



BOS Factory Fork

All serial numbers



Service manual

BOS Suspension

4 Impasse Léonce Couture
ZA du Mont Blanc
31200 Toulouse - FRANCE

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DEAR CUSTOMER

Congratulations, you have just acquired one of our suspensions and we thank you for it.

We have a common passion, motorcycling!

This passion has led us to design our products with all the care and expertise that you, as a user can expect.

Our suspensions are the result of advanced research from our research department, bench validations and many test sessions with our professional riders.

The goal of all this work is to provide you the best of our technologies for your greatest satisfaction.

In order to make the most of your new acquisition, we invite you to read this user manual carefully. The mounting instructions and tips for use contained on it will allow you to make the most of the potential of your suspensions.

Thank you for choosing BOS suspension!

This document was written at the time of the creation of this product, however, BOS Suspension does not exclude the existence of possible discrepancies due to the evolution of the product since its initial version.

BOS Suspension reserves the right to update the information in this document during the life of the product. BOS Suspension accepts no liability for any printing problems or errors. All information in this document is provided without any obligation on the part of BOS Suspension.

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BOS Suspension

4 Impasse Léonce Couture

ZA du Mont Blanc

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Valid for all BOS Factory and Premium forks.

When working on a BOS suspension, please wear appropriate safety equipment such as an apron, safety gloves and goggles.



When handling the suspension oil, please wear goggles and nitrile gloves.

MANUAL SYMBOLS



CAUTION operations may impair your safety or cause damage to your suspension.

Be sure to take note of these warnings.



These indications are provided to enable you to perform the operations described in this manual and to optimize the performance of your suspension.

GENERAL WARNINGS

The fork is an important element which has a direct influence on the behaviour of your vehicle.

This manual must be consulted before using the BOS fork and during its entire service life. It is an integral part of the product.

If necessary, or for any service operation, please contact an authorized BOS Suspension centre or consult this manual.

After installation, test your vehicle at low speed to make sure that it works properly.

USE IN SAFETY



- When using BOS products, make sure you are in good physical shape and not under the influence of products that affect your lucidity and decision-making capacity (alcohol, drugs, etc.). If you are not able to ride, do not endanger yourself or any other person.



- The fork has the effect of absorbing shocks, which can generate strong heat. Do not touch the shock absorber after use. Allow it to cool before attempting any work on it.

OPERATING RULES ON YOUR SHOCK

Before carrying out any operation, check that you have the necessary tools to perform it. Some tools will be specific to BOS shock absorbers, they will be indicated in this manual when using them and can be ordered directly on our website www.bos-suspension.com.

The disassembly of your shock absorber implies the replacement of certain parts which cannot be reassembled worn without risk of malfunction of your product (O-rings, seals, wiper seals, rings...).

Before reassembly, clean the parts thoroughly of any impurities and check their state of wear. If this seems correct, you can reassemble your shock absorber, otherwise, change the worn parts.

ENVIRONNEMENT

Motocross is a wonderful sport that brings you a lot of happiness. However, it is potentially a source of environmental conflict with other people.

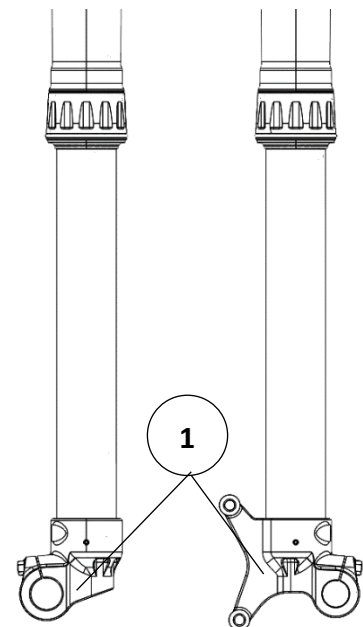
Responsible behaviour when using your motocross bike automatically defuses problems and conflicts. Make sure that you comply with the legislation in force in your country regarding the disposal of used shock absorber oils and components.

To ensure the continued existence of MX, make sure that you stay within the legal framework, are environmentally friendly and recognise the rights of others.



NUMERO DE SERIE

Your fork part number is engraved on the stem of your fork. It is a sequence of 15 characters including the letter E in seventh position (0000-E-0000000).



BOS SUSPENSION grants a contractual guarantee under the following conditions:

BOS guarantees its products against all defects in form and manufacturing faults for a period of one year from the date of original purchase. Proof of purchase will be required for any application of the guarantee. The warranty is granted to the original owner and is non-transferable. Wearing parts such as wiper seals, O-rings, guide rings, pins, bushings, screws and bolts are not covered by the warranty.

Application

The application of the warranty is subject to the laws in force in the country or state in which the original owner resides. If the local legislation differs from the warranty as described here, the warranty is deemed to be amendable to comply with it.

Limitation

BOS SUSPENSION is not liable for direct, indirect, special, incidental or unforeseen damage resulting from the use of its products, subject to compliance with local legislation.

Exclusion

The guarantee does not apply in the following cases :

- Failure to comply with the installation instructions as described in the installation and adjustment manual.
- Failure to follow the disassembly/assembly instructions as described in the service manual.
- Modifications made to the product by the owner or a third party.
- Inappropriate use.
- Damage resulting from an accident, violent shock, fall, under any circumstances.
- Failure to comply with the instructions and maintenance intervals.
- Replacement of original parts with parts from manufacturers other than BOS SUSPENSION.
- Alteration of the serial numbers with the obvious aim of making it illegible.

Procedure

Regardless of where the product was purchased, the owner must contact an authorised BOS centre to apply for the guarantee. It is compulsory to produce the purchase invoice. Otherwise, the warranty will not apply. Sending the product is subject to the prior agreement of the BOS SUSPENSION after-sales service department. Outward carriage, dismantling and packaging costs are the responsibility of the customer. In the event of refusal to apply the guarantee, the packaging and return shipping costs are the responsibility of the customer.

When servicing your BOS suspension, make sure that you are working in conditions that will not affect performance:

- Work in a dust-free environment
- Work at a clean and organised workstation
- Use soft aluminium jaws to protect the equipment when using a vice.
- Do not scratch any surfaces when using tools.
- Clean the components when disassembling them
- Remove the sub-assemblies in the order of disassembly so that you can easily find out how to reassemble them together.
- Long sleeves are recommended or shaved arms.

If you carry out maintenance on your BOS suspension outside a workshop, you should at least :

- Avoid dust and air circulation around your work area
- A clean tarpaulin to be placed under the suspension on the floor
- A repair bracket to maintain the suspension
- An oil pan

All the necessary tools listed below

Cleaning and safety :

- | | |
|----------------------------|---------------------------|
| - Safety goggles | - High pressure cleaner |
| - Clean cloths (lint-free) | - Apron |
| - Soap (+ hot water) | - Oil pan |
| - Nitrile gloves | - Oil fountain (optional) |

Standard tools :

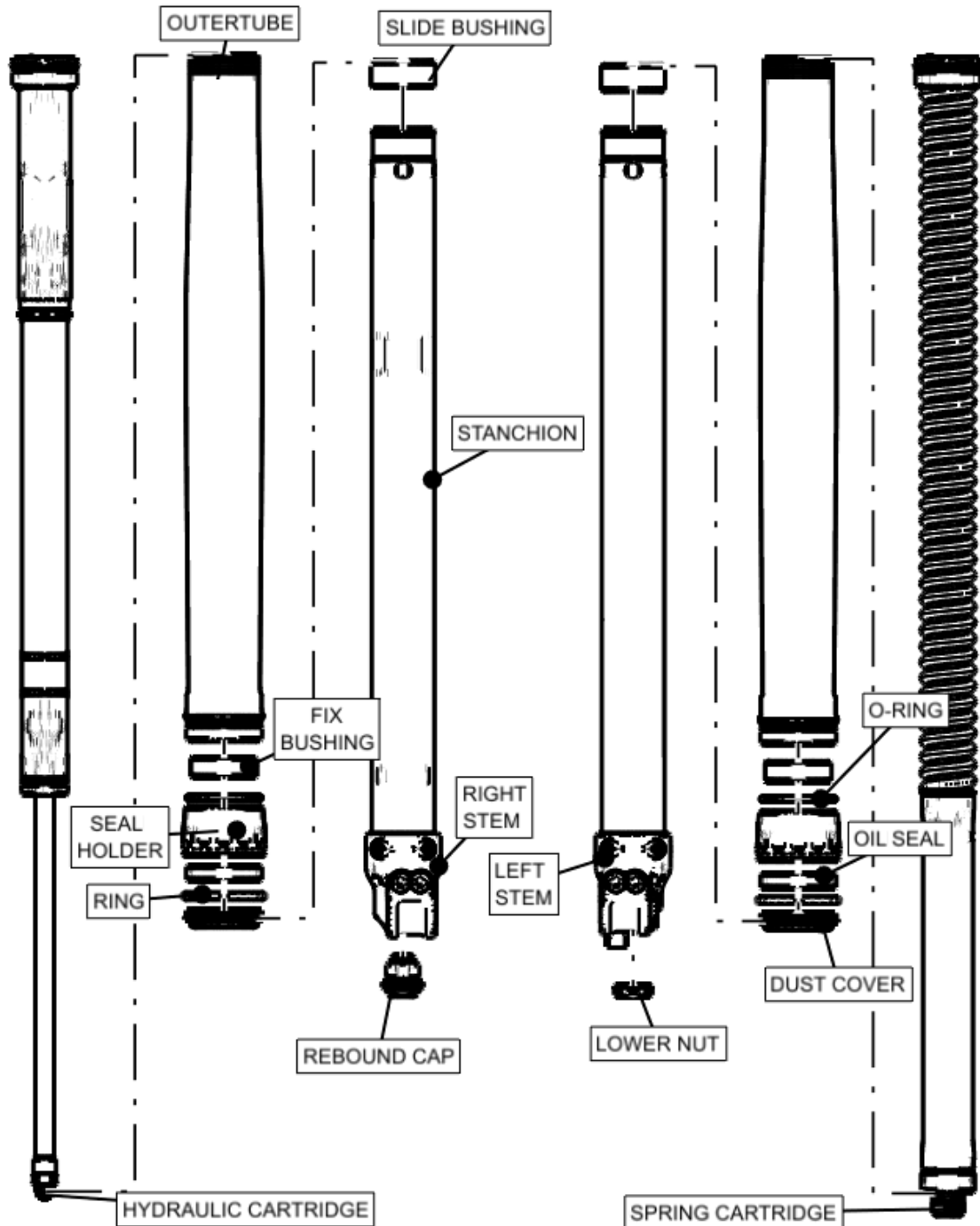
- | | |
|-------------------------------------|-----------------|
| - Ratchet key Socket
21/26/10/13 | - Impact wrench |
| - Flat screwdriver | - Torque wrench |
| - Flat spanner 16/30 | - Ruler |

Specific tools :

- | | |
|--|---|
| - Bush/scrapper tool (ref : 42914-O-012) | - Top cap spanner (ref : 42914-O-003) |
| - Compression block tool (ref : 42914-O-021) | - Vice axles (ref : 42914-O-009 ou 42914-O-010) |
| - Scrapper insert tool (ref : 42914-O-022) | |
| - Seal holder spanner (ref : 42914-O-023) | |

Oils :

- | | |
|---------------------------|-------------------------|
| - Closed cartridge : AMX2 | - Open cartridge : AMX6 |
|---------------------------|-------------------------|



Overhaul kits are available on our website www.bos-suspension.com :

- Premium 49 fork light overhaul kit: KREVL-F49-PRM
- Factory 49 fork light overhaul kit: KREVL-F49-FTY
- Complete overhaul kit for Premium 49 forks: KREVC-F49-PRM
- Complete overhaul kit for Factory 49 forks: KREVC-F49-FTY

Clean your fork with a washing machine if you have one available.

Otherwise, use the high pressure cleaner and finish cleaning with hot water and soap.



Absolutely prohibited : any aggressive product such as degreaser on joints and spherical bearing. If you use a high-pressure washer, never direct the jet directly onto the joints. Regularly remove any soil that may accumulate under the scraper seal.



Required tools :

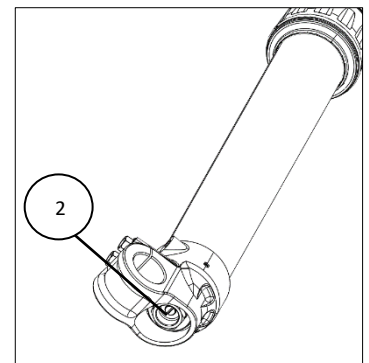
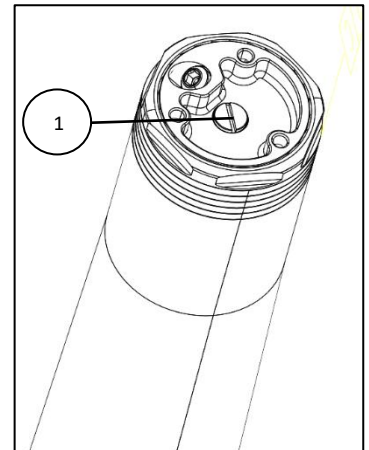
- Washing machine
- Soap

PREREQUISITE

- 1) Before dismantling, make a note of your compression (1)/expansion (2) settings in a notebook.

To do this, count the number of clicks to the fully closed position. Once you have noted your settings, unscrew them all the way to work on your fork.

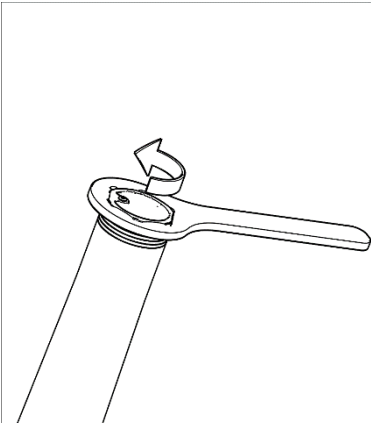
- 2) Once you have noted the preload value, you can proceed with disassembly.



Required tools:

- Flat screwdriver

SPRING CARTRIDGE REMOVAL

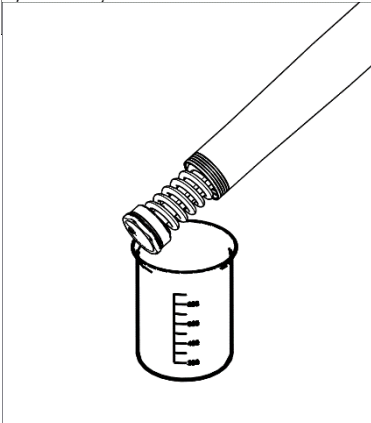


- Unscrew the cartridge top cap
- i** Remove the cap by keeping the fork on your motorbike if you don't have a suitable tool to hold it in a vice.



Required tools

- Top cap spanner(42914-O-003)

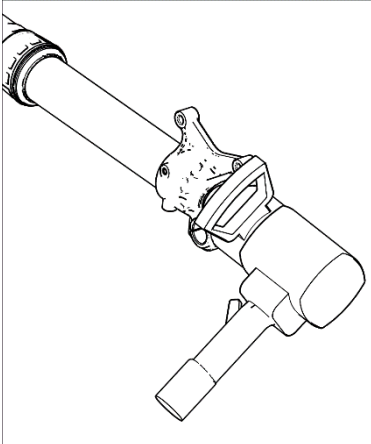


- Empty the contents of the fork into a drain pan



Required tools :

- Drain pan



- Unscrew the lower fork nut on the spring side using a ratchet spanner or an impact spanner if it turns on itself.

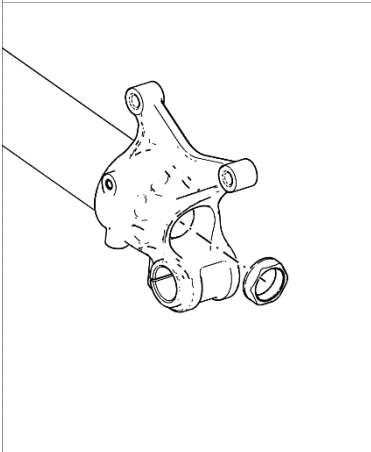


Use the impact spanner with care to avoid damaging your fork.



Required tools :

- Impact spanner / Ratchet spanner

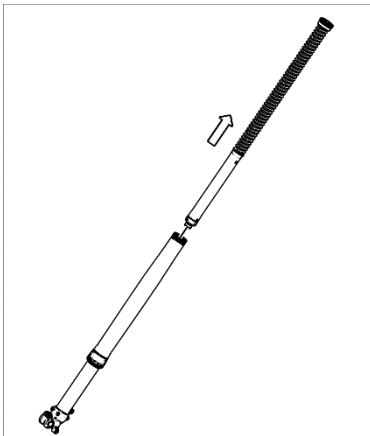


- Remove the lower spring cartridge nut



Required tools :

- By hand

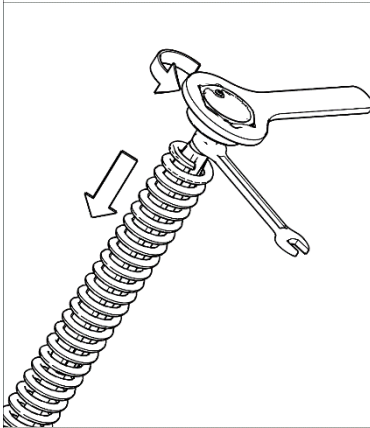


- Carefully remove the spring cartridge from the fork tube



Required tools :

- By hand

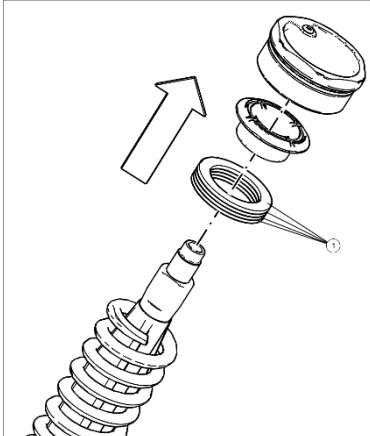


- Compress the spring, then insert a 16 mm spanner to hold the lock nut.
- Then unscrew the cartridge cap using the BOS spanner



Required tools :

- Top cap spanner (42914-O-003)
- 16mm flat spanner

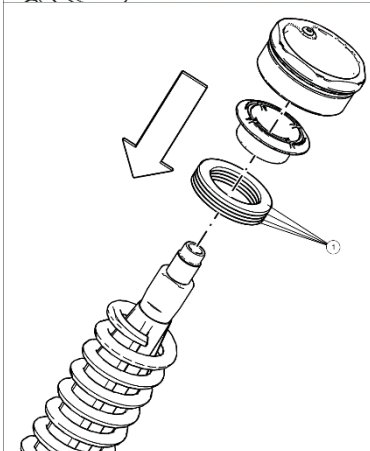


- Then remove the spring support and the preload shims, which you can add or remove as you wish.
- Then remove the spring from your cartridge



Required tools :

- By hand

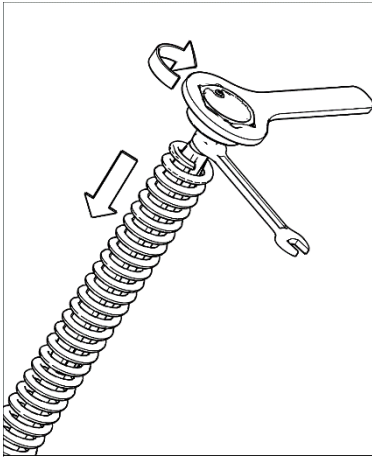


- To reassemble, proceed in reverse: insert the spring, then the shims and spring support, before screwing on the top cap.



Required tools :

- By hand



- Hold the cap lock nut with a 16 mm open-end spanner
- Tighten the top cap using the BOS hexagonal key

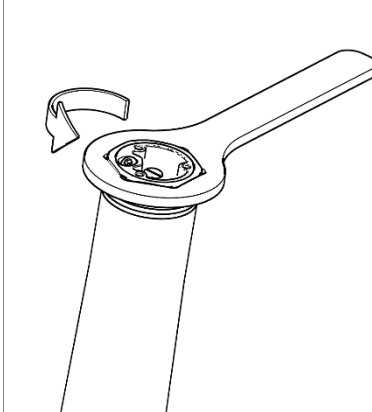
i Do not exceed a torque of 15Nm



Required tools :

- Top cap spanner (42914-O-003)
- 16mm flat spanner

HYDRAULIC CARTRIDGE REMOVAL



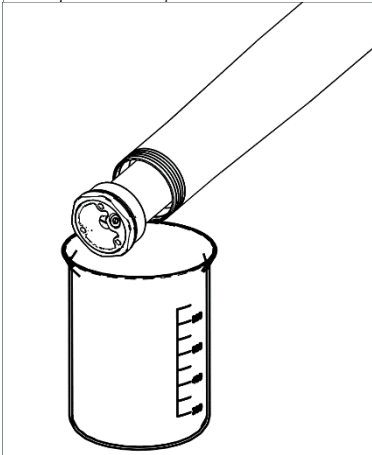
- Unscrew the hydraulic cartridge cap

i Unscrew the cap, keeping the fork on your bike if you don't have a tool to hold it in a vice.



Required tools:

- Top cap spanner (42914-O-003)

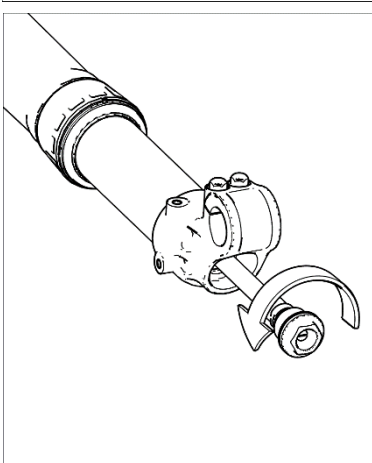


- Empty the contents of the fork into a drain pan



Required tools :

- Oil pan

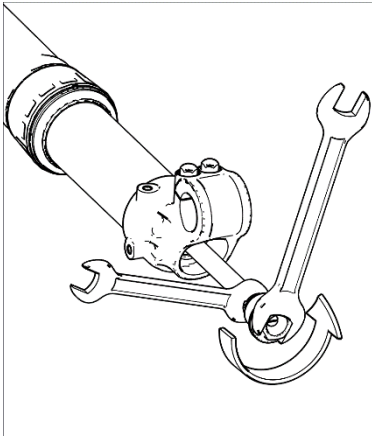


- Unscrew the lower nut on your hydraulic cartridge using a 21mm socket.



Required tool :

- 21mm Socket

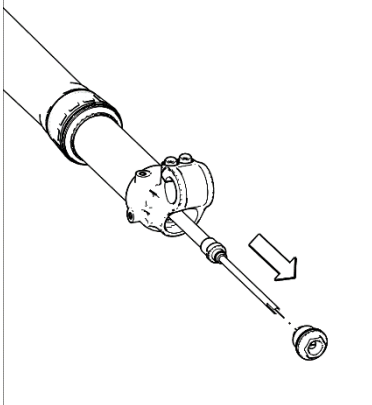


- Unscrew the rebound adjustment block using a 16 mm open-end spanner and a 21 mm socket.



Required tools :

- 21mm Socket
- 16mm flat spanner

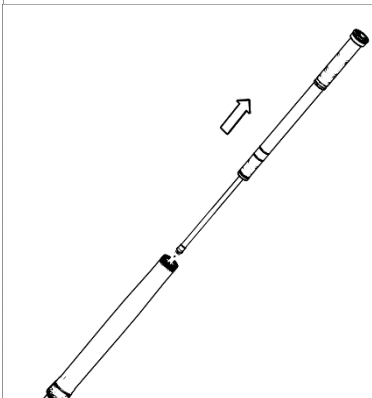


- Remove the rebound adjuster block and the flat gasket.
- Also remove the rebound shaft



Required tools :

- By hand

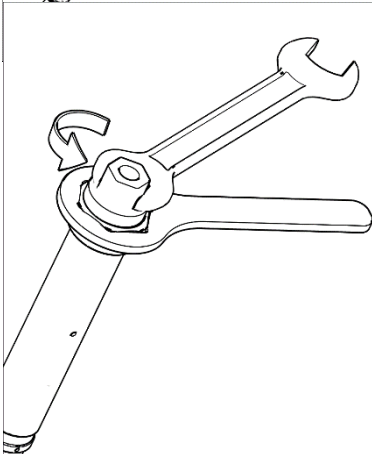


- Carefully remove the hydraulic cartridge from your fork tube



Required tools :

- By hand

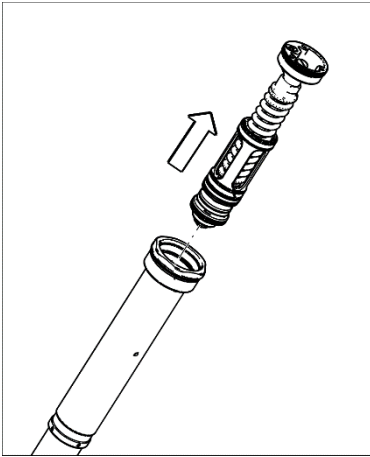


- Unscrew the compression block from your hydraulic cartridge




Required tools :

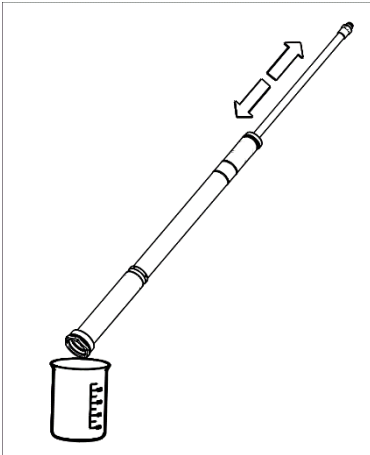
- Top cap spanner (42914-O-003)
- Compression block tool (42914-O-021)




- Remove the compression block from your hydraulic cartridge

 **Required tools :**

- By hand

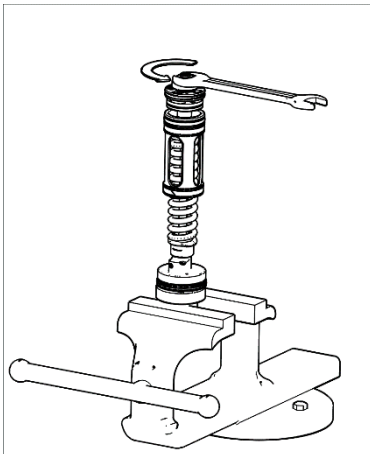


- Empty the contents of the closed cartridge into a drain pan


 **Required tools :**

- Oil pan

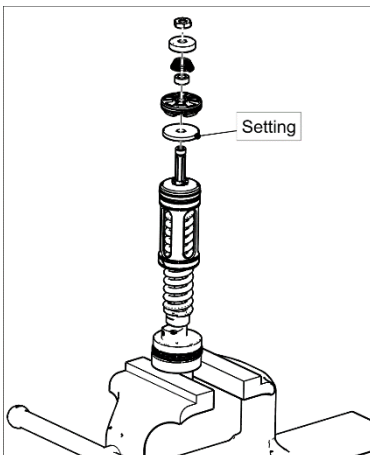
COMPRESSION BLOCK DISASSEMBLY



- Hold the compression block in a vice using the BOS tool (42914-O-021).
- Unscrew the setting nut using a 13" spanner

 **Required tools :**


- Compression block tool (42914-O-021)
- 13mm spanner



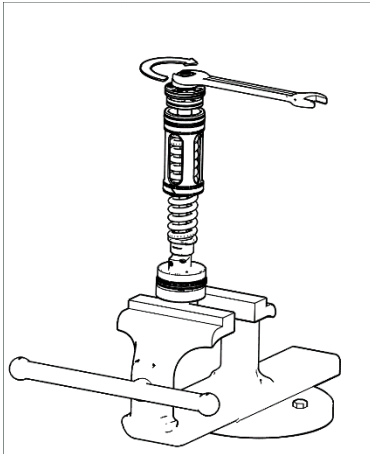
- Remove the nut
- Remove the piston assembly
- Change the piston seal if necessary



Make sure that the parts are assembled in the correct direction
Length of block spring to be respected: 105mm

 **Required tools :**

- By hand



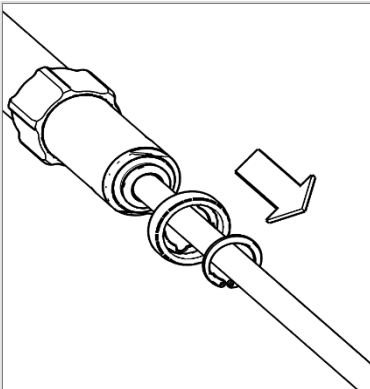
- Apply Loctite 243 to the compression block nut and tighten to 7Nm.



Required tools :

- Compression block tool (42914-O-021)
- 13mm spanner

REBOUND SHAFT DISASSEMBLY

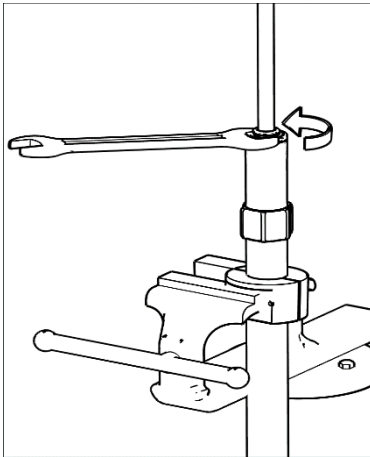


- Remove the circlip
- Remove the rebound stop piston



Required tools :

- Clip pliers

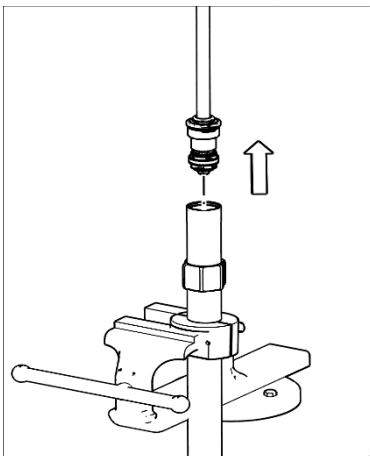


- Unscrew the cartridge rod guide using a 30 mm spanner.
- Use soft jaws to hold the cartridge in a vice



Required tools :

- Cartridge half-shells (42914-O-007)
- Flat spanner 30mm

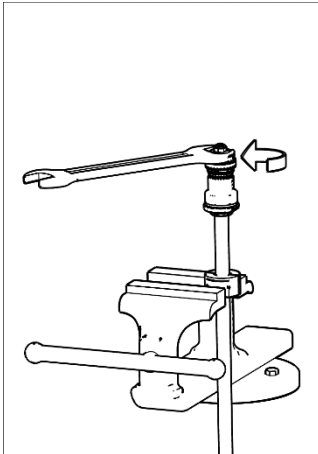


- Gently remove the rebound rod from your cartridge



Required tools :

- By hand

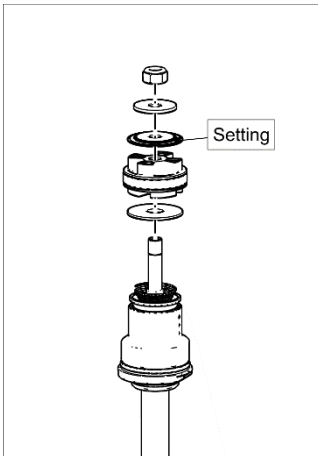


- Hold the shaft in a vice using half-shells
- Unscrew the nut using a 10 mm socket



Required tools :

- Cartridge half-shells (42914-O-002)
- Socket 10mm



- Remove the nut
- Remove the piston assembly
- Change the piston seal if necessary

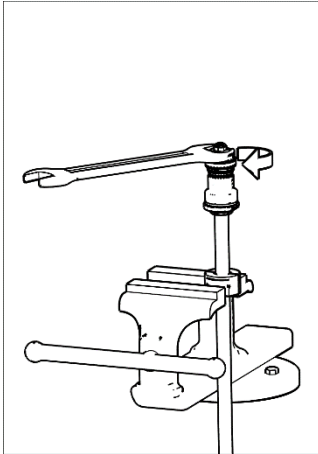


Make sure that the parts are assembled in the correct order



Required tools :

- By hand

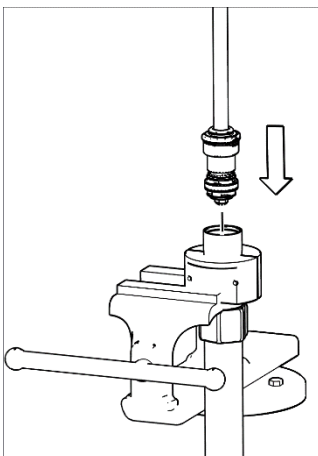


- Retighten the rebound block nut, then tighten to 7Nm.



Required tools :

- Cartridge half-shells (42914-O-002)
- Socket 10mm

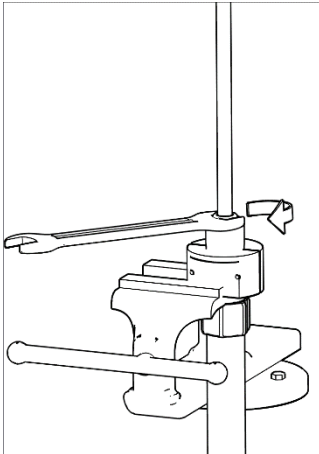


- Insert the rebound rod into the closed cartridge



Required tools :

- By hand



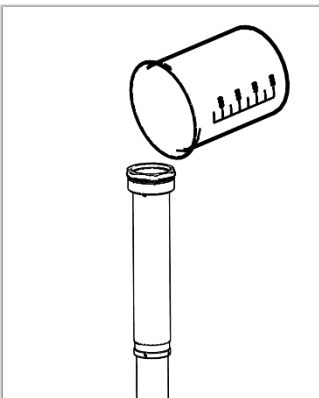
- Apply Loctite 2701 to the rod guide
- Tighten to 25Nm



Required tools :

- Cartridge half-shells (42914-O-007)
- Flat spanner 30mm

CLOSED CARTRIDGE ASSEMBLY

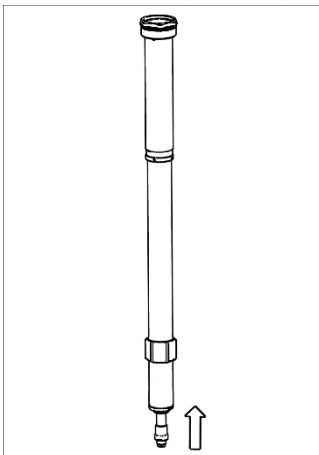


- Pour approximately 300ml of AMX2 oil into the closed cartridge.



Required tools :

- Measuring glass

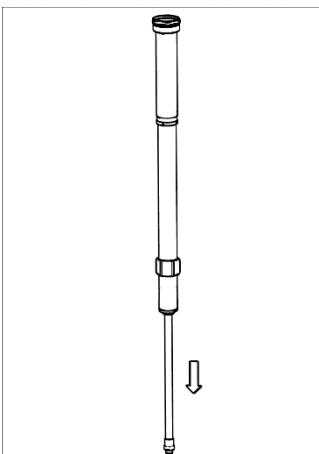


- Push the rod all the way in



Required tools :

- By hand

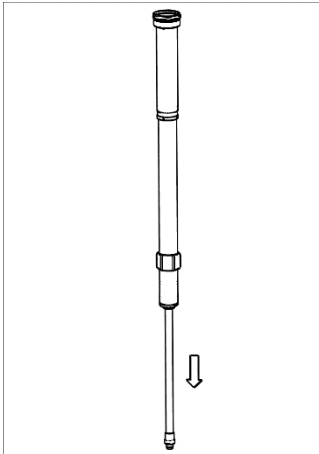


- Pull the rod all the way out in one go

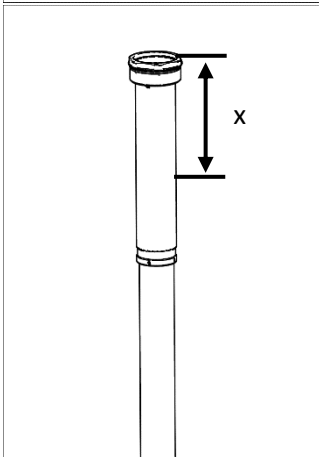


Required tools :

- By hand



- Leave to rest to remove any remaining air bubbles

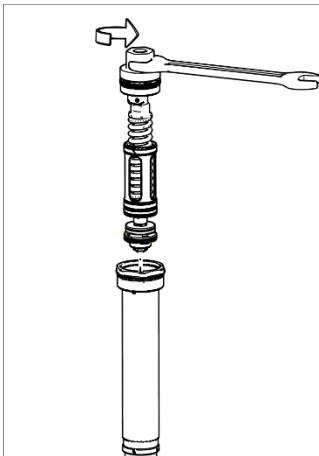


- Check the oil level in your cartridge
- Extended rod
- 165mm from the top of the cartridge and the oil surface



Required tools :

- Ruler

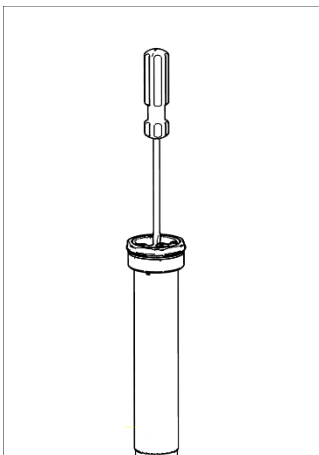


- Refit the compression block in the closed cartridge
- Tighten to 10Nm



Required tools :

- Cartridge half-shells (42914-O-007)
- Compression block tool (42914-O-021)

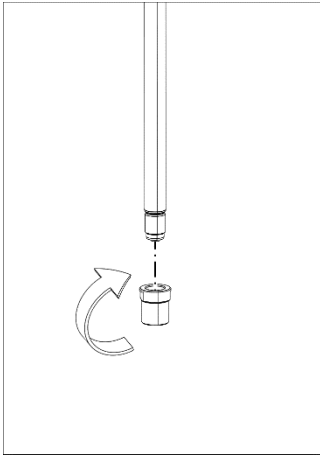


- Close the compression adjuster fully



Required tools :

- Flat screwdriver

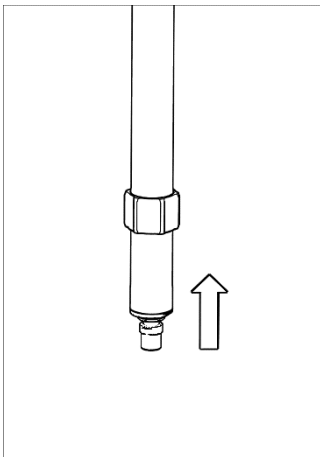


- Screw the rebound locking nut fully onto the rod in the reverse direction



Required tools :

- By hand

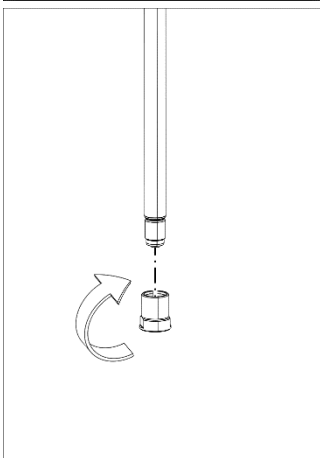


- Gently push the rod all the way in
- Check that it returns evenly
- Pour any excess oil through the holes in the reservoir



Required tools :

- By hand



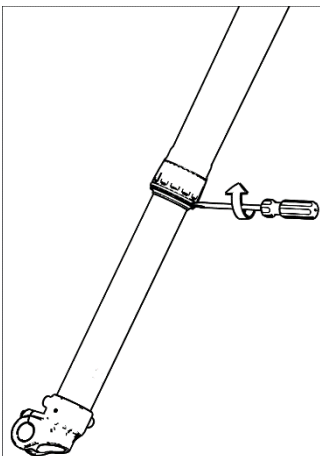
- Replace the rebound locking nut in the correct position.



Required tools :

- By hand

SEAL HOLDER DISASSEMBLY

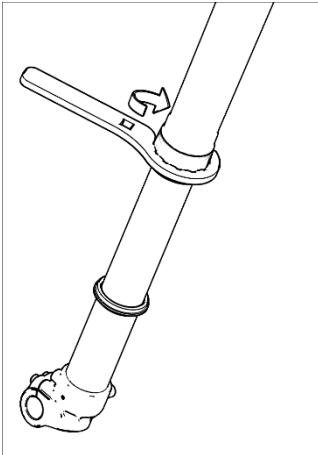


- Lever the dust cover and seal holder together to release it from its housing



Required tools :

- Flat screwdriver

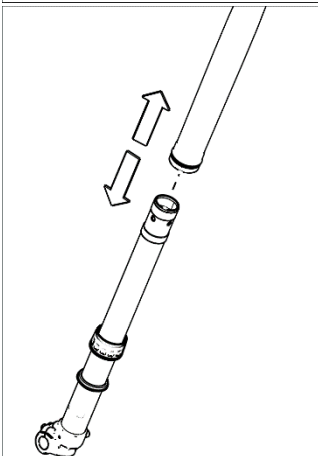


- Unscrew the seal holder from the outer tube using the BOS seal holder spanner.



Required tools :

- Seal spanner (42914-O-023)

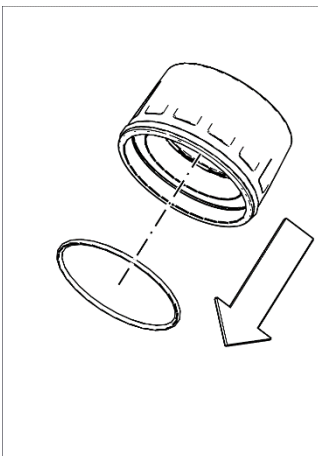


- Once the seal holder has been unscrewed, remove the outer tube from the fork stanchion.



Required tools :

- By hand

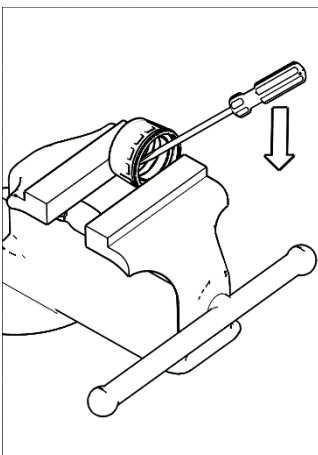


- Remove the SPY seal retaining clip from the seal holder using a flathead screwdriver.
- Lever the SPY seal out of its housing



Required tools :

- Flat screwdriver

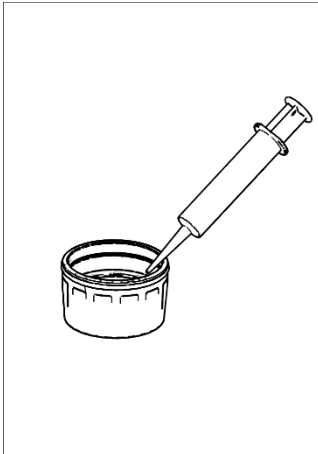


- Then clean the seal holder



Required tools :

- Flat screwdriver

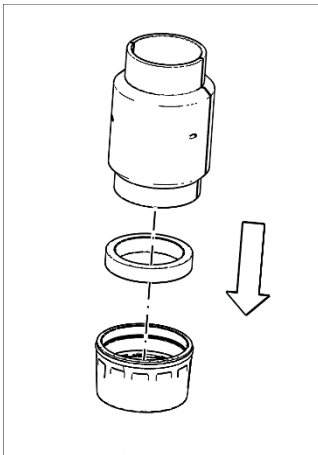


- Apply white grease to the SPY seal housing



Required tools :

- Flat screwdriver

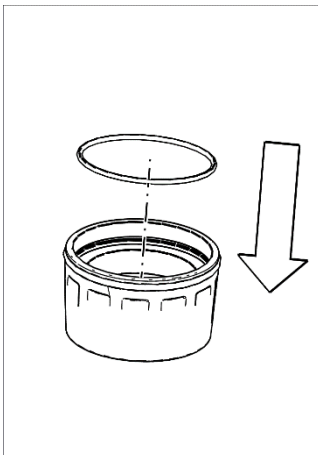


- Insert the new seal using the insertion tool, using the side with the larger diameter



Required tools :

- Seal insertion tool (42914-O-012)

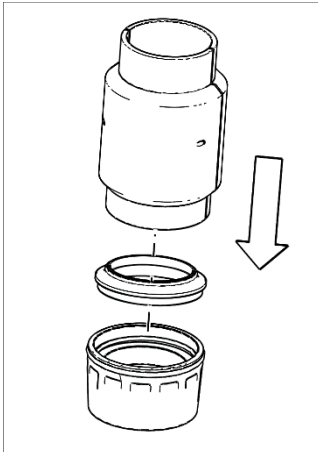


- Insert the seal retaining clip into its housing



Required tools :

- By hand



- Insert the dust cover into the seal holder using the insertion tool, using the side with the larger diameter.



Required tools :

- Seal insertion tool (42914-O-012)

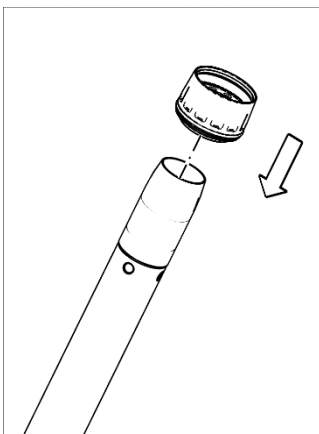


- Oil the inside of the spy ring with AMX6 oil.



Required tools :

- By hand

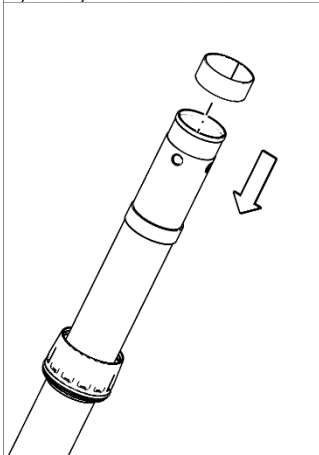


- Position the SPY seal insertion cone on the stanchion of your fork.
- Then insert the seal holder on the stanchion



Outil(s) requis :

- Seal insertion tool (42914-O-022A)



- Insert the fixed ring on the stanchion, then the movable ring in its housing.

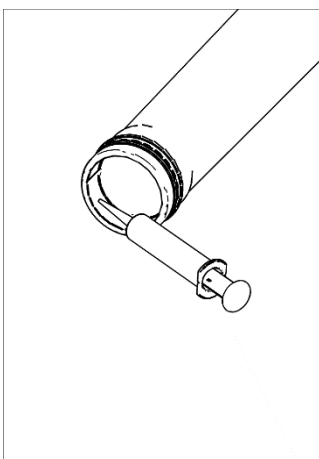


Make sure the slots in the guide rings face away from each other



Required tools :

- By hand

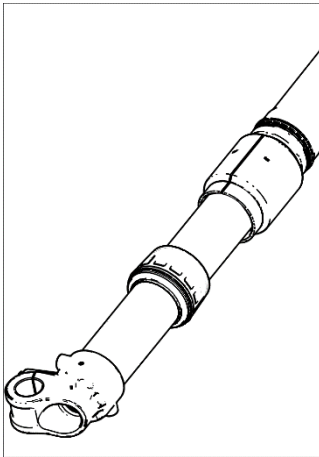


- Apply white grease to the fixed bushing housing



Required tools :

- By hand

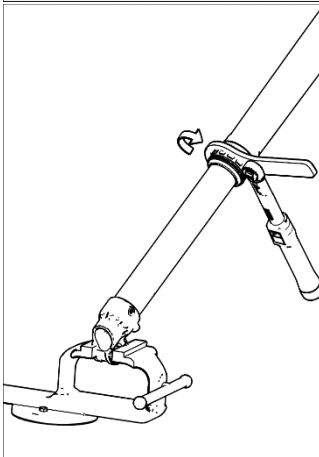


- Insert the fixed ring into the outer tube using the insertion tool, using the side with the smaller diameter



Required tools :

- Seal insertion tool (42914-O-012)



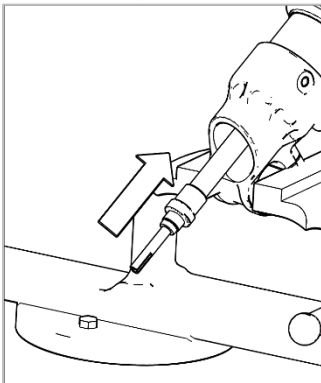
- Apply white grease to the sleeve O-ring
- Apply Loctite 243 to the sleeve thread
- Tighten the seal holder using the BOS spanner to a torque of 18Nm



Required tools :

- Seal spanner (42914-O-023)

HYDRAULIC CARTRIDGE ASSEMBLY

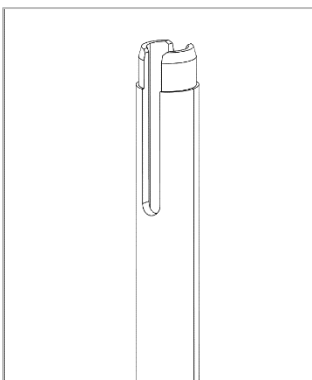


- Insert the hydraulic cartridge into the fork tube
- Insert the rebound transmission into the rod
- Tighten the lock nut

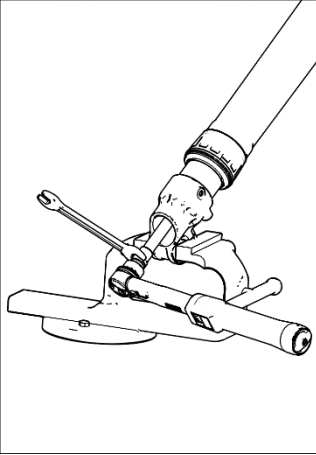


Required tools :

- By hand



- Note the direction of assembly of the rebound transmission
- Insert the side with the shoulder first (see photo opposite)

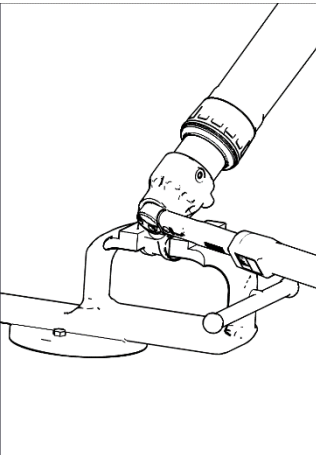


- Hold the lock nut and then tighten the cap to 25Nm



Required tools :

- 21mm socket
- Flat spanner 16mm

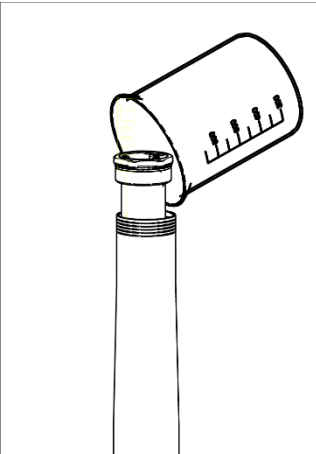


- Screw the cap into the base to a torque of 25Nm



Required tools :

- 21mm Socket

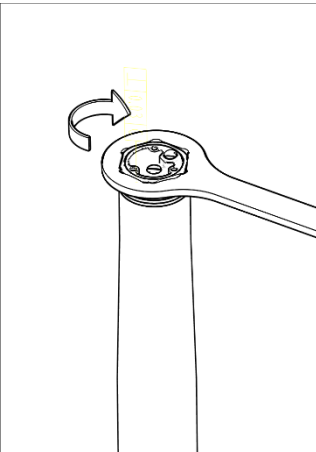


- Insert 300ml of AMX6 oil into your hydraulic cartridge tube
- i* The amount of oil is adjustable over a range of +20 -30ml, so if you adjust the hydraulic side by a certain amount, adjust the spring side by the same amount.



Required tools :

- Spout
- AMX6 oil



- Tighten the top cap in the outer tube using the BOS spanner.

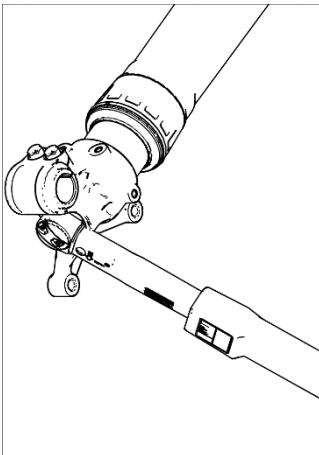
- i* - Do not exceed a torque of 10Nm
- When you've reassembled, don't forget to reset the settings to the desired position (always start from the fully screwed-in position).




Required tools :

- Top cap spanner (42914-O-003)

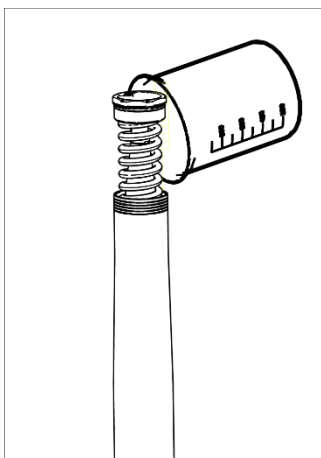
SPRING CARTRIDGE REASSEMBLY




- Insert the spring cartridge into the fork tube
- Apply Loctite 243 to the lower cartridge nut
- Tighten to a torque of 25Nm

 **Required tools :**

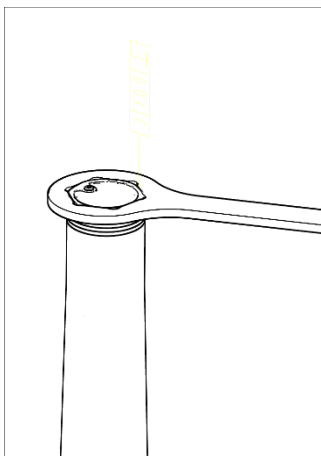
- 26mm socket
- Loctite 243



- Insert 625 ml of AMX6 oil into your spring cartridge tube.
- i* The quantity of oil is adjustable over a range of +20 -30ml, so if you adjust the quantity of oil on the spring side, adjust it by the same amount on the hydraulic side.


 **Required tools :**

- Spout
- AMX6 oil



- Tighten the top cap in the outer tube using the BOS spanner


i Do not exceed a torque of 10Nm

 **Required tools :**

- Top cap spanner (42914-O-003)

STICKER APPLICATION

When fitting your BOS fork stickers, we recommend aligning the top of the lettering "BOS" with the air bleed screw on the top cap and the centre of your fork leg.

 **Required tools :**

- Premium fork sticker (42914-S-003A)
- Factory fork sticker (42914-S-004A)

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