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MOTOR CYCLES

for
1940

Described by "MOTOR CYCLING"

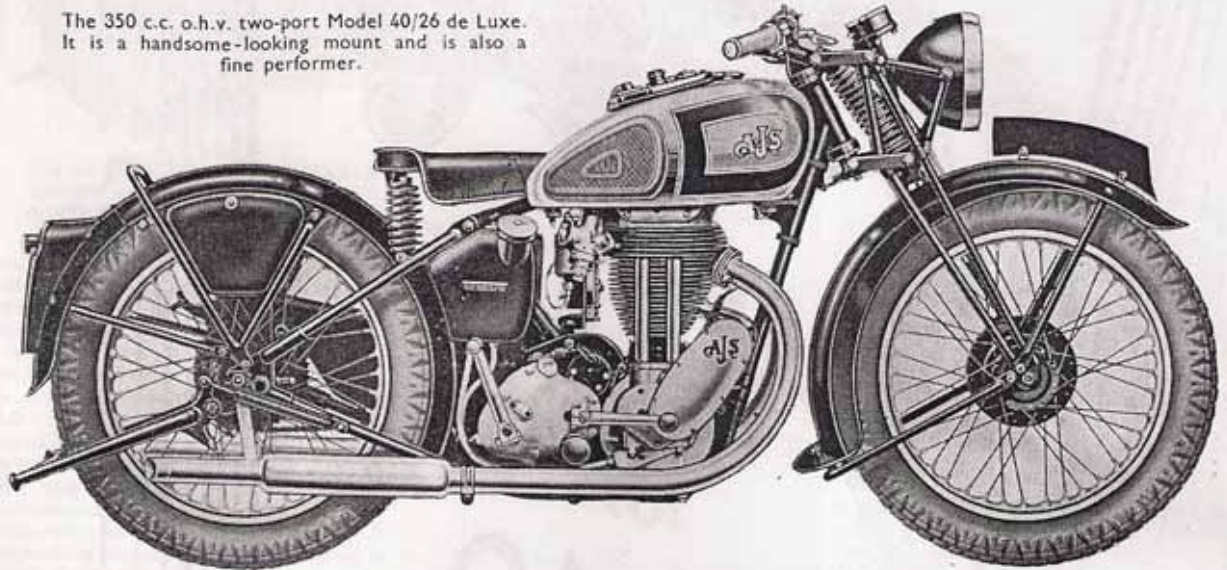
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DETAIL IMPROVEMENTS ON 1940

The 350 c.c. o.h.v. two-port Model 40/26 de Luxe. It is a handsome-looking mount and is also a fine performer.



LIKE many other concerns, the war has seriously upset the plans and ambitions of A.J.S. Motor Cycles, of Plumstead, but they are not waduly downhearted and intend carrying on as fully as circumstances will permit to meet the demands of the home and overseas markets.

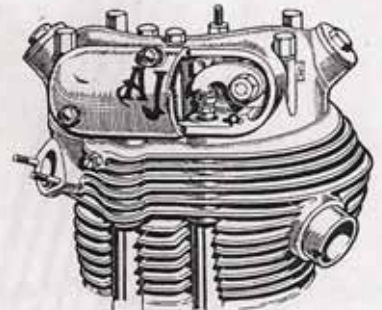
As our readers are aware, A.J.S. machines were carving a big name for themselves in the racing world during 1939, the outstanding achievement, of course, being Walter Rusk's 100 m.p.h. lap on the Ulster Grand Prix circuit in August, on the amazingly fast super-charged four-cylinder model. But for the war the A.J.S. people would have embarked on an even larger racing programme in 1940 because they are confident that with the vast amount of data which they have gained they would have held their own against all comers. Unfortunately, everything has had to be shelved but interest is still maintained, and when the time comes for racing to begin again there will be A.J.S. machines ready to uphold

British prestige and to challenge any competitors from the Continent.

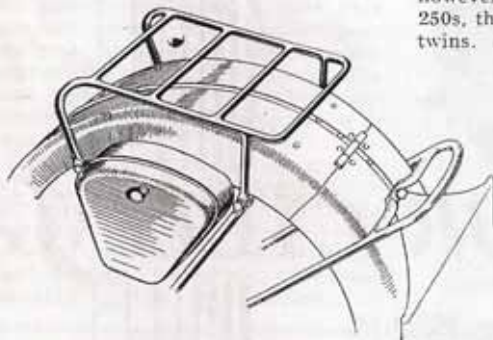
The big snag, of course, is that the standard range of machines has to "mark time" in unison with the racing jobs and much development work which was under way has had to be put on one side owing to pressure of war work. Many ideas and new features which have been thoroughly developed and tested in road racing would have been incorporated in 1940 A.J.S. machines had peace prevailed, but now we must wait until after the war before they put in an appearance. The point is, however, that although a restricted range is listed for the time being, it is the future that is the immediate concern of the men in charge, so that when the opportunity presents itself the high standard of A.J.S. machines will be even further enhanced.

Last year the A.J.S. range comprised some 18 different models, but for 1940 it has been decided to limit the number of machines to a total of 10. The range is still a most comprehensive one, however, for it comprises a brace of 250s, three 350s, three 500s and two big twins. All are overhead-valve machines

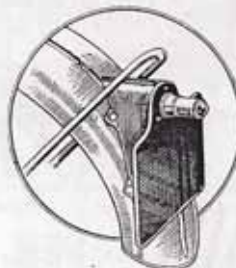
except for one of the 500s and the two twins. As a matter of fact, the power units have proved so outstandingly successful that it has not been found necessary to make any major alterations in engine design, but certain detailed improvements have been carried out on the machines themselves, the most



How the valve clearances are adjusted on the 350 c.c. o.h.v. A.J.S. engine. The end-plate on the rocker box is detachable.



The sturdy rear carrier as fitted to the Export big-twin, which has a powerful 990 c.c. side-valve engine and special equipment.



The rear number plate which has a shield bridging the gap between the plate itself and the mudguard.



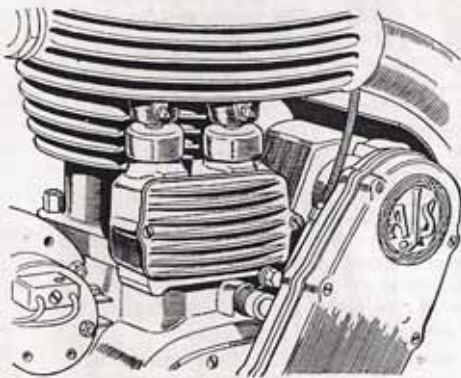
This crankcase shield is a standard A.J.S. fitting. It forms a splendid protector and is anything but unsightly.

A.J.S. MACHINES

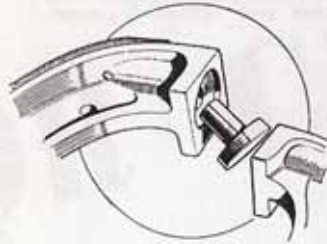
An Attractive Range of Ten Models Designed to Cater for all Requirements

important change concerning the forks on the 250 and 350 c.c. models. These now have longer links with redesigned and larger dampers, with the result that steering and road holding are even better than before.

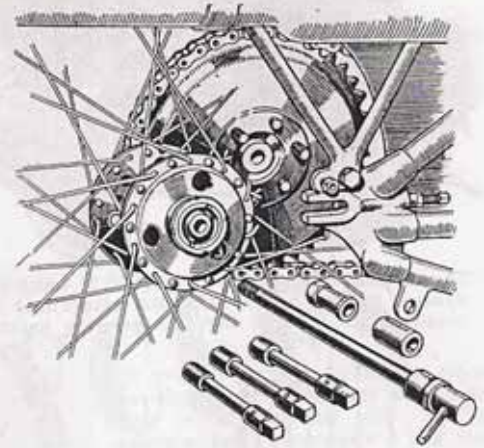
The two 250 machines are the models 40/12 and 40/22, both having o.h.v. engines, the bore and stroke of which



How the valve springs are enclosed on the model 40/9—a 500 c.c. side-valver. Note the grease nipples for valve stem lubrication.



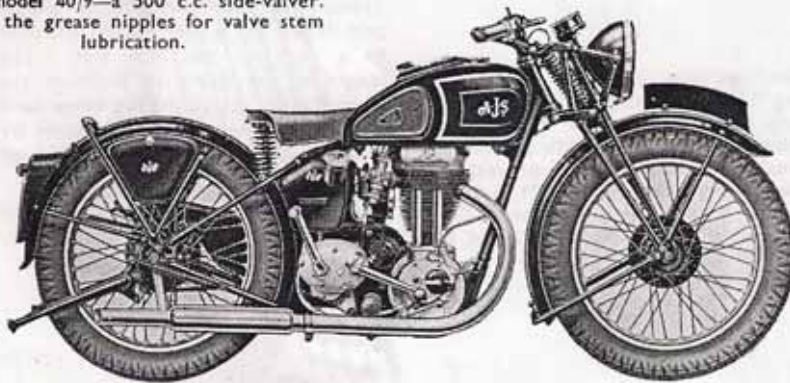
A clever method of ensuring the longest possible life to brake linings. Washers (supplied with the tool kit) slipped over the steel end-pad shown in the sketch, take up any wear.



The detachable rear wheel as fitted to the 500 c.c. and 990 c.c. models.



The neat handlebar layout of the big-twin Export Model 40/2A. The twist-grips operate the ignition and the throttle.



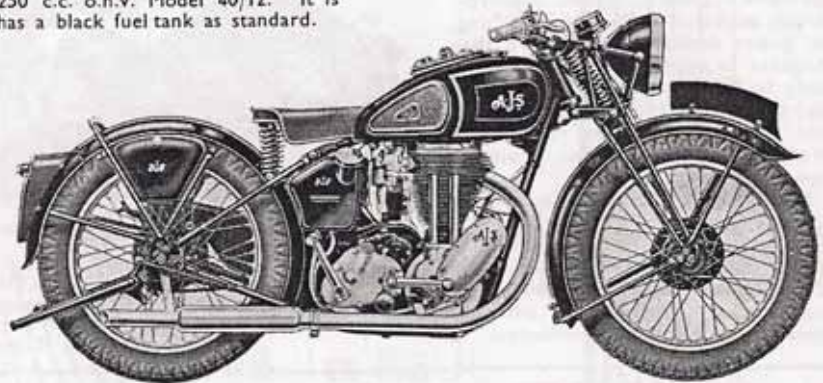
The cheapest A.J.S. machine—the 250 c.c. o.h.v. Model 40/12. It is equipped with coil ignition, and has a black fuel tank as standard.

are 62.5 mm. and 80 mm., giving a capacity of 246 c.c. The former model, which is known as a "Standard," has coil ignition and a black fuel tank, whilst the latter is a de Luxe job and boasts magneto ignition, a chromium-plated tank and a valanced front mud-guard; in both cases, however, the engine is a single port unit and the gear ratios are also identical, being 6.25, 8.74, 11.2 and 18.6 to 1. The gearboxes are of medium weight and are equipped with positive stop foot-operated gear change mechanism, a feature which is common throughout the range except for one of the big twins. The fuel tanks, incidentally, hold three gallons of petrol. Downswept exhaust pipes

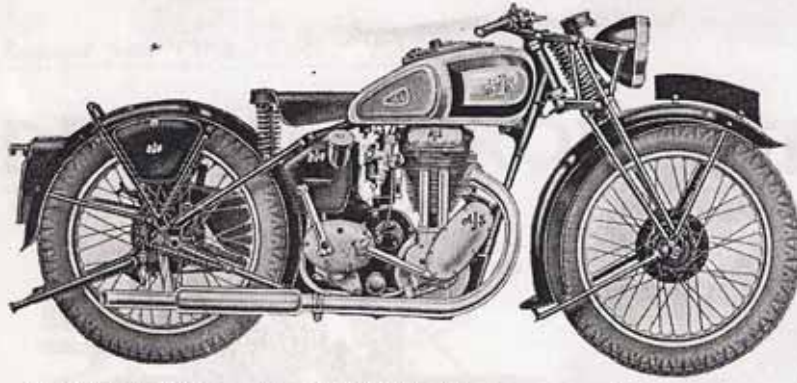
are fitted as standard, but upswept pipes are available as an alternative at a small extra charge. This alternative also applies throughout the range of o.h.v. jobs.

These 250 c.c. engines develop a surprising amount of power, for proof of which one has only to study the large number of important trial and scramble awards which have been won by 250 A.J.S. machines, the power units of which were quite standard.

The 350 c.c. machines comprise the models 40/16M Standard, the 40/26 de Luxe and the 40/26SS. In each case the size of the engine is the same—347 c.c., the bore and stroke being 69 mm. and 93 mm. respectively. The de Luxe



A larger edition of the model illustrated above—the 350 c.c. Model 40/16M. It has magneto ignition instead of coil, however, but the standard tank is black.



The de Luxe 250 c.c. o.h.v. Model 40/22 which has magneto ignition, separate dynamo lighting and a chromium-plated fuel tank. The forks have been modified for 1940 so that the steering has been even further improved.

model has a two-port engine, but the other two machines have single-port motors. The Standard has a black tank and a magneto is fitted in preference to a coil ignition system. The de Luxe machine, as the title implies, is a rather more elaborately equipped job with more chromium plating, including the tank, and a valanced front mudguard. The 40/26SS is one of the popular Silver Streak machines introduced two years ago. It looks extremely handsome with its wealth of chromium plating and the power unit is specially tuned and polished.

All the 350 c.c. machines have heavy-weight gearboxes giving ratios of 5.55, 7.1, 9.76 and 14.8 to 1.

The 500s

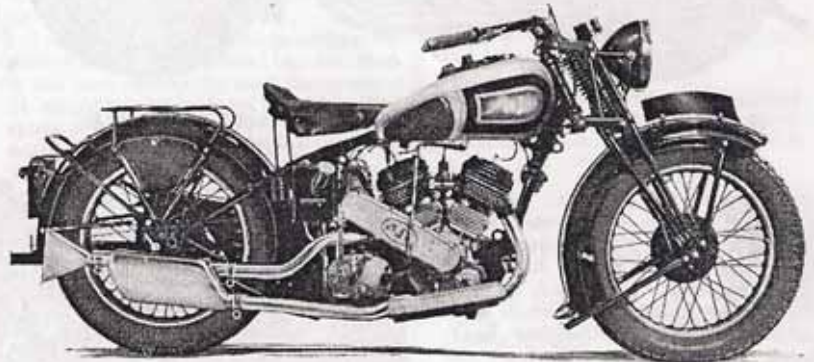
The three 500s comprise the 40/9, a side-valve de Luxe machine, the 40/8, which is the largest edition of the single port de Luxe machines already mentioned, and the 40/8SS which is another Silver Streak. Both o.h.v. machines have single-port engines, that in the Silver Streak being specially tuned. The side-valve machine is primarily a dual-purpose mount, because it is equally happy when pulling a sidecar as when being used as a solo. The gear ratios of these 500 c.c. machines are 5, 6.4, 8.8 and 13.3 to 1.

The remaining machines are the big twins, the models 40/2 and 40/2A, the difference being that the former is produced for the home user, whereas the latter has been designed to appeal to the export market.

The cylinder heads on these big-twin side-valve engines have been improved, giving smoother and cooler running, the power available being more than adequate to cope with any conditions likely to be encountered either on the road or on a rough colonial track. The bore and stroke of the engines are identical, being 85.5 mm., giving a capacity of 990 c.c.

The complete machines are entirely different to look at. The English job is quite typical of the other machines in the range in the matter of specification and equipment, but the export mount has folding footboards, left-hand operated gear-change mechanism, a

foot-controlled clutch, "sit up and beg" bars of a modern type with twist-grip controls for the throttle and ignition, and a large saddle mounted on tension springs. The gear ratios of these big twins solo are 4.72, 5.95, 7.4 and 12.6 to 1, but if a sidecar is fitted the ratios are 4.9, 6.43, 8.12 and 13.8 to 1.



This is the Export Model 40/2A. It has folding footboards, a foot-operated clutch, a left-hand operated gearchange and special handlebars and saddle. The standard gearbox is a four-speeder, but a three-speed and reverse unit can be fitted.

Amongst the general modifications which have been made for 1940 are included slotted oil control rings, which are being used on all the pistons, while many parts are now being cadmium plated instead of coslettized as previously. Incidentally, the gap between the rear number plate and the mudguard is now occupied by a very neat shield which acts as a protector to the rear of the lamp. As will be seen from the photographs, this considerably enhances the rear end of the mudguard.

Engine Modifications

All the engines have fully enclosed and automatically lubricated valve-gear mechanism, the adjustment on the o.h.v. units being effected at the top ends of the push rods. Detachable covers on the rocker boxes give access for adjustment purposes. Cast and stiffened brake shoes are used throughout, one particularly interesting feature of the brake assembly being the use of steel end-pads which are recessed into the shoes where they bear on the operating cams. In order that the fullest possible use can be obtained from the brake linings, the tool kit contains adjustment washers which can be slipped under these pads to take up such wear as occurs, so that the useful life of the brake lining is considerably prolonged.

So far as electrical equipment is concerned all the single-cylinder machines are equipped with a separate dynamo mounted behind the engine and driven by a roller chain enclosed in a case on the near side. The magnetos are fitted in front of the power units. Both the big twins have Lucas Magdynos which are covered by large shields. These are fitted behind the rear cylinder.

Altogether a useful and well-tryed range based on a policy of quality, performance and excellent detail finish.



THURSDAYS - - - - 4p.

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