

Quality department After-Sales

# **WORKSHOP MANUAL**





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### PRODUCTS DANGER SYMBOLS USED

Protection of individuals and of the environment.

63	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 goggles and cotton overalls 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.
N	Corrosive	The product can damage living tissues or other surfaces.	Avoid contact with skin and clothes. Wear gloves, safety goggles and cotton overalls 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.
	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. Example: 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.
V	Note	Operation that can be difficult.	Indicate a note which gives key information to make the procedure easier.
	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.
	New part	Use a new part.	Indicate the specific procedures that shall be followed in order not to damage the vehicle.

## **CHARACTERISTICS**

## **■** Engine

	125 cc 150 cc				
Marking	XS1P52QMI-3B XS1P57QMJ-2B				
Туре	4-stroke single-cylinder 4 valves per cylinder with chain driven overhead camshaft				
Cooling	By a circulation of forced air by mean	s of a turbine on the flywheel magneto			
Bore x stroke	52.4 x 57.8 mm	57.4 x 58.2 mm			
Cubic capacity	124.6 cc	150.6 cc			
Max. power output	7.5 kW at 8500 rpm	8.3 kW at 8000 rpm			
Max. torque rating	8.9 Nm at 7000 rpm	11 Nm at 6000 rpm			
Compression	Compression ratio 10,6 <sup>±0.2</sup> :1 Compression ratio 10,4 <sup>±0.2</sup> :1				
Compression ratio	11.4 bars at 700 rpm 7 bars Minimum.				
Lubrication	Trochoid pump driven by a chain from the crankshaft				
Transmission	By 2 variable pulleys and V-type belt				
Clutch	Centrifuga	al automatic			
Exhaust	Catalytic				
Spark plug	NGK CR7HSA Electrode gap: 0.7 - 0.8 mm				
Magneto flywheel	80	OW .			
Fuel supply	Deni DPD24J carburettor				
Standards	Euro3				

## ■ Capacities

Crankcase	0.95 L (0.7 L at oïl change) SAE 5W40 Synthetic Minimum grade: API SJ	
Relay box	0.18 L SAE 80W90 (0.17 L at oïl change) Minimum grade: API GL4	
Fuel tank	8.5 L Unleaded 95 or 98	
Fork oil	0.092 L per tube SAE 10W.	

### **■** Chassis

Chassis	Steel tube		
Front suspension  32 mm Ø telescopic front fork Travel: 85 mm			
Rear suspension Combined spring and hydraulically-damped shock absorber Travel: 88 r			

# ■ Dimensions and weight

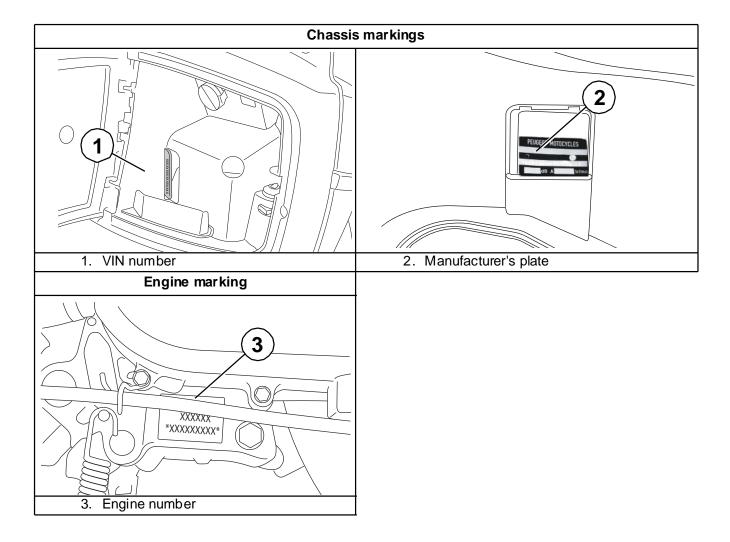
Overall length	1925 mm
Width at handlebar	710 mm
Height. (without rear- view mirrors)	11 90 mm
Wheelbase	1350 mm
Ground clearance	110 mm
Saddle height	770 mm
Unladen weight	129 kg

# **■** Tyres

Front wheel rims	3"x12 inch aluminium alloy	
Front tyre	120/70 - 12	
Front tyre pressure	1.8 bars	
Rear wheel rim	3"x12 inch aluminium alloy	
Rear tyre	120/70 - 12	
Rear tyre pressure	2 bars	

### ■ Brakes

Version	Conventional braking	Integral braking		
Front brake	Single disc type, hydraulic control			
Disc diameter and thickness	200 mm - 3.5 mm Mini. thickness: 3 mm			
Front caliper	Floating calliper equipped with 2 pistons	Floating calliper equipped with 3 pistons		
Rear brake	Single disc type, hydraulic control			
Disc diameter and thickness				
Rear caliper	Rear caliper Fixed calliper with 2 pistons Floating			



### 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	5000	10000	15000	20000	25000
Extensive servicing in km²	500	2500	5000	7500	10000	12500
Minimum servicing	1 months	12 months	24 months	36 months	48 months	60 months
To be checked at each service	1					
Steering column play.	V	V	V	٧	V	V
Wheel bearing play.	С	С	С	С	С	С
Throttle cable play.	V	V	V	٧	V	V
Operation of electrical equipment.	V	V	V	V	V	V
Condition of front and rear brake hydraulic controls.	V	V	V	٧	V	V
Brake fluid level.	V	V	V	٧	V	V
Brake pad wear.	С	С	С	С	С	С
Condition of petrol pipes.	С	С	С	С	С	С
Tyre condition, pressure and wear.	С	С	С	С	С	С
Condition of the front suspension. Condition of the rear suspension.	٧	V	٧	٧	٧	V
Battery charge.	٧	٧	٧	٧	٧	٧
Engine oil level.		•	Every 1	000 km		
Headlight height adjustment.	V	V	V	V	V	V
Tightness of nuts and bolts.	V	V	V	٧	V	V
Overall operation. Road test.	V	V	V	٧	V	٧
Service operations						
Spark plug.			R		R	
Air filter.		R <sup>a</sup>	R	R <sup>a</sup>	R	R <sup>a</sup>
Intake silencer drain.		N	N	N	N	N
Drive pulley rollers and guides/Flange wear.			С		С	
Driven pulley caged needle bearing.			G		G	
Transmission belt.			R		R	
Kick starter mechanism.			G		G	
Valve dearances.		V	V	V	V	V
Setting the carburettor.			V		V	
Joints. (Central stand. Lateral stand)		G	G	G	G	G
Petrol filter.					R	
Engine oil (+ clean strainer).	R	R	R	R	R	R
Relay box oil.	R	R	R	R	R	R
Fork oil.					R	
Petrol pipe.	R Once every 5 years					
Brake fluid.	R Once every 2 years					
Servicing time in tenths of an hour (0.5 h = 30 min)						
Reception and Treatment	0.1	0.1	0.1	0.1	0.1	0.1
Django 125/150cc	0.9	1.9	2.3	1.9	3.3	1.9
V: Check, clean, adjust. R: Change. G: Check, clean, lubricate. After 20000 km, resume the service schedule again from 5000		and change	if necessar	ry. <b>N:</b> Clean		

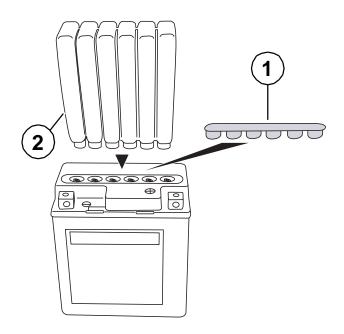
a.Perform these maintenance operations if the vehicle is used in severe conditions: areas that are damp, dusty, or have high températures, urban use only, etc



### ■ Battery preparation

#### Battery preparation:

- Remove the battery's filler protector.
- Remove the strip of caps (1) from the electrolyte bottle, which will be used as battery caps (2).
- Place the electrolyte bottle upside down with the 6 sealed zones in line with the 6 battery filler holes.
- Press downwards to pierce the bottle's seal.
- Air bubbles must go up into the bottle.
- Tap on the bottle to help the air bubbles go up.
- Once the battery is filled with electrolyte, remove the bottle.
- Leave the battery to stand for around half an hour.
- Fit the strip of caps (1) over the battery's filler holes.



### Battery charge:

Once it is filled with electrolyte, a new battery is charged up to approximately 80%.

The battery must be charged before being used for the first time. If it is not charged in this way a loss of 20% of its maximum nominal capacity and 30% of its life expectance will be permanent.

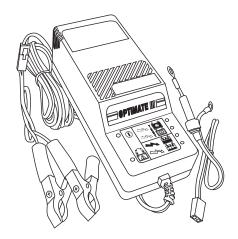


You must absolutely use a battery charger provided with a charge regulator which is suited to small capacities.

See documentation: Workshop tools N° 2.

The battery's maximum charging current is equal to 1 tenth of its capacity.

- Charge the battery for 5 to 10 hours.
- Leave the battery to stand for around half an hour.

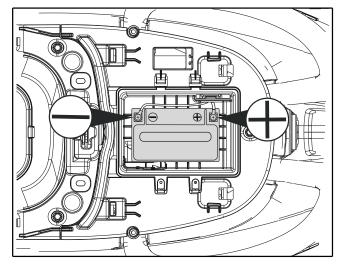




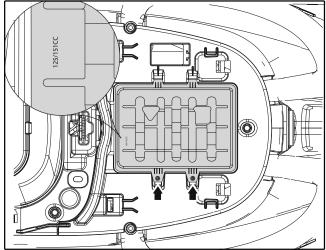
Never remove the battery's strip of caps, and never add water or electrolyte into the battery.

### ■ Installing the battery

- Fit the battery.
- Connect the red wire lug to the battery's + terminal, and the green wire lug to the battery's
   terminal



- Fit the battery cover, ensuring it is the right way round. The vehicle's cubic capacity must be visible from the outside.
- 2 plastic screws.



### ■ New machine preparation

- See the new vehicle preparation sheet.
- 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, hom, 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 unleaded fuel only.



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

	Quantity	Dimension	Tightening torque 125/151 cc
Spark plug	1	M10-1.5	10 to 12 Nm
Engine drain plug	1	M12	35 to 45 Nm
Screen	1	M30	10 to 20 Nm
Cylinder head			
Nut Ø8 mm	4	M8-1.25	18 to 22 Nm
Screw Ø6 mm	2	M6-1.0	7 to 11 Nm
Cylinder head cover	4	M6-1.0	8 to 12 Nm
Camshaft gear	2	M6-1.0	10 to 15 Nm
Camshaft stopper plate	1	M6-1.0	10 to 15 Nm
Automatic tension er	2	M5-0.8	7 to 11 Nm
Automatic tension er plug	2	M6-1.0	8 to 12 Nm
Camshaft gear	1	M6-1.0	8 to 12 Nm
Chain tensioner	1	M6-1.0	8 to 12 Nm
Inlet manifold	2	M6-1.0	8 to 12 Nm
Cylinder casings	2	M6-1.0	8 to 12 Nm
RH casing cover	10	M6-1.0	7 to 11 Nm
Freewheel	1	M22	90 to 100 Nm
Oil pump	2	M6-1.0	8 to 12 Nm
Anti-splash plate	2	M6-1.0	8 to 12 Nm
Transmission cover	8	M6-1.0	8 to 12 Nm
Relay box cover	7	M8-1.25	26 to 30 Nm
Relay box drain plug	1	M8-1.25	10 to 15 Nm
Relay box filler cap	1	M8-1.25	10 to 15 Nm
Starter motor	2	M6-1.0	7 to 11 Nm
Rotor	1	M12	50 to 60 Nm
Turbine	4	M6-1.0	8 to 12 Nm
Stator	2	M6-1.0	8 to 12 Nm
Engine speed sensor	2	M5-0.8	4 to 6 Nm
Drive pulley	1	M12	55 to 60 Nm
Driven pulley	1	M12	50 to 60 Nm
Clutch plate and shoes	1	M28	55 to 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	60 to 70 Nm		
Wheel hub pin	100 to 120 Nm		
Rear wheel bolt	27 to 32 Nm		
Engine/linkrod connecting pin	52 to 62 Nm		
Linkrod/chassis connecting pin	52 to 62 Nm		
Shock absorber top mount	43 to 50 Nm		
Shock absorber bottom mount	20 to 25 Nm		
Exhaust to cylinder head mounting nut	20 to 25 Nm		
Exhaust to casing mounting bolt	20 to 25 Nm		
Steering nut1 (in 2 operations)	38 to 42 Nm/15 to 19 Nm		
Steering nut2	Hand tightened		
Steering locknut	70 to 85 Nm		
Front brake caliper	27 to 32 Nm		
Brake pad pins	12 to 18 Nm		
Front brake disc	27 to 32 Nm		
Rear brake caliper	27 to 32 Nm		
Rear brake disc	27 to 32 Nm		
Brake unions	27 to 35 Nm		
Handle bar	35 to 45 Nm		
Fork tube	25 to 30 Nm		
Fork tube cap	25 to 30 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		757860	Steering tool	
0	752361	39 mm pipe casing seal drift		758008	Clutch compression tool	801682
	759788	Steeing head cup push tool		801682	Spacer adaptor	758008
	755996	Hose clamp				

(\*) New or modified tool

## STANDARD TOOLS

A Communication of the second	Slide calipers	Set of shims
	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
	Multimeter	Automatic resetting type torque wrench 40 to 200 Nm Type: Facom S.208A200
	Fork seal insertion kit Type: Marolotest 601055	Wrenches with interchangeable end fittings for valve clearance adjustment Type: Marolotest 500140

### **LOCATION OF COMPONENTS**



- 1. Starter motor relay
- 2. Starter resistor
- 3. Regulator
- 4. CDI unit
- 5. Temperature control unit
- 6. HT coil
- 7. Outside temperature sensor
- 8. Speed sensor
- 9. 12-volt plug
- 10. Ignition sensor

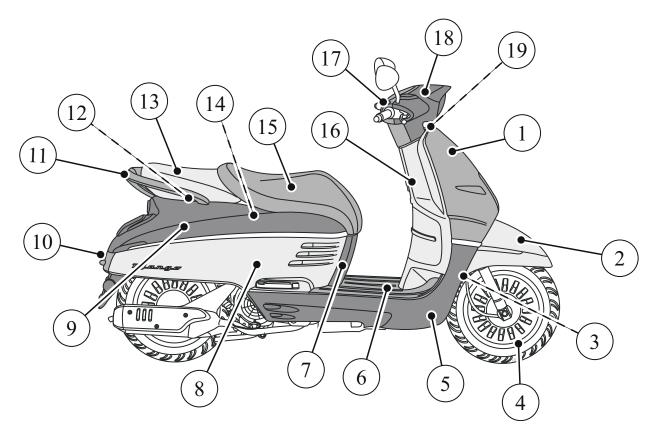
- 11. Instrument panel
- 12.Fuses
- 13.Battery
- 14.Choke
- 15. Carburetor heater
- 16. Kickstand contact switch
- 17. Fuel gauge
- 18. Horn



### **BODY PANELS**

### ■ Location of body components

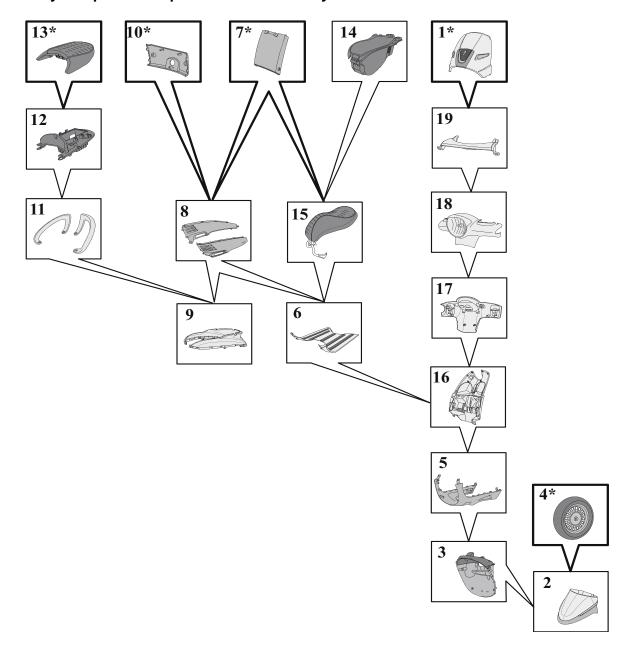
### **■** Description



- 1. Front shield panel
- 2. Front mudguard
- 3. Mudguard
- 4. Front wheel
- 5. Bottom panel
- 6. Floor panel
- 7. Central panel
- 8. Lower side fairing
- 9. Upper side fairing
- 10. Rear central fairing

- 11. Grab handle
- 12. Battery holder
- 13. Passenger backseat
- 14. Saddle storage compartment
- 15. Rider saddle
- 16. Rear shield
- 17. Counter panel
- 18. Headlight fairing
- 19. Sheath guide

### ■ Body component sequence of disassembly

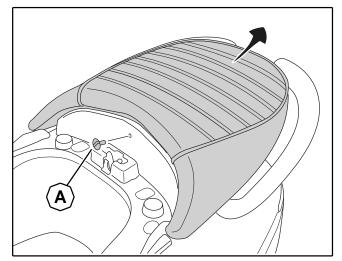


- 1. Front shield panel \*
- 2. Front mudguard
- 3. Mudguard
- 4. Front wheel \*
- 5. Bottom panel
- 6. Floor panel
- 7. Central panel \*
- 8. Lower side fairing
- 9. Upper side fairing
- 40 Dear control fairing
- 10. Rear central fairing \*
- \* This item may be removed on its own.

- 11. Grab handle
- 12. Battery holder
- 13. Passenger backseat \*
- 14. Saddle storage compartment
- 15. Rider saddle
- 16. Rear shield
- 17. Handlebar rear fairing
- 18. Handlebar front fairing
- 19. Sheath guide

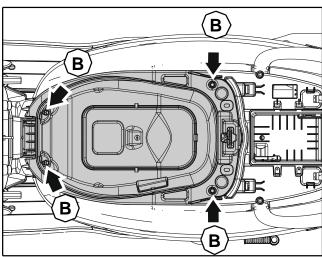
# ■ Removal of the passenger's saddle Procedure 1.

- Open the saddle storage compartment.
- Remove the passenger seat.
  - 1 (A) screws. 🗳 🗍



# ■ Removal of the storage compartment Procedure 2.

- Remove the passenger seat. See: Procedure 1 page 20.
- Remove the storage compartment.
- 4 washer head screws (B).



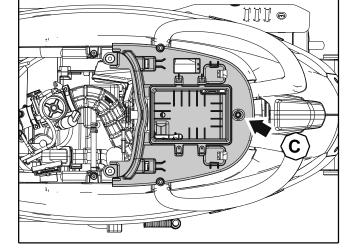
# ■ Removal of the battery holder

- Procedure 3.
- Remove the storage compartment. See: Procedure 2 page 20.
- Remove the battery cover.



- 2 plastic screws.
- Disconnect and remove the battery.
- Remove the fuse holders.
- Remove the battery bracket.
  - 1 washer head screw (C).

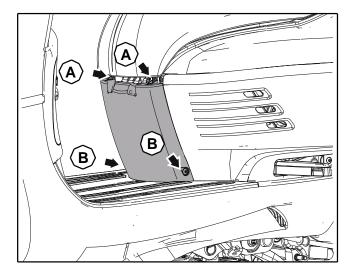




# ■ Remove the central fairing under the saddle

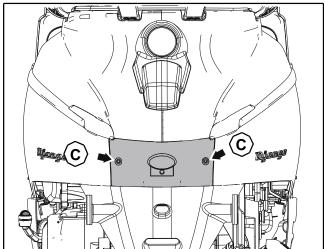
### Procedure 4.

- Remove the central fairing under the saddle.
  - 2 plastic screws (A).
  - 2 washer head screws (B).



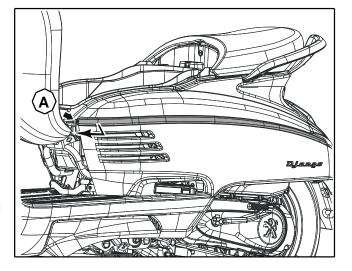
# ■ Removal of the central cover panel Procedure 5.

- Remove the central cover panel.
  - 2 plastic screws (C).
- Disconnect the license plate light.



# ■ Removal of a lower RH or LH side fairing Procedure 6.

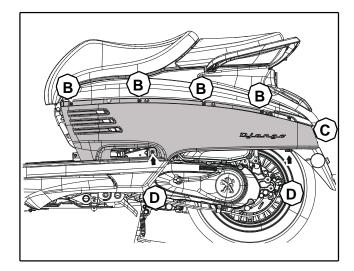
- Remove the central fairing under the saddle. See: Procedure 4. page 21.
- Remove the central cover panel. See: Procedure 5. page 21.
- Remove the chrome trim.
- 1 plastic screws (A).
- Push the front of the trim away slightly and then slide it towards the front of the vehicle.



- Open the foot rest (1).
- Remove the lower side fairing.
  - 4 plastic screws (B).



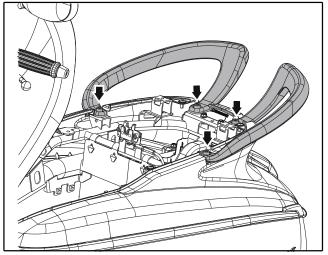
- 1 washer head screw (C).
- 2 washer head screws (D).



### ■ Removal of the grab handles

### Procedure 7.

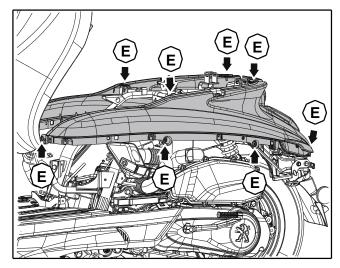
- Remove the battery bracket. See: Procedure 3. page 20.
- Remove the grab handles.
  - 4 Ø8 mm screw.

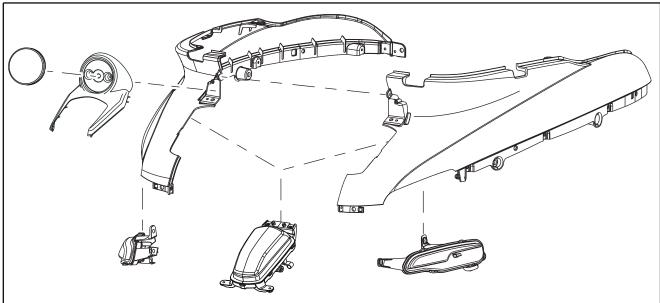


# ■ Removal of the upper side fairing assembly

### Procedure 8.

- Remove the lower side fairing. See: Procedure 6. page 21.
- Remove the grab handles. See: Procedure 7. page 22.
- Remove the upper side fairing assembly.
  - 12 washer head screws (E).

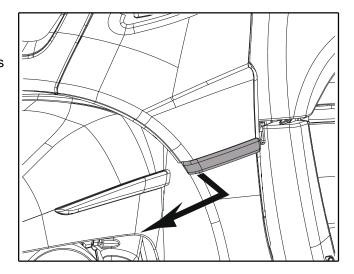




# ■ Removal of the front shield panel Procedure 9.

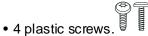
# - Unclip the front of the trim, then slide it towards the front of the vehicle.

- Remove the 2 chrome trims.

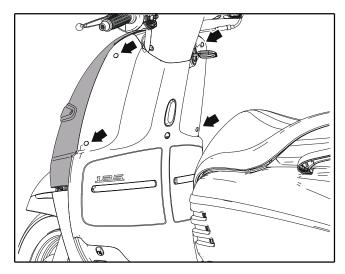


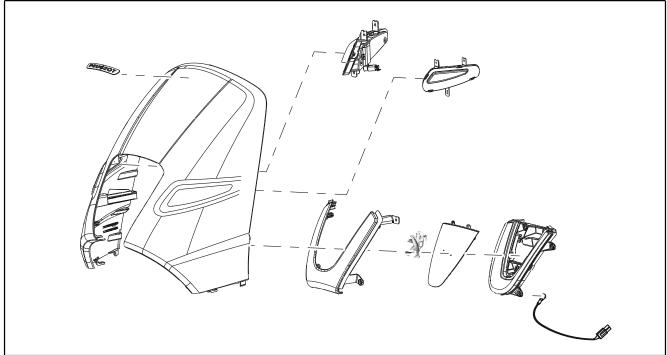


- Remove the front shield panel.



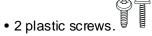
- Disconnect:
  - The indicators.
  - The outside temperature probe.
- The side light (depending on the model).

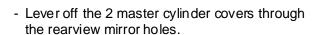


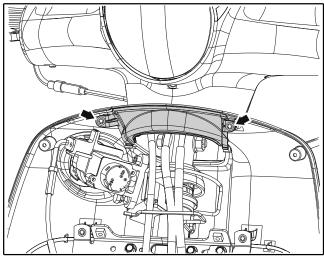


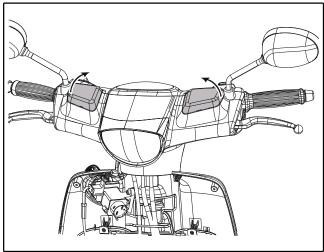
# ■ Removal of the head light fairing Procedure 10.

- Remove the front shield panel. See: Procedure 9. page 23.
- Remove the sheath guide.

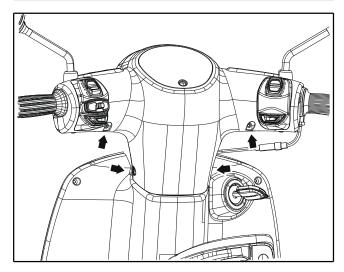






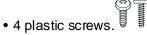


- Carefully unclip the upper part and remove the head light fairing.
  - 4 plastic screws.
- Disconnect the lighting.



## ■ Removal of the speedometer fairing Procedure 11.

- Remove the headlight fairing. See: Procedure 10. page 25.
- Disconnect:
  - The instrument panel.
  - The control clusters.
  - The brake light switches
- Remove the speedometer fairing.



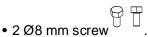
### ■ Removal of the footboard

### Procedure 12.

- Remove the upper side fairings. See: Procedure 6. page 21.
- Remove the storage compartment. See: Procedure 2. page 20.
- Remove the bracket and the driver's saddle (1).



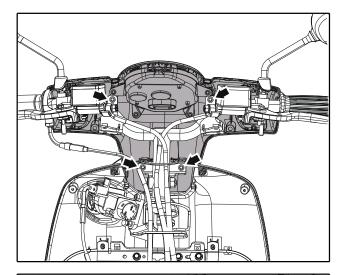
• 2 washer head screws.

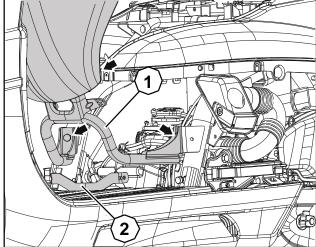


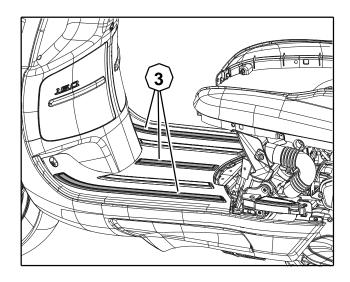
- Remove the central fairing bracket under the saddle (2).



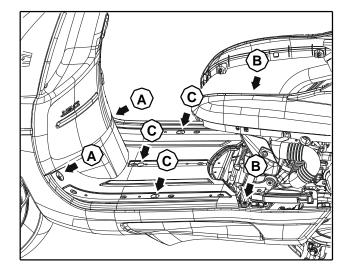
- 2 Ø5 mm screw
- Remove the 3 footboard mats (3).







- Remove the footboard by sliding it towards the rear of the vehicle and then lifting it.
  - 2 washer head screws (A).
  - 2 washer head screws Ø6 mm (B).
  - 3 washer head screws Ø6 mm (C).



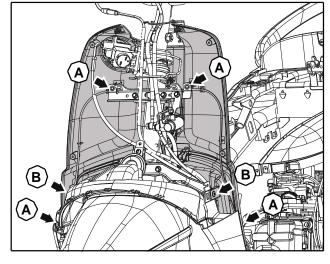
# ■ Removal of the rear shield panel Procedure 13.

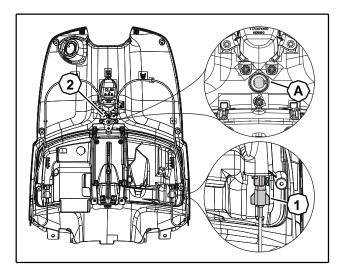
- Remove the front shield panel. See: Procedure 9. page 23.
- Remove the footboard. See: Procedure 12. page 26.
- Open the tank filler cap door.
- Remove the tank filler cap.
- Disconnect the accessory plug.
- Remove the rear shield panel.
  - 4 plastic screws (A).

• 2 washer head screws (B)

# ■ Removal of the door-locking system Procedure 14.

- Remove the rear shield panel. See: Procedure 13. page 27.
- Remove the RH or LH door locking pin (1) and its cable by turning it through a 1/4 turn.
- Remove the double-acting control plate (2).
  - 3 plastic screws.
- Push back the locking ratchet (A) and extract the barrel from the rear shield panel.







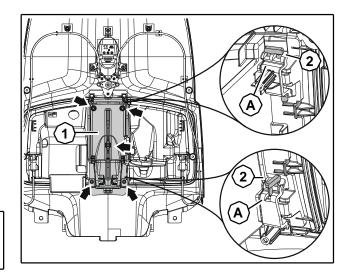
### ■ Removal of a RH or LH door

### Procedure 15.

- Remove the rear shield panel. See: Procedure 13. page 27.
- Remove the rear shield panel plate (1).
  - 5 plastic screws
- Remove the RH or LH door.
  - 2 pins (2).



When refitting the doors, position the pin indexing in the orifices (A).

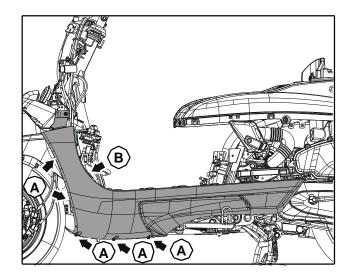


### ■ Removal of the RH or LH under body panel

### Procedure 16.

- Remove the rear shield panel. See: Procedure 13. page 27.
- Remove the RH or LH under body panel.
  - 5 plastic screws (A).
- 1 washer head screw (B).



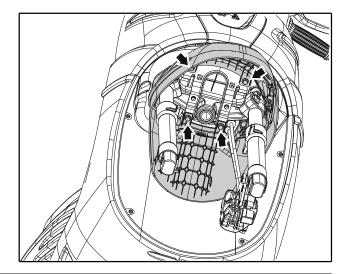


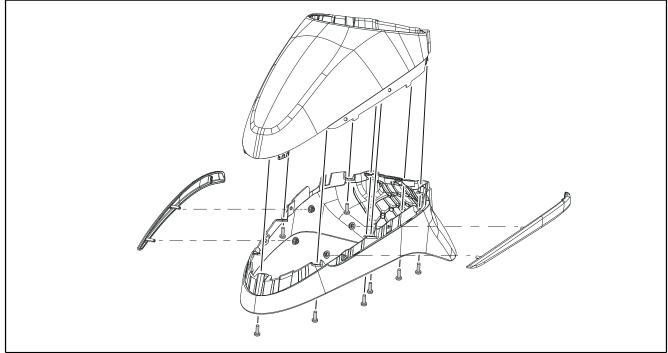
# ■ Removal of the front mudguard Procedure 17.

- Suspend or immobilize the machine securely.
- Remove the front wheel.

## Tightening torque:65 Nm.

- Remove the front mudguard.
  - 4 washer head screws.



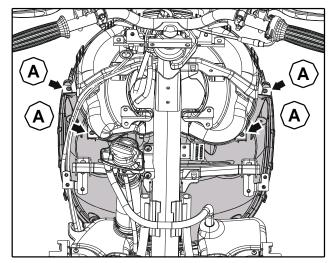


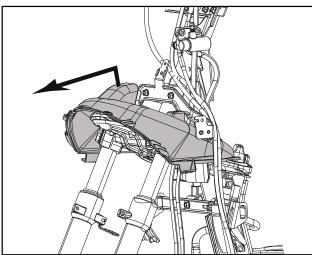
### ■ Removal of the dirt shield

### Procedure 18.

- Remove the RH and LH under body panel. See: Procedure 16. page 28.
- Remove the front mudguard. See: Procedure 17.page 29.
- Remove the lower mudguards.
  - 4 plastic screws (A).







### **SERVICE OPERATIONS**

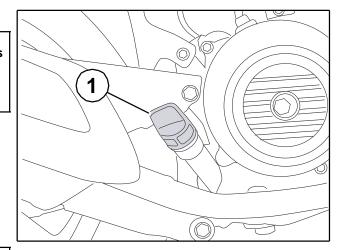
### ■ Empty the oil from the engine



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 (1).



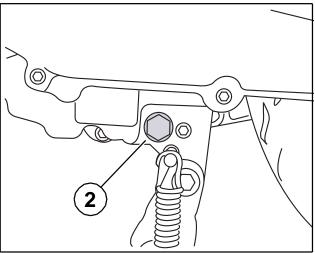


Remove the drainage cap and its seal (2) and allow the oil to drip into a recipient.

### Tightening torque:40 Nm.



Replace the copper seal every time you change oil.

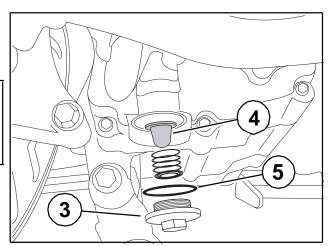


- Remove the strainer cap (3) and clean the strainer.

### Tightening torque:15 Nm.



Every time oil is changed, the filter (4) must be cleaned and the O-ring changed (5).



- 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:
  - 0.95 L at oil 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.

### ■ Draining the relay box



The engine must be drained when it is warm to allow the oil to run easier.

Wear gloves in order not to get burnt.

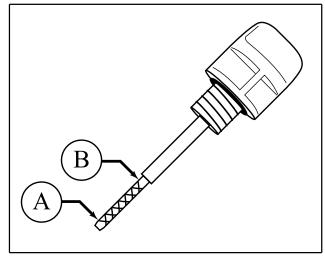
- Place the vehicle on its central stand on flat ground.
- Remove the relay box filler cap (1)

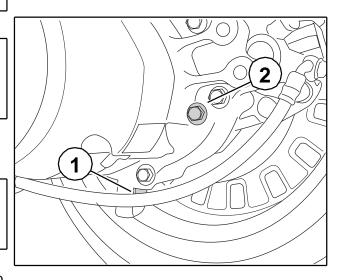


Remove the drainage cap and its seal (2) and allow the oil to drip into a recipient.

- Re-install the plug with a new seal.
- Pour the required quantity of oil corresponding to the manufacturer's standards into the filler hole.
  - 0.18 L at oil change.
- Fit the filler cap.

Tightening torque: 10 Nm.





### ■ Replacing the air filter

### Replacing the air filter with transmission maintenance

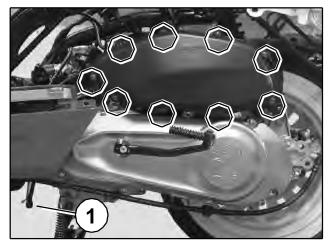
- Remove the lower LH side fairing. See: Procedure 6. page 21.
- Remove the air filter cover (9 bolts) and its seal.
- Remove the inlet silencer drain plug to let humidity and oil drip out (1).
- Remove the air filter (2).
- Clean inside the air filter box.
- Clean the oil vapour return filter (3).

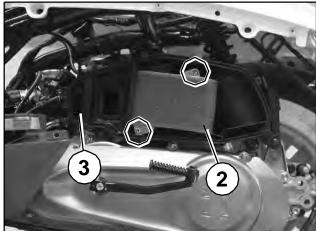
### Reassembly

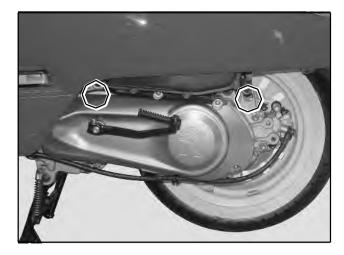
- Fit a new air filter.
- Fit the gasket.
- Install the air filter cover.

# Replacing the air filter without transmission maintenance

- Remove the storage compartment. See: Procedure 2. page 20.
- Remove the 2 screws that secure the air filter.







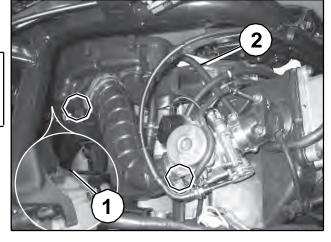
- Remove the air filter unit through the undersaddle storage compartment space. (1 collar and 1 screws)



Use a cloth to protect the cover of the air

Take care not to damage the throttle control when bringing out the air unit.

- Disconnect the relay box air vent hose (1).
- Disconnect the oil vapour return pipe (2).



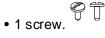
- Remove the air filter cover (9 bolts) and its seal.
- Remove the inlet silencer drain plug to let humidity and oil drip out (3).
- Remove the air filter (4).
- Clean inside the air filter box.
- Clean the oil vapour return filter (5).

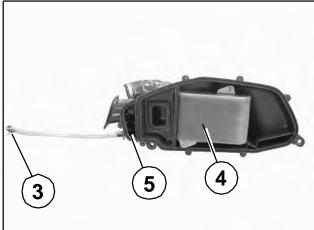
### Reassembly

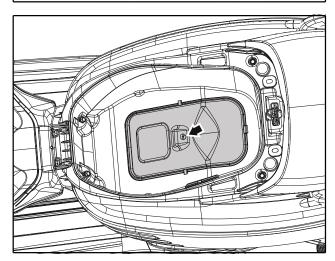
- Fit a new air filter.
- Fit the gasket.
- Install the air filter cover.

### ■ Removal of the spark plug

- The engine must be cold.
- Open the saddle.
- Remove the access door.







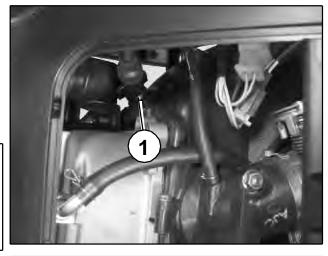
- Disconnect the suppressor (1).
- Remove the spark plug.

### Tightening torque: 11 Nm.

- Recommended spark plug:
  - NGK CR7 HSA.
  - Electrode gap: 0.7 to 0.8 mm.

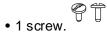


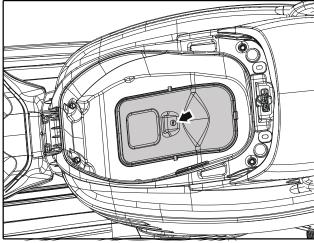
Essential precautions: When re-installing, srew in the spark plug (a few turns) by



### ■ Idle setting

- Open the saddle.
- Remove the access door.



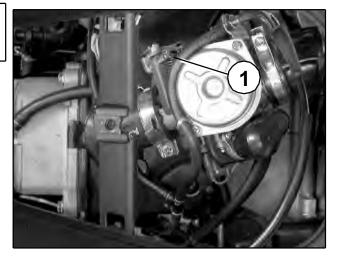




Engine at operating temperature.

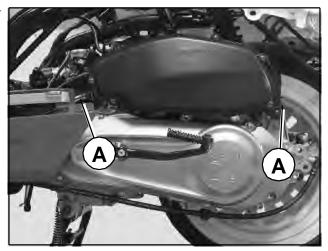
- Check the operating clearance in the throttle.
- Start the engine.
- Screw or unscrew the engine speed adjuster screw (1) to alter the idle speed.

Idle setting: 1800<sup>±100</sup> rpm.



# ■ Removal of the primary transmission cover [

- Remove the upper RH fairing. See: Procedure 6. page 21
- Remove the 2 air filter box fixing bolts (A).



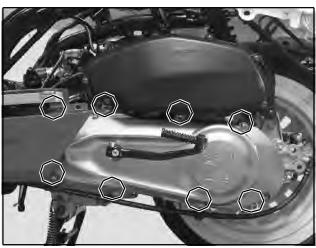
- Remove the transmission cover.
  - 8 Ø6 mm screw.

#### Tightening torque: 10 Nm.

- Remove the paper gasket.



When re-installing, use a new gasket.

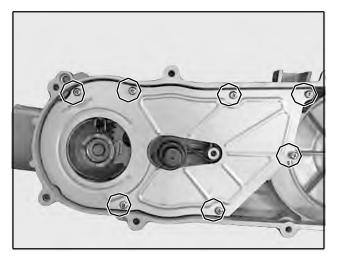


#### Removal of the starter system

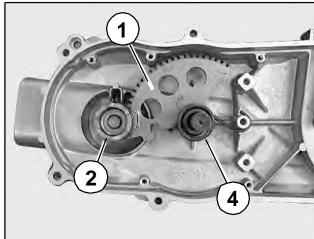
- Remove the kickstart pedal.
  - 1 Ø 8 mm screws.



- Remove the plate.
  - 7 Ø5 mm screws.
- Remove the paper gasket.



 Actuate the kick starter gear sector (1) by hand and remove the kick starter drive piece (2) and washer.

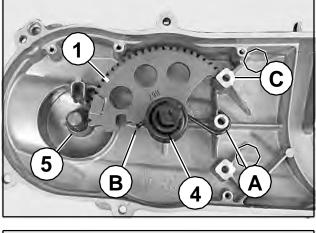


- Remove the lock ring (3), using circlip pliers.
- Remove the washer.
- Remove the elastic washer.
- Remove the starter gear sector (1) and the washer (4) from the drive train cover.



#### Fitting the starter system

- Fit the washer (5) on the housing of the kick starter drive piece.
- Fit the return spring (4), hook the longest buckle on the cover's pin (A).
- Fit the starter gear sector (1) into the lubricated bearing sleeve.
- Hook the second buckle (B) of the spring onto the starter gear sector.
- Wind the spring so as to position the kick starter sector on the stop (C) of the cover.



- Turn over the cover, fit the washer and the circlip on the the gear sector spindle.
- Wind approximately 1/8th of a turn the gear sector so as to place the kick starter drive piece (2).
- Position the pin (6) on the kick starter drive piece in the cover housing (D).
- Fit the paper gasket.

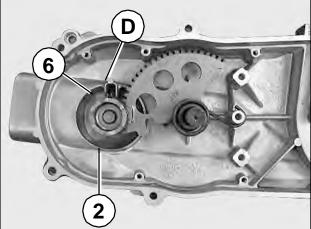


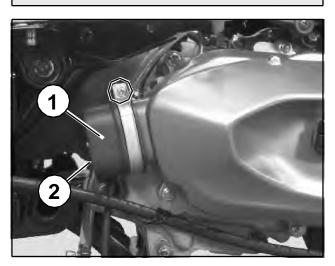
When re-installing, use a new gasket.

- Install the plate and the 7 screws.

#### Removal of the transmission air filter

- Remove the transmission air filter (1).
- 1 collar.
- Clean or change the filtering elment if necessary (2).



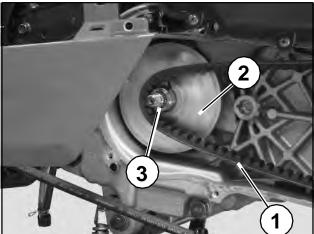


### ■ Removal of the drive pulley

- Remove the upper RH fairing. See: Procedure 6. page 21
- Removal of the primary transmission cover.
- Hold the fixed flange with tool P/N 752237.
- Remove the nut and the washer.
- Remove the fixed flange.



- Pull the belt aside (1).
- Remove the drive pulley (2) with the guide hub (3).

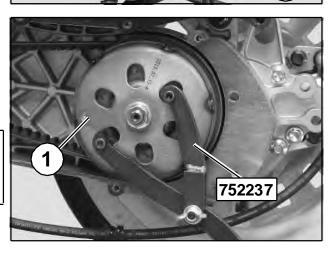


# ■ Removal of the driven pulley

- Lock the clutch drum (1) with the pin wrench P/N 752237.
- Remove the nut and the washer.
- Remove the clutch drum, the clutch drive pulley and driven pulley assembly and belt.



Make a note of the direction of rotation of the belt.



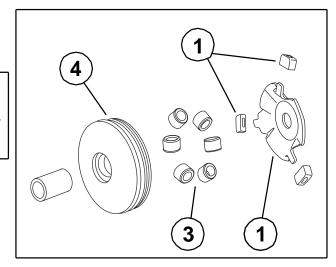
# ■ Changing the drive pulley bearings

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

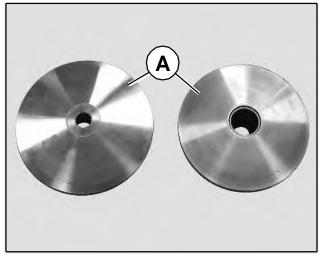


The bearings must be changed if they show major signs of wear.

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).

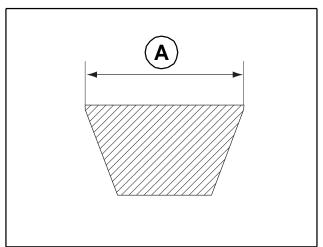


# ■ Checking the drive belt

- Measure the width of the belt (A).

Minimum width: 18.5 mm.

- Make sure the belt is not cracked.



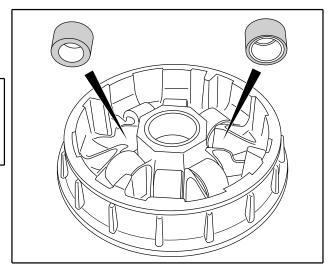
#### Reas sembly:

 Proceed in reverse order to disassembly and do not grease the bearings.



When refitting, respect the way the rollers are installed.

- Grease the moving flange bore lightly (high temperature grease).



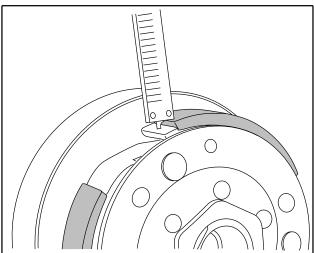
# ■ Checking the thickness of the clutch linings

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

#### Mini. thickness: 2 mm.

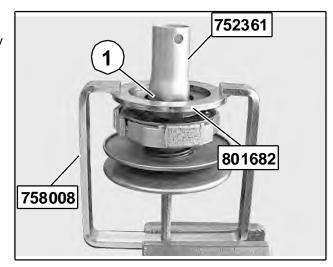


The balance of the clutch jaw assembly is factory set, and therefore the assembly cannot be dismantled.

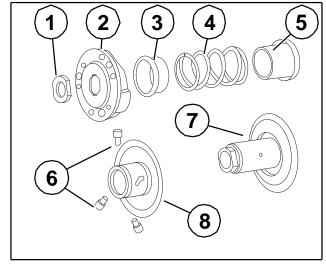


# ■ Removal of the clutch lining assembly

- Compress the clutch and driven pulley assembly using tool 758008 equipped with the protection spacer P/N 801682.
- Remove nut (1) using spanner P/N 752361. 752361.
- Slacken tool P/N 758008.

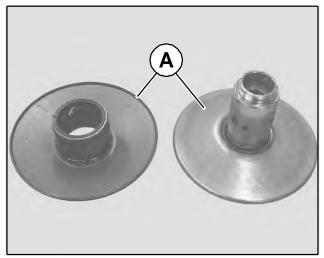


- Remove the clutch linings (2), the upper centring sleeve (3), the spring (4), and the lower centring sleeve (5).
- Remove the 3 pins (6) from the variable speed drive seat.
- Separate the fixed (7) and rotating (8) flanges.
- Make sure surface of the plates in contact with the belt does not show any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



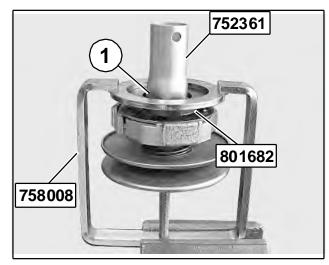
# ■ Refitting the clutch lining assembly

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



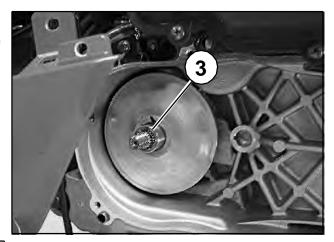
- Compress the clutch drive pulley and driven pulley assembly with the tool P/N 758008.
- Tighten the nut (1).

Tightening torque: 58 Nm.



# ■ Installing the primary drive

- Fit the drive pulley with its guide hub (3) onto the crank assembly.

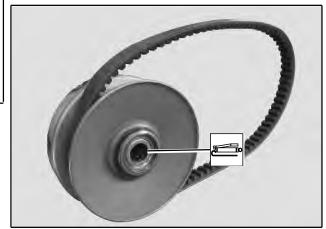




Before fitting the clutch drive pulley and driven pulley to the input shaft, fit the belt into the pulley bottom by opening the flanges by hand.

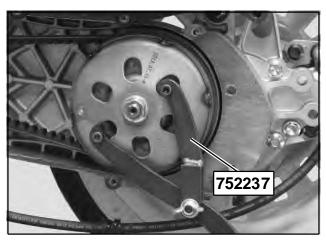
Respect the direction of rotation of the belt which is shown by an arrow.

- Lightly grease the drawn cup needle roller bearing of the driven pulley.



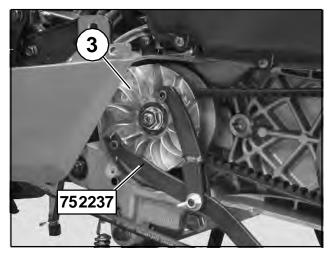
- Fit the clutch drive pulley and driven pulley assembly.
- Fit the clutch cover.
- Fit washer.
- Lock the clutch drum (1) with the pin wrench P/N 752237.
- Fit and tighten the nut.

Tightening torque: 58 Nm.



- 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 the plain washer.
- Hold the fixed flange with tool P/N 752237.
- Fit and tighten the nut.

#### Tightening torque: 58 Nm.

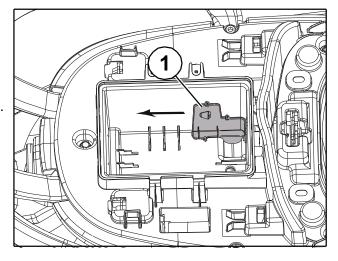


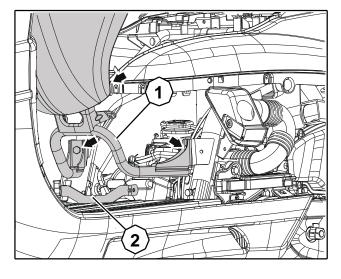
# ■ Installing the valve clearance

- Remove the saddle storage compartment. See: Range 2. page 20.
- Remove the central fairing under the saddle. See: Procedure 4. page 21.
- Remove the passenger seat. See: Procedure 1. page 20.
- Remove the battery cover.
- Disconnect and remove the battery.
- Suspend the rear of the machine.
- Remove the hatch giving access to the shock absorber upper screw (1).
- Lift the rear of the machine.
- Remove the shock absorber upper fixing bolt.

#### Tightening torque: 47 Nm.

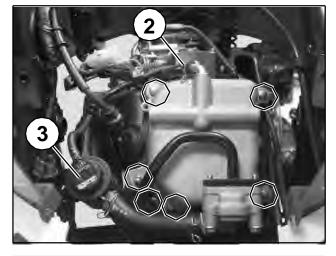
- Remove the bracket and the driver's saddle (1).
  - 2 washer head screws Ø6 mm.
  - 2 Ø8 mm screw.
- Remove the central fairing bracket under the saddle (2).
  - 2 Ø6 mm screw.



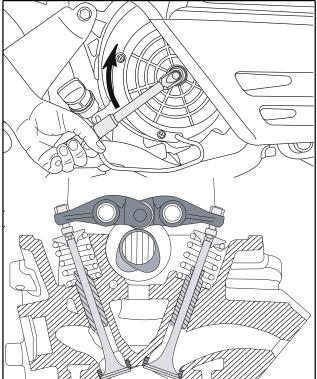


- Disconnect the oil vapour return pipe (2).
- Remove the pneumatic valve (3).
  - 2 nuts Ø6 mm
- Remove the rocker cover.
  - 4 Ø6 mm screw.

Tightening torque: 10 Nm.



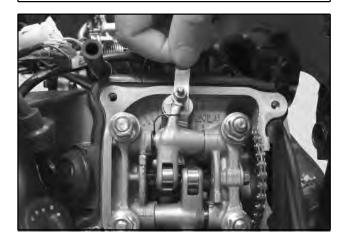
- Rotate the engine by hand in the operating direction in order to bring the rocker bearings on the back of the cams.



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

#### Clearances:

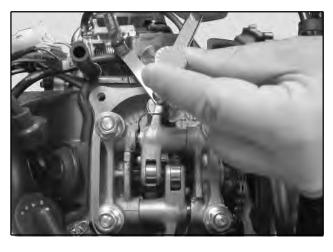
- 0.12±0.02 mm at the intake.
- 0.12±0.02 mm at the exhaust.



# ■ Checking the valve clearance

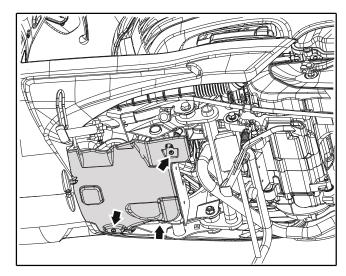
- At the intake a 0.15 mm feeler gauge shouldn't go.
- At the exhaust a 0.15 mm feeler gauge shouldn't go.
- On the contrary, if the fealer gauge goes, reset the clearances.
- Tighten the nock nut.

Tightening torque: 10 Nm.



### ■ Changing the fuel filter

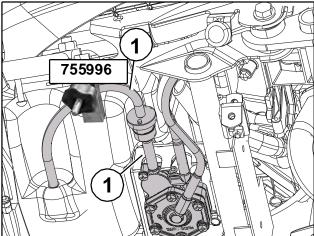
- Remove the protective shoe.
  - 3 screw.



- Using tool part number 755996 clamp the fuel supply hose between the tank and the fuel pump.
- Disconnect the 2 fuel pipes (1).
- Remove the fuel filter.



When re-installing, respect the direction of installation of the filter shown by the arrow which indicates in which direction the fuel flows.



# ■ Integral braking



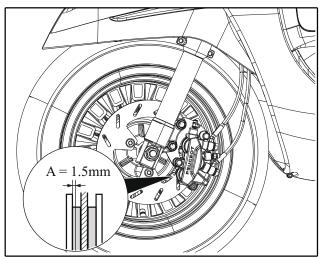
# ■ Brake pad wear

# Front brake

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

#### A. Mini. thickness: 1.5 mm.

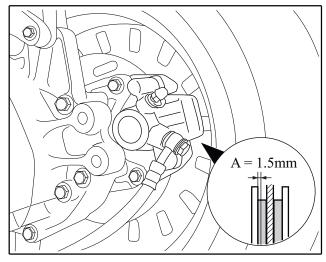
- If it shows signs of wear, change the shaft.



#### 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 brake pad pin cap (1).
- Loosen the brake pad pin first.

Tightening torque: 10 Nm.

- Remove the calliper (2 screw).

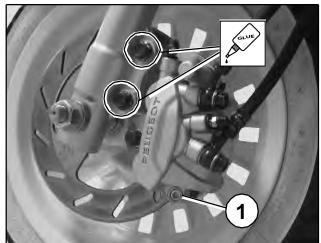
Tightening torque: 30 Nm.



When refitting the brake caliper, spread standard thread lock on the bolts.



When changing the brake pads, it is essential to replace the brake pad attachment system (spindle, pin, clips, ...)



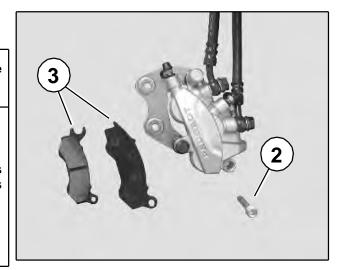
- Remove the brake pad pin (2).
- Remove the brake pads (3).



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



When changing the brake pads, it is essential to replace the brake pad attachment system (spindle, pin, clips, ...)

- Remove the wheel trim.
- Remove the 5 screws fastening the rear wheel.

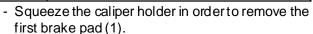
Tightening torque: 30 Nm.

- Remove the brake caliper (2 screw).

Tightening torque: 30 Nm.



When refitting the brake caliper, spread standard thread lock on the bolts.



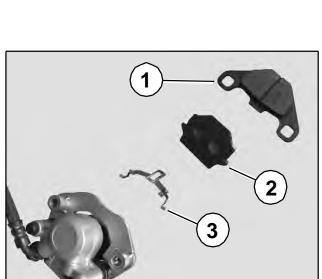
- Remove the second brake pad (2).
- Remove the brake pad spring (3).

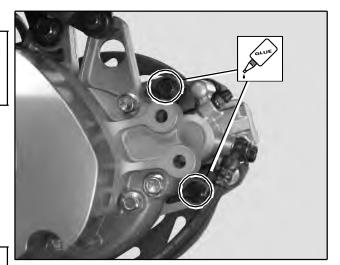


When refitting the brake pads, push the pistons all the way into their housing.



After refitting, actuate the brake levers several times to bring the brake pads against the brake disc.





# ■ Bleeding the integral circuit

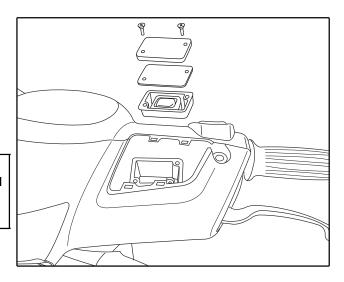
#### Draining the main brake circuit

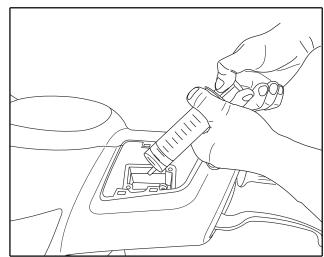
- Remove the master-cylinder cover. See: Procedure 10. page 25.
- Remove the front shield panel. See: Procedure 9.page 23.



Protect plastic parts that can be splashed by brake fluid.

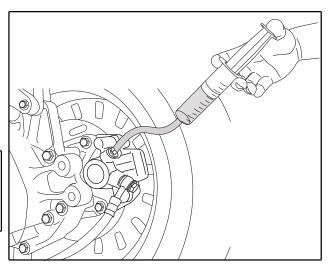
- Position the handlebars so that the master cylinder will be horizontal.
- Remove the cover and the diaphragm from the master cylinder.
  - 2 screw.
- Using the syringe, empty the LH master cylinder.



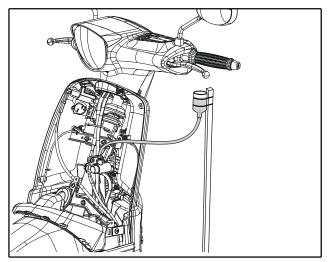


- Fill the syringe with brake fluid.
- Connect the syringe to the bleed screw of the rear calliper.
- Open the bleed screw by 1 to 2 turns.
- Inject the brake fluid slowly into the circuit until the level inside the reservoir of the master cylinder is halfway up.
- Close the bleeder screw.





- Connect the reservoir containing brake fluid to the modulator bleed screw using a transparent pipe. The reservoir must be kept higher than the modulator to easily check that the air bubbles are being expelled.
- Open the bleed screw by 1 to 2 turns.

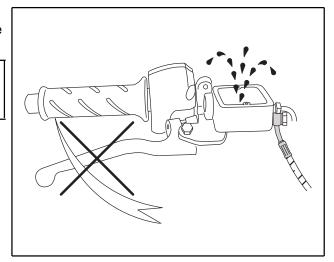


 Actuate the LH brake lever in an even way and without undue haste while topping up with brake fluid in the master cylinder.

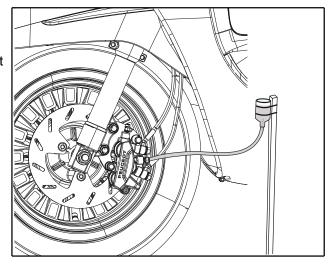


Don't lean over the master cylinder when bleeding the circuit in order not to get splashed by brake fluid

- Stop the operation when no more bubbles are expelled from the modulator bleeder screw.
- Close the bleeder screw.



- Connect the reservoir containing brake fluid to the front brake calliper bleed screw using a transparent pipe. The reservoir must be kept higher than the brake calliper to easily check that the air bubbles are being expelled.
- Open the bleed screw by 1 to 2 turns.

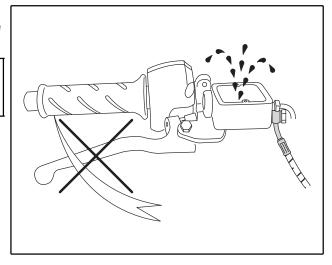


 Actuate the LH brake lever in an even way and without undue haste while topping up with brake fluid in the master cylinder.



Don't lean over the master cylinder when bleeding the circuit in order not to get splashed by brake fluid

- Stop the operation when no more bubbles are expelled from the calliper bleeder screw.
- Close the bleeder screw.



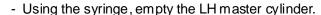
### Bleeding the emergency system

- Remove the master-cylinder cover. See: Procedure 10. page 25.

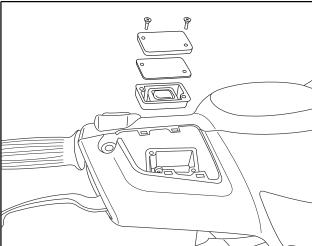


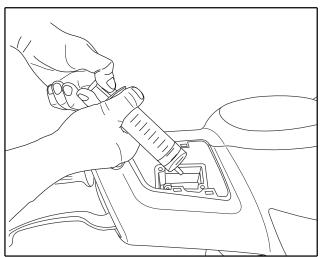
Protect plastic parts that can be splashed by brake fluid.

- Remove the cover and the diaphragm from the master cylinder.
  - 2 screw.



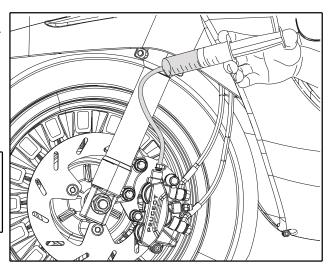
- Position the handlebars so that the master cylinder will be horizontal.



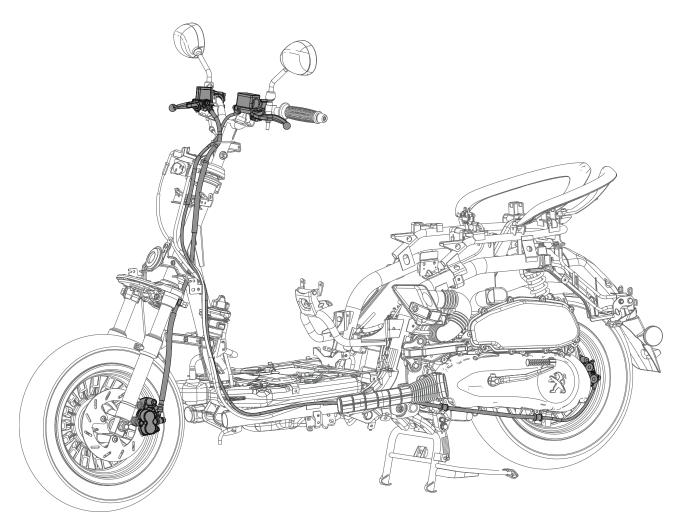


- Fill the syringe with brake fluid.
- Connect the syringe to the bleed screw of the rear calliper.
- Open the bleed screw by 1 to 2 turns.
- Inject the brake fluid slowly into the circuit until the level inside the reservoir of the master cylinder is halfway up.
- Close the bleeder screw.





# ■ Conventional braking



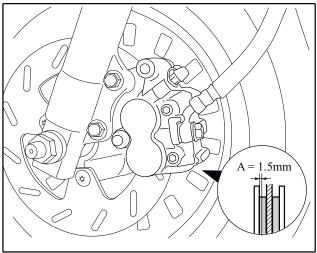
# ■ Brake pad wear

#### 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.

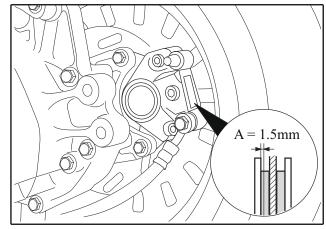
- If it shows signs of wear, change the shaft.



#### 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 caps (1) on the brake pad pins.
- Loosen the brake pad pins beforehand.

Tightening torque: 10 Nm.

- Remove the calliper (2 screw).

Tightening torque: 30 Nm.



When refitting the brake caliper, spread standard thread lock on the bolts.



When changing the brake pads, it is essential to replace the brake pad attachment system (spindle, pin, clips, ...)



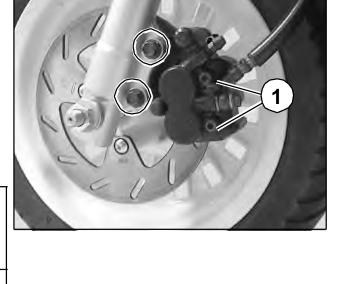
- Remove the brake pads (3).

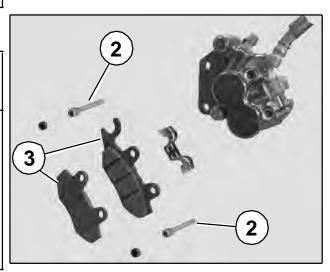


When refitting the brake pads, push the pistons all the way into their housing.



After refitting, actuate the brake levers several times to bring the brake pads against the brake disc.





#### Rear brake



When changing the brake pads, it is essential to replace the brake pad attachment system (spindle, pin, clips, ...)

- Remove the wheel trim.
- Remove the 5 screws fastening the rear wheel.

#### Tightening torque: 30 Nm.

- Loosen the brake pad pin first. (1)
- Remove the brake caliper (2 screw).

### Tightening torque: 30 Nm.



When refitting the brake caliper, spread standard thread lock on the bolts.

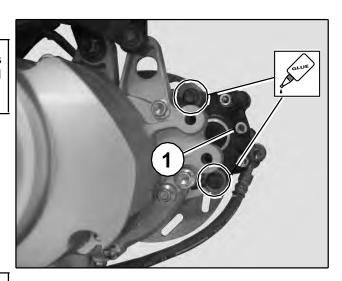
- Remove the brake pad pin (2).
- Remove the tension spring (3).
- Remove the brake pads (4).

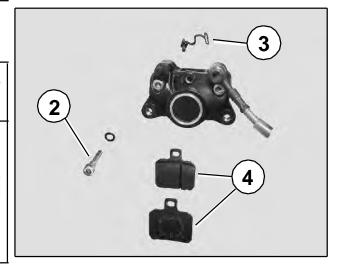


When refitting the brake pads, push the pistons all the way into their housing.



After refitting, actuate the brake levers several times to bring the brake pads against the brake disc.





# ■ Drain the braking circuit

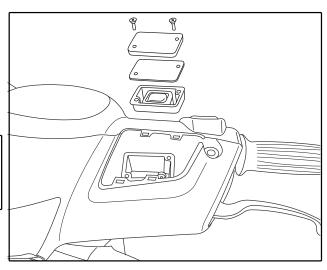
#### <u>Draining the rear brake circuit:</u>

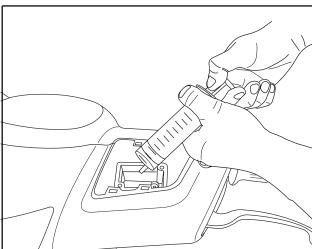
- Remove the master-cylinder cover. See: Procedure 10. page 25.



Protect plastic parts that can be splashed by brake fluid.

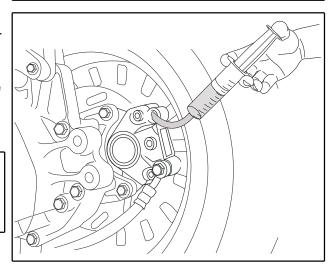
- Remove the cover and the diaphragm from the master cylinder.
  - 2 screw.
- Using the syringe, empty the LH master cylinder.
- Position the handlebars so that the master cylinder will be horizontal.





- Fill the syringe with brake fluid.
- Connect the syringe to the bleed screw of the rear calliper.
- Open the bleed screw by 1 to 2 turns.
- Inject the brake fluid slowly into the circuit until the level inside the reservoir of the master cylinder is halfway up.
- Close the bleeder screw.





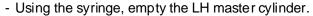
#### Draining the front brake circuit:

- Remove the master-cylinder cover. See: Procedure 10.page 25.

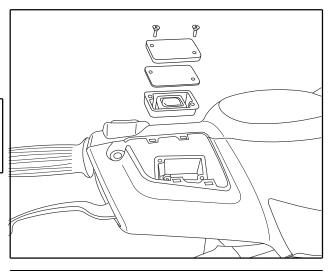


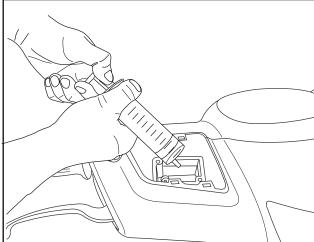
Protect plastic parts that can be splashed by brake fluid.

- Remove the cover and the diaphragm from the master cylinder.
  - 2 screw.



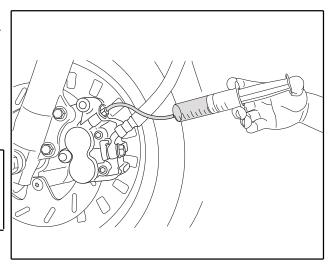
- Position the handlebars so that the master cylinder will be horizontal.





- Fill the syringe with brake fluid.
- Connect the syringe to the bleed screw of the rear calliper.
- Open the bleed screw by 1 to 2 turns.
- Inject the brake fluid slowly into the circuit until the level inside the reservoir of the master cylinder is halfway up.
- Close the bleeder screw.

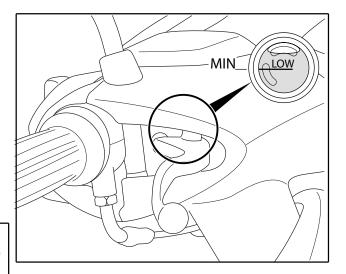




# ■ Checking the brake fluid level

- 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 master-cylinder cover. See: Procedure 10. page 25.
- Remove the cover and the diaphragm from the master cylinder (2 screw).



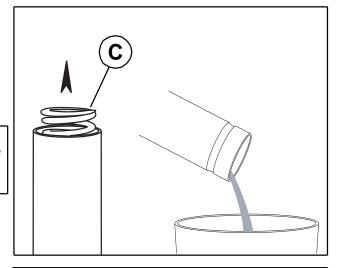


# ■ Draining the front fork

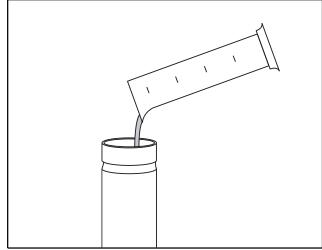
- Remove the fork tubes. See chapter: Changing the front fork seals, page 61.
- Remove the fork tube cap (A).
- Remove the spring (C).



Turn the fork tube upside down to drain the oil into a recipient.



- Pour 0.0921 SAE10W hydraulic oil into the fork tube.
- Refit the other items in the reverse order to disassembly.
- Repeat the operation with the other stanchion.



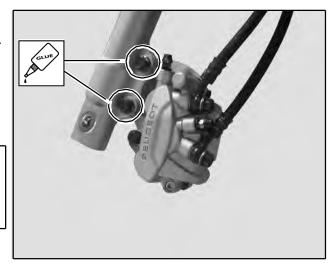
#### STEERING/FORK

#### ■ Changing the front fork seals

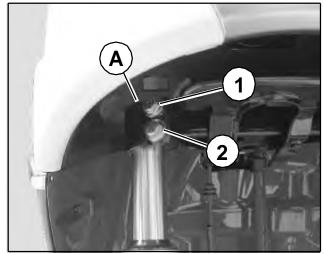
- Remove the front mudguard. See: Procedure 17. page 29.
- Remove the brake caliper without disconnecting it
  - 2Ø8 mm screw.



When refitting the brake caliper, spread standard thread lock on the bolts.



- Unscrew and remove the 2 upper screws (1) from the fork Tee.
- Before, loosen the fork tube caps (A).
- Unscrew the 2 lower screws (2) from the fork Tee.
- Remove the fork stanchions.

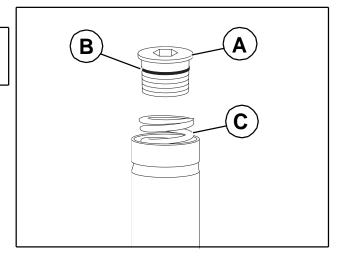


- Remove the fork tube cap (A).



Check the condition of the O-rings (B).

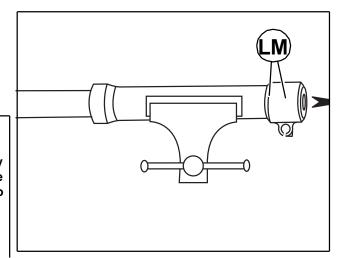
- Remove the spring (C).
- Drain the front fork. See chapter: Draining the front fork, page 60.



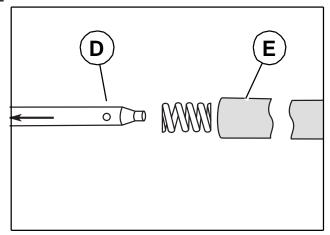
- Secure the stanchion in a vice fitted with protection.
- Remove the tightening screw from the internal tube and its seal (LM).
- If necessary use a mallet to dislodge the screws.



If the screw is hard to remove, temporarily refit the spring and the plug. Get someone to help you and compress the fork unit to block the calibrated hydraulic tube.



- Remove the calibrated hydraulic tube (D).
- Remove the expansion stop spring (E).

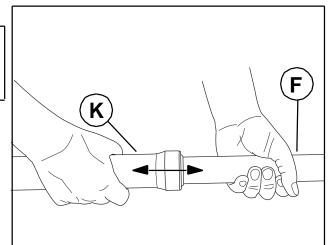


- Separate the fork's tube (F) from the cover (K).

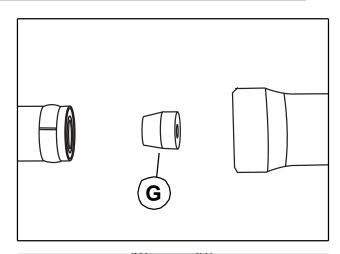


Gently work the tube free from the hollow shaft whose lip seal, washer and guide ring should still be in place.

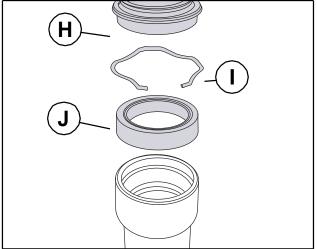
Operation that can be difficult.



- Remove the compression stop cone (G).

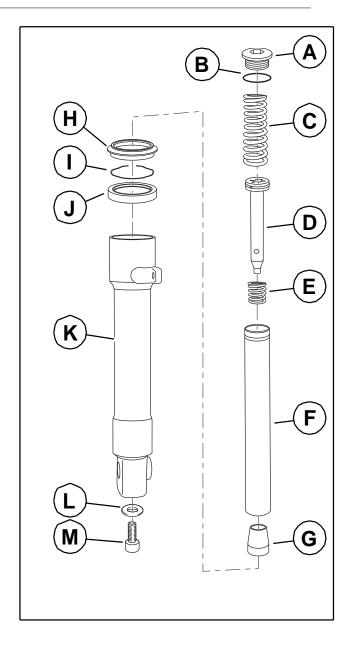


- Remove the dust cover (H).
- Remove the retaining clip (I).
- Remove the seal (J).



#### The fork and its components

- A. Fork tube cap.
- B. O-ring.
- C. Spring.
- D. Calibrated hydraulic tube.
- E. Expansion stop spring.
- F. Fork tube.
- G. End of compression cone.
- H. Dust cover.
- I. Retaining clip.
- J. Tightness seal.
- K. Hollow shaft.
- L. Tightness seal.
- M. Stanchion assembly screw.

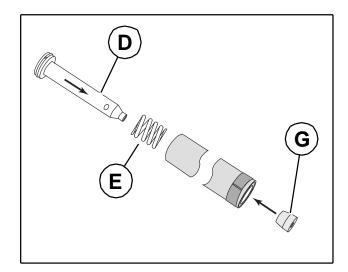


#### Pre-assembly checks

- 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 the expansion stop spring (E).
- Install the calibrated hydraulic tube (D).
- Install the compression stop cone (G) on the calibrated hydraulic tube.

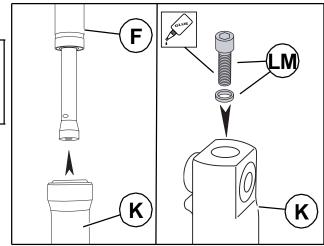


- Fit the fork sleeve (K) to the slightly oiled fork tube (F).

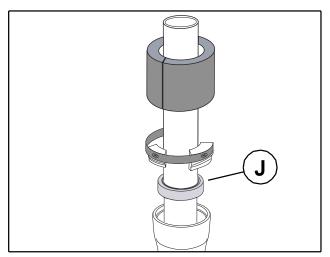


Install the stanchion assembly screw and its seal (LM).

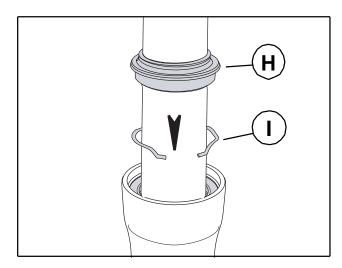
Tightening torque: 25 Nm.



 Using the marolotest lip seal insertion kit tool, push the seal (J) under the groove in the retaining ring.

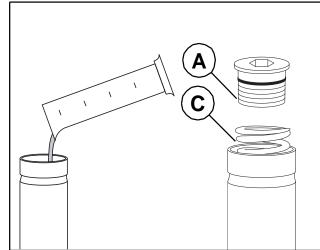


- Install the retaining ring (I).
- Fit a new, lightly greased dust cover (H).



- Pour 0.092 I SAE 10W hydraulic oil into the fork tube.
- Install the spring (C).
- Fit the fork tube cap (A).

Tightening torque: 28 Nm.

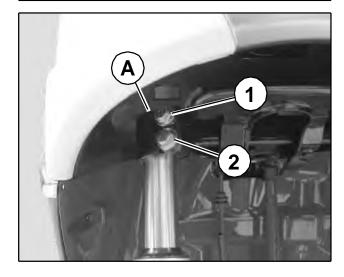


- Fit the fork tubes into the fork triple clamps.
- Fit and tighten the upper screws on the fork tee (1).

# Tightening torque: 28 Nm.

- Tighten the lower screws on the fork tee (2).

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: 65 Nm.



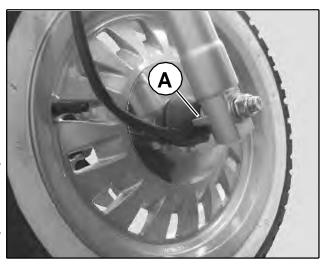
When re-installing, use a new nut.

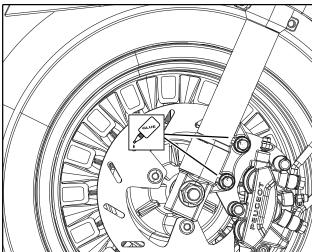
- Fit the brake calliper.
  - 2 Ø 8 mm screws.

#### Tightening torque: 30 Nm.



When refitting the brake caliper, spread standard thread lock on the bolts.





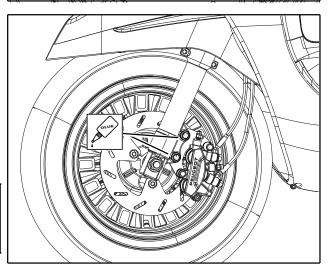
#### ■ Removal of the fork

- Remove the front mudguard. See: Procedure 17. page 29.
- Remove the brake caliper without disconnecting it.

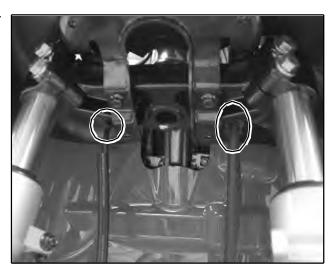
#### Tightening torque: 30 Nm.



When refitting the brake caliper, spread standard thread lock on the bolts.



- Unclip the hydraulic controls and the speed ometer control.



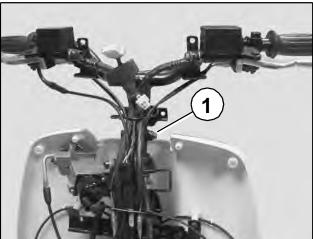
- Remove the speedometer fairing. Voir: Procedure 11.page 26
- Remove the handlebars from the fork tube. (1 screws and 1 nut) (1).

Tightening torque: 40 Nm.



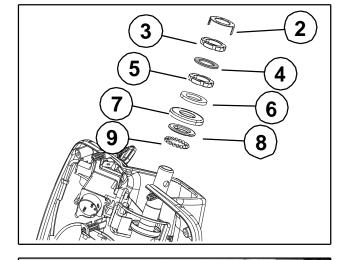
When re-installing, use a new nut.

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





- Remove:
  - the lock washer (2).
  - The nut (3).
  - The rubber washer (4).
  - The nut (5).
  - The flat washer (6).
  - The dust cover (7).
  - The upper cone (8).
  - Remove the caged ball bearings (9).
- Remove the fork.



# ■ Replacing the bearings of the steering system

### Steering headset cups

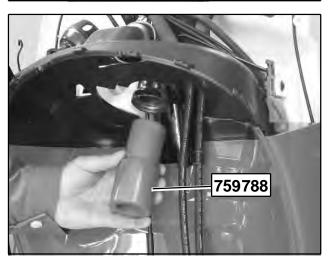


If the steering head cups are changed, the cones and ball bearings must also be changed.

- Using a drift, remove the steering head cups.



- Install new steering head cups using tool P/N 759788.

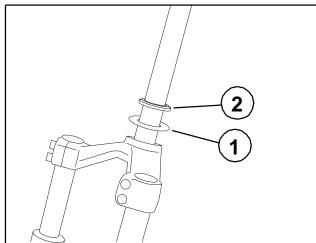


#### Steering cone

- Tap out the steering cone using a drift placed behind the flat washer.

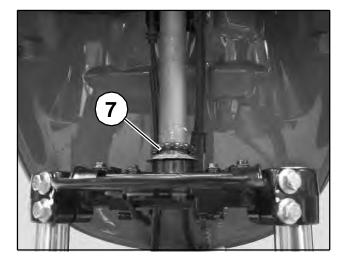


- Install the following new parts:
  - The flat washer (1).
  - The fork cone (2).



# ■ 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 (no special direction).
- Install the upper cone (8).
- Install the dust cover (7).
- Fit the plain washer (6).
- Fit the first nut (5).

#### Tightening torque: 40 Nm.

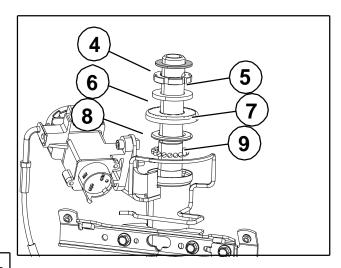
- Loosen and re-tighten the steering head nut (5).

#### Tightening torque: 18 Nm.

- Install the rubber washer (4).



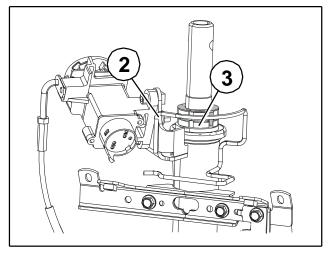
Do not tighten the steering nut beyond the recommended value to avoid damanging the steering bearings.



- 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.

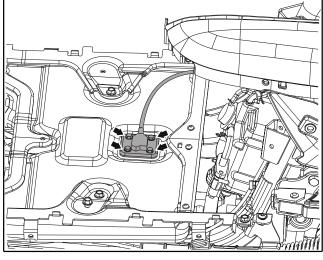
- Check that there is no play in the fork.
- Tum the fork from left to right to check that there are no tight spots.
- Refit the other items in the reverse order to disassembly.



#### **FUEL SYSTEM**

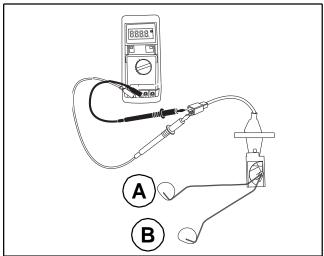
# ■ Removal of the fuel gauge

- Remove the footboard. See: Procedure 12. page 26.
- Remove the fuel gauge.
  - 4 Ø5 mm screw.



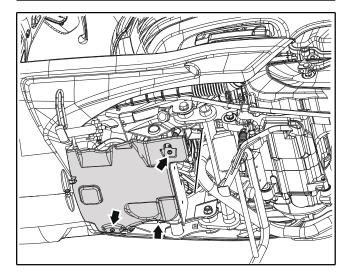
# ■ Fuel gauge check

A. Full fuel tank: 10  $\Omega$   $^{\pm20\%}$  B. Empty fuel tank: 95  $\Omega$   $^{\pm20\%}$ 

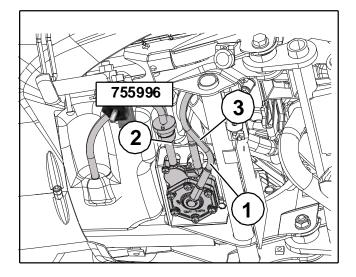


# ■ Removal of the fuel pump

- Remove the protective shoe.
- 3 screw.

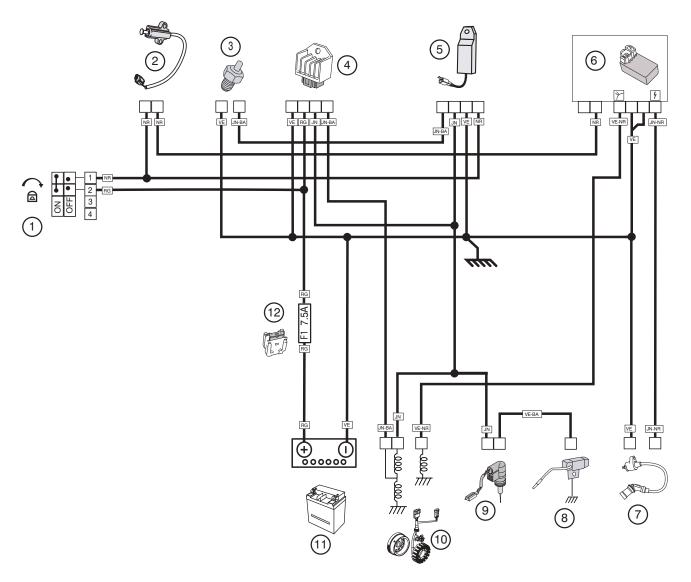


- Using tool part number 755996 clamp the fuel supply hose between the tank and the fuel pump.
- Disconnect the fuel pump:
  - 1. The vacuum pressure hose.
  - 2. The fuel inlet pipe.
  - 3. The carburetor fuel supply hose.



# **ELECTRICITY**

# ■ Ignition principle schematic/Carburetor heater/Battery charge circuit



- 1. Ignition switch.
- 2. Kickstand contact switch.
- 3. Resistor warming carburator.
- 4. Voltage regulator.
- 5. Temperature control unit.
- 6. Ignition unit.

- 7. HT coil.
- 8. Starter resistor.
- 9. Automatic starter.
- 10. Magneto flywheel.
- 11.Battery.
- 12.7.5 A fuse

# ■ Regulator/Temperature control unit/Starter motor relay/CDI unit/Starter resistor

- Remove the upper RH fairing. See: Procedure 6. page 21.
- Removal:
  - Regulator (1)
  - The starter motor relay (2)
  - The temperature control unit (3)
  - The ignition module (4)
  - The starter resistor (5)



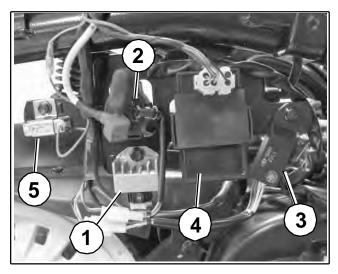
Disconnect the ignition unit and take the measurements on the harness side.

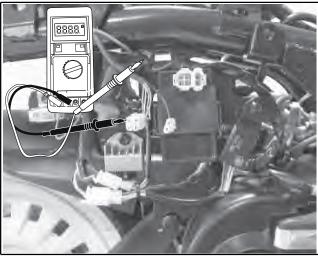
- Between the green wire and the ground:  $0 \Omega$ .
- Between the green/black wire and the ground (Ignition sensor) : 195  $\Omega$  ±20%.
- Between the yellow/black wire and the earth (High voltage primary coil) : 0.5  $\Omega^{\pm 20\%}$ .
- Between the black wire and the ground, ignition on: 12V (Battery voltage).

If the values are correct, replace the ignition module.

#### If the values are incorrect, check:

- The harness.
- The ignition switch.
- The kickstand contactor.
- The high voltage coil:
- Primary:  $0.5 \Omega^{\pm 20\%}$ .
- Secondary: 3.7 K $\Omega$  ±20%.
- Spark plug socket: 5 K $\Omega$   $^{\pm 20\%}$ . Low voltage coil:
- The ignition sensor: Between the green/black wire and the ground: 195  $\Omega$   $^{\pm20\%}$ .





#### ■ Checking the carburettor heating circuit

Power supply range of the carburettor heating resistor:

between 10±2 and 20±2 °C.

# Disconnect the temperature control unit and take the measurements on the harness side.

- Between the green wire and the ground: 0  $\Omega$
- Between the white/yellow wire and the ground (Resistor warming carburator):9.5  $\Omega$   $^{\pm20\%}$ .
- Between the black wire and the ground, ignition on: 12V (Battery voltage).
- Between the yellow wire and the ground, engine running: 13.5V (Regulated alternating current).

# If the values are correct, replace the temperature control unit.

#### If the values are incorrect, check:

- The harness.
- The ignition switch.
- The carburettor heating resistor : 9.5  $\Omega$   $^{\pm20\%}$ .

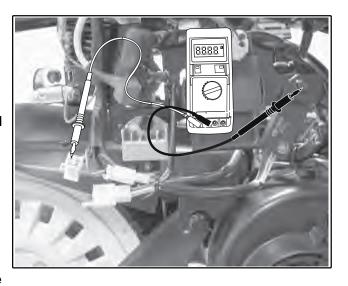
# ■ Checking the starter circuit.

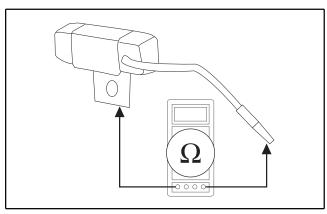
#### Checking the starter resistance:

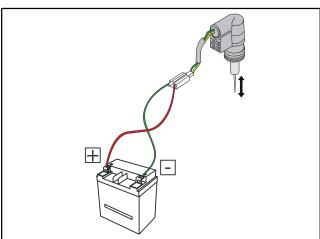
- Disconnect the limiting resistance.
- Measure the value of the resistance between the resistor wire and the earth: 5  $\Omega$   $^{\pm20\%}$ .

#### Checking the electric starter

- Removal of the electric choke.
- Connect the **starter** to a battery. The starter piston should retract.





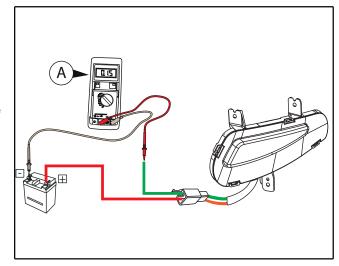


### ■ Checking the indicators

- Removing an indicator.
- Connect the indicator in series with a battery and a ammeter.

#### Normal consumption: 0.30 - 0.40 A.

- If consumption is outside this range, change the indicator.
- Carry out the same operation with the other indicators.
- If the consumption of the indicators is correct, check the wiring harness.



# ■ Checking the red light, the stop light and the side light

- Remove the side light or the rear light.
  - 1. Connect the **side light** in series with a battery and an ammeter.

Normal consumption: 0.25 - 0.35 A.

2. Connect the **stop light** in series with a battery and an ammeter.

Normal consumption: 0.25 - 0.35 A.

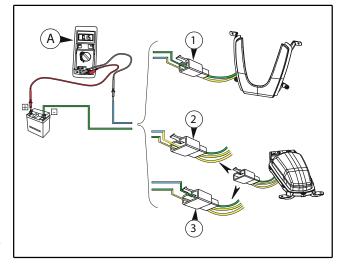
3. Connect the **red light** in series with a battery and an ammeter.

#### Normal consumption: 0.60 - 0.70 mA.

- If the consumption is outside this range, change the side light or the rear light.
- If the consumption of the side light or the rear light is correct:

#### Check:

- The main harness.
- The stop light contactors.
- The magneto.
- The regulator.



#### **POWER UNIT**

#### ■ Removal of the power unit

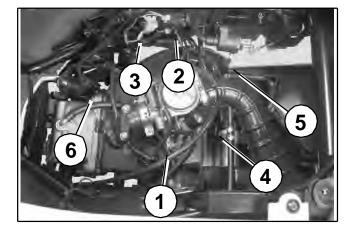
Note: To remove the cylinder head, remove the power propulsion unit.

For removal of the cylinder head, cylinder and piston, see the workshop manual : MA0020/MA0050.

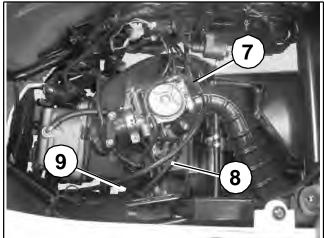
- Remove the storage compartment. See: Procedure 2. page 20.

#### Disconnect:

- The carburettor heater (1).
- The choke (2).
- The magneto (3).
- The starter motor (4).
- The engine ground (5).
- The suppressor (6).



- Disconnect:
  - The throttle control (7).
  - The fuel hose (8).
  - The vacuum pressure hose (9).



- Remove the wheel trim.
- Remove the wheel (5 screw).

Tightening torque: 30 Nm.



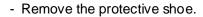
- Remove the brake calliper (2 screw).

# Tightening torque: 30 Nm.

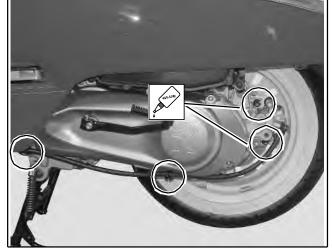


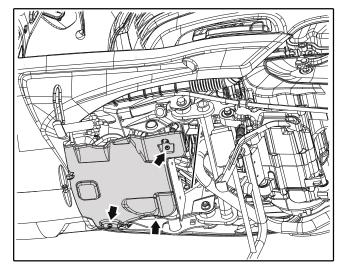
When refitting the brake caliper, spread standard thread lock on the bolts.

- Unclip the hydraulic control.
- Temporarily reinstall the wheel.









- Remove the passenger seat. See: Procedure 1. page 20.
- Remove the battery cover.
- Disconnect and remove the battery.
- Suspend the rear of the machine.
- Remove the hatch giving access to the shock absorber upper screw (1).
- Remove the shock absorber upper fixing bolt.

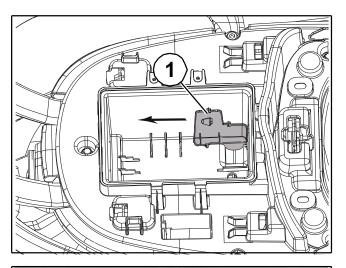
Tightening torque: 48 Nm.

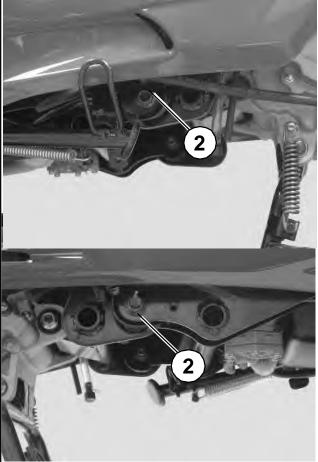
• Remove the 2 connecting-rod/chassis fastening screws (2).

Tightening torque: 60 Nm.



Use new nuts when refitting.





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



P/N. MA0051GB

In our permanent concern to make improvements PEUGEOT Scooters reserves the right to suppress, modify, or add any reference mentioned.

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