

Sales division Technical network leadership

WORKSHOP MANUAL



TABLE OF CONTENTS

TABLE OF CONTENTS	1
PRODUCTS DANGER SYMBOLS USED	4
CHARACTERISTICS	6
Engine	6
Capacities	6
Chassis	7
Dimensions and weight	7
Tyres	7
Brakes	8
SERVICE SCHEDULE AND COMMISSIONING	9
Battery preparation (Except battery without maintenance)*	11
Installing the battery	11
New machine preparation	12
SPECIAL IMPORTANT POINTS	13
TIGHTENING TORQUES	14
Engine part	14
Body panels	15
Cycle part	15
Standard	15
SPECIAL TOOLS	16
Standard tools	18
LOCATION OF COMPONENTS	19
4 STROKE INDIRECT INJECTION SYSTEM FUNCTIONAL DIAGRAM	20
BODY PANELS	21
Location of body components	21
Body component sequence of disassembly	22
Removal of the storage compartment	23
Removal of the rear body cover	23
Removal of under-saddle panels	23
Removal of headlight panels	24
Removal of front lower shield panels	25
Removal of the rear shield panel	25
Removal of the footboard	27



ERVICE OPERATIONS	28
Changing the engine oil and replacing the oil filter	
Replacing the air filter	
Removal of the spark plug	31
Draining the cooling circuit	31
Transmission air filter	33
Removal of the primary transmission cover	
125 cc	33
200 cc	
Checking the transmission cover bearing	
Removal of the primary drive	
125 cc	
Removal of the overrunning clutch	
Checking the overrunning clutch	
Changing the drive pulley bearings	
200 cc	
Checking the drive belt	
Removal of the clutch lining assembly	
Refitting the clutch lining assembly	40
Fitting the overrunning clutch	41
Installing the primary drive	43
125 cc	44
200 cc	
Fitting the primary transmission cover	45
125 cc	
Installing the value clearance	
Checking the valve clearance	
Changing the fuel filter	
Brake pad wear	
Brake pad wear	
Front brake	
Rear brake	
Checking the brake fluid level	50
Draining the front fork	51



STEERING/FORK	52
Changing the front fork seals	52
The fork and its components	55
Removal of the fork	59
Replacing the bearings of the steering system	60
Steering headset cups	60
Steering cone	61
Installing the fork	62
FUEL SYSTEM	63
Procedure for reducing the fuel circuit pressure	63
Checking fuel pressure	63
Measuring the petrol flow	64
Removal of the fuel pump	65
POWER UNIT	66
Removal of the power unit	66



PRODUCTS DANGER SYMBOLS USED

Protection of individuals and of the environment.

A A	Möbius band	Recyclable.	Means that the product or the package can be recycled. However, this does not guarantee that the product will be recycled.
×	Irritant	The product can irritate the skin, eyes and respiratory organs.	Avoid contact with skin and clothes. Wear gloves, safety glasses and appropriate clothing such as a cotton overall. Do not breath fumes. If in contact, wash thoroughly with water.
*	Flammable	The product is flammable.	Keep it away from flames or any heat source (barbecue, radiator, heating, etc.). Do not leave the product in the sun.
F	Corrosive	The product can damage living tissues or other surfaces.	Avoid contact with skin and clothes. Wear gloves, safety glasses and appropriate clothing such as a cotton overall. Do not breath fumes.
	Explosive	The product can explode under certain circumstances (flame, heat, impact, friction).	Avoid impacts, friction, sparks and heat.
*	Hazardous to the environment	The product affects fauna and flora. Do not dump it in dustbins, sinks or in the environment.	The ideal solution is to bring this product to your nearest household waste recycling centre.
A	Toxic	The product can seriously affect health if it is inhaled, ingested or in contact with skin.	Avoid direct contact with the body, even by inhalation. If you feel unwell, seek medical advice immediately.
X	Do not throw away into a garbage can	One of the product's component is toxic and can be hazardous to environment. i.e.:. Used batteries.	This symbol informs the consumer that the used product shall not be thrown away into a garbage can, but shall be brought back to the merchant or dropped at a specific collection point.
	Compulsory gloves	Operation that can be dangerous for people.	People's safety can be seriously affected if the recommendations are not fully respected.

<u>.</u>	People's safety	Operation that can be dangerous for people.	People's safety can be seriously affected if the recommendations are not fully respected.
	Important	Operation that can be hazardous to the vehicle.	Indicate the specific procedures that shall be followed in order not to damage the vehicle.
~	Good operating condition of the vehicle	The operation must be carried out in strict compliance with the documents.	Serious damage to the vehicle and in certain cases a cancellation of the warranty can be involved if the recommendations are not fully respected.
\checkmark	Note	Operation that can be difficult.	Indicate a note which gives key information to make the procedure easier.
X	Lubricate	Lubricate the parts to be assembled.	Indicate the specific procedures that shall be followed in order not to damage the vehicle.
	Grease	Grease the parts to be assembled.	Indicate the specific procedures that shall be followed in order not to damage the vehicle.
GLUE	Glue	Glue the parts to be assembled.	Indicate the specific procedures that shall be followed in order not to damage the vehicle.
N	New part	Use a new part.	Indicate the specific procedures that shall be followed in order not to damage the vehicle.



CHARACTERISTICS

Engine

	Citystar		
	125i	200i	
Marking	FD6R	FD8	
Туре	4-stroke single-cylinder. Horizontal cylinder Single overhead camshaft, 4 valves		
Cooling	By a circulation of forced air by means of a turbine on the flywheel magneto		
Bore x stroke	57 x 48.9 mm	64 x 58.9 mm	
Cubic capacity	124.7 cc 189.4 cc		
Max. power output	10.3 kW at 9200 rpm	14 kW at 8500 rpm	
Max. torque rating	10.8 Nm at 8700 rpm 17 Nm at 6700 rpm		
Compression	12.5 bars at 580 rpm 7 bars. Minimum		
Lubrication	Trochoid pump driven by a gear set from the crankshaft		
Transmission	By 2 variable pulleys and V-type belt		
Clutch	Centrifugal automatic		
Exhaust	Catalytic		
Spark plug	NGK CR8EB Electrode gap: 0.7 - 0.8 mm		
Magneto flywheel	360 W		
Fuel supply	Indirect electronic injection		
Standards	Euro3		

Capacities

	11		
Crankcase	(0.92 I at oil change)		
	(0.95 I at oil filter change)		
	SAE 5W40 Synthetic		
	Minimum grade: API SJ		
Deley her	0.12 I SAE 80W90 Lifelong lubrication		
Relay box	Minimum grade: API GL4		
	9.5		
Fuel tank	Unleaded 95 or 98		
	Lead-free 95 E10		
Coolant	1.3		
Fork oil	0.18 I per tube. SAE 10W		
1			



Chassis

	Citystar				
	125i 200i				
Chassis	Steel tube				
Front suspension	37 mm Ø telescopic front fork Travel: 95 mm				
Rear suspension	Combined spring and hydraulically-damped shock absorber Travel: 96 mm				

Dimensions and weight

Overall length	1985 mm
Width at handlebar	750 mm
Height. (without rear- view mirrors)	1300 mm
Wheelbase	1430 mm
Unladen weight	150 kg

Tyres

Front wheel rim	13 inch aluminium alloy		
Front tyre	120/70 - 13		
Front tyre pressure	1.8 bars		
Rear wheel rim	13 inch aluminium alloy		
Rear tyre	130/60 - 13		
Rear tyre pressure	2 bars		



Brakes

	Citystar				
	125i 200i				
Front brake	Single disc type, hydraulic control				
Disc diameter and thickness	240 mm - 4 mm Mini. thickness: 3.5 mm				
Front caliper	Floating calliper equipped with 2 pistons				
Rear brake	Single disc type, hydraulic control				
Disc diameter and thickness	210 mm - 4 mm Mini. thickness: 3.5 mm				
Rear caliper	Fixed calliper with 2 pistons				





SERVICE SCHEDULE AND COMMISSIONING

Heavy duty servicing is for vehicles used under "harsh" conditions: door-to-door deliveries, intensive urban use (courier), short journeys with engine cold, dusty areas, ambient temperature over 30°C.

Normal servicing in km	500	10000	20000	30000	40000
Extensive servicing in km ^a	500	5000	10000	15000	20000
Minimum servicing	1 month	24 mont hs	48 mont hs	72 mont hs	96 mont hs
To be checked at each service					
Steering column play.	V	V	V	V	V
Wheel bearing play.	С	С	С	С	С
Throttle cable play.	V	V	V	V	V
Operation of electrical equipment.	V	V	V	V	V
Condition of front and rear brake hydraulic controls.	V	V	V	V	V
Brake fluid level.	V	V	V	V	V
Brake pad wear.	С	С	С	С	С
Condition of petrol pipes.	С	С	С	С	С
Tyre condition, pressure and wear.	С	С	С	С	С
Condition of the front suspension. Condition of the rear suspension.	V	V	V	V	V
Battery electrolyte level. Battery charge.	V	V	V	V	V
Coolant level.	V	V	V	V	V
Engine oil level.		Eve	ery 1000 k	ms	
Headlight height adjustment.	V	V	V	V	V
Tightness of nuts and bolts.	V	V	V	V	V
Overall operation. Road test.	V	V	V	V	V
Reading the ECU fault codes.	V	V	V	V	V
Servicing for all models					
Spark plug.		R	R	R	R
Air filter. (Filter element).		Ν	Ν	Ν	Ν
Intake silencer drain.		Ν	Ν	Ν	Ν
Drive pulley bearings and guides.		С	С	С	С
Transmission belt.		R	R	R	R
Driven pulley caged needle bearing.		G	G	G	G
V: Check, clean, adjust. R: Change. G: Check, clean, lul Clean.	bricate. C	Inspect a	and chang	e if neces	sary. N:

After 40000 km, resume the service schedule again from 10000 km.

a.Carry out this servicing if the vehicle is used in "severe" conditions: damp or dusty environment, high temperature, exclusively town use, etc..



Normal servicing in km	500	10000	20000	30000	40000			
Extensive servicing in km ^a	500	5000	10000	15000	20000			
Minimum servicing	1 month	24 mont hs	48 mont hs	72 mont hs	96 mont hs			
Servicing for all models								
Freewheel.		V	V	V	V			
Starter drive gear needle bearing cage.		G	G	G	G			
Valve clearances.		V						
Joints. (Central stand. Lateral stand).		G	G	G	G			
Fork oil.			R		R			
Petrol filter.			R		R			
Petrol pipe.	R Once every 5 years.							
Brake fluid.	R Once every 2 years.							
Coolant.	R Once every 5 years.							
Servicing for 125 cc models								
Engine oil. (+ clean strainer).		Eve	ry 10000	kms				
Oil filter.		Eve	ry 10000	kms				
Servicing for 200 cc models								
Engine oil. (+ clean strainer).	Every 5000 kms							
Oil filter. Every 10000 kms								
V: Check, clean, adjust. R: Change. G: Check, clean, lubricate. C: Inspect and change if necessary. N: Clean. After 40000 km, resume the service schedule again from 10000 km.								

Normal servicing in km	0	500	5000	10000	15000	20000	25000	30000
Extensive servicing in km ^a	0	500	2500	5000	7500	10000	12500	15000
Servicing time in tenths of an hour (0.5 h = 30 mn)								
Citystar 125	1.4	0.8		3.6		4.7		2.6
Citystar 200	1.4	0.8	0.3	3.6	0.3	4.7	0.3	2.6

a.Carry out this servicing if the vehicle is used in "severe" conditions: damp or dusty environment, high temperature, exclusively town use, etc..



Battery preparation (Except battery without maintenance)*

Remove the battery.

Remove the 6 filler caps and the vent plug.

Fill all the battery cells with electrolyte to the upper level shown on the battery "UPPER LEVEL".

Electrolyte: (35% sulfuric acid = 1.28g/cm3). 0.5 litre can P/N 739733.

Leave the battery to stand for around half an hour.

Top up if necessary.

Charge the battery for at least 2 hours with a current of 1.2 A.

Then, the battery level should be topped up if necessary, after fully charging, using distilled water only.

* Depending on equipment.

Installing the battery

- Connect the battery breather hose to the battery.
- Insert the end of the hose into the opening in the battery compartment.
- Place the hose in the battery compartment guide channel.
- Fit the battery in its housing.
- Pull gently on the hose to avoid it being pinched.
- Insert the hose into the hasps inside the mud guard.

- Connect the red wire lug to the battery's + terminal, and the green wire lug to the battery's terminal.
- Fit the battery retention plate.
- Fit the retention strap.
- Fit the battery access hatch.









New machine preparation

- Check the wheel nuts are tight.
- Check nuts and bolts are tight.
- Check brake adjustment and efficiency.
- Check the tyre pressures cold.
- Check operation of the lights, flashers, horn, and brake light.
- Check the different warning lights work.
- Carry out a road test.

Electricity

All components of the electrical system are powered with 12 volts DC

The battery must not be disconnected while the engine is running and the voltage must be at least 8.5 volts for the ECU to function and enable engine starting.



SPECIAL IMPORTANT POINTS

This engine is designed to run on 95 or 98 lead-free petrol or on 95 E10 lead-free petrol.



Fuel pipes must absolutely be changed if there are any signs of wear, cracks, etc. The clips are specific, they must always be changed each time they are removed and replaced with new genuine parts clips



Petrol is highly inflammable, do not smoke in the working area and avoid proximity to flames or sparks.

Before carrying out any work, leave the engine to cool for at least 2 hours.



TIGHTENING TORQUES

Engine part

	125 сс	200 сс	
Spark plug	12 Nm		
Engine drain plug	40	Nm	
Oil filter	10	Nm	
Cylinder head			
• Nut Ø8 mm	6/15/25 Nm		
Screw Ø6 mm	10 Nm		
Cylinder head cover	10	Nm	
Camshaft gear	33	Nm	
Camshaft stopper plate	10	Nm	
Automatic tensioner	10	Nm	
Automatic tensioner plug	18	Nm	
Cylinder	10	Nm	
Oil pressure switch	10	Nm	
Thermostat valve	8 Nm		
Chain tensioner	10 Nm		
Inlet manifold	10 Nm		
Injection rail	10 Nm		
Cylinder casings	10 Nm		
Flywheel magneto cover	10 Nm		
Oil pump	10 Nm		
Relief valve	40	Nm	
Anti-splash plate	10	Nm	
Transmission cover	10	Nm	
Transmission air filter cover	10	Nm	
Relay box cover	10	Nm	
Starter motor	10 Nm		
Kick starter stopper	10 Nm		
Rotor	70 Nm		
Stator	10 Nm		
Engine speed sensor	7 Nm		
Drive pulley	70 Nm 110 Nm		
Driven pulley	70 Nm		
Clutch plate and shoes	60 Nm		



Body panels

Front mudguard	8 to 10 Nm
Handlebar cover	1 to 2 Nm
Front shield panels	1 to 2 Nm
Rear shield	1 to 2 Nm
Bottom panel	6 to 8 Nm
Floor panel	8 to 10 Nm
Saddle storage compartment	8 to 10 Nm
Rear body panels	1 to 2 Nm
Grab handle	20 to 25 Nm

■ Cycle part

Front wheel spindle	65 Nm
Front wheel spindle flange	10 Nm
Rear wheel spindle nut	100 Nm
Rear wheel bolt	80 Nm
Linkrod to engine pivot	70 Nm
Linkrod to frame pivot	70 Nm
Shock absorber top mount	45 Nm
Shock absorber bottom mount	22 Nm
Exhaust to cylinder head mounting nut	22 Nm
Exhaust clamp	10 Nm
Exhaust to casing mounting bolt	22 Nm
Adjustment cone (in 2 operations)	40/22 Nm
the adjustable cone locknut	Hand tightened
Steering locknut	75 Nm
Front brake caliper	30 Nm
Brake pad pins	15 Nm
Front brake disc	40 Nm
Rear brake caliper	30 Nm
Rear brake disc	30 Nm
Brake unions	30 Nm
Handle bar	40 Nm
Fork tube	22 Nm
Fork tube cap	20 Nm

Standard

Nut and bolt 5 mm diameter	5 Nm
Nut and bolt 6 mm diameter	10 Nm
Nut and bolt 8 mm diameter	22 Nm
Nut and bolt 10 mm diameter	35 Nm
Nut and bolt 12 mm diameter	55 Nm



SPECIAL TOOLS

	Tool N°	Designation	Used with		Tool N°	Designation	Used with
	752237	Adjustable pin wrench			757877	Pressure gauge	
	754040	46 mm pipe wrench	758008		758008	Clutch compression tool	754040 801412
and the second sec	755585	Bearing extractor tool			759492	Driven pulley pin spanner	
	756017	Fuel injector power supply harness			759788	Steeing head cup push tool	
6	756607	Steeing head cup push tool			759982	Control point 32 way	
THE REAL PROPERTY AND A DECIMAL OF A DECIMALO OF A DECIMALO OF A DECIMALO OF A DECIMAL OF A DECIMAL OF A DECI	757860	Steering tool		0	766062	Spark plug spanner	

	Tool N°	Designation	Used with	Tool N°	Designation	Used with
(()) L	801760	Fork extraction tool		802638*	Extraction tool	
	801412*	Spacer adaptor	758008	802809	TEP2010	

(*) New or modified tool



Standard tools

	Wrenches with interchangeable end fittings for valve clearance adjustment Type: Marolotest P/N 500140	Set of shims
All a	Slide calipers	Multimeter
	Heat gun	Automatic resetting type torque wrench 5 to 25 Nm Type: Facom R.306A25
	Intertia type extractor tool for bearings from 6 to 18 mm Type: Facom U.49PJ3	Automatic resetting type torque wrench 10 to 50 Nm Type: Facom J.208A50
	Automatic resetting type torque wrench 40 to 200 Nm Type: Facom S.208A200	Fork seal insertion kit Type: Marolotest 601055



LOCATION OF COMPONENTS



- 1. Instrument panel
- 2. Injection ECU
- 3. Battery
- 4. Fuses
- 5. Fuel pump relay/Lighting relay
- 6. Fuel pump
- 7. Engine speed and position sensor
- 8. Petrol injector
- 9. Engine temperature sensor
- 10. Lambda sensor

- 11. HT coil
- 12. Kickstand contact switch
- 13. Transponder antenna
- 14. Immobiliser module
- 15. Regulator
- 16. Oil pressure switch
- 17. Starter motor relay
- 18. Speed sensor
- 19. Horn
- 20. Cooling fan
- 21. Diagnostic plug



4 STROKE INDIRECT INJECTION SYSTEM FUNCTIONAL DIAGRAM



- 1. Injection ECU
- 2. Ignition switch
- 3. Battery
- 4. Fuel pump relay
- 5. Fuel pump
- 6. Diagnostic plug
- 7. Diagnostic plug loop
- 8. Lambda sensor

- 9. Engine temperature sensor
- 10. Petrol injector
- 11. HT coil
- 12. Engine speed and position sensor
- 13. Electronics dashboard
- 14. Immobiliser module
- 15. Transponder antenna
- 16. Kickstand contact switch



BODY PANELS

- Location of body components
- Description.



- 1. Front top cover panel
- 2. Radiator grille
- 3. Plastic cover
- 4. Headlight fairing
- 5. Wind protector
- 6. Cooling duct
- 7. Counter panel
- 8. Front lower legshields
- 9. Mudguard
- 10. Front mudguard
- 11. Cover

- 12. Lower handlebar cover
- 13. Upper handlebar cover
- 14. Rear shield
- 15. Floor panel
- 16. Footrest
- 17. Under-saddle panel
- 18. Bottom panel
- 19. Saddle and storage compartment
- 20. Grab handle
- 21. Rear body panels
- 22. Mudflap



Body component sequence of disassembly



- 2. Radiator grille
- 3. Plastic cover*
- 4. Headlight fairing
- 5. Wind protector
- 6. Cooling duct
- 7. Counter panel
- 8. Front lower legshields
- 9. Mudguard
- 10. Front mudguard*
- 11. Cover
- * This item may be removed on its own.

- 12. Lower handlebar cover
- 13. Upper handlebar cover*
- 14. Rear shield
- 15. Floor panel
- 16. Footrest*
- 17. Under-saddle panel
- 18. Bottom panel
- 19. Saddle and storage compartment*
- 20. Grab handle
- 21. Rear body panels
- 22. Mudflap



Removal of the storage compartment

Procedure 1.

- Lift the saddle.
- Remove the storage compartment.
 - 2 plastic screws (A).
 - 4 washer head screws Ø6 mm (B).

Removal of the rear body cover

Procedure 2.

- Remove the storage compartment. See: Procedure 1. page 23.
- Remove the grab handle.
 - 4 screw Ø8 mm (A).
- Remove the rear body cover.
 - 4 plastic screws (B).
 - 2 washer head screws Ø5 mm (C).
 - 2 washer head screws Ø5 mm (D).
- Disconnect the taillight.

Removal of under-saddle panels

Procedure 3.

- Remove the rubbers from the footrests (1) (2 screws each).
- Open the tank filler cap door.
- Remove the under-saddle panels.
 - 6 plastic screws (A).
 - 2 washer head screws Ø5 mm (B).









Removal of headlight panels

Procedure 4.

- Remove the front top cover panel (1).
 - 1 plastic screws (A).
- Remove the plastic cover (2).
 - 1 washer head screw Ø5 mm (B).
- Remove the radiator grille.
 - 4 plastic screws (C).
 - On each side remove.
 - 3 plastic screws (D).

Reassembly:

upwards.

duct.

- Unclip the tabs on the front shield panels (3)(4).

- Fit the headlight panels by sliding them

- Fit the retention tabs (3) over the cooling system

- Remove the headlight panels.









Removal of front lower shield panels

Procedure 5.

- Remove the headlight panels. See: Procedure 2. page 23.
- Remove the front lower shield panels.
 - 3 plastic screws (A).
 - 11 washer head screws Ø5 mm (B).
- Disconnect the direction indicators.
- When refitting, attach the temperature sensor with a screw from a lower shield panel (1).







Removal of the rear shield panel

Procedure 6.

- Remove the front lower shield panels. See: Procedure 2. page 23.
- Remove the screen (4 screw).



- Remove the handlebar upper fairing.
 - 6 plastic screws.

- Remove the instrument cluster fairing.
 - 4 plastic screws (D).
 - 2 washer head screws Ø5 mm (E).



- Disconnect the instrument cluster.

Procedure:

- Press the locking system (X) to actuate the positioning lever (Y) of the instrument cluster's connector.
- Push the lever all the up (Z) in order to remove the connector from the instrument cluster.



- Remove the header tank (2 screw) (Right side).
- Remove the ingnition switch trim (1).
- Remove the utility hanger (2) (2 screw).
- Disconnect the accessory plug (3).
- Remove the rear shield panel.
 - 1 washer head screws Ø5 mm (F).
 - 2 washer head screws Ø6 mm (G).



Removal of the footboard

Procedure 7.

- Remove the under-saddle panels. See: Procedure 2. page 23.
- Remove the rear shield panel. See: Procedure 2. page 23.
- Remove the RH and LH under body panel.
 - 3 plastic screws (A).
 - 2 screw Ø6 mm (B).
- Remove the footboard.





SERVICE OPERATIONS

Changing the engine oil and replacing the oil filter



The engine must be drained when it is warm to allow the oil to run easier. Wear gloves in order not to get burnt.

- Place the vehicle on its central stand on flat ground.
- Remove the engine's oil filler cap.





Remove the cap and the filter to drain oil from the engine (1).

Replace the copper seal every time you change oil.



- Remove the fairing under the saddle (Left side) See: Procedure 2. page 23.
- Remove the filter cover (2 screw).
- Remove the oil filter.



Check the condition of the O-ring and change it if necessary.

- Install a new oil filter and its cover.

Tightening torque: 10 Nm.





- Put back the drainage cap and strainer cap, fitted with a new seal.

Tightening torque: 40 Nm.

- Pour the required quantity of oil corresponding to the manufacturer's standards into the filler hole:
 - 0.92 I at oil change.
 - 0.95 I at oil filter change.
- Fit the filler cap.
- Start the engine and let it run for a short while.
- Remove the engine's oil filler cap/gauge.
- Wipe dry the filler cap/gauge and fit it back but do not screw it into the filler hole.
- Remove the filler cap/gauge and check the oil level.
 - A. Oil level low.
 - B. Oil level high.
- Add oil if necessary.



Check the level with the machine parked on its centre stand, on level ground.





- Replacing the air filter
 - Remove the air filter cover (8 bolts) and its seal.



- Remove the air filter (1) (3 screw).
- Clean inside the air filter box.
- Remove the inlet silencer drain plug to let humidity and oil drip out (2).

Reassembly

- Fit a new air filter.
- Fit the gasket.
- Install the air filter cover.





Removal of the spark plug

- The engine must be cold.
- Remove the storage compartment. See: Procedure 1. page 23.
- Disconnect the suppressor.
- Remove the spark plug using tool P/N 766062.

Tightening torque: 12 Nm.

- Recommended spark plug:
 - NGK CR8EB.
 - Electrode gap: 0.7 to 0.8 mm.



Essential precautions: When reinstalling, srew in the spark plug (a few turns) by hand.

Draining the cooling circuit



The cooling system is drained when the engine is cold.

- Remove the storage compartment. See: Procedure 1. page 23.
- Remove the headlight panels (Right side). See: Procedure 2. page 23.
- Remove the radiator plug.



Remove the drainage cap (1) and its seal and allow the oil to drip into a recipient.

- Remove the header tank cap.
- Disconnect the pipe from the header tank to the radiator to empty the tank.
- Reconnect the hose.
- Fill the header tank up to the minimum mark.









- Install the screw and its seal.
- Fill the circuit with 0.9 L of coolant.
- Loosen the bleeder screw (2) to remove air contained in the engine.
- Close the bleeder screw.
- Check and top up the coolant level in the radiator.

- Start the engine and accelerate in order to warm it up.
- Allow the engine to cool down.
- Stop the engine once it reaches its operating temperature.
- Check and top up the coolant level in the radiator.
- Check the coolant level in the header tank.
- The level of coolant should be between the minimum (A) and maximum (B) markers without exceeding the latter.







- Transmission air filter
 - Remove the air filter cover (3 screw).

Tightening torque: 10 Nm.

- Remove the air filter (1).
- Clean or replace the air filter if it is dirty.



Removal of the primary transmission cover

<u>125 cc</u>

- Remove the plastic cover.
- Lock the clutch drum with the pin wrench P/N 759492.
- Remove the nut.

Tightening torque: 70 Nm.



759492

- Remove the transmission cover (8 screw).





- Remove the tapered washer (1).
- Remove the clutch cover (2).







- Remove the under-saddle panels. See:

- Remove the fastening screw from the intake

- Remove the transmission cover (8 screw).

Procedure 2. page 23.

Tightening torque: 10 Nm.

silencer (A)

<u>125/200 cc</u>

<u>200 cc</u>

- Check the condition of the bearing seals (1).
- Using your finger, turn the internal bearing ring; it should turn freely and silently.
- Check that the bearing is tightly fitted to the casing.

Replacement

- Place the cover on its gasket seat surface, heat it (80 to 90°C) until the bearing (1) falls out by itself.
- While the casing is expanded fit the new bearing fully home in its housing.




Removal of the primary drive

- Hold the fixed flange with tool P/N 752237.
- Remove the nut.
- Remove the fixed flange.

Tightening torque:

- 125 cc: 70 Nm.
- 200 cc: 110 Nm.
- Pull the belt aside.
- Remove the drive pulley (1) with the guide hub (2).





<u>125 cc</u>

- Remove the clutch and driven pulley assembly together with the belt.



<u>200 cc</u>

- Hold the cover with the pin wrench P/N 752237.

Tightening torque: 70 Nm.

- Remove the clutch and driven pulley assembly together with the belt.
- Removal of the overrunning clutch
 - Remove the kick starter stopper (1) (1 screw).

Tightening torque: 10 Nm.

- Remove the starter dog (2).

- Using the réf. 802638 extraction tool, remove the overrunning clutch.







Position the tool's hooks towards the perimeter (A).





- Checking the overrunning clutch
 - Rotate the overrunning clutch by hand:
 - It must rotate in direction (A).
 - It must be block in direction (B).
 - If it doesn't, replace the overrunning clutch.



- Separate the overrunning clutch from the ring gear.
- Check the condition of the caged needle bearing and replace if necessary (1).
- Using your finger, turn the internal bearing ring; it should turn freely and silently (2).



- Using a brush, clean the overrunning clutch.
- Using your hand, actuate the 3 rollers to check the condition of release springs (3).
- Check the crimping of the 3 screws (4).





Changing the drive pulley bearings

- Remove the holder (1) and its 3 plastic guides (2).
- Remove the moving flange (4) 6 bearings (3).



The bearings must be changed if they show major signs of wear. The guides shall be replaced if they

show signs of wear.



Make sure surface of the plates in contact with the belt does not show any cracks or signs of abnormal wear (A).



Reassembly:

- Fit the drive rollers, variator pulley cam, and its guide without using grease.





<u>200 cc</u>



When refitting, respect the way the rollers are installed.



Checking the drive belt

- Measure the width of the belt (A).

Minimum width:

125 cc: 20.5 mm. 200 cc: 23 mm.

- Make sure the belt is not cracked.



Removal of the clutch lining assembly

- Using the depth calliper, measure the thickness of the clutch linings.

Mini. thickness: 2 mm.



The balance of the clutch jaw assembly is factory set, and therefore the assembly cannot be dismantled.





- Compress the clutch and driven pulley assembly using tool 758008 equipped with the protection spacer P/N 801412.
- Remove nut (1) using spanner P/N 754040.
- Slacken tool P/N 758008.

- Remove the clutch linings (2), the upper centring sleeve (3), the spring (4), and the lower centring sleeve (5).
- Remove the 3 pins (6) from the variable speed drive seat.
- Separate the fixed (7) and rotating (8) flanges.
- Make sure surface of the plates in contact with the belt does not show any cracks or signs of abnormal wear.





Refitting the clutch lining assembly

- Make sure surface of the plates in contact with the belt does not show any cracks or signs of abnormal wear (A).
- After checking the 2 lip seals (9) and the 2 Orings (10) of the rotating flange (8) are in good condition, grease the governor seat 3 pins (6) (high temperature grease) and assemble the parts in reverse order to removal.

Ang Star

754040

801412

1

- Compress the clutch and driven pulley assembly using tool 758008 equipped with the protection spacer P/N 801412.
- Tighten the nut (1).

Tightening torque: 60 Nm.



- Fit the starter ring.
- Fit the spacer (1).

- Fit and engage the overrunning clutch on the ring gear of the starter by turning it counterclockwise.

1

758008



- Lightly grease the caged needle bearing of the kick starter (2).
- Fit the starter motor dog.
- Fit the kick starter stopper (3) (2 screw).

Tightening torque: 10 Nm.



Use lithium soap grease.





Installing the primary drive



Before fitting the clutch drive pulley and driven pulley to the input shaft, fit the belt into the pulley bottom by opening the flanges by hand.

Respect the direction of rotation of the belt which is shown by an arrow.

- Lightly grease the drawn cup needle roller bearing of the driven pulley.
- Fit the clutch drive pulley and driven pulley assembly.
- Fit the drive pulley with its guide hub onto the connecting rod (1).
- Fit the belt (2) to the guide hub.



- Fit the fixed flange (3) to the crank assembly, ensuring that it is properly positioned on the crank assembly splines and checking that it is in contact with the hub guide of the mobile flange.
- Fit and tighten the nut.

Tightening torque:

- 125 cc: 70 Nm.
- 200 cc: 110 Nm.





<u>125 cc</u>

- Fit the clutch cover (4).
- Fit the spacer (5) (Chamfer facing you).





<u>200 cc</u>

- Fit the clutch cover.
- Hold the cover with the pin wrench P/N 752237.
- Fit and tighten the nut.

Tightening torque: 70 Nm.



■ Fitting the primary transmission cover

<u>125 cc</u>

- Install the transmission cover (8 screw).

Tightening torque: 10 Nm.

- Lock the clutch drum with the pin wrench P/N 759492.
- Fit and tighten the nut.

Tightening torque: 70 Nm.

- Fit the plastic cover.





<u>200 cc</u>

- Install the transmission cover (8 screw).

Tightening torque: 10 Nm.

- Fit the intake silencer fastening screw (A).
- Fit the under-saddle panels.





Installing the valve clearance

- Remove the storage compartment. See: Procedure 1. page 23.
- Remove the under-saddle panels. See: Procedure 2. page 23.
- Remove the transmission air filter cover.
- Disconnect the oil vapour return hose to the rocker cover.
- Remove the rocker cover (5 screw).

Tightening torque: 10 Nm.

- Rotate the engine by hand in the operating direction in order to bring the rocker bearings on the back of the cams (A).





- Using the set of feeler gauges, measure the clearance of each valve.

Clearances:

- $0.10^{\pm 0.02}$ mm at the intake
- 0.20^{±0.02} mm at the exhaust





- If the clearance is not correct, adjust by means of the cam follower screw.
- Use a wrench to adjust the valve clearance: Type: Marolotest, P/N 500140.

Checking the valve clearance

- At the intake a **0.15 mm** feeler gauge shouldn't go.
- At the exhaust a **0.25 mm** feeler gauge shouldn't go.
- On the contrary, if the fealer gauge goes, reset the clearances.

Changing the fuel filter



The fuel filter is incorporated into the pump.

- Remove the footboard. See: Procedure 7. page 27.
- Carry out the procedure for lowering the pressure in the fuel system. See: Procedure 8. page 63.
- Disconnect the fuel supply hose (1).
- Remove the fuel filter (3 screw).









Brake pad wear

Front brake

- If one of the 2 brake pads is worn down to the minimum dimensions (A), the 2 brake pads must be changed.
 - A. Mini. thickness: 1.5 mm.



Rear brake

- If one of the 2 brake pads is worn down to the minimum dimensions (A), the 2 brake pads must be changed.

A. Mini. thickness: 1.5 mm.



Replacing the brake pads

Front brake

- Remove the calliper (2 screw).

Tightening torque: 30 Nm.





- Remove the 2 pins from the caliper.

Tightening torque: 18 Nm.

- Remove the brake pads (1).

\checkmark	When refitting the brake pads, push the pistons all the way into their housing.
	After refitting, actuate the brake levers several times to bring the brake pads against the brake disc.

Rear brake

- Remove the exhaust muffler trim (3 screw).
- Remove the exhaust (1 collar and 3 screws).





- Remove the suspension arm (5 screws and 1 nut).
- Remove the wheel (3 screw).





- Remove the brake pad clips and pin (1).



- Remove the brake pads.

\checkmark	When refitting the brake pads, push the pistons all the way into their housing.
<u>!</u>	After refitting, actuate the brake levers several times to bring the brake pads against the brake disc.



■ Checking the brake fluid level

- Position the handlebars so that the master cylinder will be horizontal.
- Check the brake fluid level and if necessary top up in the master cylinder.
- Remove the cover and the diaphragm from the master cylinder (2 screw).



Add brake fluid until it reaches the maximum level.







- Pour 0.18 I SAE10W hydraulic oil into the fork tube.
- Refit the other items in the reverse order to disassembly. See chapter: Changing the front fork seals, page 52.
- Install the spring.





STEERING/FORK

- Changing the front fork seals
 - Remove the front lower shield panels. See: Procedure 2. page 23.
 - Suspend or immobilize the machine securely.
 - Remove the front brake caliper from the fork tube (2 screw).

Tightening torque: 10 Nm.

- Loosen the wheel spindle clamping screw (1).
- Remove the wheel spindle (2).
- Remove the front wheel.
- Remove the fork guard (2 screw).
- Unscrew the 2 upper screws (3) on the fork tee.
- Remove the fork tube cap (4).
- Unscrew the 2 lower screws (5) from the fork Tee.
- Remove the fork tubes.





- Drain the front fork. See chapter: Draining the front fork, page 51.
- Secure the stanchion in a vice fitted with protection.
- Remove the tightening screw from the internal tube and its seal (6).
- If necessary use a mallet to dislodge the screws.





- Remove the calibrated hydraulic tube (7).
- Remove the expansion stop spring (8).



- Remove the dust cover (9).
- Remove the retaining clip (10).



Extraction of the tube assembly, seals and rings

- Screw the pin (A) of tool ref. 801760 onto the fork tube (11) in place of the cap.
- Pull on the fork tube (11) as far out of the hollow shaft as possible.





- Place the flanged tube (B) of tool ref. 801760 on the hollow shaft.
- Install the split washer (C) ref. 801760 under the washer.
- Secure the pin (A) and screw the nut (D) on the pin as far as the separation of the shaft (12) and fork tube.



- Remove the tool ref. 801760.
- Remove the compression stop cone (13).



- Remove the seal (14).
- Remove the washer (15).
- Remove the guiding rings (16).





The fork and its components

- 1. Fork tube cap.
- 2. Spring.
- 3. Screw and copper seal.
- 4. Hollow shaft.
- 5. End of compression cone.
- 6. Fork upper tube.
- 7. Washer.
- 8. Retaining clip.
- 9. Balk rings
- 10. Tightness seal.
- 11. Dust cover.
- 12. Expansion spring.
- 13. Calibrated hydraulic tube.
- 14. Fork triple clamp.



Pre-assembly checks

- Clean all the parts with a degreasing agent:
 - Biosane type ref. 754748.
 - Or use an ultrasonic cleaning tank.
- Check the condition of the fork tube, there shall be no corrosion or impact marks, and the tube shall be perfectly straight and clean.

Reassembly

- Install a new guiding ring (1).
- Install the expansion stop spring (2).
- Install the calibrated hydraulic tube (3).
- Install the compression stop cone (4) on the calibrated hydraulic tube.





- Fit the fork sleeve (5) to the slightly oiled fork tube (6).
- Install the stanchion assembly screw and its seal (7).

Tightening torque: 25 Nm.

- Install a new guiding ring (8).
- Fit washer (9).
- Using the marolotest lip seal installation kit tool, partially push the guiding balk ring.



- Install the new lightly lubricated seal (10).
- Using the marolotest lip seal insertion kit tool, push the seal (10) under the groove in the retaining ring.





- Install the retaining ring (11).
- Fit a new, lightly greased dust cover (12).



- Pour 0.18 I SAE10W hydraulic oil into the fork tube.
- Install the spring (3).



- Fit the fork tubes into the fork triple clamps.
- Tighten the lower screws on the fork tee (13).

Tightening torque: 28 Nm.

- Install and screw up the cap (14).

Tightening torque: 28 Nm.

- Tighten the upper screws on the fork tee (15).

Tightening torque: 28 Nm.





- Fit the front mudguard.
- Fit the speedometer drive gear assembly to the wheel drive pins.
- Fit the wheel, matching the speedometer drive gear assembly to the pin (A) on the fork stanchion.
- Fit the wheel spindle and tighten.

Tightening torque: 60 Nm.



When re-installing, use a new nut.

- Tighten the spindle clamping screw (16).

Tightening torque: 10 Nm.

- Refit the other items in the reverse order to disassembly.





Removal of the fork

- Suspend or immobilize the machine securely.
- Remove the front mudguard (4 screw).
- Remove the front brake caliper from the fork tube (2 screw).

Tightening torque: 30 Nm.

- Remove the front wheel.

Tightening torque: 60 Nm.



When re-installing, use a new nut.

- Remove the fork guard (2 screw).
- Remove the handlebar upper fairing.6 plastic screws.





- Remove the handlebars from the fork tube. (1 screw and 1 nut) (1).

Tightening torque: 45 Nm.



When re-installing, use a new nut.





- Using tool P/N 757860 remove the steering locknut.





- Remove:

- The brake washer (2).
- The nut (3).
- The rubber washer (4).
- The adjustable cone (5).
- Remove the fork.
- Remove the caged ball bearings.

Replacing the bearings of the steering system

Steering headset cups



If the steering head cups are changed, the cones and ball bearings must also be changed.

- Using a drift, remove the steering head cups.





- Using push tool P/N 756607, fit a new upper cup into the steering tube.
- Using push tool P/N 759788, fit a lower cup into the steering tube.





Steering cone



• Fit a new steering head cone (6).





Installing the fork

- Grease the cup bearing races.
- Install new ball cage bearings (7) (respect the right way of installation).
- Fit the fork into the steering column.





- Install new ball cage bearings (8) (no special direction).
- Install the adjustable cone and tighten it (5).

Tightening torque: 20 Nm.

- Loosen and then retighten the adjustable cone.

Tightening torque: 20 Nm.



Do not tighten the adjustment cone beyond the recommended value to avoid damaging the steering bearings.

- Install the rubber washer (4).
- Fit and finger tighten the nut (3) so that its notches are aligned with those of the nut.
- Fit the lock washer (2) in the notches of the locknut and adjustable cone.
- Install the steering head locknut and tighten it.

Tightening torque: 75 Nm.

- Check that there is no play in the fork.
- Turn the fork from left to right to check that there are no tight spots.
- Refit the other items in the reverse order to disassembly.





FUEL SYSTEM

Procedure for reducing the fuel circuit pressure

Procedure 8

- Remove the storage compartment. See: Procedure 1. page 23.
- Disconnect the fuel injector.
- Remove the fuel injector without disconnecting the supply hose.
- Connect the fuel injector power supply harness tool P/N 756017 to the fuel injector and the battery.
- Place the injector above a pan.
- Actuate the contact switch of the tool 3 times for 5 seconds while respecting a released time of 5 seconds between each action, in order to drop the pressure inside the supply hose of the fuel manifold.





The pressurised jet of fuel may be dangerous for the skin, do not expose the hands to the jet of fuel when opening the injector.

Checking fuel pressure

Modify the pressure gauge ref. 757877 as follows

- Cut a connector ref. 769197 in half.
- Connect the connectors to the pressure gauge using collars ref. 769404.





- Carry out the procedure for lowering the pressure in the fuel system. See: Procedure 8. page 63.
- Disconnect the pump fuel feed hose.
- Insert the pressure gauge P/N 757877 between the gauge well and the supply hose.
- Turn the ignition on 3 times to bleed the fuel system.
- With the engine stopped, check the fuel pressure which must be 2.5 bars when switching on the fuel pump.

Measuring the petrol flow

- Carry out the procedure for lowering the pressure in the fuel system. See: Procedure 8. page 63.
- Disconnect the fuel injector pipe and place it in a graduated recipient.
- Turn on the ignition to run the fuel pump and measure the output quantity.
- When switching on the ignition, the fuel pump will operate for 3 seconds.
- This quantity must be 35 ml minimum for 3 seconds







Removal of the fuel pump

- Remove the footboard. See: Procedure 7. page 27.
- Carry out the procedure for lowering the pressure in the fuel system. See: Procedure 8. page 63.
- Disconnect the fuel pump output hose (1).
- Disconnect the fuel pump (2).





Check the condition of the rubber seal.







POWER UNIT

Removal of the power unit

Note: To remove the cylinder head, remove the power propulsion unit.

For removal of the cylinder head, cylinder and piston, see the workshop manual:

- Engine 125/200cc. 4 valves.
- Remove the under-saddle panels. See: Procedure 2. page 23.
- Disconnect the battery.
- Drain the cooling circuit. See chapter page 31.
- Carry out the procedure for lowering the pressure in the fuel system. See: Procedure 8. page 63.

Disconnect:

- Regulator (1).
- The engine speed sensor (2).
- The lambda sensor (3).



- The starter motor (4).
- The engine ground (5).
- The engine temperature sensor (6).



- The oil pressure (7).
- The throttle box (8).
- The fuel injector (9).
- The suppressor (10).

The fuel inlet pipe (11).The throttle control (12).

Disconnect:







- Remove the exhaust (1 collar and 3 screws).

- Remove the suspension arm (5 screws and 1 nut).
- Remove the wheel (3 screw).

- Remove the rear brake caliper (2 screw).

Tightening torque: 30 Nm.

- Temporarily reinstall the wheel.





- Suspend the rear of the machine.
- Remove the shock absorber lower mount (14).

Tightening torque: 22 Nm.

- Remove the linkrod-to-engine connecting pin (15).

Tightening torque: 70 Nm.



When re-installing, use a new nut.

- Remove the power propulsion unit from the frame.
- Remove the covers from the power unit.









P/N MA0024GB

In our permanent concern to make improvements PEUGEOT MOTOCYCLES reserves the right to suppress, modify, or add any reference mentioned. DC/PS/APV 12/7/11 (non contractual pictures)

