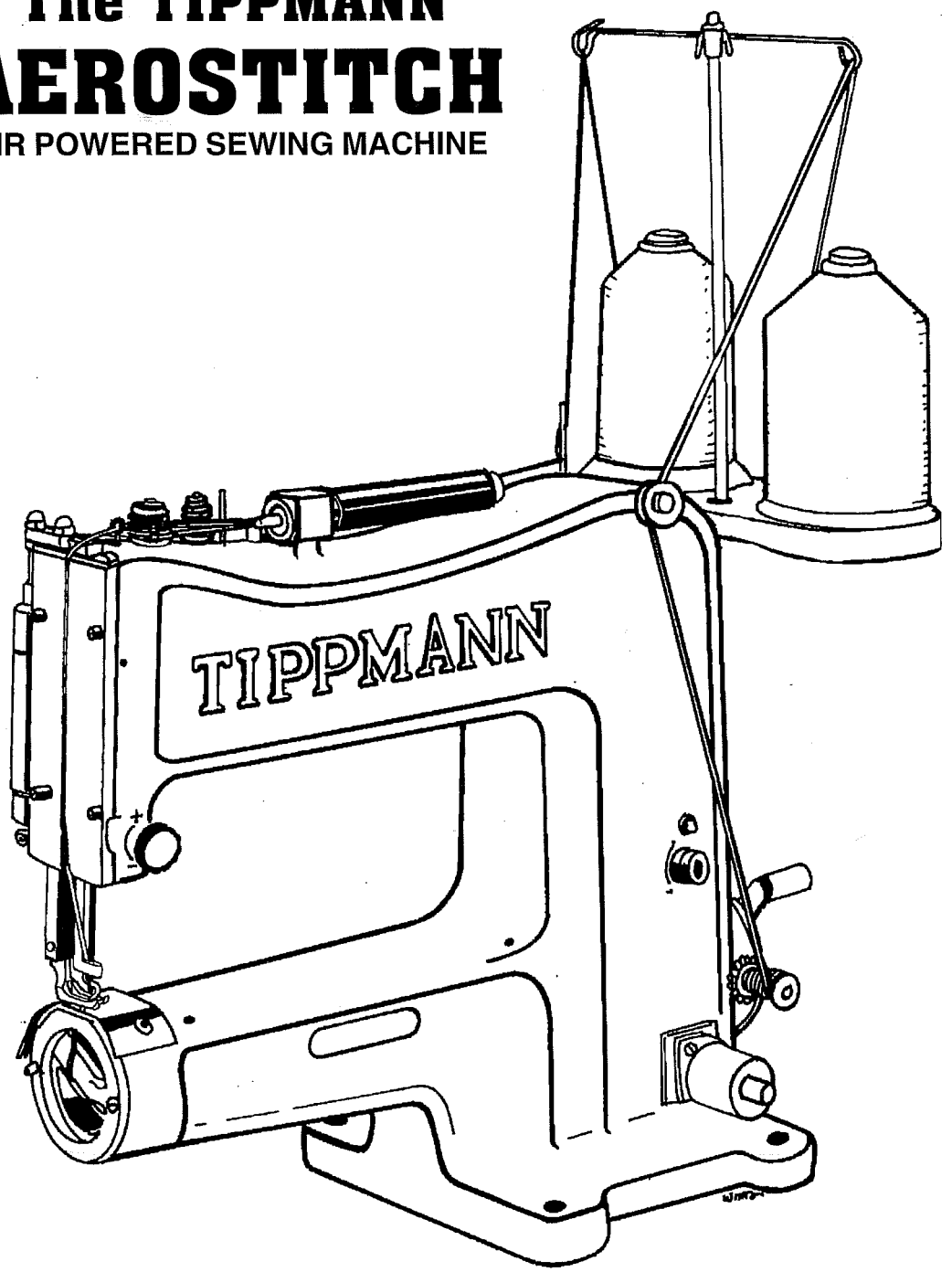
TIPPMANN

INDUSTRIAL PRODUCTS, INC.

OPERATOR'S MANUAL

The TIPPMANN AEROSTITCH

AIR POWERED SEWING MACHINE



4520 Ellenwood Drive • Fort Wayne, IN 46806 • Tel: (260) 441-9603 • Fax: (260) 441-8264
INTERNET: www.tippmannindustrial.com

TIPPMANN

INDUSTRIAL PRODUCTS, INC.

AEROSTITCH

AIR POWERED SEWING MACHINE

OPERATOR'S MANUAL

CONGRATULATIONS on your purchase of our Tippmann AEROSTITCH air powered sewing machine

Please take time to read through this manual thoroughly and become familiar with the Tippmann AEROSTITCH parts, operation, and safety precautions ***before*** you attempt to operate this machine.

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WARNING/LIABILITY STATEMENT

This Tippmann AEROSTITCH 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.

- Shut off air supply and cycle the machine to remove pressurized air:
— 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 with back cover off.

- 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 AEROSTITCH sewing machine is a needle-feed, lock-stitch machine. The AEROSTITCH 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	AEROSTITCH
Type Feed	Needle Feed/Lower Needle Guide
Type Stitch	Lock Stitch
Type Bed	3 " Cylinder Bed
	(optional flat-bed attachment available)
Throat Depth	11"
Stitch Cycle Rate	Variable 1 to 250+ 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 554
Stitch Length Adjuster	4 per inch to 16 per inch
Bobbin Winder	Built-in/Manual
Power Requirements	80-120 lb. Air Pressure @ 5 cfm
(Standard 3/4 HP Air Compressor or can also work off a regulated CO^2 tank)	
Machine Weight with Pedals	75 Pounds

STANDARD EQUIPMENT

- 2 Spool Thread Stand
- Mechanical Bobbin Winder*
- 2 Bobbins
- Assortment of 10 Needles*
- Foot Pedal Controls
- Standard Presser Foot*
- Shuttle (#98622)
- Allen Wrench Set
- 1/4 Bicarbonate Filter

*See *Optional Equipment & Pricing* pages for additional options.

SETUP INSTRUCTIONS

• Secure machine to Tippmann stand using four (4) 7/16" bolts of suitable length. If installing to existing work bench use four (4) 7/16" bolt or lag screws of suitable length.

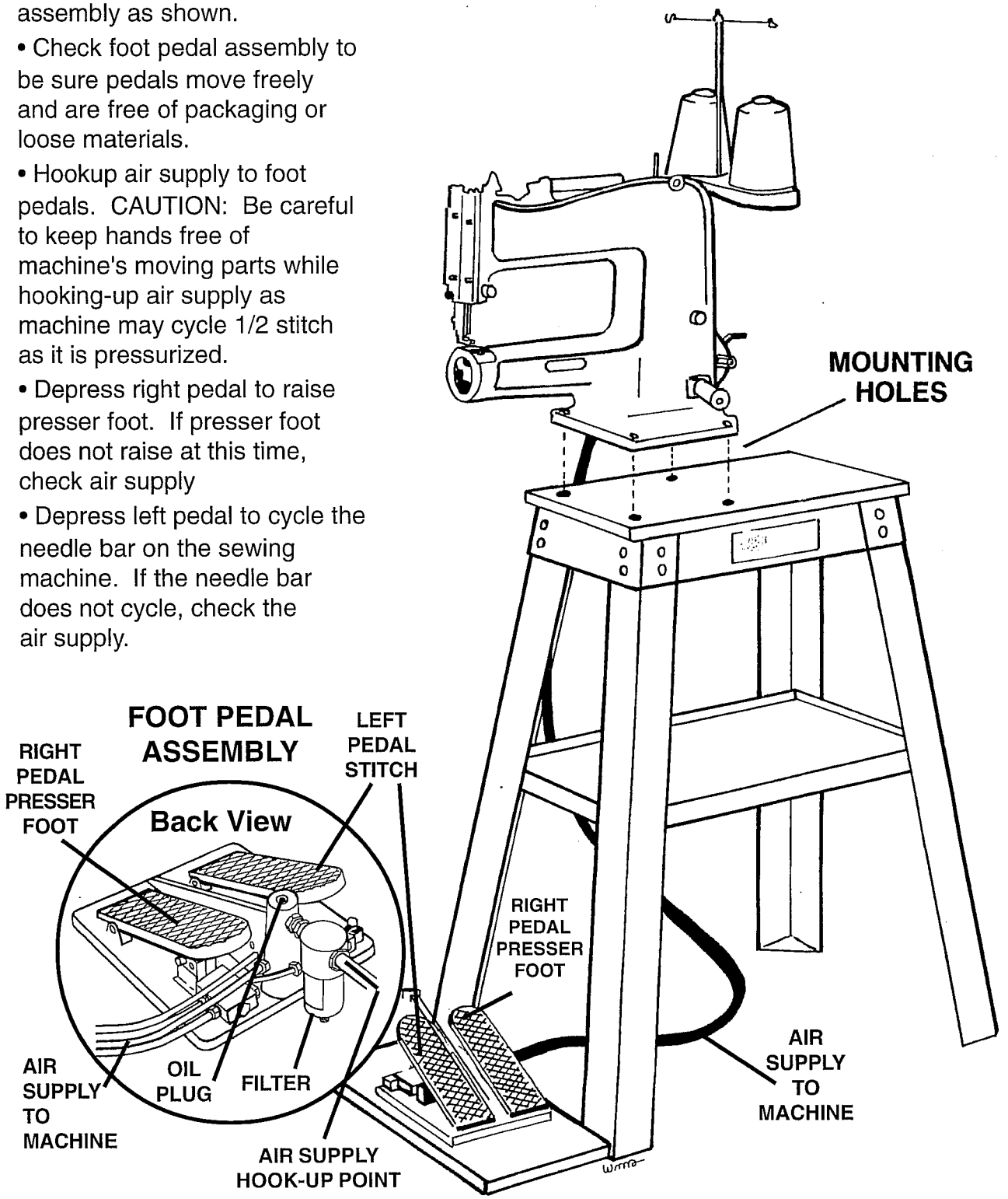
• Position foot pedal control assembly as shown.

• Check foot pedal assembly to be sure pedals move freely and are free of packaging or loose materials.

• Hookup air supply to foot pedals. CAUTION: Be careful to keep hands free of machine's moving parts while hooking-up air supply as machine may cycle 1/2 stitch as it is pressurized.

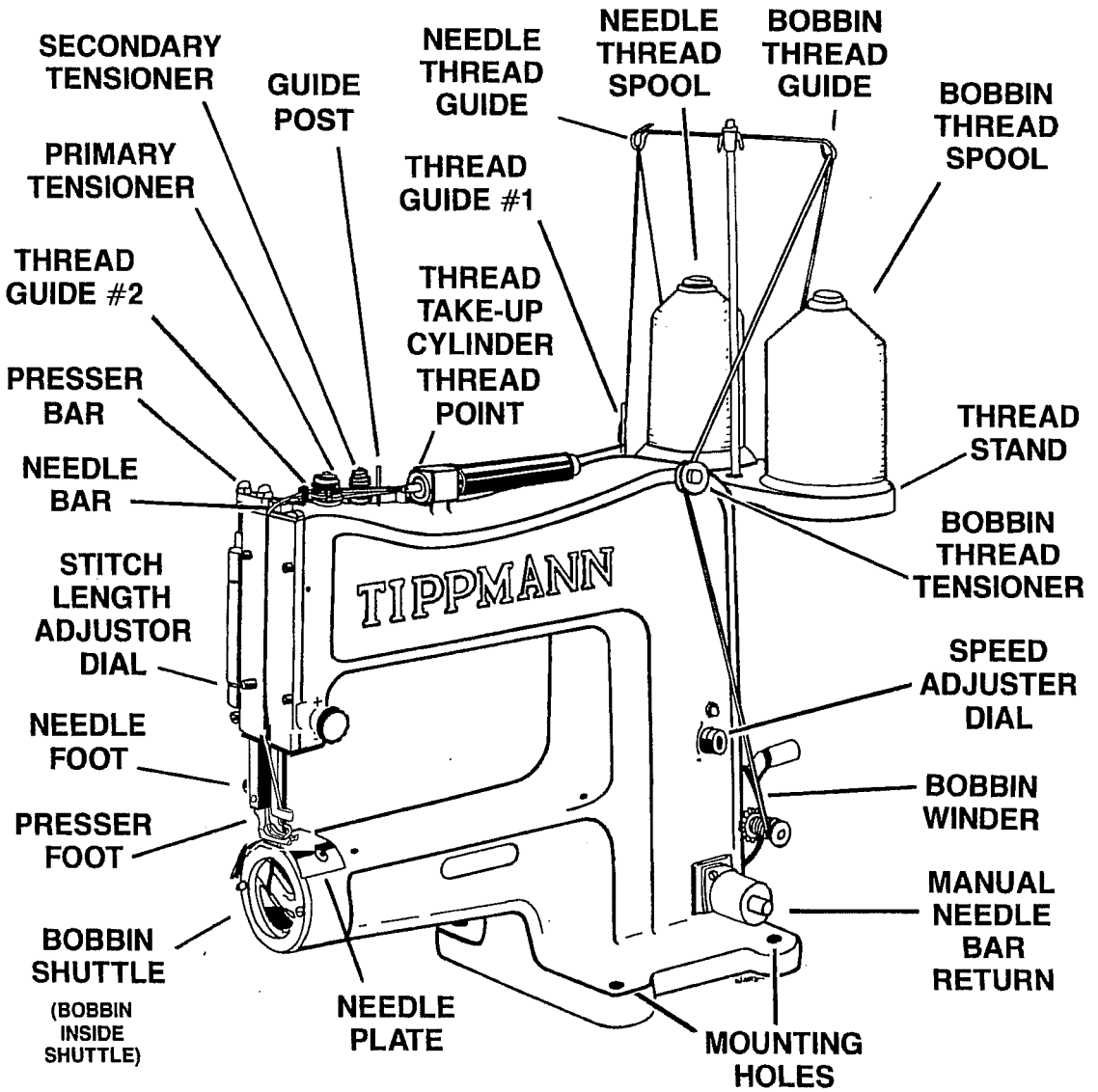
• Depress right pedal to raise presser foot. If presser foot does not raise at this time, check air supply

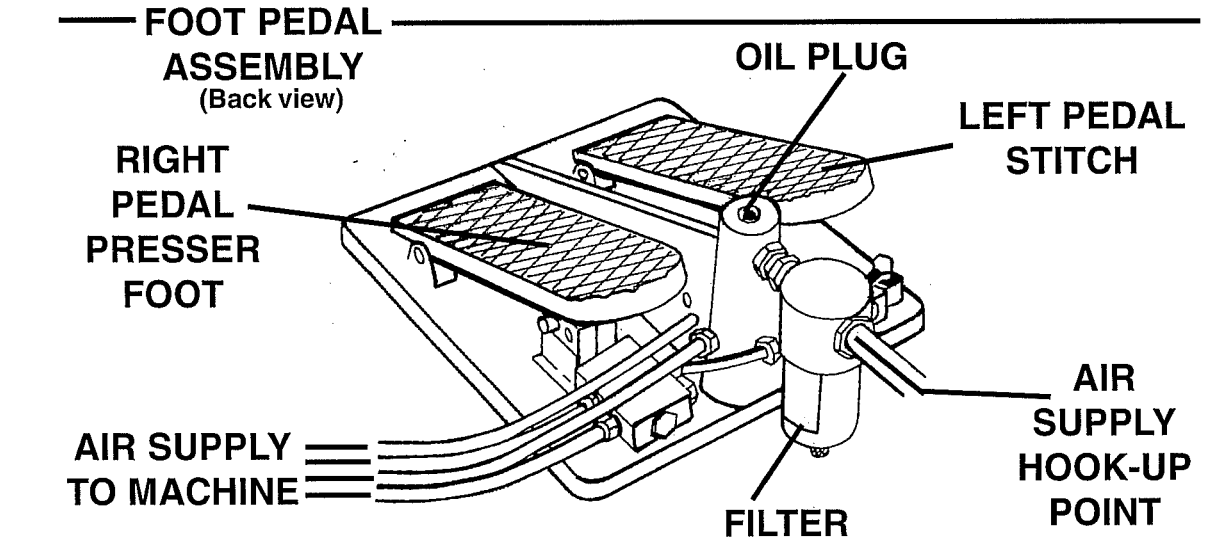
• Depress left pedal to cycle the needle bar on the sewing machine. If the needle bar does not cycle, check the air supply.



The **TIPPMANN**

AEROSTITCH





INSTALLING THE NEEDLE

CAUTION:

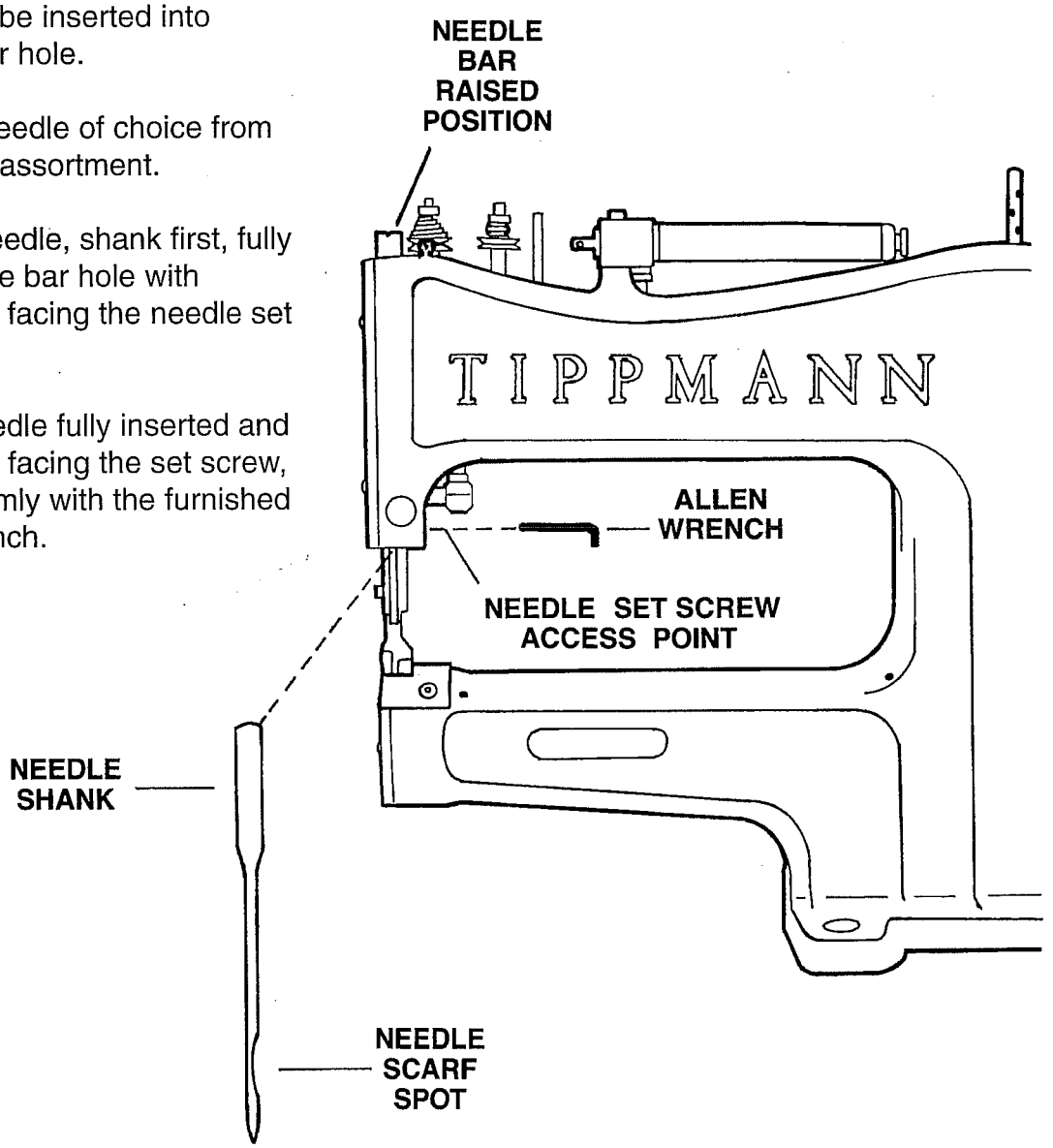
Before installing needle in the machine, do the following: Depress left pedal to cycle the needle bar to the raised position as pictured. At this point, shut off air supply to the machine. Now, cycle the presser foot (right pedal) to exhaust remaining pressurized air in machine.

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

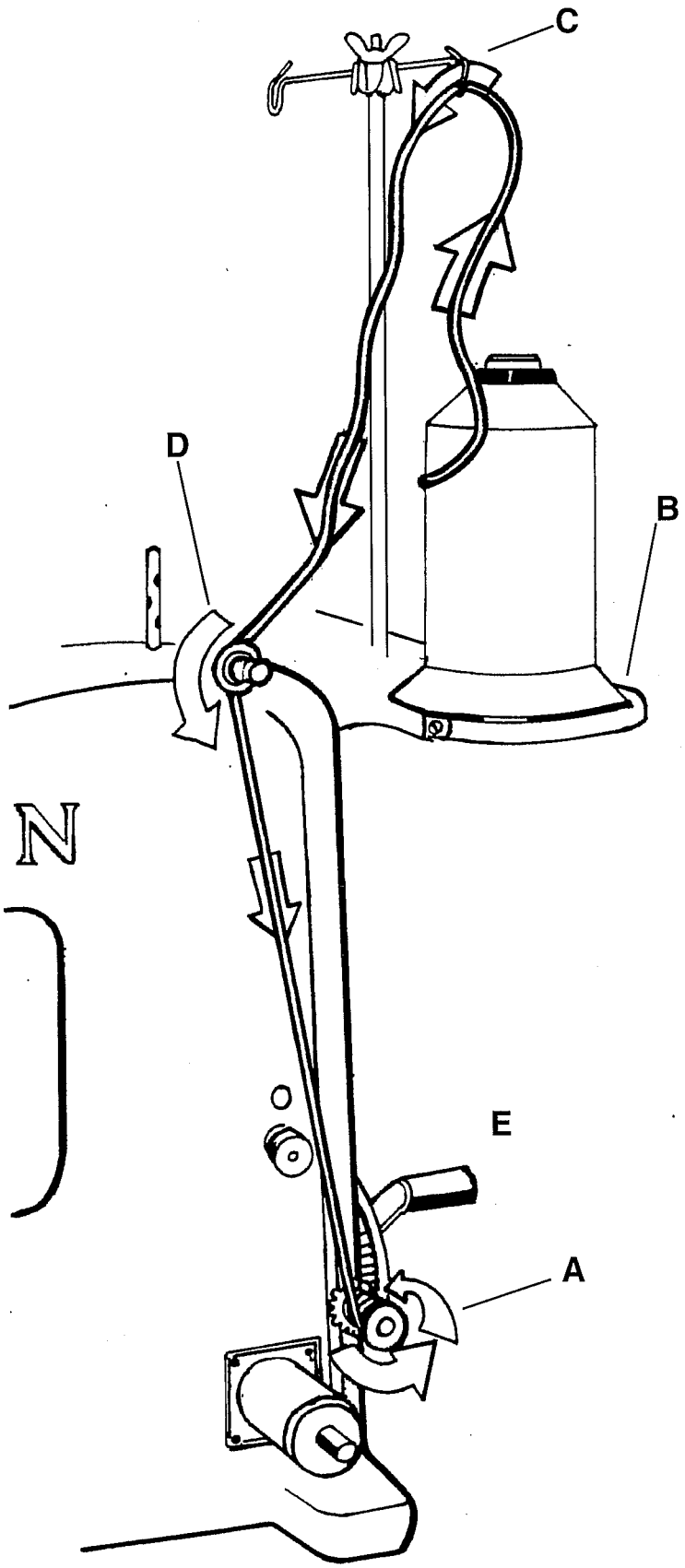
- Select needle of choice from furnished assortment.

- 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 set screw, tighten firmly with the furnished allen wrench.



THREADING THE BOBBIN



- Place empty bobbin on mechanical bobbin winder (A).

- Place desired thread on thread stand (B).

- Loop thread over thread guide (C).

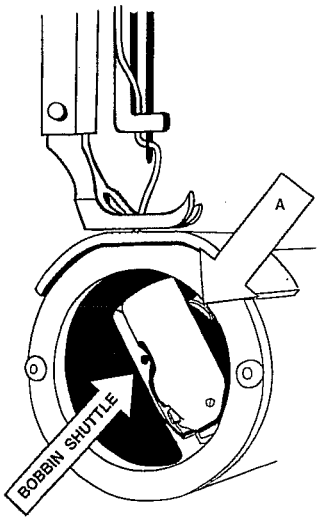
- Run thread counterclockwise around bobbin thread tensioner disk (D) then straight to empty bobbin at (A).

- To attach thread to bobbin place thread on center shaft of bobbin and hold with thumb while winding thread counterclockwise 3 to 5 times to secure thread to bobbin. Remove slack in thread by pulling excess thread up through tensioner.

- Fill* bobbin by cranking handle (E) clockwise. When bobbin is full, cut thread and remove from bobbin winder.

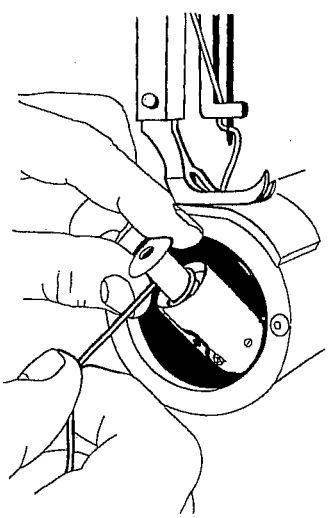
*Do not fill bobbin to the point that it has to be forced into bobbin shuttle.

INSTALLING BOBBIN IN BOBBIN SHUTTLE

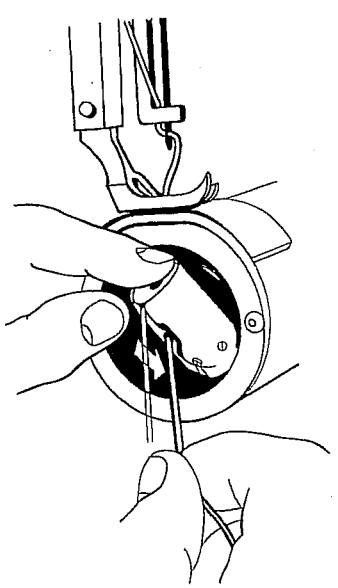


• Locate the bobbin shuttle in the end of the cylinder bed. Press the shuttle release latch to release the bobbin cylinder (point A).

• Remove the empty bobbin spool and wind with selected thread on the mechanical bobbin winder (See Threading the Bobbin page 7).



• 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 to the Bobbin Shuttle at the end of the cylinder bed at this point.

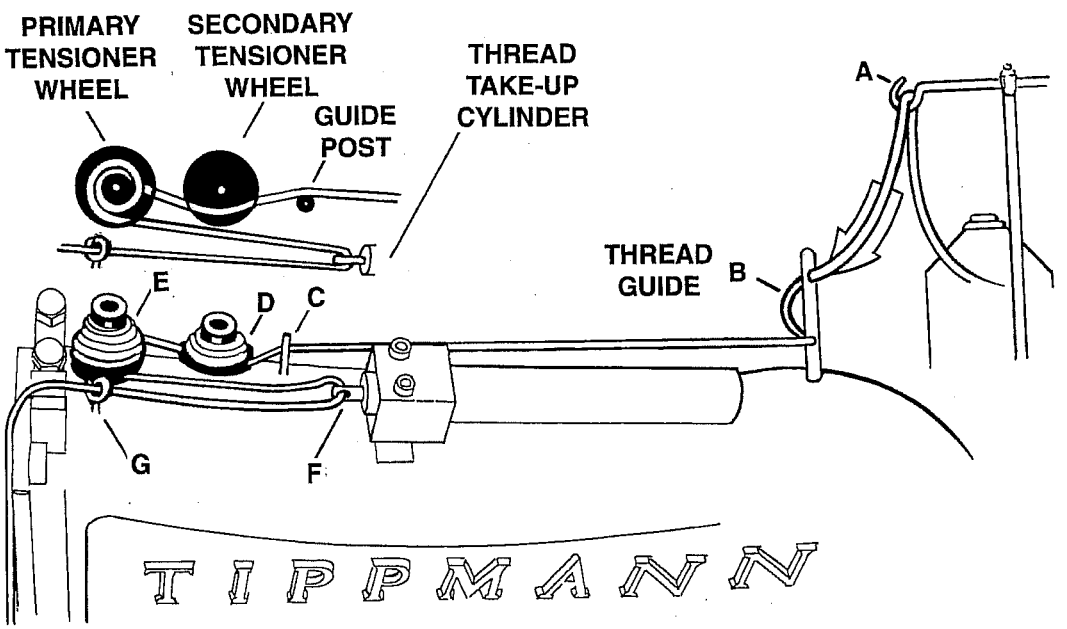
(Bobbin Thread Tension Adjustment Instructions on page 13)

THREADING THE MACHINE

CAUTION:

With the left pedal, cycle the needle bar to the raised position. Shut off the air supply to machine and cycle the presser foot with the right pedal to exhaust remaining pressurized air from machine.

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



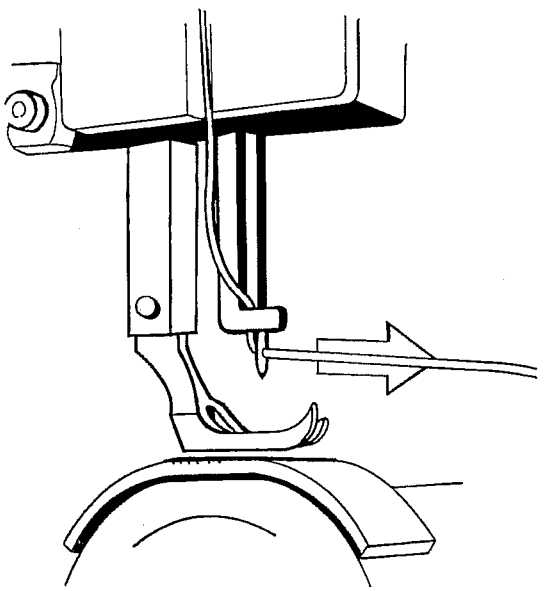
1. Loop thread over thread stand - Thread Guide (A) as shown above.
2. Pass thread through 2 holes in Thread Guide (B) as shown above.
3. Weave thread around guide post (C) as shown above.
4. Pass thread through left side of Secondary Tensioner Wheel (D) as shown above.
5. Loop thread counterclockwise around the Primary Tensioner wheel (E) as shown above..
6. Pass thread from primary tensioner wheel and through thread hole in Thread Take-up Cylinder (F) as shown above.. (NOTE: The primary tensioner wheel should rotate counterclockwise as thread is drawn through the thread take-up cylinder.)
7. Continue thread through thread guide (G) as shown above and down edge of machine.

You are now ready to thread needle.

THREADING THE NEEDLE

CAUTION:

With the left pedal, cycle needle bar to the raised position. Shut off air supply to machine and cycle the presser foot (right pedal) to exhaust remaining pressurized air from machine.



- Pass thread down through needle foot then from left to right through needle eye as shown in illustration.

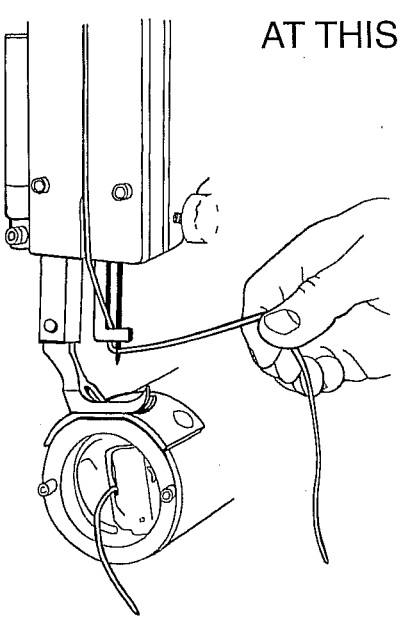
- Draw approximately ten (10) inches of thread through the eye of needle with which to prepare needle and bobbin threads for sewing.

DRAWING BOBBIN THREAD UP THROUGH NEEDLE PLATE

CAUTION:

Be careful to keep hands free of machine's moving parts while hooking-up air supply as machine may cycle 1/2 stitch when it is pressurized.

AT THIS POINT TURN AIR ON TO MACHINE.

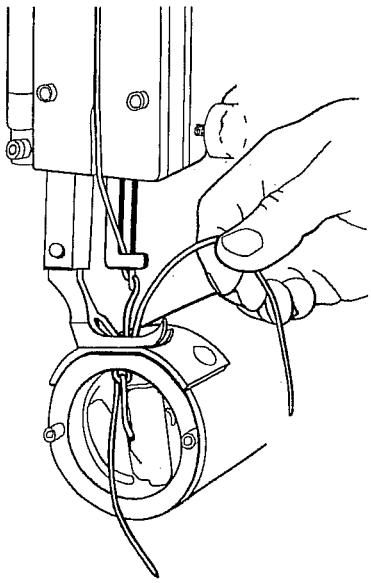


Readying needle thread for looping.

- Hold the end of the needle thread (away from the needle).

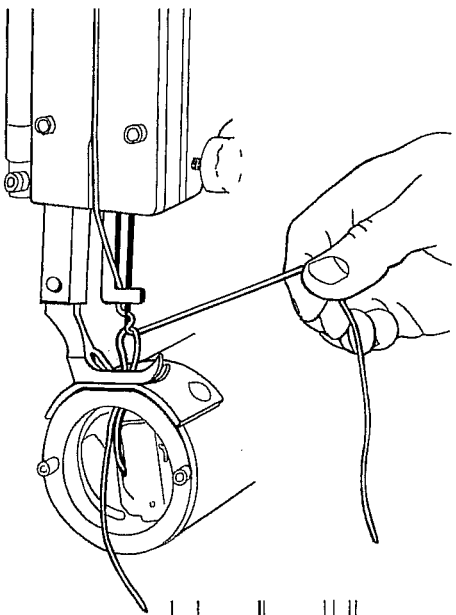
DRAWING BOBBIN THREAD UP THROUGH NEEDLE PLATE

(Continued from page 10)



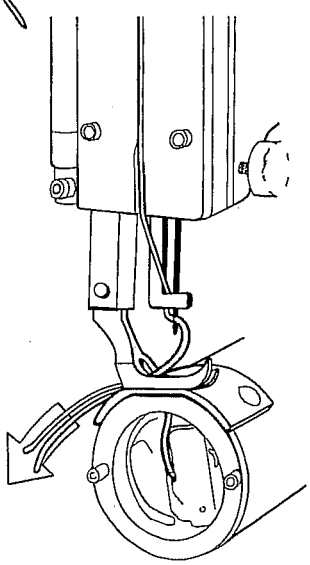
Looping bobbin and needle threads.

• Cycle needle bar (down & up) one time without releasing end of the needle thread. This action loops the bobbin and needle threads together inside the cylinder bed.



Drawing up the bobbin thread.

• Pull the needle thread and the bobbin thread will come up with it through the hole in the needle plate.



Aligning threads to sew.

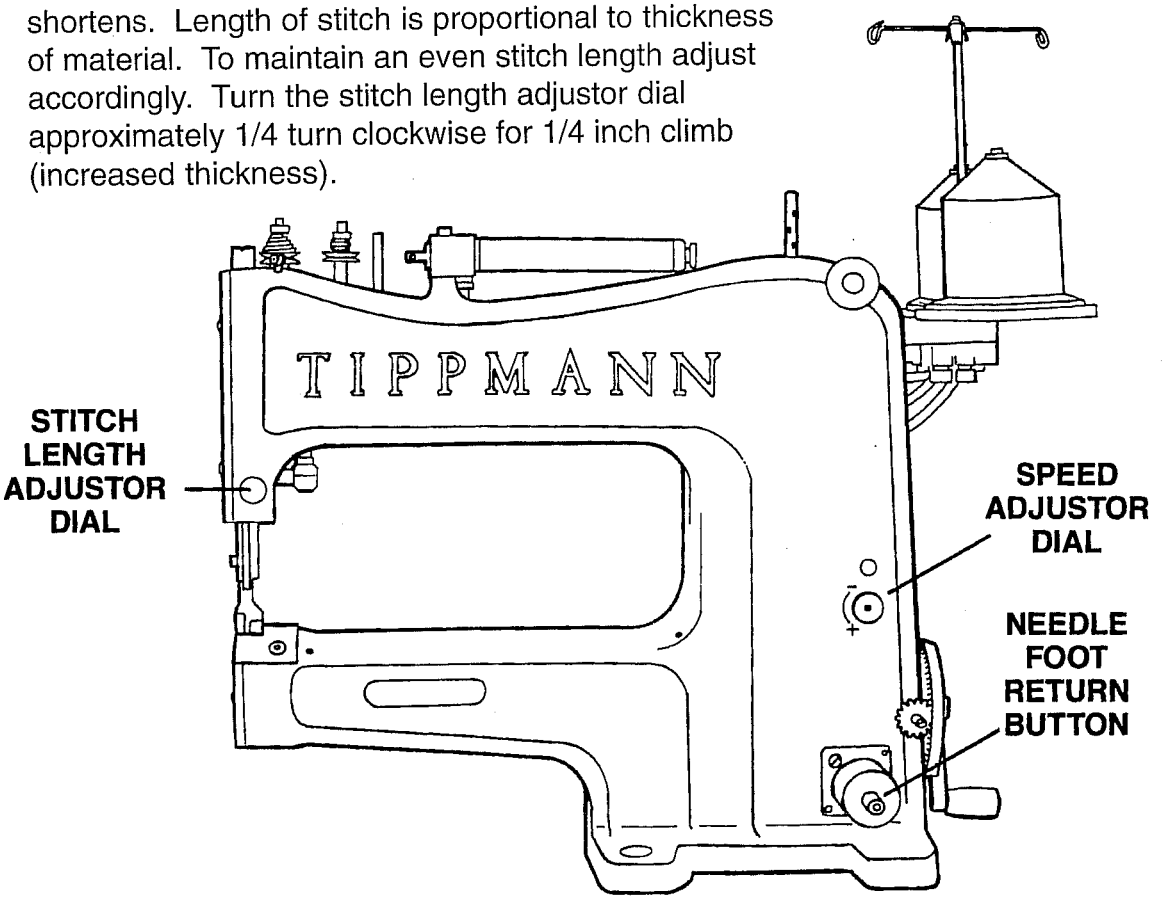
• Align needle thread through presser foot toes and align with bobbin thread.

• You are now ready to insert material for stitching (Unlike other machines, it is unnecessary to hold thread ends to begin stitching).

STITCH LENGTH ADJUSTMENT

Adjusting the stitch length is accomplished with the Stitch Length Adjustor Dial.

- For a larger stitch - turn the Dial clockwise.
- For a smaller stitch - turn the Dial counterclockwise.
- When material thickness is increased, stitch length shortens. Length of stitch is proportional to thickness of material. To maintain an even stitch length adjust accordingly. Turn the stitch length adjustor dial approximately 1/4 turn clockwise for 1/4 inch climb (increased thickness).



SPEED ADJUSTMENTS

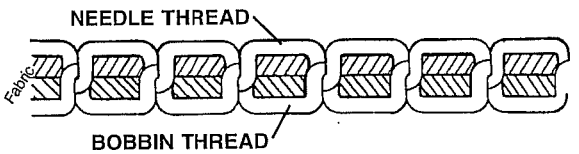
Adjusting the stitching rate is accomplished with the Speed Adjustor Dial.

- To increase speed - turn the Speed Adjustor Dial Counterclockwise.
- To decrease speed - turn the Speed Adjustor Dial Clockwise.

NEEDLE BAR RETURN BUTTON

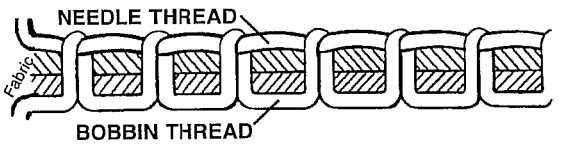
The AEROSTITCH is equipped with a Needle Bar Return Button which raises the needle foot to the upright position when pushed. This is particularly helpful if the needle sticks in thick material.

ADJUSTING THE STITCH



A PERFECTLY LOCKED STITCH results with upper and lower tensions balanced so that needle and bobbin threads are drawn into fabric equally.

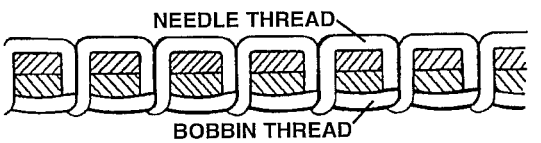
NEEDLE THREAD TENSION — ADJUSTMENTS



NEEDLE THREAD NOT BEING DRAWN INTO FABRIC

Needle thread tension may be too tight.

• Lower needle thread tension by adjusting the Primary Tensioner. Turn the Primary Tensioner adjusting nut counterclockwise to lesson the needle thread tension.

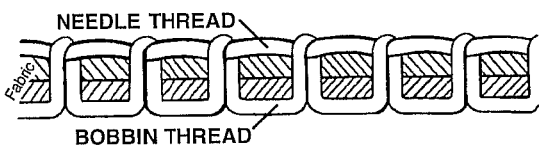


NEEDLE THREAD BEING DRAWN THROUGH FABRIC

Needle thread tension may be too loose.

• Tighten needle thread tension by adjusting the Primary Tensioner. Turn the Primary Tensioner adjusting nut clockwise to increase the needle thread tension.

BOBBIN THREAD TENSION — ADJUSTMENTS



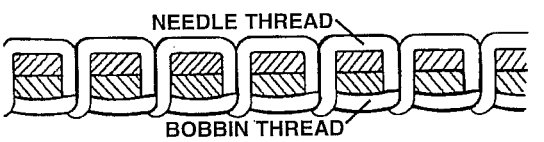
BOBBIN THREAD BEING DRAWN THROUGH FABRIC

Bobbin thread tension may be too loose.

(NOTE: Before adjusting tension screw, loosen tension locking screw.)

•Tighten bobbin thread tension by turning bobbin tension screw clockwise.

(NOTE: After adjusting tension screw be sure to snug-tighten the tension locking screw.)



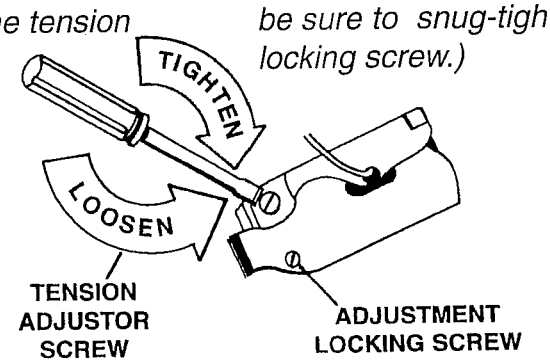
BOBBIN THREAD NOT BEING DRAWN INTO FABRIC

Bobbin thread tension may be too tight.

(NOTE: Before adjusting tension screw, loosen tension locking screw.)

• Loosen bobbin thread tension by turning bobbin tension screw counterclockwise.

(NOTE: After adjusting tension screw be sure to snug-tighten the tension locking screw.)

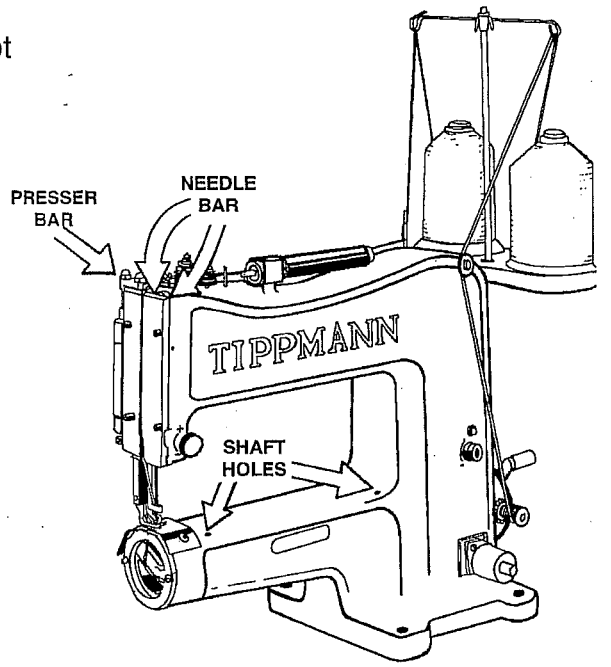


CLEANING AND LUBRICATING THE MACHINE

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

Use a quality sewing machine oil when oiling the AEROSTITCH.

• Apply a drop or two of oil to each place as indicated...

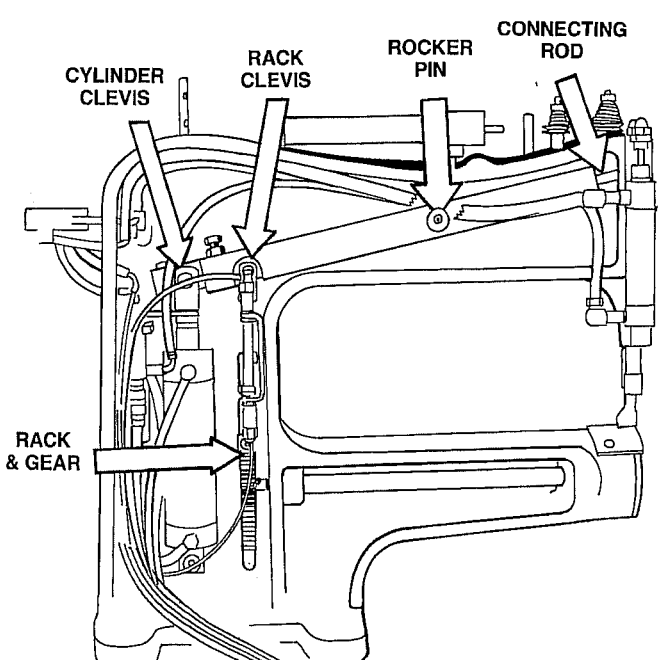


CAUTION:

Before removing back cover, shut off the air supply and cycle the machine to remove all pressurized air. Do not operate machine with back plate removed as equipment damage or personal injury could result.

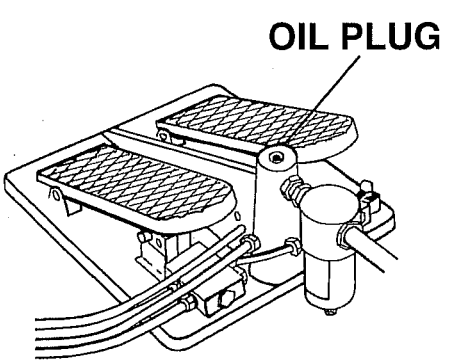
WITH THE BACK COVER REMOVED

• After cleaning any lint or dust buildups, place a drop or two of oil at the points indicated below. Carefully replace the back cover when cleaning and oiling is complete.



TO LUBRICATE THE AIR SYSTEM

• To internally lubricate the air system shut off the air supply and cycle the machine to remove all pressurized air. Locate the Oil Plug on the foot pedal assembly.



• Remove the Plug with 3/16" allen wrench and add 3 - 4 drops of oil into the air line. Replace the oil plug and repeat monthly (more or less often depending on machine usage).

TROUBLE SHOOTING

TO AVOID BREAKING NEEDLES: If the needle breaks it may be caused by one of the following:

- Avoid pulling materials when stitching.
- Do not attempt to sew heavy materials with too small of a needle.

NEEDLE THREAD BREAKS: If the needle thread breaks it may be caused by one of the following:

- Improperly threaded machine (See page 9).
- Needle thread tension being too tight. (See page 13).
- The thread being too coarse for the size of needle being used (See below).
- The needle being incorrectly installed (See page 6).
- Check to see if the needle is bent.
- Check to see if the needle has a dull point.

BOBBIN THREAD BREAKS: If the bobbin thread breaks it may be caused by one of the following:

- Improperly threaded bobbin (See page 7).
- Bobbin tension being too tight (See page 13).

SKIPPING STITCHES: If the machine skips stitches it may be caused by one of the following:

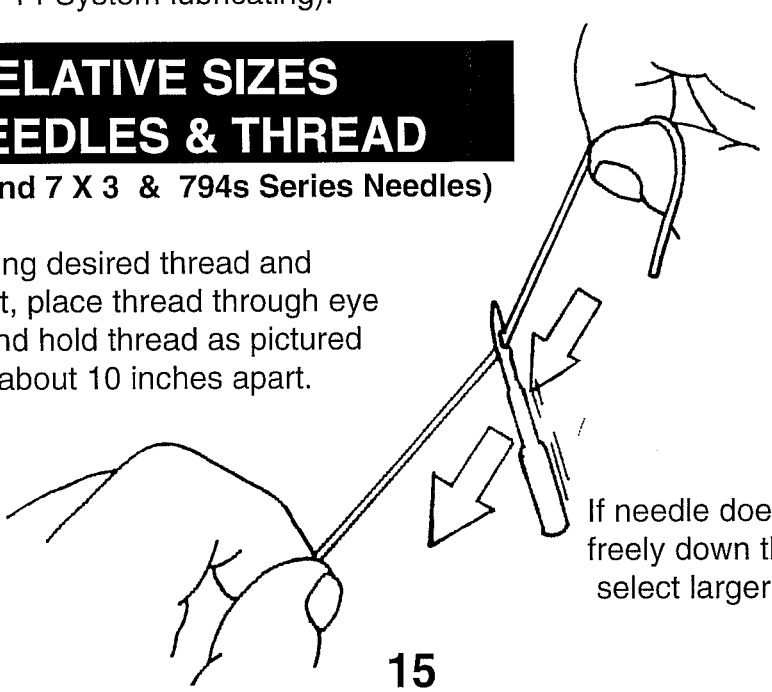
- Check to be sure needle is fully seated in the needle bar and is securely fastened in place (See page 6).
- Check to be sure needle is not blunt or bent.
- Check to be sure needle size and thread size are compatible.
- Check to be sure needle scarf spot is aligned correctly (See page 6).
- Check to be sure shuttle area is clear of debris and moves freely.
- Check to be sure material is not jumping which can cause missed stitches.

MATERIAL IS JUMPING: If material is jumping, the pressure foot is not coming completely down before the needle starts up causing material to jump (See page 14 System lubricating).

RELATIVE SIZES OF NEEDLES & THREAD

(Recommend 7 X 3 & 794s Series Needles)

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



If needle does not slide freely down thread — select larger needle.

TIPPMANN

INDUSTRIAL PRODUCTS, INC.

WARRANTY AND REPAIR POLICY

Tippmann Industrial Products, Inc., is dedicated to providing you with the precision manufactured AEROSTITCH sewing machine and the quality support necessary for the utmost satisfaction in its use. In the event warranty or other non-warranty related repairs are required, we are here for you. For assistance with warranty and repair call 1 (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 calling the above warranty and repair number, ship or deliver your sewing machine or specific parts to Tippmann Industrial Products, Inc. postage or delivery charges prepaid, 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.
4520 ELLENWOOD DRIVE
FORT WAYNE, IN 46806

Tel: (260) 441-9603 • Fax: (260) 441-8264

INTERNET: www.tippmannindustrial.com

THREAD SPECIFICATIONS

Recommended Thread and Needles for Tippmann Equipment

Thread Size	Cord Equivalent	7 x 3 Needle ..... Part #	794s Serv 1 Needle ..... Part #
MB-69	F -	7 X 3 110 ..... SM 53-12	-.....-
MB-99	- -	7 X 3 110 ..... SM 53-12	-.....-
MB-138	U-150 -	7 X 3 130 ..... SM 53-8	-.....-
MB-207	U-250 3	7 X 3 160 ..... SM 53-1	794s Serv 1 160 ..... SM 53-9
MB-277	U-300 4	7 X 3 180 ..... SM 53-2	794s Serv 1 180 ..... SM 53-7
	U-300 4	7 X 3 200 ..... SM 53-3	794s Serv 1 200 ..... SM 53-4
MB-346	U-350 5	7 X 3 230 ..... SM 53-6	794s Serv 1 230 ..... SM 53-5
MB-415	U-450 6	7 X 3 230 ..... SM 53-6	794s Serv 1 230 ..... SM 53-5
MB-554	U-600 8	7 X 3 250 ..... SM 53-11	794s Serv 1 250 ..... SM 53-10

Specifications subject to change without notice.

Average Linear Density			Breaking Strength		Diameter	
Size	Yards/Lb	M/Kg	Lbs	Kg	Inches	mm
MB-69	6,450	13,003	11.90	5.40	0.0090	0.230
MB-99	4,375	8,820	15.30	6.95	0.0110	0.280
MB-138	3,230	6,512	23.50	10.70	0.0135	0.340
MB-207	2,234	4,504	33.50	15.20	0.0180	0.460
MB-277	1,615	3,256	46.00	20.90	0.0240	0.610
MB-346	1,220	2,460	64.00	29.10	0.0260	0.660
MB-415	1,060	2,137	76.00	34.50	0.0290	0.740
MB-554	790	1,593	88.00	40.00	0.0310	0.790

Specifications subject to change without notice.

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