

OPERATION MANUAL



LT 600

LLOYD MOTOREN WERKE GMBH BREMEN



LLOYD LT 600

15 P

**OPERATION
AND
SERVICE**

of your



LT 600

LLOYD MOTOREN WERKE GMBH BREMEN

Essential data which should be recorded for quick reference.

Vehicle type: LLOYD LT 600

License plate No.:

Registration No.:

Chassis No.:

Where: Dash board below,
identification plate

Engine No.:

Where: Clutch housing, top

Ignition-Doorkey No.:

Owner:

Insurance Policy No.:

Insurance Company:

LLOYD Service Station:

Dear LLOYD Driver!



You are heartily welcome in the big community of LLOYD friends and we wish you happy motoring with your new LLOYD car at all times.

Your new – LLOYD LT 600 – is a car you will be proud to own and you will be happy that you have chosen this beautiful and elegant vehicle with the reliable and economical 600 c. c. fourstroke engine. It will be our sincere endeavour at all times to justify this happiness and pride of ownership.

The world-wide LLOYD Service organisation is at your disposal. Foremen and mechanics of the LLOYD Service Stations are trained in our Works and know all about your beautiful car. All of them are keen to give first class service.

It is natural that you will want to know everything about your new – LLOYD LT 600 – We therefore present in a simple and concise manner hints and instructions which should be carefully studied and observed, for the mutual benefit of you and your LLOYD.

And once again:

Heartiest congratulations to the new – LLOYD LT 600 –

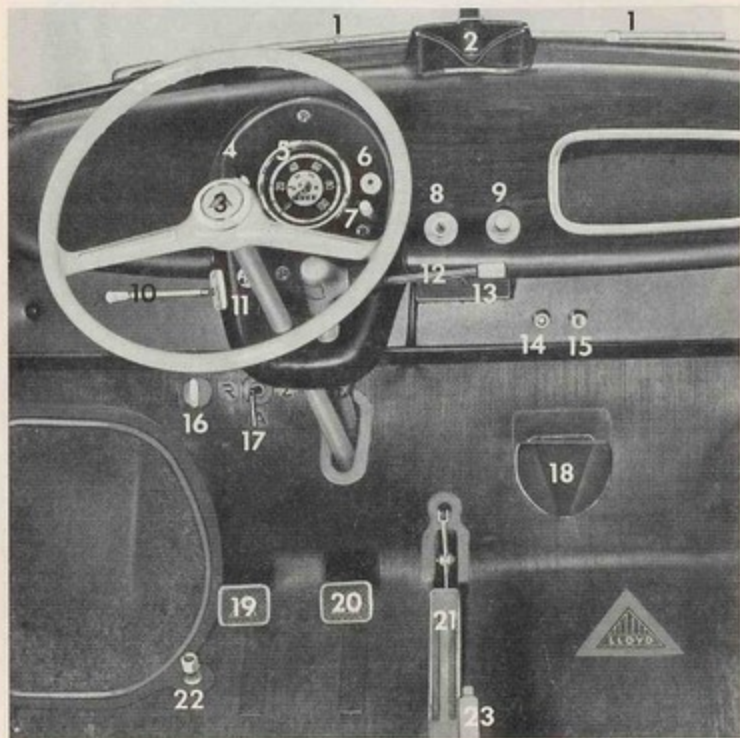
Yours faithfully, **LLOYD MOTOREN WERKE G.M.B.H.**

Service department



If you have any requests or eventual troubles owners are recommended to get in touch with their authorized Dealers and Workshops. It would be appreciated if you would inform us about your experiences, especially if you are not fully satisfied. It is always our desire to assist and improve. When writing to the works please do not forget to quote chassis and engine Nos. of your car which will facilitate dealing with your request.

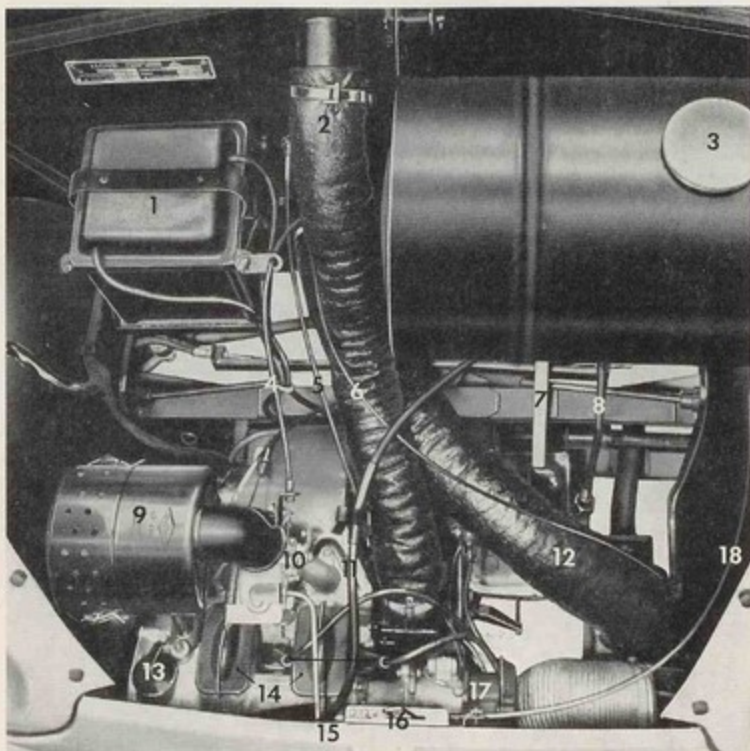
View of driving controls and instruments



- | | |
|-----------------------------------|------------------------------|
| 1. Windscreen wiper | 13. Fuse-box |
| 2. Defroster outlet | 14. Button for heater |
| 3. Horn button | 15. Button for defroster |
| 4. Blinker control lamp, red | 16. Bonnet lock control |
| 5. Speedometer | 17. Fuel cock |
| 6. Headlight warning light (blue) | 18. Air-outlet of the heater |
| 7. Windscreen wiper switch | 19. Clutch foot-pedal |
| 8. Ignition-starter switch | 20. Brake foot-pedal |
| 9. Light switch | 21. Accelerator |
| 10. Blinker switch | 22. Dipper switch |
| 11. Carburettor choke control | 23. Handbrake lever |
| 12. Gear lever | |

View under Bonnet

2



- | | |
|--|-----------------------------|
| 1. Battery | 10. Downdraught carburettor |
| 2. Defroster hose | 11. Fuel line |
| 3. Fuel tank filler cap | 12. Heater hose |
| 4. Cable for Carburettor choke control | 13. Engine oil filler cap |
| 5. Cable for defroster control | 14. Valve room covers |
| 6. Cable for heater | 15. Splash plug plugs |
| 7. Gear rod | 16. Bonnet locks |
| 8. Speedometer cable | 17. Distributor |
| 9. Air cleaner or air filter | 18. Cable for bonnet lock |

Before starting . . .

Your -LLOYD LT 600- has an aircooled engine. Therefore you do not have to worry about the "Radiator water level". Your car is ready to drive at any time if the tank contains sufficient petrol.

The fuel tank with the filler cap is located, theft proof, under the bonnet which is released from inside the car, by pulling the white handel on the left hand side under the instrument panel (Fig. 3, left hand). One can now open the bonnet by pushing away the second locking lever (Fig. 3, right hand). The bonnet is then secured by engaging the bonnet support. The reserve fuel cock is situated near the base of the steering column. In the normal position -A- the cock must point downwards. To close the fuel supply the cock must be turned to the right to position -Z- closed; on reserve to the left to position -R-. The fuel cock can be operated easy from the driver's seat (Fig. 4). After filling up fuel take care that the fuel cock is in position -A-.

Clear fuel without any oil added is required for your -LLOYD LT 600- with its 600 c. c. fourstroke engine. This is important as the brother of the -LLOYD LT 600- the LLOYD 400, which is well known, has a twostroke engine which runs on a petrol-oil mixture. Therefore you should watch that your -LLOYD LT 600- is refuelled with petrol without oil being added. Only fuel of commercial brands should be used. It is a matter of course that also your Fourstroke engine needs oil for lubrication. The engine oil is fed in through the oil filler cap when the engine is switched off.

3

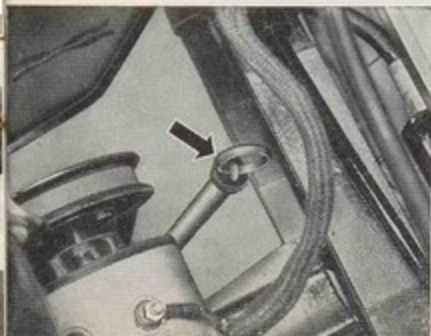
4



For checking the oil level pull out the dipstick (Fig. 5). Wipe off the oil with a clean rag, re-insert into the engine sump and again withdraw the stick. The oil level must be always between the two marks and should be kept as close as possible to the upper mark (Fig. 6, left hand). Check your oil level when re-fuelling especially after 500 km or appr. 300 miles run. If the oil level is marked on the lower line it is necessary to add oil, but take care that the oil level shown on the dipstick is not above the upper line. Furthermore take care that the dipstick is pushed in completely after checking the oil-level therewith the rubber gasket on the dipstick closes the engine-case (Fig. 6, right hand). We recommend to use HD-Oil for carburettor engines (commercial brands), never use HD-Oil for Diesel-engines and do not mix HD-Oils for carburettor engines of different commercial brands, because very often the chemical bases do not agree with each other.

Driving safety and driving comfort demand regular checks of the tyre pressures. Your – LLOYD LT 600 – is fitted with modern tubeless tyres, which keep their pressure for a long time but nevertheless a regular check of the air-pressure is necessary. Please remember that low pressures shorten the life of the tyres, high pressures cause unnecessary strains on the chassis of your car as well as discomfort due to hard shocks. It is therefore recommended that the tyre pressures are regulated to specific loads according to the figures in the technical data. The tyres should be checked carefully as this will ensure long life. Do not forget to check the spare wheel.

5



6



Oilstand bis

Oil level

obere Marke = 1,8 Liter

upper mark = .4 Imp. gall.

untere Marke = 1 Liter

lower mark = .22 Imp. gall.

Running-in

A lot has been said and written about the correct process of running-in a new car. You have no need to worry providing you attend the following hints.

By our modern production methods, the high quality of all engine parts and the improved quality of the engine oils the running-in has lost a part of the importance, but it is still no question that it has to be done, because each engine has a higher friction in the first hours of working as later, when all moving parts work together in the correct manner. The surface of the parts which slide on each other must be like polished and the quality of this surface polishing depends on the driving conditions in the first time. There is an easy way to do it. Do not drive your car faster than 70 km/h = 43,75 miles/h during the first 1500 km = appr. 1000 miles. When you are driving your vehicle hill up, change the gear early, do not try to climb the highest point of the road with the top-gear and full opened throttle. The synchromeshed gear-box makes the gear shifting really easy.

But do not believe to do the best to the engine of your car when driving especially slow. The engine of your – LLOYD LT 600 – does not like it to be driven with low revolutions and to low temperature especially in the top gear.

On the speedometer dial the admitted speeds for the different gears are marked, but this speeds should be driven after the time of running-in. We recommend to drive not faster as 70 km/h = 43,75 miles/h in the fourth gear during the running-in and to change the gears early enough before the speedometer shows the marked speeds. To do so have a look at the speedometer the first time, later on you will know when to change the gears.

Please do not drive the cold engine with full opened throttle-neither when idling nor in the gears. The lubrication circuit needs a short time to cover all sliding surfaces with protecting oil. It is mentioned already that the temperature of the engine is important too. Therefore do not let the engine idle when it is not necessary. Start when the engine is willing to accelerate, by this the engine will receive the correct working temperature soonest.

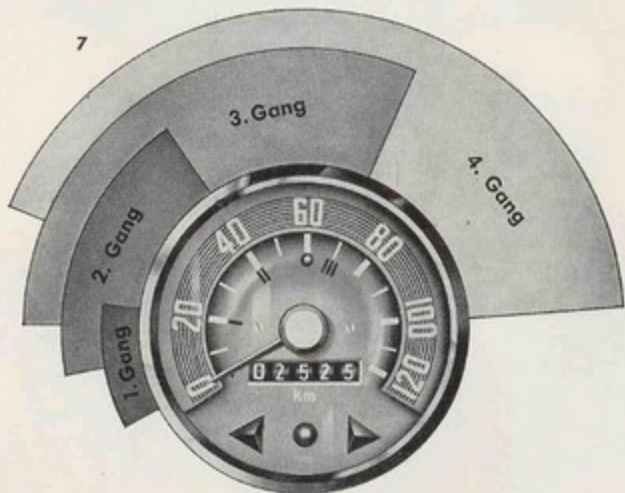
When you have driven your LLOYD the above mentioned 1500 km = 1000 miles not faster than 70 km/h or 43,75 miles/h, you may drive the following 1000 km = appr. 650 miles increasing to a top speed of 85 km/h = 53,125 miles/h. We recommend to drive not with a equal speed, but to change the speed from time to time, by this the running-in will be better and later on you may drive your car longer time with high speed.

It is your own interest to attend our running-in instructions for the first 2500 km = 1250 miles and to change the oil at 500 km = 300 miles and 1500 km = appr. 1000 miles.

After the running-in you may drive your - LLOYD LT 600 - with the following speeds:

First gear	0 - 20 km/h	0 - 12,5 miles/h
Second gear	10 - 40 km/h	6,25 - 25 miles/h
Third gear	16 - 60 km/h	10 - 37,5 miles/h
Fourth gear	24 - 85 km/h	15 - 53,125 miles/h

(Fig. 7)



Gear change

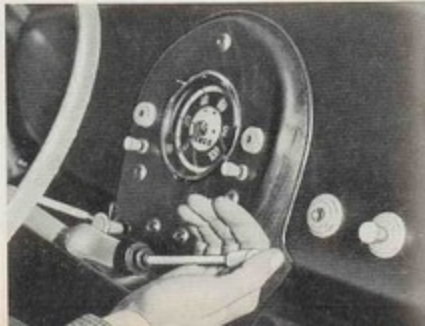
Well versed in the fundamental running-in instructions you take your seat behind the steering-wheel. We would like to accompany you on your first drive as an invisible passenger. Before you start you adapt the driver's seat to your requirements which is done by pressing down a lever and moving the seat backward or forward as necessary (Fig. 8). The inclination of the backrest is adjusted by turning the knurled knob at the lower end of the back rest (Fig. 8, arrow).

Before you start the engine, make sure that the gear lever is in the neutral position (Fig. 9). The change of the gears is made really easy by the four speed synchromeshed gear-box when you know how to do it. At first we shall explain the function of a synchromeshed gear-box. The LLOYD owner, who is not interested on technical descriptions may change over to page 12, because it is not necessary to know the technical explanations, when driving the - LLOYD LT 600 -. A gear-box is named fullsynchromeshed, when all forward-gears are provided with a synchronization. In the gear-box of the - LLOYD LT 600 - the tooth-wheels of the four forwards-gears are engaged always, furthermore the ones of the second, third and fourth gear are helical to secure a noiseless running. Two tooth-wheels belong to each gear, one is tightened on the drive shaft and the opposite one can turn free on a needle bearing which is placed on the gear change shaft.

8



9



The gear change will be done by shifting gear change rings in axial direction, these rings are provided with claw teeth on the inside. The change can be done noiseless and shockless, because the teeth-wheels and the gear change rings turn automatically with the same nr. of revolutions, this is caused by the synchronization.

This synchronization works in a manner, that the gear change ring can be shifted only so far to the corresponding tooth-wheel, that two cone friction levels are touching. The one of these friction levels is placed on the inside of the gear change-ring and the other one is connected direct to the tooth-wheel.

A special construction stops the gear change ring on the way to the tooth wheel so long until the friction of the two cone levels causes a parallel turning of the gear change ring and the tooth wheel. When the parallel turning is obtained the stop passes away and the gear change ring can be moved so that the claw toothing of the gear change ring and the one of the tooth wheel, slide into each other noiseless and shockless. Now the corresponding tooth wheel is connected to the gear change wheel so that the power can be transferred. The gear is changed (Fig. 10).

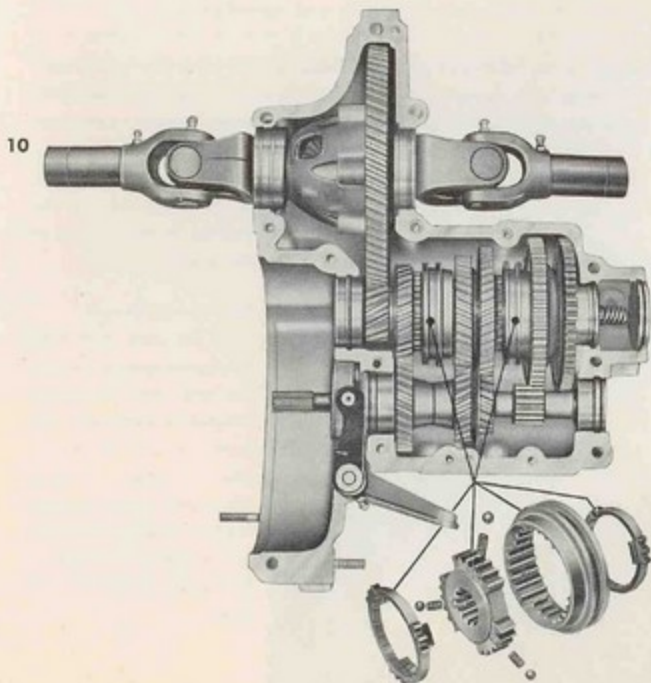


Fig. 11 shows the gear lever positions. It is remarkable that the third and fourth, the first and second and the reverse gear are placed on three levels. The neutral gear is in the middle of each level, the gear will be placed always in the neutral position between the third and fourth gear by a spring pressure. When moving the gear lever in direction to the steering wheel in neutral against the spring pressure up to a stronger spring pressure the gear lever is in the position of the level of the first and second gear. If you pull the gear lever further in the same direction, passing the stronger spring pressure = reverse gear stop, to the next stop the gear lever is placed in the level of the reverse gear. In this position move the gear lever down and the reverse gear is changed, but this has to be done only when the car is not moving.

Now you know the positions of the neutral and the reverse gear. The forwards gears have to be changed in the following manner.

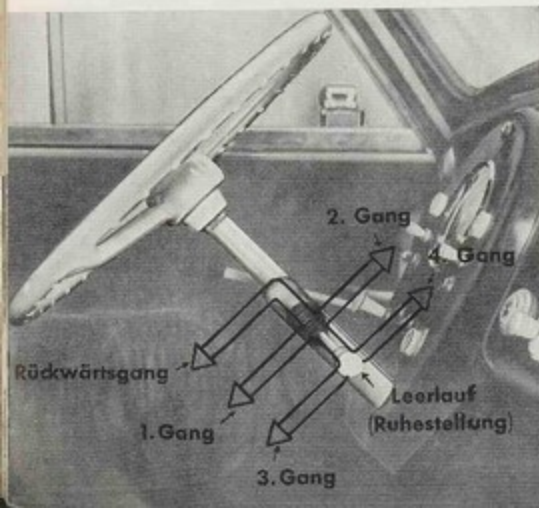
First and second gear: Pull the gear lever in neutral to the reverse gear stop and move the lever down (first gear) or up (second gear).

Please take care of the following hint: When changing from the first to second gear move the gear lever in the same level, if you do not so, it may happen that the spring pressure in the neutral, presses the gear lever down in the level of the third and fourth gear and you change in the fourth gear or if you pull the gear lever to wheel you may

move the gear lever strong in the direction to the steering in the position of the reverse gear level.

Third and fourth gear

Move the gear lever from the second gear to the neutral and allow the spring pressure to press down the gear lever to the neutral position between third and fourth gear, by moving down the gear lever in this position you change to the third gear, by moving up in the fourth gear.



The synchromeshed gearbox makes the gear changing really easy if you attend to following hints:

- Before changing a gear take your foot off the accelerator and disengage the clutch completely. If you do not disengage the clutch completely the synchronization of the gearbox will be worn in a short time.
- Do not rest your foot on the clutch pedal when driving the car.
- Move the gear lever easy and equal.

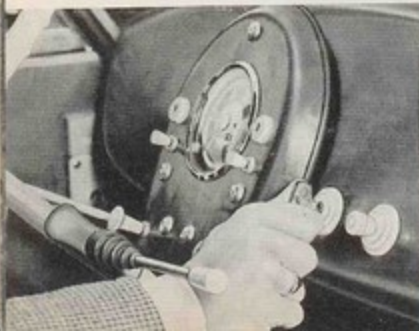
Especially when changing down, the synchromeshed gearbox of your LLOYD, shows the best qualifications, but do change down only according to the following note, otherwise it may damage the clutch or the engine of your car.

Changing down of the fourth to the third gear should be done at a speed below $60 \text{ km/h} = 37,5 \text{ miles/h}$. Changing down of the third to the second gear should be done at the speed below $40 \text{ km/h} = 25 \text{ miles/h}$. Changing down of the second to the first gear should be done at a speed below $20 \text{ km/h} = 12,5 \text{ miles/h}$.

Please do not turn over a gear.

Before you start the engine, make sure that the gear lever is in the neutral position. Ignition is switched on by inserting the ignition key and a short clockwise turn. The engine is started by a further clockwise turn after depressing the key (Fig. 12). When the engine is started let loose the key, when doing so, the key will return in the ignition position. Do not declutch when starting as you will aggravate the function of the electric starter motor. (Only in winter time it may be advisable to disengage the clutch when starting the engine, because the gearbox oil may be stiff by the coldness.) The carburettor choke control, marked "S", should only be pulled out when starting a cold engine (Fig. 13). As soon as the engine starts press the knob slowly into the normal position and accelerate slightly. Should the engine falter, i. e. does not accelerate or runs irregularly, the choke must be pulled out a little. Do not use the choke when the engine is warm as there is the possibility of flooding the cylinders with an over-rich mixture. Should the engine inadvertently have become flooded, press the accelerator pedal down fully and press the selfstarter until the engine fires.

12



13



Drive with Consideration

Considerate driving is the safe control of your car which is achieved by making proper use of all controls and instruments. These are located in your LLOYD car in such positions that they can either be seen or operated easily from the driver's seat and allow maximum attention to be given to driving.

For instance the LLOYD 600 is equipped with extremely effective blinking trafficators to indicate change of direction. The trafficator lever switch is located on the instrument panel on the left side of steering column and can be easily moved with a finger of your left hand without leaving hold of the steering wheel (Fig. 14). The trafficator warning lamp is situated on the left side of the speedometer, and can be seen easily. You are additionally warned by the ticking noise of the blinker transmitter.

Please take care that you change your direction only after selecting the trafficators and convince yourself by looking in the rear view mirror, that you do not endanger the traffic by your turn. The excellent view from your LLOYD car is uninterrupted on all sides and overtaking vehicles can be easily seen. Traffic safety comes first!

The light switch is located on the instrument panel, near the starter ignition switch and is operated by pulling out the switch-knob (Fig. 15). The first step selects the parking light when fully drawn out, the headlamp beams which can be dipped by the foot switch. The blue high beam warning light is situated in the top of the speedometer. Please dip your beams promptly so that approaching vehicles and yourself are not endangered. Furthermore the light switch is in such a position that the headlamp beams can be used easily as "light horn" during the night.

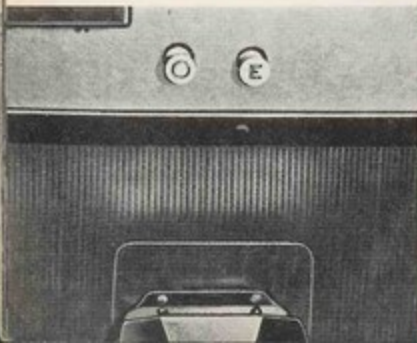
14

15



The control knobs for the heater and windscreen defroster are placed on the dash board, above the outlet for the air, warmed by the heater. Left knob-heater, right knob-defroster (Fig. 16). Both are operated by pulling out and can be settled by rotation to the right. A short left turn removes the settlement. Both systems are working independent. The heater air is warmed by the exhaust system and the defroster gets the warm air of the cylinder walls.

The windscreen wipers are switched on by pulling the knob underneath the headlight, warning light (blue) and the instrument panel (Fig. 17). They permit a good visibility in rain and contribute to safe driving. The - LLOYD LT 600 - has superior roadholding qualities on wet roads. Nevertheless you should drive in a quite and careful manner. High cruising averages do not depend so much on the maximum speed but rather on good acceleration of the car. If you take advantage of the outstanding acceleration of your - LLOYD LT 600 - good averages will be obtained without driving constantly at full throttle. The best pulling capacity of the engine and at the same time the most economical fuel consumption is found in the medium engine speeds. Accelerate your - LLOYD LT 600 - positively to the desired speed but allow the accelerator pedal to return until the car just maintains this speed. Your accelerator foot can save you money and you will be glad to surprise your friends with the low fuel consumption as well as good performance. For safe and economical driving the braking energy of the engine i. e. the retardation which occurs when the accelerator is released should be used as much as possible. The Fourstroke engine in the LLOYD performs this more effectively than the twostroke models. Therefore release the accelerator pedal in time and make full use of the braking energy of your engine. Every unnecessary depressing of the accelerator means a waste of fuel.



Don't be afraid of Punctures

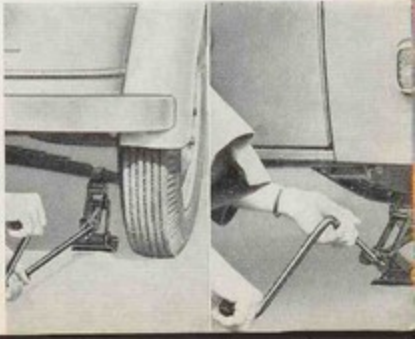
Punctures have become a rarity since horseshoes nails are hardly ever found nowadays and tyre qualities have been greatly improved. If a removal of a wheel does become necessary this is not heavy work and will be forgotten within a few minutes, if you work according to the following instructions.

First remove the spare wheel out of the place inside the car and place it within reach close to the wheel to be changed. Remove the hub cap by means of a screwdriver, which is supplied in the car tool kit. The slackening of the wheel bolts requires the application of some force, as the bolts must be firmly tightened for safety. The bolts are only slackened so that they can be unscrewed later when the car is jacked up. (Fig. 18). Make sure that the hand brake (Fig. 1) is pulled hard on when changing a rear wheel and place stones or suchlike before the tyres when changing a frontwheel. Screw the jack to approximate height and place it in position under the car. Place the wheel-nut wrench on the end of the long handle and turn in a clockwise direction. When changing the rear wheel the jack must be positioned under the rear axle close to the spring and wheel; if a frontwheel is changed the jack is put under the lower spring close to the wheel (Fig. 19). Jack up the car with a few turns until the wheel spins freely. Now the wheel bolts are completely unscrewed and the damaged wheel is removed. Put it on one side and bring the spare wheel into position.

18



19



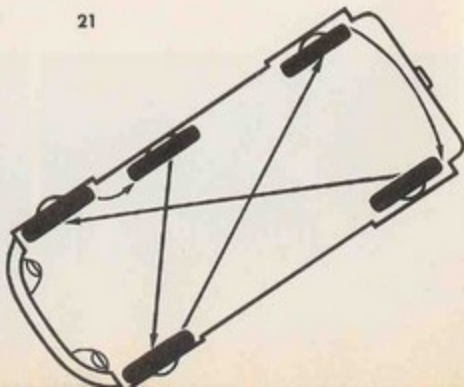
The spare wheel can be mounted without lifting if you adjust the height of the brake drum with the jack so that one of the wheel bolts can be screwed in simply by tilting the wheel from bottom to top [Fig. 20]. Hanging on this one bolt the wheel then can be turned to screw in the remaining bolts. These bolts must be tightened diagonally a few turns at a time so that the tapered shoulders of the wheelbolts fit correctly in the bolt holes of the sparewheel. Tighten the wheelbolts moderately and evenly and let the car down on all wheels. Now the bolts are firmly and diagonally tightened. Your own safety demands that you tighten up the wheel bolts again at the next stop or at the latest after 50 km or appr. 30 miles. The hub cap is replaced by giving it a short blow with the palm of your hand. Have the punctured tyre repaired in the next workshop – the law of series is malicious – especially where punctures are concerned and one puncture can be followed quickly by another.

To ensure a uniform wear of the tyres, including the sparewheel, the wheels should be changed diagonally at intervals of a few thousand miles. The correct way of changing tyres diagonally is shown in Fig. 21. If tyres are interchanged in this manner it will never happen that your spare wheel is useless due to under-inflation in case of a sudden puncture. Have your sparewheel slightly over-inflated. It is far easier to reduce pressure than to increase it.

20



21



Maintain with care

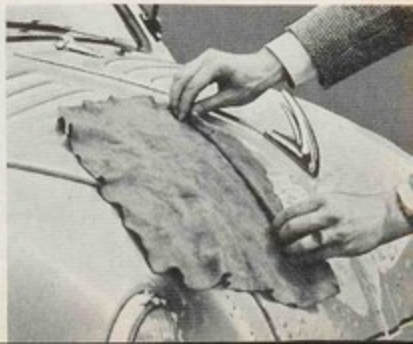
Care of a car is a peculiar thing. As long as the car is new, every little spatter is removed, every little scratch is regretted and removed as quickly as possible. When the car gets older, the loving care is reduced and the washing of the car, which is everdue is delayed till a later occasion.

The synthetic resin baking enamel of your LLOYD car is of such an excellent quality that it endures "lantern garages", sun, wind and rain for a long time without any injuries to the good appearance. But even the best quality paint requires care and regular washing if it is to retain its lustre for years. Cleaning is best done with a sponge and a copious supply of cold and clear water (Fig. 22) and never in the sun. No attempt should be made to dust the car with a dry duster or of dry removal of road mud as even the hardest paint will be scratched and becomes dull. When the dirt has been removed by washing, dry the Surface with a chamois leather to prevent the formation of water marks (Fig. 23), your car, however, requires more maintenance than regular cleaning. Even a good quality point needs an occasional application of a good body polish to retain its water repelling qualities and lustre, it will also prevent the paint from becoming dull. The point is properly maintained when water, put on the Surface, stays in pearls or runs off in drops from vertical places.

22



23



A body polish is recommended for this purpose by the LLOYD MOTOREN WERKE, which is available at every authorized LLOYD workshop. This polish (LLOYD-Politur) is applied thinly and uniformly with a flannel rag or cotton wad with circular movement and polished with polishing cotton to a bright finish. This of course requires time and work but you are repaid by a lasting lustre of the paint (Fig. 24).

The bright parts too, such as bumpers, ornamental ledges, headlamp rims and wheel hub caps require a certain maintenance to keep their brightness. This is best done by rubbing the parts with polishing cotton after the washing and by an application of a very thin coat of vaseline. (Fig. 25).

If your LLOYD car is equipped with a sliding roof or hood, the special instructions for the preservation of the hood cloth, which are issued with your car, should be adhered to. The upholstery should be cleaned from time to time with the aid of a vacuum cleaner and spots removed with a cleaning fluid.

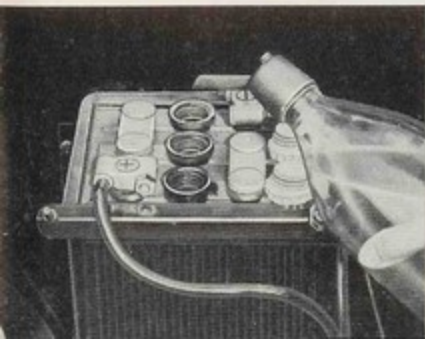
The original lustre and neat appearance of your car can be retained for a long time by good maintenance. A well kept car is also a recommendation for the owner and for this reason your LLOYD car should be maintained just as carefully as your valuable household effects.



Take car for service

Service means more than maintenance work. The owner, who wants to do this work himself and will not leave this job to the workshop must have already some knowledge and must not be afraid to get dirty hands. We are thinking of all parts of your car, which we believe can be serviced by the interested amateur. The inspection and service operations, which are compiled in this chapter, are so simple that they can be easily accomplished by the owner. Whether the lubricating operations can be done depends on conditions, to which we shall refer later. Of course, all servicing can be entrusted to your Service Stations, if you do not have the time or inclination.

To deal first with the battery this is a very important part of your vehicle and requires regular attention. The vent plugs in the top of the battery should be removed and the level of the acid solution examined. Keep the solution level approx. 10 mm or $\frac{3}{8}$ " above the plates, distilled water must be added if necessary. Acid or so called special refill liquids should never be used as they will destroy the battery within a short time. It is important that open lights are not held near the vents on account of inflammable gases. Always use an electric lamp when examining the cells. A rubber spout for the refilling can be bought for a few pence. The distilled water should be kept in a clean bottle (Fig. 26). Battery inspections should be carried out regularly with the periodical maintenance service and especially in summer time. As the battery cover must be removed on this occasion, the battery posts and terminals should be thinly coated with good petrolleum jelly (Vaseline) for protection (Fig. 27). You should also check that the terminals are fitting tightly.



The airfilter of your LLOYD car is novel as the dry absorption of dust is effected by an element consisting of special paper. Accordingly the cleaning is very simple. The element can be removed by pulling back the quick action claps (Fig. 28, left hand). The cleaning will be done by slight knocking on a level piece of wood (Fig. 28, right hand). Under normal driving conditions a first cleaning will be necessary after 6 000 km or appr. 4 000 miles, but really dusty conditions will require more frequent cleaning. At 12 000 km or appr. 7 500 miles the element must renewed (Fig. 28, right hand).

Maintenance of plugs belongs also to the service operations. Spark plugs are subject to age and corrosion. A new set of spark plugs after a mileage of 12 000 km or 7 500 miles will be done by slight knocking on a level piece of wood (Fig. 28, right hand). Under appr. 2 000 miles for appearance and correct gap. When engine and plugs are sound the plug will show the wellknown light brown colour on the insulator. The electrode gap should be 0,7–0,8 mm or .027–.031" (Fig. 29, right hand) and can be adjusted by tapping the side electrode towards the centre one. Plugs are removed with the special plug spanner, which unscrews and removes the plug from its channel (Fig. 29, left hand).

* will be a real help to the engine. Plugs must be examined at intervals of 3000 km or

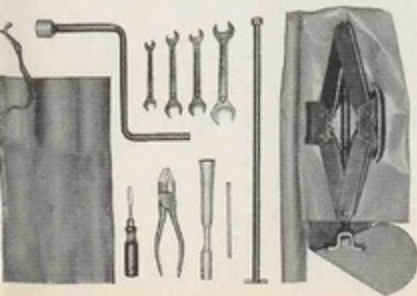


A tool kit for maintenance and service, which is illustrated in Fig. 30, is supplied with the car and allows you to do the work mentioned.

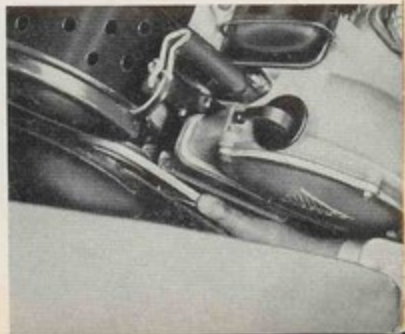
The dynamo and the blower pulley, are operated by a V shaped belt, which is therefore responsible for the correct cooling of the engine. Belt failure is indicated immediately by the glowing of the red ignition warning light. In such a case stop the car at once and have a new belt fitted. It is advisable to have a spare belt for safety in your tool kit, although the belt has a practically unlimited life if it is inspected and properly tensioned from time to time. The correct adjustment is effected when the belt can be pushed inwards to the extent of appr. 20 mm or $\frac{7}{8}$ ". This check can be done yourself by reaching through between gear casing and engine and pushing the belt with the thumb (Fig. 31). If the belt is too loose it must be retightened. This operation requires additional tools and experience and is best done by the authorized LLOYD workshop. We would like to draw your attention to the fact that the V belt runs dry and must not be lubricated.

As the saying goes "Grease well and speed well" this holds good for your LLOYD car. You will find the lubricating periods and points to be greased on the lubrication chart.

30



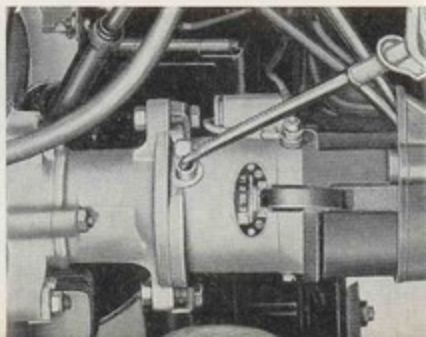
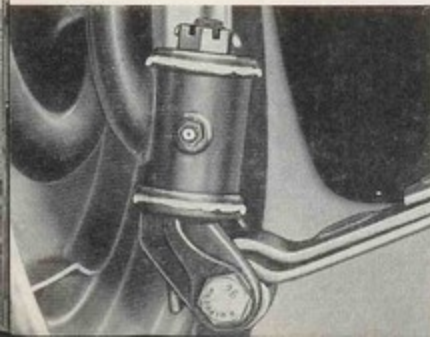
31



Even though a LLOYD Service Station is entrusted with the lubrication, owner are recommended to watch the lubricating operations so that they know where the particular lubrication points are positioned and how they are serviced. If it gives you pleasure to do this important work yourself, you must have a hand grease gun and the specified lubricants at your disposal. Your authorized LLOYD workshop will supply or advise you about this.

Even a simple operation like greasing a grease nipple must be done the proper way. It is important that dirt and old grease is cleaned from the lubricator fittings before the grease gun is applied, and new grease is forced in. The new grease must force out the old used grease, which emerges around the greasing point in the shape of a collar. This so called "grease collar" should not be removed as it is the best protection against penetration of road dirt and water (Fig. 32).

The convenient position of the distributor flap oiler should not induce you to overdo the lubrication, for the distributor requires only a few drops of oil every 24 000 km or 15 000 miles (Fig. 33). The lubrication chart, which is found on the last page of this booklet informs you about all lubrication service and everything connected with it.



Maintenance requiring expert knowledge

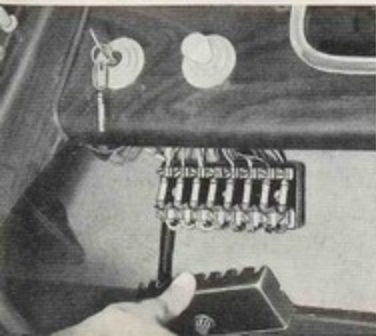
The previous operations and instructions are sufficient for the good running of your car, but the following work needs expert knowledge. Furthermore some special tools are required. We explain all this to give you some insight into the maintenance practice and to enable other workshops to carry out this work, if a LLOYD agent is not available.

Electrical system

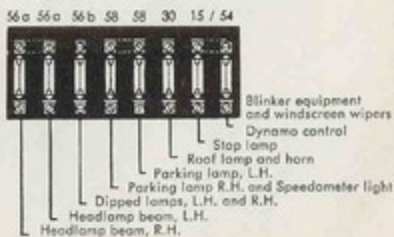
Fuses will only blow when there is some fault in the circuit or electrical equipment. Failures caused by a transient and harmless excess loading are very rare. Replacement of the fuse will not remedy the trouble, it is therefore essential to locate and repair the fault which caused the fuse to blow. Never substitute wire or tin foil for blown out fuses, which will only increase the trouble.

It will be advantageous to carry in the car a small box with spare fuses and lamp-bulbs, which can be bought at every LLOYD workshop. The electrical system must be examined at once and the trouble cured by an expert mechanic in a workshop. The fuse box is located behind the battery (Fig. 34). The circuit lay-out is shown on fig. 35.

34



35

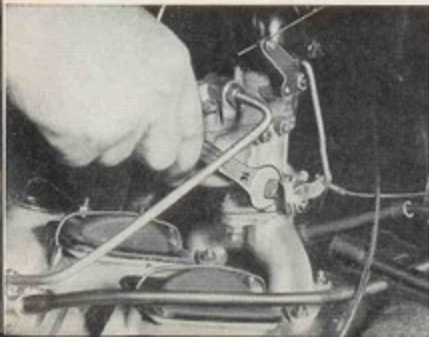


Carburettor

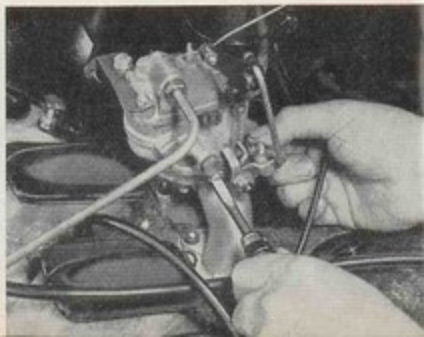
The carburettor is a precision mechanism which is adjusted by the Works by extended tests for the lowest fuel consumption and best performance. The only trouble which can occur is a choked jet, and this happens very rarely as the fuel, which is supplied today by the filling stations is usually free from dirt.

Main and idling fuel jets can be removed with the tools of the tool kit without disassembly of the carburettor and are cleaned by blowing through (Fig. 36). On no account should wire or anything, which would enlarge the orifice be used, as carburettor jets are calibrated to very fine limits. Furthermore it is useless to alter the jets to obtain a lower consumption or higher performance. As mentioned above, the carburettor setting is made by the Works and should not be altered. The only occasional adjustment required is to the idling screw. This should be made when the engine is warm. To begin with the engine is adjusted with the idling adjusting screw to the usual idling revolutions. Then the volume mixture control screw (adjusted with screwdriver, fig. 37) is gradually adjusted until the engine runs evenly. The idling speed is readjusted with the idling adjusting screw. The setting is correct when the engine does not stop when the throttle is suddenly opened or closed. The adjustment of both screws is effected as shown in fig. 37.

36



37



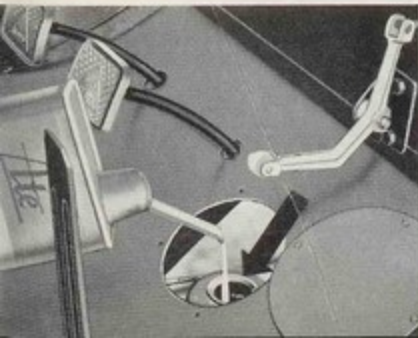
Brakes I

Good Brakes are essential. It is very rare that a driver himself notices that the brake efficiency of his car has deteriorated for after a long time he has become accustomed to it.

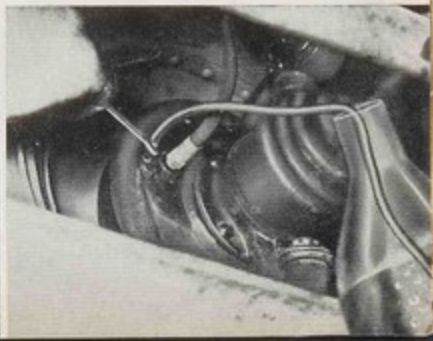
But your own and the traffic safety requires more than ever faultless brakes, which are at your disposal in case of danger. Brakes, therefore, should be inspected at regular intervals at the Service Station and maintained by an expert.

Two operations are essential for brake adjustment, first the bleeding of the hydraulic system and then the actual adjustment. The hydraulic system is bled by means of a bleeding hose. One end of the hose is attached to the wheel cylinder bleeding screw, the lower end submerges in a small quantity of brake fluid in a clean bottle. The brake master cylinder must be filled with brake fluid and the level be kept at least half full throughout the operation, otherwise air will be drawn into the system, necessitating a new start (Fig. 38). After removal of the rubber protection cap, the bleeding hose is attached to the bleeder screw of the wheel cylinder of each wheel in the following sequence: rear R. H., rear L. H., front L. H. The bleeder screw is opened by a spanner. Depress the brake pedal quickly and allow it to return without assistance. Repeat this pumping action and watch the flow of fluid until air bubbles cease to appear from the bleeding hose (Fig. 39). Press the brake pedal firmly against the floorboards while the bleeder screw is securely tightened.

38



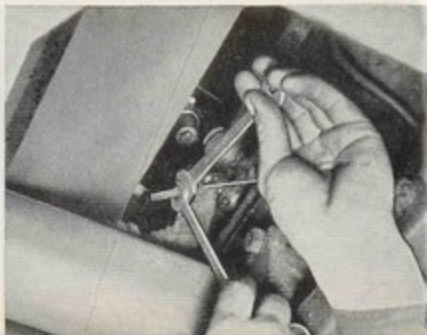
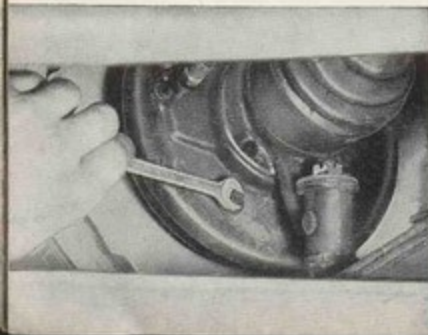
39



The bleeding hose is removed and the rubber protection cap refitted to protect the bleeder screw against penetration of dirt. Please take care that only specified brake fluids like "ATE blue" or Lockheed from original containers are used for this operation. Only then is it warranted that the rubber parts of the brake system are not injured. When the brake system is bled, the readjustment of the brake shoes can be effected. Jack up the car until all four wheels are clear off the ground. Shoe adjustment is done individually at each wheel by the eccentric adjusting screw. Spin the wheel in the rotation of forward movement until the brake shoe rubs lightly. Then slacken back the adjusting screw until the wheel just spins freely. Turn adjuster clockwise, i. e. in outward directions as shown in fig. 40.

The handbrake is adjusted on the adjusting devices of the brake cables underneath the vehicle (Fig. 41). Furthermore a fine control is found on the hand brake lever, which is adjusted by the adjusting nut after slackening of the lock nut. In following the adjusting nut is secured again. The handbrake must be adjusted in such manner that the brake grips efficiently in the third ratchet position.

Good drivers should make it a practice of checking the efficiency of the brakes before starting on a run after a long stop. This check should always be made when the car has been washed as braking efficiency may be reduced by water getting into the brake drums. This trouble can be quickly cured by slightly depressing the brake pedal for a short distance. The heating of brake shoes and drums soon evaporates the water and the full efficiency is quickly restored.



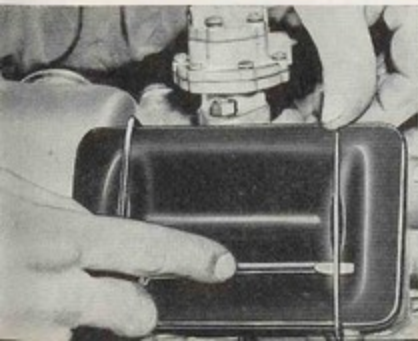
Valves

The checking and adjustment of the valves is maintenance which should be carried out at regular intervals. This should be done every 3 000 km or appr. 2 000 miles by a Service Station when other specified servicing is carried out.

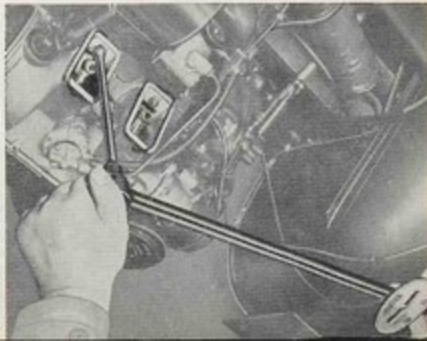
The valve room covers can be easily removed by easing out the retaining spring (Fig. 42). The camshaft housing will always contain some oil, which will spill on this occasion. As the valve clearance must be set when the engine is cold, this should be done at the end of the maintenance schedule. To adjust the valve clearance, the piston of the cylinder in question must be at Top Dead Centre of the compression stroke. Both valves are closed in this position and the existing clearance can be checked. The Top Dead Centre adjustment is done in the same way as the ignition setting (Page 31, Fig. 47) with the variation that the mark "OT" (Top Dead Centre) of the flywheel must coincide with the engine casing mark. This adjustment requires the care of an expert mechanic. Not only the life of the valves but also the engine's performance depend on the valve setting being correct.

When the valve room covers are removed, the bolts of the camshaft housing must be checked and retightened if necessary. This work has to be done by a LLOYD service station, because it needs the use of a special tool (torque wrench) fig. 43.

42



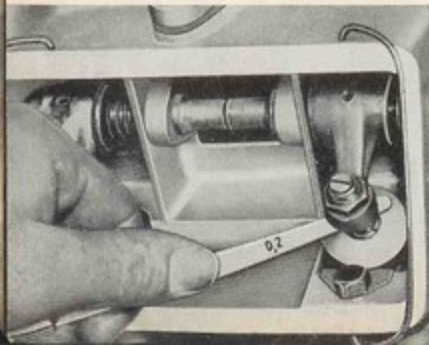
43



The valve clearance is checked with a feeler gauge, the inlet valve clearance must be 0,15 mm or .006", exhaust valve clearance 0,20 mm or .0078" (Fig. 44). The two exhaust valves shown in fig. 45 have a common cover, the inlet valves, however, on the opposite side have separate covers.

The valve clearance always must be adjusted, if it does not correspond to the above mentioned clearances. The adjusting screws are secured by lock nuts, which are undone with a 15 mm ring spanner. Turn the adjusting screw with a screwdriver so far that the feeler gauge can be inserted with a slight pull between adjusting screw and valve stem. The adjusting screw is fixed in the correct position by means of a screwdriver and secured by lock nut against rotation (Fig. 45). When this is done, the valve clearance should be checked again to ascertain that the adjusting screw setting was not disturbed when the lock nut was tightened. Make sure that the cork gasket of the valve chamber cover is in good condition; replace if necessary and close the covers with the retaining springs.

44



45

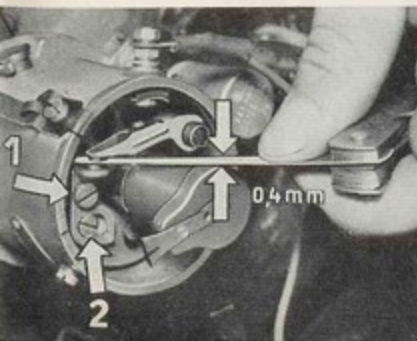


Ignition

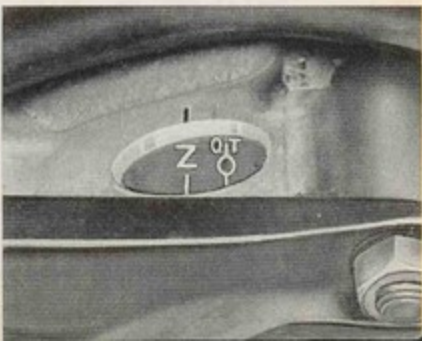
Control and adjustment of the ignition also have a considerable effect on the efficiency of the engine. Contact points as well as the fibre contact arm require periodical attention on account of wear which gradually results in an alteration of the ignition timing. Check the contact point gap, when the points are fully opened. To obtain the maximum opening of the contacts remove the spark plugs and turn the engine by revolving the pulley of the V-shaped belt.

The setting of the contact breaker is now checked with a feeler gauge of 0,4 mm or .016". Slacken the screw which secures the fixed contact plate (Fig. 46, screw No. 1), and adjust plate to correct setting by the eccentric screw (Fig. 46, screw No. 2). Tighten the fixing screw No. 1, thus securing the correct gap. Now check ignition timing on No. 1 cylinder (Flywheel side). Remove the rubber plug from the inspection hole of the clutch casing, and crank engine in running direction (forward) until the mark (Z) on flywheel coincides with the mark on the engine casing (Fig. 47).

46



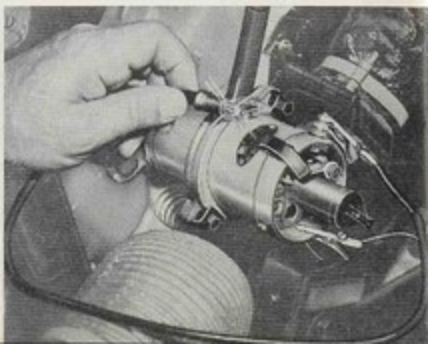
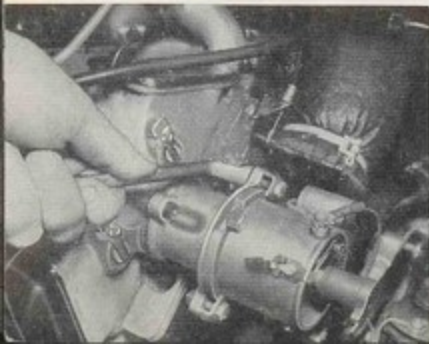
47



The rotating electrode therefore must point in this position to the mark on the distributor casing. The piston of cylinder No. 1 is now 3° before Top Dead Centre and this is the position when the ignition must be fired.

To obtain an accurate setting, an electric 6-Volt testlamp can be used. Switch on the ignition and connect the 6-Volt lamp in parallel with the contact breaker point (Fig. 49) (i. e. one lead from the distributor low tension terminal and the other to ground). Now slacken the bolts, which hold the distributor (Fig. 48) and turn the distributor casing to the left (advanced ignition) or to the right (retarded ignition) until the test lamp lights (Fig. 49). Please observe the following: The turning of the engine for the ignition setting must be made in the running direction only. If the mark on the casing is overtravelled rotate backwards, but pass the mark a sufficient distance and adjust on the mark anew in rotating direction. Slight transmission backlash which prevents an exact setting of the ignition is thus eliminated.

It can be seen that the ignition setting really requires professional knowledge and care and is should therefore be left to your garage.



The Clutch

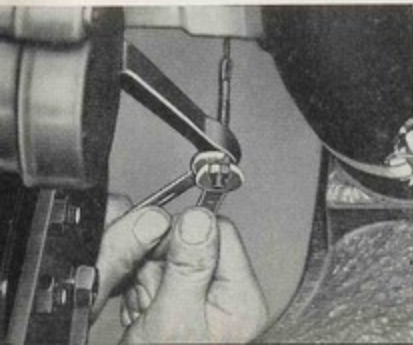
The clutch should only be used for changing gears. The foot should not be rested on the clutch pedal as unintentional slight pressure will result clutch slip and undue wear. From time to time the clutch must be checked and adjusted as slight wear of the clutch linings and transmission parts after some operating time is unavoidable. This should be made periodically by your Service Station.

To readjust slacken the lock nut of the clutch cable on the clutch lever and turn the the adjusting nut (Fig. 50).

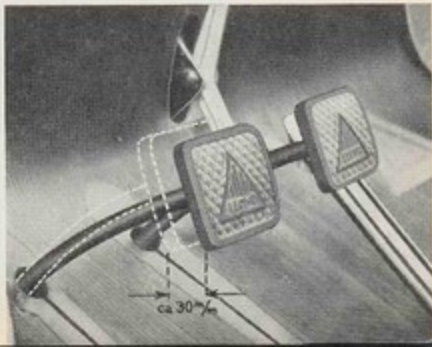
The correct clearance until begin of release between nut and clutch lever is 2–6 mm or $\frac{1}{16}$ – $\frac{15}{64}$ ". This setting corresponds with a free movement of appr. 30 mm or $1\frac{1}{4}$ " on the clutch pedal (Fig. 51). When the setting is effected, secure the adjusting nut with the lock nut.

The clutch has an almost unlimited life, if it is correctly operated and carefully adjusted it enables the driver to make a smooth start and to shift the gears noiselessly.

50



51



Light system

Occasionally the bulbs of your car go out of commission. It is therefore advisable to carry spare bulbs in the car as their replacement is simple and no special instructions are required. Even the headlamp bulb replacement is not difficult, if one knows how to go about it.

To begin with undo the right hand slotted screw, located at the underside of the rim, with a screwdriver (Fig. 52) and remove the light unit. Release the spring clip and pull off the bulb holder. The bulb can then be removed by turning it to the left and pulling it out. The replacement bulb is fitted in reversed sequence. Please avoid touching the new headlamp bulb with greasy, oily or bare fingers. Grease or perspiration will evaporate by the bulb heat and settle on the reflector. When replacing bulbs these should be handled therefore with the package or with tissue paper or a clean rag (Fig. 53). The left hand screw of the front rim adjusts the angle of tilt of the reflector. As the headlamps of your car are adjusted at the works the setting should not need altering.

52



53



The lubrication service

In the folding lubrication chart, which you will find on the right, a fixed lubrication and maintenance schedule is given for the further operation of your car. The lubrication chart shows all points which require attention and details the specified lubricants. In addition to the lubrication service, which is due every 1500 km or 1000 miles the following operations have to be carried out:

1. Check engine oil level, refill if necessary
2. Check gearbox oil level and refill if necessary
3. Grease steering gear
4. Grease clutch lever
5. Grease interior joints and interior universal shafts
6. Grease exterior joints, front wheel suspension and spring forks
7. Grease tie rod joints
8. Grease foot pedal shaft
9. Check brake fluid and refill if necessary
10. Check acid level of battery, refill distilled water if necessary, clean and grease terminals

Note: Use same brand of oil as used for last filling

To be carried out in greater intervals only:

11. Renew engine oil (every 3000 km or 2000 miles)
12. Grease slide, bearings of the rear springs (every 3000 km or 2000 miles)
13. Grease door hinges, rods etc. (every 3000 km or 2000 miles)
14. Grease rear wheel bearings (every 6000 km or 3500 miles)
15. Spray front and rear springs (every 6000 km or 3500 miles)
16. Renew gear box oil (every 12000 km or 7500 miles)
17. Clean engine oil gauze screen
18. Oil distributor flap oiler (every 24000 km or 15000 miles)

The minor maintenance service

Additionally to above operations mentioned in the "Lubrication Service" chapter the following inspection resp. new adjustments should be carried out every 3000 km or 2000 miles:

1. Test drive
2. Greasing as per lubrication chart incl. oil change
3. Check valve clearance and adjust if necessary
4. Check engine suspension and retighten if necessary
5. Check clutch clearance on foot pedal and clutch lever and adjust if necessary
6. Check steering and adjust if necessary
7. Check brake hoses and pipes for tightness
8. Check foot and handbrake, adjust and bleed if necessary
9. Check tyre pressure and correct if necessary
10. Test drive and delivery control (check idling and adjust if necessary)

The major maintenance service

The major maintenance service should be done every 6000 km or 3500 miles, i. e. at every second minor maintenance service. This major maintenance service should be entrusted to your LLOYD workshop as it includes some adjustments which are vital for driving safety and consistent performance of the vehicle.

The operations required are as follows:

1. Lubrication service as per lubrication chart
2. Maintenance service
3. Check V belt tension and tighten if necessary
4. Check contact breaker points and ignition timing, adjust if necessary. Check spark plugs, grease cam or the distributor shaft
5. Clean airfilter
6. Clean fuel gauze screen of three-way fuel cock
7. Check toe-in (Front and rear wheels)
8. Check spring stirrup nuts for tight seat and retighten if necessary
9. Check starter motor for tight seat, and retighten if necessary
10. Check shock absorber tightness and function
11. Check light system, headlamp adjustment, blinker function and horn

12. Check panel instruments
Check Bowden cables for smooth operation and free if necessary
13. Check all bolts, nuts and body screws and retighten if necessary

To be done at longer intervals only:

14. Renew airfilter element (every 12000 km or 7500 miles)
15. Control flange attachment of inlet and exhaust manifold for tight fit (every 12000 km or 7500 miles)
16. Clean fuel gauze screen of three-way fuel cock, fuel pipes, carburettor and jets (every 12000 km or 7500 miles)
17. Clean gauze screen of breather tube (every 12000 km or 7500 miles)
18. Check front and rear wheel bearing play (every 12000 km or 7500 miles)

LLOYD Cars are efficient, reliable and economical. Regular maintenance and service is required to maintain these qualities. The wide spread net work of LLOYD Service Stations for the expert execution of these operations is everywhere at your disposal. Regular maintenance service increases the life of your car.

TECHNICAL DATA

Engine

Manufacturer and model:	LLOYD 600
Maximum torque:	3,9 mkg at 2500 r. p. m. (28,2 ft. lb.)
Continuous power output:	19 HP (DIN) at 4500 r. p. m. (24 bhp. SAE)
Short-duration power output:	19 HP (DIN) at 4500 r. p. m. (24 bhp. SAE)
Specific power output:	31,7 HP/l.
Mean working pressure:	6,37 kg/cm ² at 4500 r. p. m. (90,5 p. s. i.)
Mean piston speed:	9,6 m/sec. at 4500 r. p. m. (31,5 ft.)
Compression:	6,6
Crank ratio:	4,0
Location in the vehicle:	in the front part transversely to the direction of drive
Suspension:	3-point, rubber-cushioned
Lubricating system:	pressure-feed
Cooling system:	air (fan N = 1,65 x N crankshaft)
Weight, approx.:	52 kg (115 lb.)
Number of cylinders:	2
Arrangement of cylinders:	40 degrees tilted forward/side by side
Design of cylinders:	single
Cylinder material:	cast-iron
Cylinder bore:	77 mm (3,03 in.)
Stroke of piston:	64 mm (2,52 in.)
Total piston displacement:	596 c. c. (36,36 cu. in.)
Cylinder head:	light alloy/detachable/single head
Valve-seal inserts:	shrink fit
Makers of pistons:	Mahle/Karl Schmidt
Piston material:	light alloy/with inserted steel struts/cast
Piston rings:	2 compression, 1 oil scraper
Connecting rod:	double - T section
Connecting rod bearing:	roller bearing with cage
Crankshaft:	steel/pressed
Crankcase:	light alloy/split type
Lubricating oil passages:	cast-in pipe
Number of valves (each Cylinder):	Inlet: 1, Exhaust: 1
Arrangement of valves:	overhead
Inlet valve opens:	80° after BDC. } 0,2 mm = .0079"
Inlet valve closes:	75° before BDC. } valve clearance
Exhaust valve opens:	30° after TDC. } 0,15 mm = .0059"
Exhaust valve closes:	35° before TDC. } valve clearance
Valve clearance (cold engine):	Inlet 0,15 mm = .0059", Exhaust 0,2 mm = .0079"
Valves are actuated by:	double-armed drag lever (rocker-arms)
Camshaft:	above cylinder head / 2 ball bearings
Camshaft drive:	chain wheels and single roller chain

TECHNICAL DATA

Engine accessories

Fuel supply:	diaphragm pump
Fuel tank capacity:	31 l (6.8 Imp. gall.)
Fuel filter:	inside fuel cock
Oil pump:	geared type
Oil can filling quantity:	1,8 l (.4 Imp. gall.)
Oil filter:	strainer at pump inlet
Air cleaner:	dry air filter w. insert
Carburettor-type:	Solex 28 VFIS
Carburettor-principle:	downdraft
Carburettor-adjustment:	
Main jet:	120
Idle jet:	50
Air idler jet:	1,0
Air funnel:	24
Air regulating jet:	220
Electrical system:	6 volts
Ignition:	battery ignition
Contact breaker:	single/point gap 0,4 mm (.0157")
Ignition distributor:	Bosch VJ 2 Bl. 5 mk.
Spark-advance mechanism:	centrifugal type
Ignition timing:	3° before TDC
Spark plug:	Bosch W 225 T 1 or Beru 225/14 u 2 or Champion L 7
Spark gap:	0,7 to 0,8 mm (.0276 - .0315")
Firing order:	1 - 2
Starter:	Bosch CDD 0,4/6 R 5
Starter design:	mechanical pinion shift
Starter control:	electro-magnetic
Dynamo:	Bosch LJ/GEH 160/6/2500 L 8
Dynamo drive:	narrow vee-belt 9,5 x 700 (.37 x 27,5")
Kind of regulation:	voltage regulation
Charging begins:	at 1000 r. p. m. of the crankshaft
Gear ratio: crankshaft/dynamo:	shaft i = 0,605
Battery:	6 V/50 Amp/hr. 6 V/56 Amp/hr.

Power Transmission System

Clutch make:	Fichtel & Sachs / K 5 E
Type of clutch:	single plate dry clutch
Transmission:	mechanical multi-speed change gear full-synchromeshed
Arrangement of transmission:	connected to the engine in one unit
Number of speeds:	4 forward, 1 reverse
Gear ratios:	4,58 / 2,39 / 1,54 / 1,03 R 4,58
Gear shift arrangement:	beside the steering column

Operations of change gears

Transmission housing - amount of oil required:	1 l (.22 Imp. gall.)
---	----------------------

TECHNICAL DATA

Power train:	direct to front wheels
Driving wheels:	2 (front wheels)
Differential gearing:	bevel gears/inside transmission case
Drive of semi-axes:	helical gears
Gear ratio: Revs. of transmission:	Revs. of wheel i = 5,29
Transmission of thrust:	transverse springs

Wheels, Tyres Steering

Type of wheels:	slotted wheel disc
Number of wheels:	4 (+ 1 spare wheel)
Tyre size front and rear:	5,60 - 13 (tubeless)
Type of rim:	drop centre rim
Size of rim front and rear:	4 J x 13
Wheel support rear:	independent suspension by transverse springs
Wheel support rear:	oscillating axle
Suspension front:	2 transverse springs
Suspension rear:	2 longitudinal springs
Shock absorbers:	4 telescopic shock absorber
Camber:	2°
King-pin inclination:	7°
Toe-in (unloaded):	0 - 4 mm (0 - .1575")
Castor:	0°
Steering gear system:	rack steering-duplicated steering
Steering gear ratio:	17,65
Maximum steering lock:	ins. 33,5° / outs. 26,5°
Track rod:	divided
Minimum turning radius:	10,5 m (34,45 ft.)

Brakes

Brake system:	LLOYD-Teves
Principle of working of the pedal brake:	on 4 wheels / inner shoes
Effective total braking surface:	456 cm² (70,7 sq. in.)
Transmission of brake power:	hydraulic
Brake drum diameter:	200 mm (7,874")
Principle of working of the hand brake:	mechanical on front wheel/inner shoes

General data of the Chassis	LT/LTK (normal)	LT/LTK (long wheel base)
Wheelbase:	2350 mm (92,52")	2850 mm (112,21")
Tread, front:	1200 mm (47,244")	1200 mm (47,244")
Tread, rear:	1200 mm (47,244")	1200 mm (47,244")

TECHNICAL DATA

Ground clearance:	120 mm (4,724")
Frame construction:	centre tube
Lubricating system:	individual lubrication

Axle loads and weights

	LT	LTK
Permissible axle load, front:	575 kg (1267,636 lbs.)	575 kg (1267,636 lbs.)
Permissible axle load, rear:	750 kg (1653,439 lbs.)	750 kg (1653,439 lbs.)
Permissible total weight:	1150 kg (2535,273 lbs.)	1285 kg (2832,892 lbs.)
Weight empty:	715 kg (1576,279 lbs.)	750 kg (1653,439 lbs.)
Load-carrying capacity:	435 kg (958,995 lbs.)	535 kg (1179,453 lbs.)

Other data

Top speed:	85 km/h (53,125 mph)
Highway speed:	85 km/h (53,125 mph)

Climbing ability in %

	1 Person	under full load	Speed
First gear:	34	28	11 km/h = 6,875 m/h
Second gear:	21.5	13	21 km/h = 13,125 m/h
Third gear:	12.5	7.5	33 km/h = 20,625 m/h
Fourth gear:	7	3.7	49 km/h = 30,625 m/h

Normal fuel consumption: 6,7 ltr./100 km = 41,66 m p imp. gall *)

Specific engine revolutions

(1000 m/4. Gang) (3281 ft./4th gear):	3072
---------------------------------------	------

Dimensions:

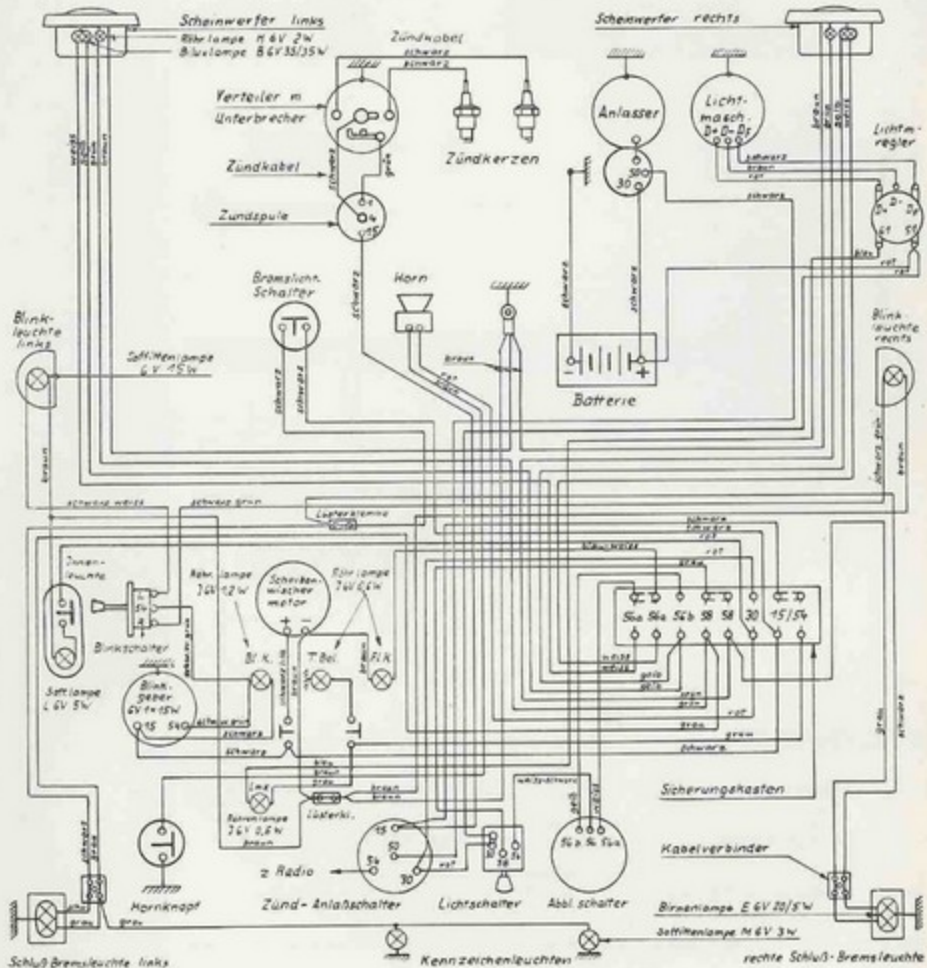
Overall length:	3530 mm (138,97")	4050 mm (159,448")
Overall width:	1485 mm (58,464")	1485 mm (58,464")
Overall height:	1630 mm (63,779")	1630 mm (63,779")
Smallest turning circle: (plus overhang)	11 m (36,08 ft.)	13,5 m (44,28 ft.)

Accessories:

Headlights:	35 W
Dimming:	Foot dimmer switch
Parking lights:	in headlights
Direction indicators:	Blinker, front and rear
Charging current indicator:	Control light
Speedometer:	0-100 km/h (0-62,5 m/h)
Tyre pressure according to the load:	front 1,2-1,4 atü (17,6-20,5 lb/sq. in) rear 1,2-1,7 atü (17,6-25 lb/sq. in)

*) located by the new test instruction DIN 70030, which orders a higher test speed.
(Now 64 km/h = 40 m/h instead 53 km/h = 33,125 m/h equal speed).

Notes



Lubrication chart

Nomenclature of greasing
respectively servicing points

1. Airfilter, dry
2. Engine oil drain plug
3. Engine oil filler plug
4. Distributor
5. Four speed gearbox
Einfüllschraube = Gearbox filler cap
Ölstandkontrolle = Oil level control
Ablassschraube = Drain plug
6. Steering casting
7. Clutch lever
8. Frontwheel suspension and kingpin joints
9. Interior joints
10. Interior universal joints
11. Pedal shaft
12. Tie rod joints
13. Rear wheel hub
14. Brake mastercylinder
15. Bellows
16. Springs (front and rear)
17. Bearing of the rear springs

Nomenclature and specification of lubricating and maintenance materials

Engine oil

HD-oil for combustion engines (Commercial brands). Do not use flush oil for flushing but same brand of oil as used for refill



Check engine oil level

Four speed
synchronised gearbox

At especially low outside air temperatures (below approx. 15°C = 59°F) we recommend the use of a gearbox fluid (Automatic Transmission fluid), made by one of the leading oil manufacturers in the automotive line.



Three speed gearbox

SAL 50, summer and winter

Steering

SAL 100, summer and winter

Check gearbox oil level

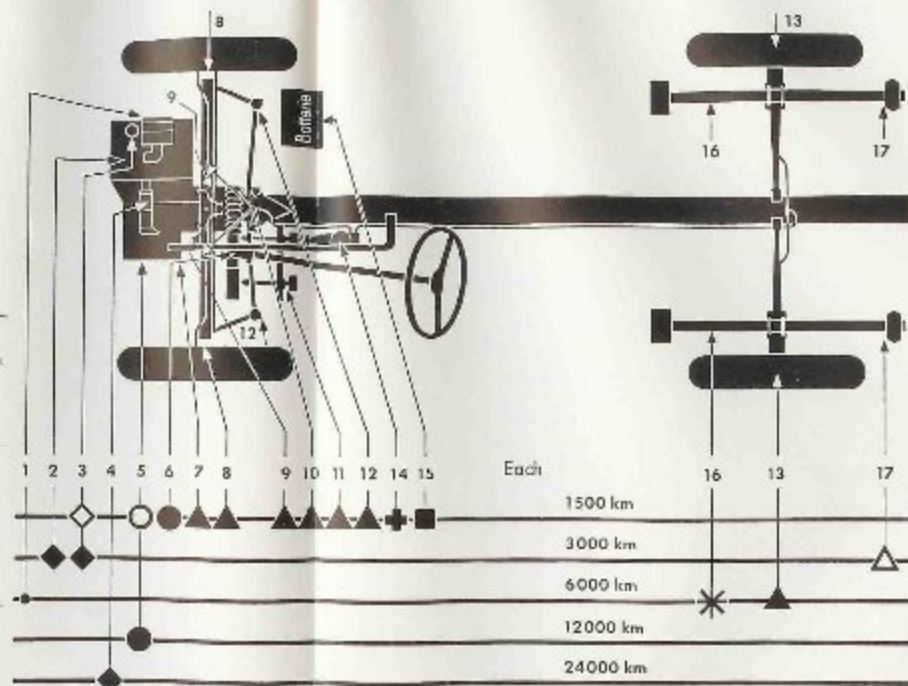
Oil pressure grease, water repellent acid resistant

Distilled water

Brake fluid "ATE blue" or "Lackhead"

Spray oil

Graphite grease
1 km = 0.6 miles



KEY TO WIRING DIAGRAM

1. Scheinwerfer (li.)	Headlamp L. H.
2. Blinkleuchte (li.)	Blinker L. H.
3. Birnenlampe F 6 V 15 W	Ball bulb F 6 V 15 W
4. Verteiler mit Unterbrecher	Distributor with contact breaker
5. Zündkerzen	Spark plugs
6. Blinkleuchte (re.)	Blinker R. H.
7. Scheinwerfer (re.)	Headlamp R. H.
8. Horn	Horn
9. Zündspule	Ignition coil
10. Lichtmaschine	Dynamo
11. Anlasser	Starter motor
12. Bremslicht-Schalter	Stop lamp switch
13. Lichtmaschinen-Regler	Regulator
14. Batterie	Battery
15. Kugellampe H 6 V 5 W	Ball bulb H 6 V 5 W
16. Innenleuchte	Roof light
17. Fuß-Abblendschalter	Foot dipper switch
18. 2 Röhrenlampen J 6 V 0,6 W	2 Tube bulbs J 6 V 0,6 W
19. Kabel-Klemme	Cable clamp
20. Sicherungskasten mit 8 Schmelzeinsätzen 8 Amp.	Fuse box with 8 fuses 8 Amp.
21. Brems-Blinkleuchte, links	Stop-blinker lamp L. H.
22. Leuchten im Tachometer	Speedometer lamps
23. Scheibenwischermotor	Screen wiper motor
24. Scheibenwischerschalter	Screen wiper switch
25. Blinkgeber 6 V - 2 x 15 W	Blinker transmitter 6 V - 2 x 15 W
26. 3 Röhrenlampen J 6 V 1,2 W	3 Tube bulbs J 6 V 1,2 W
27. Hornknopf	Horn button
28. Blinkschalter	Blinker switch
29. Brems-Blinkleuchte (re.)	Stop-blinker lamp R. H.
30. Schlußleuchte (li.)	Tail lamp L. H.
31. Kennzeichenleuchte (li.)	Number plate lamp, L. H.
32. Zünd-Anlaßschalter	Ignition starter switch
33. z. Radio	Contact for radio connection
34. Lichtschalter	Light switch
35. Soffittenlampe M 6 V 3 W	Tubular bulb M 6 V 3 W
36. Kennzeichenleuchte (re.)	Number plate lamp, R. H.
37. Soffittenlampe K 6 V 15 W	Tubulator bulb K 6 V 15 W
38. Soffittenlampe L 6 V 5 W	Tubulator bulb L 6 V 5 W
39. Schlußleuchte (re.)	Tail lamp R. H.
40. Biluxlampe B 6 V 35/35 W	Bilux headlamp bulb B 6 V 35/35 W
41. Röhrenlampe H 6 V 2 W	Tube bulb H 6 V 2 W

CABLE COLOURS

Rot	Red	Weiß	White	Schwarz-gelb	Black with yellow
Schwarz	Black	Schwarz-lila	Black with purple	Schwarz-rot	Black with red
Braun	Brown	Blau	Blue	Blau-weiß	Blue with white
Schwarz-grün	Black with green	Weiß-schwarz	White with black	Weiß-grün	White with green
Grau-rot	Grey with red	Grau	Grey		
Gelb	Yellow	Grün-rot	Green with red		

MORE THAN 1000

LLOYD SERVICE STATIONS

with Works trained expert personnel and genuine
LLOYD spare parts in

ANDORRA

BELGIUM

DENMARK

FRANCE

GREECE

ITALY

MALTA

NORWAY

SAAR TERRITORY

SWEDEN

AUSTRIA

CYPRUS

FINLAND

GREAT BRITAIN

ICELAND

LUXEMBOURG

NETHERLANDS

PORTUGAL

SPAIN

SWITZERLAND

TURKEY

AFRICA

ASIA

AMERICA

AUSTRALIA

warrant also abroad a correct LLOYD service.

543 254-0	Sechskantschraube M 6 x 12 DIN 933-8 G Federring B 6 DIN 127 Scheibe 7 DIN 126 Sechskantmutter M 6 DIN 934-6 S vorst. 4 Pos. f. Befestigung Rahmen u. Rahmen	Hex head bolt M 6 x 12 DIN 933-8 G Spring ring B 6 DIN 127 Washer 7 DIN 126 Hex nut M 6 DIN 934-6 S the a.s. 4 items are for connection spacer with bottom	Boulon (six pans) M 6 x 12 DIN 933-8 G Rondelle grower B 6 DIN 127 Rondelle 7 DIN 126 Ecrou (six pans) M 6 DIN 934-6 S les 4 pièces ci-dessus pour fixation du plancher avec le baulier
	Sechskantschraube M 6 x 20 DIN 933-8 G Scheibe vorst. 2 Pos. f. Befestigung Rahmen u. Rahmen u. Stützelemente	Hex head bolt M 6 x 20 DIN 933-8 G Washer the a.s. 2 items for connection spacer with bottom and bumper carrier	Boulon (six pans) M 6 x 20 DIN 933-8 G Rondelle les 2 pièces ci-dessus pr. fix. plancher avec baulier et les supports de pare-chocs
543 254-0	Sechskantschraube M 6 x 15 DIN 933-8 G Scheibe Sechskantmutter M 6 DIN 934-6 S vorst. 3 Pos. f. Kennzeichenbefestigung	Hex head bolt M 6 x 15 DIN 933-8 G Washer Hex nut M 6 DIN 934-6 S the a.s. 3 items are for connection the license plate fastening	Boulon (six pans) M 6 x 15 DIN 933-8 G Rondelle Ecrou (six pans) M 6 DIN 934-6 S les 3 pièces ci-dessus pr. fixation de plaque d'immatriculation
	Klemwinkel (f. Dichtungsmittel Seitenheil) Sechskantschraube M 6 x 25 DIN 933-8 G	Angular clamp for rubber seal for side portion Hex head bolt M 6 x 25 DIN 933-8 G	Equerre pr. fixation de bande caoutchouc pour panneau de côté. Boulon (six pans) M 6 x 25 DIN 933-8 G
543 254-0	Scheibe Sechskantmutter M 6 DIN 934-6 S vorst. 3 Pos. f. Klemwinkel u. Seitenheil	Washer Hex nut M 6 DIN 934-6 S the a.s. 3 items are for angular clamp and side portion	Rondelle Ecrou (six pans) M 6 DIN 934-6 S les 3 pièces ci-dessus pour fixation equerre et panneau de côté
	Linsenschraube AM 6 x 15 DIN 7985 f. Seitenheil hinten mit Seitenwand	Lens head screw AM 6 x 15 DIN 7985 for side portion "rear" with side panel Hex head bolt M 6 x 12 DIN 933-8 G	Vis tête bombée AM 6 x 15 DIN 7985 pour fixation panneau tête arrière avec panneau de côté Boulon (six pans) M 6 x 12 DIN 933-8 G
543 266-0 543 254-0	Sechskantschraube M 6 x 12 DIN 933-8 G Scheibe Scheibe Federring A 6 DIN 127	Washer Washer Spring ring A 6 DIN 127	Rondelle Rondelle Rondelle grower A 6 DIN 127

443 406-0
443 406-1

Sechskantmutter M 6 DIN 934-6 S
varst. 5 Pos. f. Seitenwand m. Rumer hint.

Latching-Nut SNL 1856
Schraube f. Speed-Nut
Schraube f. Speed-Nut
Sechskantschraube M 6 x 15
DIN 933-8 G
Scheibe R 7 DIN 440
Federring B 6 DIN 127
Sechskantmutter M 6 DIN 934-6 S
varst. 7 Pos. sind Verbindungssteile f. Dach

543 254-0

Senkholtschraube 4 x 20 mm
DIN 97, f. Holzrahmen f. Schiebedach
Sechskantschraube M 6 x 12
DIN 933-8 G
Scheibe
Federring B 6 DIN 127
Sechskantmutter M 6 DIN 934-6 S
varst. 4 Pos. f. Rumer vors u. vorderen Radkasten

443 114-1
543 254-0

Winkel m. Anpunktschraube
Scheibe
Federring B 6 DIN 127
Sechskantmutter M 6 DIN 934-6 S
varst. 4 Pos. f. Radkasten mit vord. Seitenteil u. Rumer

Sechskantschraube M 6 x 15
DIN 933-6 S (Mutter etc. in Gr. 29)
f. Rumer mit Radkasten u. Signalkornhalter

Hex nut M 6 DIN 934-6 S
the a.m. 5 items are for side wall with spacer rear

Latching nut SNL 1856
Bolt f. speed-nut
Bolt f. speed-nut
Hex head bolt M 6 x 15 DIN 933-8 G

Washer R 7 DIN 440
Spring ring B 6 DIN 127
Hex nut M 6 DIN 934-6 S
the a.m. 7 items are connecting elements for roof

Countersunk wood screw 4 x 20 mm
DIN 97, for wooden frame for sliding roof
Hex head bolt M 6 x 12 DIN 933-8 G

Washer
Spring ring B 6 DIN 127
Hex nut M 6 DIN 934-6 S
the a.m. 4 items are for spacer front and front wheel box

Angle with screw
Washer
Spring ring B 6 DIN 127
Hex nut M 6 DIN 934-6 S
the a.m. 4 items for wheel box front side partion and spacer

Hex head bolt M 6 x 15 DIN 933-6 S
(nuts etc. in gr. 29)
for spacer with wheel box and signal horn holder

Ecrou (six pans) M 6 DIN 934-6 S
les 5 pices ci-dessus pour assemblage panneau de cte avec le bouclier intrieur

Latchingnut SNL 1856
Vis  pas indesserable
Vis  pas indesserable
Boulon (six pans) M 6 x 15
DIN 933-8 G
Rondelle R 7 DIN 440
Rondelle grower B 6 DIN 127
Ecrou (six pans) M 6 DIN 934-6 S
les 7 pices ci-dessus servent  l'assemblage du toit

Vis  bois tte fraise 4 x 20 mm
DIN 97 pour cadre en bois du toit coulissant
Boulon (six pans) M 6 x 12
DIN 933-8 G
Rondelle
Rondelle grower B 6 DIN 127
Ecrou (six pans) M 6 DIN 934-6 S
les 4 pices ci-dessus pour assemblage du boudier avant avec tle passage de roue

Equerre tle avec vis soude
Rondelle
Rondelle grower
Ecrou (six pans) M 6 DIN 934-6 S
les 4 pices ci-dessus pour assemblage de tle passage de roue avant avec panneau de cte et bouclier avant

Boulon (six pans) M 6 x 15
DIN 933-6 S
(Ecrours etc. en gr. 29)
pr. assemblage du boudier avec passage de roue et support overrigger

		<p>Linse senkrecht m. Spitze AM 4 x 10 DIN 7988-5 S f. Seitenteil vorn m. Anschlußblech</p> <p>Sechskantschraube M 6 x 15 DIN 933-8 G Scheibe Federring B 6 DIN 127 Sechskantmutter M 6 DIN 934-6 S vorst. 4 Pos. f. vord. Seitenteil m. Rad- kasten u. Böumer</p> <p>Sechskantschraube M 6 x 60 DIN 931-8 G Scheibe Federring B 6 DIN 127 Sechskantmutter M 6 DIN 934-6 S vorst. 4 Pos. f. vord. Seitenteil m. Seiten- wand</p> <p>Sechskantschraube M 6 x 15 DIN 933-8 G Sechskantschraube M 6 x 12 DIN 933-8 G Federring B 6 DIN 127 Sechskantmutter M 6 DIN 934-6 S vorst. 4 Pos. f. Seitenwand u. Heck m. Rahmen</p>		<p>Lens head countersunk screw pointed AM 4 x 10 DIN 7988-5 S for side portion, front, with connecting plate</p> <p>Hex head bolt M 6 x 15 DIN 933-8 G</p> <p>Washer Spring ring B 6 DIN 127 Hex nut M 6 DIN 934-6 S the a.m. 4 items are for front side portion with wheel box and spacer</p> <p>Hex head bolt M 6 x 60 DIN 931-8 G Washer Spring ring B 6 DIN 127 Hex nut M 6 DIN 934-6 S the a.m. 4 items are for front side portion with side panel</p> <p>Hex head bolt M 6 x 15 DIN 933-8 G</p> <p>Hex head bolt M 6 x 12 DIN 933-8 G</p> <p>Spring ring B 6 DIN 127 Hex nut M 6 DIN 934-6 S the a. m. 4 items are for side panel and rear compartment with frame</p>	<p>Vis tête bombée fraisée pointue AM 4 x 10 DIN 7988-5 S pour assemblage panneau côté avant avec</p> <p>Boulon (six pans) M 6 x 15 DIN 933-8 G Rondelle Rondelle grower B 6 DIN 127 Ecrou (six pans) M 6 DIN 934-6 S les 4 pièces ci-dessus pour assemblage panneau côté avant avec tête de passage de roue et du boîtier avant</p> <p>Boulon (six pans) 6 x 60 DIN 931-8 G</p> <p>Rondelle Rondelle grower B 6 DIN 127 Ecrou (six pans) M 6 DIN 934-6 S les 4 pièces ci-dessus pour assemblage de panneau de côté avec panneau arrière</p> <p>Boulon (six pans) M 6 x 15 DIN 933-8 G Boulon (six pans) M 6 x 12 DIN 933-8 G Rondelle grower B 6 DIN 127 Ecrou (six pans) M 6 DIN 6 S les 4 pièces ci-dessus pour assemblage panneau de côté avec le cadre chassis</p>
643 254-0					
543 254-0					
643 208-0	Gewindeplatte oben L	1	Threaded counterplate top L.H.		Contre plaque filetée haut G
643 213-0	Gewindeplatte unten L	1	Threaded counterplate bottom L.H.		Contre plaque filetée bas G
643 221-0	Gewindeplatte R f. LS/LK z. Rückwandbefestigung an Karosserie, S. auch Gr. 44	1	Threaded counterplate R.H. for LS/LK for mounting door on body		Contre plaque filetée droite pr. LS/LK pour montage de portière sur la carrosserie
8-10	Seitenteil vorn L	1	Side portion front, L.H.		Panneau de côté avant gauche
13 43 101-2	Seitenteil vorn R	1	Side portion front, R.H.		Panneau de côté avant droite



LLOYD MOTOREN WERKE G.M.B.H. BREMEN