

DT SWISS

F 232 ONE

TECHNICAL MANUAL

V2021.11

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1. GENERAL

1.1 VALIDITY

This manual describes the component specified on the front page and the footer. This manual is valid for the design of the product as of 22.11.21. Deviations are possible and all items are subject to technical changes.

1.2 SAFETY

The safety and warning instructions are classified as follows:



DANGER

...indicates a hazardous situation that, if not avoided, will result in death or serious injury.



CAUTION

... indicates a hazard with a medium level of risk which, if not avoided, may result in minor or moderate injury.



NOTE

... indicates a potentially hazardous situation that may result in damage to property.

1.3 TARGET GROUP

This manual is intended for the user of the component and dealers. This manual offers the experienced user the possibility to carry out minor service work himself. If you have any doubts about your own abilities, you should definitely contact a specialist or a DT Swiss Service Center. Any warranty claims will lapse if work is not carried out properly.

1.4 LAYOUT

The cover page and the footing provide information about the type of product and manual as well as the version of the manual. The DT Swiss contact details can be found on the back. A list of all DT Swiss service centers can be found at www.dtswiss.com.

This manual is intended for being printed as an A5 booklet. Only print this manual if electronic usage is not possible.

1.5 GENERAL MAINTENANCE INFORMATION

Unless otherwise specified, moving parts, threads, O-rings and seals must be greased before assembly.

CLEANING

For an optimal result of the maintenance works, every component that will be disassembled must be cleaned. Only use cleaners which do not damage the components. Especially the cleaning of O-rings and sealings requires mild cleaners. Observe the instructions for use of the respective cleaner.

DT Swiss recommends the following cleaners:

- Motorex Rex
- Motorex Swissclean
- Motorex OPAL 2400, 3000 OPAL, OPAL 5000

Use soapy water or similar mild cleaners for external cleaning.

TOOLS

To ensure a damage-free mounting and dismounting of the components, only use the tools which are mentioned in this manual. Special tools are indicated at the beginning of a chapter in the table "Required material".

The use of different tools is at the discretion of the user. If components are damaged by the usage of differing tools, the user is liable.

DT Swiss special tools are precision tools. Damage-free mounting and dismounting of the components can only be ensured if the tools are working properly and if the condition of the tools are perfect. Always keep the tools in their original packaging or adequate devices to prevent damage.

1.6 ENVIRONMENTAL PROTECTION

The statutory regulations shall apply. Whenever possible, avoid creating waste. Waste, especially carbon, lubricants, cleaners and any other fluids must be disposed in an environmentally compatible manner.

Only print this manual if electronic usage is not possible.

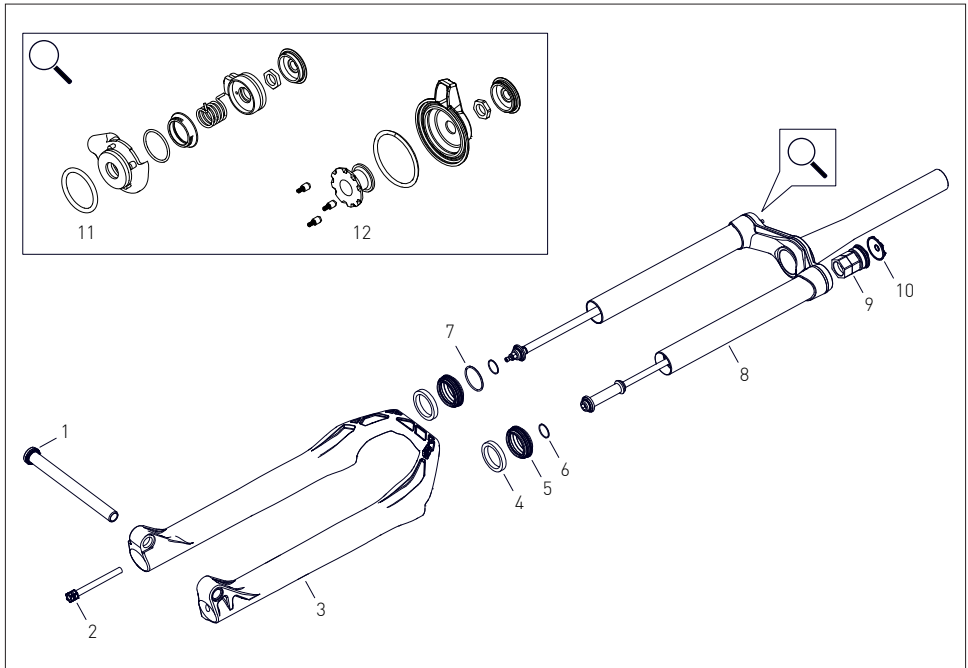
1.7 EXCLUSION OF LIABILITY

The activities listed in this manual may only be carried out by persons with sufficient specialist knowledge. The user is liable for any damage or consequential damage caused by wrongly maintained or installed components. If you have doubts, please contact your region's DT Swiss pro level service center.

1.8 WARRANTY

Warranty conditions can be found at www.dtswiss.com.

2. OVERVIEW



- 1 RWS axle
- 2 rebound adjuster
- 3 lower unit
- 4 foam ring
- 5 wiper seal
- 6 O-ring connector

- 7 SAG O-ring
- 8 upper unit
- 9 air chamber cap with volume spacers
- 10 valve cap
- 11 remote controls kit
- 12 manual controls kit

3. SERVICE AND CARE

3.1 SAFETY



DANGER

RISK OF INJURY DUE TO WRONG MAINTENANCE OF THE FORK!

Incorrect maintenance or assembly of the fork can lead to incorrect function!

- Maintenance and assembly may only be done by a skilled professional.
- In case of any doubt, contact a DT Swiss service center.
- Only use original spare parts.

3.2 SERVICE INTERVALS

If service intervals are not respected, any warranty claims can be denied.

Task	Interval
Full service carried out by a DT Swiss service center	Annually or after 200 operating hours
Small service see " 5. Small Service " on page 8	50 operating hours more frequently in case of extreme operating conditions.
Check the fork for damage and cracks. If there is any damage, contact the DT Swiss Service Center.	Before and after every ride and after a crash
Check the fastening is correct / check tightening torques	Before each ride
Check the functionality	Before each ride
Care (see below)	After each ride

3.3 CARE AND CLEANING

The following care and cleaning instructions must be observed:

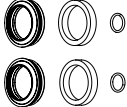
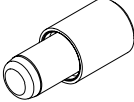
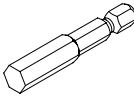
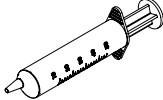

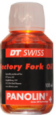
- Clean the fork with a damp cloth after each ride. Remove dirt accumulations in the area of the wiper seals.
- Never use aggressive cleaners that damage the wiper seals.
- Never use high pressure cleaners. Water and dirt can get into the fork and damage it!
- Remove all visible, dried dirt from the area of the wiper seals. This will prevent dirt from getting into the fork.
- It is not necessary to grease the fork in the area of the wiper seal.

4. TROUBLE SHOOTING

Problem	Cause	Solution
The fork is not responding properly.	The bedding-in time is not over.	Continue riding (bedding-in time is about 20 operating hours).
	The air pressure is too high.	Decrease the air pressure controlled using a suitable shock pump.
	The fork needs a small service.	Carry out a small service [see "5. Small Service" on page 8] yourself or by your dealer or a DT Swiss service center.
The fork bottoms out on moderate bumps.	The air pressure is too low.	Increase the air pressure controlled using a suitable shock pump.
The full travel of the fork cannot be used.	Air pressure is too high.	Reduce the air pressure.
	Wrong measurement of the travel. Some forks do not use the full stroke of the stanchions.	Always measure the distance between wiper seal and SAG O-ring.
The fork does not rebound completely and hardens on fast repetitive bumps.	Too much rebound damping.	Decrease rebound damping.
The fork rebounds too fast, the front wheel loses contact to the ground after bumps or it slides in turns.	Not enough rebound damping.	Increase rebound damping.
The lockout does not work well.	Leaks inside the cartridge.	Contact your local dealer or the responsible DT Swiss service center to solve this problem.
	Remote Lockout: The lockout cable is not tensioned correctly.	Check the proper fixation and the tension of the lockout cable.

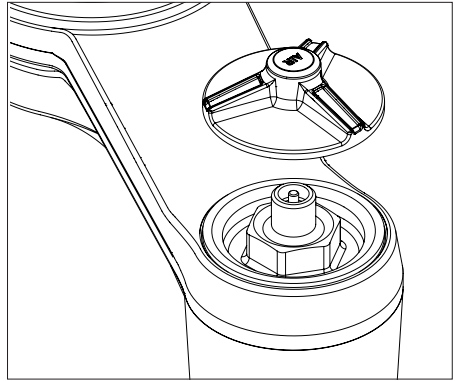
If the problem cannot be solved, contact a DT Swiss service center!

5. SMALL SERVICE

PREPARATORY STEPS	Link		
Clean the fork	„Cleaning“ on page 4		
REQUIRED TOOLS AND MATERIAL	Specification	Quantity	Article number
wiper seal kit Ø32 (2x wiper seal, 2x foam ring, 2x O-ring connector)		1	FWKXXXXXXXXX31066S
presstool wiper seal Ø32		1	FWTXXXXXXXXX013089S
8 mm hex bit		1	FXTXXXXXXXXX018482S.
syringe (minimum volume 20 ml)		1	-
8 mm hex nut		1	-
solid tire lever		1	-
12 mm wrench		1	-
2.5 mm hex key		1	-
torque wrench		1	-
plastic hammer		1	-
shock pump		1	-
degreaser		1	-
thread locker	Loctite 241	as required	-
DT Swiss Lube Fluid		100 ml	4064XXXXXXXXX000026
DT Swiss Fork Oil		100 ml	4064XXXXXXXXX000024

5.1 RELEASING THE AIR

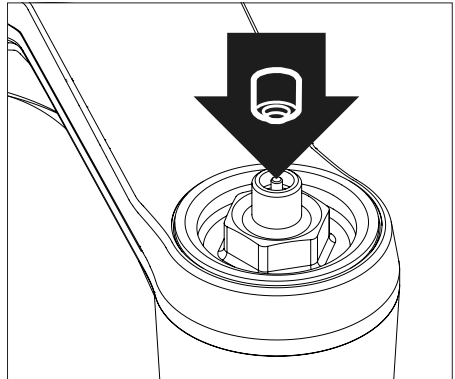
1. Unscrew the valve cap.



2. Carefully press the back of the valve cap onto the valve insert and slowly release the air.

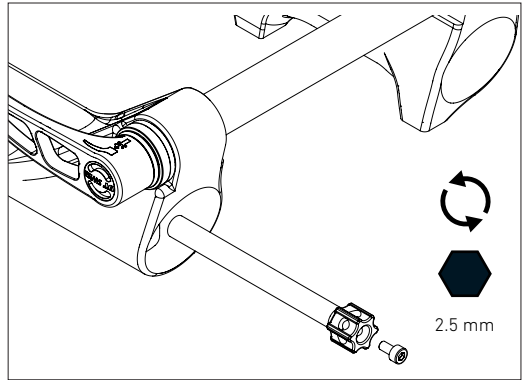
3. Slowly compress the fork two times about 10 mm with the valve insert pressed and pull it apart again.

- This balances the positive and negative air chambers.
- If the fork compresses while releasing the air, inflate the fork again until it is fully extended and release the air more slowly.

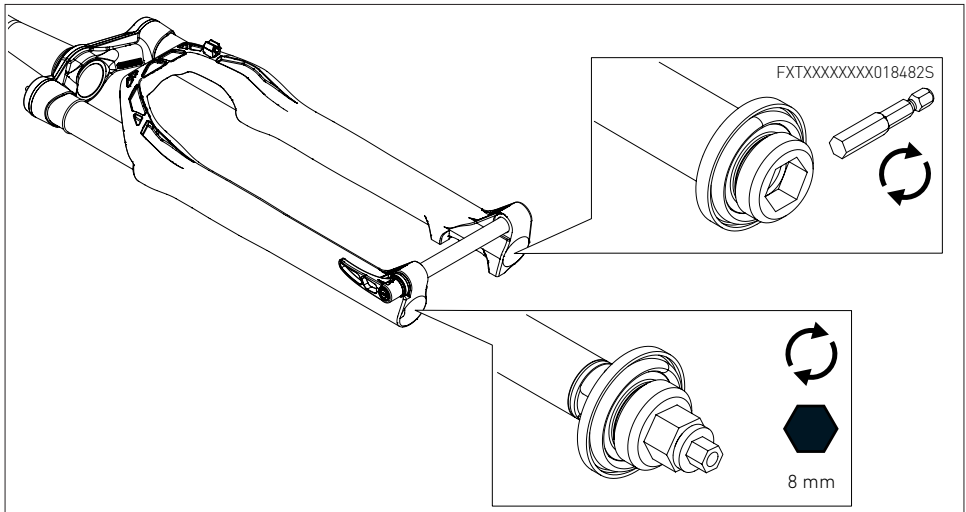


5.2 DISASSEMBLING THE LOWER UNIT

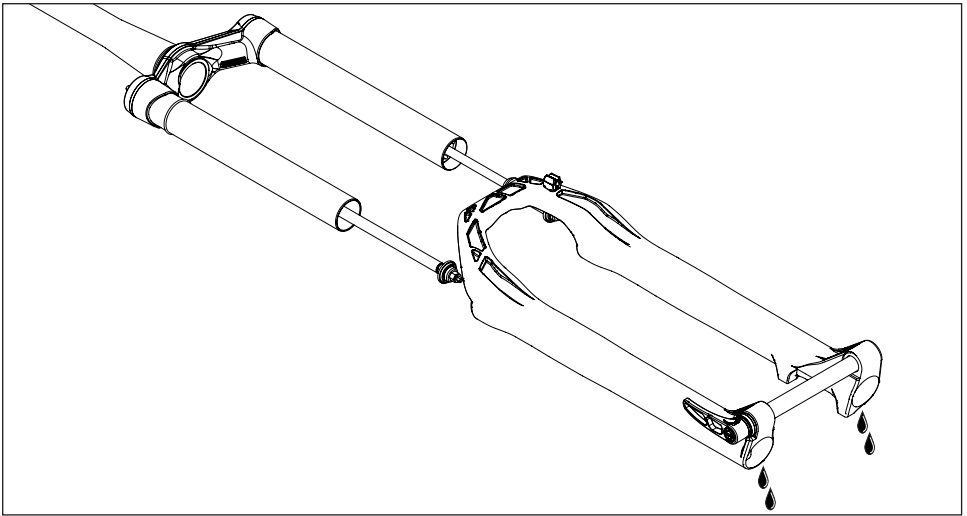
1. Hold the rebound adjuster using a 12 mm wrench and unscrew the fixing screw of the rebound adjuster using a long 2.5 mm hex key.



2. Ensure that the air has been released completely (see „5.1 Releasing the air“ on page 9).



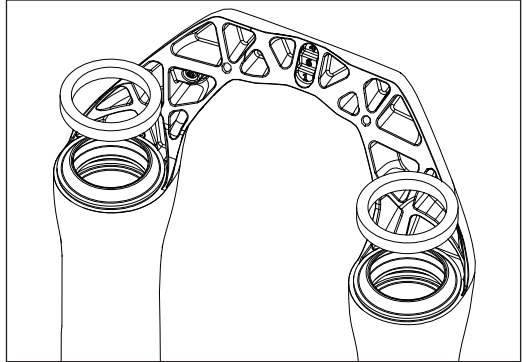
3. Screw the screw on the spring side into the dropout clockwise using the tool FXTXXXXXXXX018482S.
4. Screw the screw on the damping side into the dropout clockwise using an 8 mm hex nut.
→ After the screws are screwed in, about 14 ml oil will leak out of each dropout. Collect the leaking oil using a suitable container.



5. Remove the lower unit carefully.
→ The O-rings on the connectors may fall off after removing the lower unit. Ensure that the O-rings do not stay inside the lower unit.
6. Collect the leaking oil using a suitable container.

5.3 CHANGING THE WIPER SEALS REMOVING THE WIPER SEALS

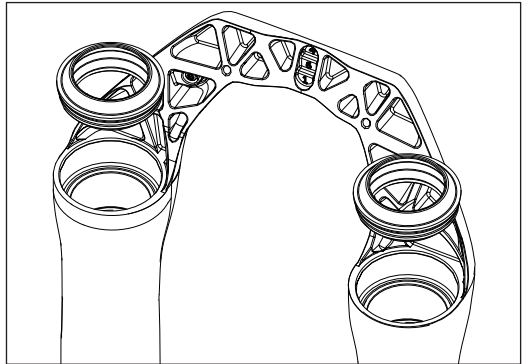
1. Remove both foam rings below the wiper seals.



2. Remove both wiper seals using a solid tire lever.

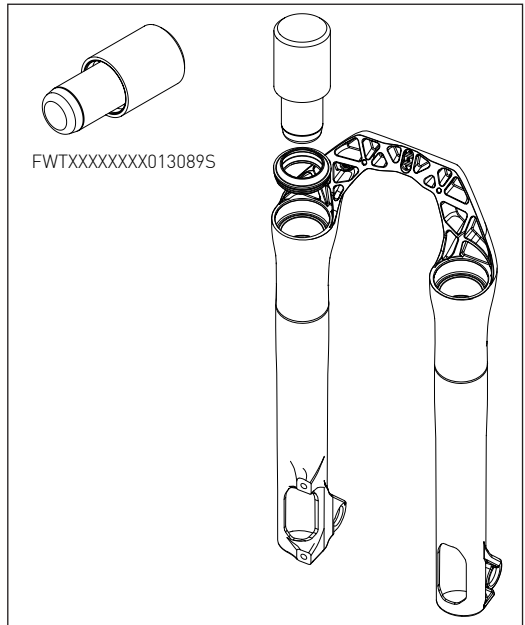


NOTE: Take care not to damage the lower unit when removing the wiper seals!

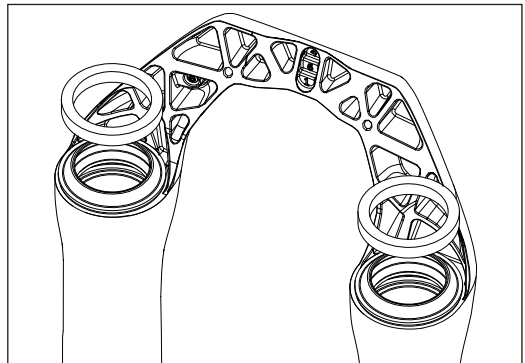


MOUNTING THE WIPER SEALS

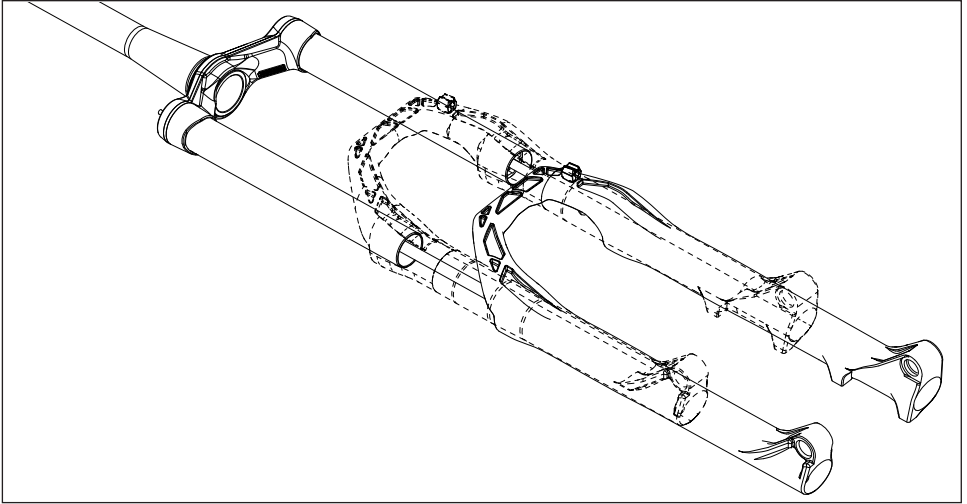
1. Clean the lower unit with an appropriate cleaner.
 - If you are using soap water, flush the lower unit with clear water after cleaning.
 - There must be no residual moisture inside the lower unit before re-mounting.
 - Only use lint-free textile cloths.
2. Slide the tool FWTXXXXXXXXX013089S into the first wiper seal.
3. Carefully drive in the wiper seal using a hammer.
4. Remove the tool from the wiper seal.
5. Repeat steps to mount the second wiper seal.
6. If small rubber slices were cut off from the wiper when pressing in, remove them.



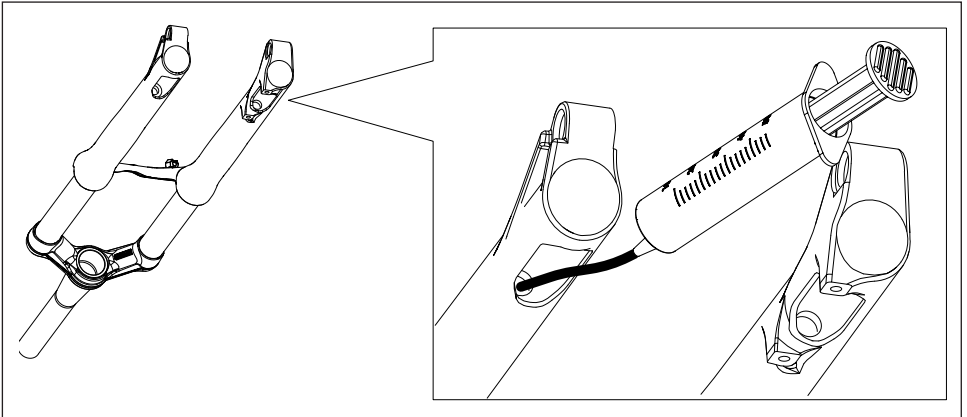
7. Put two new, in DT Swiss Lube Fluid soaked foam rings between the bushings and the wiper seals.



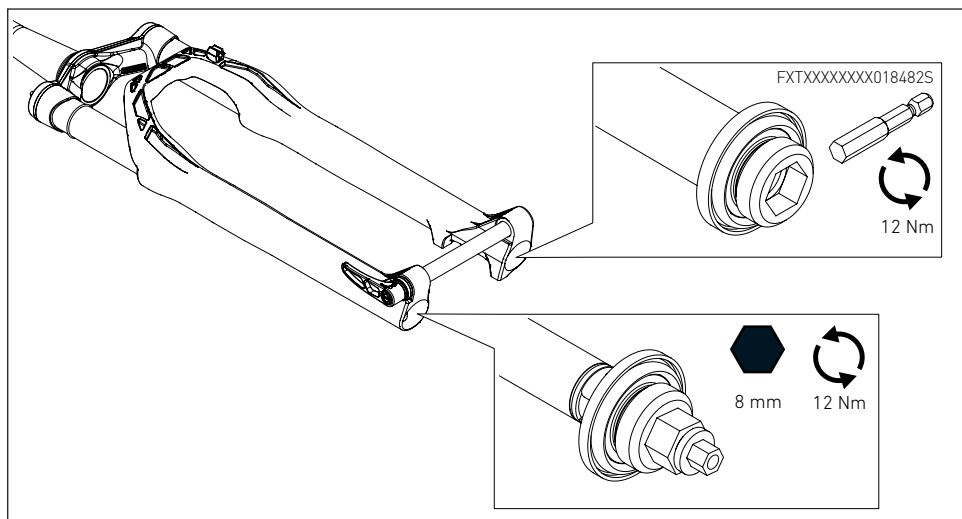
5.4 ASSEMBLING THE LOWER UNIT



1. Put two new O-rings onto the connectors.
2. Slide the SAG O-ring onto the stanchion tube.
3. Slide the lower unit about 2 cm onto the upper unit.

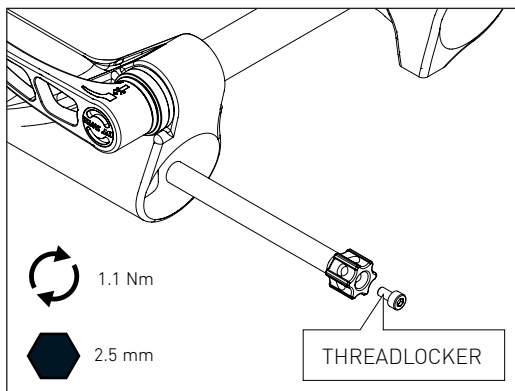


4. Fill 14 ml DT Swiss Fork Oil into the air side of the lower unit.
5. Fill 14 ml DT Swiss Fork Oil into the damping side of the lower unit.
6. Fix the fork 45° - 70° upright for about 60 seconds to allow the bushings to be lubed.
7. Fully slide the lower unit onto the stanchions. Do not compress the piston rod while sliding on the lower unit.



8. Screw in the hexagonal socket screw on the damping side into the lower unit counterclockwise using the special tool FXTXXXXXXXX018482S and tighten it with a torque of 12 Nm.
9. Screw in the hexagonal socket screw on the spring side into the lower unit counterclockwise using an 8 mm hex nut and tighten it with a torque of 12 Nm.

10. Put the rebound adjuster onto the hex of the damping unit.
11. Put Loctite 241 onto the thread of the fixing screw of the rebound adjuster.
12. Hold the rebound adjuster using a 12 mm wrench and screw on the fixing screw of the rebound adjuster using a long 2.5 mm hex key. Tighten the fixing screw with a torque of 1.1 Nm.



CLOSING STEPS

- | | |
|---|--|
| Inflate the fork to your desired pressure | Link |
| Check all functions of the fork | see User Manual for pressure recommendations |

Link

see User Manual for pressure recommendations

6. CONVERTING THE CONTROL ELEMENTS

6.1 CONVERTING THE CONTROL ELEMENTS FROM MANUAL TO REMOTE

PREPARATORY STEPS

Clean the fork, especially the area around the control elements

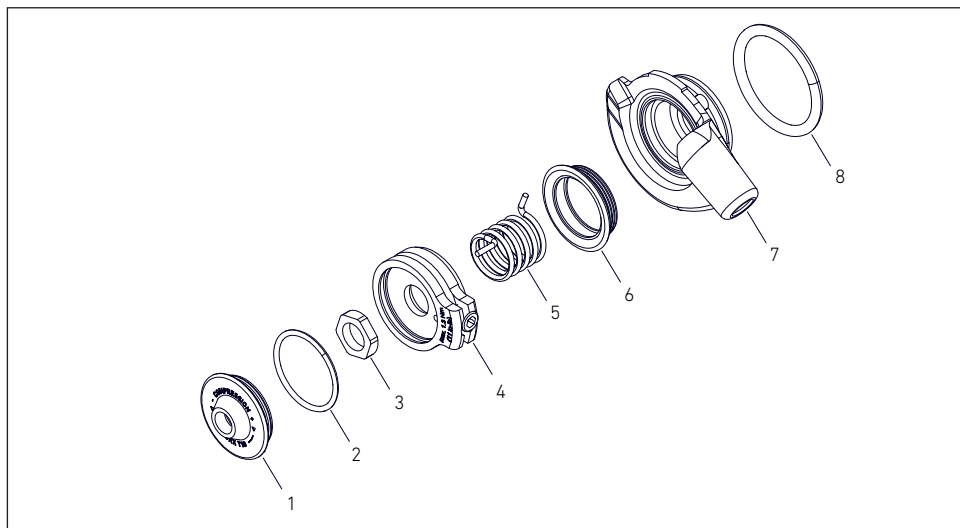
Link

„Cleaning“ on page 4

REQUIRED TOOLS AND MATERIALS

	Quantity	Article number
controls kit Ø32 remote	1	FWXXXXXXXXXX15181S
2 mm hex key	1	
8 mm socket	1	FXTXXXXXXXXX018645S
torque wrench	1	

OVERVIEW REMOTE CONTROLS KIT



1 compression cover

2 O-ring

3 nut

4 remote wheel

5 spring

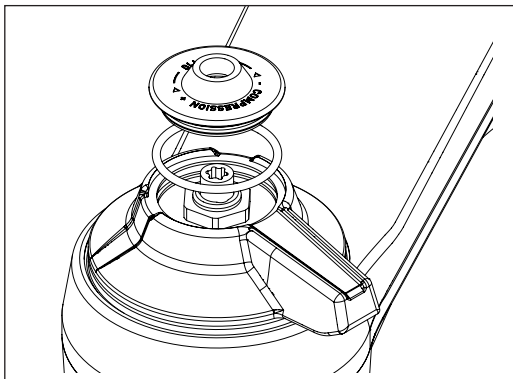
6 dust seal

7 cable guide

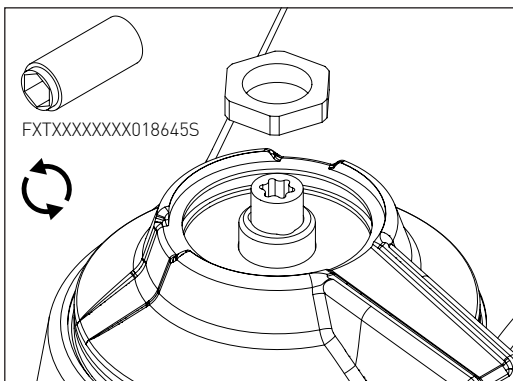
8 O-ring

REMOVING MANUAL CONTROL ELEMENTS

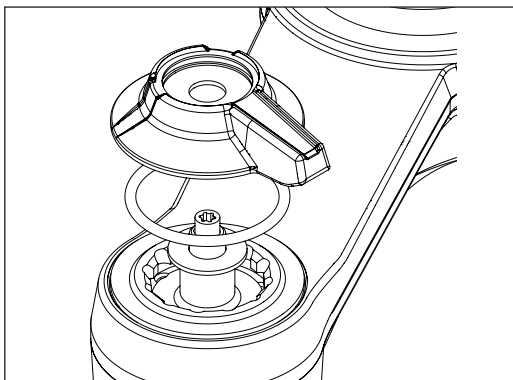
1. Pull off the compression cover and the O-ring.



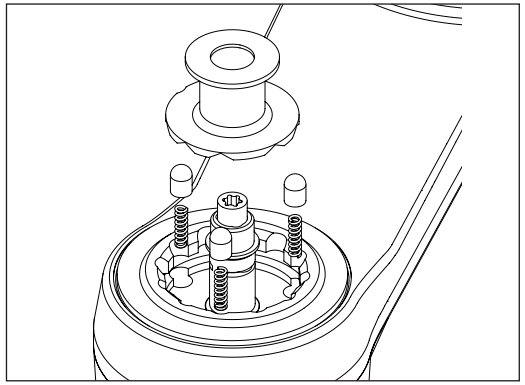
2. Hold the lever with one hand.
→ The lever must not turn while unscrewing the nut!
3. Unscrew the nut of the remote wheel using the tool FXTXXXXXXXXX018645S.



4. Remove the lever and the O-ring underneath.

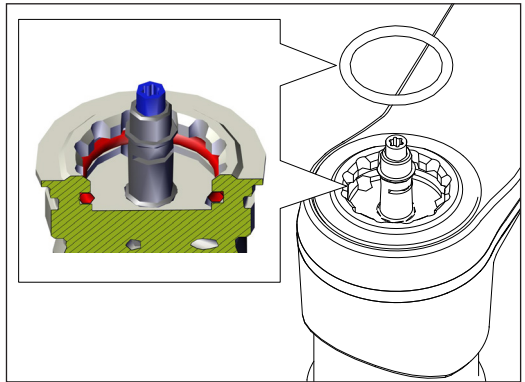


5. Remove the index, the index caps and the springs.

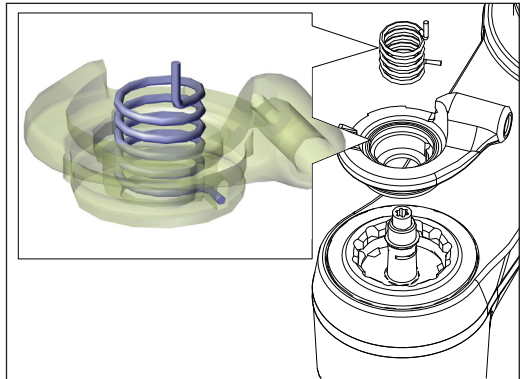


ASSEMBLING REMOTE CONTROL ELEMENTS

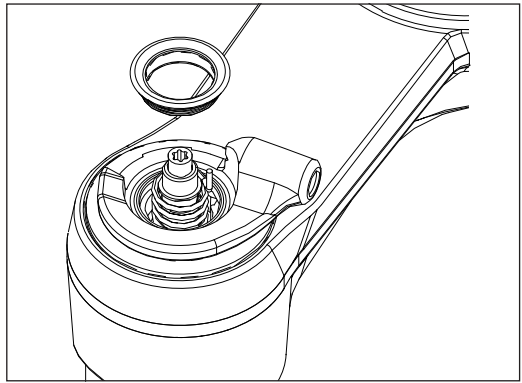
1. Ensure that the lockout pin is turned until stop in clockwise direction.
→ Turn the lockout pin if needed.
2. Slightly grease the O-ring and put it into the groove on the top of the damping unit.
→ The O-ring must rest equally in the whole circumference of the groove.
3. Slightly grease the lockout pin.



4. Insert the spring into the cable guide.
→ The horizontally angled arm of the spring must rest in the slot of the cable guide.
5. Push the cable guide with the spring onto the damping unit.
→ If the cable guide cannot be pushed in fully, possibly the O-ring is not positioned correctly [see step above].
→ The cable guide must rest fully on the fork crown.
→ The cable guide must face in riding direction to the middle of the fork without touching the fork crown.



6. Put the dust seal onto the cable guide.



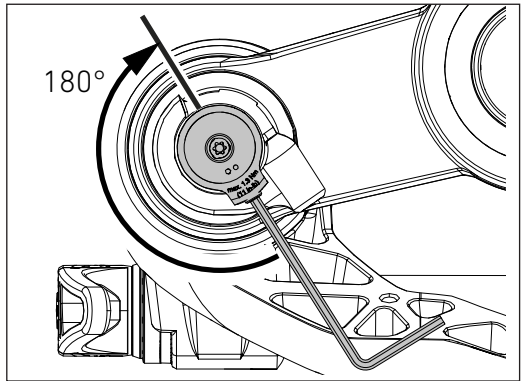
7. Put the end of the spring facing upwards into the bore of the remote wheel.

8. Put the remote wheel onto the lockout pin.

9. Put a 2 mm hex key into the hex of the cable fixing screw and turn the remote wheel approx. 180° until the remote wheel engages behind the rise of the cable guide.

→ Push down the remote wheel while turning.

→ The rise of the cable guide prevents that the remote wheel turns backwards.



10. Push the remote wheel down in the engaged position and hold it in this position.

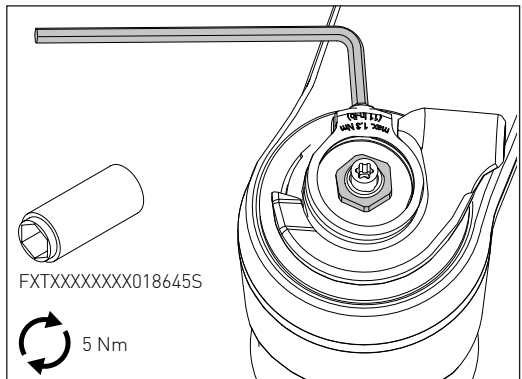
11. Remove the hex key.

12. Screw the nut onto the pin by hand.

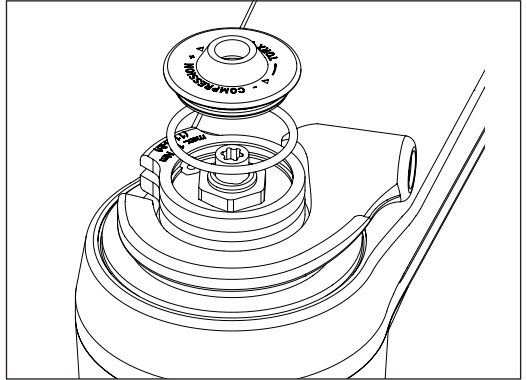
13. Turn the remote wheel into the lockout position using the short end of an angled 2 mm hex key.

→ The remote wheel is in the lockout position when it touches the cable stop [see picture].

14. Screw on the nut clockwise using the special tool FXTXXXXXXXX018645S and tighten the fixing nut with a torque of 5 Nm.



15. Check the correct assembly of the remote wheel: Turn the remote wheel using the short end of an angled 2 mm hex key.
- The remote wheel must turn from the left stop to the cable stop.
 - If the remote wheel cannot be turned in this angle, the lockout pin is not positioned correctly. Dismount the remote wheel and position the lockout pin again (see step 1 on page 18).
16. Put on the O-ring into the groove of the remote wheel and pop on the compression cover.



CLOSING STEPS

Check all functions of the control elements

Link

6.3 CONVERTING THE CONTROL ELEMENTS FROM REMOTE TO MANUAL

PREPARATORY STEPS

Clean the fork, especially the area around the control elements

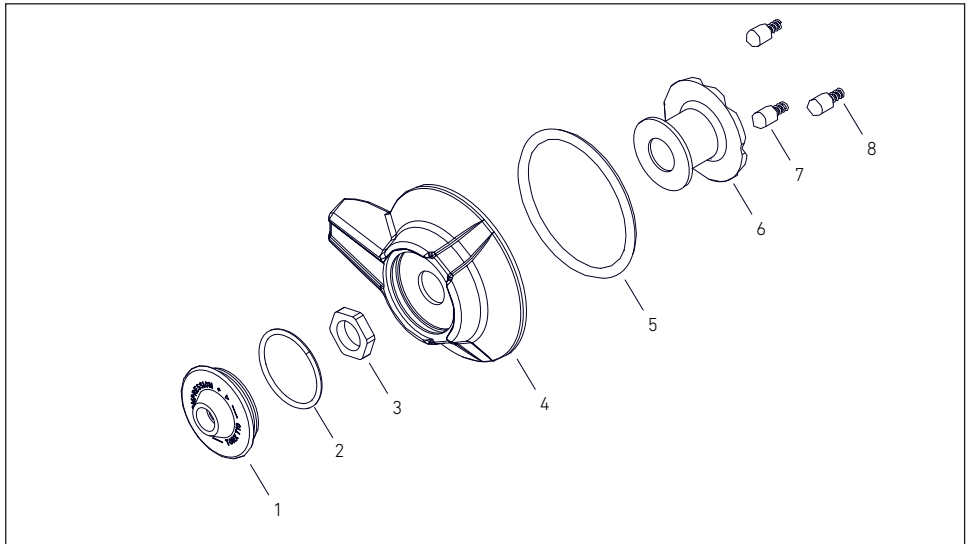
Link

„Cleaning“ on page 4

REQUIRED TOOLS AND MATERIALS

	Quantity	Article number
controls kit Ø32 lever	1	FWXXXXXXXXXX20218S
2 mm hex key	1	
8 mm socket	1	FXTXXXXXXXXX018645S
torque wrench	1	

OVERVIEW MANUAL CONTROLS KIT



1 compression cover

2 O-ring

3 nut

4 lever

5 O-ring

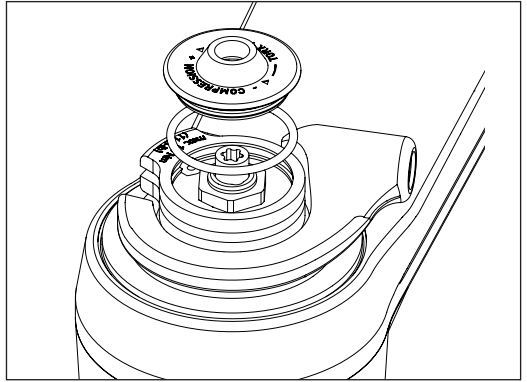
6 index

7 index cap

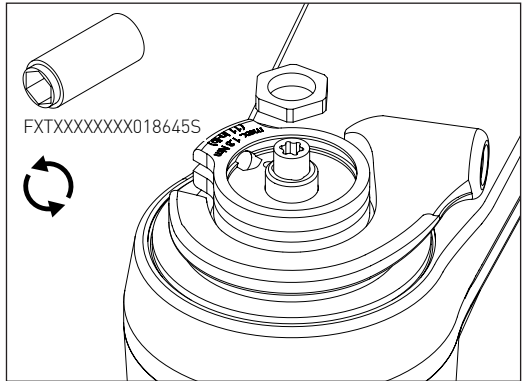
8 spring

REMOVING REMOTE CONTROL ELEMENTS

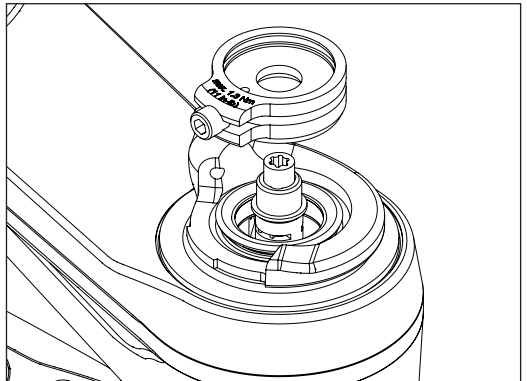
1. Pull off the compression cover and the O-ring.



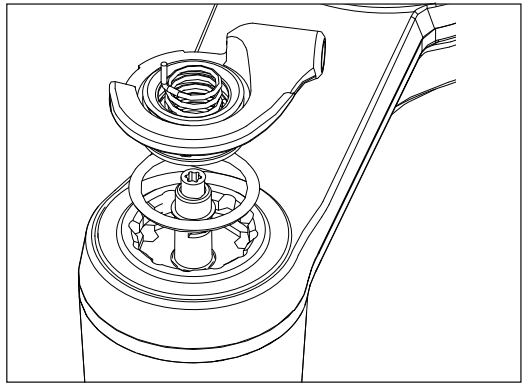
2. Hold the remote wheel.
→ The remote wheel must not turn while unscrewing the nut!
3. Unscrew the nut of the remote wheel using the tool FXTXXXXXXXXX018645S.



4. Pull off the remote wheel.

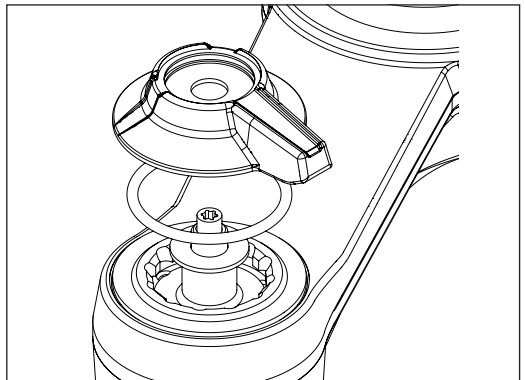
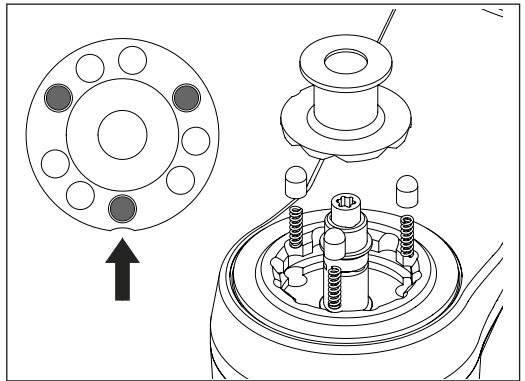


5. Remove the cable guide with dust seal and spring.
6. Remove the O-ring.

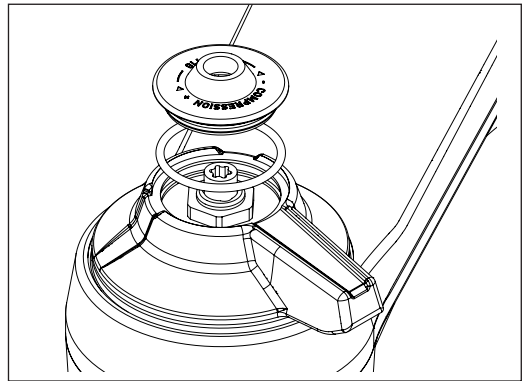
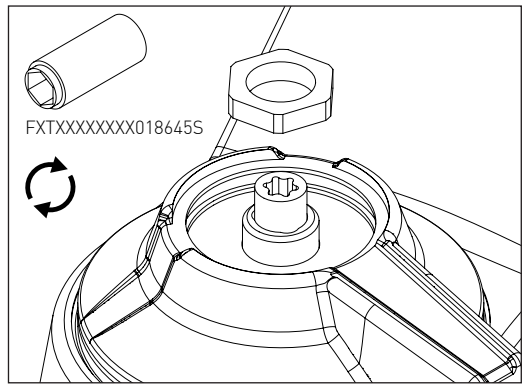


ASSEMBLING MANUAL CONTROL ELEMENTS

1. Ensure that the lockout pin is turned until stop in clockwise direction.
→ Turn the lockout pin if needed.
2. Put the springs into the index caps.
TIP: Put some grease onto the springs so that they stick inside the index caps.
3. Put all three index caps with the springs into the bores of the damping unit.
4. Put on the index and turn it clockwise until it comes to the last of the three index positions. One of the three pins must match in the notch direction of the index.
5. Put on the O-ring and the lever.



6. Screw on the nut by hand.
7. Hold the lever in position «LOCK» and tighten the nut with 5 Nm using an the tool FXTXXXXXXXXX018645S.
8. Check the position of the lever.
 - In the position «DRIVE», the lever must face in riding direction.
 - The lever must lock in the three positions.
9. Check the damping function of the positions «OPEN», «DRIVE» and «LOCK» by compressing the fork.
10. Put on the O-ring into the groove of the remote wheel and pop on the compression cover.



CLOSING STEPS

Check all functions of the control elements

Link

7. APT SPACER ADAPTION

PREPARATORY STEPS

Clean the fork, especially the area around the air chamber cap

Link

„Cleaning“ on page 4

REQUIRED TOOLS AND MATERIALS

15 mm socket

1

25 mm wrench

1

torque wrench

1

7.1 OPENING THE AIR CHAMBER



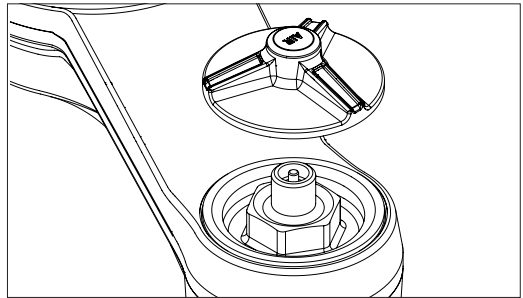
DANGER

RISK OF INJURY FROM PRESSURIZED COMPONENTS!

If the spring unit or the air chamber cap is removed without first releasing the air, the spring unit or the air chamber cap is ejected from the stanchion after loosening the screw connection.

- Release the air completely before unscrewing the spring unit or the air chamber cap.
- While deflating the air, move the fork several times through the travel and deflate the air again. (see „5.1 Releasing the air“ on page 13).
- Components that may be under pressure must never point towards the face or body during disassembly.

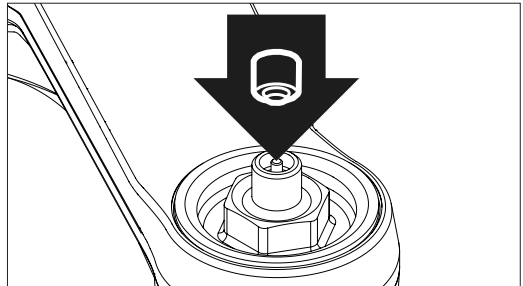
1. Unscrew the valve cap.



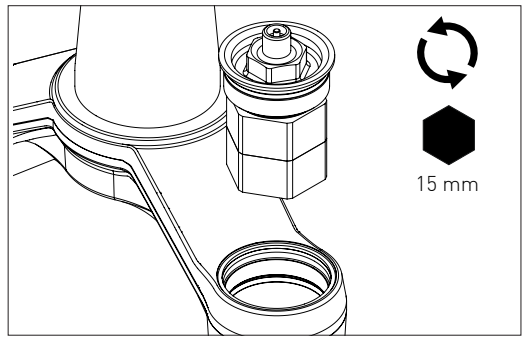
2. Carefully press the back of the valve cap onto the valve insert and slowly release the air.

3. Slowly compress the fork two times about 10 mm with the valve insert pressed and pull it apart again.

→ This balances the positive and negative air chambers.



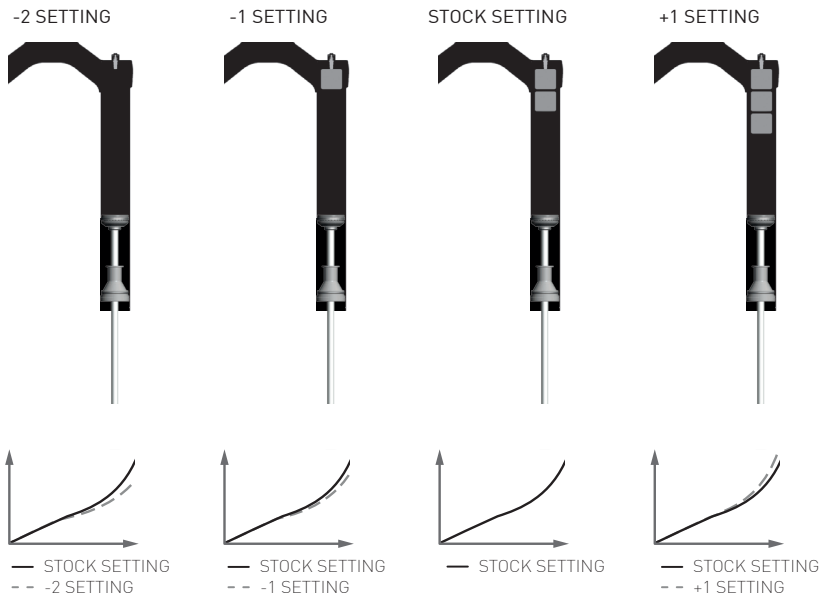
1. Ensure that the air has been released.
2. Unscrew the air chamber cap using a 15 mm socket.



7.2 ADDING / REMOVING VOLUME SPACERS

The APT (Adaptable Progression Tune) system allows the rider to adjust the progression of the air spring curve by adding or removing volume spacers in the fork's air chamber.

The fork is delivered with two volume spacers. A further volume spacer is included for personal adjustment.



The "-2 SETTING" offers a linear and comfortable suspension curve for lighter riders or riders who prefer more comfort.

The "-1 SETTING" offers a slightly less comfortable and less linear suspension curve, recommended for the average rider who prefers more pleasant and soft riding behavior.

The "STOCK SETTING" offers a more progressive suspension curve for sporty riders looking for direct riding behavior.

The "+1 SETTING" offers a progressive suspension curve for aggressive riders looking for very direct riding behavior.



NOTICE

Risk of damage through the installation of more than three volume spacers!

If more than three volume spacers are installed, the fork cannot compress completely.

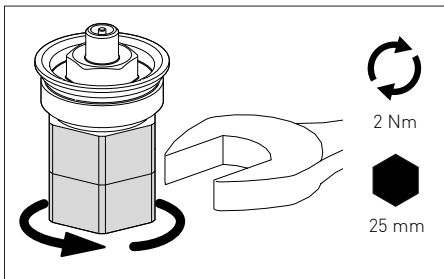
- Never mount more than three volume spacers!

1. Add or remove volume spacer(s) using a 25 mm wrench.



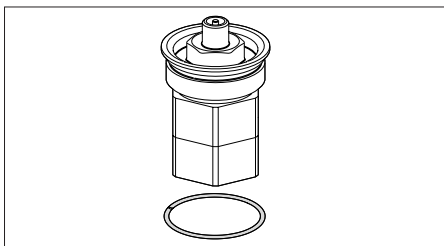
The maximum amount of volume spacers is three! Do not exceed!

2. Tighten the volume spacer(s) with a torque of 2 Nm.



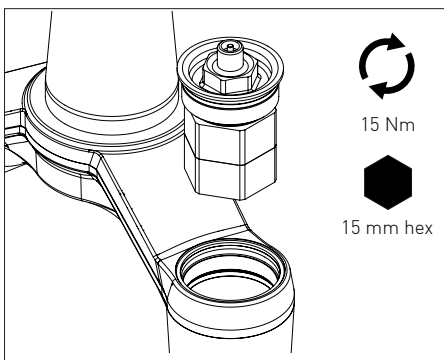
7.3 CLOSING THE AIR CHAMBER

1. Remove the O-ring from the air chamber cap.
2. Check the O-ring of the air chamber cap for damages. Replace the O-ring if necessary. The O-ring is part of the seal kit spring unit FWKXXXXXXXXX28872S.
3. Clean the seat of the O-ring and the thread of the air chamber cap and grease it slightly.
4. Slightly grease the O-ring and put it back onto the air chamber cap.
5. Ensure that the required amount of volume spacers is mounted on the air chamber cap.



The maximum amount of volume spacers is three! Do not exceed!

6. Screw in the air chamber cap using a 15 mm socket and tighten it with a torque of 15 Nm.



CLOSING STEPS

Inflate the fork to your desired pressure

Check all functions of the fork

Link

see User Manual for pressure recommendations

DT SWISS AG

Längfeldweg 101
CH - 2504 Biel/Bienne
service.ch@dtswiss.com

DT SWISS, INC.

2493 Industrial Blvd.
USA - Grand Junction, CO 81505
techusa@dtswiss.com

DT SWISS (FRANCE) S.A.S.

Parc d'Activites de la Sarrée
Route de Gourdon
F - 06620 Le Bar sur Loup
service.fr@dtswiss.com

DT SWISS ASIA LTD.

No.5, Jingke 5th Rd., Nantun District
Taichung City 408
Taiwan (R.O.C.)
service.tw@dtswiss.com

DT SWISS DEUTSCHLAND GmbH

Albert-Einstein-Strasse 3
59302 Oelde
Germany
service.de@dtswiss.com

DT SWISS POLSKA Sp. z o.o.

ul. Towarowa 36
PL-64-600 Oborniki
Poland
service.pl@dtswiss.com

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