

# The Cotswold Section

## Newsletter



Covid19 Issue 7 Lockdown week 8



We wish Roel, (a regular contributor to this newsletter), and his wife Hennie best wishes on their 40<sup>th</sup> wedding anniversary. They have a stunning collection of veteran motorcycles, which they exercise regularly at many veteran events in Europe.

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The purpose of this mailing is to occupy the thoughts of members of the motorcycling fraternity during the current crisis when non-essential riding might be deemed to be unlawful. Articles may be technical, thought provoking, humorous, accompanied by images, etc, but definitely about our hobby of motorcycling. Please feel free to share the contents with any other interested riders and send appropriate material to me at the above email address. Thanks!

## **From the B190**

This issue looks at some of the builds/rebuilds that Peter and Geoff are working on and finishes with 'a lost but found' Cotswold masterpiece to be read in a Cotswold accent. I am also grateful to our South Pacific correspondent for two articles gleaned from the Auckland Veteran and Vintage Car Club, the equivalent of the combined forces of the VMCC and VSCC. I have managed to fit in an article by Chris Roberts on things we ought to know about oil, which fitted in well with a piece on what is happening in the oil industry. I was also sent an article taken from the AJS&MMCC that I should have published in April and felt that it adds something to the news section of the Newsletter.

Hence, the theme of this Newsletter is a gathering of items of interest from other publications.  
*Reg Eyre KOB*

## **Don Stringer and the Quadrant**

Don was a keen motorcyclist who went to extraordinary lengths in his attempts to kill himself in Ireland. For a couple of years, he was a legend on the Irish rally with his 1904 Quadrant motorised cycle. I will have to describe this wretched device for you.

Picture a very large turn of the century gentleman's safety Bicycle, with industrial-strength tubing. Fill the void between the frame tubes and the saddle with a vertical slab tank, which leaked petrol profusely from each and every seam. Couple this with the most ineffective and the heaviest single cylinder engine which you have ever seen, then add a wick carburettor, which would regularly backfire and set fire to the whole plot in spectacular style, an enormous set of pedals and Edwardian cow horn handlebars with more levers than a railway signal box completes the picture.



Now Don was not a large or well-built man and completely fearless. He was wiry and he was also determined, very determined.

Due to its weight the Quadrant could cope quite well with the downhill bits, although the lack of any worthwhile brakes frequently led to bloody scenes at the bottom of inclines. A former racing cyclist, Don was obsessed with the idea that although the motor was not up to much, he could pedal the damnable thing around the place and up all the hills and thus complete an Irish Rally on it. But the Quadrant was a truly Satanic device which would bite him and set him on

fire with monotonous regularity. He could be seen, arriving at check points long after darkness had descended, knackered, bleeding and often still smoking from the countless petrol fires, which had destroyed much of his hair and clothing. He never gave up - ever! After five days of torture, bloodied, bruised, swathed in bandages and badly scorched around the crutch region, Don finally made it all the way to within 2 miles of the finish of the 1973 rally. Here the evil contraption spat him off one final time, caught fire again and buckled its wheels beyond recognition. Did he give up? Did he wait for the Banana Wagon? Oh no, not super Don. He carried the remains all the way to the finish and got his finishers plate and also just about every other award they could think of. I took pity on Don the next year and loaned him my 2 speeder Morgan, so he toured around in comparative luxury and all of the emergency services went on short-time.

*Article by Peter Alderdice and sent in by our South Pacific correspondent from the Auckland Veteran and Vintage Car Club*

### **Slippery Stuff**

No not the muddy but the oily variety.

Animal, mineral, vegetable or man made cover the sources available for machine lubrication but for the infernal combustion engine we can discount animal fats and oils but vegetable in the form of castor oil has proven to be very satisfactory. Most aircraft engines during WW1 were doused inside and out with castor oil. Many being lubricated by constant loss systems meant that the poor pilots were liberally dosed which kept them pretty regular! For racing engines until sophisticated synthetic man made oils were developed vegetable oil ruled the day.

Before the advent of multigrade thixotropic mineral oils (get thicker when heated up, like me), motorcycle engines as a rule ran on SAE 30 in the winter and SAE 40 in the summer. These oils could be quite thick when cold and thin when hot, which isn't ideal. It could also make engines difficult to kick-start when cold and sluggish until warm. Then, when hot and thin, all the gaps in tappets, big end rollers and main bearings make themselves heard and the stuff seeps out instead of staying in!

So, I thought I would just recount some of my past experiences with the slippery stuff. In the sixties my first motorbike was a 1957 Ariel NH 350cc single which cost me £22 but the engine didn't last long before I had to rebuild it! Before the rebuild though and being the swinging sixties I had seen the adverts for Duckhams Green oil. Must treat the Ariel to some of this modern slippery stuff I thought. After the oil change (the oil stain is probably still on the drive where my father used to live) I decided to go off on a thirty mile run. Half way round cars were flashing lights, couldn't be me I thought until I looked round and saw the eclipse I was creating between night and daylight! Seriously smokey! The Duckhams Green oil had a very high detergent content and caused the disturbed crap in my engine to foul the scavenge oil pump, thus helping to transfer the contents of the oil tank into the crankcase then up past the piston rings and smoke that 007 would have been proud of.

Next one is the confusion about piston clearances required on side valve engines fitted with new old stock original pistons. Modern pistons are made from low expansion aluminium whereas the originals were not! What happens is that insufficient clearance is allowed when having a re-bore and new old stock piston are fitted. The result is that when the hot running side valve engine gets up to temperature the piston expands to the point where there is no room left for the film of lubricant between it and the bore. The result, as I have experienced on many occasions is reluctance for the engine to work! Recognition of the symptoms and a quick hand on the clutch lever can avert an expensive catastrophe! You can also achieve the same results if you have a valve fitted on the oil supply to the oil pump from the oil tank and have forgotten to

turn it on before setting off!

My most recent experience is with that other slippery stuff - grease. As with oil, lots of different additives are mixed in with the emulsified mixture, which comprises grease. Many early gearboxes used a mixture of grease and oil or just grease (not very effective). Problems were experienced when it was found that the sulphur content of some greases were dissolving phosphor bronze bushes used in many gearboxes. In my case grease had been used as a preservative on a cast iron cylinder bore. This time the sulphur in the grease that had been applied over thirty years ago had destroyed the graphite in the cast iron to sufficient depth that a +20 thou rebore didn't get rid of the serious pitting that had been caused. A sleeve was the only solution!

There is quite a lot to this slippery stuff and during my career in Power Stations I have seen oil starvation resulting in bearing failure on a 400 tonne turbine rotor but that's as they say, another story!!

*Chris Roberts*

## **Also from the Auckland Veteran and Vintage Car Club**

### **The Current Oil Market**

The coronavirus pandemic is turning oil markets upside down. While U.S. crude futures have shed half of their value this year, prices for actual barrels of oil in some places have fallen even further. Storage around the globe is rapidly filling and, in areas where crude is hard to transport, producers could soon be forced to pay consumers to take it off their hands—effectively pushing prices below zero. Part of the problem, traders say, is the industry's limited capacity to store excess oil. Efforts to curb the spread of the virus have driven demand to record lows. Factories have shut. Cars and airplanes are sitting immobile. So, refineries are slashing activity while stores of crude rapidly accumulate. U.S. crude inventories surged by a record 15.2 million barrels during the week ended April 3, according to data from the Energy Information Administration. Gasoline stockpiles also jumped, climbing by 10.5 million barrels, while refining activity hit its lowest level since September 2008. Crude comes in many varieties, used for a range of purposes, and different grades are priced based on several factors, including their density, sulphur content and ease of transportation to trading hubs and refineries. Heavier, higher sulphur crudes generally trade at a discount to lighter, sweet crudes such as West Texas Intermediate because they tend to require more processing. Crudes that depend on pipeline transportation are trading at a discount right now because there is nowhere to put them and the pipelines that would normally take them away are getting jammed up. One commodities trading house recently bid less than zero dollars for Wyoming Asphalt Sour crude! Saudi Arabia and Russia ended a production feud and joined the U.S. to lead a coalition of 23 oil-producing countries to cut output by a collective 9.7 million barrels a day. The feud began in March after Russia refused to participate in a Saudi-backed plan to carry out coordinated cuts. Saudi Arabia then lowered prices and raised production of its barrels, sending global prices into a downward spiral. Some analysts see a glimmer of hope coming from China, where there are some signals of life returning to normal. Chinese consumers have cautiously begun to travel again after lock down at home for two months. Others aren't as optimistic, noting that global oil demand is still falling by tens-of millions of barrels a day.

*Don Howarth summary, from the Wall Street Journal*

## Matchless Model X 1938

Back in June 2019, I happened to go and view the motorcycle auction at H J Pughs in Ledbury, being local, its only 10minutes up the road. There amongst the various bikes for sale was a Matchless Model X. Being an Ariel man I had never considered a Matchless before, but have for a while had an inkling towards a large side valve Vee Twin. There was this large side valve Vee twin and I had a few bob in the bank so I was persuaded, it didn't take a lot of persuasion for me to have a fixed bid placed to then go home and wait for the on line auction to take place. My bid won the bike and I popped back to Pughs to collect it. What I had bought was an unfinished project, the engine had been rebuilt, the frame and tin ware stove-enamelled, forks, wheels and a box of bits.



What I quickly discovered is that there is little information about these models and even fewer spare parts. I came across a Matchless pre war group on the Internet, which proved invaluable for the initial pieces of information and a parts book. I was able to download a non-illustrated parts list, which helped me identify what was missing in some form or another.

The entire drive and clutch side of the bike was missing, this it seems is not unusual with Matchless, the chain case is 'tin' and is often wrecked or rusted. Through the pre-war Matchless group I tracked down a guy in Holland who could make a chain case complete. It seems this model so often loses its chain case that he set about making the tooling to press out replacements. I spoke to him, placed an order and what I thought to be the hardest to find part appeared a few weeks later. Not perfect but once a few simple modifications were made it was good.

As I mentioned earlier, the drive from the engine was missing, the good news was that from the parts book I could see the shock absorber, cush drive, spring and collar were standard post war Matchless but the sprocket is unique to the X. Another very kind man from the Matchless group had an engine sprocket, which I bought and used, and I sourced the other parts at the Founders day autojumble.

Then to the clutch, which turned out to be quite a saga (if I had looked closely at the parts book I would have saved hours of time and a lot of money – more shortly). I bought a basket that looked okay from eBay, made various bits and pieces and assembled it on the mainshaft only to find that no one sold clutch plates to suit the basket I had purchased – for whatever bike it was from, was ¼” larger than anything else in the market. I still have no idea from what machine it

was for, but in true Burman style, 'looks fine but is just slightly different'. Threw that attempt in the bin! Second attempt the helpful guy at AMC Classic Spares suggested it was likely to have the Standard AMC 'CP' clutch fitted and he supplied me with a used basket, and a complete set of friction and steel plates to fit. Being the Ariel Spares organiser for the gearboxes, I put a set of springs in and now I had the clutch ready.

I had recently become the part owner of a Colchester Bantam lathe – a fine machine and I was beginning to use it a lot to make nuts and bolts etc. My most challenging job now was to repair the engine sprocket I had purchased at the Founders Day event. The sprocket as purchased had 21 teeth, I had been advised by many to 'up' the tooth count, sidecar is 21, standard 24, I was going for 27 (I am a big believer in lowering engine rpm where I can for all sorts of reasons).

The old teeth were removed and the new teeth added, pressed on and welded into place.

With the drive side out the way I concentrated on the other stuff, Tony Cooper sold me a fresh magneto (always a good bet, if in doubt, fit a new mag!) I purchased a new carburettor from Amal and other critical stuff required to get it ready to run.



Now came the challenge of the magneto platform. There wasn't one provided when I bought the bike so I needed to make one. As previously mentioned there are no images in the parts book, all I had to go on were photographs. A useful source of photos is the Bonham's web site they provide for all their sales items high quality format photos. There have been several Matchless X's sold through them so plenty of choice. The problem is again like the chain cases these things get lost and people make replacements. There were several versions shown in the photos. I set about making a platform, version 1 - not strong enough, modified it to version 2 - much stronger but now couldn't get it in without stripping out the magneto drive on the engine; modified it again for version 3 - fitted but didn't like it. Threw versions 1 to 3 in the bin and started again using 4mm plate, (previous versions 3mm plate). This process continued in one form of another until I reached version 11, whilst still not entirely happy, it was strong enough, fitted without the need to strip down the magneto drive side of the engine so I painted it and fitted it. It remains fitted and working I am still tripping over the debris of the earlier versions in the garage.

I am not a concourse person, my objective for this bike is to put it together with what I have, buying bits along the way, get it running mechanically, put it on the road to sort it out. If I really like it keep it and finish off, then do the non-critical stuff, chroming, high quality paint

job, etc. If I don't like it for any reason, then sell it before I spend a fortune on it. As it happens so far there not going to be a lot of chroming to do, yes, the wheels need new rims and spokes, the tank was already restored and is very nice so in many respects the bike is not too far off. It fired up reasonably well, it ran even better when I realised I had timed the advance backwards and I worked out that it is a loose wire magneto! I ran it up and down the lane with a 100ml syringe to provide fuel for testing purposes. With it running fine and no obvious issues, I sorted the fuel tank out to increase the range.

It was this point the first clutch destroyed itself, the basket was in fairness badly worn and the friction plates forced the basket apart leading to a jammed clutch. As I mentioned earlier, only now did I take a close look at the spare parts book to realise the basket takes Burman 3X friction plates, we, (the Ariel Club) keep the 5 ½" clutch plates on stock but more importantly we also keep the basket. Unfortunately the Ariel 5 ½" clutch has rubber shock absorbers built in to the basket. Much modification later the Matchless is now fitted with an Ariel 5 ½" clutch basket with the original bonded plates I bought from AMC Classic Spares.

This lasted around 150miles before the already slight damaged bonded plates repeated the previous failure, forcing the basket apart and jamming the clutch. I went for broke, replaced the bonded plates with the Ariel club cork plates, I pulled the basket back to become a good fit with the new plates, welded a band all around the basket and so far this has been successful. I must say this clutch is extremely good and beautifully progressive.

The only remaining challenge is to find a way to keep some form of lubrication in the drive side chaincase. I am determined to try to maintain some level of lubricant here, since there is a lot going on in there with this machine. The primary chain is not the strongest I have ever seen and it is important to keep the engine drive shock absorber well oiled. I ordered some tallow, melted it and poured it in, to see if this would work, but it still came pouring out from around the upper seams due to the rotational pressure on the oil.

Apart from this all the remaining jobs have been completed with my newly acquired spare time, the bike is now ready for the road and hopefully the Pecos Rally in Spain this year if it takes place.

*Geoff Brown*

### **Busily Doing .....**

Not as exciting compared to some contributors, but the building of a bike in the workshop, (an MZ of course), has helped to keep me sane with my knuckles bruised during the lockdown. It came as a rolling chassis, which had been built as a Trials bike with some rather quaint but probably illegal for road use features.



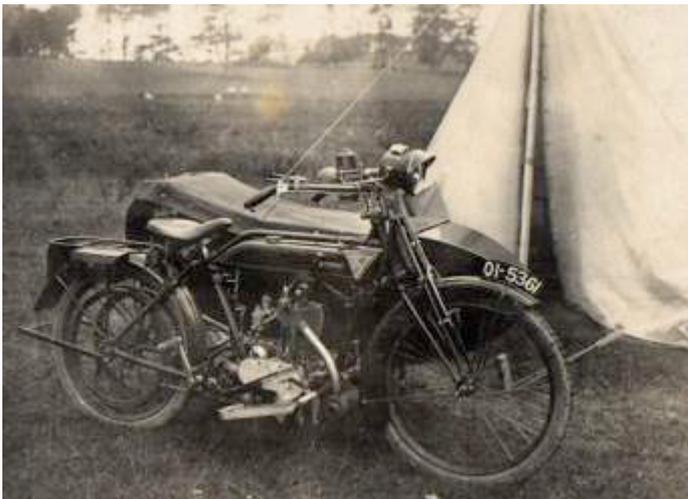
I think it is just about road legal now but it was not an easy or obvious transformation. Quite a

lot of the original frame had been cut away including the bits that mounted the footrests, the rear brake and the tank mounting. Fabricating replacements tested my bodging skills to the limit. The exhaust came with the bike, looks the business and works to the extent that it keeps the noise to just about legal limits. However, I suspect it is very restrictive and despite many peoples' attempts to design a tuned exhaust for an MZ, in my experience they only perform properly with the original as developed by Walter Kaaden. I took it for a brief spin up the road yesterday and it seems ok but no opportunity to prove or disprove my fears about the exhaust;. It is fully road legal by the way as it's just been registered Historic and is insured. Whether it will ever get used in earnest is another matter, in truth my Enfield Himalayan will do everything better than my Trail MZ project but at least it stopped me tinkering and likely breaking something on one of the other bikes. Now what shall I do next week!



You have seen what it looked like when I got it. It may not look much different but believe me it's taken weeks and still not wholly satisfactory. The panniers look good but would have broken away the first time if it were used in anger.

*Peter Fielding*



A Quadrant seen in Ireland – do you know where? – photo sent in by Roger Fogg

This next item was sent to me in April. It is an interesting view on AMC machines before they closed their doors. It was sent as an image, so I apologise for the lower quality reproduction.

## *The Final Days of Associated Motor Cycles*

### *The Real Story...*

A FEW years ago at a function in Greenwich, I got into conversation with a man who was an ex-Plumstead employee. He told me a story which he said was "the truth" about the final days there, but his story seemed so fantastic that I dismissed it as the drink talking – it was that sort of function! However, I have just seen evidence with my own eyes which seems to confirm his story, so I thought I had better put it down for the record.

From 1st April 1966 a new procedure was adopted in the design office called "Regulations and Standards Conformity" – or RSC for short. It was to address the emerging problem of national governments bringing in a proliferation of standards and regulations governing road vehicles, and AMC needed to be one jump ahead of them to make sure they weren't barred from their markets by local legislation.

The first dozen such projects were minor ones, and satisfactorily completed by the design office. But the next one – inspired by the plans of the American and Japanese governments to make left-hand gear change mandatory – was a bit more of a challenge. "*Regulations and Standards Conformity 13 (States/Japan Adaptation)*" – RSC/13(S/JA) for short – was almost not given that number as the chief was superstitious, and hadn't wanted to use the number 13 for this project. As we all know, the biggest problem the company faced at the time was financial, and the bank had to be approached to finance the engineering work that would be required. It was made quite clear by them that this extra loan would take them to the limit, and no further funds would be forthcoming.

My acquaintance was the new "print boy", and he was asked to get the GA – General Arrangement drawing – for the 650 twins for the chief to look at. When he put it on his drawing board he managed to get it the wrong way around – easily done with a transparency – and

he got shouted at for his mistake. However, the chief looked at the reversed drawing, and for a moment wondered if he could build a "mirror image" machine like the one that he was looking at, as this would put the gear change on the left. He remembered Phil Irvine describing a happy accident with the transparency of the Vincent HRD "Comet" engine, when two overlapping transparencies gave the impression of a V-twin, and from that chance event the "Rapide" was born. Just then he noticed that the drawing number was RSC 13 SJA – the job number he was working on! "Of course" he said out loud "It's AJS 31 CSR backwards!" It seemed like a good omen, and so he sat down to work out what would need to be done to produce such a machine.

Very little as it turned out. New crankcase halves, a timing cover, primary chaincase outer, and the two gearbox castings. The swinging arm and rear brake also needed some attention, but most of the engine and gearbox internals would run just as happily in the mirror image casings, and so within a week drawings were dispatched to pattern makers. It was only a couple of months before the prototype was carefully assembled and ready for testing. It rapidly became apparent why crankshafts have left hand threads on the timing end and right hand on the drive end. In the mirror image assembly the crankshaft was rotating in the opposite direction to usual and consequently things kept undoing! The same applied to most other threads, and so a succession of special crankshafts, camshafts, gearbox shafts, etc., were produced to overcome this problem – and all this cost money! The chief's first instinct was right after all, 13 did turn out to be an unlucky number!

In early July all was ready, and some assembly shop personnel were brought in to assemble a batch of machines for road testing. It was only now that the fatal flaw in the whole scheme became apparent. These new machines took twice as long to build. The reason? Like most manufactured items, motorcycles were designed – probably subconsciously – to be

assembled by right-handed people. Because these machines were "mirror images" of a normal design they were most easily assembled by left-handed people! Plumstead's assembly line had a small proportion of these useful folk, however to assemble these "mirror image" machines economically they would need to recruit a new, largely left-handed workforce.

Clearly this was a non-starter, and the board was informed of the total failure of the whole exercise, and just how much money had been wasted. The board realised that this effectively meant the end of AMC and they took the decision to excise the whole project from the corporate memory and throw themselves on the mercy of the bank. Consequently, the bikes produced were all cut up, all drawings destroyed and everyone involved was sworn to secrecy. After all, no one wanted to be the laughing stock of the industry, and they all knew that they would be job hunting within weeks. They were right – at the start of August the bank called in the receiver.

However, the print boy hadn't been sworn to secrecy, he was too unimportant, and so here he was, like Coleridge's Ancient Mariner, telling everyone he met the incredible story.

So why do I now think his story is true? Well, if you look on the Member's Mart page you will see reproduced on the top right a timing side photograph of one of these machines! When I showed this to a friend he said he had always been puzzled by a photograph in "The Complete Illustrated Encyclopaedia of the World's Motorcycles" by Erwin Tragatsch, of what is described as a 1961 G12CSR. Look for yourself on page 204 for a drive side view of another example. You see...truth can be stranger than fiction!

**Libera Clavis**

*Below: The entry for Matchless from Erwin Tragatsch's book.*

MATCHLESS



646cc Matchless (ohv twin Model G12 CSR) 1961



248cc Matchless G2 (ohv single) 1960



347cc Matchless G3 (ohv single) 1960



496cc Matchless G6 (ohv single) 1960

models inch single to the square. 85-5; couple of years. Respon Bert Collier Matchless v. to other in OEC. Morg their own A. the Clubma engines. See 347cc = £58

During W bers of 347; forces. The 1945 the fac singles up to ohv twins up them was th afterwards ti single-cylind enlarged 348

**And Finally** a little bit of culture sent in by Ian Dettmer. He found this poem in his loft and it is supposed to be read in a Cotswold dialect.

**Owd Bob's Motorcycle** (Old Bob's Motorcycle)

[This is exactly as it was written on the paper Ian scanned and sent to the editor. It is to be read in an old Gloster version of local dialect/vernacular.](#)

There's bin a darned rum game this wik,  
I never seed the like,  
The capers that owd Bob 'as cut,  
On his new motor bike.

I tried my best to turn him off,  
When he towd me wot he'd done,  
But bless you', he's that blooming soft,  
He sez, he must 'ave one.

He has his way, and sure as eggs,  
When Robert tried to ride it,  
He got it mixed up with his legs,  
An' tried to get inside it.

At least he got 'er goin' fine,  
But him not knowin' much,  
He opens up the throttle,  
An' then lets in the clutch.

Away he thunders down the road,  
At forty miles an hour;  
An' "Nibbs" the bobby, spots him,  
An' goes to look that sour.

Puts up his hand for Bob to stop,  
But Bob didna even look;  
His eyes swelled out as if they'd pop,  
As the first bend he took.

An' then! My heck. He met if fair;  
He 'it it such a crash.  
And when they gathered up the bits,  
It 'ud settled Robert's hash.

An' now Bob sez as 'ow he'll walk,  
Afore he breaks his neck,  
If he'd a listened to my talk,  
He'd knowed wot to expect.