

OPERATING THE VERDUN SEMI-AUTOMATIC KNITTING MACHINE

Having purchased a Verdun Semi-Automatic sock machine that needed a bit of work, it was sent to Jacquie Grant and now runs quite well though one part still needs to be replaced for optimum performance. Photos at right show the name plate with serial number and 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.

A comprehensive manual, parts list, and repair information do not seem to exist.

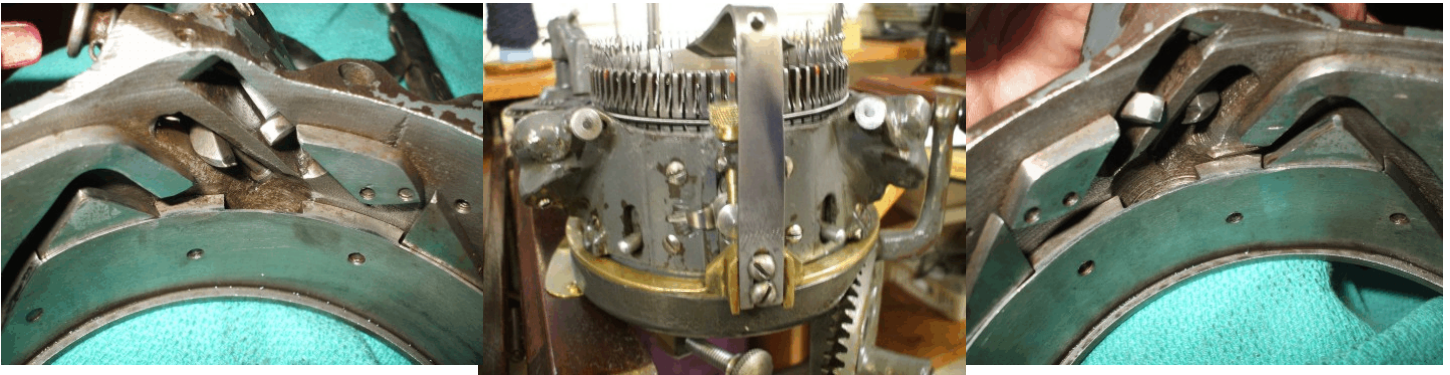
The machine has only been in use for six months and only for making heels and toes.

Jacquie Grant has advised not taking it apart as the additional 6-part cam set up for the semi-automatic is rather complex, especially for a novice at using this type of machine.



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





Frontal view Verdun Semi-Automatic

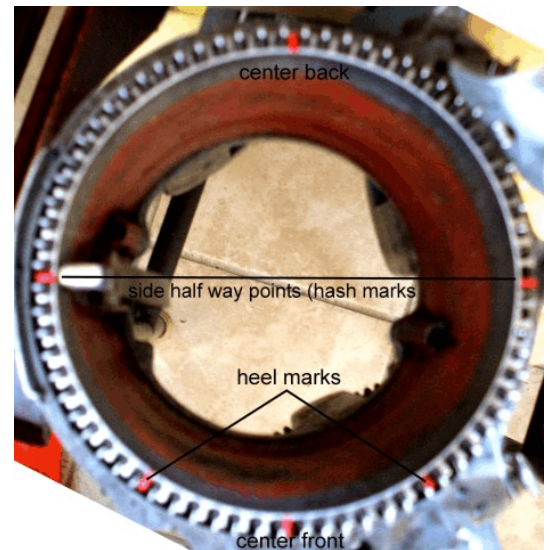
The only actual difference between the Verdun Semi-Automatic and other typical LeGaré-style machines is the two needle lifters and two large protrusions with buttons top and bottom that contain the cams for lifting and lowering the needles. These features serve in the construction of heels and toes as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

Typical adjustments used on the LeGaré 47, standard Verdun, or LeGaré 400 are executed in the same manner. Basic instructions from those manuals can be used with the Verdun Semi-Automatic, if one is not employing the semi-automatic features and chooses to perform tasks manually.

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

USING THE SEMI-AUTOMATIC FEATURES ON THE VERDUN

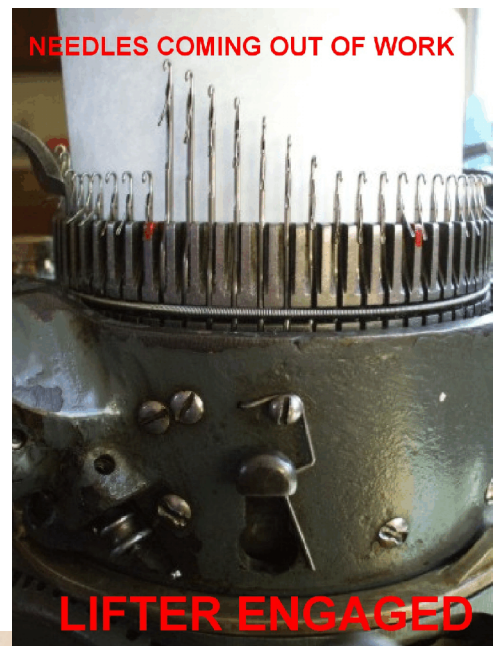
In order to correctly align the components that initiate and execute the semi-automatic features, it is necessary to have each cylinder permanently marked in quarters: center front, center back and the left and right halfway points (hash marks). Additional marks are placed on the front of the cylinder to mark the number of needles left in work when constructing the heel or toe.



NEEDLE LIFTER

To lift the back needles out of work, the needle lifter is set by pushing the right switch up until it clicks into position.

Line up the tension knob with the center front mark and lift 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 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.

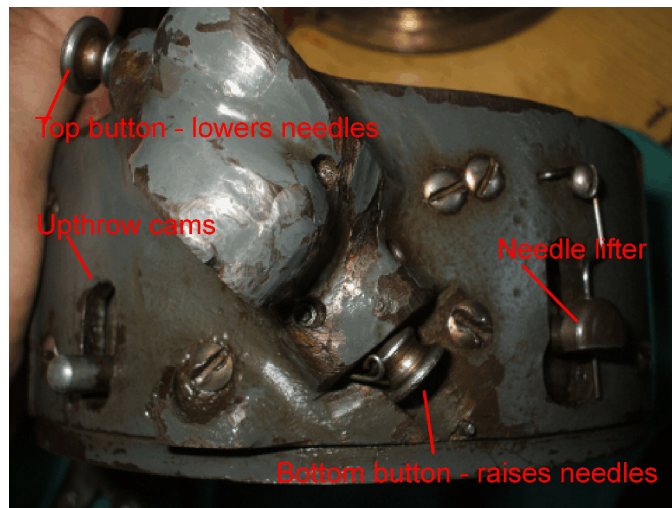
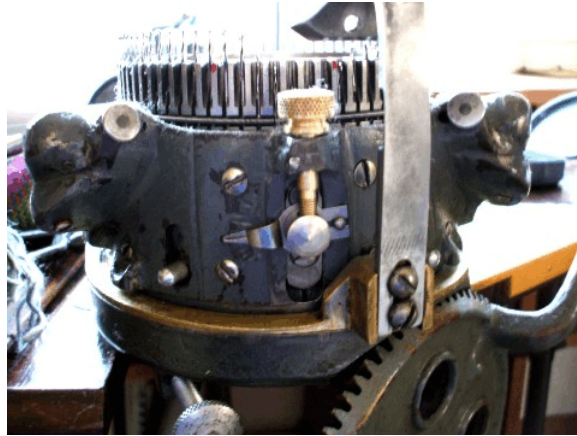


small gold knob at center back is the tension knob

The left lifter is only used to perform this process for times when one would opt to raise the needles 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 half of the cylinder at a time both on the front and back halves or if one chose to construct a heel or toe on the rear of the machine rather than the front.*

USING THE SEMI-AUTOMATIC FUNCTION

The semi-automatic function is used to raise and lower single needles in sequence. The two large bulges on the cam shell contain its elements. The bottom buttons control the raising of needles to the out of work position. The top buttons control the lowering of needles into the in work position.



This photo of the right side of the machine shows how the top button faces forward and the bottom one is angled downward and backward.

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.

To make the heel: 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 portion. 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. For the novice, 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, one is required to place an unused needle in the blank slots opposite the side of the machine on which the heel is being formed.

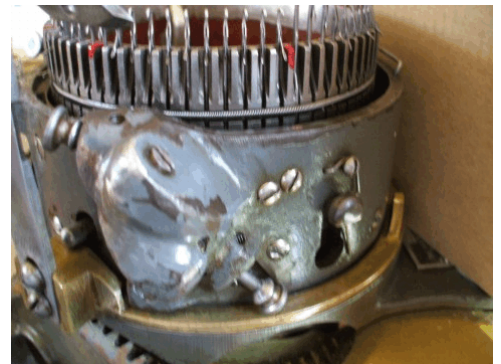
A heel can be made on either the front or back of the cylinder. This manual shows it being constructed on the front. To use the back instead, instructions for raising and lowering the knobs and needles is, of course, to be reversed.

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

Whether 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 needles in work in the front half of the cylinder. On the last row of the pre-heel stop and center the tension knob on the center front mark on the cylinder. Take the ribber out of work if using one.

Put the needle lifter in the up position. Pull out the bottom buttons on both sides.

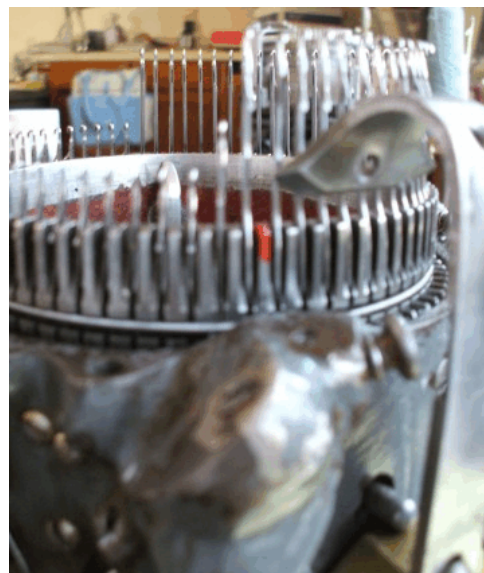


Knit to the back, stopping with the tension knob at the center back mark. Lower the needle lifter knob and push

the needles in front of the left hash mark fully down if necessary. Engage the heel spring.

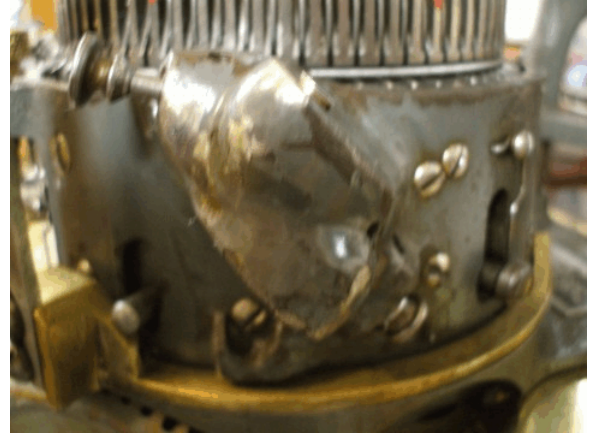
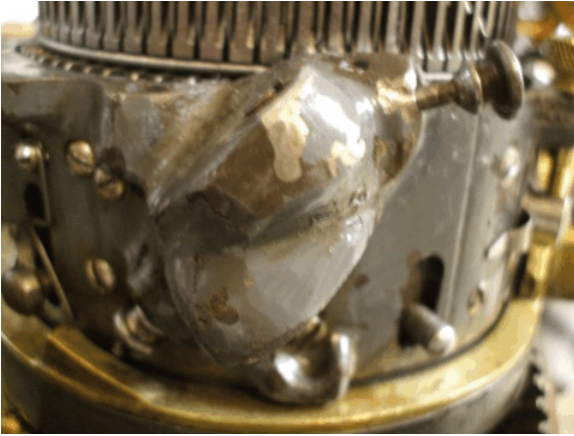
The heel is knit back and forth whether one is using the semi-automatic function or performing this step manually. A weight system of some type is required in order to maintain tension on the web through the creation of the heel or toe as on all sock machines. The semi-automatic functions command slightly more weight when forming the heel or toe. It must be consistent and firm. 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.



Continue knitting back and forth until all but one needle on the left remains to be raised. The yarn carrier is on the left. Then 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 left to right pass.



Continue to knit back and forth. 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.

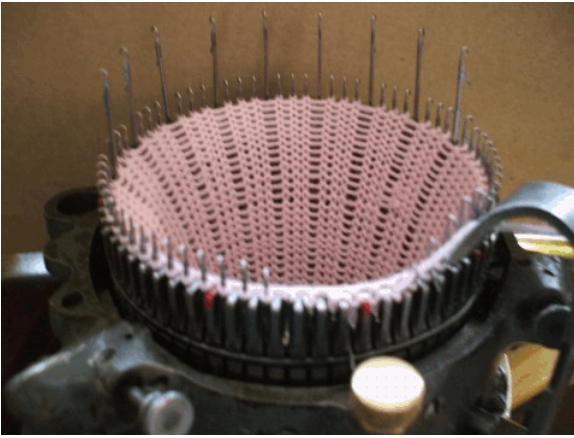
Continue knitting the foot.

On the last row of the foot, stop with the tension knob centered on the center front mark.

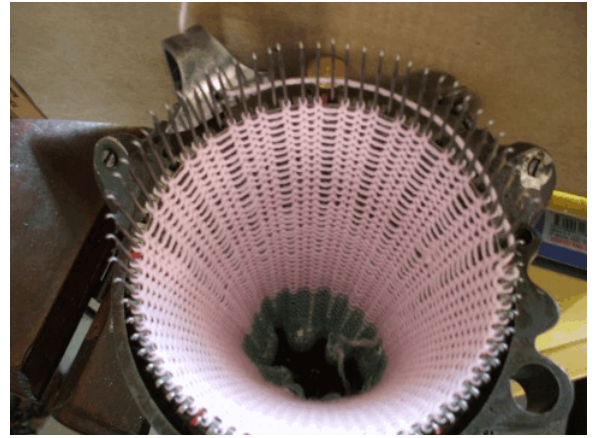
The toe is done in the same way, including the use of the temporary needles.

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



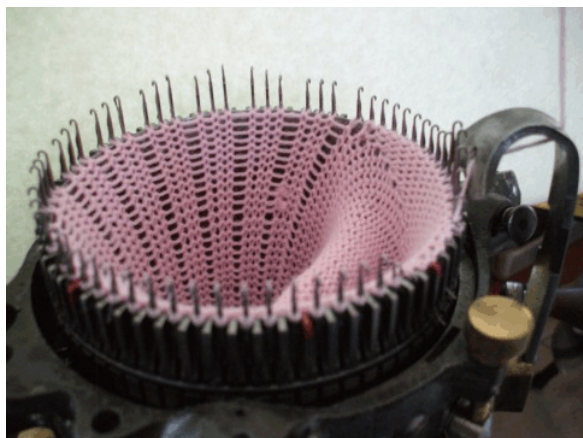
4. All but last left needle up; preparing to begin last decrease row



5. Top button up; first needle being lowered



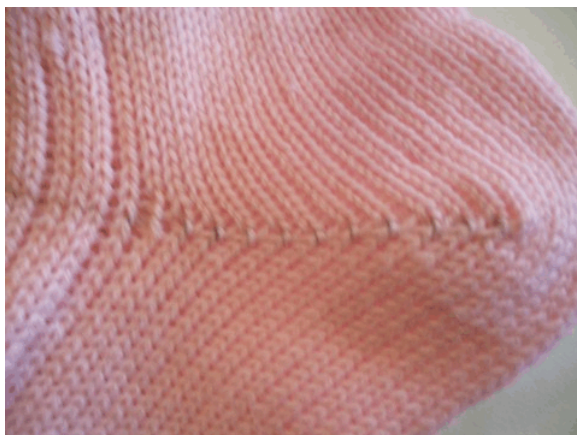
6. Bottom and top buttons in



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
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