1. GENERAL .................................................................3
2. TROUBLE SHOOTING.................................6
3. SMALL SERVICE ..................................................8
4. CHANGING THE DU BUSHING ..................18
5. CHANGING THE SPHERICAL BEARINGS .......23
1. GENERAL

1.1 VALIDITY
This manual describes the component specified on the front page and the footer. This manual is valid for the design of the product as of 22.07.20. Deviations are possible and all items are subject to technical changes.

1.2 SAFETY
The safety and warning instructions are classified as follows:

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

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

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

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

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

This manual is intended for being printed as an A5 booklet. Only print this manual if electronic usage is not possible.
1.5 DT SWISS MANUAL CONCEPT
The DT Swiss manuals are split into the following types of manuals:

- User Manual: Information for the end user on how to install and use the component.
- Technical Manual: Detailed information for the end user and the dealer on how to maintain the component, spare parts and technical data.

1.6 HOW TO USE THE MANUAL
The steps described in this manual must be carried out in the order they are shown. If steps are ignored or executed in a wrong order, the function of the component cannot be guaranteed. Instructions begin with the table «Preparatory Steps» and end with the table «Closing Steps». The instructions in these tables must be carried out.

1.7 CROSS REFERENCES
In order to simplify the use of this manual, some text is edited as hypertext. After clicking you will be automatically redirected to the target of the reference. If the text is formatted underlined, it is a cross-reference. Example: Click here: “1. General” on page 3 to jump to the beginning of this chapter.

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

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

DT Swiss recommends the following cleaners:

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

Use soapy water or similar mild cleaners for external cleaning.

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

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

DT Swiss special tools are precision tools. Damage-free mounting and dismounting of the components can only be ensured if the tools are working properly and if the condition of the tools are perfect. Always keep the tools in their original packaging or adequate devices to prevent damage.
1.9 ENVIRONMENTAL PROTECTION
The statutory regulations shall apply. Whenever possible, avoid creating waste. Waste, especially carbon, lubricants, cleaners and any other fluids must be disposed in an environmentally compatible manner.
Only print this manual if electronic usage is not possible.

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

1.11 WARRANTY
Warranty conditions can be found at www.dtswiss.com.
### 2. TROUBLE SHOOTING

<table>
<thead>
<tr>
<th>Issue</th>
<th>Fault</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air loss after long term storage or riding.</td>
<td>Normal effect. The shock can lose about 1-2 bar per month.</td>
<td>Inflate the air chamber and perform standard set up.</td>
</tr>
<tr>
<td>Air loss after short time.</td>
<td>Quadring, wiper or guide band of the air chamber is worn.</td>
<td>Change the sealings of the air chamber seal kit. See „3. Small Service“ on page 8.</td>
</tr>
<tr>
<td></td>
<td>Wrong grease</td>
<td>Disassemble and clean the inner surface of the air chamber and the oil chamber tab. Grease the inner surface of the air chamber, the oil chamber tab and the wiper using Slick Honey Bike Grease. See „3. Small Service“ on page 8.</td>
</tr>
<tr>
<td>The air chamber is damaged.</td>
<td></td>
<td>Change the air chamber.</td>
</tr>
<tr>
<td>The outer surface of the oil chamber is damaged / scratched.</td>
<td></td>
<td>Full service necessary. Contact a DT Swiss service center.</td>
</tr>
<tr>
<td>Tiny amounts of oil or grease on the outside.</td>
<td>None - normal residue from installation or operation.</td>
<td>Clean shock with a cloth after each ride.</td>
</tr>
<tr>
<td>Tiny amounts of oil on the rebound wheel or on the end cap.</td>
<td>None - normal residue from assembly.</td>
<td>Clean the area around the rebound wheel and check again after a while. If this area is oily again, further measures are necessary. Contact a DT Swiss service center.</td>
</tr>
<tr>
<td>Shock loses oil instantly around the rebound wheel.</td>
<td>O-ring of the lockout pin is damaged.</td>
<td>Full service necessary. Contact a DT Swiss service center.</td>
</tr>
<tr>
<td>Shock makes slight flowing sound (effect changes depending on the rebound adjustment).</td>
<td>None - normal damping effect of oil and bores.</td>
<td></td>
</tr>
<tr>
<td>Shock makes loud «smacking» sound.</td>
<td>Air in the oil.</td>
<td>Full service necessary. Contact a DT Swiss service center.</td>
</tr>
<tr>
<td>The rebound is not working properly.</td>
<td>Rebound pin sticks.</td>
<td>Full service necessary. Contact a DT Swiss service center.</td>
</tr>
<tr>
<td>The lockout is not working properly.</td>
<td>The remote cable is not adjusted correctly.</td>
<td>Adjust the remote cable.</td>
</tr>
<tr>
<td></td>
<td>The sealing of the damping piston is worn or damaged.</td>
<td>Full service necessary. Contact a DT Swiss service center.</td>
</tr>
<tr>
<td></td>
<td>Lockout cap does not close correctly.</td>
<td></td>
</tr>
<tr>
<td>Only trunnion mount shocks:</td>
<td>Dirt between lockout shaft and rebound wheel or between rebound wheel and end cap.</td>
<td></td>
</tr>
<tr>
<td>Issue</td>
<td>Fault</td>
<td>Action</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>The shock can’t be inflated (the air instantly leaks out the shock</td>
<td>Damaged valves or valve inserts.</td>
<td>Change or retighten the valve inserts [max. 0.4 Nm].</td>
</tr>
<tr>
<td>again).</td>
<td>Leaksage</td>
<td>Check in waterbath where the air is leaking.</td>
</tr>
<tr>
<td>The pressure indicated on the pressure gauge rises rapidly while</td>
<td>Valve doesn’t open.</td>
<td>Check the positioning of the pump on the shock or change the pump.</td>
</tr>
<tr>
<td>pumping.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shock has noticeable play at the spherical bearings / DU bushings.</td>
<td>Wrong mounting hardware, incorrect tightened screws or wear.</td>
<td>Check whether the correct mounting hardware was used or the screws are</td>
</tr>
<tr>
<td></td>
<td></td>
<td>tightened correctly. If necessary, change the spherical bearings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the DU bushing” on page 18].</td>
</tr>
<tr>
<td>Noticeable loss of oil at the oil chamber (when the air chamber</td>
<td>Sealings are at their wear limits.</td>
<td>Full service necessary.</td>
</tr>
<tr>
<td>is removed).</td>
<td></td>
<td>Contact a DT Swiss service center.</td>
</tr>
<tr>
<td>Oil sprays out of the valve while deflating the air chamber.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise while compressing the shock after about 10 mm of the stroke.</td>
<td>None - normal sound of the air balance between the positive and the</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>negative air chamber.</td>
</tr>
<tr>
<td>Clacking noise when compressing.</td>
<td>Defective lockout cap.</td>
<td>Full service necessary.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contact a DT Swiss service center.</td>
</tr>
<tr>
<td></td>
<td>IFP not in correct position.</td>
<td>Full service necessary.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contact a DT Swiss service center.</td>
</tr>
<tr>
<td>Shock squeaks while riding, when the shock gets hot.</td>
<td>Wiper is dry</td>
<td>Small service necessary.</td>
</tr>
<tr>
<td>Shock gets hot while riding.</td>
<td>None - the shock can get very hot on long downhills. This does not</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>affect the performance of the shock.</td>
</tr>
</tbody>
</table>
## 3. SMALL SERVICE

### Preparatory Steps

| Disassemble the shock from the bike. |

Clean the surface of the shock.  
see „Cleaning” on page 4

### Required Tools and Material

<table>
<thead>
<tr>
<th>cleaner</th>
<th>see „Cleaning” on page 4</th>
<th>as required</th>
</tr>
</thead>
</table>
| grease      | Buzzy’s Slick Honey  
4.7 dl: Art No.: 40341000AD02000001  
20 ml: Art. No.: TZX0XXNSLICKS | as required |
| seal kit air chamber | CWKR232X30197S  
see „3.1 Overview seal kit air chamber” on page 9 | 1 |

For a small service no special tools are needed!
### 3.1 OVERVIEW SEAL KIT AIR CHAMBER

**SEAL KIT AIR CHAMBER R232/R232 TM CWKR232X30197S**

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Description</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>support ring oil chamber tab</td>
<td>33 / 39 x 1.4 mm</td>
</tr>
<tr>
<td>2</td>
<td>quadring oil chamber tab</td>
<td>31.34 x 3.53 mm</td>
</tr>
<tr>
<td>3</td>
<td>O-ring end cap / air chamber</td>
<td>44.17 x 1.78 mm</td>
</tr>
<tr>
<td>4</td>
<td>quadring air can</td>
<td>26.64 x 2.62 mm</td>
</tr>
<tr>
<td>5</td>
<td>guide band</td>
<td>27.3 / 31.26 x 2.6 mm</td>
</tr>
<tr>
<td>6</td>
<td>wiper air chamber</td>
<td>26.15 / 36.2 x 5 mm</td>
</tr>
</tbody>
</table>
3.2 RELEASING THE AIR PRESSURE

⚠️ DANGER

SHOCK OIL MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS!

Oil mist might escape through the valve while releasing the air.
- Always put a cloth onto the valve while releasing the air.
- The valve must face down, away from your body while releasing the air.

⚠️ DANGER

DANGER OF INJURY DUE TO HIGH PRESSURE!

After releasing the air, there might be still pressure inside the negative air chamber!
- If the air is released too fast, the pressure of the positive and negative air chamber will not be balanced. The shock compresses fully and the pressure inside the negative air chamber remains.
- If you have any doubts, if the pressure inside the negative air chamber is fully released, measure the shock length after deflating. When the negative air chamber is fully deflated, the shock is not contracted.
- The air chamber must NOT be removed before the air of the positive and negative air chamber is fully removed.

1. Unscrew the valve cap.

2. Position the shock that way, that the valve faces away from your body and face and put a cloth onto the valve.

3. Slowly push the valve insert using the backside of the valve cap or better: Use the shock pump and slowly release the air using the release valve of the shock pump.
   → The shock compresses to the point the air flows from the negative air chamber into the positive air chamber.

4. If the shock compresses fully while releasing the air, inflate the shock again and release the air more slowly. OR
   Fully extend the shock manually and compress it about 10 mm from fully extended so that the air can flow from the positive air chamber into the negative air chamber. Repeat this a few times and release the air again.
   After releasing the air, the shock must not be compressed! If in any doubt, measure the length of the shock!
REMOVING THE AIR CHAMBER

1. Remove the SAG O-ring from the oil chamber.

![Image of shock with removed O-ring](image)

**NOTE**

**RISK OF DAMAGING THE SHOCK!**
To avoid damages, always clamp the shock or parts of the shock into ground clamping jaws, aluminum clamping jaws or plastic clamping jaws

2. Ensure, the pressure is fully released [see page 3.2 on page 10].

3. Clamp the shock into a vice vertically.

4. Unscrew the air chamber by hand.
   If the air chamber cannot be loosened by hand, unscrew the air chamber using a strap wrench.

5. Slide off the air chamber.

6. Check, if there is damping oil inside the air chamber. If there is, the whole oil chamber tab assembly must be changed.

7. Take the shock out of the vice

![Image of shock being removed from vice](image)
3.4 CHANGING THE SUPPORT RINGS AND THE QUADRING

1. Remove both support rings.

2. Remove the quadring.

3. Clean the oil chamber tab. See „Cleaning“ on page 4.
4. Grease the new quadring and put it onto the oil chamber tab.

5. Put two new support rings onto the oil chamber tab.
   NOTE: The support rings must be put to both sides of the quad ring.

6. Check, if the quadring is not twisted or damaged.
3.5 SERVICING THE AIR CHAMBER HOUSING

CHECKING FOR DAMAGES

1. Check the air chamber housing for
   • scratches on the inner surface
   • wear
   • cracks

2. Change the air chamber housing if there are any damages.

CHANGING WIPER, QUADRING AND GUIDE BAND

1. Carefully remove the wiper seal using plastic forceps.
   → The air chamber must not be damaged!
   → Do not re-use the wiper seal!

2. Remove the guide band from the air chamber by hand.
   → Do not re-use the guide band!
3. Remove the quadring from the air chamber by hand.  
   → Do not re-use the quadring!

4. Clean the air chamber housing with a clean, lint-free and dry cloth. There must be no lint and no residuals of grease after cleaning!

5. Slightly grease the new quadring and put it into the inner groove of the air chamber (see figure).  
   → Ensure, the quadring is not twisted.

6. Put a new guide band onto the web between both grooves of the air chamber (see figure).

7. Slightly grease the new wiper seal and put it into the outer groove of the air chamber (see figure).  
   → Ensure, the wiper seal lays evenly all around the groove.
CHANGE THE O-RING BETWEEN END CAP AND AIR CHAMBER

Only shocks with standard mount:
1. Remove the O-ring from the end cap.
2. Grease the new O-ring with slick honey and put it onto the end cap.

Only shocks with trunnion mount:
1. Remove the O-ring from the air chamber.
2. Grease the new O-ring with slick honey and put it onto the air chamber.

GREASING THE INNER SURFACE OF THE AIR CHAMBER

1. Grease the inner surface of the air chamber, the guide band and the seat of the O-ring slightly. The wiper must be greased generously.
3.6 ASSEMBLING THE AIR CHAMBER

1. Slightly grease the quadring, the support rings and the oil chamber.

2. Clamp the end cap into the vice.

3. Slide on the air chamber and tighten it by hand.
   → Ensure that the support rings on the oil chamber tab does not get twisted.
   → Ensure that the O-ring between the air chamber and the end cap does not get jammed.
   → If you can`t push down the air chamber by hand, mount the shock into your bike and compress the shock while screwing on the air chamber.

4. Take the shock out of the vice.

5. Put the SAG O-ring onto the oil chamber.

Closing Steps

| Dispose all waste in an environmentally compatible manner. | „1.9 Environmental protection“ on page 5 |
| Assemble the shock to your bicycle. | |

Closing Steps

| Dispose all waste in an environmentally compatible manner. | „1.9 Environmental protection“ on page 5 |
| Assemble the shock to your bicycle. | |

Closing Steps

| Dispose all waste in an environmentally compatible manner. | „1.9 Environmental protection“ on page 5 |
| Assemble the shock to your bicycle. | |
4. CHANGING THE DU BUSHING

Preparatory Steps

| Disassemble the shock from the bike. |
| Clean the surface of the shock.     |

see „Cleaning“ on page 4

Required Tools and Material

| degreaser / cleaner | see „Cleaning“ on page 4 | as required |
| grease             | Buzzy’s Slick Honey     | as required |

| TOOL KIT DU PIN UNMOUNTING ASSEMBLY | CWTXX10031935S | 1 |
| TOOL KIT DU BUSHING UNMOUNTING ASSEMBLY | CWTXX10031927S | 1 |
| TOOL KIT DU BUSHING MOUNTING ASSEMBLY | CXTXX10031928S | 1 |

OVERVIEW
REMOVING THE SLEEVES AND O-RINGS

1. Remove the sleeves and O-rings by hand.

TESTING THE DU BUSHING

1. Clamp the DU pin into a vice.
2. Rotate the shock on the pin to check the DU bushing.
   → If the shock can be rotated without resistance, the DU Bushings must be changed. See following.
   → If the shock can be rotated with resistance, the DU bushing must not be changed. Check the DU bushing again within the next small service.
   Mount the sleeves and the O-rings again (see “Mounting the sleeve and the O-rings” on page 22).
**REMOVING THE DU PIN**

1. Slide the pusher into the DU pin.
2. Align the receiver like shown in the picture.
3. Push out the DU pin using a press or a bench vise.

**REMOVING THE DU BUSHING**

1. Slide the pusher into the DU bushing.
2. Align the receiver like shown in the picture.
3. Push out the DU bushing using a press or a bench vise.
MOUNTING THE DU BUSHING

1. Slightly grease the inner surface of the shock eyelet and the outer surface of the bushing.

2. Put the bushing onto the pusher.

3. Position the bushing to the shock eyelet that the gap is oriented 90° to the axis of movement of the shock.

4. Align the receiver like shown in the picture.

5. Push in the bushing using a press or a bench vise.
MOUNTING THE DU PIN

1. Slightly grease the inner surface of the DU bushing and the outer surface of the DU pin.

2. Push in the DU Pin by hand.
3. Position the pin centrally by clamping the pin in the vice and while turning the shock, pushing it to the center.
4. Wait a few minutes and check the DU bushing again (see „Testing the DU Bushing” on page 19).
   If this test fails a second time, contact a DT Swiss service center.

MOUNTING THE SLEEVE AND THE O-RINGS

NOTE: There are no O-rings on the short versions of the pins / sleeves!

1. Slightly grease the DU pin.
2. Slide the O-rings onto the sleeves.
3. Push the sleeves onto the DU pin.
4. Slide the O-rings between the sleeves and the shock eyelet after the shock is mounted in the bike frame.

Closing Steps

<table>
<thead>
<tr>
<th>Dispose all waste in an environmentally compatible manner.</th>
<th>„1.9 Environmental protection” on page 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assemble the shock to your bicycle.</td>
<td></td>
</tr>
</tbody>
</table>
## 5. CHANGING THE SPHERICAL BEARINGS

### Preparatory Steps

<table>
<thead>
<tr>
<th>Preparatory Steps</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disassemble the shock from the bike.</td>
<td></td>
</tr>
<tr>
<td>Clean the surface of the shock.</td>
<td>see „Cleaning“ on page 4</td>
</tr>
</tbody>
</table>

### Required Tools and Material

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>degreaser / cleaner</td>
<td>see „Cleaning“ on page 4</td>
<td>as required</td>
</tr>
<tr>
<td>thread locker</td>
<td>high-strength</td>
<td>as required</td>
</tr>
<tr>
<td>tool kit spherical bearings</td>
<td>CWTXX10028914S</td>
<td>1</td>
</tr>
</tbody>
</table>

### OVERVIEW

![Diagram of spherical bearing assembly]

- **ball**
- **plastic ring**
- **shock eyelet**
CHECKING THE BALL JOINTS

1. Check the play of the spherical bearing by hand.
   → If the spherical bearing can be moved without resistance, the spherical bearing should be replaced.

CHANGING THE BALL JOINTS

1. Insert the unmounting tool from one side into the spherical bearing.
2. Plug the counter sleeve onto the other side.
3. Press out the spherical bearing by pressing the dismounting tool.
   For pressing out, you can use a bench vise, a press or something similar.
4. Clean the eye of the shock with a degreaser and put a small amount of high-strength thread locker onto the inner surface of the shock’s eye.
5. Position the spherical bearing to the shock eyelet that the gap in the plastic ring is oriented 90° to the axis of movement of the shock.
6. Press in the new spherical bearing using the mounting tool.
   For pressing in, you can use a bench vise, a press or something similar.
7. Take the tool and the parts out of the vice.
8. Remove the excessive thread locker with a degreaser.
9. Check, if the spherical bearing is in the middle of the shock’s eye.
10. Check the spherical bearing again (see „Checking the Ball Joints” on page 24).

Closing Steps

<table>
<thead>
<tr>
<th>Dispose all waste in an environmentally compatible manner.</th>
<th>„1.9 Environmental protection” on page 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assemble the shock to your bicycle.</td>
<td></td>
</tr>
</tbody>
</table>