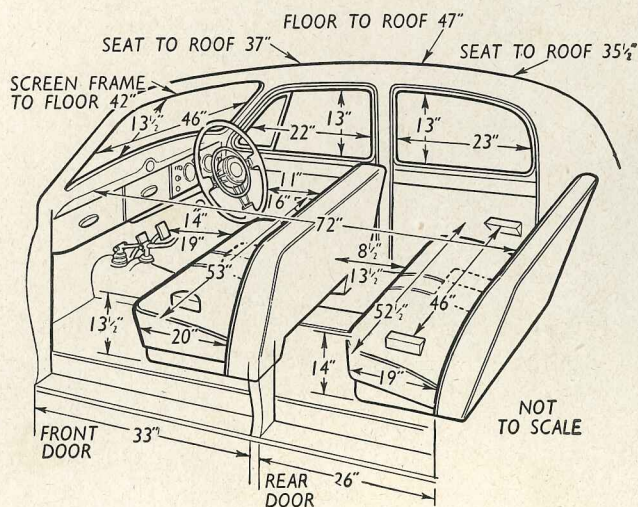
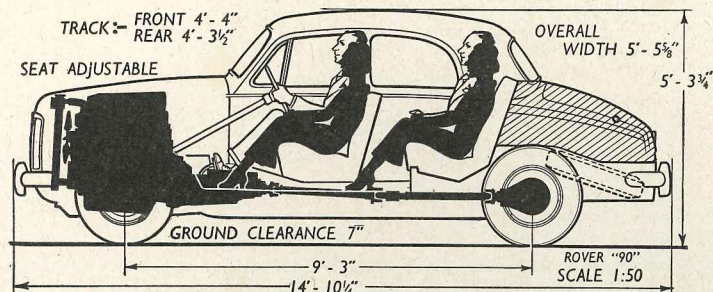


# The Motor Road Test No. 22/54 (Continental)

**Make:** Rover

**Makers:** The Rover Co., Ltd., Solihull, Birmingham

**Type:** "90" Saloon



## Test Data

**CONDITIONS.** Weather: wet, except during braking and standing-start acceleration tests; moderate cross-wind. Surface: smooth concrete (Ostend-Ghent motor road). Fuel: English and Belgian premium grades.

### INSTRUMENTS

Speedometer at 30 m.p.h. .. .. 7% fast  
 Speedometer at 60 m.p.h. .. .. 5% fast  
 Speedometer at 80 m.p.h. .. .. 5% fast  
 Distance recorder .. .. Accurate

### MAXIMUM SPEEDS

**Flying Quarter Mile**  
 Mean of four opposite runs .. 87.3 m.p.h.  
 Best time equals .. .. 90.0 m.p.h.

### Speed in Gears

Max. speed in 3rd gear .. .. 72 m.p.h.  
 Max. speed in 2nd gear .. .. 48 m.p.h.

### FUEL CONSUMPTION

31.0 m.p.g. at constant 30 m.p.h.  
 30.0 m.p.g. at constant 40 m.p.h.  
 27.0 m.p.g. at constant 50 m.p.h.  
 23.5 m.p.g. at constant 60 m.p.h.  
 20.0 m.p.g. at constant 70 m.p.h.  
 Overall consumption for 498 miles (mostly hard driving), 24.5 gallons, = 20.3 m.p.g. (For results with freewheel, see text).  
 Fuel tank capacity, 11 1/2 gallons (incl. 1 1/2 reserve).

### ACCELERATION TIMES Through Gears

0-30 m.p.h. .. .. 5.9 sec.  
 0-40 m.p.h. .. .. 9.1 sec.  
 0-50 m.p.h. .. .. 13.6 sec.  
 0-60 m.p.h. .. .. 18.9 sec.  
 0-70 m.p.h. .. .. 26.7 sec.  
 0-80 m.p.h. .. .. 39.6 sec.  
 Standing Quarter Mile .. .. 21.8 sec.

### ACCELERATION TIMES on Two Upper Ratios

	Top	3rd
10-30 m.p.h. .. ..	10.1 sec.	7.3 sec.
20-40 m.p.h. .. ..	10.4 sec.	7.4 sec.
30-50 m.p.h. .. ..	11.5 sec.	8.7 sec.
40-60 m.p.h. .. ..	12.9 sec.	10.5 sec.
50-70 m.p.h. .. ..	17.0 sec.	—
60-80 m.p.h. .. ..	28.0 sec.	—

### WEIGHT

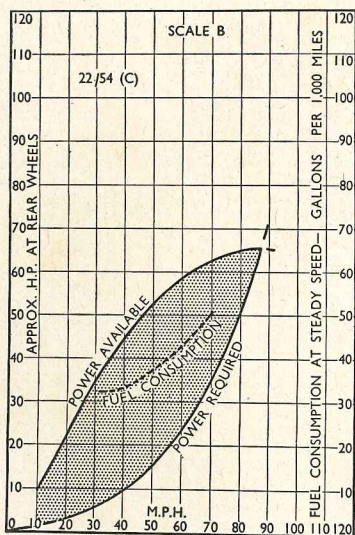
Unladen kerb weight .. .. 28 1/2 cwt.  
 Front/rear weight distribution .. 55/45  
 Weight laden as tested .. .. 32 cwt.

### HILL CLIMBING (at steady speeds)

Max. top gear speed on 1 in 20 .. .. 70 m.p.h.  
 Max. top gear speed on 1 in 15 .. .. 61 m.p.h.  
 Max. gradient on top gear .. .. 1 in 10.1 (Tapley 220 lb./ton)  
 Max. gradient on 3rd gear .. .. 1 in 7.4 (Tapley 300 lb./ton)  
 Max. gradient on 2nd gear .. .. 1 in 5.2 (Tapley 420 lb./ton)

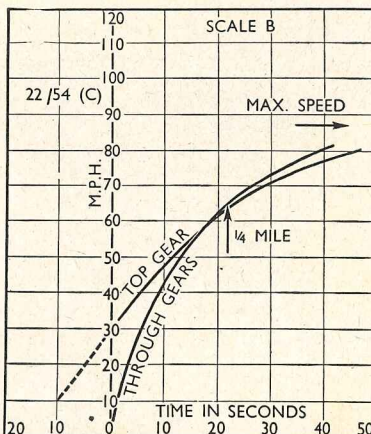
### BRAKES at 30 m.p.h.

0.90 g retardation (=33 1/2 ft. stopping distance) with 120 lb. pedal pressure  
 0.87 g retardation (=34 1/2 ft. stopping distance) with 100 lb. pedal pressure  
 0.81 g retardation (=36 1/2 ft. stopping distance) with 75 lb. pedal pressure  
 0.58 g retardation (=52 ft. stopping distance) with 50 lb. pedal pressure  
 0.31 g retardation (=97 ft. stopping distance) with 25 lb. pedal pressure



Drag at 10 m.p.h. .. .. 40 lb.  
 Drag at 60 m.p.h. .. .. 150 lb.

**Specific Fuel Consumption** when cruising at 80% of maximum speed (i.e. 69.8 m.p.h.) on level road, based on power delivered to rear wheels .. .. 0.81 pint/b.h.p./hr.



## Maintenance

**Sump:** 15 pints, S.A.E. 20W (winter), S.A.E. 30 (summer). **Gearbox:** 3 1/2 pints, S.A.E. 20WV. **Rear axle:** 3 pints, S.A.E. 90 EP. **Steering gear:** S.A.E. 140. **Radiator:** 21 pints (2 drain taps). **Chassis lubrication:** By grease gun every 3,000 miles to 4 points only (on propeller shaft). **Ignition timing:** 10° before T.D.C. **Spark plug gap:** 0.029-0.032 in. **Contact breaker gap:** 0.014-0.016 in. **Valve timing:** Inlet opens 9° B.T.D.C. and closes 45° A.B.D.C.; Exhaust opens 42° B.B.D.C. and closes 16° A.T.D.C. **Tappet clearances:** (Hot) Inlet 0.008 in.; Exhaust 0.012 in. **Front wheel toe-in:** 0-1/4 in. **Camber angle:** 2° positive. **Castor angle:** 2° positive. **Tyre pressures:** Front 28 lb., rear 24 lb. (30 lb. all round for full load). **Brake fluid:** Girling Crimson. **Battery:** 51 amp./hr. **Lamp bulbs:** Headlamps (home) 42/36 watt (Lucas No. 354). Sidelamps and rear number plate lamp: 4 watt (Lucas No. 222). Stop/tail lamps, 6/18 watt (Lucas No. 361). Reverse lamp, 18 watt (Lucas No. 221). Luggage boot and interior lamps, 6 watt (Lucas No. 989). Instrument panel and clock lamps, 2.4 watt M.E.S. (Lucas No. 987). Warning lights, 2.4 watt M.E.S. (Lucas No. 987). Trafficators, 3 watt festoon (Lucas No. 256). Fog lamp (home), 48 watt (Lucas No. 323).

# The ROVER "90" Saloon

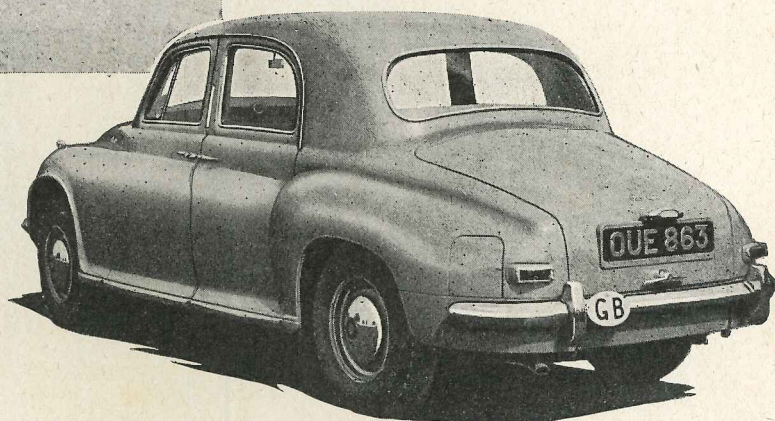
Largest-engined Car in the Rover Range Retains Maker's Traditional Refinements with Considerably-enhanced Performance



**DIGNIFIED SILENCE.**—Among the outstanding characteristics of the Rover "90" is its freedom from engine and road noises. The large curved-glass windscreen and rear window, wing-mounted side lamps, fog lamp and enclosed petrol filler are evident in these photographs.

**A**LTHOUGH several British manufacturers follow the practice of offering two engine sizes in otherwise identical or basically-similar models, the Rover company is unique in providing three variations of a single theme—a theme which, if one may carry the metaphor further, is always pianissimo; for quietness is the characteristic above all others which impresses itself upon those who try these cars.

The name of Rover is held in high respect in many parts of the world, from its maintained association with cars which fully justify their moderately high prices by unostentatious quality of workmanship and materials. The three versions of the Rover are the "60," the "75" and the "90"



which, apart from a few very minor details, are all identical except for their power units. For the "60," a four-cylinder engine of 1,997 c.c. is used and the "75" and "90" have six-cylinder engines of 2,103 c.c. and 2,638 c.c. respectively. All sizes of engines follow the same basic—and unusual—design, with overhead inlet and side exhaust valves operated from a single side camshaft.

A choice of axle ratios is offered on the "90" and the model tested was fitted with the higher of the two, namely, 3.9 to 1 as opposed to the optional 4.3 to 1 ratio, which is standardized on the "60" and "75" models. With this high gearing, the "90" is well ahead of the "75" in maximum speed—by nearly 10 m.p.h.—but thanks to the larger engine its acceleration also is better even from low speeds in top gear. The car will accelerate away from 10 m.p.h. in top in a very silky manner, and will deal with hills most efficiently in this gear, proving almost capable of maintaining its speed up a 1 in 10 gradient without a change down.

car stationary it is realized that this particular timepiece ticks with that vigour which is usually associated with alarm-clocks! On main roads, 70-75 m.p.h. is a most effortless cruising speed and it is possible to exceed 70 m.p.h. in third gear.

Starting is at all times easy and it is soon possible to dispense with the choke control. The latter is arranged so that its initial travel merely serves to increase the idling speed, further movement progressively enriching the mixture. For the benefit of forgetful drivers, there is a thermostatically controlled amber warning light which appears when the engine is sufficiently warm to dispense with the choke.

Even with the higher axle ratio, the clutch is sweet enough to cope easily with second-gear starts. The gear-change of the latest Rover is unusual, in that a form of off-set central remote control with a sharply cranked lever is used instead of the former layout with the gear lever below the steering wheel. This arrangement still leaves the centre of the floor clear, so that three

## In Brief

Price: £915 plus purchase tax £382 7s. 6d., equals £1,297 7s. 6d.

Capacity ... .. 2,638 c.c.

Unladen kerb weight ... 28½ cwt.

Fuel consumption (without using freewheel) ... .. 20.3 m.p.g.

Maximum speed ... .. 87.3 m.p.h.

Maximum speed on 1 in 20 gradient ... .. 70 m.p.h.

Maximum top gear gradient 1 in 10.1

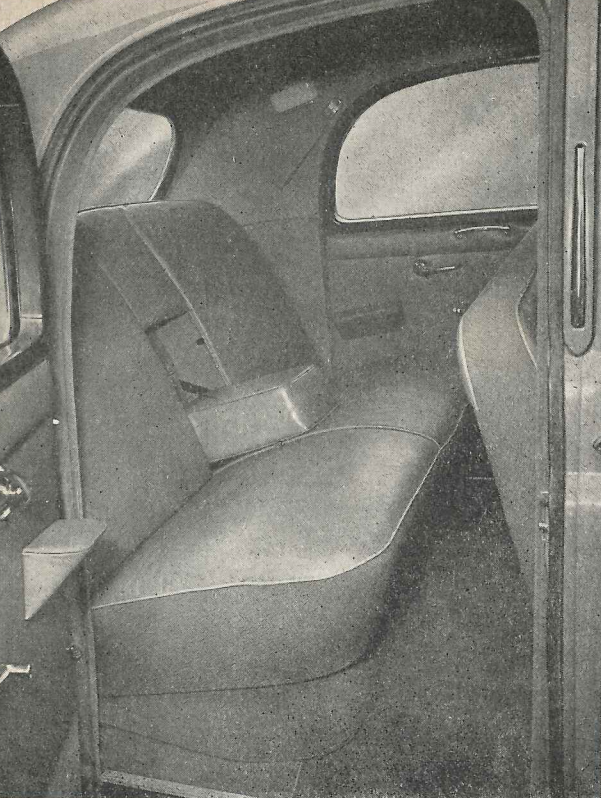
Acceleration:

10-30 m.p.h. in top ... 10.1 sec.

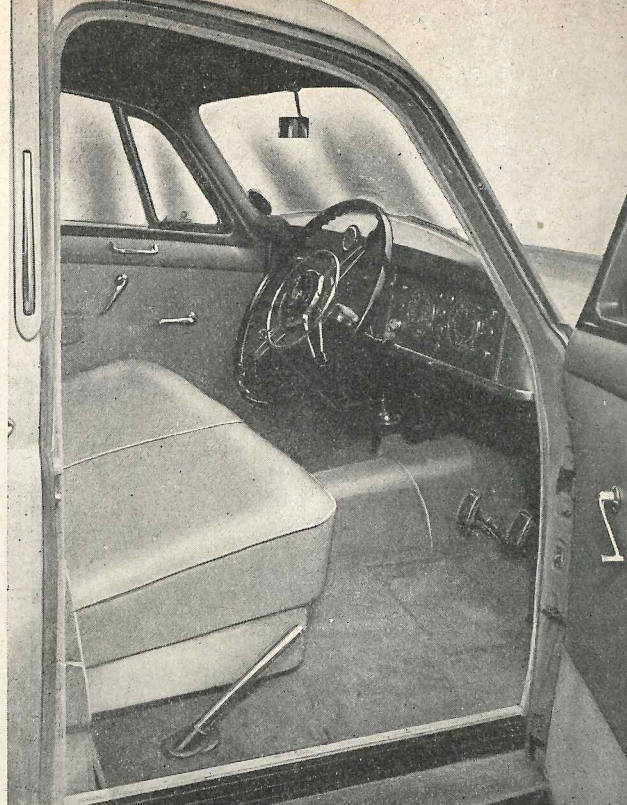
0-50 m.p.h. through gears 13.6 sec.

Gearing: 19.8 m.p.h. in top at 1,000 r.p.m.;

72.1 m.p.h. at 2,500 ft. per min. piston speed.



**COMFORT.**—Both front and rear seats are fitted with folding centre armrests and smaller rests on the doors, those at the front being adjustable for height. Instruments are well placed in front of the driver, the cranked gear lever is nicely positioned, whilst the sturdy hand-brake is placed at the side of the front seat.



people may be carried on the bench seat or the driver can enter comfortably from either side of the car; the remote-control linkage is rather flexible, although as familiarity with the car grows this flexibility becomes progressively less noticeable. The four-speed gearbox itself is very quiet and the synchromesh mechanism on the three upper ratios is smoothly effective.

#### Free-Wheel Available

A feature of the Rover which is unusual these days, is the provision of a freewheel; the use of this is optional and there is a control knob which can be used, when the car is stationary or when the engine is pulling, to put the freewheel into or out of action as desired. The freewheel allows delightful clutchless gear changes, provided the throttle is closed momentarily before moving the gear lever and, thanks to the silence of the power unit, the contrast between driving and freewheeling conditions is so little marked as never to be irritating. Use of the freewheel also results in fuel economy, although the degree of saving naturally depends upon the manner in which the car is driven. Thus, on one test when the car was driven hard, the saving amounted to 1.6 m.p.g., whereas an economy of some 7 m.p.g. was achieved on another occasion when the car was handled for a short time by a driver more accustomed to using a freewheel. The positioning of the ignition warning lamp which shines brilliantly at tick-over engine speeds, directly in front of the driver, was irritating when using the freewheel.

An outline performance comparison of the three Rover models may prove helpful at this stage. Figures for the "60" are those recorded when the car was tested earlier this year (*The Motor*, January 20, 1954) and those for the "75" refer to a model tested two years ago, but as this model has not been substantially altered (and is, in fact, the type upon which the more recent "60" and "90" are based), the figures may be regarded as reasonably representative. Here then, is an outline of the relative capabilities of the three types:—

	"60"	"75," (1952)	"90"
Maximum speed . . . . .	75.3 m.p.h.	78.3 m.p.h.	87.3 m.p.h.
Rest-50 m.p.h. through gears . . . . .	16.9 sec.	16.3 sec.	13.6 sec.
10-30 m.p.h. in top . . . . .	11.9 sec.	11.7 sec.	10.1 sec.
40-60 m.p.h. in top . . . . .	18.6 sec.	16.9 sec.	12.9 sec.
Overall fuel consumption . . . . .	25.8 m.p.g.	23.9 m.p.g.	20.3 m.p.g.

Despite the weight which goes with its sturdy build and appreciable size, the Rover "90" has very light steering, partly, but by no means entirely, as a result of low gearing: also the turning circle is quite reasonably compact. Stable in gusty side winds, although rather sensitive to changes in road camber, the car is well behaved on straight roads, but on corners it lacks the responsiveness of the lighter "60" model. An unusual front suspension layout minimizes roll on corners and "dipping" of the nose during braking, but this is obviously a touring car and when cornering fast (especially on a loose or slippery road surface) a driver must be prepared to correct a tendency for the front of the car to run "wide."

The suspension represents a particularly good blend of adequate damping with good bump absorption, and comfort and stability are notable at all speeds. This applies equally on bad Continental pavé, on which the Rover is outstanding for the low level of road noise.

Normal braking calls for quite light pedal pressures and the car responds well to heavy braking when necessary; panic

applications may result in some wheel locking, but, if this happens, all four wheels lock together and there appears to be no departure from a straight line. The handbrake, horizontally positioned at the side of the bench-type driving seat, is powerful, but would be easier to reach if it was raised somewhat; the armrest on the driver's door also represents a minor obstacle to reaching the handbrake lever.

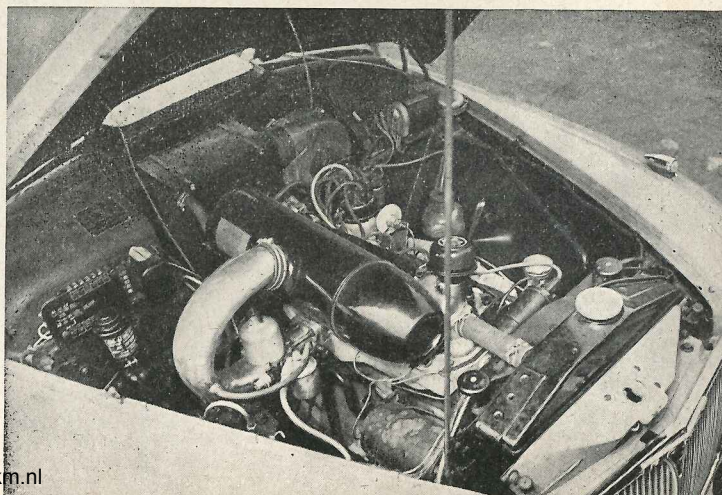
#### Fully Equipped

Unusual switchgear is provided for the lights, comprising an on-off master switch on the fascia panel, a two-position switch beneath the steering wheel which selects sidelamps only or side and headlamps, and a foot-operated headlamp dipping switch. The headlamps give a rather long and narrow beam, quite good for fast driving on straight roads, but unsatisfactory for the negotiation of winding lanes: a foglamp is also fitted, and could be set to give some more light to one side of the car.

Appreciation of a driver's needs is to be found in the provision of many useful refinements. These include a fuel gauge which, at the pressure of a button, indi-

#### POWER UNIT.—

The bulk of the six-cylinder Rover "90" engine leaves little space to spare beneath the bonnet. It is dominated by a large silencer from which air is ducted to the single S.U. carburetter. The hydraulic brake reservoir, radiator cap, oil filler and distributor are accessible for routine attention. The S.U. electric fuel pump is situated in the luggage boot.



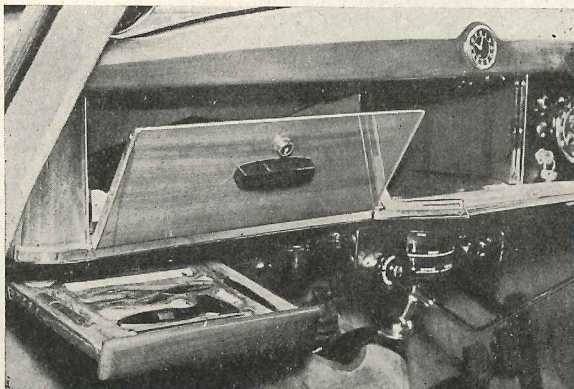
## The Rover "90" Saloon - - - - - Contd.

cates the amount of oil in the sump . . . the fitting of a reserve petrol tap . . . the use of self-parking wipers . . . a foot-operated screen washer . . . the arrangement of a map reading light neatly concealed in the scuttle above the fascia board . . . and the provision of courtesy switches which operate the map-reading light when the front doors are opened or the appropriate reading light when the back doors are opened. Other much-appreciated details include the fitting of safety catches in the rear door handles to prevent accidental operation by children, and the pro-

Driving visibility is up to average standards, but the nearside front wing lamp is not visible and tall drivers may find the top of the screen rather low if they sit in an erect position.

Great care has obviously been taken over the matter of ventilation. The hinged ventilating panels on the front door seem free from the annoying fault of rain leaks when open in wet weather. A very good supply of fresh air may also be taken in through the scuttle ventilator, and this, too, appears to be free from rain troubles. In addition, an elaborate heating and venti-

TYPICAL of the useful detail equipment found in the Rover are the well-made cubby holes (one lockable) with sensibly d.w.n.folding lids and the removable tray containing small tools.



vision of a particularly useful tool tray beneath the fascia board which not only contains all the small tools in their own recesses, but can be detached complete to enable the tools to be carried to wherever they are required. Worthy of note is the fact that chassis lubrication is needed only at 3,000-mile intervals, a mileage which would cover most holiday or business journeys abroad.

The seats are deeply upholstered and an excellent feature is that, although of the bench type, the front seat is not only adjustable fore and aft, but provision is also made for altering both the height and the rake; by repositioning the securing bolts in the base, the height may be adjusted over a range of 1½ in. at either front or rear or both. Ideas of seating comfort being so much an individual matter, this is a very valuable point. Other good points about the seating are the provision of wide armrests which give good lateral support, the fitting of adjustable armrests on the front doors, and the very ample room for three on the softly cushioned rear seat.

lating system is fitted as standard; this not only allows hot or cold air to be directed independently to either the windscreen demisters or the interior of the car, but is also arranged so that the heating unit can be used purely to warm and recirculate the air already in the car. Much thought has obviously gone into securing efficient draught sealing, and this has, in fact, almost been carried to extremes, as a distinctly hearty slam is necessary to shut the doors securely, especially if all the windows happen to be closed.

Internal accommodation for odds and ends is good, with a very large lockable cubby (supplemented by an additional cubby if no radio is fitted), a map pocket in the front passenger's door and the usual parcel shelf behind the rear seat. The floor of the boot slopes slightly, but is free from obstructions, and there is a good capacity for suitcases, whilst no complication arises over the spare wheel, which is carried in an entirely separate compartment which lets down when the wheel is required. An appreciated refinement is a light in the boot.

From what has been said, it will be gathered that this Rover is particularly well equipped and, moreover, fitted out with a very practical appreciation of the needs of modern motorists. Above all, however, it is the refinement of the Rover which leaves the most lasting impression, a refinement which, coupled with the practical planning and excellent performance, takes much of the fatigue out of long journeys.



**BAGGAGE ROOM.**—In spite of the sloping floor of the luggage boot there is sufficient capacity to carry a considerable amount of baggage.

## Mechanical Specification

<b>Engine</b>	
Cylinders ... ..	6
Bore ... ..	73.025 mm.
Stroke ... ..	105 mm.
Cubic capacity ... ..	2,638 c.c.
Piston area ... ..	39.0 sq.in.
Valves ... ..	Overhead inlet, side exhaust
Compression ratio ... ..	6.73/1
Max. power ... ..	90 b.h.p. at ... ..
at ... ..	4,500 r.p.m.
Piston speed at max. b.h.p.	3,110 ft. per min.
Carburettor ... ..	Horizontal S.U. (H6)
Ignition ... ..	12-volt coil
Sparking plugs ... ..	Lodge CLN-H
Fuel pump ... ..	S.U. electric (in boot)
Oil filter ... ..	AC-Delco full-flow
<b>Transmission</b>	
Clutch ... ..	Single dry plate
Top gear (s/m) ... ..	3.9
3rd gear (s/m) ... ..	5.36
2nd gear (s/m) ... ..	7.975
1st gear ... ..	13.15
Freewheel (lockable) ... ..	Incorporated in rear of gearbox
Propeller shaft ... ..	Divided open Hardy Spicer
Final drive ... ..	Spiral bevel
Top gear m.p.h. at 1,000 r.p.m.	19.8
Top gear m.p.h. at 1,000 ft./min. piston speed ... ..	28.8
<b>Chassis</b>	
Brakes ... ..	Girling hydraulic (2LS on front)
Brake drum diameter ... ..	11 in.
Friction lining area ... ..	181 sq. in.
Suspension:	
Front Independent (coil) with anti-roll bar	
Rear ... ..	Semi-elliptic (progressive rate)
Shock absorbers ... ..	Woodhead Monroe telescopic (anti-aeration)
Tyres ... ..	Dunlop 6.00 x 15
<b>Steering</b>	
Steering gear ... ..	Burman recirculating ball worm and nut (variable ratio)
Turning circle: Left ... ..	37 feet
Right ... ..	37 feet
Turns of steering wheel, lock to lock ... ..	4
<b>Performance factors (at laden weight as tested):</b>	
Piston area, sq. in. per ton ... ..	24.4
Brake lining area, sq. in. per ton ... ..	113
Specific displacement, litres per ton mile 2,500	
Fully described in <i>The Motor</i> , Sept. 30, 1953.	

## Coachwork and Equipment

<b>Bumper height with car unladen:</b>	
Front (max.) 22½ in., (min.) 13½ in.	
Rear (max.) 22½ in., (min.) 13½ in.	
Starting handle ... ..	Yes
Battery mounting ... ..	Under rear seat
Jack ... ..	Bevelift (triangulated)
Jacking points ... ..	Two external on each side
Standard tool kit: Jack, tyre pump, wheel brace, grease gun, screwdriver, four open-ended spanners, two box spanners, adjustable spanner, pliers, contact breaker screwdriver and gauge, tyre-pressure gauge. (Small tools carried in tray under fascia.)	
Exterior lights: Two head, 2 side, 2 tail/stop, 1 reverse/number plate lamp, fog lamp.	
Direction indicators ... ..	Semaphore type, self-cancelling
Windscreen wipers ... ..	Dual-bladed electric, self-parking (screen washer standard)
Sun visors ... ..	Two universally-mounted (vanity mirror on nearside visor)
Instruments: Speedometer with decimal trip, clock, radiator thermometer, ammeter, combined fuel/oil contents indicator.	
Warning lights: Dynamo charge, oil pressure, choke and headlamp main beam.	
<b>Locks:</b>	
With ignition key ... ..	Ignition and driver's door
With other keys ... ..	Luggage locker and cubby hole
Glove lockers: Two on fascia panel with lids (one only if radio fitted).	
Map pockets ... ..	One (in front passenger's door)
Parcel shelves ... ..	One, behind rear squab
Ashtrays ... ..	Two (one front, one rear)
Cigar lighters ... ..	Nil
Interior lights: Two in rear quarters and one over fascia (all with "courtesy" switches).	
Interior heater ... ..	Heater and demister, with fresh-air intake on scuttle
Car radio ... ..	Optional extra: Radiomobile long and medium-wave, or all-wave
Extras available: Fitted seat covers, extra floor mats, foot rest for front passenger, skid grips, luggage roof rack, cigarette lighter, towing bar, badge bar, wing mirror, fog lamp, windscreen washer, Rimblishers. Prices on application.	
Upholstery material ... ..	Leather
Floor covering ... ..	Pile carpet
Exterior colours standardized: Pastel blue, ivory, sage green, grey, black (also dual colour schemes at extra charge).	
Alternative body styles ... ..	Nil