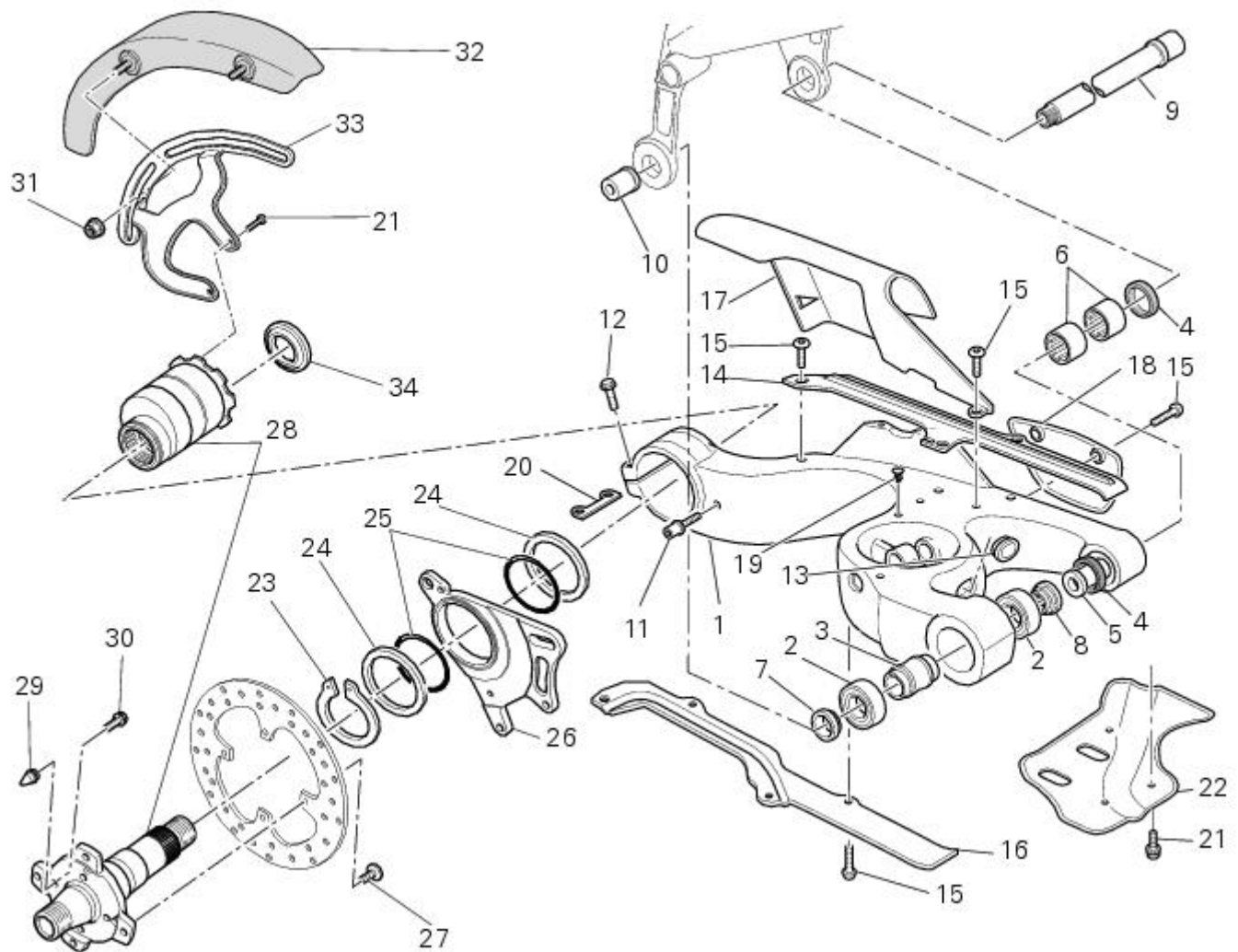



## 5

### - Rear swingarm



- 1Rear swingarm
- 2Bearing
- 3Spacer
- 4Seal
- 5Bush
- 6Roller bearing
- 7RH spacer
- 8LH spacer
- 9 Swingarm pivot shaft
- 10Special nut
- 11Pin
- 12Bolt
- 13Plug
- 14Upper drive chain slider
- 15Bolt
- 16Lower drive chain slider
- 17Upper chain guard
- 18Lower chain guard
- 19Plug
- 20Plate
- 21Bolt
- 22Heat shield
- 23Circlip

- 24Shim
- 25O-ring
- 26Caliper mounting bracket
- 27Bolt
- 28Hub assembly
- 29Pin
- 30Bolt
- 31Nut
- 32Splashguard
- 33Bracket
- 34Bush
-  [Parts catalogue](#)

## [REAR WHEEL AXLE](#)

### [SWINGARM](#)



#### Important

Bold reference numbers in this section identify parts not shown in the figures alongside the text, but which can be found in the exploded view diagram.

#### Removal of the rear eccentric hub

Before removing the rear brake disc, you must first remove the following parts.

Operation	Section reference
Remove the rear wheel	G 4, <a href="#">Removal of the rear wheel</a>
Slacken off the drive chain	D 4, <a href="#">Adjusting the chain tension</a>
Remove the rear sprocket	G 8, <a href="#">Removal of the rear sprocket</a>
Remove the rear brake caliper	G 6, <a href="#">Removal of the rear brake system</a>

Slacken off the bolts (12).



Remove the spacer (34) on the chain side and withdraw the stub axle (28) complete with brake disc from the opposite side.



Remove the splashguard (32) by unscrewing the bolts (21) securing it to the bracket (33).



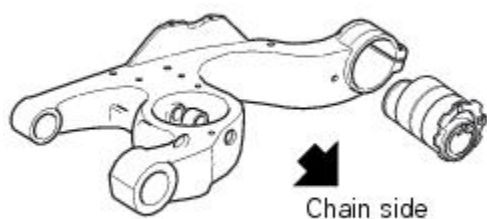
Remove the circlip (23) on the wheel side of the eccentric hub.



Remove the washer (24), the caliper mounting bracket (26) with the O-rings (25) and the other washer (24).



Withdraw the eccentric hub (28) from the chain side of the swingarm.



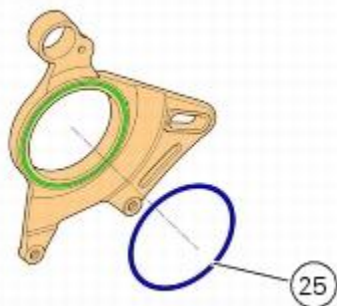
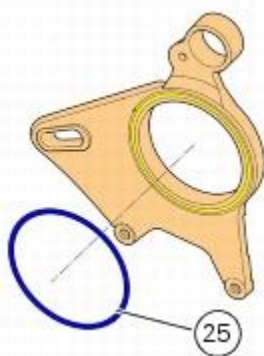
### Important

The rear hub is a component particularly critical to the dynamic safety of the motorcycle. For this reason, any overhaul of the internal components of the hub is strictly forbidden. The hub is available as complete assembly, part no. **756.2.006.2A**.

### Refitting the rear eccentric hub

Refitting is the reverse of removal, with attention to the following points.

Before refitting, apply the recommended grease to the seat on the eccentric hub (28) of the caliper mounting bracket (26) on which the rings (25), also greased, will be located.



If the caliper bracket locating pin (11) was removed, apply the recommended threadlocker on reassembly.

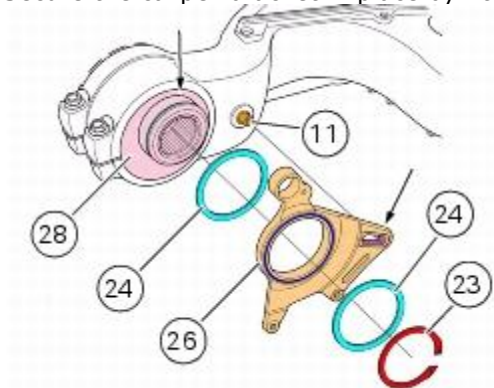


Fit the washer (24) on the hub (28).

Fit the caliper mounting bracket (with the 2 O-rings) on the hub, inserting the locating pin (11) on the swingarm in the slot on the bracket (26) as shown.

Fit another washer (24).

Secure the caliper bracket in place by fitting the circlip (23) in the groove in the hub (28).



Apply the prescribed threadlocker to the bolts (12) and tighten to the specified torque (Sect. C 3, [Frame torque settings](#)).



Operation	Section reference
Refit the rear brake caliper	G 6, <a href="#">Refitting the rear brake system</a>
Refit the rear sprocket	G 8, <a href="#">Removal of the rear sprocket</a>
Adjust the drive chain tension	D 4, <a href="#">Adjusting the chain tension</a>

Refit the rear wheel	G 4, <a href="#">Refitting the rear wheel</a>
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Tension the drive chain as indicated in the paragraph "[Adjusting the chain tension](#)" in Section D 4.

## Removal of the swingarm

Before removing the parts in question, you must first remove the following parts:

Operation	Section reference
Remove the footrest brackets	H 4, <a href="#">Removal of the footrest brackets</a>
Remove the rear wheel	G 4, <a href="#">Removal of the rear wheel</a>
Slacken off the drive chain	D 4, <a href="#">Adjusting the chain tension</a>
Remove the rear sprocket	G 8, <a href="#">Final drive</a>
Remove the rear brake caliper	G 6, <a href="#">Removal of the rear brake system</a>
Remove the shock absorber and suspension tie-rod from the swingarm	G 7, <a href="#">Removal of the rear shock absorber</a>

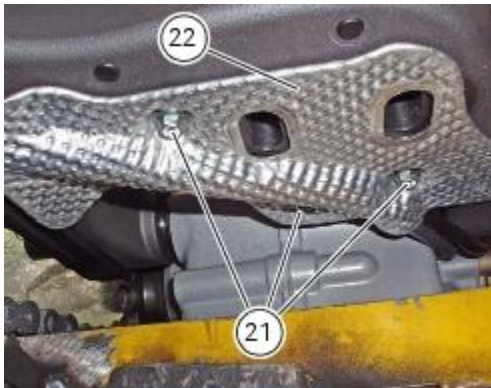
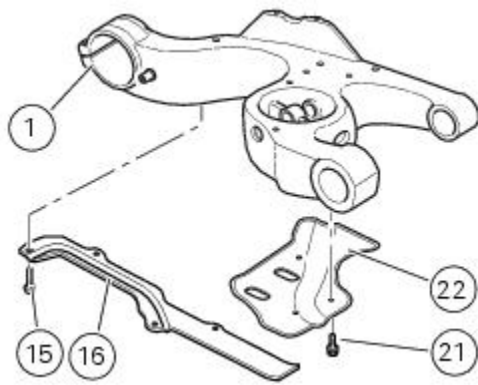
You can check the play in the swingarm bearings while the swingarm (1) is still installed on the motorcycle frame.

Grasp the rear of the swingarm (1) and try to move it in the four directions shown by the arrows. Any abnormal movement is a sign of worn bearings that could cause instability when riding. Refer to the indications for checking swingarm bearing play in Section G 1, [Wheel bearings](#).



Remove the eccentric rear hub as described in "[Removal of the rear eccentric hub](#)" in this section. Free the speed sensor wiring from the lower chain slider (16) and from the heat shield (22) by unscrewing the bolts (15) and (21).



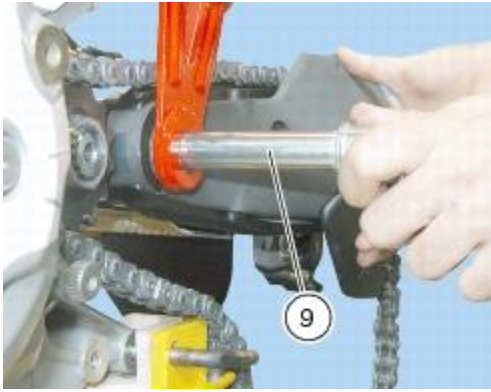


Disconnect the speed sensor wiring connector (A) from the main wiring loom.

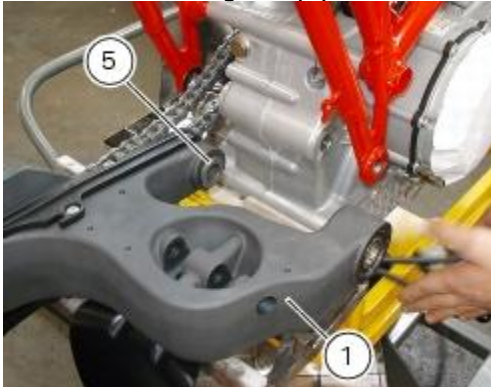


Unscrew the nut (10) and drive out the pivot bolt (9) using a suitable drift.





Withdraw the swingarm (1) from its seat sufficiently to recover the bush (5).



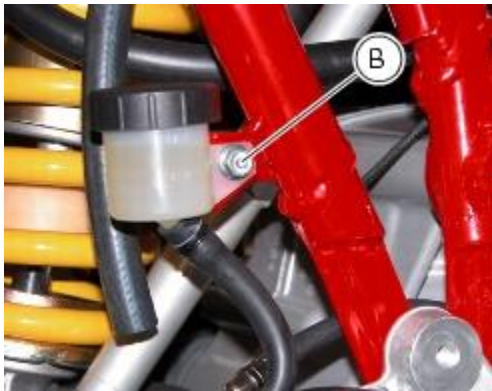
Where the right-hand side of the swingarm is attached to the frame, there are two internal spacers (8) and (7).

Disconnect the wiring connector (A) from speed sensor.



Remove the bolt (B) securing the rear brake fluid reservoir.

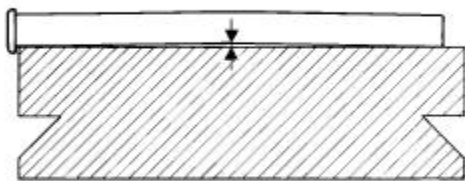




### Inspecting the swingarm pivot shaft

Before refitting the swingarm pivot shaft, check it carefully for distortion.

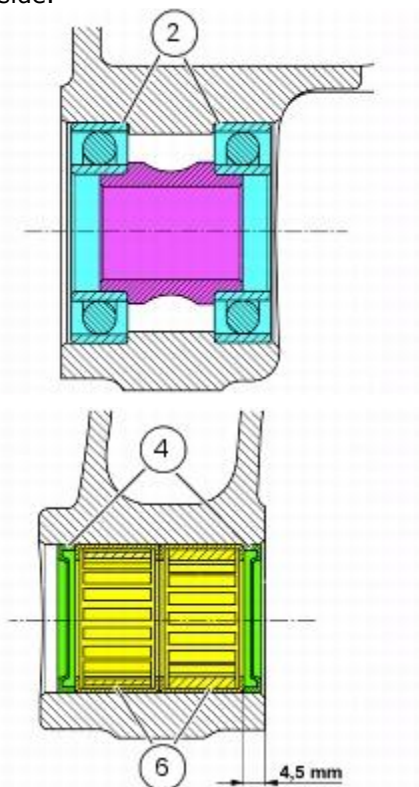
Roll the shaft on a reference surface and measure maximum distortion using a feeler gauge (see Sect. C 1.1, [Rear wheel](#)).



Renew the pivot shaft when distortion exceeds the specified limit or if cracked or otherwise damaged.

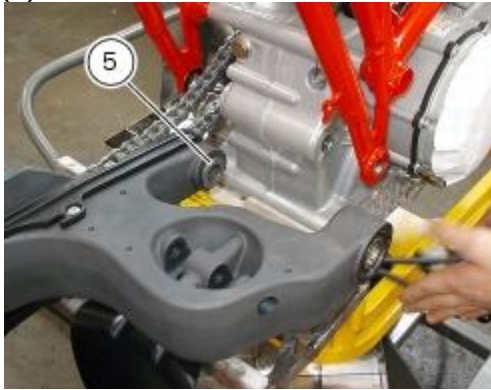
### Overhauling the rear swingarm

Inside the swingarm (1), at the point at which it pivots on the frame, there are a pair of ball bearing races (2) on the right-hand side and a pair of roller bearings (6) with seals (4) on the left-hand side.



To change the bearings, proceed as follows.

Remove the spacers (8) and (7) from the right-hand side of the swingarm and remove the bush (5) from the left-hand side.

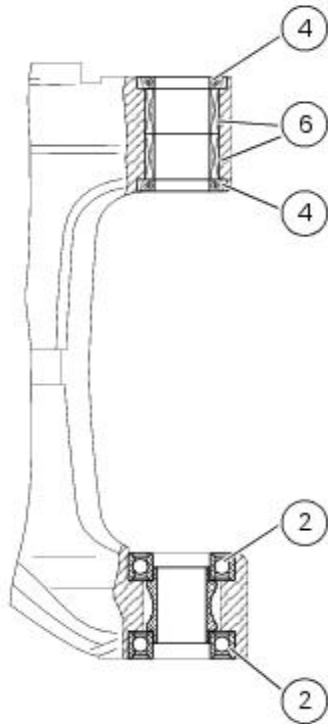


Remove the bearings (2), the seals (4) and the roller bearings (6) using a suitable punch and a press. Support the swingarm and take care not to damage the bearing bores.

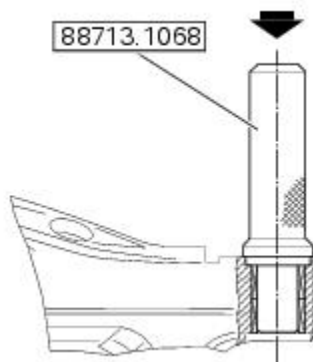


#### Important

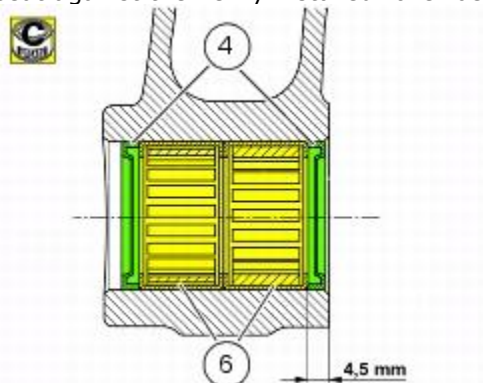
Once removed, the bearings (2), seal rings (4) and roller bearings (6) must not be reinstalled.



Heat the entire swingarm up to **150 °C** and support it.  
 Insert the new roller bearings (6) in the service tool no. **88713.1068** and install them from the outside into the bore on the left-hand side of the swingarm.  
 Drive them in until the tool is fully seated against the swingarm.



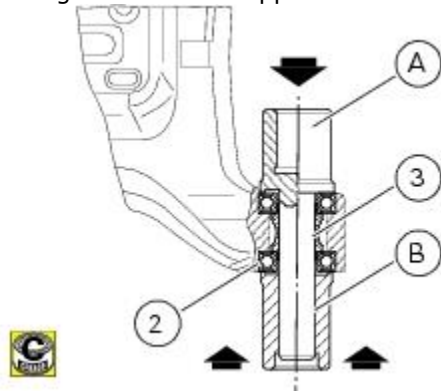
Use the same tool to fit the new seals (4), positioned as shown in the sectional view, so that they seat against the newly installed roller bearings.



To install the ball bearing races (2) you will need service tool no. **88713.2409** comprised of:  
 (A) - drift for internal bearings;  
 (A) - drift for external bearings;

(C) - guide pin.

Fit a new bearing (2) with the internal spacer (3) onto the drift (A) and position it on the interior of the right-hand side support of the swingarm.



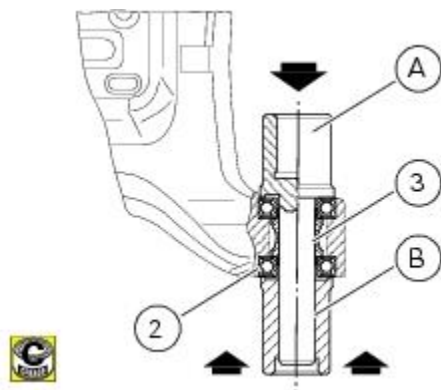
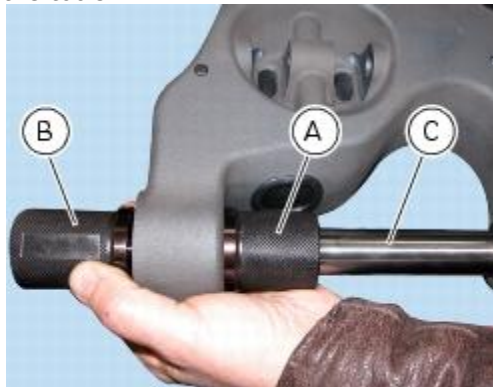
Insert the guide pin (C) into the previously mounted roller bearings and insert the other end in the bore in the tool (A).



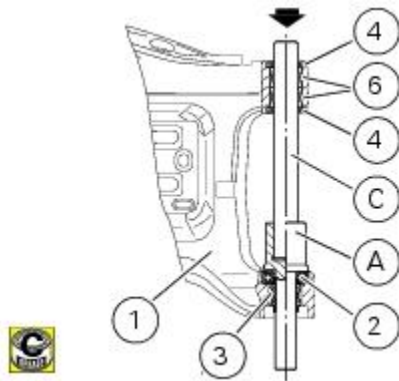
Drive the bearing (2) fully into the swingarm.

Fit the other new bearing (2) at the outer end of tool (A).

Using tool (A) as a stop, use tool (B) to drive the external bearing up against spacer (3): remove the tools.



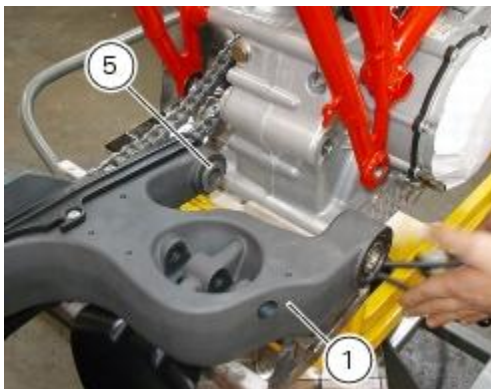
Before refitting the swingarm (1), grease the ball bearings (2), roller bearings (6) and seals (4) with the recommended grease.



### Refitting the swingarm

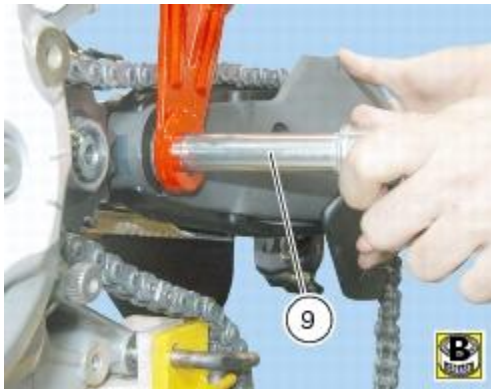
If the swingarm has been disassembled, reassemble it referring to the exploded view at the beginning of this chapter.

Locate the swingarm assembly (1), making sure that spacers (7) and (8) are present on the RH side and that the bush (5) is present on the LH side.





Lubricate the swingarm pivot shaft (9) with the recommended grease and insert it fully into the frame.



Lubricate the nut (10) with the recommended grease and screw it on the opposite end of the pivot shaft.

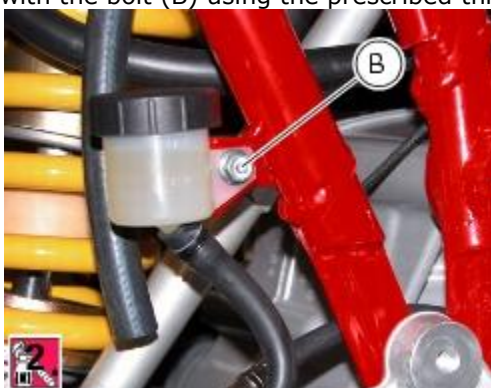
Tighten the nut (10) to the specified torque (Sect. C 3, [Frame torque settings](#)).



Fit the upper chain guard (17), feeding the drive chain through it; apply threadlocker to the bolts (15) and tighten them to the specified torque (Sect. C 3, [Frame torque settings](#)).



Reconnect the wiring connector (A) of the speed sensor and secure the rear brake fluid reservoir with the bolt (B) using the prescribed threadlocker.





Operation	Section reference
Refit the shock absorber and tie-rod to the swingarm	G 7, <a href="#">Refitting the rear suspension</a>
Refit the rear wheel	G 4, <a href="#">Refitting the rear wheel</a>
Refit the rear brake caliper	G 6, <a href="#">Refitting the rear brake system</a>
Refit the final drive assembly	G 8, <a href="#">Final drive</a>
Adjust the drive chain tension	D 4, <a href="#">Adjusting the chain tension</a>
Refit the footrest brackets	H 4, <a href="#">Refitting</a>