

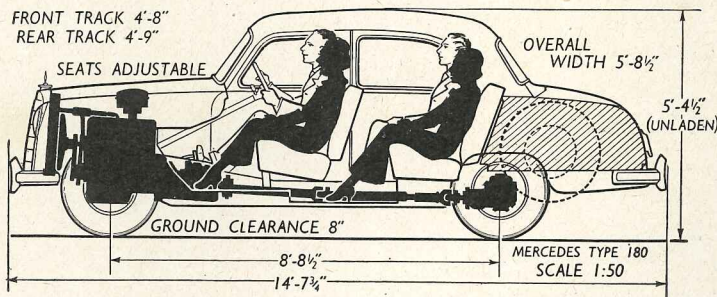
The Motor Road Test No. 20/54

Make: Mercedes-Benz

Type: 180 Saloon

Makers: Daimler-Benz A.G., Stuttgart-Unterturkheim, Germany

(British concessionaires, Mercedes-Benz (Great Britain) Ltd., 111, Grosvenor Road, Victoria, London, S.W.1)



Test Data

CONDITIONS: Mild, dry weather with strong wind. Smooth tarred Macadam road surface. Standard-grade pump fuel.

INSTRUMENTS

Speedometer at 30 m.p.h. 3% fast
 Speedometer at 60 m.p.h. 5% fast
 Distance Recorder Accurate

MAXIMUM SPEEDS

Flying Quarter Mile 12.2 km
 Mean of four opposite runs 73.8 m.p.h.
 Best time equals 76.3 m.p.h.

Speed in Gears (recommended limits)

Max. speed in 3rd gear 55 m.p.h.
 Max. speed in 2nd gear 36 m.p.h.
 Max. speed in 1st gear 21 m.p.h.

FUEL CONSUMPTION

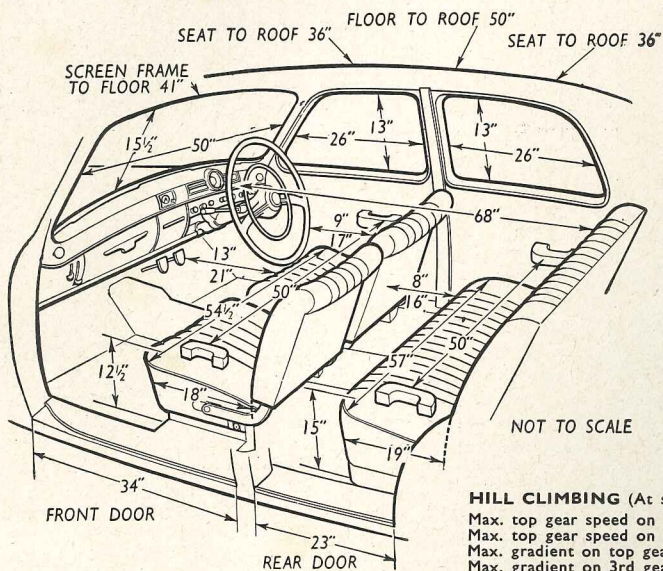
38.5 m.p.g. at constant 30 m.p.h.
 36.5 m.p.g. at constant 40 m.p.h.
 33.5 m.p.g. at constant 50 m.p.h.
 28.0 m.p.g. at constant 60 m.p.h.
 21.0 m.p.g. at constant 70 m.p.h.
 Overall consumption for 614 miles, 23 gallons.
 = 26.7 m.p.g.
 Fuel tank capacity 12 1/2 gallons.

ACCELERATION TIMES Through Gears

0-30 m.p.h. 7.0 sec.
 0-40 m.p.h. 12.2 sec.
 0-50 m.p.h. 18.7 sec.
 0-60 m.p.h. 29.5 sec.
 Standing Quarter Mile 23.4 sec.

ACCELERATION TIMES on Two Upper Ratios

Ratios	Top	3rd
10-30 m.p.h.	16.8 sec.	9.6 sec.
20-40 m.p.h.	16.0 sec.	9.1 sec.
30-50 m.p.h.	16.6 sec.	10.8 sec.
40-60 m.p.h.	20.5 sec.	—



HILL CLIMBING (At steady speeds)

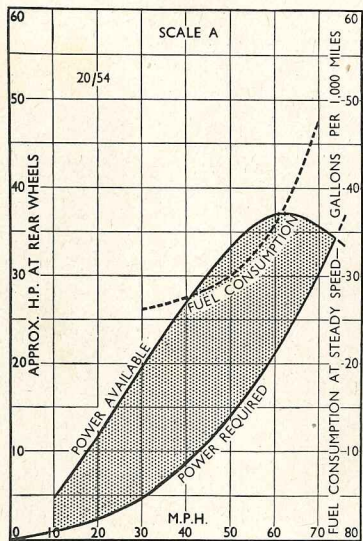
Max. top gear speed on 1 in 20 56 m.p.h.
 Max. top gear speed on 1 in 15 45 m.p.h.
 Max. gradient on top gear 1 in 12.7 (Tapley 175 lb./ton)
 Max. gradient on 3rd gear 1 in 8.2 (Tapley 270 lb./ton)
 Max. gradient on 2nd gear 1 in 5.6 (Tapley 395 lb./ton)

BRAKES at 30 m.p.h.

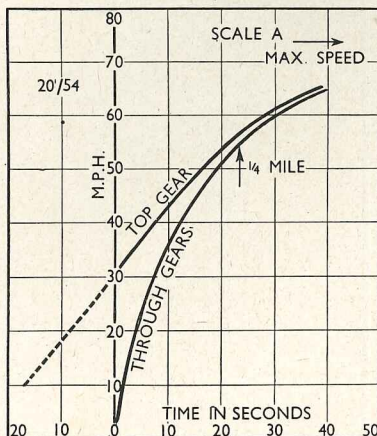
0.84 g retardation (= 35 1/2 ft. stopping distance) with 135 lb. pedal pressure.
 0.77 g retardation (= 39 ft. stopping distance) with 100 lb. pedal pressure.
 0.70 g retardation (= 43 ft. stopping distance) with 75 lb. pedal pressure.
 0.48 g retardation (= 63 ft. stopping distance) with 50 lb. pedal pressure.
 0.18 g retardation (= 167 ft. stopping distance) with 25 lb. pedal pressure.

WEIGHT

Unladen kerb weight 22 cwt.
 Front/rear weight distribution 53/47
 Weight laden as tested 25 1/2 cwt.



Drag at 10 m.p.h. 29 lb.
 Drag at 60 m.p.h. 133 lb.
Specific Fuel Consumption when cruising at 80% of maximum speed (i.e. 59.0 m.p.h.) on level road, based on power delivered to rear wheels 0.80 pints/b.h.p./hr.



Maintenance

Sump: 7 pints, S.A.E. 30 summer, S.A.E. 20 winter.
Gearbox: 2 1/2 pints, automatic transmission fluid.
Rear Axle: 3 pints, S.A.E. 90 E.P. hypoid gear oil.
Steering gear: S.A.E. 90 E.P. gear oil. **Radiator:** 16 pints (1 drain tap, heater pipe joints also must be loosened to drain system). **Chassis Lubrication:** By grease gun every 1,250 miles to 22 points.
Ignition timing: 0°-2° before t.d.c., static.
Spark Plug gap: 0.043 in. **Contact breaker gap:** 0.016 in.-0.020 in. **Tappet clearances:** (Cold); Inlet 0.005 in.; Exhaust 0.007 in. **Front wheel toe-in (laden):** 0-0.039 in. **Camber angle (laden):** 1°. **Castor angle:** 1 1/2°. **Tyre pressures:** Front 24-27 lb., rear 25-29 lb., according to cruising speed. **Brake fluid:** A.T.E. blue, or Lockheed. **Battery:** 6-volt, 70 amp. hr. **Lamp bulbs:** 6-volt.

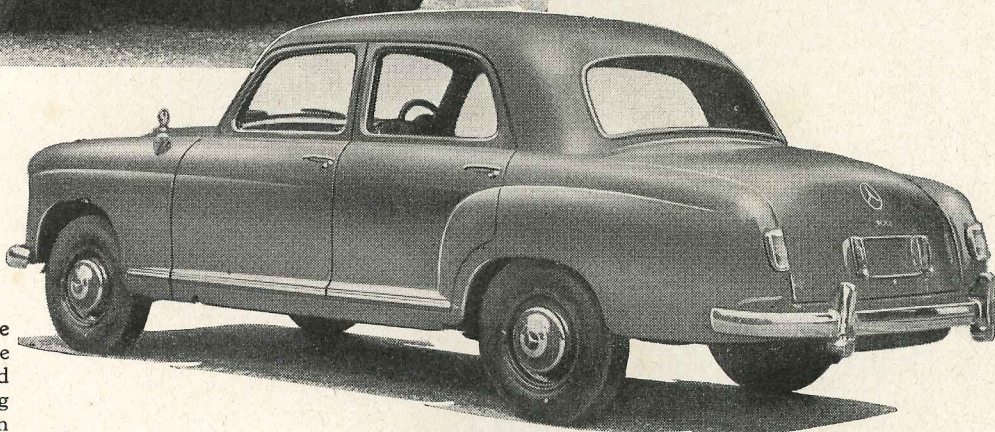
The MERCEDES-BENZ Type 180

An Exceptionally Refined 5-seater Touring Car



Wide and low, the Mercedes 180 has very comfortable accommodation for five people, with excellent stability on the road. Air intakes on either side of the radiator shell lead to two independent fresh-air heaters.

TO a very large extent, the respect in which the name of Mercedes-Benz is held in Britain results from racing successes which have been won at intervals over a very long period of years. None of the more conspicuous characteristics of racing cars is exhibited by the type 180 saloon, an example of which was recently loaned to us by Mercedes-Benz (Great Britain) Ltd.; this, the smallest of the models currently built at Stuttgart Unterturkheim, is a spacious touring vehicle, the outstanding features of which are refinement and durability, together with moderate fuel consumption and performance. Racing



has, however, undoubtedly had a subtle but significant influence upon even this model, by teaching the Mercedes-Benz engineering and business personnel to be particular about such things as driving position, driving vision, precision of controls, and stamina to resist sustained high speed.

Selling at a price which is inflated by the successive payments of import duty and purchase tax, the Mercedes-Benz type 180 is, nevertheless, finding a substantial market in Britain, making its appeal to those who value quality of workmanship and detail design more highly than performance. Very roomy as a five-seater, and powered by a long-stroke four-cylinder side-valve engine, which the former British taxation system would have rated at a modest 14 h.p., this model makes no pretensions to dazzling performance, although it does travel very briskly on the road. The engine has been tuned for economy rather than for utmost power, running very quietly indeed and incident-

ally making no demand for anything better than commercial-grade petrol.

Some cars of high quality are only appreciated to the full when a considerable mileage has been covered, but the Mercedes-Benz type 180 makes friends quickly. A major contribution to this is certainly the comfort of the two individual front seats, the driving position achieving the almost unique feat of being really comfortable for all the varying-sized members of our editorial staff. Conspicuously, the seat backrests give support high up behind the shoulders, and are curved just sufficiently to give lateral support also: more subtly, the positions of the steering wheel, door-mounted arm rest, and steering-column gear lever all prove comfortable in conjunction with widely varying settings of the fore-and-aft seat adjustment.

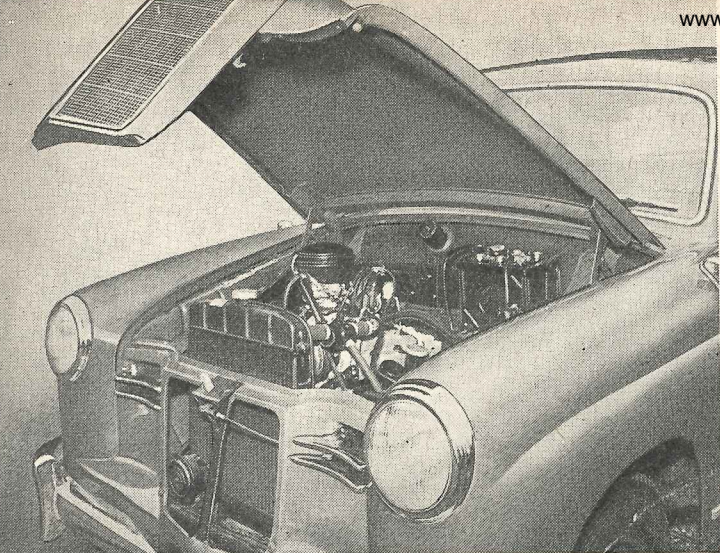
Similar care over details has evidently gone into the interior furnishing, which is carried out in dark brown plastic and green leather-cloth of excellent quality, the workmanship being good and the style compromising happily between the ornate and the austere. No attempt has been

made to provide lavish furnishings, there being, for example, only a single sun visor, but the fit of the moulded rubber floor coverings was noted, and the fact that even the interior of the glove locker had been trimmed as perfectly as the more prominent fascia panel. Beneath the bonnet we observed tappet accessibility such as is rarely featured on modern side-valve engines, thanks to a slight sideways tilting of the cylinder block and the use of sharply upswept manifolds, and also the provision of a more fully sub-divided set of fuses for the electrical system than is usual on British cars.

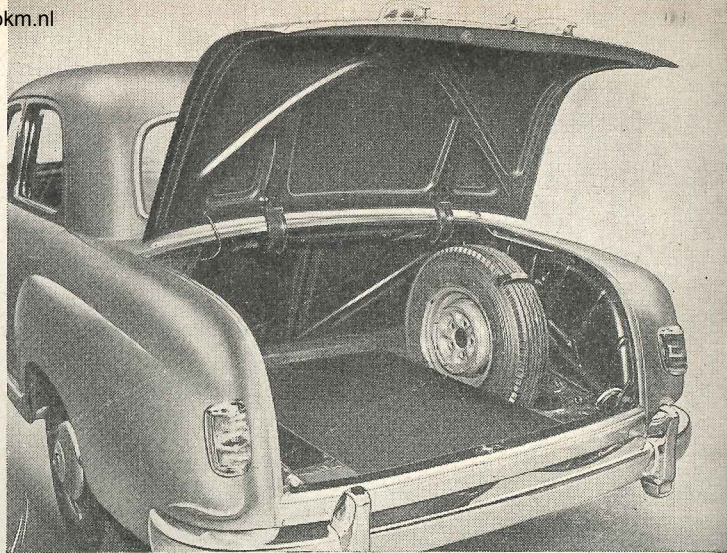
On the road, the favourable impression given by comfortable seats is quickly reinforced by the discovery that this car runs exceptionally quietly and smoothly. The integral-construction steel body does not appear to have been treated with sprayed-on sound deadening material, but it will be recalled that the front suspension and the rubber-mounted engine are both bolted to a form of sub-frame, which, in

In Brief

Price (in Britain)	£1,195 plus purchase tax	£499 0s. 10d., equals £1,694 0s. 10d.
Capacity	...	1,767 c.c.
Unladen kerb weight	...	22 cwt.
Fuel consumption	...	26.7 m.p.g.
Maximum speed	...	73.8 m.p.h.
Maximum speed on 1 in 20 gradient	...	56 m.p.h.
Maximum top gear gradient	...	1 in 12.7
Acceleration:		
10-30 m.p.h. in top	...	16.8 sec.
0-50 m.p.h. through gears	...	18.7 sec.
Gearing: 18.3 m.p.h. in top at 1,000 r.p.m.; 69.7 m.p.h. at 2,500 ft. per min. piston speed.		



The grille lifts integrally with the bonnet and can catch the head of the unwary, but accessibility is first-rate, even to the tappets of the sloping side-valve engine. A box on the bulkhead contains ten separate fuses.



Capacity of the luggage boot is enormous, and a second spare wheel may be carried if required. Plastic mouldings in the rear wings contain tail, stop and direction indicator, and automatic reversing lamps.

The Mercedes-Benz Type 180 - - - - - Contd.

turn, is insulated from the body of the car by rubber. This unusual arrangement, plus the quietness of the transmission components and the lack of wind noise, combine to make this a notably smooth and quiet car especially in the range of speeds between 30 and 60 m.p.h. Opening the windows very much increases the noise level at speeds above 50 m.p.h., but on any less refined car the slight exhaust resonance audible at around 62-64 m.p.h. and the even, but not inconspicuous, idling of the 4-cylinder engine would escape notice.

Soft Springing

Extremely flexible springs with very light restraint by the telescopic shock absorbers give this car something of the "boulevard ride" associated with transatlantic products. Very much less "exaggeration" of road waviness than might be expected results from this flexibility of the springing system, which gives excellent riding on normally surfaced roads and allows very brisk speeds to be maintained over the worst of potholed and corrugated tracks. In the very spacious rear compartment, the ride is comfortable, but less smooth than in the front seats.

Geared at three turns from extreme to extreme of the very good lock, the steering has the silky smoothness appropriate to this car's character. A little flexibility has been accepted in order to obtain freedom from road shock without sacrificing self-centring action, but the car handles easily and precisely at its normal cruising speeds: reasonably light control when parking a 22-cwt. car testifies to the mechanical efficiency of the steering mechanism. Roll on

Deep, separately adjustable front seats, and rear seats well within the wheelbase provide an exceptionally smooth ride. The upholstery is in grained leather-cloth; well-fitted floor covering in rubber.

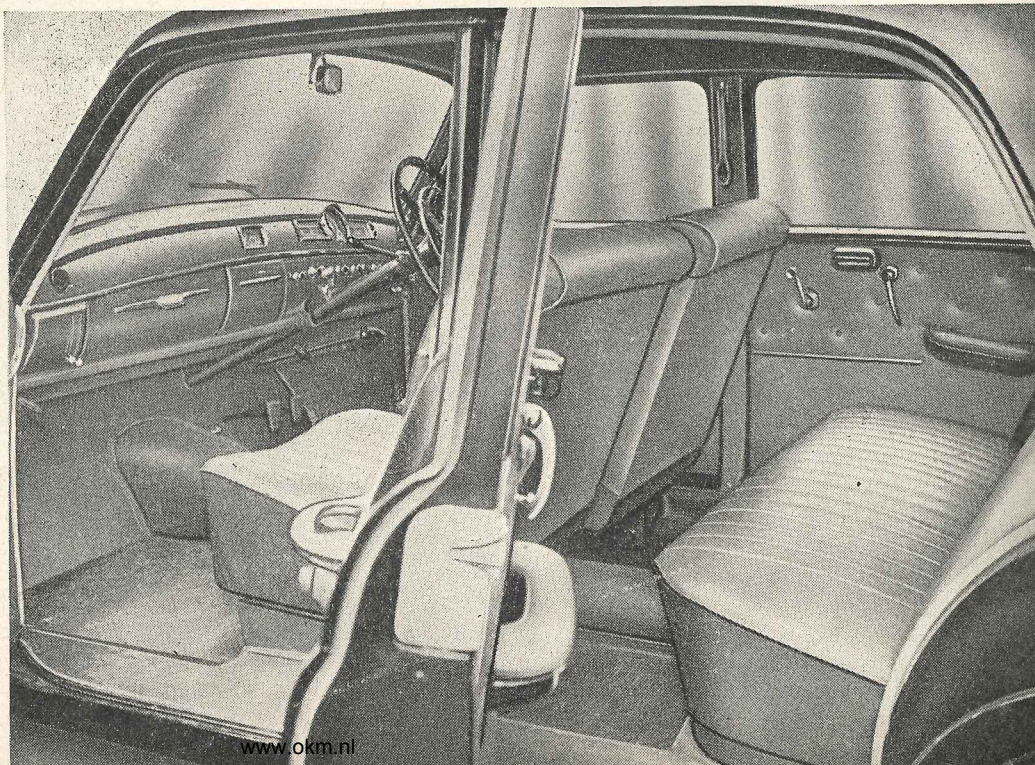
corners occurs to about the modest extent which would be expected in a touring car with flexible suspension but of low and wide build, and the "oversteer" characteristic sometimes associated with divided-axle independent rear wheel springing has been banished safely beyond the cornering vigour usable upon public highways, wide track and the use of 13-inch wheels no doubt helping to ensure consistently good road manners. With four wheels independently sprung, the car is positively located laterally in relation to all its wheels, there being no sway on sudden changes of direction.

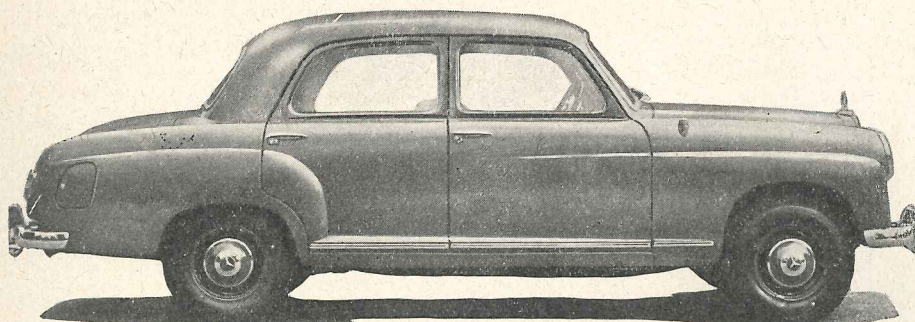
Performance, as has been indicated, is of the effortlessly adequate order without being startling. The timed maximum speed of 73.8 m.p.h., recorded as the mean of runs with and against a strong wind, falls short of the manufacturer's normally precise claims by approximately 4 m.p.h., perhaps because an engine designed for longevity was insufficiently run-in to develop its full power.

Cruising at 70 m.p.h. is quiet and smooth but at this speed the reserve of

power is rather small and the fuel consumption relatively heavy, a genuine 60 m.p.h. being the quiet pace which can be held steadily on undulating roads without the cruising fuel consumption falling below 28 m.p.g.

Closely akin to the "overdrive" ratio of some other cars of comparable size, the 3.89/1 top gear ratio used on this model does not provide dazzling get-away from low speeds, but is quite normally usable down to 20 m.p.h., whilst acceleration from 10 m.p.h. in top gear is possible without snatch. There is, however, every incentive to make use of the gearbox, which has good synchromesh mechanism on all its four ratios, the steering-column gear lever working very smoothly. Not absolutely inaudible under load, the gears are very quiet and "smooth" sounding, and in town it is normal to cover long distances in third gear which, virtually silent during steady-speed running, gives quiet acceleration up to 40 m.p.h., and far from fussy acceleration on up to a recommended limit of 56 m.p.h. In really hilly country, second gear can be needed quite often, the recommended maximum speed in this ratio being 36 m.p.h. First gear is low





Short bonnet and long boot characterize the profile of the Mercedes. Ahead of the windscreen pillar may be seen one of the combined direction indicator and parking lamps.

enough to tackle any foreseeable gradient, and for some purposes, the extra wheel adhesion available with independent rear wheel suspension (thanks to engine torque not lifting one rear wheel as with a conventional axle) would have obvious value.

Positive in action, so that bad throttle control after a gear-change can jerk the car, the clutch, nevertheless, operates very smoothly when used with normal skill, and despite the high ratio of 9.25/1 it is not impossible to start from rest in second gear. Although this is not in any way a difficult car to drive, it certainly rewards a skilful touch on the controls such as the more mature motoring enthusiast takes pride in using.

Somewhat mixed feelings are induced by the brakes, which at times squeaked in a way which is especially unwelcome on such a quiet car. In general, they were smooth and progressive in action, and they could lock all four wheels when a rather heavy pressure was applied to the pedal. The handbrake also proved effective, although the beautifully made twist-to-release control was rather awkwardly placed behind the steering wheel.

On each side of the car, a separate fresh-air heating system is installed, pairs of control levers (without markings to identify their functions to strangers) regulating air flow and the amount of hot water used to warm this incoming air. Weather conditions during our test were not suitable for assessing the power of this dual heating system, but a strong flow of fresh air was available, an ample volume being directed onto the windscreen at any speed above 25 m.p.h. (no fan is fitted, unless ordered as an extra) and also through de-misting jets aimed at the side windows. The heat control was sensitive enough to allow very gentle warming to suit the climate of springtime to be obtained.

Minor Imperfections

Most of the minor controls worked extremely smoothly, although some details are not above criticism. The lighting switch, which has an additional position illuminating a single parking light on the side of the car, is very accessibly placed, but so small is the angle through which it turns that by daylight it is easy to leave the side and rear lamps alight unintentionally.

On the test car, the choke control did not appear to be functioning correctly, no "fast idle" being provided to facilitate manoeuvring of the car during the (commendably brief) warming-up period after a start from cold. Control of the direction indicators by twisting the horn ring is an unusual arrangement which comes to be accepted as very convenient, with the major proviso that absence of any self-cancelling action was greatly missed. Minor items which, on a relatively new car, required much too much effort to operate were the bonnet release and the push-button door locking catches. The doors closed beautifully easily, but the dummy radiator grille which lifted up with the bonnet was a potential head-bruise for anyone who had been looking at the engine.

Long Range

Reached through a counter-balanced lift-up lid, the luggage locker of this car is really large in size, and has a big expanse of completely flat rubber-covered floor. The spare wheel is mounted vertically at one side of the locker, and by uncovering a matching well in the floor on the other side of the locker it becomes possible to accommodate a second spare wheel. Beneath the floor of the locker, the fuel tank has a capacity of 12 $\frac{3}{4}$ gallons, giving a useful range of fully 300 miles between re-fuelling stops on a long journey: as will be seen from the figures on the data page, our overall fuel consumption with a preponderance of quite fast driving was 26.7 m.p.g. for 614 miles, more moderate speeds bringing figures better than 30 m.p.g. well within the reach of this extremely comfortable five-seater car.

Entirely unspectacular in its characteristics, the Mercedes-Benz type 180 is, nevertheless, a car which reflects great credit upon its German manufacturers. It offers a very high standard of refinement, and whilst durability cannot be assessed in a one-week test it obviously incorporates workmanship such as is rarely seen in mass-production cars. For the mature yet keen long-distance motorist, interested more in refinement than in sparkling acceleration, and seeking a car which should give good service over a considerable number of years, this model even at its duty-paid British price has real attractions.

Mechanical Specification

Engine	
Cylinders	4
Bore	75 mm.
Stroke	100 m.m.
Cubic capacity	1,767 c.c.
Piston area	27.4 sq. in.
Valves	Side
Compression ratio	6.7/1
Max. power	52 b.h.p.
at	4,000 r.p.m.
Piston speed at max b.h.p.	2,620 ft. per min.
Carburettor	Solex 32 P/JCB downdraught
Ignition	Bosch 6-volt coil
Sparkling plugs	Beru K175b1/14u or Bosch W175T1
Fuel pump	Solex mechanical
Oil filter	Full-flow
Transmission	
Clutch	Single dry plate
Top gear (s/m) ... ..	... 3.89
3rd gear (s/m) ... ..	... 5.95
2nd gear (s/m) ... ..	... 9.25
1st gear (s/m) ... ..	... 15.75
Propeller shaft	Divided open
Final drive	Hypoid bevel (rubber-mounted on frame)
Top gear m.p.h. at 1,000 r.p.m.	... 18.3
Top gear m.p.h. at 1,000 ft/min piston speed ... ..	... 27.9
Chassis	
Brakes	Hydraulic (2 i.s. front)
Brake drum diameter ... ..	... 9 in.
Friction lining area ... ..	... 127 sq. in.
Suspension:	
Front	Coil and wishbone i.f.s. with anti-roll torsion bar
Rear	Independent: by coil springs and swinging half-axles
Shock absorbers	Telescopic
Tyres	6.40 x 13 (Dunlop in Britain)
Steering	
Steering gear	Re-circulating ball type
Turning circle between kerbs	33 feet
Turns of steering wheel lock to lock	3
Performance factors (at laden weight as tested):	
Piston area, sq. in. per ton	21.5
Brake lining area, sq. in. per ton	100
Specific displacement, litres per ton mile	2,275
Fully described in <i>The Motor</i> , September 16, 1953.	
Coachwork and Equipment	
Bumper height with car unladen:	
Front (max.)	20 $\frac{1}{2}$ in., (min.) 12 in.
Rear (max.)	24 in., (min.) 14 in.
Starting handle ... ..	... No
Battery mounting ... ..	... On scuttle
Jack ... ..	... Bevel type
Jacking points ... ..	... 4 external, on body sides
Standard tool kit:	Tool bag, jack, wheel nut spanner, wheel mounting fork, triple key for oil filler caps, 1 single-ended spanner, 3 double-ended spanners, 1 double-ended box spanner and tommy bar, 1 pair pliers, 2 screwdrivers, tyre pressure gauge, spare fuses.
Exterior lights:	2 headlamps with pilot bulbs, 2 tail/stop/direction indicator lamps, 2 re- versing lamps, 2 parking/direction indicator lamps, number plate lamp.
Direction indicators	Flashing type, non-self-cancelling
Windscreen wipers	Electrical self-parking, 2 blades
Sun vizors ... ..	... One
Instruments:	Speedometer (distance recorder without "trip" or decimals), oil pressure gauge, coolant thermometer, fuel contents gauge.
Warning lights:	Headlamp main beam, choke, direction indicators, low fuel level, dynamo charge.
Locks:	
With ignition key	Ignition and steering
With other keys	Driver's door, luggage locker
Glove lockers	One on fascia, with lid
Map pockets	Two below instrument panel
Parcel shelves	One behind rear seat
Ashtrays	Three (1 on fascia, 2 on rear doors)
Cigar lighters	One on fascia
Interior lights	One, with courtesy switches
Interior heater:	Fresh air type, with windscreen and side window de-misting jets (fan, optional extra).
Car radio	Optional extra
Extras available (German):	Ventilation fans, radio, fog lamps, fitted trunks, second spare wheel and tyre, tilt-back front seats, sliding roof.
Upholstery material	Grained leather-cloth
Floor covering	Rubber
Exterior colours standardized:	Five (black, grey, green, dark brown, blue).
Alternative body styles ... ..	... Nil