

# REPLACING THE MBX ROLLS & REALIGNING THE CHIPPER

YOU'LL NEED THE FOLLOWING TOOLS TO REPLACE THE ROLLS IN THE MBX BUCKER:



- 2 new rolls
- User guide



- Some sort of prybar – plastic / wood
- Flat screwdriver



- 9/16 wrench
- 9/16 socket or ratchet



- Circlip pliers
- 5 hex wrenches: 1/4", 3/16", 5/32", 1/8", 3/32"
- Blue Loctite

## REMOVING THE ROLLS

STEP 01.



Start by removing the guards and the dieplate. The stem hole dieplate can be removed with the 5/32 allen wrench. Loosen the 4 screws retaining the dieplate and set aside.



STEP 04.



To release the cover, pull down on the shrouding at the bottom, then pull off and release. Repeat on the opposite side, then slide the cover off the MBX.



STEP 02.



Using the same 5/32 allen wrench, remove the cover over the chipper and set aside.



STEP 05.



To remove the side plate, use the 5/32 to unscrew the 3 screws on the right side of the rollers.



STEP 03.



Remove the centre screw with the 3/16 allen wrench, and the 2 button-head screws at the bottom of both side panels.



STEP 06.



Next, remove the motor with the gearbox using the 9/16 socket. Be careful not to lose any of the parts – there's an aluminum spacer, and a bolt with 2 washers.



# REMOVING THE ROLLS

## STEP 07.



There should be enough slack on the wire that you can set the assembly on the frame. Remove the key sitting in the keyway.

## STEP 11.



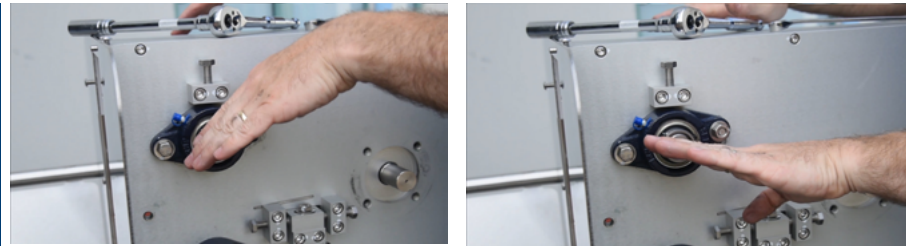
Release the tension off the rolls by loosening the top bolts on the upper 2-bolt flange bearings on both sides of the machine, then loosen the flange bolts on either side

## STEP 08.



Remove the 4-bolt flange bearing for the chipper using the 9/16 socket on each of the 4 bolts. Note that the grease fitting is at the top – this is where you'll want it when you put the flange back on.

## STEP 12.



Once loose, the tension is off the rollers and the flange will float up. They pivot down to tighten and pivot up when they're loose.

## STEP 09.



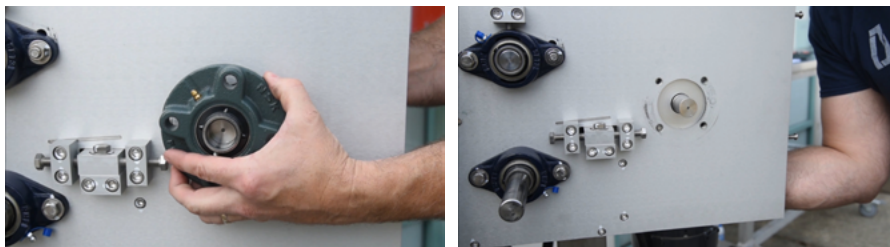
The flange should pull right off, but if it doesn't, rotate it about 45degrees so that the holes don't line up anymore, then take 2 of the 4 bolts you removed and insert on the opposite side of the plate kitty-corner to each other.

## STEP 13.



Next remove the lower flange bearing. There are 2 little plastic bushings inside the bearing – be careful not to lose those as you pull the flange off. Set the bearing off to the side.

## STEP 10.



This will help push the bearing block out. Remove those bolts before moving on.

## STEP 14.



Loosen off the two adjustment bolts so there is a gap between the bolt and the blade block.

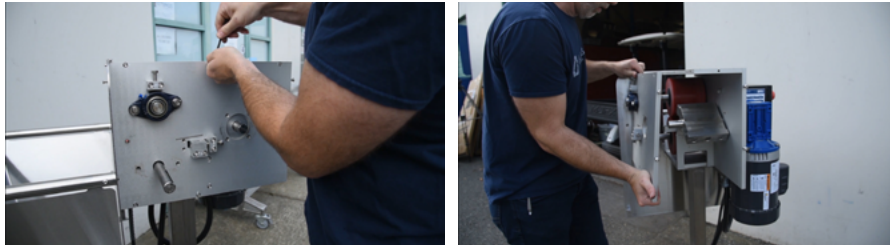
# REMOVING THE ROLLS

STEP 15.



The reason for removing this portion – the adjuster bolt body – is because there is a deflector plate in behind, which will be easier to slide back in with that portion out of the way.

STEP 16.



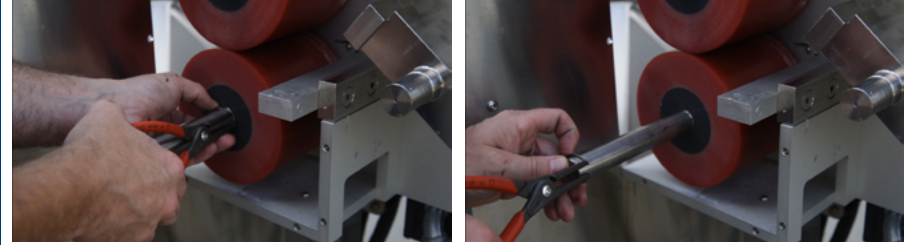
Remove the 7 bolts with the 3/16 allen wrench then remove the side plate.

STEP 17.



Inside you'll see the 2 rolls and the deflector plate which you can remove now, as well as two black spacer washers.

STEP 18.



Using the circlip pliers, remove the circlip around each roller. It's advisable to wear safety glasses during this portion as the circlips can spring off and cause injury.

STEP 19.



You can now remove both of the rolls. If the bottom roll is difficult to remove, use the prybar or wedge to work the roller off without damaging any of the aluminum plates, then pull it off the rest of the way.

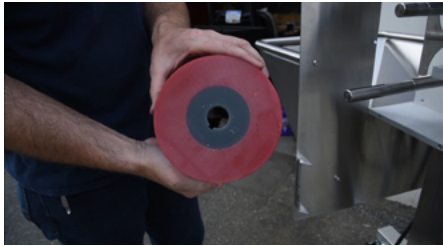
STEP 20.



Be careful not to lose the key. This is also a good time to give the machine a thorough cleaning.

# REINSTALLING THE ROLLS

STEP 21.



The bottom roller has a keyway. Line that up with the key and slide the roller on.



STEP 22.



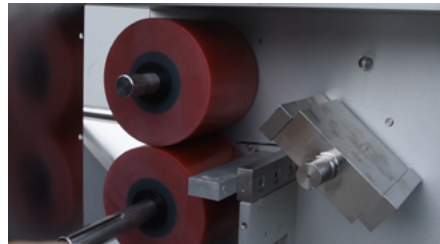
The top roller has no keyway.



STEP 23.



Once both are installed, with safety glasses on, put the circlips back on making sure they're seated in the groove all the way around, then slide the spacer washers back on.



STEP 24.



Replace the side plate making sure that all of the holes and two shafts line up properly. The top bearing will need to be moved up to line up with the shaft. Once aligned, the plate can be pushed on the rest of the way.



STEP 25.



Using blue loctite, replace all seven of the screws on the side plate. Get them all started, but don't tighten until all seven are in place. You can then go back over each and snug them all down, then go back a third time to tighten them.



STEP 26.



Next we'll reinstall the 4-bolt flange bearing. Make sure the grease fitting is at the top. You may need to grab the chipper from behind and lift it to get the flange bearing to fit into its recess, then line up the 4 holes, add loctite to the first few threads and replace the 4 bolts, tightening each once they've all been installed.



STEP 27.



Make sure that the plastic bushings are installed in the 2 bolt lower flange bearing. Add loctite to the two bolts, then slide the bearing onto the shaft.



STEP 28.



Tighten one of the bolts by hand, then pivot the other side up slightly to get that bolt started, then slide the bearing tight against the plate. Continue to thread the bolts by hand, then tighten with the socket.



# REINSTALLING THE ROLLS

## STEP 29.



Then tighten the bolts on either side – as tight as you can with your fingers. Once all of the bolts are secured, we'll come back to finish the chipper blade assembly.

## STEP 30.



Next we'll reinstall the 4-bolt flange bearing. Make sure the grease fitting is at the top. You may need to grab the chipper from behind and lift it to get the flange bearing to fit into its recess, then line up the 4 holes, add loctite to the first few threads and replace the 4 bolts, tightening each once they've all been installed.



## STEP 31.



Make sure that the plastic bushings are installed in the 2 bolt lower flange bearing. Add loctite to the two bolts, then slide the bearing onto the shaft.



## STEP 32.



Tighten one of the bolts by hand, then pivot the other side up slightly to get that bolt started, then slide the bearing tight against the plate. Continue to thread the bolts by hand, then tighten with the socket.

## STEP 33.



With all the flange bearings installed, you want to remove each of the 6 set screws (2 in each bearing), add a bit of blue loctite, then reinstall them using the 1/8 hex wrench. The 4-bolt flange bearing uses the 3/32 hex wrench.



## STEP 34.



Turn the shaft of the lower flange so that it aligns with the key way on the motor gearbox. With the gearbox on about 1/2 an inch of the shaft, take the key and hold it in the key way



## STEP 35.



Look down the hole of the gearbox to make sure everything is lined up, then slide the whole assembly on, but leave room to install the rest of the hardware. With a bit of loctite on the bolt, pass it through the bracket and the spacer, then roll the motor until the bolt lines up with the hole in the side plate and start tightening the bolt by hand to ensure it doesn't get cross-threaded, then tighten the rest of the way with the socket.



## STEP 36.

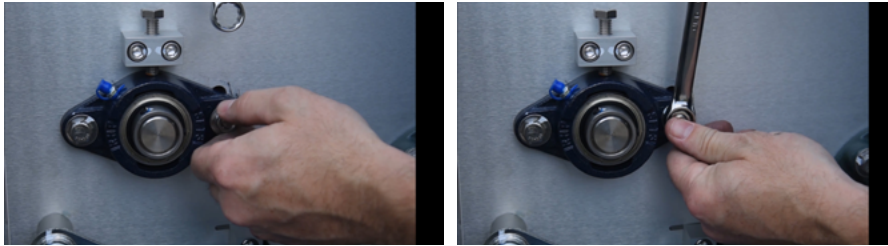


Start tightening the adjuster bolts on the top of each of the upper roll bearing blocks with the 9/16 socket. As you tighten the bolts, it will start to expose a slot where the bolt goes through. You want to tighten the bolt until you can fit a 1/8 hex key in the opening. That's when you know the rolls are adjusted correctly. Repeat the same process on the opposite side.



# REINSTALLING THE ROLLS

STEP 37.



Tighten the bolts on each side of the bearing on both sides of the machine, then snug down the top bolt which will prevent the bearing block from vibrating and coming loose.

STEP 38.



Replace the plate on the side of the rollers with the short screw. The 2 longer screws hold the dieplate in place – they can just be threaded loosely for now, but the middle screw can be tightened up.

# REALIGNING THE CHIPPER

## STEP 39.

### PART 1: VISUAL ADJUSTMENT

- MACHINE UNPLUGGED
- SLIGHT CONTACT BETWEEN THE BLADES
- CHIPPER IS PARALLEL

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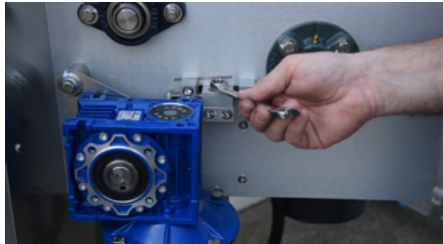
- MACHINE UNPLUGGED
- SLIGHT CONTACT BETWEEN THE BLADES
- CHIPPER IS PARALLEL

### PART 2: AUDIBLE ADJUSTMENT

- ONCE MACHINE IS PUT BACK TOGETHER

The bottom roller has a keyway. Line that up with the key and slide the roller on.

## STEP 40.



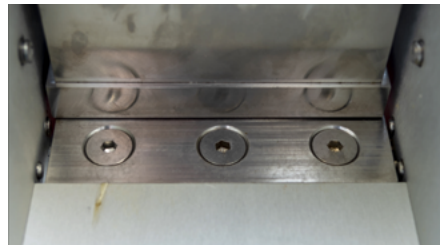
The top roller has no keyway.

## STEP 41.



Once both are installed, with safety glasses on, put the circlips back on making sure they're seated in the groove all the way around, then slide the spacer washers back on.

## STEP 42.



Replace the side plate making sure that all of the holes and two shafts line up properly. The top bearing will need to be moved up to line up with the shaft. Once aligned, the plate can be pushed on the rest of the way.

## STEP 43.

### PART 1: VISUAL ADJUSTMENT COMPLETE

- SLIGHT CONTACT
- BLADE AND CHIPPER ARE PARALLEL
- CHIPPER ROTATES 360 DEGREES



Using blue loctite, replace all seven of the screws on the side plate. Get them all started, but don't tighten until all seven are in place. You can then go back over each and snug them all down, then go back a third time to tighten them.

## STEP 44.



Next we'll reinstall the 4-bolt flange bearing. Make sure the grease fitting is at the top. You may need to grab the chipper from behind and lift it to get the flange bearing to fit into its recess, then line up the 4 holes, add loctite to the first few threads and replace the 4 bolts, tightening each once they've all been installed.

## STEP 45.

### TO MOVE BLADE CLOSER TO CHIPPER

- TIGHTEN THE BOLT CLOSEST TO THE ROLLER SIDE
- LOOSEN THE BOLT CLOSEST TO THE CHIPPER SIDE



Make sure that the plastic bushings are installed in the 2 bolt lower flange bearing. Add loctite to the two bolts, then slide the bearing onto the shaft.

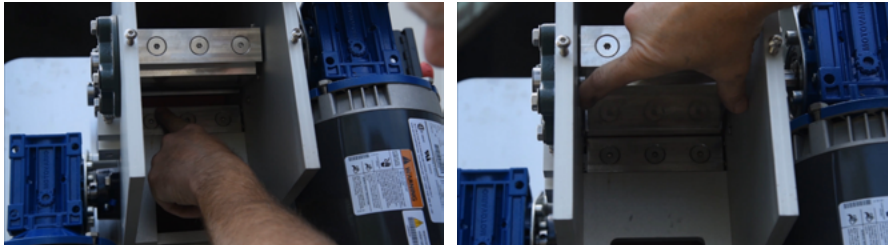
## STEP 46.



Tighten one of the bolts by hand, then pivot the other side up slightly to get that bolt started, then slide the bearing tight against the plate. Continue to thread the bolts by hand, then tighten with the socket.

# REALIGNING THE CHIPPER

STEP 47.



Turn the machine off, remove the guard and rotate the chipper to make sure you still have slight contact with the stationary blade, and it's parallel contact across the full width of the blade, and that after rotating 180 degrees, you have the same contact and parallel spacing.

STEP 48.



Put the shrouding back on. Make sure that the hooks on the bottom of each side go into the holes.

STEP 49.



Install the 2 button head screws on the bottom of each side, but don't tighten yet, then thread the centre screw at the top of the chipper side.

STEP 50.



Tighten the two button heads at the top of the shroud, the two previously threaded button heads at the bottom of each side, and the 4 screws in the corners of the dieplate.

STEP 51.



Replace the cover over the chipper and tighten each of the screws.

STEP 52.



Turn the machine on and allow the rollers to rotate in the forward direction while looking through the holes in the dieplate. Then switch directions