Quarterly Quest

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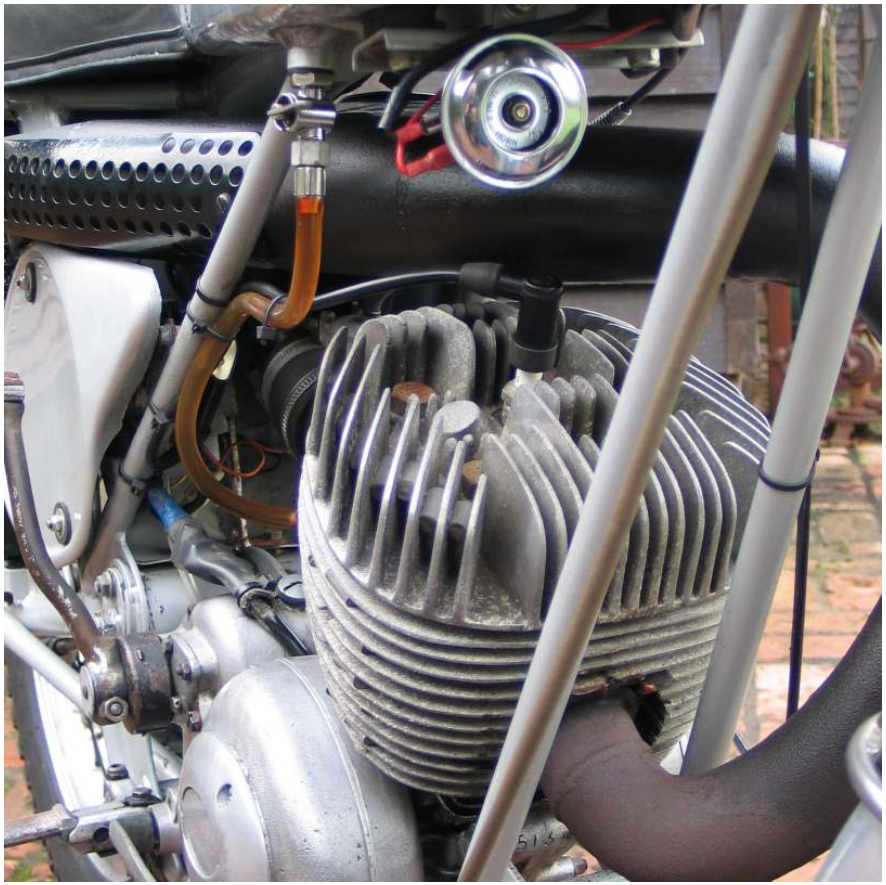

East London & Essex Section

News Letter

It's Not Unit Construction!!!

I have long ago lost count of the number of times I have seen the 250/350cc power units fitted to the lightweight AJS and Matchless models described as unit construction. Even those who should have known enough about them to have known better seem sometimes to have fallen into this trap. I have seen several references to unit construction appearing in articles in the "Jampot" over the years and quite recently I read an article, written about 20 years ago, as an interview with a 1950s AMC works supported trials rider, where even he referred to them as unit construction. AMC were probably not upset by the fact that so many thought of them as unit type motor as I feel the whole shape of the smoothed casings with the carefully positioned cover between the engine and gearbox indicated that this is exactly what they wanted people to think about their new engine. At the time they were introduced, unit construction, long favoured throughout Europe and by one or two enterprising UK manufacturers pre-war, was starting to be seen as the way forward for the future by the larger of our manufacturers such as BSA / Triumph who were probably thought the only serious threat to the mighty AMC concern. I suppose that AMC did not want to be left behind in this, so why did they not actually design their new engine and gearbox as a unit in the same was as had BSA with the C15/B40 which were both derived from the unit built Triumph Cub?.

We can only guess at the real reason behind the decision to make them the way they did because although the design was discussed in interviews with magazines at the time of launch, any statements made were obviously going to reflect what the company wanted the public to believe rather than any underlying reason. Being that the lightweight name was rather a misnomer in that the bikes were not at all light when compared with their competitors C15/B40 offerings, I wonder how much weight could have been saved if the AMC engine had been unit and the frame had not then needed the extra metalwork that it has got. The engine and gearbox designer, Phil Walker, was a talented engineer who had already designed the successful AMC twin engine. The "top end" of the twin was considerably different to the AMC heavyweight singles, yet with his lightweight design he kept very closely to the existing single, indeed the whole engine design looked almost the same with just the cylinder head being slightly skewed on the barrel (to give a straighter in/out gas flow apparently) and the engine being slightly desaxe, with the barrel centre line just forward of the crank centre line. I think that the intention was to reduce piston noise, although I am not certain about this. A recent article in Real Classic magazine discussed this reasoning but without any real conclusion. All I can say is that my own engine has very little piston noise. Despite looking very similar almost no parts were interchangeable with the heavyweights so there was no "use of existing parts" savings benefit there. I wonder therefore if they deliberately kept the engine design similar to the existing heavyweights because they actually wanted to keep an association with an engine that had a long and well respected history.

If AMC were wary of unit construction (and the associated cost of the complicated castings required) they could always have done the same as BSA did with their original rigid/plunger framed model A7/A10 twins and Villiers with their engine/gearbox units and have the gearbox bolted up directly to the rear of the crankcase, thereby giving the engine/gearbox unit almost the rigidity of a unit motor without needing all the frame "ironwork" that a completely separate gearbox requires. The primary chain in such motors is tensioned with an adjustable slipper or Weller type tensioner (as it is in unit engines) and this works perfectly well. However AMC went for a sort of half way house by having the gearbox built into a circular drum "tied" to the back of a matching circular recess in the back of the crankcases by two steel bands which, not having the rigidity of the bolted up type of semi-unit engines, still needed all the attendant ironwork on the frame to support it. The reasoning behind this was that the gearbox could be rotated in its straps to tension the primary chain as the main shaft and sprocket carrier sleeve gear were offset from the central point of the gearbox "drum", the chaincase would not then need a slipper tensioner fitted. A complicated way of doing things which still needed both the primary and rear chains adjusting if the primary needed adjustment (instead of a couple of turns on a locknut) and which still needed provision for a moving oil seal on the back primary case). For many years I thought that this revolving gearbox idea was unique to AMC but have later found out that this arrangement had been used many years before by Coventry Eagle in the 1930s for their Silent Superb model (a model which by all account was neither silent or superb), so Phil Walker had in fact "borrowed" the idea. This setup was in some ways the worst of both worlds though because it had none of the real

advantages of unit (or bolted up) construction but the extra disadvantage that this large gearbox casing needed a whole 3 pints of oil (more than the engine oil reservoir held) in order to fill it to a level where the gears could actually receive any lubrication. The only

advantage I have found is that it does give plenty of space to get fingers in when working on the gearbox.

Why AMC decided to go this way with the lightweight AJS & Matchless models I find especially puzzling because with the AMC two-stroke engine designs for Francis Barnett and James (which do share some gearbox components and frame parts with the AJS/ Matchless lightweights) they did indeed use a "bolted up" gearbox/engine design. The only reason that I can think of as to why they did not is that they were not really sure at that time that unit construction would "take off" with typical British enthusiasts in the larger sizes of motorcycle, so wanted to produce something which looked in every way as if it was a unit job in order to see if the public would take to the looks whereas the two-stroke engines had to be made to fit in the frames that previously housed the Villiers bolted up engine units. Perhaps they were right in this approach with their four stroke versions because it seems that their heavyweight 350 remained the better seller, leading to the 350 lightweight being dropped after 2 to 3 years, but with

younger people buying new lightweight motorcycles with “cleaner looking” engine lines, unit construction quickly became universal and the “unit looking” 250 AJS and Matchless carried for about 9 years in total.

Reading what I have previously written it might be thought that I do not approve of the AMC lightweight design. However, nothing could be further from the truth. The whole engine and gearbox is solidly made (which is why the bike is no lightweight) and durable. The gearbox has plenty of room to work inside and the gears are robust looking and seem to last well. I have worked on one of the BSA unit construction engines which the AMC was intended to compete with and it is easy to see why they are lighter. Compared with the AMC engine the castings, gears and engine components seem very flimsy and almost “toy like”, certainly they seem to be nowhere as robust or able to take much punishment. They obviously perform quite well (Jeff Smith and John Banks proved that in scrambles) but I prefer the whole construction of the AMC engine in every way and when it comes down to day to day running then in this case I get the best of both worlds with my Matchless G5, an engine unit which is as easy to keep clean as a unit construction motor (and even keeps its oil tank inside the engine casings) but without the complication of having to take the whole motor unit apart in order to work on either engine or gearbox – and that suits me absolutely fine.

The non-unit construction lightweight engine in all its glory.

Simple front brake improvement

Arrows show direction of wheel rotation. White area shows where I have removed 1 1/2" of lining of trailing edge of trailing (bonded, not riveted) lining. Theory is that this allows the leading edge of leading shoe at point marked 'L' (next to actuating cam) to benefit from the 'servo' effect of being 'dragged' towards the drum, whereas the trailing edge of the trailing shoe (marked 'T') is being 'pushed away' from the drum&59; although in reality that point is apparently being pushed t

owards the drum by the cam. First suggested by 'Titch' Allen 20 yrs ago and I can only say from practical experience that I've modded my '54 G3LS

lining (as in the photo) with a significant and certainly

worthwhile

improvement in performance.

Showing reduced size of modified trailing lining

(1 1/2" removed) and

unmodified full size leading shoe lining.

Neville Bolding Sussex Section

Something Special

If you want a new G50 engined machine building to your personal specification, I will discuss it with you and then prepare a quote for you utilising the components you have chosen. I will then order the parts and assemble your machine. I have constructed many machines to order and you can see some of them here.
The Seeley Condor was a very exclusive hand built machine produced by Colin Seeley for some discerning road bike customers. It offered all the advantages of the Seeley G50 racer which was then the current state of the art for the privateer racer, with the relative comfort of a road bike. The replica shown here was built to the customer's specifications which included a mildly tuned G50 race engine, 5 speed gearbox with kickstart and also a lighting system. This particular machine was built completely from new parts, but it would also be possible, and cheaper ! to convert a second hand race bike to suit.
The Seeley G50Mk2 race machine was constructed from the finest available parts, with a Titchmarsh chassis, Walmsley G50 motor, 6 speed PGT gearbox and Super light weight fairing and other parts. In the hands of its owner it was very successful and TGA was responsible for preparing the bike and transporting it to the IHRO races around Europe for the customer. I can build you a Seeley G50 with any specification that you require.
This off road G50 machine was built for a Japanese customer who wanted a G50 trail bike to ride around on his private island. The basis is an MRD replica Metisse scrambles chassis with a detuned G50 engine and wide ration 4 speed gearbox with kickstart. The bike has a total loss lighting system to keep the construction simple.
£23,000.00

End of Riding Season Dinner 2009.

Although it was a wet evening outside there was a great atmosphere inside the Toot Hill golf club when sixtyfour members and guests gathered for this annual event.With the conclusion of the meal the raffle was “enjoyed” with all the usual comments and banter during the proceedings and with the lucky winners seated we got down to the trophy presentations.This year the members voted Graham Bister as their “Clubman of the Year”, and he accepted the trophy in his usual shy manner!!! The “Piston Broke “ trophy was awarded to Alan Jennings as a result of a very unfortunate riding season, but he remained very good humoured when receiving the trophy. Mention was made at this time of the major trophies won this year at the Jampot Rally when Pat Gill won the Taverners Collier trophy (as usual!!!) and Dudley Woods won not only the Best Wolverhampton 1930s AJS trophy but also the prestigious Basil Chilvers Award for all his hard work concerning the Itilian International Rally this year. At the conclusion of the trophy presentations the Chairman thanked Karen and Roy Bellett for their efforts in organising such an enjoyable event which drew applause from all present. As the evening progressed there seemed general agreement that this venue was well suited to this annual social occasion, this being our third visit. We understand that everyone present returned home safely.

Dennis

And Now For Something Completely Different

The first I knew about it was on the Monday morning after our section dinner, when I looked at my e-mails and saw one from Roy, reading, “I must have drunk a bit too much last night and I bought this!, but I can’t get it to run”. There was also a picture of – THIS, from which I deduced that THIS was a 1950s 98cc James Comet, all 2.8bhp of it with TWO gears to control all that power. The strain of Presidentship must be getting to him I thought, this was not a normal Roy type bike, would he be able to control all that power.

A couple of Saturdays later saw me making my way round to Roy’s to see if we could get signs of life out of the beast and, on arriving meeting up with Roger Limb, who was just getting ready to leave with a very nice G9 Matchless. So Karen provided a welcome cup of tea while we all had a chat before Roger left and Roy wheeled the little James out into the sunlight. “There is no consistent spark and it just will not fire”, said Roy, “and there was a condenser in the toolbox with crocodile clips on it” – This seemed suspicious and hopeful at the same time. The bike was in a sorry state, but all the necessary bits were there, it was just dirty and neglected, so it was a good possibility that it was ignition problems that had taken it off the road rather than an engine disaster or an accident. Ignition problems with bikes still tying to work on 50 and 60 year old components probably give more trouble than anything else where old bikes are concerned – because they do not look worn then people insist on still trying to use them and if they start at all then they usually give up when they get hot.

I started by draining the crankcase and found that it must have been half full of stale fuel and gungy oil. Then Roy was able to produce a 6 volt coil and a charged battery and I "gash" wired it up to run as direct coil ignition. With a correct sparking plug fitted and seen to be sparking Roy gave it a kick and it started second time. Initially it didn't want to keep running but once we re-fitted the air cleaner to the carb' it kept running and as much as the sticking throttle cable would allow we adjusted it up to give a steady and reliable tick over. There was hardly any noise from the engine and it could run so slowly that the crank seals must have still been OK, the engine seemed a "good-un". We even managed to get the lights working OK and tried out the two gears. The little James should make quite a good useable bike with not a great amount of work needing to be done on it.

"I CAN FEEL ANOTHER TWELVE HOUR RESTORATION COMING ON" said Roy while I chomped my way through a couple of mince pies and another cup of tea, courtesy of Karen – so take notice you lot, one of the run days might get re-allocated in the not so distant future.

Colin

Olga Valerie Kevelos

In 1943, when she was 19, she saw an advertisement in *The Times,* placed by the Department for War Transport, inviting women to train for work on the canals. Quitting her job at the Royal Observatory, Olga Kevelos spent the next two years with all-female volunteer crews which manned barges carrying vital war materials along the Grand Union Canal between London and the Midlands.

She and her fellow crew members were nicknamed the "Idle Women" after the initials IW on their badges. Officially, IW stood for Inland Waterways, but the traditional boat people alongside whom they worked were jealous of the newcomers and gave them the name, which stuck.

But Olga Kevelos made it clear that life had been far from idle for this exceptional group of women: "[It was] hard work with no respite at all... We worked an 18- to 20-hour day, and nobody ever stopped." Nor did the Idle Women receive the extra rations enjoyed by the more celebrated Land Girls. "We subsisted on cocoa with condensed milk, national loaf and peanut butter," she remembered. "I was always hungry – all the time."

In all, some 45 women took charge of the canal boats, which were worked in pairs, each pair crewed by three women. After initial training, the volunteers would take the helm of massive barges transporting Spitfire or machine parts from the London docks to Birmingham; on the return trip they would haul coal from Warwickshire to London. After a three-week round trip, they would have the option of a week's unpaid leave.

As Olga Kevelos discovered, the work was arduous and could be dangerous and unpleasant. She encountered the drowned bodies of unwanted babies and more unexpected hazards, including a transsexual colleague who constantly proposed marriage to other crew members. Meanwhile their cargo was often disguised, with weapons and even gold bars concealed as more innocent freight. .

Living conditions were rough, and the girls were often cold and wet as well as hungry.
The weather could be appalling, and their craft were sometimes icebound. For the daughter of a middle-class family who would normally never have been allowed to go out to work, the war was a unique experience of manual labour and heavy physical toil.
Olga Valerie Kevelos was born at Edgbaston, Birmingham, on November 6 1923, the daughter of a wealthy Greek financier and his English wife, whose first husband, an Indian Army doctor, had died of wounds sustained in the First World War. From the King Edward VI High School for Girls, Olga went on to study Metallurgy, and with the country at war, worked for a time in the laboratories of William Mills, manufacturer of the Mills bomb.
Always passionate about astronomy, she was lured to London by the offer of a job at the Royal Observatory at Greenwich. But enemy bombing forced the observatory's closure soon afterwards, and she was evacuated along with other members of staff to the Admiralty at Bath.
Her arrival dismayed at least one of the Admiralty's senior managers, Donald Sadler, who later recalled that "Olga Kevelos... could not do arithmetic and terrified people by stalking around with a large knife in her belt."
He did concede, however, that "she seemed an interesting woman". Neither was she especially pleased to be working with Sadler: there was no stargazing to be done, only endless piles of paperwork.
When National Service for women began in 1943, Olga Kevelos became one of the few who joined the waterways as a volunteer; no boating experience was called for, but applicants had to be "of robust constitution".
After the war, she was awarded a government grant to study French Medieval History for a year at the Cité University in Paris. Fit and strong after her wartime exertions, she recalled bicycling all over Paris and travelling extensively in other parts of Europe. "I was one of the first backpackers," she later noted. Returning to Birmingham, Olga Kevelos started her own travel agency, harnessing her new-found knowledge of Europe. She also helped her father and other members of the family run the Cherry Orchard restaurant in the city centre.

A boyfriend keen on motorcycle racing encouraged her to try the sport herself. Despite having received only a few basic lessons, Olga Kevelos soon impressed with her natural aptitude and was immediately offered a bike and sponsorship by the James Motorcycle Company. The following year, she rode to San Remo in Italy to take part in the International Six-Day Trial. Once there, an accident left her with a broken wrist and ankle. Undaunted, she rode back home still in plaster.

In 1949 Olga Kevelos went on to win the first of her two gold medals, riding a 500cc Norton in the International Six-Day Trials in Wales. She was to ride with varying degrees of success in every Scottish six-day trial until she finally retired from the sport in 1970, and in every International Six-Day Trial until 1966. During that time, she won the backing of almost every major British motorcycle manufacturer, and the Italian and Czech manufacturers Parilla and Jawa/CZ respectively.

In 1964 Olga Kevelos risked the wrath of the East German authorities by handing out to local children some fruit that had been expensively imported for her fellow competitors. She was unaware that such luxuries were forbidden to the local population – and, in any case, the children had no idea how to peel a banana. She raced in several other countries behind the old Iron Curtain – including Poland, Czechoslovakia and Russia – and retained sympathy for the collective sufferings of their people for the rest of her life.

Her close links with Czechoslovakia led Olga Kevelos some 40 years later to be invited to a Foreign Office reception held to celebrate the Czech Republic's accession to the European Union. The then prime minister, Tony Blair, apparently spent some time discussing with Olga Kevelos her views on Genghis Khan, a subject about which she had once answered questions on *Mastermind*. "He [Blair] probably wanted a few tips on how to invade other people's countries successfully," she commented afterwards.

Olga Kevelos eventually gave up racing and for 26 years helped her younger brother Ray to run his pub, the Three Tuns, at King's Sutton, south Northamptonshire.
She could light up a room with the gleam in her eye, and leave people in convulsions of laughter with her mischievous sense of humour. She was a woman of firm convictions but never allowed seriousness to interfere with her sense of fun.
Olga Kevelos, who died on October 28, is survived by her brother, Ray. An elder brother died earlier this year.

Olga had a number of outings in the Mk I Kieft including the Ladies race at Brands Hatch in October 1950. Olga held a significant lead and was signalled to slow by her pit crew only for Elisabeth Store, in a JBS, to pip her at the line.

January—June 2010		**Venue**	**Time**
10th January	Sunday Jumble Witham		10.00 AM
14th January	Thursday Club Night.	Squadron	7.30 PM
24th January	Section Run	TBA	10.00AM
28th January	Thursday Club Night.	Squadron	7.30 PM
11th February	Thursday Club Night.	Squadron	7.30 PM
21st February	Section Run TBA	TBA	10.00AM
25th February	Thursday Club Night Talk Pat Gill	Squadron	7.30 PM
11th March	Thursday Club Night.	Squadron	7.30 PM
21st March	**Sunday Run To Ardingly West Sussex**	J28M25	9.00 AM
25th March	**Thursday Club Night Bill Hawkins**	Squadron	7.30 PM
7th April	Wednesday Mid week run	TBA	11.00AM
8th April	Thursday Club Night.	Squadron	7.30 PM
18th April	**Sunday Eastern Counties Meet**	Sible Hedingham	10.00AM
22nd April	**Thursday Club Night Fish & Chips**	Squadron	7.30 PM
25th April	**Sunday section Run Drive it Day**	TBA	10.00AM
9th May	**Sunday Jericho Cottage Bike Meet**	TBA	10.00AM
13th May	Thursday Club Night.	Squadron	7.30 PM
21st-24th May	**Fri- Mon 2010 International Jampot**	**Ireland**	
27th May	Thursday Club Night	Squadron	7.30 PM
29thMay	**Saturday Open Day Kettering**	TBA	8.30 AM
2nd June	Wednesday Mid week run	TBA	11.00A
6th June	**Sunday Classic Bike show Knebworth**	TBA	9.00 AM
10th June	Thursday Club Night	Squadron	7.30 PM
20th June	Section Run TBA	TBA	10.00AM
24thJune	Thursday Club Night	Squadron	7.30 PM

July-August 2010		**Venue**	**Time**
4th July	**Sunday Section Run To Battlesbridge**	TBA	10.00AM
4th July	Sunday 100 years ot AJS Woolwich	TBA	TBA
8th July	Thursday Club Night **Kent Section visit**	Squadron	7.30 PM
14th July	Wednesday Mid week run	TBA	11.00AM
22nd July	Thursday Club Night	Squadron	7.30 PM
25th July	**Section Run ACE Cafe AJS Day**	TBA	9.30 AM
6th-9th August	**Fri - Mon Jampot Rally West Midlands**		
12th August	Thursday Club Night	Squadron	7.30 PM
15th August	**Sunday Section Stand North Weald**	North Weald	8.30AM
16th August	**Monday Evening Run To Kent Section**	TBA	6.30 PM
26th August	Thursday Club Night	Squadron	7.30 PM
29th August	Section Run TBA	TBA	10.00 AM
9th September	Thursday Club Night	Squadron	7.30 PM
12th September	**Sunday Classic Bike show Knebworth**	TBA	9.00 AM
15th September	Wednesday Mid week run	TBA	11.00AM
23rd September	Thursday Club Night	Squadron	7.30 PM
26th September	Section run to Battlesbridge	TBA	
1st-3rdOctober	**Alternative Rally**	**Hampshire**	
14th October	Thursday Club Night	Squadron	7.30 PM
22ndOctober	Thursday Club Night	Squadron	7.30 PM
24th October	**Sunday Change of Clocks Run**	TBA	10.00 AM
7th November	**Sunday Remembrance Sunday**	Squadron	10.00 AM
11th November	Thursday Club Night	Squadron	7.30 PM
25th November	Thursday Club Night	Squadron	7.30 PM
27th November	**Saturday End of Season Dinner**	TBA	7.00 PM
9th December	Thursday Club Night	Squadron	7.30 PM
23rd December	Thursday Club Night	Squadron	7.30 PM

The Next Quarter

January 2010

10th Sunday Jumble Witham

14th Thursday Club Night.

24th January Section Run TBA

28th January Thursday Club Night.

February 2010

11th February Thursday Club Night.

21st February Section Run TBA

25th February Thursday Club Night Talk Pat Gill

March 2010

11th March Thursday Club Night.

21st March **Sunday Run To Ardingly West Sussex** J28M25 9.00 AM

25th March **Thursday Club Night AMC Test Rider Talk By Bill Hawkins**

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