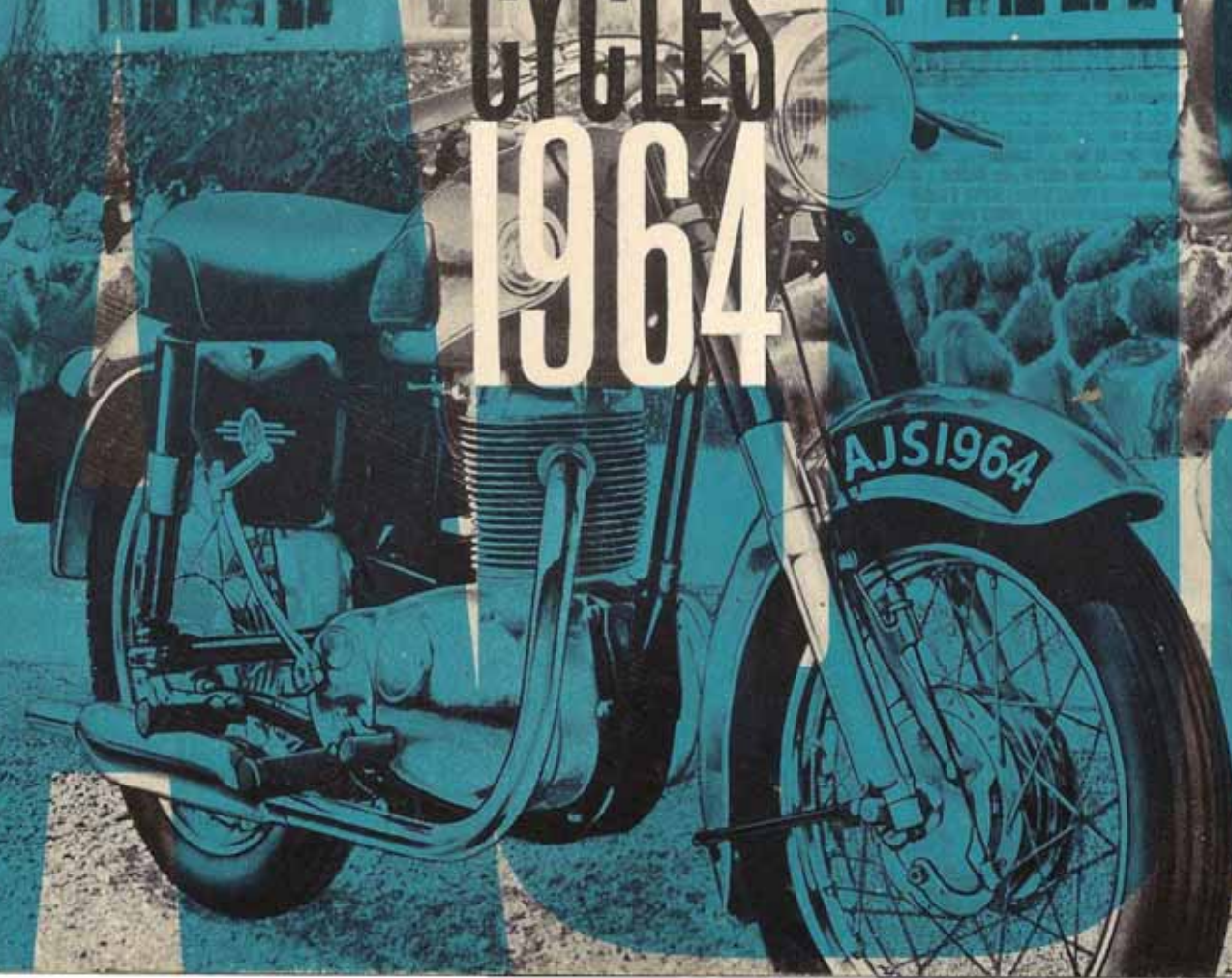


# AJS

# MOTOR CYCLES

# 1964

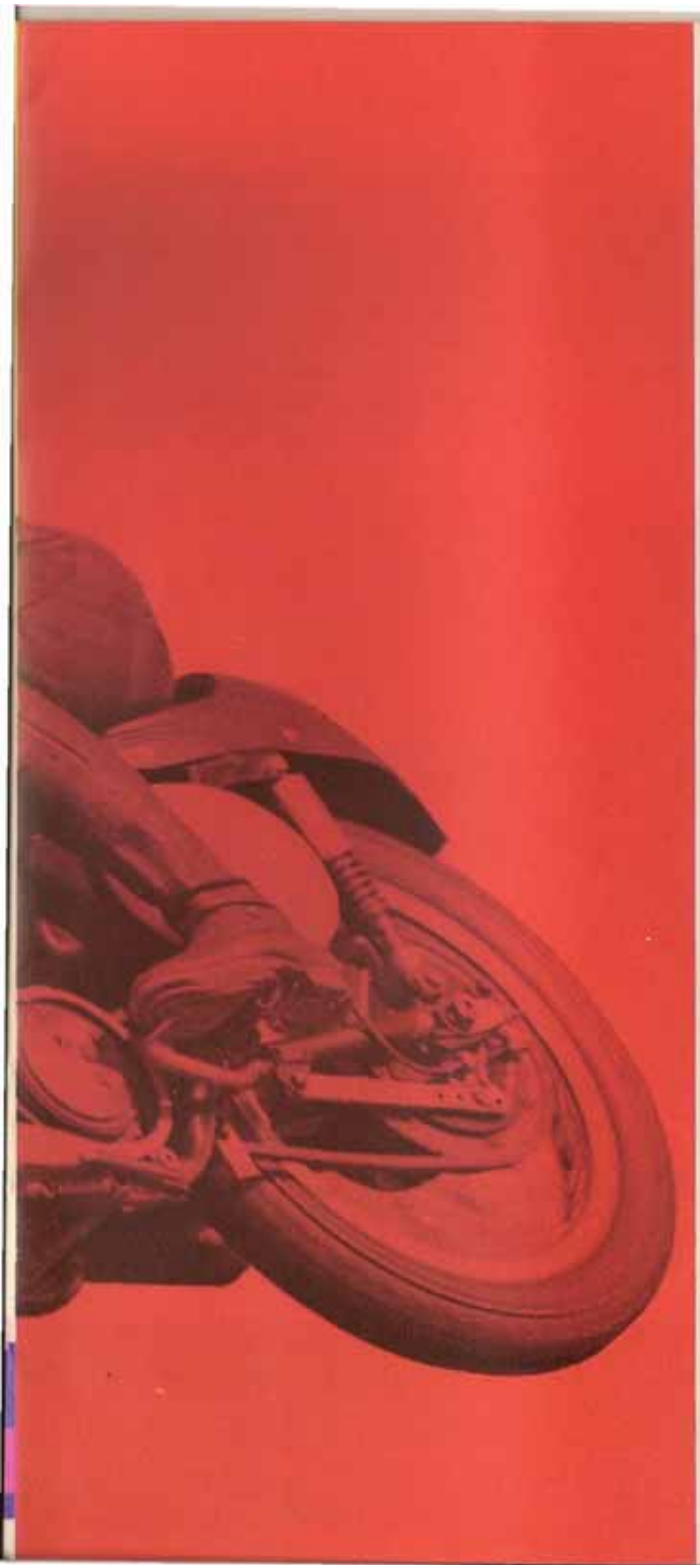


# RACE REARED... TRIAL TESTED... ROAD PROVED...

You have seen A.J.S machines on the racing circuits, winning event after event - 1-2-3 in the Manx G.P. for example; you have undoubtedly heard of the marque's trials success - winning the Scottish more times than any other, and the team award on numerous occasions; manufacturer's awards in the Welsh Three Days Trials, and awards in the International Six Days Trials.

As well as achieving these successes, the works development machines are also doing something for *you*. They are testing components which, providing they withstand the punishment, will be incorporated in production models to make them more reliable and safer for you to ride. For 1964, several such components are included in the specifications of the seven models available. The heavy duty machines have "Roadholder" forks, complete with thief-proof lock; larger brakes housed in smart alloy hubs; 12 volt electrics on the twins; new engines for the singles based on the scrambler and complete with a gear-type oil pump; frame changes on the sporting twin; detail modifications to the competition models, and many more. All have been race reared, trial tested and road proved.





# 250 c.c. **SAPPHIRE** SUPER SPORTS



A fast trip along the Motorway, a leisurely touring holiday, or a run down to the shops for the Sunday newspaper – all are well within the scope of this sturdy, good-looking lightweight. "A highly tuned engine" says the specification. So it is, not only for the high speeds of which the machine is capable, but also for riding in heavy traffic, for that moderate-average-speed run, and for first rate fuel economy.

Handling and roadholding, braking too, are in the top bracket; competition Teledraulic forks and the large front brake make sure of that.

## TECHNICAL DETAILS

**Engine** 248 c.c. o.h.v. single (70 mm. bore x 65mm. stroke). Light alloy cylinder head with cast-in valve seats: chrome plated, stellite tipped valves: duplex hairpin valve springs: built-up rockers: hiduminium pushrods with hardened steel end-cups: lever type cam followers: both cams on single shaft: steel connecting rod: caged roller big-end bearings: built-up crankshaft supported by roller, ball and plain bearings: rotary reciprocating plunger oil pump: ignition by battery and coil with independent emergency start circuit.

**Gearbox** Separate from engine, but polished side covers give appearance of unit construction with engine. 4 speeds, positive foot change, driven through multi-plate clutch incorporating rubber vane shock absorber: duplex primary chain adjusted by rotation of gearbox shell.

**Forks** Telescopic, two way oil damped, with multi-rate springs.

**Frame** of brazed and bolted construction: single top and saddle tube: single front down tube: pressed steel engine under channel: short triangulated rear sub-frame: pivoted fork rear suspension controlled by Girling adjustable units.

**Lighting** 6 volt, 54 watt, crankshaft mounted alternator: 11 a.h. battery: 6" headlamp with speedometer, ammeter and switches mounted in shell: combined rear and stoplight with integral reflector.

**Wheels** 17" diameter with 3.25" Dunlop tyres.

**Brakes** 6" diameter at front and rear: full width hubs.

**Twins seat** Two level foam rubber with water-proof covering.

**Colour finish** Primarily black, with blue and chrome tank, and black accessory covers: usual parts are chrome plated and most of the light alloy components are highly polished.



# 350 c.c. SCEPTRE

Appearances are often deceptive. Here's a rugged looking 350 that is surprisingly light and easy to handle, and has a very creditable turn of speed.

Always a reliable machine, the Sceptre has an additional bonus for '64 in both reliability and power. The engine is new, and is developed from the scrambler. It has the same bottom end, same main bearings, steel flywheels, large crankpin, larger big-end bearing, stiffer connecting rod, and a high compression ratio. A new gear type pump delivers oil at a higher pressure than previously, and the feed to the big-end is more direct.

Other refinements of the 1964 Sceptre include new forks, hubs and brakes, and something which certainly is not new to the model - first class fuel economy.



## TECHNICAL DETAILS

**Engines** Model 16, 348 c.c. o.h.v. single (72 mm. bore x 85.5 mm stroke) Model 18, 497 c.c. o.h.v. single (86 mm. bore x 85.5 mm. stroke).

Light alloy cylinder head with cast-in valve seats: chrome plated, stellite tipped valves: exhaust valve lifter fitted: duplex hairpin valve springs: built-up rockers housed in detachable light alloy rocker box, separate inspection cover: biduminium pushrods with hardened steel end-cups: mushroom type cam followers: separate cam wheels: built-up crankshaft, with individually balanced steel fly-wheels and two-piece crankpin, supported by ball, roller and plain main bearings: duralumin caged roller big-end bearing with improved direct oil feed: high tensile steel connecting rod: forged alloy piston: cast iron cylinder barrel with integral push-rod tunnels: new gear type oil pump driven off timing side crankshaft: ignition by battery and coil with independent emergency start circuit.

**Gearbox** Separate four speed box: light alloy shell and covers: wide tooth heavy duty pinions: multi-plate clutch with integral rubber van shock absorber: primary drive housed in cast alloy oil bath.

**Frame** Brazed and bolted construction, with integral sidecar lugs: twin tube duplex cradle: single top and saddle tubes: large robust lug at base of saddle tube houses self lubricating pivot bush for rear swinging fork: rear sub-frame loops are short and rear swinging fork braced for rigidity: rear suspension controlled by fully adjustable oil damped Girling units.

**Forks** New "Roadholder" forks with built-in thief proof lock: pro-

# 500 c.c. STATESMAN

The Statesman's engine is a road-tuned version of the scrambler. Having the same rugged race-proved parts, reliability is assured. The relatively low compression ratio helps retain the machine's inherent pulling power and good manners, and all-round performance is improved by the "oversquare" engine.

Add to this, the new forks and hubs, a particularly economical fuel consumption, and it's easy to appreciate why the Statesman has so much appeal for the man who is in the market for a good "all-rounder" at a realistic price.

gressive two way oil damping: single rate springs housed within large diameter heat treated tubular stanchions: light alloy sliders, with chromed steel extensions.

**Wheels** 18" diameter chrome plated steel rims: heavy duty spokes. Fitted with Dunlop high hysteresis tyres.

**Hubs and Brakes** New large diameter die cast light alloy hubs, with deep cooling fins and internal strengthening webs: front brake drum cast into hub: one piece rear drum and sprocket separate from hub (necessary as rear wheel is Q.D.): ball journal bearings support hubs on high tensile steel spindles. Brake sizes—front 8" x 11" rear 7" x 11".

**Lighting** 6 volt, 60 watt crankshaft mounted alternator: 11 a.h. battery: 7" headlamp: combined rear and stop-light with integral reflector.

**Twinseat** Two level touring seat: pressed steel base: foam rubber padding waterproof vynide covering.

**Tanks** 4 gallon pressed steel petrol tank, completely rubber mounted: mounting at front by expanding rubber bushes, at rear by rubber bands - tank rests on foam rubber pads: single two-level tap. 4 pint pressed steel oil tank bolted up to rear sub-frame.

**Dimensions** Seat height 29.5": ground clearance 5.5": wheelbase 55"

**Colour Finish** All black and chrome. Polychromatic blue is optional for petrol tank, oil tank and toolbox.

**Optional** Sidecar specification - special forks, gears and suspension.

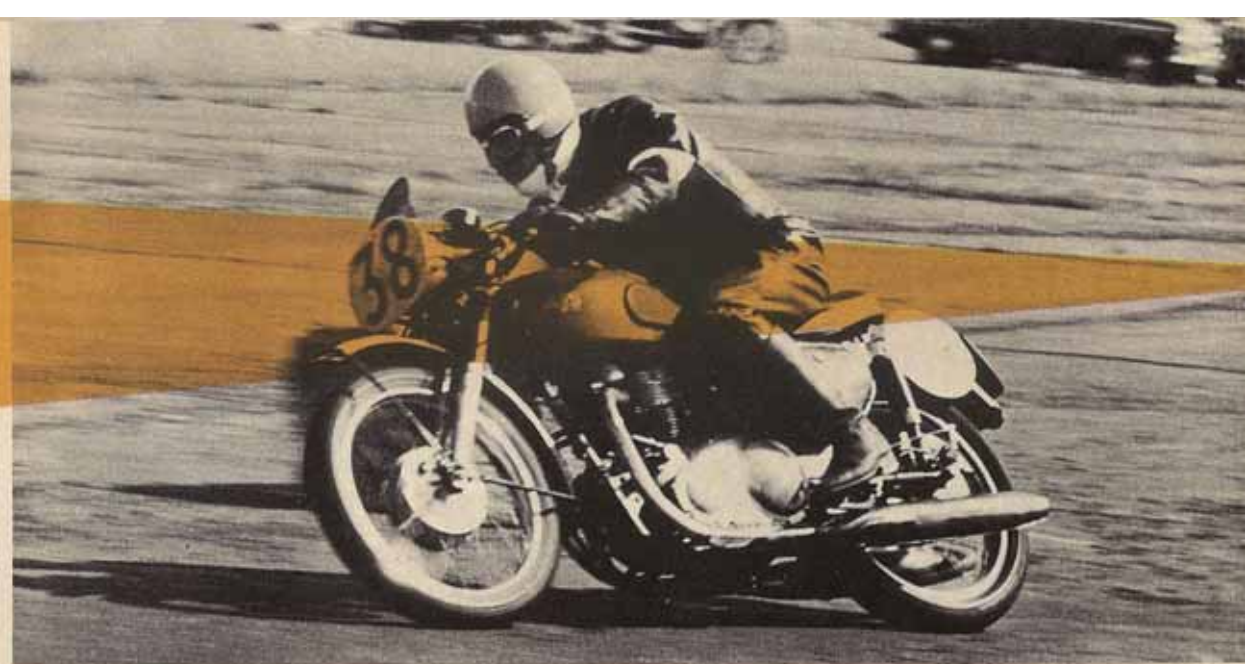
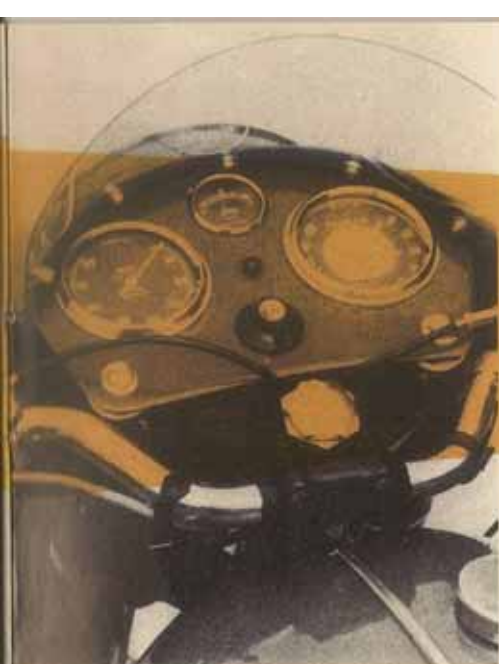
**Option Extras** Range of dolphin fairings. Fully enclosed rear chaincase. Air cleaner. Steering damper. Front and rear safety bars.



650 c.c. **HURRICANE**







A lower riding position, larger twinseat, the shorter rigid rear sub-frame, smaller wheels with bigger brakes, "Roadholder" forks, and 12 volt lighting. All included on this year's Hurricane for the increased comfort and safety which they give.

Most important for the production racing enthusiast is the optional extra speed-kit, which adds a top speed increase plus additional power in the middle and lower ranges of the rev. scale. Also available with the speed-kit, as extras, are the racing magneto and dual exhaust system, the latter providing an even greater boost to the middle range power output.

## TECHNICAL DETAILS

Specification is similar in many respects to the standard 650 c.c. twin, but with the following alterations.

**Engine** Highly tuned with 8.5:1 compression ratio. Magneto ignition.

**Mudguards** Chrome plated steel.

**Twinseat** Two level twin seat.

**Colour Finish** Black frame, fork covers, etc., with polychromatic blue and chrome

petrol tank, and polychromatic blue oil tank and toolbox.

**Optional Extras** Range of Dolphin fairings. Speedkit comprising twin carburetors, h.c. pistons and special camshafts. Rev-counter. Steering damper. A racing magneto and separate exhaust system can be fitted if the speedkit is supplied as original equipment.

# 650 c.c. SWIFT

This twin cylinder machine can be summed up in one word. 'Versatility!' Here you have all the speed and power of a large capacity motor cycle, yet it handles as easily as a lightweight - especially in heavy traffic. This year's modifications should see the Swift respond with an even better all round performance. As a dependable all the year round transport, this machine will be very attractive to the motor cyclist who needs to use it at all times of the day and night. The new 12 volt lighting system gives a great increase in light output, allowing high speeds to be maintained after dark without any difficulty. The Swift is understandably popular with sidecar fans, and will be even more so, now that special forks are available.



## TECHNICAL DETAILS

**Engine** 646 c.c. o.h.v. vertical twin (72 mm. bore x 79.3 mm. stroke). Both the barrels and heads are separate for ease of maintenance. Light alloy cylinder heads with cast-in valve seats: chrome plated stellite tipped valves: multi-rate coil valve springs: one piece rockers adjustable by eccentric spindles which are mounted between pillars integral with heads: hiduminium pushrods with hardened steel end-cups: lever cam followers: separate gear-driven camshafts mounted fore and aft of barrels: one piece three bearing crankshaft supported by two large diameter roller journal bearings and plain metal centre bearing: plain big-end bearings: two piece forged alloy connecting rods: forged alloy pistons: separate fine grain cast-iron cylinder barrels: two camshaft driven gear type oil pumps: ignition by battery and coil, with dual contact breakers, and independent emergency start circuit.

**Gearbox, Frame, Forks, Wheels, Hubs and Brakes, Twinseat, Tanks** All as single cylinder models.

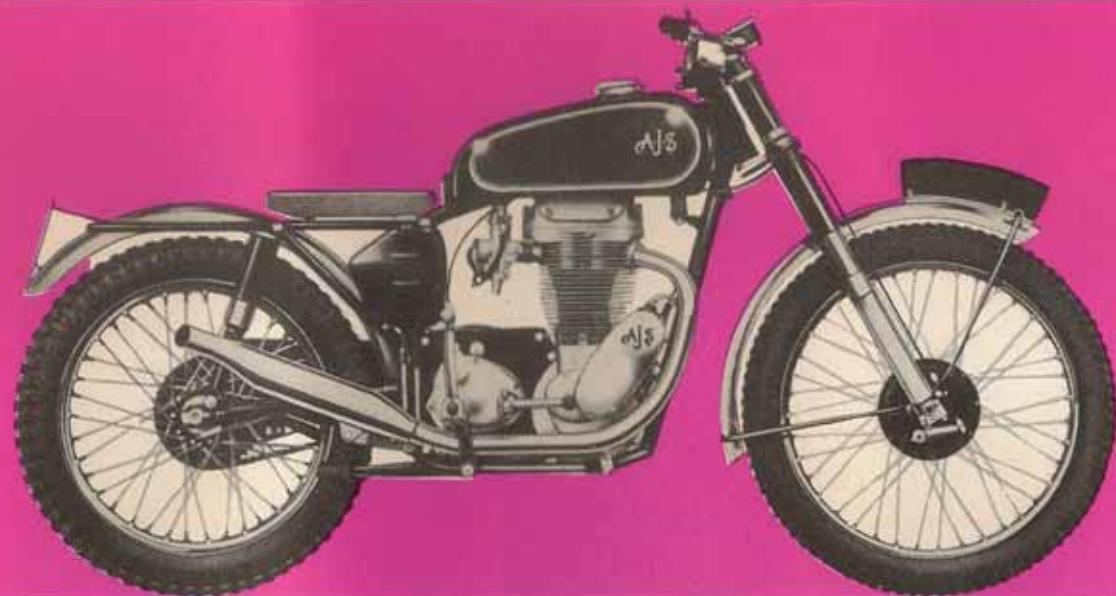
**Lighting** 12 volt. Crankshaft mounted alternator: two 6 volt batteries connected in series: Zener diode: adjustable 7" headlamp with 50w/40w double filament head bulb: combined rear and stop light with integral reflector.

**Dimensions** Seat height 29.5": ground clearance 5.5": weight 410 lbs.

**Colour finish** All black and chrome. Polychromatic blue is optional for petrol tank, oil tank and toolbox.

**Optional** Sidecar specification - special forks, gears and suspension. Siamesed exhaust.

**Optional Extras** Range of dolphin fairings. Magneto ignition. Steering damper. Air cleaner. Front and rear safety bars. Fully enclosed rear chaincase.



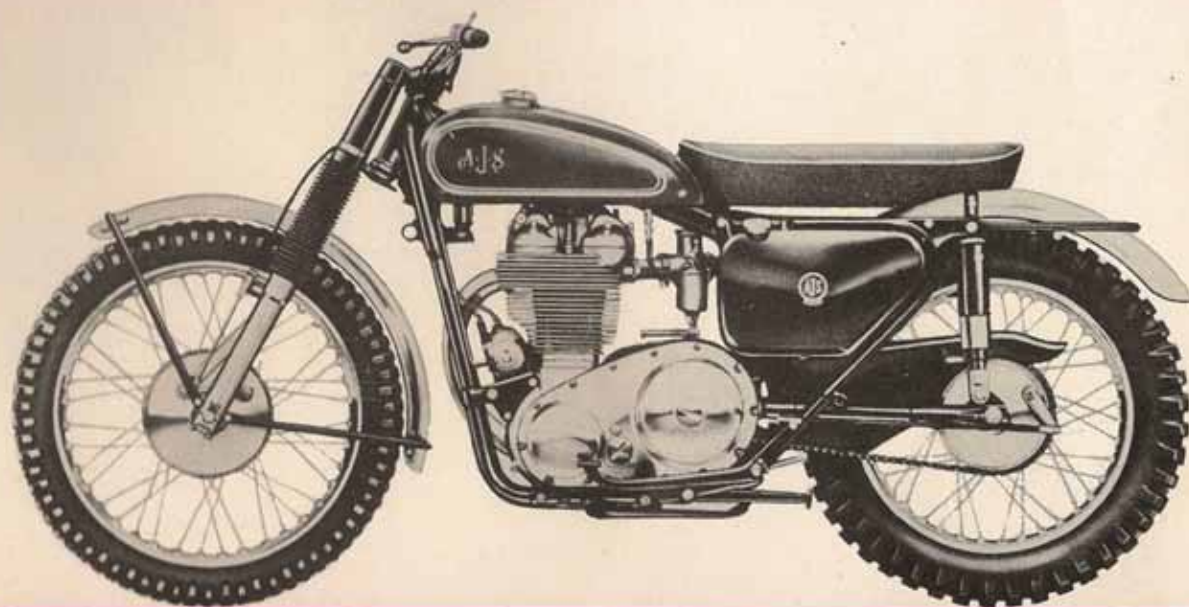
## 350 c.c. **EXPERTS**

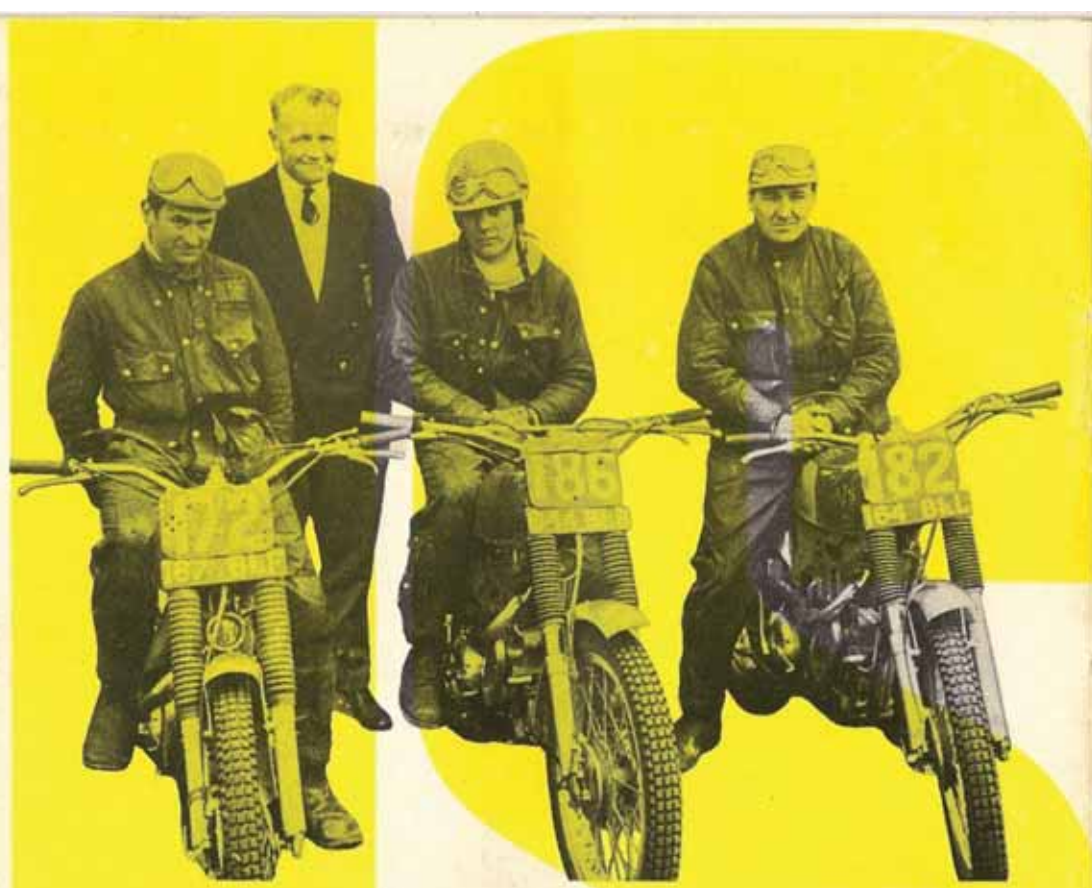
The short-stroke engine is here, and what's more it plonks better than the old unit. Response to the throttle is better and just as easy to control. The new low seat enables a heavy boot to be got down a lot more easily if a spot of bother is encountered. Mud-pluggers who have never experienced the joys of riding a bigger banger should try this one - it's a revelation.

## 500 c.c. **SOUTHERNER**

Powered by what is probably motor cycling's most potent push-rod single, only detail mods are made this year. A new gear-type oil-pump, and modified feeds to the big-end and rockers, improved oil circulation and thereby increased reliability.

Detailed specifications of both models available on request.





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