The Oz Vincent Review

Edition #18, July 2015

The Oz Vincent Review is a totally independent, non-profit, *e*-Zine about the classic British motorcycling scene with a focus all things Vincent. OVR, distributed free of charge to its readers, may be contacted by email at OzVinReview@Gmail.com

Welcome

Welcome to this latest edition of The Oz Vincent Review with a focus on all things Vincent plus some tasty tit bits on other marques as well.

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Melbourne, Australia.
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The Front Cover

This month's front cover is of Reg Boulton an old racer and contributor to MPH, as Reg's Racing Ramblings, astride the Greg Brillis superb racer. Photo taken by OVR's roving reporter, Rodney Brown, during a recent open day at Greg's place.

Inbox – aka Letters to the Editor

Hi Martyn, Having been through it all recently, I found the piece in OVR #17, on valve timing interesting, BUT I would definitely challenge the suggested method of finding TDC with the barrels off. If accuracy is the requirement for perfect tuning (harmony!) then I don't think the suggested method is good enough.

The method I used to locate TDC was to fit the degree plate at approximate TDC and then hold a fixed length stub machined to fit the spark plug hole of 1 1/4 inch length and rotate the crank ATDC and BTDC until the stub lands out on the piston. On my engine that came in around the 42 degree mark either side. On first attempt you might get something like 38 and 46 but by halving the difference and adjusting the degree plate you quickly and accurately get TDC. What I found even more interesting is that on my machine the TDC of the two pistons were actually 48.5 degrees apart instead of the specified 50 degrees. I checked the barrel deck angles and got 50 degrees exactly so I can only assume the crankshaft centers are not quite where they are supposed to be, which is supported by the need to have different barrel heights to get both pots on 50 thou quench band clearances.

Using the method I got from Terry Prince, and previously published in OVR, I have my valve timing exact for the 48.5 degree offset.

Finally, since the inlet / exhaust timing relationship is fixed and cannot be changed I don't see the need to measure the exhaust cam timing profile because the timing is set on the inlet timing. I have never measured the exhaust timing simply because I don't have any spec to measure for the TPV Mk2 cams.

Holger Lubotzki

Dear Martyn. I've been meaning to write you a few lines for some time but things seem to prevent me! but here goes. I've been in the Club (VOC) since the1960s, those were the days when Vincent's were easy and fairly cheap to obtain and buy. I started with a Series ' 'B' converted it to a series 'C' by fitted Girdraulics, plus a rear damper etc. I used this machine for

many years, riding to all the early French, Dutch and German Rallies, plus many FIM events well as all the major events in the UK. Going round the clock twice and well into it's third tour.

Getting on in years I decided I needed a more comfortable and softer machine so I found an open 'D' and brought it for around £600.....I rode this bike to all my usual European, FIM and UK events. I then found and bought a set of second hand enclosures. After repairing and cleaning them up I fitted them to the bike. This made a considerable difference to my riding style, as it gave me far better weather protection, which enabled me to ride further before stopping etc.

The time eventually arrived when I found the bike was getting too heavy for me, specially getting it out of my workshop and going down backwards down my steep drive to the road. (Asked John Huegel) So I reluctantly sold it. I then converted one of my Comets utilising a Bob Dunn 636 cc cylinder liner and muff etc: I also fitted it with a Norton gearbox, plus a 12volt electric starting and charging system. It was a lovely bike with brilliant acceleration, and it would cruise comfortably at a steady 75/80 mph all day.

The years continued to roll by, and my poor old steel knees felt as if they were going rusty.....! However, I still have one of my electric start Comets, plus a CB 500s Honda twin. I'm not riding so much these days, and my European trips definitely over. 90 next birthday.....!! But I did achieve those 32 consecutive Dutch, French and German Rallies, plus several FIM events.

I am not complaining at all, I've had some many excellent and memorable rides in various countries around the world, including several rides across and up and down dear old Australia, and both Islands of New Zealand, also a good trip starting in Texas and ending in San Francisco. Then back down those western states to Argentina. Where I stayed for several weeks with a guy who had about 12 Vincent's all in bits. I managed to build him three running machines from this heap of bits and pieces. I thoroughly enjoyed my time out there, specially all the beef steaks that were placed in front of me every evening at dinner. Huge things, almost as big as the plate. I never knew that beef could taste so good and so very tender....Never tasted anything like it in the UK or Europe....

I guess I am what you would call a fair weather rider nowadays, if it's raining hard I don't go out. I just cover the bike up, and wait until the weather changes to nice dry and warm conditions.....! Aha, it also means I don't have to clean the bike so often....

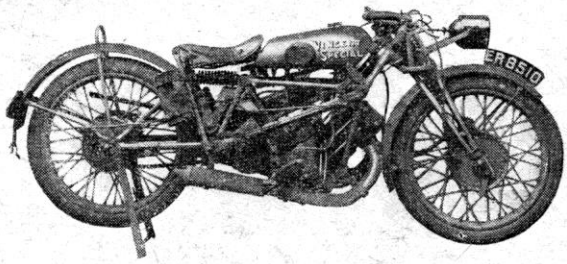
As you will know Martyn I spent several years as a VOC Executive Committee Member, being the Social Secretary for 15 years. I thoroughly enjoyed my long stint in that position, and I was fortunate enough to able to travel the VOC world and meet so many of it's members. I still treasure those memories, One event stands out however, that was the trip I organised for a 106 members who had an hours flight on Concorde, We flew at twice the speed of sound across the Atlantic Ocean and back, the captain was a VOC friend of mine, so I was on the flight deck for most of the flight. I use to service his Vincent and that was used as a good lever in obtaining the flight.....

Better stop here Martyn, I think I've gone on long enough. Hope this letter finds you fit and well, and enjoying your lovely Aussie sunshine, something I always envy you for. How I used to enjoy being up at Arkaroola for weeks at a time tending their big Lister Diesel Generating Plants. I was a fully qualified Lister Engineer in charge of their Service Department. But that was many years ago.....Many many years.

Best Wishes

Cheers. Jack Barker.

Always In The Picture since 1928



A VINTAGE VINCENT

The 1927 350 c.c. "Vincent Special" incorporating the original frame designed by Phil Vincent.

Photograph by courtesy of "The Motor Cycle."

EVER since 1928, when the Vincent H.R.D. Company was formed, Conway Motors have specialised in The Vincent motor cycles.

The "Vincent Special" (shown on left) was built in 1927, using the original frame designed by Phil Vincent whilst at Cambridge University.

All Vincent machines, right from the first, have incorporated rear-wheel springing as standard equipment. The old "veteran" on the left is no exception. The exposed rear-suspension spring can be clearly seen, mounted beneath saddle, joining main frame with rear assembly; this basic design has changed but little over the years. Powered by a 350 c.c. single-cylinder MAG, the proprietary engine made by Motosacoche in Geneva, the "Vincent Special" displayed an originality in design far ahead of its time.

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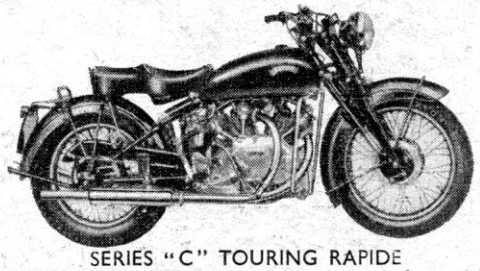

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1950	**VINCENT** "C" Shadow, mileage 900	£339
1950	**VINCENT** "C" Rapide, mileage 8,000	£289
1950	**VINCENT** Comet, mileage 4,000	£209
1949	**ARIEL** Sq. 4 springer, mileage low	£239
1949	**SUNBEAM** S8, mileage 3,000	£189
1948	**ARIEL** Sq. 4, mileage low	£189
1949	**ARIEL** Twin, mileage low	£159
1947	**ARIEL** Sq. 4, mileage low	£139
1947	**TRIUMPH** T100, mileage 8,000	£149
1949	**TRIUMPH** trophy springer, mil'ge 6,000	£195
1951	**B.S.A.** Bantam, 146 miles only	£79
1949	**TRIUMPH** T100, mileage low	£175
1938	**B.M.W.** R5 model, low mileage	£145
1946	**MATCHLESS** G31 model, 350	£109
1950	**VELOCETTE** L.E., mileage 1,000	£125
1947	**ENFIELD** Model G, mileage 5,000	£99
1949	**ENFIELD** Model G, mileage low	£119
1946	**TRIUMPH** 350 Twin, low mileage	£119
1946	**A.J.S.** 350 c.c., low mileage	£119
1949	**NORTON** ES2 spgr., mileage low	£159

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1949	**VINCENT** Rapide, with Watsonian Stratford	£279
1949	**TRIUMPH** S.T. Sprung, Swallow 2-seater	£259
1950	**ARIEL** R.H., shop soiled, Commando s/c	£230
1939	**TRIUMPH** S. Twin, Watsonian s/c	£125
1937	**NORTON** Model 18, single-seater	£79
1949	**P & M** 600, Garrard sidecar, low mileage	£219
1951	**TRIUMPH** Thunderbird springer, Avon s/c	£289
1950	**VINCENT**, new Swallow s/c, low mileage	£275
1950	**VINCENT** Comet, new Commando s/c	£285
1946	**MATCHLESS** G8L, Swallow s/c	£149
1935	**VELOCETTE** M.S.S., Sports s/c	£79
1949	**NORTON** ES2, Blacknell launch s/c, as new	£239
1951	**MINICAR**, one owner, 900 miles, taxed	£289
1949	**NORTON** ES2, with Swallow launch s/c	£199

CONWAY MOTORS

SOLO MACHINES

1947	**B.S.A.** M21, mileage low	£105
1945	**B.S.A.** 250 C10, mileage low	£65
1946 (reg.)	**NORTON** 16H, mileage low	£69
1939	**F. BARNETT** Cruiser, mileage low	£49
1947	**MATCHLESS** G3L, low mileage	£119
1948	**B.S.A.** A7 twin, low mileage	£149
1950	**NORTON** Dominator, 3,000 miles	£219
1950	**ENFIELD** 500 J2, 4,000 miles	£149
1950	**ARIEL** 350 de luxe, 5,000 miles	£130
1947	**NORTON** Model 18, low mileage	£119
1949	**ARIEL** R.H., one owner	£149
1949	**B.S.A.** A7, low mileage	£159
1947	**TRIUMPH** T100, low mileage	£139
1949	**TRIUMPH** T100, spring hub, dual seat	£209
1946	**HARLEY D.** 750 c.c., nice cond.	£89
1946 (reg.)	**ARIEL** 350, dual seat	£79
1938	**TRIUMPH** T80, good runner	£69
1948	**VINCENT** "C" Rapide, B/S speedo, super	£259
1949/50	**SUNBEAM** S8, low mileage	£189
1945 (reg.)	**VELOCETTE** M.A.C., nice cond.	£69
1937	**NORTON** Inter. o.h.c., nice condition	£99

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How Much? *Barry Taylor shares an adventure with us, Thanks Mate.*

This is my 1952 Series C Rapide, I bought this MC from Markwell Brothers in Brisbane in 1960 for 225 pounds it was in fair condition. After a year I decided to completely rebuild the mc, my wages at the time were not flash so I saved 5 pounds a week for 10 months. The engine was stripped & a new Alpha big end fitted the cylinder heads were ported & BSA gold star valve springs were a perfect fit. Lightning pistons fitted at 9:1 & Lightning cams new manifolds were made & Monobloc Carbs fitted. Lots of chrome work & polish & the Matchless seat as you can see. The tank should have a Vincent sticker But I liked the HRD one instead.

This was great time to own a Vincent MC, because there were very few on the road I only knew of 3 or 4 in Brisbane at this time. Apart from that there was no MC or car that could get close to a Vincent MC in straight line top speed; it was not until the Jaguar E Type came out in 1962 that the Vincent had a challenger. After running the engine in I gave it its first full throttle run it picked up the front wheel about 4 inches and carried it all the way through first gear in top gear with no helmet I may add that the first thing that told me just how fast I was going my cheeks were pushed in & my eyes were watering so bad I was having trouble seeing. A Cromwell helmet & flying goggles were purchased forthwith much to my Mothers relief.

12 years slip past till Vincent MC meets HR Holden (car) head on, Riding home from work at Cooparoo in 1964 putting along in 3rd gear a Holden sedan pulled out on my left & ploughed straight into me, a few weeks in hospital & then home to see my beautiful Vincent a wreck.

One front fork has a slight bend so I went to Markwell MC the Vincent agents to buy another one 105 pounds will buy you one Barry I was cheerfully informed! Stunned Mullet had nothing on the look on my face 225 pounds for the complete bike: 105 pounds for a single fork leg! Cripes – back then the average weekly wage was just 30 pounds a week.

You really wonder what kind of luck you have from time to time, It turned out the Holden driver was driving out of Doigs Panel Shop when he ran into me after having his Holden repaired after his last crash, Then the police inform me this is his 6th crash in 2 years. Running over a Chinerman or the Luck of the Irish had nothing on this guy. Happy Days to all the Lucky Vincent owners.

Tuck in Tight & Get Fast. *Barry Taylor.*

Event Calendar

An overview of some upcoming rides and events that may be of interest.

If you are planning any rides or are aware of events that readers may be interested in, you may invite others to participate via the "OVR Event Calendar" column in OVR. Just drop the editor a line at OzVinReview@Gmail.com .

September 6 – 21, 2015	VOC International Rally, Italy; *for VOC members only.*
October 4-9, 2015	Australian National Vintage Motorcycle Rally, Ararat, Victoria.
October 14-17, **2016**	VOC Australian National Rally at Parkes, NSW. Put this in your ride diary now.
	Cripes – is nothing much happening? Plenty of room for more entries, why not promote what's happening in your area? Just drop a line to the OVR editor with the details.

25 years with a Commando

Holger Lubotzki shares his passion

Back in 1974 when I was about 16 years old I was standing on a street corner downtown when I first saw a Norton motorcycle. It was the sound that caught my attention. The rider idled up to the T junction, turned right, and then just hit the throttle and rocketed out of sight. I was impressed! I later found out that was a 750 Combat Commando.

As soon as I could afford it, by about the time I was nineteen, I bought a 750 Commando. It was nothing special apart from being a Norton Commando. Just before my 21st birthday in 1980, I was presented with an opportunity to purchase a particularly special example of an 1974 850 Mk2a Commando. The asking price was A$1,400, which was labelled as outrageous by my peers, because condition A 850 Commandos were going for about $1,100 at the time. The machine was in white livery, including the frame, and with chrome everything, including the tank with white inlays and gold decals.

I clocked up 20,000 miles on the bike in the first year of ownership, and that was at a time when I owned two other motorcycles and a car. I went everywhere, man!

I had the first engine rebuild done in 1991 in Adelaide which was a disaster. They never bothered to clean out the detritus from the rebore and everything flogged out in 1000 miles. I subsequently had it done properly by Max Reid in Perth in 1992 and never looked back. I used the Norton as a commuter bike in Perth and Melbourne, with some road trips thrown in. By 2011 the machine was looking well used. I came to know of Kelvin Mears when a friend we had in common rolled up at my place on a 750 Fastback

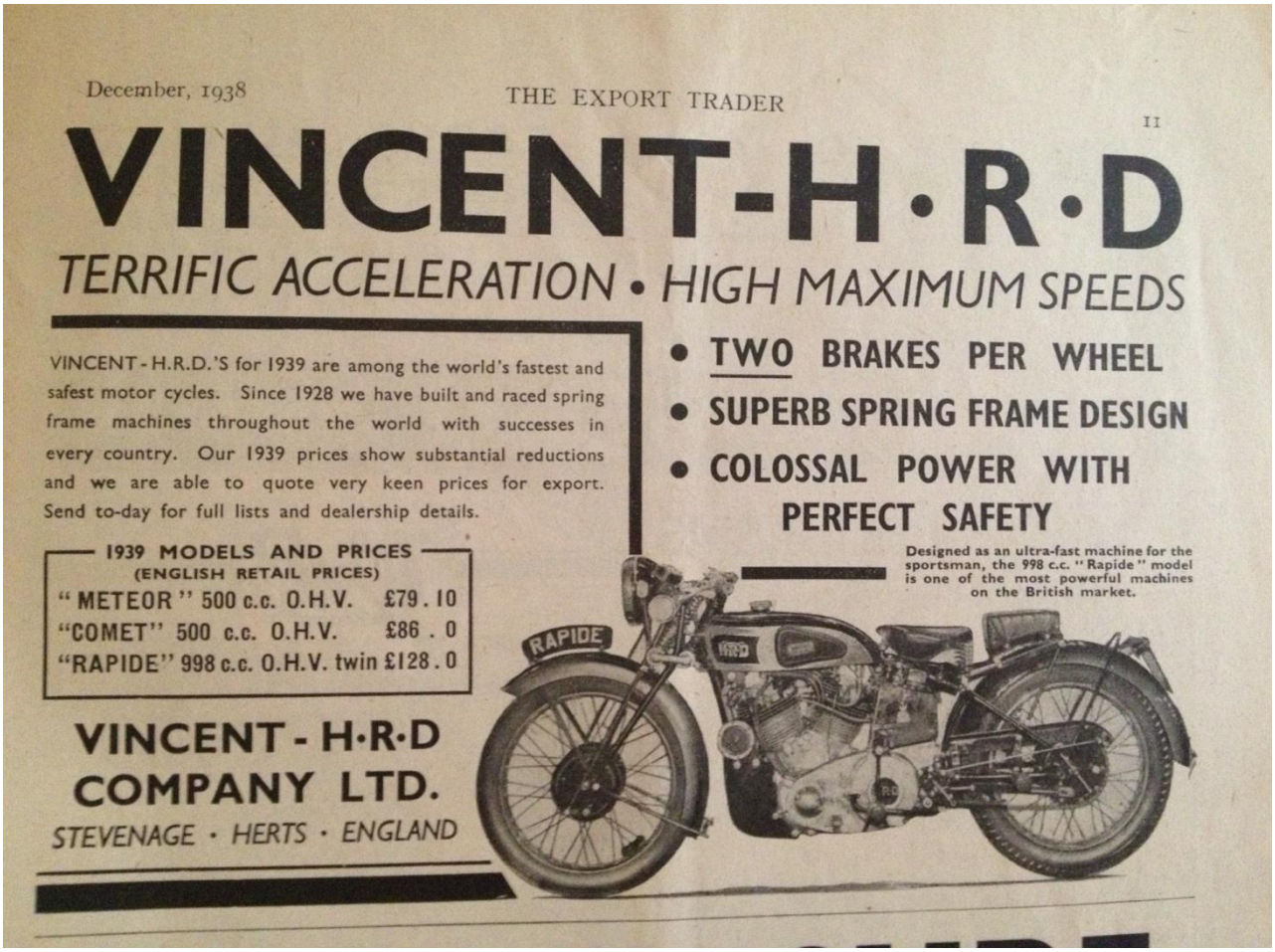
Commando. Once again, I was captivated by the sound coming up the driveway and recognised the machine as being particularly well put together and tuned. It turned out to be Kelvin's bike on loan.

I was subsequently lucky enough to persuade Kelvin Mears undertake a complete and thorough restoration on my 850 Mk2a, and the result is superb. The improvements and upgrades include:

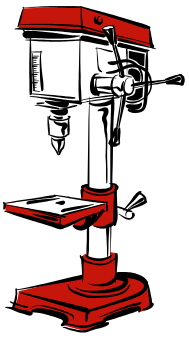
- RGM front brake
- Pazon Ignition
- TriSpark regulator
- Reed valve in the breather line
- Norvil toothed belt primary
- FullAuto Head
- Vernier Isolastics

The result is a very capable classic motorcycle that looks great with excellent handling. The Photos were taken in September 2012 when I rode the newly restored machine back to my place.

Kelvin recently sold his 750 Fastback to fund the purchase of a 1936 500cc Norton International and is currently working on restoring a 1911 Thor motorcycle. He tells me that my Commando was the last one he will ever do because he is no longer interested in what he now calls "post modern shit"...



Workshop Wisdom



Vincent Crank Case Assembly

Dry fit with bearing spacers[1] AND ET77, the main bearing distance piece (oil thrower), in place and ESA firmly installed then check for the conrod(s) being central. It/they MUST be either exactly in the centre or closer to the drive side of the liner opening(s) without any shims in place. If this is not the case then you need to stop now, disassemble everything and have some material removed from the drive side flywheel to get to that state.

Assuming all is well deduct the smaller value, being the drive side, from the larger then divide result by 2 and the result is the thickness of shim you need to put between the flywheel and the drive side bearing in order to centralise the con rod. Note – the shim MUST go directly against the drive side flywheel.

Disassemble and fit the shim on the drive side between the flywheel and the bearing spacer then reassemble, again using the bearing spacers, and measure again. Remember ET77 MUST be in place. Of course equal measurement on both sides is the perfect result, though variance up to 0.010" is acceptable.

Once you are happy with the rod centralisation, dissemble all again, then reassemble, this time fitting the actual main bearings in place of the bearing spacers. Remember – the shim MUST go directly against the flywheel on the drive side.

If there is ANY tendency for the inner race of either main bearing to slip or rotate on the main shaft it MUST be secured to the main shaft with a product like Loctite 680.

Ideally the bearings should be an interference fit onto the drive shafts; In order to install them, place the bearings into a small container (a discarded saucepan is ideal) of engine oil then heat till the oil is just starting to smoke and the bearings well heated. Taking care not to burn yourself, you can then drop the bearings onto the main shafts being sure to keep them firmly up against the flywheel face till they have cooled sufficiently to lock onto the main shafts. Remember – any shims MUST go on between the flywheel and the bearing on the drive side. If however the bearings are a sliding fit on the main shafts they must be secured with a product like Loctite 660 Retaining compound

Only now can you proceed to install the crank assembly, complete with bearings in place, into the case halves and then bolt the case halves together using a reliable case sealant such as Loctite 510 to provide an oil tight seal on the case faces.

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[1] Bearing "spacers" can be easily made from a pair of old, discarded main bearings. Using whatever means at your disposal, dismantle the old bearings then open up the internal diameter of the inner race so that they are an easy slide fit on the main shafts and Vola! You have a set of spacers. You may need some professional assistance to open up the ID but once you have done so – you have a spacer set for life.

New On The Scene?

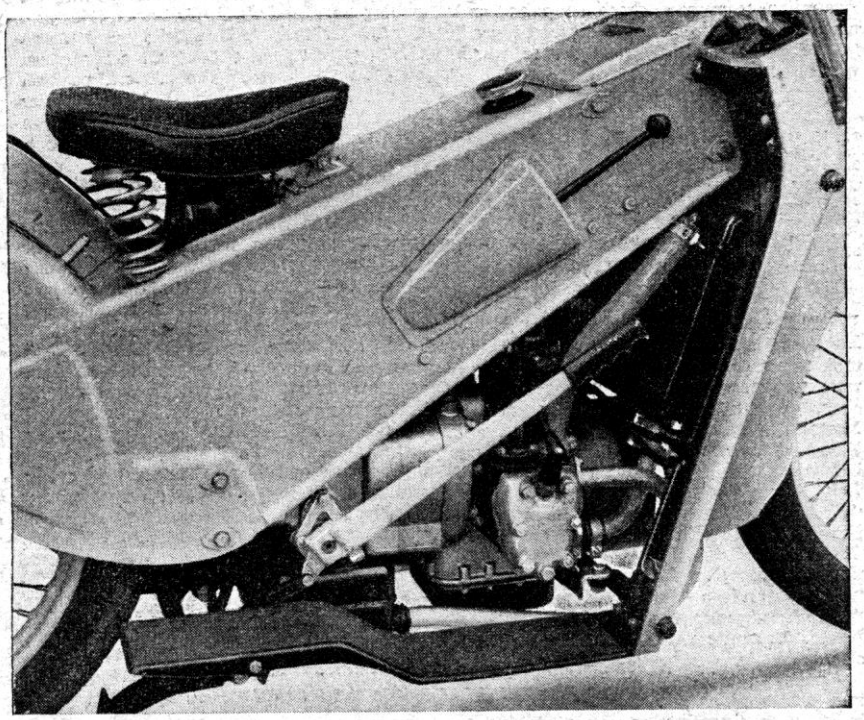
Well not quite – Long time Vincenteer and precision engineer Greg Brillus (Queensland, Australia) has recently started providing full time maintenance and restoration services for Vincents. More information is expected to be available for the next edition of OVR. Till then here are a few photo's taken recently at an Open Day in his workshop. Enjoy.

This is a review of an often unrecognised Phil Irving design, the Velocette LE, which if sales are a measure, succeeded beyond anyone's expectations.

Road Tests of Current Models—

The 192 c.c. Twin Water-cooled Model LE VELOCETTE

A Popular Shaft-driven Utility Machine in its Latest Form



The offside of the LE Velocette, showing the efficient leg shields, two-level footboards, car-type gear lever, starting handle linked to the central stand, fuel tank filler and built-in glove-box. The saddle is hinged at the nose to facilitate access to the battery.

IN the following road-test report it will be difficult to avoid a repetition of superlatives; thus a brief summary of the outstanding and immediately appreciated qualities of the water-cooled s.v. flat-twin 192 c.c. LE Velocette is best given in an early paragraph.

With a wide range of motorcycles forming the background of the tester's experience, there can be no hesitation in saying that this small machine is the quietest, smoothest and one of the most comfortable so far to have "come to hand." It cannot be said to perform in any truly remarkable fashion, but in its behaviour the LE would capture the heart and imagination of any person appreciative of good machinery and purposeful design.

Quiet!

During the four years that followed its introduction, in 1948, the British public, motoring and non-motoring, have become accustomed to the stealthy fashion in which this machine moves about and passers-by no longer question the motive power.

Initially, the machine was not designed or built for that most conservative of men, the motorcyclist, but rather to provide everyday transport for those thousands of unfortunate people who are crowded daily into the buses and trains of an overworked transport system. Inevitably, motorcyclists were attracted by the machine's outstanding qualities and purchased in spite of a lack of features normally considered essential, such as a foot-operated gear change or kick-starter.

From many, however, there came requests for a slight increase in the power produced by the engine, and in 1951 the swept volume was increased from 149 c.c. to 192 c.c.

For those readers who may have failed to make the acquaintance of this Velocette production, it may quickly be said that the 192 c.c. LE conforms in few ways to accepted motorcycle design. There is no frame as such. All units are built into, or on to, a sheet-steel pressing, to which the rear mudguard is welded. This structure carries toolbox, battery, petrol tank, pillion seat and pannier bags. A tube is bolted into the nose of the structure to hold the bearings of the front-fork steering head.

Below this pressed "bridge," and forming a cradle for the engine-gearbox unit and radiator, are two sub-assemblies; that at the front is tubing; the other is a steel pressing, located beneath the saddle. Radiator and legshields are attached to the forward tubular unit, and footboards join the tubes to the rear pressing.

Tubular telescopic forks are complementary to the swinging-fork rear suspension, which is instantaneously adjustable for load.

The Power Unit

Mounted on rubber, the 50-mm. bore, 49-mm. stroke water-cooled, side-valve, transverse, h.o. twin is in unit with the three-speed gearbox. A lever working in a gate welded to the off-side main frame pressing is provided to operate the gears. Drive to the rear wheel is via a shaft and finally by bevels. A control on the near-side operates the easy-starting device on the special car-type carburetter fitted. Starting the engine is achieved by a long handle, which automatically raises the central stand from its "in action" position. Very briefly, then, that is the LE Velocette.

When starting from cold a single pull of the handle proved to be almost infallible, provided time was allowed for the float chamber to fill. An ignition switch and warning light are located on top of the off-side legshield; the switch has three positions, "on," "off" and, in the event of a flat battery, direct current straight from the B.T.H. generator to the coil.

Clutch withdrawal was found to be light and smooth; with bottom gear selected, the take-off was free of judder from any part of the transmission.

Gear Changing

To confirmed modern motorcyclists, and the tester believes he can be placed under this heading, the hand gear-change needs getting accustomed to. From first to second the lever should be pulled across the gate as quickly as possible; any time lag will produce a slight "clonk." A light tap, however, will throw the lever from second to third gear and this method proved easy and noiseless. Excellent changes could be made down from top to second if, with the throttle set, the hand control was slipped back and "double declutching" employed. It must be remembered that neutral could be selected instantaneously from any gear and that, primarily, the machine is intended for those people to whom a "foot-change" is something of a mystery.

How such first-class suspension has been obtained, using only single-rate springs and with no positive hydraulic control, is indeed intriguing, particularly as the efficiency extends throughout the entire range of the machine's capabilities.

A leisurely game was played during the twice-daily journeys over one of the worst roads in Birmingham. For want of a better name it was dubbed "Hunt the Pothole," and its purpose was to find an obstacle that would "bottom" the rear suspension when it was set in the position giving the softest ride. It took four days—and at a rough guess the pothole finally responsible for the tell-tale noise was no less than four inches in depth and had a diameter of about three feet! The front suspension was truly excellent. On all types of going, from "crawling" to the maximum (downhill) speed of 60 m.p.h., the front fork and rear springing worked admirably in unison without pitching or bouncing.

A riding position that enables the arms to be relaxed and an upright "stance" employed is engendered by handlebars, which have a pronounced rearward bend, and the

feet rest naturally on the downswept centre section of the two-level footboards.

A limit to the angle at which the machine can be banked on a corner is set by these footboards. One suspects that this arbitrary limit was imposed intentionally at the design stage, for the steering is such that, for want of a better word, what racing men call "ear-holing" of no mean order could otherwise be indulged in.

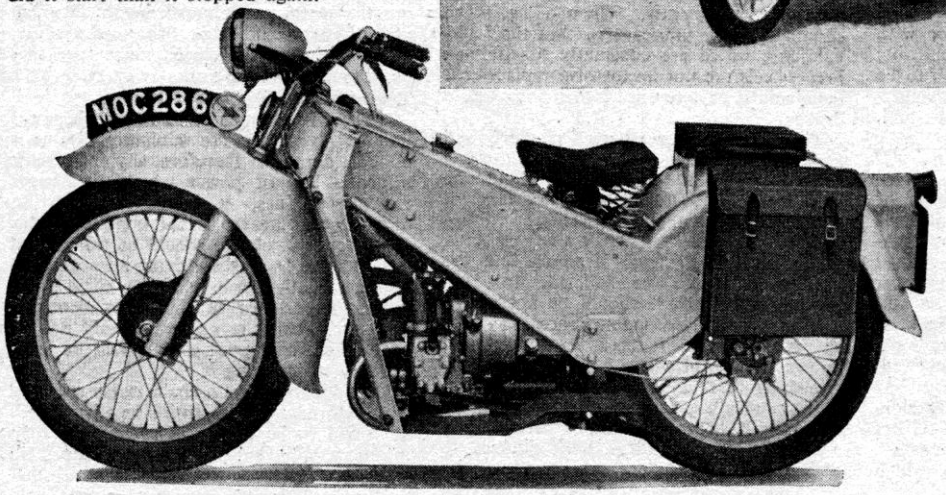
From a non-snatch top-gear speed of 15 m.p.h., acceleration, free from pinking or a display of temperament from the carburetter, was clean to the 45-48 m.p.h. gait at which the machine cruised most comfortably.

Weather Protection

Once the machine was under way, bottom gear could be forgotten and was brought into use only in traffic jams; in fact, on the open road, it was surprising how few were the occasions on which even the second ratio was necessary. A really steep hill was needed to bring the speedometer needle down to 30 m.p.h.

Slight drumming from the alloy leg shield panels was noticed occasionally. It was virtually impossible to pinpoint the road speed at which it occurred, for no sooner did it start than it stopped again.

Happy at his work! "Motor Cycling's" tester out on the LE Velocette. The comfortable riding position and the silent operation of the machine gave pleasant journeys.



(Left) Not the least remarkable feature of the Velocette is its "frameless" construction, the engine-gearbox unit being supported in a tubular sub-assembly. Note the adequate mudguarding and handy panniers.

Investigation at the end of a wet 12-mile journey showed that water had been thrown onto the rider's boots from passing vehicles and that, other than for some slight spray that comes back from the front wheel between footboards and cylinder heads, the mudguards and legshields do their job most efficiently. On shower-damped roads, protection is complete and leggings unnecessary.

Generally speaking, many lightweights need more than a fair share of road in which to stop. This criticism cannot be levelled at the LE for the 5-in. brakes have ample power. Not only in this respect do they deserve praise; both are pleasant to operate, smooth in retardation and progressive. No suggestion of fade could be discerned, even when the brakes were applied at top speed downhill.

With a machine claiming an anticipated run of 20,000 miles before serious attention is required, a normal road test mileage cannot be capable of revealing the ease of

(*Continued on page* 45)

BRIEF SPECIFICATION OF THE 192 c.c. LE VELOCETTE

Engine: Horizontally opposed side-valve twin, water-cooled, set transversely in frame. Bore 50 mm. by 49 mm. stroke = 192 c.c. Compression ratio 7 to 1. Crankshaft on plain and ball bearings with roller-bearing big-ends; light-alloy pistons and cylinder heads; special multi-jet carburetter with butterfly throttle valve operated by twist grip, air taken through large cleaner; petrol filter in fuel feed. Engine starting by hand-lever which automatically raises stand. Capacity of water system 2½ pints; jacket drain plugs in cylinder heads; car-type sump lubrication, capacity 1¼ pints.

Transmission: By shaft and bevel gears to rear wheel. Three-speed Velocette unit gearbox with two-plate clutch; transmission fully enclosed, lubricated and free from adjustment; hand gear change; ratios 7.15, 10.92 and 21 to 1.

Frame: One-piece steel pressing incorporating rear mudguard; built-in tool box and battery retainer; concealed 1¼-gallon petrol tank; telescopic front forks controlled by coil springs, oil lubricated; valanced front mudguard attached to fork legs and free from stays.

Wheels: Fitted with 3-in. by 19-in. tyres front and rear; rear wheel carried on swinging arm with coil springs, adjustable for load; brakes 5-in. diameter front and rear; wheels quickly detachable but not interchangeable.

Equipment: B.T.H. generator unit mounted on engine shaft ahead of flywheel. 6-in. head lamp with 24-24-watt twin-filament bulb, handlebar-controlled 6-volt 3 w. s.c.c. pilot bulb, ignition and lighting switches on panel above right leg shield; polished aluminium leg shields, rubber-covered footboards, raised platform for pillion rider's feet; large pannier bags; speedometer.

Finish: Frame, forks, tank, wheels, etc., in silver sheen; black handlebars.

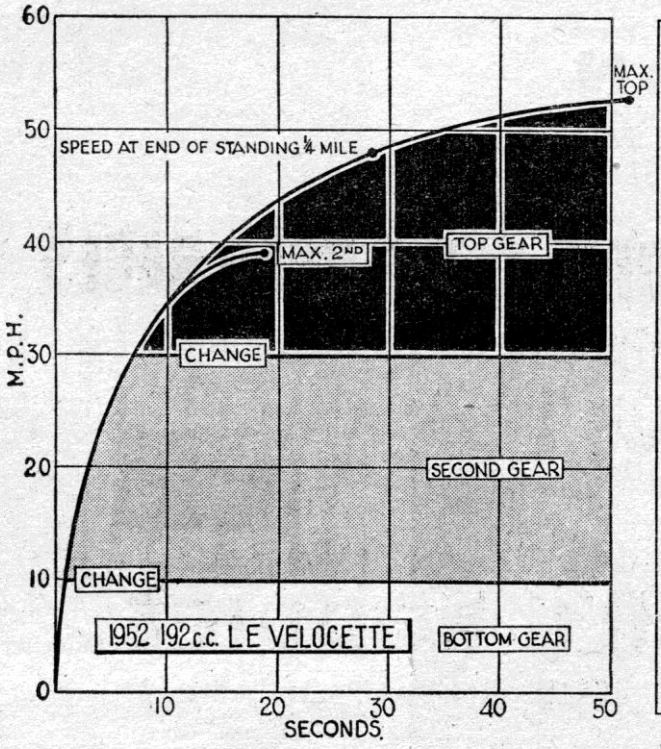
Dimensions: Wheelbase, 51¼ ins.; ground clearance, 5½ ins.; saddle height, 28 ins.; overall width, 25 ins.; overall length, 82 ins.; dry weight approximately 250 lb.

Price: £136 plus £37 15s. 7d. P.T. = £173 15s. 7d. Road Fund licence. £1 17s. 6d. per annum or 10s. 4d. per quarter.

Makers: Veloce, Ltd., York Road, Hall Green, Birmingham, 28.

Road Test of 192 c.c. Model LE VELOCETTE

Continued from page 43



MOTOR CYCLING

TESTER'S ROAD REPORT

MODEL 1952 192 c.c. LE VELOCETTE.

Maximum Speeds in:—

				Time from Standing Start
Top Gear (Ratio 7·15 to 1)	53 m.p.h.	= 5032 r.p.m.		51⅕ secs.
~~Third Gear (Ratio to 1)~~	~~m.p.h.~~	~~= r.p.m.~~		~~secs.~~
Second Gear (Ratio 10·92 to 1)	39 m.p.h.	= 5575 r.p.m.		18⅘ secs.

Speeds over measured Quarter Mile:—

Flying Start 52·6 m.p.h Standing Start 32·14 m.p.h.

Braking Figures On TARRED MACADAM **Surface, from 30 m.p.h.:—**

Both Brakes 28 ft. Front Brake 33 ft Rear Brake 49 ft

Fuel Consumption:— 30 M.P.H. Town 120 m.p.g. 50 M.P.H. Country 84 m.p.g.

Oil Consumption:— NEGLIGIBLE. Weight :— 255 lb.

maintenance unless the unusual happens. Nothing did happen during our use of the LE and attention was drawn only to an empty petrol tank which had been provided with no reserve tap. It is, however, easy to assess the contents of the tank, even on the move, and this slightly dull note was struck but once. No oil or water replenishment was required.

Some doubt as to the ease with which the rear wheel could be removed was quickly dispelled when it was found that, with the spindle withdrawn and the machine tilted slightly, the wheel was indeed quickly detachable.

With the lighting available it is possible to drive at maximum m.p.h. at night with safety, and a neat combined horn button and dip switch is to be found on the near-side handlebar. Cleaning merely calls for a damp cloth and, even for the late-riser, is a "before breakfast" job. A slight smear on one fork leg was the only sign of errant oil. Finally, if silence is golden, each 192 c.c. Velocette must possess an immense crock of gold for only the politest murmur can be heard at 50 m.p.h. Hence, of course, the machine's kennel-name—siLEnt.

If any amendments or alterations are to be made—the tester hesitates to say "improvements"—three things could perhaps be listed.

The first, a thumb wheel for the rear suspension adjustment instead of the present hexagon. The second, a more positive twist-grip, and, lastly, that the panniers should be detachable—the porterage of often very personal equipment, piecemeal, through hotels can be very undignified.

Burman Gearbox Maintenance

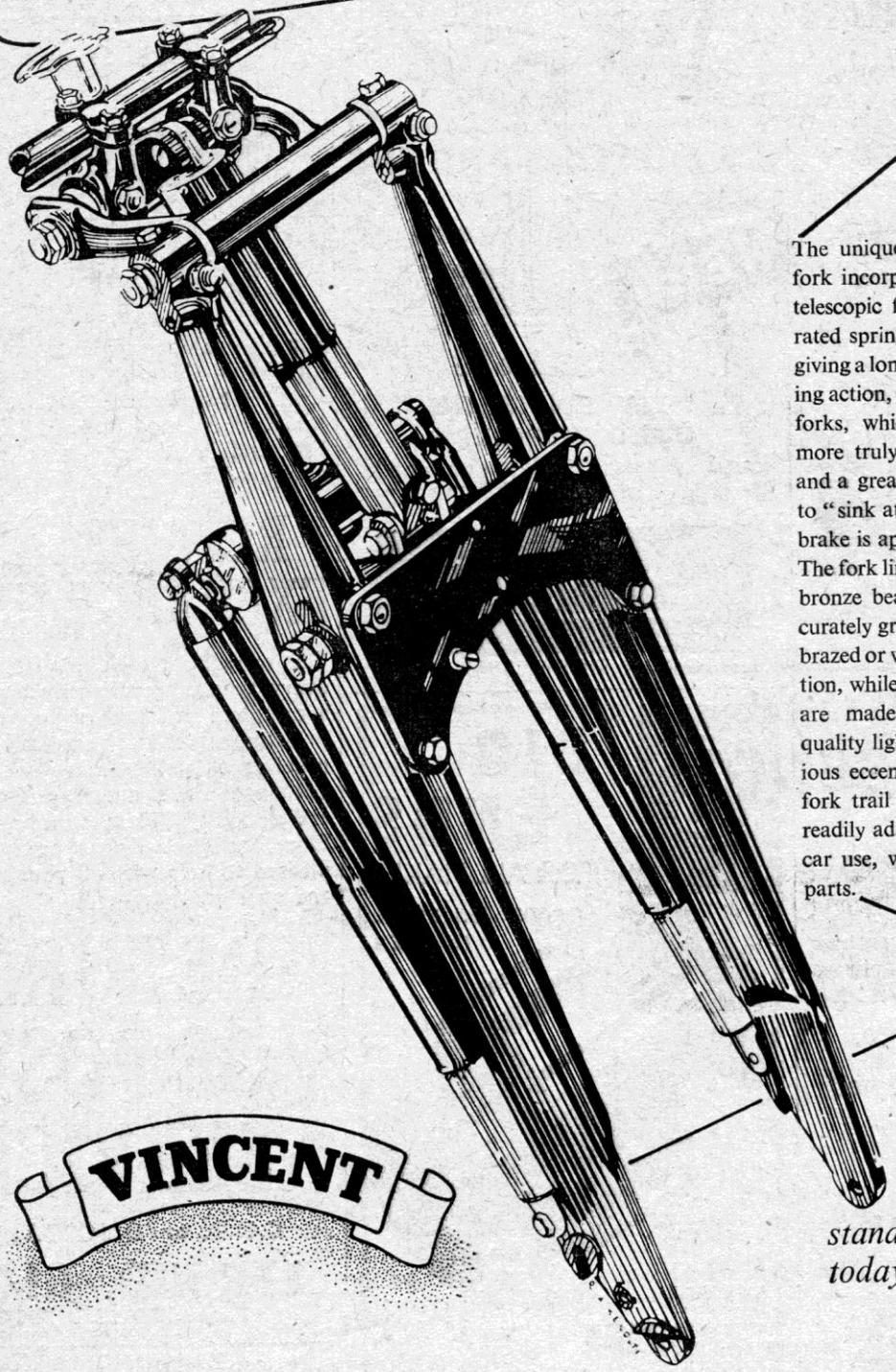
W.C.Haycraft, writing in 1948 offers this advice on caring for the Burman 4 speed box.

Every 5,000 miles flush out the box with a suitable Flushing Oil then replace with either 1lb 14oz (850grams) of grease OR 1 pint of oil. With grease filled boxes flushing is facilitated by first removing the foot change/kick start cover.

Every 1,000 miles add 2 oz (55 grams) of grease or oil to the box.

Suitable grease is Penrite Semi-Fluid Grease and suitable oil is Penrite Gear Oil 80W-90; I have no suggestion for the 'flushing oil' ; Editor

No.1 features that put VINCENT in a class by itself



The unique Vincent Girdraulic front fork incorporates the best features of telescopic forks, with their long soft rated springs and hydraulic dampers, giving a long smooth and gentle springing action, together with those of girder forks, which offer great rigidity, a more truly vertical springing motion and a great reduction in the tendency to "sink at the head" when the front brake is applied.

The fork links swivel on self-lubricating bronze bearings running on hard, accurately ground spindles. There are no brazed or welded joints in the construction, while most of major components are made from high grade aircraft quality light alloy forgings. An ingenious eccentric adjustment enables the fork trail and spring strength to be readily adapted for either solo or sidecar use, without fitting any additional parts.

VINCENT

Motorcycles of the future will be judged by the standards set by Vincent today.

VINCENT ENGINEERS (STEVENAGE) LTD., STEVENAGE, HERTS, ENGLAND

Telephone: STEVENAGE 690-3

A5

Optimising Amal Mark 1 Concentric Fuel Levels

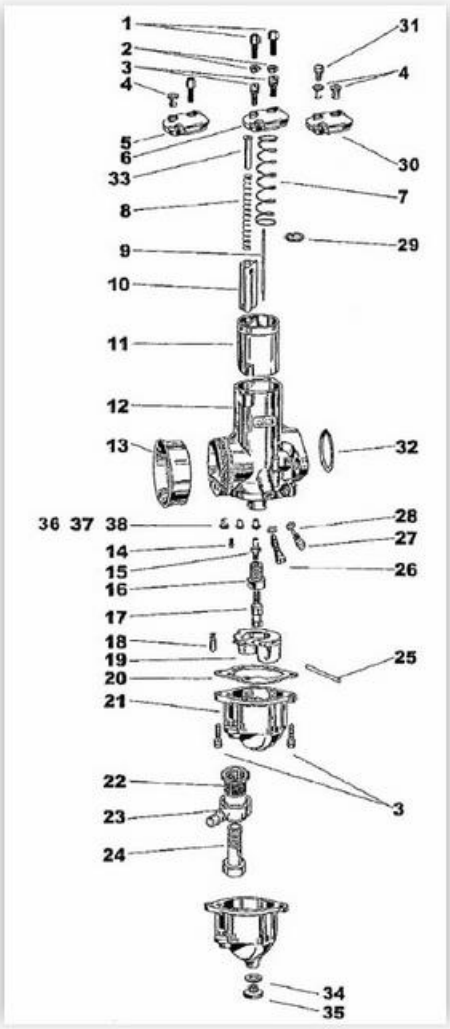
Although the Concentric carburettor will function across a wide range of fuel levels, an accurate fuel level is the foundation of the overall jetting of the carburettor and makes a significant contribution to the smoothness and performance of an engine.

The Amal StayUp float has stainless steel tangs which can be bent to alter the fuel level. The nylon floats are non-adjustable.

Fuel Level

Although the Concentric carburettor will function across a wide range of fuel levels, an accurate fuel level is the foundation of the overall jetting of the carburettor and makes a significant contribution to the smoothness and performance of an engine

The fuel level is determined during manufacture by the position of the float needle valve seat and should not require adjustment under normal circumstances. For performance tuning or where a carburettor runs consistently rich or weak despite being fitted with the correct jetting, it may be desirable to check the fuel level to establish a calibrated basis for tuning, or re-establish the carburettor within the correct parameters.



Because there have been changes to the float chamber since the Concentric carburettor was first introduced, and because there is no way of knowing what alterations may have been made by a previous owner, measuring the fuel level is the best way of setting up the float chamber..

The correct fuel level for all Mark 1 Concentric carburettors is 0.21" plus or minus 0.040" below the top edge of the float bowl. Thus when the needle valve is being held shut by the tangs of the float, the level of the fuel will be between 0.17" to 0.24" (4.33mm to 6.35mm) from the top of the bowl.

The fuel level can be checked by removing the float chamber and observing fuel running into it. The fuel flow should be sufficient to hold the needle valve open until closed by the action of the float. Insufficient fuel flow will cause the needle valve to seal under its own weight before the float rises far enough to press the valve shut. The level of the fuel can then be measured down from the top surface of the float chamber.

The fuel level can also be checked by attaching a piece of clear tubing to the bottom of the float chamber. A plastic float chamber drain plug can be modified to mount a suitable spigot, such as an old jet, to attach the tubing. Route the tubing in a vertical position alongside the float chamber. Open the petrol tap and fill the float chamber with fuel. If the fuel level is in the correct range the fuel will rise in the tube to a point between 0.170" and 0.240" below the top edge of the float bowl. Start the engine and ensure the fuel level remains within the correct parameters.

The new Amal "Stay Up" float has stainless steel tangs which can be bent to alter the fuel level. The tangs can be easily adjusted by clamping the float in a vice up to the spindle hooks and tapping the body of the float gently in the direction required until the required level is achieved.

Needle Valve

If your float chamber is fitted with a brass needle valve you may find the valve sealing under its own weight before the float has risen far enough to press it shut. Symptoms of this problem can be that the carburettor takes a long time to tickle, hesitates on pickup and does not idle reliably. A Viton tipped aluminium needle valve is now available that overcomes this problem. It is now fitted as standard equipment to all new Mark 1 Concentric carburettors.

Harmony:

Part 2a – Heavy Breathing

It was intended for the 2nd part of this series to focus on ignition, alas on reflection that needs to wait a bit longer – possibly next time.

While you are attending to valve timing it is also the perfect time to sort out engine breathing. Personally I have tried all manner of 'after market' breathers on my Vincent, including the Bunn system, an elephant trunk, the "D" breather, PCV valves and more, only to come to the conclusion that the original Vincent timed breather, properly set up, provides the best solution.

I can do no better than quote directly from Phil Irving (PEI), who in his volume "Tuning For Speed", referring to the Vincent motor, had this to say:

"Better crankcase ventilation is obtained by filing straight across the breather-valve sleeve until the slot is (at least) a full 3/8" wide, then rounding the outer edges of the flat so that the outgoing air has a clearer passage; the edges of the slot should be left sharp to act as oil scrapers. Replacing the external banjo and pipe with a straight union and a large bore pipe running upwards and rearwards also helps ventilation."

With a Comet the breather should be timed so it closes somewhere around 4 degrees After Bottom Dead Centre (but NEVER before BDC);
For a twin it should close at or just after 30 degrees after Bottom Dead Centre of the REAR cylinder

For a more detailed treatment of crankcase breathing check out the Workshop Wisdom entry in OVR #4 of May 2014. If you cannot locate a copy contact the editor who I'm sure will oblige with same.

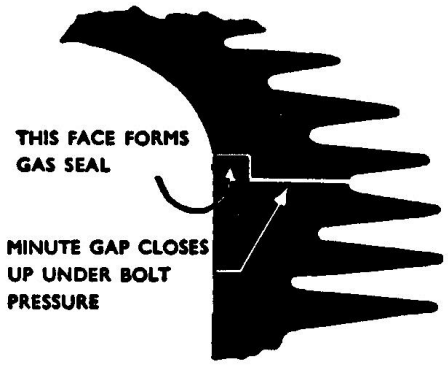
And a word or two of sage advice. For the timed breather where the breather valve sleeve or "tube" portion being ET141/SL is made from aluminium it is critical that when assembling the timing case that you do not reduce the end float of the breather. The spindle it rotates on is made from carbon steel that has a linear coefficient of expansion of 0.000012 m/m°C which is only half that of the aluminium 'tube' at 0.000023 m/m°C. Put simply the aluminium increases in length with rising temperature at double the rate of increase of the steel spindle and without sufficient end float when cold, as the engine temperature rises the breather pinion assembly

will grow in length (at twice the rate of the spindle) and seize against the steady plate causing a rapid temperature rise at the interface of the breather pinion itself and the interference fit of the breather valve sleeve, quickly leading to failure of the breather valve sleeve or the breather spindle itself. This is an easy and potentially expensive mistake to make when attempting to reduce timing case noise. If you want to do the math, there is more detailed information available here The Engineering Toolbox. To avoid embarrassment, don't ask the OVR editor about this ☺.

Remember – you will only be able to achieve a leak-free motor (no, it's not an urban myth) only if you have first sorted out the engine breathing.

Part 2b – Cylinder Head Joints

Now is the appropriate time to take a close look at the cylinder head joint – because if you cannot keep the combustion pressure in you won't get much power out!



Again drawing on the thoughts of PEI it is important to be aware that with a Vincent this is a "double-ground" construction in which simultaneous contact is made between two areas, but at different pressures. The design takes the form of a recess in the head which fits over a spigot on the barrel, spigot and recess being substantially equal depths.

The two components are ground together with *fine* grinding paste between the spigot faces and *coarse* grinding paste between the broad outer faces. The result is to leave a *minute* gap between the broad faces when the spigot faces are in light contact; then when the head bolts are tightened heavy pressure is applied to the spigot faces to form a gas-tight seal while distortion is prevented by the broad faces coming into contact.

During the grinding process the coarse paste should be continually renewed, but as the spigot faces approach perfection the fine paste can be gradually reduced in quantity by wiping the barrel spigot clean and adding a drop or 2 of light oil, after which attention the process is continued until the spigot and its recess acquire a bright smooth finish over their entire area. The broad faces will have a matt surface which should be continuous, though one or two small patches of indifferent contact should not be detrimental.

In the final assembly jointing compound is both unnecessary and undesirable. Being gas-tight this type of joint allows for a good flow of heat from the underside of the exhaust valve seat to the barrel and so assists in keeping this region of the cylinder head cool.

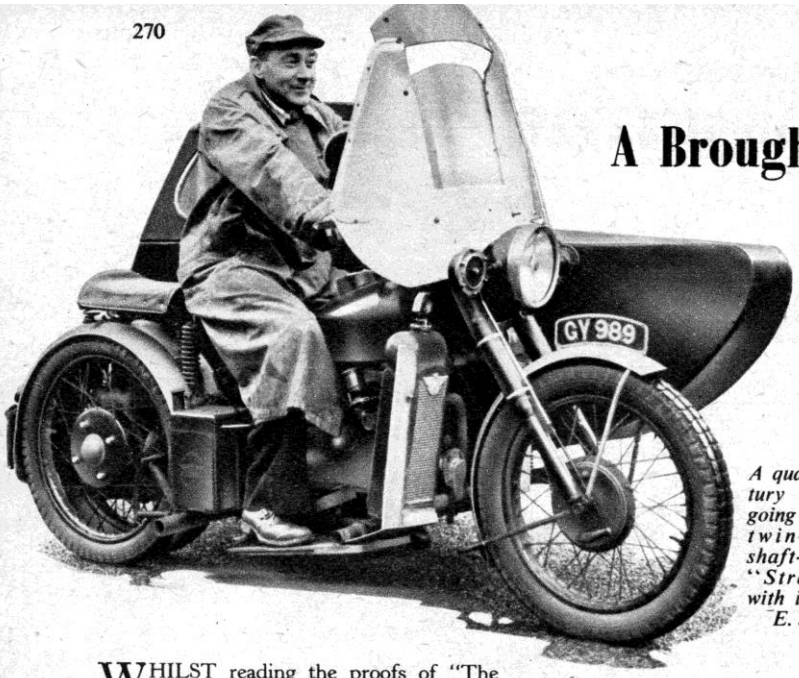
Head nut tension should be in the order of 30 to 35 ft pounds. With head nut tension in excess of 40 ft lb there is an increasing risk of ripping the head bolts out of the cases (as the motor comes up to operating temperature) with horrendously expensive consequences!

Finally a reflection on the stresses of combustion, using regular fuel, again with thanks to PEI: the table makes the crankcase stresses imposed by increasing CR's pretty clear.

Compression Ratio	Compression Pressure, psi	Combustion Pressure, psi
6.45:1 (Rapides & Metors)	182	680
7.3:1 (Shadows & Comets)	212	800
9:1	280	1050
10:1	320	1200

A Brough Superior "Straight Four"

JOHN GRIFFITH Describes an Unusual Mount Owned by a London Enthusiast



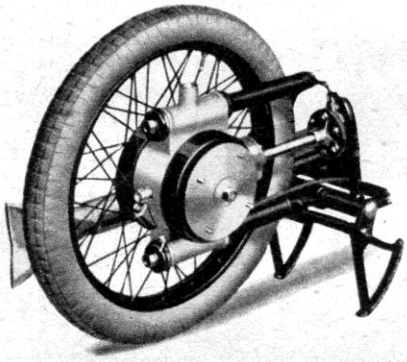
A quarter of a century old—and still going strong. The twin-rear-wheel shaft-drive Brough "Straight Four," with its owner, Mr. E. J. Sheriden.

WHILST reading the proofs of "The Editor's Correspondence" feature for our August 22 issue, I came across a letter from "G.14," of Ashton-under-Lyne, suggesting that a maker should build a car-engined motorcycle for the sidecar brigade. I immediately collared the colleague responsible for "Corres" and told him I had a picture of just such a model—why not put it in the feature? This was swiftly done and a line was added asking if any examples were still in existence. Replies soon arrived, and so it was that a week or two ago I kept an appointment with Mr. E. J. Sheriden, of Forest Gate, London, E.7, to see his Brough Superior "Straight Four."

GY989 was originally registered in July, 1932 and its early history is a little obscure. Eventually it was offered for sale, some years ago, by Comerfords, Ltd., who had been using it to haul their "float," and then it was that Mr. Sheriden bought it.

One obviously non-standard fitment is a pair of Ariel telescopic forks which have replaced the original Castle type. The original single-piece rear mudguard has been replaced by a pair of light alloy blades, mated to cover the twin rear wheels, and a matching guard has been fitted at the front. The correct wheel for the telescopic fork—also non-standard, of course—is used, but the original headlamp is retained. Minor differences are a new saddle and redesigned footboards.

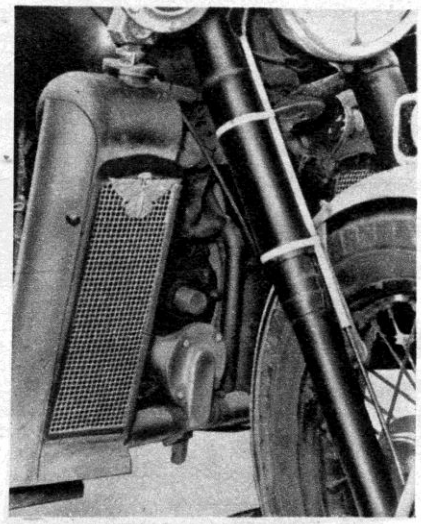
The engine is a slightly modified Austin "Seven" unit which, according to the B.-S. catalogue for 1932, has a bore and stroke measurement of 57.9×76 mm.=800 c.c. (slightly larger than the standard Austin "Seven"). A special cylinder head is used and the front of the engine carries a water pump, for no fan is employed. The owner has fitted a Solex carburetter in place of the original Amal instrument. Electrics are 6-volt and are supplied by a dynamo mounted transversely across the front of the power unit. The electric starter is standard—no kick-starter is fitted.

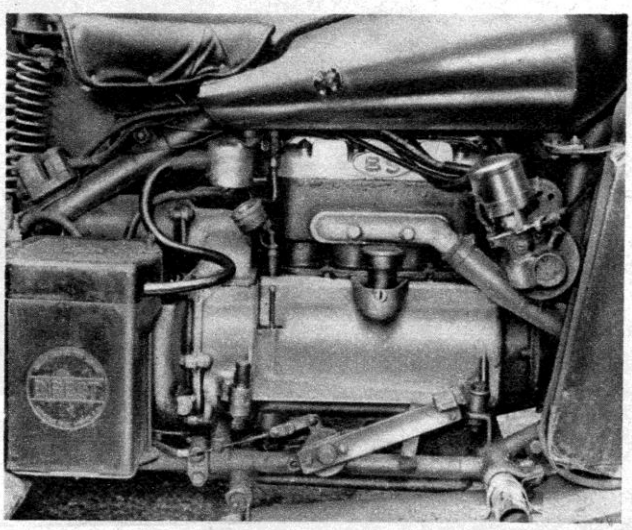


Transmission is via a three-forward-and-one-reverse gearbox to the final drive shaft, which uses a standard Austin crown wheel and pinion to drive the rear wheels. Tyre sizes are 3.50×19 in. for front and sidecar wheels and 3.00×20 in. at the rear. A home-built, and very well made, sidecar is carried on the original Brough chassis, which is attached to the machine by two large-diameter tubes at the front and rear of the engine unit, plus two extra supports at seat and headlug. Wheelbase, with the Ariel forks, is now 62½ in.; in standard trim it was 59½ in.

The 1932 catalogue claimed that "60 m.p.h. speeds with two passengers and luggage can be maintained indefinitely and in perfect comfort," also that the consumption was 50 m.p.g. at 50-55 m.p.h. with two passengers. Mr. Sheriden's model returns a figure of about 40 m.p.g. at 40-45 m.p.h. He has never had the model flat out; he finds that it vibrates at over 50 m.p.h. and believes its maximum would be about 55 m.p.h. He has never had any serious trouble with the machine. It has been rebored, but this item can be classed as "routine" in eight years of ownership. The outfit, adds Mr. Sheriden, invariably causes comment wherever it is parked, and he is quite frequently disbelieved when he quotes its age—over a quarter of a century.

By way of postscript, I would like to thank the dozen or so readers who wrote to us about B.-S. "fours." I hope Mr. Sheriden's machine is as interesting to them as it has been to me.





(Above) The rear end, with offside wheel removed to show the central shaft drive and parallel frame tubes—a contemporary catalogue illustration.

(Left) The twin radiators; between them, the casing of the water pump.

(Right) Offside close-up of the engine room; note the distributor at top right. The gear-change lever has been transferred to the other side for left-hand operation.

Buy, Swap n' Sell

If you have anything that you want to buy, swap or sell you can now do so, free of cost, in this section of OVR. All you need do is send a email to the editor of OVR with the text of your advertisment. OVR will NOT be providing any editorial or corrections – what you send is what will be published. Of course OVR cannot accept any responsibility for anything to do with the items advertised – that's a buyer/seller matter. Items will be listed in 2 consecutive editions of OVR.

Ken Butler, in Victoria, Australia has the following bike for sale: A 2008 Suzuki SV650ABS, 20,000K great condition, full service history including the first owners paper work & the log book I started 4.5years ago when purchased. A quick, light great bike. Handlebar fairing, heated grips, extended front guard (keeps crap away from oil cooler) & paddock stand. Any test. FURTHER REDUCED to just A$5,500 ONO. LAM approved.

Contact Ken on 03-5678 2245 or 0409004017,
else email to kenneth_butler@bigpond.com.

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Conway Motors Ltd, UK: Anti-Sumping Valves, Comet Multi-Plate clutch conversions plus an extensive range of excelent Vincent Spares. Ships Worldwide. Email for more information steve@conway-motors.co.uk

VOC Spares Company Ltd, UK: Full range of Vincent Spares. Ships Worldwide. Visit their web site for more information http://www.vincentspares.co.uk.

Union Jack Motorcycles, Australia: Full range of Triumph, Amal and control cable parts, plus an extensive range of Vincent parts. Ships worldwide. More info at the website www.unionjack.com.au

Pablo's Motorcycle Tyres, Australia: Road, Classic, Road Racing, Classic Racing, Enduro, Motocross, Speedway, Trials and Slicks....and if they haven't got it - they'll get it! For more info see their web site www.pablos.com.au

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Nuts n Bolts:

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Classic Fastners, Australia: Classic Fasteners is a family owned business, established in 1988. Their aim is to supply obsolete and hard to obtain fasteners for your restoration project be it a professional or private venture. The print catalogue, available for download, lists the current complete range. Ships Worldwide. http://www.classicfasteners.com.au/

Precision Shims Australia: All types of shims made to your requirements, ships worldwide. More info at their web site www.precisionshims.com.au

V3 (see entry under Spares above) also stocks a large range of Vincent specific nuts n bolts.

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