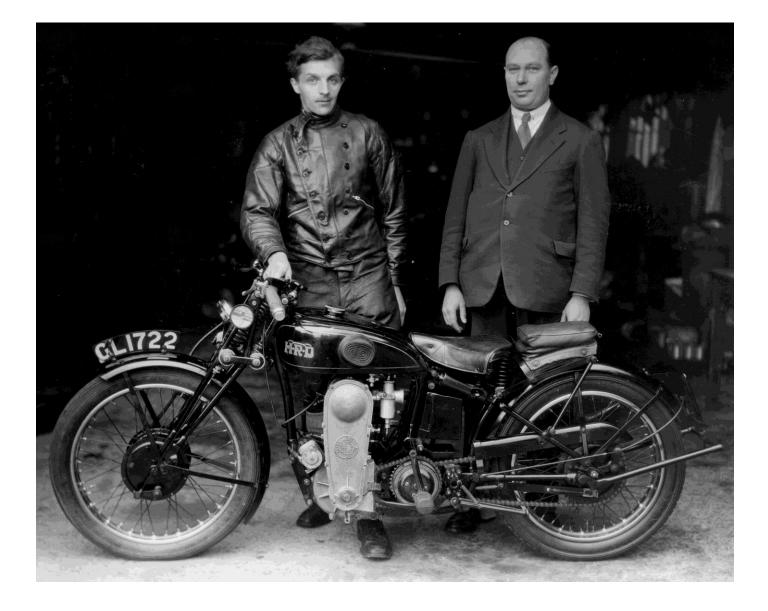


The Oz Vincent Review Edition #11, December 2014



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What's It All About?

Welcome to latest edition of The Oz Vincent Review, an independent, not for profit, *e*-zine that provides a forum and voice for all folks with an interest in Classic British Bikes and Vincent motorcycles in particular.

I encourage all readers to submit items on any related subject for inclusion; this could be ride reports, humorous or otherwise incidents, technical information, details of your bike(s) or even reprints of historical material. Given the electronic format of OVR there is little restriction of the inclusion of photographs and such like. This edition includes a number of reader contributions; don't be shy, you do not need to be a literary impresario – send me what you have and, only if needed, I will polish it for you.

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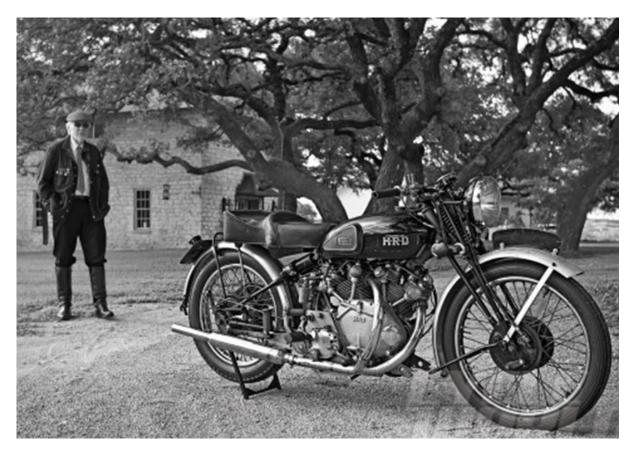
Melbourne, Australia. Email: <u>ozvinreview@gmail.com</u>

Front Cover: In recent times there has been much debate regarding the use (or otherwise) of the "Cross" rotary valve engine in a HRD motorcycle. This archive photo from 1934 and the reproduced article in this edition of OVR from the same period settles the matter – the engine was fitted into the frame by Mr R.C. Cross as part of an exercise to prove his engine design. So it's a one-off bitza, unrelated to the efforts of the Stevenage team! The picture shows the rider, Mr Milson and a proud Mr R.C. Cross, the inventor of the rotary valve head motor. Read more about the Cross Engine and the front cover bike inside this edition of OVR.



The first Series B Vincent Rapide and an exquisite HRD Rudge Python Sport.

By Peter Egan, first published in Cycleworld September 30, 2013



Herb Harris is an Austin lawyer who retired a few years ago to open a new business (Harris Vincent Gallery, Inc.), one that would allow him to concentrate on his favorite things in life, which are tracking down Vincents and/or restoring them.

Though many of the world's great Vincents—including the Rollie Free "bathing suit bike" of Bonneville record fame—have passed through his hands, Herb says he's not really a collector. He enjoys having the bikes for a few years and working on them, but feels no need to hang on to them in the long run. As is the case with so many of us, it's the hunt that matters. He's really more history detective than collector.

And, without Herb, it might have taken Sherlock Holmes himself to track down the big Series B Vincent engine that's nestled in the heart of the first bike we're looking at today. It's the very first Series B engine, introduced just after WWII. Long since separated from its original chassis and passed around for various factory experimental projects, it was discovered by Herb in an English eBay ad, and he's now returned it to a proper chassis—one it might have had when it was introduced to the English press in 1946—with an overlay of appropriate patina.

To explain where this all fits in the Big Scheme, perhaps we should do a quick little review of Vincent History.

Phil Vincent started building his own Vincent-HRD Singles with purchased engines (J.A.P., Villiers, Rudge, etc.) and his own stoutly triangulated frame designs. Frustration with some of these engines (J.A.P., mostly) drove him and his famous partner in crime, Australian engineer Phil Irving, to design their own big Singles, the Meteor and the hotter Comet.



These engines had a number of clever features, including high cams and rocker-arm fingers operating on collars at the center of the valve stems, which shortened the pushrods to lighten the valvetrain and reduce overall engine height. Valves were carried in two guides, with a gap between them for the rocker arm. In 1936, the Two Phils quite logically joined a pair of these cylinders at the hip and introduced the Series A Rapide, a fire-breathing 1000cc V-Twin, to an astonished motorcycle world.

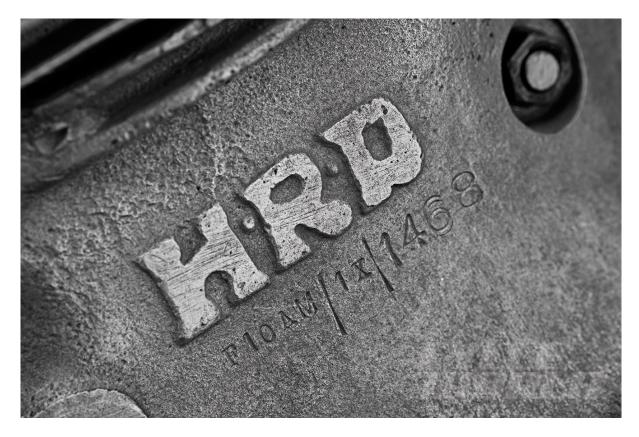
This fearsome object would easily top 100 mph, and it was soon dubbed "The Snarling Beast" by one of its test riders. Unfortunately, the press also dubbed it "The Plumber's Nightmare" because of all the arachnid-like external oil lines; critics further noted the clutch slipped because it was overwhelmed with all that torque and power.

At this point, after 78 were sold, WWII drew a merciful curtain upon the Rapide's shortcomings and Vincent went into war production, building things that exploded on purpose: artillery shells and land mines. During those dark years, Vincent and Irving plotted an improved post-war Rapide.

And here's where Herb's engine comes in. It's the very first works prototype engine, 1X, long believed to have been scrapped. And it almost was.

That first B-Series Rapide was much ridden and photographed by the press, who approved of its cleaned-up engine, whose external oil lines had been replaced by raised "veins" cast into the case covers. In place of the weak old proprietary clutch was a clever two-stage unit with lightly sprung discs operating a set of brake-shoe-like grabbers in a drum. The traditional diamond frame had also been eliminated by using ... no frame. The Brampton fork was simply attached to a sturdy oil tank bolted to the top of the cylinder heads, and the unique A-frame swingarm pivoted off the engine cases, with spring boxes almost hidden beneath the seat. What you had, essentially, was that schoolboy's dream: a big hairy engine with two wheels attached.

But once the adoring press finished with it, that prototype bike didn't get much in-house respect. The lads at the factory used it for bashing about town, and then the British military decided they needed a fast assault boat to attack enemy coastlines and had Vincent build 1X into a hot Lightning race-spec engine for testing. Nothing came of this, but the poor engine got its transmission band-sawed off and a new set of contemporary case numbers (468) tacked on to the existing number 1 (which led to some confusion later). Then, the beast was left to languish under a workbench.



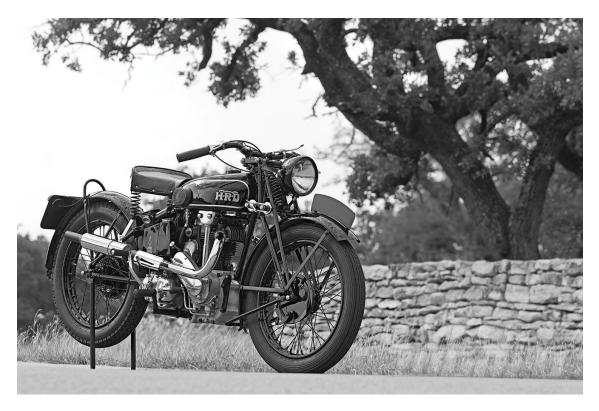
After that, the engine was sold off, installed in a later frame and used in various hillclimbers and racebikes—with a Norton gearbox bolted on. And this is how Herb found it in England, a bitsa Lightning-spec racebike with straight pipes and later Girdraulic fork. He thought it deserved to go back into an early Series B chassis, replicating as closely as possible the bike shown in those 1946 magazine photos. And that's what we have here. Not the first complete Series B Vincent, which has long since been parted out into the cosmos, but a proper setting for its original engine, now fully rebuilt, of course.



One ride on a Vincent reminds you why people put up with the expense and vintage eccentricities of these bikes—and why I sold everything to buy one of my own. They feel compact and light, with a low center of gravity, and the engine has a relaxed, almost liquid-smooth V-Twin gait and shuffle that make you want to motor down the road and off into infinity. It has great, easy torque, plenty of power and light, agile steering from the Brampton fork, while the rear suspension really works, soaking up bumps in a way that must have seemed unbelievably civilized.

Out of respect for the value of this bike—and my own cowardice and recently healed ribs—I didn't push it too hard in corners, but the general characteristics are intuitively natural turn-in and good stability in fast turns. Brakes? Better than almost anything from the era—and for about 20 years thereafter—but if you're headed into a blind downhill sweeper at 65 mph, you should probably know where the road goes in advance. Surprises are not entirely welcome.

When we finally put the Rapide away Herb showed us another of his finished project bikes, a 1932 HRD Python Sport, a 500cc Single with a four-valve Rudge engine—in hot "Ulster Tune" competition spec. If the Rapide was intended to have historic patina, this one was restored so perfectly you almost hate to stand too close.



ROLLING HISTORY: The 1932 HRD Python Sport features a four-valve 500cc Rudge Single, swept-back pipes and an Amal carb on its side.

This bike came at a pivotal point in Vincent history, as Phil Vincent had finally been convinced to abandon his unconventional early frame design, which was heavily triangulated and had an awkward frame tube slashing across the side of the engine. In its place came a more "normal" diamond frame, but still with his excellent rear suspension. At this time, he was also having trouble with J.A.P. (John A. Prestwich) engines and was trying out the more sophisticated Rudge Python unit. This period lasted only briefly, until Rudge quit supplying engines, and Vincent and Irving designed their own.

And the Rudge Python is a pretty exquisite engine. It has four valves located radially in a bronze (sometimes iron) head, dual exhaust ports that empty into a pair of gracefully swept-back Highgate "silencers" and an Amal carb with the slide body turned sideways for more tank clearance. (Well, why not? Should work.)



Brian Hale's Ride To Robe

By Bob Allen

"Ripper Robe, Ripper Ride"; that was the heading of the flyer I received, then the usual contents dates, times, accommodation and towards the bottom it said "Experience the joys of planning and preparing your "beast" for touring, just as the maker intended! Having always toured with just a spare pair of jocks hanging from the rear-view mirror and a toothbrush in with my tool bag I thought I may go a little civilized for this trip.

Having (much) earlier purchased a second-hand rack with an ancient pair of Craven Golden Arrows and the world's ugliest top box, I ordered 2 new Craven Comet panniers and a 25 litre Craven top box which duly arrived and I started to "experience the joys of planning and preparing". Well needless to say everything had to be fitted, removed refitted, then fitted again – still not perfect, removed – you get the drift! Parts had to be made, bolts, washers and screws sourced and finally there it was, the Touring Black Shadow from the flyer.

The next afternoon Vince Rogers arrived with another mate of mine, a person who thinks motorcycles are only ridden by patch holders and imbeciles but we forgave him because he drinks beer. Well he had not looked at the bike for more than a few minutes when he asks to sit on it? Certainty, help yourself I replied. CRASH!!

Vince and I picked up the bike and surveyed the damage – just a few scratches, not too bad. So we had a few beers to celebrate that and to forgive the non-believer in our midst.

9 am Friday November 28, 2014 and 2 Vincent's leave Frankston heading towards Sorrento to the Ferry; Vince Rogers having arrived the night before and after dinner at the Seagull Greek Restaurant and some more good red wines we hit the hay early for a next morning start.

The sun was out and it was 23°C as we pulled into the ferry terminal, paid our \$30 and road aboard – it was a perfect crossing, like a millpond. We stayed with the bikes just in case and drank a very good coffee. Disembarking at Queenscliff we headed straight off for Colac where we were to meet up with Brian Hale, Burger Drake, Wally Walsh, Chris Weir, Martyn Goodwin and Keith McCracken.

As we rolled into the service station the boys were finishing off their fuel fills – they had met early problems with Martyn's Comet in Ballarat which Bruce Armfield and Eric Foster had picked up and trailered to Burgers place in Ballarat; Burger then lent Martyn his Triumph Tiger 650 twin which performed flawlessly during the event. Keith's bike also dropped out early – before he even left home – with carburettor problems so he was on his 1949 BSA 500 twin – a very pretty bike.

After a chat and fuel we saddled up and headed towards Lavers Hill on some of the best roads I have ridden on. After lunch at Lavers Hill, where we had difficulty extracting Vince from the café as he raved about the quality of the food, we followed the Great Ocean Road to Port Campbell for a break, have on-route passed the Apostles where at least 100 people were lined up to visit the site – they were Asian tourists armed with erectile lensed cameras and were photographing anything in sight including sheep, cows and alpacas! At Port Campbell we shot some Vincent pictures ourselves before heading back along the road and on to our overnight accommodation in Warrnambool.



It had been a 252 mile day. Dinner was at Maceys Bistro where we met up with Burgers son and daughter-in-law, Michael and Jennie. The meals were excellent and we returned to our motel for post-dinner drinks on the balcony till the owner turned the lights off at midnight and then quickly apologised for the inconvenience – but we got the message and headed off to bed.

Breakfast the next morning was at McDonalds then we fired up the bikes and headed towards Portland. The countryside was very green for the time of the year and as you rode along there were amazing ocean views everywhere – just being enjoyed by the cows grazing in the paddocks – those views would be worth squillions in Melbourne! We continued on to Nelson for coffee where, as we drank it, a young lass about 12 YO started to climb 70 foot Norfolk Pine tree – within 5 minutes she was at the very top and all this in her best skirt – we gave her a round of applause then remounted the bikes and headed via Mount Gambier to Millicent for a very nice lunch in their local community centre.

19 miles on we detoured to Beachport on Cape Martin where we stopped and had ice creams and the locals scrutinised our bikes – of course one local knew 'someone' that had a heap of bikes stashed away in a shed, but Robe was only a further 30 miles further on so with no further ado we were back on the coarse road winding along watching the water until Robe came into view. It had been a 236 mile day. We fuelled up the bikes and proceeded down the mail street to see Ken Phelps and Jerrys bikes in front of a café but no sign of them so we proceeded on to our Beachfront quarters – the Robe Hotel and the Malelucla Motel. We had a private bike park at the rear of the hotel and after checking in everyone did some basic maintenance on their bikes but all gravitated towards Vince Rogers Norvin which was having Open Carburettor Surgery being performed on it for Stick Slide Syndrome by Doctor Rogers himself. The beers were flowing by now and Vince certainly received heaps of advice on how to do what he was doing.

Then it was time to shower and dress for the formal dinner. I had forgotten to pack my Tuxedo but a black t-shirt sufficed; Phelps and Jerry had arrived in the dining room and it was soon a very social affair; some lovely Coonawarra Reds graced the table and the meals were fabulous with platters of prawn skewers with spicy chorizo, grilled octopus, buffalo mozzarella, meats, dips and sourdough breads. Another late night!



We woke around 7am, showered and headed out on the bikes for bacon and eggs on Main Street; Phelpsie and Jerry rode past shaking their heads – they were already heading off on their way home to Traralgon, non-stop – it would be a 700 mile day for those two – you just can't keep those blokes out of the saddle!



So here we are – Day 3 and no problems, great roads, 23° to 25°C, clear skies and sunshine. Heading out of Robe toward Penola in the Coonawarra we stopped to ask directions from a local in his front yard when Burger says "I know you!" and the bloke says he was Burgers mail man in Warrnambool of years, but has now retired. After that we rode on to Casterton, the "Home of the Kelpie", through Coleraine and on to Cavendish where we stop for lunch and some more photos at the Bunyip Hotel where we are made very welcome – Great feed, great folks.

From Cavendish we headed off towards Halls Gap. It was on a long fast straight when the BSA suddenly blew out a fog of white smoke and died. At the time Martyn was riding with Keith and the rest of us were some distance ahead. Blissfully unaware of the BSA problems we were waiting at a crossroad fo the 2 of them when this car pulls up and a lady asks if we are OK. Burger saunters over and assures here that all is well but that her voice sounds familiar; he then remembers her name and family name as well though he had not seen her for 45 years. I just walked away, can't even remember my own name some days, especially after a beer or two! That Burger is amazing – anyway RACV Total Care said they were on the way for the BSA so sans Keith, we headed on. The roads here were well made and surfaced but sharply undulating – it was like riding waves. Between here and Halls Gap in the Grampians we encountered 2 mobs of Emus, a snake, a turtle and a 6 foot long goanna which just got off the road in time not to become road kill.

Once in the Grampians National Park the roads were amazing and we were swinging through corners way faster than I would have expected very little traffic so you could use up the road. We pulled into our accommodation at Halls gap with all 3 Black Shadows all able to see the bottoms of their fuel tanks. A 225 mile day! Chris and I made it to the local service station on fumes – Wally's bike rand completely out as he hit the servo driveway – talk about cutting it fine! It was very warm by the time we got back to the accommodation so Vince, Wally and Martyn hit the pool while the rest of us walked over the road to the air conditioned pub. That's the way I like my Grampians view – cold beer and air conditioning – looking at the view through a hotels panoramic window. It was an early night and after dinner at the pub we retired for the night.

Up at 7 am we headed off to Ararat, some 28 miles away, for breakfast. The ride was great and the countryside was now all farms and hay. Fantastic breakfast in Ararat then off down the Western Highway where Burger and Martyn took the slip road into Ballarat. We continued on and had a final fuel up at Bachus Marsh where Chris Weir left us. As we entered the outskirts of Melbourne Brian and Wally took the Western Ring Road to visit Bob Sattely and Vince and I split up at the Bolte Bridge.



I was home in Frankston by 2pm. A 220 mile day. Changed the oil and filter, cleaned the bike and that was it for another year.

Everyone agreed that it was the most fun you could have with your clothes on and all said they will be back for next year. Massive thanks to Brian Hale for arranging this, the second Vincent Riders Dinner – long may they continue.

Four Days; 933 Miles; The Diners;

Keith McCracken, Wally Walsh, Martyn Goodwin, Brian Hale, Bob Allen, Burger Drake, Ken Phelps, Jerry, Chris Weir, Vince Rogers

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 <u>OzVinReview@Gmail.com</u>.

December 7 Gets better every year	Bendigo Historic Motorcycle Club, Motorcycle specific Swap Meet @ Llanelly. Camp on site O/Nite on Dec 6 th . More info call Elaine 03 5475 1668
January 8, 2015	Bonhams Las Vegas Motorcycle Auction at Bally's Hotel & Casino on The Strip. More information can be found at <u>Bonhams.com/Vegas</u> .
January 17-18 Let your hair down	High Speed Regularity @ Wakefield Park, Goulburn, NSW. Here is the chance to get your Classic Bike on a race track at any speed you like. Real casual affair. A club licence can be issued on the day. Contact Dave Large on 03- 97441111 or bjdj79@icloud if interested in being there or taking part.
January 18	RACV Great Australian Rally, Melbourne to Mornington – for all vehicles and bikes over 25 years old. Contact <u>colin.brown@hotkey.com.au</u> for additional information
February 6 - 8	Nulli Secundus Rally, Nug-Nug, Vic., Australia.
February 8	All British Day, Echungra, South Australia. More info at <u>www.allbritishday.com</u>
February 20-22	New Zealand National Motorcycle Rally @ Cromwell. contact <u>amandastuf@vodaphone.co.nz</u> for more info
March 8 <i>Massive</i>	Yarra Glen Swap Meet, Yarra Glen Racecourse, Victoria. Gates open @ 8am.
April 25-26 Simply Outstanding	All British Rally at Newstead, Vic., Australia. More info at <u>www.bsa.asn.au</u>
May 9	Vintage Car Club of New Zealand: Waimea Motor Cycle Rally; contact <u>amandastuf@vodaphone.co.nz</u> for more info
September 6 – 20	VOC International Rally, Italy; for VOC members only.
Remember	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 NewsFlash" service and also the "Events Calendar" column in OVR. Just drop the editor a line at <u>OzVinReview@Gmail.com</u> .

Wanted! Your ideas about format or content of OVR. What about submitting your constructive suggestions or better still your contributions in the form of Ride Reports, Original Stories, Your Technical Experiences and such like to the OVR editor ? You do not need to be a literary wizard as the editor will, only if essential, tidy things up for you.

Likewise, if you are thinking of arranging any rides or events, again drop a line with details to the editor who can then publicise them through OVR newsflashes and/or entry in the "Event Calendar" section of OVR.

Contact the editor by email <u>OzVinReview@gmail.com</u>.

This article is reproduced "as is" from "Motor Cycling" April 28 1937. Enjoy!

Reprinted from "Motor Cycling," April 28, 1937



a wonderful power output.) Mr. Cross, our tester and three of Mr. Cross's assistants adjourned to a local piece of 1 in 4 with the three machines to carry out some demonstrations of top-gear pulling. The particular hill is known as Southstoke, near Bath, and has a narrow lane approaching it and a sharp left-hand hairpin at the top. This hill was climbed repeatedly in top gear with the 500 c.c. model, and it would even do it two up, but this necessitated slipping the clutch just a triffe going round the hairpin. The engine showed no sign of pinking, and the only complaint was from the transmission, which snatched rather badly at times.

Flexibility

The 350 engine, which was fitted with a T.T. closeratio (our-speed gearbox and no kick-starter, was also ridden up this 1-in-4 hill in top gear just to show how flexible the engine was, and both demonstrations were most convincing. The 350 was fitted with a large bore T.T. carboretter and was definitely a fast motor and yet had all the docility of a 500 side-valve. Particularly was this noticeable when pulling away from a speed of 20 miles per hour or lower in top gear.

On a straight piece of road with a slight down-hill gradient the machine was ridden by our tester at speeds of well over 94 miles an hour, and in the reverse direction up the slope 90 m.p.h. was achieved. The only criticism it was possible to make concerns the position of the carburetter, which was so situated that unless the rider was very careful when pottering along.

Details of the Performances of a 250, a 350 and a 500 of Unusual Design

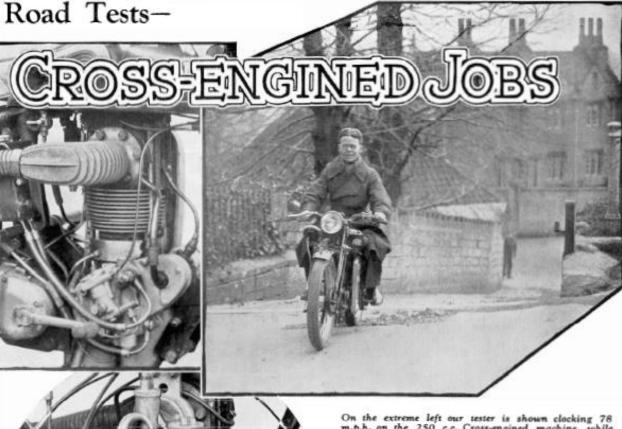
his knee would get in the way of the air intake and cause the engine to eight-stroke very badly—or even stop. This, of course, will not arise when the engine is put in the frame for which it is designed, the Rudge frame being used merely while the engine was being tried out.

These speeds were put up with the machine equipped with a silencer of Mr. Cross's own design, which, although very efficient, is claimed to cause no power loss or back pressure.

The 250 was then put through its paces; this had the same characteristics with regard to magnificent pulling power at low r.p.m., and yet on the same piece of road we clocked 78 m.p.h. on it, using No. 3 petrol.

We have remarked on the unusually fine power output at low r.p.m., but it must not be thought that the engines will not rev. At one period when riding the 350 the r.p.m. rose to over 8,000 in the intermediate gears.

A point upon which Mr. Cross has spent a great deal



of time is the avoidance of oil passing into the combustion chamber, and this is controlled most ingeniously, despite the fact that the supply to the valve is unusually great. A system of control valve loading is used to achieve this end, the rotary valve housing being divided so that it provides a resilient contact with the valve, which acts as a spacing member between the **two halves of the head. It will be seen**, therefore, that expansion of the valve under heat is automatically adjusted by the spring-loaded housing.

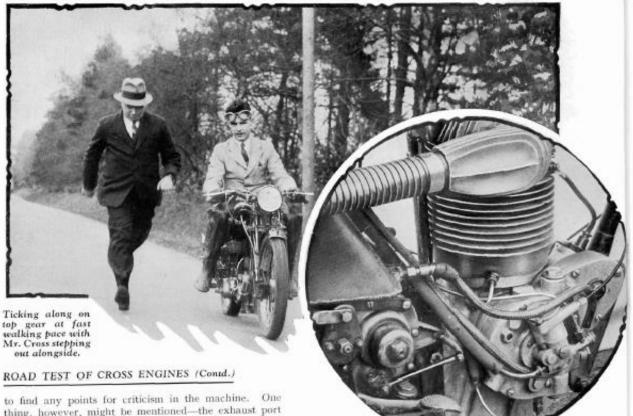
We tested the efficiency of this oil control by taking the 350 to the top of a steep hill about a mile and a On the extreme left our tester is shown clocking 78 m.p.h. on the 250 c.c. Cross-engined machine, while (above) he is seen surmounting a steep acclivity on the 500 c.c. job in top gear at a mere 15 m.p.h. The engine "close-ups" depict the 500 c.c. unit and, in circle below, the 250 c.c. engine.

quarter in length and coasting down to the bottom in gear and without giving the engine any bursts of throttle to clear the plug. When the bottom of the hill was reached, the engine fired immediately the throttle was opened, and it did not miss a beat on the subsequent getaway. It is doubtful whether many engines, particularly of the hot-stuff variety, could stand up to a test such as this.

We were fortunate in being able to persuade Mr. Cross to lend us the 500 machine for more than a week to enable us to carry out a more detailed test. It was explained to us that the engine was by no means a hot-stuff job. It had not been carefully balanced, and during its 15 months of strenuous life it had only been taken down once—and that six months previously. The plug was 15 months old as well.

The engine was fitted in a Vincent-H.R.D. frame, and the ensemble proved to be a revelation in motorcycles. Although we are concentrating on the engine, a word must be said for the cycle parts. The machine steered to a hair, it could be thrown round corners at high speeds, and indifferent surfaces did not affect the ease of control in the slightest. No doubt the spring frame was responsible for a lot of this, and, indeed, at Brooklands, where the concrete is definitely bad in patches, it proved the most comfortable machine we have ridden on the track.

It will be hard to make this report appear anything but a list of praises owing to the fact that it was difficult



to find any points for criticism in the machine. One thing, however, might be mentioned—the exhaust port is very close to the rider's leg, coming as it does straight out of the exhaust side of the engine and being led aft just beneath the saddle. In this position it had a somewhat disastrous effect on the tester's waders, but a light guard would have prevented this.

Starting was definitely a first-kick business, provided the machine was gently eased over compression once, or perhaps twice, when the carburetter had been flooded. Having no exhaust valve lifter it was found that after easing the piston over compression with the kick-starter there was a second but lighter resistance felt, and provided that a swinging kick was taken from this point in the piston's downward path the engine never once failed to deliver the goods.

87 m.p.h. in 28.5 secs.!

The acceleration was unusual; it will be seen from the report that its maximum of 87 m.p.h. was reached in 28.5 seconds, and this speaks for itself. It was not difficult to leave a black mark on the concrete if a sudden getaway from a standstill was in progress.

The engine seemed quite tireless, and when the road conditions permitted it could be held at 75 m.p.h. without any signs of drying up, and when it was necessary to drop down to a lower gear the engine would continue to turn happily at over 6,000 r.p.m. Naturally there was no valve clatter, and, indeed, the engine was outstandingly quiet. The only sound other than a faint whirring noise from the valve was the click of the driving chains, and even this disappeared when the engine was pulling smoothly: it was only noticeable, in actual fact, when an carly change was made into top gear at about 12 m.p.h. to 14 m.p.h.—the minimum non-snatch speed in this ratio being 18 m.p.h.

The off side of the 350 c.c. rotary-value engine showing the exhaust attachment and the manner in which the cylinder "sits-on" the Rudge crankcase.

A linerless aluminium cylinder barrel is used in all Cross engines, and special pistons and rings have been designed to be used with them, the result being that there is no trace of piston slap even when the engine is cold, and we were assured that it did no harm whatever to the engine to open it right up when starting out first thing in the morning.

An interesting feature was that the ignition control had very little usable range of movement. In fact, about $\frac{1}{2}$ in, was all that it could be retarded on the quadrant without stopping the engine. This was the only method of stopping the unit once it had been started, for when it was warmed up it would tick over smoothly and quietly with the throttle closed right down.

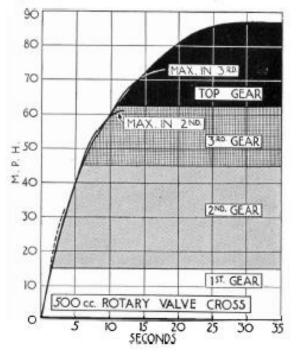
One of the most pleasing characteristics of this Cross engine, which we were assured was definitely of the touring type, was that, in spite of its really first-class all-round performance, it never once sounded offensive on the exhaust, and a great many people remarked that, far from being the high-performance model which it undoubtedly is, it sounded like a very woolly side valve. Mr. Cross can claim the credit for this, because the machine is fitted with one of his own design absorption silencers, and there is no doubt that with it fitted the utmost use can be made of the acceleration of the engine without any fear of complaint.

The 500 c.c. Cross was not an expensive model so far as petrol and oil are concerned. It would do 56 m.p.g. of fuel, and this at a fairly high cruising speed, and the oil consumption worked out at 1,250 miles to the gallon.

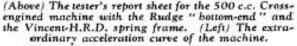
It must be borne in mind that by a special arrangement of pumps the oil delivered to the valve is in direct proportion to the speed of the engine, there being a junction box beneath the petrol tank so that the throttle slide and the oil pump are opened together. There is little doubt that the oil consumption could have been improved considerably had the machine had an easier life while it was in our hands, but it was used extensively for fast road going when conditions permitted the most to be made of its performance.

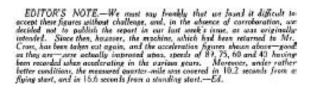
A certain amount of oil leakage was noticeable from behind the cylinder after some very strenuous miles at Brooklands, but this was not worthy of serious complaint, and is not really to be grumbled at, bearing in mind the very considerable mileage which the engine had already done since its one and only overhaul.

A Rudge T.T. Replica crankcase assembly has been used for this 500 Cross cylinder and head, and it appears to have stood up to the tremendous amount of work without any signs of feeling the strain, and bearing in mind that the compression ratio used in this engine is $10\frac{1}{2}$ to 1, this fact calls for no little praise.



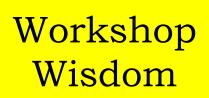






Speaking once more of the machine as a whole, it would be unfair to pass over the magnificent braking figures which we obtained at Brooklands when the concrete was slightly damp. The well-known Vincent-H.R.D. four-brake system was employed, and with all the stoppers working a distance of 29 feet was recorded to stop from 30 miles an hour, and only another three feet were necessary when using the front brake alone.

In conclusion, it must be said that during the whole time the machine was in our possession we never had any occasion to make any adjustment whatever to it, and it proved itself a genuine dual-character—high performance yet utterly docile—machine.





Alton AC Generator Testing Procedure

By Paul Hamon, France



Static Tests (engine off):

- 1. Test continuity between the 2 wires from Alton AC generator (alternator). There should be CONTINUITY between those wires.
- 2. Test continuity between one (or the other) wire from the AC generator and the Alton body. There should be NO continuity.

Dynamic Tests (engine running):

- 3. Disconnect the AC generator from regulator. Start engine. Check AC voltage between the 2 wires of AC generator. This voltage should reach 20-22 volts AC as soon as you rev up engine (let's say at a high idling rpm).
- 4. Disconnect the AC generator from regulator. Start engine. Test at a fast idling rpm for voltage between one (or other) wire from the AC generator and the Alton Body. There should be NO voltage.
- 5. Connect the regulator to the AC generator and battery with everything as it should be. Start engine. Check DC voltage between the 2 terminals of battery. This voltage should reach 13 volts DC as soon as you rev up engine (let's say at a high idling rpm).

[editors comment: Failure of any of the tests 1 thru 4 suggests a faulty Alton AC generator, Failure of test 5 suggests a faulty voltage regulator.]

The Holger Breather – A solution from West Australia

An original OVR contribution from Holger Lubotzki

For all the wonderful and advanced engineering surrounding the Vincent twins, the engine breather was never really up to the task and has been the target of many upgrades and modifications. The "Elephant's Trunk" is probably the best known of these and while it was an improvement on the original set up, many Vincent lovers feel it detracted from the aesthetics. This article outlines a very different approach to modifying the Vincent breather, although I can't be certain what follows hasn't been tried before by somebody.



Engine crankcase breathers are intended to vent pressure which for most engines is the combustion gas blow by, but in singles and parallel twins there is also the piston compression on the downstroke. For large capacity engines like Vincent twins (not parallel, but only 50 degrees off the mark), the piston compression represents most of what needs to be vented by the breather. Any inefficiencies result in the crankcase pressuring up as a result and this pressure is a major contributor to oil leaks, with the oil being forced out by internal pressure through any aperture to atmospheric pressure.

I was first led down the path I took when I had my 1974 Mk2A Norton Commando fully restored by Kelvin Mears in Perth. As part of that exercise he fitted a reed valve from a USA spec Yamaha XS650 (Thanks, Tim!) in the breather line. What that showed was that the crankcase goes from running pressured up to running mostly in vacuum as the reed valve vents the compression and then holds the crankcase in vacuum on the upstroke. The net result of that was zero oil leaks! Those of you who know the Norton Commando might think that head gasket seeps are a fact of life but not any more! My challenge was to do something similar for my 1950 Vincent Series C Rapide which I was upgrading with a 1200cc top end kit from Terry Prince, the latter adding to the downstroke compression. Terry offered me two insights into the Vincent breather:

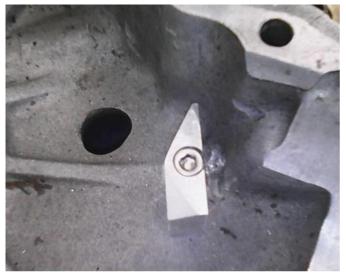
- 1. The original set up never provided enough airflow area, with the main restrictions being the timed slot on the timing gear idler spindle and the banjo bolt with tiny holes and the banjo itself.
- 2. The best way to keep the oil in the crankcase was to take to breather outlet "up and over" rather than "down and under", which was what the elephant's trunk had achieved.

I also wanted to minimise the "visual interference". My basic plan was to use a reed valve and eliminate the timed idler, open up the venting as much as possible to minimise back pressure, and to take the breather line up and over the top of the engine. In order to make the reed valve

as effective as possible it was necessary to fit a drive side crankshaft seal, which was doubly essential since I am running a V3 clutch in a modified primary chain case with ATF.

The first step was to drill the breather outlet straight through into the crankcase with the largest diameter possible that didn't compromise the thread for the banjo bolt, as shown in the photo. The hole on the inside of the crankcase sits right above the flywheel which would throw sump oil straight into the hole, adding to the oil being carried out by venting crankcase compression.

The solution was to mill up and fit a small baffle to deflect the oil. Note that the cylinder liner occludes most of the area and the baffle just covers the small gap below the breather hole. The baffle has a triangular tip to clear the flywheel and the chamfer seen on the lower left hand face is there for liner clearance. The



left hand face is there for liner clearance. The socket head screw is recessed and secured with threadlock.

On the outside of the crankcase I had a JRC fitting adapted to screw into the original hole for the banjo bolt. This is the smallest restriction in the entire breather system.



A 90 degree JRC elbow is connected to the outlet with a $\frac{1}{2}$ inch ID hose, and the hose is taken along the same line as the HT leads, up and over the engine and under the petrol tank.

The reed valve is mounted just above the swing arm using the existing mudguard mounting, which leaves it hidden behind the horn. The breather hose runs down behind the battery and connects to the top of the valve, with the vent taken out the side and connected to an oil catcher mounted at the rear of the machine.

In practice the breather works very well with any oil expelled from the engine contained by the oil catcher, but it is far less than with the original breather system. In the first 100 miles on the new engine the catcher got to about half full but the next 200 miles after that didn't make the lower limit of the sight gauge, and it will improve further as the engine is run in.





Editors Note: Thank you Holger, that was informative. If other readers have any stories like this why not share them with the Oz Vincent Review readership, which by the way, now numbers well over 400 and is growing almost daily.

Herb Harris Collection Joins Bonhams 2015 Las Vegas Motorcycle Auction

Following the recent news of an impressive assortment of early consignments to January's auction — including motorcycles from the estates of Dennis Hopper and Peter Fonda, Bonhams is very pleased to announce the addition of another truly renowned collection, that of Herb Harris (see article on part of the Harris collection earlier in this edition of OVR).

For years the Herb Harris Collection of Texas has been synonymous with the absolute finest in premium, classic British motorcycles, particularly Vincent HRD. After all, it was Harris who discovered and loving restored with painstaking historical accuracy the Rollie Free Bathing Suit Bike. Being the savior and long-time steward of one of the most famous and important motorcycles in the world was no small responsibility, yet Harris excelled in his role and applied the same meticulous approach to everything that came under his care. Soon, a Harris Vincent came to mean a motorcycle of flawless quality.

The motorcycles

Motorcycles consigned from this famous collection include the 1946 Vincent "1X" Rapide B Prototype, the first post-War Vincent produced and the first series B Rapide ever created. Interestingly, the engine was — after numerous adoring test rides by the press — converted by the factory to power a military speedboat for the British government. 1X had been lost for nearly half a century until it was discovered, researched and reinstated back as a motorcycle once again by Harris.

Another prototype is the 1954 Vincent Black Prince, the very first created of this avant-garde model, which creator Phil Vincent called a "two-wheeled Bentley", and the Earls Court Motor Show display bike.



Other models include an exquisitely restored 1949 Vincent Rapide C with matching Blacknell Bullet Sidecar in striking Chinese Red, a 1957 BSA B34 Works Racer, a 1962 Matchless G50 CSR Silver Eagle with a spare engine, and an early 1949 AJS 7R, among others.

The cut-aways

Harris is also known for his extensive collection of rare cut-away, or sectioned, motors — complete motorcycle engines sliced open with precision in order to show the internal workings. These factory-made educational pieces are very scarce today and Bonhams will be offering a dozen of Harris' from marques Ariel, BSA, Matchless, New Imperial, Norton, Sunbeam and Triumph. Perhaps even more fascinating are the two sectioned motorcycles also on offer — not just engines but complete motorcycles — a BSA Lightning and BSA Goldstar Clubman, which are surely some of the rarest of their kind. The Goldstar, for example, was created specifically for the Earls Court Motor Show, is fully operational, and is fascinating to watch as the inner mechanics and suspension move.

The artifacts

Being a true collector and historian, Harris also assembled an array of fascinating memorabilia, some of which will be included in the auction, such as the original bill of sale of the HRD company to Phil Vincent in 1928, or some of the first conceptual drawings Phil Vincent made in 1928.

Truly one of the greatest names in British motorcycle collecting, the Herb Harris Collection will, as reported, share center stage with another collection of renown, the Jack Silverman Collection of Italian motorcycles. These two headlining collections will be supported by a 30+-strong private collection of American motorcycles, specifically Harley-Davidson.

More details about the Las Vegas Motorcycle Auction scheduled for Thursday, January 8th at Bally's Hotel & Casino on The Strip can be found at <u>Bonhams.com/Vegas</u>.

Machining Oilite Bearings



There are a few basic machining practices required to optimize retaining surface micro-porosity and the self lubricating properties of Oilite® bearing materials.

Cutting tools must be sharp. For this reason, carbide inserts are highly recommended since they hold a cutting edge much longer. This preserves the open-pore structure from which oil can flow freely. A dull tool will smear the pores, greatly reducing the self-lubricating qualities of the material.

Turning: Cutting Feed Rate: 0.002-0.006 IPM Speed: Oilite® Bronze 375-500 SFM Speed: Super-Oilite® 250-500 SFM

Roller Burnishing is an excellent choice to modify an ID slightly. Ball sizing can also be used on the ID effectively for final sizing.

Honing and grinding are never recommended on Oilite® bearing materials. Using these methods on any surface which will become the bearing surface will introduce grinding media and could easily smear the bronze pores sealing the micro-porosity.

After extensive machining, bearings should be re-impregnated with appropriate / specified oils. Vacuumed impregnation is recommended. If bearings were not lubricated prior to machining and if cutting fluids were used, that medium must be removed prior to any impregnation of the oil selected for the application. Your authorized Oilite distributor can provide oils for reimpregnation after machining

More information at <u>www.oilite.com</u>

John Prestwich, the man behind the fabulous JAP business, the renowned London based maker of a vast range of proprietary motors.

The initials, in stylish script, of John Alfred Prestwich adorned many of the engines used in motorcycles, threewheelers, light cars and even aeroplanes through half the 20th century.

The range was enormous, from lightweight commuters to the rangetopping V-twins that met the standards George Brough required for his 'Rolls-Rovce of motorcycles'. Stationary, industrial and racing engines, JAP made them all. When production finally ended the total figures were far in excess of a million, yet the man behind this astounding achievement received scant recognition.

John Prestwich born was in Kensington in 1874 and later moved to High Road, Tottenham. He learned his craft with Ferranti, working with electrical equipment and scientific instruments. By the time he was 21, he was working from premises in Lansdowne Road, Tottenham, but success meant expansion into the buildings either side. The first business of the company was cinematographic equipment and Prestwich was a pioneer in the field, creating cameras and machinery used for some of the earliest newsreel coverage. The high standards of required for engineering these products were carried over into the company other activities.



Prestwich designed his first internal combustion engine in 1901 and by 1903 JAP motorcycles were shown at the Stanley Show, including a lightweight model and a 3.5hp ohv engine, installed in a BSA frame. A three-wheeler was available a couple of years later.

The quality of the engines was quickly recognised and JAP was soon supplying all the major manufacturers, as an alternative to engines sourced from continental manufacturers. In 1906, the first overhead valve V-twin appeared, but two years later JAP stopped making complete bikes, as a diplomatic withdrawal from competing with its own customers. There was also a healthy export trade, with French and German builders happy to use the Tottenham brand.

While the motorcycle industry boomed in the Midlands, the engineers at JAP claimed to have led

the way in production methods. The Prestwich engine manufacturing process relied heavily on jigs and fixtures, reducing 'working tolerances' minimum and ensuring to а repeatable performance. Engine development continued apace and the Tottenham works continued to grow, JAP engines were used in light cars and the aircraft engines already included a V-eight for airships.

A V-twin engine powered A V Roe's 1909 triplane, recognised as the first all-British aeroplane. Roe and Prestwich formed a partnership, which was soon dissolved after the pair got into trouble with the farmers for 'causing disturbance to animals' with test flights on Hackney Marshes, not far from the Tottenham factory.

Developments continued and in the 1920s a new factory adjoined the machine shops manufacture to pencils, another Prestwich innovation. Ideas for engine improvements included a patent for a desmodromic valve system, granted in 1923. As the market for boughtout car and motorcycle engines company diminished, the concentrated on the extremes of its output. The high performance engines used by riders such as Bert le Vack and Eric Fernihough in racing and record breaking ensured the brand remained in the public eye, but the main income for the company was from the dependable and highly regarded industrial engines.

At the outbreak of the Second World War JAP had vast premises at Northumberland Park in Tottenham, with more than 3000 employees. While the industrial engines continued to be made and supplied to the armed forces, much of the manufacturing capacity was turned over to armaments. Soon after the war, JAP became a public company.

John Prestwich died in November 1952. The company merged with its long-term rival, Villiers, but the Prestwich legacy of quality engineering continued.

At the 1953 Motor Cycle Show his company offered no less than 16 racing engines. Among them was an exciting prototype of a 500cc, dohc four-cylinder engine.



The JAP 500cc Speedway engine became the company's swansong. This was ironic as John Prestwich had witnessed some of the earliest speedway events and dismissed them as 'a brief craze'. His son Vivian and engineer Stan Greening persuaded him to reconsider. Introduced in 1930, the engine soon displaced all the other pretenders.

JAP was still the one to beat in the mid-1960s, but by then, the factory had already closed its doors.

Sorting out an Amal Carb

by Martyn Goodwin

Recently I have been attempting to "fine tune" the mid-range of the Amal Mk1 concentric carburettor fitted to my Comet. This is where the needle jet has the major influence on mixture; between ¼ to ¾ of throttle opening – and there where most folk ride. On the needle itself there are 3 groves available to position the needle clip and thus the mixture. If the top grove is used, then the tip of the needle is at its lowest or leanest position. If the bottom groove is used then the tip of the needle is in its highest or richest position. Naturally the middle groove gives the in between result .



In my case I found that using the top groove made the mixture too lean, while the middle groove made it too rich. If I used the bottom groove, the richest position, the spark plug became clogged with carbon!

Measuring the needle revealed that each change of groove altered the relative needle position by 0.065". What I needed was somewhere between the top and middle groove. **Searching I found a seller on ebay by name of "gk24sailor" who offered exactly what I was seeking** – shims suitable to be placed inside the throttle slide and under the needle clip. These shims were available in 2 thicknesses 0.015" and 0.030". The shims are 5/8" OD which is a glove like fit into the recess inside the slide and they have a 1/8" wide groove to allow for the passage of the



Shown L to R; needle clip, 0.030" shim and throttle slide

throttle cable. As the needle clip recess in the base of the slide is 0.085" deep both the shims and the needle clip are securely retained. I purchased 2 of each size for just UK£1 each. This gave me the option, using just 1 shim of raising the needle by 0.015" or 0.030" or by the use of 2 shims, the additional options of 0.045" and 0.060" become available – It gives you pretty much a vernier control over the needle position, one needle groove to the next.

Initially I used the top needle groove and one 0.015" shim. After a run of just over 100 miles I checked the spark plug and found the centre electrode almost white – I also noticed some "blueing" of the exhaust – all the way to the front of the silencer so I concluded that the mixture was still too lean. My next setup was to remove the 0.015" shim and replace it with a 0.030" shim in order to "richen" the mixture. Another road test of sensible distance found that it was just about perfect, evidenced by a near perfect spark plug colour.

I should add that before doing any of this I did check my ignition timing – which I have set at 31° BTDC fully advanced; plus to ensure that the results were not being influenced by main jet restrictions – for the duration of the testing I increased the main jet size from a 220 to a 240. At the end of the testing related to the needle jet I reinstalled my 220 main. In case you are wondering – I am using a 106 needle jet.

New Motorcycle Rules in Queensland

A number of changes to road rules related to lane filtering, motorcycle control and motorcycle helmets, affecting motorcycle riders in Queensland, Australia will commence in early 2015. Please note that the current rules and penalties for riding a motorcycle in Queensland will remain in place until the changes commence in early 2015. The EXACT date the changes come into force is yet to be announced.

Lane filtering: Motorcycle riders with an open RE or R motorcycle licence will be allowed to move between lanes of stationary or slow moving vehicles travelling in the same direction as the rider, provided they are not travelling at more than 30km/h and it is safe to do so *(without a clear definition this sounds like the basis for extensive litigation – it seems to be a matter of who thinks what is safe - editor).* Learner and provisional riders will not be allowed to lane filter because of their relatively limited on-road driving and riding experience. Motorcycle riders will be prohibited from lane filtering in school zones during school hours.

Riding on road shoulders and kerbside: On major roads, such as motorways and freeways where the speed limit is 90km/hr or more, a motorcycle rider who holds an open licence will be allowed to ride past stationary or slow moving traffic at speeds not greater than 30km/hr on the road shoulder (the sealed area of a road to the left or right of an edge line). A motorcycle rider will be required to give way to cyclists or motorcycle riders already on the road shoulder. Riding on a road shoulder will not be allowed on roads with lower speed limits where there may be more pedestrian activity and it may pose a greater road safety risk to pedestrians. To ensure pedestrian safety, lane filtering will only be allowed between lanes of traffic and not between a vehicle and the kerb.

Motorcycle riders in bicycle storage areas and bicycle lanes: Motorcycle riders will be allowed to enter bicycle storage areas (the areas of road close to an intersection with traffic lights that allows cyclists to wait in front of vehicles stopped at the intersection, and usually painted green with white bicycle symbols). Motorcycle riders are not allowed to ride in bicycle lanes in normal circumstances and this will not change.

Controlling a motorcycle: The strict rules about how a motorcycle rider must sit and where they have their hands and feet will be removed, allowing motorcycle riders to, for example, remove a foot from the footrests to stretch a leg or raise themselves from the seat when riding on uneven road surfaces. Motorcycle riders will still be required to be astride their seat, meaning that they must have one leg on either side of the seat when riding.

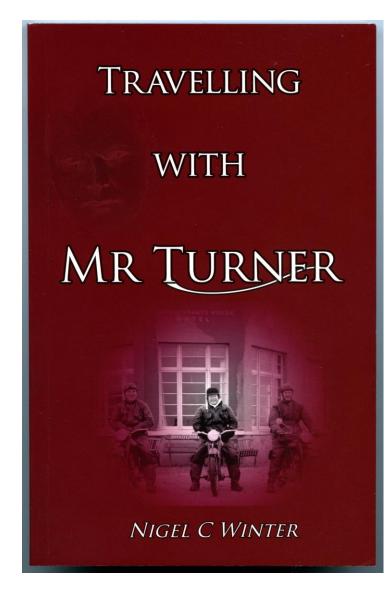
Motorcycle helmets: The range of motorcycle helmets approved for use in Queensland will be expanded to include those complying with the United Nations Economic Commission for Europe (ECE) 22.05 standard. Queenslanders will be able to legally buy helmets meeting the ECE 22.05 standard through international online retailers or if they are travelling overseas.

If you wish to know more about these changes, please visit this web site: <u>New Qld Bike Rules</u>

OVR thanks reader, Kevin Dennis. of Queensland for this information

Travelling With Mr Turner, a novel by Nigel Winter

Back in 2007, Horsham solicitor Nigel Winter swapped his pin-stripe suit for leathers, fastened his helmet and climbed upon his beloved Triumph Thunderbird.



It was one of the wettest summer weekends on record, but Nigel resisted the lure of hotels and instead packed a tent for a journey that would take him on a scenic route from Lands' End to John O'Groats.

That in itself is not an achievement worthy of column inches. Nigel admits that his nose was put out a touch when he was told upon arriving at the northern landmark that a cyclist had arrived a little while before him, having also completed the journey in five days.

Nigel's motivation was a personal desire to recreate a trip completed in 1953 by Edward Turner on a 150cc Triumph Terrier. However, whilst the former General Manager of Triumph recovered at the end of each day in the country's finest hotels, Nigel opted to pitch a tent at campsites practically deserted due to unseasonal downpours.

It took Nigel four years to complete and publish a book about his trip. Travelling with Mr Turner has already shifted more than 1500 copies and is receiving excellent reviews both at home and across the Atlantic. The book marries witty thoughts and observations from the journey with wellresearched information and amusing anecdotes relating to the incredible history of Triumph motorcycles.

Nigel, a senior associate at Carfax-based Rawlison Butler, said: "Triumph is a unique brand and the book is, in essence, about that brand. I was worried about how it would be received by the motorcycle press as it isn't a technical book - it isn't about bikes, brake horsepower or broken bones. I just wrote it in the hope that it would be read by people who simply enjoy a good read. I think by virtue of the topic there is a niche market but the style of writing attracts other readers. Best of British Magazine wrote in its review that 'you don't have to be interested in motorcycles to like this one' and I hope that is true."

It is indeed Nigel's light-hearted tone and honest story telling that keeps the pages turning and has ensured that Travelling with Mr Turner can be enjoyed by all - not just those interested in the iconic Triumph brand.

Whilst only 166 pages long, Nigel manages to bring life and colour to Edward Turner's 1953 journey and the story of Triumph's battle for survival makes for fascinating reading.

In case you suspected a mid-life crisis was behind the motivation for the trip and subsequent book, Nigel has actually been riding for many years and has even written articles on motorcycling for national newspapers and magazines.

His father owned a Vincent and travelled around Europe, along many mountain passages that Nigel has subsequently ridden. Although he is a fan of British bikes in general, along with other classic manufacturers such as Moto Guzzi and Harley Davidson, it is the Triumph story which Nigel finds most endearing.

It's unlikely that we'll see a flurry of novels from Nigel. "Having written this book, getting it to sell is the thing that counts," he said. "There are more books in me but it doesn't really fit in with being a lawyer and being a father!"

Travelling with Mr Turner is available to buy at a cost of £9.99 through Panther Publishing (www.panther-publishing.com)

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 endorsment 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, 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

Vin-Parts International, UK: (aka Russel & Debbie Kemp) has an extensive range of excelent Vincent Spares. Ships Worldwide. Email for a price list to <u>russell.kemp@btconnect.com</u> and see their web site for additional information: <u>www.vinpartsinternational.co.uk</u>

Coventry Spares Ltd, USA: Fantastic service and deep product knowledge plus extensive range of excelent 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 plus an extensive range of excelent Vincent Spares. Ships Worldwide. Email for more information <u>steve@conway-motors.co.uk</u>

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

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 <u>www.unionjack.com.au</u>

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 <u>www.norbsa02.freeuk.com</u>

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

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 <u>www.acmestainless.co.uk</u>

Peter Barker, UK: Extensive range of nuts, bolts and fittings in Stainless Steel for Vincents and other classic bikes; all sourced in the UK by this enthuasist. Email for a catalogue <u>hrd998@hotmail.com</u>

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/

Services :

Woody's Hydroblast, Australia: Woodys Engine Services / Hydroblast is a Melbourne, Australia based business dedicated to helping car and bike restorers repair and detail their componentry to the highest standards. The wet abrasive blasting used to finish jet turbines now provided by him is able to clean the most intricate components without degradation to the original surface. For more information visit their web site <u>www.woodyshydroblast.com</u> or call (03) 9597 0387

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.

Cylinder Heads, Australia: Cylinder Heads are highly skilled engine experts with 30 years of experience operating from their Box Hill North workshop. Alex has extensive experience in complete reconditioning of motorcycle heads, including Vincents plus installation of hardened valve seats, valve guides and valve stem seals. For more information see http://www.cylinderheadsvictoria.com.au or phone (03) 9899 1400

Peter Scott Motorcycles, Australia: Top quality magneto and dynamo services, from simple repairs to complete restorations plus a comphrensive 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 <u>qualmag@optusnet.com.au</u>

Ray Dean, Australia: Precision engineering services including but not restricted to Cylinder honeing, crankshaft rebuilds, aluminium welding and more. Located at 28 Albemarle Street Williamstown, Victoria. Phone 0400 803 226

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

Rays Custom Spray Painting, Australia: Ray Drever is the consumate perfectionist when it comes to paining 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.

Perfect Seal Piston Rings, Australia: piston rings made to order – for more information contact Trevor McGregor, Phone 0412 506 398

Terry Prince Classic Motorbikes, Australia: Classic Motor Bikes, 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 <u>Click Here</u> or telephone +61 2 4568 2208