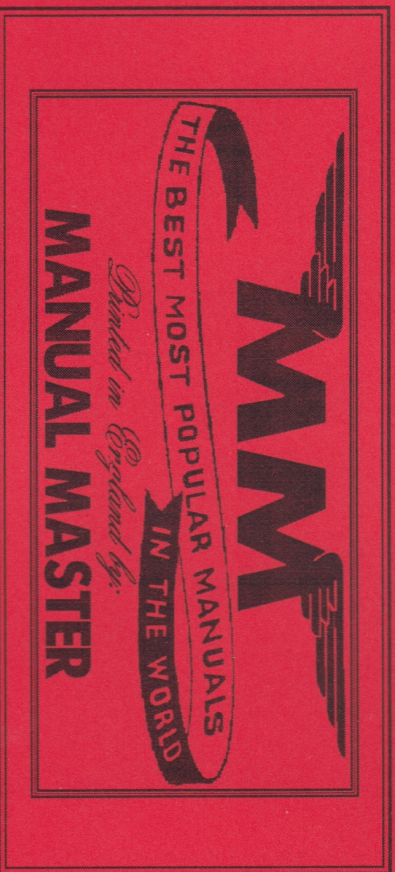


TROUBLE	LIKELY CAUSES	POSSIBLE REMEDY
Thread Loops underneath work	1. Tension of top tension-unit not correct	1. Adjustment upper tension.
Thread Loops on top of work	2. Tension of lower tension-unit not correct	2. Adjustment upper tension.
Snagging threads in material	Needle problem	If threads are being snagged across the work as you sew you have a damaged needle, or too thick a needle for a fine fabric. Use correct.
Needle unthreads as you start to sew	A simple problem	Always have at least 3 inches (75mm) of thread out the back of the machine before you start to sew. You can also hold the thread or start the first stitch by hand.



**Helping You To Use & Enjoy
Your SEWING MACHINE BY:
MANUAL MASTER**

29K

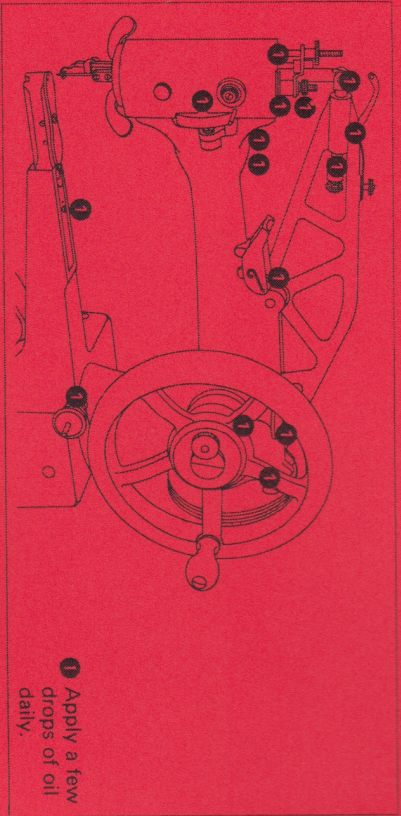
29K71, 29K72 & 29K73

Operator's & Adjuster's Guide

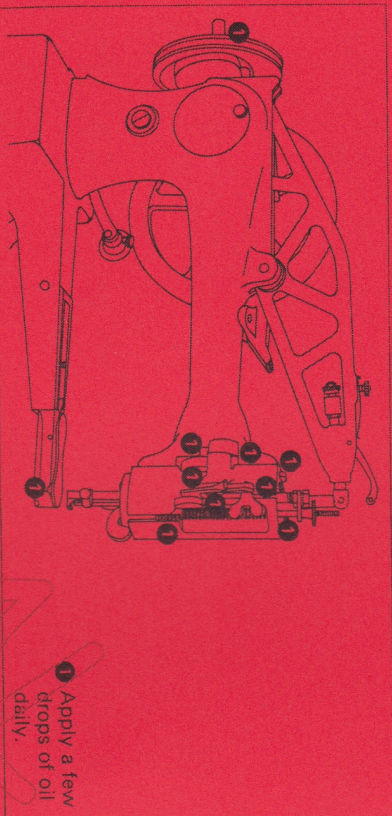
Also including A Trouble Shooting Guide

instructions

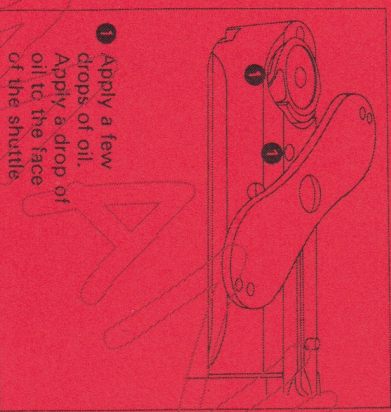
Lubrication



1 Apply a few drops of oil daily.



1 Apply a few drops of oil daily.



1 Apply a few drops of oil.
Apply a drop of oil to the face of the shuttle.

Cleaning

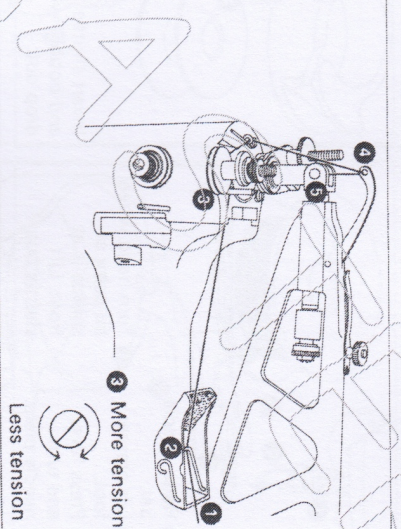
Using short bristled brush (not point of scissors or shears) remove lint or other waste from around the shuttle. Wipe the exterior of the machine with a soft cloth.

Use Singer Oil, Type 'B' or 'D' only.

Threading Needle

For Stitching

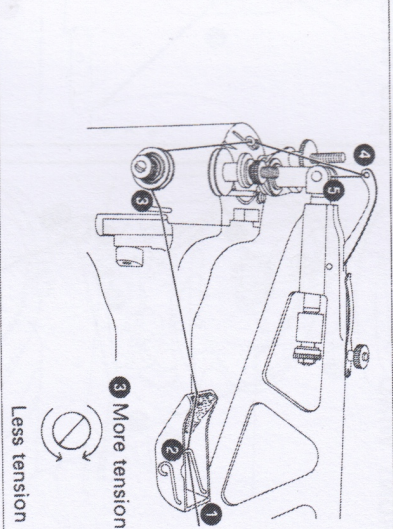
- 1 From unwinder
- 2 Under wire guide in oil cup.
- 3 Into tension assembly (upper).
- 4 Through top eyelet.
- 5 Down centre of presser bar.



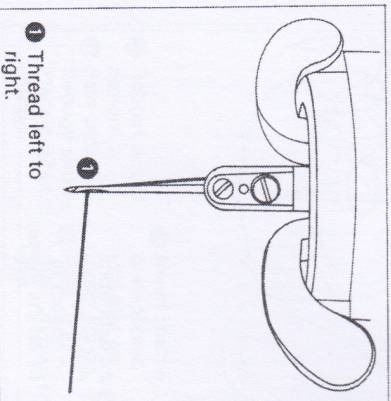
3 More tension
Less tension

For Darning

- 1 From unwinder
- 2 Under wire guide in oil cup.
- 3 Into tension assembly (lower).
- 4 Through top eyelet.
- 5 Down centre of presser bar.

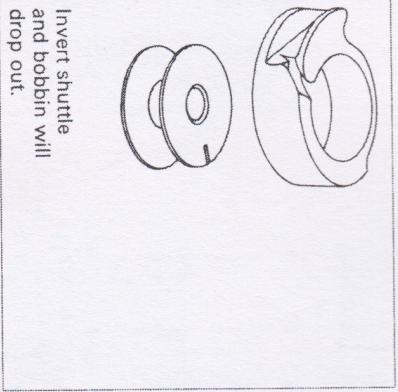
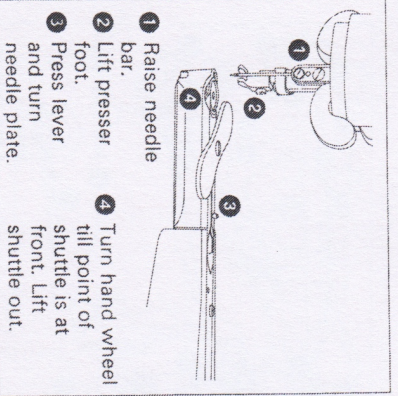


3 More tension
Less tension

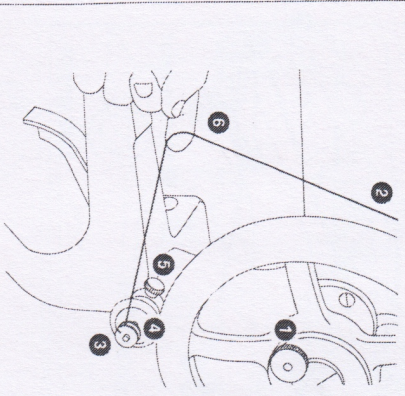


1 Thread left to right.

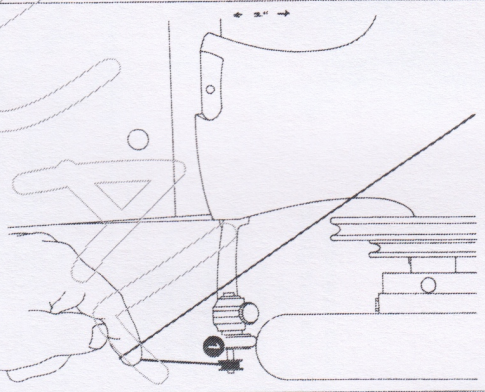
Bobbin Removal and Winding



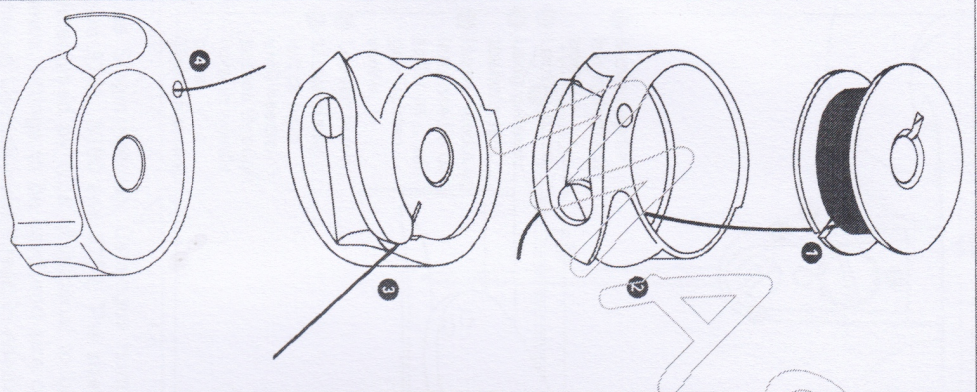
FRONT WIND



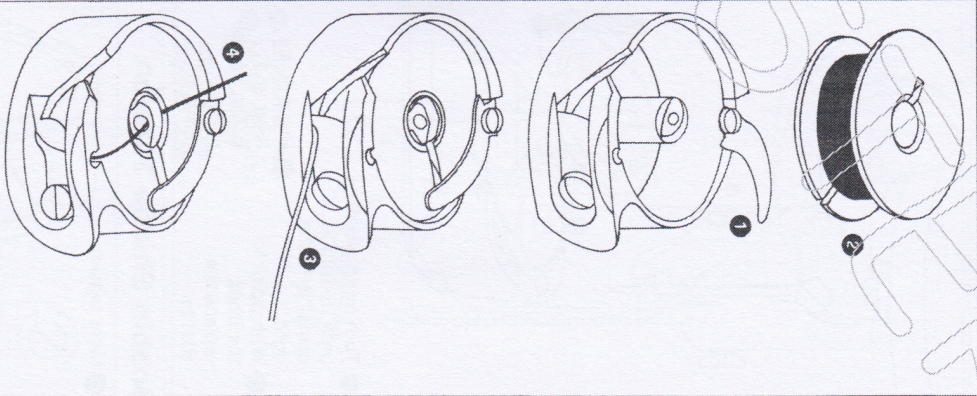
END WIND



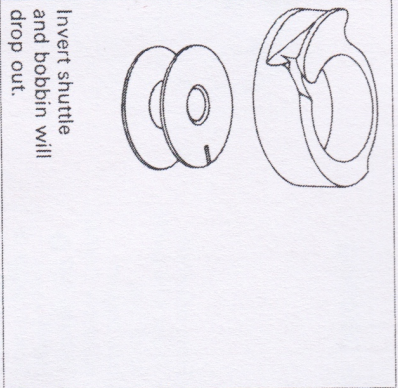
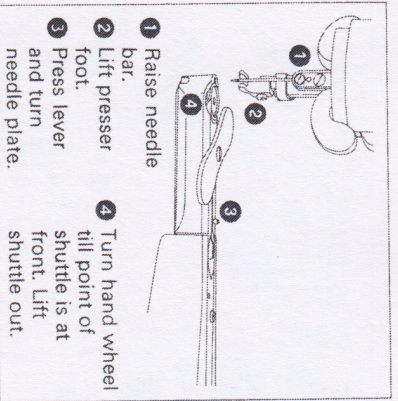
Threading Shuttle for 29K71 and 29K73



Threading Shuttle for 29K72

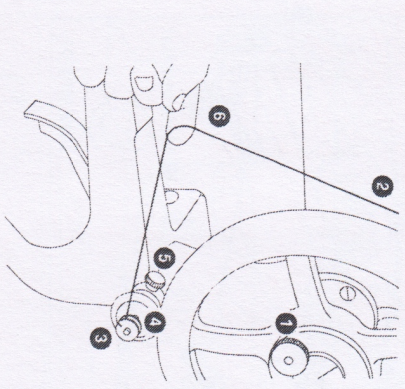


Bobbin Removal and Winding



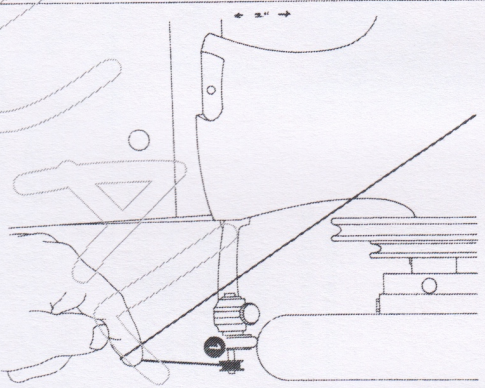
Invert shuttle and bobbin will drop out.

FRONT WIND



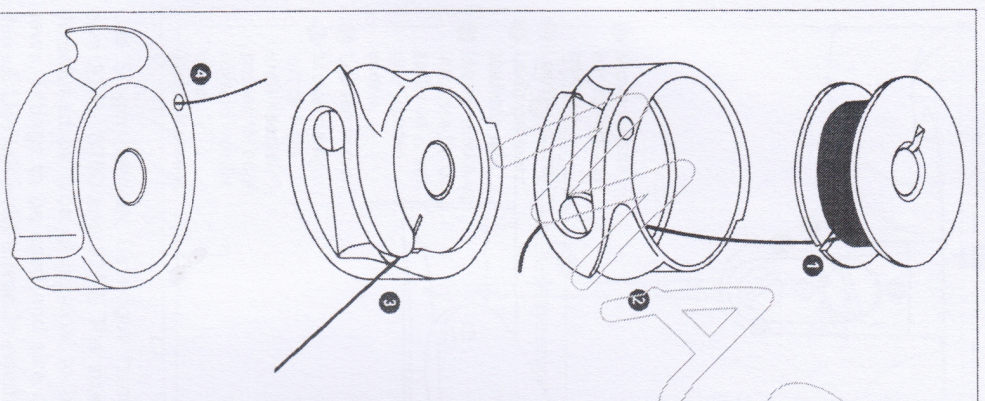
- 1 Disengage hand wheel by extracting plunger.
- 2 Thread from unwinder.
- 3 Thread through hole in centre of bobbin.
- 4 Press bobbin onto spindle as far as it will go with slot to the outside.
- 5 Loosen screw and bring winder into contact with pulley.
- 6 Turn pulley and guide thread as shown.

END WIND



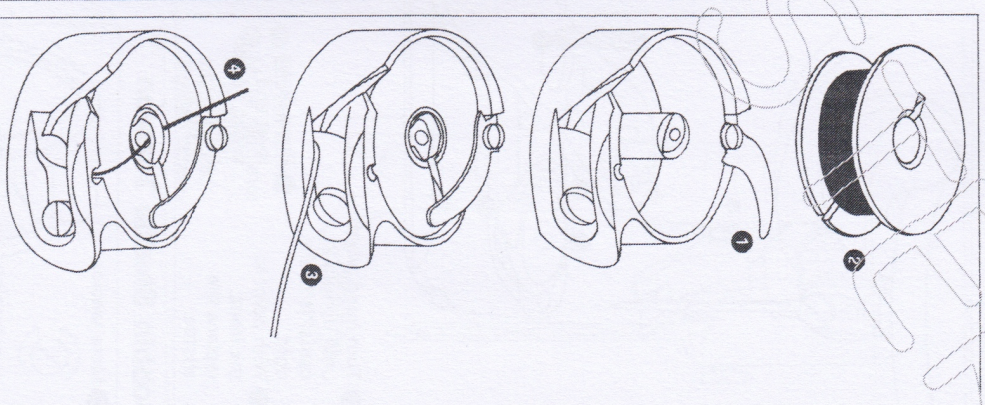
- 1 As with front wind, but slot on bobbin to be on the inside.

Threading Shuttle for 29K71 and 29K73



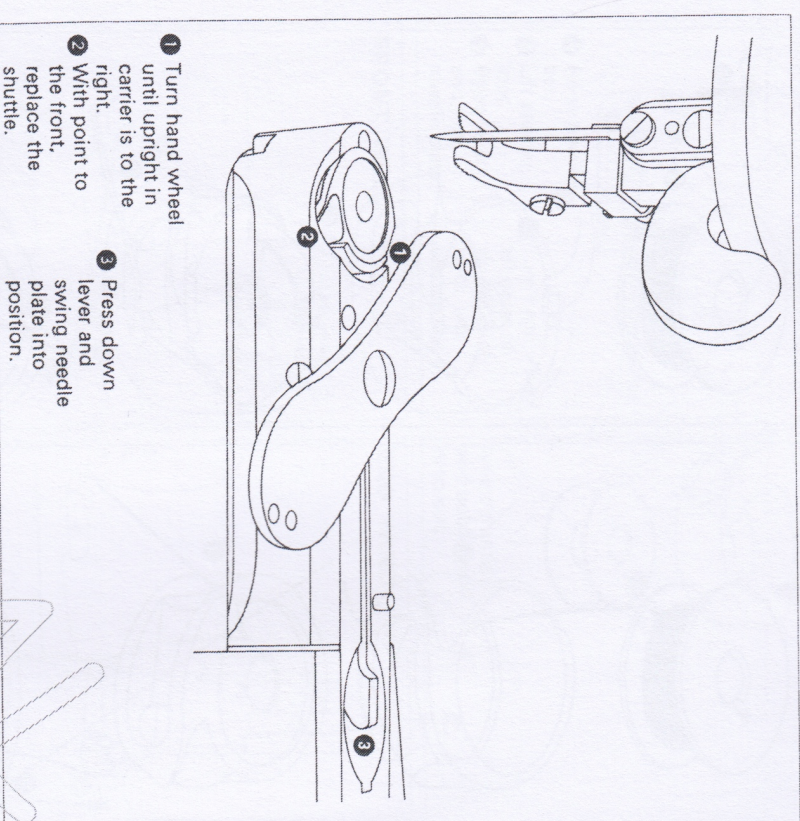
- 1 Bobbin slot at bottom.
- 2 Pass thread through shuttle.
- 3 Invert shuttle draw thread into slot and under spring.
- 4 Pass thread through delivery eye.

Threading Shuttle for 29K72

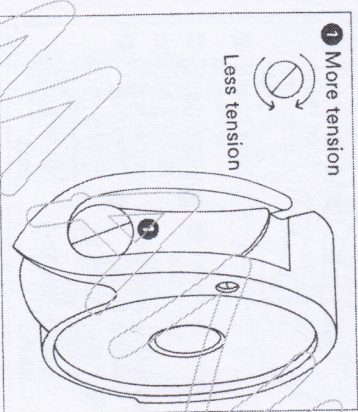


- 1 Swing retaining spring aside.
- 2 Place bobbin in shuttle and replace retaining spring.
- 3 Draw thread down slot, and under spring.
- 4 Thread up through hole and through eye in bobbin post.

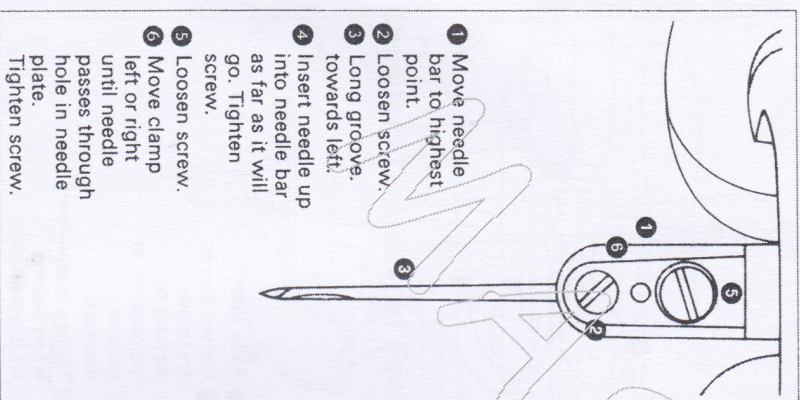
Shuttle Replacement



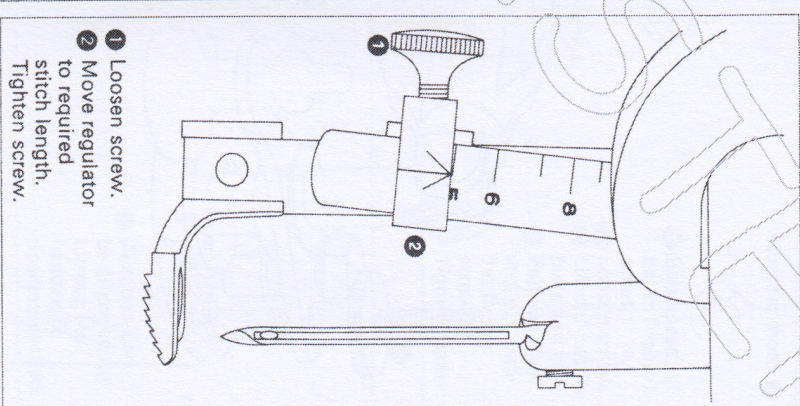
Bobbin Shuttle Tension



Needles

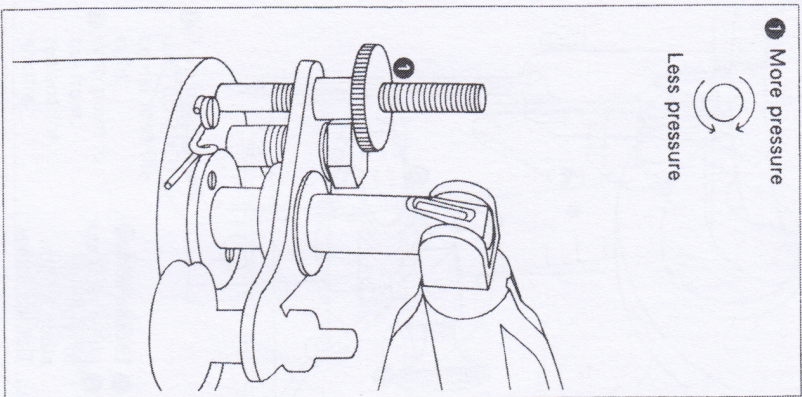


Stitch Length

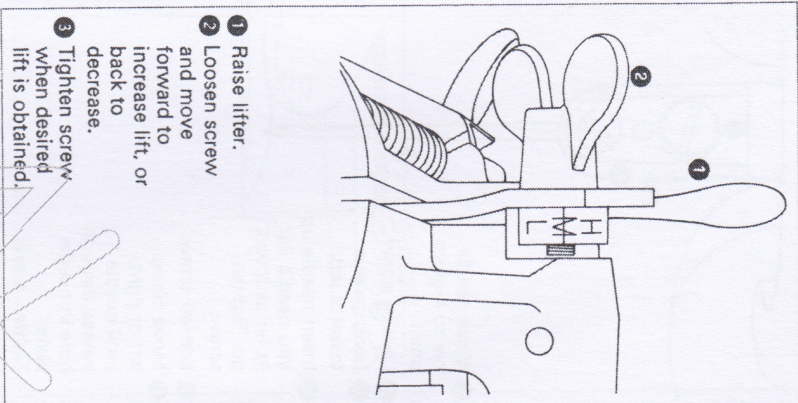


Use Singer needles, Catalogue numbers 3741, 3750 and 3752. The sizes determined by type of material to be sewn, fittings to be used and size of thread. Use left twist thread in needle and either left or right twist in bobbin.

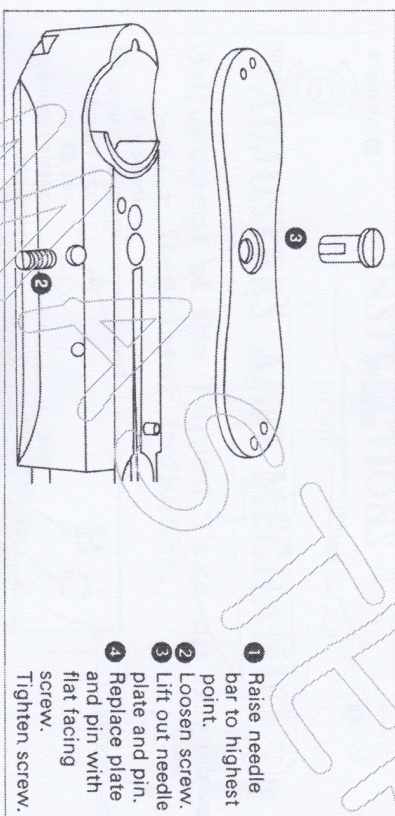
Presser Foot Pressure



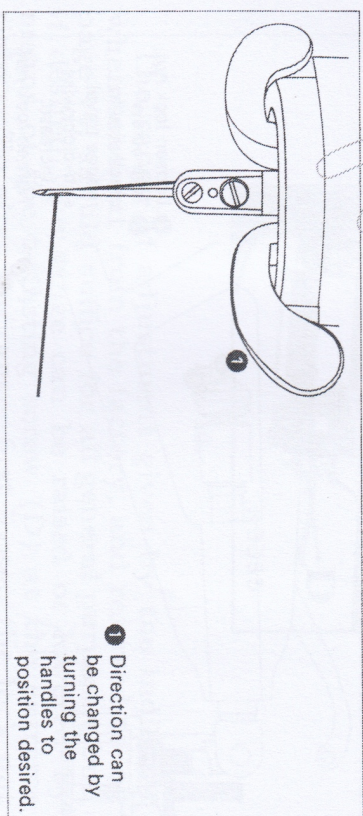
Presser Foot Lift



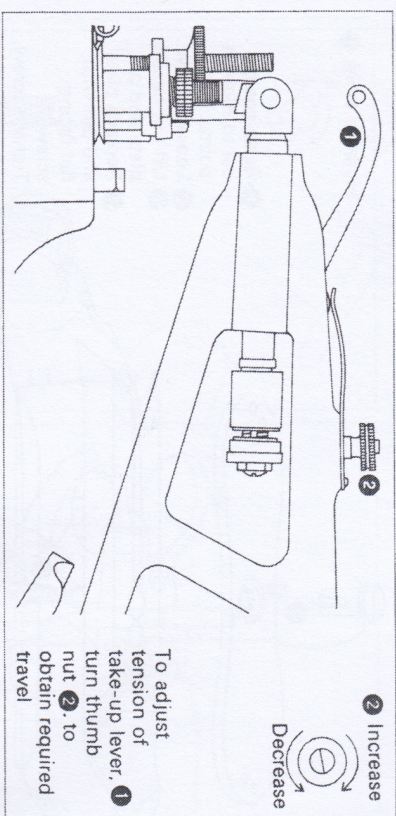
Changing Needle Plate



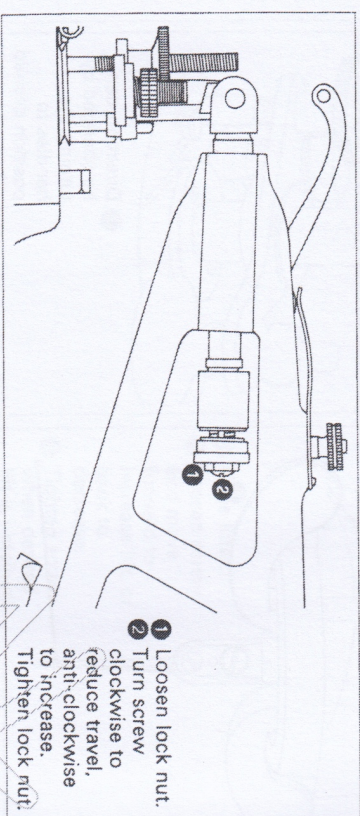
Changing Direction of Feed



Regulating Take-up Lever with Regulator Indicator



Adjusting Regulator Indicator



INSTRUCTIONS FOR ADJUSTERS AND MECHANICS

Adjustment of the Threaded Take-up Lever Regulator Indicator.

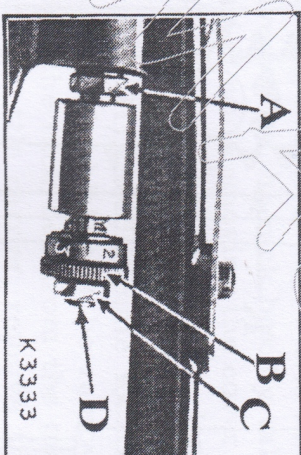


Fig. 16.

The range of adjustment given by the indicator when sent out from the factory, and referred to on page 14, should suffice for all general purposes, but, if desired, the range can be raised or lowered by means of the adjusting screw (D) at the extreme right. To alter the range, first loosen the lock nut (C) and turn the centre screw relative to the indicator head by means of a screw driver. Turning to the right will reduce the travel of the take-up lever, while turning to the left will increase the travel. Wear at the tip of the centre screw can also be taken up in this manner. When the proper adjustment has been obtained, tighten the lock nut (C).

It is most important that the hexagon head nut N7100 (A) be securely locked against the face of the piston 82190.

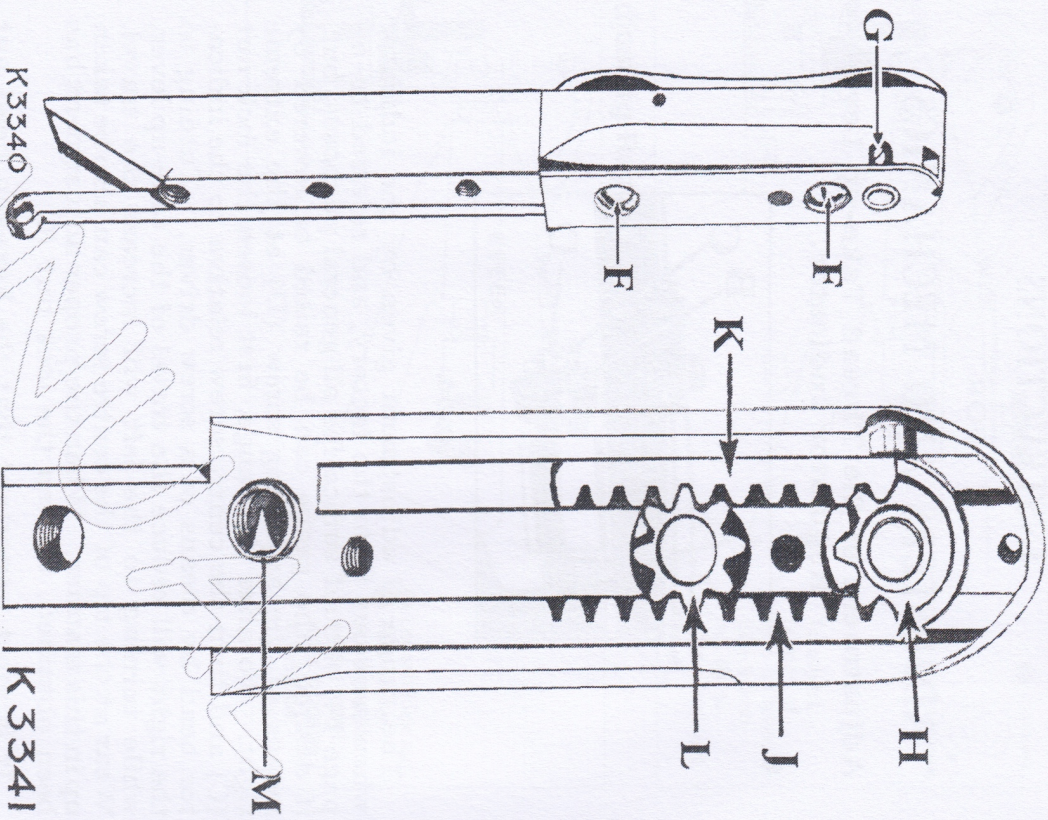


Fig. 17.

Fig. 18.

To Examine and Remove the Parts from the Rack Box and Re-Assemble Them.

(See Figs. 17 and 18)

Remove the machine head from the treadle stand or power bench by taking out the four screws. The machine head should now be tipped up and supported with the horn in a vertical position, the underside facing the adjuster. Parts can be examined or removed from the rack box by taking out the two screws (F) and removing the cover plate. The following parts are then exposed : long rack (J), short rack (K), intermediate pinion (L), shuttle driving pinion (H), needle plate locating pin and spring (M), all of which can be removed without disconnecting the rack box from the machine. To take out the shuttle carrier, remove the small set screw in the shuttle carrier pinion by inserting a small screw driver through the groove (G) at the side of the rack box. The shuttle carrier can then be pressed through the pinion. To remove the long rack, insert a screw driver through the hole (D, Fig. 19) and take out the screw. Before proceeding to withdraw the rack, remove the pinion (L), then grip the rack and draw it in a straight-away manner towards the pulley end of the machine. The short rack (K) and shuttle-driving pinion (H) can be removed without difficulty. When replacing any one or re-assembling the whole of these parts, care must be taken to see that the gears and racks are correctly enmeshed, as shown in the illustration (Fig. 18).

Instructions for the Removal of the Rack Box.

(See Fig. 19)

If for any reason it is necessary to remove the rack box from the machine, proceed in the following manner. Remove the machine head from its treadle stand or power bench and tip it up as instructed on the previous page. Then turn the balance wheel until the connecting rod hinge screw No. 89 (E) comes opposite the hole (D) in the lower arm. Insert a screw driver through the hole (D) and remove the screw. Slightly loosen the two screws (B) by giving them a half turn with a screw driver. Then drive out the taper pin (C), using a $\frac{3}{16}$ " punch and hammer, and take out the two screws (B). The machine should now be replaced on its feet and the horn will then come away if pulled in a horizontal direction.

On no account raise the front of the horn or the end of the long rack may be damaged.

When re-assembling the rack box to the machine, be sure that the taper pin is driven home before finally tightening the two screws.

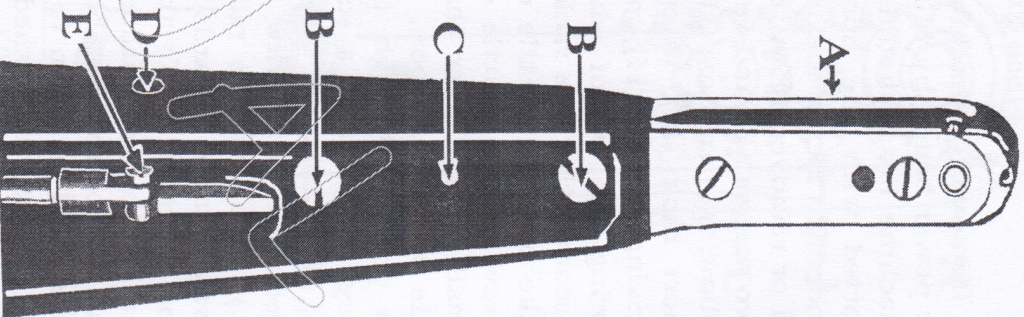


Fig. 19.

K 3339

Correct Position of the Eccentric Screw which connects the Shuttle Driving Lever and the Rack Connecting Rod

The head of this screw stud carries a small cut, and a line is marked on the end of the Shuttle-driving Lever Connecting Rod. These two markings should approximately coincide when the stud head is opposite the screw driver hole at the side of the machine base.

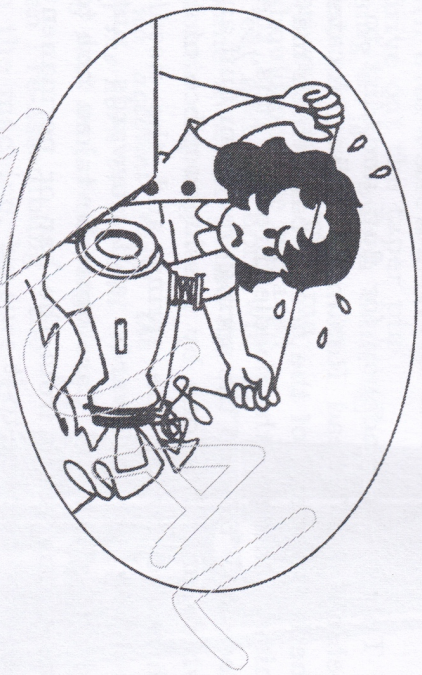
To time the shuttle, turn the Eccentric Stud until the leading edge of the Shuttle Carrier moves at each oscillation to a position approximately one-third of the distance across the needle slot.

To Remove any Foreign Matter from under the Thread Retaining Spring.

There is a tendency for fluff and dirt to gather behind the Thread Retaining Spring, located near the bottom end of the needle bar, which may cause mis-stitching of the needle thread. It is, therefore, necessary to keep the spring free from fluff and dirt, which may be done by passing a piece of tape or thread between the spring and the needle bar, working it backwards and forwards until the spring is cleaned. Care must be taken not to bend the spring away from the bar or permanent damage may be done to it.

Help You To Use & Enjoy Your Sewing Machine By: MANUAL MASTER

General Purpose Sewing Machine Fault Finder Trouble Shooting Guide



Prevent Frustration, Save Temper,
Trouble & Money
With This Booklet

TROUBLE	LIKELY CAUSES	POSSIBLE REMEDY
<p>Sewing machine suddenly binds, locks or is very noisy and 'clunky'</p>	<p>1. A tight spot on the machine that has come on suddenly (like a migraine) is usually caused by a piece of thread trapped in the race (bobbin case area). You cannot see the thread.</p>	<p>1. Clean the race-hook area out with the tip of a pin or needle, brush and blow. The smallest piece of thread in this area can cause a tight spot. Put a single drop of oil on the race-hook.</p>
<p>Loads of thread bunching underneath.</p>	<p>This is commonly called a 'birdsnest' in the trade and is normally caused by incorrect TOP threading of your machine.</p>	<p>Take your TOP thread out and re-thread your machine making sure you don't miss anything.</p>
<p>Top thread constantly snaps with a sharp clean break</p>	<p>If you have recently changed a needle, check you have put it in the correct way.</p>	<p>Putting your needle around the wrong way is very common, check it!</p>
<p>There is a multitude of reason for top thread breaking. Check out each one to find the culprit. Take your time here as you may have more than one fault</p>	<p>Examine the snapped thread, if it is a frayed snap, rather than a straight cut, it is usually a rough spot around the bobbin case, race, hook or needle-plate area.</p>	<p>Find the burr or rough spot & rub it away with some fine emery paper. Watch the needle-plate holes this is a common spot for a burr. In some cases the tip of a broken needle can get stuck, causing terrible problems.</p>
<p>Top thread constantly snaps with a frayed break</p>	<p>1. Have you just changed your needle? 2. Top tension too tight</p>	<p>1. If you have changed your needle double check you have inserted it correctly. 2. Make sure your tension dial is not too tight, it should usually be around the middle of the dial / tension unit.</p>

TROUBLE	LIKELY CAUSES	POSSIBLE REMEDY
Top thread constantly snaps with a frayed break	<p>3- Thread too thick for needle, needle too fine for thread.</p> <p>Note: occasionally thread snapping & missing stitches can sometimes be eliminated by dropping the needle 2mm before tightening.</p> <p>4. Machine incorrectly threaded.</p> <p>5. Bent or damaged needle or eye of the needle.</p> <p>Or as above you have put your needle in the wrong way round!</p>	<p>3- Using a thread that does not pass through the eye of the needle freely, will cause snapping. Also the long groove that runs down the side of the needle is for the threads protection. If it sticks proud of the groove, it is not protected.</p> <p>4. Double check, no, triple check your top threading.</p> <p>5. Change the needle, sometimes the eye of the needle becomes rough causing fraying as the thread passes through it. Change it anyway just for good measure.</p>
Top thread frays often sending the top reel of thread spinning.	<p>6. Thread is wrapped around the spool peg or caught on the rough edge of a reel of thread.</p> <p>7. On machines that are used a lot you can sometimes get such a build-up of lint underneath the needle plate that it traps the top thread.</p> <p>8. Old thread</p>	<p>6. A common fault with thread breaking at the needle is thread rapped around the spool peg or reel on the other end of the machine. A troublesome or damaged thread guide can also snag the thread.</p> <p>7. Remove needle plate & give machine a good clean and a drop of oil.</p> <p>8. Don't use old thread. If you have constant problems with a reel, bin it. Always run your machine with a good quality thread that has not perished.</p> <p>9. Run your finger around the shuttle area & feel for anything sharp, if you find something, however small, polish it away with fine emery.</p>
Top thread snaps with a frayed break	<p>9. Damage around the shuttle area or needle-plate can snap the thread</p>	

TROUBLE	LIKELY CAUSES	POSSIBLE REMEDY
Top thread snaps with a frayed break	<p>10. Thread guide damage.</p>	<p>10. If a machine has had extreme use, the thread guides leading to the needle can get sharp grooves in them that trap the thread. Examine the guides for these grooves. If they are present, replace them.</p> <p>1. Check the tension discs are opening as the foot is raised. If not investigate why. You may have something broken inside your machine.</p>
Thread will not pull out freely from the top of the machine with the foot raised	<p>1. When the foot is raised the top thread should release as the tension discs open.</p>	
Bottom, lower thread breaks.	<p>1. Badly wound bobbin or loose thread on bobbin.</p> <p>Note: A large needle passing through a small needle plate can jam &/or sap the machine</p> <p>2. Over filled bobbin</p> <p>3. Bobbin damaged</p>	<p>1. A badly wound bobbin binds in the bobbin & snaps. One way to ensure a nice even bobbin when winding is to rest your finger gently on the reel of thread while winding the bobbin. Never wind bobbins by hand.</p> <p>2. Over filled bobbin will jam in the bobbin case & cause snapping, remove some of the thread before putting the bobbin into the machine. A bobbin should never be more than 90% full.</p> <p>3. Carefully examine your bobbin to make sure it has no damage that may cause it to jam. Such as bent edges, cracked or flared out sides, or sharp edges. If your bobbin is damaged don't use.</p>
Bottom lower thread breaking.	<p>4. Bobbin case damaged or needle-plate damaged.</p> <p>5. Bobbin case tension too tight.</p>	<p>4. A damaged bobbin case is a common problem. Place your bobbin into the case and make sure it turns freely & smoothly as you pull the thread out.</p> <p>5. See lower tension adjustment.</p>

TROUBLE	LIKELY CAUSES	POSSIBLE REMEDY
Bottom lower thread breaking.	6. Incorrect threading of case 7. Wrong bobbins	6. Refer to your owner's manual on this one as they all thread differently. You may find some bobbins prefer to revolve clockwise some anti. 7. You would be amazed how many people buy the wrong bobbins for their machines & wonder why they won't work. There are dozens of different bobbins, only one will be for your machine. Refer to your owner's manual.
	8. Thread tangle	8. Thread caught around the spindle in the bobbin case will cause jamming & snapping.
	9. Lint/fluff, in bobbin case	9. Lint/fluff in the case will jam the bobbin & cause lower thread to snap. Clean out the case & place a single drop of oil on the spigot/shaft/pin.
Bottom lower thread breaking.	10. Thread around the locating of the peg on the machine	10. A single twist of thread caught around the peg/spindle that locates the bobbin case as it goes into the machine can jam a bobbin case & snap the thread. Look into the machine with a good light & examine the peg. scratch around it with the tip of a needle to clean it. 1. Make sure you are inserting your needle in the correct way & are pushing it right up to its needle stop. 2. Using an old or damaged needle is a waste of time. Bin old needles.
Needle breaks	1. Needle not put in the machine correctly 2. Damaged needle	

TROUBLE	LIKELY CAUSES	POSSIBLE REMEDY
Needle breaks	3. Corroded needles 4. Needles too fine 5. Cheap needles	3. Some old needles become corroded and grip the fabric as they sew through, then bend & break. If in doubt always bin the needle. 4. Using a needle that is too fine for the work will cause it to bend & snap. As a general rule, thick work, thick needle, thin work, thin needle. 5. Cheap needles are a waste of time they are made of inferior grade of metal. They bend, break & damage your lovely machine. Never buy cheap needles, they cost you twice as much in the long run.
	6. Chipped needles	6. A needle that is chipped will change direction once it enters the fabric, & then it will bend & break. If you can see the tip of a needle then it is blunt or chipped.
	7. Are you using a ball point needle? These open the threads of the fabric apart rather than pierce them.	7. Ball point needles are great for certain fabrics but they are also known in the trade as 'blunt point' needles as they have the point polished away. Don't use on dense fabric & damage far easier than a regular sharp point needle.
	8. Plated needles	8. Plated needles are chrome plated. once the plating wears off they become rough. The needle then grips & snags the work, bends & breaks. Most cheap needles are thinly plated, bin them.

TROUBLE	LIKELY CAUSES	POSSIBLE REMEDY
Needle breaks	<p>9. Letting the material bend the needle.</p> <p>10. Pulling your work.</p> <p>11. Starting heavy work with your needle up.</p>	<p>9. This is a common fault, say you are working on a pair of curtains & they are falling over the end of the table. The whole weight of the fabric is pulling on the needle, & you were wondering why you keep breaking them.</p> <p>10. Pulling the work is so easily done & the most common cause of breaking your needles. Never pull your work, ease it through the machine at the same speed as the machine.</p> <p>11. When you start heavy work always bring your needle down into the work so that the first movement of the machine & needle is out of the work. This allows the machine to gain momentum & the faster the machine is going the straighter the needle will stay. Most people bend or chip the needle on their first few stitches & struggle on until it breaks.</p> <p>12. By sewing with a very tight top tension this can bend the needle causing it to snap.</p> <p>13. Putting a heavy thread through a small needle will cause the thread to jam in the needle, bend & snap it. Also cheap threads contain knots; a knot will bend &/or snap a needle.</p>

TROUBLE	LIKELY CAUSES	POSSIBLE REMEDY
Needle breaks	<p>14. Wrong setting on your machine or wrong needle plate in it</p> <p>15. Has the fabric got pins in it or metallic bits or lumps on it?</p> <p>16. Something is loose.</p> <p>17. Zips, piping and sewing method.</p> <p>18. Lastly, you may have a serious fault, such as timing.</p>	<p>14. Sewing with zig-zag stitch while using a straight stitch foot will end in disaster. Double check that you have the correct foot & plate on. make sure your machine settings are correctly set.</p> <p>15. Some fabrics, even raw silk can have solid lumps that when the needle hits it deflects it, causing it to bend or break. Also only sew over pins if you are really confident & only at right angles to the foot. Leather is another culprit, soften it with soap first, or use talcum powder to allow it to slide under the foot.</p> <p>16. Often the needle can break because it is hitting something that is loose. Check the presser foot, needle clamp & needle-plate, make sure all is tight & straight.</p> <p>17. Sewing to close to zips or piping causes the needle to bend & hit the mechanism beneath the work. Examine your needle plate for damage. It is a sure sign that you are bending your needle due to your sewing technique.</p> <p>18. If your needle hits something as it goes below the needle plate, the timing could be out & you may need professional advice.</p>
Poor, uneven, loose or tight stitching.	See tension adjustment	See tension adjustment

TROUBLE	LIKELY CAUSES	POSSIBLE REMEDY
Puckering	<ol style="list-style-type: none"> 1. Top tension too tight 2. Needle blunt 	<ol style="list-style-type: none"> 1. Release top tension (anticlockwise) by one number at a time until you have a good stitch. See tension adjustment. 2. A blunt needle will cause puckering & a tell-tale snagged thread that pulls across the work at 90 degrees. 3. Again the old culprit of thick thread. This will give you a lumpy feel to your sewing. Also the locked stitch is such a large knot in fine fabric that it puckers; there is just not enough room for the thick thread to lock in the fabric without puckering. 4. A long stitch can produce puckering on fine fabrics. 5. The wrong foot will cause puckering, for example using the buttonhole or applique foot.
<p>Material fails to move through the machine well. Poor feed.</p>	<ol style="list-style-type: none"> 1. The feed dog (teeth height) and pressure on the sewing foot (presser foot) are the two common faults. <p>Note: On most machines you should be able to see teeth rised about 2mm above the needle plate with the forward movement.</p> <ol style="list-style-type: none"> 2. Are the teeth worn 	<ol style="list-style-type: none"> 1. Make sure you can see the teeth come above the needle plate and move forward. If they do not you may have set them to darning. Also remove the needle plate & clean out the grooves between the teeth. If these are full of lint/fluff they will stop the teeth from rising to the proper height. 2. Feel the teeth do they feel sharp, if they are worn the fabric will slip

TROUBLE	LIKELY CAUSES	POSSIBLE REMEDY
<p>Material fails to move through the machine well. Poor feed.</p>	<ol style="list-style-type: none"> 3. Is there enough pressure on the sewing foot? 4. Stitch length 	<ol style="list-style-type: none"> 3. Unless there is sufficient pressure on the presser foot the fabric will not move through the machine, refer to your instruction manual on how to increase the pressure. Most machines have a dial or knob above the foot on top or to the side of the machine for this purpose. 4. Is the stitch length set correctly, if you are stitching thick work use the maximum possible length of stitch as much of the length gets lost in the thickness. 5. By easing the work through the machine you are acting like a second pair of teeth, be careful not to pull too much or the needle will break. 6. On thick work you need to go slow & careful, to fast can cause the teeth to slip & work to slow down! 7. If you do not have enough pressure on the sewing foot the material will not feed through the work. Simply increase the pressure. This is the most common cause of a poor feed. 8. Make sure the correct foot is used, for example, you may have left on the darning or zip foot instead of the correct one? If it is correct the underneath should be smooth as glass & NOT rough in anyway.
	<ol style="list-style-type: none"> 5. Easing the work through 6. Sewing too fast 7. Not enough pressure on the sewing foot 8. Wrong sewing foot or the foot is too rough 	

TROUBLE	LIKELY CAUSES	POSSIBLE REMEDY
Work does not feed straight.	1. Worn feed 2. Foot not level 3. Letting the weight of the work pull the fabric 4. Crooked teeth or lint built up in the teeth grooves.	1. This is usually due to the feed teeth being bent or worn unevenly. Examine the teeth when they are at their highest point & see if they are level, if not replace them. 2. If your foot is not pressing evenly on the work it will not sew straight. 3. A common problem when sewing large items i.e. curtains, allowing the fabric to pull the work as it falls off the end of the table. Support the work behind the machine. 4. If the teeth have been set crooked in the machine, the work will not feed straight. Simply remove the teeth, clean them & straighten them.
Missing stitches.	1. Bent or damaged needle 2. Needle too fine 3. Wrong thread 4. Stretchy thread 5. Stretchy fabric	1. The most common cause, replace needle. Even new needles can be faulty. 2. Using a fine needle on some work allows it to bend away from the hook underneath that needs to catch the thread. If you are missing stitches go up one size until it stops. 3. Using too thick a thread with a fine needle will cause the machine to miss stitches. 4. Some new very stretchy threads cling so close to the needle that the hook cannot pick up the stitch. 5. Some fabrics are very stretchy & cause missing stitches as the thread is trapped against the needle & does not produce the loop needed for the hook to catch underneath. Try adding some interlining or stiffener, even tissue paper will work.

TROUBLE	LIKELY CAUSES	POSSIBLE REMEDY
Missing stitches.	6. Wrong needle 7. Needle in wrong way 8. Needle not in properly 9. Machine not threaded correctly 10. Machine fluffed up with lint 11. Top thread too loose or too tight 12. Damage to the hook mechanism, or the timing	6. On some work the use of a Stretch needle will work. A stretch needle is NOT a ball point needle. 7. Common causes. Make absolutely sure your needle is in the correct way, refer to your manual. Did the fault arise after you changed a needle? It is probably wrong. 8. Make sure the needle is fitted properly or up to the needle stop, this causes missing stitches. 9. A machine that is not threaded correctly will miss stitches, double check. 10. With lint/fluff will miss stitches. Give the machine a good clean around the shuttle area & teeth, then a drop of oil. 11. If the top thread is very loose or tight the machine will not sew properly, check your tensions. 12. If machine still doesn't work you probably have some damage that will need professional help. The most common is hook timing that needs to be exact for a perfect stitch. There is no 99% with timing.

Sometimes lowering the needle 2mm will compensate for minor timing issues

Note: There are many timing points on a machine. They all have to be correct for a perfect stitch. Without the correct tools & instructions this job is best left for a professional.