

#155 DOUBLE PULL BINDING BRUTE

INSTRUCTION MANUAL

 Read Manual Before Operating Machine



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RULES FOR SAFE OPERATION

READ AND SAVE ALL INSTRUCTIONS FOR FUTURE USE. Before use, be sure everyone operating this equipment reads and understands this manual as well as any labels packaged with or attached to the tool.

- 1. KNOW YOUR EQUIPMENT:** Read this manual carefully to learn equipment applications and limitations as well as potential hazards associated with this type of equipment.
- 2. GROUND YOUR TOOL:** Unless your tool is double insulated, it should be grounded. *See Grounding.*
- 3. AVOID DANGEROUS ENVIRONMENTS:** Do not use in rain, damp or wet locations, or in the presence of explosive atmospheres (gaseous fumes, dust or flammable materials). Remove materials or debris that may be ignited by sparks.
- 4. KEEP WORK AREA CLEAN AND WELL LIT:** Cluttered, dark work areas invite accidents.
- 5. DRESS PROPERLY:** Do not wear loose clothing. These may be caught in moving parts. When working outdoors, wear rubber gloves and insulated non-skid footwear. Keep hands and gloves away from moving parts.
- 6. USE SAFETY EQUIPMENT:** Everyone in the work area should wear safety goggles or glasses complying with current safety standards. Wear hearing protection during extended use and a dust mask for dusty operations. Hard hats, face shields, safety shoes, etc. should be worn when specified or necessary.
- 7. KEEP BYSTANDERS AWAY:** Children and bystanders should be kept at a safe distance from the work area to avoid distracting the operator and contacting the tool or extension cord. Operator should be aware of who is around them and their proximity.
- 8. PROTECT OTHERS IN THE WORK AREA:** Provide barriers or shields as needed to protect others from debris.
- 9. USE PROPER ACCESSORIES:** Using accessories that are not recommended may be hazardous. Be sure accessories are properly installed and maintained. Do not delete a guard or other safety device when installing an accessory or attachment.
- 10. CHECK FOR DAMAGED PARTS:** Inspect guards and other parts before use. Check for misalignment, binding of moving parts, improper mounting, broken parts and any other conditions that may affect operation. If abnormal noise or vibration occurs, turn the tool off immediately and have the problem corrected before further use. Do not use damaged equipment. Tag damaged tools "DO NOT USE" until repaired. A guard or other damaged parts should be properly repaired or replaced. For all repairs, insist on only identical National replacement parts.
- 11. REMOVE ALL ADJUSTING KEYS AND WRENCHES:** Make a habit of checking that the adjusting keys, wrenches, etc. are removed from the tool before turning it on.
- 12. GUARD AGAINST ELECTRIC SHOCK:** Prevent body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.
- 13. AVOID ACCIDENTAL STARTING:** Be sure equipment is turned off before plugging it in. Do not use a tool if the power switch does not turn the tool on and off.
- 14. DO NOT FORCE EQUIPMENT:** Equipment will perform best at the rate for which it was designed. Excessive force only causes operator fatigue, increased wear and reduced control.
- 15. KEEP HANDS AWAY FROM ALL MOVING PARTS.**

RULES FOR SAFE OPERATION

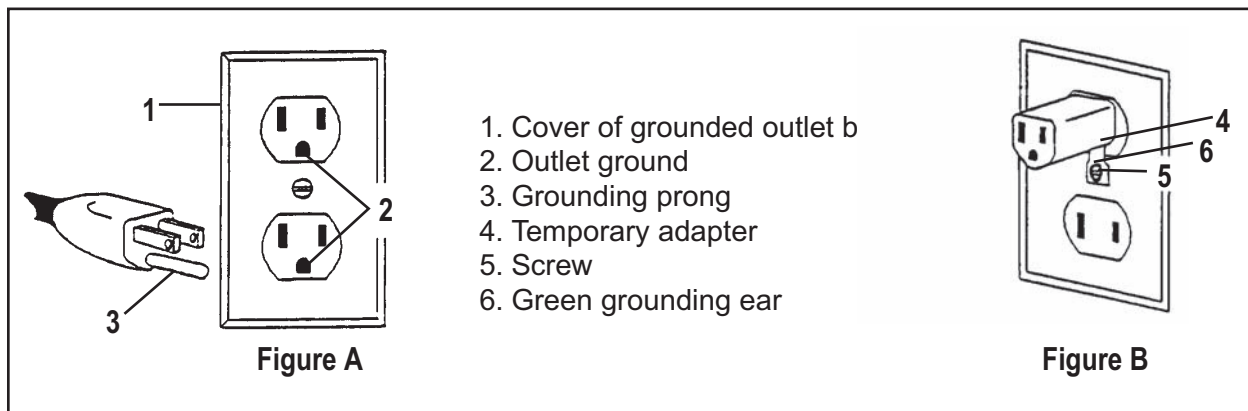
16. **DO NOT ABUSE CORD:** Never unplug by yanking the cord from the outlet. Pull plug rather than cord to reduce the risk of damage. Keep the cord away from heat, oil, sharp objects, cutting edges and moving parts.
17. **STAY ALERT:** Watch what you are doing, and use common sense. Do not use when you are tired, distracted or under the influence of drugs, alcohol or any medication causing decreased control.
18. **STARTING MACHINE:** On/off switch must be in off position before connecting to power source.
19. **UNPLUG EQUIPMENT:** When it is not in use, unplug tool before changing accessories or performing recommended maintenance.
20. **STORE IDLE EQUIPMENT:** When not in use, store in a dry, secured place. Keep away from children.
21. **MAINTAIN LABELS AND NAMEPLATES:** These carry important information. If unreadable or missing, contact National for a free replacement.
22. **MACHINE IS HEAVY, DO NOT DROP.**

RULES FOR SAFE OPERATION

GROUNDING

⚠ WARNING: Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the cord or plug is damaged. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

⚠ WARNING: Electrical cords can be hazardous. Misuse can result in fire or death by electrical shock. Read carefully and follow all directions.



GROUNDING TOOLS: TOOLS WITH THREE PRONG PLUGS

Tools marked "Grounding Required" have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet. See *Figure A*. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock.

The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically "live" terminal.

Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in *Figure A*.

Figure B illustrates a temporary adapter available for connecting grounded plugs (*Figure A*) to two prong outlets. The green rigid ear or lug extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box or receptacle. Simply remove the center screw from the outlet, insert the adapter and reattach the screw through the green grounding ear to the outlet. If in doubt of proper grounding, call a qualified electrician. A temporary adapter should only be used until a properly grounded outlet can be installed by a qualified electrician. The Canadian Electrical Code prohibits the use of temporary adapters.

RULES FOR SAFE OPERATION


EXTENSION CORDS

⚠ WARNING: Electrical cords can be hazardous. Misuse can result in fire or death by electrical shock. Read carefully and follow all directions.

Grounded tools require a three wire extension cord. Double insulated tools can use either a two or three wire extension cord. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage.

The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. When using more than one extension cord to make up the total length, be sure each cord contains at least the minimum wire size required. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum wire size.

GUIDELINES FOR USING EXTENSION CORDS

- If you are using an extension cord outdoors, make sure it is marked with the suffix “W-A” (“W” in Canada) to indicate that it is acceptable for outdoor use.
- Be sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it.
- Protect your extension cords from sharp objects, excessive heat and damp or wet areas.
- Keep away from water. Do not use if wet. 
- Inspect thoroughly before each use. **DO NOT USE IF DAMAGED.**
- Make sure equipment is OFF before connecting cord outlet.
- FULLY INSERT plug into outlet.
- Do not remove, bend or modify any metal prongs or pins of cord.
- Do not use excessive force to make connections.
- Do not connect a three prong plug to a two-hole cord.
- Avoid overheating. Uncoil cord and do not cover it with any material.
- Do not walk on cord.
- Do not drive, drag or place objects over cord.

READ AND SAVE ALL INSTRUCTIONS FOR FUTURE REFERENCE.



INTRODUCTION

As with our many other products offered to the carpeting industry we stand ready to warrant and assist you in any way possible. Should it be necessary for you to require service or assistance, please contact our sales or service representative at 800-245-0267.

With the maintenance portion of the Video tape and this manual, it is our objective to provide you with both pictorial and written information necessary to assist you in proper servicing and maintenance of your Binding Brute.

Each new Binder is furnished with the following items:

- Binding Tape Discs (2)
- Instruction DVD
- Instruction Manual
- Lubricant
- Binding Reel Centering Plug
- Accessory Kit containing:
 - Prewound Bobbins (8)
 - Needles (1 -Ten Pack)
 - Tweezers
 - 5/64 Allen Wrench
 - Large Screwdriver (2)
 - Thread Clippers
 - 5/32 Allen Wrench
 - 3/32 Allen Wrench
 - Binding Tape (1 Roll)
 - Serging Tape Sample
 - Small Screwdriver (2)

NOTE: It is highly recommended you retain the box and packing your Binder was supplied in for storage, transporting or if necessary, to return the Binder for service. Replacement Shipping Cartons can be purchased.

For equipment to be returned, please fill out and include the return sheet found at the back of this instruction manual.

⚠ CAUTION: For your safety, always disconnect the power source to the Binder before attempting to service or adjust the machine.

THREADING INSTRUCTIONS

1. Raise needle to highest point.
2. Raise the feed roller.
3. Thread by following the letters indicated in the illustration (See Figure 1).
 - A. Upper Thread Guide
 - B. Enter Tension Discs
 - C. Exit Tension Discs
 - D. Take up Spring
 - E. Take up Lever
 - F. Lower Thread Guides
 - G. Needle Block
 - H. Needle (See Figure 2).

NOTE: Assure thread is bottomed in the tension disc (B & C). This is extremely important.

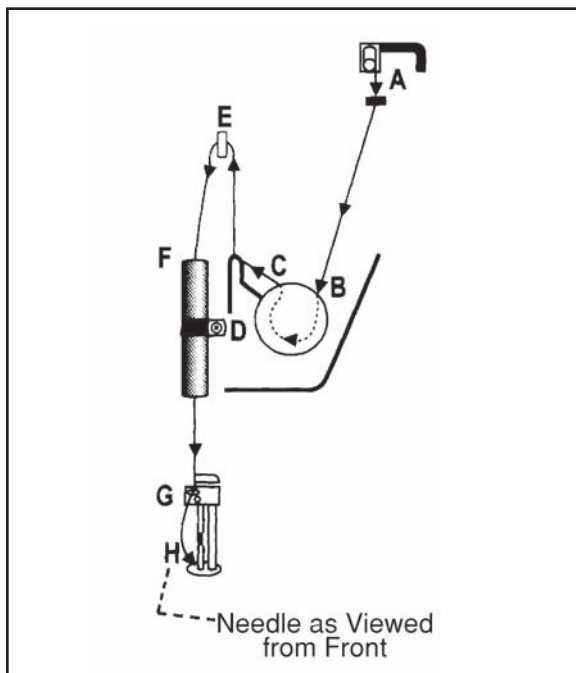


Figure 1

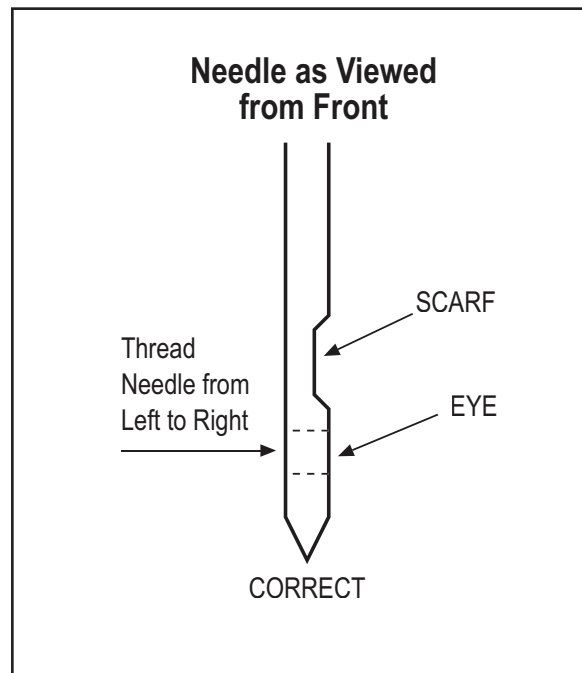


Figure 2

THREADING INSTRUCTIONS

1. Removal of Bobbin Case

- a. Raise feed roller.
- b. Rotate handwheel toward you until needle reaches its highest point.
- c. Tilt machine to rest on handwheel end. If you have binding wheels installed, use a small block box to support machine on handwheel.
- d. Remove lower feed roller plate.
- e. Lift and grasp bobbin case latch (as illustrated).
- f. Remove case by pulling towards you.

2. Threading of Bobbin Case

- a. With bobbin and bobbin case being held as illustrated, and with approximately 5 to 6 inches of thread for feeding, insert bobbin into case (See Figure 2).
- b. Pull thread through slot in the bobbin case. (See Figure 3).
- c. Continue by pulling thread under tension spring and up through slot in spring. (See Figure 4).

Refer to Step 7c to check for proper thread feed tension. (See Page 11, paragraph 3).

3. Installation of Bobbin Case

- a. Lift and grasp bobbin case latch and with the case horn aligned with the notch in the shuttle race cover, slide the bobbin case fully onto the center post (See Figure 1). During this operation, it is helpful to also hold the thread with the bobbin case to prevent the bobbin from dropping out of the case.
- b. Trim the bobbin thread to approximately 2 inches.

⚠ CAUTION: Assure the bobbin case latch is fully closed after installation.

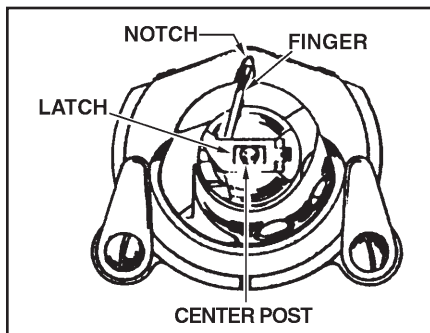


Figure 1



Figure 2

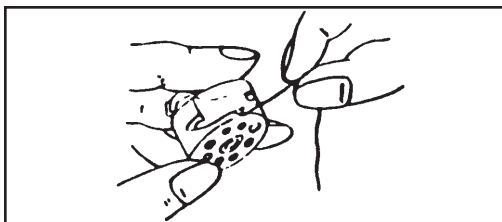


Figure 3

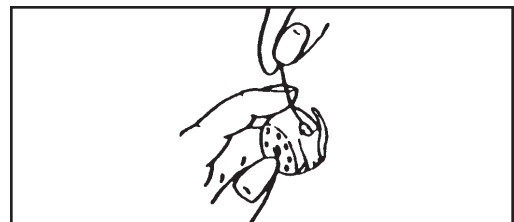


Figure 4

THREADING INSTRUCTIONS

4. Needle Replacement

- a. To remove, rotate the handwheel towards you until it reaches its highest point. Using a 5/64 allen wrench, (provided in the kit), loosen the set screw above the needle and remove needle.
- b. To replace, grasp the needle with tweezers, and as viewed from the feed side of the machine, position needle with the long groove facing left and the notch side facing right. Feed the point into the lower guide, and then the other end up into the clamp. Assure needle is bottomed in clamp before tightening set screw. **DO NOT OVER TIGHTEN.**

⚠ CAUTION: Replacement needles **MUST** be of the correct type and installed correctly for proper machine operation.

Proper needle type for your machine will be indicated by packet of needles enclosed in kit.

The majority of binders are equipped with a "Schmetz No. 22" needle. As an option, the "Schmetz No. 23" needle can be supplied or substituted. The principle difference is, the No. 23 is slightly larger in diameter, therefore stiffer and tends to deflect less. Needle to hook spacing may change and the adjustment should be checked per the adjustment instruction sheet. The diameter increase will result in a larger penetration hole in the fabric.

THREAD TENSION

1. **Proper thread tensions are important to obtain the optimum stitch appearance, proper knot location and tensions within the fabrics being sewn.**

*Indications of proper and improper thread tensions.

When the upper and lower thread tensions are correct, the threads are knotted in the fabric center as in this illustration.



With excessive tension on the upper thread, the result will be looping on the top of the fabric as in this illustration.



With excessive tension of the lower thread, the result will be looping on the bottom of the fabric as in this illustration.



2. Upper thread adjustments.

Rotation of the Tension control clockwise will INCREASE THREAD TENSION. Conversely, COUNTERCLOCKWISE will decrease thread tension.

NOTE: Make small adjustments (single number movements) until desired results are achieved. It is also appropriate at this point to note that whenever you re-thread the machine, to make sure the thread is properly seated between the tension discs. Lack of upper tension can result in looping of upper thread on bottom of carpet.

3. Lower thread adjustments.

Remove bobbin case. Check that the bobbin spool is properly threaded in the case. To test tension, hold the thread end and allow the bobbin case to hang freely. Give the thread a slight tug upward. If the tension is correct, the weight of the case will cause approximately 1" of thread to feed out.

To increase tension, turn the small slot screw on the case clockwise. Conversely, counterclockwise will decrease.

NOTE: Rotate the adjusting screw no more than 1/8" to 1/4" turn at a single time, until desired result are achieved. Recheck spool threading after each test and before reinstalling case in machine. Over time, thread dust will accumulate between the spring and case and can cause erratic tensions. To correct, remove screw and spring and clean.

THREAD TENSION

1. Installation and Threading of Binding Tape:

Included with your machine are:

- Large Black Plastic Discs (2)
- Tape Reel Centering Plug
- Binding Tape (1 Roll)

Mount the tape reel:

- Place the inner disc on spindle with smooth side to face tape reel.
- Slide the plug onto spindle.
- Place tape reel on centering plug in a manner that tape will feed off reel in a CLOCKWISE direction.
- Slide remaining disc onto spindle. Allow space for free tape feed.
- Lightly tighten thumb screw.

REMEMBER... Tape reel MUST roll freely between discs.

Threading Tape:

- Trim tape end to provide a long sharp point.
- Start tape end into folder inlet (do not thread through tension spring at this time).
- Using a tweezer, point in the folder slot, push the tape until you can grasp tape end at folder exit.
- Pull several inches of tape through folder and out under the needle, (as it would appear while stitching).
- Tape as being fed from reel to folder, can now be through the tape guide closest to the folder (one guide is recommended).

2. Preparation for Stitching:

- Set the Zig-zag-straight stitch selector to Zig-zag.
- Grasp the upper thread and tape end in your left hand, and with a slight pulling pressure away from you, and in a straight line, run machine in short bursts until stitching occurs in binding tape.

3. Stitching:

- Raise feed roller.
- Rotate hand wheel towards you until needle is at highest point.
- Insert material edge into folder groove and up to needle foot.
- Drop feed roller.
- Begin sewing. (It may be necessary to push material slightly at this point to engage it under feed roller.)

STITCHING

While sewing, NEVER pull on carpet or machine. This can cause needle deflection which can result in needle breakage and/or damage to the bobbin/shuttle mechanism.

TO CHANGE DIRECTION OF STITCHING:

- Stop sewing and if necessary, rotate hand wheel towards you until needle is in carpet.
- Raise feed roller.
- Alter direction of material (or machine).
- Lower feed roller and resume sewing.

TO REMOVE CARPET:

- Raise feed roller.
- Rotate hand wheel toward you until needle is at highest point.
- Pull carpet out to your left (or move machine to the right).
- Cut thread and binding.

REGULATION WIDTH OF ZIG-ZAG STITCH:

The width of zig-zag stitch is regulated by the stitch pattern control knob or lever. For instance, to "0" is straight stitch, and to "5" is max zig-zag stitch.

Turn the hand wheel toward you slowly with your right hand until needle enters needle plate and returns to highest point. Avoid making these changes with the needle below the needle plate or in carpeting.

IMPORTANT:

Certain carpet types, weights and those with a heavy or rubberized backing, may prove difficult to bind in the full zig-zag mode.

If this occurs, using a scrap piece, test in the full straight stitch mode. Then gradually select up to a zig-zag pattern allowable. This is the recommended procedure for Berbers.

*It should be noted that carpet types such as Berber or those with a stiff or heavy backing may require a sewing softener application prior to binding. Also, use of a #23 needle is recommended for Berbers.

Also, a good gauge for carpet height capability is one that will easily pass through the folder throat. Above that, beveling is necessary. A rule of thumb is, weights above 40 oz. should be beveled for best results.

Use the #126T Lubricator when sewing Unitary/Unibond type carpet.

FOLDERS

The standard folder shipped with the machine is a 7/8" raw edge. This folder is designed to be used with polyester binding.

For cotton binding, NATIONAL can supply a 3/4" folder model. It is recommended that you supply NATIONAL with a sample roll of the cotton binding for testing, and to specify the carpet type you intend to bind.

Other folder types available are as follows:



3/4", 7/8", 1 1/4", 2", 2 1/4", 3", etc.



1-1/4" Clean Top
(Tucks top edge under)



1-1/4" Clean Top and Bottom
(Tucks top and bottom edges under)

The folder supplied with the machine has been tested at both stitch extremes. (Full straight and Full zig-zag).

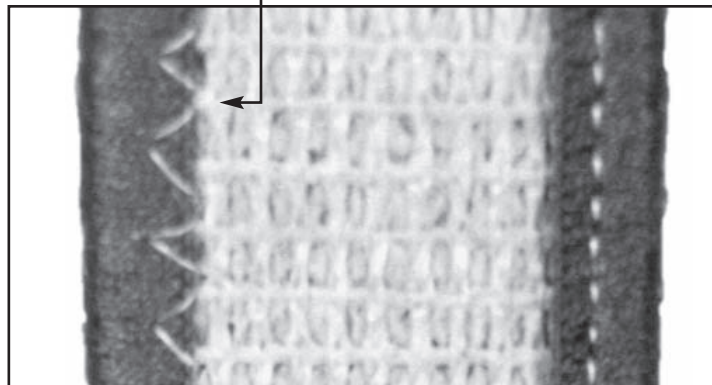
AS SEEN FROM THE BOTTOM OF THE CARPET CORRECT STITCHING SHOULD APPEAR LIKE THIS 7/8" BINDING TAPE EXAMPLE:

ZIG-ZAG

STRAIGHT

Right stitch
off edge of tape

→ | | ← Approximately 1/8" from
edge of tape



FOLDERS

As shipped, the folder is positioned to correctly bind in the full zig-zag mode. Straight stitching will require moving the folder to the left. Adjustment instructions per Figure 2 follows.

1. The slot in the folder bracket allows it to be moved left or right when changing between zig zag and straight on the stitch control.
2. **Caution:** Keep the presser foot needle block assembly from hitting the folder by allowing approximately 1/8" space between them.
3. When correctly adjusted the folder positions can be marked on a piece of masking tape applied at the front edge of the folder.
4. Use of the guide bar is optional. If used it should be far enough to the right so it doesn't block the folder opening.
5. Threading the binding tape through only one of the tape guides (the one closest to the opening) is recommended.
6. If stitch misses the tape on the bottom see page 23.

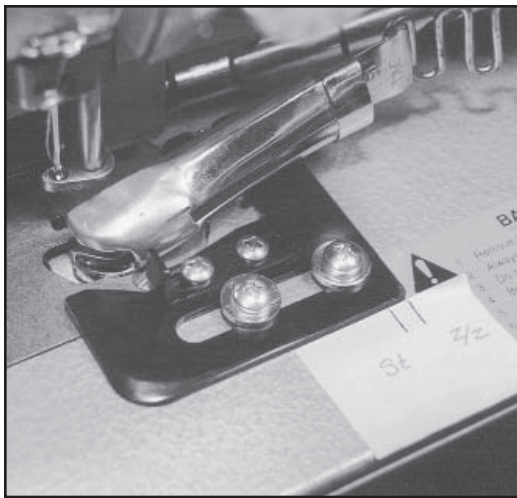


Figure 1

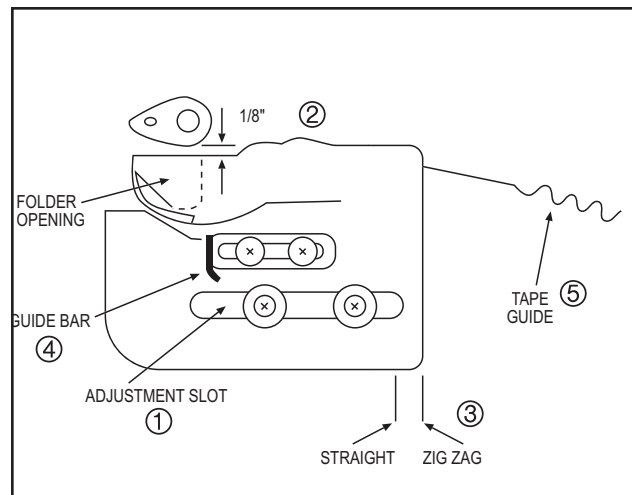


Figure 2

MAINTENANCE

LUBRICATION

Thorough and regular lubrication of your machine is essential to proper operation and long service.

SHUTTLE AREA LUBRICATION

Inspect and, if necessary, clean each time you change bobbins or after a maximum of one hour of continuous running. Lubricate after cleaning with the type of lubricant supplied with machine.

Remove lower feed roller plate, bobbin case, hook retainer and hook.

Thoroughly clean the race cover, hook and hook inner race (an old needle works well to remove grime from inner race corners).

Apply a light film of lubricant on the hook, inside of race cover and inner race.

ENTIRE MACHINE LUBRICATION

Follow this procedure after approximately eight (8) hours running time.

Remove the top cover. Slowly rotate the handwheel towards you and observe where rotation occurs. Apply the oil at these points, the oil port for the main shaft bearing, oil ports on the crank journals beneath the stitch selector mechanism, and all the pivot and sliding areas associated with the stitch selector.

Repeat this procedure in the needle bar area (behind the front cover) and the lower area (after removing the pan). **NEVER** lubricate the tension control. This is also a good time to check and re-tighten all screws.

OPERATION TIPS

- Always check the needle condition and the amount of bobbin remaining before starting a job.
- It is good practice to run a short strip of scrap whenever changing carpet types to check for stitch placement and binding fold.
- Never pull on machine or carpet during operation. The feed roller and needle stroke is timed to prevent carpet movement while needle is in carpet. When binding corners with feed roller up, use care in feeding carpet.
- Always use a softener when binding Berbers. It is good practice to use no more than 1/2 of the zig zag range and to install a #23 needle.
- Always use a lubricant when binding unibond/unitary backed carpet. The thread and needle will pick up the plastic from the backing, transfer it to the shuttle parts, and cause thread tangling and breakage.
- If you hear the needle hitting, stop and inspect the shuttle area parts and needle the first opportunity you have.

ADJUSTMENTS

TO CHECK NEEDLE HEIGHT ADJUSTMENT

Note: All screw locations marked in red are permanent and should not be adjusted.

This adjustment should be checked if machine skips stitches, after machine jams, or a needle has broken.

Install new needle incorrectly with the scarf to the outside (left) rather than inside (right), (See Figure 1).

1. Remove shuttle access plate.
2. Remove bobbin case.
3. Remove race cover.
4. Leave hook in shuttle.
5. Reverse needle 180° so scarf faces out (See Figure 2). Tilt machine so that it is at an angle so you can see the shuttle area. as you turn the handwheel counterclockwise, the hook will travel clockwise; reverse rotation and travel counterclockwise to a position where the point of the hook is approximately 1/8" behind the needle and reverse the rotation again. When the point of the hook is just in line with the back side of the needle, the point of the hook should be in the center of the scarf (approximately 1/8" above the center of the eye of the needle).

NOTE: (For adjustments see page 23). Make sure hook is always in full contact with the bottom most part of driver. When completed, install the needle properly with the scarf to the right.

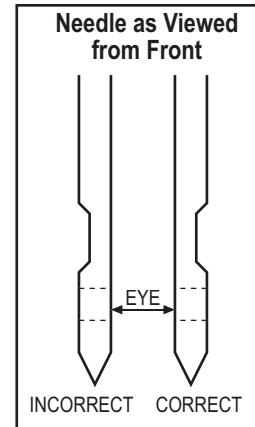


Figure 1

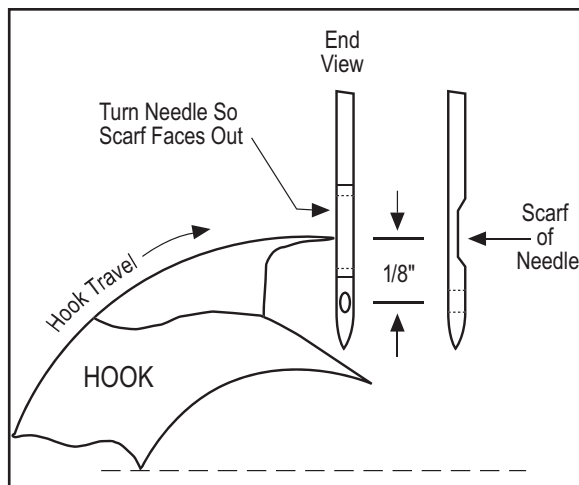


Figure 2

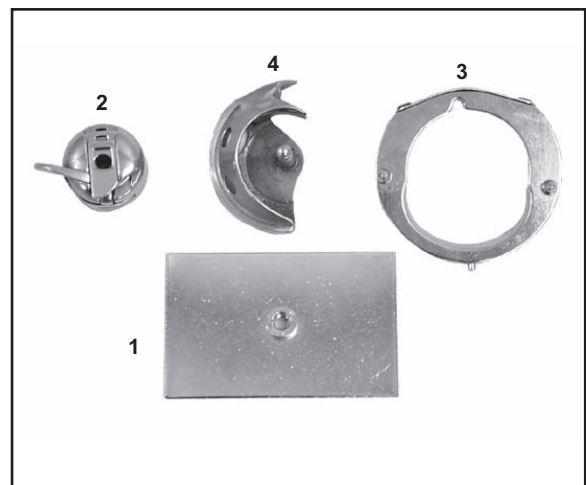


Figure 3

ADJUSTMENTS

TO ADJUST NEEDLE

1. Loosen set screw located in needle bar drive collar (part# 126-164, See Figure 1).
2. Slide needle bar (part #126-172) slightly up or down.
3. Tighten set screw in drive collar.
4. Recheck adjustment using procedure on Page 17.



Figure 1

Access Hole Exterior View

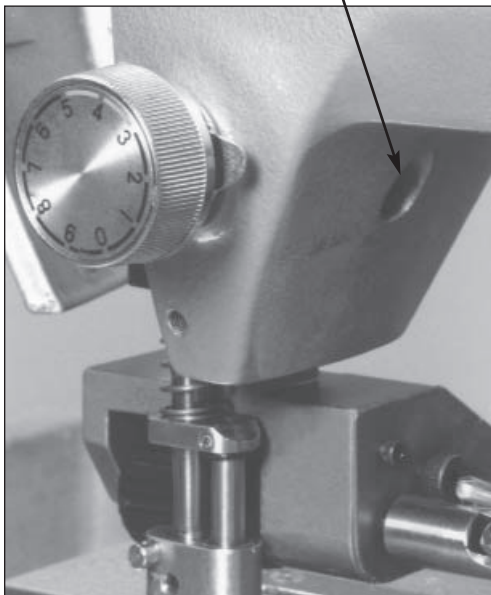


Figure 2

Access Hole Interior View

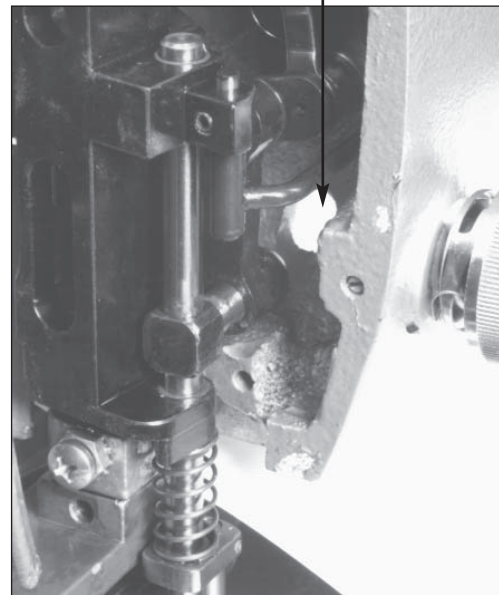


Figure 3

ADJUSTMENTS

NOTE: Needle to hook clearance and race cover spring clearance seldom change or need adjustment.

Needle bar height may change due to jamming the machine or breaking a needle and should be checked if stitches are skipped or thread breaks.

NEEDLE TO HOOK CLEARANCE

1. Remove: Lower feed roller plate (Model 126) or shuttle access plate (Model 155), pan, bobbin, and race cover.
2. Clean the shuttle area, hook and race cover prior to adjusting.

TO CHECK:

Install new needle backwards with the scarf to the outside (left) rather than inside (right) (See Figure 4).

Hold machine at an angle so that the hook stays in place and the shuttle area is visible. Turn handwheel counter-clockwise until the point of the hook passes behind the needle. Stop when the point is approximately 1/8" past the needle (See Figure 1). The hook should just touch, but not deflect the needle (See Figure 2). This setting should be made in the zig zag position and the needle checked so it does not deflect on either the inside or outside stitch.

If adjustment is necessary, loosen Screw 'A,' (part# 126-137) on shuttle drive clamp (part#126-139) and move shuttle body left or right as necessary (See Figure 3). Tighten screw 'A' slightly. Because loosening Screw 'A' also allows the shuttle assembly to rotate, the race cover spring clearance should also be checked. (Next step page 20)

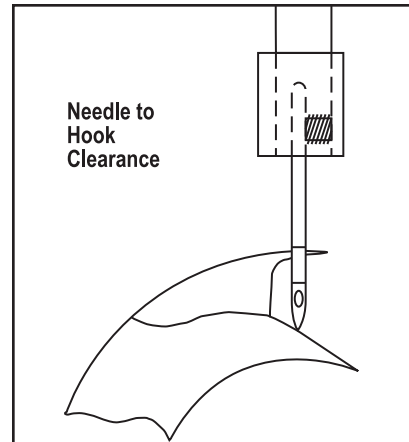


Figure 1

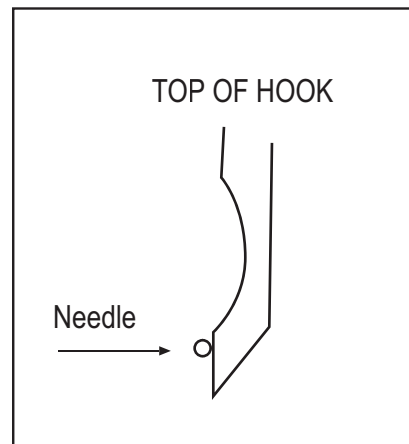


Figure 2

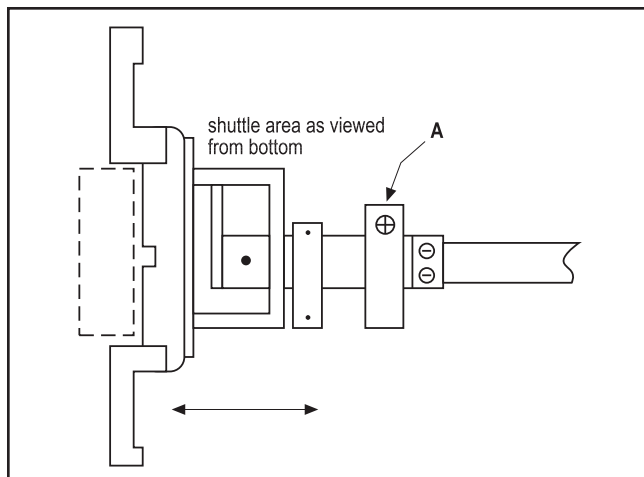


Figure 3

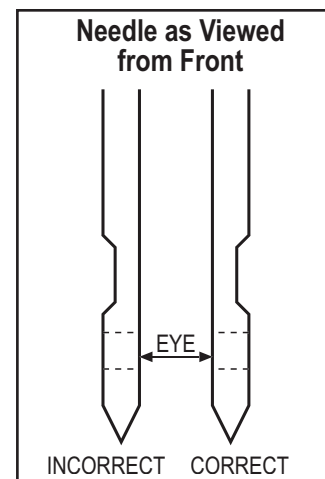


Figure 4

ADJUSTMENTS

RACE COVER SPRING CLEARANCE ADJUSTMENT

Remove the hook and install the race cover part# 126-140B.

Handwheel the machine. The needle should be centered in the race cover ellipse (notch). Fig. 1. If not centered, loosen Screw 'A' and rotate shuttle.

Proper adjustment will result in the needle passing through the race cover spring as shown in Fig. 2. Tighten Screw 'A,' but do not over-tighten and cause the shaft to bind up. Install hook. Recheck needle to hook clearance.

IMPORTANT: When adjustments are completed install the needle properly. Scarf (flat side) on right hand side. Symptoms of a problem with this adjustment are dents on the race cover spring caused by the needle hitting it.

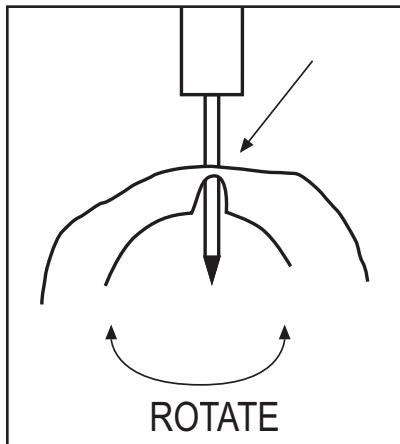


Figure 1

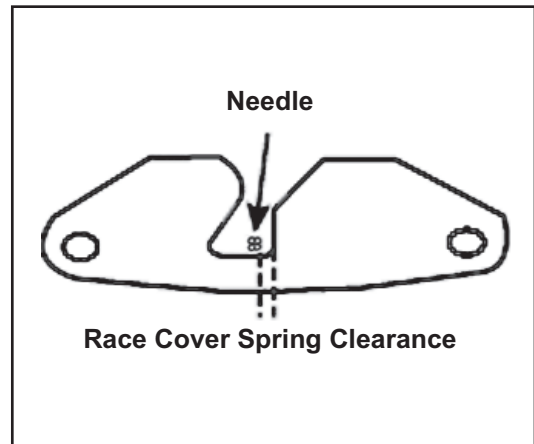


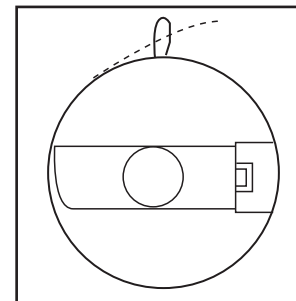
Figure 2

BOBBIN CASE

This machine uses bobbin case with an eyelet: Part #126-112-1.

Thread must pass through eyelet in bobbin case for proper operation. Tension on the bobbin thread should be light.

You have a #23 needle in machine, when ordering needle ask for size #23, Part #126-B.



TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Skipping	Bad needle	Check needle
	Dirty shuttle area	Clean shuttle area
	*Needle height or clearance out of adjustment	Check Adjustment
	Damage to shuttle hook or race cover spring	Check shuttle hook & race cover spring — repair/replace
Breaking Needles	Needle not installed properly	Check needle
	Operator forcing carpet or machine	Let machine do the work
	Race cover spring clearance improper	See instruction manual
	Carpet type (i.e. Berbers)	Test on another type of carpet, use softener on Berber
Upper Thread Breaking	Needle clearance out of adjustment	Check adjustment
	Bad needle	Check needle
	Upper tension set too high	Check tension
	Carpet type	Test on another type carpet
	Dirty Shuttle	Clean shuttle area
	Burrs on shuttle area	Inspect shuttle parts and deburr
	Burrs on bottom of needle plate	Inspect and deburr
	Bad upper thread	Attempt to break between hands
Threading wrong	Check thread path	
*Needle height	See instruction manual	
Upper Thread Loops on Carpet Bottom	Upper thread not inserted properly in tension control	Check that out feed of tension control has drag on thread
	Too little upper tension	Check tension setting
	Dirty shuttle area	Clean shuttle
	*Needle height	See instruction manual
	**Shuttle drive spring deformed or broken	Replace drive spring
Upper Thread Tangles in Shuttle and/or in Cut on Carpet Bottom	Binding on carpet with plastic backing (i.e. Unibond)	Use lubricant
	Burrs on shuttle hook	Deburr hook
	Binding carpet with backing where glue is not dry	Allow to dry or use lubricant
Won't Pick Up Bobbin Thread	*Needle height or clearance out of adjustment	See instruction manual
	Bobbin tension incorrect	Check tension
	Damaged bobbin tension spring	Replace spring
	Needle in wrong	Check needle
	Too short of thread lead from bobbin case	Leave 2" of lead
Bobbin Thread Breaks	Bad bobbin	Check thread strength
	Burr on shuttle hook or race cover or bad bobbin case spring	Check each item
Stitch Misses Top or Bottom of Binding	Change in type of binding tape	Check
	Cannot use cotton binding in polyester folder	Check
	Carpet too thick	Bevel carpet
	Need to adjust folder position	See instruction manual
Bobbin Thread Loose on Bottom of Binding	Damaged or loose bobbin tension spring	Check spring
	Dirt between bobbin tension spring & bobbin case	Remove spring & clean surfaces
Bobbin Case Pops Out	Bobbin case not latched	Check
	Latch spring broken	Check latch & spring
	Too wide needle clearance	Check adjustment

*The most common cause of thread breaking, skips, loops, and not picking up bobbin thread is the needle bar being out of adjustment. The adjustment is shown both on the first adjustment instruction sheet and in the video.

**New and most updated and refurbished machines now have a springless driver.

BINDING TIPS

BINDING

- Straight stitch or zig zag is a matter of preference.
- Zig Zag is more forgiving when trying to stay on the edge of the binding.
- With some types of backing the perforations of straight stitching can cause the edge to break, especially when using the heavy #23 needle.
- Straight stitching uses less thread which means bobbin thread goes farther.
- Heavy carpets such as Berber are easier to bind with a straight stitch. The machine may skip stitches in zig zag.
- If the binding tape is uneven, (more on top than bottom or vice versa), see page 15.1.

BINDING CORNERS

Binding corners requires some practice. A good way to learn is to cut 4 approximately 1' squares of carpet and bind them. You will gain a lot of experience by the time you reach corner #16.

Slowing the machine down with the speed control (included with Model #155 or optional #126-N with Model #126) will also aid in making corners, circles, and curves.

If no speed control is used, trigger the machine in short bursts, but a speed control is much more effective.

A glue gun such as #103, #285, or #287 is necessary.

Feed roller pressure may be reduced to make turning the machine easier. When operating with less pressure, use care not to force the machine and deflect or break the needle. Feed roller height is changed by loosening the set screw in the lift dog (part #178 Model 126, #778 Model 155).

BASE BINDING

If base starts to curl when binding, it is usually caused by tension on the binding tape. Check the discs to make sure they are not squeezing the tape. By-pass the tape guides on the folder and feed the tape directly into the folder. Dry teflon lubricant #1040 may be sprayed on both sides of tape spools.

FOLDER ADJUSTMENTS

For uneven folds where the bottom stitch misses the tape there are 2 possible solutions.

1. Place a straight edge in the front of the folder. Adjust the folder guide (part #126-1521) so that it just touches the straight edge and is at a slight angle away from the edge at the front. Trial and error maybe necessary with slightly more movement to the left (See Figure 1).
2. Loosen the folder to bracket screws. By trial and error movements of slight increments, raise the end where the binding tape comes out while keeping the screw at the opposite end at the bottom of the slot (See Figure 3).



Figure 1

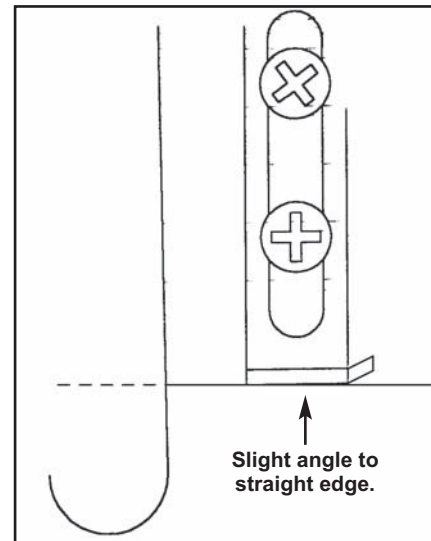


Figure 2

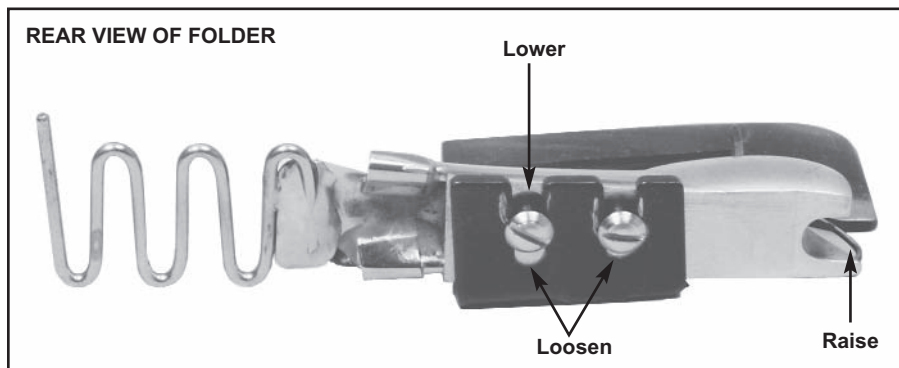
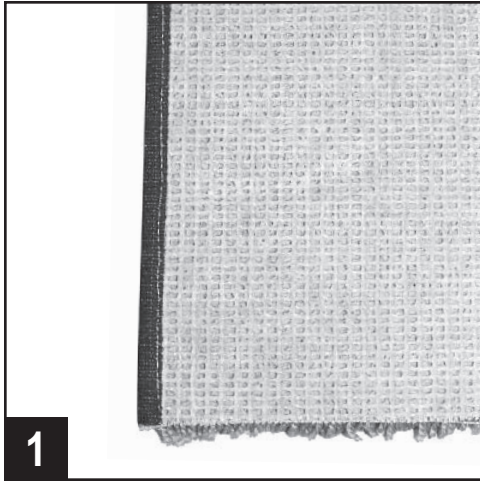


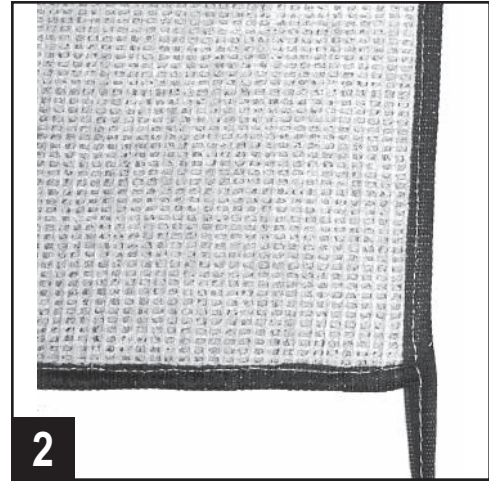
Figure 3

BINDING & STITCHING INSTRUCTIONS

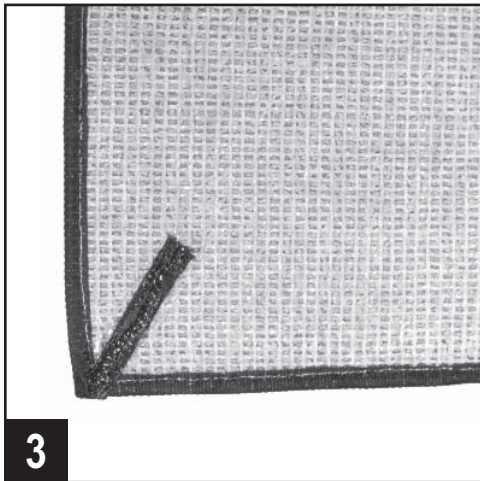
NORMAL OUTSIDE CORNER



Sew over end, then trim flush with edge



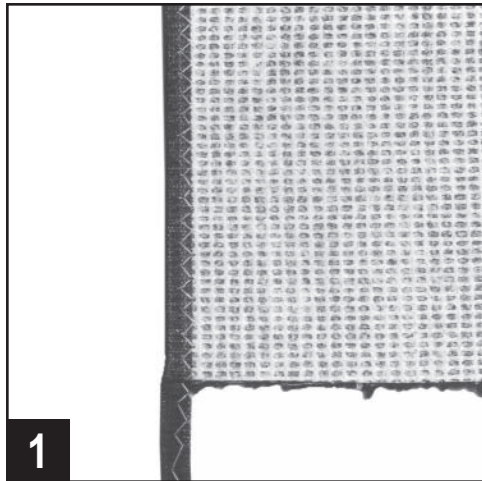
Leave approximately 2-3" strip each time. Sew over trimmed end. Repeat on each corner.



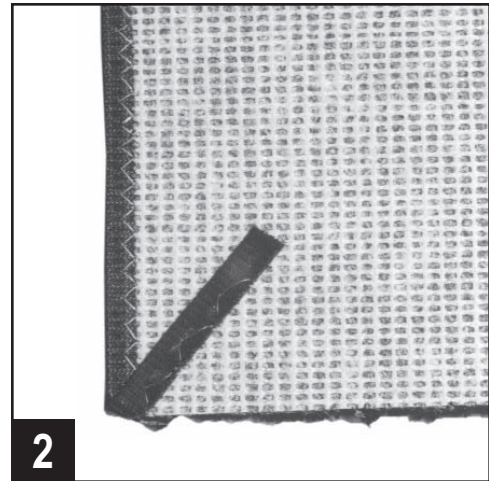
When completed, fold and glue each corner strip.

BINDING & STITCHING INSTRUCTIONS

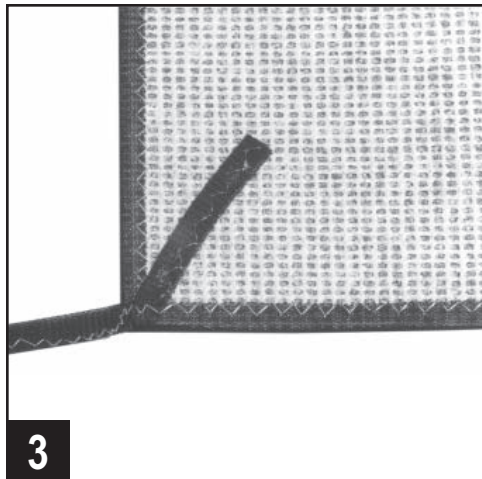
OPTIONAL – DOUBLE COVERED CORNERS



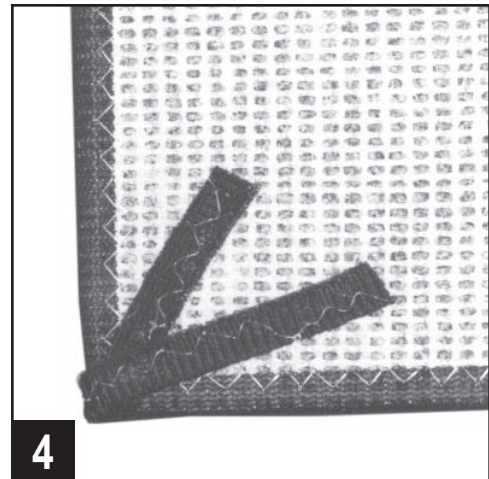
Sew over end leaving a 2" to 3" strip. Leave a 2" to 3" strip at the end. Raise needle and cut.



Fold strip under.



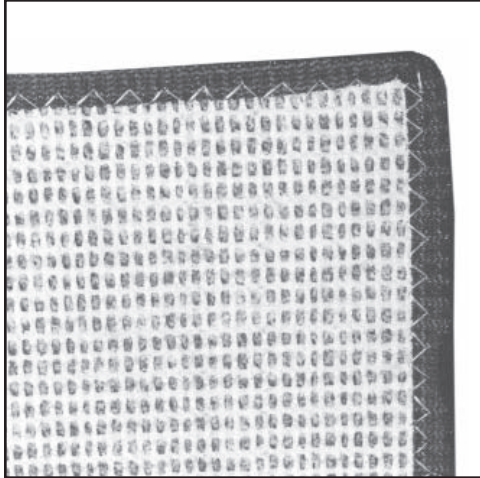
Place folded strip in folder. Sew down that side. Repeat 1 thru 3 on each corner.



When completed fold and glue all the strips down.

BINDING & STITCHING INSTRUCTIONS

SEWN CORNERS

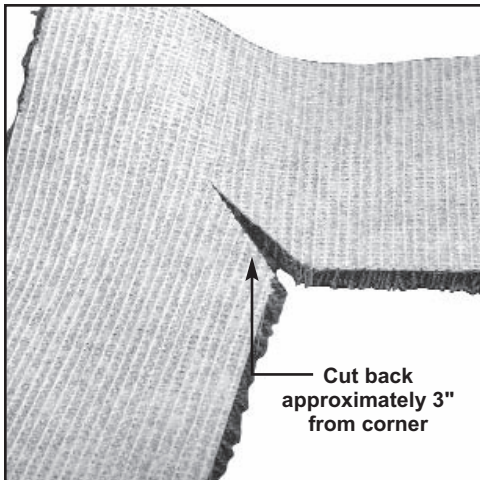


It is possible, but more difficult to sew around corners. Corners done in this manner are usually not as sharp as those done by folding over and gluing. You have to raise the feed roller, watch the needle, and move the carpet only when the needle is up. Zig zag should be used on corners. Straight stitching is not recommended.

INSIDE CORNERS

Inside corners may be done in 2 ways:

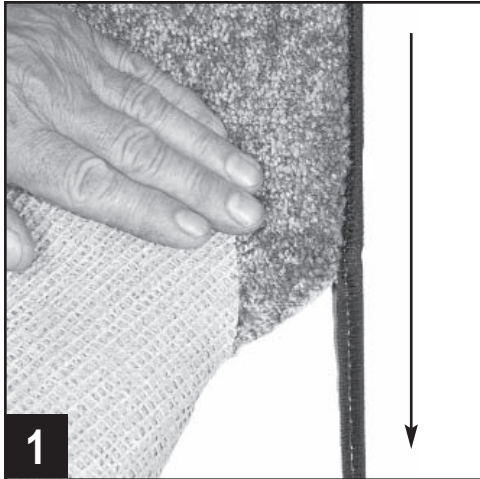
A. FIRST WAY



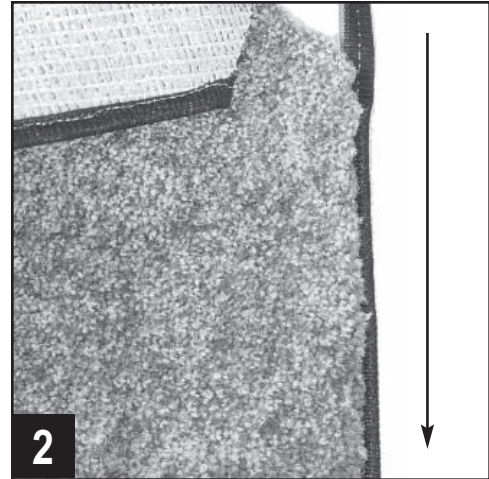
Cut the and hot glue the corner.

BINDING & STITCHING INSTRUCTIONS

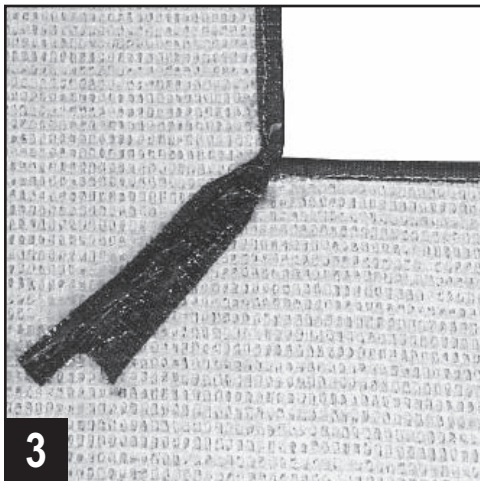
INSIDE CORNERS continued...



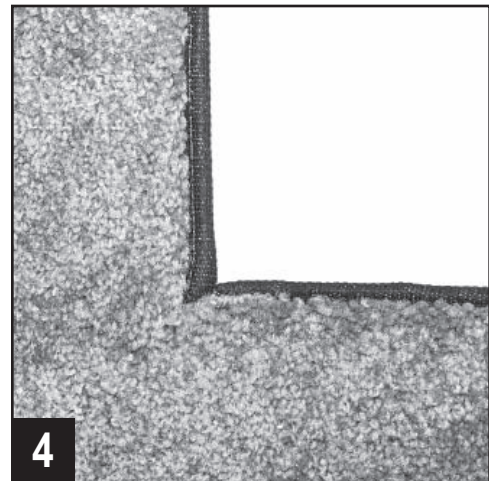
Fold back at cut and sew over end.



Fold back sewed side. Start at cut.



Push fibers into cut. Flatten tape from both sides and glue over cut.

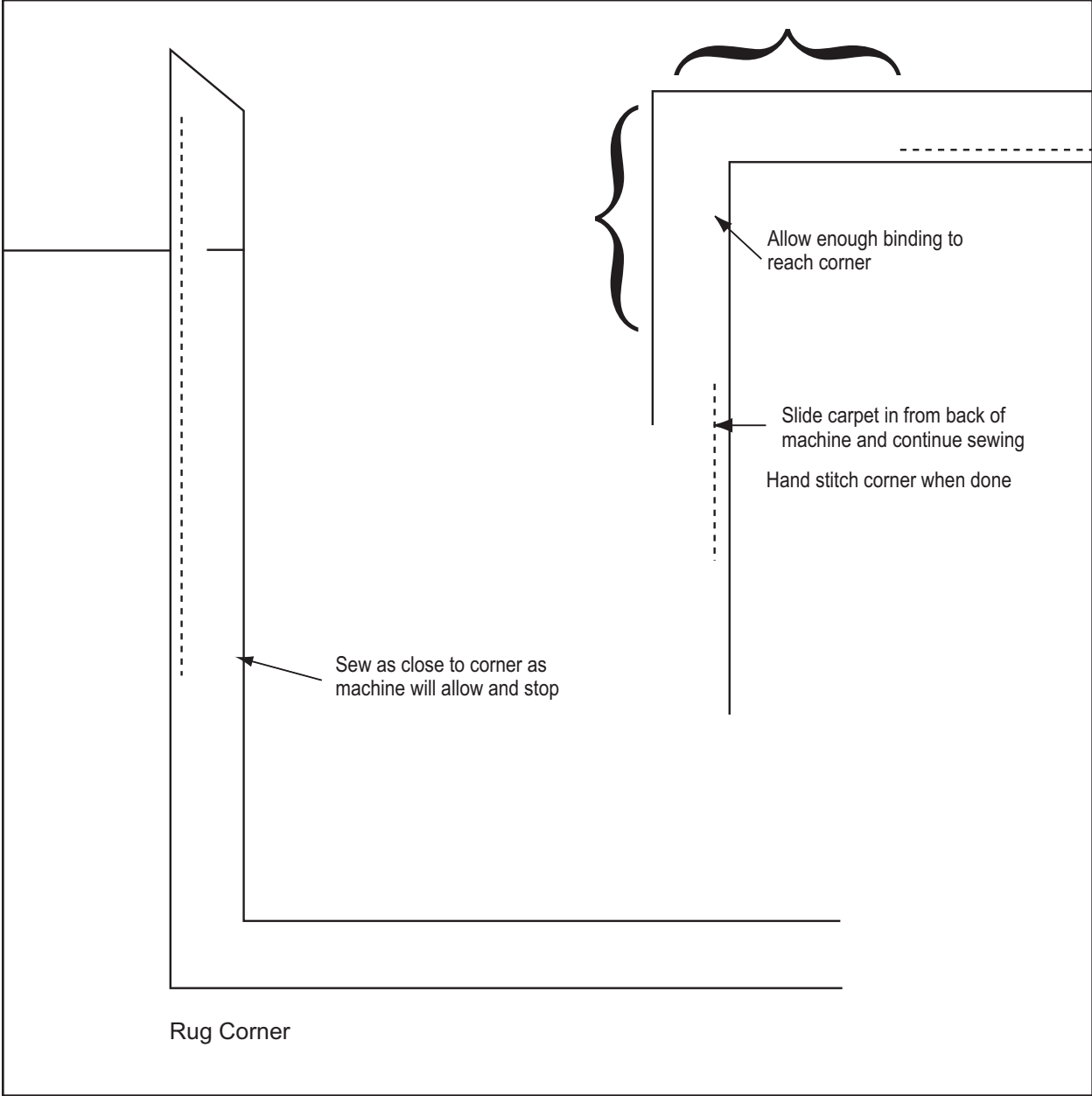


Top of completed corner.

BINDING & STITCHING INSTRUCTIONS

B. SECOND WAY

Handsew the corners.



COMPLETE PARTS LIST

COMPLETE PARTS LIST

PART #	DESCRIPTION
126-C4T	THREAD STAND BOLT & NUT
126-CS	TAPE CENTERING PLUG FOR 7/8" TAPE
126-DISC	BINDING DISC SET (INCLUDES DISC 1, DISC 2 & DISC COLLAR THUMB SCREW)
126-DISC1	REAR DISC
126-DISC2	FRONT DISC
126-DISC2A	DISC COLLAR
126-DISC2B	DISC COLLAR THUMB SCREW
126-DS	TAPE CENTERING PLUG FOR 1-1/4" TAPE
126-01	FRAME
126-02	FRONT COVER
126-03-3	TOP COVER
126-03G	TOP COVER GUIDE ASSEMBLY
126-03H	HANDLE ONLY
126-03HB	HANDLE BOLT (2)
126-03HN	HANDLE NUT (2)
126-03HW	HANDLE FENDER WASHER (2)
126-04	BINDING SPINDLE
126-05	BINDING SPINDLE PLATE
126-07	BINDING SPINDLE NUT
126-12	THREAD SPOOL CENTER
126-13	TOP COVER REAR SCREW
126-14	TOP COVER FRONT SCREW
126-15	UPPER THREAD TUBE WASHER (2)
126-18	THREAD TUBE CLAMP (2)
126-19	UPPER THREAD TUBE
126-19-1	LOWER THREAD TUBE
126-20	FRONT COVER LATCH SCREW
126-21	FRONT COVER LATCH
126-23	FRONT COVER HINGE
126-24-2	UPPER THREAD TENSION CONTROL (SEE PG 36)
126-52	MOTOR POWER RECEPTACLE
126-53	POWER CORD STRAIN RELIEF RETAINER
126-54	POWER CORD STRAIN RELIEF
126-57	110/220 V CONTROL SWITCH
126-59	PAN HANDLE CAP (OLD STYLE)
126-90	CONNECTING ROD,CAP & SCREWS (MATCHED)
126-92	FEED ROLLER DRIVE CRANK
126-96	FEED ROLLER DR MAIN SHAFT BEARING BLOCK
126-97	FEED ROLLER DRIVE MAIN SHAFT
126-98	FEED ROLLER RETAINING SPRING
126-100	FEED ROLLER FLEX DRIVE SHAFT W/ SET SCREWS
126-110	BOBBIN CASE SPRING W/SCREW
126-112-1	BOBBIN CASE W/EYELET
126-113	SHUTTLE HOOK
126-116	SHUTTLE DRIVE
126-117	SHUTTLE BODY
126-118	SHUTTLE DRIVE SHAFT
126-118N	SHUTTLE DRIVE SHAFT 5/16" (OLD STYLE) (NOT SHOWN)
126-119N	SHUTTLE DRIVE CRANK FOR 5/16" SHAFT (OLD STYLE) (NOT SHOWN)
126-119T	SHUTTLE DRIVE CRANK W/SET SCREWS (FOR 3/8" SHAFT)
126-120	SHUTTLE OSCILLATOR SHAFT
126-121	SHUTTLE DRIVE CONNECTING ROD CAP SCREW ONLY (2) (NOT SHOWN)
126-122	SHUTTLE DRIVE CONNECTING ROD W/ CAP & SCREWS

COMPLETE PARTS LIST

COMPLETE PARTS LIST (continued)

<u>PART #</u>	<u>DESCRIPTION</u>
126-123	DRIVE FORK RETAINER (2)
126-124S	SHUTTLE DRIVE FORK, BEARING & BOLT ASSY.
126-125	CONNECTING ROD LOWER SPINDLE
126-126	CONNECTING ROD LOWER SPINDLE NUT
126-127	SHUTTLE OSCILLATOR CRANK SCREW ONLY (2) (NOT SHOWN)
126-128	SHUTTLE OSCILLATOR CRANK W/ SCREWS
126-130	SHUTTLE OSCILLATOR LINK PIN (2)
126-131	SHUTTLE OSCILLATOR LINK
126-134	SHUTTLE CLAMP GUIDE BAR
126-136	SHUTTLE DRIVE SHAFT COLLAR W/ SET SCREWS
126-137	SHUTTLE DRIVE CLAMP LOCK SCREW ONLY (NOT SHOWN)
126-139	SHUTTLE DRIVE CLAMP W/ SCREWS
126-140A	SHUTTLE RACE COVER W/ SPRINGS & SCREWS (RED) (NOT SHOWN)
126-140B	SHUTTLE RACE COVER W/ SPRINGS & SCREWS (NO RED)
126-142	SHUTTLE RACE COVER SPRING W/SCREWS
126-144	FEED ROLLER LIFT SHAFT RETAINER
126-145	FEED ROLLER LIFT SHAFT
126-147	NEEDLE BAR DRIVE COUNTER BALANCE
126-148	NEEDLE PLATE MOUNT SCREW
126-150	FOLDER GUIDE MOUNT SCREW (2)
126-151	FOLDER BRACKET
126-152	FOLDER GUIDE
126-156	NEEDLE BAR CARRIER
126-158	NEEDLE BAR SPRING
126-160	NEEDLE BAR DRIVE LINKAGE ASSEMBLY
126-161	NEEDLE BAR DRIVE LINK W/ RETAINER
126-162	NEEDLE BAR DRIVE LINK
126-163	NEEDLE BAR SET SCREW (NOT SHOWN)
126-164	NEEDLE BAR DRIVE COLLAR W/ SET SCREW
126-165	NEEDLE BAR DRIVE LINKAGE ASSEMBLY PIN W/ E-CLIP & SET SCREW
126-166	NEEDLE BAR DRIVE LINKAGE ASSEMBLY PIN E-CLIP (NOT SHOWN)
126-172	NEEDLE BAR/PRESSER FOOT ASSEMBLY W/ SET SCREW
126-172A	NEEDLE BAR THREAD GUIDE (NOT SHOWN)
126-173	NEEDLE SET SCREW (NOT SHOWN)
126-177	FEED ROLLER LIFT SHAFT BUSHING
126-178	FEED ROLLER LIFT DOG W/ SET SCREW
126-179	FEED ROLLER LIFT SHAFT RETURN SPRING
126-181	FEED ROLLER LIFT HANDLE PIN
126-182	FEED ROLLER LIFT HANDLE
126-192	DRIVE MOTOR PULLEY (INCL. SET SCREW)
126-194	1/4-20 X 3/8 DRIVE MOTOR LOWER MOUNT SCREW (2)
126-196	1/4-20 X 1 1/2 FILSLM HEAD DRIVE MOTOR UPPER MOUNT SCREW (2)
126-198	DRIVE MOTOR MOUNTING PLATE
126-199	DRIVE MOTOR BELT
126-500	BULB ONLY
126-501	LIGHT KIT
126-502A	LIGHT RECEPTACLE SNAP-IN
126-528	LINK PIN W/ RETAINER CLIP
126-529	HAND WHEEL
126-530	HAND WHEEL RETAINER WASHER
126-531	HAND WHEEL RETAINER
126-532	TOP SHAFT BEARING RETAINER PIN
126-533	TOP SHAFT

COMPLETE PARTS LIST

COMPLETE PARTS LIST (continued)

<u>PART #</u>	<u>DESCRIPTION</u>
126-534	TOP SHAFT FORWARD BEARING
126-535	TOP SHAFT REAR BUSHING
126-536A	DRIVER CAM WASHER
126-537	ZIG ZAG DRIVE GEAR W/ SCREWS
126-538	REPL. STITCH SEL. CAM CLAMPING SCREW ONLY (NOT SHOWN)
126-540	TOP SHAFT FORWARD BEARING SET SCREW
126-542	STITCH SELECTOR CAM ASSEMBLY
126-543	REPL. SHUTTLE OSCILLATOR CONTROL LINK CLAMPING SCREW ONLY
126-544	STITCH CONTROL ASSEMBLY
126-544A	REPL. STITCH CONTROL KNOB ONLY
126-545	STITCH CONTROL ASSEMBLY MOUNTING SCREW (3)
126-546	SHUTTLE OSCILLATOR CONTROL LINK W/ SCREW
126-549	STITCH SELECTOR CAM LINK
126-550	STITCH SELECTOR CAM LINK BUSHING
126-551	STITCH SELECTOR CAM SHOE
126-552	NEEDLE BAR CARRIER CONTROL ROD
126-553	NEEDLE BAR CARRIER CONTROL ROD SET SCREW
126-554	NEEDLE BAR CARRIER CONTROL ROD PIN
126-555	NEEDLE BAR CARRIER CONTROL ROD SOCKET W/SCREW
126-556	REPL. NEEDLE BAR CARRIER CONTROL ROD LOCK SCREW ONLY (NOT SHOWN)
126-557	ZIG ZAG DRIVE GEAR SET SCREW ONLY (2) (NOT SHOWN)
126-574	ZIG ZAG DRIVE WORM GEAR
126-600	LATCH PIN (FOR COVER)
126-1171	RACE COVER RETAINERS (2)
126-1172	SHUTTLE BODY BUSHING
126-1192	BEARINGS AND BOLT SET
126-1201	SHUTTLE OSCILLATOR SHAFT BUSHING
126-1242	DRIVE FORK BOLT (2)
126-1301	O-RING FOR LINK PIN
126-1302	E-CLIP FOR LINK PIN
126-1303	WASHER FOR LINK PIN (2)
126-1910A	DRIVE MOTOR 110V BRUSHES (2)
126-1910B	DRIVE MOTOR 230V BRUSHES (NOT SHOWN)
155-526	PAN ASSEMBLY
155-526-1	PAN (ONLY)
155-527	PAN THUMB SCREW (3)
155-528	SWITCH WASHER
155-530	SPEED CONTROL BACK PLATE
155-533	SPEED CONTROL KNOB
155-537	PAN WHEEL W/ BEARING (4)
155-568A	FEED ROLLER TRANSMISSION (NEW STYLE)
155-569	NEEDLE PLATE
155-570	NEEDLE PLATE ROLLER LEFT
155-570-1	NEEDLE PLATE ROLLER RIGHT
155-572	NEEDLE PLATE ROLLER DOWEL PIN 1/8" X 2" (2)
155-573	NEEDLE PLATE REAR SCREW (2)
155-575	NEEDLE PLATE RETAINER BAR
155-577	SHUTTLE RECESS PLATE
155-577-1	NEEDLE PLATE RETAINER
155-577-2	SHUTTLE ACCESS PLATE SPRING
155-578	SHUTTLE ACCESS PLATE THUMB SCREW
155-636	FEED ROLLER DRIVE CAM
155-1568	TRANSMISSION KIT (NEW STYLE) (NOT SHOWN)

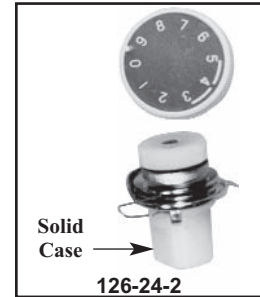
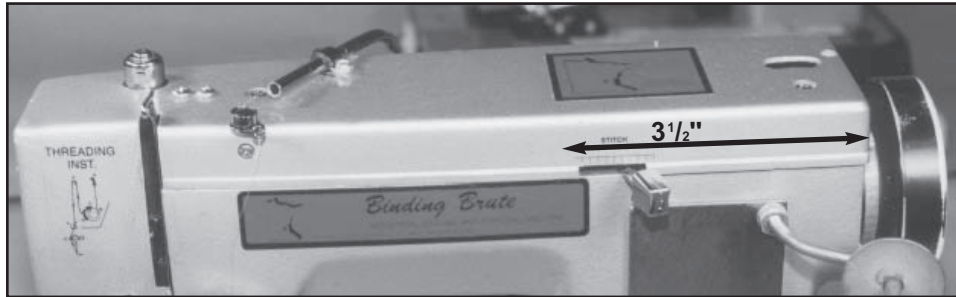
COMPLETE PARTS LIST

COMPLETE PARTS LIST (continued)

PART #	DESCRIPTION
155-5260	220 V PAN ASSEMBLY
155-5290	220 V SWITCH ASSEMBLY
155-5340	220 V SPEED CONTROL
500-12	PAN POWER CORD
71021	1/8" ID BEARING (6)
71081	5/8" ID BEARING (2)
72301	DRIVE MOTOR 115V
72311W	DRIVE MOTOR 230V (NOT SHOWN)
72460	SPEED CONTROL
73002	1/4 SPLIT LOCK WASHER (3)
73009	1/4-20 FULL HEX NUT (4)
73012	1/4-20 X 3/8 CUP POINT SOCKET SET SCREW (NOT SHOWN)
73041	1/4 FLAT WASHER USS (12)
73085	1/4-20 FLANGE NUT ZINC
73064	1/4-20 X 3/4 CUP POINT SOCKET SET SCREW (NOT SHOWN)
73346	5/16 X 1/2 SHOULDER BOLT
73353	5/16 X 5/8 SHOULDER BOLT
74406	10-32 X 3/8 PHILLIPS PAN HEAD MACHINE SCREW (2)
74408	10-32 X 1/8 CUP POINT SOCKET SET SCREW (3)
74409	10-32 X 3/16 CUP POINT SOCKET SET SCREW (6)
74414	#10 FLAT WASHER SAE (4)
74433	10-32 X 1/2 PHILLIPS PAN HEAD SCREW (2)
74437	10-32 X 1/4 CUP POINT SET SCREW ONLY (4)
74440	10-32 X 3/4 SOCKET HEAD CAP SCREW (2)
74510	6-32 X 3/8 PHILLIPS PAN HEAD MACHINE SCREW (2)
74518	6-32 HEX NUT W/TOOTH WASHER (KEPS NUT) (2)
74550	6-40 X 3/8 PHILLIPS PAN HEAD MACHINE SCREW (4)
74567	LATCH PIN SCREW (2)
74568	#8 EXTERNAL LOCK WASHER (NOT SHOWN)
74569	8-32 X 3/16 CUP POINT SOCKET SET SCREW (2)
75569	SHUTTLE DRIVE CLAMP SET SCREW ONLY (NOT SHOWN)
80101	PAN HANDLE CAP (NEW STYLE)

PART NUMBERS AND DIAGRAMS

#126-03-3 ZIG ZAG LEVER BEHIND BINDING TAPE DISKS

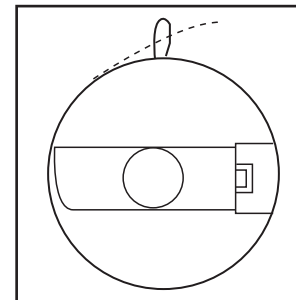


BOBBIN CASE

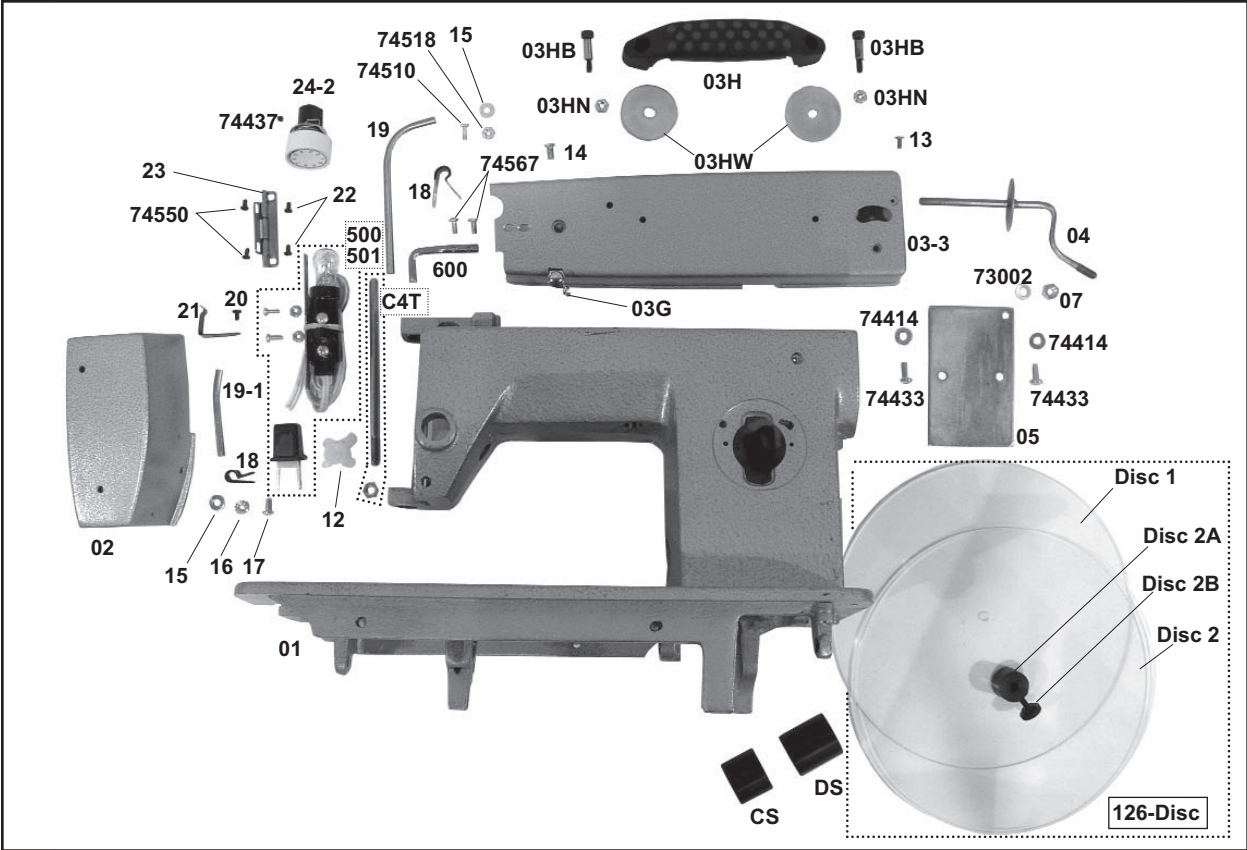
This machine uses bobbin case with an eyelet: Part #126-112-1.

Thread must pass through eyelet in bobbin case for proper operation. Tension on the bobbin thread should be light.

You have a #23 needle in machine, when ordering needle ask for size #23, Part #126-B (126-B2A [10 pk], 126-B2 [100 pk])



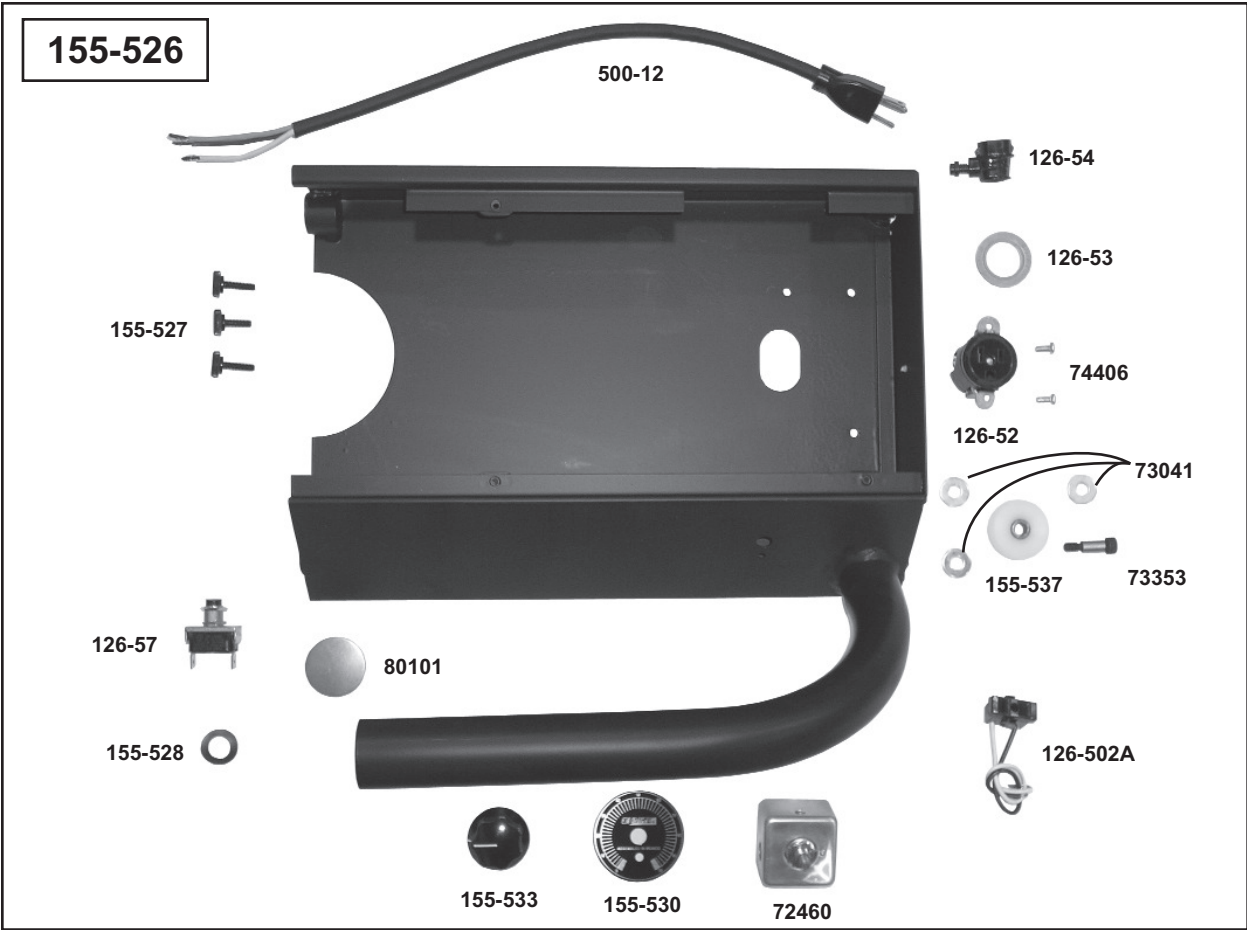
PART NUMBERS AND DIAGRAMS



<u>PART #</u>	<u>DESCRIPTION</u>
126-01	Frame
126-02	Front Cover
126-03-3	Top Cover
126-03G	Top Cover Guide Assembly
126-03H	Handle <i>Only</i>
126-03HB	Handle Bolt (2)
126-03HN	Handle Nut (2)
126-03HW	Handle Fender Washer (2)
126-04	Binding Spindle
126-05	Binding Spindle Plate
126-07	Binding Spindle Nut
126-12	Thread Spool Center
126-13	Top Cover Rear Screw
126-14	Top Cover Front Screw
126-15	Upper Thread Tube Washer (2)
126-18	Thread Tube Clamp (2)
126-19	Upper Thread Tube
126-19-1	Lower Thread Tube
126-20	Front Cover Latch Screw
126-21	Front Cover Latch
126-23	Front Cover Hinge
126-24-2	Upper Thread Tension Control (See pg 36)
126-500	Bulb Only
126-501	Light Kit

<u>PART #</u>	<u>DESCRIPTION</u>
126-600	Latch Pin (For Cover)
126-C4T	Thread Stand Bolt & Nut
126-CS	Tape Centering Plug for 7/8" Tape
126-Disc	Binding Disc Set (Includes Disc 1, Disc 2 & Disc Collar Thumb Screw)
126-Disc1	Rear Disc
126-Disc2	Front Disc
126-Disc2A	Disc Collar
126-Disc2B	Disc Collar Thumb Screw
126-DS	Tape Centering Plug for 1-1/4" Tape
73002	1/4 Split Lock Washer
74414	#10 Flat Washer SAE (2)
74433	10-32 x 1/2 Phillips Pan Head Screw (2)
74437	10-32 x 1/4 Drive Motor Pully Set Screw
74510	6-32 x 3/8 Phillips Pan Head Machine Screw (2)
74518	6-32 Hex Nut w/Tooth Washer (Keeps Nut)(2)
74550	6-40 x 3/8 Phillips Pan Head Machine Screw (4)
74567	Latch Pin Screw (2)
74568	#8 External Lock Washer (Not Shown)

PART NUMBERS AND DIAGRAMS

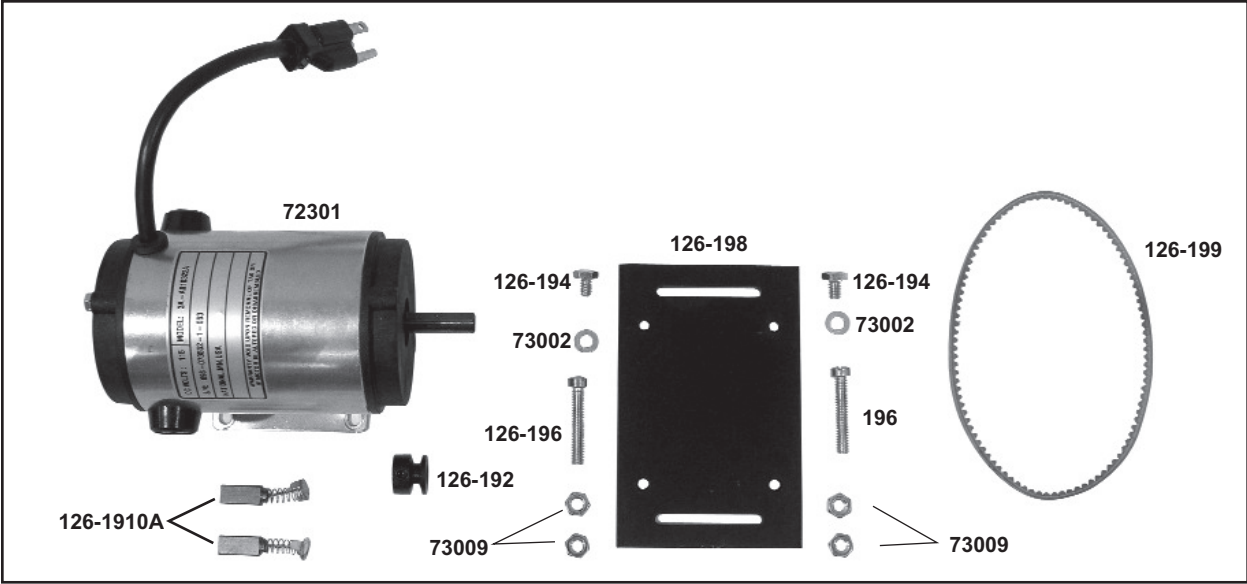


<u>PART #</u>	<u>DESCRIPTION</u>	<u>PART #</u>	<u>DESCRIPTION</u>
126-52	Motor Power Receptacle	155-537	Pan Wheel w/ Bearing (4)
126-53	Power Cord Strain Relief Retainer	155-5260	220 V Pan Assembly
126-54	Power Cord Strain Relief	155-5290	220 V Switch Assembly
126-57	110/220 V Control Switch	155-5340	220 V Speed Control
126-59	Pan Handle Cap (Old Style)	500-12	Pan Power Cord
126-502A	Light Receptacle Snap-In	72460	Speed Control
155-526	Pan Assembly	73041	1/4 Flat Washer USS (12)
155-526-1	Pan (Only)	73353	5/16 x 5/8 Shoulder Bolt
155-527	Pan Thumb Screw (3)	74406	10-32 x 3/8 Phillips Pan Head Machine Screw (2)
155-528	Switch Washer	80101	Pan Handle Cap (New Style)
155-530	Speed Control Back Plate		
155-533	Speed Control Knob		

NOTE: INTERNAL PAN WIRE NOT SHOWN

**PART CONFIGURATION MAY VARY BY MACHINE MODEL.
FURNISH SERIAL NO. ON ALL ORDERS.**

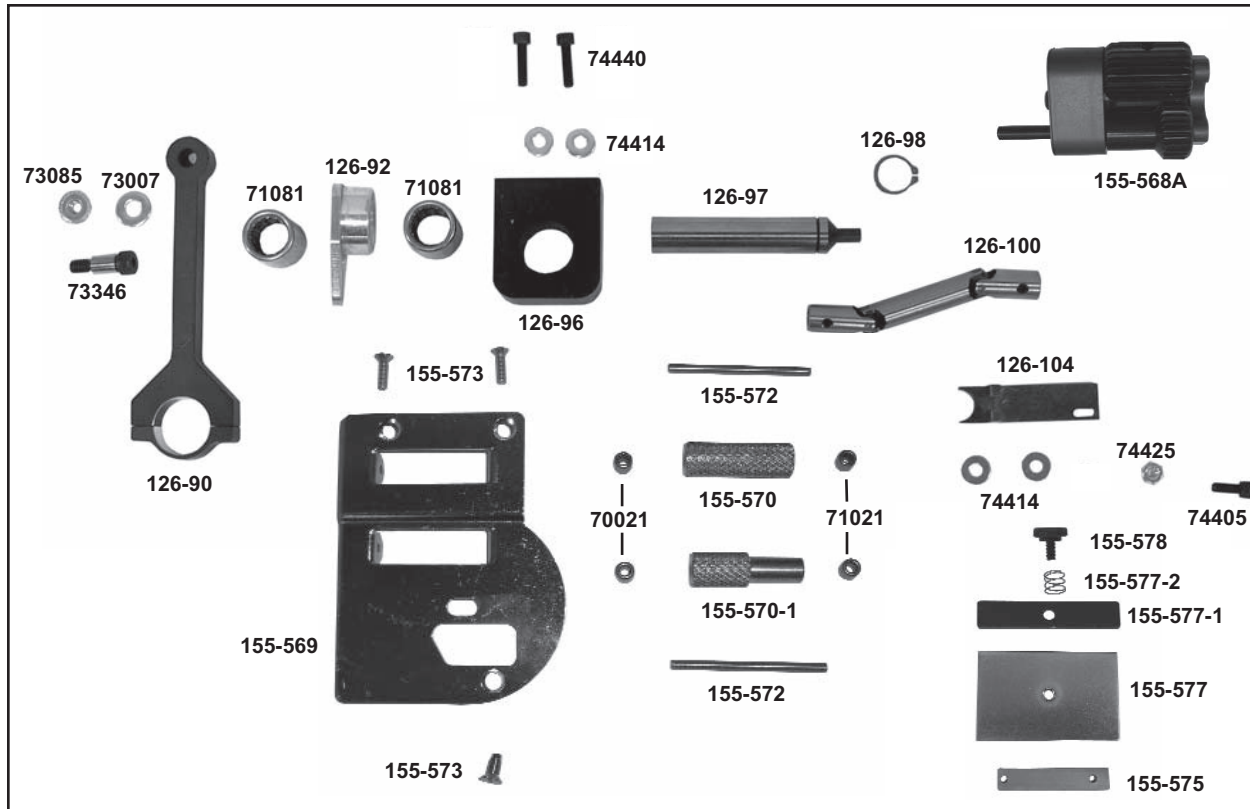
PART NUMBERS AND DIAGRAMS



<u>PART #</u>	<u>DESCRIPTION</u>	<u>PART #</u>	<u>DESCRIPTION</u>
126-192	Drive Motor Pulley (Incl. set screw)	126-1910B	Drive Motor 230V Brushes (Not Shown)
126-194	1/4-20 x 3/8 Drive Motor Lower Mount Screw (2)	73002	1/4 Split Lock Washer (2)
126-196	1/4-20 x 1 1/2 FILSLM Head Drive Motor Upper Mount Screw (2)	73009	1/4-20 Full Hex Nut (4)
126-198	Drive Motor Mounting Plate	72301	Drive Motor 115V
126-199	Drive Motor Belt	72311W	Drive Motor 230V (Not Shown)
126-1910A	Drive Motor 110V Brushes (2)	74437	10-32 x 1/4 Drive Motor Pulley Set Screw <i>Only</i> (Not Shown)

**PART CONFIGURATION MAY VARY BY MACHINE MODEL.
FURNISH SERIAL NO. ON ALL ORDERS.**

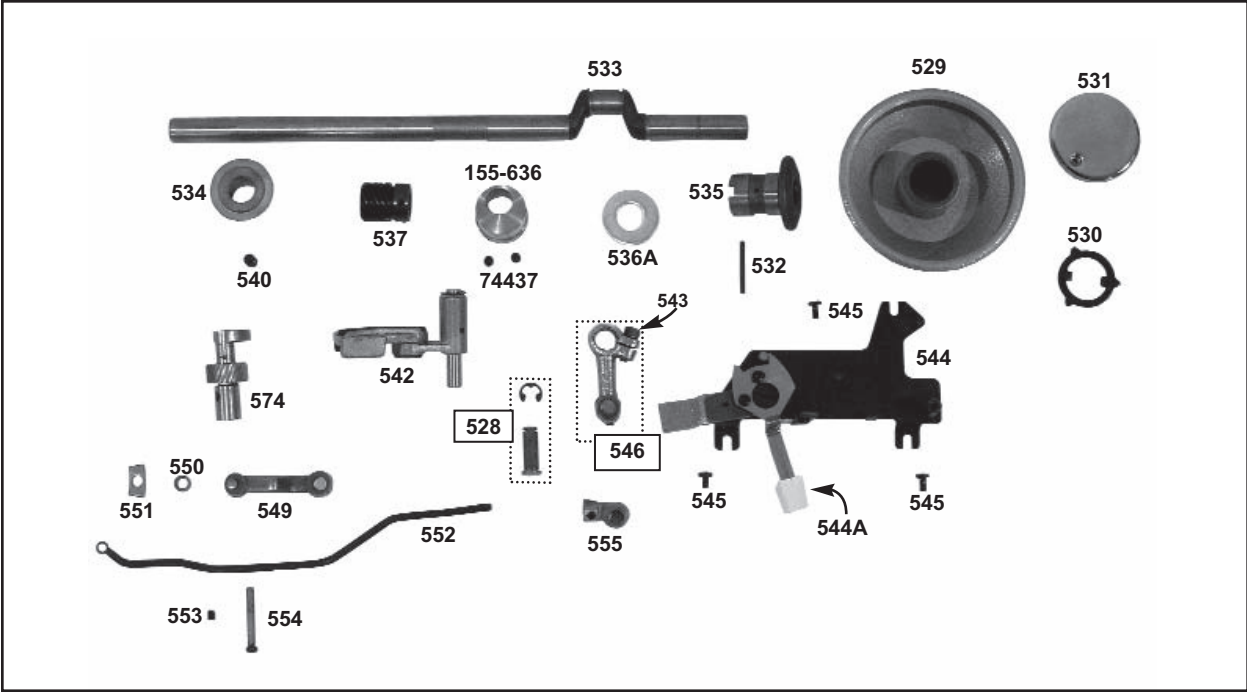
PART NUMBERS AND DIAGRAMS



PART #	DESCRIPTION	PART #	DESCRIPTION
126-90	Connecting Rod,Cap & Screws (Matched)	155-577	Shuttle Recess Plate
126-92	Feed Roller Drive Crank	155-577-1	Needle Plate Retainer
126-96	Feed Roller Dr Main Shaft Bearing Block	155-577-2	Shuttle Access Plate Spring
126-97	Feed Roller Drive Main Shaft	155-578	Shuttle Access Plate Thumb Screw
126-98	Feed Roller Retaining Spring	155-1568	Transmission Kit (New Style) (Not Shown)
126-100	Feed Roller Flex Drive Shaft w/ Set Screws	71021	1/8" ID Bearing (4)
126-148	Needle Plate Mount Screw	71081	5/8" ID Bearing (2)
155-568A	Feed Roller Transmission (New Style)	73085	1/4-20 Flange Nut Zinc
155-569	Needle Plate	73346	5/16 x 1/2 Shoulder Bolt
155-570	Needle Plate Roller Left	74414	#10 Flat Washer SAE (2)
155-570-1	Needle Plate Roller Right	74440	10-32 x 3/4 Socket Head Cap Screw (2)
155-572	Needle Plate Roller Dowel Pin 1/8" x 2" (2)		
155-573	Needle Plate Rear Screw (2)		
155-575	Needle Plate Retainer Bar		

**PART CONFIGURATION MAY VARY BY MACHINE MODEL.
FURNISH SERIAL NO. ON ALL ORDERS.**

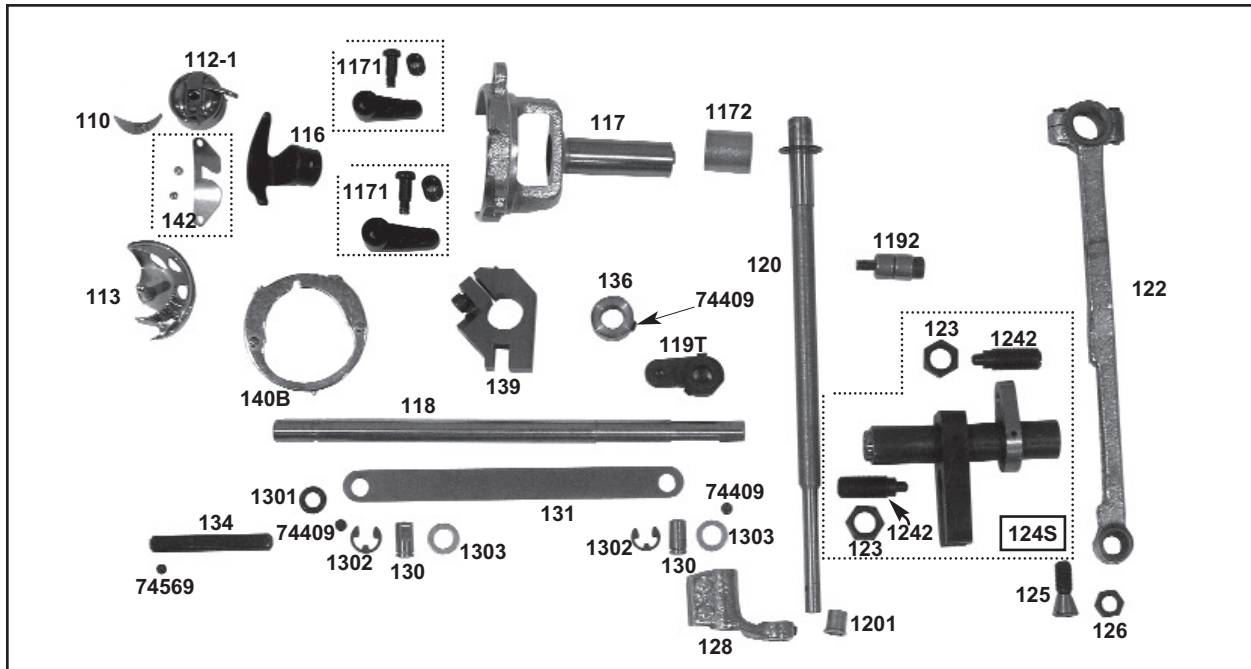
PART NUMBERS AND DIAGRAMS



<u>PART #</u>	<u>DESCRIPTION</u>	<u>PART #</u>	<u>DESCRIPTION</u>
126-528	Link Pin w/ Retainer Clip	126-545	Stitch Control Assembly Mounting Screw (3)
126-529	Hand Wheel	126-546	Shuttle Oscillator Control Link w/ Screw
126-530	Hand Wheel Retainer Washer	126-549	Stitch Selector Cam Link
126-531	Hand Wheel Retainer	126-550	Stitch Selector Cam Link Bushing
126-532	Top Shaft Bearing Retainer Pin	126-551	Stitch Selector Cam Shoe
126-533	Top Shaft	126-552	Needle Bar Carrier Control Rod
126-534	Top Shaft Forward Bearing	126-553	Needle Bar Carrier Control Rod Set Screw
126-535	Top Shaft Rear Bushing	126-554	Needle Bar Carrier Control Rod Pin
126-536A	Driver Cam Washer	126-555	Needle Bar Carrier Control Rod Socket w/Screw
126-537	Zig Zag Drive Gear w/ Screws	126-556	Repl. Needle Bar Carrier Control Rod Lock Screw <i>Only</i> (Not Shown)
126-538	Repl. Stitch Sel. Cam Clamping Screw <i>Only</i> (Not Shown)	126-557	Zig Zag Drive Gear Set Screw <i>Only</i> (2) (Not Shown)
126-540	Top Shaft Forward Bearing Set Screw	126-574	Zig Zag Drive Worm Gear
126-542	Stitch Selector Cam Assembly	155-636	Feed Roller Drive Cam
126-543	Repl. Shuttle Oscillator Control Link Clamping Screw <i>Only</i>	74437	10-32 x 1/4 Cup Point Set Screw <i>Only</i> (2)
126-544	Stitch Control Assembly		
126-544A	Repl. Stitch Control Knob <i>Only</i>		

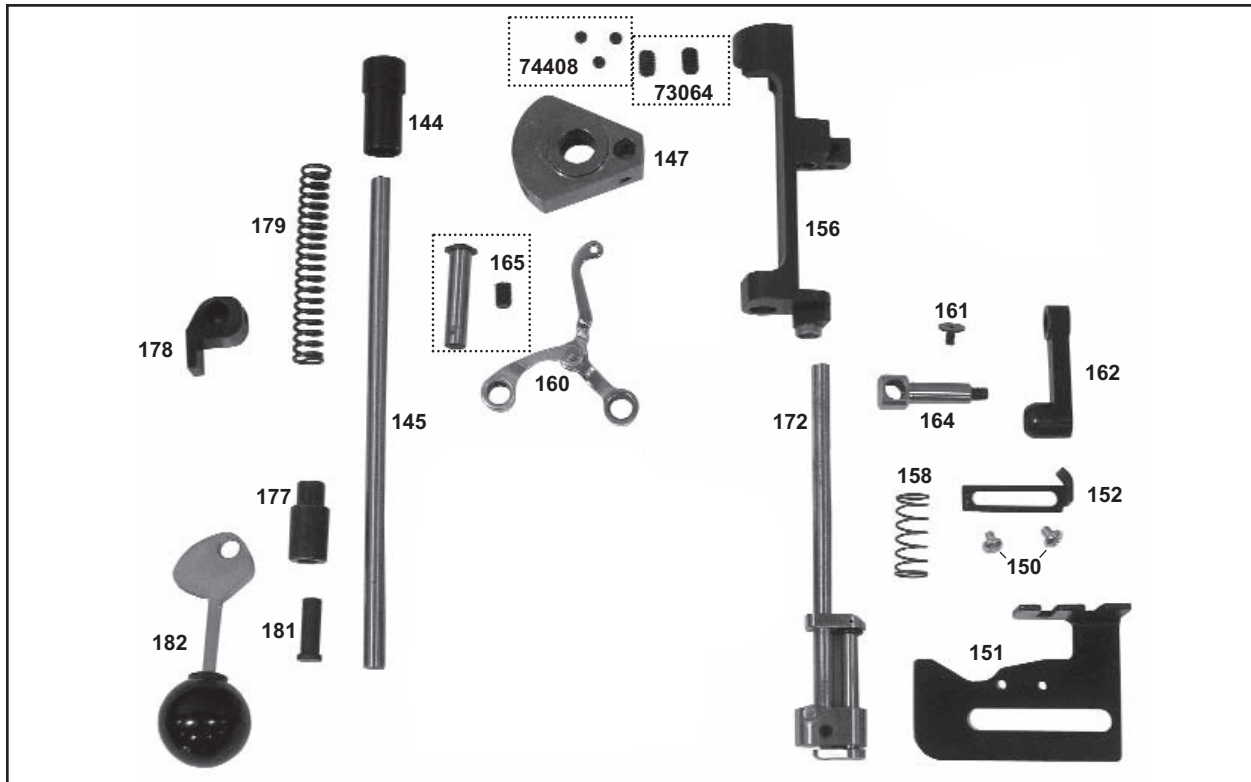
**PART CONFIGURATION MAY VARY BY MACHINE MODEL.
FURNISH SERIAL NO. ON ALL ORDERS.**

PART NUMBERS AND DIAGRAMS



<u>PART #</u>	<u>DESCRIPTION</u>	<u>PART #</u>	<u>DESCRIPTION</u>
126-110	Bobbin Case Spring w/Screw	126-130	Shuttle Oscillator Link Pin (2)
126-112-1	Bobbin Case w/Eyelet	126-131	Shuttle Oscillator Link
126-113	Shuttle Hook	126-134	Shuttle Clamp Guide Bar
126-116	Shuttle Drive	126-136	Shuttle Drive Shaft Collar w/ Set Screws
126-117	Shuttle Body	126-137	Shuttle Drive Clamp Lock Screw <i>Only</i> (Not Shown)
126-118	Shuttle Drive Shaft	126-139	Shuttle Drive Clamp w/ Screws
126-118N	Shuttle Drive Shaft 5/16" (Old Style) (Not Shown)	126-140A	Shuttle Race Cover w/ Springs & Screws (Red) (Not Shown)
126-119N	Shuttle Drive Crank for 5/16" Shaft (Old Style) (Not Shown)	126-140B	Shuttle Race Cover w/ Springs & Screws (No Red)
126-119T	Shuttle Drive Crank w/Set Screws (for 3/8" shaft)	126-142	Shuttle Race Cover Spring w/Screws
126-120	Shuttle Oscillator Shaft	126-1171	Race Cover Retainers (2)
126-121	Shuttle Drive Connecting Rod Cap Screw <i>Only</i> (2) (Not Shown)	126-1172	Shuttle Body Bushing
126-122	Shuttle Drive Connecting Rod w/ Cap & Screws	126-1192	Bearings and Bolt Set
126-123	Drive Fork Retainer (2)	126-1201	Shuttle Oscillator Shaft Bushing
126-124S	Shuttle Drive Fork, Bearing & Bolt Assy.	126-1242	Drive Fork Bolt (2)
126-125	Connecting Rod Lower Spindle	126-1301	O-Ring for Link Pin
126-126	Connecting Rod Lower Spindle Nut	126-1302	E-Clip for Link Pin
126-127	Shuttle Oscillator Crank Screw <i>Only</i> (2) (Not Shown)	126-1303	Washer for Link Pin (2)
126-128	Shuttle Oscillator Crank w/ Screws	74409	10-32 x 3/16 Cup Point Socket Set Screw (6)
		74569	8-32 x 3/16 Cup Point Socket Set Screw
		75569	Shuttle Drive Clamp Set Screw <i>Only</i> (Not Shown)

PART NUMBERS AND DIAGRAMS



PART #	DESCRIPTION	PART #	DESCRIPTION
126-144	Feed Roller Lift Shaft Retainer	126-172A	Needle Bar Thread Guide (Not Shown)
126-145	Feed Roller Lift Shaft	126-173	Needle Set Screw (Not Shown)
126-147	Needle Bar Drive Counter Balance	126-177	Feed Roller Lift Shaft Bushing
126-150	Folder Guide Mount Screw (2)	126-178	Feed Roller Lift Dog w/ Set Screw
126-151	Folder Bracket	126-179	Feed Roller Lift Shaft Return Spring
126-152	Folder Guide	126-181	Feed Roller Lift Handle Pin
126-156	Needle Bar Carrier	126-182	Feed Roller Lift Handle
126-158	Needle Bar Spring	71021	Lower Roller Bearing (2) (Not Shown)
126-160	Needle Bar Drive Linkage Assembly	73012	1/4-20 x 3/8 Cup Point Socket Set Screw (Not Shown)
126-161	Needle Bar Drive Link Retainer	73064	1/4-20 x 3/4 Cup Point Socket Set Screw (2)
126-162	Needle Bar Drive Link	74408	10-32 x 1/8 Cup Point Socket Set Screw (3)
126-163	Needle Bar Set Screw (Not Shown)	74569	8-32 x 3/16 Cup Point Socket Set Screw (Not Shown)
126-164	Needle Bar Drive Collar w/ Set Screw		
126-165	Needle Bar Drive Linkage Assembly Pin w/ E-Clip & Set Screw		
126-166	Needle Bar Drive Linkage Assembly Pin E-Clip (Not Shown)		
126-172	Needle Bar/Presser Foot Assembly w/ Set Screw		

ACCESSORIES & ATTACHMENTS

THREAD #126-E

Clear – 4,300 yards per spool

- Size #52
- Comes with sock
- For Binding Brutes



COLORED THREAD

#1550 Colored Thread

Thirty-six color varieties
 • Some colors match OEM vinyl
 • 1500 yards per spool
 • 4 oz. spool • Nylon • Colorfast • Bonded & lubed • Left twist



#1551 Colored Thread Chart

BOBBINS

We use the best...nylon not polyester
 • Tackified so they won't overspin in the bobbin case
 • Sideless
 • 80 spools per pkg.



#126-A1 Style-A, Size O • 125 yards • Nylon
 #126-A2 Style-A, Size D • 72 yards • Nylon (comes with Binding Brute)
 • Heavy Duty

#126-A3 Style-F • 80 yards • Cardboard sides, for use with binders other than National's

NEEDLES

We use the strongest needles in the world.
 Schmetz HD Cutting Point will run smoother and last longer than any other needle.



#126-B1 140/22 100/pkg

#126-B1A 140/22 10/pkg

#126-B2 160/23 Heavy duty – ideal for tough carpet • 100/pkg

#126-B2A 160/23 (Comes with Binding Brute) • 10/pkg

LUBRICANTS



#1040

#128-2

#128-4 #128-12

#128-5

#1040 DRY TEFLON LUBRICANT

Clean, non-staining • O-Zone Safe • 10 oz. aerosol can

SUPER LUBE AND TRI-FLOW

The ultimate in lubrication • Reduces friction wear

#128-2 Liquid 2 oz. Tri-Flow®

#128-4 Aerosol 4 oz. Tri-Flow®

#128-5 Super Lube 3 oz.

#128-12 Aerosol 12 oz. Tri-Flow®

#1394 Silicone Spray 3M

A silicone product in a 13.25 oz. spray can that lubricates, repels water, helps prevent rust and corrosion

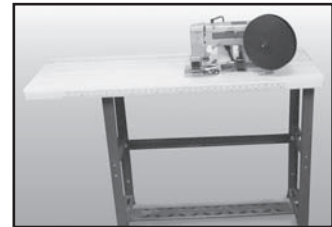


#1394

BINDING TABLE #127

Butcher block formica table top with ruler along front edge, rounded corners and plastic moulding

- Size 20" x 48"
- Heavy duty legs
- Fits Binding Brute
- Table only – binding machine not included •



Comes with foot pedal and lamp • The perfect answer for small rug production or base binding • Allows both hands to be free • Foot controlled machine operation

CASE & FOOT PEDAL

Optional foot control and case are available

- Can be purchased separately or in combination
- For the #126 & #155 Binding Brutes
- Bottom pan does not fit in case

#126F Case & Foot Pedal – 110v

#126-F1 Single Brute Case Only

#126-FW Case & Foot Pedal – 220v

#126-H Foot Pedal Only – 110v

#126-HW Foot Pedal Only – 220v



EMERY CORD SANDPAPER

Designed for deburring odd or tight places

ROUND Diameter Grain

#127-1 .082 120

#127-2 .040 180

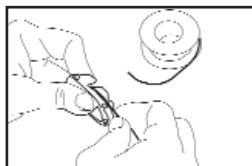
#127-3 .018 200

FLAT Diameter Grain

#127-4 1/16" 180

#127-5 3/32" 180

#127-6 1/4" 150



SPEED CONTROL #126-N

Proper speed improves control of machine

#126-N Speed Control 110v, 15 amp

#126-NW Speed Control 220v, 20 amp



ACCESSORIES & ATTACHMENTS

UPGRADE KIT

#1126-Upgrade

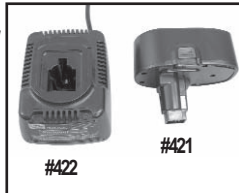
An upgrade kit that converts your existing Binding Brute™ to battery operation



BATTERY AND CHARGER

- #421 Replacement Battery Only
- #422 Replacement Charger Only 110v
- #422-W Replacement Charger Only 220v (requires a transformer)

For use with "cordless" machines #1126, #1155, #8089 & #8094



ACCESSORY KIT

#126-P217 Accessory Kit

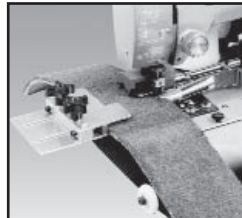
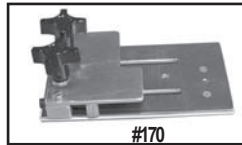
For Binding Brutes™ • Includes six bobbins, ten needles, four screwdrivers, thread clip, tweezers, three allen wrenches, race cover spring and case



BASE ATTACHMENTS

- #170 Base Attachment for #155 Double Pull Binding Brute
- #171 Base Attachment for #126 Single Pull Binding Brute

Easily attaches to Binding Brutes • Adjustable for various base widths • Makes it a hands-free operation • Adjusts from 2-1/2" to 6"



#1840 TWEEZERS

Deluxe bent 6" tweezers • Comes with accessory kit



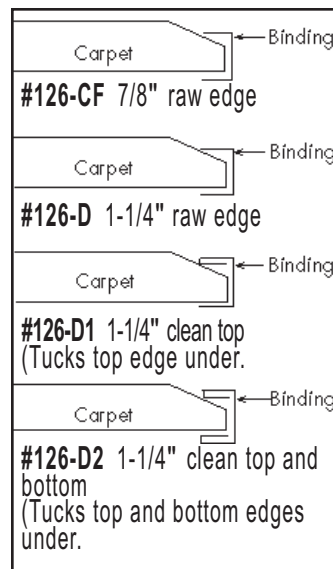
#1841 SMALL SCREWDRIVER SET

Contains one small screwdriver great for bobbin case screws and one (4-1/2" screwdriver • Plastic handle • Comes with accessory kit



#680 THREAD CLIP

Value priced • Full length 4" • Length of cut 1" • Comes with accessory kit



BINDING, SERGING & FRINGE ATTACHMENTS

- #126-C1 3/4" Cotton Folder
- #126-C2 2-3/4" Wide Binding Folder
- #126-C3 2" Folder
- #126-C4 3" Folder
- #126-C41 3" Single Tuck Folder
- #126-C6 4-3/8" Folder
- #126-C7 4-3/4" Folder
- #126-CF 7/8" Binding/Serging Folder
- #126-D 1-1/4" Raw Edge Folder
- #126-D1 1-1/4" Single Tuck
- #126-D2 1-1/4" Double Tuck (For cotton only)
- #126-D3 1-1/4" Wide Gap Raw Edge Folder (Great for heavy Berber or thick unbeveled carpet)
- #126-G Fringe Attachment



#126-G



#126-CF

Folders are made for National binders; modifications may be required to fit other brand machines. Custom folders available; inquire.

GUARANTEE

The National #155 Binding Brute is guaranteed to be free of manufacturer defective workmanship or in quality of materials for a period of one year.

Manufacturer's credit in full or in part cannot be issued by the distributor. Replacement or loaners on guarantee repairs is not allowed.

All merchandise returned subject to this guarantee must be accompanied by date of purchase receipt. C.O.D. freight return shipments will not be accepted.

All returns **must** have a return authorization number . Contact National to obtain one.

All guarantee findings will be up to the consideration of National Flooring Equipment, Inc. and that decision will be final.

Due to our lack of control of the many conditions and techniques used in the field, National will not be held responsible for injury to anyone or damage to any object, resulting through the use of this product regardless of its age or condition or the manner in which it is used.

RETURN SHEET

WHEN SHIPPING MACHINE, SHIP IN ORIGINAL CARTON

Company Name _____

Contact Name _____

Telephone Number _____

Approximate Usage (hours) _____

Problems Encountered _____

Check One: Repair

Do you wish to be contacted before repairing Yes No

Return

Contact National if a loaner is needed

Return Authorization Number _____ Date _____

Customer Number _____
required, contact National

Purchased From _____
if known

if not directly from National

INTERNAL USE ONLY

Date Received _____

Unit Serial Number _____

Subject To Warranty _____