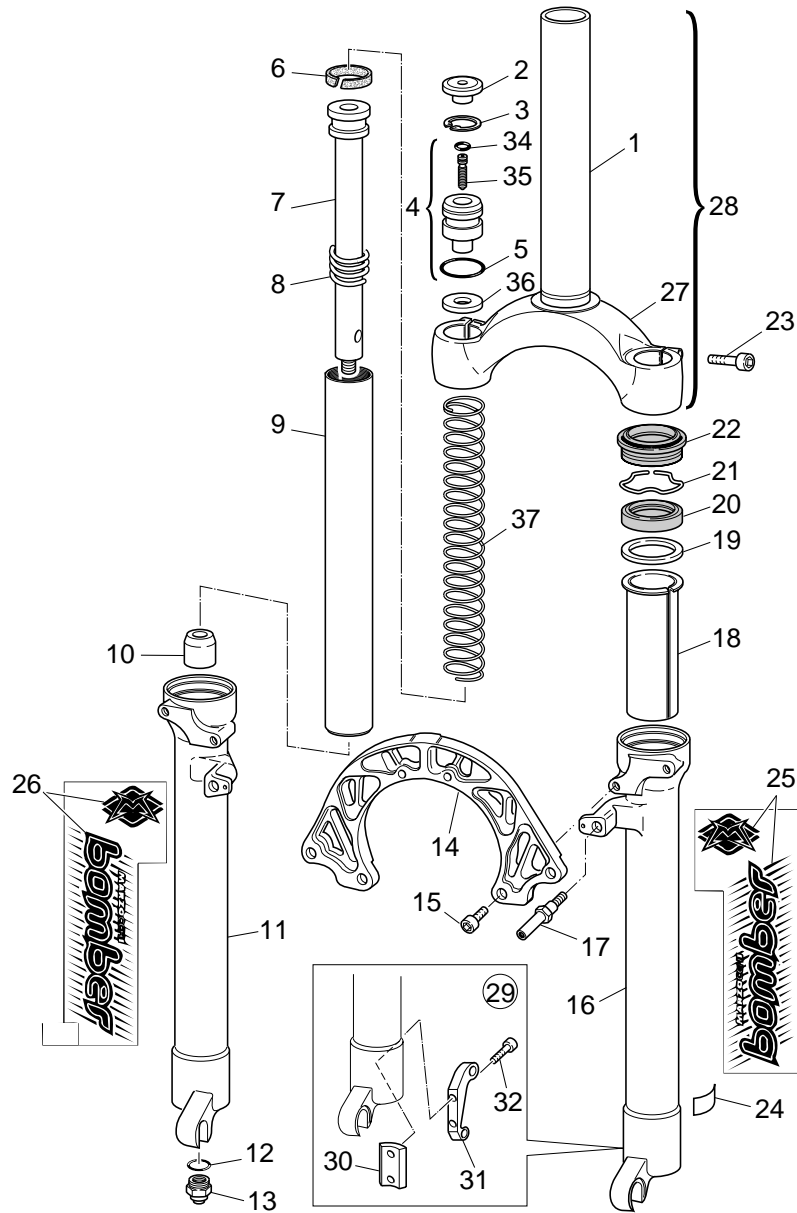
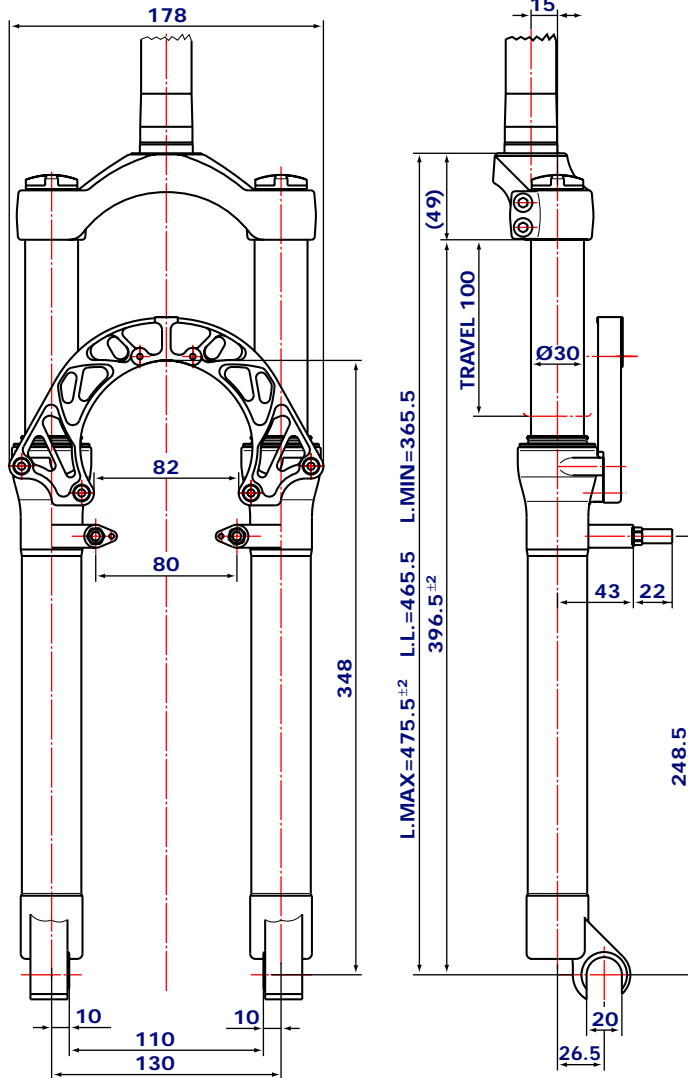


Z5  
Q2  
R0  
SPRING



# Z5 Q2 R0 SPRING



## GENERAL

- The fork is sprung by a mechanical coil system and uses hydraulic rebound damping.
- Spring pre-load adjustment controlled by outer adjuster.
- Stanchions and full length bushings for superior rigidity.
- Parts subjected to friction are cooled and lubricated by a specially formulated oil.
- Brake caliper adapter available, fits onto LH slider.

**Steer Tube:** EASTON aluminum steer tubes in non threaded 1 1/8" diameter.

**Crown:** Forged and CNC-machined BAM\* aluminum alloy.

**Arch:** Forged and CNC-machined BAM\* aluminum alloy.

**Stanchions:** Special chrome-molybdenum steel, hard-chromated.

**Sliders:** Cast and CNC-machined BAM\* aluminum alloy.

**Springs:** Constant pitch springs.

**Slider bushing:** Full length guide bushings composed of a copper base and impregnated with an anti-friction coating.

**Seals:** Computer designed oil seals guarantee the highest quality seals available.

**Oil:** Specially formulated oil which eliminates foaming and viscosity breakdown while providing complete stiction-free performance.

**Fork leg oil:** 100 cc type EBH 16 - SAE 7.5.

\* **BAM: Bomber Aerospace Material.**  
Special alloy developed from aerospace material.

## INSTRUCTIONS

### **GENERAL RULES FOR CORRECT OVERHAULING AND MAINTENANCE**

1. *Where specified, assemble and disassemble the shock absorption system using the MARZOCCHI special tools only.*
2. *On reassembling the suspension system, always use new seals.*
3. *If two screws are close one to the other, always tighten using a 1-2-1 sequence. In short, screw the first screw just up to the point it is well tightened, then tighten the second screw and then go back to the first one and screw it tighter.*
4. *Clean all metal parts with a special, preferably biodegradable solvent, such as trichloroethane or trichloroethylene.*
5. *Before reassembling, lubricate all parts in contact with each other using silicone fat spray.*
6. *Always grease the conic seal rings before reassembling.*
7. *Use wrenches with metric size only. Wrenches with inch size might damage the fastening devices even when their size is similar to that of the wrenches in metric size.*

Z5

Q 2  
R 0

S  
P  
R  
I  
N  
G

## **FAILURES, CAUSES AND REMEDIES**

*This paragraph reports some failures that may occur when using the fork. It also indicates possible causes and suggests a remedy. Always refer to this table before doing any repair work.*

Z5

Q 2  
R 0

S  
P  
R  
I  
N  
G

### **FAILURES**

### **CAUSES**

### **REMEDIES**

*Oil leaking though the top of slider*

- 1. Slider oil seal is worn out*
- 2. Stanchion tube is scored*
- 3. Excessive dirt on slider oil seal*

- 1. Replace oil seal*
- 2. Replace crown and stanchions assembly and oil seals*
- 3. Clean the oil seal seat and replace oil seal*

*Oil leaking through the bottom of slider*

*O-ring on the pumping rod nut is damaged*

*Replace the O-ring*

*Fork has not been used for some time and is locked out*

*Oil seals and dust seals tend to stick to stanchion tubes*

*Raise dust seal and lubricate stanchion tube, dust seal and oil seal*

*Excessive play of stanchions in the sliders*

*Pilot bushings are worn*

*Replace pilot bushings*

## RECOMMENDATIONS FOR MAINTENANCE

MARZOCCHI forks are based on advanced technology, supported by year-long experience in the field of professional mountain biking. In order to achieve best results, we recommend to check and clean the area below the dust seal and the stanchion tube after each use and lubricate with silicone oil.

## INSTALLATION

Installing the Z5 fork on a bicycle is a very delicate operation that should be carried out with extreme care.

The installation should always be checked by one of our Technical Service Centers.



**WARNING:** Steer tube/headset mounting and adjustment must be carried out in compliance with the headset manufacturer's instructions. Improper installation may jeopardize the safety of the rider.

To replace it, contact one of our Technical Service Centers with the required tools.



**WARNING:** In case of improper installation of the steer tube into the crown, the rider could lose control of his/her bicycle, thus jeopardizing his/her safety.



**WARNING:** Brake supports feature fixing pins or - as an option - bolts. Never remove these pins (or bolts), as they help keep brake arch-sliders-assembly locked securely together.

Z5

Q 2  
R 0

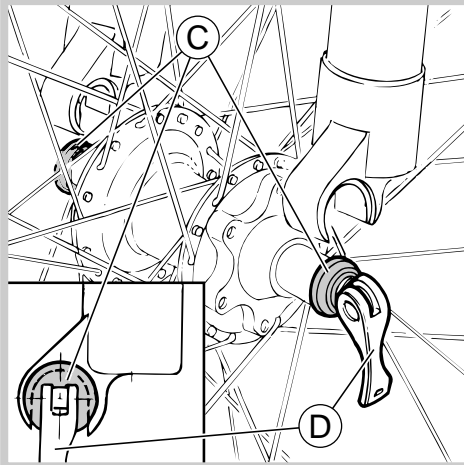
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G

## FRONT WHEEL ASSEMBLY (Fig. A)

**⚠ IMPORTANT:** fixing the front wheel properly as specified in the instructions given below is essential for the proper operation of this fork and all related devices, and therefore for safe riding. You are advised to follow these instructions closely.

Slacken the lock nut of the quick release lever so the hub will fit between the fork sliders.

Make sure the quick release bushings (C) are centered to the recesses in the sliders. Lock the quick release lever (D) and make sure the bushings (C) are properly seated in the sliders.



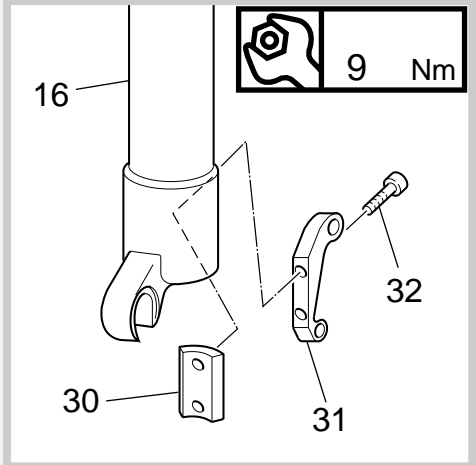
**⚠ WARNING:** These sliders are specifically designed to fit this type of hub. Do not use any hub design other than that specified here, as this would not ensure proper fastening of the wheel and may lead to breakdown of the assembly components.

## DISC BRAKE SYSTEM ASSEMBLY (Fig. B)

Assembling the brake caliper onto the slider is a very delicate operation that should be carried out with extreme care. Improper assembly might overstress the caliper supports, which might break. Screw the caliper support (31) to the slider (16) using the screws (32) and plate (30).

**⚠ IMPORTANT:** Clean the mating surfaces inside and outside slider, otherwise dirt may affect caliper position or cause the screws (32) to become loose.

Tighten the screws (32) to 9 Nm. When installing the disc brake system, be sure to properly follow the instructions given by the manufacturer.



## SPRING PRELOAD ADJUSTMENT

(Fig. C)

Take off the protection (2) using a 4mm Allen wrench.

To change preload, turn the screw (35) inside cap (4) with the same Allen wrench.

Turn out the screw (35) completely, then tighten it until it touches the upper washer (36).

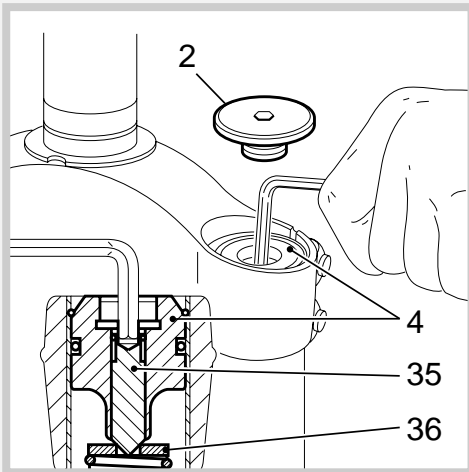
From this starting position, which corresponds to "0" preload, turn in as many turns as the preload you want.

Each turn corresponds to 1.25 mm (0.05 in.).

When supplied, Z5 is set with the minimum preload. However, spring is slightly preloaded to counteract static loads.

By turning the adjustment screw clockwise, the preload is increased up to the maximum value equal to 15 mm's/0.59 in. of spring preload.

This adjustment is essential in order to have the right Z5 response for the rider's weight and riding style.



Z5

Q2  
R0

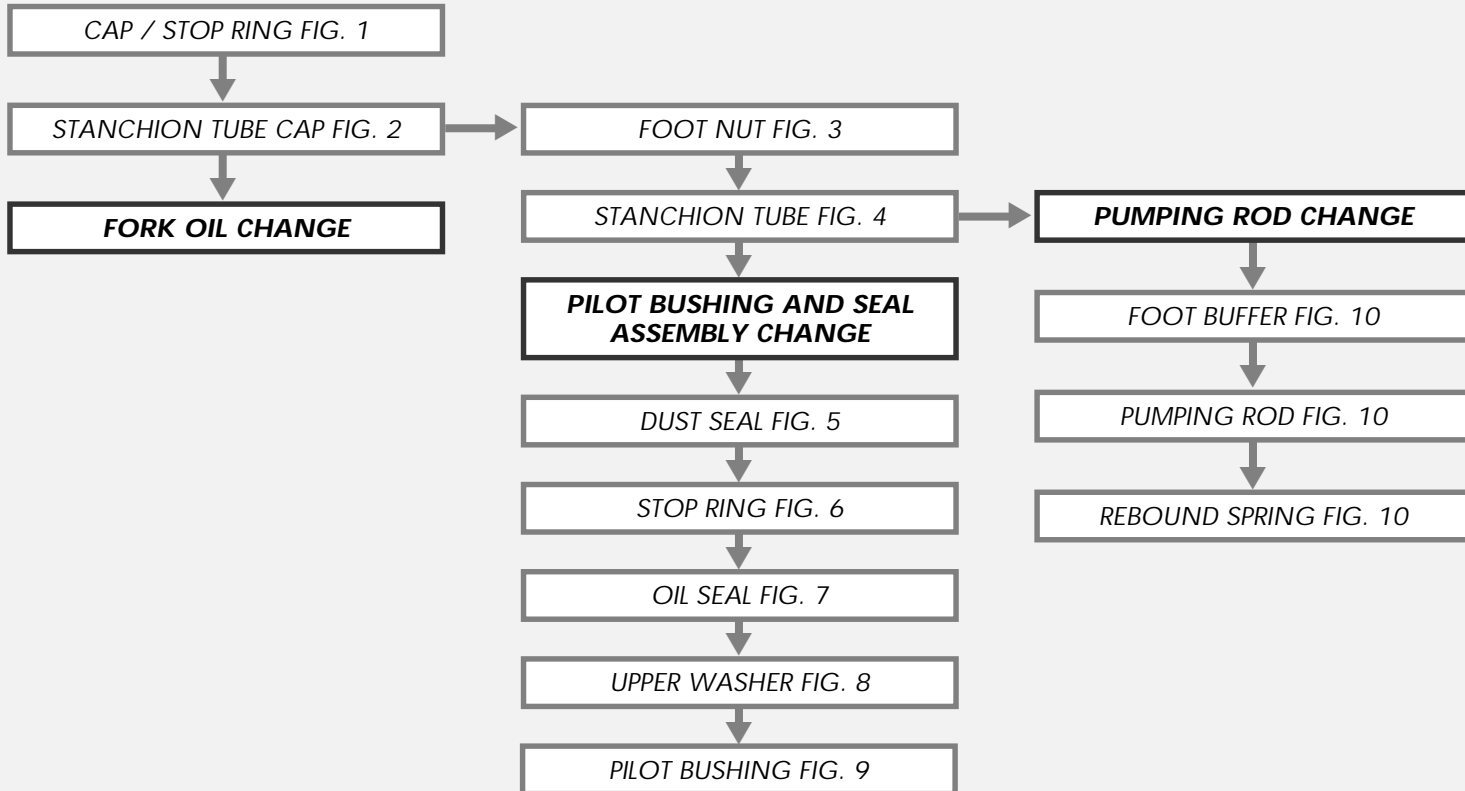
S  
P  
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G

## DISASSEMBLY

### GENERAL

- The reference numbers given in this section relate to the components shown in the fork exploded view.
- Operations refer to the fork legs already removed from the crown and disassembled from the brake arch.
- Before starting any operation, please read the diagram below. It shows the quickest procedure and the exact disassembling sequence. Locate the part you need to remove in the diagram, then look at the arrows to determine which other parts you will need to remove first.

## DISASSEMBLY DIAGRAM



Z5

Q 2  
R 0

S  
P  
R  
I  
N  
G

**FIG. 1**

**⚠ WARNING:** Any maintenance or repair work may only be carried out by reducing the preload of the springs inside both fork legs by turning the screws (35), as shown in Fig. A.

With a suitable rod, push the cap (4) into the stanchion tube (9) just enough to expose the stop ring. Remove upper stop ring (3) using a screwdriver and keep pushing the cap (4).

**⚠ WARNING:** once stop ring (3) is removed, the thrust of the inner spring (37) could make the cap (4) abruptly come out of the stanchion tube. Take all the measures necessary to prevent this danger.

**FIG. 2**

Push the stanchion tube into the slider and remove the washer (36) and the spring (37).

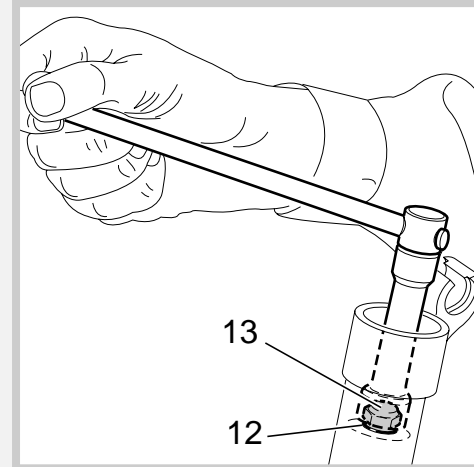
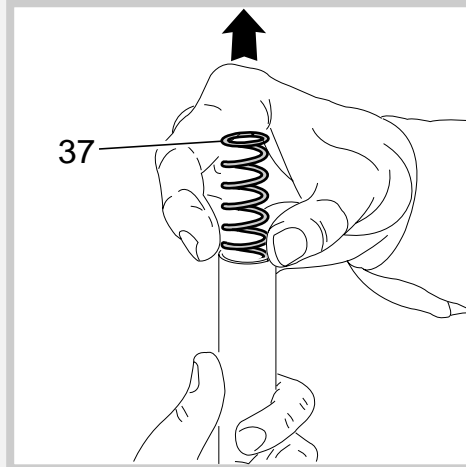
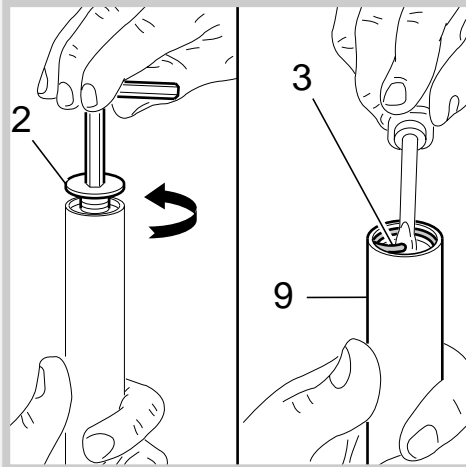
Drain all oil from the fork leg.

**⚠ WARNING:** Remember to always recycle any used oil.

To change the fork leg oil follow the procedure as described in section "REASSEMBLY" from Fig. 20 to Fig. 22.

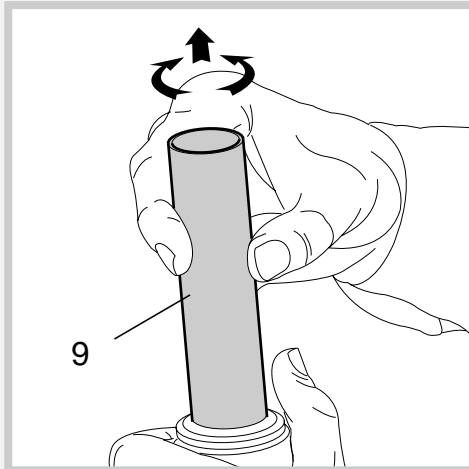
**FIG. 3**

Turn the fork leg upside-down and unscrew the foot nut (13) complete with O-ring (12) by the use of a 15 mm socket wrench.



**FIG. 4**

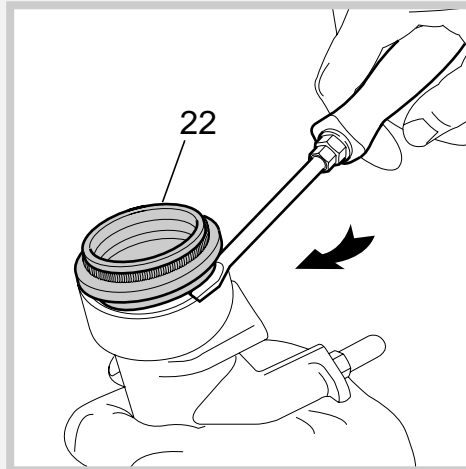
Withdraw the stanchion tube (9) from the slider.



**PILOT BUSHING AND SEAL  
ASSEMBLY CHANGE**

**FIG. 5**

Remove the dust seal (22) from the top of the slider using a small screwdriver.

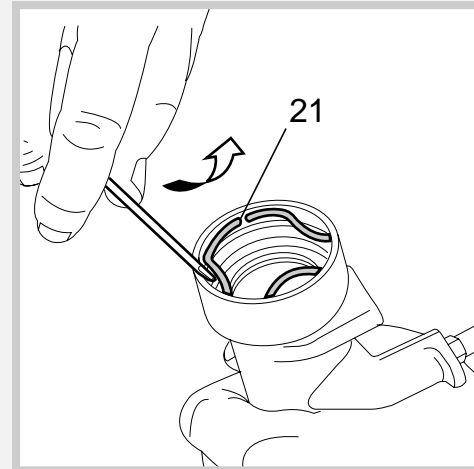


**FIG. 6**

Remove the stop ring (21) from the slider by placing the screwdriver bit in one of the three openings on the stop ring.



**IMPORTANT:** when removing the stop ring, make sure not to damage its seat.



Z5

Q 2  
R 0

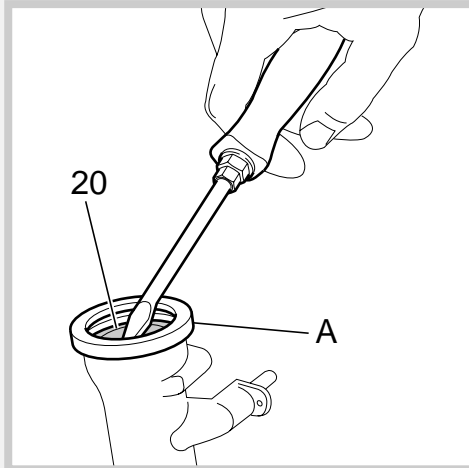
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**FIG. 7**

Fit the slider protector (A) onto the slider and remove the oil seal (20) with the help of a large screwdriver.

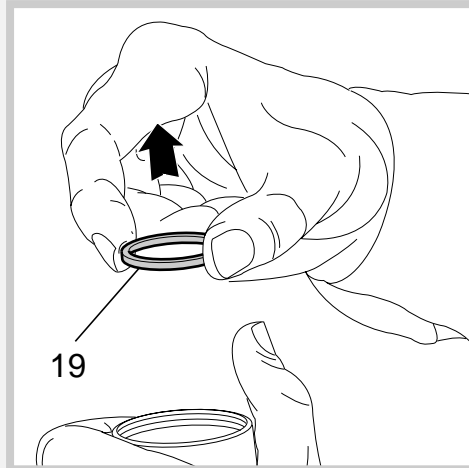


**IMPORTANT:** when removing the oil seal, make sure not to damage its seat. Once removed the oil seals should not be used again.



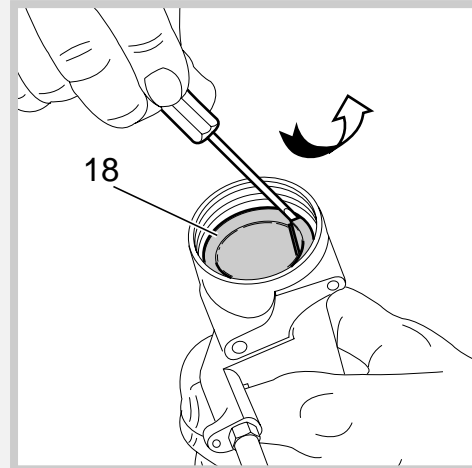
**FIG. 8**

Remove the upper washer (19) from the slider.



**FIG. 9**

Fit the bit of a small screwdriver into the upper edge slot of the pilot bushing (18) and lift gently. Pull the bushing out of the slider and make all necessary changes.



Z5

Q 2  
R 0

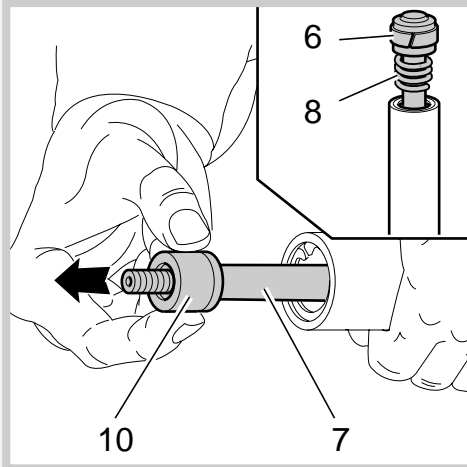
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## **PUMPING ROD CHANGE**

### **FIG. 10**

Remove the foot buffer (10) from the pumping rod (7) end.

Withdraw the pumping rod (7) and the rebound spring (8) from the stanchion tube opposite side. Replace the seal ring (6) if damaged or worn out.



Z5

Q 2  
R 0

S  
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R  
I  
N  
G

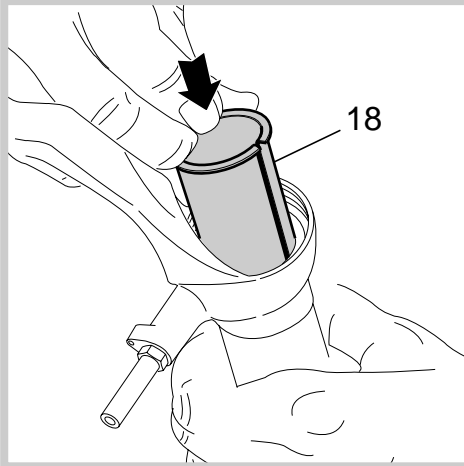
## REASSEMBLY

**⚠ CAUTION:** before reassembling, all metal parts should be washed carefully with inflammable, preferably biodegradable, solvent and dried with compressed air.

### PILOT BUSHING AND SEAL ASSEMBLY

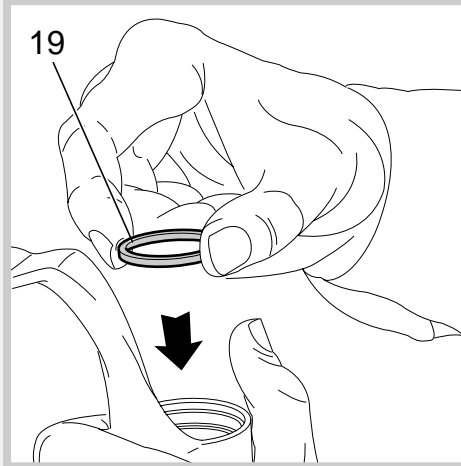
**FIG. 11**

Check that no dirt or debris is between slider and bushing. Insert the pilot bushing (18) into place so that it adheres to the slider.



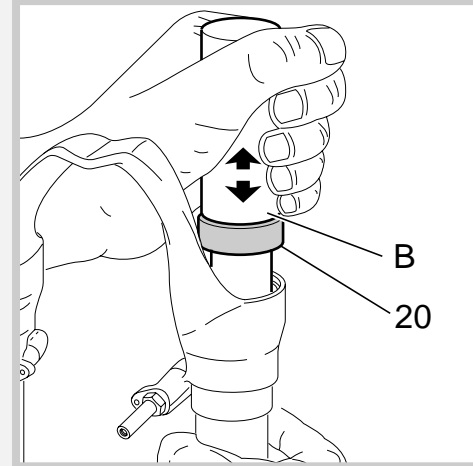
**FIG. 12**

Fit the upper washer (19) into the slider so that it touches the pilot bushing.



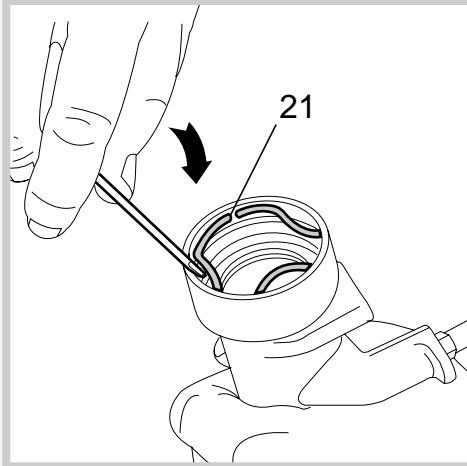
**FIG. 13**

Lubricate the oil seal (20) and fit it onto the seal press (B) with the hollow side toward the slider. Press the oil seal until it touches the upper washer by using the above seal press.



**FIG. 14**

Insert the stop ring (21) into the slider making sure it is properly seated into place.

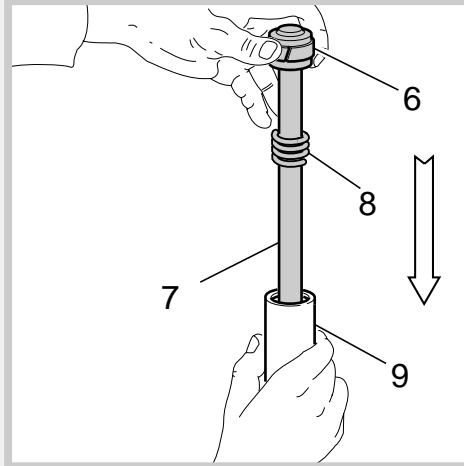


**PUMPING ROD ASSEMBLY**

**FIG. 15**

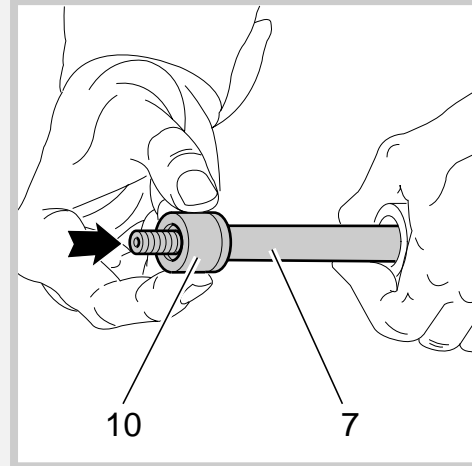
After having overhauled or replaced the pumping rod (7) and after having cleaned the inside of the stanchion tube, reassemble.

Fit pumping rod (7), seal ring (6) and rebound spring (8) into the stanchion tube (9) and push the rod until it comes out from the other end.



**FIG. 16**

Reassemble the foot buffer (10) onto the pumping rod (7) end.



Z5

Q 2  
R O

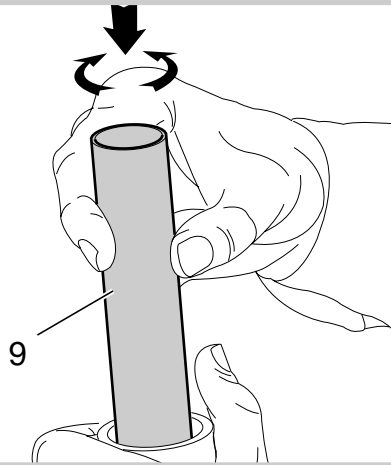
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## STANCHION TUBE ASSEMBLY

### FIG. 17

Fit the stanchion tube (9) gently into the oil seal (20).

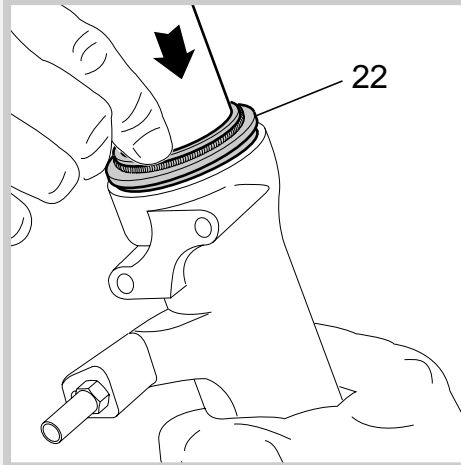
Rotate the stanchion tube while inserting it into the seal to facilitate installation and reduce the chance of damaging the seals. Turn the slider over and check that the pumping rod thread is coming out from slider bottom.



### FIG. 18

Lubricate the dust seal (22) and fit it into the stanchion.

Properly place the dust seal into its seat in the slider.



### FIG. 19

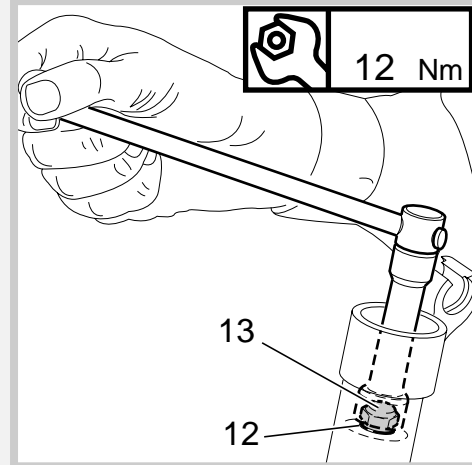
Grease the O-ring (12) on the foot nut (13) and screw the nut onto the pumping rod thread.

Tighten to 12 Nm.

Check to see that the stanchion tube slides unrestricted by cycling the fork up and down several times.

The tube should slide freely inside the seal assembly without any side play.

In the event it is too hard or too soft, repeat the previous steps described above checking to ensure that components are not damaged.



Z5

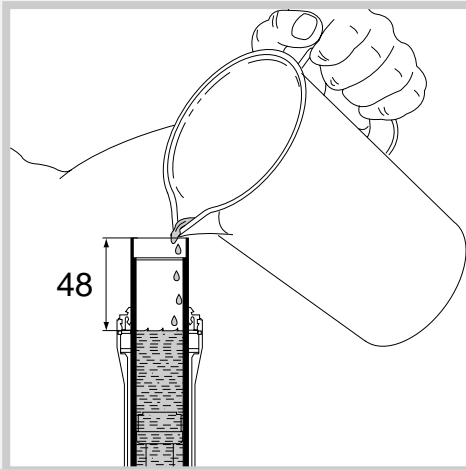
Q 2  
R O

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## HOW TO FILL WITH OIL

**FIG. 20**

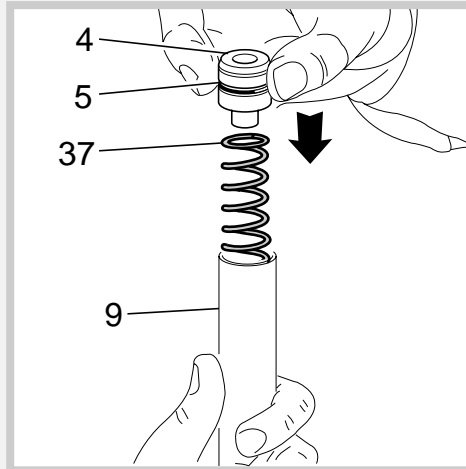
Pour the oil little by little when the stanchion tube is fully down and then pump the stanchion tube so as to have a better filling. Check that the oil level is 48 mm/ 1.89 inches from the top of the stanchion tube, in both legs.



## CAP ASSEMBLY

**FIG. 21**

Insert spring (37) inside stanchion tube. Smear some grease on the O-ring (5) and refit the cap (4) into the stanchion (9). Push the cap down below the stop ring (3) seat.



**FIG. 22**

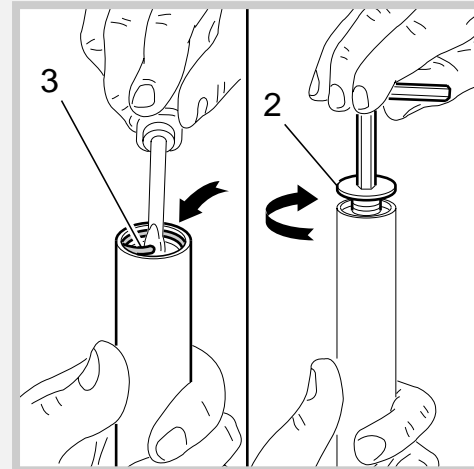
Refit the upper stop ring (3).



**WARNING:** while inserting the stop ring (3), keep the cap (4) pressed inside the stanchion tube using a suitable rod, if necessary.

Refit the protection cap (2).

The brake arch can now be installed on the fork leg, which should then be installed into the crown as specified in section "INSTALLATION".



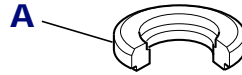
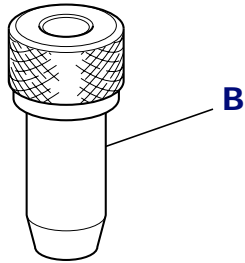
Z5

Q 2  
R 0

S  
P  
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## SPECIFIC TOOLS

Ref.	Item.	Description and use
<b>A</b>	536003 AB	Slider protector: to remove the oil seal from the slider
<b>B</b>	R 5068	Oil seal press: to press oil seal into the slider



Z5  
Q 2  
R 0  
S  
P  
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