though it is a one of the new chrome plated type, I found it was slightly oval. A gentle squeeze in the vice sorted this and it now fits the barrel perfectly. So using this carb is now a viable alternative.

Still no closer to re-solving the issue with the original 1 1/16" carb. If you assemble the carb in the normal way, the slide gets very stiff. Easing the nut that holds the jet block in place immediately frees the slide but it is critical that the nut is done up tightly as it locates the float chamber. I am becoming increasingly suspicious of the jet block as I don't think it is the correct one for the body. I will take some pictures to illustrate why I think that.

Monday 26th September 2022

Since I last reported I have done two actual runs on the Sloper. The first was on 18th September 2022 organised by the Wessex V&V Section. It was only about 25 miles so a perfect opportunity to try the bike out. It went well with no real problems on the run itself. When I checked the plug after the event it still looked a little weak so I changed the main jet from a 150 to a 170. This produced a very sooty looking plug so I then fitted a 160 main jet. This was in place when I did the Dorset Section Vintage run from Leigh near Sherbourne on 25th September. This was a bit longer – around 43 miles and apart from one hiccup when the choke decided to close itself, the bike ran very well. The first half of the run was mostly on narrow lanes with the bike just trickling along. The return half involved a 12 mile run on an A road so I was able to try out the performance a little more. It seemed quite happy to run at 40-45 up hill and down dale in top gear and the speedo showed a highest speed of 48mph when checked later. No engine problems encountered on the run but the plug was still very sooty at the end. So now I am confused as given a 150 was weak and a 170 was rich, it seemed reasonable that a 160 should be spot on. Still thinking about this at the moment but I have put in a

hotter plug (NGKB6ES) instead of the B7ES it was using in case the sootiness is actually oil though it does not smoke nor seem to use much if any oil.

I have also done a couple of other things recently. The primary chain was very tight so this has been adjusted. Doing this identified that the rear chain is pretty much at the limits of its adjustment so I will fit a new chain some time soon. The dynamo stopped charging some time on the Dorset run but the battery had plenty of charge so the lights kept working. Back home I tried flashing the dynamo by pressing the cutout on the regulator and it is now charging again – very odd.

Whilst in Dorset I discussed the original carb issues with a couple of the local experts. The issues seem to revolve round the jet block which is the wrong size (1" rather than 1 1/16") and from a 276 rather than the type 6 carb body on the bike. Peter Hallows is going to look in his box of carb bits to see if he has a jet block that would be a better fit.

I forgot to mention that Dave Owen from Swindon kindly gave me a single connection fuel for the Monobloc carb so this is now ready to fit. I am tempted to give it a try.

Saturday 1st October 2022

I am hoping to do the Flat Tank Section Belts and Braces Run next Sunday (9th October) starting from Dennis Beale's house at Minsterworth on the A48. I have now put back the 150 main jet to see how that performs on an actual run as just riding it round my test route at home does not seem to give a realistic result. I have a suspicion that this also will prove too rich and what I really need to be looking at is raising the needle to richen the mixture in the mid-range. The main jet only controls mixture from circa ¾ throttle and it is likely that with the smaller carb I get to that point more readily trying to maintain higher speeds especially up hills. With hindsight it is entirely possible that the 130 main jet is adequate and that I have been adjusting the wrong setting. Given the ease of starting and reliable tickover, I am reluctant to give up on this carb unless and until a more suitable carb is sourced or the original is fixed. That 1 & 1/16" Monobloc is still sitting on the shelf.

Wednesday 12th October 2022

The Sloper completed the Belts & Braces Run on 9th covering about 34 miles in the morning. The afternoon route was officially 29 miles but I did about 35 as I missed one of the turns and finished up somewhat off route. I did try and get clever and pick the route up again but failed to spot the junction I needed. Still all was not lost and I had a good main road blast of about 15 miles back to the finish. The bike generally went well though the small carb clearly limits performance it to cruise around 45 but not yet seen 50mph and hills slow it down. Not that I actually want to go much faster, just that I would like it to be able to. It did lose power briefly climbing out of Mitcheldean and limped along in 2nd gear for a short time but then picked up again and did not miss a beat for the remaining 10 miles back to Bealesville.

As expected, the plug showed the mixture was still too rich even with the 150 main jet. Today I fitted the original 130 main jet and took it for a more demanding test ride where I could get it running on the main jet. This time it was running leaner than I would like, the plug being straw coloured rather than light brown. Time to see if I can locate a 140 main jet as that could well be the optimum. I think I will still need to raise the needle a notch as well though.

It's also time to think about fitting new tyres. At the moment it is wearing very old Avon tyres, - Speedmaster at the front and an SM Mk2 at the rear. Both have fine cracks in the sidewalls and the rear has worn flat as SMs are prone to do.

Sunday 16th October 2022

I visited Reg in Lockeridge today and borrowed a 140 main jet. Fitted it this afternoon and took the bike for another test run up and down the bypass. About 4 miles altogether. Top speed of the bike up the hill is still about 48mph but this is an accurate figure from a GPS so on a speedo would likely have been well over 50. Back home I checked the plug and it is a little darker than when the 130 was fitted so I will settle for that for now. Reading a plug with modern fuel is not easy and I noticed that though one side of the nose was a nice light chocolate brown the other side was much lighter. I have seen this on BMWs in the past and they survived great distances like that so I am not overly worried.

Tuesday 18th October 2022

Now that the main Vintage Class events for the year are over, it is time to give the Sloper a bit of a makeover. Nothing drastic but there are a couple of areas that merit attention. First was to tidy up the wiring from the battery which for the positive connection seemed to have far too many joints. Now much improved but I really need to get it in the workshop and review the whole wiring loom as it seems to consist of a miscellany of different coloured wire for no apparent reason. However it works so a longer term project. I ordered a pair of new tyres on Monday and they are due later in the week. That will definitely mean getting the bike into the workshop and onto the lift to get enough clearance to drop the rear wheel. While working in that area I can check the brake drum and linings and replace the rear chain which is just about on the limit of adjustment.

One thing I have tackled though is the scruffy bag holding tools and suchlike. This is was strapped to the pillion seat but sort of draped itself sideways and forward onto the mudguard. I was just going to remove the seat and fabricate some sort of crude framework to attach the bag using the pillion seat mounting brackets. However the project developed a life of its own and I now have a fairly substantial box with hinged lid made out of some alloy sheet left over from my railway project. Quite pleased with the result and everything is now safely housed and the lid is lockable if needed. Needs to be painted in due course.



Wednesday 26th October 2022

I took the Sloper on a shortish run to a VMCC coffee morning yesterday. Went well and attracted some interest. I checked the plug when I got home and it seems just about right so the 140 jet is the one to go for. No progress yet in sorting out the original carb but no real hurry. Top speed apart, it runs perfectly well on the smaller carb.

The bike itself is now in the workshop having the new tyre fitted. I was dreading trying to get the old Avon SM off as they can often be quite stiff and hard to shift. However, it came off fairly easily and the rim underneath was very clean, no rust to be seen. The new tyre went on easily, I had bought a new inner tube but the old one was a good quality Michelin with no repairs so I re-used it. The new one will be kept as a spare in my new tool box.

While it was on the bike lift I fitted a new rear chain as the old one was just about on the limit of adjustment even though it seemed firm on the sprocket. To my surprise when I compared old with new (genuine Reynolds chain) there was very little difference in overall length no more than $\frac{1}{4}$ ". However, when fitted there was still had lots of adjustment left. Just the front tyre to replace now; a job for another day.

Thursday 27th October 2022

Must be my lucky day. I decided to fit the front tyre which I duly did without too much hassle. However, whilst doing the job I noticed that lying on the bench was the spring clip for the rear chain I had just replaced! No idea why I overlooked it but thank goodness I spotted it and of course it is

now fitted. That just about concludes the autumn makeover I had planned for the Sloper so it will now be mothballed for the winter. There are a couple of issues outstanding from the list I made when I first got the bike but I don't regard any as urgent. The inside of the tank was a major concern at the time but has not proved a problem so will be left until it does. Might be an idea to drain the tank down for the winter though. Oh yes, one other thing I noticed for the record; both wheels have what look to be new shoes/linings. Both are still bedding in and should improve with use.

Saturday 5th November 2022

It was the VMCC Shepton Mallet autojumble today and wandering around I spotted what looked to be suitable carb for the Sloper. It was the right size and had obviously been fitted to a Velocette at some time as it had the special tickover adjuster and it was the correct bore. Not quite complete but I had the parts that were missing and the rest was in good condition so I bought it for £60. Not cheap but a new one would be £400.

Back home I cleaned it up and reassembled to make a complete carb. The slide is a bit sticky but I think usable and worst case is I send it off to Bill Harley for a refurb. The number on the flange is BS/1AT which turns out to be for the pre-war 500cc Iron MSS Velocette and exactly the right specification for the Sloper. Just hope it works ok when fitted.

Monday 8th May 2023

Big gap since I last updated this blog but partly because of trouble with my hands – see daily Blog - and partly because not a lot has happened with the Sloper. It has been slumbering away over the winter. I did send the 'new' carb to Bill Harley who worked his usual magic. The carb is now fitted and when I came to test it, the petrol tap appeared to be clogged as no fuel came out. I was about to remove the tank and give it the clean that is on the bucket list below but then thought it might be prudent to check the fuel level. Which proved to be very low! Made worse by the fact that, as the tap had no filter, I had put in a 3/4" pipe to ensure it took fuel well above tank bottom. I did remove the tap anyway to drain out the remaining fuel and to my surprise there was little evidence of any debris. A gallon of fresh petrol and all was well. Bikes starts easily and ticks over quite well. It will need a final tune-up once the engine is properly warm but as far as I can see the bike is ready for the Giants Run on 29th May.

Monday 22nd May 2023

Disaster. This morning I rode the Sloper 5 miles or so to Westbury for my usual visit to the model engineering club. It started easily enough and ran fine including a prolonged spell in slow moving traffic. At lunchtime it again started easily but once on the main road started to misfire when the throttle was opened wider, still eased its way up to 40mph or so though. I was not unduly worried about this as I suspected the main jet had unscrewed and in the event this proved to be correct and had no real bearing on subsequent problems. Stopped at Yanbrook to fill up with Esso super unleaded as this currently contains no ethanol. After which the bike refused to start and in the end I had to get home and collect it later in the van.

Later that day when the bike had obviously cooled down it again started easily but if stopped it was very reluctant to re-start. The magneto was (still is) the obvious culprit so I cleaned and checked the points gap. They were very clean and the gap was correct at 12thou. There is a spark but to me it

looked very weak and fitting a brand new plug did not improve matters. When I could get it running, I did check the carb settings but everything appeared fine and I don't think this is the problem. I am sure it's an ignition problem.

The immediate issue is the Giants Run due this coming Sunday – 28th May. I suspect that if I could keep the engine running it would probably get me round, possibly might even start with a push but repeated kicking is hard work. For sure the engine would stall somewhere and equally I would like to stop for a coffee and to take photos. So the Velo MOV is being prepped for the event instead – but that's a story in another blog.

In the interim I am in a dilemma as to the best way forward. The obvious solution is to have the magneto rebuilt by Paul Lydford from Shaftesbury. However removing the mag means stripping the primary drive side completely to get at one of the fixing bolts and there may well be an issue about getting the drive gear of the magneto as it is on a taper and these early models do not include any inbuilt extractor. Nor is there much room to get a puller in place. My attempt to get the timing cover of the engine to investigate this came to nothing as the case appears to be glued on and I was reluctant to force the issue.

The alternative I am looking at is to fit a Thorspark electronic conversion to the magneto. This basically replaces the points assembly with a fitting that includes the pickup and a rotor with a magnet to act as a trigger. The magneto is otherwise untouched and effectively provides the mounting body and drive. Cost of this unit is £160 which is not much less than a mag rebuild but rather less hassle and potentially a lot quicker as Paul undoubtedly has a waiting list for rebuilds. Plus of course I do not have to wrestle with removing and refitting the magneto. The downside is that it is battery powered so you need to be sure you have a good battery and charging system. Luckily the Sloper currently has both. Still pondering about which way to go but decision will have to wait until after the upcoming weekend which is also the Whitson bank holiday so everything will be closed until Tuesday anyway.

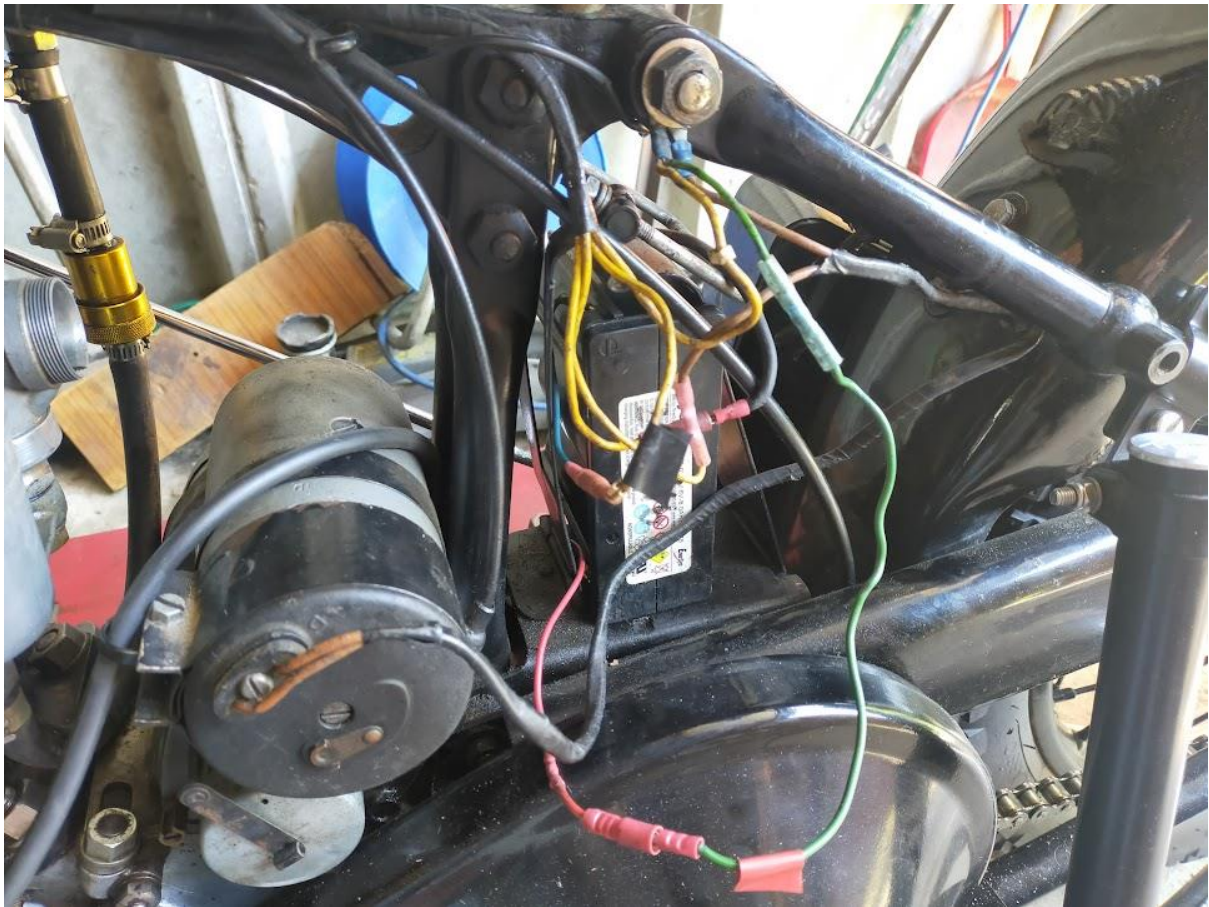
Sunday 5th June 2023

As it happens I met Paul Lydford at the Giants Run in Dorset last Sunday. He is now semi-retired and would be prepared to rebuild the magneto but was currently out of stock of MO1 armatures so it might have to wait a few weeks. That tipped the balance and I ordered a Thorspark unit on Tuesday (Monday being a Bank holiday). It was sort of delivered on Saturday but as it required a signature, and we were out, the Postie is bringing back on Monday! However, this was enough to trigger me to have a detailed look at the wiring of the Sloper preparatory to fitting the unit. Just as well I did.

I have done little to the electrics beyond fitting a new battery when I got the bike, and cleaning the brushes etc on the dynamo and fitting an LED headlight bulb. This got the unit charging reliably, indeed the battery was at 6.3v when I checked it today and a working set of lights/horn. It has a mechanical regulator which is somewhat inconveniently fitted in the tool box. But hey everything worked so it was left alone.

A more detailed investigation today revealed a slightly less encouraging assessment. It seems that whoever rewired the bike only had two colours of wire. All wires going to the headlamp were yellow

and all wires to the regulator were brown. As you can see in the photo, there are few other colours used mostly as connector tails.



To be honest it looks more daunting than it is in reality and despite the mess around the earthing points and the battery connections I am pretty sure the rest of it is sound and I have been able to identify the key connection points for the Thorspark unit. The other factor is that the bike is presently configured for +ve earth polarity. Pre-war it was normally -ve earth and modern thinking suggests this preferable. Given that most of my other bikes are -ve earth my plan is to switch it over. My belief, being checked, is that it is quite simple and that everything fitted is capable of running with either polarity. The dynamo will require flashing and probably the ammeter connections swapping.

Monday 6th June 2023

Don't think I have mentioned it, but I did ride the Velo MOV on the Giants Run and unfortunately I wrenched my shoulder quite badly trying to stop the bike falling over. On top of this I went down with a kidney infection so my motivation along with my ability to do anything has been sadly lacking for over a week. I can only muster the energy and enthusiasm to do jobs for limited periods before retiring hurt and something I cannot do at all with only one working arm.

However, things are improving and I was able to get the Sloper into the workshop today. First Job was to replace some of the scabby wiring shown in the photo above. All is now much neater though I have not replaced any of the yellow or brown wires as yet – colour apart they are sound so I can pick away at them later. I tentatively tried connecting everything up as -ve earth and found that

everything still work as it should except that the ammeter now read in reverse – but this was expected. I also flashed the dynamo using the regulator cutout. Everything still working ok. Next step was to get the engine running and that is where I hit a wall. The bike refused to start, I think it knows I am not well. In the end I refitted the old plug I removed last week when it was playing up and it did start and ran ok – better still the dynamo started charging after I revved the engine a bit and balanced the full headlight load.

All of this may seem a bit unnecessary but I wanted to make sure before fitting the Thorspark unit that it was a running bike with just a suspect magneto. It would be annoying if the starting problems turned out to be carb related but I think the need for the plug change has confirmed its an ignition problem. Tomorrow we start fitting the Thorspark unit which turned up in todays post. The 6 pages of fitting instructions will be bedtime reading.

Tuesday 7th June 2023

Its 3pm and tea break time, in fact probably knock-off time as I am a bit tired. Fitting the Thorspark system itself is quite straightforward. Indeed the other tasks are not onerous they just take time and you need to find a few bits not included in the kit like a switch and a warning lamp and a few connectors to splice it into the main loom. They do provide a new coil and recommend you fit it under the tank or in the toolbox. Personally I prefer to have things like that in the air stream so I mounted mine on the rear mudguard where the regulator normally sits (that's already in the toolbox). Then I had to manufacture a mounting bracket for the switch and warning light. I used a convenient lug on the frame above the tool box for this. The bracket is just to get things lined up, it will be re-made to look neater and provide protection from the weather eventually.

The next hurdle was pure farce. Thorspark instruction require you to set the thing up with the manual a/r at full advance and the engine in that position. But nowhere is the full advance specified as either distance or degrees bt dc. The BSA manual tells you to time it on full retard at tdc. In the end I worked it out crudely by measuring the distance the piston moved between the points just opening fully retarded and fully advanced. Worked out at 10.2mm or .4" which was pretty close to my initial guess of 3/8". For setting up the Thorspark unit I set the engine position with the magneto points just opening at full advance. I made up pointer and marked the tdc and full advance positions on the engine sprocket ready for strobe testing.

Fitting the Thorspark unit itself is fiddly – small screws in dark confined spaces but we got there in the end. Fine tuning the timing needs a strobe and adjustment is crude. You have to slacken the magnetic rotor which is held purely by a taper, twist it in the required direction, tighten it up and strobe all over again. Looking forward to this stage - should be fun. I rather rushed the wiring of the actual unit as I wanted to see if it all worked. This will have to be re-done as a final tidying up exercise.

Anyway, the good news is that there was a very healthy spark at the plug and when stuck into the engine it started first kick so I guess I got the timing fairly close by my unorthodox method. The not so good news is that the bike still would not tick over reliably and sounded as though it was running rich. Pretty much the same symptoms as when running on the magneto. Worse still, it would not restart once warm. It was at this point that I decided to stop for tea! I am beginning to think that the

problem all along has been carb related as the only thing that has changed since it ran happily last year was the fitting of the refurbished MSS carb – b****r.

Update: I discovered after my tea break that the bike behaved even more erratically, then stopped altogether with no spark at all. Big panic as I assumed I had installed it incorrectly somehow and damaged the unit. However when checked the battery it had dropped to circa 4.3v. It was an old one fitted temporarily a when the correct battery was refitted everything sprang back into life but it was clear the timing is too advanced at present so tomorrow the strobe will be in action.

Wednesday 7th June 2023

Well today things regressed rather progressed. It was clearly still much too advanced so I reposition the rotor slightly. This improved matters such that it was possible to start the engine without a mighty kickback but it seemed to me it was not responding to the a/r lever. In fact the whole unit seemed very wobbly to me so I stripped it down to investigate. The problem seemed to surround the two fixing screws that secure the pickup plate to the plate that connects to the a/r unit. They simply would not tighten up properly. In the end I removed the whole unit to check it on the bench and there it remains for now. In fact I have removed the whole Thorspark assembly and reverted the bike to magneto ignition.

I am more and more convinced that the mag was never the real problem and I have successfully restarted the bike a number of times this morning even when hot. It runs fine provided the tickover speed is kept high but will not settle to a slow idle. Neither does it respond to adjustment of the mixture screw. When I regain some enthusiasm I am going to work carefully through the whole carb to see if I can identify the problem. To me it seems like the pilot jet is blocked, except that it does not have one, just some drillings in the carb body.

I have now stripped the 276 carb fitted to the Sloper and established the pilot jet orifices are all clear. The body itself (originally from an iron MSS Velo) was refurbished by Bill Harley last year with a new slide and I really cannot see anything wrong with. Turning to the float chamber, I set up a test rig to establish the fuel height and here I think is where the problem lies. As can be seen in the picture the fuel level is right to the top of the cup before the needle cut off the flow. My feeling is it should only rise just above the level of the fibre washer.



Thursday 8th June 2023

Out of frustration last night I fitted 7/8" Monobloc carb originally fitted to my MAC and destined to be tried on the MOV when I am well enough to get it of the van. The main reason for trying this was because it was working fine on the MAC. I had never tried a Monobloc on the sloper before [partly because I wanted to retain the period look and partly because I was unsure if it could be made to fit. But with nothing to lose I had a go this morning. Bingo, bike starts easily even though I did not fit the choke and only gave it a minimal tickle. It also ticks over reliably and re-started easily a number of times later in the day even when warm. Does rather prove that the 276 carb has always been the problem despite having it refurbished. The problem of course is that a 7/8" carb is not ideal for a . Digging through the spares boxes I found a 1&1/16" Monobloc that came with the Viper and which appears to be in good condition with a new chrome slide etc. Externally it is no bigger than the 7/8" Monobloc so swapping them over was not a problem. It started easily even though I had done nothing about checking the settings and took only a few seconds to establish a steady tickover. During the course of the afternoon I have restarted it several times without problem. I also tried a variety of plugs in it and established that one new NGK I had been trying early still will not throw in the bin. Seems happiest on an old Champion N5. I tried a an iridium plug out of interest; it did start but ran like a dog probably because it's a resistor type. Not able to ride the bike as yet but I think I have nailed down the problem – big decision now is whether to persist in trying to get the 276 to work or stick with the Monobloc and forget originality.

Separate I I did do more research on the 276 float level and got what I regarded as strange information via the VMCC forum. There is no definitive information on the internet so in the end I rang Burlens this afternoon. The helpful guy confirmed my gut feeling that my fuel level was too high

and the fuel should only come at most half way up the cup. Too high and it would choke the pilot jet orifice and prevent setting a reliable tickover. Too low and the pilot circuit would be starved of fuel. Out of interest I repeated my test with the float 4mm further down the needle and sure enough that gave me pretty much the right fuel level. Making a permanent fix is another matter as cutting a clean new groove in the needle proved difficult even using the lathe. I will probably order a new needle as they only cost £12 and see what that does. My main reason for persisting with the investigation is that I suspect the same problem is behind the troubles I had with the MOV on the Giants run. For the moment the Sloper is back together and awaiting a test ride – hopefully within week or two.

Should anyone ever read this and think I wasted my money going down the Thorspark route I would not agree. It was always a gamble mainly aimed at avoiding an unnecessary strip down to have the mag rebuilt mid-season. Trying the Thorspark established that it was not an ignition problem and I still have the unit on the shelf for another day or can be sold for perhaps £100. If I had gone directly for a mag overhaul I would probably still be waiting to get it back, have spent £200 and gained nothing as it was not faulty as the carburetion still needs sorting. Overall it was quite a useful learning curve if somewhat frustrating along the way.

Appendix- Outstanding Issues – end of document marker do not remove

Remove and clean tank – check for leaks

Parking light fitting needed

Check ign timing

Rear stand twisted and needs powder coating

Front mudguard incorrect – no mud flap. Just live with it.

Replace tyres

~~**Dynamo not charging.** Now cleaned, and functions as a motor but will not charge. Budget £120 for a professional rebuild. Led lights fitted as interim measure. Suddenly started charging so problem gone away.~~

~~**Adjust tappets.** Checked and both slack but tank needs removal to get at adjusters.~~

~~**Fit Mirror**~~

~~**Headlamp:** the bike should have an 8" headlight. It actually has a 6.5 headlamp of the period with the correct style rim but wrong light unit which does not fit well. I have ordered a new 6.5 lens with BFP fitting which will enable use of an led headlight bulb pending sorting the dynamo. New light unit with led bulb fitted 1st August 2022~~

~~**Straighten Brake Lever.** Make new and spare front brake cable~~

~~**Saddle Cover needs replacing** £35 – ordered 27th July. Fitted 1st August~~

Adjust seat height and tilt. Tricky to solve Turns out the seat tube was fitted the wrong way round
This has been sorted.

~~Check pushrod tube cover spring tension.~~ Slackened off as suggested by Dave Spencer.

~~No side stand.~~ Ordered a Vintele style stand — hope it will fit — Woks fine, fitted 1st August

~~Steering Very Stiff~~ — Sorted