

Lambretta

Fabricated by:

**Lambretta** S.A. L.

EIBAR (Spain)

**SCOOTERS**

**125** c.c.

**150** c.c. y

**200** c.c.

**INSTRUCTIONS  
BOOKLET**

# SCOOTERS

125 c.c. 150 c.c.

200 c.c.

*We are honoured and pleased to welcome you amongst the owners of a 150 cc., 125 cc. and 200 cc. and appreciate your choice of our product.*

*The 150 cc., 125 cc. and 200 cc., were designed and built in our works and have reached you after exacting check and tests thus ensuring the perfection and warranty of our product.*

*The life of your scooter depends very much on the care and maintenance you give it. We have here, briefly summarized some fundamental hints and instructions which we feel will help you in knowing and making the most of your new machine.*

*Remember we have created in this country and throughout the world a network of Authorized Service Dealers, with trained personnel and fully equipped with tools and original spare parts to ensure the perfect functioning of your machine. Accept our advice and take advantage of their skill and expert knowledge at any time, bearing in mind that every member of this great Organization is at your service.*

*We wish you "Bon voyage" and a wonderful time on your new 150 cc., 125 cc. and 200 cc. designed for you, the connoisseur.*

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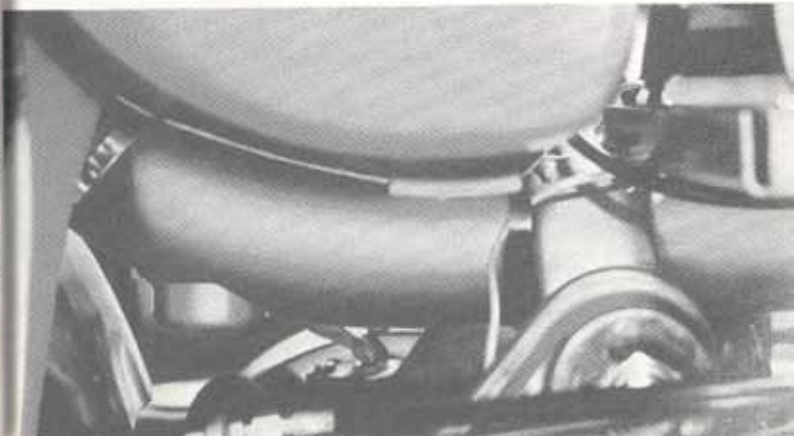
Fig. 1

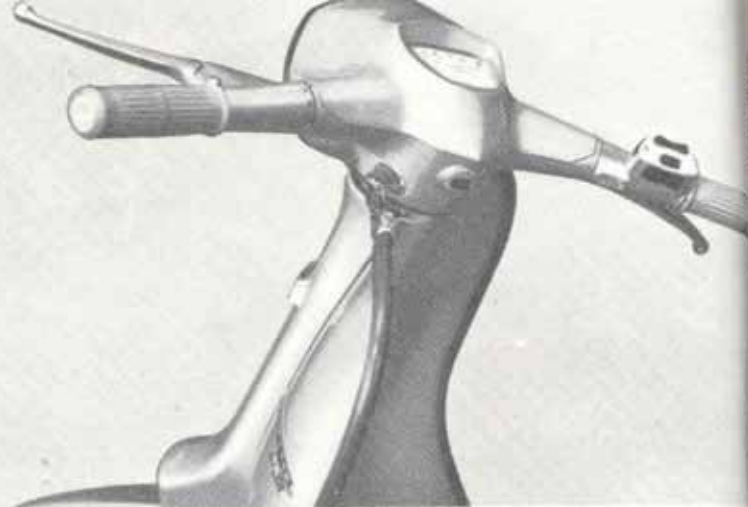
## IDENTIFICATION OF THE SCOOTER

*Rahmen*

The frame and engine numbers, which serve to identify your scooter in accordance with the Rules and Regulations, are stamped as show in figures 1 and 2. These numbers are repeated on log-book, and should always be quoted when requesting spare parts.

Fig. 2





## KEYS

The sets of keys supplied with your scooter are for the steering lock fitted under the left hand of the handlebar (fig. 3) and for the luggage box situated in the central front rib of the frame (fig. 4). Each key has a number stamped on it and the same number is stamped on the lock or switch itself, so that in the case of loss, a replacement can be obtained by quoting the appropriate number.

Fig.

Fig.



Fig. 5

## CONTROLS

Fig. 5. Shows the controls on your scooter. They are:

### On the handlebar

**Right hand:** front brake lever, throttle twist grip and light switch with horn button.

**Left hand:** Clutch control lever and gear change control.

**Centre:** on top: speedometer and head-lamp; facing driver: cut-out button and steering lock.



**Under left hand handlebar arm:** steering lock.

To use steering lock, turn handlebar full lock to either of left and then turn key half a turn.

### On the handlebar (With turn signals)

**Right Hand.** Front Brake lever, throttle twist grip and dispositive with: stop switch, selectioner of turn, left and right.

**Left Hand.** Clutch control lever and gear change control, dispositive with light switch selection and horn button.

**Center:** Besides exposed before the scooter with turn signals have: dead point position, head lamp and city light pilots.

### On the footboard

**Right hand side:** Rear brake pedal.

**On the central frame rib** under the front part of saddle.

**On Left hand side:** 3-way fuel tap (open, reserve, closed) see fig. 6.

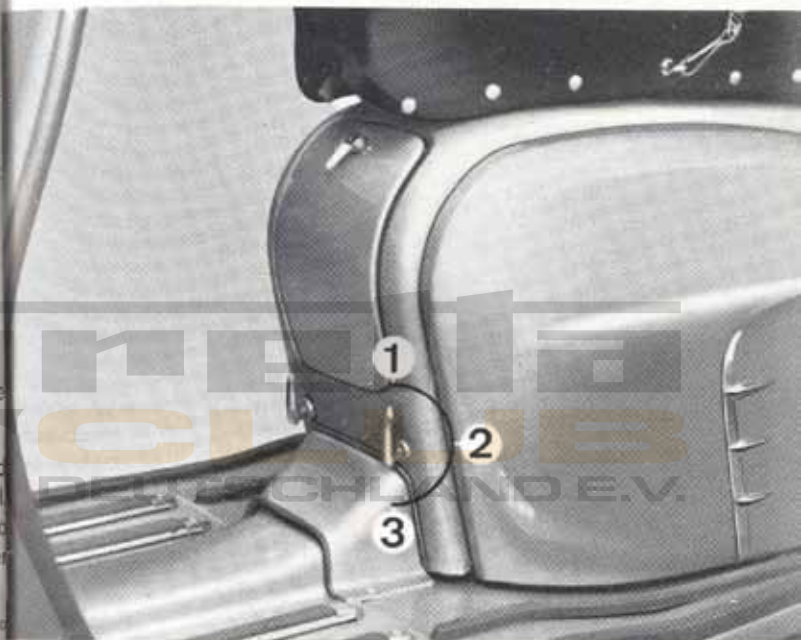
When machines is at stand-still, it is advisable to turn tap to closed position. The fuel tank contains a total of 1.9 galls (8,5 Lt) of fuel. When riding, tap should be in open position, and when you have to switch to reserve you still have 1 1/2 pints (0,8 Lt) available (in other words a further 20 miles approximately).

**On Right hand side:** start control. Turn start control lever 180° clockwise (this only when starting on a cold engine). Return to original position as soon as engine is running steadily.

### On right hand side of machine

Kickstart pedal. Before kick starting, ensure that gear is in neutral

Fig. 6



1. Reserve

2. Closed

3. Open.

## SERVICE INSTRUCTIONS

### During running-in period

(first 1000 miles) keep strictly to the following rules:

- do not exceed the following speeds:

Modelo		1st gear	2nd gear	3rd gear	4th gear
125 cc.	M.P.H.	10	17	20	30
150 cc.		12	19	24	34
200 cc.		15,5	22	31	37
125 cc.	KM/H.	18	27	36	50
150 cc.		20	30	40	55
200 cc.		25	35	52	60

- do not maintain these speeds for long periods;
- do not climb hills on full throttle;
- do not accelerate at full throttle;
- take great care **not to overheat** your engine;
- take great care to have your machine fully serviced, as per the service schedule, at the correct time by one of the authorized service agents.

Remember that the life of your scooter depends entirely on the running-in schedule being properly maintained.

### Fuel - Fuel tank

During running-in period and after use a mixture of 2 % oil **SYNTHETICAL** and standard petrol 98 - 100 O.N.

To reach the fuel tank filler cap:

- free the saddle hold by pressing on rear portion (see fig. 7)
- lift saddle forward and open lid on frame rib. (see fig. 8).

The tank contains a total of 1,9 galls, of which 1 1/2 pints reserve (for the fuel tap, see fig. 6).



Fig. 7



Fig. 8

### Wheels

Tires 3.5 - 10.

Pressure: front 12 lbs per sq. inch (0,9 kg/sq.cm); rear 18 lbs per sq. inch (1,25 kg/sq.cm) with rider only; rear 32 lbs per sq. inch (2,25 kg/sq.cm) with pillion rider.

Wheels are interchangeable.

To dismantle, lift machines on its stand. The necessary tools will be found in the luggage box (see page 15).

#### to dismantle the front wheel:

- unscrew the four dome nuts fixing rim to hub (care must be taken **not** to unscrew the other nuts);
- unscrew the two nuts holding hub to trailing links;
- slip wheel from links and hub, taking care not to pinch or bend the front brake and speedometer drive cables.



Fig. 9

### To dismantle the rear wheel:

- fit the wheel lift stand, supplied in kit, to the lug on crankcase (see fig. 9);
- unscrew the four dome nuts and slip wheel from hub.

### To dismantle tire from rims:

- dismantle wheel (as above);
- ensure that tire is deflated;
- unscrew the four nuts holding the rims.

### Brakes

Ensure that the brakes are kept regularly adjusted so that the wheel is completely free to rotate, but the braking effect begins immediately by the lever or pedal is used. Adjustment is carried out by means of two adjusters (see fig. 10 and 11).

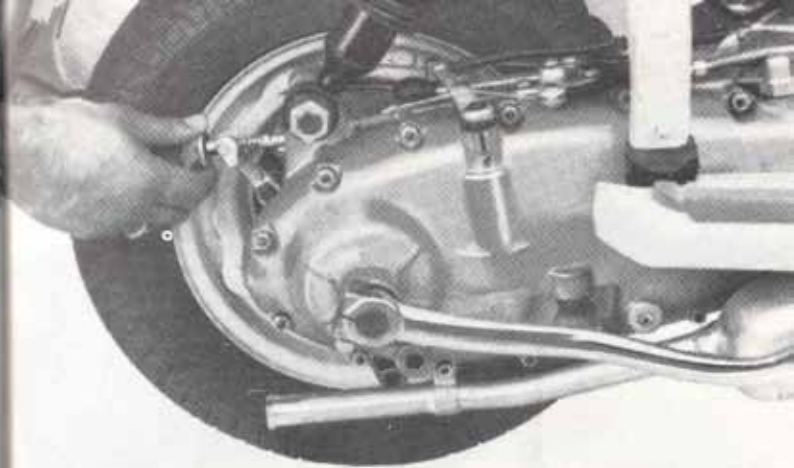
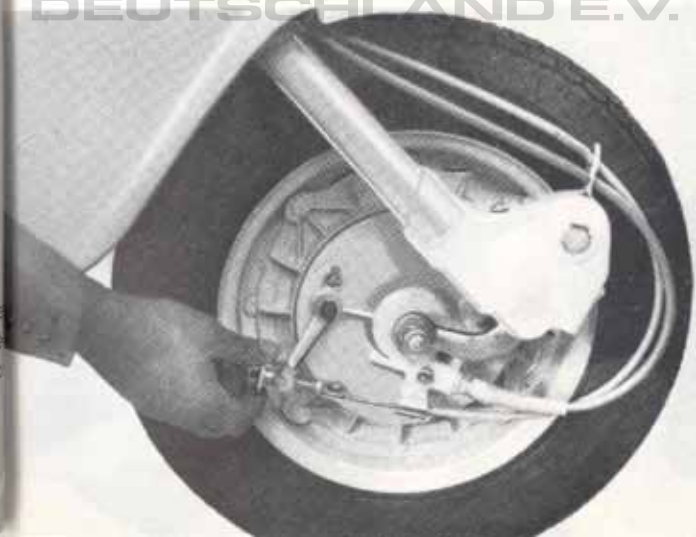


Fig. 10

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Fig. 11



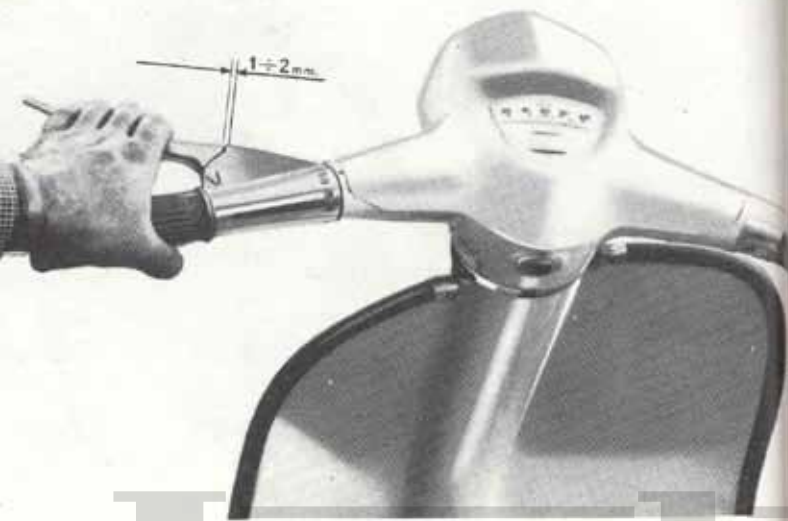


Fig. 13

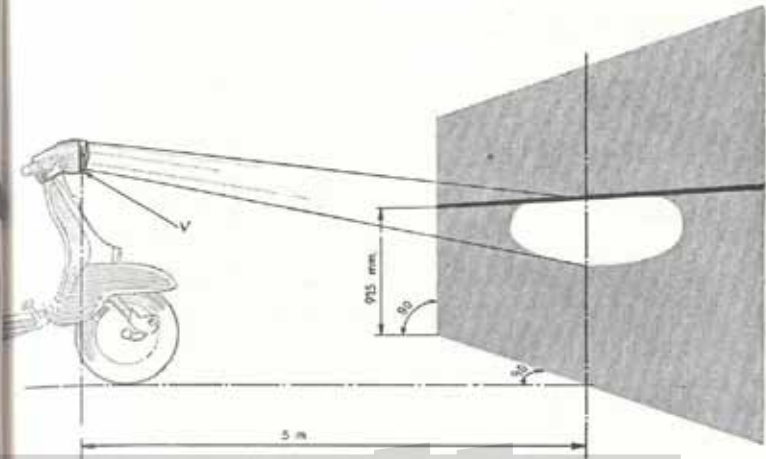


Fig. 14

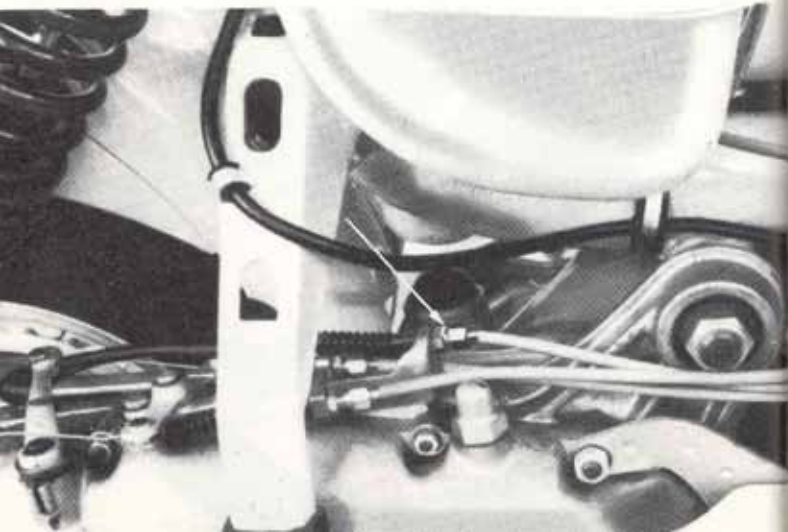


Fig. 12 **Clutch**

Keep the clutch constantly adjusted, so that it begins to slip when clutch levers is in the position shown on fig. 12. The adjustment is carried out by turning the adjuster illustrated in fig. 13.

1 - 2 mm equal to 1/16" approx.

### Headlamp adjustment

Check tire pressures (see page 11).

Place a vertical screen as shown in fig. 14.

Put the scooter under the normal load conditions.

Loosen three V screws shown on the headlamp, rotating it until the upper edge of the zone illuminated by the dipped beam coincides with the horizontal line traced on the screen.

## Luggage box and tools

The luggage box is moulded into the central frame rib under the front part of the seat. A pair of keys for this box are supplied with the scooter in the Luggage box, a tool kit is supplied consisting of:

- 1 double ended box spanner 21 - 14 mm for the spark plug and wheels nuts;
- 1 10 mm allen spanner for oil plugs;
- 1 spanner 14 - 27 mm for rear wheel nut;
- 1 double ended spanner 8 - 10 mm;
- 1 screwdriver;
- 1 rear wheel lifting stand;

## Starting – Running – Stopping

### To start the scooter

- place on centre stand;
- ensure that gear is in neutral;
- insert key into main switch and turn to position of day riding (see page 6);
- open fuel tap (see page 9);
- turn starting control lever - **Only** when engine is cold (see page 9);
- keeping throttle to minimum, kick start machine;
- as soon as engines it turning over, give slight acceleration to warm up;
- if the starting control lever has been used, return to original position.

### To move off:

- bring machine off its stand;
- with engine ticking over, pull clutch lever and put into 1st gear by rotating left twist grip;
- lef clutch lever out slowly, accelerating engine gradually to maintain constant revolutions;
- continue to accelerate until you have reached the correct speed to change up to a higher gear.

### To change gear:

- close throttle;
  - pull clutch lever;
  - insert next gear;
  - let clutch lever out slowly, accelerating gradually at the same time.
- Do not hesitate to change down, when wanting to appreciably reduce speed.

### To stop engine:

- close throttle;
- pull clutch lever;
- put gear into neutral;
- cut out engine by turning main switch key to vertical position.

## PERIODIC MAINTENANCE

### Every 1250 miles (2000 km)

Brakes: check adjustment.

Spark plug: check, clean electrodes with kit file and adjust gap to 0.020" (mm 0.5 - 0.6).

#### Lubrication:

Crankcase: re-establish level with **oil AGIP F.1 Rotra SAE 90**. To do this, unscrew oil level and filler plugs, pour in oil until this begins to flow from level plug.

Clutch cable knuckles

Gear change cable knuckles,  
twin lever

Rear brake knuckles

Front brake knuckles

Front brake cam pin

Rear brake cam pin

Handlebar control lever knuckles

Rear brake pedal pin

Grease with

**AGIP F.1 Grease 15**

### Every 2500 miles (4000 km)

Clutch control: check adjustment.

Flywheel magneto contact breaker points: clean and set gap 1/64" (mm 0.35 - 45); we suggest that adjustment of this part is carried out by Authorized Service Agent.

Flywheel magneto cam oil pad: lubricate.



Fig. 15

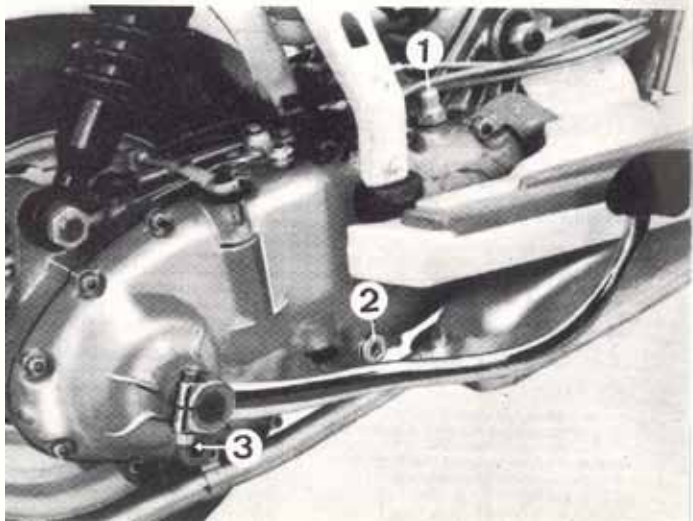


Fig. 16

2. Level plug.

3. Drain plug.

Fig. 17



Carburettor air filter: take out filter cartridge from air inlet box (see fig. 15 - 16), clean by shaking and blowing with low pressure air.

### Do not wash in petrol.

We strongly recommend to recharge the filter cartridge every 6.500 miles (km 10.000).

Decarbonise cylinder, cylinder head, piston head and silencer.

We strongly recommend that this work is carried out by an Authorized Service Agent.

### Lubrication

Crankcase: drain oil completely through drain plug; when the engine is warm. Replace drain plug unscrew filler and level plugs; pour in oil until this flows from level plug. Quantity of oil needed 1 1/4 pints of **AGIP F.1 Rotra SAE 90**.

### Speedometer Drive Box:

grease with gun through nipple (about 1 gr.) of grease **AGIP F.1 Grease 15**.

### Front wheel bearings:

grease with gun through nipple **AGIP F.1 Grease 30**.

### Front suspension knuckles:

grease with gun through nipple **AGIP F.1 Grease 15**.

### Cleaning of scooter

- wash engine with petroleum, using a brush. Dry with clean rags;
- wash cellulosed and plastic parts with water, using a sponge. Dry with chamoins leather. **Do not use petrol or petroleum**, otherwise damage will result.

## When the scooter remains out of use some time:

- wash and dry carefully as above;
- drain all petrol from tank and carburettor;
- clean tank and carburettor filters;
- unscrew spark plug, insert few drops of engine oil, rotate engine by hand two or three times to ensure a protective oil film in cylinder barrel. Replace spark plug;
- coat with anti-rust grease all non-painted parts;
- lift machine off the ground by placing blocks carefully under frame; tires should not reach the floor;
- clean and deflate tire;
- cover machine.

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**CLUB**  
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## TROUBLE CHART

### A GUIDE TO ASSIST IN THE TRACING AND RECTIFYING COMMON FAULTS

#### Engine fails to start, or stops immediately

Possible cause:	Remedy:
Faulty fuel flow to carburettor	Clean fuel lines and filters. clean out jets.
Flooded carburettor	close fuel tap, open throttle and endeavour to kick start. Or, unscrew and dry out spark plug, replace plug and kick start the motor.
Start control non adjusted	adjust thread regulator on the carburettor.
Damage carburettor float	have it replaced at Service Agent.
<b>(if current is reaching H.T. lead)</b>	
- dirty spark plug	unscrew and clean.
- Electrodes non adjusted	adjust to 0,020" - 0,025" (0,5 - 0,6 mm).
- faulty spark plug	replace with a new one.
<b>(if current does not reach H.T. lead)</b>	
- contact breaker points faulty	take machine to Authorized Service Agent.
- Flywheel magneto or H.T. coil circuits shorting	take machine to Authorized Service Agent.

#### Engine knocking

Incorrect mixture	drain out and replace with correct fuel mixture.
Pre-ignition	clean spark plug. Decarbonise cylinder head.
Ignition too far advanced	see Authorized Service Agent.

#### Engine misfires

Irregular flow of fuel to the carburettor	check and clean out fuel line.
Spark plug electrode gap too wide	re-adjust to correct gap.
Dirty spark plug	unscrew and clean out.
Contact points dirty or not adjusted	clean and adjust gap between points.

#### Explosion in carburettor

Pre-ignition due to excessive overheating of spark plug	change spark plug for one with a higher heat range.
Carbon deposits on spark plug	clean out spark plug.

#### Loss of power or excessive overheating

Incorrect timing	adjust timing. Take machine on an Authorized Service Station.
Exhaust port or silencer partially obstructed	clean out port or silencer.
Cylinder head loose	tighten cylinder head nuts.

## MAIN FEATURES

Overall length . . . . .	71" (m. 1.800)
Overall width . . . . .	27 1/2" (m. 0.700)
Overall height . . . . .	40 1/2" (m. 1.030)
Wheel base (full load). . . . .	51" (m. 1.290)

Central frame in steel tube.

Bodywork in pressed steel sheet.

Front suspension by means of trailing links, carrying two helical springs and shock absorbers.

Rear-suspension: Swinging engine unit with shock absorber carrying two helical springs.

Centre stand with two arms.

Unladen weight . . . . .	<b>125 cc.</b> 230 lbs. (104 kg.)
	<b>150 cc.</b> 231 lbs. (105 kg.)
	<b>200 cc.</b> 260 lbs. (123 kg.)

Fuel tank capacity . . . . . 1,8 imp. gals. (8.1 lt)

Maximum speed . . . . .	<b>125 cc.</b> 43 m.p.h. ( 72 km/h.)
	<b>150 cc.</b> 53 m.p.h. ( 92 km/h.)
	<b>200 cc.</b> 66 m.p.h. (107 km/h.)

Fuel consumption . . . . .	<b>125 cc.</b> 64 m.p. 2,1 lt.
	<b>150 cc.</b> 79 m.p. - 2,8 lt.
	<b>200 cc.</b> 93 m.p. imp. gal.

Uphill (rider only) . . . . .	<b>125 cc.</b>	<b>150 cc.</b>	<b>200 cc.</b>	
	4th gear	7 %	9 %	11 %
	3rd gear	13 %	14 %	18 %
	2nd gear	21 %	22 %	28 %
	1st gear	35 %	35 %	40 %

## Engine

two stroke single cylinder. Forced air cooled . . . . .	<b>125 cc.</b>	<b>150 cc.</b>	<b>200 cc.</b>
Bore . . . . .	52 mm	57 mm	66 mm
Stroke . . . . .	58 mm	58 mm	58 mm
Capacity . . . . .	123 cc.	148 cc.	198 cc.
Compression ratio . . . . .	7	8,15	1 : 7
Maximum output on driving shaft . . . . .	6,5 HP.	7,6 HP.	9,75 HP.
	at r.p.m.	at 5.200	at 5.200
Lubrication . . . . .	Mixture	Mixture	Petrol
Starting . . . . .			Kickstart pedal

## Carburettor

**125 cc.** SH 1/18, **150 cc.** SH 18 and **200 cc.** DELLORTO SH 20, with central float chamber. Air filter cartridge type incorporated in air intake box.

## Ignition

by flywheel magneto and external H.T. coil. Fixed advanced ignition.

Spark plug: heat range **125 cc.** and **150 cc.** 225, **200 cc.** 240 Bosch scale.

## Clutch

multi-disc in oil bath.

## Transmission

double dow chain with two shock dampers.

## Gear box

Four-speed constant mesh in oil bath.

Rear wheel/driving shaft/R.P.M. ratio:

	125 cc.	150 cc.	200 cc.
1st	0,0575	0,0717	1 : 12.53
2nd	0,0931	0,1034	1 : 8.77
2nd	0,1337	0,1421	1 : 6.32
4th	0,1770	0,1917	1 : 4.82

## Wheels and brakes

Interchangeable wheels.

Rims: in pressed steel sheet, split in two halves.

Brakes: front - disc brake ; rear - internal expansion.

Tires: 3.5 - 10".

Tires pressures:

front: 12 lbs/sq.in. (0.9 kg/sq.cm.).

rear (rider only): 18 lbs/sq.in. (1.25 kg/sq.cm.).

rear (with pillion): 32 lbs/sq.in. (2.25 kg/sq.cm.).

## Electrical equipment

General: flywheel magneto 58 watt 6 poles.

Battery: 6 V., 8 Ah.

## BULBS

POSITION	USE	No.	CHARACTERISTICS		
			ELECTR. DATA	BULB	SOCKET
Hear lamp	dazzle and anti-dazzle light	1	6 V - 25/25 W	Spherical	BA 20 d
	pilot light	1	6 V - 7 W.	Festoon	S 8.5/9.5
Rear light	number plate light/stop light	1	6 V - 4/18 W	Spherical	BAY 15 d/19
Speedometer	speedometer light	1	12 V - 2.5 W	Cylindrical	BA 9 s

## WORKING INSTRUCTION MOTORCYCLE BATTERY DRY & CHARGED

### PRECAUTION BEFORE INSTALLATION

#### \* Preparation for Filling

Take off sealing tape and remove vent plugs ONLY right before filling the electrolyte. If your battery is equipped with a long size exhaust tube, cut off its sealed end at about 3 cm. (1 inch) from the tip.

If your battery has a short size sealing tube, and is supplied with a separate long size tube, pull off the short one and replace with the long one.

#### \* Filling Electrolyte

Fill battery with electrolyte (dilute sulphuric acid) with the density of 1,240 for tropical climate where average temperature is in excess of 25°C (77°F), and 1,260 for temperature climate. Fill to the UPPER LEVEL as indicated on the battery. The electrolyte should be cooled below 30°C (86°F) before filling. Leave the battery standing for half an hour after filling.

Electrolyte level may have fallen during the standing. Refill the acid to the UPPER LEVEL.

#### \* Charging

An initial charging is recommended before placing in service when time and equipment permit.

Charge the battery with a current as described in the Table continuously for 15 to 20 hours.

If the electrolyte level is found fallen after charging, fill DISTILLED WATER up to the UPPER LEVEL.

After charging place the vent plugs firmly, wash off acid spillage with water, and dry the battery.

### INSTALLATION

- \* Fasten the battery firmly to vehicle. Be sure not to make wrong connection of battery's positive and negative terminals. Do not fold or crimp the battery's exhaust tube. It may cause explosion if the tube is pinched.

### MAINTENANCE SERVICE

- \* Check electrolyte level once a month. If found lower than the middle of UPPER and LOWER LEVEL, add distilled water to restore the level. Never use ACID in this case.
- \* Keep battery always clean. Apply grease around the terminals to prevent corrosion.
- \* Keep the exhaust tube free of kinds and obstructions.

### RECHARGING

Recharging is necessary when you find the lights get dark and horn weak, and when you keep battery unused for longer than one month.

Charge the battery with a current as described in the table. Charge until the battery starts gassing freely and the specific gravity of electrolyte rise higher than 1,240 in tropical climate and 1,260 in temperature climate.

**YUASA BATTERY CO., LTD.**  
**Takatsuki, Osaka, JAPAN**

## LUBRICATION

In case it should not be easy to find AGIP products, we recommend, in relation to the various parts, the following lubricants:

For fuel mixture

### ENERGOL TWO STROKE

(5) Crankcase

### ENERGOL GEAR OIL SAE 90

(4) Gear change knuckles twin lever - (3) Clutch and gear change knuckles - (1) Rear brake knuckles - (9) Front brake knuckles.

Side panel hook - (7) Rear brake cam pin - (6) Rear brake pedal pin - (10) speedometer driver box and suspension knuckles - (12) Front suspension helical springs - (8) Levers and controls on the handlebar.

### Grease with ENERGREASE A 1

(11) Front wheel bearings - (13) (14) Steering ball bearings.

### Grease with ENERGREASE L 3

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