MAINTENANCE BOOKLET

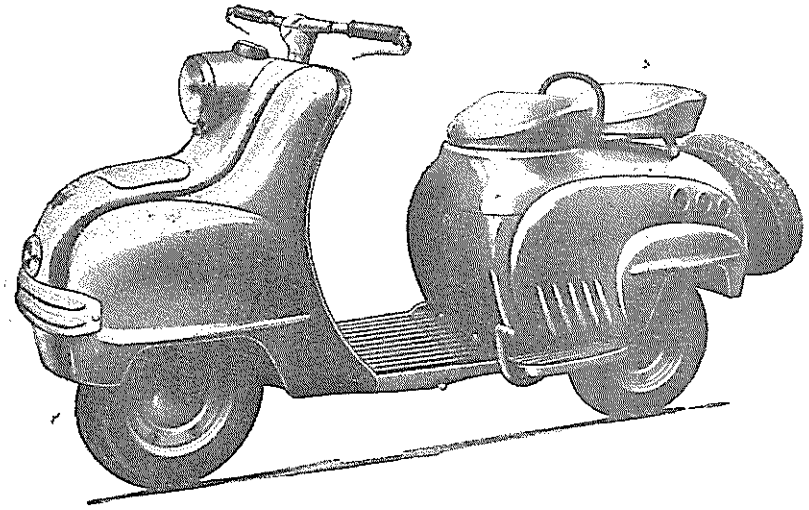
TERROT

SCOOTERS

125 ccs

type VMS 3

DISTRIBUTORS



SCOOTER (Type V.M.S. 3)

CARE BEFORE FIRST USE

Close petrol-cock and fill up with a mixture of petrol and CASTROL TWO STROKE SELF MIXING 40 in the following proportions :

1° When using cap-measure of can of Self Mixing 40.
Up to 1.250 miles : 16 capfuls per gallon.
After 1.250 miles : 11 capfuls per gallon.

2° When using measure supplied with tool kit
Up to 1.250 miles : 10 capfuls per gallon.
After 1.250 miles : 6 capfuls per gallon.

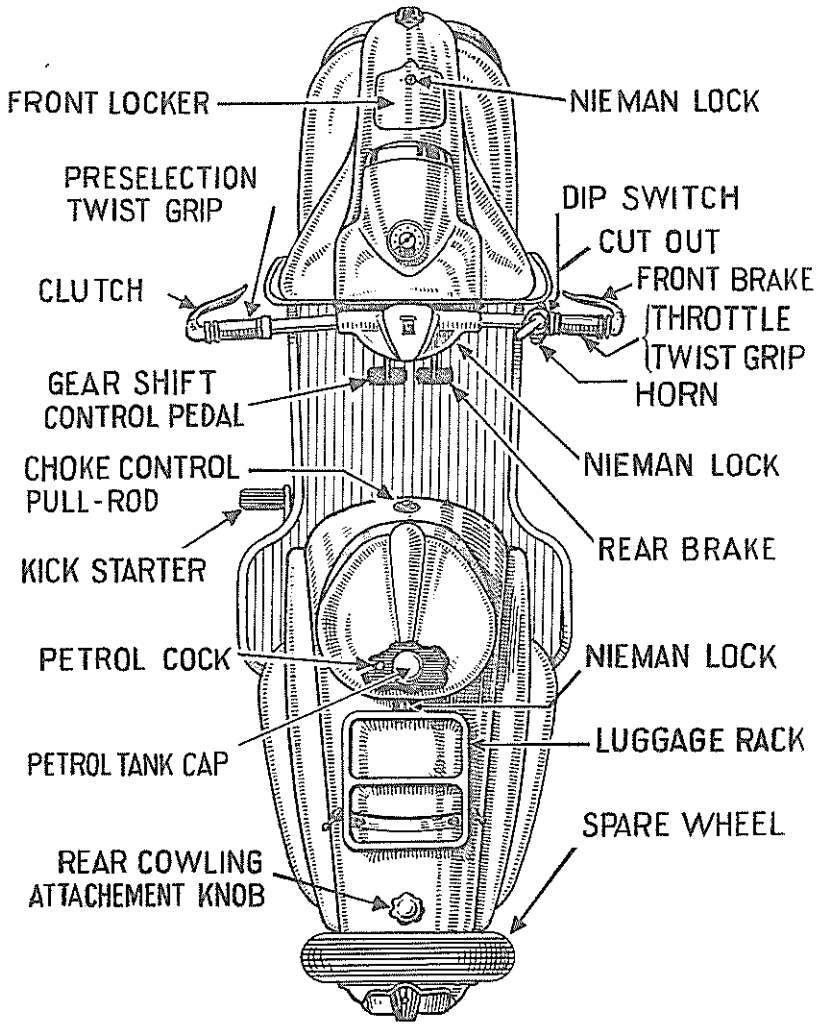
During hot weather, increase doses by one to two capfuls per gallon according to temperature.

NOTE : Failing TWO STROKE SELF MIXING 40, use CASTROL XXL (SAE 40) in the following percentages :

Up to 1.250 miles	8 %
After 1.250 milles	6 to 7 %

For first use, it is better to employ ordinary petrol rather than higher octane mixtures ; never use petrol without oil as otherwise the engine would not be lubricated at all.

Lubricate everywhere as per instructions of Chart (except wheel hubs).



RUNNING IN.

It is of the utmost importance to spare the engine when new ; we divide this running-in time into three periods :

Up to 125 miles approximately : never exceed 25 mph
Up to 450 miles approximately : never exceed 30 mph
Up to 600 miles approximately : never exceed 37 mph

After the first 600 miles the engine can be run progressively faster, but do not try to reach top speed ; however short bursts are allowable during this period provided they are not extended beyond a few hundred yards.

When the first 600 miles have been covered, drain the gearbox and refill — as per level — with CASTROL GRAND PRIX (SAE 50).

STARTING OFF FROM COLD.

Before starting up the engine, declutch to the full and kick over once or twice. The object of this is to free the clutch plates and to ease the first gearshift ; it is particularly recommended in cold weather.

Open up the petrol (cock is located under saddle) and pull out the choke pullrod 'S'.

Operate kick-starter, **the throttle twist-grip being closed ;** the engine should start. After the engine has been going for some little while, the choke will cut out **automatically** when the throttle is opened out.

Never push the choke pull-rod back by hand, as you will probably make it bind by so doing.

STARTING UP WARM.

Never use the choke, or you will have considerable difficulty in starting engine.

PRE-SELECTIVE GEARBOX.

This is the greatest stride forward which has been made on any two-wheel vehicle for many a long year — pre-selection eases driving immensely. Here are its three main points :

— Preparation **in advance** of the next gear you consider you will be needing.

— Actual gearshift, when the time comes, simply by pushing down the left foot pedal.

— Instantaneous return to neutral whatever be the combination of gears engaged and pre-engaged.

DESCRIPTION OF SYSTEM.

The gearshift control consists of :

1° The left hand twist-grip. This grip can occupy four positions : Neutral, first, second and third speeds.

2° The left foot pedal. Whilst the twist-grip serves to 'select' the next gear wanted, the pedal actually declutches and passes it.

NOTE : Pre-selection by means of the twist-grip does NOT engage anything whatsoever ; you can twist the grip about in all positions while the engine is running without the slightest risk.

DRIVING OFF.

Before (or after) starting engine, turn the twist-grip until the sign "1" appears on the dial in centre of handlebars ; no declutching is needed.

With the engine idling, push the left foot pedal down full ; you now proceed just as with a car : accelerate and lift left foot up gradually.

For beginners, or in certain cases, e.g. when it is necessary to have both feet on the ground, you may use the ordinary clutch lever which still subsists at left of handlebars.

TO CHANGE UP.

As soon as off, and whilst the machine is picking up speed, twist the grip into position for 2nd gear (the figure 2 appears on dial) — once again, this does not engage the 2nd speed ; but merely "pre-selects" it. When speed is sufficient push left foot pedal down firmly and let go : You are in second gear.

As for any other gearshift, throttle must be cut during actual shift.

As before, and as the machine picks up in 2nd gear, pre-select the 3rd : when speed is sufficient, push pedal down and you are in top.

CHANGING DOWN.

When running in top, always twist grip on to position "2". If, then, for any reason : slowing down, traffic jam, cornering, steep hill, you were to need the 2nd gear, just push your left foot down... that's all !

Similarly for passing from 2nd to 1st, and from 1st to neutral.

TO STOP.

If when running in top, 2nd or 1st, you wish to stop : just pre-select neutral. When the actual time comes to stop, push your foot down and the machine finds itself in neutral.

As will be seen from the above, it is clear that this pre-selective gearbox increases ease of driving more than any other recent improvement.

LUBRICATION CHART

EVERY **300** MILES

- **B** Front suspension
- **C** Suspension arm. } Castrolease GL
- **C** Suspension pivot. }
- **G** Chain..... Castrol XXL

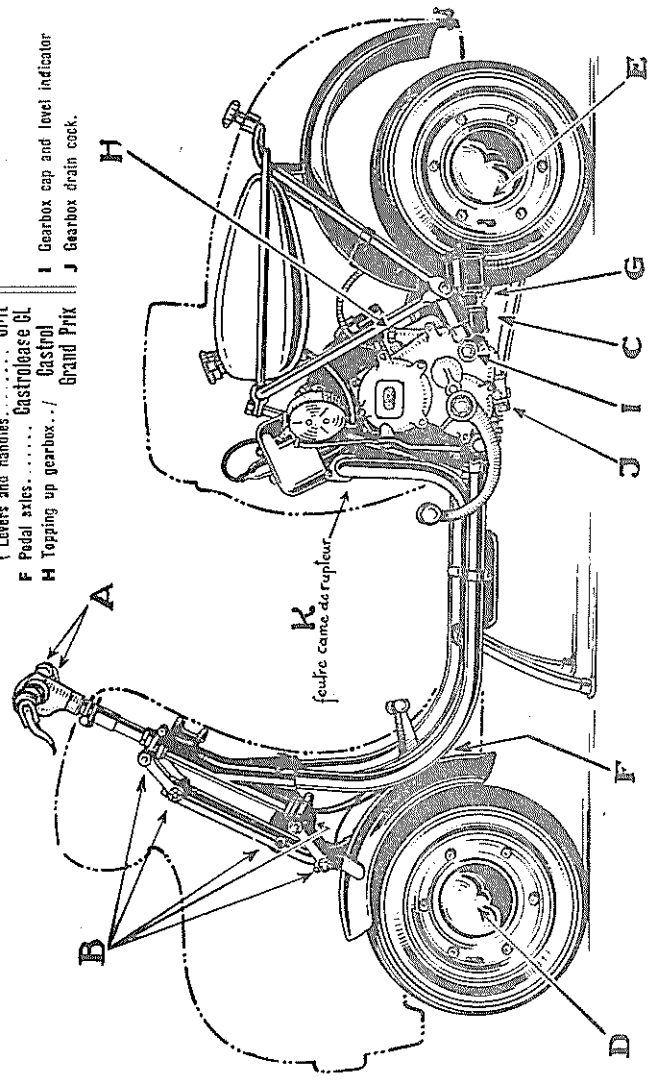
EVERY **600** MILES

- **A** Cables... } Castrolease graphited
- **A** Levers and handles..... } Oilit
- **F** Pedal axles..... Castrolease GL
- **H** Topping up gearbox.../ Castrol Grand Prix

EVERY **1.200** MILES

- **D** Front hub ... } Castrol Spheerol S.
- **E** Rear hub ... }
- **K** Breaker cam foll..... Oilit
- **I** Gearbox cap and level indicator
- **J** Gearbox drain cock.

NOTE : To reach the grease nipples of the upper swiveling axles of the fork, it is necessary to remove glass of headlamp.
The lower swiveling axles are more easily reached when the scooter is on its side.



WHEN GOING DOWNHILL

Never coast downhill by declutching, avoid free-wheeling in neutral.

TO STOP ENGINE.

A cut-out switch is provided on right side of handlebars.

MECHANICAL MAINTENANCE

CLUTCH.

The clutch lever on the handlebars must operate freely before starting to disengage, a play of up to 2/16" is necessary. An adjustment screw is provided to this end on the engine mounting plate. If these instructions are not followed, clutch trouble is liable to ensue ; clutch trouble can indeed usually be traced to this particular cause.

DISMANTLING OF CLUTCH.

Remove inspection cap from clutch housing. Unscrew nut provided on engine shaft end after having removed the thrustrod bearing the clutch stop.

It is strictly recommended never to use a hammer on the spanner whilst preventing the engine from turning by holding the flywheel, since otherwise the crankpin may be damaged.

The discs, so freed, can be easily removed.

When reassembling, the driving drum should turn freely on its bushings. Any abnormal friction would prevent the smooth working of the clutch.

DECARBONISING.

Remove carbon deposit on cylinder ports and from piston head every 1.250 miles or so. Also clean the silencer which might cause overheating of engine if clogged.

CONNECTING ROD ASSEMBLY.

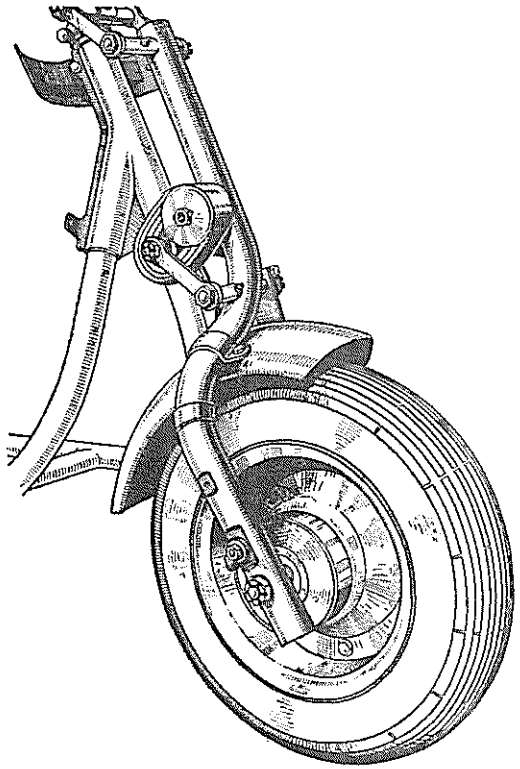
To dismantle connecting rod and crankpins it is advisable to apply to TERROT Agents who alone have at their disposal the necessary tools to carry out the job properly.

COOLING.

The engine is air-cooled by forced draught from a fan whose blades are rooted in the flywheel magneto. After having removed the sparking plug, remember to replace moulded rubber cap since otherwise there would be a loss of cooling efficiency.

FRONT SUSPENSION.

The suspension arm is mounted on girder forks and Neiman rubber dampers.



ADJUSTMENT

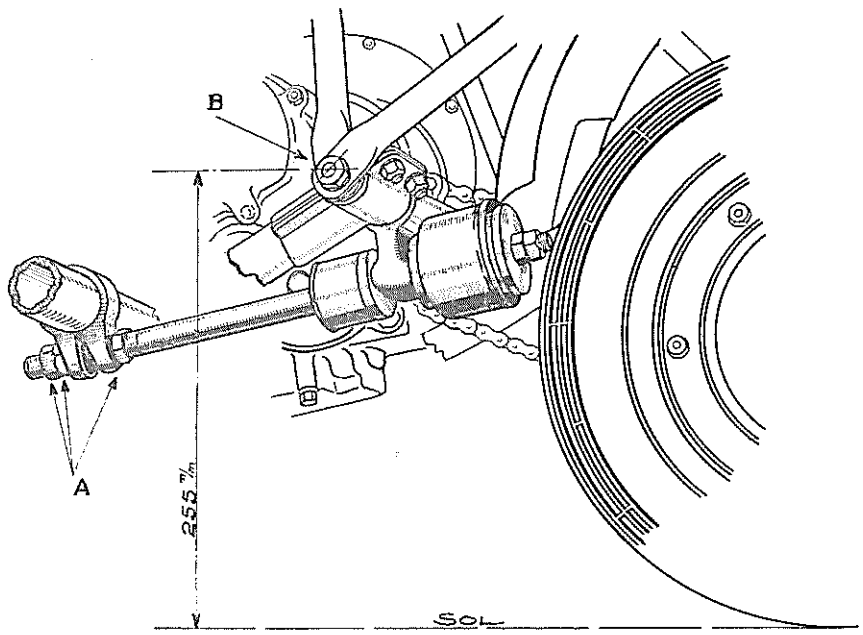
The adjustement of the front fork is obtained by acting separately on each of the articulation spindles.

1" Loosen the two nuts on the spindle.

2" Act on square end of spindle until the adjustment washers turn freely.

3" Block the two nuts.

IMPORTANT : After blocking, make quite certain that adjustment washers turn freely.



REAR SUSPENSION.

This consists of a swinging arm and rubber dampers. Adjustement is by means of nuts and lock-nuts 'A'.

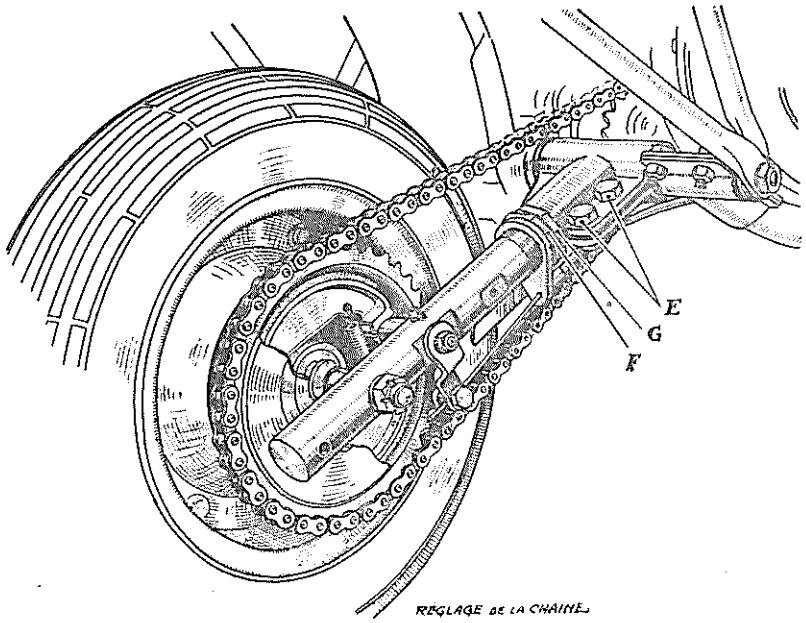
IMPORTANT : The rear suspension should be so adjusted that when the scooter is bolt upright, with no one on it, the distance from swivel 'B' to the ground should be 10" (exactly 225 mms. i.e. 10.04").

FRONT BRAKE.

Consists of two 5" shoes. Adjustment is by means of the stop acting on the control cable.

REAR BRAKE.

Of the classical two shoe type, drum diamatre 5". Adjustment is by an adjustable stop located on the rear suspension arm.



REGLAGE DE LA CHAINE

Make certain that the linings of the brake shoes are free from oil which might penetrate owing to over-lubrication of hubs. If such were the case, clean them well in petrol first and dry thoroughly before refitting.

CHAIN.

Oil the chain frequently with a brush dipped in CASTROL XXL. Every 1.250 miles the chain should be removed and soaked in kerosene, after softening of the dirt and grit and when the links become unstiffened, stretch the chain flat and rub with a hard brush ; rince in kerosene, dry and grease again before refitting.

Adjustment of chain. — Loosen both bolts of the supporting connection of shaft E. Loosen lock-nut F and turn nut G ; tighten the bolts E and the lock-nut F whilst, at the same time, maintaining the nut G. Two special wrenches are provided in the tool-kit for this adjustment.

IMPORTANT : Check the tension of the chain by swinging the rear suspension up and down. At no point of the swing should the links be stretched beyond play.

HUBS.

The front and rear hubs are mounted on ball bearings and amply lubricated on assembly.

Whenever dismantling the wheels, make sure that they are in good condition and grease with **CASTROL SPHEEROL S.**

WHEELS.

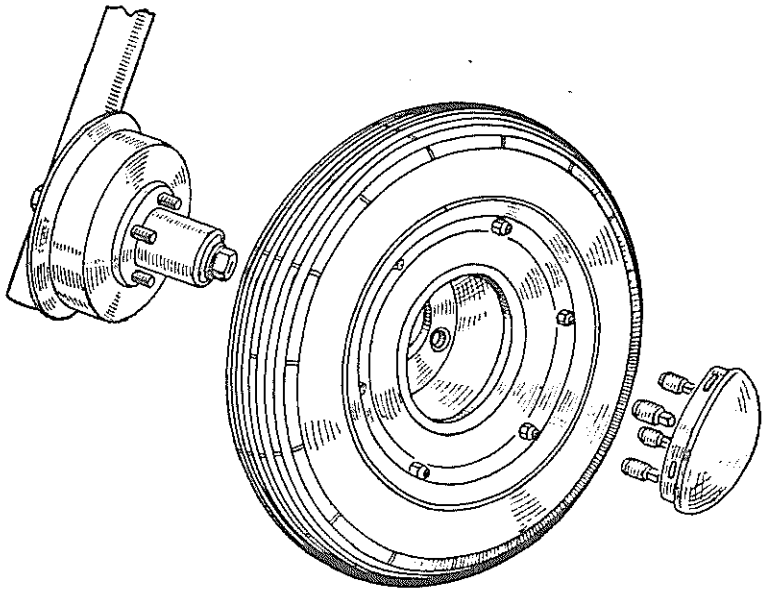
Removal of wheels.

1° Spare wheel :

To remove spare wheel, unscrew nut in centre of wheel-cover and remove same, at the same time taking care to disconnect tail lamp wire. Unscrew the three central nuts and remove spare wheel.

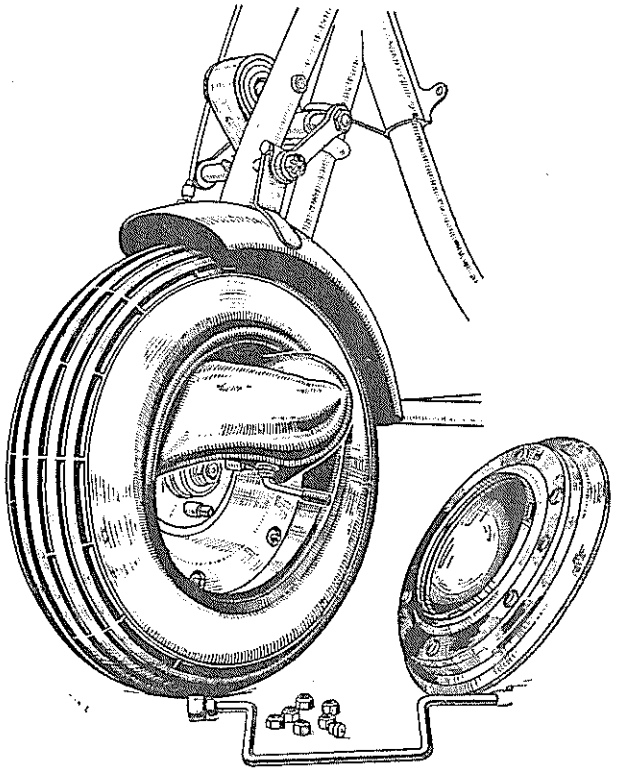
2° Front and rear wheels :

First take away the hub-cover by using a screw-driver as a lever between the flange and the cover. Unscrew the four nuts of hub casing.



TO REMOVE TYRES.

The wheels consist of two half-flanges, one of which is fixed and the other removable. All that is necessary, then, is to unscrew the six nuts by means of the brace provided and to remove the half-flange and the inner tube. It is always advisable to sprinkle the inner tube with talc powder before replacing it.



TYRE PRESSURE.

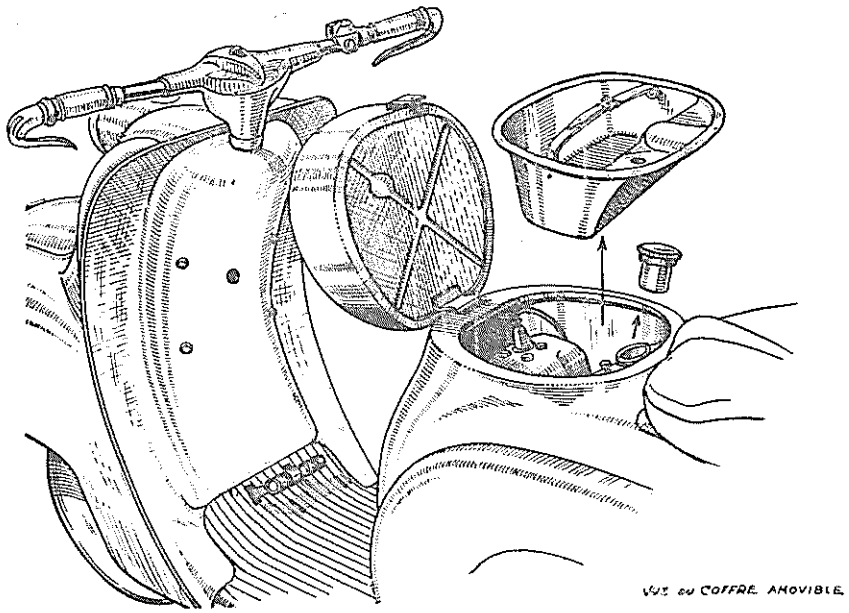
Avoid being under-inflated.

Keep as near as possible to the following pressures. Tyres 3.50 X 8

Front	18 lbs
Rear solo	25 "
Rear with passenger	30 "

TOOL LOCKER.

The saddle, hinged at front, clears the locker when swung forward. The bin is removable and gives easy access to all upper parts of the engine.



VUE DU COFFRE AMOVIBLE

ADJUSTMENT OF HEADLIGHT.

This adjustment is carried out by means of the screw provided under the optical system. To lower the beam, tighten screw ; to raise, loosen.

SPARKING PLUGS.

The electrode gap should be between 20 to 24/1.000". If, through wear, the gap becomes greater, act on the side electrode and never on the centre one.

FLYWHEEL MAGNETO.

The tungsten contacts must always be perfectly clean and should be attended to every now and again, either with petrol or else a penknife ; but care must be taken never to scratch them. Whilst about it, remember to put a drop of oil on the felt of the breaker cam.

DISMANTLING.

Release the rotor attachment nut, preferably by means of a closed wrench. The attachment nut serves to pull the flywheel free.

IMPORTANT : As soon as the rotor has been removed, arm the magnets by connecting both poles of each by soft steel plates ; these plates should have been prepared in advance.

To remove the stator, it is necessary first to remove the ignition terminal. When dismantled, the stator should always be kept inside the rotor.

When reassembling the flywheel, set the contact gap at 16/1.000".

Bring the piston to the ignition, point i.e. 24/100" below the upper dead centre. Taking care not to let the engine turn, bring the mark which is etched between the rotor arms opposite the pointer on the stator. Lock the central nut.

At the ignition point, a piece of cigarette paper should move freely between the contacts.

NEIMAN LOCKS.

Provided at rear of steering column, and at both front and rear lockers.

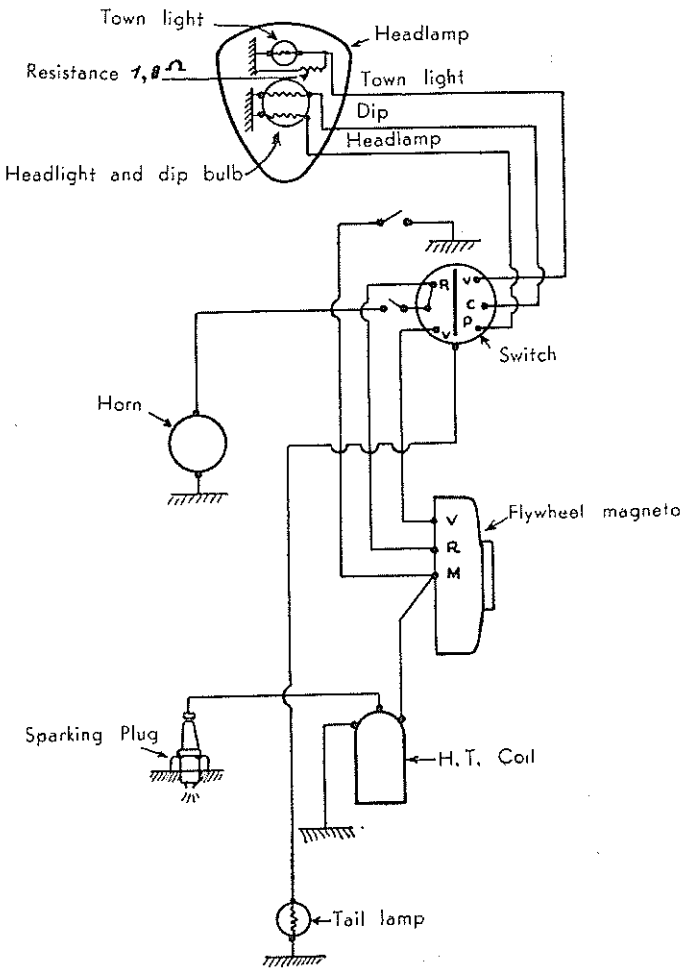
REAR COWLING.

The whole of the rear cowling swings forward, thus giving excellent access to all principal parts : engine, transmission, rear suspension.

All that is necessary is to loosen completely the ball-nut at rear of cowling, then to loosen and remove the screw-knob behind the luggage-rack.

Push the spare wheel up ; the whole of the cowling then swings clear on its floorboard swivel.

ELECTRIC WIRING DIAGRAM FOR TERROT SCOOTER VMS 3



SPECIFICATIONS

ENGINE : 2 stroke, 125 ccs.

Stroke	53.5 mms
Bore	55 mms
British Treasury rating	1,5 HP
Engine speed	4.500 rpm

ADJUSTMENT OF IGNITION TIMING :

Maximum advance (6 mms) below upper dead centre	.235"

CARBURETTOR : with semi-automatic choke :

Make	GURTNER
Type	H 17 G
Jets	32-31
Flap	10

GEARBOX :

Number of speeds	3
Gear reduction ratios	
1st	2.2 to 1
2nd	1.45 to 1
3rd	.96 to 1

TRANSMISSION :

Final reduction ratios	
1st	11.3 to 1
2nd	7.2 to 1
3rd	4.82 to 1

WHEELS :

Removable half-flange	
Front brake	ø 5"
Rear brake	

TYRES :

Front	3.50 × 8
Rear	

PETROL TANK :

Approximate contents	2 gallons

WEIGHT OF MACHINE :

Empty	200 lbs

CONSUMPTION :

Fuel Mixture	a good 100 mpg

BREAKDOWN CHART

I. THE ENGINE FAILS TO START

Petrol cock and Choke (S) are in position : OPEN

- **The plug sparks regularly**
  - Engine gummed.
  - Air leak.
  - Cable Jamming.
  - Ignition point wrongly adjusted.
  - Jet clogged.
  - Float punctured.
  - Engine flooded.
  - Starting speed insufficient.
- **The plug does NOT spark**
  - Clogged or defective plug.
  - Plug-lead cut or damaged.
  - Platinum points dirty or badly ajusted.
  - Breaker skid damaged.
  - Moisture in flywheel magneto.
  - Condenser fused.
  - Defective ignition coil.

Petrol cock and Choke (S) are in position : OPEN

- **Cock in normal working order**
  - Tank empty.
  - Pipes choked.
  - Tank cap vent hole clogged.
  - Cock-strainer clogged.
  - Needle seized.

The engine misses

- **Steady sparking**
  - Too much oil in fuel.
  - Too much Petrol.
  - Water in Petrol.
  - Lack of Petrol (clogged jet).
  - Float punctured.
  - Needle badly ground or jamming.
  - Retarded ignition.
- **Irregular sparking**
  - Electrodes badly adjusted.
  - Faulty insulation.
  - Sparking plug lead damaged.
  - Breaker spring broken.
  - Faulty condenser.
  - Dirty or faulty sparking plug.
  - Platinum points in poor condition.
  - Breaker jammed.

The engine back-fires.

- **Exhaust smoke light blue**
  - Too much air, mixture too poor.
  - Jet too small.
  - Breaker out of timing.
  - Air leaks.

Explosions in exhaust pipe

- **Exhaust smoke black**
  - Too much fuel, mixture too rich.
  - Jet too large.
  - Breaker out of timing.
  - Carburettor flooded.
  - Needle seizing.
  - Float punctured.

II. THE ENGINE DOES NOT RUN SMOOTHLY

The engine "knocks" or is otherwise noisy	Clicking noise	Piston slaps. Too much air. Engine carbonised.
	Clear pinking noise	Too much advance. Self-ignition.
	Muffled sound	Too much Petrol.
	Sharp noise	Play in piston ring grooves, or excessive play in other working parts.
	Heavy knock	Flywheel working loose.
The engine does NOT give full power	Constantly	Insufficient compression. Piston rings broken, worn or gummed. Cylinder or piston worn out. Leaky gaskets. Air leaks. Choked pipes and silencer. Self-ignition. Faulty sparking plug. Overheating of engine. Axles binding. Faulty carburation. Chain too tight. Break binding. Gearbox binding.
	Now and then	Vent hole in tank cap partially clogged. Insufficient fuel feed.

ÉTABLISSEMENTS

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capital de 630.000.000 de francs

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