



## Inland Northwest Machine Quilters Newsletter – Issue 26

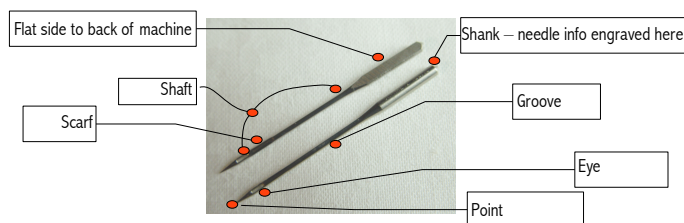
### ~ Needle Knowledge ~

Whether you're sewing, piecing, serging or quilting, your needle and thread(s) are critical to the quality of a seam. On a sewing machine or quilting machine, if your needle or thread isn't working right, you're going to get poor stitch quality. On a serger, if the needle thread is pulled out, there's nothing holding the looper threads; it all falls apart. The formation of a stitch is all about high speed perfection and **you have a lot of control on how perfect perfection is!**

Make the correct selection (the needle type) for your machine type as well as the thread and fabric you'll be working with. Monitor your needle condition. A good rule of thumb is to use a new needle for every quilt or project. Needles are relatively inexpensive and they can have a dramatic impact on the longevity of your project. A new needle for every project is worth the small investment!

Be aware of the needle position when you insert it and when you thread it. If any one aspect of your machine set up is out of sync your stitches could be poorly formed, irregular or just end up as a bird's nest of thread. This is true for sewing machines, quilting machines and sergers; it's just that on quilting machines and sergers things happen faster (sergers can sew about twice as fast as a sewing machine, long-arm machines can stitch at 2,400+ stitches per minute). If you forget how to thread your machine, search on-line for instructions. I found a good listing of threading instructions at SewUSA.com (as well as a source for replacing lost/missing machine manuals).

Needle type: Most home/domestic machines use flat-shanked needles. Most quilting machines use round-shanked needles.



#### Needle Parts

**Shank** – The top of the needle (the non-pointy end). It's the heaviest part of the needle. On household systems, the shank is flat on the back. On commercial and most long-arm machines the shank is round (to enhance the needle's strength). To correctly position the needle in a home/domestic machine, the flat side is the back side of the needle; the rounded side is the front. If using a round-shanked needle, you want to position based on the groove and scarf (see below).

**Shaft** – The long part of the needle between the shank and the eye.

**Groove** – The thread runs down the groove so the thread is protected as it is forced through the fabric. When the needle is inserted into your machine, the groove must be on facing the front (the rounded side of the shank). Note: This is true for domestic and long-arm machines.

**Scarf** – The scarf is on the back side of the needle just above the eye. It's an indented or hollowed out area that supports the hook system as it picks up the thread so the stitch can be properly formed. If you keep the groove in the front then the scarf is correctly positioned on the back side.

**Eye** – The point where the thread goes through the needle. Eyes can be different lengths and configurations that help reduce tension and wear on the thread (e.g., metallic needles – see chart below).



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**Point** – The tip of the needle can be a sharp (e.g., Jeans needle) or rounded (e.g., ball-point needle) or somewhere in between (see chart below).

Needle Type	Tip	Scarf, Eye & Shaft	Uses	Notes
Universal	Slightly rounded		Wovens and knits	General purpose needle
Ball Point	Rounded		Knits	Prevents runs in fabrics
Stretch	Medium ball point	Deeper scarf, special eye	Knits Elastics	Solves skipped stitches
Jersey	Medium ball point		Knits and some stretch fabrics	Does not damage or break knitted fibers.
Jeans	Modified ball point	Reinforced shaft	Denim and similar fabrics	Penetrates extra thick woven fabrics, denims, quilts with minimum deflection, reduced needle breakage, minimizes skipped stitches
Leather			Leather ONLY	Do not use on knit or woven fabrics
Microtex	Very slim, acute point		Microfibers, polyester, silk, foils, artificial leather, coated materials	Creates beautiful top-stitching and perfectly straight stitches for quilt piecing. Use when precision is paramount
Quilting Needle	Special taper to slightly rounded point			Made for piecing and machine quilting. Tapered design allows easier penetration, helps eliminate skipped stitches
Embroidery	Light ball point	Wide eye and scarf	Rayon, Polyester, specialty embroidery threads	Protects fragile threads and guards against excess friction. Use also for decorative purposes.
Metallic		Elongated eye		Special eye prevents shredding and breaking
Topstitch		Extra long eye		Perfect straight stitch lines and even stitches when using a straight stitch plate



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### **Using a serger? Mix & match needles? Not a good idea.**

Unless your machine's manual advises otherwise, when setting up your serger use the same needle brand, size and type throughout. Even if your manual doesn't address this question, it's best to use the same brand, size and type of needle unless you have a very specific need to mis-match them.

### **Caveats and suggestions.**

- Always keep a supply of extra needles.
- If you're wondering if a needle should be changed, it probably should.
- When changing needles, proceed methodically and carefully to be sure a needle is correctly positioned.
- You have needle-related problems if:
  - There is no stitch formation or irregular stitches
  - You observe skipped stitches
  - You observe crooked stitches
  - You hear a popping sound as the needle punches through the fabric
  - You observe runs and/or holes in your fabric
  - Your needle hits a pin (Watch for those pins and pull them out before then get to the needle on a sewing machine or to the knife blade on a serger. When using a serger it's a good idea to place your pins parallel with your sewing line – versus perpendicular.) If you hit a pin, change the needle. Look for a damaged or misaligned needle if you have these issues. The quickest solution? If you hit a pin, change your needle!
- When to change a needle:
  - Inspect needles after sewing or serging synthetic fabrics (polyesters, batting, fake fur, metallics, microfibers). These fabrics will dull a needle faster than the natural fabrics.
  - If you're running at higher speeds the needle is making more insertions per minute which means greater friction and more use.
  - If you're wondering whether you should change your needle, you probably should.
  - Change needles every 6-8 hours or at the start of every project



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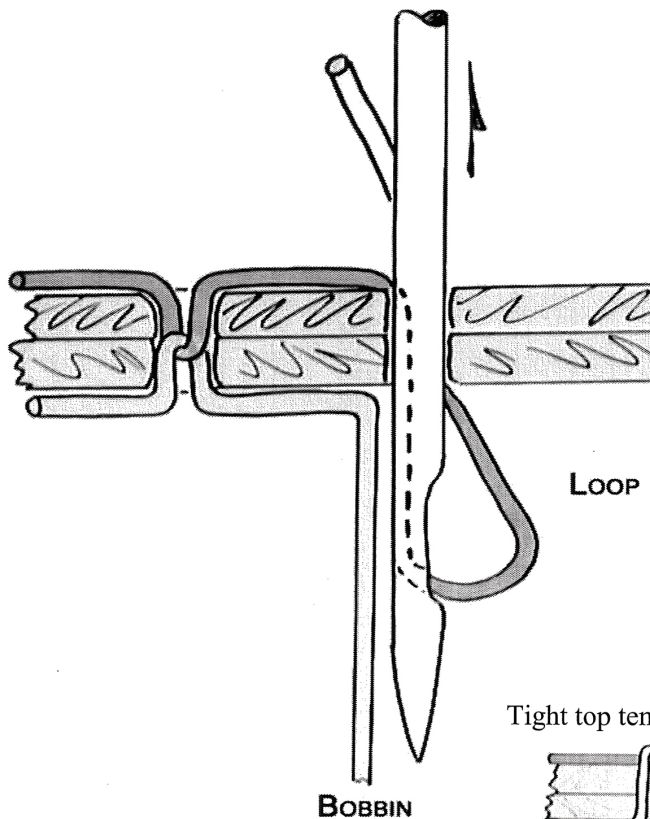
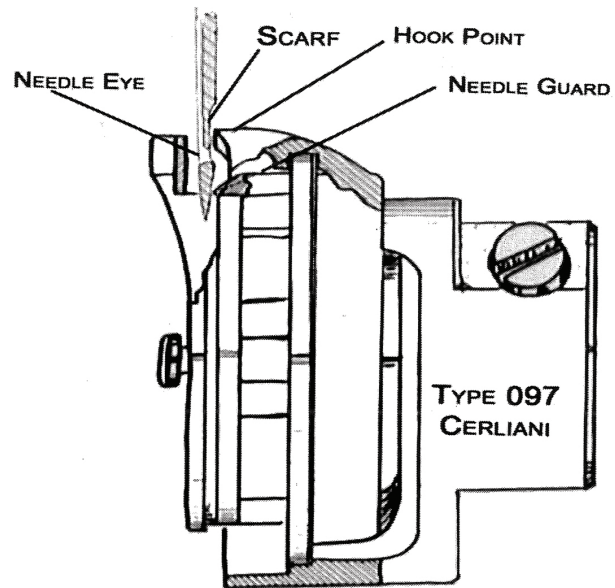
Cool tools for quilters



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Having set the bobbin thread **tension properly**, and the Top thread looks like *Diagram A*:

Problem: the top thread is too tight.

Solution: Loosen the top thread tension discs.

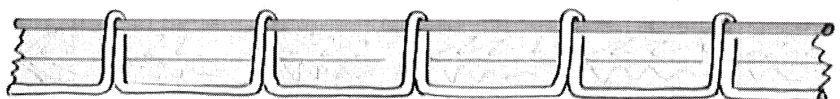
Having set the bobbin thread **tension properly**, and the Top thread looks like diagram B:

Problem: The top thread is too loose.

Solution: Tighten the top thread tension discs.

### TENSION IMBALANCE

Tight top tension



Loose top tension





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## Longarm Machine Needle Guide

Type of machine	Groz-Beckert Needle Style			
	R-point (Rounded Sharp)	FFG (Titanium-coated Light-ball point)	134, 135 x 5 Designation	A-1 (135 x 17 designation)
A-1 Elite				X
A-1 Platinum Elite			X	
APQS	X			
Baby Lock Crown Jewel			X	
Baby Lock Tiara			X	
Gammill	X	X		
Handi Quilter			X	
Innova	X	X		
Juki Quilt Virtuoso Pro			X	
Ken Quilt	X	X		
Nolting	X	X		
Nolting Fun Quilter			X	
Pfaff Grand Quilter 18.8	X	X		
Prodigy	X	X		
Tin Lizzie	X	X		
Viking Mega Quilter 18.8	X	X		



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## Superior Threads Longarm Machine Thread Reference Guide

**\*Needle Sizes: #14 = MR 3.0 #16 = MR 3.5 #18 = 4.0 #19 = MR 4.5 #21 = 5.0**

Product	Recommended for	Description	Recommended Needle*	Notes
Art Studio Colors™	quilting	40 wt. high sheen trilobal polyester	#18 (MR 4.0)	Loosen tension settings as necessary.
Bottom Line™	bobbin, quilting, binding	60 wt. polyester for bobbin, applique, & quilting	#14 (MR 3.0)	Blending top thread.
Fantastico™	quilting	#40 high sheen high strength trilobal polyester	#18 (MR 4.0)	High sheen high strength polyester.
Glitter™	quilting	flat hologram thread	#19 or #21 (MR 4.5 or 5.0)	Loosen tension settings, reduce speed.
Halo™	bobbin or bobbin work	decorative serger & bobbin thread	use in bobbin	Makes beautiful quilt backs. Good for reverse quilting.
King Tut™	quilting	#40/3-ply extra-long staple Egyptian cotton	#18 (MR 4.0)	Very low lint and extra strong. Nature's finest thread!
LAVA™	quilting	35 wt. extra strong polyester	#19 (MR 4.5)	Extra-strong variegated polyester.
Magnifico™	quilting	#40 high sheen high strength trilobal polyester	#18 (MR 4.0)	High sheen high strength polyester.
MasterPiece™	quilting	#50/3-ply extra-long staple Egyptian cotton	#16 (MR 3.5)	Loosen tension settings as necessary.
Metallic™	quilting	world's best metallic thread, guaranteed.	#18 (MR 4.0)	Loosen tension settings and reduce speed.
MonoPoly™	quilting, thread painting	.004 heat-resistant invisible polyester monofilament	#14 (MR 3.0)	If using as top thread, loosen tension settings.
NiteLite ExtraGlow™	quilting	40 wt. polyester	#18 (MR 4.0)	Glow up to six hours, night after night. Six colors.
OMNI™	quilting	40 wt. (Tex 30) poly-wrapped poly core	#18 (MR 4.0)	Cleaner & stronger than other poly-wrapped poly core threads.
Poly Quilter™	quilting	#30/3-ply variegated spun polyester	#21 (MR 5.0)	Extra-strong spun polyester with a cotton-like appearance.
Rainbows™	quilting	40 wt. high sheen trilobal variegated polyester	#18 (MR 4.0)	Loosen tension settings as necessary.
Razzle Dazzle™	bobbin or bobbin work	decorative bobbin, couching & serger thread	use in bobbin	Makes beautiful quilt backs. Good for reverse quilting.
Silk Thread. Kimono™ #100	bobbin, quilting, binding	#100 pure silk thread.	#14 (MR 3.0)	Blending top thread and binding thread.
Silk #50	quilting	#50 pure silk thread.	#16 (MR 3.5)	Blending top thread and binding thread.
Silk #30	quilting	#30 pure silk thread.	#18 (MR 4.0)	Blending top thread.
So Fine™ #50	quilting, bobbin	#50/3-ply lint-free polyester	#16 (MR 3.5)	Blending top and bobbin thread.
So Fine™ #40	quilting	#40/3-ply variegated polyester	#18 (MR 4.0)	Medium-weight variegated top and bobbin thread.
So Fine™ #30 (formerly Brytes)	quilting & outlining	#30/3-ply lint-free polyester	#19 or #21 (MR 4.5 or 5.0)	Loosen tension settings as necessary.
Super Brights™	quilting	40 wt. high sheen trilobal polyester	#18 (MR 4.0)	Loosen tension settings as necessary.
Twist™	quilting	#40 high sheen high strength trilobal polyester	#18 (MR 4.0)	Unique 2-color twists.
Vanish-Extra™	trapunto and basting	strong water soluble thread	#18 (MR 4.0)	Not recommended for swimsuits. Ha! Ha!

www.superiorthreads.com 1-800-499-1777

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## Superior Threads Quick Start Guide

Thread	Weight	Application																	
		Appliqué	Apparel	Basting	Binding	Blending Threads	Bobbin Thread	Bobbinwork	Color-changing Thread	Clothing & Crafting	Couching	Embroidery (Machine)*	Fusible Thread	Glow in the Dark	Hand Embroidery	Hand Quilting	Invisible Thread*	Lacework	Metallic
Art Studio Colors	40	X				X						X							
Bonded Nylon	46, 69, 92																		
Bonded Polyester (Solar Guard)	69,92																		
Bottom Line	60	X		X	X	X	X			X						X	X		
Charlotte's Fusible Web	---	X	X									X							
Frosted Donuts	50	X				X	X										X	X	
Glitter	---											X							X
Halo	---							X			X								X
Highlights	40	X				X						X						X	
King Tut	40	X				X									X				X
Lava	35											X						X	
Living Colors	40	X				X						X						X	
Magnifico	40	X				X						X			X			X	
MasterPiece	50	X		X	X	X	X			X		X			X		X	X	X
Metallic	40											X			X			X	
MonoPoly	---	X				X	X									X			X
Nature Colors	40	X				X						X						X	
NiteLite ExtraGlow	40									X		X		X				X	
OMNI	40		X	X			X			X								X	X
Poly Quilter	30		X												X				X
Polyarn	---		X																X
Rainbows	40	X										X						X	
Razzle Dazzle	40							X			X							X	X

\* see Comments

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		Appliqué	Apparel	Basting	Binding	Blending Threads	Bobbin Thread	Bobbinwork	Color-changing Thread	Clothing & Crafting	Couching	Embroidery (Machine)*	Fusible Thread	Glow in the Dark	Hand Embroidery	Hand Quilting	Invisible Thread*	Lacework
Silk - Buttonhole Silk	16		X							X					X	X		
Silk - Embroidery Floss	25/3														X			
Silk - Quilter's Silk	16									X					X	X		
Silk - Tire #30	30	X								X		X			X	X		
Silk - Tire #50	50	X	X		X	X				X		X			X	X		
Silk - Tiara #50 variegated	50	X								X					X	X		
Silk - Kimono #100	100	X	X			X									X	X		
Silk Ribbon	---							X			X	X			X			
So Fine! #30	30											X						
So Fine! #40	40															X		
So Fine! #50	50				X	X	X			X		X					X	
SunBurst	40								X			X						
Super Brights	40											X						
SuperBOBs Donut	60	X															X	
Treasure	30															X		
Vanish-Extra	---		X	X														
Vanish-Lite	---			X														
*Comments		<ul style="list-style-type: none"> <li>Embroidery • Polyester threads are stronger and more colorfast than rayon threads. We do not recommend rayon thread.</li> <li>Invisible Thread • Neutral colors and fabric-matched colors of Bottom Line and Kimono Silk also tend to become invisible.</li> <li>Piecing • MasterPiece cotton thread is recommended for piecing, especially when high-heat pressing is needed.</li> <li>• Polyester can also be used for piecing; however, be sure to use a low-med heat setting when pressing.</li> <li>Serger • Polyarn is a 'woollie-like' thread for fleece and stretch fabrics.</li> </ul>																

\* see Comments

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