The Oz Vincent Review

Edition #27, June 2016

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

Welcome

Welcome to this latest edition of The Oz Vincent Review

This month's front cover is an image of your editor's right wrist taken some six months after been tossed from his Comet following a violent tank slapper. The base of the Radius, adjacent to the Scaphoid and Lunate was shattered by the sudden and ferocious movement of the handlebars; the result is a permanent reduction in wrist mobility. So why make a feature of this? To encourage those of you who ride your classic bikes as they were intended, to fit a modern hydraulic steering damper to reduce as much as possible the risk of this happening to you.

Next issue will contain a short report on my Sri Lanka search for some "missing" Vincents.

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Martyn

Melbourne, Australia.
Email: ozvinreview@gmail.com

Letter(s) to the Editor

Hi Martyn,

If you think there may be any interest for your readers, I am making some more of the 2" exhaust pipes as per the photo.

The bike is in the USA and its owner purchased the pipes from me and fitted them himself. I can of course, bend them from smaller diameter tube, should anyone not want the big ones. (my cnc program for the bender will accommodate any tube size).

Best way for anyone to contact me being by email colinegl1taylor@gmail.com

Regards. Colin Taylor

Hi Martyn, Thanks for another good issue! I liked the Vincent road test. Here is a question for all and sundry. Can anyone identify the Motor Cycling staff man in the road test of naked Series D Vincent March 10, 1955 ? 'Motor Cycling' were well known for not identifying their staff people in photos.

Thanks Again, Roger Payne, UK

Las Vegas Auctions 2016

Bonhams and Mecum pull in record crowds, and Vincent command top prices at the Las Vegas auctions.

Top money at Bonhams was $434,000 for this one-of-one 1951 red Vincent White Shadow.

Vincents, including Egli-Vincents, continue to command top prices, with 12 sold at Bonhams' Las Vegas auction for an average of $129,856 and six at Mecum's auction for an average of $80,583.

Mecum had total sales of $9,054,965 in 2016 against $7,300,000 in 2015, an increase of more than 24 percent. Of 646 bikes offered, 516 sold for an 80 percent sell-through. The average price at Mecum in 2016 was $17,000, $5,000 more than 2015.

Bonhams saw a smaller increase, with total sales of $4,800,000 in 2016 against $4,500,000 in 2015, an increase of almost 7 percent. Of 241 bikes offered, 198 sold for an 82 percent sell-through. The average price paid at Bonhams in 2016 was $24,242, $4,343 more than 2015. Mecum charges a 10 percent buyer's premium on bikes sold with a reserve and a 7 percent buyer's premium on bikes sold without a reserve. At Bonhams, the premium is 15 percent on the first $100,000 and 10 percent on any amount over $100,000. Bonhams prices reported here include the buyer's premium while the Mecum prices do not unless noted.

Viewed through the Vegas lens, Vincents are, to no one's surprise, still rising to the top of the collecting heap, as are rare pre-World War I and World War II American machines. At Bonhams, a one-of-one 1951 Vincent Series C "Red" White Shadow cost its new owner a staggering $434,000. That's the most ever paid for a Vincent at auction, beating out the $418,940 paid for a 1939 Series A Rapide at Bonhams' annual Stafford, England, auction in 2015. In both cases, rarity was the determining factor; only 80 Series A Rapides were built between 1937-1939 and this particular 1951 Series C was truly a one-of-a-kind, powered by an unpainted Black Shadow-spec engine and wearing red paint on both frame and sheet metal, the only bike ever to leave the Vincent factory so equipped.

Looking at other high-end collectibles, prices for Brough Superiors have been on the rise for years, making the $120,500 achieved at Bonhams for an immaculate 1938 SS80 seem a bargain of sorts compared to the $425,943 a 1939 SS100 commanded at Bonhams' 2014 Stafford auction.

From the Archives

The following item was first published in Motor Cycling, in March 1957

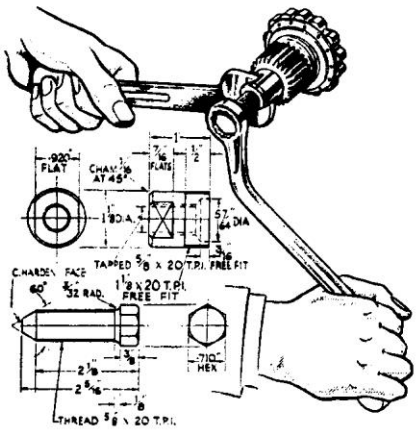
"DO-IT-YOURSELF" SERIES No. 15 - - - by BERNAL OSBORNE

The 498 c.c. and 592 c.c. Twin-cylinder

A.J.S. AND MATCHLESS

Technical Details and Maintenance Routine for Four 1957 Touring Models Made at Plumstead

DEALING with the "twins" made by Associated Motor Cycles, Ltd., involves consideration of what is fundamentally one type of machine, represented originally by the 498 c.c. A.J.S. "Springtwin" and Matchless G9 motorcycles first introduced in 1948. Specification variations are found in the 592 c.c. versions, marketed respectively as the A.J.S. Model 30 and Matchless G11. To some extent, the 498 c.c. racing model, listed as the Matchless G45, is similar so far as engine details are concerned but, to avoid complications, reference is not made to this fifth model in the Woolwich "twin" range for, it should be noted, beyond the engine layout, there is little in the G45 specification which ties up with the roadster "twins," for the frame, gearbox and wheels are related more closely to the race-model counterpart in the A.J.S. range, the 348 c.c. o.h.c. Model 7R.



Application of the bolt-type half-time extractor tool, together with dimensions.

Special Tools

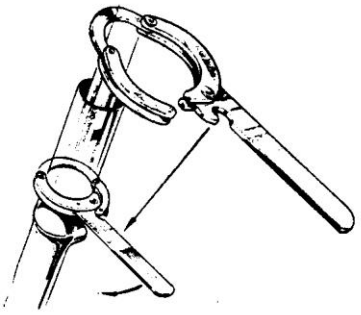
Overhauling any one of these machines calls for a reasonable degree of mechanical knowledge and an appreciation of the use of general workshop tools, reamers and so forth. Actually, much of the work can be carried out with the manufacturer's tool kit, which is a commendably comprehensive one. But there are a few special appliances which help the work along; these are listed in the respective instruction books and the application of several such gadgets has been illustrated for this feature. In some cases there is no ready substitute for the A.M.C. tool, but in others a little practical improvising successfully provides the owner with an equally satisfactory alternative.

Dismantling Procedure

Right- and left-handed, the rocker covers, rockers and cylinder heads are separate assemblies. Thus, it is relatively easy to take down the top part of the unit piecemeal; there is no call to handle large, heavy castings or to grope about single-handed to support pistons while the cylinder block is withdrawn, for the cylinders, too, are separate.

It is improbable that there will be serious wear in the rocker spindle bearing assembly, which is substantially proportioned, but the reamed size is given in the Reference Data as a guide. Rocker lubrication is ensured by drilled oilways which should be cleaned out. Reference to the cut-away engine drawing shows the location of three plain washers and a spring washer in the rocker assembly; the order indicated should be maintained.

The valves face up at 45° to hardened inserts which are cast in and the valve guides are circlip-located and the head must be warmed before removal of the latter is attempted. Drive out the guide part-way to free the circlip, which can be taken off and the guide then pressed right through from the outside. Routine checking of the free valve-spring length can be carried out at this stage. See Reference Data for the "as-new" dimensions.



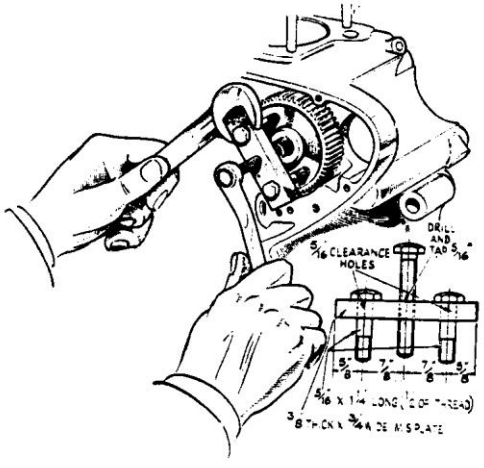
Special clamp tool for the front fork sliders, shown "open" and applied.

A special tool is included in the kit for the removal of the Seeger-type piston circlips. Five turns of special wire bind the B.H.B. pistons and, while the two compression rings and single scraper are detachable in the usual way for inspection, the wire should be left intact; it is a fixture designed to control expansion and to minimize risk of distortion. Note the positioning of the split piston skirt, the split facing to the front.

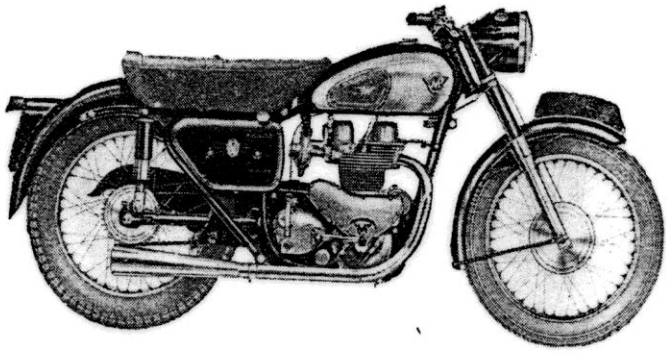
Long through-studs retain each of the cylinders, which can be taken off conveniently while the engine assembly is still in the frame. At this stage, the timing cover (located by ten screws and one nut) and pump-plate assembly may also be removed after disconnecting the oil-pipes. The primary transmission should be removed—assuming the unit is ultimately to come out of the frame—and the cam gear wheels extracted by the application of the bridge-type tool illustrated. The nuts securing the timing wheels are slotted to key with drive-tongues on the two oil-pump spindles. Because of this special function, the spindles and camwheel nuts are left-hand threaded.

It is not difficult for the owner to make up his own tool resembling the manufacturer's appliance No. 015374 to the dimensions shown. There is also available from the makers a magneto pinion extractor—a bolt-puller type of gadget (No. 015273)—the outer sleeve nut of which screws into the threaded centre of the pinion. Also threaded internally, the sleeve nut accommodates a hardened thrust bolt which, rotated clockwise, abuts against the end of the armature shaft, breaking the taper fit.

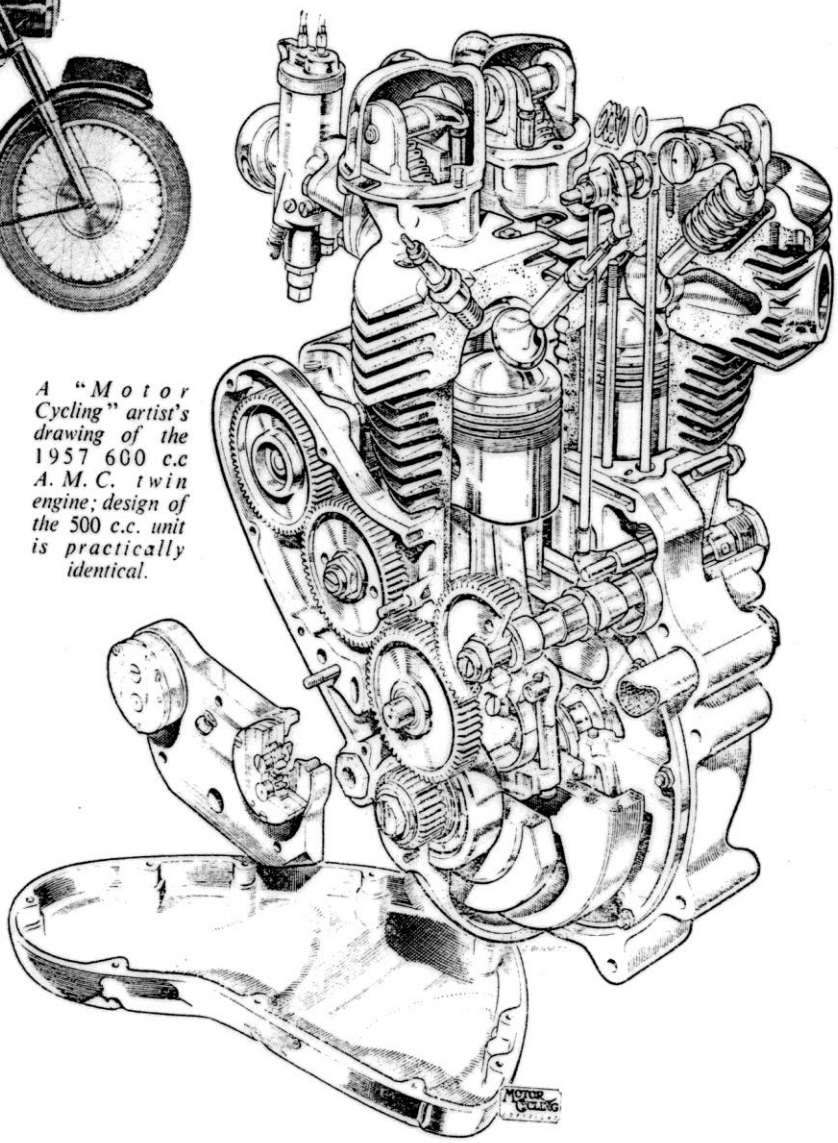
The engine mainshaft pinion is a parallel fit with the shaft and keyed, and this too can be extracted with tool No. 015273—provided that it is considered necessary to take it off at all. A.J.S. and Matchless twins are unusual in that the crankcase can be split and the timing-side half drawn off, leaving the mainshaft pinion in position (see sketch). Actually, the only reason for disturbing the pinion is the possible need to renew the rollers and inner race of the bearing on this side. The idler wheel in the timing gear-train can be taken off by hand and the dynamo, complete



Dimensions and application of the bridge-type cam pinion extractor tool.



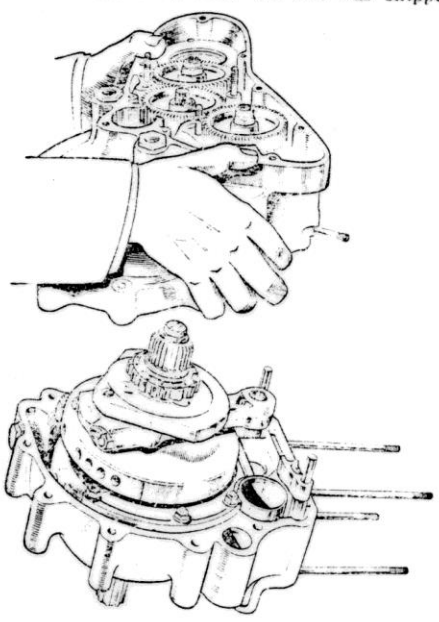
Typical of the range is this Matchless G9 498 c.c. o.h.v. twin.



A "Motor Cycling" artist's drawing of the 1957 600 c.c A. M. C. twin engine; design of the 500 c.c. unit is practically identical.

with its pinion, pulled out of the cradle as soon as the fixing strap has been sufficiently slackened.

Normally, one separates the crankcase halves only to attend to the two main roller bearings, or the plain bearing big-ends or centre support. A.M.C.s are unusual in another twin-cylinder design feature. The use of a centre journal makes it possible to have a main oil delivery to this point where, under high pump pressure, streams of lubricant divide at the base of a V-shaped oil-way in the shaft, passing in equal quantities to the two big-ends, any sludge or foreign matter being flung by the centrifugal action of the shaft past the big-end feed orifices in the journals to the tops of the V-drilling, which act as sludge traps. The most important aspect of this layout is that one is unlikely to find one journal and bearing—usually the one farthest from the oil pump in other types of vertical twin engines—showing early signs of advancing wear. Actually, the writer's own experience with A.J.S. and Matchless twins represents a mileage of 38,000 over a period of five years and, during that time, neither of the two engines in question required attention to the bearings. In each case, when the unit was stripped down at the end of its long tour of duty, micrometer readings at the journals revealed negligible wear.



Removing the timing-side half of the crankcase, with the pinions left in position.

Splitting the crankcase will have involved taking out the main oil-filter element, a caged fabric component located transversely across the engine in front of the exhaust camshaft, where it accepts the full output from the pump for initial cleansing. Pressure is maintained by the use of a ball-valve housed in the hexagon-headed end-cap. It is necessary to remove the end-cap to withdraw the filter element from the drive-side, and it will be noted that in 1957 engines the component is works-assembled: in other words, the ball and spring are not detachable, as previously. The earlier arrangement gave rise occasionally to incorrect reassembling of the ball and spring, with the result that the valve did not operate at all and the supply was cut off from the engine, so that seizure occurred and pump pressure built up dangerously, sometimes with further damage. This is impossible with the current end-cap incorporating the trapped ball and spring.

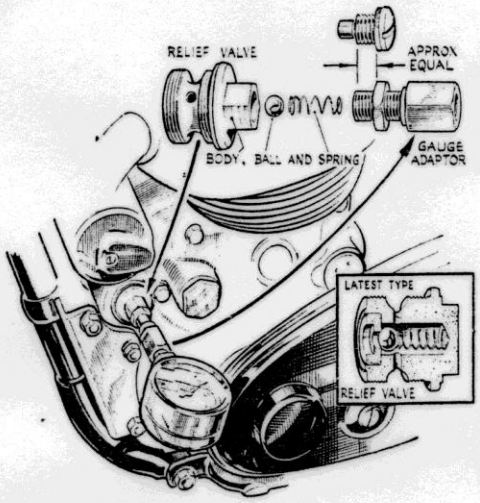
The camshaft tunnels are sealed on the drive-side by end-caps, that at the front hexagon-headed and that at the rear keyed (for a peg spanner). There are bushes pressed into the crankcase castings (one on the drive-side and two on the timing-side) in which the shafts bear.

Six studs and nuts retain the centre plate and bearing assembly; for the latter, and also the connecting rod big-end caps, shake-proof nuts are used. It is wise, perhaps, to renew the nuts if the bearings are dismantled. Bearing renovation constitutes either the renewing of the half shells; or, after lengthy service or following a seizure, the regrinding of the journals and fitting undersize-diameter shells, when the big-ends will again be as good as new. The rollers and inner race of each main bearing are a light press fit on the shaft. The outer races fit tightly in the crankcases; they can be jarred out if the surrounding metal is heated.

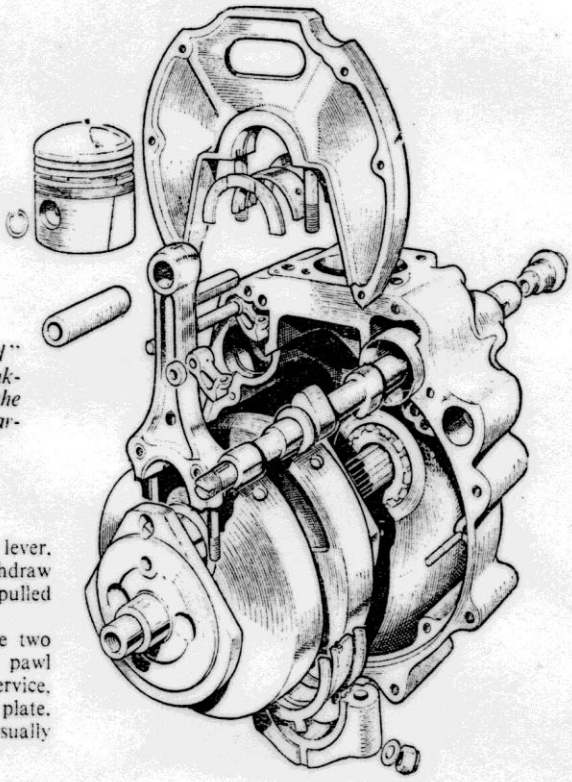
Assembly

Because of its design, the engine is not difficult to erect, for the work is largely similar to that of assembling two "singles"

(*Continued overleaf*)



(Left) Testing the oil pressure by inserting a gauge and screw adaptor in place of the end-cap. Note the use of pre-1957 parts; the 1957-type relief valve, made as a single assembly, is shown inset.



(Right) An "extended" view of the A.M.C. crankshaft layout, showing the camshaft and centre bearing support.

on to a common crankcase. Probably the easiest procedure is first to feed the complete crankshaft, including the centre plate, into the drive-side crankcase, to bolt up this sub-assembly and then to check endwise location by putting on and tightening the primary drive sprocket and nut. Tighten the centre-plate fixings, insert the camshafts and then offer up the timing-side crankcase, into which the timing gears may then be assembled once more.

Inserting the oil-filter element and replacing the camshaft tunnel end-caps are the next jobs, followed by the replacing of the pistons and the two cylinders. At this stage it is a good idea to get the ignition timing right while it is easy to measure the recommended B.T.D.C. advance. Valve timing must wait until the cylinder heads and rockers are in position, when the timing wheels should be meshed in accordance with the markings. This operation is, of course, sufficient to ensure correct valve timing. (The timing figures included, for information, under Reference Data apply to 1957 models; readers who are using this article as a guide to work upon 1956 machines should note that their timing is: Inlet opens 35° before T.D.C., closes 65° after B.D.C. Exhaust opens 65° before B.D.C., closes 35° after T.D.C.)

The oil-pump unit and timing cover complete the main assembly work.

Transmission

A 1957 A.M.C.-manufactured twin (except the G45) carries the new roadster gearbox, which is of the conventional type with ball journal bearings supporting the mainshaft at both ends. Plain bushes carry the layshaft on both sides. Removal of the K.S. crank (though not the gear lever), the gear indicator mechanism, the oil filler and inspection plates and five securing screws, makes it possible to take off the polished outer cover. But before this is finally freed it is desirable to put a scriber mark on the outer surface of the gearbox end-plate to indicate the angle of the clutch thrust arm when in the working position. Being able, by this means, to line up the arm and slotted arm holder greatly facilitates reassembly. The gear-change lever, left *in situ* as advised, serves to withdraw most of the mechanism as the cover is pulled away.

Possible wearing components are the two hairpin springs of the ratchet and pawl mechanism and, after a long period of service, the bearings and bushes. The cam plate, operating under very good conditions, usually has a very long life.

Suspension

Taking down a fork slider, usually in order to renew oil seals, is one of the few jobs which the owner may have to carry out. Anything of greater magnitude, such as taking down the stanchions, is usually called for only as the outcome of a mishap when, for preference, the complete fork assembly should be put in the hands of an A.M.C. dealer for works checking.

In removing the slider, the unscrewing of the extension tube is carried out with the wheel *in situ*, but supported free of the ground. When the extension tube has been slackened, take out the wheel and disconnect the front stays and mudguard. Using a thin tubular box spanner, unscrew the bolt sunk in the upper half of the spindle clamp: the oil content of the slider will now escape, but the slider will be free of the damper tube and can be withdrawn if given a sharp downward jerk. The oil seal is a close pushfit in the top of the slider, and may initially be the cause of a slight difficulty in pulling the slider free.

At the rear, the swinging-fork assembly bears in two flanged "Oilite" bushes which are an interference fit in the lug. During assembly at the factory, the annular space between the bushes is filled with 1½ fl. oz. (42.6 c.c.) of heavy gear oil which may be replenished, if necessary, via an orifice, normally closed by a screw cap, in the right-hand end bearing cover. The internal diameter of the bushes should be reamed to 1.001/1.002 in. after fitting. It is the fitting, however, which will probably constitute the biggest headache to a man working without a fairly powerful press. The Girling dampers are sealed at the factory and should not be tampered with.

Lubrication

The gear-type pump is not a wearing component and will operate satisfactorily for many years without attention; but the main filter element, of gauze and fabric construction, should be renewed frequently. While it often suffices simply to rinse filters of this type in petrol, there is always the risk that dirt and metal particles thus liberated from the innner surface of the felt will swill around and settle on the outer surface, remaining there after the element is thought to be clean. In consequence, the initial surge of lubricant sent around the engine to the relatively soft big-end bearings carries with it a quantity of foreign matter which, to say the least, can do no good.

There is also a metal filter located in the feed line at the bottom of the oil tank, plus a magnetic device incorporated in the drawplug which at least attracts and traps ferrous particles in the sump. A full range of lubricants and greases suitable for engine and other components in all weather conditions is contained in the instruction book; and, in the writer's opinion, all twins of A.M.C. manufacture respond well to the use of S.A.E. 20 engine grades, not only in the "extreme cold" conditions specified, but for general use during English winter weather.

Pre-1957 engines could easily be tested for oil pressure faults by substituting a gauge and screw adapter in place of the end-cap. The 1957 end-cap offers no such facility and earlier-pattern parts, as illustrated, must be used when testing. Make sure the engine is warm, so that the lubricant is flowing freely, and test chiefly at idling speeds (20-40 lb. readings should result) simply to establish that pressure is consistent.

REFERENCE DATA

CYLINDER-PISTON GROUP

	500 c.c.	600 c.c.
Bore:	66 mm.	72 mm.
Stroke:	72.8 mm.	72.8 mm.
Swept volume:	498 c.c.	592 c.c.
Compression ratio:	7.7	7.5

Rebore to: .020 in. O.S. when maximum wear exceeds .008 in.

Piston Diameters:
- At top land: 2.570/2.572 in. — 2.804/2.806 in.
- At bottom land: .0000/.0008 in. larger than top of skirt.
- At skirt: 2.5969/2.5976 in. — 2.8334/2.8341 in.

Piston ring gap: .006/.030 in.

Piston ring depth:
- Compression: .092/.100 in.
- Scraper: .095/.102 in.
- } .101/.109

Permissible vertical play: .002 in.

Gudgeon-pin diameter: .7497/.7499 in.

Small-end bush diameter: .7500/.7505 in.

VALVES AND VALVE GEAR

Valve stem diameter:
Inlet: .27875/.27975 in.
Exhaust: .3090/.3100 in.

Bore of valve guides:
Inlet: .28075/.28175 in.
Exhaust: .3120/.3130 in.

Seat angle: 45°

Free valve-spring length:
Inner 1 19/32 in. Outer 1 3/4 in.

Rocker spindle diameter: .498/.500 in.

Rocker bush bore: .500/.5005 in.

Timing wheel bush bore:
1 1/16 in.—.008/.010 in.

Bore of cam followers: .3745/.3755 in.

Valve timing (with tappets set at .012 in clearance):
- Inlet opens before T.D.C. .. 24°
- Inlet closes after B.D.C. .. 65°
- Exhaust opens before B.D.C. 63°
- Exhaust closes after T.D.C. 25°

Normal tappet clearances: .006 in. (cold)

CRANKSHAFT GROUP

Journal track diameter: 1.62475/1.62525 in.

Con-rod big-end eye diameter: 1 7710/1.7715 in.

Type of big-end bearing: Three-layer lead bronze indium plain bearing in halves to fit 1 3/8 in. shaft. + .0025 in.

Main bearings: SKF type RLS 12 1/2, single row roller; 1 3/8 in. bore by 3 in. O/D by 11/16 in. (2 off, one each side).

Left-hand threads on engine components Camshaft gears and nuts 3/8 in. by 20 T.P.I

Location of contact breaker: Magneto behind engine

GEARBOX

Bearings, type and size: Sleeve gear carries "Oilite" bushes, .8140/.8145 in. bore by .9053/.9060 in. O/D by .875 in.
Mainshaft bearing at clutch end, SKF RLS 9Z, 1 1/4 in. bore by 2 1/4 in. O/D by 3/8 in.
At K.S. end: Hoffmann RLS7 3/8 in. bore by 1 1/8 in. O/D by 7/16 in.

Layshaft supported by SKF 6203 ball bearing 17 mm. bore by 40 mm. O/D by 12 mm.

Internal reductions: 1.35, 1.77 and 2.67:1

Left-hand thread on gearbox: sleeve gear and nut retaining gearbox sprocket, 1 1/4 in by 20 T.P.I.

TRANSMISSION

	500 c.c.	600 c.c.
Sprocket Sizes:		
Engine:	21t	22t
Clutch:	42t	42t
Final drive:	16t	16t
Rear wheel:	42t	42t

Gear Ratios:
500 c.c. 5.25, 7.10, 9.3 and 14.0 : 1
600 c.c. 5.00, 6.8, 8.9 and 13.4 : 1

Primary chain: Renold 110046 1/2 in. by .305 in. by .335 in. (500 c.c., 67 links; 600 c.c., 68 links.)

Secondary chain: Renold 110056 3/8 in. by .380 in. by .400 in. (97 links).

WHEELS

Front: WM 2-19.
Brake diameter 7 in.
Spokes: 5 13/16 in. by 11G (straight, 20 each side).
Hub bearings: SKF W. 6669 taper roller 27 mm. bore by 1 1/2 in. O/D by 1/2 in.

Rear: WM 2-19.
Brake diameter: 7 in.
Spokes: 6 15/16 in. by 10G (straight 20 each side).
Hub bearings: SKF K. 1178X/K1130 N.I taper roller two-part bearing, 3/8 in. bore by 1 3/4 in. O/D by 13/16 in.

FRONT SUSPENSION

By "Teledraulic" forks carried on ball-and-cup race type head bearings, comprising 56 7/16 in. diameter balls with 1.750 in pitch circle

Three-rate compression springs: solo 218 lb., sidecar, 280 lb. maximum.

Head angle: 62°

Trail: 2 15/16 in.

Damper fluid content: 6 1/2 fl oz. of S.A.E 20 oil.

Slider bush dimensions:
Bottom bush (steel) 1.2495/1.2500 in. bore 1.5605/1.5610 in. O/D by 1.000/1.002 in.
Guide bush (flanged) 1.2505/1.2515 in. bore by 1.5605/1.5625 in. O/D by 1 1/16 in.

REAR SUSPENSION

By swinging-fork and Girling S/B-type 3.5-in piston stroke units with cast light-alloy bottom yoke and light-alloy collets at top location with the fixing eye.

Pivot bush details:
"Oilite," 1.001/1.002 in. bore, by .995/1.005 in. long under flange (2 off).

CARBURATION

500 c.c.
Amal Monobloc type 376/6: 1 in. choke; 240 main jet (no air filter); 230 main jet (with air filter); No. 4 throttle slide; centre notch needle position; .1065 needle jet. 30 pilot jet.

600 c.c.
Type 376/78; 1 1/16 in. choke; with 300 main jet (no air filter); 220 main jet (with air filter); No. 4 throttle slide; fourth notch from top needle position; .1065 needle jet. 30 pilot jet

LUBRICATION

Circulation by double gear type pump delivered under pressure to filter chamber with direct onward supply to centre and big-end bearings. Supply to rocker mechanism by metered bypass with provision for back draining to camshaft housings: final overflow to crankcase and sump.

ELECTRICAL EQUIPMENT

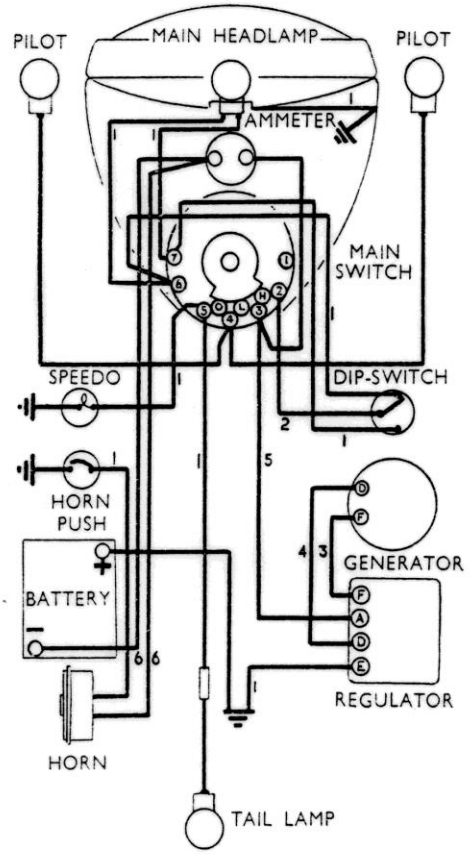
Lucas K2F magneto and E3L 60-watt dynamo with output controlled by MCR2 C.V.C. set as follows:

Cut-out:
- Cut-in voltage: 6.3/6.7 volts.
- Drop-off voltage: 4.5/5.0 volts.
- Reverse current: 3.0/5.0 amp.

Regulator: (setting on open circuit)

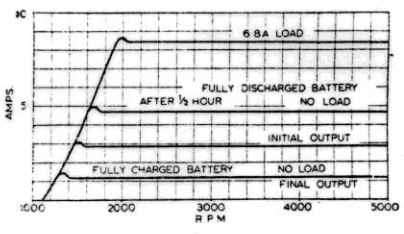
10°C. (50°F.)	7.7/8.1 volts
20°C. (68°F.)	7.6/8.0 volts
30°C. (86°F.)	7.5/7.9 volts
40°C. (104°F.)	7.4/7.8 volts

Bulb Ratings:
Headlamp, 6v. 30/24w.
Pilot, 6v. 3w.
Tail, 6v. 18/5w.
Speedometer 6v. 1.8w



Wiring diagram for the A.J.S. and Matchless "twins."

Key to colour code:
1 = *Black*
2 = *Blue*
3 = *Green*
4 = *Yellow*
5 = *Purple*
6 = *Brown*



(Right) Performance curves for the Lucas E3L dynamo with voltage regulator.

Event Calendar

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. Just drop the editor a line at OzVinReview@Gmail.com .

2016	
August 18-21	North American Vincent Rally 2016 – in Missoula, Montana. Contact Josh Bogage for more information, email Joshuabogage@gmail.com.
September 17-18	40th Classic Car and Bike meet. Wakefield Park, Goulburn, NSW. For more info email vscca40@gmail.com
October 15-16	Girder Fork Rally, Cooma, NSW - email owenpamjohnson@gmail.com for more info.
October 15-17	VOC Australian National Rally, Parkes, NSW. contact alynvincent@mac.com for more information
2017	
March 19-30	Tassie Tour 2017 (Australia), open to pre 1970 British bikes – for more info contact tassietour2017@hotmail.com . This fantastic 10 day tour is limited to just 100 bikes so if you are interested, act now.

WORKSHOP WISDOM

Sealed Drive-side Crankcase Bearings?

There has been a growing fashion amongst Vincent owners of installing a sealed drive side bearing to replace the original non-sealed drive-side bearing in an attempt to reduce the passage of oil between the crankcase and the primary drive case. In fact even the VOC Spares company now lists a sealed alternative for these bearings.

But take care! The use of sealed bearings in this position, where the engine sprocket abuts the bearing is not desirable. In the manufacture of the sealed bearing, the bearing manufacturer machines a lip on the inner of the bearing race to carry the bearing seal thus significantly reducing the area of contact for the engine sprocket to almost a knife edge. Over time the action of the ESA allows this bearing edge to intrude into the face of the engine sprocket thus resulting in the drive sprocket moving out of correct alignment with the clutch sprocket (shortening the life of the primary drive chain and the drive sprockets) along with an effective loosening of PD7 that may result in early failure of the ESA springs. The solution is to stay with the open bearings as intended by the two Phils.

If you are bothered with oil migration into the drive case then bite the bullet and solve the root cause which will be incorrect breather timing and/or failing piston rings.

If on the other had it is migration of oil FROM the drive cases into the crankcase you want to resolve then consider fitting a correctly designed drive case seal, such as described by Paul Richardson in his essential book "Vincent Motor Cycles" (This book is available from the VOC Spares company, part # RP/12 for just GBP 18!)

Thanks to Mike White, Canada, for this gem of Workshop Wisdom.

What The Hell Happened!

Take a close look at this photo of a pleasant Australia country road mid-point of an exhilarating but gentle 70 mph corner. July 23 2015 I traversed this stretch, mostly on my Comet then for about 20 yards – airborn. Look again at the left foot and you can see a mound in the road surface where an over enthusiastic road repair crew had created an all but invisible 'speed hump' just waiting for an unsuspecting motorcyclist – me.

Not long after I became the custodian of my Comet, some 4 years back, I experienced a mild tank slapper and while it did not bring me down it sure shook me up. After consulting fellow Vincent owners I took the following actions to prevent a repetition (or so I thought). I fitted a "D" series twin disk steering damper, modern tyres and modern IKON shock absorbers, front and rear. I also fitted a set of Christian Patzke's tapered head stem bearings. Three years and over 35,000 miles of enjoyable and event free riding followed – until I encountered this exact bit of roadway. I have no visual recollection of what happened, I do recall feeling the violent shake of the handlebar and thinking to myself "That's strange – I know I tightened up that steering damper". The next memory I have is being loaded into an Ambulance which was, I am told, some 20 minutes after the incident.

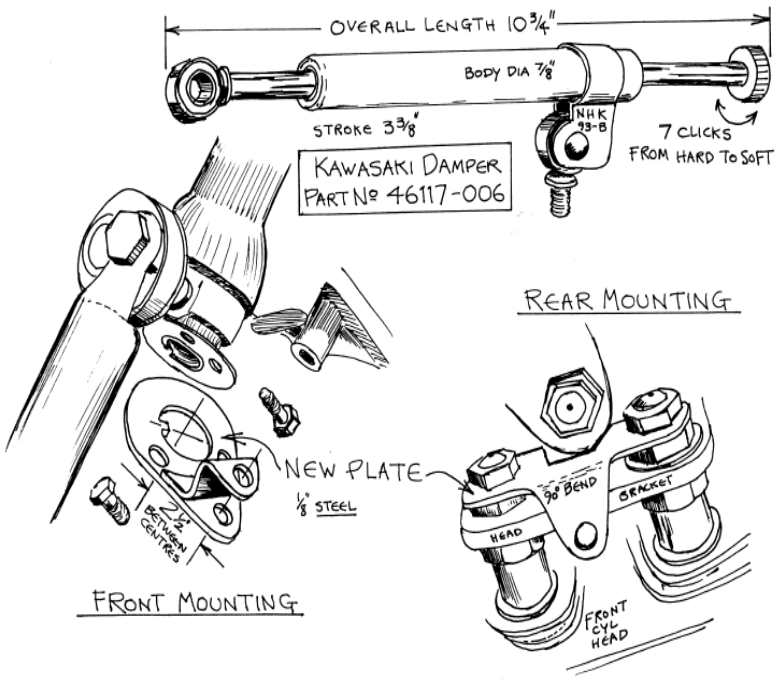
Reflecting on the events of that day and having talked to a number of witnesses (I was riding as part of a touring group) what happened was a massive tank slapper. My Comet hit the mound in the road and became airborn and I presumed what happened then was that the Girduralics relaxed into their lowest position with the links pointing downwards at landing. Result – instant instability and the tank slapper. Now as we all *should* know, the friction type of steering damper is most effective at slow rotational speeds but as the rotational speed increases its effectiveness decreases to the point where, as my situation attests, it becomes next to useless.

Damage to the bike, thanks to the crash bar (VOC Spares Part CB1SS) was minimal. The bike landed on its left side and slid down the roadway for some 30 yards; the left footpeg and hanger were badly bent, the drive side cover gouged but not penetrated and there were 2 dents in the top of the fuel tank where the rear of FF4 hit it on each side, plus the right side of the

handlebar was bent forward by around 30 degrees– it was a MASSIVE slapper. Other than that, not more than a few scratches plus a perplexing flat spot on the rear tyre.

Me?? Shattered right wrist and some minor abrasion to my left leg. Given there was no impact damage at all to the right side of the bike or my right glove I believe it was the sudden movement of the handlebar that was responsible for the damage to my wrist.

Both the bike and I have recovered and are back riding – but this time I have fitted a modern hydraulic steering damper which has the opposite performance to the friction disk type. Hydraulic damper offer only low resistance a slow movement but become progressively stiffer as the rotational velocity of the steering stem increases – just what's needed to effectively control any tendency to Tank Slap.



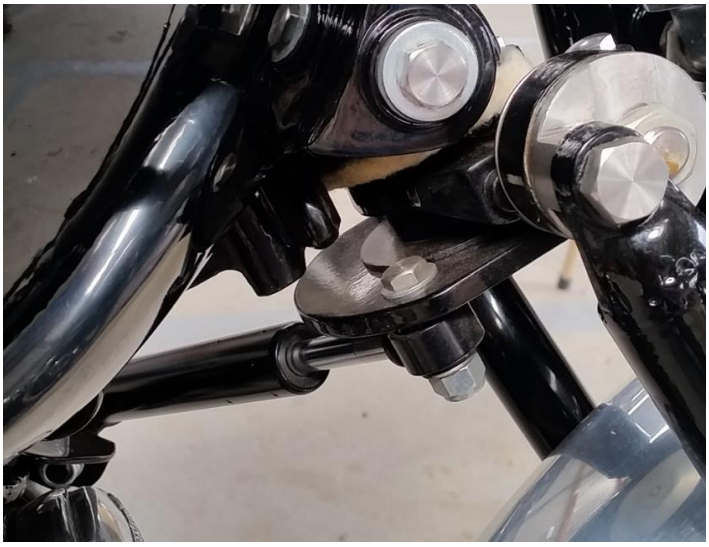
Installation of my new steering damper generally follows that as described by Reg Bolton in MPH #553 though Bill Parrs' solution described in MPH #716 is also effective.

Reproduced here is the drawing provided by Reg Bolton in MPH 553. *Big vote of thanks to Reg for giving OVR permission to use it.*

What the drawing does not make clear is that you need to drill and tap the two 'lugs' on the underside of FF33AS to secure the front mounting plate. Below are some examples depicting various alternative hydraulics steering damper installations. It really does not matter what installation method you use – just fit a modern hydraulic steering damper for your own safety. It was almost 8 months before I was fit enough to ride after my tank slapper!

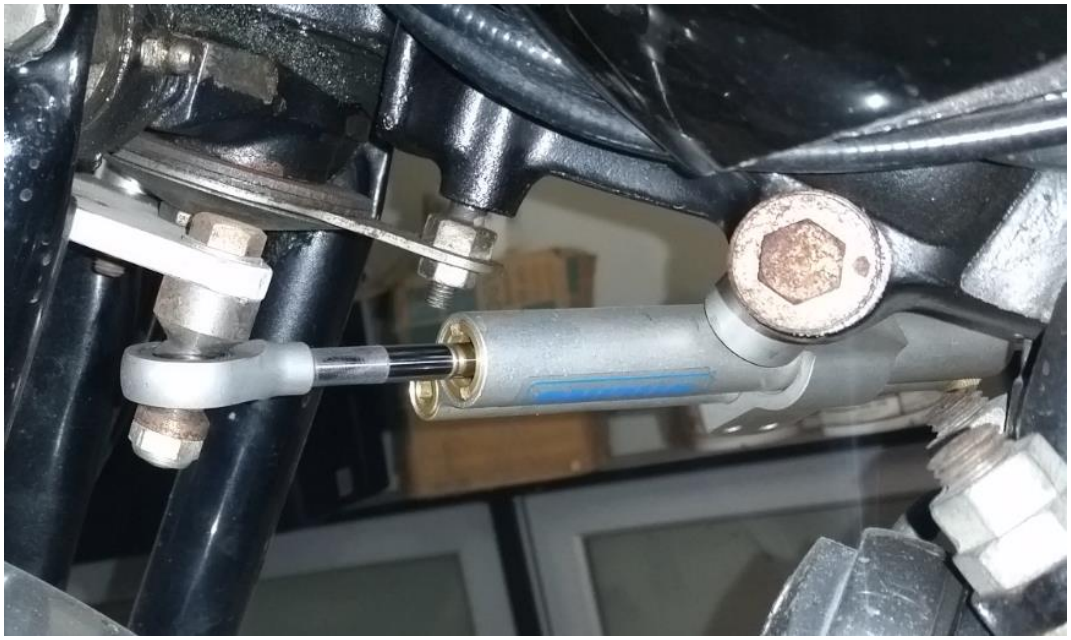
Click **HERE** to better understand why our bikes are prone to instability.

1. The Irving-Vincent method that makes use of the front sidecar mount



2. Phil Canning's elegant solution

3. And to conclude, below is Dean Davidson's installation, also using the sidecar mount.



The Unified Theory of Motorcycle Steering – Part 2

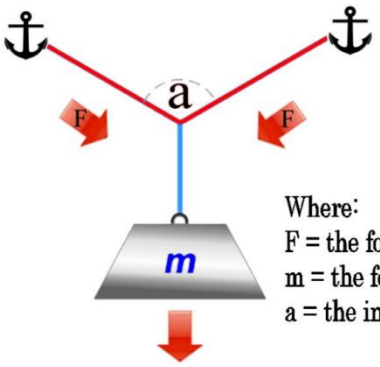
A OVR contribution from Andy Luck, Australia

Andy continues his in-depth paper on the theory of Motorcycle Steering from where he left off in the last edition of OVR.

What is the force causing the steering response? Gravity and the 'Power Thrust Vector'! First, Gravity. Gravity is the primary 'engine' of motorcycle steering. As the steering head moves to the right, the centre of gravity also moves, and once the vertical line through the Centre of Gravity (CG) of the motorcycle moves outside the contact point of the tyres the bike will fall to the right. Everyone has experienced this, and if the motorcycle is stationary and you don't support the bike with your right leg, it will fall over. Embarrassing and expensive!

If the motorcycle is moving, as the CG falls to the right the motorcycle commences turning in a curve to the right. The longer you maintain the countersteering input, the further the CG moves to the right and the further the motorcycle will turn to the right. Once you remove the countersteering input the curve on which the motorcycle is travelling will stabilise as the front wheel is now pointing along the line of the curve. Hopefully this curve matches the road on which you are travelling, otherwise your ride will shortly be painfully terminated in a shower of sparks and pain!

It is at this point that I need to introduce the concept of Vectors. A Vector of a linear force is the effect of that force acting at an angle. The less the angle the closer the Vector is to the force, at zero degrees the Vector is equal to the force but as the angle increases the Vector reduces. An example of this is being towed on a motorcycle (not easy on a modern motorcycle, but I have done this on my Vincent Comet many years ago. Wow, that would be 1967!) If you loop the tow rope around the left hand bar you can comfortably be towed in a straight line with the tow rope at an angle to the towing motorcycle on your left. The tension in the towrope has two vectors, one straight ahead and the other to the left. You balance your off centre attachment to the rope with the correct angle to produce a comfortable straight ahead vector.



$$F = \frac{(m \times 0.5)}{\cos(a \times 0.5)}$$

Where:
F = the force exerted to each anchorage.
m = the force exerted by the load in kN or lbf.
a = the internal angle between the two slings.

Vectors allow us to visualise the forces involved. We know that it is harder to hold up a stationary motorcycle the further it leans over, don't we? This is because the gravity vector pushing to the right increases as the angle of lean increases. At the same time the gravity vector acting through the CG to the tyre contact point decreases. The sum of these gravity vectors is always equal to the weight of the motorcycle (and rider of course).

I did some not very rigorous experiments to show this with a rod on a set of scales, watching the weight measurement as the rod fell from vertical to horizontal. As the rod fell to the horizontal the weight reading dropped until it was zero when the rod was horizontal. I freely confess this would have been a lot more scientific with a hinged mount between the rod and the scales and a high speed camera recording the whole thing for subsequent analysis. However I could not do that, sorry!

Creating this document from my previous papers did make me realise there is something I had not previously identified. If the force at the ground decreases as a motorcycle leans then the available frictional resistance between the tyre and the road will also reduce as the lean angle increases. This obviously does not happen so I conclude that the centrifugal force vector down the motorcycle centre line compensates for the reduction in the gravity vector at the tyre contact point. Sorry you will have to do the maths!

You can experiment with this concept by standing vertically next to a wall with your shoulder against the wall. There is no pressure against your shoulder, is there? If you now move your feet away from the wall, so that you are leaning against the wall, you can feel a pressure on your shoulder. The further away from the wall you move your feet, the greater the pressure on your shoulder. This pressure is caused by the horizontal gravity vector. If you don't believe me, try it!

I had thought this would be unarguable, but one of my correspondents insists this force is caused by the wall. No, the force is caused by gravity, the pressure on your shoulder is the equal and opposite force provided by the wall. Without this you would fall through the wall!

Next, the 'Power Thrust Vector'. This is the effect which also aids the steering response. This is original thought on my part, actually a development of Keith Code' arguments that power on a chain driven bike actually makes the rear suspension rise, not squat as most people think. As this is bound to be controversial I had better address this issue now before explaining the 'Power Thrust Vector'.

It is true that sudden application of power on a chain driven bike causes the suspension to squat INITIALLY, but sustained power causes the suspension to rise. This is because the rear wheel axle is being pushed under the rear suspension pivot point by the force being generated at the ground. To observe this it is only necessary to place the front wheel of the motorcycle against a wall and let the clutch out with the engine running and in gear. The back of the bike will rise. The wall represents an infinite amount of the rolling resistance which the engine normally has to overcome when the bike is in motion. Photographs of bikes accelerating with their front wheel in the air do not show the rear suspension collapsed, do they?

OK, back to the 'Power Thrust Vector'! When the front wheel is turned left the motorcycle is 'hinged' around the steering head and the thrust at the rear wheel tends to 'fold' the machine to the right. An extreme example of this is when you attempt to mount a kerb with the wheel turned. If you try this the steering head is violently forced to the 'countersteering' side. This is the 'Power Thrust Vector'. I might copyright this term!

I believe this effect contributes to both Mode 2 and Mode 3 countersteering. Addition of power when initiating a turn 'bends' the 'hinge' at the steering head and assists in forcing the CG to the 'countersteering side. I identified the 'Power Thrust Vector' as a result of empirically experiencing an increased turn rate after adding power when turning. I should emphasise that this effect only occurs when the steering is turned from the straight ahead position.

Once the motorcycle IS stabilised in a turn it is obvious that there is some force which is balancing the horizontal gravity vector in order to stop the motorcycle lean angle increasing until the motorcycle has fallen on it's side, yes? As this is unlikely to be a conveniently placed wall running around our curve, it must be something else.

That something else is centrifugal force. Centrifugal force is generated when a moving object deviates from a straight line. (I will avoid any discussion of the difference between centripetal and centrifugal force to avoid

unnecessary confusion) It is probably appropriate to quote Newtons first law of Motion here. “A body in motion continues to move in a straight line with uniform velocity unless acted upon by some external force”. In other words, in order to move a motorcycle from a straight line, a force is required. This force is provided by the horizontal gravity Vector. Centrifugal force balances this, the tighter and or faster the turn, the greater the centrifugal force and the further the motorcycle must lean over. Conversely, if you speed up in a turn without adding more countersteer the motorcycle will stand up as the centrifugal force increases until the turn radius increases to lower it again to match the current horizontal gravity vector.

At a certain point the centrifugal force will exceed the available gravity vector and the additional cornering force must be provided by the available traction at the tyre/road interface. Now you begin to scrub your tyres and, at some further point, the centrifugal force may exceed the sum of the gravity vector and the available traction side thrust. At this point you have just lost the front end! Implicit in this explanation is that there may be combinations of speed and turn radius that can be obtained WITHOUT requiring any side thrust from the tyres.

I have struggled a little with this statement, I intuitively feel this is possible as it is consistent with my arguments above and could explain the phenomenon of a motorcycle being able to be ridden on black ice. I have several times read of people only falling on black ice once they have stopped and attempted to dismount! Not only that; Ben, a friend of mine who is an extremely gentle rider, has achieved over 25,000 klm from his Goldwing tyres with hardly any noticeable wear, whereas I, who throw my Goldwing around like my VFR, wear the front tyre out before the rear tyre in less than 15,000 klm. I am obviously using more side thrust than Ben, perhaps he is not using any? This is original thought on my part and Keith Code makes no such suggestion in his first 'Twist of the Wrist' book, however I still think it has value. Someone has to say it first!

Summoning my rusty maths I have convinced myself that a motorcycle, or any other object, when leaned over, must have an equal and opposite horizontal gravity vector acting at the ground. The question I ask myself is, once there is centrifugal force at play, acting through the centre of gravity and neutralising the horizontal gravity vector acting in the direction of the turn, is there still an opposing horizontal gravity vector at the tyre ground interface?

If the answer is no, then the riding on black ice trick could have an explanation. However, I do recognise that whenever the ‘Power Thrust Vector’ or a steering input is present, there will be a side thrust required. Moral, don’t add power or steering input on black ice! I have no proof, or examples that would indicate that I am right about this, I just intuitively believe that it is true. Feel free to reject it, or better still come up with the proper mathematical proof, one way or another!

I am reasonably happy with the above explanation of countersteering in Mode 2. Now we come to discuss countersteering in Mode 3. Mode 3, remember, is when the motorcycle is already banked over in a turn to the right and you wish to turn to the left (or vice versa). I have never seen any explanation of countersteering in Mode 3 so this is completely original thinking on my part. It seems obvious now but it was not obvious to me in 1984!

In this example of Mode 3 we are executing a high speed right turn, say on Winton circuit (where I first pondered the problem) and there is a left hand turn rapidly approaching. We have our right footrest on the deck and give a mighty countersteering input to the left by pushing (hard) on the left hand bar. Bang! Almost instantly we are on the footrest on the left hand side. How did we do that? Our steering head obviously cannot fall UP, but that is what just happened, very fast! How?

Some would have you believe that gyroscopic precession is totally responsible for lifting the steering head up from maximum lean to the right to maximum lean to the left. I cannot believe this and have long believed that the forward motion of the motorcycle must somehow be responsible. Only now, however, do I believe I can explain it.

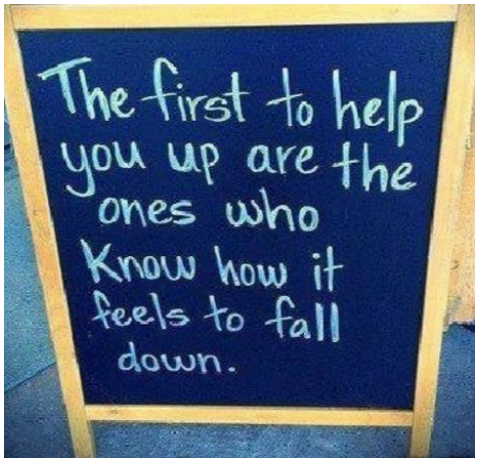
In our Mode 3 example you are turning to the right at maximum lean with your footrest on the deck. You are in a position of stable equilibrium, that is, the centrifugal force generated by your deviation from a straight line is exactly balanced by the gravity vector to the right and the side thrust at the tyre road interface and your wheels are in line with the curve on which you are travelling.

The left turn is approaching at high speed and you need to turn left, what do you do?

You add a large countersteering input, by pushing (hard) on the left hand bar. This will lift the steering head in the same way it moved when the bike was vertical, by leverage against the front tyre contact patch, plus the gyroscopic precession force. This reduces the right horizontal gravity vector and immediately liberates a component of the centrifugal force plus the 'Power Thrust Vector' is now available. It is the enormous quantities of available Centrifugal Force which lift the motorcycle around the tyre contact patches, rather like letting the genie out of the bottle!

As the Center of Gravity rises, the horizontal gravity vector diminishes and the available opposing horizontal centrifugal vector increases dramatically. It seems to me that it is the rapidly increasing horizontal vector of Centrifugal Force which provides the energy to snap a motorcycle from right footrest to left footrest, or rather, as a reviewer of this document pointed out, from footrest to vertical. At that point we are in Mode 2 again!

Here I will return to discussing Mode 1 steering. Mode 1 is positive steering in that the rider turns the bars in the direction he wishes to go, right for right and left for left. The centre of gravity moves in the opposite direction to the steering input as it does in Mode 2 and 3 but in Mode 1 the centre of gravity of the combined bike and rider must always remain above the contact point of the wheels, but how this is achieved is not important, the motorcycle may lean to the left and the rider to the right or vice versa. This is necessary because there is NO centrifugal force at slow speed to balance any horizontal gravity vector caused by the motorcycle learning so you cannot allow any horizontal gravity vector to rear its ugly head.



As you see Gravity controls both modes! In Mode 2, the horizontal gravity vector moving the motorcycle centre of gravity to the right is balanced by the centrifugal force generated by the curved path of the motorcycle, whilst in Mode 1 the action of moving the centre of gravity to the right is balanced by the rider moving HIS centre of gravity to the left.

Quite simple really, when you think about it. My son thought it was 'bloody obvious' when I discussed it with him! He is a biker but at the time was young enough to know everything. I had just not really thought about it at all until I started pursuing the 'how does it fall up?' question.

Long Marston Vincent Event 17th April 2016

An OVR contribution by Rob Staley

When I first had the idea of a Coventry section visit to Long Marston, all I had in mind was for us to watch the NSA (National Sprint association) event. But as it was also a "Run What Ya Brung" meeting, I then thought I could perhaps get one or two Vincent racers to do some demonstration runs and persuade Shakespeare County Raceway (as Long Marston is now called) to allocate us some paddock area.

Just some of the bikes in the pit area

I'm new to this sort of thing, so this was my first experience of the chicken-and-egg problem of event organisation, in that it is necessary to commit to some estimate of numbers before a single person is recruited. So some key people's willingness to pitch in was greatly appreciated. Jerry Cookson of SCR put me in touch with Chris Illman, and he kindly agreed to bring Methamon, which was a brilliant start.

Chris Chant of the Coventry section and Paul Champion of the Kent section also provided invaluable assistance with recruitment. It has been a pleasure to meet our "star attractions" and the many splendid volunteers at SCR who made the event possible.

As I have already written an account of the days "racing" for MPH, I will not repeat that here. There is also a comprehensive collection of photos and few films that can be viewed on the Coventry section website http://coventryvoc.co.uk/

Instead I thought some of the information that had to be left out of MPH might be of interest.

I will start with the times. The full spreadsheet sent to me by SCR is extraordinary, with over 70 columns of information for every run. Below is the much edited version.

Alan Wager on his much modified "B"

Race Number	Competitor Number	Competitor Name(s)	Description	60Foot Time	330Foot Time	1/8 mile Time	990Foot Time	1/4 Mile Time	1/8 mile Speed	1/4 Mile Speed
353	86	Julian & Clare Bishop	Rapide engined sidecar outfit	2.398	6.322	9.536	12.284	**14.856**	75.350	**90.03**
354	VN119	John Renwick	Epimetheus	1.952	4.912	7.220	9.143	**10.921**	111.590	**130.68**
355	VN4	Tim Kingham	Racing Comet	3.030	7.211	10.736	13.799	**16.656**	68.180	**79.48**
356	VN3	Alan Wager	B Rapide, tuned engine	2.353	7.177	10.828	13.676	**16.289**	72.110	**82.47**
357	VN1	Rob Staley	C Rapide, standard engine	2.374	6.270	9.682	12.671	**15.486**	70.410	**81.24**
358	VN315	Roy Robertson	Egli, 1300cc	2.108	5.235	7.703	9.794	**11.709**	99.620	**117.81**
470	VN3	Alan Wager	B Rapide, tuned engine	2.499	7.185	10.699	13.660	**16.416**	71.820	**84.37**
471	VN4	Tim Kingham	Racing Comet	3.758	9.713	15.191	20.464	**25.892**	43.430	**39.26**
472	VN1	Rob Staley	C Rapide, standard engine	2.358	6.913	10.947	14.231	**17.223**	62.110	**77.01**
474	86	Julian & Clare Bishop	Rapide engined sidecar outfit	2.162	5.984	9.180	11.968	**14.567**	75.420	**87.79**
476	VN315	Roy Robertson	Egli, 1300cc	2.324	5.578	8.124	10.252	**12.179**	96.820	**119.43**
573	VN3	Alan Wager	B Rapide, tuned engine	2.360	6.597	9.964	12.694	**15.159**	74.670	**93.66**
574	VN1	Rob Staley	C Rapide, standard engine	2.218	6.101	9.489	12.424	**15.176**	71.450	**83.69**
576	86	Julian & Clare Bishop	Rapide engined sidecar outfit	2.358	6.218	9.408	12.130	**14.628**	76.740	**92.35**
Run 1	243	Chris Illman & Sheelagh Neil	Methamon					**12.666**		**91.30**
Run 2	243	Chris Illman & Sheelagh Neil	Methamon					**12.721**		**116.87**
Run 3	243	Chris Illman & Sheelagh Neil	Methamon					**12.047**		**116.68**

I thought this provides an interesting comparison of my standard C series Rapide alongside Alan Wagers highly tuned B series Rapide.

Julian and Clare Bishop preparing to race the clock!

Chris Illman and Roy Robertson kindly provided the following information, which may not be readily available elsewhere.

Methamon

Sometime around 50 years ago, Maurice Brierley hung up his leathers and retired his Record Breaking Supercharged Vincent Sidecar 'Methamon'. Having achieved a great number of successes including two World Records, many Course Records and countless wins on his incredible Sprint machine, he consigned it to 'Museum Status'. After spells at Shuttleworth Air

Museum and then the VMCC Collection at Stanford Hall, it disappeared off the Radar. There was much speculation about the fate of this historic machine with suggestions that it had been robbed of its 'Blower' and key Engine components and the remaining parts disposed of. It was therefore extremely heartening to learn that not only that the machine had surfaced but, contrary to popular belief, it was completely intact with not a nut or bolt missing from its final incarnation just as Maurice last used it in 1965!

Chris Illman and Shellagh Neil aboard Methamon

As part of the VMCC's collection of machines, it was deemed appropriate that members of the Sprint Section of the Club should be charged with resurrecting Methamon to running status rather than just a static exhibit. The objective was to enable the machine to be seen and heard at some of the more important events in the Club's calendar. Would it be conceivable with little more than 12 weeks until its debut at the Festival of 1000 Bikes, in mid-July that Methamon could run again after 45 years in hibernation? Well, we all like a challenge!

With the VMCC's blessing and support, Chris Illman and Colin Jeffries began the painstaking process of inspecting, recording and dismantling the machine to determine whether or not it would be a viable proposition to bring Methamon back to life. 45 Years is a long time to stand around doing nothing with the potential of internal corrosion especially when considering the exotic diet of 'R' and Methanol/Nitro mix that sustained Methamon in its prime! Incredibly, all fears of serious corrosion and worn out parts were misplaced. Apart from 4 decades of dust & grime and some significant deterioration of the tyres, the internals were in remarkable condition.

It was almost as though it had undergone a complete bottom rebuild before being consigned to the Museum. Ok, there were some things that needed attention, the most significant of which being the necessity for the replacement of the Valve Guides. Not the easiest of jobs however considering that the heads are of the 'Big Port' variety (1 ½") with huge Nimonic 80 valves (2") with non-standard Stems and what is believed to be 'Gold Star' springs. Thanks to Bob Culver the Vincent Guru, the heads are again like new. Apart from some remedial attention required to the Supercharger drive shaft, Methamon was basically in a remarkable state of preservation.

With a record of dozens of photographs taken at each stage of dismantling, the entire machine was carefully reassembled taking the utmost care to retain originality where ever possible, with a view to achieving that 'just used' look of 1964 when Maurice last rode the beast. To clarify things here, it was never envisaged that the machine be 'Restored'. To do so would have erased Maurice's stamp on it. Rather a sympathetic 'Mechanical Re-commissioning' was the objective and we believe that is what has been achieved.

After some serious Midnight Oil being consumed in just over 10 weeks, Methamon was wheeled out on to the Mallory Start & Finish Straight to take part in the Sprint Sections demonstration on Sunday 11th July and for the first time in 45 years it roared into life and showed the assembled crowd what Sprinting in the 60's was all about.

The technical specification of the Methamon.
It is not 1000cc but 1148cc. It is bored to 90mm, to make it 90 x 90, and fitted with forged G50 Matchless pistons. The supercharger is a C142 Shorrock vane type of 1420 cc capacity running at 0.84 engine speed. It is chain driven via an extra sprocket on the clutch. The compression ratio(s) are 9.5 to 1 on the front cylinder and 9.1 to 1 on the back. The reason for this was that it was the easiest way to compensate for unequal distribution of mixture from the blower due to the rear cylinder being closer. So, Maurice set it up for equal compression pressure rather than equal compression ratio. The boost pressure was 13 lbs so that gave 27.7lb absolute.

The boost gauge is mounted in the nose of the sidecar and it is the passengers job to take readings on the runs. Maurice reckoned the bike gave 130 bhp on methanol and 150bhp on 20% nitro. He'd made a dynamometer in his workshop. It was ok for the unblown Methamon but the blown version took it off the scale so it was educated guessing after that. The plugs were Champion N51T for methanol and N53T when we used 20% nitromethane in methanol mixture. Methamon does about 3 mpg! The carburettor is a 2" diameter S.U. from a Jaguar car. The main jet is a 1/4" reamed hole. Maurice had two needles – a standard one for methanol and a rich one Nimonic tube also forms the first three inches of the exhaust pipes to resist the erosive effects of the heat when on nitro.

It might have been coincidental that Maurice worked at de Havillands at Hatfield. The primary chain is a standard single run item in place of the normal Triplex. The front end is standard 7R - forks and wheel. The rear end comprises an extended Velocette rear fork and Woodhead Munro suspension units. Needless to say, Maurice had fitted an Avon slick rear tyre which he used to "light up" when leaving the line. Now fitted with an M & H Slick. The sidecar is a bespoke Watsonian device which weighs in at 41.75lbs. The sidecar is on the right of the bike to accommodate Maurice's artificial leg. It was because of the latter that the bike is fitted with a foot operated parking brake mechanism integral with the rear brake pedal and the gear change is similarly mounted and operated by cables! The brake pedal was above the footrest as the gear lever was below it - both being on the left hand side just in front of the rear spindle. The gearing was set for 82 mph in first, 132 in second, 165 in third and 215 in top for Kilos. The gearing has now been lowered for ¼ mile Sprints as Kilos are no longer run.

In July 1965 Methamon was timed at 148.2mph for the last 88 yards of a standing start kilometre and reckoned to be doing over 150 going over the line as it was still accelerating at the time. In its unblown form it had been fitted with Lightning cams which had lots of overlap for normal aspiration. When he fitted the blower, Maurice found that he was not getting the expected power increase due to the supercharger blowing the mixture straight out down the

exhaust pipes during the overlap period. His answer was to fit road cams which had less overlap and kept the mixture in.

In 1965, Maurice declined to go to Ramsgate because by then the bike was already too fast for the Course and he was concerned about the braking distance.

Roy Robertson's 166mph 1272cc Egli

Built by owner-rider Roy Robertson from parts 1986-88, the new CTG Egli replica frame (designed by Fritz Egli in 1967) was bare metal, the engine just two odd 'chopped'1951 Vincent crankcase halves and a pair of damaged cylinder heads when the project began. Over the years it has been continuously improved and increased in capacity by boring and stroking to 90mm bore and 100mm stroke in 1997. When last tested the Vin. developed 94 bhp @ 6300 rpm at the rear wheel.

Many of the parts including the titanium parts and fasteners were made by the ex-toolmaker owner/rider in his hobby workshop, reducing the dry weight to 342 lbs. Now a great-grandfather and in his forty-seventh year of competition, Roy has competed on Vincent powered machines in over 375 races with many wins/podium finishes.

In 2004 and 2007 he took the Vincent to New Zealand and raced at the famous Pukekohe Classic meetings where a best placing of a 3rd and a handful of 4ths were achieved.

In 2002 at the "Classic Bike" Woodbridge Speed Trials, Roy managed 150mph over the flying quarter mile, with an exit speed of 151mph, setting a pre-1982 record . The following year, with a copy of Super Nero's "dustbin" fairing fitted, he increased his record to 166mph (on petrol) which may still stand.

Roy also regularly sprints the Egli Vincent and to date has a best time of 11.018secs for the standing quarter mile and a best terminal speed with the "dustbin" fitted of 131mph. He competed in his final road-race meeting at CRMC Brands in July 2015, where he finished 2nd twice and 3rd in the Twins Class. However, Roy still intends to carry on sprinting and will be at Long Marston and Brighton this year.

Ray Elgar, getting ready to launch!

Bran Chapman's bikes are particularly fascinating. The consumption of nitro is so fast, he does not bother with a float chamber, just feeds the fuel direct to the jet! I have added some images of an article I found online

I have also added a rather splendid picture of Ray Elgar. It is an old photo from the days when he used to do 12 second runs on his Egli which he rode to the event. He was not able to bring his Egli to Long Marston, but he came along to chat.

John Renwick, the creator and pilot of Epimethus, seems to prefer to keep the full spec of his bikes to himself, at least I have not found much online.

I will close by saying I think RWYB events are very well suited to classic bikes and their riders. The accident risk is probably lower than the on public roads, and with a little care, there should be little risk of mechanical damage. I think the threshold for entry is lower than for any other track event: Only an ordinary road licence is required, zip-up leathers are acceptable and the track fee was £25. I had considerably doubts about entering myself as I thought I might be painfully slow, but I greatly enjoyed it and was very pleased with my time.

I would love to see an "All Classics" RWYB event put on by a consortium of bike clubs, perhaps someone will take up the idea?

John Renwick's "Epitmethus"

above, "Mighty Mouse"; below, "Super Mouse"

The photos reproduced here were kindly supplied by Alan Turner. Some of them may appear in MPH.

Many thanks to Rob Staley for this wonderful item.

Two Australians At Large

The continuing travel diary of Joy & Bob Allen and their Shadow outfit.

Preamble: The Allens decided to take part in the 2015 VOC International Rally in Italy. In preparation Bob built up the Shadow outfit in his workshop in Australia then shipped it off to the UK. Bob concludes the story [editor]

The final Leg

Fuel is hard to find on the M16 and in the French villages it is self serve; in particular at many service stations you cannot get fuel unless you have a fuel card so we just waited for a customer and gave them cash to use their fuel card – thankfully this worked every time.

Trying to make time to reach the train to take us back to England skirting around Amiens and holding the throttle open heading for our designated fuel stop at Abbeville, as we rode along a Fiat pulled alongside us with a Frenchman videoing us - this was not unusual and he soon sped off at high speed but blow me down just 5 minutes later we came around a bend and he is again, this time videoing us again, from the roadside out of his car, we waved as we thundered passed and had a laugh to ourselves.

With only 2 kilometres to our fuel stop in Abbeville we heard a strange silence, she had stopped as we had run out of fuel for only the second time on the whole of the trip. We pulled over to the side of the Autobahn as far as we could to keep safe. I was just about to start walking with Joy was left to guard the precious Lady when along came the Fiat with our staunch admirer. Guess what? He is a Vincent fan, and offers to race off and get fuel for us; We give him 10Euro and just as he sets off he tells us that he can't get back on the Autobahn so keep an eye out for him on the bridge behind us. About an hour later we thought we had been scammed, we looked in the opposite direction and here he is walking along the road carrying the Jerry can of fuel; he had parked his car in a fire truck and emergency entrance he knew, climbed over 8 foot mesh gates then humped the petrol about a kilometre along the freeway. When I saw him I ran down to relieve him of the load as he was no spring chicken and only small and in his 70s but full of life. He was a bit keen on Joy and wanted several photos of him and her, must have been Joy kissing him with delight when he returned with the fuel. Joy was feeling a bit guilty about not letting me stop earlier for fuel at Amiens.

I poured the petrol in and the mighty Vincent started first kick again. Our French saviour was impressed then we pulled him on the pillion seat with no helmet and a fast trip back to find his car - he loved the ride and wouldn't accept any money for his efforts.

I rode the outfit off the highway up to the overgrown emergency gate we were taking photos and chatting when a Fire

Engine and the Fire Chief in his red land cruiser, pulls up behind our friends car. I couldn't believe it as the access looked like it never gets used.

The fire chief runs down and tells our friend to move his car. We first thought we were going to be in trouble for having fuel on the Autobahn and blocking the entrance till he told us to move out of the way as they were closing the Road.

Our French friend took his petrol drum and our stash of Corscian chocolate that Joy had convinced him to take for his trouble and waved goodbye. Happily the fire engine went racing down the road and we decided to follow. The fire chief looked at us and then waved us through as we had nowhere else to go other than out the emergency gate.

We rode for a minute to find around the corner that there is a car on its roof in the middle of the Autobahn. The firemen were all over it and other cars there to help, nothing we can do here, so I snake around everything and open the throttle with just 2 kilometres to the fuel stop. Stuff happens when you have to be on the last Train and why shouldn't today be any different.

It is about 2pm and I'm fanging it, we are going up a hill and into a tunnel (nothing good ever happens in a tunnel) at about 90 kph when the old girl starts to gently weave, I thought it was just the road then Joy was yelling and belting my leg that the sidecar wheel is going to come off, she wanted me to stop now but I had to wait to exit the tunnel to pull over safely.

A quick inspection finds a flat tyre and a broken spoke. I had a spare tube, levers etc but no air to inflate the tube. Ah Joy remembers the can of Finilec she had insisted we buy at the start of the trip, its buried at the bottom of the boot. I'm dubious but I squirt it in and Voila as the French say, hard as a rock. I then remove the broken spoke and get rid of it. Whilst I am performing this miracle, a Kombi Van pulls up and a young French couple jumps out and offers a hand, we thank them very much but the problem is fixed - we hope. With much insistence they will follow us to the next town to make sure we are going to be ok. I'm starting to feel old about now and thanked them profusely and kindly accept their kindness to babysit us to Boulogne -S -Mer just in case the Finilec fails.

We took off as normal and sat on 100kph with about 100 km to cover to reach Calais, they stayed for quite some time and then waved us goodbye and we were on our own again.

We pulled into Calais Euro rail and they had started loading we hadn't pre booked as we weren't sure if we would make it on time. If we had have booked on line we would have booked as a motorbike but they insisted we were to pay as a car, we didn't have time to argue so we rode straight on board the train, the bloke in front of us on a VW Trike and 2 Poms on BMWs 1200s (like bum holes everybody's got one)

Click HERE TO SEE a short video of us boarding the train

The train pulled out of Calais and I sat on the bike chatting to the Poms who had also been touring France. 30 minutes later we are in Folkstone riding out of the terminal.

We had lost an hour of daylight coming from France to England so we decided to ride to Maidstone in Kent to stay at the White Rabbit pub, one of our favourite stopovers for good food and friendly staff.

This was our third stay and we were greeted like old friends and told to park the shady lady in the staff courtyard where she always stays in her covers. After breakfast we jump onto the M20 circle London and speed to Great Gransden a bit above Cambridge to visit Hartsmere Logistics, our bike importer to let them know we had arrived and we would be dropping the bike off the next day for re-crating and shipping back to OZ .

We had elevenses (morning tea) and head north to the ancient village of Rushton which Mike and Debbie had recommended for us to stay at Rushton Hall.

Our trusty steed and Rushton Hall

A magnificent manor house situated on a vast estate. Mike and Debbie had organized to pick us up for a farewell dinner and listened to tales of travel, which was very nice and enjoyed by all.

The next morning we loaded the old girl for the last time on this trip very sad indeed, only to discover another two broken spokes on the sidecar and the Finilec still working, I imagine the problem is caused by the narrow country roads, when passing and hitting some potholes, no stress its only a bit over an hour back to the shipping yard, so I just removed the broken spokes and rode a little slower.

On arrival at our destination we had to pack everything that wasn't needed into the sidecar to cut our luggage carrying. Time to go home. It has been a great experience, we rode in England ,France, Switzerland ,Germany ,Italy, Corscia and made many new friends who we still keep in touch with

We put faces to names only read about in MPH "The Vincent Journal"

Joy and I would like to thank everyone who offered us helpful advice and assistance on this trip

We plan to return for an England, Ireland and Scotland adventure in the near future

Statistics

Just over 23,000 klm on a 1953 Black Shadow with Steib sidecar.

4 rear tyres, 3 chains, 1 clutch cable, 12 spokes, 1 set of points, 1 generator, 2 bolts and nuts plus 1 side mirror,

If you are considering riding anywhere but your well-meaning friends tell you "adventure is dangerous" reply; "yes but routine is lethal !"

Tread your own path- Goodbye for now, Bob & Joy

This is the conclusion of Bob's and Joy's amazing 2016 VOC International Rally Diary

At the last Minute!!

Here is a very opertune "Letter to the Editor" from Tom Gaynor, which arrived in the last few minutes before this issue was finalized. And given the front cover topic it seems that it just had to go into this edition.

Hi Martyn,

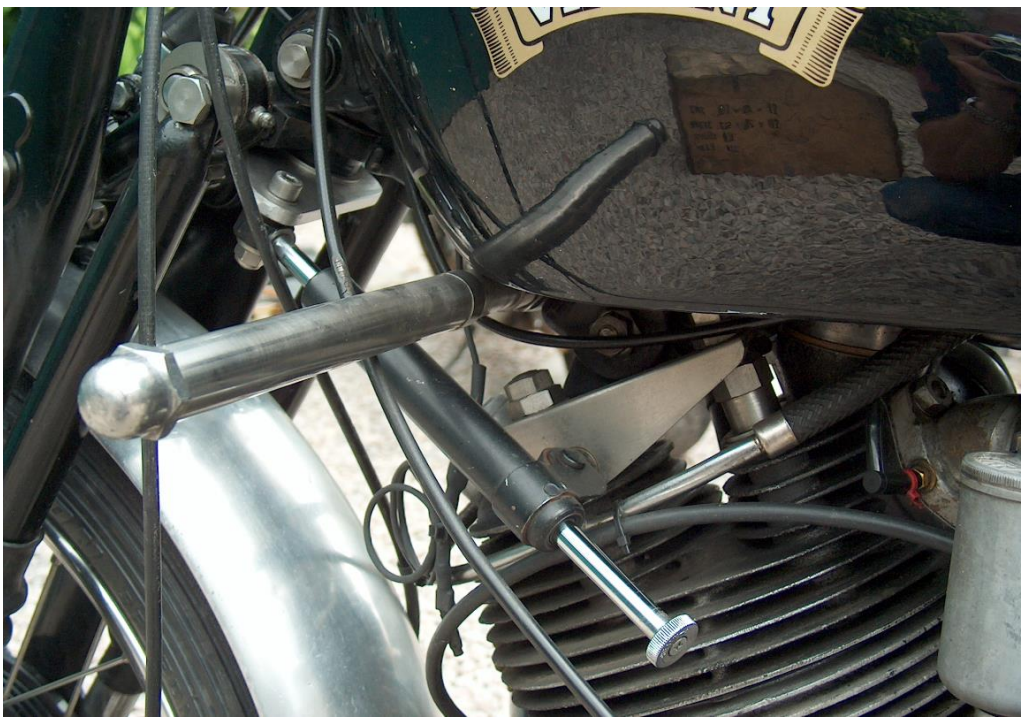
I've never had a tank-slapper on a Vincent, neither twin nor single, despite experimenting with one empty spring box on the front. It gave a very supple ride, but weaved so badly at 80 mph that my wife, following behind in the car, backed right off so she wouldn't run me over. (Later I used shorter springs – zero pre-load – which gave me what I wanted. The David Dunfey articles in MPH are well worth reading, and acting on.)

However I have HAD tank-slappers, the last of which, on a Guzzi Le Mans, 25th November 2002, my 60th birthday, bloody nearly killed me, so I fitted a steering damper to the Shadow for peace of mind.

As a friend once remarked in broad Borders Scots *"folks that talk aboot controlling tank-slappers have niver hid one. Ye've as much control as a rat has in the mooth o' a terrier".* This is my own experience, too.

I used a Kawasaki type damper – details in Reg Bolton's article on steering dampers in MPH. One important thing to understand is that what makes dampers work is the SPEED of movement. There is no need to set it up so stiff that "slow roll" occurs: mine is on the softest setting, but try to jerk the bars and it feels as though it has locked solid. Which is what you want. Otherwise, it might not exist. Which is the other thing you want.

(Late breaking news: the damper is a 46 117-006, which cost £220 from Kaw about 10 years ago. An identical replica cost about £40. No prizes for guessing which I fitted...)



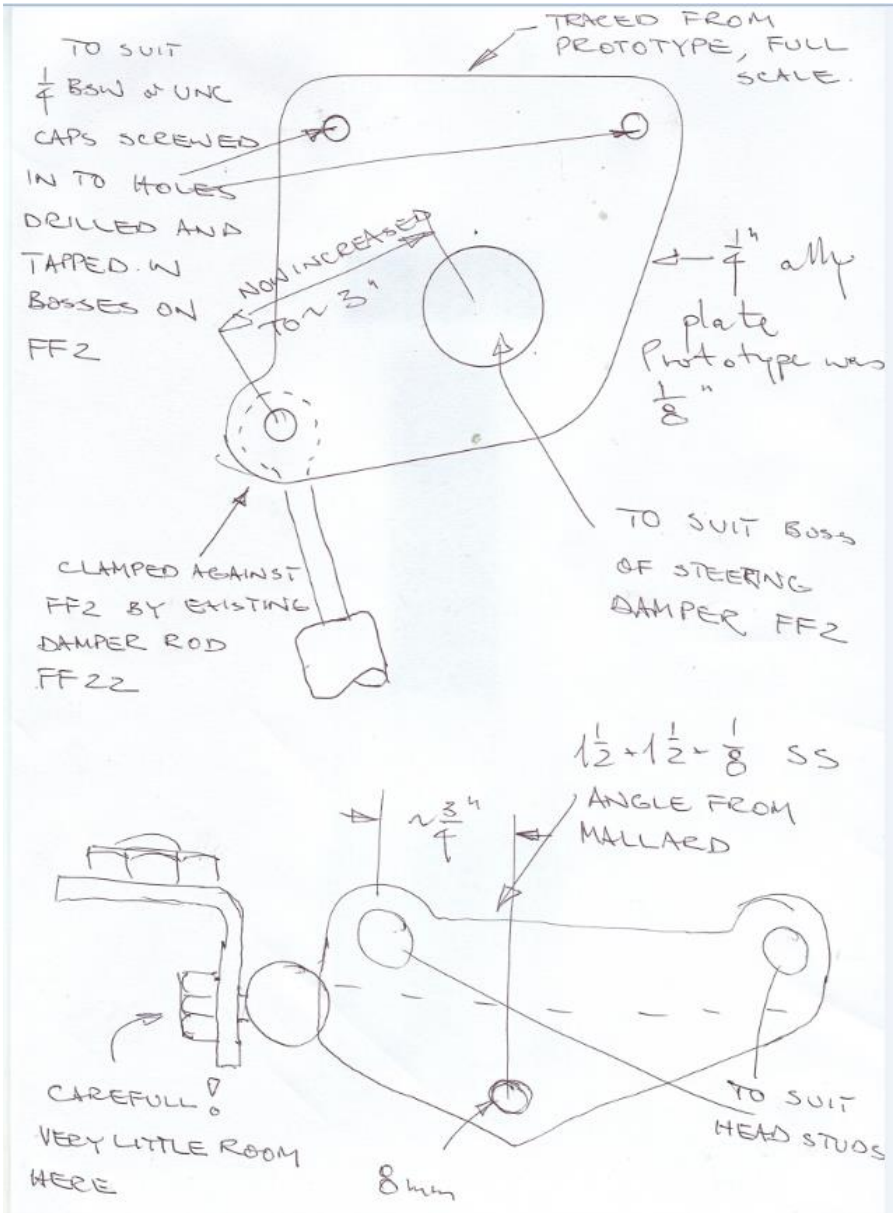
The drawing attached shows details and dimensions. You need a piece of stainless angle to bolt to the head nuts, and a bit of dural plate (minimium 1/4" is fine) for the rest of it. The only other thing you need is a way of FIXING the plate to the bottom yoke. If you are lucky, then the two

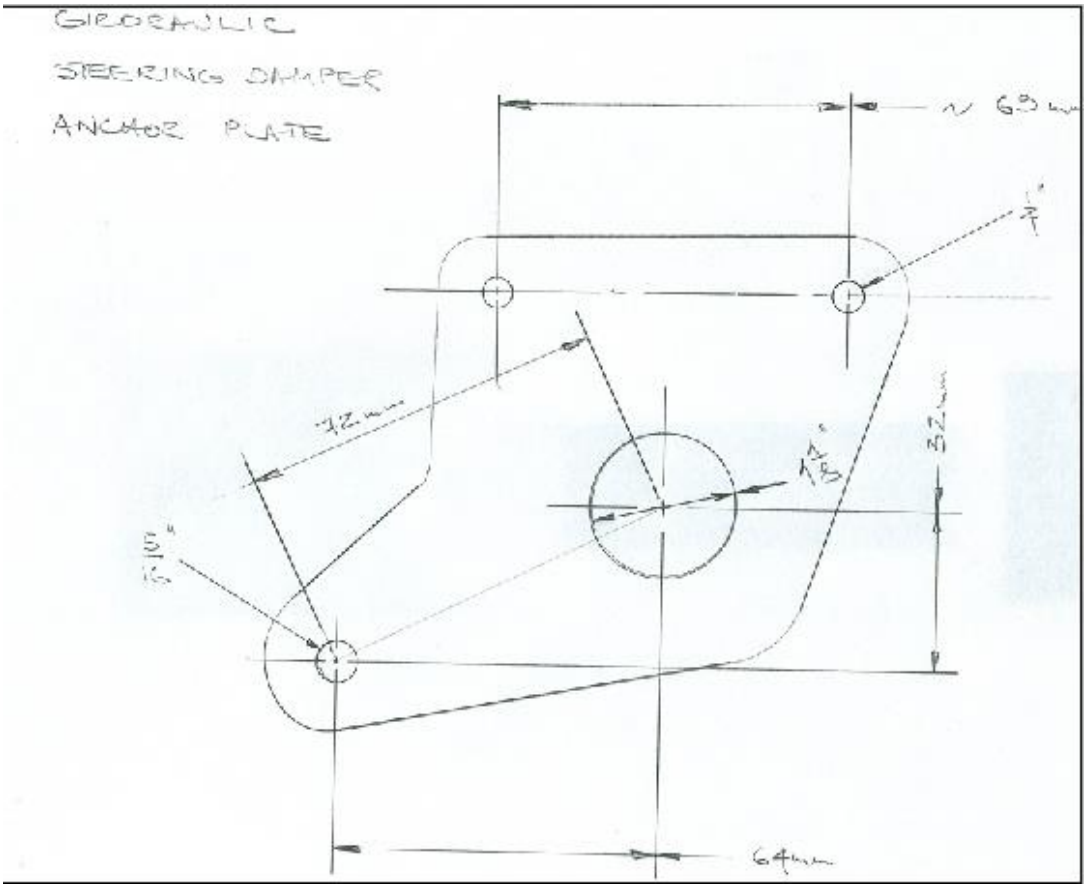
bosses on the yoke will already be tapped – according to KTB they were intended for a headlamp mounting. My bikes, 1951, had untapped bosses (most bikes do), so I had to drill and tap them.

The method is to measure the centre distance of the bosses, make the plate with 1/4" dia holes to coincide with the boss centres, fit the whole affair, scribe through the 1/4" holes to the underside of the bosses, and drill and tap the bosses 1/4" Whitworth. (1/4" UNC is effectively identical.) I can't remember now, but I think I made the centres for the tapped holes by using the plate as a template, then drilled and tapped the boss holes freehand. I definitely drilled them freehand.

One drawing gives the original layout (steering damper plate) and the other is the final version as fitted. There's something to be said for making the plates in 1/16" ally to make sure everything clears, before making final ones in 1/8" stainless angle, and 1/4" (or thickere) dural. Remember - there is no such thing as "a standard Vincent"...

Regards, Tom Gaynor, Scotland





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For Sale: Kick Start return spring for Burman BAP gearbox Vincent Comet Part PR50-130X (brand New) purchased in error from VOC Spares. A$20 plus postage: Contact Graeme on 0448480909

Almost Free: Following editions of MPH (1 copy of each) are available for just the cost of postage from Melbourne Australia. MPH Numbers: 423, 527 to 530, 532 to 553, 555, 573 to 576, 584, 590, 594 and 596. Contact Martyn by email goodwin@pobox.com or phone +61 419 499 901

For Sale: One of our readers from Victoria (Australia) is currently selling his Egli project. Asking price is UK£30,000. Any inquiries, please contact 998@egli-vincent.net who will on-forward to the owner.

Key features are:

Genuine 1951 Vincent Rapide Engine (Series C - F10AB/1/****); "Egli-Style" frame built by Sprint Manufacturing UK (S******); Currently registered by the VOC; Titled as a 1953 motorcycle and last registered in Western Australia in 1997; Numerous receipts concerning the new parts.

Details of the rolling frame

Norton Roadholder forks; 4LS front drum brakes with new "NOS" shoes, cables, chrome scoop covers and cap set; "Replico" fiberglass seat base; "NOS" front brake and clutch levers and cables; "NOS" speedo cable; "Tarozzi" new rear sets; "Akron" aluminum Rims

Details of the engine

"V2" clutch; "Boyer" electronic Twin Digital Ignition; New 32mm "Amal" Mk2 carbs (Old Amal carbs included); "TPV" Inlet Stubs; Other new parts and new spares. Old parts kept and included (see photos).

Main parts missing

Electric loom / Battery (not installed on the bike); Kick start; Seat Upholstery and mounting (shell supplied); Fuel Tank mounting brackets.

Glass protection makes the headlines and the bodylines at Earls Court

The Kangol Safety Helmet made from moulded Fibreglass to combine lightness with resilience and tremendous strength.

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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 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 for Comets plus an extensive range of excelent Vincent Spares. Ships Worldwide. Email for more information steve@conway-motors.co.uk

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

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

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

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

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

Restoration Services:

Steve Barnett, Australia**.** Master coachbuilder and fuel tank creater who does incrediable 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

General Services :

Cylinder Heads, Australia: Cylinder Heads are highly skilled engine experts with 30 years of experience operating from their new Ringwood 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. A precision engineer, Alex offers an extensive range of engine reconditioning and repair services; he also offers precision welding of all metals. For more information see http://www.cylinderheadsvictoria.com.au or phone Alex on (03) 8838 8515

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 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 the 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.

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 **Click Here** or telephone +61 2 4568 2208

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

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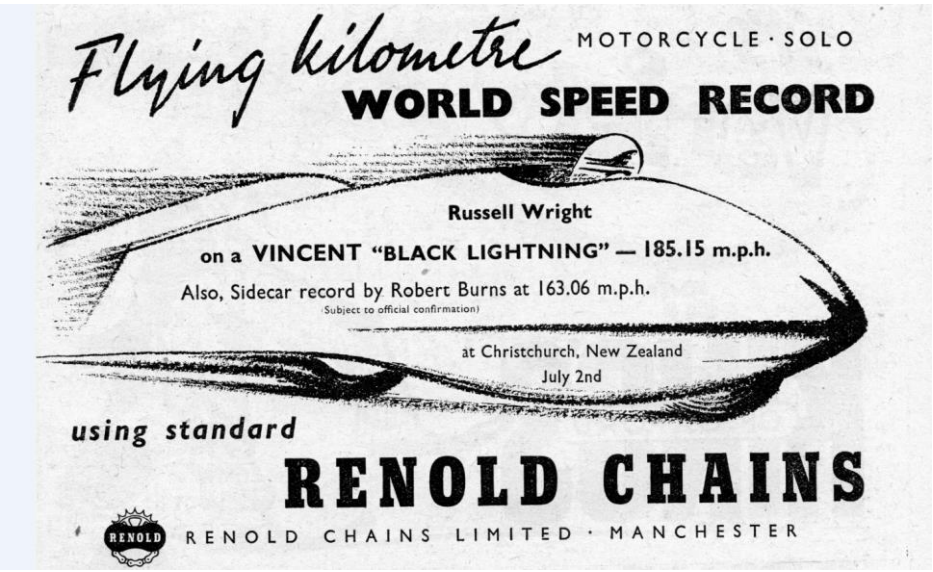

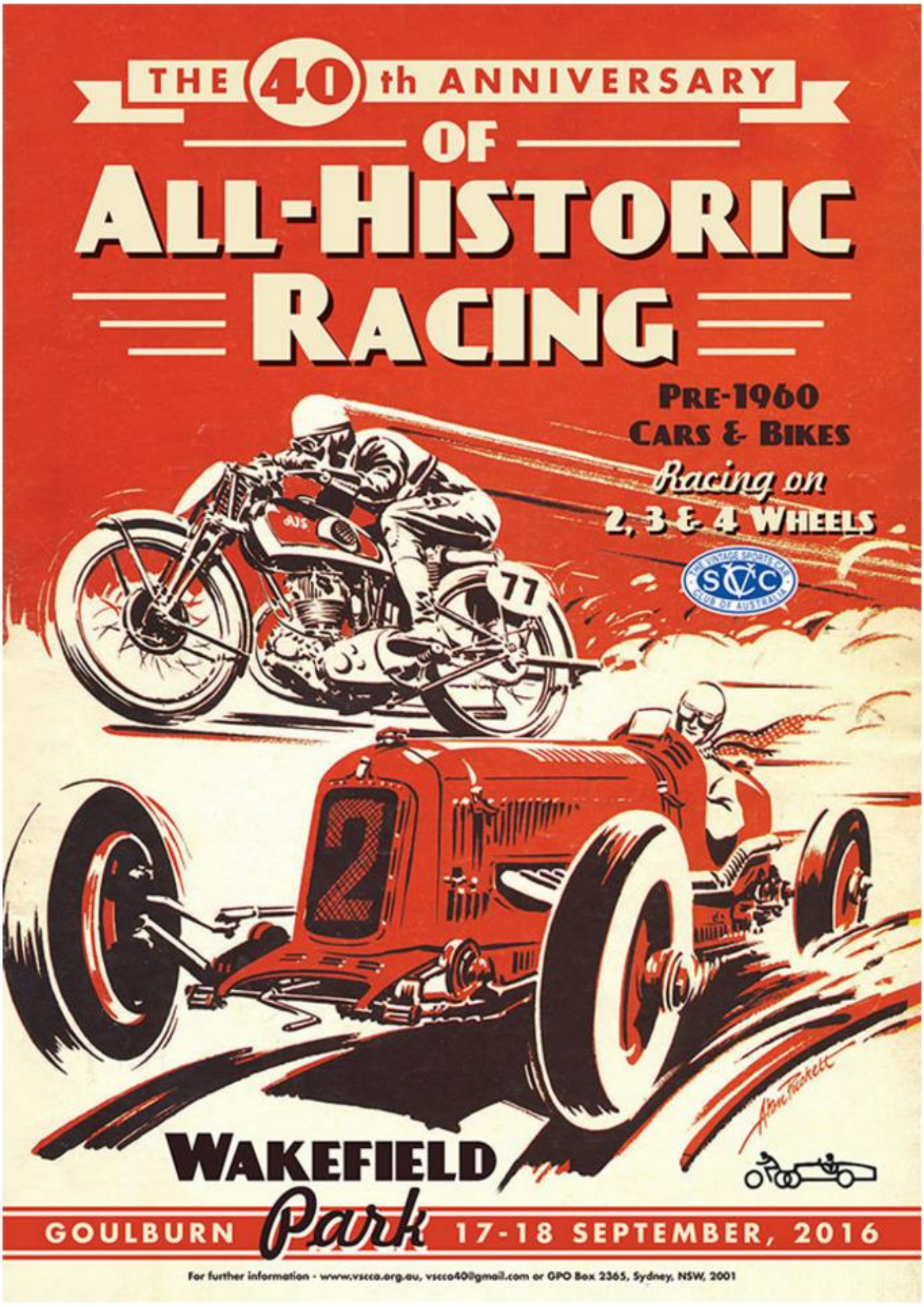
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