



*The Race-bred  
Motor Cycle*

## PRESENTING THE 1957 MODELS

**T**HE name A·J·S has been synonymous with quality built motorcycles since 1910 when the first A·J·S motorcycle was produced. Since these early days the policy has always been the same—to produce quality motorcycles of superb design and superlative performance.

The design and construction of every A·J·S motorcycle has been exhaustively tested and proved and is the result of considerable data amassed from active and successful participation in road racing and trials. Hair-line steering, leech-like road holding, superb braking—the inherent characteristics of the racing and competition machines, from which they have been developed, are apparent in every model in the 1957 range.

In appearance, A·J·S motorcycles have that well balanced classical simplicity of line which denotes pedigree breeding.

*A·J·S—A PLEASURE TO OWN  
—A JOY TO RIDE*



### A·J·S MOTOR CYCLES

Proprietors: Associated Motor Cycles Ltd

PLUMSTEAD ROAD, LONDON, S.E.18, ENGLAND

Telephone: Woolwich 1223

Telegrams: ICANOPIT, WOL, LONDON

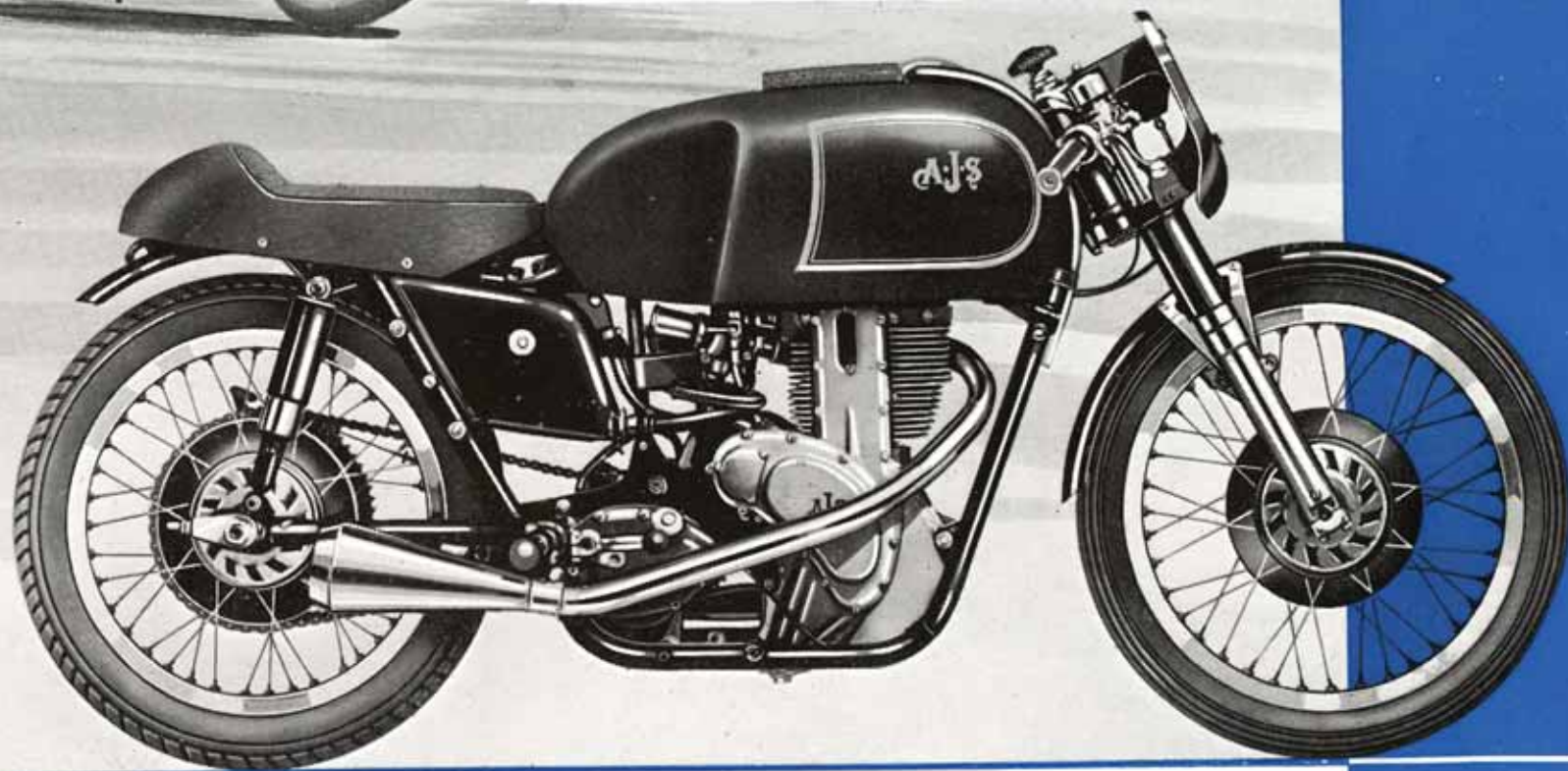


1956 JUNIOR T.T.  
MANUFACTURERS' TEAM PRIZE  
WON BY A·J·S MOTORCYCLES



349 c.c. O.H.C. single-cylinder 75.5 mm. bore  $\times$  78 mm. stroke. Magnesium alloy crankcase, timing case, rocker box, etc. Light alloy cylinder head with shrunk-in valve seats; chain-driven camshaft. Lucas racing magneto. Amal Grand Prix carburettor. Duplex cradle frame of welded construction with full front and rear suspension. Magnesium alloy hubs with 8 $\frac{1}{2}$  inch brakes and straight spokes. Light alloy tanks—5 gallon petrol, 8 pints oil. 2.75  $\times$  19 inch front and 3.25  $\times$  19 inch rear Light Alloy wheel rims and Dunlop Racing tyres. Close ratio 4-speed gear box. Smith's rev. counter.

All engines are fully bench tested and develop not less than 38 b.h.p. at 7,600 r.p.m. Ready for immediate racing, the Model 7R conforms to the current F.I.M. Regulations in every respect.



MODEL

**7R**

349 c.c. O.H.C.

A standard production racing machine which is accepted to be the most successful of its class in the world. Each Model 7R is individually produced in the Works Racing Department.

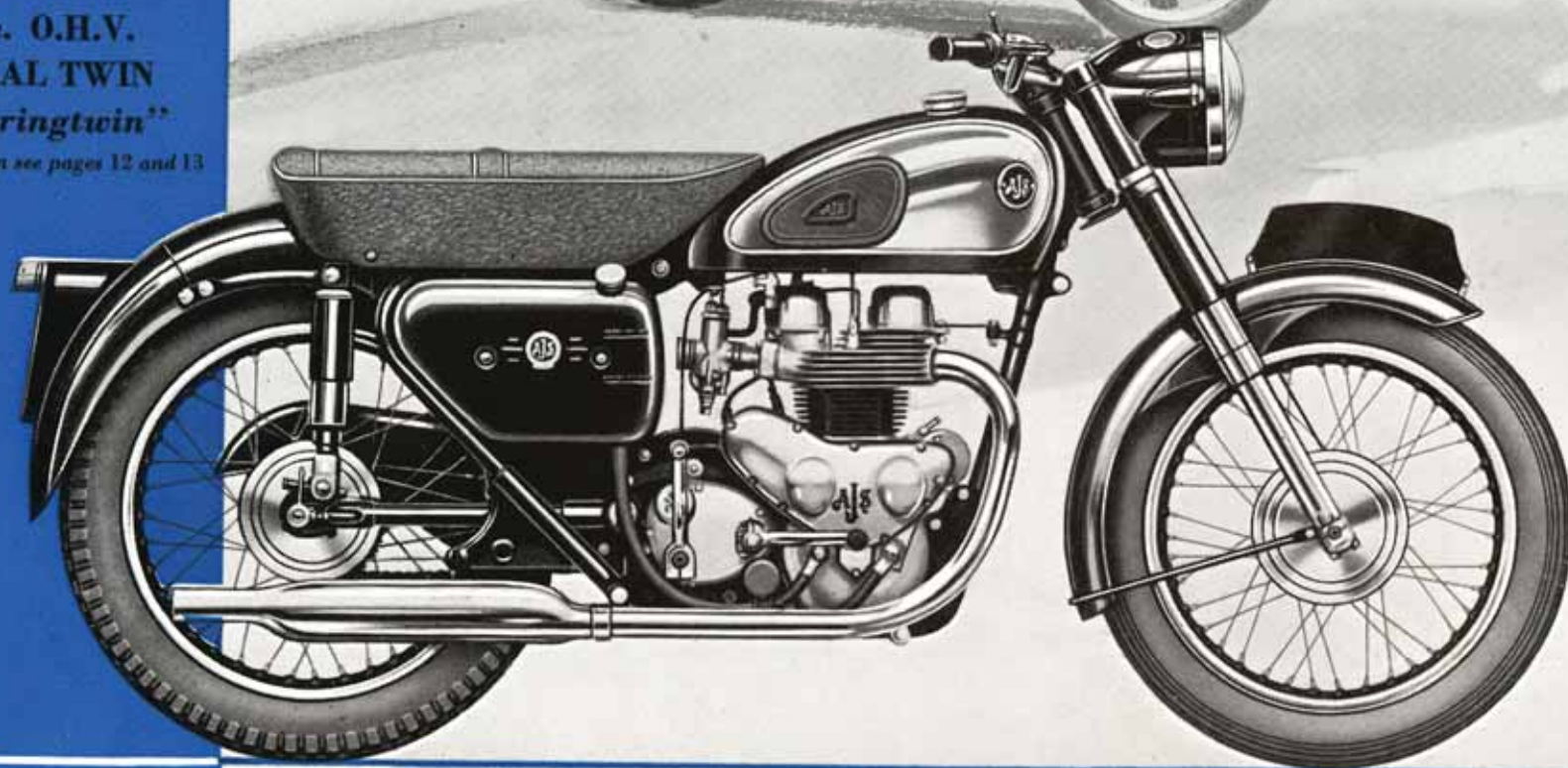


MODEL

20

498 c.c. O.H.V.  
VERTICAL TWIN  
"The Springtwin"

*for full specification see pages 12 and 13*



A fast and delightful model that makes light work of long journeys.  
Silky performance, attractive appearance and unfailing reliability.



MODEL

**30**

600 c.c. O.H.V.

VERTICAL TWIN

*"The New Springtwin"*  
for full specification see pages 12 and 13



Unobtrusively fast yet extremely tractable, the Model 30 possesses the additional performance that the long distance high speed rider demands.

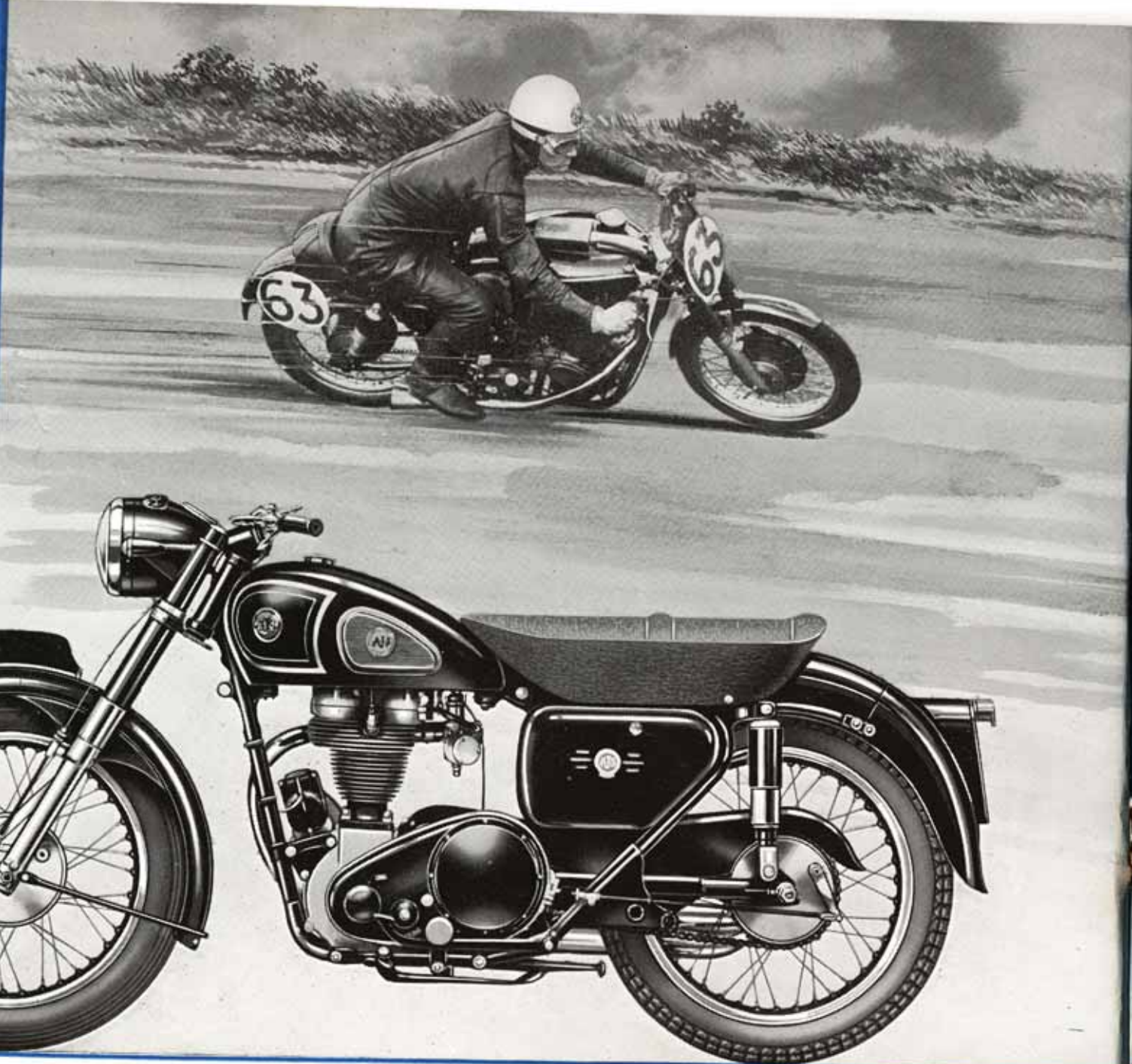


MODEL

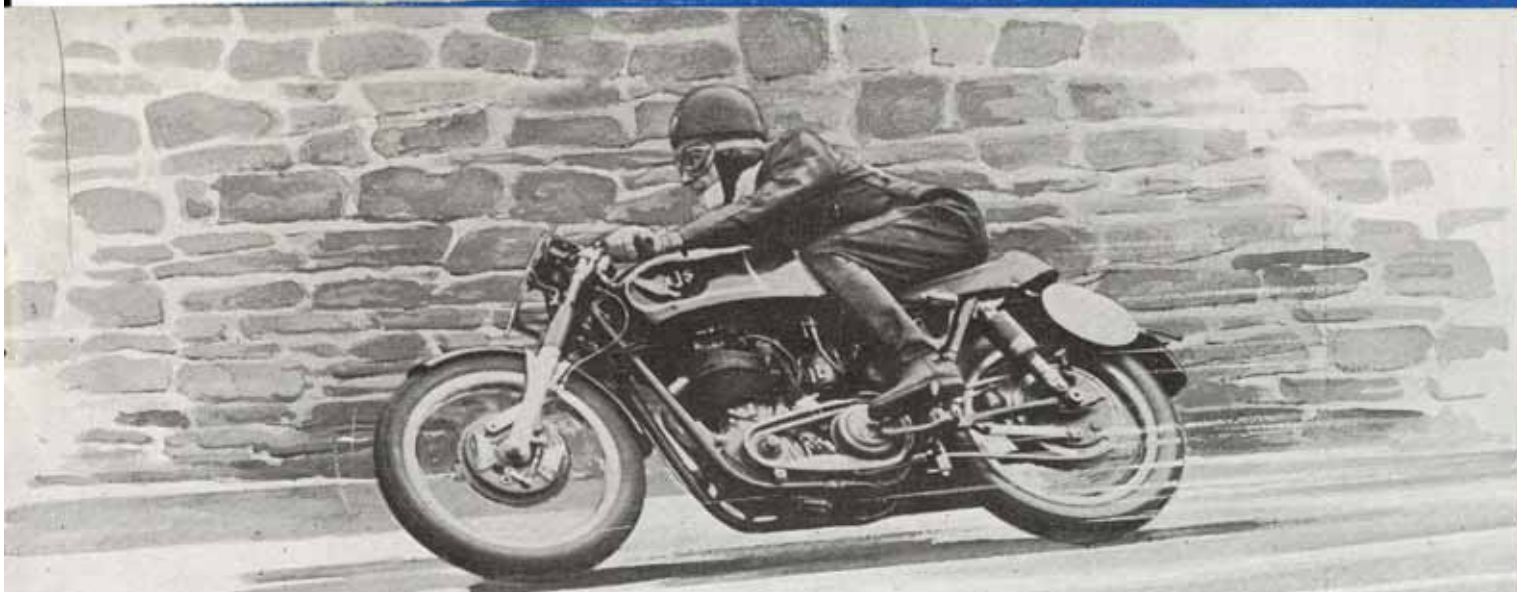
**16MS**

**347 c.c. O.H.V.**

*for full specification see pages 12 and 13*



**Pre-eminent in popularity the Model 16MS provides performance, economy and reliability at minimum cost.**

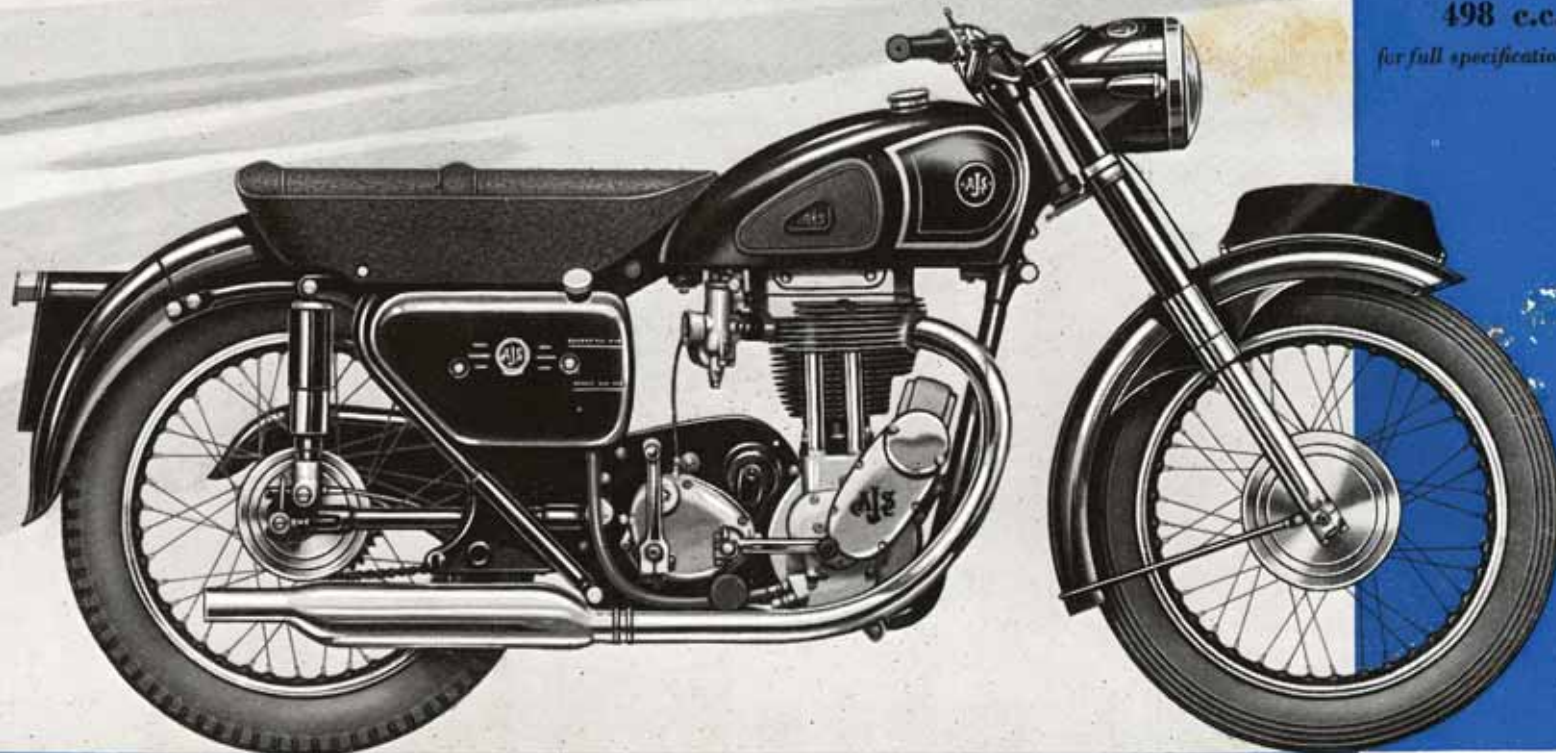


MODEL

**18S**

498 c.c. O.H.V.

*for full specification see pages 12 and 13*



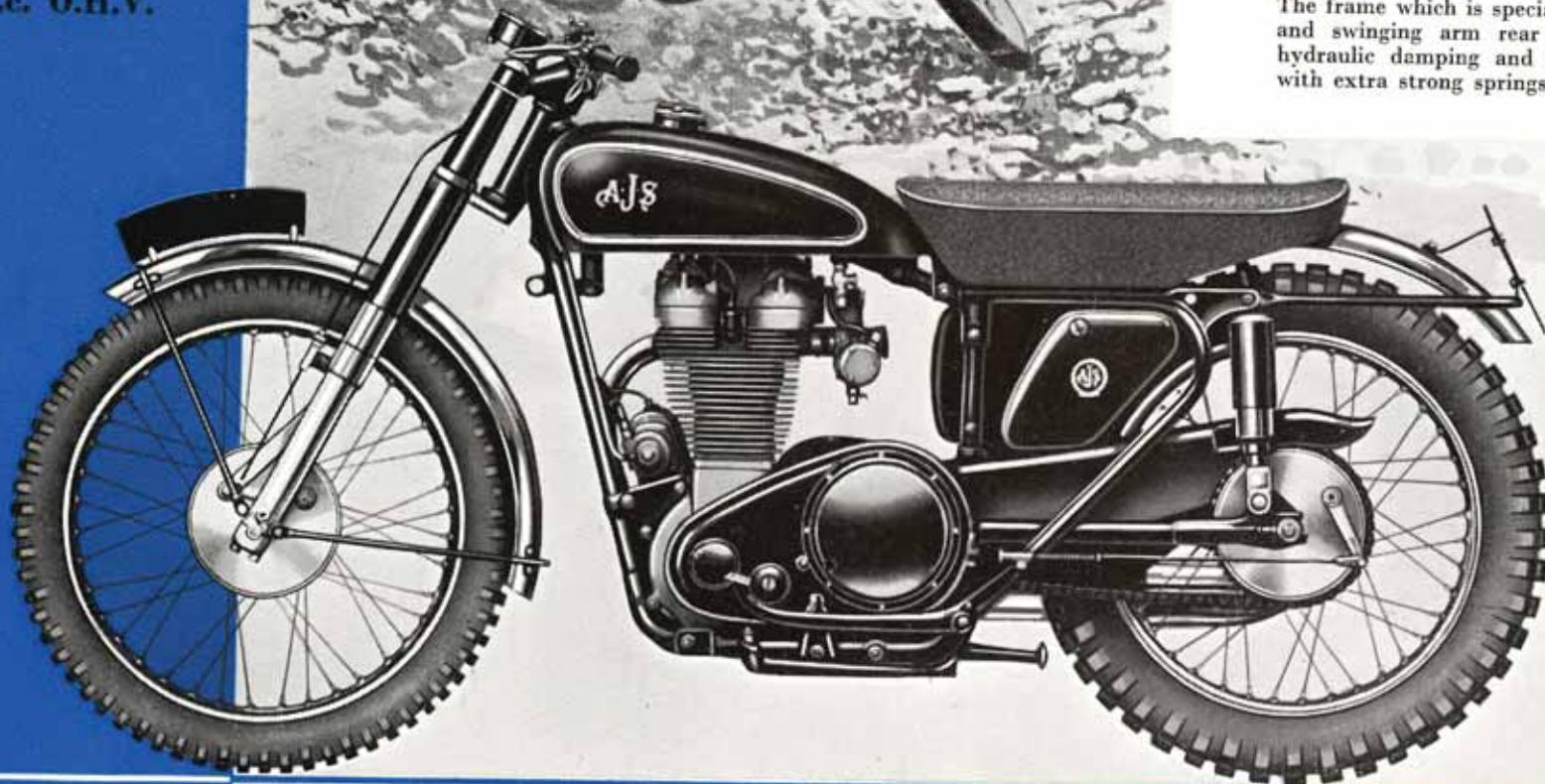
Unequalled for performance and reliability, this '500' single combines the qualities needed by the fast solo rider with that extra power for use if a sidecar is attached.



MODEL

**16MCS**

348 c.c. O.H.V.



## MOTO-CR

The models 16MCS and 18CS differ from the standard specification in many essential respects and these variations are detailed as follows:—

### ENGINE

<i>Bore</i>	<i>Stroke</i>	<i>Capacity</i>
72 mm.	85.5 mm.	348 cc.
86 mm.	85.5 mm.	497 c.c.

Flywheels machined from forged steel discs and drilled for balance, large diameter two piece racing crankpin, short high tensile steel connecting rod, racing cams, light alloy cylinder with iron liner and integral push rod tubes, high compression piston, large bore 'Monobloc' carburettor.

### FRAME

The frame which is specially strengthened, and swinging arm rear suspension with hydraulic damping and Teledraulic forks with extra strong springs, ensure that full

**There is no finer machine in the 350 c.c. class for the rider who aspires to success in Moto-Cross events.**



## S MODELS

advantage may be taken of the terrific power developed.

The wheels have wide rims and security bolts, extra heavy straight spokes, Dunlop 'knobbly' tyres and full width hubs with adjustable taper roller bearings.

### EQUIPMENT

Light alloy mudguards. Small capacity petrol tank of light alloy. Special design Twinseat. Engine undershield. Forged steel footrests of immense strength. Speedometer. Light alloy number plates. Spring-up central stand and prop stand.

### OPTIONAL EQUIPMENT

Standard wheels and tyres.  $3\frac{3}{4}$  gallon petrol tank, standard gear ratios. High compression alcohol piston.

### OPTIONAL EXTRA

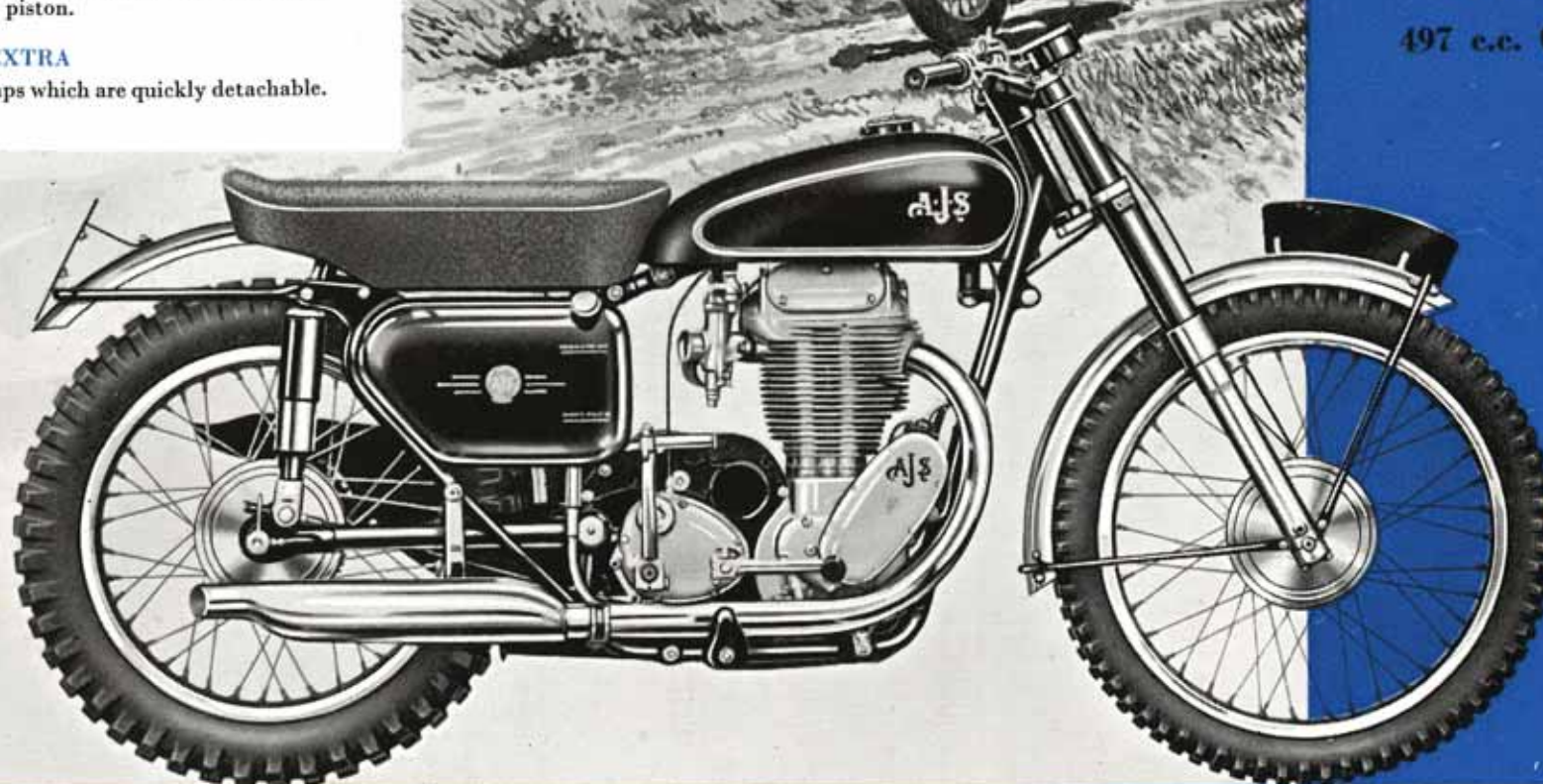
Electric lamps which are quickly detachable.



MODEL

# 18CS

497 c.c. O.H.V.



**The 500 c.c. Scrambles machine that is unsurpassed for performance, ease of handling and reliability under rugged cross country conditions.**



MODEL

16 MC

317 c.c. O.H.V.



### COMPETITION MODEL

Fitted with new short wheelbase high ground clearance frame of welded construction with swinging arm rear suspension. The low compression 350 c.c. engine has a light alloy cylinder barrel; wide ratio gear box with folding kickstarter. 4.00 x 19 inch rear tyre, 2.75 x 21 inch front tyre.

Incorporating extra heavy gauge straight spokes and full width light alloy hubs, each wheel is fitted with security bolts.

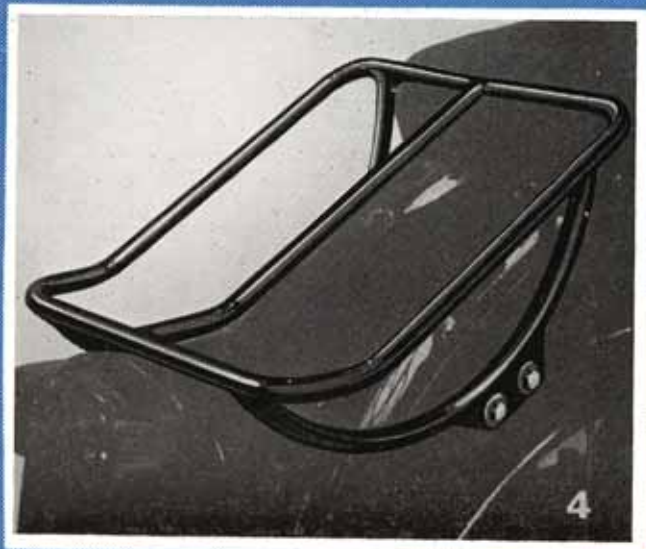
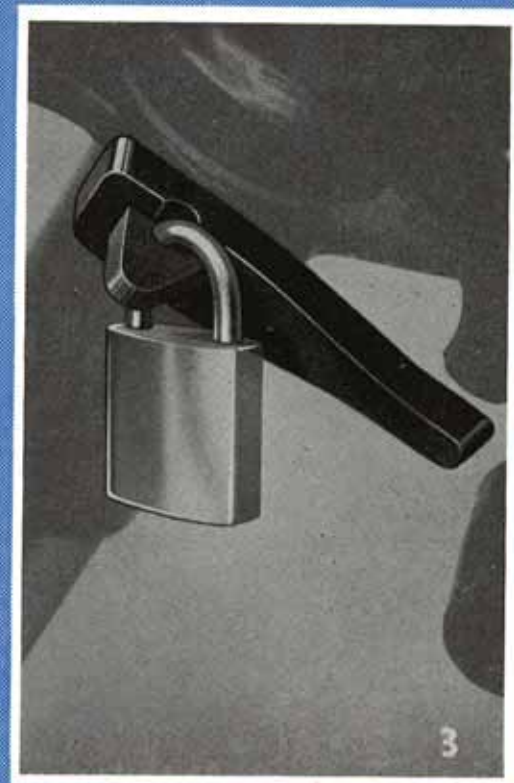
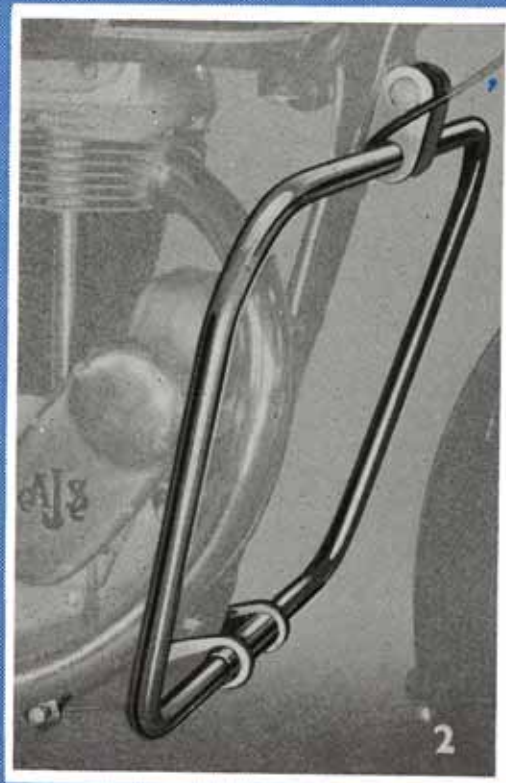
Polished light alloy mudguards—light alloy number plates—upswept exhaust system—steel crankcase shield—small capacity light alloy petrol tank—Lucas waterproof magneto with manually operated ignition control.

OPTIONAL EXTRA Quickly detachable electric lighting.  
Standard or high compression ratio.  
Standard gear ratios.



The stamina and handling of this famous trials machine has been proved by the successes achieved in innumerable important competitions.

# A · J · S Accessories



1. Robust pannier equipment, with strong tubular frames, and quickly detachable waterproof bags.
2. Chromium plated crash bars of great strength and rigidity.
3. A simple but effective steering lock.
4. Luggage carrier of tubular steel construction, easily fitted and blending with the lines of the machine.

# SPECIFICATION

## SINGLE CYLINDER ENGINES—A.J.S.

The single port O.H.V. engines are of A·J·S design and are manufactured in two capacities:

347 c.c. bore 69.0 mm. stroke 93 mm.

498 c.c. bore 82.5 mm. stroke 93 mm.

Deeply finned diecast aluminium alloy cylinder head with cast in valve seats. Stellite tipped chromium plated valves operated by duralumin pushrods and hairpin valve springs through built up rockers housed in a detachable oil retaining cast aluminium cover.

Separate inlet and exhaust cams and cam wheels with quietening ramp for silent operation.

Mushroom type cam followers with hardened and ground bearing surfaces.

Robust flywheel assembly consisting of balanced flywheel discs, hardened steel mainshafts, two-piece crankpin; triple row caged roller big end bearing, forged steel connecting rod with light alloy little end bush.

Twin heavy duty ball bearings on drive side, plain bronze oil distribution bush on timing side. Low clearance, controlled expansion, wire wound piston with two compression and one oil control piston rings. The top ring is chromium plated to reduce cylinder bore wear.

## LUBRICATION

Dry sump. The oil is circulated through the engine and returned to the tank by a double acting, reciprocating plunger pump. One side forces oil to the big end bearing, valve gear and all moving parts and the other returns the surplus oil, which has drained to the sump in the crankcase, to the tank. Filters prevent foreign matter from being circulated with the oil.

## TWIN CYLINDER ENGINES

498 c.c. bore 66 mm. stroke 72.8 mm.

592 c.c. bore 72 mm. stroke 72.8 mm.

The statically and dynamically balanced one piece crankshaft is manufactured from a high grade alloy iron. It is housed in a spherical crankcase of aluminium alloy and supported on caged roller bearings on the drive and timing sides, and a plain Vandervell shell bearing at the centre. This bearing is carried by a separate light alloy plate which is spigotted into both crankcase halves and bolted to the drive side half.

The connecting rods are immensely strong and forged in light alloy. Split Vandervell shell bearings are fitted to the big ends.

As in the single cylinder models, wire wound pistons with chromium plated top rings and slotted oil control rings are fitted.

Each cylinder head and barrel is separate. The barrels are of a high grade iron and the heads light alloy die castings. The barrels are deeply spigotted into the crankcase and the whole assembly of barrel, head and crankcase is bolted together to ensure absolute rigidity.

The ends of the valve stems are Stellite tipped to resist wear. Inlet valves are Silchrome steel and the exhaust valves are of KE.965 steel.

The overhead rockers, which are one-piece forgings, are mounted on eccentric spindles to facilitate the adjustment of valve clearances. Reciprocating weight in the valve operating mechanism is reduced by eliminating tappets, the cams operating Duralumin pushrods through short single arm followers.

Two gear driven camshafts are provided, one for the inlet valves and one for the exhaust valves.

The cam followers and timing gear pinions operate in an oil bath, the oil level of which is controlled; surplus oil drains into the crankcase sump.

## LUBRICATION

The engine is lubricated by a dry sump system employing two separate pumps, each independently driven at half engine speed from the camshafts.

The delivery pump feeds oil direct to the centre main bearing and then via drilled oilways to each big end.

The overhead valve mechanism is supplied via oilways in the barrels and heads.

The scavenge pump which has twice the capacity of the delivery pump, collects oil from the sump in the crankcase and returns it to the tank.

Filters are provided in the oil feed lines and a powerful magnetic filter, which is housed in the crankcase sump, is quickly removable for cleaning.

## CARBURETTOR

An Amal 'Monobloc' carburettor is standard for all models. Float chamber and mixing chamber are a one-piece casting. The instrument has adjustable pilot jet and throttle stop. The throttle is controlled by a twist grip and air control is by a handlebar mounted lever.

## IGNITION

The single cylinder models have a chain-driven Lucas magneto incorporating an automatically controlled advance and retard mechanism. A gear-driven magneto is fitted to the twin-cylinder models and the advance and retard is manually controlled by a lever mounted on the handlebars. KLG FE.80 'Corundite' plugs are used on all models.

# SPECIFICATION

## TRANSMISSION

Primary chain enclosed in oil bath with clutch inspection cover, deep and efficient rear chain guard. Rear chain adjustment unaffected by wheel removal.

## FRAME

The frame is of brazed construction and duplex cradle type, integral sidecar and pillion footrest lugs are provided. Robust swinging arm rear suspension is controlled by two oil damped suspension units. The pivot bush is of the self-lubricating type.

## TANKS

Both petrol and oil tanks are of welded steel construction. The petrol tank has twin taps and quick action filler cap. One tap acts as a reserve.

## FORKS

Patented self-lubricating, oil damped Tele-draulic.

## MUDGUARDS

Deep section steel guards with central rib and tubular stays. Quickly detachable rear portion for wheel accessibility.

## BRAKES

7-inch diameter internal expanding front and rear with finger and secondary shim adjustment.

## WHEELS

Full width light alloy hubs with straight spokes, adjustable caged taper roller bearings.

On all models except Competition models, the rear wheel is quickly detachable.

## TYRES

350 c.c. Model  
3.25 x 19 inch Dunlop Tyres front and rear  
500 c.c. and 600 c.c. Models  
3.25 x 19 inch front and  
3.50 x 19 inch rear Dunlop Tyres

## TWINSEAT

Of exclusive A.J.S design. Grained and blue piped Vynide covered Dunlopillo of deep and comfortable section.

## STANDS

A prop stand and a central stand are fitted to all models. Both are of the spring up type.

## HANDLEBARS

Full adjustment is provided for height and angle.

## SILENCER

A.J.S design and manufacture. It is finished in heavy chromium plate.

## ELECTRICAL EQUIPMENT

7-inch diameter headlamp of pleasing design, the shell of which encloses the speedometer body. Mounted on either side of the lamp are streamlined pilot lights. The rear lamp is a plastic moulding and incorporates a reflector.

Twin cylinder models have a 60 watt dynamo, the singles 35 watt. All models have a vibration

insulated automatic voltage control unit and a 6 volt 12 amp.hour battery.

## GEAR BOX

Heavyweight, with four speeds, the gear box is of A.J.S design and manufacture. Foot operated positive stop gear change mechanism.

## CLUTCH

The multi-plate dry clutch is handcontrolled from the handlebar and incorporates an efficient rubber shock absorber.

## FINISH

Three coats of finest quality black stove enamel on Bonderized surface and heavy chromium plating. Light alloy hubs, fork sliders, timing case, etc., highly polished. Petrol tank hand-lined.

## EQUIPMENT

Illuminated speedometer, comprehensive tool kit, grease gun, tyre pump and 90 page Maintenance Manual.

## OPTIONAL EQUIPMENT

Low compression ratio piston, studded front tyre.

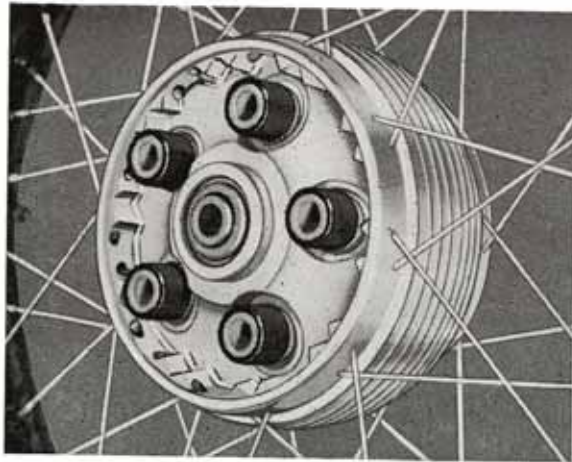
## OPTIONAL EXTRAS

Quickly detachable pannier equipment, steering lock, air cleaner, stop light, luggage carrier, pillion footrests, steering damper and crash bars.

## MOTO CROSS AND TRIALS MODELS

For deviations from the standard specification, please see pages 8, 9 and 10.

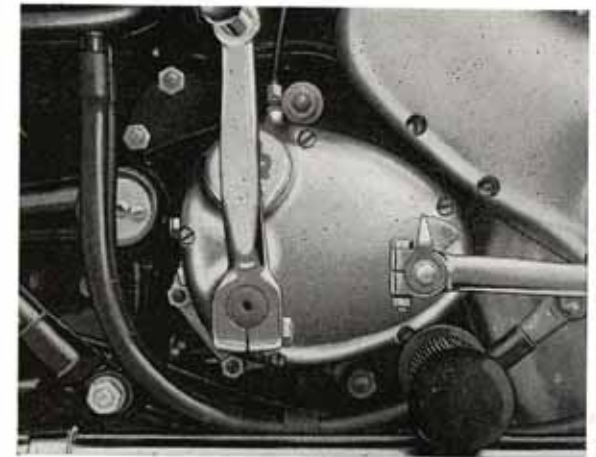
## *Special Features of the 1957 A·J·S Quality Range*



The new quickly detachable rear wheel eliminates metal to metal contact with large diameter rubber sleeved driving pins.



Redesigned chainguard affords even greater protection to both top and bottom runs of the chain.

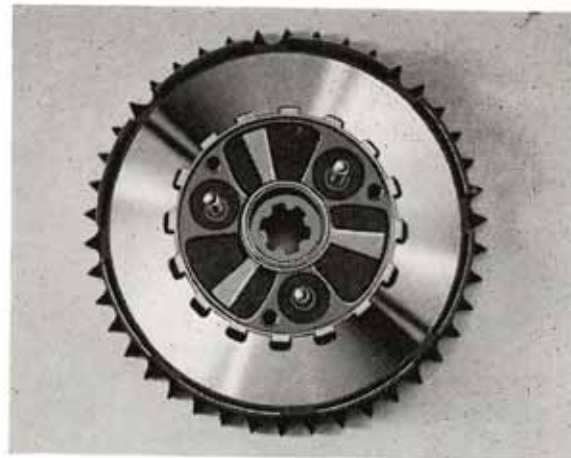


Completely new gear box of A·J·S design and manufacture. Robust construction. 4-speed with positive foot control and dry multi-plate clutch.

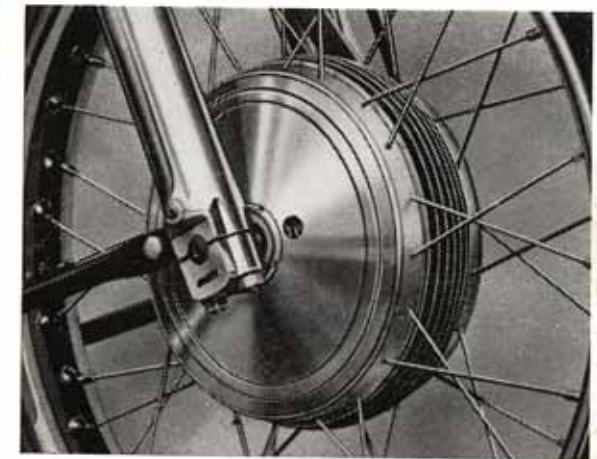


Petrol tanks featuring chromium plated side panels have enhanced the appearance of the twin cylinder models.

PAGE FOURTEEN



The rubber shock absorber incorporated in the clutch eliminates transmission shocks and improves tractability.



Full width light alloy hubs with racing type straight spokes.

# TECHNICAL DATA

MODEL	16MS	18S	20	30	16MCS	18CS	16MC
Engine: Type ... ..	O.H.V.	O.H.V.	O.H.V.	O.H.V.	O.H.V.	O.H.V.	O.H.V.
No. of cylinders ... ..	1	1	2	2	1	1	1
Bore/Stroke mm. ... ..	69×93	82.5×93	66×72.8	72×72.8	72×85.5	86×85.5	69×93
Capacity c.c. ... ..	347	498	498	592	348	497	347
Compression ratio ... ..	7.5 or 6.5	7.3 or 6.3	8.0 or 7.0	7.4 or 6.75	9.9	8.7	6.5
Gear ratios: Top ... ..	5.8	5.0		5.25	6.5	5.8	6.5
Third ... ..	7.8	6.8		7.1	8.8	7.8	9.6
Second ... ..	10.3	8.9		9.3	11.5	10.3	15.5
First ... ..	15.5	13.4		14.0	17.4	15.5	21.3
Carburettor: Amal ... ..	Monobloc 376/5	Monobloc 389/1	Monobloc 376/6	Monobloc 376/78	Monobloc 389/18	Monobloc 389/12	Monobloc 376/5
Choke size ... ..	1 $\frac{1}{16}$ "	1 $\frac{3}{32}$ "	1"	1 $\frac{1}{16}$ "	1 $\frac{1}{8}$ "	1 $\frac{3}{16}$ "	1 $\frac{1}{16}$ "
Main Jet No. ... ..	210	260	220	280	270	440	210
Throttle Slide No. ... ..		3 $\frac{1}{2}$		4		3	3
Rear chain ... ..	$\frac{5}{8}$ " Pitch × 0.380" Width		$\frac{5}{8}$ " Pitch × 0.380" Width		$\frac{5}{8}$ " Pitch × 0.380" Width		$\frac{5}{8}$ " Pitch × 0.380" Width
Front chain ... ..	$\frac{1}{2}$ " Pitch × 0.305" Width		$\frac{1}{2}$ " Pitch × 0.305" Width		$\frac{1}{2}$ " Pitch × 0.305" Width		$\frac{1}{2}$ " Pitch × 0.305" Width
Tyres: Front ... ..	3.25" × 19"		3.25" × 19"		3.00" × 21"		2.75" × 21"
Rear ... ..	3.25" × 19"	3.50" × 19"	3.50" × 19"		4.00" × 19"		4.00" × 19"
Brakes: Front and Rear ... ..	7" diam. × $\frac{7}{8}$ " wide		7" diam. × $\frac{7}{8}$ " wide		7" diam. × $\frac{7}{8}$ " wide		7" diam. × $\frac{7}{8}$ " wide
Seat Height ... ..	31 $\frac{1}{2}$ "		31 $\frac{1}{2}$ "		32 $\frac{1}{2}$ "		32 $\frac{1}{2}$ "
Wheelbase ... ..	55 $\frac{1}{4}$ "		55 $\frac{1}{4}$ "		55 $\frac{1}{4}$ "		54"
Length ... ..	86 $\frac{1}{4}$ "		86 $\frac{1}{4}$ "		85 $\frac{1}{4}$ "		83"
Width ... ..	28"		28"		28"		28"
Height ... ..	41 $\frac{1}{2}$ "		41 $\frac{1}{2}$ "		43"		43"
Clearance ... ..	5 $\frac{1}{2}$ "		5 $\frac{1}{2}$ "		6 $\frac{1}{2}$ "		6 $\frac{1}{2}$ "
Weight lbs. ... ..	375	387	394	396	326	329	320
Petrol tank capacity galls. ... ..	3 $\frac{3}{4}$		3 $\frac{3}{4}$		2		2
Oil tank capacity pints ... ..	4		4		4		4

# G U A R A N T E E

## NOTICE

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

## GUARANTEE

We give the following guarantee with our motorcycles, motorcycle 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 motorcycle and/or sidecar used for any dirt track, cinder track or grass track racing or 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 motorcycle, motorcycle combination or sidecar which may have proved defective. We do not undertake to replace or refix or bear the cost of replacing or refixing such new parts in the motorcycle, motorcycle combination or sidecar. We undertake subject to the conditions mentioned below, to make good at any time within six months any defects in these respects. As motorcycles, motorcycle 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 a motorcycle in such a manner as to cause damage or calculated to render the latter unsafe when ridden.
2. The use of a motorcycle or of a motorcycle 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 motorcycle by any form of attachment not provided, supplied or approved by us, or to a motorcycle which is not designed for such use.

Any motorcycle, motorcycle 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 materials 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 made good the work found to be defective.

## CONDITIONS OF GUARANTEE

If a defective part should be found in our motorcycles, motorcycle 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, electrical equipment, lamps, etc., or any component parts supplied to the order of the purchaser differing from standard specification, supplied with our motorcycles, motorcycle combinations, sidecars or otherwise.

## THE A·J·S FREE SERVICE SCHEME

It is strongly recommended that owners of new A·J·S motorcycles should avail themselves of the free Service Scheme operated by all home Dealers, full details of which are given on the card supplied with each machine.

## NOTICE

All prices and specifications are subject to alteration without notice and all motorcycles and equipment are sold subject to the limited guarantee printed herein.