



# EXPERTIP

Category	PRESS
Keywords	Press fabric, press fabric installation, installation safety

## Tips for Installing Your Seamed Press Fabrics

The first step in getting maximum performance from your press fabrics is to make sure you handle and install them correctly. Having an action plan and executing it properly not only minimizes machine downtime, but also ensures that the fabrics will run trouble-free on your machine.

As part of your action plan, consider the following questions:

- 1. Do we need to do any maintenance or repair work to the press section to correct for misalignment?** (If the fabric you are currently running is hard to guide or showing signs of misalignment, you should diagnose the cause(s) of the problem and correct before the new fabric is put on).
- 2. How should we prepare the new fabric and position it for installation?** (Care should be taken in transporting the fabric from storage to the machine floor. Clean the area before placing the new fabric on it. The end labels on the packaging show the direction of roll-up, so you can position the roll correctly before opening the tube).

## Safety First!

First priority, of course, is SAFETY. The following precautions should be taken when installing a new fabric:

1. Follow proper lock out procedures for the mill.
2. Wear appropriate personal safety equipment, including gloves.
3. Use the right equipment and tools (e.g. use a bandcutter instead of screwdriver or pliers).
4. Be vigilant about moving machinery, pinch points, etc.
5. Never place body parts under/between cantilevered equipment.
6. Use extreme caution when cutting plastic bands off the fabric. Stand to the side of the band when you cut it.

## Press Fabric Installation - Seamed Fabric

### Important Note

- Taking the time to ensure the felt is dry, straight and in a good seaming location is key to ensure a smooth and rapid installation of a seamed felt.

### Step 1: Unpacking the fabric

- Note: Installation direction is pre-determined and the fabric is wound on a pole and packaged so that sheet side and run direction end up being correct. Indications on the packaging can be used to determine the front and back edges of fabric.
- Put the seaming kit supplied with the fabric aside for when the fabric seam is ready to be joined.
- The pintle spool assembly should stay sealed in the plastic bag until it is ready to use. Moisture from the air can swell the nylon strands making the seaming process more difficult.

### Step 2: Setting-up installation

- Bring the fabric in place for installation.
- Re-check the following to make sure fabric gets installed to run in the proper direction:
  - ◇ Front and Back are indicated on the packaging and the pole.
  - ◇ Run direction arrows on the leader and felt
  - ◇ Sheet side indication on the leader and felt
- On top fabrics, it is recommended to use a cradle or stand to hold the fabric square. If a cradle or stand is not being used, tie off the felt pole in both directions on front and back – this will help to keep fabric square.

### Step 3: Pulling the fabric around the section

- The ideal way of threading the fabric around the section is with the use of a triangular leader and by pulling with a single rope or flat strap.
- Often it is required to unload and bleed vacuum roll seal strip air tubes and unload the felt roll doctor blades to insure these rolls can turn freely during felt installation.
- If top felts are pulled on with a crane – have maintenance attach an eye bolt to the crane for felt pulling purposes – use a shackle to attach the rope/strap to the eye bolt. It is best not to use the crane hook.
- Make sure all nips are open and you have ample clearance for the felt install.
- All ropes/straps for pulling on should be sufficient for the task.

- Do not stand near the rope/strap when pulling on – safety.
- Do not let top felts “free-spool” off the core – apply light hand pressure on the felt while unrolling to keep slack from sagging in the press – slack is a premium on top felts.
- Monitor alignment when pulling on any felt – pick a spot on a roll or stationary element and try to keep the felt at that spot as you unroll – zipping up a felt that has been pulled on in a skew will be hard to zip – may lead to doubles in zipper and unequal edges on distal end of the zipper.

#### Step 4: Removing the core

- Once the fabric is fully unwound it will typically be tied to a core.
- Edge clamps and ropes should be used on top positions to hold the fabric ends in place before cutting the fabric free from the core.
- On top felts – tie off the bottom half of the felt first using clamps/seam assist handles. After you have pulled on completely (you still have the crane/tugger attached to the top), tie off the top last.
- Cut white straps to free fabric from the core (figure 1).
- When bringing the top felt pipe down from the press have ropes secured to both ends to keep pipe level when moving.



FIGURE 1.

#### Step 5: Removing the triangular leader

- Edge clamps and ropes should be used on top positions to hold this end of the fabric in place before unzipping.
- Remove the leader by simply unzipping.

#### Step 6: Setting-up the seam

- Zip both fabric ends together.
- Have sufficient help for zipping of top felt – do not force the zipper.
- Both fabric ends should be supported with use of the edge clamps to relieve tension from the zipper while joining the zipper. Adjust as necessary.
- The zipper block needs to be pulled straight when joining the zipper to avoid doubles or actually breaking the zipper apart. If ends do not match, unzip and start over.
- Remove the black seam protector flaps by pulling on the bag stitch; the starting point is well indicated (figure 2).



FIGURE 2.

#### Step 7: Removing the loop protector strands

- The fabric is shipped with protector strands inside the seam loops.
- Undo the knot in the protector strands and slowly pull out of the seam loops.
- Remove the loop protector strand slowly; removing too fast can cause damage to the loops. The loop protector strand should be pulled out in the same direction the joining wire will be pushed.

### Step 8: Seaming the felt

- The pintle shipped with the felt has been optimized for the actual fabric you are installing. Switching the pintle can lead to poor seam performance.
- Start joining the seam loops together from the fabric edge which will be in contact with the guide palm.
- Manually join the first few loops and insert the metal pintle.
- Using a black light can help to see the pintle tip as you seam.
- Continue the seaming process until the metal pintle is passed all the way through, inspecting the seam for missed and doubled loops as you go.
- For improved seamability, any glycerin based lubricant can be applied to the pintle yarns or seam loops to reduce friction.
- Once the metal pintle is passed all the way through it is very important to stop and inspect the entire seam for missed or doubled loops
- If seam loops have been missed or if doubles are found, the metal pintle needs to be backed up and the faulty area needs to be fixed.
- Once the seam area has been inspected, continue pulling on the metal pintle to insert the nylon strands in seam loops.
- Stop pulling when the nylon strands are passed all the way through.

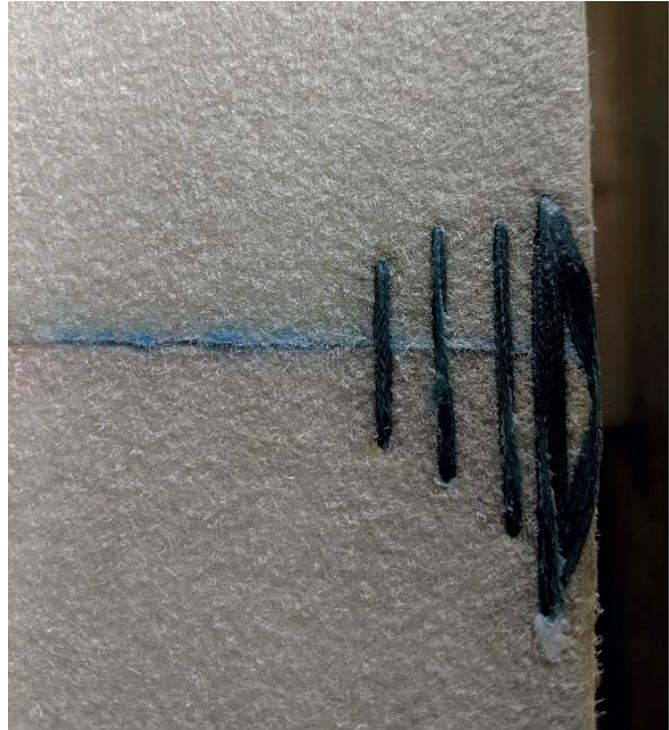


FIGURE 3.

### Step 9: Complete Seaming

- Cut the nylon strands approximately 12 inches (30 cm) long at each end of the seam.
- Tie a single knot in the nylon strands at each end of the seam and trim off the excess leaving about  $\frac{3}{4}$ " (2 cm).

### Step 10: Removing the zipper assist

- Remove the zipper by pulling on the bag stitch; the bag stitch removal start point is well indicated at each end of zipper.

### Step 11: Sewing the seam edges

- Needles and thread are supplied in seaming kit.
- Sew the seam edges for reinforcement (figure 3 and 4).
- Leave 2" (5 cm) of pintle extra before tying a knot- in case the seam distorts it will not pull the pintle back into the seam, or if you have to trim the felt, you will have some extra pintle to tie a knot. When sewing the edges lay this 2" (5 cm) of extra pintle on the backside of the seam and then stitch the edge that will hold the pintle.
- Two methods of edge sewing are noted.
- (Figure 3) Stitch the edges – whip around the seam 4 times from about an inch in and then cross over from the front to back side of felt as you sew over the edge of the seam, protecting the seam edge from bad paddles or the press frame.
- (Figure 4) Stitch the edges using a cross over stitch.



FIGURE 4.

Installation is now complete.

## Stitching-Out and Back-in on tight seams

Seams designed for the most mark-sensitive positions are engineered with components that create a very crowded seam area that cause internal friction and can create high tensions when pulling the pintle into the loops.

Usually, the lead wire can be pushed all the way through the felt width, but for these seams there is a significant risk that the pintle or connection between the wire and pintle (swage) can fail. For this reason, it is critical to get familiar with the stitching out technique to avoid production delays that will be caused by pintle or swage failures.

### Step 1: Pull the lead wire through the bottom loop

- Use the provided guide marks to determine where AstenJohnson recommends stitching out, or pull out roughly every 100 inches (250 cm) of width.
- It is a good idea to pull it out from the bottom loop, keeping in mind that you will be going back into the next top loop.

### Step 2: Pull the wire all the way out

- Continue to pull the lead wire and swage out.
- One method is to only pull as much pintle out of the joined area as you need for now (~2 feet or 60 cm). This prevents pintle entanglement or soiling.
- However, if the pull force was high and there is potential for breaking the swage from the pintle you should pull enough pintle yarns to reach the full width of the machine. If the first 100" (250 cm) was tight, it will likely still be tight when pulling the next 100" (250 cm).
- If using the second method, someone needs to hold the pintle strands taught to prevent entanglement as they enter the loops.

### Step 3: Re-insert the lead wire

- Holding the pintle yarn back and out of the way, insert the lead wire tip into the next available top loop (figure 5 and 6)
- Once the lead wire tip has been inserted into the first top loop, mesh the rest of the unseamed loops back together.
- Once the lead wire is properly reinserted and meshing the loops, push the wire to the next exit point.
- If you are stitching out again, repeat the entire process.

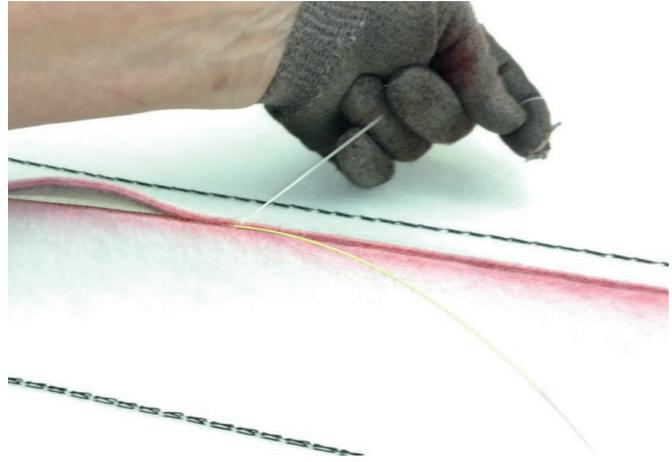


FIGURE 5.



FIGURE 6.

## Questions?

We are here to help. We distribute **ExpertTips** to help you improve the performance of your paper machine. Not just fabric performance, but the overall efficiency, reliability, and productivity of your mill.

If you have questions about anything you see here, please contact us by emailing [expertip@astenjohnson.com](mailto:expertip@astenjohnson.com) or visiting our website [www.astenjohnson.com/expertips](http://www.astenjohnson.com/expertips).

And, if you have suggestions about other topics you would like to receive an ExpertTip on, we would love to hear from you!