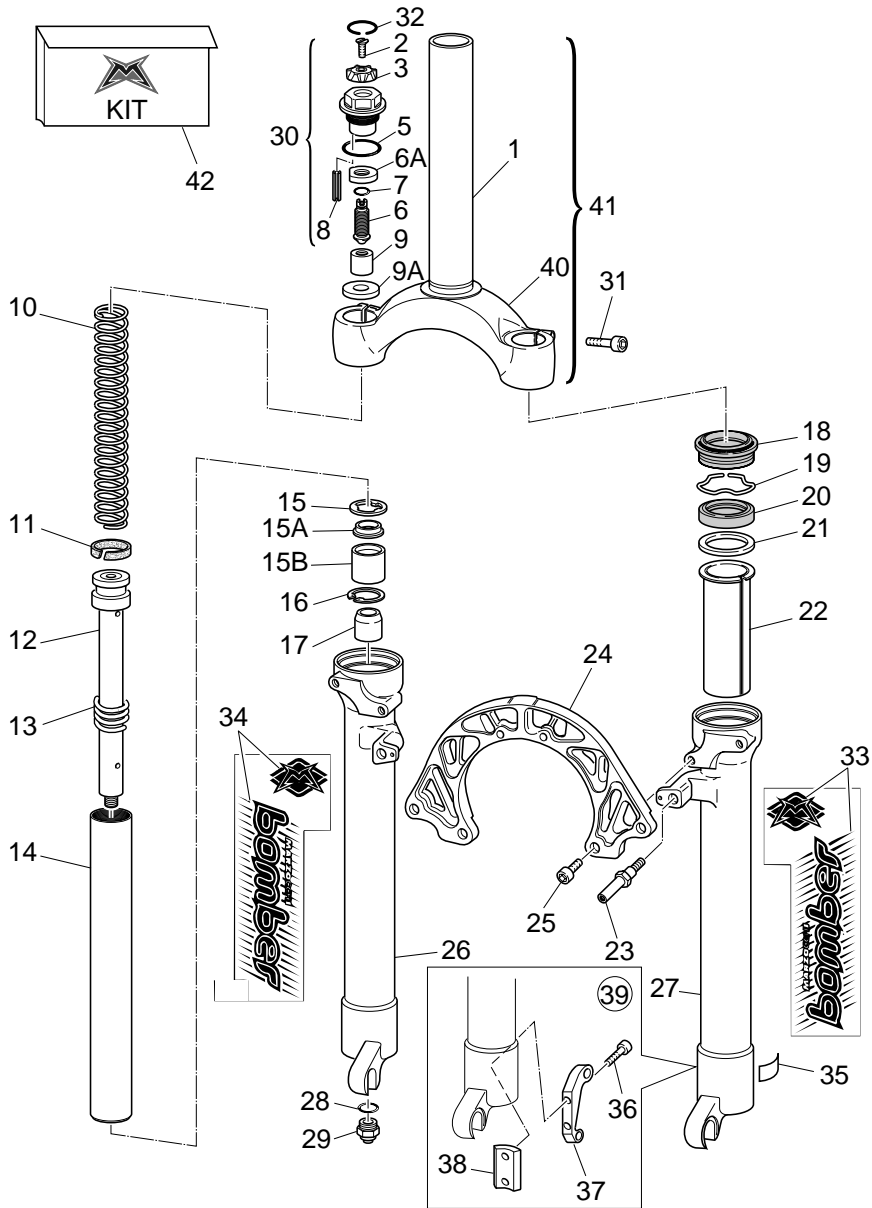
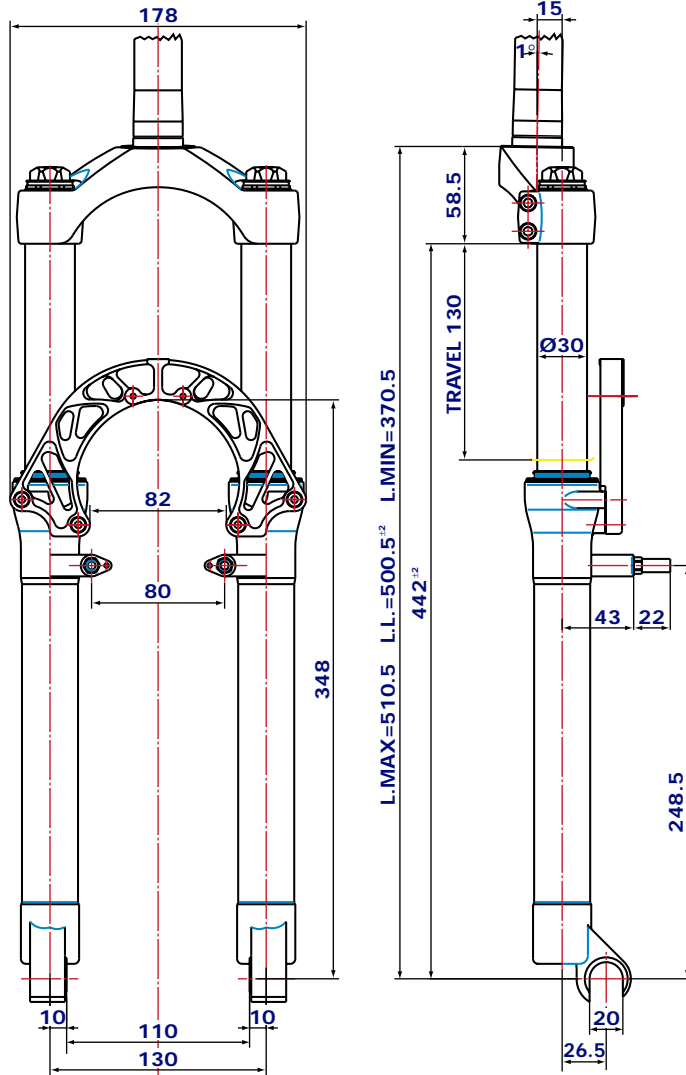


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GENERAL

- The Z3 fork is sprung by a mechanical spring system and damped by hydraulic rebound damping.
- Spring pre-load adjustment controlled via external top mount adjuster, rebound damping adjustment controlled by adjuster inside each fork leg.
- Stanchions and full length bushings for superior rigidity.
- Stanchions designed with a special safety feature to eliminate any chance of the stanchions becoming separated from the crown.
- Parts subjected to friction are cooled and lubricated by a specially formulated oil.

Steer tube: in CrMo steel with variable butting. Several lengths available in threaded or non threaded 1 1/8" diameters. EASTON aluminum steer tubes available in non threaded 1 1/8" diameter.

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

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

Stanchions: Anodized EASTON aluminum.

Springs: Constant pitch springs.

Sliders: Forged and CNC-machined BAM* aluminum alloy.

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: type EBH 16- SAE 7.5: 95 c.c.

* **BAM: Bomber Aerospace Material.**

Special alloy developed from aerospace material.

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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 lip 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.*

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.

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FAILURES	CAUSES	REMEDIES
<i>Oil leaking through the top of slider</i>	<ol style="list-style-type: none"><i>1. Oil seal is worn out</i><i>2. Stanchion tube is scored</i><i>3. Excessive dirt on slider oil seal</i>	<ol style="list-style-type: none"><i>1. Replace oil seal</i><i>2. Replace oil seal and stanchion tube</i><i>3. Clean the oil seal seat and replace oil seal</i>
<i>Oil leaking through the bottom of slider</i>	<i>O-ring on the pumping rod nut is damaged</i>	<i>Replace the O-ring</i>
<i>Fork has not been used for some time and is locked out</i>	<i>Oil seals and dust seals tend to stick to stanchion tubes</i>	<i>Raise dust seal and lubricate stanchion tube, dust seal and oil seal</i>
<i>Excessive play of stanchions in the sliders</i>	<i>Pilot bushings are worn</i>	<i>Replace pilot bushings</i>

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 Z3 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 either when a threaded steer tube or an "A-Head Set" steer tube is installed. Improper installation may jeopardize the safety of the rider.

If you have the steer tube replaced, be sure to select the correct steer type (A-Head Set or threaded), diameter and length for the frame on which it should be fitted. Contact one of our Technical Service Centers to have steer tube installed.

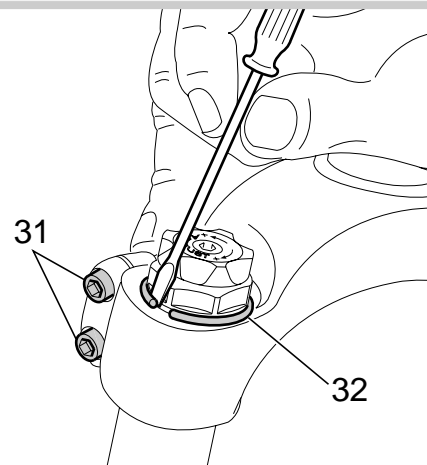
⚠ WARNING: In case of improper installation of the steer tube into the crown, the rider could lose control of his/her bicycle, thus jeopardizing his/her safety.

Check the torque of the bolts fastening the stanchions to the crown and attaching the brake arch to the sliders at regular intervals (11 Nm).

REMOVING THE FORK LEGS FROM THE CROWN (Fig. A)

To remove the fork legs from the crown, loosen the bolts (31) and remove the safety ring (32). For easier removal, insert a small screwdriver between the ring and its seat and then remove the complete fork legs.

⚠ WARNING: Be sure to install the fork legs safety rings when reassembling, so that the fork legs do not become separated from the crown even though the bolts have become loose.

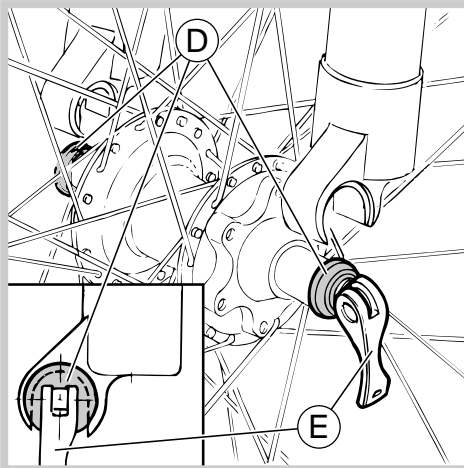


FRONT WHEEL ASSEMBLY (Fig. B)

⚠ 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 (D) are centered to the recesses in the sliders. Lock the quick release lever (E) and check on both sides to make sure the bushings (D) are properly seated in the sliders.

⚠ WARNING: These sliders are specifically designed to fit this type of hub.



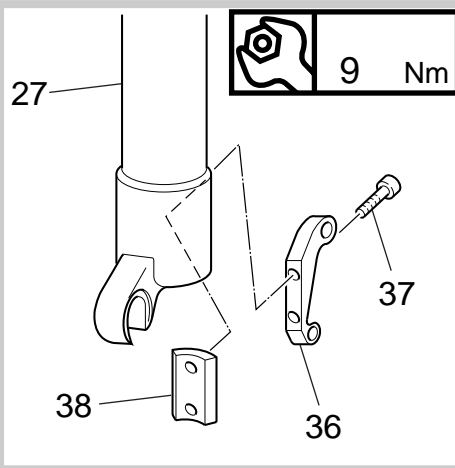
Do not use any hub design other than that specified here, as this would not ensure proper fastening of the wheel and may lead to breakdown of the assembly components.

DISC BRAKE SYSTEM ASSEMBLY (Fig. C)

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 (36) to the slider (27) using the screws (37) and plate (38).

⚠ IMPORTANT: Clean the mating surfaces inside and outside slider, otherwise dirt may affect caliper position or cause the screws (37) to become loose.

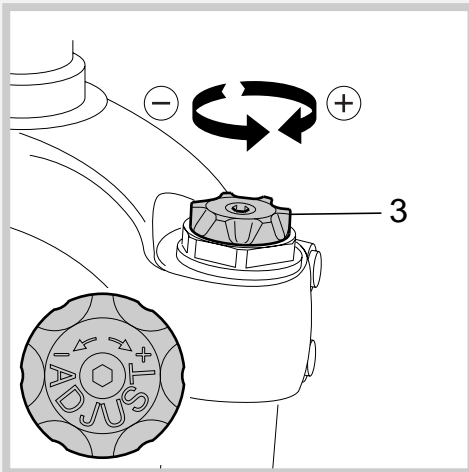
Tighten the screws (37) to 9 Nm. When installing the disc brake system, be sure to properly follow the instructions given by the manufacturer.



ADJUSTMENT

SPRING PRELOAD (Fig. D)

Spring preload determines COMPRESION damping and can be adjusted by turning the adjuster knob (3) on top of the fork legs. From the factory the Z3 is set with the minimum preload, i.e. the adjustment knob is completely unscrewed counterclockwise. However, the springs are slightly preloaded to help counteract static loads. By turning the adjustment knob clockwise, the preload is increased up to the maximum value equal to 15 mm's of spring preload. This adjustment is essential in order to have the right Z3 response for the rider's weight and riding style.



REBOUND ADJUSTER ON INNER PUMPING ROD (Fig. E)

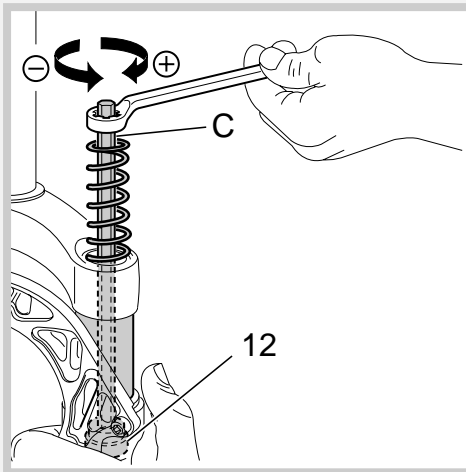
The adjuster controlling REBOUND damping adjustment is accommodated inside pumping rod (12) inside each fork leg.

To access the adjuster, unscrew the top cap (30) and push the stanchion tubes fully down (see Fig. 1).

Fit the supplied hexagon rod (C) into the stanchion tube and into the adjuster inner hole. Rotate the adjuster clockwise for harder damping, counterclockwise to soften it.

Refit the cap (30) and tighten it to the specified torque (see Fig. 24).

⚠ WARNING: Do not remove the springs or this will alter the amount of oil inside the fork legs.



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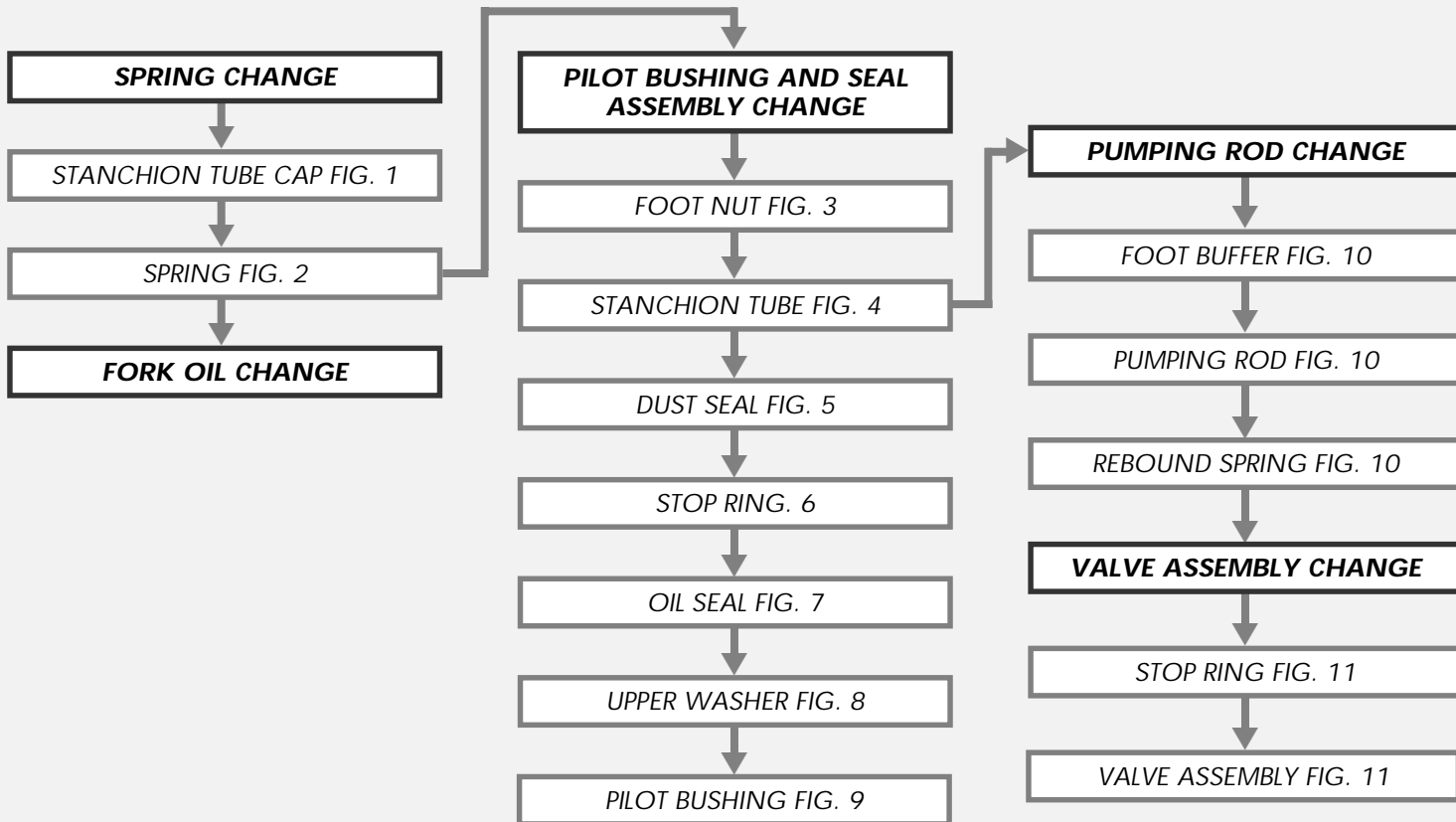
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DISASSEMBLY

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 need to remove first.

DISASSEMBLY DIAGRAM



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SPRING CHANGE

FIG. 1

Place the stanchion tube (14) in a vice making sure it is not damaged or dented in the process and unscrew the cap (4) with a 26 mm wrench.

Remove the cap complete with O-ring (5) from the stanchion tube.

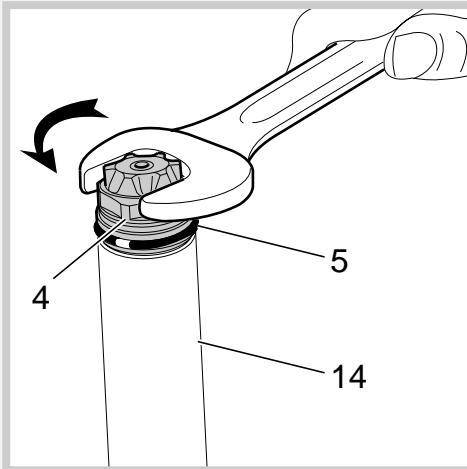


FIG. 2

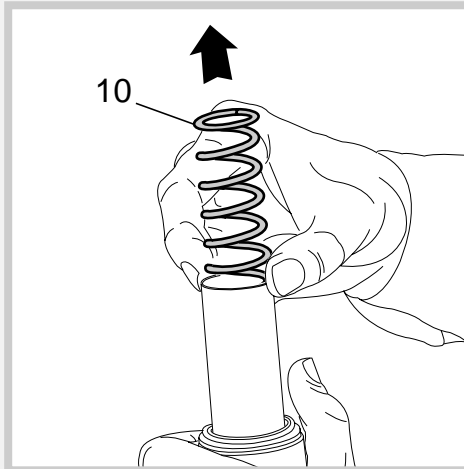
Push the stanchion tube into the slider and remove the washers (9A/9B) and the spring (10).

Drain all oil from the fork leg.



WARNING: Remember to always recycle any used oil.

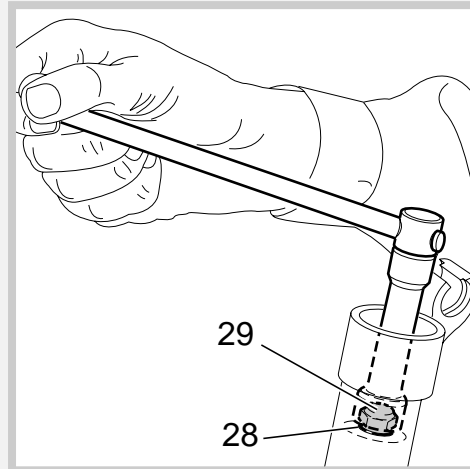
To change the fork leg oil follow the procedure as described in section "REASSEMBLY" from Fig. 22 to Fig. 24.



PILOT BUSHING AND SEAL ASSEMBLY CHANGE

FIG. 3

Turn the fork leg upside-down and unscrew the foot nut (29) complete with O-ring (28) by the use of a 15 mm socket wrench.



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FIG. 4

Withdraw the stanchion tube (14) complete with pumping rod from the slider.

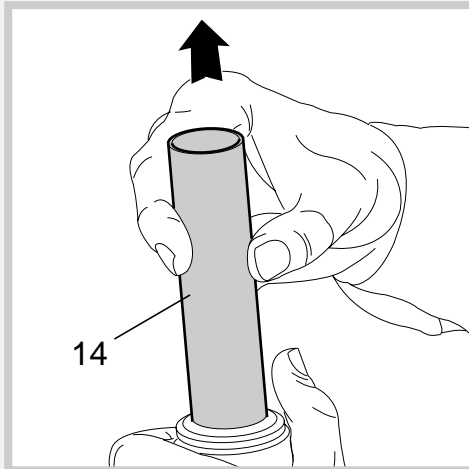


FIG. 5

Remove the dust seal (18) from the top of the slider using a small screwdriver.

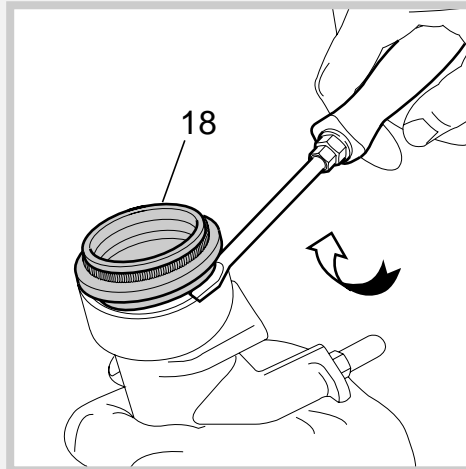
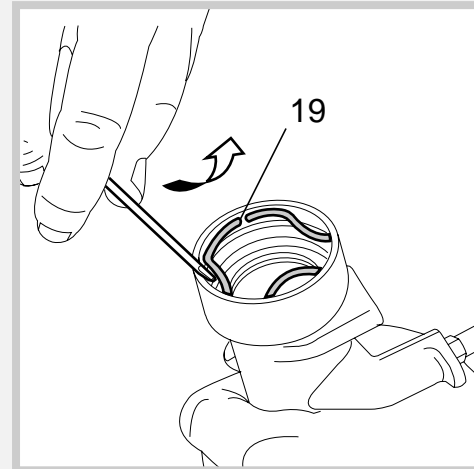


FIG. 6

Remove the stop ring (19) 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.



Z3

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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.

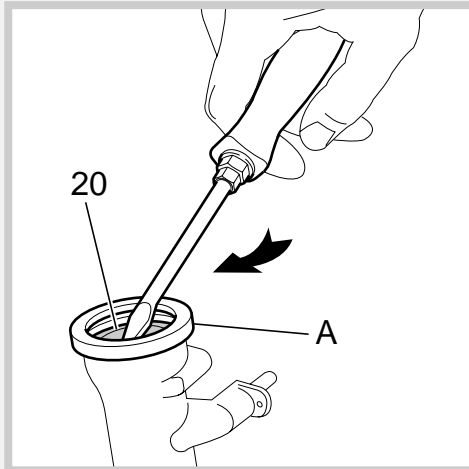


FIG. 8

Remove the upper washer (21) from the slider.

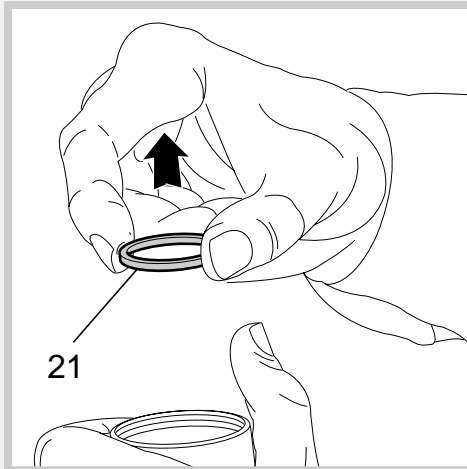
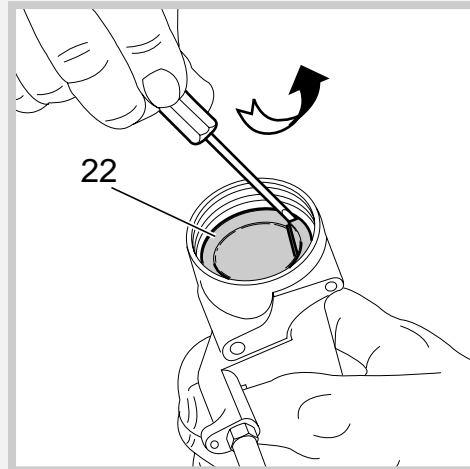


FIG. 9

Fit the bit of a small screwdriver into upper edge slot of the pilot bushing (22) and lift gently. Pull the bushing out of the slider and make all necessary changes.



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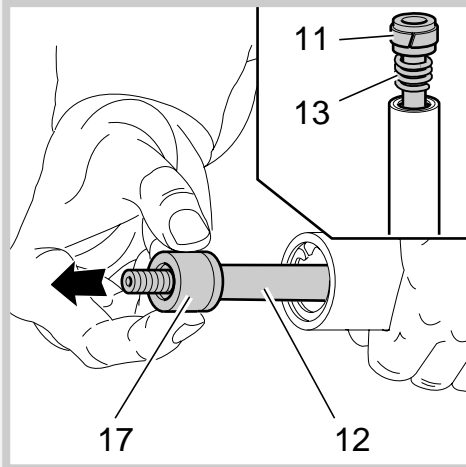
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PUMPING ROD CHANGE

FIG. 10

Remove the foot buffer (17) from the pumping rod (12) end.

Withdraw the pumping rod (12) and the rebound spring (13) from the stanchion tube opposite side. Replace the seal ring (11) if damaged or worn out.



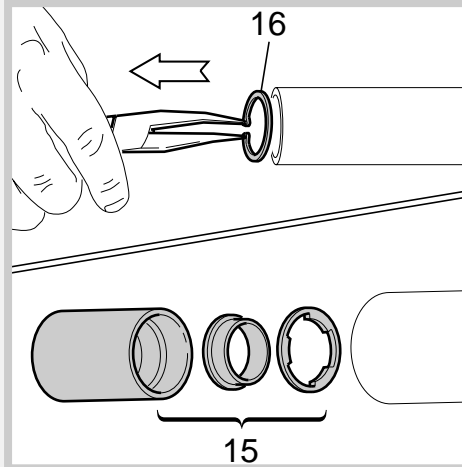
VALVE ASSEMBLY CHANGE

FIG. 11

To check that the valve assembly is operating correctly, it is necessary to work on the inside of the stanchion tube.

Slip off the stop ring (16) using pointed pliers.

Pull the valve assembly (15) out of the stanchion tube with one finger in the same sequence as in the figure.



REASSEMBLY

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

PILOT BUSHING AND SEAL ASSEMBLY

FIG. 12

Check that no dirt or debris is between slider and bushing. Insert the pilot bushing (22) into place so that it adheres to the slider.

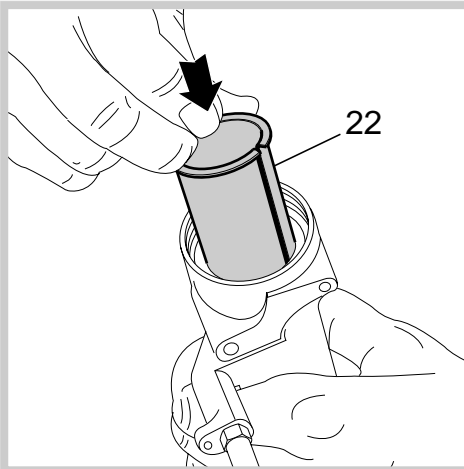


FIG. 13

Fit the upper washer (21) into the slider so that it touches the pilot bushing.

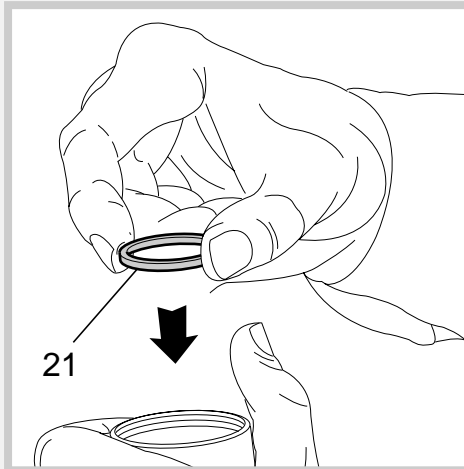


FIG. 14

Lubricate the oil seal (20) and place 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.

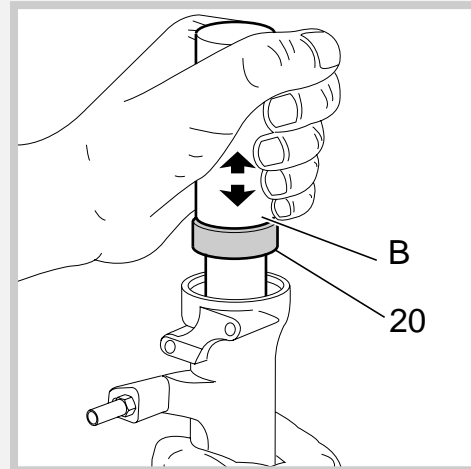
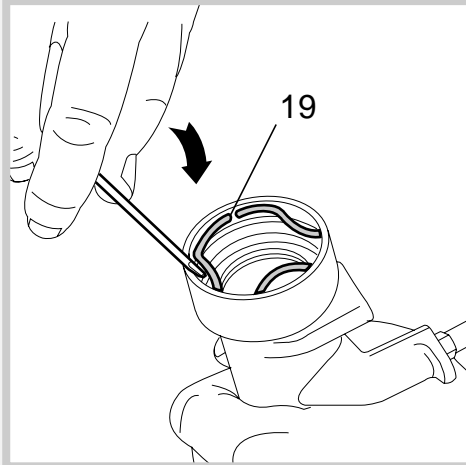


FIG. 15

Insert the stop ring (19) making sure it is properly seated into place.



VALVE AND PUMPING ROD ASSEMBLY

FIG. 16

After having overhauled or replaced the valve unit and after having cleaned the inside of the stanchion, reassemble. Assemble valve components (15), in correct sequence.

Then fit pumping rod (12), seal ring (11) and rebound spring (13) into the valve assembly (15).

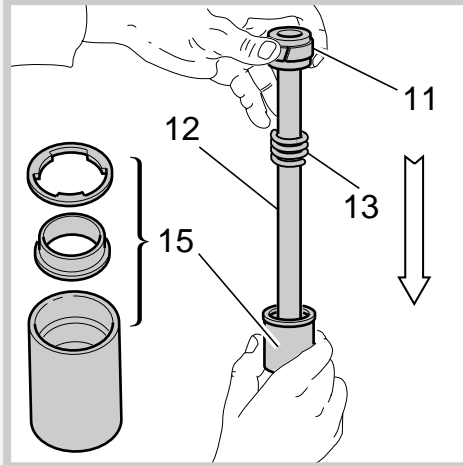
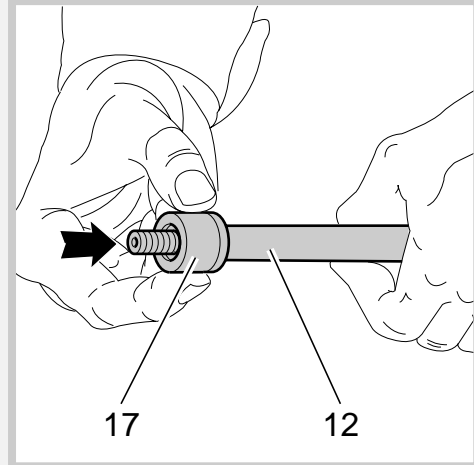


FIG. 17

Reassemble the foot buffer (17) onto pumping rod (12) end.



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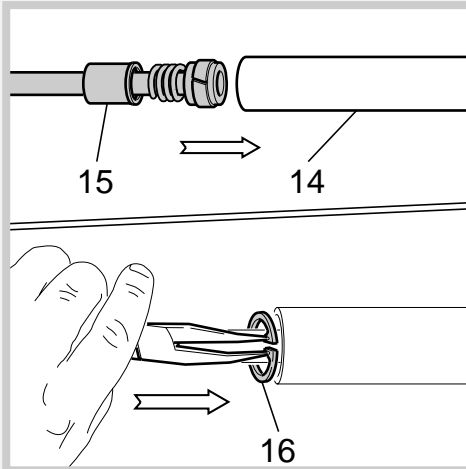
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FIG. 18

Fit this assembly into the stanchion tube (14) and properly seat the valve assembly (15).

Insert the stop ring (16).



STANCHION TUBE ASSEMBLY

FIG. 19

Fit the complete stanchion tube (14) 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 (12) is sticking out through the hole at slider bottom. If not so, use the hexagon rod (C) to push pumping rod.

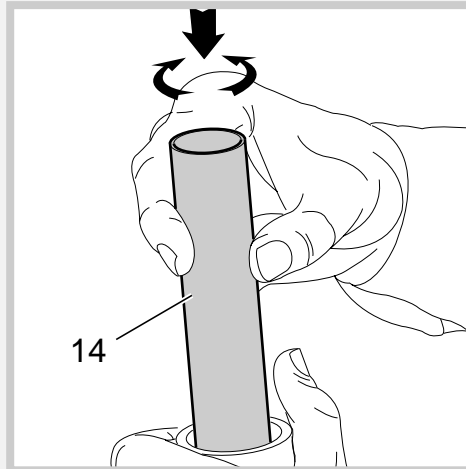
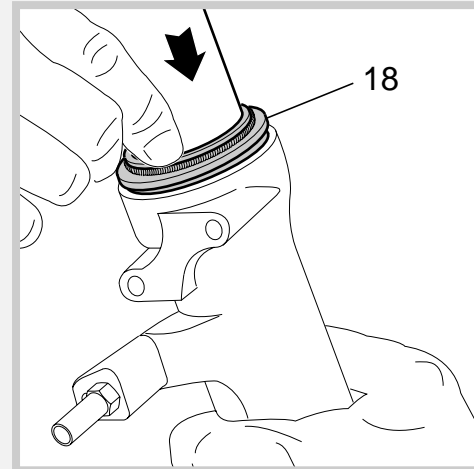


FIG. 20

Grease the dust seal (18) and insert it in the stanchion tube.

Then fit onto the stop of slider.



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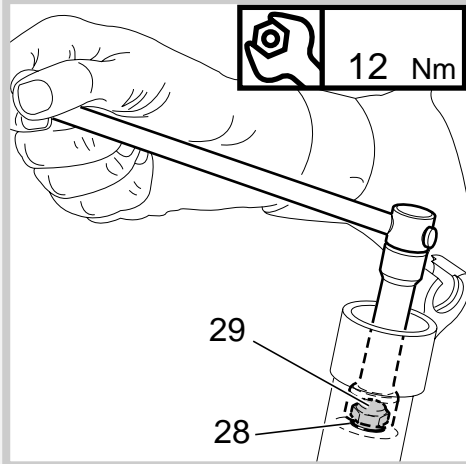
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FIG. 21

Grease the O-ring (28) on the foot nut (29) and screw the nut on the hydraulic cartridge threaded end.

Tighten to 12 Nm.

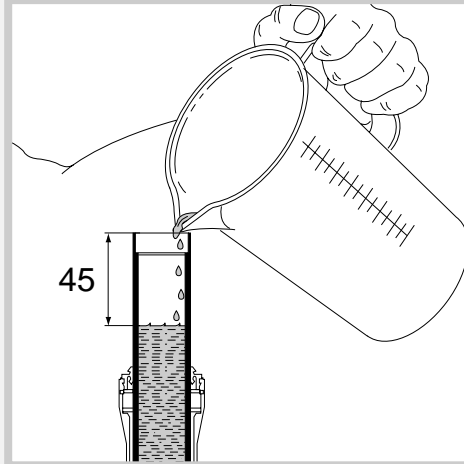
Check to verify that the stanchion tube slides properly through the stroke by pumping it up and down several times.



HOW TO FILL WITH OIL

FIG. 22

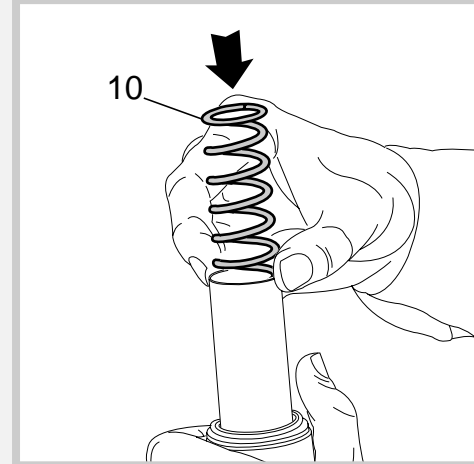
Pour the oil little by little when the stanchion tube is fully down and then pump with the stanchion tube so as to have a better filling. Check that the oil level is 45 mm/1.77 in. from the top of the stanchion tube in each leg.



SPRING AND CAP

FIG. 23

Fit the spring (10) into the stanchion tube.



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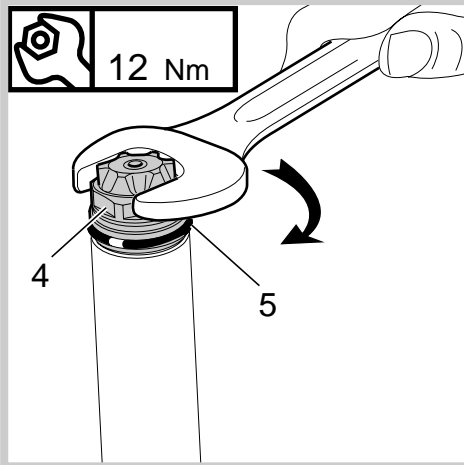
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FIG. 24

Lubricate the O-ring (5) on the cap (4).
Turn the preload adjuster (6) until setting
minimum preload and install the lower
washers (9B / 9A).

Fit the complete cap assembly into the
stanchion tube and start cap into thread
by hand. Tighten the cap (4) to 12 Nm.
The brake arch can now be installed on
the fork leg, which should then be in-
stalled into the crown as specified in
section "INSTALLATION".



SPECIFIC TOOLS

Ref.	Item.	Description and use
A	536003 AB	Slider protector: to remove the oil seal from the slider
B	R 5068	Oil seal press: to press oil seal into the slider
C	R 5085	Hexagon wrench: to set rebound adjuster

