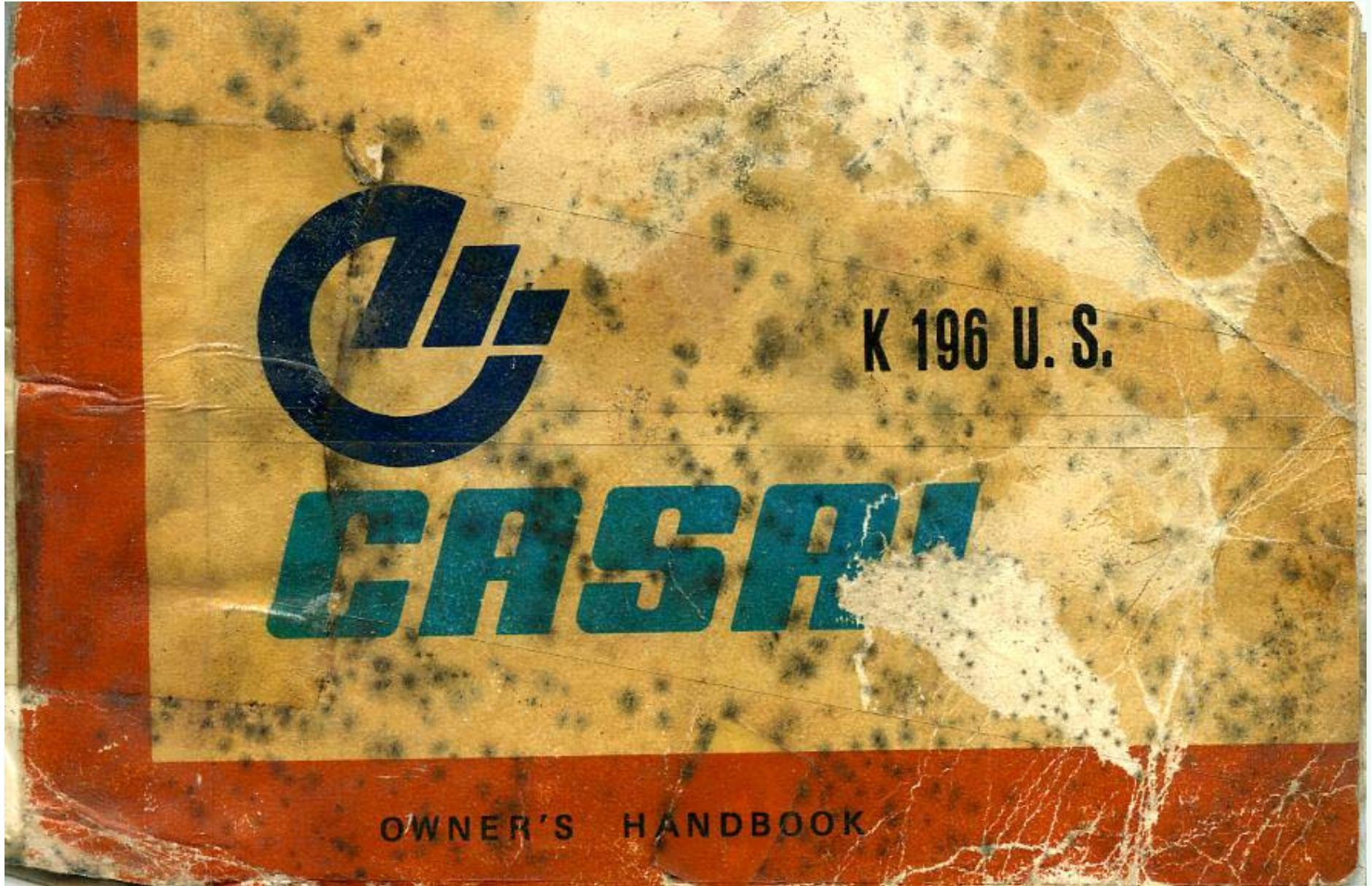


## Casal K 196 U.S. Owners Manual

An Owners manual for a Casal K 196 U.S.



Proud Owner:

We congratulate you on having chosen CASAL.

If you are already the owner of a CASAL vehicle, you will no doubt have reasons to be satisfied with your choice.

If it is your first CASAL vehicle, we welcome you to the CASAL club. In all of the millions of people who make up the CASAL group, you will find concern, goodwill, and the spirit to serve for complete satisfaction.

Follow carefully the instructions given within, for they are the guarantee that your vehicle will serve you well for a long, long time.

METALURGIA CASAL, SARL

# INDEX

	Page
TECHNICAL DATA K 196 US ... ..	7
1 — IDENTIFICATION ... ..	8
2 — CONTROLS ... ..	10
3 — SERVICE AND MAINTENANCE ... ..	12
3.1 — ENGINE ... ..	12
3.2 — VEHICLE ... ..	16
4 — USEFUL INDICATIONS ... ..	19
5 — BREAKDOWNS AND POSSIBLE CAUSES ... ..	22
ELECTRICAL INSTALLATION LAYOUT ... ..	25

# IMPORTANT

In your own interest, and even if you have owned other Mopeds, be sure to read carefully, and adhere to, all of the instructions given within.

In doing so, you can be assured that your CASAL motor will always give you total satisfaction.



# TECHNICAL DATA

## VEHICLE - K196 U. S.

Frame — Steel Pressed Plate  
 Suspension — Front - Telescopic forks  
 — Rear-Swing arm with shock absorber

### Electrical System

Bulbs — Headlamp 6 V. 21 W  
 — Rear light 6 V. 5 W  
 — Brake light 6 V. 10 W

### Dimensions

Distance between shafts — 1.210m  
 — Length — 1.870m  
 — Width — 1.030m  
 — Ground to saddle height — 0,790m

Weight — 55 Kgs = 121 #

Wheels — Front — 21"x2,75" (17"x2"¾)  
 — Rear — 21"x2,75" (17"x2"¾)

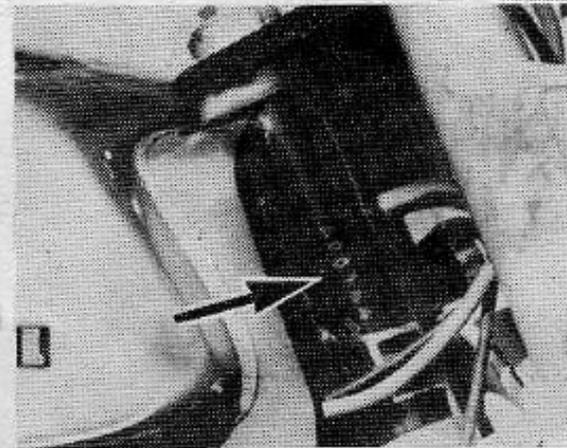
## ENGINE M148

System — 1 Cylinder 2 stroke  
 Fuel — Petrol+oil (30:1)  
 Compression ratio — 1:8,5  
 Bore — 40 x 39,7 mm  
 Capacity — 49,9 cc  
 Power — 1, 1½, 2 HP  
 Carburettor — Bing 1.17  
 Magneto — Bosch 6V 25W  
 Spark plug — Bosch W225T1  
 Ignition — 1,5 mm B. T. D. C.  
 Contact breaker point — 0,35 to 0,4 mm = 16  
 Clutch — Multidisc in oil bath  
 Gearbox — 2 Speed  
 Gearbox oil — 0,30 L - SAE 80 EP

# 1 IDENTIFICATION

## FRAME NUMBER

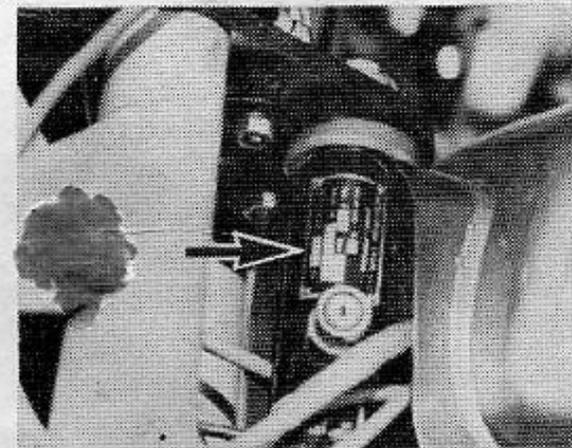
The vehicle number is stamped on the right hand side of the front headstock. (Fig. 1).



**Fig. 1**

## FRAME IDENTIFICATION PLATE

In addition to having the identical number to the one stamped on the frame, this plate also bears the year of manufacture, the model, and the weight, engraved on it. (Fig. 2).



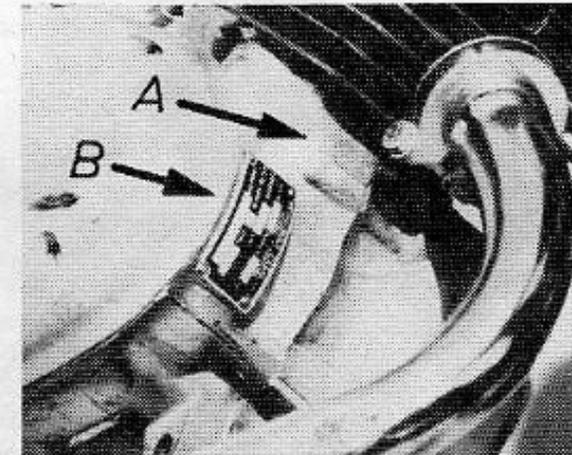
**Fig. 2**

## ENGINE NUMBER

The engine number is stamped on the right hand crankcase, at the front of the engine. A (Fig. 3).

## ENGINE IDENTIFICATION PLATE

Is rivetted to the right hand crankcase. Engraved on it are, the engine number, year of manufacture, engine capacity, and the type of engine. B (Fig. 3).



**Fig. 3**

## 2 — CONTROLS

### 2.1 — GEAR SELECTION

In all of the 2 speed CASAL vehicles, the gear selector is of the hand grip type, situated on the left hand side of the handlebars. (Fig. 4).

### 2.2 — CLUTCH

The clutch is brought into play by the action of the clutch lever situated on the left hand side of the handlebars. There should exist a play of 5 to 8mm and can be adjusted by A (Fig. 4). To bring the clutch into action, squeeze the clutch lever on the handlebars. For correction in the adjustment of the gears, use the adjustor B (Fig. 4).

The «O» mark shown in (Figs. 4) and (5), marks the position of neutral which occurs between 1st and 2nd gears.

### 2.3 — ACCELERATOR (THROTTLE TWIST GRIP)

Situated on the right hand side of the handlebars. WHEN twisted, the throttle grip, causes the carburettor piston to move, with the help of an insulated, and flexible steel cable. There should be enough play on the cable so that the engine does not accelerate when turning the handlebars to one side. Use the carburettor adjustor to correct this.

### 2.4 — BRAKES

The braking is guaranteed by  $\varnothing = 120$  mm hubs with mechanically expanding brakeshoes which are activated by a lever and cam. The front brakes are activated by a steel cable, and the rear by the anti-clockwise action of the pedals, which is taken up by an extension rod which in turn is connected to the brake cam.

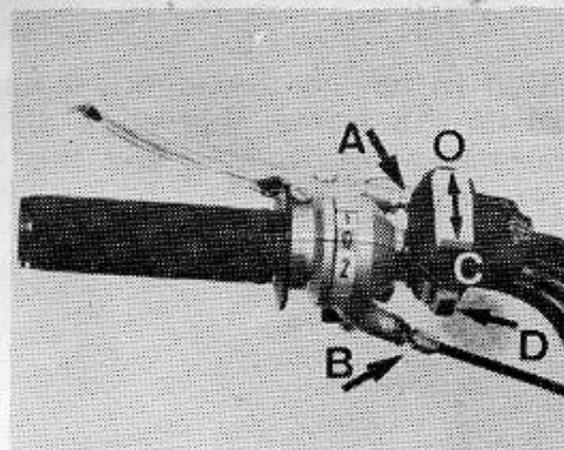


Fig. 4

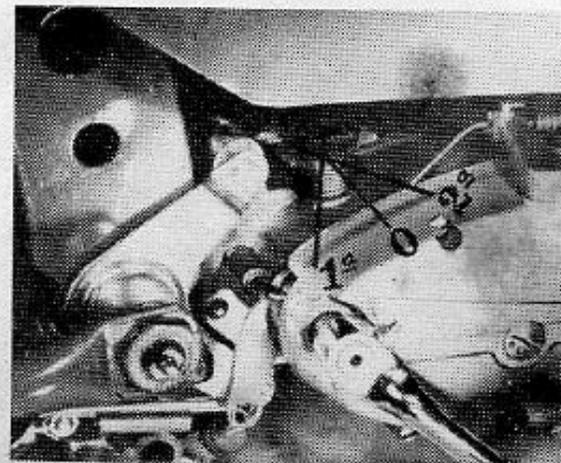


Fig. 5

## 2.5 — ELECTRICAL SYSTEM

### LIGHT SWITCH (Fig. 4)

The light switch is mounted on the left hand side of the handlebars. The two positions marked on it are;

- C. ON.
- O. OFF.

### HORN

The horn may be sounded by pressing button «D» (Fig. 4).

### IGNITION (Fig. 6)

The ignition switch is mounted on the right hand side of the handlebars.

Position «B» indicates ignition «on».

Position «A» indicates ignition «off».

### REAR AND STOP LIGHT

Incorporated in the rear light, is the brake warning light. The bulb lights up when the switch «A» (Fig. 7) is activated by the action of the pedals. The brake lever on the handlebars also causes the rear light to come on through switch «C» (Fig. 6).

## 2.6 — SPEEDOMETER

The speedometer is mounted in a central position on top of the forks. This enables the driver to check easily the speed that the vehicle is travelling at (Fig. 10).

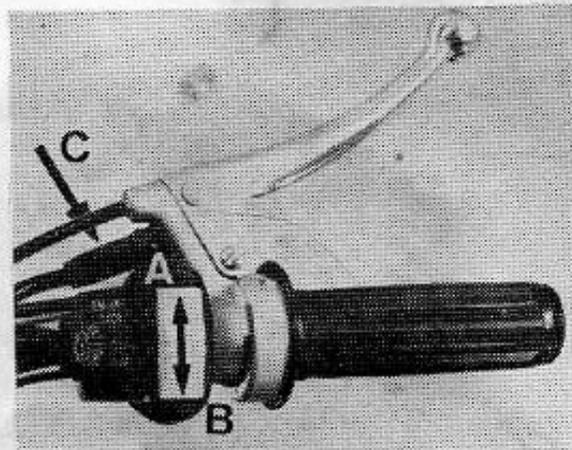


Fig. 6

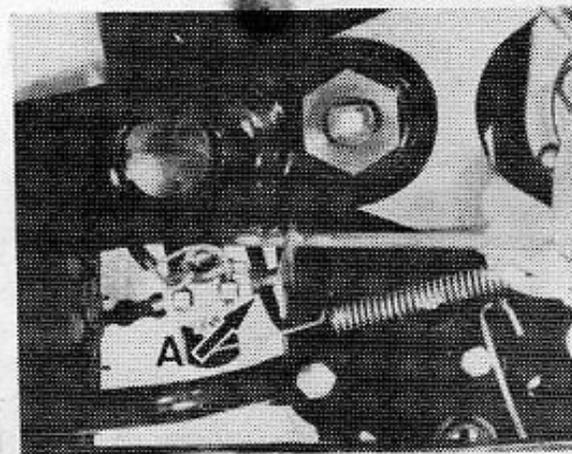


Fig. 7

## 3

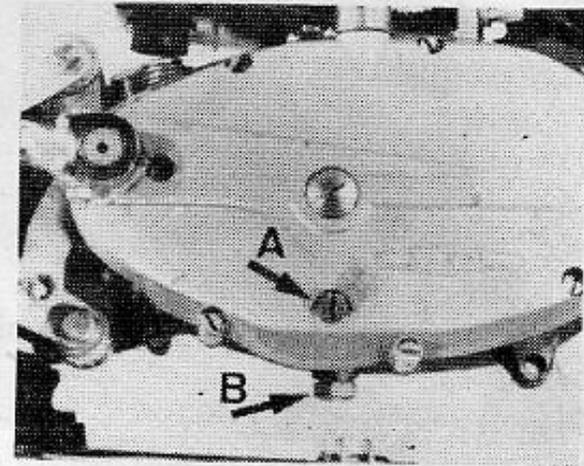
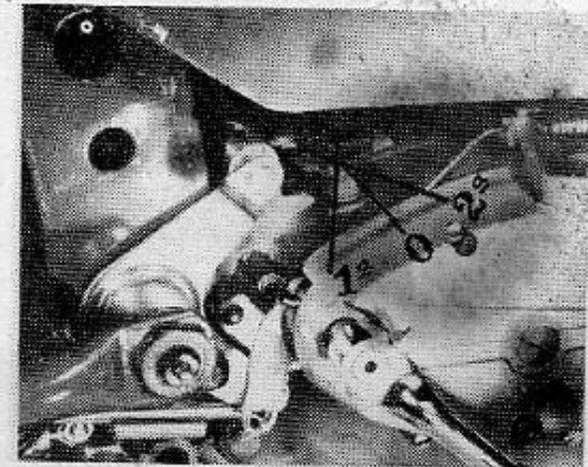
**SERVICE AND MAINTENANCE****3.1 — ENGINE****3.1.1 — TYPE**

The CASAL motor is a 2 stroke engine and therefore requires particular attention when mixing the fuel. It is this same mixture that lubricates the crankshaft, piston, cylinder, etc. Since these are the components which are constantly being subjected to heavy stress, it is of paramount importance that a good quality oil for 2 stroke engines be used in the fuel mixture.

«THE ENGINE IS NOT RUN IN WHEN IT LEAVES THE FACTORY».

**3.1.2 — GEARBOX**

The CASAL motor is equipped with constant mesh gears in the wedge formation. The gear selection is made with the help of a mobile shaft which causes 4 ball bearings mounted on the gear shaft, to engage the respective gear. The gear selector is brought into play by the lever (Fig. 9) which in turn is activated by a steel cable connected to the twist grip on the handlebars (Fig. 4).

**Fig. 8****Fig. 9**

For every 300 miles of service, we recommend that the oil level be checked. This operation is carried out by placing the vehicle on level ground. With the engine switched off, remove the oil level check screw «A» (Fig. 8).

To change the oil, ensure that the vehicle is warm so that the oil can drain easily. With the engine off, drain the oil by removing the drain plug «B» (Fig. 8). Having drained the oil, tighten the drain plug and proceed to fill up with SAE80EP oil through plug «C» (Fig. 13).

### 3.1.3 — CLUTCH

Multi-discs in an oil bath, form the basis of the CASAL motor's clutch system.

To avoid premature wear, we recommend the use of the clutch, only when engaging the respective gears. Regular lubrication of the cable nipples «B» (Fig. 10), increases their efficiency in respect to the controls that they command.

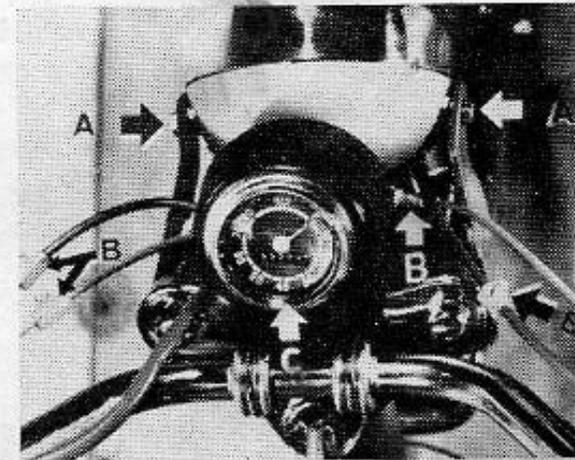


Fig. 10

### 3.1.4 — IGNITION

The ignition system is one of most important organs of the engine.

Check regularly, the state of the contact breaker points (gap 0,35 mm to 0.40 mm), the ignition advance (1,5 mm B.T.D.C.), and that all cables are correctly adjusted.

The gap between the electrodes of the spark plug should be 0,50 mm to 0,70 mm. *20 TO 25*

The adjustment of the ignition advance is carried out as indicated in fig 11. This operation should preferably be carried out by a competent mechanic. The gap "E" shown in the diagram, should be 0,25 mm to 0,30 mm. To adjust, loosen screw, set, and retighten. *= 10*

*24*

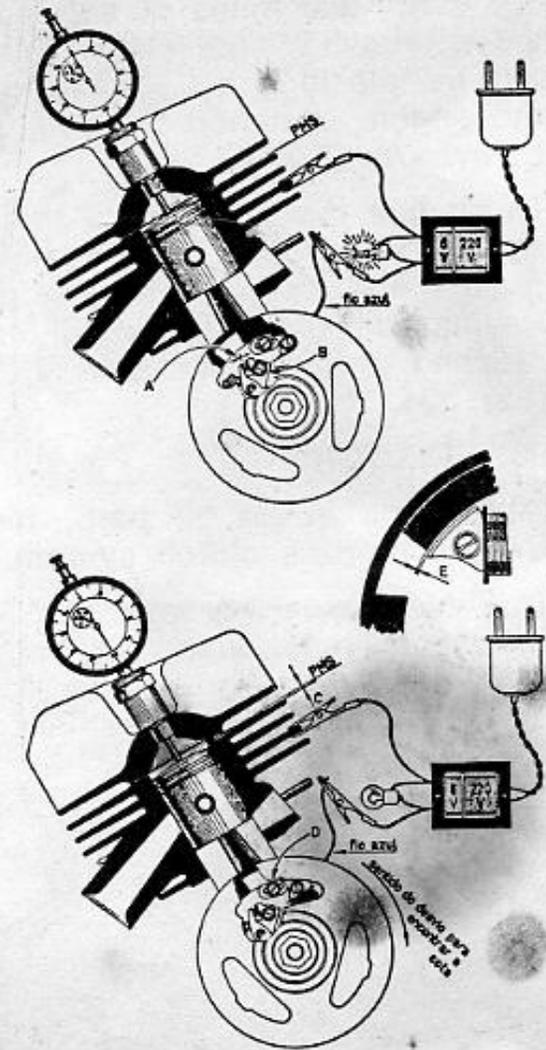


Fig. 11

### 3.1.5 — CARBURETTOR

To ensure maximum economy and power, we recommend that the maintenance of the carburettor be carried out at a CASAL workshop.

To start the engine, depress button «B» (fig. 12). This action causes the chamber to fill and eventually spill over. For easy starting in very cold weather, depress choke pin «A» (Fig. 12).

### IDLING ADJUSTMENT

(FIG. 13)

Tighten screw «A». Start the engine and let it run until it is warm. Leave the throttle in its relaxed position. (The engine idles high). Loosen screw «A» until the regular running of the engine is obtained.

### 3.1.6 — AIR CLEANER

At regular intervals, wash out the air cleaner element. To remove, loosen cover screw «B» (Fig. 13) and proceed to wash the air cleaner element using petrol or paraffin. Once dry, lubricate with thin oil or even petrol from the vehicle's tank.

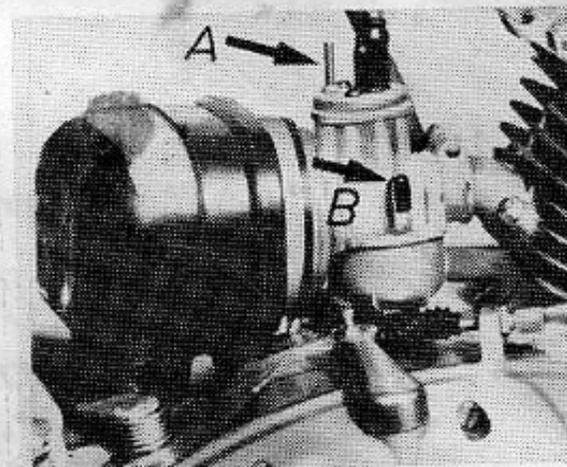


Fig. 12

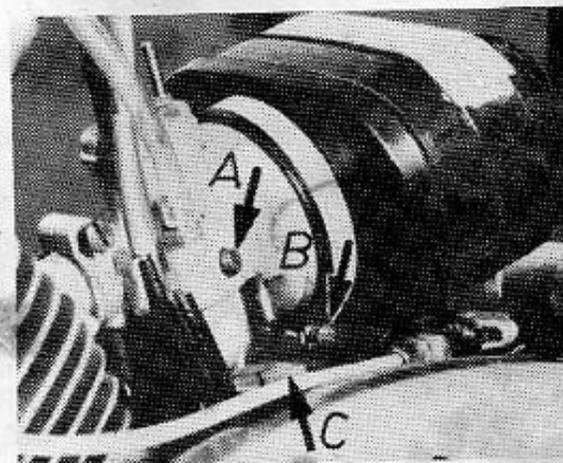


Fig. 13

## 3.2 — VEHICLE

### 3.2.1 — WHEELS AND BRAKES

**FRONT WHEEL** — The front wheel is equipped with a 120 mm light aluminium hub with a steel braking drum (Fig. 14).

The two brake shoes have a large surface area, which provides for a greater braking power. Both are activated by lever «C». Any adjustment needed through wear, can be processed using cable adjustor «B». In the front wheel hub, is incorporated the speedometer gear, which is connected to the speedometer shaft «A».

To take off the front wheel, it is necessary to disconnect the speedometer cable from the shaft, the brake cable, and wheel shaft «D» (Fig. 14).

**REAR WHEEL** — The rear wheel is similar in design to the front one, except that it incorporates an independent chain sprocket (Fig. 15). To take off the rear wheel, firstly loosen wheel shaft «A», followed by brake rod «B», and then the spacer «C» which lies between the suspension arm and the hub. In this manner, the wheel can be removed without touching the chain sprocket.

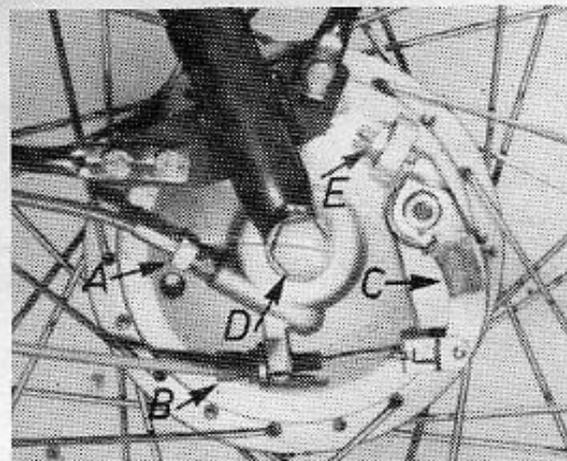


Fig. 14

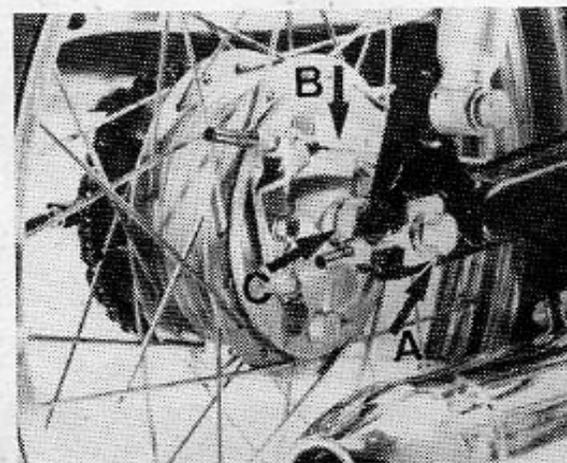


Fig. 15

### 3.2 — TRANSMISSION CHAIN

Due to the wear of the rollers, the chain may need periodical adjustment. To adjust loosen nut «A» and tighten nut «B» (Fig. 16). Do the same with the opposite side of the wheel to maintain the rear wheel correctly aligned with the front one. Retighten wheel shaft «A» (Fig. 15) and nut «A» (Fig. 16). Retighten also the nuts «B» and lock them.

The adjusted play should allow for up and down movement of the chain of 1,50 cm to 2 cm. Do not overtighten the chain or leave it too slack.

#### CHAIN LINK

*5/8 TO 7/8*

The chain is connected by means of a steel spring link. When fitting a link, ensure that the open end faces in the direction opposite to the rotation of the chain (Fig. 17).

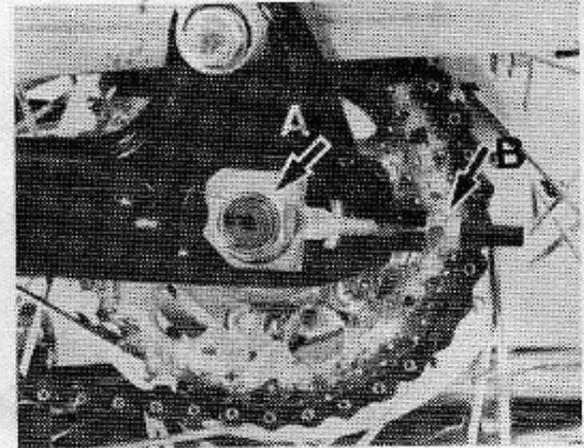


Fig. 16

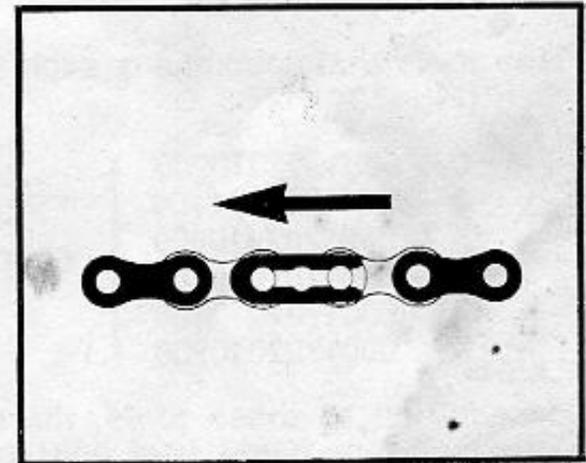


Fig. 17

### 3.2.3 — STEERING ADJUSTMENT SET

For eventual adjustment, loosen locknut «A» and tighten ring «B». Retighten locknut. Ensure that the steering is not too stiff (Fig. 18).

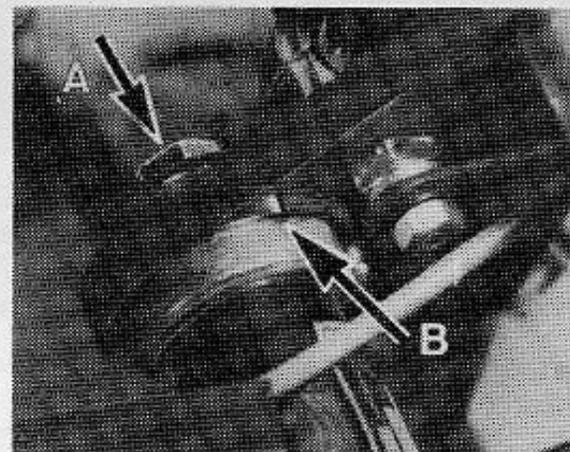


Fig. 18

### 3.2.4 — LIGHTING SYSTEM

In order to have an adequate lighting system, keep a regular check on the headlamp beam adjustment. To correct the headlamp beam, loosen the headlamp fixing screws «A» (Fig. 10). Retighten the screws.

An installation layout may be found on page 25.

### 3.2.5 — TOOLS

The tools that accompany each vehicle are as follows see (Fig. 19).

- |                        |                 |
|------------------------|-----------------|
| Fig. 1 — 0001702010900 | } 0001702010000 |
| » 2 — 0001702011100    |                 |
| » 3 — 0001702010800    |                 |
| » 4 — 0001702010300    |                 |
| » 5 — 0001702010400    |                 |
| » 6 — 0001702010200    |                 |

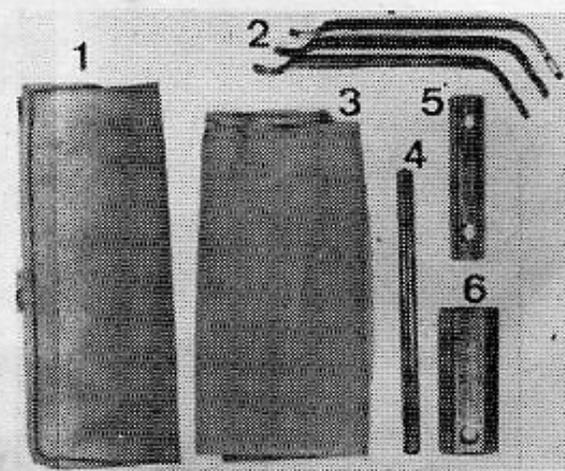


Fig. 19

In addition to these tools, there is also a small but efficient tyre pump (Ref 0001702010100).

**4**

**USEFUL INDICATIONS**

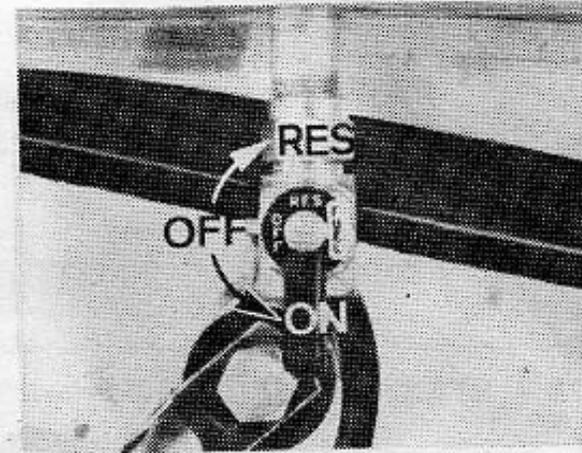
**4.1 — STARTING THE ENGINE**

**4.1.1**

Shake the fuel tank in order to distribute uniformly, the oil in the petrol+oil mixture (Ratio of 30:1).

**4.1.2**

Turn the tap lever to the open position «ON» (Fig. 20). Position «RES» indicates the reserve and should only be used in case of emergency.



**Fig. 20**

#### 4.1.3

Depress button «B» until the carburettor is full (Fig. 12).

#### 4.1.4

In very cold weather, depress the choke pin «A».

### 4.2 — STARTING OFF

#### 4.2.1

With the engine running and warmed up, squeeze the clutch lever situated on the left hand side of the handlebars. Engage the first gear by easing the twist grip forward (Fig. 4).

Accelerate gradually and at the same time ease off on the clutch lever until the vehicle gains motion.

#### 4.2.2

Having gained speed, back off the throttle, squeeze the clutch lever, and ease the twist grip forward to engage the second gear.

## 4.2.3

Always use the adequate gear for your riding speed.

SPEED CHART	
GEAR	TRAVELLING SPEED
1st gear 2nd gear	To be used only when starting off 12 M.P.H. and over

Check the tyre pressures regularly to ensure long tyre life and saferiding.

TYRE PRESSURE CHART			
WHEEL	TYRE	PRESSURE-LBS/SQ INCH	
		1 PERSON	2 PERSONS
Front	21"x2,50R	25	
	21"x2,75"	18	
Rear	21"x2,75"	30	

## 5 — BREAKDOWNS AND POSSIBLE CAUSES

### 5.1 — ENGINE DOES NOT START

#### POSSIBLE CAUSES

##### A) — FUEL SYSTEM

- Empty fuel tank.
- Fuel passage tap closed.
- Insufficient fuel in the float chamber due to the button on the carburettor not having been depressed properly.
- In very cold weather, the choke pin not having been depressed, A (fig. 12).
- Interrupted fuel supply (dirty filter).
- Float needle sticking.
- Main jet blocked.

##### B) — IGNITION

- Ignition switch shorting.
- Dirty spark plug.
- Spark plug electrodes too far apart (0,5 mm to 0,7 mm).
- Defective ignition cable.
- Damaged contact breaker points (job for workshop).

### 5.2 — PINPOINTING THE BREAKDOWN

Fit a new spark plug into the plug lead. Turn the engine over by using the kickstarter. If there is no spark, check the ignition system as pointed out under heading (B) above. If a spark occurs, check the fuel system as listed under (A) above.

### 5.3 — ENGINE STARTS BUT CUTS OUT SHORTLY AFTERWARDS

#### POSSIBLE CAUSES:

- Closed fuel tap (the engine only runs for as long as there is petrol in the carburettor float chamber).
- Fuel passage obstruction due to a dirty or blocked main jet, carburettor gauze filter, or fuel tap filter.

### 5.4 — THE ENGINE RUNS BUT EMITS AN EXCESSIVE AMOUNT OF SMOKE THROUGH THE EXHAUST

#### POSSIBLE CAUSES:

- The button, which when depressed holds down the float in order to fill the carburettor for starting, could be sticking, causing an over-rich mixture. This leads to loss of power and excessive smoking.
- The air passage obstructed causing an over-rich mixture. If it is not obstructed, remove the air cleaner and check to see that the element is not dirty or clogged (see para 3.16).

### 5.5 — ENGINE RUNS BUT IRREGULARLY

#### POSSIBLE CAUSES:

- Defective spark plug (replace).
- Ignition timing off (job for workshop).
- Defective ignition cable (replace).
- Bad contact between spark plug, holder, and lead.
- Incorrect adjustment of the carburettor (job for the workshop).

## **5.6 — THE ENGINE OVERHEATS AND LOSES POWER**

### **POSSIBLE CAUSES:**

- Insufficient oil in the fuel mixture.
- Incorrect ignition timing.
- Excessive carbon deposits in exhaust pipe and silencer which obstruct the flow of gases.
- Lack of compression: seized piston rings, defective cylinder head gasket, or loose cylinder head.

## **5.7 — EXCESSIVE FUEL CONSUMPTION**

### **POSSIBLE CAUSES:**

- Leaking fuel tank or fuel passages (workshop).
- Overlarge jet.
- Holed float or a sticking float needle.
- Blocked exhaust system due to carbonized oil deposits.
- Throttle jet too large or oval.
- Throttle needle too high.

## **5.8 — THE ENGINE CHANGES FROM LOW 'TO HIGH REVS' WHEN UNDER STRAIN**

### **POSSIBLE CAUSES:**

- Defective clutch (workshop).

