



**THE WORLD'S FIRST SUPERBIKE**



# In the beginning

# HRD

- **Howard Raymond Davies – British Royal Flying Corps pilot**
- **Shot down and captured by Germans in 1917**
- **Conceived the idea of building his own motorcycle company**
- **Started HRD motors in 1924 (in partnership with E J Massey)**





- Various models were produced – mainly using J.A.P. engines







*Howard Davies at the Isle of Mann T.T. on his H.R.D. motorcycle*



*Freddie Dixon on his Isle of Mann T.T. winning H.R.D.*

- Won races .... but

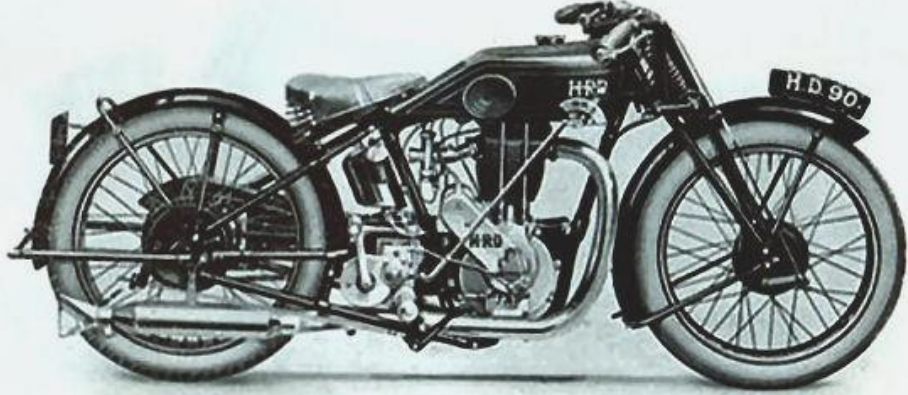




**HRD**


**MODEL:**  
"HOWARD DAVIES 90."

**PRICE:**  
76 GUINEAS.

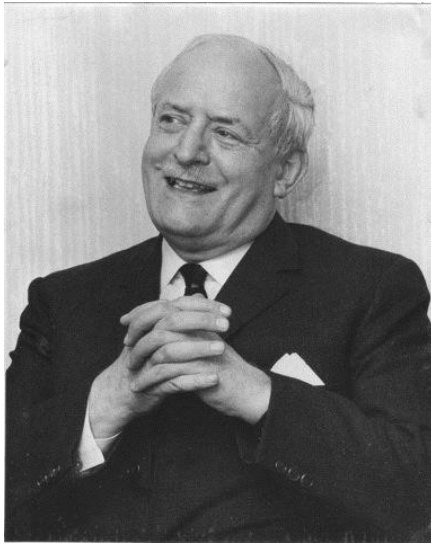


**ENGINE.**—Special 500 c.c. O.H.V. Sports J.A.P., 85.5 x 85 mm. Approximate road speed, solo, 85/90 m.p.h. (With double port head, £3/3/- extra). **GEAR RATIOS.**—Top, 4.64 to 1; Middle, 6.87 to 1; Low, 9.35 to 1. **FORKS.**—Heavy Webb with adjustable shock dampers and steering damper incorporated. Druids optional. **TWIST GRIP.**—Optional if specified.

Details as General Specification.      Code Word, "NINTY."      Use Wakefield Castrol R.

WINNER OF TWO T.T.'s. IN TWO YEARS.  
ManxNorton.com 

- Ran at a loss and in January 1928 went into voluntary liquidation
- Bought by Ernest Humphries of O K Supreme Motors for factory space
  - HRD name, jigs, tools, patterns and stock offered for sale again



Philip Vincent 1908 - 1979



- Philip Vincent dreamed of building his own reliable, state of the art, motorcycle
  - Wealthy family background – from cattle ranching in Argentina
    - Had built his own motorcycle in 1927
    - Was advised to start production under an established name
  - In 1928 registered a patent for a cantilever rear suspension of his own design
- Acquired trademark, goodwill, components, etc of HRD from Humphries for \$450 in 1928
  - Promptly renamed Vincent HRD Co Ltd and production moved to Stevenage

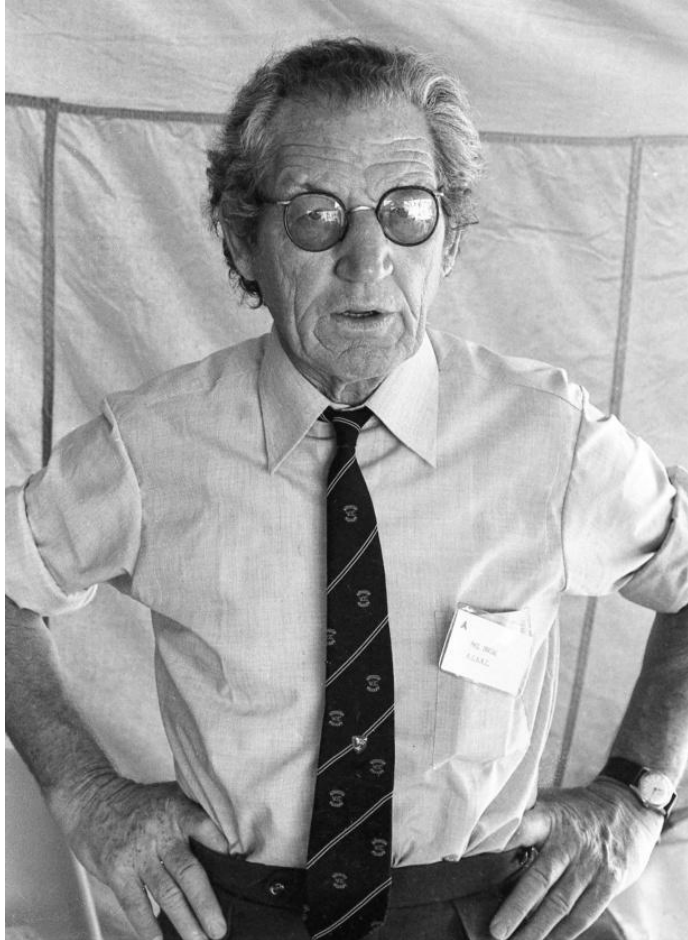




- **First Vincent-HRD motorcycles used JAP (some Rudge-Python) single cylinder engines in a Vincent designed cantilever frame**
  - **Disastrous 1934 Isle of Man TT with engine problems and all three entries retired**
    - **Philip Vincent decided to build his own engines**



# Vincent – the Australian connection



Phil Irving 1903-1992

- Australian engineer Phil Irving MBE, CEng, FIMechE, MSAE joined Vincent in 1931
- Responsible for many engineering innovations which made the Vincent famous
- First engine design was OHV 500cc single Meteor in 1934
- Two stints at Vincent 1931 – 37, and 1943 – 49
  - Also worked for Velocette motorcycles twice
    - Returned to Australia in 1949
- Heavily involved and instrumental in Repco-Brabham Formula 1 team success





# The Vincent – model progression

## Meteor and Comet (1934 -)



- Single cylinder 500cc
- Meteor produced 26 bhp (19 kW) @5300 rpm
  - Comet had sportier motor
- Featured double valve guides to eliminate side forces on valve stem



# 1936 – Dawn of the V twin Rapide



- Single drawing overlay “inspiration”
- 998cc V twin with 6.8:1 compression ratio produced 45 bhp (34 kW) and was capable of 110 mph
  - Series A and Series B
- Externally sourced Burman clutch and gearbox did not cope well with the power





# 1948 – Series C Vincents

## Rapide, Black Shadow, Black Lightning



- Unit construction engine/gearbox/clutch
- Girdraulic front forks with hydraulic damping replaced the girder forks used previously
- The Black Shadow 50° V twin produced 54 bhp (40 kW) @ 5700rpm capable of 125 mph
- Easily recognised by the black coating on the engine/gearbox and the large 5" speedo
- Black lightning was the racing version of Black Shadow – parts removed or aluminium



## 1950 – HRD dropped from name

- Confusion with American Harley Davidson (HD)





# 1954 – Series D Vincents

## Victor, Black Knight, Black Prince



- Prices increasing - declining sales
- Upgraded rear subframe, suspension, seat arrangement and new hand operated stand
- Introduction of fibreglass fairing, screen, leg shields, and side/tail panels



- Sales/profitability continue to decline – hand built and expensive
- Post war motorcycling boom affected by availability of cheaper cars
  - Production ceased one week before Christmas 1955
  - Total of only 11,000 Vincents sold post World War II





## Other Vincent Ventures

- **War years: essentially made munitions, but also engines for small boats and portable pumps**
- **1951 – 1954: Vincent Picador – ultra-light aircraft engine and failed Queen Bee drone project**
  - **1953 – 55: Vincent Firefly 45cc bicycle clip-on engines**
  - **1954: Revival of 1932 Vincent Bantam three wheelers**
- **1954: Sales agency agreement with NSU – NSU-Vincent Fox mopeds**
  - **1955: Vincent Amanda – Water scooters**



# Vincent Amanda – First PWC (Jet ski forerunner)







# Vincent – Subsequent developments



**Norvin**



**Egli-Vincent**





# Vincent – Subsequent developments



## Vincent RTV Motorcycles

- Started in 1996 by Rodney Brown, Terry Prince, and Ron Slender
- Upgraded 1200/1300 cc in Egli type frame





# Vincent – The Legend

The world's fastest standard production motorcycles



- Rolland “Rollie” Free broke USA motorcycle speed record in 1948 at 150.313 mph (Bonneville Salt Flats, Utah)
- Russel Wright set a world m/cycle speed record in 1955 at 185.15 mph (Swannanoa, NZ)



# Vincent – The Legend

The world's fastest standard production motorcycles



- Jack Ehret broke the Australian land speed record in 1953 at 141.509 mph (Gunnedah, NSW)
- His Vincent sold at Las Vegas Bonhams Auction in Jan 2018 for US\$929,000





# Vincent – The Legend

The world's fastest standard production motorcycles



*Jack Surtees with son John Surtees in their Vincent Black Lightning sidecar outfit*



# Vincent – The Legend

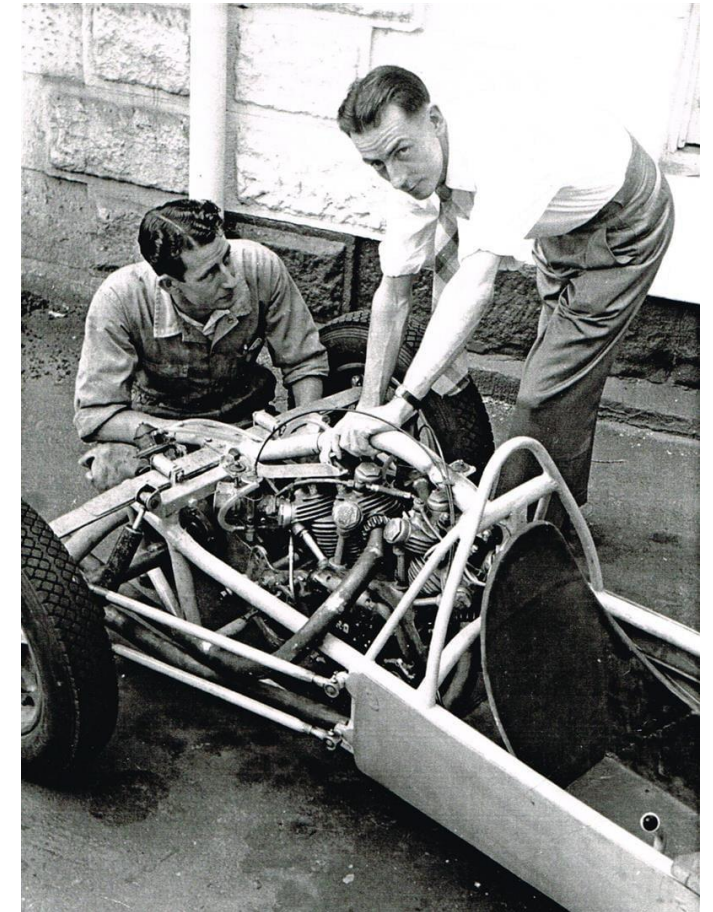
The world's fastest standard production motorcycles



*Phil Irving and his speedway boys aboard his design.*



*Phil Irving working on the Lex Davison supercharged Vincent powered Cooper Irving racing car.*



*Austin and Ron Tauranac (later of Brabham and RALT fame) and their Vincent H.R.D. powered RALT racing car.*





# Vincent – The Legend

The world's fastest standard production motorcycles



- In 1949, the fastest production car in the world and the fastest production motorcycle in the world were both British – the Jaguar XK120 and the Vincent Black Shadow
- The Jaguar held the record for 6 years while the Black Shadow was the king of motorcycles for a quarter of a century





# VINCENT ADVERTISING SLOGANS



**1950: The World's Fastest Standard Motorcycles**

*This is a fact, not a slogan*

**1952: The World's Safest Motorcycle**

*This is a fact, not a slogan*

**1953: The World's Fastest, Safest, and Most Durable Motorcycle**

*These are facts, not slogans*

**1953: Motorcycles of the Future will be Judged by the Standards  
set by Vincent Today**



# VINCENT ADVERTISING SAMPLES





JULY 25TH, 1946

THE MOTOR CYCLE

1

**THE "LITTLE" BIG TWIN  
IS A SHEER THRILL!**

A 1,000 c.c. semi-o.h.c. engine in a compact machine weighing a little over 400 lbs. gives unique performance with perfect manners in traffic. Four powerful brakes and a spring frame ensure controllability and safety. Stainless steel and superb enamel for a lasting finish and a hundred exclusive rider's features make the "Rapide" a sheer joy for the enthusiast. Price £201 (plus Purchase Tax £54-5-5 AND NO EXTRAS.

THE SERIES "B"

THE VINCENT  
**H.R.D.**  
*Rapide*


Vincent-H.R.D. Co. Ltd.  
Stonage - - - Herts.  
Telephone: Stonage 375

**★ THE WORLD'S FASTEST  
STANDARD MOTORCYCLE**

**1,000 c.c. O.H.V. TWIN  
FOUR BRAKES • SPRING FRAME  
STAINLESS STEEL**

★ This is a fact—  
NOT A SLOGAN



ManxNorton.com 





STAR PERFORMANCE • ABOUNDING IN EXCLUSIVE FEATURES



1000 c.c. Black Shadow Sports Rapide. Series C



1000 c.c. Black Lightning Racing Rapide. Series C

**H.R.D.**



500 c.c. Standard Comet. Series C



1000 c.c. Standard Rapide. Series B

DESIGNED BY ENTHUSIASTS FOR THE DISCRIMINATING RIDER

**H.R.D.**





THE MOTOR CYCLE

23 MARCH 1950



## MOTORCYCLES

### for "Rider Satisfaction" . . .

MANY "armchair designers" fall into the common error of thinking that the most important factors in the design of a really first-class motorcycle are talking points like the number and disposition of cylinders or the type of transmission employed.

In our opinion the engineering skill of the designer, his practical motorcycling experience and his mental approach to the problem, the skill and enthusiasm of the factory workers and the staff, the modernity and precision of the machine tools and tooling methods, the care and time taken by inspectors, assemblers and testers, AND the absence of any attempt to build DOWN to a price, all have a much more telling effect on practical "rider satisfaction" than all the "paper riding and designing" in the world.

Vincent Motorcycles are built to give practical "rider satisfaction," consequently it is our constant endeavour to fulfil to the greatest degree possible the conditions laid down in the preceding paragraph.

Our technicians, factory staff and workers all realise, for instance, that rigidity of design, four massive main bearings, and super precision of manufacture, contribute as much to the vibrationless running of an engine as does any special arrangement of the cylinders. Consequently we were not surprised to read *Motor Cycling's* report on our "old fashioned single" "Comet" when they wrote "At no engine speed was any vibration apparent, the revs. rising with a smoothness reminiscent of a dynamo."

Another good example that we can quote is the girder fork, to show how rigid, massive design blended with the most modern knowledge of metallurgical science and certain original ideas can revolutionise a feature commonly regarded as obsolete.

*The Motor Cycle* wrote of this after we had transformed it into the wonderful modern Girdraulic fork, "A soft yet positive movement is provided by the massively proportioned Girdraulic fork. There is a 'tautness' and solid feeling about the steering which engenders confidence no matter what the speed and almost irrespective of the condition of the road surface. Corners and bends can be taken stylishly and

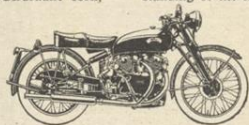
safely at ultra-high speeds. There was no chopping, no 'sawing'; not one of the faults which are sometimes apparent on high-speed machines."

*Motor Cycling* also praised our Girdraulic fork as follows. "The Girdraulic forks held the front wheel steadily on any line chosen without a trace of waver and it would appear that the performance characteristics of the forks improve as the speed rises. Variations in road surface and even rain did not appear to affect the way in which the 'Comet' could be ridden. It could be heeled over with the sure knowledge that nothing untoward would happen and on several occasions weaved its way through a series of bends without, apparently, any assistance from the rider."

Throughout all Vincent motorcycles we have applied the same enthusiasm and technical skill which have achieved the splendid results shown in the two particular examples above. The result is "a luxury mount built by highly skilled engineers who at the same time are knowledgeable motorcycle enthusiasts." *The Motor Cycle*, 11.8.49. The Rhodesian Journal *Road and Air* November, 1948, described it thus, "Truly a magnificent machine. All those little things, plus the big things, go to complete an article built for a connoisseur."

Can you think of any words which would convey higher praise than these two comments? Do they not breathe "rider satisfaction"? The following extract from a letter just received from the owner of a 1950 "Meteor" model expresses the same affectionate feeling in different words— "I know from my own feelings—being the owner of such a precision instrument—that there is a tendency to afford it motherlike tenderness—the knowledge that it will endure greater trials than perhaps any other contemporary machine being no excuse for careless maintenance."

It is this enthusiasm, affection for the machine, understanding of the mechanism, this rider delight that makes the ownership of a Vincent so infinitely more pleasurable, such an unforgettable experience. Never forget that it "is truly a motorcycle conceived and built by motorcyclists who know the answers for motorcyclists who have asked the questions." Graham Walker, *Motor Cycling*, 16.5.46.



★ THE WORLD'S FASTEST STANDARD MOTOR CYCLE

★ THIS IS A FACT, NOT A SLOGAN

THE VINCENT H.R.D. COMPANY, LTD., STEVENAGE, HERTS, ENGLAND. TEL: STEVENAGE 670

September 4, 1952.

MOTOR CYCLING

11



## PRICES REDUCED

The constantly improving efficiency of our very modern factory has once again enabled us to offset the great rise in manufacturing costs and to make our contribution towards checking the vicious spiral of inflation. You can form some idea of this great achievement by comparing the current price of the Series "C" Rapide at £272 with the £142 for the Series "A" Rapide in 1937. An increase of *only* 89% for a machine of far better design, that is much more expensive to construct both as regards material and labour costs, in spite of the terrific increases in all prices since 1937.



The Comet, Rapide and Black Shadow continue to form the main planks of our programme, together with the Black Lightning which is available in limited quantities to special order. From time to time we introduce detail improvements to this well proven range of superb motorcycles and all models are notably quieter running than their equivalents of a year ago.

With the ending of another trading season we are pleased to be able to announce that, in spite of the difficulties caused by the closing of many markets, both number and value of Vincent motorcycles exported last season were a record by a substantial margin for the sixth year in succession. With the new reduced prices we look forward with every confidence to the establishment of new Export records in the coming year. Increasing Exports coupled with reduced material supplies will unfortunately mean severe curtailment of the number of machines available to the Home market, but we feel certain that our many friends will understand our difficulties if they have to wait longer than usual for their machines in the Spring and Summer of next year.

### PRICES OPERATIVE FROM 1ST. SEPTEMBER 1952

BLACK SHADOW SERIES "C" - £305.0.0 P.T. £84.14.5

RAPIDE SERIES "C" - - - £272.0.0 P.T. £75.11.1

COMET SERIES "C" - - - £215.0.0 P.T. £59.14.5

### ★ "THE WORLD'S SAFEST MOTORCYCLES"

★ THIS IS A FACT, NOT A SLOGAN

THE VINCENT H.R.D. COMPANY LTD., STEVENAGE, HERTS, ENGLAND. TEL. STEVENAGE 690-3

ManxNorton.com





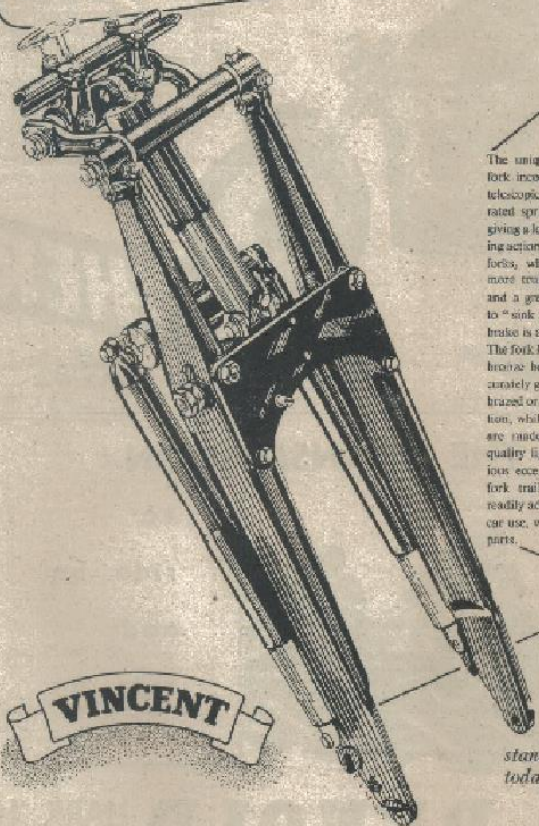


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THE MOTOR CYCLE

6 AUGUST 1935

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



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

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

*Motor cycles of the future will be judged by the standards set by Vincent today.*

**VINCENT**

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

Telephone: STEVENAGE 690-3

A 8



September 1, 1935

MOTOR CYCLING

11

**No. 2**  
features that put **VINCENT** in a class by itself



As a representative example of the advanced engineering of Vincent motorcycles, a few details which the rider may not find of the greatest importance, are presented in a series of captions to the simple explanation of working parts.

From left to right: the Vincent Girder front fork, the Vincent side-car and rear fork, the Vincent side-car and rear fork.

The Vincent Girder front fork, the Vincent side-car and rear fork, the Vincent side-car and rear fork.

*Motor cycles of the future will be judged by the standards set by Vincent today.*

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

Telephone: STEVENAGE 690-3

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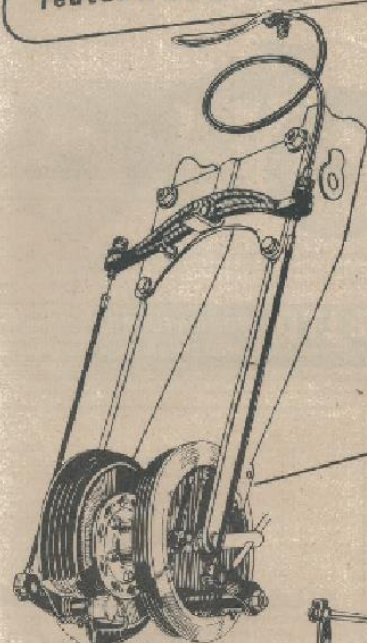
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THE MOTOR CYCLE

17 SEPTEMBER 1953

No. 3

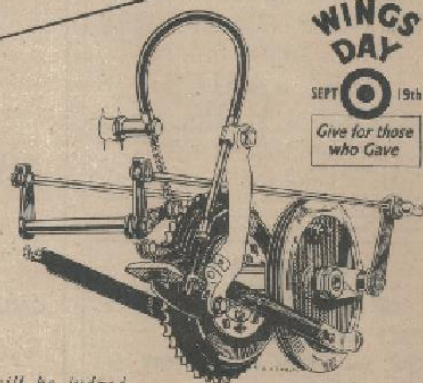
features that put VINCENT in a class by itself



No less than 20 years ago we introduced our now famous dual braking system using two brakes on each wheel operation simultaneously, thus we ensure that all reaction forces are balanced on either side of the forks. This means that however severely the machine is braked there is no tendency to distort the forks or frame, so that the wheels remain in perfect track under all conditions of braking. A bent frame effect when the wheels are locked can be disastrous, but this danger is eliminated by the dual braking system.

By doubling the number of brakes a large lining area can be obtained with comparatively small diameter and narrow brake drums. Such drums are much less liable to distortion, and consequently provide supremely steady and smooth braking.

Doubling the number of brakes also doubles the cooling area and, consequently, "brake fade" is virtually unknown even under the most severe braking conditions.



WINGS  
DAY

SEPT 19th

Give for those  
who Gave

VINCENT

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

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

Telephone: STEVENAGE 690-3

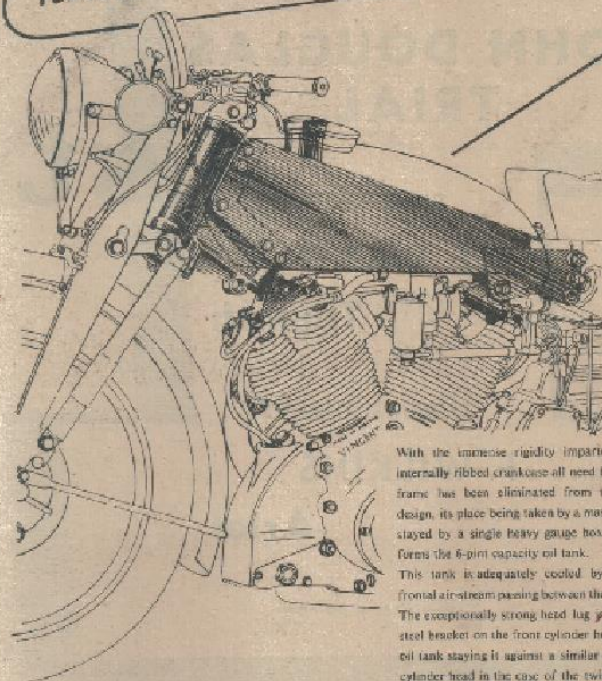
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THE MOTOR CYCLE

22 OCTOBER 1953

No. 5

features that put VINCENT in a class by itself



With the immense rigidity imparted by the massive internally ribbed crankcase all need for the conventional frame has been eliminated from the modern Vincent design, its place being taken by a massive forged head lug stayed by a single heavy gauge box member which also forms the 8-pint capacity oil tank.

This tank is adequately cooled by the uninterrupted frontal airstream passing between the oil and petrol tanks. The exceptionally strong head lug is bolted to a forged steel bracket on the front cylinder head, the box member oil tank staying it against a similar bracket on the rear cylinder head in the case of the twin cylinder 1,000 c.c. models and against a cast aluminium seat stay on the single cylinder 500 c.c. machines.

On the rear end of the main box member heavy gauge check plates provide the forward mounting points for the dual seat, rear springs and hydraulic damper.

VINCENT

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

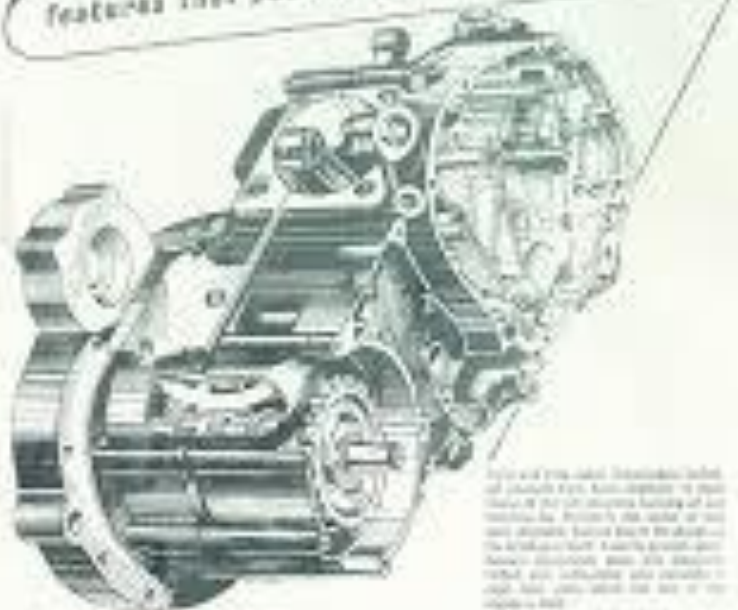
VINCENT ENGINEERS (STEVENAGE) LTD., STEVENAGE, HERTS, ENGLAND

Telephone: STEVENAGE 690-3





features that put VINCENT in a class by itself



Before and after school, I sometimes helped my parents get things together in their shop. In the afternoon, I was in charge of the kitchen. I remember that night as one of the happiest. I had been in the shop in the afternoon, and I was very proud of my work. I had been in the shop in the afternoon, and I was very proud of my work. I had been in the shop in the afternoon, and I was very proud of my work.

For more information on any of these services, call 1-800-368-5868 or visit our website at [www.aa.com](http://www.aa.com).

the 1,500 x 1 m quadrats the greatest biomass was in the middle of the quadrats, indicating that some large, old trees were present and close to the 500 g/m<sup>2</sup> threshold was sufficient to be sufficient to support more than one species of seed-eating bird. Species that nested in the quadrats with the greatest biomass were also those species that nested in the quadrats with the lowest biomass, indicating that the quadrats were not too large and that the quadrats were not too small. The quadrats were also too small to support more than one species of seed-eating bird, but they were large enough to support more than one species of seed-eating bird.



VINCENT J. ANDERSON, WILSON, 1100, 10TH AVE. N.E., BOSTON, MASSACHUSETTS

[illegible]

©WORTONS ARCHIVE

Many riders would consider a trip from London to Leicester and return, a reasonable single day's run. Now just suppose they were asked to do it every day of the week, week in and week out they would certainly think very carefully around the make of machine they would use and of its care and maintenance.

For over 500 days Mr. Rose's daily average mileage exceeded that which would have been covered by such a run and by 3rd February, 1953 he had covered over 100,000 miles without even decarbonising the engine of his

**VINCENT**  
BLACK SHADOW

Messrs. Vincent Engineers (Stevenage) Ltd.,  
Stevenage, Herts.

6 Adlam Road,  
Liverpool, 9.  
6th February, 1933.

Dear Sirs,

In the Autumn of 1951 I was talking to Mr. Vincent on the Vincent Stand at the Motor Cycle Show at Earls Court, and during the conversation the question of longevity arose.

As a result of this conversation, Mr. Vincent expressed the opinion that subject to a reasonable amount of care being exercised in the driving of the motor cycle, that it is taking care not to exceed the figure of 5,000 r.p.m., that my Black Shadow which had then completed 9,000 miles would comfortably exceed the mileage of 100,000 without decarbonising. Mr. Vincent went on to state that he built 100,000 miles into every one of his motor cycles and such a mileage was not in any way phenomenal. In fact he told me that one of the Works machines had exceeded the mileage of 164,000 miles and at that date was still being used as a Works "hack".

As a result of this conversation the "Vincent H.R.D. Owner's Club" decided to sponsor the World's Longest Road Test, that of 100,000 miles and from that date a monthly mileage of between 5,000 and 6,000 miles had been accomplished.

A monthly report of the performance of the machine and the replacements necessary has been published in M.P.H. Magazine, the journal of the Club and their officials, members of the interested trades and the Works themselves frequently testing the machine throughout its life.

This test culminated in the stripping down of the machine at some Works on February 3rd, 1953 in the presence of members of the Press and representatives of the "Vincent Owner's Club" when it was found that Mr. Vincent's statement had not been lightly made and that the engine was obviously good for many thousands of additional miles.

I need hardly say that the members of the "Vincent Owner's Club" and myself congratulate you on turning out such a superb machine.

It may be that you will care to utilize this letter for the purposes of publicity, and needless to say I gladly give you my permission, as I feel that while the speed and handling qualities of these magnificent machines are widely known, there must be many thousands of motor cyclists who are unaware of the immense life and wearing qualities which are built into these masterpieces of motor cycle design and production.

Yours faithfully,  
Isid. Anthony G. Rose

The condition of the engine to which Mr. Rose refers is borne out by the following wear figures for parts removed from the engine and measured in the presence of members of the Press and officials of the Yacht Owner's Club.

Layside 1st year	more wear	0.006"	Crankpin Roller track wear	=	0.0061"
"	"	0.0025"	Crank pin end flange wear	=	0.004"
"	"	0.005"	Roller pin wear	=	0.003" average
Cylinder barrels, bore wear			" bearing wear	=	0.003" "
Front		0.0025" to 0.004"			
Rear		0.0025" to 0.0075"			

\* THE ASSOCIATE PARTNER'S CLASH IS BEING AND CONSIDERED BY SEVERAL COUNCILS OF MANAGER LAYERS HAVE

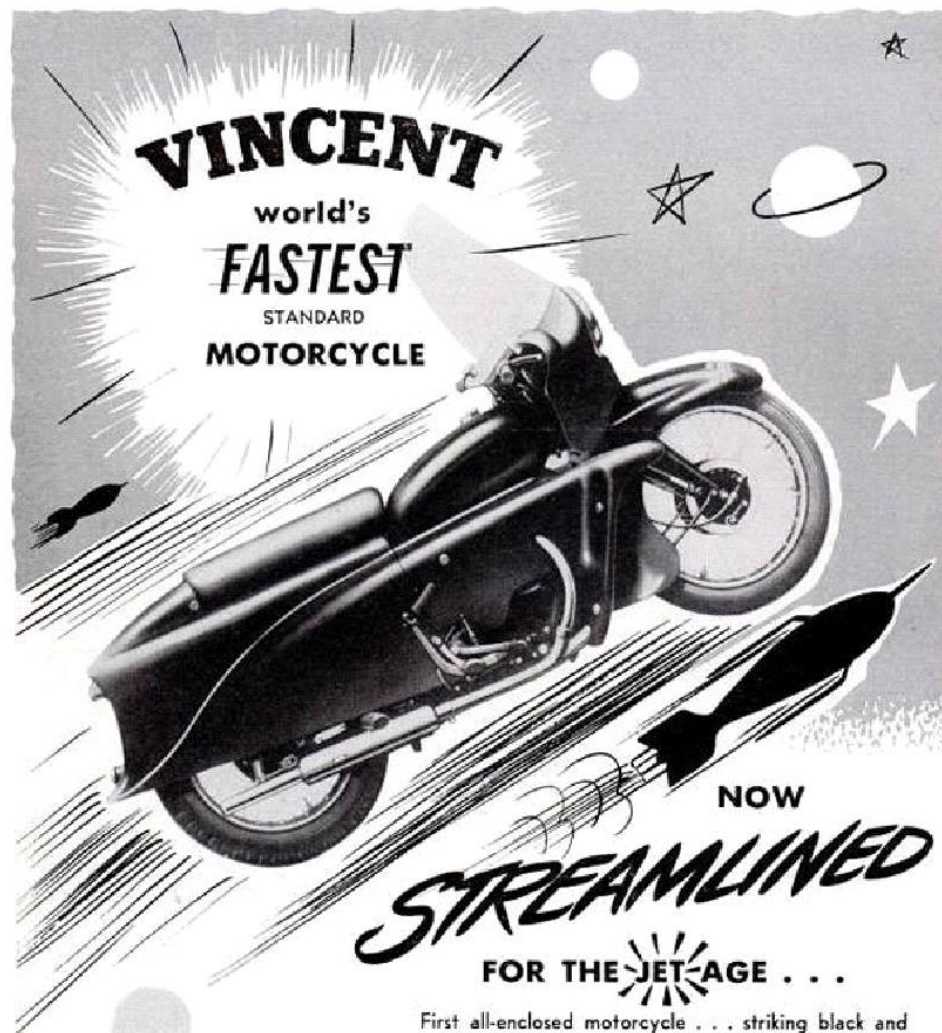
\* THE WORLD'S FASTEST, SAFEST *and* MOST DURABLE MOTORCYCLE

\* THESE ARE FACTS, NOT SLOGANS

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

—Telephone: STEVENAGE 660.





Jet streamlining  
directly developed  
from world wide  
speed trials.

First all-enclosed motorcycle . . . striking black and  
gold beauty . . . sturdy, streamlined glass fibre im-  
pregnated plastic enclosure for complete weather  
protection and minimum wind resistance at Vincent's  
highest speeds.

Distributed by







# UNIQUE FEATURES





# **UNIQUE FEATURES**

## **Vincent Black Shadow**

- **Cantilever rear suspension**
- **Unit construction all alloy gearbox/engine V twin 998cc**
- **No main frame – used engine as stressed member with oil tank as upper frame member to which front and back end attached**
  - **Twin brake drums front and back**
  - **Quick detachable wheels (T-bar axles)**
- **Rear wheel was reversible with different size sprockets to change final drive ratios**
  - **Servo assisted (dual) clutch system**
- **Adjustable brake and gear levers to suit individual feet**





# **UNIQUE FEATURES**

## **Vincent Black Shadow**

- **Forged alloy Girdraulic front forks (adjustable sidecar trail)**
  - **Short pushrod valve actuation system**
    - **Folding front footrests**
    - **Classic 5" speedometer**
  - **Twin side stands (on either side)**
- **Aluminium mudguards with hinged rear mudguard**
  - **First dual (sculpted) seat**
  - **Magneto cover plate (aluminium)**
  - **Front and back ends reasonably easy to detach**
- **World's fastest standard production motorcycle (100+ mph)**



# VINCENT BLACK SHADOW RESTORATION

































**Thank You**