

## Piaggio - mss\_fly\_50\_4t

WORKSHOP MANUAL

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MSS Fly 50 4T

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MANUAL

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WORKSHOP MANUAL

MSS Fly 50 4T

This workshop manual has been drawn up by Piaggio & C. Spa to be used by the workshops of Piaggio-Gilera dealers. This manual is addressed to Piaggio service mechanics who are supposed to have a basic knowledge of mechanics principles and of vehicle fixing techniques and procedures. Any important changes made to the vehicles or to specific fixing operations will be promptly reported by updates to this manual. Nevertheless, no fixing work can be satisfactory if the necessary equipment and tools are unavailable. It is therefore advisable to read the sections of this manual relating to specific tools, along with the specific tool catalogue.

N.B. Provides key information to make the procedure easier to understand and carry out.

CAUTION Refers to specific procedures to carry out for preventing damages to the vehicle.

WARNING Refers to specific procedures to carry out to prevent injuries to the repairer.

Personal safety Failure to completely observe these instructions will result in serious risk of personal injury.

Safeguarding the environment Sections marked with this symbol indicate the correct use of the vehicle to prevent damaging the environment.

Vehicle intactness The incomplete or non-observance of these regulations leads to the risk of serious damage to the vehicle and sometimes even the invalidity of the guarantee.

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## Rules

This section describes general safety rules for any maintenance operations performed on the vehicle.

### Safety rules

- If work can only be done on the vehicle with the engine running, make sure that the premises are well-ventilated, using special extractors if necessary; never let the engine run in an enclosed area. Exhaust fumes are toxic.
- The battery electrolyte contains sulphuric acid. Protect your eyes, clothes and skin. Sulphuric acid is highly corrosive; in the event of contact with your eyes or skin, rinse thoroughly with abundant water and seek immediate medical attention.
- The battery produces hydrogen, a gas that can be highly explosive. Do not smoke and avoid sparks or flames near the battery, especially when charging it.
- Fuel is highly flammable and it can be explosive given some conditions. Do not smoke in the working area, and avoid open flames or sparks.
- Clean the brake pads in a well-ventilated area, directing the jet of compressed air in such a way that you do not breathe in the dust produced by the wear of the friction material. Even though the latter contains no asbestos, inhaling dust is harmful.

### Maintenance rules

- Use original PIAGGIO spare parts and lubricants recommended by the Manufacturer. Non-original or non-conforming spares may damage the vehicle.
- Use only the appropriate tools designed for this vehicle.
- Always use new gaskets, sealing rings and split pins upon refitting.
- After removal, clean the components using non-flammable or low flash-point solvents. Lubricate all the work surfaces, except tapered couplings, before refitting these parts.
- After refitting, make sure that all the components have been installed correctly and work properly.
- For removal, overhaul and refit operations use only tools with metric measures. Metric bolts, nuts and screws are not interchangeable with coupling members with English measurement. Using unsuitable coupling members and tools may damage the vehicle.
- When carrying out maintenance operations on the vehicle that involve the electrical system, make sure the electric

connections have been made properly, particularly the ground and battery connections.

### MSS Fly 50 4T Characteristics

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##### Vehicle identification

##### VEHICLE IDENTIFICATION

Specification Desc./Quantity

Engine prefix C442M ÷ 1001

Chassis prefix ZAPM44200 ÷ 1001

##### Dimensions and mass

##### WEIGHT AND DIMENSIONS

Specification Desc./Quantity

Length 1,880

Maximum height 1150 mm

Seat height 785

Width 735

Wheelbase 1,340

Kerb weight 105 kg

### Characteristics MSS Fly 50 4T

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##### Engine

##### ENGINE

Specification Desc./Quantity

Engine type Single cylinder 4-stroke Piaggio Hi-PER4

Bore x stroke 39 X 41.8 mm

Cubic capacity 49.93 cm<sup>3</sup>

Compression ratio 11.5 :1

Timing system single overhead camshaft, driven by a chain to the left side.

Depression carburettor KEIHN CVK 18

CO adjustment 3,2% ± 0,5

Engine idle 1900 ÷ 2000 rpm.

Air filter Sponge, soaked in a mixture (50% SELENIA Air Filter Oil and 50% unleaded petrol).

Starting system electric starter/kick-starter

Lubrication Engine lubrication with lobe pump (inside the crankcase), chain-driven, and double filter: mesh and centrifugal.

Fuel supply Gravity feed, with unleaded petrol (with a minimum octane rating of 95) with carburettor.

Max. power (crankshaft) 2,5 KW (3,4 CV) at 6500 rpm.

Cooling system forced coolant circulation system

Valve clearance intake: 0.10 mm discharge: 0.15 mm

## MSS Fly 50 4T Characteristics

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### Transmission

#### TRANSMISSION

Specification Desc./Quantity

Transmission With automatic expandable pulley variator, torque server, V-belt, automatic clutch, gear reduction unit.

### Capacities

#### CAPACITY

Specification Desc./Quantity

Rear hub oil Quantity: approx. 85 cc

Engine oil Capacity: approx. 850 cm<sup>3</sup>

Fuel tank capacity approx. 7.2 litres (of which 1.5 l is reserve)

### Electrical system

#### IMPIANTO ELETTRICO

Specification Desc./Quantity

Type of ignition Capacitive discharge type electronic ignition, with incorporated high voltage coil

Ignition advance variable, with microprocessor (before T.D.C.) 10° at 1800-2000 rpm  
26° at 5000-6000 rpm

Spark plug Champion RG 4 PHP

Champion RG 4 HC

Alternative spark plug DENSO U24ESR-NB

Battery 12V-9Ah

Fuse 10A

Generator single-phase alternating current

### Frame and suspensions

#### FRAME AND SUSPENSION

Specification Desc./Quantity

Type of chassis Welded tubular steel chassis with stamped sheet reinforcements.

Front suspension Telescopic mechanical fork, 76-mm travel.

Rear suspension Single hydraulic shock absorber, 72.5-mm travel

### Brakes

#### BRAKES

Specification Desc./Quantity

Front brake Disc brake (Ø 200 mm) with hydraulic control (lever on the right end of the handlebar) and floating calliper.

Rear brake drum brake (Ø 140 mm) with mechanical linkage.(l.h. brake

lever).

Characteristics MSS Fly 50 4T

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