Lambretta 175tv

third series

instruction booklet

INNOCENTI

motor di

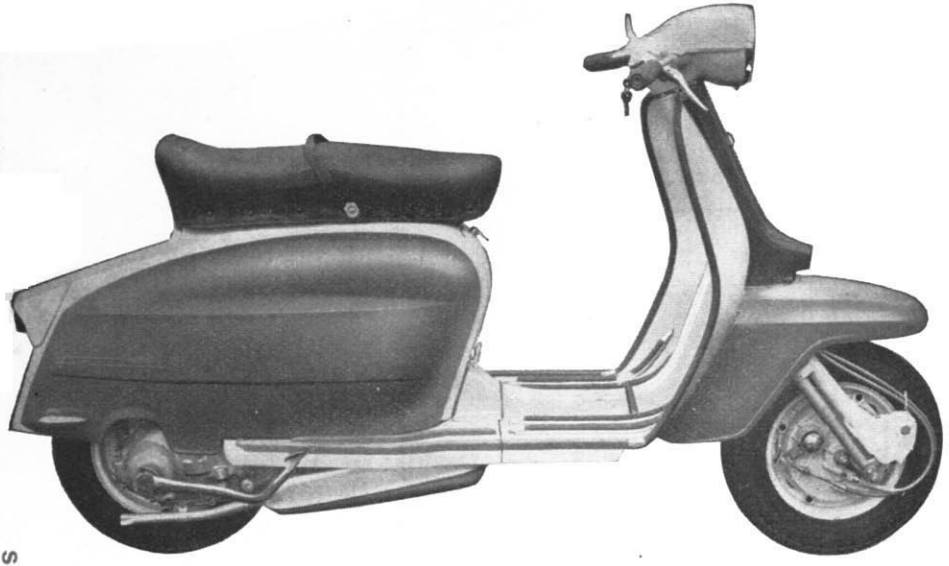
Lambretta 175tv

third series

instruction booklet

INNOCENTI

motor division



Lambretta 175 tv - third series

INNOCENTI motor division

It is our pleasure to congratulate you on your choice of a ***Lambretta TV 175*** *— our machine for the ambitious. Your preference for this machine encourages us to treat you as a specialist — a super sportsman — a connoisseur in the field of scootering.*

You have always hoped for perfection in performance. We have achieved it with the introduction of the TV 175. Years of research and application of the most rigourous tests have produced this machine which combines speed with safety, power with comfort.

The standard of efficiency of the TV 175 has been set at a peak. We depend on you to maintain this standard by carefully following the instructions set out in this booklet. Do not deny your machine the care and attention necessary for perfect scootering. We have created a network of authorized Lambretta Service Agents in this country and throughout the world. Do not hesitate to take advantage of the skill and expert knowledge of their trained personnel who are fully equipped to assist and guide you.

We wish you "Bon Voyage" on your new TV 175 — designed for you, the connoisseur.

Lambretta

LAMBRETTA CONCESSIONAIRES LTD

TROJAN WORKS - PURLEY WAY - CROYDON - SURREY

CONTENTS

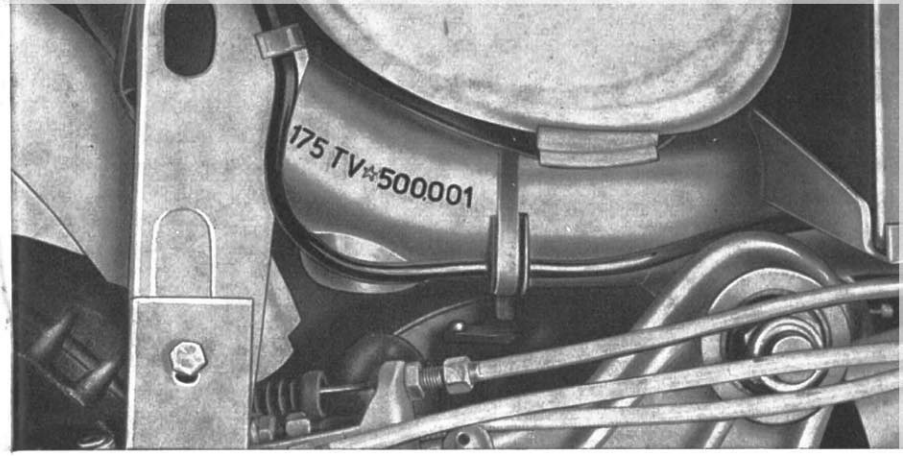
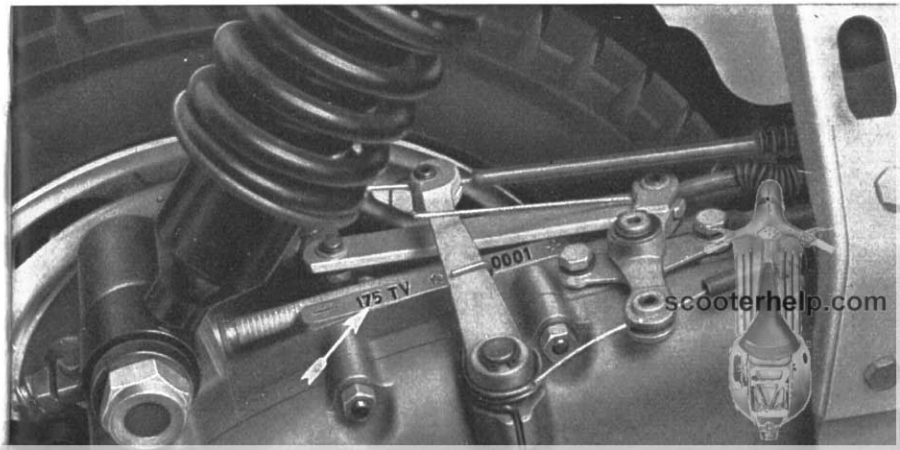


Fig. 1

IDENTIFICATION OF THE SCOOTER

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

Fig. 2



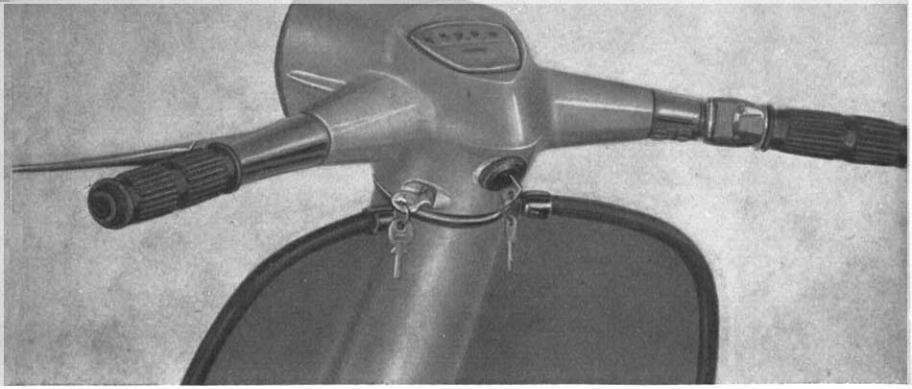
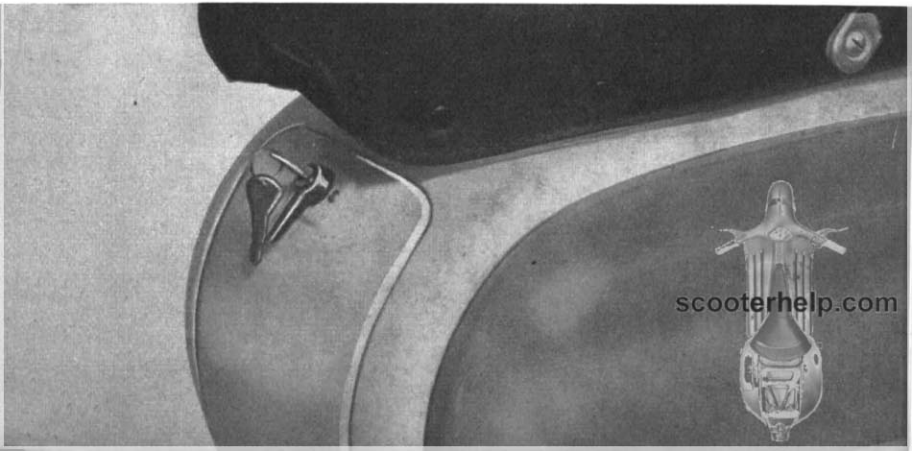


Fig. 3

KEYS

The sets of keys supplied with your scooter are for the main light switch in the centre of the handlebar facing the driver, see fig. 3, for the steering lock fitted under the left hand of the handlebar 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 remplacement can be obtained by quoting the appropriate number.

Fig. 4



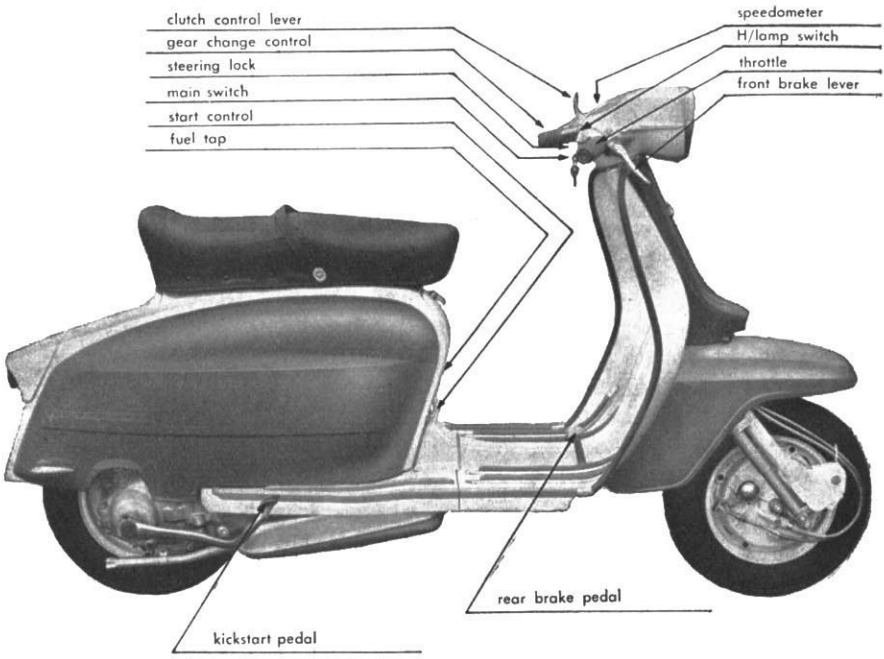


Fig. 5

CONTROLS

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

On the handlebar

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

Left hand: Clutch control lever and gear change control.

Centre:
on top: speedometer and head-lamp;
facing driver: main switch and steering lock.

The main switch key has five positions; clockwise:

— pilot light, speedometer light and rear light on when used for parking;
— (key vertical)machine at standstill - lights out;
— day riding-lights out;
— night riding (in town) - pilot light, speedometer light and rear light on;
— night riding (in country areas) - headlamp, speedometer light and rear light on.

The headlamp beam switch, with horn button, is fitted near to the right hand twist grip.

In the first two positions to the left, the key can be extracted from main switch.

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 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.

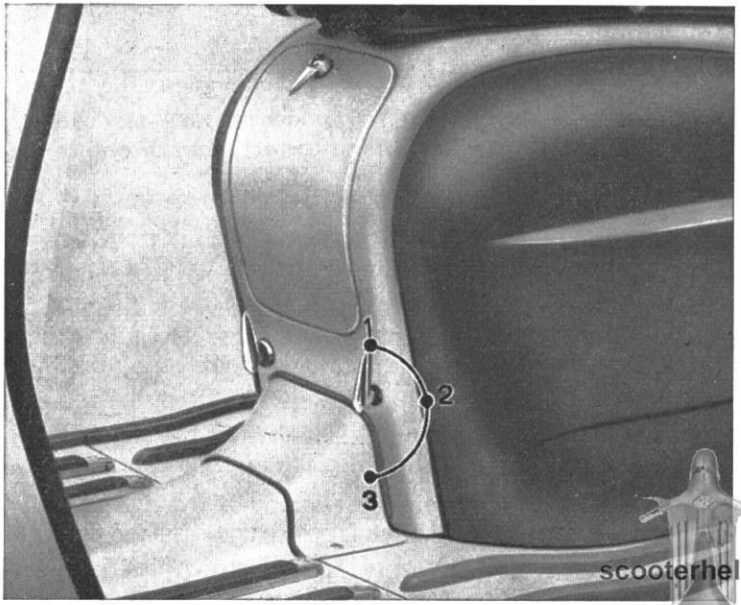
When machine is at stand-still, it is advisable to turn tap to closed position. The fuel tank contains a total of 1.9 galls. (8,6 Lt) of fuel. When riding, tap should be in open position, and when you have to switch to reserve you still have 1 ½ pints (0,8 lt) available (in other words a further 20 miles approximately).

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

On right hand side of machine

Kickstart pedal. Before kick starting, ensure that gear is in neutral, insert key into main switch, turning it to position 3.

1. Closed 2. Open 3. Reserve



During running-in period

(first 1800 miles) keep strictly to the following rules:

— do not exceed the following speeds;

	1st gear m. p. h.	2nd gear m. p. h.	3rd gear m. p. h.	4th gear m. p. h.
Up to 900 miles . . .	**15**	**22**	**30**	**40**
From 900 to 1800 miles	**15**	**22**	**30**	**47**

— 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 4 % oil (BP Energol Two Stroke) and good standard petrol.

To reach the fuel tank filler cap:

— free the saddle hold by pressing on rear portion (see fig. 7 and 8);

— lift saddle forward and open lid on frame rib. (see fig. 10).

The tank contains a total of 1,9 galls. of which 1,1 pints reserve (for the fuel tap, see page 8).

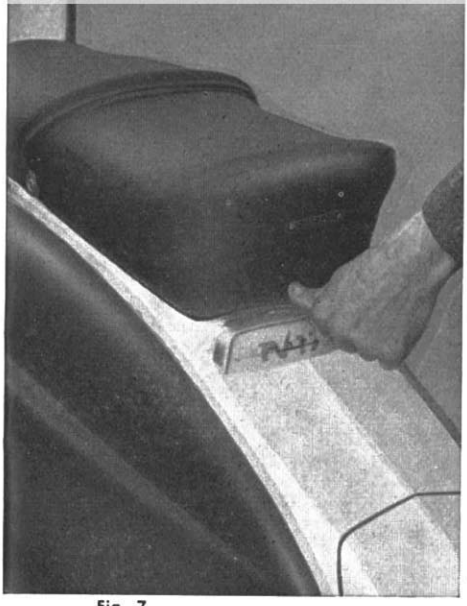


Fig. 7

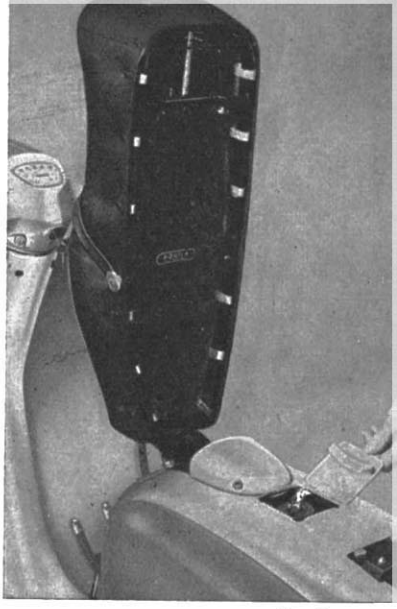


Fig. 8

Wheels

Tires 10" x 3.5".

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 machine on its stand. The necessary tools will be found in the luggage box (see pag. 17).

To dismantle tire from rims:

— 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.

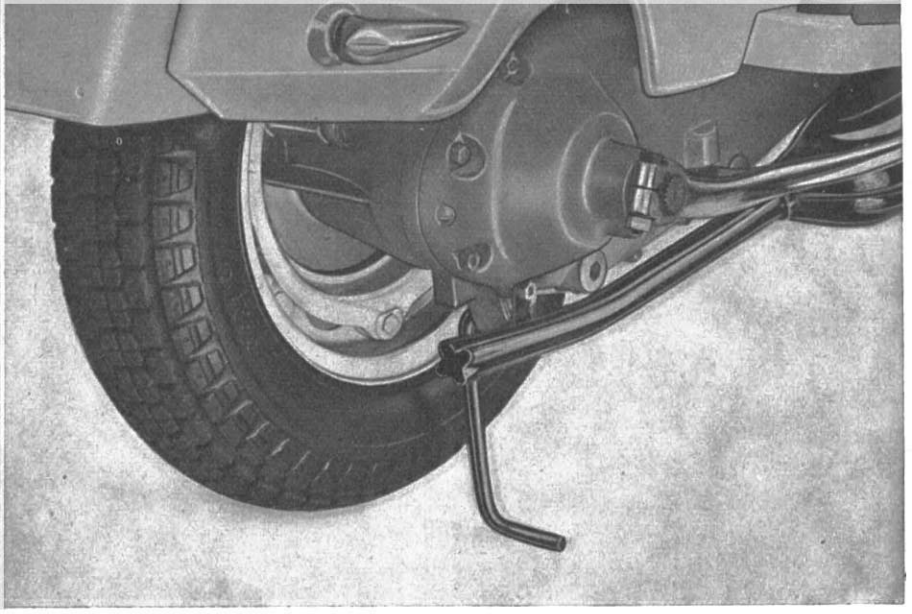


Fig. 9

To dismantle the front 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 the rear wheel:

— 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 the lever or pedal is used. Adjustment is carried out by means of two adjusters (see fig. 10 and 11).

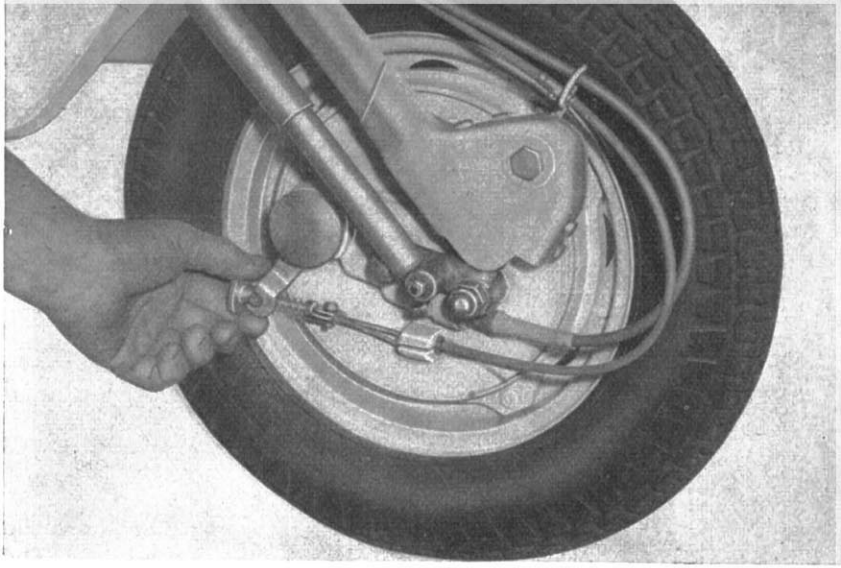
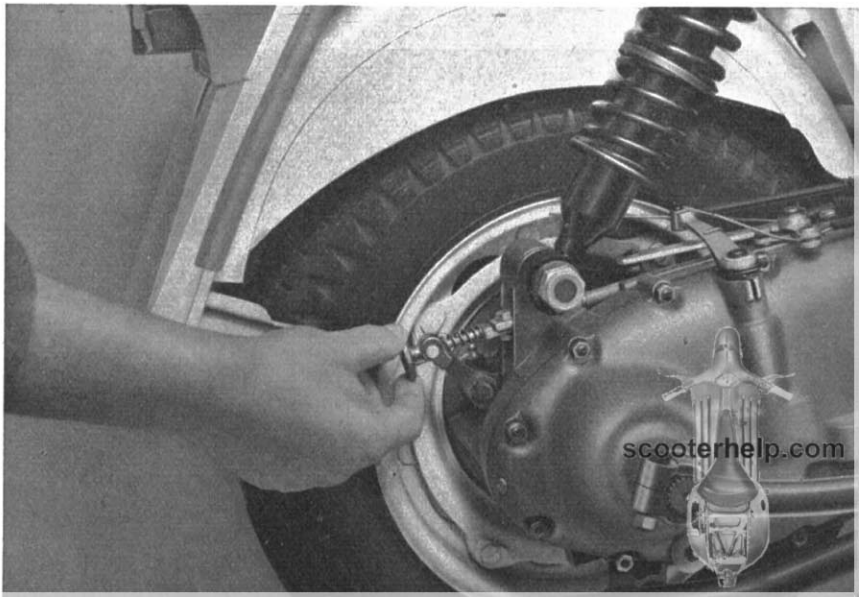


Fig. 10

Fig. 11



Rectifier, fuse

Should the lights not function when turning the main switch key to the first position on the left and pressing the foot brake, check that the fuse has not blown. If so, replace and check for the cause of the short circuit.

The 8 A fuse which protects the electrical installation can be reached by removing the left hand side panel and taking off the cover of the box containing the rectifier-impendence fuse group (fig. 12-13).

Attention - To avoid possible burning up of the lamps, when the engine is operating the lights must **not** be lighted up if the battery is not regularly connected.

Clutch

Keep the clutch constantly adjusted, so that it begins to slip when the clutch lever is in the position shown on fig. 14. The adjustment is carried out by turning the adjuster illustrated in fig. 15.

Fig. 12

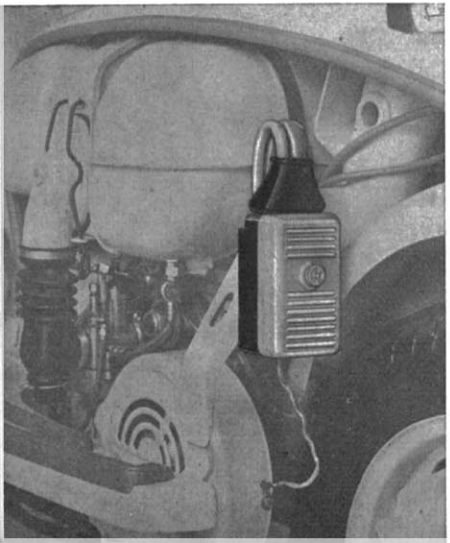


Fig. 13

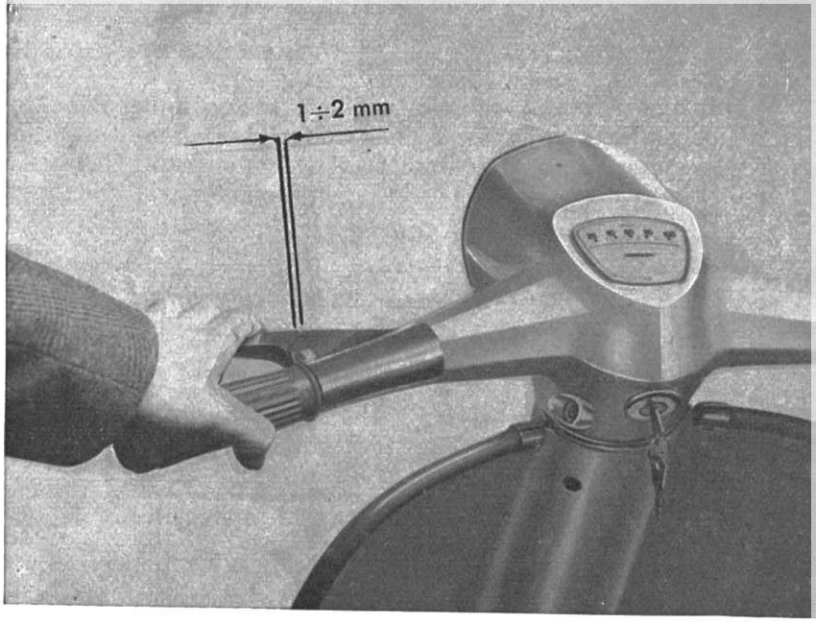
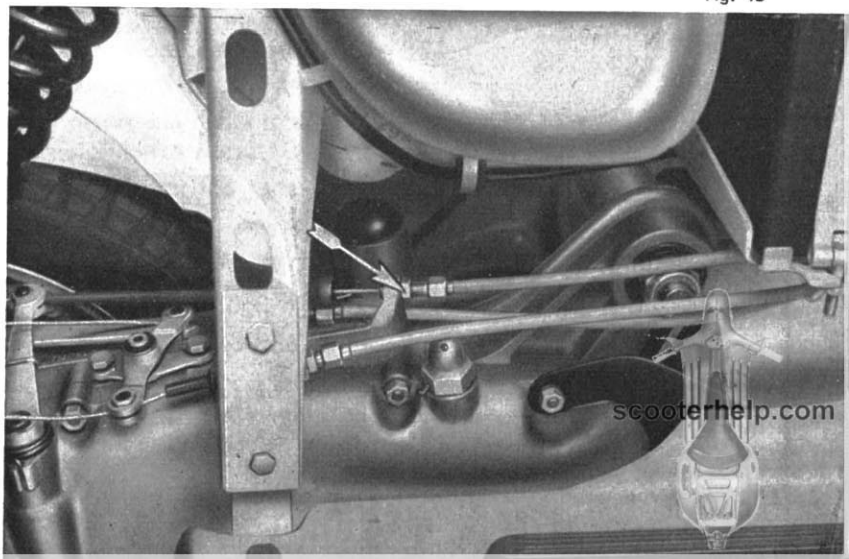


Fig. 14

1 ÷ 2 mm. equal to 1/16'' approx.

Fig. 15



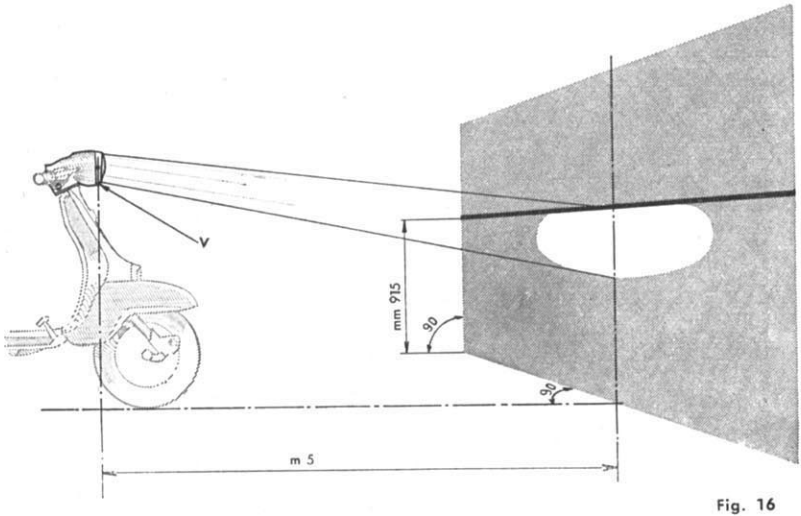


Fig. 16

Headlamp adjustment

Check tire pressures (see page 11).

Place a vertical screen as shown in fig. 16.

Put the scooter under the normal load conditions.

Loosen the 3 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 dual seat. A pair of keys for this box are supplied with the scooter (see page 6). 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;
1 points file;
1 4 mm. allen spanner for trunnion grub screws.

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 8);
— open fuel tap (see page 8);
— turn starting control lever - **Only** when engine is cold (see page 9);
— keeping throttle to minimum, kick start machine;
— as soon as engine is 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;
— let 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.

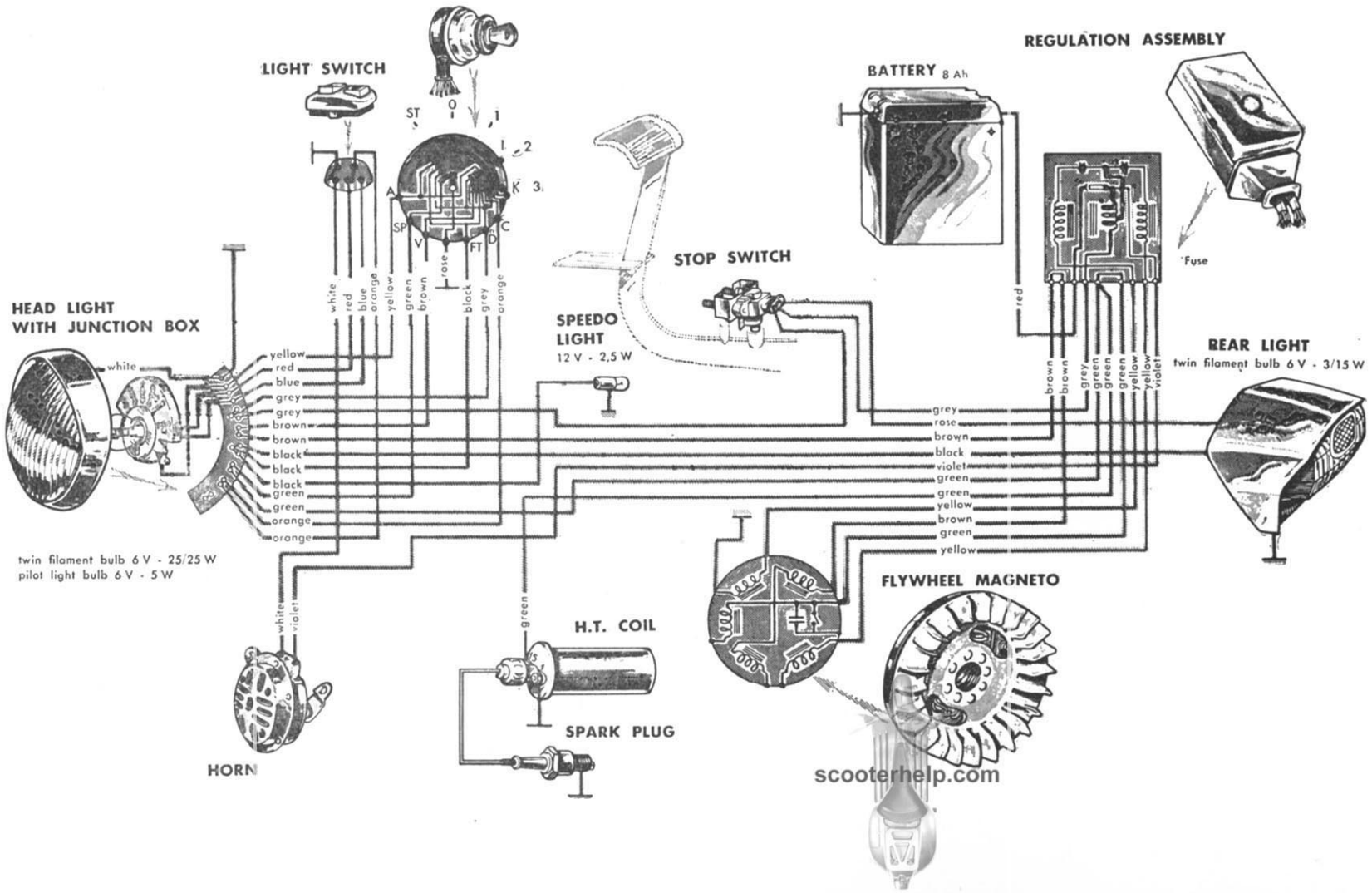
To change gear:

— 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.

WIRING DIAGRAM



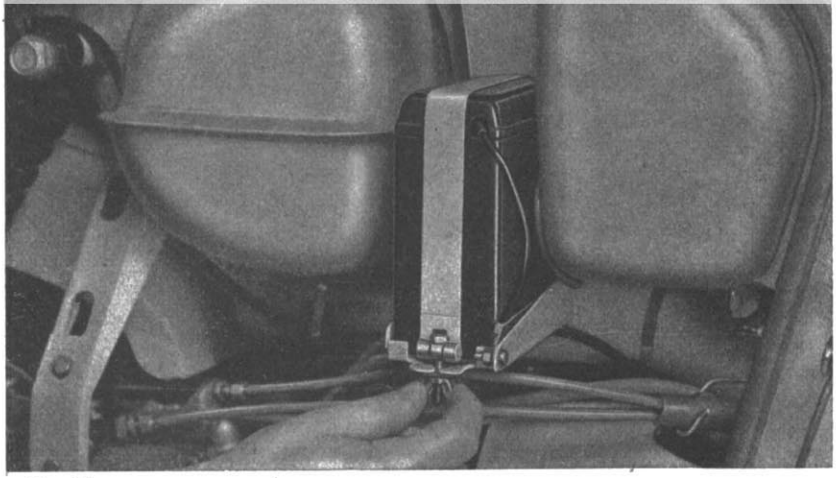


Fig. 17

PERIODIC MAINTENANCE

Every 4 weeks:

Add distilled water to parking light battery until water is about ¼" (mm. 5) over the top of cells. To do this it is necessary to take battery out from its seat, as shown in fig. 17.

Grease battery terminals with vaseline.

Every 1250 miles (2000 km):

Brakes: check adjustment (see page 12).

Spark plug: check, clean electrodes with kit file and adjust gap to 0,020"-0,025" (mm. 0,5÷0,6).

Carburettor Air Filter: Take out filter cartridge in front air inlet box (see fig. 18-19), shake and blow with low-pressure air. **Do not wash in petrol.**

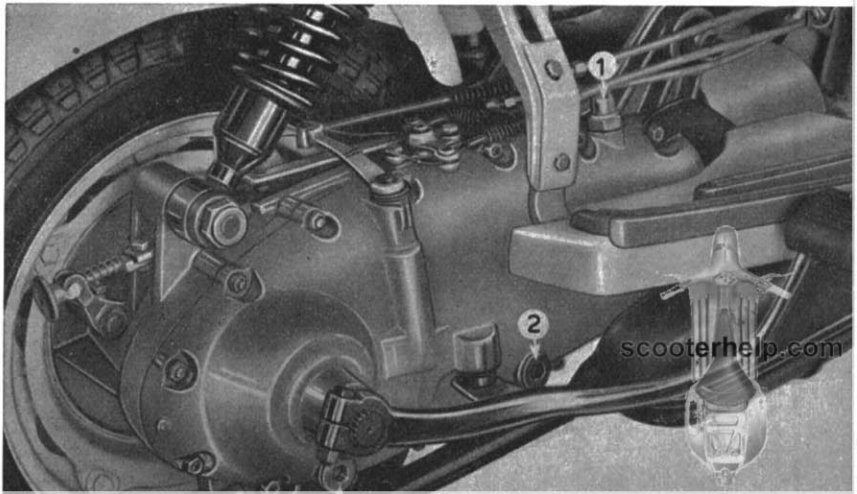
Fig. 18

Fig. 19

Lubrication

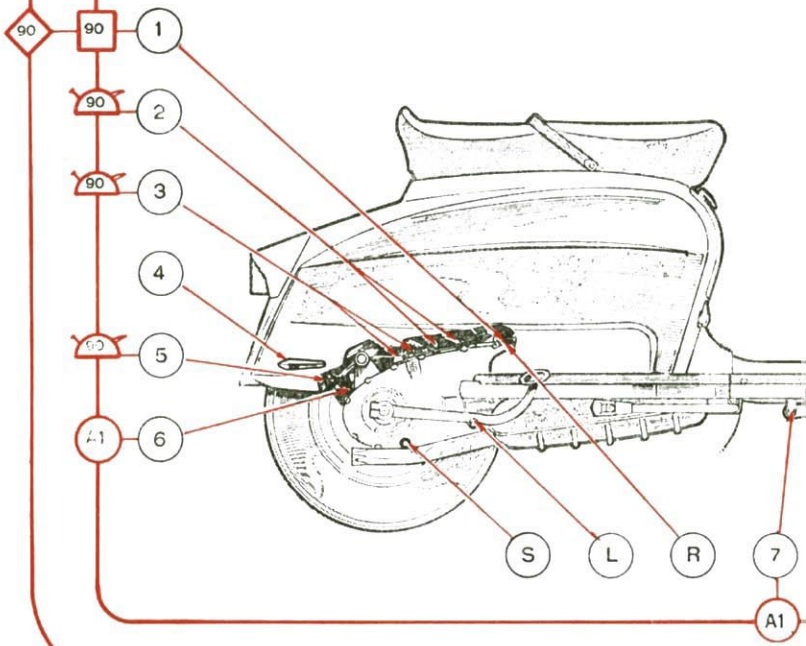
Crankcase: re-establish level with **BP Energol Gear Oil SAE 90**. To do this, unscrew oil level and filler plugs, pour in oil until this begins to flow from level plug (see fig. 20).

Fig. 20 1. Filler plug. 2. Level plug. 3. Drain plug.



Every 2500 miles

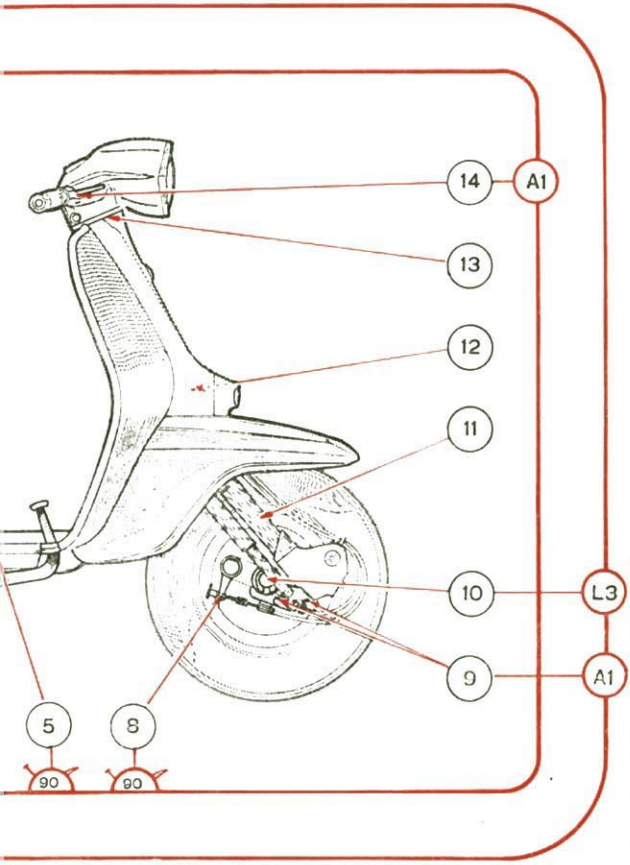
Every 1250 miles



PERIODIC LUBRICATION - (1) Crankcase: change oil after first 1000 miles (1500 km.) using BP Energol Gear Oil SAE 90. (2) Gear change knuckles, twin lever. (3) Clutch and gear change knuckles. (5) Rear brake knuckles. (6) Rear brake cam pin. (7) Rear brake pedal pin. (8) Front brake knuckles. (9) Speedometer drive box and suspension knuckles. (10) Front wheel bearings. (14) Levers and controls on the handlebar: (lubricate end cylinders of the clutch and brake cables, throttle and gear control drive box on knuckles).

R = oil filler plug. L = oil level plug. S = oil drain plug. 90 means BP Ene

LUBRICATION DIAGRAM



Grease.

Oil.

Change oil.

Re-establish level.

LUBRICATE THESE PARTS WHEN ASSEMBLING SCOOTER AFTER OVERHAUL

1. Part (2), (3), (5), (8) should be lubricated with Energrease A1.
2. Steering ball bearings, parts (12) (13) should be lubricated with Energrease L3.
3. Side panel hooks (4) and handlebar control lever knuckles (14) should be lubricated with Energrease A1.
4. Front suspension helical springs (11) should be smeared with Energrease A1.
5. Introduce a little BP Energrease A1 in control cable coating before mounting wires.

gol Gear Oil SAE 90. A1 means BP Energrease A1. L3 means BP Energrease L3.

Clutch cable knuckles
Gear change cable knuckles, twin lever
Rear brake knuckles
Front brake knuckles

Lubricate with **BP Energol Gear Oil SAE 90**

Rear brake cam pin
Handlebar control lever knuckles
Rear brake pedal pin

Grease with **BP Energrease A1**

Every 2500 miles (4000 km):

Clutch control: check adjustment (see page 15).

Flywheel magneto conctact breaker points: clean and set gap 1/64" (mm. 0,35÷0,45); we suggest that adjustment on this part should be carried out by authorized Service Agent.

Flywheel magneto cam oil pad: lubricate with oil drop.

— Decarbonise cylinder, cylinder head, piston head and silencer. We strongly recommend that this work be carried out by the Authorized Service Agent.

Lubrication

Crankcase: drain oil completely through drain plug (see fig. 20). Replace drain plug; unscrew filler and level plugs; pour in oil until this flows from level plug. Quantity of oil needed 1 pint (600 cm^3) of **BP Energol Gear Oil SAE 90.**

Speedometer Drive Box:
grease with gun through nipple. **BP Energrease A1.**

Front wheel bearings:
grease with gun through nipple. **BP Energrease L3.**

Front suspension knuckles:
grease with gun through nipple. **BP Energrease A1.**

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 chamois 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;

— take out battery; place in dry place to avoid freezing; have it re-charged monthly at an Authorized Service Agent;

— lift machine off the ground by placing blocks carefully under frame; tires should not reach the floor;

— clean and deflate tires;

— cover machine.

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.
Damaged carburettor float .	have it replaced at Service Agent.
(if current is reaching H.T. lead)	
— 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.
(if current does not reach H.T. lead)	
— contact breaker points faulty	take machine to Authorised 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 splug. 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 to 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	27½"	(m. 0.700)
Overall height	41"	(m. 1.035)
Ground clearance	6½"	(m. 0.165)
Wheel base	51"	(m. 1.290)

Central frame in steel tube.

Bodywork in pressed steel sheet.

Front suspension by means of trailing links, carrying a variable pitch helical springs and shock absorbers.

Rear-suspension: swinging engine unit with shock absorber carrying one helical spring of variable pitch.

Centre stand with two arms.

Unladen weight	242	lbs. (110 kg.).
Fuel tank capacity	1.9	imp. gals (2,3 U.S. gals - 8,6 lt.).

Maximum speed:

driver upright	56/58	m.p.h. (91/93 km/h).
driver bent forward . . .	64	m.p.h. (104 km/h).

(according to the CUNA standard)

Fuel consumption (at the speed of 28÷31 m.p.h.)	118 m.p. imp. gal. (100 m.p. U.S. gal. - 2,3 lt/100 km).
Range	218 miles (350 km).
Uphill	4th gear 1 in 11 (9%) 3rd gear 1 in 6,6 (15%) 2nd gear 1 in 4,2 (24%) 1st gear 1 in 2,8 (36%)

Engine

two stroke single cylinder. Forced air cooled.

Bore	62 mm
Stroke	58 mm
Capacity	175 cc
Compression ratio	8
Maximum output	8,75 HP. at 5,300 r.p.m.
Lubrication	Petrol.
Starting	Kickstart pedal.

Carburettor

Dell'Orto SH 20 automatic, with central float chamber; no needle. Air filter cartridge type incorporated in air intake box.

Ignition

by flywheel magneto and external H.T. coil.

Spark plug: — during running-in period: heat range 225 Bosch scale

— after running-in period: heat range 226 or 240 according to conditions of use.

Clutch

multi-disc in oil bath.

Transmission

double dow chain with two shock dampers.

Gear box

Four-speed constant mesh in oil bath.

1st	1 : 12.522
2nd	1 : 8.762
3rd	1 : 6.304
4th	1 : 4.819

Wheels and brakes

Interchangeable wheels.
Rims: in pressed sheet, split in two halves.
Brakes: front - disc brake; rear - internal expansion.
Tires: 3.5" x 10".
Tires pressures:
front: 12 lbs/sq.in. (0,9 kg/cmq)
rear (rider only): 18 lbs/sq.in (1,25 kg/cmq)
rear (with pillion): 32 lbs/sq.in (2.25 kg/cmq)

Electrical equipment

General: flywheel magneto 27 W 6 poles.
Fuse: 8 Amp.
Battery: 6V, 8 Ah

POSITION	USE	No.	CHARACTERISTICS		
			ELECTR. DATA	BULB	SOCKET
Head lamp	dazzle and anti-dazzle light	1	6 V - 25/25 W	Spherical	BA 20 d
	pilot light	1	6 V - 5 W	Festoon	S 8,5/9,5
Rear light	number plate light/stop light	1	6 V - 3/15 W	Spherical	BAY 15 d/18
Speedometer	speedometer light	1	12 V - 2,5 W	Cylindrical	BA 9 s

NOTE. - To avoid possible burning out of bulbs, do not under any circumstance switch ligths on when engine is running unless battery is properly connected.

world

Lambretta

organization

Lambretta

LAMBRETTA CONCESSIONAIRES LTD

TROJAN WORKS - PURLEY WAY - CROYDON - SURREY

INNOCENTI

SOC. GENERALE PER L'INDUSTRIA METALLURGICA E MECCANICA

MILANO ROMA NEW YORK PARIGI LONDRA CARACAS