RS 300 R - RS 500 R 2021

Manual - Operation - Maintenance

PRESENTATION

Welcome to the SWM motorcycling Family!

Your new SWM motorcycle is designed and manufactured to be the best in its field.

The instructions in this book have been prepared to provide a simple and understandable guide for your motorcycle's operation and care.

Follow the instructions carefully to obtain maximum performance and your personal motorcycling pleasure. Your owner's manual contains instructions for owner care and maintenance.

The main repair or maintenance work requires the attention of a skilled mechanic and the use of special tools and equipment.

Your SWM Dealer has the facilities, experience and original parts necessary to properly render this valuable service.

This "Owner's Manual" is part and parcel of the motorcycle, hence, it shall remain with the motorcycle even when sold to another user.

This motorcycle uses components designed thanks to systems and state-of-the-art technologies which are thereafter tested in competitions.

In racing motorcycles, every detail is verified after each race in order to always guarantee better performance.

To ensure trouble-free operation of the vehicle, it is necessary to follow the maintenance and inspection table found under Appendix A.

IMPORTANT NOTICES

1) RS models are STREET LEGAL motorcycles; they are guaranteed exempt from functional defects and covered with legal guarantee, as far as the STANDARD CONFIGURATION IS MAINTAINED and the suggested maintenance table, shown in Appendix A, is observed.

2) All the motorcycles and any of their parts used in competitions of any type are excluded from the warranty.

IMPORTANT

In order to maintain the vehicle's "Guarantee of Functionality", the client must follow the maintenance programme indicated in the user's manual by carrying out maintenance inspections at authorised SWM dealers.
The cost for changing parts and for the labour necessary in order to comply with the maintenance plan is charged to the Client.
Note*: the warranty is NULL AND VOID if the motorcycle is rented.

Important Notice

Read this manual carefully and pay special attention to statements preceded by the following words:

WARNING*: Indicates the possibility of severe personal injury or death if instructions are not followed.

CAUTION*: Indicates the possibility of personal injury or vehicle damage if instructions are not followed.

Note*: Gives helpful information.

Parts Replacement

When parts replacement is required, use only SWM ORIGINAL parts.

WARNING*: After a crash, inspect the motorcycle carefully. Make sure that the throttle, brake, clutch and all other systems are undamaged. Riding with a damaged motorcycle can lead to a serious accident.

WARNING*: Never attempt to start or operate your motorcycle unless you are wearing appropriate protective clothing. Always wear a motorcycle helmet, boots, gloves, goggles and other appropriate protective clothing.

PRECAUTIONS FOR CHILDREN

WARNING:

- **Park the vehicle where it is unlikely to be bumped into or damaged.**
  Even slight or involuntary bumps can cause the vehicle to tip over, with subsequent risk of serious harm to people or children.
- **To prevent the vehicle from tipping over, never park it on soft or uneven ground, nor on asphalt strongly heated by the sun.**
- **Engine and exhaust pipes become very hot during riding. Always park your motorcycle where people or children can not easily reach these parts, in order to avoid serious scalds.**

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SCHEDULED MAINTENANCE ..... APPENDIX A

Note

- References to the "left" or "right" of the motorcycle are considered from the point of view of a person facing forward.

- Z: number of teeth
- A: Austria
  AUS: Australia
  B: Belgium
  BR: Brazil
  CDN: Canada
  CH: Switzerland
  D: Germany
  E: Spain
  F: France
  FIN: Finland
  GB: Great Britain
  I: Italy
  J: Japan
  USA: United States of America

- Unless otherwise specified, all the data and the instructions are referred to any and all Countries.

IDENTIFICATION DATA

The engine identification number is stamped at the top of the crankcase, while vehicle serial number or Vehicle Identification Number is stamped on the steering head tube.

Always quote **the number stamped on the frame** when ordering spare parts or requesting further details about your vehicle and note it on this booklet.

CHASSIS NUMBER

RS 300 R

ZN0B101AAHV000000

(●) (▲) (♦)

RS 500 R

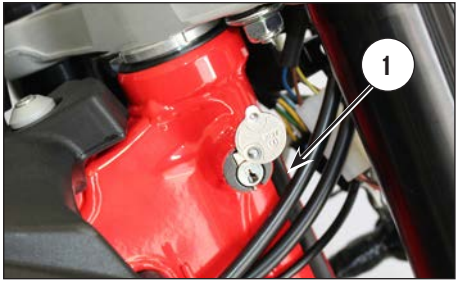
ZN0B103AAHV000000

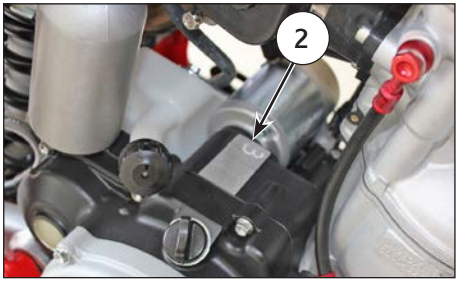
(●) (▲) (♦)

VEHICLE IDENTIFICATION NUMBER (V.I.N.)

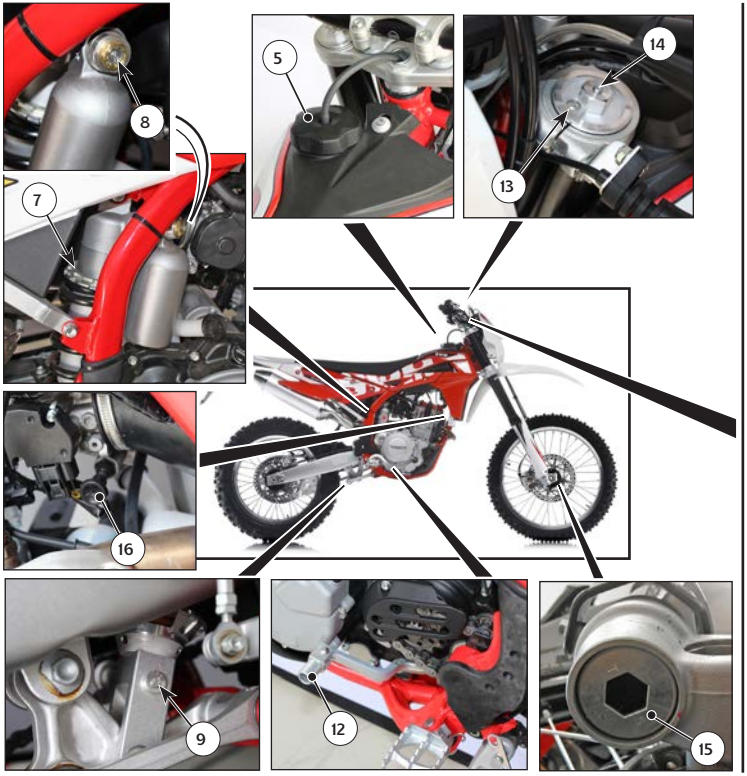
The full 17-digit serial, or Vehicle Identification Number, is stamped on the steering tube (R.H. side).

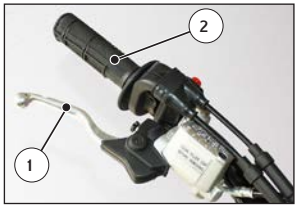
(●) = Model designation
(▲) = Model Year (2017)
(♦) = Progressive no.

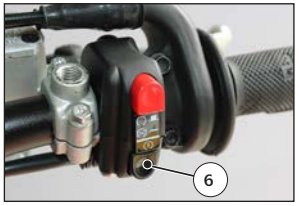


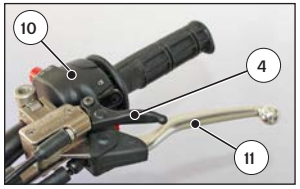


1. Chassis serial number
2. Engine serial number









CONTROLS LOCATION

1. Front brake control lever
2. Throttle twistgrip
3. Rear brake control pedal
4. Manual decompressor
5. Fuel tank filler cap
6. R.H. switch (engine electric starting)
7. Rear shock absorber spring preload adjuster
8. Rear shock absorber compression adjuster (low and high damping speeds)
9. Rear shock absorber rebound adjuster
10. L.H. switch
11. Clutch control lever
12. Gear shift control pedal
13. Air bleeding screw on front fork leg
14. Fork leg rebound adjuster
15. Compression damper adjustment (front fork leg bottom side)
16. Choke (L.H. side)

KEYS

Two keys are supplied with the motorcycle (one of them is a spare key) to be used:
a) on the ignition switch;
b) on the steering lock.

TECHNICAL DATA

ENGINE
Type . . . . . single cylinder, 4 stroke
Cooling liquid with electric fan
Bore (300) . . . . . .3,27 in.
Bore (500) . . . . . .3.81 in.
Stroke (300) . . . . . .2.17 in.
Stroke (500) . . . . . 2.67 in.
Displacement (300) . . . . . .18,16 cu. in.
Displacement (500) . . . . . 30.56 cu. in
Compression ratio 12,9:1
Starting . . . . . electric
(with automatic decompressor)

TIMING SYSTEM
Type . . . . . double overhead camshaft; 4 valve
Valve clearance (with engine cold)
Intake . . . . . .0.004 ÷ 0,006 in.
Exhaust . . . . . .0.007 ÷ 0,009 in.

LUBRICATION
Type . . . . . Dry sump with two oil pump
rotor and cartridge filter

IGNITION
Type . . . . . Electronic, inductive discharge,
with adjustable advance (digital control)
Spark plug type . . . . . NGK CR8EB
Spark plug gap . . . . . 0.027 in.

FUEL SYSTEM
Type . . . . . .Electronic injection feed

PRIMARY DRIVE
Drive pinion gear- Clutch ring gear
(300) . . . . . Z 24- Z 88
(500) . . . . . .Z 23- Z 63

Transmission ratio
(300) 3,666
(500) 2,739

CLUTCH
Type . . . . . .oil bath multiple disc clutch,
hydraulic control

TRANSMISSION
Type . . . . . constant mesh gear type

Transmission ratio
1st gear . . . . . .2,000 (z 28/14)
2nd gear . . . . . .1,611 (z 29/18)
3rd gear . . . . . .1,333 (z 24/18)
4th gear . . . . . 1,086 (z 25/23)
5 th gear . . . . . .0,920 (z 23/25)
6 th gear . . . . . .0,814 (z 22/27)

SECONDARY DRIVE
Transmission sprocket- Rear wheel sprocket
RS 300 R . . . .Z 13- Z 50
RS 500 R . . . . . Z 13- Z 46

Transmission ratio
RS 300 R 3,846
RS 500 R 3,538

FRAME
Type . . . . single beam, double cradle in steel tubes;
rear frame in light alloy.

FRONT SUSPENSION
Type . . . . . "Upside-down" telescopic hydraulic
front fork with advanced axle
(adjustable in compression and
rebound stroke); stanchions tubes Ø 1.89 in.

Legs axis stroke . . . . . 11.81 in.;

REAR SUSPENSION
Type . . . . . progressive with hydraulic single
shock absorber

Wheel stroke . . . . . 11.65 in.

FRONT BRAKE
Type . . . . fixed disc Ø 10.23 in with hydraulic control
and floating caliper;

REAR BRAKE
Type . . . . . .floating disc, ø 9.45 in. with
hydraulic control and floating caliper

RIMS
Front. . . . . .in light alloy: 1,6x21"
Rear . . . . . .in light alloy: 2,15x18"

EN

TIRES

Front. . . . . 90/90x21”
Rear . . . . . 140/80x18”

Cold tire pressure on road
(front) . . . . . .1 Kg/cm^2
(rear) . . . . . 1,2 Kg/cm^2

Cold tire pressure off road
(front) . . . . . 1,5 Kg/cm^2
(rear) . . . . . 2,0 Kg/cm^2

DIMENSION, WEIGHT, CAPACITY

Wheelbase . . . . . 58.38 in.
Overall length . . . . . 89.25 in.
Overall width . . . . . 32.30 in.
Overall height . . . . . 50.59 in.
Saddle height . . . . . .37.91 in.
Minimum ground clearance . . . . . .11.81 in.
Dry weight
(RS 300 R) . . . . . lb. 235.9
(RS 500 R) . . . . . lb. 244.7
Fuel tank capacity (1.58 Imp. Qt./ 1.9 U.S. Qt. reserve included) . . . . . .1.58 Imp. Gall./ 1.9 U.S. Gall
Coolant capacity . . . . . 2.0÷2.4 Imp. Pints; 2.3÷2.7 U.S. Pints

Transmission oil
Oil and oil filter replacement Imp. Quarts 1.5, U.S. Quarts 1.8
Oil replacement . . . . . .Imp. Quarts 1.3, U.S. Quarts 1.6

TABLE FOR LUBRICATION, SUPPLIES

Engine, gearbox and primary drive lubricating oil
MOTUL 5100 TECHNOSYNTHESE 10W50

Engine coolant
MOTUL MOTOCOOL EXPERT

Brake system fluid
MOTUL DOT 3&4

Clutch fluid
SAE 10 MINERAL OIL FOR HYDRAULIC CIRCUITS

Grease lubrication
MOTUL GREASE 100

Final drive chain lubrication
MOTUL CHAIN LUBE

Front fork oil
MOTUL FORK OIL LIGHT 5W

Oil for rear shock absorber
MOTUL FORK OIL LIGHT 5W

Electric contact protection
MOTUL EZ LUBE

CONTROLS

FUEL TAP

On vehicles which are fitted with a fuel injection engine, the fuel pump is built into the fuel tank and there is no tap (ON-OFF-RES) mounted on the fuel supply system.

The reserve warning is indicated on the digital instrument panel by the relevant warning light (See paragraph "Digital instrument, warning lights").

FUEL

Recommended fuel: premium grade UNLEADED fuel (R.O.N. 98).

Note*: If the engine "knocks", change fuel brand or use a higher octane rating fuel.

WARNING*: Do not continue operation if the engine pings or knocks.The engine will be damaged and could seize.

WARNING*: Fuel is extremely flammable and can be explosive under certain conditions. Always stop the engine and do not smoke or allow flames or sparks in the area where the motorcycle is refuelled or fuel is stored.

WARNING*: Do not overfill the tank. Refer to the lower mark on filler. After refuelling, make sure the tank cap (1) is closed securely.

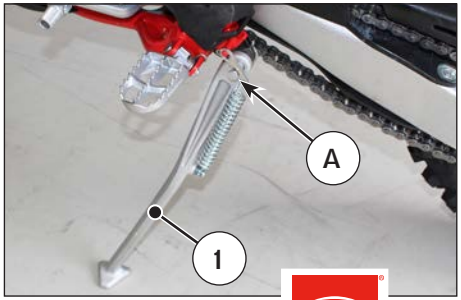
SIDE STAND

A side stand (1) is supplied with every motorcycle.

WARNING*: The stand is designed to support the WEIGHT of the MOTORCYCLE ONLY. Do not sit astride the motorcycle using the stand for support as this could cause structural failure to the stand resulting in serious injury.

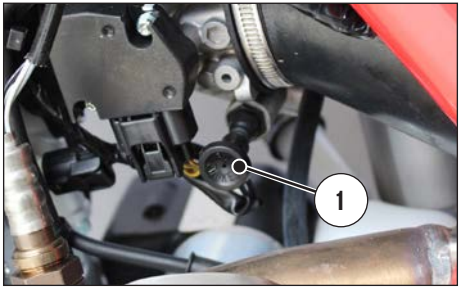
WARNING*: The motorcycle MUST be set on the side stand ONLY AFTER the rider has got off the vehicle. Stand AUTOMATICALLY folds back to rest position once the vehicle is vertical, no longer resting on the ground.

Periodically check the side stand (see "Scheduled Maintenance Chart"); make sure that the springs are not damaged and the side stand freely moves. If the side stand is noisy, lubricate the fastening pivot (A).



COLD START

For a cold start, the models with a fuel injection engine are fitted with a black knob (1) located on the left of the throttle body.
Pull the knob outwards to open the starter and push inwards to close.

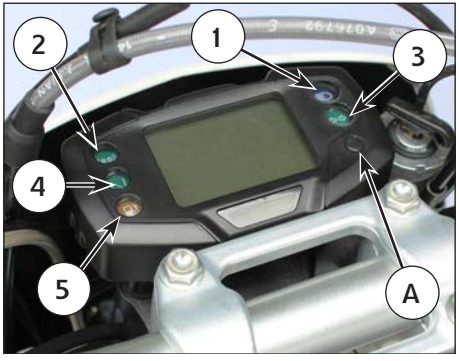


DIGITAL INSTRUMENT, WARNING LIGHTS

The motorcycle is fitted with a digital instrument on which 5 warning lights are also displayed: high beam lights, low beam lights (with display lighting), turning indicators, neutral gear and fuel reserve.

1- BLUE warning light "HIGH BEAM"
2- GREEN warning light "LOW BEAM"
3- GREEN warning light "TURNING INDICATORS"
4- GREEN warning light "NEUTRAL GEAR"
5- ORANGE warning light "FUEL RESERVE"

Note*:
- After starting the engine, the instrument will show the SW version for checking for the first 2 seconds; afterwards the instrument will show the last configured function.
- When the engine is turned off, the instrument does not show any functions.



- To select instrument functions and reset functions, use the SCROLL button (A)
- The functions, which can be selected in order are as follows:

1- SPEED / ODO
2- SPEED / H
3- SPEED / CLOCK
4- SPEED / TRIP 1
5- SPEED / STP 1
6- SPEED / AVS 1
7- SPEED / SPEED MAX
8- SPEED / TRIP 2
9- SPEED / TRP 2 / CLOCK
10- SPEED / RPM (engine r.p.m. numerical value)
.....

Note*:
The RPM function seen on the vertical bar indicator is **ALWAYS** active.

***IMPORTANT:**
Functions of the GREEN warning light (4)"NEUTRAL" in case of FUEL INJECTION SYSTEM malfunction (contact your local SWM Dealer)
a) With the GEARBOX NOT in NEUTRAL position: the warning light FLASHES INTERMITTENTLY.
b) With the GEARBOX in NEUTRAL position: the warning light is initially constantly ON then it FLASHES TWICE IN RAPID SUCCESSION then returns to being constantly ON. This cycle repeats itself.

After eliminating the malfunction,the warning light (4) returns to its normal operation.

1- SPEED (kmh or mph) / ODO / RPM (figure 1)

- SPEED: vehicle speed - maximum value: 299 kmh or 299 mph;
- ODO: odometer - maximum value: 99999 km;
- RPM: engine r.p.m. shown on the vertical bar indicator.

To replace kilometres with miles or miles with kilometres proceed as follows:

1) set to figure 1, place the ignition key in the OFF position and push the knob SCROLL (A);
2) place the ignition key in the ON position while pressing the SCROLL wheel for 3 seconds (A)

To confirm the conversion, the "SET" and the Miles and mph or km and kmh segment will activate for 3 seconds; afterwards the standard function in Fig.1 will reappear.

Note*:
After the previously described operation, the ODO setting will be converted and all other data reset (the H Counter is unchanged).

2- SPEED / H / RPM (figure 2)

- SPEED: speed - maximum value: 299 kmh or 299 mph;
- H: shows the running hours of the engine (data are saved in permanent memory every 10 minutes).
- Maximum value: 9999:59;
- RPM: engine r.p.m. shown on the vertical bar indicator.

3- SPEED / CLOCK / RPM (figure 3)

- SPEED: speed - maximum value: 299 kmh or 299 mph;
- CLOCK: Clock - reading from 0:00 to 23:59:59 (the data will be lost after detaching battery);

To set clock, press the SCROLL button (A) for 3 seconds or more to increase the hour; release button and after 3 seconds the minutes can be increased;

- RPM: engine r.p.m. shown on the vertical bar indicator.

4- SPEED / TRIP 1 / RPM (figure 4)

- SPEED: speed - maximum value: 299 kmh or 299 mph;
- TRIP 1: distance - maximum value: 999.9 km (the data will be lost after detaching battery).

Resetting the STP 1 also resets the TRIP 1 and AVS 1 data.

The function TRIP 1 is ON together with the function STP 1 (*).

- RPM: engine r.p.m. shown on the vertical bar indicator.

(*): see figure 5

5- SPEED / STP 1 / RPM (figure 5)

- SPEED: speed - maximum value: 299 kmh or 299 mph;
- STP 1: miles/kilometres covered time
- Reading from 0:00 to 23:59:59 (the data will be lost after detaching battery).

To activate the function STP 1, push the knob SCROLL (A) for more than 3 seconds.

- pressing SCROLL (A) for more than three seconds, the counter starts;
- pressing SCROLL (A) once only, the counter stops;
- pressing SCROLL (A) once only, the counter resets;

.....

and so on

Note*:

STP 1 data + TRIP 1 data = AVS 1 (*).

- RPM: engine r.p.m. shown on the vertical bar indicator.

(*): see figure 6

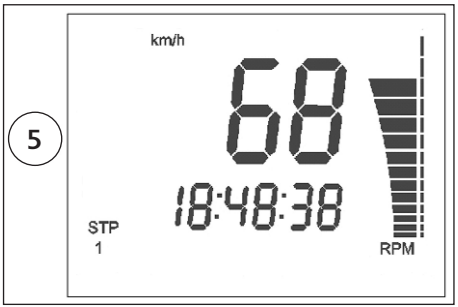
6- SPEED / AVS 1 / RPM (figure 6)

- SPEED: speed - maximum value: 299 kmh or 299 mph;
- AVS 1: shows the average speed for vehicle coverage, distance data (TRIP 1) and covered time (STP1) (the data will be lost after detaching battery).

Note*:

Resetting the STP 1 also resets the TRIP 1 and AVS 1 data.

- RPM: engine r.p.m. shown on the vertical bar indicator.

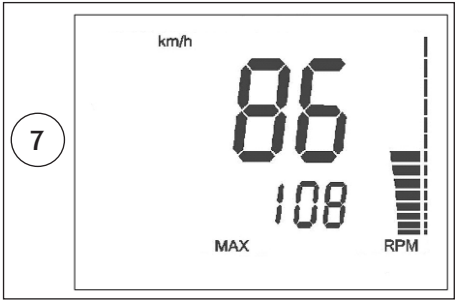


7- SPEED / V MAX / RPM (figure 7)

- SPEED: speed - maximum value: 299 kmh or 299 mph;
- V MAX: Shows the maximum speed reached by the vehicle, in kmh or mph.

Maximum value: 299 kmh or 299 mph. To set to zero V MAX, push the knob SCROLL (A) for more than 3 seconds;

- RPM: engine r.p.m. shown on the vertical bar indicator.



8- SPEED / TRIP 2 / RPM (figure 8)

- SPEED: speed - maximum value: 299 kmh or 299 mph;
- TRIP 2: distance - maximum value: 999.9 km/miles (the data will be lost after detaching battery);

To set TRIP 2 to zero, push the knob SCROLL (A) for more than 3 seconds;

- RPM: engine r.p.m. shown on the vertical bar indicator.

9- TRP 2 / CLOCK / RPM (figure 9)

- TRIP 2: distance - maximum value: 999.9 km/miles (the data will be lost after detaching battery);

To set TRIP 2 to zero, push the knob SCROLL (A) for more than 3 seconds;

- CLOCK: Clock- reading from 0:00 to 23:59:59 (the data will be lost after detaching battery);

To reset the clock, push the knob SCROLL (A) for more than 3 seconds in order to increase the hours; release the knob then, after 3 seconds, it is possible to increase the minutes;

- RPM: engine r.p.m. shown on the vertical bar indicator.

10- SPEED /RPM (engine r.p.m. numerical value) (figure 10)

- SPEED: speed - maximum value: 299 kmh or 299 mph;
- RPM: engine r.p.m.; both vertical bar indicator and numerical value are on.

THROTTLE CONTROL

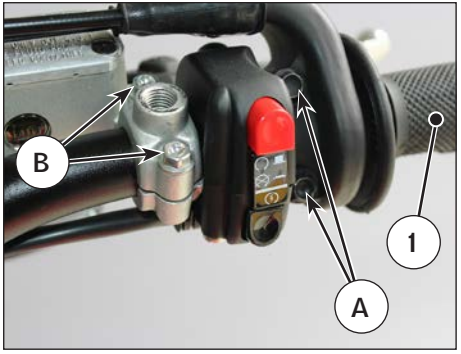
The throttle twistgrip (1) is located on the right-hand side of the handlebar. The position of the throttle control can be adjusted by loosening the two retaining screws.

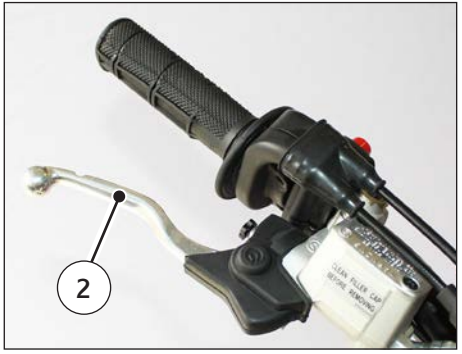
CAUTION*: Do not forget to tighten the screws (A) after the adjustment.

FRONT BRAKE CONTROL

The brake control lever (2) is located on the right-hand side of the handlebar. The position of the throttle control can be adjusted by loosening the two retaining screws.

CAUTION*: Do not forget to tighten the screws (B) after the adjustment.





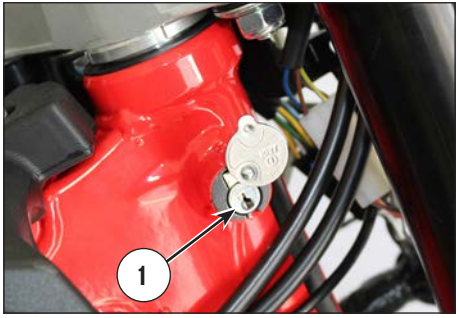
IGNITION SWITCH

The ignition switch has two positions.

- From the OFF position, i.e. where you can remove the key, turn the key (1) clockwise to ON; ignition, parking lights and utilities are hence activated and the engine can be started.

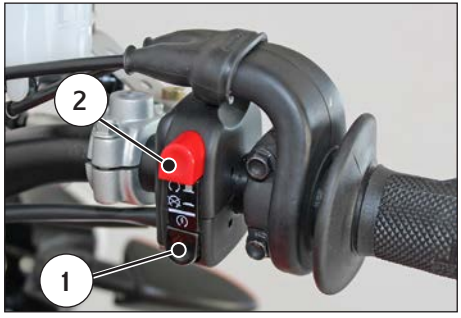
STEERING LOCK

The motorcycle is equipped with a steering lock (1) on the R.H. side of the steering head tube.
To lock it, procede as follows:
turn the handlebar leftwards, place the key in lock and turn counterclockwise. Push the key inwards (if necessary, turn to and from). Turn the key clockwise and remove it from the lock.
To unlock the steering lock, reverse the above procedure.



R.H. HANDLEBAR SWITCH

The right-hand switch features the following controls:
1) Engine start button
2) Engine KILL SWITCH.



L.H. HANDLEBAR SWITCH

The left-hand switch features the following controls:
1) High beam flasher (self-cancelling)

2) High beam

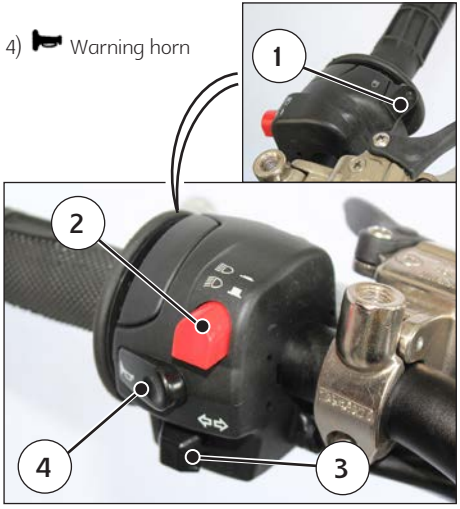
Low beam

3) Left-hand turning indicators (self-cancelling)

Right-hand turning indicators (self-cancelling)

To deactivate the turning indicators, press the control lever after it is returned to the centre.

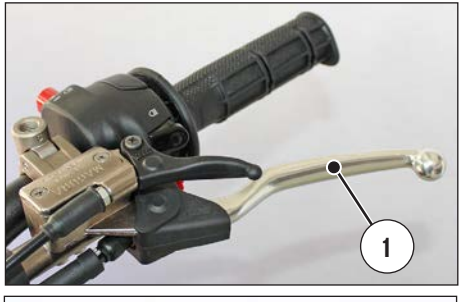
4) Warning horn



CLUTCH CONTROL

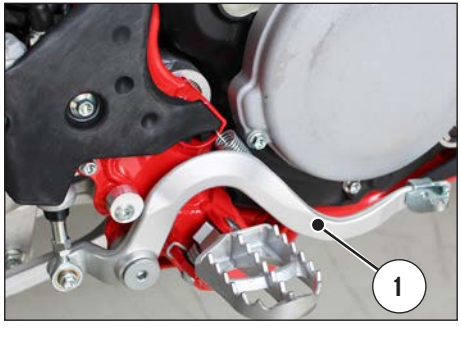
The hydraulic clutch control lever (1) is located on the left-hand side of the handlebar and is protected against dirt.
The clutch control position on the handlebar can be adjusted by loosening the lower retaining screw (A).

CAUTION*: Do not forget to tighten the screw after the adjustment.



REAR BRAKE CONTROL

The rear brake control (1) is placed on the right-hand side of the motorcycle. A stop switch, during the braking action, causes the stop light on the tail light to come on.

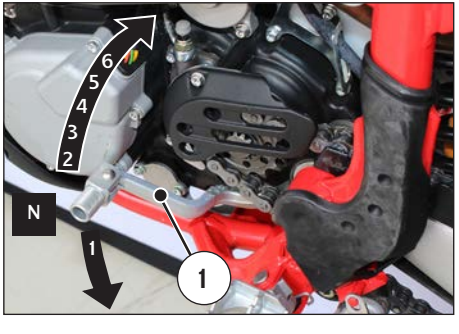


GEAR SHIFT CONTROL

The lever (1) is placed on the left-hand side of the engine. The operator must release the lever after each gear change to allow it to return to its central position. Neutral position (N) is between the first and second gears.
First gear is engaged by pushing the lever downwards; the other gears are engaged in a sequence by pushing the lever upwards.
The position of the gear shift lever on the shaft can be varied as follows: loosen the screw, pull the lever out, and place the lever in a new position on the shaft.
Tighten the screw once operation is completed.

CAUTION*: Do not shift gears without disengaging the clutch and closing the throttle. The engine could be damaged by overspeed.

WARNING*: Do not downshift when travelling at a speed that would force the engine to overrev in the next lower gear, or cause the rear wheel to lose grip.



RIDING

WARNING*: The motorbike is approved to be used by the pilot only and for this reason it is not allowed to carry a passenger.

Note*: If you are not familiar with the motorcycle operation, read paragraphs on "CONTROLS" before riding this motorcycle.

PRE-RIDE CHECKS

Any time you ride your motorcycle, make a general inspection first and proceed to check the following:
- check fuel level and engine oil level;
- check the brake and clutch fluids level;
- check the steering by turning the handlebar both ways, fully home;
- check the tyre pressure;
- check the chain tension;
- check the throttle twistgrip and adjust it, if necessary;
- turn the ignition switch to ON position: check the lighting of instrument display and, with gearbox in neutral, make sure that the neutral warning light comes on;
- switch on the low beam, the high beam and check that the relevant warning lights come on;
- operate the turning indicators and check that the warning light comes on;
- check if the rear stop light is functioning.

INSTRUCTIONS FOR RUNNING-IN

The exclusivity of the design, coupled to the high quality of the materials used and the accuracy of the assembly, guarantee the higher comfort right from the start. However, when running for the first 1500 Km., SCRUPULOUSLY follow the rules mentioned herebelow. Please note that FAILURE TO COMPLY WITH THESE RULES MAY COMPROMISE THE LIFE AND THE PERFORMANCE OF THE MOTORCYCLE:

- warm up the engine by running at low revs before using the motorcycle;
- avoid quick starts and never rev up the engine when in low gear;
- ride at low speed until the engine is warmed up;
- apply both brakes several times to settle the pads and the discs;
- do not maintain the same speed for a long time;
- do not ride for a long time without stopping;
- NEVER drive downhill with GEARBOX IN NEUTRAL, but shift into gear to brake with the engine if necessary, thus preventing the fast wear of the brake pads.

TROUBLESHOOTING

The following list is used for troubleshooting and to find the necessary remedies.

The engine does not start
- the starting procedures are not correctly followed: follow the instructions given on paragraph "Starting the engine"
- dirty spark plug: clean
- the spark plug does not spark: adjust the electrodes gap
- faulty starter motor: repair or replace;
- faulty start button: replace the switch

The engine has starting troubles
- dirty or worn out spark plug: clean or replace

The engine starts, but it is erratic
- dirty or worn out spark plug: clean or replace
- faulty spark plug electrode gap: adjust;

The spark plug gets easily dirt:
- unfit spark plug: replace

The engine overheats
- the air flow on the radiators is blocked: clean
- Faulty electric fan: replace thermal switch
- Insufficient amount of coolant: top up.

The engine lacks power
- dirty air filter: clean
- the spark plug electrode gap is too large: adjust;
- incorrect valve clearance: adjust;
- insufficient compression: check for the cause

The engine knocks
- excessive carbon deposit on the piston crown, or in the combustion chamber: clean
- faulty spark plug or wrong heat rating: replace

The alternator fails to charge, or its charge is insufficient
- the cables on the voltage regulator are badly connected, or in short-circuit: correctly connect, or replace
- faulty alternator coil: replace
- de-magnetised alternator rotor: replace
- faulty voltage regulator: replace

The battery overheats
- faulty voltage regulator: replace

Difficulty in shifting gears
- engine oil with too high viscosity rating: replace with the recommended oil

The clutch slips
- insufficient spring load: replace
- worn-out clutch plates: replace

Faulty brakes
- worn-out pads: replace

STARTING THE ENGINE

With cold engine, i.e., after the motorcycle has not been used for a while or in low ambient temperatures, operate in the following manner:
1) Place ignition key (1) to ON position (the buzz that you hear when you turn the key to ON is caused by the fuel pump which puts the feeding system under pressure);
2) pull the starter knob (2);
3) pull the clutch lever (3);
4) shift the gear pedal (4) into neutral position;
5) Check that the button (5) is in the out position and press it, followed by the start button (6).
   Put the knob (2) in its initial position as soon as the engine is idling
   When starting with an already warmed up engine DO NOT USE the starter. When a cold engine has just been started, do not increase revs, to ensure an adequate oil warm-up and circulation.

Note*: A safety switch is fitted on the clutch lever support that allows starting ONLY when the clutch lever is pulled.

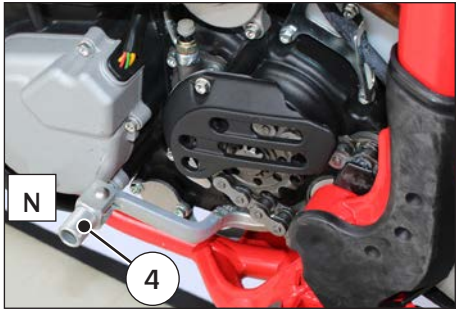
Although the engine has an automatic decompressor, it may in some cases be necessary (throttle body flooding or starting difficulties due to inadequate battery charge) to use the manual decompressor located on the left-hand side of the handlebar. In these cases, pull the lever (7) whilst simultaneously pressing the starter button (6), release the lever (7) keeping the button (6) pressed and then release the button.

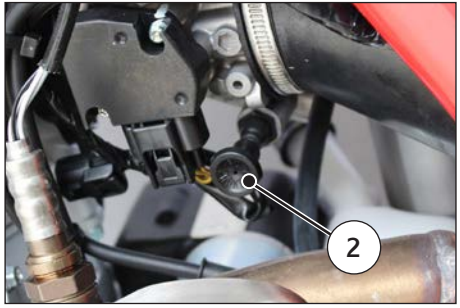
IMPORTANT NOTE IN CASE OF COLD STARTS AT LOW TEMPERATURES

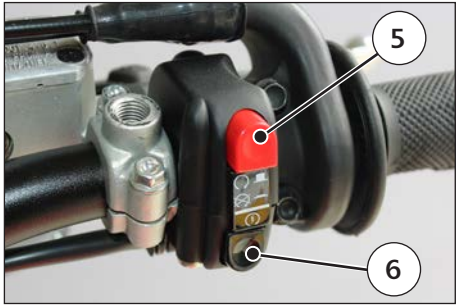
It is recommended to briefly warm-up the engine at idle until, after having disengaged the starter, there is a normal response from the engine when opening the throttle.
In this way the oil can reach all the surfaces needing lubrication and the coolant will reach the necessary temperature for correct engine function.
Avoid overheating the engine.

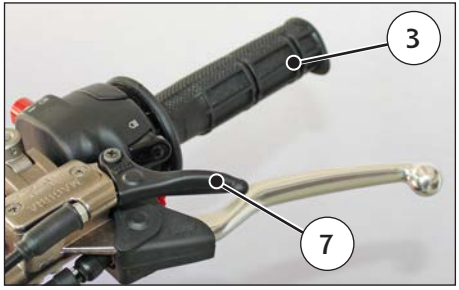
IMPORTANT*: Never accelerate the engine after a cold start.

WARNING*: Exhaust contains poisonous carbon monoxide gas. Never run the engine in a closed garage or in a confined area.









STOPPING THE MOTORCYCLE AND THE ENGINE

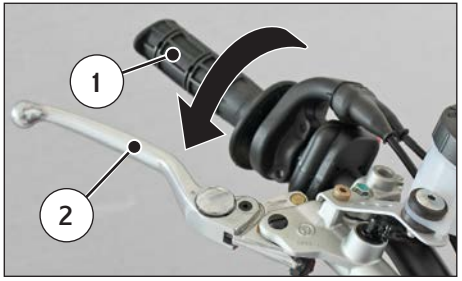
- Close the throttle (1) completely so that the engine will help slow down the motorcycle.
- Apply both front (2) and rear (3) brakes while downshifting (for fast deceleration, press firmly on both brake pedal and lever).
- When stopped, pull the clutch lever (4) and shift gear lever (5) into the neutral position
- Turn the ignition key (6) to the OFF position (position for removing key).

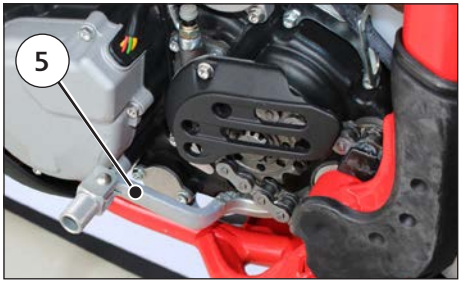
STOPPING THE MOTOR IN AN EMERGENCY

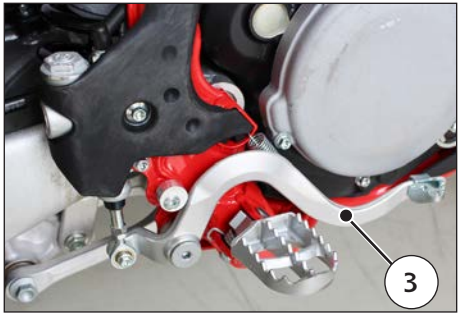
- Press the red button (7) to stop the motor; after use, bring it back to the "out" position.

WARNING*: Independent use of the front or rear brake may be advantageous under certain conditions. Be careful when using the front brake, especially on slippery surfaces. Improper use of the brakes can lead to a serious crash.

WARNING*: In the event of stuck throttle or other malfunction which causes the engine to run uncontrollably, IMMEDIATELY depress the engine kill switch (7). Control the motorcycle by normal use of the brakes and steering while pressing the engine kill switch.





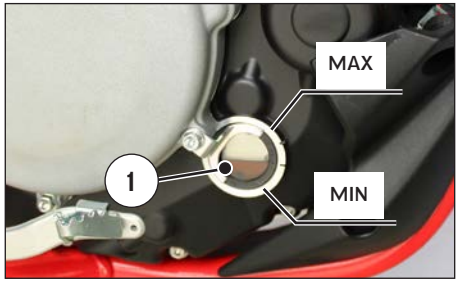


CHECKING THE OIL LEVEL

Keeping the motorbike level and in a vertical position, check the oil level through the inspection (1) window on the right crankcase. Make sure the level is in between the MIN and MAX notches.
To top up, remove the filler cap (2).

Note*: Have this operation made with warm engine.

WARNING*: Be careful not to touch hot engine oil.

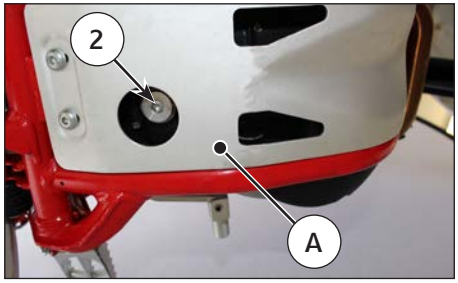


ENGINE OIL REPLACEMENT AND BAG FILTERS-FILTER CARTRIDGE CLEANING OR REPLACEMENT

WARNING*: Be careful not to touch hot engine oil.

Drain the oil with WARM ENGINE; proceed as follows:

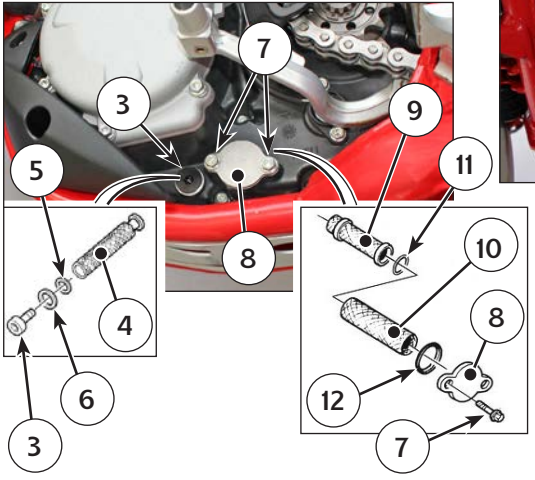
- remove oil filler cap (1);
- remove the engine guard (A)
- place an oil drain pan under the engine block
- remove the oil drain cap (2)
- drain the used oil completely then clean the magneto on the cap;
- replace the filters as described below.



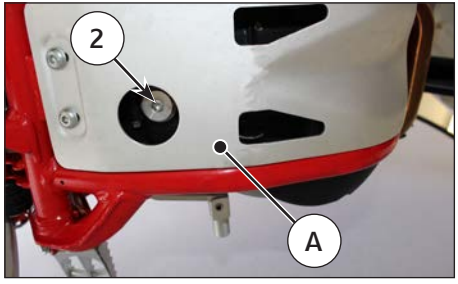
CLEANING THE METAL FILTERS

After draining the oil as described above, operate as follows:

- Unscrew the cap (3) and remove the filter (4).
- Clean the filter (4) using petrol.
- Check the condition of the O-ring (5) and replace it if worn.
- Refit everything operating in reverse order from removal taking care to correctly position the aluminium washer (6).
- Undo the two screws (7) and remove the cap (8).
- Clean the filters (9) and (10) using petrol.
- Check the condition of the O-rings (11) and (12) and replace them if worn.



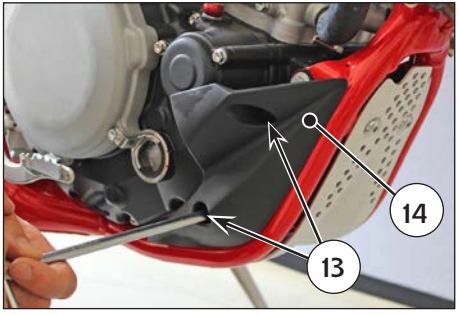
- Refit everything operating in reverse order from removal taking care to correctly position the O-rings (11) and (12).
- Once you have replaced the filters, refit the drain cap (2) and the engine guard (A) and pour in the required amount of oil.

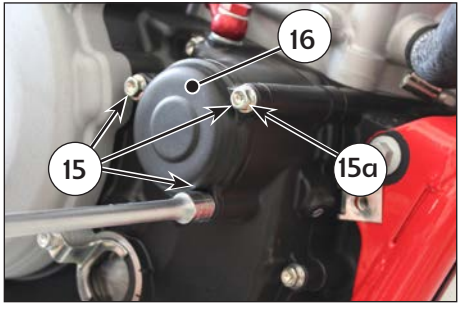


REPLACING THE FILTER CARTRIDGE

After draining the oil as described above, operate as follows:

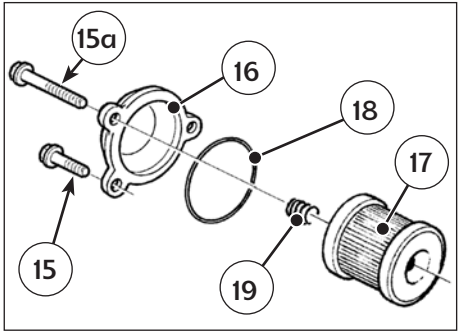
- Undo the two screws (13) and remove the guard (14).
- Undo the three screws (15) and remove the cap (16).
- Replace the filter (17).
- Check the condition of the O-ring (18) and replace it if worn.





- Refit everything operating in reverse order from removal taking care to correctly position the O-ring (18) and the spring (19).

WARNING*: the longer screw (15a) is to be fitted exactly in the position indicated in the figure.

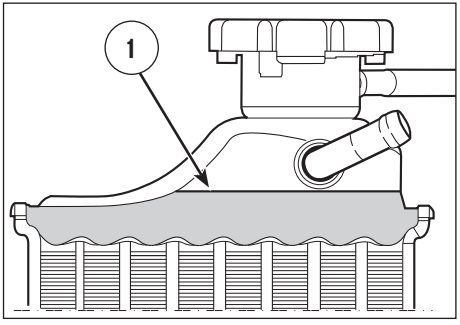


COOLANT LEVEL CHECK

Check level (1) in right-hand radiator when engine is cold (place the motorcycle so that it is perpendicular to the ground). The coolant should be approximately 10 mm above cells and besides, it shall not exceed the middle of the expansion tank (2) located in front of the rear shock absorber.

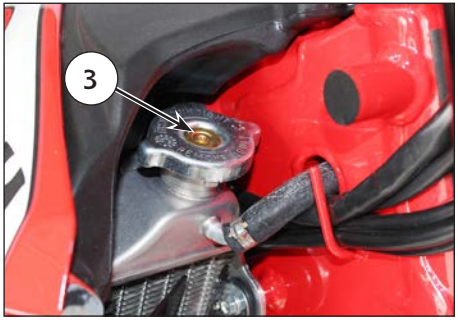
The radiator cap (3) features two locking positions, the first being for the previous pressure discharge of the cooling system.

CAUTION*: Avoid removing radiator cap (3) when engine is hot, as coolant may spout out and cause scalding.



CAUTION*: Because the cooling fan (4) can be activated even when the start switch is in OFF position, always keep at a safe distance from the fan blades.

Note*: Difficulties may arise in eliminating coolant from painted surfaces. If this occurs, wash off with water.

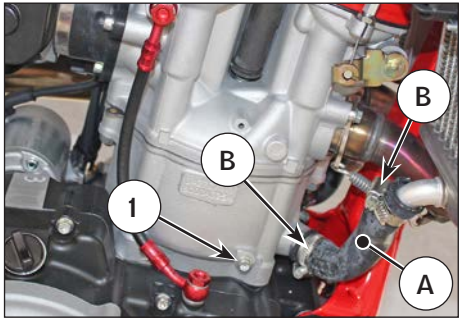


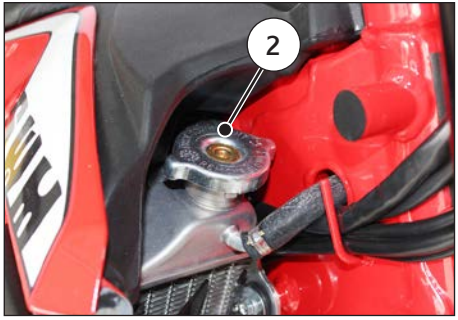
COOLANT REPLACEMENT

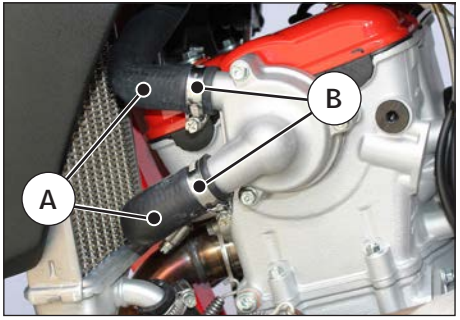
WARNING*: Coolant shall be replaced with cold engine and coolant.

Standard procedure

- Place a vessel on the R.H. side of the cylinder, under the coolant drain screw (1). FIRST remove the screw (1) then SLOWLY open the R.H. radiator cap (2); slope the motorcycle on the right side to drain the coolant easily in the vessel. Reassemble the screw (1).
- Pour the necessary quantity of coolant in the radiator then warm up the engine in order to eliminate any possible air bubbles.
- Allow the coolant to cool down then remove cap (2) and check the level as explained under "Coolant level check".
- Periodically check the connecting hoses (see "Scheduled Maintenance Chart"): this will avoid coolant leakage and consequent engine seizure: If hoses (A) show cracks, swelling or hardening due to sheaths desiccation, their replacement shall be advisable.
- Check the correct tightening of the clamps (B).







THROTTLE CABLE ADJUSTMENT

To check the correct adjustment of the throttle operate as follows:

- move the upper rubber cap (1);
- by moving cable (2) back and forth check for 2 mm. clearance;
- should this not be the case, release the check nut (3) and appropriately turn the adjustment screw (4) (unscrewing reduces the clearance, tightening increases it);
- Lock the check nut (3).

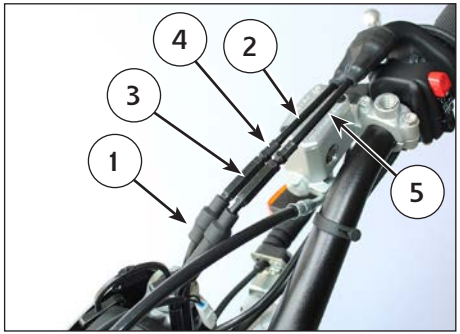
WARNING*: Operation with damaged throttle cable could result in an unsafe riding condition.

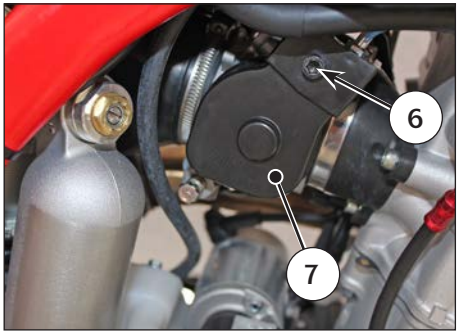
WARNING*: Exhaust gas contains poisonous carbon monoxide gas. Never run the engine in a closed area or in a confined area.

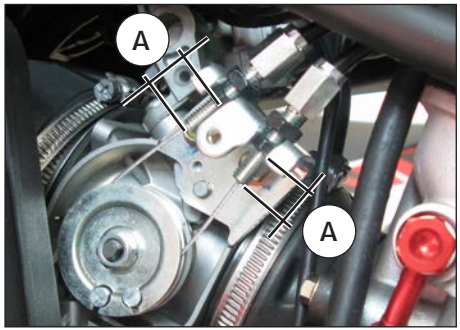
Note*: If replacing the throttle control cables (2) and (5), operate as follows:

- Undo the screw (6) and remove the cap (7).
- Replace the cables (2) and (5); when refitting, respect the dimension A (10mm) shown in the photo. Then refit the protection cap (7) using the screw (6) and adjust the cables on the handlebar as described above.

To replace throttle control cables, first remove tha fuel tank.



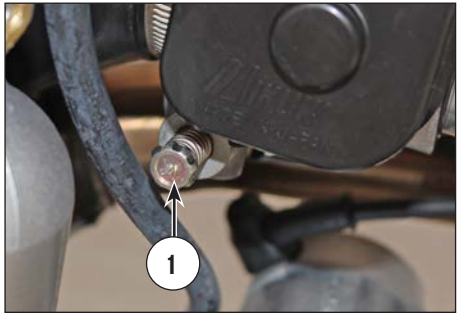




ADJUSTING THE IDLE

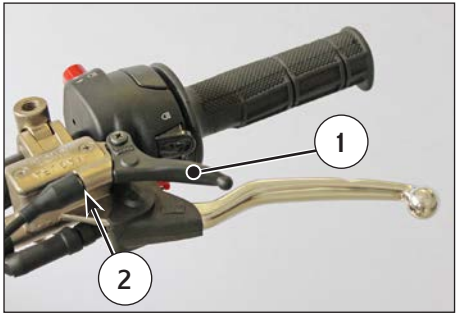
Adjust the carburettor with warm engine and with the throttle control in closed position. Proceed as follows:

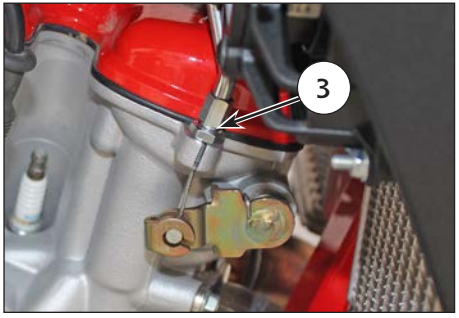
- turn the idle speed adjustment screw (1) on the throttle body, located on the right-hand side of the vehicle, until the idle speed of 1650 RPM is reached (turn clockwise to increase the speed and anticlockwise to reduce the speed).



ADJUSTING THE MANUAL DECOMPRESSOR CABLE TENSION

In order to adjust the lever (1) decompressor free play (approximately 3 mm- 0.12 in.), the lever holder is provided with the adjuster (2); the adjustment can be also effected with the tightener (3) on the R.H. side of the engine (use this tightener if it is not possible to obtain the correct free play with the adjuster on the handlebar).





SPARK PLUG CHECK

Spark plug (2) gap shall be 0.028 in.
A wider gap may cause difficulties in starting the engine and overload the coil.
A gap that is too narrow may cause difficulties when accelerating, when idling or poor performance at low speed.
Clean the scale away from the base of the spark plug before removing it from the cylinder, after removing the cap (1).
It is very useful to examine the state of the spark plug just after it has been removed from the engine since the scale deposits on the plug and the colour of the insulator provide useful indications.

Correct heat rating:
The tip of the insulator should be dry and the colour should be light brown or grey.

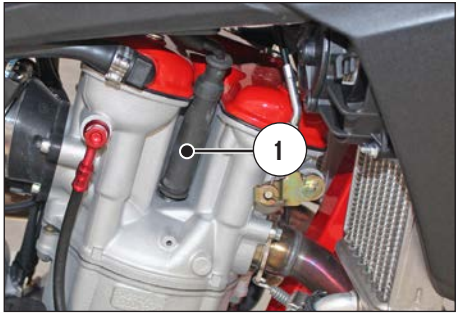
High heat rating:
In this case, the insulator tip is dry and covered with dark deposits.

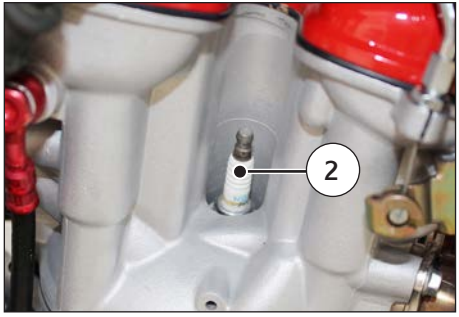
Low heat rating:
In this case, the spark plug has overheated and insulator tip is vitrified (glazed), white or grey in colour.

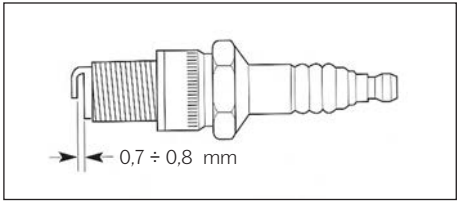
WARNING*: If the spark plug is replaced, use one with the same rating.

CAUTION*: A spark plug with too hot a heat range may lead to preignition and possible engine damage. A spark plug with too cold a heat range may foul as the result of too much carbon buildup.

Before refitting the plug, thoroughly clean the electrodes and the insulator using a metal brush. Smear some graphite grease on spark plug thread, do it fully home finger tight then tighten it to 7.37÷8.85 ft-lb. torque. Loosen the spark plug then tighten it again to 7.37÷8.85 ft-lb.
Spark plugs which have cracked insulators or corroded electrodes should be replaced.

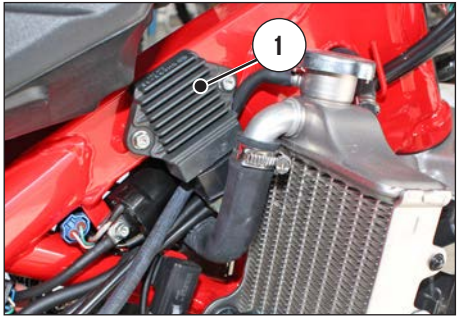


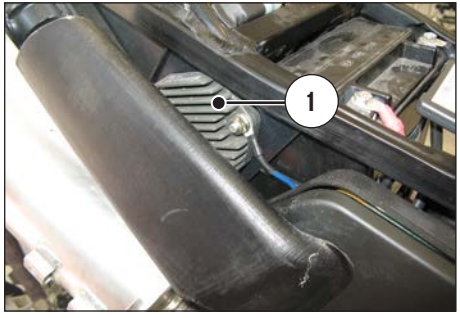




VOLTAGE REGULATOR

The voltage regulator (1) is fitted to the right side of the chassis, on the front.

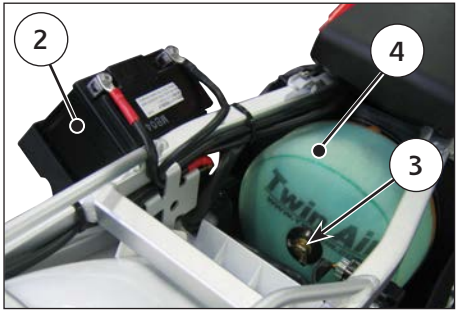




AIR FILTER CHECK

Turn the rear pin (1) anticlockwise and remove the saddle disengaging it from the front retaining screw.

Take out the battery (2) and place it sideways on the vehicle.
Remove screw (3) and the filter (4). Separate filter (5) from frame (6).

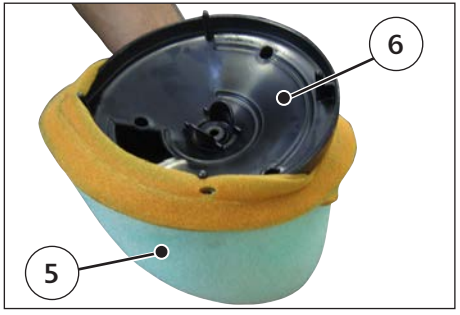


AIR FILTER AND CLEANING

Wash the filter with a specific detergent then dry it fully.
Plunge the filter in special oil for filters then wring it to drain superfluous oil.

CAUTION*: Do not use gasoline or a low flash-point solvent to clean the element. A fire or explosion could result.

CAUTION*: Clean the element in a well ventilated area, and do not allow sparks or flames anywhere near the working area.

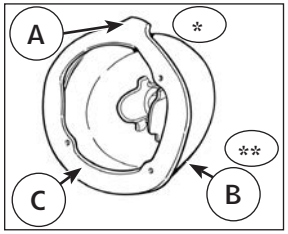


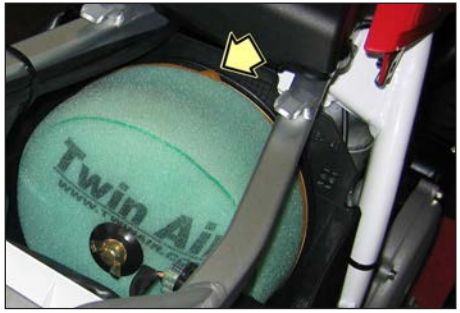
ASSEMBLY

To ensure tight fit, slightly (C) grease filter edge on side facing filter housing.
While re-inserting the filter into its housing, make surs that piece (A) is turned upwards and edge (B) is on the left lower side of the filter case. Reassemble the parts previously removed (battery: connect the positive cable first).

CAUTION*: If the element assembly is not installed correctly, dirt and dust may enter and the engine resulting in rapid wear of the piston rings and cylinder.

*: upper side
**: left-hand side



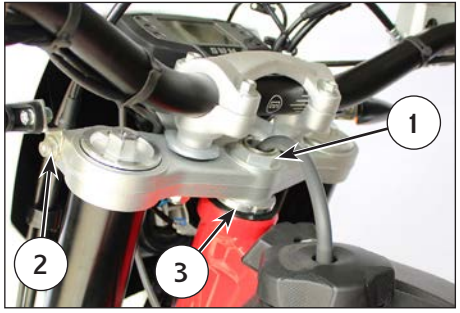


STEERING WHEEL BALL PLAY ADJUSTMENT

To ensure maximum safety, the steering wheel should always be regulated so that the handlebars steering the motorcycle rotate freely without play. To check steering wheel adjustment, place kick stand or other support under the engine so that the front wheel is raised from ground.
Place slight pressure on the tips of the handlebars to rotate steering wheel; the handlebars should also rotate without effort.
Stand in front of the motorcycle and grasp the lower end of the fork rods sliders moving them in the direction of their axis. Se si avverte gioco occorrerà eseguire la regolazione operando come segue:

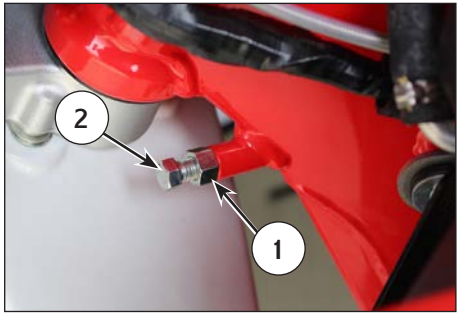
- loosen steering sleeve nut (1).
- Loosen screws that fix steering head to fork rods (2).
  Turn the steering ring nut (3) clockwise of the steering sleeve proper tool, to adjust play properly.
- Tighten steering sleeve nut (1) to a torque setting of 57,9÷65,1 Lb/ft; (78,4÷88,3 Nm).
- Tighten screws on the steering head (2) to a torque of 22,5÷26,5 Nm (16.6÷19.5 Lb/ft).

CAUTION*: Do not ride a motorcycle with damaged steering stem bearings. An unsafe handling condition can result.



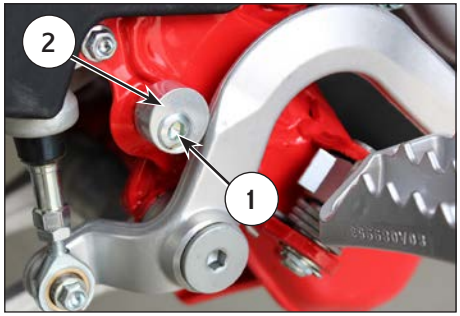
LOCK ADJUSTMENT

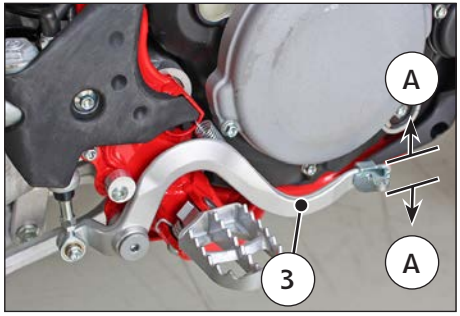
The lock can be changed, using the adjusting units on the sides of the steering tube, as follows: loosen the ring nut (1) and turn the adjusting screw (2) until you have the desired angle, then tighten the ring nut again (1). Change by the same amount on both sides.



REAR BRAKE PEDAL POSITION ADJUSTMENT

The position of the rear brake pedal with respect to the footrest may be adjusted according to the individual needs.
For adjusting, proceed as follows.
- loosen the screw (1);
- turn the cam (2) in order to raise or lower the brake pedal (3) within the range available (A);
- the operation done, tighten the screw (1). Once this adjustment is completed, adjust the free play of the pedal as follows.

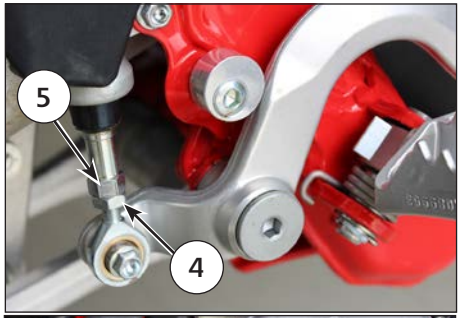


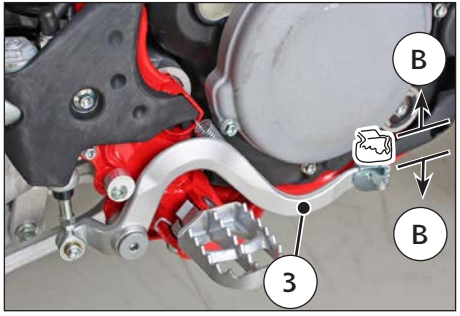


REAR BRAKE PEDAL FREE PLAY ADJUSTMENT

The rear brake pedal (3) should have a free play (B) (0.2 in.) before the brakes begin to bite.
Should this not happen, operate as follows:
- loosen nut (4);
- operate the pump rod (5) to increase or decrease the free play;
- tighten nut (4) at the end of the operation.

WARNING*: When the free play requirement is not met, the brake pads will be subjected to an early wear that may lead to TOTAL BRAKE INEFFECTIVENESS.





ADJUSTMENT OF THE CONTROL LEVER AND FRONT BRAKE FLUID LEVEL CHECK

On the RS models the adjuster (2), located on the control lever, allows adjusting of the free play (a). Free play (a) must be at least 0.1 in.
The level of the fluid in master cylinder reservoir must never be below the minimum value (1), which can be checked from the window on the rear side of the master cylinder body.
A decrease of the fluid level will let air into the system, hence an extension of the lever stroke.

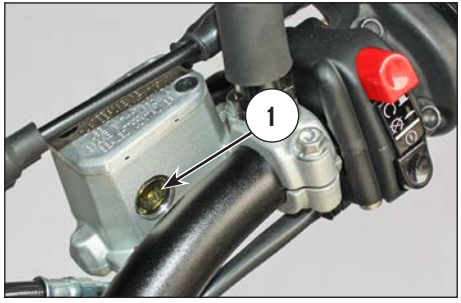
WARNING*: If the brake lever feels mushy when pulled, there may be air in the brake lines or the brake may be defective. Since it is dangerous to operate the motorcycle under such conditions, have the brake system immediately checked by the SWM Dealer.

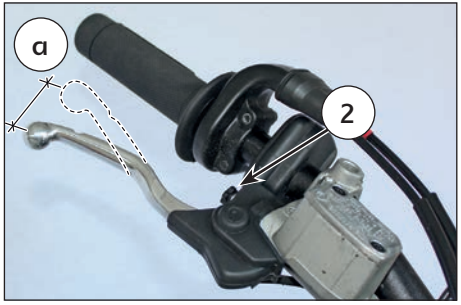
CAUTION*: Do not spill brake fluid onto any painted surface or light lens.

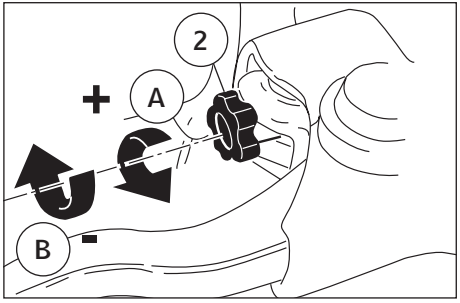
CAUTION*: Do not mix two brands of fluid. Completely change the brake fluid in the brake system if you wish to switch to another fluid brand.

CAUTION*: Brake fluid may cause irritation. Avoid contact with skin or eyes. In case of contact, flush thoroughly with water and call a doctor if your eyes were exposed.

A: to increase clearance
B: to decrease clearance



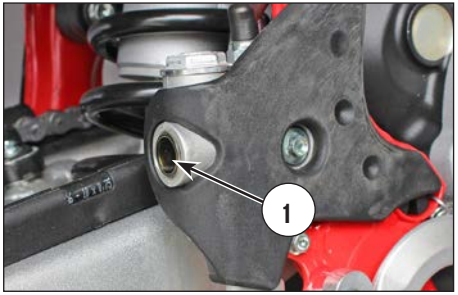




REAR BRAKE FLUID LEVEL CHECK

The pump fluid level must never be below the minimum value indicated on the pump tank (1).
A decrease of the fluid level will let air into the system, hence an extension of the lever stroke.

WARNING*: If the brake pedal feels mushy when pulled, there may be air in the brake lines or the brake may be defective. Since it is dangerous to operate the motorcycle under such conditions, have the brake system immediately checked by the SWM Dealer.



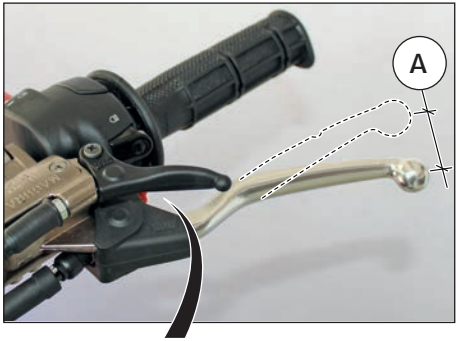
CAUTION*: Do not spill brake fluid onto any painted surface or light lens.

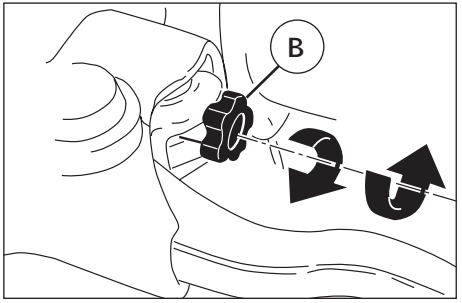
CAUTION*: Do not mix two brands of fluid. Completely change the brake fluid in the brake system if you wish to switch to another fluid brand.

CAUTION*: Brake fluid may cause irritation. Avoid contact with skin or eyes. In case of contact, flush thoroughly with water and call a doctor if your eyes were exposed.

ADJUSTMENT OF THE HYDRAULIC CLUTCH CONTROL LEVER

Free play (A) must be at least 0.1 in.
The lever position can be adjusted to suit the rider hand size.
To decrease the lever distance from the handgrip, rotate the adjuster (B) CLOCKWISE.
To increase the lever distance from the handgrip, rotate the adjuster (B) COUNTER CLOCKWISE.



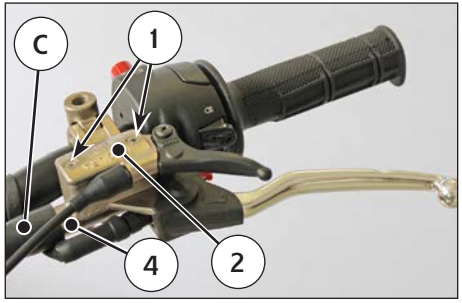


HYDRAULIC CLUTCH FLUID LEVEL CHECK

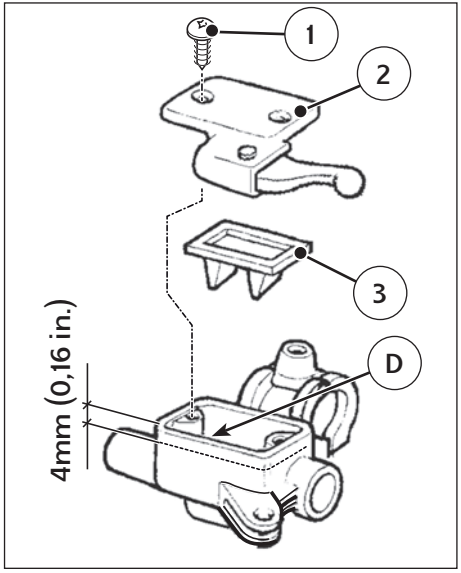
To check the fluid level, proceed as follows:
- remove screws (1), cover (2) and rubber (3) pump diaphragm on the handlebar clutch control;
- by keeping the master cylinder (4) in horizontal position, check the fluid level is NOT BELOW 4 mm (0.16 in.) from the upper surface (D) of the pump body;
- if necessary, add fluid until the correct level is reached see TABLE FOR LUBRICATION-SUPPLIES for the fluid type.

CAUTION*: NEVER use brake fluid.

Reassembly the removed parts using the reverse procedure.



Periodically check the connecting hose (see "Periodical maintenance card"): if the hose (C) show is bent or cracked, its replacement is advised.



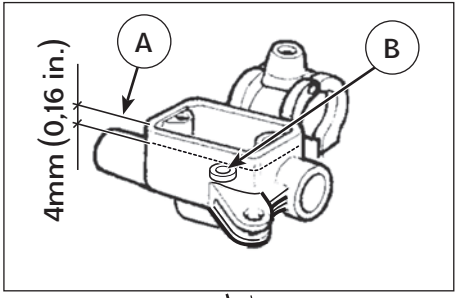
HYDRAULIC CLUTCH BLEEDING

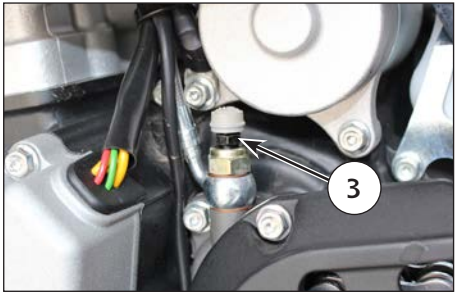
Proceed as follows:
- remove screws (1), cap (2) and rubber pump diaphragm;
- remove the bleeding nipple (3);
- mount a syringe in the bleeding nipple hole, then refill with fresh fluid.

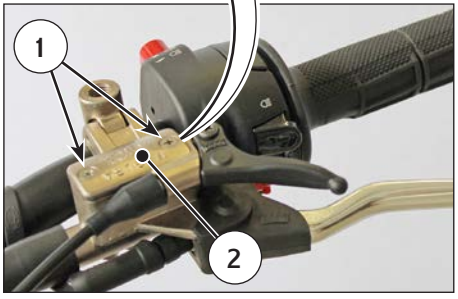
CAUTION *: NEVER use brake fluid.

- refill until fluid is discharged from the lower hole (B) on the pump body WITHOUT BUBBLES.

The fluid level MUST NEVER BE below 4 mm from the top (A) of the clutch pump body (see picture). Reassemble the removed parts.







SUSPENSIONS

Standard suspensions setting derives from several extensive demanding tests in various usage conditions of the vehicles. If you intend to use them on more specific ground, following are a few guidelines for setup. Always start from the suspensions standard setting before making any change. Afterwards, increase or decrease the adjusting clicks, one at a time.

HARD GROUND
Front fork: softer compression setting.
Shock absorber: softer compression setting.

SANDY GROUND
Front fork: harder compression setting.
Shock absorber: harder compression, and especially harder rebound settings. Work on the spring preload to lower the motorcycle riding height (rear end).

MUDDY GROUND
Front fork: harder compression setting.
Shock absorber: harder compression and rebound settings; Work on the spring preload to lift the motorcycle riding height (rear end).

WARNING*: ALWAYS remember that all the motorcycles and their parts used in competitions of any type are excluded from the warranty and that all modifications to standard configuration cause THE VEHICLE NON COMPLIANCE WITH TYPE-APPROVAL REQUIREMENTS and it is hence unsuitable for circulating on public roads: consequently it may be used only in "CLOSED CIRCUITS" by authorised subjects holding the relevant driving licence or authorisation.

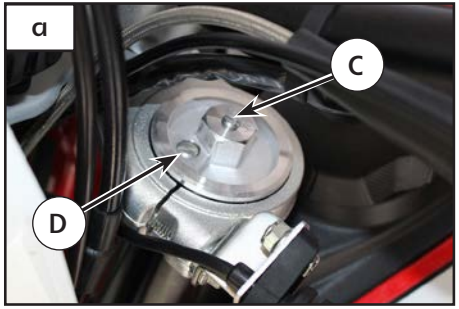
ADJUSTING THE FRONT FORK

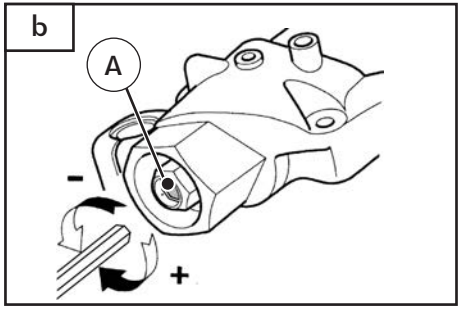
a) REBOUND (TOP ADJUSTER)
Standard setting:
- 10 clicks.
To reset standard calibration, turn adjuster (C) clockwise to reach the fully closed position; then, turn it back by the mentioned clicks. In order to obtain a smooth braking action, turn the adjuster counter clockwise. Vice versa to obtain a harder braking action.

b) COMPRESSION (UPPER REGISTER)
Standard calibration :
- 10 clicks.
To reset to the standadr calibration turn register (A) clockwise until the position of fully closed is reached then, turn back by the mentioned clicks. To obtain a smoother braking action, turn the register anti-clockwise. Reverse the operation in order to obtain a harder action.

- AIR VENT (to carry out monthly).
Set the motorcycle on a central stand, release the fork fully extended and loosen the air vent valve (D). Once this operation is over, tighten the valve.

Note*: Never force the adjusting screws beyond the maximum open and closed positions.





FORK OIL LEVEL

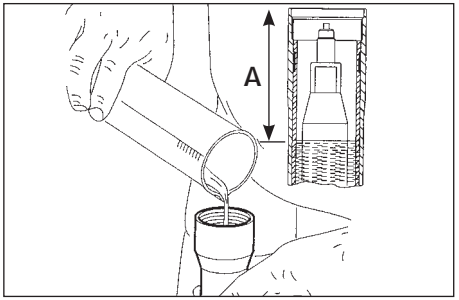
For regular fork operation, both legs must be provided with the necessary oil quantity. Remove the fork legs from the fork to check the oil level. Work as follows:
- remove the damper rod caps;
- remove springs from the legs letting the oil drain into the legs;
- bring fork to stroke end;
- check that the level is at distance "A" below the upper limit of damper rod.

OIL QUANTITY IN EACH FORK LEG

- 39.23 in^3. (643 cm^3)
- A: 5.51 in. (140 mm)
with fork leg fully compressed and without spring.

Note*:
Standard spring elastic constant:
- K= 8.8 N/mm

Note*:
Always replace both the spring and the spacers to keep the preload value unchanged.



ADJUSTING THE SHOCK ABSORBER

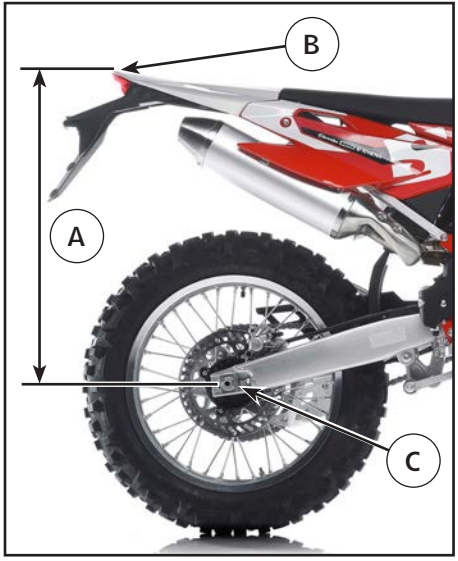
The rear shock absorber must be adjusted according to the rider weight and track conditions.
Proceed as follows:

1. With the motorcycle on the ground in vertical position, measure the distance (A).
2. Take the normal riding position on the motorcycle with all your riding apparel.
3. With somebody's help, take the new distance (A).
4. The difference between these two measurements constitutes the "SAG" of the motorcycle's rear end.
   The recommended SAG is 0.98/1.18 (25-30 mm).
5. To get the right SAG according to your weight, adjust the shock absorber spring preload as described at side.

B: rear mudguard top height
C: rear wheel axle height

WARNING*: The shock absorber adjustment affects both the stability and the handling of the motorcycle. After changing the standard suspension setting, ride with care. We advise measuring the reference distance "A" before making any change.

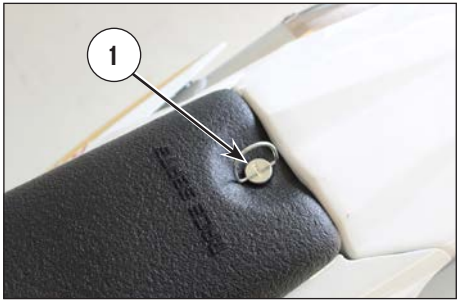
WARNING*: Never disassemble the shock absorber, which contains compressed gas. Contact your SWM Dealer for any major service.

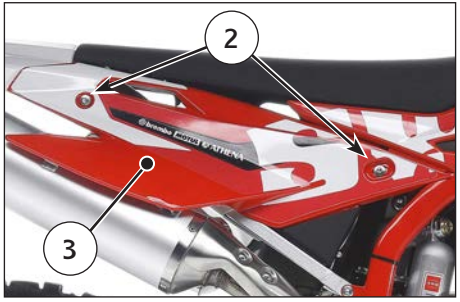


ADJUSTING THE SHOCK ABSORBER SPRING PRELOAD

Proceed as follows:

1. First turn counterclockwise fastening rear pin (1) then remove saddle, screws (2) and R.H. side panel (3).

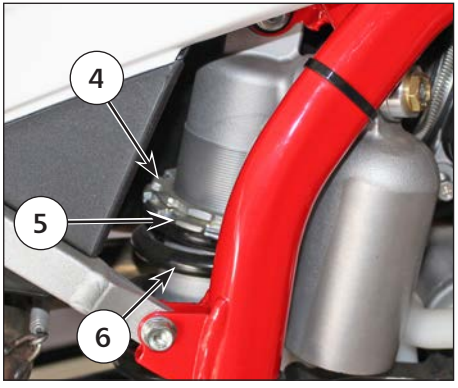




2. Clean ringnut (4) and adjusting nut (5) of the spring (6).
3. Either with a hook wrench or an aluminium punch, loosen the lock ring nut.
4. Turn the adjuster ring nut as required.
5. When the adjusting operation is over (according to your weight and riding style), tighten the lock ring nut. (Torque: 36.2 ft/lb).
6. Refit the R.H. side panel and the saddle.

WARNING*: Be careful not to touch hot exhaust pipe while adjusting the shock absorber.

Standard spring elastic constant:
- 52 N/mm



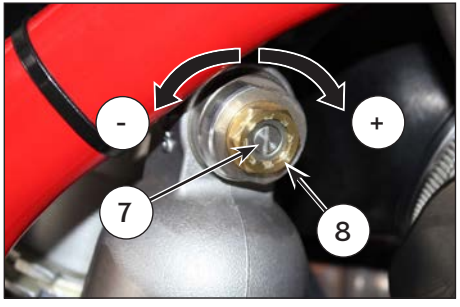
ADJUSTING THE SHOCK ABSORBER HYDRAULIC DAMPING

Adjustment of the compression stroke is independent from the rebound stroke.

A) COMPRESSION - Standard setting:
1) Low damping speed:
- 14 clicks
(adjuster 7)

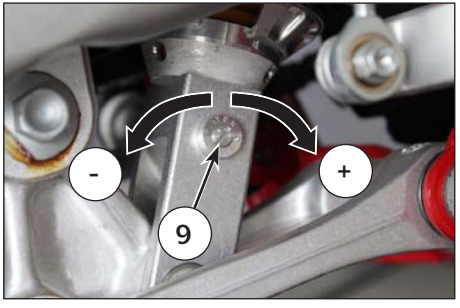
2) High damping speed:
- 1 ½ turn
(adjuster 8)

To reset the standard setting, turn upper adjusters (7) and (8) clockwise until reaching fully closed position.Then turn them back to the above-mentioned positions. In order to obtain a smooth braking action, turn the adjusters counter clockwise. Vice versa to obtain a harder braking action.



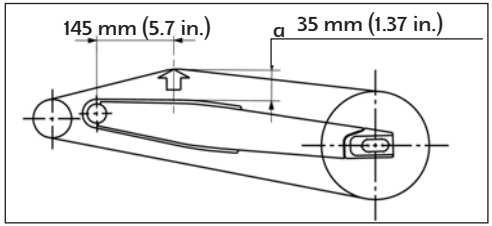
B) REBOUND - Standard setting:
- 10 clicks
(adjuster 9)

To reset the standard setting, turn lower adjuster (9) clockwise until reaching fully closed position. Then turn it back by the mentioned clicks.
In order to obtain a smooth braking action, turn the adjuster counter clockwise. Vice versa to obtain a harder braking action.



CHAIN ADJUSTMENT (FIG. A)

Chain should be checked, adjusted and lubricated as per the Maintenance Chart to ensure security and prevent excessive wear. If the chains becomes badly worn or is poorly adjusted (i.e., if it is too loose or too taught), it could escape from sprocket or break. To adjust the rear chain it is necessary to lower the rear part of motorcycle so to line up the drive sprocket axle, the rear swing arm axle and the rear wheel axle as shown on drawing. Than let turn three times the rear wheel. Now the chain should not be tight.

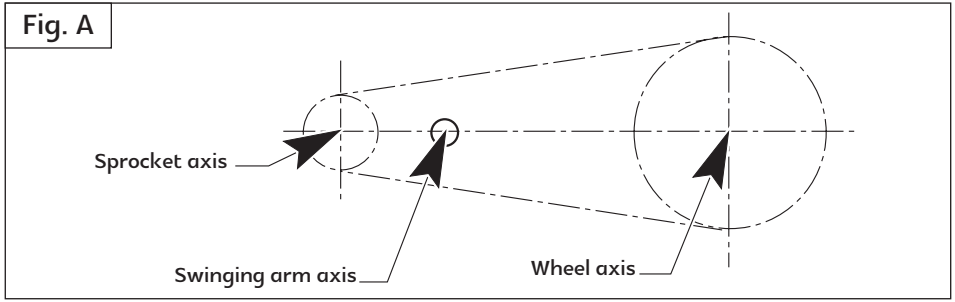


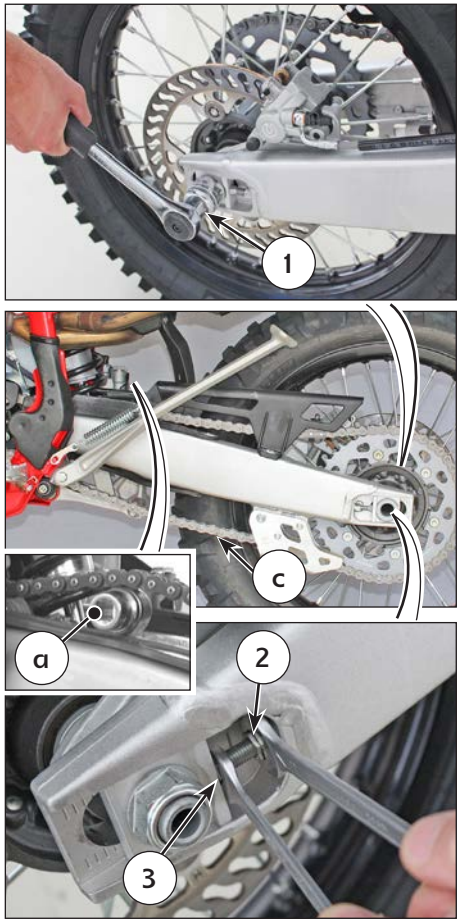
FAST ADJUSTMENT (FIG. B)

In the point shown in the figure, fit a bush (a), 1.37 in. (35 mm) diameter (or alternatively a shim in the same size) and make sure the lower branch (C) of the chain is slightly taut.
If it is not, proceed as follows:

- on the right side, with a 1.06 in. (27 mm) Allen screwdriver, loosen the locking nut (1) of the wheel pin;
- with a 0.47 in. (12 mm) screwdriver, loosen the check nuts (2) on both chain stretchers and work on the screws (3) to achieve the right tension;
- when the adjustment is over, tighten the check nuts (2) and the wheel pin nut (1).

When the adjustment is over check the wheel for alignment.





CHECKING THE WEAR OF CHAIN, PINION AND SPROCKET

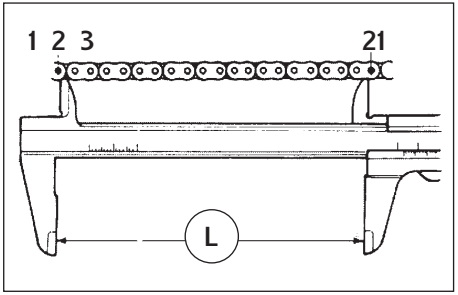
Proceed as follows:
- fully stretch the chain with the adjusting screws.
- mark 20 chain links.
- measure the distance "L" between 1st pin center and 21st pin center.

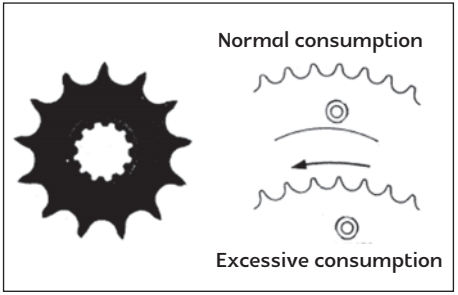
STANDARD	WEAR LIMIT
12.5 in.	12.71 in.

Check the pinion damages or wear and replace it should the wear degree be as the one shown in figure.
Remove the wheel and check the wear of the rear sproket teeth. The below figure shows the outline of teeth in normal and excessive wear. Should the sprocket be badly worn out, replace it by loosening the six fastening screws to the hub.

WARNING*: Misalignment of the wheel will result in abnormal wear and may result in an unsafe riding condition.

Note*: In muddy and wet conditions, mud sticks to the chain and sprockets resulting in an overtight chain. The pinion, the chain, and the rear sprocket wheel wear increases when running on muddy ground.





LUBRICATING THE CHAIN

Lubricate the chain following these instructions.

CAUTION*: Never use grease to lubricate the chain. Grease helps to accumulate dust and mud, which act as abrasive and help to rapidly wear out the chain, the front and rear sprockets.

Disassembling and cleaning

When particularly dirty, remove and clean the chain before lubrication. Proceed as follows.

1- Set a stand or a block under the engine and see that the rear wheel is lifted from the ground.
Remove: screws (1), sprocket guard (2), clip (3), master link (4) with its O-rings and chain (5).
To reassemble, reverse the above procedure, making sure to correctly set the clip (3) and master link (4) as well as the relevant O-rings.

2- Make sure that the chain is neither worn out nor damaged. If the rollers or the links are damaged, replace the chain by following the instructions given in the Scheduled Maintenance Chart.

3- Ensure that the sprockets are not damaged.

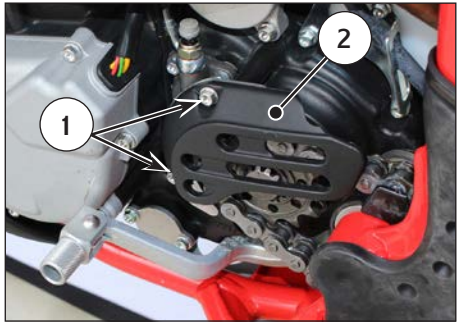
4- Wash and clean the chain as described hereunder.

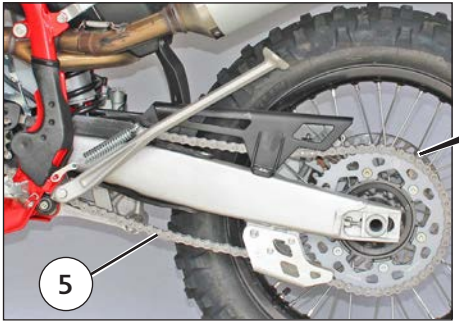
5- If the chain has been cut, reassemble it using the master link.

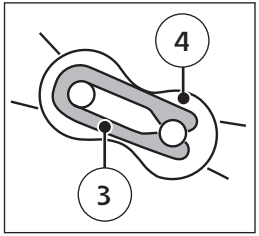
6- Assemble the master link spring (3) by setting the closed side facing the chain direction of rotation, as shown below.

Note*: The master link is the most critical safety part in the drive chain. Even if the master links are reusable when in good conditions, for safety purposes we advise using a new master link when reassembling the chain.

7- Accurately adjust the chain as described in the relevant paragraph.







Washing the chain with O-rings

Wash using petroleum, naphtha or paraffin oil. Never use fuel, trichloroethylene or solvents, as the O-rings may get damaged.
Use instead special sprays for chains with O-rings.

Lubricating the chain with O-rings

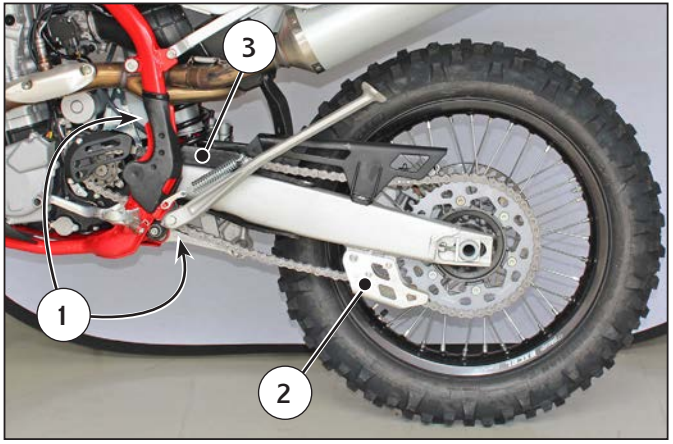
Lubricate all metallic and rubber (O-ring) elements using a brush and engine oil with SAE 80-90 viscosity, inside and outside parts.

CAUTION*: The chain lubricant shall NEVER get in contact with the tyres or the rear brake disc.

Chain guide roller, chain guide eye, chain slider

Check the wear of the above-mentioned elements and replace them when necessary.

CAUTION*: Check the chain guide alignment, and remember that a bent element can cause chain early wear. In this case, chain might unwrap from the sprocket.



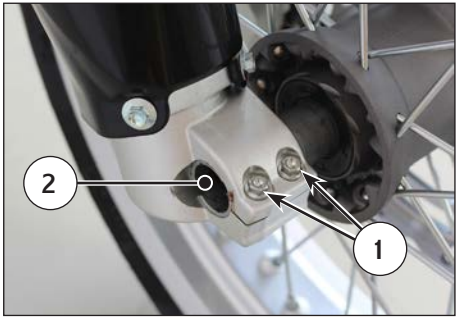
1 - Chain tensioner roller
2 - Chain guide eye
3 - Chain slider

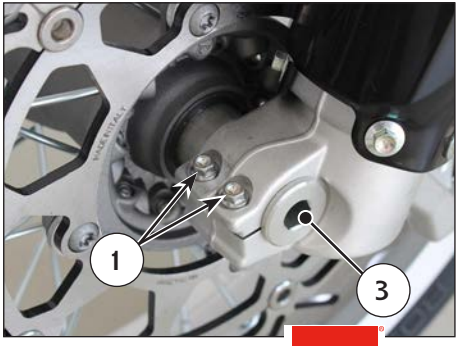
REMOVING THE FRONT WHEEL

Set a stand or a block under the engine and see that the front wheel is lifted from the ground.

Loosen the bolts (1) holding the wheel axle (2) to the front fork mounts. Hold the head of the wheel axle in place, and unscrew the bolt (3) on the opposite side; draw the wheel axle out.

Note*: Do not operate the front brake lever when the wheel has been removed; this causes the calliper pistons to move outwards. After removal, lay down the wheel with brake disc on top.





REASSEMBLING THE FRONT WHEEL

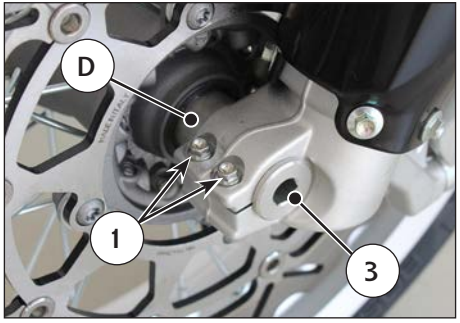
Fit the L.H. spacer (D) on the wheel hub.

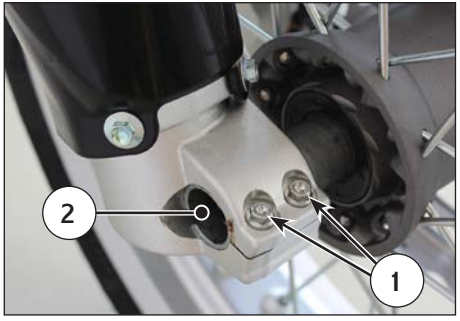
Fit the wheel between the fork legs so as to set the brake disc into the calliper.

Fit the wheel axle (2) from the R.H. side, after greasing it and push it fully home against the L.H. fork leg; during this operation, the wheel should be turned. Tighten the screw (3) on the fork L.H. side but DO NOT lock it.

Now, pump for a while, pushing the handlebar downwards until you are sure that the fork legs are perfectly aligned. Lock: the screws (1) on the R.H. leg (7.67 ft-lb), the screw (3) on the L.H. side (37.95 ft-lb), the screws (1) on the L.H. leg (7.67 ft-lb).

Note*: After reassembly, pull the brake control lever until the pads are against the brake disc.





REMOVING THE REAR WHEEL

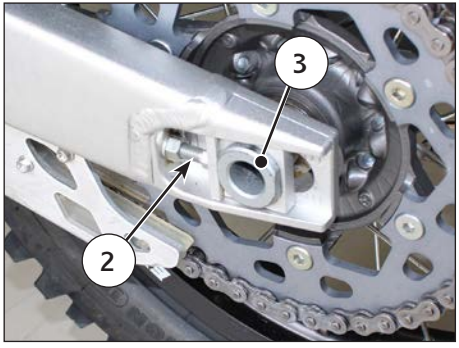
Unscrew the nut (1) of the wheel axle (3) and extract it. It is not necessary to loosen the chain tensioners (2); in this way, the chain tension will remain unchanged after reassembly. Extract the complete rear wheel, keeping the spacers located at the hub sides.
To reassemble, reverse the above procedure remembering to insert the brake disc into the calliper.

Note*: Do not operate the rear brake pedal when the wheel has been removed; this causes the calliper pistons to move outwards.
After removal, lay down the wheel with brake disc on top.
After reassembly, depress the brake pedal until the pads are against the brake disc.

TYRES

Care should be taken to keep the tyres properly inflated. See "Technical data" chart at the beginning of the manual for correct tyre inflation pressure.
Replace the tyre if its wear exceeds reference values on the table below.

MINIMUM HEIGHT OF THE TREAD	
FRONT	0.12 in.
REAR	0.12 in.

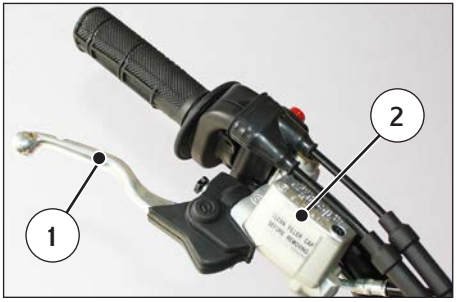


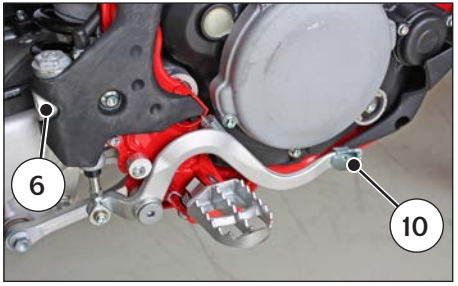
BRAKES

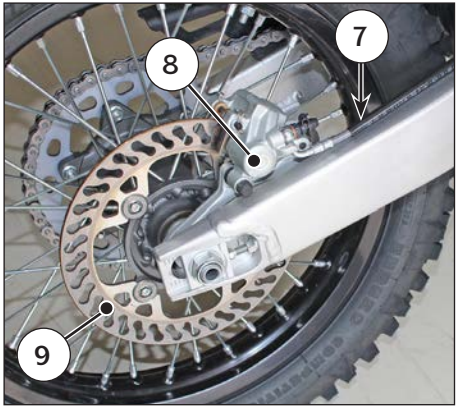
The key components of the braking systems are: brake master cylinder with its lever (front) or pedal (rear), brake lines, calliper assembly and disc.

LEGEND

1. Front brake control lever
2. Front brake master cylinder with fluid reservoir
3. Front brake line
4. Front brake calliper
5. Front brake disc
6. Rear brake pump with oil tank
7. Rear brake line
8. Rear brake calliper
9. Rear brake disc
10. Rear brake control pedal







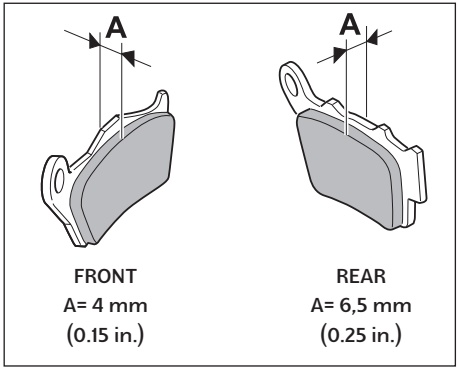
BRAKE PADS REMOVAL

- Remove clips (1).
- Slide out pin (2).
- Remove pads.

WARNING*: Do not work the brake lever or pedal while removing the pads.

PADS WEAR

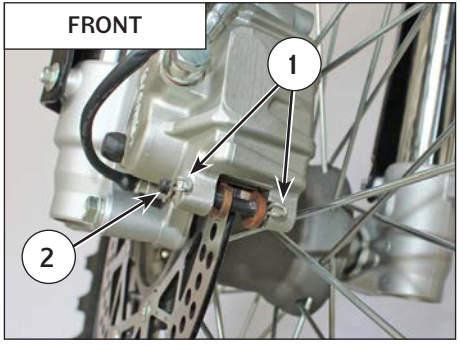
Check brake pad wear.
Respect the service limit "A" indicated in the relative figures.
If service limit is exceeded, always replace the pads in pairs.



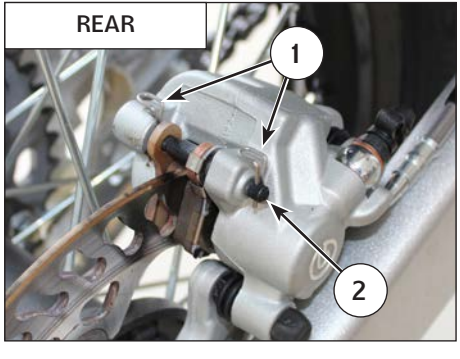
FRONT
A= 4 mm
(0.15 in.)

REAR
A= 6,5 mm
(0.25 in.)

FRONT



REAR



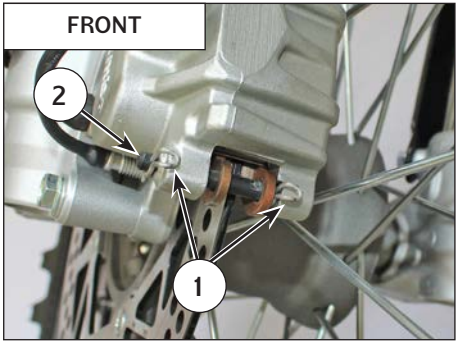
PADS CLEANING

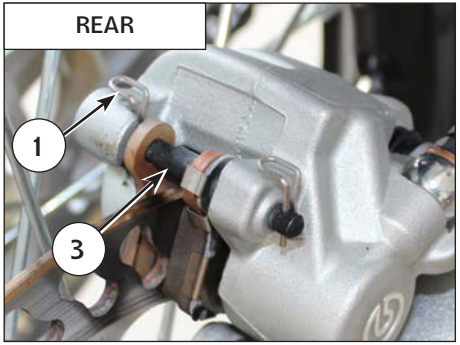
Be careful that no brake fluid or any oil gets on brake pads or discs. Clean off with alcohol any fluid or oil that inadvertently gets on the pads or disc. Replace the pads with new ones if they cannot be cleaned satisfactorily.

WARNING*: Do not attempt to ride the motorcycle until the brake lever or pedal are fully effective. "Pump" with the brake lever or pedal until the pads are against the discs. The brake will not function on the first application of the lever or pedal.

PADS INSTALLATION

- Install new brake pads.
- Reassemble the two pins (2) and the clips (1).





BRAKE DISC WEAR

Measure the thickness of each disc at the point where it has worn the most. Replace the disc if it has worn past the service limit.

Disc thickness

DISC	STANDARD	SERVICE LIMIT
Front	0.11 in. (3 mm)	0.09 in. (2,5 mm)
Rear	0.15 in. (4 mm)	0.14 in. (3,6 mm)

DISC CLEANING

Poor braking can also be caused by oil on the disc. Oil or grease on the disc must be cleaned off with a high flash-point oil free solvent, such as acetone or lacquer thinner.

FLUID CHANGE

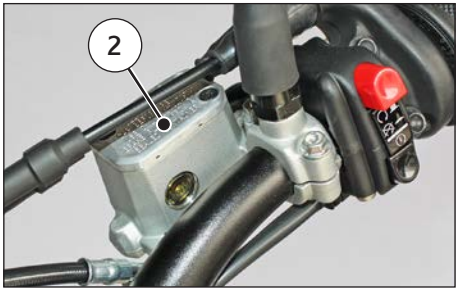
The brake fluid should be checked and changed in accordance with the Periodic Maintenance Chart or whenever it is contaminated with dirt or water. Don't change the fluid in the rain or when a strong wind is blowing.

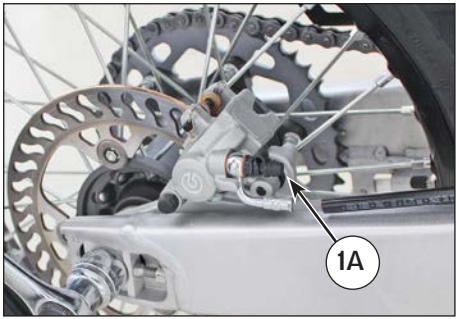
CAUTION*:

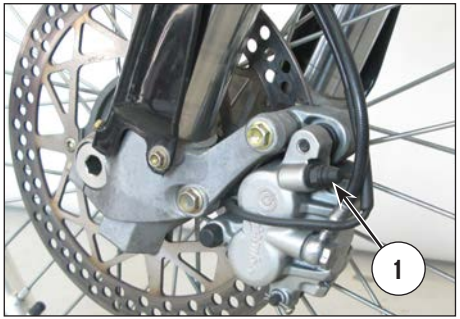
* **Use only brake fluid from a sealed container (DOT 4). Never use old brake fluid.**
* **Never allow contaminants (dirt, water, etc.) to enter the brake fluid reservoir.**
* **Don't leave the reservoir cap off any length of time to avoid moisture contamination of the fluid.**
* **Handle brake fluid with care because it can damage paint.**
* **Don't mix two types of fluid for use in the brake. This lowers the brake fluid boiling point and could cause the brake to be ineffective. It may also cause the rubber brake part to deteriorate.**

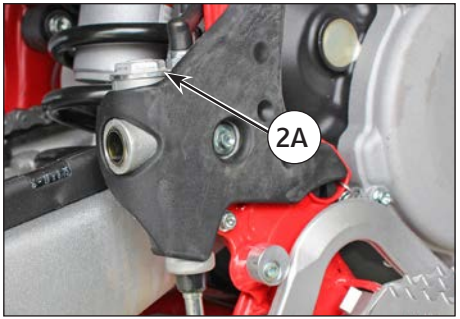
To replace the fluid, proceed as follows:

- Remove the rubber cap on the bleeding valve (1) or (1A).
- Attach a clear plastic hose to the bleeding valve on the brake caliper and turn the other end of the hose into a container.
- Remove fluid reservoir cap (2)or (2A: 21 mm wrench) and the rubber.
- Loosen bleeding valve on the brake caliper.



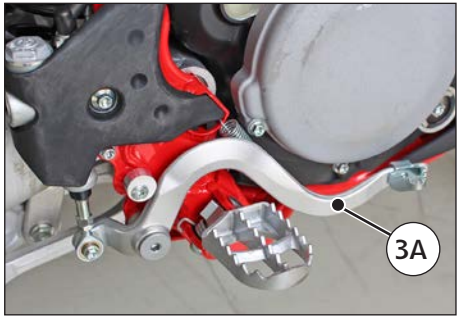


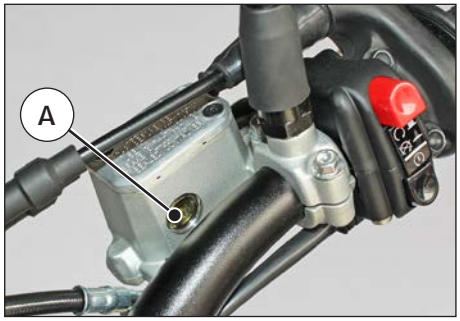


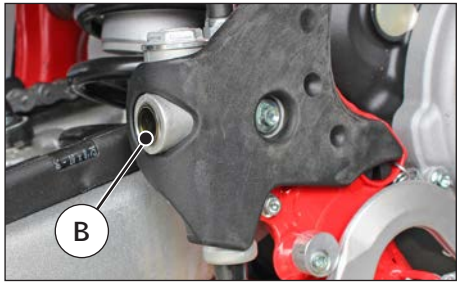


- Pump with brake lever (3) or brake pedal (3A) in order to push brake fluid out of line.
- Close the bleeding valve and fill the reservoir with fresh brake fluid.
- Open the bleeding valve, apply the brake using the brake lever or pedal, close the bleeding valve with the brake lever or pedal applied and then quickly release the lever or pedal.
- Repeat this operation until the brake line is filled and clear fluid starts coming out of the plastic hose: now close the bleeding valve.
- Restore the brake fluid level (A) or (B) then reassemble the rubber and the fluid reservoir cap.

After changing the fluid, bleed the system as described in the relative paragraph.







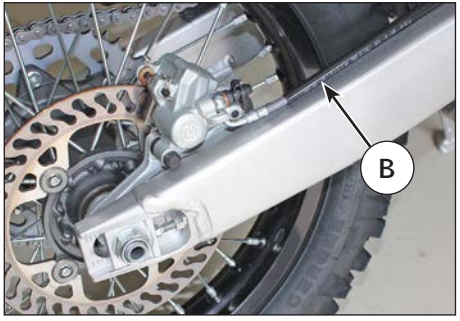
WARNING*:
Brake fluid quickly ruins painted surfaces; any spilled fluid should be completely wiped up immediately.
*** Brake fluid may cause irritation. Avoid contact with skin or eyes. In case of contact, flush thoroughly and call a doctor if your eyes were exposed.**

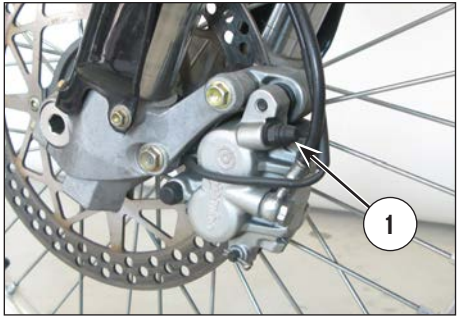
Periodically check the connecting hoses (see "Periodical maintenance card"): if the hoses (A) and (B) are worned or cracked, their replacement is advised

FRONT BRAKING SYSTEM BLEEDING

The braking system must be bled after the fluid replacement or when, due to air in the circuit, the lever stroke is long and spongy.
Proceed as follows:

- Remove the rubber cap on the bleeding valve (1).
- Attach a clear plastic hose to the bleeding valve on the brake caliper and turn the other end of the hose into a container (make sure that the end of the hose is submerged in brake fluid during the entire bleeding operation).





- Remove fluid reservoir cap (2), the rubber and fill the reservoir with fresh brake fluid.
- Open the bleeding valve and pump with brake lever (3) several times until the fluid, clear and without bubbles, comes out of the hose: now close the bleeding valve.-
- Restore the brake fluid level (A) then reassemble the rubber and the fluid reservoir cap (2).

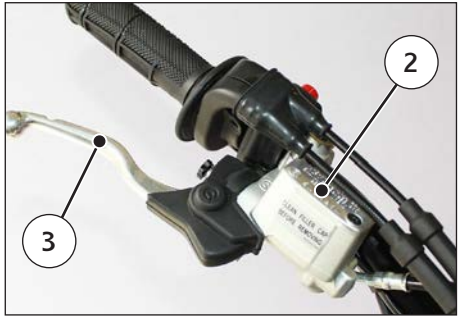
WARNING*:
During the bleed operation the fluid level inside the reservoir must never be lower than the minimum level.
Tightening torque for bleed valve is 1,2 ÷ 1,6 kgm (12 ÷ 16 Nm; 8.8 ÷ 11.8 ft-lb).

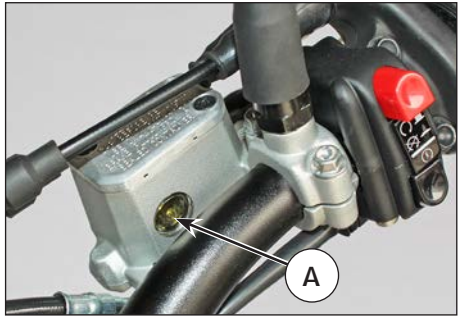
As the braking fluid is a very corrosive substance, in the case it comes in contact with your eyes wash them abundantly with water.

During the bleeding of the braking circuit keep the handlebar turned leftwards. This is the way to lift the pump tank and to make easier the bleeding of the braking system.

If the lever stroke gets stretchy and the braking action results as poor in the case of falls during competitions, or after repair work in shops, repeat the bleeding operation described above.

As the bleeding operation does not fully eliminate the air inside the circuit, the small quantity of air remaining inside will be eliminated after a short time of use of the brake. In this case however, the action of the lever will be harder and the stroke shorter.





REAR BRAKING SYSTEM BLEEDING

The braking system must be bled after the fluid replacement or when, due to air in the circuit, the pedal stroke is long and spongy.
To bleed the system:

- Remove the reservoir cover (A) (21 mm wrench) rubber boot and top up with (DOT 4) brake fluid.

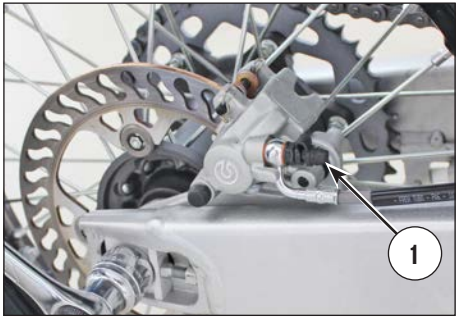
- Attach a clear plastic hose to the bleed valve (1) on the caliper and turn the other end of the hose into a container.

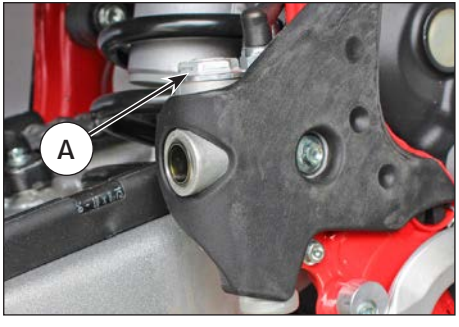
- Depress the pedal (2) and keep it full down.
- Loosen the bleed union letting out fluid (at first, only air will come out), then, closing the union slightly.
- Release the pedal and wait for a few seconds before repeating the operation until only fluid come out of the tube.
- Close the bleed union to the prescribed torque and check the fluid level (B) inside the reservoir before reassemblle the cap (1).

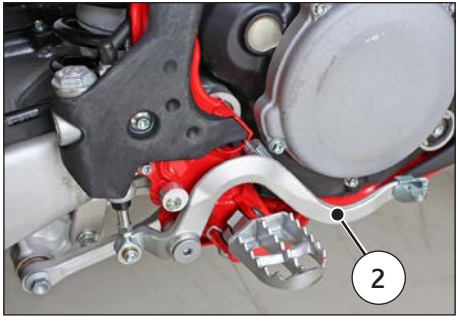
If the bleeding operation has be done correctly, the pedal will have no mushy feel. If not, repeat the operation.

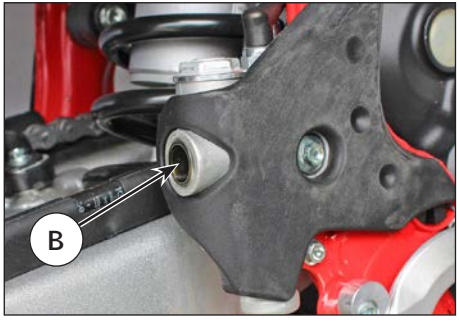
Note*: If following falls or repairs, the brake lever or pedal stroke is stretchy resulting in reduced braking efficiency, repeat circuit bleeding as described above.

WARNING*:
During the bleed operation the fluid level inside the reservoir must never be lower than the minimum level.
Tightening torque for bleed valve is 1,2 ÷ 1,6 kgm (12 ÷ 16 Nm; 8.8 ÷ 11.8 ft-lb).









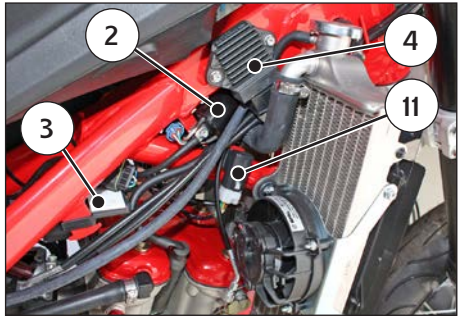
EXHAUST MUFFLER

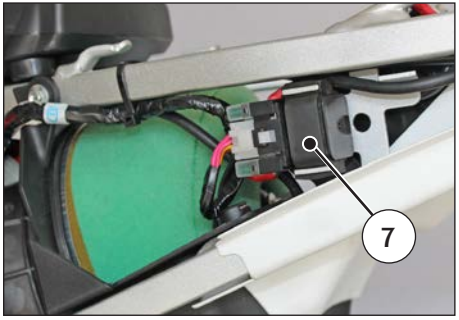
The muffler reduces the noise of the exhaust gases, but it is an integral part of the exhaust as well. As such, its conditions affect the motorcycle performance.
When the noise on the exhaust is too high, it means that the deadening material set on the holed tube inside the muffler is deteriorated.

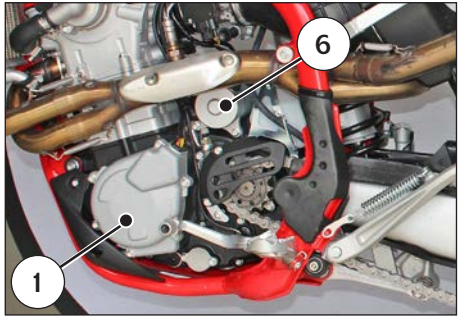
ELECTRICAL COMPONENTS LOCATION

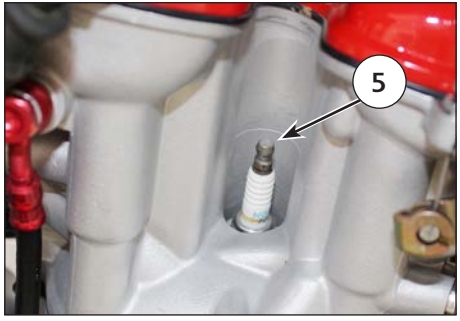
The ignition system includes the following elements:
- Generator (1), in oil bath, on the inner side of L.H. crankcase cover;
- Electronic ignition coil (2) under the fuel tank;
- Electronic power unit C.D.I. (3) under the fuel tank;
- Voltage regulator (4) under the fuel tank;
- Spark plug (5) on the R.H. side of cylinder head;
- Starting motor 12V-450W (6) behind the cylinder;
- Electric start remote control switch (7) on the left side of the rear frame.
- M.A.Q.S. sensor (pressure, throttle control position, air temperature) (8) on the throttle body.

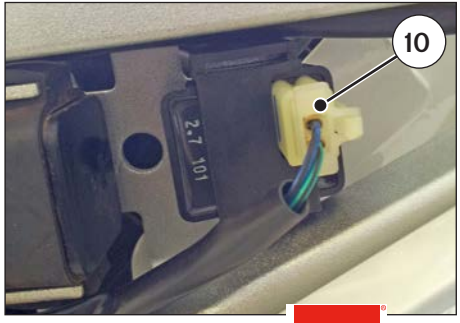
The electric system includes the following elements:
- Battery 12V-14Ah (9) under the saddle;
- Intermittent flasher device (10) located on the utility plate underneath the saddle;
- Relays located on the utility plate underneath the saddle;
- Relay (11): warning horn, turning indicators, stop lights, low-beam lights, high-beam lights;



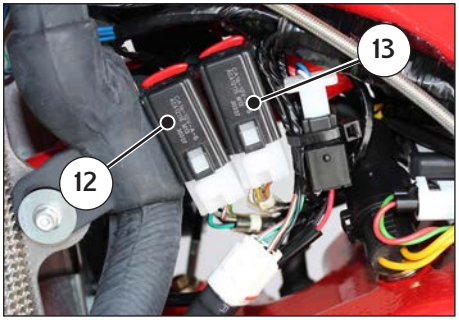


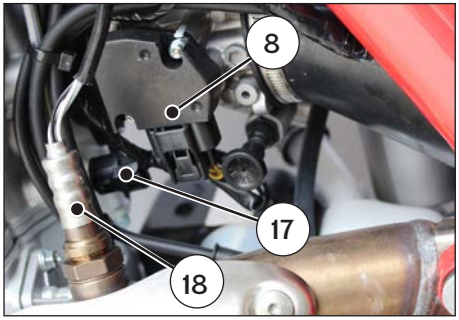


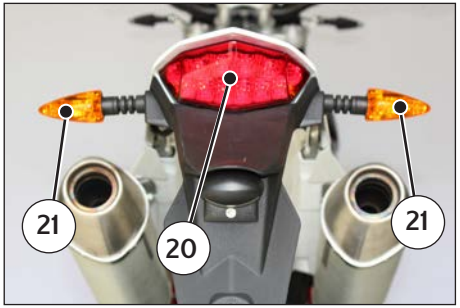


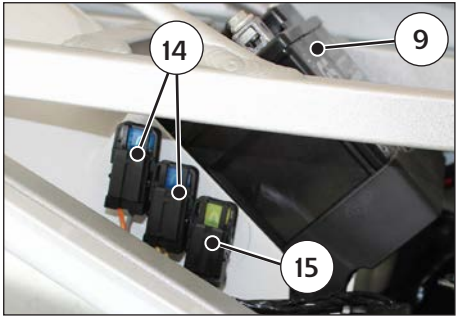


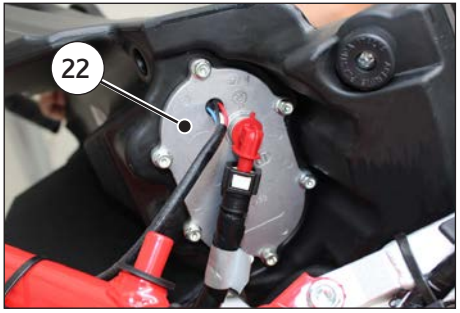
- Relay (12): injector, Lambda sensor, fuel pump, coil;
- Solenoid valve relay (13);
- Two fuses (14) 15A and one (15) 20A, on the right side of the rear mudguard;
- Coolant temperature sensor (17);
- Lambda probe (18);
- Headlamp (19) with two filaments bulb of 12V-35/35W and parking light bulb of 12V-5W;
- LED tail light (20) with 12V-21W stop warning light and 12V-5W position light;
- Turn signals bulb (21) of 12V-10W;
- Fuel pump (22) inside the fuel tank.











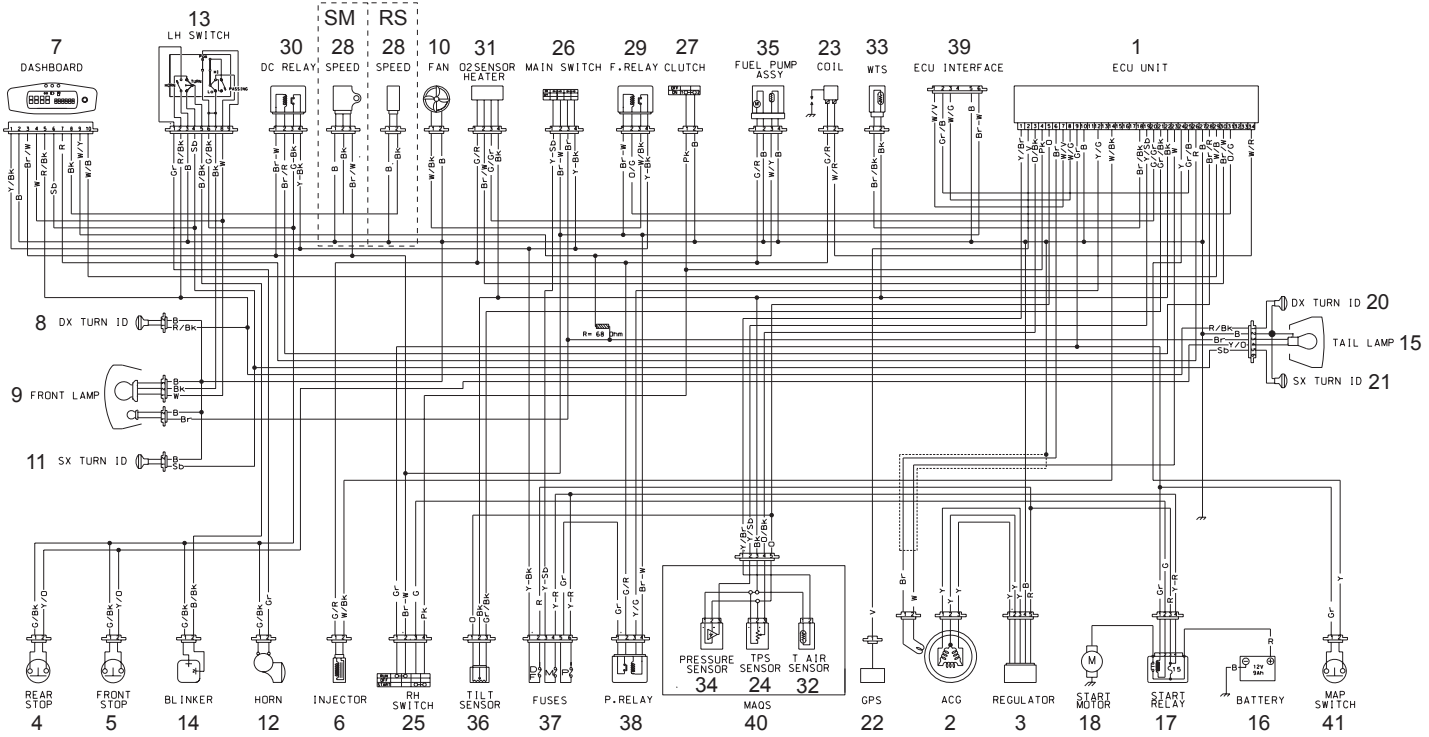
CABLE COLOUR CODING

B	Blue
B/Bk	Blue/Black
Bk	Black
Br	Brown
Br/Bk	Brown/Black
Br/R	Brown/Red
Br/W	Brown/White
G	Green
G/Bk	Green/Black
G/Gr	Green/Grey
G/R	Green/Red
Gr	Grey
Gr/B	Grey/Blue
Gr/Bk	Grey/Black
O	Orange
O/Bk	Orange/Black
O/G	Orange/Green
Pk	Pink
R	Red
R/Bk	Red/Black
Sb	Sky blue
V	Violet
W	White
W/B	White/Blue
W/Bk	White/Black
W/G	White/Green
W/R	White/Red
W/V	White/Violet
W/Y	White/Yellow
Y	Yellow
Y/Bk	Yellow/Black
Y/Br	Yellow/Brown
Y/G	Yellow/Green
Y/O	Yellow/Orange
Y/Sb	Yellow/Sky blue
Y/R	Yellow/Red

KEY TO ELECTRIC DIAGRAM

1. Electronic power unit
2. Alternator
3. Voltage regulator
4. Rear stop switch
5. Front stop switch
6. Injector
7. Instrument
8. R.H. front turn indicator
9. Front headlamp
10. Cooling fan
11. L.H. front turn indicator
12. Horn
13. L.H. commutator
14. Turn indicators flasher
15. Tail light
16. Battery
17. Electric start remote control switch
18. Starting motor
19. Spark plug
20. R.H. rear turn indicator
21. L.H. rear turn indicator
22. Gear shift position sensor
23. H.T. coil
24. Sensor position throttle control (40)
25. R.H. switch
26. Ignition switch
27. Clutch microswitch
28. Speed sensor
29. Relay for electric fan
30. Direct current relay
31. LAMBDA probe
32. Air temperature sensor (40)
33. Coolant temperature sensor
34. Pressure sensor (40)
35. Fuel pump
36. Fall sensor
37. Fuses
38. Power relay
39. Power unit interface
40. M.A.Q.S. (34+24+32)

(*): it stops the engine in case of a fall


7 DASHBOARD
13 LH SWITCH
30 DC RELAY
SM
RS
28 SPEED
28 SPEED
10 FAN
31 O2SENSOR HEATER
26 MAIN SWITCH
29 F.RELAY
27 CLUTCH
35 FUEL PUMP ASSY
23 COIL
33 WTS
39 ECU INTERFACE
1 ECU UNIT
8 DX TURN ID
9 FRONT LAMP
11 SX TURN ID
R= 68 Ohm
DX TURN ID 20
TAIL LAMP 15
SX TURN ID 21
REAR STOP 4
FRONT STOP 5
BLINKER 14
HORN 12
INJECTOR 6
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FUSES 37
P.RELAY 38
PRESSURE SENSOR 34
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BATTERY

The sealed battery does not require any maintenance. When electrolyte leaks, or other failure of the electrical system is detected, apply to the SWM Dealer.
If the vehicle remains unused for long periods, it is recommended to disconnect the battery from the electrical system and store it in a dry place.
- After an intensive use of the battery, it is advisable to carry out a standard slow charging cycle (12V-6Ah battery: 0,6A for 8 hours).
- Quick charging is advised only in situations of extreme necessity since the life of lead elements is drastically reduced by such cycle (12V-6Ah battery: 6A for 0,5 hours).

BATTERY CHARGER

To gain access to the battery (1):
- first turn counterclockwise fastening rear pin (2) then remove the saddle.
- Release the elastic strap holding the battery;

- first remove the BLACK or BLUE negative cable, then the RED positive cable (when reassembling, first connect the RED positive cable, then the BLACK or BLUE negative cable);
- remove the battery (1) from its housing.

Check, using a voltmeter, that battery voltage is not less than 12.5 V.
If it is not so, the battery needs to be charged.

Using a battery charger with a constant voltage, first connect the RED positive cable to the battery positive terminal then the BLACK or BLUE negative cable to the battery negative terminal.

The voltage reaches a constant value only after a few hours, therefore it is suggested NOT to measure it immediately after having charged or discharged the battery.

Always check the battery charge before reinstalling it on the vehicle.

The battery should be kept clean and the terminals coated with grease.

WARNING*: The battery contains sulphuric acid. Avoid contact with skin, eyes or clothing.

SOLUTIONS:
CONTACT WITH THE SKIN: Rinse with plenty of water.
INGESTION: Drink large amounts of water. Immediately call a doctor. Do not induce vomiting.
CONTACT WITH THE EYES: Flush with water for no less than 15 minutes and get prompt medical attention.

WARNING*: If the battery is left unused, it has to be in any case recharged with slow cycle (12V-6Ah battery: 0,6A for 8 hours) at least every 3 weeks.

WARNING*: Batteries produce explosive gas, ventilate when charging or using indoors. When using a battery charger, always connect the battery before turning on the charger. This procedure prevents sparks at the battery terminals which could ignite any battery gases.

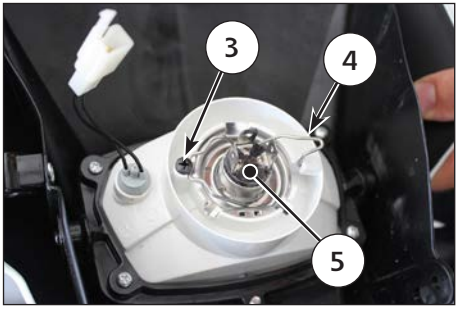
HEADLAMP BULBS REPLACEMENT

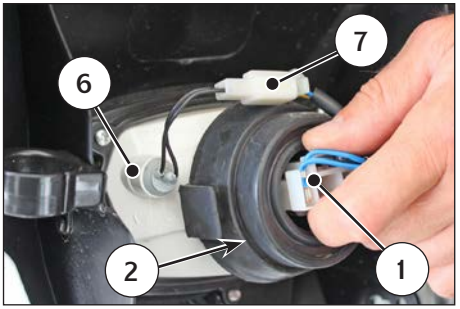
To gain access to the healamp bulbs, proceede as follows:

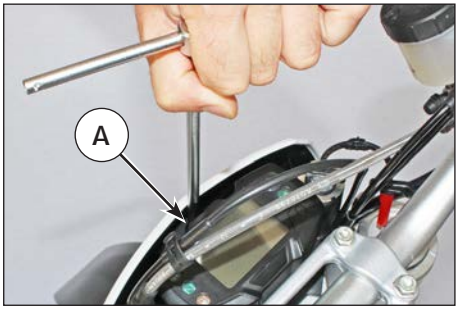
- remove the upper fastening screw of the the headlamp carrier to the instrument panuel support (A);
- push forward the headlamp carrier (B) and pull it towards the high (C) in order to uncouple from the two lower supports.
- remove the headlamp carrier;
- remove the two filaments bulb connector (1) and the boot (2);
- remove the screw (3);
- release the bulb holding spring (4) and then the bulb (5) itself.

Note*: Headlamp bulb (5) is of the halogen type; be careful when replacing it since the glass part shall not be touched with bare hands.

To replace the position light bulb (6), disconnect the connector (7) and remove it from the internal cap. After replacement, reverse operations for reassembly.

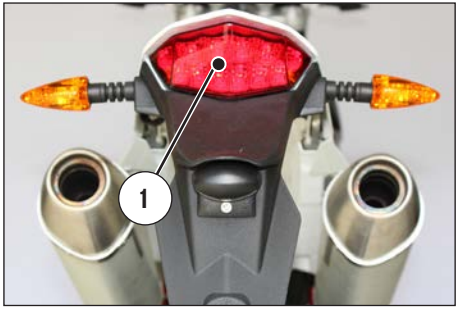






TAIL LIGHT

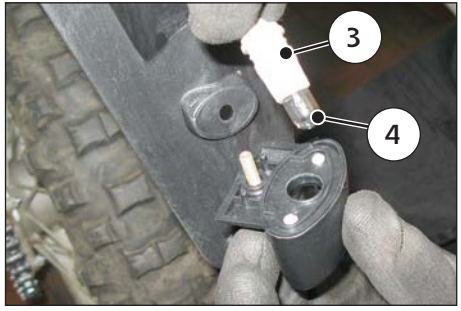
The tail light (1) is a LED light; Replace it when it does not function.



REPLACING THE NUMBER PLATE BULB

- loosen screw (1) and remove the number plate bulb (2) from the mudguard;
- take bulb holder (3) and bulb (4) out of the support;
- pull the bulb (4) to detach it from bulb holder.

Once the bulb has been replaced, reverse the above procedure to reassemble.



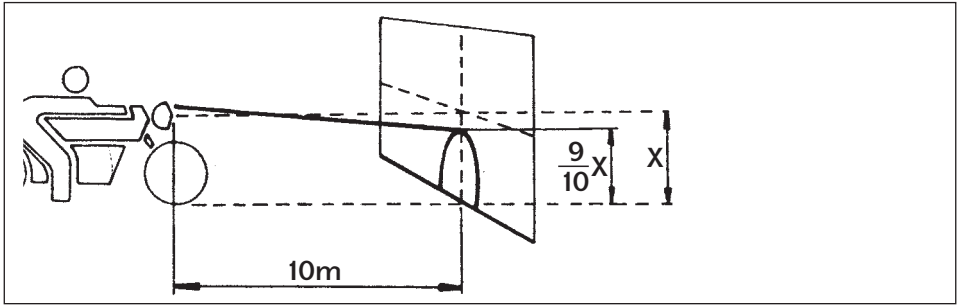
HEADLIGHT ADJUSTMENT

When checking the proper aiming of the headlight beam: inflate tyres at the right pressure, have a person sit astride the motorcycle and set the motorcycle perpendicular to its longitudinal axis at 33 ft from a wall or screen. Then trace a horizontal line at the height of headlight centre and a vertical one, in line with vehicle longitudinal axis.

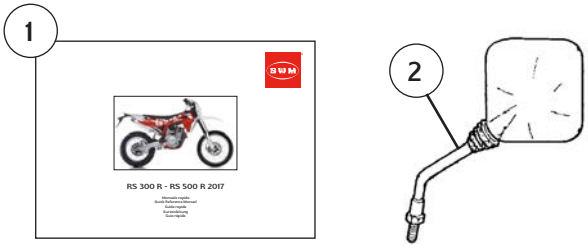
If possible, execute this operation in a shaded place. When the low beam is on, the upper edge between dark and lit zone should be at 9/10th of headlight centre from ground.

Beam height can be adjusted as follows:

- Work adjuster screw (1);
  tighten to lower the beam,
  loosen to raise the beam.



Pos.	No. Part no.	DESCRIPTION
1	A000P01249	MULTILANGUAGE QUICK MANUAL (1)
2	FA00P01471	R.H. REAR-VIEW MIRROR (1)
	F000P01471	L.H. REAR-VIEW MIRROR (1)



APPENDIX

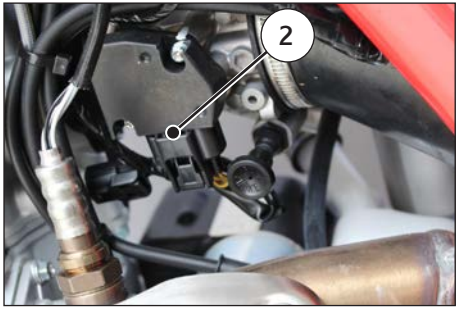
LONG PERIOD OF INACTIVITY

When the motorcycle is to be stored for a certain period, it should be prepared for storage as follows:
- clean the entire motorcycle thoroughly.
- Drain all fuel from the tank.
- Fill the tank with fuel added with a stabiliser

WARNING*: Never release fuel into the environment or let the engine run indoors.

- Lubricate the final drive chain and all the cables.
- Spray oil on all unpainted metal surfaces to prevent rusting. Avoid getting oil on rubber parts or brakes.
- Set the motorcycle on a support or stand so that both wheels are raised off the ground (if this cannot be done, put boards under the wheels to keep moisture away from the tyres).
- Tie a plastic bag over the exhaust pipe to prevent moisture from entering.
- Put a cover over the motorcycle to keep dust and dirt from collecting on it.

To set the motorcycle back ready for use after storage:
- Make sure the spark plug is tight.
- Fill the fuel tank.
- Run the engine to warm the oil up then drain the oil.
- Refill with fresh oil.
- Check all the points listed under the inspection and Adjustment Section (Appendix A).
- Lubricate all the points listed under the "Lubrication" Section (Appendix A).



CLEANING

Before washing the motorcycle, it is necessary to duly protect the following parts:
a) Rear opening of the muffler;
b) Air filter intake;
c) Clutch and brake levers, hand grips, handlebar commutators;
d) Fork head, wheel bearings;
e) Rear suspension links.

DO NOT INSIST WITH HIGH-PRESSURE AIR OR WATER on the ELECTRICAL PARTS and on the INJECTION FUEL FEEDING SYSTEM, especially on the electronic control unit (1) and the M.A.Q.S. unit (2).

After washing:
- Lubricate the points listed in the "Maintenance Chart" (Appendix A).
- Briefly warm up the engine
- Test the brakes before riding the motorcycle.

WARNING*: Never wax or lubricate the brake discs. Loss of braking efficiency and an accident could result. Clean the disc with a solvent such as acetone.

PRE-DELIVERY INSPECTION

Description	Operation	Pre-delivery
Engine oil	Check level	❑
Two-stroke mix oil level	Check level	❑ ❁
Coolant	Check / Restore level	❑
Cooling system	Check for leakage	❑
Electric fans	Check operation	❑ ❁ ❁
Spark plugs	Check / Replace	❑
Throttle body / Carburettor	Check and adjust	❑
Brakes / Clutch fluid	Check level	❑
Brakes / Clutch	Check operation	❑
Brakes / Clutch	Check lines for leakage	❑
Throttle control	Check operation	❑
Throttle control	Check / Adjust play	❑
Choke control	Check operation	❑
Flexible controls and transm.	Check / Adjust	❑
Drive chain	Check / Adjust	❑

Description	Operation	Pre-delivery
Tyres	Check pressure	❑
Side stand	Check operation	❑
Side stand switch	Check operation	❑
Electrical equipment	Check operation	❑
Instrument panel	Check operation	❑
Lights / Visula signals	Check operation	❑
Horn	Check operation	❑
Headlight	Check operation	❑
Ignition switch	Check operation	❑
Locks	Check operation	❑
Screws and nuts	Check / Tighten	❑
Hose clamps	Check / Tighten	❑
General lubrication		❑
General test		❑

❁ only for motorcycles with 2 stroke engine
❁ ❁ only for some models

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APPENDIX A

RS 300R - RS 500R	SCHEDULED MAINTENANCE CHART (TO BE CARRIED OUT AT THE SWM DEALER) S						
	AFTER FIRST 3 HOURS	EVERY 4h MX / 8h EN	EVERY 8h MX / 16h EN	EVERY 16h MX / 32h EN	EVERY 32h MX / 64h EN	EVERY 40h MX / 80h EN	- REPLACE IF NECESSARY -
	OR EVERY 500 KM		OR EVERY 2000 KM -	OR EVERY 4000 KM	OR EVERY 8000 KM	OR EVERY 10000 KM	
VALVES	CLEARANCE			CLEARANCE		S (#)	
VALVE SPRING						C	X
VALVE CUP, VALVE HALF CONE						C	X
ROCKER ARM (INTAKE-EXHAUST)						C	X
CAMSHAFT						C	
TIMING CHAIN					C	S	
TIMING CHAIN SLIDER						S	

RS 300R - RS 500R	SCHEDULED MAINTENANCE CHART (TO BE CARRIED OUT AT THE SWM DEALER)						
	AFTER FIRST 3 HOURS	EVERY 4h MX / 8h EN	EVERY 8h MX / 16h EN	EVERY 16h MX / 32h EN	EVERY 32h MX / 64h EN	EVERY 40h MX / 80h EN	- REPLACE IF NECESSARY -
	OR EVERY 500 KM		OR EVERY 2000 KM	OR EVERY 4000 KM	OR EVERY 8000 KM	OR EVERY 10000 KM	
VALVE TIMING DRIVEN GEAR						C	X
VALVE TIMING GEAR					C		X
TIMING CHAIN TENSIONER						C	
STARTER DECOMPRESSOR SYSTEM					C		X
INTAKE MANIFOLD			C		S		
CYLINDER ASSY.						C	X
PISTON ASSY					C	S	
CONNECTING ROD ASSY.						S	

RS 300R - RS 500R	SCHEDULED MAINTENANCE CHART (TO BE CARRIED OUT AT THE SWM DEALER)						
	AFTER FIRST 3 HOURS	EVERY 4h MX / 8h EN	EVERY 8h MX / 16h EN	EVERY 16h MX / 32h EN	EVERY 32h MX / 64h EN	EVERY 40h MX / 80h EN	- REPLACE IF NECESSARY -
	OR EVERY 500 KM		OR EVERY 2000 KM	OR EVERY 4000 KM	OR EVERY 8000 KM	OR EVERY 10000 KM	
CRANKCASE BEARINGS						S	
ENGINE OIL	S		S				
OIL PUMP					C		
OIL FILTER CARTRIDGE / NET OIL FILTER	S, P		S, P				
OIL PUMP / CRANKCASE HOSE						C	
SET OF MATCHED PRIMARY				C			
CLUTCH HUB				C			X
CLUTCH DISCS			C		S		X

RS 300R - RS 500R	SCHEDULED MAINTENANCE CHART (TO BE CARRIED OUT AT THE SWM DEALER)						
	AFTER FIRST 3 HOURS	EVERY 4h MX / 8h EN	EVERY 8h MX / 16h EN	EVERY 16h MX / 32h EN	EVERY 32h MX / 64h EN	EVERY 40h MX / 80h EN	- REPLACE IF NECESSARY -
	OR EVERY 500 KM		OR EVERY 2000 KM	OR EVERY 4000 KM	OR EVERY 8000 KM	OR EVERY 10000 KM	
CLUTCH DISCS PRESSURE PLATE					C		
MOCLUTCH SPRING					C		X
CLUTCH DISCS HOUSING					C		
CLUTCH DISENGAGEMENT ROD					C		
DRIVE SPROCKET		C	S				X
STARTING GEARS					C		X
STARTING PEDAL				L			
GEAR CONTROL PEDAL			C				

RS 300R - RS 500R	SCHEDULED MAINTENANCE CHART (TO BE CARRIED OUT AT THE SWM DEALER)						
	AFTER FIRST 3 HOURS	EVERY 4h MX / 8h EN	EVERY 8h MX / 16h EN	EVERY 16h MX / 32h EN	EVERY 32h MX / 64h EN	EVERY 40h MX / 80h EN	REPLACE IF NECESSARY
	OR EVERY 500 KM		OR EVERY 2000 KM	OR EVERY 4000 KM	OR EVERY 8000 KM	OR EVERY 10000 KM	
PARK PLUG			P	S			
SPARK PLUG CAP				C			
CARBURETOR		P				R	
CARBURETOR THROTTLE VALVE						C	
AIR FILTER		P, L					
RADIATORS		C					
COOLANT HOSES AND CLAMPS		C					
RADIATORS HOSE / WATER PUMP		C					

RS 300R - RS 500R	SCHEDULED MAINTENANCE CHART (TO BE CARRIED OUT AT THE SWM DEALER)						
	AFTER FIRST 3 HOURS	EVERY 4h MX / 8h EN	EVERY 8h MX / 16h EN	EVERY 16h MX / 32h EN	EVERY 32h MX / 64h EN	EVERY 40h MX / 80h EN	REPLACE IF NECESSARY
	OR EVERY 500 KM		OR EVERY 2000 KM	OR EVERY 4000 KM	OR EVERY 8000 KM	OR EVERY 10000 KM	
COOLANT		C					X
FOOTRESTS, FOOTRESTS PINS AND SPRINGS			C				X
SADDLE FRAME FASTENING BOLTS, ENGINE FASTENING BOLTS	C			C			
SIDE STAND		C					
CHAIN GUIDE ROLLER, BEARINGS		C					
STEERING HEAD, STEERING CROWN WITH PIN			L				

RS 300R - RS 500R	SCHEDULED MAINTENANCE CHART (TO BE CARRIED OUT AT THE SWM DEALER)						
	AFTER FIRST 3 HOURS	EVERY 4h MX / 8h EN	EVERY 8h MX / 16h EN	EVERY 16h MX / 32h EN	EVERY 32h MX / 64h EN	EVERY 40h MX / 80h EN	REPLACE IF NECESSARY
	OR EVERY 500 KM		OR EVERY 2000 KM	OR EVERY 4000 KM	OR EVERY 8000 KM	OR EVERY 10000 KM	
FRONT FORK			R				
HANDLEBAR HOLDERS AND FASTENING SET	C			C			
REAR SWING ARM BUSHING				C			
REAR CHAIN SLIDER				C			X
REAR SUSPENSION LINKS BUSHINGS				C			
REAR CHAIN GUIDE / REAR CHIAN GUARD		C					X
REAR SWING ARM PIVOT NEEDLE BEARINGS			L				

RS 300R - RS 500R	SCHEDULED MAINTENANCE CHART (TO BE CARRIED OUT AT THE SWM DEALER)						
	AFTER FIRST 3 HOURS	EVERY 4h MX / 8h EN	EVERY 8h MX / 16h EN	EVERY 16h MX / 32h EN	EVERY 32h MX / 64h EN	EVERY 40h MX / 80h EN	REPLACE IF NECESSARY
	OR EVERY 500 KM		OR EVERY 2000 KM	OR EVERY 4000 KM	OR EVERY 8000 KM	OR EVERY 10000 KM	
REAR SHOCK ABSORBER						R	
REAR SUSPENSION LINKS NEEDLE BEARINGS AND GUDGEON PIN		L					
THROTTLE CONTROL ASSY		C, L					
CLUTCH CONTROL ASSY		C (•)				R (#)	
THROTTLE AND STARTING DECOMPRESSOR CABLES		C		L			X
FRONT BRAKE DISC			C				X
FRONT BRAKE SYSTEM FLUID		C				S	

RS 300R - RS 500R	SCHEDULED MAINTENANCE CHART (TO BE CARRIED OUT AT THE SWM DEALER)						
	AFTER FIRST 3 HOURS	EVERY 4h MX / 8h EN	EVERY 8h MX / 16h EN	EVERY 16h MX / 32h EN	EVERY 32h MX / 64h EN	EVERY 40h MX / 80h EN	REPLACE IF NECESSARY
	OR EVERY 500 KM		OR EVERY 2000 KM	OR EVERY 4000 KM	OR EVERY 8000 KM	OR EVERY 10000 KM	
REAR BRAKE DISC			C				X
REAR BRAKE SYSTEM FLUID		C				S	
BRAKE PADS		C					X
BRAKE SYSTEM PUMP / CALIPER HOSES		C					
FUEL HOSES		C				S	X
EXHAUST SILENCER PACKING			S				X
EXHAUST PIPE AND SILNECER		C					X
WHEEL SPOKES TENSION	C		C				

RS 300R - RS 500R	SCHEDULED MAINTENANCE CHART (TO BE CARRIED OUT AT THE SWM DEALER)						
	AFTER FIRST 3 HOURS	EVERY 4h MX / 8h EN	EVERY 8h MX / 16h EN	EVERY 16h MX / 32h EN	EVERY 32h MX / 64h EN	EVERY 40h MX / 80h EN	REPLACE IF NECESSARY
	OR EVERY 500 KM		OR EVERY 2000 KM	OR EVERY 4000 KM	OR EVERY 8000 KM	OR EVERY 10000 KM	
WHEEL HUB BEARINGS					S		X
REAR DRIVEN SPROCKET			S				X
REAR DRIVEN SPROCKET SCREWS TIGHTENING	C		C				
CHAIN	C,L		S				X
SERBOLTS AND NUTS TIGHTNESS GENERAL CHECK	C			C			

KEY FOR MAINTENANCE SCHEDULE:
h: HOURS
S: REPLACEMENT
C: CHECK
P: CLEAN
R: OVERHAUL
L: IGREASING / LUBRICATION
MX: MOTOCROSS
EN: ENDURO
#: REFER TO MANUAL WORKSHOP

NOTE:
EVERY REMOVAL REPLACE ALL GASKETS

REPLACE SCREWS AND NUTS IF WORN

GENERAL CHECK AFTER RACING USE AND MUDDY OR SANDY GROUNDS

SWM Motorcycles USA

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