

Product

Exploded View

Disassembly & Assembling



Frontfork

## 4357 MX Multi Adjuster 2000

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**Disassembly & Assembling**



## **Introduction**

General notice:

Pay attention to the following notes, when you are working with WP Suspension products as described in this workshop manual.

Always use clean and professional tools. Regular you need next to the general equipment, the special tools of WP Suspension.

These tools with a unique "T" number (available at WP Suspension) protect you from damaging the parts.

Always use aluminium protector-plates, when clamping our products or parts in the vice.

Always replace damaged or worn parts.

Clean all parts before assembling.

Caution:

Many times it is necessary to assemble parts with T131, T132 and T163.

These parts must dry for at least four hours!!

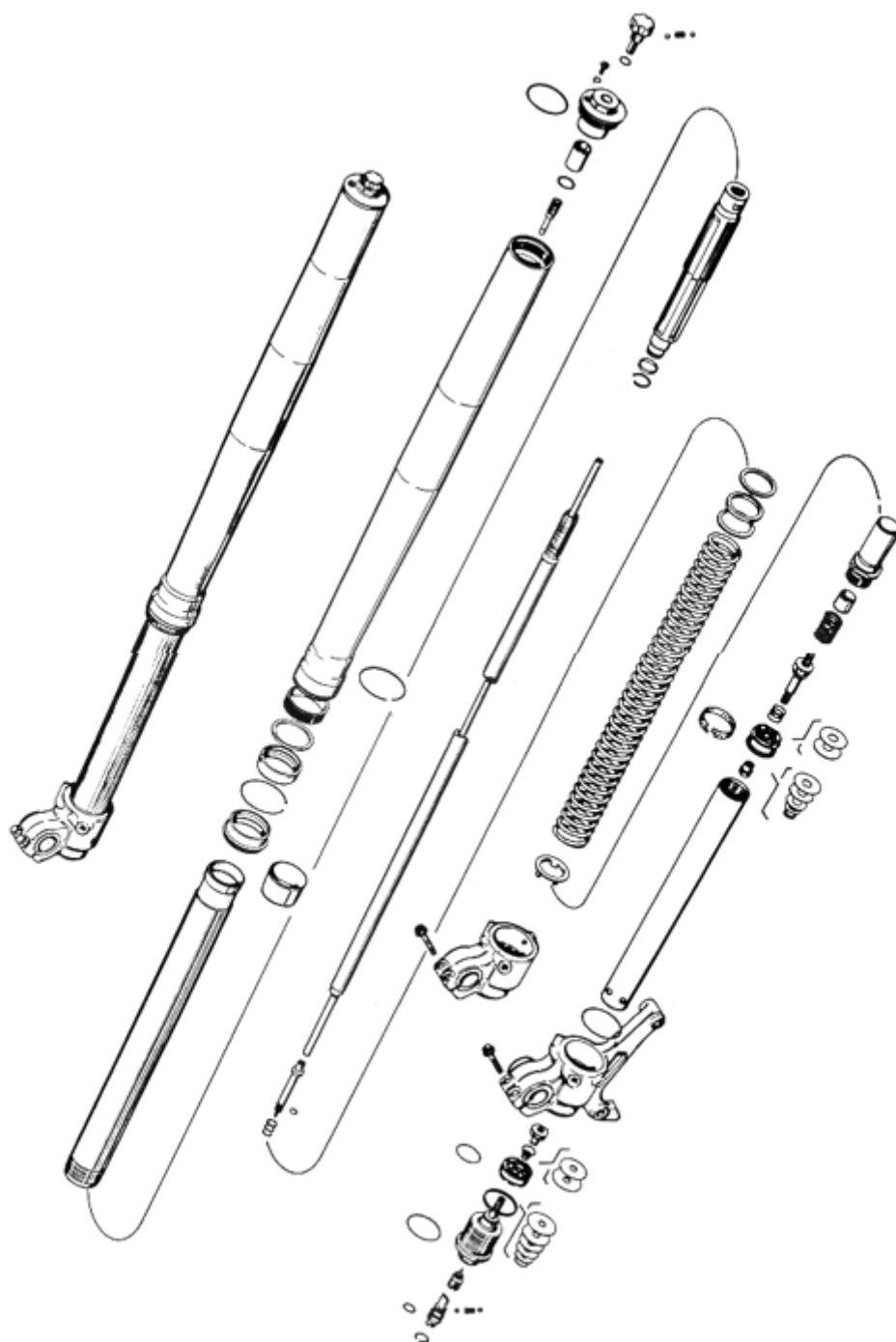
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Disassembly & Assembling



Exploded view



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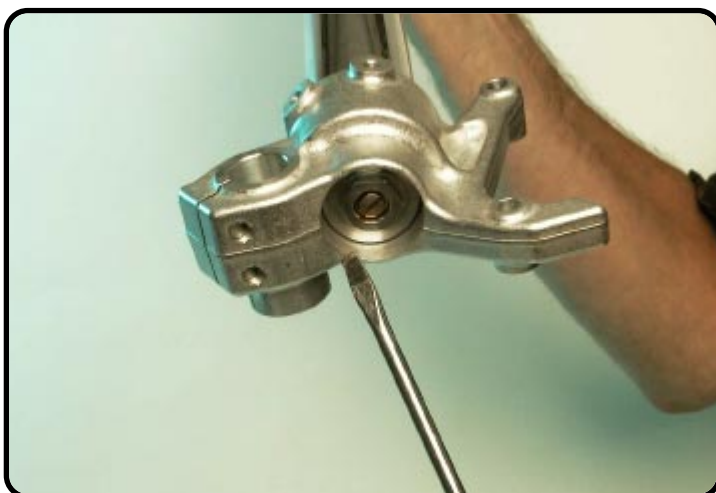
Disassembly & Assembling



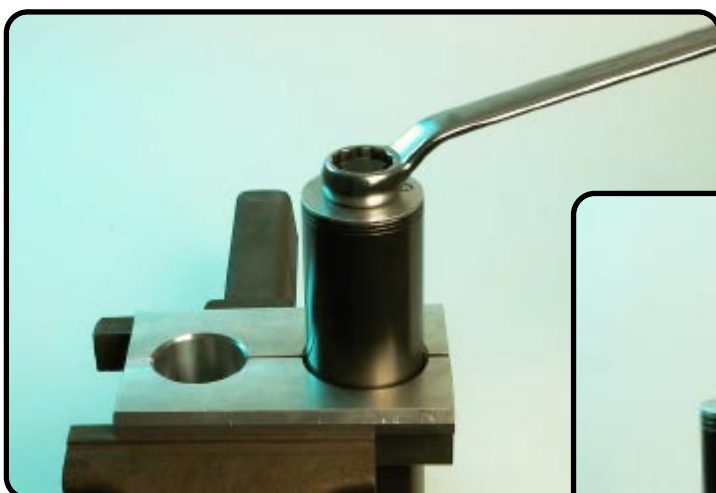
## Disassembly outer-tube



Note the rebound position by turning the knob to the right.



Note the compression position by turning the screw to the right.



Clamp the outer-tube in T501S and unscrew the screwcap. (size 24)  
Cap PA with T103!!



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Disassembly & Assembling

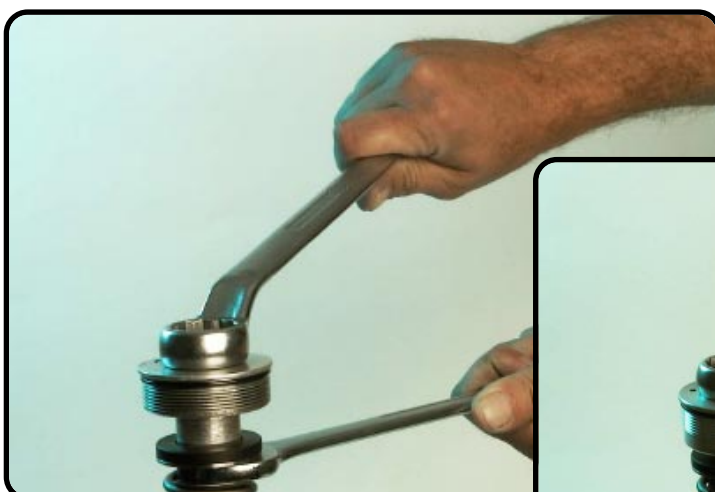


Clamp the forkleg (axle-clamp) in the vice and let the outer-tube down.

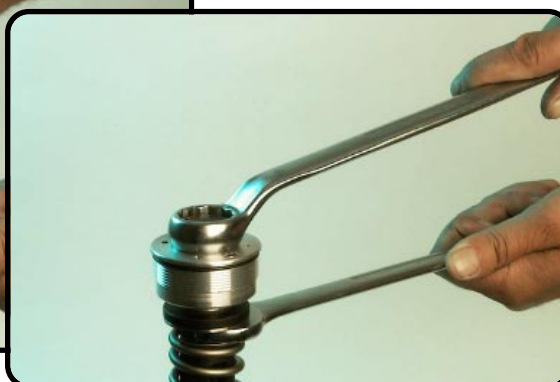
Pull the spring downwards....



....and place open-end spanner (size 20) on the hydraulic stop.



Unscrew the screwcap.



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Disassembly & Assembling



Remove the screwcap from the piston rod.



Remove the steel washer and the preload spacers.



Pull the spring downwards and remove the spanner.

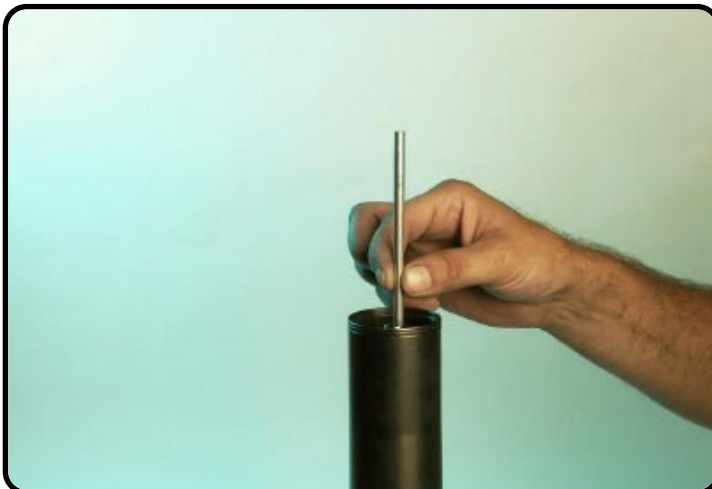
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Disassembly & Assembling



Remove the spring.



Remove the adjustment tube.

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Disassembly & Assembling



Drain the oil out the forkleg.



Clamp the axle-clamp in the vice so that the forkleg is at an angle of  $\pm 45$  degrees.



Unscrew the compression holder out of the axle-clamp. (size 19) (when the cartridge is rotating with the holder, bend the piston rod a little bit to the side)



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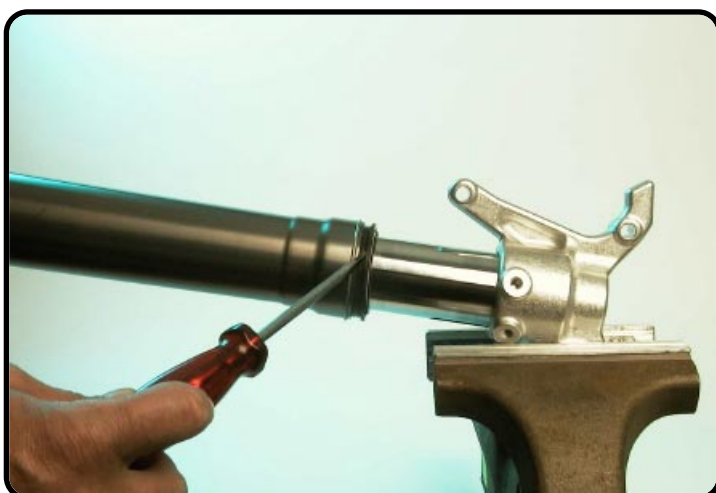
Disassembly & Assembling



Remove holder compression.  
Caution: oil is coming out the cartridge.



Disassemble the cartridge out the forkleg.



Disassemble the dust-wiper.

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Disassembly & Assembling



Disassemble the circlip.



Heat the outer-tube near the oilseal.  
(not too hot)



Pull with both hands the outer-tube from the inner-tube.

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Disassembly & Assembling



Remove DU-bush inner-tube.



Remove DU-bush outer-tube.



Remove support ring.

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Exploded View

Disassembly & Assembling



Disassemble the oilseal.  
Pay attention to the assembling  
direction!!!



Remove the circlip.



Remove the dust wiper.

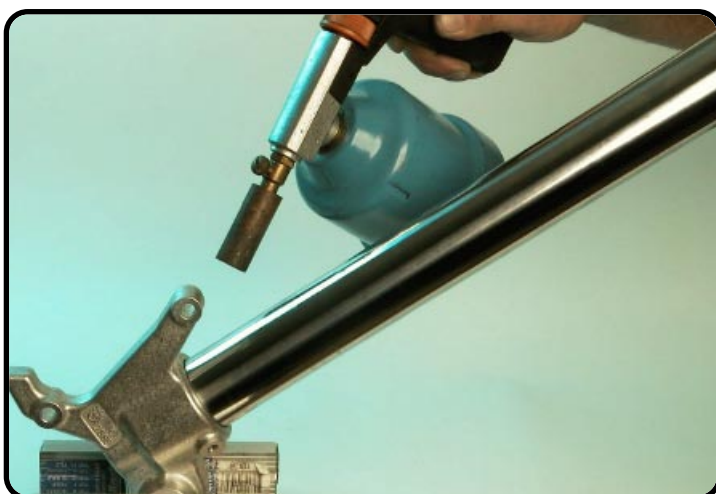
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Disassembly & Assembling



- dust wiper
- circlip
- oilseal
- support ring
- DU-bush outer-tube
- DU-bush inner-tube



Heat the axle-clamp.



Use T503 and T605....

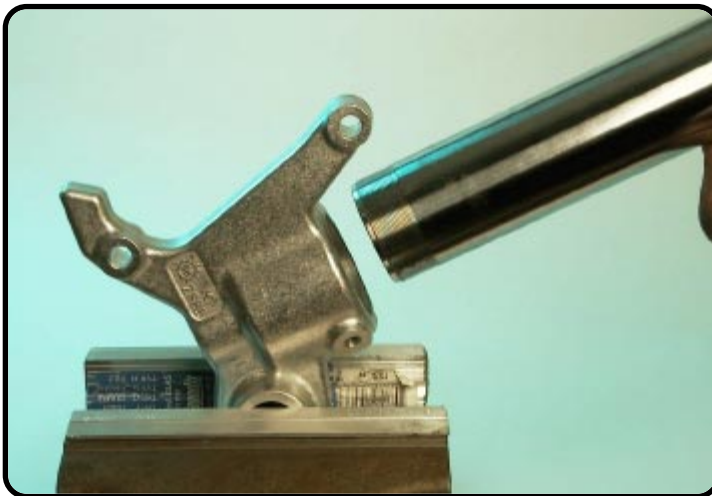
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Disassembly & Assembling



....and unscrew the inner-tube from the axle-clamp.



Remove the inner-tube.



Remove the O-ring out the groove of the axle-clamp.

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Disassembly & Assembling



## Disassembly screwcap



Disassemble the adjustment knob. Pay attention to the steel balls and spring!!!

For PA version: Manual PA Front Fork 2000



Unscrew plastic holder adjustment tube out of the screwcap.



Remove airrelease screw with O-ring.

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Disassembly & Assembling



- rebound adjusting knob with steel balls and spring
- holder adjustment tube
- airrelease screw with O-ring
- screwcap with O-ring



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Disassembly & Assembling



## Assembling screwcap



Assemble the airrelease screw



Screw the holder adjustment tube in the cap.



Grease the O-ring, steel balls and spring with T158.  
Assemble the knob with steel balls and spring.

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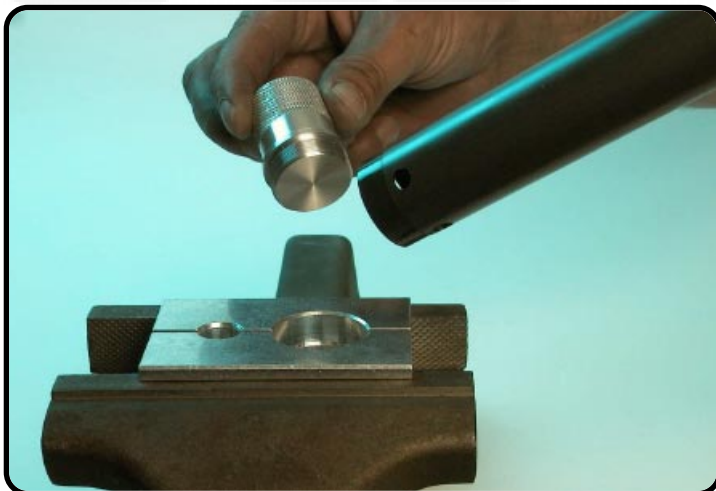
Exploded View

Disassembly & Assembling



## Disassembly cartridge

1. Clamp the tube with plug in the clamping-block. (Tool T508S)



2.



3.



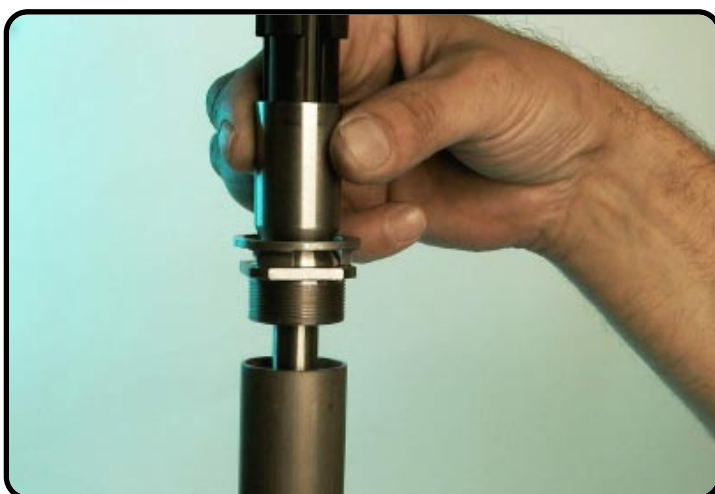
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Disassembly & Assembling



Unscrew the screwsleeve.



Remove the screwsleeve out of the tube.



Disassemble the piston rod "complete".  
Pay attention to the piston ring!!!

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Disassembly & Assembling



Clamp the piston rod in T508S **"not too tight"** and unscrew the hydraulic stop from the piston rod.



Remove the hydraulic stop.

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Disassembly & Assembling



Remove the screw sleeve with spring retainer.



Disassemble the DU-bush with T507 and press it out the screwsleeve with support of the vice.



- spring retainer
- screwsleeve
- DU-bush

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Disassembly & Assembling



## Disassembly holder compression



Clamp the compression holder in the vice and unscrew the check-valve nut. (size 17)

Version with a locking: remove the locking with a file.



Remove the check-valve nut.

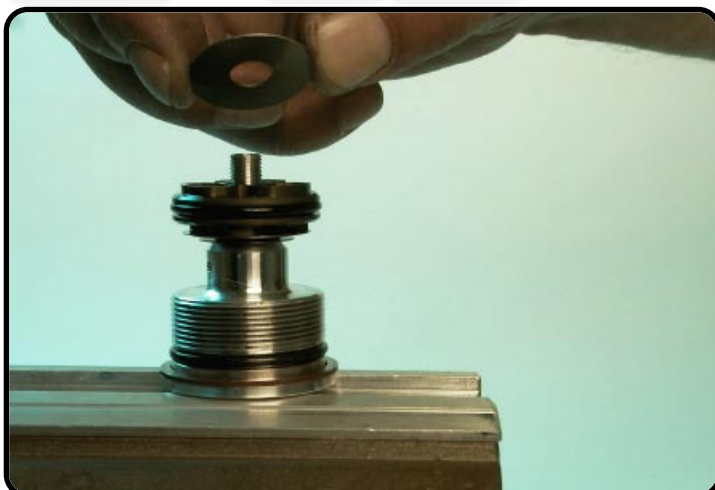


Remove the check-valve spring. Pay attention to the assembling direction!!!

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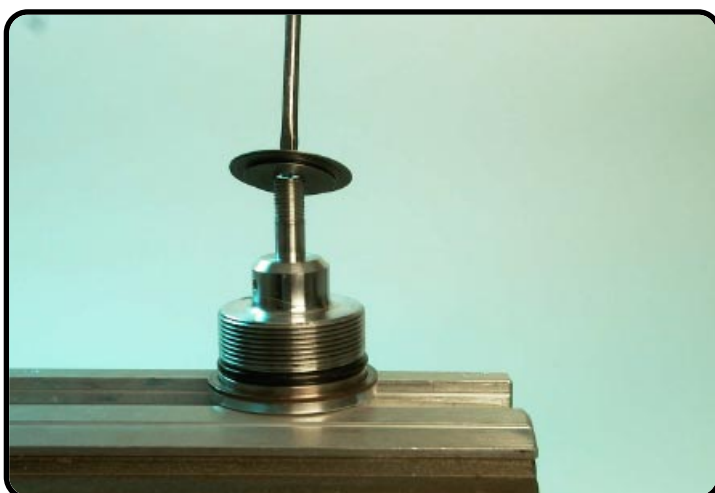
Disassembly & Assembling



Remove the check-valve shim.



Disassemble the compression piston with O-ring.  
Pay attention to the assembling direction!!!



Place a screwdriver on top of the holder and remove the entire shim packet.

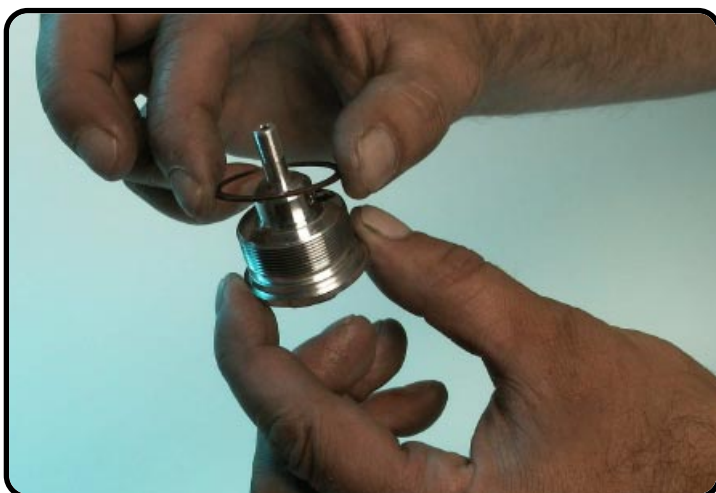
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Disassembly & Assembling



Disassemble the O-ring.



Remove the copper washer.



- holder compression
- copper washer
- O-ring
- shims compression
- piston compression with O-ring
- shim check-valve
- spring check-valve
- nut check-valve



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Disassembly & Assembling



## Assembling holder compression



Replace copper washer.



Assemble the O-ring.



Replace the entire shim packet.

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Disassembly & Assembling



Replace piston.  
Pay attention to the assembling  
direction!!!



Replace shim check-valve.



Replace spring check-valve.  
Pay attention to the assembling  
direction!!!

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Disassembly & Assembling



Wetting the thread of the nut with T132 and tighten it....



....to a torque of 5 Nm (+10%).



Check if the spring is correctly placed in the chamber of the nut.

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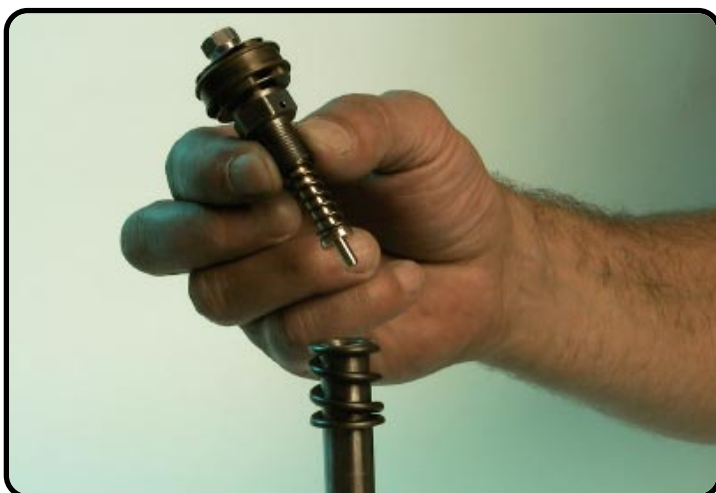
Disassembly & Assembling



## Disassembly tap rebound



Clamp the piston rod (at the level where the hydraulic stop is mounted) in T508S and unscrew the rebound tap.  
(Size 17)



Remove the rebound tap "complete".



Remove the rebound spring.

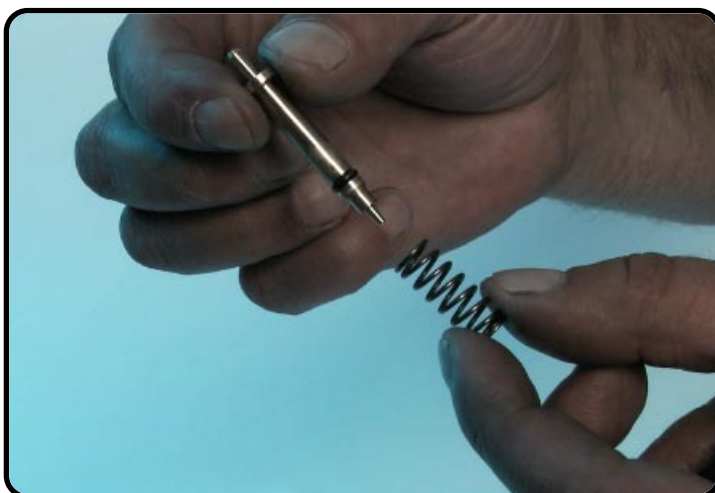
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Disassembly & Assembling



Pull the rebound needle with spring out of the tap rebound.



Check the O-ring.



Pay attention to the position of the triangular shims on the piston !!  
Clamp the tap in the vice and unscrew the nut. (Size 10)  
Version with locking: Remove the locking with a file.

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Disassembly & Assembling



Remove the nut.  
Pay attention to the assembling  
direction!!!



Place a screwdriver on top of  
the tap and remove the entire  
shim packet.

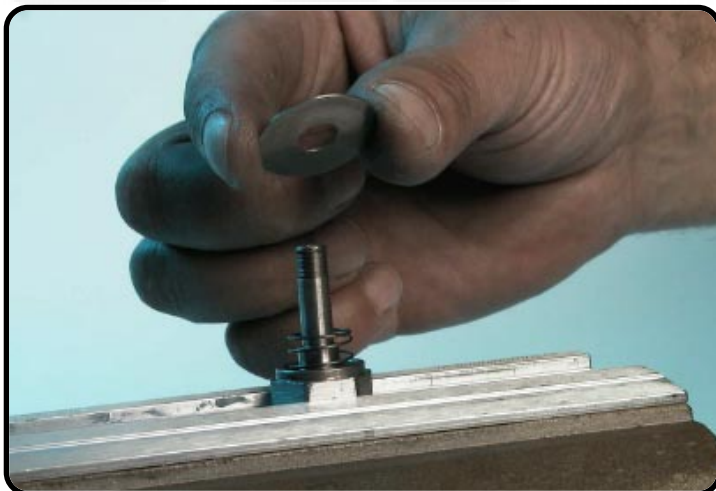


Remove piston rebound.  
Pay attention to the assembling  
direction!!!

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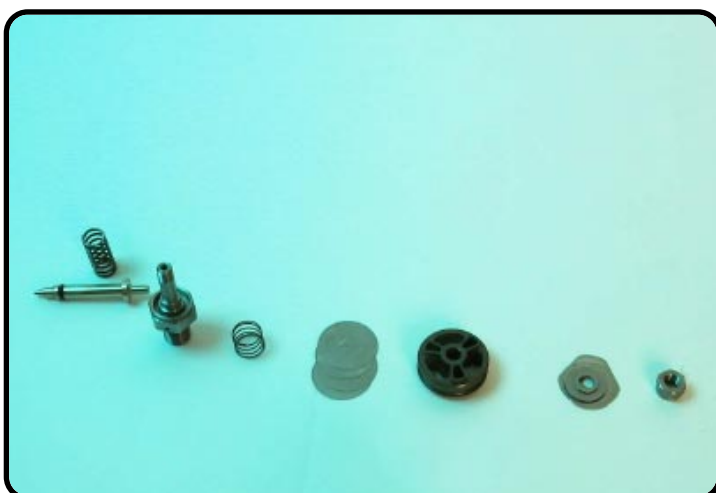
Disassembly & Assembling



Remove check-valve shims.



Remove spring check-valve.



- reb. adjustment needle with O-ring
- spring
- tap rebound
- spring check-valve
- shims check-valve
- piston rebound
- shims
- nut M6x0.5

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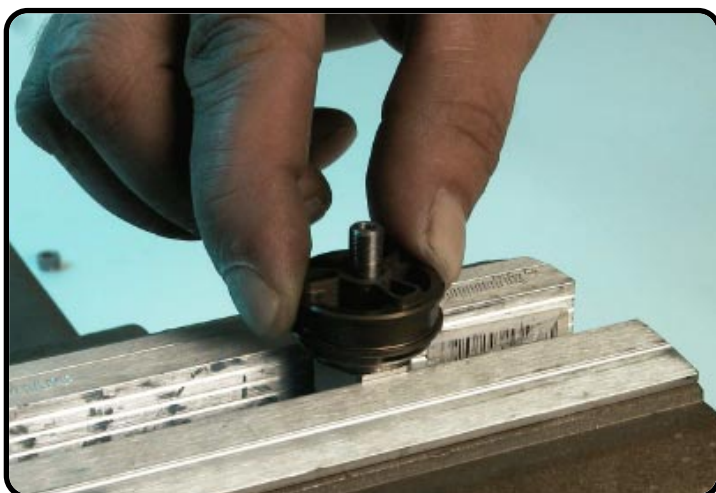
Disassembly & Assembling



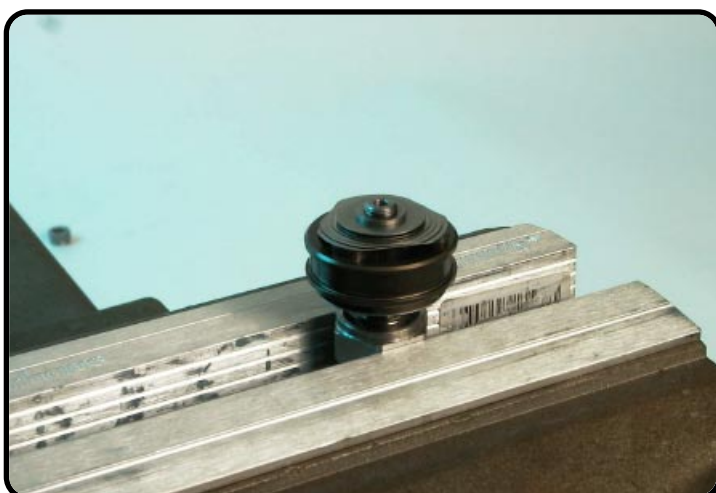
## Assembling tap rebound



Assemble the spring and shims check-valve.



Assemble the piston rebound.  
Pay attention to the assembling direction!!!



Replace the shims.  
Pay attention to the position of the triangular shims on the piston!!!



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Disassembly & Assembling



Wetting the thread of the nut with T132.

Screw the nut on the tap....



....tighten the nut to a torque of 5 Nm (+10%).



Grease the O-ring of the adjustment needle with T158.

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Disassembly & Assembling



Mount the needle with spring into the tap rebound.

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Disassembly & Assembling



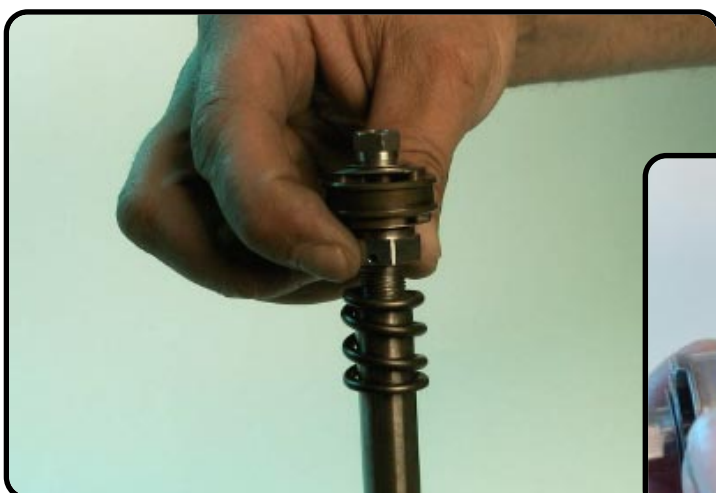
## Assembling cartridge



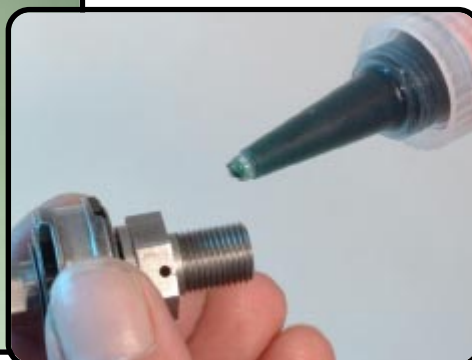
Press with T507 the DU-bush into the screwsleeve.



Clamp the piston rod in T508S. At the level where the hydraulic stop is mounted.



Wetting the thread with T131. And screw the tap in the piston rod.



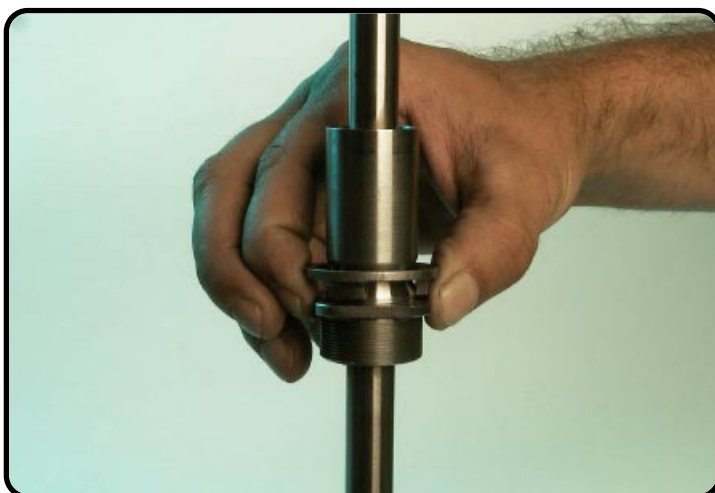
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Disassembly & Assembling



Tighten the tap rebound.



Clamp the piston rod **"not too tight"** in at the other side and replace the screwsleeve with springretainer.



Screw the hydraulic stop "hand tight" to the end of the thread of the piston rod.

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Disassembly & Assembling



Clamp the tube with plug in the clamping block (T508S) and assemble the piston rod "cpl." into the tube.  
Guide the piston ring!!!



**Before assembling wet the thread of the sleeve with T131.**

Screw the sleeve into the tube.



Tighten the sleeve.

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Disassembly & Assembling

## Assembling outer-tube



Replace a new O-ring in the groove of the axle-clamp.



Wetting the thread of the axle-clamp with T132.



Wetting the thread of the inner-tube with T132.

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Disassembly & Assembling



Assemble the inner-tube in the axle-clamp.



Screw very tight the inner-tube with T503 and T605.



Apply the dust wiper with T511.



Place T512 over the inne-tube and assemble the dust wiper.



Replace the circlip.



Apply the innerside of the oilseal with T511 and the outside with frontfork oil.



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Disassembly & Assembling



Assemble the oilseal.  
Pay attention to the assembling  
direction!!!



Remove the tool and replace the  
support ring.



Assemble both DU-bushes.



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Exploded View

Disassembly & Assembling



Slide carefully the outer-tube over the inner-tube.



Assemble with T502S the DU-bush -with the flat side- and....



....tap or push it into the outer-tube.

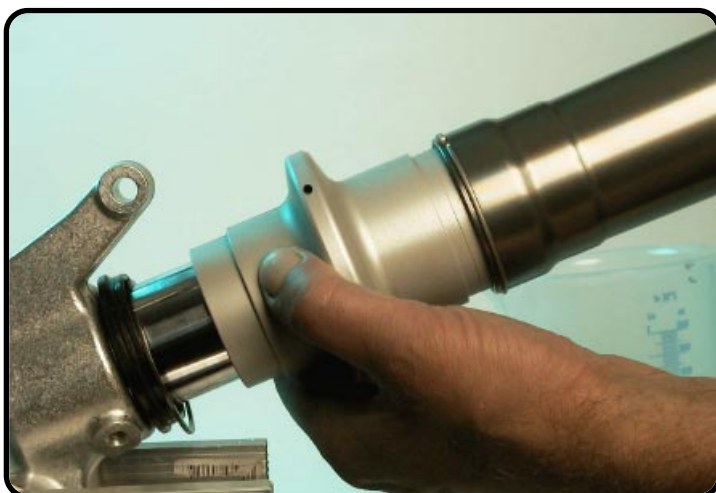
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Disassembly & Assembling



Use the other side of T502S....



....and tap the oilseal into the outer-tube.



Assemble the circlip in the groove of the outer-tube.  
**Important: Check this very carefully!!!**

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Disassembly & Assembling



Assemble the dust wiper with T502S.



Place the cartridge in the forkleg.



Apply the O-ring of the compression piston with frontfork oil.

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Disassembly & Assembling



Assemble the cartridge in the center of the axle-clamp and tighten the holder compression to a torque of 25Nm.



Assemble the adjustment tube.

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Disassembly &amp; Assembling



Keep the outer-tube down and the piston rod a little bit extended (like picture), fill the forkleg with oil till the edge of the outer-tube, wait a few moments, you will see airbubbles rising up.

The oil must stay **above** the 4 holes of the inner-tube, if necessary fill some extra oil in the forkleg.



Move the piston rod (keep the adjustment tube on his place) several times up and down, till you feel that the cartridge is full with oil, (the damping is smooth over the entire stroke) mostly it is necessary to fill some (not too much) extra oil in the forkleg.

Now compress the piston rod and outer-tube fully down, and fill the forkleg with oil till about 25mm **under** the 4 holes of the inner-tube. Move the piston rod and the outer-tube at the same time several times up and down over the entire stroke.



Push the piston rod and outer-tube fully down and adjust the oil level (airchamber) with T137S.

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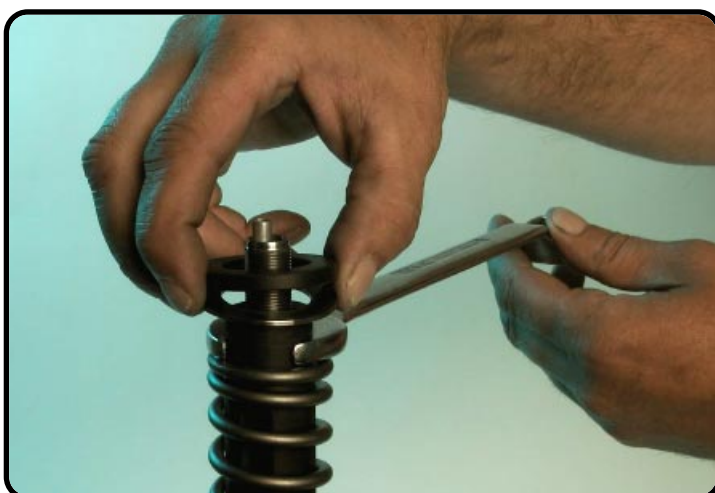
Disassembly & Assembling



Pull the piston rod out and assemble the spring.



Pull the spring downwards and place open-end spanner 20 on the hydraulic stop.

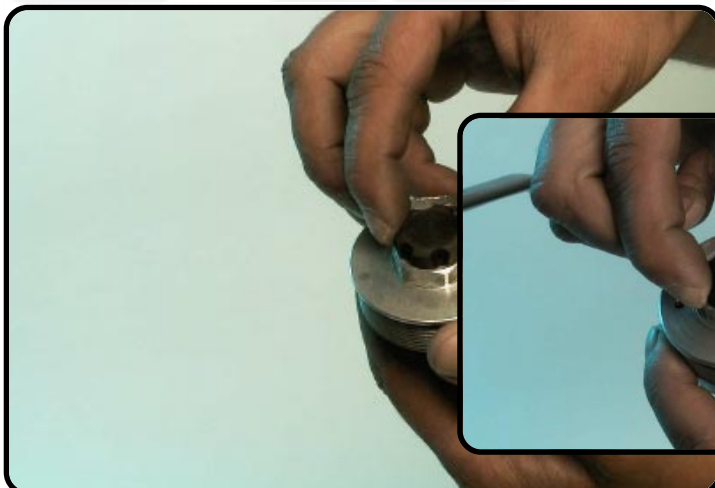


Replace first the steel washer on the spring, then the preload spacer(s).

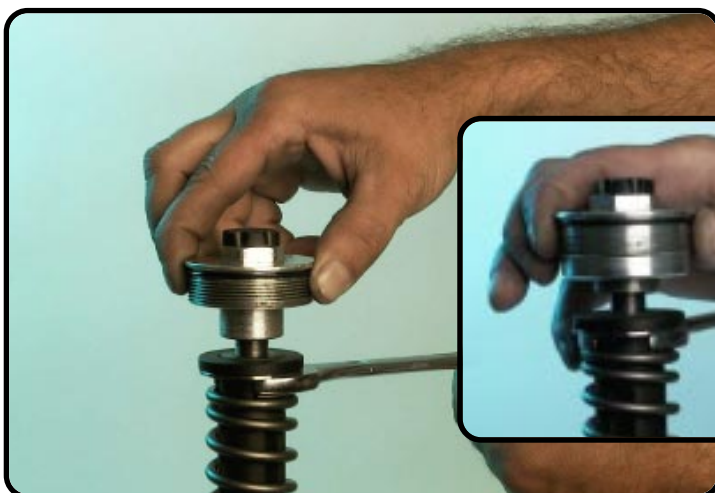
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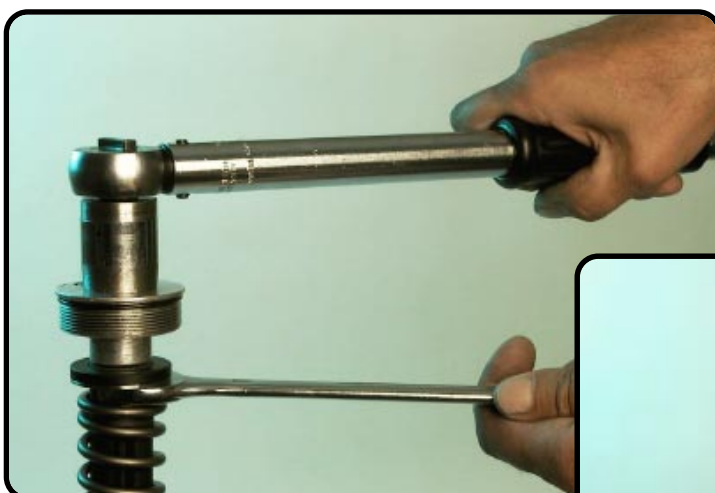
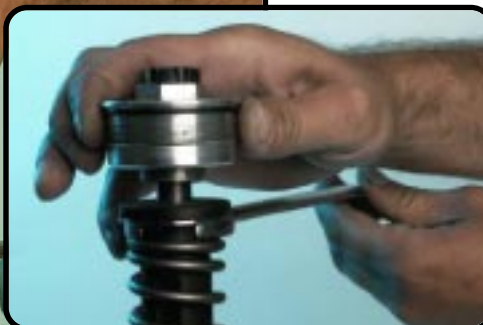
Disassembly & Assembling



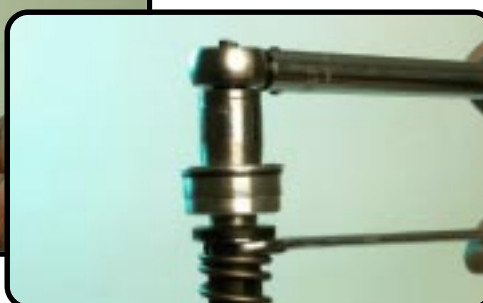
Turn the adjusting knob completely to the left.



Screw handtight the screwcap on the piston rod.



Screw down the screwcap, till the hydr. stop is against the cap and tighten it to a torque of 20 Nm ( $\pm 10\%$ ).

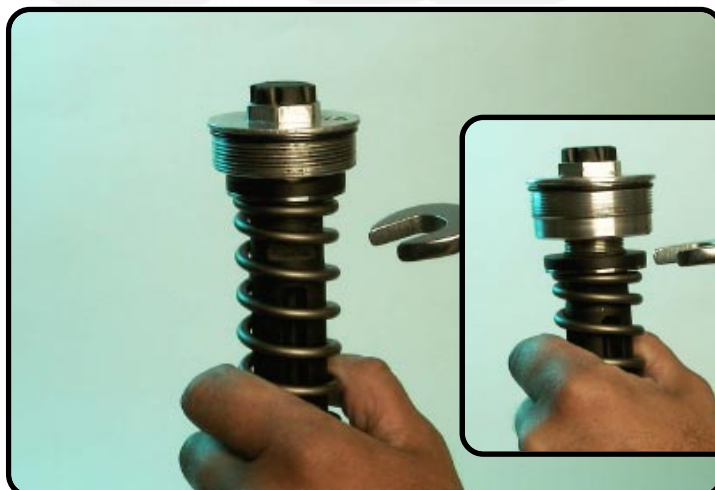




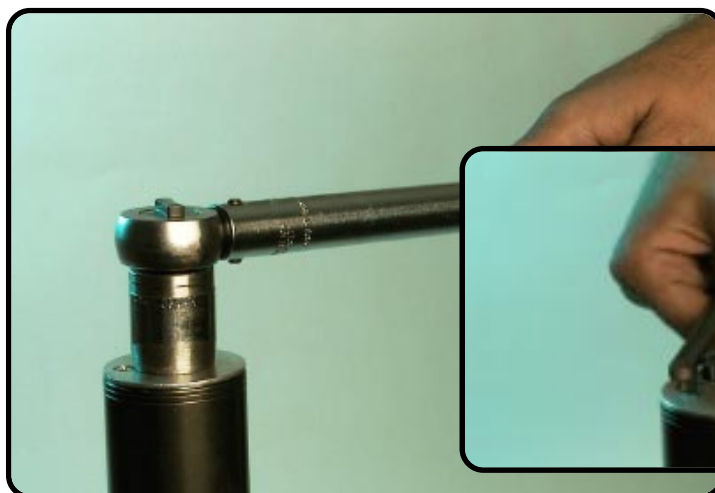
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Disassembly & Assembling



Pull the spring downwards and remove the spanner.



Tighten the screwcap to a torque of 25Nm.

Use T103 with the PA version.



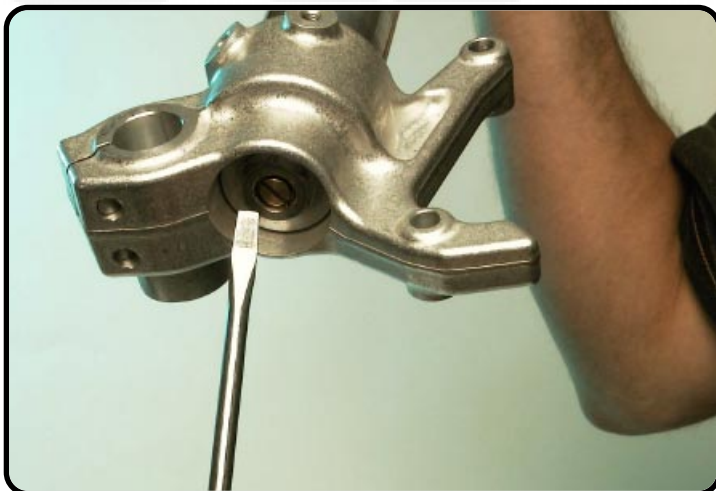
Position rebound!



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Disassembly & Assembling



Position compression!