

TECHNICAL CHARACTERISTICS

Fork with Ø30 mm legs with "Double Air" damping system.

Adjustment of the air preload (positive air) on both legs.

Adjustment of the rebound damping (negative air) on the left leg.

The ECC5 cartridge in the right leg lets you adjust the rebound damping in five positions "on the fly".

The stanchion tubes are pressed into the crown with a cryogenic process.

New sliding system to improve the stiffness and operation.

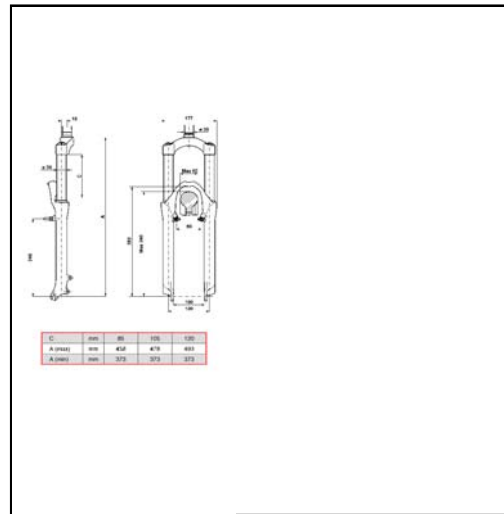
Magnesium alloy cast one-piece assembly, CNC machined for lighter weight and more stiffness.

Components subjected to friction are lubricated and cooled by means of a special oil

Steer tube : aluminium, 1-1/8", threadless.

Crown: BAM® aluminium alloy forged and CNC machined.

Stanchions: anodised aluminium.



Sliding bushes: made of friction free and wear free material.

Seals: computer designed oil seals that guarantee the maximum seal in any condition.

Oil: special formulated oil that prevents foam and keeps the viscosity unchanged while offering high performance; free from static friction.

Dropout type: Standard.

Disk brake mount: XC International Standard for 6" disk.

V-Brake fit.

BAM®: Bomber Aerospace Material: special alloy coming from the aerospace industry.

Rider's weight		Positive air pressure	
lbs	kg	kg	kg
120 ÷ 155	55 ÷ 70	30 ÷ 40	2.00 ÷ 2.75
155 ÷ 180	70 ÷ 80	35 ÷ 45	2.40 ÷ 3.10
180 ÷ 210	80 ÷ 95	42 ÷ 52	2.90 ÷ 3.80
210 ÷ 220+	95 ÷ 100+	52 ÷ 65	3.60 ÷ 4.50

Positive air pressure	
psi	bar
0 ÷ 15 psi	0 ÷ 1 bar

Marathon SL - 85	150	50
Marathon SL -105	150	50
Marathon SL -120	150	50
MARZOCCHI cod 55 00 09 SAE 7,5		



INSTRUCTIONS FOR USE



GENERAL REGULATIONS



FITTING THE FORK ONTO THE FRAME



INSTALLING THE DISK BRAKE SYSTEM



INSTALLING THE V-BRAKE SYSTEM



ASSEMBLING THE WHEEL ON FORKS WITH STANDARD DROPOUTS

INSTRUCTIONS FOR USE

MARZOCCHI forks are based on an advanced technology coming from the company's years long experience in the professional mountain bike industry.

For the best results, it is advisable to inspect and clean the area below the dust seal and the stanchion tube after every use and to lubricate the parts with some silicone oil.

MARZOCCHI forks usually offer the best performances since the very first rides. Notwithstanding this, a short running-in period may be necessary (5-10 hours) to adjust the internal couplings. This precaution will lengthen your fork's life and guarantee its best performances.

Changing the oil every 100 hours is recommended.

The forks with a polished finish must be treated periodically with polishing paste to keep the exterior shining like new.

GENERAL REGULATIONS

- After a complete breakdown, always use new MARZOCCHI seals when reassembling.
- Before reassembly, wash all new and old components and dry them with some compressed air, making sure there are neither breaks nor burrs.
- Never use flammable or corrosive solvents to clean the parts as this could damage the seals. If necessary use specific detergents that are not corrosive, not flammable or have a high flash point compatible with the materials of the seals and preferably biodegradable.
- Before reassembling, always lubricate the parts of the fork in contact with some oil for forks.
- Never pour lubricants, solvents or detergents which are not completely biodegradable in the environment; these must be collected and kept in the relevant special containers, then disposed of in accordance with the regulations in force.
- Always grease the seal lips before reassembling.
- Use only metric spanners and not imperial. Imperial spanners may have similar sizes to metric ones but they can

damage the bolts and screws making it impossible to unscrew them.

- Use the right size and sort of screwdriver to unscrew slotted or crosshead screws.
- When using a screwdriver to assemble or dismantle metal stop rings, O-ring seals, guide bushes or seal segments, avoid scratching or cutting the components with the tip of the screwdriver.
- Use only original spare parts.
- Before servicing the fork, we recommend washing the fork thoroughly.
- Work in a clean, ordered and well-lit place.
- Carefully check there are no metal shavings in the work area.

FITTING THE FORK ONTO THE FRAME

The fork is supplied with “A-Head Set” steer tube to be cut according to frame size it will be used on.

Fitting the fork onto the bike frame is a very delicate operation that must be carried out at one of our service centres only.

The assembling on the frame and the adjustment of the steer tube must be carried out following the instructions of the steering set manufacturer.

A wrong installation can be dangerous for the rider.

Marzocchi does not guarantee the assembly and accepts no liability for damage and/or accidents arising from a wrong installation.

The steer tube must be pressed into the crown; its replacement must be carried out by one of our service centres using the adequate tools.

A wrong installation of the steer tube into the crown may cause the rider to lose the control of the bike and lead to serious personal injury.

INSTALLING THE DISK BRAKE SYSTEM

Installing the brake system is a very delicate operation that must be carried out at our specialised service centres only.

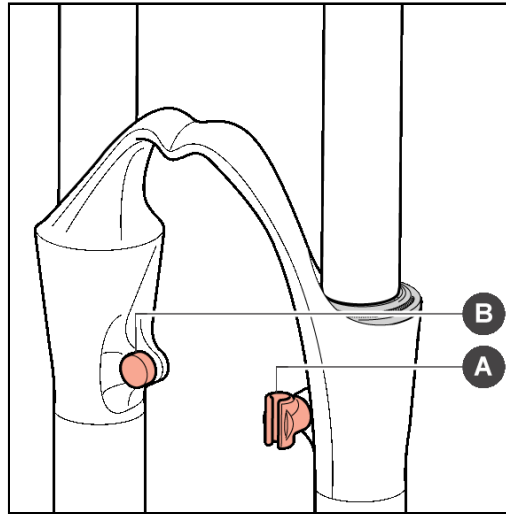
Marzocchi does not guarantee the installation and accepts no liability for damage and/or accidents arising from a wrong installation

Improper installation of the disk brake system can overstress the caliper mountings, which may break. The installation of the brake system must be carried out following the instructions of the brake system manufacturer. Improper installation can be dangerous for the rider.

Use only brake systems in accordance with the fork's specifications.

If the fork comes standard with V-brake mounts, remove such mounts and install the cable guide (A) on the left side and cap (B) on the right side.

After installation always check that the brake tube is correctly fixed to the special mount (A).



INSTALLING THE V-BRAKE SYSTEM

Installing the brake system is a very delicate operation that must be carried out at our specialised service centres only.

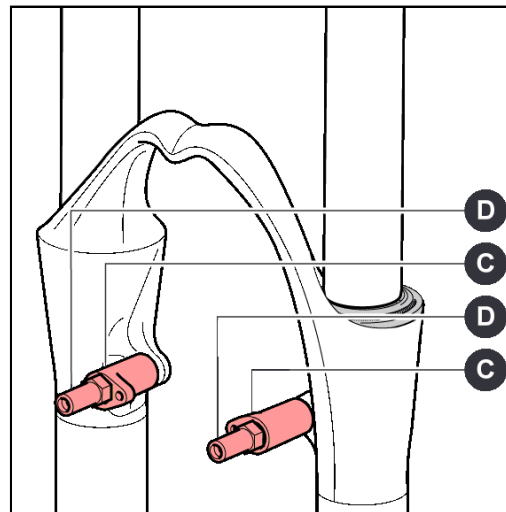
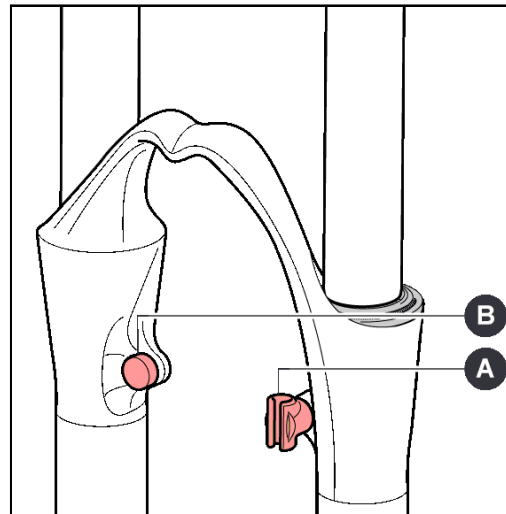
Marzocchi does not guarantee the installation and accepts no liability for damage and/or accidents arising from a wrong installation.

The installation of the brake system must be carried out following the instructions of the brake system manufacturer. Improper installation can be dangerous for the rider.

Use only brake systems in accordance with the fork's specifications.

If the fork does not come standard with V-brake mounts, after removing the cable guide (A) and the disk brake mount cap (B), install the adapter (A) and the bolt (D) on both legs, check that the adapter is correctly oriented as shown and tighten the bolt to the recommended tightening torque (11 ± 1 Nm).

On the thread of bolts (D) a special anti-unscrewing treatment has been applied; as a result, the removed bolts cannot be re-used as they lose such treatment.



**ASSEMBLING THE WHEEL ON FORKS
WITH STANDARD DROPOUTS**

**Install the wheel following the
instructions of the bike's manufacturer.**

A good and reliable operation of the fork
and all of the parts linked to it mainly
depend on the correct fixing of the front
wheel.

For a correct operation of the fork, install
the wheel as explained below:

Check the correct fork-wheel alignment by
fully compressing the fork a few times.

Lift the front wheel above the ground; turn
the wheel a few times to verify the correct
alignment with the disk brake.





REMOVING THE TOP CAP – RIGHT LEG



REMOVING THE TOP CAP – LEFT LEG



DRAINING THE OIL



BREAKING DOWN THE CROWN-STANCHION UNIT / ARCH-SLIDER ASSEMBLY



REMOVING THE HYDRAULIC CARTRIDGE - RIGHT LEG



REMOVING THE CARTRIDGE – LEFT LEG



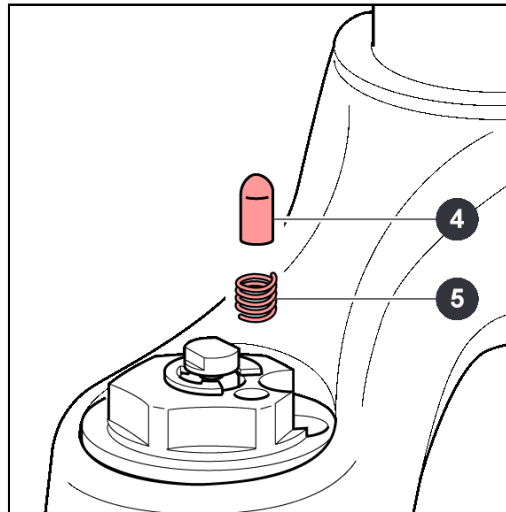
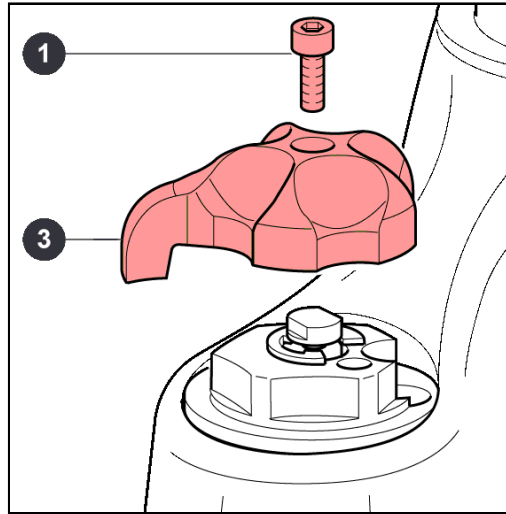
REMOVING THE SEALS



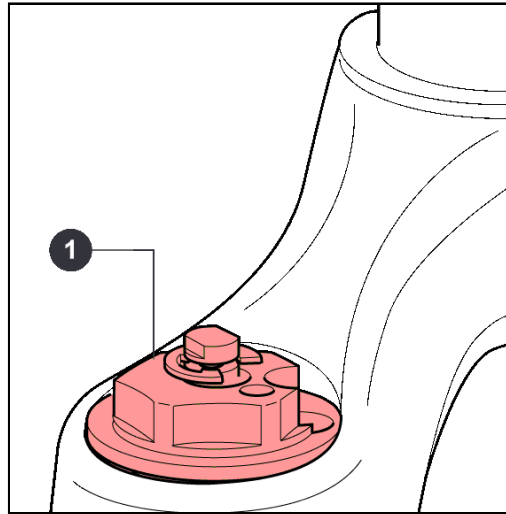
REMOVING THE GUIDE BUSHES

REMOVING THE TOP CAP – RIGHT LEG

- Put the fork in the vice in a vertical position, fixing it by the dropouts.
- With a 2mm Allen wrench, loosen the screw (2) of the ECC5 control knob.
- Remove the ECC5 control knob (3).
- Remove pin (4) and spring (5).



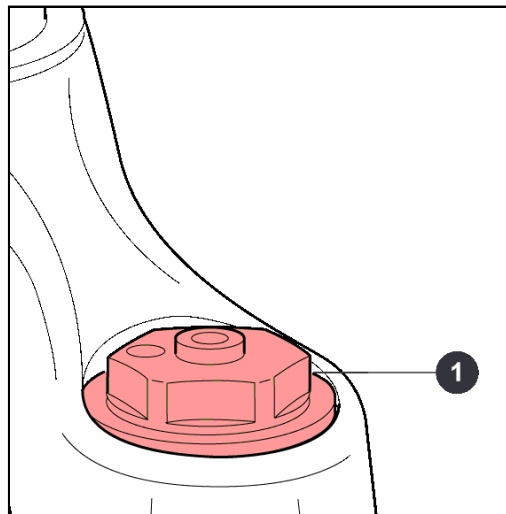
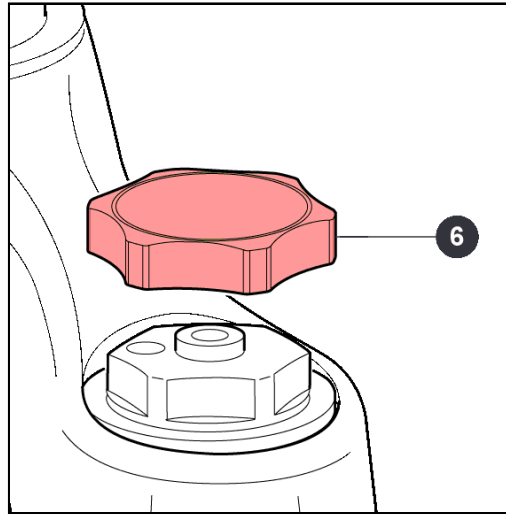
- Using a small pin screwdriver, blow the air off the fork leg, pushing on the air valve.
- Fully unscrew the lock cap (1) with a 21mm socket spanner.



REMOVING THE TOP CAP – LEFT LEG

- Put the fork in the vice in a vertical position, fixing it by the dropouts.
- Loosen and remove the protection cap (6).
- Using a small pin screwdriver, blow the air off the fork leg, pushing on the air valve.
- Fully unscrew the lock cap (1) with a 21mm socket spanner.

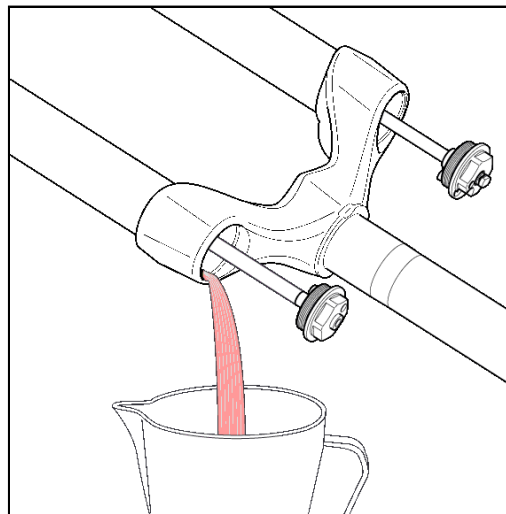
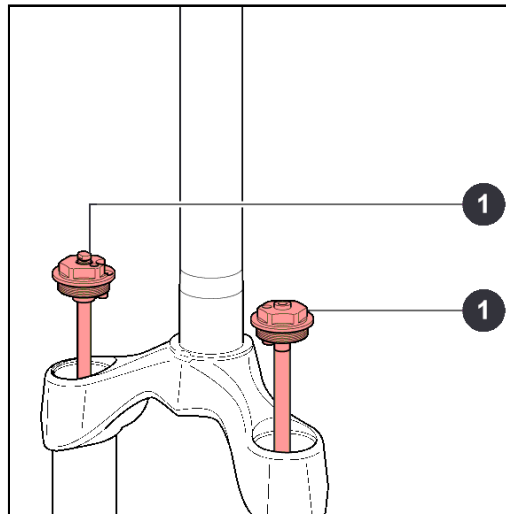
Now you can remove the caps from the cartridge rods. It is however recommended to do this operation after having removed the cartridge from the arch-slider assembly.



DRAINING THE OIL

- Remove the leg caps (1) from the crown unit.
- Free the fork from the vice and tip it into a container of a suitable size to drain the oil; compress the fork a few times to help the oil flow out.

Do not pour used oils on the ground.

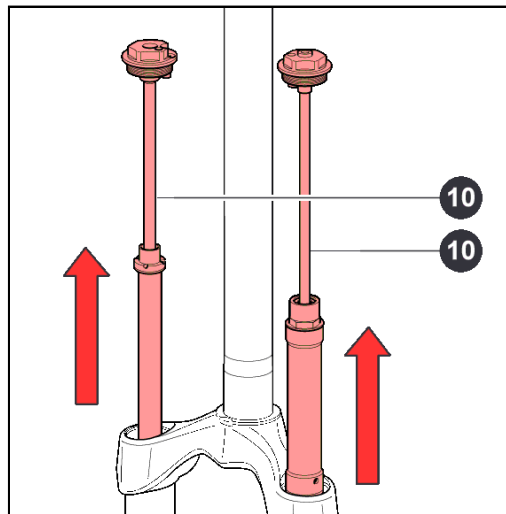
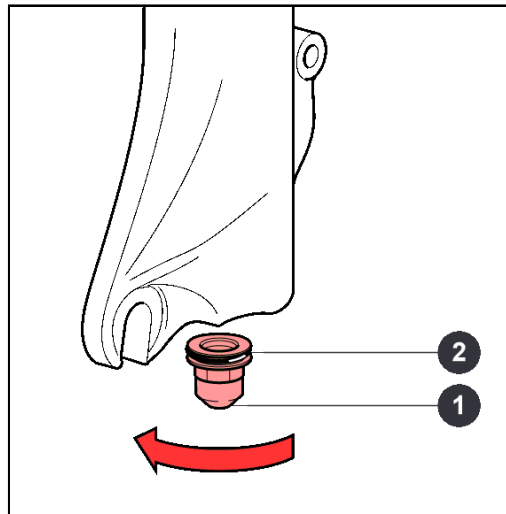


**BREAKING DOWN THE
CROWN-STANCHION UNIT /
ARCH-SLIDER ASSEMBLY**

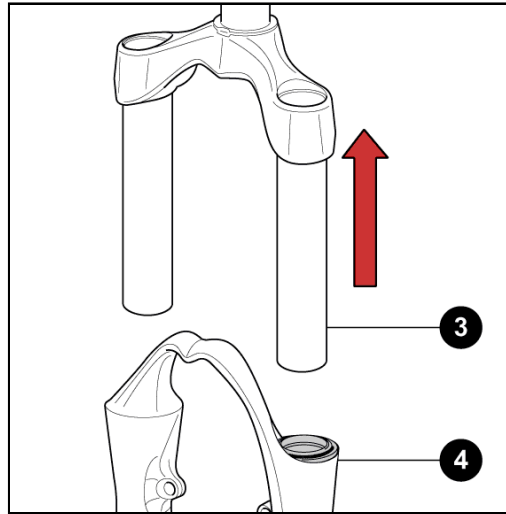
**Use the special spanner to remove the
bottom nuts. Do not use other tools.**

Using the special 12mm spanner (A),
loosen the two bottom nuts (1).

- Remove the bottom nuts (1) and the
O-rings (2).
- Pull the complete cartridges (10)
off both
fork legs.



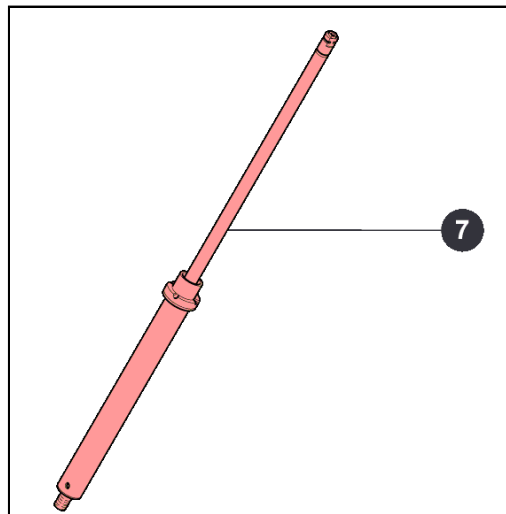
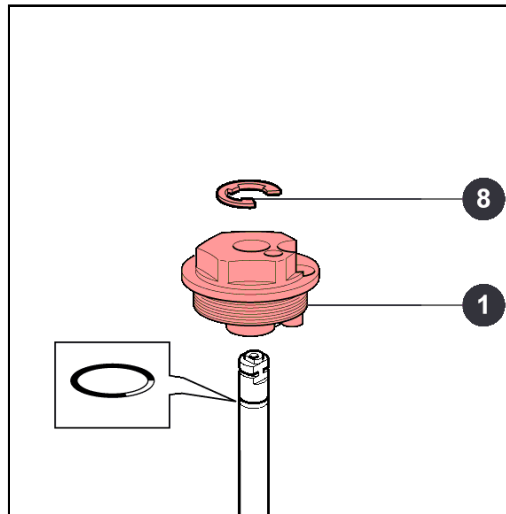
- Pull the crown-stanchion unit (3) off the arch-slider assembly (4).



REMOVING THE CARTRIDGE – RIGHT LEG

- Remove the stop ring (8).
- Remove the lock cap (1).

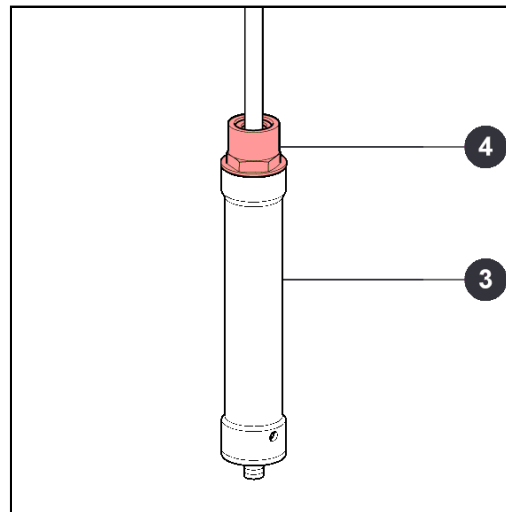
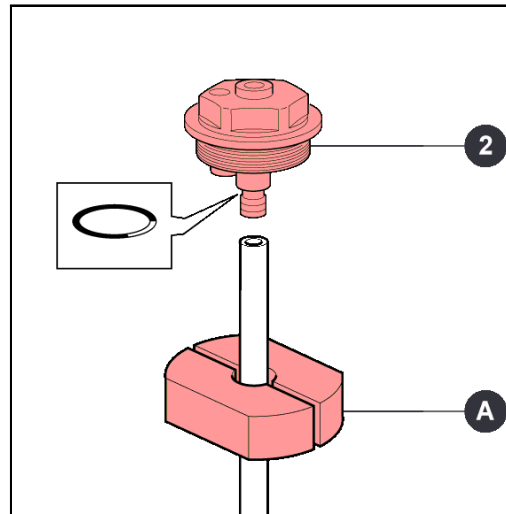
The ECC5 cartridge (7) is sealed through machining and cannot be overhauled. In the case of faults or a malfunctioning, it must be replaced.



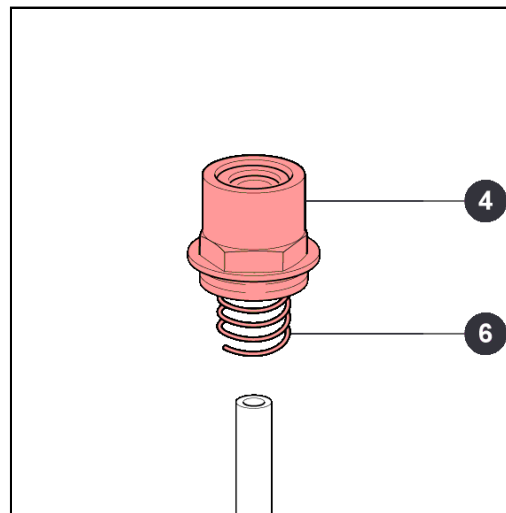
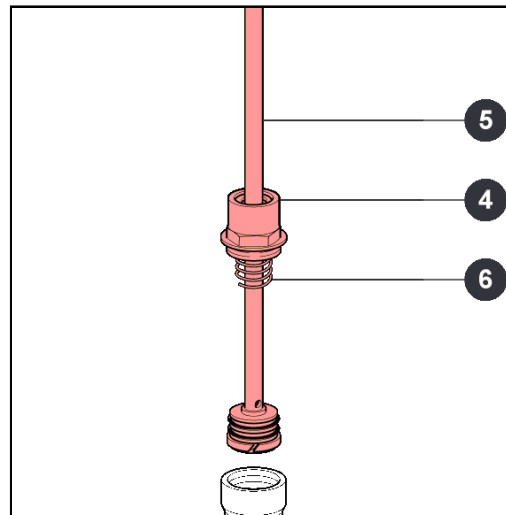
REMOVING THE CARTRIDGE – LEFT LEG

- Hold the cartridge rod in the vice using the special jaws (A).
- With a 21mm socket spanner, fully unscrew lock cap (2).
- Remove lock cap (2).
- Hold liner (3) firmly and, with a 19mm hexagonal wrench, remove the cartridge cap (4).

On the thread of cap (4) a special anti-unscrewing treatment has been applied. Do not re-use removed caps as they lose such treatment.

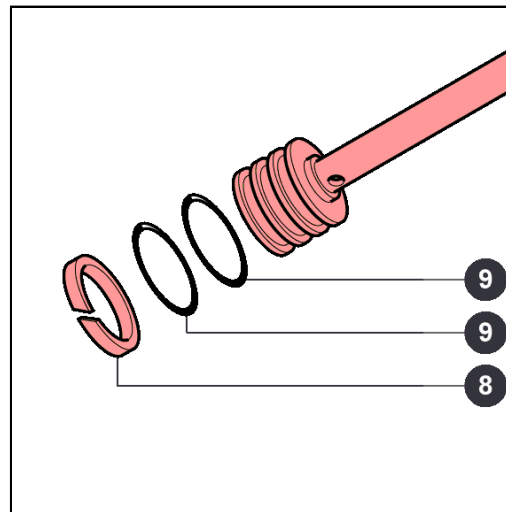
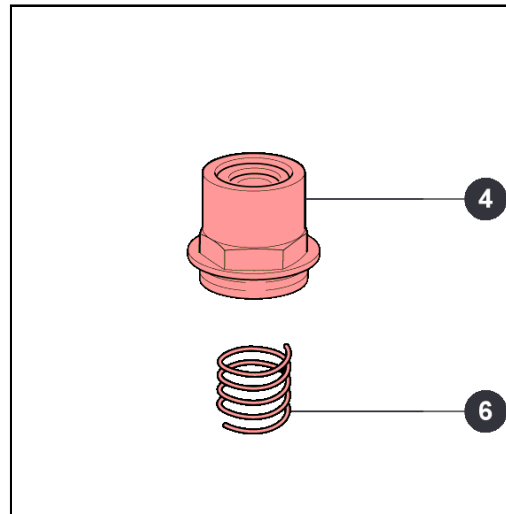


- Pull out the cartridge rod (5) complete with cap (4) and rebound spring (6).
- Remove cap (4) complete with rebound spring (6) from the cartridge.



· Separate the cap from the rebound spring (6).

· If the segment (8) or the O-rings (9) are worn out, prize them off with a small flat-tip screwdriver.

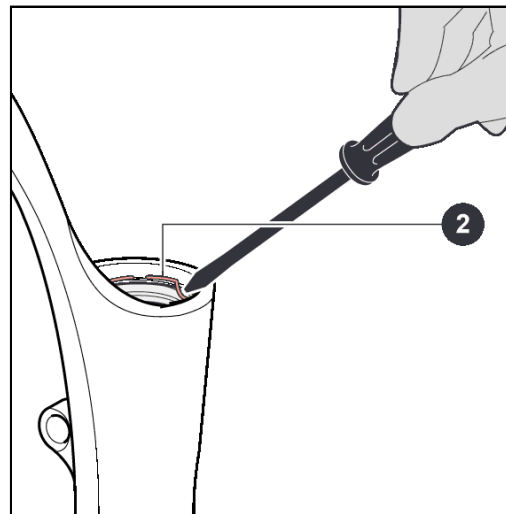
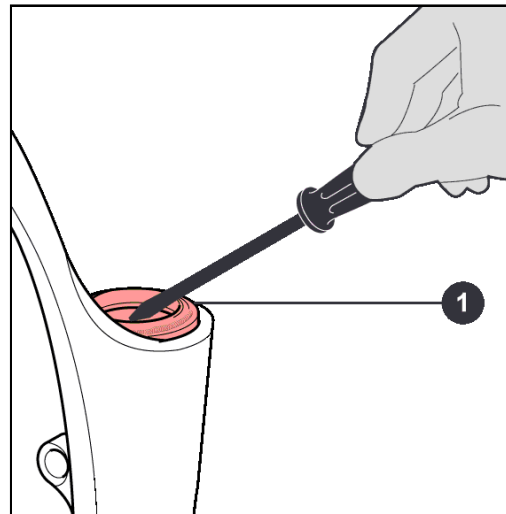


REMOVING THE SEALS

· Remove the dust seal (1) from its seat, using a small flat-tip screwdriver.

· With the same screwdriver prize off the metal stop ring (2).

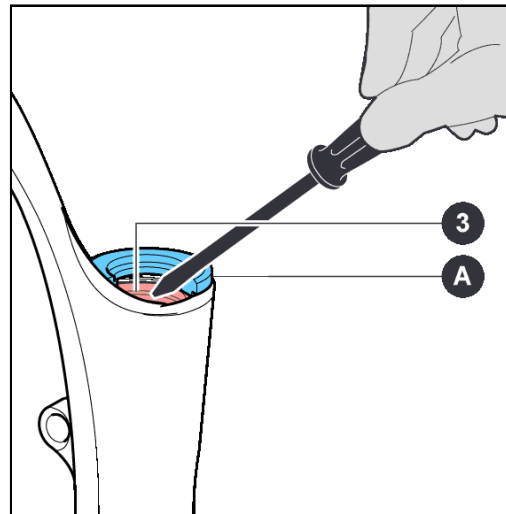
Take great care not to damage the internal surfaces of the arch-slider assembly when removing the dust seal and the stop ring.



Protect the upper part of the slider with the special tool (A).
With a screwdriver prize the sealing ring (3) off.
Remove the sealing ring (3).

Take great care not to damage the internal surfaces of the arch-slider assembly when removing the sealing ring.

The old sealing rings and dust seals must not be used again.



REMOVING THE GUIDE BUSHES

Use the special extractor to remove the guide bushes. Do not use other tools.

Fit the aluminium bush (A) to the extractor keeping the small diameter side towards the edge opposite to the striker.

Fit the extraction washer (B) with a white finish to the extractor.

During use, remove the non-used washer from the extractor.

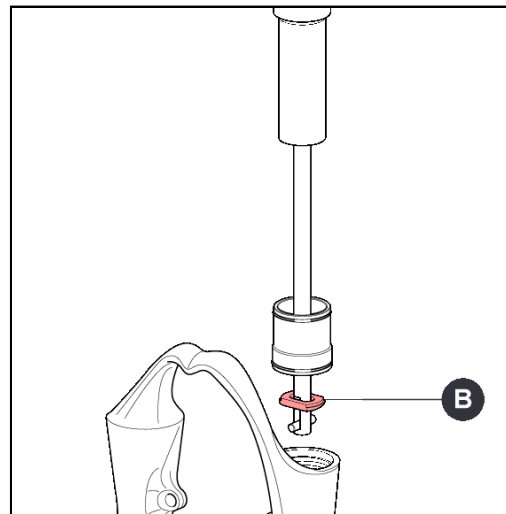
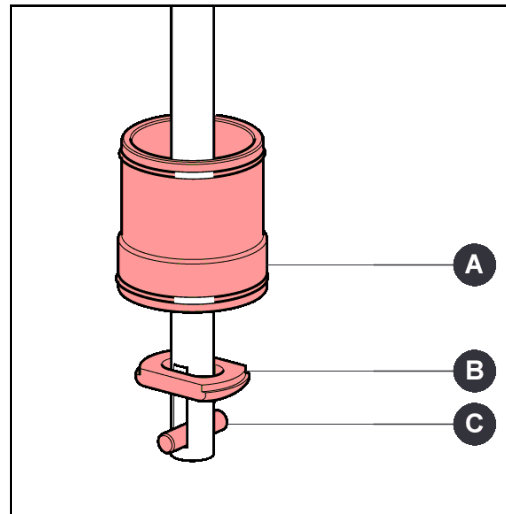
Remove first the top bushes, then the bottom bushes.

Fit the extraction washer keeping the blunt side towards the threaded grubscrew (C) fixed crosswise on to the main rod as shown.

The slot in the rod lets the extraction washer swing inside the rod itself.

Insert the extractor in the arch-slider assembly from the side of washer (B) as shown.

The slot in the extractor rod will let the washer pass underneath the bush to be extracted.



Pull the extractor rod so that the upper face of the washer stops against the lower face of the guide bush.

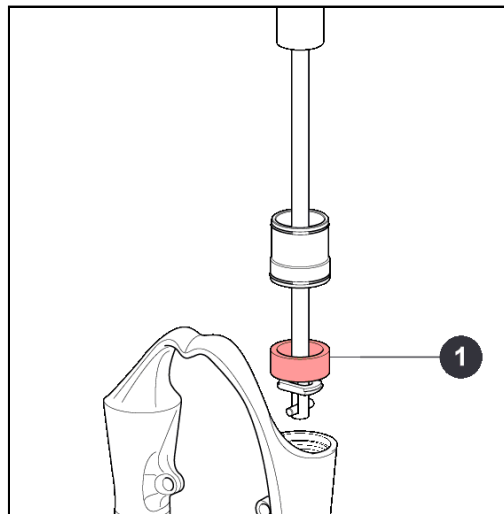
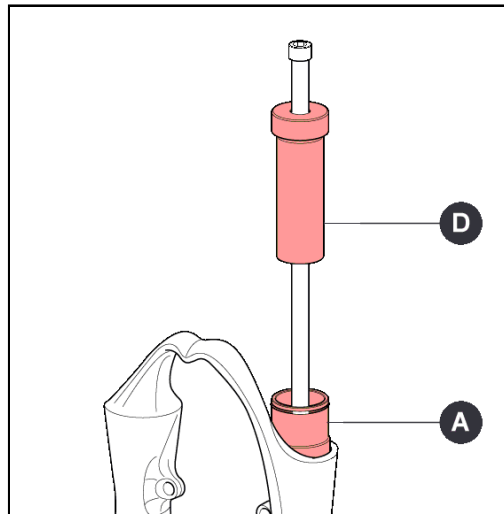
Insert the aluminium bush (A) in the seat of the sealing ring.

While holding the main rod in position, the aluminium bush drives the guide bushes during extraction.

With striker (D) knock out and extract the guide bush (1).

Remove the guide bush (1) from the extractor.

Repeat the steps above to remove the bottom guide bush.





ASSEMBLING THE GUIDE BUSHES

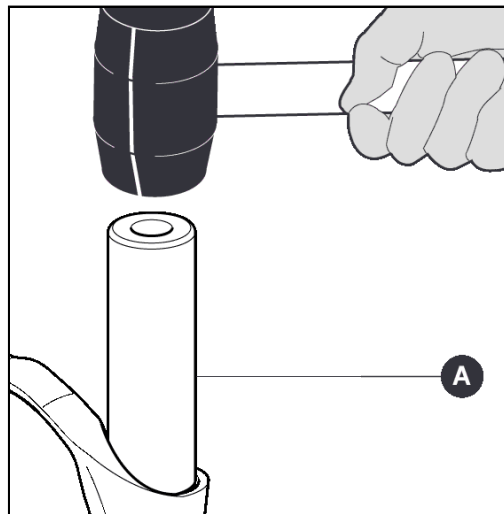
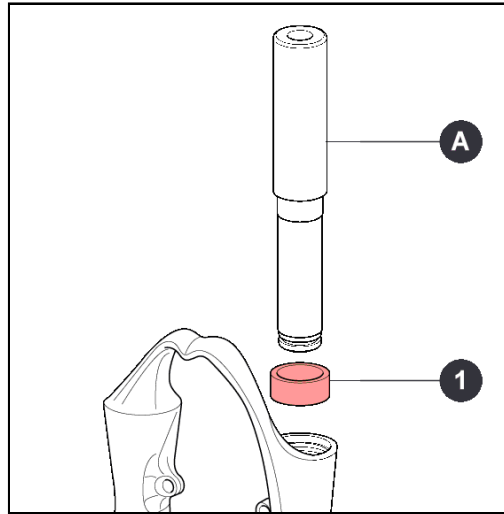
ASSEMBLING THE GUIDE BUSHES

Insert the guide bushes using the special introducers (short type for the top bush and long type for the bottom bush, both with a black finish). Do not use other tools.

Fit first the bottom bushes, then the top bushes.

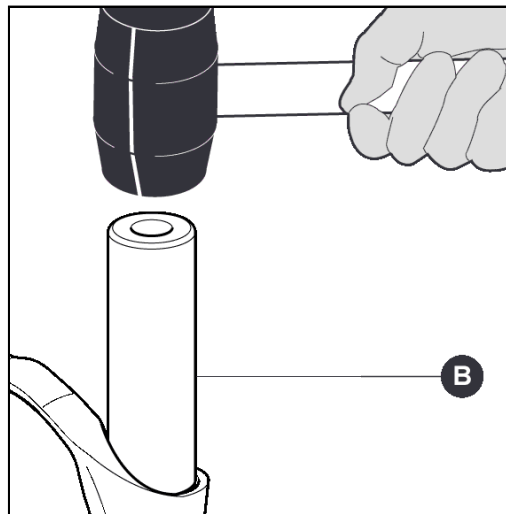
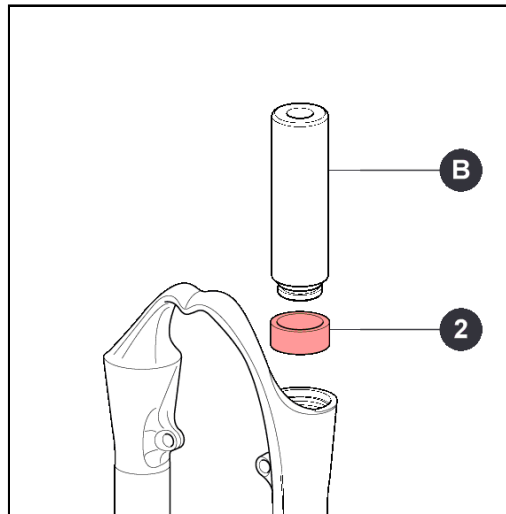
Using the long introducer (A) fit the bottom bush (1).

Using a hammer knock the introducer (A) into the arch-slider assembly.



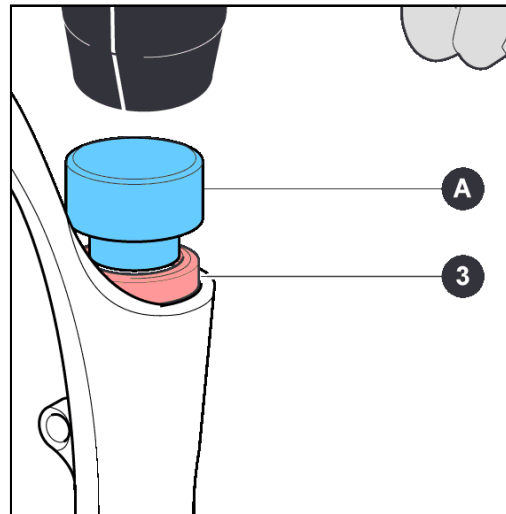
Using the short introducer (**B**) fit the bottom bush (**2**).

Using a hammer knock the introducer (**B**) into the arch-slider assembly.



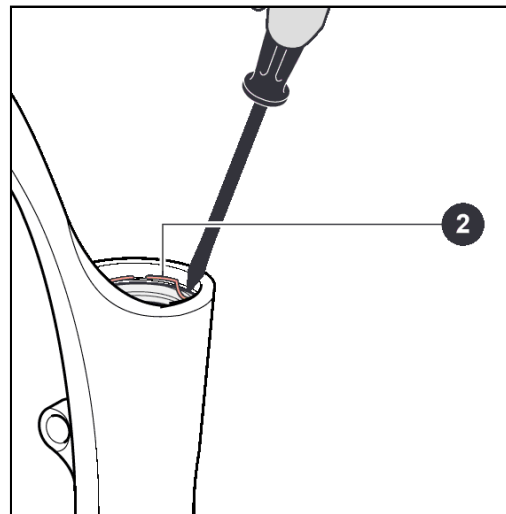
ASSEMBLING THE SEALS

- Smear the dust seal and the sealing ring with some grease.
- Refit the sealing ring (3) using the special introducer (A).
- Using a hammer knock in the introducer (A) and drive the sealing ring home into the arch-slider assembly.
- With a small tip screwdriver mount the stop ring (2) and check it fits perfectly into its groove.



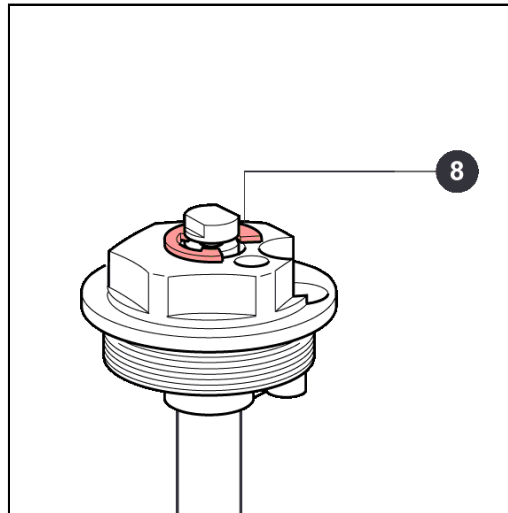
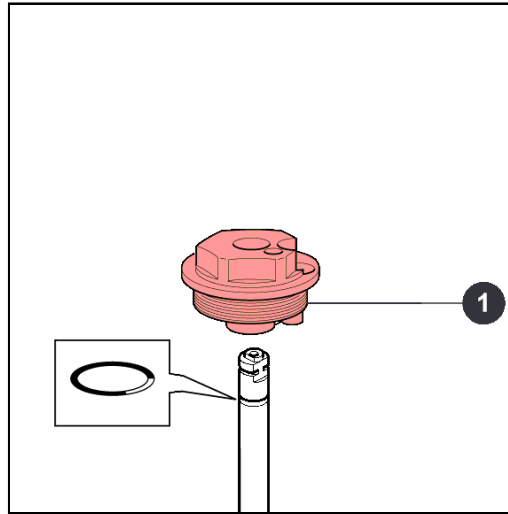
Take great care not to damage the internal surfaces of the arch-slider assembly when fitting the stop ring.

- The dust seals shall be refitted when reassembling the crown-stanchion unit / arch-slider assembly.



MOUNTING THE CARTRIDGE - RIGHT LEG

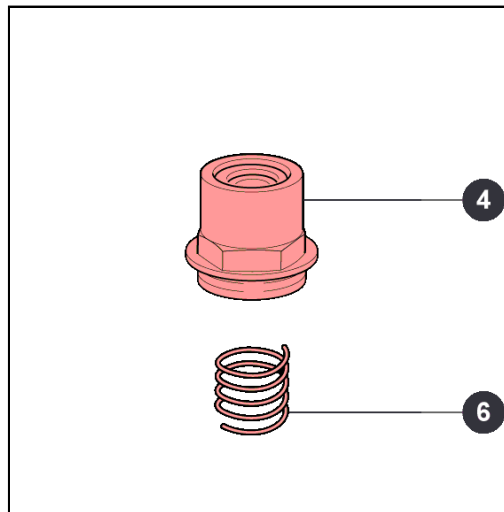
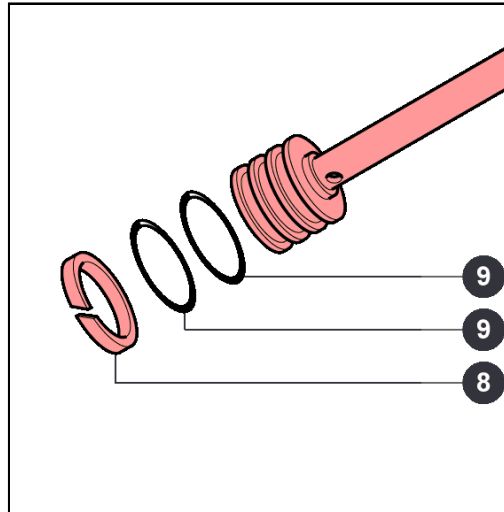
- Fit the lock cap (1).
- Insert the stop ring (8) and check it fits perfectly into its groove.



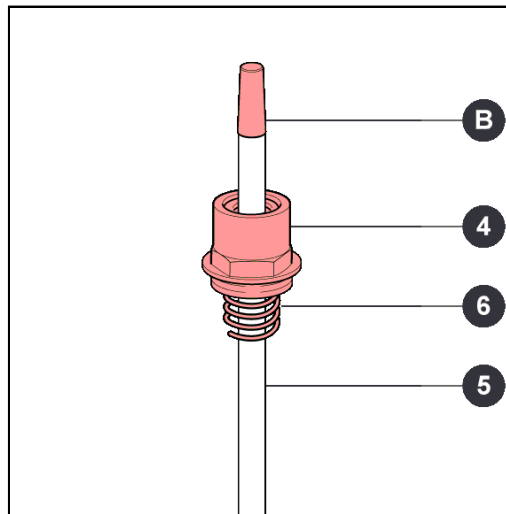
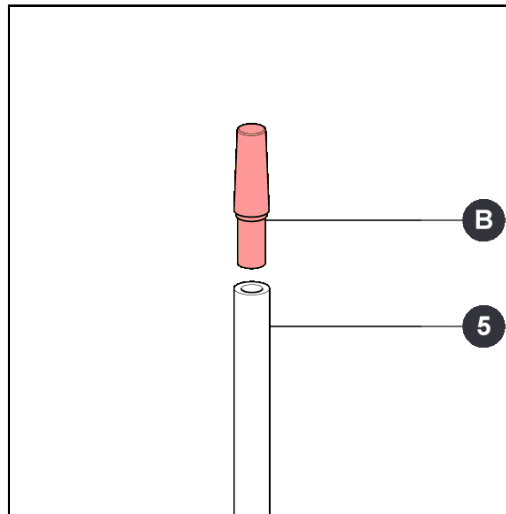
REMOVING THE CARTRIDGE - LEFT LEG

- Replace the segment (8) and the O-rings (9) if necessary.
- Fit the rebound spring (6) on a new cap (4).

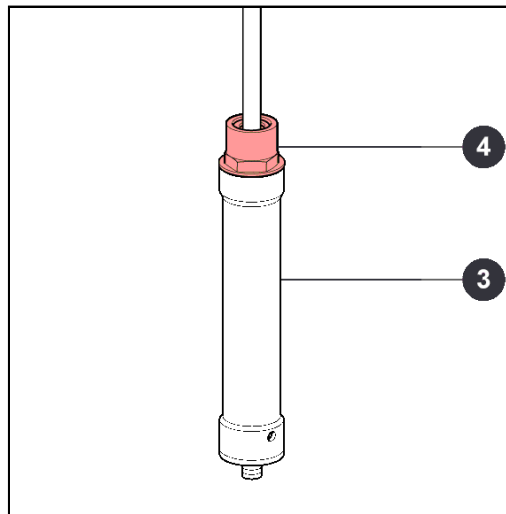
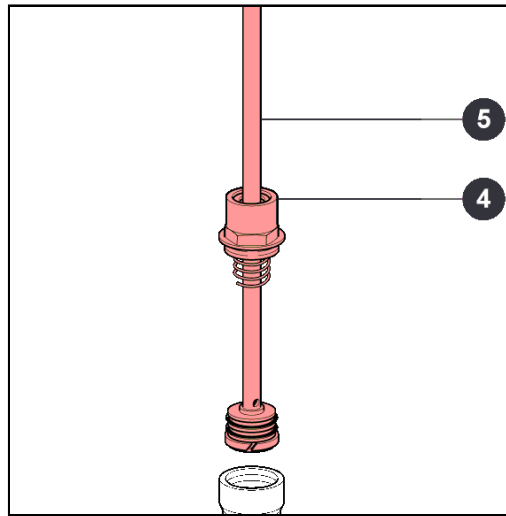
On the thread of cap (4) a special anti-unscrewing treatment has been applied. Do not re-use the removed caps as they lose such treatment.



- Mount the introducer (**B**) on the top of the cartridge rod (**5**).
- Insert cap (**4**) complete with the rebound spring (**6**) in the cartridge rod (**5**).
- Remove the introducer (**B**).

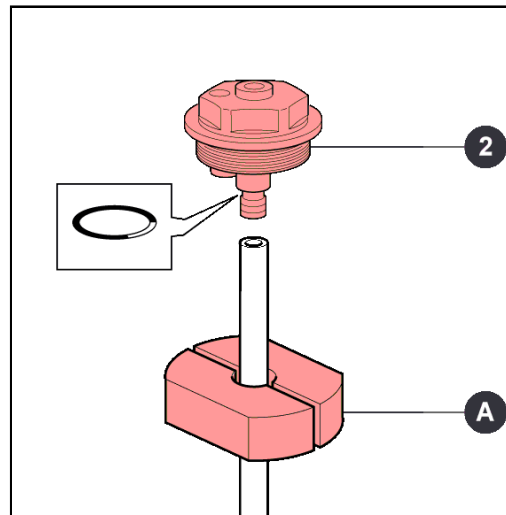


- Insert the cartridge rod (5) complete with plug (4) inside the liner.
- Holding liner (3) firmly, tighten cap (4) with a 19mm hexagonal wrench.



Put the cartridge rod in the vice using the special jaws (**A**).

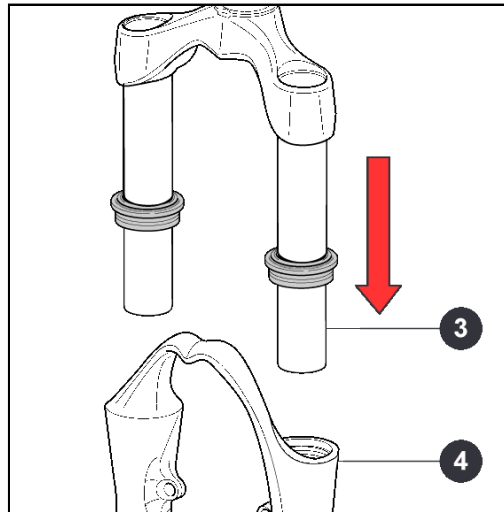
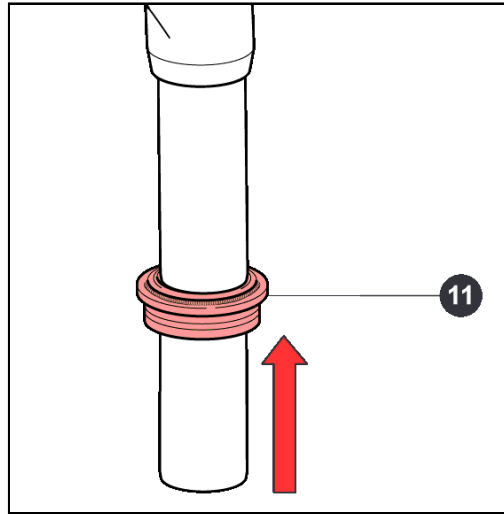
· With a 21mm socket spanner, tighten lock cap (**2**) on the cartridge rod to the recommended tightening torque ($6\text{ Nm}\pm 1$).



**ASSEMBLING THE CROWN-STANCHION
UNIT / ARCH-SLIDER ASSEMBLY**

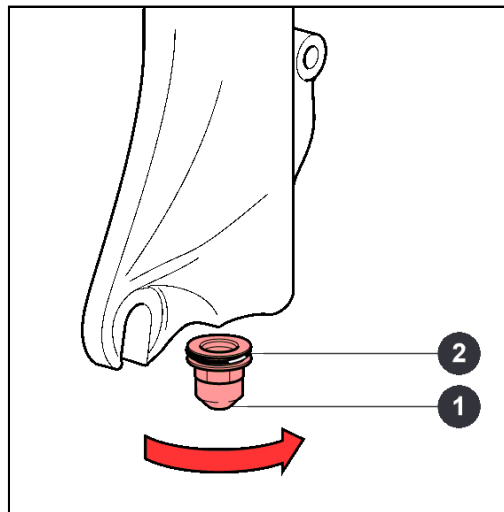
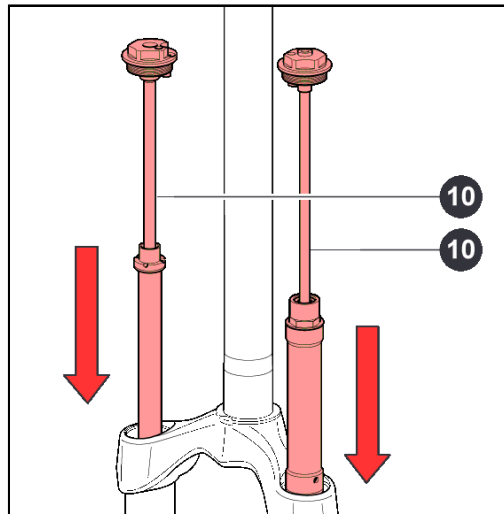
A special spanner shall be used to assemble the bottom nut. Do not use other tools.

- Fit the dust seals (**11**) to the stanchions.
- Insert the crown-stanchion unit (**3**) in the arch-slider assembly (**4**).

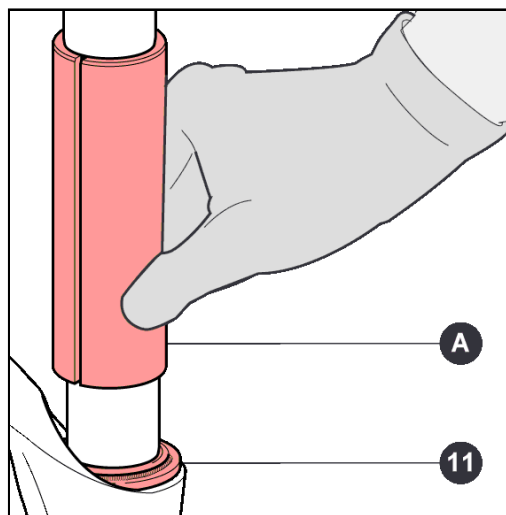


Fit the complete cartridges (10) in both fork legs.

· With the special 12mm spanner (A), tighten the bottom nut (1) with O-ring (2) of both legs to the recommended tightening torque (11 Nm±1).

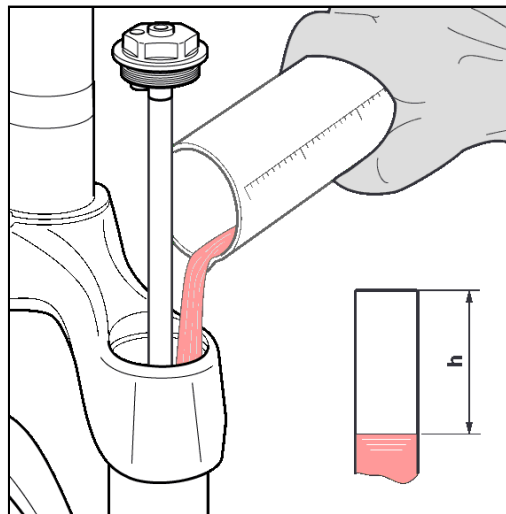
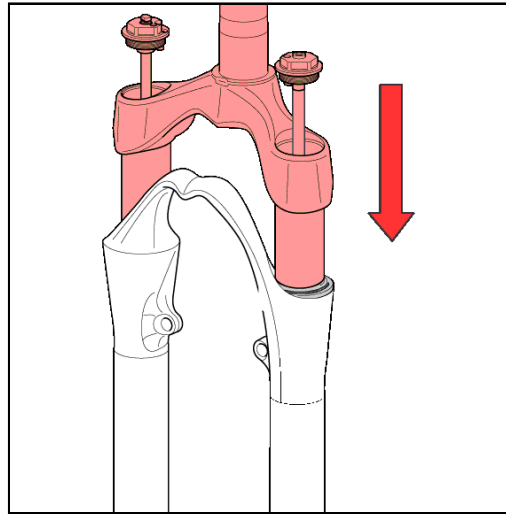


· Re-assemble the dust seals (**11**) in their seats using the special introducer (**A**).



FILLING WITH OIL

- Put the fork in the vice in vertical position.
- Lower the crown-stanchion unit on the arch-slider assembly.
- Prepare the quantity of oil to pour into the fork leg (see table).
- Pour roughly 1/3 of the oil required into each stanchion, then pump the fork a few times to remove any traces of air.
- Pour the rest of the oil in.
- Lower again the crown-stanchion unit on the arch-slider assembly.



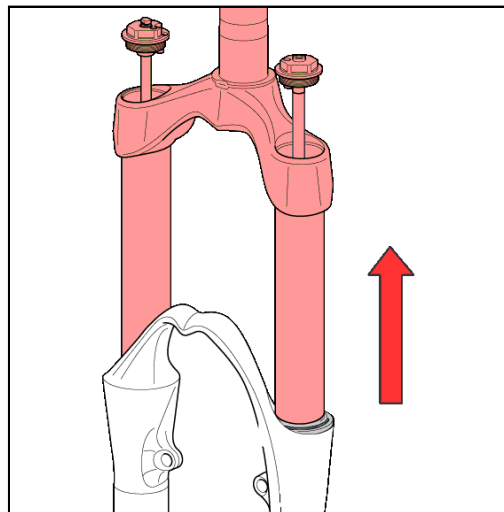
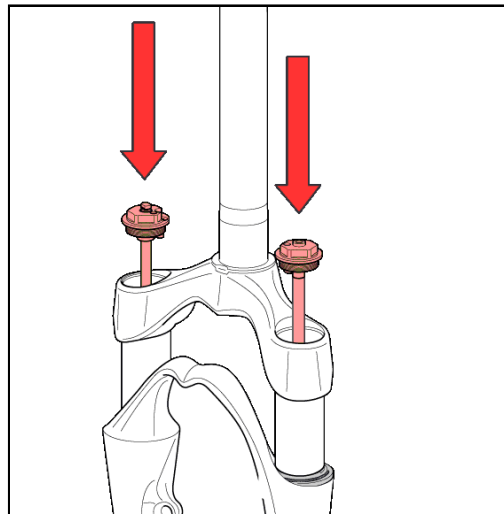
· Wait for a few minutes and check the volume of the air (h); if necessary refill to the right level.

In order to check the air properly and avoid to alter the reached values, lower the lock caps on the fork crown as much as possible.

For the recommended air volumes, consult our website www.marzocchi.com.

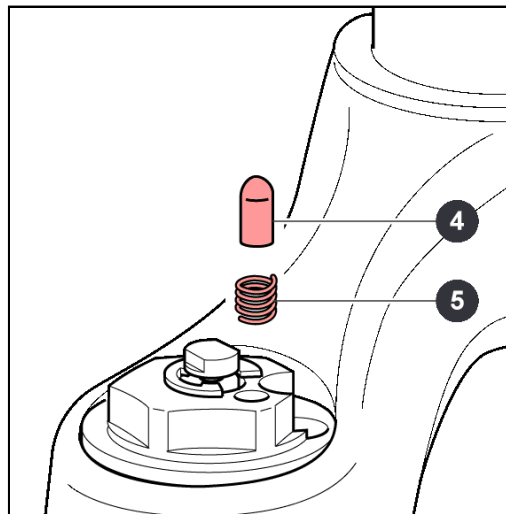
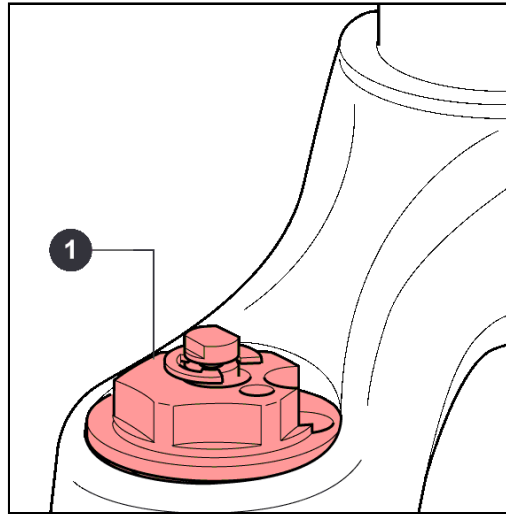
A lower or higher volume of air, or a type of oil other than the recommended type can change the behaviour of the fork in every phase.

· Lift the stanchions on the sliders.



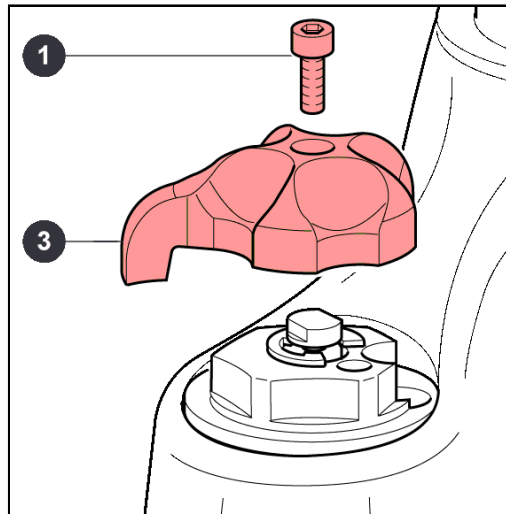
MOUNTING THE TOP CAP – RIGHT LEG

- Put the fork in the vice in vertical position, fixing it by the dropouts.
- With the 21mm socket spanner, tighten the lock cap (2) to the recommended tightening torque ($20 \text{ Nm} \pm 1$).
- Insert spring (5) and pin (4).



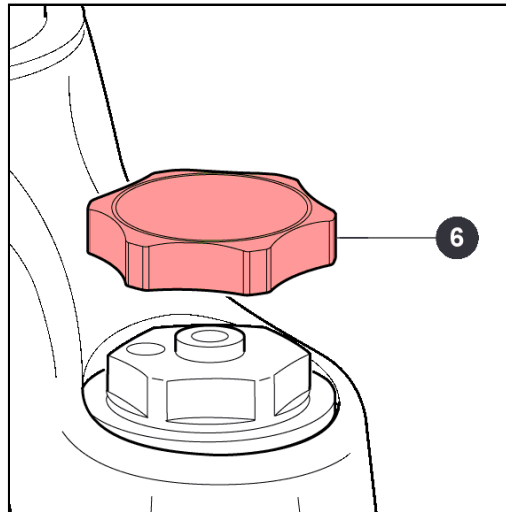
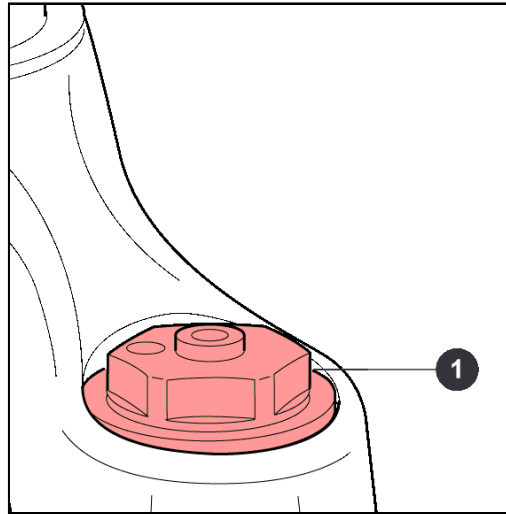
REMOVING THE TOP CAP

- Put the fork in the vice in a vertical position, fixing it by the dropouts.
- With a 1.5mm Allen wrench loosen the grub screw (4) and remove the adjusting knob (5).
- Remove the stop ring (8).



MOUNTING THE TOP CAP – LEFT LEG

- Put the fork in the vice in vertical position, fixing it by the dropouts.
- With the 21mm socket spanner, tighten the lock cap (1) to the recommended tightening torque (20 Nm±1).
- Restore the positive and negative air pressure (see settings).
- Hand-tighten the protection cap (6).





POSITIVE AIR



NEGATIVE AIR



ECC5

POSITIVE AIR

Use the MARZOCCHI pump with pressure gauge to inflate the fork legs.

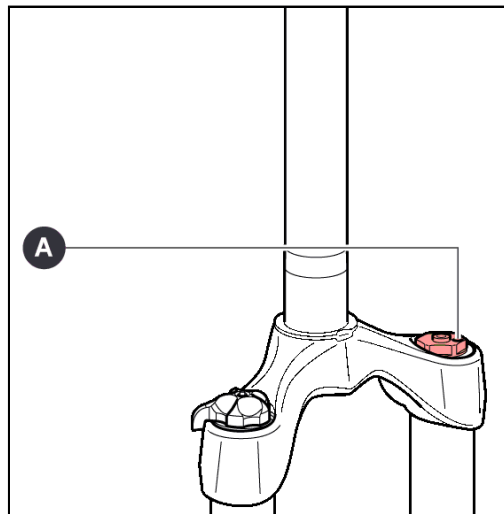
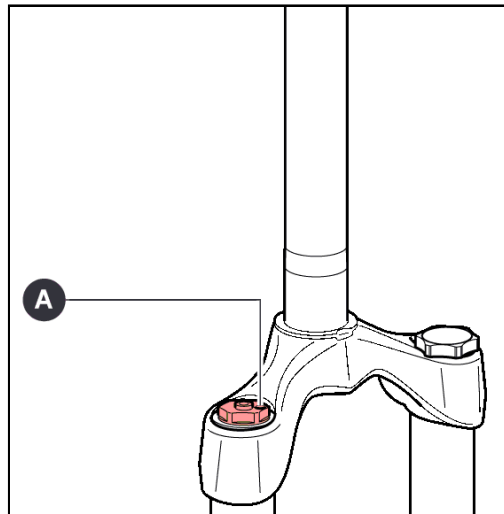
Using inadequate tools may lead to a wrong inflation and result in a malfunctioning or damage to the fork.

To reduce the leg's pressure, simply push the valve pin down with a pointed tool such as a small pin extractor.

Apply the same preload pressure to both fork legs.

Drawing in compressed air through the positive air valves (**A**) changes the damping of the forces resulting from the COMPRESSION of the fork legs.

For this adjustment, fit the special pump adapter which comes standard with the fork.



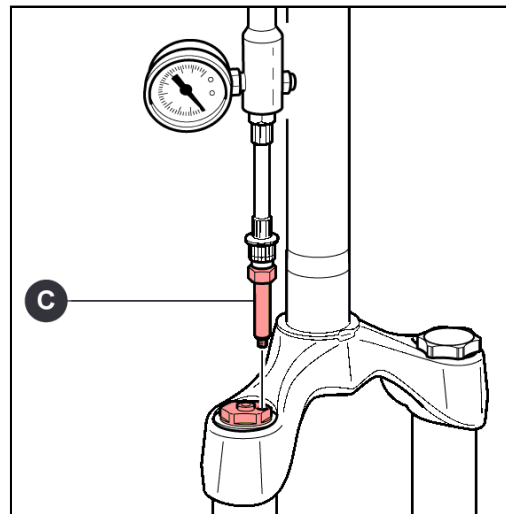
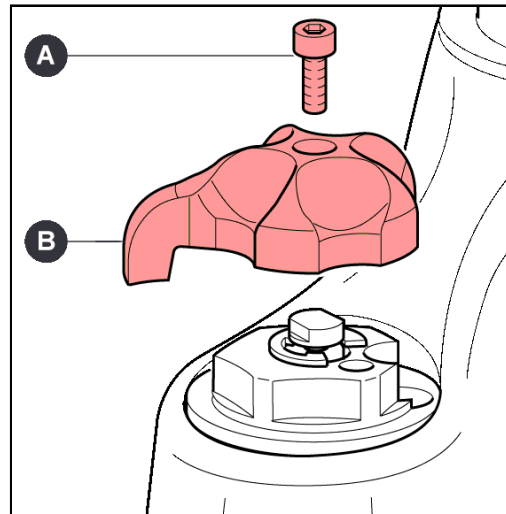
Left leg positive air adjustment:

Using a 2.5mm Allen wrench, loosen the screw (**A**) fixing the ECC5 knob. Remove screw (**A**) and knob (**B**). Fit and tighten the pump adapter (**C**) on the valve.

· Inflate till reaching the pressure you wish (see table).

Refit knob (**B**).
With a 2.5mm Allen wrench, tighten screw (**A**) to the recommended tightening torque ($2 \text{ Nm} \pm 0.5$).

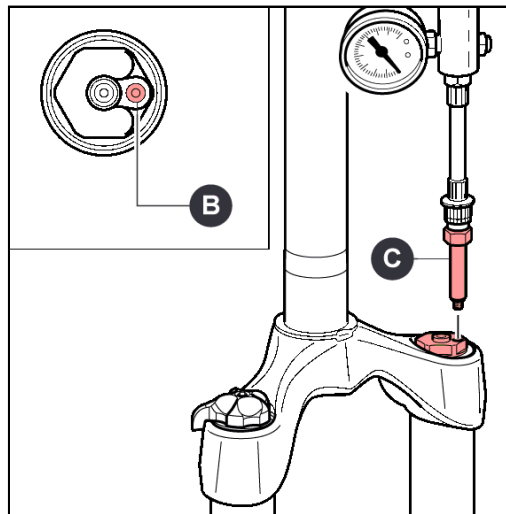
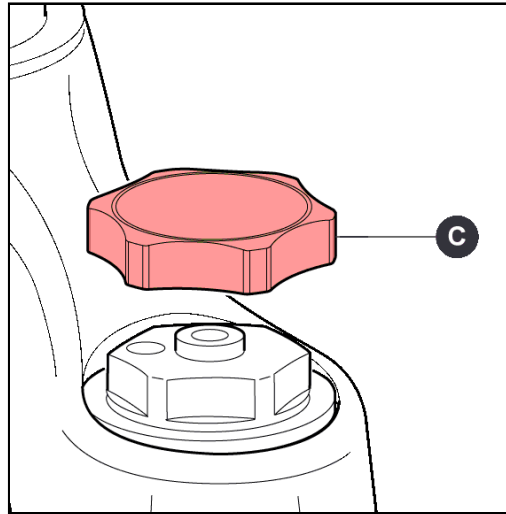
The pressure values in the table are given as a mere example and can be changed to meet the biker's riding style and the track condition.



Right leg positive air adjustment:

- Loosen and remove the protection cap (A).
- Screw the pump adapter (C) down on the external valve (B).
- Inflate till reaching the pressure you wish (see table).
- Refit and tighten the protection cap (B).

The pressure values in the table are given as a mere example and can be changed to meet the biker's riding style and the track condition.



NEGATIVE AIR

Use the MARZOCCHI pump with pressure gauge to inflate the fork legs.

Using inadequate tools may lead to a wrong inflation and result in a malfunctioning or damage to the fork.

To reduce the leg's pressure, simply push the valve pin down with a pointed tool such as a small pin extractor.

Drawing in compressed air through the negative air valve (**B**) changes the damping of the forces resulting from the REBOUND of the fork legs.

Install the pump adapter provided with the fork.

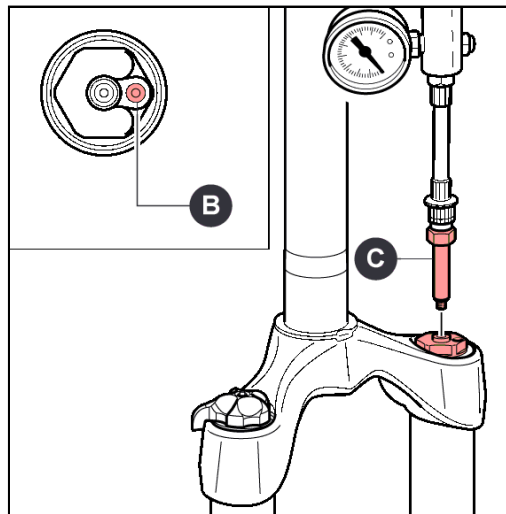
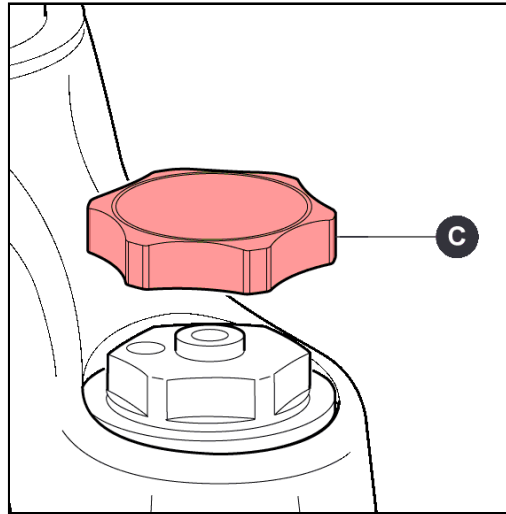
· Loosen and remove the protection cap (**A**) on the left leg.

Screw the pump adapter (**C**) down on the central valve (**A**)

· Inflate till reaching the pressure you wish (see table).

Refit and tighten the protection cap (**B**).

The pressure values in the table are given as a mere example and can be changed to meet the biker's riding style and the track condition.



ECC5

The ECC5 cartridge lets you adjust the rebound damping “on the fly”.

Turning the adjuster (**A**) changes the hydraulic configuration of the internal valves letting more or less oil flow through or stopping the oil flow in the "LOCK OUT" position.

Adjustment is done with a 5-position knob.

Pos. 1 "LOCK OUT"

Turning the knob fully clockwise, you'll get the maximum rebound damping. In this position, the fork legs stay down when hitting an obstacle; any other impact will lower the bike's geometry further.

This position is suitable for steep uphill.

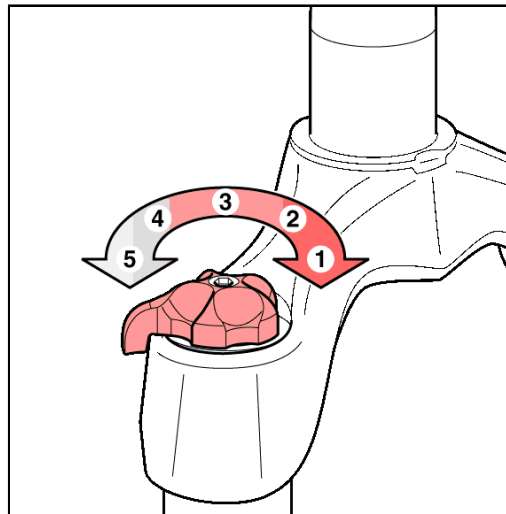
Pos. "2 - 3 - 4"

Turning the knob counter-clockwise reduces the rebound resistance.

Pos. 5 "MINIMUM REBOUND DAMPING"

Turning the knob fully counter-clockwise, you'll reach the minimum rebound damping and the maximum fork's response.

Do not, at any times, use the "LOCK OUT" position when riding on steep



downhills. The fork would not react safely enough when hitting an obstacle.