1.5. Masses

Empty mass (with fuel and tools)	151 kg (variant with drum brake)
	153 kg (variant with disk brake)
Permissible total mass	330 kg

1.6. Capacities

Fuel tank	17.0 l
including reserve of	1.5 l
Gear oil	0.9 l

1.7. Road Performance

Maximum speed	125 to 130 km/h depending on load, atmospheric conditions and sitting position
Acceleration from 0 to 80 km/h	6.6 s
Fuel consumption	3.5 . . . 5 l/100 km

2. Fuel, Lubricants, etc.

Engine

Petrol having an octane rating of 88 (ROZ) which is mixed with **two-stroke engine oil** in the ratio of 50:1 should be used.

Example: 10 l fuel to be mixed with 0.2 l of two-stroke engine oil

Gearbox

Gear oil SAE 80 or non-additive type of engine oil SAE 40 for summer and winter. In the GDR, oil of grade GL 60 is used.

Cycle parts

Gear oil SAE 80 and antifriction bearing grease

Electrical equipment

For a new battery use accumulator sulphuric acid having a density of 1.28 g/cm³ (in the tropics 1.23 g/cm³) at 25 °C. For topping up the battery, only use distilled water. Use grease for battery terminals for protection against corrosion of the battery connections.

Use hypoid oil (gear oil of a high degree of viscosity) for the contact-breaker lubricating felt pad.

3. Operation

3.1. Controls

The Figs. 1 to 8 show all control elements required for operating the motor-cycle and their functions. Please, familiarise yourself with them before the first start.

3.2. Starting and Driving

Before any ride, check the vehicle for reliability of operation and roadworthiness according to the Maintenance Chart (see Section 4.2.).

Starting

1. Shift the gearbox to neutral position (Fig. 6).
2. Switch on the ignition system (Fig. 3/1).
   Control light for dynamo will light.
   Control light for idling will light (de luxe model).

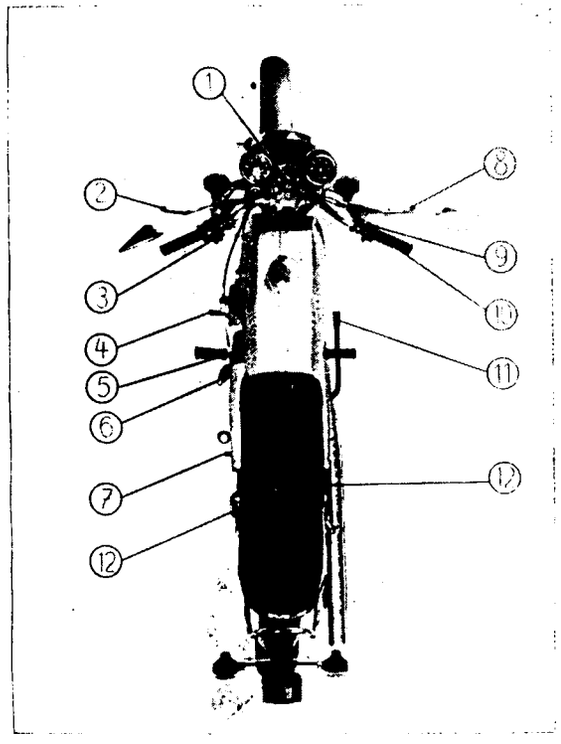


Fig. 1. Controls of the motor-cycle

(1) Ignition and light switch
(2) Clutch lever
(3) Combined switch for electrical system
(4) Gearchange pedal
(5) Fuel shut-off cock
(6) Kick-starter
(7) Prop stand
(8) Hand-brake lever
(9) Lever for cold-starting device
(10) Throttle twist-grip
(11) Brake pedal
(12) Adjusting sleeve for suspension unit

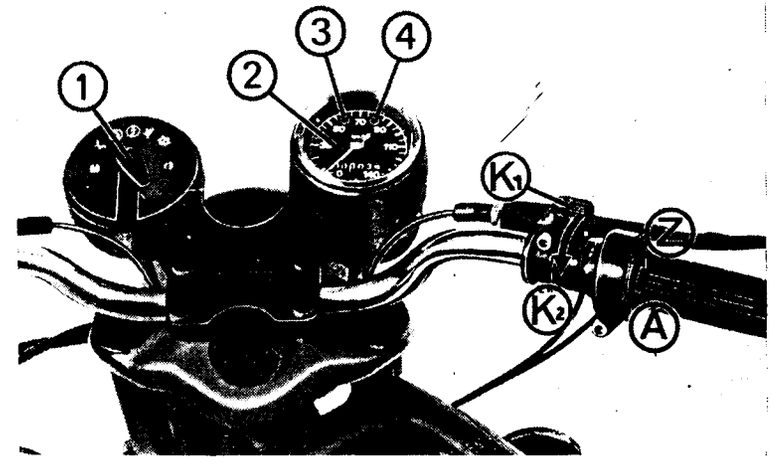


Fig. 2. Instruments (standard design) and cold-starting device

(1) Ignition and light switch (switch positions same as in Fig. 3.)
(2) Speedometer with kilometer counter
(3) High-beam headlight indicator (blue)
(4) Tell-tale light for dynamo and flashing-light direction indicator system (green)
(K_1) cold-starting device closed (operating position, starting when the engine is in a hot state)
(K_2) cold-starting device open (starting from cold)
(Z) throttle twist-grip closed
(A) throttle twist-grip open

} see also Fig. 21

3. Open the fuel shut-off cock (Fig. 5).
4. **With the engine in a cold state:** Open the cold-starting device (Fig. 2).
   With the engine in a hot state: Leave the cold-starting device in the closed position.
5. **With the engine in a cold state:** Throttle-twist grip is in the neutral position.

With the engine in a hot state: Open the throttle-twist grip for about one quarter of a revolution.

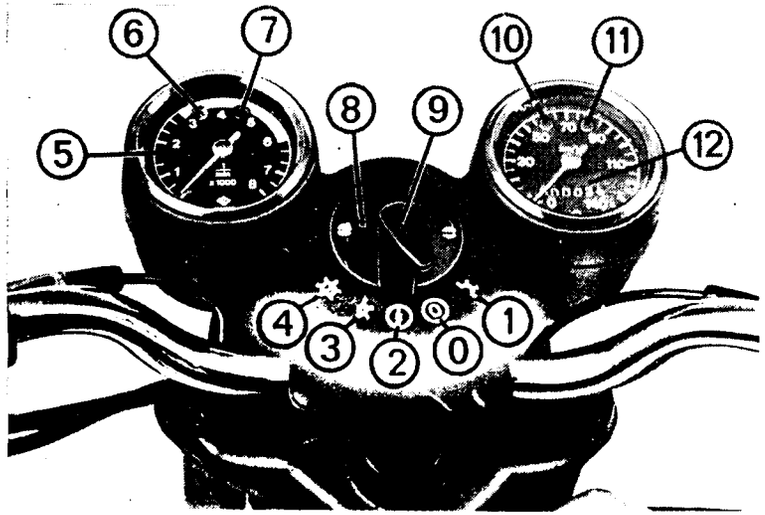


Fig. 3. Instruments (de luxe model)

(0) All loads switched off – key (9) can be withdrawn
(1) Parking position at night – key can be withdrawn, town light switched on
(2) Ignition system switched on, riding in the daytime – key cannot be withdrawn (pushing for starting the motor-cycle is possible with the 2nd gear in engagement without battery)
(3) Ignition system switched on, parking and tail lamps burn – key cannot be withdrawn
(4) Ignition system switched on, night operation – key cannot be withdrawn
(5) Revolution counter
(6) Idling indicator (yellow)
(7) Control light for dynamo (red)
(8) Ignition and light switch
(9) Ignition key
(10) High-beam headlight indicator (blue)
(11) Tell-tale light for flashing-light direction indicator system (green)
(12) Speedometer with kilometer counter

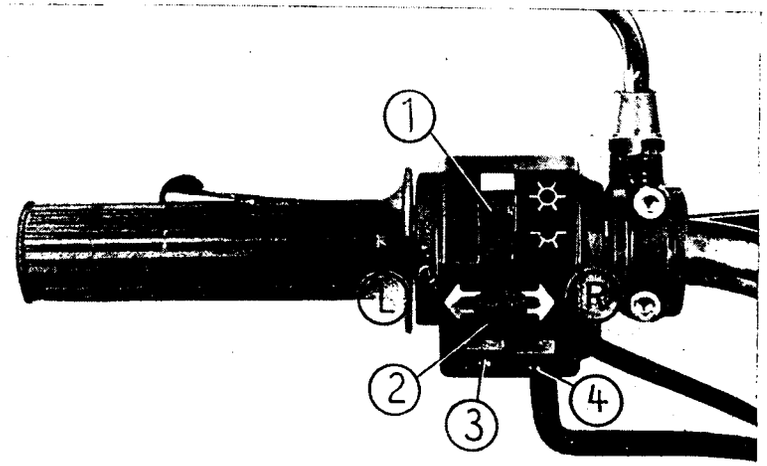


Fig. 4. Combined switch at handle-bar

(1) Dimmer switch for headlamp

high-beam headlight

passing beam

(2) Switch for direction indication
L left-hand flashing-light indicator
R right-hand flashing-light indicator
(3) Push-button for horn
(4) Push-button for by-pass light signal

6. Vigorously actuate the kick-starter.
7. Close the cold-starting device when the engine readily accepts gas.

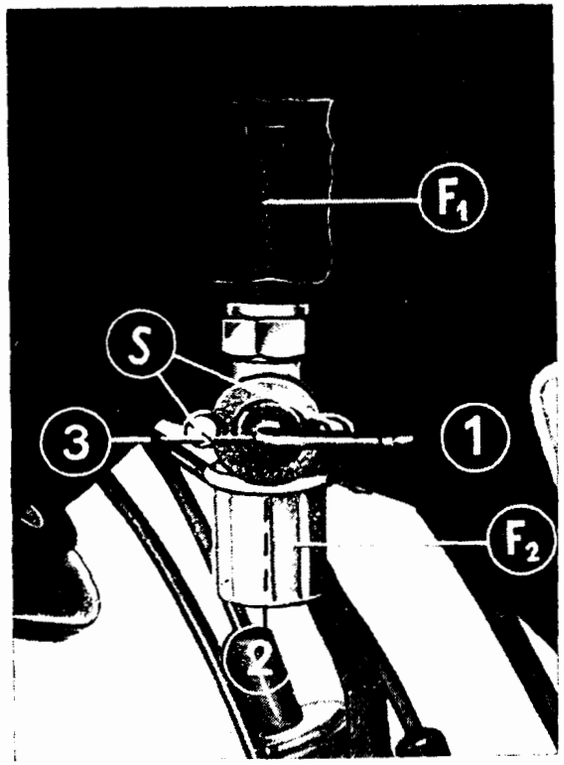


Fig. 5. Fuel shut-off cock

(1) Inlet filter
(2) Outlet filter
(3) Fuel shut-off cock closed
(S) Fuel shut-off cock open
(F_1) Reserve position
(F_2) Fastening screws

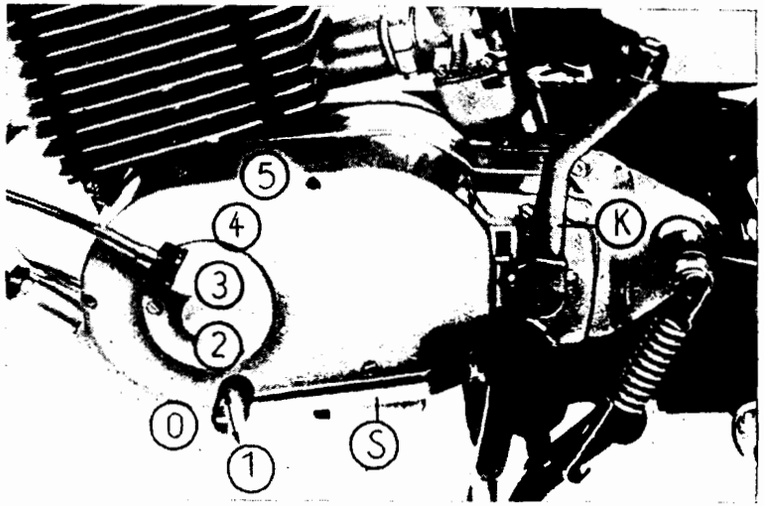


Fig. 6. Gearchange pedal

Numbers: position of the gears
(S) Gearchange pedal
(K) Kick-starter

Notice! In the case of extremely low ambient temperatures, and when the engine has been subjected to several starting trials in vain, allow the engine to rest for 20 s in order that fuel in the cold-starting device can be restored to normal level.

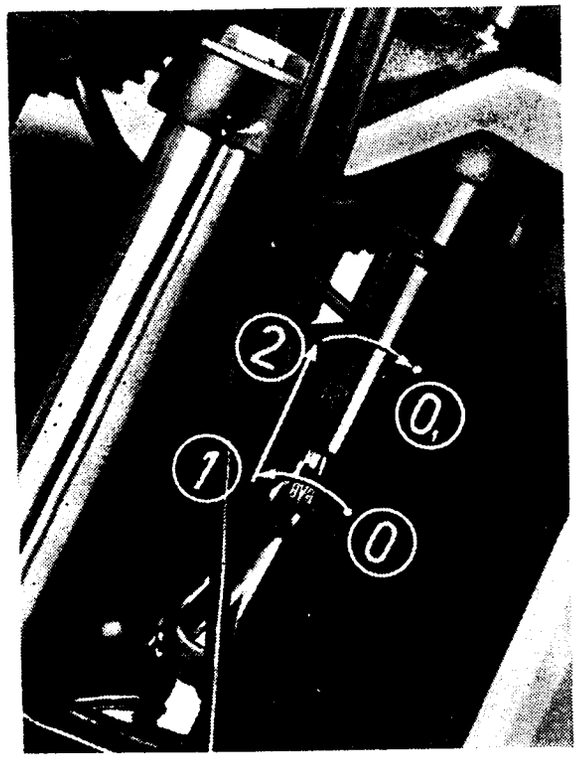


Fig. 7. Thief-proof device

(0) Lock locked – key can be withdrawn
(0_1) Lock locked – key can be withdrawn, steering, blocked
(1) Lock unlocked – key cannot be withdrawn
(2) Direction of motion for locking the steering (arrows)

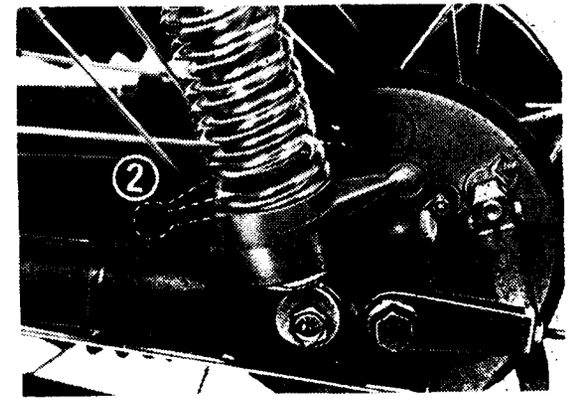


Fig. 8. Changing the pre-load on the spring
(1) Setting for single-person operation
(2) Setting for higher loads

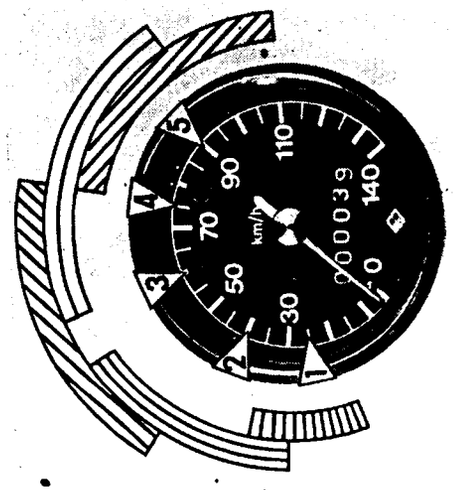
Driving

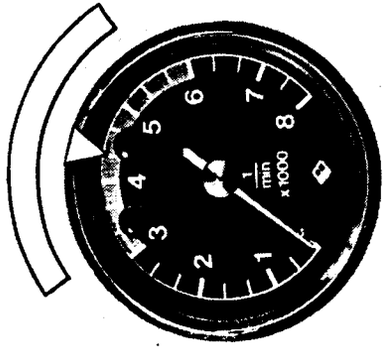
The temperature of the engine need not be raised when the vehicle is stationary, it rises during road operation. Actuate the clutch lever and shift gears, starting with the first gear in engagement. The operating ranges of the various gears are shown in Fig. 9.
The speed ranges shown in this illustration apply to the transmission gear/rear wheel of 19/48 teeth. For other gear ratios, the speed ranges are lower.

Notice! Use the clutch only for moving off and for shifting gears. When stopping for a prolonged period of time, shift to the neutral.

Brakes

Always use both brakes exerting the braking pressure according to requirements.





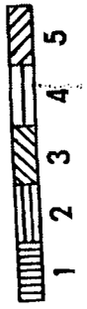


Fig. 9. Engine speed and travel speed ranges

1 Maximum engine speed and travel speed during the running-in period

Main operating ranges (engine speed and travel speed) after the running-in period

Parking

Switch off the ignition system, withdraw the ignition key, close the fuel shut-off cock, turn the handle-bars to the right and block the steering system by means of the thief-proofing device according to Fig. 7.

3.3. Information for Running-in

A distance of 1,500 to 2,000 km is considered as running-in period for the engine. During this time observe the following information.

1. Allow the engine with the vehicle in a stationary position to run for as short a period as possible but move off and then the engine will soon reach operating temperature; in the case of a prolonged stop, shut off the engine.
2. Observe the ranges specified for the various gears in Fig. 9 during running-in, and change gears in time.
3. Systematically increase the travelling speeds and engine speeds until the end of the running-in period.
4. Frequently change engine speeds and travelling speeds. — Normal highways are better suited for running-in than superhighways (Autobahn)!
5. Strictly adhere to the specified inspections in an MZ-Service Workshop.

4. Maintenance

4.1. General Instructions

The tool kit accomodated under the right-hand side panel enables you to perform almost all maintenance operations according to the Maintenance Chart. Take the Guarantee Regulations into consideration.

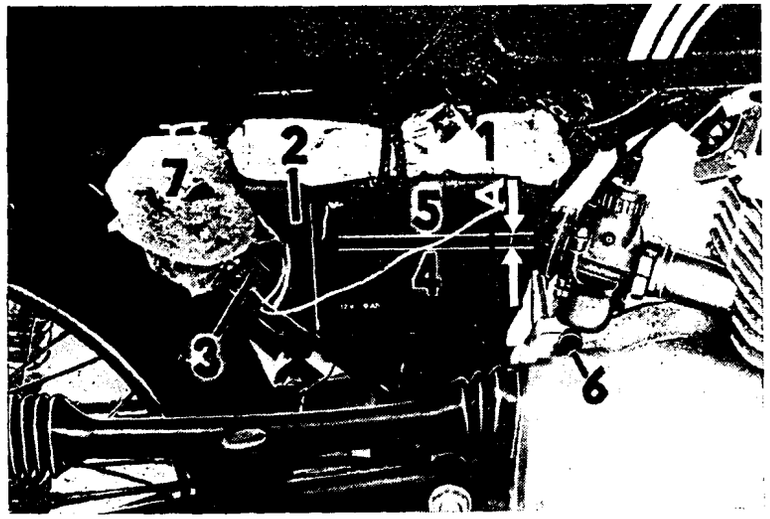


Fig. 10. Battery and tool accomodation

(1) Tool kit
(2) Flasher unit
(3) Fuse box
(4) Top edge of plate
(5) Level of electrolyte
(6) Oil filling opening
(7) Bag with bulbs for replacement (not included in every model)

A = 5 mm (level of electrolyte on top of plate)

4.2. Maintenance Chart

Maintenance operations	before a ride	after a ride	after 500 km	every 2,500 km	every 5,000 km	every 10,000 km	every 20,000 km
Engine and gearbox							
Check the clutch clearance	X						
Check the gear oil level				X			
Change the gear oil			X[1]				X
Retighten the exhaust pipe mounting at cylinder [98 Nm (10 kpm)]			X[1]				
Check the engine fastening screws for tight fit					X		
Clean the carburetter, retighten the mounting of the individual parts			X[1]		X		
Check the carburetter setting			X[1]	X[1]	X		
Checking the emission of noxious substances according to the values determined by law	at intervals of 6 months						

Maintenance operations	before a ride	after a ride	after 500 km	every 2,500 km	every 5,000 km	every 10,000 km	every 20,000 km
Electrical equipment							
Check the lighting and signalling system for proper functioning	×						
Clean and adjust the sparking-plug				×			
Replace sparking-plug by a new one						×	
Check the contact-breaker gap			×[1]		×		
Check for advanced ignition			×[1]		×		
Apply three drops of Hypoid oil to the lubricating felt pad of contact-breaker cam			×[1]		×		
Check the level of the electrolyte in the battery				×			
Cycle parts							
Check the brakes for proper function	×						

Maintenance operations	before a ride	after a ride	after 500 km	every 2,500 km	every 5,000 km	every 10,000 km	every 20,000 km
Check the brake fluid level in the reservoir	×						
Change the brake fluid			every two years				
Check the thickness of lining on the brake shoes (disk brake)				×			
Wipe the guide tubes of the telescopic fork (model with protective cap)	×	×					
Telescopic fork — inspection for leaks	×						
Check the tyre inflation pressure	×						
Check the amount of fuel in fuel tank	×						
Dismantle the fuel shut-off cock, clean the filter			×[1]		×		
Clean the air filter by tapping					×		
Wipe the air filter bowl					×	×	
Replace the air filter by a new one						×	

Maintenance operations	before a ride	after a ride	after 500 km	every 2,500 km	every 5,000 km	every 10,000 km	every 20,000 km
Check all accessible screw connections for tight fit			X[1]		X		
Driving chain — sag checking				X			
Lubricate the driving chain				X			
Lubricate the hand levers and throttle twist grip				X			
Dismantle the cable controls and oil them						X	
Oil the drive shafts for speedometer and revolution counter						X	
Dismantle the brake shoes at the front and rear, the brake cam at the front; clean and lubricate the points of support						X	
Lubricate the rear brake cam				X			
Clean and lubricate the wheel bearings						X	
Check the swing-arm bearing and the springing						X	

x[1] On the occasion of the 1st and 2nd inspection under guarantee

4.3. Lubrication Points

	Point of lubrication	Lubricant
1	Adjusting sleeve for suspension unit	antifriction bearing grease
2	Speedometer drive	antifriction bearing grease (permanently lubricated)
3	Speedometer drive shaft	gear oil
4	Secondary chain	antifriction bearing grease
5	Gearbox	gear oil
6	Lubricating felt pad for contact breaker	Hypoid oil
7	Drive shaft for revolution counter	gear oil
8	Wheel bearing	antifriction bearing grease
9	Steering bearing	antifriction bearing grease
10	Hand brake lever	gear oil
11	Throttle twist grip	antifriction bearing grease
12	Clutch lever	gear oil
13	Cable controls	gear oil
14	Guide tubes of telescopic fork, outside	gear oil

Point of lubrication		Lubricant
15	Bearing tube for prop stand	antifriction bearing grease
16	Swing-arm bearing bolt	graphited oil (only when mounting)
17	Pedal brake lever shaft	antifriction bearing grease
18	Brake cam, rear	gear oil
19	Brake shoe bearings front and rear	antifriction bearing grease

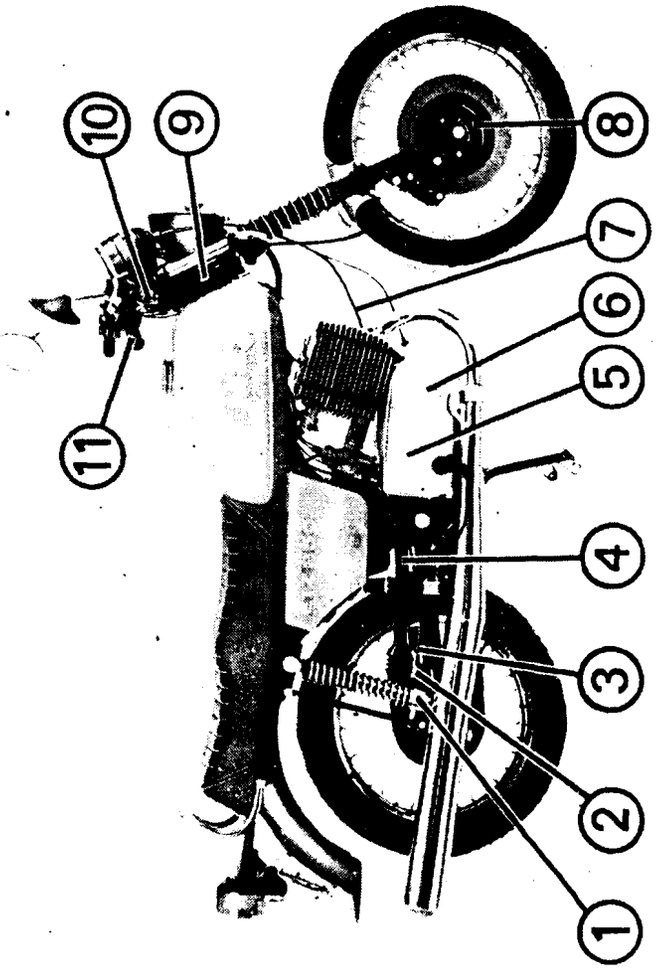


Fig. 11. ETZ 250 right-hand side (for explanation of the legends see Section 4.3.)

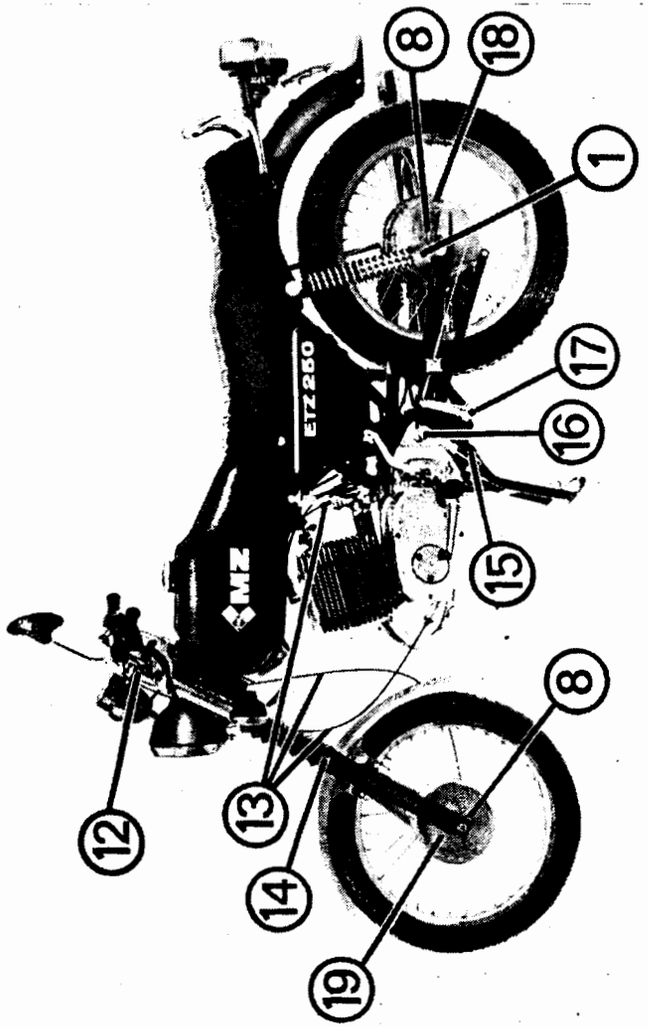


Fig. 12. ETZ 250 left-hand side (for explanation of the legends see Section 4.3.)

4.4. Gearbox Lubrication

Checking the oil level

For this purpose, the vehicle must stand horizontally. This operation should be carried out about 15 min after the switching off of the engine or the filling of oil. When the correct amount has been poured in, the oil level coincides with the lower edge of the checking hole.

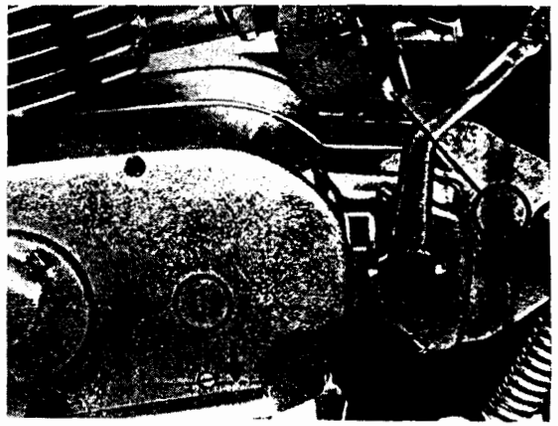


Fig. 13. Checking the oil level
(1) Oil-level checking screw
(2) Oil-filling hole
Arrow-head: Level of oil in gearbox

Oil change

For this purpose, the engine must be in a hot state, i. e. it must have operating temperature, in order that abraded particles are drained together with the oil. Unscrew the two oil drain plugs. Clean the magnet in the screw (2). Replace the sealing rings, if necessary.

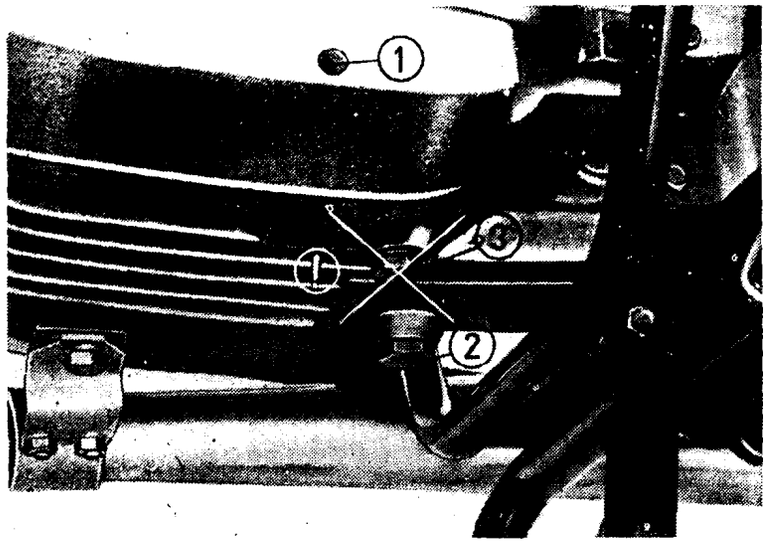


Fig. 14. Position of the oil drain screw plugs
(1) Drain plug for clutch compartment
(2) Drain plug for gearbox compartment
(3) Idle gear or neutral detent – **do not screw out!**

4.5. Clutch and Brakes

Clutch

Adjust the clutch clearance of 3 mm by means of the adjusting screw (1). Lock the adjusting screw again. If the adjusting screw (1) is not sufficient for correcting the adjustment, then correct the coarse adjustment. For this purpose dismantle the clutch cable control according to the order of the numbers given in Fig. 16 and turn the adjusting plate (5) until at the nipple holder kept taut an amount of S 11 mm is achieved.

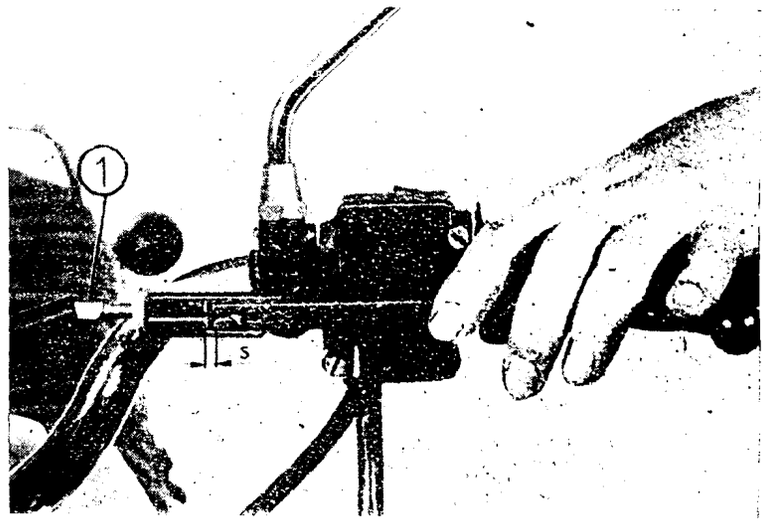


Fig. 15. Adjusting the clutch (and the mechanical brakes) at the hand lever
(1) Adjusting screw with check nut
(S) Clutch clearance

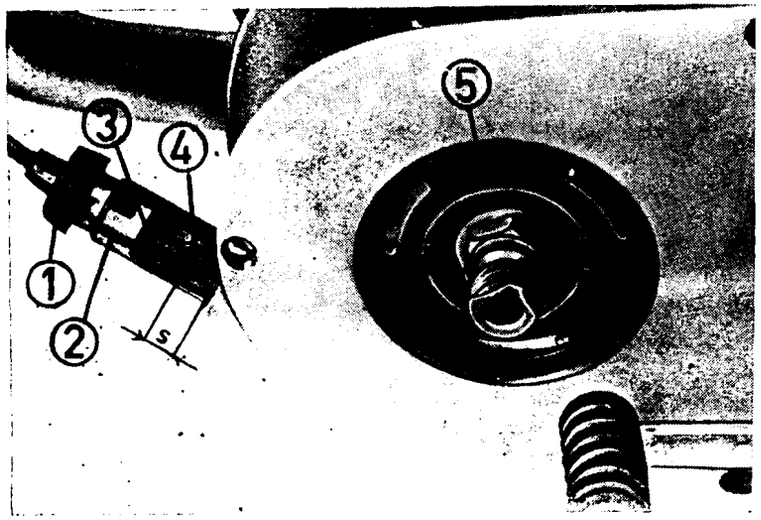


Fig. 16. Coarse adjustment of clutch

(1) Protective cap and plug-type nipple
(2) Cable control holder
(3) Cable control
(4) Cable control nipple
(5) Adjusting plate
(S) Adjusting dimension for clutch lever

Mechanical brakes

Adjust the front mechanical brake at the hand lever to the dimension S = 3 to 5 mm (Fig. 15). When not actuated, the brake shoes must not slide. Adjust the pedal brake in such a way that, in a convenient sitting position, full braking effect is obtained with a short travel of actuation of the pedal. Then adjust the stop light switch:

- switch on the ignition system
- loosen the check nut

- actuate the brake lever – brake shoes are just applied enough to start sliding
- turn the contact screw until the stop lighting fitting flashes up
- tighten the check nut

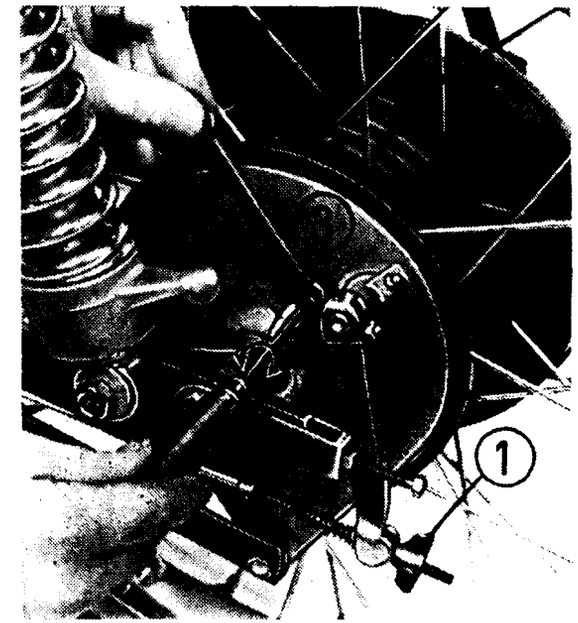


Fig. 17. Adjusting the rear wheel brake and stop-light switch

(1) Adjusting nut
(2) Connecting cable
(3) Adjusting screw

4.6. Fuel Feed, Carburetter, Induction System

The fuel is cleaned in the fuel shut-off cock, whose filter (F_2) (Fig. 5) can be cleaned after unscrewing the filter bowl. The filter (F_1) (Fig. 5) in the fuel tank is only accessible when the fuel shut-off cock is removed.

– Before screwing it off, drain the fuel.

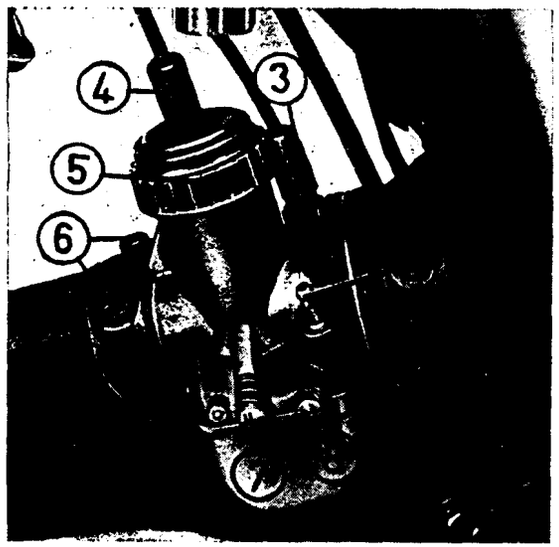


Fig. 20. Carburetter 30 N 2-5

(1) Clamping ring with screw
(2) Fuel feed
(3) Screwing of the cold-starting device with adjusting screw
(4) Adjusting screw for throttle – cable control
(5) Locking nut
(6) Clamping screws
(7) Stop screw for throttle valve
(8) Idling air adjusting screw

Notice! Do not tighten the screws (S) (Fig. 5) until they contact the housing.

Maintenance of the carburetter is limited to cleaning and setting the idling speed by means of the stop screw (7).

For cleaning the carburetter, dismantle it in the order 1 to 6 (Fig. 20).

Notice! Do not distort the float. Do not push wire through the jets – blow air through them.

Adjust the friction brake at the throttle twist-grip in such a way that the twist-grip does not return auto-

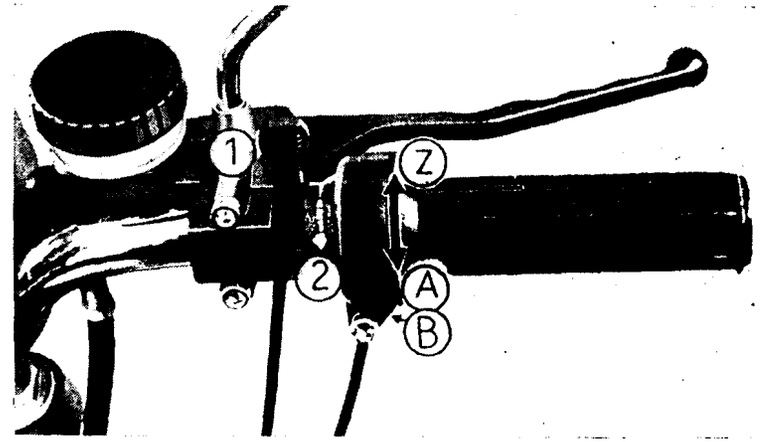


Fig. 21. Throttle twist-grip and cold-starting device

(1) Cold-starting device closed
(2) Cold-starting device engaged
(Z) Throttle twist-grip closed
(A) Throttle twist-grip open (full load)
(B) Frictional brake of twist-grip – adjusting screw

matically into the initial position and that it can still be turned conveniently. The paper air filter is accessible after the removal of the battery (Section 4.9., Fig. 34). Carefully tap the filter – do not wash it. Moist air filter must be dried or replaced by new ones. The induction system must be tight, that is to say, it must be assembled with every care.

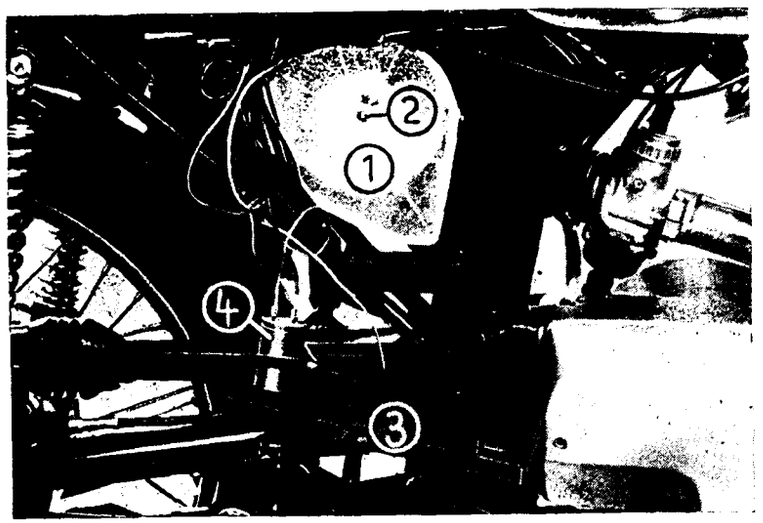


Fig. 22. Removing the air filter
(1) Cover for filter bowl
(2) Screwing
(3) Battery holder
(4) Flasher unit

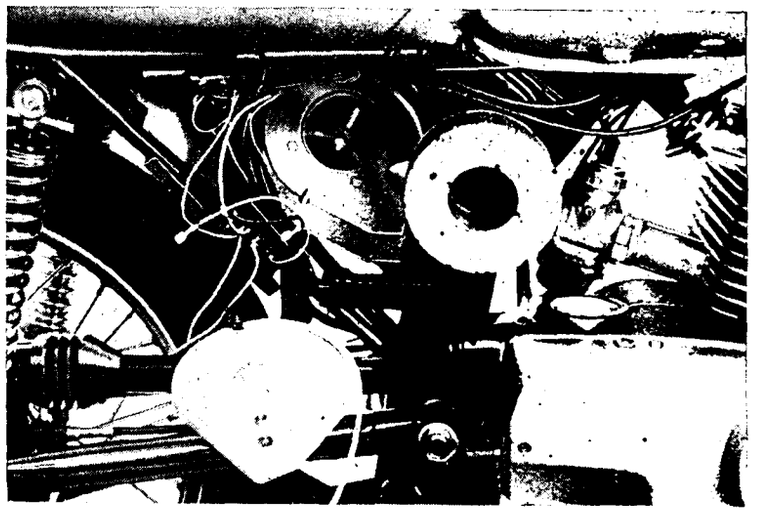


Fig. 23. Air filter removed

4.7. Wheels and Tyres

Removal and fitting of the front wheel

Remove the wheel in the sequence of the numbers (given in Fig. 24 and Fig. 25). When having pulled out the axle, place it on the tool bag.

Press the brake shoes in the disk brake apart before fitting the wheel.

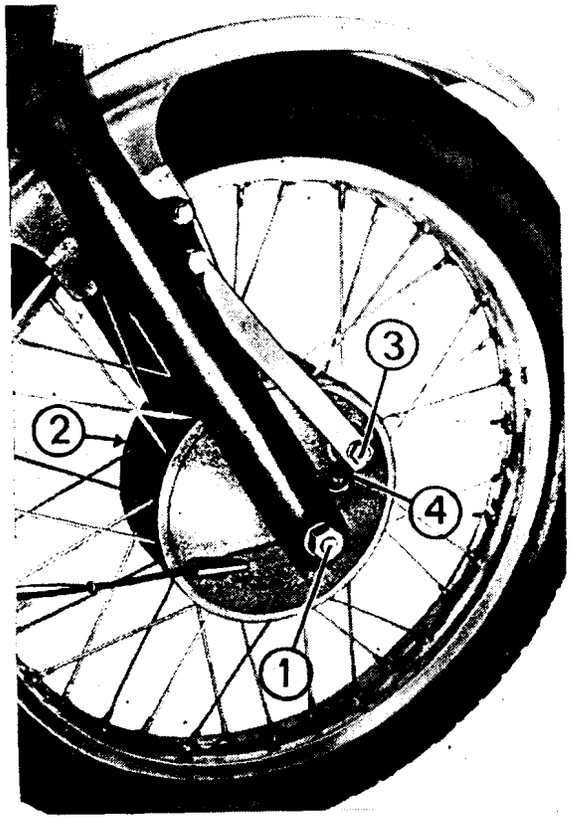


Fig. 24. Removing the front wheel (drum brake)

(1) Axle nut
(2) Clamping screw
(3) Fastening of the abutment brace
(4) Stop light switch

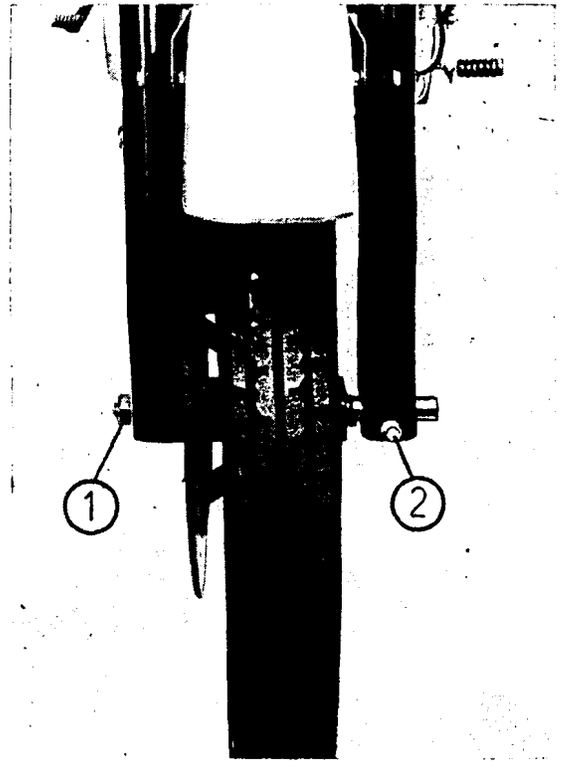


Fig. 25. Removal of front wheel

(1) Axle nut
(2) Clamping screw

First tighten the axle nut (1), apply the hand brake and deflect the telescopic form springs by hand, and then tighten the clamping screw (2).

Notice! When the wheel is removed, do not actuate the hand brake lever of the disk brake.

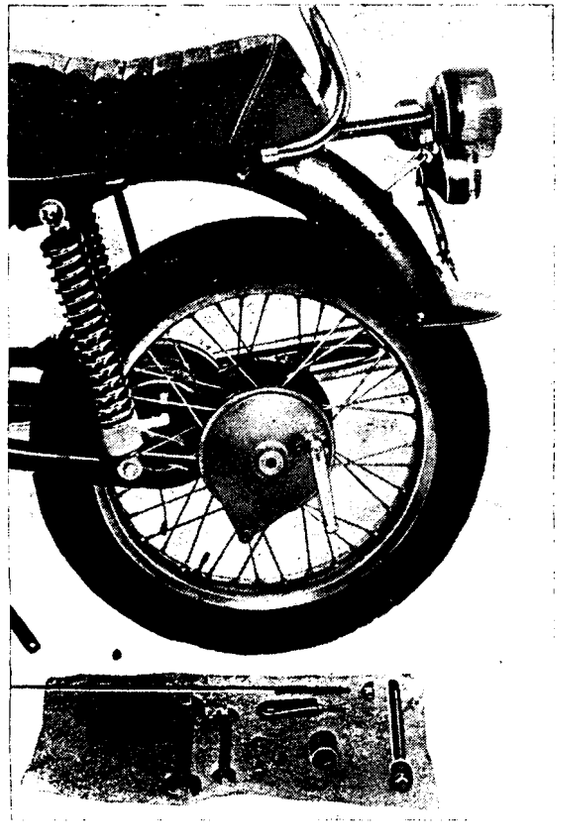


Fig. 26. Removal of rear wheel 1st stage

Removal and fitting of the rear wheel

Place the wheel on the prop stand. Dismantle all parts visible in Fig. 26 and place them on the tool bag; bring the wheel into the position indicated and pull out the brake abutment.

When fitting the wheel, engage a gear of the gearbox –

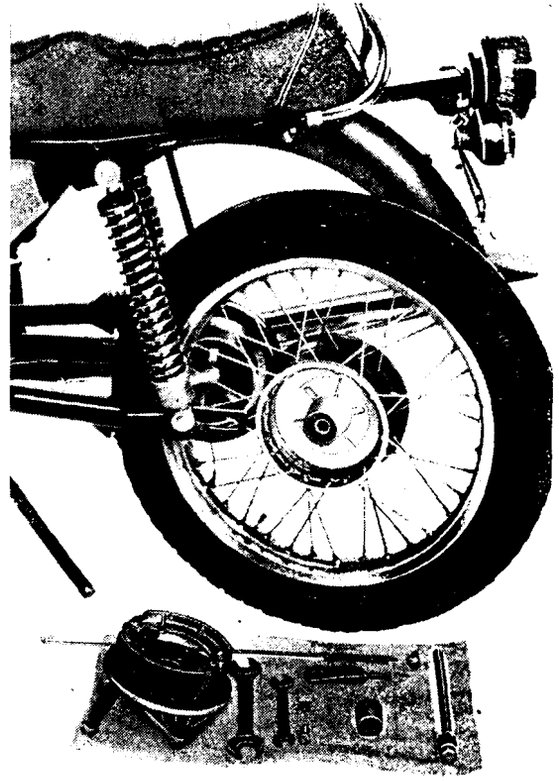


Fig. 27. Removal of rear wheel 2nd stage

Care of the tyres

Before any ride, check the tyre inflation pressure. It must correspond to the selected load on the vehicle. The tyres should be protected from intense direct insolation and fuel.

4.8. Rear Wheel Drive

Checking the chain tension

Place the motor-cycle on the prop stand without any load. The upper chain protection hose with the chain inside must be slack enough to be pressed just down

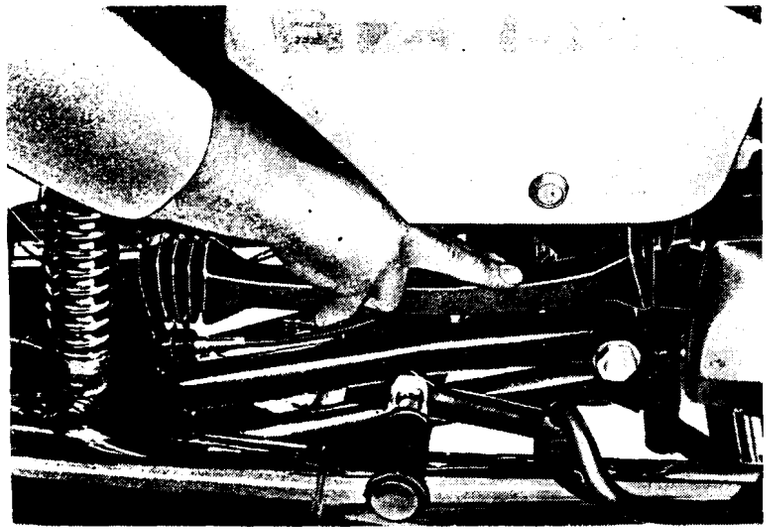


Fig. 30. Checking the chain tension

to the cross tube of the rear wheel swing-arm by two fingers.

Tensioning the chain

The knock-out axle (1) and the nut for fastening the rear wheel drive must be loosened. Then uniformly turn the adjusting screw (3) of the two chain tighteners (2) and provide the screw with a check nut after setting. Check the wheel track according to Fig. 32 or by visual inspection from the front. The gap (S) results from the different widths of front and rear wheel.

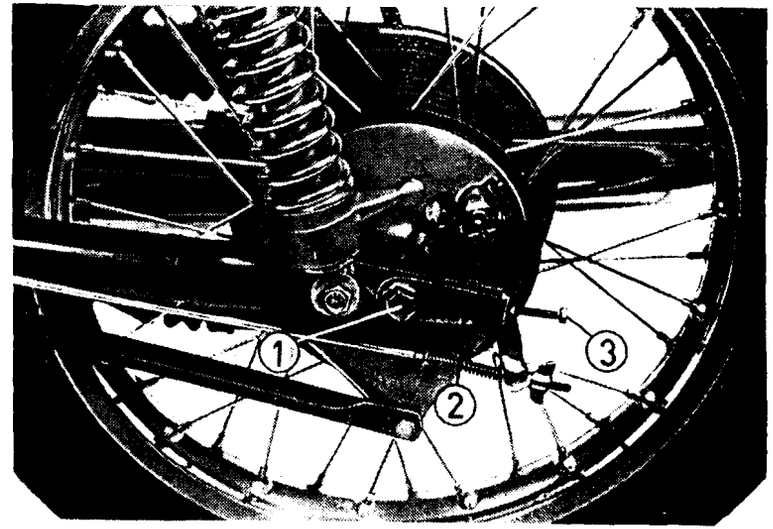


Fig. 31. Tensioning the chain

(1) Knockout axle
(2) Chain tightener, left-hand side
(3) Adjusting screw with check nut

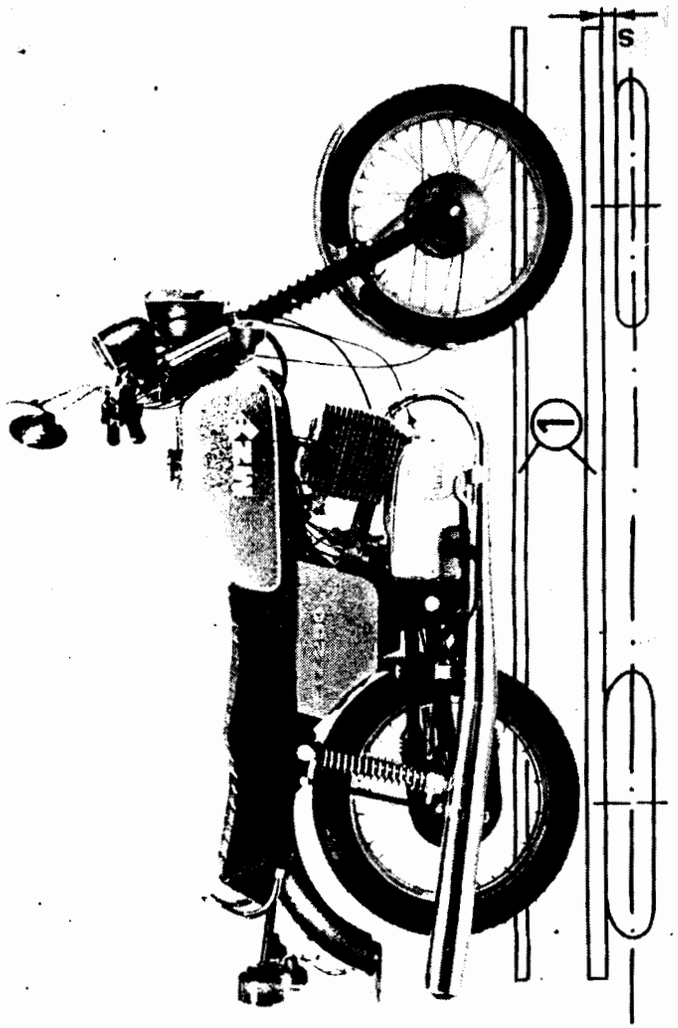


Fig. 32. Aligning the wheels
(1) Lath for alignment
(S) Gap between measuring lath and front wheel (about 1 cm)

Replacing the chain

If two rollers adjacent to each other or more than 5 rollers altogether are broken or if the chain joints show an excessive play, replace the chain by a new one and remove broken pieces of the old chain. You may attach the new chain to the old one and draw it through the chain protection. The locking spring clip of the chain connecting link must be inserted so that the open end is opposite to the sense of rotation.

4.9. Electrical Equipment

Take care to see to it that the insulation of the cables and electrical devices is always in proper condition and that all line connections are tight and free from oxide. Never replace blown fuses by other metal objects.
Electrical welding operations in the motor-cycle should only be done after the disconnection of the battery. No positive line must get into contact with the welding electrode.

Dynamo

The dynamo does not require any care. The charging-control lamp flashes up when the ignition system is switched on and will go out when the engine has started up. Faults are given when the control lamp fails to flash up or emits a dim light only upon switching on the ignition system or when it fails to go out when the engine is running.

Ignition system

This system includes contact breaker (Fig. 33), ignition coil (Fig. 34) and sparking-plug. (The ignition timing

and the adjustment of the contact breaker gap must be left to a specialised workshop. Provide the lubrication felt pad with 3 drops of Hypoid oil, if necessary. The felt should just touch the highest point of the cam. Clean the sparking-plug at the specified intervals and re-adjust the electrode gap. Keep the plug connector inside clean and dry. Colour deviations of the plug body — normal colour is, depending on the driving habit, grey-yellow to light brown — are indicative of faults or defects which have to be removed by a workshop.

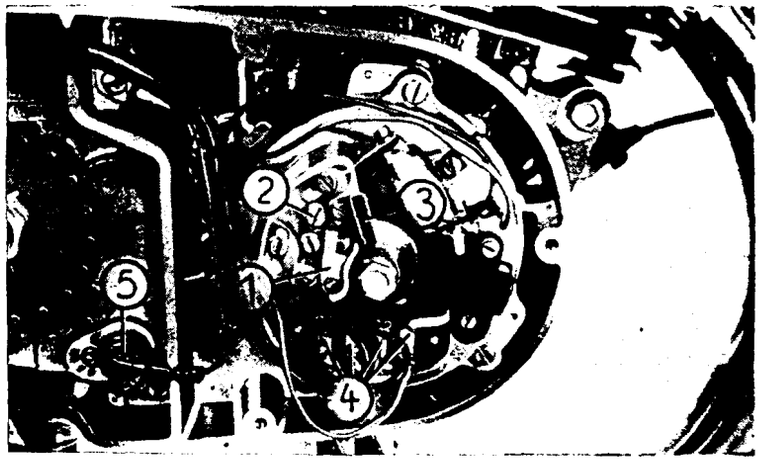


Fig. 33. Dynamo and contact breaker

(1) Contact breaker
(2) Setting eccentric for contact breaker
(3) Lubricating felt pad for contact breaker
(4) Cable connections of the dynamo
(5) Idle gear switch

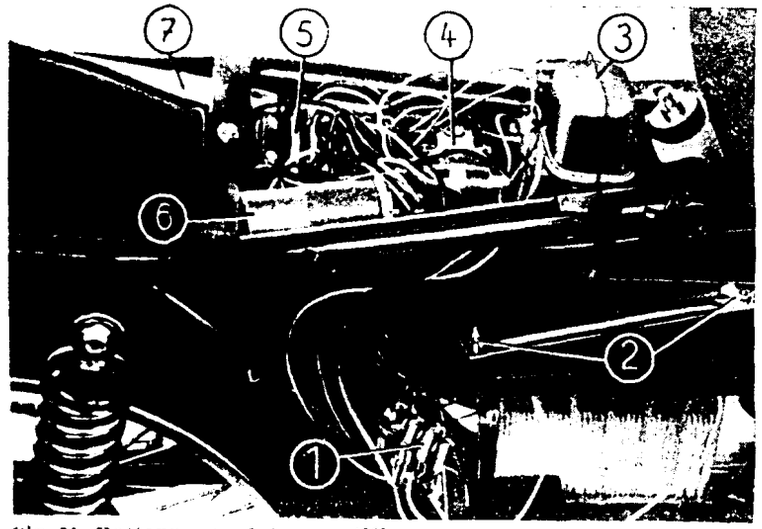


Fig. 34. Battery, regulator, rectifier

(1) Fuse box
(2) Fastening screws for battery
(3) Regulator for the dynamo
(4) Line connector
(5) Rectifier for dynamo
(6) Ignition coil
(7) Inflation pump

Battery

The battery terminals and the pole connections must always be kept clean and, after cleaning, be provided with a film of grease for battery terminals. Check the level of the electrolyte (Fig. 10) every two weeks in summer and every four weeks in winter.
For topping up, only use distilled water.
When the vehicle is inoperative for a prolonged period of time, re-charge the battery once a month.

Notice! When changing by mistake the battery cables (positive and negative), the diodes of the rectifier and the battery will be destroyed.

Headlamp

When replacing the twin-filament bulb by a new one, take care that the lamp properly engages with the reflector. The contacts must be clean and put on correctly.

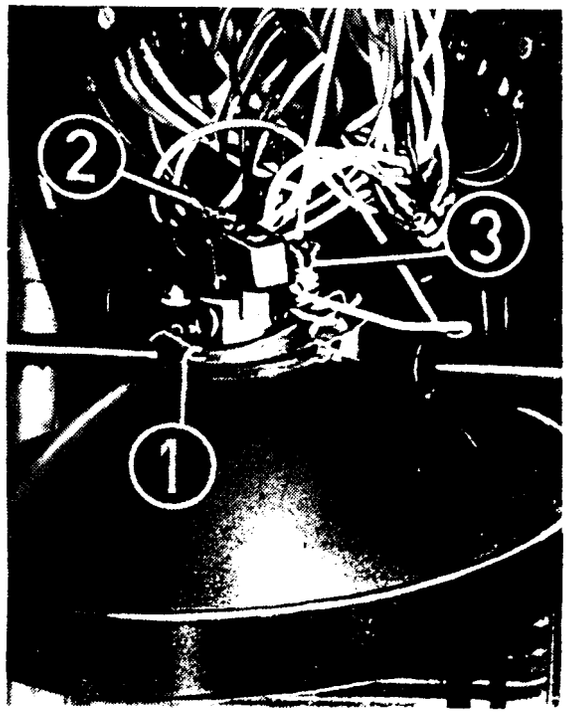


Fig. 35. Replacement of electric bulbs for headlamp
(1) Retaining spring
(2) Connecting piece of twin-filament bulb
(3) Cable for parking lamp

Adjust the headlamp according to the schematic representation in Fig. 37. For this purpose, load the vehicle with the driver and set the suspension units at the rear to "soft". Slacken back the headlamp fastening screws - the headlamp can be turned to any side.

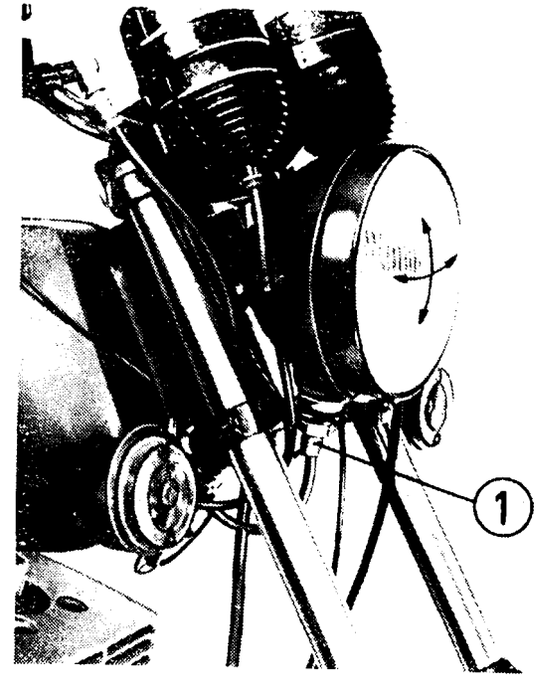


Fig. 36. Mounting of headlamp
(1) Fastening screw

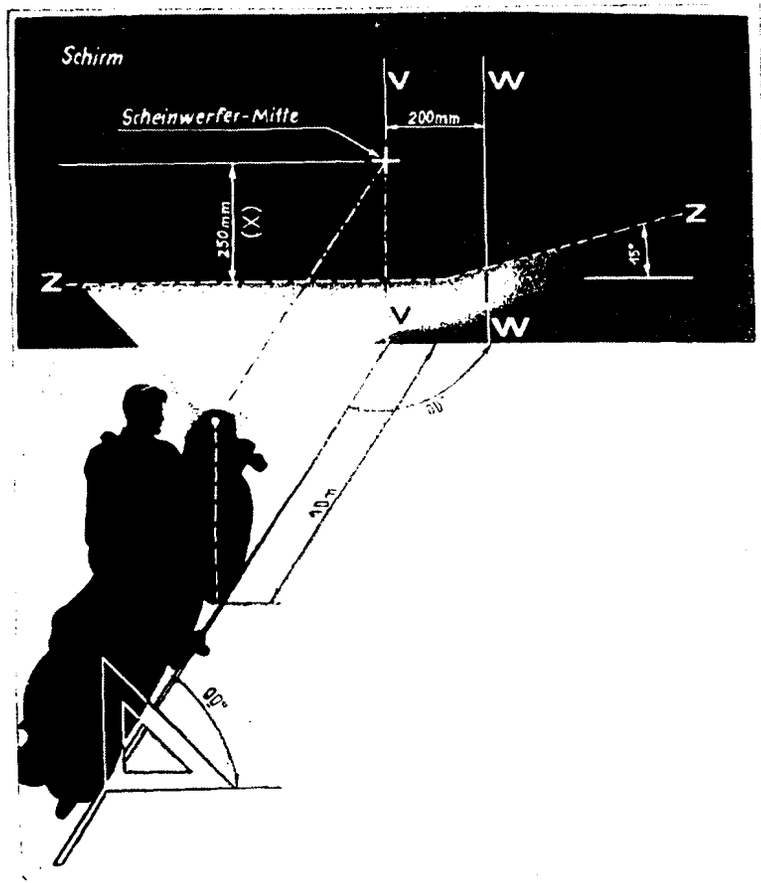


Fig. 37. Focusing and adjustment diagram for headlamp
Schirm = Screew
Scheinwerfer – Mitte = Centre of headlamp

Direction indication

The operation of the flashing-light direction indicators can be observed at the edge (Fig. 38/1) or at the control lamp (Fig. 2/4 or Fig. 3/11). When one flashing-light direction indicator fails, the other one will flash and the control lamp at double the normal frequency.

4.10. Information about Winter Operation

We ask all of our customers who will use their vehicles in winter, to take into consideration the information given below.

Due to chemical thawing agents on the roads, severe damage due to corrosion can be caused in winter. Therefore, apply a film of a suitable anti-corrosion agent on the basis of wax or mineral oil to the chromium-plated or unprotected metal parts before the onset of winter. Lubricate the vehicle according to the Maintenance Chart. Parts such as the guide tubes of the telescopic fork, which cannot be protected for a longer period of time, must be treated with an anti-corrosion agent after every ride.

At the end of the winter season, the preserving agent can be removed.

5. Faults and Their Remedies

Fault	Remedy
No voltage in the electrical system	
One or the two fuses defective	Replace the fuses and remove the short-circuit
Battery insufficiently charged or defective	Charge the battery or replace it by a new one
Cable broken or corroded at the connections	Repair the cable, clean the connections
Dynamo defective	Repair it
Ignition system switched on, but charging control light fails to flash up	
No voltage in the electrical system	see above
Ignition switch defective	replace it
Electric bulb defective	replace it
Fuse of the flashing-light direction indicator system defective (only standard design)	replace it
Ignition system switched on, charging control lamp emits a dim light	
Lamp holder makes poor contact	clean the contacts
Cable DF interrupted between dynamo and regulator or fuse ring 4 (2 A) defective	
Rectifier defective	replace it

Fault	Remedy
Rotor of the dynamo defective	replace it
Cable U, V or W interrupted	repair it
Charging control lamp lights while the engine is running	
Dynamo, regulator or rectifier defective	have them repaired
Cable between dynamo, regulator, rectifier and battery defective	have it repaired
Electric bulbs in headlamp or tail lamp fail to light	
No voltage in the electrical system	see above
Electric bulbs defective or poor contact	replace them and/or clean
Cable defective	repair it
Dimmer switch or ignition-light switch defective	replace the defective part
Stop lamp fails to light	
No voltage in the electrical system	see above
Electric bulbs defective or poor contact	replace them and/or clean
Cable defective	replace it
Stop-light switch wrongly set	adjust it

Fault	Remedy
Direction indicator system defective	
No voltage in the electrical system	see above
Fuse of the flashing-light direction indicator system blown	replace it and remove the short-circuit
Flasher unit defective	replace it
Electric bulb defective or poor contact	replace and or clean
Cable defective	repair it
Ignition system emits no or irregular sparks	
No voltage in the electrical system	see above
Sparking-plug wet	dry the plug, close the fuel shut-off cock and, with the ignition system switched off and the plug removed, several times actuate the kick-starter
Sparking-plug defective or oiled up	replace it or clean it
Plug connector wet or insulation broken	dry or replace it
Contact-breaker contacts fail to open	set the assembly or replace the contact-breaker by a new one

Fault	Remedy
Contact-breaker oiled up	clean it
Cable between contact breaker and ignition coil defective or poor contact	repair it or clean the parts in question
Ignition coil defective	replace it
Capacitor defective	replace it
Fuel feed impaired	
No fuel in fuel tank	fill in fuel
Vent hole in cap of fuel tank clogged	clean it
Filter in fuel shut-off cock dirty	clean it
Packing under the lever at the fuel shut-off cock squeezed	replace it by a new one
Carburetter overflow	
Float valve sticks	clean it or replace it
Float leaky	replace it
Float extremely maladjusted	adjust it
Engine fails to start	
Fuel feed impaired	see under this headline
Ignition system fails to produce a spark	see respective Section above

Fault	Remedy
When cold starting, cold-starting device not open, throttle twist-grip opened too much	see Section 3.2.
When the engine is in a hot state, cold-starting device opened	see Section 3.2.
Engine runs erratically	
Fuel feed impaired	see respective Section above
Ignition system emits irregular sparks	see respective Section above
Induction system or air filter faulty	remove fault
Engine fails to pull	
Carburetter tuning wrong	regulate it
Ignition timing incorrect	readjust it
Air filter wet or induction system clogged	replace it or dry and clean it
Riding with the incorrect gear in engagement	see Section 3.2.
Clutch slips	adjust clutch clearance
Exhaust pipe clogged due to wrong driving habit	clean exhaust pipe by driving for 10 to 20 km (high engine speeds with the throttle fully open)

Fault	Remedy
Excessive fuel consumption	
Air filter wet or induction system clogged	replace it, dry and clean it
Carburetter tuning wrong	have it regulated
Wrong driving habit	see Section 3.2.
Cold-starting device fails to close	adjust a clearance of 2 mm at the cable control
Uncommon noise when shifting gears	
Clutch defective or improperly adjusted	adjust or repair it
Idling speed too high	adjust it
Gear oil level too low	top up with oil
Rear wheel springing deflects too much	
Adjusting sleeves not set to "hard"	re-adjust the adjusting sleeves
Permissible total mass exceeded	strictly adhere to permissible total mass
Poor road-holding properties	
Tyre inflation pressure wrong	inflate the tyres correctly
Tyre tread worn	replace tyres
Wheel track wrong	adjust the track

Fault	Remedy
Brake fails to stop	
Brake shoes worn	re-adjust the cable controls, replace the brake shoes
Brake disk oiled up	clean the disk and the brake shoes
Brake blocked	
Brake ring or brake disk oxidised because vehicle was inoperative	after a prolonged period of time of inoperation, carefully brake the vehicle several times — always use the front wheel brake
Lost motion of hand-brake cable excessive	
(disk brake)	
Air in brake system	have the brake system bled in a specialised workshop
Compensation hole in brake cylinder is not released	have the play of the hand brake lever re-adjusted in a specialised workshop
Brake fluid level in reservoir too low	
Brake shoes worn	replace the brake shoes by new ones
Brake lines leaky	have the brake system repaired

6. After-sales Service

In all of your inquiries, please, give full information both as to your vehicle and as to the defect presumed. As a rule, however, you should call on one of our authorised workshops. We are not in a position to deliver spare parts directly to you. We only deliver spare parts to our authorised workshops and MZ special sales shops and to our importers in foreign countries.

7. For Making the Motor-cycles Complete

For reasons of facilitating transport, a few parts have not been mounted by the manufacturer. These parts must be mounted subsequently in order to complete the vehicle. When connecting the rear lighting fittings to the line connector or earth point and fuse box, take the wiring diagram into consideration. Correctly attach the flashing-light direction indicators and do not omit the packings between flashing-light direction indicator carrier and the flashing-light indicator. Remove the foil from under the oil filler screw plug in order that the ventilation of the gearbox compartment becomes free.

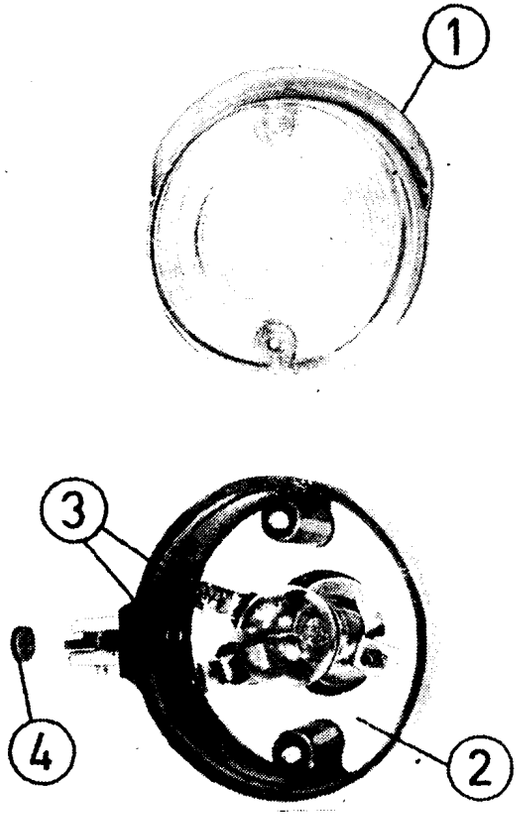


Fig. 38. Front flashing-light direction indicator

(1) Edge for checking the flashing operation
(2) Plastic reflector
(3) Terminals
(4) Packing

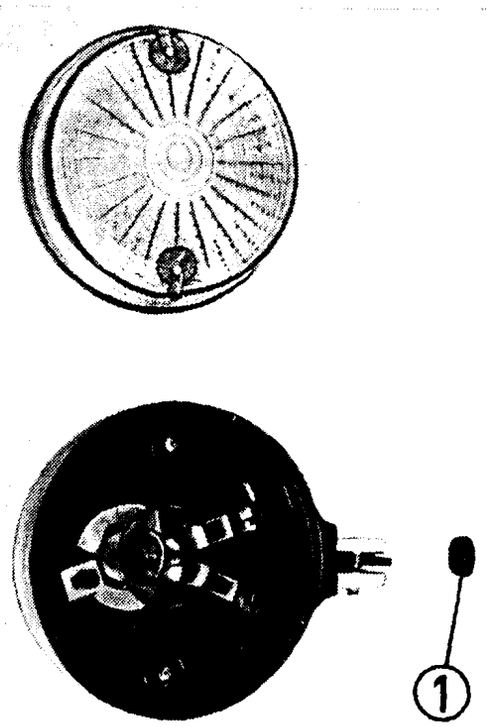


Fig. 39. Rear flashing-light direction indicator

(1) Packing

Fig. 40. Circuit diagram for ETZ 250

(1) Battery
(1a) Capacitor
(2) Ignition-light switch
(3) Dynamo
(4) Rectifier
(5) Regulator
(6) Control lamp for dynamo (in the standard design, this is also the control lamp for the direction indicators)
(7) Idling control lamp (only for deluxe model)
(7a) Switch for idling control lamp
(8) Switch for horn (combined switch at the handlebars)
(9) Horn
(10) Switch for by-pass light signal (combined switch at the handle-bars)
(11) Dimmer switch (switch combination at handlebars)
(12) Tell-tale light for high-beam headlight
(13) Lamp for headlamp
(a) high-beam headlight
(b) passing beam
(14) Illumination for rotational speed meter scale (only for deluxe model)
(15) Lighting of the scale of the speedometer
(16) Parking light (town light, in headlamp)
(17) Tail light and number-plate illumination (in the combined stop, tail and number-plate lighting fitting, bottom)
(17a) Socket outlet for side lamps (side-car operation)
(17b) Socket outlet for earth (side-car operation)
(18) Ignition coil
(19) Contact breaker of ignition system
(20) Sparking-plug with suppressor connector
(21) Stop-light switch for front wheel brake
(22) Stop-light switch for rear wheel brake
(23) Lamp for stop light (on top in the tail lighting fitting)
(24) Flasher unit
(25) Switch for direction indication (combined switch at the handle-bars)
(26) Control lamp for direction indicators (only in deluxe model)
(27) Flashing-light direction indicator, front left-hand side
(28) Flashing-light direction indicator, rear left-hand side
(29) Flashing-light direction indicator, front right-hand side
(30) Flashing-light direction indicator, rear right-hand side
(30a) Socket outlet for right-hand side flashing-light direction indicators (mounted only for side-car model)
(31) Wiring symbols for
(a) flat plug-in connection
(b) receptacle for flat plug-in connection or socket outlet
(c) Ground
(d) detachable connection (screw, terminal)
(e) Permanent connection
(LVR) Line connector in headlamp, right-hand side
(o) top (u) bottom
(v) front (x) occupied connection
(LVL) Line connector in headlamp, left-hand side
(o) top (u) bottom
(v) front (x) occupied connection
(LVF) Line connector at the frame (top of filter housing)
v) front h) rear
x) connection occupied
(Si) Fuse box
(l) left (r) right
(MA) Earth point, headlamp
(MB) Earth point combined stop, tail and number-plate lighting fitting
(ML) Earth, lamp for headlamp
(MC) Earth point, vehicle (at line connector LVF)
(MD) Earth point, dynamo
(MT) Earth point, speedometer

Cable colour code

Abbreviation in German	Meaning	Abbreviation in German	Meaning
br	brown	ws	white
rt	red	ws/sw	white/black
rt/sw	red/black	gn	green
sw/rt	black/red	gn/rt	green/red
sw	black	gn/bl	green/blue
sw/bl	black/blue	bl	blue
sw/ws	black/white	bl/ws	blue/white
sw/gn	black/green	ge	yellow
gr	grey		