

OPERATING THE VERDUN SEMI-AUTOMATIC KNITTING MACHINE

The Verdun Semi-Automatic sock machine is more complex than a standard sock machine. Photos below show the name plate with serial number and the overall appearance of the completed machine.

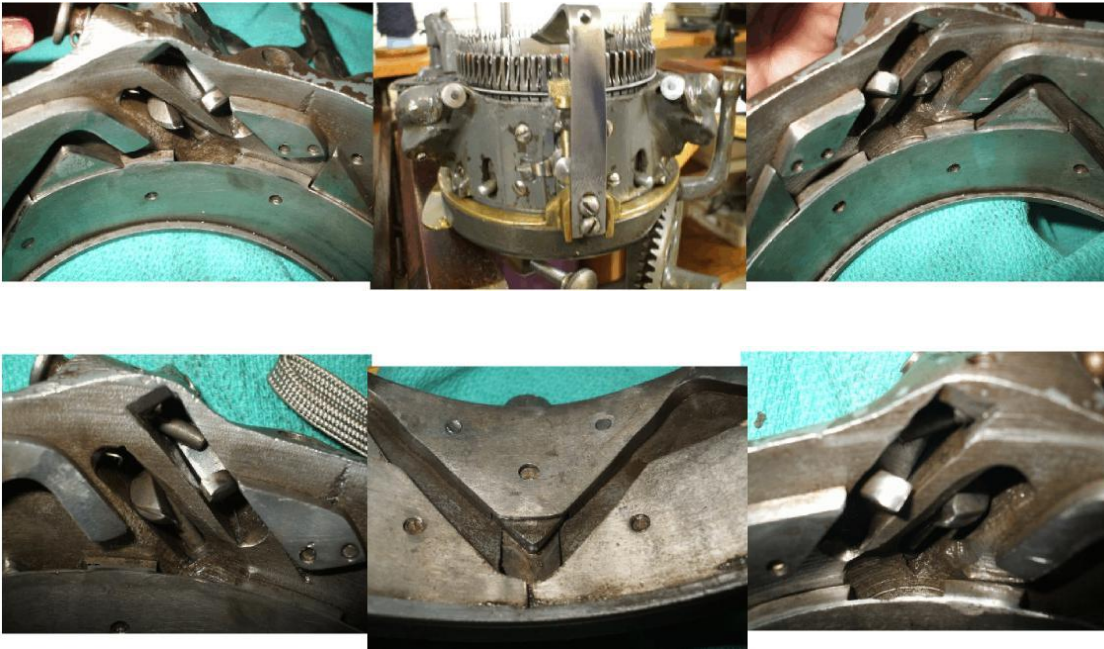


Pat Fly, Angora Valley Fibers, has posted on her web site the only available instructions which consist of an original sheet in French and the English translation. Find them at www.angoravalley.com

No comprehensive manual, parts list, or repair information seem to exist.

The additional 6- part cam set up for the semi-automatic is rather complex. It should not be dismantled by an inexperienced refurbisher, especially a novice at using this type of machine.

The following are pictures of the interior of the cam shell with the cylinder removed



The only actual difference between the Verdun Semi-Automatic and other typical closed cam style machines is the two needle lifters and two large protrusions with buttons top and bottom that contain the cams for lifting and lowering the needles. These features serve in the construction of heels and toes as well as argyles and additional color-controlled patterns that have not been explored as yet.

Typical adjustments used on the standard Verdun, LeGaré 47 and LeGaré 400 are executed in the same manner. Basic instructions from those manuals can be used with the Verdun Semi-Automatic, if the heel making portion of the sock is performed manually.

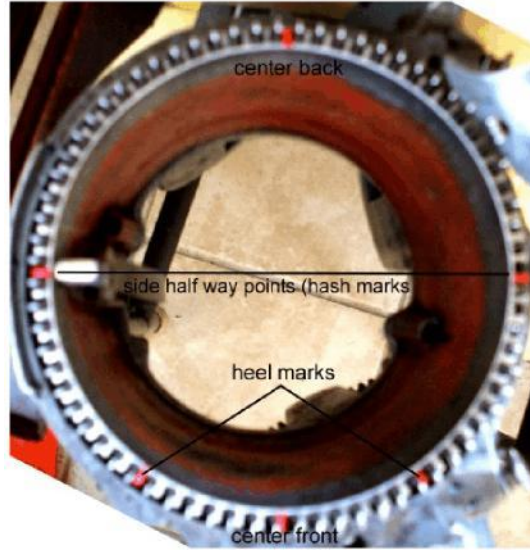
Knitting a sock on the Semi-Automatic is identical to most other circular sock knitting machines. This includes the use of the ribber. The ribber can be used in conjunction with the semi-automatic features.

USING THE SEMI-AUTOMATIC FEATURES ON THE VERDUN

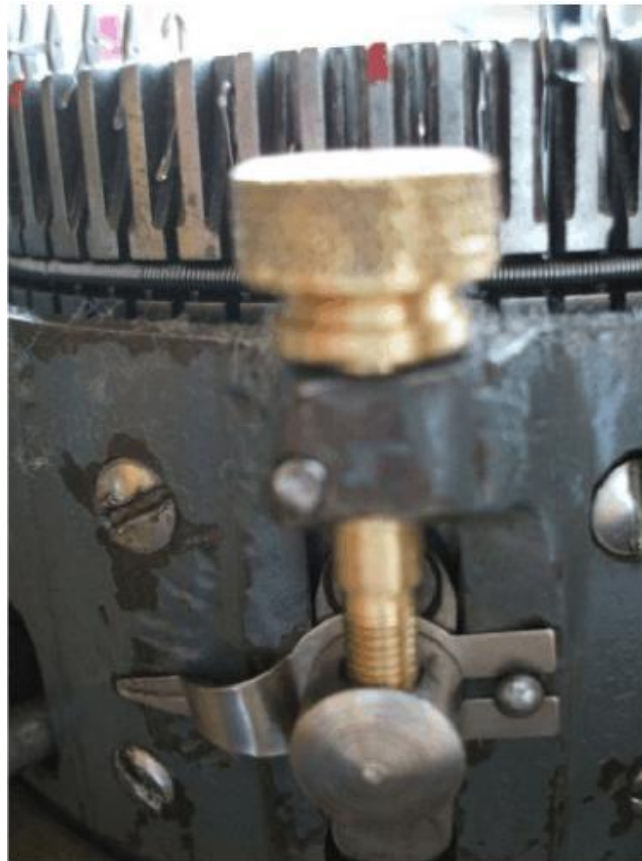
To lift the back needles out of work, the needle lifter is set by pushing the right switch up until it clicks into position. The left lifter is only used to perform this process across the front of the machine rather than the back. In which case the process begins on the left and ends on the right. This feature would likely be used in the construction of argyles or other patterns which utilize portions of the cylinder both on the front and back halves or when constructing a heel or toe on the rear of the machine rather than the front.

In order to correctly align the components that initiate and execute the semi-automatic features, it is necessary to have each cylinder permanently marked in quarters: center front, center back and the left and right halfway points

(hash marks). Additional marks are placed on the front of the cylinder to mark the number of needles left in work when constructing the heel or toe.

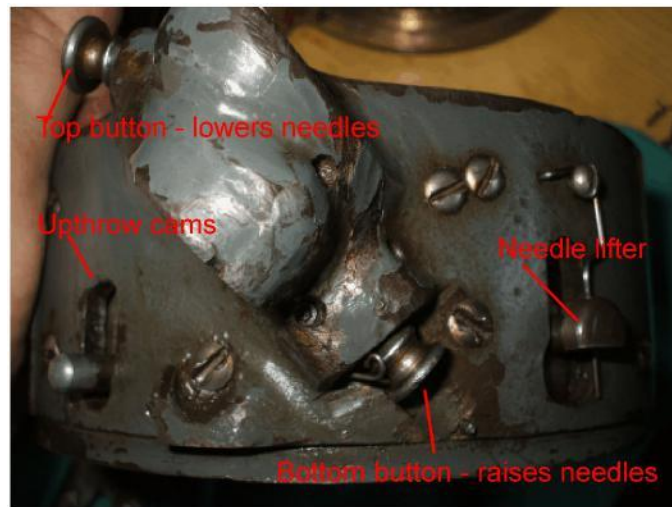


Line up the tension knob with the center front mark and raise the right lifter knob; crank until the tension knob is aligned with the back center mark. Needles will rise out of work. Lower the lifter knob. Push the few needles in front of the left hash mark, which may be slightly elevated, fully back to the in work position. Note that the yarn carrier remains in the out-of-work area.





The small gold knob at the center back is the tension knob



MAKING A HEEL OR TOE ON THE VERDUN SEMI-AUTOMATIC MACHINE

Socks are knit on this machine, with the exception of the heel and toe, as you would on any typical machine such as the Auto Knitter or standard LeGaré, including the use of the ribber.

Although other typical machines consider the ribbed-arch sock as the standard, the semi-automatic appears to have been designed to speed up the heel and toe process by ending the ribbing at the pre-heel. This enables the machine to function most efficiently since it is necessary to have a needle in every cylinder slot when making heels and toes, even if those needles are out of work. That also means that a mock-ribbed section is best terminated at the pre-heel as well. If real or mock ribbing is to be continued at the point of the pre-heel, it is necessary to place an unused needle in the blank slots opposite the side of the machine on which the heel is being formed.

A heel can be made on either the front or back of the cylinder. This manual shows it being constructed on the front. To use the back, instructions for raising and lowering the knobs and needles is to be reversed.

When using the semi-automatic function, there MUST be a needle in every slot in the cylinder.

Whether the top of the foot of the sock is knit with a ribber or not, you must put temporary needles in all empty cylinder slots while making the heel/toe. Empty cylinder slots exist for mock ribbing technique and when using a ribber. The temporary needles do not knit, they just fill the slot and will be removed at the completion of the heel when continuing either mock rib or using the ribber in the remainder of the sock.



Knit the pre-heel section with all cylinder needles in work in the front half of the cylinder. Stop the yarn carrier on the last row of the pre-heel when the tension knob is aligned with the center front mark on the cylinder. Take the ribber out of work if using one. Insert cylinder needles to the empty cylinder slots

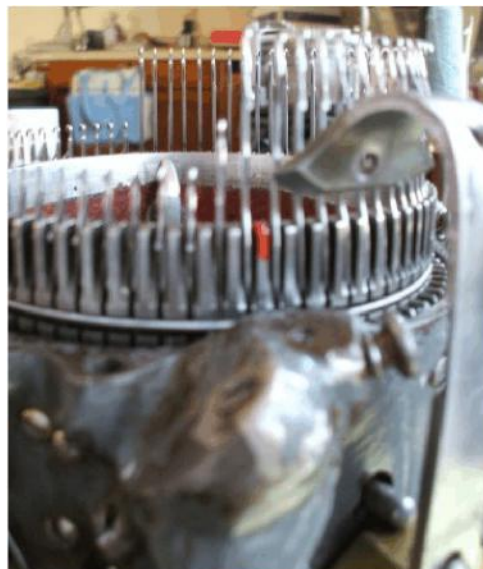
Put the needle lifter in the up position.



Knit to the back, stopping with the tension knob at the center back mark. Lower the needle lifter knob and push the needles in front of the left hash mark fully down if necessary. Pull out the bottom buttons on both sides. Engage the heel spring.

The heel is knit back and forth whether using the semi-automatic function or performing this step manually. As with all machines, a weight system of some type is required in order to maintain tension on the web throughout the creation of the heel or toe. The semi-automatic functions need especially precise and careful weight distribution when forming the heel or toe. It must be consistent and firm but not too heavy. Reposition the weights frequently. Be sure to move the carrier well past the center of the out-of-work needles on each row.

Knit to the left. The first needle in front of the right hash mark will be moved up out of work and the remaining down needles will knit. On all subsequent rows, the first needle will rise and will not knit. If the first two needles are to be raised manually lift the first needle and allow the semi-automatic function to resume with the next needle

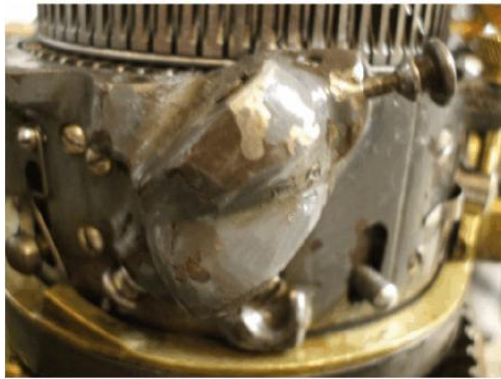


Continue knitting right, then left, until all but one needle on the left remains to be raised. Knit to the right, all the way to the center back. Push the bottom buttons up firmly until they click into the closed position.

Pull the top buttons out. Knit to the left. The first needle on the left is lowered and will knit on the next right to left pass. Continue to knit right then left. One needle will be lowered at the end of each row and will knit at the beginning of the next row. When all of the desired needles but the last one on the right in front of the hash marks are lowered, stop at the front. Push the top buttons in and manually put the remaining needles into work.

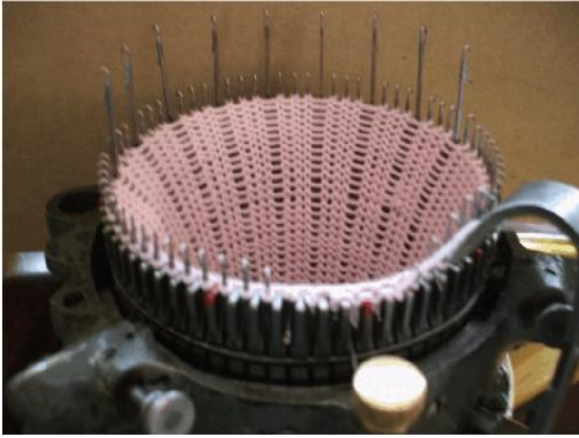
Reactivate the ribber if used, remove the temporary needles behind the hash marks, and remove the heel spring.

The toe is done in the same way, including the use of the temporary needles.

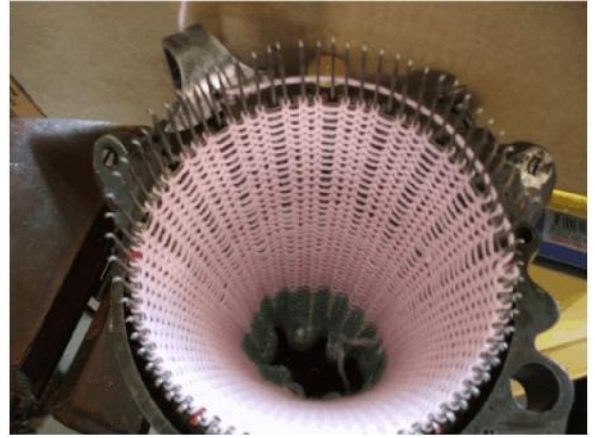


A HEEL KNT USING THE VERDUN SEMI-AUTOMATIC

The sock knit for this booklet was done without a ribber in place for clarity.



1 Last row of pre-heel; setting up to knit heel; temporary needles added to fill back cylinder slots



2. Heel lifter down; first pass to left



3. First needle moved up



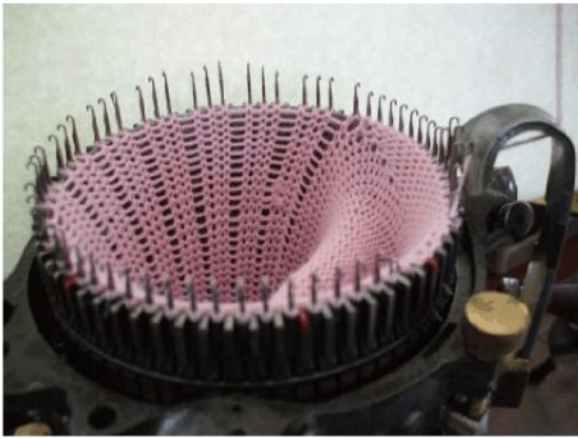
4. All but last left needle up; preparing to begin last decrease row



5. Top button up; first needle being lowered



6. Bottom and top buttons in



7. Last stitch lowered, top buttons in; temporary needles removed



8. Completed heel



9. Detail of heel

Angora Valley Fibers has a comprehensive collection of photos and manuals for many brands of sock machines. Find them at: www.angoravalley.com

This booklet was written to provide assistance in using the Verdun Semi-Automatic Knitting Machine. It is under copyright and is published by Angora Valley Fibers with permission from the author.

Sharon Hilgers © 2009 revised 2015