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FANTIC

ENDURO

250

LIBRETTO DI USO E MANUTENZIONE - USER MANUAL
MODEL YEAR 2019

FANTIC WANTS TO THANK YOU

For choosing one of its products.

We recommend that you read this manual before driving your vehicle. It contains information, advice and warnings on the vehicle maintenance and use. The instructions in this manual have been prepared to give you a simple and clear guide for use. We are sure that taking it into consideration you will gain confidence with your new vehicle, which you can use for a long time and with full satisfaction.

THANK YOU			
INTRODUCTION			
Manufacturer data and edition			
SYMBOLS USED			
GENERAL WARNINGS			
Motorcycle care			
Carbon monoxide			
Fuel			
Hot components			
Used engine and gearbox oil			
Brake fluid			
Electrolyte and hydrogen gas from the battery			
Exhaust			
Precautions and general warnings			
FUNDAMENTAL SAFETY RULES			
Behaviour and driving			
Clothing			
Tips to prevent theft			
Parking			
Transport			
Silencer			
3 GENERAL CONTENT AND CONSULTATION			
Vehicle identification			
7 Main controls			
Panel commands			
Dashboard			
9 Key switch			
Steering lock engagement			
11 Horn button			
Turn signal switch			
11 Light command			
High beam flashing button			
11 Start button			
Engine stop button			
13 Saddle opening			
Refuelling			
14 Vehicle inactivity			
Vehicle washing			
15 MAINTENANCE			
Introduction			
Preliminary checks			
Engine oil			
Tires			
Spark plug			
Air filter			
Coolant			
27 Braking system			
Suspensions			
Chain			
Battery			
Fuses and relays			
Lights and turn signals			
Rear-view mirrors			
51 MAINTENANCE TABLE			
Scheduled maintenance table			
Recommended products table			
53 TECHNICAL DATA			

This manual is an integral part of the vehicle and if the vehicle should be resold, it must be delivered together with the vehicle. Fantic Motor reserves the right to modify and make changes, at any time and without notice, to the models described, specifications and design data, guaranteeing the essential characteristics described and illustrated herein. This publication, or part of it, cannot be reduced or translated without the company's approval. Reproduction of the contents used in this manual without the Manufacturer's permission is prohibited. Fantic Motor assumes no responsibility for printing errors and omissions. All rights reserved.

MANUFACTURER DATA AND EDITION

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The symbols indicated in the booklet are very important. They are used to highlight parts of text to which it is necessary to pay more attention. Read this manual carefully before starting the engine. Your safety and that of others does not depend only on your quickness of reflexes and agility, but also on your knowledge of the vehicle, its condition and your knowledge of the rules for safe driving. We therefore recommend that you familiarize yourself with the vehicle so that you can move in all driving situations with mastery and safety.

In this booklet you will find notes to warnings preceded by the following symbols:



Important safety regulations for the vehicle and the driver.



Information notes on the vehicle use and characteristics.

MOTORCYCLE CARE

Fantic Motor recommends using appropriate vehicle care products. Using products that contain alcohol, nitro diluents, cold detergents, fuels or similar can ruin and/or damage vehicle components.

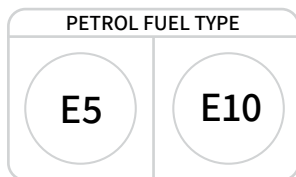
Regular care preserves the aesthetic and functional quality of your vehicle for a long time.

CARBON MONOXIDE



The exhaust fumes contain carbon monoxide, a poisonous gas that can cause death. Therefore, for certain operations, make sure you are in an open space, or in a suitable and well-ventilated room, never in enclosed spaces. If operating in enclosed spaces, use an evacuation system for the exhaust fumes.

FUEL



The fuel used is extremely flammable and can become explosive under certain conditions. Refuelling and maintenance operations must be carried out in a ventilated area and with the vehicle switched off. Do not smoke during refuelling and near fuel vapours; avoid contact with open flames, sparks and any other source that could cause ignition or explosion.



Do not disperse in the environment and keep away from children.

HOT COMPONENTS

The engine and certain components become very hot and remain hot for a while even when the engine is off. Before carrying out any operation near the engine or exhaust system, wear insulating gloves or wait for their cooling.

GENERAL WARNINGS

USED ENGINE AND GEARBOX OIL

Used engine and gearbox oil is harmful to health, whether it is inhaled or swallowed. It is also irritating and can cause serious consequences if it comes into contact with the skin.

Spreading and dispersion into the environment is prohibited.



If swallowed, do not induce vomiting, but go urgently to a first aid centre, indicating the cause and how the accident occurred.



In case of contact with the skin, immediately wash the affected part with soap and water, repeating the operation until the affected part is free from residues.



In case of contact with eyes and ears, immediately rinse the affected parts with plenty of water and urgently go to a first aid center, indicating the cause and how the accident occurred.



In case of contact with clothing, undress and wash thoroughly with soap and water. Change the dirty cloths which must be specifically washes as soon as possible.



Always use gloves suitable to protect your hands during the maintenance operations.



Keep out of the reach of children.



Used engine and gearbox oil must be collected in a sealed container, and delivered to the nearest service station or at a waste oil collection centre where you will find personnel authorized to dispose of it.

BRAKE FLUID



Brake fluid may damage painted, plastic or rubber surfaces. Protect these components with a clean rag when performing certain operations.



Always wear protective glasses and in case of accidental contact with eyes, rinse immediately with plenty of clean, fresh water and consult a doctor immediately. Keep out of the reach of children.

ELECTROLYTE AND HYDROGEN GAS FROM THE BATTERY



The electrolyte of the battery is toxic and caustic. In contact with skin it can cause burns, as it contains sulphuric acid. Wear gloves and protective clothing.



If the electrolyte liquid comes into contact with the skin, wash it thoroughly with fresh water.



Protect your eyes, as battery fluid can cause blindness. If it comes into contact with the eyes, wash thoroughly with water for fifteen minutes and promptly contact an eye specialist.



The battery emits explosive gases, it is advisable to keep away flames, sparks and any other source of heat. Provide adequate ventilation when servicing or recharging the battery.



Keep out of the reach of children.

GENERAL WARNINGS



The battery fluid is corrosive. Do not pour it or spread it, especially on plastic parts.



Provide for regular disposal.

EXHAUST



This component's task is to oxidize the carbon monoxide and convert it into carbon dioxide, transform the unburnt fuel into steam and reduce nitrogen oxides into oxygen and nitrogen. When the vehicle is on, the part of the exhaust corresponding to the catalytic converter, may turn into red colour: this colour turn is absolutely normal and indicates that the catalytic converter is working correctly.

Do not stop or park the vehicle close to dry grass or dry brushwoods.

Prevent people and/or children to touch it.

The exhaust reaches very high temperatures, avoid any type of contact and take the maximum care until it is completely cooled down.

It is forbidden to modify, alter or tamper in any way the exhaust system.

Do not use leaded fuel as it would damage the catalytic converter.

Check the whole exhaust system in order to detect holes or rust.

PRECAUTIONS AND GENERAL WARNINGS



Unless otherwise specified in this manual, do not disassemble any mechanical or electrical components.

BEHAVIOUR AND DRIVING

Some safety tips are given below to avoid damage to people and/or things and to use your vehicle with an easier and safer drive.

VEHICLE USE

To use the vehicle it is necessary to meet all the law requirements.

It is advisable, in order to acquire a good knowledge of the vehicle, to use the vehicle in areas without traffic or unpopulated stretches of road. It is advisable to always respect the highway code while driving, to avoid sudden or dangerous manoeuvres keeping both hands on the handlebar and always keeping your feet on the appropriate footrests. Pay close attention while riding.



Do not ride the vehicle while drunk, under the influence of drugs, after taking certain medicines or in a state of physical fatigue and drowsiness. Failure to comply with these rules is considered extremely dangerous and could cause serious damage to property and/or people.

Evaluate and keep in consideration the conditions of the road surface, visibility and weather. In a situation not suitable for safe driving, reduce the speed and drive carefully. The braking effect in wet roads without ever having applied the brakes is initially less; under these conditions it is advised to periodically operate the brakes.



Although the vehicle is equipped with an ABS system, pay attention during braking on a wet road and on an unpaved or slippery ground.

In case the vehicle is used on roads dirty with sand, mud, snow mixed with salt, we recommend checking and if necessary cleaning the brake discs with special non-aggressive detergents, so as to prevent the formation of abrasive agglomerates inside the holes and an early wear of the brake pads.



Do not alter or modify in any way the original features and performance of the vehicle. The alteration or modification of the original parts of the vehicle is prohibited by law and makes the vehicle no longer compliant and it becomes dangerous for driving. These changes lead not only to the annulment of the guarantee, but also to possible fines.



It is recommended to always comply with national and local laws and regulations regarding vehicle equipment

FUNDAMENTAL SAFETY RULES

The getting on and off from the vehicle must be in complete freedom of movement and without impediments. Go up and down only from the left side of the vehicle and with the kickstand down to prevent unbalancing or loss of balance, causing falls or overturns.



The rider is always the first to go on and the last to go down as he/she has to govern the stability of the vehicle.

Getting on

The passenger must make the movements to get on with the utmost caution, avoiding to unbalance the rider and the vehicle. Place your feet on the ground and hold the vehicle in running position.



The kickstand is designed to support the weight of the vehicle and a minimum load, without rider and passenger.



If it is not possible to have both feet on the ground when getting on, keep only the right foot on the ground, as the left side of the vehicle is “protected” from the kickstand, in case of imbalance or loss of balance.

The foot boards must be extracted from the passenger and wait for him/her to get on the vehicle.



The rider must instruct the passenger on how to get on the vehicle. The passenger must climb with the utmost caution, avoiding to unbalance the rider and the vehicle..



The passenger must always get on from the left side of the vehicle, using the left footrest.

Use the left foot to retract the lateral kickstand.

Getting off

Stop the vehicle in an area suitable for stopping or parking, ensuring that the ground is stable and free of obstacles. Fully extend the kickstand using the left foot.



If it is not possible to have both feet on the ground when getting off, keep only the right foot on the ground, as the left side is “protected” from the kickstand, in case of imbalance or loss of balance.

Keeping the vehicle in running position, wait for the passenger to get off the vehicle.



The passenger must always get off from the left side of the vehicle, using the left footrest.



The rider must instruct the passenger on how to get off the vehicle. The passenger must get off with the utmost caution, avoiding unbalancing the rider and the vehicle.



Do not get off the vehicle jumping or by stretching the leg to touch the ground. The stability and balance of the vehicle would be compromised.

Tilt the vehicle making the kickstand touch the ground. Get off the vehicle and turn the handlebar completely to the left.



Make sure that the vehicle is stationary and stable.



Do not lift the vehicle grasping the license plate holder frame, in order to avoid damage.

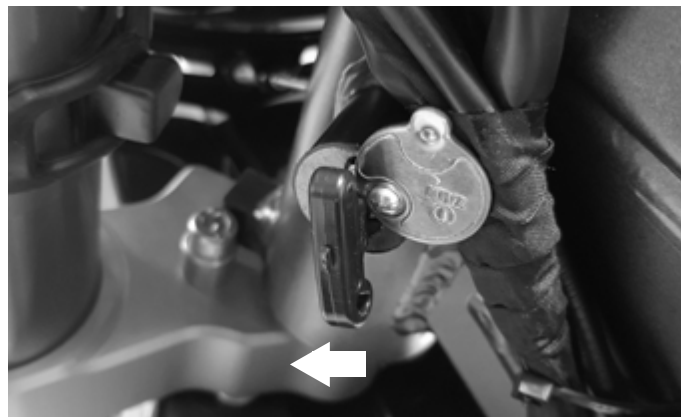
FUNDAMENTAL SAFETY RULES

STARTING

Release the steering lock turning the key clockwise and get on the vehicle assuming the correct posture, making sure that the kickstand is completely retracted.



The kickstand is lowered, the vehicle can be started only with the gearbox in neutral. If you try to engage the gear the vehicle will switch off.



Apply the front and/or rear brake.
Pull the clutch lever and make sure that the gearbox is in neutral.



FUNDAMENTAL SAFETY RULES

ENGLISH

Turn the key to “ON” and wait a few seconds to load the standard parameters on the dashboard display.



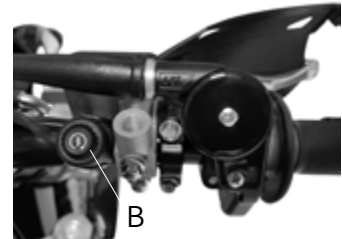
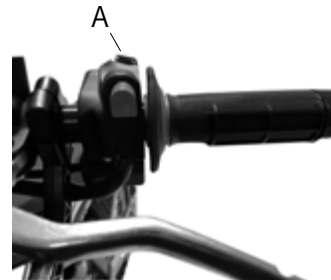
Press the engine stop button “A” and then press the start button “B” once.



It is advisable to warm up the engine well, proceeding for the first kilometres at reduced speed. Do not start abruptly with the cold engine.



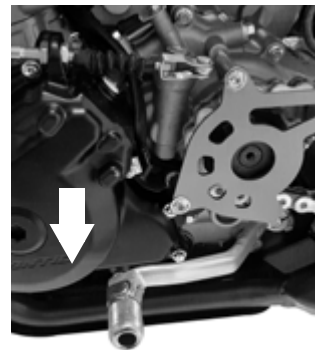
If the fuel reserve warning light comes on, refuel as soon as possible.



FUNDAMENTAL SAFETY RULES

Starting

After starting the vehicle and warming the engine well, operate the clutch lever and engage the first gear pressing the gear lever downwards. The neutral indicator light will go off on the dashboard.



Releasing the clutch slowly, gradually accelerate to allow the vehicle to move forward.



Gearbox use

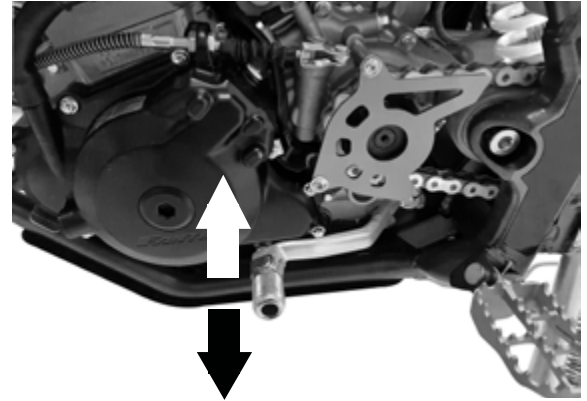
To change gears, release the throttle control knob, operate the clutch lever and raise the gearbox pedal upward to shift up and/or down to shift down.



If you are a beginner in driving the vehicle, it is important to familiarize yourself with the vehicle



Shift one gear at a time. Up-shifting or down-shifting the gearbox more than a single gear at a time may cause the engine to run out of speed and risk to exceed the maximum speed allowed by it.



FUNDAMENTAL SAFETY RULES

Engine stop

To stop the vehicle and the engine, apply the front and/or rear brake until the vehicle is stopped. Set the shift lever to neutral.



Do not intervene on the engine stop switch when the vehicle is running, this would cause the engine to stop; this can damage the engine and above all may cause loss of control of the vehicle.



Only after these operations, press the engine stop button and turn the key counter clockwise to "OFF".



If you forget the key turned to "ON", the battery charge level will decrease until it is down and will need to be replaced.



When the vehicle is turned off, do not release the clutch too quickly or suddenly. It could cause the engine to stop or an unintended wheelie of the vehicle.



Avoid sudden stops or sudden vehicle slow-downs.



Running-in rules

When using the vehicle the first few times it is essential to carry out a running-in period, for the correct operation and duration of the engine. During this period, it is necessary to follow certain rules in order to prepare the engine and vehicle components for subsequent maximum performance (after running-in).



The best performance will be achieved only after having completed the inspection at the end of the running in.

The following tips are indicative and can help the user to perform a good running-in. It is important to stress the engine and vehicle components appropriately, but it is necessary not to exceed or fail to do this because in both cases the engine and the vehicle components would be affected. Do not make sudden accelerations and gradually change the speed.



Full acceleration is allowed, but it is necessary not to travel too long and at full speed.

When driving on mountain roads, be careful not to force the engine, brakes and suspension. It is more suitable to travel on roads with moderate curves and hills where engine, brakes and suspensions alternate periods of stress to periods of reduced or no stress. The brake pads at the purchase are new and the friction surface initially does not make perfect friction on the discs; to be fully operative, it must be run in so that is perfectly adhering to the disc during braking. The running-in requires approximately 200 km (125 mi) of urban route. In this period, consider longer braking distances and use the brake lever with greater strength.



Abrupt braking and prolonged periods are to be avoided.

During the first 1000 km (600 mi) check the maintenance operations required for this mileage.



At the estimated mileage, perform the checks in the “Scheduled Maintenance Table” at an authorized Fantic Motor Service Center. Check and carry out these operations to avoid damage to the vehicle, to others and to yourself.



Failure to comply with these rules can negatively affect the subsequent performance of the engine and vehicle components in general.

FUNDAMENTAL SAFETY RULES

CLOTHING

Always wear and fasten the helmet before starting to ride the vehicle. The helmet must be approved, intact and with the visor intact and clean. Wear appropriate protective clothing and no hanging accessories that could create problems when riding the vehicle. Do not wear or carry sharp objects as they are potentially dangerous in the event of a fall.



All these recommendations also apply to the passenger.

TIPS TO PREVENT THEFT

Never leave the ignition key on and always use the steering lock. Park the vehicle in a safe place, possibly in a garage or in a monitored place. Check that the documents and the circulation tax are in order.

PARKING

Choose the parking zone carefully and with attention. It is very important to respect the road signs and the indications given below



Do not park the vehicle placing it against the walls or laying it on the ground. Make sure that the parking area is solid and level.



Make sure that parts subject to high temperatures (silencer, engine, radiator, brake discs, etc.) are not dangerous for people and the surrounding environment.



Never leave the vehicle on and unattended with the key inserted.

TRANSPORT

Before transporting the vehicle, the fuel tank must be completely emptied. Avoid accidental fuel leaks and check that the components are completely dry. The vehicle must be firmly secured, with the first gear engaged and in running order.



In the event of failure, do not perform towing or unsafe and risky procedures that may endanger people and/or things. This would result in the risk of causing accidents or damage to the vehicle.

SILENCER

This component, with regard to exhaust gas, has the task of oxidizing carbon monoxide converting it into carbon dioxide, of transforming unburnt hydrocarbons into water vapour and reducing nitrogen oxides converting them into oxygen and nitrogen.



During the vehicle use, the part of the exhaust system corresponding to the catalytic element can take a bright red colour: this colour variation is absolutely normal and indicates a correct operation of the catalyst.



Avoid stopping or parking the vehicle near places where there is dry brushwood.



Avoid places accessible to children and/or people.



The silencer reaches high temperatures, so avoid any kind of contact and pay the maximum attention until it has not completely cooled down.



It is forbidden to modify, alter or tamper with the exhaust system in any way.



Do not use leaded petrol as it will ruin the catalyst.

Check that there are no holes and signs of rust or wear on the exhaust system.

Check that the exhaust system always works correctly.

In case of increased or abnormal noise, contact a Authorized Fantic Motor Center as soon as possible.



For maintenance, repair or replacement work, contact an Authorized Fantic Motor Center.

VEHICLE IDENTIFICATION

Frame number

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Engine number

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Fantic Motor vehicles are equipped with frame and engine identification numbers. It is advisable to write down the identification numbers in the spaces indicated above, in order to remind them in case of loss or damage.



Do not modify the identification data in order to avoid serious penal and administrative sanctions. In addition, the warranty for new vehicles will be invalidated if the frame identification number has been changed and can not be readily determined.

GENERAL CONTENT AND CONSULTATION

Frame number

The frame number is punched on the steering tube on the right side.



For the original spare parts supply this identification number to your dealer.



Engine number

The engine number is punched on the left side of the crankcase.



GENERAL CONTENT AND CONSULTATION

MAIN CONTROLS



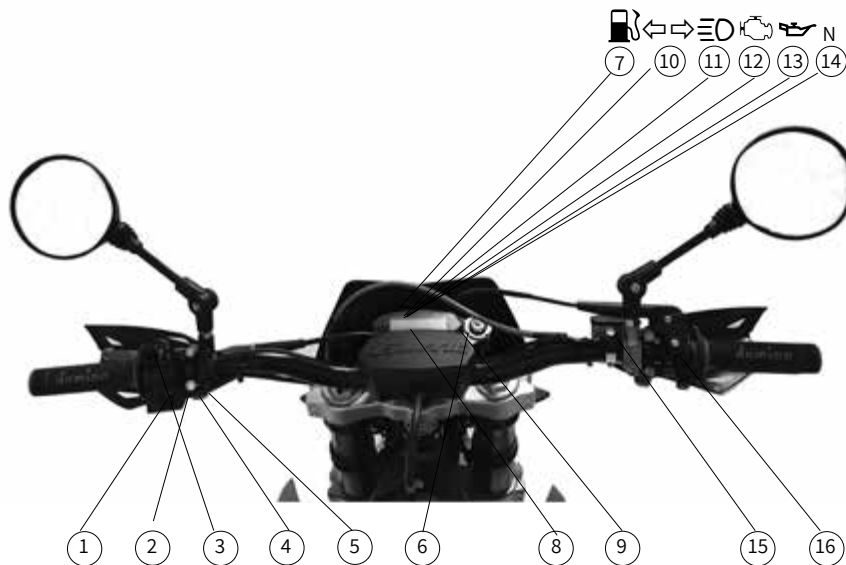
1. Headlight
2. Front left turn indicator
3. Dashboard
4. Clutch lever
5. Left light command
6. Left rear mirror
7. Fuel tank cap
8. Fuel tank
9. Pilot seat
10. Rear mudguard
11. Tail light
12. License plate holder
13. License plate light
14. Rear left turn indicator
15. Pilot left footpeg
16. Side kickstand
17. Gear shift lever
18. Left side conveyor (radiator cover)
19. Front brake caliper



- 20. Right rear mirror
- 21. Right light command
- 22. Throttle
- 23. Front brake pump
- 24. Front brake lever
- 25. Front right turn indicator
- 26. Engine oil cap
- 27. Rear brake lever
- 28. Pilot right footpeg
- 29. Rear brake oil tank
- 30. Rear brake pump
- 31. Rear brake caliper
- 32. Rear speed sensor

GENERAL CONTENT AND CONSULTATION

PANEL CONTROLS

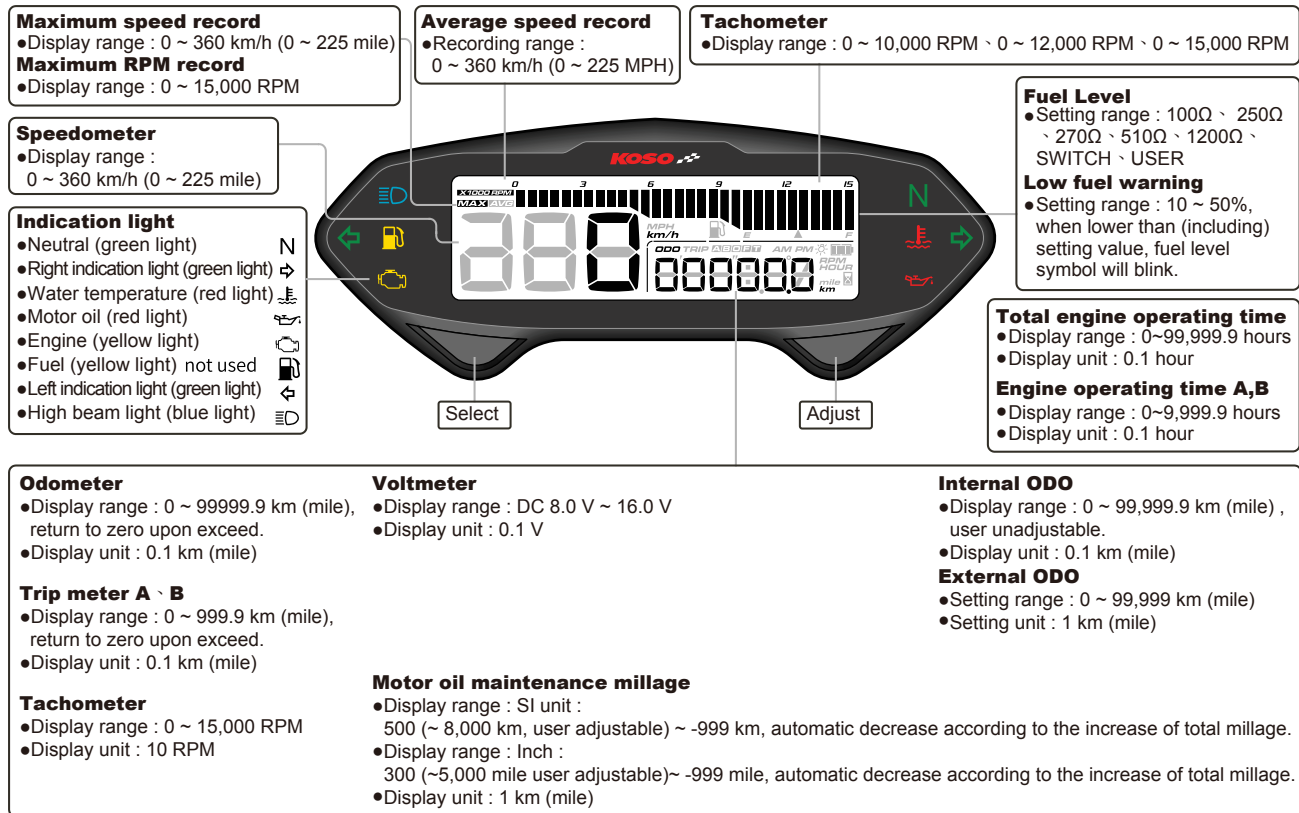


- 1. Turn indicator switch
- 2. Horn button
- 3. High/low headlight beam switch
- 4. Engine stop button
- 5. Clutch switch
- 6. Key Switch

- 7. Fuel reserve indicator light
- 8. "Adjust" dashboard adjust button
- 9. "Select" dashboard select button
- 10. Turn signal indicator light
- 11. High beam indicator light
- 12. Engine indicator light

- 13. Engine oil indicator light (not working)
- 14. Neutral indicator light
- 15. (Engine) start button
- 16. Throttle

DASHBOARD Function

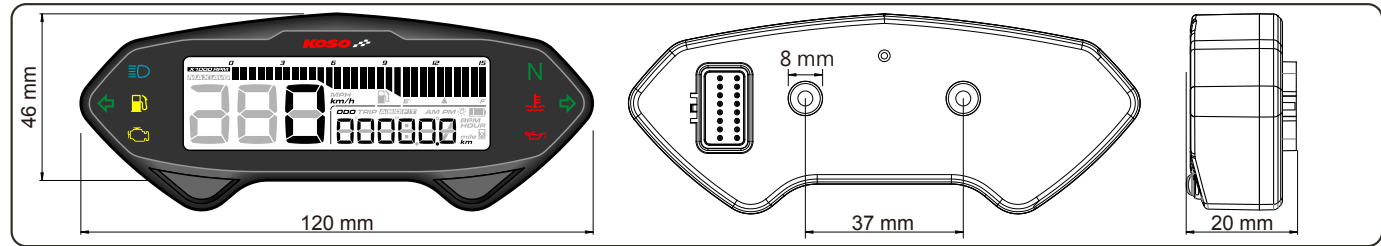


GENERAL CONTENT AND CONSULTATION

BASIC FUNCTION INSTRUCTION

● Speedometer	Display range : 0 ~ 360 km/h (0 ~ 225 MPH) Will blink when exceed range. Display unit : 1 km (mile)	● Fuel level	Setting range : 100Ω ~ 250Ω, ~ 270Ω ~ 510Ω ~ 1200Ω ~ SWITCH ~ USER
○ Display internal	<0.5 second	○ Staged fuel gauge	Setting range : 10 stage display Warning range : Fuel level warning stage below (including) setting value, fuel level symbol will blink.
○ Odometer	Display range : 0 ~ 99,999.9 km (mile), return to zero upon exceed. Display unit : 0.1km (mile)	○ Digital fuel gauge	Setting range : 0 ~ 100 % Setting unit : 10 %
○ Trip meter A、B	Display range : 0 ~ 999.9 km (mile), return to zero upon exceed. Display unit : 0.1km (mile)	○ Low fuel warning	Setting range : 10 ~ 50 %, when lower than (including) setting value, fuel level symbol will blink. Setting unit : 10%
● Motor oil maintenance millage	Display range : SI unit : 500 (~8000 km, user adjustable) ~ -999 km, automatic decrease according to the increase of total millage. Display range : Inch : 300 (~ 5000 mile user adjustable) ~ -999 km, automatic decrease according to the increase of total millage. Display unit : 1 km (mile)	● Volt meter	Display range : DC8.0 V ~ 16.0 V Display unit : 0.1V
○ Maximum speed record	Display range : 0 ~ 360 km (0 ~ 225 mile) Display unit : 1 km (mile)	● Internal ODO	Display range : 0~99999.9 km (mile), user unadjustable Display unit : 0.1 km (mile)
○ Average speed record	Recording range : 0 ~ 360km/h (0 ~ 225 MPH)	● External ODO	Setting range : 0~99999 km (mile) Setting unit : 1km (mile)
○ Tire circumference	Setting range : 300 ~ 2,500 mm Setting unit : 1 mm	● Backlight color	Display range: white
○ Sensitive point	Setting range : 1 ~ 20 points Setting range : 1 point	● Effective voltage	DC 12 V
● Tachometer	Display range : 0 ~ 15,000 RPM Display unit : 10 RPM	● Effective temperature	range +60 °C
○ Display internal	<0.5 second	● Meter standard	JIS D 0203 (S2)
○ Stage tachometer	Display range : 0 ~ 10,000 RPM ~ 0 ~ 12,000 RPM ~ 0 ~ 15000 RPM Display unit : 0 ~ 10,000 RPM (333 RPM each stage) 0 ~ 12,000 RPM (400 RPM each stage) 0 ~ 15,000 RPM (500 RPM each stage)	● Meter size	120 x 46 x 20 mm
○ MAX RPM record	Display range : 0 ~ 15,000 RPM Display unit : 10 RPM	● Meter weight	Around 240 g
○ The RPM input signal number setting	Setting range : P-0.5, P-1~P-25	● Indicator light	Neutral (green light) N Right indication light (green light) → Water temperature (red light) 温度計 Motor oil (red light) 油圧計 High beam light (blue light) 高光束 Left indication light (green light) ← Fuel (yellow light) 燃料計 Engine (yellow light) エンジン
○ The RPM input pulse	Setting range : lo-Act, Hi-Act	NOTE Any design and specification changes will not be notify.	
● Total hour meter	Display range : 0 ~ 99,999.9 hour Display unit : 0.1 hour		
○ Hour meter A、B	Display range : 0 ~ 9,999.9 hour Display unit : 0.1 hour		

3-3 Meter size



3-4 Select button function instruction



- In the clock screen, press the **Select button** one time to enter the volt screen.
- In any screen, press and hold the **Select buttons for 3 seconds** to switch between rpm and fuel bar screen.



- In the volt screen, press the **Select button** one time to enter the fuel level screen.



- In the fuel level screen, press the **Select button** one time to go back to the clock screen.



- In the clock screen.

GENERAL CONTENT AND CONSULTATION

3-5 Adjust button function instruction



- In the ODO screen, press the **Adjust button** to enter the Trip A screen.
- In the ODO screen, press the **Select+Adjust buttons for 3 seconds** to enter settings (Please refer to 4).



- In the Trip A screen, Press the **Adjust button** to enter the Trip B screen.
- Press and hold the **Adjust button for 3 seconds** to reset Trip A screen.



- In the Trip B screen, press the **Adjust button** to enter the oil maintenance mileage screen.
- Press and hold the **Adjust button for 3 seconds** to reset Trip B screen.



- In the oil maintenance mileage screen, press the **Adjust button** to enter the total hour meter screen.
- Press and hold the **Adjust button for 3 seconds** to reset oil maintenance mileage screen.



- In total hour meter screen, press the **Adjust button** to enter the hour meter A screen.



- In the hour meter A screen, press the **Adjust button** to enter the hour meter B screen.
- Press and hold the **Adjust button for 3 seconds** to reset hour meter A screen.



- In the hour meter B screen, press the **Adjust button** to enter the Max. record screen.
- Press and hold the **Adjust button for 3 seconds** to reset hour meter B screen.



- In the Max. record screen, press the **Adjust button** one time to enter the Average speed record screen.
- Press and hold the **Adjust button for 3 seconds** to reset Max. record screen.

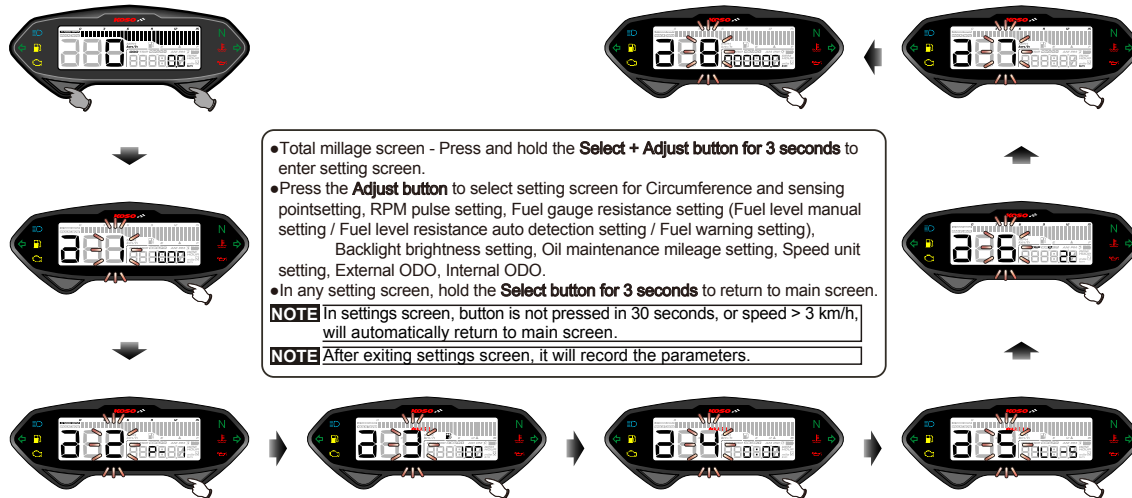


- In the Average speed record screen, press the **Adjust button** one time to enter the ODO screen.
- Press and hold the **Adjust button for 3 seconds** to reset Average speed record screen.

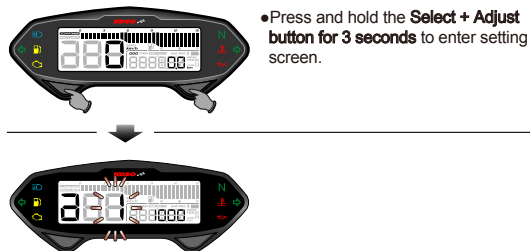


- In the ODO screen.

3-6 The settings screen description



4 Enter settings and function index menu



GENERAL CONTENT AND CONSULTATION

4-1 Circumference and sensing point setting



- Press the **Select** button to enter the circumference and sensing point setting screen.

CAUTION!

- Please measure the tire circumference (The tire you will install the sensor on) and make sure the number of magnet sensor point (You could install the magnet into the disc screw or the sprocket screw.)
- The speed displayed on the meter will be affected by the setting, please make sure the setting number is correct before you make the setting.

⚠ Please reset this setting value when you change a different size tire.



- **Example : If the tire circumference is 1,300 mm.**

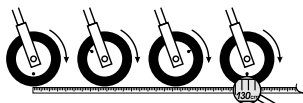
- Press the **Select** button to choose the setting number.
- EX. Now the tire circumference is setting from 1,000 mm.

⚠ Now the digit in thousands setting number is flashing!

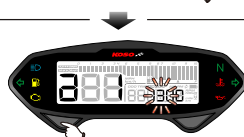
NOTE Setting range : 300 ~ 2,500 mm
Setting unit : 1 mm

P.S.

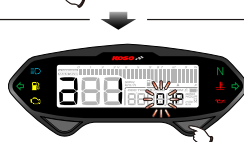
- You could define the valve as the starting point and the terminal point to measure the wheel circumference with a measuring tape.



- Press the **Adjust** button to choose the setting number.



- Press the **Select** button to enter the sensor point setting.
- EX. The circumference setting is changed from 1,000 mm to 1,300 mm.

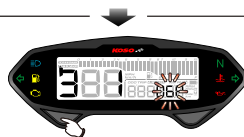


- **Example : If the sensor point is setting 6P.**

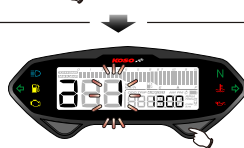
- Press the **Adjust** button to choose the setting number.
- EX. Now the sensor point is setting from 1P.

⚠ Now the setting value is flashing!

NOTE Sensitive point : 1 ~ 20



- Press the **Select** button to go back to the circumference and sensing point setting screen.
- EX. Now the sensor point is setting from 1P to 6P.



- Press the **Adjust** button to enter next operation setting.

4-2 RPM pulse setting



- Press the **Select** button to enter the RPM pulse setting screen.



- EX. You want to connect the RPM signal wire to the pick up signal and there are 13 flywheel signals per turn.
- Press the **Adjust** button to choose the setting number.

⚠ Currently setting value will blink.

NOTE Setting range: 0.5 ~ 1 ~ 25

The setting value	The corresponding stroke and pistons number.	The corresponding RPM signal number per ignition.
0.5	4C-1P	2 RPM signals per 1 ignition.
1	2C-1P 4C-2P	1 RPM signal per 1 ignition.
2	2C-2P 4C-4P	1 RPM signal per 2 ignition.
3	2C-3P 4C-6P	1 RPM signal per 3 ignition.
4	2C-4P 4C-8P	1 RPM signal per 4 ignition.
5	4C-10P	1 RPM signal per 5 ignition.
6	2C-6P 4C-12P	1 RPM signal per 6 ignition.

⚠ **CAUTION!** Most of the 4-cycle bikes with one single piston are igniting every 360 degree once, so the setting should be the same as the bike with 2-cycle and one piston engine.



- Press the **Select** button to enter waveform setting screen.
- EX. Setting engine ignition angle from P-1 to P-13.



- **Example : To set waveform to high waveform (Hi-Act).**
- Press the **Adjust** button to choose the setting number.

⚠ Currently setting value will blink.

NOTE Setting range : Hi-Act ~ Lo-Act

NOTE During RPM signal detection, if there is any bad sensing or interference, please select another RPM sensing waveform.



- Press the **Select** button to enter rpm stage setting screen.
- EX. Setting from high wave (Hi-Act) to low wave (Lo-Act).



- **Example : To set rpm stage value as 10,000 RPM.**

- Press the **Select** button to choose the setting number.
- EX. Current rpm stage value is 15,000 RPM.

⚠ Currently setting value will blink.

NOTE Setting range : 10,000 ~ 12,000 ~ 15,000 RPM *



- Press the **Adjust** button to choose the setting number.



- Press the **Select** button to return to rpm stage setting screen.
- EX. Setting rpm stage value form 15,000 RPM to 10,000 RPM.



- Press the **Adjust** button to enter next operation setting.

GENERAL CONTENT AND CONSULTATION

NOTE

ATTENTION

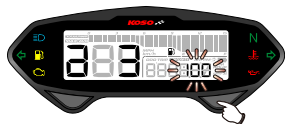
- 4-3 Fuel gauge resistance setting
- 4-3-1 Fuel level manual setting
- 4-3-2 Fuel level resistance auto detection setting
- 4-3-3 Fuel warning setting

All Functions related to the fuel are disabled in this vehicle

4-3 Fuel gauge resistance setting



- Press the **Select button** to enter the circumference and sensing point setting screen.



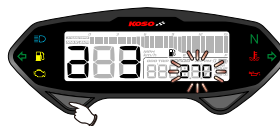
- Example: If the vehicle is a YAMAHA T-MAX 530, its resistance is 100 Ω according to the service manual.
- Press the **Adjust button** to choose the setting number.

⚠ Currently setting value will blink.

NOTE The fuel gauge resistance setting range : USER 、 100 Ω 、 250 Ω 、 270 Ω 、 510 Ω 、 1200 Ω 、 SW (turn off)

NOTE Custom fuel level resistance:
1) Manual - Please check 4-3-1 Fuel Level Resistance Manual Setting Instructions.
2) Auto - Please check 4-3-2 Fuel Level Resistance Auto Setting Instructions.

NOTE Fuel meter will be displayed with the wiring connected.



- Press the **Select button** to enter 4-3-3 fuel warning setting screen.
- EX. Setting fuel meter's resistance value from 100 to 270.

4-3-1 Fuel level manual setting



- Press the **Select** button to enter the lowest fuel level's resistance setting screen.

P.S.



- You could find your fuel level sensor resistance range in the electronic components section in the service manual.

- Normally, we will recommend to choose the closest number set as the range to ensure that riders will not run out of gas before the fuel level indication.



- **Example : To set minimum fuel level as 90 Ω.**

- Press the **Select** button to choose the setting number.

⚠ Currently setting value will blink.



- Press the **Adjust** button to choose the setting number.



- Press the **Select** button **twice** to enter maximum fuel resistance value setting screen.

- EX : Setting minimum fuel level from 0 to 90.



- **Example : To set maximum fuel level as 10.**

- Press the **Select** button to choose the setting number.

⚠ Currently setting value will blink.



- Press the **Adjust** button to choose the setting number.



- Press the **Select** button **twice** to enter 4-3-3 fuel warning setting menu.

- EX. The highest fuel level setting is changed from 0 to 10 Ω.

GENERAL CONTENT AND CONSULTATION

4-3-2 Fuel level resistance auto detection setting



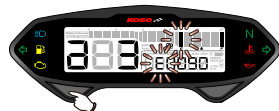
- Press the **Select button** to enter the lowest fuel level's resistance auto detection screen.

⚠ CAUTION!

- Before detection, ensure that your current fuel level is in the lowest position that you would like to have.
- Stop the vehicle for a few seconds to allow the fuel surface to become steady, then start the detection of the resistance.



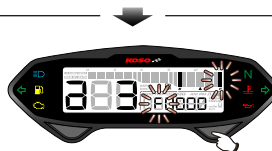
- Press the **Adjust button** to detect the lowest fuel level's resistance.



- Press the **Select button 5 times** to enter the lowest fuel level resistance auto detection screen.
- EX. Auto Detection the lowest fuel level resistance is 90 Ω .

⚠ CAUTION!

- Before detection, please ensure your current fuel level is in the highest position that you would like to have.
- Stop the vehicle for a few seconds to allow the fuel surface become steady, then start the detection of the resistance.



- Press the **Adjust button** to detect the highest fuel level resistance.



- Press the **Select button 5 times** to go back to the fuel gauge resistance.
- EX. Automatically detect the highest fuel level resistance value as 10 Ω .

4-3-3 Fuel warning setting



- **Example** : To set fuel warning value as 30%.
- Press the **Adjust** button to choose the setting number.

⚠ Currently setting value will blink.

NOTE Setting range : 10%, 20%, 30%, 40%, 50%.
Fuel meter will not display when fuel meter's wire is not installed.



- Press the **Adjust** button to enter next operation setting.



- Press the **Select** button to return to fuel level resistance value setting screen.
- EX. Setting maximum fuel level from 30% to 10%.

NOTE Setting range : 0 ~ 23

4-4 Backlight brightness setting



- Press the **Select** button to enter the backlight brightness setting screen.



- Press the **Select** button to go back to the backlight brightness setting screen.
- EX. The backlight brightness setting is changed from 5 (100%) to 3 (60%).



- **Example** : You want to set the brightness at 60 % (3).
- Press the **Adjust** button to choose the setting number.

⚠ Currently setting value will blink.

NOTE Setting range : 1 (Darkest) ~ 5 (Brightest), 5 different levels available.
Setting unit : 20% per level.
The backlight brightness will change immediately after you set the value.



- Press the **Adjust** button to enter next operation setting.

GENERAL CONTENT AND CONSULTATION

4-5 Oil maintenance mileage setting



- Press the **Select** button to enter the oil maintenance mileage setting screen.



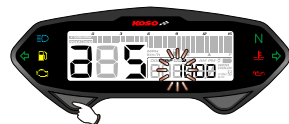
- **Example : To set motor oil mileage value as 4T.**
- Press the **Adjust** button to choose the setting number.
- EX. Current motor oil mileage is 2T.

⚠ Currently setting value will blink.

NOTE Setting range : 2T / 4T



- Press the **Select** button to enter 4T motor oil mileage setting main screen.
- EX. Setting motor oil mileage value from 2T to 4T.



- **Example : To set motor oil mileage parameter as 1,500.**
- Press the **Select** button to choose the setting number.
- EX. Current motor oil mileage parameter is 1,000.

⚠ Currently setting value will blink.

NOTE ● 2-stroke motor oil mileage is indicated by external signal warning (motor oil indicator will lit).

● 4-stroke motor oil mileage is internally set by the chronograph.



- Press the **Adjust** button to choose the setting number.



- Press the **Select** button to go back oil maintenance mileage setting screen.
- EX. Setting motor oil mileage parameter from 1,000 to 1,500.



- Press the **Adjust** button to enter next operation setting.

4-6 Speed unit setting



- Press the **Select button** to enter the speed unit setting screen.



- Press the **Adjust button** to choose the setting number.

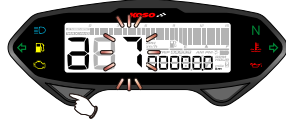


- Press the **Select button** to go back **speed unit setting** screen.
- EX. The speed unit setting is changed km/h ~ km to MPH ~ mlie.



- Press the **Adjust button** to enter next operation setting.

4-7 External ODO



- Press the **Select button** to enter the external ODO setting screen.



- **Example : To set external total millage value to 12,500 km.**
- Press the **Select button** to choose the setting number.

⚠ **Currently setting value will blink.**

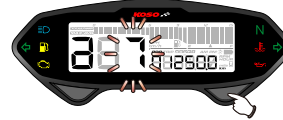
NOTE Setting range :
0 ~ 99,999 km (mile)



- Press the **Adjust button** to choose the setting number.



- Press the **Select button** to the external ODO setting screen.
- EX. The external ODO is changed 0 to 12,500 km.



- Press the **Adjust button** to enter next operation setting.

GENERAL CONTENT AND CONSULTATION

4-8 Internal ODO



- Example : Current internal ODO is 50,000 km.
- Press the **Select** button three seconds to go back to ODO screen.

⚠ User unable to adjust and clear internal ODO.

NOTE Setting range : 99999.9 km (mlie).



- The main screen.

5 Trouble shooting

The following situation do not indicate malfunction of the meter. Please check the following before taking it in for repair.

Trouble	Check item	Trouble	Check item
The meter doesn't work when the power is on.	• The power doesn't supply to the meter. →Please make sure the wiring is connected. The wiring and fuse are not broken. →The battery is broken or the battery is too old to supply enough power (DC 8 V) to make the meter work.	Tachometer does not appear or appear incorrectly	• Please check the RPM sensor wiring is connected correctly. • Please check the spark plug is R type or not. If not, please replace the spark plug with the R type spark plug. • Please check your setting. →Please refer to the manual 4-2 RPM pulse setting.
The meter shows wrong information.	• Check the voltage of your battery, and make sure the voltage is over DC 8 V.	The odometer and trip meter is not accumulated or accumulated wrong data.	• It is possible that the permanent power wire is not connected well. →Please check the red positive wire is connect well or not.
Speed does not appear or appear incorrectly.	• Make sure the speed sensor is connected properly. →Please check if speed sensor is connected and working properly. Also check whether the cable of speed sensor has broken or lose or not. • Check the tire-size setting. →Refer to the manual 4-1 circumference and sensing point setting.	Fuel gauge does not appear or appear incorrectly.	• Check your fuel tank. • Check the wiring harness. →Is the wire connected properly. • Check the tire-size setting. →Refer to the manual 4-3 fuel gauge resistance setting.
The odometer and trip meter are not accumulated or accumulated the wrong data.	• It is possible that the permanent power wire is not connected properly. →Check if the red positive wire is connect properly.		

* If the problem is not resolved after following the steps shown above, please contact your local distributor for assistance.

ATTENTION TECHNICAL DATA FOR SETTING

a.1 Circumference and sensing point setting

Enduro 2990



9P



a.2 RPM pulse setting

Hi-Act



a.3 Fuel reserve



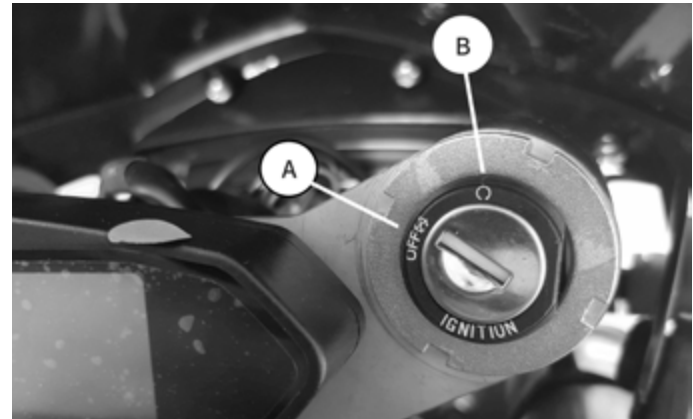
KEY SWITCH

The key switch is on the front of the vehicle, close to the dashboard on the right.

The key switch functions are the following:

A. the vehicle and the lights cannot be turned on, it is possible to remove the key.

B. The vehicle and the lights can be turned on, it is not possible to remove the key.



The vehicle is delivered with two keys, one of which is for spare. Keep the spare key in a place other than the vehicle.



The lights switch off when the key switch is on “A” position.



When the vehicle is turned on, the lights switch on automatically.

GENERAL CONTENT AND CONSULTATION

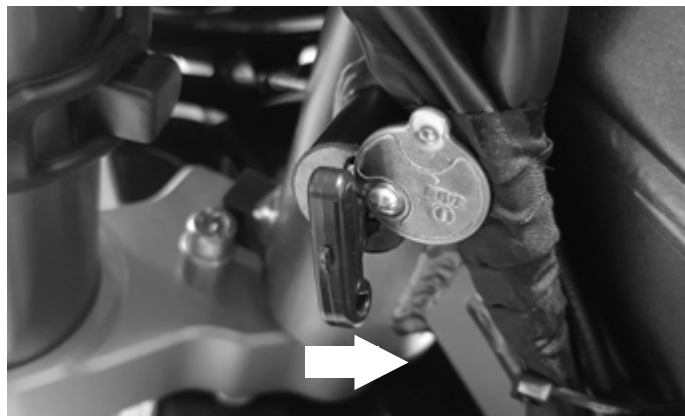
STEERING LOCK

To lock the steering, put the vehicle on the stand and then turn the handlebar fully to the right. Turn the lock cover upwards.

Insert the key into the lock, turn counter-clockwise and press.
Release the key and remove it.



Do not run the motorbike with the key inserted in the steering lock.



HORN BUTTON

Press to activate the horn.



TURN INDICATOR SWITCH

Push the switch on the left or on the right to indicate the turn.

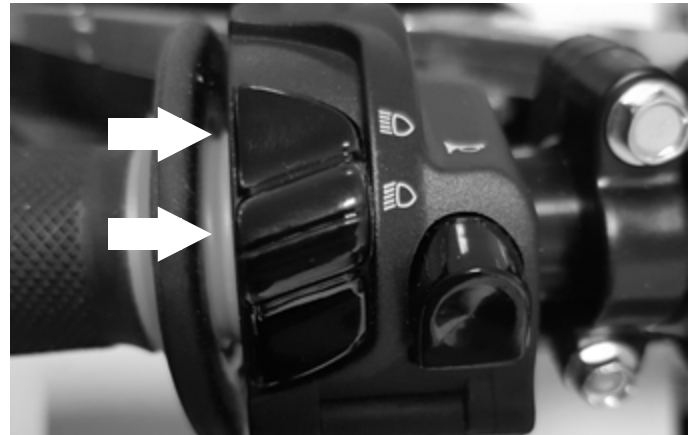
Push the switch bringing it to the center, in order to turn off the indicators.



LIGHT COMMAND

Pushing the switch to the front, the headlight beam is turned from low to high.

To return the beam to low, pull back the switch.



GENERAL CONTENT AND CONSULTATION

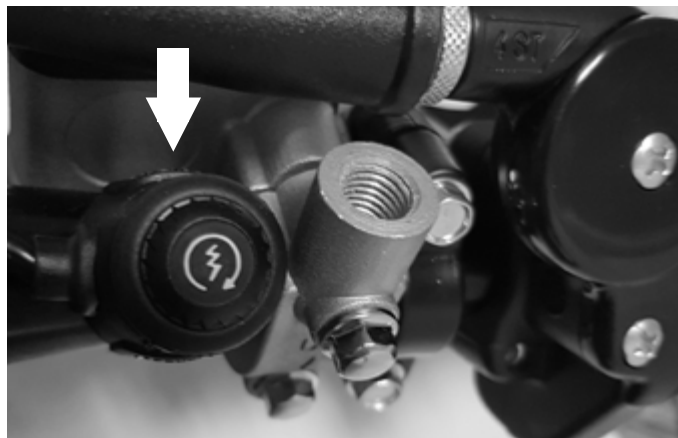
HEADLIGHT HIGH BEAM

Pushing the switch to the front, the high beam of the headlight is activated. Usually, it is used to signal dangerous situations or emergency



START BUTTON

With the key inserted and set to “ON”, with the engine stop button deactivated, when the button is pressed, the engine will start.



ENGINE STOP BUTTON

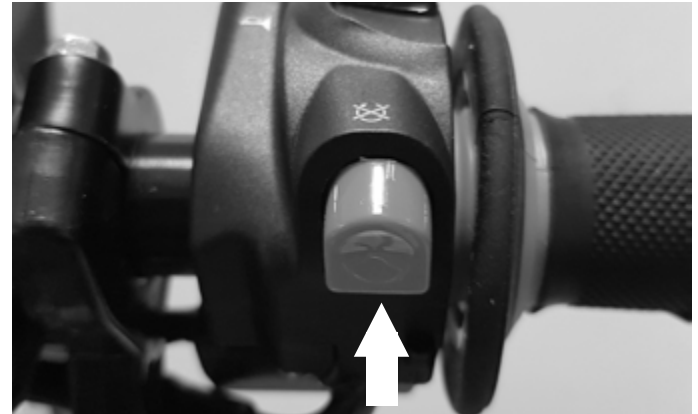
Pressing it stops the engine.

It has the function of a safety or emergency switch.



Do not intervene on the switch when the vehicle is running, this would cause the engine to stop.

This could result in loss of control of the vehicle, increasing the risk of accidents and damaging things and/or people.



GENERAL CONTENT AND CONSULTATION

SADDLE OPENING

To open the saddle, unscrew and remove the screw "A".



Lift up and remove the saddle "B".



Before reassembling the saddle make sure you have not forgotten the key in the area under the saddle.



Before riding, check that the saddle has been correctly fixed.



REFUELING

Unscrew and take away the fuel tank cap (1). Do not add additives or other substances to the fuel.

If you use funnels or other tools, check for their cleanness.



When refuelling, do not smoke or use open flames, avoid using electrical devices or any source that can trigger sparks or ignition. Failure to comply with these rules could result in a danger of fire or explosion, causing serious damage to property and/or persons.



Do not add additives or other substances to the fuel during refuelling.



Avoid fuel leakage during refuelling. If you use a funnel, make sure that it is perfectly clean.

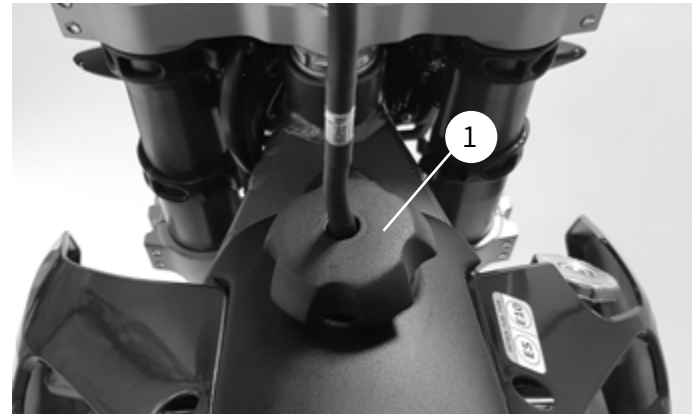


It is recommended to use the type of fuel indicated in the technical specifications of this manual. Do not use different fuels, they could damage the fuel system and compromise the operation of the engine.

When refueling, do not overtake the “FULL” level. As “FULL” level is intended a space of 20-25mm from the top of the fuel tank. Complete the refueling and close the fuel tank cap (1).



Make sure that the tank cap is closed.



GENERAL CONTENT AND CONSULTATION

VEHICLE INACTIVITY

If the vehicle should remain inactive for months it is advisable to take some precautions:

- Empty the tank completely.
- Remove the battery and charge it with a suitable battery charger **every two weeks**.



The battery must be kept in a dry place and at a temperature between 5-35 °C (41-95 °F). Keep the battery out of reach of children.

- Position the vehicle with the tires raised off the ground using the appropriate supports and periodically check the tire pressure.
- Lubricate the chain.
- Cover the exhaust terminal with a well-tied bag to prevent moisture from entering inside.
- Cover the vehicle with an appropriate sheet (in breathable material) of a size sufficient to fully cover the vehicle.
- The vehicle must be placed in an unheated place with minimal temperature variations, free from humidity and protected from sunlight.

After the period of inactivity

- Uncover and wash the vehicle.
- Check the battery status
- Perform preliminary checks.



Take a test drive for a few kilometres (miles) at moderate speed in an area away from traffic.

VEHICLE WASHING

It is good that the vehicle is washed periodically to keep its components in good condition.

If the vehicle is used under the following conditions, more frequent washing is recommended:

- Areas where humidity and salinity of the atmosphere are higher than normal.
- Roads or areas where salt or de-icing chemicals are used.
- Roads or areas with the presence of industrial dust or tar stains.
- Sport use and off-road driving.
- Presence on the vehicle body of dead insects, bird excrement, etc.

It is advisable not to stop or park the vehicle under plants or trees. Certain plants or trees release residues, resins, fruits or leaves containing substances harmful to the vehicle components and bodywork.

Do not wash in the sun, especially in summer, with the body still warm, as if the detergent dries before rinsing it could cause damage to the paintwork.

Do not use liquids at temperatures above 40 °C (104 °F) to clean plastic components.

Do not direct air jets, steam or water at high pressure on:

- Wheel hubs.
- Handlebar switches.
- Bearings.
- Brake oil master cylinder and tanks.
- Tools and indicators.
- Exhaust system fumes outlet hole.
- Steering lock.
- Fuel tank cap or similar.
- Headlight and tail light.
- Electrical components.



Do not use products that contain alcohol, petrol or solvent for cleaning the saddle, rubber and/or plastic parts.
Use of unsuitable products can damage vehicle components.

GENERAL CONTENT AND CONSULTATION

The use of a jet of high pressure water can damage some components of the vehicle. Use a jet of warm water at low pressure, rinse the vehicle thoroughly and in particular the dirtiest parts. With a soft sponge rub all parts of the vehicle. Rinse the vehicle well and thoroughly using a low pressure jet. With a chamois leather cloth, proceed to dry the vehicle. It is possible that after the wash the braking efficiency is reduced, it is therefore recommended to dry the discs well and wait for the pads to dry. If the vehicle is started, proceed with caution and operate the brakes repeatedly.

Only after a scrupulous and thorough washing it is possible to proceed with the polishing phase with silicone waxes.



Do not use abrasive pastes on the vehicle, they could damage the painted parts.



Do not apply protective wax on the parts of the braking system, it could compromise their operation.



Do not pass wax on the saddle, it could damage it and make it slippery, reducing the stability of the rider's and/ or passenger's seat thus increasing the risk of accidents and/or damage to things and/or people.

INTRODUCTION

For specific maintenance and repairs it is advisable to contact our Authorized Fantic Motor Centers, which will guarantee an accurate and prompt service, always using original spare parts.

It is recommended, after the first hours of use, to carry out the preliminary checks.



Failure to follow these procedures can result in serious injury to persons and to the vehicle. Contact an Authorized Fantic Motor Center if malfunctions or anomalies are found.

PRELIMINARY CHECKS

PART	DESCRIPTION
Front and rear disc brake	Check the levers operation, idle stroke, fluid level and check for leaks. If necessary, top up the brake fluid.
Throttle control	Make sure that the knob rotation is smooth and fluid from both directions and that there are no jamming.
Engine oil	Check the level and top up if necessary.
Wheels and tires	Check the tires surface conditions, pressure, wear and the presence of damage. Remove the trapped foreign bodies, if any.
Levers and brakes	Check that it works correctly during engagement and release without jamming, tearing or slipping. Lubricate the joints if necessary.
Clutch lever	Check that it works correctly during engagement and release without jamming, tearing or slipping. Lubricate the joints if necessary.

MAINTENANCE

PART	DESCRIPTION
Handlebar	Make sure that the complete rotation on both sides is free and homogeneous and without clearance or slack.
Kickstand	Check its rotation and sliding. Check that the spring tension returns it to its normal position. Lubricate the joints if necessary. Check the correct operation of the safety switch.
Fastening elements	Check that there are no loose fasteners. If necessary, adjust and tighten.
Fuel Tank	Verify the fuel level and refuel if necessary. Verify the correct closure of the fuel tank cap and the absence of leakages in the fuel system.
Start switch	Check the correct operation.
Acoustic and visual devices	Check the correct operation. Replace in case of failure.

ENGINE OIL



Check and verify the engine oil level every 1,000 km (600 mi).

Check the engine oil level

Periodically check the engine oil level.



The engine oil check must be carried out with hot engine.



Do not rest the vehicle on the side kickstand when checking the engine oil.

Position and keep the vehicle in a vertical position and with both wheels resting on the ground.

Start the engine and warm it up for at least two minutes at idling speed and then turn it off: wait two minutes before checking the oil level.

Check the oil level from the porthole.

The level must remain between the notches at the porthole.

H = MAX

L = MIN



The oil level must not go beyond the “H” marking and must never be below the “L” marking, in order not to damage the engine.



MAINTENANCE

Engine oil topping up

If after checking the engine oil level, the level is not in the right parameters, topping up is required. Therefore remove the oil level plug and top up.



If you use a funnel or something else, make sure of the perfect cleaning.



Do not add additives or other substances and use the products recommended in the “RECOMMENDED PRODUCTS TABLE” section



Engine oil replacement



The operations for filter and engine oil replacement are complicated for an inexperienced operator. It is advisable to contact an Authorized Fantic Motor Center if you need to remove and replace the filter and the engine oil.



Amount of engine oil

- Total amount: 1.5 l (0.32 UK gal, 0.39 US gal)
- Without replacement of the oil filter element: 0.95 l (0.20 UK gal, 0.25 US gal)
- With replacement of the oil filter element: 1 l (0.21 UK gal, 0.26 US gal)

MAINTENANCE

TIRES

For tire pressure values, brand, type and dimensions refer to the "TECHNICAL DATA" section.



Check the tire pressure at room temperature, because if the tires are warm, the measurement will not be correct.



The tires ambient temperature means that the vehicle has been stationary for at least three hours or has travelled a distance of less than 2 km (1 mi).

Check the fuel consumption and tire pressure (at room temperature) before and after each long trip.



If the inflation pressure is too high, the irregularities of the ground are not properly cushioned and are then transmitted to the handlebar, compromising road holding in turns. If the inflation pressure is insufficient, the side walls of the tires work harder and there is a risk of tire slippage on the rim or detachment, with consequent loss of control of the vehicle: in the event of sudden braking, the tires could come off from the rims. In turns, the vehicle may skid.



It is advisable, if possible, to always use the same pressure gauge to check the pressure so as not to measure incorrect values caused by the variability between different gauges.





Check the surface condition and wear. A poor tire condition compromises the grip and manoeuvrability of the vehicle. Replace the tire if worn or punctured. After repairing or replacing a tire, carry out the wheel balancing.

Use only and exclusively tires of the dimensions indicated by the manufacturer. The use of tires other than those specified may compromise the handling and stability of the vehicle with the risk of accidents, damage to property and/or persons and the risk of serious injury and even death.



Check that the pressure valves are always fitted with protective caps and that they are properly closed to avoid sudden tire deflation.



If the tires are new, they can be covered with a slippery film. Drive carefully for the first few kilometres/miles.

Do not grease the tires with unsuitable liquid. If the tires are old, even if not completely worn out, they can harden and do not guarantee road holding, therefore replace them.

Replacement, repair and maintenance are very important and must be performed with appropriate tools and by an operator with the necessary experience. For this reason, it is advisable to contact an authorized Fantic Motor Center or a tire specialist for the execution of certain operations.\



The tires supplied are of the tubeless type and are mounted on spoked rims together with the inner tube.

Avoid tubeless tires without the inner tubes

Tread depth

The maximum tread values are:

- Front tire: 12 mm (0.47 in);
- Rear tire: 12 mm (0.47 in).



The tread depths should never be less than 1 mm (0.03 in) or less than required by the legislation in force in the country where the vehicle is used.

MAINTENANCE

SPARK PLUG



To check, clean and replace the spark plug, contact an Authorized Fantic Motor Center.

AIR FILTER



The type of air filter does not require cleaning, but only replacement.

For the maintenance operations, refer to the “SCHEDULED MAINTENANCE TABLE” section, under “Air filter”.



To disassemble, check, clean and replace the air filter, contact an Authorized Fantic Motor Center.

COOLANT

For the maintenance operations, refer to the “SCHEDULED MAINTENANCE TABLE” section, under “Cooling system”.



Do not use the vehicle if the coolant level is below the minimum level.



To replace, check and top up the coolant, contact an authorized Fantic Motor Service Center.

BRAKING SYSTEM

Check the front brake fluid level To check the front brake fluid level, position the vehicle on the kickstand and turn the handlebar, so that the liquid contained in the brake oil reservoir is parallel to the cap. Check that the liquid is over the “MIN” mark.



If the liquid level does not reach at least the “MIN” mark, check the brake disc and pads wear. If the brake disc and the brake pads are not to be replaced, contact an authorized Fantic Motor Service Center.



Check the rear brake fluid level

To check the rear brake fluid, keep the vehicle in vertical position, so that the liquid contained in the brake oil reservoir is parallel to the cap. Check that the liquid is between the “MIN” and “MAX” marks.



If the liquid level does not reach at least the “MIN” mark, check the brake disc and pads wear. If the brake disc and the brake pads are not to be replaced, contact an authorized Fantic Motor Service Center.

Refilling the brake system



To top up the brake fluid, do to an authorized Fantic Motor Service Centre.



MAINTENANCE

Pads wear check



It is recommended to check the pads wear before each trip and at the end of each use.

The pads have a groove that must always be visible. The disc brake pads wear depends on the use, the type of driving and the type of road.

To quickly check the pads wear, position the vehicle on the kickstand.

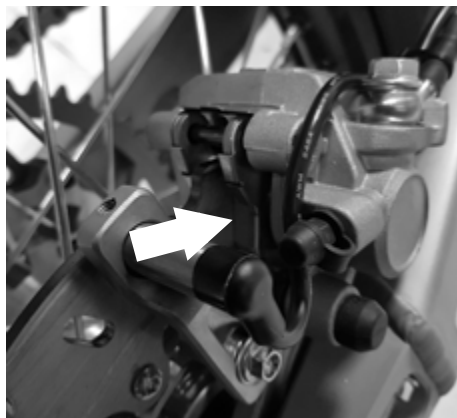


Perform a visual check between disc and pads, looking from the bottom upwards in the direction of the calliper wheel pin for the front brake callipers and from the top rear for the rear brake calliper.



Wear that goes beyond the limit of the friction material leads to contact of the pad metal shoe with the disk with consequent metallic noise and sparks flying from the calliper; braking efficiency, safety and completeness of the disk would be affected.

If the groove has disappeared (1.5 mm (0.05 in) friction material height) replace the pad pair.



SUSPENSIONS

Front wheel suspension



For the replacement of the front suspension oil, go to an authorized Fantic Motor Service Center.

For the maintenance operations, refer to the “SCHEDULED MAINTENANCE TABLE” section, under “Fork”.

Check

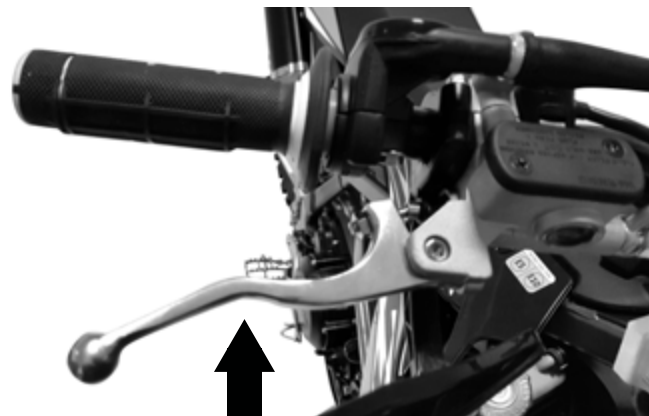
Apply the front brake lever, push repeatedly on the handlebars, making the fork compress. The stroke must be gentle and there should be no traces of oil on the rods. Check that all the front suspension components are tight.



In the event that malfunctions are noticed or specialized personnel need to be contacted, go to an authorized Fantic Motor Service Center.

Adjustment

This type of suspension does not require any type of adjustment. The basic setting of the suspension is done by Fantic Motor.



MAINTENANCE

Rear suspension

For maintenance intervals, refer to the “SCHEDULED MAINTENANCE TABLE” section under “Rear shock absorber”. The rear wheel suspension is composed of a damper and linkage unit and is connected in the upper part to the shock absorber head and in the lower part (linkage) to the swing arm.

Shock absorber preload adjustment

For different use needs, it is possible to customize the setting. To make changes it is recommended to wait until the engine is completely cold. Adjust the spring preload according to the conditions of use of the vehicle.

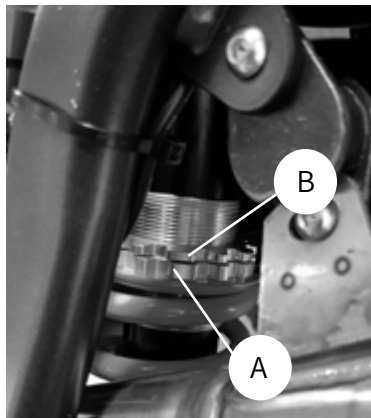
- Loosen the ring “B” ; with the hook key
- Turn the “A” ring with the hook key
- Tighten the “A” ring on the “B” ring



Do not force the rotation of the registers beyond the limit switch (in both directions), to avoid possible damage.



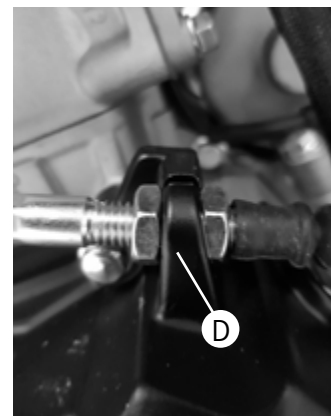
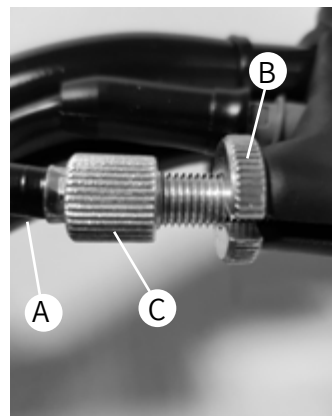
The basic setting of the suspension is done by Fantic Motor.



Perform the clutch adjustment when the engine stops or the vehicle tends to move forward with the clutch lever and the gear engaged, or if the clutch “slips”, causing an acceleration delay with respect to the engine rpm.

To make the adjustment:

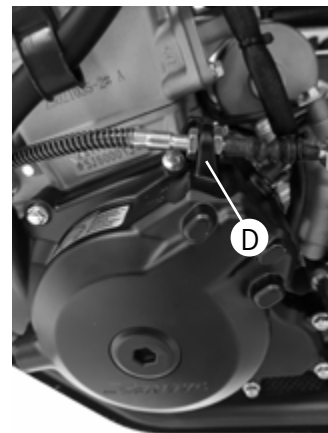
- Remove protection cowl “A”.
- Loosen the ring nut “B”.
- Turn the adjuster “C” until the idle stroke of the clutch lever, with the handlebar straight, is not 2 mm (0.08 in).
- Tighten the ring nut “B” keeping the adjuster “C” still.
- Reposition the protective cowl “A”.
- If the stroke of the “C” adjuster is not sufficient to guarantee the required clearance, operate on the clutch lever adjusters “D”, located on the engine crankcase.



Check the integrity of the clutch cable in its entire length; the sheath must not show cracks, cuts, crushing or wear, if only one of these defects is present, replace the clutch cable at an authorized Fantic Motor Center.



If the adjustments made are not sufficient to guarantee the required clearance, contact an authorized Fantic Motor Center.



MAINTENANCE

CHAIN

The vehicle is equipped with a junction mesh chain.

Check the chain, pinion and crown wear

Check the following parts and check that the chain, pinion and crown do not show:

- worn rollers;
- loose pins;
- dry, rusty, crushed or seized meshes;
- missing sealing rings;
- pinion teeth and/or crown teeth excessively worn or damaged.



If one of these components is damaged, the entire chain assembly (pinion, chain and crown) must be replaced.



Also check the wear of the chain guide and the chain sliding shoe.



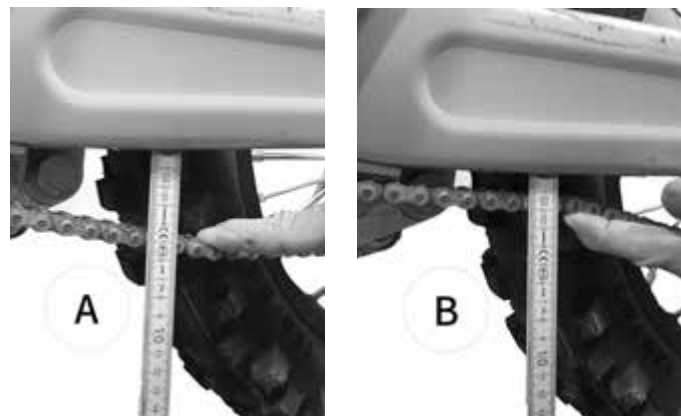
Excessive loosening of the chain could make it come off from the pinion, causing accidents and serious damage to the vehicle. Check the clearance regularly. For chain replacement, contact an authorized Fantic Motor Center only.



Improper maintenance can cause premature chain wear and/or damage the pinion and/or crown.

Chain Clearance check

- Stop the engine;
- Position the vehicle on the kickstand;
- Place the gear lever in neutral;
- Pressing with a finger an intermediate point between the pinion and the sprocket, press the lower branch of the chain first downwards and then upwards, measuring the distance from the edge of the swingarm; check that the vertical oscillation, obtained as the difference between the highest value “A” and the lowest value “B”, is about 35 mm (1.37 in).
- Move the vehicle forward, in order to check the vertical oscillation of the chain also in other positions; the clearance must remain constant in all the phases of the wheel rotation.



If there is a higher clearance in certain positions, it means that there are crushed or seized meshes, in this case contact an Authorized Fantic Motor Center. To prevent the risk of seizure, it is recommended to lubricate the chain correctly..

Lubrication and cleaning

The chain must always be kept well lubricated and must be cleaned especially after riding off-road with mud or sand. If there are dry or rusty parts, if there are crushed or seized meshes, it is advisable to lubricate the chain and replace the damaged parts in working conditions. If this is not possible, contact an Authorized Fantic Motor Centre.



Do not wash the chain with jets of water, steam, high pressure jets and solvents with a high degree of flammability.



For chain recommended lubrication and cleaning products, refer to the “RECOMMENDED PRODUCTS TABLE”

MAINTENANCE

BATTERY

The “A” battery is located under the saddle. The type of battery installed does not require maintenance. It is therefore not necessary to check the electrolyte level or top

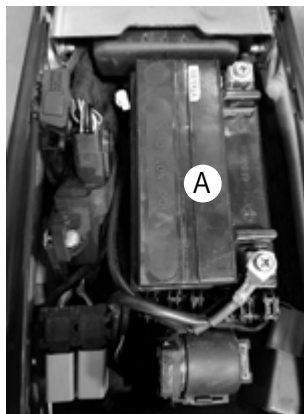


Keep the battery poles clean and, if necessary, lightly grease them with acid-free grease.

Battery disassembly

Remove the saddle and disconnect the negative and then the positive pole from the battery.

Remove the battery.



When installing the battery, insert it with the positive pole positioned as shown in the figure and connect the negative pole to the battery at the end.



If for any reason there is an electrolyte (sulphuric acid) leak from the battery, the maximum precaution is recommended.

Keep sparks or open flames away from the battery.

Keep exhausted batteries out of reach of children and arrange for regular disposal.

Do not remove the protections and install the battery respecting the polarities.

Protect the battery clamps with Vaseline grease.

FUSES AND RELAYS

To check the fuses, set the ignition switch to "OFF" to avoid the risk of a short circuit. Remove the saddle and the fuse box cover.

Remove one fuse at a time and check if the filament is broken.

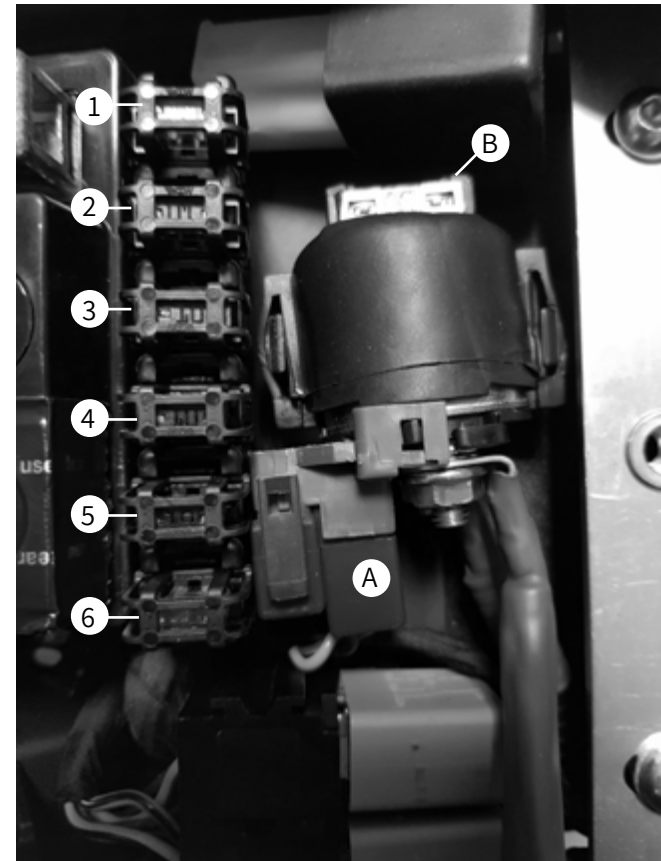
Replace the fuse, if damaged, with a type of the same amperage.



Do not repair faulty fuses and never use a fuse of a different power than specified, it could cause a short circuit and consequently the risk of fire.

Fuses arrangement

- A. Main fuse (30 a)
- B. Main fuse backup (30 a)
- 1. Cdi fuse (direct supply) (15 a)
- 2. Cooling fan fuse (10 a)
- 3. Fuel pump, fuel injection and obd fuse (10 a)
- 4. Key switch fuse (10 a)
- 5. Parking lights fuse (10 a)
- 6. Headlight and tail light fuse (15 a)



MAINTENANCE

LIGHTS AND TURN SIGNALS



For disassembling, checking and/or replacing the headlight, tail light and license plate light, contact an authorized Fantic Motor Service Center.

Headlight adjustment

To check the correct orientation of the front light beam, place the vehicle at 10 m (32.8 ft) away from a vertical wall, making sure that the ground is level. Turn on the low beam, sit on the vehicle, and check that the light beam projected onto the wall is slightly below the horizontal straight line of the projector (about 9/10 of the total height). To carry out the vertical adjustment of the light beam, position the vehicle in running position, loosen the screws “A” on both sides of the vehicle and manually adjust the desired position of the light beam. Tighten the screws “A”. Check again the correct orientation of the light beam.

Turn signals

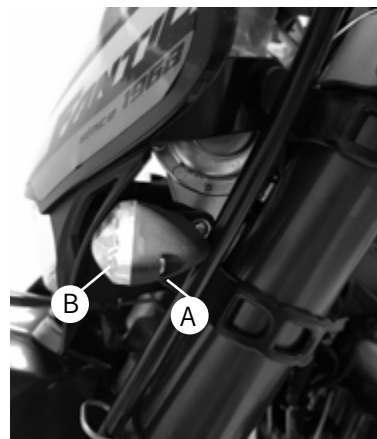
To replace the front and/or rear turn signal lamps, position the vehicle on the kickstand. Unscrew and remove the screw “A” and cover “B”. Gently press the bulb and turn it counter clockwise, then pull the lamp out. Install a new lamp of the same type correctly.



If the reflector inside comes out of its seat, reposition it correctly.



Make sure to have correctly inserted the lamp.



REAR-VIEW MIRRORS



The operations described below apply to both rear view mirrors.

Place the vehicle on the kickstand and on a flat and stable surface. Loosen the lock nut "A", turn the left-hand mirror counter-clockwise and remove it, then turn the right-hand mirror clockwise and remove it.

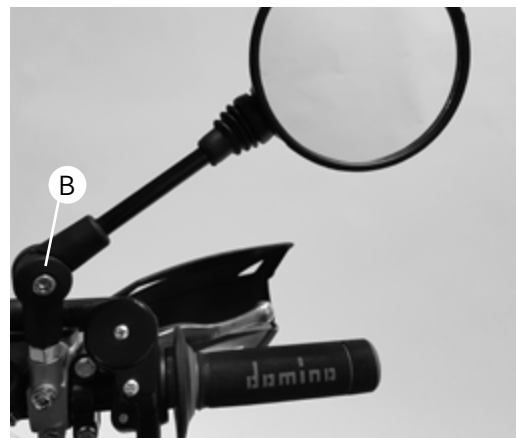


During reassembly, before tightening the nut, check that the mirror support rod is aligned with the handlebar.

Rear-view mirror adjustment

To adjust the rear-view mirrors, get on the vehicle in the driving position and turn the rear-view mirror according to your needs. It is also possible to adjust the inclination of the rear-view mirror support rod. To carry out this operation, loosen the screw "B" and move the support rod sideways.

Adjust and tighten screw "B".



Expert users can normally carry out some maintenance operations even though they require the use of specific equipment and suitable technical preparation.



If you do not have all the specific tools, suitable clothing and protections, and a suitable place to operate in complete safety, it is not recommended to perform maintenance operations. If it is necessary to have technical advice or request service, contact the Authorized Fantic Motor Center.



Fantic Motor declines all civil and criminal liability for damage to the vehicle, property and/or persons due to maintenance operations performed by the user.



If the user is not interested in performing certain routine maintenance operations, we recommend going to an Authorized Fantic Motor Service Center.



Carry out maintenance operations more frequently if the vehicle is used in rainy, dusty areas, rough roads or in the case of fast riding.



Check the engine oil level every 1,000 km (600 mi).



It is essential to make the first inspection and servicing by the end of the first year of use of the vehicle even if the deadline of 1,000 km (600 mi) has not been reached.



It is essential to make inspection and servicing by the end of the second year of use of the vehicle even if the specified deadline has not been reached.



The timely execution of the inspection and servicing indicated (the first one in the first year and the second one in the second year) is necessary for the correct use of the warranty.

MAINTENANCE TABLE



Perform the annual checks on a regular basis unless a kilometre (or mileage) interval has expired previously

MAINTENANCE TABLE

Position	Intervento	1.000 km (600 mi)	5.000 km (3.000 mi)	10.000 km (6.000 mi)	15.000 km (9.000 mi)	20.000 km (12.000 mi)
Fuel circuit	- Check that the fuel pipes are not cracked or damaged.		✓		✓	
Spark plug	Check its status. - Clean and restore the electrode distance.	✓	✓	✓	✓	✓
	- Replace.			✓		
Valves	- Check the valve clearance. - Adjust.	✓	✓	✓	✓	✓
Air filter	- Clean.	✓		✓		
	- Replace.		✓		✓	
Clutch	- Check its operation. - Adjust.	✓	✓		✓	
Front brake	- Check its operation, the fluid level and absence of leakage in the vehicle. - Check its operation, the fluid level and absence of leakage in the vehicle.	✓	✓		✓	
	- Replace the brake pads.	If worn up to the limit.				
Rear brake	- Check its operation, the fluid level and absence of leakage in the vehicle.	✓	✓		✓	
	- Replace the brake pads.	If worn up to the limit.				

MAINTENANCE TABLE

Position	Operation	1.000 km (600 mi)	5.000 km (3.000 mi)	10.000 km (6.000 mi)	15.000 km (9.000 mi)	20.000 km (12.000 mi)
Brake tubes	– Check for cracks or damage. – Check that the installation and tightening are correct.		✓		✓	
	– Replace.	Every 4 years.				
Brake fluid	– Replace.	Every 2 years.				
Wheels	– Check for misalignment and damage.		✓		✓	
Tires	– Check the tread depth and damage. – Replace if necessary. – Check the air pressure. – Correct if necessary.		✓		✓	
Wheel bearings	– Check that the bearings are not loose or damaged.		✓		✓	
Swing arm	– Check its operation and excessive clearance.		✓		✓	
	– Lubricate with lithium soap based grease.	Every 24.000 km (14.000 mi).				

MAINTENANCE TABLE

Posizione	Intervento	1.000 km (600 mi)	5.000 km (3.000 mi)	10.000 km (6.000 mi)	15.000 km (9.000 mi)	20.000 km (12.000 mi)
Transmission chain	– Check the tension, alignment and conditions of the drive chain. – Check the crown and pinion. – Fully adjust and lubricate the drive chain with a specific lubricant.	Every 500 km (300 mi). Following heavy use.				
	– Replace.	If the chain elongation exceeds 2%				
Handlebar bearings	Check the bearing clearance and the handle-bar hardness.	✓	✓		✓	
	– Lubricate with lithium soap based grease.	Every 24.000 km (14.000 mi).				
Fixings the frame parts	– Make sure that all nuts, bolts and screws are properly tightened.	✓	✓	✓	✓	✓
Brake lever rotation pin	– Lubricate with silicone grease.		✓		✓	
Brake pedal rotation pin	– Lubricate with lithium soap based grease.		✓		✓	
Clutch lever rotation pin	–Lubricate with lithium soap based grease.		✓		✓	
Side kickstand	– Check its operation. – Lubricate with lithium soap based grease.		✓		✓	

MAINTENANCE TABLE

Position	Operation	1.000 km (600 mi)	5.000 km (3.000 mi)	10.000 km (6.000 mi)	15.000 km (9.000 mi)	20.000 km (12.000 mi)
Fork	– Check its operation and the absence of oil leaks.		✓		✓	
	Replace oil.			✓		✓
	Replacement oil seal		✓			✓
Rear shock absorber	– Check its operation and the absence of oil leaks in the shock absorber.		✓		✓	
Rear suspension rotation points	– Check the swing arm operation.		✓		✓	
	– Check the junction arm operation.				✓	
Engine oil	– Check the oil level and the absence of oil leaks in the vehicle.	Every 1.000 km (600 mi)				
	– Change.	✓	✓	✓	✓	✓
Engine oil filter	– Replace.	✓	✓	✓	✓	✓
Cooling system	– Check the coolant level and the absence of oil leaks in the vehicle.		✓		✓	
	– Coolant change.	Every 3 years.				
Front brake and rear brake switches	– Check its operation.	✓	✓		✓	
Moving parts and cables	– Lubricate.	✓	✓	✓	✓	✓

MAINTENANCE TABLE

Position	Operation	1.000 km (600 mi)	5.000 km (3.000 mi)	10.000 km (6.000 mi)	15.000 km (9.000 mi)	20.000 km (12.000 mi)
Throttle control knob	– Check its operation. – Check the throttle knob grip clearance and adjust if necessary. – Lubricate the cable and the knob body.		✓		✓	
Lights, signals and switches	– Check its operation. – Adjust the headlight beam.	✓	✓		✓	

MAINTENANCE TABLE

Product	Characteristics	Remarks
4-stroke gear engine oil	SAE 10W30,10W40,15W40, 20W40, 20W50, API service tipo SG o superiore, JASO standard MA	Do not use mineral oils.
Grease for bearings, joints, articulations and levers	Lithium grease	
Coolant	Antifreeze liquid based on ethylene glycol with organic additives	Do not dilute with water.
Fork oil	Fork oil gradation 15W	
Transmission chain lubricant	Spray grease for transmission chains	
Brake oil	Dot 4 or 5.1 brake fluid	
Cleaner for electrical contacts	Contact cleaner	
Fuel	95 or 98 lead-free super petrol	PETROL FUEL TYPE E5 E10
Paste for carter and engine covers coupling	Three Bond N. 1215®	
Safety lock medium tightening	Medium threadlocker	
Lubricant for bolts unlocking	Unblocking protective lubricant	
Anti-friction lubricant for screw tightening torques	Generic engine oil	

MAINTENANCE TABLE

Product	Characteristics	Remarks
Lubricant for rubber oil seals and OR parts	Lithium soap grease	
Battery poles	White vaseline grease	
Vehicle wash	Low pressure water at room temperature Ecological neutral liquid soap	Avoid aggressive detergents.
External cleaning of the brake system (brake discs and seats)	Spray Disc Brake Cleaner	Do not use to clean brake pads and plastic parts.

TECHNICAL DATA

Dati Tecnici	
Maximum length	2148 mm
Maximum width	815 mm
Maximum height	1185 mm
Wheel base	1425 mm
Weight in running order	127 kg
Weight at full load (vehicle, rider, baggage)	202 kg
Engine type	4-stroke single cylinder
Number of cylinders	1
Total displacement	250 cc
Bore/Stroke	77x53,6
Compression ratio	11,20:1
Starting type	Electric
N ° of engine revolutions at idle speed	1200±100
Clutch	Multidisk in oil bath
Lubrication system	Casing in oil bath. Pressure system regulated by trochoidal pump
Type of cooling	Liquid
Coolant	1,5 L (0,32 UK gal, 0,39 US gal)
Type of gearbox	6-speed mechanical Pedal control on the left side of the engine

TECHNICAL DATA

ENGLISH

Dati Tecnici	
Transmission ratios	1:7,52 2 1:5,24 3 1:3,88 4 1:3,20 5 1:2,79 6 1 2,56 Final transmission ratio 3,857 Total transmission ration at the highest gear 9,14
Transmission chain	520 Regina, model 135 ZRA, 112 links
Air filter	Paper
Tank capacity (including reserve) 11.5 l	8,5 L/1 L
Capacity of the fuel reserve only	1L
Engine oil	Quantity (disassembled) 1.5 l (0.32 UK gal, 0.39 US gal) Without oil filter change 0.95 l (0.20 UK gal, 0.25 US gal) With oil filter change 1 l (0.21 UK gal, 0.26 US gal)
Seats	1
Maximum allowable weight (rider, passenger, baggage)	202 kg
Fuel system	34 mm single-body Athena electronic injection, singlepoint single injector.
Fuel	95-98 octane super lead-free petrol PETROL FUEL TYPE E5 E10
Frame	PERIMETER FRAME IN CrMo STEEL
Swing arm	Steel swing arm with variable section
Steering angle (with extended suspensions)	65°
Steering angle (both sides)	45°±3°
Front suspension	Telescopic hydraulic fork, range: 271mm
Rear suspension	Hydraulic adjustable shock absorber range: 105mm

TECHNICAL DATA

ENGLISH

Technical Data	
Rims/tires	front/pressure 90/90x21 tarmac 1,6 bar offroad 1,3 bar (Axle 1) 90/90 -21 40L -21" x1,60" 170kPa (Axle 2) 120/ 90-18 37L - 18"x1,85" 180kPa posteriore/pressione 120/80x18 tarmac 1,6 bar offroad 1,3 bar 90
Spark plug	NGK CR8E
Battery	GS YTX9-BS
Fuses	Main fuse 30 A Secondary fuses 10 A, 15 A
Generator	12V 210W
Turn signals	HY6W-Orange
High/low beam light	Led
Position/brake light	Led
License plate light	Integrated in the tail light
Fuel reserve indicator light	Integrated in the dashboard
Turn signal indicator light	Integrated in the dashboard
Neutral indicator light	Integrated in the dashboard
Oil pressure warning light	Integrated in the dashboard
Engine warning light	Integrated in the dashboard
High beam light indicator	Integrated in the dashboard
Front brake	Disc 260mm hydraulic control
Rear brake	Disc 260mm hydraulic control

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