

GRAND PRIX

**RIDER'S
MANUAL**

BATAVUS



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1981 - Batavus Intercycle BV - Heerenveen

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The BATAVUS moped you just bought is manufactured to reach a speed not in excess of a specific speed. This maximum speed is indicated on your moped on the rear fender below the taillight, informing which speed version your moped is.

BATAVUS mopeds are manufactured in Holland by the BATAVUS INTERCYCLE CORPORATION which has long enjoyed an excellent reputation for quality and craftsmanship throughout the world.

To acquaint yourself with the outstanding features of the BATAVUS mopeds we recommend that you read this owner's manual. The manual will give you details as to care and operation and enable you to maintain your moped in the best possible condition.

If you have any questions, please contact your local dealer who will be happy to assist you. We wish you many pleasant riding hours!

BATAVUS USA Inc.
3061 Kingston Court - Suite A
MARIETTA, Georgia 30067

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TECHNICAL DATA

ENGINE

Type	Peugeot 103 LVS, air cooled, fuel lubricated 2 stroke engine with centrifugal clutchsystem and automatic gear change.
Bore & stroke	40-39 mm
Cyl. capacity	49 cc
Electric unit	high voltage Peugeot fly-wheel magneto with lighting coils 6V-21/10W
Breaker gap	1,5 mm
Ignition lead	1,5 mm before TDC
Spark plug	Bosch 175 T1, Champion L88A, EyQuem 7055 or Marchal 35
Carburetor	Gurtner Ø 12 mm
Jet size	245
Transmission	primary: drive belt secondary: chain
Fuel	mixture of regular octane gas (not high octane!) and a good quality of corrosion resistant 2 stroke oil SAE

30; mixture proportion 50 : 1 (2%)

FRAME

Type	tubular frame
Fuel tank capacity	1.10 gal (4.3 l)
Tires	2.1/4 - 16
Tire pressure	front: 200 kPa (28 lbs) rear: 240 kPa (34 lbs)
Headlamp bulb	6V - 21W
Taillight bulb	6V - 5W
Brake light bulb	6V - 10W
Suspension	front: telescopic front fork rear: adjustable shock absorbers and telescopic supports
Brakes	hand operated hi-performance drum brake hubs (front & rear)
Weights	vehicle weight without fuel: 97 lbs (44 kilo) vehicle weight with fuel: 106 lbs (48 kilo) max. load incl. fuel & rider: 350 lbs (160 kilo)

CLUTCH AND TRANSMISSION

The clutch is composed of two principal parts.

1. The starting clutch. It is a centrifugal clutch which engages automatically when your moped attains a speed of 3.7 mph.

2. The second clutch plate engages automatically at 2,500 rpm. The **primary** transmission consists of a drive belt running between the pulley wheels on the drive shaft and the bottom bracket axle. The **secondary** transmission consists of a chain which runs from the bottom bracket axle (fixed sprocket attached) to the sprocket of the rear wheel in a manner similar to that of a bicycle.

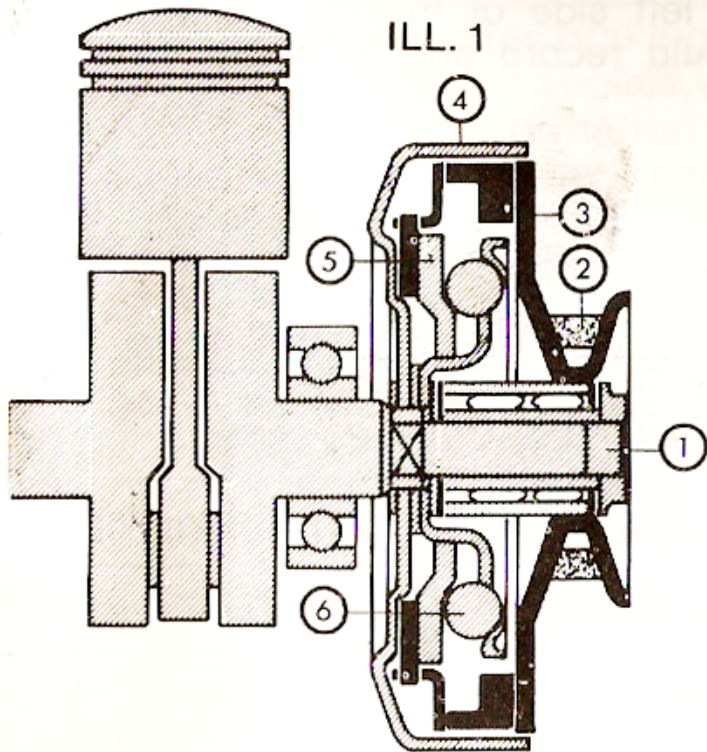
Automatic gear change: your moped is equipped with an automatic gear change. For this purpose, the pulley wheel on the drive shaft is "extensible", that is, driven by the action of centrifugal weights which are moved by centrifugal force (Ill. 2 and 3).

The engine itself is mounted on an axle so that it can pivot backward to accommodate the expansion of the "extensible" pulley wheel. The extensible pulley (Ill. 2 and 3) drives, in turn, the

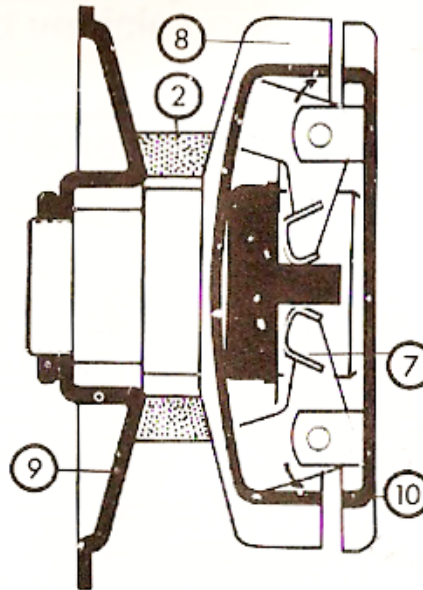
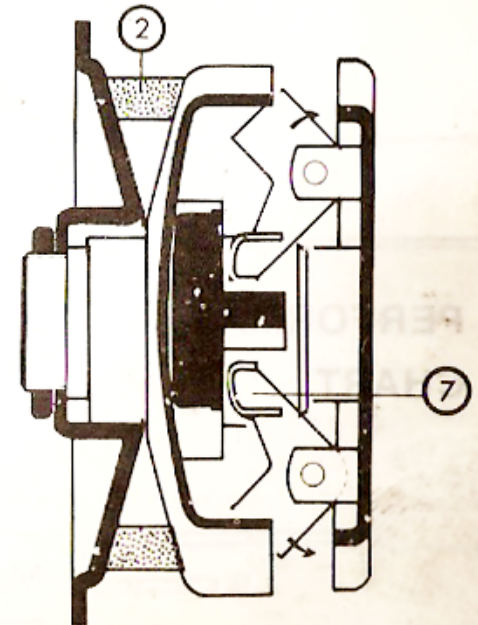
large bottom bracket pulley. The engine is spring-mounted on its axle in order to maintain a proper tension on the drive belt of the primary transmission.

CLUTCH

ILL. 1

**(CLUTCH AND SINGLE SPEED PULLEY)**

- 1. drive shaft
- 2. drive belt (primary transmission)
- 3. drive pulley
- 4. clutch box
- 5. pressure plate

AUTOMATIC GEAR CHANGEILL.2 Small pulley diameter
High reduction rationILL.3 Large pulley diameter
Low reduction ratio**(EXTENSIBLE PULLEY)**

- 6. thrust plate drum and balls
- 7. centrifugal weight
- 8. moveable pulley plate
- 9. fixed pulley plate
- 10. holder plate

IDENTIFICATION

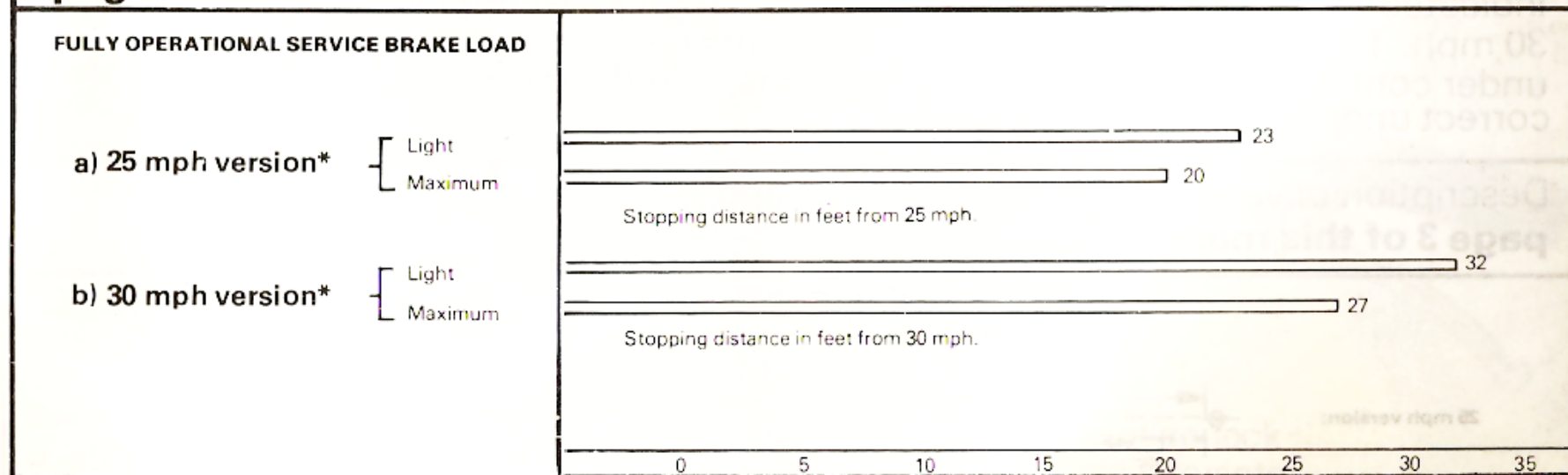
Your moped is provided with an identification plate attached to the head steering tube. The serial number of the vehicle is engraved on the

plate. The serial number of the engine is engraved on the left side of the cylinder head. Owners should record and file **both** serial numbers.

PERFORMANCE CHART	Type	103 LVS-U2	103 LVS-U3
	Speed	25 mph(40 km/h)	30 mph(48 km/h)
	Maximum RPM	6,250	6,000
	Maximum RPM at torque	3,000	3,600
	RPM for maximum power	4,500	5,000
	Transmission	automatic	automatic
	Maximum climbing grade without pedal assistance	16%-18%	16%-18%

This figure indicates braking performance that can be met or exceeded by the vehicles to which it applies, without locking the wheels, under different conditions of loading. The information presented represents results obtainable by skilled drivers under controlled road and vehicle conditions, and the information may not be correct under other conditions.

Description of vehicles to which this table applies: **moped, as specified on page 3 of this manual.**



* The maximum speed attainable by accelerating at maximum rate from a standing start for one mile.

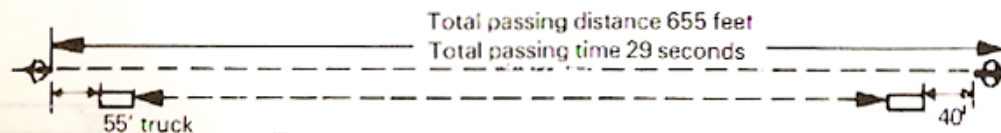
Notice: The stopping distances indicated at light loading (290 lbs, incl. vehicle weight) are limited by the locking point of time of the wheels. The table also shows that the maximum loading (350 lbs, incl. vehicle weight) has a reverse effect in this respect.

This figure indicates passing times and distances that can be met or exceeded by the vehicles to which it applies, in the situations diagrammed below. The passes indicated below assume an initial speed of 20 mph and limiting speed of 25, resp. 30 mph. The information presented represents results obtainable by skilled drivers under controlled road and vehicle conditions, and the information may not be correct under other conditions.

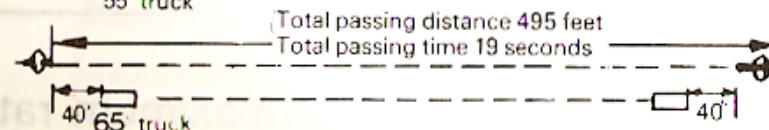
Description of vehicles to which this table applies: **moped, as specified on page 3 of this manual.**

Summary table

25 mph version:



30 mph version:

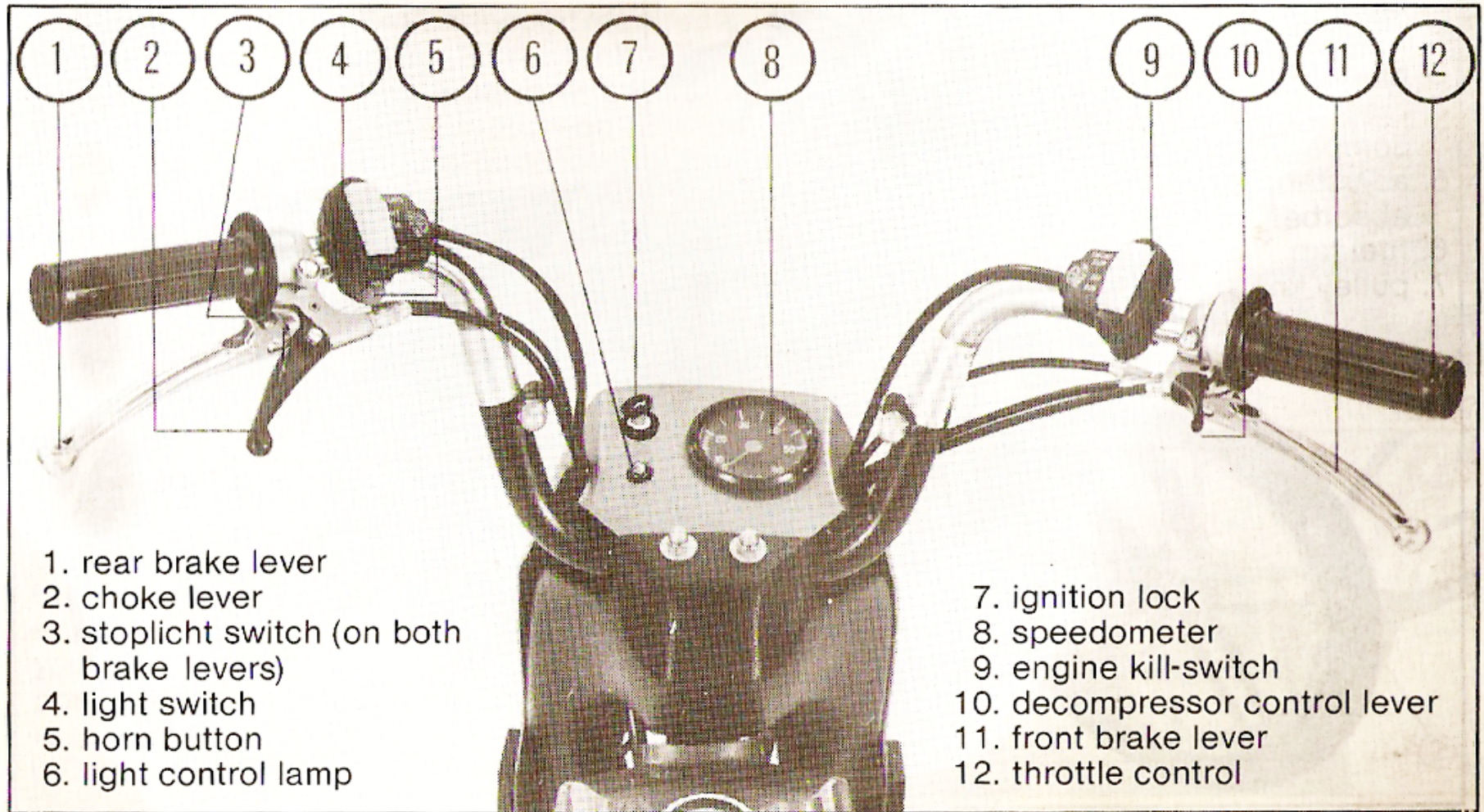


Pass: 655 ft.; 29 sec.

Pass: 495 ft.; 19 sec.

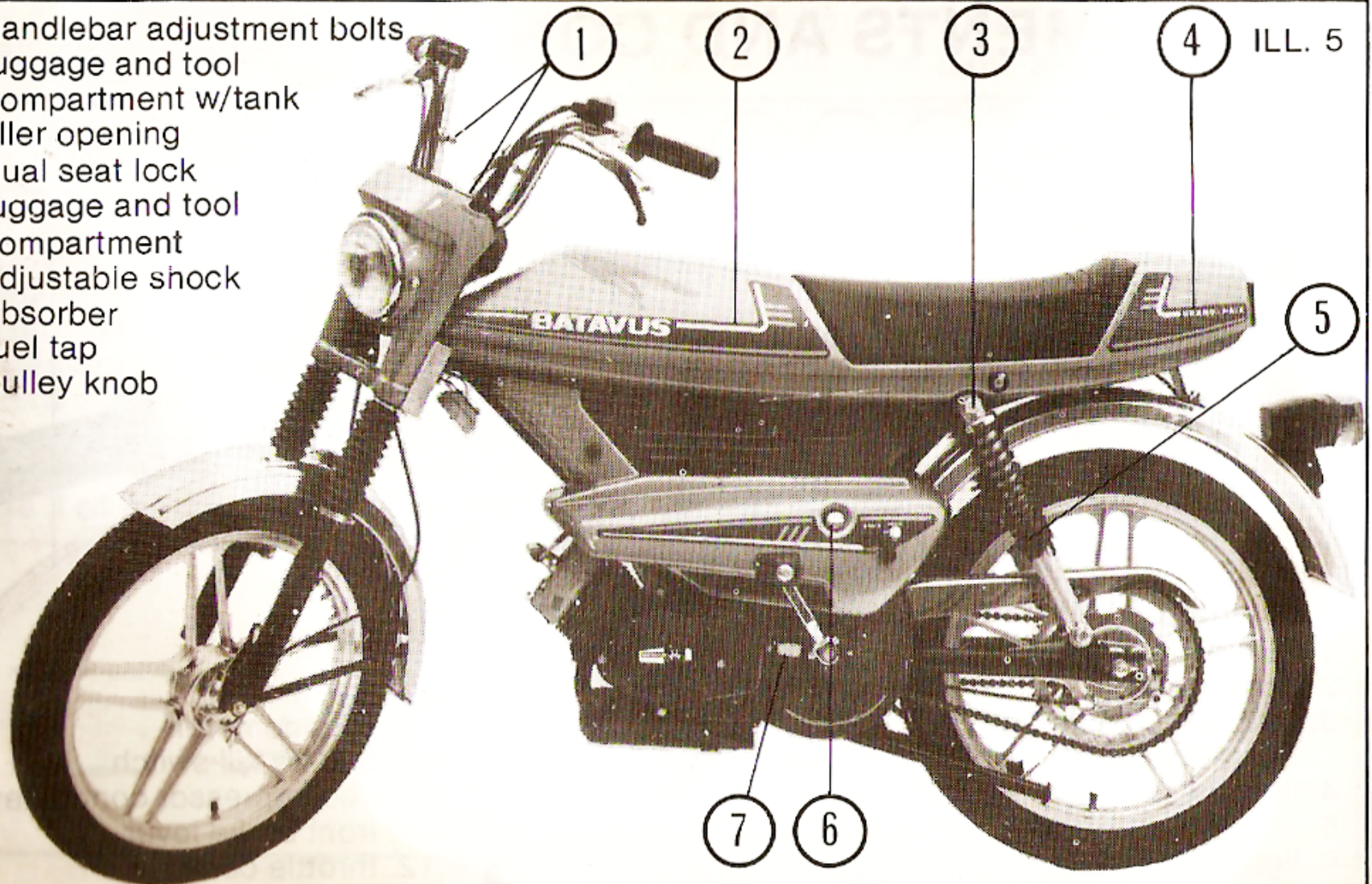
INSTRUMENTS AND CONTROLS

ILL. 4



1. handlebar adjustment bolts
2. luggage and tool compartment w/tank filler opening
3. dual seat lock
4. luggage and tool compartment
5. adjustable shock absorber
6. fuel tap
7. pulley knob

ILL. 5



OPERATING INSTRUCTIONS

FUEL MIXTURE

The engine of your BATAVUS moped requires a gas-oil mixture. Preferably, fill the tank with a pre-mixed 50 : 1 gas-oil mixture of regular, **unleaded** gasoline and a proportion (2% or 2.5 ounces per gallon) of a good quality two stroke oil SAE 30

If you cannot pre-mix your fuel, fill the empty tank with half a gallon gasoline and add 2% or 2.5 ounces of oil. Then, fill the tank with another half gallon of gasoline.

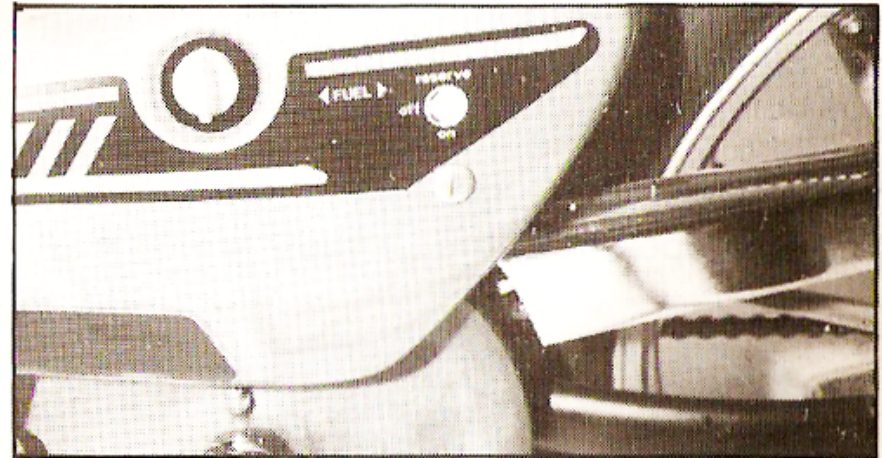
RANGE

A full tank should take you approx. 124 miles (200 km).

FUEL TAP

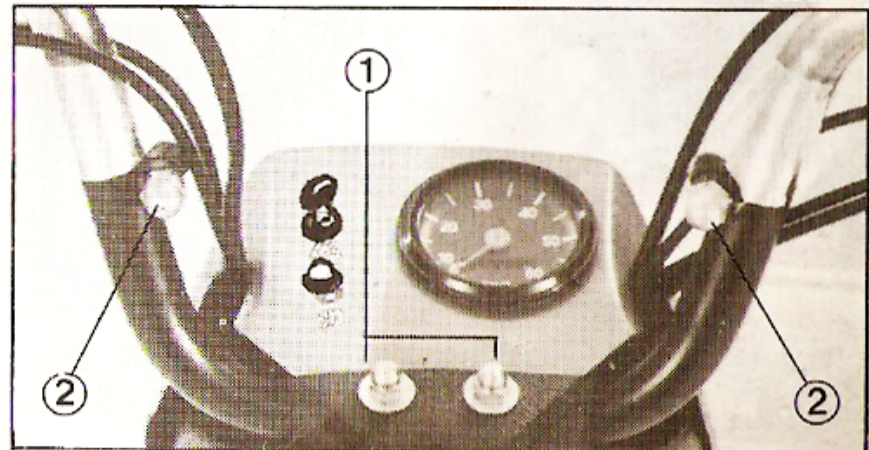
The fuel tap of your moped (ILL. 6) has three positions: OFF, ON and RESERVE. Put the fuel tap lever in the ON position when you start the engine. Set the lever in the OFF position after you have stopped the engine. Use the RESERVE position only when running out of fuel. The reserve fuel supply should take you abt. 6 miles (10 km).

ILL. 6



HANDLEBAR ADJUSTMENT

ILL. 7



To change the vertical position of the handlebars, simply loosen the clamp bolts (ill. 7 - 1), adjust the bars and retighten the bolts. For sideways adjustment, loosen the handlebar clamps (ill. 7 - 2), adjust to the desired position and re-tighten both clamps.

TANK AND TOOL COMPARTMENTS

The filler opening of the fuel tank is located in

ILL 8



the compartment in front of the dual seat. To unlock this seat, insert key and turn it to the left. Then pull the inner lock cylinder outwards until it levels with the black outer cylinder. Remove the key and push both cylinders with your thumb. Now the dual seat can be removed. To lock the seat again, push the seat downward until the conical bolt underneath the seat bolts in, and follow the above procedure in reverse order.

TIRE PRESSURE

A proper tire pressure guarantees a minimum tread wear and a maximum road holding ability, safety and comfort of your moped. Check this pressure regularly.

Recommended tire pressures are 200kPa (28 lbs) for the front tire and 240 kPa (34 lbs) for the rear tire.

BRAKES

Check your brakes frequently. If any adjustment is required, follow the instructions given in the maintenance section.

DRIVE KNOB

Before starting, make sure that the engine

drive knob on the pulley is in the B position (ill. 12).

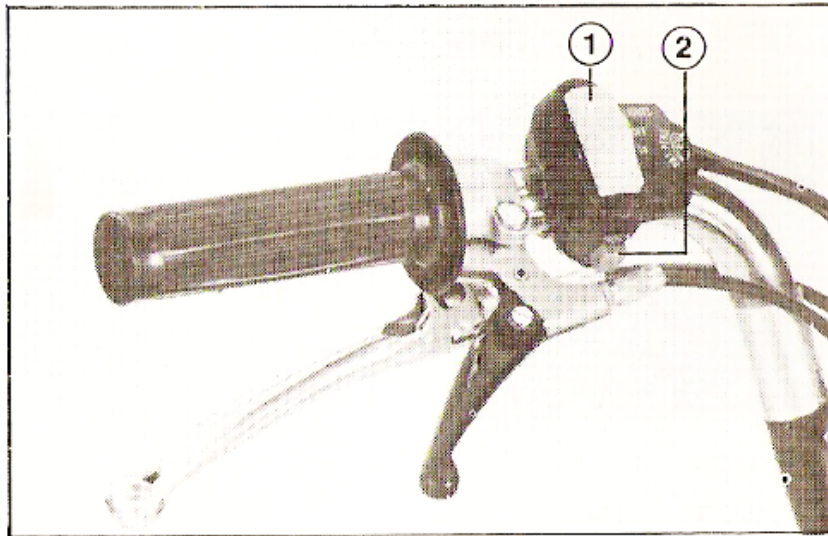
LIGHTS, STOPLIGHT, ELECTRIC HORN

Make sure that your lights and electric horn operate properly before starting off.

ELECTRICAL SWITCHES

The headlight switch (ill. 9 - 1) is located on the left side of the handlebar. In the "LO" (= on) position, the switch controls the headlight, red tail light, the green control lamp and speedo-

ILL. 9

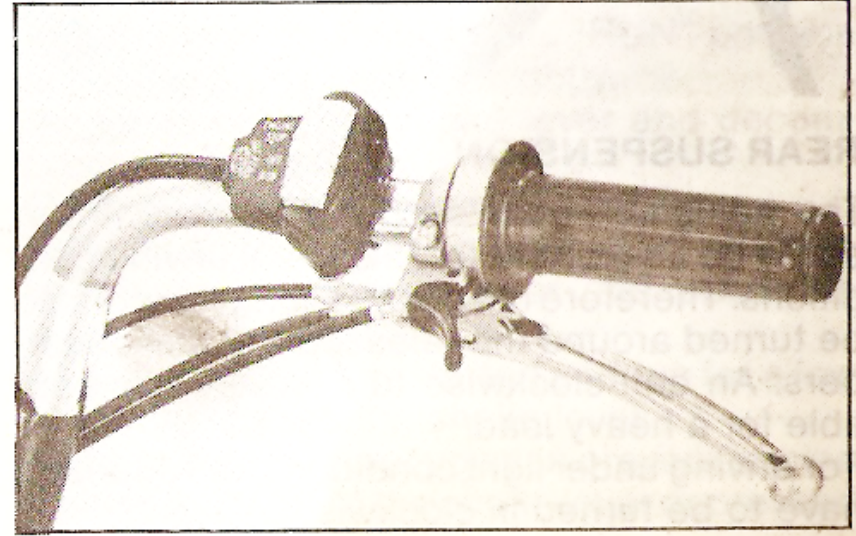


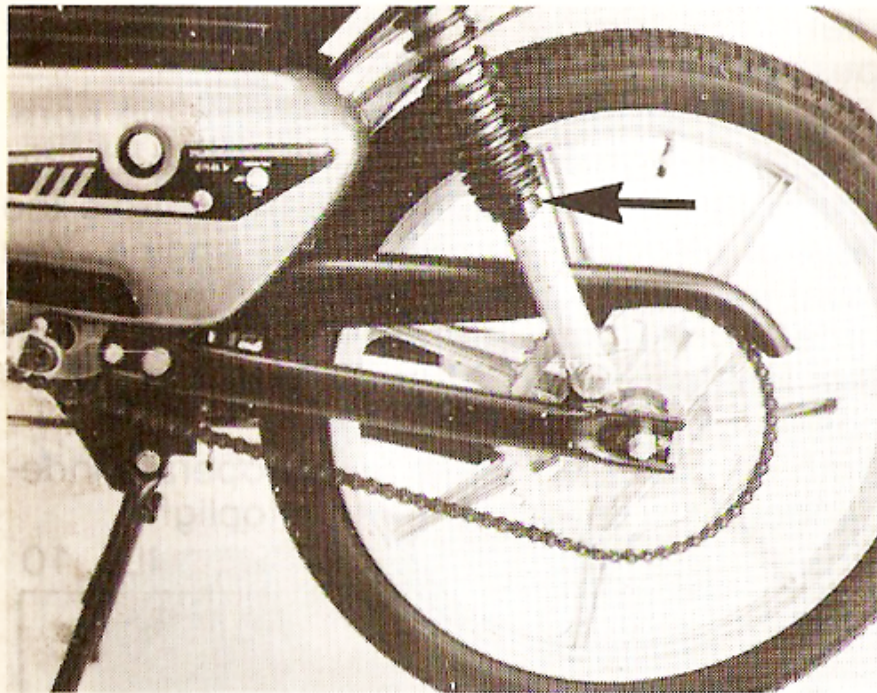
meter light. In order to shut the lights off, simply push the switch to the "OFF" position.

The blue button (ill. 9 - 2) operates the horn. The ignition switch (ill. 10) located on the right side of the handlebar, controls the flow of electrical current to the engine. You must set this switch in the "RUN" position in order to start and operate the engine. When the ignition switch is pushed to the "OFF" position, the engine will stop.

Both right and left brake levers operate independently to activate the rear stoplight.

ILL. 10





REAR SUSPENSION

ILL. 11

The adjustable rear suspension (ill. 11) can easily be adapted to three several driving conditions. Therefore have both spring supports to be turned around the telescopic shock absorbers. An anti clockwise turn makes him suitable for a heavy load.

For driving under light conditions, the supports have to be turned in clockwise sense.

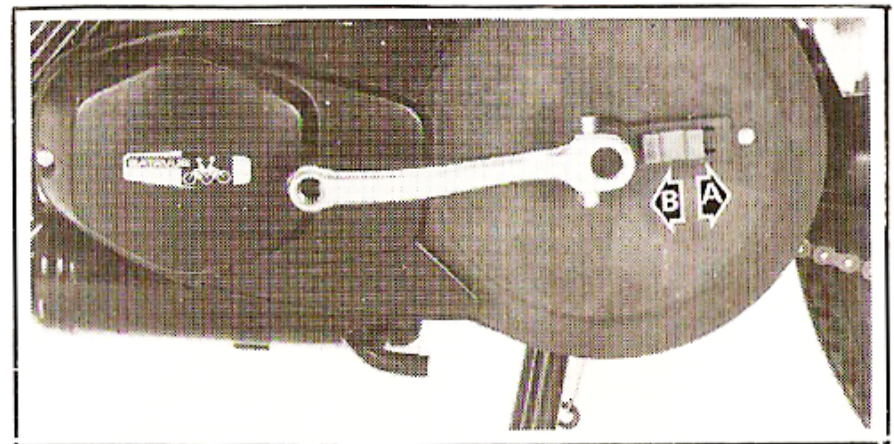
Be sure that both supports always are adjusted into the same position. So don't turn one of them more than the other one.

STARTING THE ENGINE

There are two good ways to start your moped's engine. The first method is the easiest to follow and involves kicking either pedal and crank arm while the moped is resting on its central stand. Proceed successively as follows:

- Put the engine drive knob in the "B" position (ill. 12).
- Put the fuel tap in the "ON" position (ill. 6).

ILL. 12



- Insert the ignition key into the ignition lock and turn it to the right.
- Put the ignition switch (III. 4 - 9) in the "RUN" position.
- Twist the throttle control (III. 4 - 12) slightly with your right hand.
- Squeeze the choke lever (III. 4 - 2) with your left hand.
- Press the decompressor control lever (III. 4 - 10) with your right thumb.
- Starting with the left-hand pedal at its top position kick the pedal down sharply and release the decompressor lever when the left-hand crank arm reaches the bottom.
- Repeat this kicking operation two or three times if the engine is cold.
- As soon as the engine engages, use the throttle to give it some more fuel.
- After the engine has run for a few seconds, release the choke.
- Stop the rear wheel from spinning simply by squeezing the left hand rear brake lever.
- To take the moped off its stand, hold it firmly and push forward slowly.
- Check to see that your stoplight operates properly when one or both brake levers are

squeezed. Check your headlight, tail light, and horn.

- Sit down and, to get under way, push off with your feet and accelerate simultaneously.

The second method of starting involves pedaling the moped like a bicycle in order to turn the engine over.

- Put the engine drive knob in the "B" position.
- Put the fuel tap in the "ON" position and sit in the saddle.
- Insert the ignition key into the ignition lock and turn it to the right.
- Put the ignition switch to its "RUN" position and engage the throttle slightly.
- Squeeze both the choke lever and decompressor control lever.
- Push off and pedal the moped.
- As soon as the engine is turning, release the decompressor control lever and open the throttle slightly more.
- After the engine has started and run for a few seconds, release the choke lever.
- Note: In cold weather you can prevent engine stalling by keeping the choke lever depressed

for a few hundred yards of travel. But do not use the choke lever when you start up an engine that is already warm.

Important note on breaking in your new machine:

To break your engine in properly, ride the moped at moderate speeds for its first three hundred miles. Do not race the engine when it is new, and be careful you do not overheat it either through long idling or in hot weather.

SLOWING DOWN AND STOPPING

To slow down and stop in a normal manner, close the throttle and apply both brakes simultaneously. When you have come to a full stop, your moped engine will idle in a "neutral" gear as the clutch plate automatically disengages. While your engine is idling with the moped at a standstill, do not race or "rev-up" the engine. This action will cause the automatic clutch to re-engage.

When you are ready to move forward again, simply open the throttle and accelerate. If you

are starting on an up-grade, you may have to pedal to help your engine get the moped under way.

For your safety and convenience three devices have been provided to stop the engine. Firstly, an ignition switch (Ill. 4 - 9) is located just ahead of the right handlebar grip. Secondly, the decompressor control lever, which will cut off engine compression and stop the motor, is located just under the right handlebar grip (ill. 4 - 10). Thirdly, there is an ignition lock in the head lamp housing (Ill. 4 - 7).

YOUR MOPED AS BICYCLE

Under certain circumstances (like an empty fuel tank!) you may have to pedal your moped with the engine stopped. In order to pedal without engaging the clutch push the engine drive knob (Ill. 6) in towards the center of the crank to position "A". This operation must always be performed with the engine shut off. It is not recommended that you use your moped as a bicycle for an extended period of time or especially when going down a slope. The pulley might seize on the sprocket and be damaged.

MAINTENANCE

MAINTENANCE SCHEDULE

MAINTENANCE OR LUBRICATION POINT WHAT TO DO		FREQUENCY		
		Every 600 mls (1000 km)	Every 1500 mls (2500 km)	Every 2500 mls (4000 km)
Carburetor	Clean and adjust			X
Air filter	Depending on the degree of pollution to be washed out in petrol and then plunged into oil SAE 40 or 50 (squeeze out all excess oil)	X		
Engine and ex-haust system	Decarbonize,			X
Spark plug	Check, clean and adjust, or replace, (electrode gap has to be 0.4 mm)	X		
Chains	Check tension, clean and lubricate (lubricant: thin engine oil),	X		
Cables	Grease or oil,		X	
Hubs	Apply some oildrops to brake lever pivots, Pack bearings with new grease,	X		X

Crank axle bearings	These bearings are self-greasing; no maintenance is required.	Every 600 mls (1000 km)	Every 1500 mls (2500 km)	Every 2500 mls (4000 km)
Swing axle bearings	No lubrication is required.			
General remarks	Clean all greasing points before lubrication to prevent forcing in dust.			
Front fork	Provide with grease, preferably Retinax A, via greasing nipple (2 cc per forkleg),	X		
Steering head and pedals	Remove and repack with new grease,			X
Speedometer drive	Provide with a little oil SAE 20 via greasing nipple,		X	
Bolts, nuts	Check if properly tightened,	X		

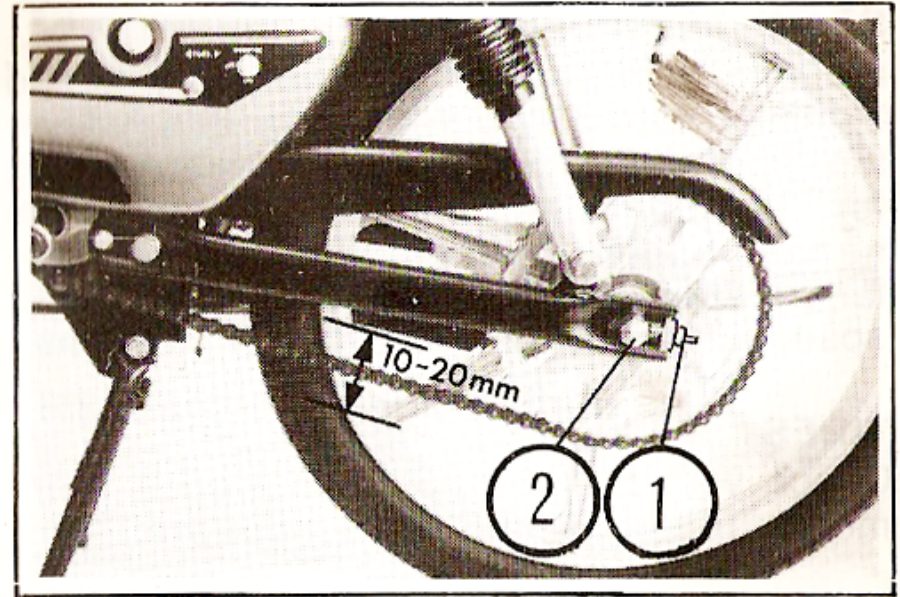
Take your moped to your dealer after the first 300 miles and whenever this maintenance schedule, advises so, for its maintenance. Ask him after each maintenance or repair action, to give you his signature and dealer-stamp on the maintenance registration card on page 29. Please note that no warranty claims will be accepted, when this card has not been completed properly. Also, see your warranty conditions on pages 24 - 27!

CHAIN MAINTENANCE

The secondary transmission drive chain (and the crank gear bicycle chain) must be lubricated every 600 miles (1000 km). Before lubrication, both chains must be cleaned of old grease and dirt to avoid premature wear. Clean them using a small brush, a solvent, and a cloth. After cleaning reassemble the chains before you apply new oil. Put the moped on its stand, rotate the rear wheel slowly and let the new oil drip on both the inside and outside links of the chain.

DRIVE CHAIN ADJUSTMENT

Total up and down movement of the driving chain should not exceed $\frac{3}{4}$ " or 20 mm ($\frac{3}{8}$ " or 10 mm upwards and $\frac{3}{8}$ " or 10 mm downwards). If this movement is exceeded, the chain should be tightened by releasing the rear axle nuts (Ill. 13 - 2) and pulling the rearwheel backwards by means of both nut-keys (Ill. 13-1) situated at the end of the rear fork. See that the wheel remains exactly in the centre of the rear fork. Afterwards the axle nuts must be securely tightened again.



ILL.13

BICYCLE CHAIN AND DRIVE BELT ADJUSTMENT

The chain you use to pedal your moped is automatically tensioned by an automatic chain tensioner. No adjustment is necessary. Your moped has been equipped with a spring which automatically keeps a proper tension in the primary transmission drive belt. No adjustment is necessary.

SPARK PLUG

If after a fairly long period of use, your moped begins to start only with difficulty, or if it develops poor engine power, check your spark plug for wear, corrosion, or defect and replace as needed. (Note: Spark plugs should be **regularly** cleaned with a wire brush). The correct spark plug electrode gap is 0.016" (0.4 mm).

TIRES

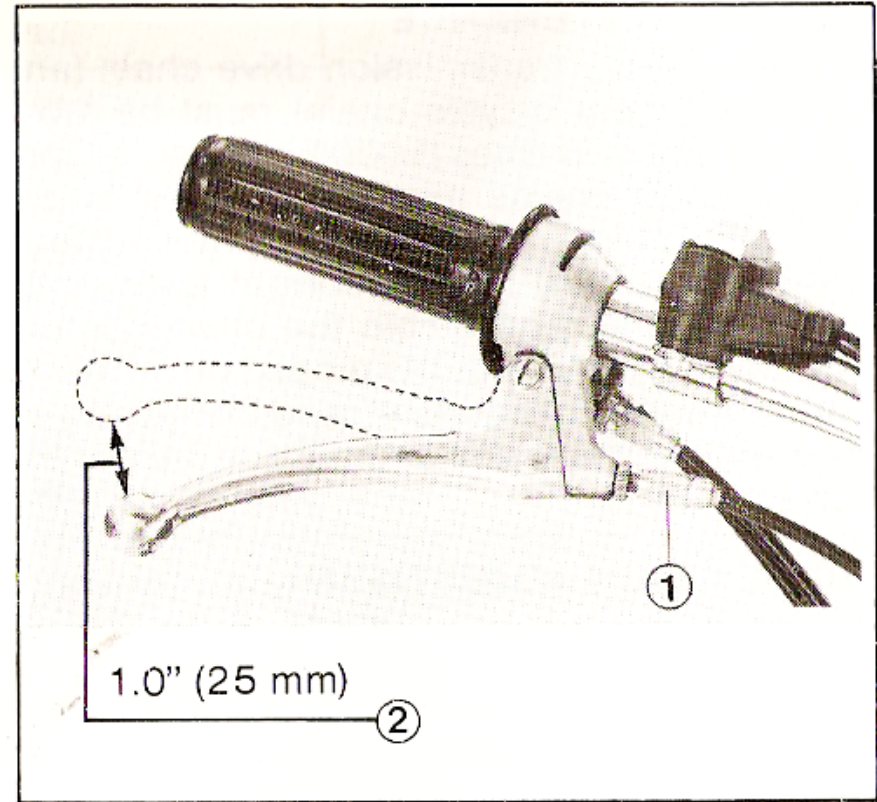
Check your tire pressure about once every month. The correct pressure ratios are:

Front tire: 200 kPa (28 lbs)

Rear tire: 240 kPa (34 lbs)

BRAKE ADJUSTMENT

The brake levers on the handlebar are equipped with adjusters (ill. 14 - 1), with which the cables can be adjusted for maximum efficiency. Allow abt. 1.0" (25 mm) lever free play (ill. 14 - 2), measured at the lever tip, before the brakes are applied.



ILL. 14

On both front and rear wheel hubs an inspection hole has been provided to enable you to examine the wear on the brake shoe linings without dismantling the hubs.

DECARBONIZING

Carbonizing is the process by which hard deposits of combustion residues build up in the engine and exhaust system. How fast carbonizing occurs in your moped will depend upon the quality of the fuel you use. Carbonizing will occur faster than usual if you do not follow the recommendations on fuel mixture in this manual. Generally, however, a deposit great enough to inhibit or even suffocate engine performance can form at about 2500 miles (approx. 4000 km).

The primary symptom of the carbonizing process is an engine that runs abnormally hot and suffers a loss of power. If your moped develops the above problems, let your BATAVUS dealer "decarbonize" your engine and exhaust system and restore your moped's original high performance.

CLEANING

Important: Never clean enamelled parts with solvents like kerosine, gasoline, oil or alkaline washes. Clean dirty parts with water and a soft detergent or apply a maintenance program similar to one used for automobiles. Spots of tar can be removed with a de-tarring solvent.

HEADLIGHT ADJUSTMENT

In order to ride safely at night, your headlight should be kept in good adjustment. For night riding, your light must not be set so high as to blind other drivers coming towards you. To adjust your headlight, proceed as follows:

- a. Slightly loosen the two adjustment bolts on each side of the headlight.
- b. Station the bike thirty-three feet from a wall.
- c. With a rider sitting on the moped, which is **off** its stand, the focal point of the headlight beam should appear on the wall about 1.66 ft (0.50 meter) above the ground. In order to adjust the lamp to attain the necessary angle, simply tip the lamp with your hands. Then re-tighten the headlamp adjustment bolts.

WINTER STORAGE

In case you do not use your moped for a long period during winter, it is advisable to take the following precautions:

1. Close fuel tap when the engine is still running, so that the fuel in the carburettor is completely consumed.
2. Remove spark plug from cylinder head.
3. Pour 2 or 3 spoons of anti-corrosion oil into the plug hole, pedal a few times with pulled start lever, so that the engine is turned over several times. Fit spark plug again.
4. Clean cooling fins of cylinder with a steel brush.
5. Either fill tank completely with the right gasoline/oil mixture or empty it and rinse it with pure gasoline and swill the inside of the fuel tank with anti-corrosion oil.
6. Clean your moped decently; provide chromed parts with acid-free vaseline and enamelled parts with wax.
7. Inflate tyres to the correct pressure.
8. Store your moped in a dry and cool place.

Do **not** start the engine during the period of storage. When the time comes to use your moped again, the fuel tank has to be rinsed with pure gasoline to remove the anti-corrosion oil.

TROUBLE SHOOTING

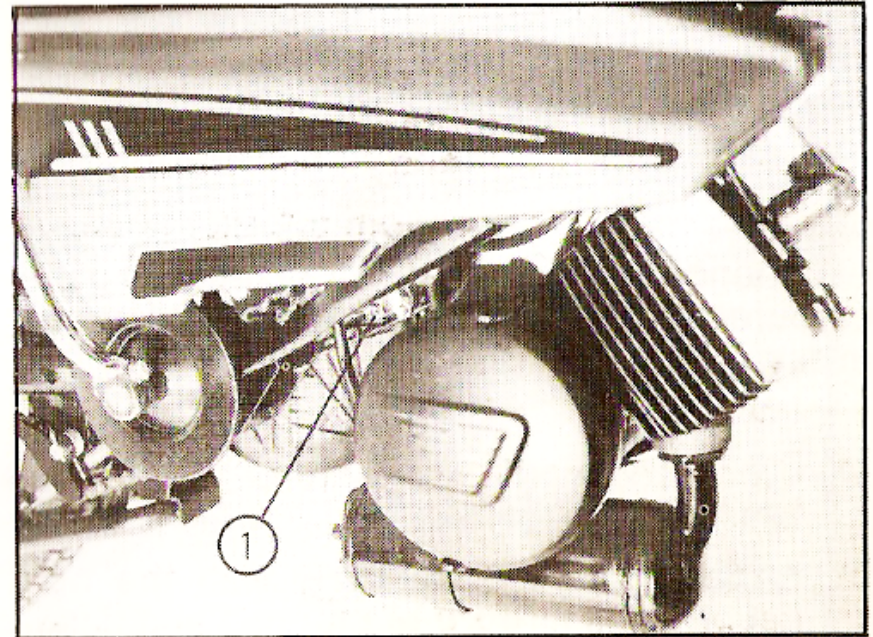
ENGINE CHECKLIST

If... the engine will not start, or stops completely while you are driving along, or misfires and skips... **check** first to see if your fuel tank is empty. If so, put your fuel tap lever in the "RESERVE" position. Your reserve supply of gas should take you about six miles... and to the nearest gas station.

If... your engine suddenly shuts off while you are driving, then you may have accidentally bumped your ignition switch to the "OFF" position. Put the ignition switch to "RUN" and restart. (also, if your engine doesn't "fire" at all when you try to start it, check the ignition switch and be sure it is in the "RUN" position).

If... your engine isn't getting the fuel it needs... your fuel line may be blocked. Disconnect the fuel line from the carburetor and open the tap to check the gas flow. If needed, clean both the fuel tap filter and air holes in the tank cap.

If... the jet is clogged (ill. 15) take it out of the carburetor and blow it out with your tire pump. **DO NOT** try to clean it with any metal wire which could affect the output of the jet.



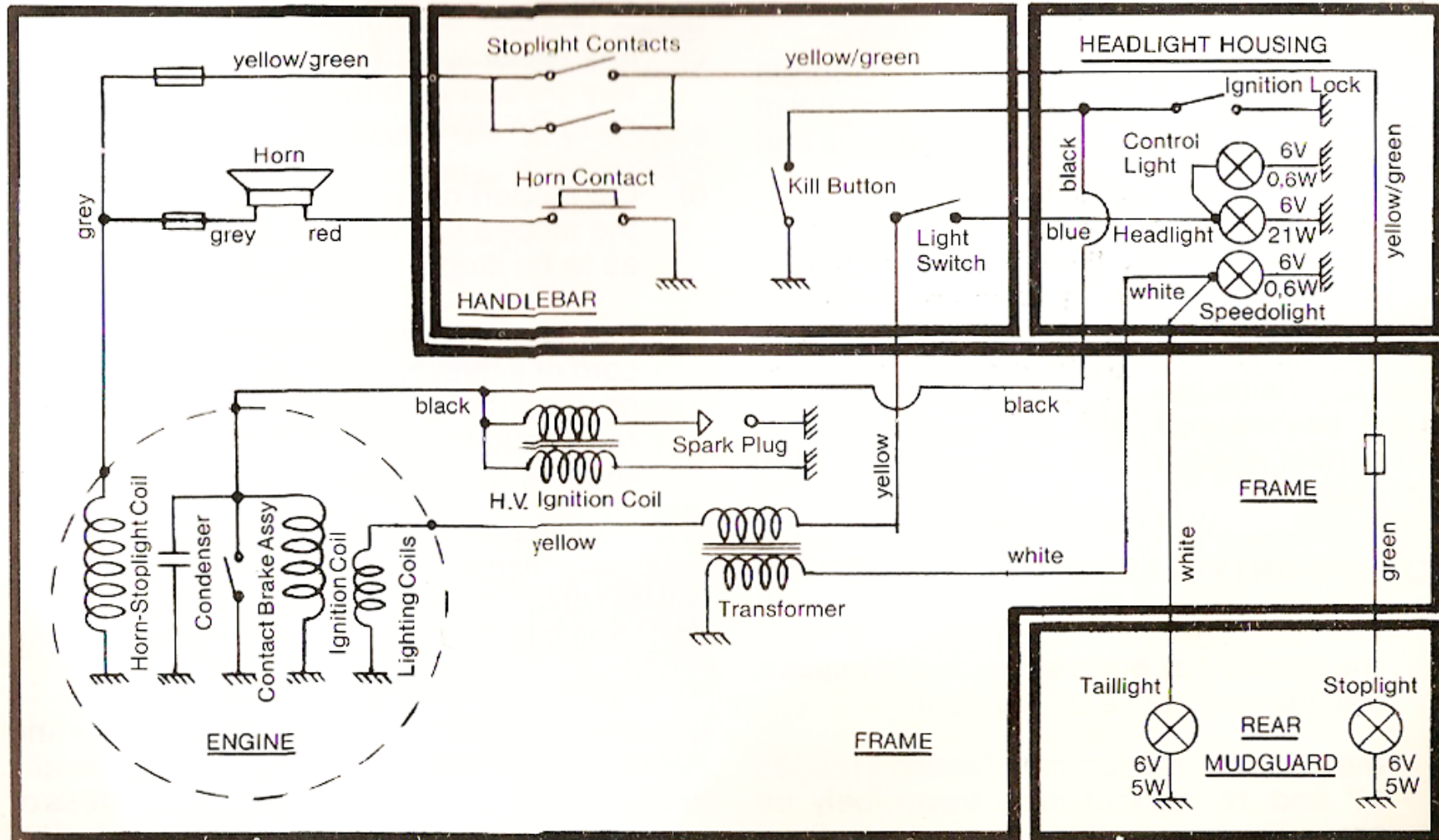
ILL. 15

If... the spark plug is dirty or worn, clean or replace it. It is always desirable to carry a new spark plug as a spare in the tool compartment. (Don't forget that it is a fragile part and should

be kept in its original package). If the spark plug gets wet, ignition cannot occur. Remove the plug, clean it, and dry it.

If...none of the remedies above improve an engine performance that is below par, you should take your moped to your BATAVUS dealer. He has the appropriate equipment and tools, and he is fully qualified to perform needed repairs and adjustments. Of course, consult your BATAVUS dealer immediately should you experience any important failure regarding the carburetor, flywheel magneto, clutch, transmission, etc.

ELECTRICAL WIRING DIAGRAM



STANDARD WARRANTY CONDITIONS FOR BATAVUS MOPEDS

BATAVUS USA INC., MARIETTA, Georgia guarantees the moped, described on page 3 of this manual, to be free of faults of material and craftsmanship to the first owner.

The warranty period is six months for all parts, excluding those mentioned hereafter and three months for labor costs. The warranty period starts from the date of purchase.

Chains, chainwheels, electric bulbs, spark plugs, ballbearings, stands, bowden cables and normal wear and tear, are excluded from this warranty.

NO WARRANTY CLAIMS WILL BE ACCEPTED IF:

- a) the moped has been subjected to misuse, negligence, abuse or accident.
- b) the required moped maintenance (pages 17 and 18) cannot incontrovertibly be proved by a correctly and completely filled

in maintenance registration card (page 29).

- c) any repair work has been carried out by any person or firm other than an authorised BATAVUS dealer.
- d) the moped or engine serial number upon the moped has been removed or defaced as to be illegible or incomplete.
- e) the owner cannot produce the warranty card or if this card has been uncompletely or uncorrectly filled in, or if the warranty registration card has not been sent in within 8 days after date of purchase.

Any original part that is judged by the importer to be defective under the terms of this warranty will be replaced free of charge. Dealer's transportation charges are not covered by this warranty.

Under no circumstances the manufacturer and / or BATAVUS USA INC., shall be liable on any implied warranty of merchantability or fitness or for special or consequential damage. This war-

warranty excludes all other warranties not expressly named herein.

By signing the warranty card the first owner acknowledges these warranty conditions to be binding.

See your BATAVUS dealer for any service under the BATAVUS warranty. If necessary write or call for assistance to:

**BATAVUS USA Inc.,
3061 Kingston Court - Suite A
MARIETTA, Georgia 30067**

Some states do not allow limitations on how long a warranty lasts nor the exclusion or limitations of incidental or consequential damages. In these cases the above limitations or exclusion may not apply to you.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.