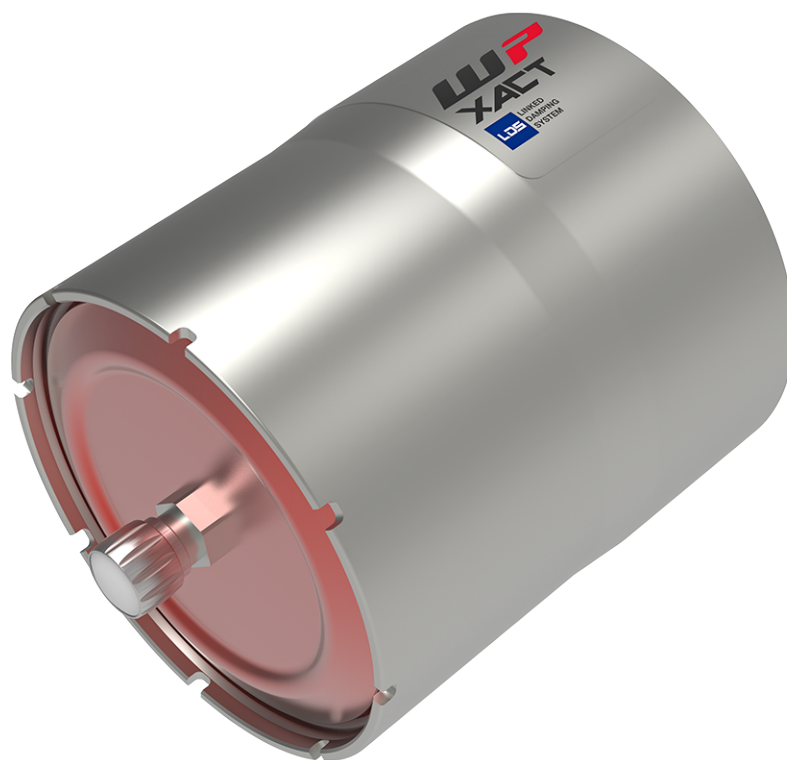


FITTING INSTRUCTIONS

Bladder Kit OEM Link

Item no. 53000290en



Read these fitting instructions carefully and thoroughly before beginning work.

These fitting instructions were written to correspond to the latest state of this series. We reserve the right to make changes in the interest of technical advancement without updating these fitting instructions at the same time.

We shall not provide a description of general workshop methods. Likewise, safety rules that apply in a workshop are not specified here. It is assumed that the work will be performed by a fully trained mechanic.

All specifications contained herein are non-binding. WP Suspension GmbH specifically reserves the right to modify or delete technical specifications, prices, colors, forms, materials, services, designs, equipment, etc., without prior notice and without providing reasons, to adapt these to local conditions, as well as to stop the production of a particular model without prior notice. WP accepts no liability for delivery options, deviations from figures and descriptions, misprints, and other errors. The models portrayed partly contain special equipment that does not belong to the regular scope of supply.

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WP Suspension GmbH
Stallhofnerstraße 3
5230 Mattighofen, Austria

This document is valid for the following models:

Bladder Kit OEM Link (ZF10011)



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1.1 Symbols used

The meaning of specific symbols is described below.



Indicates an expected reaction (e.g., of a work step or a function).



Indicates an unexpected reaction (e.g., of a work step or a function).



Indicates a page reference (more information is provided on the specified page).



Indicates information with more details or tips.



Indicates the result of a testing step.



Indicates the end of an activity, including potential reworking.

1.2 Formats used

The typographical formats used in this document are explained below.

Proprietary name

Indicates a proprietary name.

Name[®]

Indicates a protected name.

Brand[™]

Indicates a brand available on the open market.

Underlined terms

Refer to technical details of the vehicle or indicate technical terms, which are explained in the glossary.

2 SAFETY ADVICE

2.1 Correct installation

Correct installation analogously to original components and in accordance with the instructions of the vehicle manufacturer is essential for ensuring maximum safety and functionality.

It is therefore strongly recommended that you have the chassis component installed at a WP Authorized Center.

2.2 Fitting instructions

It is essential to read these fitting instructions carefully and thoroughly before beginning work. They contain useful information and tips to help you fit the chassis components.

This manual assumes that the necessary special WP tools and workplace and workshop equipment are available.

2.3 Safety advice

A number of safety instructions need to be followed to operate the product described safely. Therefore read this instruction and all further instructions included carefully. The safety instructions are highlighted in the text and are referred to at the relevant passages.

Info

Various information and warning labels are attached in prominent locations on the product described. Do not remove any information or warning labels. If they are missing, you or others may not recognize dangers and may therefore be injured.

2.4 Degrees of risk and symbols



Warning

Identifies a danger that is likely to lead to fatal or serious injury if the appropriate measures are not taken.

2.5 Work rules

Special tools are necessary for certain tasks. The tools are not a component of the chassis component, but can be ordered using the number in parentheses.

During assembly, use new parts to replace parts which cannot be reused (e.g., seals, seal rings, O-rings).

In the case of certain screws, a thread locker (e.g. **Loctite**[®]) is required. Observe the manufacturer's instructions.

After disassembly, clean the parts that are to be reused and check them for damage and wear. Change damaged or worn parts.

After completing a repair or service work, check the operating safety of the chassis component.

3.1 Manufacturer warranty, implied warranty

The work prescribed in the service schedule must be carried out in a WP Authorized Center only, since otherwise no warranty claims will be recognized. Damage or secondary damage caused by tampering with and/or conversions on the chassis component are not covered by the manufacturer warranty.

3.2 Fuel, auxiliary substances

The fuel and auxiliary substances specified in the Owner's Manual must be used in accordance with the specifications.

3.3 Spare parts, accessories

For your safety, only use spare parts and accessory products that are approved and/or recommended by WP and have them installed in a WP Authorized Center. WP accepts no liability for other products and any resulting damage or loss.

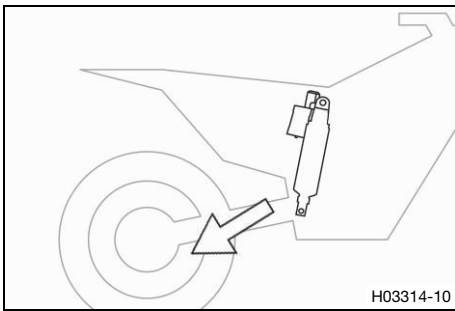
Certain spare parts and accessory products are specified in parentheses in the descriptions. Your WP Authorized Center will be pleased to advise you.

3.4 Figures

The figures contained in the manual may depict special equipment.

In the interest of clarity, some components may be shown disassembled or may not be shown at all. It is not always necessary to disassemble the component to perform the activity in question. Please follow the instructions in the text.

4.1 Removing the shock absorber

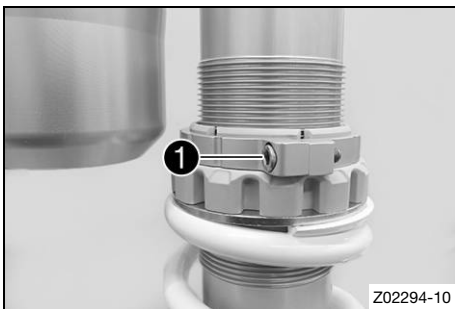


- Remove the shock absorber according to the Owner's Manual.

4.2 Removing the spring

Condition

The shock absorber has been removed.



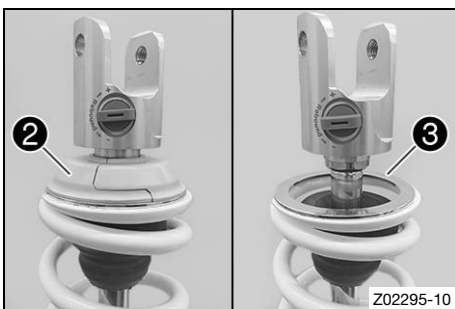
- Clamp the shock absorber into the vise.

Guideline

Use soft jaws.

- Measure and note the spring length while the spring is under tension.
- Loosen screw ①.
- Turn the adjusting ring until the spring is completely without tension.

Hook wrench (90129051000) (p. 22)

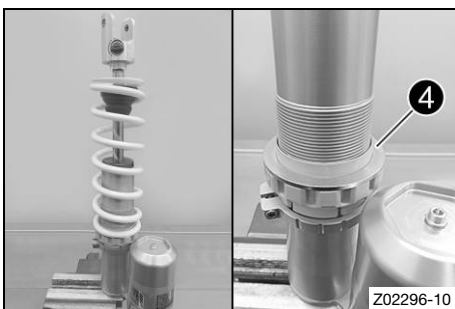


- Remove spring retainer ②.

Info

The spring retainer is made up of two parts.

- Remove washer ③.



- Remove the spring.
- Remove washer ④.

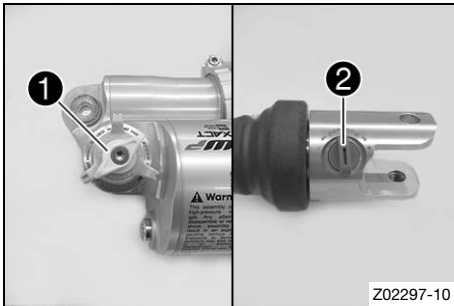
4.3 Disassembling the damper

Preparatory work

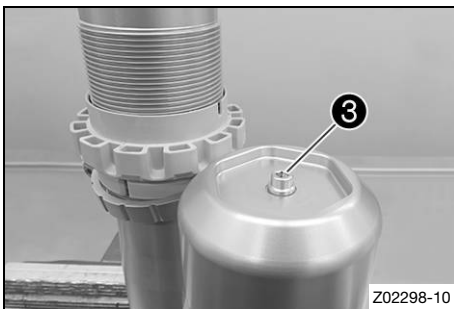
- Remove the spring. (📖 p. 6)

Main work

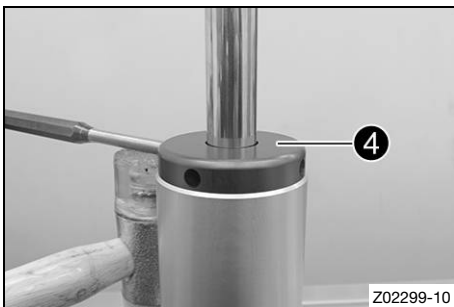
- Make a note of the present state of compression damping ① and rebound damping ②.
- Open the adjusters of the compression and rebound damping completely.



- Slowly open screw ③.
- ✓ The nitrogen pressure dissipates.
- Remove screw ③ with the O-ring.



- Remove locking cap ④.

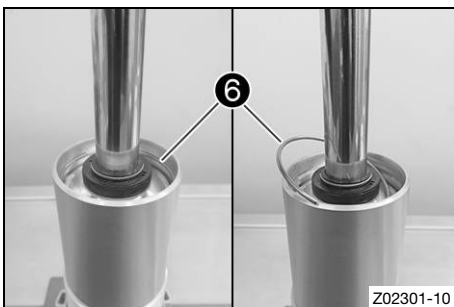


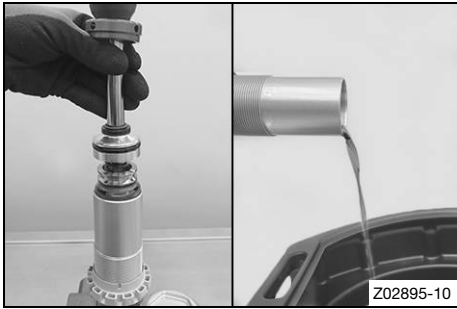
- Push in seal ring retainer ⑤.



- Remove lock ring ⑥.

i Info
Check inner surface; do not scratch. If necessary, remove any burrs with sandpaper.





- Remove the piston rod.
- Drain the oil.



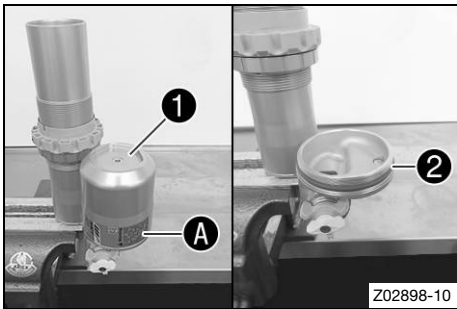
Info

Place a collecting container underneath.

4.4 Removing the reservoir

Condition

The shock absorber has been removed.



- Heat reservoir **1** in area **A** and remove with the special tool.

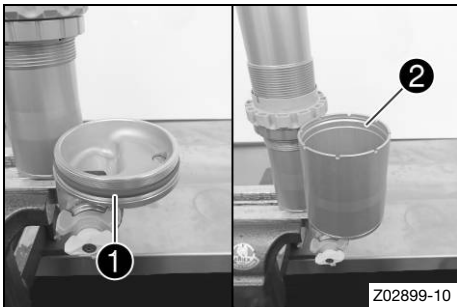
Guideline

50 °C (122 °F)

Mounting tool (T18003) (p. 24)

- Remove O-ring **2**.

4.5 Installing the bladder kit



- Lubricate and mount O-ring **1**.

Special grease (00062010053) (p. 21)

- Mount and tighten reservoir **2** using the special tool.

Guideline

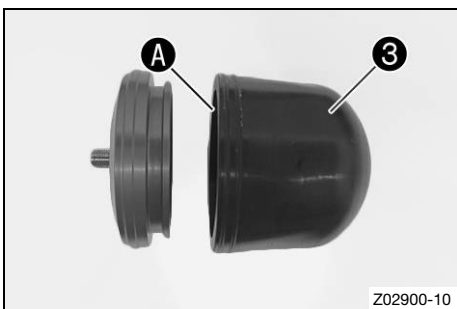
Reservoir

M72x1

60 Nm (44.3 lbf ft)

Loctite® 2701™

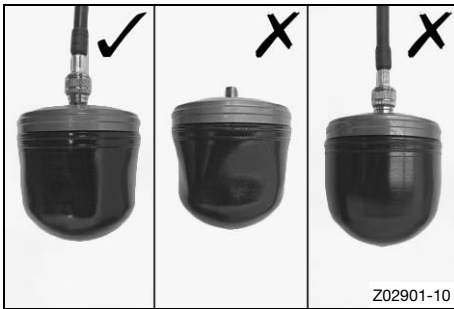
Reservoir adapter (T1238) (p. 23)



- Lubricate bladder **3** in area **A**.

Lubricant (T159) (p. 21)

- Mount the bladder on the locking cap.

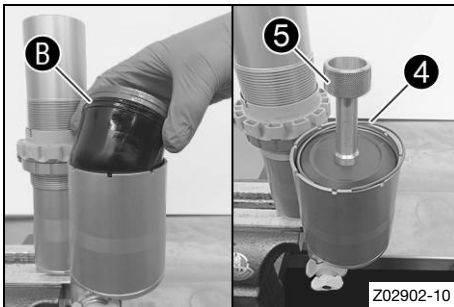


Z02901-10

- Mount the special tool and fill the bladder kit with air.

Fork airpump (79412966100) (📖 p. 22)

- ✓ There are no dents on the bladder and it is not too full.



Z02902-10

- Lubricate the bladder in area **B**.

Special grease (00062010053) (📖 p. 21)

- Mount the bladder kit and slide it under the ring groove.

- Mount lock ring **4**.

- ✓ The lock ring engages audibly.

- Mount special tool **5** and pull out the bladder kit up to the lock ring.

Puller (T1560) (📖 p. 24)

4.6 Assembling the damper



Z02897-10

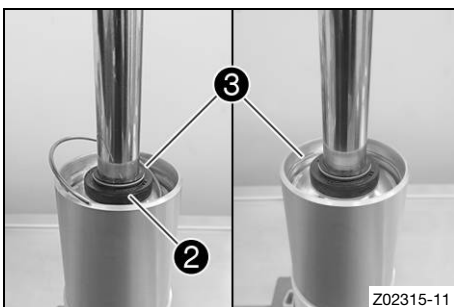
- Fill the damper cartridge about half full.

Shock absorber fluid (SAE 2.5) (50180751S1) (📖 p. 20)

- Lubricate O-ring **1** of the seal ring retainer.

Lubricant (T158) (📖 p. 21)

- Mount the piston rod carefully.



Z02315-11

- Mount seal ring retainer **2** and slide it under the ring groove.

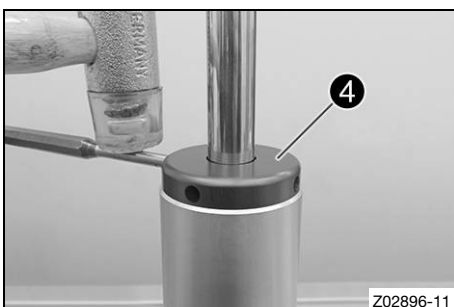
- Mount lock ring **3**.



Info

Do not scratch the inside surface.

- Pull out the piston rod until the seal ring retainer is flush with the lock ring.

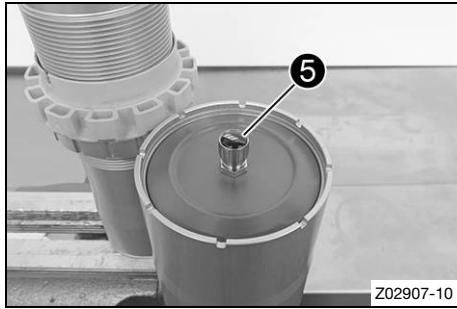


Z02896-11

- Mount locking cap **4** of the damper cartridge.

- Bleed and fill the damper. (📖 p. 12)

- Fill the damper with nitrogen. (📖 p. 16)

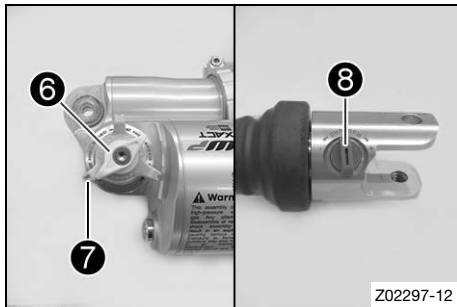


- Mount valve cap **5** using special tool.

Guideline

Locking cap	8V1	0.25 Nm (0.184 lbf ft)
-------------	-----	---------------------------

Valve cap tool (T12134) (📖 p. 22)



Alternative 1

- Turn adjusting screw **6** clockwise up to the last perceptible click.
- Turn counterclockwise by the number of clicks corresponding to the shock absorber type.

Guideline

Low-speed compression damping	
125 SX, 250/350/450 SX-F, TC 125, FC 250/350/450, MC 125 2024, MC 250F/350F/450F 2024 Comfort	17 clicks
125 SX, 250/350/450 SX-F, TC 125, FC 250/350/450, MC 125 2024, MC 250F/350F/450F 2024 Standard	15 clicks
125 SX, 250/350/450 SX-F, TC 125, FC 250/350/450, MC 125 2024, MC 250F/350F/450F 2024 Sport	13 clicks
250/300 SX, TC 250/300, MC 250 2024 Comfort	18 clicks
250/300 SX, TC 250/300, MC 250 2024 Standard	16 clicks
250/300 SX, TC 250/300, MC 250 2024 Sport	14 clicks

- Turn adjusting screw **7** clockwise all the way.

- Turn counterclockwise by the number of turns corresponding to the shock absorber type.

Guideline

High-speed compression damping	
125 SX, 250/350/450 SX-F, TC 125, FC 250/350/450, MC 125 2024, MC 250F/350F/450F 2024 Comfort	17 clicks
125 SX, 250/350/450 SX-F, TC 125, FC 250/350/450, MC 125 2024, MC 250F/350F/450F 2024 Standard	15 clicks
125 SX, 250/350/450 SX-F, TC 125, FC 250/350/450, MC 125 2024, MC 250F/350F/450F 2024 Sport	13 clicks
250/300 SX, TC 250/300, MC 250 2024 Comfort	15 clicks
250/300 SX, TC 250/300, MC 250 2024 Standard	13 clicks
250/300 SX, TC 250/300, MC 250 2024 Sport	11 clicks

- Turn adjusting screw **8** clockwise up to the last perceptible click.
- Turn counterclockwise by the number of clicks corresponding to the shock absorber type.

Guideline

Low-speed rebound damping	
All EU versions Comfort	22 clicks
All EU versions Standard	20 clicks
All EU versions Sport	18 clicks
High-speed rebound damping	
125/250/300 SX, TC 125/250/300, MC 125 2024	15 clicks
250/450 SX-F, FC 250/450, MC 250F/450F 2024	10 clicks
350 SX-F, FC 350, MC 350F 2024	20 clicks

Alternative 2



Warning

Danger of accident Modifications to the suspension setting may seriously alter the handling characteristic.

Extreme modifications to the suspension setting may cause a serious deterioration in the handling characteristic and overload components.

- Only make adjustments within the recommended range.
- Ride slowly to start with after making adjustments to get the feel of the new handling characteristic.

- Position adjusting screws ⑥, ⑦, and ⑧ in the location determined during disassembly.

4.7 Bleeding and filling the damper



Info

Before working with the vacuum pump, it is essential that you carefully read through the Owner's Manual included for the vacuum pump.

Open the adjusters of the rebound and compression damping completely.



- Clamp the damper as shown.

Guideline

Use soft jaws.

i Info

The filling port must be located at the highest position. The piston rod moves in and out during filling; do not immobilize it by holding it with your hand.

- Remove the screw from the filling port.
- Mount adapter 1 on the damper.

Guideline

Hand-tighten only without using a tool.

Filling adapter (T1245S) (p. 23)

Filling adapter (T12128) (p. 22)

- Connect adapter 1 to connector 2 of the vacuum pump.

Vacuum pump (T1240S) (p. 23)

- Mount the special tool and fill the bladder kit with air.

Guideline

0.8 bar

Fork airpump (79412966100) (p. 22)

- Remove the special tool.
- Adjust the control lever as shown.

- ✓ Control lever **External tank** 3 is set to **Closed**, **Damper** 4 is set to **Vacuum** and **Oil reservoir** 5 is set to **Vacuum**.

- Actuate **On/Off** switch 6.

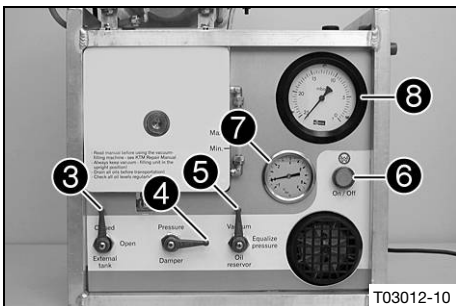
- ✓ The suction process begins.

- ✓ Pressure gauge 7 drops to the required value.

< 0 bar

- ✓ Vacuum gauge 8 drops to the required value.

4 mbar



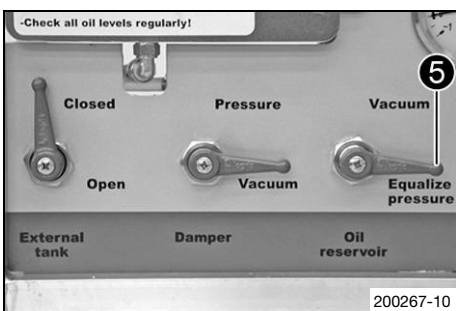
- When the vacuum gauge reaches the required value, turn control lever **Oil reservoir** 5 to **Equalize pressure**.

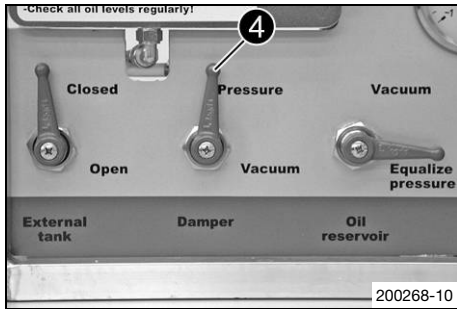
Guideline

4 mbar

- ✓ The pressure gauge rises to the specified value.

0 bar





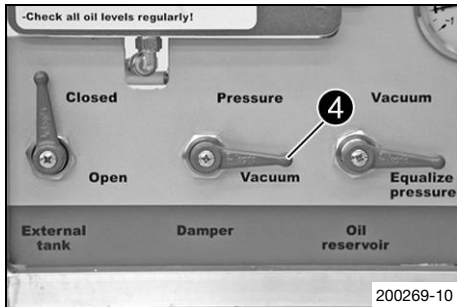
- When the pressure gauge reaches the specified value, turn control lever **Damper 4** to **Pressure**.

Guideline

0 bar

- ✓ Oil is pumped into the damper.
- ✓ The pressure gauge rises to the specified value.

3 bar



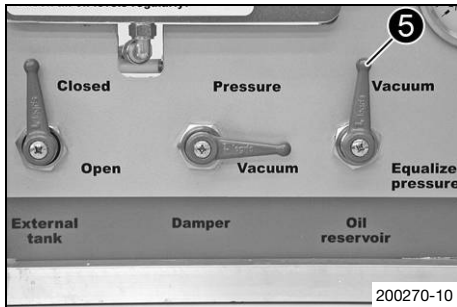
- When the pressure gauge reaches the specified value, turn control lever **Damper 4** to **Vacuum**.

Guideline

3 bar

- ✓ The pressure gauge drops to the specified value.

0 bar



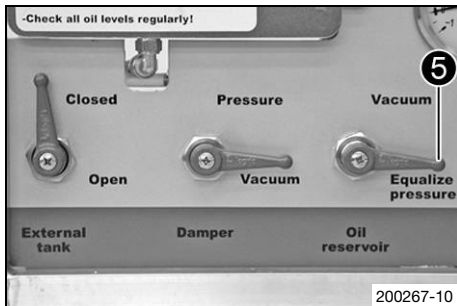
- When the pressure gauge reaches the specified value, turn control lever **Oil reservoir 5** to **Vacuum**.

Guideline

0 bar

- ✓ The vacuum gauge drops to the specified value.

4 mbar



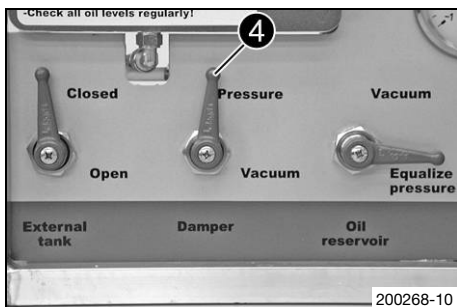
- When the vacuum gauge reaches the required value, turn control lever **Oil reservoir 5** to **Equalize Pressure**.

Guideline

4 mbar

- ✓ The pressure gauge drops to the specified value.

0 bar



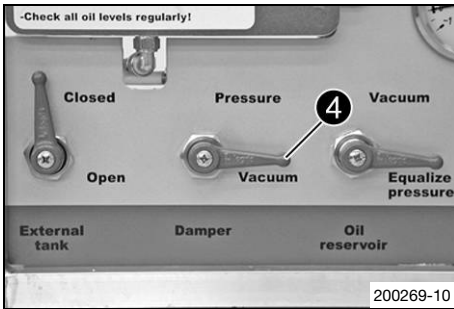
- When the pressure gauge reaches the specified value, turn control lever **Damper 4** to **Pressure**.

Guideline

0 bar

- ✓ Oil is pumped into the damper.
- ✓ The pressure gauge rises to the specified value.

3 bar



- When the pressure gauge reaches the specified value, turn control lever **Damper 4** to **Vacuum**.

Guideline

3 bar

- ✓ The pressure gauge drops to the specified value.

0 bar

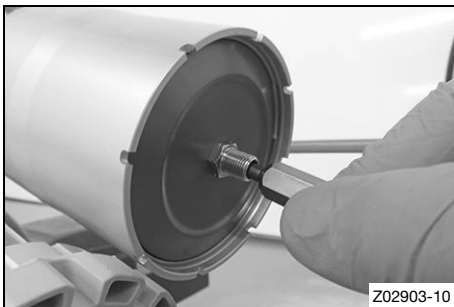
- When the pressure gauge reaches the required value, activate switch **On/Off**.

Guideline

0 bar

- ✓ The vacuum pump is switched off.

- Remove the valve core.
- ✓ The pressure dissipates.
- Mount and tighten the valve core.



Z02903-10

- Remove adapter **1** from connector **2** of the vacuum pump.

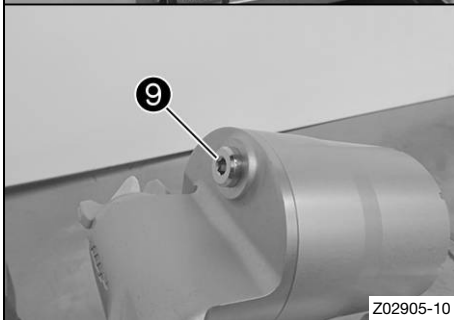
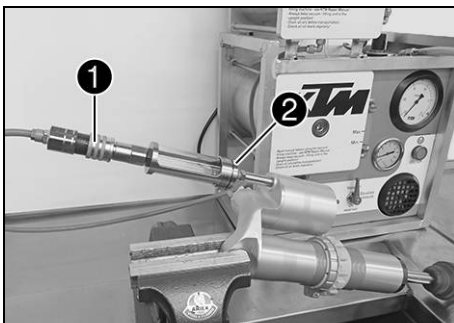
i Info

The filling port must be located at the highest position.

- Remove the adapter.
- Mount and tighten screw **9**.

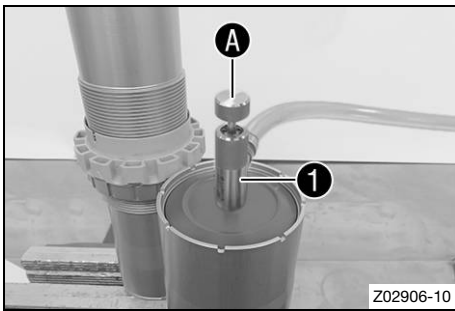
Guideline

Screw, filling port	1/8"	14 Nm (10.3 lbf ft)
---------------------	------	---------------------



Z02905-10

4.8 Filling the damper with nitrogen



- Clamp the damper in the bench vise.

Guideline

Use soft jaws.

- Mount special tool ① on the valve.

Filling adapter (T1558S) (📖 p. 23)

i Info

The piston rod is fully extended.

- Connect the special tool to the pressure regulator of the filling cylinder.

Filling gas - nitrogen

- Adjust the pressure regulator.

Guideline

Gas pressure

All EU versions	8 bar (116 psi)
-----------------	-----------------

- Open the filler tap.
- Turn tap handle ① clockwise as far as it will go and fill the damper for at least 15 seconds.

Guideline

Gas pressure

All EU versions	8 bar (116 psi)
-----------------	-----------------

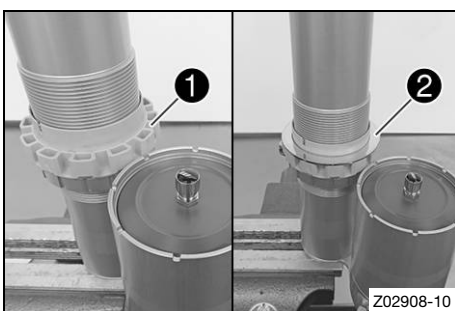
i Info

Watch the pressure regulator dial.

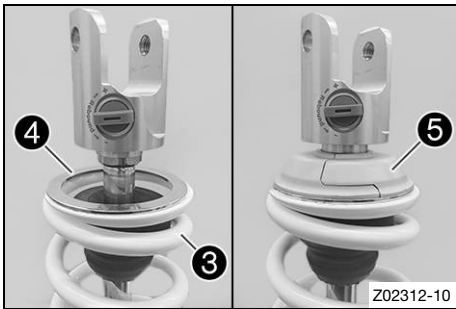
Ensure that the damper is filled to the specified pressure.

- Turn the tap handle counterclockwise as far as it will go.
- Close the filler tap and remove the special tool.

4.9 Installing the spring



- Ensure that adjusting ring ① is mounted with the clamping ring.
- Mount washer ②.



- Measure the total spring length while the spring is not under tension.
- Position spring ③.

Guideline

Spring rate	
Weight of rider: 55 ... 65 kg (121 ... 143 lb.)	39 N/mm (223 lb/in)
Weight of rider: 65 ... 75 kg (143 ... 165 lb.)	42 N/mm (240 lb/in)
Weight of rider: 75 ... 85 kg (165 ... 187 lb.)	45 N/mm (257 lb/in)
Weight of rider: 85 ... 95 kg (187 ... 209 lb.)	48 N/mm (274 lb/in)
Weight of rider: 95 ... 105 kg (209 ... 231 lb.)	51 N/mm (291 lb/in)

- Mount washer ④.
- Mount spring retainer ⑤.

Alternative 1

- Tension the spring by turning the adjusting ring to the prescribed value.

Guideline

Spring preload	
125 SX, 450 SX-F, TC 125, FC 450, MC 125 2024, MC 450F 2024	8 mm (0.31 in)
250/300 SX, TC 250/300, MC 250 2024	7 mm (0.28 in)
250/350 SX-F, FC 250/350, MC 250F/350F 2024	10 mm (0.39 in)

Hook wrench (90129051000) (📖 p. 22)

Alternative 2



Warning

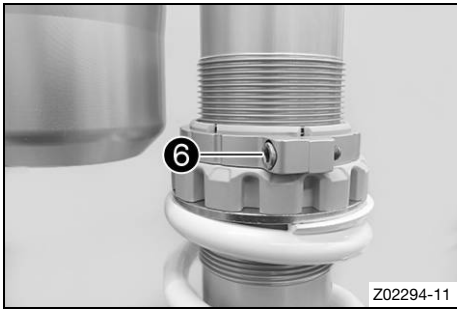
Danger of accident Modifications to the suspension setting may seriously alter the handling characteristic.

Extreme modifications to the suspension setting may cause a serious deterioration in the handling characteristic and overload components.

- Only make adjustments within the recommended range.
- Ride slowly to start with after making adjustments to get the feel of the new handling characteristic.

- Tension the spring to the length measured during disassembly by turning the adjusting ring.

Hook wrench (90129051000) (📖 p. 22)

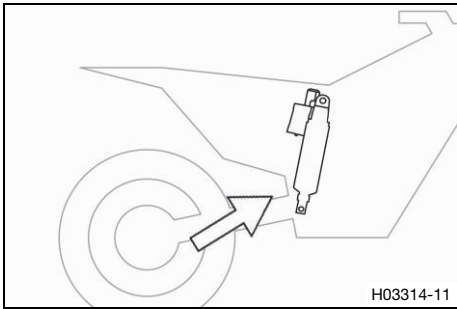


- Tighten screw ⑥.

Guideline

Screw, shock absorber adjusting ring	M5	5 Nm (3.7 lbf ft)
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4.10 Installing the shock absorber



- Install the shock absorber according to the Owner's Manual.

5.1 Bladder kit

Bladder kit	XACT LDS
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Shock absorber fluid (SAE 2.5) (50180751S1)

Standard/classification

- SAE (📖 p. 25) (SAE 2.5)

Guideline

- Use only oils that comply with the specified standards (see specifications on the container) and that exhibit the corresponding properties.

Lubricant (T159)

Recommended supplier

Bel-Ray®

- MC-11®

Lubricant (T158)

Recommended supplier

Lubcon®

- Turmogrease® PP 300

Special grease (00062010053)

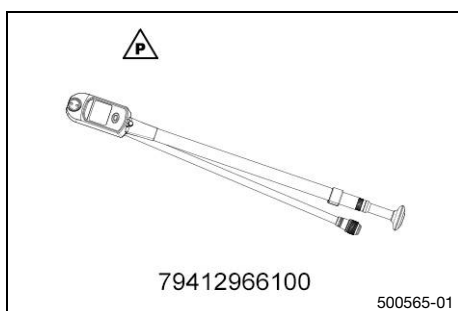
Recommended supplier

Klüber Lubrication®

- KLÜBERFOOD NH1 34-401

8 SPECIAL TOOLS

Fork airpump

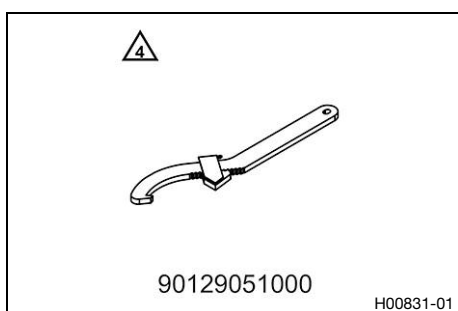


Art. no.: 79412966100

Feature

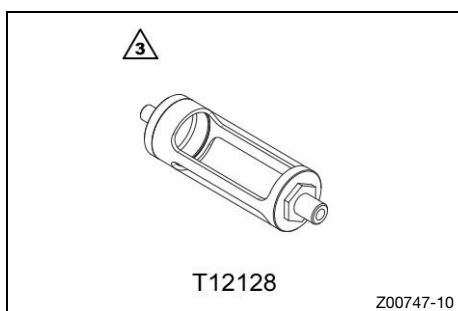
Maximum pressure	20 bar (290 psi)
Display	Digital pressure gauge
Valve connection	Schrader valve
Units	bar, psi and kg/cm ²
Material	Aluminum tube

Hook wrench



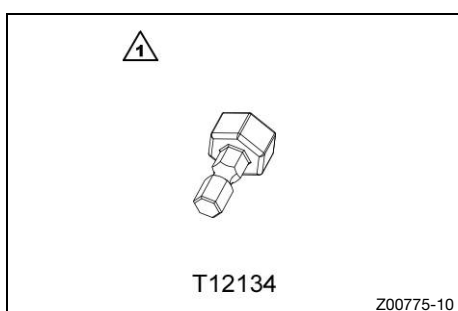
Art. no.: 90129051000

Filling adapter



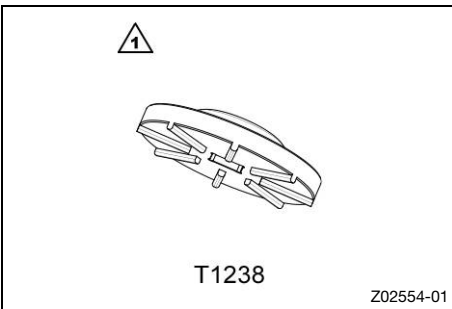
Art. no.: T12128

Valve cap tool



Art. no.: T12134

Reservoir adapter

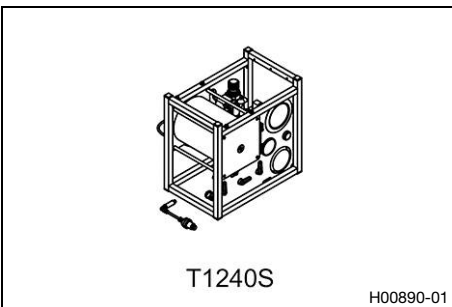


Art. no.: T1238

Feature

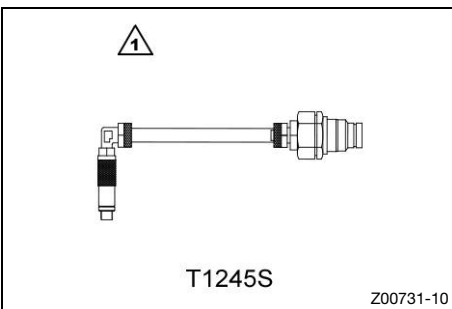
Drive	1/2 in
Adapter diameter	74 mm (2.91 in)

Vacuum pump



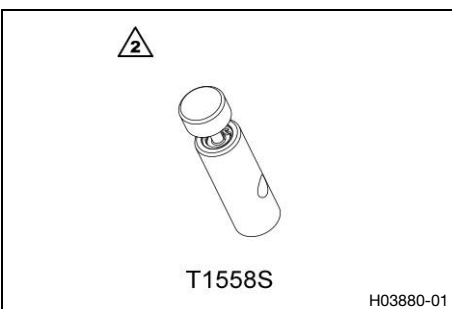
Art. no.: T1240S

Filling adapter



Art. no.: T1245S

Filling adapter



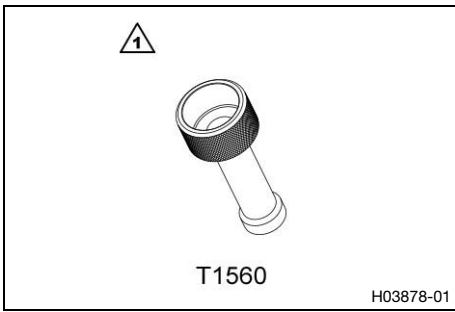
Art. no.: T1558S

Feature

Diameter	18 mm (0.71 in)
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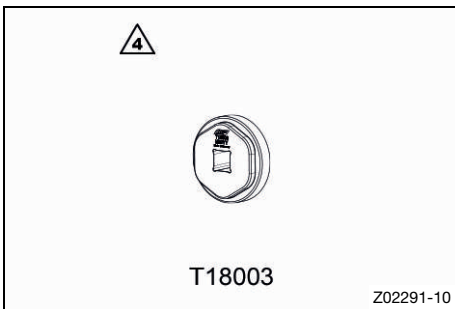
8 SPECIAL TOOLS

Puller



Art. no.: T1560

Mounting tool



Art. no.: T18003

Feature

Drive	1/2 in
Narrow diameter	30 mm (1.18 in)
Wide diameter	45 mm (1.77 in)

SAE

The SAE viscosity classes were defined by the Society of Automotive Engineers and are used for classifying oils according to their viscosity. The viscosity describes only one property of oil and says nothing about quality.

10 LIST OF ABBREVIATIONS

Art. no.	Article number
ca.	circa
cf.	compare
e.g.	for example
etc.	et cetera
i.a.	inter alia
no.	number
poss.	possibly

A	
Accessories	5
Auxiliary substances	5
B	
Bladder kit	
installing	8
C	
Correct installation	4
F	
Figures	5
Fuel, oils, etc.	5
I	
Implied warranty	5
M	
Manufacturer warranty	5
S	
Shock absorber	
damper, assembling	9
damper, bleeding and filling	12
damper, disassembling	7
damper, filling with nitrogen	16
installing	18
installing the bladder kit	8
removing	6
removing the reservoir	8
spring, installing	16
spring, removing	6
Spare parts	5
T	
Technical data	
bladder kit	19
W	
Work rules	4



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21.03.2022