

*Shock Absorber*

***TTX Air***

*Workshop Manual - Air Sleeve 100 h*

# SAFETY PRECAUTIONS

## General Warnings

**Note!**

The shock absorber/front fork/steering damper is an important part of the vehicle and will affect the stability.

**Note!**

Read and ensure you understand the information in this manual and other technical documents provided by Öhlins, before using the product.

**Note!**

Öhlins Racing AB can not be held responsible for any damage to the shock absorber/front fork/steering damper, vehicle, other property or injury to persons, if the instructions for mounting, usage and maintenance are not followed exactly.

**Warning!**

After installing the Öhlins product, take a test ride at low speed to ensure your vehicle has maintained stability.

**Warning!**

If the suspension makes an abnormal noise, or the function is irregular, or if you notice any leakage from the product, stop the vehicle immediately and return the product to an Öhlins Service Centre.

**Warning!**

The product warranty shall only apply if the product has been operated and maintained in accordance with recommendations in this manual. If you have any questions regarding usage, service, inspection and/or maintenance please contact Öhlins.

**Note!**

When working with the Öhlins product, always read the Vehicle Service Manual.

## Product Specific Warnings

**Warning!**

This product was developed and designed exclusively for a specific vehicle model and shall only be installed on the intended vehicle model in its original condition as delivered from the vehicle manufacturer.

**Warning!**

This product is pressurized. Do not open, service or modify this product without proper education (authorized Öhlins dealer/distributor) and proper tools.

**Caution!**

Do not use a pressure washer or a power washer when cleaning the fork or shock.

## SAFETY SYMBOLS

In this manual, mounting instructions and other technical documents, important information concerning safety is distinguished by the following symbols:



The Safety Alert Symbol means: Warning! Your safety is involved.

**Warning!**

The Warning Symbol means: Failure to follow warning instructions can result in severe or fatal injury to anyone working with, inspecting or using the shock absorber, or to bystanders.

**Caution!**

The Caution Symbol means: Special precautions must be taken to avoid damage to the shock absorber.

**Note!**

The Note Symbol indicates information that is important regarding procedures.

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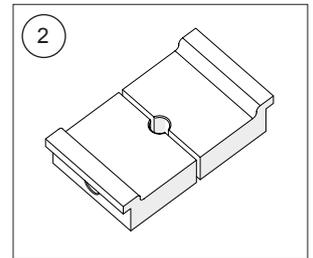
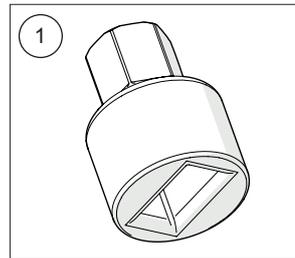
## TABLE OF CONTENTS

Tools .....	3
Service Kit Contents .....	3
Air Sleeve 100-H Service .....	4

# TTX AIR 100-HOUR SERVICE

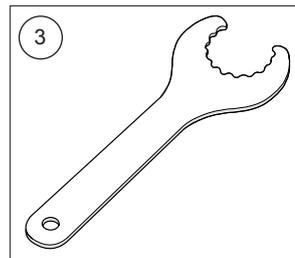
## Tools

1	19861-01	End eye tool
2	19860-03	8 mm clamp TTX
3	N/A	Shimano TL-FC32 Bottom bracket tool



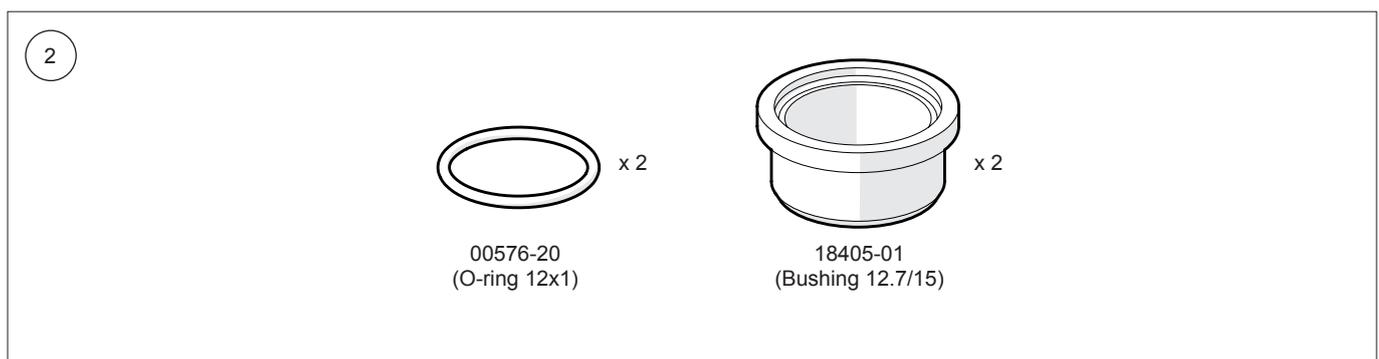
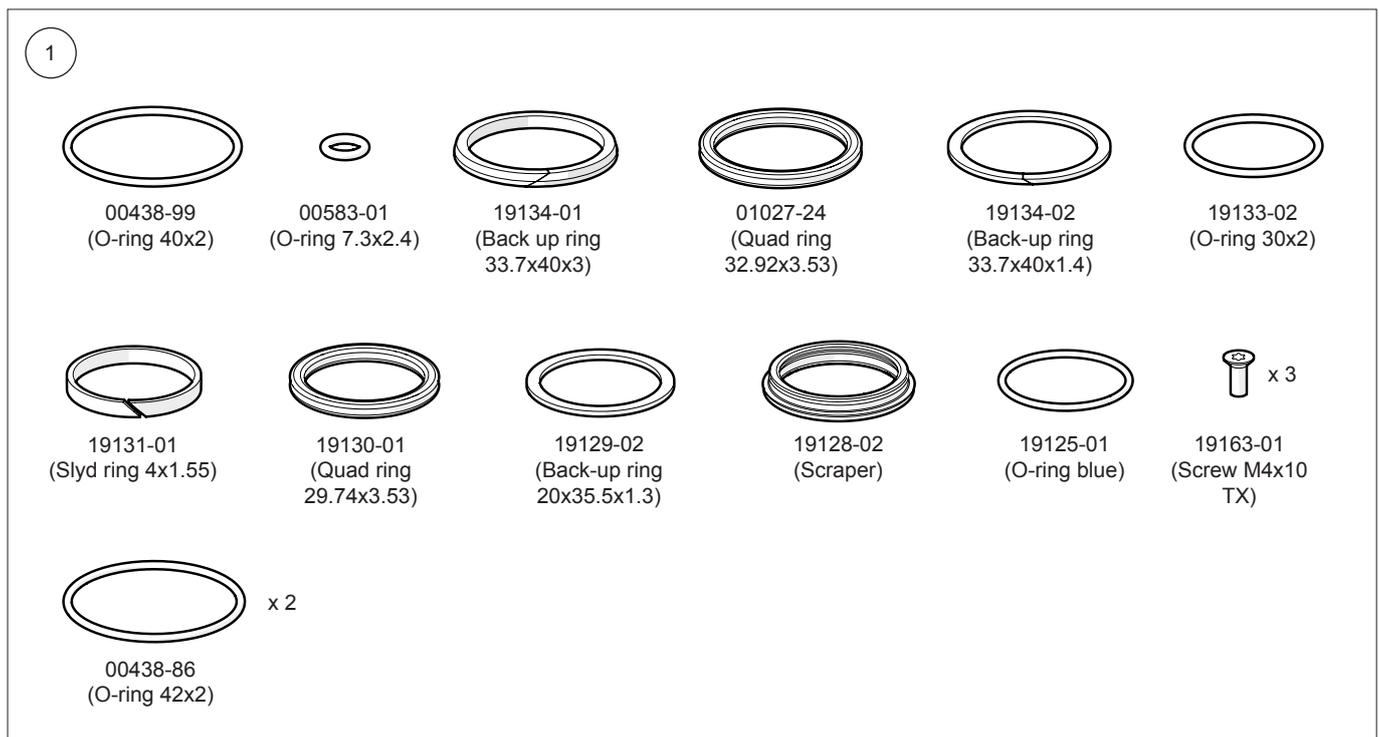
## Oil, grease, thread locker and sealant

Air spring lubrication fluid	01337-06 Renep CGLP 220 Air spring lube 0.6L
Assembly grease	Slickoleum / Buzzy's Slick Honey
Dynamic seal grease	01338-22 - Renolit SI 410 M Silicone grease 225 g
Loctite 243	01791-04



## Service Kit Contents

1	19190-01	Service Kit Air Sleeve TTX Air
2	18482-01	Bushing kit



# TTX AIR 100-HOUR SERVICE

## Air Sleeve 100-Hour Service

### 👁 Note!

Clean all parts with a soft detergent and a rag to remove dirt, old grease and thread sealant before reassembling.

### 👉 Caution!

Do not use strong detergent such as contact cleaner or equivalent.

### 👁 Note!

Use a vise with soft jaws and the appropriate tools and clamps when servicing the shock absorber.

### 👁 Note!

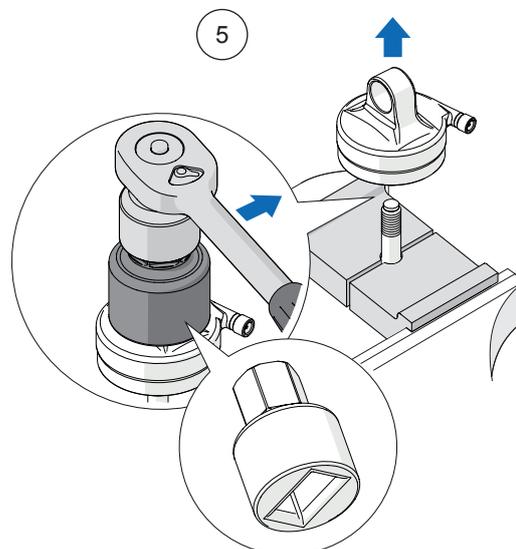
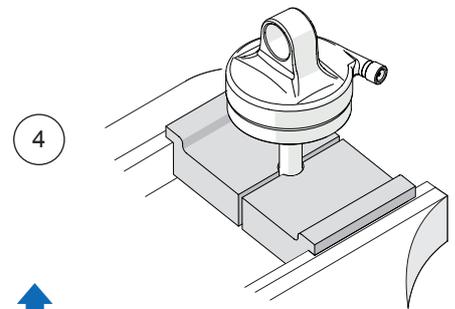
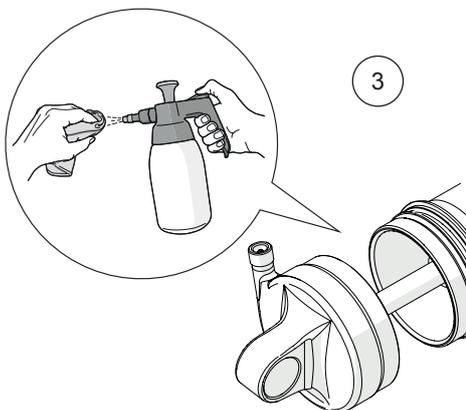
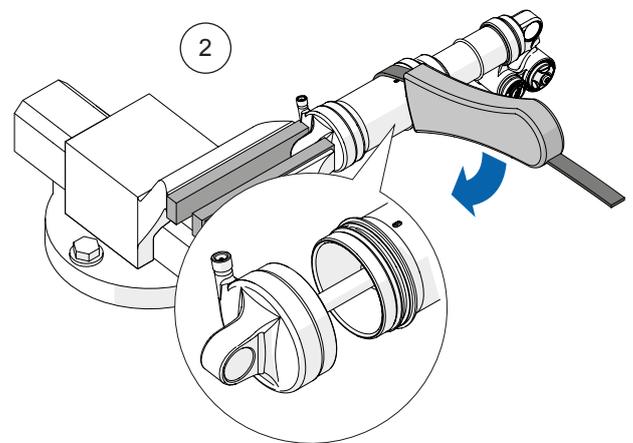
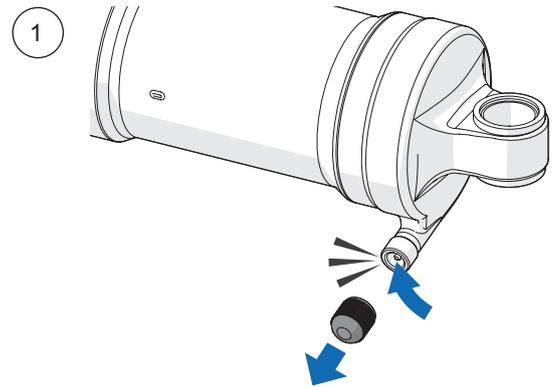
Use assembly grease when mounting O-rings if nothing else is specified.

## Single tube air spring (steps 1 - 5)

### 👁 Note!

For "Double tube air spring" follow steps 6 - 11.

1. Remove the air valve cap and release the air pressure.
2. Remove the air sleeve from the end eye by using an adjustable strap wrench.
3. Clean the piston shaft with a soft detergent and a rag to remove old grease and oil.
4. Use the 8 mm clamp TTX tool (19860-03) to clamp the shaft.
5. Remove the end eye from the shaft by using End eye tool (19861-01) and a socket wrench with a 22 mm deep hex socket.



# TTX AIR 100-HOUR SERVICE

## Double tube air spring (steps 6 - 11)

6. Remove the air valve cap and release the air pressure.

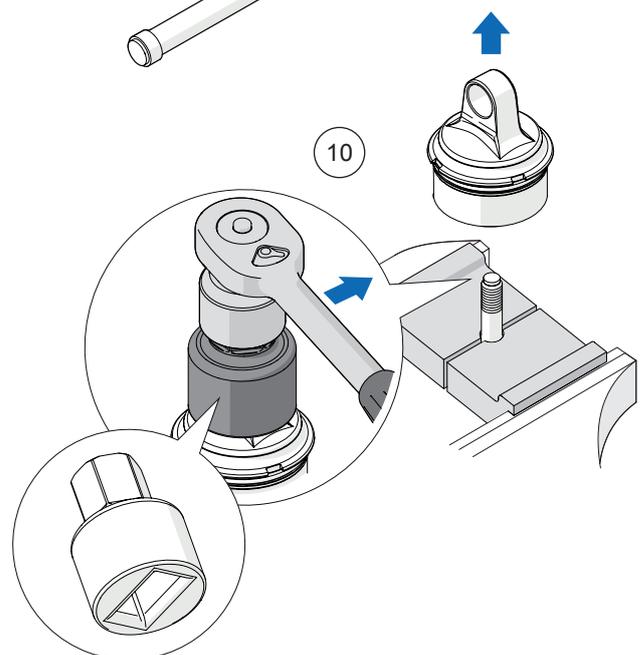
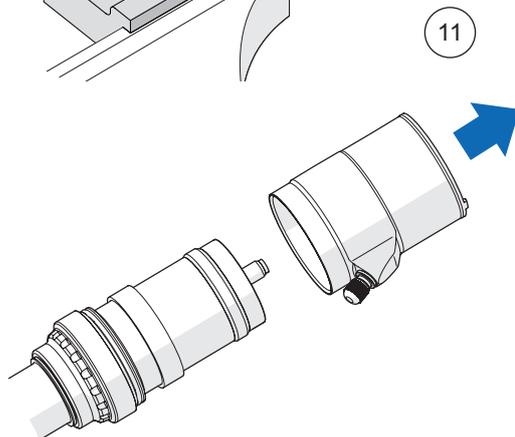
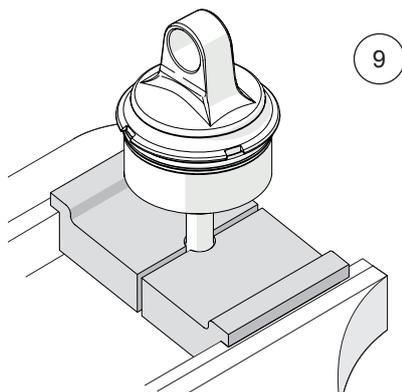
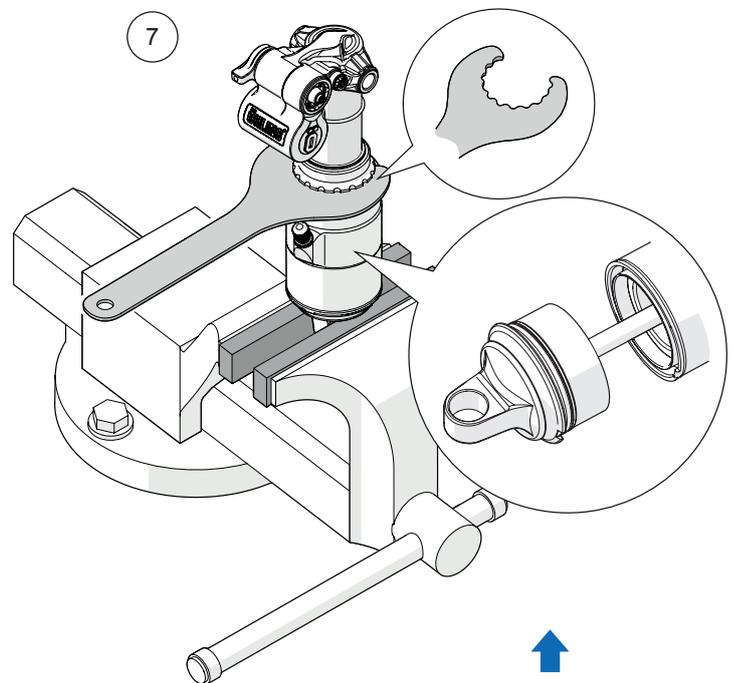
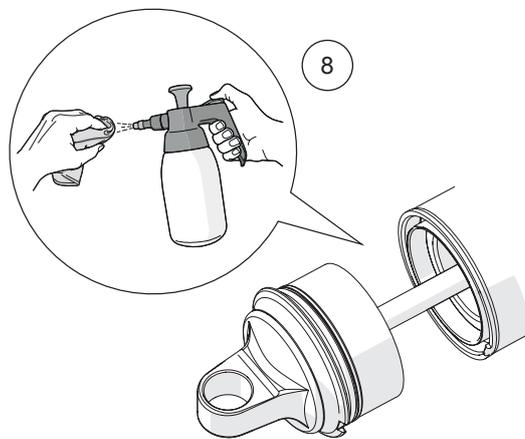
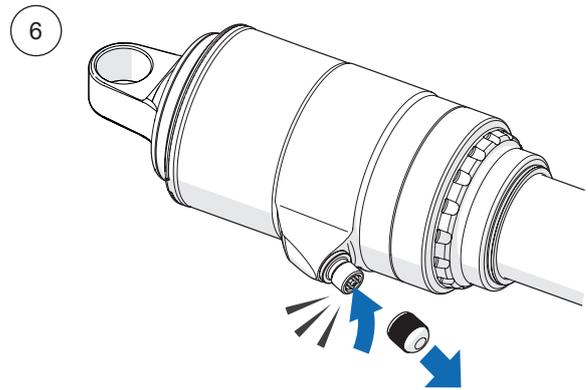
7. Remove the air sleeve using an open bottom bracket wrench. Hold the outer air sleeve by hand to support the tab while removing the air sleeve.

8. Clean the piston shaft with a soft detergent and a rag to remove old grease and oil.

9. Use 8 mm clamp TTX (19860-03) to clamp the shaft.

10. Remove the end eye from the shaft by using End eye tool (19861-01) and a socket wrench with a 22 mm deep hex socket.

11. Remove the outer air sleeve.



# TTX AIR 100-HOUR SERVICE

12. Remove the stroke spacer and the o-ring from the piston shaft.

13. Remove the torx screws from the seal head.

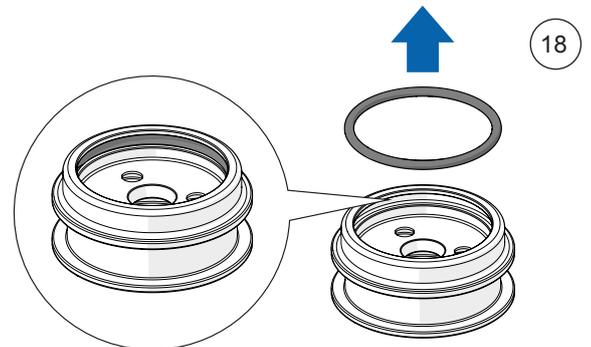
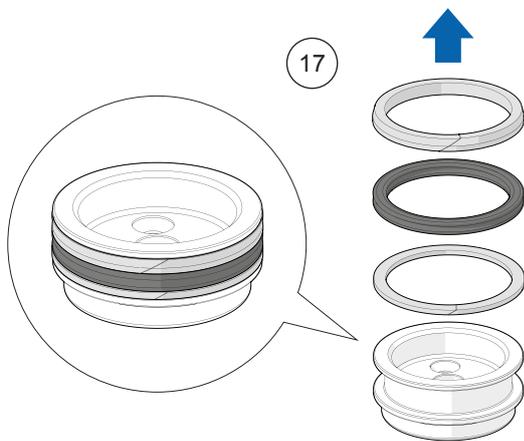
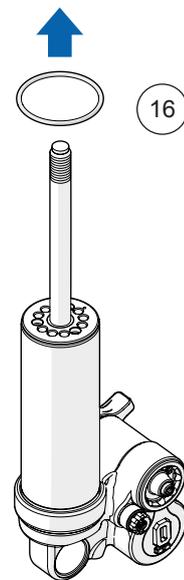
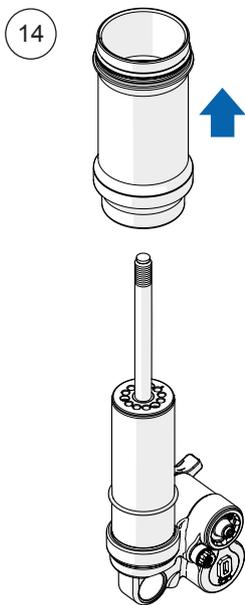
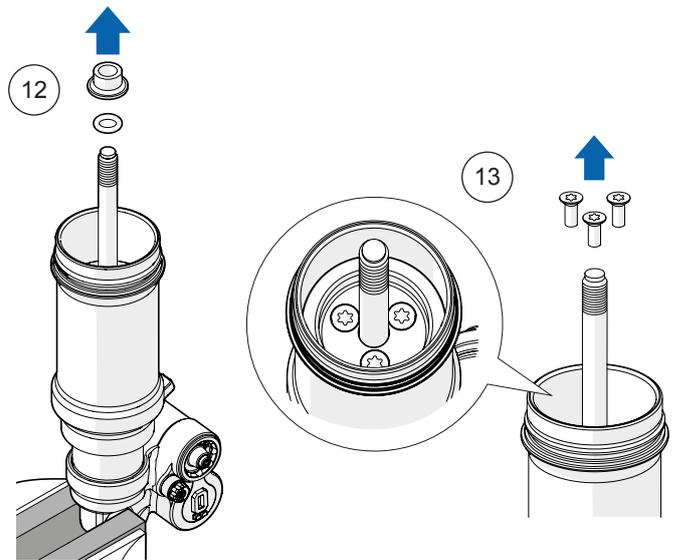
14. Remove the air sleeve assembly from the piston shaft.

15. Remove the air seal holder assembly from the air sleeve.

16. Remove the o-ring from the outer cylinder tube.

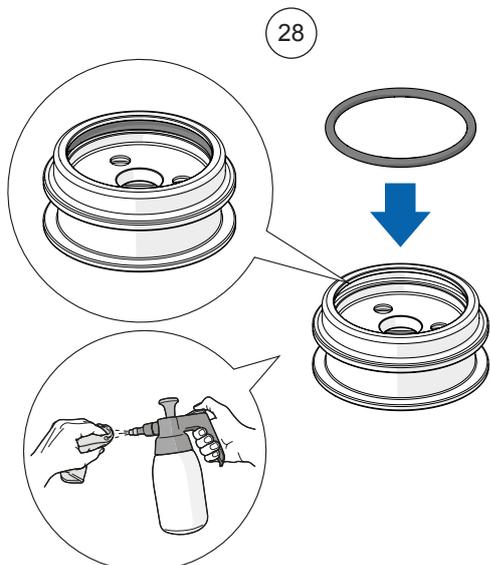
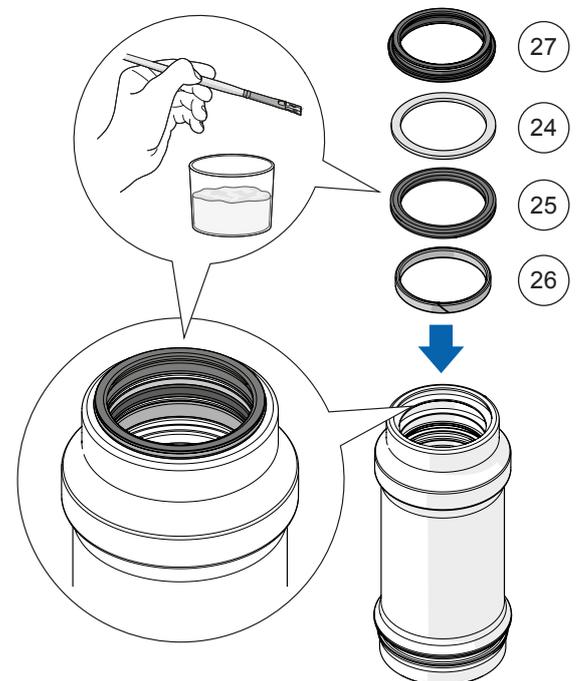
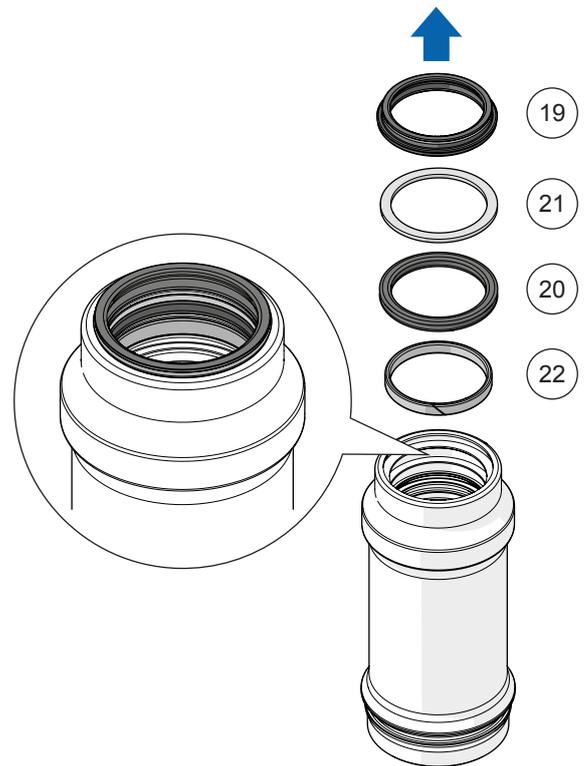
17. Remove the two back-up rings and the quad ring from the air seal holder by using a proper tool.

18. Remove the o-ring from inside the air seal holder.



# TTX AIR 100-HOUR SERVICE

19. Remove the scraper from inside the air sleeve.
20. Remove the quad ring from inside the air sleeve.
21. Remove the back-up ring from inside the air sleeve.
22. Remove the slyd ring from inside the air sleeve.
23. Clean the inside of the air sleeve with a soft detergent and a rag to remove old grease and oil.
24. Mount a new back-up ring (19129-02) inside the air sleeve.
25. Apply Dynamic seal grease (01338-22) on the new quad ring (19130-01) and mount the quad ring inside the air sleeve.
26. Mount a new slyd ring (19131-01) inside the air sleeve.
27. Mount a new scraper (19128-02) inside the air sleeve. Apply Dynamic seal grease (01338-22) all around the sliding surfaces.
28. Clean the air seal holder and mount a new o-ring (19133-02).



# TTX AIR 100-HOUR SERVICE

**29.** Apply Dynamic seal grease (01338-22) on the new quad ring (01027-24). Mount the new back-up ring (19134-02), quad ring (01027-24) and the back-up ring (19134-01) on the air seal holder. Make sure the edges of the back up rings overlap and that the chamfer (19134-01) is correctly oriented.

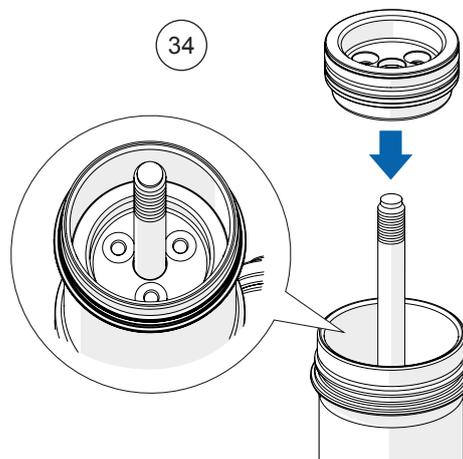
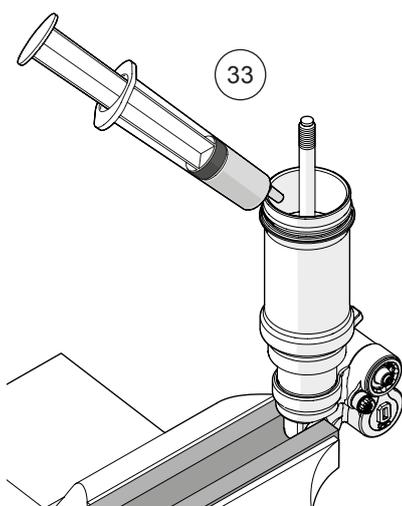
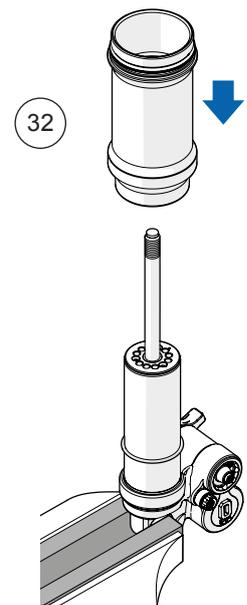
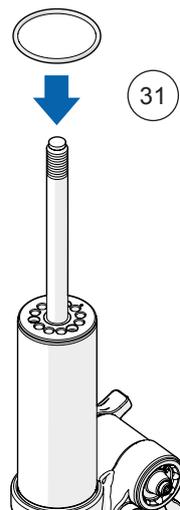
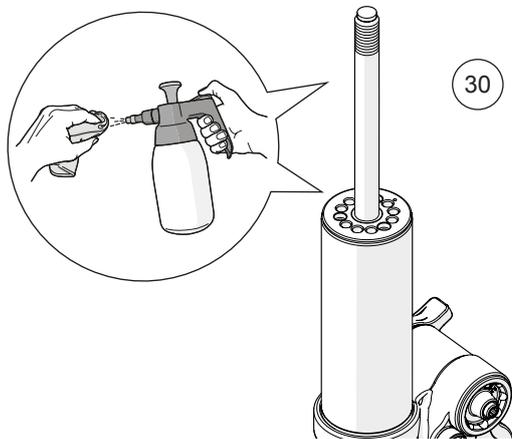
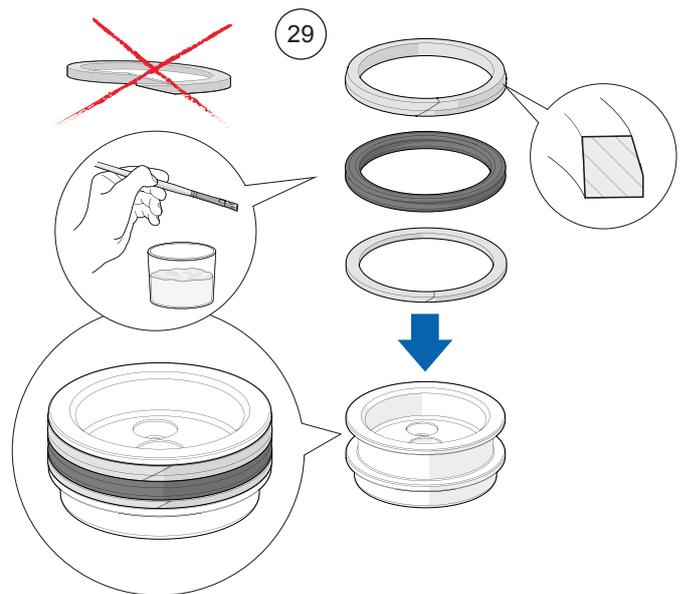
**30.** Clean the seal head and piston shaft with a soft detergent and a rag to remove old grease, oil and thread sealant.

**31.** Mount a new sag o-ring (19125-01) on the outer cylinder tube. Do not apply assembly grease on the o-ring.

**32.** Slide the air sleeve on to the shock absorber.

**33.** Apply 1 ml of air spring lubrication fluid (01337-06) in the air sleeve.

**34.** Mount the seal holder assembly into the air sleeve.



# TTX AIR 100-HOUR SERVICE

35. Apply Loctite 243 (01791-04) to the new torx screw (19163-01) threads. Use a torque wrench to tighten the screws to 2.5 Nm.

36. Mount a new o-ring (00583-01) and the stroke spacer on the piston shaft. Do not apply assembly grease on the o-ring.

## Single tube air spring (steps 37 - 43)

### Note!

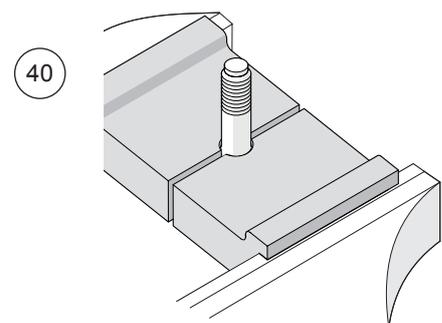
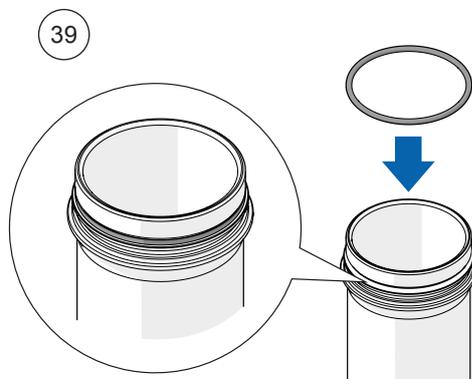
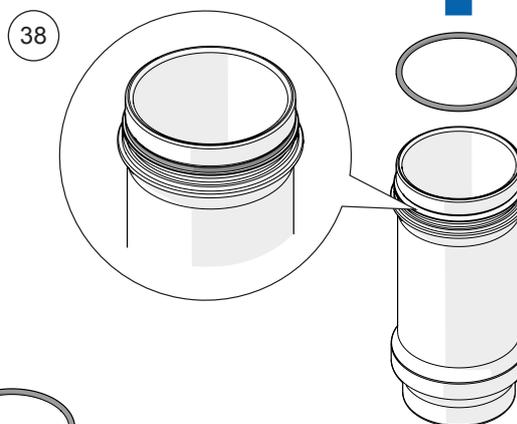
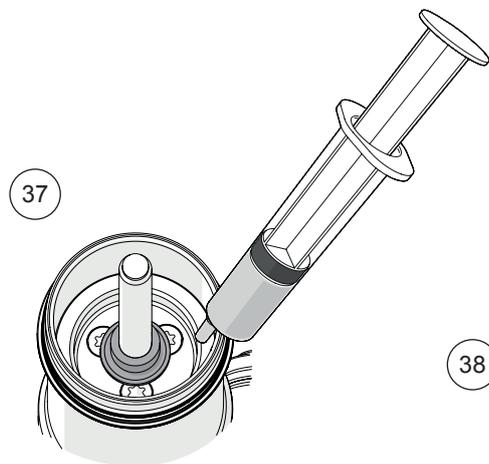
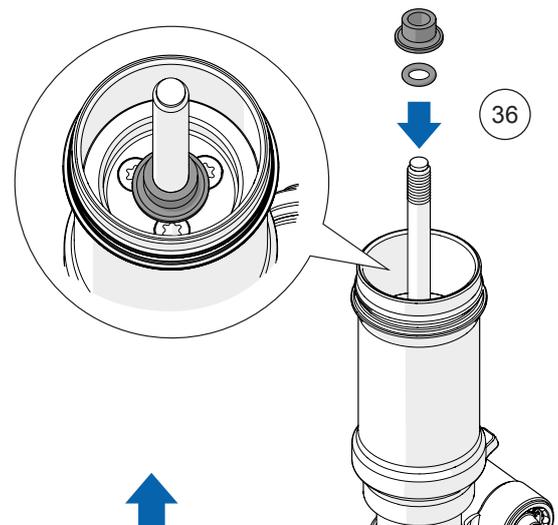
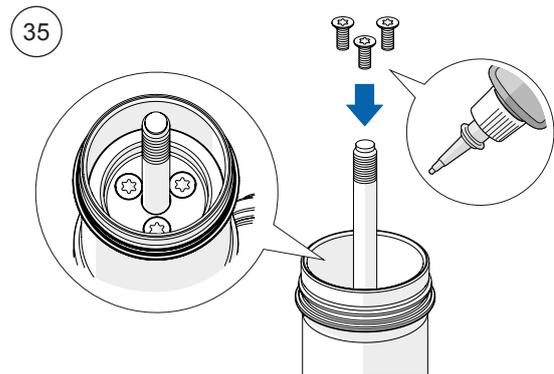
For "Double tube air spring" follow steps 44 - 53.

37. Apply 1 ml of air spring lubrication fluid (01337-06) in the air sleeve. Make sure it is applied around the whole air sleeve diameter.

38. Remove the o-ring from the air sleeve.

39. Mount a new o-ring (00438-99) on the air sleeve.

40. Use the 8 mm clamp TTX tool (19860-03) to clamp the shaft.



# TTX AIR 100-HOUR SERVICE

**41.** Apply Loctite 243 (01791-04) to the piston shaft thread. Mount the end eye using the End eye tool (19861-01) and a torque wrench with a 22 mm deep hex socket. Tighten to 12 Nm.

**42.** Mount the air sleeve to the end eye by hands, entering a few threads. Then tighten by using an adjustable strap wrench (approximately 15 Nm).

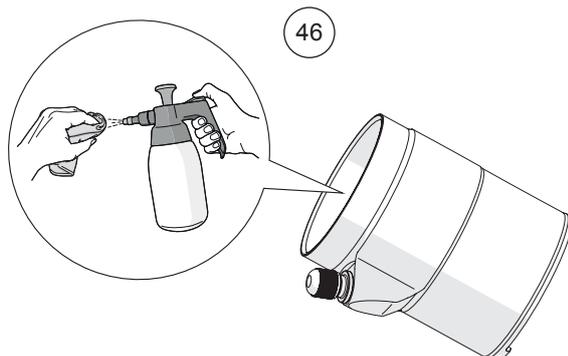
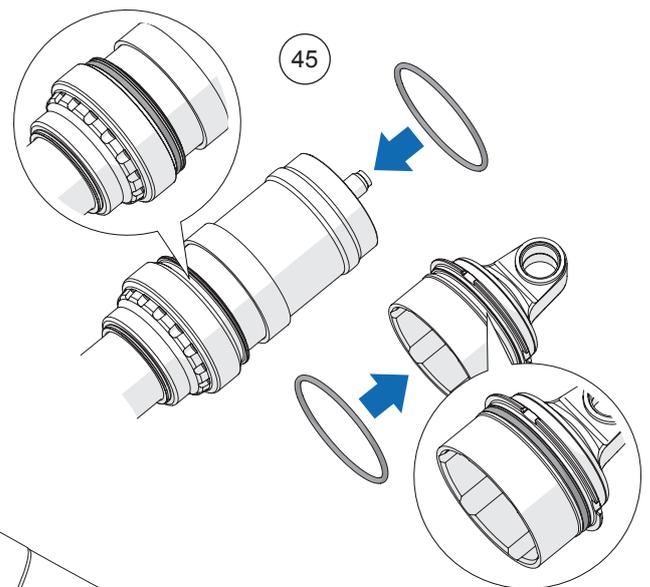
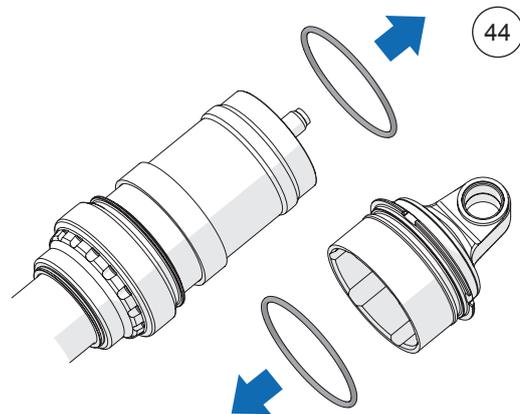
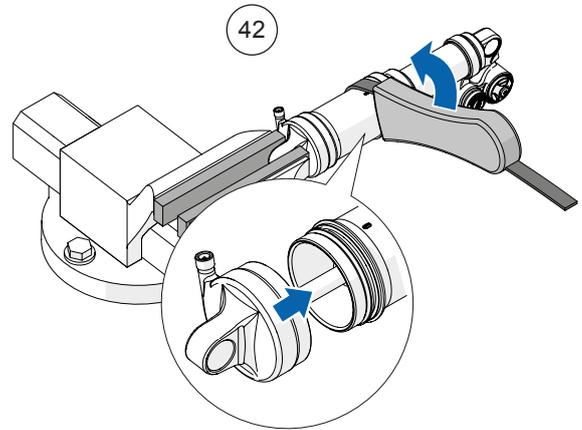
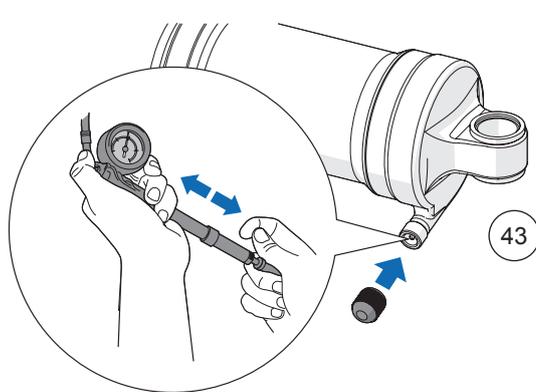
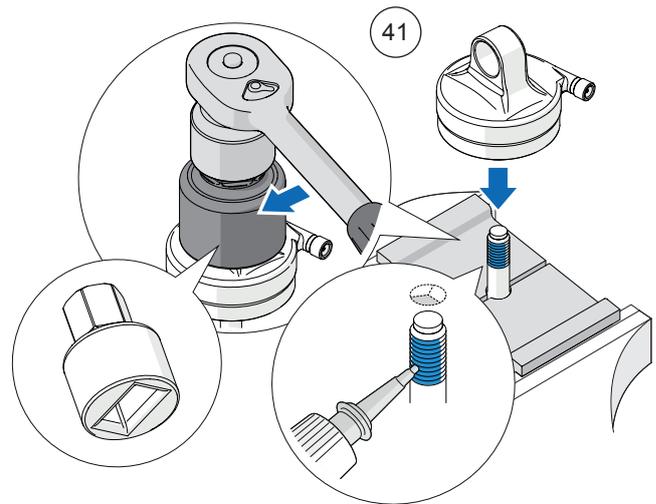
**43.** Set the air pressure and mount the air valve cap.

## Double tube air spring (steps 44 - 53)

**44.** Remove the o-rings from the air sleeve and the end eye.

**45.** Mount the new o-rings (00436-86 (2x)) on the air sleeve and the end eye.

**46.** Clean the outer air sleeve (19180) with a soft detergent and a rag.



# TTX AIR 100-HOUR SERVICE

47. Slide on the outer air sleeve to the air sleeve.

48. Use 8 mm clamp TTX (19860-03) to clamp the shaft.

49. Apply Loctite 243 (01791-04) to the piston shaft thread. Mount the end eye using the End eye tool (19861-01) and a torque wrench with a 22 mm deep hex socket. Tighten to 12 Nm.

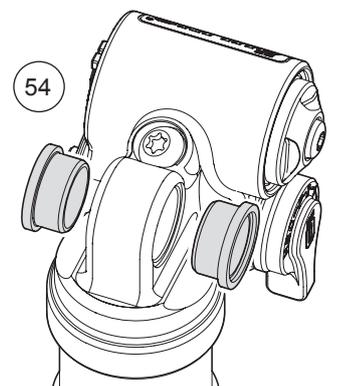
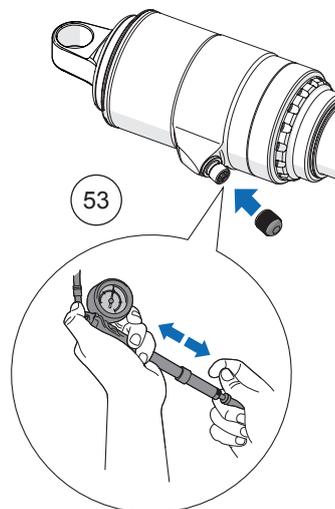
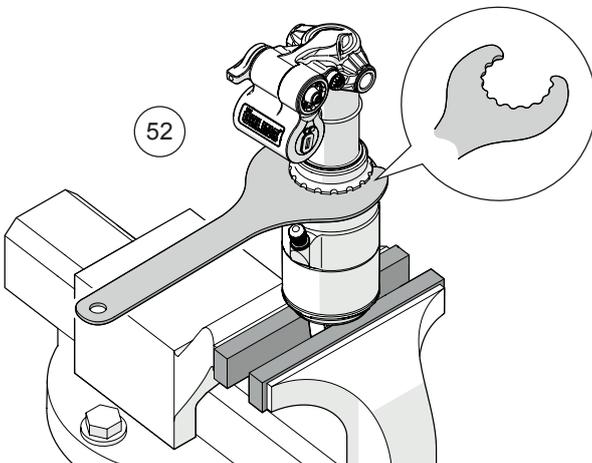
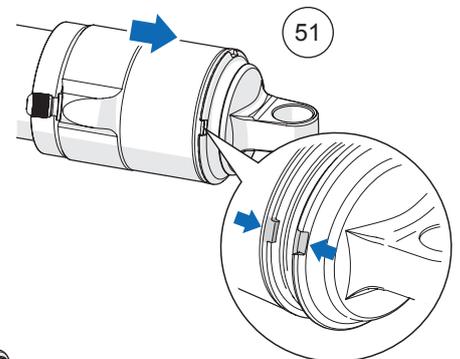
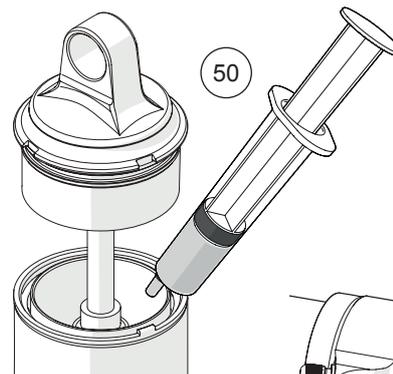
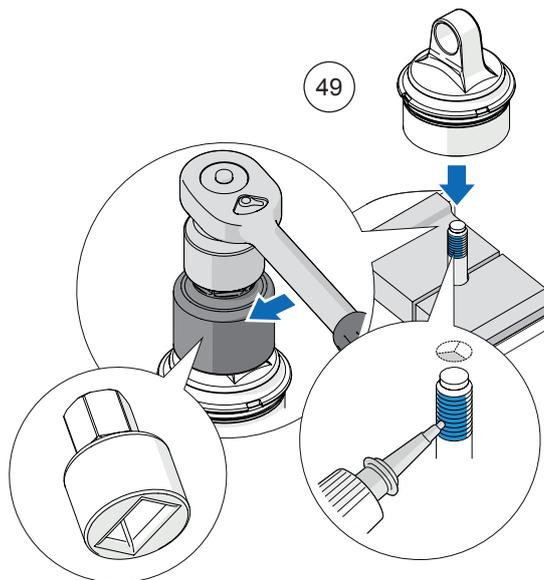
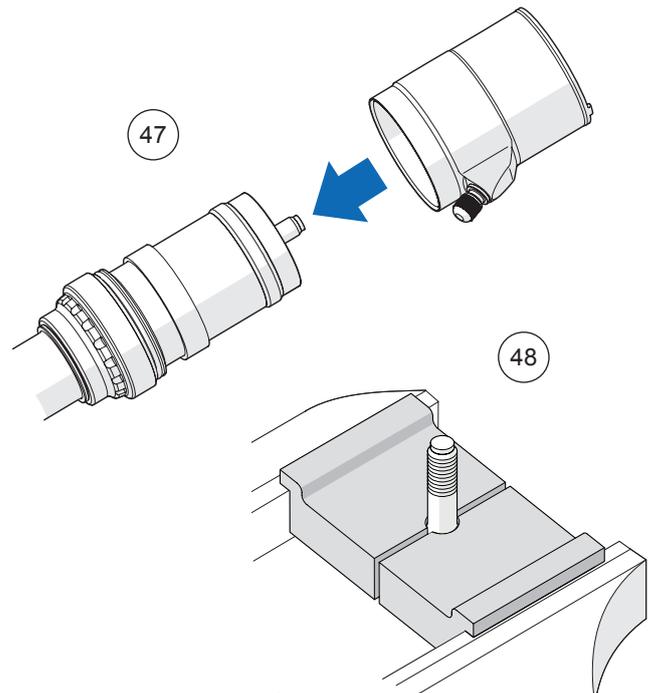
50. Apply 2 ml of air spring lubrication fluid (01337-06) in the air sleeve. Make sure it is applied around the whole air sleeve diameter.

51. Pull down the outer air sleeve. Make sure the tab is placed in the slot on the end eye.

52. Mount the air sleeve to the end eye by hand, entering a few threads. Then tighten using an open bottom bracket wrench (approximately 15 Nm).

53. Set air pressure and mount the air valve cap.

54. Use bushing kit (18482-01) to change bushings.



Your Öhlins retailer:

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