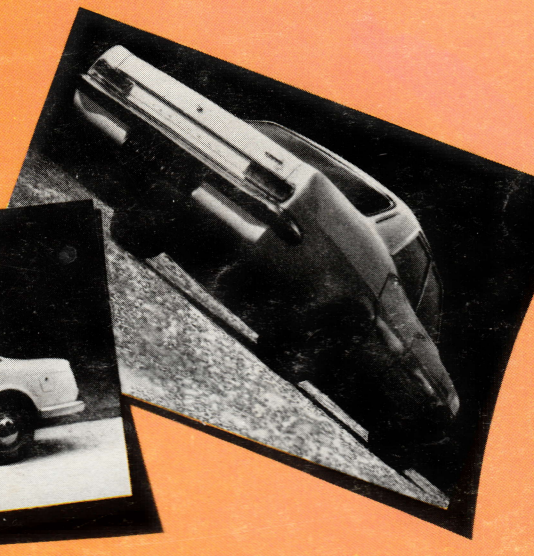
26 OCTOBER 1967 2s 0d

Autocar

LONDON SHOW REPORT



IN PICTURES

BMW 1600 Coupé 1,573 c.c.

AT A GLANCE: Latest addition to BMW range. Sweet, high-revving single-ohc engine gives very brisk performance and good economy. Light, but temperature sensitive brakes, power assisted. Back seat restricted; lots of room in front. Excellent road-holding and comfortable ride. Very little wind noise. Good finish, but inflated price.

MANUFACTURER

Bayerische Motoren Werke AG, 8 Munchen 13, Lerchenaur Strasse 76, West Germany.

UK CONCESSIONAIRES

BMW Concessionaires (England) Ltd., Victoria Road, Portslade, Sussex

PRICES

Basic	£1,055	0s	0d
Purchase Tax	£243	2s	0d
Seat belts (pair) ..	£14	5s	10d
Total (in GB)	£1,312	7s	10d

EXTRAS (inc. P.T.)

Dunlop SP41 radial ply tyres	£17	10s	5d

PERFORMANCE SUMMARY

Mean maximum speed	102 mph
Standing start ¼-mile	18·5 sec
0-60 mph	12·5 sec
30-70 mph (through gears) ..	13·5 sec
Fuel consumption ..	28 mpg
Miles per tankful	280

ORIGINALLY the BMW 1600 was a smaller-engined version of the four-door 1800 saloon. None of these earlier cars ever came to England officially, although they were quite popular in Germany and even saw service as taxis in Munich, their home town. Then about the end of 1965, the model ceased to be listed and at the Geneva Show 1966 it was reborn as the two-door 1600.

The new car is 500lb lighter, a foot shorter and much more compact than the original. To avoid confusion it is called the 1600 Coupé in Great Britain, although it is merely a close-coupled four-seater with two doors and not at all a fastback.

Its specification and £1,300 price tag put it straight in one of the most competitive classes. This is the category where the luxury small cars overlap with some of the cheaper larger ones, and the buyer with between £1,000 and £1,500 really has a huge choice.

The latest version of the 1,573 c.c. engine develops 85 bhp net at 5,700 rpm against the original car's 83 at 5,500. The cylinder head is now identical to the 1800's, and carburation is through a single Solex, with a manual choke. We found that although the engine started very easily, full choke was needed for quite some time before the engine would pull smoothly, and it took a few miles before the temperature gauge would move off the bottom of its scale.

The rest of the chassis is very similar to the four-door versions, although the final drive ratio is 4·11-to-1 (to make up for the 13 instead of 14in dia wheels), and the Ate-Dunlop disc front, drum rear brakes are about an inch smaller, but still with a vacuum servo. The test car had a 6-volt electrical system, although the whole BMW range now has 12-volt electrics.

We have no hesitation in saying that this latest version of the engine is by far the smoothest in the whole BMW range. Apart from a turbine-like whine from the single overhead camshaft, it is remarkably quiet and ultra-retractable. An indication of its rev range is shown by the fact that the engine will pull fairly smoothly from as low as 10 mph in top gear —a bare 600 rpm—right up to 7,500 rpm in the indirect gears. Only a slight mechanical harshness indicates ▶

Autocar road test number 2156

Make: BMW
Type: 1600 Coupé
1,573 c.c.

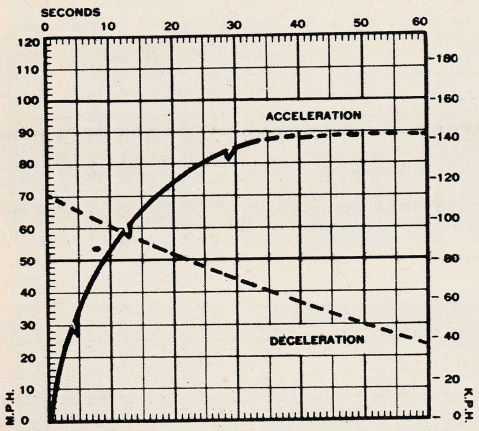
TEST CONDITIONS

Weather: Cloudy, bright. Wind: 10-20 mph
Temperature: 15 deg. C (60 deg. F)
Barometer: 29·35in. Hg.
Humidity: 48 per cent
Surfaces: Dry, concrete and asphalt

Figures taken at 3,400 miles by our own staff at the Motor Industry Research Association proving ground at Nuneaton.

WEIGHT

Kerb weight: 18·3 cwt (2,051lb-932 kg) (with oil, water and half-full fuel tank)
Distribution, per cent F, 55·7; R, 44·3
Laden as tested: 22·5 cwt (2,522lb-1,143kg)

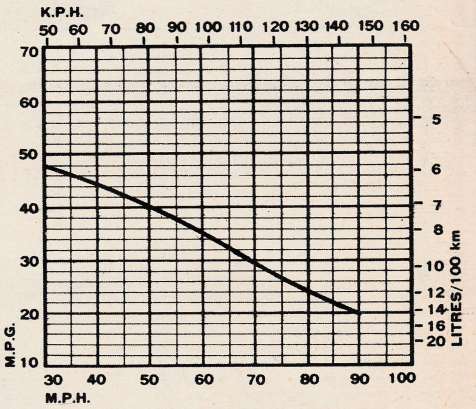


MAXIMUM SPEEDS

Gear	mph	kph	rpm
Top (mean)	102	164	6,250
(best)	106	171	6,500
3rd	90	145	7,500
2nd	60	97	7,500
1st	32	52	7,500

Standing ¼-Mile 18·5 sec 72 mph
Standing Kilometre 34·3 sec 86 mph

FUEL CONSUMPTION



(At constant speeds—mpg)

30 m.p.h.	47·0
40	43·0
50	39·6
60	33·9
70	29·8
80	24·5
90	20·1

Typical mpg 28 (10·1 litres/100km)
Calculated (DIN) mpg 27·1 (10·4 litres/100km)
Overall mpg 26·3 (10·7 litres/100km)
Grade of fuel, Premium, 4-star (min 97RM)

OIL CONSUMPTION

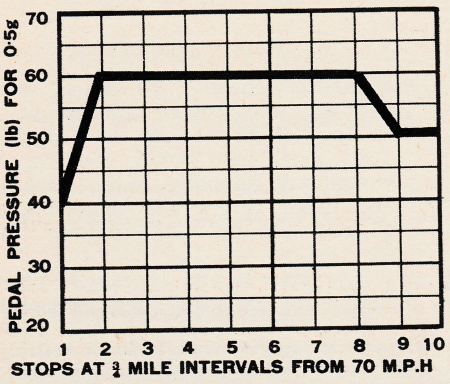
SAE 10W/30 .. .. negligible

TIME IN SECONDS	4·1	6·1	8·8	12·5	17·5	23·9		
TRUE SPEED MPH	30	40	50	60	70	80	90	100
INDICATED SPEED	35	45	55	65	75	85	95	105

Mileage recorder, 0·1 per cent over-reading
Test distance 917 miles

Speed range, gear ratios and time in seconds

m.p.h.	Top	3rd	2nd	1st
10—30	11·3	7·5	4·6	3·2
20—40	10·1	6·7	4·2	—
30—50	10·1	6·6	4·7	—
40—60	10·6	7·1	—	—
50—70	12·5	8·4	—	—
60—80	16·6	12·1	—	—



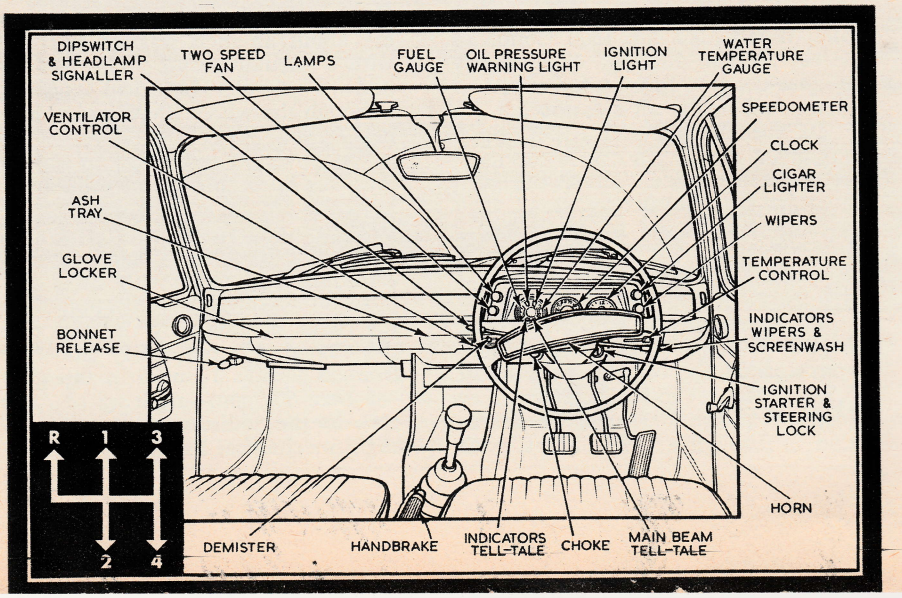
BRAKES (from 30 mph in neutral)

Load	g	Distance
25lb	0·30	100ft
50 „	0·80	37·6 „
60 „	1·0	30·1 „
Handbrake	0·28	107 „

Max. Gradient, 1 in 3
Clutch Pedal: 40lb and 7in.

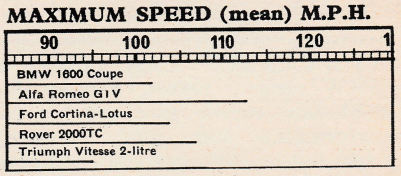
TURNING CIRCLES

Between kerbs L, 34ft 3in.; R, 31ft 10in.
Between walls L, 35ft 9in.; R, 33ft 5in.
Steering wheel turns, lock to lock, 3·7

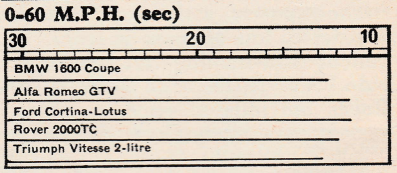


HOW THE CAR COMPARES:

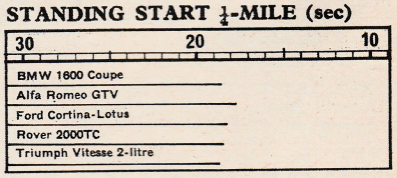
MAXIMUM SPEED (mean) M.P.H.



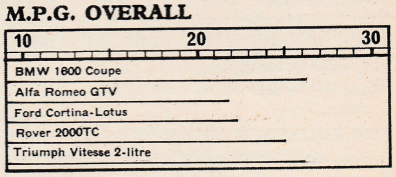
0-60 M.P.H. (sec)



STANDING START ¼-MILE (sec)

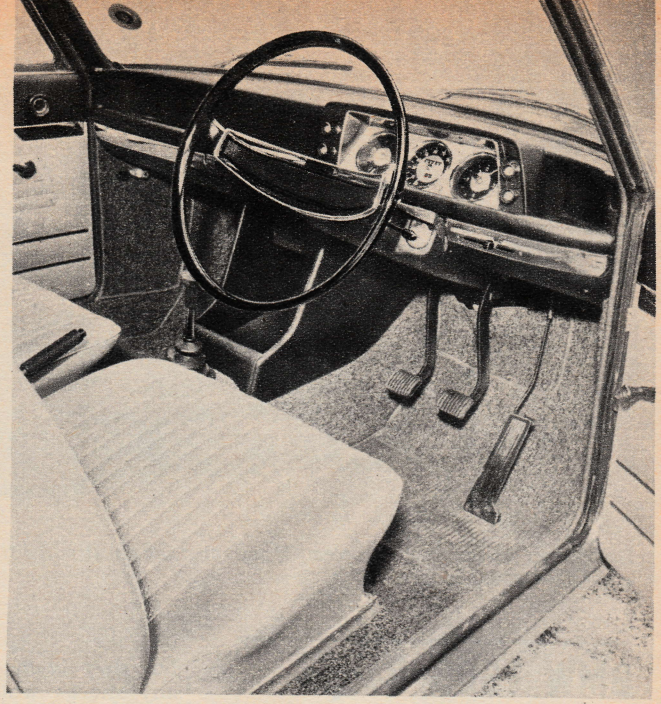


M.P.G. OVERALL



PRICES

BMW 1600 Coupé	£1,298
Alfa Romeo GTV	£1,950
Ford Cortina-Lotus	£1,080
Rover 2000 TC	£1,451
Triumph Vitesse 2-litre	£839



Access to the rear seats is good, but leg room is rather limited. There are ashtrays and small armrests on each side. Carpet covers the floor at the front and rear. A deep cowling over the instruments prevents reflections in the screen at night. The horn ring round the single steering wheel spoke is difficult to find quickly

that the rev limit has been reached and BMW recommend that 6,200 rpm should be used as the theoretical red line. With an engine that will rev as freely as this, there is a genuine need for a rev counter. Marks on the speedometer dial at 26, 48 and 73 mph (these can be raised by five mph to allow for the error) correspond with around 6,000 rpm.

Performance

With its much lighter body, the 1600 Coupé is a really fast car. The maximum speeds in the gears are 32, 60 and 90 mph, although in practice one changes a good deal lower down the range to take full advantage of the very flat torque curve. It is not often that we are able to beat BMW's own usually accurate performance figures, but in the case of the 1600, we clocked 8·8sec to 50 mph and 12.5sec to 60—½sec quicker. The gear ratios are just about perfect, third providing an ideal overtaking gear, with plenty in reserve. The clutch on the test car took up the drive at the very end of its travel, and it was too easy to ride the pedal and get some slip.

As the engine in the 1600 Coupé is slightly further aft in the chassis than in the larger cars, the gear lever is better placed; this makes control much easier, especially when wearing seat belts. The lever action is very smooth, with a beautiful "watch-like" precision. Synchromesh is very powerful.

Frustrated as we are by the 70 mph speed limit, the BMW's maximum was taken on the MIRA banked circuit, which it *lapped* at 102 mph on a very windy day. The best figure was 106 mph—which is really excellent for a saloon car weighing over a ton and developing only 85 bhp. Although the very smooth engine does not worry at running at over 6,500 rpm, it is rather happier cruising at around the 90 mph mark. Frameless windows are difficult to make "wind proof," yet on the test car one was barely aware of any wind noise at 70 mph; the left-hand front quarter light was the main source of noise, making a slight roar at over 80 mph.

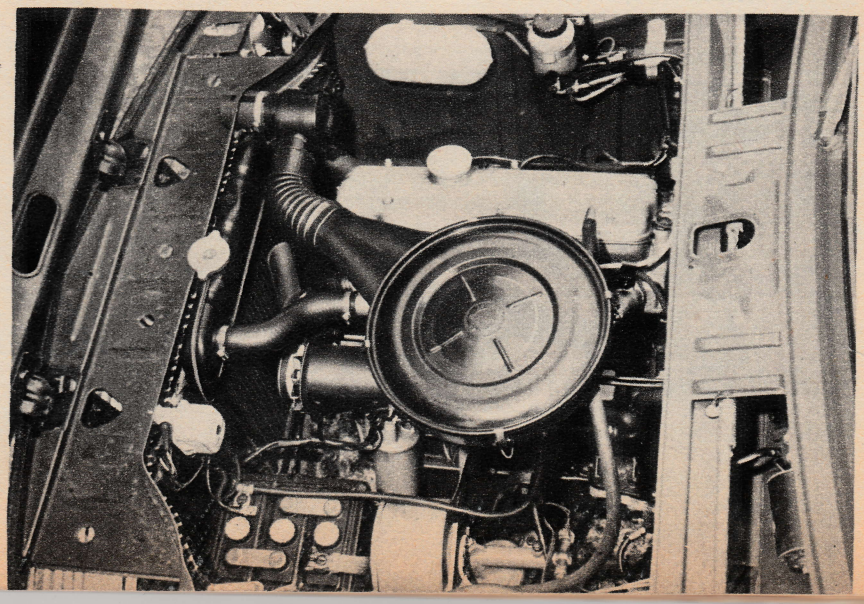
Originally the 1600 did not have a servo on its braking system, but BMW have now thought one necessary. The brakes are very well balanced, and progressive, with just 25lb pedal pressure needed for check braking and only 60lb for a full 1·0g stop. Fairly hard pads and linings are used, and the handbrake would only slow the car at 0·28g, despite a really powerful heave on the lever between the front seats. As with other BMWs we have tested, we found that the brakes have "instant" fade. The first of our 10 stops at 0·5g from 70 mph needed only 40lb pedal load; the second one needed 65 and then 60. Eventually, after nine stops, the load dropped to 50lb. There is a strong smell of hot asbestos when the brakes are used very hard.

The 1600's overall fuel figure of 26·3 mpg is good for a car that asks to be driven with spirit. Four star petrol is needed and the 10 gallon tank, with its filler on the right hand rear wing, will fill to the brim without blowing back.

No oil was needed throughout the 917 mile test.

Although the 1600 has almost the same wheelbase as its larger four door sisters, its handling is far more precise, and less cumbersome. The semi-trailing-arm independent rear suspension is extremely good with no ▶

Two struts hold the bonnet lid wide open, allowing very good access to the engine and backs of the headlamps. The test car had a 6-volt electrical system, new cars have 12 volts. In the foreground are the fuse block and brake servo



The compact two-door coupé has plenty of glass area and superb visibility. Reversing lamps are built into the rear clusters, and the front indicators wrap well round the wings

BMW 1600 Coupé . . .

vices. There is slight understeer on normal fast corners, changing to a very gentle oversteer (almost as if to remind the driver not to get *too* enthusiastic) when really pressed. On very tight corners it is possible to make the inside rear wheel come clear of the road, but the car's attitude barely changes.

Roadholding

Dunlop SP41s are extra; they seemed to squeal more than usual, even during quite gentle cornering, but they provide immense grip and even on roads running with water, one can drive with great confidence. Strong winds push the car about a good deal, and constant concentration is needed to keep the car on course on exposed roads. For a car only an inch over 14ft long, the turning circle of nearly 36ft is excessive. A good safety feature is that the steering box and arms are set behind the front suspension sub frame.

Ride comfort is good, with firm damping. Nothing short of sudden hump back bridges will throw the car, but the radial ply tyres give that slight harshness usually associated with them. The seats are quite hard, but they seem well able to absorb any shocks which get through the suspension.

One of the first differences one notices between the seating positions of the 1600 and the larger cars is that in the newer cars the seats are lower, so that one gets the impression of sitting *in* rather than *on* the car—not that this detracts from the visibility, which is excellent. The front seats have four backrest angles and are trimmed in "woven" pvc material. There is plenty of location, and the adjustments work very smoothly.

Several of the test staff complained that the pedals were set too high and too far back from the toe-board. This meant that drivers with small feet had to lift them well clear of the floor in order to use the brake and clutch. The return spring on the accelerator pedal is also very heavy, and on motorways we found the car getting slower and slower until another "bite" was taken on the pedal. It is best to balance the spring pressure with the weight of the whole leg—uncomfortable but effective.

Leg room at the rear is rather restricted, and with the driving seat set back for a near straight-arm position, it is almost impossible to squeeze an adult in. Both front seats tip well forward so that access to the rear is easy. Several people who rode in the back of the car found to their discomfort that there is a roof strengthening bar running under the trim above the back window; only a slight bump in the road brings skulls into painful contact with it.

The trim in the 1600 Coupé is less elaborate than on the 1800 or 2000, yet it maintains the same high BMW standard. Three equal-sized instrument dials are in a rectangular housing on the facia shelf. The speedometer was exactly 5 mph optimistic throughout its range—an error probably due to the smaller rolling radius of the Dunlop tyres compared with the Continental cross-ply tyres which are standard. The total and trip mileometers—the latter has no tenth scale—are virtually accurate. Flanking the instrument panel are the switches, which have the usual BMW crushable safety knobs. The driving lamps and heater fan switch are on the left, the cigar lighter and two-speed wipers on the right.

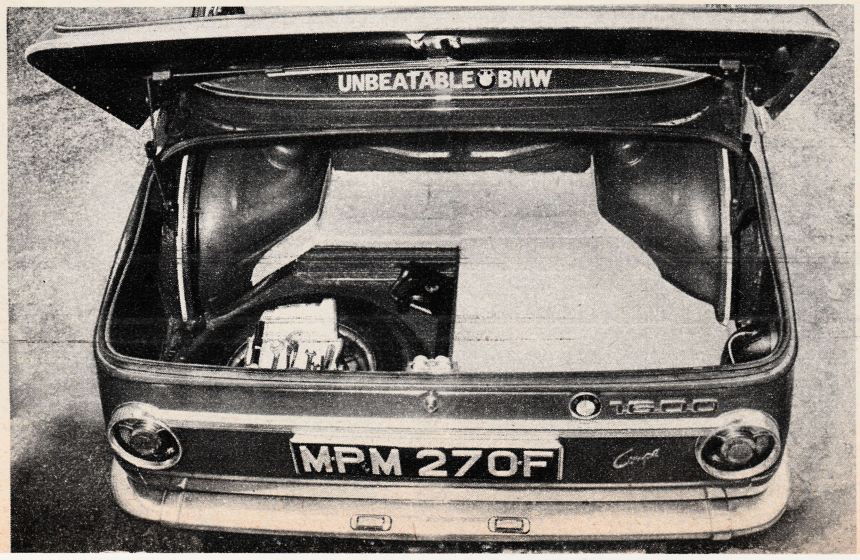
Controls

The left hand of the two steering column levers operates the dipswitch and headlamp flasher, while that on the right controls the direction indicators and, when pulled back, the screen washer; the wipers automatically come on with the washers and stay on for an extra four wipes after the jets have stopped.

The feeble, low-pitched horn has little effect in fast-moving traffic, having neither the volume nor tone to be heard. The "ring" runs rounds the horizontal, padded spoke of the steering wheel, making it difficult to find in an emergency.

Although the heating system is very efficient, no through-flow of air is provided except by means of the hinged rear windows. The temperature is controlled by a slide on the right of the steering column and the distribution by two controls on the left—one for demisting, the other for floor-level heating. Tiny vents at each end of the screen rail provide demisting for the side windows. No provision is

Half the boot floor lifts up to reveal the spare wheel and tool kit. The high sill makes it difficult to lift heavy luggage in or out



made for separate cold fresh-air ventilation.

Storage space inside the car is rather limited. The facia shelf has a deep lip across its front edge to stop things flying off, and hidden right out of sight under the bright metal strip which runs across the facia is a small, shallow drop-down locker which holds little more than the car's handbook and service records. A deep open locker in front of the gear lever has a panel in it for the installation of a radio.

Autocar now knows BMWs pretty well—we have been running the bigger cars for 18 months—and in many ways we like the smaller 1600 best of all. It is fast (indecently so for its size), economical and extremely well mannered. In the free markets of Europe it is also good value, but at almost £1,300 tax and duty paid in the UK, the appeal obviously lies with the discerning motorist who can afford and appreciate the fine engineering and gain pleasure from it. ■

SPECIFICATION: BMW 1600 COUPÉ (FRONT ENGINE, REAR-WHEEL DRIVE)

ENGINE

Cylinders	4, in line
Cooling system	Water; pump, fan and thermostat
Bore	84mm (3·31in.)
Stroke	71mm (2·40in.)
Displacement	1,573 c.c. (95·98 cu. in.)
Valve gear	Single overhead camshaft
Compression ratio	8·6-to-1: Min. octane requirement 97RM
Carburettor	One Solex 38 PDSI downdraught
Fuel pump	Solex mechanical
Oil filter	Fram full flow
Max. power	85 bhp (net) at 5,700 rpm
Max. torque	91 lb. ft. (net) at 3,000 rpm

TRANSMISSION

Clutch	Fichtel and Sachs single dry plate, 8·0in. dia.
Gearbox	4-speed, all synchromesh
Gear ratios	Top 1·0; Third 1·39; Second 2·05; First 3·84; Reverse 4·18
Final drive	Hypoid bevel, 4·11-to-1

CHASSIS and BODY

Construction	Integral with steel body

SUSPENSION

Front	Independent, coil springs, MacPherson struts, wishbones telescopic dampers
Rear	Independent, coil springs, semi-trailing arms, telescopic dampers

STEERING

Type	ZF-Gemmer worm and roller
Wheel dia.	15·5in.

BRAKES

Make and type	ATE disc front; drum rear
Servo	ATE vacuum
Dimensions	F, 9·45in. dia.; R, 7·87in. dia. 1·57in. wide shoes
Swept area	F, 210·3 sq. in.; R, 156·7 sq. in. Total 367·0 sq. in. (326 sq. in./ton laden)

WHEELS

Type	Pressed steel disc, 4·5in. wide rim
Tyres—make	Dunlop
—type	SP41 radial-ply tubeless
—size	165SR-13

EQUIPMENT

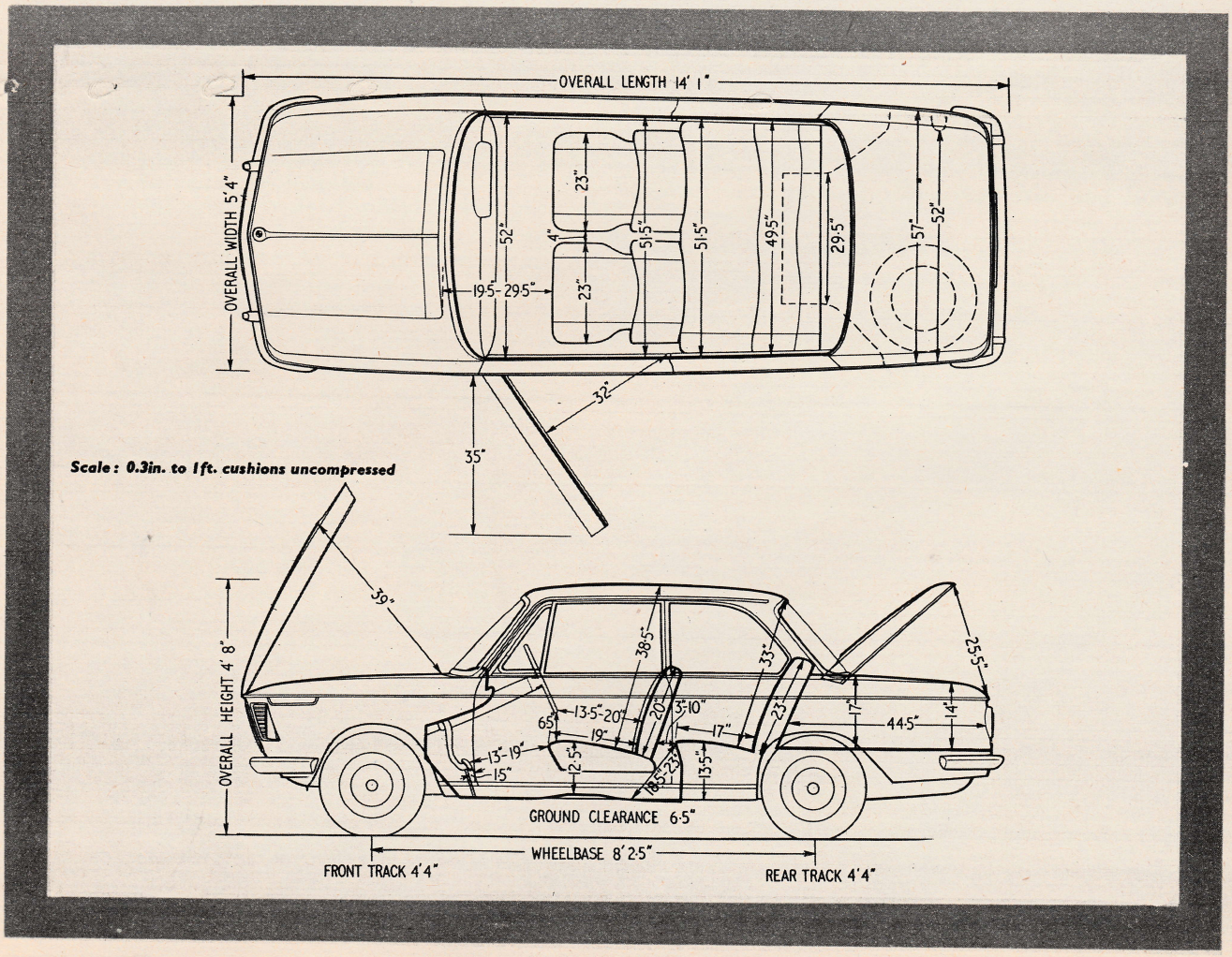
Battery	12-volt 38-amp. hr.
Alternator	Bosch alternator 42-amp.
Headlamps	Hella sealed filament 90/100-watt (total)
Reversing lamp	Standard
Electric fuses	6
Screen wipers	Two-speed, self-parking
Screen washer	Standard, electric pump
Interior heater	Standard, air-blending
Heated backlight	Extra
Safety belts	Extra, anchorages built-in
Interior trim	Skai seats, pvc headlining
Floor covering	Carpet
Starting handle	No provision
Jack (type)	Screw pillar
Jacking points	2 each side under sills
Windscreen	Toughened
Underbody protection	Rubber-based compound under wheel arches, wax-sprayed elsewhere

MAINTENANCE

Fuel tank	10·2 Imp. gallons (no reserve) (46 litres)
Cooling system	12 pints (including heater) (6·8 litres)
Engine sump	8 pints (4·6 litres) SAE 10W/30. Change oil every 4,000 miles; Change filter element every 4,000 miles
Gearbox	2 pints SAE 80. Change oil every 8,000 miles
Final drive	2 pints SAE90. Change oil every 16,000 miles
Grease	2 points every 4,000 miles
Tyre pressures	F, 24; R, 24 p.s.i. (normal driving). F, 26; R, 26 p.s.i. (fast driving). F, 24; R, 27 p.s.i. (full load)

PERFORMANCE DATA

Top gear m.p.h. per 1,000 r.p.m.	16·3
Mean piston speed at max power	2,653 ft/min
B.h.p. per ton laden	75·5



hey Fog! meet your Waterloo

For generations, motorists have fought a losing battle against fog. Some drivers favour sidelamps or low powered foglamps. But these scarcely penetrate thick fog.

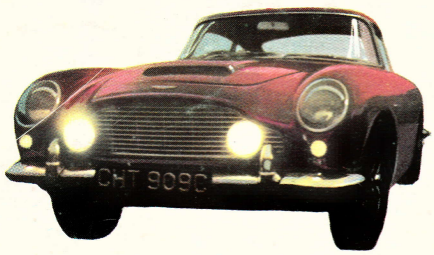
Others favour bright lamps. But they light up the fog instead of the road.

The remainder favour the train.

What you really need in fog is a powerful, piercing beam, carefully controlled to prevent stray shafts of light from bouncing back into your eyes. With a lamp like that, you could really cut fog down to size.
Well, now there is a lamp like that.

Lucas' top lighting boffins have been working on it for years. Now they've perfected it; the world's first sealed-beam quartz-halogen foglamp.

They call it the Silver Sabre.



This is a totally new kind of foglamp. It's broad, flat-topped beam is so powerful it can slash a path through the worst pea-souper. That's the quartz-halogen bit.

And the beam is controlled so critically, back-glare due to stray light rays is cut to an absolute minimum.

That's because the beam is sealed, for life.

The Silver Sabre is not cheap. It's built to win battles, not just admiring glances (though it does that, too). At £6.10s, it ought to be the most effective fog beater in the world. It is.

Your local garage man will tell you lots more about the Silver Sabre. And about the matching Silver Lance driving lamp. You may find him a shade smug. People who hold the ultimate weapon often are.

Cut fog down to size with a Lucas Silver Sabre-world's first sealed-beam quartz-halogen foglamp

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