

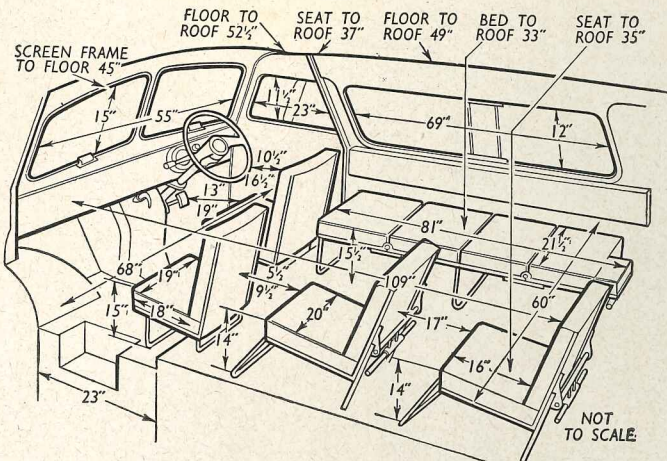
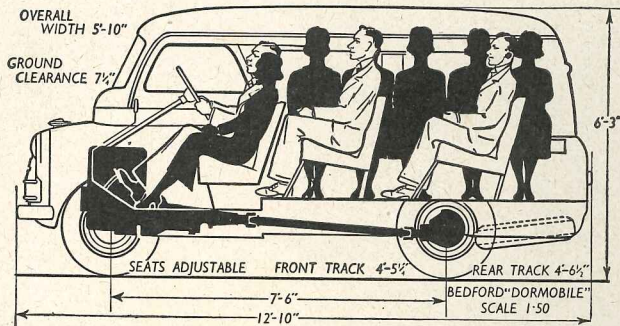
The Motor Road Test No. 7/54

Make: Bedford

Type: Dormobile

Makers: Chassis: Vauxhall Motors Ltd., Luton, Beds.

Body: Martin Walter, Ltd., Utilecon Works, Cheriton Road, Folkestone, Kent.



Test Data

CONDITIONS. Dry, frosty weather with moderate cross wind. Smooth tarred road surface. Premium grade pump fuel.

INSTRUMENTS

Speedometer at 30 m.p.h. 1% slow
Speedometer at 60 m.p.h. 2% fast
Distance recorder 1% slow

MAXIMUM SPEEDS

Flying Quarter Mile
Mean of four opposite runs 58.6 m.p.h.
Best time equals 60.0 m.p.h.

Speed in Gears
Max. speed in 2nd gear 47 m.p.h.
Max. speed in 1st gear 23 m.p.h.

FUEL CONSUMPTION

41.5 m.p.g. at constant 20 m.p.h.
38.5 m.p.g. at constant 30 m.p.h.
35.5 m.p.g. at constant 40 m.p.h.
26.5 m.p.g. at constant 50 m.p.h.
Overall consumption for 516 miles, 20.4 gallons, = 25.3 m.p.g.
Fuel tank capacity, 7½ gallons.

ACCELERATION TIMES Through Gears

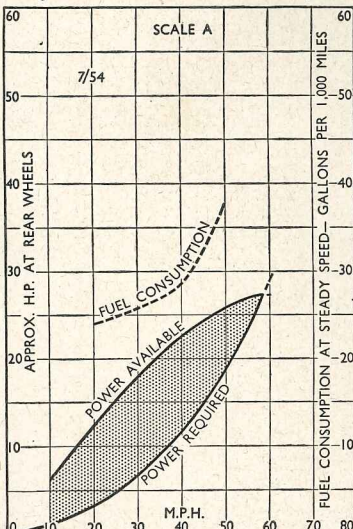
0-30 m.p.h. 9.6 sec.
0-40 m.p.h. 15.7 sec.
0-50 m.p.h. 33.2 sec.
Standing Quarter Mile 27.1 sec.

ACCELERATION TIMES on Two Upper Ratios

	Top	2nd
10-30 m.p.h.	17.4 sec.	9.2 sec.
20-40 m.p.h.	21.5 sec.	10.7 sec.
30-50 m.p.h.	31.6 sec.	—

WEIGHT

Unladen kerb weight 22½ cwt.
Front/rear weight distribution .. 48/52
Weight laden as tested 26½ cwt.



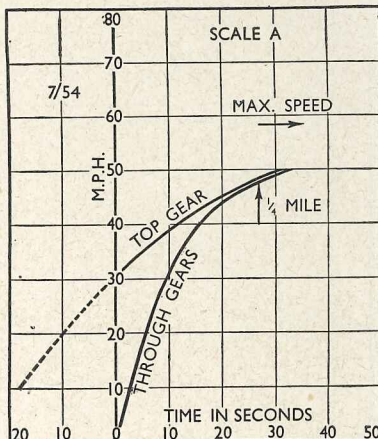
Drag at 10 m.p.h. 43 lb.
Drag at 60 m.p.h., by extrapolation, approx. 185 lb.
Specific Fuel Consumption when cruising at 80% of maximum speed (i.e., 46.9 m.p.h.) on level road, based on power delivered to rear wheels 0.78 pints/b.h.p./hr.

HILL CLIMBING (At steady speeds)

Max. top gear speed on 1 in 20 30 m.p.h.
Max. top gear speed on 1 in 15 20 m.p.h.
Max. gradient on top gear 1 in 14.9 (Tapley 150 lb./ton)
Max. gradient on 2nd gear 1 in 9.1 (Tapley 245 lb./ton)

BRAKES at 30 m.p.h.

0.95 g retardation (= 31½ ft. stopping distance) with 85 lb. pedal pressure.
0.90 g retardation (= 33½ ft. stopping distance) with 75 lb. pedal pressure.
0.63 g retardation (= 48 ft. stopping distance) with 50 lb. pedal pressure.
0.21 g retardation (= 143 ft. stopping distance) with 25 lb. pedal pressure.



Maintenance

Sump and filter: 8½ pints, S.A.E. 20. **Gearbox:** ½ pint, S.A.E. 90 gear oil. **Rear Axle:** 2½ pints, S.A.E. 90 hypoid gear oil. **Steering gear:** ½ pint, S.A.E. 90 gear oil. **Radiator:** 12 pints (2 drain taps). **Chassis lubrication:** By oil gun every 1,000 miles to 20 points. **Ignition Timing:** 2° b.t.d.c. static (31° centrifugal advance, 11° vacuum advance). **Spark plug gap:** 0.028-0.030 in. **Contact breaker gap:** 0.014-0.016 in. **Firing order:** 1-3-4-2. **Valve Timing:** I.O., 4° b.t.d.c.; I.C. 36° a.b.d.c.; E.O., 36° b.b.d.c.; E.C., 4° a.t.d.c. **Tappet clearances:** (Hot); Inlet and Exhaust 0.013 in. **Front wheel toe-in:** (on tyre walls) 0.09-0.16 in. **Camber angle:** (unladen) 1°-2°. **Castor angle:** (unladen) 1°-1½°. **Pivot pin inclination:** (unladen) 2½°-3½°. **Tyre pressures:** Front 25 lb., Rear 30 lb. **Brake Fluid:** Lockheed (Orange) No. 33. **Battery:** 12 volt, 44 amp. hr. at 20 hr. rate (Lucas GTW7A or Exide 6XC7R). **Lampbulbs:** 12 volt; **Headlamps:** 42/36 watt. **Sidelamps and number-plate lamp:** 6 watt. **Tail/stop lamps:** 6/18 watt.

The BEDFORD Dormobile

An Inexpensive yet Comfortable Vehicle which is Rapidly Transformable to Accommodate Goods, 6-12 Passengers or Two Campers on Sprung Beds

In Brief

Price: £545 (no purchase tax payable)	
Capacity	1,507 c.c.
Unladen kerb weight ...	22 $\frac{3}{4}$ cwt.
Fuel consumption... ..	25.3 m.p.g.
Maximum speed	58.6 m.p.h.
Maximum speed on 1 in 20 gradient	30 m.p.h.
Maximum top gear gradient	1 in 14.9
Acceleration:	
10-30 m.p.h. in top ...	17.4 sec.
0-50 m.p.h. through gears	33.2 sec.
Gearing: 15.3 m.p.h. in top at 1,000 r.p.m.; 76.5 m.p.h. at 2,500 ft. per min. piston speed.	

IN the fullest sense of the word, the Dormobile which the old-established coachbuilding firm of Martin Walter Ltd. produce on a Bedford chassis is a Utility vehicle. Our readers may be assured that, although it is of unusual appearance, the Dormobile will perform comfortably all the duties of a six-seater car, with moderate performance but with correspondingly moderate running costs. Also, any or all of the four individual forward-facing rear seats may be rapidly converted into inward-facing bench seats for two people apiece, accommodation for up to eleven passengers and a driver being available for school, business or sports club purposes. For holiday use, the bench seats can become either two full-length single beds, or a double bed, in a weather-proof body which can be locked from the inside. Finally, any or all of the passenger seats may be folded up against the body sides to convert the Dormobile into a spacious 10-12 cwt. goods-carrying vehicle.

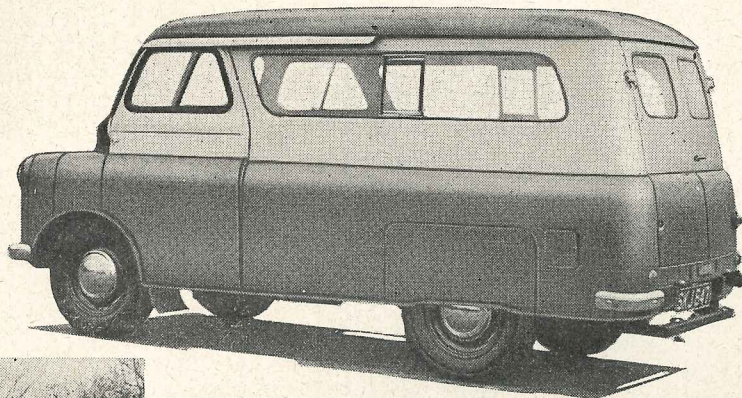
Based upon a well-tried commercial vehicle chassis, that of the 10-12 cwt. Bedford van, the Dormobile differs from private cars in its appearance much more than in its behaviour on the road. It may be mentioned that a great many components, including the independent front-wheel suspension layout, 1,507 c.c. overhead valve engine, and three-speed syn-

chromesh gearbox with steering-column control, are virtually identical with those incorporated in Vauxhall Wyvern cars. Somewhat cubist exterior lines are associated with a very far-forward driving position, half of the bonnet which encloses the four-cylinder engine extending into the vehicle between the driver and the front-seat passenger. Public reaction to the Dormobile during our 10-day test period made it very evident that, for many people, the style conventionally associated with private cars is well worth sacrificing in order to obtain other very substantial advantages.

Entry to the Dormobile is through two front doors of very large area which, in complete contrast to car practice, slide back on rollers instead of opening on hinges. These doors do not provide completely flush body sides, nor do they move with silky smoothness as hinged doors should do. But, the sliding doors proved substantially draughtproof, and the fact that opening them did not increase the width of the vehicle at all was very much appreciated in busy streets, in narrow garages or parking places, and when reversing into confined spaces—also, in tropic weather, it would be possible to drive with the doors open. Additionally, there are double rear doors, inside which

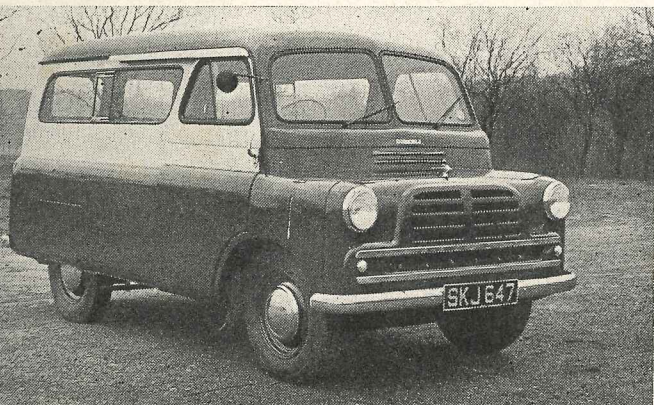
is a folding step: two doors have outside locks and one an internal locking catch. One irritant was the proximity of the external driving mirror to the driver's door where it could too easily bruise a forehead.

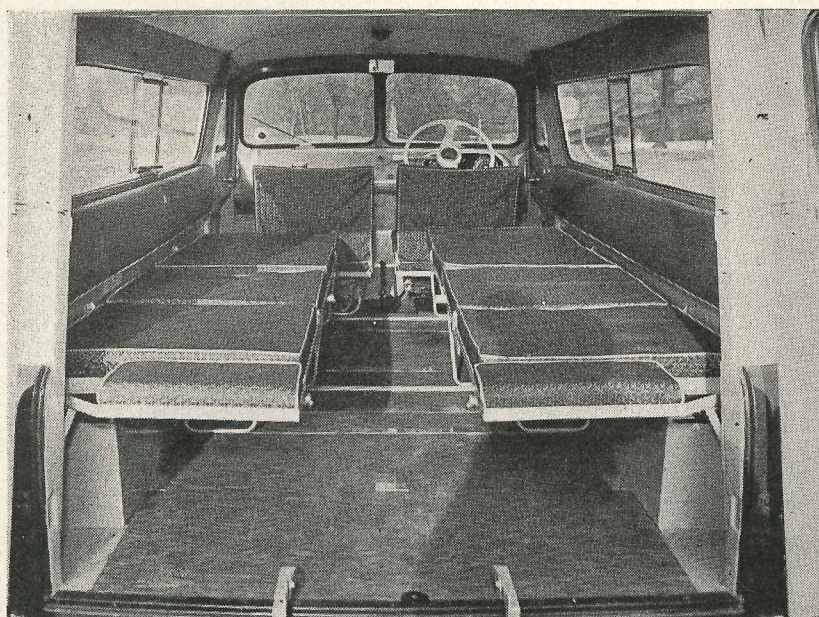
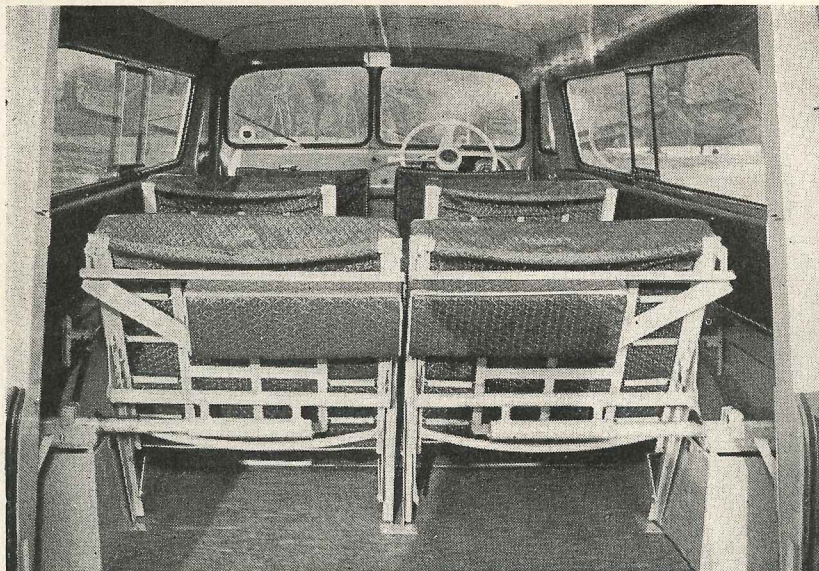
Winding windows are not provided, but sliding glass panels on the door windows provide for manual signals. Two large forward-facing ventilators, with very sensitive controls, allow gentle or powerful draughts of cool, fresh air to be induced, and two hinged panels capable of turning through 180° provide powerful or gentle ventilation for the back of the body. An interior heater is an optional extra, but its location on the passenger's side of the car meant that in frosty weather the driver was not saved from the discomfort of cold feet.



CUBIST exterior lines allow great internal roominess to be combined with an overall length which is less than most 1 $\frac{1}{2}$ -litre private cars. Dual colours (50s.) and a caravan towing bracket (130s.) are optional extras on the model illustrated.

Sitting high up on a comfortable seat, the driver has a superb view forwards through a deep vee windscreen—no bonnet whatever obstructs the sight line. Initially, a car driver finds that the absence of a bonnet calls for different methods of judging his vehicle's width, but familiarity soon brings enthusiasm for the vision obtainable with high seating and forward





RAPID CONVERSION to very varied interior layouts is the especial feature of the Dormobile body. Six forward-facing seats (top) offer virtually private-car standards of comfort and leave a luggage space behind them. Twelve people can travel in the Dormobile when the seats are converted into inward-facing benches (centre) or these benches can be used as single beds. Releasing four catches permits the benches to be slid towards one another (lower picture) to form a comfortable double bed. It is also possible to fold some or all of the four seats up against the body sides, to provide van standards of goods-carrying capacity.

The Bedford Dormobile

control. Unhappily, the view is less good in some directions other than forwards, the windscreen pillars being very much thicker than on most cars and the sloping door pillars alongside the driver also rather wide: a minor snag of forward control is that one can very easily pull up so nearly beneath high-set traffic signals as to lose sight of them after being stopped. Passengers in the rear compartment enjoy a fine all-round view through huge areas of glass.

Plain by private-car standards, the interior decoration of the latest Dormobile is nevertheless quite pleasing. Polished woodwork frames the rear windows, and plastic upholstery in four different colours is available for the simple yet comfortable seats. On the example tested, the roof was double-skinned and interlined with heat-insulating material between the skins, this being an optional feature which campers appreciate. The painted fascia carries circular-dial instruments with very nicely restrained lighting, a straight-forward twist switch for the side and head lamps, and a time switch for the direction indicators which are an optional extra.

Rapid Re-arrangement

Conversion of the Dormobile's seats from forward-facing to bench form is utterly simple, the locking catches being released automatically as soon as the front edge of a seat is lifted—it is, however, not impossible to nip a finger gently by holding a seat wrongly when converting it into a bench. The detail work of the folding seats appears to be quite sufficiently sturdy, and despite the many joints involved in the provision of seats which fold up or convert into either two beds or a double bed, there are very few rattles indeed when rough roads are negotiated.

When the seats are set to face forward, the headroom above them is very generous indeed for all six passengers. The benches which may be formed by letting down the seat backrests are rather higher above the floor, but the headroom available above them is fully adequate for journeys of moderate length.

In order to secure adequate width for the pedals, which with this vehicle's very forward driving position lie between the power unit and a front-wheel arch, the engine is off-set $3\frac{1}{2}$ in. towards the nearside of the chassis—towards the left on right-hand-drive models, or vice versa where left-hand drive is supplied for export. This arrangement allows space for a driver to wear gum-boots or similar bulky footwear, but very much reduces passenger footroom on the opposite side of the vehicle.

Riding comfort is an extremely strong point of this chassis, even although the spring rates and tyre pressures have had to be chosen to be adequate for heavy maximum loads. There is no pitching or jolting at any time, and the Dormobile coped especially well with some really atrocious surfaces which had been formed by a heavy snowfall becoming rolled into irregular lumps of ice. The suspension is, however, firm enough to cut down rolling on corners to a very low level, although a most annoying detail was lateral rocking

Contd.

of the folding front passenger seat during cornering.

Another aspect of road behaviour in which this unusual vehicle excels over many conventional cars is lightness of the controls. The pleasantly precise steering is unusually light at all times, this point being especially noticed when entering or leaving car parks, yet has an adequate amount of self-centring action: this lightness of the steering comes to some extent from gearing which gives four turns from lock to lock; but this ratio appears more reasonable when related to the fact that the Dormobile can turn around in a road which is barely more than 30 ft. wide between kerbs. The clutch is also light to operate, and the brakes are light and very powerful although they sometimes tended to pull sideways during "crash stop" tests

normal driving although its linkage was apt to "snag" occasionally if first-to-second changes were rushed.

To an abnormal extent, the fuel consumption of this vehicle depends on driving methods, weak mixture strengths under steady running conditions being permitted by the use of a powerful accelerator pump in the carburetter, and the wind resistance of the large and angular body at high speeds being rather substantial. Our overall consumption figure of 25.3 miles per gallon covers a gentle tour around hilly country with a considerable load at about 30 m.p.g. consumption, followed by a period of hard driving with a lighter load at little better than 20 m.p.g. A few thousand more miles would no doubt produce appreciable improvements in fuel consumption.

Although mechanical noise from the engine is more prominent in this vehicle than in most modern cars, especially above 40 m.p.h., cruising speeds of 50 m.p.h. or more are not in any way tiring. Our test coincided with a sustained period of extremely frosty weather, and although the engine ran without appreciable pinking on standard grades of fuel, we used premium-grade fuel for the performance tests to minimize cold-weather flat-spots in the carburation. Wind, we found, affected this vehicle to a considerable extent, both laterally and by raising or lowering the natural cruising gait.

Instant Starting

Even when it had non-premium fuel in the tank, the Bedford engine was a first-touch starter after standing in the open overnight in conditions of (for England) abnormally hard frost. The engine was very soon ready to pull normally without use of the choke, a trivial annoyance being the positioning of the starter control on the floor between the seats where it adjoins the sturdy handbrake but is far away from the choke control.

Access to the power unit is divided, an external panel which is hardly long enough to be called a bonnet top giving access to the dipstick and the water and oil fillers, whilst most other items may be reached by removing the double-skin engine cover panel inside the vehicle. For some purposes, divided access probably has disadvantages, but on a cold day we appreciated being able to couple our fuel consumption test gear to the engine's petrol pump without getting out of the vehicle.

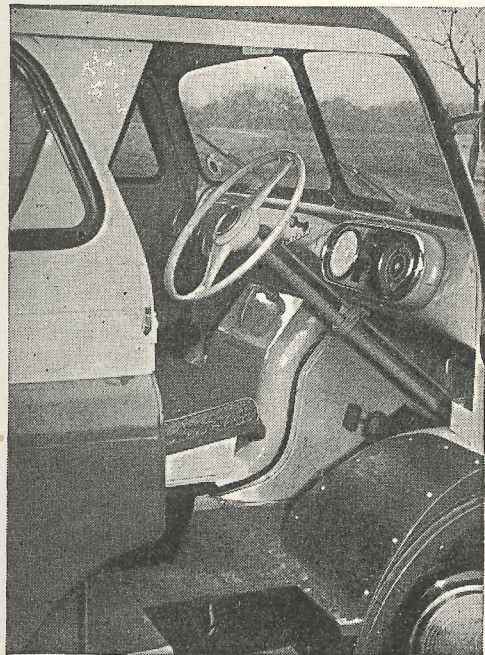
After ten days during which various members of our staff subjected the Dormobile to extremely diverse usage, we were much impressed by its great and varied usefulness. In town, its manoeuvrability and its sliding doors were very convenient indeed. In the country, the almost unlimited capacity for passengers and goods of all kinds was appreciated. At a holiday season, the ability to sleep two people in sheltered comfort, and to carry the camping equipment for several others to places which would be difficult of access for a caravan, would be most useful. Over and above all this, the admittedly rather unusual looking Dormobile proved no less comfortable and pleasant to drive than an ordinary private car of economically moderate performance.

Mechanical Specification

Engine	
Cylinders	4
Bore	79.4 mm.
Stroke	76.2 mm.
Cubic capacity	1,507 c.c.
Piston area	30.7 sq. in.
Valves	Pushrod o.h.v.
Compression ratio	6.8/1
Max. power	40 b.h.p. at
Piston speed at max. b.h.p.	4,000 r.p.m.
Carburetter	Zenith 30 VIG-7 down-draught
Ignition	Lucas coil
Spark plug	14 mm. AC "48"
Fuel pump	AC mechanical
Oil filter	By-pass
Transmission	
Clutch	Borg & Beck 7½ in. s.d.p.
Top gear (s/m)	5.285
2nd gear (s/m)	8.657
1st gear	18.15
Propeller shaft	Hardy Spicer open
Final drive	7/37 hypoid bevel
Top gear speed at 1,000 r.p.m.	15.3 m.p.h.
Top gear speed at 1,000 ft./min. piston speed	30.6 m.p.h.
Chassis	
Brakes	Lockheed-Vauxhall hydraulic
Brake drum diameter	9.13 in.
Friction lining area	100.65 sq. in.
Suspension:	
Front	Coil and wishbone i.f.s., with anti-roll torsion bar
Rear	Semi-elliptic
Shock absorbers	Vauxhall double-acting telescopic
Tyres	Avon, 6.00-16
Steering	
Steering gear	Burman re-circulating ball type
Turning circle	30 feet
Turns of steering wheel, lock to lock	4
Performance factors (at laden weight as tested):	
Piston area, sq. in. per ton	23.4
Brake lining area, sq. in. per ton	76.5
Specific displacement, litres per ton mile	2,250

Coachwork and Equipment

Bumper height with car unladen:	
Front (max.) 19½ in., (min.) 16 in.	
Rear (max.) 21 in., (min.) 17½ in.	
Starting handle	Yes
Battery mounting	Under floor, with quickly removable cover
Jack	High-lift screw jack
Jacking points	Corners of chassis frame
Standard tool kit: Tool bag, wheel brace, plug spanner and tommy bar, 2 double-ended spanners, adjustable spanner, screw-driver.	
Exterior lights: 2 headlamps, 2 sidelamps, 2 stop/tail lamps.	
Direction indicators	Optional extra
Windscreen wipers	Self-parking, engine driven
Instruments: Speedometer (without decimals or trip), fuel contents gauge, coolant thermometer.	
Warning lights	Dynamo charge, oil pressure, headlamp main beam
Locks:	
With ignition key	Ignition, driver's door, rear doors
With other keys	None
Glove lockers	2 trays, above front wheel arches
Map pockets	Nil
Parcel shelves	Nil
Ashtrays	Nil
Cigar lighters	Nil
Interior lights	One in roof over front seats
Interior heater: Optional extra, Smiths re-circulating type heater and screen demister.	
Car radio	Optional extra (Radiomobile)
Extras available: Perspex sun-roof, trafficators, dual wipers, foglamp, interior driving mirror, roof ventilator, roof lining (with or without insulation), low entrance steps inside front doors, roof luggage rack, trailer towing bracket, reversing lamps, extra interior lamp, plated hub-caps, sun visors, 3rd bed.	
Upholstery material	Plastic
Floor covering: Front compartment, rubber; rear compartment, linoleum.	
Exterior colours standardized: 6 (beige, desert sand, ivory, royal blue, light grey, Westminster green). Special colours £5 extra, dual colours £2 10s. extra.	
Alternative body styles	Nil



UPRIGHT SEATING provides comfort and good forward vision for the driver, the straightforward instrument panel carrying a large and almost accurate speedometer the needle of which is vertical at 30 m.p.h. Unusual are the parcel trays above the front wheel arches, and the double-skinned engine cover inside the vehicle.

—normal braking was in a perfectly straight line, as we checked on many miles of ice-covered roads.

Large dimensions in conjunction with a 40 b.h.p. 1½-litre engine do not suggest high performance, but the Dormobile is not objectionably slow. As the figures show, it has not been geared down to any extreme extent, a maximum very little short of 60 m.p.h. being attainable at less than 4,000 r.p.m., on a model which was by no means fully run in and was running on a mixture which was really too weak for the prevailing cold weather. Acceleration and hill-climbing powers also rank as adequate, the relatively wide-ratio three-speed gearbox working very sweetly in