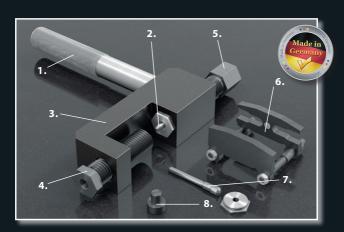


# **Operating instructions Chain Tool KTW 2.5**









Many thanks for the trust that you have placed in us by purchasing a Kellermann chain tool.

#### OVERVIEW

- 1. Handle
- Arbor and fence for chains 5xx and 6xx
- 3. Base plate
- Clamping screw

- 5. Pressure screw
- Magnetic positioning unit
- Arbor and fence for chains 4xx
- **Bolt stop**

#### **WARNING NOTICES**

CAUTION! Read the instructions for use through carefully before using the tool.

**CAUTION!** If you are still unsure whether you can use the tool correctly after carefully reading the instructions for use, consult with a specialist to this effect. Improperly assembled and riveted chains may result in the operational safety of the vehicle being impaired.

**CAUTION!** The motorcycle toppling over can cause injuries and result in damages to the motorcycle. You must thus ensure that the motorcycle is in a secure position and switch the engine and ignition off.

**CAUTION!** When using the chain tool, wear suitable protective clothing and protective goggles.

#### PROCEDURE FOR CHANGING THE CHAIN

Replacement of the chain without replacing the chain wheel and pinion at the same time generally results in greatly enhanced wear of the new chain. We therefore recommend replacing the chain wheel and pinion together with the chain as a basic principle. When making a purchase, ensure that all of the components are suitable for your vehicle. You need a chain, a chain pinion, a chain wheel and a chain lock with hollow bolts, and if necessary new locking devices for the fastening screws of the chain wheel and pinion in the form of locking washers or similar fittings. Ask your specialist dealer!

### 1. Disassembling the Worn Chain Kit

• If you have one at hand cut the worn chain with an angle grinder, but you can also use the chain tool. Put the right arbor and fence into the tool first (small arbor and fence for 4xx chains, other chains: big one).

Pull the arbor back until it can no longer be seen by turning the pressure screw. To disconnect the chain, clamp one of its bolts in the tool by turning the clamping screw. The bolt is centred in the recess into which the arbor also disappeared.

- Press out the bolt by turning the pressure screw (Fig. 1). To do this, hold the tool firmly and turn the pressure screw clockwise using a wrench WAF19.
- Disassemble the chain wheel and pinion

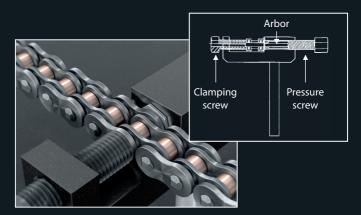


Fig. 1

## 2. Fitting the New Chain

- Assemble the new chain wheel and pinion, not forgetting the locking devices of the fastening screws, and observe the manufacturer's instructions.
- Set the spring tensioning device to minimum tension.
- With most motorcycles, it is only possible to assemble a new chain without having to remove the link when the chain is open. When using an endless chain, this must first of all be disconnected. To disconnect, two neighbouring bolts that have a shared outer plate as shown in Figure 2 must be pressed out.

**CAUTION!** Incorrect selection of the bolts leads to the loss of a chain link and renders the chain unusable!

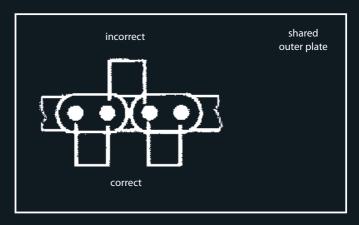


Fig. 2

• Press out the bolts as described in Point 1 for the worn chain.

# 3. Assembling the Chain Lock

- Slide one gasket ring each on to both bolts of the chain lock and generously lubricate the bolts with grease.
- Fit the chain on the chain wheel and pinion and loosely connect the ends with the prepared part of the chain lock. To do this, slide the bolts through the open sleeves on the two chain ends. In doing this, it can be helpful to fit the open ends of the chain on the chain wheel for the purpose of fixing the chain (Fig. 3).

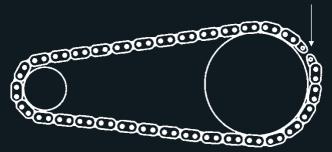


Fig. 3

- After the chain has been loosely connected, turn the rear wheel and thus bring the chain lock into the middle between the chain wheel and pinion at the bottom, where it is easily accessible for pressing out the outer plate.
- Slide a gasket ring onto both bolts of the chain lock.

**NOTICE ABOUT USING CHAIN SPRAY:** Spray specifically in the area between the rollers and inner plates. The rollers run openly and must therefore be regularly supplied with lubricant from outside, such that they and their friction partners do not wear prematurely. Wipe away excess grease following ventilation, such that the motorcycle is not unnecessarily dirty. The gasket rings will also last longer when they are lubricated. The maintenance recommendations of the chain manufacturer are decisive for chain maintenance.

• Stick the outer plates of the chain lock to the bolts using a little grease and surround the chain lock from below using the enclosed positioning unit, such that it is possible to see through the recesses of the positioning unit whether the holes in the outer plate are flush with the ends of the bolts. The positioning unit remains stuck to the chain lock due to the integrated magnets (Fig. 4).



Fig. 4

- Position the arbor of the chain tool by turning the pressure screw, such that
  the arbor sticks out by around 5mm, and tension the working space using
  the clamping screw such that the tool can be slid upwards from the bottom
  using the positioning unit.
- Slide the tool using the positioning unit and tighten the pressure screw by hand, such that the chain (including the positioning unit) is clamped in the tool. Ensure once again that the bolts are flush with the holes, then slide the outer plate on by turning the pressure screw. As regards its width, the positioning unit stretches not only beyond the chain lock, but also beyond the two neighbouring links. If, when sliding on the outer plate, the neighbouring plate and the positioning unit come into contact with one another, the outer plate is in the correct position and the sliding-on process is complete. This can be determined with the naked eye. Under no circumstances should you turn the screw further! (Fig. 5)



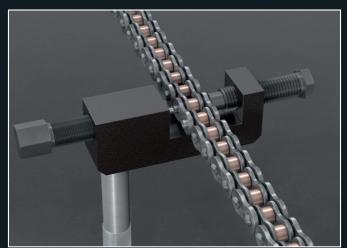
Fig. 5

NOTICE ABOUT THE FUNCTION OF CHAIN LINKS: Chain links should be able to move easily. There must therefore be play between the sleeves and the outer plate. If one slides the outer plate on too far, it touches the sleeves on the inside of the chain lock and there is no longer any play. In addition, the gasket rings become too greatly tempered (squashed). The function is impaired and a high level of wear or spontaneous failure can be the consequences.

Should the outer plate be accidentally slid on too far and the chain lock link be difficult to access, press the bolts out and use a new chain lock.

## 4. Riveting the Chain Lock Bolts

- After sliding on the outer plate of the chain lock, it is necessary to rivet both bolts of the chain lock. To do this, turn the pressure screw such that the arbor sticks out around five millimetres from the guide. Stick the bolt stop on the clamping screw and clamp the bolts to be riveted by turning the clamping screw.
- Ensure that the arbor is centred in the hollow bolts of the chain lock (Fig. 6).



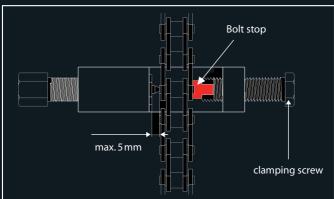


Fig. 6

• Rivet the bolts by turning the pressure screw.

**CAUTION!** A torque of more than 35 Nm when riveting can result in damages to the tool, especially the arbor.

We recommend using a torque key. Riveting with 20 Nm is entirely sufficient for the conventional 5xx chains (in the case of older chain types, please observe the following torques: 4xx:10 Nm, 6xx: 25 Nm).

**NOTICE:** Rivet by turning the conical arbor such that it penetrates into and expands the hollow end of the bolt. A little plastic deformation of the bolt is sufficient in order to achieve a secure rivet, as the forces that occur when operating in this direction are comparatively low.

## 5. Tensioning the Chain

• Tension the chain according to the manufacturer's specification.

**NOTICE ON TENSIONING THE CHAIN:** The distance between the chain piston and chain wheel determines the chain tension. It is at its maximum when the link is slightly horizontal; it should therefore be measured in this position and in the middle of the chain wheel and pinion, where the sagging is at its greatest. It is normal that the chain does not lengthen evenly, so never measure the tension in one position only, but change the chain position by turning the rear wheel and measuring at several points.

The consequence of too little chain tension is increased wear due to smaller wrap angles and loss of comfort when changing loads. The chain can knock, grind and bounce off the link or the engine housing.

The consequence of too much chain tension is increased wear and the risk of the chain ripping, which can cause accidents and result in broken motor housings. Another possible consequence is increased wear of the transmission output bearing and a modified driving behaviour.

If the chain is elongated greatly or in a very different way, it is worn and must be replaced. The chain always lengthens at a faster pace before ripping. We recommend replacing the chain kit if you notice an increase in the wear speed.



German Patent 10 2011 100 474



We are more than happy to help should you have questions about this product. Please call us on  $+49\ 241\ 93808-0$ .

On our website www.kellermann-online.com, you will find, among other things, our online shop with our extensive range of spare parts and accessories and a download area.

ONLINE SHOP at www.kellermann-online.com