

GAS GAS

USER MANUAL

TXT RACING 2017 E4



GAS GAS thank you for the trust you have placed in us.

By choosing the new GAS GAS TXT GP 2017-E4 you have become part of the great GAS GAS family and, as a user of the number one manufacturer of off-road motorbike, you deserve the distinguished treatment that we wish to offer to you both in our after-sale relationship and in the explanations that we provide in this manual.

Our TXT RACING 2017-E4 2017 is a bike conceived for the practice of high-competition trial. It is actually the fruit of many years of competition and experimentation in this demanding discipline, as well as the many great successes achieved thanks to great trial riders who have contributed with their expertise to the basic data that have allowed us to create a high-level motorbike, a GAS GAS which counts on its low weight as a significant key factor.

Congratulations for making the right choice. With your skills at the commands of this motorbike, an adequate preparation and the indispensable servicing for this to be highly reliable, you will be able to enjoy the most comfortable and rewarding trial practice.

Thank you for your trust in us, and welcome to GAS GAS.

February - 2017



Important notice

Read this Manual carefully. You will find it contains all the necessary information for your safety, and that of third persons, as well as guaranteeing the correct conservation and maintenance of the GAS GAS motorbike you have just bought.

You will find all the necessary instructions for the correct riding and control of this vehicle are set out below. Each message is preceded by a sign whose meaning is the following:



Be careful! This sign introduces all those rules and precautionary measures necessary to avoid slight or severe injuries, or even the death of the user should these instructions not be correctly followed.



Look out! This sign introduces special warnings to avoid damaging your motorbike. Should these warnings not be heeded, the guarantee may be automatically invalidated.



Various notes. These are the indications necessary for the optimal control and adjustment operations, together with those tasks of conservation and maintenance of the motorbike in order that you may obtain the greatest possible satisfaction from your vehicle.

The aim of this Manual is to help the user to minimise or avoid possible damage to people, property, the environment, and naturally to his/her new motorbike. For this reason, all the information presented here is based on data obtained from the latest models put on the market just before the publication of this Manual. However, GAS GAS reserves the right to make modifications without any prior warning being given to consumers and without incurring any additional obligations in so doing. Your local dealer will also provide you with any information as might be deemed necessary.

Contents

Thanks to consumer	3	Carburettor dismantle	27
Important notice	4	Carburettor capacity check	27
Warranty regulations	6 to 8	Carburettor cleaning	27
Recommendations	9	Inlet valves dismantle	28
Technical specifications	10 & 11	Inlet valves	28
Component location	12 & 13	Clutch operations	29
Maintenance guide	14 & 15	Discs and clutch spring	29
Serial number	16	Air bleed	29
Combination switch	17	Water pump draining	29
Steering lock	18	Front suspension	30 & 31
Combustible	18	Rear suspension	32
Fuel tank cap	19	Swing-arm articulations	33
Fuel tap	20	Articulation lubrication	34 to 36
Starter	20	Chain fixing link position	37
Carburation	20	Chain and wheel tension	37
Kick-start engine pedal position	21	Tyres and tyre pression	38
Lever regulation	21	Brakes	39
Oil level checking	22	Rear brake fluid tank	40
Crankcase fill-in	22	Installation	41-43
Crankcase draining	22	Torques	44
Air filter box cleaning	23	Storage	45
Fuel tank dismantle	24	Multifunction	46-48
Radiator fill-in	24	Troubleshooting	49 to 53
Spark dismantle	25	Finally recommendations	54
Spark check	25		
Air filter box dismantle	26		

WARRANTY TERMS AND CONDITIONS

(According to Law decree 23/2003 on the 10th of July, covering Warranties on Consumer Item Sales)

Warranty terms of the trademark GASGAS.

The trademark GAS GAS (hereafter referred to as "GG"), with this present document guarantees the consumer, the purchaser of a vehicle manufactured by GG, that both the materials and the manufacturing are free of defects in accordance with the highest standards of quality. Consequently, GG with this document guarantees the consumer (hereafter referred to as the "purchaser"), in accordance with the conditions set out below, the repair, free of charge, of any defect in materials or that might result from faulty manufacture that is detected in a new motorcycle within the period covered by this Warranty and with no limit on the number of kilometres covered or hours of use.

Warranty Period

The period covered by this Warranty will begin on the day of delivery of the vehicle to the purchaser by a GG authorised dealer, or in the case of demonstration models, on the date in which the vehicle is used for the first time. The seller will be responsible for any unwarranted faults that become apparent within the period established in the Law decree 23/2003 on the 10th of July covering Warranties on Consumer Goods Sold from the time of delivery and in accordance with the Directive 1999/44/EC for other members of the European Community. For countries outside the European Community, the Warranty Period will be determined by the existing regulations in those countries. Nevertheless, should the fault appear during the first six months after the delivery of the motorcycle, it will be presumed that the said fault existed at the time of delivery; from the end of the sixth month onwards, the purchaser must demonstrate that the unwarranted fault existed at the moment of delivery. During the first six months subsequent to the delivery of the repaired vehicle, the seller will be responsible for any unwarranted faults arising out of the repair.

Any defects detected in the product must be brought to the attention of a GG authorised dealer within the Warranty Period. If the last day of this period is a Sunday or an official holiday, the Warranty period will be extended such that the last day of the period covered will be the first working day after the Sunday or official holiday.

Those claims under Warranty for defects not brought to the attention of a GG authorised dealer before the end of the Warranty Period will be excluded.

Obligation of the purchaser

GG will have the right to reject any claims under Warranty in the event that:

- a)** The purchaser has failed to submit the vehicle to any of the inspections and/or maintenance work required in the Users' Manual, or has exceeded the date set for such inspections or maintenance work. Also excluded from guarantee are those faults that appeared prior to the dates established for an inspection or maintenance work where the latter was not carried out, or was carried out later than the date established.
- b)** An inspection, maintenance or repair has been performed on the vehicle by third parties not recognised or authorised by GG.
- c)** Any maintenance or repair has been carried out on the vehicle that violates the technical requirements, specifications and/or instructions indicated by the manufacturer.
- d)** Spare parts whose use has not been authorised by GG have been used during the course of maintenance work or repairs to the vehicle, or in the event that the vehicle has been used with fuels, lubricants or other liquids (including, amongst others, cleaning products) that have not been expressly mentioned in the specifications set out in the User's Manual.
- e)** The vehicle has been altered or modified in any way or fitted with components other than those expressly authorised by GG as accepted components of the vehicle.
- f)** The vehicle has been stored or transported in a way that is not in accordance to the corresponding technical requirements.
- g)** The vehicle has been used for special purposes other than ordinary use, such as competition, races or record breaking attempts.
- h)** The vehicle has been directly or indirectly damaged as a result of a fall or an accident.

Warranty exclusions

The following items are not covered by this Warranty:

- a)** Worn parts, including, without any limitation, spark plugs, batteries, petrol filters, oil filter elements, (secondary) chains, engine output pinions, rear sprockets, air filters, brake discs, brake pads, clutch plates and discs, bulbs, fuses, carbon brushes, footrest rubbers, tyres, inner tubes, cables and other rubber components
- b)** Lubricants (for example, oil, grease, etc.) and working fluids (for example, battery liquid, coolant, etc.)
- c)** Inspection, adjustments and other maintenance tasks, as well as all kinds of cleaning work
- d)** Damage to the paint-work and consequent corrosion due to external causes, such as stones, salt, industrial fumes and other environmental impact, or inadequate cleaning with inappropriate products

- e) Any damages caused as a result of the defects, as well as any expenses incurred either directly or indirectly as a consequence of the defects (for example, communication costs, accommodation expenses, car hire costs, public transport costs, breakdown truck fees, courier costs, etc.), as well as other financial losses (for example, those caused by the loss of the use of the vehicle, loss of income, time lost, etc.)
- f) Any acoustic or aesthetic phenomenon that does not significantly affect the condition or use of the motorcycle (for example, small or hidden imperfections, noise or vibrations that are normal in use, etc.)
- g) Phenomena that are the result of the ageing of the vehicle (for example, discolouring of painted or metallic coated surfaces).

Various

- 1.- GG shall have the prerogative to decide, at its own discretion, whether to repair or replace defective parts. Where parts are replaced, ownership of the parts removed shall pass to GG without any other consideration. The GG authorised dealer, to whom the making good of the defects has been entrusted, is not authorised to make any declarations that are binding on GG.
- 2.- In case of doubt regarding the existence of a defect, or a visual or material inspection is required, GG reserves the right to demand the return of the parts which are the object of a claim under Warranty, or to arrange an inspection of the defect by an expert from GG. Any additional obligations arising out of guarantees on parts replaced free of charge, or any other service rendered free of charge, are excluded from the effects of this present warranty. The Warranty on parts replaced within the Warranty Period will end at the expiry date for the Warranty Period of the product concerned.
- 3.- Should it prove to be the case that a defect can not be repaired, the purchaser guaranteed shall have the right to the cancellation of the contract (payment of compensation) or a partial refund of the purchase price (discount), instead of repairing the motorcycle.
- 4.- Any claims against Warranty by the purchaser under the terms of the sale contract with the corresponding authorised dealer shall not be affected by the terms of this present Warranty. Neither will this present Warranty affect those additional contractual rights acquired by the purchaser under the general commercial terms and conditions of the authorised dealer. However, such additional rights may only be exercised through claims against the authorised dealer.
- 5.- Should the purchaser resell the product within the Warranty Period, the duration and conditions of the present Warranty will remain unaltered, in such a way as that the rights to make claims under the present Warranty in accordance with the terms and conditions set out in this present document shall be transferred to the new owner of the motorcycle.

Recommendations for the reliable operation of your GAS GAS.

- Eight hours of running-in are recommended in order to guarantee the correct operation of the engine.
- It is important to warm the engine to the optimum operation temperature every time the motorbike is used.
- Synthetic or semi-synthetic 2-stroke oil should be used at 1,5% in the oil/petrol mix.

GASGAS

RECOMMENDS THE USE OF OIL:



TECHNICAL SPECIFICATIONS

ENGINE	2 stroke, single cylinder, direct reed valve crankcase induction. Liquid cooled.	
125 cc. engine	Cylinder size	124,8 cc.
	Bore and stroke	54 x 54.5 mm
250cc. engine	Cylinder size	247,7 cc
	Bore and stroke	72,5 x 60 mm
280 cc. engine	Cylinder size	272,2 cc.
	Bore and stroke	76 x 60 mm
300 cc. engine	Cylinder size	294,1 cc.
	Bore and stroke	79 x 60 mm
Lubrication system	Mixture (67:1)(1,5%)	
Ignition system	Digital magnetic flywheel CDI	

TRANSMISSION	
Transmission type	6 gears, Four / Six system by GAS GAS* (Patented).
Clutch type	Hydraulic command, 1/3 discs, variable progres. with diaphragm system by GAS GAS* (Patented).
Final drive system	By chain
Gear ratio	1st. 2,996 (35x27x28/16x24x23)
	2nd. 2,571 (36/14)
	3th. 2,187 (35/16)
	4st. 2,112 (36x23x24/14x28x24)
	5st. 1,125 (27/24)
	6th. 0,821 (23/28)

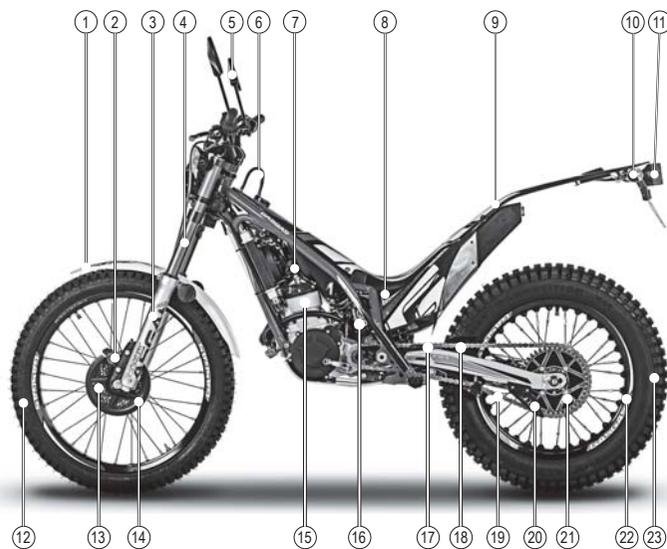
Primary reduction ratio		2,777 (75/27)
Final reduction ratio		3,818 (42/11).
Overall drive ratio		8,704 (6th. gear).
Transmission oil	Capacity	370 cc.
	Type	NILS FOR CLUTCH TX

FRAME		
Type		Tubular profile made with Cr-Mo.
Tyres	Front	2,75 x 21" Trial
	Rear	4,00 x 18" Trial tubeless
Suspension	Front	Adjustable tele-hydraulic fork ø 39 mm
	Rear	Variable progressive system with mono-shock multiadjustable.
Suspension stroke	Front	177 mm
	Rear	164 mm
Front fork oil		SAE 5 OJ 01 FORK FLUID.
Front fork oil level	Ø39 mm	Left-130mm Air chamber Right-75mm Air chamber mm

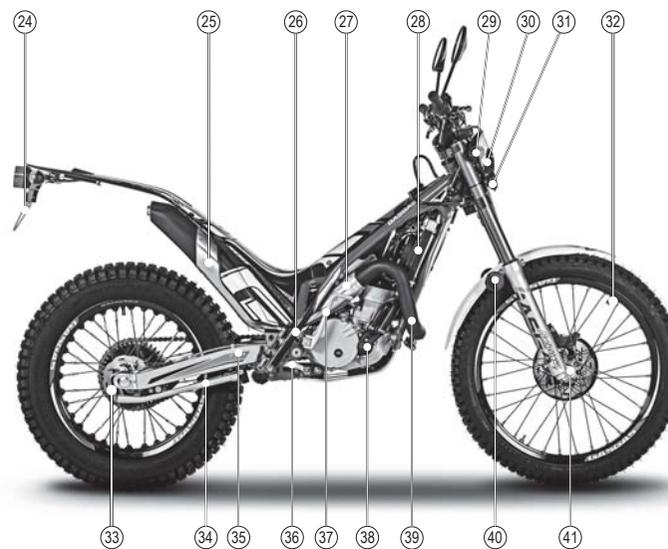
BRAKES		
Type		Disc brake.
Disc diameter	Front	Ø185mm 4 piston calipers
	Rear	ø150mm 2 piston calipers

DIMENSIONS		
Overall height		1130 mm
Overall width		825 mm
Seat height		660 mm
Ground clearance		325 mm
Wheelbase		1320 mm

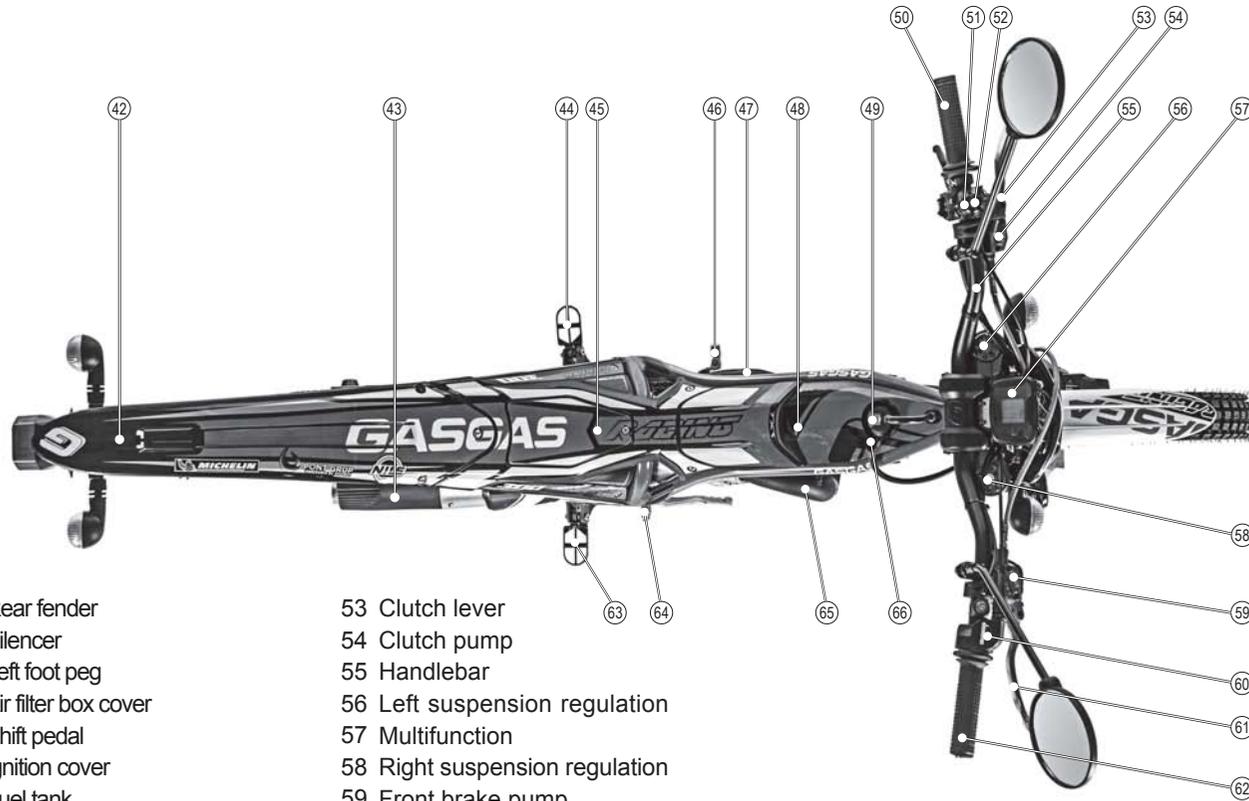
(Specifications subject to change without notice, which may not be applicable in every country).



- | | |
|-----------------------------|---------------------------|
| 1 Front fender | 13 Front brake disc cover |
| 2 Front brake caliper | 14 Front brake disc |
| 3 Front suspension left leg | 15 Cylinder |
| 4 Front suspension bar | 16 Carburetor |
| 5 Rear view mirrors | 17 Chain tensioner |
| 6 Breather hose | 18 Chain guide |
| 7 Spark plug | 19 Chain |
| 8 Filter box | 20 Rear sprocket cover |
| 9 Rear fender | 21 Rear sprocket |
| 10 Rear indicators | 22 Rear rim |
| 11 Tail lamp | 23 Rear tyre |
| 12 Front tyre | 24 License plate holder |



- | | |
|-------------------------|-----------------------|
| 25 Exhaust protection | 37 Kickstart pedal |
| 26 Frame | 38 Water pump |
| 27 Middle silencier | 39 Exhaust pipe elbow |
| 28 Radiator | 40 Catadioptric |
| 29 Front indicators | 41 Front wheel axle |
| 30 Headlight | |
| 31 Horn | |
| 32 Front tyre air valve | |
| 33 Rear brake disc | |
| 34 Sidestand arm | |
| 35 Swingarm | |
| 36 Rear brake pedal | |



- 42 Rear fender
- 43 Silencer
- 44 Left foot peg
- 45 Air filter box cover
- 46 Shift pedal
- 47 Ignition cover
- 48 Fuel tank
- 49 Fuel tank cap
- 50 Left handle grip
- 51 Light controls
- 52 Mil

- 53 Clutch lever
- 54 Clutch pump
- 55 Handlebar
- 56 Left suspension regulation
- 57 Multifunction
- 58 Right suspension regulation
- 59 Front brake pump
- 60 Throttle cover
- 61 Front brake lever
- 62 Throttle grip
- 63 Right foot peg

- 64 Rear brake pedal
- 65 Exhaust pipe elbow
- 66 Overflow

The maintenance table and adjustments are easy to carry out and must be done to insure the motorcycle is in good running condition.

MAINTENANCE TABLE

Part	Check / Inspect	Adjust	Replace / Change	Clean	Grease / Lubricate
Rear shock absorber	Every year	-	Every 2 years	-	-
Transmission oil	30 hours	-	60 hours	-	-
Front fork oil	-	-	60 hours	-	-
Brake adjust	Every race	If is necessary	-	-	-
Swingarm and connecting rods	Every race	-	If is damaged	Every race	Every cleaning
Spark plug	Every race	30 hours	60 hours	15 hours	-
Throttle cable and twist grip	Every race	If is necessary	If is damaged	If is necessary	Every cleaning
Chain	Every race	If is necessary	If is damaged	Every race	Every cleaning
Reed valve box	30 hours	-	If is damaged	Every race	-
Carburetor	Every race	If is necessary	If is damaged	Every race	-
Frame	Every race	-	If is damaged	Every race	.
Carburetor jet	-	If is necessary	If is damaged	-	-
Steering bearing	Every race	-	If is damaged	-	-
Piston bearing	-	-	If is damaged	-	-
Wheel bearing	-	-	If is damaged	-	-
Engine bearing	-	-	If is damaged	-	-
Rear sprocket	30 hours	First 5 hours	If is damaged	-	Every cleaning
Cylinder and cylinder head	60 hours	-	Every year	-	-
Brake	Every race	If is necessary	If is damaged	-	-
Brake disc	Every race	First 5 hours	If is damaged	Every 2 races	-
Clutch discs	-	-	If is damaged	-	-
Clutch	Every race	-	If is damaged	-	-
Engine protector plate	Every race	im a fall	if is damaged	-	-

NOTE: (*) Inspect or do this operations only it's necessary.

MAINTENANCE TABLE

Part	Check / Inspect	Adjust	Replace / Change	Clean	Grease / Lubricate
Exhaust	Every race	-	500 hours	-	-
Packing	-	-	100 hours	-	-
Air filter	Every race	-	If is damaged	Every race	Every cleaning
Steering assembly	Every race	If is necessary	-	-	-
Brake hose	Every race	If is necessary	Every 2 years	-	Every cleaning
Cooling fluid	Every race	If is necessary	Every year	-	-
General lubrication	Every race	-	-	Every race	Every cleaning
Front and rear rims	Every race	-	If is damaged	Every race	-
Tyres	Every race	-	If is damaged	Every race	-
Brake oil level	Every race	If is necessary	-	-	-
Chain guide slider	Every race	-	If is damaged	-	-
Kickstart and shift pedal	Every race	-	If is damaged	-	Every cleaning
Brake piston pump and the dustcover	-	-	If is damaged	-	-
Brake piston and the dust-cover	-	-	If is damaged	-	-
Piston and piston rings	60 hours	-	Every year	-	-
Front and rear spokes	Every race	5 hours	If is damaged	Every race	-
Fuel system	Every race	-	If is damaged	-	-
Front suspension	Every race	If is necessary	If is damaged	Every race with mud	Every race with dust
Exhaust o'ring	-	-	If is damaged	-	-
Bolts, nuts & fasteners	Every race	If is necessary	If is damaged	-	-
Fuel hose	Every race	If is necessary	If is damaged	-	-
Radiator hose set and connections	Every race	If is necessary	If is damaged	-	-
Frame protect sickers	Every race	-	if is damaged	-	-
Tire-silencer space (clearance)	Every race	1m a fall	if is damaged	-	-

NOTE: (*) Inspect or do this operations only it's necessary.

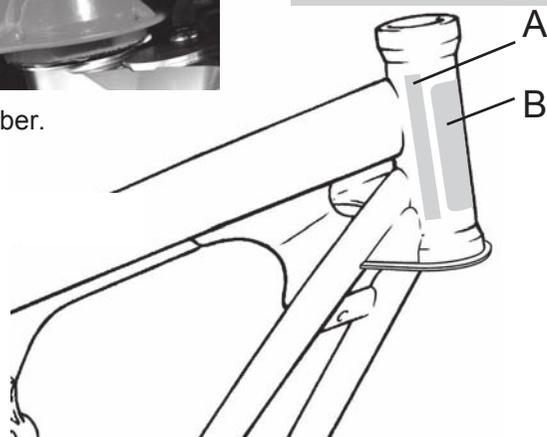


Serial number.



The new GAS GAS TXT RACING-E4 carries the appropriate certification plate whose details should coincide with those on the accompanying documentation and the frame number stamped on the steering arm.

Homologation conditions are detailed on sheets 56 to 57.



Enter the vehicle identification number (serial number), the particulars shown on the model label, and the ignition-key identification number in the spaces provided, in order to simplify your future orders for spare parts or as a useful reference in the event of your vehicle being stolen.

Serial number (A)

This has been printed on the steering tube. It shows the frame number used for registering this machine.

SERIAL N

Manufacturer's plate (B)

The motorcycle carries a certification plate showing a serial number that has also been printed on the front, and this information must coincide with that contained in the vehicle documents. We recommend that this information be entered in the box below.

HOMOLOGATION P.

Key identification numbers

The motorcycle carries one key set. The identification number appears right on the key joints. This number may be quoted when ordering a spare to replace a lost key. (except some racing models)

KEY NUMBER

 All light controls have been located on the left-hand grip; the various positions available are reached by sliding the main switch, which is on the left end of the grip.



 The indicator control has been located on the underside of the left-hand grip. This is an orange-colour button. To start the right-hand indicator, move this switch to the right; and likewise, to start the left-hand indicator, move this switch to the left.



 The control panel includes lighting, turn signal, horn and engine stop switches.





Located under the suspension lower right side bracket. For correct operation, it is necessary to turn the handlebar completely towards the right until it stops, insert the key in the slot, turn it in counterclockwise direction, press and to turn it again in clockwise direction. The key can now be removed and the steering will remain locked.



Never leave the key in the lock. If the steering is turned with the key in the lock it may be damaged and the locking system could be damaged.



Fuel tank capacity : 2,4 liters

Use premium gasoline with an octane rating equal to or higher than that shown in the table.

OCTANE RATING METHOD	MINIMUM RATING
Antiknock Index (RON + MON)/2	90
Research Octane No. (RON)	98



Gasoline is extremely flammable and can be explosive under certain conditions. Always stop the engine and do not smoke. Make sure the area is well ventilated and free from any source of flame or sparks; this includes any appliance with a pilot light.



Never mix vegetal and mineral oils together. Too much oil may cause an excessive amount of fumes and spark-plug dirt. Too little oil may cause engine damage or early wear.



This engine is designed to burn a mixture of combustible fuels, lead free petrol and oil.



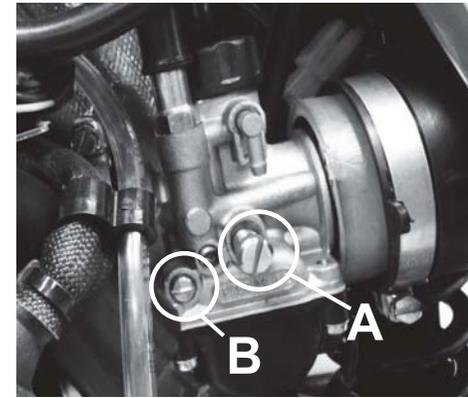
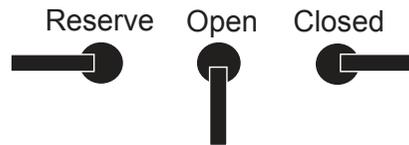
The fuel tank cap is of the quick release type. To open the cap, lift the tab and turn it 1/4 turn in counterclockwise direction. To close it, place cap with the words GAS GAS in the upper position, and turn the tab in clockwise direction. It is important to check periodically the condition of the cap sealing O'ring to insure proper sealing.

GASGAS
RECOMMENDS NILS DUO SYNT S

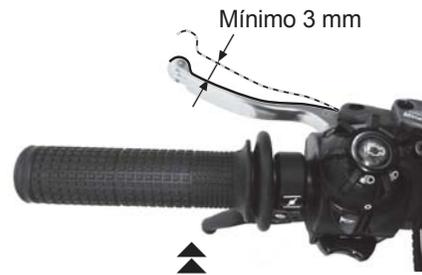




The position of the fuel tap (A) must be pointing down for normal operation. When turned forwards, it opens the reserve, to the rear turns off the fuel.



The idle (A) and petrol-air mixture (B) can be adjusted by the screw as shown in the illustration.



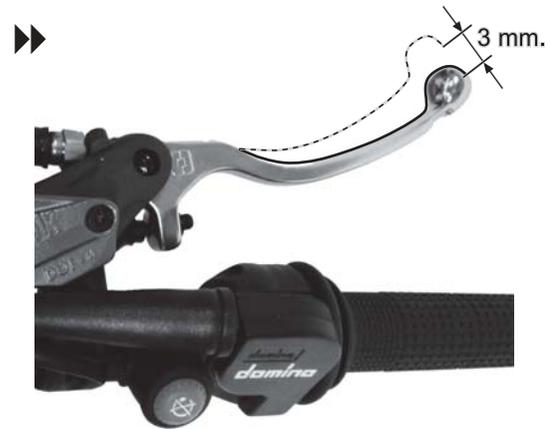
The clutch lever must be adjusted to your liking, but the free play should not exceed 3mm.

This play must never be eliminated.

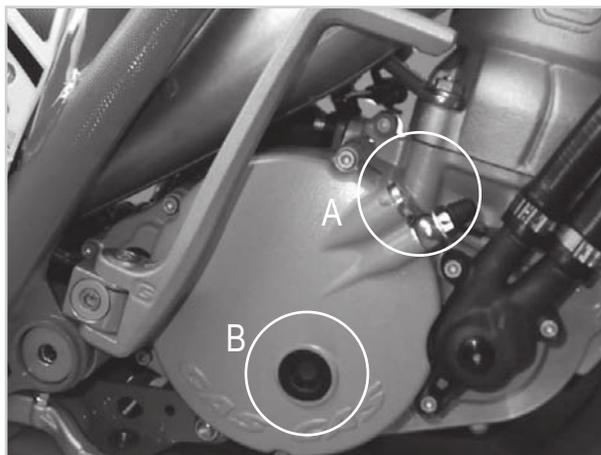


Like the clutch lever, the front brake lever must be in the ideal position. Again, the play must not exceed 3mm,

This play must never be eliminated.



This is the position the kick-start should be in when not being used.

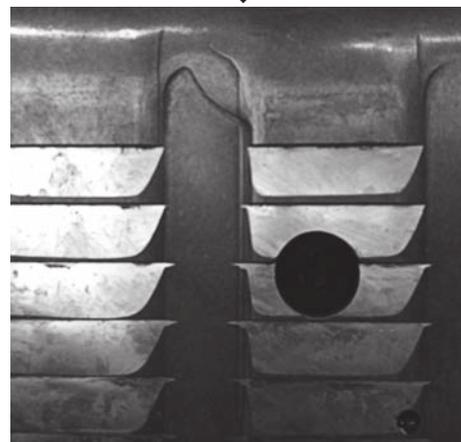


When topping up the oil, open the cap (A).

Engine Oil capacity 400cc.



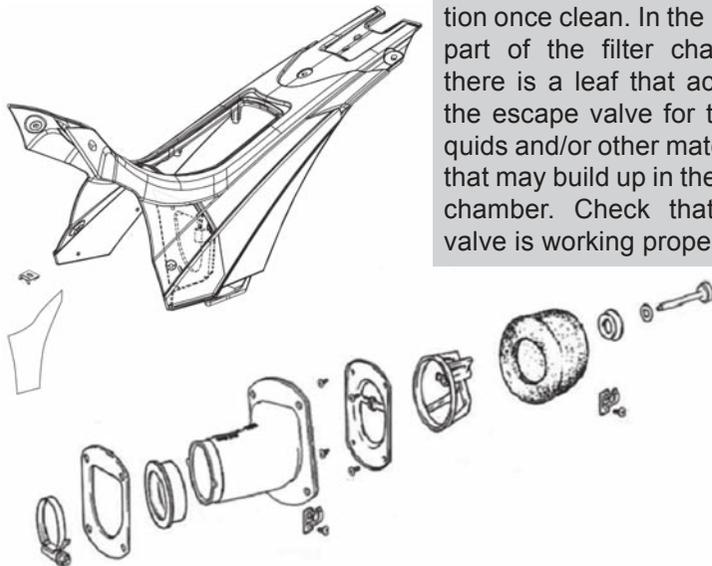
The engine crankcase drain cap is situated on the lower left-hand side. The drainage hole in the crankcase allows emptying.



To check the oil level, first make sure the motorbike is perpendicular to the ground. If the bike has been in use, wait a few minutes. To check the oil level, (B) and examine the level of oil using the window. The level should be in the middle of the window. If it is too high, drain the excess. If it is too low, add the necessary quantity by opening the oil cap. Use the same type and make of lubricant as that which is already in the engine.

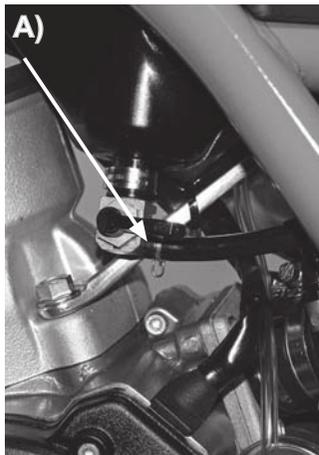


It is important to periodically check the air filter. Open the door on the motorbike as shown in the photo. Clean with water and detergent, then dry and lubricate with oil designed for filters. Ensure its correct installation once clean. In the lower part of the filter chamber there is a leaf that acts as the escape valve for the liquids and/or other materials that may build up in the filter chamber. Check that this valve is working properly.





Remove the fuel tank, located in the upper area of the chassis, before servicing the motor or any other internal part of the motorcycle. To do this, first check that the gasoline cap and fuel cock are closed properly. Next pull out the fuel tube end **(A)** which is inserted in the fuel cock. The third step is to unscrew the screw **(B)** fastening the front upper part of the tank. Once the fuel tank is released, lift it at the front section and remove the tank completely out the of the chassis **(C)**.



Cooling fluid
-30°C



When filling the radiator, use cooling fluid designed for lightweight alloy motors.



The engine must be cool before removing the radiator cap or when replacing radiator coolant, or severe scalding may result.



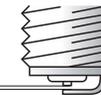


It is necessary to periodically check the spark plug condition. This must be done removing the spark plug from the upper part of the cylinder head. First disconnect the spark plug cap and remove area first. Clean the spark plug with compressed air to remove dirt and prevent foreign material from entering inside the engine compartment.



It is necessary to periodically check the state of the spark plug. The sparking plug distance should be between 0.6 and 0.7mm.

0,6 ≈ 0,7 mm.





To carry out any type of operations on and improve access to the carburetor, it is recommended to remove the filter box. You must follow these steps:

- 1.- Loosen the admission port clamp.
- 2.- Unscrew 4 tapered Allen screws M6 which are used to anchor the filter box to the chassis.
- 3.- Pull the filter box straight up just enough until the rear wiring connector is visible (Fig. 2).
- 4.- Disconnect the connector (Fig. 1).
- 5.- Remove the filter box completely.

The carburetor is now exposed and can be separated from the motor assembly by loosening the reed port clamp.

Loosen the two screws of the carburetor cap to allow the removal of the body to prepare it for cleaning.

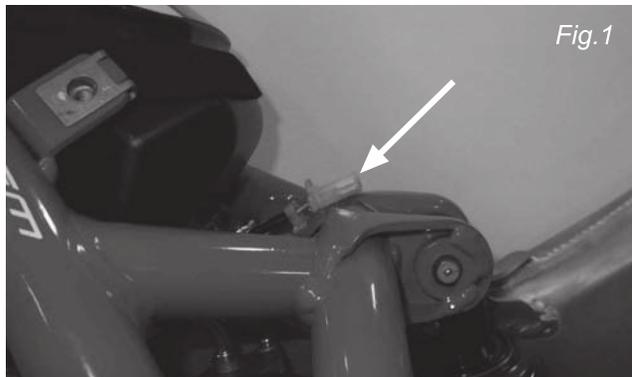


Fig.1



Fig.2



Extreme precautions must be taken to dry the inside of the carburetor thoroughly. Water droplets, dirt, or other foreign material may enter and damage the reed box and consequently cause damages to the piston and cylinder assembly.



It is important to check the level of petrol within the carburetor. The float should be at 15,16mm.



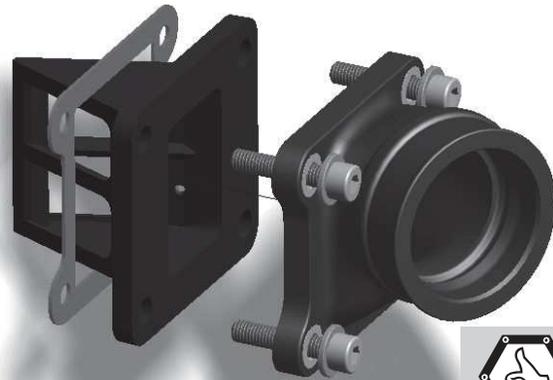
It is necessary to clean the carburetor very thoroughly. To do so use compressed air.



Dismantle and clean periodically the main nozzle after washing the bike, as well as cleaning the inside of the carburetor housing.



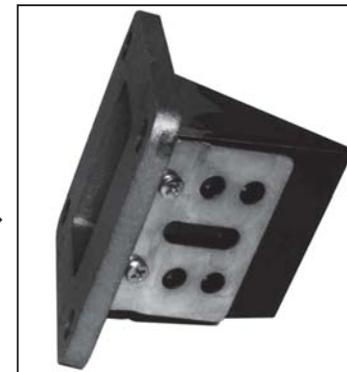
The reed box assembly is composed of only one body, the stops. To inspect the assembly remove it by removing the 4 screws which attach it to the rear of the left and right crankcases.



The distance between reeds and the reed keeper should be 6,5 mm for all types of displacement models. Reeds must be kept in perfect conditions with no signs of nicks, scratches, broken or folded sections. Otherwise, the reed assembly must be replaced with a new one.

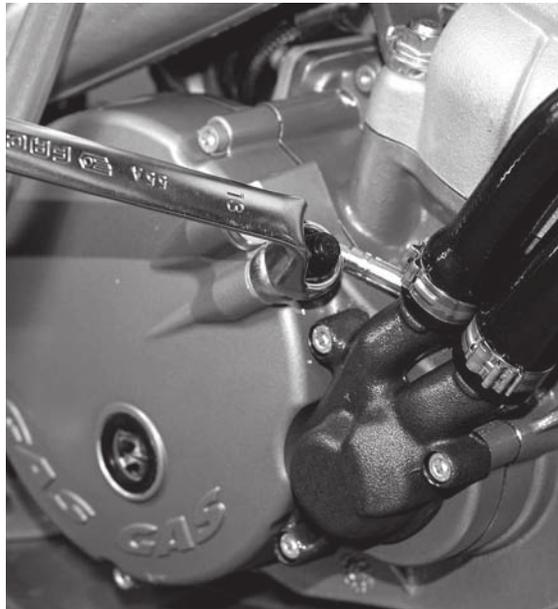


Since this is the last point of access to the inside of the cylinder, special precautions must be taken to keep it in good condition and to monitor its performance periodically. Cover the cylinder bore with a clean shop towel to prevent foreign material from entering the compartment when handling these parts.

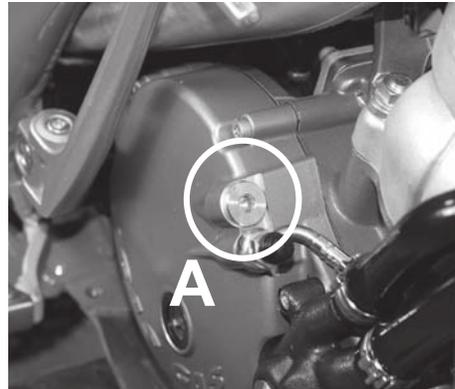
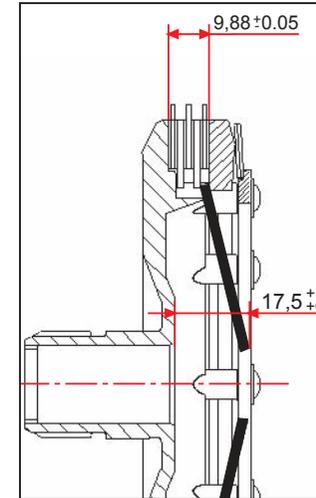
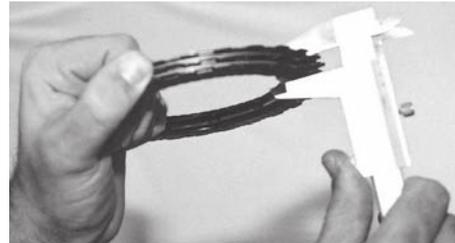




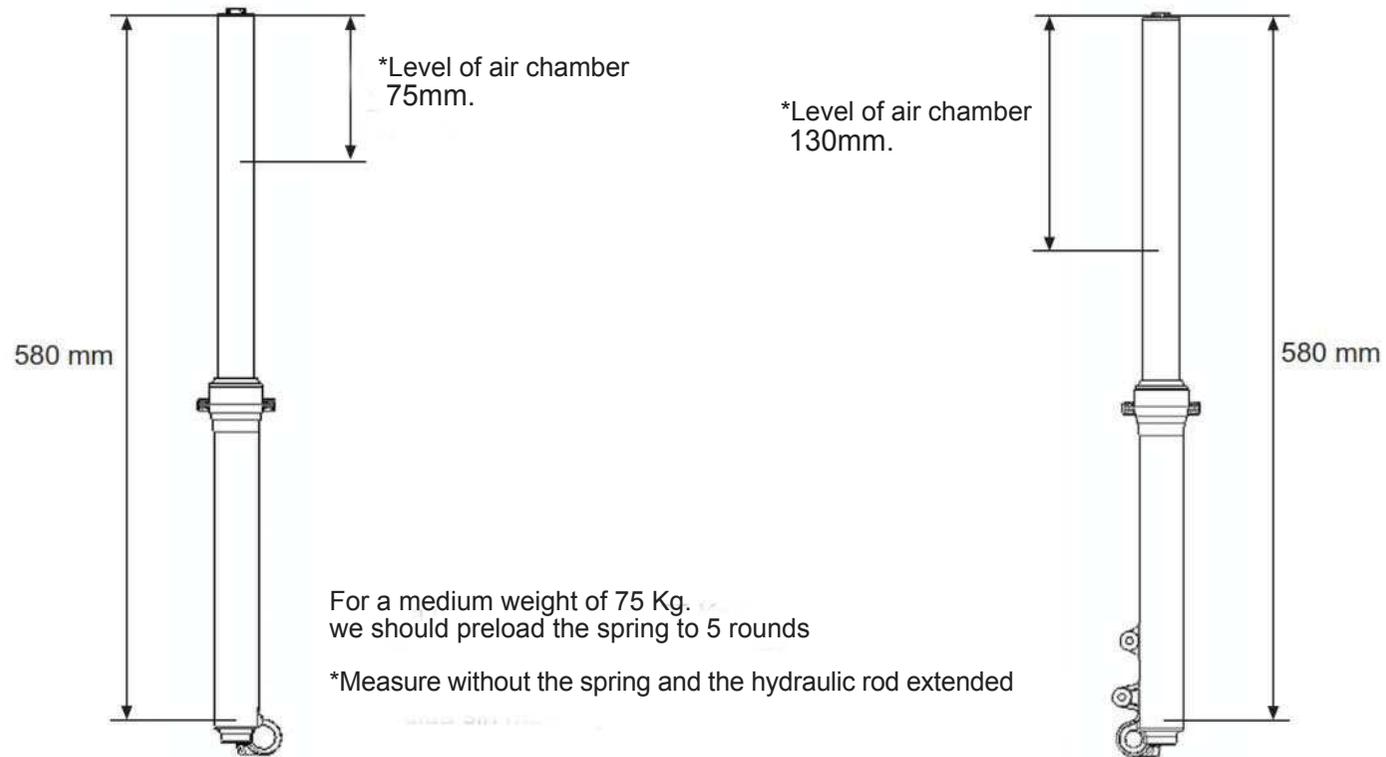
After any removal or assembly operations on the clutch air trapped inside must be purged by connecting wrench (spanner) and bleeding the system.



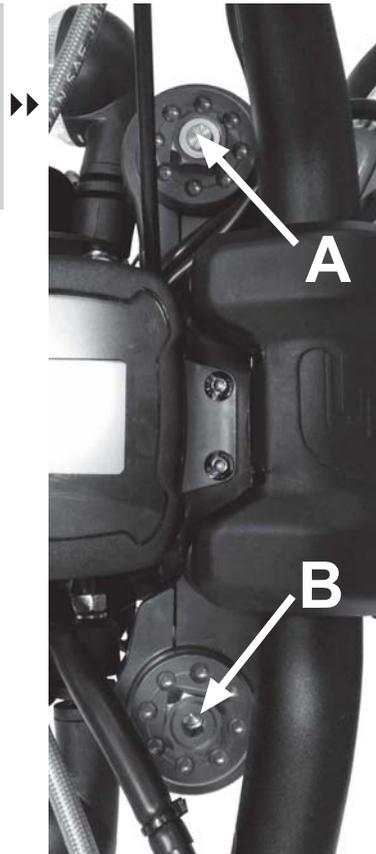
Check clutch discs for possible wear after many hours of use. For correct operation the minimum measurement should be 9,83 mm.



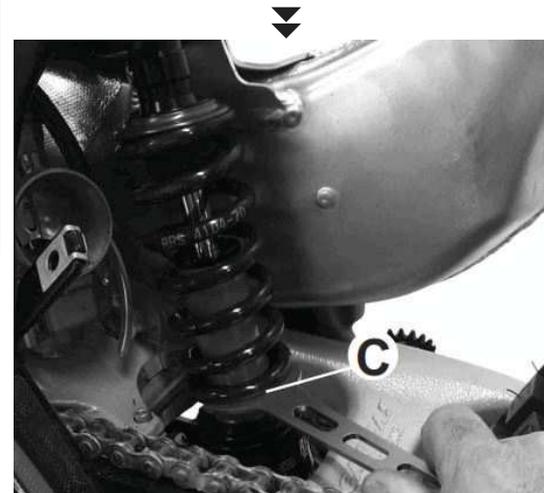
(A) The circle indicates where the engine oil should be poured in



 The front suspension is adjusted manually
A-Right (hydraulic extension).
B-Left (Spring Preload).



 The preload on the shock absorber is adjusted by turning the toothed rings (C) with the aid of two special spanners.
Starting from the standard preload of 7mm, tighten it up or loosen it off depending on the weight of the rider, up to a maximum of 9mm preload (see springs and preloads table). Preload refers to the difference in length in mm between the spring when compressed and at rest.

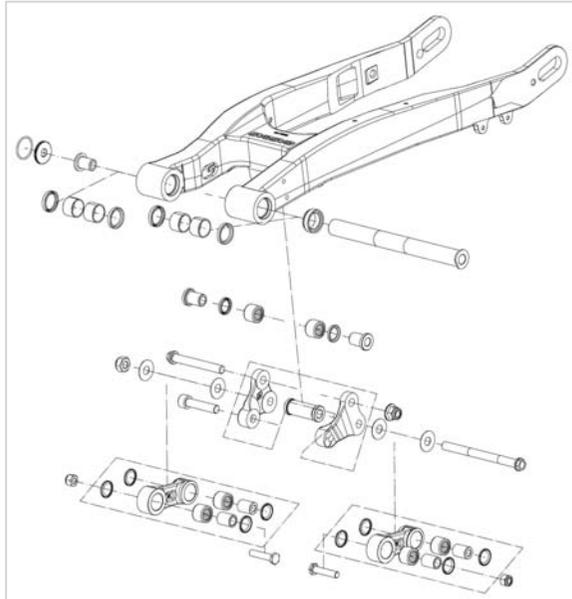




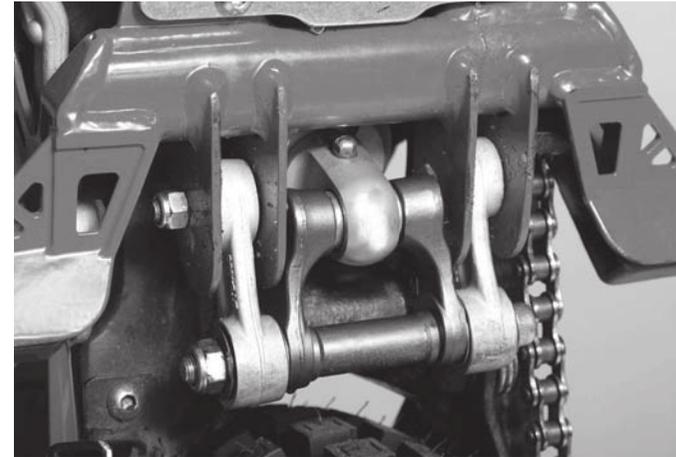
Adjust the rebound or extension by means of screw.
 The standard position is 28 clicks from closed. From this starting position, open up clicks to get a faster extension or rebound, and close up clicks to get a slower extension or rebound.
 It is advisable to work with a maximum of 10 clicks on either side of the standard position.

REIGER SHOCK ABSORBER 2V

IDEAL PRELOADS AND SPRINGS DEPENDING ON RIDER WEIGHT			
Rider weight without equip.(Kg)	k (daN/mm) spring	Spring preload (mm)	
Up to 70	67,5	6,5 to 7,5	
70 - 80	70	7	production
80 - 85	72,5	7 to 7,5	
Over 85	75	7 to 7,5	



It is very important to periodically remove and verify the condition of the swingarm bearings and pieces.



The linkage at the lower part of rear suspension must be periodically cleaned, inspected and lubricated with grease.



Use special oil to lubricate the following:

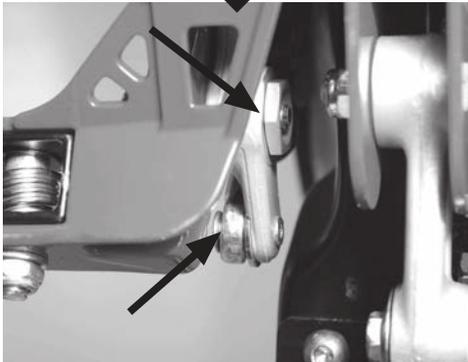
1) All pivot points of the brake and clutch levers.



2) The pivot of the gear shift lever.

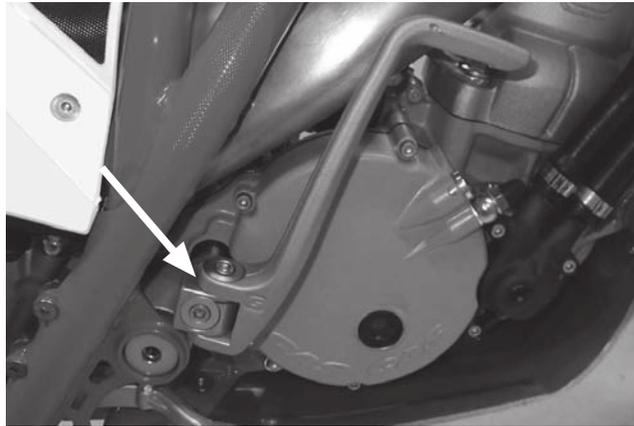


3) Also the rear brake pedal (bearings).

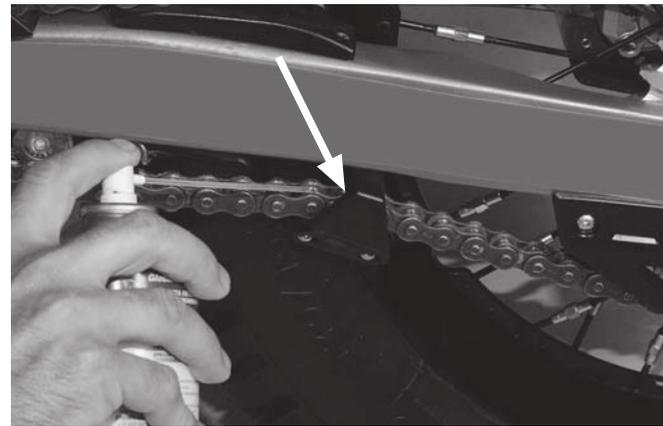


4) Apply grease to the footrest springs and fixtures.





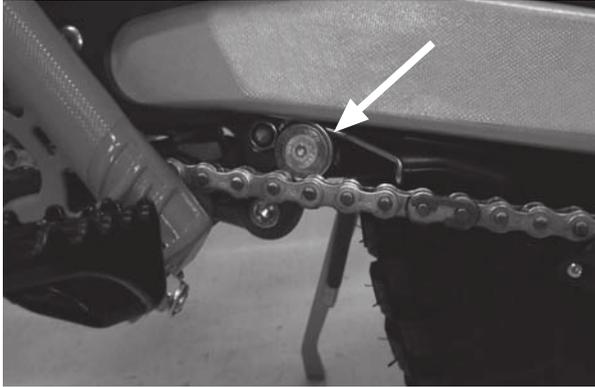
5) Apply grease to the linkage of the engine starting pedal.



6) The drive chain must be cleaned and lubricated thoroughly and frequently since it is exposed to the elements and constant abrasion.



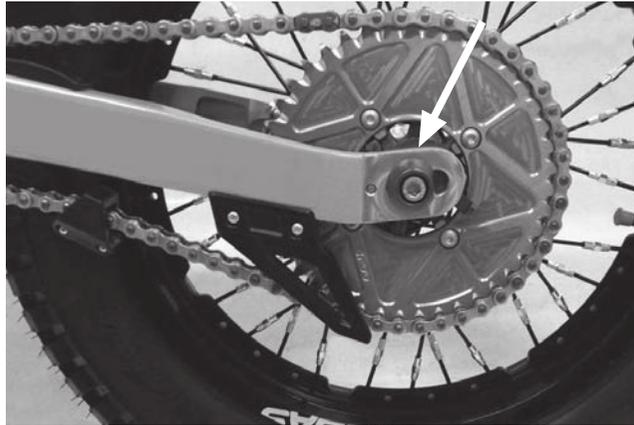
7) Lubricate the handlebar with a fine coat of oil to allow smooth operation of the throttle control.



8) It is also recommended to frequently lubricate the chain tensioner spring because it is under great stress.



9) Oil and clean the throttle control frequently; it is especially recommended to do so after the bike has been cleaned with water under high pressure.



To regulate the chain slack and center the rear wheel use the shaft excentrics which can be easily adjusted.



The chain master link clip must be placed in opposite direction of the wheel travel.



All tyre conditions must be checked to insure optimum.

Fig. 1 - Bad condition
Fig. 2 - Good condition



Fig.1

Front tyre:
2,75 x 21" TRIAL

Rear tyre:
4,00 x 18" TRIAL (tubeless)



Fig.2



Tyre pressure should be checked periodically to insure the best.

Front wheel pressure:
1,2 bar - normal
**0,420 bar - only competition

Rear wheel pressure:
1,2 bar - normal
**0,300 bar - only competition





Brake pad wear, front and rear, must be checked from time to time to insure an efficient braking power under all circumstances.



The front brake fluid level can be verified through the transparent inspection window.



The brake calipers have been furnished with bleeder valves to eliminate the air trapped in the brake system.





The rear brake fluid reservoir is located at the cylinder support.
Verify fluid level periodically and refill if necessary.



Put the bike in vertical position to be able to see the liquid real level in order to check the tank level.

It must be between MIN and MAX

— MAX

— MIN

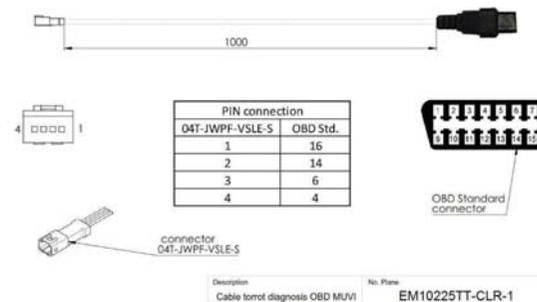
The On-Board Diagnostics (OBD) system features a Malfunction Indicator Lamp (MIL). When the motorcycle is started, the MIL, which is located on the top of the switch, turns on.



If there is no error, the MIL turns off after 5 seconds. If the OBD system detects an error, the MIL stays on permanently. It will turn off if it is started 3 consecutive times exceeding 2,000 rpm, if no error is detected.



It can be connected to the OBD system using a diagnostics machine compatible with the ISO 15765-4 CAN protocol. To connect the 4-way socket of the motorcycle's electrical system to the diagnostics machine (18-pin JAE connector), it is necessary to use an interface cable, which can be purchased from GG's spare parts department under reference EM10225TT-CLR-1.



The 4-way socket is located on the right. To connect the Creader VI+ scan tool (or similar), the protection needs to be removed from the connector



When the scan tool is connected, it turns on and the start screen appears connecting to the ISO 15765-4 CAN protocol that our OBD system has.



If the OBD system detects an historical error, the MIL stays on permanently.

Also, if you use the Creader VI scan tool, you can see in Monitor Status the information MIL status ON. (With the key light in red at the top).

You can cancel the error if you go to Diagnosis Menu - Erase error.

If you return to the Monitor Status screen, the MIL Status is OFF and, at the top, the green light appears turning off the red key light... And, at the same time, the MIL turns off on the switch.



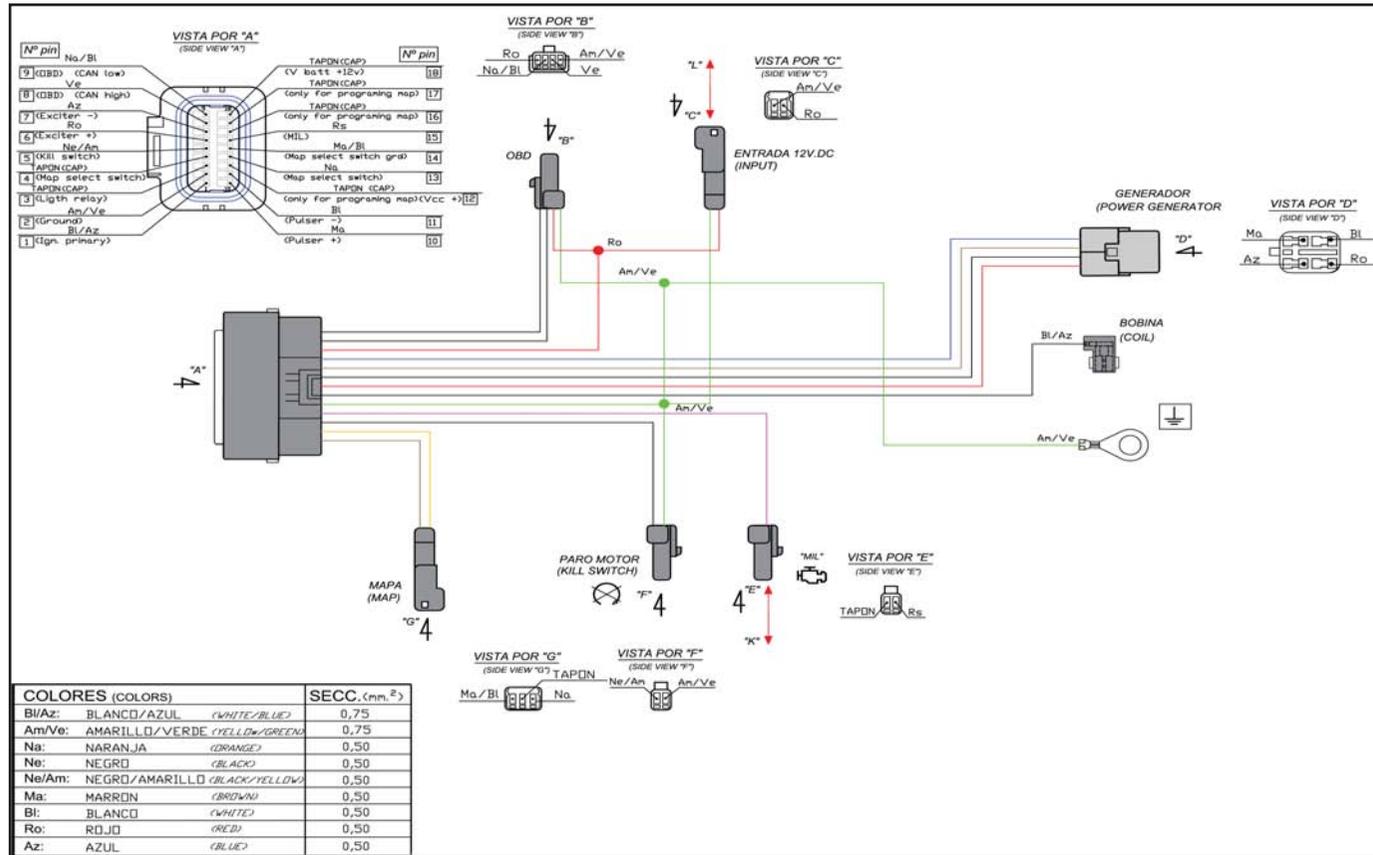
On the scan tool, the following information can be viewed:

- Current RPM, maximums.
- Time in seconds that the engine is running.
- Minutes running with the MIL on.
- Total minutes of engine running. And the ISO 15031 Diagnostic Trouble Codes (DTC):

P0350 - Ignition coil malfunction.

P0315 - Ignition pick-up fault.

It is possible to access the DTC and clear all historical errors.



Torques

	PART NAME	N-m
C H A S S I S	Front wheel axle	40 - 50
	Chassis to swingarm fastener	60 - 70
	Upper shock absorber fastener	40 - 50
	Lower shock absorber fastener	40 - 50
	Connecting rods caps	40 - 50
	Handlebars	18 - 25
	Hand levers	7 - 10
	Radiator fasteners	7 - 10
	Front bridge wing	7 - 10
	Brake pedal	27 - 32
	Muffler fasteners	18 - 25
	Rear wheel axle	40 - 50
	Rear brake caliper fastener	27 - 32
	Front brake caliper fastener	27 - 32
	Exhaust pipe elbow fastener	27 - 32
Engine fasteners	18 - 25	
Rear brake pump fastener	7 - 10	

	PART NAME	N-m
E N G I N E	Spark plug	11
	Ignition fasteners	7 - 8
	Cluth fasteners	7 - 8
	Cylinder stud bolt fasteners	25
	Reeds fasteners	7 - 8
	Clutch ground fastener	3 - 4
	Crankcases fasteners	7 - 8
	Water pump cap fastener	7 - 8
	Clutch cap fastener	7 - 8
	Flywheel fastener	40
	Water fastener	10
	Ignition cap	7 - 8
	Engine drain plug	12
	Kickstart pedal screw	12 - 13
	Shift pedal screw	7 - 8
Cylinder head screws	11,5 - 13	
Cylinder nut	25	

STORAGE

For extended storage of the motorcycle, you must do the following:

- Clean the motorcycle thoroughly.
- Start the engine for about 5 minutes to warm up the transmission oil and then drain it (see “crankcase drain cap” page 22).
- Fill with new transmission oil.
- Empty the fuel tank (gasoline will deteriorate if left too long).
- Lubricate the chain and all cables.
- Cover all unpainted metal surfaces with a coat of oil to prevent rust, do not apply oil to the brakes and rubber parts.
- Cover the exhaust pipe with a plastic bag to prevent corrosion.
- Place the motorcycle in such a position so that the wheels do not touch the ground (if possible, place cardboard under the wheels).
- Cover the motorcycle to protect it from dust and dirt.

When starting off after an extended storage:

- Remove the plastic bag from the exhaust pipe.
- Tighten the spark plug.
- Fill the fuel tank.
- General lubrication.
- Inspect tyre pressure and inflate to the specified pressure, if necessary.



To avoid excessive ageing of the plastic parts and other washable pieces of the motorcycle, it is suggested that these items must be washed carefully. If the washer applies water at high pressure and/or temperature, take the precaution of maintaining the washer outlet gun at a distance of 30 centimeters minimum, this will insure the correct gloss of the plastics and adherence of the self-adhesive labels that decorate the motorcycle.

Multifunction gauge (Only on certain models and markets)

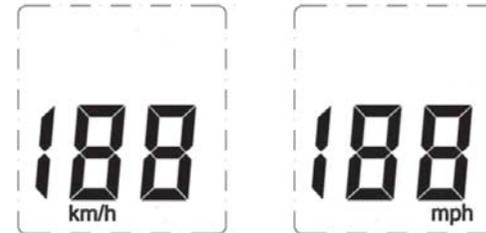
The multifunction device is water resistant, has 3 buttons with a brightly lit LCD.



WARNING

The multifunction device is water resistant but not waterproof. Do not wash with pressure washer. Do not leave the device in direct sunlight when the motorcycle is stopped. Avoid contact with gasoline, degreasers or other cleaning chemical products that could be cause damages in the device. Always remember to pay attention to the road when you're driving.

- **Overall distance travelled** from 0,0 to 99999,9 km



- **Speedometer**, up to a maximum of 199 km/h
- **Units of mesurement**, in Kilometers or in Miles, depending on the code reference of the device.



*The showed speed is updated each 0,5 seg.

*The units of mesurement can not be changed, depends only of the model bought.

TROUBLESHOOTING

NOTE

This is not an exhaustive list of malfunctions, it only shows the most common problems.

	MALFUNCTION	POSSIBLE CAUSE	REMEDY
1	Engine does not start	<ul style="list-style-type: none"> - Seized crankshaft. - Seized cylinder / piston / journal bearing. - Seized transmission assembly. - Motorcycle inactive too long. - Wet or fouled spark plug. - Flooded engine. - Incorrect air/fuel mixture. - Exhaust valve stuck open 	<ul style="list-style-type: none"> - Go to a specialized workshop. - Go to a specialized workshop. - Go to a specialized workshop. Drain old fuel out of the tank. With the fuel tank filled with new fuel, the engine will start immediately. - Clean and dry or replace the spark plug. - In order to "relieve the engine", accelerate to max. speed, press the starter pedal 5 or 10 times. Then, start the engine as described above. If the engine fails to start, remove the spark plug and dry it. - Clean the fuel tank air vent. Adjust the air cleaner duct. - Verify the exhaust valve and repair as necessary.
2	Engine start but then stops	<ul style="list-style-type: none"> - Incorrect air supply. - No fuel. 	<ul style="list-style-type: none"> - Close the starter. Clean fuel tank air vent. Adjust the air cleaner duct. - Fill up the fuel tank.
3	Engine overheating	<ul style="list-style-type: none"> - Insufficient cooling liquid in the circuit. - Radiator is dirty or partially restricted. 	<ul style="list-style-type: none"> - Fill up cooling liquid, verify the refrigeration system watertightness. - Clean radiator fins or replace it.
4	The engine operates irregularly	<ul style="list-style-type: none"> - Spark plug dirty, or misadjusted. - Poor contact with the spark plug cap or cable loose in cap. 	<ul style="list-style-type: none"> - Verify the spark plug condition and clean it accordingly, tighten or replace it. - Verify the spark plug cap condition. Replace if deteriorated.

	MALFUNCTION	POSSIBLE CAUSE	REMEDY
4	The engine operates irregularly	<ul style="list-style-type: none"> - Ignition rotor damaged. - Water in fuel. 	<ul style="list-style-type: none"> - Replace the rotor. - Drain the fuel tank and fill up with new fuel.
5	Engine lacks power or poor acceleration	<ul style="list-style-type: none"> - Fuel supply defective. - Dirty air cleaner. - Leaking or deteriorated exhaust system. - Dirty carburetor jets. - Worn or damaged crankshaft bearings. - Clutch slips. 	<ul style="list-style-type: none"> - Clean the fuel system and verify its operation. - Clean or replace the air cleaner. Verify its operation. - Verify if the exhaust system is damaged. Replace the muffler fiberglass packing, if necessary. - Disassembly the carburetor and clean all jets. - Replace the crankshaft bearings. - Verify the clutch operation. Go to a specialized workshop.
6	Abnormal engine noise	<ul style="list-style-type: none"> - Ignition problem. - Overheating. 	<ul style="list-style-type: none"> - Go to a specialized workshop. - Refer to section 5.
7	Detonations from the exhaust pipe	<ul style="list-style-type: none"> - Carbon build up in combustion chamber. - Incorrect octane or poor quality gasoline. - Damaged spark plug or incorrect specifications. - Deteriorated exhaust system gaskets. 	<ul style="list-style-type: none"> - Clean the combustion chamber. - Drain all gasoline and fill up with a higher octane fuel. - Replace the spark plug with a new one of the correct type. - Verify if the exhaust system is damaged. All gaskets must be in perfect conditions, otherwise replace them with new ones if necessary.
8	White smoke coming out of the exhaust pipe	<ul style="list-style-type: none"> - Deteriorated cylinder head gasket (water leakage into the cylinder). - Incorrect throttle cable adjustment. 	<ul style="list-style-type: none"> - Replace the cylinder head gasket. Go to a specialized workshop. - Readjust the throttle valve cable.
9	Brown smoke coming out of the exhaust pipe	<ul style="list-style-type: none"> - Restricted air cleaner. - Main jet set too high. 	<ul style="list-style-type: none"> - Clean or replace the air cleaner. Go to a specialized workshop. - Verify main jet operation. Go to a specialized workshop.

	MALFUNCTION	POSSIBLE CAUSE	REMEDY
10	Gears do not engage correctly	<ul style="list-style-type: none"> - Clutch does not disengage. - Bent or seized shift fork. - Gear seized at the transmission. - Damaged gearshift lever. - Broken or loose selector position spring. - Broken spring in the reverse selector mechanism. - Broken spring in the reverse selector mechanism. - Broken gear drum. - Broken spring in the gear selector ratchet. 	<ul style="list-style-type: none"> - Go to a specialized workshop. - Replace the shift fork. - Go to a specialized workshop. - Replace the gearshift lever. - Adjust or replace the selector position spring. - Replace the spring in the reverse selector mechanism. - Replace the spring in the reverse selector mechanism. - Replace the gear drum. - Replace the spring in the gear selector ratchet.
11	Jumps out of gear	<ul style="list-style-type: none"> - Shift fork worn at the gears. - Worn gear grooves. - Worn gear dogs. - Worn shift drum groove. - Worn shift fork shaft. - Broken selector drum position spring. - Broken gears. 	<ul style="list-style-type: none"> - Replace the shift fork. - Replace. Go to a specialized workshop - Replace. Go to a specialized workshop. - Replace. Go to a specialized workshop. - Replace shaft. Go to a specialized workshop. - Replace the spring. Go to a specialized workshop. - Go to a specialized workshop.
12	Clutch slips	<ul style="list-style-type: none"> - No clutch lever free play. - Worn clutch friction plate. - Worn clutch center hub. - Broken or weak clutch spring. - Unevenly worn clutch discs. 	<ul style="list-style-type: none"> - Go to a specialized workshop. - Replace the clutch friction plate. Go to a specialized workshop. - Replace the clutch center hub. - Adjust or replace the clutch spring. - Replace the clutch discs. Go to a specialized workshop.
13	The motorcycle is unstable	<ul style="list-style-type: none"> - Cable interferes with the handlebar. - Steering stem locknut too tight. - Damaged or worn steering bearings. - Bent steering stem. 	<ul style="list-style-type: none"> - Move or loosen the cable just a little. - Loosen the steering stem locknut. - Replace the steering bearings. - Replace the steering stem. Go to a specialized workshop.

	MALFUNCTION	POSSIBLE CAUSE	REMEDY
14	Shock absorber set too hard	<ul style="list-style-type: none"> - Excessive front fork oil. - Front fork oil viscosity too high. - Bent front fork. - Tire air pressure set too high. - Incorrect rear shock absorber adjustment. 	<ul style="list-style-type: none"> - Pour excess oil until reaching the correct oil level. - Drain fork oil and fill with correct fork oil viscosity. - Replace the front fork. Go to a specialized workshop. - Check tire air pressure. - Adjust rear shock absorber.
15	Shock absorber set too soft	<ul style="list-style-type: none"> - Insufficient front fork oil. - Front fork oil viscosity too low. - Bent front fork. - Incorrect rear shock absorber adjustment. 	<ul style="list-style-type: none"> - Fill with fork oil until reaching the correct oil level. - Drain fork oil and fill with correct fork oil viscosity. - Replace the front fork. Go to a specialized workshop. - Adjust the rear shock absorber.
16	Abnormal motorcycle noises	<ul style="list-style-type: none"> - Incorrect drive chain adjustment . - Worn drive chain. - Worn rear sprocket teeth. - Insufficient drive chain lubrication . - Incorrect rear wheel alignment. - Insufficient front fork oil. - Weak or broken front fork spring. - Worn disc brake. - Pad installed incorrectly or surface glazed. - Damaged cylinder. - Improperly tightened brackets, nuts, bolts. 	<ul style="list-style-type: none"> - Adjust the drive chain. - Replace the drive chain, rear sprocket and the secondary transmission pinion. - Replace the rear sprocket. - Lubricate with appropriate chain oil. - Align the rear wheel. Go to a specialized workshop. - Add front fork oil until reaching the correct level. - Replace the front fork spring. - Change the disc brake. - Reinstall or replace pad. - Replace the damaged cylinder. - Verify and adjust to the correct torque values.
17	Handlebar vibration	<ul style="list-style-type: none"> - Worn tire, and worn swingarm or its needle bearings. - Wheel rim off-centre. - Incorrect wheel alignment. 	<ul style="list-style-type: none"> - Replace worn parts with new ones. - Centre rim. - Verify wheel spokes tension. Readjust if necessary.

	MALFUNCTION	POSSIBLE CAUSE	REMEDY
17	Handlebar vibration	<ul style="list-style-type: none"> - Excessive steering axles tolerances. - Loose handlebar bracket, and loose handlebar stem locknut. 	<ul style="list-style-type: none"> - Tighten steering bracket and steering stem locknut to the correct torque values. - Tighten steering bracket and steering stem locknut to the correct torque values.
18	Motorcycle pull to one side	<ul style="list-style-type: none"> - Bent chassis. - Incorrect steering adjustment. - Bent steering stem. - Bent front fork. - Incorrect wheel alignment. 	<ul style="list-style-type: none"> - Replace the chassis. Go to a specialized workshop. - Adjust the steering. Go to a specialized workshop. - Replace the steering stem. Go to a specialized workshop. - Replace the front fork. - Align the wheels.
19	Brakes do not operate correctly	<ul style="list-style-type: none"> - Worn discs. - Leaking brake fluid. - Deteriorated brake fluid. - Broken pump piston. - Incorrect brake adjustment. 	<ul style="list-style-type: none"> - Replace the discs. - Verify the brake circuits. Replace the damaged or broken parts. - Drain the brake fluid and fill with the new fluid recommended by the manufacturer. - Replace the pump piston. - Adjust brakes.

FINAL RECOMMENDATIONS

PREVENTIVE ADVICE

Before you ride the vehicle, take all the time you may require to check your motorcycle, carry out the periodical upkeep and check all functions. In different sections of this manual you will find data and work specifications that must be done at an authorized GAS GAS dealer, because of this and to extend the useful life of the motorcycle, all periodical inspections must be carried out by specially trained professionals at a GAS GAS Post-Sale Service Shop.



Poor maintenance work of the motorcycle or not taking proper care of any problem, even if its is a small concern, can cause severe personal injury and may lead to death.



To avoid excessive ageing of the plastic parts and other washable pieces of the motorcycle, it is suggested that these items must be washed carefully. If the washer applies water at high pressure and/or temperature, take the precaution of maintaining the washer outlet gun at a distance of 30 centimeters minimum, this will insure the correct gloss of the plastics and adherence of the self-adhesive labels that decorate the motorcycle.

SAFE RIDING OF THIS MOTORCYCLE

Safe riding of a motorcycle does not only depend on the vehicle. The driver's intelligence and common sense are key factors to be taken into consideration. It is recommended that you practice your favorite sport wearing all the necessary safety equipment (helmet, protection gear, boots, etc.).

LEGAL ADVICE

In the interest of technical development we reserve the right to modify the construction, the equipment and accessories of the motorcycle. It is understood that all measurements, weights and power data must include their respective tolerances. The photographs included in this manual may not match the model you have purchased. The descriptions and the illustrations may vary depending on the volume of equipment and accessories of your motorcycle and also of the versions exported. Because of this, there can be no liability in case of errors, misprint or omission.

GG reserves the right to make changes and/or modifications at any time without notice.