The Motor Road Test No. 8/59

Type: Calthorpe Home Cruiser (on 10/12 cwt. chassis)

Makers: Chassis built by Ford Motor Co. Ltd., Dagenham, Essex.
Body conversion for M. Calthorpe (Home Cruiser) Ltd., 128 Park Lane, London, W.1., by F. Stuart & Son (Shepperton), Ltd.

Test Data

CONDITIONS: *Weather: Cold and dry with moderately strong wind. (Temperature 32°-34° F., Barometer 29.6 in. Hg.) Surface: Dry tarred macadam with icy patches. Fuel: Standard-grade pump petrol approx. 82 Research Method Octane Rating.*

INSTRUMENTS

Speedometer at 30 m.p.h.	11% fast
Speedometer at 50 m.p.h.	7% fast
Distance recorder	3% fast

WEIGHT

Kerb weight (unladen, but with oil coolant and fuel for approx. 50 miles)	26¼ cwt
Front/rear distribution of kerb weight	54½/45½
Weight laden as tested	30¼ cwt

MAXIMUM SPEEDS

Flying Quarter Mile

Mean of four opposite runs	61.9 m.p.h.
Best one-way time equals	64.7 m.p.h.

"Maximile Speed." (Timed quarter mile after one mile accelerating from rest.)

Mean of four opposite runs	60.4 m.p.h.
Best one-way time equals	61.6 m.p.h.

Speed in Gears

Max. speed in 2nd gear	50 m.p.h.
Max. speed in 1st gear	31 m.p.h.

FUEL CONSUMPTION

33.5 m.p.g. at constant 30 m.p.h. on level.
28.5 m.p.g. at constant 40 m.p.h. on level.
24.0 m.p.g. at constant 50 m.p.h. on level.

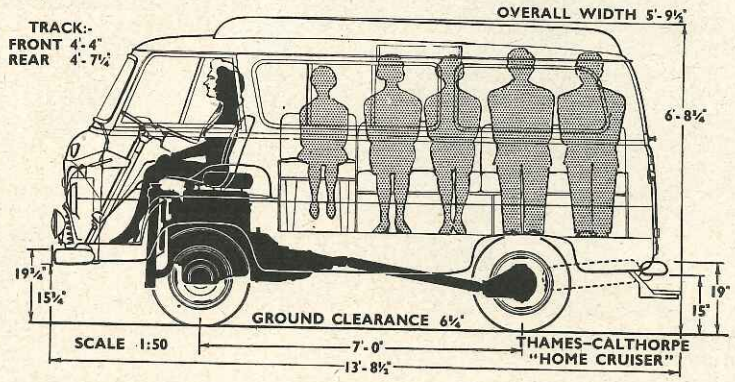
Overall Fuel Consumption for 942 miles, 41¼ gallons, equals 22.7 m.p.g. (12.4 litres/100 km.)

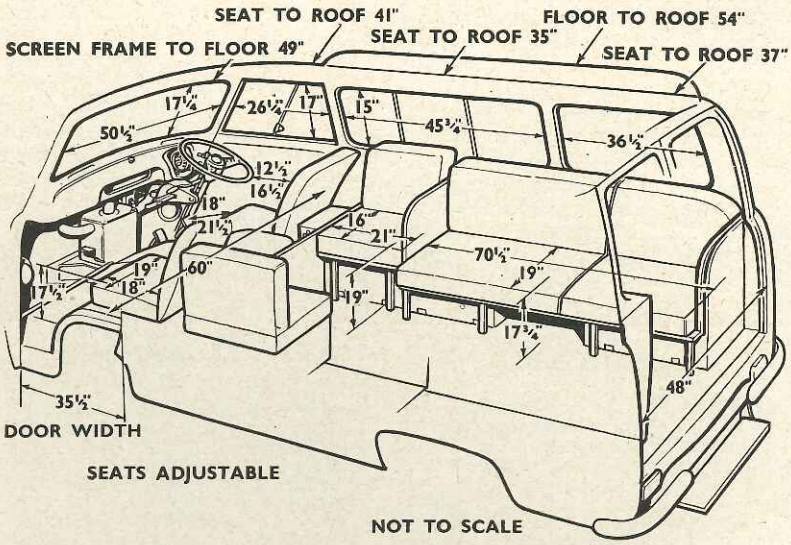
Touring Fuel Consumption (m.p.g. at steady speed midway between 30 m.p.h. and maximum, less 5% allowance for acceleration) 24.5 m.p.g.

Fuel Tank Capacity (maker's figure) 8 gallons.

STEERING

Turning circle between kerbs:	
Left	34 feet
Right	34½ feet
Turns of steering wheel from lock to lock	2¾





ACCELERATION TIMES from standstill

0-30 m.p.h.	8.8 sec.
0-40 m.p.h.	15.4 sec.
0-50 m.p.h.	30.8 sec.
Standing quarter mile	26.3 sec

ACCELERATION TIMES on upper ratios

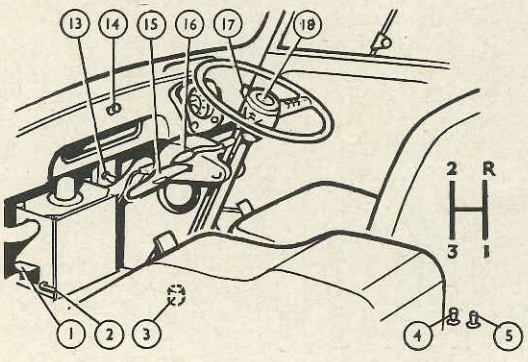
	Top gear	2nd gear
10-30 m.p.h.	—	9.5 sec.
20-40 m.p.h.	21.0 sec.	11.8 sec.
30-50 m.p.h.	27.9 sec.	—

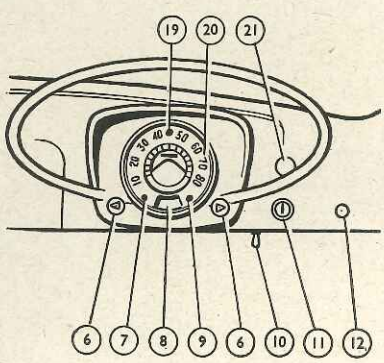
BRAKES from 30 m.p.h. (wet road)

0.80 g retardation (equivalent to 37½ ft. stopping distance) with 100 lb. pedal pressure.
0.69 g retardation (equivalent to 43½ ft. stopping distance) with 75 lb. pedal pressure.
0.50 g retardation (equivalent to 60 ft. stopping distance) with 50 lb. pedal pressure.
0.23 g retardation (equivalent to 130 ft. stopping distance) with 25 lb. pedal pressure.

HILL CLIMBING at sustained steady speeds

Max. gradient on top gear	1 in 18.7 (Tapley 120 lb./ton)
Max. gradient on 2nd gear	1 in 9.3 (Tapley 250 lb./ton)





1, Heater air shutter. 2, Heater control. 3, Headlamp dipswitch. 4, Starter switch. 5, Choke control. 6, Direction indicator warning light. 7, High beam indicator. 8, Fuel contents gauge. 9, Dynamo charge warning light. 10, Panel light switch. 11, Ignition switch. 12, Spotlight switch. 13, Heater fan switch. 14, Wipers switch. 15, Handbrake. 16, Gear lever. 17, Direction indicator switch. 18, Horn button. 19, Oil pressure warning light. 20, Speedometer and distance recorder. 21, Lights switch.

The Calthorpe Home Cruiser on Thames Van

An Eight-seat Car and a Touring Caravan Combined at a Competitive Price

Additional interior height is imparted to the Ford Thames conversion by an elevating roof, shown here in the raised position. The curtains offer privacy.

AT a price of £875, the Calthorpe "Home Cruiser" conversion of the Ford-built Thames 10/12-cwt. van invites a very interesting comparison. For about the same price, people seeking either a "second string" or an "only car" could either buy this self-propelled caravan or else could buy both a small car such as a Ford Prefect and an 8-ft. trailer caravan offering approximately comparable living accommodation.

In favour of what until recently would have been the orthodox choice, that of the car and trailer, there are points such as higher performance, greater fuel economy, and rather easier parking on occasions when the caravan is not being towed. On none of these points, however, is the motor caravan open to serious complaint, since it will exceed 60 m.p.h. on the level, uses low-cost fuel at a rate well on the economical side of 20 m.p.g., and is only 15 inches longer overall than the Prefect, which is Ford's most compact car.

Favouring the Home Cruiser is immense roominess, which allows eight people to be carried instead of four; an ability to use 50 m.p.h. cruising speeds comfortably and legally when a trailer caravan would be limited to 30 m.p.h.; ease of manœuvre into or out of places where reversing difficulties would discourage most people from taking a trailer, and the fact that one vehicle is easier and cheaper to garage or park than two vehicles. Especially for anyone who is interested in touring rather than in holidays spent on one camping site, and for anyone who habitually travels afield at week-ends, this sort of conversion (which may also be applied to vans of three other makes) is an extremely interesting proposition.

In Brief

Price	£875 (no purchase tax).
Capacity	1,703 c.c.
Unladen kerb weight	26½ cwt.
Acceleration:	
20-40 m.p.h. in top gear	21.0 sec.
0-50 m.p.h. through gears	30.8 sec.
Maximum direct top gear gradient	1 in 18.7
Maximum speed	61.9 m.p.h.
"Maximile" speed	60.4 m.p.h.
Touring fuel consumption	24.5 m.p.g.
Gearing: 17.9 m.p.h. in top gear at 1,000 r.p.m.; 34.3 m.p.h. at 1,000 ft./min. piston speed.	

Sensible Layout

The problem in converting a light commercial vehicle into acceptable casual living quarters is to compress the necessary amenities into the available space and yet leave sufficient room for the occupants to move about with reasonable freedom. In this task the Calthorpe concern have succeeded reasonably well, particularly as regards the headroom afforded by their patented roof section, which, when the vehicle is on site, can be raised to give a full 6 ft. from floor to top.

In its current version, the roof comprises a flexible aluminium panel, hinged at the rear and provided with channelled rollers at the front, and two hinged side panels which lie flat when the roof is "down." To get it into the "up" position, all that is necessary is to release two catches and a wingnut and push the side members upwards and outwards, the aluminium panel curving upwards (and its end moving backwards on its rollers) to conform to the contours of the now-vertical side panels. Heavy rain, and subsequent experiments with a hosepipe, showed the structure to be thoroughly weatherproof. Bolts hold the side members in position when the roof is up and no harm resulted from driving with it in this position.

The general interior layout is planned very much on the lines of a small trailer caravan, a settee padded with interior-spring cushions being set along the offside and a kitchen unit and wardrobe along the other. Ahead of these are two small occasional seats which can be turned into a child's transverse bed. Use of twin rear doors, one half with a lockable exterior handle, but the other held shut by a bolt, is an arrangement which does not mate up ideally with the central gangway, as entry to or exit from the "living room" involves either squeezing through a narrow gap or opening both doors.

Using the Home Cruiser as mobile week-end accommodation in the course of our reporting duties showed it to be quite acceptably comfortable to live in, and transformation of the seating from "motoring" to "dining," and then to "sleeping" layout, was no more trouble than the same sort of arrangement in a trailer caravan, except that there was less room to deposit the cushions while the operation was in progress.

The double bed is just about long enough to accommodate a six-foot man and about the same width as the average domestic three-quarter bed. The cushions which make up the mattress are not all of equal size and a little practice is necessary to get them in the right positions. Once this is achieved, the result is comfortable.

Food and Light

Cooking and main lighting is by butane gas from a cylinder housed under one of the forward seats. A slight defect in the coupling between the cylinder and the regulator showed the need for this compartment to be provided with some form of ventilation. The single gas light is conveniently placed and the B. and B. two-burner and grill gas cooker worked satisfactorily.

Six gallons of fresh water can be carried in an optional-extra under-body tank the filler for which is on the opposite side to the fuel filler and distinguished from it by being set behind a small trap-door so there is little likelihood of putting the wrong fluid in the wrong tank. Feed to the sink is then by means of a double-acting pump which would be more convenient if the nozzle could be swung farther over the sink. Waste water goes down into another tank which is provided with a drain cock accessible from outside the vehicle. Beneath one of the seats there is stowage for a chemical closet.

There are cupboards with sliding doors in the bottom of the kitchen unit for carrying food and cooking utensils, but they are not ventilated; moreover, it would be an advantage were the doors a slightly tighter fit in their runners or provided with some sort of catch to prevent them sliding open and spilling the

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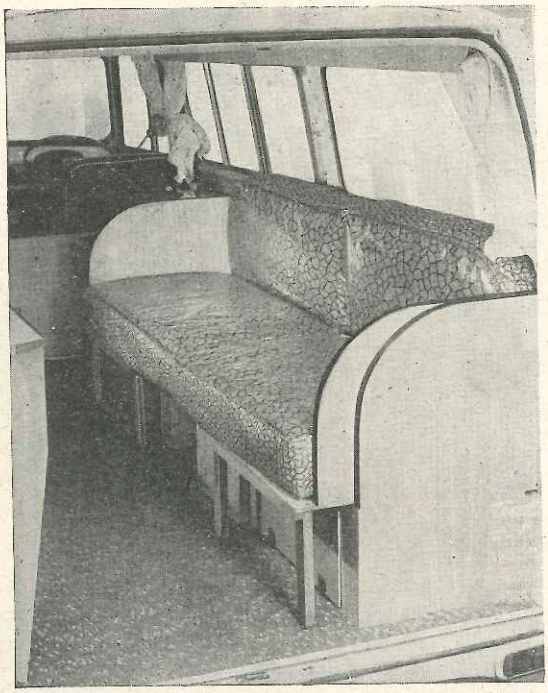
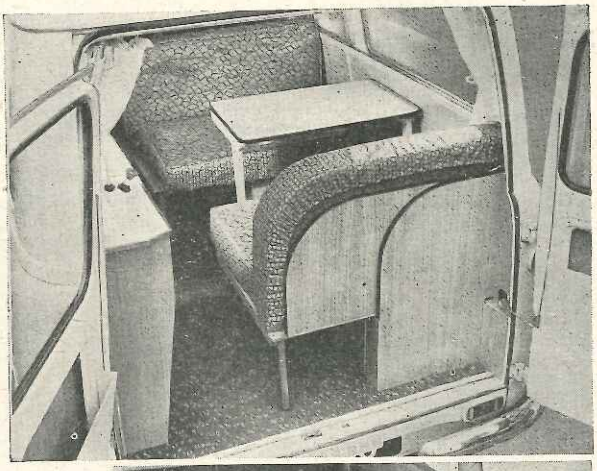
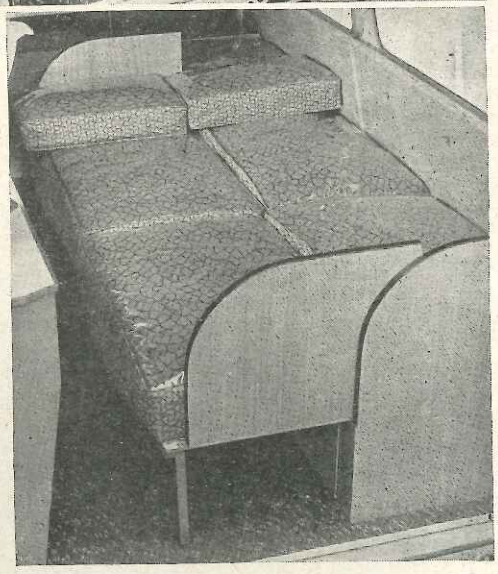






Seating can be arranged either in the form of a settee (*left*), or two individual seats, with or without the table (*top right*). For sleeping, a further transformation, involving the use of the table top and a pull-out front section of the settee, results in the double bed seen on the right.

cupboard contents when the vehicle is in motion on uneven surfaces or has to be braked sharply. This apart, however, commendation must be given to the joinery and the general finish of the furniture which is carried out in light-oak veneer and is well up to caravan standards of quality. All-round plastic curtains are available for the windows and windscreen to give privacy at night; they work on runners and are of adequate width to secure complete closure.

As a private car the Home Cruiser initially strikes a note of unfamiliarity, with its front seats perched up rather high above the front wheels, an engine cover between and behind the seats, and the backs of the headlights inside the "cab." But, the layout is soon found to have much merit, the adjustable seats proving very comfortable and far easier to enter than their height at first suggests, and the view from them forwards and sideways being superb — the screen pillars are amazingly slender and you can see over hedges or the tops of normal cars. The trim may look austere but with the optional fresh-air heater and screen de-mister this is a comfortably habitable "car" in either winter or summer.

Car-type Riding

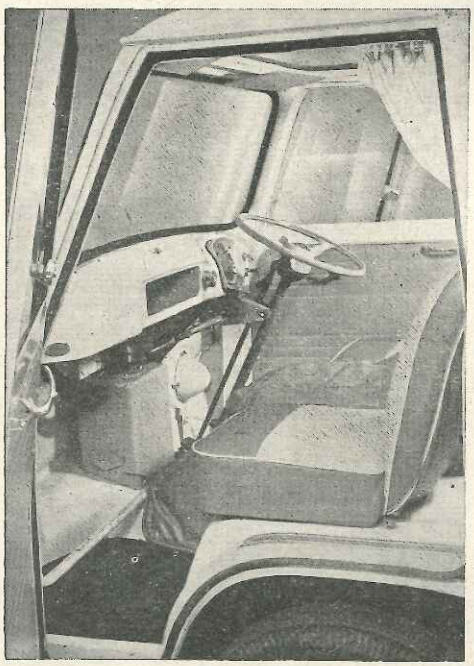
Seating directly above an axle cannot be expected to give quite the comfort of an inter-axle ride, but except on awkwardly wavy road surfaces the driver and front passenger in this model enjoy smoothness of travel which, thanks to a coil-spring layout of I.F.S., is up to modern car standards—rather firm rear springs, to suit possible 8-up loads, slightly impair the comfort for a solitary passenger in the rear part of the vehicle. Despite the high build which allows vast roominess to be combined with go-anywhere ground clearance and compact overall dimensions, there is not much roll during fast cornering, the Home Cruiser steering in utterly stable and viceless fashion at all times, even on wet or icy roads as encountered during our test. Its turning circle is compact, but the steering does become rather heavy when full lock is wanted at practically zero forward speed.

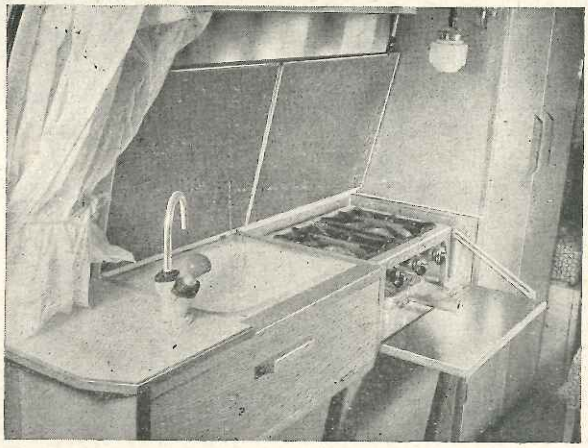
Sliding windows in the front doors are less convenient than the wind-down type usual on British cars, but they do a good job of providing ventilation without causing draughts or admitting rain water. The windscreen wipers clear almost the whole of the curved glass in wet weather, and a vacuum pump prevents them stopping completely during full-throttle driving although they slow down very considerably. A newcomer to this sort of vehicle takes a little while to gain confidence in reversing it into parking places, the rather high rear window demanding caution lest some low-lying obstruction such as a bicycle be overlooked, but by use of the twin exterior mirrors faultless parking is soon found possible.

Powering this vehicle, the 1.7-litre Ford Consul car engine is normally de-rated to use commercial-grade petrol. Whilst this may appeal to those who run fleets of commercial vehicles on fuel dispensed from a privately owned pump, most private buyers of this model would probably be wise to choose the optional high-compression cylinder head which, at the expense of demanding premium-grade petrol, would improve the speed, acceleration and fuel consumption as compared with our test model. Even in low-compression form, however, the Home Cruiser runs comfortably on the open road at true speeds of 50-55 m.p.h. (the speedometer was somewhat prone to exaggerate) and a rest-to-40 m.p.h. acceleration time of 15.4 seconds indicates ability to keep up readily with rush-hour traffic on sub-urban roads.

Whilst an alternative 4.62 axle ratio is available, our test model used the same 4.11 top gear as Ford Consul cars in conjunction with larger wheels, the consequent ratio of 17.9 m.p.h. per 1,000 engine r.p.m. giving effortless cruising with astonishingly little engine noise (the gearbox also is very little heard inside the vehicle) but providing rather limited top-gear acceleration and making a downward gearchange necessary whenever the speed drops below 20 m.p.h. Controlled effectively from the steering column, the 3-speed gearbox has synchromesh on the upper two ratios and a first gear which is not difficult to engage, but whilst any hill likely to be encountered in Devonshire can be climbed from a rolling start, 1st gear is not low enough to restart a laden vehicle on a gradient steeper than about 1 in 5.

Our overall fuel consumption of 22.7 m.p.g. for 900-odd miles (no greater in cost than 25.1 m.p.g. on premium-grade petrol) might, we think, be bettered by many owners, as our test model had





Right : The lids of the kitchen unit hinge upwards to reveal a gas hotplate with two burners and a grill and a plastic sink with pump feed from an under-chassis tank as an optional extra.

Left : Surprising comfort is provided by the adjustable seats in the forward-control driving compartment and the front and sideways visibility is exceptionally good. Noteworthy are the round-dialled speedometer, horizontal handbrake lever and centrally set glove box.

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had less than 1,000 miles of running-in before delivery to us, and its preparation had been in the hands of distributors whose standards of " tune " did not appear to be as exacting as are those of many private motorists. A few petty faults such as an exhaust joint nut which loosened and fell off led to us finding that, whilst the degree of accessibility provided by a hinged engine cover can on occasion be increased by instantly removable front seats and by detachable panels on each side of the engine which have eight securing screws apiece, this is not the easiest of power units to work on.

Driving and living in the Calthorpe Home Cruiser during wintry weather conditions which could well have emphasized its disadvantages, we in fact found it perfectly satisfactory for all the weekday and week-end journeys and errands for which a top speed slightly in excess of 60 m.p.h. suffices, and whilst we usually drove with from one to three people aboard we at times appreciated its huge load-carrying capacity. As week-end living accommodation it served well in January, so for holidays and week-ends throughout the milder half of each year it would obviously be an extremely attractive proposition.

Specification

Engine

Cylinders	4
Bore	82.55 mm.
Stroke	79.5 mm.
Cubic capacity	1,703 c.c.
Piston area	33.16 sq. in.
Valves	Pushrod o.h.v.
Compression ratio	6.9/1 (optional 7.8)
Carburetter	Zenith 34VN downdraught
Fuel pump	AC-Delco mechanical (with vacuum pump)
Ignition timing control	Centrifugal and vacuum
Oil filter	Full-flow
Max. power (net) at	52 b.h.p. (55 b.h.p. gross) 4,400 r.p.m.
(extra 3 b.h.p. with optional higher compression ratio)	
Piston speed at max. b.h.p.	2,300 ft./min.

Transmission

Clutch	Ford 8½ in. single dry plate
Top gear (s/m)	4.111
2nd gear (s/m)	6.952
1st gear	13.443
Reverse	16.325
(optional axle ratios, 4.625 and 5.125)	
Propeller shaft	Hardy Spicer open
Final drive	¾-floating hypoid bevel
Top gear m.p.h. at 1,000 r.p.m.	17.9
Top gear m.p.h. at 1,000 ft./min. piston speed	34.3

Chassis

Brakes	Girling hydraulic, 2 l.s. front
Brake drum internal diameter	9 in.
Friction lining area	147 sq. in.
Suspension :	
Front.	Independent by coil springs and unequal-length wishbones
Rear.	Rigid axle and ½-elliptic leaf springs
Shock absorbers :	
Front.	Armstrong telescopic
Rear.	Armstrong lever-arm hydraulic
Steering gear	Worm and peg
Tyres	5.90-15 (6-ply, with tubes)

Coachwork and Equipment

Starting handle	Yes
Battery mounting	Behind driving seat
Jack	Screw jack
Jacking points.	Unladen, use side jacking points; laden, jack under rear spring
Standard tool kit	Jack, wheelbrace, starting handle, screwdriver
Exterior lights.	2 headlamps, 2 sidelamps/flashers, 2 stop/tail/flasher lamps, number plate lamps
Number of electrical fuses.	One in direction indicators (plus one in optional heater fan circuit)
Direction indicators	Self-cancelling flashers (white front, red rear)
Windscreen wipers	Two-blade self-parking, vacuum operated with engine-driven booster pump
Windscreen washers	Optional extra
Sun visors	One
Instruments.	Speedometer with non-trip decimal distance recorder; fuel contents gauge.
Warning lights.	Dynamo charge, oil pressure, headlamp main beam, direction indicators
Locks with ignition key.	Ignition switch, either front door, rear door
With other keys	None
Glove lockers.	One open locker on facia panel
Map pockets	None in driving compartment
Parcel shelves	Parcels may be placed in well behind front passenger's seat
Ashtrays	None
Cigar lighters	None
Interior lights	Electric light above front seats, bottled-gas light in living compartment
Interior heater.	Delaney-Gallay fresh-air heater and screen de-mister as optional extra
Car radio	Optional extra
Extras available.	Normal range of car extras. Also portable W.C., bottled-gas interior heater, externally filled water tank and pump, extension tent, extra upper berth, interior curtains (fittings provided as standard), fitted carpet (replacing washable PVC), loose seat covers, engine cowl cover.
Upholstery material	Plastic leathercloth seats
Floor covering.	Metal floor in front compartment
Exterior colours standardized.	Six (duotone combinations £5 extra)
Alternative body styles.	None (Similar " Home Cruiser " conversions are also available on Austin, Bedford and Morris vehicles)

Maintenance

Sump	6 pints plus 1 pint in filter, S.A.E. 20/20W in temperate climates
Gearbox	2½ pints, S.A.E. 80 E.P. gear oil
Rear axle	3 pints, S.A.E. 90 hypoid gear oil
Steering gear lubricant	S.A.E. 90 hypoid gear oil
Cooling system capacity	15 pints (2 drain tap)
Chassis lubrication	By grease gun every 1,000 miles to 14 points
Ignition timing	8° before t.d.c., static
Contact-breaker gap	0.014-0.016 in.
Sparking plug type	Champion N8B
Sparking plug gap	0.032 in.
Valve timing	Inlet opens 17° before t.d.c. and closes 51° after b.d.c.; Exhaust opens 49° before b.d.c. and closes 19° after t.d.c.
Tappet clearances (cold) inlet and exhaust	0.014 in.
Front wheel toe-in	0.060-0.120 in.
Camber angle	1½° laden
Castor angle	1½°
Steering swivel pin inclination	5-5¼°
Tyre pressures	(Max.) Front 30 lb. Rear 30 lb.
Brake fluid	Enfo.
Battery type and capacity	12 volt 45 or 47 amp. hr.