



# Road Test No. 27/59

**Make:** Hillman

**Type:** Minx Ser. IIIA de Luxe with Easidrive Transmission

**Makers:** Hillman Motor Co. Ltd., Ryton on Dunsmore, Coventry

## Test Data

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**CONDITIONS:** Weather: Dry, light wind. (Temperature 58°-61°F., Barometer 29.8 in.Hg.) Surface: Dry tarmac and banked concrete track. Fuel: Premium grade pump fuel (approximately 96 Research Method Octane Number).

### INSTRUMENTS

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

### WEIGHT

Kerb weight (unladen, but with oil, water and fuel for approx. 50 miles) ... 21½ cwt.  
 Front/rear distribution of kerb weight ... 58/42  
 Weight laden as tested ... 25 cwt.

### MAXIMUM SPEEDS

**Flying Quarter Mile**  
 Mean lap speed around banked circuit ... 80.0 m.p.h.  
 Best one-way quarter mile ... 81.1 m.p.h.  
**"Maximile" Speed.** (Timed quarter mile after one mile accelerating from rest)  
 Mean of three runs ... 78.3 m.p.h.  
 Best one-way time equals ... 79.4 m.p.h.

### Speed in gears

Max. possible speed in 2nd gear ... 60 m.p.h.  
 Max. automatic speed in 2nd gear ... 45 m.p.h.  
 Max. automatic speed in 1st gear ... 20 m.p.h.

### FUEL CONSUMPTION (top gear)

41 m.p.g. at constant 30 m.p.h. on level.  
 41 m.p.g. at constant 40 m.p.h. on level.  
 37 m.p.g. at constant 50 m.p.h. on level.  
 32 m.p.g. at constant 60 m.p.h. on level.  
 25½ m.p.g. at constant 70 m.p.h. on level.  
 19½ m.p.g. at maximum speed of approximately 80 m.p.h. on level.

**Overall Fuel Consumption** for 1,278 miles, 48.8 gallons, equals 26.2 m.p.g. (10.8 litres/100 km.)

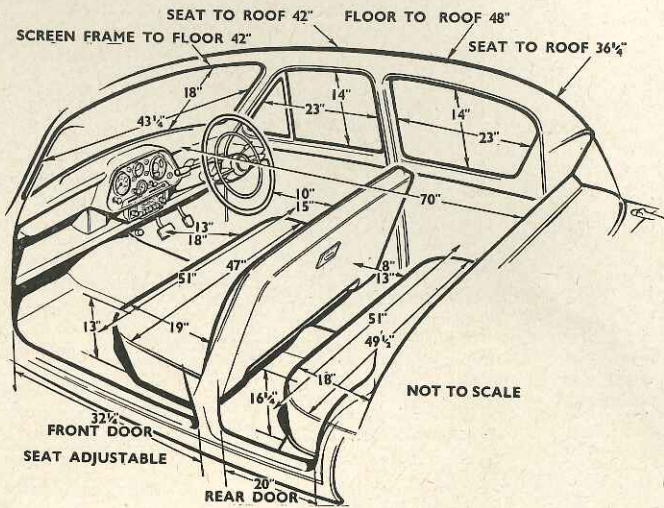
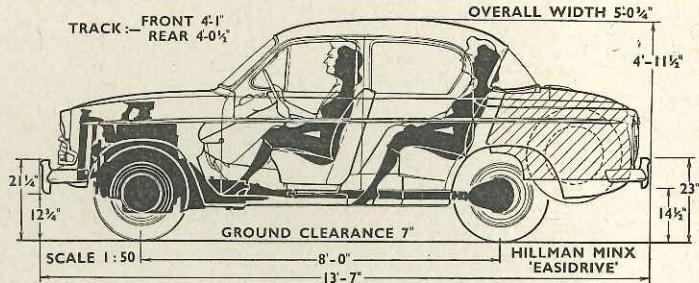
**Touring Fuel Consumption** (m.p.g. at steady speed midway between 30 m.p.h. and maximum, less 5% allowance for acceleration) 32.8 m.p.g.  
 Fuel tank capacity (maker's figure) 7 gallons

### HILL CLIMBING at sustained steady speeds

Max. gradient on 2nd gear ... 1 in 6.8 (Tapley 325 lb/ton)

### STEERING

Turning circle between kerbs:  
 Left ... 34½ feet  
 Right ... 34½ feet  
 Turns of steering wheel from lock to lock ... 3½



### ACCELERATION TIMES from standstill (drive range)

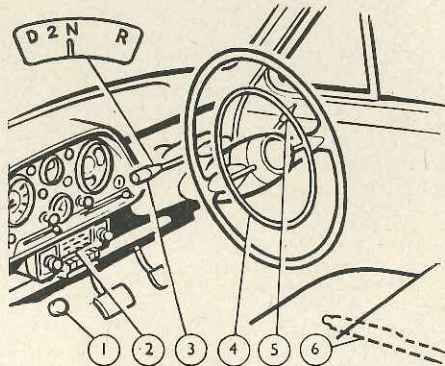
0-30 m.p.h.	7.6 sec.
0-40 m.p.h.	11.5 sec.
0-50 m.p.h.	16.7 sec.
0-60 m.p.h.	24.5 sec.
0-70 m.p.h.	37.9 sec.
Standing quarter mile	23.4 sec.

### ACCELERATION TIMES on Upper Ratios

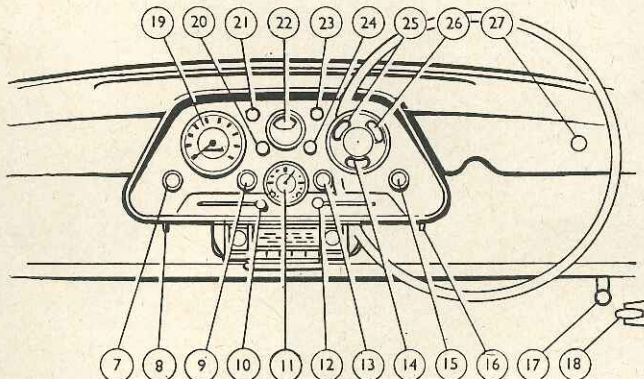
Drive range	2nd
0-20 m.p.h.	5.9 sec.
10-30 m.p.h.	6.6 sec.
20-40 m.p.h.	7.2 sec.
30-50 m.p.h.	8.7 sec.
40-60 m.p.h.	—
50-70 m.p.h.	—

### BRAKES from 30 m.p.h.

0.95 g retardation (equivalent to 31½ ft. stopping distance) with 120 lb. pedal pressure.  
 0.85 g retardation (equivalent to 35 ft. stopping distance) with 100 lb. pedal pressure.  
 0.66 g retardation (equivalent to 45½ ft. stopping distance) with 75 lb. pedal pressure.  
 0.45 g retardation (equivalent to 67 ft. stopping distance) with 50 lb. pedal pressure.  
 0.21 g retardation (equivalent to 143 ft. stopping distance) with 25 lb. pedal pressure



1, Headlamp dip switch. 2, Radio controls. 3, Transmission selector lever. 4, Horn ring. 5, Direction indicator switch. 6, Handbrake. 7, Chokey control. 8, Fan on/off switch. 9, Lights switch. 10, Demister control. 11, Clock. 12,



Heater control. 13, Windscreen wipers switch. 14, Water thermometer. 15, Ignition and starter switch. 16, Panel light switch. 17, Air vent control. 18, Bonnet catch release. 19, Speedometer and distance recorder. 20, Direction

indicator warning light. 21, Oil pressure warning light. 22, Fuel contents gauge. 23, Dynamo charge warning light. 24, Headlamp main beam indicator. 25, Ammeter. 26, Blank dial. 27, Windscreen washer button.

# The Hillman Minx III<sub>A</sub> de Luxe

(with automatic transmission)

Face-lifted, the Minx remains a compact four-seater of smooth, conventional line. Bumper over-riders, white-wall tyres and wheel rim embellishers are extra.



## Fully Automatic Transmission Brought Successfully to Small-car Motoring

**S**MALL mechanical improvements and a styling face-lift have been applied to the 1960 Hillman Minx. The feature which makes this road test of especial importance, however, is the arrival of wholly automatic gear-changing on a 1½-litre family saloon after several years in which the British public has shown itself reluctant to adopt the half-way stage of automatic clutches and manual gear selection. Made by Smiths and developed for a number of years "Easidrive," as it is known in its Rootes guise, follows quite different principles from the normal, fluid-drive automatic transmissions, giving a positive non-slip drive by electro-magnetic powder clutches and automatic selection of three forward gear ratios. Over 1,400 miles' experience with the Easidrive Minx bears out the claim that the system is unusually well suited to a small car.

Before describing the uses of the transmission it is worth establishing its conditions of work. The Hillman is a four-seater saloon weighing some 21 cwt. at the kerb, powered by an engine of 56½ gross b.h.p. with a maximum speed (unaffected by the transmission) of about 80 m.p.h. It is not possible to make a direct comparison of performance with the car in standard form as minor improvements in the engine since

the last road test by *The Motor* have raised maximum speed by about 2 m.p.h. with some steady-speed fuel consumptions up to 2½ m.p.g. better. However, acceleration from rest to 50 m.p.h., using all three gears of the automatic transmission, takes almost exactly the same space of time as on last year's car making manual changes between three out of four gears. For the driver interested in performance the slightly retarding effect of automatics is therefore just about accounted for by a year of progress in engine development. Considered, perhaps more fairly, in the light of effortless driving, top gear acceleration from 10 m.p.h. to 50 m.p.h. in the old car, at 25 seconds, compares very unfavourably with this year's "Drive" range figure of under 15 seconds.

### How to "Easidrive"

From the driver's seat the selector lever and its indicator panel on the steering column differ from their American-designed counterparts only in the absence of a "Park" position. The lever can be moved to Drive, Second or Neutral and, by lifting it over a spring-loaded catch, to Reverse, which should not be engaged before the car has come completely to rest.

Normal routine is to select Neutral, in which position only will the starter function, and then Drive. With the car at rest, this will automatically engage bottom gear, but without causing any of the "creep" sometimes found with hydraulic drives. Undoubtedly the Easidrive's most appealing characteristic is the smoothness of the powder clutch in standing starts. Gently or vigorously used, it gets away with no fuss or judder and appears to be immune to ill-treatment. Trials on an accurately calibrated test hill showed that restarting with two people and 50 lb. or so of luggage was easy and still smooth on a 1 in 4 gradient but impossible on a slope of 1 in 3.

Changes into second and top gears are governed automatically by a control box matching road speed and throttle opening. Under light acceleration the upward changes occur at about 10 m.p.h. and

25 m.p.h. respectively, speeds which use of full throttle will increase to about 20 m.p.h. and 45 m.p.h. Driving in all kinds of road conditions confirms the initial impression that, like most automatics, Easidrive lends itself usefully to unhurried motoring, but unlike most is not really at its best in city traffic. Inevitably, with a small engine, a compromise has had to be reached between performance and easy operation, and performance has taken priority in fixing the minimum speeds for engagement of the upper gears. The result is that town driving quite often finds the car cruising at 20-25 m.p.h. in a lower, and therefore noisier, gear than is necessary.

The same is true in the reverse sense, when at speeds only a little above the minimum for each gear quite light pressure on the accelerator will cause a change down; the adoption of either some kind of "kick-down" switch which would work only when the pedal was pushed to the floor, or a manual control to hold top gear, might be an advantage to more expert drivers for smooth driving in traffic.

### Manual Selection Possible

It is easy when describing a complicated mechanism to give a false impression that complicated tactics are needed to control it, which is the opposite of the truth. For nine people out of ten "Drive" is the only position of the lever which will be used for everyday journeys, and apart from a slowish change up from bottom gear the workings of the transmission will be ignored. For the tenth driver—possibly one who likes to drive fast but whose wife prefers to do things the easy way—the second-gear hold position of the selector, together with a little practice, will supply most of the answers. Instead of changing up automatically at 45 m.p.h., even under full throttle, the transmission can be kept in second up to the limit of engine revs (about 60 m.p.h., or 6,000 r.p.m. in the extreme case) for the best possible acceleration. Alternatively, when engine braking is needed, selecting "2" at any speed below 45 m.p.h. will make a smooth change down

### In Brief

Price (including "Easidrive" transmission as tested) £627 plus purchase tax £262 7s. 6d., equals £889 7s. 6d.

Price with manual transmission (including purchase tax), £764 14s. 2d.

Capacity ... .. 1,494 c.c.  
Unladen kerb weight ... 21¼ cwt.

#### Acceleration:

20-40 m.p.h. in drive range 7.6 sec.  
0-50 m.p.h. through gears 16.7 sec.

Maximum speed ... .. 80.0 m.p.h.  
"Maximile" speed ... .. 78.3 m.p.h.

Touring fuel consumption ... 32.8 m.p.g.

Gearing: 16.0 m.p.h. in top gear at 1,000 r.p.m.; 32.0 m.p.h. at 1,000 ft./min. piston speed.



## The Hillman Minx IIIA de Luxe

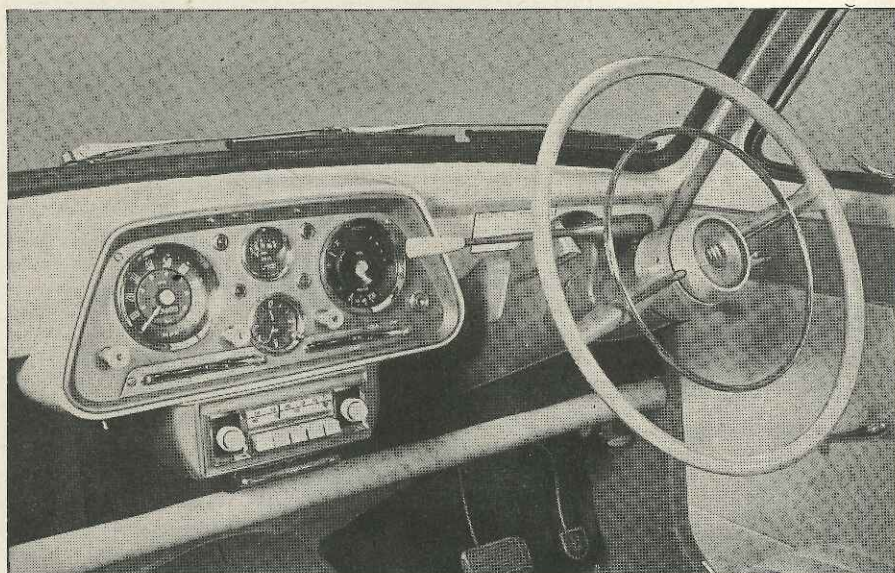
Separate front seats, an optional extra, are sensible in a car which is made to be comfortable for four adults. Front leg-room could be improved by a longer travel for the front seats.

with the engine automatically "blipped." The "2" position can also be useful on occasions when traffic crawling would otherwise bring on a series of changes between first and second. Deliberate slipping of the powder coupling by driving slowly up a long hill in second gear had no apparent ill effect on the smoothness of take-up.

Easidrive can therefore be taken for granted or controlled manually to a fair degree. The usefulness of a really effective two-pedal transmission was amply demonstrated during our test period by confiding the car to an inexperienced driver who restarted on a very steep hill without any trouble or running back. It is clear that for people not trained in the old school of gear-changing, balancing the car between accelerator and brake is much easier than between accelerator, clutch and handbrake.

No alterations, even in final drive ratio, are made to the Minx when the automatic transmission is installed. The alternative is a four-speed synchromesh gearbox similar to that of last year's model but with closer ratios and a central gear lever. The more powerful engine, already remarked on, is a smooth and quiet performer, pinking slightly if hard pressed on premium-grade British petrol. The choke is needed for quite a short time when starting on a mild autumn morning, although the added inconvenience of stalling the engine when the gear selector has to be returned to neutral, in order to start again, encourages driving for another minute or two with the choke partly pulled out—the "fast idle" causes no clutch drag.

Like its Easidrive, the Minx favours moderate driving methods. Roadholding is of the orthodox family saloon standard which might be expected, safe rather than outstanding, by reason of fairly strong understeer (58% of the weight is on the front wheels) and early but controllable sliding of the back wheels if sharp corners are attacked with enthusiasm in the wet. Steering which tends to the sluggish in response and at low speeds is not particularly light, will come as no surprise to drivers of the earlier Hillman models and is probably the least likeable characteristic of the car. With normal pressures the tyres can be provoked into squeals quite easily, and there is enough roll for the front passenger to be glad of optionally available separate seats.



The interior fittings include a full-width parcel shelf. An ammeter is standard with Easidrive transmission, but not an oil pressure gauge. Separate controls are provided for interior heating and windscreen demisting.

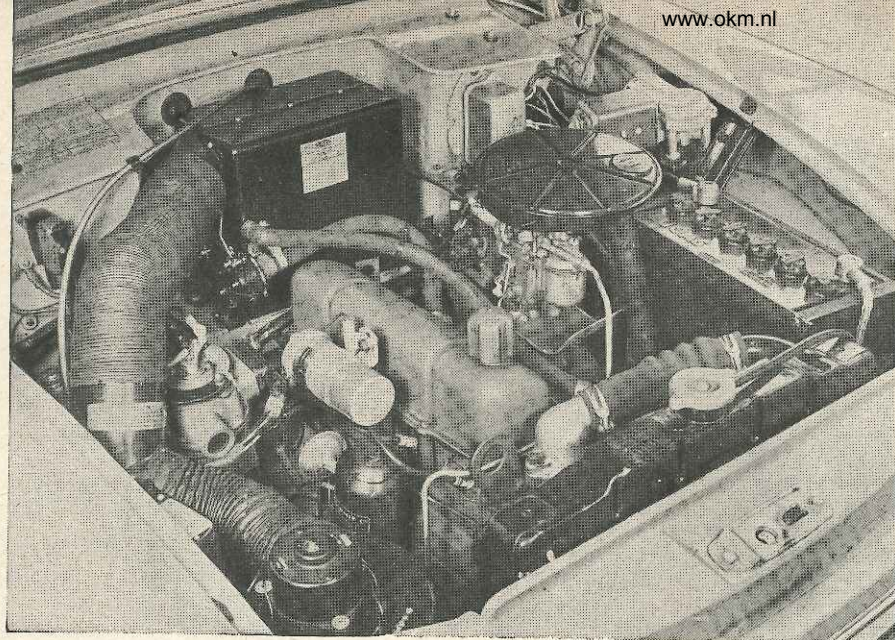
To the credit of the engineering design department, larger brakes which increase the lining area from 92 sq. in. to 121 sq. in. are extremely reassuring. A pedal pressure of 120 lb., needed for the best possible stopping power, is usually found easily enough in real emergency, while the pressures in normal use are quite light. More important, a series of stops from 60 m.p.h. revealed no tendency towards fade or drum expansion, and the brakes continued to pull straight.

As a leveller of rough roads the suspension arouses neither special criticism nor special praise. One might perhaps expect it to give a softer and more floating ride, whereas wavy surfaces seem to be dealt with rather better than small bumps like cats eyes, which are fairly noticeable at low speed. The separate front seats of the test car are useful assistants to the suspension, well-padded and comfortable over a long journey. For some drivers the backs could be less upright but a more serious and unnecessary failing is the limited front leg

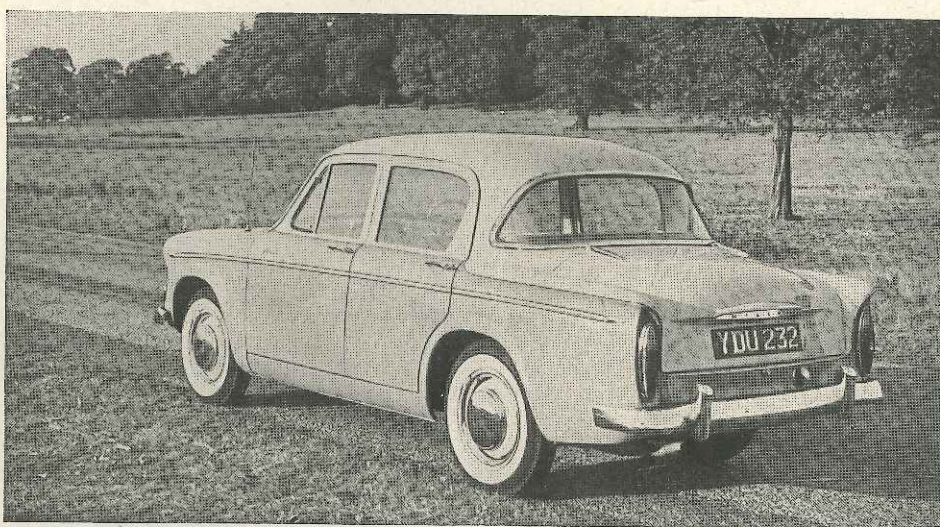
room caused simply by restricted travel on the seat adjustment. The rear-seat ride aroused no complaints at all from passengers who travelled in the back for quite long distances.

Visibility, helped by a new, deeper windscreen, is excellent, spoiled only by the driving mirror which leaves an unforgivable blind-spot for tall drivers. The wrap-around rear window and slightly raised wings make a good complement to the Easidrive clutch for backing into a small space. Amongst the other aids to comfortable and easy motoring is a heating system with the rare ability simultaneously to blow warm air on to the floor and cool air on to the windscreen at breathing level.

The small internal fittings are in some ways disappointing on a car with the Rootes reputation for finish. Such things as stiff window winders with loose plastic bosses, or an American-style headlamp switch with two pull "pressures" but no twist between side and headlamps are not in keeping with the rest of the car. Rubber



The Easidrive control box, seen to the left of the coil, does not obstruct access to the dipstick, but the distributor is more difficult to reach.



"Tail-lifted" to match its "face," the 1960 car has rounded fins and new tail lamp clusters as distinguishing marks. An Easidrive nameplate is fitted to cars with automatic transmission.

covers the floor in the front and carpet in the rear. For the Minx, both standard and de luxe, a parcel shelf running the full width of the car has taken the place of a lockable glove box. With the shelf under the rear window and a boot (its lid spring-loaded) of very useful dimensions, there is ample capacity for luggage of all sorts. A range of less than 200 miles without unfairly hard driving suggests that another two gallons could be usefully added to the capacity of the tank.

All in all, the 1960 Minx is the anticipated development of its predecessors in a long line of sensible family saloons. Family motoring on the 1½-litre scale today implies performance which would have been considered sporting not very long ago; the latest in transmission design makes it possible to combine semi-sporting performance with very sophisticated effortless driving.

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## Specification

<b>Engine</b>	
Cylinders ... ..	4
Bore ... ..	79 mm.
Stroke ... ..	76.2 mm.
Cubic capacity ... ..	1,494 c.c.
Piston area ... ..	30.4 sq. in.
Valves ... ..	Overhead (pushrod)
Compression ratio ... ..	8.5/1
Carburettor ... ..	Zenith downdraught
Fuel pump ... ..	AC mechanical
Ignition timing control ... ..	Centrifugal and vacuum
Oil filter ... ..	Fram or Tecalemit
Max. power (gross) ... ..	56.5 b.h.p.
at ... ..	4,400 r.p.m.
Piston speed at max. b.h.p. ... ..	2,200 ft./min.
<b>Transmission</b>	
Clutch ... ..	Borg and Beck s.d.p.
Top gear ... ..	4.55
2nd gear ... ..	7.243
1st gear ... ..	13.497
Reverse ... ..	14.014
Propeller shaft ... ..	Hardy Spicer open
Final drive ... ..	Spiral bevel
Top gear m.p.h. at 1,000 r.p.m. ... ..	16.1
Top gear m.p.h. at 1,000 ft./min. piston speed ... ..	32.3
<b>Chassis</b>	
Brakes ... ..	Lockheed hydraulic
Brake drum internal diameter ... ..	9 in.
Friction lining area ... ..	121 sq. in.
Suspension:	
Front ... ..	Independent (coil and wishbone)
Rear ... ..	Semi-elliptic
Shock absorbers ... ..	Armstrong telescopic
Steering gear ... ..	Burman re-circulating ball
Tyres ... ..	5.60—15

## Coachwork and Equipment

Starting handle ... ..	Yes	With other keys ... ..	Boot
Battery mounting ... ..	On left of engine	Glove lockers ... ..	None
Jack ... ..	.. Screw pillar	Map pockets ... ..	None
Jacking points ... ..	4 under bumpers	Parcel shelves ... ..	One under facia, one under rear window
Standard tool kit: Wheelbrace, jack, nave plate remover, tyre valve key.		Ashtrays ... ..	One under facia, one behind front seat
Exterior lights: 2 head, 2 side/indicator, 2 tail/indicator, 2 stop, rear number plate.		Cigar lighters ... ..	None
Number of electrical fuses ... ..	2	Interior lights ... ..	One with courtesy switches
Direction indicators ... ..	Flashing, self-cancelling	Interior heater ... ..	Optional, Smiths
Windscreen wipers ... ..	Electric self-parking	Car radio ... ..	Optional
Windscreen washers ... ..	Extra (Tudor)	Extras available: Heater, radio, oil pressure gauge, ammeter (standard with Easidrive transmission), bumper over-riders, separate front seats.	
Sun visors ... ..	2	Upholstery material ... ..	Vynide
Instruments: Speedometer with non-decimal, total distance recorder, fuel gauge, water thermometer.		Floor covering ... ..	Rubber and carpet
Warning lights: Dynamo charge, oil pressure, indicator, headlamp main beam.		Exterior colours standardized ... ..	6 single, 6 two-tone
Locks: With ignition key Ignition, both front doors		Alternative body styles ... ..	Convertible estate car

## Maintenance

Sump ... ..	8 pints S.A.E. 20/20W (over 90° F. S.A.E. 30 (under 10° F., S.A.E. 10)	Tappet clearances (cold):	
Gearbox (Easidrive) ... ..	2½ pints, S.A.E. 10W/30	Inlet ... ..	0.012 in.
Rear axle ... ..	1½ pints, S.A.E. 140 E.P.	Exhaust ... ..	0.014 in.
Steering gear lubricant ... ..	S.A.E. 140 E.P.	Front wheel toe-in ... ..	¼ in.
Cooling system capacity ... ..	12½ pints (2 drain taps)	Camber angle ... ..	45'
Chassis lubrication ... ..	By grease gun every 1,000 miles to 23 points	Castor angle ... ..	1° 45'
Ignition timing ... ..	9-11° b.t.d.c.	Steering swivel pin inclination ... ..	5° 15'
Contact-breaker gap ... ..	0.015 in.	Tyre pressures:	
Sparking plug type ... ..	Champion N8 14 mm.	Front ... ..	24 lb.
Sparking plug gap ... ..	0.025 in.	Rear ... ..	24 lb. (26 lb. laden)
Valve timing: Inlet opens 10° b.t.d.c., inlet closes 45° a.b.d.c.; exhaust opens 46° b.d.c., exhaust closes 9° a.t.d.c.		Brake fluid ... ..	Lockheed S.A.E. 70 R1 or R2
		Battery type and capacity ... ..	Lucas 12 v., 51 amp./hr.
		Miscellaneous: Throttle and governor controls to be oiled at 1,000-mile intervals.	