

1952

ARIEL

**THE WORLD'S
FINEST
MOTORCYCLES**



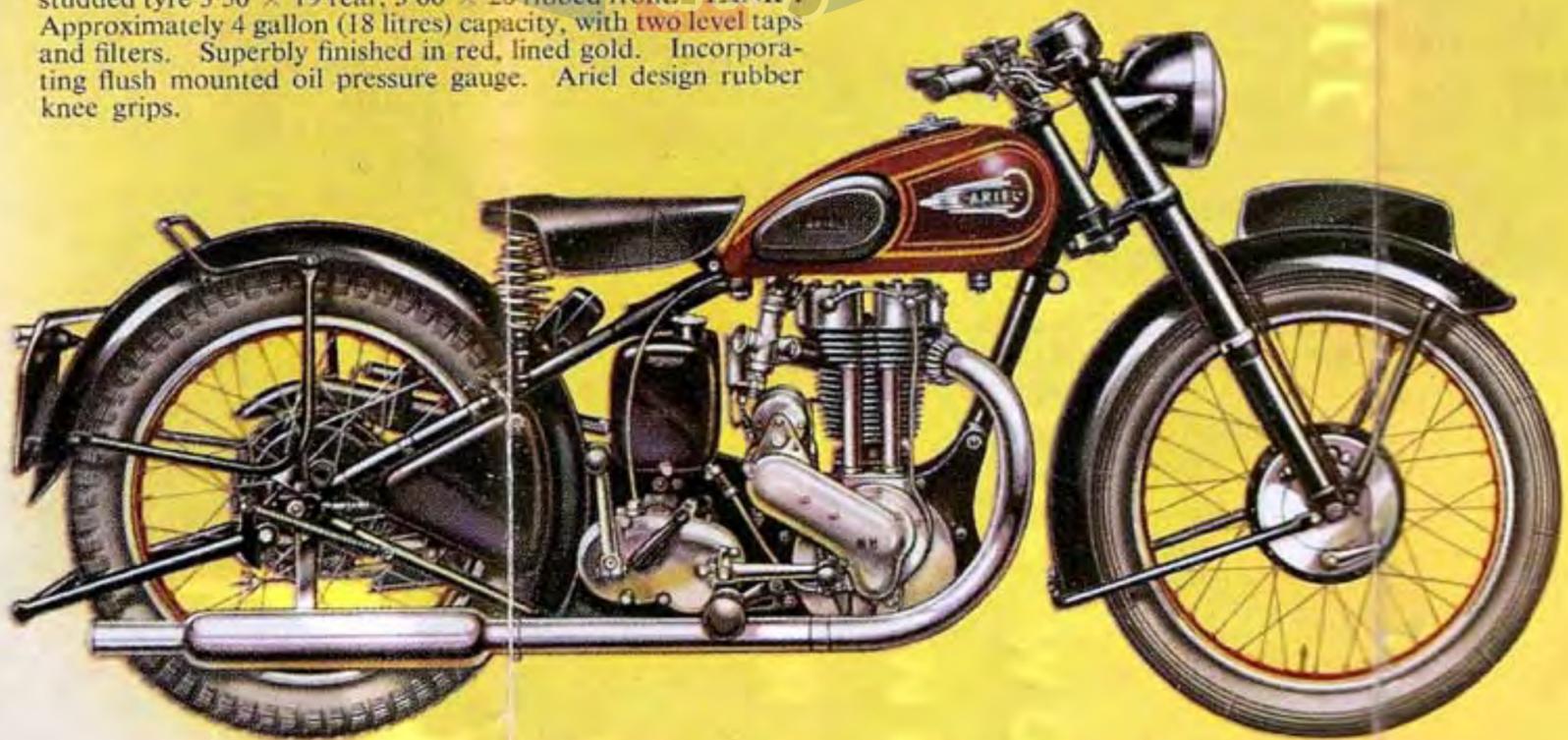
ARIEL



THE RED HUNTER TWIN 500 c.c. MODEL KH

The Aristocrat of Twins

ENGINE : OHV. Vertical Twin. 63 × 80 mm. = 498 c.c. (2.48 × 3.15 = 30.4 cubic inches). Balanced crankshaft forged in one piece, carried on a large roller bearing on drive side and plain white metal bearing on timing side. Light alloy connecting rods with white metal liners. Twin camshafts driven by automatically adjusted Duplex chain. Light alloy pistons 6.8 compression ratio. 7.5 compression ratio pistons can be supplied to order for use with 80 octane fuel. Polished inlet and exhaust ports. Specially bench tested and tuned. **LUBRICATION :** Oil circulates by double gear pump, feeds oil to bearings under pressure. Separate oil tank, $\frac{1}{2}$ gallon (2.3 litres) capacity. **ELECTRICAL EQUIPMENT :** 56 watt voltage controlled dynamo. Magneto with automatic ignition control. **WHEELS :** Immensely strong. Dunlop studded tyre 3.50 × 19 rear, 3.00 × 20 ribbed front. **TANK :** Approximately 4 gallon (18 litres) capacity, with two level taps and filters. Superbly finished in red, lined gold. Incorporating flush mounted oil pressure gauge. Ariel design rubber knee grips.



THE RED HUNTER SINGLE CYLINDER 350 c.c. MODEL NH

Excellent for Pillion Work

ENGINE : OHV. 72 × 85 mm. = 547 c.c. (2.835 × 3.346 = 21.2 cubic inches). Specially bench tested and tuned. Close grained cast iron cylinder head with deep cooling fins. Ground and polished inlet and exhaust ports. Ball bearings on both sides of mainshaft. Large double roller bearing big end. Aluminium alloy piston 6.2 compression ratio. **LUBRICATION :** Oil circulates by dual plunger pump. Separate oil tank, $\frac{1}{2}$ gallon (2.3 litres) capacity. **ELECTRICAL EQUIPMENT :** 56 watt voltage controlled magdynamo. **WHEELS :** Immensely strong. Dunlop studded tyre 3.25 × 19 rear, 3.00 × 20 ribbed front. **TANK :** Approximately 2 $\frac{1}{2}$ gallon (12.5 litres) capacity, with two level tap and filter. Superbly finished in red, lined gold. Ariel design rubber knee grips.

THE ONLY BRITISH MANUFACTURER OFFERING FOUR, TWIN AND SINGLE CYLINDER MODELS



THE RED HUNTER SINGLE CYLINDER 500 c.c. MODEL VH

The Ideal Sports Machine

ENGINE : OHV, 81.8 × 95 mm. = 497 c.c. (3.22 × 3.74 = 30.4 cubic inches). Specially bench tested and tuned. Close grained cast iron cylinder head with deep cooling fins. Ground and polished inlet and exhaust ports. Large diameter mainshafts mounted on two heavy duty roller bearings and one ball bearing. Extra large double roller bearing big end with durafium cage. Aluminium alloy piston 6.8 compression ratio. 7.5 compression ratio can be supplied to order for use with 80 octane fuel. **LUBRICATION :** Oil circulates by dual plunger pump. Separate oil tank, $\frac{3}{4}$ gallon (3.4 litres) capacity. **ELECTRICAL EQUIPMENT :** 56 watt voltage controlled magdyno. **WHEELS :** Immensely strong. Dunlop studded tyre 3.25 × 19 rear, 3.00 × 20 ribbed front. **TANK :** 3 $\frac{1}{2}$ gallon (16 litres) capacity, with two level tap and filter. Superbly finished in red, lined gold. Ariel design rubber knee grips.

This model can be supplied with an aluminium alloy cylinder and head having extra deep cooling fins, see separate price list. The aluminium alloy cylinder is provided with a wear resisting liner and the cylinder head with stainless steel valve inserts.



THE SIDE VALVE DE LUXE 600 c.c. MODEL VB

For the Family Man

ENGINE : 86.4 × 102 mm. = 598 c.c. (3.4 × 4.01 = 36.5 cubic inches). Entirely new aluminium alloy cylinder head with deep finning. Totally enclosed valve springs. Double roller bearing big end. Aluminium alloy piston 5.0 compression ratio. **LUBRICATION :** Oil circulates by dual plunger pump. Separate oil tank, $\frac{3}{4}$ gallon (3.4 litres) capacity. **ELECTRICAL EQUIPMENT :** 56 watt voltage controlled magdyno. **WHEELS :** Immensely strong. Dunlop studded tyres 3.25 × 19. **TANK :** 3 $\frac{1}{2}$ gallon (16 litres) capacity, with two level tap and filter. Superbly finished in black, lined gold. (Ariel green, lined gold optional.) Ariel design rubber knee grips.



THE SQUARE FOUR

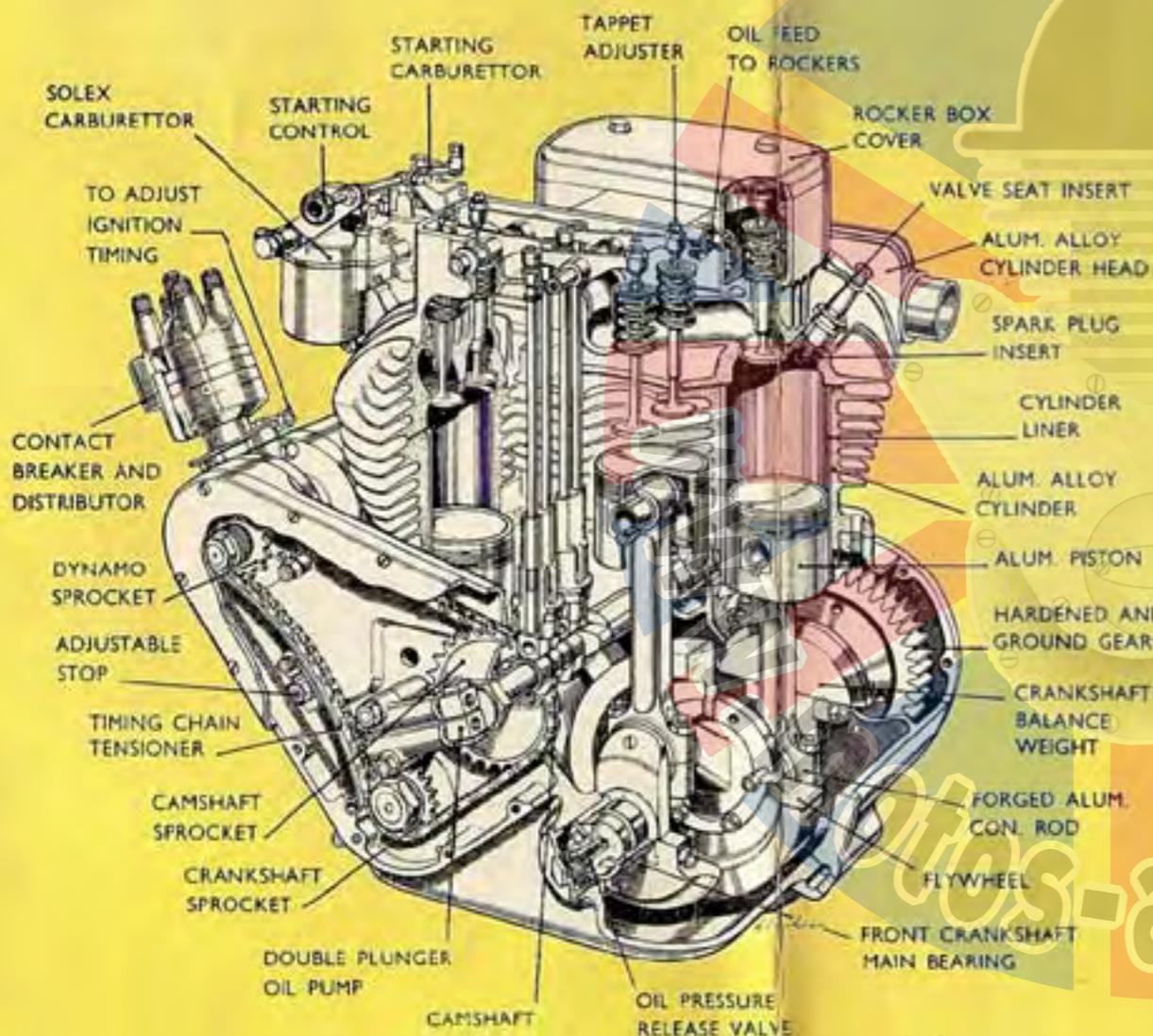
1,000 c.c. MODEL 4G

*Generally accepted as the World's
most outstanding Motor Cycle*

ENGINE : 4 cylinder, OHV. 65 × 75 mm. = 997 c.c. (2.56 × 2.95 = 60.8 cubic inches). Aluminium alloy cylinders cast "en bloc" in square formation. Fitted with wear resisting detachable sleeves. Aluminium alloy cylinder heads with valve seat inserts. Sparking plug holes, bronze bushed. Enclosed and automatically lubricated overhead valves. Twin counter-balanced alloy steel crankshafts coupled by hardened and ground gears. Aluminium alloy con-rods with white metal liners. Pistons 6.0 compression ratio (6.8 compression ratio can be supplied to order for use with 80 octane fuel). **LUBRICATION :** Oil circulates by dual plunger pump, feeds oil to bearings under pressure. Scavenger pump returns filtered oil to separate $\frac{3}{4}$ gallon (3.4 litres) capacity tank. **ELECTRICAL EQUIPMENT :** 70 watt voltage controlled dynamo, incorporating distributor with automatic ignition control. Six volt coil. Ignition switch and warning light. 20 amp. hour battery. **WHEELS :** Immensely strong. Dunlop studded tyre 4.00 × 18 rear, 3.25 × 19 ribbed front. Quickly detachable rear wheel, with 8 inch brake. **TANK :** 4 gallon (18 litres) capacity, with two level tap and filter. Superbly finished in red, lined gold. (Black, lined gold optional.) Incorporating flush mounted oil pressure gauge. Ariel design rubber knee grips.



GENERAL SPECIFICATION



**THE POWER UNIT OF THE SQUARE FOUR,
THE WORLD'S MOST EXCLUSIVE MOTOR CYCLE**

Frame : Full cradle type, built of Aero quality tubing. All joints brazed, ensuring great strength and torsional stiffness. Built-in lugs provided for either near or offside sidecar attachment.

Forks : Ariel design. Telescopic with hydraulic control. Large bearing surfaces automatically lubricated, 6 1/2 inches total travel. Steering damper incorporated.

Mudguards : Wide D section with tubular stays. Rear guard can be lifted for easy removal of wheel.

Brakes : Ariel design of great power, ensuring positive and progressive action. Fulcrum adjustment.

Gearbox : Four speed, foot control.

Transmission : Engine shaft shock absorber. Polished aluminium oilbath primary chaincase. Rear chain fully protected and lubricated.

Stands : Forged steel girder spring-up rear and strong tubular front

Lifting handle on rear guard. Prop stands on all models with the exception of Model VB. .

Footrests : Adjustable. Special lugs provided for pillion footrests.

Handlebars : Adjustable. Twist grip for throttle. Clutch control lever. Front brake control lever. Headlamp dipper and horn push button. (Ignition, Exhaust Lifter and Air Levers on single cylinder models.)

Petrol Tank : Rubber insulated, incorporating quick release cam operated petrol filler cap.

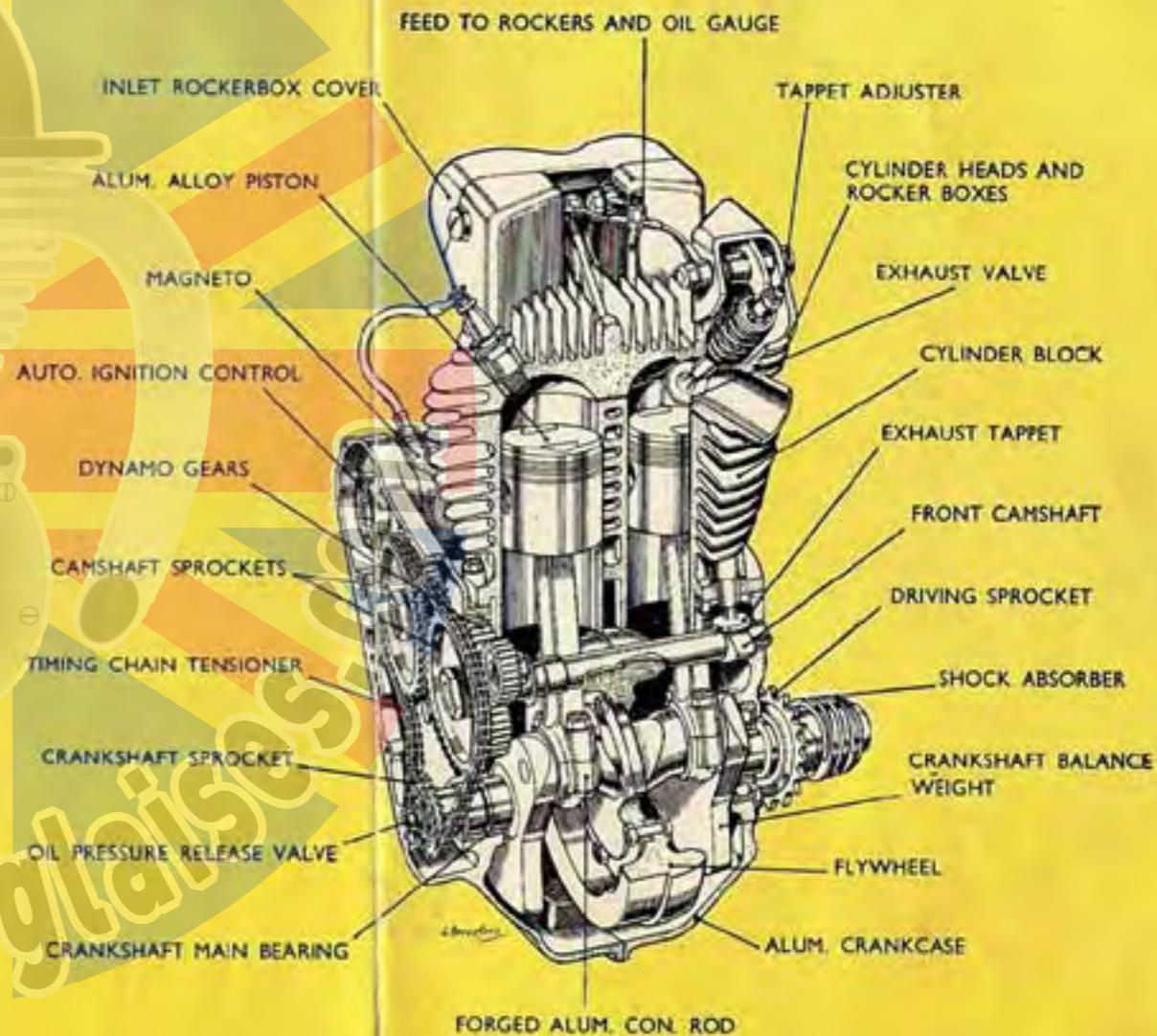
Speedometer : 120 m.p.h. (180 k.p.h.).

Electrical Equipment : All models 7 1/2 inch headlamp incorporating lighting switch and ammeter. 6 volt battery.

Equipment : Steel tool box with complete kit of tools and grease gun. Tyre inflator.

TECHNICAL AND PERFORMANCE DATA

MODEL	4G	KH	VH	NH	VB
TYPE	OHV	OHV	OHV	OHV	SV
Number of cylinders ...	4	2	1	1	1
Bore and stroke ...	65 ×75	63 ×80	81.8 ×95	72 ×85	86.4 ×102
Cylinder capacity ...	997	498	497	347	598
Compression ratio ...	6.0	6.8	6.8	6.2	5.0
B.H.P. and R.P.M. ...	34.5 at 5400	26 at 6500	24.6 at 6000	19.4 at 5600	15.5 at 4400
Engine Sprocket					
No. of teeth—Solo ...	24	21	23	20	23
" " " —Sidecar... ..	22	19	9	—	19
Solo gear ratio—Top ...	4.5	5.20	4.7	5.7	4.7
" " " —Third	5.7	6.65	6.0	7.3	6.0
" " " —Second	7.7	9.15	8.0	10.1	8.0
" " " —First	12.1	13.85	2.6	15.3	12.6
Sidecar gear ratio—Top... ..	4.9	5.75	5.7	—	5.7
" " " —Third	6.2	7.40	7.2	—	7.2
" " " —Second	8.4	10.15	9.7	—	9.7
" " " —First	13.2	15.40	15.3	—	15.3
Chain, No. of links—Front (solo)					
$\frac{1}{4}$ " pitch	72	81	81	80	81
Chain, No. of links—Rear (solo)					
$\frac{1}{4}$ " pitch	91	95	95	95	95
Wheelbase—inches	56	56	56	56	56
Overall length—inches	86	86	86	86	86
Handlebar width—inches	27	27	27	27	27
Saddle height—inches	30	30	30	30	30
Ground clearance—inches	5 $\frac{1}{2}$	5 $\frac{1}{2}$	5 $\frac{1}{2}$	5 $\frac{1}{2}$	5 $\frac{1}{2}$
Weight fully equipped—lbs.	412	384	375	348	365
Petrol Tank capacity	4 gal.	4 gal.	3 $\frac{1}{2}$ gal.	2 $\frac{3}{4}$ gal.	3 $\frac{1}{2}$ gal.
Oil Tank capacity	6 pts.	6 pts.	6 pts.	4 pts.	6 pts.



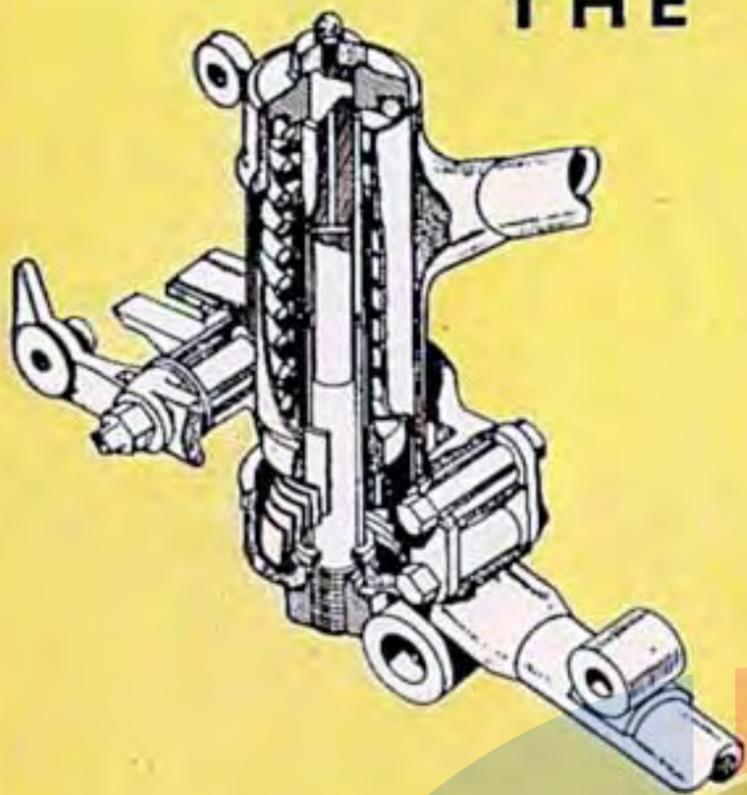
THE POWER UNIT OF THE ARIEL TWIN



Here is the world's finest range of Motor Cycles—produced by the only British manufacturer offering Four, Twin and Single Cylinder models. Designed to appeal to every class of motor cycle enthusiast, the 5 superlative models in the ARIEL 1952 range incorporate every worthwhile feature and refinement resulting in improved appearance and performance. Whichever ARIEL machine is chosen, the rider can be sure of getting the very best of its class—in keeping with that unrivalled reputation for **LEADERSHIP IN DESIGN** and manufacture, which has made ARIEL "The World's Most Exclusive Motor Cycle."



THE ARIEL patented SPRING FRAME



alone gives these outstanding advantages:—Exceptional comfort for rider and passenger. Improved road holding and braking. Complete lateral rigidity, solo or sidecar. Constant chain tension. $3\frac{1}{2}$ -in. total movement. Total enclosure of working parts. Reduced tyre wear.

When the Spring Frame is operating, the swinging arms in conjunction with the sliding members allow the rear wheel to move not only up and down but also in a semi-circular path centred round the gearbox sprocket, with the result that throughout the whole range of movement the rear chain tension remains constant and snatch or overloading is prevented. The exceptional lateral rigidity, especially when a sidecar is fitted, is achieved by the method of anchoring the swinging arms to the frame members. The load carrying springs are robust yet flexible and are designed for solo, pillion or sidecar use. Rebound springs are also fitted which operate against the load carrying springs, giving a progressive action and superb riding comfort.

QUICKLY DETACHABLE REAR WHEEL

Tyre changing or repair has been greatly simplified with the new Ariel Detachable Wheel, as the wheel and hub can be removed leaving intact the rear sprocket, chain and brake mechanism.

To remove wheel, loosen the nuts securing the side stays and forward bracket of Guard, unscrew the five securing nuts and wheel spindle with special spanners provided, withdraw the spindle and distance piece and lift the rear guard.

The illustration shows the operation completed.





Guarantee

We give the following Guarantee with our Motor Cycles and Sidecars in place of and to the exclusion of any implied conditions or warranties or any liabilities whatsoever statutory or otherwise.

We guarantee that all precautions which are usual and reasonable have been taken by us to secure excellence of materials and workmanship, but this guarantee is to extend and be in force for six months only from the date of purchase. The damages for which we make ourselves responsible under this Guarantee are limited to the free repair of or supply of a new part in exchange for the part which may have proved defective. We do not undertake to bear the cost of replacing or refixing any such new part. As Motor Cycles and Sidecars are easily liable to derangement by neglect or misuse this Guarantee does not apply to defects caused by wear and tear, neglect or misuse. We do not guarantee Tyres, Saddles, Chains, Electrical Equipment or any other Specialities of Accessory Manufacturers.

If a defective part should be found in our Motor Cycles or Sidecars it must be sent to us carriage paid, and accompanied by an intimation from the owner that he desires to have it repaired or exchanged free of charge under our guarantee, and he must also furnish us at the same time with the number of the machine and the date of purchase.

ARIEL MOTORS LIMITED
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