



**Beta**  
the play bike

BETAMOTOR.COM

**EVO**  
**2012** evolution *trial* 

**2T**



MANUALE DI ISTRUZIONI  
OWNER'S MANUAL  
MANUAL DE ISTRUCCIONES  
MANUEL D'INSTRUCTIONS  
BEDIENUNGSANLEITUNG

**EVO 2T 2012**

**125·200·250·300**

## EVO

Thank you for choosing BETA. Wishing you a lots of good biking!  
This manual will give you the information you need to use your  
motorcycle correctly and to keep it in excellent condition.

BETAMOTOR S.p.A. reserves the right to change the data and features described in  
this manual and to modify its products at any time.

## ATTENTION

After the first training hour, check all the tightenings and in a particular manner:

- Footboard supports
- Front and rear brake disks
- Wheel rims
- Shock absorber bolt
- Engine bolts and nuts
- Crown

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Main parts

Vehicle identification data

Instrument panel and controls

Technical data

Electrical diagram

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# SECTION 1



### MAIN PARTS

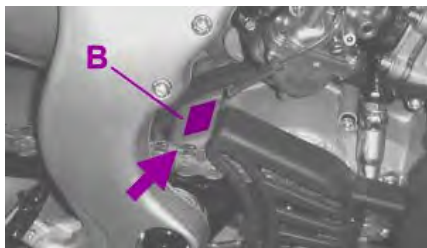
- 1-Filter box 2-Fuel tank 3-Fuel cap  
4-Silencer 5-Kick starter

### VEHICLE IDENTIFICATION DATA



#### Frame identification

Identification data **A** are stamped on the right side of the steering gear column.



#### Motor identification

Motor identification data **B** are stamped as indicated in the picture.

### INSTRUMENT PANEL AND CONTROLS



- 1 Clutch lever  
2 Front brake lever  
3 Throttle grip

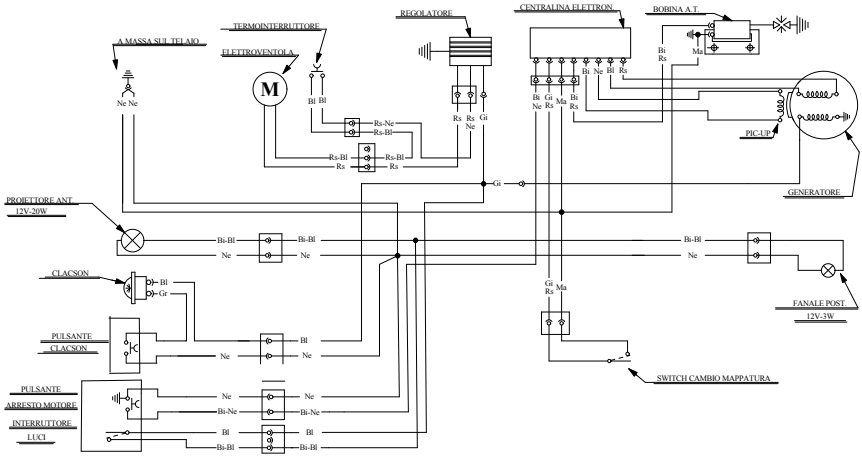


- 4 Engine switch off button  
5 Lights switch on/switch off button

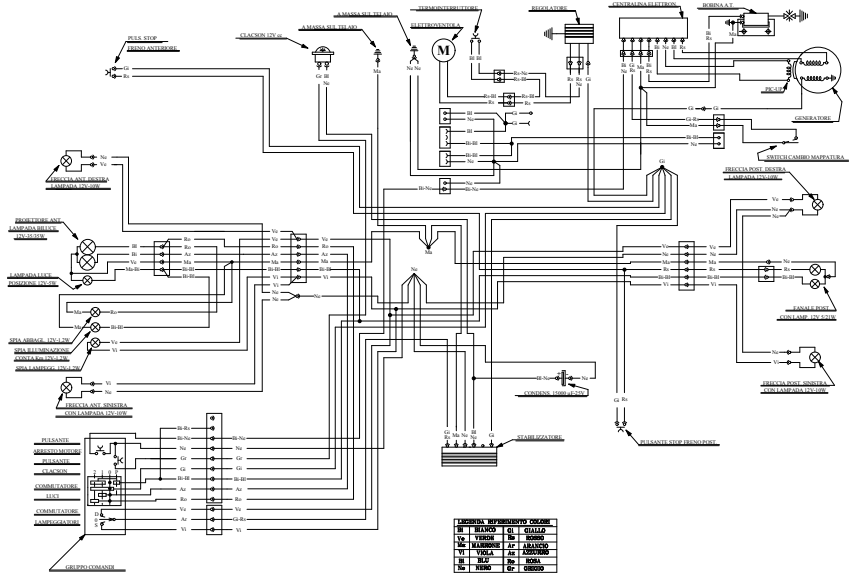
TECHNICAL DATA	VERSION TYPE			
	125cc	200cc	250cc	290cc
<b>CYCLE</b>				
<b>Vehicle weight</b>				
Ready to operate (unfueled)	67,5 kg	68,5 kg	68,5 kg	68,5 kg
<b>Dimensions</b>				
Wheelbase	1305 mm	1305 mm	1305 mm	1305 mm
Total length	1990 mm	1990 mm	1990 mm	1990 mm
Total width	850 mm	850 mm	850 mm	850 mm
Total height	1115 mm	1115 mm	1115 mm	1115 mm
Saddle height	660 mm	660 mm	660 mm	660 mm
Clearance from ground	310 mm	310 mm	310 mm	310 mm
<b>Filling capacity</b>				
Fuel tank	2,6 l.	2,6 l.	2,6 l.	2,6 l.
Including reserve of	0,5 l.	0,5 l.	0,5 l.	0,5 l.
Cooling circuit liquid	600 cc	600 cc	600 cc	600 cc
Engine oil	SAE 10/30 (550cc)	SAE 10/30 (550cc)	SAE 10/30 (550cc)	SAE 10/30 (550cc)
<b>Suspension</b>				
Front suspension	hydraulic fork with ø38 mm rod	hydraulic fork with ø38 mm rod	hydraulic fork with ø38 mm rod	hydraulic fork with ø38 mm rod
Rear suspension	single-element	single-element	single-element	single-element
<b>Brake</b>				
Front brake	disk-type ø185 mm 4 piston	disk-type ø185 mm 4 piston	disk-type ø185 mm 4 piston	disk-type ø185 mm 4 piston
Rear brake	disk-type ø160 mm 2 piston	disk-type ø160 mm 2 piston	disk-type ø160 mm 2 piston	disk-type ø160 mm 2 piston
<b>Tyre</b>				
Front rim	21 - 1,6 - 32 holes	21 - 1,6 - 32 holes	21 - 1,6 - 32 holes	21 - 1,6 - 32 holes
Rear rim	18 - 2,15 - 32 holes	18 - 2,15 - 32 holes	18 - 2,15 - 32 holes	18 - 2,15 - 32 holes
Front tyre dimensions	2,75 - 21*	2,75 - 21*	2,75 - 21*	2,75 - 21*
Rear tyre dimensions	4.00 R 18*	4.00 R 18*	4.00 R 18*	4.00 R 18*
<b>ENGINE</b>				
<b>Data</b>				
Type	BETA6605 ZD3B9T A	BETA6605 ZD3B9T	BETA6605 ZD3B9T F	BETA6605 ZD3B9T L
Number of cylinders	1	1	1	1
Bore	54,0 mm	64,0 mm	72,5 mm	79,0 mm
Stroke	54,0 mm	60,5 mm	60,5 mm	60,5 mm
Displacement	124cc	194,6 cc	249,7cc	296,5cc
Compression ratio	16,4:1	11,8:1	8,9:1	10,2:1
Ignition	electrical AET 12V - 85W	elettronica AET 12V - 85W	elettronica AET 12V - 85W	elettronica AET 12V - 85W
Spark plug	NGK BR7ES	NGK BR7ES	NGK BR7ES	NGK BR7ES
<b>Fuel system</b>				
Carburetor	Keihin PWK ø 28mm	Keihin PWK ø 28mm	Keihin PWK ø 28mm	Keihin PWK ø 28mm
Jet	min 55 max 130	min 48 max 125	min 48 max 125	min 48 max 125
Mixture	1,5 % synthetic oil 4% mineral oil	1,5 % synthetic oil 4% mineral oil	1,5 % synthetic oil 4% mineral oil	1,5 % synthetic oil 4% mineral oil



## ELECTRICAL DIAGRAM



LEGENDA RIFERIMENTO COLORI			
B1	BIANCO	G1	GIALLO
Va	VERDE	Ra	ROSSO
Mb	MARRONE	Af	ARANCIO
V1	VIOLA	As	AZZURRO
B1	BLU	Ro	ROSA
Ne	NERO	Gr	GRIGIO



LEGENDA RIFERIMENTO COLORI			
B1	BIANCO	G1	GIALLO
Va	VERDE	Ra	ROSSO
Mb	MARRONE	Af	ARANCIO
V1	VIOLA	As	AZZURRO
B1	BLU	Ro	ROSA
Ne	NERO	Gr	GRIGIO

GENERAL INFORMATION

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Check and maintenance before and after off-road use

Fueling

Recommended lubricants and liquids

Breaking in

Start up

Map switch

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# SECTION 2

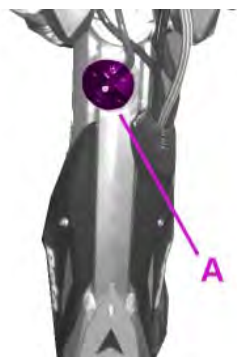
In order to avoid problems connected to the operation of the vehicle, it is advisable to perform some checking and maintenance operations before and after use. Just a few minutes given to these procedures will save you time and money, and will make riding much safer. Proceed as follows:

TYRES	check pressure, general condition and thickness of tread
SPOKES	check for correct tension
NUTS AND BOLTS	check completely all bolts and nuts
CHAIN	check tension (20 mm play) and grease if necessary
AIR FILTER	clean filter and wet with suitable oil for filters

#### Note:

Check that you have the vehicle identification documents.

On cold days, warm up the motor by running it at minimum for a few instants before starting off. Wash the vehicle carefully after every off-road use.



## FUELING

Remove cap A.

The fuel tank holds approximately 2,6 liters, 0,5 liter of which is reserve.

Use only a mixture of unleaded super fuel and oil (mineral oil 4%, synthetic oil 1,5 %)

## 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
MOTOR OIL	BARDAHL GEARBOX 10W30
OIL FOR MIXTURE	BARDAHL VBA KXT
BRAKE AND CLUTCH OIL	BARDAHL BRAKE FLUID DOT 4
FORK OIL	IDEMITSU OJ-RACING-01 or BEL RAY "MC 10 SAE 5"
GREASE FOR JOINTS AND RODS	BARDAHL OUTBOARD GREASE
LIQUID COOLANT	BARDAHL PERMANENT

### NOTE:

For substitution, follow attentively the chart.

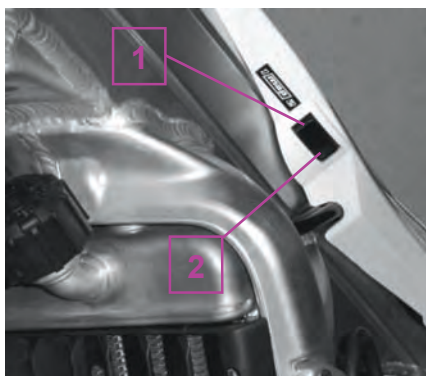
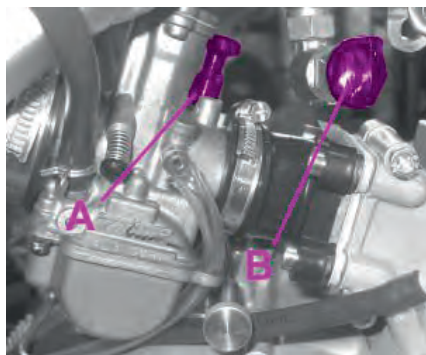
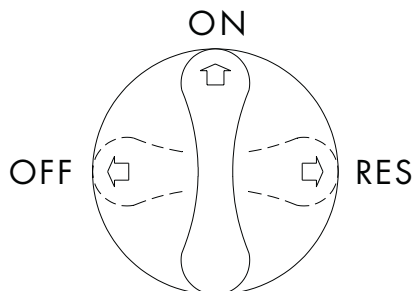
## BREAKING IN

Breaking in takes approximately 10 hours of operation.  
During this time we suggest to:

- Ride after having well warmed the engine
- Avoid travel at constant speed
- 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 5 hours of operation, change the gear box oil.
- Always use a mixture of unleaded super fuel and oil (mineral oil 4%, synthetic oil 1,5 %).
- After the first off-road use, check all the nuts and bolts.



## STARTUP

- Open fuel tank valve B

OFF = closed

ON = open

RES = reserve

- Check that the gears are in neutral.
- Depress the kick-starter with a sharp movement the foot and slightly turn the gas control.
- Always close the fuel tank valve when the engine is off.

### Attention!

During competition use or extreme "trial zone" is advising to position the fuel tap on "RES" to guarantee an optimal fuel supply in all condition use.

### Note:

When the engine is cold, use choke A. Pull the lever, wait a few seconds, and then return the lever to its starting position.

## MAP SWITCH

Using the switch shown in the picture, it is possible to choose between two different map for spark advance.

With the switch in position 1, "soft" map is selected, more suitable for slippery terrain and for a softer engine response.

With the switch in position 2, "hard" map is selected, for a more aggressive engine response: more suitable for dry condition.

## INDEX

Gearbox oil

Brake pump oil

Clutch pump oil

Fork oil

Air filter

Spark plug

Generator

Front brake

Rear brake

Cooling liquid

Silencer

Carburettor

Valve petals

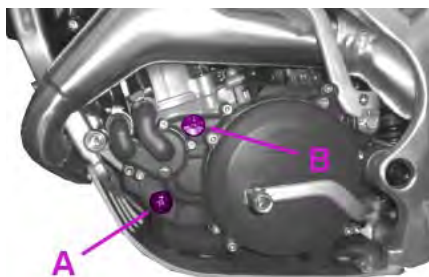
Rear shock absorber Leverage

Checks after cleaning

Maintenance schedule

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# SECTION 3

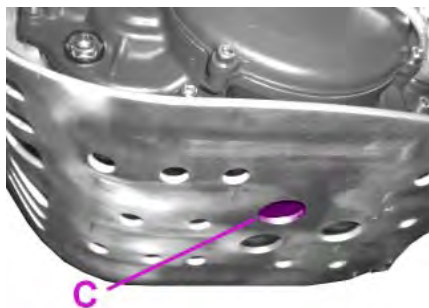


## GEARBOX OIL

### Check

Hold the vehicle vertical to the ground. When engine is cold check the oil level by means of porthole A. The oil level must be always visible from the porthole.

In contrary case restore the oil level through cap B.



### Oil change

The engine must be hot when changing oil:

- Place a container under the engine
- Unscrew the filler cap and oil drain plug C
- Empty the crankcase completely
- Close drain plug C
- Put in the right oil quantity (table on page 45)
- Close the filler cap.

### Note:

Change the gearbox oil after the first 5 hours of operation. For all subsequent changes, follow the instructions given on the chart on pag. 66, using the lubricants recommended on pag. 49.

## BRAKE PUMP OIL

### Front brake

Check the oil level by means of oil porthole **A**. The oil level must be always visible from the porthole. In contrary case restore the oil level.

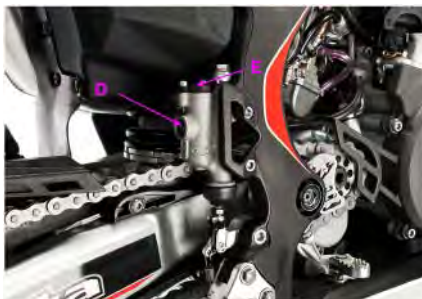
To restore the oil level, top up by unscrewing the two screws **B**, lifting cap **C** and adding oil.



### Rear brake

Check the level of the brake fluid through sight **D**. The level of the fluid should never fall below the mark in the sight.

To restore the level of the brake fluid, unscrew cap **E** and pour in brake fluid (BARDAHL BRAKE FLUID DOT 4) until the level reaches the mark in sight **D**.



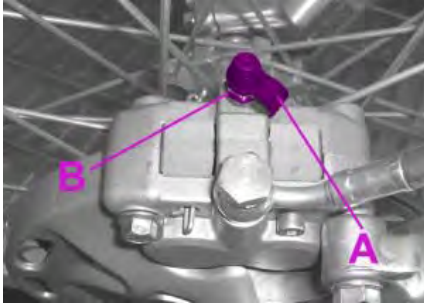
### Warning:

If you feel the lever too soft, there may be an air bubble in the circuit. Apply to your dealer immediately.

### Note:

For oil changes, follow the instructions given on the chart on pag. 66, using the lubricants recommended on pag. 49.





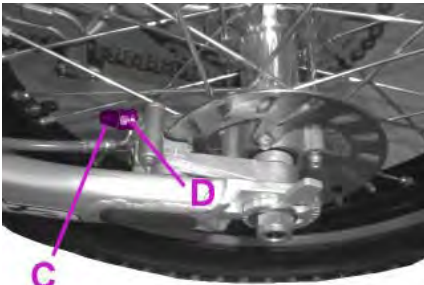
### Bleeding of front brake

To bleed air from the front brake circuit, proceed as follows:

- Remove the rubber cap A from valve B
- Open the oil sump cap
- Insert one end of a transparent tube into valve B and the other end into a container
- Pump with the brake lever 2/3 times and keep the lever pressed
- Unscrew the valve and let the oil drain
- Close the valve and release the lever
- If air bubbles are still visible in the tube repeat above operation until obtaining a continuous outflow of oil with no air bubbles

Note: During this procedure, continuously top up the brake pump tank to replace the oil that is out flowing

- Remove the tube.
- Replace the rubber cap.



### Bleeding of rear brake

To bleed air from the rear brake circuit, proceed as follows:

- Remove the rubber cap C from valve D
- Remove the brake pump cover
- Insert one end of a transparent tube into valve D and the other end into a container
- Pump with the brake lever 2/3 times and keep the lever pressed
- Unscrew the valve and let the oil drain
- Close the valve and release the lever
- If air bubbles are still visible in the tube repeat above operation until obtaining a continuous outflow of oil with no air bubbles

Note: During this procedure, continuously top up the brake pump tank to replace the oil that is out flowing

- Remove the tube.
- Replace the rubber cap.

#### Note:

Handle the hydraulic oil very carefully. It is corrosive, and will irreparably damage painted or plastic parts of the motorcycle upon contact.

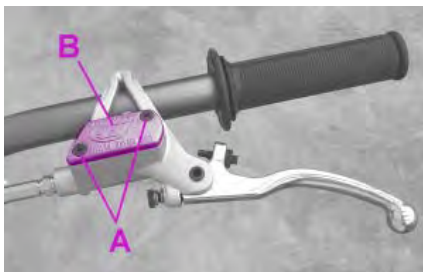
## CLUTCH PUMP OIL

Check the oil level. The oil level must never be below half the tank capacity.

To restore the oil level, top up by unscrewing the two screws A, lifting cop B and adding oil.

### Note:

For oil changes, follow the instructions given on the chart on pag. 66, using the lubricants recommended on pag. 49



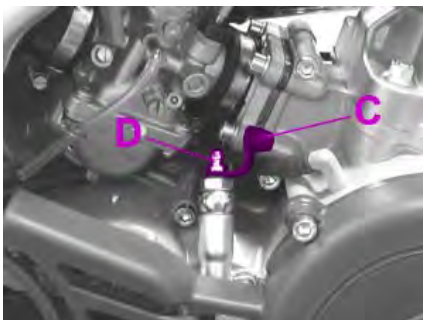
### Bleeding of clutch

To bleed air from the clutch circuit, proceed as follows:

- Remove the rubber cap C from valve D
- Open the oil sump cap
- Insert one end of a transparent tube into valve D and the other end into a container
- Pump with the clutch lever 2/3 times and keep the lever pressed
- Unscrew the valve and let the oil drain
- Close the valve and release the lever
- If air bubbles are still visible in the tube repeat above operation until obtaining a continuous outflow of oil with no air bubbles

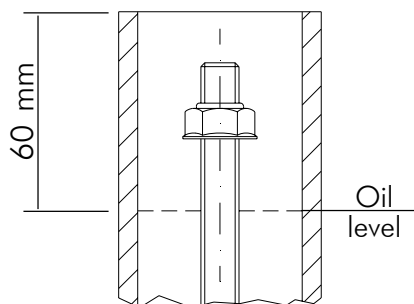
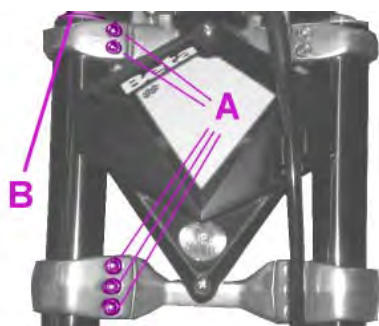
Note: During this procedure, continuously top up the clutch pump tank to replace the oil that is out flowing

- Remove the tube
- Replace the rubber cap.



### Note:

Handle the hydraulic oil very carefully. It is corrosive, and will irreparably damage painted or plastic parts of the motorcycle upon contact.



## FORK OIL

### Right shaft

To replace the oil, proceed as follows:

- 1) Remove the front wheel
- 2) Remove the handlebar (see pag.69)
- 3) Loosen left shaft lock screws A and take off the slider
- 4) Unscrew upper plug B
- 5) Unscrew fixing lock nut and take off the plug
- 6) Unscrew the fixing screw of the cartridge positioned under the slider, and extract the cartridge
- 7) Empty the fork leg and the cartridge, draining all the oil inside
- 8) Reassemble the cartridge on the slider tightening the fixing screw, then refill oil (OJ01) in the cartridge up to the level indicated in the figure (with fork in the fully compressed position)
- 9) Reassemble the plug on the rod, tighten the lock nut and, extending the fork leg, screw the plug on the shaft
- 10) Reassemble the fork

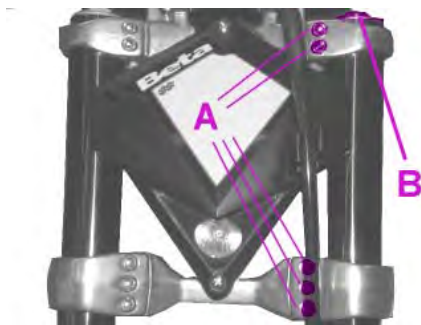
### Note:

For screw A: torque wrench setting 7,8 : 9,1 Nm.

### Left shaft

To replace the oil, proceed as follows:

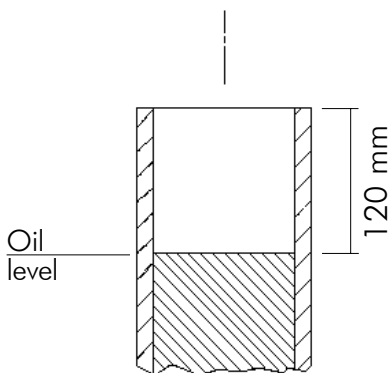
- 1) Remove the front wheel
- 2) Remove the handlebar (see pag. 69)
- 3) Loosen the shaft lock screws **A**
- 4) Unscrew slider plug **B**
- 5) Remove the spring and totally empty the oil
- 6) Fill oil up to the level indicated in figure (with fork compressed in the fully compressed position)
- 7) Reassemble the spring and extend fork leg
- 8) Screw the plug **B**



### Note:

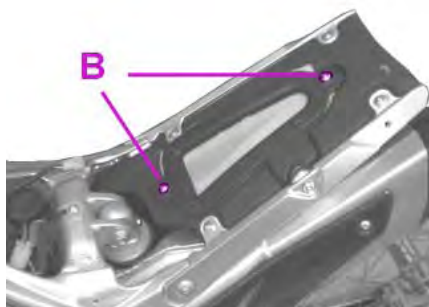
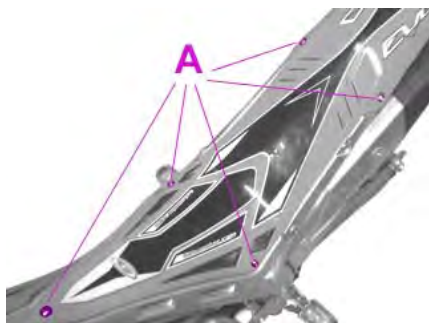
For all changes, follow the instructions given on the chart on pag. 66, using the lubricants recommended on pag. 49.

Check regularly and clean thoroughly removing any dirt or dust cover and also check the rubber seal to ensure a good seal.



### Note:

For screw **A**: torque wrench setting 7,8 : 9,1 Nm.



## AIR FILTER

To access the filter remove the mudguard by unscrewing the 5 screws A, and then proceed as follows:

- Remove the rear mudguard detaching the cable of the tail lamp
- Remove filter capping and filter unscrewing the 2 screws B
- Wash the filter with water and soap
- Dry the filter
- Wet the filter with filter oil, removing any excess oil so that there is no dripping
- If necessary, clean the inside of the filter box
- Reassemble. We suggest to assemble previously the filter capping on filter .

Note:

- If the filter is very dirty, wash it first with gasoline and then with water and shampoo.
- If the filter is damaged, replace it immediately.

Warning:

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

**Clean the filter every time the vehicle is used cross-country.**

## SPARK PLUG

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

To perform the check, simply slide off the electrical connection tube and unscrew the spark plug.

Examine the distance between the electrodes with a feeler. This distance should be from 0.5 to 0.6 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.

Observe the chart on page 66 when performing the check.

When replacing the spark plug, screw it in by hand until it stops, then tight with a wrench.

Note:

- The use of low-quality oil will cause an increase in carbon deposits. We therefore advise the use of BARDHAL KXT oil.
- Always use NGK BR7ES spark plugs.

## GENERATOR (IGNITION GENERATOR CHECK)

Check must be performed with a component temperature of about 20°C.

Check can also be performed with the generator mounted on the motor bike or on the engine.

Unplug the black 12 pins connector between the generator and CDI.

Verify with a multimeter that the resistance values among the below indicated pins are in the prescribed range:

- |                                  |                    |
|----------------------------------|--------------------|
| • black- white (Pick-Up)         | 320 ohm $\pm$ 15%  |
| • red-blue (capacitor charge)    | 300 ohm $\pm$ 15 % |
| • yellow-brown (services supply) | 0,45 ohm $\pm$ 20% |

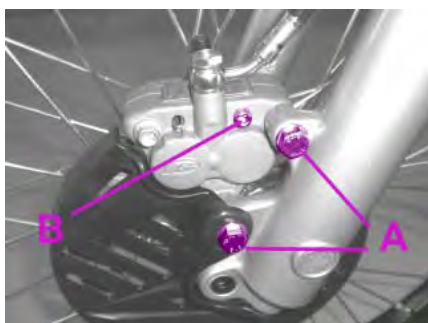
## FRONT BRAKE

**Check**

To check the front brake wear, simply observe the caliper from the front, where it is possible to see the ends of the two pads. These pads should have at least a 2 mm layer of lining. If this layer is thinner than 2 mm, replace the pads immediately.

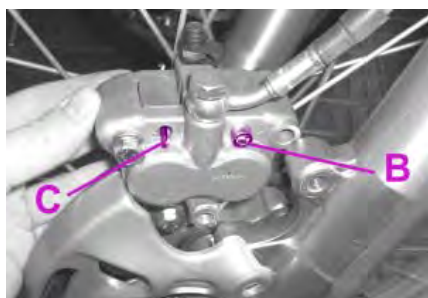
**Note:**

Observe the times given on the chart on pag. 66 when performing the check.

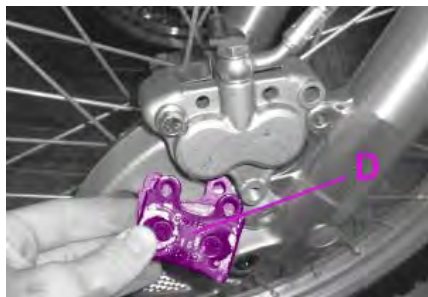
**Replacement**

To replace the pads, proceed as follows:

- Disassemble the disk cover and the caliper by unscrewing the two screws A and loosening the screw B
- Take off the split pin C
- Unscrew the screw B
- Remove the pads D and replace them
- To reassemble, proceed in the reverse order. Apply medium thread-locking (frenafilletti medio) to the screws A

**Note:**

To avoid braking problems, pay particular attention to the correct reassembly of the split pins.



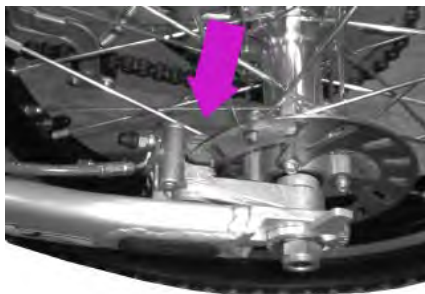
If the brake disk is removed, apply medium thread-locking to the screws when reassembling.

## REAR BRAKE

### Check

To check the rear brake wear, simply observe the caliper on the upper part where it is possible to see the ends of the two pads. The pads should have at least a 2 mm layer of lining. If this layer is thinner than 2 mm, replace the pads immediately.

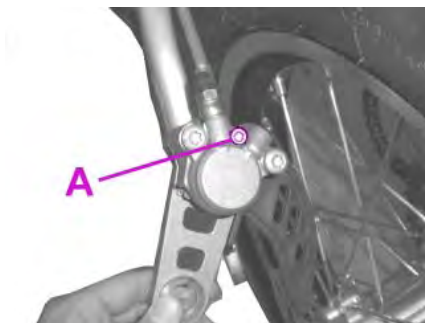
Note: Observe the times given on the chart on pag. 66 when performing the check.



### Replacement

To replace the pads, proceed as follows:

- Disassemble the rear wheel
- Remove the caliper from the swing arm
- Unscrew the screw A
- Take off the pads and replace them
- To reassemble, proceed in the reverse order. Apply medium thread-locking (frenafiletti medio) to the screw A.



If the brake disk is removed, apply medium thread-locking to the screws when reassembling.





## LIQUID COOLANT

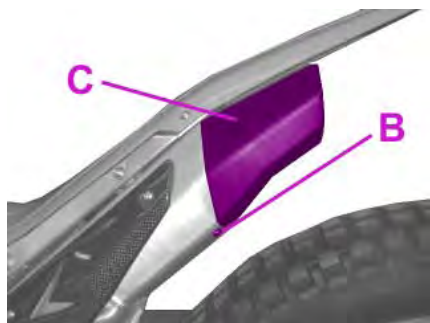
The level check must be performed with the engine cold, as follows:

- Unscrew cap A and check the level of the liquid
- If the level is not visible in proximity of the bottom of pipe proceed to add liquid

Circuit capacity is indicated in the table on pag. 45. Use the liquids recommended on the table on pag. 49.

### WARNING:

To avoid burns, never unscrew the radiator filler cap when the engine is hot.

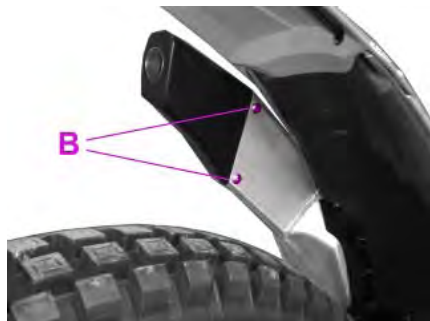


## SILENCER

If an increase in exhaust noise is noted, check the silencer.

Proceed as follows:

- Unscrew the 3 screws **B**
- Take off end piece **C**
- Extract the fiber wool and substitute with a new other (available as spare-part)
- To reassemble, proceed in the reverse order.

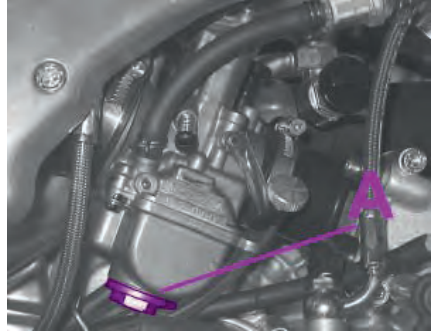


## CARBURETTOR

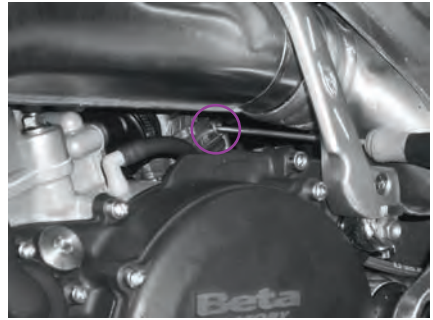
To ensure excellent carburettor performance, the carburettor must be periodically and thoroughly cleaned.

Unscrew plug A and check that no dirty is inside.

Differently it will be necessary to open the tank and to carefully clean the jets.



To adjust the mixture at the idling, use a screw-driver as it is shown in the pictures.

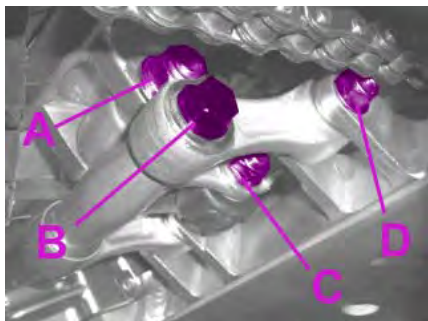


## VALVE PETALS

We recommend to check the valve petals as follows after every 40 hours of use:

- Check that flaps A show no signs of breakage.
- Check that flaps A close perfectly on valve body B.

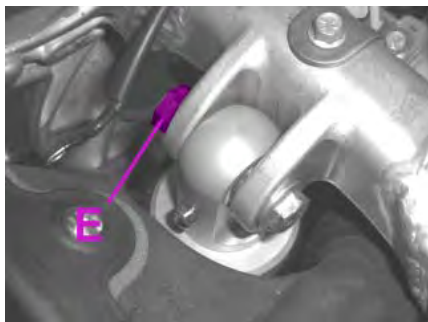




## REAR SHOCK ABSORBER LEVERAGE

To guarantee an optimal operation and the longest lifetime of the progressive leverage of the rear suspension, it is recommended to check after every race/run the correct tightening of the bolts marked A, B, C, D and E.

It is also recommended not to wash the motorbike with high pressure water jets and also to perform a check of cages and bushes every 40 hours of usage. Proceed as follows:



Disassemble the leverage unscrewing the screws A, B, C, D.

- Extract the bushes.
- Clean all the parts with a dry cloth.
- Lubricate the cages with lithium grease.
- Reassemble the group starting with fixing the linking rods to the chassis, using bushes with internal diameter of 8mm and the special M8 screws.
- Fix the rocker arm to the swing arm using the bushes with the brim thickness of 2.5mm, and the M10x75. Afterwards fix it to the damper (screw M10x45).
- Finally assemble the linking rods on the rocker arm using the remaining bushes and the M10x125 screw.



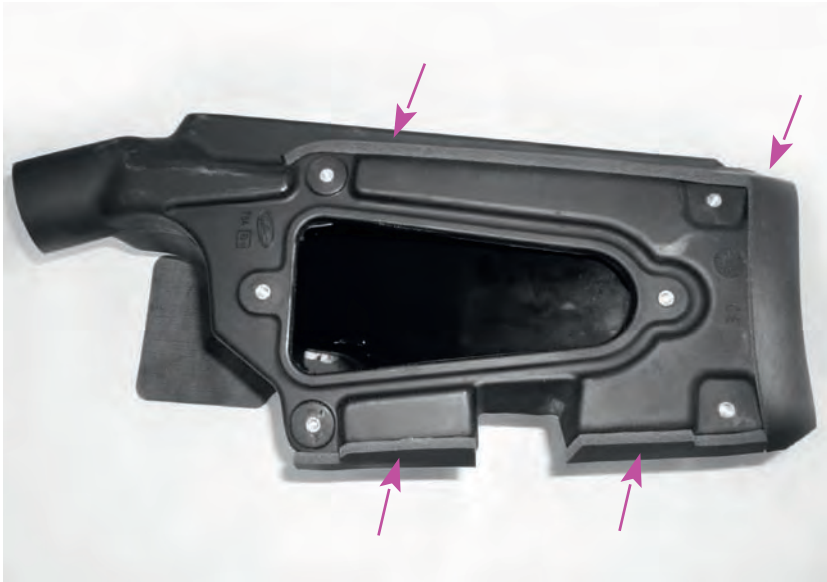
Note:

The prescribed tightening torques are 4,5Kgm for the screws A, B, C, E and 3,0Kgm for the screw D.

## CHECKS AFTER CLEANING

After cleaning the motorcycle, it is good practice to:

- Clean the air filter (proceed as described on pag.58).
- Remove the flywheel cover to eliminate any water that may have entered.
- Check carburettor tank: proceed as described on pag.63, to eliminate any water that may have entered.
- Grease the chain.
- Verify the integrity of water proofing gaskets on air box shown in the picture. Change them if these are damaged.



## MAINTENANCE SCHEDULE

		Breaking in, 5 hours		1st counterroll, 40 hours or 1000 km		2nd counterroll, 80 hours or 2000 km		3rd counterroll, 120 hours or 3000 km		4th counterroll, 160 hours or 4000 km		5th counterroll, 200 hours or 5000 km		6th counterroll, 240 hours or 6000 km		7th counterroll, 280 hours or 7000 km		8th counterroll, 320 hours or 8000 km		9th counterroll, 360 hours or 9000 km				
		CL	C	R	C-A	R	C-A	R	C-A	R	C-A	R	C-A	R	C-A	R	C-A	R	C-A	R	C-A	R	C-A	
<b>engine</b>		spark plug																						
		clutch	C-A																					
		flaps																						
		liquid coolant			C		C		C		C		C		C		C		C		C		C	
		engine oil			C		C		C		C		C		C		C		C		C		C	
		piston ring			C		C		C		C		C		C		C		C		C		C	
		piston																						
		rear shock absorber			C		C		C		C		C		C		C		C		C		C	
		nuts and bolts	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
		throttle grip	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A	C-A
bearing and steering gear play	C		C		C		C		C		C		C		C		C		C		C			
bearings rims			C		C		C		C		C		C		C		C		C		C			
lighting equipment			C		C		C		C		C		C		C		C		C		C			
air filter	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL		
brakes	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		
general greasing			C		C		C		C		C		C		C		C		C		C			
rear shock absorber leverage			T		C		C		C		C		C		C		C		C		C			
oil level brakes			C		C		C		C		C		C		C		C		C		C			
fork oil			R		R		R		R		R		R		R		R		R		R			
brake and clutch pump oil																								
tires			C		C		C		C		C		C		C		C		C		C			
tension and grease chain			C		C		C		C		C		C		C		C		C		C			
tension spoke			C		C		C		C		C		C		C		C		C		C			
motorcycle test			C		C		C		C		C		C		C		C		C		C			

**legend:**

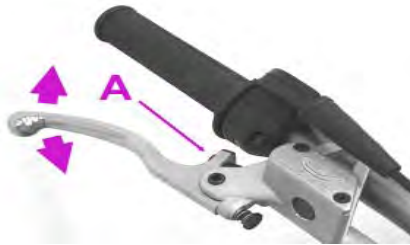
- C - Checks (cleaning, adjustment, greasing, replacement if necessary)
- R - Replacement
- A - Adjustment
- CL - Cleaning
- T - Tightening

## INDEX

- Adjustment of brakes
- Adjustment of clutch
- Adjustment of idling speed
- Adjustment of gas clearance
- Adjustment of air
- Check and adjustment of steering gear
- Tightening the chain
- Adjustment of front suspension
- Adjustment of rear shock absorber

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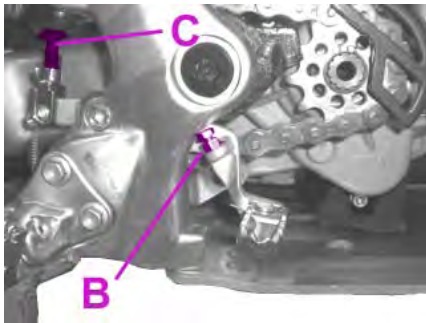
# SECTION 4



## ADJUSTMENT OF BRAKES

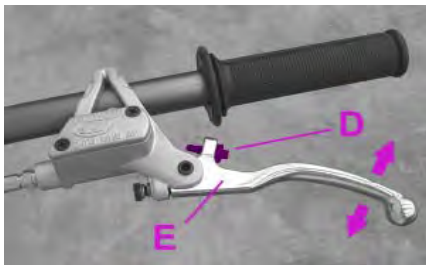
### Front brake

The front brake is disk type with hydraulic control, and therefore requires only ordinary maintenance. If you want to adjust the position of the lever, use register A.



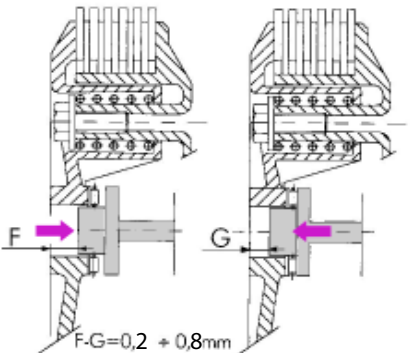
### Rear brake

The rear brake is disk type with hydraulic control. You may adjust pedal height by means of registers B and C. A minimum of clearance is recommended.



## ADJUSTMENT OF CLUTCH

Only operation that is performed on the clutch is adjustment of the position of lever E. To do this, use register D.



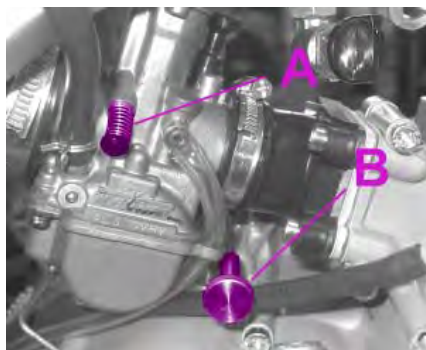
### Note:

The device you pressure plate must have a play between 0.2 mm and 0.8 mm. Therefore, proceed as follows when replacing disks:

- Reassemble the clutch without the outer cover
- Send the control rod to end of travel by pushing the pressure plate and measure distance F
- Operate the clutch lever until the control rod activates the pressure plate. Measure distance G and check that there is difference of approximately 0.2-0.8 mm.

### ADJUSTMENT OF IDLING SPEED

In order to correctly perform this operation, we advise you to do it when the engine is hot, connecting an electric revolution counter to the spark plug wire. Use the register A to calibrate the minimum (1000 rpm).



### ADJUSTMENT OF GAS CLEARANCE

Whenever the accelerator shows unloaded travel exceeding 3 mm, measured from the edge of the handle, you should adjust it by means of cable gas register.



### ADJUSTMENT AIR

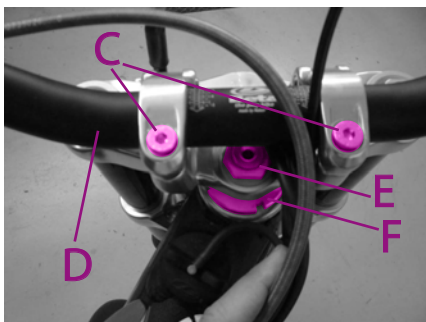
From all closed recommend to 1 1/2 turns (B).

### CHECK AND ADJUSTMENT OF STEERING GEAR

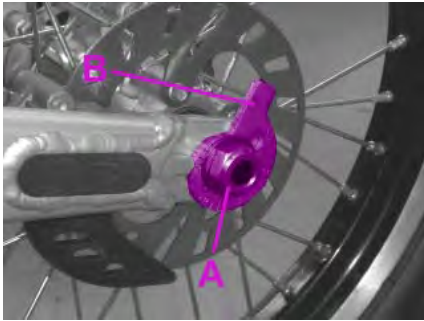
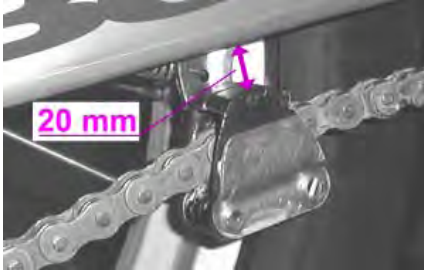
Periodically check the play in the steering sleeve by moving the fork back and forth as shown in the figure. Whenever you feel play, adjust as described below:

- Remove the handlebar protection
- Unscrew the 2 screws C
- Remove handlebar D
- Loosen nut E
- Loosen the screws G
- Take up the play by means of ring nut F.
- Correct adjustment, in order to not leaving any play, should not cause difficulty or irregularity in turning the handlebar
- Tighten the nut E

For reassembling proceed in the reverse order.







## TIGHTENING THE CHAIN

Check the drive chain periodically to ensure longer chain life.

Always keep it lubricated and clean from deposited dirt.

If play exceeds 20 mm, tighten the chain as follows:

- Loosen nut A
- Adjust lever B
- Adjust the same lever on the opposite side, bringing it to the same position
- Check wheel alignment
- Tighten and block nut A.

## ADJUSTEMENT OF FRONT SUSPENSION

### Fork

- For a more active “quicker” suspension setting, totally unscrew regulation knob B compared to the std. position
- For a more controlled “slower” suspension setting, preload spring for about 4-5 turns using the adjusting screw A and turning the knob B by 15 clicks from the fully opened position, which is in the middle of the adjustment.
- Rider weight. According to the rider weight, use the following settings:

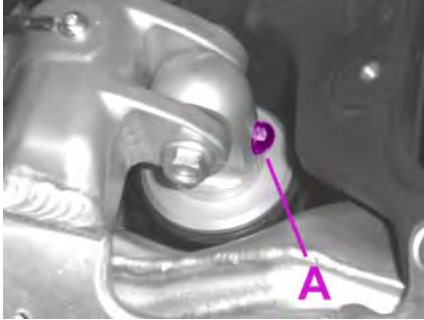


RIDER WEIGHT ( kg )	SPRING PRELOAD
weight > 80	+ 10 turns 108 mm
75 < weight < 80	+ 5 turns 110 mm
weight < 70	0 112 mm

In the event of any malfunction, contact our authorised customer service network.

ADJUSTMENT OF REAR SHOCK  
ABSORBER

Adjustment of spring load



- For a more active “quicker” suspension setting, open compression regulation knob A
- For a more controlled “slower” suspension setting, close compression regulation A

- Periodically clean the rebound rubber as follow:  
lower/remove rebound rubber using a little screwdriver and blow with compressed air in the spring spacer milling
- Always check the top and bottom bolts are tight.

In the event of any malfunction,  
contact our authorised customer  
service network.

INDEX

Troubleshooting

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# SECTION 5

PROBLEM	CAUSE	REMEDY
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 58
	-No current arriving at spark plug	Clean or replace spark plug. If the problem persists, consult one of our Authorized Dealers
	-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.
Engine misfires	-Spark plug has irregular electrode distance	Restore correct distance. See page 59
	-Spark plug is dirty	Clean or replace
	-check mass	Control isolation mass push-button
Piston knocks		
	-Carbon deposits inside cylinder or on spark plug	Consult one of our Authorized Dealers
	-Silencer partially obstructed	Consult one of our Authorized Dealers
Engine overheats and loses power	-Silencer partially obstructed	Consult one of our Authorized Dealers
	-Exhaust clearance partially obstructed	Consult one of our Authorized Dealers
	-Mix too lean	Jet may be partially obstructed
Weak front brake	-Worn pads, greased, vitrify	Proceed as indicated on page 60
	-Air or moisture in hydraulic circuit	Proceed as indicated on page 54
Weak rear brake	-Worn pads, greased, vitrify	Proceed as indicated on page 61
	-Air or moisture in hydraulic circuit	Proceed as indicated on page 54

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**Beta**  
*the play bike*

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