

THE  
**ARIEL**

MODERN MOTOR CYCLE

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ISLINGTON



1951

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ARIEL WORKS LIMITED  
Selly Oak, Birmingham

Telephone: Selly Oak, 451 (7 lines).      Telegrams: "Ariel, Selly Oak."  
Codes: Bentley's, Marconi and A.B.C. 5th Ed.

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# FOREWORD

WITHIN the pages of this Catalogue you will find the detailed specification of the 1931 Ariels. They are, by virtue of necessity, cold statements compiled to give the fullest information in the most concise way, and so appeal to the mechanical side of the enquiring mind. In themselves they suggest many reasons why you should decide to buy an Ariel, but there are many other reasons just as pertinent.

Ariel Works Ltd., true pioneers of the Motor Cycle industry, have more than 30 years' experience behind their products and have to their credit performances which are only to be accomplished on machines of the Ariel breed. To cover 5,000 miles without stopping the engine for over ten days, to cross Canada from the Atlantic to the Pacific, to circle the vast Continent of unexplored Australia, to obtain the Premier Awards in the majority of the Classic Reliability Trials—are achievements which stir the imagination.

Leaving the field of accomplishments observe the machine itself. Mark its fine lines and its superlative finish—the hall-marks of the thoroughbred—and note how your comfort, your smooth silent progress, has been studied to the minutest detail with the most scrupulous care.

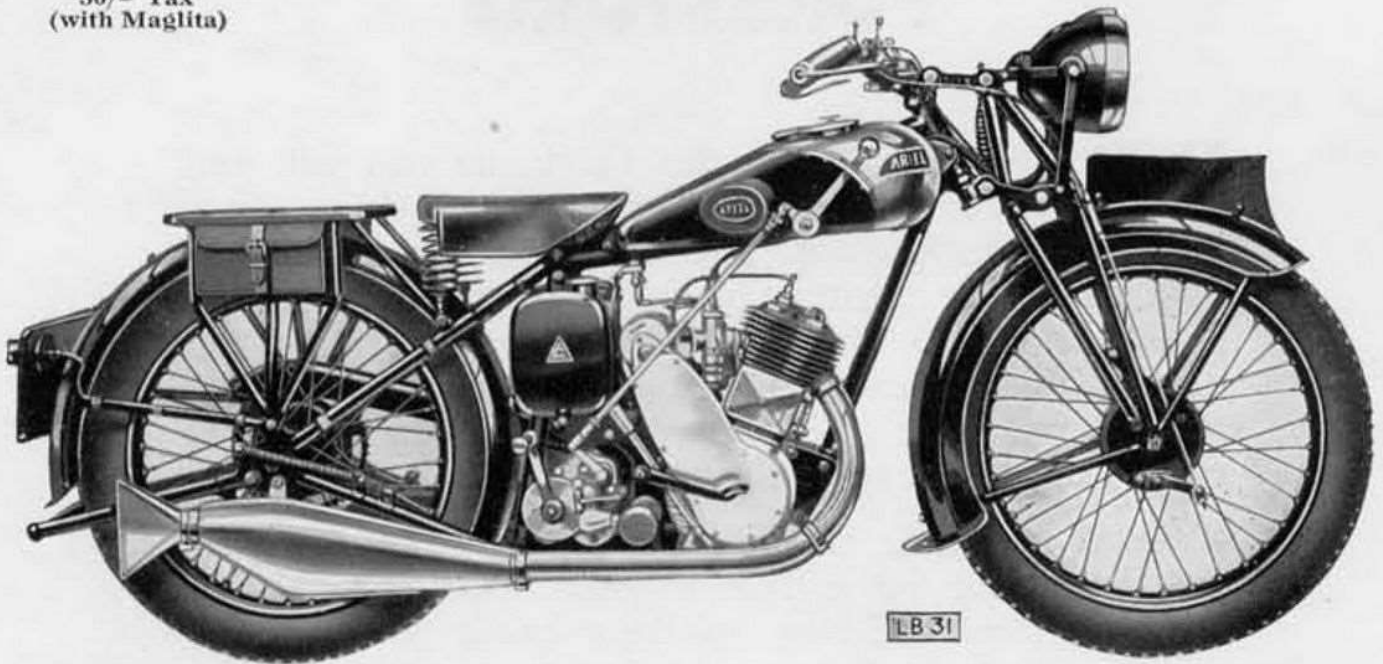
The introduction of the Ariel Square Four, after years of patient experiments and tests, marks a fresh milestone in Motoring History. The new principles employed make the 500 c.c. 4-cylinder Motor Cycle a practical proposition for the first time. Read what "Ixion" says about it elsewhere in this Catalogue.

"The Modern Motor Cycle" is no empty phrase, because in the march of progress Ariels have always been the leaders, and it is safe to say that the 1931 range will once more set the fashion in the Motor Cycle World.

# 250 c.c. S.V. INCLINED ENGINE

## MODEL LB.31

30/- Tax  
(with Maglita)



**£37 : 0 : 0**

with M.L. Maglita  
Electric Lighting

**£5 0 0 extra**

### Engine

Bore 65 mm. Stroke 75 mm. Capacity 248 c.c.'s. Double roller bearing big end. Ball bearings on both sides of main shaft. Aluminium alloy piston. Engine shaft shock absorber. Dry sump lubrication as described below.

### Silencer

Large expansion chamber, with baffles. Quiet exhaust note without back pressure.

### Gear Ratios

Engine Sprocket :	1st	2nd	3rd
16 teeth - - - -	17-0	10-4	6-4

---

## GENERAL SPECIFICATION OF 250 c.c. MODELS (LB.31, L.1F.31, L.2F.31)

### Lubrication

The lubrication system employing two plunger pumps is of the dry sump type. Patent centrifugal oil purifier as described in "Special Features." Separate oil tank mounted on platform under the saddle. A car type oil pressure gauge is mounted flush in the centre of the petrol tank.

### Carburettor

Amal. Twist grip control.

### Magneto

Lucas.

### Gear Box

Specially designed and manufactured by Messrs. Burman for the Ariel machine. 3-speeds. Gear box swivels at top anchorage for primary chain adjustment. Hand operated 3-plate cork clutch, with shock absorber.

### Frame

Built from solid steel forgings and Aero quality tubing.

### Front Fork

Tubular girder, with central tension spring. Shock absorbing friction discs are fitted to all fork link joints.

### Transmission

Primary chain totally enclosed in aluminium oil bath chain case, ensuring silence and long life. Rear chain protected by efficient guards.

### Brakes

5½ in. diameter internal expanding to both wheels.

### Wheels

Well base Dunlop rims. Taper roller bearings fitted to both wheels.

### Tyres

Dunlop 25 x 3. Wired-on.

### Stand

Low lift spring up rear.

### Foot Rests

Adjustable, with rubber pads.

### Mudguards

5 in. D section front and rear, with large valance to front. The back portion of the rear mudguard is quickly detachable, permitting easy removal of wheel.

### Carrier

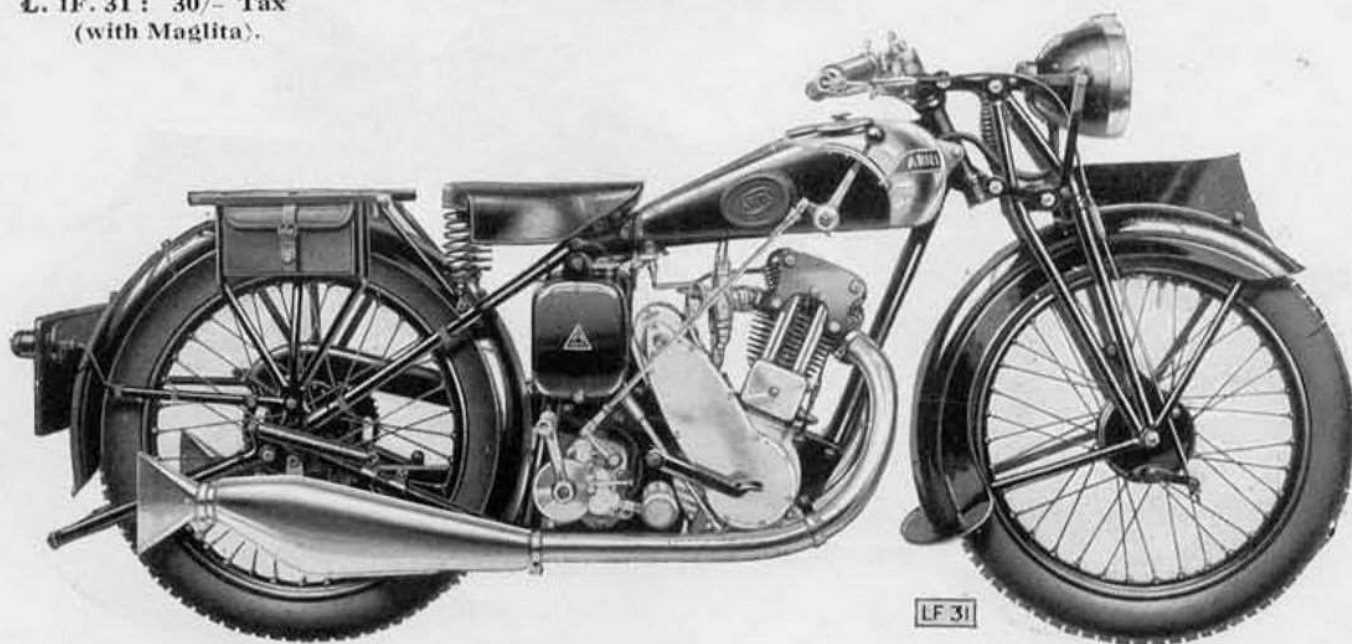
Detachable strong one-piece steel pressing. Specially designed for pillion riding.

Contd. Page Three

# 250 c.c. O.H.V. INCLINED ENGINE

MODEL L. 1F. 31 (Single Port) & L. 2F. 31 (Double Port).

L. 1F. 31 : 30/- Tax  
(with Maglita).



L. 1F. 31 : £39 : 0 : 0

with M.L. Maglita  
Electric Lighting £5 0 0 extra

L. 2F. 31 : £40 : 0 : 0

or with Lucas Magdyno  
Electric Lighting £5 10 0 extra

## Engine

Bore 65 mm. Stroke 75 mm. Capacity 248 c.c.'s. Single or double port detachable cylinder head. Inlet valve guides lubricated by suction from crankcase. Double valve springs. Totally enclosed rocker gear and push rods. Double roller bearing big end. Ball bearings on both sides of main shaft. Aluminium alloy piston. Engine shaft shock absorber. Dry sump lubrication as described below.

## Silencers

Single or twin expansion chambers, with baffles. Quiet exhaust note without back pressure.

## Gear Ratios

Engine Sprocket :	1st	2nd	3rd	
17 teeth	-	- 16-0	10-0	6-0 Standard.
16 ..	-	- 17-0	10-4	6-4 Hilly Country.

## GENERAL SPECIFICATION OF 250 c.c. (L) MODELS—Contd.

### Handlebar

Adjustable over wide range.

### Petrol Tank

All steel welded saddle tank. Capacity 2 galls. Fitted with petrol strainer, double petrol pipes giving reserve supply. Large leak-proof quick release filler cap.

### Knee Grips

Adjustable pneumatic type.

### Saddle

Spring seat 3-point suspension. Adjustable for height at rear.

### Equipment

Two tool-boxes, complete with set of tools, grease gun and tyre inflator.

### Speedometer

(£2 5s. 0d. extra). Provision is made for Smith's flush fitting tank mounted speedometer, driven from gear box.

### Lighting Set

(M.L. 6-volt Maglita £5 0s. 0d. extra, or Lucas 6-volt Magdyno £5 10s. 0d. extra). Powerful head lamp, with small parking bulb. Handlebar controlled dimmer. Accumulator mounted on platform under saddle.

### Finish

Highly finished best black enamel. Petrol tank chromium plated except rear portion, which is black enamelled to prevent glare. All bright parts chromium plated.

### Taxation

Models L.B.31 and L.1F.31, with Maglita lighting set, weigh less than 224 lbs. (30/- tax).

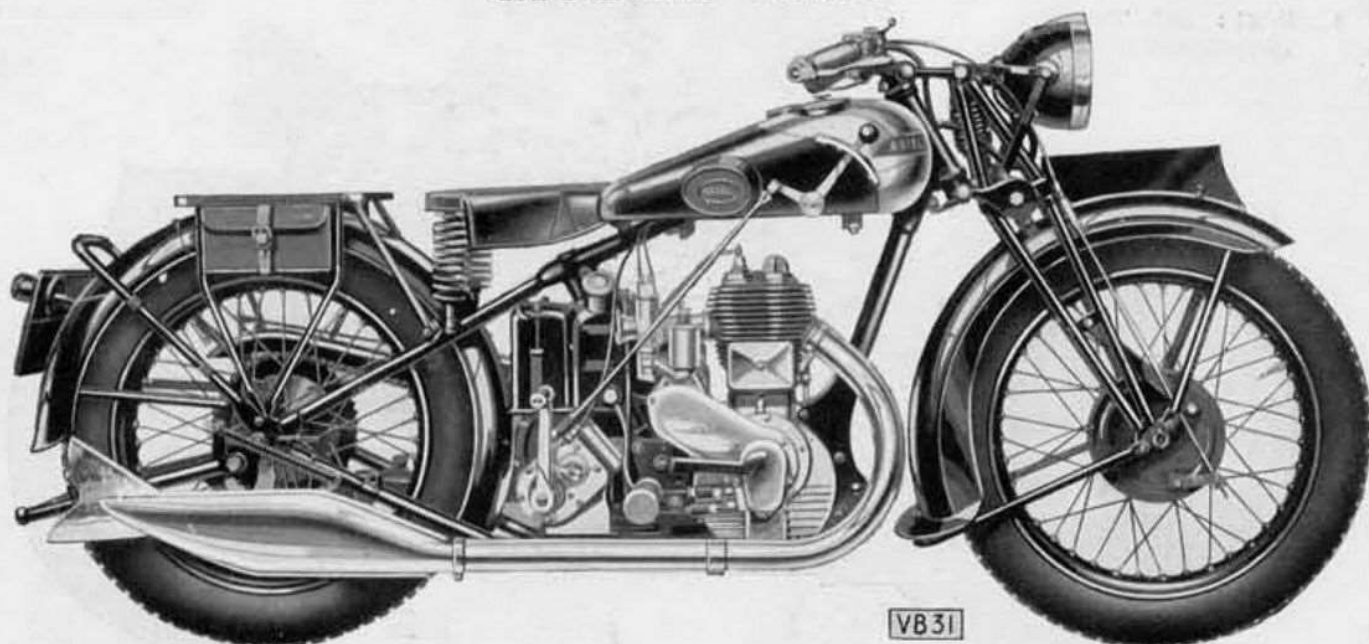
All 250 c.c. models, with acetylene lighting set, weigh less than 224 lbs. (30/- tax.)

All 250 c.c. models, with Magdyno lighting set, cannot be guaranteed to weigh less than 224 lbs. If equipment extra to the standard specification is ordered with 250 c.c. models they cannot be guaranteed to weigh less than 224 lbs. Weights are calculated with the detachable carrier, knee grips and footrest rubbers removed.



# 550 c.c. S.V. VERTICAL ENGINE

## MODEL VB.31



**£45:0:0** with Lucas Magdyno Electric Lighting, as illustrated **£5 10 0 extra**

### Engine

Bore 86.4 mm. Stroke 95 mm. Capacity 557 c.c.'s Double roller bearing big end. Ball bearing on driving side of main shaft. Aluminium alloy piston. Ground timing gears. Engine shaft shock absorber. Dry sump lubrication as described below.

### Gear Ratios

Engine Sprocket:	1st	2nd	3rd	
21 teeth	14.4	7.8	4.9	Solo —Standard.
19 "	16.0	8.7	5.4	" —Hilly Country.
17 "	18.0	9.7	6.1	Sidecar—Standard.

### Silencer

Large expansion chamber with baffles. Quiet exhaust note without back pressure.

### Gear Box

Specially designed and manufactured by Messrs. Sturmey Archer for the Ariel machine. 3-speeds. Mounted with bottom fixing and top anchorage. Draw bolt chain adjustment. Hand operated 3-plate cork clutch with shock absorber.

## GENERAL SPECIFICATION OF 550 & 500 c.c. VERTICAL ENGINE MODELS. (VB. 31 & VF. 31).

### Lubrication

The lubrication system, employing two plunger pumps, is of the dry sump type. Patent centrifugal oil purifier as described in "Special Features." Separate oil tank mounted on platform under saddle. A car type oil pressure gauge is mounted flush in the centre of the petrol tank.

### Carburettor

Amal. Twist grip control.

### Magneto

Lucas.

### Frame

Cradle type, built from solid steel forgings and aero quality tubing.

### Front Fork

Tubular girder with central tension spring. Built in adjustable shock absorbers.

### Transmission

Primary chain enclosed by efficient steel chain case. Incorporating special separate oil tank for lubrication. Rear chain protected by efficient guards.

### Brakes

7in. diameter internal expanding to both wheels.

### Wheels

Well base Dunlop rims. Taper roller bearings fitted to both wheels.

### Tyres

Dunlop 26 x 3.25 wired-on.

### Stands

Low-lift spring-up rear. Strong tubular front stand.

### Foot Rests

Adjustable, with rubber pads.

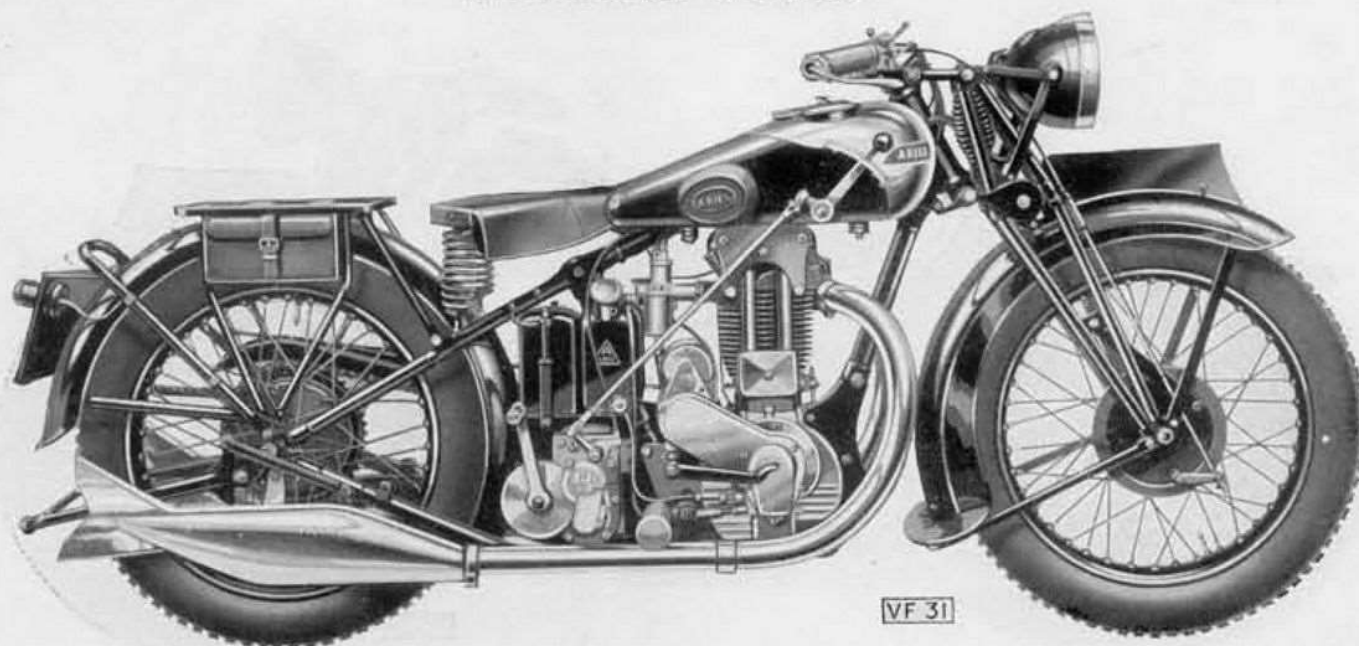
### Mudguards

Wide D section front and rear, with large flange to front. The back portion of the rear mudguard is quickly detachable, permitting easy removal of the wheel.

Cont'd. Page Five

# 500 c.c. O.H.V. VERTICAL ENGINE

## MODEL VF.31



**£48:0:0** with Lucas Magdyno Electric Lighting, as illustrated **£5 10 0 extra**

### Engine

Bore 81.8 mm. Stroke 95 mm. Capacity 497 c.c.'s. 2-Port detachable cylinder head. Inlet valve guide lubricated by suction from crankcase. Double valve springs. Totally enclosed rocker gear and push rods. Double roller bearing big end. Ball bearings on both sides of main shaft. Aluminium alloy piston. Ground timing gears. Engine shaft shock absorber. Dry sump lubrication as described below.

### Gear Ratios

Engine Sprocket :	1st	2nd	3rd	
23 teeth	13.0	7.6	4.75	Solo —Standard.
21 "	14.2	8.3	5.2	" —Hilly Country.
19 "	15.7	9.2	5.75	Sidecar—Standard.

### Silencers

Twin expansion chambers with baffles. Quiet exhaust note without back pressure.

### Gear Box

Specially designed and manufactured by Messrs. Burman for the Ariel machine. 3-speeds. Mounted with platform fixing and top anchorage. Draw bolt chain adjustment. Hand operated 3-plate cork clutch, with shock absorber.

## GENERAL SPECIFICATION OF 550 & 500 c.c. (V) MODELS—Contd.

### Carrier

Strong one-piece steel pressing, specially designed for pillion riding.

### Handlebar

Adjustable over wide range. Built-in steering damper.

### Petrol Tank

All steel welded saddle tank. Capacity 2½ galls. Fitted with petrol strainer and two level cork-seated petrol tap giving reserve supply. Large leakproof quick release filler cap.

### Knee Grips

Adjustable pneumatic type.

### Saddle

Spring seat 3-point suspension. Adjustable for height at rear.

### Equipment

Two tool-boxes, with complete set of tools, grease gun and tyre inflator.

### Speedometer

(£2 5s. 0d. extra). Provision is made for Smith's flush fitting tank-mounted speedometer, driven from the gear box.

### Lighting Set

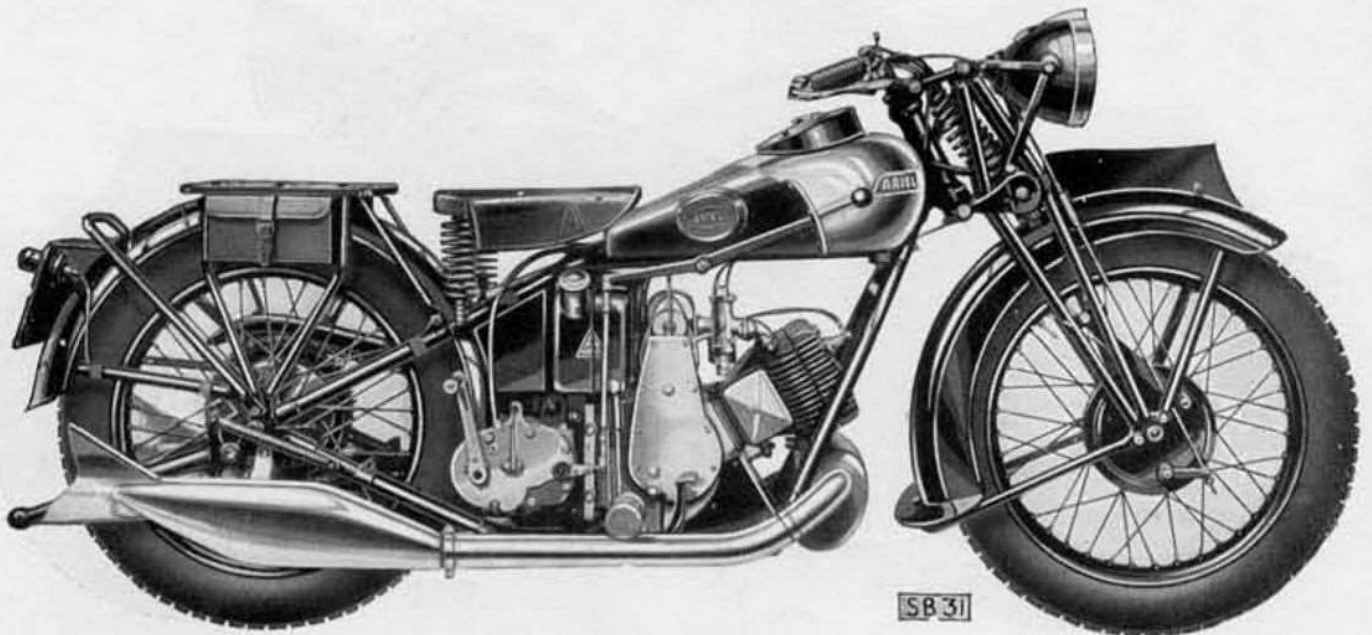
(£5 10s. 0d. extra). Lucas 6-volt Magdyno. Powerful head lamp with small parking bulb. Handlebar controlled dimmer. Accumulator mounted on platform under saddle.

### Finish

Highly finished best black enamel. Petrol tank chromium plated except rear portion, which is black enamelled to prevent glare. All bright parts chromium plated.

# 550 c.c. S.V. SLOPING ENGINE

## MODEL SB.31



**£52:0:0** with Lucas Magdyno Electric Lighting, as illustrated **£5 10 0** extra

### Engine

Bore 86.4 mm. Stroke 95 mm. Capacity 557 c.c.'s. Detachable cylinder head. Double roller bearing big end. Ball bearings on both sides of main shaft. Aluminium alloy piston. Ground timing gears. Engine shaft shock absorber. Dry sump lubrication as described on page 9.

### Carburettor

Amal. Twist grip control.

### Gear Ratios

Engine Sprocket:	1st	2nd	3rd	4th	
23 teeth	12.6	7.9	5.9	4.7	Solo —Standard.
21 "	13.8	8.6	6.5	5.2	" —Hilly Country.
19 "	15.3	9.5	7.2	5.7	Sidecar—Standard.

### Tyres

Dunlop 26 x 3.25 wired-on.

### Mudguards

Wide D section front and rear, with large valance to front. The back portion of the rear mudguard is quickly detachable, permitting easy removal of the wheel.

### Silencers

Large expansion chamber under cylinder leading to twin exhaust pipes and twin stream lined silencers. This unique system of triple silencing makes the motor cycle considerably quieter than the average car without sacrificing any engine power.

### Carrier

Strong one-piece steel pressing especially designed for pillion riding.

### Equipment

Three tool-boxes complete with set of tools, grease gun and tyre inflator.

FOR GENERAL SPECIFICATION SEE PAGE 9.

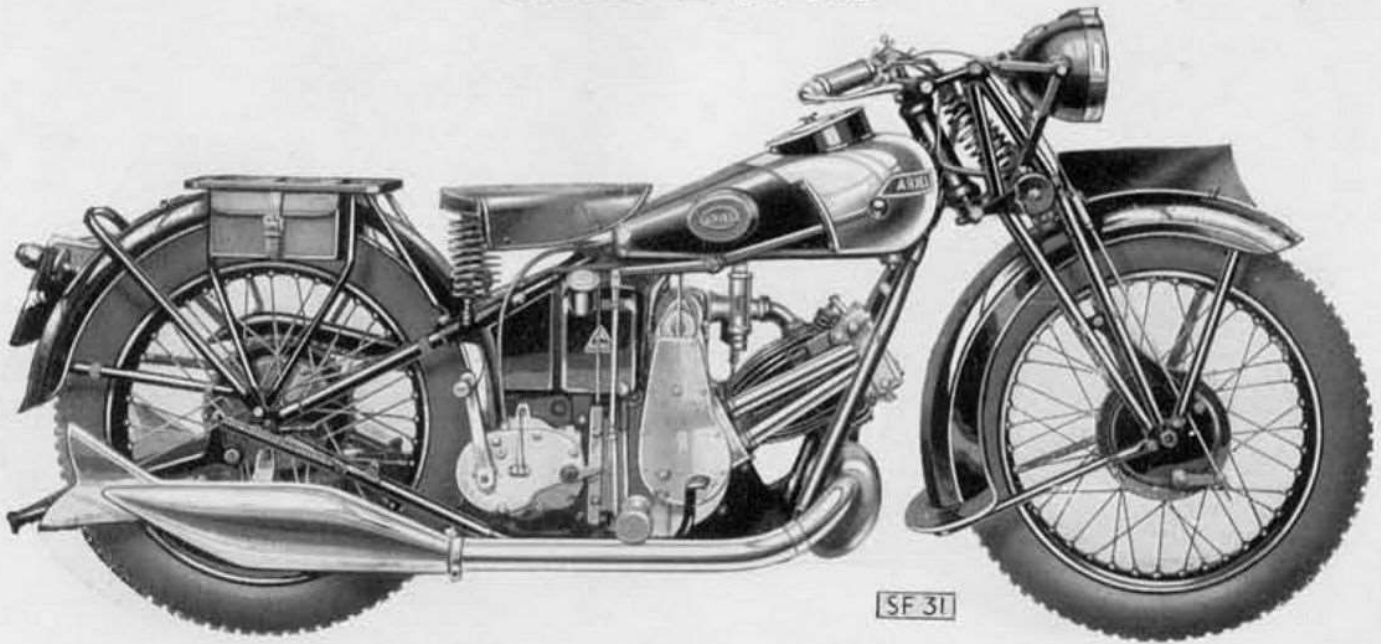
The sloping engine range of Ariel Motor Cycles represents the last word in design. The advantages are manifold, but probably the most important is the extremely low centre of gravity not only of the engine itself but also of the petrol tank, which is a heavy mass when filled with fuel. Two other highly important advantages are—greatly increased accessibility of the cylinder head and better cooling. The air stream impinges directly on to the hottest part of the engine. The low build

Contd. Page 8



# 500 c.c. O.H.V. SLOPING ENGINE

## MODEL SF.31



**£55:0:0** with Lucas Magdyno Electric Lighting, as illustrated **£5 10 0** extra

### Engine

Bore 86.4 mm. Stroke 85 mm. Capacity 490 c.c.'s. Detachable cylinder head. Inlet valve guide lubricated by suction from crankcase. Double valve springs. Totally enclosed rocker gear and push rods. Double roller bearing big end. Ball bearings on both sides of main shaft. Aluminium alloy piston. Ground timing gears. Engine shaft shock absorber. Dry sump lubrication as described on page 9.

### Gear Ratios

Engine Sprocket:	1st	2nd	3rd	4th	
23 teeth	12.6	7.9	5.9	4.7	Solo —Standard.
21 "	13.8	8.6	6.5	5.2	" —Hilly Country.
19 "	15.3	9.5	7.2	5.7	Sidecar—Standard.

### Tyres

Dunlop 26 x 3.25 wired-on.

### Mudguards

Wide D section front and rear with large valance to front. The back portion of the rear mudguard is quickly detachable, permitting easy removal of the wheel.

### Carburettor

Amal. Twist grip control.

### Silencers

Large expansion chamber under cylinder leading to twin exhaust pipes and twin stream lined silencers. This unique system of triple silencing makes the motor cycle considerably quieter than the average car without sacrificing any engine power.

### Carrier

Strong one-piece steel pressing specially designed for pillion riding.

### Equipment

Three tool-boxes complete with set of tools, grease gun and tyre inflator.

FOR GENERAL SPECIFICATION SEE PAGE 9.

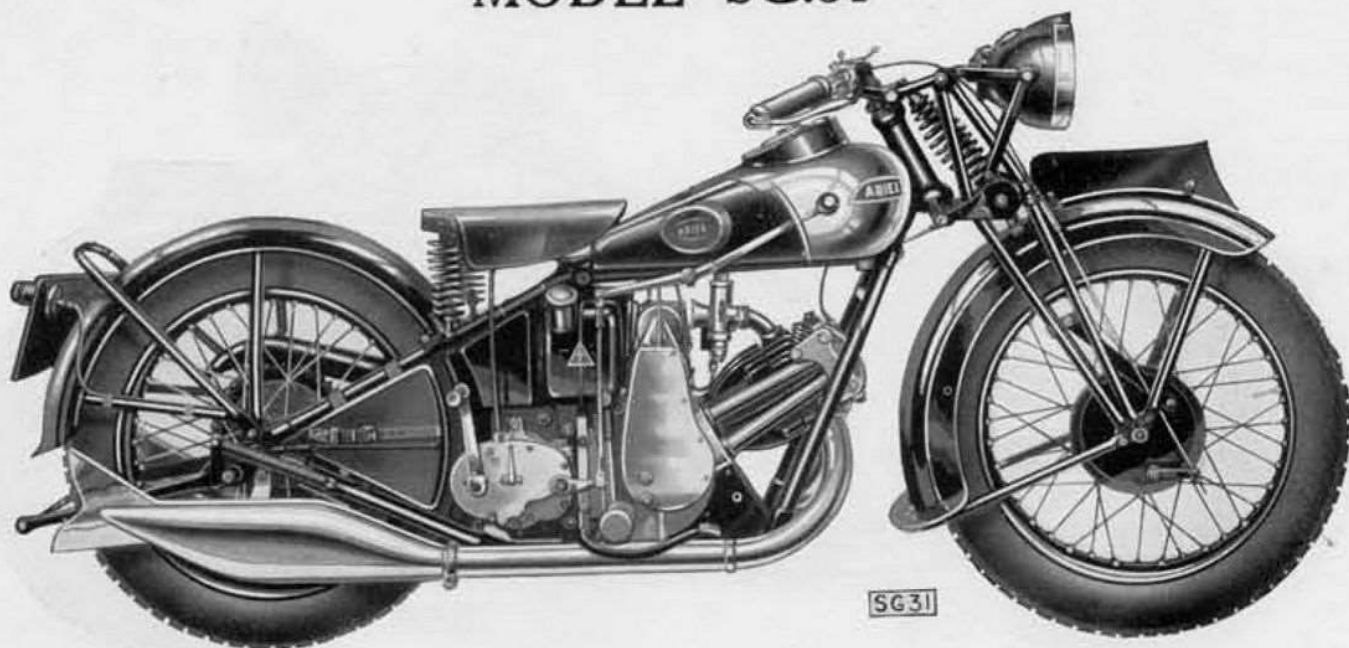
of these models gives the impression that they are long wheelbase machines, actually they are exactly the same length as the V. Models, *i.e.*, 55in. wheelbase, which is shorter than the winning 1930 T.T. machine.

The triple silencers fitted to the Models SB. and SF. are specially worthy of notice. They make these machines quieter than the average light car without sacrificing any appreciable horse power.

Contd. Page Eight.

# 500 c.c. 4-v. O.H.V. SLOPING ENGINE

## MODEL SG.31



**£60:0:0** with Lucas Magdyno Electric Lighting, as illustrated **£5 10 0** extra

### Engine

Specially tuned for high speed work. Bore 86.4 mm. Stroke 85 mm. Capacity 499 c.c.'s. 4-valve two port detachable cylinder head. Inlet valve guides lubricated by suction from crankcase. Double valve springs. Highly polished valve ports. Totally enclosed roller bearing rockers and push rods. Double roller bearing big end. Ball bearings on both sides of main shaft. Aluminium alloy piston. Ground timing gears. Engine shaft shock absorber. Dry sump lubrication described on page 9.

### Carburettor

Amal. large bore. Twist grip control.

### Silencers

Twin exhaust pipes leading to twin stream lined silencers. Quiet, but pleasing exhaust note.

### Tyres

Dunlop 26 x 3.25 wired-on. Dunlop 26 x 3 to front wheel only or to both wheels optional.

### Mudguards

Wide D section front and rear. Unvalanced front mudguard optional. The back portion of the rear mudguard is quickly detachable, permitting easy removal of the wheel.

### Equipment

Two tool-boxes complete with set of tools, grease gun and tyre inflator.

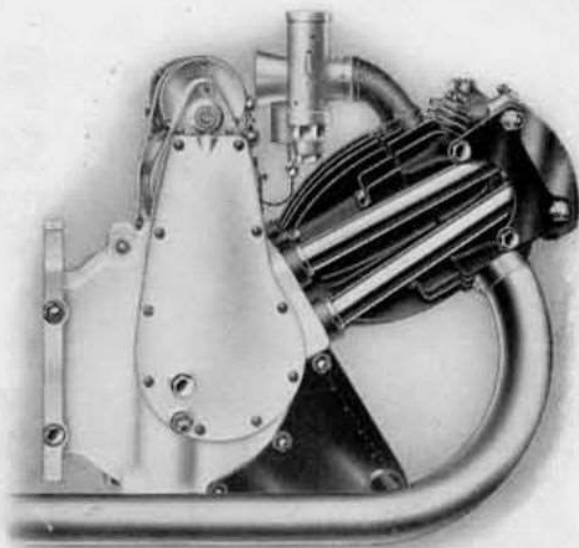
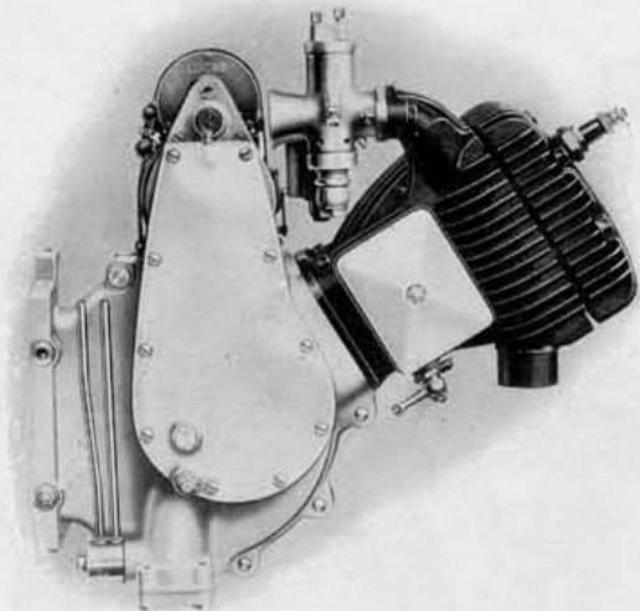
### Gear Ratios

Engine Sprocket :		1st	2nd	3rd	4th	
21 teeth -	- -	13.8	8.6	6.5	5.2	Solo —Standard.
19 " -	- -	15.3	9.5	7.2	5.7	Sidecar— ..

FOR GENERAL SPECIFICATION SEE PAGE 9.

The primary chains on the S. Models run in die cast aluminium oil baths. Chains running under such ideal conditions are not only extremely quiet in operation but only require adjustment at long intervals as compared with inefficiently guarded chains depending for lubrication on oil mist from the engine.

All S. and V. Models are dual purpose machines, ideal either for solo or sidecar work. Any one of the sidecars illustrated in this catalogue can be fitted to any S. or V. Model.



## GENERAL SPECIFICATION OF 550 & 500 C.C. SLOPING ENGINE MODELS (SB. 31, SF. 31 & SG. 31).

### **Lubrication**

The lubrication system employing two gear pumps is of the dry sump type. Patent centrifugal oil purifier as described in "Special Features." Separate oil tank mounted on platform under saddle. A car type oil pressure gauge is mounted in the instrument panel.

### **Magneto**

Lucas, driven by ground gears.

### **Gear Box**

Specially designed and manufactured by Messrs. Burman for the Ariel machine. 4-speeds. Gear box swivels at bottom anchorage for primary chain adjustment. Hand operated 4-plate cork clutch, with shock absorber.

### **Frame**

Duplex cradle type, built from solid steel forgings and Aero quality tubing.

### **Front Fork**

Tubular girder, with central compression spring. Built in adjustable shock absorbers.

### **Transmission**

Primary chain totally enclosed in aluminium oil bath chain case, ensuring silence and long life. Rear chain protected by efficient guards.

### **Brakes**

7in. diameter internal expanding to both wheels.

### **Wheels**

Well base Dunlop rims. Taper roller bearings fitted to both wheels.

### **Stands**

Low lift spring up rear. Strong tubular front stand.

### **Foot Rests**

Adjustable with rubber pads.

### **Handlebar**

Adjustable over wide range. Built-in steering damper.

### **Petrol Tank**

All steel welded saddle tank. Capacity 2½ galls. Fitted with petrol strainer and two level cork-seated petrol tap giving reserve supply.

### **Instrument Panel**

Illuminated for night riding. Mounted at the forward end of the petrol tank. Very neat and balanced in appearance. Embraces the large leak-proof quick release filler cap. The instruments provided are:—Smith's trip type speedometer (100 m.p.h. on Model: SG. and 4F.), driven from the gear box, and oil pressure gauge, while provision is made for fitting Smith's eight-day clock at 30/- extra.

### **Knee Grips**

Adjustable pneumatic type.

### **Saddle**

Spring seat 3-point suspension. Adjustable for height at rear.

### **Lighting Set**

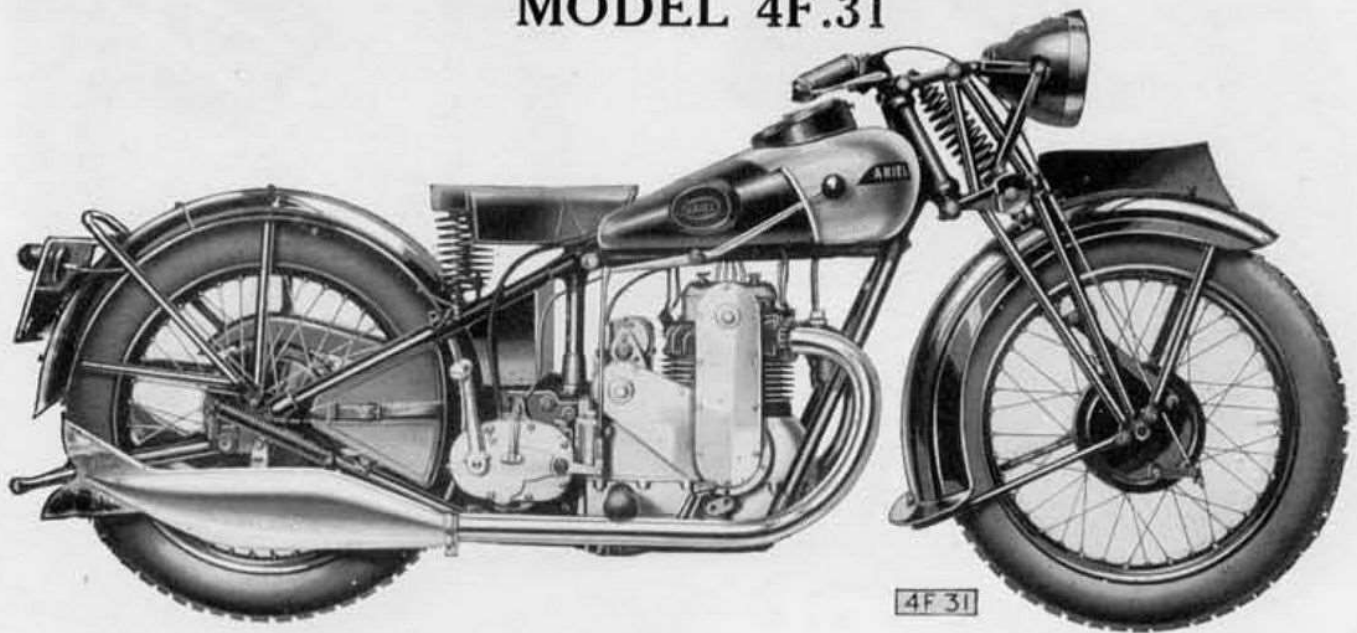
(£5 10s. 0d. extra). Lucas 6-volt Magdyno. Powerful head-lamp, with small parking bulb. Handlebar controlled dimmer. Accumulator mounted on platform under saddle.

### **Finish**

Highly finished best black enamel. Petrol tank chromium plated except rear portion, which is black enamelled to prevent glare. All bright parts chromium plated. Chromium plated rims on Model SG.31.



# 500 c.c. FOUR CYLINDER THE SQUARE FOUR MODEL 4F.31



4F 31

**£70:0:0** with Lucas Magdyno Electric Lighting, as illustrated **£5 10 0** extra

## Engine

Four cylinders. Bore 51 mm. Stroke 61 mm. Capacity 497 c.c.'s. Engine designed on an entirely new principle, having twin gear-coupled crankshafts mounted on large diameter ball bearings. The main coupling gears, of specially developed tooth form, are enclosed in a separate oil-fed chamber within the crankcase.

The light high-tensile steel connecting rods have substantial roller bearing big ends. The half-time shaft which drives both the overhead camshaft and the magneto by specially tensioned roller chains, is driven by hardened and ground gears from the forward crankshaft.

The cylinders are cast "en bloc," are designed to eliminate distortion and provide adequate cooling. The easily detachable cylinder head has the exhaust passages and special radial induction manifold integral with the casting.

The overhead valves are operated by the camshaft directly through rockers, the whole being totally enclosed in an aluminium casting with inspection cover.

## Lubrication

The lubrication system employing two gear pumps is of the dry sump type. Oil pumped from the reservoir, which is a separate compartment at the rear of the crankcase, is first forced into the chamber enclosing the main crankshaft gears. From this chamber the oil overflows into troughs and is picked up by dippers on the big ends. The remainder of the internal parts of the engine are lubricated by oil mist. A separate lead from the supply pump is taken to the overhead camshaft and rocker gear. The scavenging pump returns all surplus oil back to the reservoir at the rear of the engine.

## Carburetter

Amal. Twist grip control.

## Magneto

Lucas.

## Silencers

Twin exhaust pipes, each dealing with two cylinders leading to twin stream lined silencers. The exhaust note is quieter than on most high-grade cars.

## Gear Box

Specially designed and manufactured by Messrs. Burman for the Ariel machine. 4-speeds. Gear box swivels at bottom anchorage for primary chain adjustment. Hand operated 4-plate cork clutch with shock absorber.

## Frame

Duplex cradle type, built from solid steel forgings and Aero quality tubing.

## Tyres

Dunlop 26 x 3-25 wired-on, Dunlop 26 x 3 to front wheel only, or to both wheels optional.

## Mudguards

Wide D section front and rear. Unvalanced front mudguard optional. The back portion of the rear mudguard is quickly detachable, permitting easy removal of the wheel.

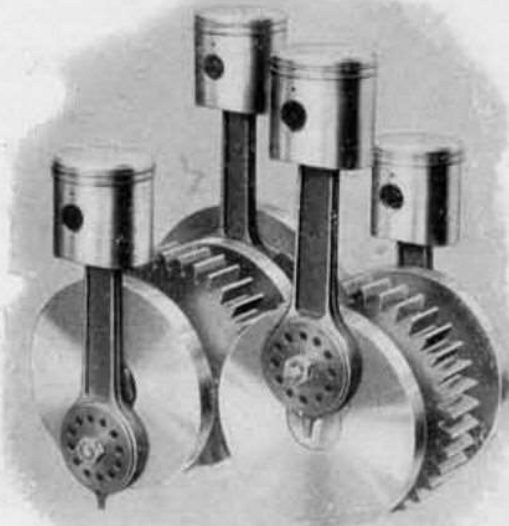
## Gear Ratios

Eng. Sprocket :	1st	2nd	3rd	4th
21 teeth (Solo) -	13.8	8.6	6.5	5.2
19 " (S/car) -	15.3	9.5	7.2	5.7

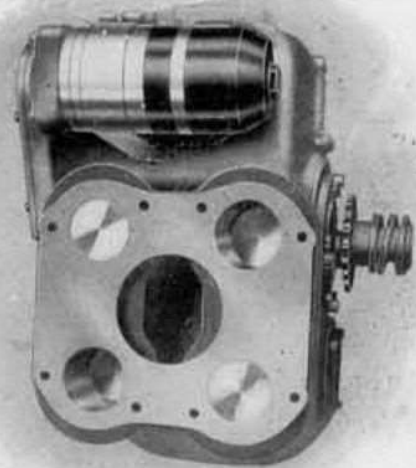
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# THE SQUARE FOUR



View showing how the twin crankshafts are geared together. Diagonally opposite pistons move in unison giving infinitely better balance than the conventional 4-cylinder in line car engine.



Plan view of the engine with cylinder head and camshaft and rocker gear removed. The square disposition of the cylinders—the secret of the extraordinary compactness of the whole power unit—is clearly illustrated.

## **Front Fork**

Tubular girder, with central compression spring. Built in adjustable shock absorbers.

## **Transmission**

Primary chain totally enclosed in aluminium oil bath chain case, ensuring silence and long life. Rear chain protected by efficient guards.

## **Brakes**

7in. diameter internal expanding to both wheels.

## **Wheels**

Well base Dunlop rims. Taper roller bearings fitted to both wheels.

## **Stands**

Low lift spring up rear. Strong tubular front stand.

## **Foot Rests**

Adjustable, with rubber pads.

## **Handlebar**

Adjustable over wide range. Built-in steering damper.

## **Instrument Panel**

Illuminated for night riding. Mounted at the forward end of the petrol tank. Very neat and balanced in appearance. Embraces the large leak-proof quick release filler cap. The instruments provided are:—Smith's trip type speedometer (100 m.p.h. on Models SG. and 4F.) driven from the gear box, and oil pressure gauge, while provision is made for fitting Smith's eight-day clock at 30/- extra.

## **Petrol Tank**

All steel welded saddle tank. Capacity 2½ galls. Fitted with petrol strainer and two-level cork-seated petrol tap giving reserve supply.

## **Knee Grips**

Adjustable pneumatic type.

## **Saddle**

Spring seat 3-point suspension. Adjustable for height at rear.

## **Equipment**

Two tool-boxes, complete with set of tools, grease gun and tyre inflator.

## **Lighting Set**

(£5 10s. 0d. extra.) Lucas 6-volt Magdyno. Powerful head lamp, with small parking bulb. Handlebar controlled dimmer. Accumulator mounted on platform under saddle.

## **Finish**

Highly finished best black enamel. Petrol tank chromium plated except rear portion which is black enamelled to prevent glare. All bright parts chromium plated, including rims.

## **Patents**

The ARIEL SQUARE FOUR is made under British Patents Nos. 330231 and 330291, and pending Patents Nos. 29405/29, 4140/30, 7332/30, 18056/30 and 18957/30.

Corresponding Patents pending in Canada, United States, Germany, France, Belgium, Switzerland, Sweden, Italy and Czechoslovakia.

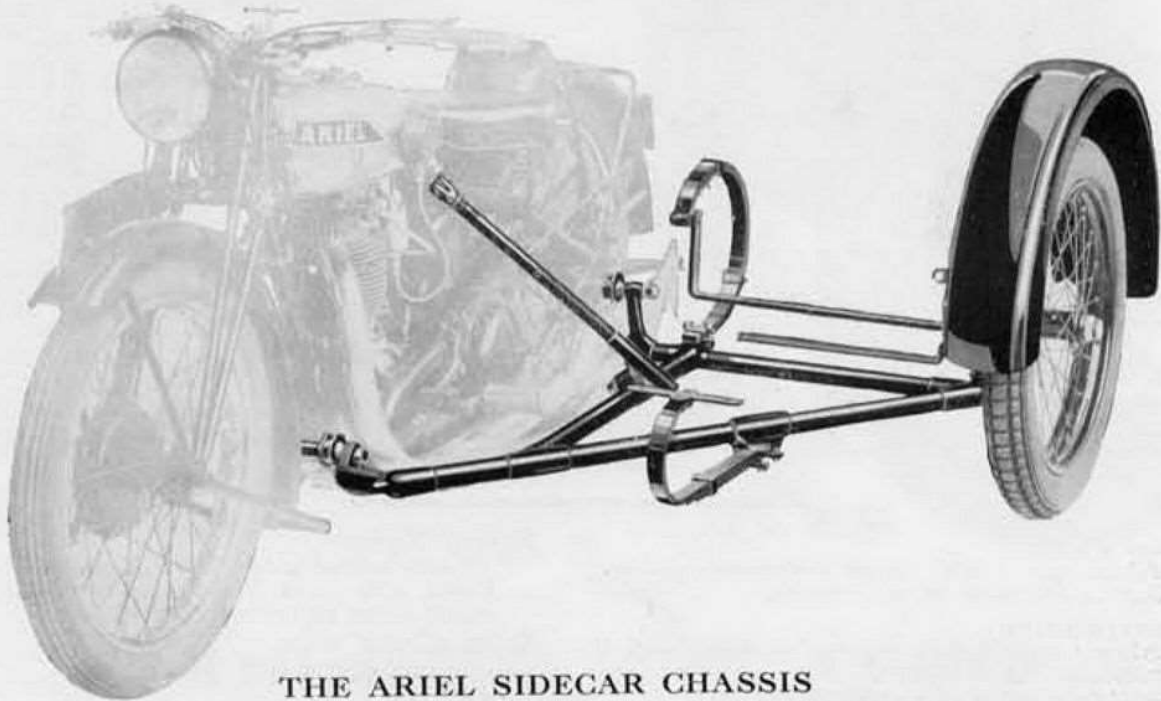
The following extracts are taken from an article which recently appeared in "The Motor Cycle"; from the pen of the famous "IXION":—

"For about a week I have been riding an experimental four cylinder. I would gladly take on a substantial bet that this machine will be the chief sensation of the Show; that it will sell in great numbers; and that it will prove a great success on the road during 1931. Its wheelbase is normal for a single cylinder. There is no vibration. It has the smoothest motor cycle engine I have ever encountered. The silence is phenomenal. In normal, sensible use the engine would never emit any roar at all, and such engines, handled with even moderate consideration would eliminate all public prejudice against motorcycle exhausts. The power unit is extremely flexible. It will fire evenly and pull smoothly down to about 5 m.p.h. on top gear. Petrol consumption appears to be in the neighbourhood of 80 miles a gallon. The acceleration—you can drive it, if you wish, as a chauffeur employed by a wealthy octogenarian lady might drive a Rolls, but if you are a lad, and desire the gamut of sensations which a lightning scout aeroplane bestow, you can handle this bus violently. I imagine, in a T.T. start, this machine would reach the top of Bray Hill, from the Grandstand grid, rather faster than most existing sports buses. ABOUT SPEED—I have to confess, with shame, that I never found a chance to open it right out on the flat. It is easily the finest motorcycle for general purposes that I have ever ridden. To start up, you just press the kick-starter very gently down against full compression without the least symptom of effort. I much desired to see whether I could 'cook' the engine, but I never got her hot enough to pink, or to knock, or to pre-ignite. Finally, accessibility is perfectly normal and easy. Maintenance of this machine is just as easy as that of any other bus. I know this is high praise; but when the machine appears, I am sure you will all ejaculate reverently, 'Why has nobody ever done this before?' And when you ride...!!!!!!" IXION."

# SIDECARS

Ariel Sidecars are specially designed to fit to Ariel Motor Cycles, as the Motor Cycles are specially designed to receive the Sidecars. We cannot too strongly advise our customers not to fit sidecars of other makes, the chassis of which were not originally intended to be adapted to our machines, and which may therefore not only prove unsatisfactory in themselves, but also impose unnecessary strains on the frame of the motor cycle.

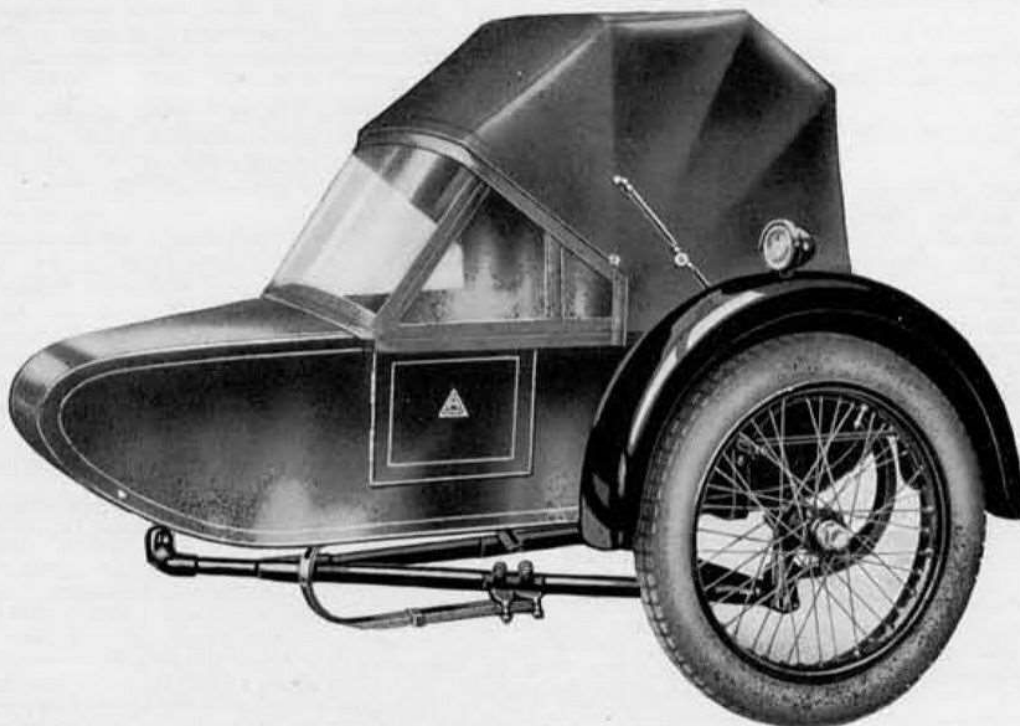
When ordering it is essential to state whether the sidecar is to be fitted to (i.) a vertical engine model, or (ii.) a sloping engine or 4-cylinder model. The chassis for these two groups are not interchangeable.



## THE ARIEL SIDECAR CHASSIS

The most scientifically designed chassis on the market. Triangulated and of immense strength, it is attached to the motor cycle frame by large ball joints at the front and rear. The third joint attached to the seat pillar is spring loaded so that severe road shocks and vibration are not transmitted to the motor cycle frame. Suspension is by leaf springs front and rear. The sidecar wheel is fitted with taper roller bearings. Each chassis is supplied with a set of tools ... ..

**£10**



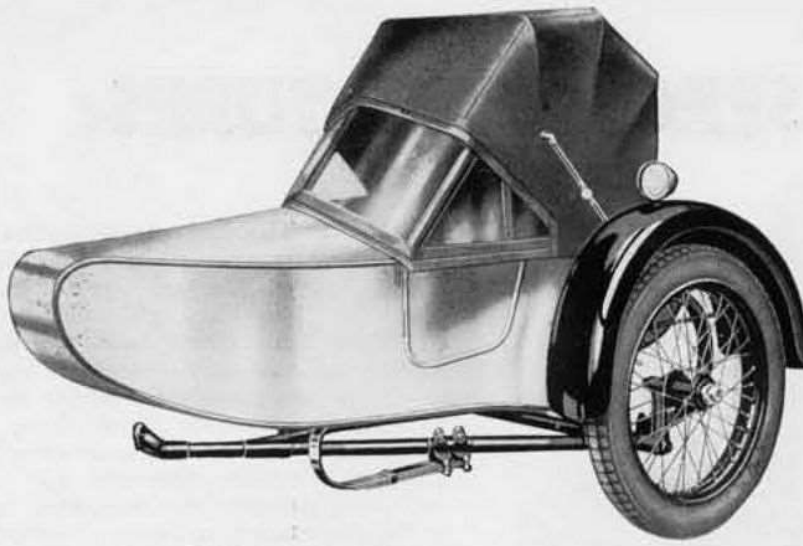
## MODEL R STANDARD TOURING

Very distinctive in design and comfortable. Spring seat over well compartment. Hinged back cushion giving access to spacious locker. Finest quality blue leather cloth upholstery. Coach built body finished in black, neatly lined in gold. Complete with mat, all-weather hood, step and screen ... ..

**£16**

www.rpw.it

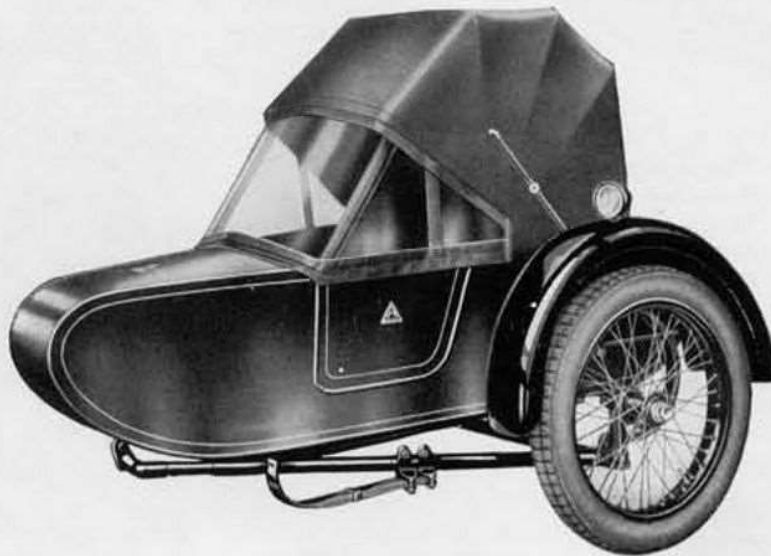




**MODEL T STANDARD SPORTS**

Very sporting in appearance giving low and protected seating position. Spring seat cushion. Hinged back cushion giving access to large locker. Finest quality blue leather cloth upholstery. Body finished in polished aluminium with mouldings picked out in blue. Complete with mat, all-weather hood, and screen ... ..

**£19**

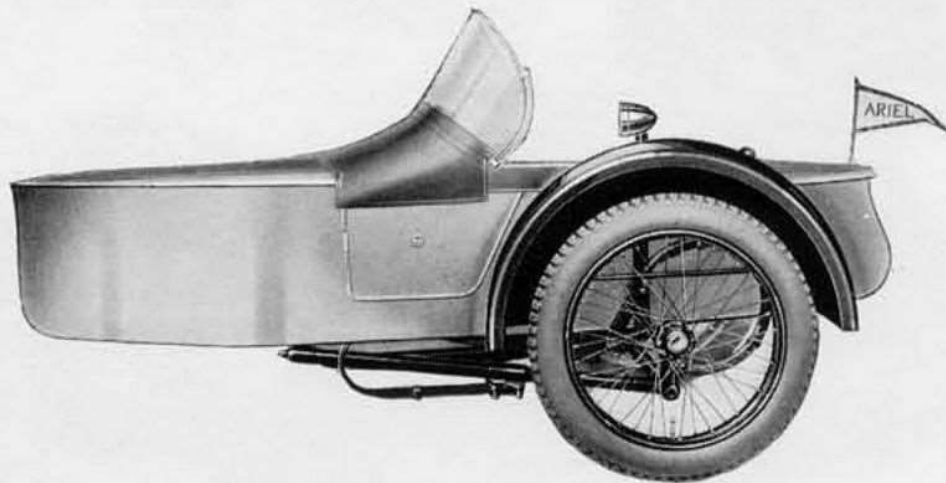


**MODEL U SPECIAL TOURING**

Very roomy and exceedingly comfortable. Spring seat over well compartment. Hinged back cushion giving access to large locker. Comfortable arm rests. Door of ample proportions. Map pocket. Finest quality blue leather cloth upholstery. Coach built body finished in black, neatly lined in gold. Complete with mat, all weather hood and screen ... ..

**£18**

This model can also be supplied with Child's Dickey Seat at £2 10s. 0d. extra

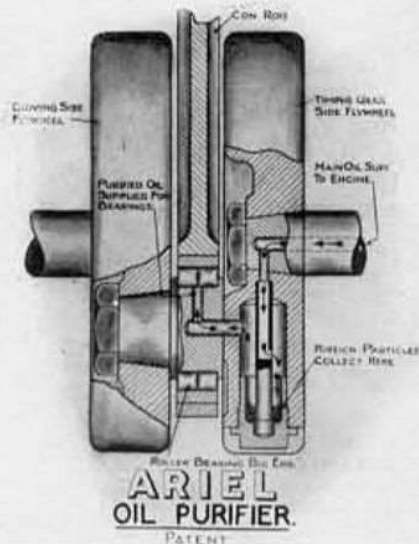


**MODEL W SPECIAL SPORTS**

Launch shaped body of large dimensions and particularly attractive design. Spring seat cushion. Hinged back cushion giving access to large locker. Door of ample proportions. Finest quality blue leather cloth upholstery. Body finished in polished aluminium with decking, which is of metal, grained to resemble polished mahogany. Nickel plated cowl and pennant mast at rear. Complete with mat, coverall apron and special screen ... ..

**£23**

# SPECIAL FEATURES

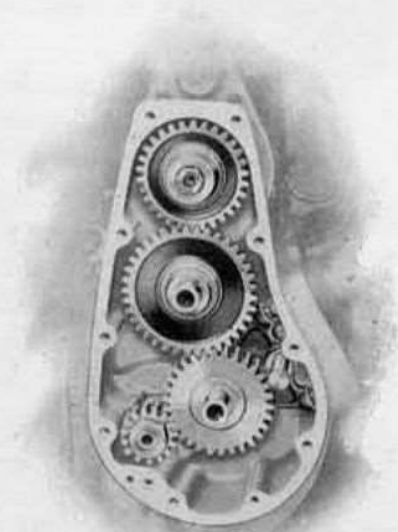


## OIL PURIFIER. All Single-Cylinder Models.

The diagram shows the principle employed in the patent Ariel oil-purifier. The short-circuiting of all minute foreign particles which are present in every internal combustion engine, and which act as an abrasive to working surfaces and bearings, ensures at least treble the life for an Ariel engine as compared with one not fitted with an oil-purifier.

## TIMING GEARS. Model S.

The complete chain of gears are mounted on very substantial bearings, and being always immersed in oil are inaudible, extremely efficient in operation and everlasting.

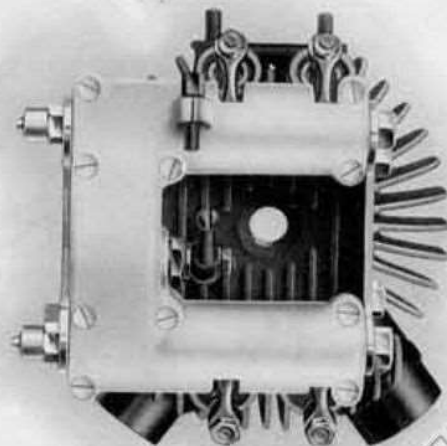


## S.V. CYLINDER. Model SB.

This view shows the cylinder with the detachable cylinder-head removed. With this design decarbonisation is simplicity itself. The carburettor and exhaust system remain undisturbed.

## 4-VALVE HEAD. Model SG.

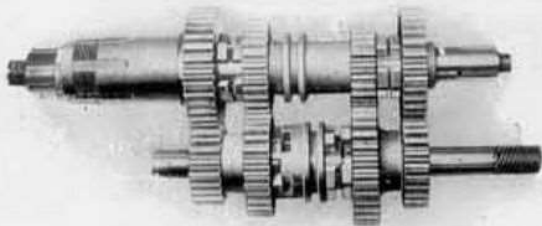
This illustration shows the disposition of the four valves. The rocker gear is neatly and completely enclosed in an aluminium alloy casting. The 4-valve type of engine gives an astonishing power output, the Model SG. being probably the fastest 500c.c. single offered to the Sporting Rider.



# SPECIAL FEATURES

## **INSTRUMENT PANEL.** Models S. & 4F

The Instrument Panel is neatly mounted on top of the petrol tank, which is itself mounted on rubber buffers, thus insulating all instruments from engine and road vibrations. The illustration shows the speedometer, the oil gauge, the patent non-leak quick-release filler cap and an eight-day clock which is only fitted when ordered as an extra. All the instruments are illuminated for night riding.

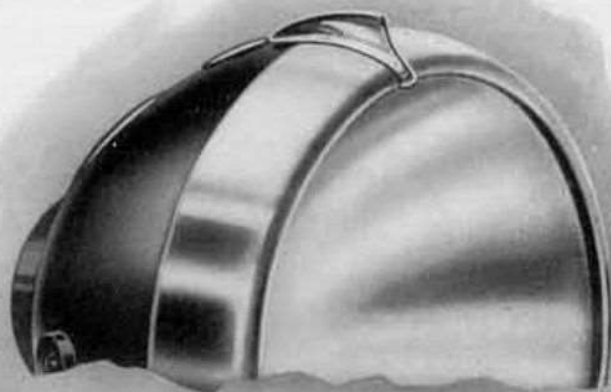


## **4-SPEED GEARS.** Models S. & 4F

The substantial proportion of the individual gears and the stiff, short shafts all make for extreme silence in operation. The fascination of having a gear to suit every gradient is now well-known to Motor Cyclists.

## **MOTIF.** All Models

The Ariel being the Modern Motor Cycle is the first to adopt the latest Automobile practice of a Motif Headlamp. The Ariel Motif is also carried out on the front number plate and the name panel on the tank.





# EXTRA & ALTERNATIVE EQUIPMENT

	£	s.	d.
Lucas 6-volt Magdyno with Tail Lamp, for all Models—Solo ...	5	10	0
Lucas 6-volt Magdyno with Tail Lamp, for all Models—			
Combination	6	0	0
M.L. 6-volt Maglita for all L. Models—Solo ...	5	0	0
Lucas Acetylene Lighting Set (420S) for V., S. and 4F. Models	1	16	0
Lucas Acetylene Lighting Set (320S) for L. Models ...	1	4	6
Lucas Spartan Horn ...		12	6
Lucas Altette Horn ...	1	5	6
Lucas No. 63 Bulb Horn ...		8	6
Steering Damper on L. Models ...		7	6
Carrier and 2 extra Pannier Bags on Models SG.31 and 4F.31...	1	5	0
Smith's Trip Type Speedometer on L. and V. Models ...	2	5	0
Smith's 8-day Clock on S. and 4F. Models ...	1	10	0
Pillion Seats, all Models ...		17	6
Pillion Footrests, all Models ...		7	6
Child's Dickey Seat to Model U. Sidecar ...	2	10	0
25×3 Fort Dunlop Tyres on L. Models ...		10	0
26×3.25 Dunlop Tyres on L. Models ...	1	0	0
26×3.25 Fort Dunlop Tyres on V., S. and 4F. Models ...		10	0
26×3.5 Fort Dunlop Tyres on V., S. and 4F. Models ...	1	0	0
27×4 Fort Dunlop Tyres on V., S. and 4F. Models ...	1	10	0

(For Sidecar Combinations the above Tyre prices are increased by 50 %)

## NOTES OF INTEREST

Saddle Height (all Models) ...	26½ ins.
Width of Handlebar (all Models) ...	30 ins.
Width of Combination (average) ...	60 ins.
Wheelbase—	
V., S. and 4F. Models ...	55 ins.
L. Models ...	50¾ ins.
Length (overall)—	
V., S. and 4F. Models ...	86 ins.
L. Models ...	78 ins.
Ground Clearance (all Models) ...	4½ ins.
Petrol Consumption—	
V., S. and 4F. Models ...	approx. 80 m.p.g.
L. Models ...	100 m.p.g.
Petrol Capacity—	
V., S. and 4F. Models ...	2½ gallons.
L. Models ...	2 gallons.
Oil Capacity (all Models) ...	½ gallon.
A.C.U. Rating—	
550 c.c. ...	5.50 h.p.
500 c.c. ...	5.00 h.p.
250 c.c. ...	2.50 h.p.

# NOTICE

We do not appoint agents for the sale on our behalf of our motor cycles or other goods, but we assign to cycle and motor cycle Dealers areas in which we supply to such Dealers exclusively for re-sale in such areas. No such Dealer is authorised to transact any business, give any warranty, make any representation or incur any liability on our behalf.

The following is a copy of the

## GUARANTEE

given by Dealers in Ariel Motor Cycles.

We give the following guarantee with our bicycles, motor cycles, motor cycle combinations and sidecars, which is given in place of any implied conditions, warranties, or liabilities whatsoever statutory or otherwise all such implied conditions, warranties, and liabilities being in all cases excluded. Any statement, description, condition or representation contained in any catalogue, advertisement leaflet or other publication, shall not be construed as enlarging varying or overriding this guarantee. In the case of machines (a) which have been used for "hiring out" purposes, or (b) any motor cycle and/or sidecar used for any dirt track, cinder track or grass track racing competitions (or any competition of any kind within an enclosure for which a charge is made for admission to take part in or view the competition) or (c) machines from which the trade mark, name, or manufacturing number has been removed, no guarantee, condition or warranty of any kind is given or is to be implied.

We guarantee, subject to the conditions mentioned below, 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 date of purchase, and damages for which we make ourselves responsible under this guarantee are limited to the free supply of a new part in exchange for the part of the bicycle, motor cycle, motor cycle combination and sidecar which may have proved defective. We do not undertake to replace or refix, or bear the cost of replacing or refixing such new part in the bicycle, motor cycle, motor cycle combination and sidecar. We undertake, subject to the conditions mentioned below, to make good at any time within six months any defects in these respects. As the bicycles, motor cycles, motor cycle combinations and sidecars are easily liable to derangement by neglect or misuse, this guarantee does not apply to defects caused by wear and tear, misuse or neglect.

The term "misuse" shall include amongst others, the following acts:—

- 1—The attaching of a sidecar to the motor cycle in such a manner as to cause damage, or calculated to render the latter unsafe when ridden.
- 2—The use of a motor cycle, or of a motor cycle and sidecar combined, when carrying more persons, or a greater weight than that for which the machine was designed by the manufacturers.
- 3—The attaching of a sidecar to a motor cycle by any form of attachment not provided, supplied or approved by the manufacturers or to a motor cycle which is not designed for such use.

Any bicycle, motor cycle, motor cycle combination or sidecar sent to us to be plated, enamelled or repaired will be repaired upon the following conditions, *i.e.*, we guarantee that all precautions which are usual and reasonable have been taken by us to secure excellence of material and workmanship such guarantee to extend and be in force for three months only from the time such work shall have been executed or until the expiration of the six months above referred to and this guarantee is in lieu and in exclusion of any common law or statute warranty or condition and the damages recoverable are limited to the cost of any further work which may be necessary to amend and make good the work found to be defective.

## CONDITIONS OF GUARANTEE

If a defective part should be found in our bicycles, motor cycles, motor cycle combinations or sidecars, or in any part supplied by way of exchange before referred to, 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, the date of the purchase, or the date when the alleged defective part was exchanged as the case may be.

Failing compliance with the above, such articles will lie here AT THE RISK OF THE OWNER, and this guarantee and any implied guarantee warranty or condition shall not be enforceable.

We do not guarantee specialities such as tyres, saddles, chains, lamps, etc., or any component parts supplied to the order of the Purchaser differing from our standard specifications supplied with our bicycles, motor cycles, motor cycle combinations, sidecars or otherwise.





**THE MODERN  
MOTOR CYCLE**

**ARIEL WORKS LTD  
BIRMINGHAM**

LOCAL AGENT: