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## THE SECRET OF SUCCESSFUL RUNNING

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Before a Bentley car is sold, it is very carefully tested and adjusted by experts. It will run best if no attempt is made to interfere unnecessarily with adjustments.

An owner would do well to instruct his driver as follows:—

Lubricate effectively, in strict accordance with the advice given in this book, and do not neglect *any* part.

Inspect all parts regularly, but take care not to alter any adjustments unless really necessary.

## SERVICE FACILITIES FOR BENTLEY CARS

Our interest in your Bentley car does not cease when you take delivery of the car. It is our ambition that every purchaser of a Bentley car shall continue to be more than satisfied.

With this end in view, the "Special Retailer", through whom the car was purchased, has established a properly equipped Service Station, staffed by men who have been specially trained in servicing Bentley cars.

In addition, on the staff of Bentley Motors (1931) Ltd., there are experts whose sole duty it is to maintain contact with the "Special Retailers", and they are available, at all times, to be called in for consultation on any matters affecting your car.

If, therefore, you require any assistance, we ask that you should immediately contact the "Special Retailer", who will be only too pleased to place his facilities at your disposal. If necessary he will call in for consultation our expert in that area. It is earnestly hoped that this arrangement will prove of mutual benefit, as we shall thus be kept in constant touch with our Customers, who may be spared the trouble of a long journey to one of our Company's Service Stations.

In the event of it being more convenient to call on us direct for assistance, our main Service Station at Hythe Road, Willesden, London N.W.10, and the one at our factory at Crewe, will be ready at all times to help. (See maps at end of Handbook.)

## LEADING PARTICULARS OF CHASSIS

### **Engine.**

Six cylinders,  $3\frac{5}{8}$ " (92 mm.) bore,  $4\frac{1}{2}$ " (114 mm.) stroke, 4,566 c.c., cubic capacity, 31.54 h.p. R.A.C. rating.

Mono-bloc casting, detachable cylinder head, overhead inlet valves, side exhaust valves.

Aluminium alloy pistons.

### **Engine Lubrication.**

Pressure feed to all crankshaft and connecting rod bearings.

Relief valve, providing positive low-pressure supply to the valve rocker shaft, from which the inlet valves, push rods and tappets are lubricated.

Two-gallon capacity sump.

### **Carburetter.**

Two special type S.U.

Air intake silencer and air cleaner.

### **Fuel System.**

Eighteen-gallon tank at rear of chassis. Supply by electric pumps. Fuel level gauge and warning light on instrument board. The warning light indicates when fuel is low.

### **Cooling System.**

By centrifugal pump circulation and fan. Thermostatically controlled. Coolant temperature thermometer on instrument board.

### **Electrical Equipment.**

Twelve-volt system with automatic regulation of dynamo output. Starter motor with reduction gear and pinion providing gentle engagement. Battery of 55 ampere-hour capacity.



**Gearbox.**

Four forward speeds and reverse. Fully automatic with over-riding hand and "kick-down" change speed control.

**Gear Ratios.**

Rear Axle Ratio.	1st Speed.	2nd Speed.	3rd Speed.	4th Speed. (Direct.)	Reverse.
3.077 : 1	11.75 : 1	8.10 : 1	4.46 : 1	3.077 : 1	13.24 : 1

**Rear Axle.**

Semi-floating type. Hypoid gears with differential. Torque and brake reactions taken by road springs.

**Rear Suspension.**

Semi-elliptic springs in combination with controllable hydraulic shock dampers.

**Front Suspension.**

Independent; open helical springs in combination with hydraulic shock dampers.

**Steering.**

Cam-and-roller type.

**Brakes.**

Hydraulic operation on front wheels, mechanical operation on rear wheels assisted by mechanically driven servo motor.

Hand brake operates on rear wheels.

**Chassis Lubrication.**

Centralised chassis lubrication system supplied by foot-operated pump and reservoir on dashboard.

**Road Wheels.**

Detachable steel wheels, fitted with 6.50" by 16" India "Speed Special" tyres.

### Dimensions.

Total length overall, including bumpers ...	...	206 $\frac{1}{2}$ "	—	17'	2 $\frac{1}{2}$ "
Width of car ...	...	71 $\frac{1}{2}$ "	—	5'	11 $\frac{1}{2}$ "
Wheelbase ...	...	120"	—	10'	0"
Track—Front ...	...	56 $\frac{1}{2}$ "	—	4'	8 $\frac{1}{2}$ "
Rear ...	...	58 $\frac{1}{2}$ "	—	4'	10 $\frac{1}{2}$ "
Turning circle, over front wings ...	...	...	...	43'	...
Weight (dry) ...	...	...	...	...	33 cwt. (approx.)

### Chassis and Engine Numbers.

The chassis number will be found on the identification plate fixed to the front of the dashboard under the bonnet, and also stamped on the left-hand side frame member just in front of the dashboard, under the bonnet.

The engine number is stamped either on the front left-hand crankcase lifting lug, or on a boss on the crankcase above the front left-hand lifting lug.



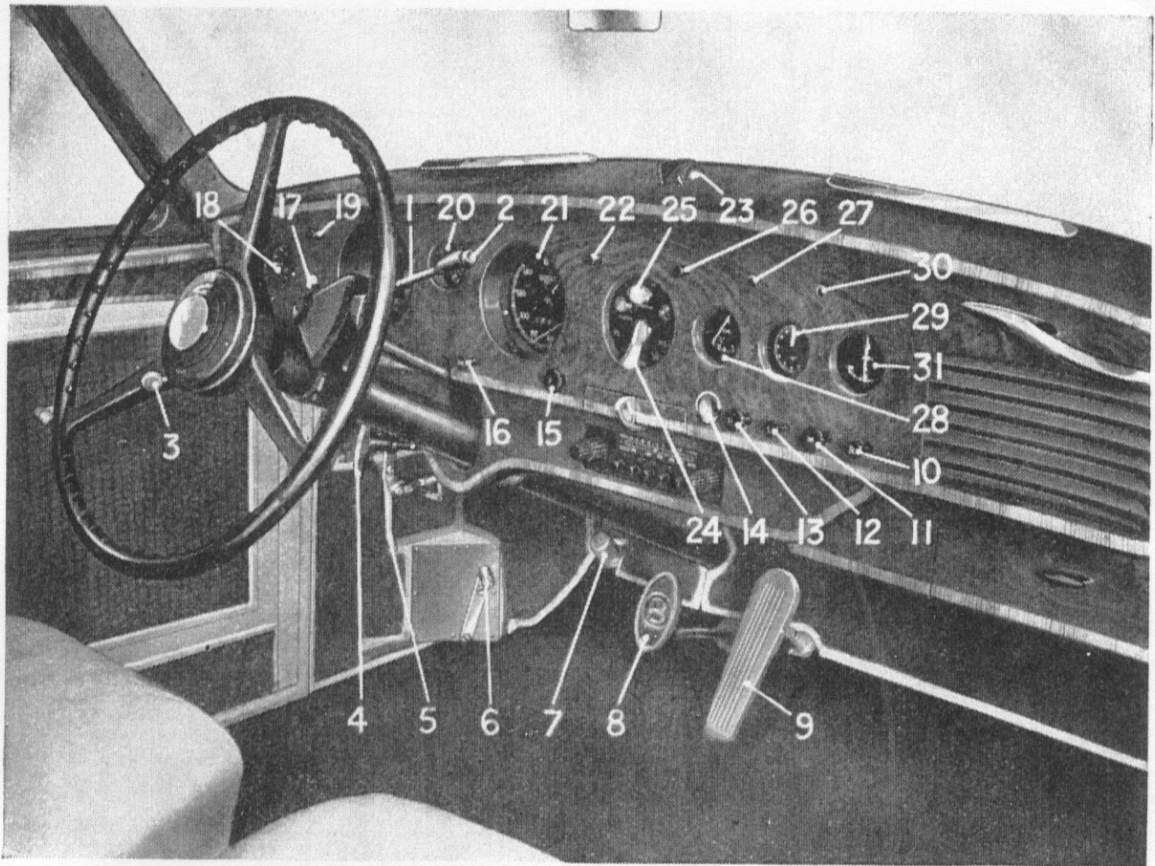


Fig. 1. —DRIVER'S CONTROLS.

1. Gear range lever.
2. Lock button.
3. Ride control.
4. Hand brake.
5. Bonnet release.
6. Fresh air duct.
7. Dip-switch.
8. Brake pedal.
9. Accelerator pedal.
10. Roof light.
11. Demister motor.
12. Fog lamp.
13. Heater switch. (Anti-clockwise is off. Heat is full on at initial movement of knob and diminishes with further turning.)
14. Cigar lighter. (Push in, lighter clicks out when ready for use.)
15. Instrument lights.
16. Rear window demister.
17. Windscreen washers. (Press-release for each squirt.)
18. Oil temperature thermometer.
19. Charging plug.
20. Pressure gauges.
21. Speedometer.
22. Map lamp switch. (Push on—push off.)
23. Direction indicator switch.
24. Master switch (controls all accessories except inspection and roof lamps).
25. Ignition switch. (Can remain at ON position, use master switch.)
26. Fuel/oil level switch. (Press button, read on fuel gauge dial.)
27. Fuel warning light.
28. Fuel/oil level indicator.
29. Clock.
30. Direction indicator light.
31. Ammeter.

## CHAPTER I

### Starting the Engine and Driving the Car

*Starting the Engine—Use of Starting Handle—Automatic Gear Changing—Tow Starting—Fuel Feed—Fuel Gauge—Chassis Lubrication—Controllable Shock Dampers—Battery Charging—Lighting Control and Switch—Accessories—Radiator Thermostat and Thermometer—Coolant Level in Radiator—Frost—Snow Tyres—Fitting of Snow Chains.*

#### **Starting the Engine.**

Switch on the ignition by turning the master and ignition switches to ON. The master switch controls all the electrical system, excepting the electric clock, inspection and roof lamps, the latter being available for convenience on entering the car in the dark.

The action of switching on the ignition also switches on the electric fuel pumps, and a few pulsations of the latter may be heard.

A small red warning light on the instrument board will be illuminated when the ignition is switched on, but will be extinguished when the engine speed is sufficient to cause the cut-out contacts to close.

Ensure that the gear lever on the steering column is in neutral, quadrant gear position "N", as it is only in this position that the starter switch is operable.

For starting the car in all temperatures above freezing point, *first depress the accelerator pedal slightly and then allow it to return to its normal position.* This permits the throttle stop on the carburetter to re-position itself correctly according to engine temperature.

For starting the car under very cold conditions in temperatures of below freezing point, it will be necessary to depress the accelerator pedal slightly, about a quarter of its full travel, and hold it depressed while the starter button is being operated. Immediately the engine fires, the accelerator pedal should be released.

*Depress the starter button firmly, an appreciable pause must be made between the operations of switching on the ignition and depressing the starter button, especially when making a start from cold.* This is necessary in order to give the pumps time to fill the float chambers of the carburetters.