# Ø39 Trial Fork

## User Manual –

This user manual contains all the relevant information regarding the correct use and maintenance of the Forks: Trial Racing Steel, Trial Ø39 4Ride, Trial Racing Aluminium, Trial Racing Pro Steel, Trial Racing Pro Aluminium, Trial Racing Pro Kashima

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## Important Information and Maintenance Intervals:

| IMPORTANT | |
|---|---|
|  | Repeatedly using our products in extreme conditions requires more frequent servicing. Using unrecommended high-pressure washing methods, using unrecommended spare parts, solvents and lubricants not recommended by Formula reduce the life span of our products. |

| IMPORTANT | |
|---|---|
|  | Formula recommends only ORIGINAL spare parts and lubricant products<br>Do not attempt assembly and disassembly operations on this product. Formula recommends consulting servicing technicians for these activities and finding eventual cracks, deformations, or evidence of damage due to fatigue or wear: if the inspection shows the presence of such problems, even if minor, immediately replace the component – with no attempts of repair. |

| SAFETY INFORMATION | |
|---|---|
|  | Always wear nitrile gloves and safety glasses when working on the fork.<br>Ensure correct disposal of waste materials and liquids. |

## Maintenance Intervals

To keep the fork efficient during normal usage and ensure proper maintenance, follow the maintenance intervals chosen by Formula:

| Procedure | Before and After any use | Every 8 Hours 1 Month | Every 35 Hours 3 Month | Every 100 Hours 1 Year |
|---|---|---|---|---|
| Washing with water and mild soap. Visual inspection. | X | | | |
| Cleaning dust seals (if dust or mud is present) | | X | | |
| Oil change | | | X | |
| Full inspection | | | | X |

## Oil Level Sheet

| Fork Code 151239XXX | SX/Left (mm) | DX/Right (mm) | MY | Customer |
|---|---|---|---|---|
| 000 | 118,0 | 118,0 | 2019 - 2022 | Ø39 Standard |
| 031 | 110,0 | 55,0 | 2011 - 2014 | Beta |
| 051 | 110,0 | 55,0 | 2011 - 2017 | Sherco |
| 054 | 130,0 | 75,0 | 2014 | Sherco |
| 055 | 130,0 | 75,0 | 2016 | Sherco |
| 056 | 130,0 | 75,0 | 2016 | Sherco |
| 057 | 130,0 | 75,0 | 2018 | Sherco |
| 058 | 130,0 | 75,0 | 2020 | Sherco |
| 059 | 140,0 | 85,0 | 2022 | Sherco |
| 101 | 110,0 | 55,0 | 2012 | Jotagas |
| 111 | 110,0 | 55,0 | 2012 | Gas Gas |
| 113 | 130,0 | 75,0 | 2014 - 2015 | Jotagas |
| 113 | 130,0 | 75,0 | 2013 - 2015 | Gas Gas |
| 113 | 130,0 | 75,0 | 2014 - 2015 | Ossa |
| 116 | 130,0 | 75,0 | 2016 | Gas Gas |
| 116 | 130,0 | 75,0 | 2017 | Sherco |
| 116 | 130,0 | 75,0 | 2017 | Scorpa |
| 119 | 130,0 | 75,0 | 2016 | Gas Gas |
| 121 | 100,0 | 50,0 | 2014 | Honda |
| 122 | 125,0 | 70,0 | 2014 | Honda |
| 123 | 100,0 | 50,0 | 2015 | Honda |
| 125 | 100,0 | 50,0 | 2016 | Honda |
| 127 | 125,0 | 60,0 | 2016 | Honda |
| 128 | 100,0 | 50,0 | 2017 | Honda |
| 129 | 130,0 | 70,0 | 2017 | Honda |
| 151 | 130,0 | 75,0 | 2015 | Vertigo |
| 152 | 130,0 | 75,0 | 2015 | Vertigo |
| 153 | 130,0 | 75,0 | 2016 | Vertigo |
| 154 | 130,0 | 75,0 | 2019 | Vertigo |
| 155 | 130,0 | 75,0 | 2019 | Vertigo |
| 156 | 130,0 | 75,0 | 2020 | Vertigo |
| 157 | 130,0 | 75,0 | 2020 | Vertigo |
| 158 | 130,0 | 75,0 | 2021 | Vertigo |
| 159 | 130,0 | 75,0 | 2021 | Vertigo |
| 171 | 130,0 | 75,0 | 2015 | TRS |
| 173 | 130,0 | 75,0 | 2017 | TRS |
| 174 | 130,0 | 75,0 | 2017 | TRS |
| 175 | 110,0 | 55,0 | 2018 | TRS |
| 176 | 110,0 | 55,0 | 2019 | TRS |
| 177 | 130,0 | 75,0 | 2020 | TRS |
| 178 | 110,0 | 55,0 | 2021 | TRS |
| 179 | 130,0 | 75,0 | 2021 | TRS |
| 185 | 130,0 | 75,0 | 2020 | Electric Motion |
| 186 | 130,0 | 75,0 | 2020 | Electric Motion |
| 187 | 118,0 | 118,0 | 2023 | Electric Motion |

| Codice Forcella 151239XXX | SX/Left (mm) | DX/Right (mm) | MY | Customer |
|---|---|---|---|---|
| 200 | 130,0 | 75,0 | 2017 | Gas Gas |
| 202 | 130,0 | 75,0 | 2020 | Gas Gas |
| 203 | 130,0 | 75,0 | 2020 | Gas Gas |
| 204 | 125,0 | 70,0 | 2022 | Gas Gas |
| 205 | 125,0 | 70,0 | 2022 | Gas Gas |
| 207 | 125,0 | 70,0 | 2022 | Gas Gas |
| 231 | 125,0 | 70,0 | 2018 | Honda |
| 232 | 100,0 | 50,0 | 2018 | Honda |
| 233 | 130,0 | 70,0 | 2020 | Honda |
| 234 | 125,0 | 60,0 | 2022 | Honda |
| 250 | 130,0 | 75,0 | 2020 | TRS |
| 260 | 130,0 | 75,0 | 2022 | Arctic Leopard |
| 261 | 130,0 | 75,0 | 2022 | Arctic Leopard |
| 262 | 130,0 | 75,0 | 2022 | Arctic Leopard |
| 900 | 118,0 | 118,0 | 2024 | Aftermarket |
| 901 | 118,0 | 118,0 | 2024 | Aftermarket |
| 902 | 130,0 | 75,0 | 2024 | Aftermarket |
| 903 | 130,0 | 75,0 | 2024 | Aftermarket |
| 904 | 110,0 | 55,0 | 2024 | Aftermarket |
| 905 | 130,0 | 75,0 | 2024 | Aftermarket |
| 906 | 130,0 | 75,0 | 2024 | Aftermarket |
| 907 | 130,0 | 75,0 | 2024 | Aftermarket |
| 908 | 130,0 | 75,0 | 2024 | Aftermarket |
| 909 | 130,0 | 75,0 | 2024 | Aftermarket |
| 910 | 130,0 | 75,0 | 2024 | Aftermarket |
| 911 | 130,0 | 75,0 | 2024 | Aftermarket |
| 912 | 130,0 | 75,0 | 2024 | Aftermarket |
| 913 | 130,0 | 75,0 | 2024 | Aftermarket |
| 914 | 110,0 | 55,0 | 2024 | Aftermarket |
| 992 | 130,0 | 75,0 | 2022 | Aftermarket |
| 994 | 130,0 | 75,0 | 2023 | Aftermarket |

## Required Tools

| Description | Position | Q.ty | Part number |
|---|---|---|---|
| Bushing and Oil Seal Tool | 1 | 1 | 0800DU007 |
| Stanchion Tube Tool | 2 | 1 | 080004000 |
| Cartridge Assembly Tool | 3 | 1 | 080008000 |

- Bench vise;
- Wrench key - 14 mm, 17 mm;
- Hex key - 1,5 mm, 12 mm;
- Flathead screwdriver;
- Torque wrench;

## Fork Settings

⚠ The forks have different settings to fine-tune their performance based on the rider's needs. Settings adjustments must be performed by an experienced technician. Setting a fork improperly could make the bike hard to ride and could cause severe or fatal injuries.

### Extension setting

**Tools:**

Flathead screwdriver.

**Procedure:**

The extension setting is located on the cap of the right leg. Turning the regulator clockwise will lower the rebound speed; Turning the regulator anti-clockwise will increase the rebound speed. Usually, the regulation is done by starting in a fully clockwise position and then turning anti-clockwise the regulator between 16 and 22 clicks, depending on the temperature outside.

### Compression setting (only on some models)

**Tools:**

Hex key 2 mm.

**Procedure:**

The compression setting is located on the lower screw of the right leg. This setting controls progressively through the entirety of the compression stroke. Usually, starting with the regulator fully screwed you need to unscrew the regulator by 2-3 turns (1 turn equals 360°).

### End stroke setting

**Tools:**

Hex key 2 mm.

**Procedure:**

The end stroke setting is located on the lower screw of the left leg. This setting only affects the last 45 mm of the stroke. Usually, the regulator is kept in a fully closed position. If the rider is light and unable to reach the end stroke, the regulator can be turned anti-clockwise.

### Spring preload setting

**Tools:**

Flathead screwdriver.

**Procedure:**

The spring preload setting is located on the cap of the left leg. This setting allows to increase the preload up to 10 mm is a very personal setting. We suggest starting with the preload set halfway (fully screwed and then unscrewed by 5 turns) and then regulating it by one turn at a time to obtain the ideal setting.

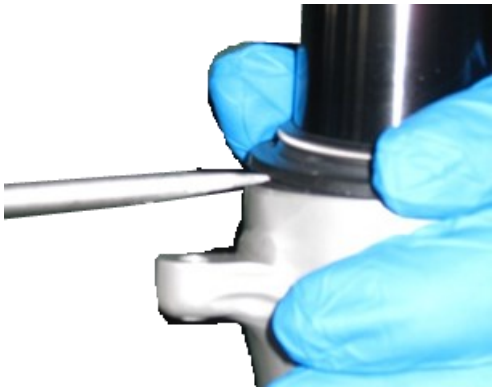
## Cleaning the Dust Seals

**Tools:**

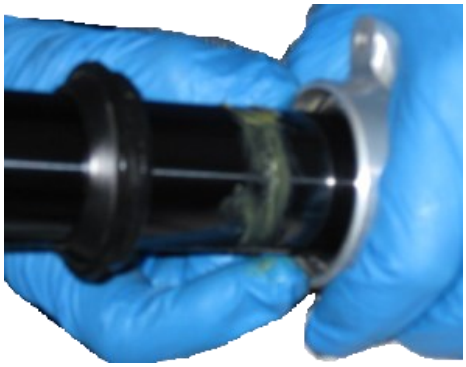
Flathead screwdriver, microfiber cloth.

**Procedure:**

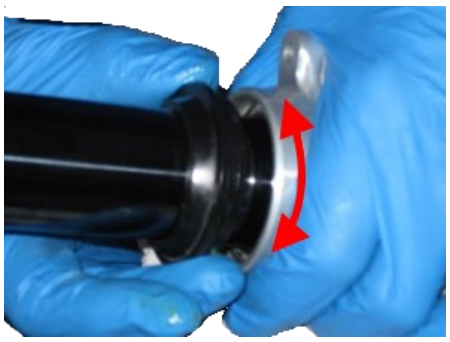
1. Before proceeding accurately clean the fork;
2. Remove the dust seal by leveraging on its side with a flat-head screwdriver. Remove any dirt residue from the dust seal and the oil seal with a microfiber cloth;




3. Insert a microfiber cloth inside the dust seal to remove dirt residue from the internal diameters, then apply grease on the tube;

4. Rotate the dust seal on the grease and insert the dust seal in its housing by pushing on its outer diameters with a screwdriver;




-End of Procedure-

## Oil Change Left Leg

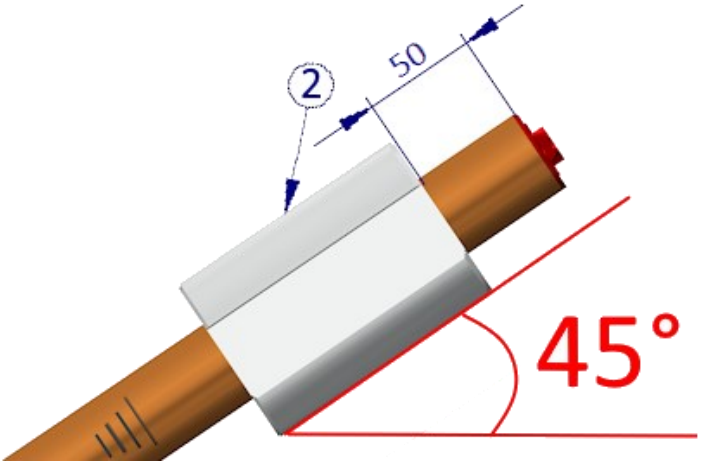
**Tools:**

| Description | Position | Part number |
|---|---|---|
| Stanchion Tube Tool | 2 | 080004000 |

Combined wrench 17 mm, Hex key 12 mm

**Procedure:**

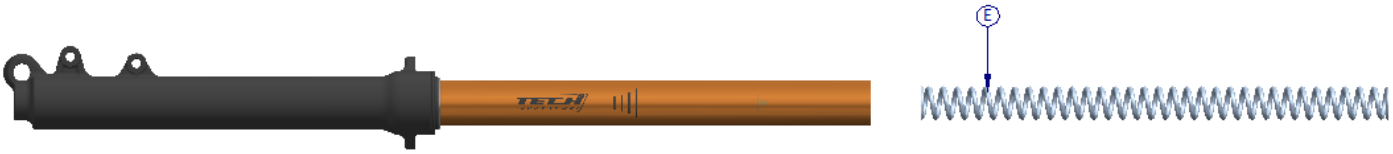
1. Before proceeding accurately clean the fork;
2. Tighten the tube on a bench vise with Tool 2 with an angle of 45°. Let the tube come out of the tool by 50 mm. Keep the fork in this position until step N°6;




3. Unscrew the cap (A) with a 17 mm combined wrench and clean it;

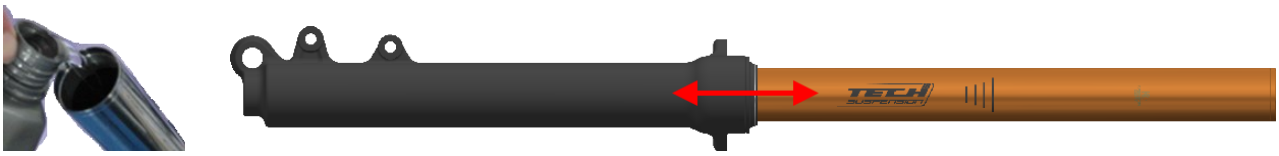

4. Remove the conical spacer (B), the spacer (C) and the washer (D);


5. Slowly remove the spring (E) with a cloth. Clean properly the spring from oil residues;

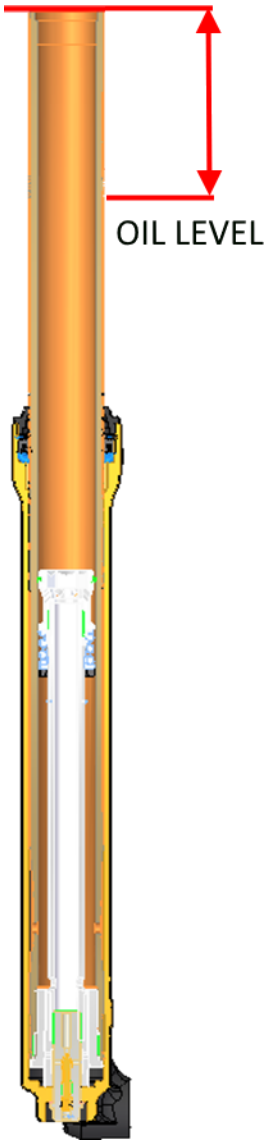


6. Remove all oil from the fork and dispose of it according to local laws;

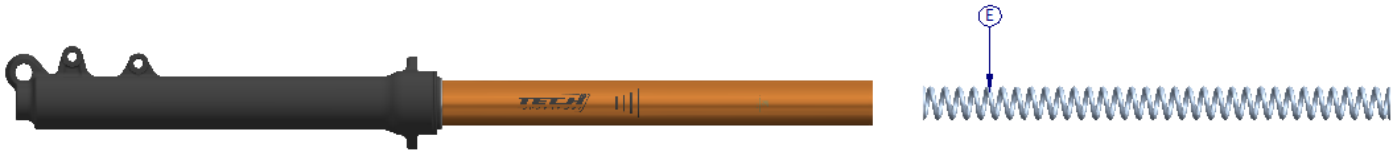
7. Put the fork in a vertical position and insert 250 mL of Oil OJ01 (SAE05). Move the tube up and down multiple times, then push it to the end of the stroke;



8. Measure the oil level from the edge of the tube and adjust the level according to the sheet on page 4/5;



9. Insert the spring (E) inside the fork;




10. Insert in the same order components D, C, B;


11. Manually screw cap (A) on the tube. Tighten the tube on a bench vise with Tool 2 with an angle of 45°. Let the tube come out of the tool by 50 mm and tighten the cap (A) with a 17 mm combined wrench and a tightening torque of 10/12 Nm;


-End of Procedure-

## Oil Change Right Leg

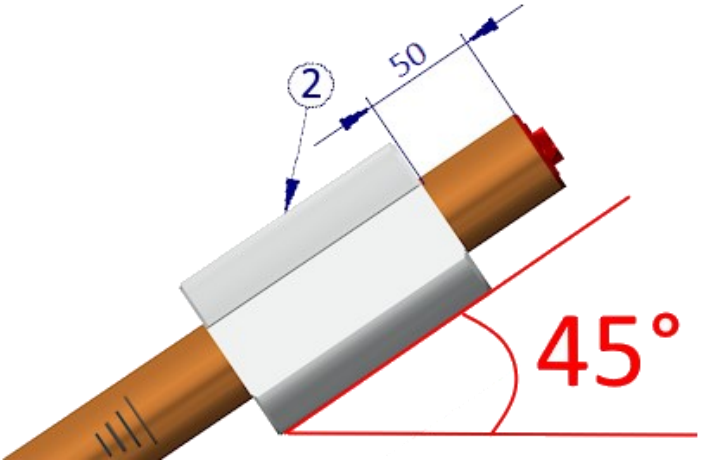
**Tools:**

| Descrizione | Posizione | Part number |
|---|---|---|
| Stanchion Tube Tool | 2 | 080004000 |

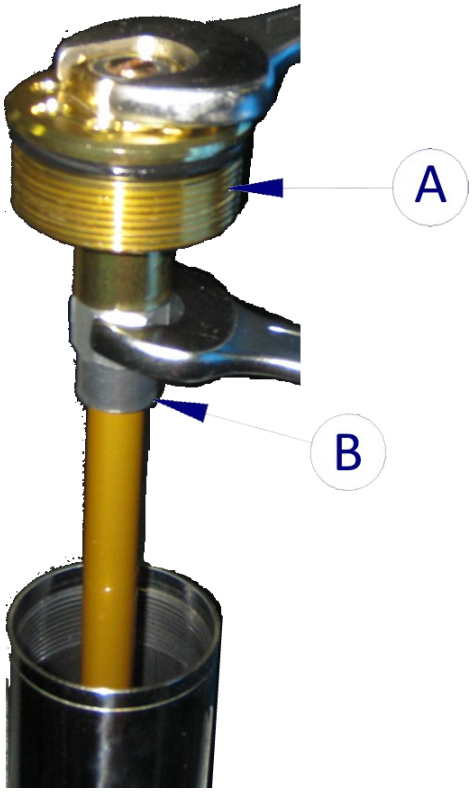
Combined wrench 14 mm, 17 mm, Hex key 1,5 mm, 12 mm

**Procedure:**

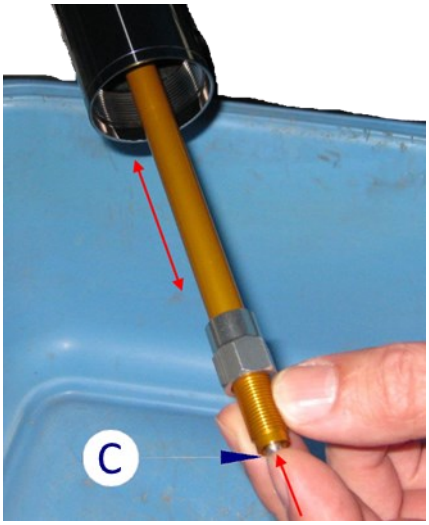
1. Before proceeding accurately clean the fork;
2. Tighten the tube on a bench vise with Tool 2 with an angle of 45°. Let the tube come out of the tool by 50 mm. Keep the fork in this position until step N°6;




3. Unscrew the cap (A) with a 17 mm combined wrench and remove it from the tube. Insert a 14 mm combined wrench on the locknut (B) and disassemble the two components. Remove the cap (A) and clean it;

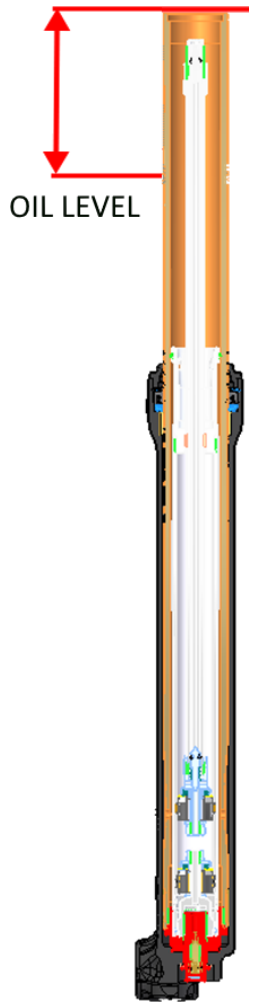


4. Keep the cap (C) inside the cartridge stem. Remove all the oil inside the cartridge by moving up and down the stem and dispose of it according to local laws;

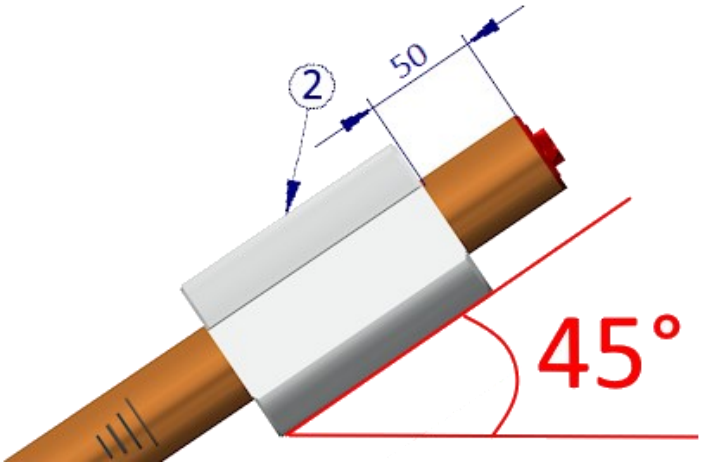


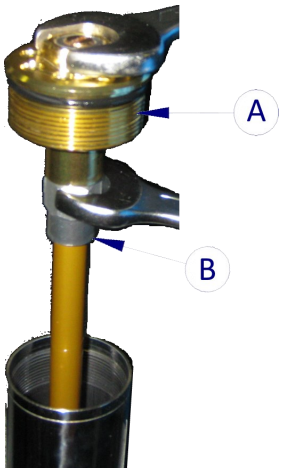

5. Put the fork in a vertical position and insert 250 mL of Oil OJ01 (SAE05). Move the cartridge stem up and down multiple times until the rebound has homogenous braking;

6. Measure the oil level from the edge of the tube and adjust the level according to the sheet on page 4/5;

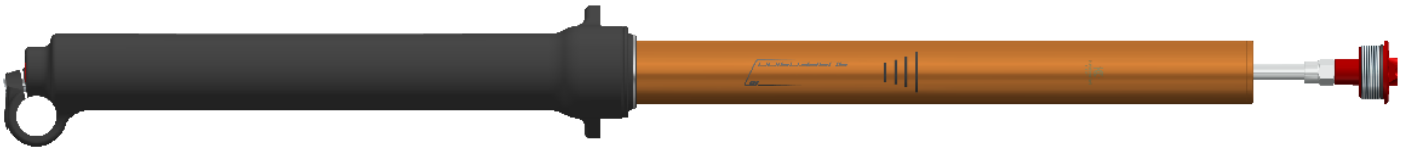


7. Screw the locknut downwards (B). Manually screw the cap (A) on the stem;
8. Manually screw cap (A) on the tube. Tighten the tube on a bench vise with Tool 2 with an angle of 45°. Let the tube come out of the tool by 50 mm. Screw the locknut (B) on the cap (A). Hold the locknut with a 14 mm combined wrench and screw the cap (A) with a 17 mm combined wrench and a tightening torque of 10/12 Nm;




9. Tighten the cap (A) on the tube with a 17 mm combined wrench and a tightening torque of 10/12 Nm.



-End of Procedure-

## Seals Replacement Left Leg

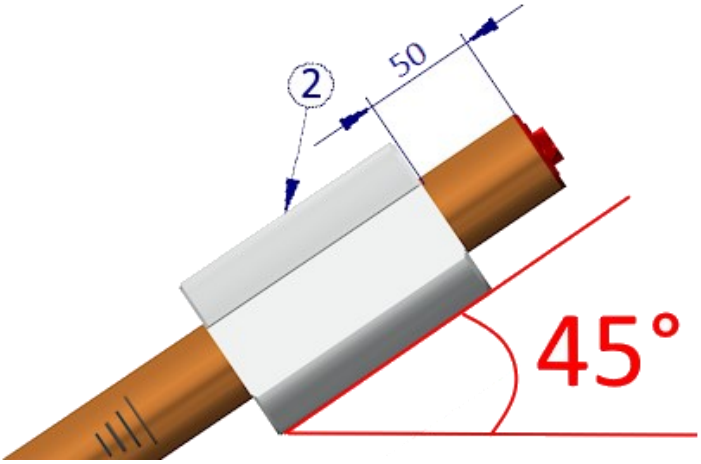
**Tools:**

| Description | Position | Part number |
|---|---|---|
| Bushing and Oil Seal Tool | 1 | 0800DU007 |
| Stanchion Tube Tool | 2 | 080004000 |
| Cartridge Assembly Tool | 3 | 080008000 |

Combined wrench 17 mm, Hex key 12 mm

**Procedure:**

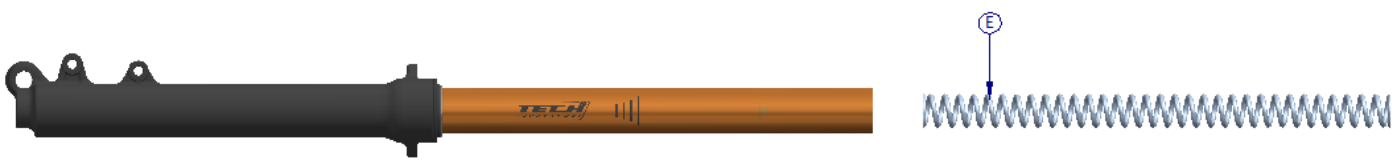
1. Before proceeding accurately clean the fork;
2. Tighten the tube on a bench vise with Tool 2 with an angle of 45°. Let the tube come out of the tool by 50 mm. Keep the fork in this position until step N°6;



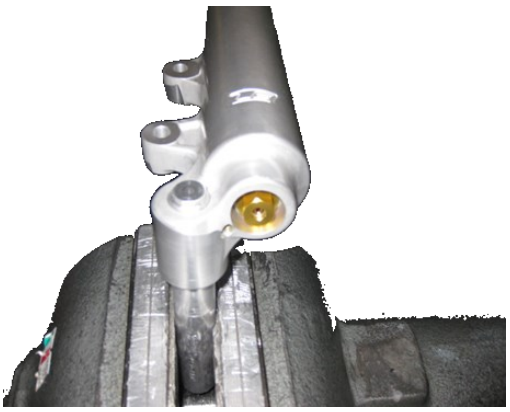

3. Unscrew the cap (A) with a 17 mm combined wrench and clean it;


4. Remove the conical spacer (B), the spacer (C) and the washer (D);


5. Slowly remove the spring (E) with a cloth. Clean properly the spring from oil residues;



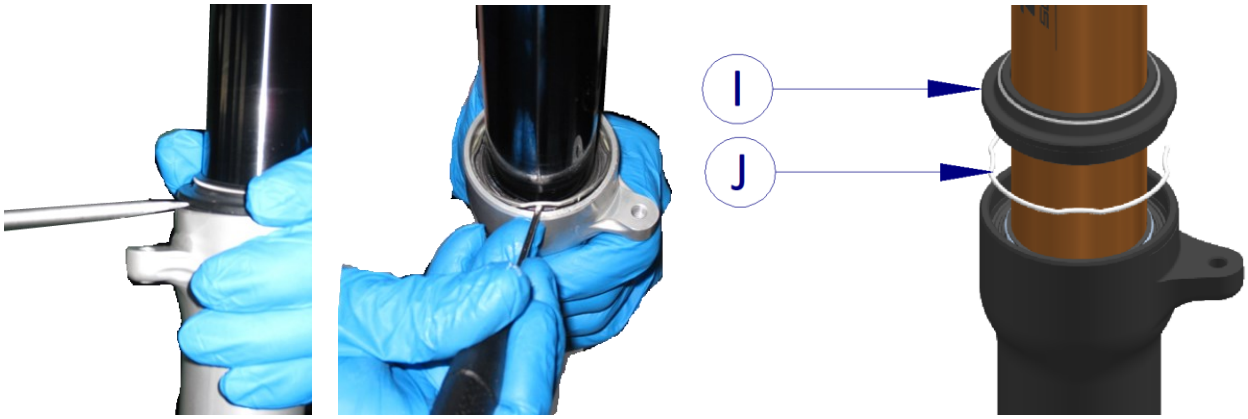
6. Remove all oil from the fork and dispose of it according to local laws;
7. Tighten the wheel's axle in a bench wise with aluminium plates and insert the leg on the axle;



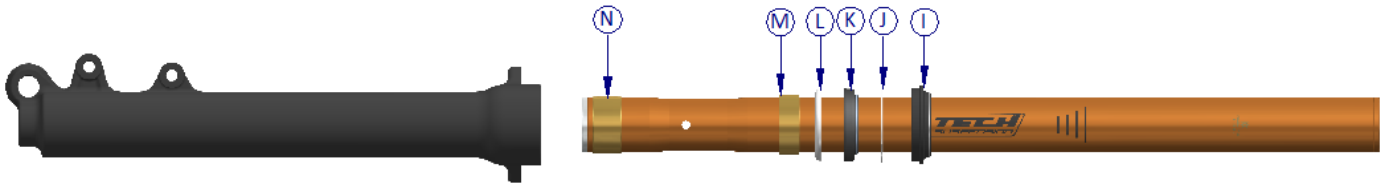
8. Push the tube inside the leg (end stroke) and insert Tool 3 inside the tube to disassemble the pumping stem (G), then unscrew the regulator for the end stroke (F) with a 12 mm hexagonal key;

9. Extract the regulator and the copper washer (F). Remove the pumping stem (G);
10. Turn the fork upside down to remove the end stroke cone (H);

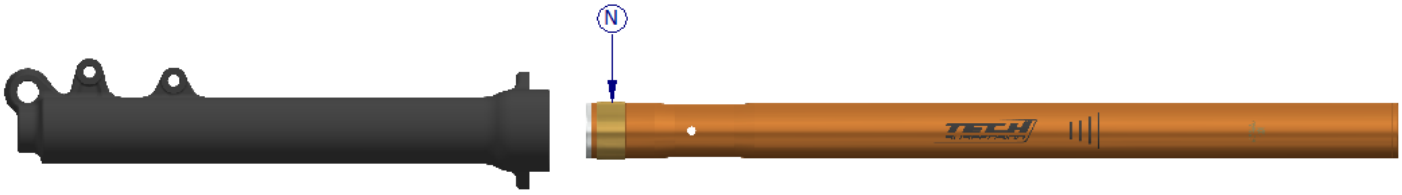

11. Remove the dust seal (I) by leveraging on its side with a flat-head screwdriver, then remove the seeger ring (J) from its housing;



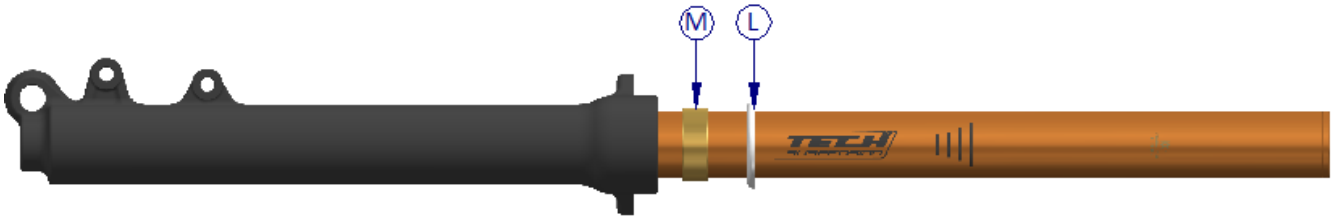
12. Tighten the wheel's axle in a bench wise with aluminium plates and insert the leg on the axle. Forcefully pull the tube out of the leg ad remove all parts from the tube (I-N);



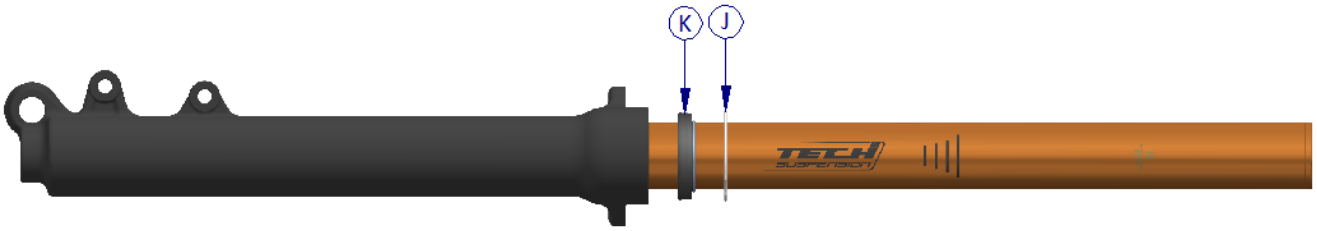

13. Replace the bushing (N) with a new one. Apply grease on the bushing and oil seal housing;
14. Insert the tube with the new bushing (N) inside the leg;



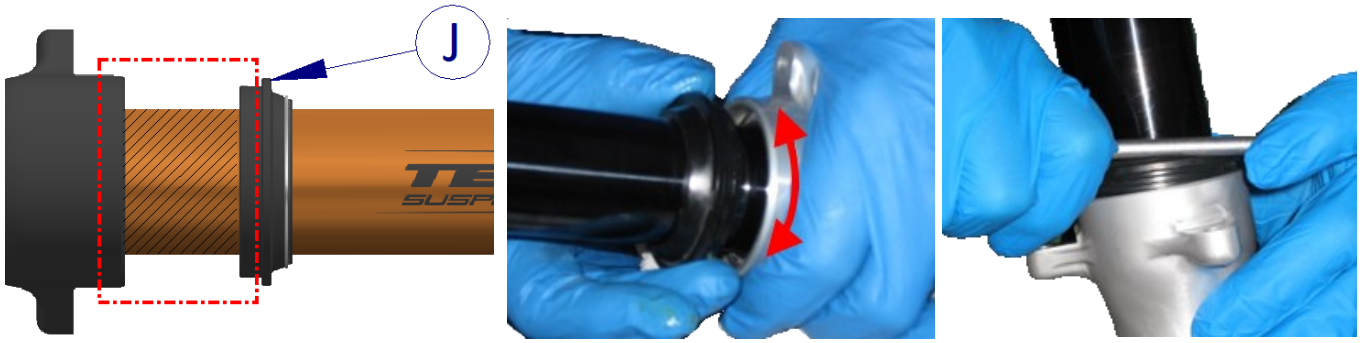

15. Insert the upper bushing (M) and the oil seal support washer (L) on the tube. Push the parts inside with Tool 1 from the side without knurling;




16. Insert the oil seal (K) with Tool 1 from the side with the knurling. Manually insert the seeger ring (J) in its housing making sure it's properly assembled;




17. Apply grease in the highlighted area. Rotate the dust seal (J) on the grease and insert the dust seal in its housing by pushing on its outer diameters with a screwdriver;

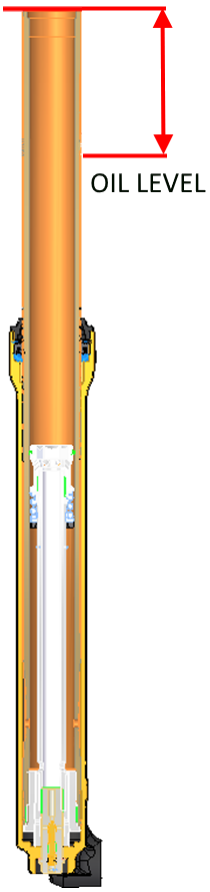



18. Insert the pumping stem (G) along with the end stroke cone (H) inside the tube;

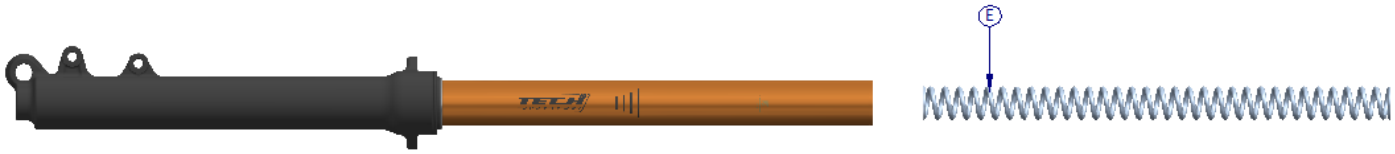

19. Push the tube inside the leg (end stroke) and insert Tool 3 inside the tube to assemble the pumping stem (G). Push Tool 3 against the pumping stem (G) and screw the regulator for the end stroke (F) with a 12 mm hexagonal key and a tightening torque of 23,5/25,5 Nm;

20. Put the fork in a vertical position and insert 250 mL of Oil OJ01 (SAE05). Move the tube up and down multiple times, then push it to the end of the stroke;

21. Measure the oil level from the edge of the tube and adjust the level according to the sheet on page 4/5;




22. Insert the spring (E) inside the fork;




23. Insert in the same order components D, C, B;


24. Manually screw cap (A) on the tube. Tighten the tube on a bench vise with Tool 2 with an angle of 45°. Let the tube come out of the tool by 50 mm and tighten the cap (A) with a 17 mm combined wrench and a tightening torque of 10/12 Nm;


-End of Procedure-

## Seals Replacement Right Leg

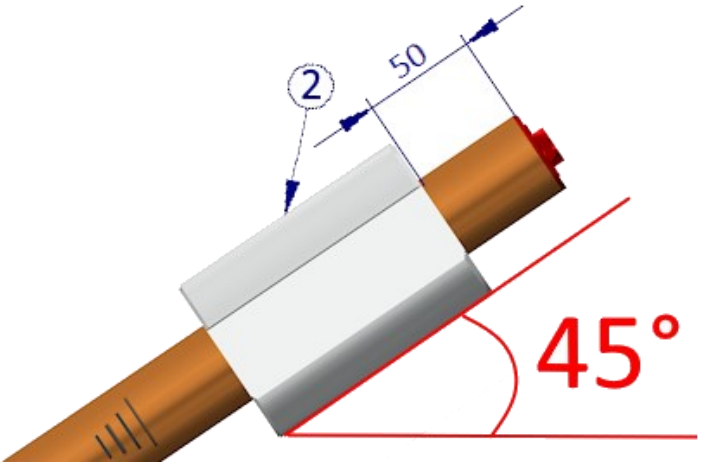
**Tools:**

| Description | Position | Part number |
|---|---|---|
| Bushing and Oil Seal Tool | 1 | 0800DU007 |
| Stanchion Tube Tool | 2 | 080004000 |
| Cartridge Assembly Tool | 3 | 080008000 |

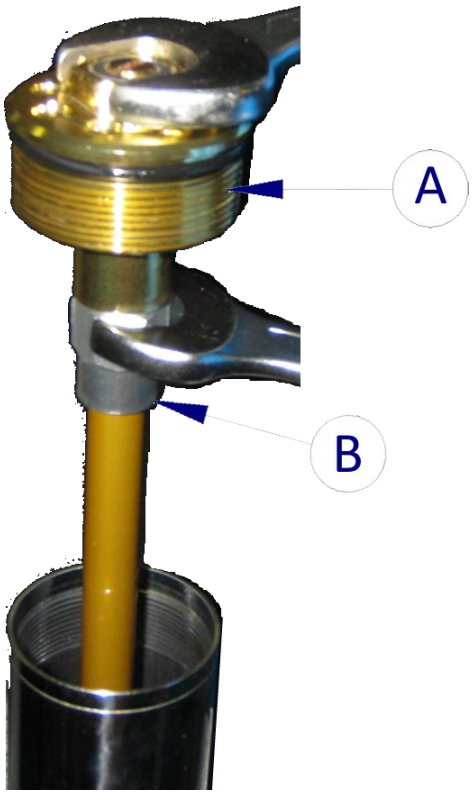
Combined wrench 14 mm, 17 mm, Hex key 1,5 mm, 12 mm

**Procedure:**

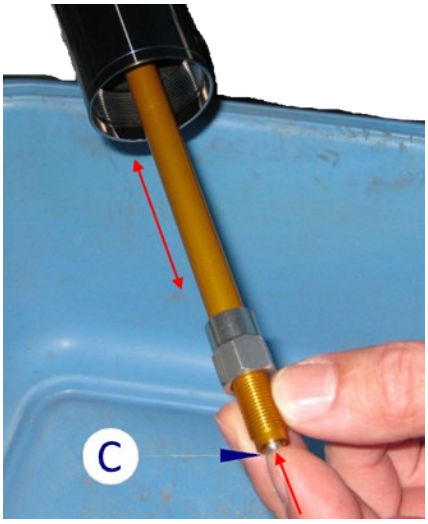
1. Before proceeding accurately clean the fork;
2. Tighten the tube on a bench vise with Tool 2 with an angle of 45°. Let the tube come out of the tool by 50 mm. Keep the fork in this position until step N°6;



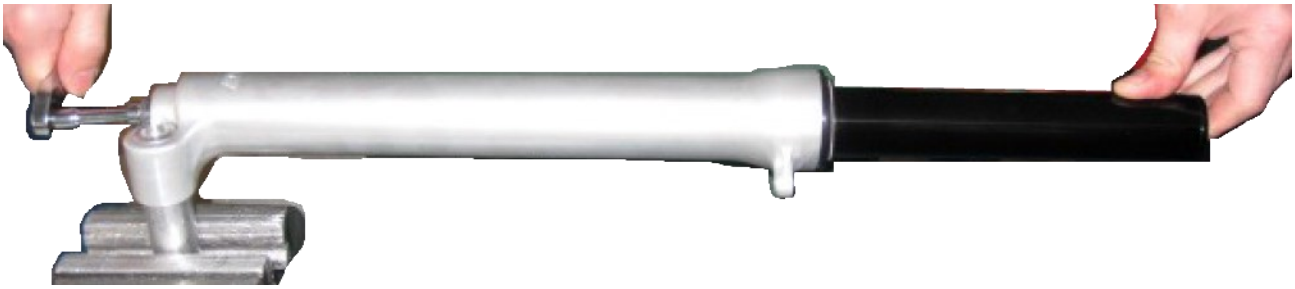

3. Unscrew the cap (A) with a 17 mm combined wrench and remove it from the tube. Insert a 14 mm combined wrench on the locknut (B) and disassemble the two components. Remove the cap (A) and clean it;

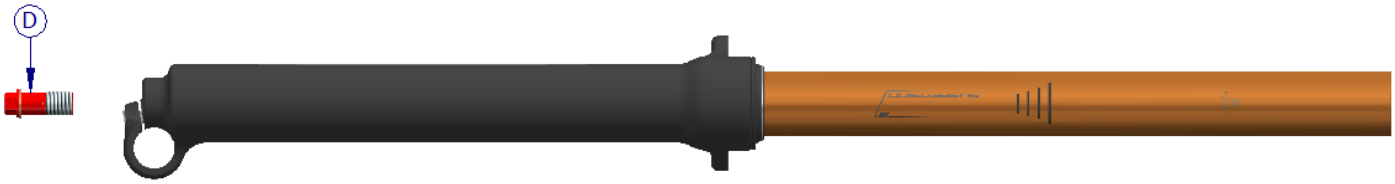


4. Keep the cap (C) inside the cartridge stem. Remove all the oil inside the cartridge by moving up and down the stem and dispose of it according to local laws. Tighten the wheel's axle in a bench wise with aluminium plates and insert the leg on the axle;

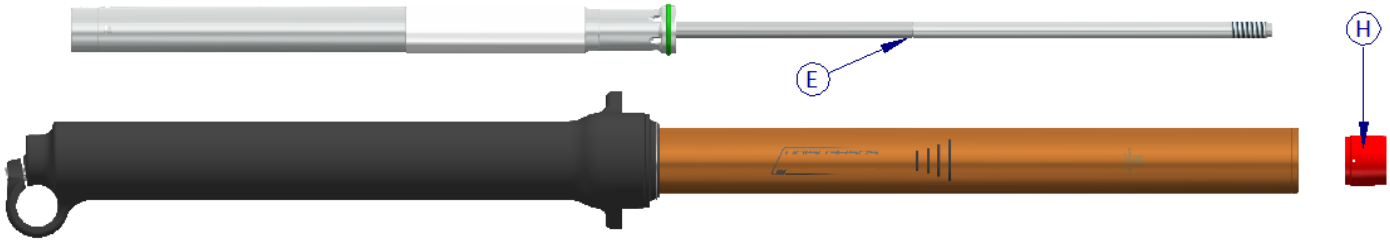



5. Remove the screw (D) with a 12 mm hexagonal key while pushing on the cartridge with the left hand to avoid the cartridge from rotating, then extract the screw (D);

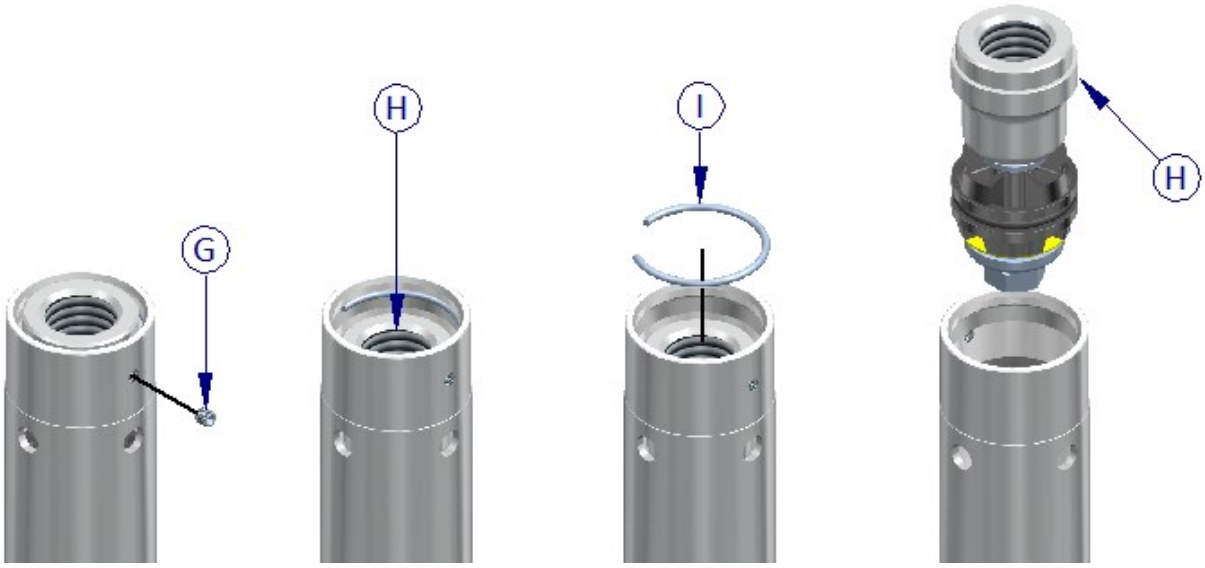




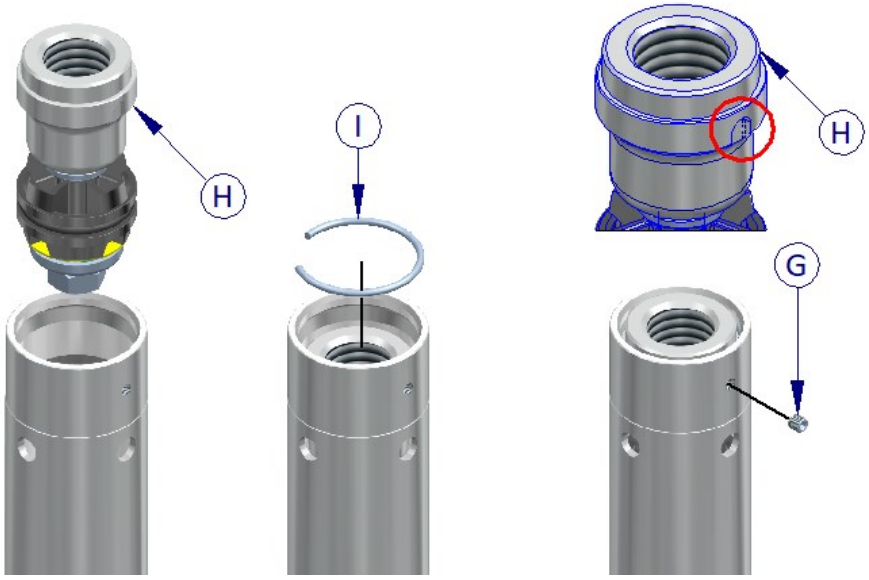

6. Remove the cartridge (E) from the tube. Turn the fork upside down to remove the end stroke cone (F);



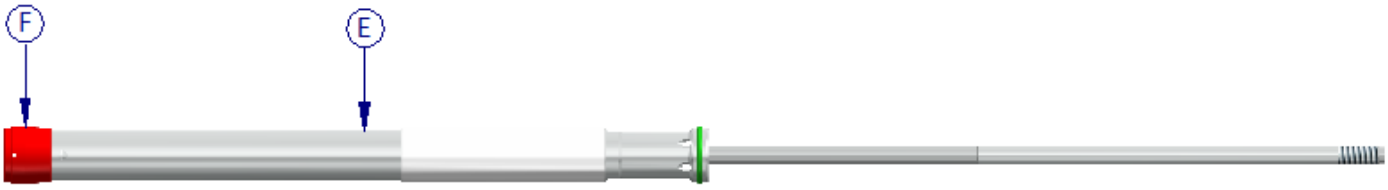
7. Disassemble the cartridge (E) and remove the grub screw (G) with a 1,5 mm hex key. Push the compression group (H) inside the cartridge and remove the seeger ring (I). Then remove the compression group (H);




8. Put the cartridge (E) over a tank and pump the cartridge's stem back and forth to remove oil residue;
9. Insert the compression group (H) in the cartridge and bloc kit with the seeger ring (I). Ensure the housing of the grub screw (G) is properly aligned with the hole. Manually screw it until it stops, then unscrew it once by 360°;

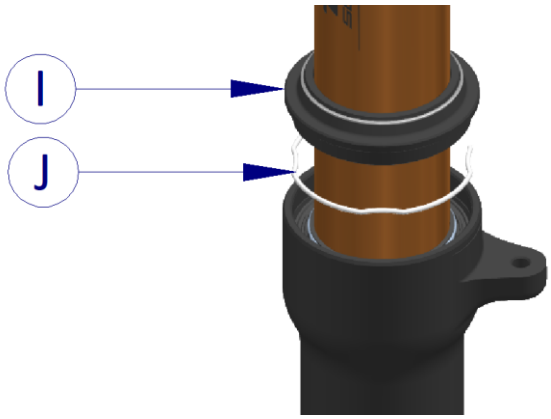



10. Insert the end stroke cone (F) on the cartridge;

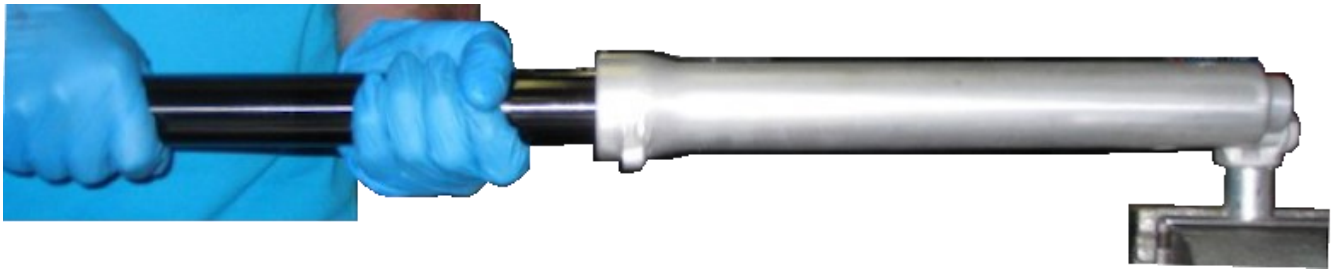
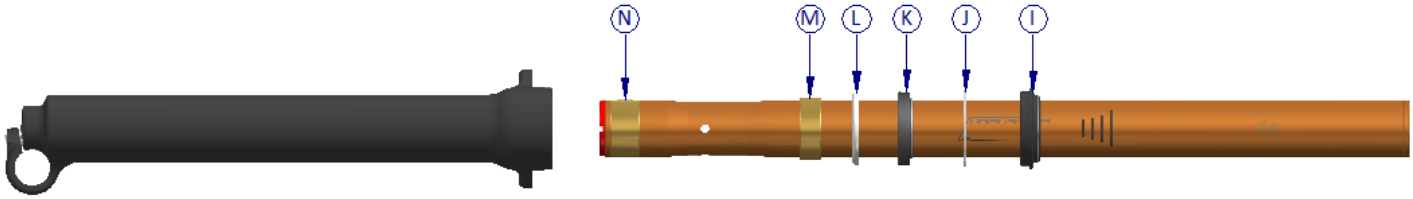


11. Remove the dust seal (I) by leveraging on its side with a flat-head screwdriver, then remove the seeger ring (J) from its housing;

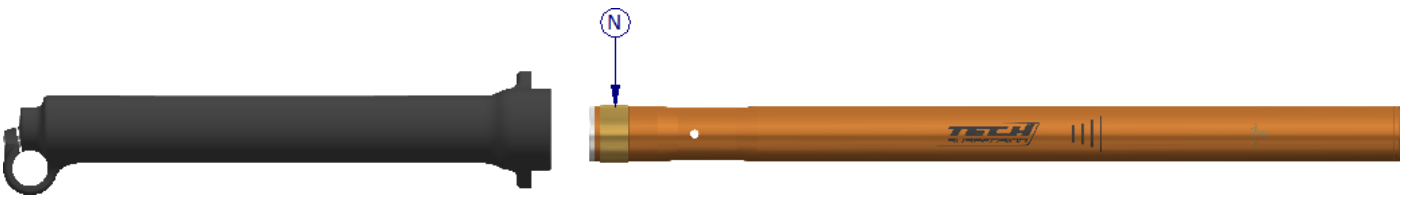




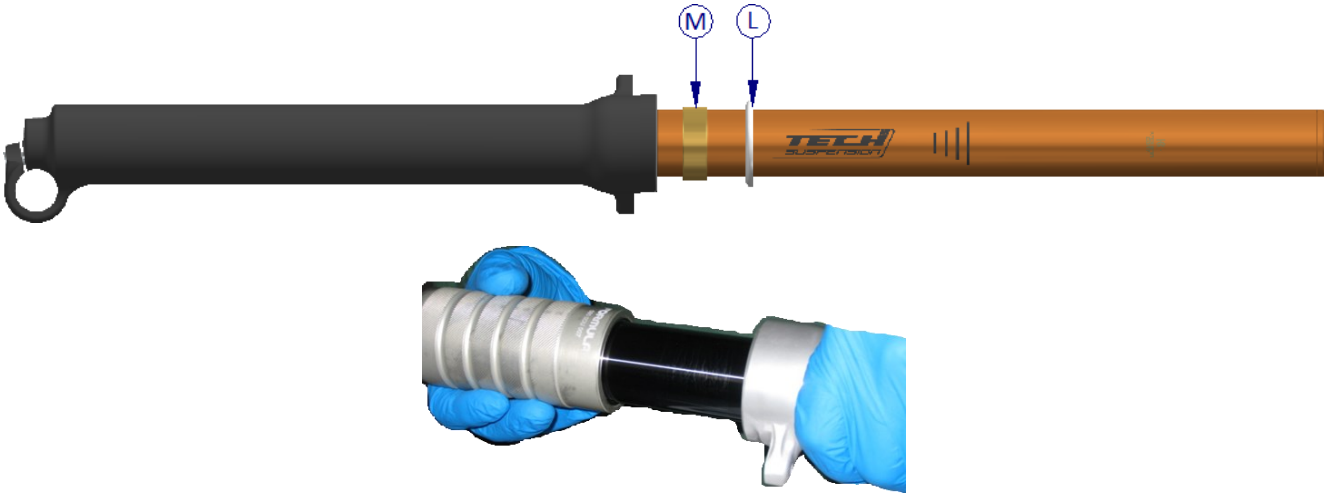

12. Tighten the wheel's axle in a bench wise with aluminium plates and insert the leg on the axle. Forcefully pull the tube out of the leg and remove all parts from the tube (I-N);

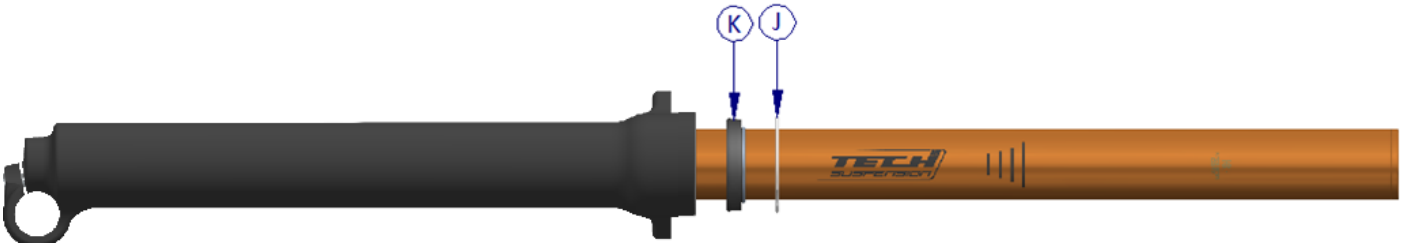

13. Replace the bushing (N) with a new one. Apply grease on the bushing and oil seal housing;
14. Insert the tube with the new bushing (N) inside the leg;

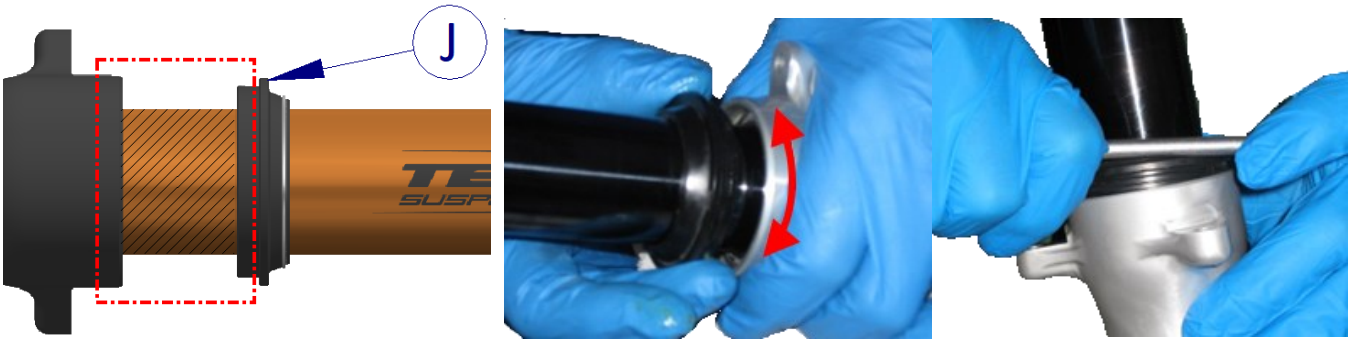
15. Insert the upper bushing (M) and the oil seal support washer (L) on the tube. Push the parts inside with Tool 1 from the side without knurling;



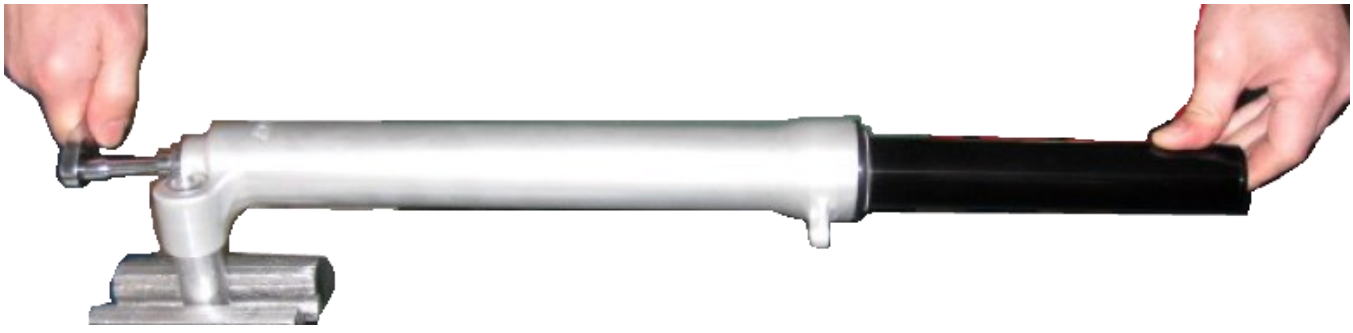

16. Insert the oil seal (K) with Tool 1 from the side with the knurling. Manually insert the seeger ring (J) in its housing making sure it's properly assembled;



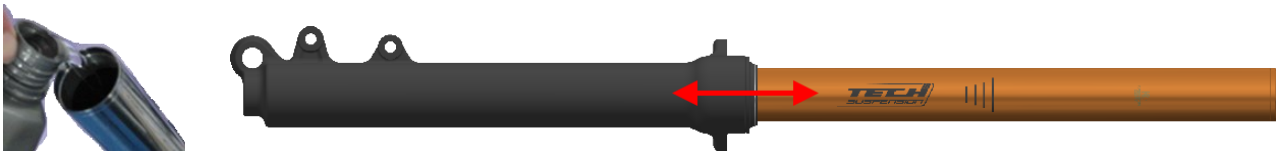

17. Apply grease in the highlighted area. Rotate the dust seal (J) on the grease and insert the dust seal in its housing by pushing on its outer diameters with a screwdriver;



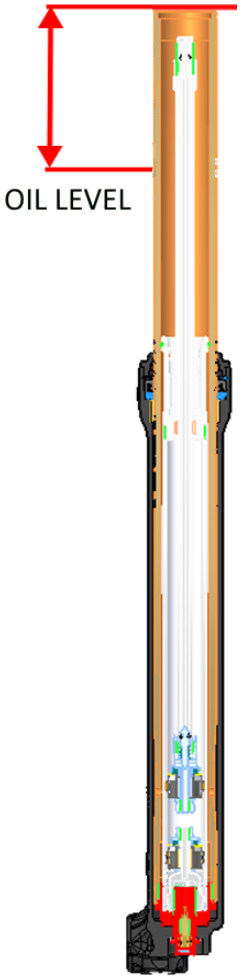

18. Insert the cartridge (E) inside the tube until it is inside its housing inside the leg;
19. Push the tube inside the leg (end stroke) and push on the cartridge, insert the screw (F) with a 12 mm hex key and a tightening torque of 23,5/25,5 Nm;



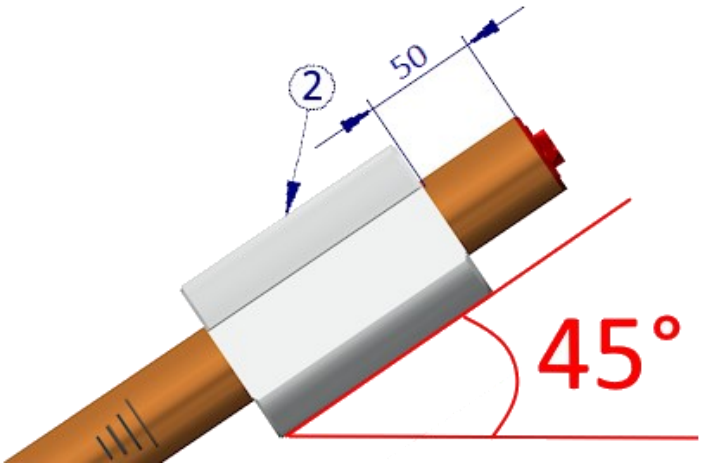
20. Put the fork in a vertical position and insert 250 mL of Oil OJ01 (SAE05). Move the cartridge stem up and down multiple times until the rebound has homogenous braking;

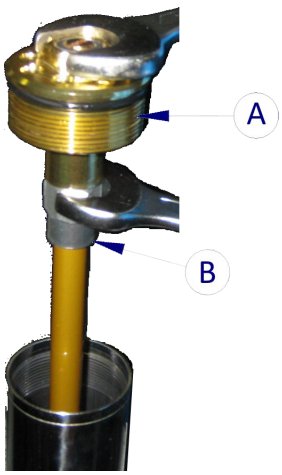


21. Measure the oil level from the edge of the tube and adjust the level according to the sheet on page 4/5;

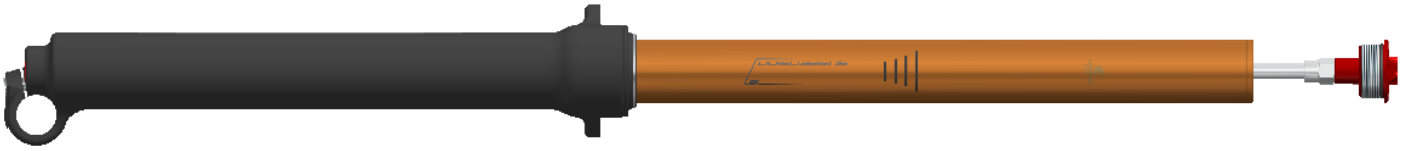



22. Screw the locknut downwards (B). Manually screw the cap (A) on the stem;
23. Manually screw cap (A) on the tube. Tighten the tube on a bench vise with Tool 2 with an angle of 45°. Let the tube come out of the tool by 50 mm. Screw the locknut (B) on the cap (A). Hold the locknut with a 14 mm combined wrench and screw the cap (A) with a 17 mm combined wrench and a tightening torque of 10/12 Nm;



24. Tighten the cap (A) on the tube with a 17 mm combined wrench and a tightening torque of 10/12 Nm.



-End of Procedure-

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