

# **BLUEROCK<sup>®</sup>**

## **Tools**

### **SERVICE MANUAL V1.0**

### **BLUEROCK<sup>®</sup> WS-260 Wire Stripper**

### **Removing/Replacing Blades**

**CAUTION!! IMPORTANT!! DANGER!! WARNING!!**

**DISCONNECT MACHINE FROM POWER BEFORE PROCEEDING!!**

#### ***PART 1: LEFT SIDE OF MACHINE 13 BLADE ASSEMBLY***

**Estimated Completion Time: 90 Minutes**

#### **Tools Required**

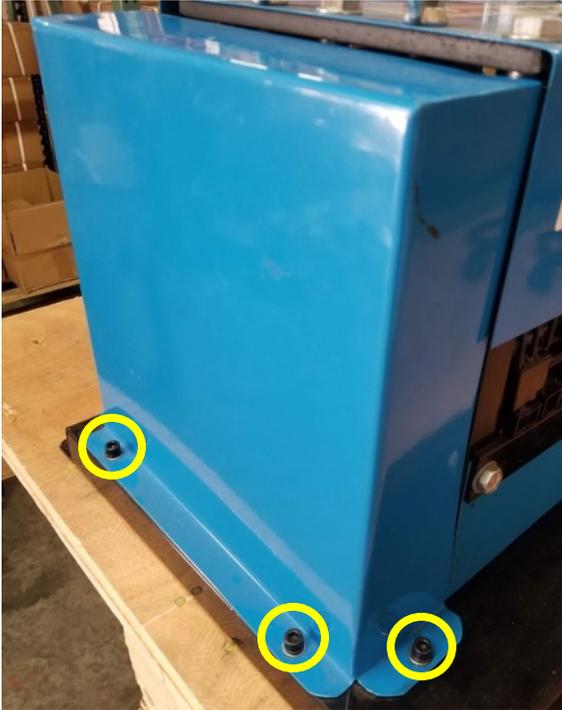
5mm Hex Wrench  
14mm Wrench  
17mm Wrench  
Adjustable Wrench  
Pliers  
Small Flathead Screwdriver  
Flat punch  
Rubber Mallet  
Hammer  
2 types of Bearing Pullers (See Pictures Below)

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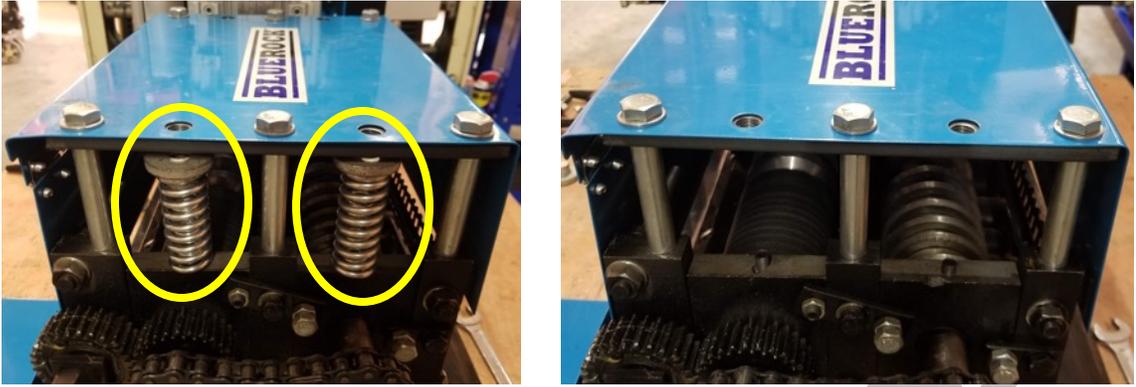
1. Use a 5mm hex wrench to remove 4 bolts fastening the side cover to the base of the machine.



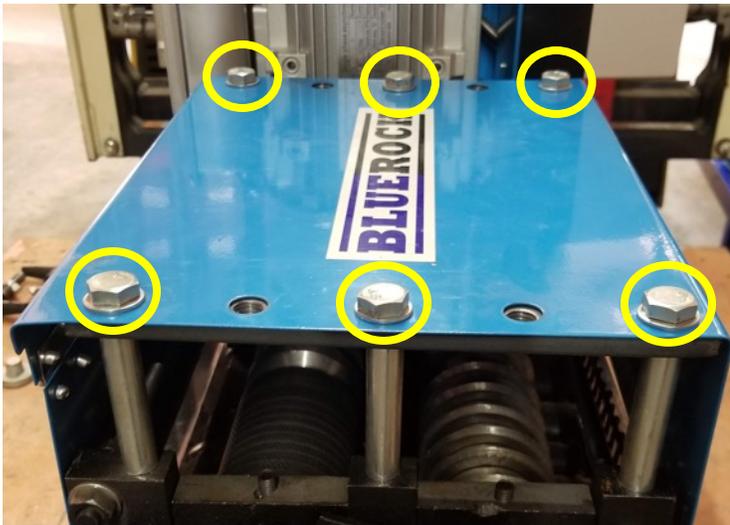
2. Remove the 4 T-handle bolts from the top of the machine.



3. Remove 4 sets of springs and spring caps from the machine.



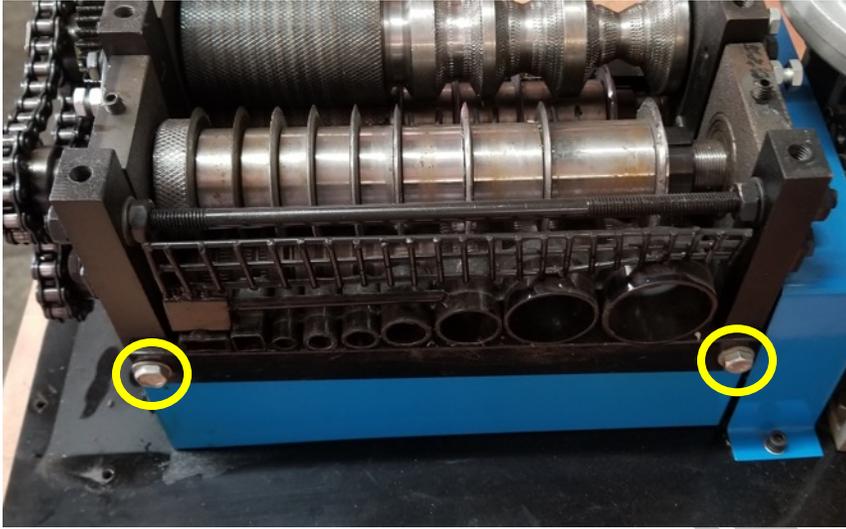
4. Use a 17mm wrench to remove the 6 top bolts from the machine.



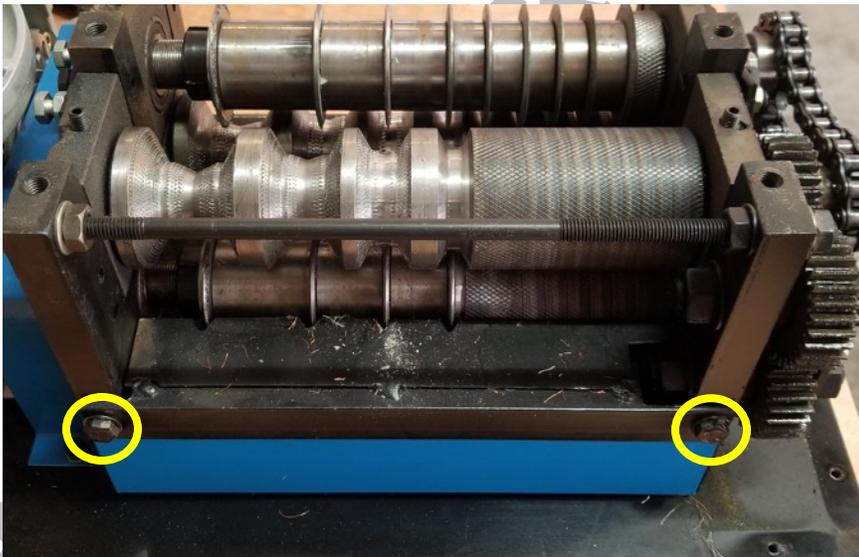
5. Carefully lift the top cover away from the machine. Be sure to remove 6 spacer tubes and 2 flat brackets as shown.



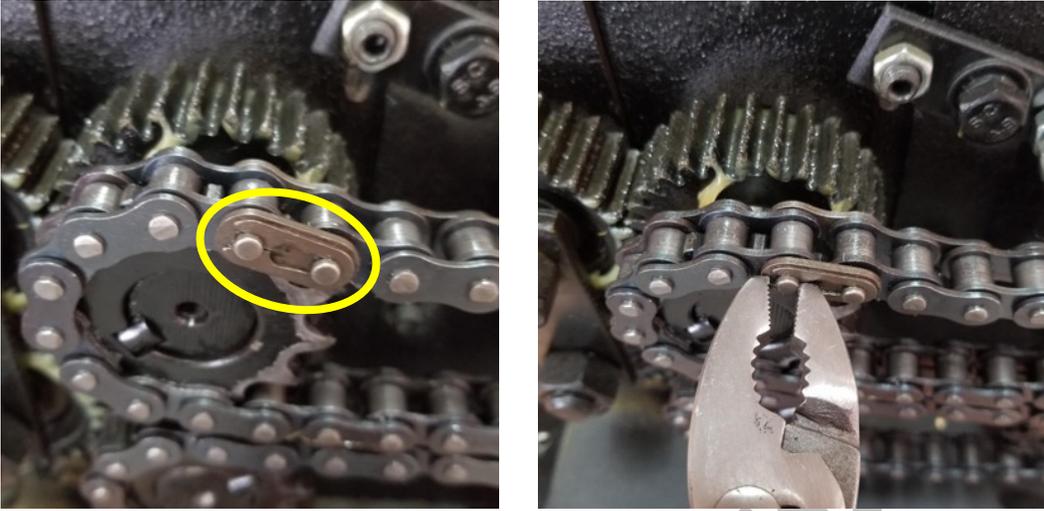
6. Use a 14mm wrench to remove 2 bolts on the front guards as shown and remove the guards from the machine.



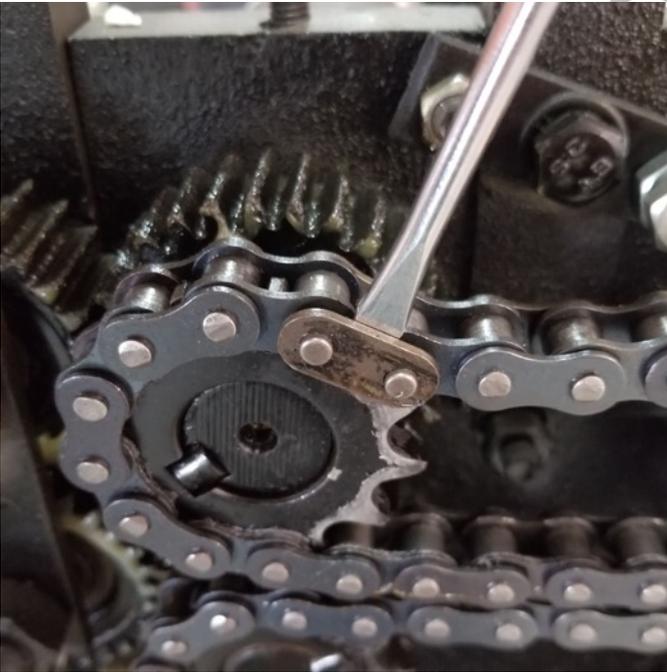
7. Use a 14mm wrench to remove 2 bolts on the rear guard as shown and remove the guards from the machine.



8. Use a pliers to remove the master link clip on the top chain as shown.

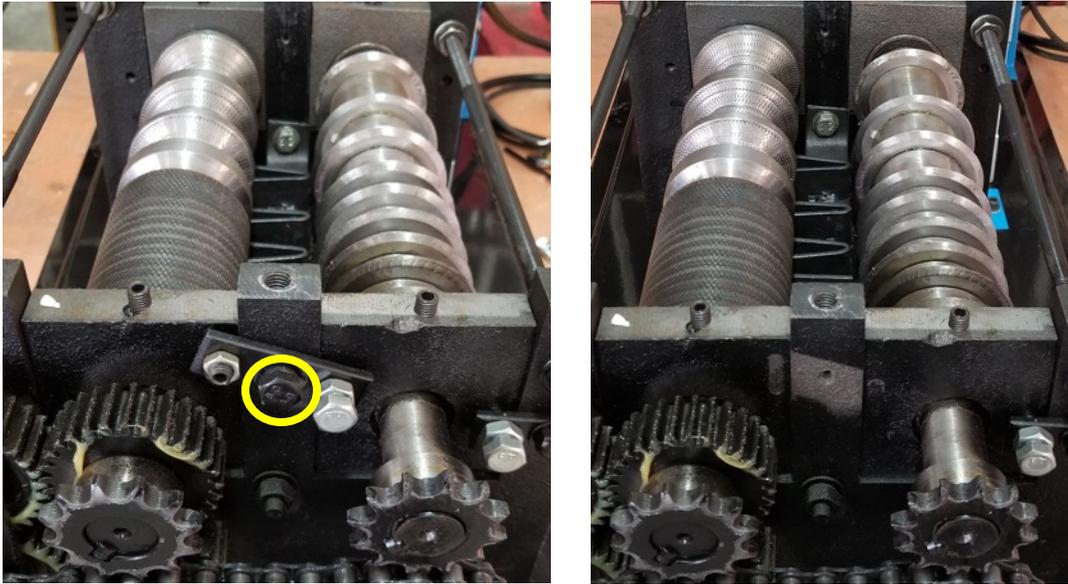


9. Use a flathead screwdriver to pry the master link apart as shown.



10. Set the chain and master link aside on a clean surface.

11. Use a 14mm wrench to remove the upper roller alignment bracket as shown.



12. Very carefully lift the blade roller assembly straight up from the machine and set on a flat piece of wood.

13. Use a bearing puller to remove the bearing housing as shown.



14. Use the bearing puller to remove the bearing from the blade shaft.



15. Use a marker to number the blade spacers for use during reassembly.



16. Place a flat punch against the spanner nut as shown.



17. **Very carefully** hold the blade assembly and tap the punch with a hammer until the nut is loose. **Note:** This nut is standard thread, loosen by spinning counterclockwise.

18. Remove the spanner nut, washer, blades, and blade spacers from the shaft.



19. Alternate placing new blades and blade spacers on the shaft in the order they came off.

20. Replace the spanner nut and tighten with the same method used to remove it.

21. Thoroughly clean the mating surfaces between the bearing housing, bearing, and blade shaft. Lubricate each of these surfaces with a thin coat of grease.

22. Set the bearing housing on a flat piece of wood with the bearing aligned on top of it. Use a rubber mallet to seat the bearing in the housing.



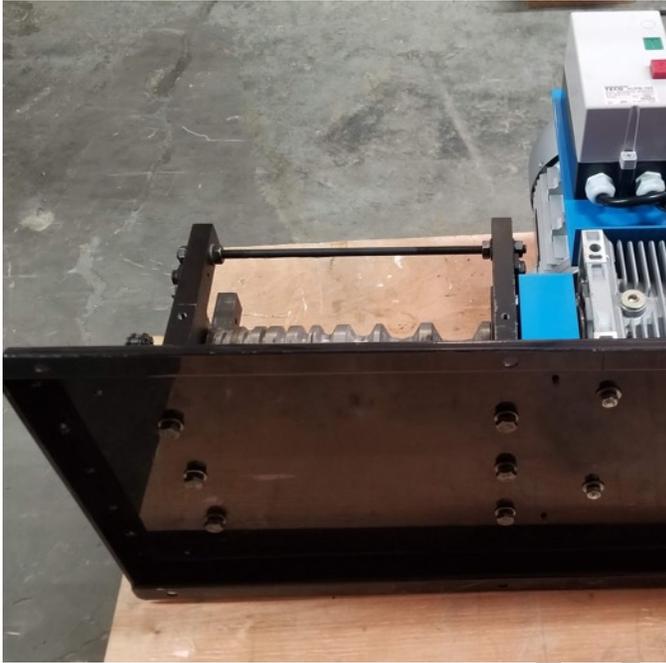
23. Carefully hold the blade shaft vertically on a piece of wood and align the bearing with the end of the shaft. Use a rubber mallet to seat the bearing on the shaft.



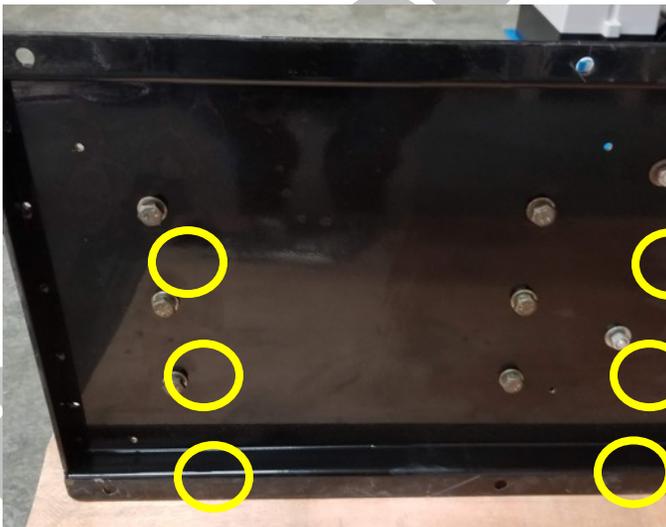
24. Set the blade roller assembly aside until reassembly.

25. Carefully lift the secondary roller straight up from the machine and set aside.

26. **Very carefully** tilt the machine on its side to access bolts under the base plate as shown.  
Brace the machine so the motor does not get damaged.



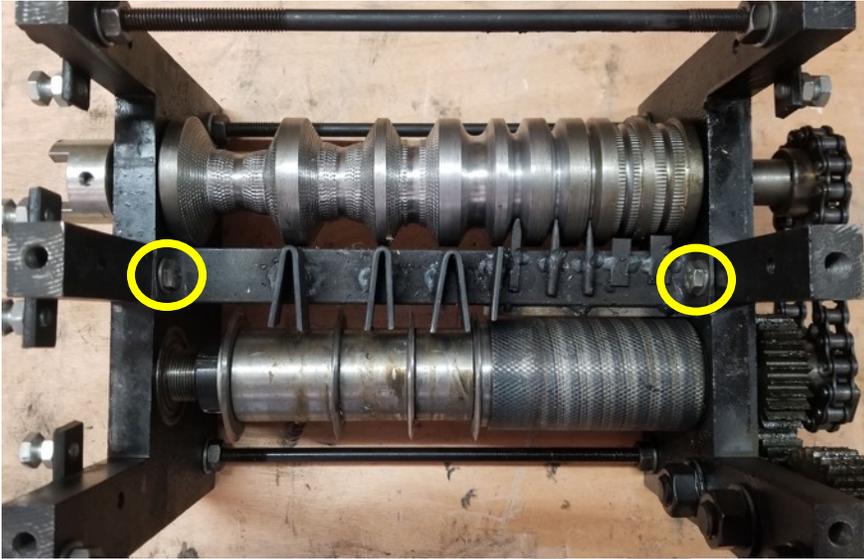
27. Use a 17mm wrench to loosen 6 bolts from the bottom side of the roller assembly as shown. **Note:** Do not fully remove the bolts yet.



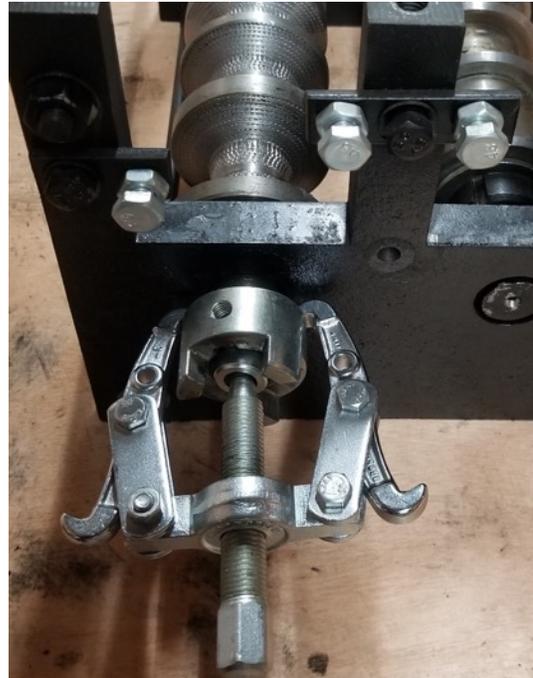
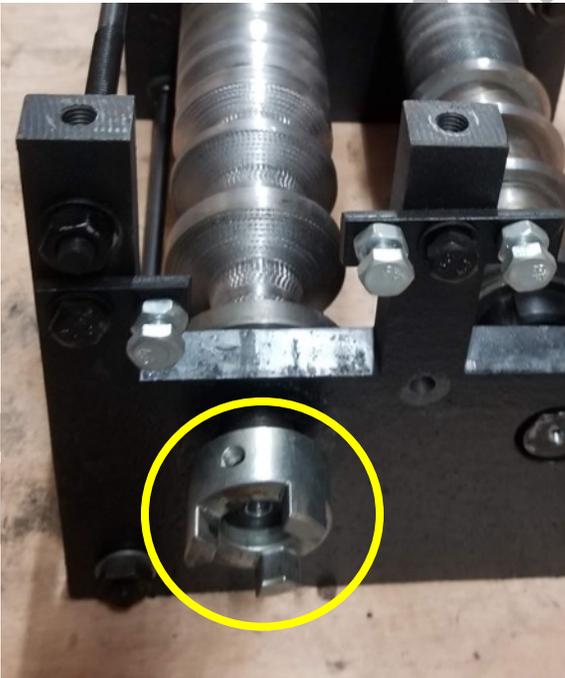
28. Tilt the machine back upright and carefully prop up with wood blocks so the bolts under the machine are accessible by hand.

29. Remove the loosened bolts from the underside of the roller assembly.

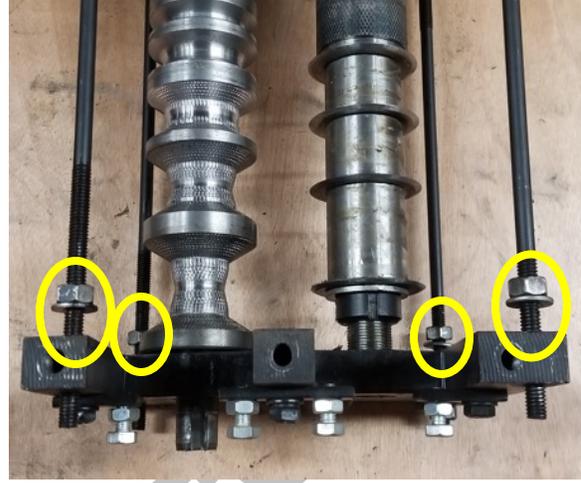
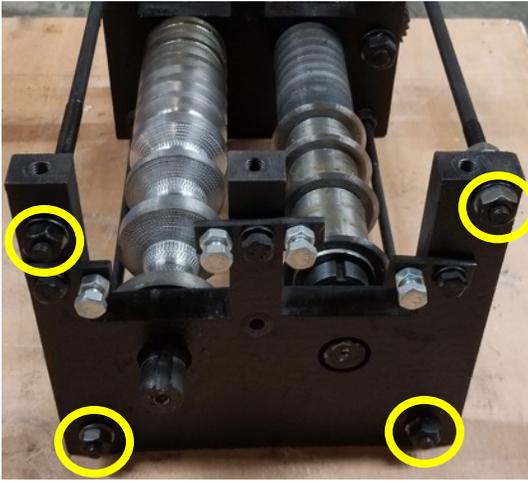
30. Separate the roller assembly from the rest of the machine. Set the motor and base aside until reassembly.
31. Use a 14mm wrench to remove 2 bolts from the middle guard as shown and remove it from the machine.



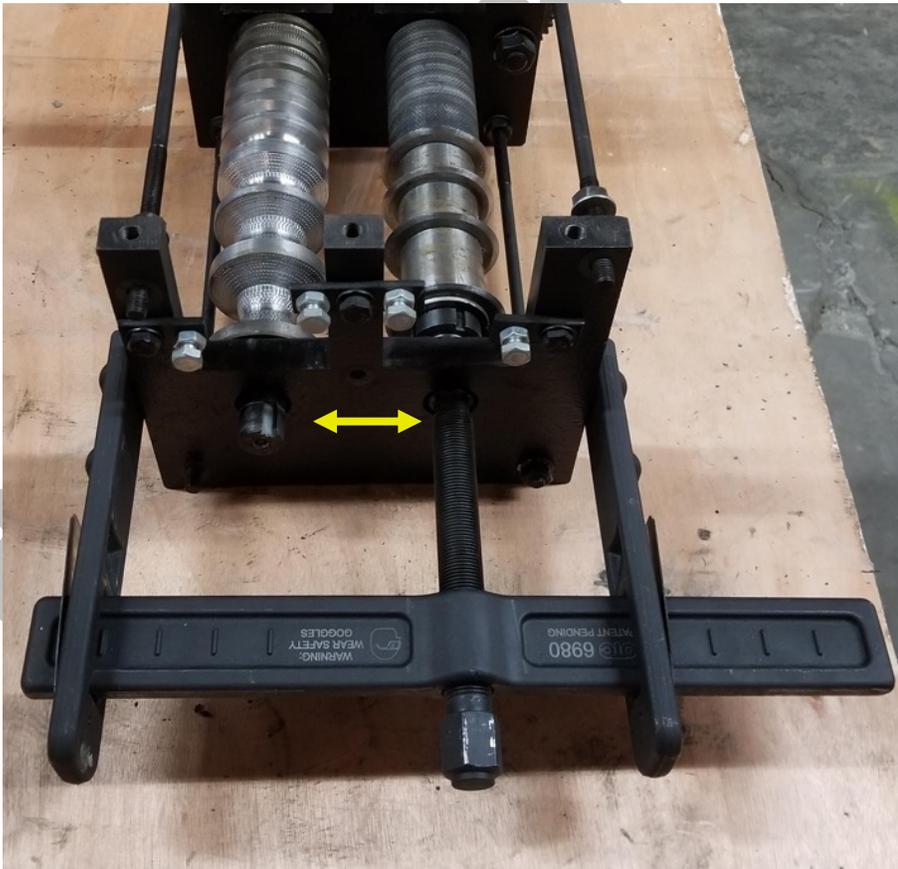
32. Use a bearing puller to remove motor coupling from the roller assembly.



33. Use a 14mm wrench to remove 4 nuts and washers from the side of the machine. Then loosen the 4 nuts on the inside of the plate as shown.



34. Use a large puller (pictured is an OTC Brand 6980 brake drum puller) to remove the side plate from the bottom roller assembly. **Important:** Alternate pulling from each shaft to prevent the plate from binding.



35. Pull the bearing from the shaft using a bearing puller as shown.



36. Use a marker to number the blade spacers for use during reassembly.



37. Place a flat punch against the spanner nut as shown with a wood block supporting the bottom of the roller. Very carefully tap the punch with a hammer until the spanner nut is loose. **Important:** This nut is reverse threaded, loosen by spinning clockwise.



38. Remove spanner nut, washer, blades, and blade spacers from the shaft.



39. Alternate placing new blades and blade spacers on the shaft in the order they came off.  
40. Replace the spanner nut and tighten with the same method used to remove it.  
41. Thoroughly clean all mating surfaces between the housing, bearings, and shafts.  
Lubricate all mating surfaces with a thin layer of grease.

## Reassembly

42. Align the bearing with the end of the blade shaft. Use a rubber mallet to seat the bearing on the shaft. **Note:** A spacer such as a large socket will be needed to seat the bearing all the way down.



43. Align the side plate of the roller assembly with the lower rollers. Use a rubber mallet to seat the bearings into the housing. Alternate tapping each side as shown to prevent the bearings from binding until the bearings are fully seated in the housing. **Note:** Be sure the nuts on the inside of the plate are loose enough to allow movement.



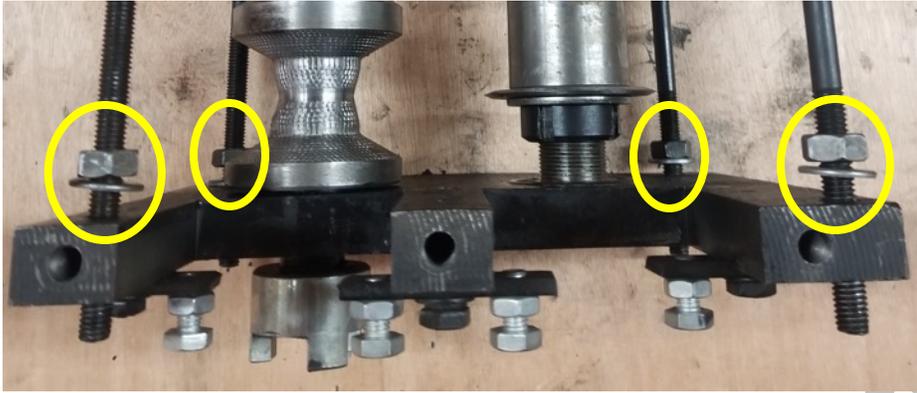
44. Thoroughly clean and lubricate the mating surfaces between the roller shaft and motor coupling. Insert the motor coupling key in the shaft and align the coupling with the shaft as shown.



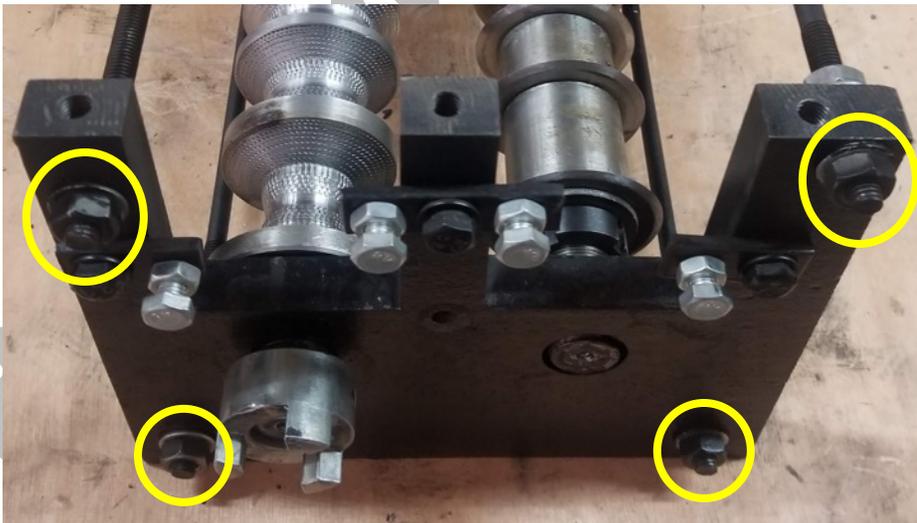
45. Place a block of wood across the top of the coupling so it does not get damaged. Squarely tap the block with a hammer until the coupling is fully seated on the shaft.



46. Finger tighten the nuts on the back of the side plate as shown.

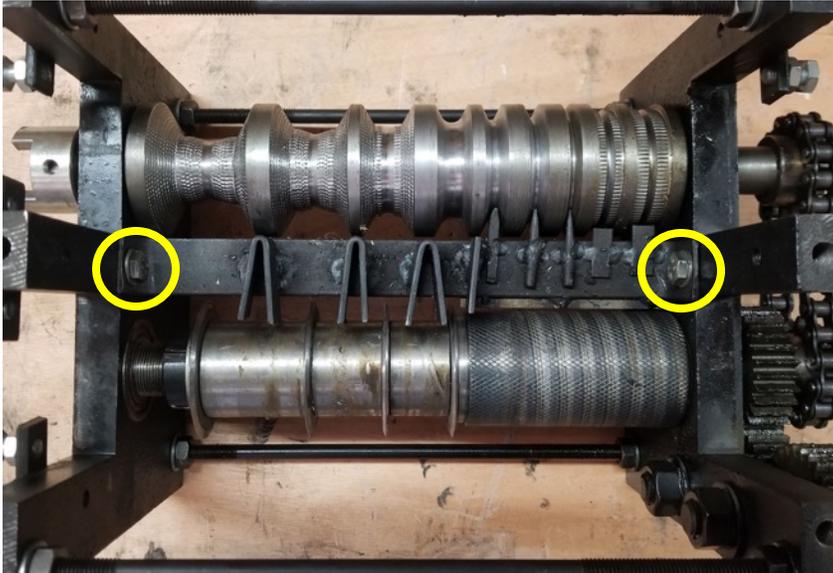


47. Place the washers and nuts on the outside of the plate and use a 14mm wrench to tighten.



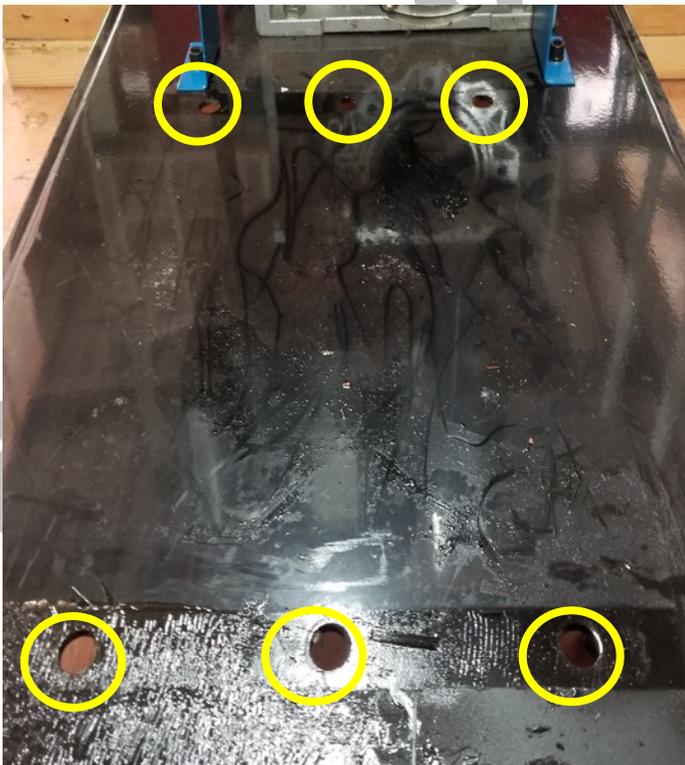
48. Install the middle guard and with 2 bolts as shown. Use a 14mm wrench to tighten.

**Note:** Turn the roller assembly to be sure the guard does not rub, adjust as needed.



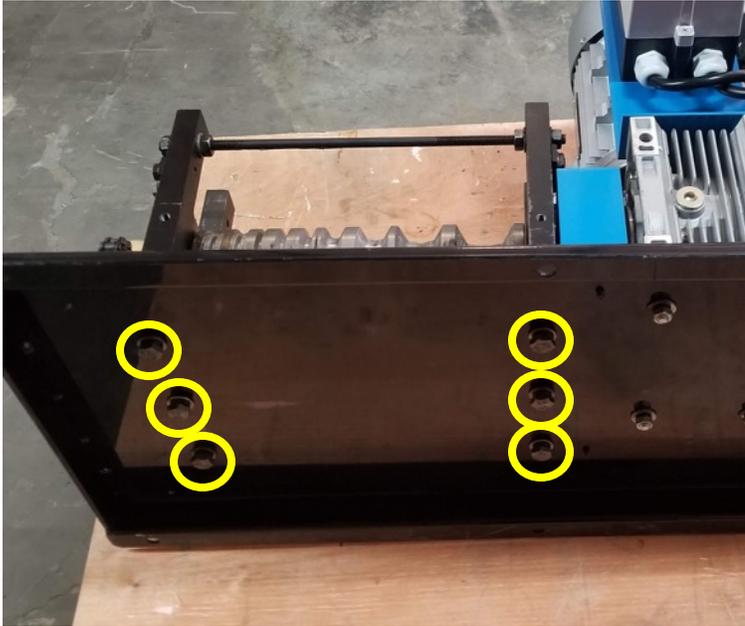
49. Carefully prop up the base of the machine with wood blocks so the underside is accessible. Align the holes under the roller assembly with the holes on the base as shown.

**Important:** Be sure the motor coupling is aligned and fitted together properly.

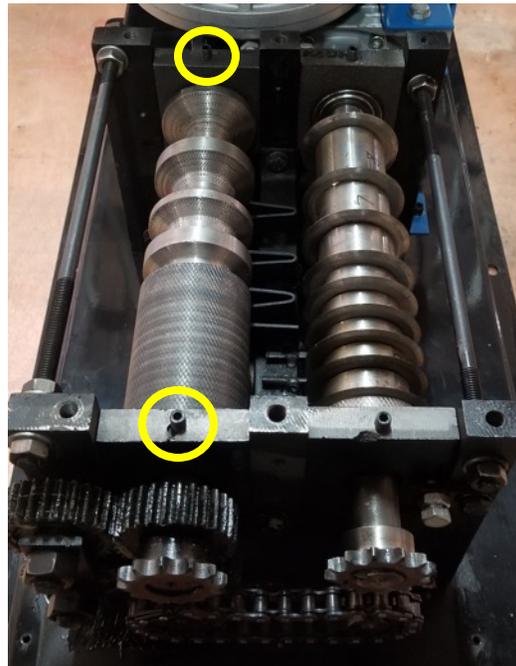
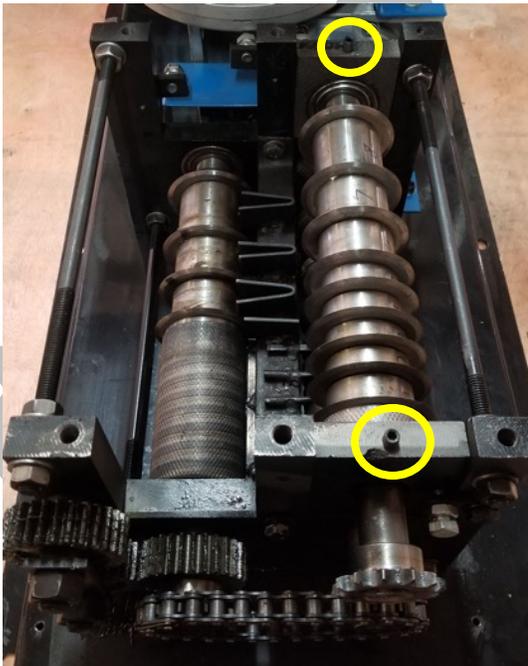


50. Screw each of the 6 bolts into the roller plates through the bottom of the base plate.

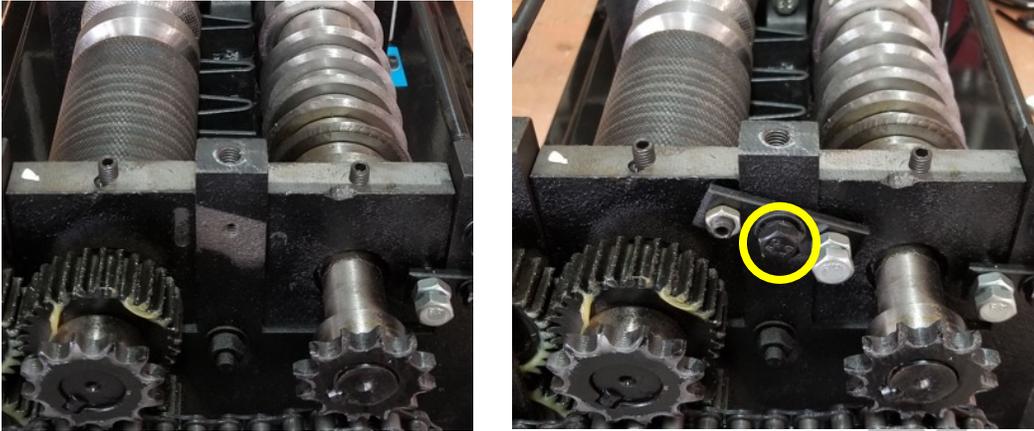
51. Tilt the machine on its side again and use a 17mm wrench to tighten all 6 bolts as shown.



52. Very carefully set the upper blade roller into the machine. Then carefully set the upper secondary roller into the machine. **Important:** Be sure the set screws are facing up as shown.



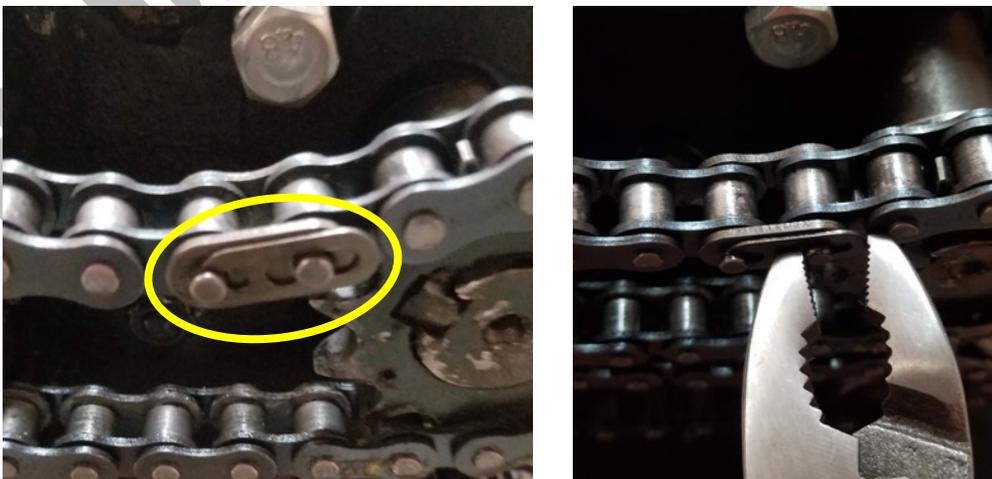
53. Use a 14mm wrench to install the upper roller alignment bracket as shown.



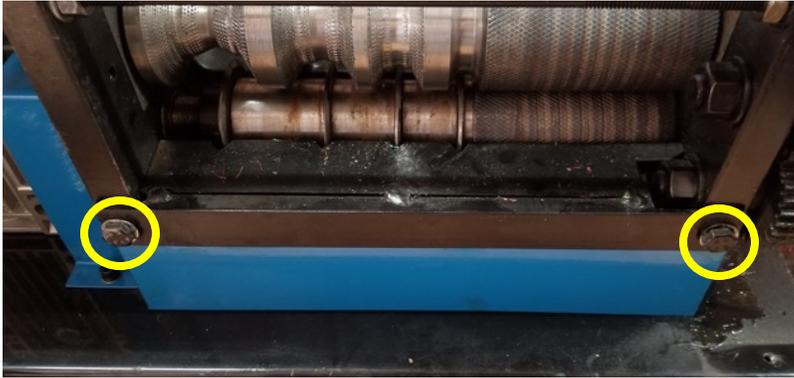
54. Lay the chain across the top sprockets and insert the master link as shown.



55. Install the master link side plate and clip. Use a pliers to fasten the master link clip as shown.



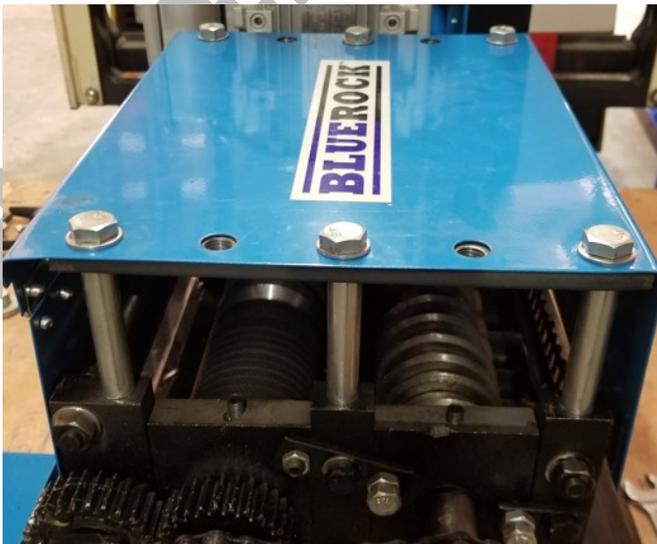
56. Install the rear guard pieces with 2 bolts as shown and tighten using a 14mm wrench.



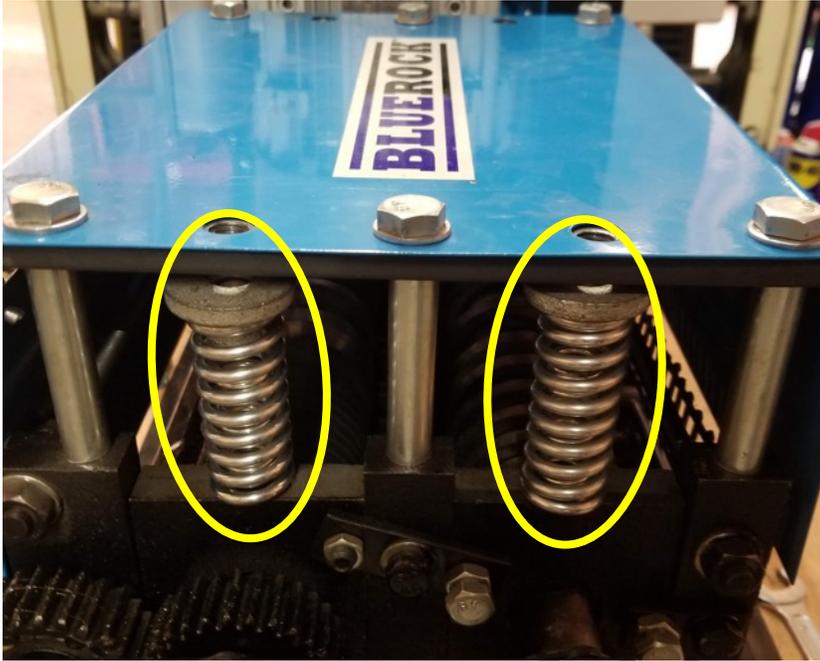
57. Install the front guard pieces with 2 bolts as shown and tighten using a 14mm wrench.



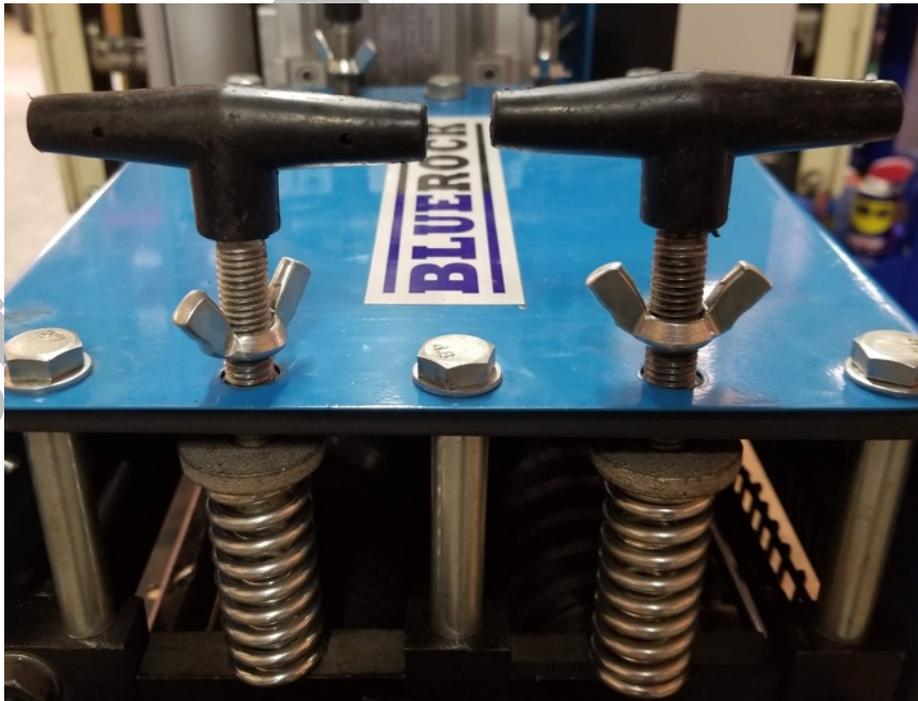
58. Set the top cover in place with 2 flat brackets 6 spacer tubes aligned under it. Insert 6 bolts through the holes in the top cover as shown and use a 17mm wrench to tighten.



59. Set the 4 sets of springs and spring caps in place over the set screws as shown with a small spring inside each large spring.

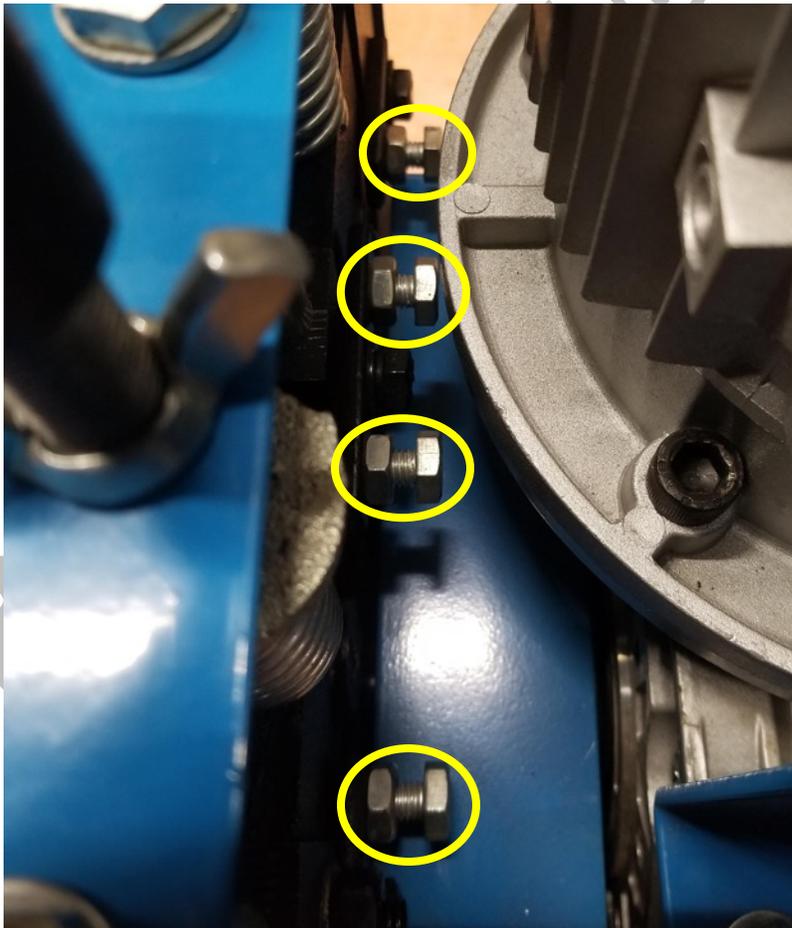
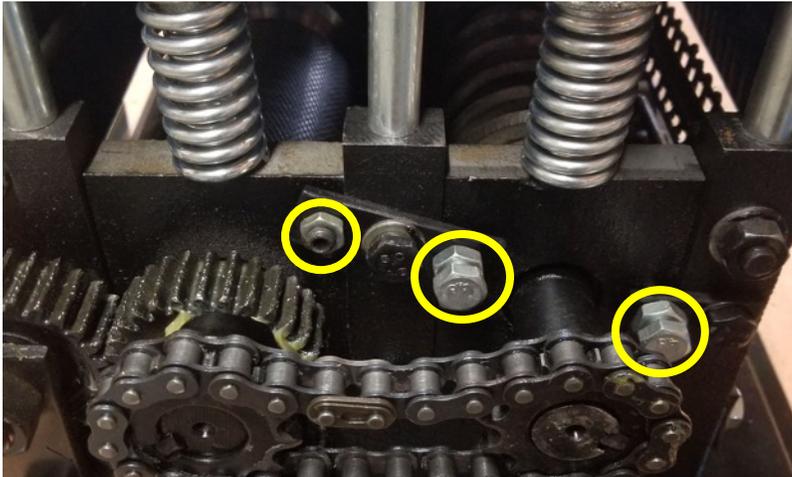


60. Screw 4 T-handle bolts into the flat brackets as shown until they touch the spring caps. Tighten each bolt an additional quarter inch to set default spring tension.



## Blade Alignment Adjustment

61. Use a 14mm wrench to loosen the locknuts and blade alignment bolts on each side of the machine as shown. **Note:** This is only necessary if the blades and cutting channels are misaligned. Move to step 65 if blades are already aligned.



62. Move the top rollers so the blades are centered in the cutting channels.
63. Tighten each of the alignment bolts only until they touch the roller housings.
64. Back each bolt out a half turn to allow room for movement and then tighten each locknut.
65. Fasten side cover as shown with 4 bolts and tighten using a 5mm hex wrench.



### ***PART 2: RIGHT SIDE OF MACHINE SINGLE BLADE SIDE***

**Estimated Completion Time: 30 Minutes**

#### **Tools Required:**

3mm Hex Wrench

5mm Hex Wrench

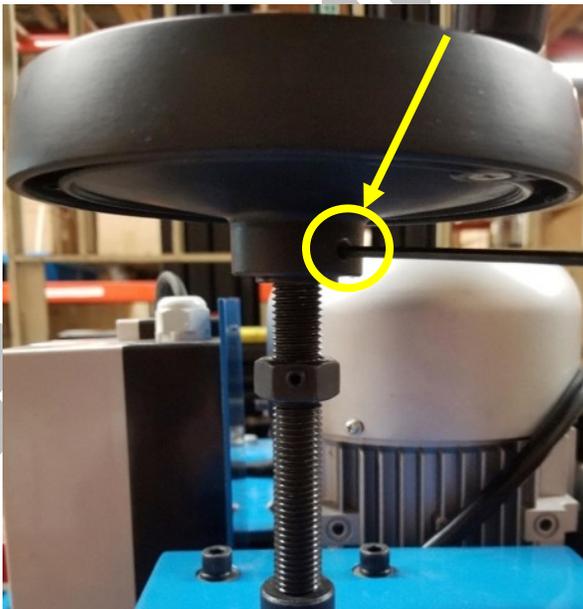
6mm Hex Wrench

Adjustable Wrench

1. Raise the blade as high as possible by turning the handwheel counterclockwise until it stops.



2. Use a 3mm hex wrench to loosen the set screw on the handwheel until it is free from the lead screw.

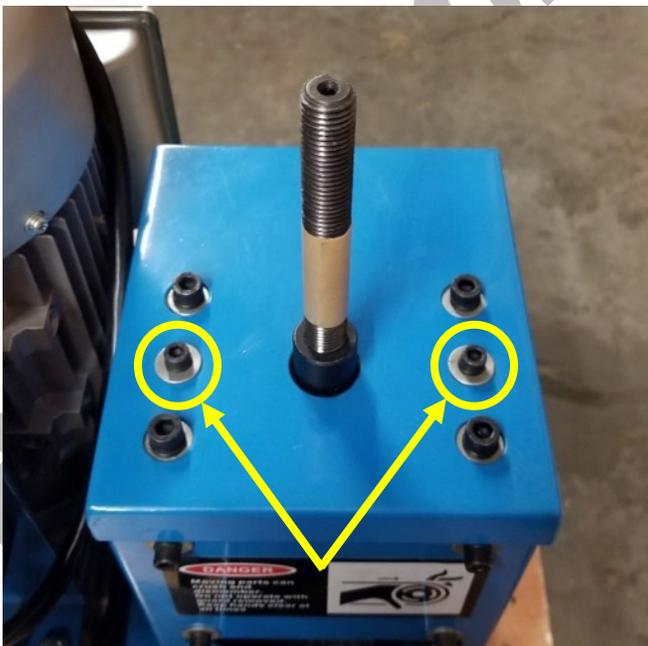


3. Remove the handwheel by spinning it counterclockwise.
4. Use a piece of tape to mark the location of the stop nut for use during reassembly.

5. Use a 3mm hex wrench to remove the set screw from the nut and then remove the nut from the lead screw using an adjustable wrench.



6. Use a 5mm hex wrench to remove 2 bolts from the top cover and lift the cover from the machine.



7. Use a 5mm hex wrench to remove 4 bolts from the front of the main cover and lift the cover straight up from the machine.



8. Use a paint marker to mark the orientation of the blade shaft for use during reassembly.



9. Use a 6mm hex wrench to remove the bolts on either side of the blade carriage. **Note:** Carefully hold the blade assembly so it does not fall.



**10. CAUTION: WEAR GLOVES WHEN DEALING WITH SHARP BLADES!** Carefully remove the blade assembly through the opening in the front of the machine. Be extremely careful as the blade may be sharp.



11. Use a 3mm hex wrench to loosen 4 set screws on one of the spanner nuts and carefully remove the spanner nut from the shaft. **Note:** To maintain blade alignment, only loosen one of the spanner nuts.



12. Remove the blade carriage from the shaft. Carefully separate the blade carriage and use a 5mm hex wrench to remove 3 bolts holding the blade. **Note:** Do not lose the spacer inside the blade carriage.



## Reassembly

13. Carefully place the new blade on the blade carriage and align the bolt holes.
14. Carefully install 3 bolts in the blade and use a 5mm hex wrench to tighten.
15. Carefully sandwich the two halves of the blade carriage together and slide the assembly onto the shaft.



16. Screw the spanner nut onto the shaft until it is flush with the blade carriage. Be sure the flange side of the nut is facing in as shown. **Note:** Do not overtighten the spanner nut or the blade bearings will bind.



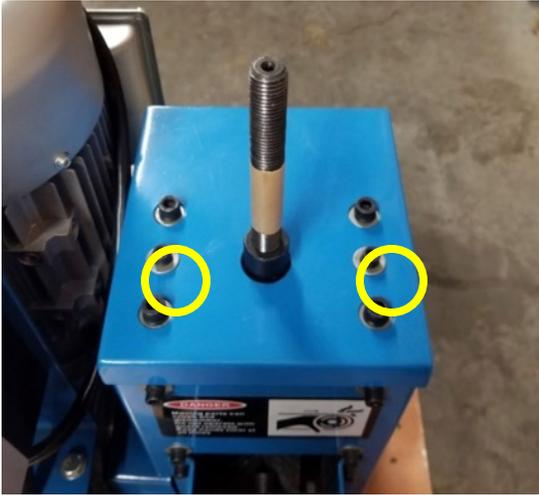
17. Use a 3mm hex wrench to tighten all 4 set screws on the spanner nut.
18. Carefully replace the blade assembly through the front of the machine. **Note:** Be sure that the blade assembly is oriented correctly using the marks made in step 8.
19. Carefully hold the blade assembly inside the carriage and screw the bolts into both sides of the shaft.



20. Use a 6mm hex wrench to tighten the 2 bolts on either side of the blade carriage
21. Slide the main cover over the machine and use a 5mm hex wrench to tighten 4 bolts on the front of the machine as shown.



22. Place the top cover over the machine and use a 5mm hex wrench to tighten 2 bolts as shown.



23. Thread the stop nut down onto the lead screw until it is flush with the tape marker used in step 4. Use a 3mm hex wrench to tighten the set screw.
24. Screw the handwheel onto the lead screw until the top of the lead screw is flush with the top of the handwheel.



25. Use a 3mm hex wrench to tighten the set screw on the handwheel. **Note:** be sure the set screw is aligned with the slot at the top of the lead screw.