

## TOOL MAINTENANCE

- Installation tools should be periodically inspected for damage or wear. Tools should be kept clean so that foreign objects and debris (chips, oil, and dirt) will not clog the tool preventing the pawl from fully pivoting inside the mandrel. Operator misuse can contribute to premature wear and/or damage to the pawl or mandrel.
- Lubricate the rear prewinder assembly threads and the Hex Shaft with minimal amount of grease for smoother operation and longer tool life.
- Use the lowest torque that will install the insert. This will also prolong the life of the tool.

## SAFETY

Always wear eye protection when working with KATO tools.

## PARTS REPLACEMENT

Replacement Pawls, Pawl Kits (1 Pawl, 2 Pins, and 2 Springs), and Mandrel Assemblies (1 each Mandrel, Pawl, Spring and Pin) are available from KATO (see parts list below).

Follow the procedures below to replace a damaged pawl or mandrel:

1. Remove the Mandrel from the Prewinder.
2. Push out the Pin, be careful not to lose it.
3. Remove the Pawl from the Mandrel slot.
4. Remove the Spring from the Mandrel.

Be careful not to lose the Spring or Pin.

To Reassemble:

5. Insert the Spring into the Mandrel.
6. Insert the Pawl into the Mandrel slot.
7. Line up the pin holes (Pawl and Mandrel) and press in the Pin.
8. Check for spring action and free movement of the Pawl in the Mandrel slot.
9. Thread the Mandrel back into the Prewinder.

## PARTS LIST

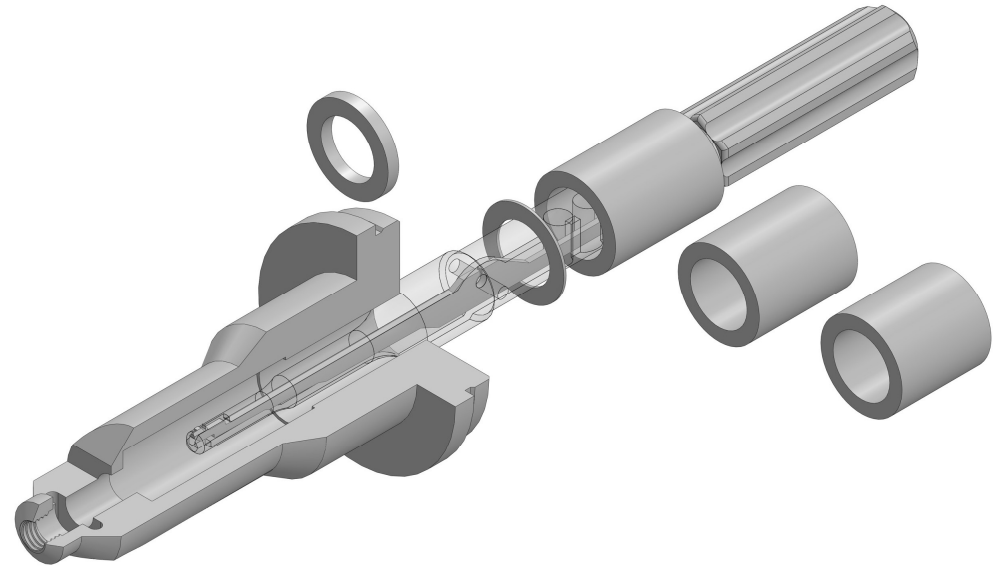
REPLACEMENT PART	KATO PART NUMBER
Pawl	2KIPX-XX
Pawl Kit	2KIPX-XXK
Mandrel	2KPEX-XXM
Spacer Set	2KPEX-XXS

X-XX Signifies Thread type & size designation. For example, 2KPEC-04M

# KATO®

## INSTRUCTIONS FOR USING KATO TANGLESS® COILTHREAD® INSERT TOOLS

THE FOLLOWING INSTRUCTIONS ARE APPLICABLE TO THE  
KATO TANGLESS PREWINDER ELECTRIC INSTALLATION TOOL (2KPE Series)



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## BEFORE YOU BEGIN PLEASE REVIEW:

- Proper hole preparation procedures.
- The KFS-20 (CT5420) instructions prior to use.
- The KATO Linear Arm (2KLRM-1) to reduce operator fatigue and injury.

### IMPORTANT NOTES

- A step by step instructional video can be found in the KATOpedia section of the KATO website [www.katofastening.com](http://www.katofastening.com).
- Low torque range spring (blue) is for installing insert sizes 2-56 thru 6-32 and M2.5 thru M4.
- High torque range spring (light silver) is for installing insert sizes 6-32 thru 1/4" and M4 thru M6.
- The KATO prewinder electric tool Front End Assembly (FEA) is designed to install 1D, 1.5D and 2D inserts only.
- CT5420-PA and CT5408-PA Prewinder Adapters are interchangeable.

### REQUIRED COMPONENTS

The KATO Prewinder Electric Installation System requires:

- CT5420: KFS-20 Brushless Electric Driver & T-45BL Power Transformer
- CT5420-PA: KATO Prewinder Adapter
- 2KPE Series: KATO Prewinder Electric FEA (one for each thread size)
- 2KLRM-1: KATO Linear Torque Arm (recommended)

### COMPONENTS LIST

The 2KPE Series Front End Assembly (FEA) includes the following parts:

- 1 Prewinder
- 1 Mandrel Assembly (includes 1 Mandrel, 1 Pawl, 1 Spring, & 1 Pin)
- 3 Spacers (1D, 1.5D, 2D)
- 4 Shims (three thin shims and one thick shim)
- 1 Dampening Cushion (see Figure 2)

### DEPTH ADJUSTMENT & COMPLETE ASSEMBLY

1. Remove the FEA Mandrel from the Prewinder by threading it completely out of the Prewinder body. Slide the appropriate depth control Spacer over the Mandrel for the insert length to be installed. Use the tallest Spacer for the 1D insert, the medium Spacer for the 1.5D insert and the shortest Spacer for the 2D insert.
2. Thread the Mandrel back into the Prewinder body. If needed, Shims of various sizes are included to fine tune the installation depth (3/4 - 1 1/2 threads below the surface for a hole with a countersink; 1/4-1/2 threads below the surface for a hole without a countersink).  
**Note: Inserts can vary ± 0.25 coil. KATO recommends that the installation depth of each lot be tested using a sample tapped hole prior to installing the inserts into the production part.**
3. The KATO KFS-20 Electric Driver is a versatile tool that can be used with several different KATO installation systems. However, before the KFS-20 driver can be used with the 2KPE Series FEA 's for the first time, the magnet located inside the Hex Sleeve must be removed (*for detailed instructions please review the KFS-20 Electric Driver instructions*). Use the small black plastic tipped Trigger Screw included with the driver.
4. Thread the Magnet Removal Screw into the magnet (located inside the hex sleeve) and pull the magnet out. Place the magnet in a safe place to prevent loss.
5. Ensure size appropriate Spring is installed into the KFS-20 driver (see Important Notes or the CT5420 instructions).
6. Place the Dampening Cushion into the Hex Sleeve. This will prevent metal to metal contact between internal components when the Mandrel is fully retracted.  
**CAUTION: The Cushion simply drops into the sleeve, be careful not lose it when assembling or disassembling the 2KPE Series FEA.**
7. Thread the Prewinder Adapter onto the KFS-20 driver. Note that the threads on the Adapter and the Electric Driver are left hand threads.
8. Loosen the Retainer Nut on the end of the Prewinder Adapter (also left-hand threads) and slide the FEA Mandrel into the Hex Sleeve of the Electric Driver. You may need to rotate the Mandrel before it will slide completely into the Hex Sleeve.
9. Tighten the Retainer Nut to hold the FEA in place. Hand tightening is all that is needed.  
**CAUTION: Do not over tighten the Prewinder Adapter or the Retainer Nut.**

### TORQUE ADJUSTMENT & INSERT INSTALLATION

1. Always use the minimum amount of torque that will install the insert. Start with a very low torque setting on the Electric Driver. To adjust the torque, pull back on the Torque Adjustment Knob while simultaneously turning through the window opening of the Prewinder Adapter. Tighten the Torque Adjustment Knob to increase torque and loosen to decrease torque. The Torque Adjusting Knob will lock into place every 180°.
2. Use the Manual Override Switch to place the driver in reverse and press the Trigger to retract the FEA Mandrel back into the Prewinder.
3. Slide the plastic strip through the Strip Feed Slot or load the bulk insert into the Well. Tangless CoilThread inserts are bi-directional so orientation is not required.
4. Hold the Electric Driver perpendicular to the tapped hole. With the tool straight, press the Trigger to drive the FEA Mandrel forward, through the insert and into the tapped hole.
5. Increase the torque setting by turning the Torque Adjusting Knob 180° clockwise if the driver reverses without fully installing the insert.
6. Once the insert is fully installed, the driver will automatically reverse. Be sure to continue to hold down the Trigger until the FEA Mandrel retracts far enough back to once again clear the top of the Well. Once the Trigger is released the driver will reset and run forward again.  
**Note: Try not to allow the Mandrel to fully retract into the Hex Sleeve and make contact with the bottom of the sleeve when the tool reverses. You will hear a clicking sound if that occurs. This may cause the Mandrel to stick and may require you to tap the Trigger a few times to release it. With practice it will be possible to allow the Mandrel to retract far enough back to accept the insert without making contact with the back of the Hex Sleeve.**
7. Verify the insert is installed to the correct depth (3/4 - 1 1/2 threads below the surface for a hole with a countersink; 1/4 - 1/2 threads below the surface for a hole without a countersink). Any additional adjustments can be made by adding or removing Shims.

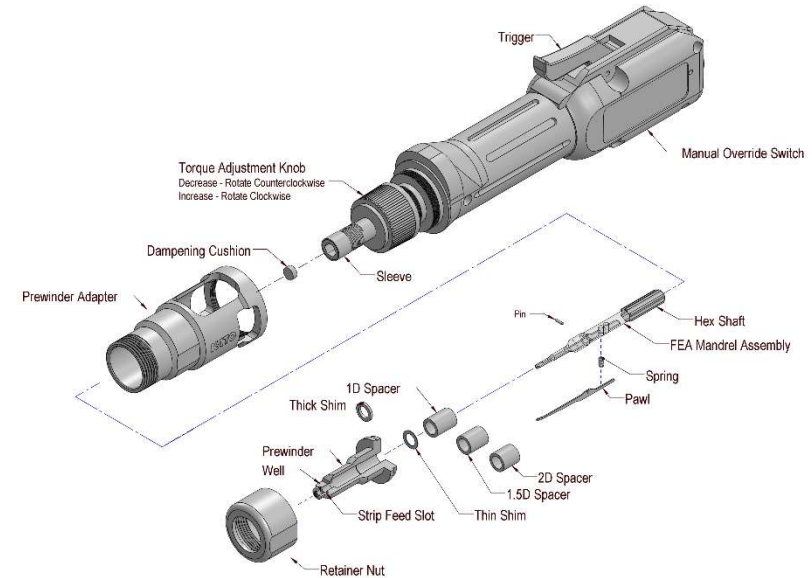


Figure 2

### TIPS & TRICKS

Having difficulty getting the insert started? Try one or more of these helpful tips:

- Do not apply any downward pressure on the tool during installation. Let the weight of the tool rest over the tapped hole.
- Try tapping the Trigger until the insert starts to enter the tapped hole, then hold the Trigger down.