

#### Kit Contents

Description	Part No	Pcs
Shock absorber	ARX 0102	1
Bracket	01082-02	1
Screw M6x30	05404-07	2
Washer 6.4x12x1.6	00153-04	4
Nut M6	00430-02	2
Screw M10x50	05404-17	1
Nut M10	00430-01	1
Tie rap	00231-01	3
Sticker set	10207-01	1
Sticker Memo notes	01180-01	1
Owner's manual	07244-01	1

#### **Note!**

Please note that there can be small differences between your product and the images in these instructions.

#### **Note!**

Please note that during storage and transport, especially at high ambient temperature, some of the oil and grease used for assembly may leak and stain the packaging. This will not cause damage to the product, wipe off the excessive oil or grease with a cloth.

#### **Note!**

Before you install this product, check the kit contents. If anything is missing, please contact an Öhlins dealer.

#### **Warning!**

Before you install this product, read the Öhlins Owner's manual. This product is an important part of the vehicle and the vehicle stability.

**AR-X 40 shock absorber for Yamaha Tenere 700 World Raid**

# **ARX 0102**

**Mounting Instructions & Setup Guide**



# SAFETY PRECAUTIONS

## General Warnings

### **Note!**

*The shock absorber/front fork/steering damper is an important part of the vehicle and will affect the stability.*

### **Note!**

*Read and ensure you understand the information in this manual and other technical documents provided by Öhlins, before using the product.*

### **Note!**

*Öhlins Racing AB can not be held responsible for any damage to the shock absorber/front fork/steering damper, vehicle, other property or injury to persons, if the instructions for mounting, usage and maintenance are not followed exactly.*

### **Warning!**

*After installing the Öhlins product, take a test ride at low speed to ensure your vehicle has maintained stability.*

### **Warning!**

*If the suspension makes an abnormal noise, or the function is irregular, or if you notice any leakage from the product, stop the vehicle immediately and return the product to an Öhlins dealer.*

### **Warning!**

*The product warranty shall only apply if the product has been operated and maintained in accordance with recommendations in this manual. If you have any questions regarding usage, service, inspection and/or maintenance please contact Öhlins.*

### **Note!**

*When working with the Öhlins product, always read the vehicle service manual.*

### **Note!**

*This manual shall be considered as a part of the product and shall accompany the product throughout its life cycle.*

## SAFETY SYMBOLS

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



*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 important regarding procedures.*

## Product Specific Warnings

### **Warning!**

*This product was developed and designed exclusively for a specific vehicle model and shall only be installed on the intended vehicle model in its original condition as delivered from the vehicle manufacturer.*

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# MOUNTING INSTRUCTIONS

## **⚠ Warning!**

*We strongly recommend to let an Öhlins dealer install this product.*

## **⚠ Warning!**

*If you work with a lifted vehicle, make sure that it is safely supported to prevent it from tipping over.*

## **👁 Note!**

*When you work with this product, see the vehicle service manual for vehicle specific procedures and important data.*

## **👁 Note!**

*Before you install this product clean the vehicle.*

**1**

Put the motorcycle on a work stand so that the rear wheel is up in the air and put a support under the rear wheel.

**2**

Remove the seat.

**3**

Remove the covers below the seat.

**4**

Remove the fender in front of the rear wheel.

**5**

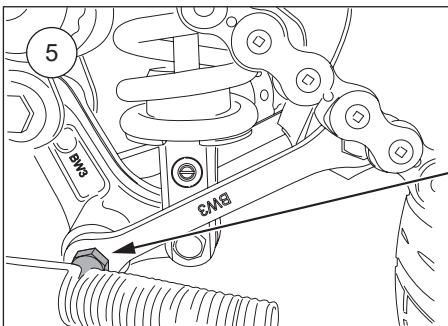
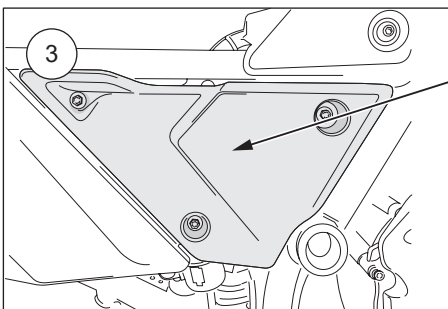
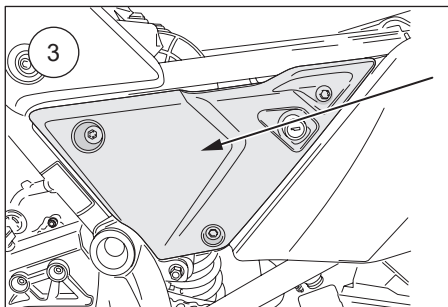
Remove the screw connecting the triangle link and pull rods.

**6**

Remove the lower shock absorber screw.

**7**

Remove the upper shock absorber screw. Lower the swing arm and remove the shock absorber upwards.



# MOUNTING INSTRUCTIONS

**8**

Mount the Öhlins shock absorber in reverse order.

**9**

Mount the supplied bracket (01082-02) together with screws (05404-07), washers (00153-04) and nuts (00430-02) to the preload master cylinder according to the figure. Tighten both nuts to 5 Nm.

**10**

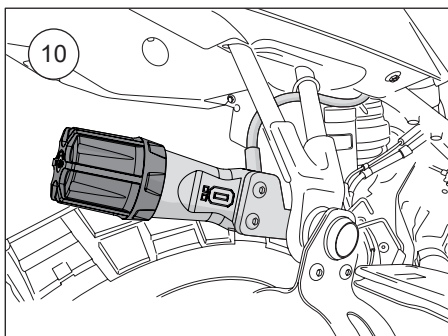
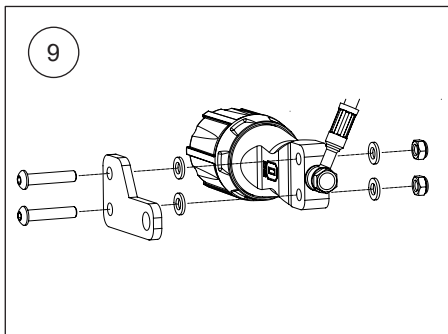
Mount the hydraulic preload master cylinder at the silencer mount. Use the supplied screw (05404-17) and nut (00430-01). Keep original outer and inner washers against the silencer bracket.

**11**

Use supplied Tie-raps (00231-01) to fasten the hose.

**12**

Mount the fender, covers and seat back in reverse order.



# ADJUSTMENTS

## **⚠ Warning!**

*Before riding, always ensure that the basic settings made by Öhlins are intact. Make only one adjustment at a time, adjust in small steps and take notes.*

## **👁 Note!**

*For recommended setup see the Mounting Instructions or contact an Öhlins dealer.*

### **Spring Preload**

*When adjusting the spring preload you move the spring seat. This will decrease or increase the initial spring force, which will lower or raise the motorcycle rear ride height.*

The spring preload is fundamental for the suspension function. If the preload is incorrectly set, any other adjustments will not help to get the intended performance from the suspension.

Turn the Hydraulic Adjuster knob to set the spring preload. Turn clockwise to increase the preload (+) and turn counter clockwise to decrease (-). Each turn or click correspond to 0.625mm on the spring, so turning the knob 4 clicks/turns will adjust 2.5mm on the spring.

### **Compression Damping**

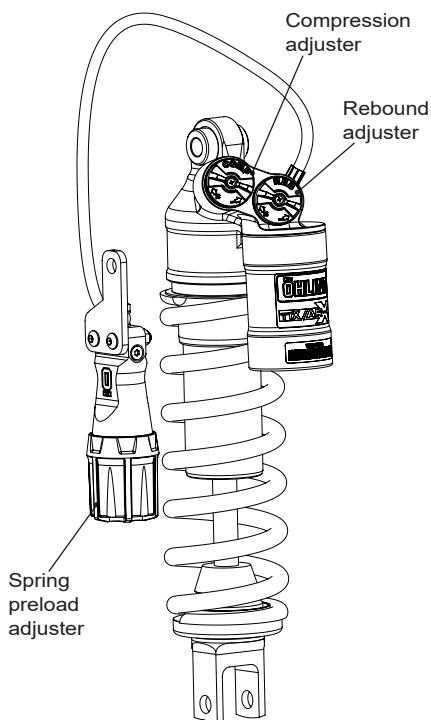
*Compression damping controls the energy absorption when the shock absorber is being compressed, thus controls how easy the shock absorber compresses when the rear wheel is being loaded or hits a bump.*

Adjust by turning the knob on top of the reservoir. Turn clockwise to increase damping (+), turn counter clockwise to decrease (-).

### **Rebound Damping**

*Rebound damping controls the energy absorption when the shock absorber is being extended and controls how fast the shock absorber returns to its normal position after being compressed.*

Adjust by turning the knob on top of the reservoir. Turn clockwise to increase damping (+), turn counter clockwise to decrease (-).



### **Reset the adjusters**

Turn the compression or rebound adjuster clockwise to fully closed position (zero [0]). Then, turn counter clockwise to open, and count the clicks until you reach the recommended number of clicks.

For the preload adjuster it's the opposite procedure. Turn the adjuster counter clockwise to fully open. Then turn clockwise to close, and count the clicks or turns until you reach the recommended amount of clicks.

See recommended settings the section Setup Data in this manual.

## **⚠ Caution!**

*When adjusting, turn carefully not to damage delicate sealing surfaces.*

# SETTING UP

## Measure Sag

### *Spring Preload - Free Sag - Ride Height*

Spring preload is a crucial part of setting your motorcycle since it affects the height of the motorcycle and the fork angle. Before setting the preload, measure the sag:

#### **Note!**

*The following procedure should be performed on a flat surface.*

1. Put the motorcycle on a work stand so that at least the rear wheel is off the ground and the suspension is unloaded.
2. Mark, for example with a piece of tape, a point immediately above the rear wheel axle.
3. Measure the distance from the marked point to a fixed point, for example the wheel axle (R1).
4. Put the motorcycle on the ground so that the rear suspension is slightly compressed. Repeat the measuring procedures (R2).
5. Sit on the motorcycle in normal riding position, properly outfitted in your riding gear. Repeat the measuring procedure (R3).

## Recommended Measures

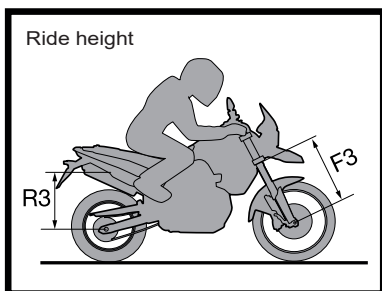
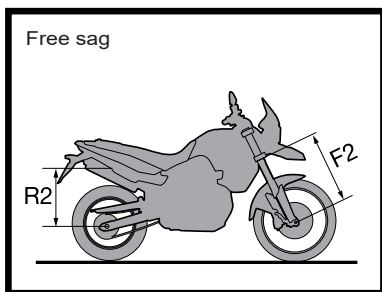
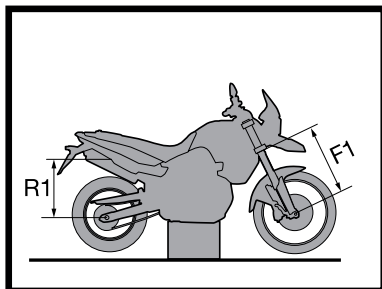
See recommended measures in section Setup Data in this manual.

## Adjust spring preload

1. If your measures differ significantly from the recommendations, adjust the spring preload. (See chapter Adjustments in this manual).
2. If the ride height still differs from the recommendations and the preload adjuster is in any of the end positions, you may need to change to softer/harder spring. Contact an Öhlins dealer for advice.

#### **Warning!**

*Incorrect spring rate may result in a front geometry that is either too steep or too flat. This can result in a tendency of under or over steering, that could seriously affect the handling characteristics of the motorcycle.*



# SETUP DATA

## **⚠ Warning!**

*Before you ride/drive, always make sure that the setup is according to the recommended setup data. Read about adjustments and setting up in this instruction before you make any adjustments. Contact an Öhlins dealer if you have any questions about setting up.*

## **Delivery data**

Shock length	385	mm
Stroke (metal to metal)	105	mm
Spring (part.no.)	00580-21	
Spring rate	75	N/mm
Spring free length	250	mm
Spring preload (range)	15 (0/+15)	mm
Spring preload adjuster position	0	turns or clicks

## **Recommended Free sag and Ride height**

R1-R2		mm
R1-R3	80±5	mm

## **Recommended damping adjuster position**

<b>Riding condition</b>	<b>Offroad</b>	<b>Standard</b>	<b>Comfort</b>	
Compression adjuster	14	16	18	clicks
Rebound adjuster	14	16	18	clicks

## **Alternative springs**

<b>Spring Part no</b>	<b>Spring rate (N/mm)</b>	<b>Load (most intended usage)</b>
20580-31	95	Passenger or luggage/equipment weight more than 30 kg

## **⚠ Warning!**

*If the rear spring is changed it may also be required to change springs in the front fork in order to have a good balance of the whole motorcycle.*

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, minor updates may occur.

To find the latest information contact an Öhlins distributor. Please contact Öhlins if you have any questions regarding the contents in this document.

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