



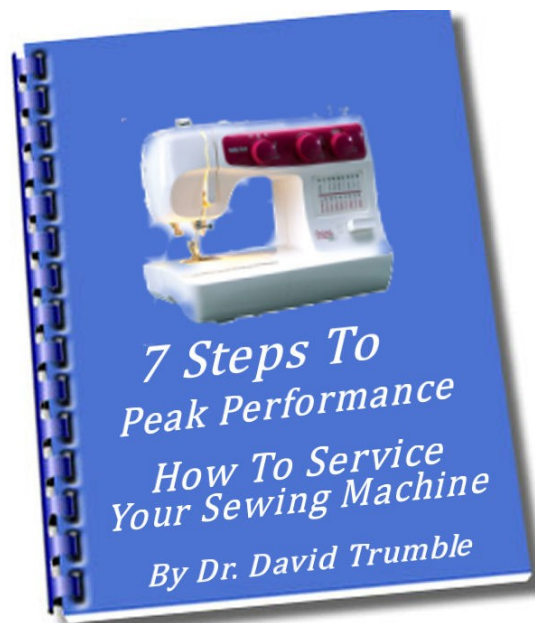
*7 Steps To
Peak Performance*

*How To Service
Your Sewing Machine*

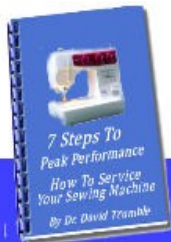
By Dr. David Trumble

7 Steps To Peak Performance For Your Sewing Machine

By
Dr. David Trumble



**All Rights Reserved
Copyright © 2008
By David Trumble and FixSewingMachines. Com**



7 Steps To Peak Performance For Your Sewing Machine

[Table of Contents](#)

About The Author Prelude & Disclaimer Introduction

**Step One:
Prevent Problems It Pays Big Dividends**

**Step Two:
Solve The Most Common Problem – Needles**

**Step Three:
Keep The Power Coming.**

**Step Four:
Perfect Threading**

**Step Five:
Care For The Bobbin Area**

Step Six: Take Up Area Care

Step Seven: Manage Tensions

Conclusion



David Trumble, Author

Hi,

I understand the challenges of learning to sew; or quilt; or how to fix it for sewing machines. I have not always been a sewing machine technician.

When I first met my wife Donna, she was the campus sewing expert. She was running her alterations business out of her dorm room. At the time, I knew nothing about sewing. Over the years, sewing has become an integral part of our lives. We married and completed our educations. I pursued graduate studies with a broad range of studies in education, ministry, and business management. (B.A.; M.Ed.; and D.Min.) During my careers, I have taught in public and private schools, preached over 30 years, and operated several businesses.

As a small church minister, money was always scarce. So, in our sewing businesses, we have done just about every kind of sewing you can imagine. We did original costume design to alterations, custom clothing construction, draperies, window coverings, home décor, quilting, and sewing machine repair.

In 1992, we opened The Sewing Studio, a full service sewing center. I was amazed by the demand for sewing machine repair. I had cleaned our machines over the years, but I was no expert. So, I began to look for a school, training center, book, something or somewhere I might learn to repair sewing machines. I thought certainly there would be a basic course

offered at the Junior College. Maybe there would be a regional training program from one of the major sewing machine companies. Nope!

After a lot of searching, I found bits and pieces. Allyn International (U.S. Necchi) permitted me to come to Denver. I spent a few days with their national repair supervisor. He taught me a bunch. But a few days was not enough. There are thousands of different sewing machine models. I collected a bunch of old old sewing machine repair books. I got repair manuals on many of the more common machines. I studied hard, but still lacked confidence.

My [sewing machine repair business](#) started in my garage. When I got stumped, I turned to my business partner Mr. Stephen Weathers (25 years experience). He helped me diagnose and complete the repair. Over the years, I have acquired hundreds of hours of technical training. This sewing machine repair training included Singers, Necchis, Berninas, Janome, New Home, Dressmaker, Elna, Viking, Brothers, and Baby Lock sewing machines. My practical sewing machine repair experience now stretches over 16 years.

My son Jeremiah use to sit at my workbench with me. He would help with cleaning. Today he is now one of the leading technicians in Texas as well as manager of our Killeen Sew And Quilt Store.

Today we own Temple Sewing And Supply, Inc., a small chain of Sew And Quilt Stores here in central Texas. As part owner, I have worked in almost every aspect of the sewing business including: production, sales,

repair, teaching, accounting, and management. I have drawn on the expertise of many other sewing machine technicians.

7 Steps To Peak Performance For Your Sewing Machine is designed to empower you to sew with confidence and care for your own sewing machine. It is not intended to replace your expert sewing machine repair technician. But it will enable you to keep your machine operating at peak performance between full service tune ups.

My sewing machine repair business had almost immediate success. I am confident that you too will quickly and easily learn [sewing machine repair](#). Now you can maintain your own sewing machines operating at peak performance.

Check out our complete line of sewing machine repair courses, and books on the sewing machine business.

[*7 Steps To Peak Performance*](#)

[*My Magnificent Sewing Machine*](#)

[*Glimpses Of Sewing Yesteryear*](#)

[*Also Check Out My Other Websites*](#)

www.sewinganswers.com

www.fixsewingmachines.com

www.sewandquiltstore.com



7 Steps To Peak Performance For Your Sewing Machine

INTRODUCTION

Your sewing machine is a marvelous creative tool.

When it is working properly, your sewing machine enables you to do hundreds of different kinds of projects. Fix and adjust those ready wear garments. Create beautiful garments for yourself, your children, grandchildren, friends, and more. Decorate your home with gorgeous window treatments, pillows, table covers, wall hangings, and embellished items. Make beautiful quilts. Produce a thousand and one great craft items.

Sewing relaxes and invigorates. Sewing builds confidence and self esteem. With your Sewing machine, you make the world beautiful.

When your sewing machine is working at peak performance, every stitch forms perfectly. Creative expression is quick and easy. Sewing is carefree and ultimate pleasure.



"Sew With Pride"

When your sewing machine is messing up, the whole world is troubled. Nothing seems to work. Frustration replaces relaxation. Weariness drains all the steam and energy out of creative expression.

When the sewing machine is not working properly, the stitches often become distorted. Tensions may be spotty. Threads may bunch here or there. Seams may look bad. An endless array of problems can arise.

So what do you do?

You could quit sewing. Put your machine in the closet. You could even slam the closet door, or say some outrageous things.

Of course, everyone talks to their sewing machine. Not everyone uses those four letter words



You could package your machine up, put it in your car or truck, and take it to your local sewing machine repair center. At the cost of \$99 or \$129, this could get costly.

Or, you could learn how to keep your sewing machine operating at peak performance all the time. Yes you can. No matter what sewing machine you have, a few simple steps taken regularly can keep your machine operating at peak performance.

Obviously, if your sewing machine is a mechanical machine with only a few stitches, it will not give you benefits of a full featured sewing machine. However, in many cases, you can keep your sewing machine operating like new or even better for many many years.

If you have a high quality sewing machine, the contents of this book are even more valuable for you. This book reveals how to keep your sewing machine with its advanced sewing, stitching, and convenience operating at peak performance.



Get the most from your sewing machine consistently and dependably.

The purpose of this book is to give you step by step instructions on maintaining your sewing machine in peak condition. These practices need to become automatic sewing habits.

If you follow these simple seven steps, your sewing machine will operate carefree year after year. You will enjoy the pleasure of sitting down to your sewing machine and sewing with confidence. You will benefit from relaxing self expression free of sewing machine frustrations.

These seven steps include: Prevention Pays, Solving The Most Common Problems, Perfect Threading, Bobbin Area Care, Take Up Area Care, Points Of Interest, and Managing Tensions. Following these simple steps will make you feel like a sewing expert, every time you start to sew.





7 Steps To Peak Performance

For Your Sewing Machine

Step One: Prevent Problems It Pays Big Dividends

How often do you change the oil in your car? Every three months whether it needs it or not? Every three thousand miles? What would you suppose would happen if you decided not to have your car serviced for 100,000 miles or may every ten years? Whatever happens in your car in terms of wear and performance, happens in your sewing machine.

The current recommendation is that your sewing machine should be professionally serviced once a year. This is important even if the machine sits in a closet all year long. If you have stored your sewing machine for a while, and decide you want to start sewing again. First, take the machine to your professional sewing machine repair technician for a full service. This will prevent loads of frustration and disappointment.

If you use your machine for embroidery, it should be serviced ever 1,000,000 stitches.

If you do a lot of sewing with linty fabrics, you need to have your machine serviced more frequently.

If you use your sewing machine professionally, it will require more frequent sewing machine service.

Average charges for a standard sewing machine service nationally run between \$99.00 and \$129.00. Depending on where you live you may find charges running between \$79.95 and \$149.95. If

you need your sewing machine serviced several times a year, the costs can be huge.

One solution is to service your own sewing machine.

If this sounds overwhelming, relax. You can quickly and easily learn to do most of the service on your own sewing machine. Indeed, if you will follow the steps included in the book regularly, religiously, faithfully; you will keep your sewing machine operating at peak performance.

It is not extremely complicated or difficult.

Yes, there are possible repairs that would be beyond your reach at the beginning. Yes, you will still need an annual service by a professional technician.

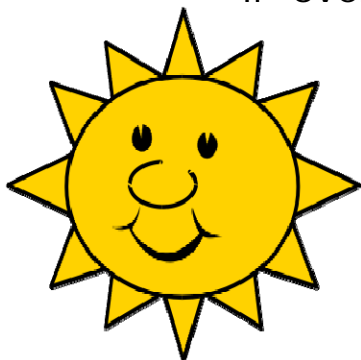
No, you should not need to keep visiting the sewing machine repair shop more frequently. This can save you hundreds of dollars every year you sew.

Yes, you can maintain and service your own sewing machine at least between annual sewing machine tune ups.

Step one is to prevent problems before they become critical.

What hurts sewing machines?

The most common exposures that affect sewing machine include direct sunlight, high moisture exposure, variable temperatures, and dust. Direct sunlight causes the sewing machine cover to deteriorate, turn yellow, and even melt if over exposed. Moisture causes rust, mildew, molds, and generally makes a mess out of the insides of your sewing machine. Sewing machines are vulnerable to extreme shifts in temperatures. Dust, grit, grime,



gunk, and dirt are fierce enemies of your sewing machine.

Step one: Prevent exposure to direct sunlight, moisture, shifts in temperature, and dirt. Keep these exposures away from your sewing machine.



To prevent exposure to direct sunlight, place your sewing machine away from windows and sun exposure.

Make a quilted sewing machine cover.

The quilted fabric will shield the sewing machine away from the sunlight.

The quilted fabric cover will provide protection against moisture. Always keep your sewing machine at room temperature.

The quilted fabric cover will protect from air borne dust and debris.

The quilted fabric cover will even protect your sewing machine from slight bumps in the night.

Every time you quit sewing for more than a few minutes, cover your sewing machine with your quilted sewing machine cover. If you are placing the machine in storage, and have a hard shell cover; place the quilted cover over the machine and then cover the machine with the hard shell case. The hard shell case does a

good job protecting your sewing machine against occasional bumps. The quilted sewing machine cover protects against the other environmental risks.

Periodically, use a moist cloth to remove smudges and surface dirt.

A clean well protected sewing machine will perform great year after year.



7 Steps To Peak Performance For Your Sewing Machine

Step Two: Solve The Most Common Problem Needles

Sewing machine problems include many different situations. The sewing machine won't turn on. Or the machine won't run when you press the foot control. It races out of control or sluggishly drags along. The sewing machine skips stitches. You select one stitch, but what you sew does not look like what you want. Threads bunch up under the fabric or ball up on top of the fabric. The fabric puckers. The fabric won't move through the sewing area.

What are the three most common causes of sewing machines problems?

The Needle.

The needle is the number one cause of sewing problems. Indeed, in the sewing machine repair shop, the very first thing the technician does is replace the needle. Needles are prone to problems. The point easily grows dull with use. The point often develops burr or flaws. The wrong needle produces wrong results. Needles may bend. Improperly installed needles can cause big problems.

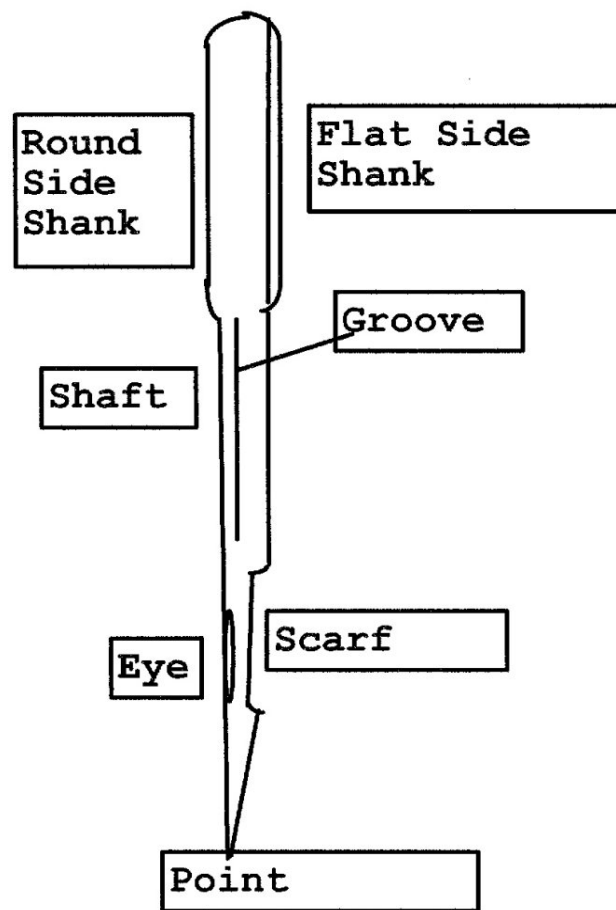
If your sewing skips stitches, replace the needle.

If your fabric appears to bounce while you sew, replace your needle.

If your stitches look weird, replace your needle.

If you have recently installed a needle and your sewing machine does not sew, replace the needle.

It does not matter how many years you have been sewing with your sewing machine, needles can make big problems.



To prevent needle problems:

1. Replace needles after every three or four hours of sewing or every other project.
2. Never sew with a dull needle. Never sew with a bent, flawed, or rusty needle.
3. Use the right needle for the application. Stretchy fabrics require stretch or ball point needles. Woven fabrics require sharp or universal needles. Light weight fabrics require smaller needles #10 or #8. Medium fabrics require medium needles #11 or #12. Heavy fabrics require heavy needles #14 or #16.
4. Make sure the needle is always installed with the back of the needle toward the back. If your needle is rounded, make sure the scarf lines up with the hook assembly and the thread take up system.
5. Make sure the needle is installed fully into position.



7 Steps To Peak Performance For Your Sewing Machine

Step Three: Keep The Power Coming.

The Cord, Plug, and Foot Control

A less common, but still frequent source of sewing machine problems is electrical. Amazingly, the most common problem reported by general appliance service people, is an unplugged appliance. Since sewing machines are often moved about, periodically, the sewing machine just won't start because it is not properly plugged in. A similar issue emerges through wear on the power cord, plugs, or foot control. Shorts and opens in the cords cause the machine to either operate erratically or not at all.

In most cases, you can repair a sewing machine cord.

In the early days of the sewing machine, the power to drive the mechanisms came from either hand or foot. The treadle sewing machine has been manufactured for over 150 years. Janome International continues to produce treadle sewing machines for third world settings lacking electricity. Those groups of people like Pennsylvania's Amish who prefer not to use electric powered sewing machines continue to seek this design. Many hundreds of sewing machine models were also manufactured using hand crank mechanisms.



Today electric power has largely replaced the treadle and hand crank sewing machines. Electrical power is distributed through standard household electrical outlet to the sewing machine power cord. In the United States, this electric power comes in 120 AC, but in Europe it comes in 240 AC. The electrical system within the sewing machine must be designed to accommodate the appropriate power system. The sewing machine power cord must also fit the right system. Using a machine designed for use in the United States in Europe (or the reverse), will result in a messed up sewing machine.

To accommodate the other power system is fairly simple. You may purchase a power transformer to alter the power system to match the power required for your sewing machine. Plug the transformer into the power outlet and connect it to the sewing machine. You are ready to sew.

Over time the sewing machine power cord may become work, the insulation may crack or even brake away from the wire. The two wires may become exposed to each other creating a dangerous electrical problem. Not only can shorts or opens cause your sewing machine to fail and cease operating. Shock and electrical discharges can cause fires, ruin motors, destroy circuit boards, and generally mess everything up.

Therefore, it is important to periodically inspect your sewing machine power cord. Look for prongs that are bent out of shape. Look for cracks, cuts, worn spots, and wear on the outlet plug, power cord, and sewing machine socket.



If you see wear that does not threaten the integrity of the sewing machine power cord, you may use standard electrical tape to cover the flaw and insure the continued reliability of the cord.

If you see cracks or an obvious break in the power cord, repair the cord by cutting the bad spot out of the power cord. Join only good ends by separating the two wires on each section. Make sure the insulation is intact. Attach the appropriate ends together. Remember you are working with AC voltage so as long as the wire is continuous after joining, they will work. You may solder the ends or use wire nuts to join the wire. Once the wires are joined, cover the joint with electrician's tape thoroughly to prevent further wear.

If the cord is badly worn, replace it. You may purchase a replacement cord from your local sewing machine repair center.

Do not continue using faulty sewing machine power cords. In most cases, you can install a new power cord without replacing the foot control. Yes, many cords do attach to the foot control, but the foot control may be disassembled and the ends of the new cord installed.

If the foot control also requires replacement, you may research aftermarket sources for the part. If the machine was a very popular model or is not older than ten years; an original product may be available. Otherwise, an aftermarket product may be available. Often older machine foot controls may be replaced with generic foot control.

The key is: do not use faulty sewing machine cords or foot controls.



7 Steps To Peak Performance For Your Sewing Machine

Step Four: Perfect Threading

Without thread there is no sewing. Thread is an essential. The sewing machine uses thread to join fabrics together. One thread fills a bobbin and is inserted under the fabric flow. One thread is drawn through the eye of the needle from above. The sewing machine moves the needle down through the fabric and beyond. The thread from above is caught by the sewing machine hook and pulled around the bobbin thread. As the needle withdraws and moves up, it tightens the threads into a locked stitch inside the fabric.

Unfortunately, when a sewing machine is not properly threaded, the stitching is distorted or possibly ruined completely. There are many ways to improperly thread a sewing machine, but only one right way to thread a sewing machine.

How Do You Thread the Elna Sewing Machine? How do you thread a Singer sewing machine?



How do you thread a Bernina, Brother, Juki, Janome, or any other sewing machine?

While there are thousands of different models of sewing machines, and each one has its own unique way to accommodate the threading process; they are all essentially the same.

The upper thread comes wound on a spool. The spools come in a variety of different shapes and designs, but they all work the same. The spool of thread is placed over a spool pin which may be horizontally or vertically mounted to the sewing machine.

A simple and easy way to thread a sewing machine is to draw the thread through, around, and over the various thread guides to the needle. Sound easy? It is.

Then, why are there so many mistakes made threading a sewing machine?



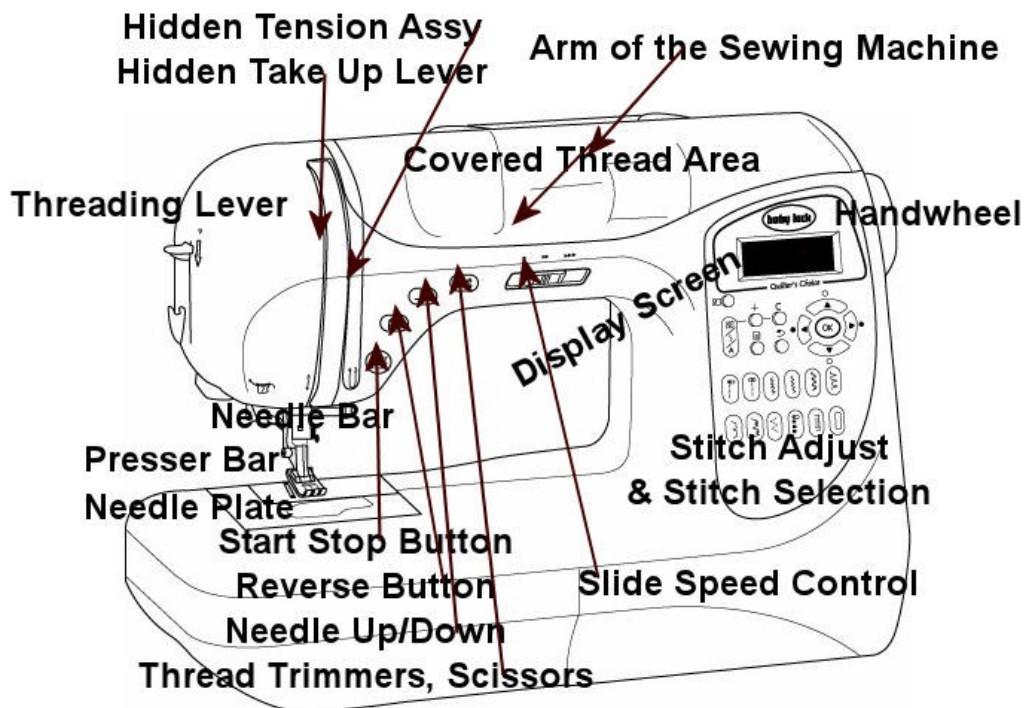
It must be done perfectly every time. No mistakes.

Here are the key instructions.

Threading a sewing machine begins at the thread spool. It must be properly placed on the spool.

Draw the thread from right to left. Draw the thread from the spool pin to the first guide.

Caution: threads often snag on rough spots on the spool, therefore, double check that the thread flows freely off the spool. If the spool pin is horizontal, a spool cap just slightly larger than the end of the thread spool is required to lift the thread off the edge of the spool where it might snag.



On some rear mounted vertical spool pins, a spool net (a net material used to guide the thread) may be needed to keep the thread from getting snarled as it flows off the spool pin.

Draw the thread through the first thread guide. Look to the left for another thread guide. Depending on the machine there may be up to four thread guides from across the top, back, and toward the front of the sewing machine. Many newer machines make this easier by numbering the threading steps so you can just follow the numbers.

From the thread guides, the thread must be drawn through the tension discs. Older machines have front mounted tension assemblies that are obvious, but often the tension assemblies are hidden under the covers.

Threading through the tensions is a common source of problems. If the presser foot is down, the thread will ride along the ridge of the tension discs instead of flowing through them properly. The solution is: raise the presser foot lever when you begin threading and keep it up until you reach the needle.

The thread must follow through the upper thread guides and through the tension discs. These discs consist of two or more flat round discs that press against the thread during sewing to provide "tension".



After flowing through the tension discs, the thread must flow through the tension spring which helps keep the tension on the thread stable during sewing.

Next the thread must flow through the sewing machine take up lever, and back down through any remaining tension guides to the eye of the needle.

Finally, the thread must flow through the eye of the needle, however, before finally threading the needle. Test the tension by slightly tugging on the end of the thread. You should feel very little resistance. Now drop the presser foot and test again. (Remember it has been up until now.) You should feel resistance now. Finish the threading by threading the needle.



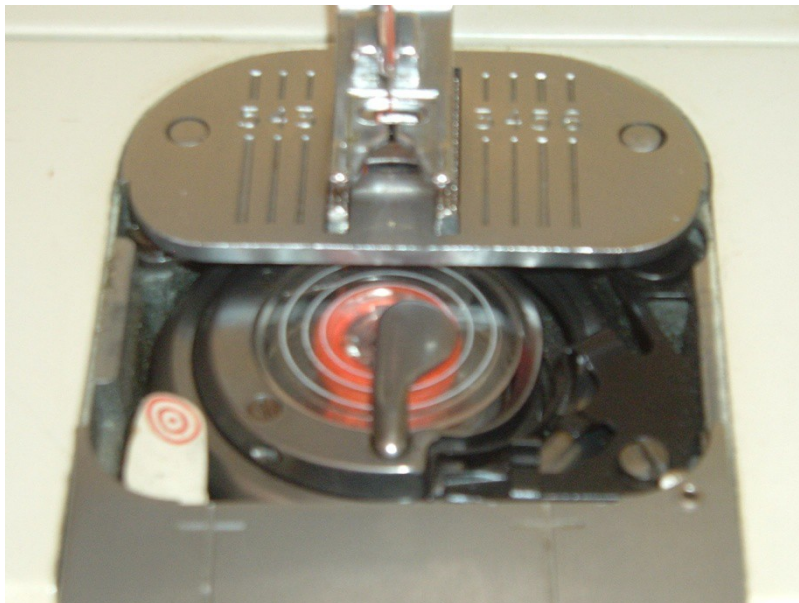
7 Steps To Peak Performance *For Your Sewing Machine*

Step Five: Care For The Bobbin Area

There are two common types of sewing machine bobbin areas. Some machines have top loading bobbins. Top loading sewing machines secure the bobbin carrier in place. The bobbin is placed into the carrier from the top and a needle plate is positioned above the bobbin area.

Other sewing machines have front or left side loading bobbins. Front and side loading sewing machines have bobbins that are placed into a bobbin carrier that is then inserted into position.

The bobbin area is prone to collecting lint, debris, grease, and other gunk. Many sewing machine users fail to clean out the bobbin area regularly. As a result, the bobbin area becomes packed with



junk which interferes with proper operation of the sewing machine. In some cases, the lint and gunk become hard and crusty causing the hook assembly to lock up. In this case, the sewing machine will eventually fail to function.

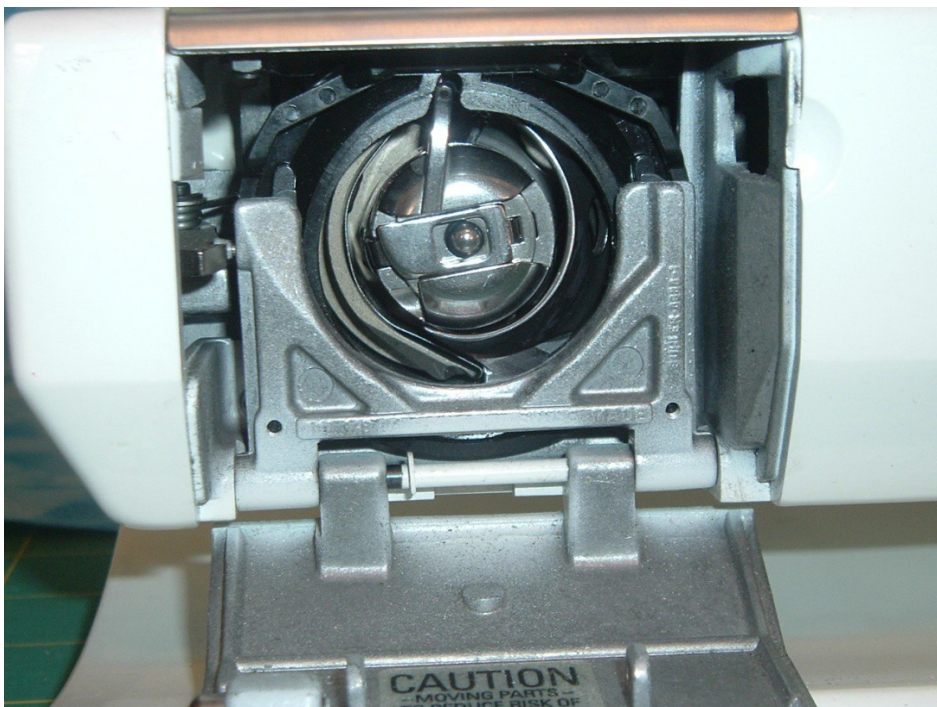
After every two to three hours of sewing, uncover and clean the bobbin area.

If you have a top loading bobbin, remove the needle plate and cover plate. Remove the bobbin. Remove the bobbin carrier.

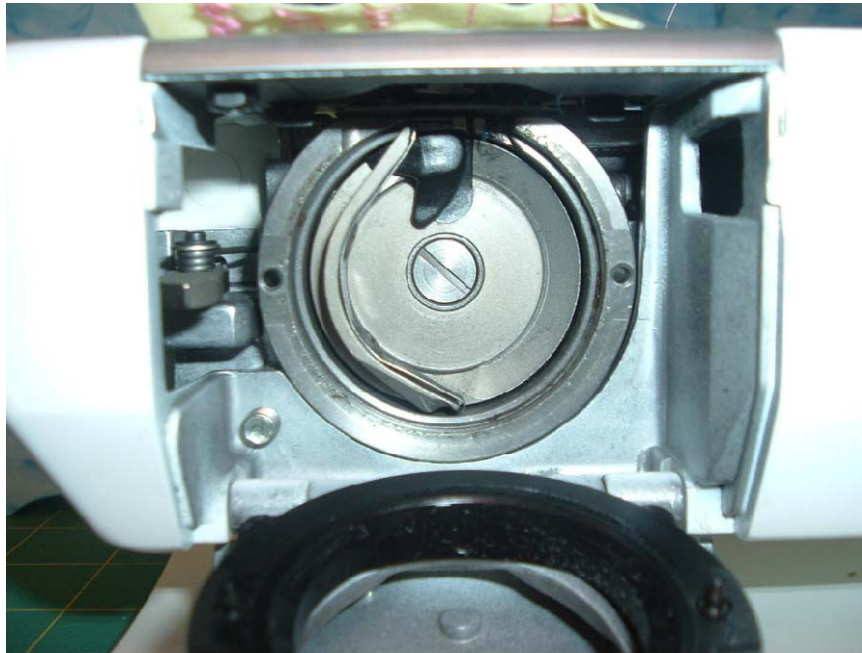
Clean the bobbin area thoroughly. Use canned air (upright only), sewing machine vacuum, or air compressor to remove all lint and debris from the bobbin area. Use a brush to loosen any solid debris or sticky stuff.

Some machines have a convenient outer cover under the bobbin area. You may remove this cover to complete the cleaning process.

Notice the hook that rotates around where you removed the bobbin carrier and bobbin. There is a groove around the inside of the hook. Once the bobbin area is completely clean, place one drop of pure clean sewing machine oil in the groove also called the race.



If you have a front or side loaded sewing machine, open the bobbin area. Remove the bobbin carrier and bobbin. A bracket holds the hook in place. Release the bracket, and remove the hook from the hook assembly. Also remove the needle plate and uncover the feed dogs. Thoroughly clean out the bobbin area of all debris, lint, and gunk. Use canned air (upright only), sewing machine vacuum, or air compressor to remove all lint and debris from the feed dog and bobbin areas. Use a brush to loosen any solid debris or sticky stuff.



Notice the hook moves along a groove called the race. Drop one drop of oil on to the race. The movement of the hook will spread the oil. Replace all parts previously removed.

Reassemble the bobbin area. Test the sewing machine for smooth easy movement by turning the hand wheel toward you several turns.

When the bobbin area is regularly cleaned, you will find carefree sewing.



7 Steps To Peak Performance

For Your Sewing Machine

Step Six: Take Up Area Care

Another problem area is the needle bar and presser foot bar area. The movement of the needle bar acts like a vacuum cleaner sucking up lint, dust, debris, and gunk. This stuff collects, hardens, and interferes with sewing machine operations.

Some sewing machine models have doors that open at the touch of a finger. Some have a cover held in place by a single screw. Every three hours or so, open the door or cover over the needle bar area. Check for dirt, lint, threads, and any other debris.



Once the area is exposed, blow out or clean out all lint and gunk that may have collected in the area. Look closely around the needle bar and the various shafts and parts for threads and debris.

Thoroughly clean out the needle bar area. Use canned air (upright only), sewing machine vacuum, or air compressor to remove all lint and debris from the feed dog and bobbin areas. Use a brush to loosen any solid debris or sticky stuff.

Once the needle bar area is thoroughly cleaned, use one drop of pure clean sewing machine oil everywhere you see metal contacting metal.

Notice the connection where the needle bar slides up and down through a metal sleeve. Notice the pivot connection at the top of the needle bar. Notice the levers, balance wheels, and other moving parts. Notice the presser foot bar and its metal parts as well.

Remember place only one that is only one drop of pure clean sewing machine oil.

Never ever use any other type of oil in your sewing machine. Many household oils contain paraffin and other elements that can cause problems for your sewing machine.





7 Steps To Peak Performance For Your Sewing Machine

Step Seven: Manage Tensions.

"The tensions are terrible.
Every time I sew, the threads bunch up."

This and similar complaints are among the most common complaints by sewing machine users. Excess threads bunch up under the fabric or bubble up on top of the fabric. The stitch may be fine for an inch or two, and then suddenly they screw up and the whole job is ruined.

There are several causes of improper tension. One of the common causes of improper tension comes from inappropriate threading of the upper thread or bobbin assembly. Missing a thread guide, threads floating on top of the upper tension discs, or threads missing the bobbin tension can cause havoc with the stitch quality. Rough spots, worn surfaces, lint and debris, burrs on the hook, bad needles, and bad thread can also cause faulty tension.

Tensions are a common source of problems in sewing. Understanding how tensions work is essential for every sewing machine user. It is not as complicated as some believe, and not as simple as some might think.

Tension is the amount of drag or resistance on the thread as it moves through the sewing machine. When the tension on top and on bottom are balanced properly, the threads will join in the

middle of the fabric with no excess thread on top or the bottom of the fabric.

How do you adjust upper tensions?

Perfect stitches form when the upper and lower threads connect in a locked stitch in the middle of the fabric. There should be no excess thread on the top of the fabric or underneath. The thread should flow smoothly and tightly from one stitch to another without puckers, looseness, or wobbles.



To achieve these perfect stitches the upper and lower threading must be appropriate, but the drag or resistance of the upper tension system and the bobbin tension system must balance each other precisely.

Consider the fabric like a stream of water. The threads are like ropes across the stream. One tug of war team pulls up and another pulls down. Each team pulls across the stream. If the

lower thread or bobbin thread pulls harder than the upper thread team, excess thread will collect under the fabric hidden until you lift the fabric to see ugly bunches of thread. The stitch may even look fine on top while the threads jam up underneath. If the upper thread pulls harder than the lower thread, excess threads pop up on top of the fabric. Usually, you will see these balls, bunches, or bubbles of thread almost as soon as they stitch.

Finally, tighten the upper thread until it balances the lower thread providing stitches that meet in the middle of the fabric.

Always do a test seam on scrap materials before sewing a finished seam that will be seen. Adjust the tension on the stitch you plan to use until it is properly balanced. Note a straight stitch may appear balanced, but when you go to a zig zag or other stitch, it may not produce your perfect stitch. Always test before sewing your finished seam.

You may notice irregularities on one side of a zig zag stitch and not on the other. Test and adjust until it looks the best you can make it. Some machines have design issues that make a perfect zig zag stitch almost impossible. If you want a perfect stitch and you have one of these older machines, consider getting a better machine.

HOW DO YOU ADJUST THE BOBBIN TENSION?



The lower thread system is even a little more mysterious than the upper thread system, but it is in many ways even simpler. The lower thread system may involve top loading bobbins, front loading bobbins, or even side loading bobbins. Older machines often used shuttles mounted underneath the machine. While there are a variety of

different designs, the essentials are the same. Thread is wound on a bobbin the bobbin is placed into a case or holder. (Older machines used shuttles the same way). The thread in the bobbin is drawn through a tension device and up to the top of the sewing platform.



Important: Be sure

you have the right bobbin.

Be sure the bobbin thread is properly wound with no loops or loose threads and not too tight either. The thread should be smoothly wound around the bobbin.

Be sure to place the bobbin in the bobbin carrier exactly the way

your sewing machine manual says. The bobbin thread usually moves from left to right or clockwise around the bobbin as it turns. However, there are models that are exactly the reverse. The key is to observe how the thread enters the bobbin carrier tension assembly. The thread should trail back under the tension so that it does not slip out during use.



Thread through the lower tension. Usually, this means the bobbin thread will peel back through the bobbin tension rather than follow along or just flop in the wind. Notice the piece of metal on top right of the carrier. A small metal spring usually built into the bobbin carrier applies pressure or resistance to the bobbin thread. This is the bobbin tension spring. A tiny screw holds the tension spring in place. Turning this screw to the right will tighten the lower tension. Turning it to the left will loosen the bobbin tension. ("Righty Tightly, Lefty Loosey")

Some bobbin carriers are built into the machine or fasten in place to receive the bobbin. Other bobbin carriers are made as bobbin cases which detach from the machine to receive the bobbin and then are reinserted after loading the bobbin.

If you have a bobbin case that detaches from the machine, test the tension by doing the following. Pull off about six inches of bobbin thread through the tension. Dangle the bobbin carrier with the bobbin in it while holding the thread above it. The lower tension should hold the carrier so that it does not drop. If it does, just turn the screw a quarter turn to the right. If it does not drop, try bouncing the carrier a little. If the tension is properly set, the carrier will drop a little and stop. If it does drop a couple of inches and stops, all is good. If the carrier does not drop at all even after pretty good bounce, the tension is too tight. Turn the screw a quarter turn to the left. Try again.



Many machines have a drop in bobbin that fits into a bobbin carrier below the needle plate. Once the bobbin is placed in the carrier, the thread is drawn under a tension spring. The same gentle pull test used in the front loading bobbin can be used with the drop in bobbin, but it is a bit less precise. If you continue to experience difficulties with the bobbin tension, it may be adjusted by turning the small tension screw on the spring of the bobbin carrier. You may also seek the expert assistance of your local sewing machine technician if needed. A special spring loaded gauge may be used to measure the actual tension on the string, but in most cases it is not required.

Double check to identify any worn parts that might snag the thread. If you find a rough spot, burr, or other such spot; correct the problem before bringing the thread up through the needle plate hole and preparing to sew.

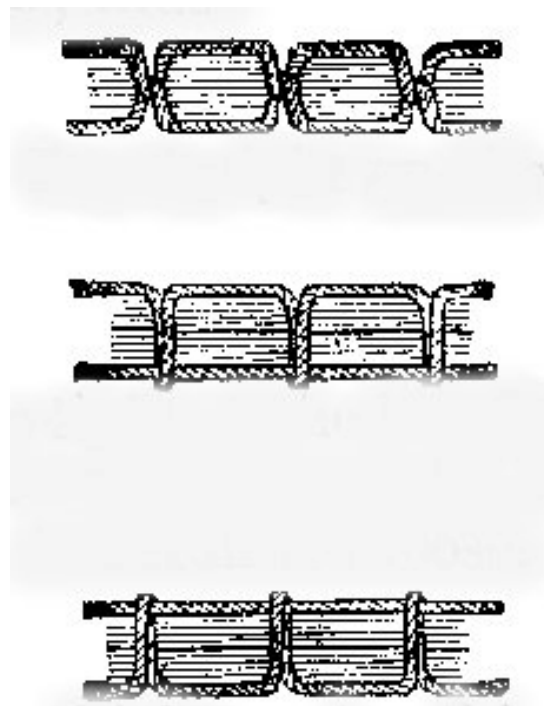
BALANCING TENSIONS

When the tensions are out of balance on your sewing machine, the stitching can be a disaster. You can get gobs of thread collecting under or on top of the fabric. The seam may have irregularly formed stitches as well as skipped stitches. This is one of the most common problems facing the sewer. It can be terribly frustrating to finish a seam and discover it looks really bad. There may be no real problem with the bobbin tension assembly or the upper threading system, or there may be some little snag in the works. The solution, however, is to fix the tension balance. Fortunately, this is usually a pretty quick fix, if you understand the tension system of your sewing machine and how to set the tension balance properly. Tension is the amount of drag or resistance on the thread as it moves through the sewing machine. When the tension on top and on bottom is balanced properly, the threads will join in the middle of the fabric with no excess thread on top or on the bottom of the fabric.

When the thread from the top and the thread from the bottom meet and form stitches in the center of the fabric with no excess thread on top or bottom, tensions are said to be balanced.

Imagine you are trying to line up three square blocks in mid air by holding on to the two outer blocks only. In your left hand you hold the "Bobbin Block" and in your right hand you hold the "Upper Thread Block". Your goal is to hold all three blocks in a straight line with no block out of skew. If you move the left hand block one way it automatically affects the other two.

Another illustration of this can be seen in a game of tug of war. Two teams grab their thread one from the bobbin and one from the needle area. If the two teams pull with equal force, the thread knot or stitch will be centered inside the fabric. If one team pulls harder than the other, you will see the thread knot bubble to that side. The stronger one side pulls over the other, the more thread collects on that side of the fabric.



Now if you look at your seam and notice a bunch of thread collected under the fabric; which is pulling harder the bobbin team or the needle team? That is right the team that pulls the hardest gets the excess thread collection. So, if the thread collects on the bottom of the fabric, the bobbin team is pulling harder than the needle team. The same would be true in reverse if the thread collects on top of the fabric, the needle team is pulling harder than the bobbin team.

So, how do you fix the problem of excess threads collecting on one side of the fabric?

To balance the tensions, simply adjust the upper tension in relation to the lower tension. If you think the bobbin tension could be poorly adjusted because you just changed the size of thread you have been using, reset the bobbin tension. Otherwise, you should not have to adjust the bobbin tension. Note if you do change the size of thread, your bobbin tension may need to be adjusted, or you may need to compensate for the difference by adjusting the upper tension.

If there is excess thread on the bottom of the fabric, increase the tension on top by turning the adjustment knob to a larger number (usually turn clockwise). If there is excess thread on the top of the fabric, decrease the top tension by adjusting the tension knob to a lower number (counterclockwise).

Important When You Have Tension Challenges:

1. Rethread & Double Check threading.
2. Test lower and upper tensions as you thread.
3. Test sew and adjust upper tension – increase or decrease.
4. If you continue to have tension challenges, take the machine to your local sewing machine service center for a thorough service.



7 Steps To Peak Performance For Your Sewing Machine

Conclusion:

You can keep your sewing machine operating at peak performance.

When your sewing machine is working at peak performance, every stitch forms perfectly. Creative expression is quick and easy. Sewing is carefree and ultimate pleasure.

Get the most from your sewing machine consistently and dependably.

The purpose of this book is to give you step by step instructions on maintaining your sewing machine in peak condition. These practices need to become automatic sewing habits.



If you follow these simple seven steps, your sewing machine will operate carefree year after year. You will enjoy the pleasure of sitting down to your sewing machine and sewing with confidence.

You will benefit from relaxing self expression free of sewing machine frustrations.



These seven steps include: Prevention Pays, Solving The Most Common Problems, Perfect Threading, Bobbin Area Care, Take Up Area Care, Points Of Interest, Managing Tensions. Following these simple steps will make you feel like a sewing expert, every time you start to sew.



Here is a brief review of the seven steps to peak performance of your sewing machine.

Step One: Prevent Problems It Pays Big Dividends

Keep your sewing machine safe, dry, and clean. Protect your sewing machine from exposure to the sun. Protect your sewing machine from extreme temperature changes. Protect your sewing machine from moisture, dust, and dirt.

Step Two: Solve The Most Common Problem – Needles

Use the right needle for your project. Replace your needles every three to four hours of sewing or every other project. The needle is the number one cause of sewing problems.

Step Three: Keep The Power Coming.

The electric cords, plug, and foot control often cause problems. Make sure the machine is plugged in to the socket. Keep the cords and plugs in good repair.

Step Four: Perfect Threading

Always use good quality threads. Carefully thread your sewing machine properly. If you have stitch irregularities: First, rethread your machine.

Step Five: Care For The Bobbin Area

Keep the bobbin area clean. Keep it free from debris, lint, threads, and gunk. One drop of oil every few hours can keep your hook operating smoothly for years.

Step Six: Take Up Area Care

The take up area or needle bar area is prone to extraneous threads, lint, and other debris. Clean it thoroughly at least every few hours of sewing. Place one drop of oil wherever metal touches metal.

Step Seven: Manage Tensions.

Understand how your tensions work. Set the bobbin tension first. Adjust the upper tension to balance the tensions relative to the bobbin tension. Make sure the thread is properly threaded through the tension devices.

If you consistently do these seven steps, your sewing machine will operate at peak performance for many many years.

Step One: Prevent Problems It Pays Big Dividends Step Two:

Solve The Most Common Problem – Needles Step Three: Keep

The Power Coming.

Step Four: Perfect Threading

Step Five: Care For The Bobbin Area

Step Six: Take Up Area Care

Step Seven: Manage Tensions.



7 Steps To Peak Performance For Your Sewing Machine

Check out our complete line of sewing machine repair courses, and books on the sewing machine business.

7 Steps To Peak Performance

My Magnificent Sewing Machine

Glimpses Of Sewing Yesteryear

Check Out Our General Sewing Books

**Sewing, The World's Greatest Hobby
The Rotary Cutter Guidebook
My Sewing Dictionary Glimpses Of
Sewing Yesteryear Words Of
Americana**

Check Out My Other Websites

www.sewinganswers.com

www.fixsewingmachines.com

www.sewandquiltstore.com

www.sewingmachienmall.com

<http://repairsewingmachines.blogspot.com>

