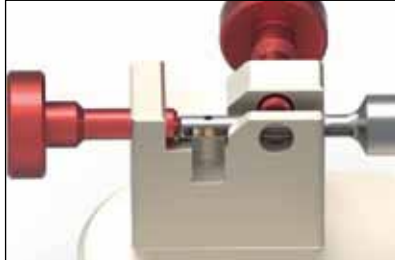


How to Change the Blades COFA Series 2 and 3 with Fixture:

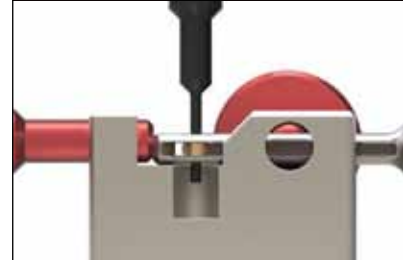


Assembly device for tool type COFA 2 and 3.

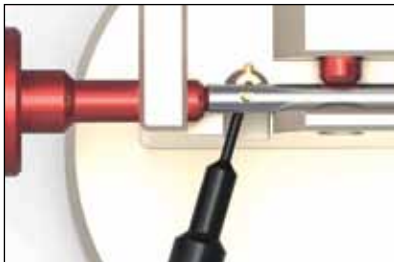
Please refer to page 71 for order information.



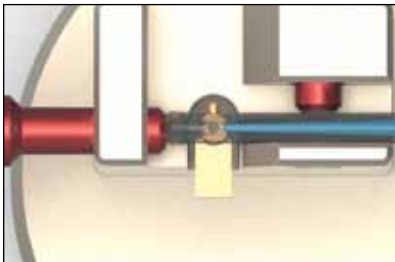
Adjust the tool lengthwise so that the blade bore is above the recess for the roll pin. Then clamp the tool. Make sure that the larger spring recess in the shaft is on clamp screw side.



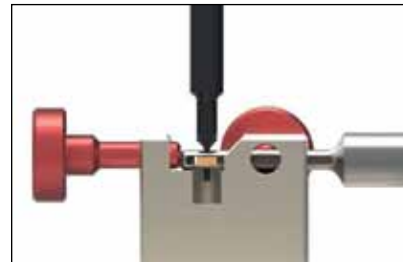
Push the roll pin out of the tool by using the smaller diameter of the assembly pin.



Push out the blade by using the smaller diameter of the assembly pin.



Insert the new blade nose first. The nose must be on the side of the shaft where the larger spring recess is (observe the mark on the tool). The spring must engage with the groove of the blade.



Center the blade with the help of the assembly pin. Its smaller diameter serves for pre-centering.



Insert roll pin with its longer and thinner section first.



Use assembly pin to push roll pin level with blade. Then unclamp the tool.



Brake off the assembly aid extensions of the blade and from the roll pin manually.

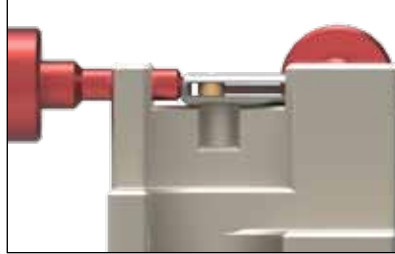
*COFA assembly fixture is recommended to remove blades

How to Change the Blades COFA Series 4 and 5 with Fixture:

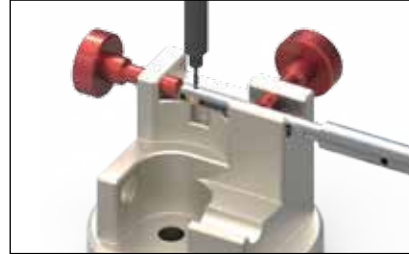


Assembly device for tool types COFA 4 and 5.

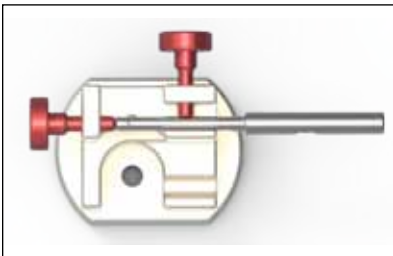
Please refer to page 71 for order information.



Adjust the tool lengthwise so that the blade bore is above the recess for the split pin. Clamp the tool as shown.



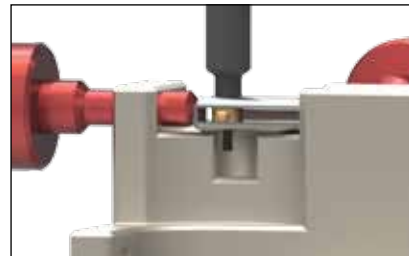
Push the split pin carefully out of the bore. Make sure you apply the assembly pin to the split end of the pin. If necessary, use a small hammer.



Push out the blade by means of the long end of the assembly pin.



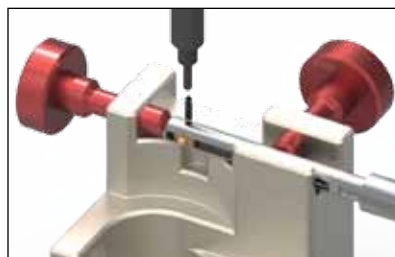
Insert the new blade into the tool with the blade groove orientated towards the spring. Please observe the marks on the tool body.



Guide the assembly pin with its long end through the bore and center the blade.



Insert the split pin manually with the split end upwards. Then push it with the assembly pin.



The assembly pin must be level with both sides of the tool body.



For blade change videos visit:

www.HeuleTool.com

*COFA assembly fixture is recommended to remove blades

How to Change the Blades (without fixture) COFA Series 2, 3, 4 and 5:

Step 1:

Line up the assembly pin on the side with the solid end of the split pin (opposite side of the split end).

Step 2:

(2a) Remove the split pin out of the tool body by pressing the assembly pin from the solid end of the split pin. (2b) The blade will fall out of the tool. Carefully use a hammer if necessary.

NOTE:

HEULE recommends that you use a new split pin with each blade change and throw out the old pin.

Step 3:

Insert the blade in the tool body with the notch down towards the spring. Use the mark on the tool body to reference the correct position.

Step 4:

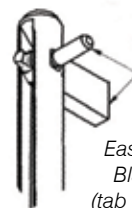
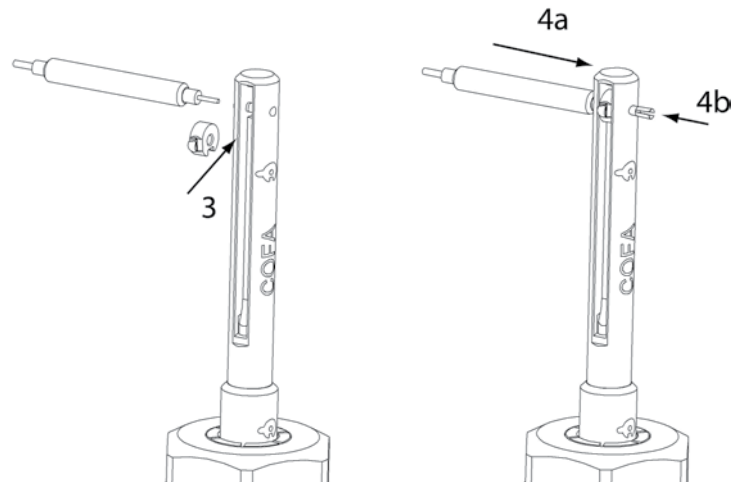
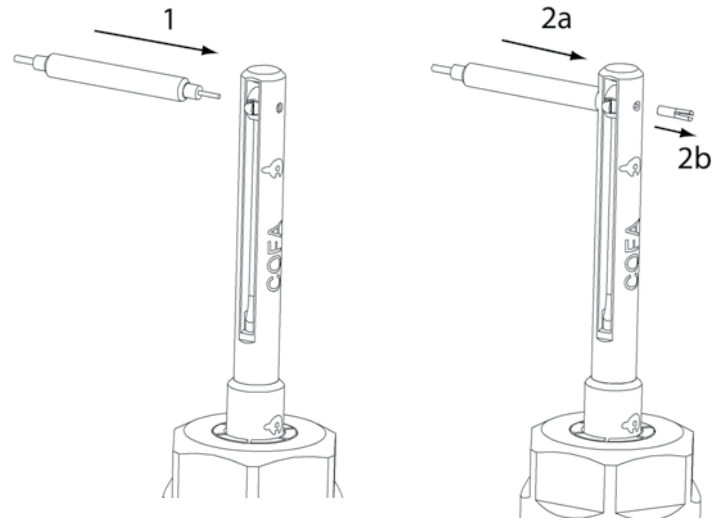
(4a) Line up the blade with the split pin hole using the assembly pin given with each tool. (4b) Insert the solid end of the split pin in the hole on the opposite side of the assembly pin and manually press into place. Using a small hammer or mallet, carefully press in the split pin on the split end into the hole.

IMPORTANT:

The split pin must be below the tool body surface. If necessary, use the assembly pin and hammer to press the split pin completely in. Make sure it does not stick out on either side of the tool body.

Step 5:

Series 2 and 3 Only: Using your fingers break off the blade tab and longer end of the split pin.

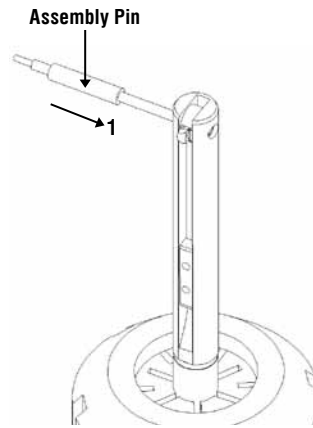


*Easy to change
Blade and pin
(tab that snaps off)*

How to Change the Blades COFA Series 6, 8, and 12:

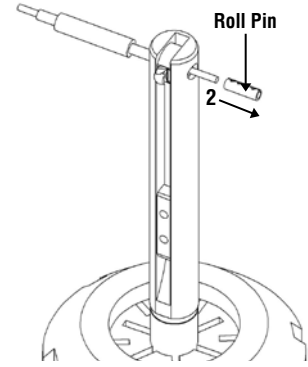
STEP 1:

Insert the long end of the assembly pin into the roll pin.



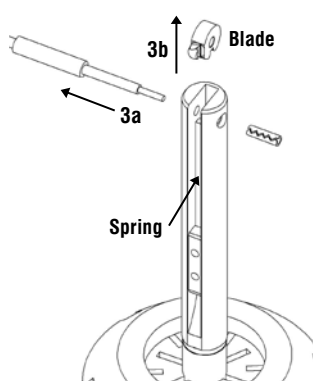
STEP 2:

Drive the roll pin out of the tool body. Keep the roll pin to reuse it.



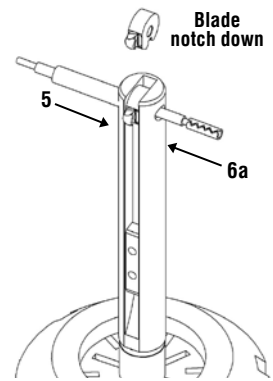
STEP 3:

Remove the assembly pin and then remove the blade.



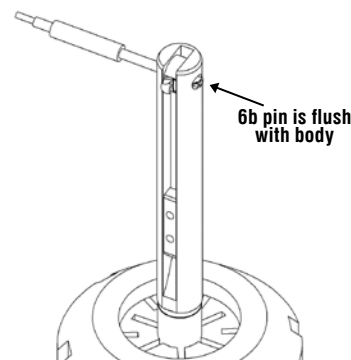
STEP 4:

Place new blade into the tool with the notch on the end of the spring.



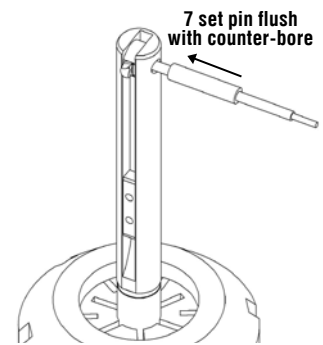
STEP 5:

Place the long end of the assembly pin through the holes to align the blade in the tool.



STEP 6:

Place the roll pin on the end of the assembly pin and hammer it into the tool. Use the assembly pin to maintain the proper alignment.



STEP 7:

Place the short end of the assembly pin into the roll pin and drive the assembly pin so it seats against the counterbore.

PROBLEM	EXPLANATION	SOLUTION
Chamfer Ø too large	<ul style="list-style-type: none"> • Tool is designed to cut to a set chamfer diameter 	<ul style="list-style-type: none"> • Select a smaller sized tool
Chamfer Ø too small	<ul style="list-style-type: none"> • Chamfer is cutting to the designated maximum from the catalog but this is not large enough • Chamfer is not to designed maximum size 	<ul style="list-style-type: none"> • Use the next size larger tool if possible • The COFA tool is only designed for edge breaks but specials can be requested • Use the next higher strength spring • Use a slower feed rate
Tool chatters	<ul style="list-style-type: none"> • Operating conditions are not correct • Not enough cutting force for your material 	<ul style="list-style-type: none"> • Increase feed rates • Decrease speed rates • Use coolant on tool • Use the next higher strength spring
Tool is pushing the burr	<ul style="list-style-type: none"> • Blade is used or dull • Blade is new but still not working 	<ul style="list-style-type: none"> • Change the insert • Use the next higher strength spring • Check programming position and feed rates • Burrs are too large
Tool creates a secondary burr or poor surface finish	<ul style="list-style-type: none"> • Spring is too heavy • Chamfer size is large • Operating conditions are not correct 	<ul style="list-style-type: none"> • Use next lighter strength spring • Use a smaller tool to achieve a smaller edge break • Check recommended feed and speed rates
Cutting Blades are chipping	<ul style="list-style-type: none"> • Programming error • Interrupted cut or possible wall interference 	<ul style="list-style-type: none"> • Make sure cutting edge is not in fast feed when cutting • Try smaller tool • Reduce speed rate
Uneven chamfer or missing some burrs	<ul style="list-style-type: none"> • Speed rate far too high • Ratio between crosshole and tube diameter (d:D) is larger than 0.5 • Not enough cutting force for your material 	<ul style="list-style-type: none"> • Special inserts are possible • Change spring or use the next higher strength spring
Blade is breaking or falling out of tool	<ul style="list-style-type: none"> • Interrupted cut or possible wall interference • Roll pins are being deformed • Program is incorrect 	<ul style="list-style-type: none"> • Try smaller tool • Check assembly procedures • Assembly pins must be used when changing blades • Change roll pin • Check programming positioning • Do not use bore cycle



Grinding may produce hazardous dust. To avoid adverse effects, use adequate ventilation and read MSDS. Cutting tools may break during use. To avoid injury, use proper safety precautions and protective equipment. Use the machine tool with sufficient rigidity and horsepower. Use a cover on a machine tool and protector, such as glasses, against shattering chips and broken tools due to misuse. Do not use insoluble oil because there is a danger of causing fire.