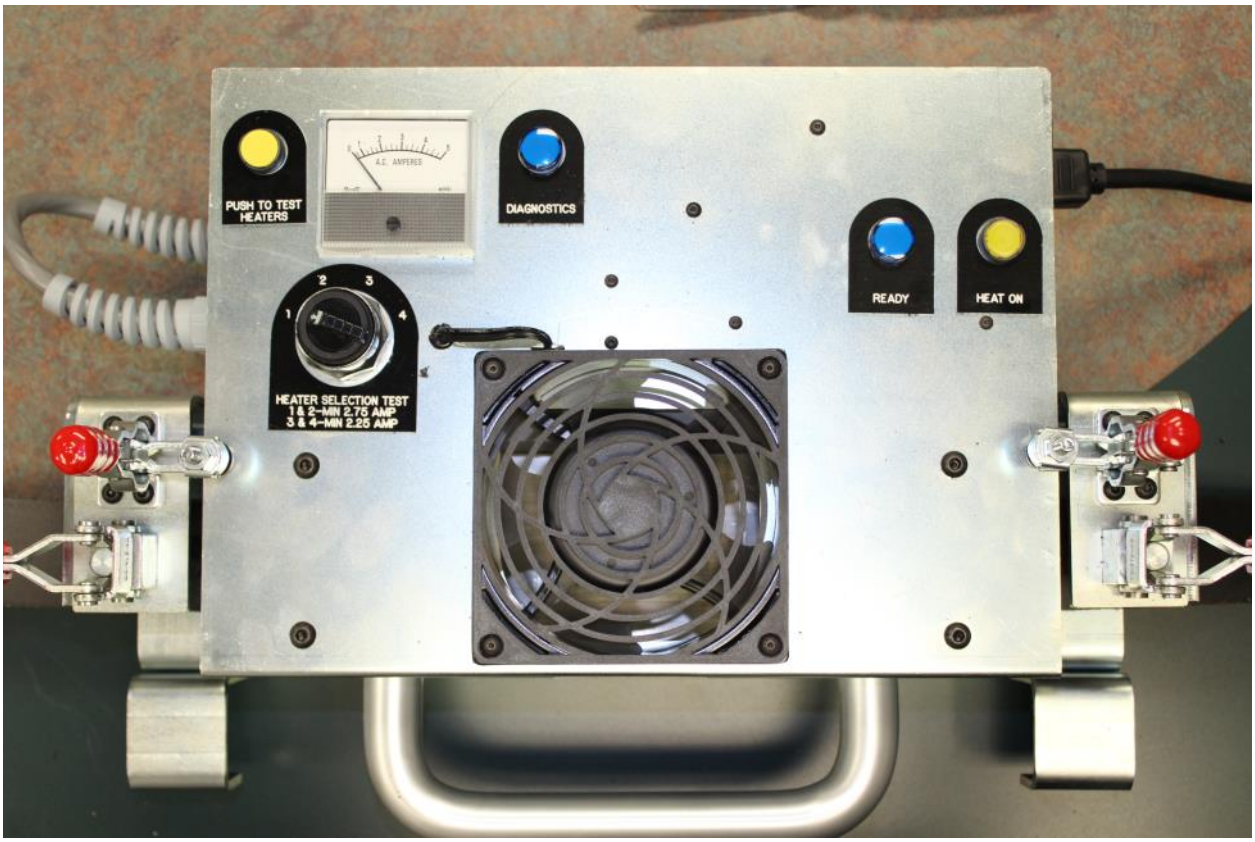
# QUIKmeld®

## Belt Splice Instructions

## For Narrow Belt Conveyors

MHS | CONVEYOR



# Index

# INTRODUCTION

## 1.1: PURPOSE

This manual contains the instructions for properly using the MHS Conveyor (formerly know as TGW Systems) QUIKmeld belt splicer for the NBC™ Flat Belt conveyor and NBA® conveyor. MHS Conveyor recommends watching the enclosed DVD and reading the QUIKmeld Instructions before repairs.

## 1.2: SCOPE

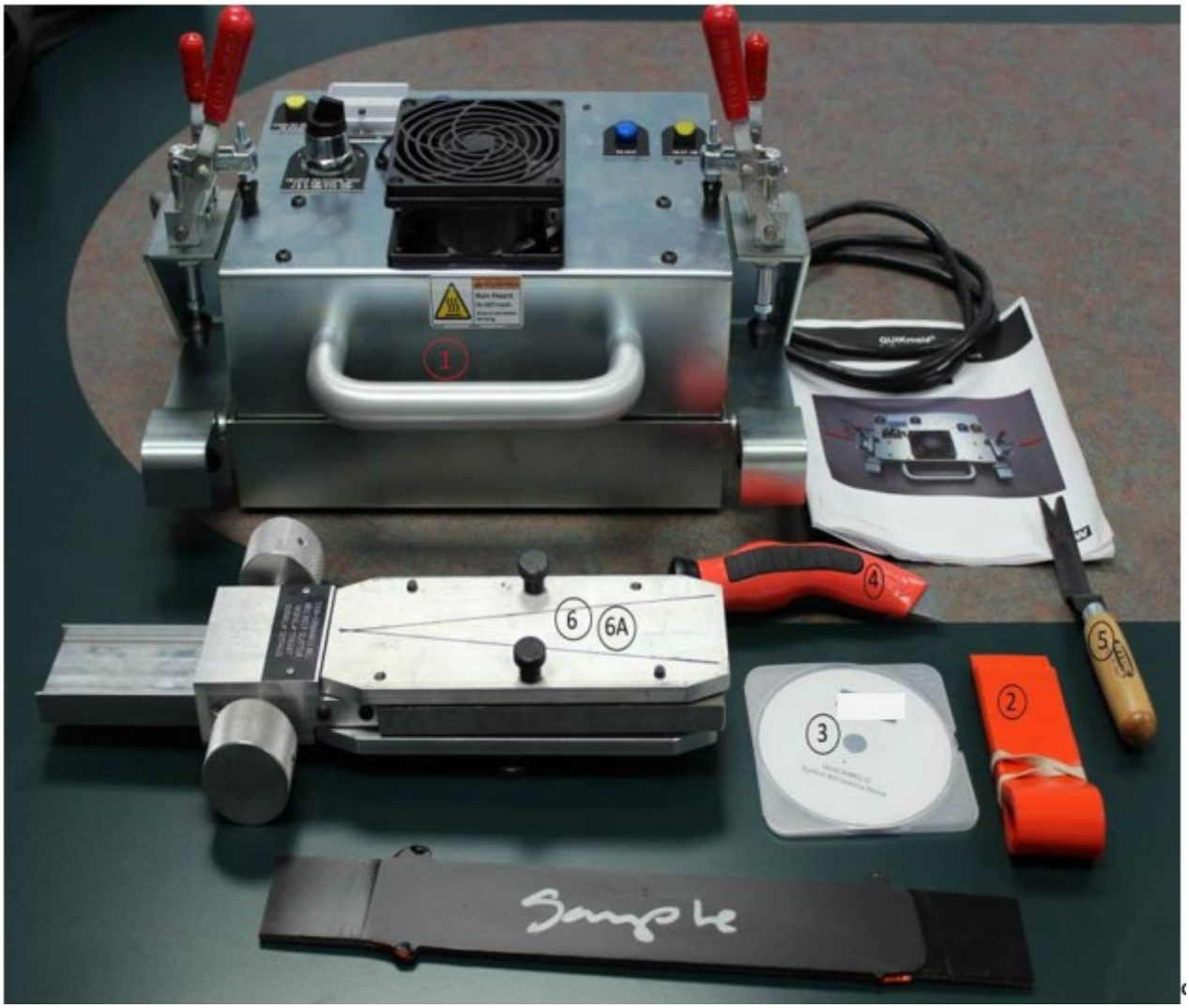
The purpose is to obtain strong, consistent belt joints in a safe and efficient manner. To accomplish this, these instructions must be followed closely.

**For more MHS Conveyor information:**

Visit mhs-conveyor.com maintenance videos and MHS Conveyor IOM manuals.

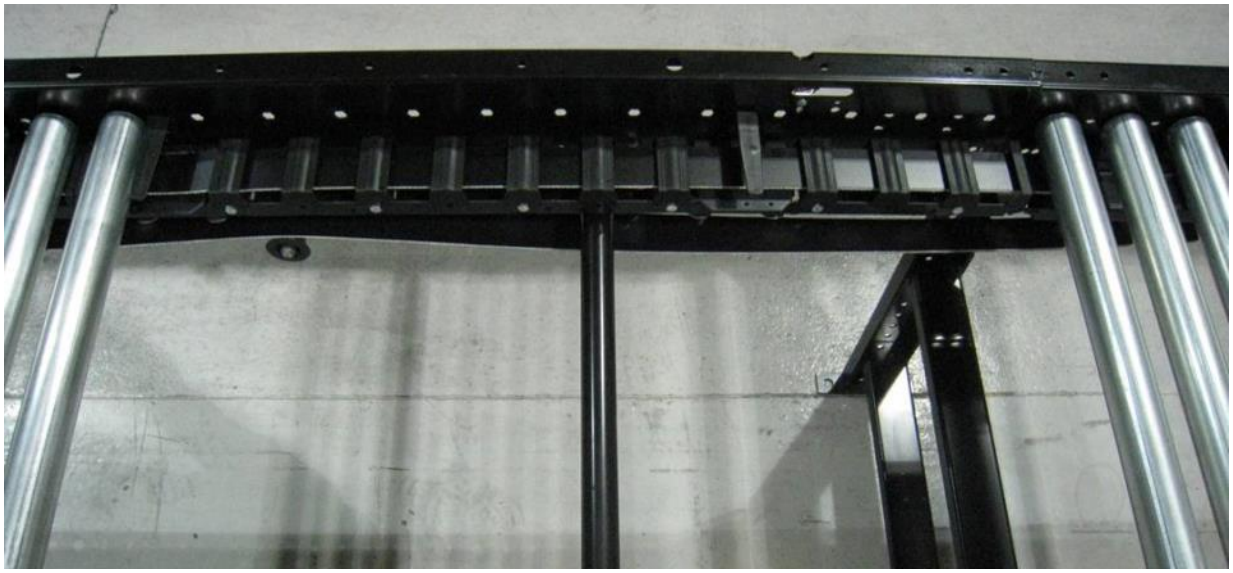
# QUIKMELD KIT COMPONENTS

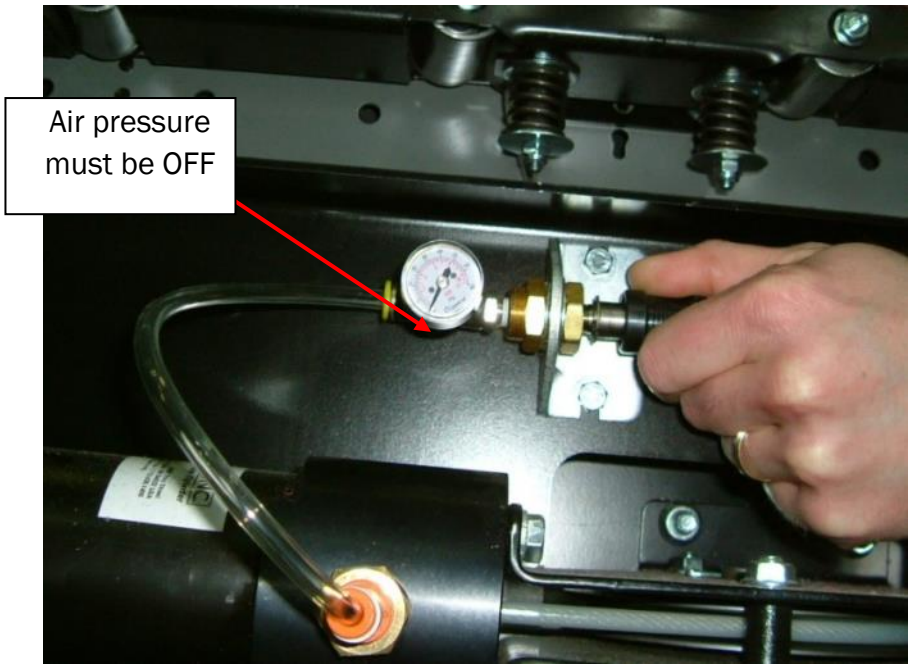
## 1.3: QUIKMELD KIT COMPONENTS:




| Quickmeld Kit & Components | | | | | |
|---|---|---|---|---|---|
| **Position** | **Item No.** | **Description** | **Position** | **Item No.** | **Description** |
| 1 | 1113487 | ASY QUIKMELD BELT PRESS | 5 | E0005289 | KNIFE,UTILITY HYDE #42083 |
| 2 | 1115978 | BELT,FILL NBA/NBC 2"X11.75" | 6* | 1118097 | BELT,SLITTER NBC 8" FINGER |
| 3 | 1120197 | CD,QUIKMELD 12" | 6A* | 1118096 | BELT,SLITTER NBA23 8" FINGER |
| 4 | E0002593 | KNIFE,OFFSET V-TRIM H222 | (*) | 1120199 | NBA 23 KIT |
| | | | (*) | 1120200 | NBC KIT |

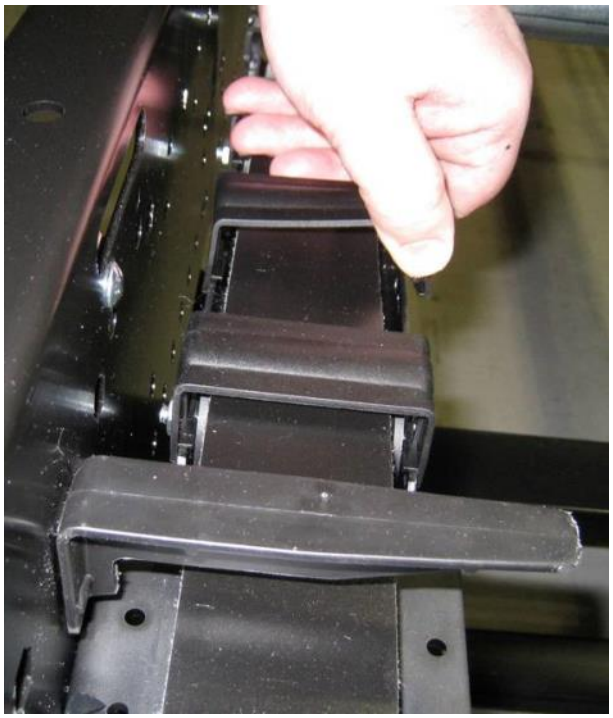
# NBC™ CONVEYOR PREPARATION






Before installing the belt, make sure the air is **OFF** to the belt take-up, by retracting the take-up pulley to the retracted position this will allow you to work with the maximum belt slack.

NBC Remove the Finger Guards.



There are three (3) different finger guards. Those between the pressure lift assemblies simply snap-in or out and those over the pressure assemblies are removed by rotating a quarter turn clockwise and pulling them out.

If the belt splicing work area includes in crossmember, a different shape finger guard is used, which also snaps into place.

# NBA® CONVEYOR PREPARATION

## 1.4: ADJUST BELT TAKE-UP

Adjust belt take-up on the drive to the retracted position, which minimizes the belt length. Back off the jam nuts completely.

# NBA REMOVE THE CARRIER ROLLERS

Remove the carrier rollers, between two pressure pan supports, in a 3' zone. Any zone can be selected, but it is easier to select one near the charge or discharge end of the conveyor. Note; Pull the axles with pliers to protect the frame.


© 2009/ Revision: 03/07/2019

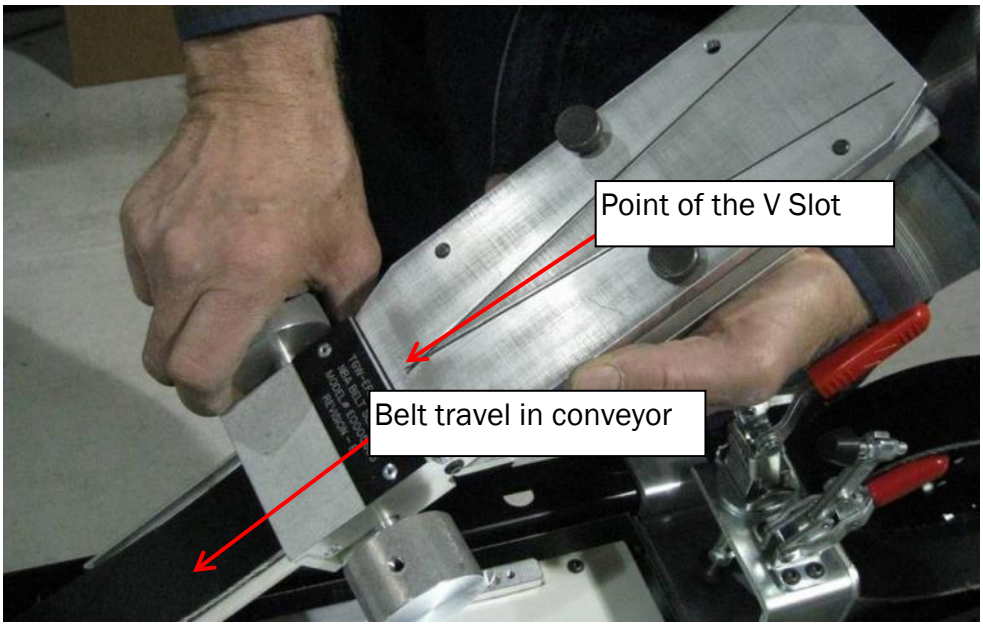
# NBA REMOVE THE FINGER GUARDS

The splice will be made on the upper belt. Remove the finger guards in the zone. These are removed by rotating a quarter turn clockwise and pulling out.

# NBC™/NBA® BELT WELDER

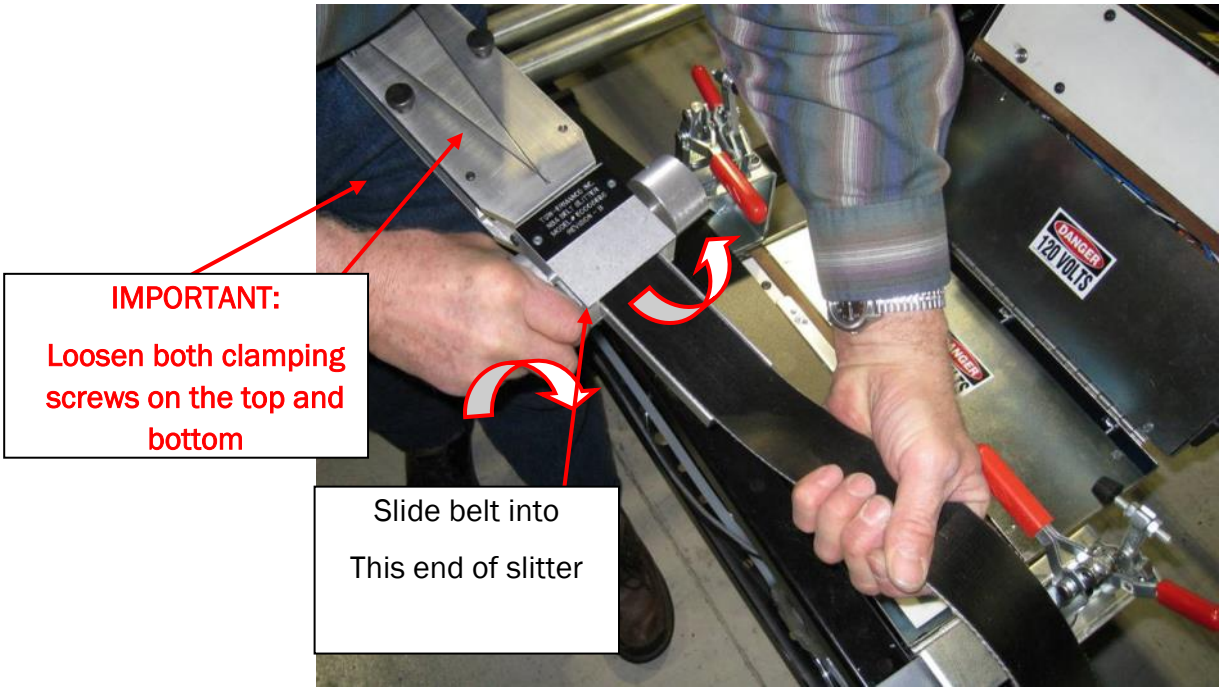
# CUTTING AND SLITTING THE BELT

Belt Slitting Process

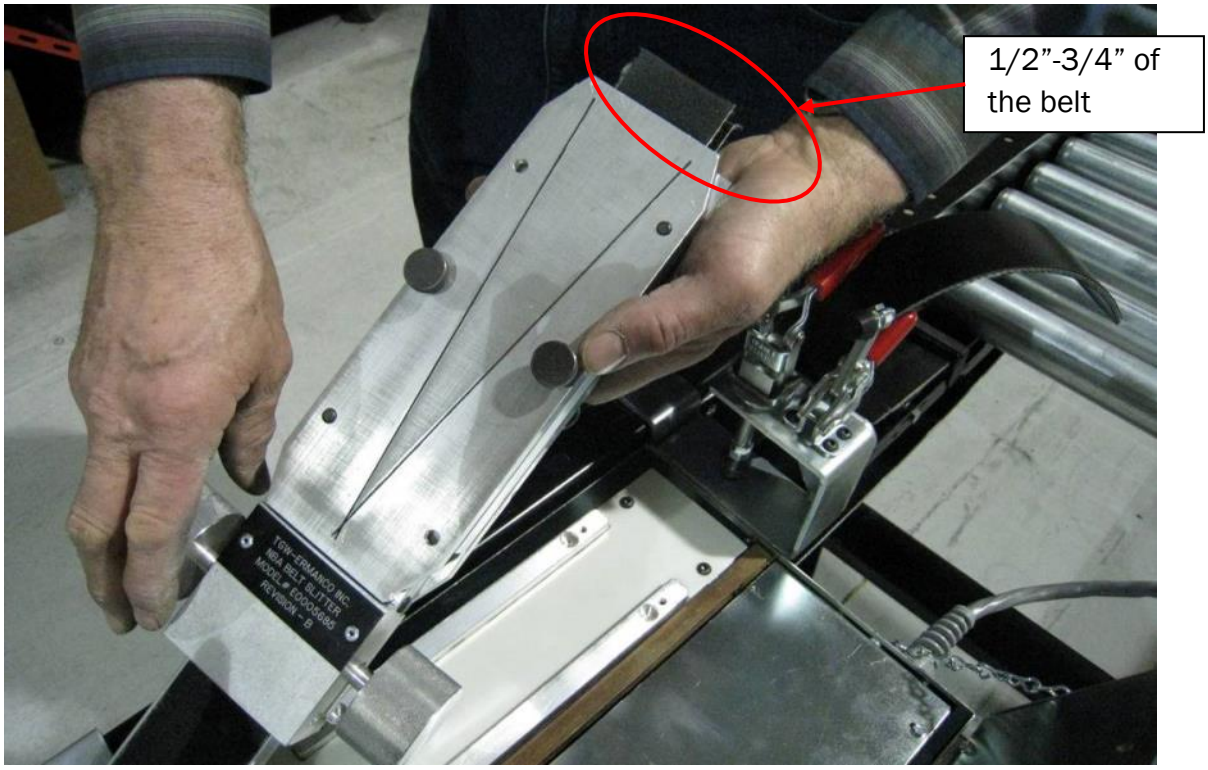



1) Start by determining the direction of the belt travel and place the slitter “V Slot” so it points in the direction of the belt travel. (The belt travel is the opposite travel of product flow.)

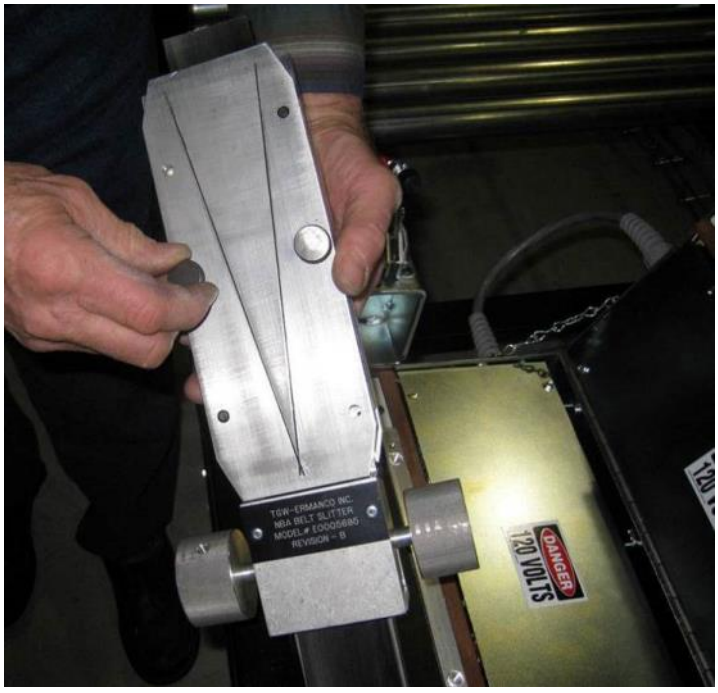
Note that the slitter label is up for the first belt end. To start the other end, the label will be down.



With the clamping screws loose, start one end of the belt into the slitter tool (with the V-slot pointing in the direction of BELT travel). A little pressure will be required to get the belt started while turning the knobs in opposite directions. You may need to alternate between the knobs until it grabs the belt and starts to feed through the slitter.



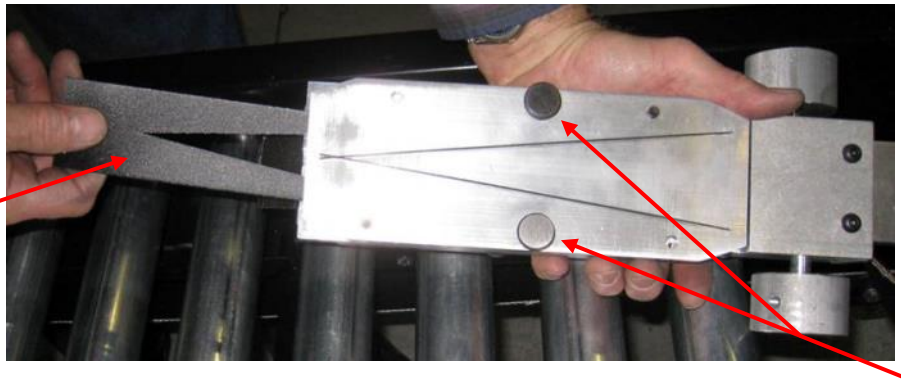

Turn the knobs in opposite directions to pull the belt through the slitter tool until approximately 1/2"-3/4" of the belt shows out the end.



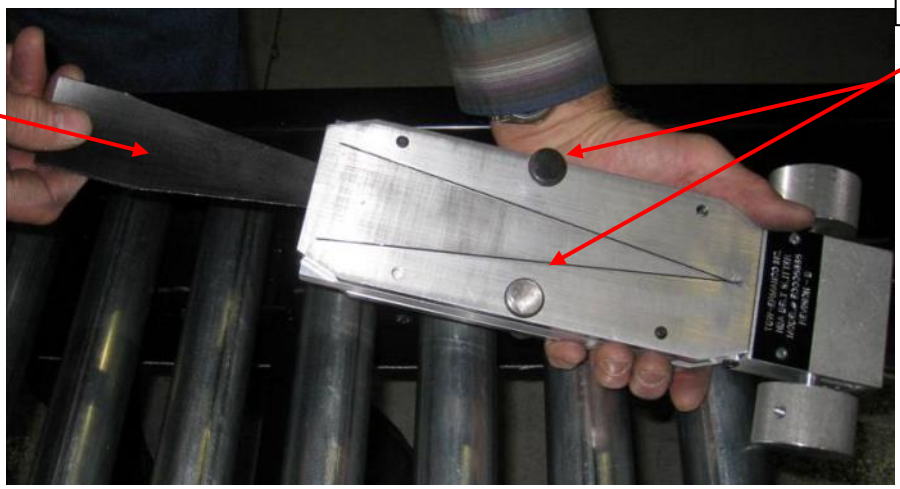

Tighten the clamping screws on both sides. Check the edges on the slitter to confirm the slotted plates are in contact with the center body. This shows the belt is centered in its channel.

Use a razor knife to cut the belt. We recommend you to start with a new razor blade. Use multiple passes to cut through the belt make sure to cut the full length of the slots. You will feel the difference between the blade contacting the belt and the bottom of the aluminum channel.

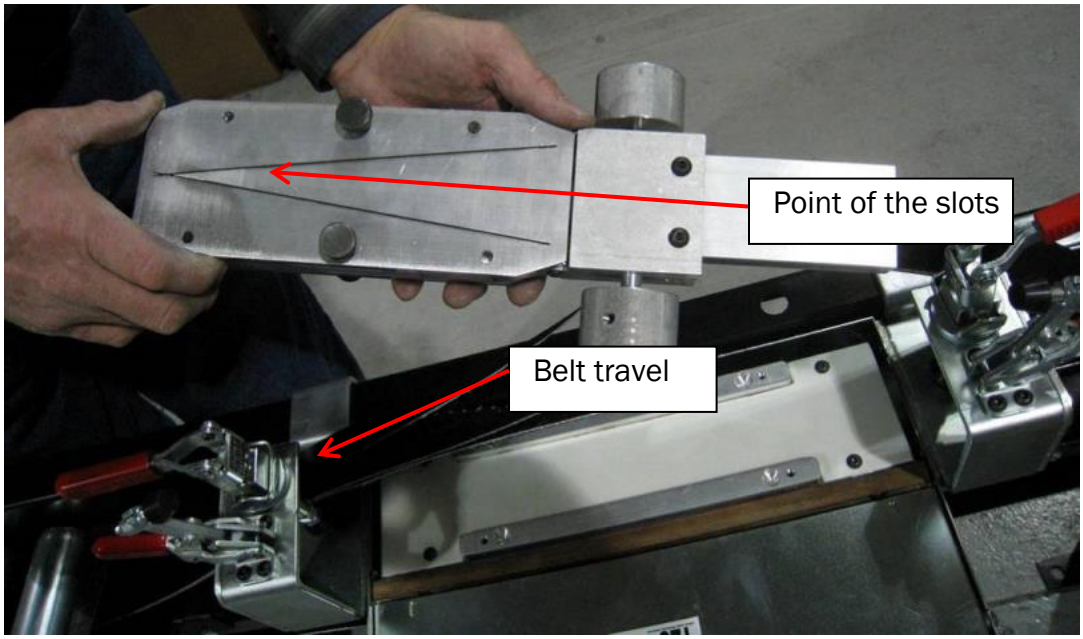
Turn the slitter tool over and repeat the above direction to cut the bottom of the belt.




Loosen clamp screws and pull the cut pieces (tail and point) out.

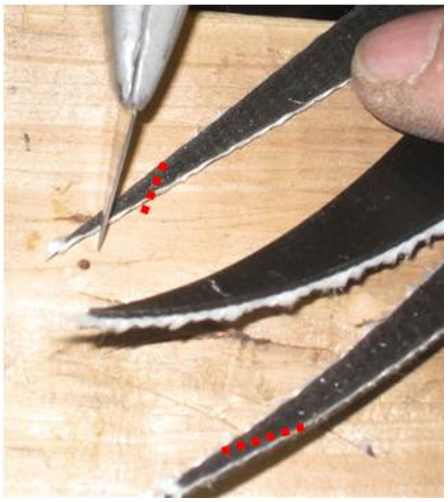



To remove the belt from the slitter, turn the slitter knobs in the opposite direction. One end of the overlapped finger splice is now complete.

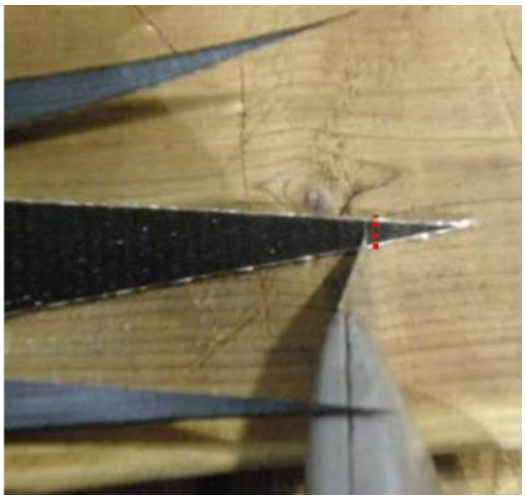



Start with the slitter label down and make sure the “V Slot” point is in the same direction as the BELT travel (opposite PRODUCT travel). THIS IS VERY IMPORTANT SO THE FINGERS WILL MESH PROPERLY. Follow the same steps as previous for cutting the belt.

## 1.5: TRIM THE TAIL POINTS.

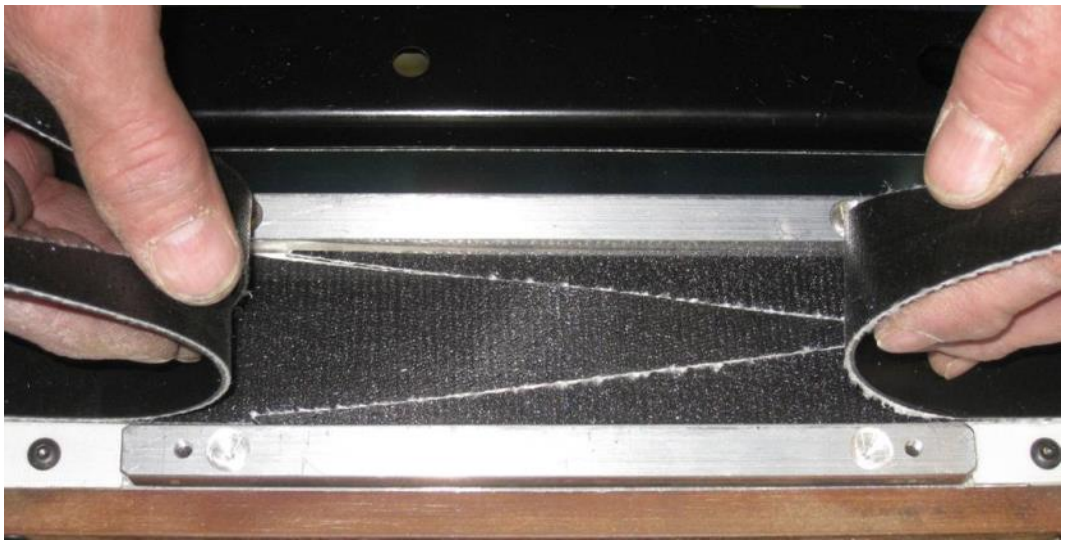


Both the center point and outer tail points must be trimmed slightly. This will allow the ends to come tightly together in the center of the splice and remove the weak narrow points on the outer tails. The tail cuts must angle outward to eliminate catch points removing approximately 1/2” or less.

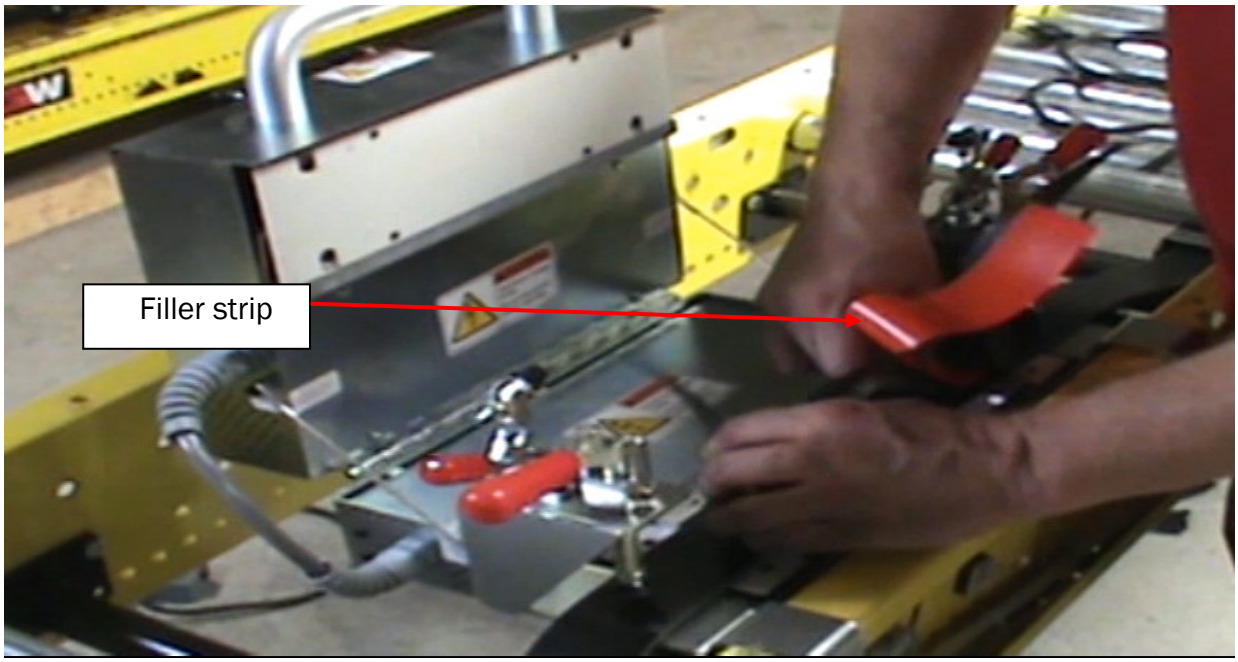


The center point only needs 1/8” to 1/4” cut off square.

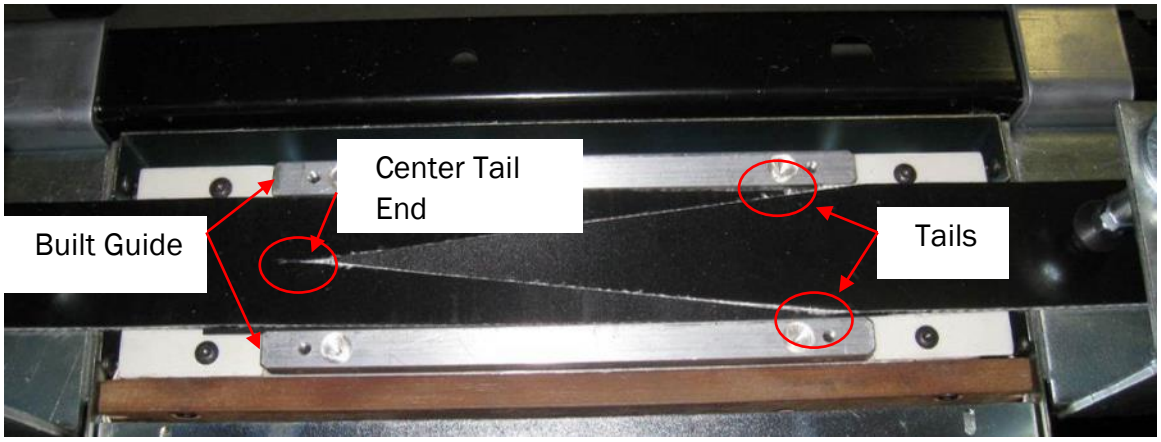
# PLACING BELT IN WELDER



Place both ends of the trimmed belt centered in the belt welder. The splice is centered when the end of the slit is 1/2 inch from the end of the white pad. All joints should line up with no gaps. Tighten down the belt clamps.




After checking the fit of both joints, pull the top halves back exposing the bottom joint. A strip of filler must be added between the layers. This added material will completely fill the joint during the welding process. The total length of the slit from one end to the other and the filler strip will be approximately 12", and must be centered in the welder. The filler may be black or orange (Shown).




Before closing the welder, confirm that the belt, especially the outer points (tails), are seated within the belt guides. Make sure the tails ends or the point ends are not sticking up above the guides as this this will ruin the weld.

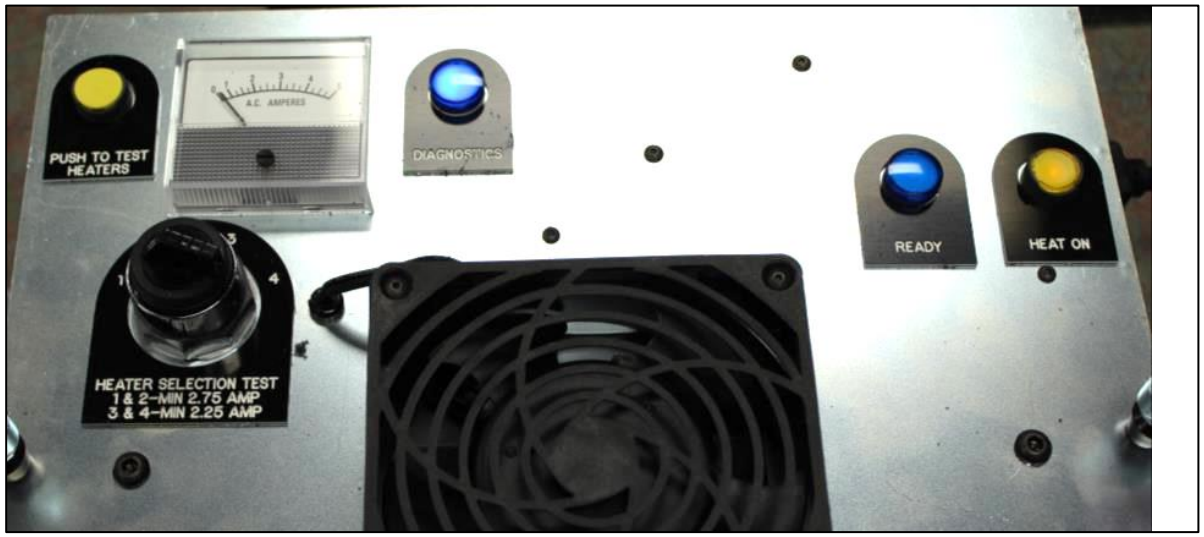
Close the belt welder lid and fully secure the upper lid clamps. The toggle lid clamps must latch over with some resistance.

If the toggle clamps close without resistance they are out of adjustment and the pressure on the belt may be insufficient, causing a weak weld. Adjust the clamps until you feel some resistance.

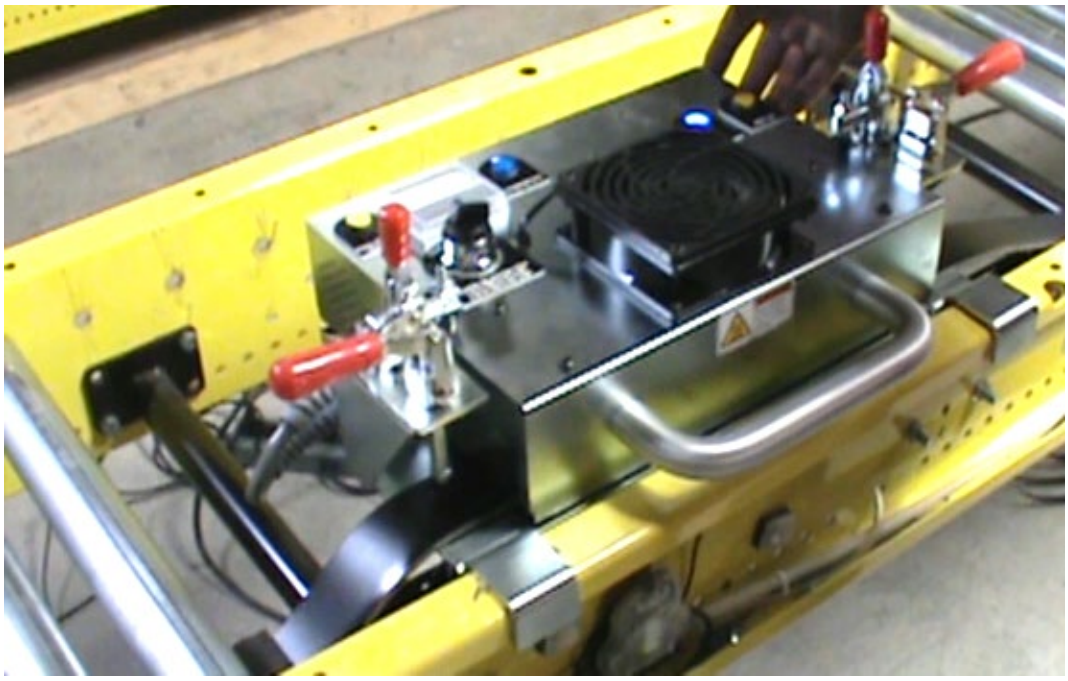
# START WELDING PROCESS

Plug in the welder and turn the switch ON. The fan should come ON and the blue "READY" light should be ON.


Press the “HEAT ON” button and the fan will stop, the yellow and blue lights (the heat on and ready lights) will both be on. The welder is now heating up. After several minutes, the blue (ready) light will go out while the yellow (heat on) light stays on.




The welding process takes about 30 minutes. During the first 5 to 7 minutes of the welding process and the blue Diagnostics light is on, the heaters can be checked using the “push to test heaters button”. This test is optional. To perform this test, please follow the Diagnostic Procedures. (See last page).

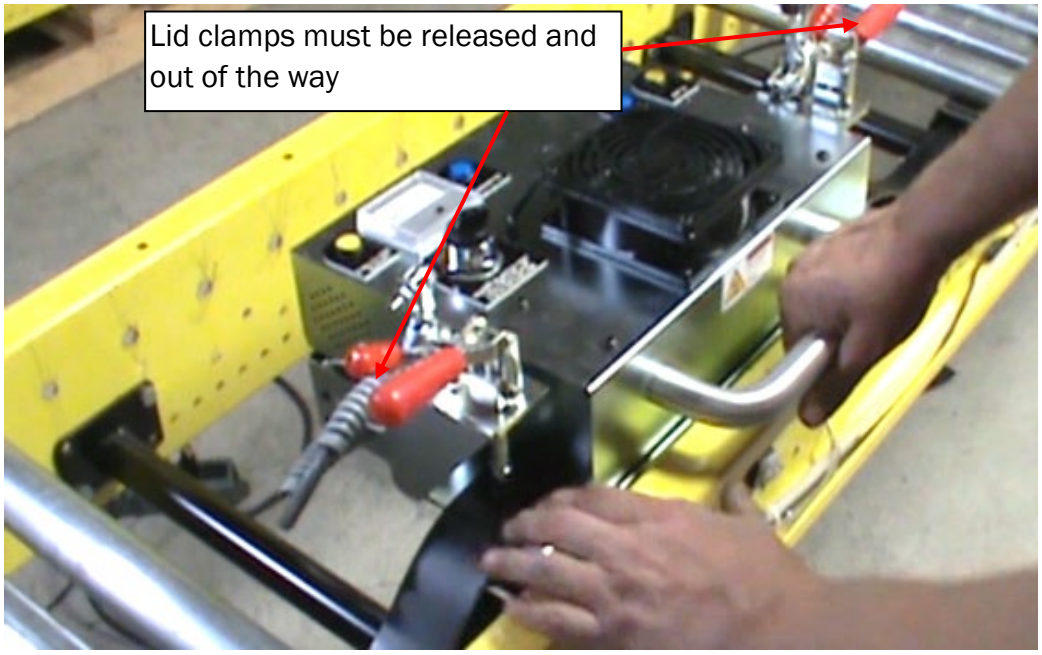


After the heating process is done, the yellow “heat” light will go out and the fan will turn on. Cooling process has begun.

The cooling process WILL NOT be complete until the blue “ready” light comes on.

Once the blue “ready” light is on, the power can be shut off and the welder can be opened (read next step before opening). OPENING THE WELDER PREMATURELY WILL RUIN THE WELD.

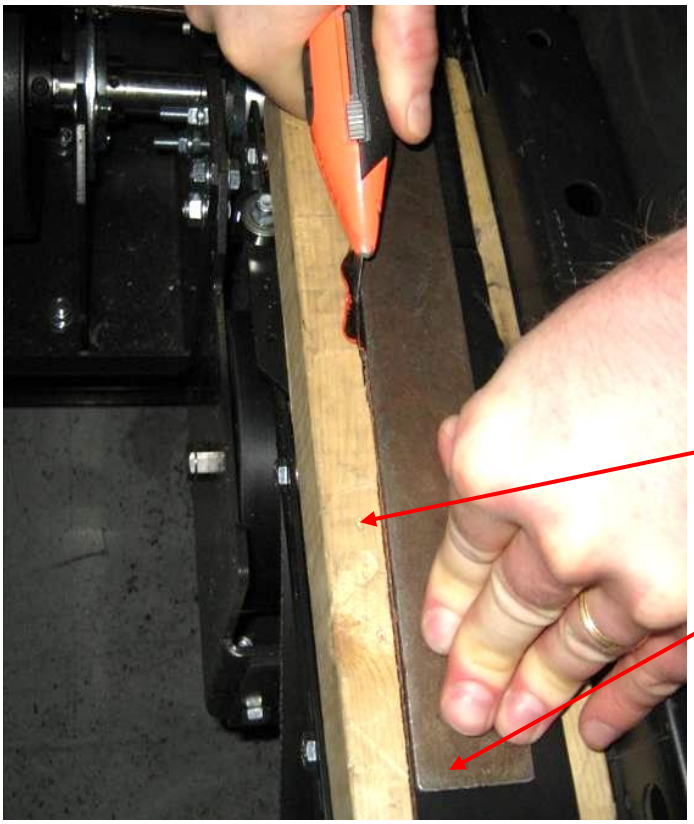
# BELT REMOVAL AND TRIMMING




While holding the welder down on the frame, unlatch the lid cam locks and grasp the handle giving a crisp tug upward to break the mold seal.

The belt area will still be warm. DO NOT TOUCH this area.


Gently pull the belt loose and out of the welder. It should release cleanly.



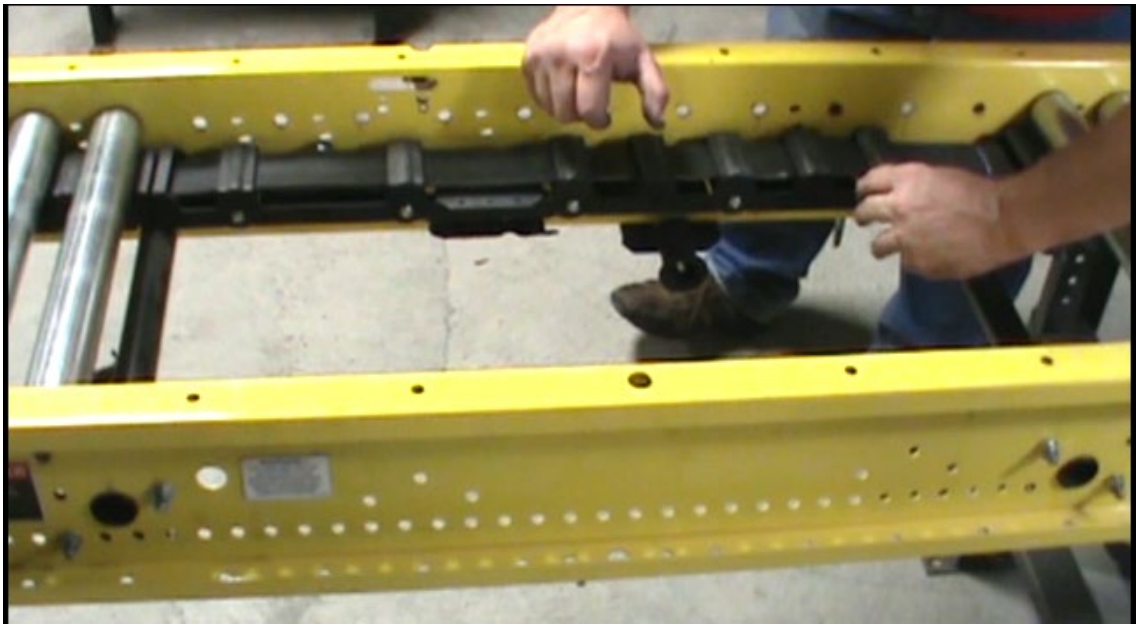

A good weld will have a smooth shiny surface (top and bottom) without cuts or gaps at the finger joint lines. The flash must be trimmed from the edges so the belt does not exceed 2" in width. The razor knife must be used on a hard surface. A straight edge also helps.

## 1.6: TRIMMING OFF THE FLASHING

The overlapping finger QUIKmeld endless splice is now complete except for flash trimming

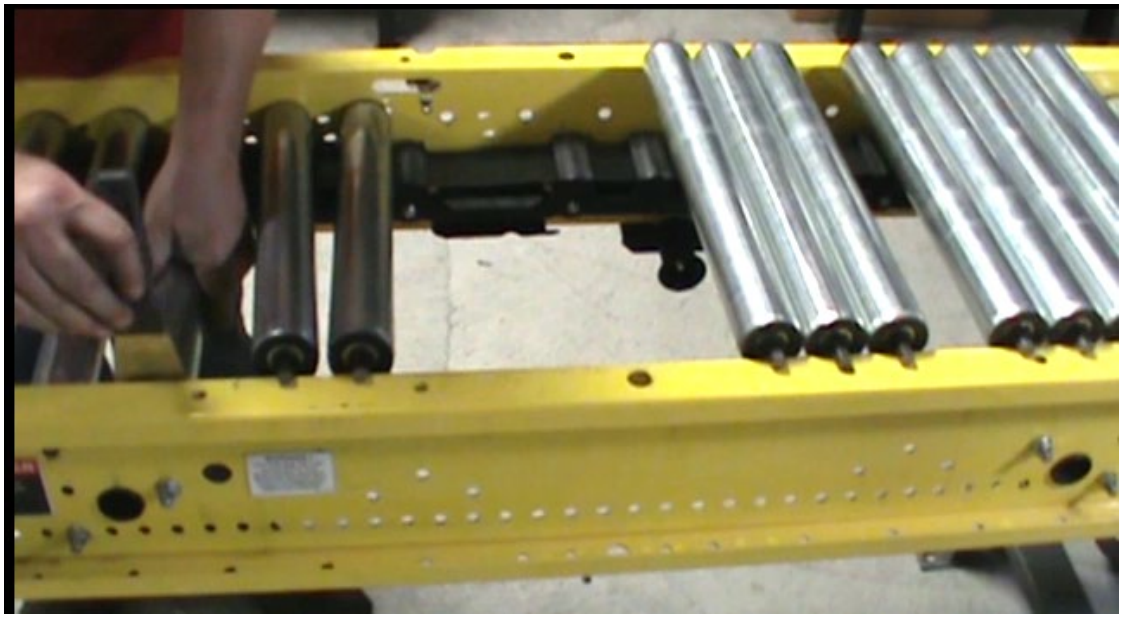
Using the V-trim knife, trim the excess flashing off both sides of the top and bottom edges. The knife will be almost flat on the belt, leaving the corner slightly beveled to remove all flashing and as little additional cover surface as possible. Do not trim down to the carcass.

# REASSEMBLING THE CONVEYOR



Replace all finger guards and then the rollers.

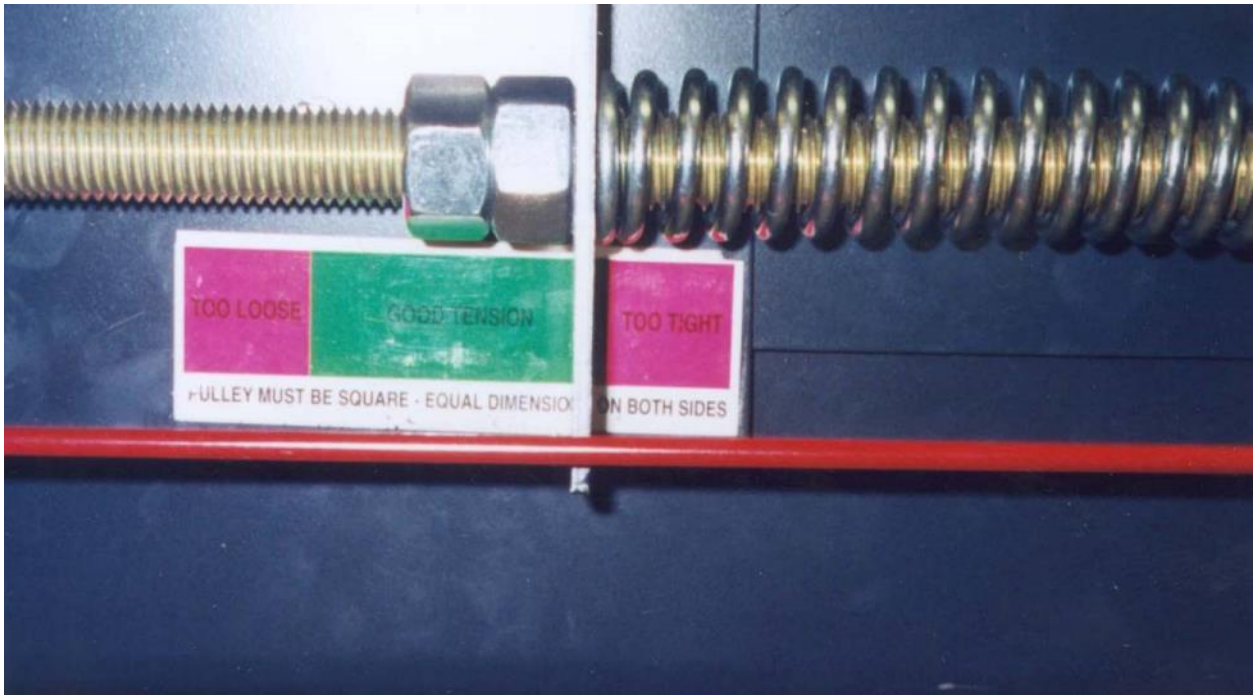
## NBC™



When replacing the rollers in the side channel, pull the axles with pliers to avoid scratching the frame. (Helpful hint use a putty knife to block the axle from scratching the frame while guiding the axle into place.)

THE BELT WELDING PROCESS IS NOW COMPLETE FOR NBC™. Turn the air ON to the belt take-up. The conveyor can now be started.

## NBA®




Tighten the belt take-up until the indicator is just into the red on the tight side. When the conveyor starts, this indicator will move back into the green indicating appropriate tension. Tension the opposite side so the tension on both sides of the drive is equal.

THE BELT WELDING PROCESS IS NOW COMPLETE FOR NBA®. The conveyor can now be started.

# DIAGNOSTIC PROCEDURES

The diagnostic components are located in the upper left corner and consist of a blue "DIAGNOSTICS" light, a yellow "PUSH TO TEST HEATERS" button, AMP meter, and a four-position switch called "HEATER SELECTION TEST."

Turn on the main switch on the side of the welder, the blue "ready" will come on. Press the yellow "heat" button and the yellow light will come on. Within the first 5 to 7 minutes, the Blue Diagnostics light will be on and you can test the heaters.

Turn the selector switch to one of the four positions and press and hold down the "push to test" button. The amp draw will be indicated on the meter.

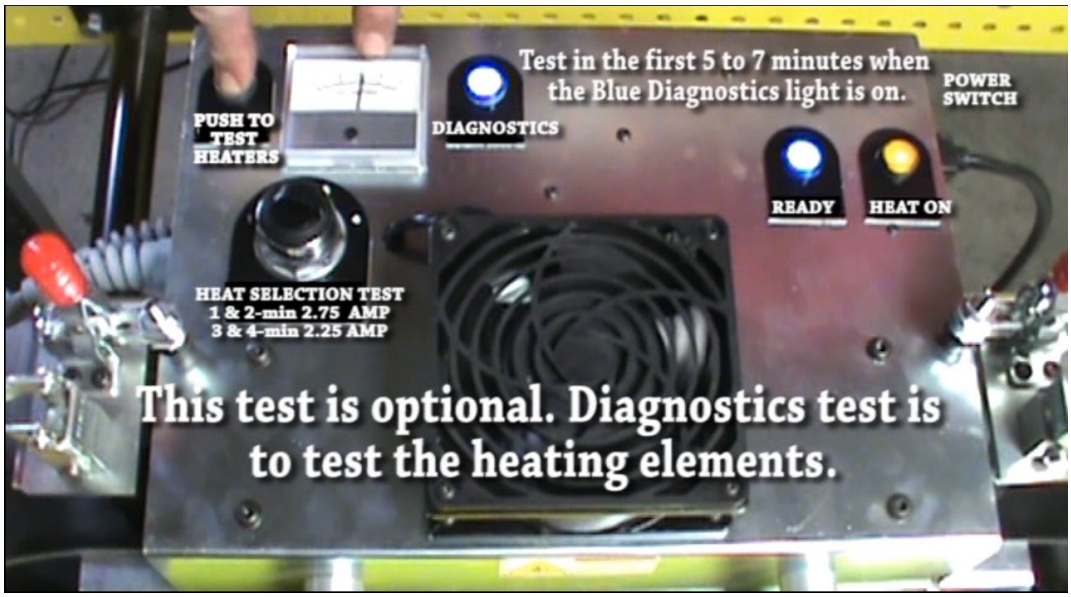
When set to #1 and #2 the meter reading should be at least 2.75 amps.

When set to #3, and #4 the reading should be at least 2.25 amps.

Test all four heater elements.

If one position is weak, the corresponding heat element will need to be replaced. Turn off the unit as soon as the test is complete.

<u>These adjustments are critical and must not be changed.</u>





© 2009/ Revision: 03/07/2019

## SERVICE CONTRACT

If the diagnostics indicate a problem, or the splice welds appear to be lowering in quality, the unit must be returned to the factory for repair. Contact the Lifetime Services Department at 231-798-4547 if you have questions or for return instructions.

# ABOUT MHS CONVEYOR

## About MHS Conveyor

MHS Conveyor, located in Norton Shores, Michigan, is a leading deliverer of “smart” material handling systems, technologies, products, and services, creating solutions for material flow applications. As a global supplier of conveyor systems and equipment since 1964, MHS Conveyor provides sorters, conveyors, and accessories to satisfy a broad spectrum of accumulation, transportation, and sortation applications.

**MHS Conveyor Corp.**
**1300 E. Mount Garfield Road**
**Norton Shores MI 49441-6097 USA**
**231.798.4547**
**Email :** usinfo@mhs-conveyor.com
**Web Site :** mhs-conveyor.com

Regional sales offices and authorized Business Partners located throughout the United States and Canada. Licensees and Business Partners in Europe, South America, and Southeast Asia.