

A M B A S S A D O R M O P E D
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INSTRUCTION BOOK

INTRODUCTION

The AMBASSADOR Moped is simple to ride and easy to maintain and, with a little understanding, will provide many thousands of miles of trouble free operation.

The object of this handbook is to instruct the learner in the correct use of the various controls and to direct the owners maintenance along the most useful channels.

CONTROLS

LEFT HANDLEBAR. Clutch lever and gear control twist grip. Is in neutral when 0 is visible in square aperture in body. Withdraw clutch and twist forwards to engage first gear. When road speed is high enough, normally 12-15 MPH, change into top gear by withdrawing clutch and rotating grip towards rider through neutral as far as it will go. Do not attempt to engage gear whilst stationary with engine stopped.

RIGHT HANDLEBAR. Front brake lever and throttle twist grip. Rotate towards rider to increase engine speed. Should be momentarily closed when changing from bottom gear to top. Also on right handlebar, light switch, horn push and engine cut-out to stop engine when throttle adjustment is set to allow running when grip in closed position.

REAR BRAKE. Operated by back pedalling.

CHOKE CONTROL. A small rod protruding up through the frame beneath the rear right hand side of the petrol tank. Push down as far as possible when starting cold engine. Rod rises automatically as throttle is opened.

FUEL TAP. Normal ON position when handle pointing downwards. OFF (Z) horizontal to the right. RESERVE(R) horizontal to the left.

LUBRICATION

ENGINE. The engine is designed to run on a mixture of petrol and oil in a ratio of 20-24 parts petrol to one part oil (see lubrication chart.) Suitable fuel can be purchased ready mixed from special dispensing machines at most Filling Stations. If the mixture is prepared by hand it should be mixed in a separate container. If this is not possible, turn off petrol tap, pour in the oil, followed by the petrol and shake the machine fairly violently from side to side before re-opening petrol tap.

(2)

GEARBOX. Every 500 miles or so, remove the gearcase filler plug and gearcase drain plug and pour in an SAE 30 oil until it begins to run out of the level plug hole. Every 1000 miles remove the above plugs and also the gearcase drain plug and allow all the oil to drain off (this is best done when engine is hot); replace drain plug and re-fill as above. Check occasionally that vent hole in filler plug is clear.

REAR CHAIN. Apply oil can occasionally allowing oil to run on to the edges of the side plates where they rub together. This should be done on the inside edges, i.e., so that movement of the chain round the sprockets tends to throw the oil more deeply into the joint.

GENERAL. Any point at which relative movement occurs will benefit from a little oil. Handlebar controls, cable ends, etc. Wipe off surplus oil to prevent damage to clothing.

RECOMMENDED LUBRICANTS

ENGINE

Castrol Two Stroke Oil
or Castrol XL

Shell 2T Petroiler Mix
Shell 2T Two-Stroke Oil

Esso Two Stroke Motor
Oil or Essolube 30

Mobilmix TT or
Mobiloil A

B.P. Zoom or
Energol Two-Stroke Oil

GEARBOX & OIL CAN

Castrol XL

Shell X-100-30

Essolube 30

Mobiloil A.

Energol SAE.30

STARTING FROM COLD

Ensure petrol mixture as specified in the fuel tank and the supply tap in the ON position. Push the choke rod down until it will go no further and open the throttle about one quarter or until you can feel some resistance which will be the throttle starting to lift the choke. Set one of the pedals at the top of its stroke (withdrawing the clutch will enable this to be more easily accomplished). Push it down smartly with the foot and the engine should start. Repeat the process if it fails to start. When started allow to run for half a minute or so, or longer if the weather is cold, before attempting to move off.

(3)

STARTING WITH WARM ENGINE

Proceed as already described but do not touch the choke rod. If the choke is used when engine warm, excess petrol is likely to be drawn into the crankcase and it will be necessary to drain this off by removing the crankcase drain plug and rotating the engine a few times by means of the pedals. Replace drain plug, ensure choke rod in "up" position and operate starting crank.

STOPPING ENGINE

Throttle adjustment is best set so that engine continues to 'tick over' when twist grip is in closed position. To stop the engine, depress the small button on the switch on the right handlebar, keeping this pressed down until the engine has ceased to revolve. Always turn fuel tap to OFF position when leaving the machine for any length of time.

RUNNING IN

The manner in which a new machine is handled during the early stages of its life has a great bearing on its subsequent behaviour, and if it is desired to obtain long life and good performance from your Moped engine the following directions should be followed as closely as possible.

For the first 100 miles the throttle should never be more than half open in either gear. It is a good plan to mark on the stationary twist grip body in pencil the $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$ throttle positions using the joint line on the rubber grip as the moving pointer.

Remember it is as harmful to hang on to the top gear when the engine revolutions have fallen to a speed at which they will not propel the machine forward steadily and sweetly as it is to over rev. the engine. Half throttle on a level road in top gear will give about 25 M.P.H. and on this throttle opening there will be an increase or decrease of speed when hills are encountered and generally it will not be necessary to take any action. The occasional hill might necessitate using first gear, but remember you must be prepared to travel much slower when this gear is engaged and a change to top gear should be made as soon as conditions permit. As the mileage increases occasional bursts of $\frac{3}{4}$ throttle and over may be indulged in, but we do not recommend prolonged use of full throttle until 200 or more miles have been covered.

PERIODIC ADJUSTMENTS

REAR CHAIN. The rear chain is in correct adjustment when there is $\frac{3}{4}$ " up and down movement in the centre of the bottom run of the chain when only the weight of the machine is on the wheels. To adjust the chain, slacken the wheel spindle nuts and set the chain side of the wheel in

(4)

correct adjustment either by pulling it back or by rotating the cam type adjuster on the wheel spindle. Ensure cam bearing against the peg in the fork end and just pinch up the nut. Note position of cam and set opposite cam in same position, tighten nuts watching that cams do not move during this operation. Check chain finally.

REAR BRAKE. Wear on the brake linings can be taken up by screwing forward the knurled nut on the end of the brake operating rod. Movement of the wheel to adjust the rear chain will also call for adjustment of the brake rod.

FRONT BRAKE. A normal cable adjuster and lock nut at the hub end of the operating cable enables wear on the linings to be taken up.

CLUTCH. There are two points of adjustment, the cable and the clutch unit in the engine and this latter (which is only likely to require touching at very infrequent intervals) must be correctly set before cable adjustment can be effective. Ensure gears in neutral, slacken clutch cable adjusters and remove the rubber plug in the right hand engine cover, thus exposing the clutch adjusting screw. Rotate the screw in a clockwise direction until turning the pedal cranks just fails to rotate the engine. Now take up all slack in the cable and rotate clutch screw anti-clockwise for $\frac{1}{4}$ turn. Replace rubber plug and adjust clutch cable to provide $\frac{1}{16}$ " to $\frac{1}{8}$ " free movement of the lever.

CHANGE GEAR CABLE. An adjuster at the engine end of this cable allows adjustment to be made so that when top gear is engaged the cable is just slack.

THROTTLE CABLE. The adjuster on the top of the carburetter should be used to provide a slow tick over when the twist grip is in the closed position.

CONTACT BREAKER POINTS. These should only require cleaning and adjustment every 2500 miles or thereabouts. Remove the left hand pedal crank and engine casing and rotate the engine until the contact breaker is accessible through one of the apertures in the flywheel and in the position in which the points are fully open. Moisten a lint-free rag with neat petrol (not petroil) fold over a pen knife blade or similar tool and insert between the points to clean them. Check the gap. It should be between .012" - .015". To adjust, slacken the bracket securing screw and turn the adjuster screw in a right or left hand direction as required. Tighten the bracket fixing screw and re-check the gap. When replacing the engine side cover, place the rubber sealing ring into the pedal shaft housing and persuade the ring over the shaft with the cover.

(5)

SPARKING PLUG GAP. At approximately 500 mile intervals remove the sparking plug (the lead pulls off and tubular plug spanner can be passed through hole in left hand engine cover). Scrape or brush off all carbon and set the points to .018" - .022" by bending the tab attached to the plug body. Never bend the central electrode. The correct replacement is a Lodge CC.14

CARBURETTER. Apart from internal cleaning and washing and re-oiling the air filter occasionally, the carburetter should require no maintenance. Remove the filter by slipping off the spring clip holding each side to the carburetter, remove the plastic plug from the underside and immerse the filter in clean petrol, swill it around, then remove and allow to dry for a short while. Dip it in petroil mixture, wipe the outside, replace plastic plug and re-fit, ensuring that the rubber scaling ring is between filter and carburetter.

There is a fuel filter fitted to the petrol tap and a further filter beneath the fuel pipe adaptor on the carburetter top cover, but fine particles may still find their way into the float chamber and possibly into the carburetter jets and upset the air fuel mixture. The main jet screws in to the right hand side of the body and may be removed for cleaning

(by blowing through) without removing the carburetter.

DECARBONISATION. The whole time the engine is running carbon is being slowly deposited in the cylinder head and exhaust port (like the soot in a domestic chimney) and after some 2000 - 3000 miles have been covered there is likely to be a loss of power, overheating and general deterioration in running due to this carbon, which must be removed. The work should preferably be done by an AMBASSADOR dealer or Villiers Service Station but some owners like to undertake the job themselves, in which case a "C" spanner for the exhaust pipe nut, exhaust pipe gasket and

cylinder head gasket should be obtained from your dealer and proceed as follows:-

Pull H.T. Lead from sparking plug. Remove both engine cover panels. Unscrew exhaust pipe nut and bolt holding the silencer to the frame and lift off pipe and silencer as one unit. Remove sparking plug and the four nuts holding the cylinder head to the barrel. Do not lose any of the washers from beneath these nuts. Lift off the cylinder head and the light alloy gasket from the joint face. Rotate engine till piston is in its lowest position. This will enable the carbon to be scraped out of the exhaust port; finally removing loose particles by blowing, brushing or drawing a lint-free cloth through the port. Rotate engine till piston is on top dead centre and carefully scrape carbon from piston crown, wipe clean, push a little way down the bore and wipe off the ring of loose carbon which will have clung to the top of the bore. Wipe joint faces, fit gasket and head, fit washers and nuts and just pinch up each nut, tightening in diagonally opposite pairs; clean, re-gap and re-fit sparking plug.

Before re-fitting exhaust system, remove pipe from silencer and remove also internal baffle from silencer by removing the small screw at the silencer outlet end removing the baffle with pliers. Clean all parts

LOCATING AND CURING POSSIBLE TROUBLE

<u>SYMPTON</u>	<u>PROBABLE CAUSE</u>	<u>REMEDY</u>
Engine fails to start.	No Fuel.	Fill up with petrol.
	Fuel tap in "OFF" position.	Turn on.
	Fuel filters choked.	Remove fuel pipe, turn on; if fuel flows, filter in carburetter.
	Carburetter jet blocked.	Remove and clean.
taps	H.T. Lead faulty.	Hold lead by rubber so that metal end abot 1/8" from cylinder head; operate pedals, large spark should jump across.
examine	Defective Sparking Plug.	Lay Plug on head fins and rotate pedals, spark jump plug; if not, change plug.
should	Carburetter jet blocked.	Remove and clean.
Engine pulls badly or runs unevenly.	Dirty Sparking plug.	Clean or fit spare.
	Choked air filter.	Remove and clean.
Engine Four Strokes	Check H.T. Lead.	See H.T. Lead faulty.
	Carburetter flooding	Clean float chamber.
Engine back fires in silencer.	Main jet loose.	Check float and needle. Tighten.
	Plug fouled.	Clean or fit spare.
Pedals fail to rotate engine.	Insufficient fuel reaching carburetter.	Check filters and jet.
	Clutch slip.	Adjust clutch unit and cable.
	Gear case oil too thick.	Drain and re-fill with SAE.30

