Alp X

Alp 4.0

4-STROKE
350



Rideability

Beta motorcycles

2026
OWNERS MANUAL

ALP 4.0 - ALP X USA

Thanks for you preference, and have a good time! This handbook contains the information you need to properly operate and maintain your motorcycle.

The data, specifications and images shown in this manual does not constitute an engagement on the part of BETAMOTOR S.p.A. BETAMOTOR reserves the right to make any changes and improvements to its models at any moment and without notice.

Code 034.44.018.83.00

IMPORTANT

We recommend you to check all the tightenings after the first one or two hours' ride over rough ground. Special attention should be paid to the following parts:

- rear sprocket
- ensure that the footrests are properly fixed
- front/rear brake levers/calipers/discs
- check that the plastics are properly fastened
- engine bolts
- shock absorber bolts/swingarm
- wheel hubs/spokes
- rear frame
- pipe connections
- tensioning the chain

IMPORTANT

In the event of interventions on the vehicle, contact Betamotor after-sales service.

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OPERATING INSTRUCTIONS

- The vehicle must be accompanied by: number-plate, registration document, tax disc and insurance.
- Any modifications of the engine or other parts are punishable by severe sanctions including the confiscation of the vehicle.
- To protect your safety and that of others, always drive carefully and with your helmet on and always keep low beams on.
- Do not sit on the vehicle when it is on its stand.
- Do not start the engine in closed places.



WARNING
Any modifications and tampering with the vehicle during the warranty period exempt the manufacturer from all responsibility and invalidate warranty.

SYMBOLS



SAFETY/ATTENTION
Failure to respect information marked with this symbol can entail a personal hazard.



INTEGRITY OF THE VEHICLE
Failure to respect information marked with this symbol can entail serious damage to the vehicle and termination of the warranty.



FLAMMABLE LIQUID HAZARD



Read the use and maintenance manual carefully.



MANDATORY TO WEAR PROTECTIVE CLOTHING
Use of the vehicle is subject to wearing specific protective clothing and safety footwear.



PROTECTIVE GLOVES MANDATORY
To perform the operations described, it is mandatory to wear protective gloves.



FORBIDDEN TO USE NAKED FLAMES OR POSSIBLE UNCONTROLLED IGNITION SOURCES



NO SMOKING



DO NOT USE MOBILE PHONE



CORROSIVE SUBSTANCES HAZARD
Liquids marked with this symbol are highly corrosive: handle with care



POISONING HAZARD

SAFETY WARNINGS

DEFINITION OF FIELDS OF USE - COMPLIANT USE

Definition of fields of use - Compliant use

This vehicle has been conceived and designed to withstand the typical stresses of NON-DEMANDING use on and off-road (unpaved roads).

This vehicle is not suitable for use on race tracks.

This vehicle may only be used on public roads in a type-approved version.

NONCONFORMING USE

Only use the vehicle in accordance with its intended use. Improper use may result in dangers to persons, property and the environment.

Any use of the vehicle other than that which is compliant and specified in the definition of the compliant field of use is considered NONCONFORMING.

Nonconforming use also includes the use of operating and auxiliary materials whose specifications do not correspond to those required for the respective use.

For the safe use of the product described, certain safety instructions must be observed. For this reason, please read these and all supplied instructions carefully. In the text, safety warnings have been appropriately highlighted and inserted at relevant points.

MANIPULATION AND TAMPERING

Manipulation and tampering with devices for noise control, gaseous emissions and safety devices are prohibited by law, whether before sale or delivery to the end customer or during use of the vehicle for purposes other than maintenance, repair or replacement.

Examples of manipulations prohibited by law are:

- Removal or perforation of silencers, baffles, manifolds or other components of the exhaust system;
- Removal or perforation of extraction system components;
- Use as a result of improperly performed maintenance;
- Replacement of mobile or fixed vehicle components or components of the exhaust or extraction system with components that are not type-approved or approved by the manufacturer.

Manipulation and/or tampering and/or modification during the warranty period exempt the Manufacturer from any liability and invalidate the warranty.

SAFE USE

Only use the vehicle if it is in perfect technical condition, in a regulatory manner and in accordance with safety and environmental protection regulations.



Hazard - accident risk
An unskilled driver endangers himself and others.

- DO NOT use the vehicle if you are under the influence of alcohol, drugs or medication
- DO NOT use the vehicle unless you are in a suitable physical and mental condition



Hazard- risk of poisoning
Exhaust gases such as petrol fumes are toxic and can cause unconsciousness and death

- Always ensure sufficient ventilation when the engine is running
- Use a suitable exhaust system when starting or running the engine indoors
- Always refuel in open, well-ventilated areas



Vehicle integrity
Do not sit on the vehicle resting on the kickstand



After each outing on rough terrain or off-road, it is recommended to check all fastenings, paying particular attention to:

- Secondary transmission;
- Footrests;
- Levers, brake callipers, brake discs
- Plastics
- Engine bolts
- Shock absorber
- Spokes and wheel hubs
- Pipe fittings

USER MANUAL



The vehicle may only be used by persons instructed in its operation: read the user manual supplied with the vehicle. The user manual contains a lot of information and tips that will facilitate driving, manoeuvring and servicing the vehicle. Only then will it be possible to find the optimal personal set-up and prevent injuries.
The user manual is an important component of the vehicle. If the vehicle is resold, the user manual must be downloaded again by the new owner.

PROTECTIVE CLOTHING



Always wear suitable protective clothing (helmet, boots, gloves, jacket and trousers with protection).
Always wear protective clothing that is in perfect condition and compliant with standards.



The absence of protective clothing or the use of defective garments may pose a safety risk

IMPORTANT WARNINGS

MANUFACTURER'S WARRANTY

The operations specified in the maintenance schedule must be performed exclusively at an authorised Betamotor workshop and must be registered on the Betanet portal, so as not to lose the warranty rights. Damage, even indirect, caused by manipulation and/or tampering with and/or modification of the vehicle is not covered by the Manufacturer's warranty.

CONSUMABLES AND AUXILIARY MATERIALS

Improper use of fuel can harm the environment.

Avoid fuel spillage and handle all liquids following all appropriate precautions.

When disposing of liquids and materials, follow local legislation.

Only use spare parts and accessories authorised and/or recommended by Betamotor and have them fitted by an authorised Betamotor workshop.

Betamotor assumes no liability in connection with products supplied by third parties and for any damage resulting therefrom.

For liquids and lubricants, please refer to the specific table.

MAINTENANCE

For ideal operation and prevention of premature wear and tear, the scheduled service, maintenance and fine-tuning must be observed.
Always observe the prescribed run-in period and service intervals.
For maintenance table refer to page 66.

CHAPTER 1 GENERAL INFORMATION

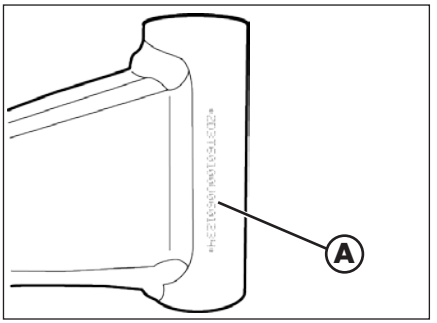
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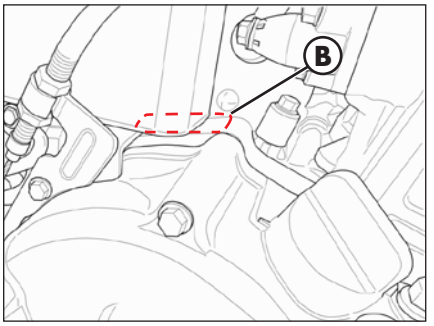
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VEHICLE IDENTIFICATION DATA

FRAME IDENTIFICATION

Frame identification data **A** are stamped on the right side of the steering head tube.

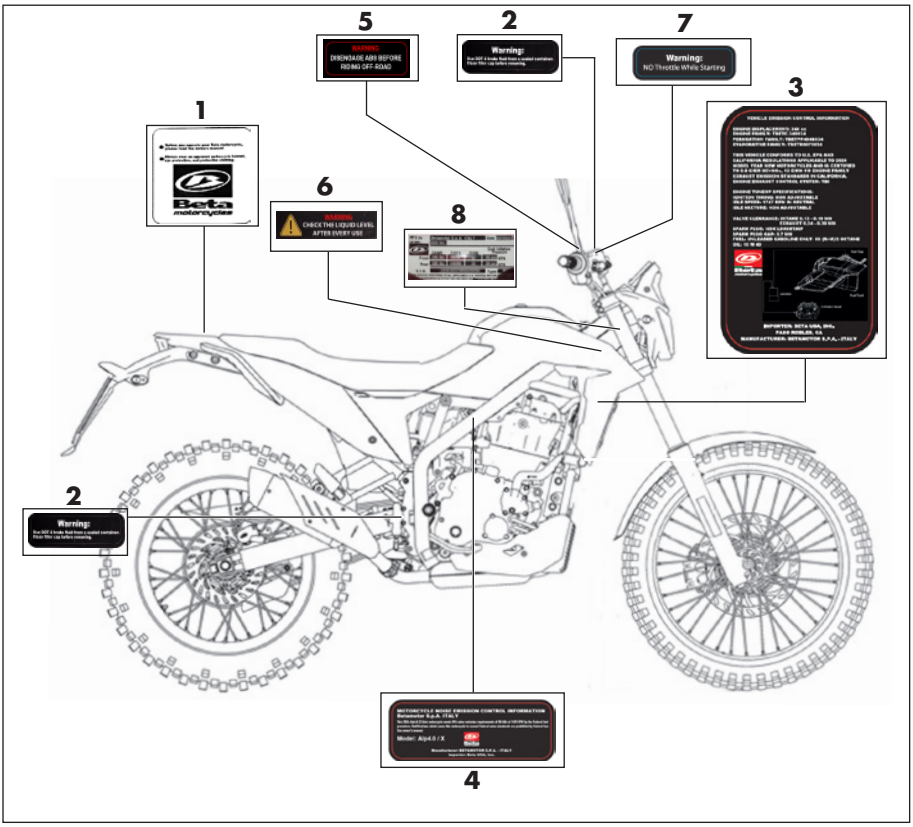


ENGINE IDENTIFICATION

Engine identification data **B** are stamped on the l.h. side half crankcase.

WARNING:
Tampering with the identification numbers is severely punished by law.

LABEL LOCATION

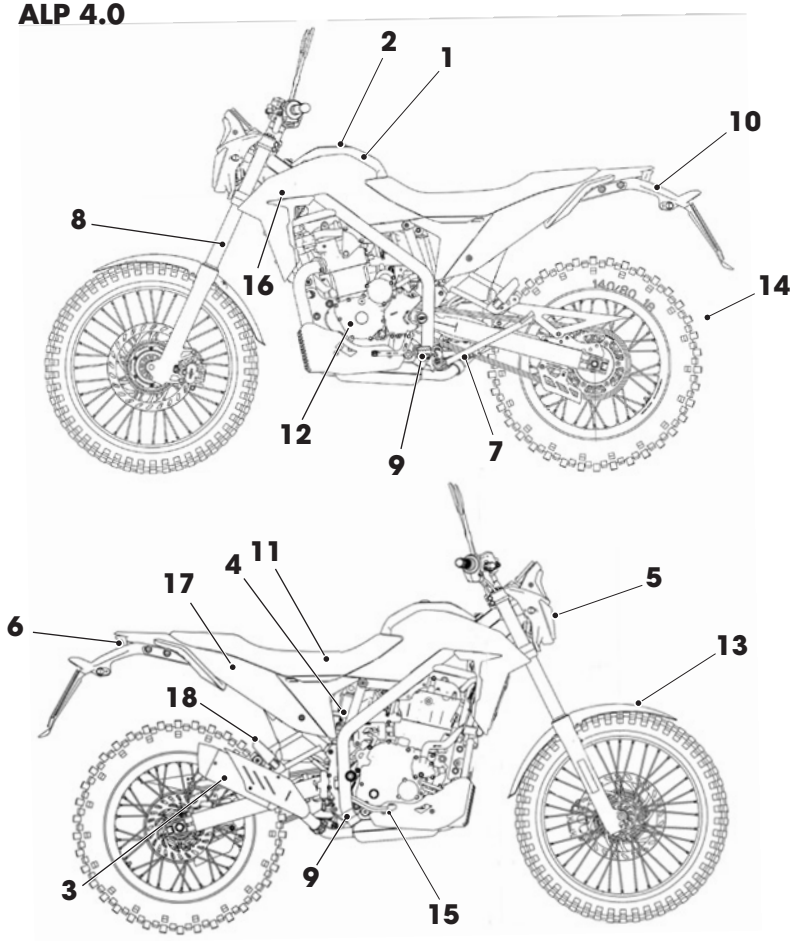


Label RS4T:

1 – Warnings plate
2 – Brake oil plate
3 – Vehicle Emission Control plate
4 – Noise limit
5 – ABS Warning plate
6 – Liquid level check
7 – No throttle while starting
8 – Homologation plate

FAMILIARIZING WITH THE VEHICLE

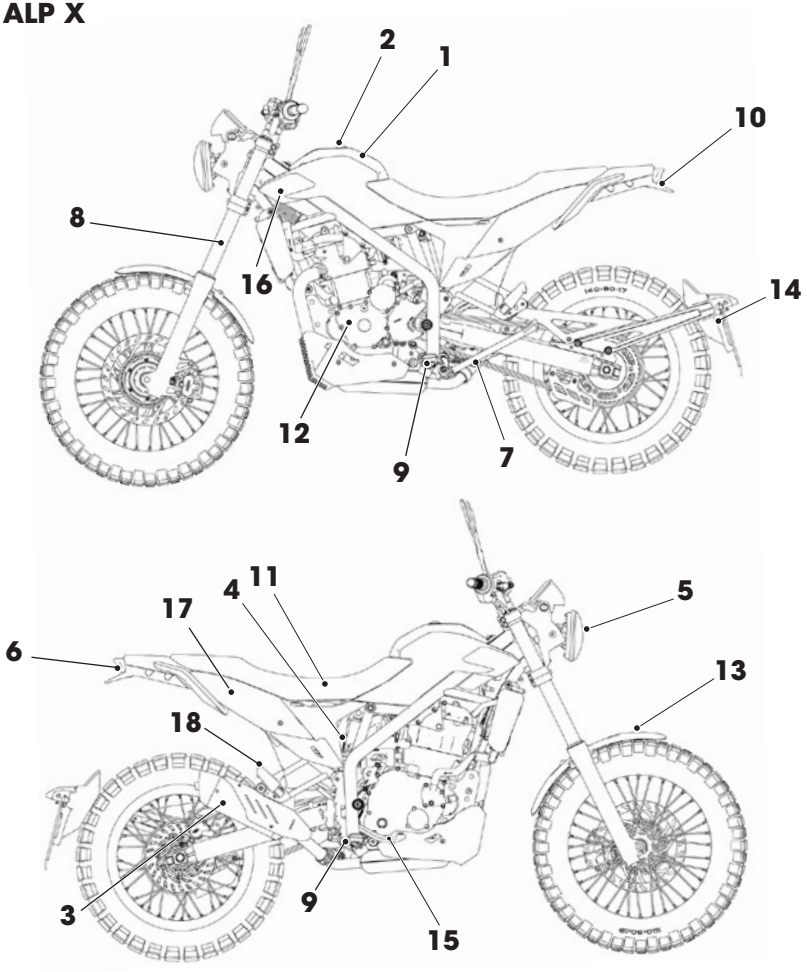
ALP 4.0



MAIN PARTS:

1 - Fuel tank
2 - Tank cap
3 - Silencer
4 - Rear shock absorber
5 - Headlight
6 - Rear light
7 - Side stand
8 - Fork
9 - Rider's footrests
10 - Rear mudguard
11 - Saddle
12 - Engine
13 - Front mudguard
14 - Number-plate holder
15 - Rear breake pedal
16 - Front side panel
17 - Rear side panel
18 - Passenger footrests

ALP X



MAIN PARTS:

1 - Fuel tank
2 - Tank cap
3 - Silencer
4 - Rear shock absorber
5 - Headlight
6 - Rear light
7 - Side stand
8 - Fork
9 - Rider's footrests
10 - Rear mudguard
11 - Saddle
12 - Engine
13 - Front mudguard
14 - Number-plate holder
15 - Rear breake pedal
16 - Front side panel
17 - Rear side panel
18 - Passenger footrests

TECHNICAL DATA

Weight in running order.....139 kg

VEHICLE DIMENSIONS

	ALP 4.0	ALP X
Maximum length [mm]	2300	2200
Maximum width [mm]	820	820
Maximum height from ground [mm]	1220	1190
Clearance from ground [mm]	270	260
Saddle height [mm]	865	855
Footrest height [mm]	370	360

TYRES

Version	Dimension		Pressure [Bar]	
	Front	Rear	Front	Rear
ALP 4.0	90/90-21 54R or 80/100-21 51R	140/80-18 70R or 130/90-18 70R	1,6 (road use)	2 (road use)
			1,2 (off-road use)	1,2 (off-road use)
ALP X	100/90-19 57S	140/80-17 69Q	1,6	2

WHEELS

Version	Dimension	
	Front	Rear
ALP 4.0	J21 x 1,85	J18M/C x MT2,5
ALP X	J19M/C x MT2,5	J17M/C x MT3,5

CAPACITIES

fuel tank (with settled tank) .....11 liters
including reserve.....2,3 liters
engine oil
oil change.....1,4 liters
with filter replacement.....1,5 liters
overhaul.....1,8 liters

FRONT SUSPENSION

Fork leg diameter.....43 mm
Oil type ..... SAE 15
Oil quantity each leg (from cap with compressed fork without spring)...405 ml
K Spring ..... 5,5 N/mm
Spring preload ..... 25 mm

REAR SUSPENSION

K Spring ..... 7 Kg/mm
Spring preload .....7 mm

BRAKING SYSTEM

The vehicle is equipped with a braking system with ABS

FRONT BRAKE

Disk-type Ø 290 mm

REAR BRAKE

Disk-type Ø 220 mm

ENGINE

Type ..... single-cylinder, 4-stroke
Bore x stroke ..... 84,5 x 62 mm
Displacement (cm^3) ..... 348 cm^3
Compression ratio 12,3:1
CO2 * ..... 83 g/km
Fuel consumption * 3,51 l/100km
Fuel system ..... Petrol-fuelled with electronic injection management
Cooling system ..... liquid cooled
Electric starter
Spark plug ..... NGK LDK8RTAIP
Clutch ..... wet, multidisc with anti-slipper

* WMTC cycle related data, for class L vehicles

Gear box ..... 6 speed

	Version	
	ALP 4.0	**ALP X**
Primary drive	2,857	
Gear ratio 1st gear	2,583	
Gear ratio 2nd gear	1,867	
Gear ratio 3rd gear	1,4	
Gear ratio 4th gear	1,227	
Gear ratio 5th gear	1	
Gear ratio 6th gear	0,846	
Secondary drive	3,142 (44/14)	3 (42/14)

BULBS

High beam/low beam ..... LED
Parking/daytime ..... LED
Turn indicators ..... 12V - RY10W
License plate light ..... LED

Fuses			
[A]	**Total quantity**	**Reserve**	**Type**
30	2	1	Standard
10	8	3	Mini

RECOMMENDED LUBRICANTS AND LIQUIDS

For better operation and longer vehicle life, we advise you to use the products listed in the following chart:

TYPE OF PRODUCT	TECHNICAL SPECIFICATION
FUEL	GASOLINE E5 (or GASOLINE 95 RON)
ENGINE AND GEARBOX OIL	MOTORBIKE 4T SYNTH 5W-40 STREET RACE OR MOTORBIKE 4T SYNTH 10W-50 STREET RACE
BRAKE OIL	LIQUI MOLY BRAKE FLUID DOT 4
FORK OIL	SAE 15W
GREASE FOR JOINTS	LIQUI MOLY SCHMIERFIX

GENERAL INFORMATION

CHAPTER 2 OPERATION

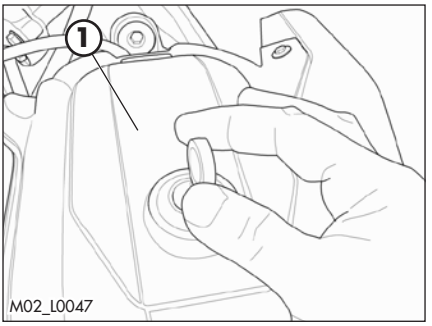
2

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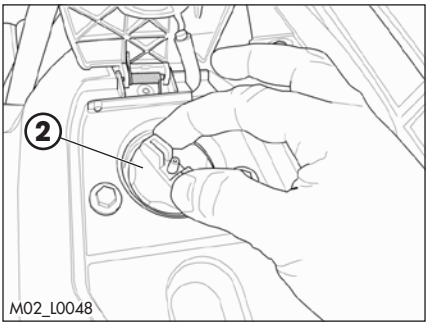
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MAIN PARTS

FUEL TANK CAP

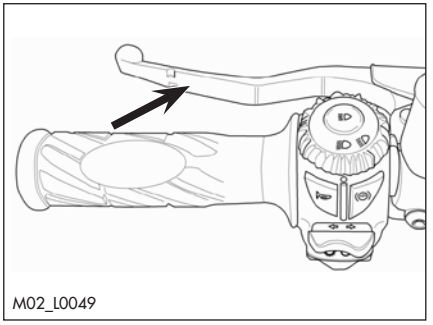
The cover **1** must be unlocked with the appropriate key and lifted in order to access the fuel tank's cap. Insert the key and turn clockwise. The cover opens automatically.



Turn the cap **2** anticlockwise.

To close the fuel tank's cap, set it on the tank and crew it clockwise.

When you have completed this operation, close by pushing the cover **1** down until it locks.



CLUTCH LEVER

The clutch lever is located on the left side of the handlebar. See the Adjustments chapter to adjust.

LH SWITCH

The dip and service switch is located on the left side of the handlebar and is composed as follows:

1 Horn button;

2 Dip switch. Turn the ring to select

position and high beam lights on;

position and low beam lights on;

3 Blinker switch: moving the lever to the right or left activates the left or right blinkers.
To switch off the blinkers, move the lever to the middle;

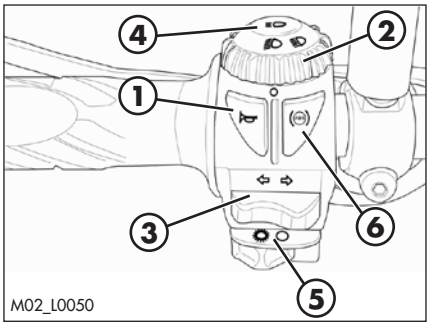
4 High-beam flash button;

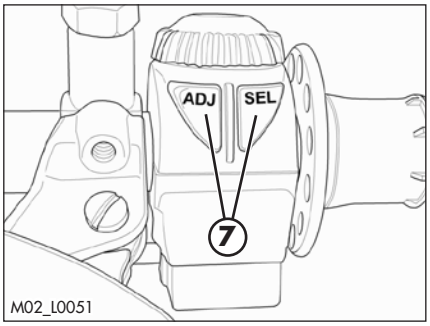
5 Driving mode switch:

Off-road mode - moving the selector to this position disables the ABS. 'OFFROAD' appears on the dashboard.

ATTENTION! To disable the ABS see paragraph "ABS system" on page 33.

Road mode - moving the selector to this position re-enables the ABS system.
'ROAD' appears on the dashboard;





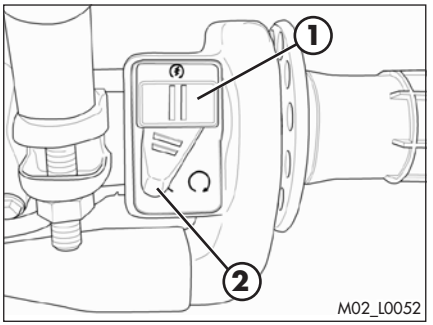
6 ABS button:

ABS activation/deactivation is managed via the ABS button (page 21).

ATTENTION! To disable ABS, the 'driving mode' switch must be in the OFFROAD position as described above.

Read the manual for further information about the ABS system operation (page 33).

7 ADJ and SEL, dashboard navigation keys, see page 27.

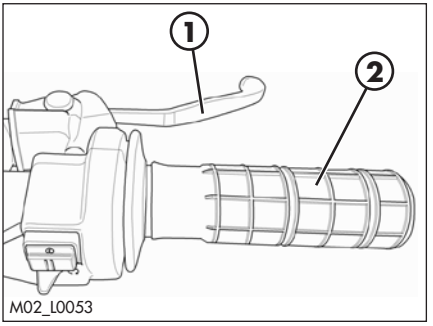


RH SWITCH

Starter button **1** is located on the right-hand side of the handlebars and operate the electric engine starter. Press and hold the button until the engine starts.
Do not press the button **1** while the engine is running.

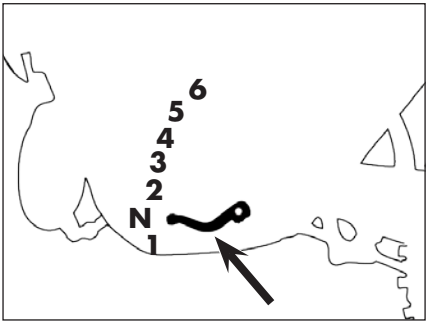
Switch **2** has two positions:
lever on the left allows the engine to start;
lever on the right does NOT allow the engine to start.

Caution:
Before starting the engine, make sure the **2** switch is .



FRONT BRAKE LEVER AND GAS CONTROL

The front brake lever **1** and the gas throttle **2** are located on the right side of the handlebar.

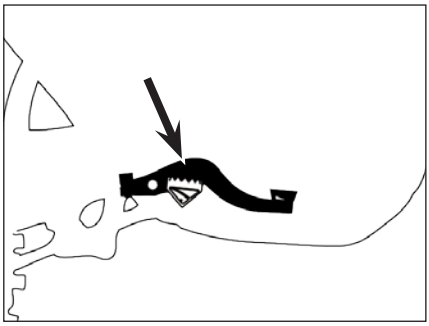


GEAR CHANGE LEVER

Gear change lever is fitted to the left side of the engine.
The positions corresponding to the different gears are shown in the figure.

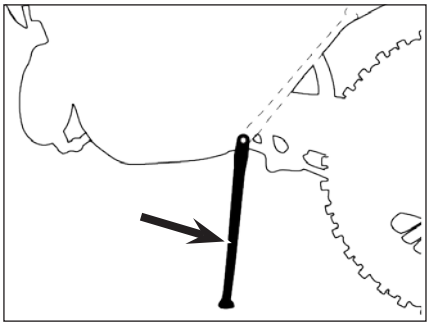
BRAKE PEDAL

Brake pedal is located in front of the right-hand footrest.



SIDE STAND

Press down side stand with the foot and lean the motorcycle against it.
Ensure that the ground is solid and the vehicle stands steadily.



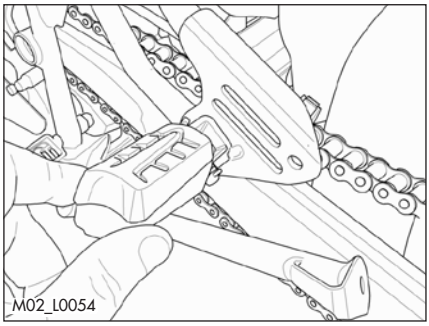
The vehicle will not start if the stand is down and the gearbox is in position other than "N".

Do not sit on the vehicle when it is on its stand.

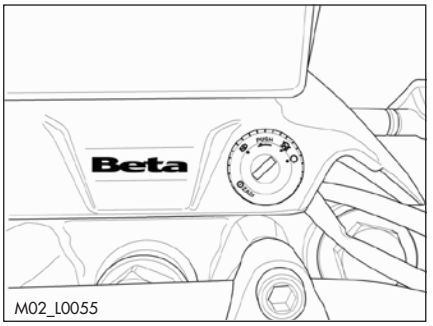
PASSENGER FOOTRESTS

The passenger footrests are located on the rear frame.
To open the footrests turn them outwards.

To close the footrests turn them inwards until they lock.



Warning
If there is no passenger, always ride with the passenger footrests closed.



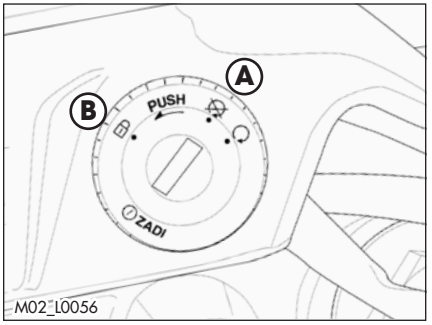
M02_L0055

KEYS

The vehicle is supplied with two keys (one key and its spare), each of which can be used for the steering lock switch, for switching the engine on the refuelling door and the saddle removal.

IGNITION CONSENT

- Turn the key to to start up the engine.
- Turn the key to to switch off the engine.



M02_L0056

STEERING LOCK

A The steering lock is off.
B The steering lock is on.
To activate the steering lock:
- turn the handlebar anti-clockwise;
- press the key and turn it anti-clockwise;

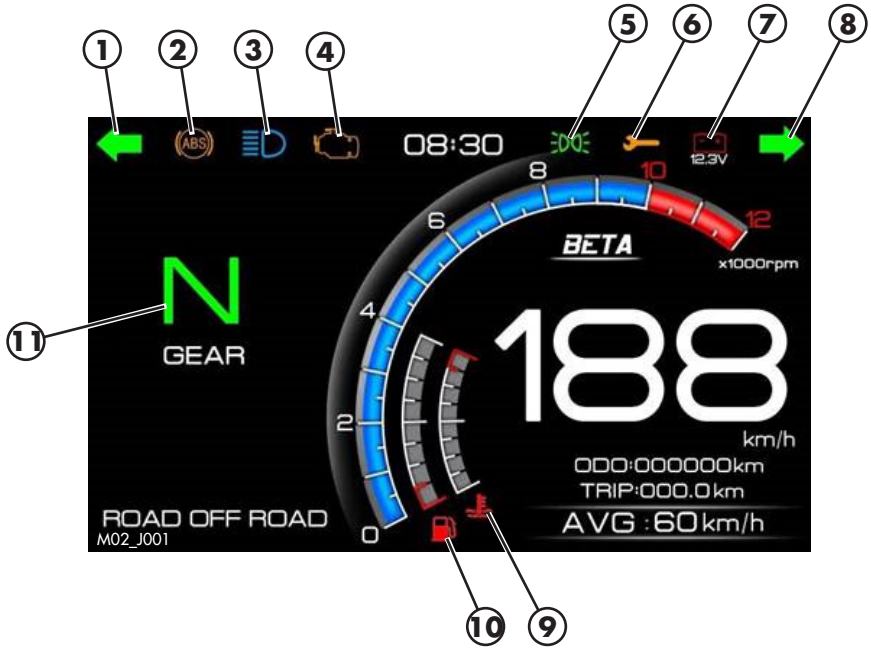
Remove the key from this position. The engine cannot be started.
To deactivate the steering lock:
- insert the key;
- turn the key clockwise;
- turn the handlebar clockwise;

From this position, the handlebar is free to move, the key can be removed and the engine cannot be started.

WARNING: do not keep the spare key inside the vehicle, but in a safe place. We suggest you note the code number stamped on the keys. In this way you can obtain a duplicate.

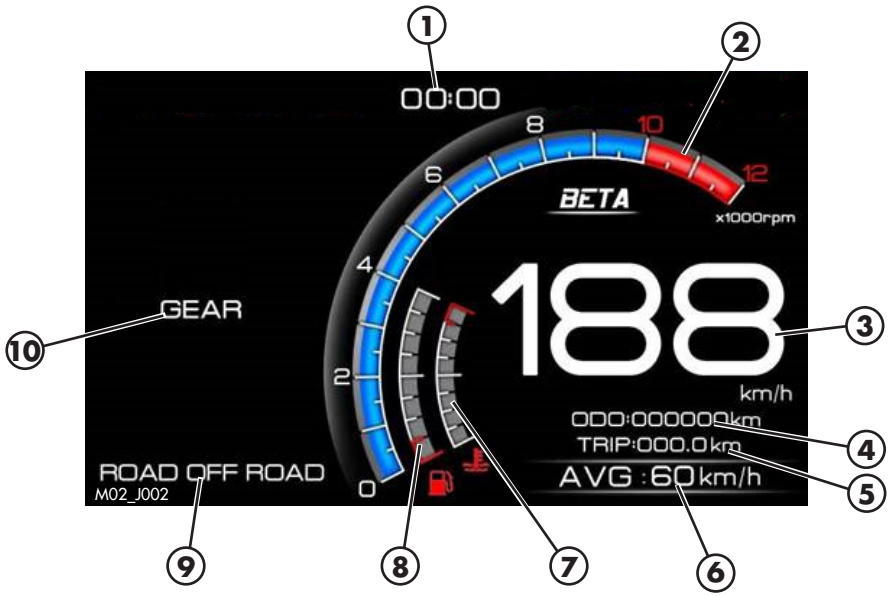
INFORMATION ON USING THE DASHBOARD

DESCRIPTION OF WARNING LIGHTS

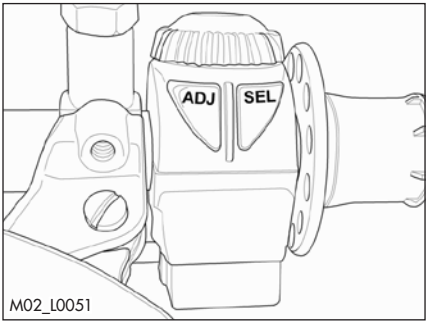


- 1/8 Turn indicators signal the activation of the turn indicators.
- 2 ABS (Anti-lock Braking System) for operating states refer to page 33.
- 3 High beams on.
- 4 Engine management system malfunction warning light, indicates the presence of a malfunction in the injection system. Contact an authorised Betamotor garage as soon as possible.
- 5 Low beam warning light on.
- 6 Service warning light, when the total mileage reaches 1000 km for the first time, the service light flashes, and subsequently flashes every 5000 km of driving. The warning light can be turned off by holding down the ADJ button.
- 7 Low voltage warning light, when flashing the voltage is below 12V.
- 9 Temperature warning light, indicates engine overheating. Check coolant level (page 47).
- 10 Reserve warning light, low residual fuel, refuel as soon as possible.
- 11 Neutral warning light, indicates correct engagement of neutral.

2 DESCRIPTION OF OPERATING STATES



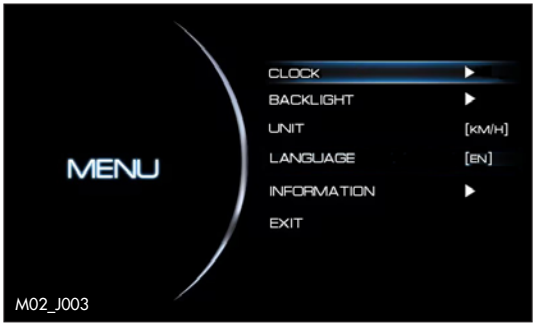
- 1 Clock, shows the time.
- 2 Rev counter, indicates the rotation speed [rpm] of the engine.
- 3 Speed indicator, shows the vehicle's instantaneous forward speed.
- 4 ODO, displays the vehicle's total mileage, cannot be deleted.
- 5 TRIP records partial mileage; it can be reset by holding down the SEL key.
- 6 AVG, displays average speed; can be reset by holding down the SEL key.
- 7 Temperature indicator, indicates coolant temperature.
- 8 Fuel gauge, indicates the level of fuel remaining in the tank.
- 9 Driving mode indicates the selected mode Road/Off road.
- 10 Gear engaged indicator, indicates gear engaged (page 22).



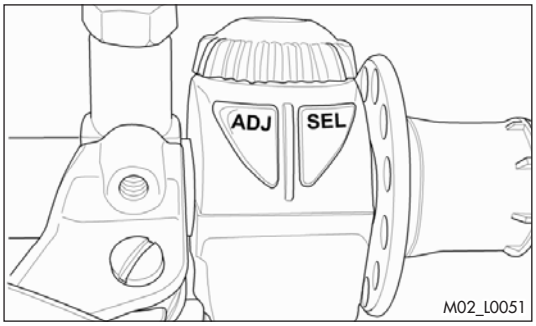
The two dashboard control buttons SEL and ADJ are located behind the left light switch.

KEY FUNCTION

One press of the **ADJ** key accesses the main menu.



Press the **SEL** key to navigate through the various menu titles, press the **ADJ** key to access sub-menus.

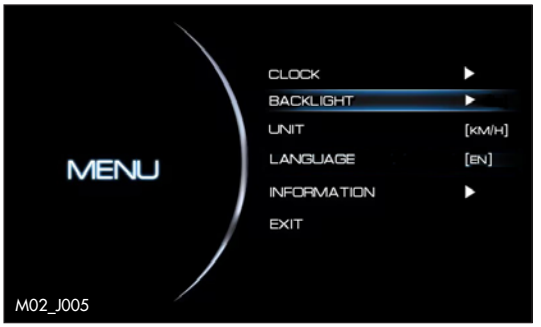


"Clock":



- press the **ADJ** key to change the selected field;
- press the **SEL** key to change the value of the digit.

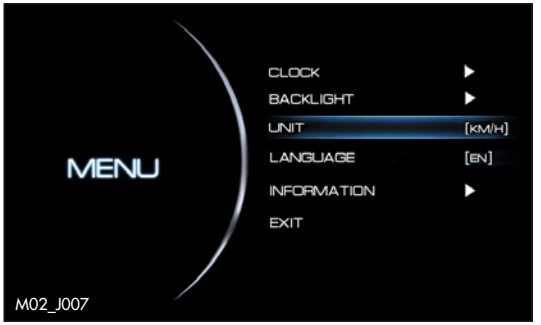




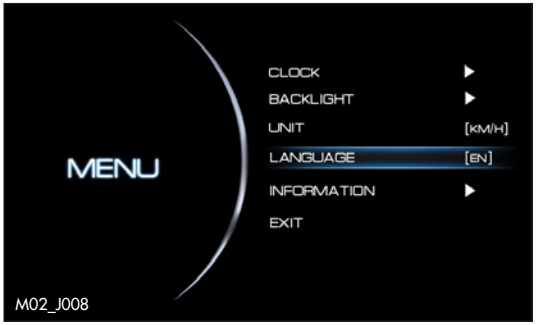
"Backlight":
This sub-menu acts on the backlight intensity of the screen.



Press the SEL key to choose between six levels of backlighting:
- From "1 to 5" the backlight intensity increases as the indicated value increases.
- "AUTO" enables automatic backlighting that constantly adapts to the external light.



"Unit":
Press the ADJ key to change the speed unit from Km/h to Mp/h, or vice versa.

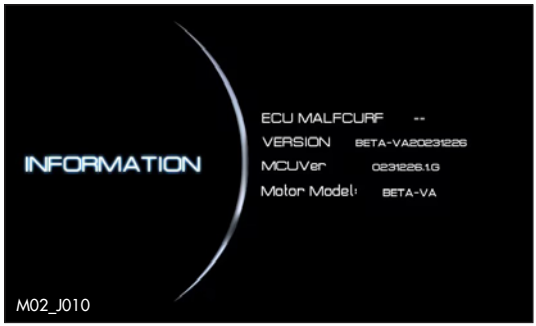


"Language":
Press the ADJ key to change the language.

"Information":



This sub-menu displays information about the dashboard, press the SEL key to return to the menu.



To go back to the main screen:
- Wait 10 seconds;
- Press and hold the ADJ key;
- Press the SEL key to select EXIT and then press the ADJ key.



CHECKS BEFORE AND AFTER USE

For safe driving and long vehicle life you should:


1 Check all fluid levels.


2 Check the correct operation of the brakes and brake pad wear (page 49-49).


3 Check pressure, general condition and thickness of tread (page 58).

4 Check that the spokes are properly tightened.

5 Check the tensioning of the chain (page 58).


6 Check the adjustment and the operation of all the cable controls.


7 Inspect all the nuts and bolts.

8 With the engine running, check the operation of the headlight, the rear and brake lights, the indicators, the warning lights and the horn.

9 Wash the motorcycle thoroughly after off-road use (page 66).

BREAKING IN

Breaking in takes approximately 1000 km/700 miles. During this time:

FIRST 500km	Less than 5500 rpm
Up to 1500km	Less than 8000 rpm
Over 1500km	Less than 10000 rpm

- Avoid travel at high speeds
- Change speed often so that the parts will break in uniformly and in a shorter time
- Avoid turning the throttle more than 3/4 of the way.

WARNING:
- After the first 1000 km/700 miles, change the motor oil.
- After the first off-road use, check all of the nuts and bolts.

REFUELLING

See page 16 for the fuel specifications.

Fuel tank capacity is shown on page 15.

To refuel open the tank cap (page 20).

WARNING
The refuelling should be performed with the engine off.


WARNING:
Fire hazard. Fuel is highly flammable.


Always stop the engine when refuelling and keep open flames and lighted cigarettes away.


Do not top up fuel while using a mobile phone.

Refuel in an open well ventilated area.

Pay special attention so that the fuel does not come into contact with hot parts of the vehicle. Immediately clean up any spilled fuel.


WARNING: Risk of poisoning.

Fuel is poisonous liquid and a health hazard.


Fuel must not come into contact with the skin, eyes, and clothing. Do not breathe in the fuel vapours. If contact occurs with the eyes, rinse immediately with plenty of water and seek medical advice. If contact occurs with skin, immediately clean contaminated areas with soap and water If fuel is swallowed, contact a doctor immediately. Change clothing that is contaminated with fuel.

WARNING: Environmental pollution hazard.

The fuel must not contaminate the ground water, the ground, or the sewage system.

STARTING THE ENGINE

Turn the key to (page 24).

Make sure the right switch on the handlebar is on (page 22).

Check that the gears are in neutral (page 22).

Pull the clutch lever (page 20).

WARNING:
The vehicle does not start if the clutch lever is not pulled

Close the side stand.

WARNING:
If the side stand is extended, the engine stops when the gear is engaged.

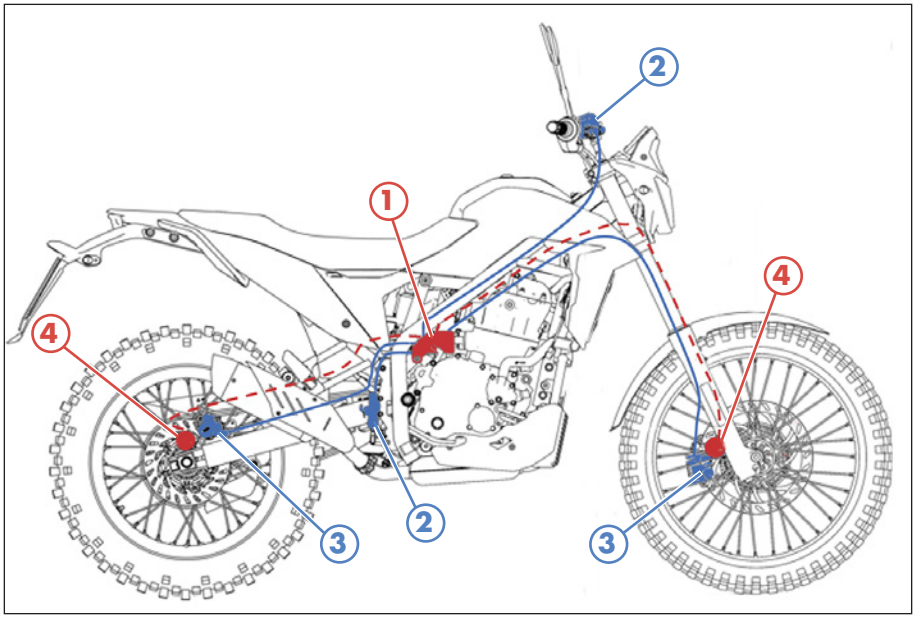
WHIT ELECTRIC STARTER (page 22):
Press and hold the start button on the right switch until the engine starts.
Do not press the button while the engine is running.

ENGINE SHUT-DOWN

To shut-down the engine, proceed in one of the two following ways:
- turn the key to  (see page 24).

- move the lever on the right-hand switch to  (page 22).

ABS SYSTEM



The ABS (Anti-lock Braking System) is developed to prevent the wheels from locking when braking. The ABS system automatically regulates braking capacity by acting intermittently on the brakes, helping to get grip on the ground and increasing the stability of the motorbike.
ABS operates with two independent brake circuits (front wheel brake and rear wheel brake). When the ABS electronic control unit detects a wheel locking tendency, ABS intervenes by adjusting the brake pressure. The adjustment process is perceived in the form of a slight pulsation of the front brake lever and/or brake pedal.

The ABS Module **1** consisting of the hydraulic unit, ABS electronic control unit and recirculation pump is mounted on the right side of the vehicle, above the engine. A wheel speed sensor is mounted on the front and rear wheels **4**.
Brake pumps **2** operate the braking system, while the pistons **3** exert braking action on the wheels; the ABS module **1** manages the pressure on the pistons in the event of ABS intervention.

ATTENTION
Modifications to the vehicle impair ABS operation.
- Do not modify the suspension beyond the intended settings.
- For the brake system, use only spare parts approved and recommended by BETAMOTOR.

- Only use wheels and tyres approved and recommended by BETAMOTOR with the corresponding speed index.
- Maintain the prescribed tyre pressure.
- Ensure that maintenance work and repairs are carried out professionally by the authorised BETAMOTOR service network

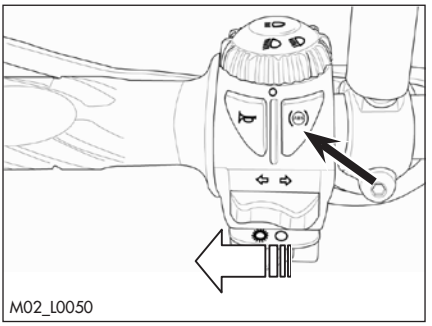
ABS is a safety system that, within the limits of physics, prevents the wheels from locking when driving straight and on bends.

ATTENTION
The ABS system can only reduce the probability of a fall within physical limits. It is not always possible to compensate for driving situations such as the presence of luggage with a high centre of gravity, alternating road surfaces, uphill spurts or hard braking without disengaging the clutch.
- Adapt your driving to the road conditions and your abilities.

Whenever the vehicle is switched on, the ABS light on the dashboard flashes quickly. When the ABS is active, above 5km/h the ABS warning light goes off.

The ABS can be activated or deactivated by the rider depending on the terrain conditions.

When the ABS is deactivated, the ABS does not intervene on either wheel and therefore the braking system behaves in a conventional manner.


M02_L0050

When ABS is activated, the ABS regulates the behaviour of both wheels.

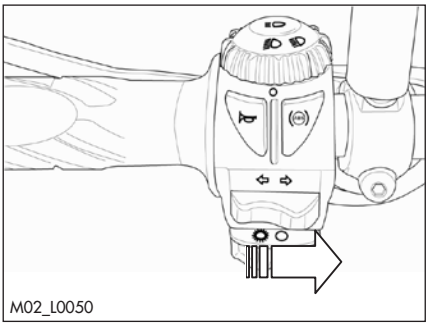
To DEACTIVATE the ABS, proceed as follows.
With the engine running (page 32) or with the dashboard on:

1. From the left-hand switch (page 21) select the OFFROAD driving mode by moving the selector switch to
2. 'OFFROAD' appears on the dashboard;
3. Hold down the ABS button ; as soon as the ABS symbol on the dashboard starts flashing slowly, release the button. The ABS symbol remains lit.

NOTE: ABS can ONLY be deactivated when the vehicle is stopped.

To ACTIVATE ABS proceed in one of the following ways.
With the engine running (page 32) or with the dashboard on:

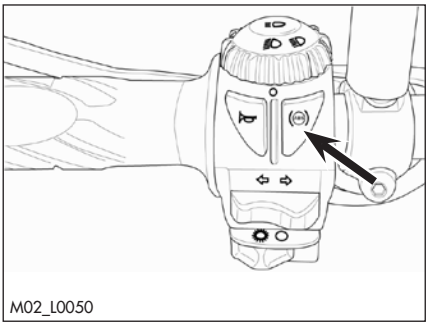
4. On the left switch (page 21) select ROAD driving mode by moving the selector switch to ○ .
5. "ROAD" appears on the dashboard and the ABS warning light (ABS) goes out;


M02_L0050

NOTE: this procedure can also be carried out with the vehicle in motion.

Alternatively, with the engine running or with the dashboard on:

6. Press the ABS button (ABS) on the left switch (page 21) until the ABS indicator light (ABS) on the dashboard goes out.


M02_L0050

NOTE. Because the selector switch is in OFFROAD mode ⚙ but the ABS is activated on the dashboard, the word OFFROAD will appear and the ABS light will be off.

NOTE: this procedure can also be carried out with the vehicle in motion.

ABS is automatically reactivated whenever the vehicle is switched off by the key or the engine switched off by the right switch (page 22).

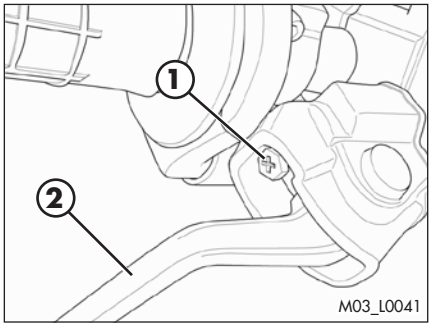
If the ABS warning light (ABS) does not go out after ignition or comes on while driving, it means that either there is an error in the ABS system or it has been disabled according to the procedure described above.
Under these conditions the ABS is no longer active and the wheels can lock during braking. The braking system retains its full functionality, only the ABS control is missing.

WARNING
DISENGAGE ABS BEFORE RIDING OFF-ROAD

CHAPTER 3 ADJUSTMENTS

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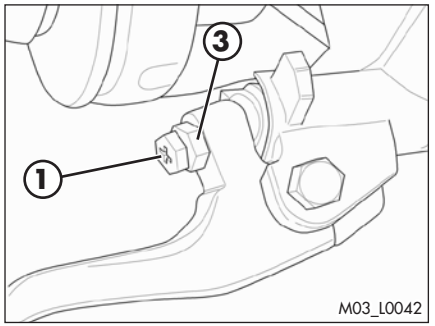
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Rear brake 38
Adjustment of clutch lever 39
Adjusting the throttle play 39
Adjusting the spring preload 40
Adjusting the headlight 41
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ALP X 41



BRAKES

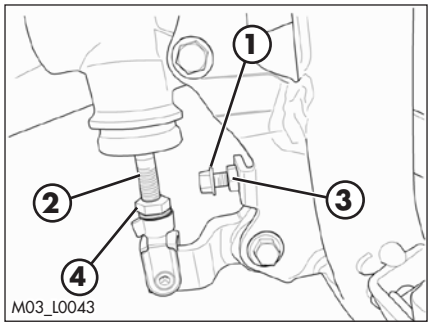
FRONT BRAKE

The front brake is disk type with hydraulic control.
The home position of brake lever **2** can be adjusted by means of screw **1**.



Once the position is adjusted with screw **1**, block it using locknut **3**.

WARNING: reduced play causes brake overheating leading to sudden lockup.



REAR BRAKE

The home position of brake pedal can be altered by turning adjusting screw **1**.

Register **1** adjusts the position of the pedal and **2** the empty stroke of the pedal on the pump.

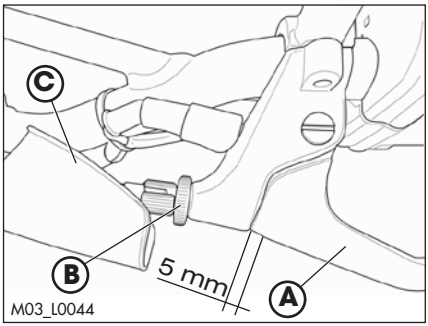
Adjust by loosening locknuts **3** and **4**; adjust screw **1** to set the pedal position and tip **2** to adjust the empty stroke.

Retighten the locknuts **3** and **4** after completing the operation.

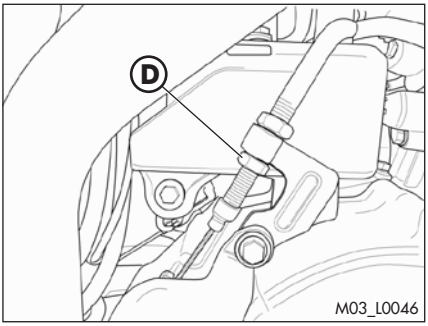
WARNING: reduced play causes brake overheating leading to sudden lockup.

ADJUSTMENT OF CLUTCH LEVER

Generally, the only operation that is performed on the clutch is adjustment of the position of lever **A**.
To perform the adjustment, lift rubber dust cover **C** and turn adjuster **B**.
The lever must have 5 mm of idle stroke.



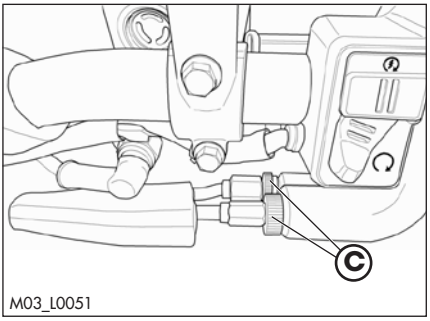
In order to adjust the play of the clutch transmission you also can operate on the control clutch lever adjusting nut **D**, located on the engine.



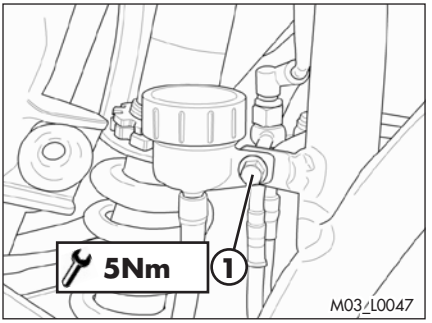
ADJUSTING THE THROTTLE PLAY

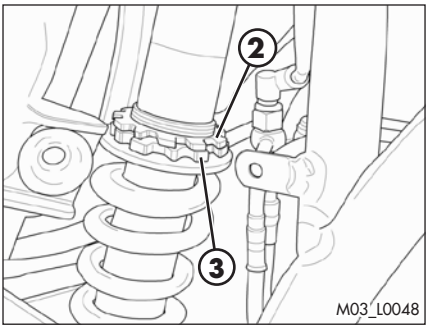
Should the throttle twist grip have an idle travel in excess of 3 mm measured on the grip rim, adjust the play by turning the registers **C** as shown in the figure.
The front register adjusts the "pull" and the rear register adjusts the "return".

Once the adjustment has been made, lock the adjuster with the ring.



WARNING! The incorrect routing of the cable may make the vehicle uncontrollable.





ADJUSTING THE SPRING PRELOAD

To adjust the spring preload, use the procedure described below:

- Remove screw **1** fixing the rear brake oil tank from its holder.

ATTENTION! Keepthe tank tube as vertical as possible.

- Loosening the locknut **2**. The spring preload can now be adjusted by turning the ring nut **3**; turning the ring nut clockwise increases the preload, turning the ring nut anti-clockwise decreases the preload.

When the operation is finished, tighten the locknut **2**.
Reassemble the removed parts.

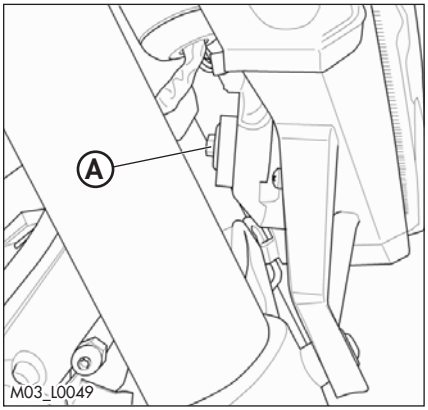
WARNING: Always replace the front fork or rear shock absorber in case of damage.

ADJUSTING THE HEADLIGHT

The adjustment is differentiated according to model and is shown below.

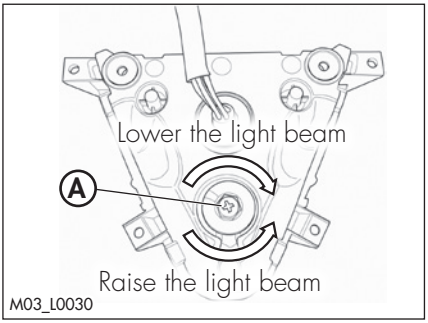
ALP 4.0

The light beam is adjusted by turning the screw A located on the back of the headlight.



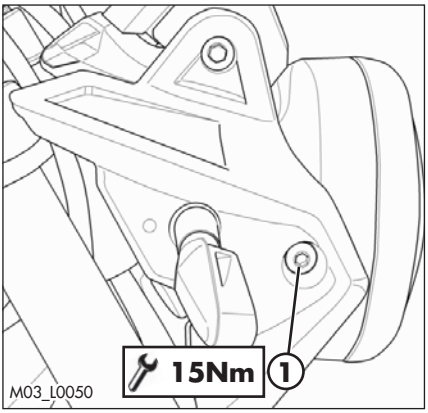
Turning screw **A** CLOCKWISE the light beam is lowered; by turning screw **A** ANTICLOCKWISE, the light beam rises.

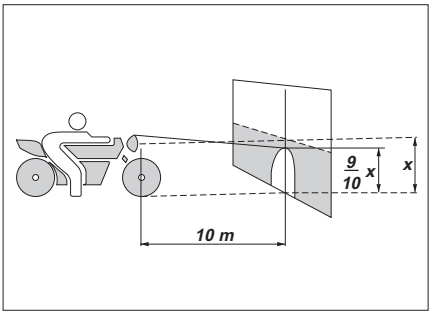
Warning! When the screw begins to resist turning, stop the maneuver. Continuing may cause damage to the projector.



ALP X

The headlight is adjustedby looseningthe screw **1** and aligning it as required.
Turning the headlight downwards lowers the beam, turning the headlight upwards raises the beam.
Once the headlight has been adjusted, tighten to the specified torque.





Place the vehicle on level ground (but not on the stand) 10 metres from a vertical wall.

Measure the height of the headlight centre above the ground and then draw a cross on the wall at 9/10 of the height of the headlight centre.

Turn on the low beam, get on the motorbike and check that the headlight beam on the wall is slightly lower than the cross drawn previously.

CHAPTER 4 CHECKS AND MAINTENANCE

4

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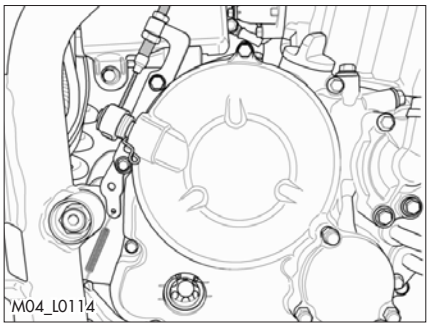
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KEY TO SYMBOLS

Tightening torque

Threadlocker Medium

Grease

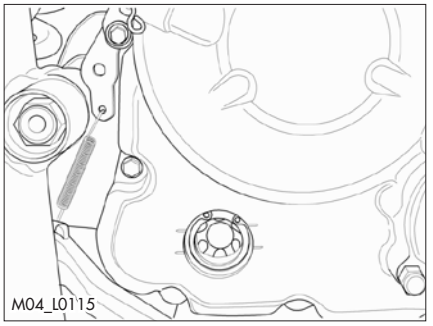


ENGINE OIL

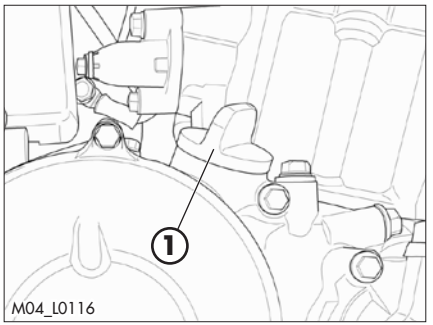
CHECK FOR OIL IN THE ENGINE

Hold the vehicle upright.

Start the engine and let it idle for 10 minutes (if the ambient temperature is below 10 ºC, let it idle for 15 minutes).
Switch off the engine and wait 3 minutes.
Observe the oil level through the porthole on the right engine crankcase.



Make sure the level is between the two notches, upper (Max) and lower (Min).
If the level is below notch lower (Min), add oil up to notch upper (Max).



To fill oil remove filler cap **1**.

WARNING: Do not start the engine if the oil level is below notch lower. Never fill the engine with oil above notch upper (Max).

ENGINE OIL REPLACEMENT

Always carry out replacement when the engine is warm.
To do this, start the engine and let it idle for about 3 minutes. Then switch off the engine and wait about 5 minutes.
- Remove the engine protection (page 74);
- Park the vehicle on the side kickstand;
- Place a container under the engine at the drain screw;

Attention! Be careful as both the engine and exhaust system are hot. Wear suitable protective gloves.

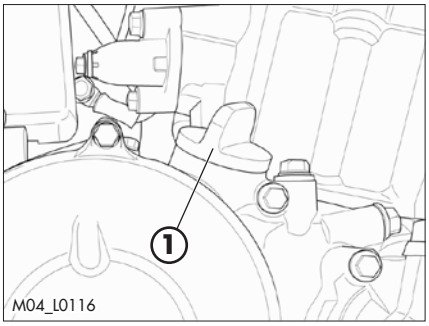
- Cut a piece of fireproof cardboard of a suitable size so that it can be placed between the engine and the exhaust system and shaped so that the oil can drain without coming into contact with the exhaust.
- Unscrew the filler cap **1** and drain plug **2**;
- Allow the crankcase to drain well.
- Clean the drain plug magnet
- Close the plug **2** and tighten to the specified torque;
- Introduce the quantities of oil shown on page 15.
  Check the level as described on page 44;
- Close the filler cap **1**.

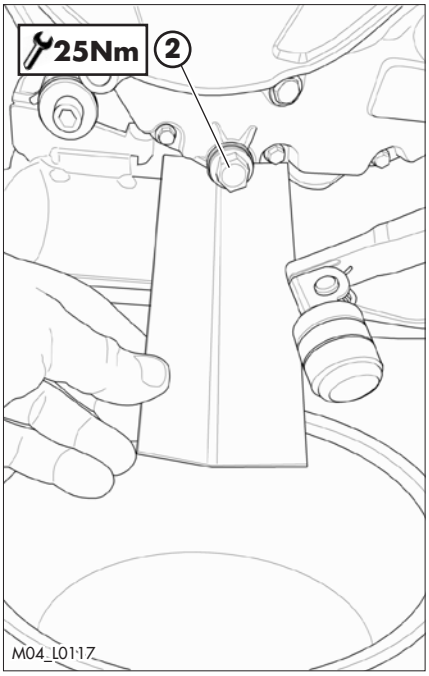
WARNING:
Hot oil can cause severe burns!

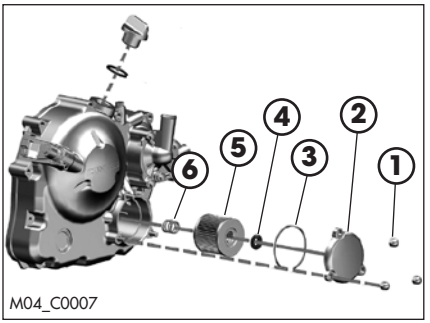
WARNING:
Dispose of used oil in compliance with local regulations.

NOTE: For subsequent oil changes, follow the instructions given on the chart on page 68, using the lubricants recommended on page 17.

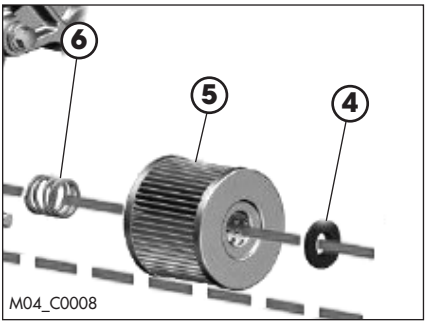
Once the operation has been completed, refit the engine protection (page 74).







M04_C0007



M04_C0008

ENGINE OIL FILTER REPLACEMENT

- Remove the engine protection (page 74);
- Keep the vehicle upright with respect o the ground;
- Place a container under the affected area.
- Unscrew nuts **1** and remove oil filter cover **2** complete with O-ring **3**, filter **5** together with ring **4** and spring **6**.
-Remove any oil residue and impurities from the filter compartment.
When reassembling, take care that the spring **6** andsealing ring **4** are fitted correctly. The motor oil filter must be mounted as in the figure, i.e. with the hole facing the filter cover **2** and the spring **6** facing the engine.

WARNING: When replacing the oil filter, we recommend replacing the O-ring **3** and sealing ring **4**.

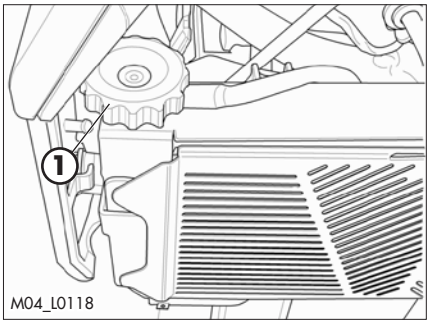
Pay attention to the installation of the oil filter. DO NOT install the oil filter upside down and do not forget the spring and seals on the filter and cover.
Incorrect installation can cause serious damage to the engine.

Once the operation has been completed, refit the engine protection (page 74).

LIQUID COOLANT

The level check must be performed with the engine cold, as follows:

- Unscrew cap **1** and ensure that the liquid is visible in the lower portion of the loading tube. Top up if necessary.
- After completion of the operation, refit the filler cap.



WARNING! When changing coolant, once the level has been checked, start the engine and keep it idling for about three minutes. Allow to cool and check the level again.

Use the liquid indicated on page 17 in the table 'Lubricants and recommended liquids'.

WARNING:
The brake fluid is extremely corrosive. Take care not to spill it on the paintwork.

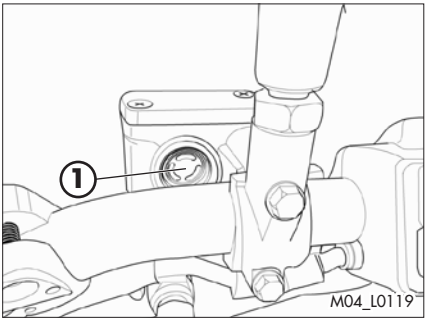
Wear appropriate protective clothing and protection gloves.

Keep coolant out of reach of children.

WARNING: Avoid any direct contact of the liquid with skin, eyes or clothing. If this happens:

- with the eyes, rinse immediately with plenty of water and seek medical advice.
- with skin, immediately clean contaminated areas with soap and water. Change clothing that is contaminated with liquid.

If liquid is swallowed, contact a doctor immediately.

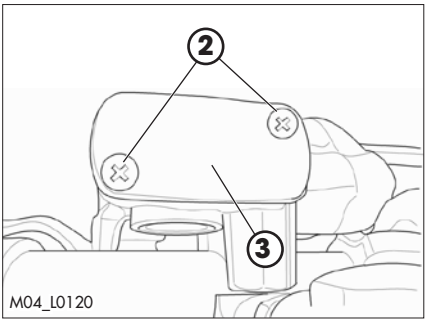


BRAKING SYSTEM

FRONT BRAKE

CHECK THE LEVEL OF THE FRONT BRAKE FLUID

Check the oil level by means of oil sight glass **1**.
The minimum oil level must be visible through the sight glass.



RESTORING THE LEVEL OF THE FRONT BRAKE FLUID

To restore the oil level, top up by unscrewing the two screws **2**, lifting cap **3** and adding oil.

WARNING:
If the lever feels soft, there may be an air bubble in the circuit, then contact authorised Betamotor authorised service immediately.

NOTE:
Use the liquid indicated on page 17 in the "Recommended lubricants and liquids" table.

WARNING:
The brake fluid is extremely corrosive. Take care not to spill it on the paintwork.

Wear appropriate protective clothing and protection gloves.

Keep coolant out of reach of children.

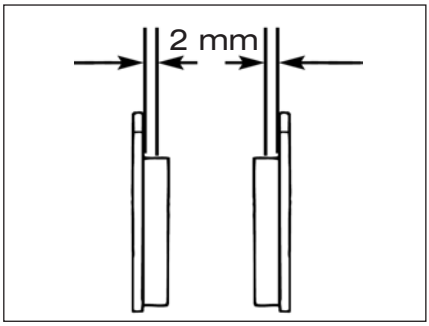
WARNING: Avoid any direct contact of the liquid with skin, eyes or clothing. If this happens:

- with the eyes, rinse immediately with plenty of water and seek medical advice.
- with skin, immediately clean contaminated areas with soap and water. Change clothing that is contaminated with liquid.

If liquid is swallowed, contact a doctor immediately.

Once completed, reassemble the parts following the dismantling sequence in inverse order.

FRONT BRAKE LINING CONTROL

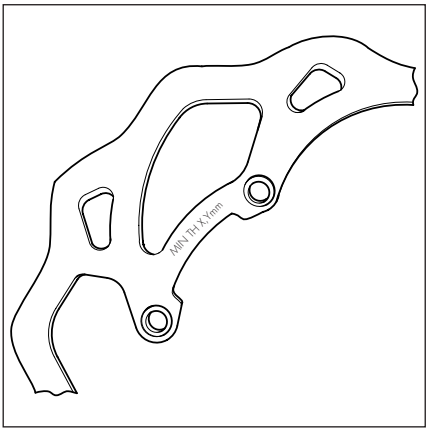


In order to verify the wear condition of front brake is enough to view the caliper from the bottom, where is possible to glimpse the brake lining tails which will have to show a brake of 2 mm in thickness.
If the stratum is lesser let's start replacing them.

NOTE:
Perform the check according to the times shown in the table on page 68.

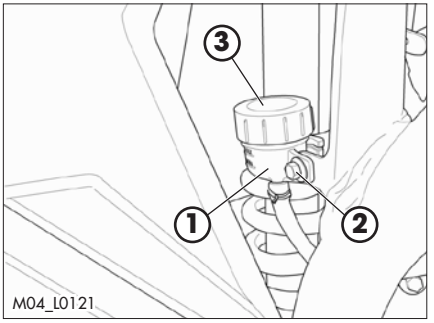
To replace, contact authorised Betamotor customer service.

BRAKE DISC THICKNESS CONTROL



Periodically verify disc condition. In case signs of damage , veins, or deformations are present, proceed with replacement.
Verify disc thickness. The minimum thickness is engraved on the disc.
Once the limit is in proximity or has been reached, proceed with brake disc replacement.
For replacement, contact an authorised Betamotor after-sales service centre.

⚠ WARNING: If the brake pads or disc are damaged, replace both.



REAR BRAKE

CHECK THE LEVEL OF THE REAR BRAKE FLUID

Check oil level by means of oil container **1**.
Oil level must never be below the minimum level mark on container.

RESTORING THE LEVEL OF THE FRONT BRAKE FLUID

Restore the level by topping up as follows:
Remove screw **2**.
Remove brake oil container **1**.
Open cap **3** taking care to keep the brake oil container in a vertical position.
Top up.
Reapply the cap and tighten securely.

Once completed, reassemble the parts following the dismantling sequence in inverse order.

NOTE:
Use the liquid indicated on page 17 in the "Recommended lubricants and liquids" table.

WARNING:
The brake fluid is extremely corrosive. Take care not to spill it on the paintwork.

Wear appropriate protective clothing and protection gloves.

Keep coolant out of reach of children.

WARNING: Avoid any direct contact of the liquid with skin, eyes or clothing. If this happens:

- with the eyes, rinse immediately with plenty of water and seek medical advice.
- with skin, immediately clean contaminated areas with soap and water. Change clothing that is contaminated with liquid.

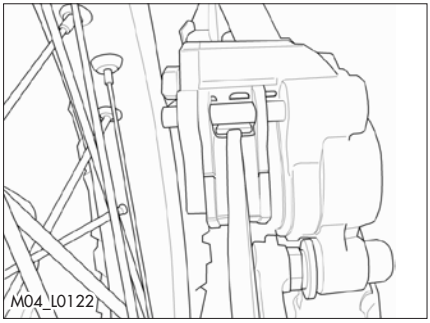
If liquid is swallowed, contact a doctor immediately.

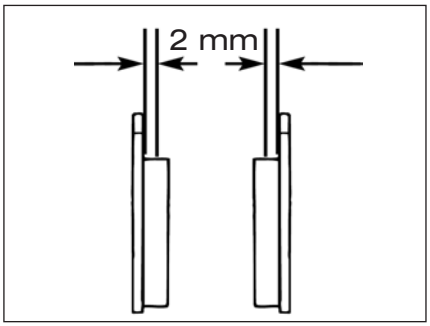
REAR BRAKE LINING CONTROL

To check the wear of the rear brake pads, visually inspect the caliper from the rear side. The lining on the visible ends of the two brake pads should be at least 2 mm thick. Should the lining be thinner, immediately replace the brake pads.

Note:
Perform the check according to the times shown in the table on page 68.

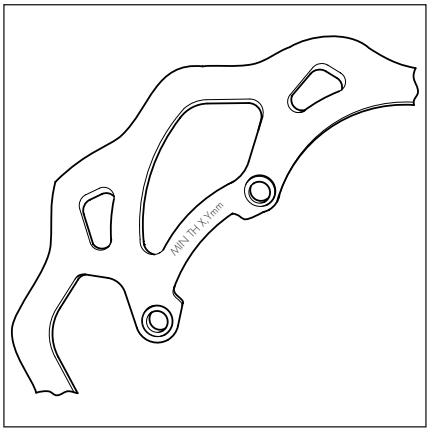
To replace, contact authorised Betamotor customer service.



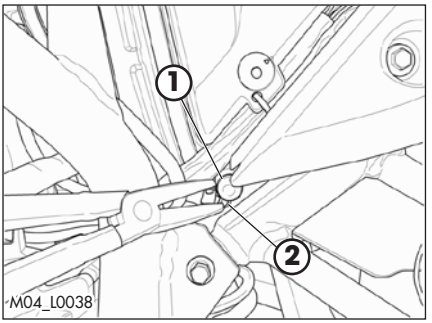


BRAKE DISC THICKNESS CONTROL

Periodically verify disc condition. In case signs of damage , veins, or deformations are present, proceed with replacement.
Verify disc thickness. The minimum thickness is engraved on the disc.
Once the limit is in proximity or has been reached, proceed with brake disc replacement.
For replacement, contact an authorised Betamotor after-sales service centre.



⚠ WARNING: If the brake pads or disc are damaged, replace both.



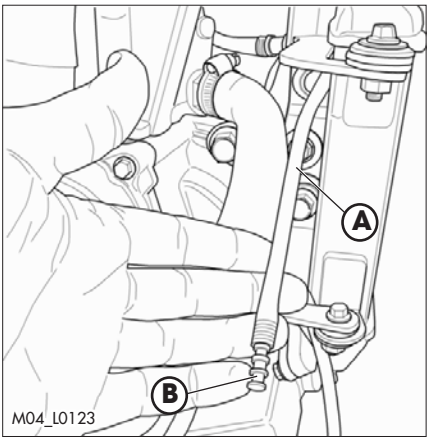
FILTER BOX FLUID COLLECTION

To drain any fluids from the filter box, proceed as follows:
- place a rag underneath plug **1**;
- remove drain plug **1** by opening the iron clamp **2** with pliers;
- drain out any fluids.

When finished, dry the plug and put it back in.

WARNING:
Dispose of used oil in compliance with local regulations.

Note: Perform the check according to the maintenance schedule on page 68.



PETROL FUMES EXHAUST PIPE

Check the transparent hose **A** periodically. Should petrol accumulate, drain it as follows:
- Place a rag or container under the hose.
- Remove the plug **B** and drain the liquid.

WARNING: carry out the operation when the vehicle is cold.

WARNING:
Fire hazard. Fuel is highly flammable.

Pay special attention so that the fuel does not come into contact with hot parts of the vehicle. Immediately clean up any spilled fuel.

WARNING: Risk of poisoning.

Fuel is poisonous liquid and a health hazard.

Fuel must not come into contact with the skin, eyes, and clothing. Do not breathe in the fuel vapours. If contact occurs with the eyes, rinse immediately with plenty of water and seek medical advice. If contact occurs with skin, immediately clean contaminated areas with soap and water If fuel is swallowed, contact a doctor immediately. Change clothing that is contaminated with fuel.

Always stop the engine when refuelling and keep open flames and lighted cigarettes away.

Immediately clean up any spilled fuel.

WARNING: Environmental pollution hazard.

The fuel must not contaminate the ground water, the ground, or the sewage system.

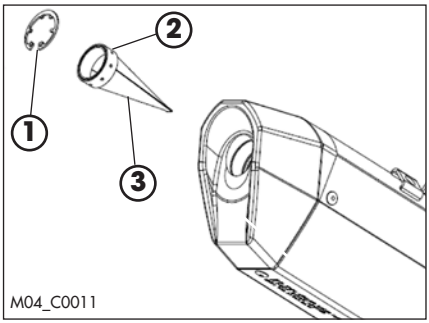
ATTENTION: Dispose of fuel in compliance with the regulations in force.

SPARK ARRESTOR SERVICE

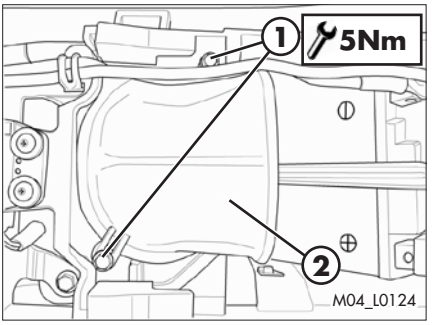
The spark arrestor should be periodically cleaned to remove accumulated carbon. A plugged spark arrestor will affect engine performance.
Replace a cracked or damaged spark arrestor before running the vehicle.

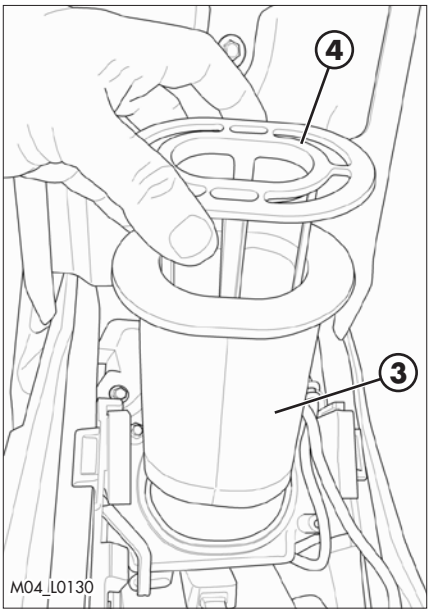
CAUTION: do not operate if silencer is hot or the engine is running.

1. Remove the spark arrestor screen fastener **1**.
2. Remove the spark arrestor **2** from the end of the muffler.
3. Use a brush to clean the screen **3** on the spark arrestor.
   Be careful to avoid damaging spark arrestor during the clean operation.
   If necessary, blow debris from the screen with compressed air.
4. Inspect the screen for wear and damage. Replace if damaged.
5. Install the spark arrestor and fasten with retainer ring.



M04_C0011





AIR FILTER

To access the air filter, proceed as follows:
- Remove the saddle (page 72);
- Remove screws **1** and mouthpiece **2**;
- Pull out the air filter **3** together with the filter cage **4**;

WARNING:
Never use the vehicle if the air filter is not in place. The infiltration of dust and dirt can cause damage and considerable wear.

WARNING:
After every intervention, check that nothing has been left inside the filter box.

- Thoroughly wash the filter with water and soap.
- Dry the filter.
- Wet the filter with filter oil and then remove the excess oil to prevent it from dripping.

Apply the sponge filter element into the cage with care.

Replace the filter in its housing together with the filter cage .

Attach the mouthpiece and tighten the screws to the specified torque.

Refit the saddle (page 72).

WARNING:
Do not clean the filter with gasoline or petrol.

NOTE:
If the filter is damaged, replace it immediately.
To replace, contact authorised Betamotor customer service.

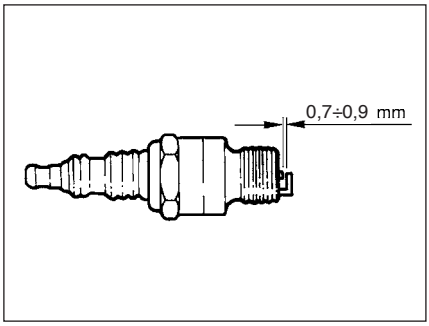
WARNING:
Never use the vehicle if the air filter is not in place. The infiltration of dust and dirt can cause damage and considerable wear.

WARNING:
After every intervention, check that nothing has been left inside the filter box.

SPARK PLUG

Keeping the spark plug in good condition will reduce fuel consumption and increase engine performance.

To perform the check, just extract the spark plug cap and unscrew the spark plug by means of the provided wrench.
Carefully clean the electrodes using a wire brush. Blow the spark plug with compressed air to prevent any residues from getting into the engine.
Examine the distance between the electrodes with a feeler. This distance should be from 0,7 - 0,9 mm. If it is not, it may be corrected by bending the earth electrode.



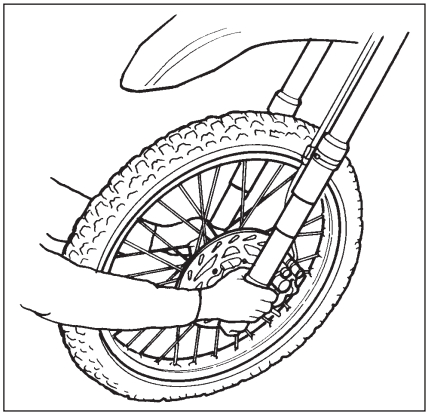
Check as well that there are no cracks in the insulation or corroded electrodes. If so, replace immediately.
Lubricate the spark plug thread, and then (when the engine is cold) screw in the spark plug by hand to its abutting end. Finally tighten the spark plug with the spanner.

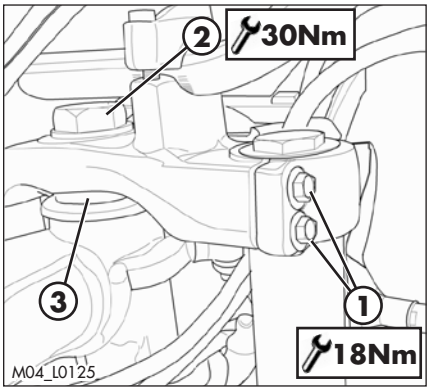
WARNING:
Do not check while the engine is hot.

CHECK AND ADJUSTING OF STEERING PLAY

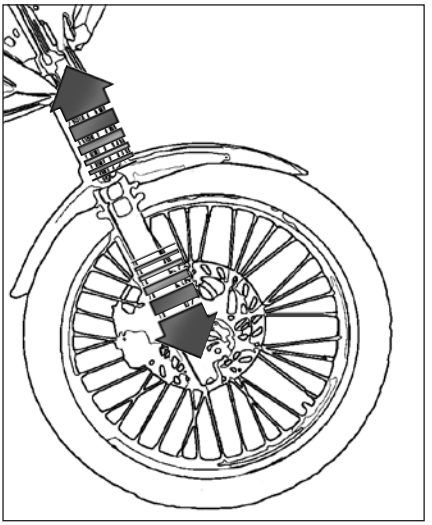
Periodically check the play in the steering sleeve by moving the fork back and forth as shown in the figure. Whenever you feel play, adjust as described below:
- Unscrew the screws **1**
- Loosen nut **2**
- Take up the play by means of ring nut **3**

Tighten the screws to the prescribed torque values.





NOTE: Correct adjustment, in addition to not leaving any play, should not cause difficulty or irregularity in turning the handlebar.

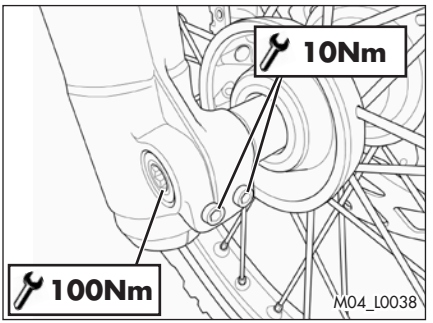


FRONT WHEEL

TIGHTENING

Following removal of the wheel:

Compress and release the fork 3-4 times.



- Tighten the wheel bolt and the screws of the foot-leg.

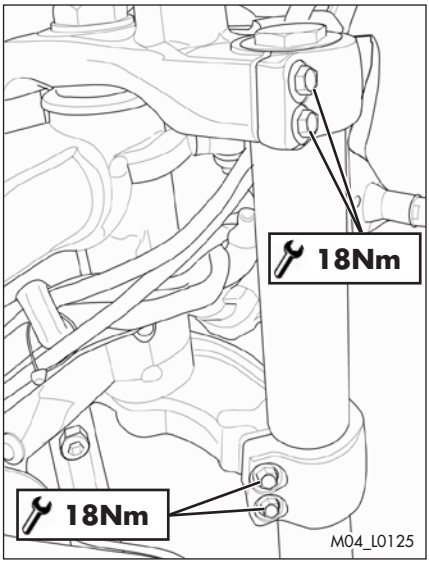
WARNING:
Tightening of the screws should be carried out by adjusting the torque wrench to the stability torque with repeated tightening until stability torque has been achieved.

FORK

To maintenance refer at an authorized service centre Betamotor.

To check the tightening torques see as shown in the figure.

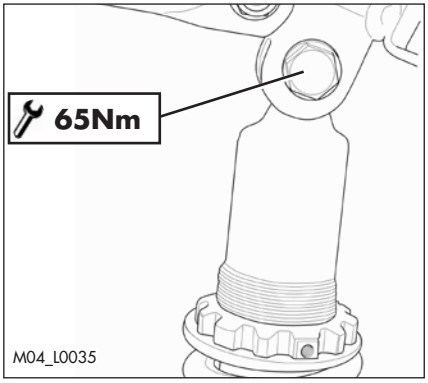
WARNING:
Tightening of the screws should be carried out by adjusting the torque wrench to the stability torque with repeated tightening until stability torque has been achieved.

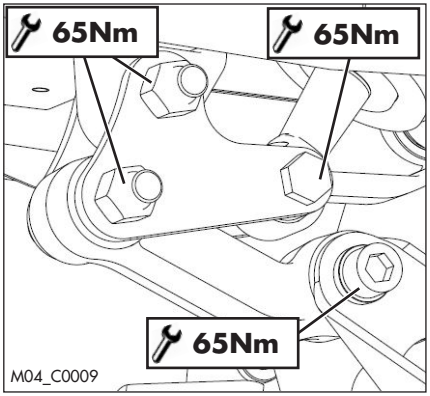


REAR SUSPENSION LEVERAGE

In order to guarantee optimal operation and duration over time of the progressive leverage of the rear suspension, it is recommended to periodically check correct tightness of nuts and bolts.

Verify that suspension nuts and bolts are at the indicated torque.





TYRES

Only fit tyres approved by BETAMOTOR.
Unsuitable tyres can adversely affect the road holding of the vehicle.

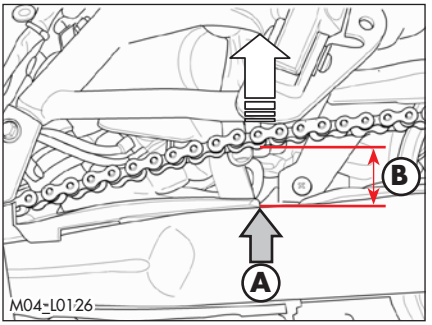
- To protect your safety, immediately replace any damaged tyres.
- Slick tyres adversely affect the road holding of the vehicle, especially on wet roads and in off-road riding.
- Insufficient pressure results in abnormal wear and overheating of the tyres. Keep tyres at the pressure indicated on page 14.
- The front and rear tyres must have the same tread design.
- Always measure the inflating pressures when the tyres are cold.

New tyres have less grip on the ground.
• Run-in new tyres at a moderate speed and increase the lean angle slowly.
Running-in distance 200 km.

CHAIN

Checking the drive chain periodically to ensure longer chain life. Always keep it lubricated and clean of deposited dirt.

Take special care in preventing the lubricant from coming into contact with the rear tyre or brake disc, otherwise the tyre grip and the action of the brake would be greatly reduced, making it very difficult to control the vehicle.



CHAIN TENSIONING CHECK

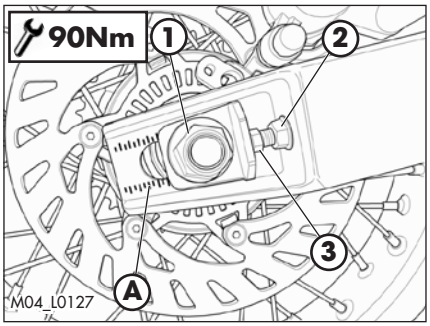
Shift the gear to neutral 'N' position.
Keep the vehicle upright
Tension the chain in area **A** at the end of the chain shoe.
Measure the distance **B** between the swing arm and the lower edge of the chain.
The maximum distance **B** must be 35 -40mm
If the distance **B** differs from the indicated value, proceed with the adjustment.

CHAIN TENSION ADJUSTMENT

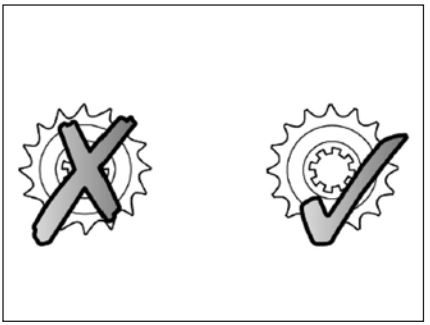
WARNING!
Incorrect chain tension damages components and causes accidents.
If the chain tension is excessive, the chain, sprocket, chainring, rear derailleur shaft bearings and rear wheel bearings wear out more quickly. Some components may break when overloaded.
If the chain tension is insufficient, the chain can fall off the sprocket or chainring. Then the rear wheel locks or the engine is damaged.

It is therefore recommended to:

- Check chain tension regularly (page 58).
- Adjust the chain tension according to the following indications.
- Raise the motorbike using the rear kickstand.
- Loosen the nut **1**.
- Loosen locknuts **2** on both swing arm legs.
- Turn adjusting screw **3** on both sides until the desired chain tension is reached. Adjust so that the left and right chain tensioners are in the same position in relation to the **A** marks on the swing arm legs. This ensures that the rear wheel is correctly aligned.
- Tighten locknuts **2** on both swing arm legs.
- Tighten the nut **1** to the specified torque.



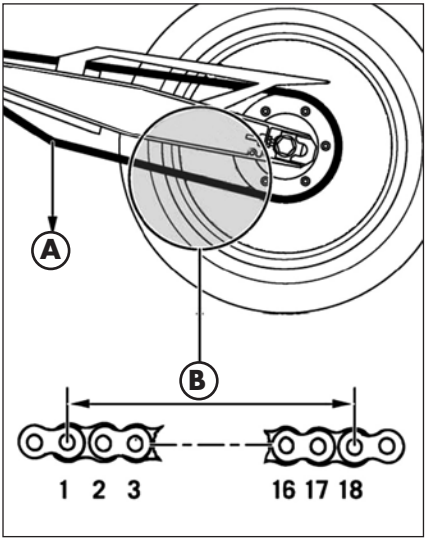
WARNING:
Check that no chain lubricant is present on the wheels or brakes. If present, remove it carefully.



CHAIN, SPROCKET, CROWN WHEEL AND CHAIN GUIDE CHECK

Raise the motorbike using the rear kickstand
Check that the chain, chainring and sprocket are not worn. If the chain, chainring or sprocket is worn, proceed to replace the final drive kit.

Attention, chain, sprocket and chainring must always be replaced together!



Shift the gear to neutral 'N' position
Apply a 5 kg weight to the indicated area **A**.
Measure the wheelbase at distance **B**.
The maximum distance **B** between 18 rollers at the longest point of the chain must be ≤273.5mm
If the distance **B** is greater than the indicated value, proceed to replace the final drive kit.

CHECKINGTHE REAR WHEEL COUPLING

The force of the engine is transmitted from the chainring to the rear wheel via rubber damping pads. These tend to wear out during operation. If the damping rubbers are not replaced in time, the coupling plate and rear hub are damaged

To check the state of use, the rear wheel must be removed.

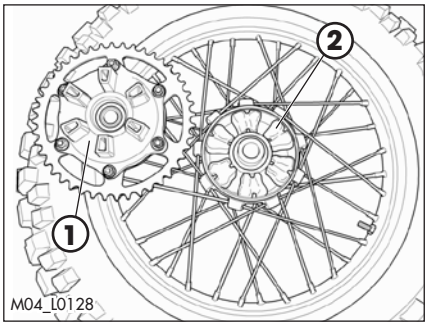
Place the rear wheel on a workbench, with the chainring facing upwards, and insert the wheel axle into the wheel hub.

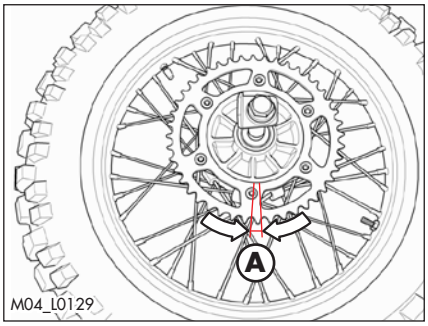
Hold the wheel still and attempt to turn the crown wheel with your hands. The play is measured on the outside of the chainring. Play must be ≤5mm

If the play **A** is greater, replace the rubber pads.

Slide the crown/drive assembly **1** off the hub; check the condition of the rubber pads **2**. Replace rubber pads if they are damaged or worn.

Once the operations have been completed, refit the rear wheel and check the chain tension (page 58)





HEADLIGHT

Keep the headlight glass clean at all times (see page 66).

Periodically check the correct angle of the light beam.

For the orientation of the headlight, refer to page 41.

The LED headlight is sealed. In the case of burnout of one or more LEDs it is necessary to replace the entire group.

To replace, contact authorised Betamotor customer service.

TAIL LIGHT

Keep the tail light glass clean at all times (see page 66).

The LED headlight is sealed. In the case of burnout of one or more LEDs it is necessary to replace the entire group.

To replace, contact authorised Betamotor customer service.

TURN INDICATORS

Keep the turn inicators glass clean at all times (see page 66).

To reach the bulb, remove the glass cover by loosening screw.
Remove the bulb from the lamp holder and replace.

PLATE LIGHT

Keep the plate light glass clean at all times (see page 66).

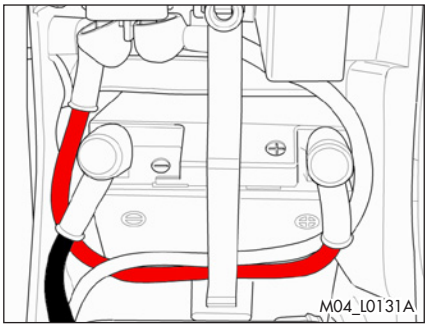
The LED headlight is sealed. In the case of burnout of one or more LEDs it is necessary to replace the entire group.

To replace, contact authorised Betamotor customer service.

BATTERY

Battery is located under the saddle and requires no maintenance.

Keep the battery terminals clean. If necessary, protect them with a thin film of acid-free grease.



WARNING:
The battery contains hazardous substances:
- Keep the batterie out of the reach of children.

WARNING:
Batteries contain environmentally hazardous materials, dispose of the used batteries at a local collection point.

- Keep sparks and open flames away from the battery.

- Charge the battery only in well-ventilated areas, keeping it away from flammable materials. Use only chargers suitable for charging lithium-ion batteries.

- Do not attempt to charge fully exhausted batteries with a voltage lower than the minimum 9V. In this case, dispose of the battery according to applicable regulations.

- Do not remove the protections.

- When installing the battery, be sure to observe the polarity of the terminals.

BATTERY REMOVAL AND ASSEMBLY

Remove the saddle (page 72).

Release the rubber band.

FIRST disconnect the negative connector (black) from negative (-) pole and THEN positive connector (black) from negative (+) pole.

Remove the battery.

When fitting the battery, insert it with the terminals as shown in picture.

FIRST connect the positive connector (red) from positive (+) pole and then negative connector (black) from negative (-) pole.

Reattach the rubber band.

WARNING:
Exercise extreme caution if, for any reason, the electrolyte (sulphuric acid) should come out of the battery. The electrolyte can cause serious burns. In case of contact with the skin, rinse abundantly with water.
Should the electrolyte come into contact with the eyes, rinse with water for at least 15 minutes and immediately seek medical attention.
Even though the battery is sealed, there is a possibility that explosive gases may leak out.
Keep sparks and open flames away from he battery.
Keep spent batteries out of the reach of children and dispose of them as prescribed by law.
Do not remove the protections.
When installing the battery, be sure to observe the polarity of the terminals.

INACTIVITY

If the vehicle is not going to be used for a long time, remove the battery and charge it every 15 days using a suitable charger or a charger mantainer.

Store the battery in a dry place at a temperature of 5 to 35°C and out of the reach of children.

CHARGING THE BATTERY

Using an open-circuit multimeter (10-12 hours after the activation), check that the voltage is greater than 12.6 V. If it is lower, it is advisable to recharge the battery.

Based on the type of charger available, charge the battery using either of the following procedures:

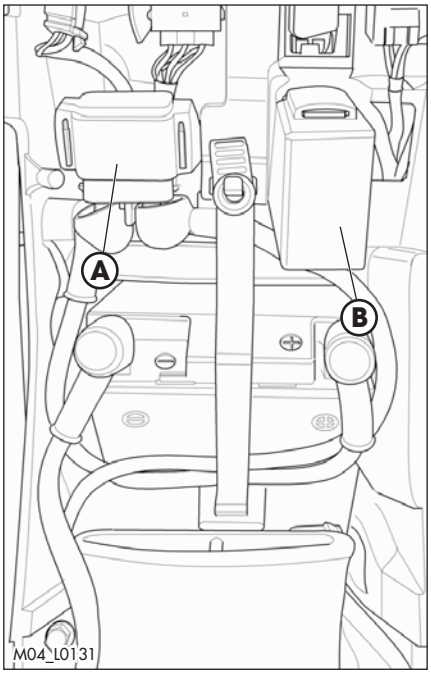
- Constant voltage (14.4-15 V) - Charge the battery for about 12 hours. Check the voltage 10-12 hours after the end of recharge as described above.
- Constant current: Charge battery at 0.5-0.8 A until the voltage between the terminals stabilizes at ~14.5 V.

WARNING:
The battery is sealed. When recharging it, do not remove the seal nor add any liquid.

FUSES

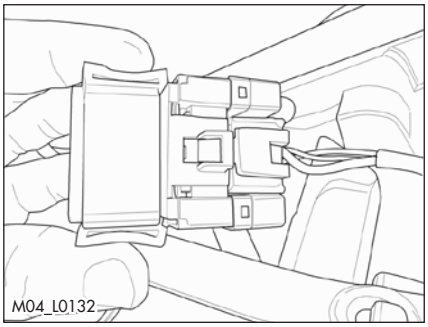
The vehicle is equipped with two fuse assemblies:

- A fuse assembly **A** located below the starter relay.
- A fuse assembly **B** placed in the fuse box.



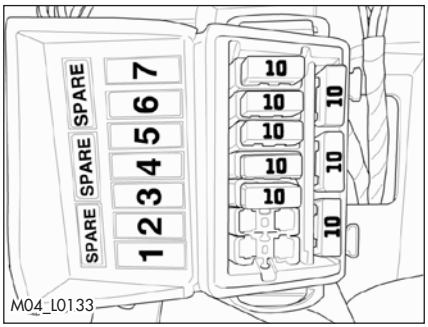
Fuses **A** protect

Fuses A			
[A]	Protected device	Quantity	Type
30	Battery	1	Standard
30	Spare	1	Standard



Fuses **B** protect

Fuses B				
[A]	Protected device	Pos.	Quantity	Type
10	ABS	3	1	Mini
10	ABS	4	1	Mini
10	Services	5	1	Mini
10	Lighting system	6	1	Mini
10	Injection system actuators	7	1	Mini
10	Spare		3	Mini



4 CLEANING THE VEHICLE

GENERAL PRECAUTIONS

WARNING: Do not clean your vehicle with a high-pressure device with a strong jet of water. Excessive pressure can reach electrical components, connectors, flexible cables, bearings, etc and can damage or destroy them.

WARNING: Wash motorbikes frequently with cold water that are used near the sea (salty air) and on roads subject to salt spreading in winter. Cover with a film of oil or silicone spray unpainted parts and the most exposed parts such as wheels, forks and swingarm. Do not treat rubber parts and brakes.

When cleaning, avoid direct exposure to sunlight.

Close off the exhaust system to prevent water from entering.

Avoid directing the jet of water onto the air filter box cover and the throttle body.

WASHING MODE

Use water jet to soften the dirt and mud accumulated on the paintwork, then remove them with a soft bodywork sponge soaked in water and shampoo. Subsequently rinse well with water, and dry with air and cloth or suede leather.

Detergents pollute water. Always wash the vehicle in areas equipped for collection and purification of the washing liquids.

AFTER WASHING

Proceed to the emptying of the filter box using the appropriate ventilation and drying (page 52).

After cleaning, ride a short distance until the engine reaches operating temperature.

WARNING: braking effect is reduced with wet brakes. Operate the brakes cautiously to allow them to dry.

Push back the handlebar control covers, so that water can evaporate.

When the bike is completely dry and cooled down, lubricate all moving parts.

Treat all plastic and painted components with non-aggressive detergents or products that are specific for the care of the motorcycle.

To prevent malfunction of the electrical system, treat electric contacts and switches with electrical contact spray.

ATTENTION: any oxidation of electrical contacts may result in serious malfunctioning to the power supply system.

PROLONGED INACTIVITY

A few simple operations should be performed to keep the vehicle in good condition whenever it is to remain inactive for a long period (e.g. during the winter):

- Thoroughly clean the vehicle.
- Reduce the tyre pressures by approximately 30 percent, and if possible raise the tyres off the ground.
- Cover the unpainted parts, excepting the brakes and the rubber parts, with a film of oil or spray silicone.
- Remove the battery and keep it in a dry place. Charge the battery every 15 days.
- Protect the vehicle with a dust cover.

AFTER PROLONGED INACTIVITY

- Reinstall the battery.
- Restore the tyre inflating pressures.
- Check the tightening of all the screws having an important mechanical function.

MAINTENANCE SCHEDULE

		Before every ride	End of run-in: 1.000 km (620mi)	Every 1.000 km (620 mi) Or 3 months	Every 6.000 km (3720 mi) or 15 months	Every 12.000 km (7440 mi) Or 30 months
Engine	Engine oil level	C				
	Engine oil		S		S	
	Engine oil filter		S			S
	Air filter *		C	P		
	Valves play					C
	Spark plug					C
	Tightening of exhaust system		T		T	
	Clutch play		C		C	
	Throttle body		C			C
	Idle speed adjustment		C		C	
	Cooling liquid level	C				
	Cooling liquid	REPLACE EVERY 3 years				
Assembling groups	Evaporative emission control system					C
	Air box fluds collection				P	
	Fuel system piping*				C	
		REPLACE EVERY 2 years				
	Cooling system piping*				C	
	Motor oil piping*		C		C	
	Drives sliding and regulation		C		C	
	Internal filter box condition*			C		P+C
	Side kickstand*	C	C			C
	Lubricate all moving parts and check their smoothness	C	C		C	
Cycling	Chassis					C
	Swing arm					C
	Transmission chain	C	C	C+P		
	Rear wheel coupling*				C	
	Chain skids*					C
	Shock absorber		C			C
	Rear suspension linkage		C			C
	Front fork	C	C		C	
	Bearings of stearing and play	C	C		C	

Legend

C **Check** (Clean, adjust, lubricate, replace as necessary)
S **Replace/renew**
P **Clean**
T **Tension/Tighten**

* Halve the mileage in case of use purely off-road use

		Before every ride	End of run-in: 1.000 km (620mi)	Every 1.000 km (620 mi) Or 3 months	Every 6.000 km (3720 mi) or 15 months	Every 12.000 km (7440 mi) Or 30 months
Braking system	Brake pads wear	C	C		C	
	Brake system hoses (replace every 2 years) *		C		C	
		REPLACE EVERY 2 years				
	Brake system fluid (replace every 2 years)		C		C	
		REPLACE EVERY 2 years				
	Brake system fluid level	C	C		C	
Electrical system	CDI diagnosis		C		C	
	Electrical system operation and connector maintenance*		C		C	
	Engine cut-off switch	C				
	Electric fan operation		C		C	
	Battery check		C		C	
	Verification of lighting and visual and audible warning system*	C	C		C	
Wheels	Tyres		C		C	
	Tyres pressure	C	C			
	Wheel spokes tension*		C		C	
	Bearings				C	
	Easily accessible and safety-related nuts and screws are well in place*		C		C	

Legend

C **Check** (Clean, adjust, lubricate, replace as necessary)
S **Replace/renew**
P **Clean**
T **Tension/Tighten**

* Halve the mileage in case of use purely off-road use

Notes for workshops: n completion of maintenance and repair work, check that the vehicle is fit and safe for road use and carry out a test drive.

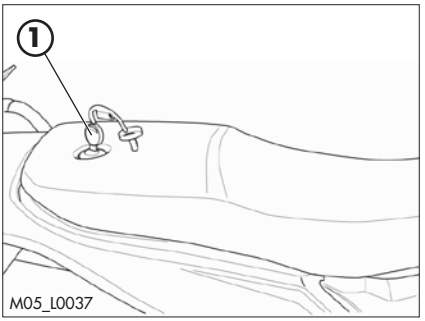
At the end of the test run, read out the error memory via the diagnostic system.

Register the intervention on the Betamotor portal.

CHAPTER 5 REMOVING AND INSTALLING SUPERSTRUCTURES

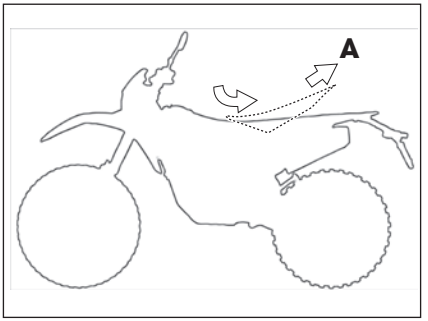
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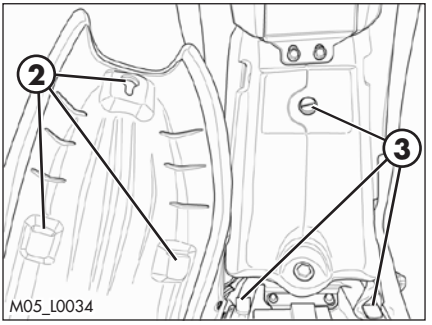


REMOVING AND INSTALLING OF THE SADDLE

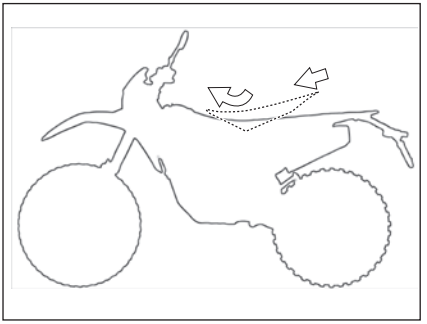
To remove the saddle, insert the key into lock
1 and turn clockwise.



Remove the saddle in the direction **A** indicated in the figure.



To re-assemble:
Insert the cavities **2** of the saddle into anchors **3**.



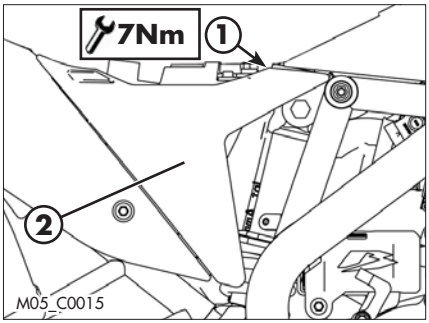
Press the saddle down in the middle and at the same time, push it forwards until the bayonet joint engages in its seat.
Press coupling **1** downwards.

REMOVING AND INSTALLING OF THE RIGHT SIDE PANEL

Disassembly and assembly of the right side panel is different for ALP 4.0 and ALP X.

ALP 4.0

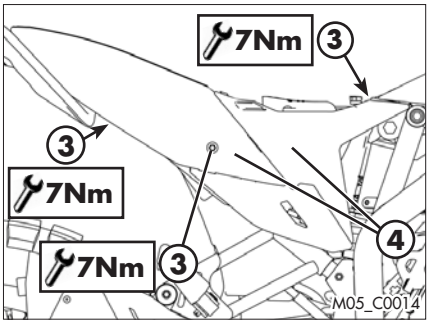
1. Remove the saddle (page 72).
2. Remove the screw **1**.
3. Afferrare il fianchetto **2** e tirarlo a se.

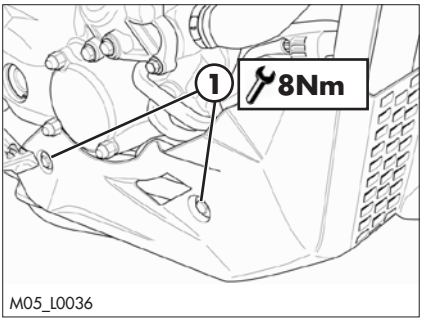


ALP X

1. Remove the saddle (page 72)
2. Remove the shown screws **3**.
3. Grasp the entire sidewall **4** and pull it towards you by moving it from the front.

Attention! For re-assembly, ensure that all parts fit together correctly.
For reassembly, proceed in the reverse order of the above steps.



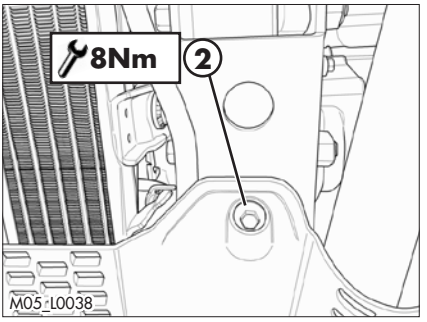


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REMOVING AND INSTALLING OF THE ENGINE PROTECTION

Disassembly

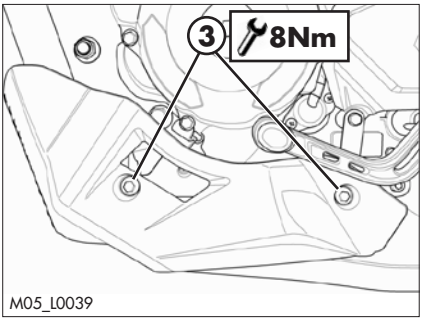
Remove all screws **1**, **2** and **3** anchoring the engine protection to the frame, shown in the figure.



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Assembly

Attach the engine protection plate and tighten it with the specified screws to the specified torque.



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CHAPTER 6 TROUBLESHOOTING

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PROBLEM	CAUSE	REMEDY
The engine starts and the telltale "MIL" lights on	- Engine management system fault	Contact authorised BETAMOTOR customer service
The engine doesn't start	-Fuel system (tubes, fuel tank, valve) is blocked	Clean the system
	-Air filter is very dirty	Proceed as indicated on page 51
	-No current arriving at spark plug	Clean or replace spark plug. If the problem persists, contact authorised Betamotor customer service
	-Engine is flooded	With gas completely open, continue trying to start engine for a few moments. If engine still doesn't start, remove the spark plug and dry it off
	- Right switch off selector on	Set the right switch selector to (page 20)
	-Gear engaged and side stand lowered	Close the stand, place the gearbox in neutral and pull the clutch
Engine misfires	-Spark gap wrongly adjusted	Restore the spark gap
	-Spark plug dirty	Clean or replace the spark plug
Engine overheats and loses power	-Silencer partly clogged	Contact authorised BETAMOTOR customer service
	-Valve adjustment too low	Contact authorised BETAMOTOR customer service
	-Mixture too lean	Contact authorised BETAMOTOR customer service
	-Ignition delayed	Contact authorised BETAMOTOR customer service
Front braking poor	-Brake pads worn	Contact authorised BETAMOTOR customer service
	-Air or humidity in the hydraulic circuit	Contact authorised BETAMOTOR customer service
Rear braking poor	-Brake pads worn	Contact authorised BETAMOTOR customer service
	-Air or humidity in the hydraulic circuit	Contact authorised BETAMOTOR customer service

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