

## Piaggio - fly\_150\_4t\_workshop\_manual

WORKSHOP MANUAL

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Fly 125 - 150 4T

WORKSHOP

MANUAL

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WORKSHOP MANUAL

Fly 125 - 150 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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CHARACTERISTICS CHAR

### 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 solvent. Lubricate all the work surfaces except the tapered couplings before refitting.

- 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 scooter.
- 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.

### Fly 125 - 150 4T Characteristics

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##### Vehicle identification

##### VEHICLE IDENTIFICATION

##### Specification Desc./Quantity

Chassis prefix (125) ZAPM42100 ÷ 1001

Engine prefix (125) M421M ÷ 1001

Chassis prefix (150) ZAPM42200 ÷ 1001

Engine prefix (150) M422M ÷ 1001

##### Dimensions and mass

##### WEIGHT AND DIMENSIONS

##### Specification Desc./Quantity

Dry weight 112 kg

Overall height 1150 mm

Seat height 785

Width 735

Wheel base 1330

Length 1870

### Characteristics Fly 125 - 150 4T

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##### Engine

##### ENGINE

##### Specification Desc./Quantity

Engine Single-cylinder, 4-stroke Piaggio LEADER

Timing system Single overhead camshaft (SOHC) with 2 valves

Valve clearance intake 0.10

outlet 0.15

Bore x stroke (125) 57 x 48.6 mm

Bore x stroke 62,6 x 48.6 mm

Cubic capacity (125) 124 cm<sup>3</sup>

Cubic capacity 150,46 cm<sup>3</sup>

Compression ratio (125) 10.6 : 1

Compression ratio 10.5: 1

Carburettor KEIHIN CVEK26

Engine idle speed approx. 1600 ÷ 1800 rpm

Start-up Electric

Maximum power to crankshaft (125) 10.5 CV at 8000 rpm

Max. power 11.6 hp at 7750 rpm

Cooling Forced air circulation.

Fly 125 - 150 4T Characteristics

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Transmission

TRANSMISSION

Specification Desc./Quantity

Transmission With automatic expandable pulley variator with torque server, V belt, automatic clutch, gear reduction unit and transmission housing with forced air circulation cooling.

Capacities

CAPACITY

Specification Desc./Quantity

Engine oil 61 in<sup>3</sup> (1,000 cm<sup>3</sup>)

Rear hub oil ~ 200 cm<sup>3</sup>

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

Electrical system

ELECTRICAL COMPONENTS

Specification Desc./Quantity

Start-up Electric

Spark plug (125) Champion RG6YC- NGK CR7EB

Spark plug Champion RG6YC

Frame and suspensions

FRAME AND SUSPENSION

Specification Desc./Quantity

Chassis Steel tube chassis

Front suspension Ø 32 Hydraulic telescopic fork - travel: 76 mm

Rear suspension Single hydraulic shock-absorber with spring preload adjustable on 4 positions; 64 mm travel.

Brakes

BRAKE

Specification Desc./Quantity

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

Rear brake Ø 140 mm drum brake

Characteristics Fly 125 - 150 4T

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