

RIEJU S.A. is very grateful for the trust you have placed in our company and congratulates you on your excellent choice.

The RS2 model is the result of RIEJU's extensive experience developing vehicles with high-quality features.

The purpose of this Owners Manual is to indicate how to use and maintain your vehicle, please carefully read the information and instructions that it contains.

Remember that the life of the vehicle depends on its use and the maintenance you provide it. Maintaining it in perfect condition will reduce future repair costs.

This manual should be considered an integral part of the motorbike and should remain with the vehicle's basic equipment in case of change of ownership.

For any query, please consult a RIEJU dealer, who will assist you at all times.

Remember, in order to have your motorbike in perfect working conditions, **demand original parts.**

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MOTORBIKE DESCRIPTION

This motorbike is equipped with a two-stroke monocylindric MINARELLI engine with liquid cooling, sheet admission and an electric starter. It's cylinder is 49.7 cubic cm., with a piston diameter of 40,3 mm. and a stroke of 39 mm.

The ignition starts via an electronic balance wheel and a 95W-12 watt AT coil.

Steel, multiple-disc friction clutch with constant-pressure springs, submerged in oil.

The engine is hooked onto a perimeter-type chassis with triangular, high resistance double tubing and the steering with coned-type bearings.

The front suspension is made up of an inverted, hydraulic fork with 35 mm diameter bars.

The rear suspension consists of a Mono-Shock absorber, which enables smooth performance.

The stainless steel, front disc brake measures 280 mm. in diameter and has a double piston caliper.

The rear brake measures 220 mm. in diameter.

MOTORBIKE IDENTIFICATION

You will find the identification number engraved in the motorbike's chassis.

The number located on the right-hand side of the steering pipe will be very useful (certificates, insurance, registration, etc...), and should be mentioned in case of complaints or parts requests.

The motorbike's serial number is engraved on the rear, left side (under the carburettor). This number will serve as a reference when requesting parts from the dealership.



MOTORBIKE'S MAIN FEATURES

KEYS

A set of keys are given with the motorbike which are for the ignition, blocking the steering, petrol tank and seat lock. These keys are joined to a tab, which is engraved with the corresponding serial number. It is recommended that this be kept in a safe place so that the number is at hand if the keys are ever lost.

INSTRUMENTS AND INDICATORS RS2 MATRIX/NAKED

1. Main switch of ignition key

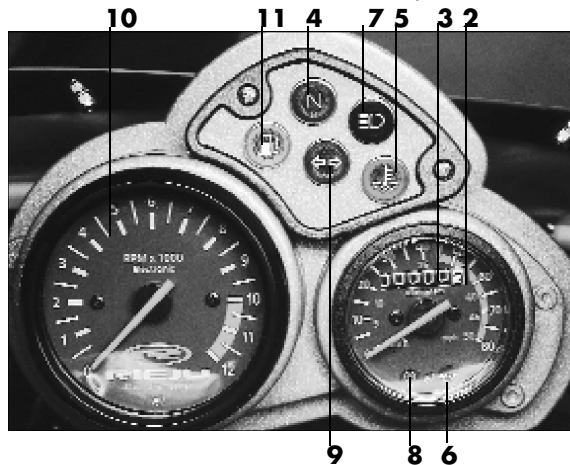
The ignition has two positions: the off position, and the ignition position for engine start-up.

2. Speedometer

The speedometer has an odometer incorporated (3).

4. Neutral indicator

This indicator lamp will come on when the gear-change pedal is in neutral.



5-. Temperature indicator

This indicator is very important because it will alert us to an increase in temperature, due to lack of cooling or to an excess of cooling liquid in the radiator.

6-. Oil reserve indicator

The indicator light will go on when the oil reaches the reserve level. It is important to fill the tank as soon as possible. If the tank is not filled, the engine could be seriously damaged.

7-. Headlight indicator

The indicator will go on when the high beam lights are on.

8. Rear light indicator

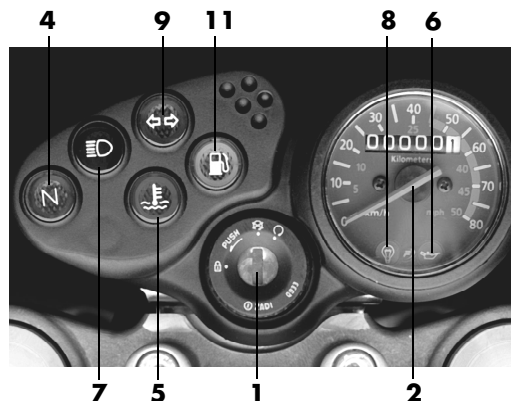
This indicator will go on when the rear bulb doesn't work even though the lights are on.

9-. Direction indicators. This indicator comes on when the indicator lights are operated.

10-. Tachometer. This indicates the number of engine revolutions per minute.

11-. Petrol reserve indicator.

The light will go on when the petrol level reaches the reserve, indicating the need to fill the tank before it is completely empty.



HANDLEBAR SWITCHES

1. Indicator switch

This has three positions: In the central position the indicators are switched off, when turned to the right the right-hand indicators are switched on, and when turned to the left, the left-hand indicators come on. Note that the switch will automatically return to the central position.

Do not forget to switch it off after having completed the associated turn, by pressing the button in its central rest position.

2. Horn switch

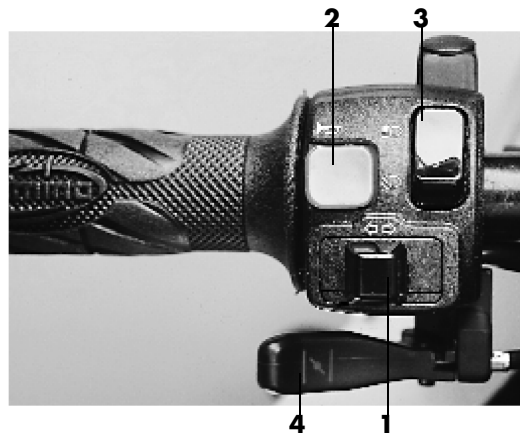
Press the button to sound the horn.

3-. Left light switch

This has two positions: Down to turn on the headlights and up to turn on the high beams.

4-. Choke control

When the motor is cold, it will be necessary to use the choke control to start up the engine.



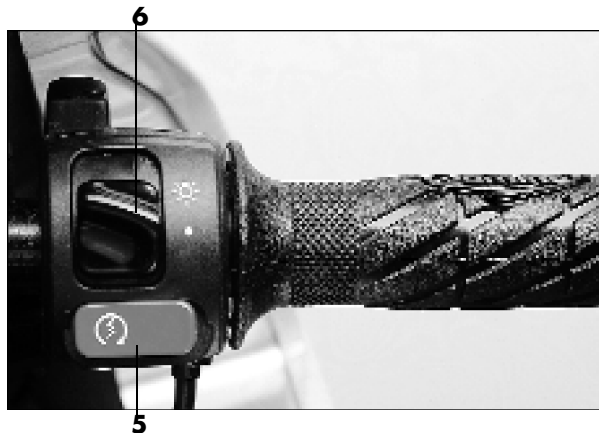
WARNING: Once the engine has reached normal temperature, put the choke control back in its original place so it will not interfere with the normal running of the motor-bike.

5. Ignition switch

This switch is used to start the engine, after verifying that the gear-change pedal is in the neutral position.

6.- Right light switch

The light switch should be set to the upper position to turn on the headlight, pilot lamp and instrument panel. They can be turned off by setting the switch to the lower position.



CLUTCH LEVER

The clutch lever is located on the left-hand side of the handlebar. To engage the clutch, the lever should be pressed towards the grip or handlebar.

FRONT BRAKE LEVER

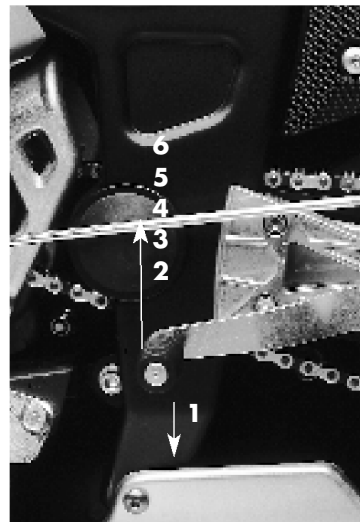
The front brake lever is located on the right-hand side of the handlebar. This brake is operated by pressing the lever towards the handlebar.

REAR BRAKE PEDAL

The rear brake pedal is on the right side of the motorbike. It is operated by pressing down with the foot.

GEAR-CHANGE PEDAL

This can be found on the left side of the motorbike, and is operated with the foot through its full range of travel and letting it return to its rest position before changing gear again. To engage first gear, the pedal should be pressed down with the foot. The other gears are engaged by raising the lever with the toe of the foot.



BATTERY, FUSE AND OIL TANK

1. - Battery

To get to the battery, loosen the screw next to the petrol tank (A) and lift the top very carefully.

The terminal status should be checked, together with the actual terminals themselves.

If any oxide is observed on the terminal block or the ends of the terminals, this should be cleaned off with a metal bristle brush, sandpaper or similar. Once the cleaning operation has been completed, the terminals should be connected again and grease applied to their ends and the terminal block.

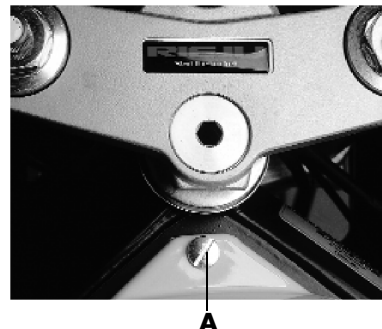
Correct connection must be verified, otherwise the battery could be damaged.

Special attention should be applied to battery handling, since this contains sulphuric acid and you may run the risk of burning your skin, eyes and clothing. It should also be kept away from flames, sparks and cigarettes.

If it should ever become necessary to replace the battery, then the same battery type should be fitted.

2. - Fuse

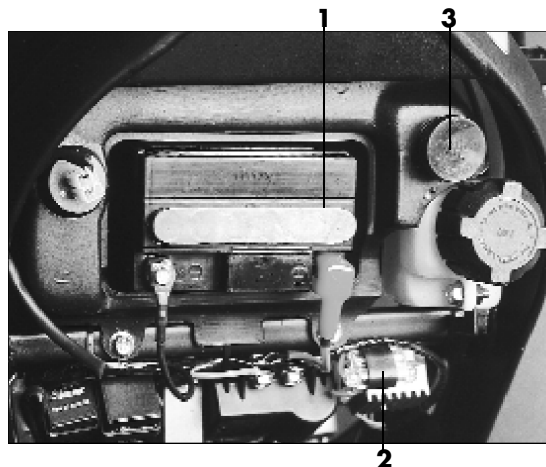
The fuse (7.5 A.) is located next to the battery, under the petrol tank. If the fuse goes out, turn off the engine, substitute it for another of the same amperage. Turn the ignition on again and verify electrical system operation. Never use fuses of a higher amperage than recommended because they could damage or burn the electrical system.



3. - Oil tank

Located under the petrol tank, it can be accessed by loosening the screw in front of the petrol tank and then, lifting it very carefully. The fuel tank capacity is 1.5 litres.

Never let the oil reach empty or it will be necessary to purge the oil pump in order to get all the air out. If this happens, the motor will immediately freeze and the economic and repair consequences could be costly. RIEJU recommends to use Injection System oil.



PETROL TANK

The petrol tank can be accessed by using the ignition key to open the cap, turning the key counter-clockwise.

Do not forget to fill the tank when the reserve light goes on.

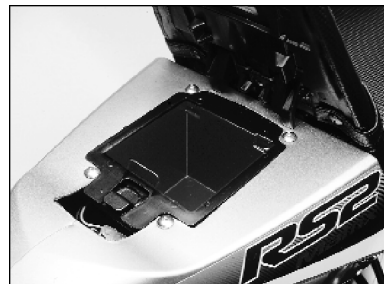
The fuel tank capacity is 10 litres.

Remember to always use unleaded petrol.

GLOVE COMPARTMENT

Located underneath the seat, it can be opened by using the ignition key.

This space may be used to store tools or motorbike documents.



CHECKS TO BE CARRIED OUT BEFORE OPERATING

Check the following points before using your motorbike.

Items to check

Oil tank
Lights and indicators
Speedometer cable
Front and rear brakes
Throttle
Petrol tank
Tires
Indicator lights
Clutch
Transmission chain
Battery

Checks

Check the level and fill, if necessary
Check for correct operation
Check for smooth operation and lubrication
Check both free-play and operation.
Check free-play, adjust and lubricate as necessary.
Check level and refill as required
Check pressure, wear and general condition
Check for correct operation
Check both free-play and operation.
Check tension and condition
Check its operation Charge when necessary

These checks before use should be carried out each time the motorbike is used.

A complete check-out requires no more than a few minutes.

If during these checks, you find some wrong, it should be fixed before using the motorbike again.

ROUTINE CHECKS

FRONT BRAKE

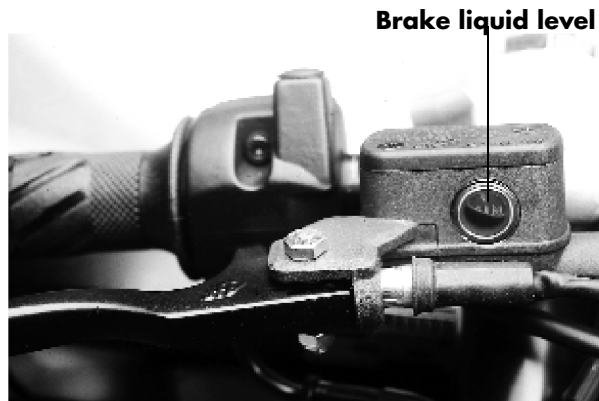
Braking is made possible with 280 mm. diameter disc brake triggered by a caliper and a hydraulic pump.

The braking surface should be free from both grease and dirt to ensure perfect operation. The following procedure should be followed if you find it necessary to empty and the refill the brake fluid circuit.

Remove the pump cover and fill almost completely with brake fluid.

The loosen the bleeding nit and fit a piece of tubing (for petrol) to this same nut.

It is recommended that this tube is inserted into some form of container so that there is no spilled fluid. With the liquid in the pump and the bleeding nut loose, slowly operate the lever until the liquid drops and exits the tube without any air bubbles. At this point, close the bleeding nut and refill the tank with brake liquid to the halfway mark. Close the cover and operate until perfect braking is achieved. Check the brake liquid level through the view-port on the brake pump. Refill if necessary.



REAR BRAKE

Periodically check that the fluid level doesn't go below the line indicated on the brake pump. To see the view-port, it is necessary to take off the dark, triangular top held on by three screws using a 4 mm Allen wrench.

Only hydraulic oil for brakes should be employed to fill this tank.

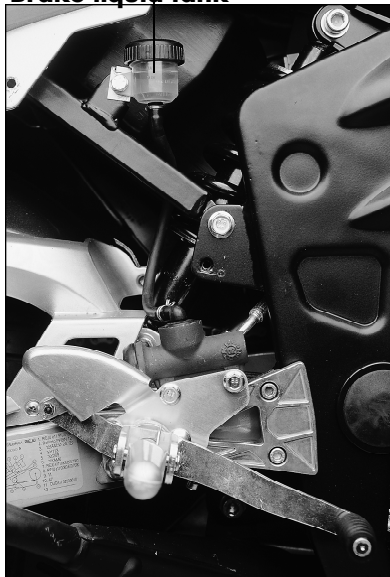
If running without oil, installation must be purged.

BRAKE PUMP AND PADS

Verify the brake fluid level, if it is not correct, the tank should be refilled to the correct mark. If the hydraulic clip brake pads are worn, they must be replaced.

Minimum thickness of the Ferodo pads should be 2 mm.

Brake liquid tank



Please remember that these operations should be carried out by an official RIEJU service centre.

THROTTLE

Check for correct operation by rotating the grip and verifying correct free-play.

The grip should firmly return when the accelerator is released.

LIGHTS AND INDICATORS

Check the headlights, high beams, direction indicators, rear light indicator, oil and petrol reserve indicators, making sure they all function correctly.

TYRES

The tyre pressure directly affects the stability and comfort of the vehicle and, above all, user safety. Therefore, it is important to check the tyre pressure. Check that the rim is centred and also inspect for tyre wear. Do not overload the motorbike as this will lead to a loss of stability and excessive tyres wear.



WARNING: If tyre pressure is very high, they lose their shock-absorbing capabilities and all the effects of uneven roads will be directly transmitted to the chassis, with negative consequences on both safety and comfort.

Pressure in cold	Front	Rear
Until 90 Kg. of load	1,8 Kg/Cm ² , 25 psi.	2,0 Kg/Cm ² , 28 psi.
From 90 Kg. of load	1,8 Kg/Cm ² , 25 psi.	2,3 Kg/Cm ² , 32 psi.

ENGINE STARTING AND OPERATION

It is very important that you have full knowledge of your motorbike and how it works.

WARNING: The engine should never be left running in an enclosed space because the toxic exhaust fumes could have serious consequences on your health.

STARTING THE ENGINE

If the motor is cold, use the choke control, located on the bike's lower left-hand side.

Turn the key clockwise, check that the engine is in neutral, release the accelerator and press the electric starter button.

Remember not to press the electric starter for more than five seconds at a time.

A few seconds after the engine starts up the choke should be returned to its original position.

Then press the clutch lever and engage first gear, progressively releasing the clutch lever as the accelerator is smoothly operated.

Do not fully accelerate or operate the engine at a high rev count until it is sufficiently heated-up.

WARNING:

Before actually moving off, you should always allow sufficient time for the engine to heat up and should never strongly accelerate with the engine cold. This will guarantee longer engine life.

RUNNING-IN

The most important time in the life of a motorbike is between 0 and 500 Kms. For this reason, we recommend that you carefully read the following instructions.

During the first 500 Kms, you shouldn't overload the motorbike because the motor is new and the different parts are wearing away and polishing until they work perfectly together.

During this period of time, prolonged use at high revolutions should be avoided, together with conditions which could lead to excessive engine heating.

ACCELERATION

Speed is adjusted by opening or closing the accelerator. Rotating it backwards will increase speed, whereas rotating forwards will reduce speed.

BRAKING

Close the accelerator grip, then progressively operate the front and rear brakes.

WARNING:

Sharp braking can cause skids or bouncing.

STOPPING

Close the accelerator grip, operate both brakes simultaneously and when speed has been reduced fully depress the clutch pedal. Turn the engine off by removing the ignition key.

CARBURETTOR

This is one of the most important components with respect to good engine performance because this is where petrol and air are mixed, poor carburettor operation means poor engine performance, which in turn, could lead to damaged engine parts. It is, therefore recommended that its adjustment is checked at an authorised RIEJU workshop.

FRONT SUSPENSION

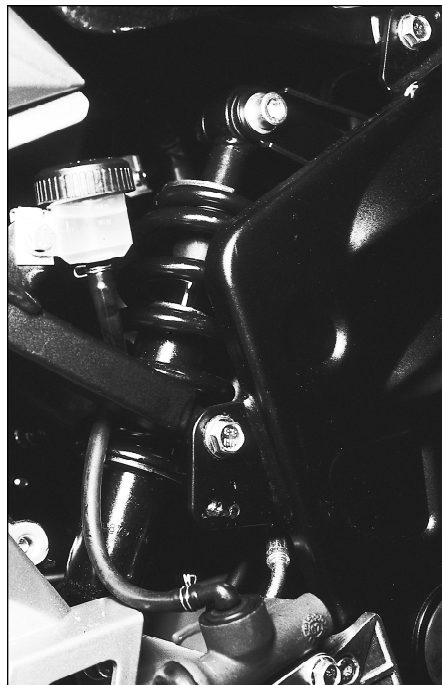
The front suspension, gifted with the most advanced design and technology, is trusted to an inverted, hydraulic fork with 35 mm bars Ø.

Oil capacity: 210 cc.per bar.

Recommended oil: Oil fork SAE 10.

REAR SUSPENSION

A rectangular tubed swingarm hooked to a Mono-Shock hydraulic absorber forms the rear suspension.



COOLING SYSTEM

Behind the front wheel, you will find the radiator with its great cooling power.

The only precaution is to check that the expansion tank that feeds the radiator is half-full. To check the level, take out the screw in front of the petrol tank and remove it carefully. This way, you will be able to access the cooling liquid tank.

Fill, if necessary.



Expansion tank

WARNING:

It is dangerous to open the cooling liquid tank while the engine is still hot because the liquid could splatter out.

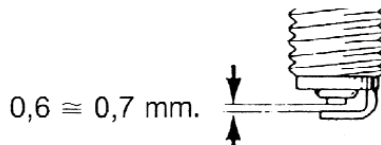
It is advisable to use closed-circuit antifreeze. This way, we avoid the water freezing, which could result in engine seizing and breakage of pump parts. If you do not have antifreeze, we recommend you use distilled water but only temporarily, because the lime can damage the radiator.

SPARK PLUG INSPECTION

The sparkplug is a very important engine component and is easy to inspect. It should be removed and inspected on a regular basis because heating and soot deposits will slowly deteriorate it. If the electrode is excessively eroded or there are heavy soot or other deposits, then the sparkplug should be replaced using a recommended spare part.

NGK BR 9 ES

Before any spark plug is installed, the separation between the electrodes should be measured using a feeler gauge and adjusted if necessary. Electrode separation should be between approximately 0.6 and 0.7 mm.



Before actually installing the new spark plug, the washer seat surface must always be thoroughly cleaned to prevent any foreign bodies from entering the combustion chamber. Screw in the spark plug by hand, making sure to do so carefully. Tighten with $\frac{1}{4}$ to $\frac{1}{2}$ turn using a wrench.

AIR FILTER

Correct operation and lifetime of the engine components, piston rod, piston, segments, crankshaft bearings and the cylinder, largely depend on the air filter's state of cleanliness.

To reach the air filter, take out the three screws that hold on the dark, triangular cover, revealing the air filter box.

Take off the cover held on by the two screws and remove the filter.



The filter foam may then be separated from its plastic support and cleaned with a specific filter foam cleaning solvent.

Once it has thoroughly dried, the filter may be reinstalled by following the above instructions in the reverse order after prior lubrication of the filter with special purpose filter oil. This is accomplished by applying a few drops of this oil and allowing to run so that it is uniformly distributed. It may now be fitted in place, and careful attention should be paid to achieving a perfect fit, otherwise non-filtered air may enter and lead to serious damage. The air filter should be cleaned in accordance with the indicated periods of time. Clean frequently if the motorbike is used in humid or dusty areas.



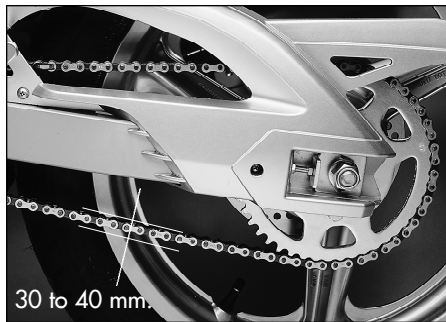
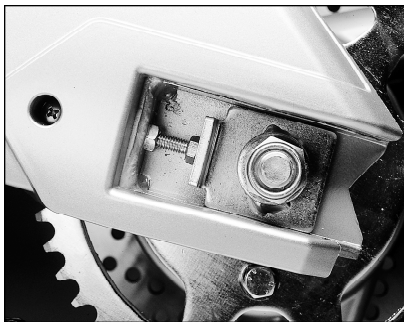
TRANSMISSION CHAIN TENSIONING AND LUBRICATION

Chain control and setting should be done only on the rear tyre axel, always concentrating on the chain's maximum point of tension.

To control free-play, spin the back wheel several times and check the tension in various areas to find the tensest point.

The motorbike should be placed vertically with its wheels on the ground and the chain setting should be 30 to 40 mm.

To regulate the chain, loosen the rear wheel axel, screwing or unscrewing the screws and nuts next to the axel, making sure that the distance is always the same on both sides.



Incorrect chain and wheel alignment could lead to the chain coming loose, together with machine stability problems.

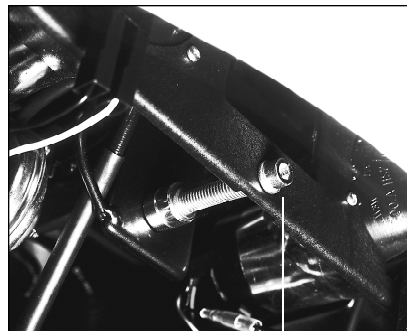
The chain should be periodically cleaned and lubricated. The chain consists of many parts that work together. If the chain is not correctly maintained, it will quickly wear out, and it is therefore recommended that it be lubricated every 100 or 200 kilometres using special chain oil.

The chain should be cleaned or remove all dirt and mud with either a brush or cloth before the lubrication operation, then the oil should be applied between the side plates and all central rollers

LIGHT BEAM REGULATION

WARNING: We recommend that you visit the closest Rieju dealership for light beam adjustment.

The adjustment is made by accessing the lower front end of the light dome. In the centre, you will find a screw, using a 5 mm Allen wrench and a 10 mm flat screwdriver, turn the screw clockwise to lower the beam and counter-clockwise to raise it.



Screw regulation

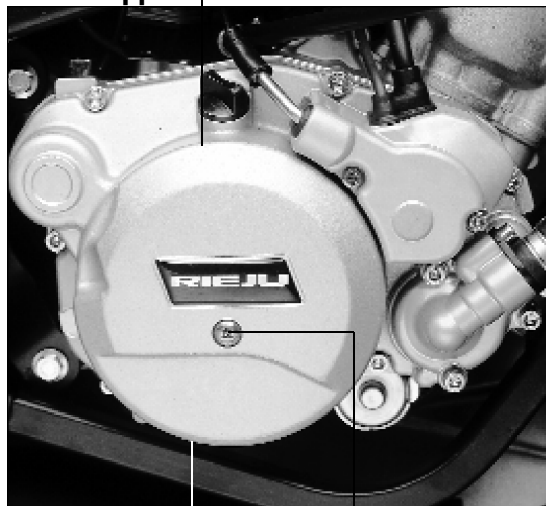
LUBRICATION

The change and clutch are lubricated by mummbling the oil you will find inside the crankcase. Change and clutch are lubricated using the same oil, we recommend SAE 10W 40, with a total capacity of 820 c.c.

The crankcase is emptied by removing the drainage screw located in the lower part of the engine. It is recommended that the oil change operation be carried out while the engine is still warm as the sump will be cleaner and the oil will drain out with greater ease because it will be more fluid. The drainage screw must be completely removed and then wait for a complete drainage.

Once empty, replace the screw and proceed to filling, removing the cap and filling until the oil reaches the top or, pour the amount of 750 c.c. because at least 50 to 70 c.c. always remains in the engine.

Filled stopper



Screw drainage

Screw level

CLEANING AND STORAGE

CLEANING Frequent and thorough cleaning of your motorbike will, not only emphasise its appearance, but will also improve its performance and lengthen the useful life of its components.

1. Before cleaning:

- a). Cover the exhaust pipe to prevent water entering inside.
- b). Check that the spark plug and all caps are firmly in place.

2. If the engine is very dirty and greasy, use a degreasing agent. Do not allow the degreasing agent to come into contact with the wheel axels or the chain since this would remove the protective layer.

3. Remover the degreasing agent, together with the dirt, using a hosepipe, but only with the minimum pressure to carry out the job.

WARNING: Rieju cannot be held responsible for the use of degreasing agents which stain and/or cause deterioration the the motorbike components.

Rieju cannot be held responsible for any possible damage resulting from the use of pressurised water to clean the motorbike.

4. Once all dirt has been cleaned off, the surfaces should be washed with warm water and mild detergent soap. Difficult areas to access can be washed with a bottle-brush or similar.
5. Rinse immediately with cold water and dry all surfaces.
6. Clean the seat with vinyl upholstery cleaner to conserve it both lustrous and flexible.
7. Once all cleaning operations have been completed, start the engine and allow it to tick over for a few minutes. This will completely dry off all the components and, at the same time, leave all connections free from moisture.

STORAGE Long-time storage of the motorbike requires certain precautions against deterioration. Once the machine has been thoroughly cleaned it can be readied for storage as follows:

1. Drain all fuel from the tank, piping and carburettor.
2. Lubricate all control cables.
3. Remove the spark plug and put a spoonful of ME 10W 40 oil in the hole. Replace the spark plug.
4. Seal the exhaust pipe with a plastic bag to prevent the entry of moisture.
5. Remove the battery and charge it at least once a month. Be careful not to store the battery in a place that is either too hot or too cold.

MAINTENANCE OPERATIONS	1ª REVISION	2ª REVISION	REV. EACH
	1.000 KMS.	3.000 KMS.	5.000 KMS.
Brake system checks.	•	•	•
Transmission oil level checks.	Exchange	•	Exchange
Chain tension and wear checks.	•	•	•
Suspensions checks.	•		•
Check, adjust and lubricate controls and cables.	•	•	•
Air filter cleaning and greasing	•	•	•
Inspect and adjust carburettor.	•		•
Inspect and adjust the sparkplug or replace it.	•	•	•
Inspect all nuts and bolts for the chassis and plastic parts.	•		•
Check the electrical system.	•		•
Inspect segment wear.			•
Inspect exhaust system.			•
Check terminals and battery condition.	•	•	•

TECHNICAL SPECIFICATIONS AND CHARACTERISTICS

Model	RS2 50
Dimensions: Total length Total width Total height Seat height Distance between axles Minimum distance to ground	1900 mm. 620 mm. 1060 mm. 800 mm. 1300 mm. 140 mm.
Basic weight With oil and full fuel tank	117 kg.
Engine: Type Number of gears Make Model Cylinders, arrangement Engine size Diameter x travel Start-up system Lubrication system	2-stroke 6-speed Minarelli AM 6 1 inclined towards ahead 49,7 c.c. 40,3 x 39,0 mm Electric Automixing

Transmission oil	
Type	SAE 10W 40
Amount	820 c.c.
Air filter	Foam rubber humid type
Fuel	
Type	Unleaded gasoline
Tank capacity	10 L
Carburettor	Dellorto PHBN 12 HS
Sparkplug	
Type	NGK BR 9 ES
Electrode separation	0,6 - 0,7 mm
Clutch type	Multiple discs in oil
Primary transmission	
Clutch crown	Z = 71
Attack pinion	Z = 20
Transmission ratio	1 : 3,55
Secondary transmission	
Engine output pinion	Z = 11
Friction plate	Z = 47
Transmission ratio	1 : 4,27
Chain	420 SR x 126 steps

GEAR CHANGE				
Speed	Primary shaft	Secondary shaft	Gear ratio	Output ratio
1ª	Z = 12	Z = 36	1 : 3,00	1 : 44,40
2ª	Z = 16	Z = 33	1 : 2,06	1 : 31,20
3ª	Z = 19	Z = 29	1 : 1,53	1 : 23,14
4ª	Z = 22	Z = 27	1 : 1,23	1 : 18,60
5ª	Z = 24	Z = 25	1 : 1,04	1 : 15,80
6ª	Z = 25	Z = 24	1 : 0,96	1 : 14,56

Suspension: Front Rear	Hydraulic reversed pitchfork SEBAC, 35 mm.ø, 210 c.c. SAE 10 for bar.
	Absorber MONO-SHOCK.
Brakes: Front Rear	280 mm. diameter disc 220 mm. diameter disc
Tires: Front Rear	90 / 80 – 17 Tubeless, 1,8 kg./cm2 110 / 80 – 17 Tubeless, 2,0 kg./cm2

Electrical equipment Ignition system Generator Ignition Timing Battery Fuse	Electronic 12 v 95 w Ducati 20°, 1'4 mm before P.M.S. 12 v 3 Ah 7,5 Ah
Lamp bulb voltage and power Headlight Rear light Instrument panel Indicator lights Mileometer light	12V 15w. 12 v 21/5 w 12 v 1,2 w 12 v 10 w 12 v 1,2 w

