

"MOTOR SPORT" ROAD TEST of the

HEALEY "SILVERSTONE" SPORTS 2-SEATER

THE Healey has been a car of interest to enthusiasts from the word go. As long ago as January, 1947, MOTOR SPORT published a long article on this then recently-announced make, and those who studied what we, and Cecil Clutton who tried the car, had to say about it, appreciated that here was a design of unusually high promise. The combination of a 2½-litre, four-cylinder Riley engine, giving over 100 b.h.p., in a welded-up chassis with a substantially constructed trailing-link, coil-spring i.f.s. layout and rear suspension also by coil springs, suggested controllability and performance well above the average.

So it proved. For since that time the Healey has put up some memorable high-speed runs, proving it to be, for a time, the fastest British production car, and driven by its sponsor, Donald Healey, and others, has built up an imposing list of successes in rallies and long-distance sports-car races. Only last year a Healey saloon covered 101.7 miles in an hour at Montlhéry track from a standing-start, 103.76 miles with a flying-start, and prior to that another saloon had been timed at 111.87 m.p.h. over a mile on the Belgian motor road, while a contemporary, conducting a normal road test, timed a saloon at 106.46 m.p.h.

Discerning people saw in the Healey a car which offered high performance without courting unreliability, and naturally began to conjecture how this chassis would perform if endowed with bodywork lighter and having less "top-hamper" than that of the standard models. Indeed, quite a number purchased Healey chassis from Warwick and set their favourite "panel-bashers" to work. But still the Donald Healey Motor Co., Ltd., listed only the "Roadster" and the stylish saloon, supplemented at Earls Court last year by the luxurious, Americanised "Sportsmobile." Until this year's Alpine Rally that is. For in this arduous event Donald Healey drove a mysterious Healey of new appearance, which puzzled alike his fellow competitors and the spectators, but won respect when it finished second (in company with a Simca) to the victorious Citroën—the new "Silverstone" model was born.

Later, three of these cars were entered for the B.R.D.C. Daily Express Production Car Race at Silverstone, the R.A.C.'s circuit from which the car's type-name is derived. Driven by Tony Rolt, Louis Chiron and Tommy Wisdom, these Healeys finished 4th, 6th and 17th, respectively, being placed 2nd, 4th and 5th behind the Frazer-Nash in the up-to-2½-litre class and winning the team prize.

Consequently, and especially as (for no very apparent reason) a Healey had evaded us ever since the "Roadster" we were to have driven experienced trouble during our visit to Warwick in

A genuine maximum of over 100 m.p.h., exceptional acceleration and splendid braking and roadholding, allied to docility and ease of control, characterise the latest model from Warwick.



1946, it was with keen anticipation that we accepted the eventual offer of a "Silverstone" model for test.

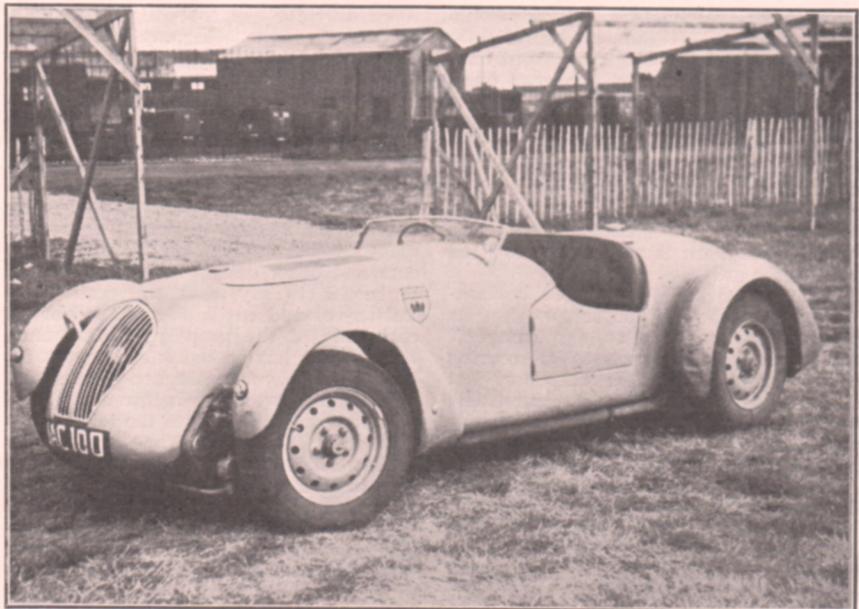
We journeyed to Leamington by British Railways on the day before the threatened "go-slow," were whisked to Warwick in a Morris Eight that had a very audible distaste for "Pool," and, after examining a row of chassis on the assembly line, assuring Mr. Barker, the General Manager, that we held a licence to drive, and signing for the car, returned to London rather more rapidly than the railway could have taken us, "go-slow" or otherwise.

The Healey handed over to us was the prototype "Silverstone" model, Reg. No. JAC 100, and the car in which Wisdom had finished fifth in his class in the Production Car Race. It had just returned from a Continental trip in the hands of a daily paper motoring correspondent and showed signs externally of the hard life; mechanically, however, it was in excellent fettle and behaved admirably during the stiff and prolonged test to which we subjected it, which in-

cluded fast "lappery" of the B.A.R.C.'s excellent circuit at Goodwood, timed runs on an aerodrome, and fast driving over main and secondary roads, with a modicum of traffic driving thrown in for good measure. We were certainly profoundly impressed by the performance capabilities and all-round excellence of the car.

Details of the "Silverstone"

Before discussing how it goes and what it can do, let us examine briefly the "Silverstone" two-seater as seen at the kerb-side. The chassis is virtually that of the normal Healey, except that the extension at the rear is deleted, the rear coil springs are rather harder, and an anti-roll bar runs between the trailing-links of the i.f.s. system, while 5.50-15 Dunlop tyres on extra wide-base rims replace tyres of 5.75-in. section. The wheelbase remains at 8 ft. 6 in. and the engine is a standard 2½-litre, four-cylinder Riley unit, having, incidentally, the unusually long stroke of 120 mm., and for which 104 b.h.p. at 4,500 r.p.m. is claimed. A saving in weight of nearly 2 cwt. over that of the normal cars has been achieved by fitting a light-alloy body shell, and to this weight reduction must be attributed the car's outstanding acceleration and roadholding qualities. That there is little "top-hamper" is evident when it is stated that the height of the car is 4 ft. 6 in. Axle ratios of



"SILVERSTONE" AT GOODWOOD.—The latest Healey seen at Goodwood circuit, where MOTOR SPORT did a number of fast laps in the course of putting this interesting car through a long road test.



AT SPEED.—The Healey "Silverstone" proved to have excellent road-clinging qualities when we drove it rapidly at the B.A.R.C.'s excellent test-circuit at Goodwood. It is here seen cornering very fast during the best lap (2 min. 5.8 sec.).

3.0, 3.25 and 3.5 to 1 are available, but the last-named is normally supplied and was used in the car we tested. It gives approx. 22 m.p.h. per 1,000 r.p.m. in top gear. The gearbox is not a particularly high-ratio one—the indirect ratios are 4.96, 7.74 and 12.76 to 1—being that used in the Riley chassis.

The body is a rather whale-like alloy shell forming a one-piece nose-cowl, bonnet, scuttle, cockpit and tail. It is made by Abbey, Healey's usual body-builder, and is supplied in green, red or blue. Low doors are provided, hinged at the front, and access to the engine is through a top panel held by two quick-action fasteners which respond to coin or screwdriver. Helmet-type aerodynamic wings, valanced at the rear, are rigidly mounted on tubular stays, the front ones carrying sunk sidelamps, the rear ones, sunk rearlamps, supplemented by a central rear lamp on the tail. The 7½-in. Lucas headlamps are mounted side by side at the base of the radiator, behind the openable grille, a location which keeps them out of the air stream without recourse to sinking them in the wings. The horn is also accommodated behind the grille.

The spare wheel is mounted horizontally at the back of the car, so that its protruding area acts as a "bumper" to protect the tail, access to its securing clamp being through a trapdoor just above the rear lamp. The screen retracts into a slot in the scuttle, giving ample wind deflection in the lowered (6 in.) position or almost full protection when erect, but it seems to offer more drag than an "aero" or fold-flat screen, judging by the way one's clothes are drawn from one's chest when the speed reaches 75 m.p.h. These cockpit eddies also had the unpleasant effect of bringing with them petrol fumes from the tank filler.

As no screen wipers are provided, the hood is rendered useless in the rain, which

is surely when one is most likely to erect it, if one does so at all? In the retracted position the frame rather hampers vision, as does the glass if the screen is wet. The "trough" into which the screen retracts fills with water which drains away through tiny pipes; we were assured that the interior of the "trough" is properly rust-proofed. On the whole we fail to see what advantage this screen offers over the fold-flat type.

The radiator and fuel filler caps, protruding through the body, are of the turn-and-lift pattern. With the 16-gallon fuel tank in the tail there is no luggage accommodation, and the jack has to occupy one of the door pockets, stowage room only for the tool-roll, hood sticks and hood canvas being available behind the seat squab. The solution for the tourist is a smaller tank, or a luggage rack over the tail. The jack inserts into sockets placed centrally one on each side of the chassis, a trapdoor beneath each seat opening to enable the operator to guide the jack into place.

There is not much point in discussing the cockpit fittings in detail, as bucket seats will be provided on the production cars and other details may be modified. Suffice it to say that the seats were leather-covered cushions on the floor on each side of the propeller-shaft tunnel, the driver's having a useful support for his left thigh, while the one-piece squab pegged into two holes in the alloy rear-platform and was held to the tail by two "Tenax" fasteners. The fascia has a shallow lidless cubby hole on the near side and carried a 6,000 r.p.m. 5-in. Jaeger rev-counter, a water thermometer, an oil gauge, the usual Lucas ignition-cum-lamps control, and push-switches for starter, second fuel pump and lamp dipper, together with warning light windows. Rather inaccessible under the fascia were pull-out ignition and choke controls. The pedals are conveniently located but we would have preferred the

spring-spoke steering wheel to have been bigger and not set so low down. The remote gear-lever is exactly where it should be, but the central hand-brake, which has a pleasantly large "grip" and a press-button ratchet release, is placed too far to the near side and is flimsily mounted. From the driving seat both front wings are visible and there is an effective rear-view mirror. The horn-push, in the wheel centre, operates a reasonably effective, not too obtrusive, horn. There is no ammeter or oil thermometer. The lamps proved effective, but not impressively so, at night, and seemed to dazzle oncoming drivers in the dimmed position; one sidelamp refused to function.

On the Road

Settling in the driving seat, a reassuring burble from the long tail-pipe as the engine is started suggests brisk performance, and without recourse to the stop-watch one soon appreciates that this Healey possesses acceleration of a very high order, for even comparatively short stretches of straight road serve to put the rev.-counter round to over 4,000 r.p.m., equal to a speed above 85 m.p.h. Even before this aspect of performance becomes apparent, however, the driver is charmed with its docility and ease of handling, exceptional for what subsequently proved to be a genuine 100-m.p.h. car.

So unobtrusive is the exhaust at low speeds that driving in towns in this racy-looking green car, with its big B.R.D.C. badges blazoned on the scuttle (why?) caused no unwelcome attention from police or other busybodies, and this Healey handles as easily as any "town-carriage." The engine will run down to 500 r.p.m. (11 m.p.h.) in the 3.5-to-1 top gear and, after an initial shudder, will accelerate away up the speed range without trace of a carburation flat-spot. If the lower gears are engaged excellent pick-up for normal motoring is obtainable without taking the engine beyond 2,500 r.p.m. Indeed, even when hanging on to top gear there is appreciable punch above about 2,000 r.p.m., or 45 m.p.h. The 10-in. Borg & Beck clutch functions smoothly and is reasonably light, the brakes arrest the car at a mere caress of the pedal and at touring gaits this Healey can be steered with finger and thumb.

The gear-change, too, controlled by that beautifully-placed, rigid little lever, is foolproof and a real joy to use. Someone in Lord Nuffield's establishment must be a gearbox-wizard, for we met the same pleasant action when driving a "TC" M.G. The lever snicks smoothly and firmly from one position to another, excellent synchro-mesh masking any misjudgment of double-declutch changes or aiding effectively less-hurried single-clutch changes, providing the clutch is fully depressed. A drop from top to second is simplicity itself, the rapid response of the engine to the throttle-pedal assisting at all times, while the lever is always to hand for selection of the required ratio when going fast into a corner or sighting an unexpected gap in the traffic stream. Reverse position is easy to locate yet properly protected by spring-action, and the gears are quiet. Full marks to whoever is responsible for this gearbox!

The docility, this "split-character" as it were, of the "Silverstone" Healey makes it a most useful general purpose sports-racing car, and we satisfied ourselves that learner-drivers felt quite at home in it.

Out on the open road, with an experienced driver at the wheel, the other side of the car's demeanour is equally impressive. Cruising speed is anything that the road permits, from the 65 m.p.h. we found we were holding over a twisting wet road in the dark while conversing with our passenger, upwards. Speed in the gears is limited by violent valve-bounce which comes in at 5,200 r.p.m., equal to 31 m.p.h. in first gear, 58 m.p.h. in second gear and 80 m.p.h. in third gear. Naturally, 4,000 to 4,500 r.p.m. is a more usual limit, even when in a hurry, giving as it does 44 to 50 m.p.h. and 62 to 70 m.p.h., respectively. So good is the acceleration, as later timed tests will prove, that going up to about 3,000 r.p.m. (33 m.p.h.) in second and 3,500 r.p.m. or so (60 m.p.h.) in third gear gets the Healey off the mark in a manner few other high-performance cars can emulate. The excellent pick-up, in spite of the high top gear, is undoubtedly due to the car's modest weight, our usual weighbridge weighing the car out at exactly 19½ cwt., without occupants but with some three gallons of fuel. In towns a change from second direct into top gear was a useful way of restoring speed after a traffic check.

The timed acceleration tests were made on a dry road, two up, without previous practice, and, spinning the back wheels for about 12 yards, we did 0-50 m.p.h. in 6.6 seconds, 0-60 m.p.h. in 11.0 seconds, and 0-70 m.p.h. in 15.0 seconds—figures which speak for themselves, and loudly! A more gentle 0-70 m.p.h. occupied 15.8 seconds. The clutch smelt a little hot after these runs, but did not appear to slip—on production cars, however, stronger springs will be used.

So far as speed is concerned, we reached 4,500 r.p.m. in top gear along an aerodrome runway, two up, screen retracted, against a 10-m.p.h. headwind (runs in the reverse direction were *verboden*). This represents a maximum of 100.4 m.p.h., based on Dunlop's computation of actual tyre diameter at 100 m.p.h. On another occasion a reading of almost 4,800 r.p.m. was attained along the Southend road, possibly aided by wind and/or gradient, this being equal to nearly 107 m.p.h. So the "Silverstone" Healey is a genuine 100-m.p.h. car. That it is not so fast as the saloon model is attributable to greater aerodynamic efficiency of the closed body and the low octane rating of British pump fuel. [We had no opportunity of checking the rev.-counter readings over a measured distance, but such instruments are seldom inaccurate, especially when fitted for racing.]

Such excellent performance turns one's thoughts to the Riley engine, for which we came to have as profound an admiration as for the Healey itself. It "pinks" furiously on pump petrol, it is true, but retarding the ignition cures this, at some sacrifice of performance. After the 100-m.p.h. runs it "ran-on" badly when switched off, but this does not occur after normal road runs and, although it

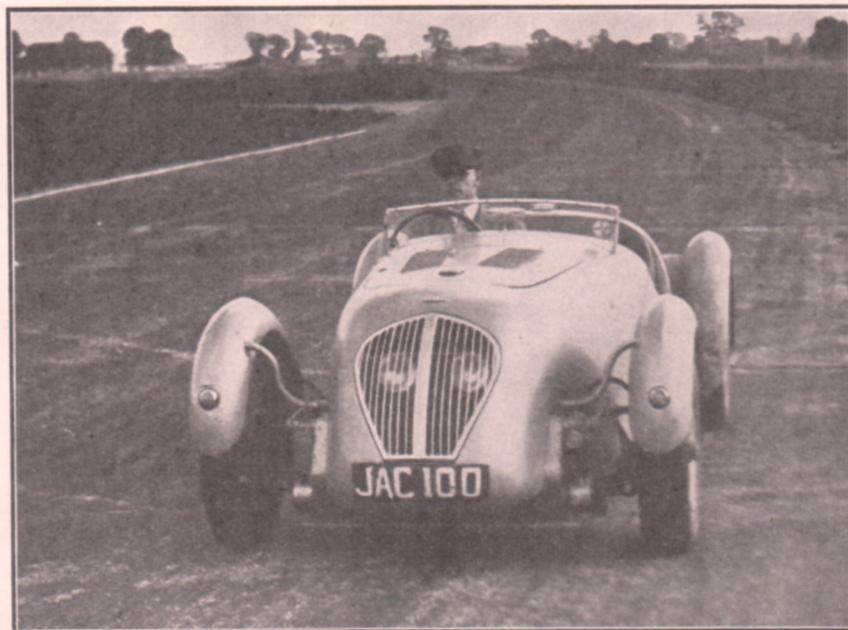
is not possible to keep one's hand on the bonnet top because of the heat, the thermometer never indicates above 170 deg. F. while in motion, or 190 deg. F. after the car has been stationary for a while. No oil, or water for the pressurised cooling system, was called for and oil pressure, which varied with engine speed, being 30 lb./sq. in. at 1,000 r.p.m. and 60 lb./sq. in. at speed, refused to diminish under the most trying conditions. The carburation is free from flat spots and the plugs never protest, while the engine starts promptly after a damp night in the open and runs practically choke-free at once. Apart from the delightfully crisp exhaust-note and an occasional glimpse of twin valve covers through the bonnet louvres, "Mr. Riley" did nothing to draw attention to his admirable presence, save for a vibration period to which reference is made later in this report.

A car of such performance has little merit as a road car unless its handling qualities are in keeping. In the case of the "Silverstone" Healey, they are. The suspension is harder at the back than on the other models, yet the ride is comfortable and entirely pitch-free, the front wheels moving up and down over bad surfaces with piston-like precision, pleasant for the passenger to watch, while the chassis remains as untroubled as on a smooth road. Only at high speed over very poor surfaces could slightly more damping be desired. But corner as fast as you can and no roll intrudes, the tyres protesting less than usual. The steering lock is exceedingly generous, even to the road-wheels rubbing the body sides on full lock, the steering wheel needing two-and-one-third turns to deflect them from one side to the other, which is gearing well suited to the car. Finger and thumb serve to control the car, no column movement and scarcely a trace of return

motion from the patented arrangement of linkage reaches the driver, and only about ½ in. of free movement existed. There is brisk castor return action to the fully-straight-ahead position.

The cornering abilities of the Healey enable a driver to put it round bends at the limit of his skill, for the car goes where it is directed and does not suffer from either of those affectations which the technical types term over- and under-steer, at all events on dry roads. Even in the wet the Healey still feels extremely safe but, with the tank almost empty (as it habitually is, these days), the tail tends to slide, just as the wheels try to spin, due to the lack of weight over the back axle, and this tendency—we believe it is "rear-end breakaway promoted by over-steer," in slide-rule jargon—has to be corrected, as it easily can be.

Difficult as the sum of the combination of steering, suspension and roadholding qualities is to describe verbally or on paper, after driving it the enthusiast will give the latest Healey full marks. It is an essentially safe car and vastly satisfying to handle, particularly in the dry. In this connection the brakes must be given a very big measure of praise. Lockheed 2LS, 11 by 1¼ in. front, 10 by 1¼ in. rear, with nickel-chrome, alloy ribbed drums, they are immensely powerful, it being possible to lock all four wheels on a dry road at any speed. Indeed, care is necessary to obviate fierce braking at low speeds, as the merest touch on the pedal is sufficient to give normal retardation, but once mastered, smooth, progressive braking can be accomplished. Moreover, save for a very slight squeak, and tyre noise if a wheel locks, these brakes function silently, were almost, if not quite, in as good fettle after a week-end of hard driving as when we left Warwick and, note this, due to an unmolested stream of air to the drums and the use



PRONOUNCING JUDGMENT.—The Editor brings the Healey "Silverstone" in after the lappery at Goodwood, towards the end of his prolonged and arduous test of the latest model from the Warwickshire factory. Note the location of the headlamps, the retracted windscreen and the clean frontal aspect.

of Dunlop ventilated disc wheels, no trace of fade was evident, even under racing conditions. We have seldom, if ever, experienced a better means of stopping a fast car.

As we have observed, the sum total of accurate steering, roll-free cornering and powerful braking is all but impossible to assess in words, so we decided that a timed lap of Goodwood might offer something of a yardstick. Taking advantage of a B.A.R.C. "practice Saturday"—a truly commendable amenity for which John Morgan deserves credit and which he hopes may be a daily amenity next season—two inexperienced drivers (in the circuit sense) took the Healey round against the watch. Incidentally 100 m.p.h. could not quite be reached along Lavant straight and top gear sufficed for most of the circuit. One driver, after three or four preliminary laps, clocked 2 min. 5.8 sec., equal to 68.8 m.p.h., and your Editor did 2 min. 8.5 sec., equal to 67.3 m.p.h. And if you compare these lap-times with the fastest laps set up in sports-car races at this venue, the potentialities of the "Silverstone" Healey on a circuit such as this are apparent. Its low ground clearance would, of course, preclude it from trials.

As no mileometer was fitted we had no definite check on the distance we covered in the car and for the same reason it is not possible to quote a fuel consumption figure. But in five days we drove the car both hard and far and it behaved impeccably. It seems likely that fuel is consumed at somewhere about the rate of a gallon every 20 miles, an exceptionally good figure, while, apart from one side-lamp that refused to function and a loose rear near-side wing stay, the car was as hale, certainly as hearty, at the finish as when we began the test.

The return run to Warwick from Hampshire emphasised what an exceptionally intriguing road-car this Healey is. Twice we reached nearly 100 m.p.h. (actually 4,400 r.p.m., equalling 98.4 m.p.h.) before having to check for other cars, and this with the screen now fully erect. With the wind thus deflected the driver can appreciate the mechanical silence of the car, the exhaust note inaudible to him at speed and the only noise from beneath the bonnet caused by intake of air to the two S.U. carburettors. Unfortunately a vibration period, either

THE HEALEY "SILVERSTONE" SPORTS TWO-SEATER

Engine: Four cylinders, 80.5 by 120 mm. (2,443 c.c.). R.A.C. h.p., 16.07; 104 b.h.p. at 4,500 r.p.m. Compression ratio: 6.9-to-1.

Gear ratios: 1st: 12.76; 2nd: 7.54; 3rd: 4.96; top: 3.50-to-1.

Tyres: Dunlop 5.50-15 on bolt-on, extra wide base Dunlop ventilated disc wheels.

Weight: Without occupants but ready for the road with approx. three gallons of fuel: 19½ cwt.

Steering ratio: 2½ turns, lock to lock.

Fuel capacity: 16 gallons (range approx. 320 miles).

Wheelbase: 8 ft. 6 in.

Track: Front: 4 ft. 6 in. Rear: 4 ft. 5 in.

Overall dimensions: 14 ft. by 5 ft. 3 in. by 4 ft. 6 in. Ground clearance: 7 in.

PERFORMANCE DATA:

Acceleration:

0-50 m.p.h. ... 6.6 sec.

0-60 m.p.h. ... 11.0 "

0-70 m.p.h. ... 15.0 "

Speeds in gears (rev.-counter calculations):

1st ... 31 m.p.h.

2nd ... 58 "

3rd ... 80 "

Top ... 100.4 "

Goodwood lap speed: 68.8 m.p.h.

Makers: Donald Healey Motor Co., Ltd., The Cape, Warwick.

engine or transmission, intruded from 2,500 until 3,500 r.p.m. in top gear, although this was less troublesome than it might have been because the Healey was seldom below 80 m.p.h. unless traffic or road conditions held it back!

The pleasant cornering capabilities and excellent brakes added as much to our enjoyment as they contributed to our safety, while the storming of main-road hills at upwards of 90 m.p.h. will live long in the memory. Without giving the

car anything like the last ounce, Stratford-on-Avon, 87½ miles from our starting point, came up in 103 minutes, an average speed of 51 m.p.h., including two brief stops to look at the map and observing that long 30-m.p.h. limit through Oxford. The overall journey to Warwick, a distance of 95½ miles, was accomplished in two minutes under two hours, in spite of another stop to map-read and yet another to dip the fuel tank. One-third of the distance was over twisty secondary roads and the last six miles were done at low speed to conserve petrol. Between Oxford and Stratford the average was in the region of 60 m.p.h.

Reluctantly we put this exhilarating means of conveyance away in its garage and set about getting home by nationalised transport—an anti-climax which occupied 6½ hours besides involving queuing for trains and standing in 'bus, corridor, and tube; positive proof, if any is needed, that modern business cannot dispense with the modern private car, and the petrol to operate it!

The Healey "Silverstone" is remarkable not only because it handles as well as any modern car we have driven and gives vivid acceleration and a maximum speed of over 100 m.p.h., but because it achieves this performance on less than 2½ litres and with a 3.5-to-1 axle ratio, so that the economy of petrol is quite unexpected. Over and above its performance capabilities it is so docile and pleasant to drive that learner-drivers feel at home in it, it is entirely devoid of temperament, and, if it is not beautiful in appearance, its lines have a satisfying functional simplicity. It is, too, virtually a top-gear car, this ratio sufficing for accelerating from 25 to 100 m.p.h. even when trying for high average speeds. Yet as peak engine speed is obtainable on all ratios, the car cannot be called over-gearred and would be even faster on a higher axle ratio. At a basic price of £975 this Healey is excellent value as a sports/racing or fast road car, and it should interest those buyers in dollar-markets who seek not only a complete breakaway from the American style of automobile but who crave *real* high performance, without courting servicing problems.—W.B.

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WHAT famous drivers say about the HEALEY SILVERSTONE

Louis Chiron.

'A PERFECT CAR IN EVERY RESPECT'

I was very happy to compete, in one of your cars, in the one-hour contest confined to production Sports cars at Silverstone.

I was absolutely amazed at the power of its engine which was submitted to a very hard test for one hour, enthusiastic about its suspension, and astonished by its brakes.

I congratulate you on having produced such a perfect car in every respect.

Goldie Gardner.

'NOTHING BUT THE HIGHEST PRAISE'

I have used my "Sports-mobile" daily since I took delivery in November, 1948, and have nothing but the highest praise for the car as a whole.

The powerful engine is extremely smooth at all speeds—the suspension, steering and brakes excellent, making the car an "effortless" drive.

The body is a full four seater, and the hood can be raised and secured in a few seconds by the driver without assistance.

Tommy Wisdom.

'THE SUPERB HEALEY'

A racing car with all the comfort and safety of a touring car—that, in my view, exactly describes the Healey.

It has been my fortune to have been at the wheel of a variety of Healey models in many differing events: notably, first of all the International Alpine Trial of 1947 (best British performance and the first appearance of a Healey in an international event), various hill-climbs, the 24-hours race at Spa (second to a bigger-engined car by a matter of yards): first production saloon car to cover 100 miles in an hour: the Mille Miglia, a really "tough" race, and the production car race at Silverstone. Superb roadholding, delightful steering, splendid brakes plus a powerful engine and close-ratio gearbox, add up to a sporting car which has no peer. When I have to go quickly, safely, there is no car I would rather drive.

DONALD HEALEY MOTOR COMPANY, LIMITED, THE CAPE, WARWICK, ENGLAND