

	PAGE
Starter Motor Bearings	93
Starter Motor Brushes	93
Starter Motor Connections	94
Starter Motor, Failure of Operation of	97
Starter Motor Lubrication	31, 93
Starter Motor Switch	94
Starter Motor, Use of	94
Starting, Control Settings for	21
Starting the Engine	21
Steering Box, Oiling	28, 30, 65
Steering Joints	67
Steering Pivots	67
Storage of Car	111
Strainer, Chassis Oil Pump	36
Suspension, Independent Front	66
Switchbox	87
Switch, Ignition	21, 24, 87
Switch, Starter Motor	94
Temperature of Coolant	25, 78
Thermometer, Coolant Temperature	25, 79
Thermostat, Radiator	25, 78
Throttle Control	22, 49
Tools	110
Tyres, Sizes of	18, 70
Tyres, Removal and Fitting	72
Upholstery and Carpets	108
Universal Joints	31, 62
Valves, Oil Relief	39
Valve Rockers... ..	40
Valve Rocker Adjustment	31
Valve Tappets... ..	40
Wheels, Balancing Road	73
Wheel, Changing a	71
Wheel Hubs	69
Wheel Nuts	69
Wheel, Removing a	69
Windscreen Washing Equipment	105

INDEX OF ILLUSTRATIONS

	FIG. No.	PAGE No.
Adjustment, Clutch Pedal	19	60
Adjusting the Inlet Valve Rocker Clearances...	3	32
Air Collector—De-mister	44	96
Axle Casing, Rear	22	62
Box, Fuse, Output Regulator and Cut-out	38	86
Brakes, Adjustment of Front	16	56
Brakes, Adjustment of Rear	17	56
Braking System, Diagram of	15	52
Carburetters, in Position on Engine	13	46
Carburetter, Exploded View	14	48
Chassis Lubrication System, Diagram of	4	34
Chassis Oil Pump	5	35
Contact Breaker and Distributor	39	91
Contact Breaker, Interior View	40	92
Controls, Driver's	1	20
Controls, Radio	50	102
Crankcase Drain Plug	10	40
Damper, Rear Hydraulic Shock	24	68
De-mister and De-froster	43	96
Diagram of Braking System	15	52
Diagram, Electrical Wiring	36	83
Door Hinges	53	108
Drain Tap, Cylinder Jacket	34	80
Dynamo	37	84
Engine Lubrication System	6	37
Engine Oil Filler Cap and Dipstick	7	37
Engine Oil, Relief Valves... ..	9	39
Entered Stud at Top	30	72
Fan Belt Adjustment	33	78
Filter, Rear	12	45
Fitting Jack to Slide	25	70
Front Brake Adjustment	16	56
Front Hub and Wheel, Section of	32	74
Fuel Pumps... ..	11	43
Fuse Box Output Regulator and Cut-out	38	86
Gearbox	20	61
Gear Lever and Gate	2	23

	FIG. No.	PAGE No
Guide to Crewe Service Station	59	115
Guide to Main Service Station	58	114
Headlamp	45	98
Headlamp, Changing the Bulb	47	99
Headlamp, with Rim Removed	46	98
Heater, Car, Connection and Isolating Tap	35	81
Hydraulic Shock Damper, Front	23	66
Hydraulic Shock Damper, Rear	24	68
Hydraulic Master Cylinder and Reservoir	18	57
Ignition Coils	41	93
Lubrication System, Chassis	4	34
Lubrication System, Engine	6	37
Motor, Starter	42	94
Mounting Rear Wheel	27	71
Oil Filter	8	38
Oil Relief Valves, Engine	9	39
Operating Wheel Jack	26	70
Operating Windscreen Washers	51	105
Positioning Rear Wheel	28	71
Propeller Shaft	21	61
Pump, Chassis Oil	5	35
Radiomobile Controls	50	102
Rear Brake Adjustment	17	56
Rear Hub and Wheel, Section of	32a	75
Rockers, Adjusting Valve	3	32
Rotating Front Wheel	29	72
Shock Damper, Front Hydraulic	23	66
Shock Damper, Rear Hydraulic	24	68
Side Lamp	48	101
Side Lamp	49	101
Spare Wheel Compartment	55	109
Starter Motor	42	94
Tools, Spare Wheel Compartment	57	110
Trap, Tyre Inflation	56	110
Upholstery, Interior	54	108
Wheel Balance Weights	31	73
Windscreen Washer, Reservoir and Pump	52	106
Wiring Diagram, Electrical	36	83

THE SECRET OF SUCCESSFUL RUNNING

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 m/m.) bore, $4\frac{1}{2}$ " (114 m/m.) stroke, 4,566 c.c., cubic capacity.

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, with which is incorporated a special air cleaner element.

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. Synchromesh on second, third and fourth speeds. Right-hand control lever.

Gear Ratios.

Rear Axle Ratio.	1st Speed.	2nd Speed.	3rd Speed.	4th Speed. (Direct.)	Reverse.
3.73 : 1	11.11 : 1	7.52 : 1	5.0 : 1	3.73 : 1	11.76 : 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 Super Silent Rayon tyres.

Dimensions.

Total length overall, including bumpers ...	...	191 $\frac{1}{2}$ "	—	15'	11 $\frac{1}{2}$ "
Width of car ...	... ..	69"	—	5'	9"
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 ...	... ..			46'	

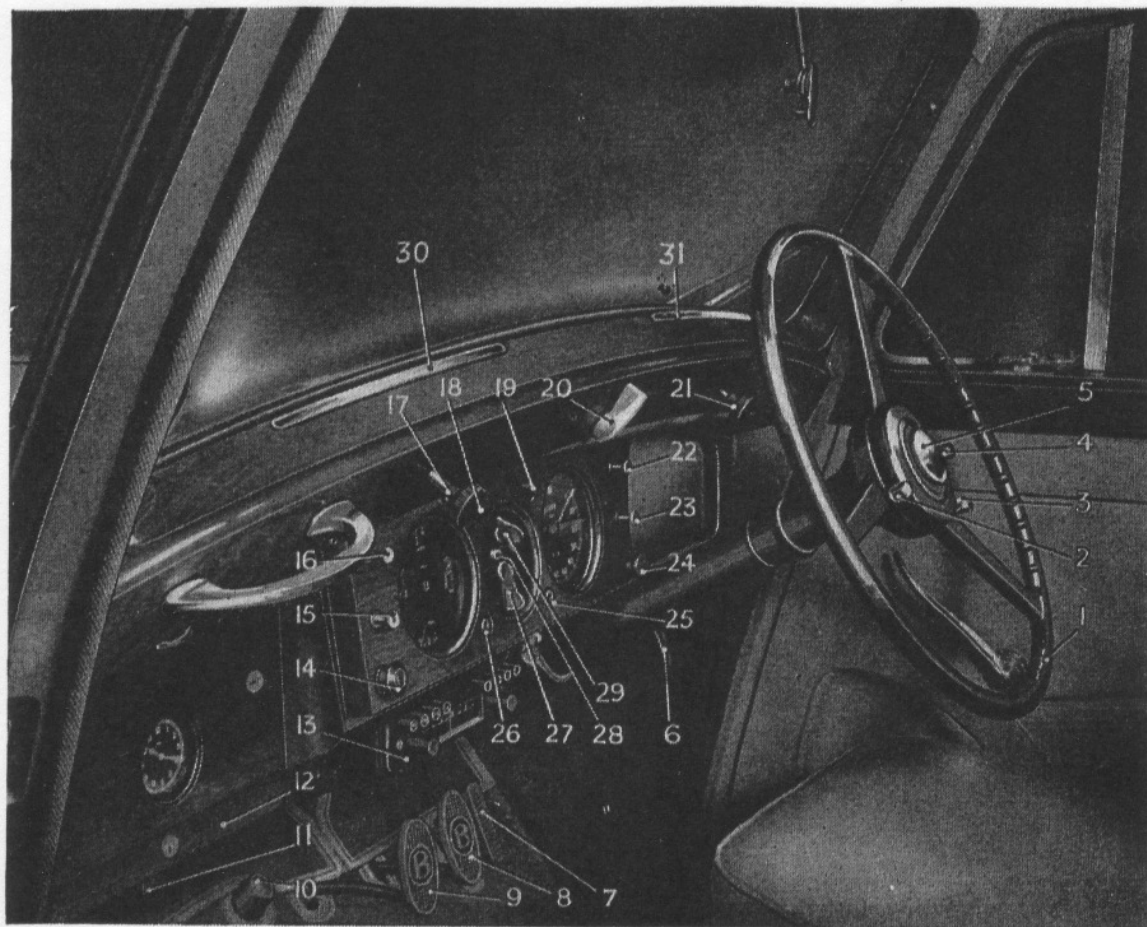


FIG. 1.—GENERAL VIEW OF DRIVER'S CONTROLS.

- | | |
|-------------------------------|------------------------------------|
| 1. Steering wheel. | 16. Windscreen wiper switch. |
| 2. Throttle control. | 17. Windscreen wiper parking knob. |
| 3. Mixture control. | 18. Fuel/oil level switch. |
| 4. Ride control. | 19. Map lamp switch. |
| 5. Horn push. | 20. Trafficator switch. |
| 6. Hand brake. | 21. Windscreen wiper parking knob. |
| 7. Accelerator pedal. | 22. Fog lamp switch. |
| 8. Brake pedal. | 23. De-mister switch. |
| 9. Clutch pedal. | 24. Car heater rheostat. |
| 10. Dip switch. | 25. Ignition warning |
| 11. Chassis lubrication pump. | 26. Fuel warning light. |
| 12. Small tool drawer. | 27. Master switch. |
| 13. Radio. | 28. Starter motor switch. |
| 14. Cigar lighter | 29. Ignition switch. |
| 15. Instrument light switch. | 30. Air vent cover. |
| | 31. Air vent cover. |

CHAPTER I

Starting the Engine and Driving the Car

Starting the Engine—Throttle Control—Mixture Control—Ignition Control—Fuel Feed—Fuel Gauge—Maximum Engine Speed—Gear Changing—Controllable Shock Dampers—Battery Charging—Lighting Control and Switch—Accessories—Radiator Thermostat and Thermometer—Coolant Level in Radiator—Frost—Fitting of Snow Chains.

Starting the Engine.

Switch on the ignition by turning master and ignition switches on the instrument board to **On**.

The master switch controls all the electrical system, excepting the inspection lamp and the roof lamp, the latter being left always available for convenience when 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 then 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 cutout contacts to close.

Set the mixture control to **"START"**; it must not be maintained in this position. As soon as the engine starts running, gradually reset the control to **"RUN"**.

With a cold engine the hand throttle control should be opened about one third of its range, but should be re-set to the closed position when the engine has warmed up.

Re-starting with a warm engine, the above is not necessary as the carburetter slow running adjustment has been set to give an adequate idling speed.

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.

When starting the engine for the first time in the day it is a good plan to form the habit of depressing the chassis oil pump pedal once at this stage. Subsequently it should be depressed once every 100 miles. If the car is to be driven only a few miles, however, half a pump-full will be sufficient at the first starting.