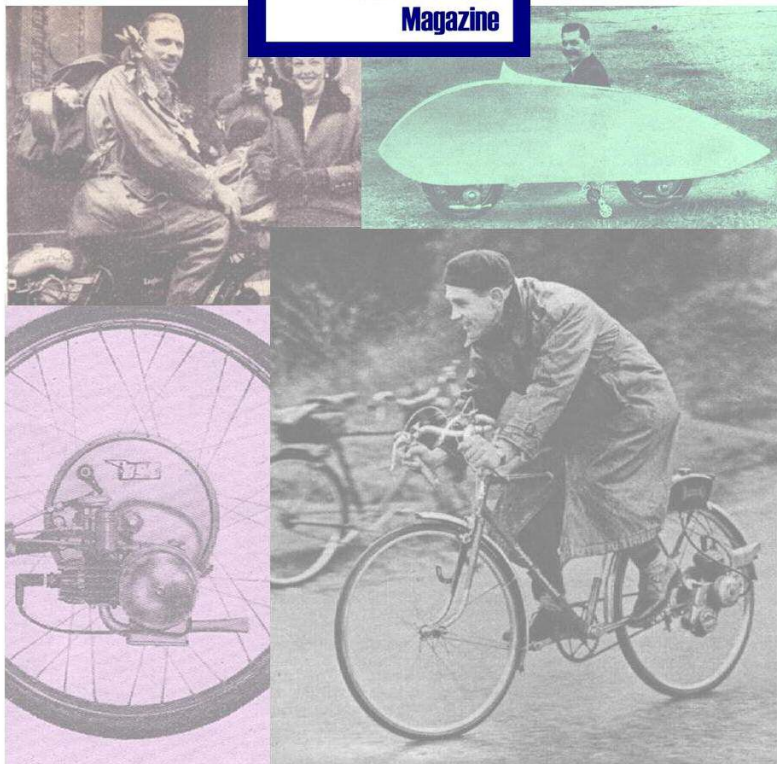


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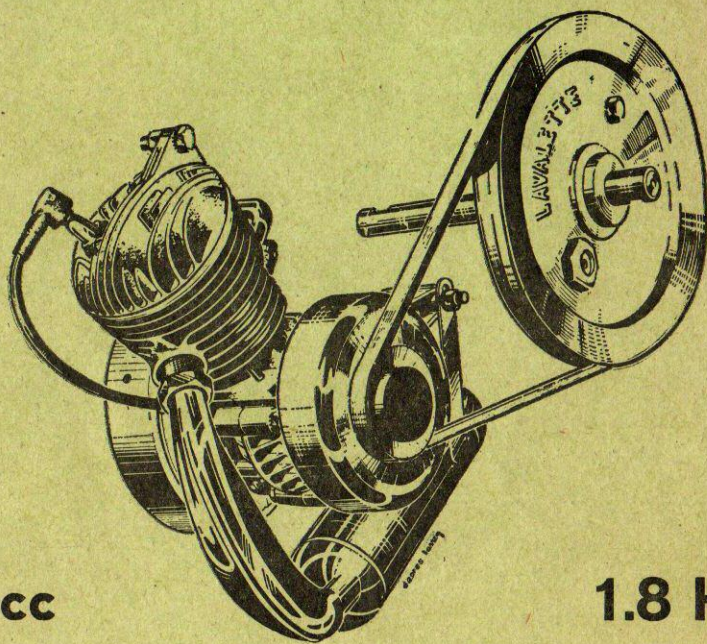
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MAINTENANCE MANUAL FOR LAVALETTE ENGINES

AML

50/2

WITH MULTIMATIC CLUTCH



49 cc

1.8 HP

FOR MOPEDS



A.C. LAVALETTE

32, Av. MICHELET
St-OUEN (Seine)
Tél. : MON. 99-60

INTRODUCTION

Dear Customer,

*You are the happy owner of a moped equipped with a **Lavalette** engine, and, very rightly, you wish to be completely satisfied.*

It is expressly with this intention that this manual is published, in order to make known to you the operation of our engine, and to help you to give it correct maintenance.

Run this engine in with care, as explained further, and you will increase its performance and its life.

The time you will spend in reading this booklet carefully will not be wasted, your engine deserves your care.

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I. TECHNICAL DATA

Cycle : 2 stroke.

Capacity : 49.6 cu.cm.

Bore : 40 mm.

Stroke : 39.6 mm.

Compression ratio : 6,1 to 1.

Power : 1.8 HP.

Speed : 4.800 RPM at 25 mph.

Road speed : 25 mph.

Maximum speed : 37 mph.

Fuel consumption : 155 mpg at 25 mph.

Cylinder head:

In Alpac alloy with semi-spheric combustion chamber and very deep fins ensuring correct cooling. The oblique position of the sparking plug also affords a proper cooling.

Piston:

In light high-silicon alloy with rounded crown.

Cylinder:

In special unlined cast-iron with double gas-flow (treated by self lubricating spongy phosphation).

Connecting rod:

Roller mounted big end, and phosphor-bronze bush at small end.

More recent models have roller bearings at both big and small ends.

Crankshaft:

Special steel, mounted on heavy ball bearings.

Crankcase:

Two separate castings with cooling fins, highly resistant, solid with engine attachment collar.

Carburettor:

Gurtner D 12 with 23 main jet—fitted with automatic cold-start device and air filter.

Ignition and lighting:

Flywheel magneto type VM/BB dynamo output 6v. 10 watts

Gap .45 to .5 mm.

Sparking plug—Bosch W 225 T 1 or

Advance 4.5 mm.

AC 44 L.

Bulbs front 6v .1 amp.

Plug gap .6 mm.

Bulbs rear 12 v .4 amp.

The plug lead must not be shortened as this is a special type incorporating resistance that acts as a suppressor.

II. BEFORE STARTING UP

The engine has been prepared by the Agent and is ready to be started.

Make sure that the petrol oil mixture is correct (see para. V hereafter).

An incorrect mixture can cause a rapid wear of the engine after a very short lapse of time. Never use grade 1 petrol.

Clutch.—The "MULTIMATIC" clutch is centrifugal incorporating sets of weights and a locking device affording the maximum performance of the engine, whilst avoiding the wear of the friction surfaces which start the moped without any pedalling being required. This transmission needs no lubrication or adjustment. The "MULTIMATIC" clutch gives the impression of having two speeds. At approximately 9 mph the locking weight comes into play and the slipping stops. The engine is locked as if in a second gear. As soon as the speed of the moped falls under 9 mph the locking weight is released, the clutch slips again.

III. STARTING UP

To start the engine from cold:

- a) Turn on the petrol.
- b) Push down the automatic choke lever found on top of the carburettor.
- c) Start up the engine:
 - either rotate the pedals forward as a kick starter, the moped being on its stand,
 - or pedal the moped, slowly gathering speed until the engine starts by itself.
- d) Once the engine is running, the throttle is the only control needed for both take off and road speeds.

Remark: When starting up a hill, it is recommended to assist the engine by pedalling.

To disconnect the engine completely and use the moped as a bicycle, unscrew the 14 mm size nut (i.e. sparking plug size) on the pulley, rotate the pulley clockwise and tighten.

IV. DRIVING INSTRUCTIONS

Running-in: A correct operation and long life of the engine require a careful running-in. During the 300 first miles do not exceed 20 mph. Avoid using full openings, moderate bursts are permissible between 300 and 600 miles.

V. LUBRICATION

A) **Mixture:** The oil must be carefully mixed to the petrol. At the ratio of 20 to 1. Always pour petrol first using lower grade petrol for better results.

B) Every 1,000 miles lubricate the pedal shaft with a light oil.

Every 200 miles lubricate throttle and brake cables.

VI. MAINTENANCE

—Check the sparking plug gap every 1000 miles.

The following operations should only be done by officially appointed Lavalette (Paloma) Agents.

—First decarbonizing after 1000 miles, the following every 1500 miles.

—When cleaning the engine great care must be taken to prevent petrol or oil penetrating into the clutch.

Decarbonizing:

—Remove the engine from the moped.

—Take off the exhaust pipe.

—Remove the cylinder head. Use a soft metal scraper (copper or aluminium) to avoid scratching light alloy parts. Clear all round the exhaust ports, combustion chamber in the cylinder head, top of piston.

Blow off all carbon particles.

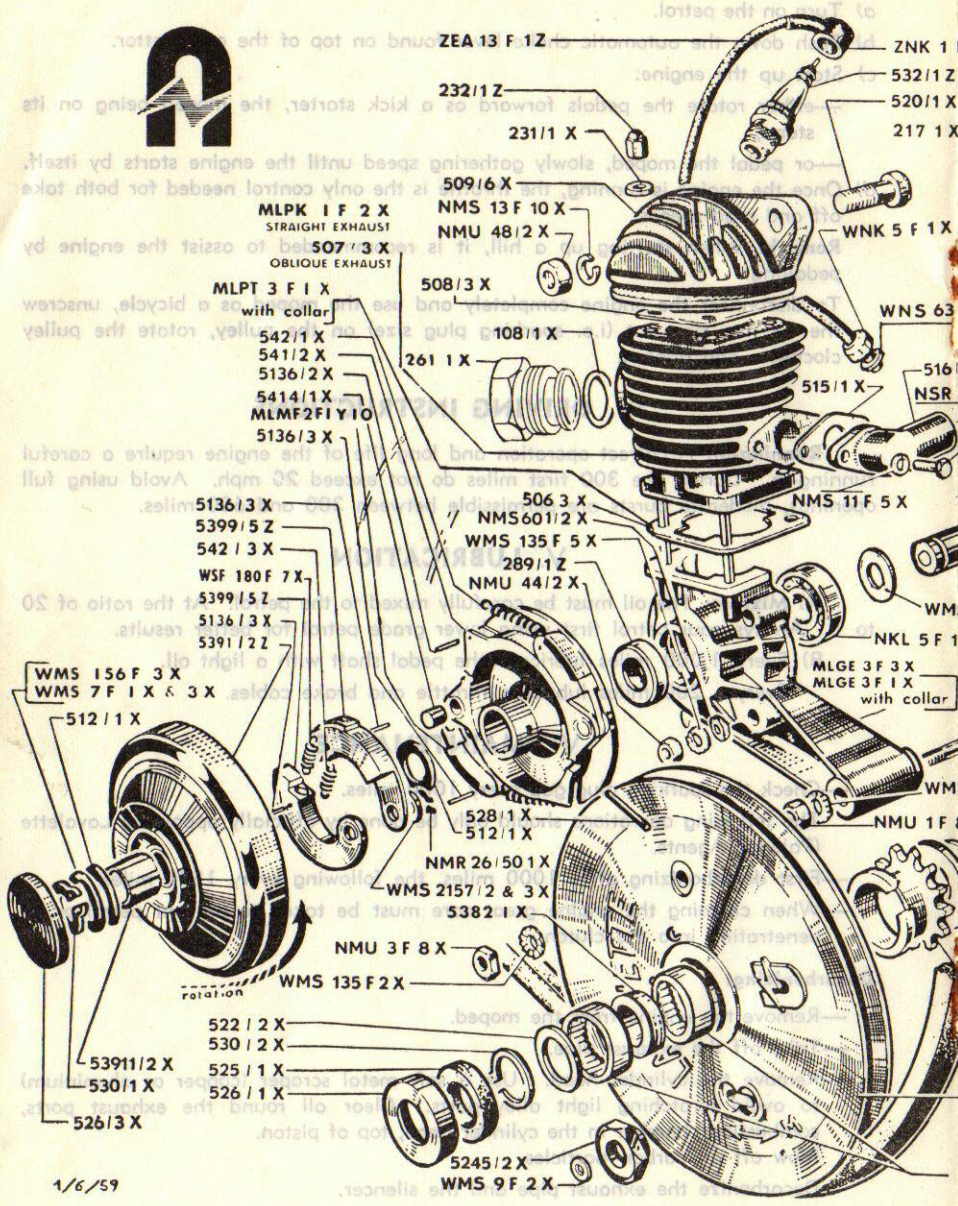
—Decarbonize the exhaust pipe and the silencer.

—Tighten the cylinder studs in the crankcase.

Adjusting idling speed:

Tightening the idling screw on the carburettor increases the idling speed.

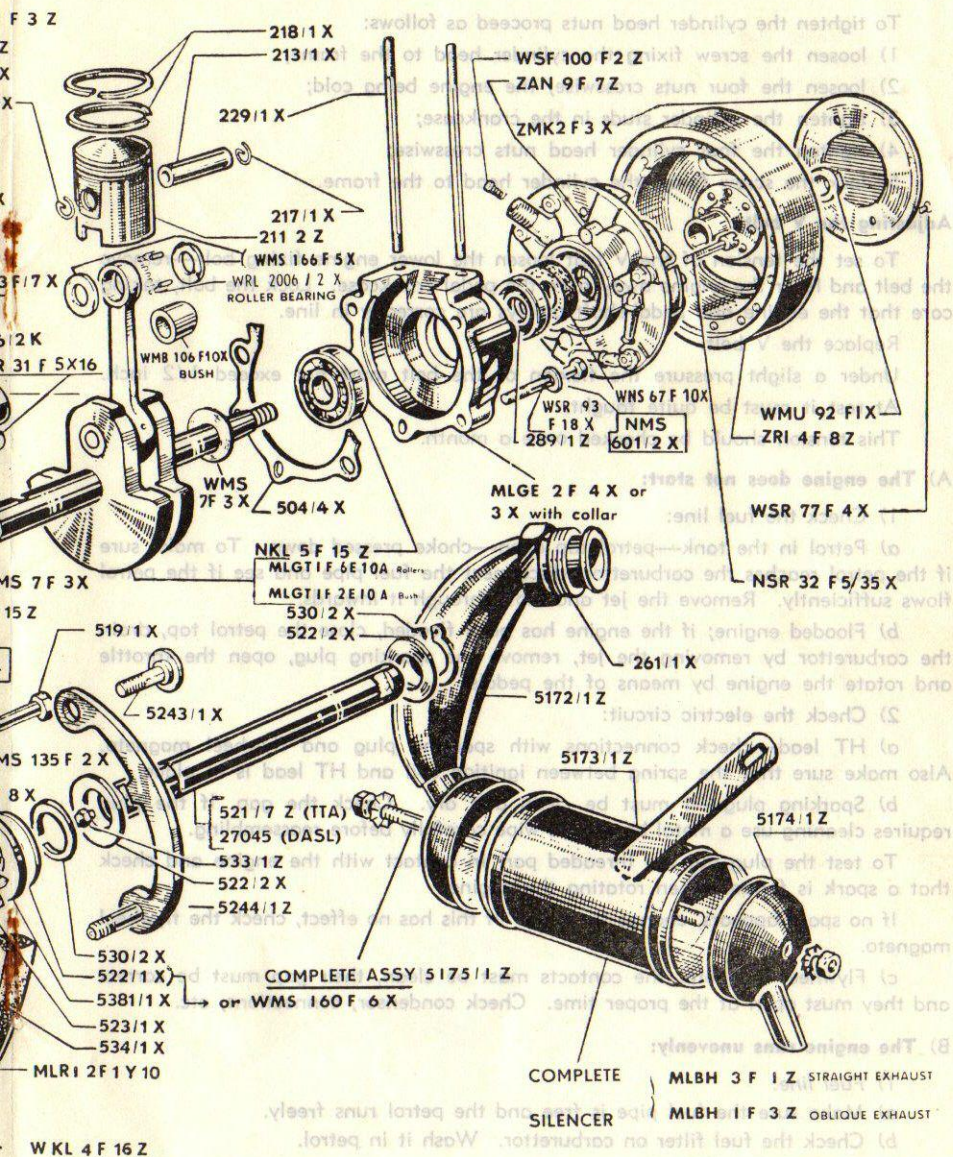
A correct idling speed is essential for correct operation of the Multimatic clutch.



1/6/59

LAVALETTE

Cylinder head:



A.M.L. 50/2

Tightening the engine nuts:

After using the moped, check nuts and screws when the engine has cooled down.

Cylinder head:

To tighten the cylinder head nuts proceed as follows:

- 1) loosen the screw fixing the cylinder head to the frame;
- 2) loosen the four nuts crosswise, the engine being cold;
- 3) tighten the cylinder studs in the crankcase;
- 4) tighten the four cylinder head nuts crosswise;
- 5) lock the screw fixing the cylinder head to the frame.

Adjusting the V belt:

To set the tension of the V belt loosen the lower engine fixing bolt—remove the belt and lever the engine away from the pedal crankcase. Lock the bolt, taking care that the engine and pedal-shaft pulleys are correctly in line.

Replace the V belt.

Under a slight pressure the flexion of the belt must not exceed 1/2 inch.

At rest it must be quite taught.

This tension should be checked once a month.

A) The engine does not start:

1) Check the fuel line:

a) Petrol in the tank—petrol tap open—choke pressed down. To make sure if the petrol reaches the carburettor, disconnect the fuel pipe and see if the petrol flows sufficiently. Remove the jet and blow through it inwards.

b) Flooded engine; if the engine has been flooded, close the petrol tap, drain the carburettor by removing the jet, remove the sparking plug, open the throttle and rotate the engine by means of the pedals.

2) Check the electric circuit:

a) HT lead—check connections with sparking plug and flywheel magneto. Also make sure that the spring between ignition coil and HT lead is in place.

b) Sparking plug—it must be clean and dry. Check the gap. If the plug requires cleaning use a metal brush and wipe carefully before reassembling.

To test the plug put the threaded part in contact with the engine and check that a spark is formed when rotating the engine.

If no spark appears, change the plug. If this has no effect, check the flywheel magneto.

c) Flywheel magneto: the contacts must be clean, their gap must be correct and they must open at the proper time. Check condensor, connections, etc.

B) The engine runs unevenly:

1) Fuel line:

a) Make sure the fuel pipe is free and the petrol runs freely.

b) Check the fuel filter on carburettor. Wash it in petrol.

c) Clean the air-filter if necessary.

d) The carburettor float must move freely.

2) Electric circuit:

Check:

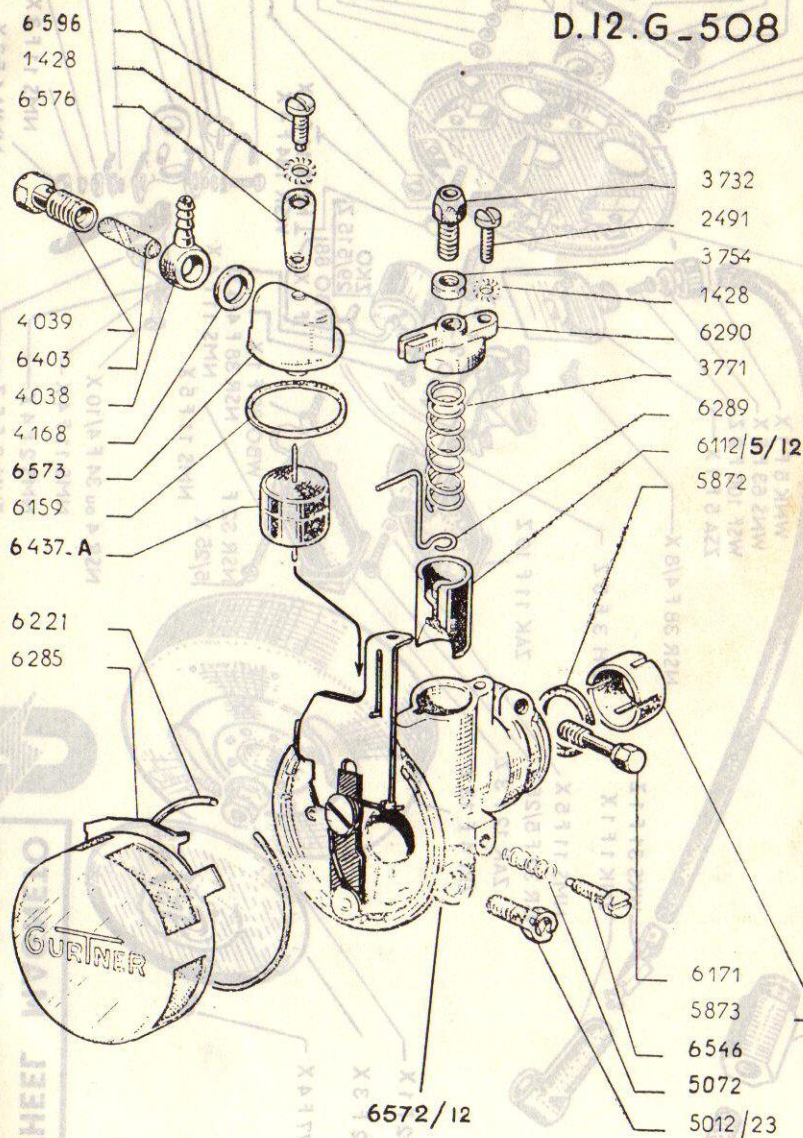
a) Sparking plug gap.

b) Contact gap.

CARBURETTOR

GURNER

D.12.G_508

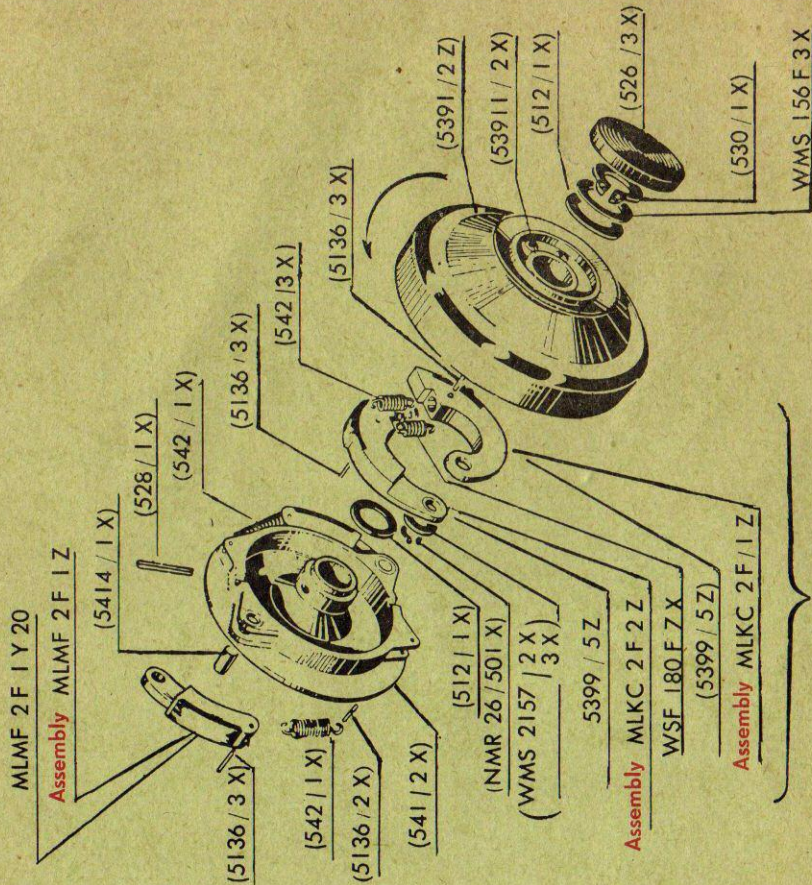


SUPPORT ASSEMBLY
MLKH 3 F / 1 Z



CLUTCH

COMPLETE ASSEMBLY
MKLG 2 F / 1 Z



PULLEY ASSEMBLY
MLRI 4 F I Z

