

Rain made Sterling's run impossible until the evening of the 24th. Entering cockpit in near-dark, he set 245 mph record.

# GRABBED A FISTFUL

#### by Griff Borgeson

When the men of Abingdon go after records they don't fool around. This time they were out for four miles a minute and they made it with speed to spare — 245 miles an hour from 91 cubic inches! AYLIGHT was almost gone and a huge storm mass was boiling in from the west. MG's time on the salt would run out the next day and the weather prediction was for rain. The assault against the 204 mph international Class F record set by Lt, Col. Goldie Gardner 18 years before had to be made now, at dusk. Stirling Moss, reclining at the controls of the brand new MG streamliner, grinned at Captain George Eyston, manager of the record runs. "George," he said, "we'll set new records today if you have to stand at the far end of the course holding a candle for me to aim at." Nobody laughed much; Moss' quip was too close to the truth. Deftly Alec Hounslow (SCI June '57). replaced the warmup plugs with hard ones. The canopy was buttoned down around Moss, and six men gave the tiny streamliner a push start.

The 1489 cc engine came to life with a soft, almost purring exhaust note, but immediately started to load up badly. As the car drove away, we could hear it popping back until the sound dropped below the horizon of audibility.

The first run didn't do it. The car got a fast plug change at the far end of the course, and Moss stormed back, making good time through the clocks – until the car lost third gear. Moss, Eyston and MG's chief engineer Syd Enever had a quick consultation. Did they dare to make another run without pulling the gearbox? "Let's go, damit," said Moss. His neck was farthest out and his opinion carried. With the sun well below the western peaks he vaulted into the narrow cockpit, was sealed in, and took off. Less than an hour from the time of the first run, USAC's Art Pillsbury, timing for FIA, had recorded these new International Class F records:

one kilometer	from 204.3 mph to 245.64 m	ph
five kilometers		ph
five miles	from 189.5 mph to 235.69 m	ph
	from 182.8 mph to 224.70 m	
		· · ·

The three-stage race against time – against clock, daylight and calendar – was won handsomely, but only barely without recourse to beacon lights.

MG's preparation for the runs was a great deal better than the last-minute difficulties might imply. Eyston and Enever, both past-master veterans in the game of record breaking. overlooked nothing in the conduct of the attempt and the design and outfitting of the machine. Moss, star that he is, was MG's choice to drive the EX 181. But to guard against the unforeseen, the company retained California's Phil Hill as stand-by driver.

Moss was busy winning the Pescara Grand Prix for England and Vanwall, and couldn't make it to the Salt until the night of August 20. Hill, fresh from a second place in the Swedish G.P., was there on the 15th, in time for good weather and a dry course. To him fell the job of letting the machine out for the first time on the salt. The life-expectancy of the engine was fairly limited, and Hill was instructed to take one warm-up run at about 150 mph and then to open the tap to limited but record-breaking revs on the return trip, and make a fast two-way run. Thus, even if Moss had not been able to make the official runs, Hill's times would insure the success of the EX 181 mission.

Phil's first, slow run in the car was no joyride. Once the car was motating rapidly, there was a startling drop in atmospheric pressure in the cockpit. Worse, the instant he backed off on the throttle a flood of nitrobenzine fumes filled the driver's space – pungent, acrid, dizzying and nearly overwhelming. But Hill brought the car to a stop with perfect control and had a hole cut in one of the radiator air ducts, which in this car pass by the driver's head: the high-pressure fresh air made the rest of the runs vastly more tolerable.

Of the EX 181 Hill said, "It's a peculiar sensation, driving (Continued on page 52) Enever requested the smallest highspeed tires ever made. Dunlop complied.

Dave Ash, set International Class G record of 118.25 in EX 179.

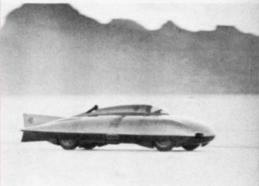
MG EX 181 is one of the most aerodynamically perfect streamliners ever built. Even the wheels are faired.

Huge eccentric-vane 30 psi boost Shorrock supercharger was almost as big as engine in EX 181.

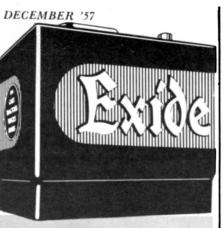
Phil Hill was Moss' standby driver. He drove both EX 179 & 181.











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#### '58 Corvette

#### (Continued from page 51)

operate the throttle. The steering wheel. in typical Chevrolet fashion, is right under the driver's chin. Even so, the Corvette is very easily controlled, the brake and clutch pedals are both well placed and smooth in operation, and there is puhlenty of room to stretch your left foot or brace it, on sharp right turns. And brace it you must, because the Corvette's bucket-style seats are the best argument for seat belts we've seen. At the risk of repeating last year's criticisms all over again, you sit on them, not in them, and there is virtually no lateral support whatsoever. Seat belts will be standard equipment this year, which is admirable indeed; but better contoured seats would be another big step ahead, too.

The brakes were so good that we kept up our punishing test for twelve stops instead of the usual ten, and it was only in the last two that a slight but definite weakening showed up. We were therefore quite disappointed to find that these were experimental linings only. Still, it's encouraging, as it shows that Chevrolet's been doing a lot of work to provide the average Joe with significantly better brakes, without his being subjected to the drawbacks of the HD kit's Cerametallics – and with a fair amount of success.

For the price of the Corvette, check with your Chevrolet dealer; GM says they're all independent businessmen who are free to set their own prices. Especially on the options, we might add. Without quoting any figures, we'd say that on the basis of local (N.Y.) prices the Corvette ranks as a Best Buy, both as a boulevard sports car and as a competition model.

Stephen F. Wilder

### MG Record Run

#### (Continued from page 23)

this car. You sit in the nose and have no view of the car at all. When I drifted away from the black line once, the car squirmed a few times on the damp salt and the feeling was as though you were sitting on a platform six feet ahead of the front wheels, with the car wagging behind you."

Moss' comments after his official record runs were cool and casual. "It's the fastest I've ever driven," he said, "but it really was a pleasant, uneventful ride. When accelerating, even in third gear I had to be careful to avoid snaking. You're not really in control in this sort of car...you just sort of guide it along. Gyroscopic wheel hop is pronounced at these speeds and you musn't fight the wheel; a light touch is OK, but to grip the wheel is to get into trouble. Steering a car like this is like keeping your balance while walking on a railroad rail — not terribly difficult, just tricky."

MG's decision to build the EX 181 (Continued on page 53)



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#### **MG Record Run**

#### (Continued from page 52)

meant, of course, a decision to improve on the car that already held the record for the company, Gardner's perennially successful EX 135. In spite of the age of the Gardner car, this was no easy job. Its Railton-designed body had a drag coefficient that was remarkably low even by today's standards and its supercharged 1106 cc engine had put out better than 200 belting bhp. Either more power or less drag would produce a faster car; MG decided to shoot for improvements in both directions and try to go a whole lot faster than 204 mph.

Getting more power was a relatively minor problem. A twin overhead camshaft head for the BMC B-series engine (used in the MG A) was already in an advanced state of development and had, in fact, been used in the 1956 record runs by MG EX 179 (SCI, Jan. 1957). The big problem that confronted Enever and his staff was that of finding a new, more slippery body shape. The obvious starting point was to reduce the car's frontal area and if possible its overall size, its total "wetted area." Since tire size and track determine the front shape, the actual starting point became tires: how small could a tire be made and still be capable of holding together at, say, 260 mph? Enever asked Dunlop to design a tire 23 inches high. Dunlop's philosophy has traditionally been "big speed: big tires" but they accepted the problem after getting Enever to give an inch. The 24-inch skins they made are oval in cross section, 5 inches wide and 41/2 inches deep, and run on 15-inch rims. Around these tires the car was designed.

Enever's approach was not just to develop a better streamlined body but to learn all he could about the optimum shape and then, with this as a reference point, work backward, keeping compromises at a minimum. The Joukowskisection profile of Gardner's car and the more recent EX 179 could be improved on hardly at all, but their slab-sided transverse sections were far from the optimum answer. Enever subjected many models with good transverse as well as longitudinal streamlining to wind tunnel testing; the one with the lowest drag factor was the narrow-rear-tread configuration adopted for EX 181. Its ratio of length to thickness is about four to one, and the tapering rear reduces the wetted area and makes for better air flow along the sides. Says Moss, "It's very stable. If the back wheels start slipping a bit, and the rear of the car swings out at all, air forces on the body automatically make it line up behind the front wheels again. It drives itself, to a great degree.'

Technically, EX 181 is most impressive as an exercise in aerodynamics and as an engineering tour de force, fitting driver and all the essential mechanisms into the smallest possible space. The de Dion rear axle is one of the many examples: it was no simple problem to fit a final drive housing, four universal joints, two wheels and the (Continued on page 54)





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#### MG Record Run

#### (Continued from page 53)

connecting shafts into a  $303/_4$  inch track. EX 181 is one of the finest record machines the world has ever seen and you can count on it going even faster in the future. At 245 mph, with this year's power plant (294 bhp @ 7100 rpm) and gearing (1.94/1), there were still hundreds of revs in hand.

While EX 181's record attempt had advance publicity all over the world, EX 179's August 13th record runs on the Salt this year came as a total surprise. This is a heavy car for a streamliner—about 2000 lbs. — and it's little more than an MG A chassis with Gardner-styled body. Fitted with a stock (except for carburetion and exhaust) 948 cc, 58 cu. in. Morris Minor "1000" engine, it was driven by Dave Ash. Tommy Wisdom to three new International Class G — Standing Start records ranging from 1000 miles at 117.48 mph to 12 hours at 118.13 mph. This with a power unit rated at 60 bhp!

In addition, some 50 National Class G records were established, half of them standing start and half flying start. But with the exception of three marks in each field, (1000 miles, 2000 kilometers, and 12 hours), these latter were all broken three days later by Ash, Wisdom, and Phil Hill who had come up to join in the fun. An identical engine with a positive displacement Shorrock supercharger installed (which increased the output to 75 hp) was fitted to EX179. (For USAC and FIA speed records, blowers do not affect one's displacement class.) In a six hour run, Phil and Dave set the 44 National records referred to above plus six in International Class G-Standing Start.

The next day, in a final orgy of speed. Tommy Wisdom of London's Daily Herald took EX179 up and down the 13 mile straightaway to break 6 National and 2 International Flying Start marks for distances up to ten miles.

Intended primarily to keep the salt beds busy until Moss arrived (a week later than planned, as Pescara was put on the International Calendar), these Class G records using a Morris Minor engine are in some ways the most impressive of all the runs this summer.

Hard on the record-keepers, all this, but not bad for BMC, who chalked up another booming year at Bonneville.

Griff Borgeson

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