



GENERAL INFORMATIONS



Those symbols give you pieces of information about the most important notions. They are described here:



DANGER! BE CAREFUL, IT CONCERNS THE SECURITY



WARNING

If the instructions given are not respected, it can have serious consequences for the health of the rider, of third party and of the people who work on the bike.

WARNING

This symbol concerns the indications, the precautions and the instructions which must be followed to avoid the deterioration of your vehicle.

NB

This symbol introduces pieces of information which will allow you to maintain your bike.

NB : The user manual takes part in the bike and must be given to the new owner in case the bike is sold. SCORPA is always working to develop and to improve its products, so that you could find a few modifications in this manual in comparison with your bike.



SUMMARY

1	SECURITY	8
2	DESCRIPTION OF THE VEHICLE	9
2.1	IDENTIFICATION	9
2.2	RIGHT SIDE	10
2.3	LEFT SIDE	11
2.4	HANDLE BAR CONTROLS	12
3	CONTROLS AND INSTRUMENTS.....	13
3.1	CONTROLS AND ELECTRIC SWITCHES	13
3.1.1	<i>Engine circuit breaker.....</i>	<i>13</i>
3.1.2	<i>Speedometer :.....</i>	<i>13</i>
3.1.3	<i>Light switches.....</i>	<i>14</i>
	MECHANICAL CONTROLS AND INDICATORS	15
	MECHANICAL CONTROLS AND INDICATORS	16
3.1.4	<i>Speedometer</i>	<i>16</i>
3.1.5	<i>Clutch lever</i>	<i>17</i>
3.1.6	<i>Gearshift lever.....</i>	<i>18</i>
3.1.7	<i>Front brake lever.....</i>	<i>19</i>
3.1.8	<i>Rear brake pedal</i>	<i>20</i>
3.1.9	<i>Choke handling</i>	<i>21</i>
3.1.10	<i>Anti theft lock.....</i>	<i>22</i>
3.2	FUEL TANK	24
3.2.1	<i>Fuel tank cap.....</i>	<i>24</i>



3.2.2	Fuel	25
3.2.3	Fuel tap	27
3.3	SIDE STAND	29
4	CHECK LIST BEFORE USE	30
4.1	CHECK POINTS BEFORE USE	31
5	INSTRUCTIONS AND ADVICES BEFORE STARTING THE BIKE.....	35
5.1	STARTING (COLD ENGINE)	35
5.2	START (WHEN THE ENGINE IS ALREADY WARM).....	37
5.3	GEAR CHANGE.....	37
5.4	FUEL CONSUMPTION REDUCTION :	39
5.5	ENGINE LAPPING	40
5.6	PARKING	41
6	MAINTENANCE AND LITTLE REPAIRING	42
6.1	TOOLS	43
6.2	REGULAR LUBRICATIONS AND MAINTENANCE.....	43
6.3	SPARK PLUG CHECK.....	51
6.4	ENGINE OIL.....	54
6.4.1	Engine oil level check.....	54
6.4.2	Oil change.....	56
6.5	AIR FILTER CLEANING	57
6.6	CARBURETOR ADJUSTMENT	58
6.6.1	Tuning engine.....	59
6.7	PLAY OF THE VALVES	64



6.8	WHEEL-AXLE UNITS	65
6.8.1	<i>Front wheel removal</i>	65
6.8.2	<i>Front wheel fitting</i>	65
6.8.3	<i>Rear wheel removal</i>	65
6.8.4	<i>Fitting of the rear wheel</i>	66
6.9	TIRES.....	67
6.9.1	<i>Check of the conditions and of the treads depth of the tires</i>	68
6.9.2	<i>Pieces of information about the tires</i>	69
6.10	THE SPOKE WHEEL.....	69
6.11	TRANSMISSION CHAIN	71
6.11.1	<i>Check of the tension</i>	72
6.11.2	<i>Setting</i>	72
6.11.3	<i>Lubrication</i> :	73
6.12	RIDER ENVIRONMENT	74
6.12.1	<i>Adjustment of foot rest support</i>	74
6.12.2	<i>Adjustment of handlebar</i>	75
6.13	ADJUSTMENT OF THE CLUTCH LEVER LOOSE	77
6.14	BRAKES	78
6.14.1	<i>Adjustment of the brake levers loose</i>	78
6.14.2	<i>Adjustment of the rear brake pedal loose</i>	79
6.14.3	<i>Pad wear control</i> :	81
6.14.4	<i>Brake fluid level control</i> :	82
6.14.5	<i>Brake fluid change</i>	84
6.15	LUBRICATIONS	84
6.15.1	<i>Cable</i> :	84
6.15.2	<i>Brake pedal, gearshift levers</i>	85



6.16	SIDE STAND	86
6.17	FRONT SUSPENSION	87
6.17.1	<i>Inspection</i>	87
6.17.2	<i>Adjustment</i>	88
6.18	REAR SUSPENSION	89
6.18.1	<i>Inspection</i>	89
6.18.2	<i>Adjustment</i>	89
6.19	FRONT FORK AND STEERING	92
6.19.1	<i>Front fork check</i>	92
6.19.2	<i>Check of the functioning of the fork</i>	92
6.19.3	<i>Check of the steering</i>	93
6.19.4	<i>Check of the wheel bearings</i>	94
6.20	REPLACEMENT OF ELECTRIC ELEMENTS	94
6.20.1	<i>Replacement of a light bulb</i>	94
6.20.2	<i>Replacement of the indicators bulbs</i>	95
6.20.3	<i>Replacement of the rear light bulb</i>	96
6.21	DIAGRAM OF BREAKDOWNS AND DEDICATED CHECKS	96
6.21.1	<i>Fuel</i>	98
6.21.2	<i>Compression</i>	99
6.21.3	<i>Ignition</i>	100
7	PUT IN CONFORMITY FOR ROAD USE	101
7.1	INSTALL THE HOMOLOGATED EXHAUST PIPE	101
7.2	INSTALL THE SPEEDOMETER	102
7.3	INSTALL THE ELECTRICAL WIRING	105



8	CARE AND STORING OF THE BIKE.....	112
8.1	CARE.....	112
8.1.1	<i>Before cleaning</i>	112
8.1.2	<i>Cleaning</i>	113
8.1.3	<i>After the cleaning</i>	114
8.2	PUTTING AWAY	114



1 SECURITY

The motorbike is a really particular vehicle, which gives incomparable sensations of power and freedom. However, it is very important not to forget that the best motorbike has only two wheels, so that it can not escape from physical laws.

As a consequence, the vehicle has to be maintained in the best work order. That is exactly the same for the rider. SCORPA recommends you to respect the laws of the country where you are riding, not to ride under the influence of alcohol or of drugs. To be in a great form, without extreme fatigue, can allow you a safe driving and quick reflexes.

Riding motorbike implies that you wear sturdy bike clothes. The helmet, the clothes (of leather or of reinforced synthetic materials), solid shoes (preferably bike boots) and gloves are essential for the rider.

Wearing such equipments must not lead to change of the way of riding, and the security instructions must be respected.



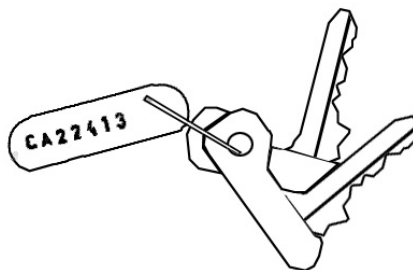
2 DESCRIPTION OF THE VEHICLE

2.1 Identification

Your SCORPA SY250F is identified with a **serial number** placed on the right side of the steering column.

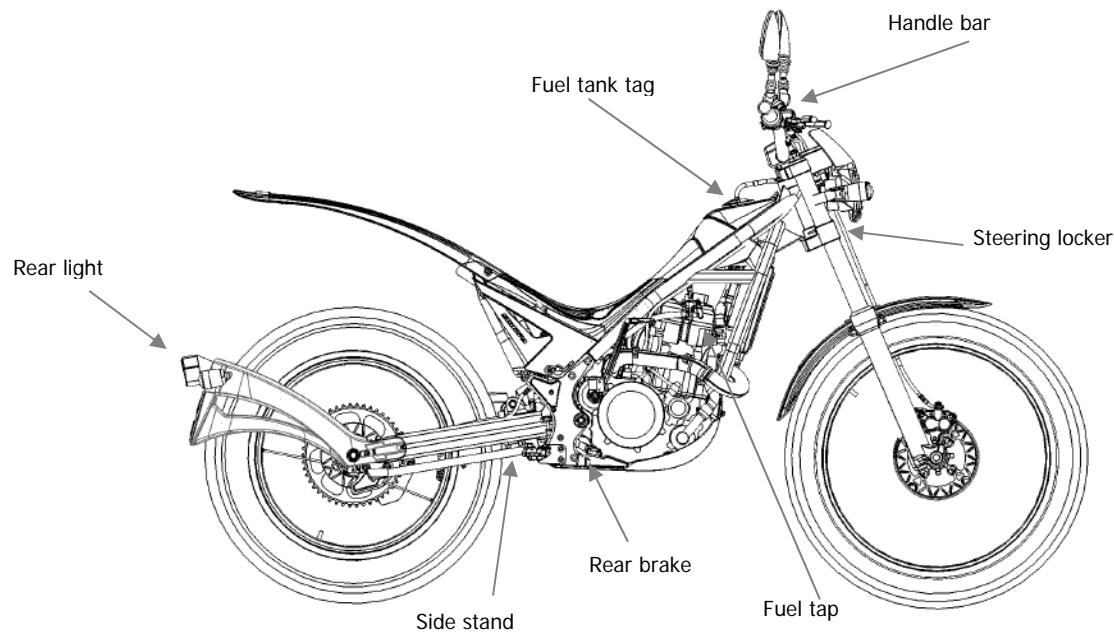
Your SCORPA SY250F has a **homologation plate** where is written the number of the frame.

The keys used to block the steering have an identification number. This number must be used if you need a new key, in case of loosing the original one.



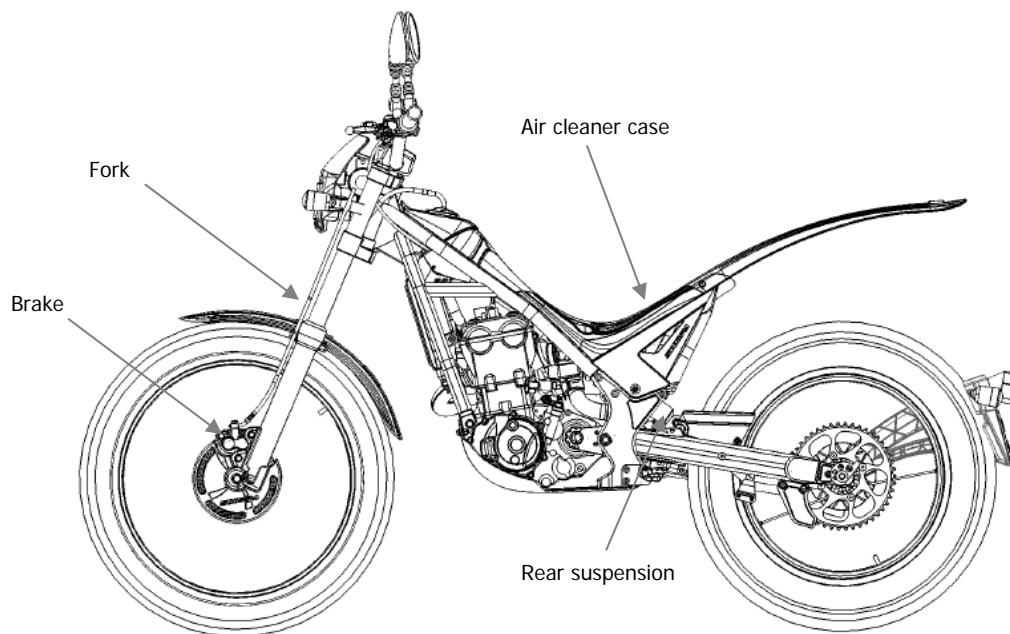


2.2 Right side



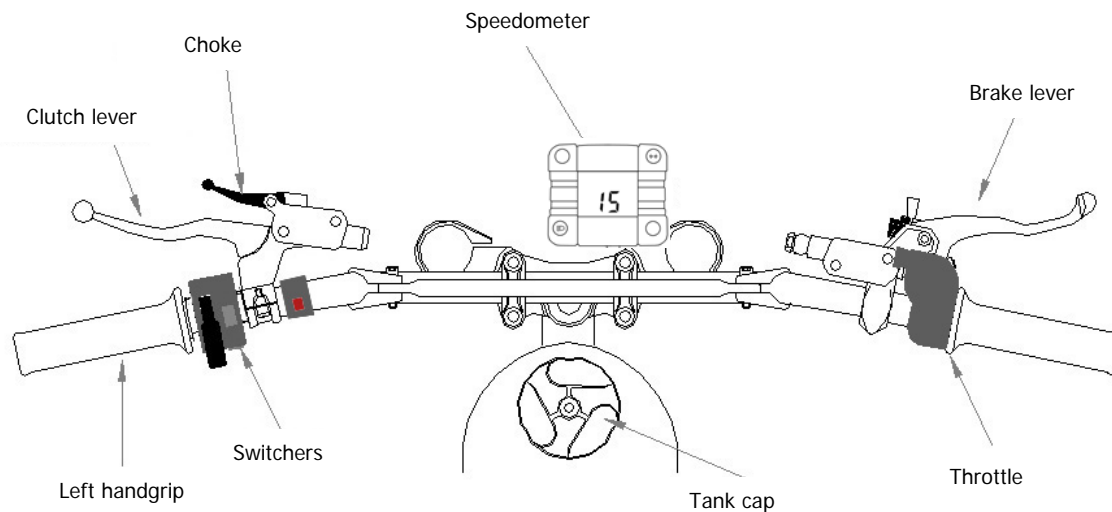


2.3 Left side





2.4 Handle bar controls





3 CONTROLS AND INSTRUMENTS

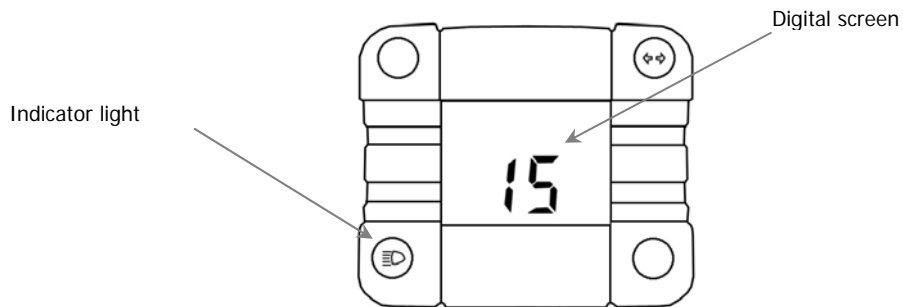
3.1 Controls and electric switches

3.1.1 Engine circuit breaker

Engine circuit breaker : "⊗"

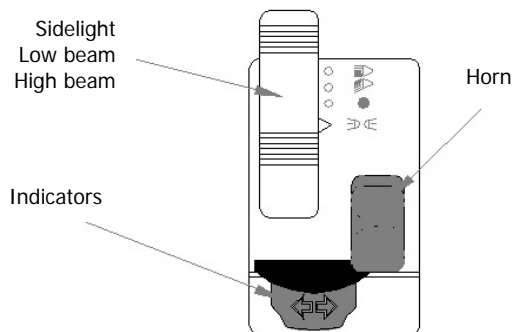
Press this button in emergency, like a fall. The effect is to cut the motor.

3.1.2 Speedometer :





3.1.3 Light switches



This part is made up of three controls :

- Side light / low beam / high beam : $\diamond \leq \ni \diamond / \ni \diamond / \ni \diamond$
 You put the control on " $\ni \diamond$ " to switch on the high beam, on " $\ni \diamond \leq$ " to switch on the low beam. The sidelight is shown by the symbol " $\ni \diamond \leq$ "



- Indication control : "↔"
In order to indicate a turn to the left: push the control to the left, towards the symbol "←".
In order to indicate a turn to the right: push the control to the right: towards the symbol "→".

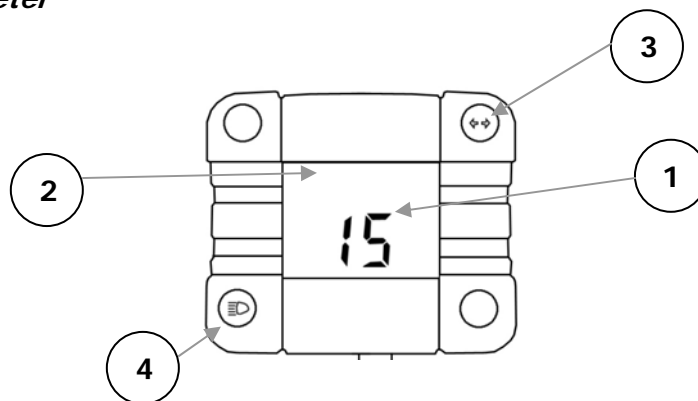
NB: when the indicators control is released, it goes back to the middle. In order to turn the indicators off, press the control when it is back in central position.
- Horn control : the horn rings when you push this control.





Mechanical controls and indicators

3.1.4 Speedometer

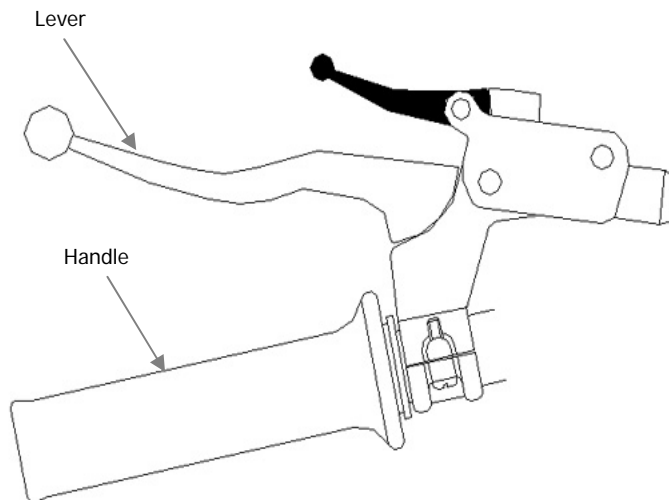


This part is made up of 4 elements:

- 1. A speedometer : it indicates the speed you are riding at
- 2. A odometer : it gives the number of kilometers covered
- 3. The turn indicators light (look at the previous paragraph)
- 4. The high beam light (look at the previous paragraph)



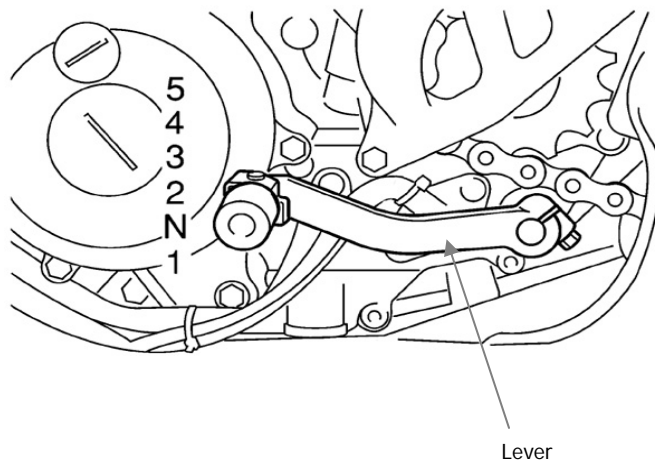
3.1.5 Clutch lever



The clutch lever is located on the left side of the handlebar. It is fixed near the left handgrip. To decltch, pull the lever towards the handgrip. To engage, just release the lever. If you would like to obtain smoothly driving, the solution is to pull the lever very quickly and to release it very progressively.



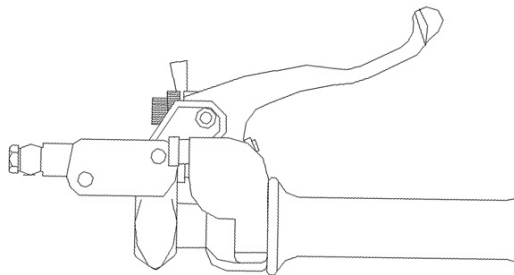
3.1.6 Gearshift lever



The gearshift lever is situated on the left side of the bike, at left toes level, when the heel rests on the left rest-foot. The use of the gearshift lever must be done only when the engine is released. That means the clutch lever is pulled towards the handgrip. The gearshift lever allows choosing one of the 5 gears of the gearbox.



3.1.7 Front brake lever



The front brake lever is situated on the right side of the handlebar. To operate the front brake, pull the lever towards the handgrip.

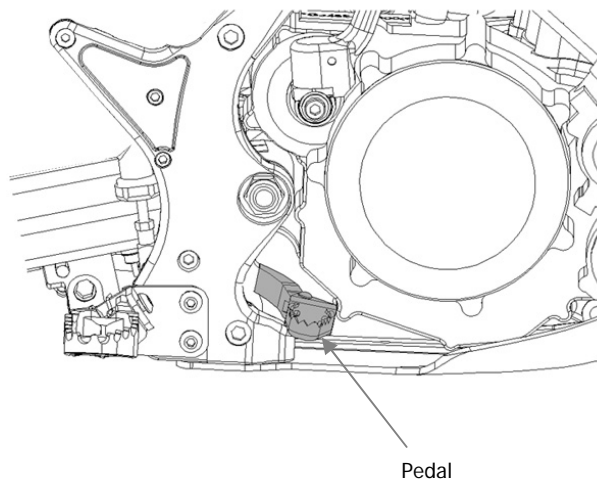


Precautions in the handling of the brake levers.

The brake levers handling must be accompanied by high precautions. In fact, a wheel lock often means the fall of the rider and its bike. That is one of the main reasons why the motorcyclists can fall. It is recommended to pull the lever as progressively as possible.



3.1.8 Rear brake pedal



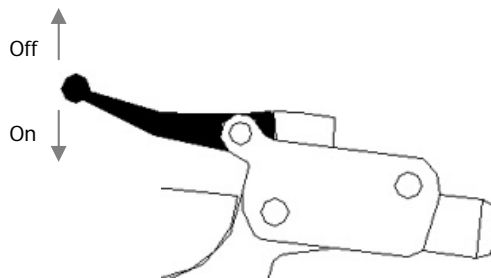
The rear brake pedal is situated on the right side of the bike, at the front of the right foot level, when the heel rests on the right rest-foot. To operate the rear brake, push the pedal towards the ground.



Precautions in the rear brake handling

As told for the front brake lever, be careful not to operate too strongly the rear brake pedal. Otherwise it can lead to the lock of the rear wheel and the fall of the rider.

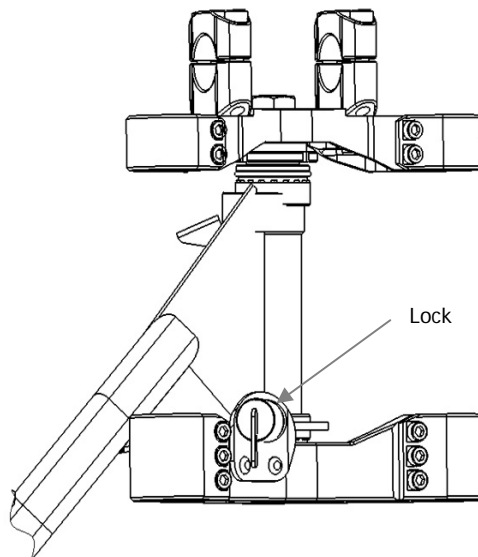
3.1.9 Choke handling



As the engine is cold, it may need to have recourse to the choke, in order to make the air / fuel mixture richer. Pull the control to open the choke and enrich the mixture. Push the control towards the ground to close the choke and to impoverish the air / fuel mixture.



3.1.10 Antitheft lock





Locking the direction: insert the key in the lock and turn it a quarter of turn towards left. Push it and, while maintaining it pushed, turn it a quarter of turn towards right. Withdraw the key, the direction is locked.

Unlocking the direction: insert the key in the lock and turn it a quarter of turn towards left: the lock goes up. Turn the key a quarter of turn towards right to withdraw the key and put it in your pocket.

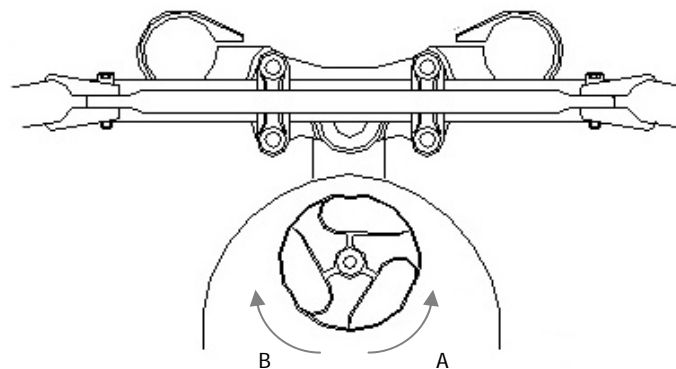
**WARNING**

Do not let the key in the key while riding. Always withdraw it before starting using your bike.



3.2 Fuel tank

3.2.1 Fuel tank cap





To remove the cap from the fuel tank, turn it anticlockwise (in the direction A), until it can be taken away. As soon as the cap is not screwed on the fuel tank, you can take it.

To put it back, turn the cap clockwise into the fuel tank (in the direction B).

When the tightening becomes harder, it is important to give one more effort, in order to be sure the fuel cap is tightened enough.



WARNING

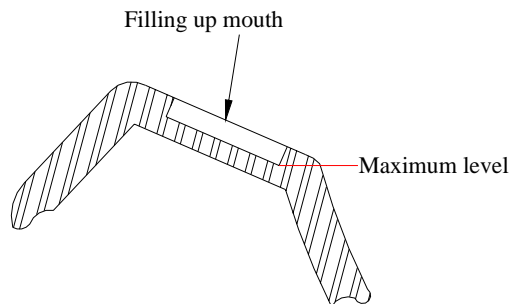
It is very important to check that the cap is tightened enough before starting the engine and riding the bike.

3.2.2 Fuel

The recommended fuel is only lead-free high octane petrol. The highest capacity of the fuel tank is 2,0 litres and the reserve is 0,6 L.

WARNING: the use of another fuel than this recommended by the manufacturer can cause serious deteriorations on the engine and on the exhaust system. SCORPA will not be responsible for any problem in that case

Before each use, check that the quantity of fuel is sufficient. In case it is not, complete in the tank. The filling up must absolutely not exceed the maximum level. Otherwise, the fuel contained in the tank could easily flow along it.



WARNING

The fuel tank must not be too much filled. In fact, as the engine is very close, the overflowing would be increased by the expansion due to the warmth.

The filling up has to be operated with a lot of precautions. There must not be fuel on the engine. This is recommended not to fill the fuel tank near a flame or near a source of heat.

WARNING :

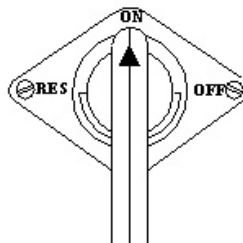
When a little amount of fuel overflows on the tank during the filling up, wipe it thanks to a sweet, soft and dry duster, in order to avoid to damage plastic, polished and painted parts.



3.2.3 Fuel tap

Its aim is to control the flow of fuel from the fuel tank to the carburettor, as the rider wants it to be regulated. This tap contains a filter, which role is to hold back the particles which could damage the engine. This diagram shows the three different possible positions. The chosen one is pointed out thanks to the drawn arrow.

There are three different positions :

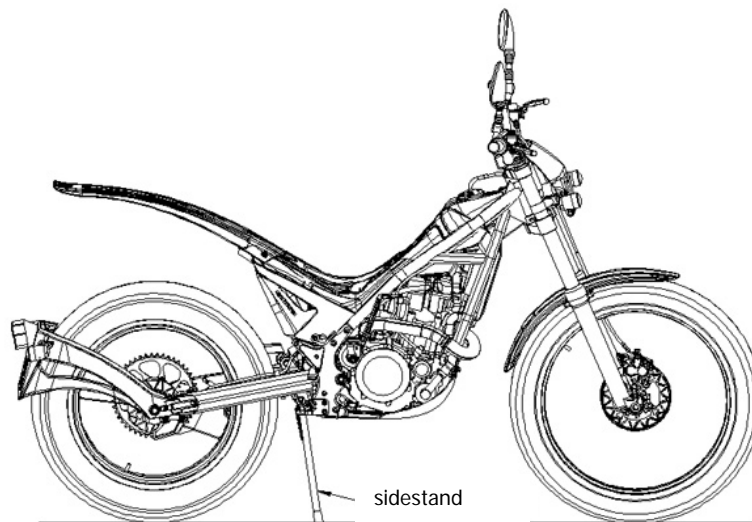




- OFF : The tap is off and the fuel is not able to flow to the carburettor. The tap must be on 'off' when the engine does not run.
- ON : the tap is running and the fuel can flow to the carburettor. The tap must be on 'on' before trying to start the engine and during the use of the bike.
- RES (Reserve): when the fuel tank is almost empty and the fuel does not flow anymore, put the tap on the position 'res.'. This system is expected to allow you to join the first filling station. Fill up the fuel tank as soon as possible. When the tank is full, put back the tap on the position 'on'.



3.3 Side stand



The side stand is fixed to the swinging arm on the right side of the bike. It automatically folds back as soon as the bike is put vertical.

**WARNING**

During the fallback of the side stand, take care not to let one of your limbs near the mechanism and be sure the third parties do so. That is the way to minimize the risks of plucking. However the stand includes a protective rubber.

4 CHECK LIST BEFORE USE

The owner is responsible for the condition of his vehicle. The bike may suffer damages during the use and during the parking too (bad weather or acts of vandalism for example). The damaging of parts which take part in the security can have very serious consequences. SCORPA recommends you to check visually those sensitive spots. If necessary, a more detailed check is naturally advocated. In case you have any doubt, do not hesitate to get in touch with your dealer.



4.1 Check points before use

Heading	Check points
Fuel	<ul style="list-style-type: none"> • Fuel level check. • Filling up if necessary. • Fuel hose check to detect a possible leak.
Engine oil	<ul style="list-style-type: none"> • Engine oil level check. • If necessary, filling up to the recommended level, with the indicated oil: <i>Motul 300V Sport 100% synthesis-ester-SAE 10w40.</i> • Visual check to detect a possible leak.
Front brake	<ul style="list-style-type: none"> • Check of the functioning. • In case the brakes are soft or spongy, ask your dealer to bleed the circuits. • Check of the play of the lever. • Adjustment if necessary • If necessary filling up to the recommended level : Motul Brake fluid DOT 5.1 or 4 • Check of the circuit to find a potential leak.



Rear brake	<ul style="list-style-type: none"> • Check of the functioning. • In case the brakes are soft or spongy, ask your dealer to bleed the circuits. • Check of the play of the lever. • Adjustment if necessary. • If necessary filling up to the recommended level: Motul Brake fluid DOT 5.1 or 4 • Check of the circuit to find a potential leak.
Throttle	<ul style="list-style-type: none"> • Make sure of the functioning progressiveness. • Check of the play of the accelerator cable. • If needs be, ask your dealer to adjust the play, and to lubricate the cable and the housing of the accelerator handle.
Clutch	<ul style="list-style-type: none"> • Check the functioning • Check of the play of the lever • Adjustment if necessary
Chain	<ul style="list-style-type: none"> • Check of the tension. • Adjustment if necessary. • Check of the condition. • Lubrication if necessary : <i>Motul Chain lub Off Road.</i>
Wheels and	<ul style="list-style-type: none"> • Check of the condition.



tyres	<ul style="list-style-type: none"> • Check of the depth of the treads. • Check of the air in the tires. • Bring back to the recommended pressure if necessary.
Gearshift lever	<ul style="list-style-type: none"> • Make sure of the functioning progressiveness and regularity. • Lubrication of the rotating parts if necessary : <i>Motul EZ Lub.</i>
Brake levers and clutch lever	<ul style="list-style-type: none"> • Make sure of the functioning progressiveness and regularity. • Lubrication of the rotating parts if necessary : <i>Motul EZ Lub.</i>
Frame fastenings	<ul style="list-style-type: none"> • Check of the nuts and screws tightening. • Tighten if necessary.
Lights, signalling and electric contacts	<ul style="list-style-type: none"> • Check the functioning • Adjustment and correct if necessary



NB : It is strongly recommended to check all those points before each use. It only takes a few minutes and the security depends on it.

**WARNING**

In case there still is a problem after the adjustments, fillings and lubrications please make it check by your dealer before starting or using the bike.



5 INSTRUCTIONS AND ADVICES BEFORE STARTING THE BIKE



WARNING

Before using the 4TRICKS, it is recommended to familiarise yourself with the engine and verify all of the functional commands in a non-hazardous area. When in doubt, refer to the 4TRICKS manual and if need be your local dealer.

The engine never must be started in a closed area or room, even for a very short period of time. The exhaust gases are very toxic. Some of them are colourless and odourless, but can cause very serious suffocations (even fatal).

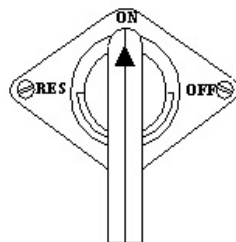
5.1 Starting (cold engine)

Before you start the engine, you have to put the gearbox in neutral position for security reasons :

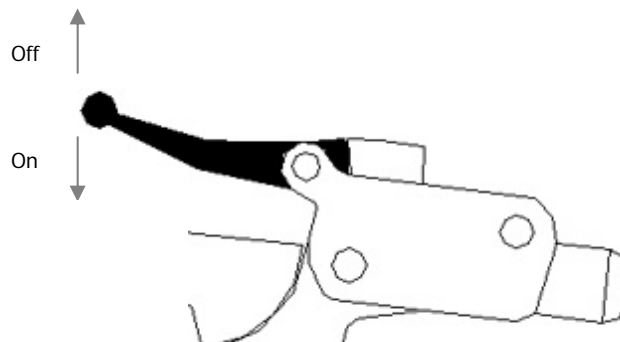
- The gearbox is placed on neutral
- If the bike is in gear, the clutch lever must be pulled and the side stand folded up.



1. Turn the tap towards to 'ON' :



2. Pull the choke lever and release the accelerator handling :





3. Spread the kick-starter.
4. Place you right foot on it and step very violently on it towards to the ground.
5. If the engine does not start, operate the two last indications again.
6. As soon as the engine starts, release the first half of the choke lever.
7. When it is warm enough, release totally the choke lever.

NB : you can consider that the engine is warm enough when it accelerates well, even when the choke is totally released.

WARNING: in order to improve the useful life of your vehicle, make sure the engine is not excessively accelerated until it is warm enough !

5.2 Start (when the engine is already warm)

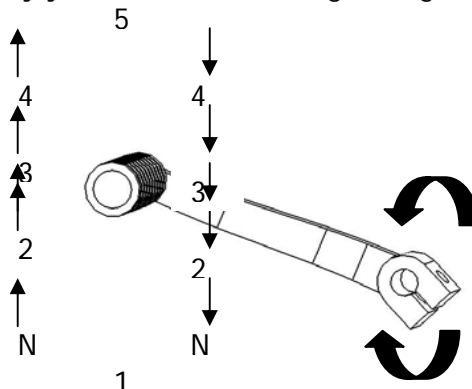
The process is the same as this with a cold engine, but you do not have to use the choke here.

5.3 Gear change

The gearbox allows you to control the power transmitted to the rear wheel. That is very useful for the hill starts, the accelerations, the hills and the bends...



This diagram shows the way you must use to change the gears thanks to the gearshift lever.



WARNING :

- It is recommended not to ride on the neutral for a too long time, especially when the engine does not run. Do not tow the bike for long distances, even on neutral. The lubrication of the gearbox is only sufficient when the engine runs. The problem is that a lack of lubrication will damage seriously the gearbox, even the engine of your bike.
- It is essential always to operate the clutch lever when you change the gears. Otherwise you will damage the gearbox, the engine and the transmission. Those parts are not conceived for such shocks and stresses, caused by the change in force of the gears.



5.4 Fuel consumption reduction :

The fuel consumption directly depends on the way you ride. Despite everything, a few tricks can help you to save up in this field :

- Release the choke as soon as possible.
- Change quickly the gears, without letting it rev hard during the acceleration.
- Do not accelerate needlessly during the deceleration or during the stops.
- Stop the engine when the traffic jam is long enough, or in front of a level crossing.



5.5 Engine lapping

The length of the bike's use life depends on the first 12 hours of use. That implies you have to respect scrupulously the following indications. During the lapping, all parts are new and must grind each other. The fragility of the parts during this period imposes not to subject them to violent shocks and important stresses for a long time.

- 0 to 6 hours

Avoid accelerating more than a third of the throttle for a long lapse of time.

- 6 to 12 hours

Avoid accelerating more than an half of the accelerator handling for a long period.

- At 12 hours

Replace the engine oil and clean the oil filter element.

- After 12 hours

The running-it is complete. You also can use the bike in the normal conditions, which are given in this manual.



WARNING: If a problem appears during the lapping, SCORPA recommends submitting the matter to your dealer as soon as possible.



5.6 Parking

When the bike is parked, the control of the fuel tank tap has to be turned to 'OFF'.



WARNING

- The hot engine and exhaust pipes could cause very serious burns to the children or to the pedestrians. Therefore it is really imperative to park the bikes in a way which help to prevent the people from burning themselves with those hot metallic parts.
- Take care to the area where you decide to park the bike.



6 MAINTENANCE AND LITTLE REPAIRING

A good motorbike rider is first and foremost expected to worry about the security. Those precautions begin by taking care about the 'active security'. That means that the rider has to respect the indications given in this manual about the checks, the maintenance, the adjustments and lubrications.

The different checks are listed in the paragraph which title is '**CHECK LIST BEFORE USE**'. The other indications are going to be given to you in the current paragraph.

NB : All pieces of information given in this manual are adapted for the normal conditions of use and ride. Each owner is expected to adapt all values and frequency for his way of driving and for the particular using conditions of his vehicle. If the use can be considered as sporting or intensive, or if the atmospheric and area conditions are bad, the frequency of checks, maintenances and lubrications must be shortened.



WARNING

If you do not master the techniques enough, or if you do not have the required tools, it is preferable for you to leave the work to your dealer.



6.1 Tools

In most operations are only used usual tools. So they often can be bought in simple equipment or do-it-yourself stores. If you do have not the necessary tools for one of the task, you can leave the work to your dealer.

6.2 Regular lubrications and maintenance

NB : An annual global check of the bike must occur only in case no check has been done in the year.

The operations preceded by an asterisk can only be carried out by people specially trained, with the required tools. In fact, it would be safer to delegate the complicated maintenance to them.



Element	Checks / Maintenance	Frequency				
		After lapping	Each race (or 3h)	Each 5 races (or 15h)	Every year	If necessary
Fuel hose	<ul style="list-style-type: none"> • Check the state of the hose (no leak and not cracked) 	◆	◆		◆	
Spark plug	<ul style="list-style-type: none"> • Check the state • Clean and adjust the distance of the electrodes • Replace 	◆		◆		◆
Valves	<ul style="list-style-type: none"> • Check the valve clearances (cold engine) and the play • Adjust (every 6 months) • Check the valve seats and valve stems for wear • Replace 	◆		◆	◆	◆
Valve springs	<ul style="list-style-type: none"> • Check the free length and the tilt • Replace 			◆		◆
Valve lifters	<ul style="list-style-type: none"> • Check for scratches and wear • Replace 			◆		◆
Camshafts	<ul style="list-style-type: none"> • Inspect the camshaft surface • Replace 			◆		◆



Timing chain sprockets, timing chain	<ul style="list-style-type: none"> • Check for wear on the teeth and for damage • Replace 			◆		◆
Piston	<ul style="list-style-type: none"> • Inspect crack • Clean carbon deposits • Replace 			◆		◆ ◆ ◆ ◆
Piston ring	<ul style="list-style-type: none"> • Check ring end gap • Replace 			◆		
Piston pin	<ul style="list-style-type: none"> • Inspect • Replace 			◆		◆
Cylinder head	<ul style="list-style-type: none"> • Clean carbon deposits • Change gasket 			◆		
Cylinder	<ul style="list-style-type: none"> • Inspect score marks and wear, clean • Replace 			◆		◆
Air filter element	<ul style="list-style-type: none"> • Clean with <i>Motul air filter clean</i> • Lubricate with <i>Motul air filter oil</i> • Replace 	◆	◆			◆
Clutch	<ul style="list-style-type: none"> • Inspect housing, friction plate, clutch plate and spring • Adjust • Replace 	◆	◆			◆ ◆



Transmission	<ul style="list-style-type: none"> • Inspect • Replace the bearing 					◆
Shift fork, shift cam, guide bar	<ul style="list-style-type: none"> • Inspect wear 					◆
Rotor nut	<ul style="list-style-type: none"> • Retighten 	◆		◆		
Exhaust pipe, silencer	<ul style="list-style-type: none"> • Inspect and retighten • Clean • Replace 	◆	◆	◆		◆
Crank	<ul style="list-style-type: none"> • Inspect and clean 			◆		◆
Cooling system	<ul style="list-style-type: none"> • Check coolant level and leakage • Check radiator cap operation • Replace coolant • Inspect hoses 	◆	◆			◆
Screws and nuts	<ul style="list-style-type: none"> • Inspect and retighten all screws and nuts 	◆	◆			
Frame	<ul style="list-style-type: none"> • Clean and inspect 	◆	◆			
Fuel tank, cock	<ul style="list-style-type: none"> • Clean and inspect 	◆		◆		



Brakes	<ul style="list-style-type: none"> • Adjust lever position and pedal height • Lubricate pivot point • Check brake disc surface • Check fluid level and leakage • Retighten brake disc bolts, caliper bolts, master cylinder bolts and union bolts • Replace pads • Replace brake fluid 	◆	◆		◆	◆ ◆
Brake hose	<ul style="list-style-type: none"> • Check the state • Make sure the hoses are not cracked and there is no leak • Replace 	◆		◆		◆
Tire, wheels	<ul style="list-style-type: none"> • Inspect aire pressure, wheel run-out, tire wear and spoke looseness • Retighten sprocket bolt • Inspect bearings • Replace bearings 	◆	◆	◆		◆
Wheel bearing	<ul style="list-style-type: none"> • Check the lack of damage and of an excessive play 	◆	◆			



Swingarm	<ul style="list-style-type: none"> • Inspect, lube and retighten • Check the excessive play in the arm 	◆	◆			
Transmission chain	<ul style="list-style-type: none"> • Check the chain tension • Check the alignment of the rear wheel • Clean with <i>Motul chaine clean</i> and lube with <i>Motul chaine lub off road</i> • Dismount and lube the chain puller • Replace the chain 	◆	◆		◆	◆
Steering head	<ul style="list-style-type: none"> • Inspect free play and retighten • Inspect bearings 	◆	◆			
Frame screws	<ul style="list-style-type: none"> • Check the screws and the nuts • Check if the guard is tightened 	◆	◆			
Side stand	<ul style="list-style-type: none"> • Check the functioning • Lube 	◆		◆		
Front fork	<ul style="list-style-type: none"> • Check the functioning and the leak, adjust • Replace oil • Replace oil seal • Check if the crowns are tightened 	◆	◆		◆	◆



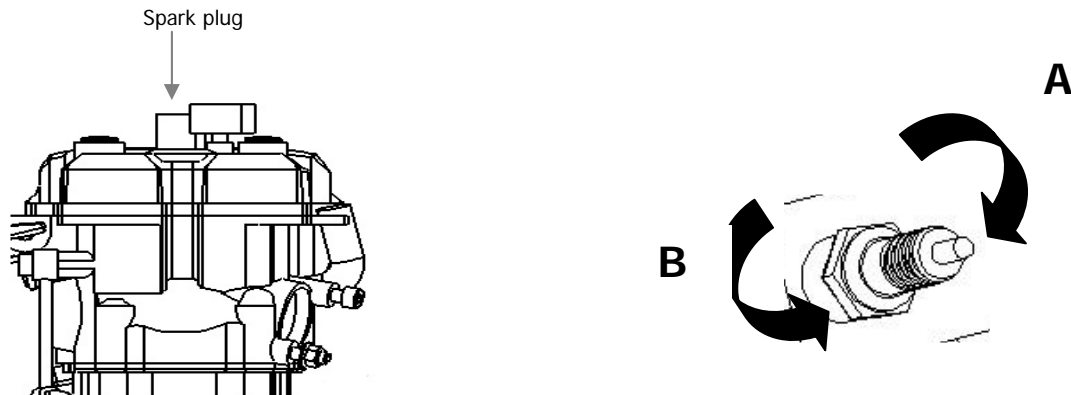
Front fork oil and dust seal	<ul style="list-style-type: none"> • Clean and lube (with lithium base grease) 	◆	◆			
Rear shock absorber	<ul style="list-style-type: none"> • Check the functioning and the lack of leak, adjust, retighten • Lube (after rain ride) 	◆	◆		◆	
Carburettor	<ul style="list-style-type: none"> • Check the functioning of the choke • Adjust the idle • Nettoyer 	◆	◆			
Engine oil	<ul style="list-style-type: none"> • Replace • Check the level of oil and the lack of oil leak 	◆	◆	◆		◆
Oil filter	<ul style="list-style-type: none"> • Replace 	◆		◆		
Moving parts	<ul style="list-style-type: none"> • Lube 		◆			
Accelerator cable and handle	<ul style="list-style-type: none"> • Check routing and connection and play • Lube with <i>Motul EZ lube</i> • Inspect and clean (throttle cable) 	◆	◆			
Clutch lever	<ul style="list-style-type: none"> • Inspect the play 					◆
Lights, signalling and electric contacts	<ul style="list-style-type: none"> • Check the functioning • Adjust the beam of lights • Check the functioning of the front brake electric contact 	◆	◆			

**NB :**

- The 'unusual' conditions of use must imply the increase of the maintenance frequency. All the parts which have to be lubricated or greased are concerned, as far as the air filter, which needs to be more frequently and after all "off road" ride. Those conditions are the rain, the humidity, the sand or the dust.
- The SY250F is equipped with two hydraulic disk brakes, which require a special maintenance :
 - Replacement of the brake master-cylinders components and callipers and the brake fluid change every two years.
 - Replacement of all brake hoses every four years or as soon as they are cracked or there is a fluid leak.
- After all "off road" ride you must carry out all the controls indicated in this table.



6.3 Spark plug check



The spark plug has one of the essential roles in the functioning of the engine. That is why it is really of the primordial importance to check its state as often as written in the list. Bad adjustments, the heat and all the deposits can all damage the spark plug. For this bike, SCORPA recommends to use the following model : *NGK R CR 8E*



In order to take the spark plug off, follow those two stages :

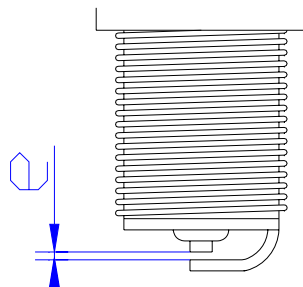
1. Take off the anti-interference system
2. Unscrew the spark plug in the direction (B) thanks to a spark plug spanner.

The spark plug state check consists in two stages too :

1. Make sure the porcelain colour around the electrodes is dark or light coffee coloured, because that colour shows the spark plug works in good conditions.
2. Check the weakening level and that the carbon deposits thickness are not excessive. If one of those situations happens, it is time to replace the spark plug.

There are four phases in the spark plug reassembly :

1. Measurement of the electrodes gap, thanks to a wedge whole set. If needs be, adjust to the recommended value: 0,6 to 0,7mm



2. Clean the joint surface and the spark plug thread.

3. Put the spark-plug in the cylinder-head. Then begin to tighten it with the hand, in order not to damage the head cylinder tapping (direction A). Tighten the spark plug thanks to torque wrench: the recommended torque is : 17,5 Nm (1,75 m.kgf).

If you have not got this tool, the solution is to tighten with the hand at the most, before to tighten from $\frac{1}{4}$ to $\frac{1}{2}$ turn with a usual wrench. After that, adjust to the recommended torque with a torque wrench as soon as possible.

4. Put back the spark plug cap.

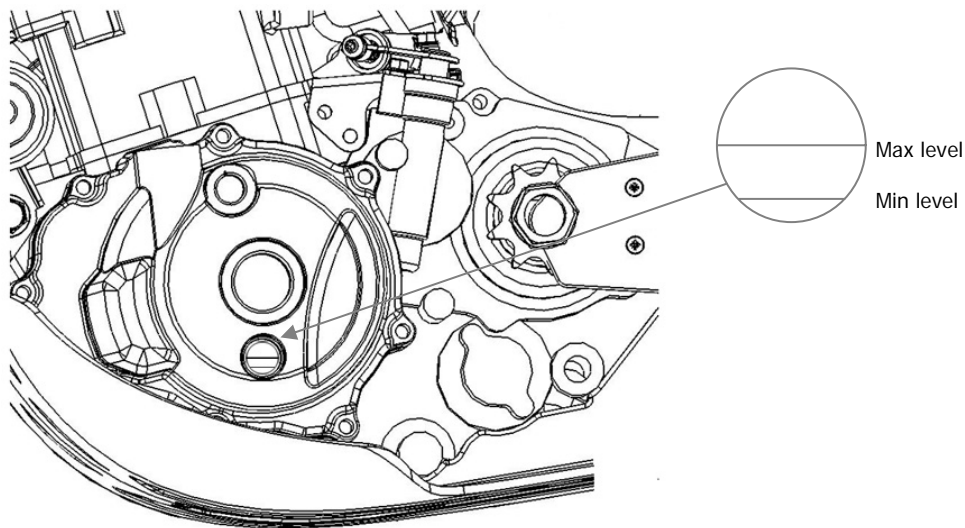


6.4 Engine oil

It is imperative to check the engine oil level before every use. The lack of engine oil can cause an insufficient lubrication of the moving parts as far as a superheating. The list of regular maintenance and lubrications gives you the recommended frequency for each task. For a greater longevity of the engine, use the *Motul 300 V 100 % synthesis-ester-SAE 10w40 four strokes high performances*.

6.4.1 Engine oil level check

1. The bike must be situated on the most horizontal ground and it has to stand upright.
2. The check is done on the right engine crankcase cover, through the oil indicator. The oil level must be situated between the two line, with the engine cold.



3. In case there is not oil enough, add oil up to the recommended level. The oil filling up hole is on the top of the right crankcase.



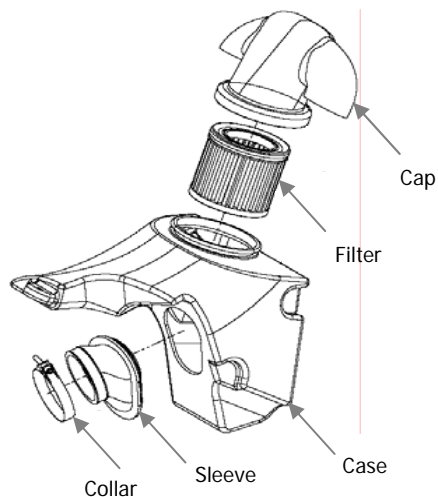
6.4.2 Oil change

1. Start the engine and let it warm up for a few minutes, and after that switch it off.
2. Put an oil change tray under the oil drain plug. It will help you to collect the old oil.
3. Unscrew the cap and the drain plug. The oil should begin to flow.
4. Once all the evacuated oil of the engine, screw up the drain plug.
5. Fill the engine with *Motul oil 300 V 100 % synthesis-ester-SAE 10w40 four strokes high performances* by the opening of filling by taking care to check the oil level with the stopper of filling.
6. Start the engine and to let it heat a few minutes, then to switch it off.
7. Check the oil level again (see paragraph on the control of the oil level).



6.5 Air filter cleaning

In order to keep the high level of performances of the bike and its reliability, it is essential to clean regularly the air filter, following the indications given by the list of regular checks and maintenance. As it has already been advised, the cleaning must be more frequent if the atmospheric and use conditions are humid or dusty.





Follow the 8 stages :

1. Unscrew the tightening ring screw.
2. Pull out the arm from the carburetor.
3. Pull out .the cap.
4. Separate the protection cover and the filter.
5. Clean the filter with *Green filter NH10*.
6. Coat the filter with recommended oil, *Green filter NH10*, then remove the excess.
7. Make sure that the protection cover is clean and dry, if necessary clean off excess dirt and dry with a clean cloth.
8. Put the protection cover back over the filter and reattach to the carburetor.

6.6 Carburetor adjustment

The carburetor is one of the essential parts for the functioning of the engine, in order to have the best performances, and to increase the engine reliability. It needs to be very precisely adjusted, preferably by a professional especially trained and tooled.



6.6.1 Tuning engine

The air/fuel mixture will vary depending on atmospheric conditions. Therefore, it is necessary to take into consideration the air pressure, ambient temperature, humidity, etc... when adjusting the carburettor.

Perform a test run to check for proper engine performance (e.g., throttle response) and spark plug discoloration or fouling. Use these readings to determine the best possible carburettor setting.

NOTE :

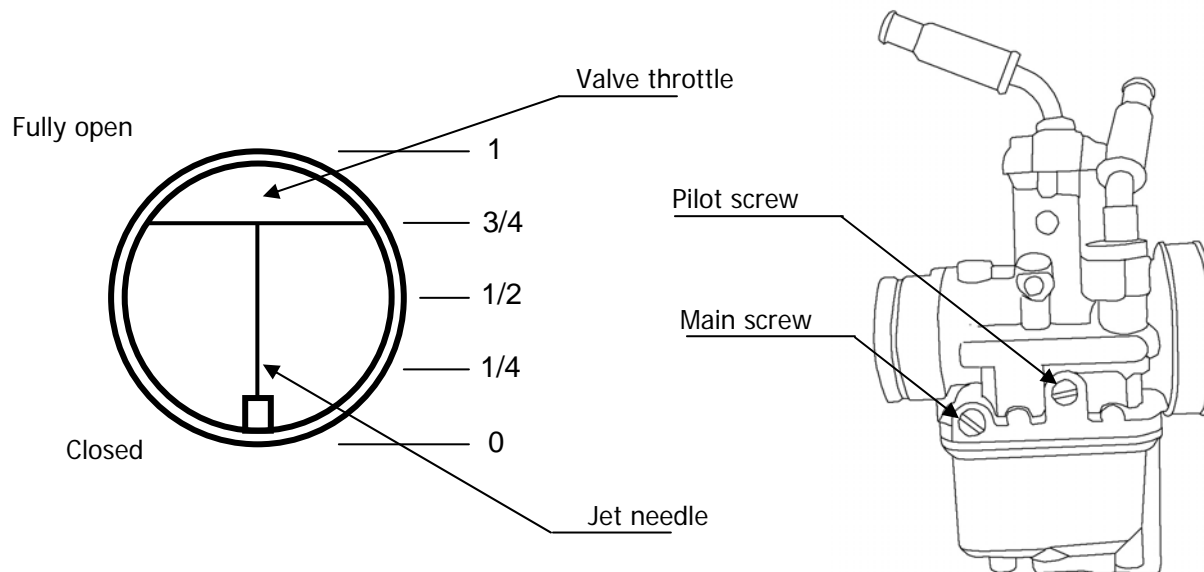
It is recommended to keep a record of all carburetor settings and external conditions (e.g., atmospheric conditions, track/surface conditions, lap times) to make future carburettor setting easier.

**WARNING**

- The carburettor is a part of the fuel line. Therefore, be sure to install it in a well-ventilated area, away from flammable objects and any sources of fire.
 - Never look into the carburettor intake. Flames may shoot out from the pipe if the engine back-fires while it is being started. Gasoline may be discharged from the accelerator pump nozzle when the carburettor has been removed.
-
- The carburettor is extremely sensitive to foreign matter (dirt, sand, water, etc.) During installation, do not allow foreign matter to get into the carburettor.
 - Always handle the carburettor and its components carefully. Even slight scratches, bends or damage to carburettor parts may prevent the carburettor from functioning correctly. Carefully perform all servicing with the appropriate tools and without applying excessive force.
 - When the engine is stopped or when riding at no load, do not open and close the throttle unnecessarily. Otherwise, too much fuel may be discharged, starting may become difficult or the engine may not run well.
 - After installing the carburettor, check that the throttle operates correctly and opens and closes smoothly.



Effects of the setting parts on the throttle valve opening

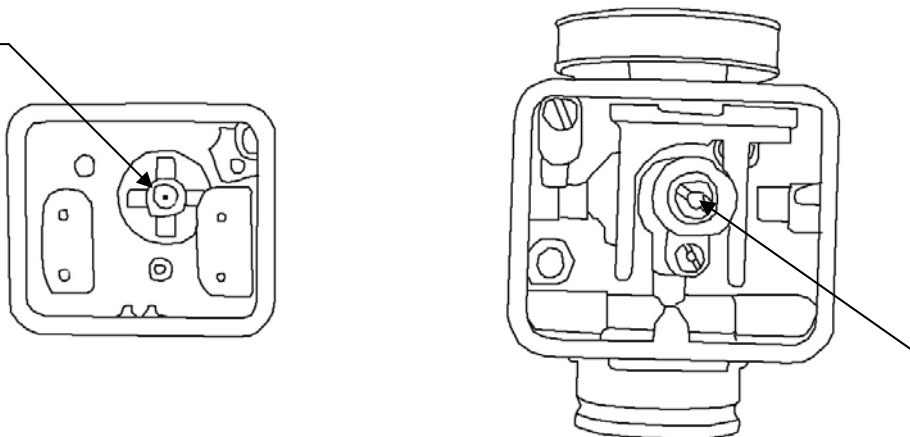


Pilot system

The FLATCR carburettor is manufactured with a pilot screw. The pilot screw adjustment ranges from fully closed throttle (don't tighten) to 3 turn open throttle.



Maint jet



Main jet adjustment

The richness of the air-fuel mixture at full throttle can be set by changing the main jet. If the air-fuel mixture is too rich or too lean, the engine power will drop, resulting in poor acceleration.



Main screw adjustment

The richness of the air-fuel mixture with the throttle fully closed to $\frac{1}{4}$ open can be set by turning the main screw. Turning in the main screw will make the mixture lean at low speeds, and turning it out will enrich it.

NOTE :

If the engine idling speed fluctuates, turn the main screw only $\frac{1}{2}$ of a turn in either direction.

Pilot jet adjustment

The richness of the air-fuel mixture with the throttle open $\frac{1}{4}$ or less can be set by adjusting the pilot jet.

Jet needle groove position adjustment

Adjusting the jet needle position affects the acceleration when the throttle is $\frac{1}{8}$ to $\frac{3}{4}$ open.

Too rich at intermediate speeds

Rough engine operation is felt and the engine will not pick up speed smoothly. In this case, step up the jet needle clip by one groove and move down the needle to lean out the mixture.

Too lean at intermediate speeds

The engine breathes hard and will not pick up speed quickly.



Step down the jet needle clip by one groove and move up the needle to enrich the mixture.

Jet needle adjustment

The needle is adjusted by changing it.

The tapered sections of all jet needles have the same starting positions, but the needles are available with different straight-portion diameters.

6.7 Play of the valves

As the time goes along, the play of the valves changes and it may alter the ratio of air to fuel of the inlet air-fuel mixture.

The solution is so to make it adjust by your dealer, as often as written in 'List of the regular maintenance and lubrications'.

It is a really complicated operation, which requires a professional expertise.



6.8 Wheel-axle units

6.8.1 Front wheel removal

1. Loosen the front wheel-axle and the screws on the bottom of the front fork arms.
2. Lift the front wheel, by using a raising stand or by putting a jack under the engine protection. Take care the bike is stalled enough to prevent it from overturning.
3. Remove successively the axle and the wheel.

6.8.2 Front wheel fitting

1. Lift the wheel up within the two front fork arms, and make sure the brake disk is situated within the brake pads.
2. Thread the wheel axle through the two front fork arms, the speedometer mechanism, and the wheel hub.
3. Tighten the axle to the recommended torque: **30 Nm (3,0 m.Kgf)**.
4. Tighten the screws on the bottom of the front fork arms.

6.8.3 Rear wheel removal

1. Loosen the wheel axle nut.
2. Turn the two chain tension eccentrics in the direction which allows the wheel to move towards the front of the bike.



3. Lift the rear wheel, by using a raising stand or by putting a jack under the engine protection. Take care the bike is stalled enough to prevent it from overturning.
4. Remove successively the axle nut and the axle.
5. Make the wheel move to the front of the bike, and remove the chain from the rear sprocket.
6. Remove the rear wheel from the swinging arm.

6.8.4 Fitting of the rear wheel

1. Place the wheel within the arms and put back the chain on the rear sprocket (not completely).
2. Thread the axle through the first eccentric and through the first arm of the swinging arm.
3. Place the brake calliper in order to stop it on the swinging arm lug and to align its axle and this of the wheel.
4. Thread the axle through the hub and the brake calliper, then through the second arm and the second eccentric.
5. Tighten the nut on the wheel axle.
6. Let the rear wheel lean on the ground.
7. Adjust the tension of the transmission chain by turning simultaneously the two eccentrics (look at the dedicated paragraph).



8. Tighten the axle nut to the recommended torque: **60 Nm (9,0 m.Kgf)**.

6.9 Tires

Here are the different principles to follow, with the aim to improve the use life, the performances and the security of your tires.

- Air in the tires : it must be checked and adjusted before each use :

Recommended pressure (checks on cold tires)	
Front tire	Rear tire
100kPa (1,0kgf/cm ² ; 15 psi)	120 kPa (1,2kgf/cm ² ; 18 psi)



WARNING

The load carried by the vehicle has an important impact on the engine performances, on the braking, on the suspension, but first and foremost on the road holding and on the tyres performances. To avoid risks at the maximum, a few precautions have to be taken:



- DO NOT EXCEED THE TECHNICAL MAXIMAL LOAD. That could damage the tyres, and even the lost of control by the rider so that an accident could happen.
- Make sure meticulously that the transported objects are efficiently stowed. Try to place the heaviest objects near the center of the bike, and check they are well shared out among the left and the right.
- Adapt the air in the tires to the transported load.
- The air in the tires, their condition and the depth of their treads must be checked before each use.

6.9.1 Check of the conditions and of the treads depth of the tires

Some conditions must imply the replacement of the concerned tire:

- If the depth of the treads has reached the minimum legal value,
- If there are one or some foreign bodies (nail, glass or metallic fragments) inlaid in the tire,
- If the flanks of the tire are cracked.

NB: the minimum depth of the treads is not the same everywhere in the world. That is why it is advisable to respect the legal value of the Country where you are riding.



6.9.2 Pieces of information about the tires

- The front and rear tires are preferably from the same manufacturer, with the same structure, with the aim to improve the road holding.
- Here are the different tires which are homologated for the SCORPA SY250F :

FRONT :

Mark	Dimensions	Model
MICHELIN	2,75-21"	Trial competition

REAR :

Mark	Dimensions	Model
MICHELIN	4,00-18"	Trial competition

6.10 The spoke wheel

The normal functioning of the bike, its reliability and the security depend on the following precautions:



- Before each use, check the lack of cracks on the rims
- Check the spoke tightening and tighten it again if necessary as explained in the dedicated paragraph.
- Make sure the wheel is not buckled.
- Every time the tire or the rim is replaced by another, it has to be rebalanced. A non-balanced wheel disrupts the road holding and shortens the length of the use life.
- After the tire replacement, it is advised not to ride too fast, until the tire is well run.

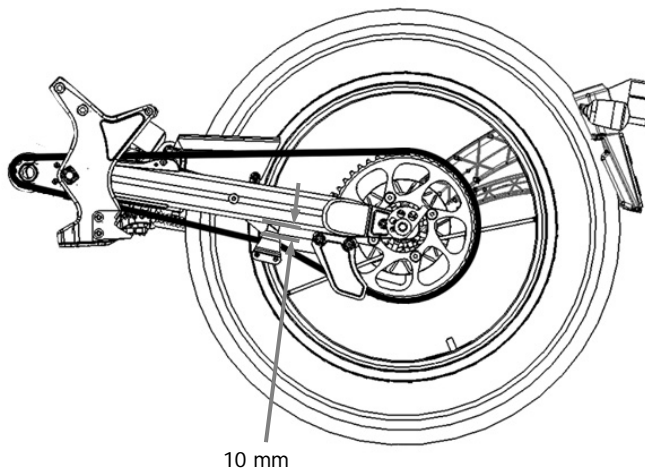
**WARNING**

Never try to repair an old and cracked or a buckled rim! It must imperatively be replaced by a new one.



6.11 Transmission chain

The tension of the transmission chain has to be checked before each use, and adjusted if it needs to be.





6.11.1 Check of the tension

1. Place the bike on a horizontal area and set it upright. Careful! There must not be any load on the bike, during the checks.
2. Put the gearbox in neutral.
3. Make the bike move forward, in order to locate the place where the tension is at its maximum.
4. Check the distance between the rubber chain-adjuster and the swinging arm as shown on the diagram. The distance must be bounded by 9 and 11 mm.

6.11.2 Setting

1. Loosen the rear wheel axle.
2. To tighten the chain, turn the left eccentric clockwise (c) and the right one anticlockwise. On the contrary, to release the chain turn the right eccentric clockwise (c) and the left one anticlockwise, then push the wheel towards the front of the bike, until the eccentrics lean on their stop on the swinging arm again.
3. Tighten the wheel-axle nut to the recommended torque: **60 Nm (6,0M.Kgf)**.

NB: The two eccentrics must be adjusted exactly in the same way and the same position, to keep the wheel aligned with the rest of the bike.



WARNING: if the chain is not tightened enough, it can cause chain jumps and even the wheel locking, which imply the risk to make the rider fall. Moreover, that includes very strong stresses on the transmission parts (chain, sprockets) and on the engine.

6.11.3 Lubrication :

It is essential to clean and lubrication the chain as often as said in the 'List of the regular maintenance and lubrication'. Otherwise, the chain will deteriorate quickly, particularly if you ride in humid and dusty areas.

- After the first cleaning of the bike, brush out the mud and the grime thanks to an old piece of rag or a brush.
- Spray **Motul chaine lub off road** for transmission chain onto the chain, on both sides and on the top of the chain, to lubricate at best all the rolls.

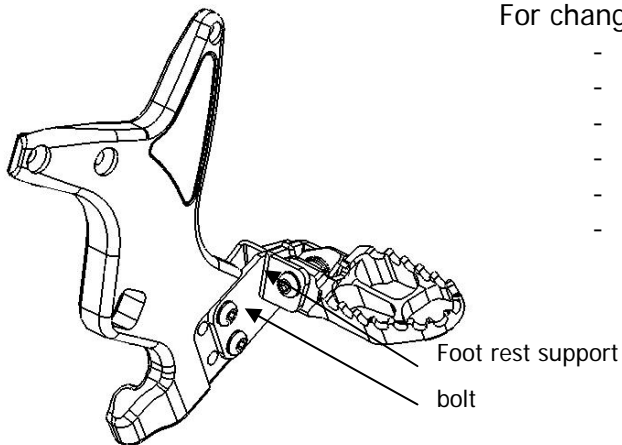


6.12 Rider environment

You could choose your rider position according to your morphology. You have 8 different setting.

6.12.1 Adjustment of foot rest support

You have 2 different setting..



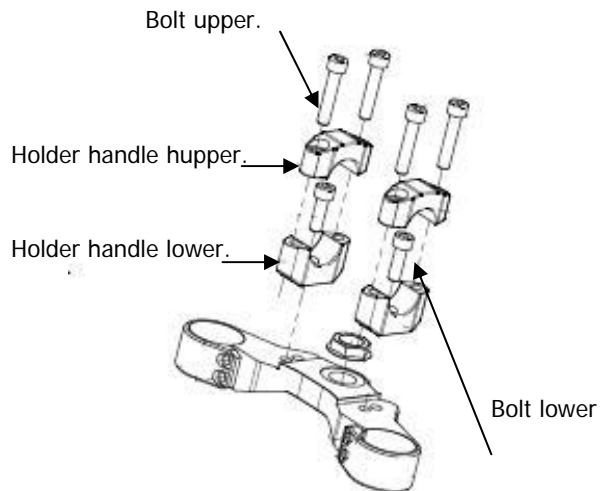
For change setting :

- Unscrew the 2 nuts
- Remove the 2 bolt
- Adjust the 2 foot rest support
- Put on the 2 bolt
- Bolt the 2 bolt (torque : 45N.m)
- Same operation for the foot rest support



6.12.2 Adjustment of handlebar

You have 4 different setting.
For change setting:



- Remove handlebar protection
- Unscrew the 4 upper bolt
- Remove the handlebar
- Unscrew the 2 lower bolt
- Make your handle bar setting (The holder handle are asymmetrical)
- Bolt the 2 bolt lower (torque 25 N.m)
- Put on and adjust the handlebar
- Bolt the 4 bolt upper (torque 28 N.m)
- Put on the handlebar protection

**WARNING**

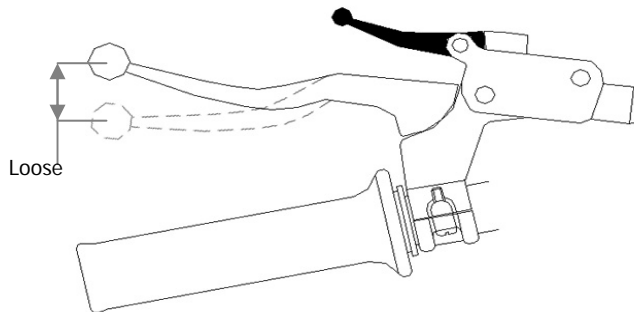
- Check the screw and nut (check the screw torque)
- Make the same setting of foot rest support on right and left side of motorbike.
- Make the same setting of holder handle lower on right and left side



6.13 Adjustment of the clutch lever loose

The clutch lever play must be bounded by 10 and 15 mm as shown on the following diagram. It has to be checked and adjusted before each use. Here is the process:

- Loosen the lock nut of the clutch lever.
- To increase the loose, turn the screw clockwise. To reduce it, turn it anticlockwise.
- Then there are two possibilities. In case the adjustment is efficient and sufficient, tighten the lock nut. In case not, ask your dealer to adjust it.





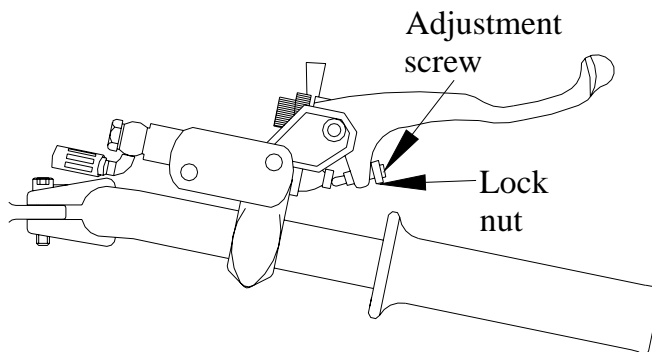
6.14 Brakes



WARNING

The new plates must be ground, so that the brake provides optimal proportioning and best deceleration. For that, make about thirty accelerations until approximately 30km/h, and slow down gradually until the total stop.

6.14.1 Adjustment of the brake levers loose





The front brake lever loose must be bounded by 5 and 8 mm. The way to measure it is the same as for this of the clutch lever. It has to be checked and adjusted before each use. Here is the process:

Loosen the lock nut of the brake lever.

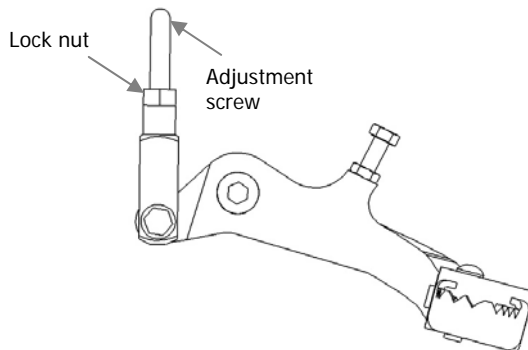
- To increase the loose, turn the screw clockwise. To reduce it, turn it anticlockwise.
- As soon as the recommended loosed is reached, tighten the lock nut. In case you do not manage to adjust it, ask your dealer to adjust it.

6.14.2 Adjustment of the rear brake pedal loose

The loose of the brake pedal must be bounded by 20 and 30 mm, as shown on the diagram. It must be checked regularly and adjusted to the recommended value, if necessary.

Loosen the lock nut of the brake pedal.

- Tighten the setting screw to increase the loose, and loosen it to reduce the loose.
- As soon as the good loose is reached, tighten the lock nut of the brake pedal.



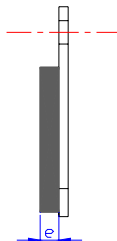
WARNING

- Check the functioning of the front brake every time you adjust the lever loose.
- If the lever gives a feeling of being spongy, it is probably due to air bubbles in the hydraulic circuit. You need confide the bleeding of the brake circuit to your dealer, to avoid a loss of braking efficiency.
- If the needed loose can not be reached, confide this task to your dealer.



6.14.3 Pad wear control :

Take care to check the brake pads wear, in accordance to the frequency given by the 'List of the regular maintenance and lubricating :



Make sure that the thickness of the brake pads lining is sufficient. It must not be less than 1mm. Otherwise, make the pads replaced by your dealer and your brakes adjusted.

**WARNING**

Don't touch immediately the disc or the brake pads after use, you are likely to burn you.

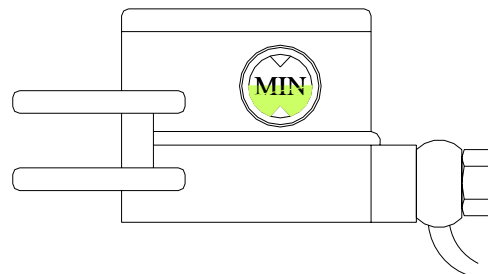
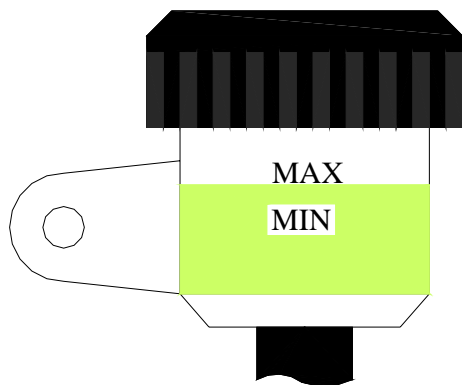
6.14.4 Brake fluid level control :

If the level of brake fluid is not sufficient, that may create air bubbles in the hydraulic circuit, so that the brakes could work badly. The consequences could be very serious for the rider.

The regular check (before each use of the bike) and the filling up are essential.

The fall of the brake fluid level may be caused by an excessive pads wear or by bubbles in the hydraulic circuit. In this case, it is recommended to make sure the circuit is not cracked and there is no leak too.

A few precautions will help you to check and maintain at the best the brake circuit of your bike



- The check of the brake fluid level must be operated when the top of the fluid tanks is horizontal, with the aim not to alter the level measurement.
- The filling up has to be operated with the recommended brake fluid: **Motul Brake Fluid DOT 5.1**, and the same type as this of the fluid of the circuit, to avoid the risk of chemical reaction.
- It is essential not to introduce bubbles of air in the brake fluid, because it could decrease the fusion temperature and to create steam in the circuit.
- Be careful not to let brake fluid flow on plastic or painted parts during the filling up: wipe carefully with a soft piece of rag.



6.14.5 Brake fluid change

The brake fluid change must occur in accordance with the indications given in the 'List of the regular maintenance and lubricating

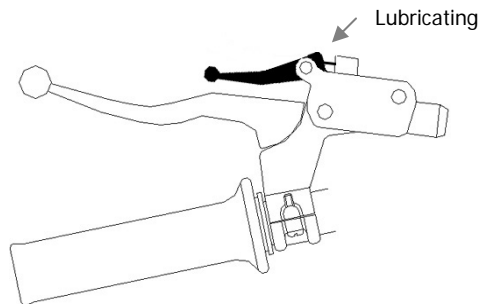
It is preferable to confide this task to your dealer, and ask him to replace the collar joint of the master cylinder and of the caliper, as far as the brake fluid hose, following the recommended frequency and in case of leak of fluid.

- collar joint : replace every two years
- brake hose : replace every four years

6.15 Lubrications

6.15.1 Cable :

The accelerator cable, the choke and clutch cables have to be checked before each use. So a good functioning of the controls is obtained and it is easier to detect all dry and damaged cables.



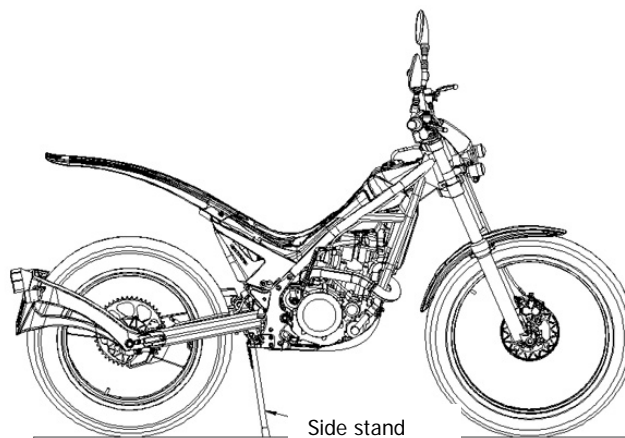
In case the cable is damaged, if the functioning is uneven, if the progressiveness of the control is insufficient or if the cable is damaged, it is vital to replace the defective part. It is important to lubricate the cable as shown on the diagram, to the frequency given in the 'List of the regular maintenance and lubricating ; recommended lubricant: *EZ Lube multi protect*

6.15.2 Brake pedal, gearshift levers

The functioning of those controls must be given much care and needs to be checked before each use. If it needs to be, lubricate the articulations with the recommended lubricant, which is: *Motul Tech Grease 300*



6.16 Side stand



Just as for the levers, the functioning of the side stand has to be checked before each use. In fact, a bad functioning can prevent the side stand from folding up. If the stand does not totally fold up, it can make the driving very dangerous.

If needs be, lubricate the articulation of the stand as far as all contact surfaces, which take part in the rotation, with **EZ Lub multi protect**.

**WARNING**

If the side stand does not work properly despite the lubrication, it is strongly recommended to make it check by your dealer. If it needs to be, replace the defective part.

6.17 Front suspension

6.17.1 Inspection

- Fork surfaces and dust seals must be clean.
- If there is an oil leakage, fork seal should be replaced before riding the bike.
- Check the fork by locking the front brake and pushing on the handlebar.
- You should try factory settings before attempting any adjustments.

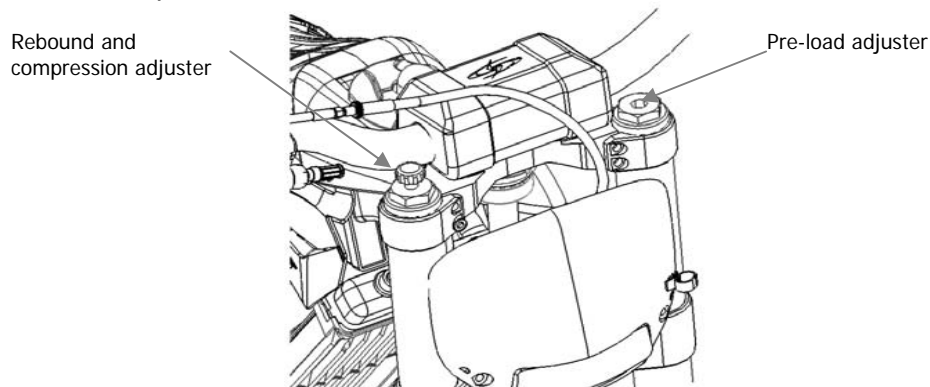


6.17.2 Adjustment

The fork can be adjusted for the rider's weight and track conditions :

- Rebound and compression damping (right fork) : turning the adjuster changes how quickly the fork extends. Turning clockwise makes the fork softer.
- Spring pre-load (left fork) : turning the adjuster adjusts the spring initial pre-load length.

NB : Modify one adjustment a time, in one-click increments in order not to get confused. If no just return to the standard position and start over.





6.18 Rear suspension

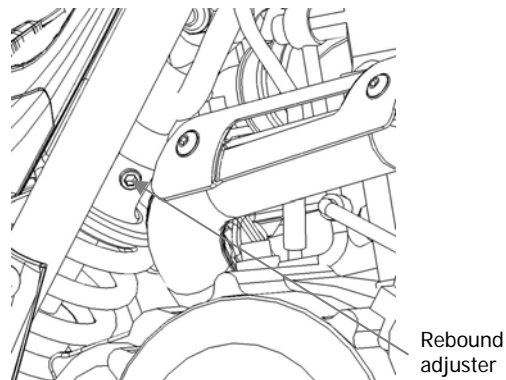
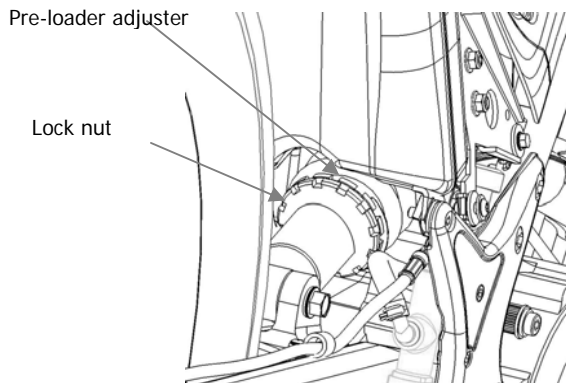
6.18.1 Inspection

- Check for a broken or collapsed spring.
- Check the suspension action by bouncing the rear of the machine.
- Check the rear shock absorber for a bent shaft or oil leaks. If there is a problem, make it inspect by your dealer, and replace it if there is a serious problem.

6.18.2 Adjustment

The swingarm is controlled by a shock absorber. It's also possible to be adjusted for the rider's weight and track conditions.

- Spring pre-load : turning the spring pre-load adjuster adjusts the spring initial pre-load length.
- Rebound damping : turning the screw adjusts how quickly the shock absorber extends.



WARNING

Uncontrolled landings after jumps may damage the shock leading to possible health and life danger



The bike is manufactured with the following settings:

The length of the spring (not installed) is 150 mm

The rear shock absorber is manufactured with an adjustment of 8,5 mm, providing a spring length of 141,5 mm

The maximal adjustment limit is 10 mm, providing a spring length of 141,1 mm

The minimal adjustment limit is 2 mm, providing a spring length of 148 mm



6.19 Front fork and steering

6.19.1 Front fork check

Check the condition of the front fork pipes (lack of scratch, of claw mark or of damage) and the lack of fork oil leak. If there is one, it must be minor. Otherwise, the fork has to be inspected by your dealer, then repaired or replaced.



WARNING

This operation requires putting well the bike on blocks to prevent it from overturning.

6.19.2 Check of the functioning of the fork

1. Place the bike the most vertically possible, on a horizontal area.
2. Operate a few times the front brake (in order to stop the bike from moving) while you compress strongly the front fork by pressing on the handlebar. So it is easier to check the progressiveness of the fork during the compression and the release.



WARNING : if the functioning or the progressiveness of the front fork is not satisfactory, make it inspect by your dealer, and replace it if there is a serious problem.

6.19.3 Check of the steering

It might happen that the steering bearings are loose or damaged. Then they may cause serious dysfunction in the steering. That is why the owner is expected to check it as often as possible (look at the 'List of the regular maintenance and lubrications').

Here are the different operations to follow :

1. Put the bike on blocks to allow you to lift the front wheel off the ground. A wedge placed under the engine protection is the simplest solution. Make sure the bike will not overturn during the operation.
2. Hold one fork pipe a hand and try to make them move forward and backwards many times. If a loose appears, ask your dealer to check it, and to repair or replace the defective parts if necessary.



6.19.4 Check of the wheel bearings

Check the condition and the progressiveness of the wheels bearings in accordance with the pieces of information of the 'List of the regular maintenance and lubrications'. In case the buckles have loose, or in case the wheels do not revolve well, it has to be inspected and maybe repaired or replaced by an occupational mechanistic.

6.20 Replacement of electric elements

6.20.1 Replacement of a light bulb

If one of the bulbs is dud, you can replace it, by following the instructions:

- Undo the two screws of the head light.
- Remove the light of the headlight.
- Separate the bulb support from the light.
- Remove the dud bulb by pressing on it while you turn it, until the bulb is pulled away.
- Put a new bulb on the bulb support, press on it and turn clockwise, until the bulb is stopped into the support.
- Put back the bulb support on the light.
- Replace the light on the headlight and tighten the two screws.

**WARNING:**

- The bulb becomes hot very quickly after the beginning of its use. To avoid the risks of burns and inflammation, it is essential to hold the bulb with a piece of rag and to operate far away from the sources of heat and flames.
- The glass of light bulbs must absolutely not be touched by the fingers, in order not to let greasy deposits. In fact they reduce the transparency of the glass so that the light beam is not as intensive as it is expected to be. Clean the traces with a soft duster, alcohol or solvent, AFTER THE COMPLETE COOLING OF THE BULB.

6.20.2 Replacement of the indicators bulbs

- Remove the screw of the indicator orange lens.
- Remove the dud bulb by pressing on it while you turn it, until the bulb is pulled away.
- Put a new bulb on the bulb support, press on it and turn clockwise, until the bulb is stopped into the support.
- Put back the orange lens on the indicator and tighten the screw. Do not tighten too much strongly, because the plastic part might become fragile after some removals.



6.20.3 Replacement of the rear light bulb

- Remove the two screws of the rear light red lens.
- Remove the dud bulb by pressing on it while you turn it, until the bulb is pulled away.
- Put a new bulb on the bulb support, press on it and turn clockwise, until the bulb is stopped into the support.
- Replace the red lens on the rear light. Then tighten the two screws.

6.21 Diagram of breakdowns and dedicated checks

Despite the care, the complete check list, the static and dynamic checks, the quality controls led by SCORPA during the development and the manufacturing of its bikes, a breakdown could happen.

A problem could cause difficulty for the start out, a loss of performance or an abnormal functioning.

The following diagram gives some pieces of information about the checks you could operate, in order to set better the probable reasons for the breakdown.



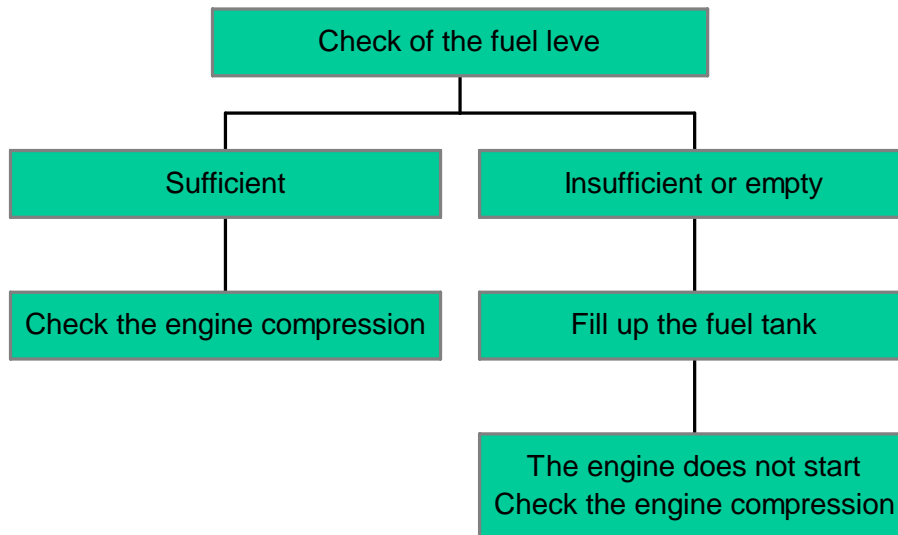
If any important operation has to occur, it is strongly recommended to confide it to your dealer, who is especially trained therefore.

Moreover, the replacement of the defective parts has to be operated with SCORPA's parts, which ensure the best reliability and performances. Those are parts which have been jointly designed especially for your vehicle. The reputation of quality and sturdiness is firmly established.

The quality and sturdiness of the 'adaptable' parts is so very often lower. Then they will lead to additional cost in short or medium term, or to damages and reparings very expensive.

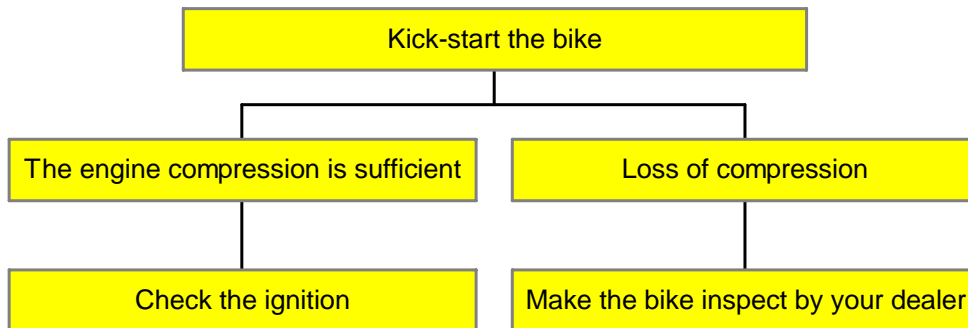


6.21.1 Fuel



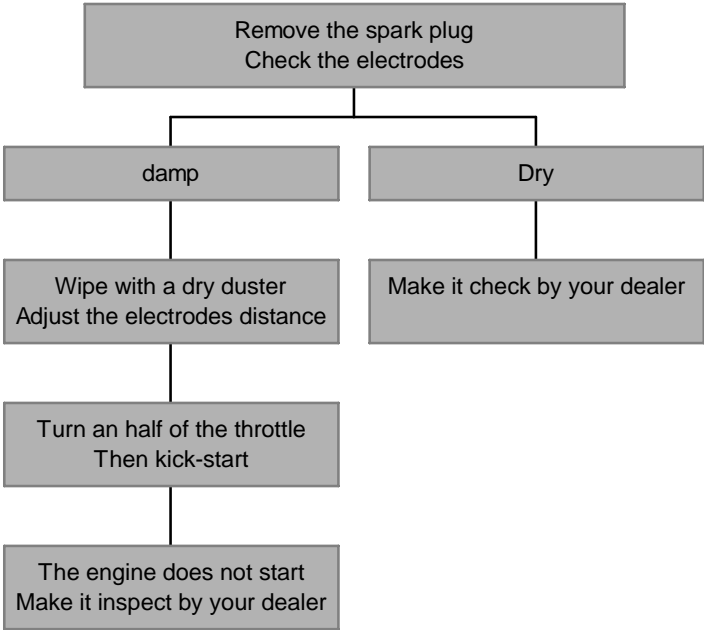


6.21.2 Compression





6.21.3 Ignition





7 Put in conformity for road use

7.1 Install the homologated exhaust pipe

Remove the air cleaner case (see « air cleaner case removal »).

Remove the carburetor (see « carburetor removal »)

Unscrew the racing exhaust pipe fixing nut and bolt.

Remove the racing exhaust pipe.

Remove the exhaust seal

Install a new exhaust seal

Install the homologated exhaust pipe

Approach the exhaust pipe fixing nut and bolt

Install the carburetor (see “carburetor installation”).

Screw the exhaust pipe fixing nut (13 N.m) and bolt (24 N.m)

Install the air cleaner case (see “air cleaner case installation”).

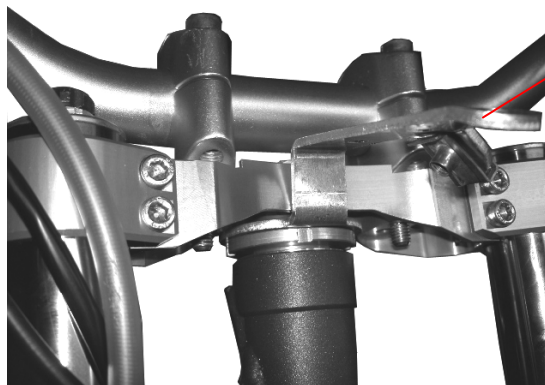


7.2 Install the speedometer

Removing the upper handle crown:

- Unscrew the 4 handle upper holders fixing bolts and remove the holders.
- Remove the handlebar.
- Unscrew the front fork cap nut.
- Unscrew the 4 upper crown bolts.
- Remove the upper handle crown.

Install the speedometer bracket



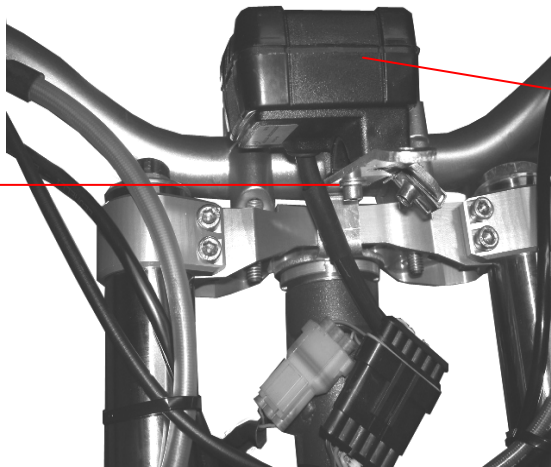
Speedometer
bracket



Install the upper handle crown:

- Screw the 4 upper crown bolts (lubricated with copper grease).
- screw the front fork cap nut.
- Install the handlebar
- Install the upper handle holders and screw the 4 fixing bolts.
- Install the speedometer on its bracket with only one bolt like a picture.
- Connect the two speedometer's lugs to the homologated electrical wiring.

Fixing
speedometer
bolt



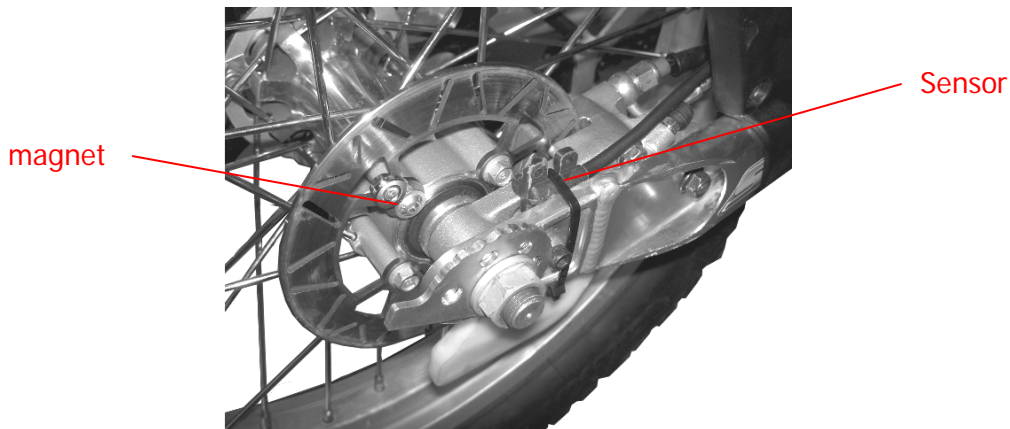
Speedometer



Install the sensor with the collar like the picture.

To fix the magnet:

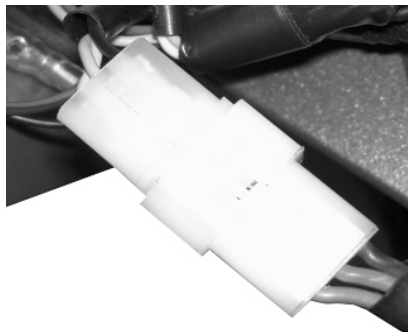
- Unscrew one of the fixing bolt of the rear brake disc
- Put the washer against the disk, then put the magnet
- Screw the fixing bolt of the rear brake disc





7.3 Install the electrical wiring

- Remove the fuel tank: (see « fuel tank removal »).
- Connect the homologated electrical wiring to the principal electrical wiring.





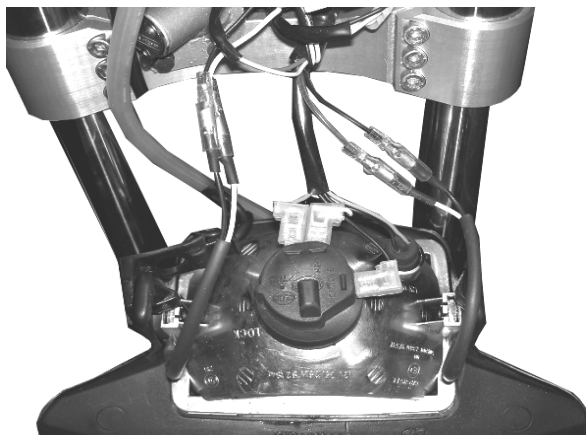
- Put the homologated electrical wiring like a picture.



The
Homologated
Electrical
Wiring passage

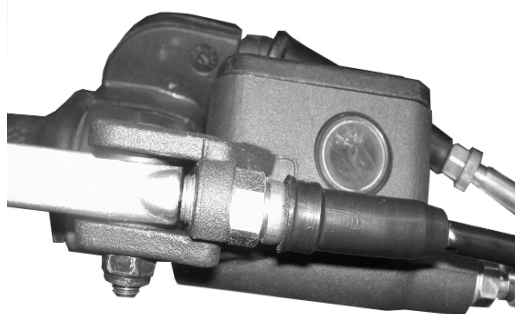


- Put the head light homologated
- Connect the front direction light with the homologated electrical wiring: black with black/White-blue with white/Blue-red with white.

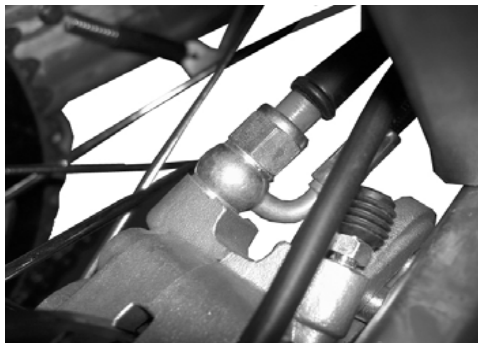




- Connect the front brake indicator

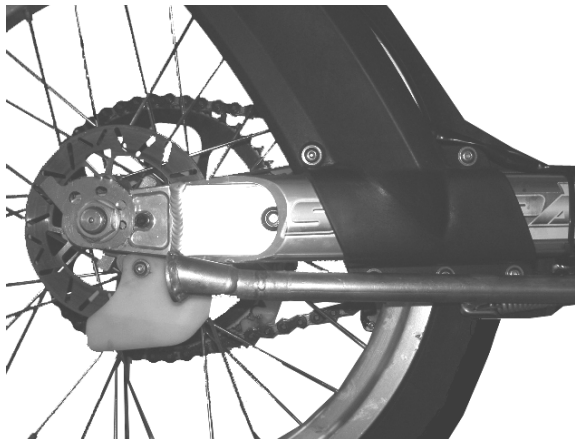


- Connect the rear brake indicator



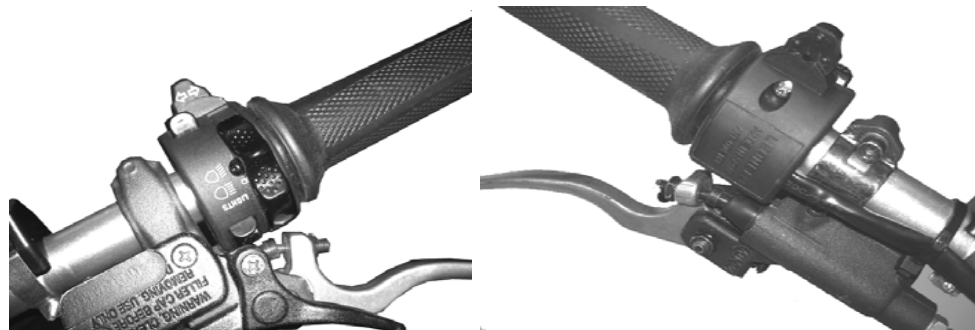


- Install the license plate bracket
 - Install the license plate bracket (long 150 millimeters between the wheel axle and the left higher fixing bolt).
 - Install the fixing plate of the bracket
- Screw the 5 bolts.
 - Connect the two electrical lugs of the rear light with homologated electrical wiring.



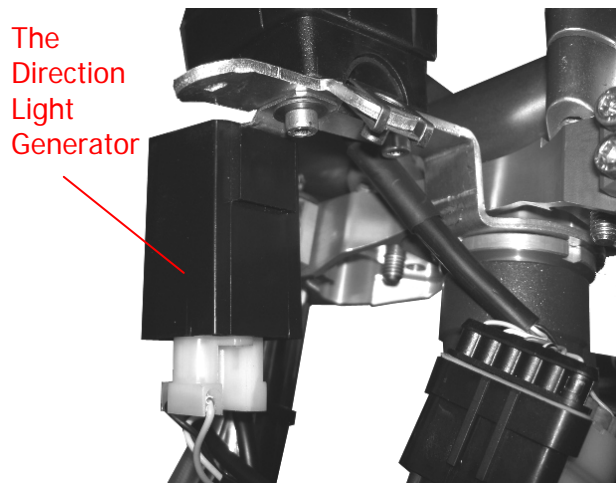


- Connect the direction lights generator unit.

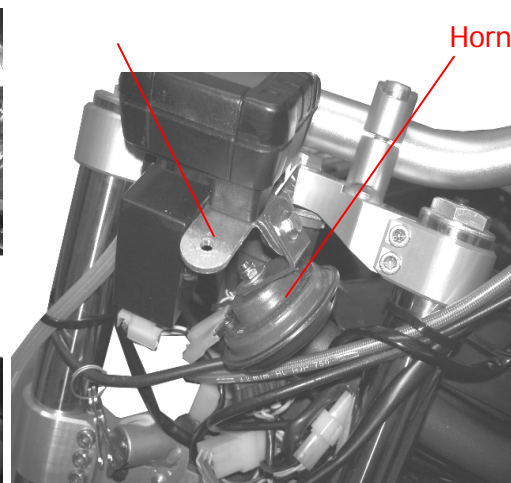




- Fix the direction lights generator unit (with speedometer) to the speedometer bracket with the second speedometer fixing bolt.
- Connect the direction lights generator unit.
- Fix the horn.
- Connect the horn.



Fixing head light



- Install head light on inner tubes and screw the fixing bolt on the speedometer bracket



8 CARE AND STORING OF THE BIKE

8.1 Care

The lack of coachwork exposes almost all parts of the bike to the stresses of the surroundings. The impacts caused by the throwings and the scratches weaken the surface of the parts, even if those of the best quality. Then they could begin to corrode and tarnish

A regular maintenance permits the parts not only to keep their original appearance and their level of performance, but to assure the length of their use-life too. Moreover, the regular maintenance of the bike is the necessary condition to be sure the recourse to the guarantee will be possible.

8.1.1 Before cleaning

- Make sure the electric terminal spad tags, the spark plug cap and all caps are well protected and positioned.
- Wait for the cooling of the engine and all warm parts.
- Put a watertight cap on the exhaust silencer end.
- It is possible to use a brush and a spot remover only in case it is never brought into contact with the joints, the axles, the bearings, the sprockets and the chain. It is essential to rinse thoroughly with water.



8.1.2 Cleaning

WARNING :

- All the parts made of plastic or rubber have to be cleaned by soft sponges or pieces of rag, water and **Moto Wash Motul**. It is forbidden to use acid or basic chemicals.
- SCORPA strongly advise against high pressure or vapour cleaners. In fact an important amount of water could infiltrate joints, bearings, electric components or the airbox. The bike is only expected to work in atmospheric and ground humidity. The high pressure or vapour cleaners would cause serious dysfunctions or damage several parts.

The cleaning is different according to the conditions and the area of use. The classic one is made of warm water and **Moto Wash Motul**. It has to be followed by a copious water rinsing.

If the bike is used in particular conditions or if the air level of salinity is high, the way to clean the vehicle is a little bit different:

- Cleaning with cold water and **Moto Wash Motul** as soon as the bike is cooled.
- Protection against corrosion of all metallic surfaces (even if they are chromium-plated or anodized) by spraying **Motul EZ Lub Multi Protect**.



8.1.3 After the cleaning

- The drying of the bike has to be as quick as possible. If it is not the case, dry it with a soft piece of rag.
- As soon as the bike is dried, lubricate the chain with **Motul Chaine lub Off Road** and all parts which could corrode.
- Scrub the chromium-plated or anodized metallic surfaces with a clean piece of rag and an anticorrosion chemical.
- Do not cover and store the bike before it is totally dry.

8.2 Putting away

Here are explained two different ways to put away the bike, according to the length of non-use. If it is short enough, about a few days, all you have to do is store the bike in a dry and fresh place. If this place is dusty and if animals could damage the bike, cover it with a porous dust cover.

For a longer period, it is recommended to follow those instructions:



- Clean the bike as explained in the previous paragraph.
- Remove the switch key and position all controls on 'OFF' (fuel tank tap, choke, light controls).
- Empty the carburettor tank by loosing the drain plug and use **Motul Carbu Clean**. That is expected to fight against the formation of deposits. Another solution consists in putting the fuel tap on 'OFF' while the engine is still running, so that the engine stops a few seconds later. Make sure the bike is totally cooled before putting it away.
- If possible, add a fuel stabilizer in the tank to prevent the fuel from deteriorating.
- Respect the following recommendations to allow the engine to be protected :
 - A. Remove the spark plug and its cap
 - B. Pour about 3 centilitres of engine oil in the spark plug hole.
 - C. Operate several times and very slowly the kick-start in order to spread the oil everywhere in the engine.
 - D. Replace the spark plug and its cap.
- Lubricate all cables, levers, pedals, gearshift lever, side stand and articulations with **Motul EZ Lub Multi Protect**.
- If possible, it is preferable to heighten the bike, so that the humidity is not concentrated in the same place of the tyres.

Put a cap on the end of the exhaust pipe. Store the bike in a fresh and dry place. If this place is dusty and if animals could damage the bike, cover it with a porous dust cover.