



**PIAGGIO
GRUPPE**

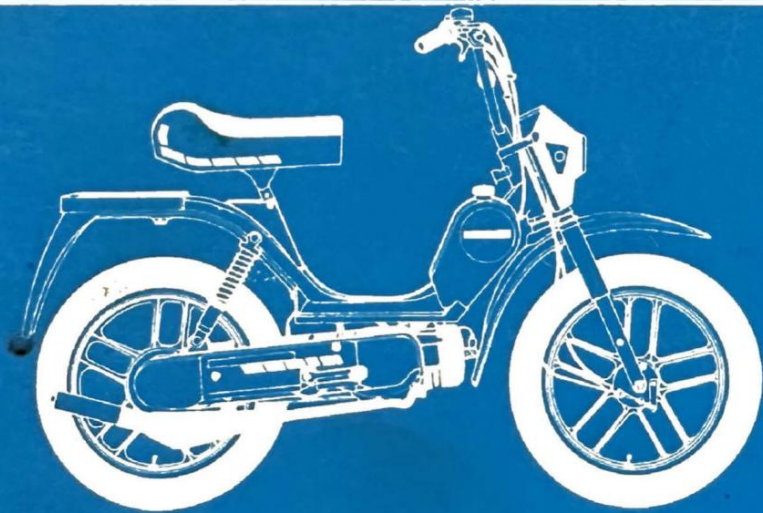
VESPA

GILERA

BIANCHI

VESPA

BEDIENUNGS - ANLEITUNG SUPERBRAVO 2



**Vespa Genuine Parts and Accessories:
The high-**

quality technology inherent in every Vespa vehicle should also be adapted to its maintenance and care so that your riding pleasure remains undiminished for years to come. Always insist on genuine Vespa parts when needed, as these parts are completely identical to the corresponding original parts. If you are offered other parts, please be suspicious, as we cannot verify their quality or their impact on the vehicle's performance.

For your safety, we therefore recommend that you only use original Vespa spare parts and original accessories .

A technical modification of the vehicle can invalidate the general operating permit and insurance coverage.

Therefore, always check the regulations and any manufacturer's certificates before making any modifications .

Table of contents

	Pages		Page
Vehicle description.	3-4	Tool removal of the side covers	14
Technical data	5	stand	
Instructions for initial operation	"	s con t ro 11 e-Te telescopic fork seat	"
data	6-12	adjustment air	15
Anti -theft device	" 6	filter removal carburetor	"
Operating elements	" 6	adjustment	16
Refueling Safety checks	" 7	brake adjustment	" 17
before	" 8	handlebar adjustment	" 17
starting Break-in procedures .	" 8	toothed belt gearbox oil check wheel	18
	" 8	removal shift	" 19-20
	" 8	adjustment tube	20-21
Starting-Fuel tap adjustments, starting-	" 9	and tire change.	" 21-22
shifting-stopping, braking-	10	Replacement of light bulbs,	" 22
stopping-switching to bicycle mode.	"	spark plug check ,	" 22
	11	breaker point check,	23
	"	maintenance and inspection plan ,	" 24-25
Electrical system switch	"	vehicle care - decommissioning.	" 26
positions,	" 12	Troubleshooting.	27
circuit	" 13		
diagram, maintenance work	14-24		

Moped «Super Bravo2»



Vehicle description

Motor

Air-cooled single-cylinder two-stroke engine with rotary valve, i.e., the fuel mixture is supplied via one of the two crank webs.

Fuel mixture supply:

By gravity from the upper fuel tank via the 3-way fuel tap to the carburetor.

fuel tank

Tank capacity 3.4 liters (of which reserve approx. 0.5 liters).

Primary

transmission : via toothed

belt; Secondary transmission: 2-speed gearbox

coupling

Single-disc dry clutch

Front

suspension: telescopic fork with internal coil spring and oil damping. Mechanical rear shock absorber with external spring.

Wheels and tires

Alloy wheels front and rear; Tires front and rear: 2 3/4-16 Trial (e.g. Pirelli ML14).

brakes

Mechanical internal shoe drum

brakes front and rear.

The front brake is operated via the hand lever on the right handlebar. The rear the coaster brake brake is operated via pedal .

Caution: To always be ready to brake, keep your feet on the pedals at all times.

Drum diameter:

front: 104 mm

back: 186 mm

Dimensions:

Length: 1640 mm

Wheelbase: 1080 mm

Width: 700 mm

Height: 1070 mm

Weights:

Unladen weight: 56 kg

Permissible total weight: 150 kg

Permissible front wheel load: 50 kg

load: Permissible rear wheel load: 100 kg

In general, the permissible wheel loads and the permissible total weight must be observed.

Special accessories: For special accessory parts, please contact a Vespa service center or request our brochure.

Technical data

fuel mixture	Fuel mixture of 2°/o (1 :50)
Drilling	38.2 mm
Hub	43 mm
Engine displacement	48 cc
compression	9:1
ignition	19°
spark plugs	Bosch W1 OAC, KLG F?O, AC422, Champion L90, Lodge CN, NGKB5HS
	Dell'Orto SHA 12110
Carburetor gear ratio Motor rear wheel	1st gear 1/30.24 - 2nd gear 1/19.20
Top speed	25 km/h
Fuel consumption according to DIN 70030	1.5 liters/100 km
reach	approx. 225 km

Instructions for commissioning

Vehicle data

The vehicle identification number is stamped on the rear part of the frame above the engine . The manufacturer's plate is riveted to the frame behind the seat .

The motor has a stamped motor number on the right side of the crankcase (EMC1 M ...).

Vehicle identification number: EMC1T .. .

Always provide the vehicle identification number (VIN) when ordering spare parts.

Anti-theft device

The moped is equipped with a steering lock. To lock it, turn the handlebars to the left and push the steering lock inwards. Once the handlebars are locked, turn the key back and remove it (check that the steering lock is engaged). To unlock it , insert the key and turn it to the left; this will disengage the steering lock .

Attention: Always note down the key number, otherwise a replacement key cannot be made if it is lost.

Attention: Always lock the steering lock and remove the key after parking the moped!

Controls

1. Clutch lever and gearshift grip. Gearshift grip positions: 0 = neutral; 1 = 1st gear; 2 = 2nd gear . 2.

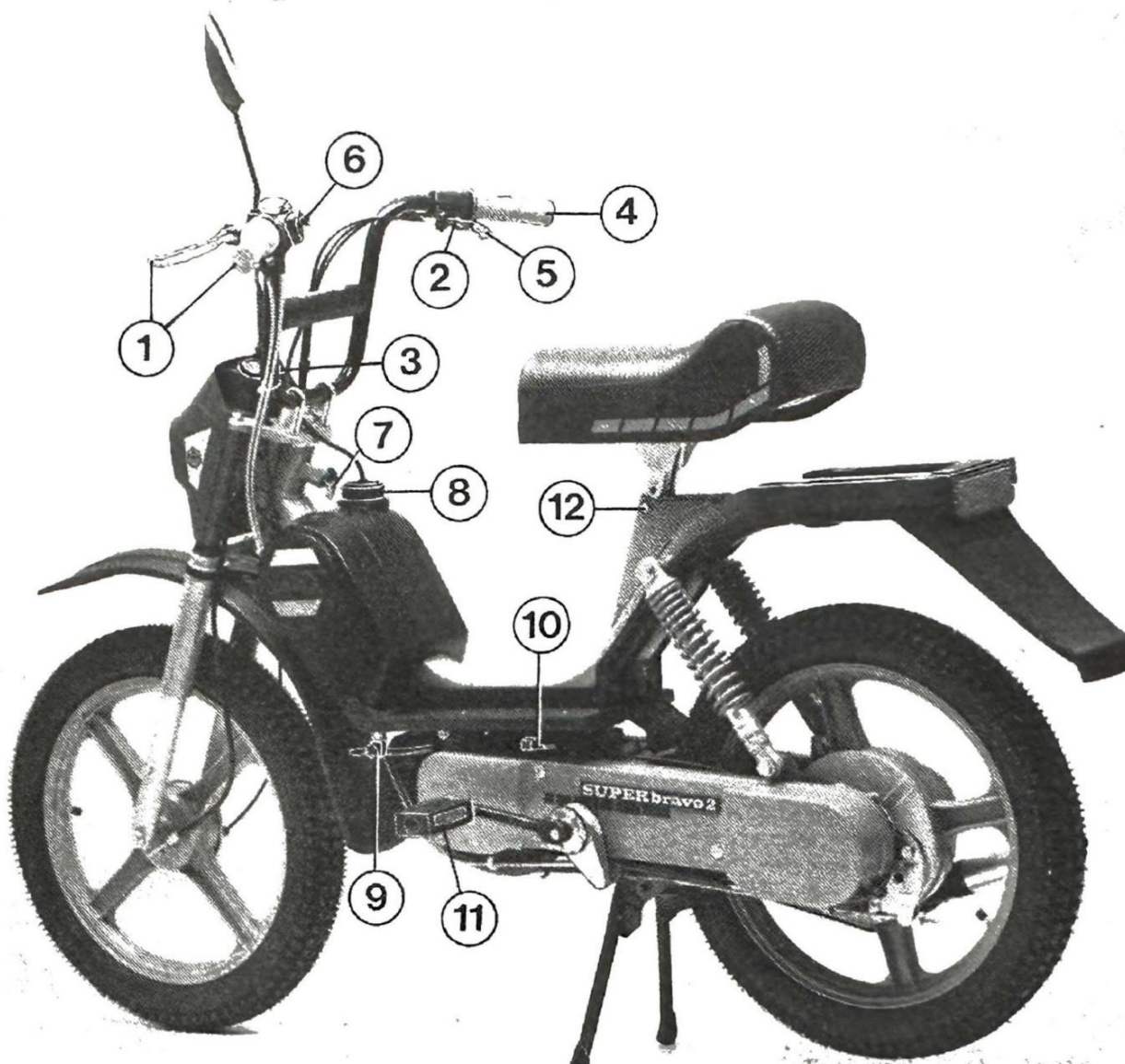
Decompression lever. 3.

4. Speedometer 5. Throttle grip 6. Front brake lever

Light switch 7. Steering lock

8. Fuel tank cap 9. Fuel tap 10. Cold start device 11. Pedals and coaster brake

12. Bolts for seat height adjustment.



Refueling

Your moped must be fueled with a 2 - stroke mixture at a ratio of 1:50. For preparing a 2 - stroke mixture at a ratio of 1:50, we prescribe the use of regular gasoline (also unleaded according to DIN 51607) and 2-stroke brand oils, such as those from Aral, Esso, Shell, Agip, etc.

Caution: **Never close the vent in the fuel cap! If it is clogged, clean the opening . The fuel level can be checked using the dipstick attached to the fuel cap.**

Safety checks before the start

- **Check the function of the lighting system and the alarm system (bell) .**

- **Check the function of the brake systems.**
- **Check fuel level.**
- **Check gearbox oil level. - Check telescopic fork oil level. ren.**
- **Check tires for damage and Check tread depth - recommendation: min. 2 mm.**
- **Check tire pressure - Front tire: 1.10 bar Rear tire: 2.00 bar**

Entry requirements

Do not drive at full throttle during the first 500 km .

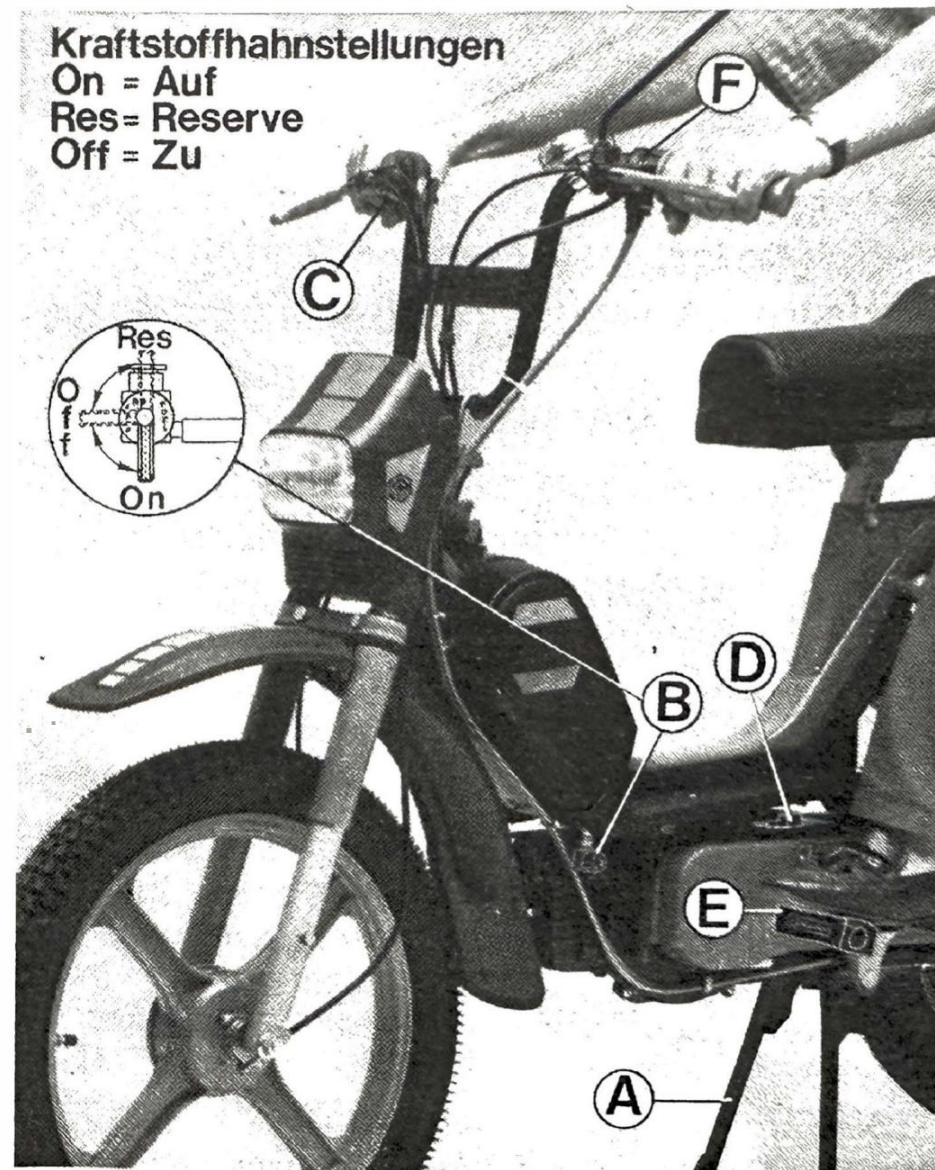
Start

Perform the safety checks before starting (see page 8)

- **Unlock the steering lock -**
- **place the moped on the kickstand "A " ,**
ensuring the rear wheel does not touch the ground - **open the fuel tap " B" -**
- **hold the throttle grip " C" at idle; if the engine is cold, engage the cold start device.**
- **Press "D" (the cold start device will automatically pop out when the throttle grip is operated).**

- **Pull in the clutch and shift into 2nd gear « F».**
- **Start pedaling using « E».**

- **Pull in the clutch and shift into neutral « F».**



Starting

off: When starting off, the clutch lever is pulled and the gearshift grip is moved to the 1st position. Turn the gear (see page 7). Then slowly release the clutch lever and simultaneously give it some gas.

Caution: Always put the moped on its kickstand before starting off. The rear wheel must not rotate when it touches the ground, as this could damage the gearbox due to the sudden stop.

Shifting:

To shift up to 2nd gear , release the throttle, pull the clutch lever and move the gearshift grip to the 2nd gear position.

Caution: When downshifting, pull the clutch lever, release the throttle, turn the gearshift lever to 1st gear and slowly release the clutch lever, otherwise the engine will abruptly decelerate.

Stopping with the engine running , e.g., in front of a traffic light: - Pull the clutch lever and turn the gearshift knob to neutral position "O" . Keep the throttle grip at idle.

Braking:

Optimal braking is achieved by applying the front and rear brakes simultaneously. When cornering, always brake before the curve and reduce throttle, possibly downshifting to a lower gear.

Caution: Since your moped is equipped with a coaster brake on the rear wheel, never take your feet off the pedals.

Caution: Regularly check the brakes for effectiveness and sufficient lever travel. For safety reasons, replace worn brake shoes promptly. Brakes that

They function poorly, require a significantly longer braking distance, and can lead to accidents.

To stop -

Turn the gearshift knob to the neutral position «Ü» .

**- Pull the decompression lever
(see page 7 no. 2).**

Attention: When parking, place the moped on its kickstand and lock the steering lock.

Switching to bicycle mode: To switch to bicycle mode, turn the shiftlever to the neutral position "Ü" and pedal.

Electrical system

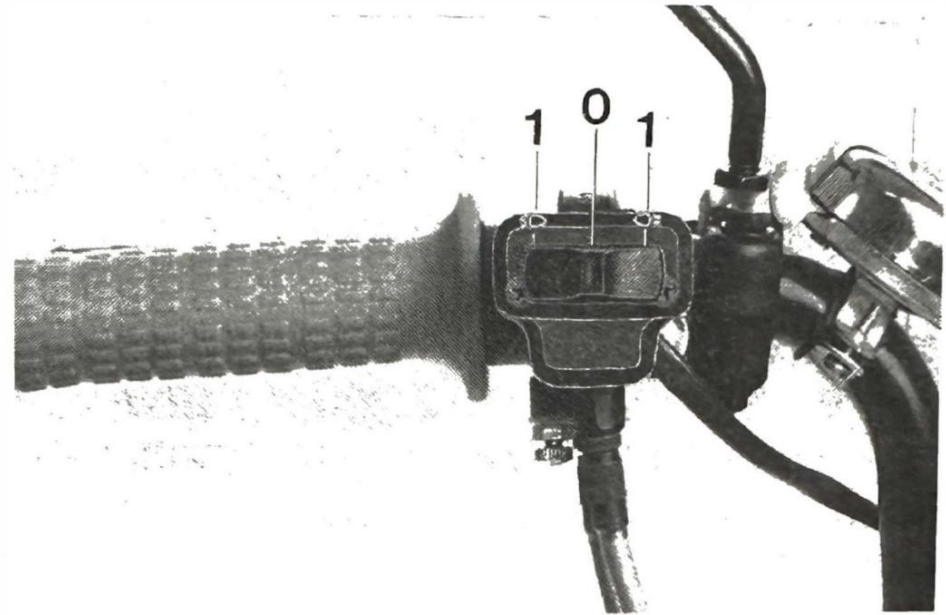
The electrical system is powered by alternating current.

The consumers are: -

Headlights with a 6V-15W bulb - Taillight with a 6V-4W bulb

Warning: Replace defective lamps immediately !

Light switch positions: 0 = light off,
1 = light on
(headlights with taillight).

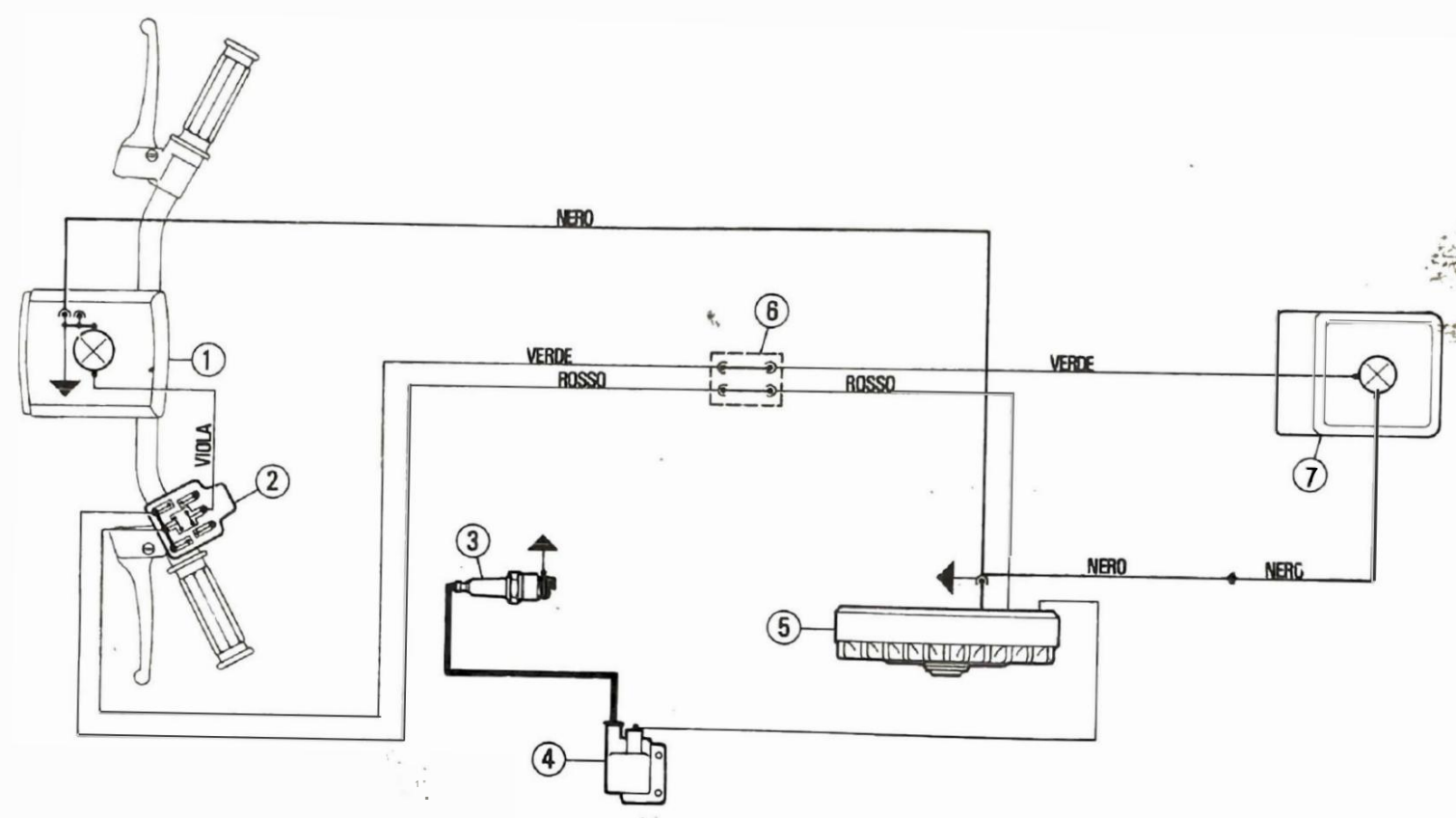


Circuit diagram (see figure, p. 13)

- 1. Headlight, 6V-15W bulb - 2.
- Light switch - 3. Spark plug - 4. Ignition coil -
- 5. Flywheel magneto - 6.
- Clipboard - 7. Rear light, 6V-4W lamp.

Rossa = Red, Verde = Green, Nero = Black,
Viola = Violet.

Circuit diagram

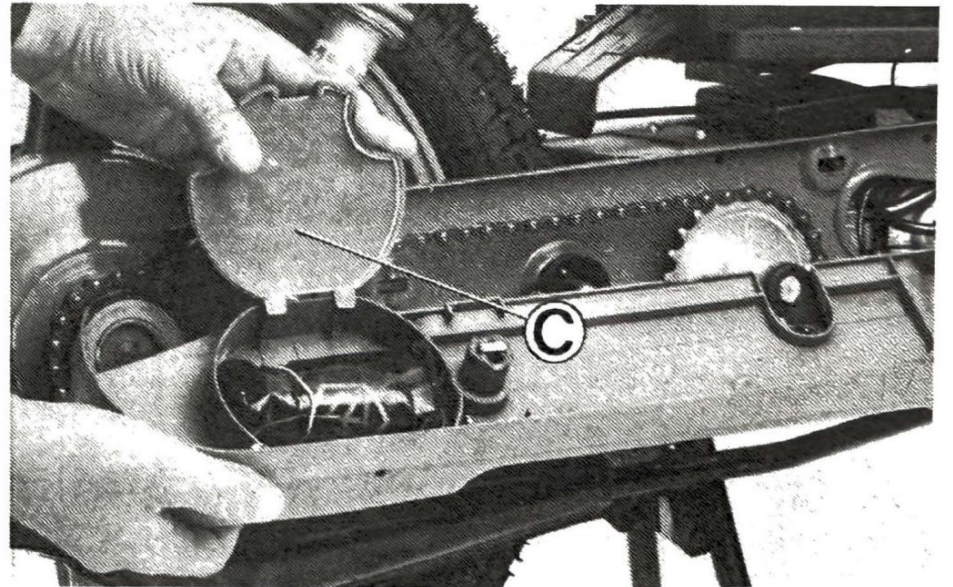


Maintenance work

Removing the side covers:

Open the two bayonet locks "A" and "B" with a screwdriver or a coin and remove the side cover.

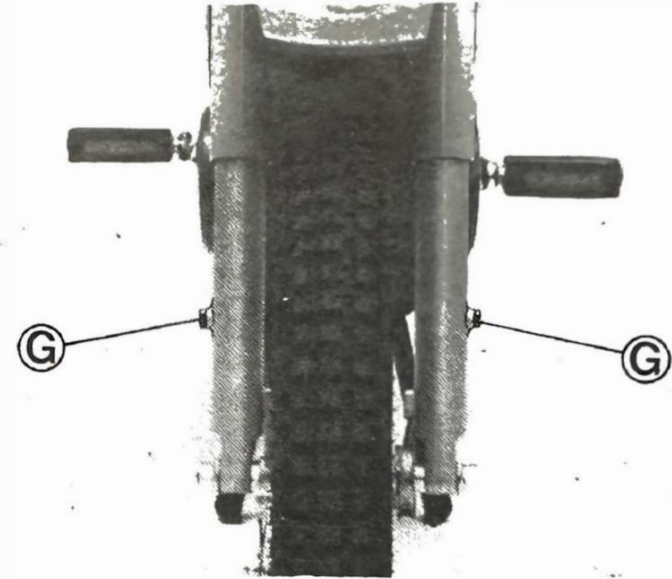
Tool The tool is located in the right side cover under cover "C" .



Oil level control Telescopic fork

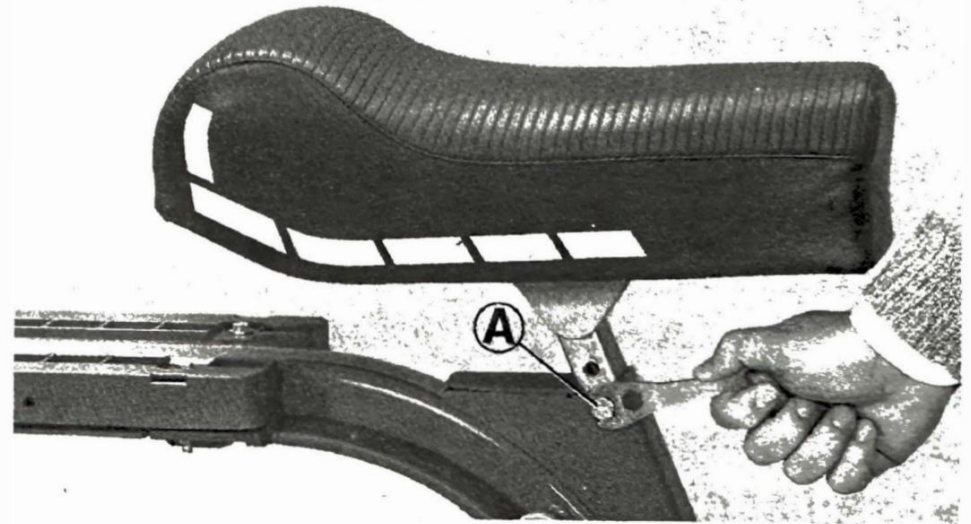
Remove the two filler plugs marked "G" (OLIO) . With the vehicle upright, the oil must reach the filler openings .

Capacity per fork leg approx. 30 cc.



Seat adjustment

Loosen the two bolts «A » (left and right) and adjust the seat higher or lower (3 adjustment positions)
Then tighten the bolts securely.



Air filter removal

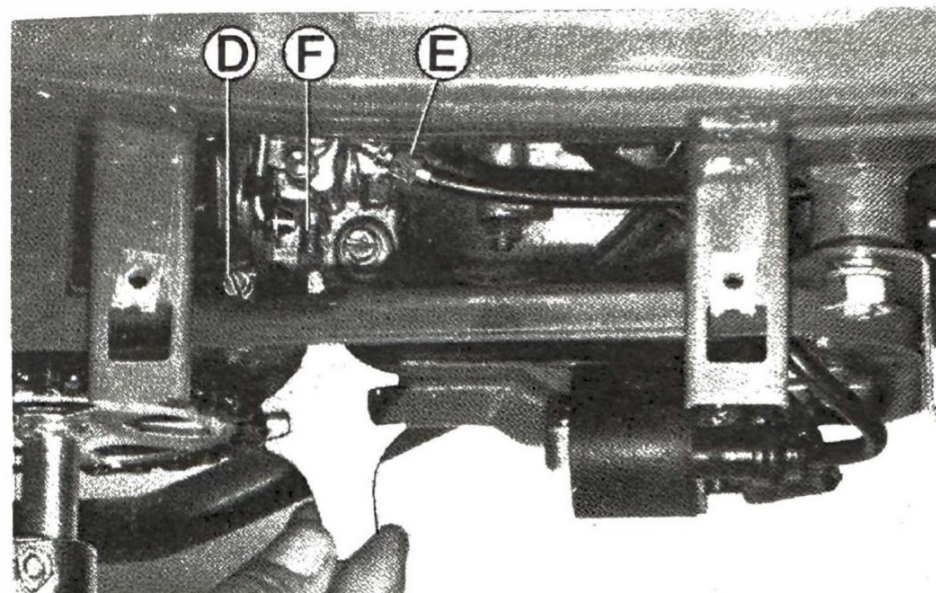
Unscrew the two Phillips head screws of the right footboard.

Loosen the air filter mounting screw "D", remove the filter and pull it out. If necessary, clean the filter with gasoline and dry it with compressed air. When reinstalling, ensure the air filter is securely fastened.

Carburetor setting

The adjustment nipple "E" is used to adjust the play of the throttle cable.

The idle speed is adjusted using a screwdriver through the idle speed adjustment screw "F".



Caution: When adjusting the idle speed, which may only be done with the engine at operating temperature, the moped must be on its kickstand.

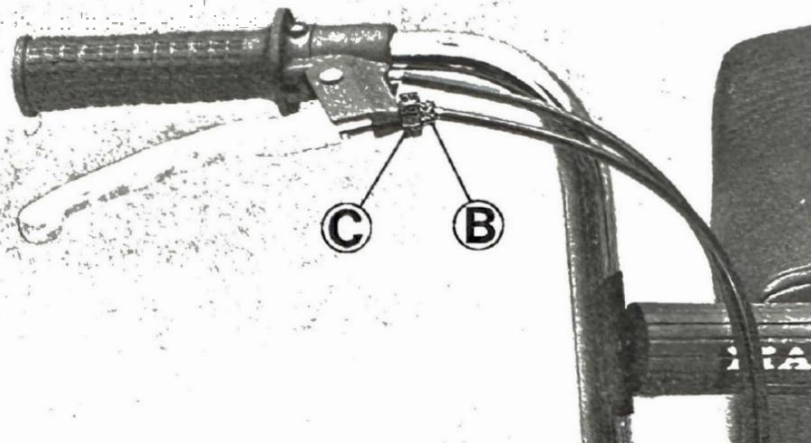
Caution: Carburetor adjustments should only ever be carried out by a Vespa service technician.

Brake adjustment

Front brake: Adjust via screw "B" on the handbrake lever (see illustration on the right). After adjustment, lock with the lock nut "C".

Rear wheel brake: Via the adjusting knurled nut «D» (see illustration above, page 18).

When adjusting the brakes, it is important to ensure that the respective wheel rotates freely and that the braking effect begins immediately after the hand brake lever or the coaster brake is activated.

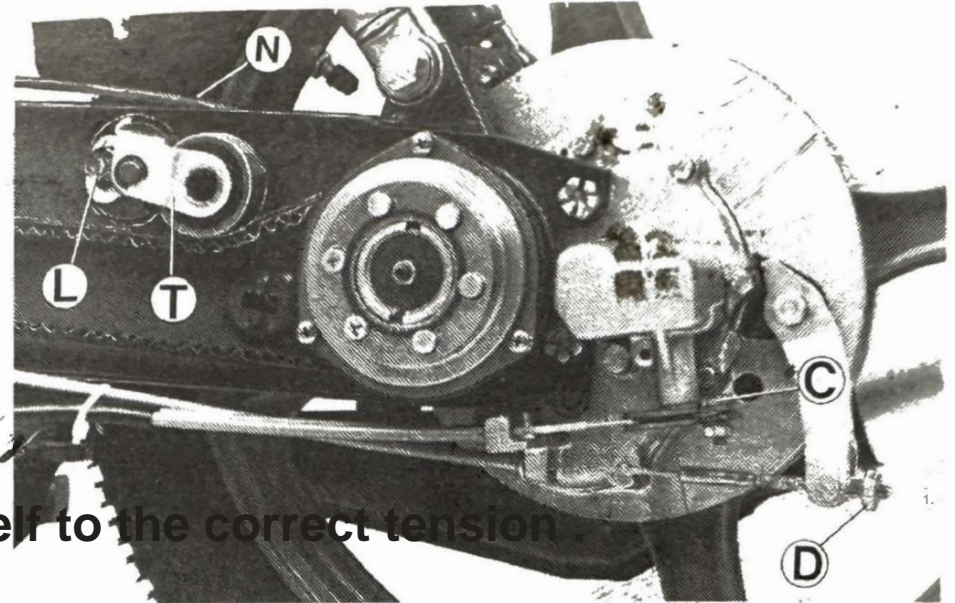


Handlebar adjustment:

Loosen the four nuts securing the handlebars under the telescopic fork bridge (do not remove them) and rotate the handlebars to the desired position. Then tighten the mounting nuts securely .

timing belt

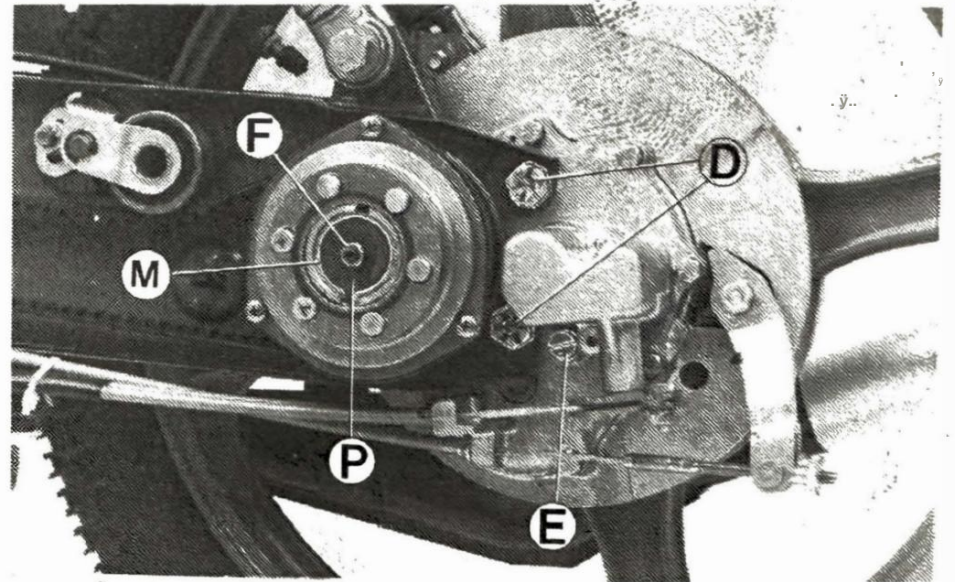
The timing belt must always be tensioned . The timing belt tensioning device is used for this purpose. When adjusting the tension, e.g., after removing the timing belt, loosen nut " L" . A spring in the timing belt stellt tensioning device "T" will then adjust itself to the correct tension . Block the mother " L" again.



Gearbox oil level check

Remove the left side cover and loosen screw " E" . With the vehicle upright, the oil level must reach the oil filler opening " E" .

When changing the gearbox oil: Loosen screw " E" and drain the oil. Then add approximately 130 cc of oil. Check the oil level and tighten the screw.



Wheel removal

Front wheel: **The two axle nuts of the. Unscrew the telescopic fork and detach the brake cable. Pull out the wheel and remove the speedometer sprocket.**

Rear wheel: Remove both side covers (see page 14) and unhook the rear brake cable by loosening the knurled nut "D" (see page 18, top illustration). Use pliers to unclip the spring clamp from the clutch cable "N" (see page 18, top illustration) and pry the clutch cable off the clutch lever. Remove the retaining ring "M" (see page 18, bottom illustration) from the clutch housing and pull out the clutch adjuster "P" (see page 18, bottom illustration) .

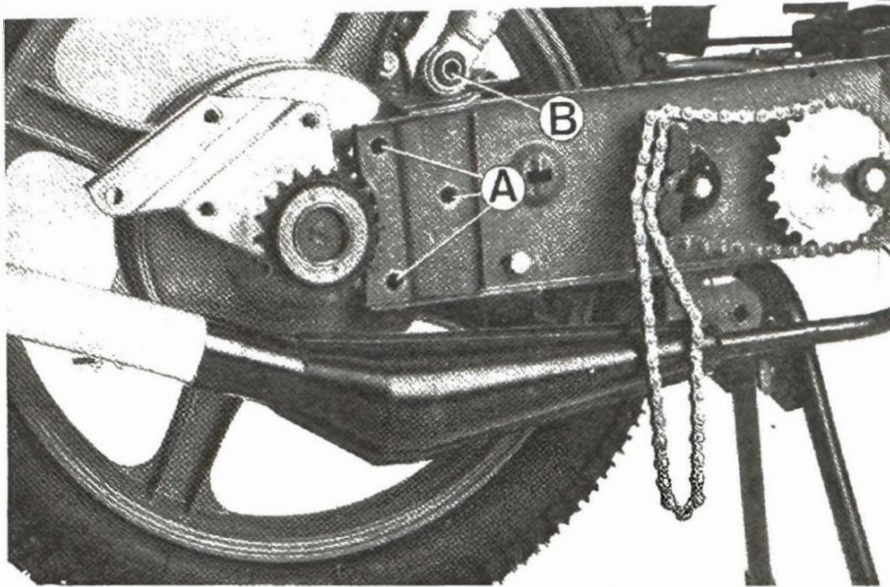
Attention: **Dabef"die Mutter «F» (see**

(Page 18, illustration below) and do not adjust the screw of the clutch actuator "P"!

Loosen the coupling's retaining nut and pull out the coupling.

Loosen screw «C» (see page 18, fig. above) of the shift detent and pull out the two shift cables, making sure to mark the shift cables and the respective guide opening.

Loosen the two screws "D" (see page 18, illustration below). Then remove the chain on the right side, loosen the 3 screws "A" (see page 20) and the shock absorber screw "B" (see page 20) . The wheel can now be pulled out. Reassembly of the wheel is the reverse of removal. Adjust the gear cables and rear brake cable .

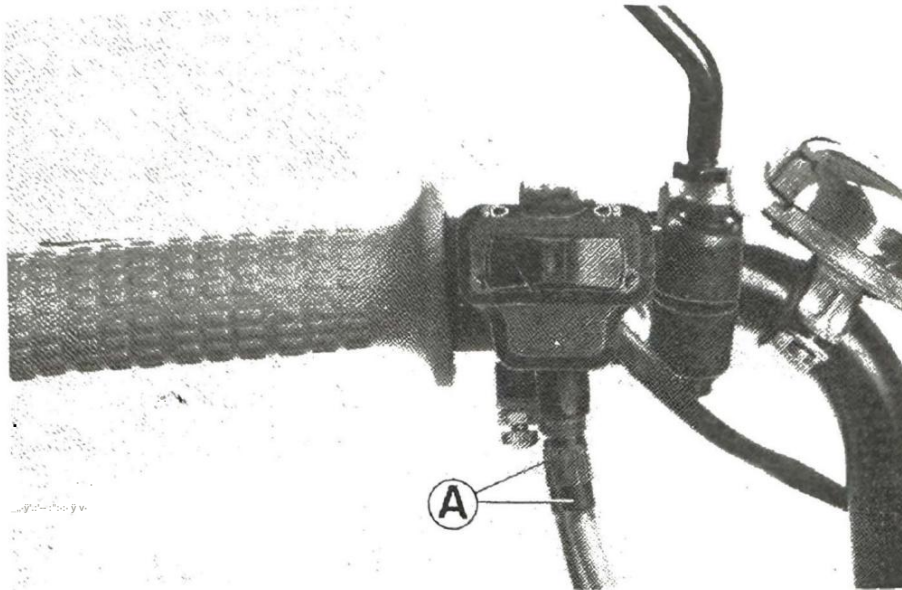


Adjusting the gears: If the gear cables were removed, e.g., when removing the rear wheel, proceed as follows:

- Turn the gear shift lever on the handlebars to the neutral position "O" .
- The shift detent also engages in neutral - Positioning (check by turning the wheel)

- Insert the shift cables into the guide openings, making sure to pay attention to your self-made markings - Tension both shift cables simultaneously over the shift detent and tighten screw "C" (see page 18, fig. above).

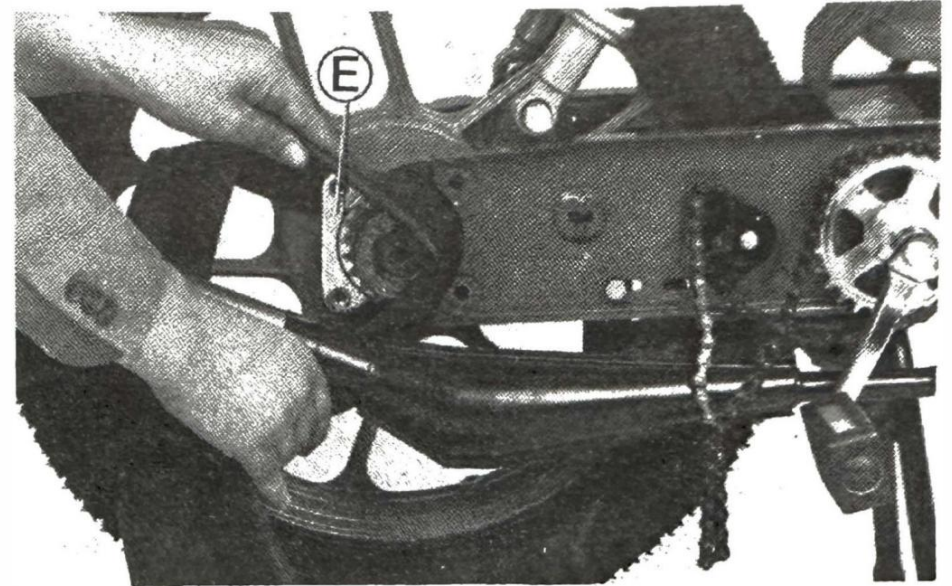
If necessary, fine-tune using the two knurled nuts « A » (see page 21) .



Tube and tire change

The following procedure should be followed when changing the inner tube on the rear wheel :

- Remove the chain on the right side
- The 3 screws «A» and the
Loosen shock absorber screw «B»
(see page 20).
- Pry the right tire bead away from the fig
shoulder and the



Remove the hose valve.

- Turn the flange «E» backwards and pull out the hose.

Reassemble in reverse order. Ensure the hose is not pinched. When changing the rear wheel

Remove the tire beads (see page 19) and lift them off the rim shoulders.

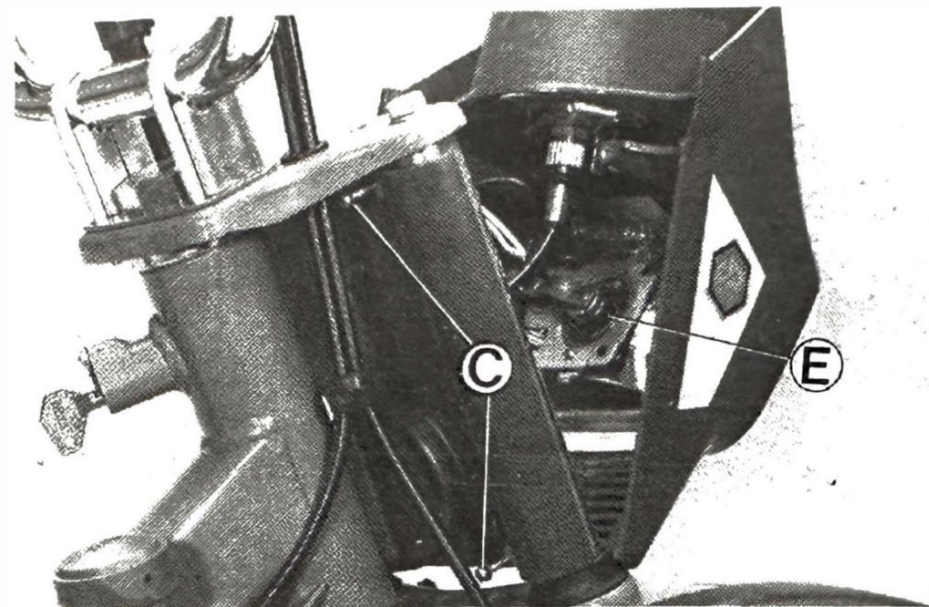
When changing the inner tube or tire on the front wheel, the wheel must be removed.

Remove the inner tube or tire from the rim in the same way as for the rear wheel.

Disconnect the spark plug connector and unscrew the spark plug using the spark plug wrench.

Clean fouled spark plugs with sandpaper or a wire brush. Check the electrode gap (0.4 mm), readjusting it if necessary by bending the ground electrode. When installing, screw the spark plug in by hand and only use the spark plug wrench to lock it in place.

Caution: Never remove or install the spark plug when the engine is hot!



Replacing the light bulbs

Headlight: Loosen the 4 screws “ C ” and fold the cover forward. Remove the bulb “ E ” from its socket.

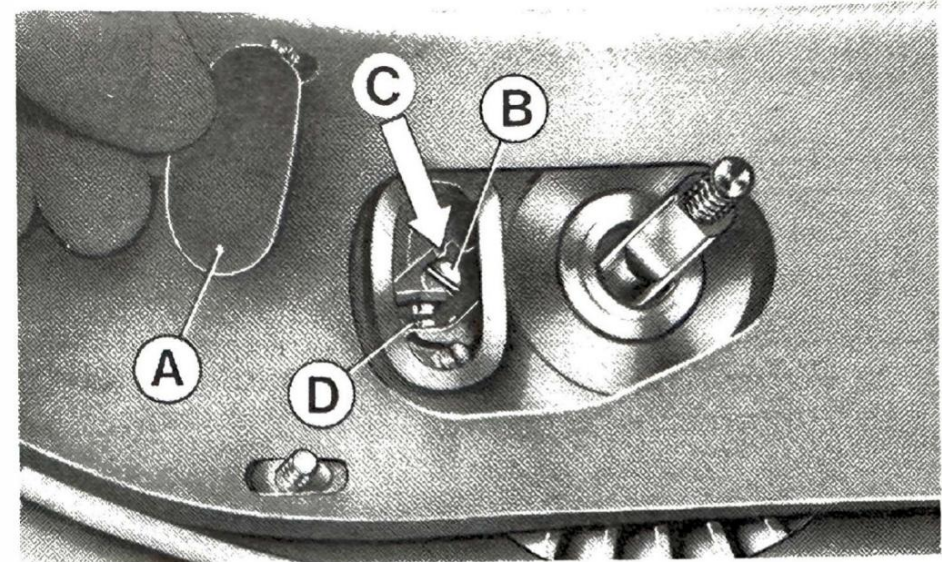
Rear light: Loosen the screws of the rear light cover, remove the cover and replace the bulb.

interrupter control

The inspection and possible adjustment of the breaker contacts can also be carried out with the clutch bell installed.

Proceed as follows: - Remove protective cap «A» - **Check** contact distance «D» with a gauge (0.4 mm)

- **For readjustment, loosen screw «B» and use a screwdriver inserted in notch «C»** to adjust contacts «D» to 0.4 mm.



- **Tighten screw «B» and check the contact distance with a gauge .**

Maintenance and inspection plan

Work to be carried out	handover control	after 500 km or 6 weeks	after 2000 km	All 4000 km
1. Check the oil level at the filler screw in the gearbox of the rear wheel hub - oil change every 8000 km (approx. 130 cc of engine oil SAE or 40)	X		X	X
2. Check carburetor, adjust if necessary.			X	X
3. Clean air filter. 4. Grease the breaker cam's felt pad (Fiat Jota 3, Esso Beacon 3, Shell Alvania Grease 3, Mobilux Grease 3)			X	X
5. Check the contact breaker gap (0.4 mm)			X	X
6. Check the spark plug electrode gap (0.4)		X	X	X
7. Functional test of: - Steering	X	X	X	X

- Brake systems	X	X	X	X
- Gearbox and clutch	X	X	X	X
- Lighting and bell	X	X	X	X
- Timing belt check				X
- Grease gearshift detent, brake lever joints and speedometer drive (Esso Beacon 3, Shell Alvania Grease 3, Fiat Jota 3, Mobilux Grease 3)				X
8. Oil the Bowden cables.				X
9. Check the oil level of the telescopic fork (capacity per fork leg approx. 30 cc Essolube 20W)				X
10. Check the fit of screws and nuts:				
- Mounting nut of the engine timing belt pulley on the crankshaft -	X	X	X	X
Front wheel -				
Rear wheel -				
Engine mounting bolts to the chassis				
11. Check tire pressure : front 1.1 bar, rear 2.0 bar	X	X	X	X
12. Test drive	X	X	X	X

Vehicle care

The engine is best cleaned with a cold cleaner. However, always follow the manufacturer's instructions.

The painted surfaces are washed with plenty of water. If clean water is not enough, a washing shampoo can be added and the dirt removed with a sponge.

Plastic parts must never be cleaned with harsh chemicals such as gasoline; the cleaning process should be the same as for painted surfaces. Special plastic cleaning agents can also be used for these parts, but the application instructions for the Heste 11 must be observed.

Chrome parts should be treated

Make sure to wash off any cleaning products and be dry.

Decommissioning the vehicle:

The moped should be thoroughly cleaned as described in the section "Vehicle Maintenance".

Furthermore, the following measures are required: - Completely

empty the fuel tank - Close the fuel tap - With the engine off, remove the spark

plug and pour 10-15 cc of SAE 30 engine oil or 2-stroke brand-name oil through the resulting opening .

- Press the pedals 2-3 times and screw the spark plug back in.
- Jack up the vehicle on the tilting stand so that the wheels are not under load.

Troubleshooting

In case of malfunctions, the following checks must be carried out:

Starting difficulties or engine misfires

**1. Fuel tank empty -
Refuel 2.**

Fuel valve in the "CLOSED" position

**- Open, possibly switch to reserve 3. Cold
start device in position «CLOSED» - open 4.
Spark
plug dirty, damaged**

**or with a poorly adjusted electrode - Clean
dirty**

**spark plugs, possibly bend the electrode
back into shape.**

Replace damaged spark plugs.

**5. Spark plug cable is shorting out or spark
plug connector is not working - replace.**

**Attention: For all other malfunctions, such as
those affecting the brakes, ignition , etc.,
contact a Vespa service center immediately!**

Subject to change without notice!

Piaggio & CSpa, Pontedera - AT - Pubbl. Teen. eOmol. - Dis. 404630 - 1 a Ed. - 1186

Stampato a Casale Monferrato (AL) presso il Poligrafico Piemontese PPM

t

l



**PIAGGIO
GROUP**

VESPA

GJ: LERA

B: IANCHJ: