

BIG NEWS FROM WOOLWICH

New Frames for A.J.S. and Matchless Machines: Entirely New "Light 350": 7R and G50 Extensively Improved

IN announcing their 1960 programme for A.J.S. and Matchless machines Associated Motor Cycles, Ltd., release news of vital interest to enthusiasts of the two marques the world over. A 350 c.c. version of the recently introduced and well-established 250 c.c. tourer is added to the range and so doubles the models offered in these light-weight classes. All machines, excluding these two but including the original "350," are given a new frame of twin-front-down-tube construction, combined with modified front fork geometry.

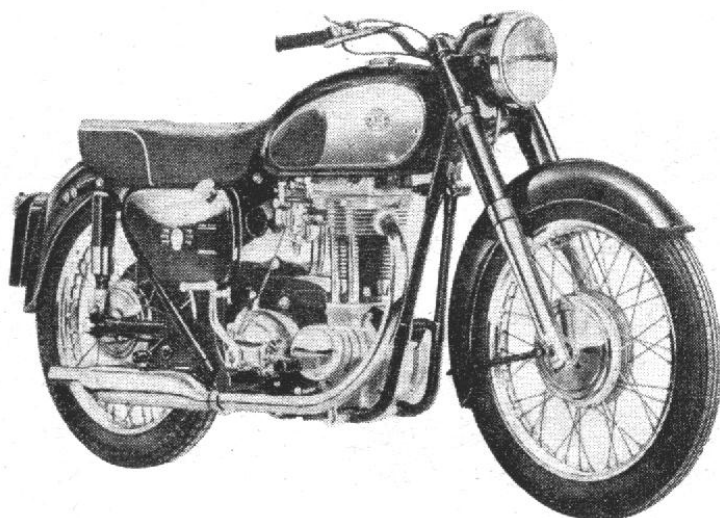
In the twin-cylinder class, the 500 c.c. range has been streamlined from four models to one, the de luxe, CS and CSR being dropped. The Matchless G9 and the A.J.S. 20, featuring alternator electrical equipment, are continued. Featured on the 650 c.c. motorcycles is a new cylinder head which gives a better spread of power and a higher rev. peak. All twins now use two-rate valve springs and have a pressure-relief valve in the engine lubrication system.

A new cylinder head has also been specified for the 500 c.c. single-cylinder tourer

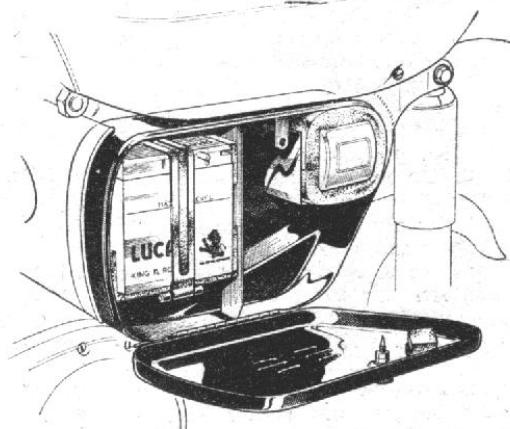
and is similar to a type developed for the scrambler. The 350 c.c. scrambler has been dropped in favour of the senior class mount, which now has a 1 $\frac{3}{8}$ -in. bore Amal G.P. carburetter in place of the earlier 1 $\frac{3}{8}$ -in. Monobloc.

Towards the end of the 1959 season a different type of petrol tank was introduced for the twins. Of three-point rubber-buffer mounting and 4 $\frac{1}{2}$ -gallon capacity, it now appears on all duplex-frame models. For these models also new intermediate gear

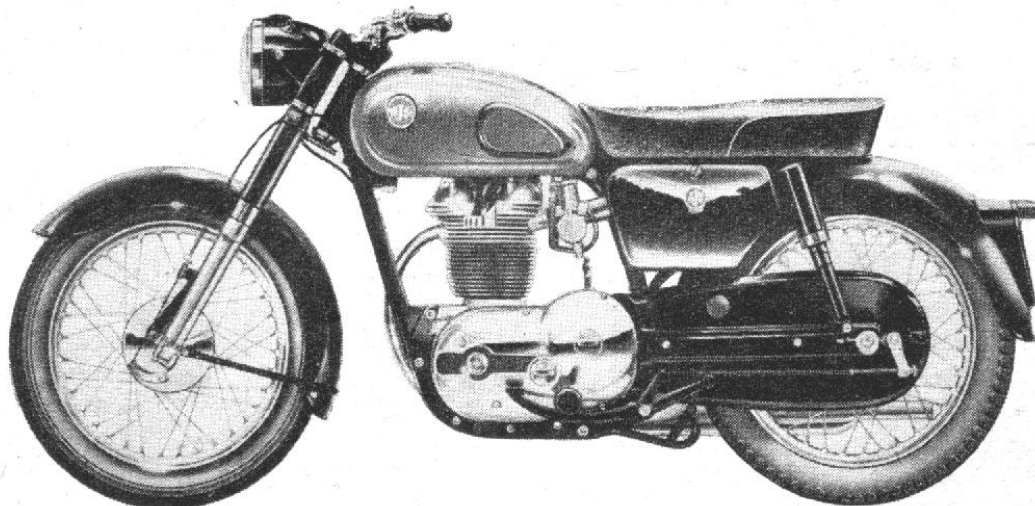
(Continued overleaf)



Model 16: this 347 c.c. o.h.v. A.J.S. is a "middle-weight" motorcycle in the classical tradition, and is the latest of a long line of well-loved "350s" associated with this marque.



On the de luxe twins, the Lucas battery and voltage regulator is housed in this shapely steel container mounted accessibly in the near-side loop of the rear frame.



A newcomer to the ranges is this "Light 350"—developed from the 250 c.c. roadster. With 348 c.c. engine it is catalogued as A.J.S. Model 8. The Matchless equivalent is the G5.

BIG NEWS FROM WOOLWICH

Continued

ratios are fitted giving higher bottom and third reductions, second being unchanged. Believing in the importance of catering for the pillion passenger, the A.J.S. and Matchless machines, utilizing the new frame, are having a two-level twin seat giving much improved characteristics.

The 350 c.c. trials mount, the A.J.S. 7R and the Matchless G50 road racers have all been the subject of development work. The provision of a large-bore G.P. carburetter on the scrambler has necessitated the removal of the oil tank to the drive side of the machine. At the same time the air cleaner capacity has been increased to cope with the improved breathing. If required, a small battery can also be fitted.

So much for the general outline; to consider the 1960 programme in detail, bearing in mind that, as the A.J.S. and Matchless marques are identical in many respects, continued reference to both sets of model numbers is not made.

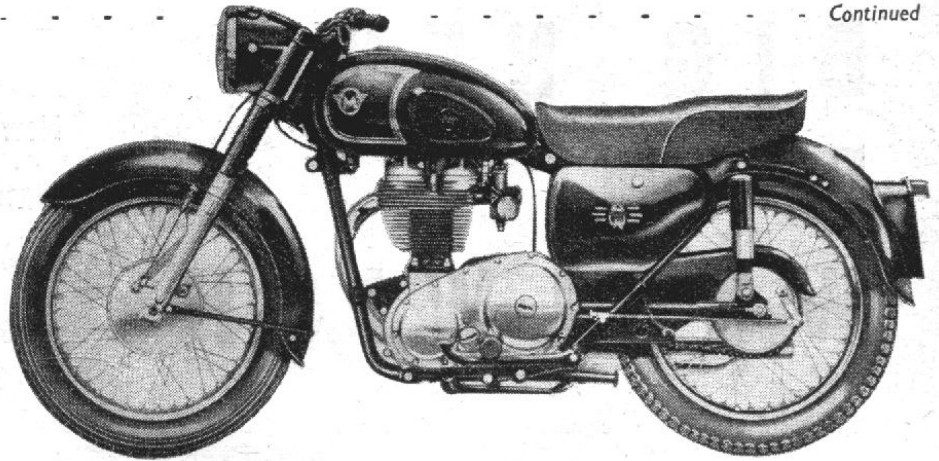
New for 1960

The new "Light 350"—as it is colloquially known at Woolwich—is very much more than a larger version of its brother, the 250 c.c. roadster. The general conception is, however, the same.

In appearance, the G5/Model 8 newcomer is like the 250 c.c. G2/Model 14; standing there side by side, immediately shows the heavier build of the former. Its engine is of 72 by 85.5 mm. bore and stroke producing a swept volume of 348 c.c. To cope with the extra power the crankpin is larger than that of the quarter-litre whilst the 1/2 by .205 in. primary chain is similar to that of the 250 c.c. scrambler.

The "350" engine is, of course, taller than its junior counterpart, so the frame is altered to suit and utilizes, at the front, the scrambler forks of Teledraulic pattern. To mate with these are larger wheels than the 17 in. ones of the "250," those of the "Light 350" being 18 by 3.25 in. front and rear.

Certain modifications effected for the G2/Model 14 250 c.c. roadster have, of course, been incorporated into the newcomer. A larger capacity tank has been developed with a centre weld covered by a chrome strip and is finished in either Cardinal red for the Matchless or in A.J.S. blue, with chromium side panels as an optional extra. A roll-on easy-action centre stand is featured for 1960. Conventionally,



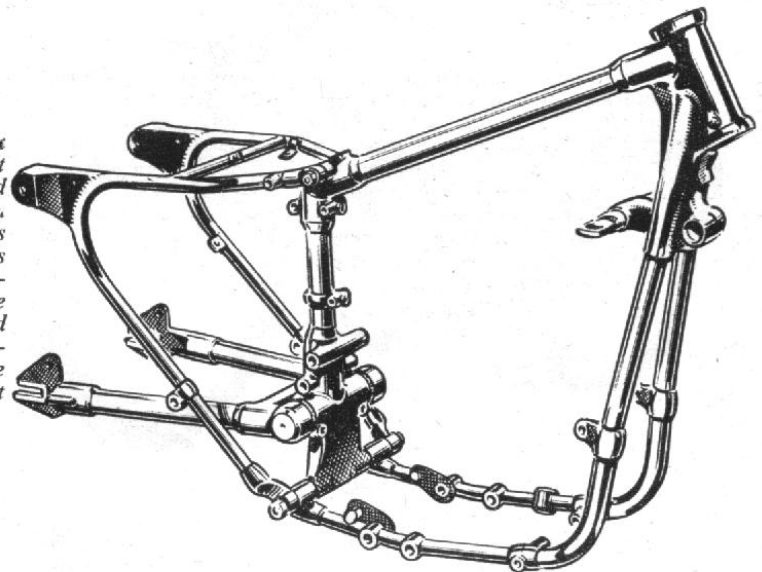
A "500" of proven worth. The G80 Matchless is a mount suitable for either solo or medium weight sidecar use and is continued with improvements which include a new cylinder head developed in competitions.

the headlamp is now mounted on lugs on the top fork shrouds and, as a result, it is lower and the appearance is improved. For the "250" only, this called for a change in the design of the top steering crown.

As stated, all models with the exception of the "250" and the "Light 350" are having new frames of duplex pattern. Full support continues to be given to the engine by a cradle but two front down tubes are used in place of the single item hitherto.

The top tube from the head lug to the saddle nose is widened to 1 1/2-in. diameter. Suitable lugging is brazed on when necessary for the 500 c.c. scrambler and the sports twins. Particular emphasis has been placed on equipping the G3/Model 16 with the duplex frame as large quantities of the original "350" have always been exported to countries like Syria and the Rhodesias where many of the roads are like "washboards" which prove exceptionally hard on

The new duplex heavy weight frame featured for next season on all Matchless and A.J.S. models save for the light-weights and the newly introduced "350." Characteristic is the use of twin front down tubes.



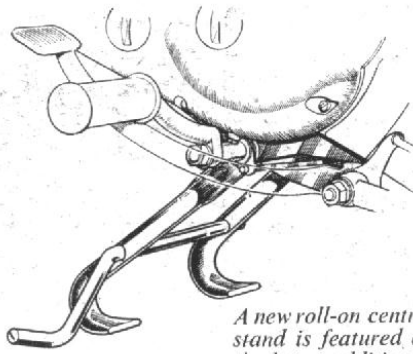
MATCHLESS SPECIFICATIONS AND PRICES: A.M.C., Ltd., Plumstead Road, London, S.E.18.

Model and type	Eng. cap.	Bore and stroke	C.R.	B.h.p.	Gear ratios	Total brake lin. area	Weight	Tank cap.	Wheel-base	Tyre size		Seat height	Price (including P.T.)
										Front	Rear		
G2 o.h.v.	248	70x65	7.8	—	6.9, 9.0, 12.8, 20.1	23	325	2 3/4	53	3.25x17	3.25x17	29	To be announced
G2CS Scrambler o.h.v.	248	70x65	10	—	9.0, 11.6, 16.6, 21.6	20 1/2	321	2 3/4	54	3.00x19	3.50x19	32	
G5 o.h.v.	348	72x85.5	7.4	—	6.2, 8.0, 11.4, 18.0	23	340	2 3/4	54	3.25x18	3.25x18	29 1/2	
G3 o.h.v.	347	69x93	7.5	—	5.8, 7.1, 9.9, 14.9	23 1/2	382	4 1/2	55	3.25x19	3.25x19	31	
G3C Trials o.h.v.	347	69x93	6.5	—	6.5, 10.1, 15.8, 21.0	17 1/2	306	2	54	2.75x21	4.00x19	32 1/2	
G80 o.h.v.	498	82.5x93	7.3	—	5.0, 6.1, 8.5, 12.9	23 1/2	394	4 1/2	55	3.25x19	3.50x19	31	
G80CS Scrambler o.h.v.	498	86x85.5	8.7	—	5.8, 7.1, 9.9, 14.9	23 1/2	336	2	55	3.00x21	4.00x19	32 1/2	
G9 o.h.v. twin	498	66x72.5	8	—	5.3, 6.4, 8.9, 13.4	23 1/2	399	4 1/2	55	3.25x19	3.50x19	31	
G12 o.h.v. twin	646	72x79.3	7.5	—	4.8, 5.8, 8.1, 12.2	23 1/2	403	4 1/2	55	3.25x19	3.50x19	31	
G12 de Luxe o.h.v. twin	646	72x79.3	7.5	—	4.8, 5.8, 8.1, 12.2	23 1/2	405	4 1/2	55	3.25x19	3.50x19	31	
G12CS Scrambler o.h.v. twin	646	72x79.3	8.5	—	5.3, 6.4, 8.9, 13.4	23 1/2	386	2	55	3.00x21	4.00x19	32 1/2	
G12CSR Sports o.h.v. twin	646	72x79.3	8.5	—	4.8, 5.8, 8.1, 12.2	23 1/2	388	4 1/2	55	3.25x19	3.50x19	31	
G50 Racer o.h.c.	496	90x78	10.6	—	4.02, 4.42, 5.34, 7.16	49	290	5 1/2	55	3.00x19	3.25x19	31	

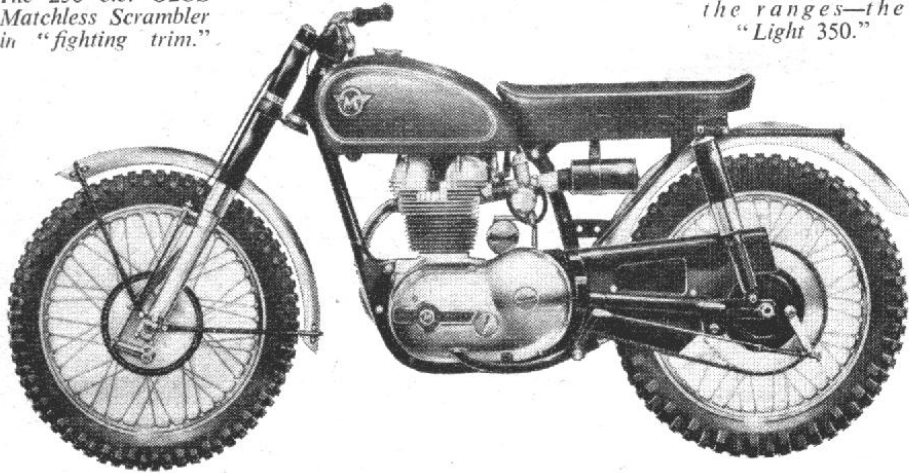
frames. The fork trail in the new frame has been increased although it still employs the established 63½° head angle.

A number of valuable modifications brought about as a result of competition work are specified for the 1960 large-capacity mounts, of which the chief one appearing on the "500 twins" is two-rate valve springing giving much-improved valve control at higher revs. But development on the 650 c.c. models has gone much further

The 250 c.c. G2CS Matchless Scrambler in "fighting trim."



A new roll-on central stand is featured on the latest addition to the ranges—the "Light 350."



than this. New cylinder heads are now specified. Although, with these, the compression ratio remains almost the same the combustion chamber shape is more favourable, the valve stems longer and the included angle, between the valves, closer.

The engines of all twins now incorporate a pressure relief valve to prevent lubrication system damage during a cold-start when oil pressure has, in the past, soared to the point where there has been lubricant leakage past joints and gaskets. An incidental modification has been the deletion of the filter relief valve which could, if an owner allowed the filter to get clogged, blow off and pass unfiltered oil and debris; to make certain that clean lubricant is passed at all times, the filter now consists of a large area of close-mesh fine-wire gauze.

Associated Motor Cycles make and supply the gearbox for all large capacity machines in the group. Hitherto, only one set of reductions has been available, namely, 1,

1.3, 1.7 and 2.6:1. These can still be specified by a customer but those normally to be fitted to 1960 machines will be 1, 1.2, 1.7 and 2.5 : 1.

A major innovation aimed at improving beyond all recognition the lot of the pillion passenger is the provision of thicker rubber seating at the rear of the dual seat and better shaping. The result is a two-level seat which has also been designed to lower the riding position. A two-level seat, but of different appearance, is provided too on the "250" and "light 350."

Again taking advantage of factory knowledge gained in competitions, the 500 scrambler is equipped with a new cylinder head accepting a large bore G.P. carburetter. A derivation of this head is used on the 500 c.c. single-cylinder roadster.

The above details are common, as appropriate, to the entire range. Here are individual machines listed having additional changes from last year's specifications, the

Matchless and A.J.S. model numbers being included in the sub-heads:

250 c.c. Roadster, G2/14: The brake pedal has been redesigned.

250 c.c. Scrambler, G2CS/14CS: New brake pedal. Internal gear ratios of 1, 1.3, 1.85 and 2.92 : 1 now become 1, 1.3, 1.85 and 2.42 : 1 to keep the engine in the power band when changing from bottom to second. The inlet valve head diameter is greater and so is that of the exhaust stem. Two material changes are made: the crankpin, is now of 85 instead of 65 ton p.s.i. steel and the gearbox internals of En.355 instead of En.34, so giving a much tougher mainshaft.

350 c.c. Trials, G3C/16C: It has been held that second is the critical gear for trials work. Therefore the factory ratios of 1, 1.56, 2.44 and 3.24 now replace the 1959 production ratios of 1, 1.56, 2.54 and 3.49 : 1 for 1960. The rear mudguard stay has been strengthened.

500 c.c. Scrambler, G80CS/18CS: This can be fitted with a small battery. It is listed in stripped forms for the U.S.A. with magneto ignition and, when required, an alternator for lighting. For some Enduro-type events a silencer, q.d. lighting and a 1⅞-in. bore Monobloc carburetter are supplied.

650 c.c. Sports Twin, G12CS and R/31CS and R: Triangulated pillion footrest lugs are now fitted together with a revised exhaust system line.

500 and 350 c.c. Road Racers, G50/7R:

The principal alteration has been aimed at improving the cornering ability by increasing the ground clearance. By shortening the nearside bottom frame loop it has been possible to tailor it in and by narrowing the width between the rear fork ends the megaphone has been brought closer to the centre line of the machine; this has required a modified gearbox end cover. The plates have, at the same time, been stiffened up. Full cable operation is provided for the rear brake and the pedal is redesigned. So too has the gear-change pedal. The riding position has been improved by slightly lowering the seat, bringing the backrest forward as well as the knee cutaways and depressing the top of the tank by 1 in. so that the rider can get his chest farther down. Part of the oil tank is relieved to facilitate engine breathing and a smaller filler cap is used. Engine alterations include closer adjustment to the vernier ignition timing, a stronger magneto strap, more rigid float chamber mounting brackets and, on the G50 only, a larger 1¼-in. dia. inlet valve instead of a 1¼-in. component.

A.J.S. SPECIFICATIONS AND PRICES: A.M.C., Ltd., Plumstead Road, London, S.E.18.

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										Front	Rear		
14 o.h.v. ...	248	70 x 65	7.8	—	6.9, 9.0, 12.8, 20.1 ..	23	325	2½	53	3.25 x 17	3.25 x 17	29	} To be announced
14CS Scrambler o.h.v. ...	248	70 x 65	10	—	9.0, 11.6, 16.6, 21.6 ..	20½	321	2½	54	3.00 x 19	3.50 x 19	32	
8 o.h.v. ...	348	72 x 85.5	7.4	—	6.2, 8.0, 11.4, 18.0 ..	23	340	2½	54	3.25 x 18	3.25 x 18	29½	
16 o.h.v. ...	347	69 x 93	7.5	—	5.8, 7.1, 9.9, 14.9 ..	23½	382	4½	55	3.25 x 19	3.25 x 19	31	
16C Trials o.h.v. ...	347	69 x 93	6.5	—	6.5, 10.1, 15.8, 21.0 ..	17½	306	2	54	2.75 x 21	4.00 x 19	32½	
18 o.h.v. ...	498	82.5 x 93	7.3	—	5.0, 6.1, 8.5, 12.9 ..	23½	394	4½	55	3.25 x 19	3.50 x 19	31	
18CS Scrambler o.h.v. ...	498	86 x 85.5	8.7	—	5.8, 7.1, 9.9, 14.9 ..	23½	336	2	55	3.00 x 21	4.00 x 19	32½	
20 o.h.v. twin ...	498	66 x 72.5	8	—	5.3, 6.4, 8.9, 13.4 ..	23½	399	4½	55	3.25 x 19	3.50 x 19	31	
31 o.h.v. twin ...	646	72 x 79.3	7.5	—	4.8, 5.8, 8.1, 12.2 ..	23½	403	4½	55	3.25 x 19	3.50 x 19	31	
31 de Luxe o.h.v. twin ...	646	72 x 79.3	7.5	—	4.8, 5.8, 8.1, 12.2 ..	23½	405	4½	55	3.25 x 19	3.50 x 19	31	
31CS Scrambler o.h.v. twin ...	646	72 x 79.3	8.5	—	5.3, 6.4, 8.9, 13.4 ..	23½	386	2	55	3.00 x 21	4.00 x 19	32½	
31CSR Sports o.h.v. twin ...	646	72 x 79.3	8.5	—	4.8, 5.8, 8.1, 12.2 ..	23½	388	4½	55	3.25 x 19	3.50 x 19	31	
7R Racer o.h.c. ...	349	75.5 x 78	11.6	—	4.87, 5.36, 6.48, 8.68 ..	49	285	5½	55	2.75 x 19	3.25 x 19	31	