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INDUSTRIAL PRODUCTS

OPERATOR'S MANUAL

THE TIPPMANN

"BOSS"

HAND STITCHER



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CONGRATULATIONS on your purchase of the Tippmann
“BOSS” hand stitcher sewing machine.

WARNING

READ THROUGH THIS MANUAL THOROUGHLY AND BECOME FAMILIAR WITH THE TIPPMANN “BOSS” PARTS, OPERATION, AND SAFETY PRECAUTIONS BEFORE YOU ATTEMPT TO OPERATE THIS MACHINE.

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STANDARD EQUIPMENT

- 2 Bobbins
- Assortment of 10 Needles*
- Standard Presser Foot*
- Allen Wrench Set
- Thread Stand
- Bobbin Winder - (Attaches to electric drill)

“Ready to Sew”

- 1/4 lb spool of thread

*See *Additional Products & Accessories* pages for options.

WARNING / LIABILITY STATEMENT

This Tippmann "BOSS" hand stitcher sewing machine is surrendered by Tippmann Industrial Products, Inc., with the understanding that the purchaser assumes all liability resulting from unsafe operation. Tippmann Industrial Products, Inc., shall not be liable for personal injury resulting from the use of this machine under any circumstances.

All information in this manual is subject to change without notice and in no way represents a commitment on the part of Tippmann Industrial Products, Inc. We reserve the right to make changes and improvements to products without incurring any obligation to incorporate such improvements in products previously sold.

SAFETY IS YOUR RESPONSIBILITY!

The ownership of this machine places upon you the total responsibility of its safe operation. You must observe the same safety precautions as you would any piece of equipment to assure the safety of not only yourself but everyone around you.

Outlined here are some general precautions to be aware of: the operator should at all times use common sense when using this machine and be sure others who may operate are also familiarized, responsible and safety conscious. Do not attempt to operate this machine until you have read and are familiar with this manual. Common sense includes reading, reviewing and understanding these written instructions before operating or setting up this machine including but not limited to:

- Before changing needles.
- Before threading needles.
- Before changing bobbin.
- Before disassembly of machine.
- Before moving machine.
- Do not attempt to operate this machine until it is securely fastened to a sturdy work surface.
- Do not operate this machine when parts have been removed as damage to the machine and/or injury to operator may result.
- Keep hands clear of presser foot and needle at all times.

GENERAL DESCRIPTION

The Tippmann "BOSS" hand stitcher sewing machine is a needle-feed, lock-stitch machine. The "BOSS" is designed and built to achieve precision quality stitching, extreme durability of the machine itself and maximum owner satisfaction for many years.

SPECIFICATIONS

Make	TIPPMANN
Model	"BOSS 2"
Type Feed	Needle Feed/Lower Needle Guide
Type Stitch	Lock Stitch
Type Bed	3 " Cylinder Bed
Throat Depth	6.5"
Stitch Cycle Rate	Variable - 1 to 100 Stitches (1" to 15"+ per minute)
Presser Foot Clearance.....	7/8 inch
Maximum Sewable Thickness	3/4 inch
Needle System	794 Series & 7 x 3
Thread Sizes	69 to 415
Stitch Length Adjuster.....	4 per inch to 16 per inch
Machine Weight	23 Pounds

SETUP INSTRUCTIONS

1. To Secure machine to existing work bench use three (3) 3/8" bolts or lag screws of suitable length.

2. Attach the Stitching Handle to the BOSS. Slide the Stitching Handle onto the shaft & secure the handle in position with bolt (AR-73 & 73-1)

3. Attach the Thread Stand.

1) Insert the bolt through the bottom of the thread stand and the thread stand post (**AR-18**)

2) Insert the bolt through the thread guide and thread stand plate and carefully start it into the provided hole on the top of the sewing machine. Position the thread guide to allow the thread to feed into thread guide B unobstructed and tighten the bolt to secure.

CAUTION: Always keep your free hand clear of presser foot and needle foot during operation - including during the following tests.

• To Check* the Presser Foot Lift:

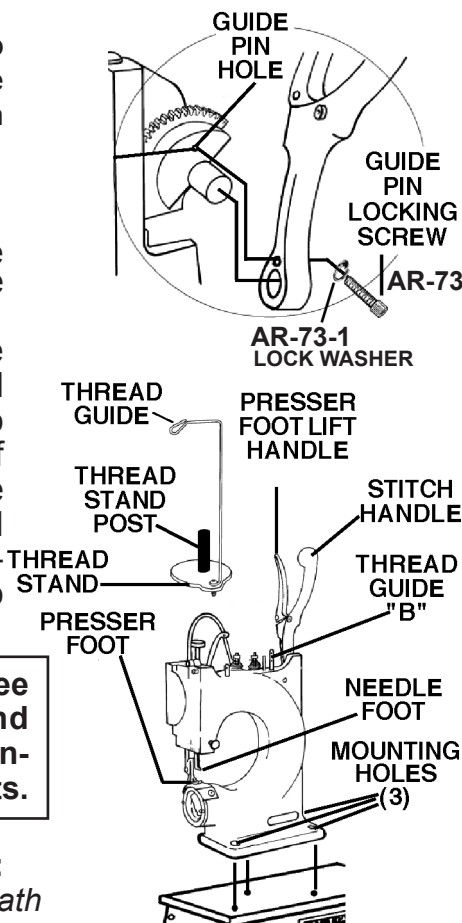
(*Always be sure the presser foot path is clear of hands, tools etc.)

With machine secured to a stable work bench, lift the Presser Foot by squeezing the Presser Foot Lifting Handle. The Presser Foot should lift approximately 7/8 inch.

• To Check* the Stitching Handle:

(*Always be sure needle foot path is clear of hands, tools etc.)

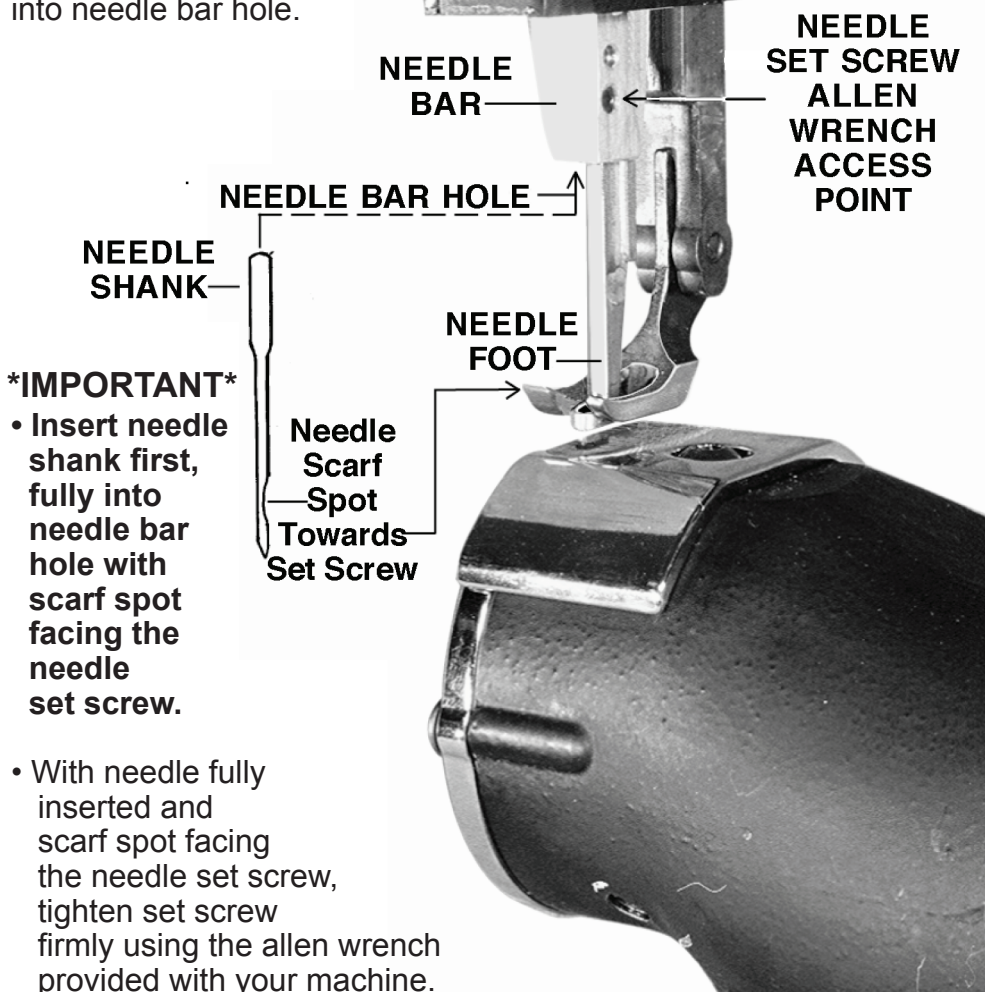
With machine secured to a stable work bench, cycle the needle foot, by pulling the Stitch Handle completely down and then return it completely to the upright position.



INSTALLING THE NEEDLE

- Lower the needle foot by lowering the stitch handle until the needle set screw is visible.

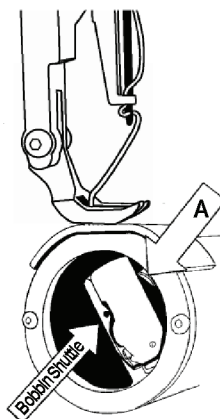
- Loosen needle set screw with furnished allen wrench to allow needle to be inserted into needle bar hole.



IMPORTANT

- Insert needle shank first, fully into needle bar hole with scarf spot facing the needle set screw.
- With needle fully inserted and scarf spot facing the needle set screw, tighten set screw firmly using the allen wrench provided with your machine.

INSTALLING BOBBIN IN BOBBIN SHUTTLE

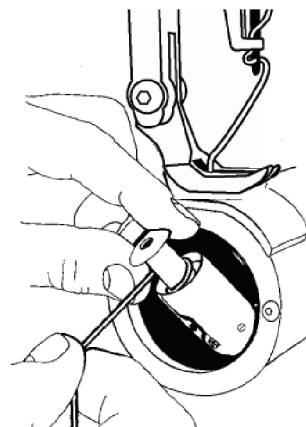



- Locate the bobbin shuttle in the end of the cylinder bed. Press the shuttle release latch to release the bobbin cylinder (point A).

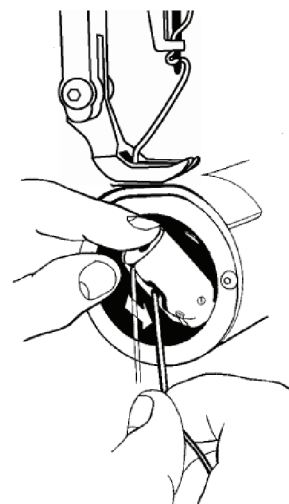
- Remove the empty bobbin spool and wind with thread.

Do not fill bobbin to the point that it has to be forced into bobbin shuttle!

(See bobbin filling instruction sheet in Tippmann Toolbox.)



- Insert wound bobbin with 6 - 8 inches of thread kept out counterclockwise  as pictured.



- Hold bobbin in place to keep it from turning. Now pull thread down the tension spring slit (B) until thread reaches thread slot in the shuttle.

- Secure shuttle by snapping the bobbin cylinder back into place. There should be 6 - 8 inches of thread hanging out of the Bobbin Shuttle at the end of the cylinder bed at this point.

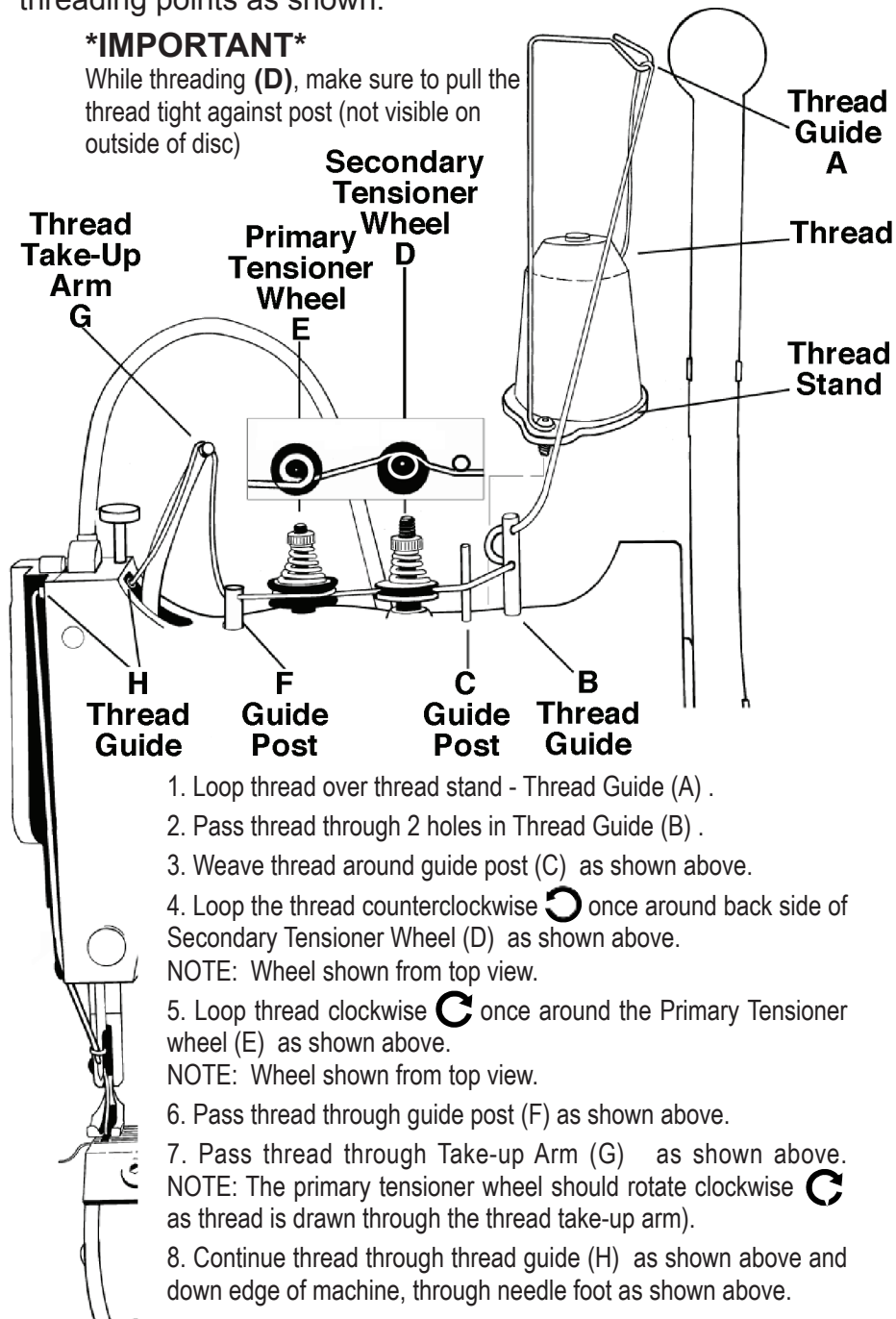
Test bobbin tension by pulling on string. It should pull evenly with 1/2 the tension of the top string.




THREADING THE MACHINE

Place selected thread on thread stand. Lead thread through all threading points as shown.

IMPORTANT

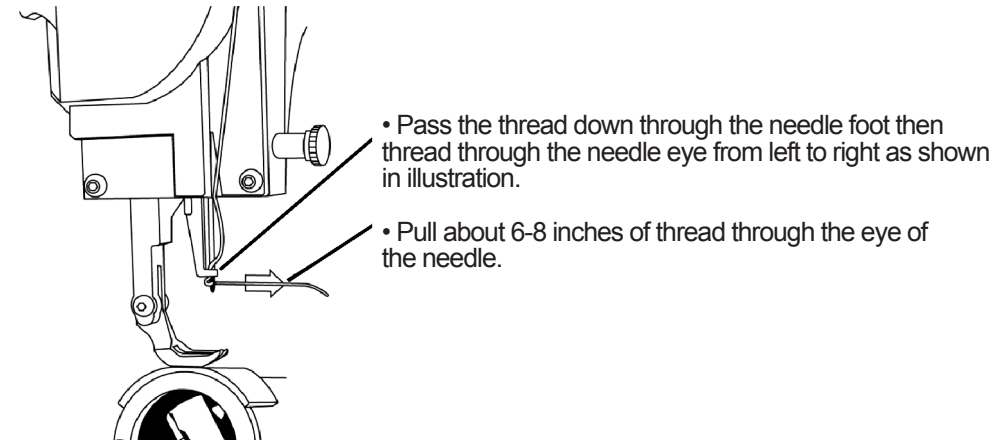
While threading (D), make sure to pull the thread tight against post (not visible on outside of disc)



1. Loop thread over thread stand - Thread Guide (A) .
2. Pass thread through 2 holes in Thread Guide (B) .
3. Weave thread around guide post (C) as shown above.
4. Loop the thread counterclockwise  once around back side of Secondary Tensioner Wheel (D) as shown above.
NOTE: Wheel shown from top view.
5. Loop thread clockwise  once around the Primary Tensioner wheel (E) as shown above.
NOTE: Wheel shown from top view.
6. Pass thread through guide post (F) as shown above.
7. Pass thread through Take-up Arm (G) as shown above.
NOTE: The primary tensioner wheel should rotate clockwise  as thread is drawn through the thread take-up arm).
8. Continue thread through thread guide (H) as shown above and down edge of machine, through needle foot as shown above.

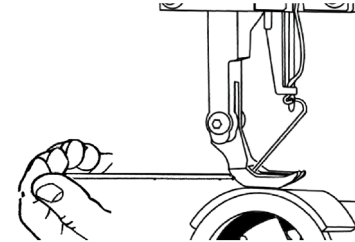
You are now ready to thread the needle. (Above Needle — shown threaded.)

THREADING THE NEEDLE



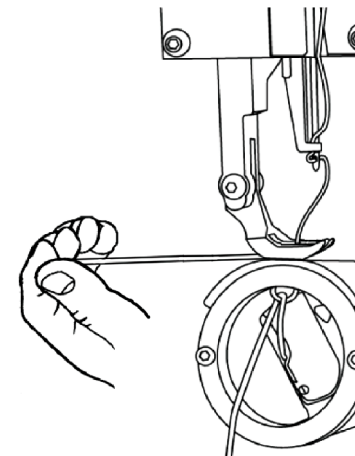
- Pass the thread down through the needle foot then thread through the needle eye from left to right as shown in illustration.
- Pull about 6-8 inches of thread through the eye of the needle.

DRAWING BOBBIN THREAD UP THROUGH NEEDLE PLATE



STEP 1:

- Place the thread under the presser foot and hold very lightly to the back .

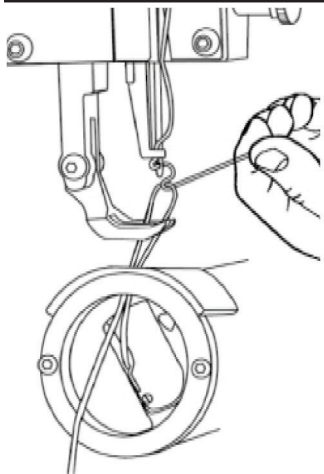


STEP 2: Looping bobbin and needle threads.

- Hold the needle thread lightly to the rear as shown and cycle the handle (pull down & up completely one time without releasing the end of the needle thread.) This action loops the bobbin and needle threads together inside the cylinder bed.

If it does not loop, be sure to hold the thread *gently* to the rear as outlined in Step 1 and try again. *NOTE: Be careful not to pull the thread tightly or the loop will not form and the shuttle will not be able to pass through the loop as required.*

DRAWING BOBBIN THREAD UP THROUGH NEEDLE PLATE

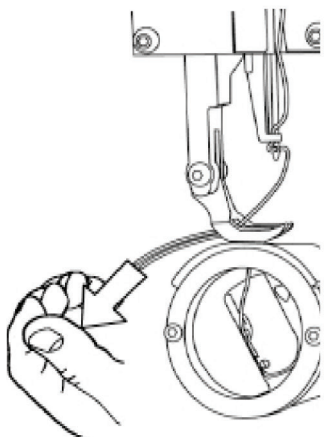


STEP 3: Drawing up the bobbin thread.

- Lift the presser foot and pull the needle thread up. The bobbin thread will come up with it through the needle plate.

IMPORTANT

This step may take a couple of tries.
If not successful on the 1st try, attempt again.



STEP 4: Aligning threads to sew.

- Align both threads under the presser foot to the back as shown.

- You are now ready to sew.

NOTE: It is necessary to hold thread ends to begin stitching.

HOW TO SEW:

How do I start and finish locking a stitch?

- You will want to make sure that your sewing machine is on a sturdy work surface before starting any set up or maintenance of your machine.
- Start on your material about 1/4" from where you would normally start.
- Sew to where you would normally start, then turn your material around and sew back through the previous holes and continue on.

Locking A Stitch

- When you are to the end of your stitchline, lift your presser foot and move back to the 2nd to last hole and stitch again. Then go back 1 stitch and stitch again. Your stitch is now locked.

PRESSER FOOT ADJUSTMENT


The Presser Foot Adjustor adjusts the Presser Foot Pressure.

A properly adjusted Presser Foot will advance the material without slipping.


To determine the proper pressure for the material to be sewn, perform the following test.

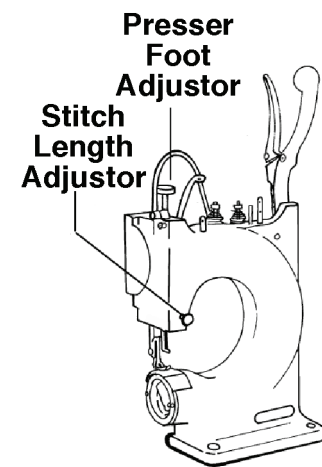
- Use a piece of the material to be sewn.
- Insert the sample material under the Presser Foot and sew a couple stitches.
- Observe the test material during stitching.
 - If the material is not advanced by the Presser Foot, the pressure needs to be increased.
 - If the presser foot leaves a deep impression on the material, the pressure needs to be decreased. NOTE: There will always be a slight impression.

To increase the Pressure.

- Turn the Presser Foot Adjustor clockwise . Re-test as before and adjust until the material is advanced by the Presser Foot without slipping.



To decrease the Pressure.


- Turn the Presser Foot Adjustor counterclockwise . Re-test and adjust until the material is advanced by the Presser Foot without leaving a deep impression.

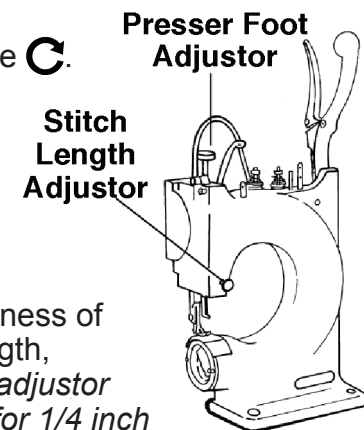


STITCH LENGTH ADJUSTMENT

Adjust the stitch length with the Stitch Length Adjustor.

- **For a larger stitch.**
Turn the Stitch Length Adjustor clockwise .
- **For a smaller stitch.**
Turn the Stitch Length Adjustor counterclockwise .
- **When the material thickness is increased, the stitch length shortens.**

Length of stitch is proportional to the thickness of a material. To maintain an even stitch length, adjust accordingly. Turn the stitch length adjustor for approximately 1/4 turn clockwise  for 1/4 inch climb (increased thickness).



HAND STITCHER



SCHEMATIC

4-9-2014

NEEDLE AND THREAD GUIDE

About Tippmann Needles and Thread:

GROZ-BECKERT®

Groz-Beckert German made needles offer the highest standard in the industry. Tippmann stocks over 5000 needles, so you can be assured that they are in stock and ready to ship.

American Efrid has over 115 years of textile experience and is the industry leader in thread. Tippmann is proud to distribute A & E thread and would be happy to send you a free thread sample kit.



ROUND POINT VS. CHISEL POINT

There are two different styles of needles used in the Tippmann BOSS.

The round point needles are “universal” needles, and work well in just about any material, including rubber, vinyl, cloth, leather, etc.

The Chisel point needles are used specifically for leather. Instead of punching a hole in the material like a round point, it “slices” through the leather. This can prevent bottom side “blowout” on dry and hard leathers. Chisel point needles are not recommended for woven fabrics such as nylon halters because it slices the strands of nylon. If your style of sewing requires a short stitch length (10 per inch or more), you should not use a chisel point needle because the material can tear from hole to hole. The round point is better for this application. When ordering needles from Tippmann, a 7x3 is a Round Point, and a 794 is a chisel point needle.

Note: Change your needle to round point when stitching fabrics other than leather.

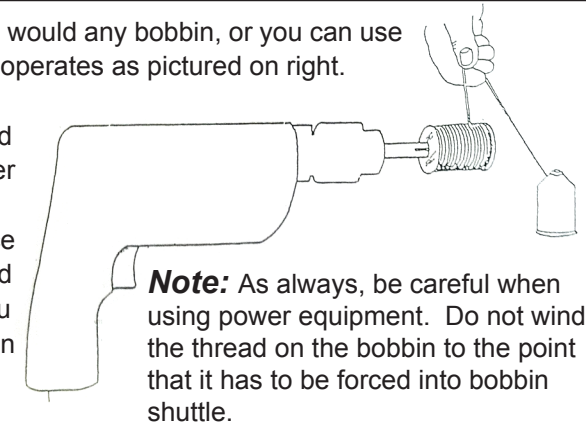
Thread size		Cord Equivalent		7x3 Needle	794 Leather Needle	Average Linear Density	Diameter
Old size	Tex Size					Yards / lb	inches
Z69	T70	F	-	7X3110	-	6450	.0090
Z99	T90		-	7X3130	-	4375	.0110
Z138	T135	U-150	-	7X3130	-	3230	.0135
Z207	T210	U-250	3	7x3160	794160	2234	.0180
Z277	T270	U-300	4	7X3180	794180	1615	.0240
Z277	T270	U-300	4	7x3200	794200	1615	.0240
Z346	T350	U-350	5	7X3230	794230	1220	.0260
Z415	T400	U-450	6	7X3250	794230	1060	.0290

THREADING THE BOBBIN

You can wind the bobbin as you would any bobbin, or you can use the tooled bobbin winder which operates as pictured on right.

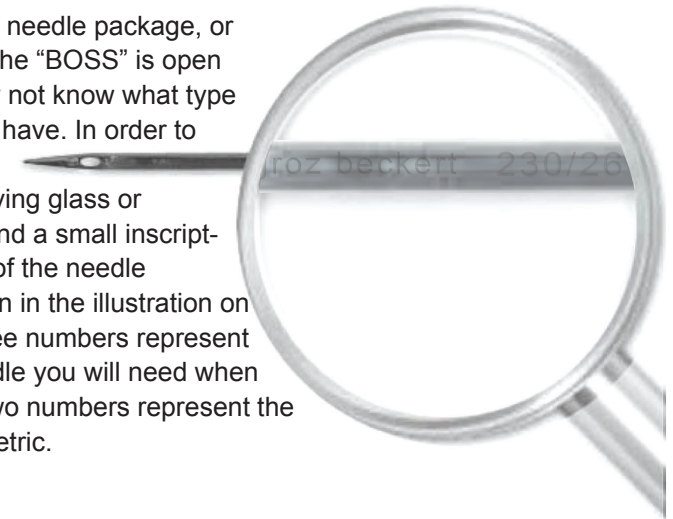
Provided with your “BOSS” hand stitcher is a tooled bobbin winder which fits into the end of a drill.

Once secured into the drill, place the bobbin on its slotted end and start winding the thread until you can complete winding the bobbin with the drill.

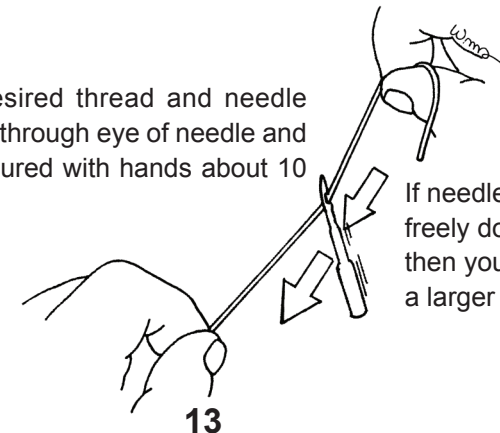


SELECTING THE CORRECT NEEDLE (RULE OF THUMB)

If you do not have your needle package, or if the kit provided with the “BOSS” is open or has spilled, you may not know what type and size of needle you have. In order to identify your needle, you will need a magnifying glass or microscope. You will find a small inscription on the side (shaft) of the needle (e.g. 230 / 26, as shown in the illustration on the right). The first three numbers represent the size of the needle you will need when ordering and the last two numbers represent the size of the needle in metric.



After selecting the desired thread and needle point, place the thread through eye of needle and hold the thread as pictured with hands about 10 inches apart.



ADJUSTING THE STITCH



A PERFECTLY LOCKED STITCH

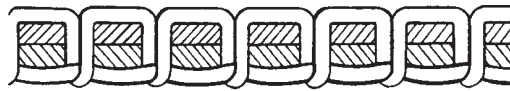
results with upper and lower tensions balanced so that needle and bobbin threads are drawn into material equally.

TENSION IS TOO HIGH OR TIGHT



If the knot is laying on top of the material, the top tension is most likely too tight. Loosen the two tension nuts on top of the machine. **Loosen both nuts the same amount, making 1/2 turn adjustments until the knot is centered in the material.** After adjusting, make 3-4 full stitches to see the change in tension.

TENSION IS TOO LOW OR LOOSE

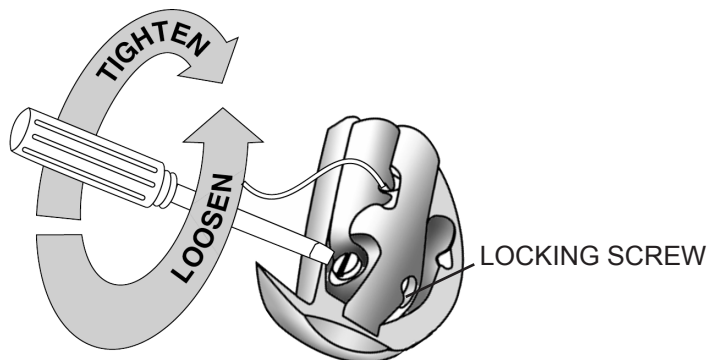


If the knot is laying on the bottom of the material, the top tension is most likely too loose. Tighten the two tension nuts on top of the machine. **Tighten both nuts the same amount, making 1/2 turn adjustments until the knot is centered in the material.** After adjusting, make 3-4 full stitches to see the change in tension,.

ADJUSTING THE BOBBING TENSION

IMPORTANT

Only adjust the bobbin if absolutely necessary. Rarely will you need to adjust tension on the bobbin shuttle. If you are unable to get the stitch correct by adjusting the top tensioners, you may need to adjust bobbin tension. To adjust tension, loosen the locking screw. You can then increase or decrease tension on the bobbin string by turning the adjustment screw. For most materials, you need less than half the tension of top string thread.



TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSES
My machine is skipping stitches	<ol style="list-style-type: none"> 1. Timing 2. Check your needle vs thread size 3. Needle plate adjustment (see pg. 16) 4. Needle orientation 5. Bent needle 6. Bad needle 7. Take up bracket (see pg. 16) 8. Presser foot tension (see pg. 16) 9. Takeup spring tension (see pg. 16)
My string is tangled underneath my material.	<ol style="list-style-type: none"> 1. Make sure that you are completing your stitch. (see pg. 16) 2. Timing 3. Take up bracket 4. Take up spring tension
My machine is fraying / splitting / breaking thread	<ol style="list-style-type: none"> 1. Burr on needle plate, needle foot (see pg. 16) 2. Needle plate 3. Need to replace needle 4. Tension is too tight 5. Not threaded correctly 6. Needle positioning 7. Timing
My machine keeps breaking needles	<ol style="list-style-type: none"> 1. Needle plate 2. Timing 3. Needle is not seated properly
I am marking my leather up too much	<ol style="list-style-type: none"> 1. Presser foot tension 2. Style of presser foot 3. Presser foot needs to be buffed
My machine is not advancing or feeding.	<ol style="list-style-type: none"> 1. Stitch length adjustment 2. Presser foot tension 3. Presser foot needs to be buffed
My foot is catching on my material.	<ol style="list-style-type: none"> 1. Are you using correct foot 2. Place a piece of duct tape over needle plate insert

NEEDLE PLATE ADJUSTMENT

STEP 1: Loosen needle plate screw

STEP 2: Center the needle in SM-11-1 needle plate insert

STEP 3: Tighten screw

TAKE UP BRACKET ADJUSTMENT

STEP 1: Loosen bolt

STEP 2: Push the handle all of the way up

STEP 3: Rotate the bracket until it touches the take up lever

STEP 4: Tighten bolt

STEP 5: Pull the handle down and then push it back up. Hold the handle up with your right hand, check for up and down play on take up lever. The play should be 1/16" or less.

PRESSER FOOT TENSION

STEP 1: Tighten presser foot tension until the material feeds correctly.

TAKE UP SPRING TENSION

If take up lever "falls" when you pick it up. (serial #s 2300-9500)

STEP 1: Loosen the nut on the nut on front

STEP 2: Tighten the shoulder bolt

COMPLETE YOUR STITCH

IMPORTANT

The "BOSS" Sewing Machine is dependent on the user pulling the handle all of the way down and then pushing the handle all of the way back up, for every stitch. The machine will bind up, skip stitches, and generally frustrate the user if you don't make a complete stitch. This is a common mistake when first using the machine, or attempting to go too fast.

REMOVING BURRS

STEP 1: Check your needle foot, presser foot, needle plate, bobbin shuttle, shuttle tension screw, and retainer shuttle for burrs.

STEP 2: Remove burrs with 240 grit sand paper or emery cloth.

BUFF PRESSER FOOT

STEP 1: Using a buffing wheel or sandpaper, round the hard edges which are making the marks.

FINE TOOTH TIMING ADJUSTMENT

*Loosen bolt 1 turn. Do not remove the bolt.

NOTE: If you do remove the bolt, see regular timing instructions for replacing gear rack.

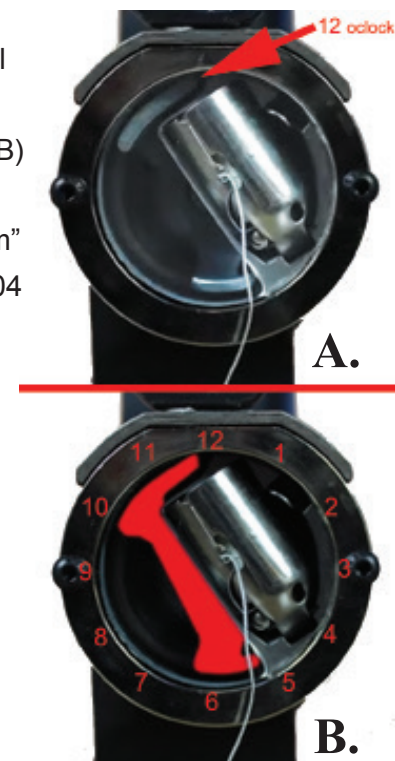
*After you loosen the bolt 1 turn, raise or lower the gear rack to finely tune the machine.

STEP 1: Locate the AR-42 Shuttle Driver (Figure A.) When the stitching handle is all the way up, the tip of the longer tine of the AR-42 Shuttle Driver (shown in red in Figure B) is at Top Dead Center, or 12 O'clock. If it is not, disengage the CAR-08 Gear Rack "from" the AR-05 Shuttle Gear and rotate the AR-04 Bottom Shaft.

STEP 2: Re-Engage the Gear Rack from the AR-05 Shuttle Gear and rotate the AR-04 Bottom Shaft.

STEP 3: Re-Engage the Gear Rack and shuttle Gear and check timing again.

STEP 4: Once your Shuttle Driver is in the correct position with the Stitching Handle all the way up as shown in (Figure B), you can replace the needle and dust cover and put the gear rack keeper back in place.



SM-140

Thread Lube Box



Lube Box is hinged to allow for easy thread insertion. Lube sold separately.

SM-141

Dyno silicone thread lubricant

- Container size 1 pt.



SM-16-5



Fleece & padded material foot

SM-16-2



Left presser foot

SM-16-3



Right presser foot

SM-16-4



Center presser foot

SM-52-5 5 pack

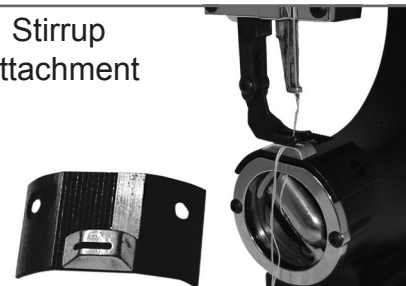
SM-52: single

Thread bobbins



SM-55

Stirrup Attachment



Chisel Point Needles

Needle.....	794160
Needle.....	794200
Needle.....	794250

* Chisel Point Needles are used specifically for leather crafting while round point needles can be used for about any material, including rubber, vinyl, cloth, leather, etc.

Round Point Needles

Needle.....	7x3110
Needle.....	7x3130
Needle.....	7x3160
Needle.....	7x3180
Needle.....	7x3200
Needle.....	7x3230
Needle.....	7x3250

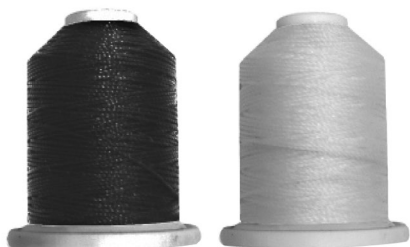
Thread: 1 lb. Spools

Colors:

- White
- Natural
- Brown
- Dark Brown
- Black

Sizes:

- z69
- z99
- z138
- z207
- z277
- z346
- z415



CHS-210

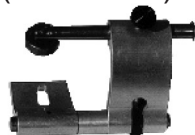
Wood Cobblers Bench

- Includes Steel Riser.



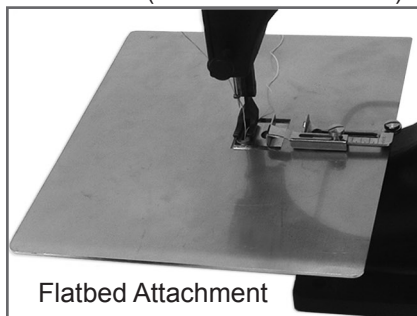
CMG-1

Material Guide Attachment (retractable)



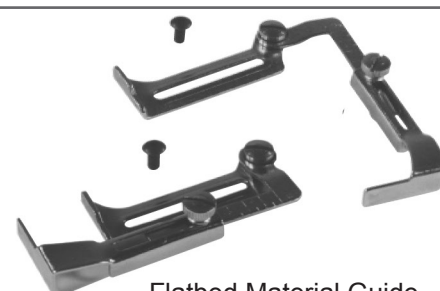
Flatbed Attachment shown with HS-60 Flatbed Material Guide. (included with this item)

CSM-38



Flatbed Attachment

HS-60



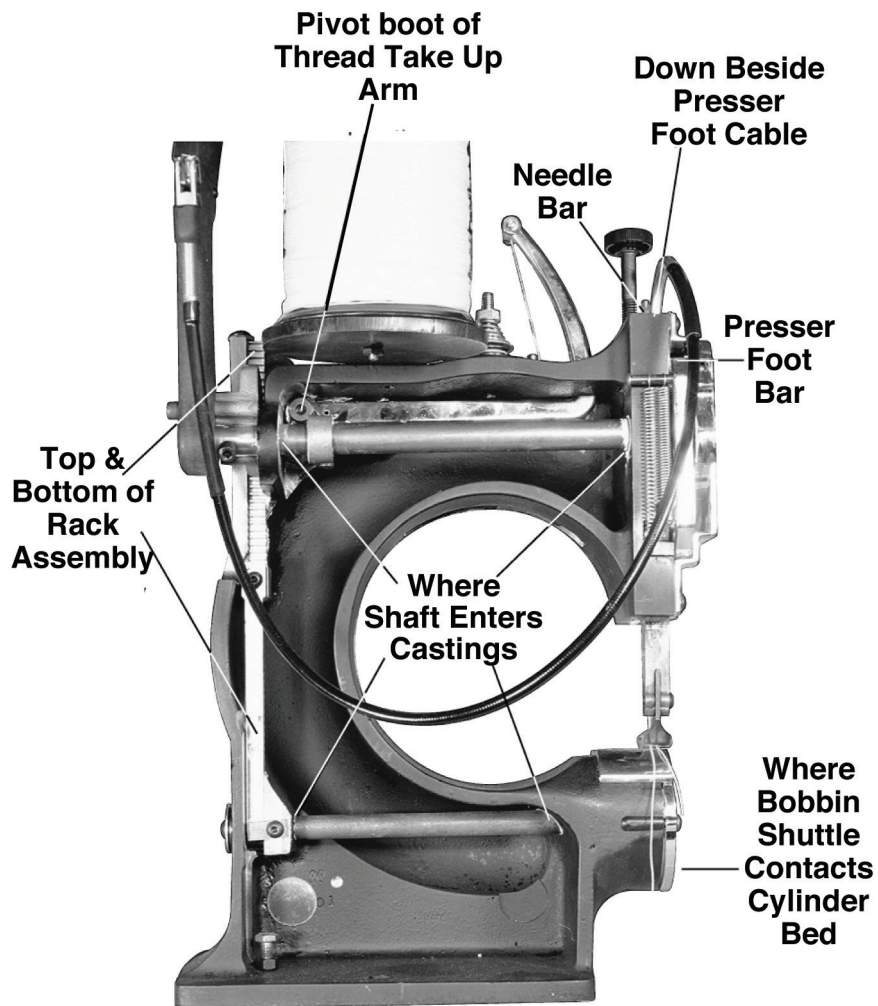
Flatbed Material Guide

CLEANING AND LUBRICATING THE MACHINE

Your Tippmann “BOSS” should always be kept clean from lint and dust buildup to ensure proper operation. Periodically check the external and internal components of the machine to remove any buildups which may have occurred.

- After cleaning any lint or dust buildups, place a drop or two of oil at the wear points such as those indicated below.

NOTE: Use a quality sewing machine oil when oiling the “BOSS”



TIPPMANN

INDUSTRIAL PRODUCTS

WARRANTY AND REPAIR POLICY

Tippmann Industrial Products, Inc. is dedicated to providing you with the precision manufactured Tippmann “BOSS®” hand stitcher sewing machine and the quality support necessary for the utmost satisfaction in its use. In the event that warranty or other non-warranty related repairs are required, we are here for you. We are open Monday - Friday - 8:30 to 5:00 Eastern Time. You can also email us. Email your questions to: service@tippmannindustrial.com and we will respond to your question on the next business day.

For assistance with warranty and repair, call 260-441-9603

WARRANTY STATEMENT

Tippmann Industrial Products, Inc. warrants that this product is found free from defects in materials and workmanship for a period of 1 year from the original date of purchase by the initial owner/purchaser. On claims submitted as outlined in “WARRANTY OR REPAIR PROCEDURE” Tippmann Industrial Products, Inc. will repair or replace, without charge, any parts that have failed through defect in material or workmanship.

WARRANTY OR REPAIR PROCEDURE

For warranty and non-warranty repair, after contacting Tippmann Industrial Products, Inc., ship or deliver your sewing machine or specific parts to Tippmann Industrial Products, Inc., with a brief statement regarding the requested repair, your name, address and telephone number where you can be reached during normal business hours, if possible.

SHIP TO:

TIPPMANN INDUSTRIAL PRODUCTS, INC.

3518 ADAMS CENTER RD,

FORT WAYNE, IN 46806