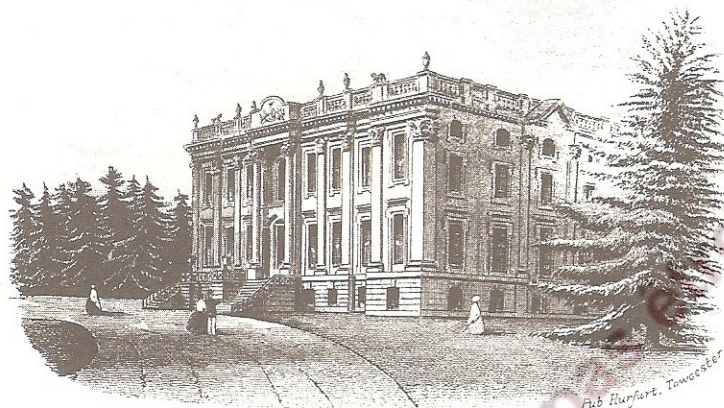


HESKETH

DOCUMENT GRATUIT, ne peut pas être vendu





Easton Neston

It is rarely that anyone has the opportunity of seeing the fulfillment of a dream. For me it started four years ago, with the decision to create and manufacture a British motorcycle which would cater for the requirements of the true enthusiast. It has been achieved without compromise and with the finest attributes of tradition and modern-day refinement.

I hope that you will be able to share with all of us at Hesketh Motorcycles the experience of owning and riding the finest road motorcycle in the world.

The Right Hon. Lord Hesketh.



THE HESKETH V1000

The Hesketh V1000 is evolutionary, progressive and represents a significant milestone in the motorcycle manufacturing industry.

There has not been a totally new British motorcycle for twelve years. And never has there been a motorcycle based so closely on design principles so much revered by the pure enthusiast.

The Hesketh owes its heritage and fundamental concept to a long and famous line of high capacity V-twins which have given birth to some of history's finest motorcycles. The Hesketh V1000 is the embodiment of such British traditions of engineering excellence and craftsmanship, tempered by the finest attributes of modern-day thinking in design refinement, technology and technique.

Small-scale production, hand-assembly by skilled craftsmen, the finest materials and construction techniques all contribute to the unique flavour, exclusivity and excellence of the Hesketh.

The Hesketh is a real motorcycle for critical, experienced riders. It is designed to be ridden fast and far, with the stamina to match. Never intended to elbow its way into the marketplace as an alternative to modern generation 'superbikes', the Hesketh was designed to carve its own niche in the market by catering for those riders with knowledge, enthusiasm and the appreciation of motorcycling — a high capacity, high performance sports touring machine with a worldbeating legacy of tradition, craftsmanship and excellence.

EDDY'S MOTORCYCLE CENTRE LTD.
SHELL GARAGE SHOWROOM
217 KIRKSTALL ROAD,
LEEDS 4.
TEL. 468895.



The supreme motorcycle engine

The heart of the Hesketh's unique character is in its classical V-twin engine. Its heritage stretches back to the turn of the century. Landmarks created by such innovators as George Brough, and the rise to prominence of Phil Vincent, fed the pre-eminence of the V-twin philosophy. Following Brough's withdrawal after the war, Vincent carried the mantle of subsequent development, his Rapide, Black Shadow and racing Black Lightning V-twin machines leaving an indelible impression even today, twenty five years after production ceased.

The V-Twin Advantage

For a powerful motorcycle, the 90° V-twin with transverse crankshaft has more to commend it than any other engine configuration.

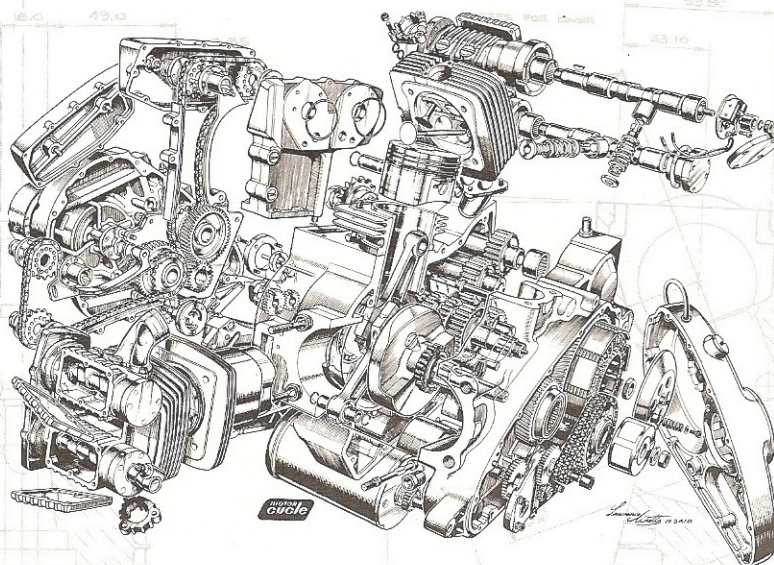
The relative simplicity resulting from having but two cylinders (rather than three, four or six) extends to the ancillaries, in particular the ignition system and the carburettors. Furthermore, the narrow configuration makes for a low centre of gravity and low drag coefficient, the benefits of which are manifested in economy, performance, balance and handling. Comparing a V-twin's slim crankcase — little wider than a single's — with that of the straight sixes currently on the superbike market, indicates the dramatic difference in frontal area.

With a lower engine speed capability than the equivalent engine with more cylinders, the V-twin produces greatly increased torque at lower engine speeds allowing a more relaxed style of riding to achieve a given performance.

Despite slightly less even firing intervals than are given by a narrower cylinder angle, the 90° V-twin is fundamentally the better as its crankshaft can be counterweighted to give perfect primary balance. Installed, as in the Hesketh, with the front cylinder almost horizontal, it has proved to be as smooth as flat twin designs (and in-line threes and fours) and has first-class cooling characteristics and with the cylinders longitudinal, the configuration eliminates undesirable gyroscopic or torque-reaction effects.

The Hesketh Engine

The basic philosophy of the Hesketh as an enthusiast's high performance touring machine has dictated the criteria in terms of engine characteristics and performance. The decision to adopt a





V-twin configuration was followed by three years of concentrated research, design, development and testing, blending a traditional engine concept with the finest, and in some cases innovative features of modern day technology.

The production engine is a well-oversquare 992cc V-twin. An extremely high design strength was the fundamental requirement in the conceptual stages, illustrated by the very robust bottom half, the castings of which embody the gearbox. Following the rigidity theme, the crankcase mouths are extended to embrace much of the cylinder liners, with the result that the aluminium jackets of the barrels are very short.

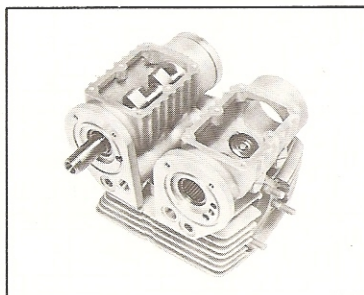
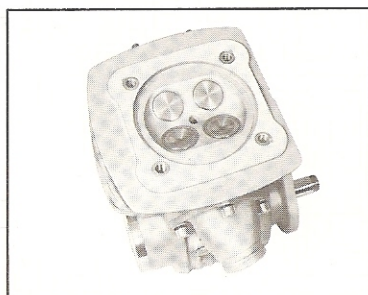
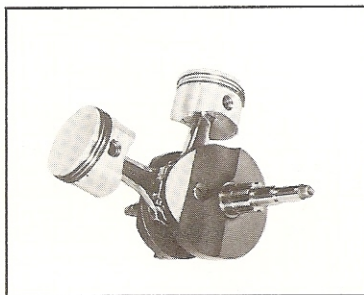
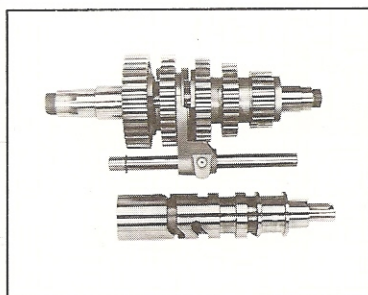
The Hesketh engine features a one-piece crankshaft assembly. An SG-iron casting, it is exceptionally stiff and runs in large-diameter roller bearings; steel forgings are used for the connecting rods which are polished all over and have split big-ends housing Vandervell copper-lead bearings of high load-carrying capacity.

In order to achieve the designed performance and efficiency, with excellent breathing and precise valve control at the higher end of the engine speed range, the adoption of four valves per cylinder, DOHC cylinder heads was considered essential. The valves have an inclined angle of 40° in the aluminium castings and the piston crowns are raised, giving highly efficient pent-roof combustion chambers and a compression ratio of 10.5 to 1. Renold roller chains, with slipper-type tensioners and anti-flutter strips, drive the camshafts which are supported in needle-roller bearings and actuate the valves through inverted-bucket tappets.

The evolution of high efficiency ignition systems through competition development paved the way for subsequent models for road use. Hesketh chose Lucas Industries' well-established RITA electronic ignition system, for consistent timing at all engine speeds and for freedom of maintenance.

The fuel mixture is provided by two Dellorto PHF carburettors with paper-element filters and the very thorough lubrication system (again with a paper-element filter) embodies a positive feed to the crankshaft, cams and the gearbox — a feature contributing significantly to the Hesketh's quality and longevity.

Engine starting is electric. The combination of a triple-reduction drive and a heavy duty battery ensures that the engine is turned over briskly in all weathers.





Transmission

The two helical gears of the primary drive are wide and durable and their centre distance has been carefully optimised for quiet running. Incorporated in the output gear is a multiplate wet clutch more than adequate to cater for the engine's high torque characteristic. The clutch is of conventional design but its actuation is indicative of practical innovation by the Hesketh design and engineering staff. The conventional cable operation is replaced by a hydraulic system to ensure ultra-smooth action with high mechanical efficiency.

The high torque characteristics result in the Hesketh requiring only five gears to achieve its full speed range. The compact gear cluster is of traditional British type. Gears and the very rigid shafts all run in Torrington low-friction needle-roller bearings. A unique feature of the otherwise orthodox footchange mechanism is a specially designed arrestor which, during rapid gearchange, prevents the inertia cam drum from causing this to 'fling through' into a false neutral as can happen with less sophisticated systems.



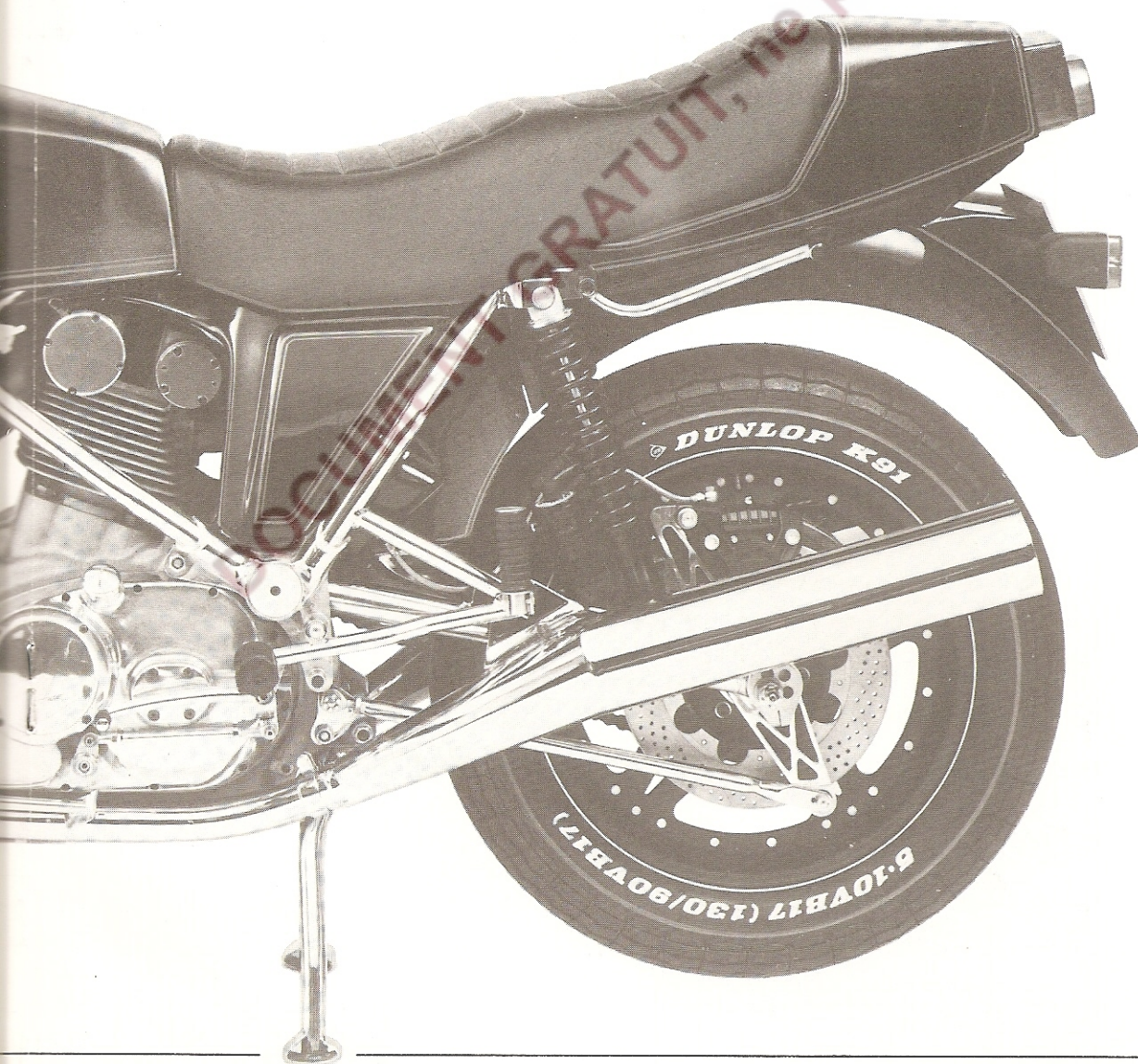


A further noteworthy and innovative facet of the transmission is the train of gears between the gearbox output and the shaft carrying the final-drive sprocket. This layout enables the sprocket to be coaxial with the pivot of the rear suspension fork. Since the usual variations in chain tension with wheel travel are thus eliminated, the 5/8in pitch rear chain has extremely good wear characteristics and is considerably lighter. This co-axial chain layout is unique amongst production motorcycles.

Frame

The frame is a light but rigid Sifbronze-welded duplex structure with the engine/gearbox forming the lower half and acting as a stressed member.

The material used for the construction is Reynolds 531 tubing (recognised as being unsurpassed for this purpose) with thorough triangulation at the steering head for the necessary torsional stiffness essential to good handling characteristics. The standard frame is stove enamelled in black lacquer, with nickle plating as an optional extra.





Suspension

The Marzocchi telescopic front forks, renowned in racing circles for rigidity, excellent damping and long service life, have been chosen for the front suspension whilst the rear fork is constructed of Renold 531 tubing but of larger diameter and heavier gauge than that of the frame. Rear end stiffness is helped by unusually wide spacing of the fork's pivot bearing which, being Timken taper-roller units, are extremely durable. The Marzocchi rear spring/damper legs have multi-rate springs and three-stage preload adjustment.

Brakes/Wheels

Like the front forks, the Brembo hydraulically operated disc brake assemblies have an enviable racing pedigree. Twin 11in discs at the front and single at the rear give extremely powerful and fade-free braking; interaction between the rear brake and suspension is precluded by a parallelogram linkage from the rear of the gearbox to a floating aluminium casting carrying the caliper, allowing the suspension to work at optimum efficiency, even under hard braking conditions.

Attention to detail is again evident in the choice of wheels. Rather than employ conventional cast aluminium alloy designs, the Hesketh is fitted with Astralite five-spoke wheels. The assembly method (spun rims and pressed spiders, riveted together at the spoke flanges) makes them appreciably lighter than conventional cast designs without any sacrifice of strength.

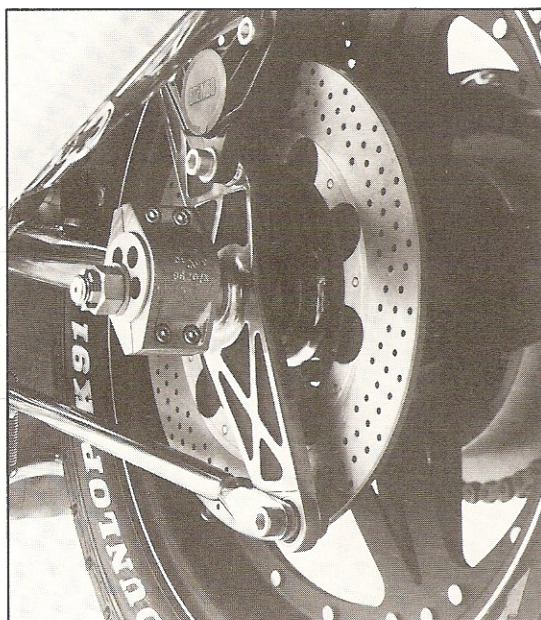
Styling and equipment

Close attention to practicality and riding comfort has resulted in a fuel tank sufficient to hold 5 gallons yet slim enough for good knee grip.

High engine efficiency has resulted in a cruising range from a full tank of over 200 miles.

The overall styling, including the tank, seat and rear fairing, headlamp cowl and enclosure panels was designed in consultation with John Mockett who has become established as Britain's top motorcycle stylist.

The Hesketh is extremely well-equipped. Electrics include a Lucas RM24 15-amp alternator and a Bosch H4 halogen headlamp for excellent range and lateral spread; the 12-volt 27Ah battery and a compartment housing a total of 5 fuses are situated between the side panels behind the rear cylinder. In addition to the obligatory speedometer with mileometer and trip meter, the instrument panel carries a tachometer, warning lights for key functions and a quartz clock, while self-cancelling turn indicators and mirrors are standard.





Specifications

Engine: Air-cooled 90° V-twin, 95mm bore × 70mm stroke, giving 992.3cc displacement. SG-iron cast crankshaft, roller main bearings; polished steel connecting rods with split big-ends housing Vandervell copper-lead shell-type plain bearings. Aluminium jackets on iron cylinder barrels; aluminium cylinder heads. Four valves per cylinder, each pair actuated through bucket tappets from an overhead camshaft; Renold 3/8in-pitch roller-chain drives to camshafts, with slipper-type adjustable tensioners.

Carburation: Two Dellorto PHF carburettors with 36 mm chokes. Air filters with disposable paper elements.

Ignition: Lucas RITA electronic system; one central sparking plug per cylinder.

Lubrication: Semi-wet sump; Hobourn Eaton motor pump feeds engine, primary drive and gearbox. Disposable cartridge filter with paper element. Sump capacity 6 pints.

Primary drive: Single-helical gears giving a reduction of 1.81 to 1.

Clutch: Wet multiplate, 6in diameter, with coil springs to provide clamping load. Hydraulic actuation.

Gearbox: Five-speed constant-mesh, in unit with engine. Reduction gear train between gearbox output shaft and final-drive sprocket shaft coaxial with rear-fork pivot. Overall ratios (engine output to gearbox final-drive sprocket) — 3.710, 2.378, 1.786, 1.481 and 1.334 to 1.

Final Drive: DID 5/8in × 3/8in roller chain, 2.765 to 1 reduction.

Frame: Duplex, of Reynolds 531 tubing, 1.125in diameter × 17 swg; Sifbronze welded at joints.

Front suspension: Marzocchi telescopic fork with integral two-way hydraulic damping.

Rear suspension: Pivoted fork 1.5in diameter × 14 swg. Timken taper-roller pivot bearings. Marzocchi AG Stada spring/damper units with multi-rate springs and three-stage preload adjustment.

Brakes: Brembo hydraulically operated discs, 11in diameter; twin brakes on front wheel, single on rear. Cast-iron discs; rear caliper mounted on floating bracket with parallelogram torque-reaction link to back of gearbox.

Wheels: Astralite light-alloy spoked type; 19in × 3in rim front and 17in × 3.5in rear.

Tyres: Dunlop K91 ribbed 4.10V19 (100/90V19) front and 5.10VB17 (130/90VB17) rear or Avon Venom 100/90V19 front and 130/90V 17 rear.

Electrics: Fully fused 12-volt system. Lucas RM24 15 amp alternator; Lucas 5M90 starter motor (with three-stage reduction to crankshaft, 27 ampere-hour heavy-duty battery, Bosch 7in headlamp with H4 halogen bulb; horn and flashing-type self-cancelling turn indicators.

Instruments: Tachometer (camshaft-driven), speedometer, total and trip mileage recorders, quartz clock, and warning lights for generator, oil pressure, neutral in gearbox, main beam and turn indicators.

Other equipment: Locks for steering head, fuel-tank filler cap and seat; centre and side stands; handlebar mirrors; toolkit, stowed behind seat, including two spare spark plugs.

Principle dimensions etc. Wheelbase 59.5in., Overall length 88in., Handlebar width 31.5in., Seat height (unladen) 32in., Ground clearance (unladen) 6in., Dry weight 500lb., Fuel tank capacity (including 0.5 gal. reserve) 5.0 gal.



The British Vee-Twin

"I know your cause is lost", wrote Christopher Fry, "but at the heart of all right causes is a cause that cannot lose". The V-twin cannot be dismissed; there are too many ways in which it so well suits the concept of a motorcycle. It may have changed with the passing years, as everything must; engineering has made its own long-legged strides, and today's off-beat ambler sounds less like a galloping horse, more like a pair of Oerlikon cannon running amok. It may not have as many cylinders as another one-litre motor, but it may well have as many valves; it may yield no more power than another, but may well be more frugal; and although it may have less incorporated behind it, it may yet have a longer future before it.

HESKETH

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