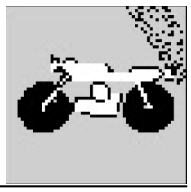
REAR SUSPENSION



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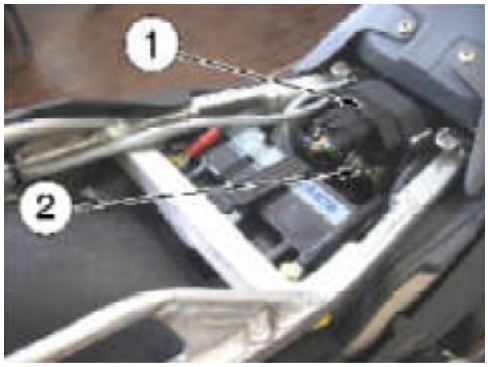
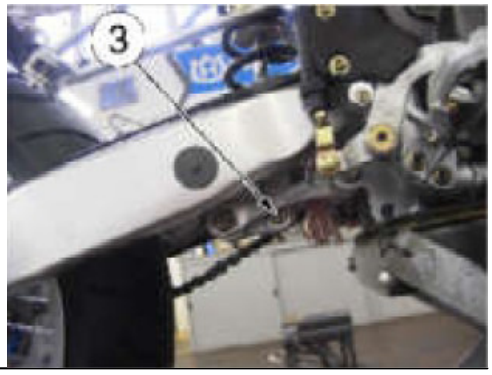
REAR SUSPENSION

Rear suspension
The suspension of this motorcycle is of the progressive type and consists of a shock absorber, a series of linkages and a swing arm. The pre-load of the shock absorber spring can be adjusted according to the driving and ground conditions. Even the hydraulic damping can be adjusted from outside. Periodically check the wear of the components.

Removal of rear shock absorber
Remove the saddle, the side panels, the exhaust central pipe and the exhaust muffler, as described in chapter "E"-General Operations (pages E.4-E.4-E.9). Remove the electronic power unit (1), the fastening screws (2) and (3) and shock absorber.





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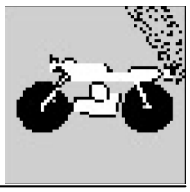


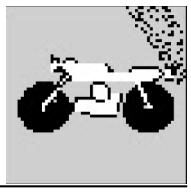
Disassembly, overhauling, and reassembly of the rear shock absorber
Accurately clean the shock absorber before disassembly.

OVERHAULING THE SPRING
Measure the spring in its housing before disassembling.
Disassembling the spring: when gripping the shock absorber in the vice take care that it gets not warped. Loosen the counter-ring nut, the ring nut, the spring cap, and the spring.

Measure the free length of the spring.
USEFUL LIMIT: 9.59-9.70 in.
When the spring length is lower than the useful limit, replace the spring.

CHECKING THE SHOCK ABSORBER
Visual check of the shock absorber to detect possible oil leaks or other drawbacks. Replace the shock absorber if necessary.

REAR SUSPENSION



Bleed the gas by pressing on the reservoir valve.

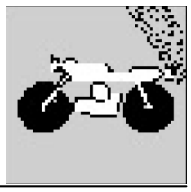
To protect his eyes from possible particles, the operator must turn the valve away from his eyes.

Removing the reservoir plug and the valve
Fit a tool on the air chamber cover, then exert a pressure on both the cover and the tool to gain access to the snap ring.

Exercise the greatest care, and exert the pressure by your hands when carrying out this operation.

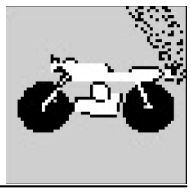
Use two small screwdrivers to remove the snap ring, and take care not to damage the inner surface.
To remove the snap ring, place first one ring end outside the groove. Remove the other ring end, insert one screwdriver between the snap ring and the reservoir, and lever by the other screwdriver. Remove the whole snap ring, and check that the grooves on the reservoir body have no burrs; on the contrary, rectify the grooves to smooth their surface.
Tighten a tube with internal thread, then remove the plug using pliers.

REAR SUSPENSION



Once the plug is removed, push and drive the fork rod guide inside the body so as to free snap ring housing. Remove then the snap ring using a screwdriver.

REAR SUSPENSION



Grip the shock absorber upper side in a vice using aluminum or bronze jaws. Insert a rod or a screwdriver into the connecting hole, and remove the piston and fork rod unit from the shock absorber body. Wrap the body in a cloth to prevent spreading the oil on the shock absorber body.

When gripping the shock absorber in the vice keep it in vertical position. When oil is drained from the shock absorber replace the reservoir diaphragm. Pour the oil in a clean and leave it to clear.

Checks on the piston unit

1) Check whether the piston-right is worn out or damaged; (in this case replace it).
2) Check the OR on the fork rod; replace the OF if scored.
3) Check whether the chromium plated fork rod surface is damaged or scored. In this case replace the replace the damaged fork rod guide, the gasket, and the DU bush. (The fork rod and fork rod guide connection unit is supplied in full).

Replacing the gasket

When replacing the seal gasket, loosen the upper connection and remove the fork rod guide. Fit then a new gasket, reassemble the whole series of elements, and tighten the upper connection using Loctite and a 50 Nm (5 kgm; 36.9 ft/lb) torque.

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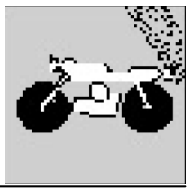
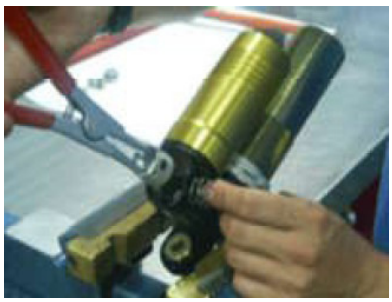


Checking the adjustment
In case of compression adjustment for operating defect, it is necessary to unscrew the knob stopping dowel (before unscrewing, heat with warm air).

Proceed as follows (J.8-J.9):
unscrew the ring nut with a suitable wrench, extract the parts paying attention to the dismantling sequence in order to correctly effect then the reassembly.



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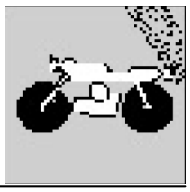

After having completed the check, insert again the piston, the disk, the spring and the ring with slots. Remove the cone holding shaft from the plug, screw the ring and insert it in the slot applying a light pressure. Lock the assembly with the plug at a torque of 30 Nm (3 kgm; 29.2 ft/lbs).

It is strictly forbidden to replace the compression blades with other types of blades, as blades different from the original ones can cause the explosion of the shock absorber during use.

Reservoir replacement
In case of reservoir replacement, it is necessary to heat with warm air near the screwed side and unscrew it with a suitable tool.

Replace the O-Ring of the reservoir. Grease the OR surface, but see that the base thread gets not smeared with grease.
Tighten the reservoir using Loctite, and see that the O-Ring is undamaged. Use a 40 Nm (4 kgm; 39.2 ft/lb) torque. NOTE: When carrying out these operations see that the place of work and all the elements are well cleaned.

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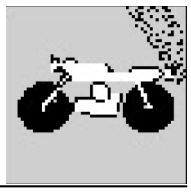
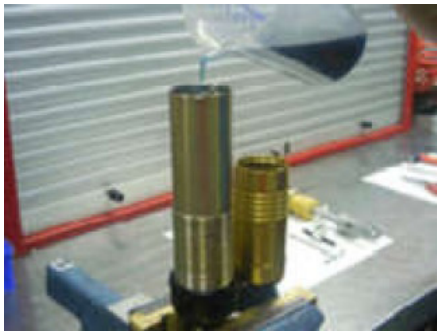


Disassembling the air/oil diaphragm of the reservoir
Always replace the diaphragm when changing the oil inside the shock absorber.
Remove the separator using pliers, and check that the tank does not scored.
When the inside surface of the tank is scored, replace the tank.

REASSEMBLING THE SHOCK ABSORBER
Accurately clean the shock absorber body using degreasing substances. Dry the body using compressed air.
Hold the shock absorber eye in a vice using aluminum or bronze jaws, or wrapping it in a cloth. Pour inside the shock absorber body 70-80 cm3 (4.3-4.9 cu. in.) of oil.
Insert the fork rod inside the shock absorber body and take care that the sliding track is undamaged. Push the fork rod, the piston and the connection inside, and leave room for topping up.



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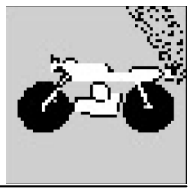
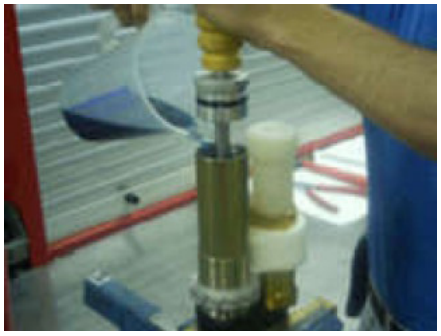


Prepare the diaphragm with assembled OR (we advise using a new one for each replacement). Fill up the reservoir with oil and insert the diaphragm into the reservoir, (see photo).
Quickly push the diaphragm downwards at the bottom of the reservoir holding fast the fork rod in the topping up position. The oil topped up in the reservoir is transferred into the shock absorber body, then sifting through the position blades, it reaches the required level. Avoid possible air intake by quickly carrying out these operations.

Proceed by topping up until reaching approx. 2 cms (0.8 in.) from the body edge. Then, execute 4 or 5 alternating strokes of 5 - 6 cms (2-2.4 in.) to bleed the air left under the piston unit.

These movements should be slow to prevent the reservoir diaphragm from moving through cavitation or compression. Top up with oil the snap ring throat is reached, then slowly fit the fork rod, and the inside end-of-stroke pad, edge-wise with the snap ring throat.



Keep the fork rod in position and run the fork rod guide to fit the shock absorber tube.
Drive the fork rod guide inside the body until the snap ring housing is free. Insert the snap ring and tighten it in position. Pull the fork rod upwards to take the fork rod guide in working position.

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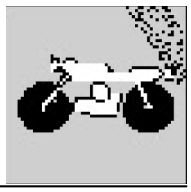

Reassemble the reservoir plug and the valve, fit it inside the reservoir, then fit the snap ring into the throat. Insert the nitrogen valve - or the air valve if the nitrogen valve is not an hand - using 10-12 bar pressure. Reassemble the cap on the valve and check to make sure that both air bleeds, or oil leaks, are not present.

Set the plug on the body

Reassembling the end-of-stroke pad and its washer.
When the end-of-stroke pads needs to be replaced, block the fork rod in a vice using aluminum or bronze jaws, then tighten the connection again using Loctite and a 50 Nm torque. Reassemble the spring and take it to the initial preload using the ring nut and the counter ring nut.

The manufacturer declines any and all responsibility for damages deriving from operations incorrectly carried out.

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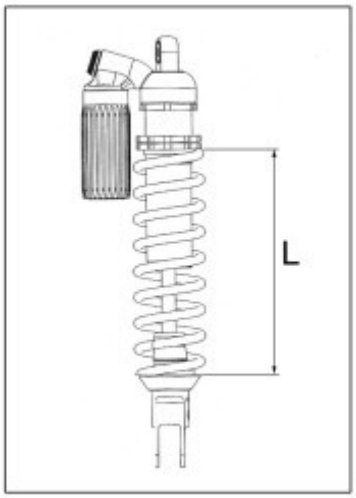

L = 234,5÷237,5 mm (9.23÷9.35 in.)

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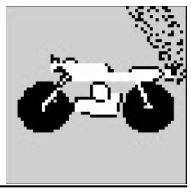

Shock absorber damping adjustment
Adjustment of the compression stroke is independent from the rebound stroke.
* A) COMPRESSION - Standard calibration:
1) Low damping speed: maximum open
2) High damping speed: maximum open
Standard adjustment: turn upper adjusters clockwise until reaching fully closed position. Return then back for the mentioned clicks. In order to obtain a smooth braking action, turn the adjusters anticlockwise. Reverse the operation in order to obtain a harder braking action.

* B) EXTENSION (TE)- Standard calibration: -20 clicks (± 2 clicks)
* B) EXTENSION (SM)- Standard calibration: -26 clicks (± 2 clicks)
Standard adjustment: turn lower adjuster clockwise until reaching fully closed position. Return then back for the mentioned clicks. In order to obtain a smooth braking action, turn the adjuster anticlockwise. Reverse the operation in order to obtain a harder braking action.