

Success in the Isle of Man has always eluded Cyril Smith (Norton) seen here at Hall Corner. His passenger is Eric Bliss, once partner to Eric Oliver

### T.T. Practice Continued

**N**ORMALLY no rider is allowed to set out from the paddock once the red flag, signifying the end of practice, has been hoisted. So G. J. Turner (Norton) set a precedent when he emerged through the gate with official blessing. But he was only on an errand. The crop of breakdowns around the circuit had resulted in all available travelling marshals being dispatched on duty. Turner therefore deputized as a marshal on a trip to St. Ninian's cross-roads to start the "roads open" car on its way.

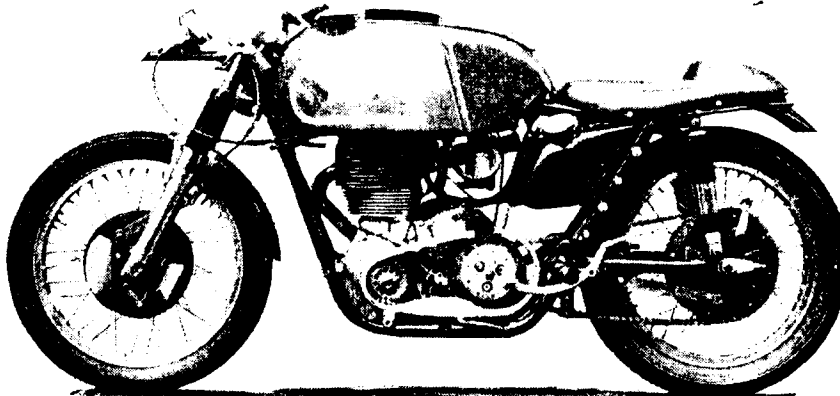
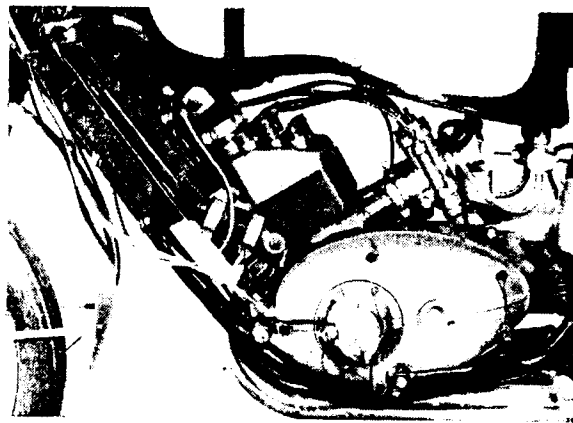
**H**IGHLIGHT of Wednesday morning was John Surtees' performance in reeling off two successive Senior laps at 99.31 and 99.62 m.p.h. and the faster lap, moreover, included slowing down for a pit stop. All in all, it was quite an MV morning, with John Hartle putting in a 98.5 m.p.h. lap for good measure. Cloudy but clear, conditions were ideal, but after the bumper turn-out of the previous evening it was only to be expected that there would be comparatively few early risers; and, too, there were all those machine troubles to put right.

**A** NEWCOMER to the fastest-six table in the Junior section was Aminar Howth from Aberdeen. Those who have watched him lapping the Island for the past eight years or so were not surprised. At Governor's Bridge, for example, his Norton was noted as losing a minimum of time. It was at Governor's Bridge, however, that the only minor upset of the period occurred when Roy Capner (B.S.A.), off line round the hairpin, tumbled and bent his gear lever.

**O**UT for the first time was a new 496 c.c. single-cylinder Matchless in the hands of Jack Ahearn. Factory prepared, the machine has been developed

from the three-fifty 7R A.J.S., to which it owes obvious allegiance. The stroke, indeed, remains the same at 78mm but the bore has been enlarged to 90mm. The only external difference is that outside plumbing is used for the pressure feed pipe to the cam gear and the fore

Right: Power unit of the water-cooled Adler two-stroke twin for the Lightweight 250 c.c. T.T. The rider is D. Falk of Germany. Below, is the experimental 496 c.c. Matchless single to be ridden by Jack Ahearn of Australia in Friday's Senior Race. The machine is developed from the 349 c.c. 7R A.J.S.



and aft drains from the rocker boxes. The carburettor is of 1 1/2 in bore.

**V**ALVE sizes are as on the 7R, as is the part-sphere of the combustion space. The piston-crown hump is thus considerably smaller than the bore, so that squish is provided as the piston approaches t.d.c. At present the power unit is purely experimental, to learn something about the problems of over-square engines. As would be expected from the small valves, the acceleration out of corners is excellent and it has been found possible to raise the gearing appreciably above what was expected.

**O**RGANIZED confusion reigned in the Ducati camp where blue-overalled mechanics were readying the newly arrived mounts for the evening session, first of the Clype circuit practices. The Ducatis, all of which have desmodromic overhead cam gear, are six in number and include the two original works models (differing only in frame detail) for Luigi Taveri and Romolo Ferri and two hack mounts for practice purposes.

**A** CHANGE of personnel, a change of machinery, a change of course—such were the ingredients for Wednesday evening's onslaught on the Clype circuit. And those who made the attack were lucky: rain which had pelted for most of the day ended an hour or so before practising started, to leave drying roads under a blue sky. As usual, the period was divided into three one-hour sessions, led off by the one-two-fives. Next followed the two-fifties while the sidcar men

The Manx Norton front fork is shortened to give the minimum tyre clearance on full upward deflection and, because of the low machine weight (275 lb for the five-hundred and a few pounds less for the three-fifty), some experiment with spring poundage has been necessary. Manx Norton wheels were used originally, but the three-fifty was recently fitted with a Gilera rear wheel having a two-leading-shoe brake. It is likely that both models will have Gilera wheels front and rear before long and the front wheels will incorporate duplex brakes, each with two leading shoes. Early in the season, tyre sizes were 3.00 x 19in rear and 2.75 x 19in front but now there is a revision to standard (3.50 x 19in rear and 3.00 x 19in front) to prevent side slip on fast bends.

For short-circuit racing oil and petrol are both contained in a composite tank and the screwed filler caps are fitted with modified grease nipples as vents. The fuel-tank vent breathes inward only, the oil-tank vent both ways. Separate fuel and oil tanks are envisaged for the T.T.

Joe Potts has modified the bore and stroke dimensions to 90 x 78mm (496 c.c.) for the larger engine and 78 x 73mm (349 c.c.) for the smaller. (An 80mm-bore three-fifty is being made.) Short connecting rods were machined from solid steel billets and operate on non-standard roller big-end bearings. The flywheels, too, were made in Potts' Bellshill machine shop. They have integral mainshafts and the flanged crankpin is pressed into the drive-side wheel and drawn into the other by a nut which is subsequently cut away. Balance factor variations are being tried in the quest for smoother running. Carburettor downdraught has been increased by about three degrees and port shapes, valve sizes, lift and timing are all to Joe's ideas.

The engines have not yet been developed but are giving a shade more power than standard units. As a result of the extra power and the reduction in machine weight, overall gearing is stepped up half a tooth, i.e., about two per cent.

Desmodromic valve gear and a three-fifty twin are among the long-term plans of Joe Potts and Bob McIntyre, but they

have to earn a living and so shortage of time is their biggest handicap. But persistence, engineering skill and riding ability they do not lack. In spite of Gilera withdrawal from racing, McIntyre is still a man to be watched in the Island.

### 1958 A.J.S. Racers

IN ITS LATEST FORM the 349 c.c. 7R A.J.S., 25 of which are being built for the 1958 racing season, differs in a number of respects from its predecessors. First of the new models to leave the racing department at Woolwich was for Pete Ferbrache who gained third place on it at Mettet on May 4. Bob Brown is taking over the second model.

Following the A.J.S. policy of giving the private owner the benefit of the previous year's experiments, Jack Williams has made several important changes in the top half of the engine. The downdraught angle of the induction tract has been steepened by 2½ degrees to 14½ which is the limit possible with the existing cam-box layout. Bore of both the carburettor and the tract has been increased by ½in to 1½in and the shape of the tract has been modified. Also the heat-resisting distance piece between carburettor and head has been increased in thickness from ¼in to 1½in. The previous pillar mounting of the float chamber is replaced by a suspended mounting through a rubber diaphragm.

The exhaust cam gives a higher lift (0.470in as against 0.412in) and has a slightly longer opening period. There have been no changes to the remainder of the cam gear nor to the combustion space in the head, but the piston is higher in the shoulders and flatter in the crown to give a more compact combustion chamber and a small degree of squish without altering the compression ratio.

Result of the modifications has been a worth-while rise in the power output, particularly lower down the usable rev range. The best of last year's engines were giving about 38 b.h.p. at the peak r.p.m. of 7,800, whereas the equivalent figure this year is over 39 b.h.p. An indication of improved combustion is the retarding of the ignition by two degrees.

The crankcase breather was previously embodied in the bolt securing the engine sprocket. Now the sprocket is secured by a nut and the breather is in the form of a radial hole in the mainshaft venting into a recess in a sleeve within the main-bearing housing.

A neater bracket for the primary-chain oiler has been evolved and a Y-piece has been inserted in the feed pipe from the top-tube oil container to take lubricant to the rear chain also. This has been necessitated by the change-over to the A.M.C. gear box, on which the well-known centrifugal oil feed via the gear-box sprocket to the rear chain is not possible.

A major change has been made in the method of linking the rear of the crankcase and the top of the gear box to the rear loops of the frame. Formerly the loops were bridged by a curved tube and a light-alloy casting extended forward from it to the crankcase; the casting embodied the gear-box upper mounting point and the chain adjuster. For 1958 a straight tube gusseted to the frame loops is employed and the casting is replaced by two simple Duralumin plates. The result is cleaner appearance, greater strength and less weight and the chain adjuster—on the right—is more accessible.

Hubs, brakes and front and rear forks are unchanged and tyre sizes remain at 2.75 x 19in front and 3.25 x 19in rear on WM1 and WM2 rims respectively. Also unaltered are the petrol tank and clip-on handlebars. The combined front number plate and mounting for screen and rev-meter is a polyester/glass moulding.

The upper attachment of the rear suspension units has been brought farther rearward by extending the channel members welded to the upper rear of the frame loops. Purpose of this change is to bring the legs more nearly at right angles to the rear fork so that a given wheel movement displaces the maximum quantity of fluid in the dampers, thereby ensuring their optimum efficiency.

Seating position is rather lower as a result of a reduction in the thickness of the padding. Further weight has been saved by lowering the hump at the back of the seat.

The modified seat and more nearly vertical suspension legs of the 1958 7R A.J.S. are clearly shown in the picture below. Right: Carburettor downdraught angle has been steepened and Duralumin plates between engine and rear frame replace the earlier light-alloy casting

