

# TTX40MkII

Workshop Manual and Spare Parts List



### Safety Signals

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



*The Safety alert symbol means: Warning! Your safety is involved.*

#### **▲ WARNING!**

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

#### **CAUTION!**

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

#### **NOTE!**

*The Note symbol indicates information that is of importance regarding procedures.*

Öhlins Racing AB cannot be held responsible for any damage to the shock absorber or vehicle, or injury to persons, if the instructions for installing and maintenance are not followed exactly. Similarly the warranty will become null and void if the instructions are not followed.

#### **NOTE!**

*Öhlins products are subject to continuous improvement and development. Therefore, although these instructions include the most up-to-date information available at the time of printing, there may be minor differences between your shock absorber and this manual. Please consult your Öhlins dealer if you have any questions regarding the contents of the manual.*

#### **▲ WARNING!**

*Changing damper may affect the stability of your vehicle. Öhlins Racing AB cannot be held responsible for any personal injury or damage that may occur after installing the suspension. Contact an Öhlins dealer for advice.*

## Before you begin

### Important notice

This manual, the *TTX40 Mk II Workshop Manual*, is an attachment to the *Inside TTX* manual, part no. 07430-01, available on the CD part no. 07431-02.

To perform the steps in this workshop manual you need to have the *Inside TTX* manual. Some of the steps required are described only in the *Inside TTX* manual.

*Contact your nearest Öhlins dealer to order a printed copy of the Inside TTX Manual, part no. 07430-01*



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Even though the external adjustability of the TTX is extensive, there may be situations when revalving is necessary.

### Tools:

- 00146-01 Red grease
- 00773-01 Vice / Standard vice with soft jaws
- 01306-01 Shock absorber fluid 309
- 01779-02 Gas needle housing
- 01781-01 Gas filling device
- 01876-XX Separating piston positioning tool\*
- 01878-01 Damper holder
- Allen key 3 mm
- Caliper
- Nitrogen gas
- Pin max 3.5 mm (to check the check valve)
- Pliers           Small circlip  
                      Small pliers
- Wrench         12 mm  
                      19mm/ Torque wrench

\*To check the position of the separating piston.

Two types:       01876-01 - to be used together with top eye 06126-02  
                      01876-02 - to be used together with the top eye 06126-04

If the oil level is found incorrect, see section *Adjusting the oil level in the Inside TTX40 part no. 07430-01* manual for the tools needed.

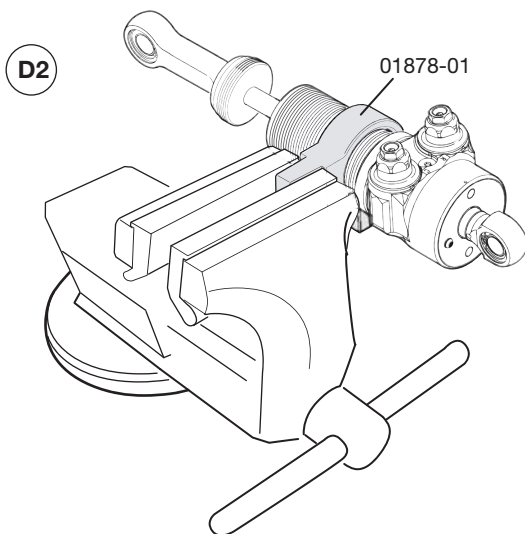
The following description relates to a fully assembled damper.

### SEE SECTION:

“General Information”,  
Inside TTX40 Manual Part no. 07430-01

### SEE SECTION:

“Using the Gas Filling Device”,  
Inside TTX40 Manual Part no. 07430-01



## Disassemble

### D1

Clean the shock absorber. Clean the area around the valves carefully.

### D2

Install the Öhlins Damper Holder (part no. 01878-01) in a vice (Bench Holder part no. 00773-01 can also be used). Install the shock absorber in the holder with the adjusters pointing up. The damper holder clamps the damper around the outer tube.

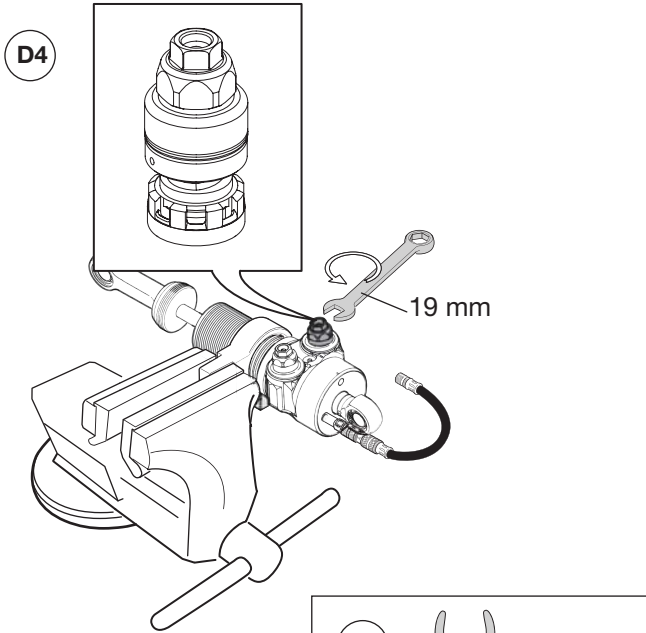
As an alternative the flat sides of the cylinder head can be used to hold the damper in a vice with soft jaws. However for revalving, this should only be seen as a temporary solution. See section General information for more details.

### NOTE!

*The clicker positions will normally not change during revalving. We recommend you to set the preload to minimum. This will make the revalving procedure easier.*

### D3

Depressurize the damper. See section *Using the gas filling device in the Inside TTX40 Manual Part no. 07430-01*. The gas needle housing together with the quick-connect hose can be left installed during the revalving procedure.



D4

**D4**

Remove the Valve End Piece, use a 19 mm wrench.

**D5**

Pick up the spring with a pair of small pliers.

**D6**

Remove the circlip and the valve.

**NOTE!**

*Use minimum force when removing the circlip, it can easily be deformed. If it is deformed you need to replace it with a new one before assembly.*

**D7**

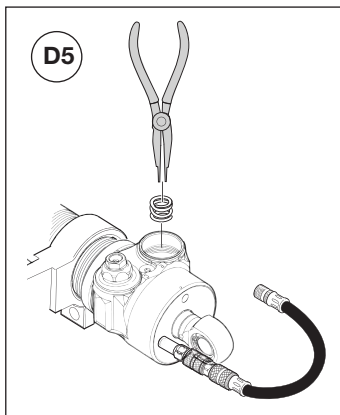
Remove the shims and clamp washer.

**D8**

Remove the lower preload ring, spring, adjustment shims and upper preload ring.

**D9**

Remove the valve holder and the two shims. Make sure you do not loose the two pins.



D5

**Assemble**

Assemble the parts in reversed order. Tighten the end piece to 11 Nm (8 ft.lbs. ).

**Adjustment shims**

To compensate for different shim stack heights you need to use adjustment shims on top of the spring.

The total height of the adjustment shim stack is:

Total shim stack height of all shims 18mm and below\* in diameter – 0.1mm.

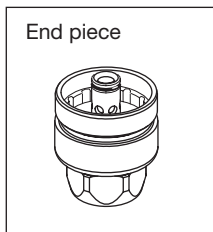
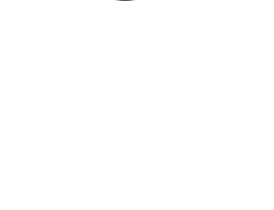
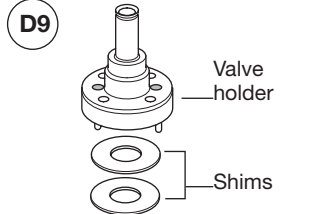
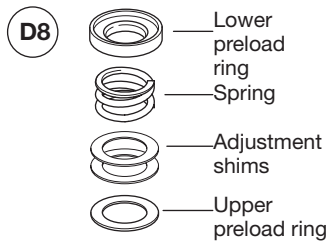
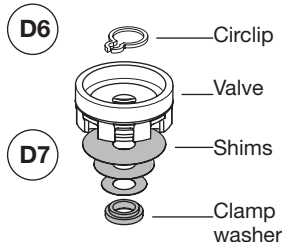
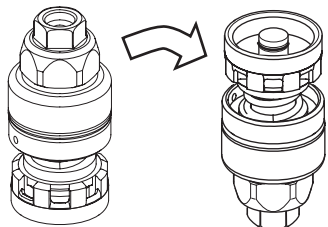
*\*All shims inside the preload ring*

Example: One shim stack has a total of 0.4mm shims inside the preload ring.

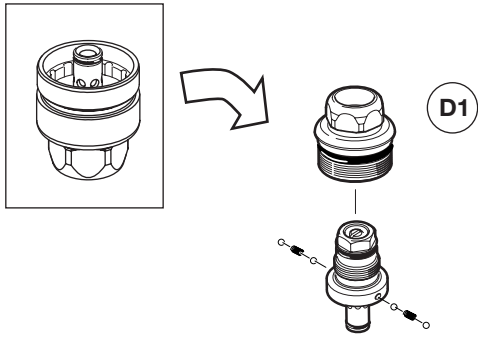
=> Adjustment shim stack to put on top of the the spring should be 0.3mm

This formula is a starting point but the adjustment shims can also be used to fine tune left to right matching of the high speed adjuster.

Valve end piece



End piece



## End piece disassembly and assembly

### NOTE!

*Removing the end piece and bleed valve is usually not necessary for normal revalves.*

Here is a very brief instruction for disassembling/assembling a valve end piece. The method is quite straight forward. Make sure you have some spare detent balls and springs available before you start the job. They are easy to drop during disassembly and assembly.

### D1

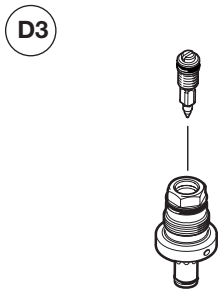
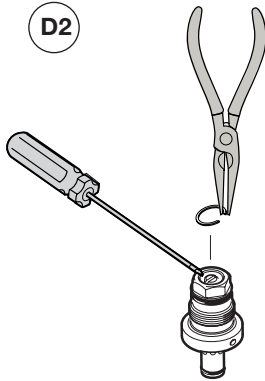
Screw out the needle housing. Be prepared to catch the detent balls and springs that will pop out.

### D2

To disassemble the bleed valve, turn the low speed adjuster to fully closed position. The next step is to remove the circlip above the needle. Push the centre of the circlip down with a little screwdriver and then grab it with a pair of small pliers and pull it out.

### D3

Remove the needle valve, use a screwdriver.



### Assemble

Replace the necessary parts and assemble the end piece in reversed order.



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