

# SCI

## ROAD TEST: the Austin Healey

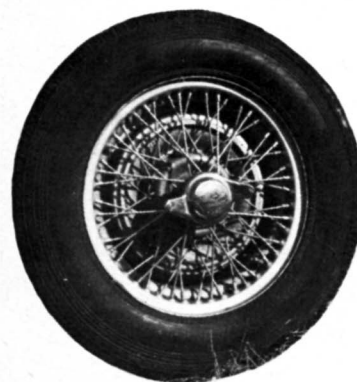
*"...the emphasis is definitely on flexibility..."*



*Coming out of a right angle bend, the Austin-Healey dips low at the rear, displaying slight under-steer. Yet drifts and power slides were executed with near perfect control.*

**O**BSERVERS were dumbfounded when Stirling Moss turned up at the Nassau races with nothing more potent than Austin-Healey 100S. "Can't he get a faster ride than that?" "Why doesn't somebody help him out?"

Actually, Stirling was offered one of Luigi Chinetti's Ferraris, and would have been a welcome man on any other team. He was simply down there for fun, not work, and



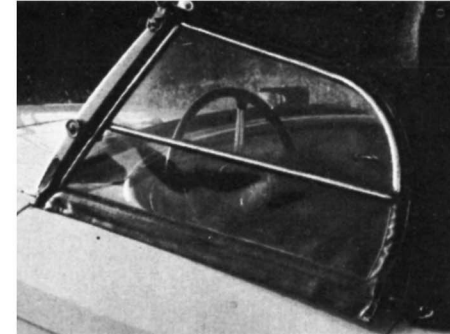
*New brake drums of A-H 100 are wider than previous model. This, combined with improved linings, makes the brakes almost fade-proof.*

wanted a car with which he could enjoy himself while making full use of his considerable talent. Basically identical to the 100S, the standard Healey retains this dual personality. It can be a smooth and easy fun car for puttering around, and yet will respond eagerly in the hands of the demanding expert. Like a good boxer, it can very rarely be caught off balance.

1956 has brought the first marked change in the Austin-Healey since its triumphant introduction in October of 1952. It rapidly established itself as a worthy and popular sports car, and is seen both on the courses and in the spectator parking lots. Increasing use in competition taught the Austin Company much, and some of this knowledge is reflected in the 100M and 100S models. At last the regular

*On long, slow corners, the Healey-100 showed itself to be responsive and light with a minimum of wheel fight. Note, that while there is some roll, it is not excessive.*

*The A-H top is easily raised or stowed. Side curtains will not keep out extreme weather, although heater is more than sufficient. Plastic hardtop can be bought for Austin-Healey from several private manufacturers.*



*At 55 mph, the A-H leans into a tight turn without sway or drift. Excess of flexibility at the rear is noticeable when cornering hard on rough surfaces. Use of Panhard lateral rods helps minimize rear axle oscillation.*



*The instruments are neatly balanced for the aesthetic eye, but are placed too low for a quick reading. Note, overdrive toggle switch next to tachometer. Cockpit is comfortable for six-footers too.*



line is getting the benefit of this experience, for all the changes reflect an awareness of racing requirements.

High on the list is the widening of brake drums and shoes from 1 3/4 to 2 1/4 inches. Combined with improved linings and the cooling allowed by wire wheels, this makes the brakes very nearly fade-proof. Their action is not light, but rather completely consistent and proportional to pedal effort. Smooth, straight-line stops were the rule, but emergency conditions caused rear wheel locking, thus suggesting that the rear is now if anything overbraked. The hand brake lever between the tunnel and the right hand seat is convenient and effective, though its recessed position when off makes it tough to grab in a hurry.

Older Healeys had a somewhat awkward three-speed







Large back window in Austin-Healey top affords excellent rear traffic view.

Cornering fast and hard, Austin-Healey-100 shows excess flexibility at the rear. This causes understeer on turns but gives little feeling of insecurity. Turn was taken at higher speed than would be normally advisable.



The 2660 cc engine sits snugly within the engine compartment. This little power-plant develops 90 bhp at 4000 rpm. Tight layout makes for some difficulty in minor service.

Looking very much like its predecessor, the A-H-100 has some new changes — a four speed gear box, and larger braking surfaces. Low ground clearance helps car hug roads at high speeds.



gearbox augmented by an overdrive arrangement that did a lot of the driver's thinking for him. This was easy around town but clumsy around Watkins Glen, and it was good news to hear that a four-speed box was being made standard, in combination with a manually-controlled version of the Laycock-de Normanville overdrive.

A C-type B.M.C. transmission is used, with special close ratios and gear selectors on the left hand side. No remote control is used, so the rather long gear lever is raked well back from its forward pivot. A noncommittally round knob carries the standard "H" shift pattern, with reverse to the left and rear. In action the lever travel is very long from first to second, with the knob near the dash in the former, and not much shorter from third to fourth. In contrast the sideways movement is very small, and a considerable kick is needed to get by the spring loaded reverse latch-out.

The strong synchromesh on the top three gears is provided with a certain amount of blocking action, and as a result shifting is slow and deliberate, though clash-free. Movement from second to third is hampered by selector imperfections which can hang you up in neutral if you try to rush it through. Oddly for a sports car the gears are utterly quiet in all ranges, and the chances are that the heavy insulation around the transmission absorbs both heat and sound.

Gearbox ratios were themselves well spaced, though the low rear axle ratio limited the useful speeds in gears. The overdrive, of course, made up for this at cruising speeds, but up to that point the four gears don't seem to be used

to best advantage. Operative in the top two gears, the overdrive engaged smoothly and rapidly, though it tended to take its time after a few power shifts into third OD. While it would be hard to reach in competition, the controlling toggle switch is an easy hand's flick under the wheel on the right. Upshifts occur with switch movement, but a downshift waits for slight throttle depression. It is thus possible, for example, to preselect direct fourth while cruising and engage it when needed by tromping down.

Other fun and games can be had by leaving the switch in "overdrive", in which case you will start from rest in regular first and second and then shift right into third OD. A good regular sequence is first, second, third, third OD and fourth OD, which provides five well-spaced ratios. No more can be found, anyway, since fourth direct and third OD are virtually identical, the latter being slightly lower. Since this was the case, I expected fractionally better 50-70 times in third OD. As the data table tells, direct top had the edge, and it seems that the extra drag and inertia of gearbox and overdrive gears more than negated the slightly higher engine power available.

Though it was rugged and silent, the transmission was generally a letdown in its rough shifting and low overall ratios. A little adroit file or grinder work would smooth out the gate, though not the synchromesh action, and a slightly higher back axle ratio would make the overdrive a true cruising gear and not a substitute for top gear.

Actually, with the Austin-Healey any discussion of the

(Continued on page 65)

## SPECIFICATIONS AUSTIN-HEALEY 100

### ENGINE

Cylinders .....4 in line  
Bore and stroke ....3.44 in x 4.37 in (87.3 mm x 111.1 mm)  
Displacement .....162 cu in (2660 cc)  
Compression ratio..7.5:1  
Max. horsepower..90 bhp @ 4000 rpm  
Max. torque .....144 lb/ft @ 2000 rpm  
Max. b.m.e.p. ....134 psi

### CHASSIS

Wheelbase .....90 in  
Front track .....48¾ in  
Rear track .....49½ in  
Curb weight .....2360 lbs  
Front/rear distribution ....48/52  
Test weight .....2670 lbs  
Turns lock to lock .....2.5  
Turning circle .....30 ft  
Gear ratios:

Gear	Direct	Overdrive
4th	4.10	3.18
3rd	5.46	4.24
2nd	7.85	
1st	12.60	
Rev	17.10	

Tire size .....5.90x15  
Brake lining area .....188 sq in  
Fuel capacity .....12½ gal

### PERFORMANCE

#### TEST CONDITIONS

40° F, light side wind, dry concrete surface at sea level. Top and side curtains erect, two aboard. Mileage on test car: 3000

#### SPEEDS IN GEARS

Gear	True mph (Car)	
4th OD	100	(108) @ 4100 rpm
Best run	101	
4th	96	(103) @ 4900 rpm
3rd OD	93	(98) @ 5000 rpm
3rd	67	(70)
2nd	49	(50)
1st	29	(29)

#### ACCELERATION

Range	Time, Seconds	Gears Used
0-30	3.6	1st
0-40	5.9	1st, 2nd
0-50	8.6	1st, 2nd
0-60	11.6	1st, 2nd, 3rd
0-70	16.2	1st, 2nd, 3rd, 3rd OD
0-80	23.0	1st, 2nd, 3rd, 3rd OD
50-70	7.9	3rd OD
50-70	7.7	4th
Standing ¼ mile	18.1	1st, 2nd, 3rd, 3rd OD
Speed at end of quarter	73 mph	

#### FUEL CONSUMPTION

Hard driving .....19 mpg  
Town/Country use .....24 mpg  
Country use .....27 mpg



# Austin-Healey Test

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transmission must be academic, since it is quite possible to drive all day without ever moving the lever out of fourth. I tried a few top-gear starts just to back this up, and the big ex-A90 engine carried it away without a tremor. The clutch helped out by being smooth and light, and later proved slip-proof during a lot of rough use. Unfortunately the distance from pedal to firewall forces a choice between riding the clutch or not using it.

Big displacement, long stroke and low stress combine to give the Healey incredible top gear pulling power, and a right foot down at any speed will produce some response. In this respect particularly, a recent convert to sports cars will find the Healey very easy to drive. He can neglect or forget to shift, lugging it heavily all day, and the Austin engine will remain unperturbed.

Starting is easy, being instant on cold days with the underdash choke, and the idle when warm is smooth and regular at 800 rpm. Linkage from the organ-type accelerator to the twin S.U.'s is complex but sturdy, and response of the slow-turning four is on the sluggish side, which can be embarrassing on hurried downshifts.

Up to its horsepower peak the engine is mechanically quiet and vibration-free, but as 4500 rpm and the red line are approached a substantial unbalance makes itself felt. That red line is very valid and need not be passed for most purposes, though as a matter of interest valve bounce is staved off until 5100 rpm.

While it is shown by the stop watch and results to be very effective, the performance of the Healey lacks the sharp, instantaneous feel of a more highly tuned (and possibly less reliable) machine. The emphasis is definitely on flexibility. When the clutch is engaged hard at high revs for a standing start, the rear end squats right down while the axle tends to hop and skitter, giving the very short driveshaft a workout in the process. This same slight excess of flexibility at the back is noticed when cornering hard on very bumpy surfaces. This is hard to avoid with a softly sprung live axle, and is minimized on the Healey by the use of a Panhard rod for lateral location. In almost every other respect the A-H handling qualities are well above par for cars of its class.

The steering itself is very good for a worm-and-nut box, having only about half an inch of free play at center. It

is quite fast enough for any maneuvers, and is power-steering-light even while parking. Caster action is mild, and there is very little road reaction on any surface. As would be expected, the Burman box just misses the last fineness and precise feel that would be provided by a rack-and-pinion system.

Translated into terms of handling qualities, and combined with a very slight amount of understeer, this means that the initial response to the wheel is a shade slow. Once the angle of approach has been selected, though, the Healey will literally do whatever you want it to in a corner. Great liberties and ham-fisted handling simply could not get it into trouble, and it preferred to execute its repertoire of controllable drifts and power slides.

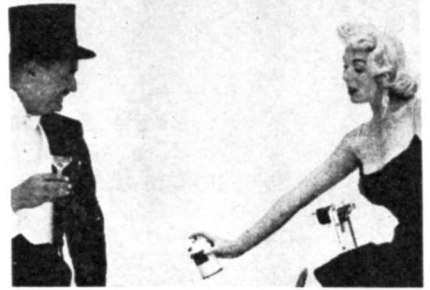
The understeer is just sufficient to make the Healey a forgiving car without incurring unresponsiveness or heaviness on slow corners. It maintained a "line" smoothly and quietly with a minimum of wheel fighting and without excessive roll, and inspired sufficient confidence to allow the fastest speeds with comfort yet recorded on my handling course.

Not a little of this agility is due to the very handy size of the Healey. The view from the cockpit emphasizes the narrowness and simplicity of the front end, and the beaded fender tops give good sight lines. Vision all around is very good, especially through the wide rear window with the top up. While it commands a very wide field of vision, I do not feel that the convex diminishing-type rear view mirror has any place on a fast sports car. One might be useful on the fender or windshield post, but the main mirror should give you a precise indication of the distance you hold from following vehicles. This one would be plain worthless in racing, and this is not a bad criterion for judging everyday effectiveness.

The seats themselves are pleasantly firm and comfortable. Structural stiffness of the seat back is impaired by pivoting it to the base, but the back contour gives very good lateral support to the shoulders. Long-armed drivers may find that the non-adjustable wheel is a little close, and they might improve both this and the small-of-the-back support by increasing the rake of the back slightly.

A well-shaped rim and sprung spokes make the 16-inch steering wheel pleasant to use, and its stationary center carries the direction signal control and

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the button for the assertive horn. The choke, heater, air vent, hood release and instrument light controls are all beneath the cowl in various places, only the starter, headlight, windshield wiper and overdrive switches remaining on the elliptical dash panel. These last are the most used, so this makes sense, but most of them are difficult to reach beneath the steering wheel. The wipers, by the way, are self-parking and fast and quiet in operation, and all the minor controls have a smooth, solid feel.

At a glance the instruments are impressive, and they are indeed handsome, but they are placed just too low for rapid reading. The lack of any graduations between ten-mile increments makes precise speed reckoning a matter of interpolation, but the rally-wise will welcome an adjustable trip mileage recorder. One small dial combines oil pressure and water temperature, while the other discloses fuel level accurately when the car is at rest. Indicator lights are provided for ignition, bright lights, and directional signals. There is no specific interior light, but maps can be read by the underdash illumination from the potent instrument lights.

Again under the cowl there is a wide, lipped parcel shelf which will hold a lot of odds and ends even during fast driving. The door pockets are long and deep, but there is no lockable interior compartment for small valuables. A key guards the trunk, however, where there is a surprising amount of room for a small sports car. The spare rests high and forward, and protrudes into the behind-seat cockpit room. Inconveniently, it must be removed before the lid can be raised to inspect the two rear-mounted batteries. Comprehensive tools and jacking equipment repose in depressions at each side.

No matter how highly you might value the protection afforded, I doubt that you'll enjoy opening the trunk to fill up with gas. Also, with a full tank and steady left cornering it's not hard to detect fuel vapors at the rear. A fuel shut-off valve is placed in the trunk, near the S.U. electric fuel pump.

The Healey hood is not large, and the big engine uses up a lot of room, so there are some limits to accessibility, particularly beneath the carburetors. Generator, plugs, distributor and oil filter are all easily reached, though, while the forward-mounted steering box is practically forgotten.

They say that you appreciate something more if it doesn't come easily, and this may explain the snug feeling of the Healey with the top up. Actually, raising and stowage are not too

complex, though a helping hand is welcome, and the problem is rather one of entry and exit. The seat sides curve up, and the side curtains curve in, and the door doesn't open widely, so a narrow path is left for a human being. A little practice and the now-sturdy dash handle help, but it's still awkward.

Weather protection is generally very good, though the upper front corners of the curtains still tend to leak wind and rain. Our car had an annoying leakage of cold air high up under the cowl on the passenger's side. The heater was more than potent enough, but the defrosters cannot be operated independently of the main heat supply, and if you want heat on the windshield you must also have it in your lap.

Early complaints about hot cockpits in summer should be avoided now by the controllable fresh air vents and extensive insulation around the gearbox and on the exhaust side of the firewall. The handsomely designed interior contributes to the very comfortable and secure feel of the A-H cockpit, and this impression is not belied by the way the car rides. It is notable among sports cars for a freedom from rocking and pitching, and it always moves flatly and stably. Low speeds reveal a sensitivity to small bumps and ripples, but this diminishes as the Healey gets into its stride. On straight roads it tracks beautifully with a minimum of driver effort, even at high speeds in strong crosswinds.

As is now usual, the headlights can't begin to cope with the car's easy cruising speed of around 80. Nor, also, are the bumpers equal to big city conditions. These are minor criticisms of a genuine 100 mph sports car which, with such normal accessories as heater, defroster, directionals, tonneau cover, wire wheels and overdrive, retails fully equipped at port-of-entry at a base price of \$2985. The only optional item is a radio, and a Motorola unit can be fitted for \$65.

The overall impression left by the Austin-Healey is one of smoothness and competence. Refinement of an originally good design over three years has left very few rough spots, and those that do turn up are largely a function of the very reasonable price. A minimum of effort and skill is required to drive the Healey, and as a result it is near-perfect for the newcomer to the sports car game. This does not, however, preclude its enjoyment by the expert, who will be able to make full use of its complete controllability and versatile transmission system. This breadth of appeal has long contributed to the Austin-Healey's worldwide popularity, which should be enhanced by this latest version. #