



INSTRUCTION MANUAL

Hummel

STANDARD
SUPER

Dear DKW-Rider!

You have made a good choice, for you have decided for a moped of first rate quality, a moped of excellent road performance which has scrupulously been tested by our engineers and represents a highly developed machine today.

This little manual shall give you many a valuable hint for the care and maintenance of your vehicle. Please keep all the instructions given therein in mind and they will help you fully to enjoy riding your DKW machine.

Do not forget either that besides of its remarkable output, the DKW moped is provided with excellent road-holding properties which may induce you to drive too quick or even carelessly, thus not only endangering you but also other participants in traffic.

We therefore ask you

- always to observe the traffic regulations,
- to be courteous — also to pedestrians,
- never to weave your way through a driving or parking motor-car convoy,
- shortly spoken — to be fair in traffic!

These are advices we ask you to take into consideration so that even after years of riding you will be able to state with pride: "I have never had an accident!"

That's what we sincerely wish you saying "bon voyage"!

ZWEIRAD UNION AG.

Notes of Interest

Number plate: Licence place:

Name and address of owner: Frame number:

..... Engine number:

..... Insurance policy number:

Phone number: Insurance company:

Licence date:

As to the indications given hereafter for the individual figures, please note that the letter in front of the cross line refers to the part or component described, whereas the number stated behind is that of the figure illustrating the part in question.

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Before-Operation Service

Nobody will take it amiss — if after a gaily spent evening you oversleep your time next morning. There is no excuse for it, however, if you then hastily pull out your machine of the garage, start it, and — giving full throttle — try to catch up the time lost. That is not the right thing to do! It is — we may say so without exaggerating — a carelessness.

Even when being in a great hurry, you should not fail to take your time and check, for the sake of your own security:

the tyre pressure — the lighting system — and the efficiency of the brakes.

Only when having done so, you have fulfilled a traffic participant's duty in this respect, and may then quietly set off.

Do not fail either to stick to all traffic regulations and to drive with carefulness.

The Tyre Pressure

Not too long a time ago, the tyres of a moped were provided with a so called bicycle valve, the tyre pressure having been to be found out roughly, by pressing the tyre with the thumb.

Today also the inner tubes of the moped tyres are equipped with a "Schrader" valve enabling you exactly to fix the tyre pressure by means of a tyre gauge.

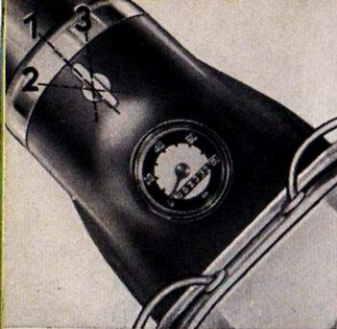
Here are the correct figures:

(applicable for a passenger's average weight of 75 kg = 165 lbs.)

"Hummel Super"	without pillion rider:	front wheel 1.8 atü	rear wheel 2.00 atü
	with pillion rider:	front wheel 1.8 atü	rear wheel 2.25 atü
"Hummel"		front wheel 1.6 atü	rear wheel 2.20 atü

Please stick to these empirical values, for they are of vital importance for the road-holding of the vehicle and the service life of the tyres. When driving with under-inflated tyres, you overstrain the breaker strip of the outer cover, making it crack prematurely. In addition to this, the steering stability, being a decisive factor for safe and reliable driving, is considerably reduced; using an expert's term, we could say: "the vehicle is shimmying".

Last not least it is also up to the tyres to cushion to a certain extent the shocks caused by rough terrain, thus guaranteeing an even more effective suspension of the machine. But they cannot do so, if you are driving with too high a pressure. Particularly on bad roads too high a tyre pressure makes not only bounce the vehicle, but also ache your wrists.



Position 1 — ignition on Fig. 1
Position 2 — ignition and lighting on
Position 3 — ignition and lighting off

The Lighting System

Even if you are not going to take a trip after dark, the lighting system of your vehicle — in other words, the head and tail lights — should be in perfect order to make sure that they meet the traffic regulations.

You can save yourself a lot of trouble by switching on the lighting with the engine running every day before setting out for your first ride, making sure that the filaments of the head and tail lights are burning.

And here another Hint....

A set of bulbs carefully packed and taken along as a reserve in your tool kit will save you disagreeable surprises, for you are never at a loss when the filament of the tail light happens to fuse on the road.

Adjusting the Headlight

To prevent that any rider coming after dark from the opposite direction is being dazzled and thus endangered by your vehicle, please observe the following indication for adjusting the headlight:

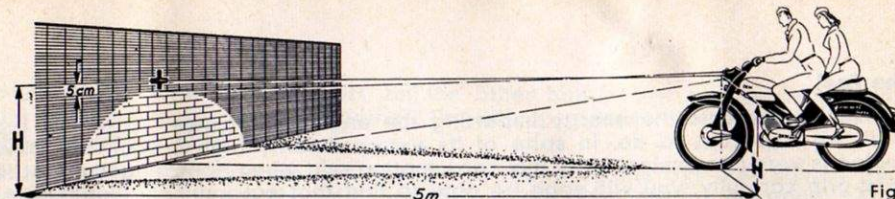


Fig. 2

The top of the main light beam should lie 5 cm (2 in.) below the centre of the headlamp, measured at a distance of 5 m (16.5 feet) and with the rider mounted on the vehicle (see fig. 2).

The adjustment of the headlight need not, of course, be done every day, but may be checked at regular intervals only, for the purpose of which you should not fail either to switch on the dimmed light. For adjusting the beam there is a lens-head screw located on the lower front of the headlamp rim, which, turned to the right, raises the beam, and, turned to left, lowers it.

The Brakes

Your vehicle is equipped with efficient brakes guaranteeing a short braking distance; provided, of course, that the brake operation is correctly adjusted, the brake lining is not soiled or too worn off, and that the brakes themselves are in perfect mechanical order.

Even when keeping your DKW machine in excellent condition, never forget to check the braking effect before setting out for a trip. Should this not meet your entire satisfaction, have the brakes repaired first before continuing the ride (please see here our statements on page 27).

The Fuel

The fuel represents the energy imparting the engine the power to render the work we expect it to do. In spite of its extraordinarily high output, the DKW engine is very economical in its fuel consumption and when operating the throttle twist-grip carefully, you will soon be able to find that out yourself. Our chapter "A Very Good Advice" on page 12 of that manual will tell you more about this.

Any commercial-quality gasoline available will serve you as fuel. You must not forget though to add engine oil with an anti-corrosion agent such as "SHELL 2 T MOTOROEL" in the ratio 25 : 1 (i.e. 25 parts of gasoline to 1 part of oil). The heart of your vehicle, you must know, is a two-stroke engine requiring an oil additive for lubricating the working surface of the piston, the piston pin and the crankshaft bearing.

But adding more oil to the gasoline than stated above certainly would not do any good to the engine, for "too much of a good thing is good for nothing". After a short period of operation already the engine would no longer work in the usual way, being then "clogged" in the fullest sense of the word. Owing to the excessive addition of oil there will have deposited in the combustion chamber, the exhaust system and — above all — the exhaust port such an amount of oil carbon that there would no way be left for the exhaust gases. In such a case the engine would have to be cleaned in a DKW workshop.

When using self-mixing two-stroke engine oils with an anti-corrosion agent, such as "SHELL 2 T MOTOROEL", you may very well fill the gasoline into the fuel tank and add the oil later on. Not premixed, additive type engine oils and pure

mineral oils (with no additives), on the other hand, must first be mixed with the gasoline in a special container, the only permissible oils being those of the SAE grade 40 or 50.

In very cold weather even self-mixing two-stroke engine oils, not having been stored in a warm room, should be mixed with the gasoline in a container before being filled into the tank.

Pure mineral oils require besides of this the addition of an anti-corrosion agent, such as "AUTOL-Desolite K". By adding the anti-corrosion agent you do not only prevent the corrosion very often occurring with internal combustion engines, but also considerably reduce the formation of combustion residues (oil carbon) on the piston head, in the cylinder head, and the exhaust system.

In general there is being offered at the filling stations an already prepared 2-stroke mixture. Here, however, you should absolutely insist on the mixing ratio 25 : 1.

Correct Mixing Ratios

Gasoline measured	(in gall.) in ltr.	(.22) 1	(.44) 2	(.66) 3	(.88) 4	(1.10) 5
Engine oil measured	(in gall.) in ltr. in cc. (in cu. in.)	(.0088) .04 40 (2.44)	(.0176) .08 80 (4.88)	(.0264) .12 120 (7.32)	(.0352) .16 160 (9.76)	(.0440) .20 200 (12.20)
Anti-corrosion agent measured	in cc. (in cu. in.)	2 (.122)	4 (.244)	6 (.366)	8 (.488)	10 (.610)

Running-In

The DKW engine has reached a stage of development today which — in connection with the up-to-date methods of production and testing — makes it no longer necessary to compensate any coarsenesses or imperfections of manufacture by running-in. The only purpose of the break-in period is to get the engine used to its later hard labour and to the varying thermal strain to which it will be exposed.

Every new engine is warming up more intensely by inner frictions and has to render harder work till all the moving parts have adapted themselves to one another. In order not to overstrain the engine during the break-in period, therefore, it is advisable not to exceed the top speeds stated below when riding the machine for the first 500 kms during longer intervals:

	1st speed	2nd speed	3rd speed
during the first 500 km (310 mi.):	0-15 km (0-9.3 mi.)	15-25 km (9.3-15.5 mi.)	25-35 km (15.5-22 mi.)
after 500 km (310 mi.):	0-20 km (0-12.4 mi.)	15-30 km (9.3-18.6 mi.)	25-40 km (15.5-25 mi.)

It would be completely out of place to run down the first 500 km (310 mi.) all in one go on rather a plain road and at the top speed stated, keeping the throttle twist-grip in one position only. That is not only a bore for you, but also for the engine getting thus used to this particular strain. On principle — we recommend

you to keep this in mind — the engine should never run jerkily, as it is feeling well only when "purring". Do not fail therefore to switch in time to the lower gear when the machine does no longer pull properly on a gradient.

Just during the break-in period the engine should be run with varying speed, being once smoothly accelerated and then decelerated again. The thermal strain is thus being changed continuously and the oil-bearing scavenging current of the petrol air mixture is steadily altering its direction. It may very well occur that an engine having been constantly run with half-throttle at the beginning, and then for thousands of miles with the throttle being opened to $\frac{3}{4}$ of its capacity, will react with a piston seizure when suddenly expected to operate at full throttle during a longer interval.

Right from the beginning, more precisely spoken during the first 300 km (186 mi.) already, the engine should be run with throttle wide open for short intervals, covering though no long distances. Here it is recommendable to decelerate every now and then to reach a speed lying within the range of the top speeds stated before for the 500 km (310 mi.) running-in period. As to the 3rd gear, please consider the figures stated as top speed a guide only; those for the 1st and 2nd gear, however, may only be exceeded when shifting gears.

Having once covered the first 300 km (186 mi.), you may drive your machine with throttle wide open for longer intervals, getting it thus used to its maximum output. But do not overstrain your machine, it would be harmful to the engine.

A Very Good Advice.

The first trip shall serve for your getting acquainted with your vehicle. To do so, rather choose a less busy country road which is offering you the best prerequisites for becoming familiar with your machine. Regarding the driving technique itself, we should like to give you hereafter some hints, which are meant to help you save avoidable costs by economical driving.

Saving Fuel

You can save fuel

1. by opening the throttle twist-grip for accelerating the machine only as much as is necessary for reaching the desired speed. Opening the throttle twist-grip jerkily till its stop position would not render a better acceleration, but rather increase the fuel consumption;
2. if — having accelerated on a long, plain road — you decelerate again, trying to find that position of the throttle twist-grip in which the engine still keeps its speed;
3. by not driving continuously with throttle wide open, as the fuel consumption increases with rising speed. The most economical driving range lies between 30 and 35 km/h (18.6 and 22 mi.).

Saving Clutch Lining

You can save clutch lining

1. by operating the clutch hand lever only when shifting the gears; otherwise the clutch would slip, wearing off the clutch lining;
2. by shifting always to neutral position before stopping the machine at a street crossing or whenever necessary. Waiting at a stop with disengaged clutch wears the clutch lining and should in any case be avoided;
3. by shifting to 1st gear always when driving at a low speed or in city traffic. Never try to decrease speed by letting the clutch slip.

Saving Repairs

You can save repairs

1. by not revving up the engine in its neutral position or 1st gear on a plain road, as there is then no air stream for cooling;
2. by not driving your machine in the 2nd or 3rd gear too slowly, thus causing the engine to run with jerks, which overstrain the bearings, clutch, gears, and chains;
3. by carrying through the maintenance punctually, this service being of vital importance for perfect running condition, road safety, and — last not least — the service life of your DKW machine.

Starting the Engine

In winter people are very often trying to start their machine once, twice — and even more, but — much to the pleasure of their fellow-creatures — it does not work. They start grumbling and growling, forgetting all the vehicle actually means to them, and — forgetting at the same time which prerequisites should be given to make the engine start at all. Should you happen to be in the same situation one day, do not lose your temper! Recollect which mistake you may have done and, at the same time, think over what we are telling you hereafter:

The first prerequisite for a good starting of the engine is that you are giving the machine the necessary service at a DKW workshop at regular intervals, thus guaranteeing that the engine is always in perfect mechanical order. Do not start tinkering with the carburettor or the contact breaker a.s.o., for lacking the necessary technical knowledge, you can make many a mistake.

To guarantee an easy starting of the engine, the fuel, too, must fulfill certain requirements, one of which is that it should consist of a good gasifiable mixture. Its volatile components may evaporate in the float chamber because of the heat radiation when the engine is stopped being still warm. The remaining non-volatile oily residue would then make starting the engine very difficult, or even impossible at all.

You can remedy this by closing the fuel tap shortly before finishing the trip (see fig. 3 or 4 resp.), making sure that the carburettor is empty when parking the machine.

Upon opening then the fuel tap before starting the engine again, the carburettor is fed with fresh easy-gasifiable petrol mixture.

Another factor worth knowing is that the fuel tap is of the three-way-type, — reserve, open, and closed — (Reserve, Auf, Zu) (see fig. 3 and 4). Turning thus its adjusting lever from "open" (Auf) to the "reserve" position (Reserve) when running short of fuel, there is still at your disposal a reserve of $\frac{1}{2}$ ltr. (.11 gall.) of fuel sufficient for a 30 or 40 kms' ride (18.6 or 25 mi.).

The adjusting lever of the fuel tap serves furthermore as an additional theft prevention when pulled out to position "closed" (Zu).

A. Starting Cold Engine

The fuel supply the engine normally is fed with does not suffice for the so-called "cold starting". Hence, the mixture has to be enriched with fuel. For this very purpose there is provided in the



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carburettor a choke slide b/15 which is to be pressed down to its lowest position by lifting the easy starting device lever a/5. The carburettor passage is then considerably reduced thus causing a low pressure in the mixing chamber when starting the engine so that the passing air carries off more petrol mixture.

Sequence to Be Followed

1. Completely close throttle twist-grip a/7 and press down choke slide b/15 by lifting easy starting device lever a/5.
2. Set throttle twist grip to about $\frac{1}{4}$ open position till noting a slight resistance.
Note: In this position of the throttle twist-grip — being of great importance for a good starting of the cold engine — the throttle slide a/15 touches the bevel of the choke slide b/15 without lifting it. The easiest and most reliable way to find this position is to hold tight the lifted easy starting device lever when opening the throttle twist-grip.
3. Crank the engine a few times, with switched off ignition, causing an air flow in the carburettor which prepares an inflammable mixture.
4. Now start engine with a vigorous stroke of the left pedal crank — and it will then prove whether or not you have made a mistake.
5. When the engine is running, do not make it warm up like a racing motorist with "vibrating gas" — once opening the throttle twist-grip, once closing it again — but quietly start driving.

The strain will make the engine warm up much quicker, and after a very short while it will readily run at any speed desired.

6. Having covered a short distance, open throttle twist-grip to its full extent so that the choke slide is being lifted and the engine does not consume excessively much fuel.

B. Starting Warm Engine

It will hardly occur that a warm engine does not start right away. But it may occur, if — by oversight — you have once closed the choke slide and become aware of this mistake not before having tried to start the engine three times or more. But do not despair! It has only absorbed a mixture being enriched with too much fuel. In such a case you must bleed air from the engine and to do so, please turn the adjusting lever of the fuel tap into "closed" position (Zu), open the throttle twist-grip to its full extent and crank the engine a few times. Then open the fuel tap again and try starting once more as follows:

Set throttle twist-grip to between $\frac{1}{3}$ and $\frac{1}{2}$ open position and start engine. — This time you will certainly not be disappointed and the engine will start right away.

Shifting the Gears Correctly

Shifting the gears will fill every learner with awe — and the moped rider does not make an exception in this case — though, after all, things are not so complicated as they may seem at first sight. For, having once realized that in proportion to the rear wheel the engine revolutions are lower with switched in 2nd or 3rd gear, and higher with switched-in 1st gear, — and having furthermore become aware of the fact that with the rising number of revolutions the output or rather the power of the engine also increases, you have made a long step forward. When sticking in addition to the top and minimum speeds for the individual gears stated on page 10, which are meant to serve you as a guide for shifting till you will have acquired the right hearing for the engine, you will hardly make any more mistakes.

Before dealing with the shifting mechanism, we should like to add a few words on the clutch. To make the vehicle set in motion slowly and not jerkily when starting it after stopping, the clutch shall bridge the differences of revolutions between the running engine and the idle rear wheel. Only in that very case — keep this particularly in mind — you may let the clutch slip, in other words, you may slowly release the handlever. When shifting, however, you must release the handlever as quick as possible — though carefully — to prevent a slipping of the clutch, as it serves here only as a disengaging connecting-link of power transmission.

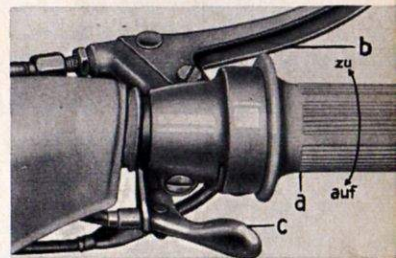
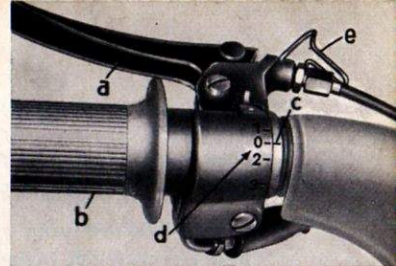
Shifting Mechanism

Shifting into higher gear:

1. Close throttle twist-grip a/7 completely.
2. Disengage clutch (pulling clutch lever a/6).
3. Select 2nd or 3rd gear respectively (turning twist-grip b/6 till mark c/6 overlaps with figure d/6 indicating gear desired).
4. Release clutch lever quickly, though carefully.

Shifting into lower gear:

1. Do not close throttle twist-grip a/7 completely so that engine increases its number of revolutions and low gear engages more easily.
2. Disengage clutch (pulling clutch lever a/6).
3. Select gear desired.
4. Quickly release clutch lever, slightly accelerating engine to avoid a jerky decrease of speed.



Stopping and Shutting off Engine

1. Close throttle twist-grip, pull on clutch lever, turn gear change twist-grip into neutral position (0), and stop vehicle by operating front and rear wheel brake.
2. Having finished your ride, shut off engine by turning switch lever on head lamp (turn switch lever into position 3 (see fig. 1), holding it tight till engine stops).

Pedalling (Cycling)

Being once, for one reason or other, or — let's say — on a bicycle path, obliged to pedal, please observe the following:

Disengage clutch, select 2nd gear and turn wire clip (clutch locking device) e/6 to the left so that clutch lever leans against it. The clutch then cuts off transmission of engine torque to gear box and you may now — geared down to 2nd speed — move your vehicle pedalling.

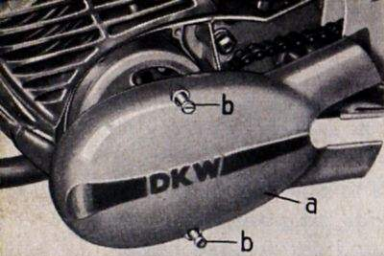
Care and Maintenance

An enthusiastic tinkering fan will now perhaps expect us to give him a detailed workshop guide. However, we are far from doing so, for we very well know how much can be done wrong, in spite of a detailed and careful description, if the necessary technical knowledge is lacking. That is why we are only giving you here some hints for the maintenance service to be carried out, which hardly can be done wrong, if you have just some practical experience.

The general care and service of your machine should be entrusted to a DKW dealer or workshop appointed by us, and you may then be sure that your vehicle will be well looked after and kept in good order so that it will always be ready for operation and of perfect roadworthiness.

We should, indeed, appreciate, if you followed this our advice, for we could then be sure to count you, too, among the hundred thousands of enthusiastic DKW customers.

Finally we should not fail, in your own interest, to draw your attention to the fact that any service during the guarantee period must in every case be carried out by a DKW dealer or workshop we appointed, as otherwise the guarantee granted by the factory would automatically terminate.



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Checking the Oil Level

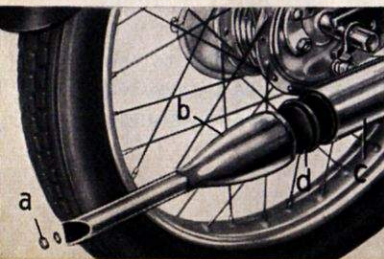
Remove lens head screws b/8, take off cover plate a/8, and unscrew oil filler plug a/9 and oil control plug b/9. With the vehicle being in straight up-right position, the oil level must reach the bottom edge of the oil control plug threading b/9. If necessary, refill oil, using always the same brand and quality.

Changing the Oil

Change oil only when engine has warmed up to its normal operating temperature. Unscrew oil filler plug a/9, oil control plug b/9, and oil drain plug c/9. Drain oil completely and screw in oil drain plug c/9. Refill: 660 cc. gear oil of the SAE grade 80, such as "SHELL Dentax 80".

Cleaning the Exhaust Silencer

Unscrew hexagon nut a/10, pull off end piece b/10 from silencer c/10, and take out insert d/10. Remove the oil carbon deposited in the insert and the end piece, as well as in the 6 tubes sitting in the muffler.



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Cleaning and Adjusting the Contact Breaker Points

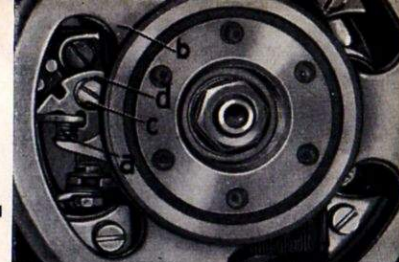
Take off left engine cover (see fig. 8). Clean contact breaker points a/11 with a small brush soaked with gasoline. Smooth burnt contact breaker points with a fine-cut contact file.

For adjusting the contact breaker points a/11, turn fly-wheel b/11 until contact arm stands on highest point of the cam b/12. Loosen cylinder screw c/11 and adjust contact breaker points gap (.3—.4 mm = .012—.016 in.) by turning contact arm d/11.

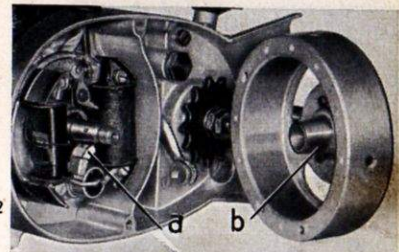
Provide grease felt pad a/12 with some high duty grease, such as "BOSCH FT 1 V 4", which is to be rubbed in well. The grease felt pad — lubricating continuously the contact breaker cam b/12 — can easily be reached with a screw driver through the cut-out in the fly-wheel.

Cleaning the Spark Plug

For cleaning the spark plug, use a wire brush please. Remove by means of a wooden stick the combustion residues in respiratory chamber giving the ignition current an earth connection. Regap sparkplug (.4—.5 mm = .016—.020 in.) by rebending earth electrode a/13.



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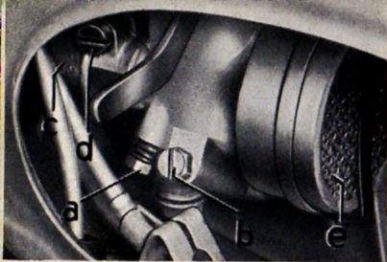


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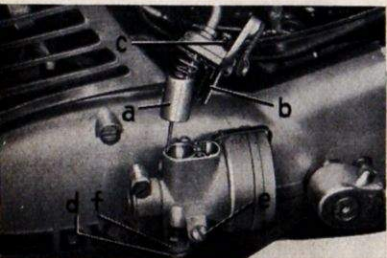
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Idling Adjustment

If engine speed is too low or too high with closed throttle twist-grip, adjust idling speed by means of adjusting screw a/14. Turning the screw to the right increases the engine revolutions, turning it to the left decreases them.



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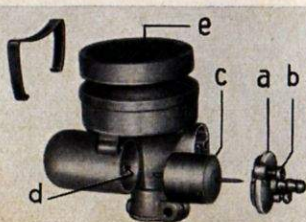
Cleaning the Main Jet

Unscrew main jet b/14 and clean it by means of compressed air, or, if necessary, with a bristle. Never use wire!

Cleaning the Carburettor

Remove carburettor from intake elbow c/14 (loosen cylinder screw d/14), take throttle slide a/15 and choke slide b/15 out of carburettor housing. (Take off cylinder head screw c/15). Unscrew needle jet d/15, main jet e/15, and adjusting screw a/14.

Take off cover a/16 of floating chamber d/16 (loosen screws b/16) and pull out float c/16. Wash all parts in gasoline and clean all passages by compressed air.



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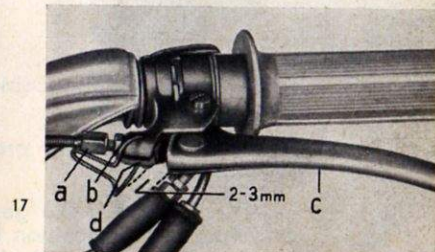
Cleaning Wet Air Filter

A dirty filter (see fig. e/14 and 16) increases the fuel consumption and causes a reduction of the engine power output. It is therefore recommendable to wash the filter rather once too often in a cleaning solvent (or gasoline), to dry it and to dip it in thin oil which is then to be dripped off carefully.

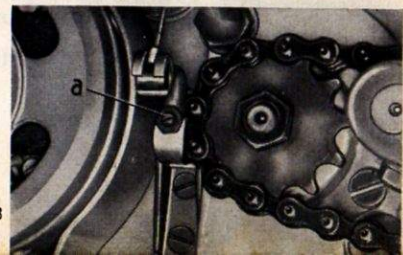
Adjusting the Clutch

If there is too much free play, the clutch will not properly disengage when operating the clutch lever; if — on the other hand — the free play is not sufficient, the clutch might slip while you are driving. When depressing the hand lever c/17 till noting a resistance, there must be a free play of 2 or 3 mm (= .08 or .12 in.) (see fig. 17) between the hand lever and stop d/17. For adjusting the clutch there serves the adjusting screw a/17.

Having run the machine for a longer time, it may — under certain conditions — be possible that the adjusting screw a/17 being too much loosened will no longer be able to correct the excessive free play. In this case tighten adjusting screw a/17 far enough to note about 3 leads of screw thread only and adjust clutch with adjusting screw a/18 (lift engine cover a/8).

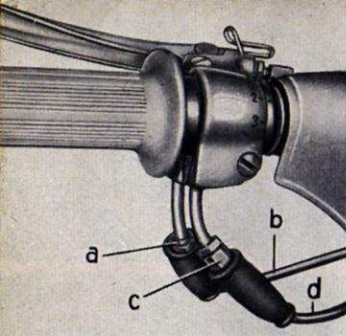


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Adjusting the Gear Shifting Mechanism

For adjusting the gear shifting mechanism, the 2nd speed position of gear change twist-grip must be strictly adapted to 2nd speed position of gear change lever on engine block. Adjust as follows:

1. Push vehicle forward or backward with twist-grip being in neutral position and select 2nd speed position on gear change twist-grip, if possible without passing beyond.
2. Adjust gear shifting cable b/19 by means of adjusting screw a/19, till 2nd gear engages.
3. Repeat this adjusting procedure till 2nd gear easily engages from neutral position.
4. Now try adjusting the gear shifting mechanism the other way round, i.e. try and find neutral position between 2nd and 3rd speed with gear change twist-grip and carefully select 2nd speed position on gear change twist-grip, if possible without passing beyond.
5. Adjust gear shifting cable d/19 by means of adjusting screw c/19 till 2nd gear engages.
6. Repeat this adjusting procedure till 2nd gear easily engages also from 3rd speed position.

Adjusting the Front and Rear Brake

The brake lever b/22 on rear wheel hub should have as little free play as possible before brake operation.

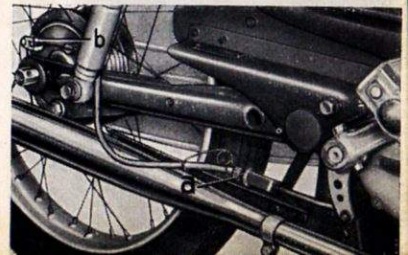
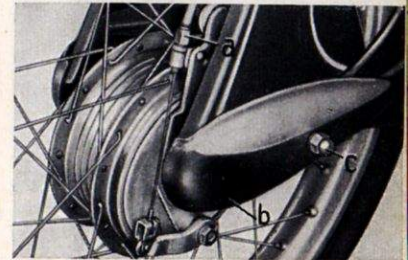
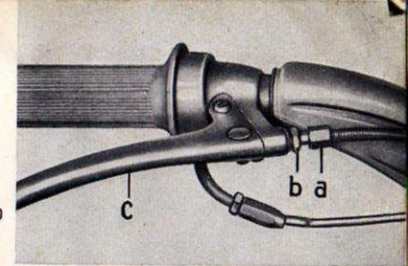
The hand brake lever c/20 should not have too much free play either to guarantee an immediate braking effect in case of necessity. The normal wear and tear of the brake lining increases the free play, for which reason the brake control mechanism should be adjusted at certain intervals.

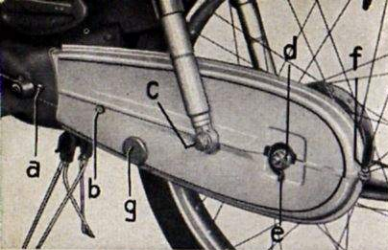
Front Brake

Loosen adjusting screw a/20 or a/21 far enough so that free play of hand brake lever till stop position does not exceed $\frac{1}{8}$ of the entire leverage.

Rear Brake

Turn out adjusting screw a/22 till brake shoes are dragging on brake drum, and tighten it again so far that rear wheel can still easily rotate. If, after this adjustment, the braking effect is not yet satisfactory, the brake drum or the brake lining may be dirty, or the brake lining may be excessively worn. In the first case, the brake drum and lining are to be cleaned with a cleaning solvent. Never use herefor the petrol mixture.





23

Dismantling, Cleaning and Lubricating the Driving Chain

Take off chain case (loosen screws a/23, c/23, and hexagon nut d/23; but unscrew completely screws b/23 and f/23), remove left engine cover plate (see fig. 8) and chain lock, and take out chain.

Wash chain in gasoline (if possible with a brush), rinse and dry it properly, and treat it with DKW chain grease. When remounting chain again, be careful that the closed side of the chain connecting link spring clip points into direction of chain motion.

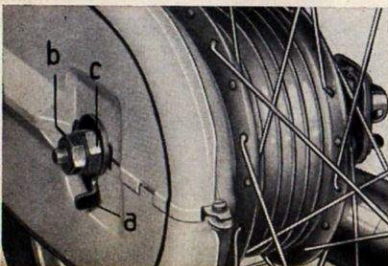
Checking and Adjusting Chain Tension

Take out rubber cap g/23 and lift driving chain with one finger to find its tightest position. The chain slack, i.e. the way it can be lifted, shall be 2 cm (.78 in.) (see fig. 24).

If necessary, adjust chain tension by means of spanning eccentrics a/25. To do so on "Hummel Super", loosen hexagon nuts b and c/25, and un-



24



25

28

screw left and right axle nut on "Hummel". Both the eccentrics have to be adjusted equally so that front and rear wheel are in perfect alignment.

Removal of the Rear Wheel

"Hummel Super"

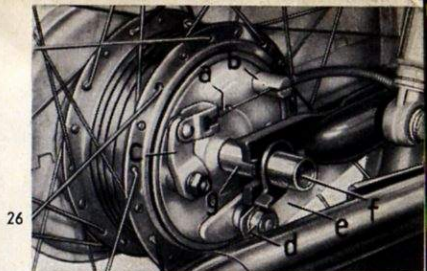
Tighten Bowden cable adjusting screw a/22. Unhook brake cable a/26 on anchorage b/26 and brake lever c/26. Unscrew hexagon nut d/26 and remove brake anchorage e/26 from stud bolt.

Screw out hexagon nut b/25, extract knock-out-spindle f/26 and take off spacer sleeve g/26. Press rear wheel to the right (loosen it from clutch plate), incline moped to the left and take out wheel.

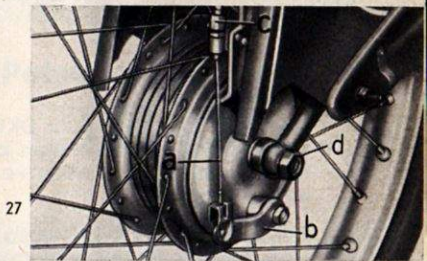
"Hummel"

Take off driving chain (see page 28). Unscrew both axle nuts, remove chain tensioner, and unscrew knurl-nut from threaded link of brake cable. Remove rear wheel backwards.

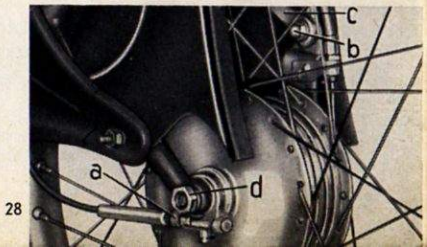
26



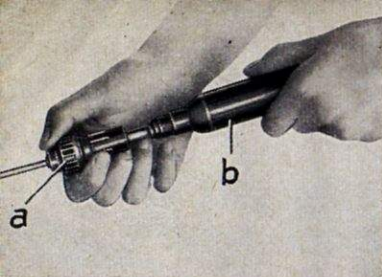
27



28



29



Removal of the Front Wheel

Take off right and left shield b/21 (unscrew cap nuts c/21). Unhook cable a/27 from brake lever b/27 and remove adjusting screw c/27 from adjusting screw anchorage.

29

Screw off speedometer spiral a/28 on drive and take off hexagon screw b/28 on brake anchorage c/28. Unscrew both flanged nuts d/28 and d/27 from front wheel axle and remove front wheel forwards.

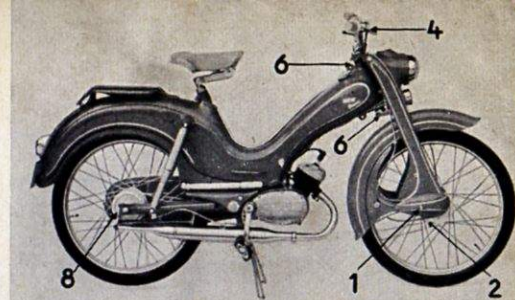
Winter Driving

To make sure that your DKW machine is in perfect running condition also during autumn and winter, when public means of transportation are overcrowded, it is recommendable to observe in view of different weather conditions the following indications:

1. Use good quality gasoline, as well as branded lubricants for two-speed engines with an anti-corrosion agent, such as "SHELL 2 T MOTOROEL".
2. The moisture also penetrates into the Bowden cable sleeve and freezes with a temperature lying below 0° C. (32° F.), the consequence being that the operating levers can no longer be handled at all, or only with extreme difficulty.

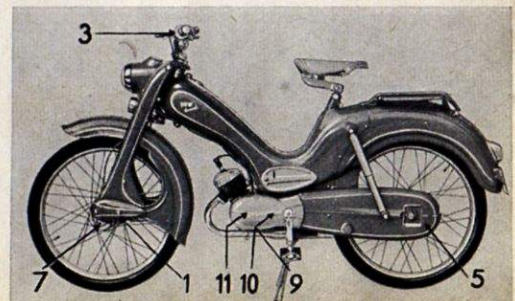
You can prevent this by lubricating the Bowden cables abundantly, using an Alra-Oil-Pressure Adaptor a/29.

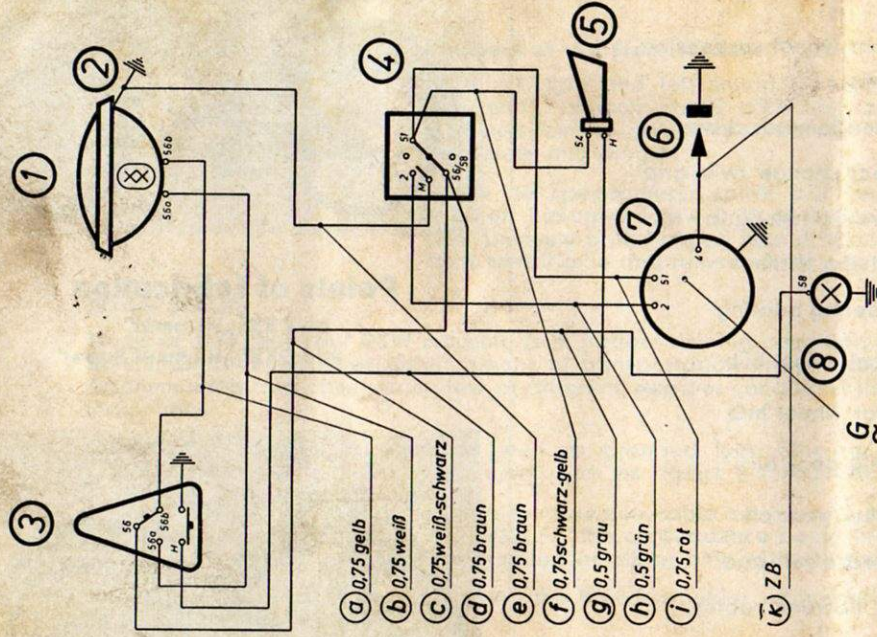
1. front wheel suspension arms
2. speedometer drive
3. gear change twist-grip
4. throttle twist-grip
5. driving chain
6. steering bearing
7. front wheel hub
8. rear wheel hub
9. refill gear oil
10. check gear oil
11. grease felt pad
12. all Bowden cables



Points of Lubrication

on DKW „Hummel”
and DKW „Hummel Super”





Electric Wiring Diagram

- 1 = head lamp insert
- 2 = negative pole on fork panelling
- 3 = horn press button
- 4 = built-in lighting switch
- 5 = electric horn
- 6 = spark plug
- 7 = fly-wheel ignition and lighting generator
- 8 = tail light

DKW
Hummel

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