

Off-side view of the new "350" Model 16 M. The "500" Model 18 is identical in appearance save only for deeper cylinder fins and an exhaust pipe which passes below the footrest.

Associated Motor Cycles, Ltd., Announce the Restoration of Peace-time Production with 350 c.c. and 500 c.c. Teledraulic equipped Designs

THROUGHOUT the period of the war in Europe Associated Motor Cycles, Ltd., of Plumstead Road, London, S.E.18, have been very fully occupied with the manufacture of thousands of W.D. machines. They are still busily engaged on turning out motorcycles for the unfinished war in the Far East, but neither of these facts has prevented them planning for peace-time production.

The first fruits of their plans are now to be seen in two new A.J.S. models, deliveries of which, it is anticipated, should begin in late July or early August. Known respectively as the "500" Model 18 and the "350" Model 16 M, each employs a vertical single-cylinder single-port o.h.v. A.J.S. power unit, the former with a bore and stroke of 82.5 mm. by 93 mm. (498 c.c.), the latter being 69 mm. by 93 mm. (347 c.c.).

The compression ratios are respectively 5.9 to 1 and 6.3 to 1, the exhaust pipe diameters $1\frac{1}{4}$ ins. and $1\frac{1}{2}$ ins., while the Amal carburetter choke sizes are $1\frac{1}{8}$ ins. and 1 in. Apart from heavier flywheels and thicker engine plates the Model 18 is identical with the Model 16 M, so that the following description may be taken as common to both.

A Sound Foundation

The flywheel assembly runs on two ball bearings on the drive side, and single roller and plain bearings on the timing side. The 1.203-in. crankpin is of two-piece construction, a hardened sleeve being a press fit on the soft pin. The big-end bearing consists of three rows of $\frac{1}{4}$ -in. rollers carried in a duralumin cage. The "Lo-ex" split skirt alloy piston is equipped with two compression and one scraper rings. Separate cam wheels in direct contact with flat-base tappets operate the valves by enclosed tubular push rods, an inspection plate in the detachable alloy rocker box casting giving access to the adjustable push-rod end cups. Two coil springs per valve are employed.

The dry-sump lubrication system, which draws its supply from a separate 4-pint tank, is very thorough. The duplex horizontal reciprocating rotary plunger pump forces oil under pressure to all working parts, the detail design being well illustrated by the jets of oil which play on the push-rod end cups.

Two New A.J.S. Models

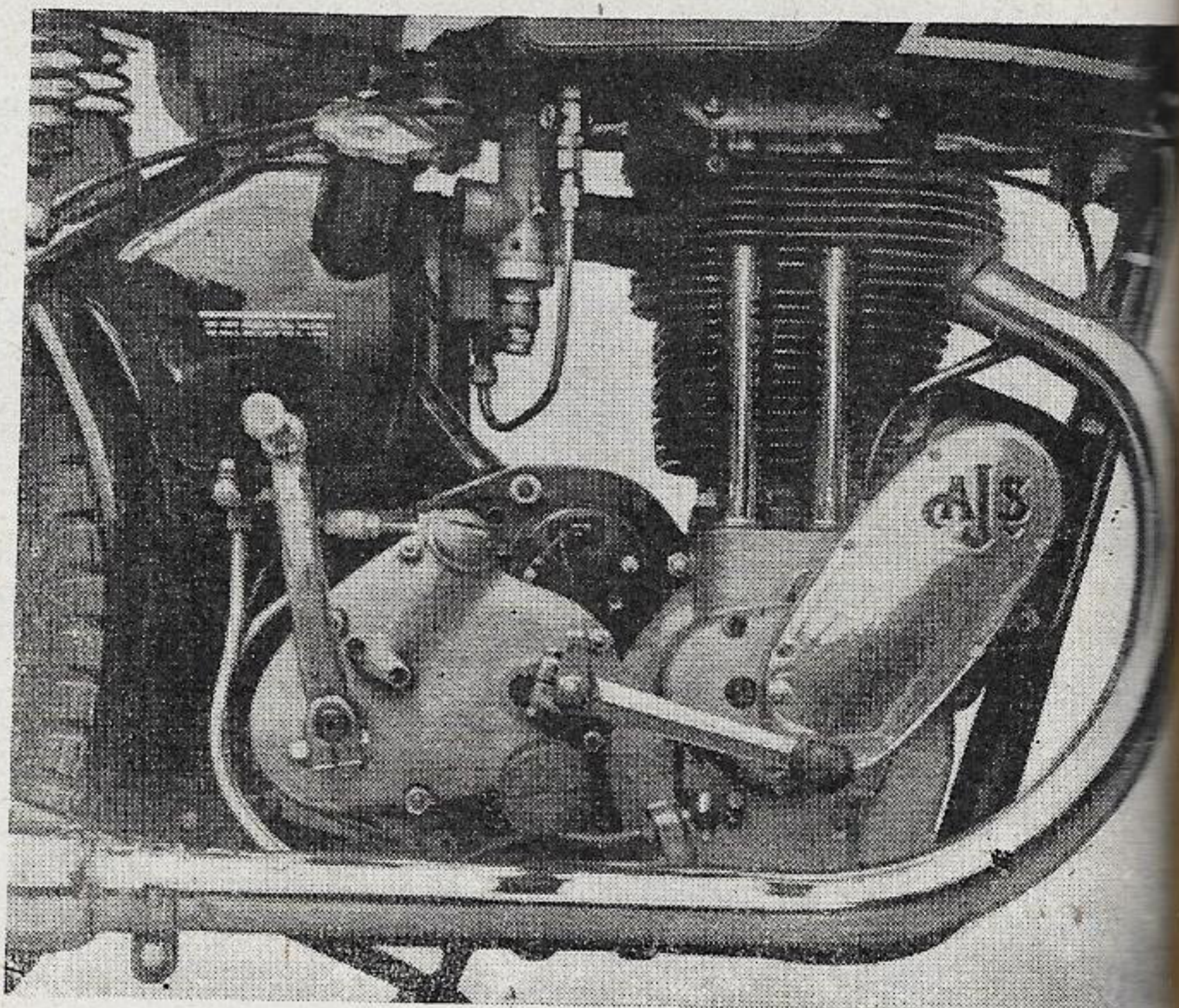
An adjustable oil feed to the inlet valve guide is another notable point. The scavenge pump returns oil to the tank via a detachable fabric filter.

The forwardly mounted Lucas magneto, shielded by a metal guard, is driven by a chain enclosed in a polished case. A separate Lucas dynamo is mounted in the rear engine plates, being driven by a chain from the engine shaft enclosed in the primary-drive oil-bath case; an eccentric mount-

extremity of the single front down tube. The steering head is provided with self-centring bearings. The 3-gallon fuel tank, with large filler cap and very comfortable kneegrips, is mounted on cross brackets brazed to the head lug and top tube. It is attached by four very accessible rubber-washed bolts; two push-pull petrol taps dispense with the need for draining when the tank is removed.

The famous Teledraulic hydraulically

Close-up of the "500" Model 18 power unit and gearbox. Note the accessible gearbox drawbolt and tank bolts, Bakelite packing piece insulating the carburetter from the cylinder head and dynamo housed in the rear engine plates. Note also the shield over the magneto and the straight-run exhaust pipe.



ing is provided for chain adjustment. The automatic voltage control unit is mounted beneath the saddle. The offset Amal carburetter is insulated from engine heat by a thick Bakelite distance piece.

The primary drive is by $\frac{1}{2}$ -in. by .305-in. roller chain to the positive-stop foot change four-speed Burman gearbox with totally enclosed clutch operating and change mechanism. The "500" ratios are 5.25, 6.8, 9.3 and 13.9 to 1, those for the "350" being 5.8, 7.5, 10.3 and 15.4 to 1.

The frame is of the cradle type, the forward ends of the chain stays being bolted to a massive lug at the lower

damped telescopic forks are an outstanding feature of the specification. On them are mounted neatly the 7-in. headlamp with fluted glass and the centrally placed speedometer driven by enclosed gears in the rear hub. A fork stop is incorporated below the steering head to prevent damage to the tank nose.

The 19-in. wheels are built up on hubs carrying special taper roller bearings and extremely efficient $6\frac{1}{2}$ -in. brakes, the shoes of which are specially ground and centred. The tyre size is 26 ins. by 3.25 ins. on each wheel. The rear drive is by $\frac{5}{8}$ -in. by $\frac{3}{8}$ -in. chain, shielded by a top-run guard with a

very deep valance between the lower run and the tyre.

An easy-lift spring-up rear stand, a bolted-up front stand-cum-mudguard stay, and an easily operated spring-loaded spade-ended central prop stand are standard equipment. The mudguards are of 5-in. "flat -D" section with ample clearances, the after half of the rear guard being detachable at a point below the saddle. A large-capacity metal toolbox is mounted on the off-side saddle stays.

The saddle is of a large size, very well sprung and provided with a padded rear edge. Lugs for pillion rests are built into the chain stays. The battery is carried on a platform mounted on the near side of the saddle tube, to which the oil tank is attached on the opposite side. The electric horn is situated on the near side abaft the cylinder.

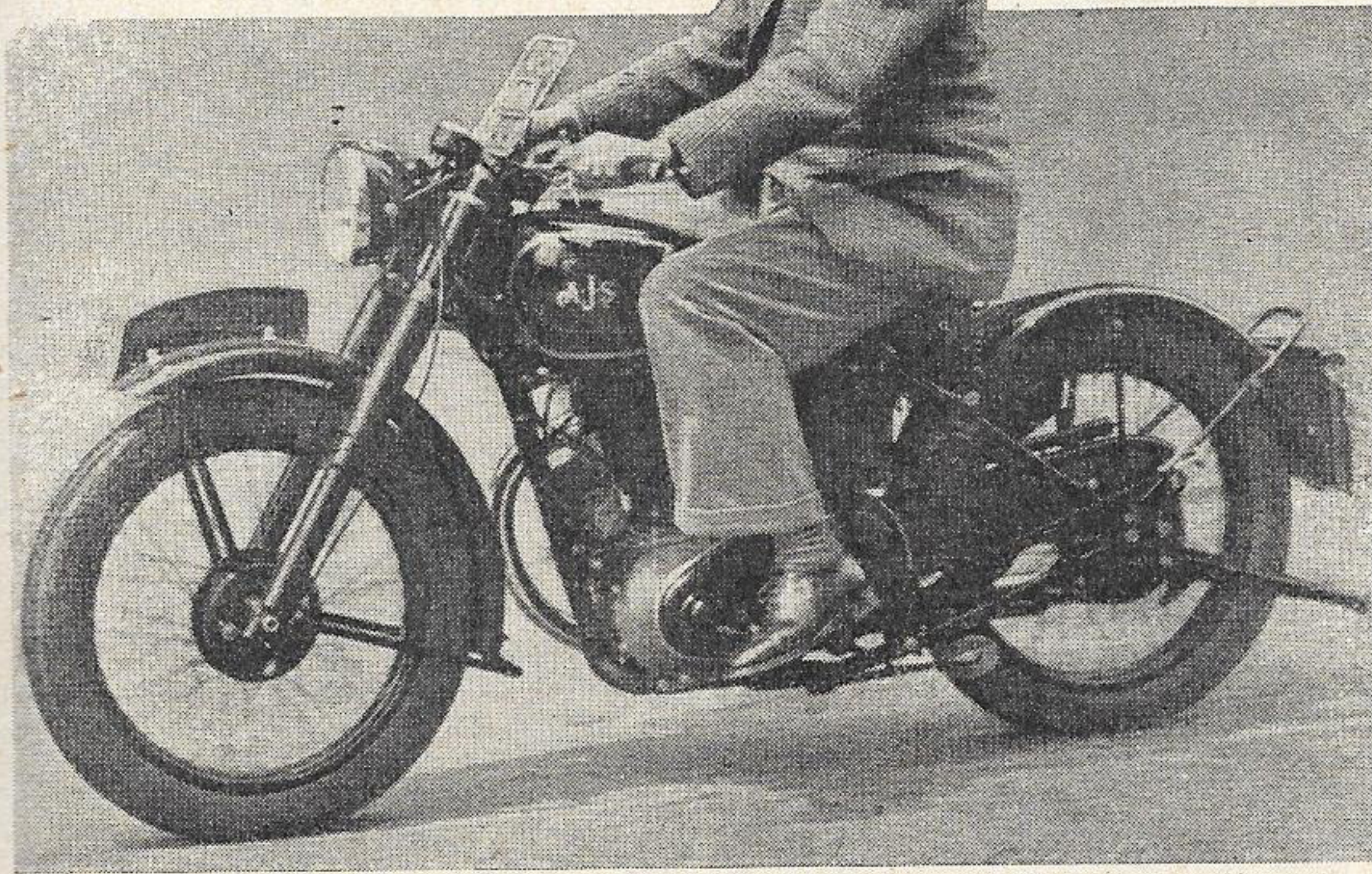
The finish is black throughout with chromium-plated relief provided by such parts as the exhaust pipe, push-rod enclosure tubes, fork cappings,

at gearbox draw bolt, and individual adjustments to foot-change and foot-brake pedals. All prominent nuts and bolts are cadmium-plated.

It is understood that the following items will be made available as extras:—Speedometer, 80 or 120 m.p.h. type at option; a mudguard pad-type pillion seat of felt and spring construction, and a carrier with, or without, the army-type pannier equipment.

No prices can be quoted, and the makers wish to make it clear that deliveries to the home market must be dependent upon export requirements first being met. It is, perhaps, necessary also to remind potential purchasers in the British Isles that for the

The proportions of the new models can be judged from this photograph of a six foot rider seated in the saddle of the "500" Model 18 which was tested by members of "Motor Cycling's" staff.



headlamp-rims, handlebar controls, and so on. The tank is lined out in gold with gold lettering. Unladen weights for the "500" and "350" are quoted by the makers as 331 and 328 lb. respectively. Detail work is well carried out, notable points being the accessible wheel adjusters in the forged rear fork ends, the easy-to-get-

time being a "Licence to Acquire" must first be obtained from the Ministry of War Transport, Berkeley House, Berkeley Square, London, W.1.

Representatives of "Motor Cycling" last week covered approximately 120 miles on a prototype 498 c.c. Model 18 A.J.S. on journeys which mixed London traffic conditions with country

going. No attempt was made to carry out a routine road test, but the general impressions gained may prove of interest to readers.

The riding position is extremely comfortable and it was not necessary to alter the adjustable footrests or handlebars. Road holding proved to be very good indeed and a most valuable feature was the ability of the machine to proceed in a straight line without conscious effort on the part of the rider at a slower-than-walking-pace speed, a very useful attribute in heavy traffic. The brakes were excellent—the front one proving to be literally of the "one-finger" type in city use.

The engine is exceptionally responsive to the ignition control and produced a remarkable tickover with the magneto in the fully retarded position. Bearing in mind the relatively low weight we expected acceleration to be good, and this proved to be the case. Whilst no effort was made to ascertain maximum speed, a speedometer reading of 75 m.p.h. was obtained on two occasions; thus the makers' suggestion that the Model 18 can be considered as "an around the 80 m.p.h. mark model" would appear to be justified.

A Traffic Beater

Another good feature was the ease with which "neutral" could be found, as the halts nowadays demanded at London's traffic lights are certainly cruel on clutches. In this connection the combination of slow-speed steering qualities and a flexible engine enabled one to crawl in and out of stationary traffic streams often just in time to make a snappy get-away at the head of the queue as the green light came up.

With past experience of a.v.c. units beneath the saddle we must admit that we viewed the A.J.S. with some suspicion, but even a 15-stone rider and deliberately-sought-out bumps failed to produce the anticipated anguish. Another good point noted was an entire absence of oil smears on engine components and gearbox.

To sum up, the two new A.J.S. models are certainly possessed of good looks and evidence of the good detail work to be expected of such experienced designers, whilst the performance and road holding are in keeping with the appearance.

Near-side view of the "350" Model 16 M. Note the ample ground clearance and mud-guard clearances, accessible magneto contact breaker and sensible rear chain guard. The primary and dynamo driving chains are housed in an oil bath case. The automatic voltage control unit can be seen beneath the saddle. Tank finish is black with gold lines and initials.

