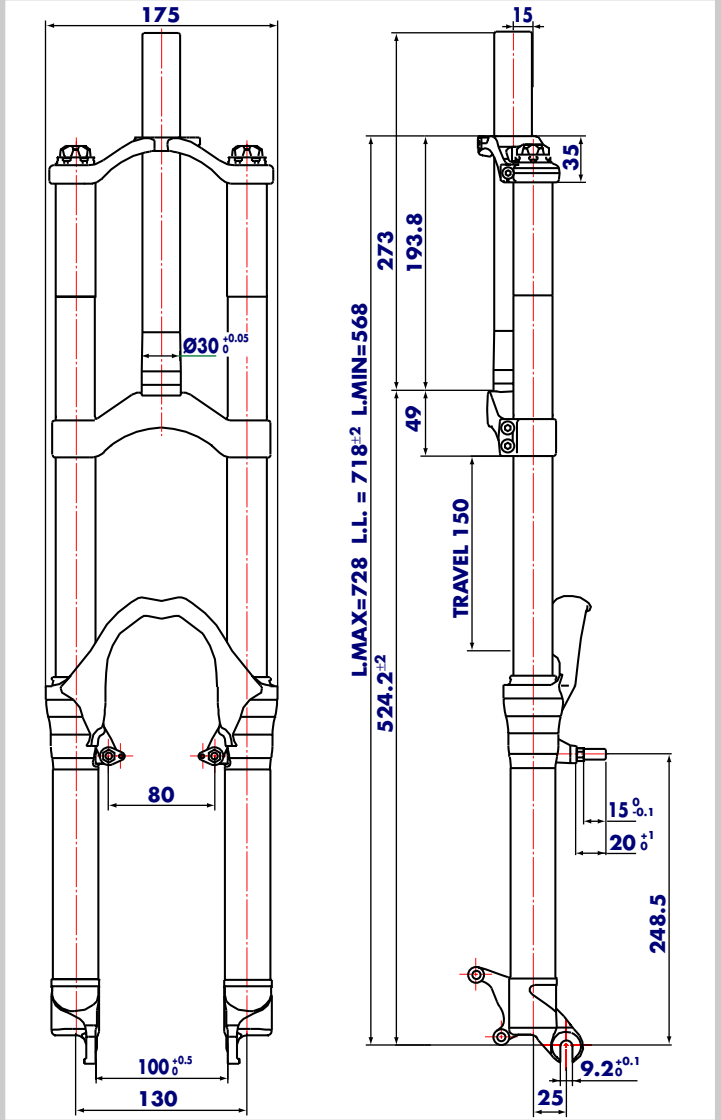
Jr. T



GENERAL

- *The Jr. T double clamp fork is specifically designed for Downhill use.*
- *The Jr. T fork is sprung by a mechanical spring and uses hydraulic rebound damping.*
- *Spring pre-load adjustment controlled via external top mount adjuster, rebound damping adjustment controlled by adjuster inside each fork leg.*
- *Stanchion tube secured to the crown and upper crown. The system is equipped with full length 360º slider bushings giving this fork an incredibly smooth stiction free stroke, in addition to unmatched structural strength.*
- *Sliders and arch are an integral assembly for reduced weight and improved rigidity.*
- *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 non threaded 1 1/8" diameters. EASTON aluminum steer tubes available for 1 1/8", threadless.*
Crown: *Forged and CNC-machined aluminum alloy.*
Upper crown: *Forged and CNC-machined aluminum alloy.*
Arch: *Cast magnesium alloy.*
Stanchions: *Anodized special EASTON aluminum variable butting.*
Springs: *Constant pitch springs.*
Sliders: *Forged and CNC-machined BAM* aluminum alloy. Left slider equipped with disc brake adapter.*
Slider bushing: *Full length guide bushing 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: *180 cc type EBH 16- SAE 7.5.5*

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

INSTRUCTIONS

GENERAL RULES

1. *Where specified, assemble and disassemble the shock absorption system using* ***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 or a specific oil for oil seals.*
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.*

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.

FAILURES	CAUSES	REMEDIES
Excessive oil build up on stanchions	1. Oil seal is worn out 2. Stanchion tube is scored 3. Excessive dirt on oil seal	1. Replace oil seal 2. Replace stanchion tube, oil seal and dust seal 3. Clean the oil seal seat and replace oil seal
Oil leaking through the bottom of slider	O-rings on the pumping rod bottom damaged	Replace the O-rings
Fork has not been used for some time and is locked out	Oil seals and dust seals tend to stick to stanchion tube	Raise dust seal and lubricate stanchion tube, dust seal and oil seal
Excessive play of stanchions into the sliders	Main slider bushings are worn	Replace main slider bushings
Adjuster position does not affect fork operation	Dirt inside legs	Clean carefully and change oil

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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.*
In general, ***MARZOCCHI*** *forks can offer top performance from the start. However, in some cases a short running-in period is required (5-10 hours) for inner adjustments. This running-in period will make fork life longer and ensure fork top performance over time.*

IMPORTANT: *change oil at least every 100 working hours.*

INSTALLATION

Installing the 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: *"A-Head Set" headset/Steering tube mounting and adjustment must be carried out in compliance with the headset manufacturer's instructions. Improper installation may jeopardize the safety of the rider.*
After any installation always check for the proper torque of screws fastening stanchion tube onto lower crown and on upper crown.
Have steer tube replaced at an authorized Technical Service Centers only.

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

MOUNTING THE FORK ON THE FRAME

FIG. A

Remove the upper crown ***(1)*** *from steer tube and fork legs by loosening the 3 fastening bolts* ***(11)****.*

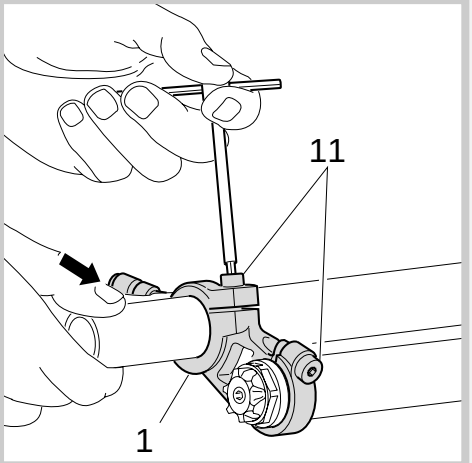


FIG. B

Assemble the fork to the frame complete with headset. Fit the upper crown ***(1)*** *into the upper stanchions and the steer tube.*

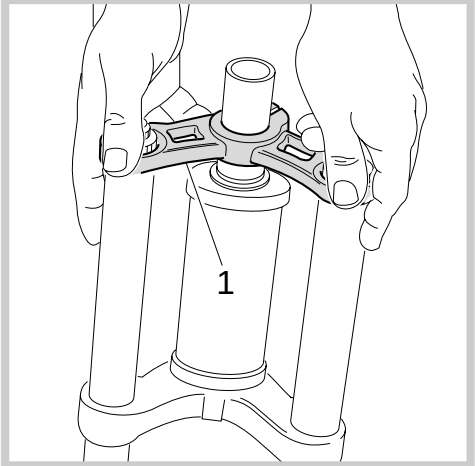


FIG. C

The stanchions edge ***(28)*** *must be aligned with or slightly lower than the upper crown* ***(1)****.*

If fork legs overprotrude, fit some spacers ***(D)*** *to the plate close to the steer tube.*

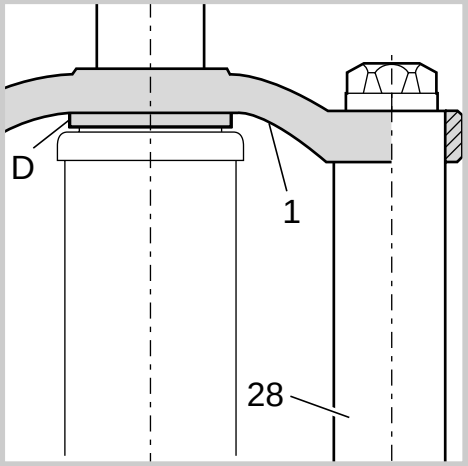


FIG. D

Fit the handlebar support and the "A-Head Set" plug over the upper crown ***(1)*** *and then adjust the steering.*

Now finally tighten the 3 bolts ***(11)*** *on the upper crown to 9 Nm.*

IMPORTANT: *Loosen the 3 screws* ***(11)*** *on the upper crown before adjusting the steering. Tighten the above bolts to the specified torque when finished.*

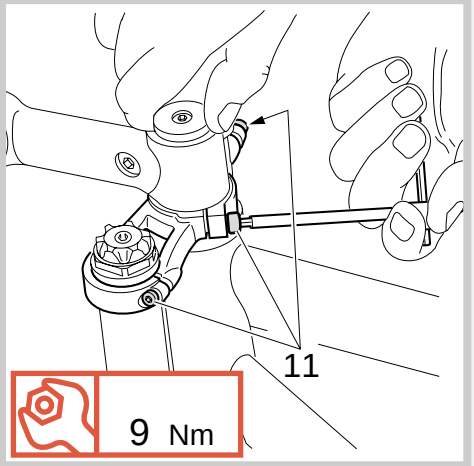


FIG. E

*If the crown **(13)** position with respect to the stanchions **(28)** has been changed for any reason, adjust the original distance.*

– *Distance **H** between crown and tyre edge (when inflated) should not be lower than total travel (150 mm) + 3 mm.*

***WARNING:** If lower Crown is improperly matched with stanchions, it may touch the tyre and cause severe injuries to the rider.*

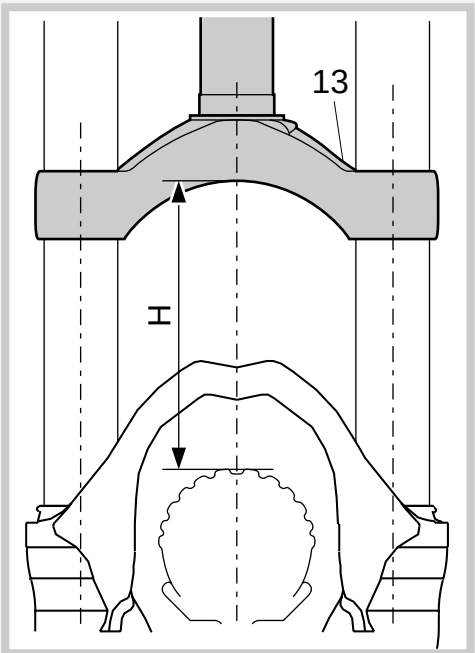
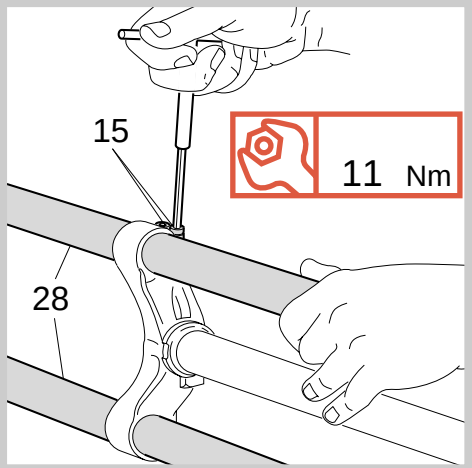


FIG. F

*Tighten the 4 stanchions fastening screws **(15)** onto the crown to 11 Nm.*

***WARNING:** do not overtighten the screws holding the stanchions to the crown as this may distort the stanchions and weaken the whole structure.*

After any installation always check for the following.
Proper torque of bolts fastening stanchion tube onto lower crown (11 Nm) and upper crown (see FIG. D).



DISC BRAKE SYSTEM ASSEMBLY

***WARNING:** If a disc brake system is installed, it is absolutely forbidden to loosen and remove original brake supports fixing pins. In fact, apart from retaining Cantilever or V-brake levers, they also play an important role in securing slider bottom to slider-arch monolith. If needed, replace these pins with screws (part no. **532979QF**) available as spare parts.*
Tighten the above screws to 15 Nm.

***IMPORTANT:** screw and pin threading is treated to ensure hydraulic seal. Never reuse screws and pins which have been removed.*

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.
When installing the disc brake system, be sure to properly follow the instructions given by the manufacturer.

ADJUSTMENT

SPRING PRELOAD

*Spring preload can be adjusted by turning the knob **(2)** on the top of the fork legs. From the factory the fork is set at minimum preload, i.e. the adjustment knob completely unscrewed counterclockwise. However, springs are slightly preloaded to counteract static loads during COMPRESSION. By turning the adjuster knob clockwise, the preload is increased up to the maximum value equal to 15 mm spring preload. This adjustment is essential in order to have the right fork response for the rider's weight and riding style.*

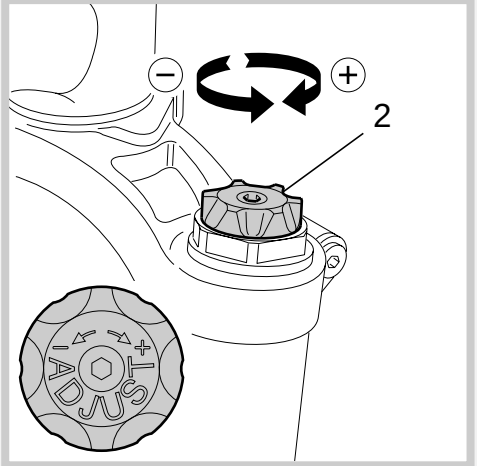
REBOUND DAMPING ADJUSTMENT

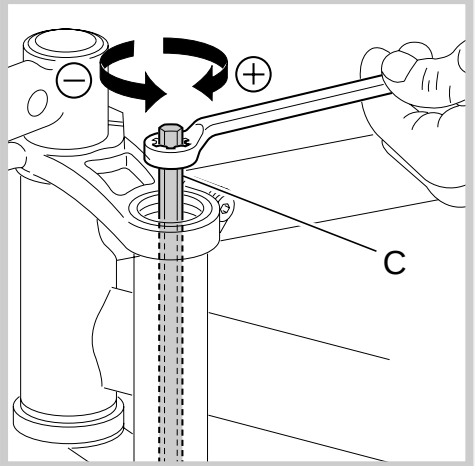
*The adjuster controlling REBOUND damping adjustment is accommodated inside cartridge rod **(27)** inside each fork leg. To access the adjuster, unscrew the top caps, push the stanchions fully down and take the washer and preload sleeve out (see section DISASSEMBLY, Fig. 1 and 2)*

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

*Insert supplied hexagonal rod **(C)** in the stanchion tube and rod edge into adjuster hexagonal hole.*

Rotate the adjuster clockwise for harder damping, counterclockwise to soften it. Refit the preload sleeve, washer and cap. Tighten cap to the specified torque (see section REASSEMBLY, Fig. 24 and 25).





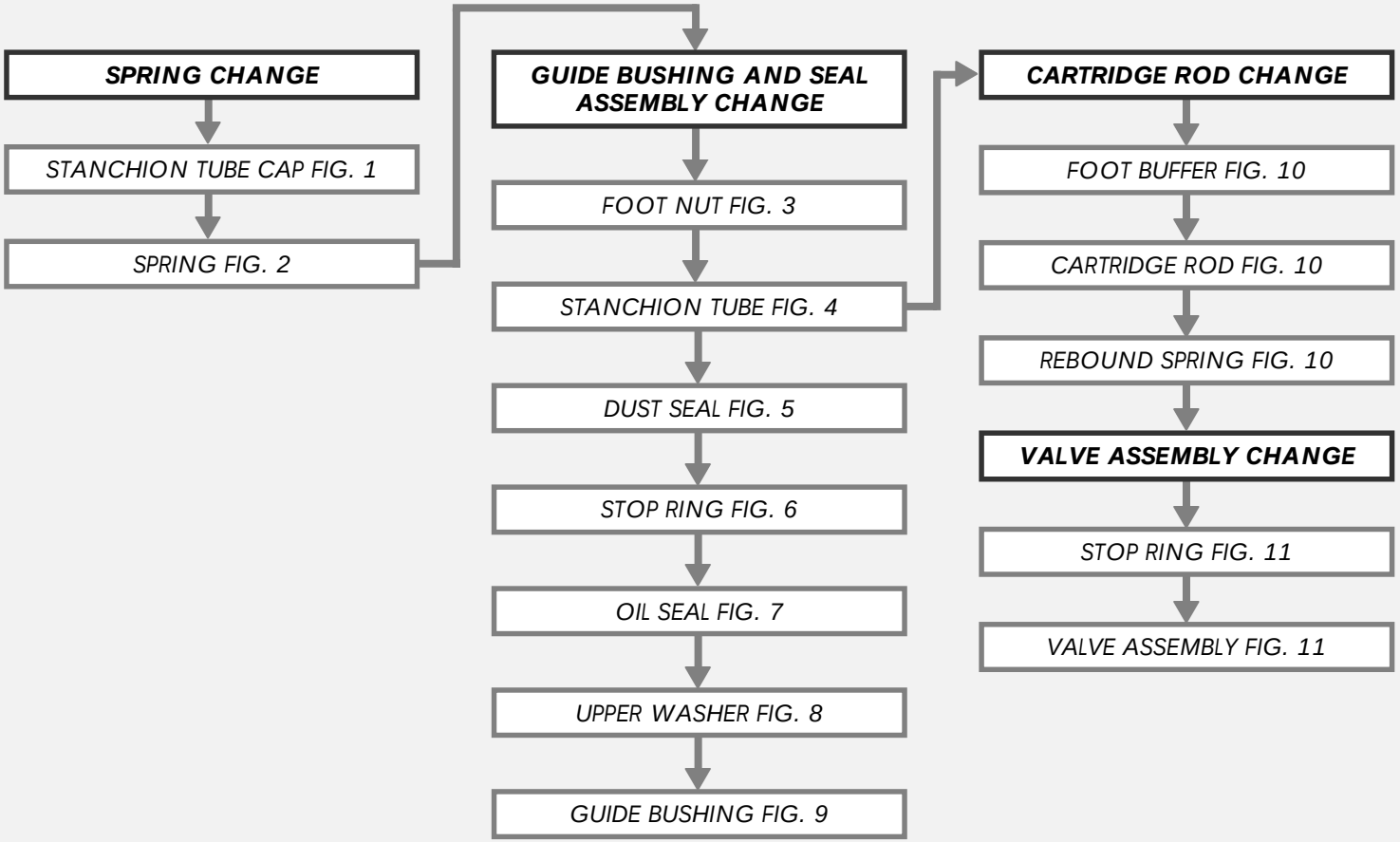
Jr. T

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 upper crown and from the crown.*
- *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



SPRING CHANGE

FIG. 1

Place the stanchion tube ***(28)*** *in a vice. Be sure not to damage or squeeze stanchion in the process. Unscrew the plugs* ***(5)*** *with a 26 mm hexagon wrench.*
Remove the plugs complete with the O-ring ***(6)*** *from the stanchions.*

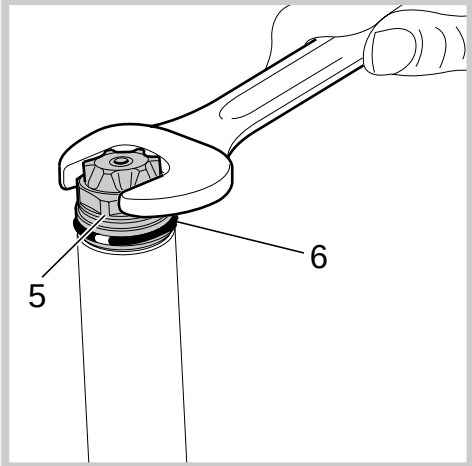
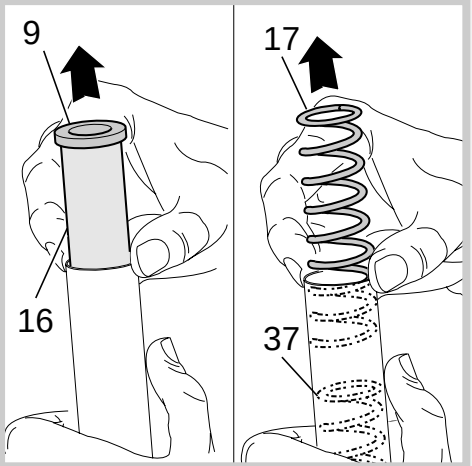


FIG. 2

Push the stanchion tube into the slider and remove the upper washer ***(9)****, the preload sleeve* ***(16)*** *and the springs* ***(17)*** *and* ***(37)****.*
Make all necessary changes.



GUIDE BUSHING AND SEAL ASSEMBLY CHANGE

FIG. 3

Let all the oil drain out.

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. 25. Turn the fork leg upside-down and unscrew the foot nut ***(36)*** *by the use of a 15 mm socket wrench.*

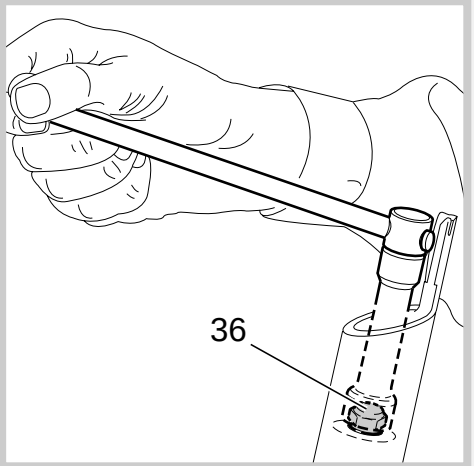


FIG. 4
Pull the stanchion tube ***(28)*** *completely out of the slider* ***(24)****.*

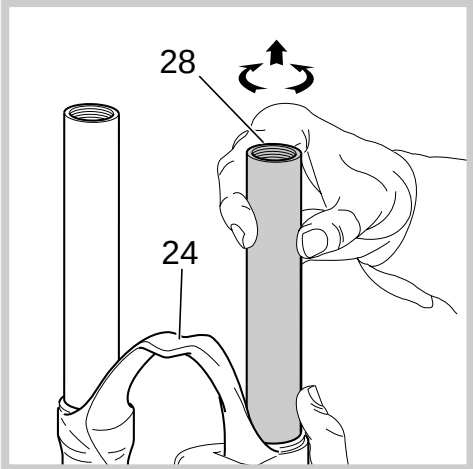


FIG. 5
Remove the dust seal ***(19)*** *from the top of the sliders using a small screwdriver.*

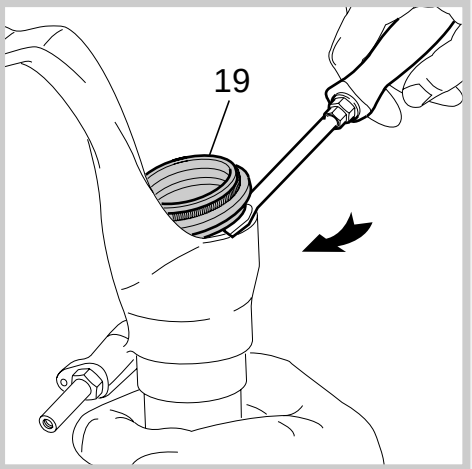


FIG. 6
Remove the stop ring ***(20)*** *from the sliders by placing the screwdriver bit in one of the three openings on the stop ring.*

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

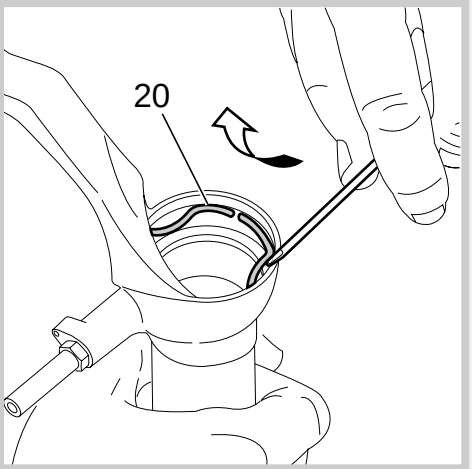


FIG. 7
*Fit the slider protector **(A)** onto the slider and remove the oil seal **(21)** with the help of a large screwdriver.*

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

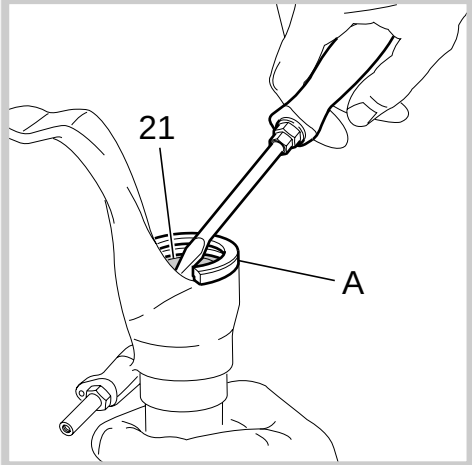


FIG. 8
*Remove the upper washer **(22)** from the slider.*

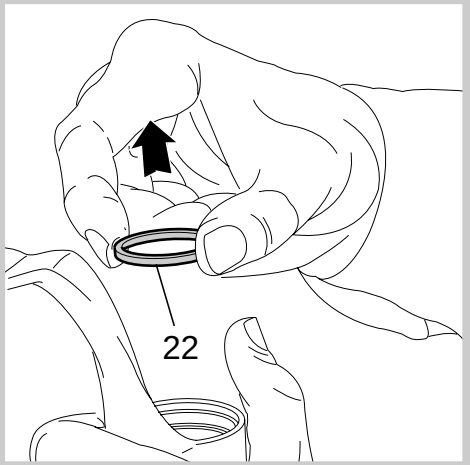
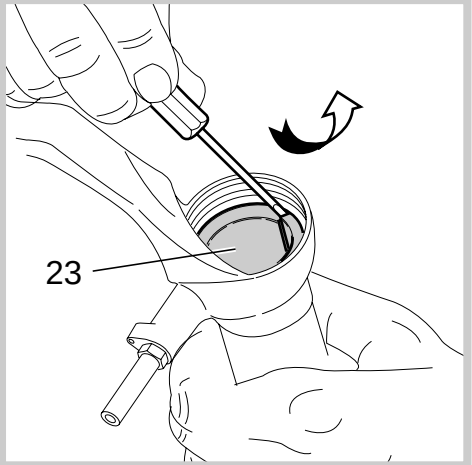
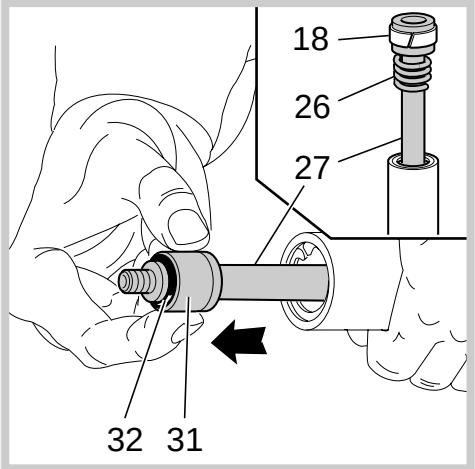


FIG. 9
*Fit the bit of a small screwdriver into upper edge slot of the pilot bushing **(23)** and lift gently. Pull the bushing out of the slider and make all necessary changes.*



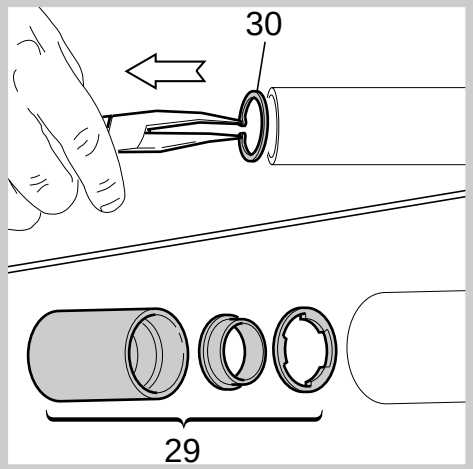
REPLACING PUMPING ELEMENT SEALS
FIG. 10

Remove the foot buffer ***(31)*** *complete with ring* ***(32)*** *from the pumping rod* ***(27)*** *end.*
Withdraw the pumping element ***(27)*** *and the rebound spring* ***(26)*** *from the stanchion tube top. Replace the seal ring* ***(18)*** *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 ***(30)*** *using pointed pliers.*
Pull the valve assembly ***(29)*** *out of the 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 bio-degradable, 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 ***(23)*** *into place so that it adheres to the slider.*

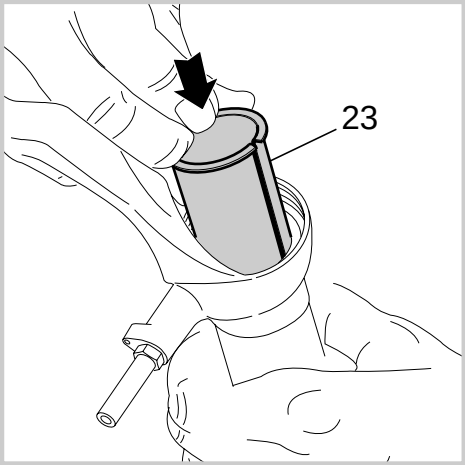


FIG. 13

Fit the upper washer ***(22)*** *into the slider so that it touches the pilot bushing.*

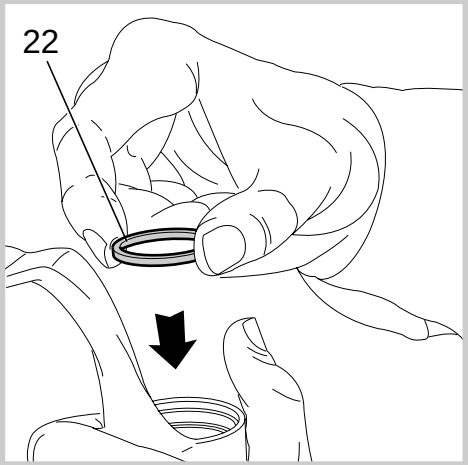


FIG. 14

Lubricate the oil seal ***(21)*** *and place it onto the seal press* ***(B)*** *with the hollow side toward the slider.*
Press the oil seal until it touches the lower washer by using the above seal press.

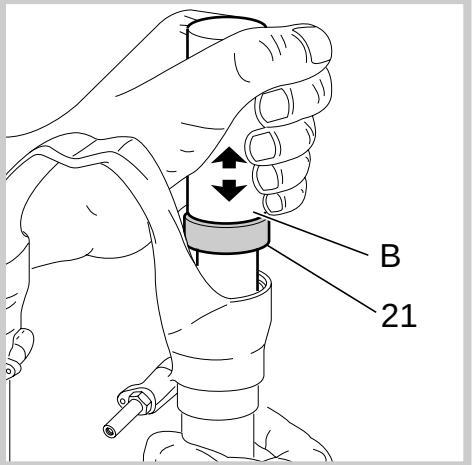


FIG. 15

Insert the stop ring ***(20)*** *into the slider making sure it is properly seated into place.*

Use buffer ***(B)*** *to properly seat the ring into the slider.*

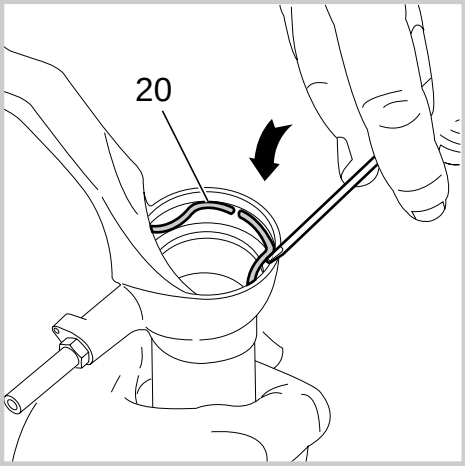
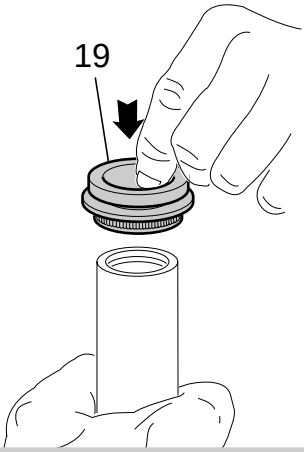


FIG. 16

Lubricate the dust seals ***(19)*** *and fit them into the stanchions from the spring end.*



VALVE AND PUMPING ROD ASSEMBLY

FIG. 17

After having overhauled or replaced the valve unit and after having cleaned the inside of the tube, reassemble. Assemble valve components ***(29)****, in correct sequence.*

Then fit pumping rod ***(27)*** *with seal ring* ***(18)*** *and rebound spring* ***(26)*** *into the valve assembly* ***(29)****.*

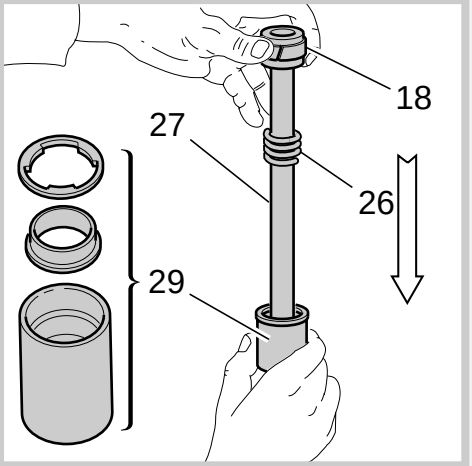


FIG. 18

*Lubricate O-rings **(25)** and **(32)** and reassemble the foot buffer **(31)** onto the end part of pumping rod **(27)**.*

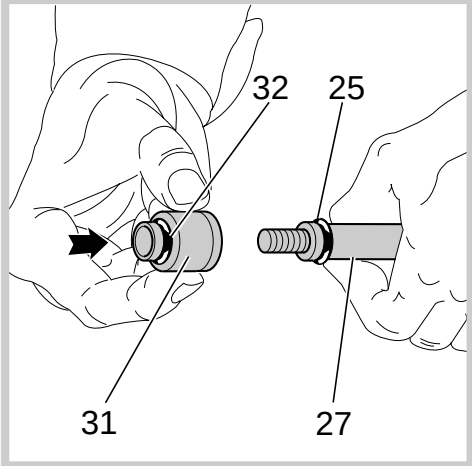
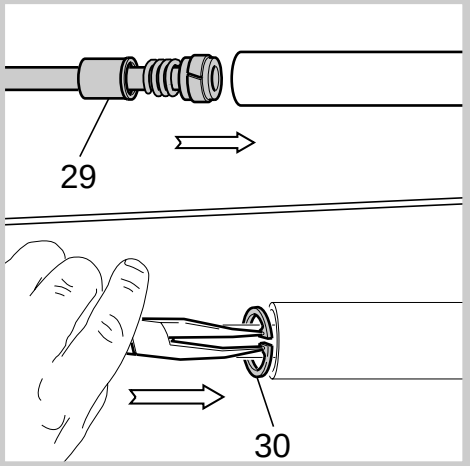


FIG. 19

*Fit this assembly into the stanchion tube and properly seat the valve assembly **(29)**.*

*Insert the stop ring **(30)**.*



STANCHION TUBE ASSEMBLY

FIG. 20

*Fit the stanchion tube **(28)** gently into the oil seal **(21)**, together with pumping element and dust seals.*

Rotate the stanchion tube while inserting it into the seal to reduce the chance of damaging the seals.

*Turn the slider over and check that cartridge rod thread **(27)** is sticking out through the slider hole.*

*If not so, press on hexagon rod **(C)** to push out cartridge rod.*

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 and check components to ensure they are not damaged.

*Seat the dust seal **(19)** on top of the slider.*

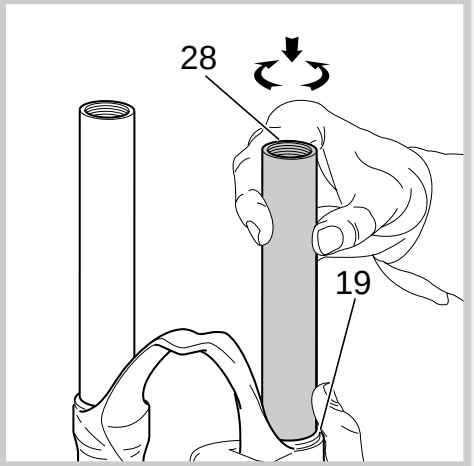
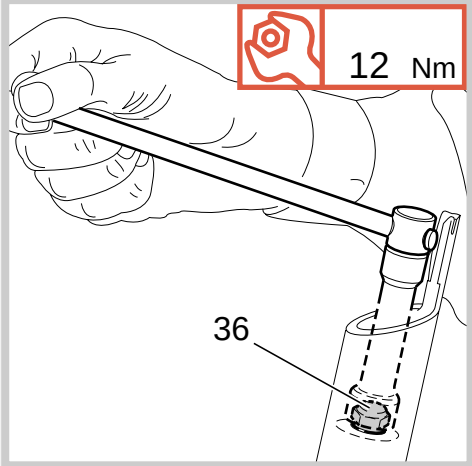


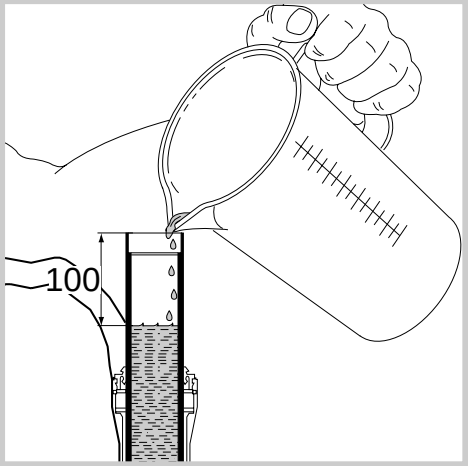
FIG. 21

Screw the foot nut ***(36)*** *onto pumping element thread* ***(27)****.*
Tighten to 12 Nm.
Pump stanchion up and down several times to make sure it slides properly through the stroke.



HOW TO FILL WITH OIL
FIG. 22

Pour the oil little by little when the stanchions are fully down and then pump stanchion tube up and down so as to have a better filling.
Check that the oil level is 100 mm from the top of the stanchion tube, in both legs.



SPRING AND PRELOAD CAP
FIG. 23

Fit the springs ***(37)*** *and* ***(17)*** *into the stanchion tube.*

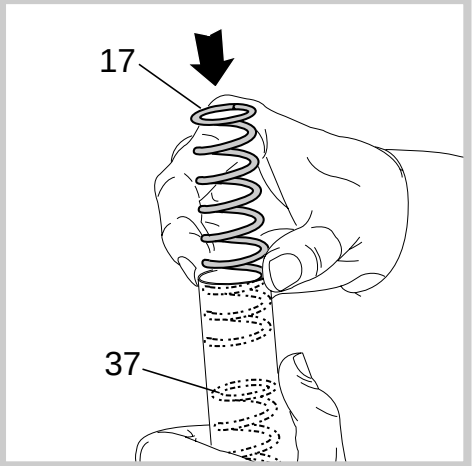


FIG. 24
Fit the preload sleeve ***(16)*** *and the top washer* ***(9)*** *into the stanchions.*

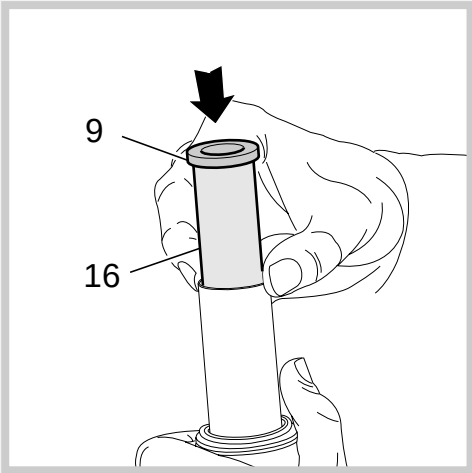
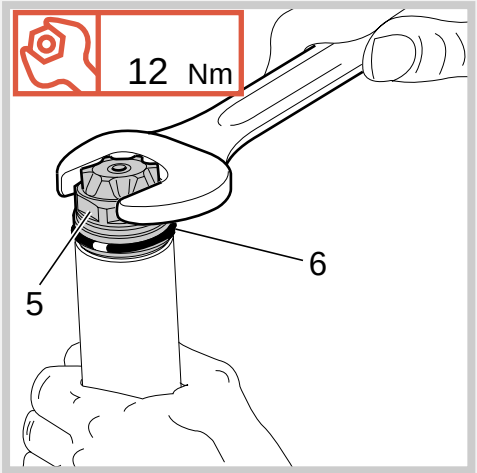


FIG. 25
Lubricate the O-ring ***(6)*** *on the cap* ***(5)****. Turn the plunger (****8****, see exploded view) inside the cap counterclockwise until it is at its minimum setting.*
Assemble cap, together with O-Ring ***(5)****, onto stanchion tube by hand. Tighten to 12 Nm.*
Install fork legs into crown and upper crown as specified in section "INSTALLATION".



SPECIFIC MARZOCCHI 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 5084	Hexagon wrench: to set rebound adjuster