

BENTLEY CONTINENTAL ROAD TEST



Long graceful lines and a special low radiator shell, without the traditional filler cap and emblem, identify the Continental Bentley saloon. There are twin Marchal head lamps with amber bulbs, and auxiliary lamps, while the side lamps in the wings act also as direction indicators.

BENTLEY CONTINENTAL SPORTS SALOON

THE Continental sports saloon is a new stage in the evolution of the post-war Bentley. The first major change since the introduction of the post-war chassis was made last year, when an increase in the bore brought the engine swept volume up to 4½ litres. *The Autocar* Road Test of December 7, 1951, recorded that it enabled the standard four-door steel panelled saloon to reach a maximum speed of 100 m.p.h., accompanied by impressive acceleration, without the slightest sacrifice of the smoothness or silence for which the *marque* is renowned. The next step was to raise the compression to profit by the better fuel now available in overseas markets, and to fit lighter bodywork with lower drag characteristics, which would allow the great potentialities of this chassis to be more fully exploited. The reduction in drag permitted a higher axle ratio to be employed, and a close ratio gear box was installed to give the best acceleration. The resulting car, known as the Bentley Continental sports saloon, has been subjected to rigorous testing on the Continent for about a year, and *The Autocar* has recently been able to give it an extensive trial in Britain and on the Continent. It brings Bentley back to the forefront of the world's fastest cars, and its tremendous performance makes this one of the outstanding in the long series of Road Tests. The car is being produced in limited numbers and is reserved for export only. Its price is high, the sterling figure being £4,890 without purchase tax, which means that by the time the foreign buyer has paid delivery charges and local taxes it will probably cost him between six and seven thousand pounds. The Continental Bentley may, therefore, be the most expensive production car in the world, but it also makes a strong claim to be the fastest four-five-seater

DATA

PRICE (basic), with two-door saloon body, £4,890. Not available in Great Britain. Extras: Radio standard if requested. Heater standard.

ENGINE: Capacity: 4,566 c.c. (278.633 cu in).
Number of cylinders: 6.
Bore and stroke: 92 × 114.3 mm (3.625 × 4.5 in).
Valve gear: Overhead inlet with push rods, side exhaust.
Compression ratio: 7 to 1.
B.H.P.: Not quoted.
Torque: Not quoted.
M.P.H. per 1,000 r.p.m. on top gear, 27.

WEIGHT (with 5 gals fuel), 33½ cwt (3,739 lb).
Weight distribution (per cent) 50.1 F; 49.9 R.
Laden as tested: 36.8 cwt (4,120 lb).
Lb per c.c. (laden): 0.9

BRAKES: Type: F, leading and trailing shoe; R, leading and trailing shoe.
Method of operation: F Hydraulic. R Mechanical. Mechanical servo.
Drum dimensions: F, 12½ in diameter, 2½ in wide. R, 12½ in diameter, 2½ in wide.
Lining area: F, 186 sq in. R, 186 sq in (202 sq in per ton laden).

TYRES: 6.50—16 in.
Pressures (lb per sq in): 30 F; 35 R (normal). 35 F; 40 R (for fast driving).

TANK CAPACITY: 18 Imperial gallons.
Oil sump, 16 pints.
Cooling system, 32 pints.

TURNING CIRCLE: 43ft 0 in (L and R).
Steering wheel turns (lock to lock): 31.

DIMENSIONS: Wheelbase 10ft 0 in.
Track: 4ft 8½ in (F); 4ft 10½ in (R).
Length (overall): 17ft 2½ in.
Height: 5ft 3 in.
Width: 5ft 11½ in.
Ground clearance: 7 in.
Frontal area: 23.5 sq ft (approx).

ELECTRICAL SYSTEM: 12-volt. 54 ampère-hour battery.
Head lights: Single or double dip, as required; wattage as required.

SUSPENSION: Front, Coil springs and wishbones with anti-roll bar.
Rear, Half-elliptics.

PERFORMANCE

ACCELERATION: from constant speeds.					TRACTIVE RESISTANCE: 34 lb per ton at 10 M.P.H.	
Speed, gear ratios and time in sec.					TRACTIVE EFFORT:	
M.P.H.	3,077 to 1	3,740 to 1	4,750 to 1	8,230 to 1	Pull (lb per ton)	Equivalent Gradient
10—30	8.2	6.9	5.3	3.4	Top ..	287 1 in 7.8
20—40	7.4	6.0	4.8	3.5	Third ..	352 1 in 6.2
30—50	7.4	6.1	5.1	—	Second ..	442 1 in 5.0
40—60	7.4	6.8	5.7	—	BRAKES:	
50—70	8.4	7.1	6.1	—	Efficiency Pedal Pressure (lb)	
60—80	9.6	8.4	—	—	97.0 per cent	116
70—90	12.1	10.8	—	—	91.5 per cent	100
80—100	14.6	14.4	—	—	58.7 per cent	50

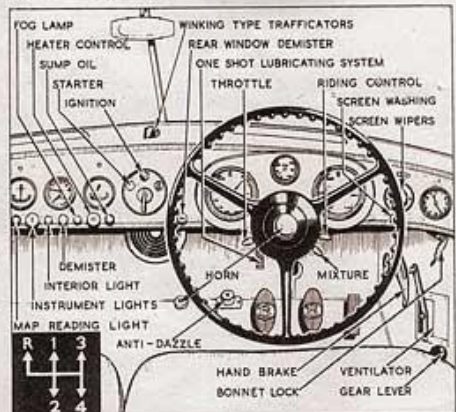
From rest through gears to:			FUEL CONSUMPTION:	
M.P.H.	sec		19.4 m.p.g. overall for 438 miles. (14.6 litres per 100 km).	
30	4.4		Approximate normal range 16-21 m.p.g. (17.7-13.5 litres per 100 km).	
50	10.5		Fuel: Belgian Super for performance tests; 50-50 Pool and 80 octane for road running.	
60	13.5		WEATHER: Dry, warm, sunny.	
70	16.3		Air temperature 95-85 degrees F.	
80	22.2		Acceleration figures are the means of several runs in opposite directions.	
90	28.1		Tractive effort and resistance obtained by Tapley meter.	
100	36.0		Model described in <i>The Autocar</i> of February 29, 1952.	

SPEED ON GEARS:					
	M.P.H. (normal and max.)*	K.P.H. (normal and max.)			
Top	(mean) 115.4	185.7			
	(best) 116.9	188.1			
3rd	80—100	129—161			
2nd	60—77	97—124			
1st	30—44	48—71			

* At 4,300 r.p.m. limit on intermediate gears.

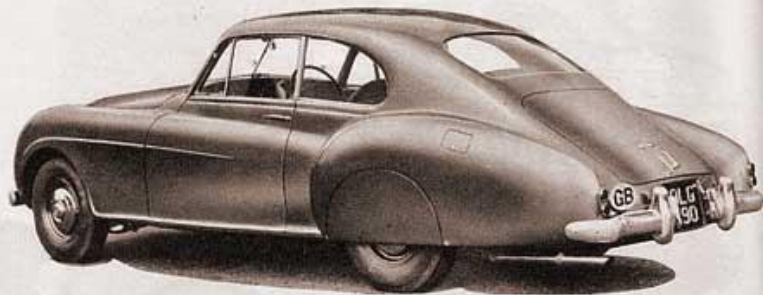
SPEEDOMETER CORRECTION: M.P.H.

Car speedometer	10	20	30	40	50	60	70	80	90	100
True speed	11.6	21.2	30.6	40.7	51.3	61.5	71.3	81.5	92.0	101.5





The special radiator shell is smoothly faired into the bonnet and the concave curves of the wings, to give a new and modern appearance to the Continental Bentley. There is a curved wind-screen supported in very slim pillars.



The graceful tail sweeps down between rear wings which terminate in twin stop and tail lamps, the stop lamps being also used as flashing direction indicators. The bumpers are in heavy-gauge light alloy and the exhaust pipe is chromium plated. Twin reversing lamps are grouped alongside the central number plate.

saloon in the world. Circumstances made it necessary to carry out the maximum speed tests on brand new tyres, which increase rolling resistance, and in the middle of a hot day, with an air temperature of 95 deg F, which reduces volumetric efficiency. Even so, a mean maximum speed of over 115 m.p.h. was recorded. One run, with driver only, was timed at 120 m.p.h., and it seems probable that in more favourable circumstances this speed might be more regularly reached. The acceleration from rest to 100 m.p.h. (36.0 sec) has not been approached by any other saloon car in *The Autocar's* experience and has been equalled by very few open sports cars. Acceleration in the gears is so well maintained that the usual tabulations have had to be extended to 100 m.p.h. for both top and third gears.

However, the figures, impressive though they are, do not tell the whole story. Whatever memorable motoring experiences one may have had, this was something different. It showed what can be achieved by the single-minded pursuit of perfection, not in seeking always to incorporate the latest technical innovation, but by ceaseless, resourceful and painstaking improvement of every minute detail on well-tryed basic principles. Such a car is bound to be costly, and the British, who make it, cannot own it; but it goes abroad as proof that a nation where the creators are constantly subjected to the debasement of their own living standards can still keep alive the ideal of perfection for others to enjoy.

One might think that such tremendous performance could be used only on rare occasions, but the controls are so superbly responsive that the experienced driver quickly finds himself making full use of its potentialities, to over 100 m.p.h., then effacing the speed smoothly and quickly with a touch on the mechanical servo brakes. It is an experience

that lulls the critical faculty and defies one to analyse the car step by step, but the effort must be made.

For the driver, the forward view through the wide, curved windscreen, with its very slim pillars, is excellent, the seating position is good for high-speed driving and the controls are well arranged. When the engine starts, there is a rasping noise, discreet and distant, but sufficient to indicate that this is something new in Bentleys, and there is a momentary snarl from the exhaust at the beginning of acceleration in each gear. These are absolutely the only aural concessions to high performance. Engine and gear box are slightly audible in first gear, but otherwise, throughout the performance range, there is only that uncanny silence which indicates long and careful attention to every detail of design and construction.

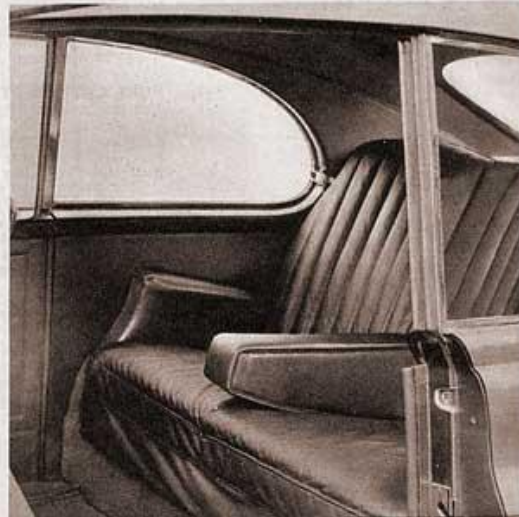
With the high gearing employed, third is the natural ratio to employ for mountainous country or winding roads. It can be kept in use for miles on end, and for smoothness or silence is quite indistinguishable from top. The maximum available on this gear is 100 m.p.h. without trespassing by more than the thickness of the needle into the red zone on the rev counter, so that it caters for all normal needs. Anyone not familiar with the car has to feel the gear lever occasionally to remind himself which gear he is using. If there is any mechanical noise at speeds near the maximum, it is completely lost in the rush of the wind.

There is no need to specify a cruising speed; progress seems as smooth, easy and effortless at 100 m.p.h. as at 50. Nor is there any imperative need for frequent gear changing. It is possible to make a smooth, easy start on top gear and to accelerate relentlessly away to maximum speed without using the gear box at all. This is hardly to be recommended as normal practice, however, especially as gear changing is such

The massive fascia in polished walnut is almost entirely occupied by instrument dials and switches. Below are seen one of the heater elements, the pendant pedal for the one-shot lubrication and a fresh-air duct by the throttle.



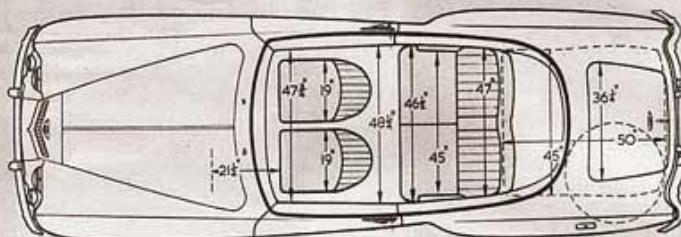
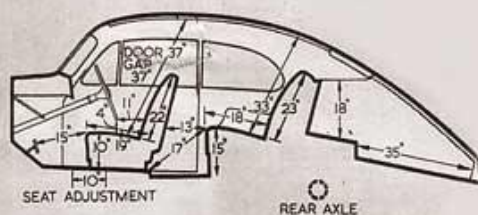
There is a folding central arm rest at the rear, and below the seat is a grille supplying fresh air from the ventilation system. The generous-sized rear quarter lights can be hinged outwards to act as air extractors.





The spare wheel, which is carried on the floor of the luggage locker, has a special cover to prevent damage to the luggage. Jack and tools are carried in a special compartment below the floor of the locker.

WHEELBASE 10' 0"
 FRONT TRACK 4' 8 3/4"
 REAR TRACK 4' 10 1/2"
 OVERALL LENGTH 17' 2 1/2"
 OVERALL WIDTH 5' 11 7/8"
 OVERALL HEIGHT 5' 3"



a pleasure for the Bentley owner with any appreciation of mechanical perfection.

Hill-climbing is quite extraordinary, and main road hills can be climbed on top gear at speeds limited only by visibility and traffic conditions. The test figures were taken on Belgian "super" fuel of approximately 80 octane. On British Pool some pinking was evident, but the car is not intended for such a dreary diet.

The brakes, aided by the special Bentley servo motor which is driven from the gear box, require little comment. There are no better brakes on any car sold today, and they allow the Bentley's great performance to be enjoyed with complete confidence. A light pressure reduces speed smoothly and swiftly, and a heavier pressure produces tremendous power for safe emergency stopping; 100 per cent efficiency was several times recorded on the meter during the tests.

Variable Ride

The ride control on the steering column, which adjusts the setting of the rear hydraulic dampers, gives all the softness required for city driving and a sensation of floating gently over the worst bumps, and the harder setting gives adequate damping for fast travel without sacrificing comfort. The steering has adequate self-centring action, and there is fairly pronounced understeer, which is reflected in excellent directional stability. Rather a strong effort is required on the wheel to hold the car into sharp bends, but control is light on ordinary roads and no undue effort is required when parking. On rough roads the more severe bumps do transmit some reaction to the steering wheel, and a firm hand on the wheel is desirable when driving fast on really rough surfaces. It should not be inferred, however, that the car is tiring to drive.

To drive this car is a wonderful motoring experience, but certain questions inevitably come to mind regarding its uses. It is described by its manufacturers as a sports saloon, but the purchaser is required to give an undertaking that he will not enter it in competitive events, so the sports title goes by default. One turns next to the adjective "Continental," which conjures up visions of long, fast runs to the Riviera. But travel implies luggage, and the locker on this model, while perhaps adequate for a weekend, could not carry the luggage of four persons for any considerable period.

A few chassis only will be delivered to foreign coach-builders, and buyers who want more luggage space, and are perhaps willing to sacrifice some of the present very ample passenger space, should therefore be able to obtain what they need. The weight of the coachwork must, however, be limited to 750 lb. This is the weight of the present H. J. Mulliner saloon, and it brings the weight of the complete car to 240 lb below that of the present Mark VI standard saloon.

For the Mulliner body it must be said that it is elegant, modern, and comfortable; moreover, it represents a com-

Measurements in these 1/4 in to 1 ft scale body diagrams are taken with the driving seat in the central position of fore and aft adjustment and with the seat cushions uncompressed.

bination of lightness and rigidity which may not be easy to emulate. All panelling is in light alloy; the seats have tubular frames; there are aluminium frames for the windows; and even the bumpers are made of light alloy. Overall height has been reduced by one inch, it is understood, as compared with this prototype. Radio is available without extra cost, for those who require it, and right- or left-hand steering.

The front seat back rests are adjustable for angle, and both front wings are easily seen from the driving seat. The big steering wheel is admirably placed and has a horn button at the centre, but it is not necessary to remove a hand from the wheel, as there is another button on the floor which can be operated by the left foot. Facia equipment includes speedometer, rev counter, switch unit with master key, fuel and engine oil level gauge, oil and water thermometers, oil pressure gauge, ammeter and electric clock. The instrument lighting is rheostat controlled. There are an interior light and map light. The twin electric screen wipers have a two-speed control, and a windscreen spray is standard. At the centre of the steering wheel are the hand throttle, starting mixture control and ride control. There is a good rearward view in spite of the pronounced slope of the rear window.

The rear seats are of generous size, with a folding central arm rest and large fixed arm rests at the sides. Leg room is ample, and head room is not unduly restricted by the streamlined curve of the roof, as the head lining is recessed locally above the rear seat. Among the standard equipment is an elaborate heating and ventilating system which makes provision for demisting both the windscreen and the rear window.

This Bentley is a modern magic carpet which annihilates great distances and delivers the occupants well-nigh as fresh as when they started. It is a car Britain may well be proud of, and it is sure to add new lustre to the name it bears.

One side of the centrally hinged bonnet is lifted to reveal the distributor with rev counter drive, the accessible plugs and oil filler, twin ignition coils, and the fan supplying the windscreen demister. The big air cleaner and silencer feeds two horizontal S.U. carburettors on a water-jacketed manifold.

