



**CUTTING
CARRYING
• COSTS •**



Berliet

VEHICLES
CUT
CARRYING
COSTS



INSTITUTE

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The upper illustration is of the entrance to the Berliet Works at Richmond Bridge, the centre illustrates the main Works at Lyons, and the lower is a bird's eye view of the Richmond Bridge Works.

T O-DAY, the need for economy is paramount. Not the false economy of buying an article solely because it is cheap in the first place, irrespective of what service it will render, but the real lasting economy of buying an article capable of rendering faithful and continuous service. Transport, representing as it does the life blood of a nation, needs more careful attention in this respect than perhaps anything else, yet it probably receives the least. For transport undoubtedly represents a very great proportion of the cost of any article sold in our shops. Taking at random a manufactured article it will be found that from the raw state until the time it reaches the consumer it has been carried in its different forms many hundreds of miles. The raw material has to be taken to the factory, from the factory to the wholesale distributor, from the wholesale distributor to the retail distributor, and again in many cases it has to be delivered to the house of the consumer. Here, in its simplest form we have four stages of transport, but frequently an article is handled three or four times during the course of its manufacture alone, and in each case the cost of transport has to be added to the cost of the finished article. It will be realised therefore, that a saving of even a penny or twopence per ton mile may easily represent quite a considerable saving in the cost of the finished article, yet the cost of transport can be reduced very considerably and the transport firms involved can make greater profits!

Undoubtedly, unsuitable vehicles have a great deal to do with increasing the cost of transport, and it is obviously just as wasteful to run, say a 5-Tonner for loads which usually average only 30-cwt. as it is to use a 2-Tonner which is constantly over-loaded. In the one case the cost of petrol, oil, tyres and depreciation is very much greater than it should be, whilst, in the other, the cost of repairs due to over-loading will be excessive.

But there is another, and far more important, point to be remembered. It is obvious, certainly, but unfortunately not generally



realised. We refer, of course, to the Transport user who is operating out-of-date, or badly designed vehicles. Facts and Figures will represent most clearly what we mean.

On the road to-day, are thousands, for example, of 4 and 5-ton lorries, averaging as a general rule four miles per gallon. With a BERLIET 5-tonner, users in all parts of the country are obtaining eight miles per gallon, and over, carrying a full load, or in other words the former man is *wasting twopence per mile for petrol alone*. Taking only 300 miles as an average weekly estimate and 50 working weeks to the year (thus totaling 15,000 miles per annum) the petrol wasted represents about £127 per year—in other words, *nearly twenty per cent. interest on a capital sum of £640*, which represents the cost of a BERLIET 5-ton complete lorry. This, apart altogether from the waste in lubricating oil, high cost of spare parts and other maintenance charges, lost profit and prestige when the machine is laid by for repairs and the irritating reflection that one has to pay the same amount for the License, Tax and Insurance of an old vehicle as for a new one. Even the advertising value alone of a new vehicle is worth a very great deal to a man in a competitive trade.

Make sure, therefore, that your transport is economical, reliable and efficient, in the only certain way—by buying a BERLIET.

STANDARDISATION.

Very often, firms running medium or large fleets of transport own hardly two vehicles of the same type—making it impossible for them to carry efficient stocks of spare parts or for their repairs staff to be fully conversant with the intricacies of design of each vehicle. A much better plan is to standardise on one make—particularly when the manufacturer can supply vehicles of all the different sizes needed. In the BERLIET range, for instance, any carrying capacity—from 10



cwts. to 5 tons—is available, which means that a firm standardising BERLIET vehicles can have a model to suit each different requirement.

On the following pages, the various BERLIET commercial châssis together with bodies suitable for most purposes, are described. Special bodies to meet particular requirements can naturally be supplied when required and, if those illustrated do not meet your particular needs we shall be only too pleased to design one that does.

YOUR PROBLEM.

If you are running transport, or if you contemplate running transport, you probably have some little problem which requires solving: let us help you. Since 1897, we have specialised in transport, both of people and goods and we flatter ourselves that—had we not known the subject thoroughly—our Factory would not have grown from the mere shed, employing a handful of workmen which existed in 1897, to the Works covering over 500 acres and employing 15,000 hands which it has developed into to-day.

RICHMOND BRIDGE WORKS.

Just beside Richmond Bridge, on the banks of the Thames, is our London Works, covering over two acres, under one roof. Here, in addition to well-equipped workshops, are the main British Stores where many thousand pounds' worth of spare parts are carried, even for models manufactured as far back as 1906.

Users of BERLIET vehicles are always welcome and our experts are at all times ready to give any advice on running and maintenance which may be required.

Do not hesitate to call.

SOME LONDON BERLIET USERS.



1.—Standard 5-Ton Mechanically-operated Tipper. 2.—Standard 5-Ton Lorry. 3.—Special body on 50-cwt. Chassis. 4.—Drop-sided body on 45-cwt. Chassis. 5.—Special "Covent Garden" body on 3½-Ton Chassis. 6.—Special delivery body on 35-cwt. Chassis.

Saloon Buses

TOO much attention cannot be paid to the careful selection of a Bus—particularly in cases where it is to be run on a route where competition is likely to be encountered. Body and chassis are equally important and it is essential that the body should be designed in co-operation with the chassis manufacturer in order to avoid pitfalls such as too much overhang, unsuitable weight distribution, or too heavy bodies.

The bodies described in the following pages have all been designed for the particular chassis on which they are mounted and consequently, may be relied upon to give the maximum service.

Perhaps the most important point, after reliability—for which BERLIET models are so justly famous is low operating costs, and here, again, the BERLIET bus scores heavily.

Petrol consumption on the 35-cwt. and 20 passenger de luxe models, for instance, averages at least 15 m.p.g. and in many cases, users are obtaining 18, 19 and even 20 m.p.g. with a corresponding economy of oil.

Tyres, too, have a very long life—a set lasting at least 15,000 miles, under average conditions.

Taking this in conjunction with the low initial cost, it will be seen that, from every point of view, the BERLIET is an extremely economical proposition.



SALOON 'BUSES

"STIRLING" 17-SEATER.

Seats face forward with gangway down centre and the back seat is carried the full width of the body. An emergency exit is provided at the rear. Three fixed windows are fitted on each side with ventilators above.

All frame work is as light as possible in construction, consistent with strength, with corners reinforced with special steel brackets. The seats are fitted with spring cushions and trimmed with moquette or leather-cloth. Painting is in standard colours. A one-man-operated door and drop windows can be fitted at extra charge.

"STIRLING" DE-LUXE 17-SEATER.

Specification is similar to the standard "Stirling" 17-seater, except that the rear exit is at the side instead of at the back. A one-man operated door is fitted at the front and all windows are made to drop. The seats are fitted with spring cushions, the rear seat extending right round the back of the body.

"EDINBURGH" 18-SEATER.

Seating is provided for twenty persons, including driver and occasional seats. There is a gangway down the centre of the body and the seats face forward. An emergency exit is provided at the rear. The windows are frameless lights, fitted in "Beclawat" channels.

All framing is of selected hardwood, with floor boards of tongued and grooved deal. Panelling of 22-gauge CRCA steel.

Passengers' entrance is in the front, on the near side—the door being fitted with slam lock. The seats are trimmed on spring foundations with antique leather cloth to choice and finished off with nickel-plated beading.

The painting is executed to choice of colour and coach varnished.



STIRLING
17-SEATER
SALOON
'BUS

STIRLING
DE-LUXE
17-SEATER



INSTITUTE



EDINBURGH
18-SEATER



SALOON 'BUSES—*continued.*

Accommodation is provided for eighteen persons. There is a gangway down the centre. The rear seat is built in three sections, the centre section swinging outwards. An emergency exit is provided at the rear. Two side fixed windows are fitted, embedded in felt and four windows each side fitted with "Rawlings" window lifts.

The entrance door is of special double swing type, with wide door, and the three-step entrance is cut back in to the body to the depth of the doorway. The door is operated by a control lever fixed to the side of the driving seat and kept closed by springs.

The trimming is in leather-cloth and the body can be painted any standard colour to choice.

The inside of the roof is covered with linocrusta and four interior reading lights are provided.

Accommodation is provided for twenty-six people, including driver: all seats face forward with the exception of two rear seats which face centre of body to allow for easy access if rear door is used.

Body is framed up with selected hardwood and panelled with 22-gauge CRCA Lysaght's hydraulically-flattened steel. The windows are of best $\frac{3}{8}$ " sheet glass, to drop, fitted in "Beclawat" channels, three in rear and two in front bay—all fixed with rubber channel.

Two doors are fitted—one at the front in the second bay for passengers and an emergency exit at the rear. Both are fitted with coach hinges and slam locks.

The trimming is in antique leather-cloth to choice, the cushions being sprung with "Ever-Rest" springs and stuffed with hair and fibre. The body is coach-painted to choice and finished with best body varnish.

Accommodation is provided for twenty-five persons, all seats facing forward with a gangway down the centre and emergency exit at rear.

The body is constructed of seasoned ash framing fitted on the outside with steel panels and fixed with mouldings.

The framework is of the lightest possible construction consistent with strength, the corners being reinforced with special steel brackets.

Four drop windows are fitted on each side with ventilators above. Seats are fitted with spring cushions and trimmed with leather-cloth. The body, chassis, wings and wheels are painted and varnished in standard colour. The body is wired for interior lights.



TRAFFORD
18-SEATER.



EDZELL
26-SEATER.



SUNBURY
25-SEATER.

SALOON 'BUSES—*continued.*

The body is constructed in seasoned ash framing, panelled with best steel panels fixed with mouldings. The seats, which give accommodation for thirty-two passengers, all face forward. There is a centre gangway and the fitting of gangway seats brings the total seating capacity up to forty.

Entrance is by means of a one-man-operated door in the front with an emergency exit at the rear. A partition is fitted behind the driver. Five of the windows on either side are made to drop.

The interior is wired for six lights. A parcel rack is fitted on either side of the interior above the windows.

The seats have spring cushions and are trimmed in leather-cloth.

The body, chassis, wings and wheels are painted and varnished in standard colours.

CHAR-A-BANCS.

Accommodation is provided for eighteen passengers and driver with room for an extra passenger on the off-side of the driver. Each of the five rows of seats has a door 18" wide on the near-side and, in addition, a door is fitted on the off-side of the driver's row.

The doors have stout hinges and slam locks with inside and outside handles.

The body is framed up with best English ash, with all joints well fitted and cut—the door pillars are reinforced. Panelling is in cold rolled steel sheets, hand beaten to shape.

A metal framed windscreen, finished in nickel plate, with adjustable panels, is fitted. The hood is of the "Beatson" seven-stick type, with plated fittings, the sticks being finished in French polish. It is covered in best quality grey duck and has a complete set of side curtains which open with the doors. The seats and back squabs are built up on spring frames stuffed with hair and upholstered in best leather.

Interior door panels are covered in leather and the backs of the seats in hair carpet.

The vehicle is painted in colours to choice and varnished.

SHOOTING BRAKE.

For rough work such as a shooting brake is usually called upon to perform, the Berliet Châssis is ideal, and perhaps the most suitable one in the range is the 25-cwt. model. Its running costs are low and its twin rear wheels are particularly suitable for rough or soft country.

The body can be designed to suit individual requirements but in general it consists of a 'bus type body with separate driver's seat running the full width of the vehicle with doors on either side. The entrance to the rear compartment is by means of a large single door, and passenger accommodation is on tip-up, or removable seats running the whole length of the body. If preferred, the seats may be in two sections so that the front half can be folded down giving the maximum accommodation for goods whilst the rear half can be in position for passengers.

Roll-up side curtains are fitted to the body as well as the driver's cab.



SOUTHDOWN
32/40-SEATER.



MEXBOROUGH
20-SEATER



SHOOTING
BRAKE ON
25-CWT.
BERLIET
CHASSIS.

GOODS CARRYING BODIES

25-CWT. AND
35-CWT.
PLATFORM
BODIES

The platform is of hard wood, mounted on substantial cross members and the back wood partition has a window, enabling the driver to see behind. There is a fixed canopy of waterproof canvas covering the top of the cab and roll-up side storm curtains with celluloid windows, are supplied.

A two-piece windscreen is fitted—the lower half being fixed and the top adjustable. There are two doors—one on either side—of sheet metal with flap pockets on the inside. The seat has a spring cushion; the back rest is leather-covered, stuffed with horsehair. Finished in "Artillery grey."

Dimensions of the 25-cwt. body .. 7' 1" x 5' 0"
Dimensions of the 35-cwt. body .. 8' 8" x 5' 4"

25-CWT. AND
35-CWT.
STANDARD
BODIES WITH
TILT SHEET

The driver's cab has a back of match-boarding from floorboards to roof and a small window permitting the driver to see inside the rear of the body. The roof is of wooden battens covered with waterproof canvas and supported by two uprights from the dash. Doors are fitted to both sides of the driver's seat and storm-curtains, closing the doors, are attached to the roof and can be rolled up when not required. Seating accommodation for the driver and one passenger is provided. A spring cushion and padded back rest are fitted. The windscreen is of two pieces—the lower half being fixed and the top half adjustable.

The body has a platform of hardwood, mounted on bearers with removable sides and tail boards—the latter being fitted with quick-action fasteners. The super-structure of iron hoops and wooden battens is removable and is covered with waterproof canvas held in place by cord lacings.

Dimensions (interior) of the 25-cwt. body:—
Length 7' 1"; width 5' 0"; height 4' 10"
Dimensions (interior) of the 35-cwt. body:—
Length 8' 8"; width 5' 4"; height 5' 5"

35-CWT.
DROP-SIDED
LORRY

The cab has a door on the nearside and a windscreen with top quarter section in front of the driver's seat opening on strong brass adjustable hinges. The seat cushions and back rest are stuffed with hair. Side curtains for the cab can be supplied at a small extra charge.

The body is strongly constructed of selected red pine on stout bearers, with sides and tail boards on strong hinges. Inside body dimensions are 10' 0" x 5' 6" with 20" close boarded sides.

Painting and varnishing are to choice of standard van colours.



25-CWT.
AND 35-CWT.
PLATFORM
BODIES.



25-CWT.
AND 35-CWT.
STANDARD
BODIES WITH
TILT SHEET



35-CWT.
DROP-
SIDED
LORRY.

GOODS CARRYING BODIES—*continued.*

The body, which is framed up in best English hardwood, is made with recessed sides to avoid the use of wheel arches so that the floor is the maximum width obtainable between the wheels. There is a partition behind the driver which is carried up to the roof with ventilating louvres to the interior of the van and with fixed windows or sliding shutters, as desired.

The cab has two half doors on both sides, hair cushion and padded back rest with mahogany hinged $\frac{1}{4}$ -section windscreen. The rear doors are fitted with anti-rattle, monkey-bolt and budget locks. They are the full width of the body and have oblong lights. For ventilation—in addition to the louvres in the cab—both sides of the body are fitted with louvres between the pillars.

The roof is covered with prepared canvas and paint. The lining inside the body is of tongued and grooved matching with suitable connections to the ventilators.

Painting is to choice of standard van colours, finished off in first class coach style.

Dimensions:—

35-cwt.	..	..	..	9' 0" x 5' 3" x 5' 6" high
25-cwt.	..	..	..	7' 6" x 5' 0" x 5' 2" high
20-cwt.	..	..	..	7' 0" x 4' 10" x 5' 0" high

This vehicle forms a perfect miniature office and showrooms on wheels, into which the traveller invites the buyer of the firm he is visiting. On either side of the interior, are glass showcases in which articles may be attractively displayed. Each showcase is adequately lighted by carefully shaded electric lights operated by the lighting set battery and in addition, the usual type roof lights for general lighting are fitted. Beneath the showcases, and at the back, are cupboards where further samples, stationery and the traveller's personal baggage may be stowed.

The seating arrangement is one of the chief features of the vehicle. The driver has a swivelling arm-chair seat arranged to turn round and face the interior of the body. A flap table may then be raised into position for writing, etc. The fixed passenger's seat is so arranged that anyone seated on it can equally well face forward or the interior of the body.

Showcases and fittings can be supplied to suit almost any trade.

This body is specially designed for use on a gentleman's estate. It is panelled throughout in mahogany and varnished in natural colours. Accommodation is provided for two beside the driver and four on a seat immediately behind the driver inside the van. Behind this second seat is a space 5-ft. 6-ins. long; 5-ft. 6-ins. wide and approximately 5-ft. 6-ins. high, so that luggage goods, etc., can be carried in addition to servants or beaters.



BOX VANS
20-CWT, 25-CWT
& 35-CWT.
BERLIET
CHASSIS.



20-CWT.
TRAVELLERS'
BROUGHAM.



ESTATE
VAN
ON 25-CWT.
BERLIET
CHASSIS.

The Local Government Board type Ambulance standardised on the Berliet Châssis is a general purpose ambulance suitable for most localities and adaptable for nearly every type of case. The body is framed in selected straight-grained ash and panelled in mahogany. There are two doors at the back, slung on special hinges which allow of their opening to their full width. Ventilation is provided in the sides and doors by louvres and in the roof by a torpedo ventilator. The body dimensions conform in every way to the Local Government Board specification.

Two stretchers are provided, located one above the other, on the near side—the top one being slung and running on a fully rabbetted frame; the lower stretcher is furnished with 12" rubber tyred wheels and run in on grooves in the floor of the ambulance body. Having wheels it can be used as an ambulance litter and can be taken into places where the ambulance itself could not go.

If required for infectious cases, the interior of the body is specially prepared with all the corners blocked and rounded off to prevent dirt or germs lodging—the stretchers in this case being fitted with patent "Dominion" wire mesh which is easy to disinfect. If intended for accident cases the stretchers are covered with stout canvas and pillows for the stretchers are provided. On the opposite side to the stretchers is a seat running the full length—for sitting patients and attendants. Interior fittings include water bottle and tumbler in frame, locker for splints, etc.

No range of Commercial Vehicles would be complete if it did not include a Horse Box. Recently, particular attention has been given to the transporting of race horses by road, as it is now recognised by the majority of trainers to be the only satisfactory way of ensuring the punctual arrival of a horse, in good condition, at a race meeting. Individual requirements of trainers differ so much that no standard body is listed, but we are at all times only too pleased to quote for any particular body that may be required.

The one illustrated is mounted on a 50-cwt. Châssis and was supplied to Mr. John Johnstone of Halleaths, Lockerbie.

Where graceful lines are required and at the same time convenience has to be studied, the low-loading châssis will be found ideal. Bulky goods can be loaded and unloaded with the utmost ease, and the châssis permits the coachbuilder to design a body which is more than pleasing in appearance. A typical example is the vehicle illustrated, which we delivered to Lords' Model Laundries for delivery and collection work. It will be noticed that good headroom is provided without the vehicle being in any way top-heavy.



L.G.B.
AMBULANCE.



HORSE
BOX.



LAUNDRY
VAN
ON LOW
LOADING
CHASSIS.

A General Purpose Lorry

FOR the 2½-Ton, 3½-Ton and 5-Ton châssis we have available an all-purpose body suitable for carrying coal, live-stock, hay, furniture, etc.

Primarily it is a platform, on which a sling van can be loaded, or heavy machinery and the like, but when required for carrying sand, gravel, bricks or other builders' material, drop sides and a tail board are attached. When it is desired to load sheep or pigs two stout oak skids (housed on the outside of the runners when not in use) are hooked on to staples on the back bar and a second section attached to the tail board which is lowered on to the skids. To make an easy mounting slope a further extension fits into the ramp and side fences to form a complete gangway up which the animals can be driven. If calves, deer or hounds have to be transported extensions to the sides are attached giving a total depth of 4'. In addition, rings are provided in the floor for horned stock, and the back of the cab is protected by steel to prevent any injury to the driver by restive cattle.

For carrying untrussed straw, hay or loads of a light nature, the tail board is unshipped and an attachment like an ordinary farm cart "ladder" is hooked on. For trussed hay the sides can be removed leaving only the ladder at the rear.

For the transport of furniture, or any load requiring protection from the weather, a tilt top is quickly attached under which the tallest articles can readily be stowed.

Altogether this body is a solution of many of the problems which present themselves to country hauliers, and makes a strong appeal to small and large farmers. All fittings needed for transforming the lorry from one purpose to another are carried, when not in use, under the body, so that different loads outwards and inwards can be dealt with to the best advantage.

A GENERAL PURPOSE LORRY.



WITH TILT SHEET IN POSITION.

FOR CARRYING TRUSSED HAY OR STRAW.



FOR TRANSPORTING CATTLE.



Heavy Duty Vehicles.

FOR the BERLIET 5-ton Heavy Duty Châssis three standard bodies are available. These are, a platform body, standard body with tilt sheet, and tipping body.

The platform body is very strongly constructed and has quickly removable sides. The driver's cab, which is practically the same for all three models, has a seat extending the whole width, stuffed with hair, and a padded back rest. A window is provided to enable the driver to see behind. A windscreen is fitted and roll-up side curtains which completely enclose the cab are supplied.

The standard body has a removable waterproof tilt sheet, stretched on wooden hoops braced with metal struts. This superstructure is also easily detachable so that it makes a very useful general purpose vehicle.

The tipper, as will be seen from the illustration, rises to a very good angle. The body is all steel.

BODY DIMENSIONS

PLATFORM LORRY.

Length	..	..	..	..	..	12' 8"
Width	..	..	..	..	..	6' 3"
Sides (detachable)	..	..	..	..	..	1' 7"

STANDARD LORRY WITH TILT SHEET.

Length	..	..	..	..	..	12' 8"
Width	..	..	..	..	..	6' 3"
Sides	..	..	..	..	..	2' 0"
Height under Tilt	..	..	..	..	..	6' 0"

MECHANICALLY-OPERATED TIPPER, ALL-STEEL BODY.

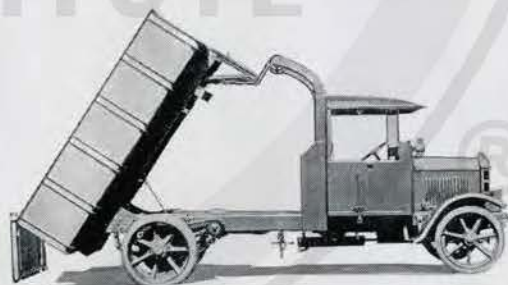
Length	..	..	..	..	..	11' 0"
Width	..	..	..	..	..	6' 6"
Sides	..	..	..	..	..	1' 11"



HEAVY
DUTY
PLATFORM
LORRY.

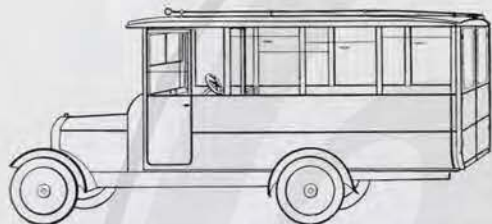


HEAVY
DUTY
STANDARD
BODY.

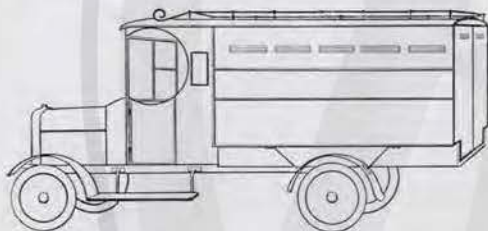


HEAVY
DUTY
TIPPING
LORRY.

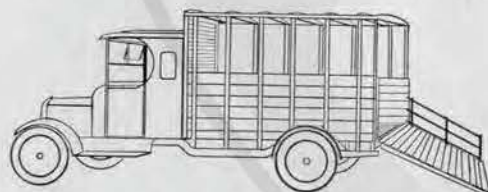
SPECIAL BODIES



The seats which are easily detachable all face forward, they have Bowden wire spring cushions and back rests trimmed in best leather cloth. For converting into a box van strong light shutters are provided to fit the pillars between the windows, they are fastened with screw studs and fly nuts and numbered for position.



Driver's cab has half doors on either side. Rear doors open to full width of body and are fitted with anti-rattle bolt and budget lock. For ventilation, louvres are fitted in both sides of the body as well as the cab. Dimensions:—9' behind the driver, 5' 3" wide, 5' 6" high.



Cab has door on near side, with hinged windscreen and hair stuffed cushions. The sides of the body are double hinged with stud and fly nut to keep the two sections together when down. Tail board is double hinged in the same way, but with top half detachable. Body dimensions 8' behind the driver, 5' 6" wide, 4' 6" deep, from floor to hoop sticks 5' 6".

Specifications of Berliet Chassis

IN the following pages are given the specifications of the various Commercial Châssis in the BERLIET range. It will be noticed that there are ten different models, varying in capacity from 15-cwt. up to 5 tons. In every case the capacity of the châssis given is the *net* capacity—that is to say, the 35-cwt. chassis, to take an example, is capable of carrying a load of 35 cwt., *excluding* the body.

Each châssis has been specifically designed for the work it has to do, and for the conditions under which it is to be used. The models equipped with pneumatic tyres, for instance, are *designed* for them and are not merely solid tyred châssis adapted. As a result they can be built very much lighter, without any sacrifice of strength, as they are not subjected to anything like the vibration a solid tyred châssis is. Consequently, running costs are reduced to a minimum.

Equipment, too, is very complete,—on all models up to and including the 45-cwt., electric lighting and starting is fitted, electric head, side, tail and dash lamps are supplied, and other equipment includes electric horn and speedometer. On the larger models, provision is made in the design of the engines for fitting lighting and starting sets when required.

Remember that BERLIET has been building commercial vehicles for over a quarter of a century, and that the present day Works are the largest Commercial Vehicle Works in the world—a fact which speaks for itself!

The
Barnet
Motor Car



Overall length ..	13' 11"
Overall width ..	5' 1"
Wheelbase ..	10' 4"
Dash to centre of rear axle ..	7' 7"
Dash to end of frame ..	9' 9"
Top of frame to ground ..	2' 2"
Width of frame at rear ..	2' 9 1/2"
Track, front ..	4' 8"
Track, rear ..	4' 8"
Ground clearance ..	9 1/2"
WEIGHT—	
Bare chassis ..	18 3/4 cwts.

SPECIFICATION OF BARNET MOTOR CAR



The 15.9 h.p. engine has a bore of 80 m/m. and stroke of 130 m/m. the cylinder block is cast in one with the top half of the crankcase and is provided with a detachable head. The crankshaft is carried in three main bearings, having bronze shells lined with white metal and located in the upper half of the crankcase. The big end bearings are of similar construction: the gudgeon pin is locked in the small end of the connecting rod by a set screw and revolves in bosses in the piston. Lubrication is by pressure from a gear wheel pump to the main crankshaft bearing and thence, by ducts drilled in the crank webs, to the big end.

By Tecalemit grease-gun throughout.

Multiple dry plate: very sweet in action.

The gear box, which provides four speeds forward and one reverse, has central change: it is bolted to the engine with which it forms one unit.

The gear box shafts are of large section steel and revolve on ball bearings: the second motion shaft takes its bearing in a bronze bush in the rear end of the first motion shaft and is splined to carry the sliding gears.

The lay shaft is positioned immediately below it and the selector mechanism is carried on the top of the gear box casing together with the change speed and hand brake levers. Fixed to a tapered extension on the second motion shaft by means of a key and nut is the foot brake drum which is ribbed externally for cooling.

The foot brake shoes expand inside the drum, the cam actuating rod passing through the left hand top corner of the gear box casing.

The complete power unit—engine-clutch-gearbox—is suspended from the chassis frame at three points, one taking a trunnion bearing at the forward end and the other two arms integral with the bell-housing surrounding the flywheel and clutch. Gear ratios are:—1st, 18.22 to 1; 2nd, 12.4 to 1; 3rd, 7.84 to 1; 4th, 4.9 to 1.

Semi-floating, helical bevel drive. Propeller shaft enclosed in torque tube. Axle composed of two steel pressings welded together. The wheels are keyed to the driving shafts which latter run on ball and roller bearings. Rear axle reduction is 4.9 to 1.

Semi-elliptic front and rear.

Worm and sector with cross rod placed behind front axle.

The foot brake operates on transmission and the hand brake on rear wheels. These brakes are very powerful and are fully capable of holding the vehicle on any incline. The control rods and brakes are carried close to and parallel with the torque tube.

Five detachable interchangeable disc wheels.

Four pneumatics, 820 x 120.

12-volt single unit starting and lighting system. The dynamotor is driven by a silent chain from the crankshaft. Head, side, tail and dash lamps are supplied. Electric horn.

Mounted at rear with vacuum feed to carburettor. Capacity 12 gallons.

The
Berliet
23 CWT CHASSIS



DIAMENSIONS

Overall length ..	14' 11"
Overall width ..	5' 6"
Wheelbase ..	10' 9"
Dash to centre of rear axle ..	8' 0"
Dash to end of frame ..	10' 3"
Top of frame to ground ..	2' 3"
Width of frame at rear ..	2' 10"
Track, front ..	4' 10"
Track, rear ..	4' 8"
Ground clearance ..	9"

WEIGHT—

Bare chassis 19½ cwts.

SPECIFICATION OF
BERLIET 23 CWT CHASSIS



15.9 h.p. engine, four-cylinders cast *en bloc*, with detachable head; bore 80 m/m. and stroke 130 m/m.; pressure feed lubrication; thermo-syphon cooling; "Zenith" carburettor; magneto ignition. (For detailed description of this engine, see 15-cwt. engine specification.)

By Tecalemit grease-gun throughout.

Multiple dry plate: very sweet in action.

Four speeds forward; one reverse; central change; gear box bolted to engine, forming one unit, suspended from the frame at three points. (For constructional details, see specification of the 15-cwt. gear box.) Gear Ratios:—1st, 23.25 to 1; 2nd, 15.75 to 1; 3rd, 10.0 to 1; 4th, 6.25 to 1.

The rear axle is of the semi-floating, overhead worm type, a steel worm meshing with a bronze worm wheel. The differential gear has four bevel pinions and it together with the worm wheel—which is mounted on the differential casing—is carried on ball bearings and ball thrust bearings in the axle casing.

The rear wheels are held by a key and nut on a taper at the end of the rear axle shafts, the shafts themselves being carried at their outer ends in large size ball bearings.

To facilitate inspection and repair of the axle, the casing is split vertically at the centre and is held together by bolts and nuts.

The torque and driving strains are taken through the rear springs. Rear axle ratio, 6.25 to 1.

Semi-elliptic front and rear.

Worm and sector, with cross rod placed behind front axle. (For detailed description, see specification of the 30/35-cwt. chassis.)

The foot brake operates on transmission and the hand brake on rear wheels, both internal expanding. The control rods and brakes are carried close to and parallel with, the torque tube.

Seven detachable disc wheels (interchangeable).

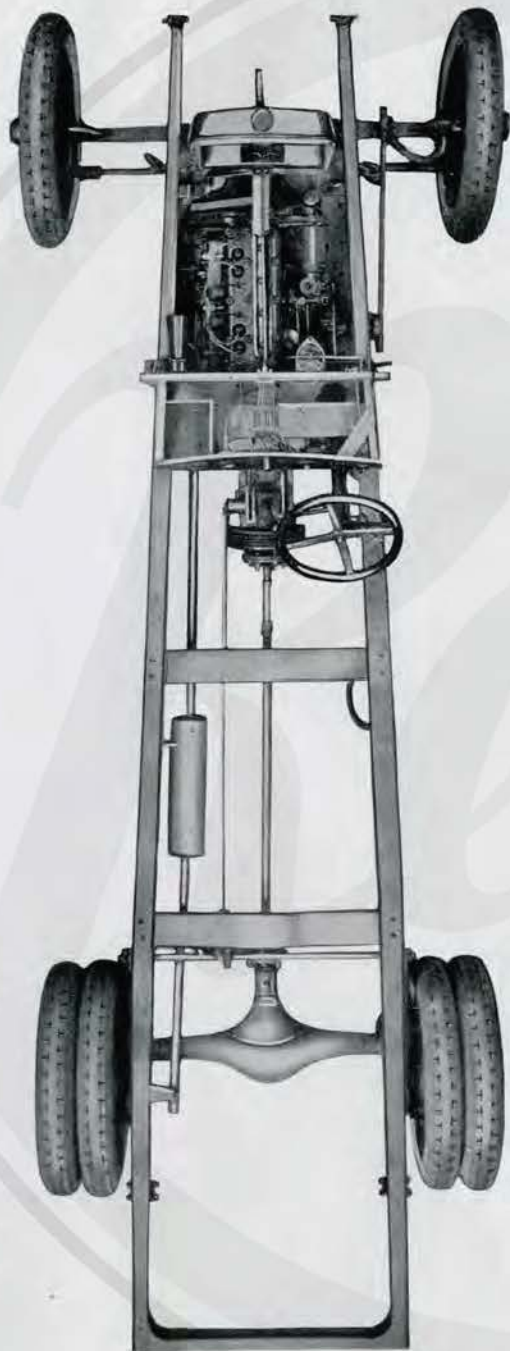
Six pneumatics, 820 × 120: twin at rear, or 835 × 135 single all round. 33" × 5" straight-sided can be fitted at extra charge.

12-volt single unit starting and lighting system. The dynamotor is driven by a silent chain from the crankshaft. Head, side, tail and dash lamps are supplied. Electric horn.

Mounted at rear, with vacuum feed to carburettor. Capacity 12 gallons.

The
Berliet

W.C.V.F.
LOW LEADING CHASSIS



Overall length ..	16' 8"
Overall width ..	5' 10"
Wheelbase ..	12' 1"
Dash to centre of rear axle ..	8' 6½"
Dash to end of frame ..	12' 2¼"
Top of frame to ground ..	1' 10½"
Width of frame at rear ..	3' 5¼"
Track, front ..	5' 3"
Track, rear ..	4' 10"
Ground clearance ..	8"

WEIGHT—

Bare chassis 27 cwts.

Specification of Berliet
35-cwt. low leading chassis



20 h.p.; four cylinders, cast *en bloc*; bore 90 m/m. and stroke 130 m/m.; detachable cylinder head; magneto ignition; lubrication by pressure feed through drilled crankshaft. Pump water circulation. (For further details of this engine, see specification of standard 35-cwt. chassis.)

Tecalemit grease-gun throughout.

Multiple dry plate

Four speeds forward and reverse; central control. Gear box is bolted to and forms one unit with the engine and clutch; the whole is suspended from the frame at three points. (See specification of 15-cwt. gear box.)

1st, 21.81 to 1; 2nd, 11.05 to 1; 3rd, 8.94 to 1; 4th, 5.55 to 1 (direct).

The chassis is given a downward sweep by a bend immediately behind the driver's cab, bringing the loading line down to within 1' 10½" of the ground. In order to clear the rear axle the side members are arched.

The frame is constructed from deep channel section pressed steel and substantially cross-braced.

The rear springs are underslung and the front springs attached to dumb irons at the forward end.

The rear axle differs from that of the standard model in that a double reduction gear is used; the first reduction is by means of a helical-toothed bevel gearing in the centre of the rear axle and the second reduction by spur gearing at the rear wheels themselves.

The axle is set slightly forward of the centre line of the wheels and at each end is provided an extension on which is mounted the spur gear on the stub axle which carries the road wheel; ball bearings are used throughout.

Foot brake operates on transmission and hand brake on drums on rear wheels. The brakes are very powerful and ample means of adjustment is provided.

Seven detachable disc wheels.

Six pneumatics; twin tyres at rear; interchangeable 835 × 135 or 855 × 155 single all round. Single straight-sided can be fitted at extra charge.

12-volt single unit starting and lighting system. The dynamotor is driven by a silent chain from the crankshaft. Head, side, tail and dash lamps are supplied—also electric horn.

Fitted at rear of chassis, with vacuum feed to the carburettor. Capacity 12 gallons.



DIMENSIONS	
Overall length ..	16' 8"
Overall width ..	6' 2"
Wheelbase ..	12' 0"
Dash to centre of rear axle ..	8' 10"
Dash to end of frame ..	12' 3"
Top of frame to ground ..	2' 6"
Width of frame at rear ..	3' 2"
Track, front ..	5' 3½"
Track, rear ..	5' 1"
Ground clearance ..	9"

WEIGHT—
Bare châssis .. 27 cwts.

SPECIFICATION OF BERLIET 35 cwt. chassis



The 20 h.p. engine has a bore of 90 m/m. and a stroke of 130 m/m. The cylinder block is cast in one with the top half of the crank case and provided with a detachable head.

The crankshaft is carried in three main bearings, having bronze shells lined with white metal and located in the upper half of the crank case. The big end bearings are of similar construction; the gudgeon pin is locked in the small end of the connecting rod by a set screw and revolves in bosses in the piston.

Lubrication is by pressure from a gear wheel pump to the main crankshaft bearing and thence, by ducts drilled in the crank webs to the big end. Ignition is by high tension magneto and water circulation by pump. Zenith Triple-diffuser carburettor.

By Tecalemit grease-gun throughout.

The drive is transmitted through a multi-plate dry clutch to a four-speed and reverse gear box.

The gear box shafts are of large section steel and revolve on ball bearings: the second motion shaft takes its bearing in a bronze bush in the rear end of the first motion shaft and is splined to carry the sliding gears. The lay shaft is positioned immediately below it and the selector mechanism is carried on the top of the gear box casing together with the change speed and hand brake levers. Fixed to a tapered extension on the second motion shaft by means of a key and nut, is the foot brake drum which is ribbed externally for cooling.

1st, 23.25 to 1; 2nd, 15.75 to 1; 3rd, 10.0 to 1; 4th, 6.25 to 1 (direct).

Semi-floating, overhead worm drive with steel worm and bronze wheel: the torque and driving strains are taken through the rear springs. This axle is almost identical with that fitted on the 1-ton chassis, except that it is larger and stronger.

Semi-elliptic front and rear.

Worm and complete wheel type: irreversible. By the provision of a complete wheel, longer life is assured for the steering gear as four wearing surfaces can be presented to the worm. An eccentric bush is provided to take up wear on the worm and wheel. The drop end from steering is provided with a ball, on which is mounted the side rod to the right hand front wheel.

The foot brake operates on transmission and the hand brake on drums on rear wheels. The brakes are very powerful and ample means of adjustment is provided.

Seven detachable disc wheels—interchangeable.

Six pneumatics: twin at rear: size 835 x 135: alternative equipment of single pneumatics all round, 955 x 155 can be supplied. 36" x 6" single straight sided, or Goodyear cushion can be supplied at extra charge.

12-volt single unit starting and lighting system: the dynamotor is driven by a silent chain from the crankshaft: head, side, tail and dash lamps are supplied, also electric horn.

Fitted at rear of chassis, with vacuum feed to the carburettor. Capacity 12 gallons.

THE
Berliet

20 PASSENGER
DE LUXE CHASSIS



DIMENSIONS

Overall length ..	16' 8"
Overall width ..	6' 2"
Wheelbase ..	12' 11"
Dash to centre of rear axle ..	9' 9"
Dash to end of frame ..	12' 3"
Top of frame to ground ..	2' 6"
Width of frame at rear ..	3' 2"
Track, front ..	5' 3 1/2"
Track, rear ..	5' 1"
Ground clearance ..	9"

WEIGHT—

Bare chassis 27 cwts.

SPECIFICATION of BERLIET
20 Passenger de Luxe Chassis



ENGINE—The 20 h.p. engine has a bore of 90 m/m and a stroke of 130 m/m. The cylinder block is cast in one with the top half of the crank case and provided with a detachable head.

The crankshaft is carried in three main bearings, having bronze shells lined with white metal and located in the upper half of the crank case.

The big end bearings are of similar construction; the gudgeon pin is locked in the small end of the connecting rod by a set screw and revolves in bosses in the piston.

Lubrication is by pressure from a gear wheel pump to the main crankshaft bearing and thence, by ducts drilled in the crank webs to the big end. Ignition is by high tension magneto and water circulation by pump. Zenith Triple-diffuser carburettor.

By Tecalemit grease-gun throughout.

CLUTCH—The drive is transmitted through a multi-plate dry clutch to a four-speed and reverse gear box.

GEAR BOX—The gear box shafts are of large section steel and revolve on ball bearings; the second motion shaft takes its bearing in a bronze bush in the rear end of the first motion shaft and is splined to carry the sliding gears. The lay shaft is positioned immediately below it and the selector mechanism is carried on the top of the gear box casing together with the change speed and hand brake levers. Fixed to a tapered extension on the second motion shaft by means of a key and nut, is the foot brake drum which is ribbed externally for cooling.

GEAR RATIOS—1st, 23.25 to 1; 2nd, 15.75 to 1; 3rd, 10.0 to 1 4th, 6.25 to 1 (direct).

REAR AXLE—Semi-floating, overhead worm drive with steel worm and bronze wheel: the torque and driving strains are taken through the rear springs. This axle is almost identical with that fitted on the 1-ton chassis, except that it is larger and stronger.

SPRINGS—Semi-elliptic front and rear.

STEERING—Worm and complete wheel type: irreversible. By the provision of a complete wheel, longer life is assured for the steering gear as four wearing surfaces can be presented to the worm. An eccentric bush is provided to take up wear on the worm and wheel. The drop end from steering is provided with a ball, on which is mounted the side rod to the right hand front wheel.

DRUMS—The foot brake operates on transmission and the hand brake on drums on rear wheels. The brakes are very powerful and ample means of adjustment is provided.

WHEELS—Seven detachable disc wheels—interchangeable.

TIRES—Six pneumatics: twin at rear: size 835 x 135: alternative equipment of single pneumatics all round, 955 x 155 can be supplied. 36" x 6" single straight sided, or Goodyear cushion can be supplied at extra charge.

ELECTRICAL EQUIPMENT—12-volt single unit starting and lighting system: the dynamotor is driven by a silent chain from the crankshaft: head, side, tail and dash lamps are supplied, also electric horn.

FUEL TANK—Fitted at rear of chassis, with vacuum feed to the carburettor. Capacity 12 gallons.

THE
Berliet
CHASSIS



Overall length ..	18' 0"
Overall width ..	6' 4 1/2"
Wheelbase ..	12' 8"
Dash to centre of rear axle ..	10' 1"
Dash to end of frame ..	13' 11 1/2"
Top of frame to ground ..	2' 6"
Width of frame at rear ..	3' 2"
Track, front ..	5' 5"
Track, rear ..	5' 3"
Ground clearance ..	11"

WEIGHT—

Bare chassis 35 cwts.

SPECIFICATION OF
BERLIET 15 CHASSIS.



ENGINE—20-h.p. four cylinders, cast *en bloc*; bore 90 m/m. and stroke 130 m/m.; detachable cylinder head; magneto ignition; lubrication by pressure feed through drilled crankshaft. Pump water circulation. (For detailed description see specification of 35-cwt. chassis.)

LUBRICATION—Tecalemit grease-gun throughout.

CLUTCH—Multiple dry plate.

GEAR BOX—Four speeds forward and reverse; central control. Gear box is bolted to and forms unit with the engine and clutch; the whole is suspended from the frame at three points.

GEAR RATIOS—1st, 4:1 to 1; 2nd, 27.5 to 1; 3rd, 17.75 to 1; 4th, 10.6 to 1.

FRAME—Substantial channel section steel with cross-members providing absolute rigidity.

DRIVE SHAFT—Semi-floating overhead worm with all gearing mounted on ball bearings; the propeller shaft from the gear box to the back axle is divided into two sections, the front half being carried in a ball bearing bracket and the rear half connected thereto by flexible disc universal joint.

AXLES—Semi-elliptic front and rear.

STEERING—Worm and sector, with cross-rod placed behind front axle.

BRAKES—Both brakes operate on single large drums on the rear wheels. The brake shoes for the foot and hand brake lie alongside each other and are provided with renewable linings.

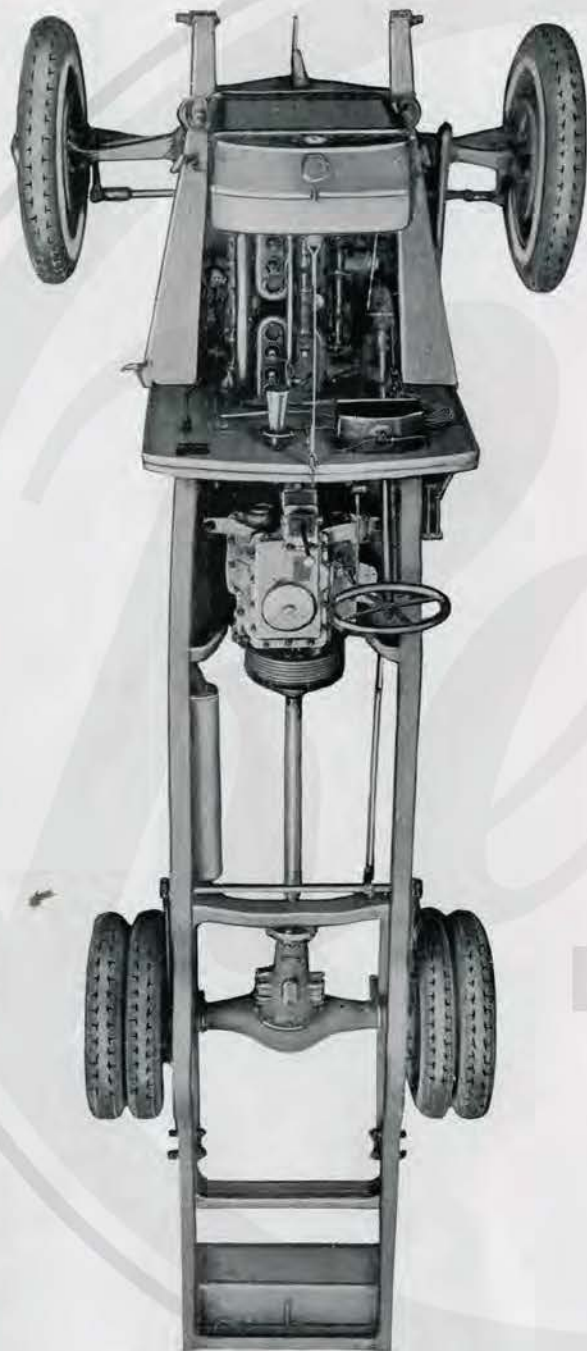
WHEELS—Seven detachable disc wheels.

TYRES—Six pneumatics; twin tyres at rear; interchangeable, 955 x 155. Single straight sided or Goodyear Cushion tyres can be fitted at extra charge.

ELECTRICAL EQUIPMENT—12-volt single unit starting and lighting system. The dynamotor is driven by a silent chain from the crankshaft. Head, side, tail and dash lamps are provided, also electric horn.

FUEL TANK—Fitted under driver's seat with vacuum feed to the carburettor. Capacity 12 gallons.

The
Berliet



Overall length ..	21' 6"
Overall width ..	6' 10"
Wheelbase ..	13' 9"
Dash to centre of rear axle ..	11' 2"
Dash to end of frame ..	17' 0"
Top of frame to ground ..	2' 8½"
Width of frame at rear ..	3' 5½"
Track front ..	6' 0"
Track, rear ..	5' 1"
Ground clearance ..	10"

WEIGHT—

Bare châssis 48 cwts.

SPECIFICATION OF
BERLIET 50 cwt chassis



The 30 h.p. engine has a bore of 110 m/m. and a stroke of 140 m/m. The four cylinders are cast in pairs with all valves on the left hand side, with detachable heads. They are of cast iron and are bolted to the top half of the aluminium crankcase. Driven from the camshaft, is a BERLIET patent centrifugal governor which operates a separate butterfly in the induction pipe and "cuts in" at 1250 r.p.m. The oil pump is of the gear wheel type and is driven by a Skew gear at the rear end of the camshaft. Oil is delivered under pressure to the main bearings and big ends. Ignition is by magneto and the mixture is supplied by a BERLIET carburettor. Provision is made for fitting a single-unit starter dynamo on the off-side of the engine.

Multiple plate type.

Located amidships, four forward speeds and reverse: all shafts run on ball bearings. (For detailed description see specification of 3½-ton chassis.

1st and reverse, 30 to 1; 2nd, 17.63 to 1; 3rd, 10.22 to 1; 4th, 6.12 to 1.

Short open shaft with one universal joint between the clutch and the gear box. Open propeller shaft from gear box to rear axle with universal joint at forward end and flexible disc joint at rear end.

Of the double reduction type—the first reduction being by bevel gear and the second reduction by straight-toothed spur pinions. The whole gear is carried on ball bearings while a four-bevel differential is employed. The axle shafts are carried at their outer ends in ball bearings.

Worm and full wheel: irreversible.

Steel drop forging fitted with substantial stub axles and swivel pins.

Seven interchangeable detachable steel disc wheels: twin at rear.

Six pneumatic tyres: 955×155. Straight sided or Goodyear Cushion can be fitted at extra charge.

Very resilient semi-elliptic front and rear, the rear being underslung to give a low loading position.

Pressed channel steel of heavy section, slightly inswept at the front and fitted with six cross-members. The motor is three-point suspended from the main frame while the gear box is suspended at its front end by a trunnion bearing from a cross member and is carried at the rear end by two arms which rest on a specially dropped cross-member.

Foot brake operates on drum behind gear box and hand brake on drums of rear wheels. All brake shoes are fitted with removable liners. THE LONG CHASSIS CAN BE FITTED WITH FRONT WHEEL BRAKES AT AN EXTRA CHARGE.

Central gear lever.

Situated at the rear with a vacuum feed to the carburettor
Capacity 20 gallons.

Berliet

Chassis



Overall length ..	21' 6"
Overall width ..	6' 10"
Wheelbase ..	13' 9"
Dash to centre of rear axle ..	11' 2"
Dash to end of frame ..	17' 0"
Top of frame to ground ..	2' 8½"
Width of frame at rear ..	3' 5½"
Track, front ..	6' 0"
Track, rear ..	5' 1"
Ground clearance	10"
WEIGHT—	
Bare châssis	48 cwts.

Specification of Berliet 26 Passenger "Grande Vitesse" Chassis.



ENGINE.— The overhead valve engine has a bore of 110 m/m. and a stroke of 140 m/m. The four cylinders are cast *en bloc*, with all valves in the head, operated by push rods from the camshaft in the crankcase. Cylinder head is detachable. Driven from the camshaft is a BERLIET patent centrifugal governor which "cuts in" at 1,500 r.p.m. Oil is delivered under pressure to the main bearings, big-end bearings and overhead valve rocker gear. Ignition is by magneto and mixture is supplied by a Zenith carburettor. Provision is made for fitting a single-unit starter dynamo on the offside of the engine.

CLUTCH.— Multiple plate type.

GEAR BOX.— Located amidships, four forward speeds and reverse: all shafts run on ball bearings. (For detailed description see specification of 3½-ton châssis.)

GEAR RATIOS.— 1st and reverse, 30 to 1; 2nd, 17.63 to 1; 3rd, 10.22 to 1; 4th, 6.12 to 1.

PROPELLER SHAFTS.— Short open shaft with one universal joint between the clutch and the gear box. Open propeller shaft from gear box to rear axle with universal joint at forward end and flexible disc joint at rear end.

REAR AXLE.— Of the double reduction type—the first reduction being by bevel gear and the second reduction by straight-toothed spur points.

STEERING.— Worm and full wheel: irreversible.

FRONT AXLE.— Steel drop forging fitted with substantial stub axles and swivel pins.

WHEELS.— Seven interchangeable detachable steel disc wheels: twin at rear.

TYRES.— Six pneumatic tyres: 955×155. Straight-sided or Goodyear cushion can be fitted at extra charge.

SPRINGS.— Very resilient semi-elliptic front and rear, the rear being underslung to give a low loading position.

FRAME.— Pressed channel steel of heavy section, slightly inswept at the front and fitted with six cross-members. The motor is three-point suspended from the main frame while the gear box is suspended at its front end by a trunnion bearing from a cross member and is carried at the rear end by two arms which rest on a specially dropped cross-member.

BRAKES.— Foot brake operates on drum behind gear box and front wheels. Hand brake on drums of rear wheels. All brake shoes are fitted with removable liners.

CONTROLS.— Central gear lever.

PETROL TANK.— Situated at the rear with a vacuum feed to the carburettor. Capacity 20 gallons.

THE
Berliet
11 TON CHASSIS



STANDARD CHASSIS
(Solid Tyres) :

Overall length ..	20' 1"
Overall width ..	6' 11"
Wheelbase ..	13' 10"
Dash to centre of rear axle	11' 1"
Dash to end of frame ..	15' 7"
Top of frame to ground ..	3' 0"
Width of frame at rear ..	3' 5"
Track, front ..	6' 0"
Track, rear ..	5' 2 1/2"
Ground clearance ..	10"

WEIGHT—
Bare Chassis 54 cwt.

EXTRA LONG
(Pneumatic Tyres) :

Overall length ..	22' 7"
Overall width ..	7' 5"
Wheelbase ..	15' 4"
Dash to centre of rear axle	12' 7"
Dash to end of frame ..	18' 1"
Top of frame to ground ..	2' 10"
Width of frame at rear ..	3' 6"
Track, front ..	6' 2"
Track, rear ..	5' 3"
Ground clearance ..	10"

WEIGHT—
Bare Chassis 56 cwt.

On pneumatics :—
Long chassis **CARDINI**
On solids :—
Standard chassis **CHARMANT**

SPECIFICATION OF
BERLIET 3 1/2 TON CHASSIS



ENGINE—30 h.p. ; four cylinders cast in pairs ; bore 110 m/m., stroke 140 m/m. Lubrication by forced feed through a drilled crankshaft to all main and connecting rod bearings. Magneto ignition. BERLIET carburettor. Thermo-syphon cooling system with large radiator and engine-driven fan. Engine fitted with centrifugal governor. (For detailed description, see specification of engine fitted to 2 1/2-ton chassis.)

CLUTCH—Multiple dry plate type.

GEAR BOX—The four-speed and reverse gear box is of very substantial construction. The gear shafts are of large diameter and carried on ball bearings.

The main and lay shafts lie parallel : the second motion shaft is splined to carry the sliding gears and takes its bearing in a bronze bush in the rear of the first motion shaft.

The selector mechanism is carried in the gear box cover while the change speed lever is centrally positioned.

GEAR RATIO—1st speed, 40.9 to 1 ; 2nd speed, 23.99 to 1 ; 3rd speed, 13.91 to 1 ; 4th speed, 8.33 to 1.

DRIVE AXLE—Full-floating overhead worm and wheel type. Driving strain taken through rear springs.

Semi-elliptic front and rear, the latter being under-slung to give a low loading line.

STEERING—Worm and nut with cross rod placed in front of front axle.

DRIVE SHAFT—Open type, having an enclosed universal joint at the forward end which is provided with automatic lubrication. The rear universal joint is a flexible fabric and metal disc coupling.

BRAKE—The foot brake operates on the transmission and hand brake on a large drum on the rear wheels.

WHEELS—Seven detachable interchangeable steel disc wheels ; twin at rear for pneumatic tyres. Cast steel for solids.

TYRES—Six : pneumatic or solid tyres can be fitted as desired. Pneumatics : 1025×185 m/m. (twin at rear). Solids : 940×130 m/m. front, 950×140 m/m. rear. Straight sided tyres can be fitted at extra charge.

FUEL TANK—Fitted at rear of the chassis with vacuum feed to carburettor. Capacity 20 gallons.

THE
Berliet

5-TON CHASSIS



DIMENSIONS

Overall length ..	21' 0"
Overall width ..	6' 9"
Wheelbase ..	13' 10"
Dash to centre of rear axle ..	11' 4"
Dash to end of frame ..	16' 2"
Top of frame to ground ..	3' 0"
Width of frame at rear ..	3' 5"
Track, front ..	6' 1"
Track, rear ..	5' 8"
Ground Clearance ..	1' 2"

WEIGHT—

Bare chassis .. 63 cwt.

Calloway-CHARALFTT

**SPECIFICATION OF
BERLIET 5 ton chassis.**



ENGINE.—30 h.p.; four cylinders cast in pairs; detachable heads; bore 110 m/m., stroke 140 m/m.; all valves located on left hand side of motor. Lubrication by pressure feed through drilled crankshaft. BERLIET carburettor; magneto ignition; thermo-syphon cooling.

CLUTCH.—Multiple plate pattern.

GEAR BOX.—Four speeds forward and reverse; right hand change; differential gear is contained in gear box.

GEAR RATIOS.—1st speed, 39.72 to 1; 2nd speed, 23.28; 3rd speed, 13.51; 4th speed, 8.25. (These ratios can be varied very easily by substituting larger or smaller chain sprockets.)

FINAL TRANSMISSION.—Side roller chains are used for the final drive.

The small driving sprocket is carried on jack shafts from the gear box and the large chain wheel is bolted to the rear wheels. The drum on which this latter is mounted also serves as a hand brake drum. Adjustable radius rods to allow of the tensioning of the chains are provided. The upper parts of the radius rod is split, drilled out and threaded and into this is screwed a bronze adjusting screw which connects with an eye surrounding the jack shaft housing on the main chassis frame. To adjust the tension of the driving chains, the bolt and nut which lock the split upper part of the lower section of the radius rod is loosened; the threaded bronze adjusting screw is then turned by means of a spanner on the hexagon provided therein until the chain tensioning is adjusted to meet the requirements of the user—the locking bolt is then tightened.

SPRINGS.—Semi-elliptic front and rear.

STEERING.—Worm and nut type.

BRAKES.—Foot brake operates on drum on jack-shaft and hand brake on rear wheels.

REAR AXLE.—Steel forging with adjustable radius rods.

FRONT AXLE.—I-beam drop forging with substantial swivel pins and jaw-ended stub axles.

WHEELS.—Cast steel.

TYRES.—Solid rubber—front 950×140; rear (twin) 1030×160.

PETROL TANK.—Located under driver's seat—feeds the carburettor by gravity. Capacity 20 gallons.

All Berliet Vehicles are Guaranteed as follows :

All vehicles or châssis shall be accepted by the purchaser subject only to the following express warranty which shall exclude all conditions, warranties and liabilities whatsoever whether statutory or otherwise, which might exist but for this provision.

Subject as hereinafter mentioned the Company guarantees all goods of its own manufacture and will supply at its factory free of cost new parts in exchange for any such parts as shall under normal use and service appear to it to have been defective in workmanship or material or at its discretion will repair such parts. This guarantee is limited to despatch to the purchaser (carriage forward) of the part or parts whether new or repaired in exchange for those acknowledged by the Company to be defective. The Company cannot however accept any responsibility in connection with the product when it has been altered outside its own factory. It is further understood that the Company gives no guarantee whatever regarding pneumatic tyres or any goods not of its own manufacture. The Company is not responsible in any case for injuries, personal accidents or consequential damages or for any undertaking representation or warranty made by any person or persons selling its products.

The Company gives no guarantee of its goods except as stated herein but desires and expects that customers shall make a thorough examination of its goods before purchasing. This guarantee is limited to a period of 6 months from the date of delivery from our works and is dependent upon the strict observance of the following clauses :—

(a) The original purchaser shall at the time of purchase personally sign the form of guarantee supplied by the Company and register his name, address, date of purchase and number of car with the Company and shall obtain from the Company a signed copy of this guarantee and shall produce same to the Company for inspection at any time upon demand. This guarantee shall not be assigned or transferred to anyone unless the Company's consent in writing has first been obtained.

(b) The purchaser shall send to the Company at its factory such part or parts of cars or châssis as are alleged to be defective within seven days of the discovery of the alleged defect. Delivery to be prepaid by the purchaser and the said part or parts of cars or châssis to be properly packed for transit and clearly marked for identification with the name and full address of the owner and with the number and model of the car or châssis from which the said part or parts were taken.

(c) The purchaser shall post to the Company at its factory on or before despatch of such part or parts alleged to be defective a full and complete description of the defect.

(d) The judgment and decision of the Company in all cases of claims shall be final and conclusive and purchasers must accept from the Company and rely upon the Company's reputation to act upon and carry out in a business-like genuine and *bona fide* manner the decision reserved by the Company to itself as sole judge on all questions as to defects as well as the decision of the Company as to the exchange of part or parts. After the expiration of six days from the despatch of notification of the Company's decision, the parts submitted may be scrapped or returned carriage forward by the Company.

Terms of Business

- 1.—DRAWINGS AND SPECIFICATIONS.—As alterations and improvements are continually being made in our vehicles, we reserve the right to make any changes without notice in material, dimensions and design which we think desirable, and we do not guarantee that vehicles supplied will be strictly in accordance with our Specifications and Drawings.
- 2.—DELIVERY.—Unless otherwise specially quoted, delivery of vehicles will be made at our Works. When required, we will quote prices including the cost of freight and insurance to any part of the world.
- 3.—DELIVERY PERIODS.—Any period quoted for delivery is subject to delay by fires, floods, strikes of workmen, lock-outs, breakdown of machinery, defective castings, failure of makers to deliver material or fittings, or any other unforeseen cause.
Owing to present production difficulties, we cannot undertake to deliver definitely on the date specified, but reserve the right to postpone delivery up to three months from the date originally specified. If, on the expiration of this period, delivery has not been effected, the customer has the right of cancelling his order and claiming the refund of any deposit paid. The customer shall have, however, no further claim in respect of damages, consequential or otherwise, due to non-delivery.
- 4.—PACKING.—For export is extra in all cases, and is quoted separately.
- 5.—PAYMENT.—Net cash. Unless specially quoted, one-third with order, and the balance when goods are ready at our works ; for export one-third with order, and balance against shipping documents at Lyons Works. It is expressly agreed that the deposit is forfeited to us should the customer not take delivery of the order at the latest 15 days after our advice by invoice or simple letter that the order is at his disposal ; in this case the order being simply cancelled.
Any claims made under our guarantee clause cannot be taken to interfere with settlement of any account due by purchaser at the stipulated time.
- 6.—TENDERS.—Tenders and quotations are made subject to customers credit being proved, and are also subject to acceptance within four weeks unless otherwise specified.
Owing to the uncertain market conditions, all prices and discounts quoted must be deemed to be provisional, and the Company reserves the right to change its prices and discounts from time to time, including any agreed to be paid by customers in respect of material ordered but non-delivered. The purchaser shall have the option of rescinding his order in the event of an increase in price after such order has been received and before he has been notified that the order is ready for delivery ; and in this event his deposit shall be returned to him, but he shall have no further claim against the Company for damages, expenses or otherwise.
- 7.—INSPECTION AND TESTS.—When desired before acceptance, to be made at our Works, where delivery is taken in all cases and no claims will be subsequently entertained except under the guarantee specified overleaf.

TERMS OF BUSINESS—*continued.*

- 8.—EXPORT.—In the case of goods for export, it is specially requested that purchaser should arrange for inspection, examination and tests at our Works, as no subsequent claim of any description will be entertained after machinery is despatched from our Works, either as regards goods or packing, except under the guarantee specified overleaf.
All goods despatched are at consignee's risks.
- 9.—LIABILITY WHEN DRIVING CUSTOMERS' VEHICLES.—Customers' vehicles are driven by our employees only at customers' risk and responsibility.
- 10.—INDEMNITY.—The purchaser shall indemnify us against all claims in respect of any accident occurring to his own workmen or employees, or to any person in connection with a contract during its progress, other than our own workmen or employees.
- 11.—CHASSIS.—All châssis are thoroughly tested on the road before despatch from our Works. When no body is supplied the châssis is finished in lead colour only.
- 12.—BODIES.—Special bodies for all purposes are designed and supplied when desired.
- 13.—OUTFIT.—With all châssis and vehicles, we supply a jack, full kit of tools, oil feeder, and certain special spanners.
- 14.—SPARE PARTS.—We keep in stock a full series of all parts of our châssis that are liable to wear or to be damaged by accident. When ordering, the part number should be quoted, and the maker's number of the vehicles given.
- 15.—EXHIBITIONS.—Motor goods are only supplied by us on condition that same are not to be exhibited by any person, firm or company at any Exhibition or Show held in the United Kingdom, Ireland and Channel Isles, other than any Exhibition or Show held or approved by the Society of Motor Manufacturers and Traders, Limited, for exhibition of motor goods by its Bond signers. Any breach of this provision shall render the purchaser liable to indemnify us in respect of our liability under the Society's Bond to pay the said Society such damages, not exceeding £250, as the Committee (or on appeal the Council) of the Society may award.
- 16.—ORDERS.—Purchasers' orders shall not be considered binding on us until accepted in writing by us. It is further understood that should we wish to cancel an order we are at liberty to do so by reimbursing the deposit paid with order plus 6 per cent. annual interest on same plus an indemnity hereby determined and agreed of twenty pounds or one thousand francs (at our choice) per vehicle ordered.
- 17.—AGENTS.—The term "Agents" is used in a complimentary sense only and those firms whom we style as such are not authorised to advertise, incur any debt or transact any business whatsoever on our behalf other than the sale of goods which they purchase from us; nor are they authorised to give any guarantee or make any representation on our behalf other than those contained in our guarantee herein set forth.