

The Oz Vincent Review

Edition #40, July 2017

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 OVR@optusnet.com.au



Disclaimer: The editor does not necessarily agree with or endorse any of the opinions expressed in, nor the accuracy of content, in published articles or endorse products or services no matter how or where mentioned; likewise hints, tips or modifications must be confirmed with a competent party before implementation.

Welcome

Welcome to this latest edition of The Oz Vincent Review. This month's Front Cover features Bob McLennan lifelong Vincent owner and master craftsman with his 'latest' Comet. (Actually a photo reproduction of one of Bob's award winning Vincent's). On the seat is one of 2 Vincent trophies Bob made many years back; the other is now a VOC perpetual trophy. And do not miss the event calendar for a upcoming auction of TWO Rapides.

If you have received this copy of OVR indirectly from another reader you can easily have your very own future editions; simply [click on this link](#) to register for your free subscription.

Finally, to access the OVR archive *from any device*, simply go to <https://goo.gl/jZkiFb>



Melbourne, Australia.
Email: OVR@optusnet.com.au

Letters To The Editor

Martyn,

Enjoyed last months OVR especially the article on Numbers. I now have two vehicles that have incorrectly transposed numbers on the State's registration data page. In one case an "S" has been transposed as a 5. In another case a "/" has been left out. To rectify these issues I have been told by the authorities that I need to incur substantial costs by undergoing engineering inspections and also re-submitting various paperwork. In the meantime I have replaced an RFM on another one of my bikes without informing the authorities! At the moment I call it an even score as I am not out of pocket, they do not have a clue and I am happily riding/ driving my machines.

It is only when you mess with the authorities and think you can beat them that you put yourself into an insidious and potentially expensive situation.

Classic Bike Owner, Australia (name supplied but redacted)

Good Day Martyn

Some months back I sent you some information and pictures of my friend Geno's Vincent dragracer which you published in OVR #25. In 1962 Geno had written a letter to Mr Irving requesting some information concerning his Vincent. I have attached the letter that Mr Irving sent back to Geno which you may find interesting. Hope you enjoy it.

Bob Gomach, USA

(PEI's letter is reproduced AND translated later in this edition)

One Readers Passion

An OVR contribution from Holger Lubotzki, Australia

I purchased my 1950 Series C Rapide as a much younger man in South Australia in 1987. While it was a matching number machine, it had previously had a tough life as a speedway outfit and the scars of that can still be seen today. Despite a few fairly serious issues early on and a range of repairs to badly worn and broken bits, I used the Vincent regularly over the years. I made a few changes in the late nineties aimed at improving the usability, and about four years ago I decided to go for a total workover including a TPV 1200cc top end conversion.

My objectives were to arrive at a completely rebuilt Vincent Twin that looked unmistakably like a Vincent, had significantly improved performance, and was both usable and reliable. I think I have achieved those objectives and I had hinted to Martyn that I would write up how I got there for the OVR. Once I sat down to that task I realised it would take a tome rather than a newsletter to cover all the dead ends and re-work I had go through, so I thought I would just outline what work was done and the major changes to the machine. This will still require a few pages to cover but if anybody would like more details on any of it, please let the editor know.



- 1200cc TPV Top End Conversion with quench band heads set at 50 thou:: Terry Prince's 1200cc kits are marvellous and this more than anything has completely transformed to bike. There is also something about engines with quench band heads that gives the running engine a real "crackle". I already had a TPV crankshaft and conrods fitted years earlier that had zero signs of wear or fatigue.
- TPV Mk2 Cams with quieting ramps :: I have Terry's Mk2 cams fitted and perfectly timed using instructions Terry gifted me and previously published in OVR
- 38mm Dellorto Pumper carbies with Tomaselli twin cables :: Terry also gave me a specification for 38mm PHM Dellorto Carbies that had been dyno tested in the same configuration to deliver over 90 HP from the engine. I had to mess around with the idle jetting in order to make it happy on the road at anything less than full throttle and they are working very well.



- Special Advance Pazon Ignition :: Pazon built me a special advance ignition unit that has 30 degrees BTDC maximum ignition advance, and also makes starting very easy with zero degrees advance at kick starter speeds. The unit is mounted inside the original magneto cover. The support from Andy and Co at Pazon during the de-bugging phase was also excellent.
- Spiral baffle silencer :: Sounds fantastic with a snappy engine but suffered heat discolouration within a few miles like they all do.
- V3 clutch running wet in modified chain case :: A V3 clutch is essential with this engine, and it has no trouble coping although it is a little sticky.
- Modified breather with reed valve and oil catcher :: This makes the bike very close to oil tight and there is an old fuel tap fitted to the oil catcher to drain the oil periodically. This modification includes a baffle in the crankcase, improved seal on the valve lifter, and reversed primary side crankshaft seal. The reed valve is hidden away under the battery.
- 12 volt Alton Alternator driving a TriSpark Regulator :: I was never happy with the Alton Alternator in the original incarnation but the solid state regulators available today from TriSpark in Australia have completely transformed the charging characteristics.
- 520 O-Ring final drive chain :: This was sourced from the VOC Spares shop and is also probably essential with this engine. I have the highest possible road gearing and the bike idles along at 70 mph and 3,000 rpm. On paper it is geared for 150 mph at 6,500 rpm (and on paper I am unfeasibly brave!)
- Ikon dampers :: While the damper are good on smooth surfaces they are very stiff. The verdict from others is that the ride is not as comfortable as modern machinery.
- VOC Spares 8 inch front brake with balance beam brace :: The brakes are very effective, but the real surprise was the brace for the balance beam. For all those years I thought the front brake cable was stretching when in fact it was actually the balance beam mounting plate distorting under load and simply taking up all of the extra pull on the brake lever. Every Vincent should have one of these.
- 21 inch front rim :: One of my requirements was decent road going rubber and that necessitated a 21 inch front rim. 19 inch was the other option but the 21 inch rim looks good and also takes out a few of the smaller bumps before they get through to the Ikon Dampers.
- Neal Videan side stand :: Every Vincent owner needs one of these, even if they don't know it. The 21 inch front rim makes it even more necessary.



- Replica Smiths Electronic Tacho and Speedo :: These instruments are expensive but they really complete the machine, and they are perfectly accurate

- There were also numerous other small modifications and parts including loads of stainless steel replacement nuts and bolts, LED tail light insert, and battery moved to right hand side on a stainless tray.

The final result is impressive. The bike starts easily (now that I figured out a brand new set of idiosyncrasies), idles perfectly even when cold, and goes like the proverbial! The brakes might not be a match for modern discs, but they certainly beat the original Norton Commando disc brakes of the seventies. The ride is probably too stiff for most people but it is perfectly stable and true and a real pleasure on high speed sweeping bends. My mate Tony Ford who rides a Ducati Sport Tourer had a go and offered the following afterwards:

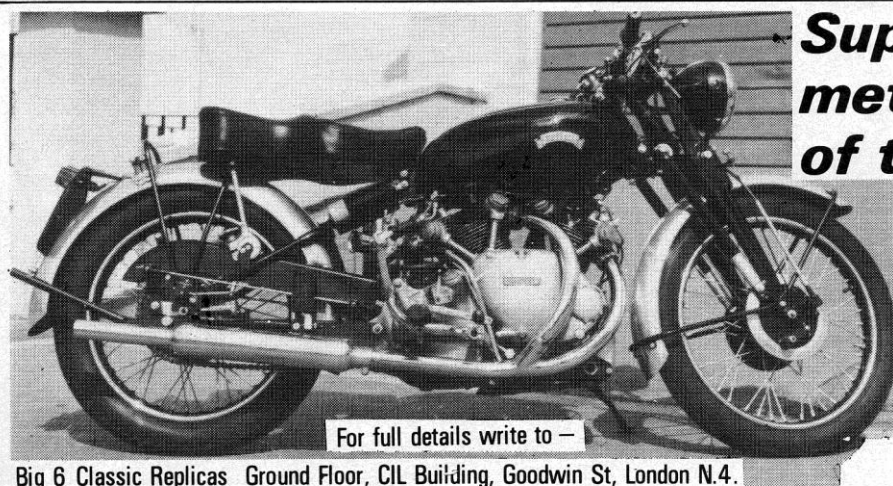
"Riding the Vincent was a revelation – the bike was rock steady carving through fast winding roads, with impressive mid range torque allowing slingshot exits from each bend. While the ride was understandably not quite up to modern bike standards, the stability and handling of this 60+ year old motorcycle could not be faulted - and the big twin sounded magnificent!"

Mission accomplished, as they say!

I didn't get here on my own and there are number of people who deserve my thanks:

- Terry Prince for the 1200 top end kit and for patiently fielding my phone calls along the way, and for all the excellent technical tips and advice.
- Mal Hewett for even more technical advice (especially on where to stick that wine cork) and for lots of encouragement when I had to go around again on a few occasions
- Ryan from Custom Paint for the excellent paint on the cycle parts
- Terry Stacy for all the modifications and repairs to the really old bits
- Ray Abbott for the big machining work on the crank case to get the top end kit to line up
- Budgie at Spokewheel Services for the wheels
- Mike Crossing for the stainless steel tray to shift the battery to the other side
- Mario from Thunderbikes for lots of help with the Dellortos.
- Andy and the people at Pazon for the special advance ignition unit and their technical support.

=====



For full details write to –

Big 6 Classic Replicas Ground Floor, CIL Building, Goodwin St, London N.4.

**Superb large scale
metal model
of the incomparable**

VINCENT

**'Big Twin'
Series C
Black Shadow**

WORKSHOP WISDOM

From the Masters Pen!

If you read Letters to the Editor in this edition, then this item will not come as a surprise. Back in 1962, Phil Irving wrote the following letter. Now Phil's handwriting was not quite as elegant as his engineering so OVR has 'translated' it for you.

10 Cranley Place
London SW7
England
8/8/1962

Geno's Cycle & Speed Shop
Wanwatoso, Wis. USA

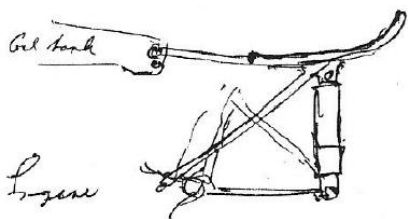
Dear 'Geno'

Late last year you wrote to me at my Australian address regarding your Vincent. At the time I had just got back there from England and was preparing to set off on a long trip into the interior. After my return I again set sail for England, where you will notice I am now, and what with one thing and another your letter kinda got overlooked along with many others I am afraid.

Anyway I would like to apologize for my seeming discourtesy in not answering sooner and by now it's probably too late anyway.

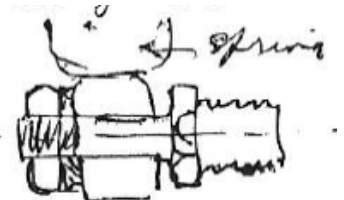
Well with regard to your setup it sounds pretty good to me. From reports I hear the 'Alpha' big end is OK although some riders won't agree. Myself, I always use as a replacement the caged bearing for which full dimensions of pin and cages are given in my book "Tuning For Speed" 4th edition. Would prefer 1 5/8" x 56" pipes for better get-away, the big ones don't chime in until over 3000 rpm.

Not sure about the 1 1/2" Dell'Ortos. In fact I don't know much about them. George Brown only uses 1 5/16" GP Amals on "Nero" with a length of 13" from valve to end of air intake. I have used 1 3/8" GP Amals with success however on a racing outfit. Despite lots of people using telescopic forks the Girdraulic is OK and can be lightened quite a lot by milling the blades into a dumb bell section.



One problem is keeping down the front wheel. The answer here is to lower the whole machine by repositioning the front axle and dropping the rear end. Also you want longer rear forks to get more weight towards the front. This can be done by extending the engine plates to shift the fork pivot 2" further back. Make up a simple frame to carry the seat rather like this.

Retain the existing rear fork (rigidity!) and use a pair of Girling units such as used on B.S.A. twins. Attach these to bolts made up to fit the large holes in the rear fork ends which are tapped 3/4" x 20 TPI thus.



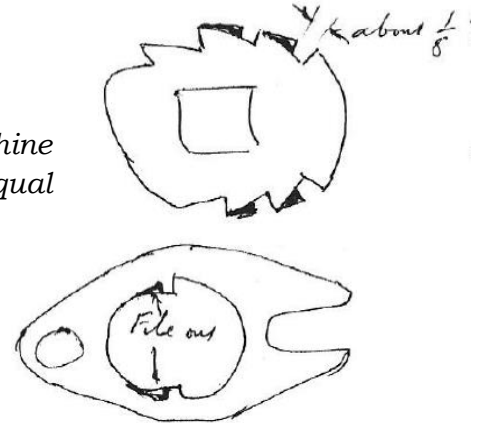
That way you can get the engine low enough so it just clears the ground on full bump. You won't have much cornering angle but you don't need it anyway for dragging. You can use the oil tank for fuel and make up a pint tank for oil as that is all you need. Throw away the banjo feed on the pipe to the pump and fit a straight union with the biggest hole you can get. A lot of big end trouble is directly caused by the oil just not following the varying suction strokes of the pump. Castrol R20 or its equivalent should be used.

You don't mention any gearbox modifications other than lightened cam plate, but each alternate dog on top and third gears should be ground out also the internal dogs on the standing gear. This was standard practice on Lightning boxes and improved the change a lot. The internal dogs are easily knocked out with a solid hard punch and a heavy hammer. Naturally you remove the dogs which are already cut back 1/16".

The change can be made more positive by this mod:

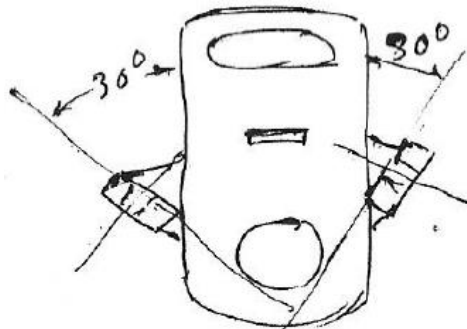
1. Put a dob of weld on the 4 ratchet teeth then re-machine to form straight sided notches about 1/8" wide all equal

instead of ramps thus (diagram here) No need to reharden after welding.



2. Soften pawl teeth and file out to fit notches thus



You will see that when the ratchet tries to overrun, as it can at present, it is now prevented from doing so by the square faces as long as the pedal is held momentarily at either extreme of travel and not just dabbed and let go. However overrunning is still possible due to the pawl carrier being able to rotate so



allowing the teeth to lift out. To stop this, modify the centralizing spring plate thus by welding on a pair of 1/4" nuts with screws and locknuts so that they can be adjusted to just contact the loops of the centralizing spring when the pawl carrier is moved to its full extent either way.

It is possible your spring plate already has a couple of turned up ears which act the same way but if so they must be reinforced somehow otherwise they bend. If you do this job properly it is impossible to overrun any gear and get the next neutral.

The Oillite bush in the gearbox hollow main shaft doesn't like racing much, I think the material compresses under load when 2nd gear is engaged but you can bore out the shaft to take a 3/4" long Torrington bearing; there is one which just fits the shaft which is 15/16" diameter and hardened. I have also fitted a Torrington to the inner clutch sprocket bearing boring out the existing bronze bush; but you really also need another collar on the clutch shaft. The existing one

has a section thus  the new one has to be thus  otherwise the bore in the bronze bush is just equal to the existing collar diameter and the location of the sprocket is poor. That about completes all I know about boxes.

As to wilder cams you are asking a lot to get more power at both ends. About the only way is to use the same timing but greater lift which you can get by dog-legging the rockers. Move the hole 1/8" towards the push rod end to alter leverage and either make new bearings or reverse the existing ones & drill another locating hole 1/8" off centre. The rockers are KE805 steel, approx. 1 and 1/2% nickel chrome and if you weld up the hole first, can be re heat treated to 70 tons (treatment quoted somewhere in 'Tuning For Speed').

You can sneak a bit of weight off the rockers by grinding the ends to 1/16" round the adjuster threads also cut off the adjuster heads & add a slot for a screw driver. Some of the boys here use duralumin push rods. 3/8" diameter in centre and barrel ended run direct in the cups and don't seem to wear much if the cups have already been polished. Don't save weight by lightening the beam portions other than simple polishing.

Well that's about all short of writing a book which is something I only do usually for some financial consideration! Which reminds me; one I had published recently called "Automotive

Engine Tuning" which should be available in the U.S. has a section what gives all the dimensions for stroking a Vincent to 99 mm to give 1098cc.

Yours sincerely

Phil Irving

PS: Will be in London at above address till November. Excuse scrawl, but I can't dictate this stuff and can't work a typewriter either!)

And just in case you were wondering here is the Masters original:


16 Cranley Place
London SW7
England
8/8/62

Gene's Cycle & Speed Shop
Wauwatosa, Wis.

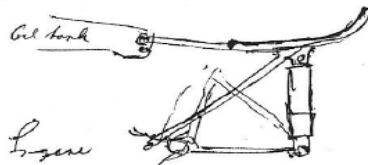
Dear "Gene"

Like last year, you wrote to me at my Australian address, regarding your Vincent. At the time, I had just got back there from England and was preparing to set off on a long trip to the interior. After my return, I again set sail for England, where you will recall I am now, and what with one thing and another, your letter kinda got overlooked - along with many others, I am afraid.

Anyway, I would like to apologize for my seeming discourtesy in not answering sooner, and by now it is probably too late anyway.

Well, with regard to your set up, it sounds pretty good to me from reports. I hear the Alpha big-end is OK although some riders won't agree. Myself, I always use a replacement, the caged bearing for which full dimensions of pin and cages are given in my book "Tuning for Speed" 4th edition. Would prefer $1\frac{5}{8} \times 56$ " pipes for better get-away. The big one don't change in until over 3000 rpm. Not sure about the $1\frac{1}{2}$ " steel bits. In fact, I don't know much about them. George Brown only uses $1\frac{5}{16}$ " GP Arnolds on "Hans", with a length of 13" from valve to end of an intake. I have used $1\frac{5}{8}$ " GP Arnolds with success however on a racing outfit. Despite lots of people using telescopic forks, the Chindraulic is OK, & can be lightened quite a bit by milling the blades into dumb-bell section. 

One problem is keeping down the front wheel. The answer here is to lower the whole machine by re-positioning the front axle, and dropping the rear end. Also you want larger rear forks to get more weight towards the front. This can be done by extending the engine plates to stiff the fork head 2" further back. Make up a simple frame to carry the seat rather like this



Return the existing rear fork (rigidity!) and use a pair of Quilins units

Swivel as used on B.S.A. trains. Attach them to bolts made up to fit the large holes in rear fork ends which are tapped $\frac{3}{4} \times 20$ T.P.S.

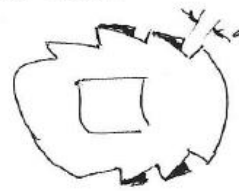


That way you can get the engine low enough so it just clears the ground on full bump. You won't have much cornering angle but you don't need it anyway for dragging. You can use the oil tank for fuel, and make up a pint tank for oil, as that is all you need. Throw away the bangs-feed or the pipe to the pump and fit a straight union with the biggest hole you can get. A lot of bogging trouble is directly caused by the oil just not following the ~~into~~ varying suction strokes of the pump. Castrol R20 or its equivalent, should be used.

You don't mention any gearbox modifications other than lightened cam-plate, but each alternate dog on top and 3rd gear should be cut ground out also the internal dogs on the sliding gear. This was standard practice on lightning boxes and improves the change a lot. The internal dogs are easily ~~can~~ knocked out with a solid hard punch and heavy hammer. Naturally you remove the dogs which are already cut back $\frac{1}{16}$ ".

The change can be made more positive by this mod.

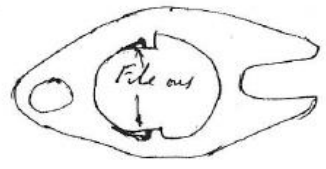
- ① Put a job of weld on 4 ratchet teeth, then re-machine to form straight-sided notches instead of ramps thus.



about $\frac{1}{8}$ " all equal

No need to reharden after welding

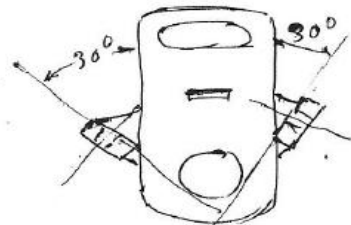
- ② Soften pawl teeth and file out to fit notches. Thus



You will see that when the ratchet tries to overrun, as it can at present, it is now prevented from doing so by the square



faces. as long as the pedal is held momentarily at either extreme of travel & not just dabbed & let go.

However, overrunning is still possible due to the pawl carrier being able to rotate, so allows the teeth to lift out. To stop this, modify the centralizing spring plate thus, by



welding on a pair of 1/4" nuts, with screws & locknuts, so that they can be adjusted to just contact the loops of the centralizing spring when the pawl carrier

is moved to its full extent either way. It is possible your spring plate already has a couple of turned up ears which act the same way, but if so, then must be reinforced somewhat otherwise they bend. If you do this job properly, it is impossible to overrun any gear & get the next neutral.

The Gilite bush in gearbox hollow mainshaft doesn't like racing much. I think the material compresses under load when 2nd gear is engaged, but you can bore out the shaft to take a 3/4" long Torrington bearing, there is one which just fits the shaft which is 15/16" diameter & hardened. I have also fitted a Torrington to the inner clutch sprocket bearing boring out the existing bronze bush, but you really also need another collar on the clutch shaft. The present one has a section thus , the new one has to be thus , otherwise the bore in the bronze bush is just equal to the existing collar diameter and the location of the sprocket is poor.

That about completes all I know about boxes

As to a wilder cam you are asking a lot to get more power at both ends. About the only way is to use the same timing but greater lift, which you can get by dog-legging the rockers, move the hole 1/8 towards the push rod end to alter leverage and either make new bearings, or reverse the existing one & drill another locating hole 1/8" off centre. The rockers are KE805 steel, approx. 1 1/2% nickel chrome and if you weld up the hole first can be re heat treated to 70 tons (treatment quotes somewhere in "Journal for Speed")

4

You can sneak a lot of weight off the rockers by grinding the ends to $\frac{1}{8}$ inch round the adjuster threads, also cut off the adjuster heads & slot for screw driver. Some of the boys here use dualuminum push rods $\frac{3}{8}$ " dia in centre and chamfer-headed. Run direct in the cups & don't seem to wear much if the cups have already been polished. Don't save weight by lightening the beam patches other than simple polishing.

Well that's about all. Start of writing a book which is something I only do usually for some financial consideration! Which reminds me, one I had published recently called 'Automobile Engine Tuning' & which should be available in the U.S. has a section which gives all the dimensions for stroking a Vincent to 99 mm to give 1098 cc.

Your sincerely

Phil Irving

P.S. Will be in London at above address until November. Excuse scrawl, but I can't dictate this stuff and can't work a typewriter either!)

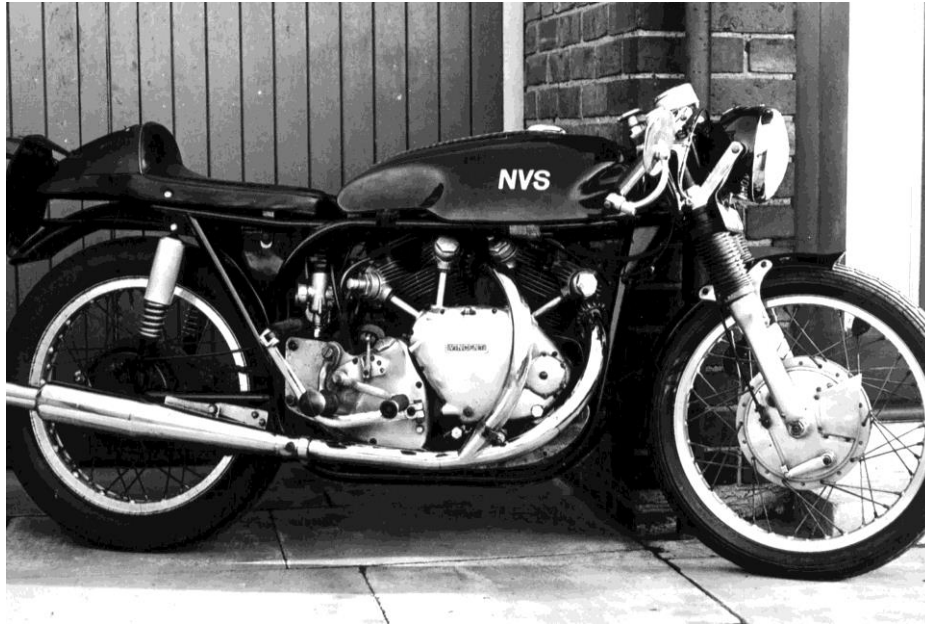
What Did I Do??

I purchased my Vincent Black Shadow, NRO 365, from Conway Motors in Goldhawk Road, London in 1964. It was my sole means of transport for the next two years.

A love-hate relationship developed as various problems occurred and were, in most cases, overcome. Eventually I succumbed to the then trend of building 'café racer' specials. Tritons were popular but I decided to go one better and build a Norvin. The end of NRO 365 was nigh!

I fitted the engine into a featherbed frame to provide me with my ultimate motorcycle, my Norton-Vincent-Special (NVS). It was reregistered in 1966 as KDH 899D and was without doubt my favourite bike of all time.

Super!



KDH 899D (ex NRO 365) following its transformation into a NVS (Norton-Vincent-Special)

Most of the remaining Vincent bits were sold off or scrapped and the registration number went to a local buyer. The NVS was ridden and immensely enjoyed for the next 2 years after which I succumbed to the temptation of 4 wheels. I traded it in against my first car for the pathetic sum of GBP150!

I returned to motorcycling in 1982, riding a Suzuki GS750 but often reminisced about my glory Vincent days. Then someone gave me a book for a birthday present: *Vincent-HRD* by Peter Carrick. Reading through this book I discovered photographs of the 1952 Montlhery record attempt with notables such as John Sutrees and Ted Davis with MY old bike!

Cripes!! NRO 365 had been famous and I was the bloody idiot who broke it up and ended the life of a piece of Vincent history. I nearly cried – with sadness, with shame, with bitterness. I had been totally unaware of its past glories.

All I have left of NRO 365 are a footrest, brake pedal, the rear seat stays, the footrest rubbers and my fading memories.

This item, contributed to OVR by David Bowen, was authored by Keith Biddlestone, Wolverhampton, West Midlands in the late 1980's.



Ted Davis (behind bike) hands over NRO 365 to Cyril Julian at the remarkable Montlhery record breaking session in May 1952 where in concert with John Surtees they set the following records: 6 hours @ 100.60 mph, 7 hours @ 99.73 mph, 8 hours @99.48 mph, 9 hours @99.4 mph, 10 hours @ 99.17 mph, 11 hours @ 92.5 mph, 1,000 miles @99.2 mph and 1,000 km @ 100.8 mph .

FOOTNOTE: As usual when it relates to a famous Vincent, the history is a bit murky and not always quite what it seems. NRO 365 was a series C Black Shadow. According to some sources it was a press hack bike at the Montlhery record attempt and not one of the actual record attempt bikes. So NRO was possibly used purely for publicity photos and such things for the press and not actually used on for the records. The article, above, by Keith Biddlestone explains that he broke NRO up and sold or scrapped the cycle parts.

After Keith sold the Norvin in 1968 it disappeared. Remember, all this Norvin contained of the original NRO was the engine. The next time there is any record of it was in Australia in 2003. This appears to have still been a Norvin, still bearing KDH 899D. Soon after this David Bowen in Adelaide, Australia ended up with the Norvin. David made contact with Keith Briddlestone who confirmed that the original RFM was cut up and later thrown a way. Keith also said the UFM and forks was sold in his local newspaper. An ever resourceful David placed an advert in MPH for the original UFM and found what was *claimed* to be the original UFM in the possession of another VOC member, Ted Croft of Hertford, UK. Once that UFM was in David's hands in Australia it was reunited with the original Black Shadow motor and a non-matching RFM that David had on hand. This rebuilt Shadow was seen again by at the Ballarat Speed trials that were part of the VOC International Rally, held in Australia in 2007. The rebuilt bike is still in Australia, having changed hands at least 2 more times.

As to the Norvin – well the Norvin frame and cycle gear – minus the Shadow engine from NRO 365 was acquired by a Vincent collector in Australia who subsequently fitted a Rapide motor to it. So it too has regained some of its former glory.



=====

Event Calendar

2017	
July 22	Tullochs Auctions in Tasmania Australia – includes TWO Vincent Rapides; more info at http://tullocks.hibid.com/auctions/current or www.tullochsauctions.com.au
July 30	Nabiac Motorcycle Swap Meet. At the National Motorcycle Museum, Clarkson St, Nabiac, Queensland
August 26-27	Antique Motorcycle Swap Meet; Bulli Showgrounds, Bulli NSA Australia. More info at www.amcaustralia.org
Sept 10	Gawler Swap Meet, Gawler South Australia. More info email swapmeet@gawlercarclub.com
Sept 10	Shepparton Swap Meet, Shepparton Showgrounds, Victoria
Sept 17	Central Coast Motorcycle Swap Meet at Doyalson, Queensland. Contact Alan on +61 2 4396 7187
October 1	Motorcycle ONLY Swap Meet. Balhannah Oval, Balhannah, South Australia
October 13-16	Vincent New Zealand Riders Rally in Waipukurau, NZ. Contact Kevin Coombs for more info; email theshifters@yahoo.com
October 15	Longford Swap Meet, Longford Tasmania.
Nov 18-19	Bendigo Swap Meet, Bendigo Victoria. Email bendigowap@impulse.net.au
2018	
March 23-24	NZ National Vincent Annual Rally at Waikotomo NZ. email thmotorcycles@xtra.co.nz for details
August 27-31	Australian National VOC Rally, to be held at the Maroochy River Resort in Queensland. Contact kevinfowler2@bigpond.com for more info
2019	
June 3 - 19	VOC International Rally; Belgium and Austria. More info to follow also see MPH

One of a Team

An Enthusiast Who Decided to Work in the Vincent H.R.D. Motor Cycle Factory Describes his Impressions

By Ken Craven

The original of this item, published in The Motor Cycle, December 16 1948, was too damaged for photographic reproduction. OVR has retyped the text and done its best with the photos.

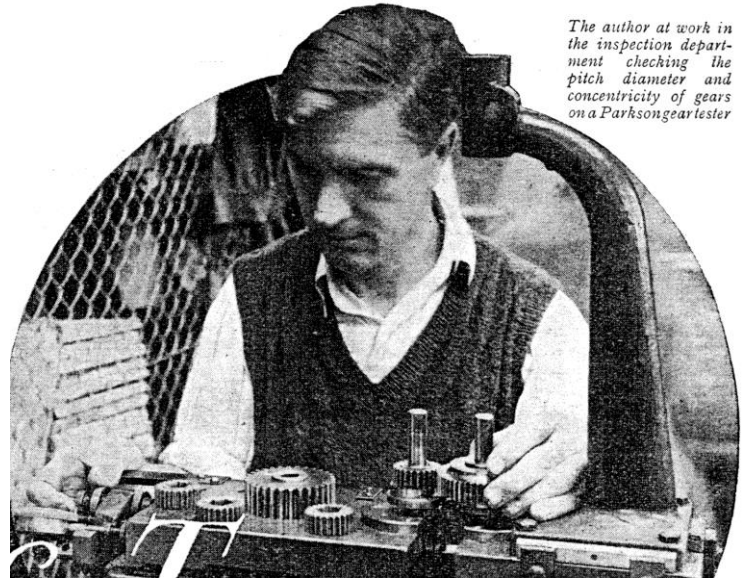
AFTER many years of engineering, in various capacities, I decided to take the plunge and apply for work in a motor cycle factory. There, by all rights, I should find contentment, helping to manufacture a product which was of real interest to me. Let me say at the start that whatever cautious hopes I possessed have been more than fulfilled. It is a factory of high efficiency where most of us, I think, find that work is something more than a dull necessity.

At the Vincent H.R.D. works the machine shop manager's office is built up a foot or so higher than the factory floor, and from the windows one can survey the whole set-up. While waiting there for my interview I passed the time by looking out at the array of up-to-date machinery set out in a spacious factory where there was plenty of room to walk and move freely. The scene was blissfully clean and orderly, with materials and parts stacked in neat piles. Although a lot of activity was going on, there was no indication of fluster or commotion. Every single person appeared to be concentrating on something, yet there was no sign of an overseer laying down the law or trying to look active by flapping a piece of paper. My impression was of an almost effortless and synchronized flow of production.

Most people, I should imagine, feel about as uncomfortable as I do when starting a new job. But the charge hand who showed me to the centre lathe put me at ease right away. "You'll be all right here," he said. "Nobody will bother you if you do a reasonable day's work. I haven't time to show you the ropes just now, but if you want any help, just ask any of the chaps. They're a pretty good crowd."

From my lathe I could see the rest of the turning machinery, which is grouped together in about one quarter of the shop. There are several automatic lathes served by one attendant, whose job is to keep them fed with bar material. Then there are two rows of large-capacity capstans (or turret lathes) each with their boxes or piles of finished work alongside. Collectively, this equipment has a prodigious output, and sometimes a run of a week or so with one machine produces enough parts for many months' production.

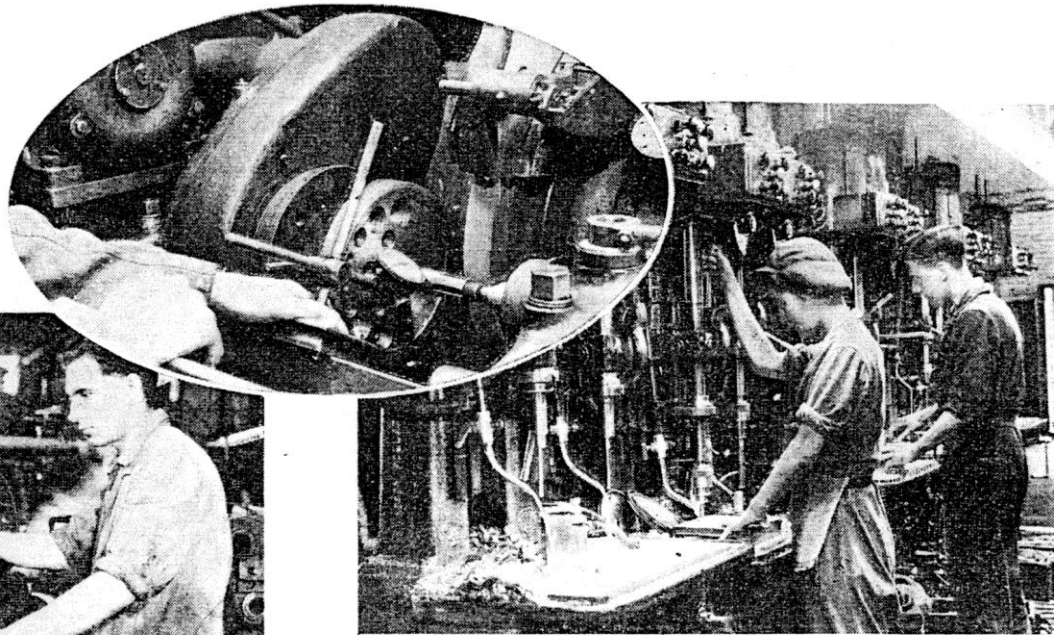
In other circumstances the two skilled setters would be breathless dealing with the setting and day-to-day adjustments and tool sharpening. Their work is not arduous, however, as the plan for machine setting is the best that I have met, and seems to me so logical and trouble-saving that I am surprised it is not the general practice in engineering shops. When, in the first instance, a machine is set to run a part, all the tool bits and holders are numbered and a written description (together with illustrations), is recorded. Although months may elapse between runs, as soon as a part is required the same tool bits are available as well as the detailed plan for setting.



The author at work in the inspection department checking the pitch diameter and concentricity of gears on a Parkson gear tester

The setters are also spared a good deal of time because the operators of the machines are usually capable of dealing with the tool sharpening and any readjustment that may be necessary. Machine minding, which so often is regarded as an unskilled and dead-end job, is not so here. Workers are encouraged and instructed to do what they can for themselves and are given opportunities for advancement.

Right: The flywheels are ground true to the mainshaft after assembly to provide accurate location for crankpin boring. The operator is checking that the shaft is running dead true



Above: A battery of two-spindle Pollard drills. The girl is using one spindle to drill, and the other to ream holes in the brake cover plates

Left: Due to a raised boss to house an oil seal, the face of the chaincase cover cannot be milled straight across. It is therefore mounted on a circular table and revolved under the cutter

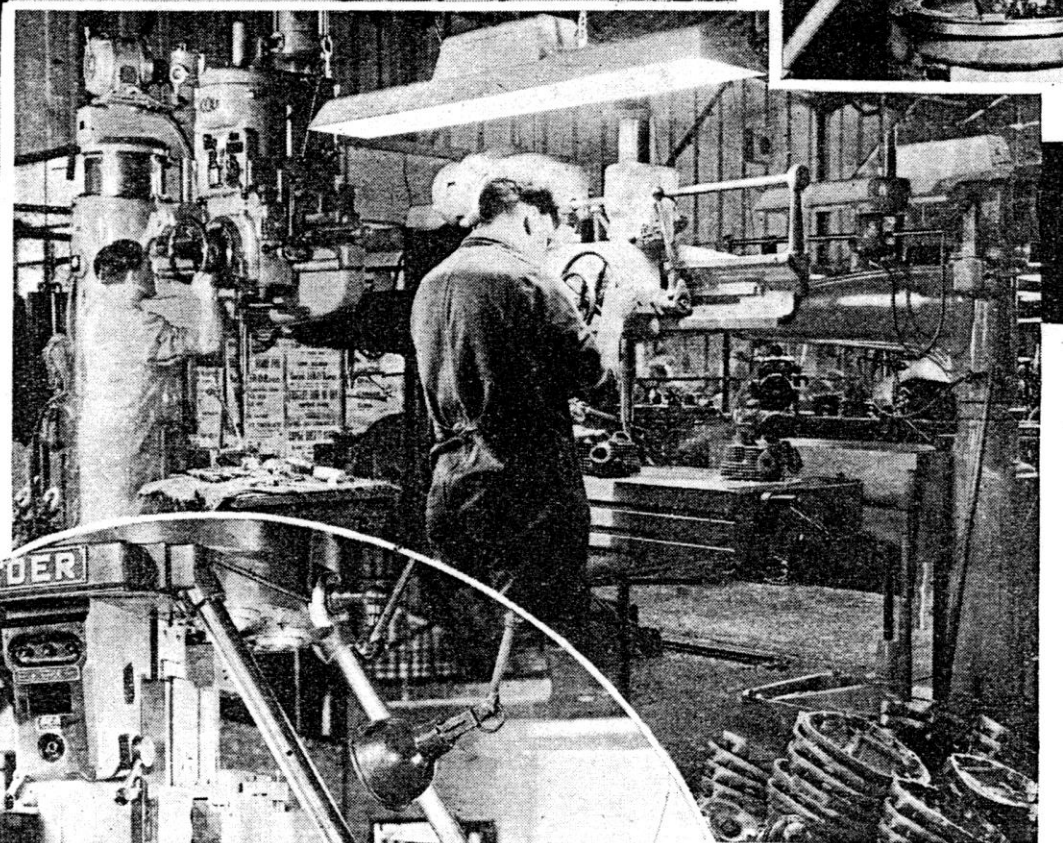
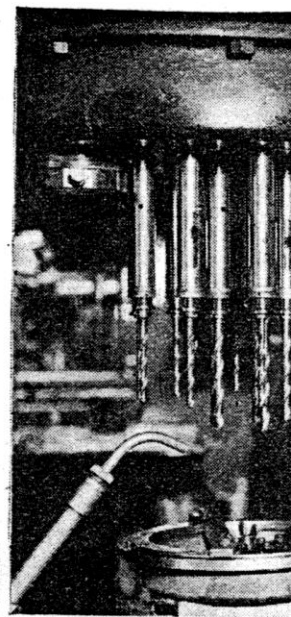
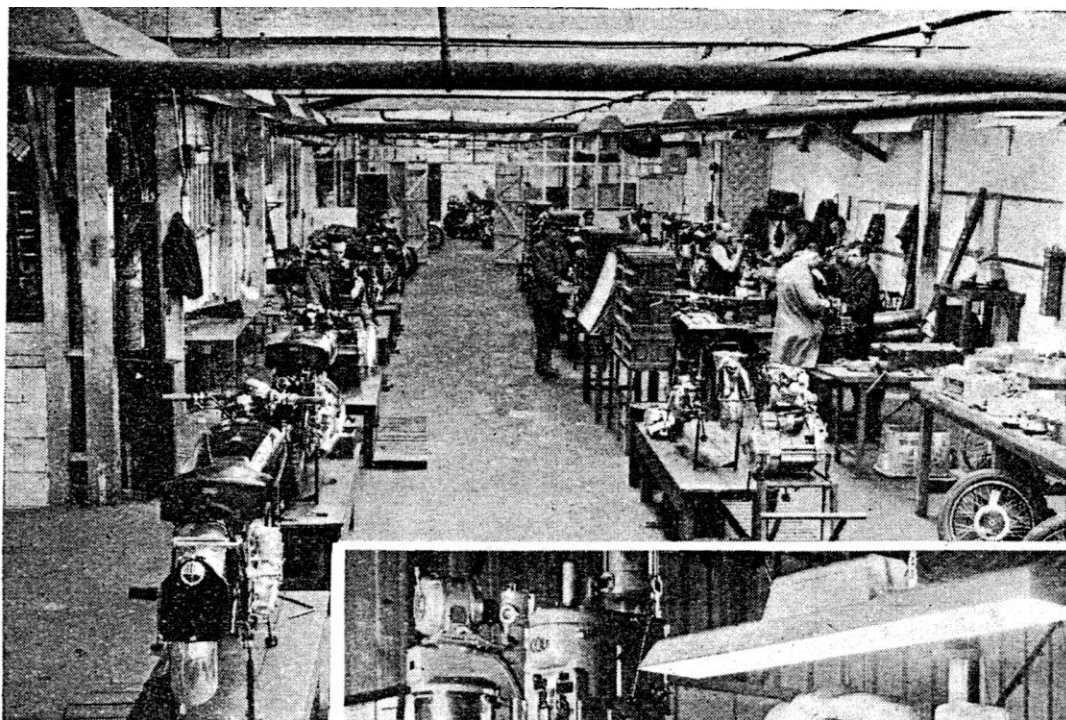
A vertical automatic of substantial dimensions, machines such parts as flywheels and clutch housings at about eight times the speed that the work could be done on centre lathes. The machine is fascinating and I find it impossible to pass by without pausing to watch. There are six large chucks mounted horizontally on a circular table. Five of the chucks are revolving and each component—one per chuck—is undergoing one of a series of operations. Meanwhile, the sixth chuck is stationary for unloading and reloading. Then, after from 2 to 3 minutes, the whole table moves round one notch and another part emerges completely machined.

A streamlined, horizontal automatic where the chucks whirr, illuminated behind glass panels, deals with smaller parts with the same efficiency. But it is the gear-cutting machines that strike me as coming the nearest to production perfection. A setter-operator attending to two semi-automatic lathes machines the forgings ready for the tooth cutting. A woman machine-minder loads the four auto-gear-cutters which together turn out from 120 to 200 gears or sprockets each day.

The grinding section is lavishly equipped. Most of the working parts which go into the model, after being turned or shaped, are heat hardened and must be ground afterwards to overcome any distortion that may have taken place. In addition, grinding is also the best method for producing an accurate and fine finish.

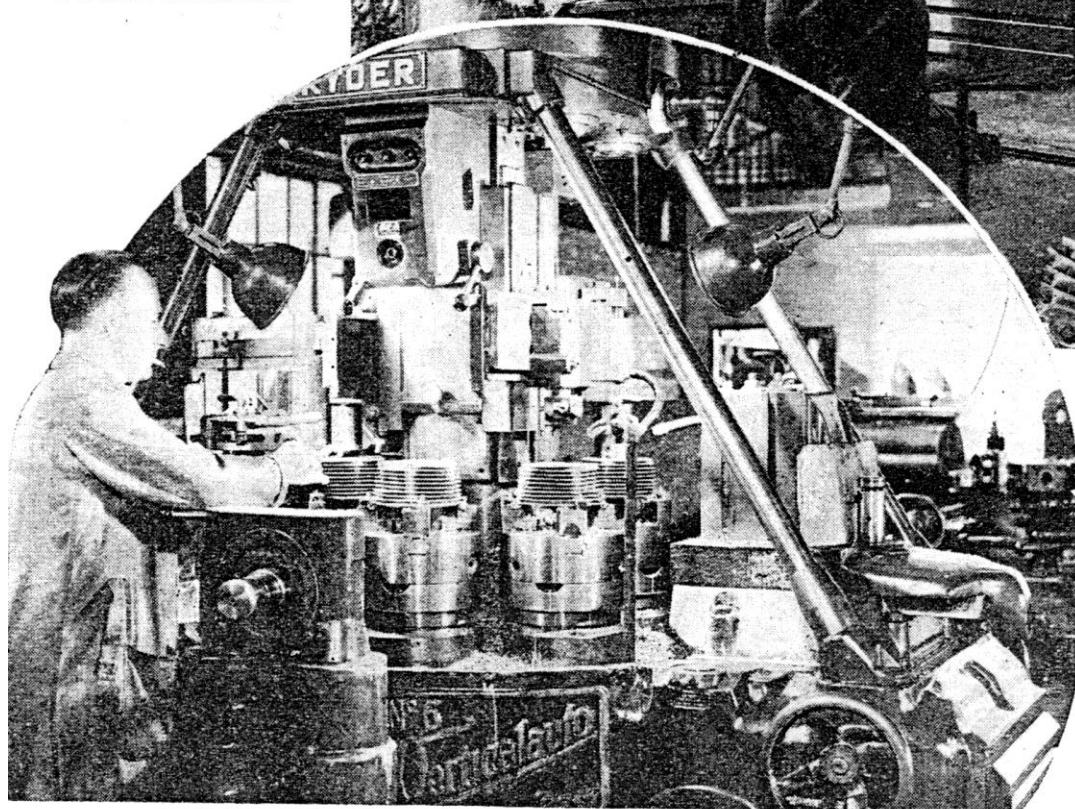
Split thou. limits are imposed on many of the parts finished by grinding, and my own experiences in the department taught me that to produce components correct to two ten-thousandths of an inch requires care and experience even when the equipment is the best available. It is simple enough to fix the part between the two centres; a lever is then pressed; the part revolves and the whole carriage moves slowly forward on to the grinding wheel, which is spinning round with a surface speed of 80 m.p.h. The sparks fly through the torrent of liquid coolant and slowly die away as the stop on the automatic feed comes into operation.

The part is then removed and pressed between the feelers of a clock gauge, when the needle should flicker within a tenth thou. or so of true size.



Machines on the line

Right: A battery of four Archdale radial drills. The large one is drilling the cylinder head rocker tunnels. On these radial machines the work is fixed and the drilling head is swung into position to drill the various holes



Left: This Ryder Verticalauto bores the cylinder jacket, faces both ends and chamfers in about two minutes. A brake drum is machined in the same time. Mr. George Barber, seen setting and operating this machine, achieved considerable success at "The Motor Cycle's" Clubman's Day events at Brooklands before the war

Sensitive to Temperature

So far so good, but it is not quite so foolproof as all that. Not only is there wear of the abrasive wheel, but the apparatus, with its bulk of metal, is sensitive to changes in temperature—and its own motors create heat—which cause expansion or contraction. An experienced operator will anticipate variations and make readjustments before valuable material is lost through being ground undersize.

No, these machines are not foolproof, and my own endeavours with one of the surface grinders is likely to become legendary. The piece to be ground was small and did not hold too well on the plate of the magnetic chuck. I was in a hurry and the sparks really flew. Cronk ! There was a jagged hole in the window of the chief inspector's office. The lean features of that gentleman peered out.

" Missed me! " he said dryly.

To my dismay, he was followed out by the manager, and I had visions of being outside in the rain.

" A poor shot ! " he said as he peered at me over his glasses, and added with some severity. "But fit a screen on that machine before you use it again."

The internal grinding and honing of bores is done in a series of operations through a number of specialized machines. To make production easier a tolerance is allowed of $\frac{1}{2}$ thou either way on big-ends and cylinder sleeves, but these are then graded to size (!) to be paired with correspondingly assorted mating parts. The honing stones are automatically trimmed by a diamond after each part is completed. This, of course, results in the stone losing a fraction of its diameter, and the controls of the machine are ingeniously adjusted each time, automatically, to compensate for the decreased size of the stone.

The first thing expected of every operator is that he or she should be conversant with all types of measuring equipment and to apply all their diligence to seeing that the job is right. An abundant supply of every type of device for measuring exists—from set gauges to dial mikes, verniers and depth mikes. The instruments are taken to the machine where the job is being run, and it is up to the operator to inspect every part himself, and to sort out doubtful or scrap components.

This is not to say that the inspectors are any the less alert; they spend most of their time on the floor working their way from machine to machine. After the double check by operator and inspector, the more vital parts go to the view room for final scrutiny. Here they can be surveyed on a comparator, the dial of which registers to 10th part of a thou. In this department there is just about everything needed to measure literally to microscopic sizes. Two hardometers are installed for testing the surface hardening of parts; this is a necessary check when items have been ground after hardening. A diamond-pointed plunger is brought to bear on the surface and instruments register the depth of penetration.

Below : Every hardened part used by the firm undergoes careful checking on these machines. Here gear box pinions are being tested



Drilling and Tapping

Perhaps the busiest section of the shop is the one dealing with drilling and tapping, for there must be a thousand or more of these operations for each motor cycle produced. In common with the rest of the factory, the department is equipped with batteries of modern units. Several small bench drills which can exceed 6,000 revs per minute are available for light work.

The multiple drills, two rows of them, are designed to be set-up in series for drilling up to six to eight holes of different sizes or depths which may be required in one component. The operator simply slides the jig along the table from spindle to spindle. The heavier work, such as cast crankcase parts, is dealt with by massive installations which remind me of the gantry type of crane. The great overhanging arm which supports the power unit and spindle, swivels on a pillar 18 inches in diameter. These machines can be fitted with quick-release chucks so that drills can be changed in a flash which the chuck is rotating.



Two multiple spindle apparatus tower up nearly ten feet in height. On one of these the cluster of drills bores fifteen holes simultaneously through the brake drum and spoke flange in less than half a minute.

The drills, together with the nearby milling machines, rely on jigs and fixtures to turn out rapid and accurate work. One half of the crankcase has more than fifty holes of various depths and diameters and the distance between centres has to be correct within 0.001 inch.

The tool room where the jigs and special tools are made is equipped with the usual lathes, grinder, shaper and other orthodox machinery. In addition, there are two elaborate installations with a host of uses. One of these is a universal miller with almost as many knobs as an aircraft cockpit. The collet for holding the milling cutters can be fixed in almost any position, while the table can move in all directions, mechanically, and at variable speeds. Added to its normal function of planning and shaping it can cut splines and gears. By fitting a chuck and using drills any number of holes can be drilled in a plate accurate to within 0.001 inch between Centres without resorting to rule and eye marking off. This is all done through the controls which are graduated in decimals down to the thou.

The second installation, several tons of elaborate mechanism, is a horizontal borer, used for cutting holes in jigs. A tool holder is attached to a slide on the face-plate and the extent to which it is off-set determines the dimension of the radius. The boring head moves up or down, while the carriage, to which the plate to be bored is attached, moves transversely. Again, by use of the vernier graduated controls, holes can be located with an accuracy impossible to achieve by manual methods. Jigs and tools must not only turn out precise work but must be easy to manipulate and quick to reload. Every single operation which is required in the production of every part is recorded on the operation schedules, down to such items as " Remove burrs, file." All methods are under constant review for simplification or improving the quality of workmanship. The tool-room staff is kept busy modifying or producing new and better jigs and equipment. The drive for ever-increasing efficiency is relentless.

The unspectacular work of the co-ordinating and auxiliary departments—progress, stores, supply, and so on—blends in so smoothly as to be taken for granted. But it is they who contribute so much to the streamlined working in the factory by seeing that the supply of materials and the flow of parts from one operation to the next is never delayed.

Sensible Organization

At the tool stores nearly everything needed for production is obtained over the one counter—whether it be a file handle, chuck, jig, or blue-print. This is sensible organization, since in all too many factories one has to tour the entire shop, meeting with red tape and impediments, in order to collect everything which is required.



To my mind, it is the simple and common sense practices that have contributed to high efficiency as much as the excellent equipment. The mounting of drawings and schedules on stiff board so that they can be propped up for easy reference; and the provision of air lines so that machines and parts can be blown clear of swarf are examples of the thought given to details.

I came to the Vincent H.R.D. factory to learn, and from the technical viewpoint I could not have done better. But I have also learned something of co-operation. The sort of good fellowship that one finds on the road is to be found here where the machines are made. It is, above all, a happy community.

As I work at my bench in the view room I look back at my former post as a works manager without any regrets. My successor is welcome to the honour. I have found a job that suits me—and that is worth a lot of glory.

Vincent Frame Suffixes

Well I don't know about you lot but I struggle to remember most things these days – some would say especially speed limits, but that is a separate topic.

In my case the Frame numbers on my Comet end with a “\C” . No its not a mistake, it has a back slash and NOT a virgule.

Most of the time the Stevenage factory used a virgule (or forward slash) as the separator though occasionally the stamps were inadvertently rotated resulting in a back slash. Yet another Vincent quirk.



So what does this “C” mean?

"C" = metric tapered rollers,

"D"= ball and roller retained by circlip,

"E"= ball and roller retained by screwed ring and split pin.

Source; "Richardson"

There is also:

/A metric taper rollers FRONT wheel only

/B metric taper rollers REAR wheel only

/C metric taper rollers in BOTH wheels

You can also get just B for Black Shadow and a combination of B/C etc.

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 advertisement. OVR will NOT be providing any editorial or corrections. 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.

For sale.

Craven Panniers and small top box. Offers around A\$400. *Does not include bike or rack.* These look like the original fittings to a 1968-71 Triumph Saint (NSW Police bike). Would come up nice when painted black. Located in Sydney, Australia. Contact me if interested. alynvincent@mac.com



For Sale.

My Feet Forward machine featuring Difazio Hub Centre Steering, fantastic front brake, cast iron disc's & racing AP callipers, full weather protection & top box. Vincent series D type centre stand & side stand. Manufactured 30 years ago with no problems with chassis & carrying full Victoria rego. Honda FT 500 engine, rear wheel & wiring loom & of course electric start. Haggling starts at A\$13,000.00 for a completely different machine. If you collect bikes this is one for your stable! Located in Victoria, Australia. Email Kenneth_butler@bigpond.com for more info.

Service Providers

The Service Providers listed have been used with a degree of satisfaction by OVR readers in the past. Just because they are listed does not imply an endorsement of them by OVR. Service providers are not charged a fee for this service nor can service providers themselves request that their information be included, though they may request that an entry referring to them be removed.

Spares:

V3 Products, Australia: (aka Neal Videan) has an extensive range of top quality Vincent Spares including multiplate clutches for twins, oil leak eliminator kits, socket head tappet adjusters, paper element oil filters and lots lots more. Ships worldwide. Email for a price list to nvidean@optusnet.com.au

Coventry Spares Ltd, USA: Fantastic service and deep product knowledge plus extensive range of excellent Vincent Spares and tools. Ships Worldwide. See website for more information <http://www.thevincentparts.com>

Conway Motors Ltd, UK: Anti-Sumping Valves, Comet Multi-Plate clutch conversions for Comets plus an extensive range of excellent 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>.

Terry Prince Classic Motorbikes, Australia: Specialises in restoration, manufacture of new parts, and the development and manufacture of high performance components for Vincent motor cycles. For more information visit the web site [Click Here](#) or telephone +61 2 4568 2208

Fastline Spokes, based in Broadford, Victoria, can supply Australian made spokes for just about any bike. Owner Bruce Lotherington manufactures spokes to order with a turn around time of less than 1 week. For more info see www.fastlinespokes.com.au or phone (+61) 0411 844 169

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

Paul Goff, UK: A massive range of electrical spares and replacements including 6 and 12V quartz Halogen bulbs, LED lamps, solid state voltage regulators and lots lots more. Ships Worldwide. PayPal accepted. See Paul's website for more information www.norbsa02.freeuk.com

François Grosset, France: Electric starter for Vincent twin, electronic ignitions for single and twin, complete unit to replace magneto; or any ignition system, includes the drive gear. For more info email pontricoul@gmail.com

VMS, Holland: 2x2 leading shoe brake kits for Vincents; a high quality 30mm wide four leading shoe system. For more info email to vspeet@vsmmetaal.nl

Nuts n Bolts:

Acme Stainless Steel, UK: All stainless steel fasteners are machined to original samples supplied by customers and clubs over the years to enable us to keep your machine looking authentic and rust free! Ships Worldwide. More info at their web site www.acmestainless.co.uk

Classic Fasteners, 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 Products (see entry under Spares above) also stocks a large range of Vincent specific nuts n bolts.

Keables, Australia: The original nut n bolt specialists who are able to supply just about anything with threads and bits to match such as taps n dies. Recently have relocated to 11 Braid St, West Footscray, Vic. Ph 03 9321 6400. Web site www.keables.com.au

Restoration Services:

Steve Barnett, Australia. Master coachbuilder and fuel tank creator who does incredible workmanship; located in Harcourt, Victoria. Ph +61 3 5474 2864, email steviemoto@hotmail.com

Ken Phelps, Australia – Qualified aircraft engineer and builder and daily rider of Norvins for over 30 years, who has the skill and experience to carry out overhauls, rebuilds, general repairs and maintenance to Vincent HRD motorcycles. Full machine shop facilities enabling complete engine and chassis rebuilds, Painting, wiring, polishing, aluminium welding and wheel building. Ken Phelps Phone: (61+) 0351760809 E-mail: ogrilp400@hotmail.com . Located in Traralgon, Victoria, Australia

Outer Cycles, Australia: Jim Browhly is a master craftsman who manufactures bespoke motorcycle exhaust systems for classic bikes, no job is beyond his capability, so if you do need a new system that will be made to your precise requirements, give Jim a call, telephone 03 9761 9217.

Grant White – Motor Trimmer, Australia: Specialising in Vintage and Classic Cars and Motorcycles. Located in Viewbank, Victoria. ph 03 9458 3479 or email grantwhite11@bigpond.com

Ace Classics Australia is a Torquay Vic. based Restoration business specialising only in British Classic and Vintage Motorcycles. Complementing this service, they provide in-house Vapour Blasting, Electrical Repairs and Upgrades, Magneto and Dynamo Restoration plus Servicing and Repairs to all pre-1975 British Motorcycles. They are also the Australian Distributor and Stockist for Alton Generators and Electric Starters. Phone on 0418350350; or email alan@aceclassics.com.au . Their Web page is www.aceclassics.com.au

General Services :

Peter Scott Motorcycles, Australia: Top quality magneto and dynamo services, from simple repairs to complete restorations plus a comprehensive range of associated spares. Provides hi-output coil rewinds with a 5 year warranty. For more info contact Peter on (02) 9624 1262 or email qualmag@optusnet.com.au

Ringwood Speedometer Service, Australia: Experts in the repair and restoration of all motorcycle, automotive and marine instruments. Smiths cronometric specialists. Telephone (03) 9874 2260

Rays Custom Spray Painting, Australia: Ray Drever is skilled in painting bike tanks and frames. Also a craftsman in flame work and airbrushing. Located near Geelong; contact Ray on 03 5251 2458 or 0402 988 284.

Dyson M/C Engineering, Australia: Wheel building, Crank rebuilds, Bead blasting, Rebores & Engine Rebuilds and more. Located at 12 Chris Crt., Hillside, Victoria. Phone 0400 817 017

Piu Welding, Australia: Frank Piu is a master welding engineer who works with Aluminium as well as steel. No job to small. Has been recommended by multiple OVR readers. Phone 03 9878 2337

MotorCycle Fairings, Australia: This crew are are total professionals when it comes to painting. Expert service, quick turnaround and fair prices. <http://www.melbournemotorcyclefairings.com.au/>
Ph 03 9939 3344



ELOCETTE

CHURCHILL