

# **BEFORE YOU BEGIN PLEASE REVIEW:**

• A step by step instructional video can be found in the KATOpedia section of the KATO website <u>www.katofastening.com</u>.

#### **IMPORTANT NOTES**

- The KATO Tangless Removal Tool is designed to provide quick, non-destructive removal of KATO Tangless Inserts.
- When removed from the handle the tool can be used with the KATO KFS-20 (CT5420) brushless electric driver. The optional hex kit (2KHEX-1K) is required. The hex kit includes a Hex Sleeve and Pin. (see Figure 1)

#### **COMPONENT LIST**

The 2KRT series removal tool is composed of:

- 1 Mandrel Assembly (1 threaded Mandrel, 1 Pawl, 1 Spring, 1 Pin)
- 1 Adjusting Sleeve Housing
- 1 Nylon Guard
- 1 Lock Nut
- 2 Wrenches

## DEPTH ADJUSTMENT AND TOOL ASSEMBLY

- 1. Use two wrenches (provided) to loosen the Lock Nut and Adjusting Sleeve on the Mandrel.
- 2. Thread the Lock Nut and Adjusting Sleeve towards the back of the Mandrel to fully expose the front threads.
- 3. Thread the Mandrel into the hole with the insert installed until the Pawl Hook engages the top drive notch of the insert. A faint click sound can be heard when the Pawl Hook is engaged.
- 4. Turn the Adjusting Sleeve until the Nylon Guard contacts the surface of the work-piece.
- 5. Use the two wrenches to lightly tighten the Lock Nut against the Adjusting Sleeve. (Be careful not to move the Adjusting Sleeve when tightening).

#### **Manual Removal**

- Thread the removal tool into the installed insert until the Nylon Guard comes into contact with the work-piece and the Pawl Hook engages the top drive notch of the insert (you should hear and/or feel a click).
- 2. Reverse the removal tool rotation and back the insert out of the tapped hole.
- 3. Release the insert from the Mandrel by pressing the Pawl Hook Release tab and threading the insert off.

#### **Electric Tool Removal**

- 4. To use the KATO KFS-20 electric driver, remove the Mandrel Assembly from the handle.
- 5. Slide the hex sleeve over the mandrel, and secure with the pin.
- 6. Use the lowest torque setting required to remove the insert. This will minimize the possibility of breaking the Mandrel or Pawl and increase the life of the tool.
- 7. Hold the electric tool perpendicular to the tapped hole and align the insert. Straight alignment will provide smooth removal and longer tool life.
- 8. Actuate the driver by pressing the Trigger.
- 9. Continue to hold down the Trigger as the Removal Mandrel threads into the installed insert.
- 10. Once the Mandrel reaches the previously set depth to remove the insert, the Electric tool will automatically reverse. *Do not release the trigger until the insert is completely out of the threaded hole.* If you release the Trigger prematurely the Electric Driver will reset. When the Trigger is depressed again the Driver will run forward.

# **TIPS & TRICKS**

Insert installed too deep? Try one or more of these helpful tips:

• The Removal Tool can also be used for adjusting the depth of an installed Tangless insert. Simply thread the tool into the insert until the pawl engages the notch. Then back the insert out to the desired depth. Use the Pawl Hook Release to disengage the tool from the insert.

11. Remove the insert from the tool by pressing the Pawl Hook Release and threading the insert off the end of the mandrel.

# **TOOL MAINTENANCE**

Removal tools should be periodically inspected for damage or wear. Tools should be kept clean so that foreign objects and debris (chips, oils, and dirt) will not clog the tool and prevent the Pawl from fully pivoting inside the Mandrel. Operator misuse can contribute to premature wear and/or damage to the Pawl or Mandrel.

# PARTS REPLACEMENT

Replacement Pawls, Pawl Kits (includes 1 Pawl, 2 Pins, and 2 Springs), and replacement Mandrels are available from KATO (see Parts List below).

## FOLLOW THE PROCEDURES BELOW TO REPLACE A DAMAGED PAWL OR MANDREL.

- 1. Loosen the Lock Nut.
- 2. Remove the Lock Nut and Adjusting Sleeve from the Mandrel.
- 3. Push out the Pawl Pin (see figure 2). Be careful not to lose the Pin.
- 4. Remove the Pawl from the Mandrel slot.
- 5. Remove the Spring from the Mandrel. Be careful not to lose the Spring.

## TO REASSEMBLE:

- 6. Insert the Spring into the Mandrel. (The Spring goes into the hole closest to the Pawl Pin)
- 7. Insert the Pawl into the Mandrel Slot.
- 8. Line up the Pin holes (Pawl & Mandrel) and press in the Pin.
- 9. Check for spring action and free movement of the Pawl in the Mandrel slot.
- 10. Thread the Lock Nut and Adjusting Sleeve back into the Mandrel.

#### SAFETY

Always wear eye protection when working with KATO tools.



Via degli Andreani, 9 40037 Sasso Marconi (BO) ITALY Tel +39 051 735744 info@tecnimetal-tm.com www.tecnimetal-tm.com www.tecnimetal-tm.eu

# PARTS LIST

REPLACEMENT PARTS	KATO PART NUMBER
Pawl	2KRP <mark>X-XX</mark>
Pawl Kit	2KRP <mark>X-XX</mark> K
Replacement Mandrel	2KRT <mark>X-XX</mark> M
Adjusting Sleeve Housing (Nylon Guard not included)	2KRT <mark>X-XX</mark> H
Nylon Guard	2KRT <mark>X-XX</mark> G
X-XX Signifies Thread Type & Size Designation. For example, 2KRTC-06G	