Congratulations!

You have just bought a SCORPA 4TRICKS. Welcome in the family of the SCORPA's customers.

This motorbike is the fruit of the experience of the high level of trial and of advanced technology. As all products of our range, it benefits from the expertise of our suppliers and from the high level of quality in the manufacturing of our motorbikes, which is well known in the world of trial.

The use of this bike requires the greatest precaution in order to take advantage of the abilities. It is very important to read this user manual before starting the bike. In this, you could find the pieces of information about the maintenance and the controls of your bike. First and foremost you will find all security instructions to avoid the risks and the danger of bike-riding.

Moreover, the advice given in this manual will help you to keep your bike in perfect working order. If necessary, do not hesitate to go and see your dealer SCORPA. The company SCORPA wishes you would find pleasure in riding your SCORPA 4TRICKS. Do not forget the security must always be the first preoccupation.

Thank you very much.

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.

USER MANUAL

SOMMAIRE

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.

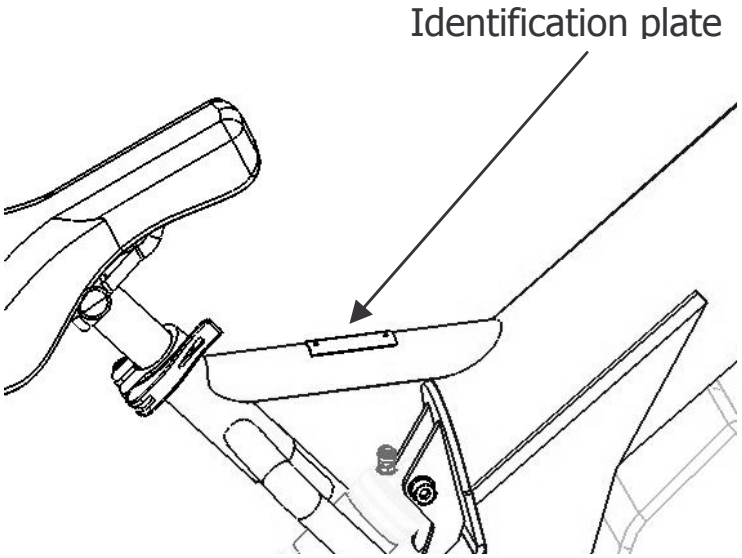
WARNING

The 4TRICKS was uniquely developed for off road outdoor use. It does not meet motorised transport regulations. The use of the 4TRICKS on public roads is illegal.

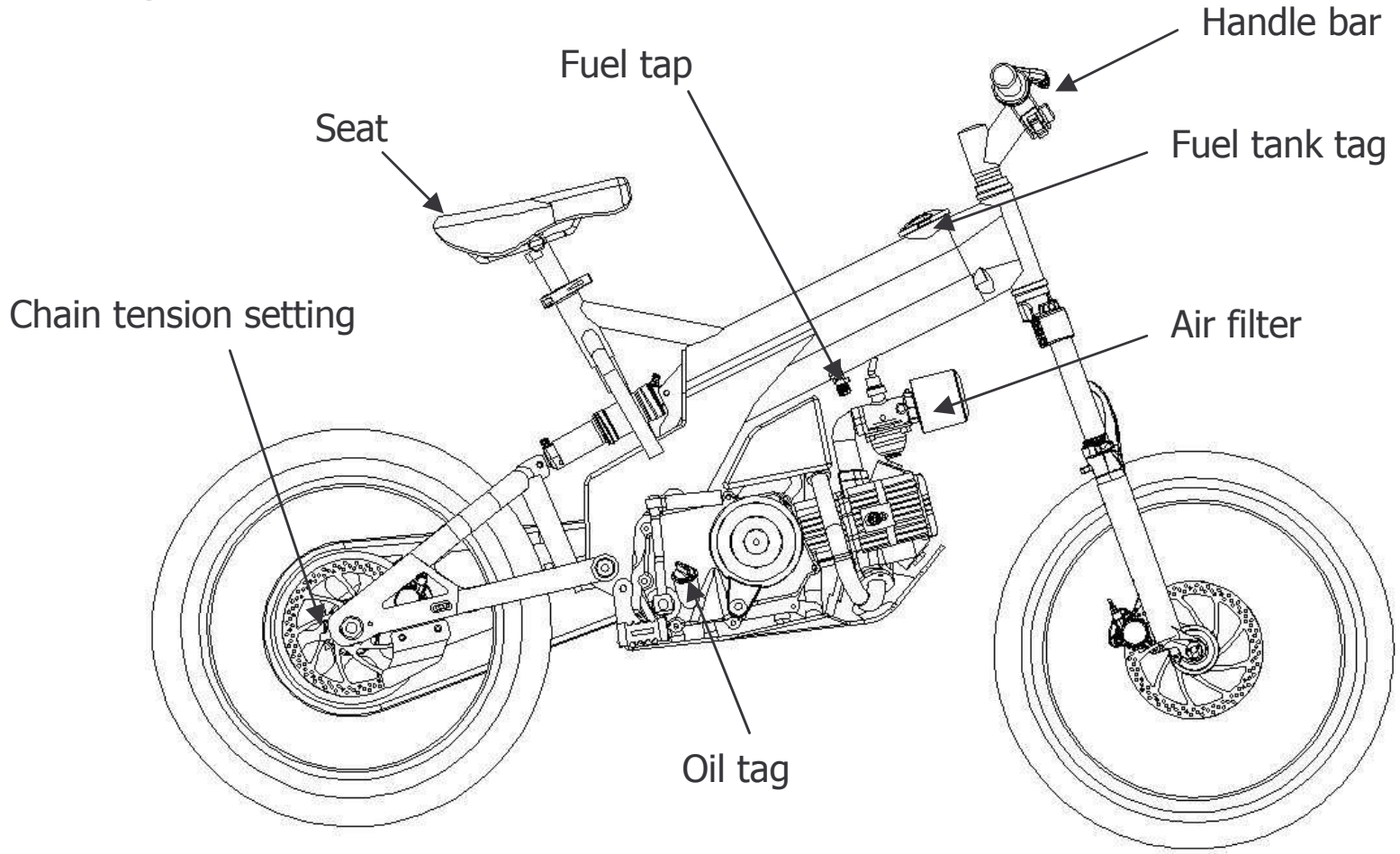
2 DESCRIPTION OF THE VEHICULE

2.1 Identification

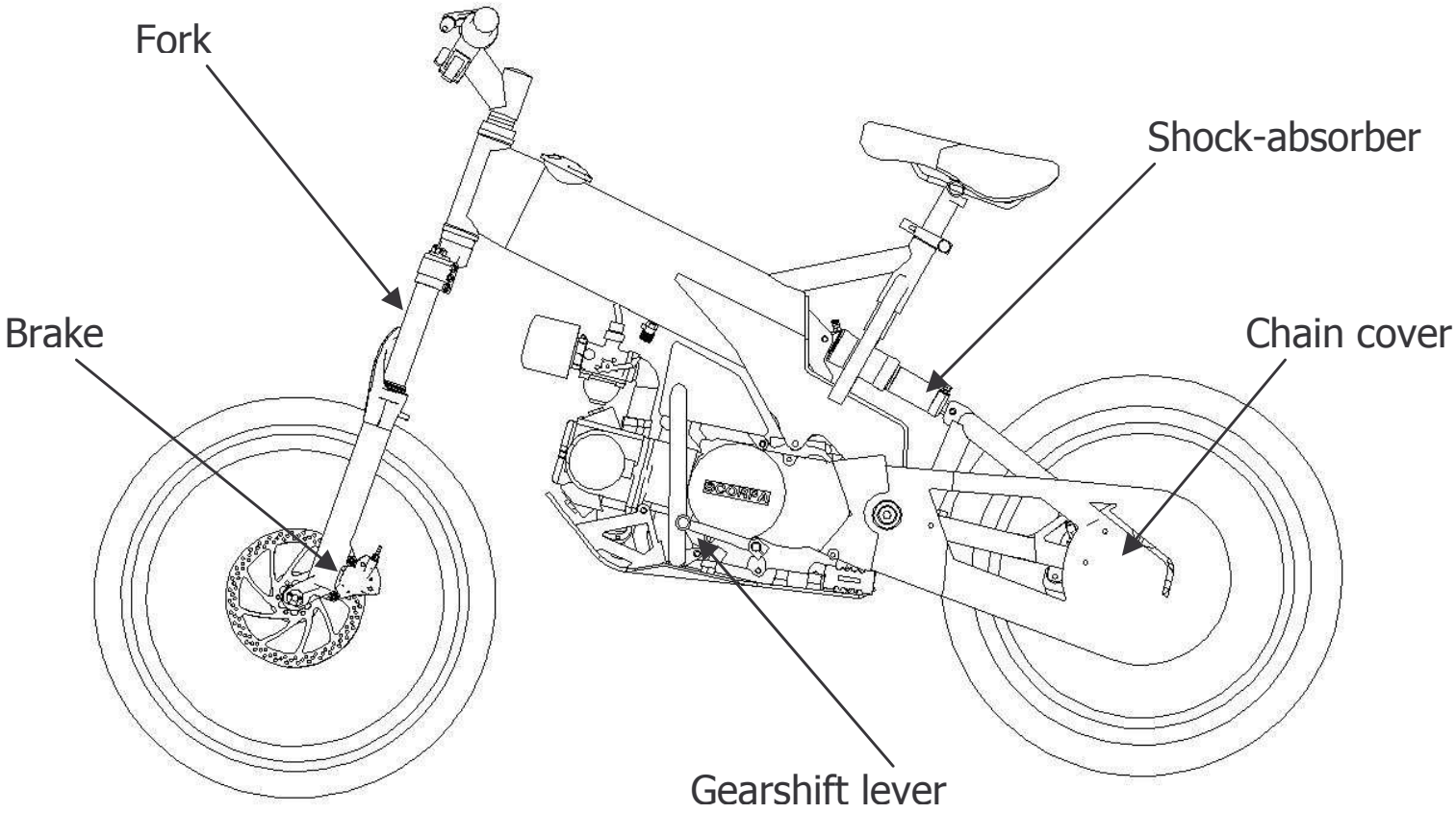
The 4TRICKS identification plate can be found on the body of the vehicle (under the seat). The serial number of the vehicle can be found on this plate



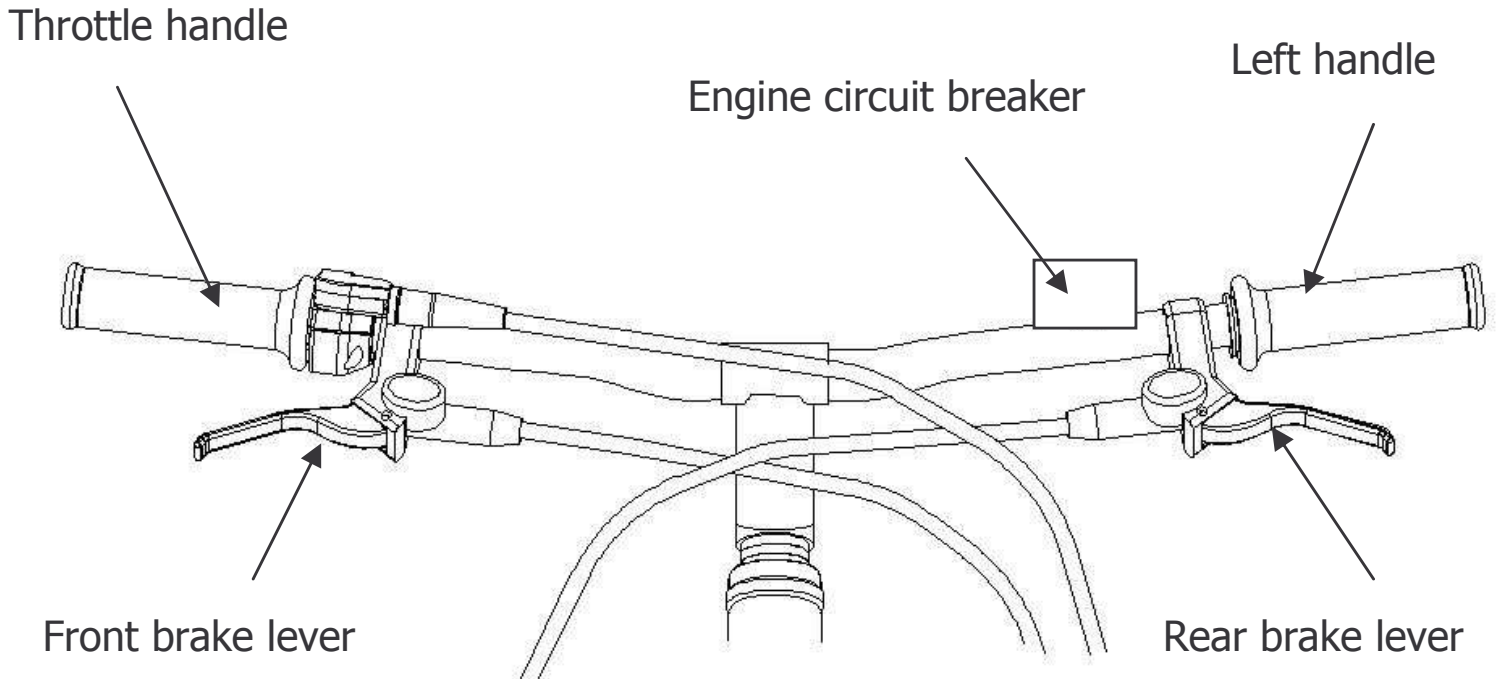
2.2 Right side



2.3 Left side



2.4 Handle bar : controls and instruments



3 CONTROLS AND INSTRUMENTS

3.1 Controls and electric switches

3.1.1 Engine circuit breaker

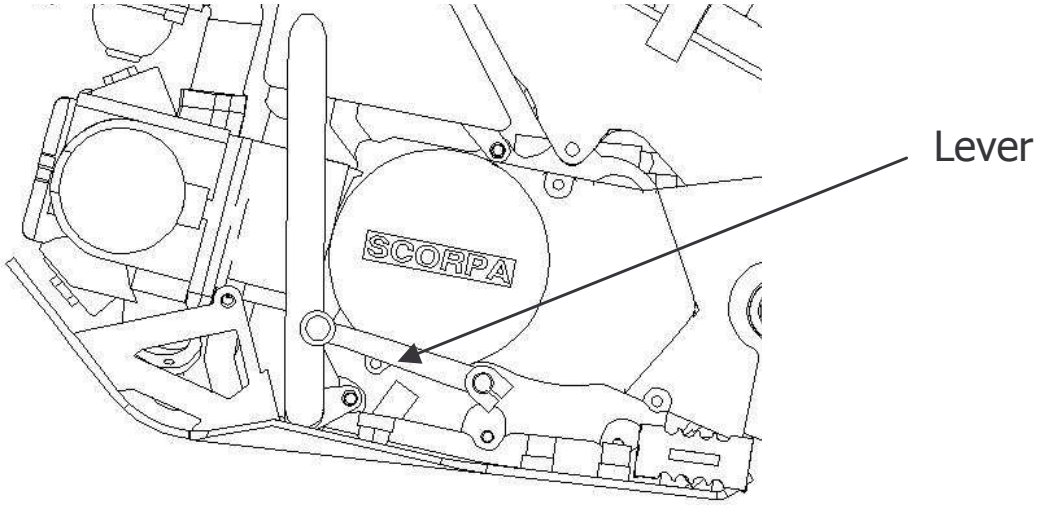
Engine circuit breaker: "⊗":
4Tricks is equipped with a safe engine circuit breaker with a strap.
Before starting 4TRICKS you must put the strap around your wrist.
To stop 4TRICKS shoot the strap to disconnect the engine circuit breaker.

▲ **Precaution before starting .**

Check if connector strap is connect with the engine circuit breaker on the left part of the handlebar, if it is not the case connect it.

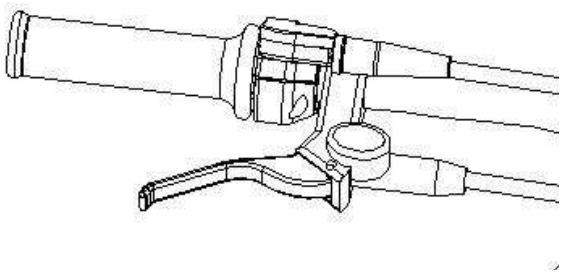
3.2 Controls and mechanical switches

3.2.1 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 gearshift lever allows choosing one of the 5 gears of the gearbox. Those gears are told 'in constant drive'.

3.2.2 Front brake lever

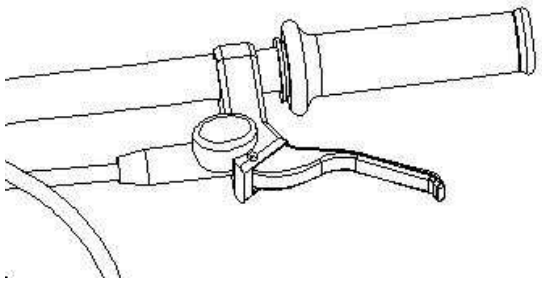


The front brake lever is situated on the right side of the handlebar. To operate the front brake, pull the lever towards the handgrip.

▲ **Precautions in the handling of the brake levers.**

The brake levers handling must be accompanied by high precautions. Indeed, 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.

3.2.3 Rear brake lever

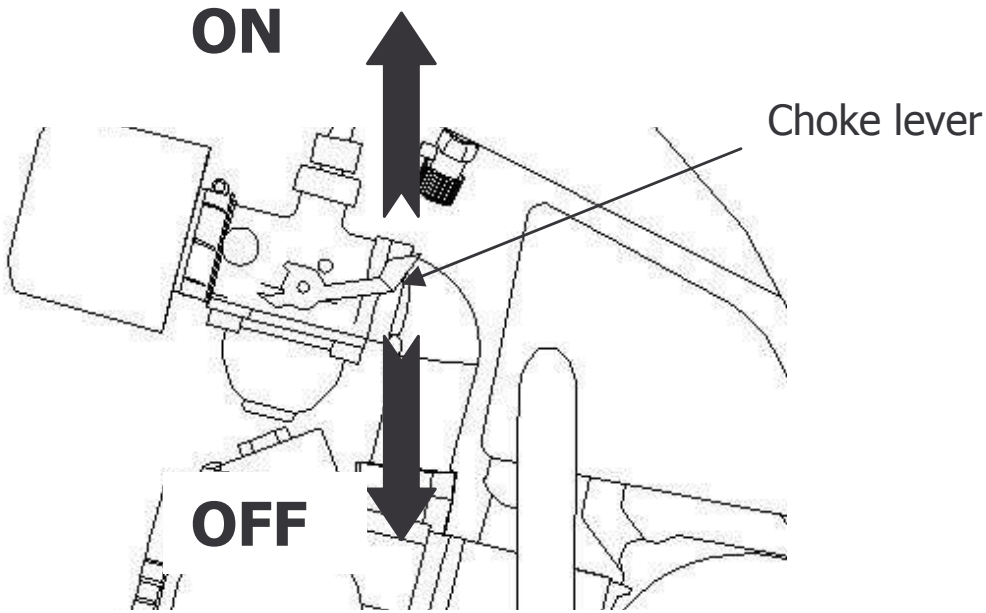


The rear brake lever is situated on the right side of the handlebar. To operate the rear brake, pull the lever towards the handgrip.

▲ Precautions in the handling of the brake levers.

As for the back brake, a too intense and sudden pressure on the back handbrake lever can lead to a back wheel locking. That is one of the main reasons why the motorcyclists can fall. It is recommended to pull the lever as progressively as possible.

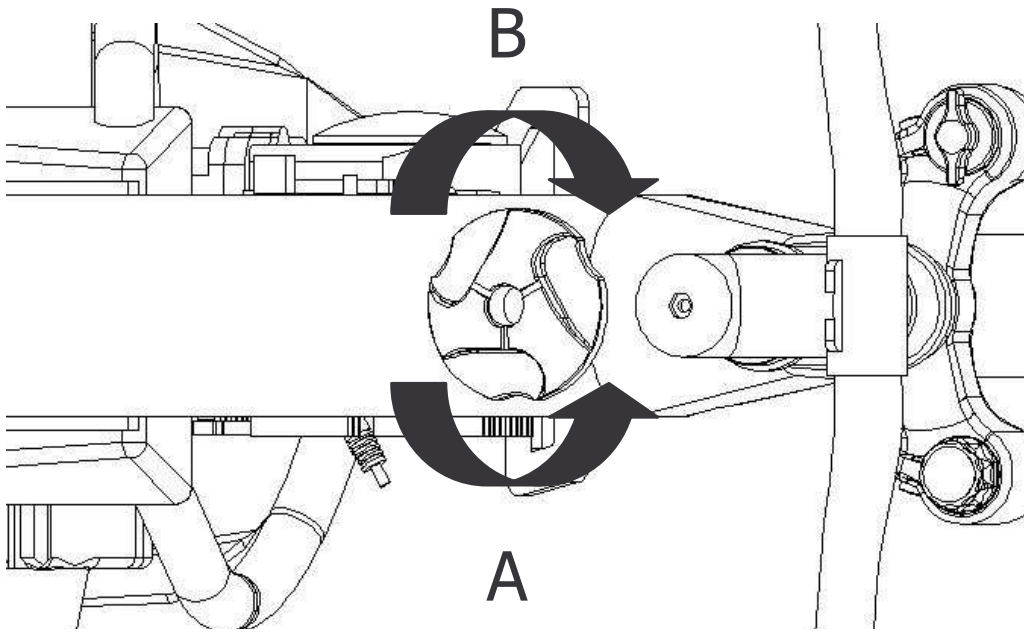
3.2.4 Choke lever



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.

3.3 Fuel tank

3.3.1 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

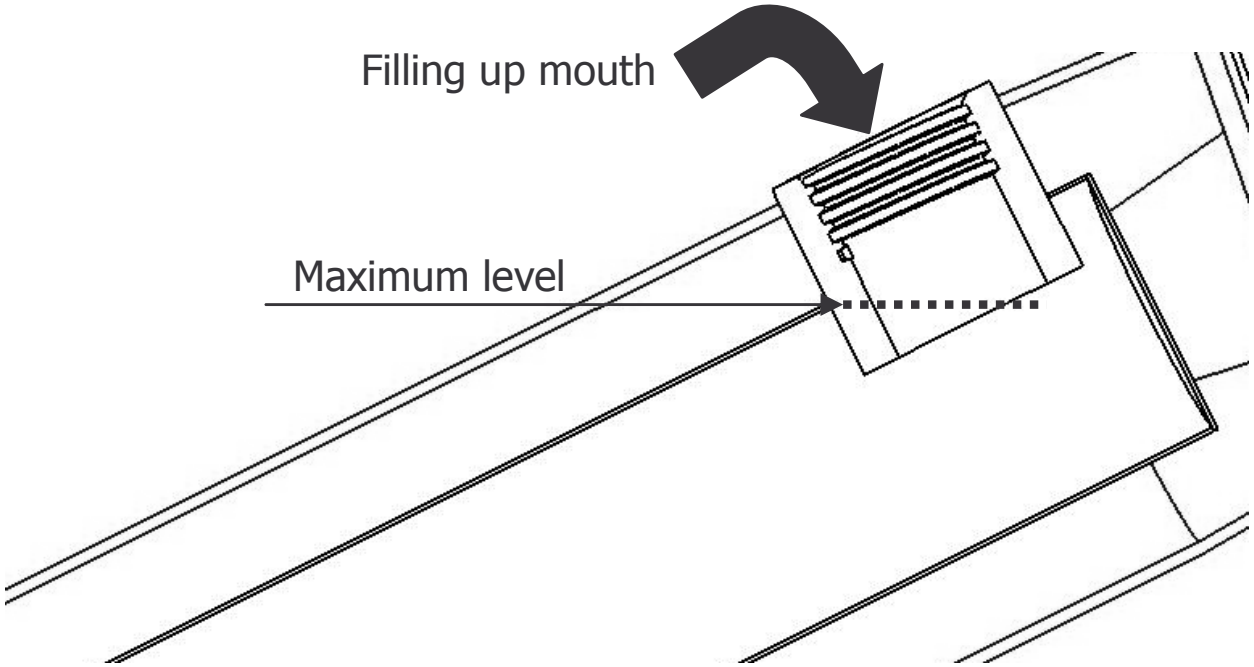
It is very important to check that the cap is tightened enough before starting the engine and riding the bike.

3.3.2 Fuel

The recommended fuel is only lead-free high octane petrol. The highest capacity of the fuel tank is 1,1L.

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

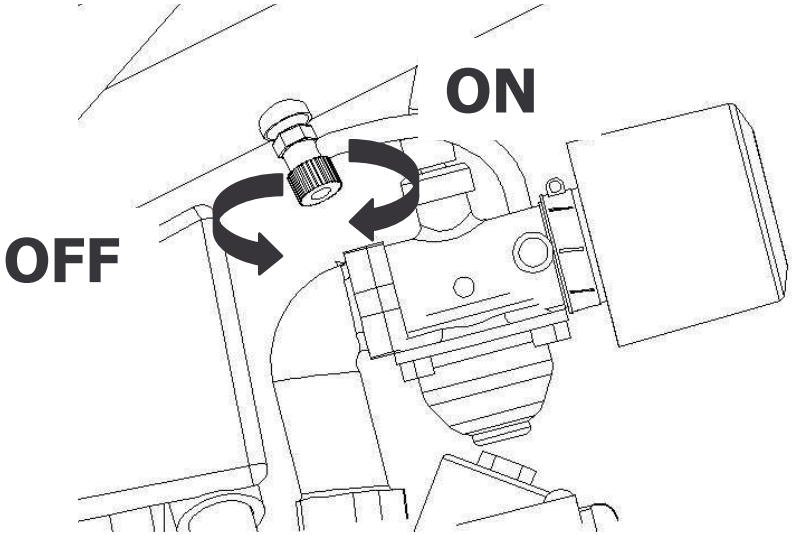
The fuel tank must not be too much filled. In fact, as the engine is very close, the overflowing would be increased by the expansion due to the warmth.
The filling up has to be operated with a lot of precautions. There must not be fuel on the engine. This is recommended not to fill the fuel tank near 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.

3.3.3 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. An arrow added on the diagram shows the selected position.

There is two differents 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.

4 CHECKINGS BEFORE USING THE BIKE

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 Points which must be checked before starting the bike

Heading	Check points	Page
Fuel	• Fuel level check. • Filling up if necessary. • Fuel hose check to detect a possible leak.	
Engine oil	• Engine oil level check. • If necessary, filling up to the recommended level, with the indicated oil: *Motul 300V Sport 100% synthesis-ester-SAE 10w40.* • Visual check to detect a possible leak.	

Front brake	• 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 : *Magura BLOOD mineral oil.* • Check of the circuit to find a potential leak.	
Rear brake	• 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: *Magura BLOOD mineral oil.* • Check of the circuit to find a potential leak.	
Throttle	• 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.	

Chain	• Check of the tension. • Adjustment if necessary. • Check of the condition. • Lubrication if necessary : *Motul Chain lub Off Road.*	
Wheels and tyres	• Check of the condition. • Check of the depth of the treads. • Check of the air in the tyres. • Bring back to the recommended pressure if necessary.	
Gearshift lever	• Make sure of the functioning progressiveness and regularity. • Lubrication of the rotating parts if necessary : *Motul EZ Lub.*	
Brake levers	• Make sure of the functioning progressiveness and regularity. • Lubrication of the rotating parts if necessary : *Motul EZ Lub.*	
Frame fastenings	• Check of the nuts and screws tightening. • Tighten 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

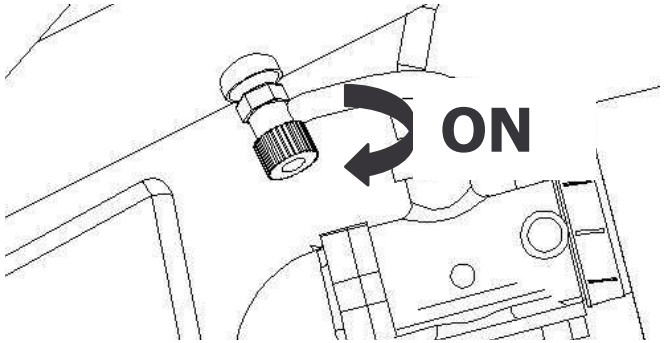
▲ WARNING

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).

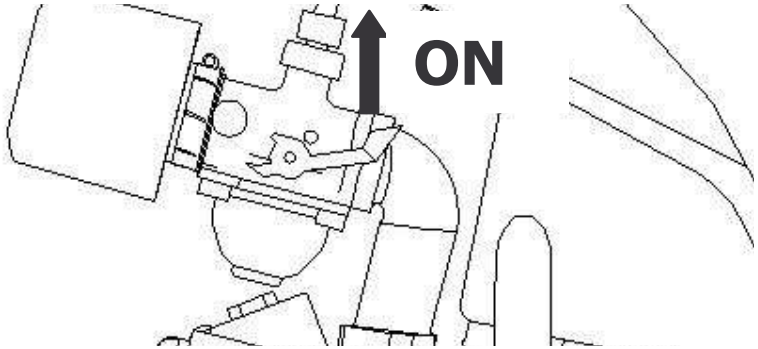
5.1 Starting (cold engine)

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

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!

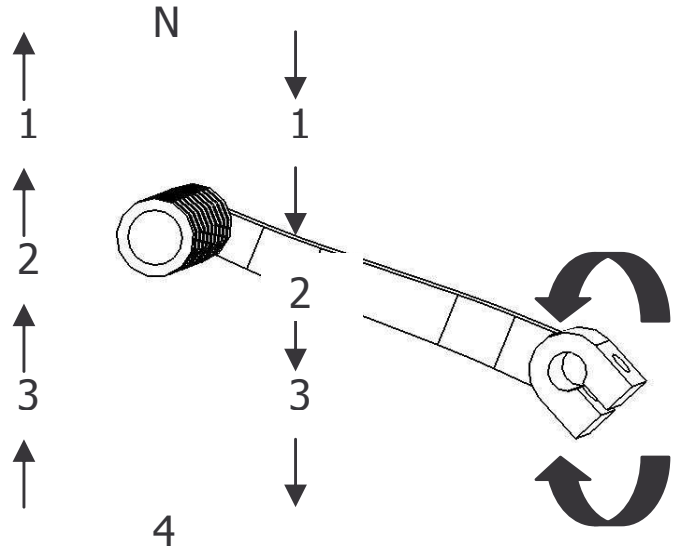
5.2 Starting (warm engine)

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

5.3 Gear shift

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 and even the engine of your bike.

5.4 Reduction of fuel consumption

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 running-in

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 running-it, 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 running-it, 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 REPAIRINGS

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.

N°		ELEMENT	CHECKS / MAINTENANCE	NUMBERS OF HOURS OF USE					ANNUAL CHECK
				12	60	120	180	240	
1	*	Fuel hose	• Check the state of the hose (no leak and not cracked)	◆	◆	◆	◆	◆	◆

2		Spark plug	• Check the state • Clean and adjust the distance of the electrodes		◆		◆		
			• Replace			◆		◆	
3	*	Valves	• Check the valves play • Adjustment	◆	◆	◆	◆	◆	
4		Air filter element	• Clean with *Motul air filter clean* • Replace <u>Important : Clear after each off road ride</u>	◆	◆	◆ ◆	◆	◆ ◆	
6	*	Front brake	• Check the level of brake fluid • Check the lack of fluid leak	◆	◆	◆	◆	◆	◆
			• Replace the brake pads	When the brake linings are worn					
7	*	Rear brake	• Check the level of brake fluid and the play of the lever • Check the lack of fluid leak	◆	◆	◆	◆	◆	◆

			• Replace the brake pads	When the brake linings are worn					
8	*	Brake hoses	• Check the state • Make sure the hoses are not cracked and there is no leak		◆	◆	◆	◆	◆
			• Replace	One time in four years					
9	*	Wheels	• Check the wheels are not buckled, the spoke state and the tightening • If necessary, tighten again	◆	◆	◆	◆	◆	
10	*	Tyres	• Check the depth of the treads • Replace if needs be • Check the air in the tyres • Adjust if necessary	◆	◆	◆	◆	◆	◆
11	*	Wheels bearings	• Check the lack of damage and of an excessive play	◆	◆	◆	◆	◆	

12	*	Rear swing arm	• Check the functioning • Check the lack of damage and of an excessive play of the bearings		◆	◆	◆	◆	
			• Coat with lithium grease	Every 24 hours					
13		Transmission chain	• Check the chain tension • Check the alignment of the rear wheel • Clean with *Motul chain clean* and grease with *Motul chain lub off road*	Every 6 hours or after a use under the rain					
14	*	Steering bearings	• Check the lack of excessive play and of resisting point in the steering	◆	◆	◆	◆	◆	
			• Coat with lithium grease	Every 24 hours					
15	*	Frame	• Check the nuts and screws tightening	◆	◆	◆	◆	◆	◆
16	*	Front fork	• Check the functioning and the lack of leak	◆	◆	◆	◆	◆	

17	*	Shock absorber	• Check the functioning and the lack of leak	◆	◆	◆	◆	◆	
18	*	Carburettor	• Check the functioning of the choke • Adjust the idle	◆	◆	◆	◆	◆	◆
19		Engine oil	• Replace • Check the level of oil • Check the lack of oil leak	◆	◆	◆	◆	◆	◆
20		Oil filter element	• Clean	◆		◆		◆	
21		Moving parts (including cables)	• Lubricate	◆	◆	◆	◆	◆	◆
22	*	Accelerator cable and handle	• Check the functioning and the play • Adjust the play if necessary • Lubricate	◆	◆	◆	◆	◆	◆

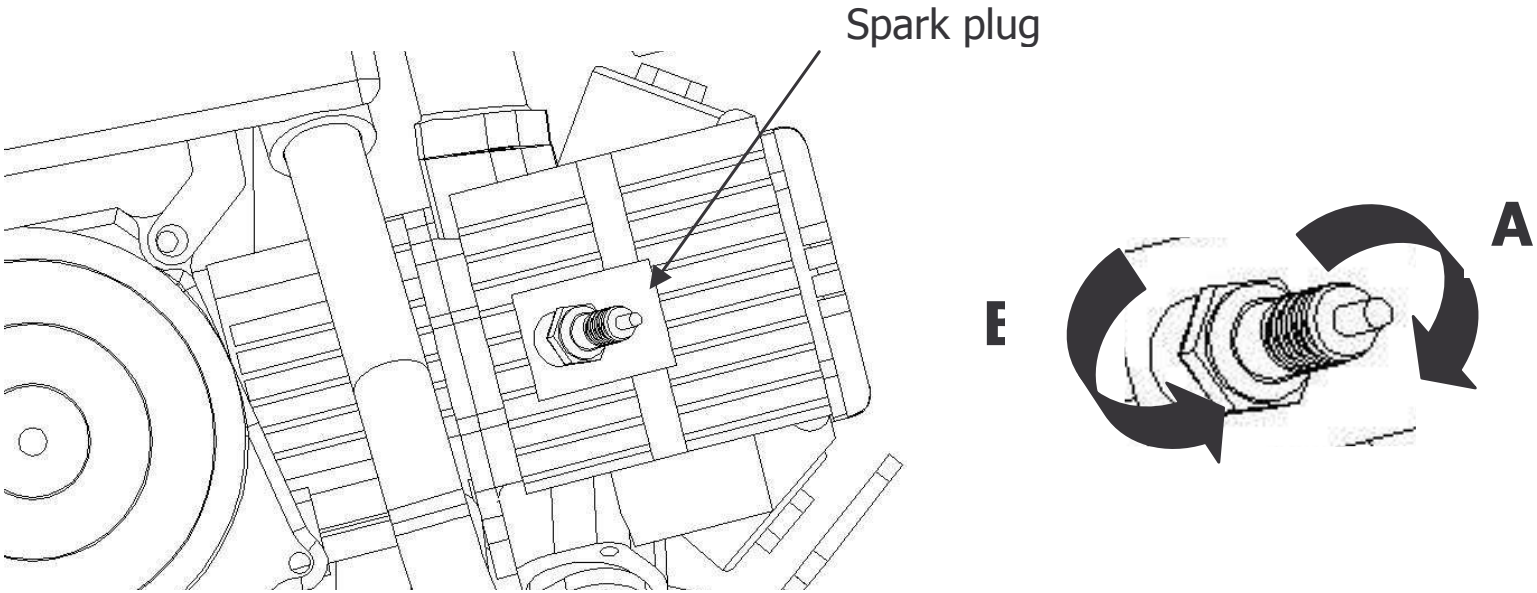
NB :

- 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 4TRICKS 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 : *CHAMPION RZ96C*

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

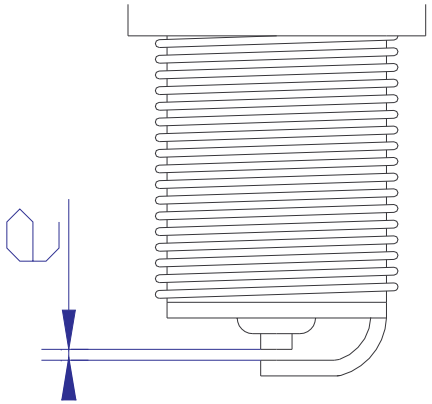
1. Take off the anti-interference system
2. Unscrew the spark plug in the direction (B) thanks to a spark plug spanner.

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 ¼ to ½ 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.

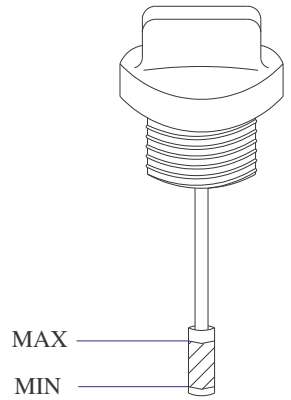
6.4 Engine oil

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 thanks to the engine oil tank cap, on the right engine crankcase, and the level must be situated between MIN and MAX, with the engine cold and the cap not tightened, just laid down.



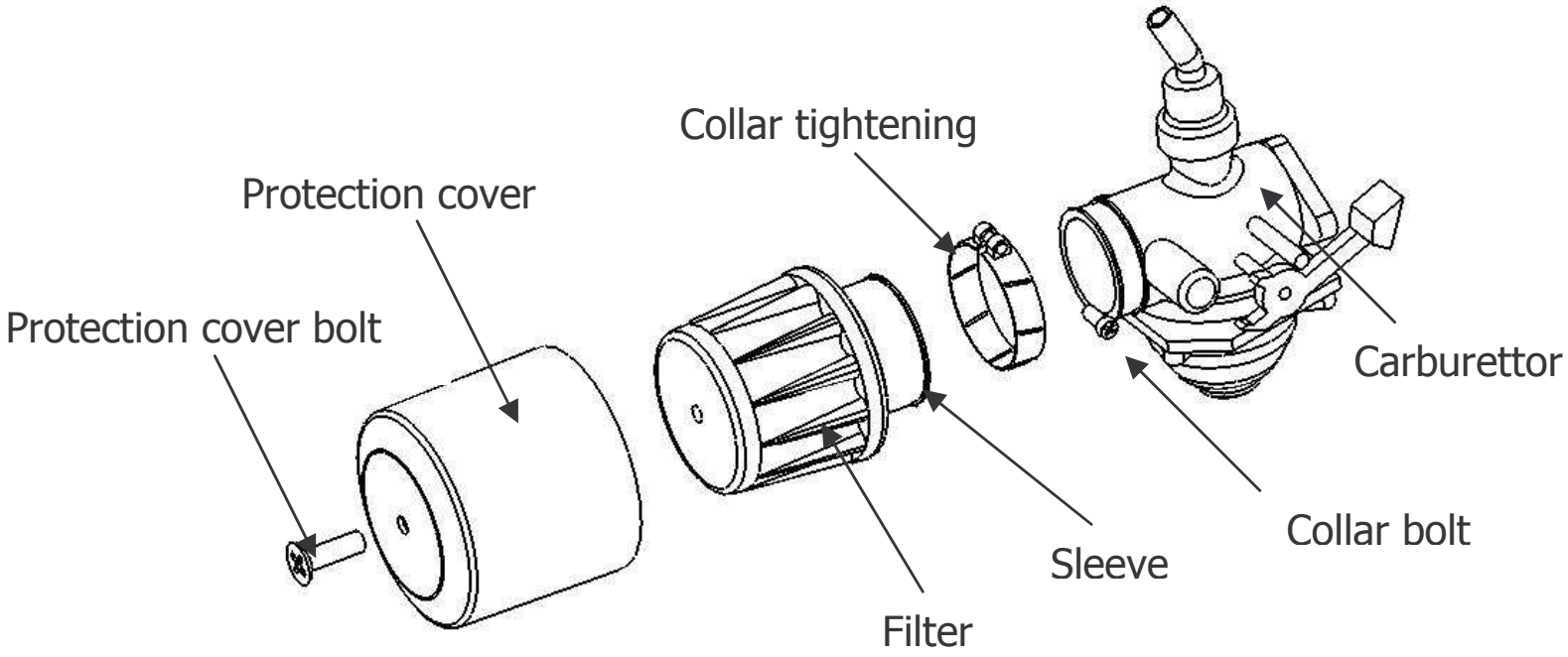
3. In case there is not oil enough, add oil up to the recommended level. The oil filling up hole is on the top of the right crankcase.

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 9 stages :

1. Unscrew the tightening ring screw.
2. Pull out the arm from the carburettor.
3. Unscrew the protection cover's screw.
4. Separate the protection cover and the filter.
5. Clean the filter with *Motul air filter clean.*
6. Coat the filter with recommended oil, *Motul air filter oil*, 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 carburettor.

6.6 Carburetion adjustment

The carburettor 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 Idle adjustment

The idle has to be adjusted, if needs be, in accordance with the 'List of the regular maintenance and lubrications'. Please notice that this setting has to be operated on a warm engine. It requires the use of a diagnosis revolution counter.

1. Connect the revolution counter on the spark plug electric wire.
2. Check the idle, and if necessary, correct it to the recommended value, thanks to the stop screw of the gas butterfly nut.

To increase the idle, turn the screw clockwise. On the contrary, turn it anticlockwise to decrease the idle.

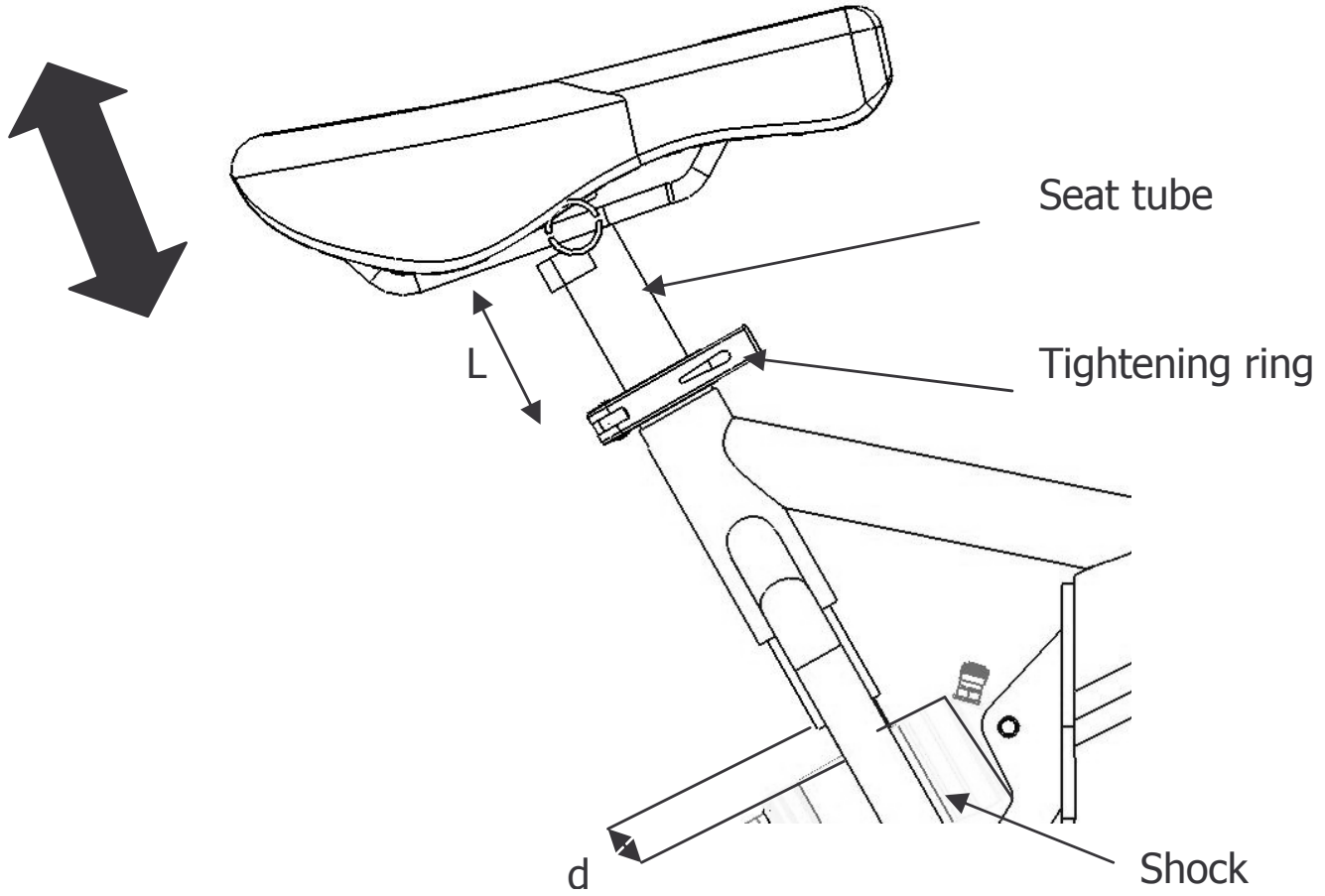
The idle recommended by the engine manufacturer is between 1600 and 1800 revolutions per minute.

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. The play of the valves advised is 0.05mm.

6.8 Saddle height

You should readjust the seat to your height specificities.



Seat adjustment :

1. Open the tightening ring.
2. Adjust to desired height by moving the seat vertically.
3. Tighten the tightening ring.

WARNING

- The distance (d) between the seat and the shock must be more than 20mm in order to avoid the collision of the two.
- The height (L) of the seat should not surpass 110mm.
- Make sure that the tightening ring is securely closed before using the motorcycle.

6.9 Wheel-axle units

6.9.1 Front wheel removal

1. Loosen the wheel with the 2 fastening screws.
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.

6.9.2 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. Tighten the screws of the front wheel by taking care of they are correctly positioned in the fork.

6.9.3 Rear wheel removal

1. Remove the chain cover.
2. Loosen the wheel axle nut.
3. Turn the two chain tension eccentrics in the direction which allows the wheel to move towards the front of the bike.
4. 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.
5. Remove successively the axle nut and the axle.
6. Make the wheel move to the front of the bike, and remove the chain from the rear sprocket.
7. Remove the rear wheel from the swinging arm.

6.9.4 Rear wheel fitting

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 arm of the swinging arm and through the first eccentric.

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 eccentric and the second arm.

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 (look at the dedicated paragraph).

8. Tighten the axle nut to the recommended torque : 60 Nm (6,0 m.Kgf).

9. Place the chain cover.

6.10 Tyres

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

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

Recommended pressure (checks on cold tyres)	
Front tyre	Rear tyre
250kPa (2,5kgf/cm²)	250 kPa (2,5kgf/cm²)

▲ 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.
- Adapt the air in the tyres to the transported load.
- The air in the tyres, their condition and the depth of their treads must be checked before each use.

6.10.1 Check of the condition and of the treads depth of the tyres

Some conditions must imply the replacement of the concerned tyre :

- 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 tyre,
- If the flanks of the tyre are cracked.

NB : The minimum depth of the treads is 1,6 mm

6.10.2 Pieces of information about the tyres

The front and rear tyres are preferably from the same manufacturer, with the same structure, with the aim to improve the road holding.

The different tyres used by SCORPA for the 4TRICKS are :

FRONT TYRE :

Mark	Dimensions	Model
TRY-ALL	2.00-20"	Stiky

REAR TYRE :

Mark	Dimensions	Model
TRY-ALL	2.50-20”	Stiky

6.11 Spoke wheels

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

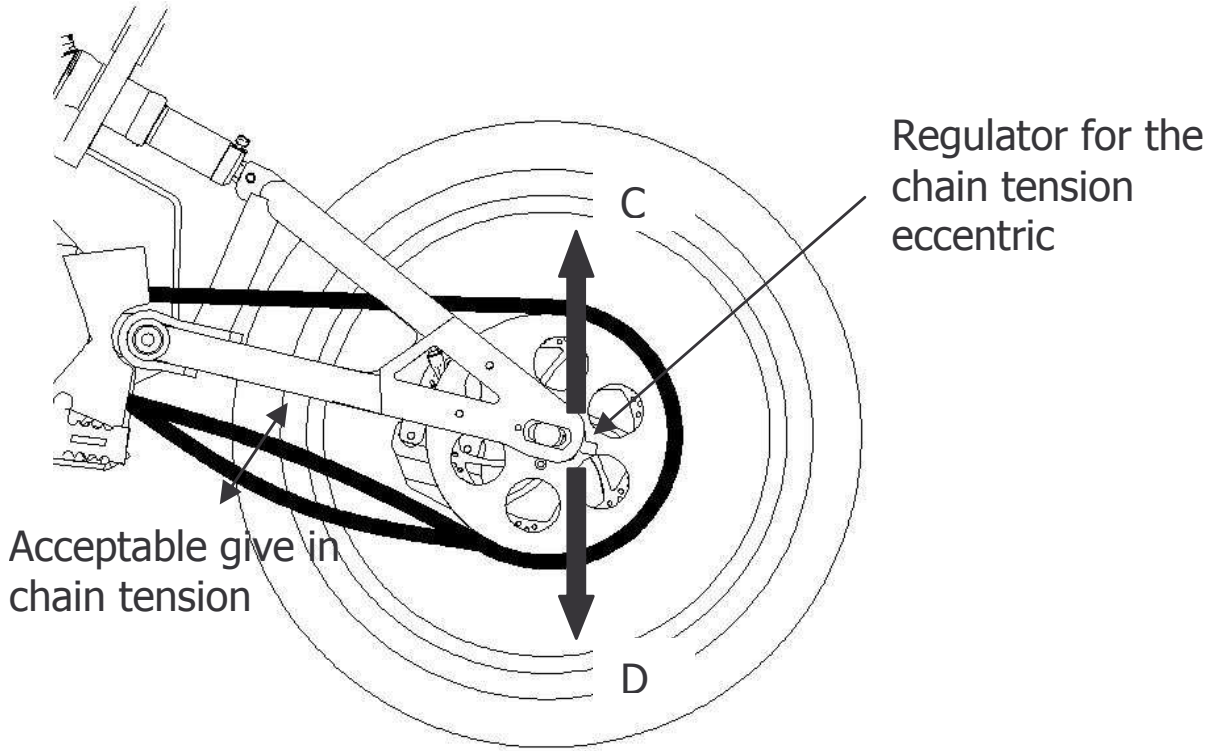
- Before each use, check the lack of cracks on the rims.
- Check the spoke tightening and tighten it again if necessary as explained in the dedicated paragraph.
- Make sure the wheel is not buckled.
- After the tyre replacement, it is advised not to ride to fast, until the tyre is well run.

▲ WARNING

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

6.12 Transmission chain

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



6.12.1 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. Remove the chain cover.
4. Make the bike move forward, in order to locate the place where the tension is at its maximum.
5. Check the distance between the rubber chain-adjuster and the swinging arm as shown on the diagram. The distance must be bounded by 20 and 25mm.

6.12.2 Setting

1. Loosen the rear wheel axle nut.
2. To tighten the chain, turn the left eccentric clockwise (d) and the right one anticlockwise. On the contrary, to release the chain turn the left eccentric anticlockwise and the right one clockwise, 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).
4. Place the chain cover.

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.

▲ WARNING

Never use the bike without the chain cover.

6.12.3 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.

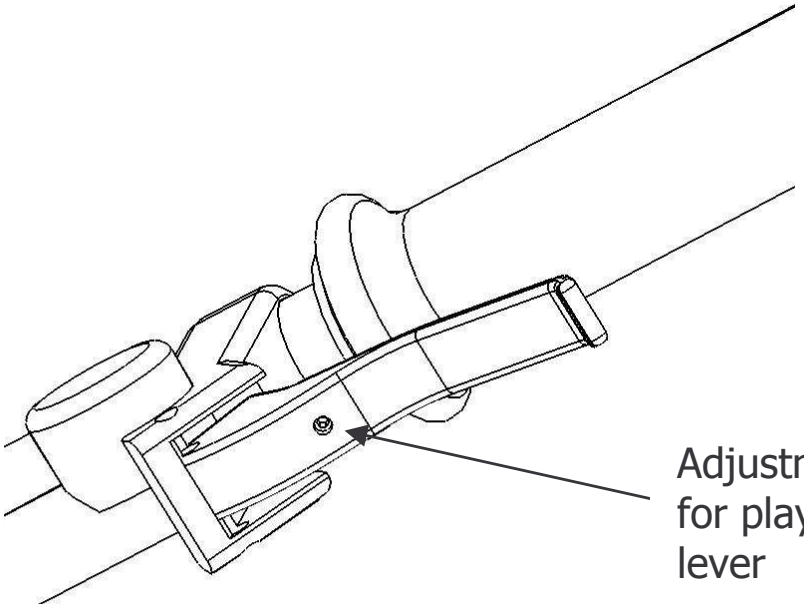
1. Brush out the mud and the grime thanks to an old piece of rag or a brush.
2. Spray *Motul chain lub off road*, for transmission chain onto the chain, on both sides and on the top of the chain, to lubricate at best all the rolls.

6.13 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.

6.13.1 Adjustment of the brake levers loose



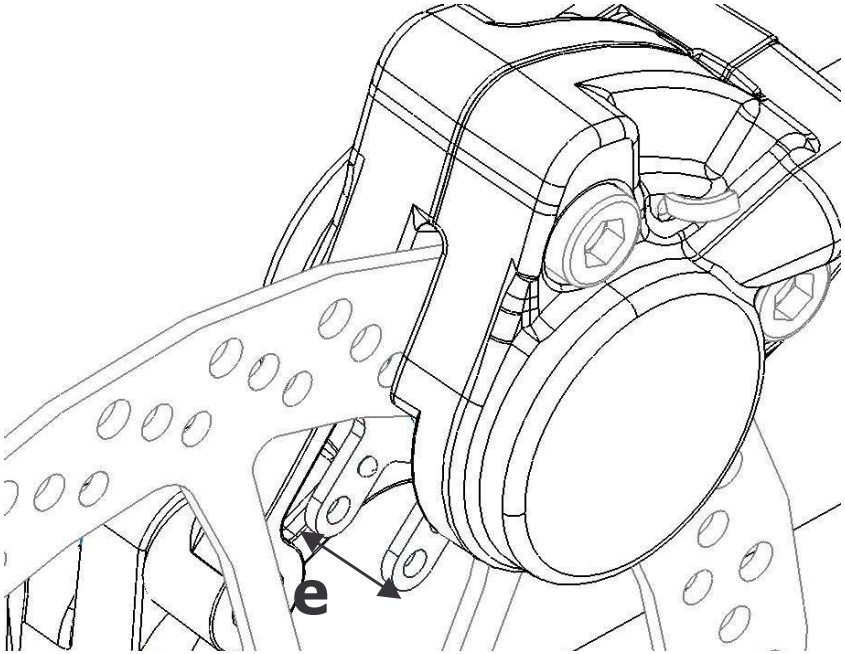
A number 2° Allen key is needed to adjust the play. Turn clockwise and the lever moves away from the handle bar, turn counter clockwise and the lever moves closer to handle bar.

WARNING

- Always verify the brakes after adjustment of the lever.
- If the lever appears to be limp, this can be due to air bubbles in the braking circuit. Your local dealer should purge the braking circuit in order to retain braking efficiency.
- In the event that the desired adjustment cannot be attained, seek aid from you local dealer.

6.13.2 Check of the brake pads thickness

Verify front and rear brake pad use in accordance with the specificities delineated in the control table for revisions and periodic greasing.



- Regularly verify that the width of the brake pads is sufficient.
- Engage and maintain the break with the wheel mounted.

NB : Maintain the presser with an elastic band or a tightening ring.

- Verification : with the brake depressed, the minimal width of the break pads should be no less than 2,5mm.
- If this is not the case, have both of the brake pads replaced simultaneously by a professional.

WARNING

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

6.13.3 Brake fluid change

The brake fluid change must occur in accordance with the indications given in the 'List of the regular maintenance and lubrications'
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 calliper, as far as the brake fluid hose, following the recommended frequency and in case of leak of fluid.

Brake hose : replace every four years

6.14 Lubrications

6.14.1 Cable

The accelerator cable has 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 lubrications'. The recommended lubricant is : *Motul EZ Lub multi protect*

6.14.2 Gearshift and brake levers

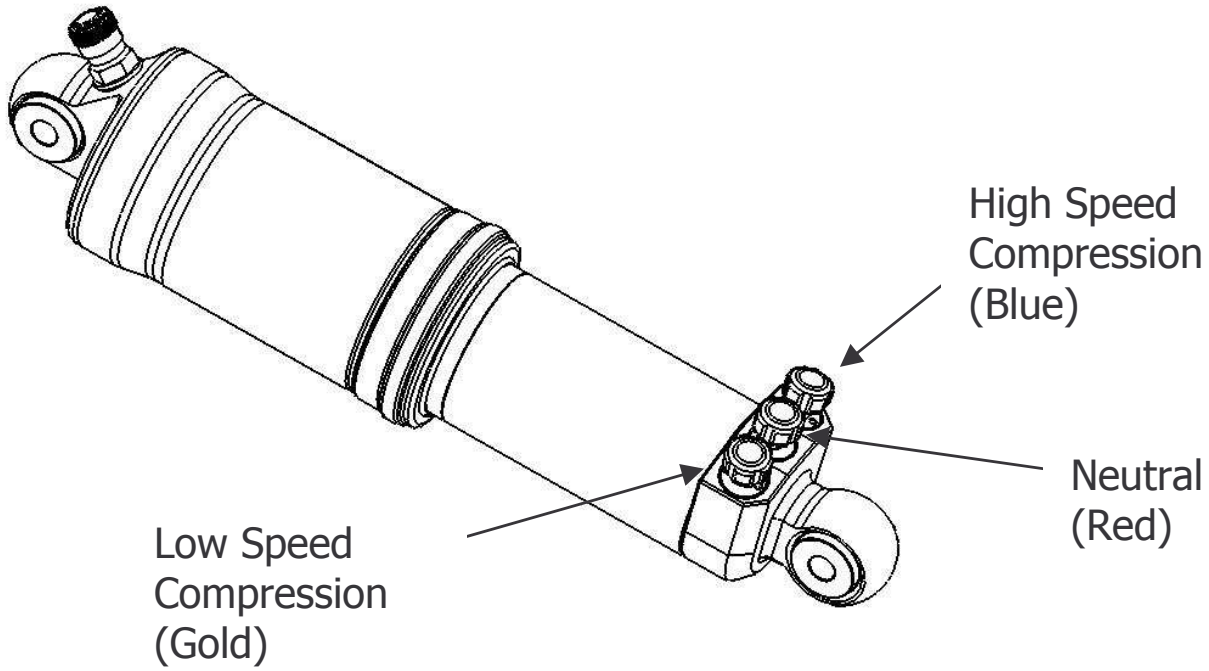
The functioning of those controls must be given much care and needs to be checked before each use. If it needs to be, lubricate the articulations with the recommended lubricant, which is : *Motul Tech Grease 300 (lubricate containing lithium high performance multiservices)*

6.15 Rear shock-absorber

A visual check before each use can help you to detect potential traces of oil leak on the rear shock absorber. In case it happens, resort to your dealer for the check, the repairing or possibly the replacement of this part.

Moreover, the owner has to follow the indications of the 'List of the regular maintenance and lubrications' as far as the rear shock absorber is concerned. The recommended lubricant is the *Motul Tech Grease 300.*

6.15.1 Rear shock-absorber settings



Verification for neutral position is red, verification for the high-speed position is blue and verification for the low speed position is gold. By turning the cutting wheel clockwise the shock absorbs more (slower/hard), turning it anticlockwise will diminish shock absorption (quicker/flexible). The compression should be adjusted so that the excess turnover is consumed without complete compression of the shock. The best option is to measure the excess turnover using the O-ring found in your reference track. Adjustment depends on your riding style.

⚠ WARNING

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

6.16 Front fork and steering

6.16.1 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

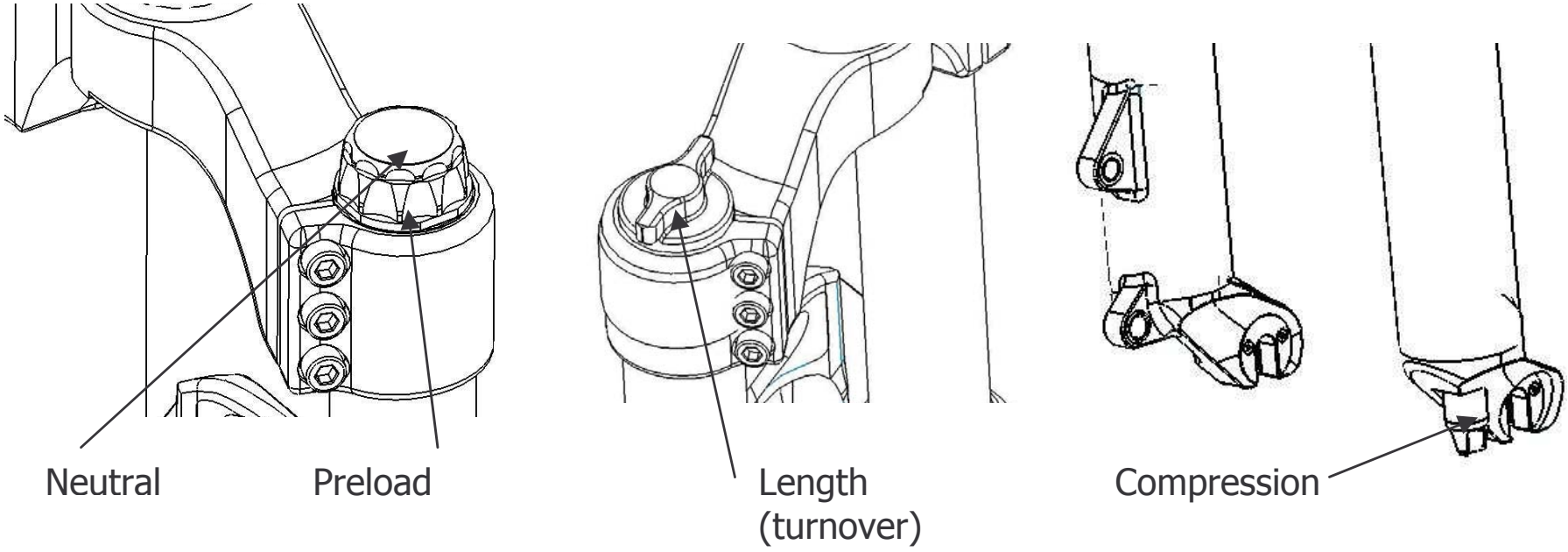
This operation requires putting well the bike on blocks to prevent it from overturning.

6.16.2 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.

6.16.3 Fork adjustment



- A nozzle is place on the right side driver above the preloading nozzle. This nozzle is used to control the neutral position. Turn the nozzle clockwise in order to increase preloading. Turn the nozzle counter clockwise to decrease it. To increase neutral absorption, turn the neutral nozzle clockwise. To decrease it, turn the nozzle counter clockwise.

- The nozzle situated on the left side is used to control the length of the fork: maximum 40mm. Turn the nozzle clockwise to reduce fork size, counter clockwise to increase the size.
  The length of the fork influences the behaviour of the 4TRICKS :
  - If the nozzle is completely tightened (minimum length), the 4TRICKS is adapted for low speed manipulation.
  - If the nozzle is loose (minimum length), the 4TRICKS is adapted for high speed manipulation with its frame completely elevated.

- To increase compression absorption, turn the nozzle clockwise. To decrease compression absorption, turn the nozzle counter clockwise.

▲ WARNING

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

6.16.4 Check of the steering

It might happen that the steering bearings are loose or damaged. Then they may cause serious dysfunctions 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.

6.16.5 Check of the wheel bearings

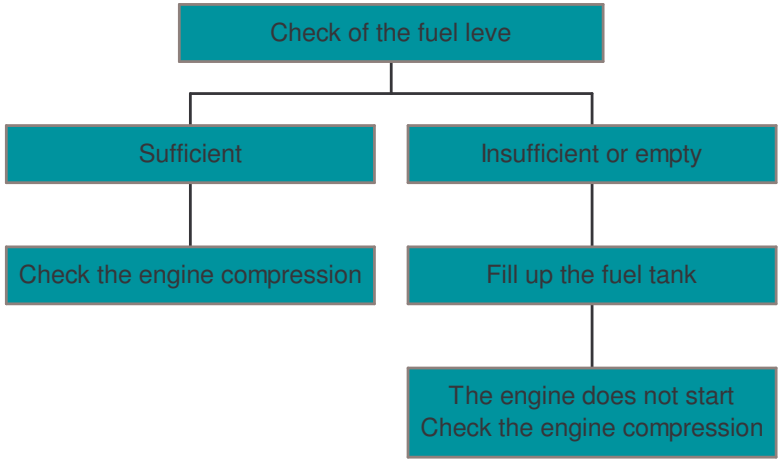
Check the condition and the progressiveness of the wheels bearings in accordance with the pieces of information of the 'List of the regular maintenance and lubrications'. In case the buckles have loose, or in case the wheels do not revolve well, it has to be inspected and maybe repaired or replaced by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

6.17 Diagram of breakdowns and dedicated checks

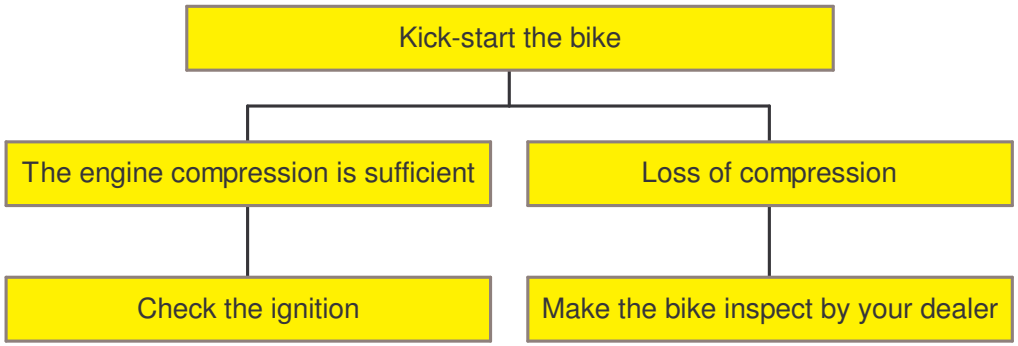
Despite the care, the complete check list, the static and dynamic checks, the quality controls led by SCORPA during the development and the manufacturing of its bikes, a breakdown could happen.
A problem could cause difficulty for the start out, a loss of performance or an abnormal functioning.
The following 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.

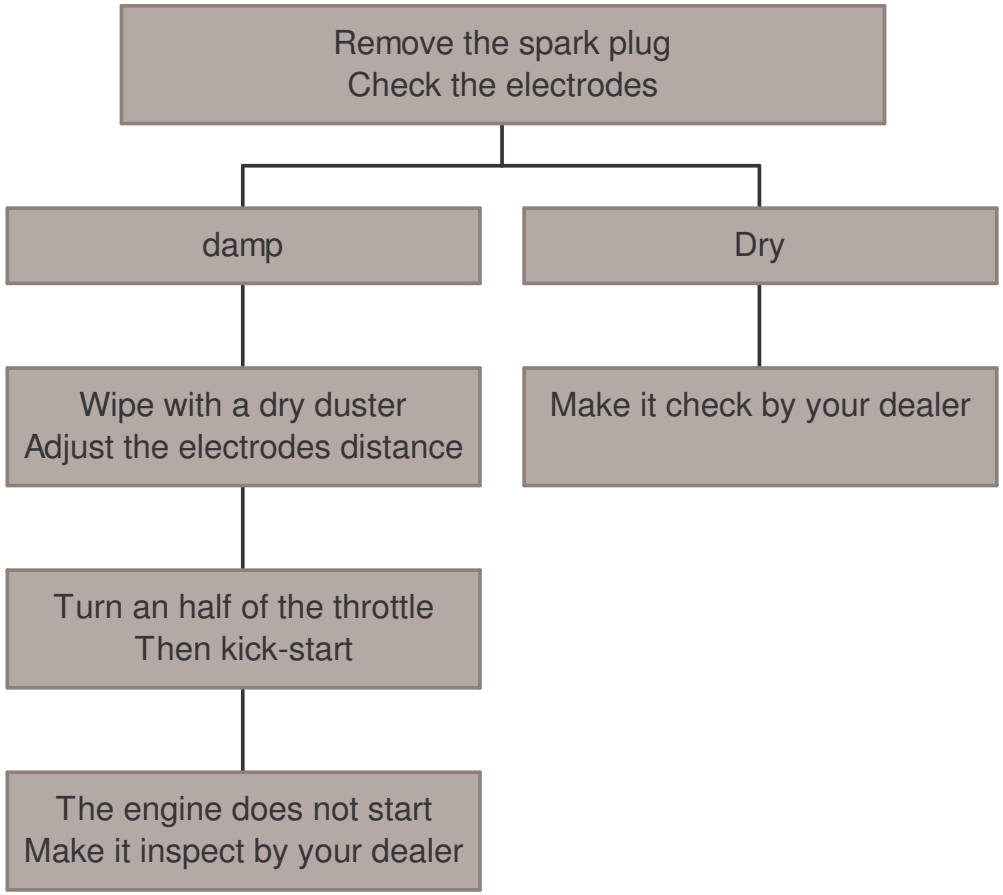
6.17.1 Fuel



6.17.2 Compression



6.17.3Ignition



7 CARE AND STORING OF THE BIKE

7.1 Care

The lack of coachwork exposes almost all parts of the bike to the stresses of the surroundings. The impacts caused by the throwing 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.

7.1.1 Before the cleaning

1. Make sure the electric terminal spade tags, the spark plug cap and all caps are well protected and positioned.
2. 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.

7.1.2 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 air box. 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 :

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

7.1.3 After the cleaning

1. 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.
2. As soon as the bike is dried, lubricate the chain with *Motul Chain lub Off Road* and all parts which could corrode.
3. Scrub the chromium-plated or anodized metallic surfaces with a clean piece of rag and an anticorrosion chemical.
4. Do not cover and store the bike before it is totally dry.

7.2 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 :

1. Clean the bike as explained in the previous paragraph.
2. 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.

3. If possible, add a fuel stabilizer in the tank to prevent the fuel from deteriorating.
4. 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.
5. Lubricate all cables, levers, pedals, gearshift lever, side stand and articulations with *Motul EZ Lub Multi Protect*.
6. If possible, it is preferable to heighten the bike, so that the humidity is not concentrated in the same place of the tyres.
7. Put a cap on the end of the exhaust pipe.
8. 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.

8 DESIGN FEATURES

Model	4TRICKS
Dimensions	
Total length	1620mm
Total width	660mm
Total height	1130mm
Saddle height	800mm
Wheelbase	1100mm
Ground clearance	240mm
Total net weight	37Kg
Engine	
Type	4 temps
	Petrol
	Air cooling
	SOHC
Position of the cylinder	horizontal
Capacity	71.8 cm3
Bore x stroke	47 x 41.4mm
Compression	9,0 :1
Start	Kick

Engine oil : *Motul 300V 100 % synthesis*

Type

-10 at 30°C : SAE 10W/30
-10 at 40°C : SAE 10W/40
-0 at 40°C : SAE 15W/40
-5 at 40°C : SAE 20W/40
-5 at 50°C : SAE 20W/50
Oil of type API Service,
of class SE, SF, Sgmin

Air filter	horn type
Fuel	
Type	Unleaded petrol
Capacity	1,1 L
Carburettor	
Mark	
Model	
Spark plug	NGK CR7HSA
Electrodes distance	0,6 – 0,7 mm

Transmission

Primary reduction system	Straight teeth gearing
Secondary reduction system	Chain driving
Reduction ratio	46/13 (3,54)
Gear box	constant driving 4 gears
Control	Left foot

Frame

Frame type	beam

Tyres

Front wheel

Type	Tube type
Dimensions	20 x 2,00
Mark	TRY ALL
Model	Stiky

Rear wheel

Type	Tube type
Dimensions	20 x 2,50
Mark	TRY ALL
Model	Stiky

Maximum load 100 kg

Air in tyres (cold)

Front	250 kPa
Rear	250 kPa

Wheels

Front

Type	Spokes wheel
Dimensions	20”x32mm

Rear

Type	Spokes wheel
Dimensions	20”x47mm

Brakes

Front		
	Type	1 disk, ∅ 180
	Control	Right hand
	Fluid	Mineral oil *Magura BLOOD*
Rear		
	Type	1 disk, ∅ 180
	Control	Left hand
	Fluid	Mineral oil *Magura BLOOD*

Suspensions

Front		
	Type	Telescopic fork
Rear		
	Type	Swinging arm

Shock absorbers

Front	Helicoids spring / Oil
Rear	Air spring/ Air

Maximum displacement

Front	90-125mm
Rear	125mm

Electric parts

Ignition	CDI

Identification number

Type	Riveted plate
Place	Frame (Saddle support)