25 July 2011

Owners Manual

Your Affordable Long Arm Quilters

TINLIZZIE

TinLizzie18 DLS

www.**tinlizzie18**.com

888-QUILT-18
(888-784-5818)

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Dear TinLizzie18 DLS Owner,

Welcome to the TinLizzie18 Family. Since 1948, Bill Floyd has been designing and improving industrial sewing machines. The TinLizzie18$_{DLS}$ is one of many specialty sewing machines that he has been instrumental in designing and manufacturing. Now, he is passing down the knowledge, passion and tradition to his son Ernie. Together they are co-owners of the TinLizzie18 L.L.C. Ernie has been in the sewing industry since 1972. In 2005 their shared vision of an affordable long arm quilting machine for the home quilter became reality. Today the TinLizzie18 is in homes all over the world.

The TinLizzie18$_{DLS}$ comes with a one year complete warranty. We will always stand behind our product and any warranty issues will be fixed at no charge. Our warranty on parts is five years and covers the sewing machine head, motor, electronics and frame.

Customer satisfaction is our number one goal. If you are not happy then we are not happy. Our dealers are selectively chosen, using our criteria of customer service and professional integrity.
Sincerely,

William Floyd
TinLizzie18 LLC

Ernie Floyd

Joshua Floyd

In the photo above Bill, Shirley, Ernie, and Josh

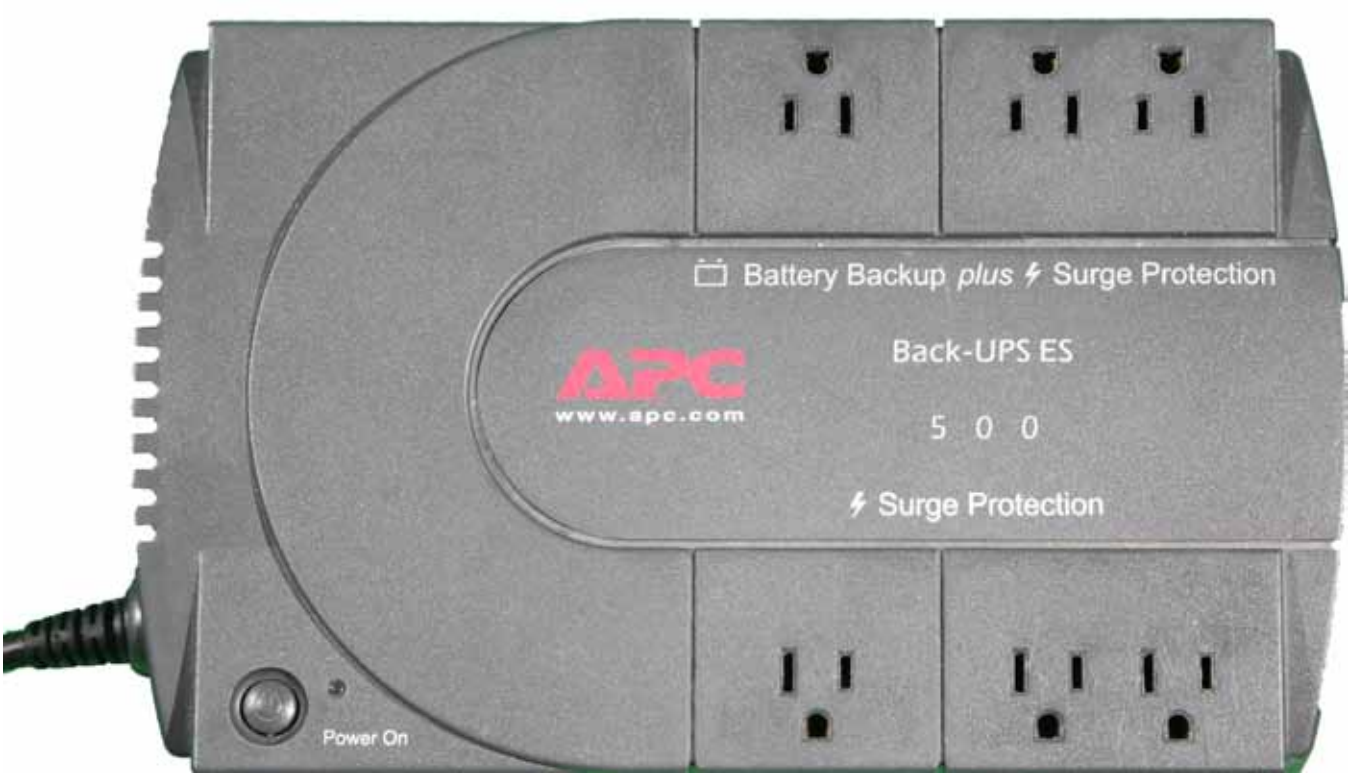
Warranty

We believe that we have designed and are manufacturing the best long arm quilting machine available. As you unpack your machine be sure to keep the box and packing materials designed to protect the machine during shipping. Should it become necessary for you to return the machine for warranty work please call us for specific instructions for packing and shipping your machine.

- Your TinLizzie18DLS has a full labor warranty for one year from the day you receive your machine. We guarantee the machine parts for five years.
- The machine must be cleaned and oiled regularly according to the instructions in this manual. Failure to properly maintain the machine will void this warranty.
- Your TinLizzie18DLS must be plugged into a surge protected electrical outlet. We highly recommend using an Un-interrupted Power Supply (UPS) also known as a Battery Backup. This helps to ensure that you are getting a regulated 110 volts into your machine. See photo below of UPS Battery Backup.
- Should we mutually decide that your machine cannot be repaired using normal communications we will arrange for machine to be returned to the factory.

Should you have a problem

Please contact your selling dealership they are your servicing dealership. Be sure to register your warranty on the TinLizzie18 web site. If your dealership is unable to fulfill your needs please visit www.Tinlizzie18.com Under the TinLizzie Support.



Attaching the square tubing to the top of your TinLizzie18DLS

The following will help you get the square tubing installed on to your Tin-Lizzie18DLS. The square tubing holds the thread stand, flexible lamp, and handles in place while you are operating the machine. The handles can be placed in the rear handles so that you can operate the machine from the front (free motion) or from the back (working with pantographs) by using the black knobs to secure the handles to the square tubing.

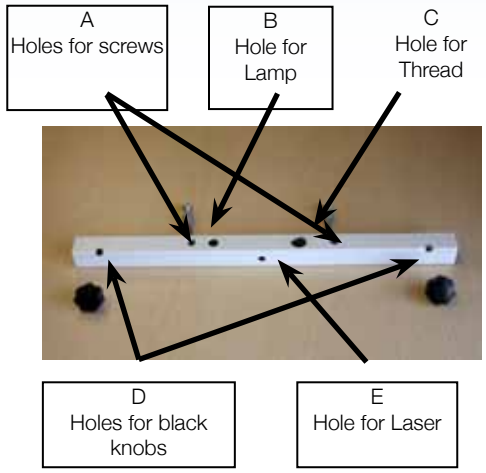


Figure 1

The square tubing has the following holes

Looking at the top of the tube

A These two holes are for the screws that hold the tube to the machine
B This hole is for the flexible lamp
C This hole is for the thread stand

Looking at the side

D These holes are for the black knobs which hold the handle bars in place
E This hole is a mount hole for the laser light

On both ends is an opening for the gooseneck bar of the handle bars to slide into the square tubing.

Figure 2

Step 1. Locate the square tubing along with two phillips head screws and washer which can be found in the bag of accessories. See figure 1

Step 2. The square tubing will be placed on top of the two risers you see on the top of the machine. see figure 2

Step 3. Using the two screws in the smallest holes on top of the square tubing orientate the square tubing so that the black knobs are on the same side as the main power box on the machine. See figure 3

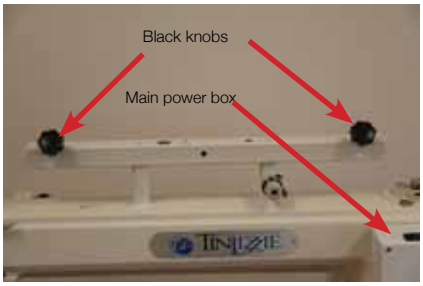


Figure 3

Step 4. Tighten the two screws

Step 5. If your black knobs are not in place attach them now.

Figure 4 shows the machine completely assembled

Figure 4

Your flexible lamp fixture

Your TinLizzie18DLS comes with a flexible lamp which puts light on the area you are working to help you see your work as you go. When you are looking at this lamp you will see that the cord is very long we will trim this cord so that you don't have extra cord hanging off your machine. Your lamp comes with a light bulb from the factory. The light bulb is a low watt bright light, we recommend this light as a standard home light bulb can cause the light fixture to get very hot and can burn you if you touch it.

Figure 5

Step 1. Remove the protective sleeves from your light fixture

Step 2. Remove nut and washer from the base of the lamp. (some lamps are packed with two nuts and washers if this is the case you can use on on the top and one on the bottom. If you have only one it will still work you will just use the one on the bottom.)

Step 3. Feed the cord and the base of the lamp into the hole provided on the top of the square tube. (this will be the smaller of the two holes on top after you have put the screws into the smallest hole attaching the square tubing to the machine.) see figure 6

Figure 6

Step 4. Place the washer and the nut back on to the base of the lamp to secure it to the square tubing.

Step 5. Tighten the nut against the square tubing to hold the light fixture in place. See figure 7

Figure 7

Step 6. Lay the cord of the light fixture across the top of the machine to the main power supply where the outlet is located.

Step 7. Trim the cord so that you have at least 17 1/2 inches of cord minimum

Step 8. Using the plug found in your accessories attach this to the end of the cord.

Step 9. To attach the plug to the end of the cord use the small screw driver that came with your machine to release the silver clip holding the plug closed.

Step 10. With the plug opened feed the cord into the silver clip and lay in the path provide. (check that the cord is laying flat in the space provided to prevent a short in the plug.) See figure 8

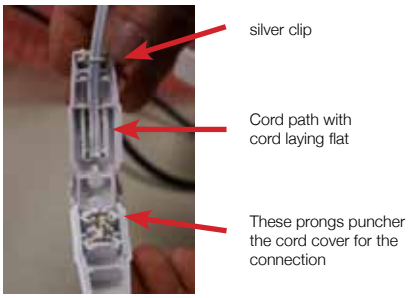


Figure 8

Step 11. Close the plug and check that the clip is secure.

Step 12. Plug into the outlet provided on the main power box. See figure 9

Figure 9

Your Thread Stand

Your TinLizzie18DLS comes with a two spool thread stand. Some assembly required.

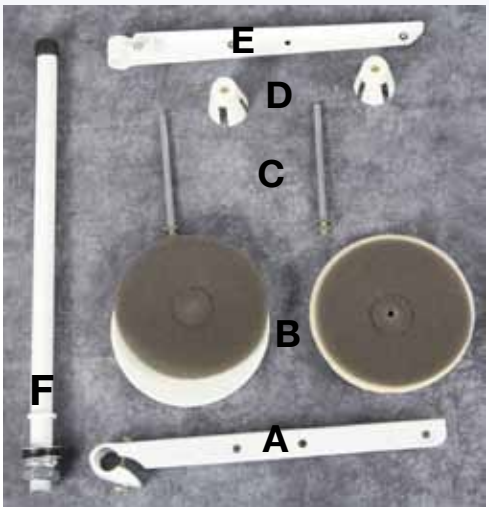


Figure 10

To assemble your thread stand and attach to your machine follow these steps.

Step1. Remove the nut from the bottom of one part C

Step 2. Place part C into one of part B with the threaded end towards the bottom of part B. See figure 11
We will use the outside two holes in part A

Step 3. Place part C with part B attached into one of the two outside holes on part A See figure 12

Step 4. Replace the washer and the nut onto part C and tighten

Repeat steps 1 - 4 for the other C and B parts so that you have the two spool holders attached to part A See figure 13


Figure 11

Step 5. Carefully remove the Rubber cap on top of part F. You may need to use the handle of your screwdriver to remove without ripping this piece. See figure 14

Step 6. Remove the nut and washer from the bottom of part F

Step 7. Place F (threads down) into the hole provided in the square tubing on top of the machine. See figure 15

Step 8. Place the washer and nut back on the base of F and tighten to the square tubing.

Step 9. Slide part A over the top of part F and slide to the base. See figure 16


Figure 12

Step 10. You will want part A to position over the side of the where the tension assembly and thread guides are located.

Step 11. Tighten this into place.

Step 12. Place part E onto part F you can leave this loose for now while you complete step 13. See figure 17


Figure 13

Step 13. Place the Rubber cap back on top of part F. See figure 18

Step 14. Position part E so that it is directly over the top of the spool holders part C and at the top of part F touching the base of the rubber cap. Tighten into place. See Figure 19

Figure 14

Figure 15

Figure 16

Figure 17

Figure 18

Figure 19

Attaching the Belt Guard

The Belt Guard can be found in the box the machine came in. This belt guard covers the motor pulley, hand wheel, and the belt to keep things from getting caught in the belt or damaging the motor sensor disk. The three screws required to attach the belt guard are located in the machine in the holes where the belt guard is positioned.

Step 1. Remove the three (3) screws with washers (A) See figure 20

Step 2. Place the Belt Guard (B) over the hand wheel and cover the motor pulley

Step 3. Replace the three (3) screws with washers to hold the belt guard in position. Tighten the screw. See figure 21

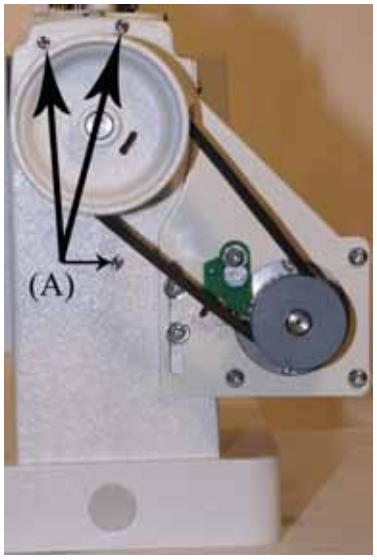


Figure 20

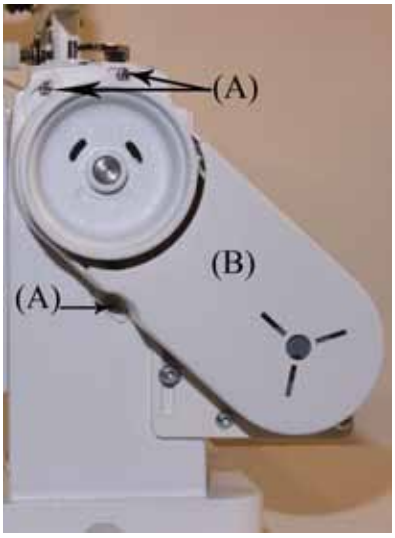


Figure 21

Replacing the Fuse

For protection of the power supply and the electronic the power supply has a fuse. This fuse is a 3 amp fast-acting glass fuse. A suitable replacement fuse can be picked up from your local Radio Shack. The fuse number you want to pick up is Radio Shack number 270-1054.

To Replace this fuse follow these steps

Step 1. Locate the fuse holder by removing the plug from the machine and between where the plug is plugged in and the on/off switch you will see a little rectangle piece with a fuse on it. See figure 22

Step 2. Using a small flat tip screw driver gently pop the fuse holder out.

Step 3. A spare fuse is held in the holder if you have used this one then you will need to pick up a fuse. See figure 23

Step 4. Remove the bad fuse from the end of the fuse holder.

Step 5. Replace the fuse with a new fuse

Step 6. Reinstall the fuse into the space provided. It should snap into place.

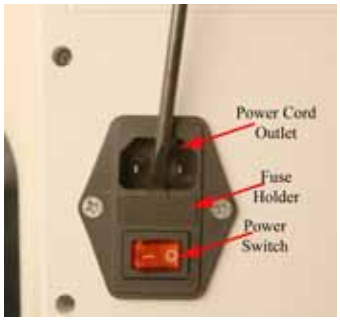


Figure 22

Figure 23

Connecting your TinLizzie18DLS to you Carriage Assembly (Deck)

Your Carriage Assembly (Deck) comes with the cables already connected to the encoders located on the upper carriage and the lower carriage. These cables are then connected to the back of your machine in the connectors provided on the power box. These cables and encoders are what sense the movement of the machine and transmit a signal to the controller board inside the power box to enable stitching when using the LizzieStitch mode.

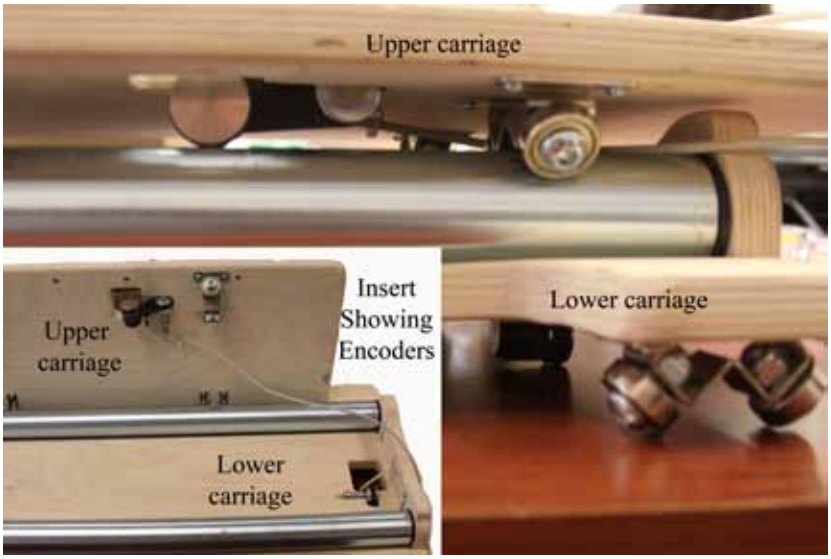


Figure 24

Figure 25

Step 1. Locate the encoders and cables on the carriage. Check them for damage prior to placing the machine onto the carriage. See figure 24

Step 2. Place the rubber mat onto the carriage to help prevent the machine from sliding.

Step 3. Place the machine on the rubber mat on the carriage. Center the machine as best as possible.

Step 4. Locate the upper carriage encoder cable and connect it to the second connection point on the side of the power box. See figure 25 and 26

Step 5. Locate the lower carriage encoder cable and connect it to the third connection point on the side of the power box. See figure 25 and 26

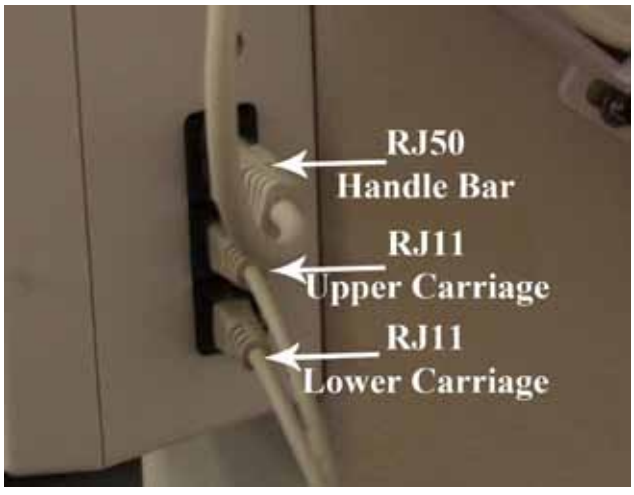


Figure 26

Attaching your handle bars to your TinLizzie18DLS and connecting the cable to the power box

Your handle bars are what you use to control the movement of your TinLizzie18DLS. These handle bars also have the controllers to select needle up/down, stitch operation choice, as well as stitch per inch when in the LizzieStitch (Stitch regulation) or machine speed when in the Constant mode.

Your handle bar has comfort grips and is adjustable so that you can position them to provide you the most control and comfort while quilting.

Your handle bar comes with a goose neck to place into the square tubing it can be place in the front of the machine or in the back of the machine depending on how you are quilting. For free motion quilting you will most likely have the handle bar in the front of the machine (needle side) and for pantographs and other quilting following a laser light you will most likely have the handle bar in the back (hand wheel side). The ease of sliding the goose neck into the square tubing and locking it down makes it easy to switch from side to side.

To attach the handle bar to the square tubing follow these steps.

Step 1. Loosen the knob on the side of the square tubing.

Step 2. Slide the goose neck into the square tubing. See figure 27

Step 3. Position where you can reach the handles without stretching.

Step 4. Tighten the knob to secure the handles to the machine.

Figure 27

To connect your hand controls to the power box follow these steps.

Step 1. Locate the Long RJ50 cable that came with your machine.

Step 2. Plug one end of this cable into the left port on the LCD screen. See figure 28

Step 3. Plug the other end into the connector on the back side of the power box. This will the the first connector on the power supply box.

Step 4. Your short RJ50 cable should be connected from the factory if you disconnect it. Plug one end into the center plug on the LCD and the left connector on the thumb control. See figure 28 and 29

Figure 28

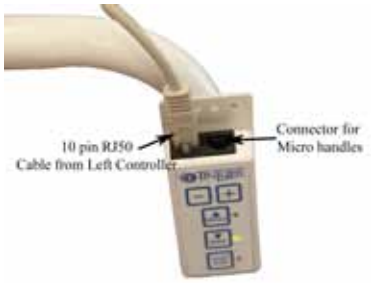


Figure 29

General Operation of the LCD key pad

When you turn on your TinLizzie18DLS you will hear one (1) beep and after three (3) seconds you will hear another beep. This lets you know that your machine is ready. The first screen you see will be fig 30. (Opening screen will have version number displayed. This is where the version is displayed for your machine)

Figure 30

The controls keys are as follows:

This key is for decreasing motor speed, stitch length, and selecting modes in menu.

This is the key for going to the menu.

This is the key used to select menu items.

This key is for increasing motor speed, stitch per inch, and selecting modes in menu

This key is for putting the needle in the down position.

This key is for starting the machine and stopping the machine. In fig 31 you can see where it shows Stitch OFF. This button will change it to Stitch ON (Note: Quilting Machine will not stitch if you see the word off next to the stitch.) Machine will turn off if no movement is detected after 12 seconds

This key is for putting the needle in the up position.

Figure 31

Lizzie Stitch (Stitch Regulation)

So you are ready to start quilting. You've turned on your machine and waited for the beeps and you see the screen see Fig 31. At this point if you want to change the Stitches Per Inch (SPI) then you can press and release the (-) key to decrease the number of stitches or you can press and release the (+) key to increase the number of stitches. (Note: If you press and hold the (-) or (+) keys then you will see the bar graph decrease or increase quicker than if you just press and release the (-) or (+) keys) Once you are happy with the Stitches Per Inch (SPI) then you can press and release the Start/Stop key and the LCD will change to fig 32. You can see on the LCD that next to the Stitch you see the word ON. This means the quilter is ready to quilt and as you move the quilter it will stitch. You cannot change the stitches per inch if the LCD screen shows ON.

Figure 32

Changing Functions

When you are ready to switch stitching modes you will press the (Menu) key. This will bring up the menu to select from. As you can see in Fig 33 There are three options in the menu.
Stitch: will let you chose between Lizzie (stitch regulation), constant (manual stitch), Robot, Idle (stitch regulation), Edge (stitch regulation), tie off up, or tie off down.

Deactivate: is used to switch between the front handle bars and the back handle bars. (Note: Both handle bars need to be connected when you turn on your machine for this to work. You should never disconnect or reconnect any cables while the power is on.) (Note: rear handle bars with electronics are optional.)

Diagnostics: is only used when directed by your technician. To exit diagnostics cycle power

Figure 33

Select indicator dash. To move the select indicator dash on the left side of the screen use the (-) key to go down the list and the (+) key to go up the list. To Select the function press the (enter) key.

Stitch Mode

Once you have pressed the (enter) key you will be able to choose between the Lizzie (stitch regulation), Constant (manual stitch), Robot (use with robot) (see Fig 34), Idle (stitch regulation no stop), Edge (for use with rulers will stop for a longer period of time.), Tie off up, or Tie off down. (see Fig 34a)

Press the (Enter) key once you have the stitch you would like to use.

If you choose Lizzie stitch you will be in the stitch regulation mode of the machine refer back to fig 31 for a look at the LCD when Lizzie is selected and after the stitch is off in this state you can move the machine and it will not stitch. Once you press the (start/stop) key then the machine becomes active refer to fig 32 and you can begin stitching when you move the machine. Remember if the machine shows ON and you do not move the machine for 12 seconds it will change to OFF and you will need to press the (start/stop) key again.

You will also see a bar graph at the bottom of the LCD with SPI on the right see fig 31. This is your stitch per inch indicator. You will use the (-) key to decrease the number of Stitches per Inch and use the (+) key to increase the number of stitches per inch. (note: Pressing and holding the (-) or (+) key this bar graph will move more rapidly across the screen.)

Figure 34

Figure 34a

Constant Stitch (Manual stitch)

If you choose Constant you will be in the manual stitch mode of the machine. Fig 35 shows the LCD screen for the Constant. You will notice you have the OFF just like in the Lizzie but you have numbers with percentage at the bottom rather than a bar graph. Same as with the Lizzie the (start/stop) key will turn the machine on and you will be ready to stitch unlike the Lizzie once you hit the (start/stop) key the machine will be sewing. Fig 36 shows with the Stitch ON

Like the Lizzie you can use the (-) or (+) keys to decrease or increase the speed of the machine. Constant does not have a default to turn off once it has been turned on. If you stop moving thread will build up until it runs out of thread or your thread breaks. It will still keep running until you press the (start/stop) key. You can adjust the motor speed while the LCD screen shows ON

Figure 35

Robot

Robot gives stitch control to the robot. This will let you control the stitching with the Remote control for the Robot.

Idle (stitch regulation without stop)

Idle stitch gives you the stitch regulation as Lizzie once you press and release the start/stop button the machine starts stitching when you come to a stop the needle continues to stitch at a slow speed, This mode allows for ease in and out of corners. Press and release start/stop button and machine will stop.

Figure 36

Edge

Use this stitch mode when working with rulers. See Lizzie Stitch for operation of this stitch. The only difference between the Edge and Lizzie is with Lizzie Stitch when you stop moving for 12 seconds the machine will go off like pressing the start/stop button. Edge Stitch will not stop giving you time to reposition your ruler or template.

Tie off up or Tie off down

These are used in conjunction with the Lizzie Stitch. With Tie off selected you will be able to start or finish your stitching, With the machine not running press the enter key and it will do 3 stitches to tie off your thread. Up will position the needle in the up position while Down will position the needle in the down position.

Figure 37

Fig 37 shows the right controller as you can see the keys are similar to the keys on the left controller. You can decrease or increase using the (-) or (+) keys. You have Needle up and Needle down. You also have a (start/stop) key

Attaching your Laser to your TinLizzie18DLS

The Laser light can be very useful when you are following patterns. There are holes in the carriage on both sides and also a hole in the square tubing (see figure 38) to help you position the laser to help you get the light on the line you want to follow and the machine positioned where you want the stitching to be on the quilt.

Figure 38

What is the Tension Release Lever?

The tension release lever raises the hopping foot and releases the tension on the thread. See figure 39
You can watch the tension disc plates open as you lift the lever.

NEVER start sewing with the lever up.
There will be no tension on the thread which will result in stitches on the bottom being bad with huge loops and other bad looking stitches.

Figure 39

Adjusting the Height of the Hopping Foot

There are many reason to adjust the height of the hopping foot. You could be using a thicker batting, quilting a quilt with thicker seams, or just need a little more clearance. You don't want the foot to be too high as that can cause strain on the thread, create flagging of the fabric while stitching, or just be to high if you put a ruler next to it.

To adjust the height of the hopping foot use these steps.

Step 1. Lower the needle into the fabric to get the hopping foot to it's lowest position. (close to a seam is a good place then you can tell how high you need to be to clear the seam.)

Step 2. Loosen screw (A) on the sided of the hopping foot (B). See figure 40

Step 3. Move the foot up or down to adjust for your project.

Step 4 While holding the hopping foot where you want it tighten the screw back down.

Factory setting for this is with needle down a dime should be able to pass below the foot and touch the foot as it passes under. See figure 41

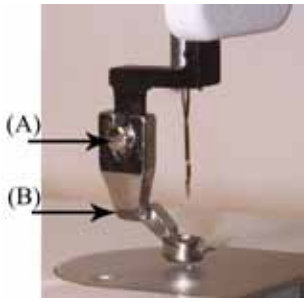


Figure 40

Figure 41

Adjusting the Stroke of the hopping foot

Factory setting is in the down position. The reason for less stroke is for better ability working with rulers. Adjustment of stroke is for going over thicker seams.

Step 1. Remove the four (4) screws (A) holding the cover (B) in place front left side of machine. See figure 42

Step 2. Using a wrench loosen the bolt (C) on the link adjusting crank (D) slide up to increase the stroke down to decrease the stroke. See figure 43

Step 3. Use your wrench to tighten the bolt (C)

Step 4. For your safety replace the cover (B) prior to use. Using the four (4) screws (A)

Figure 42

Figure 43

Routine Cleaning and Oiling

Routine cleaning and oiling is very important to the longevity of your quilting machine. Brush out the fuzz from around the hook and foot. Change your needle regularly to avoid thread breakage, tension problems and needle breakage. A worn needle can mean skipped stitches, shredded thread and a weakening of the needle itself. These things can lead to stitch quality issues.

Lint has a tendency to build up in the bobbin case. A tiny amount of lint can cause poor stitches. Check the bobbin case each time you change the bobbin to keep it clean. We suggest using a soft bristle brush to wipe out the bobbin case and the bobbin area. Canned air only blows the lint around. By using a soft bristle brush you collect the dust on the brush. Occasionally, place a drop of machine oil on a cotton swab to wipe out the bobbin case.

Keep your table clean of dust and oil. Clean the bars and carriage deck regularly for smooth movement.

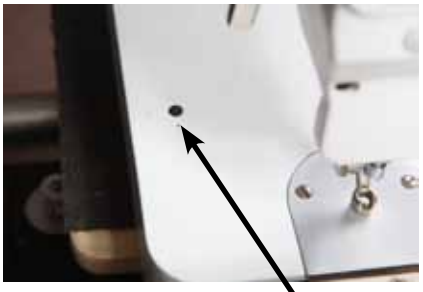
Oiling is extremely important to the longevity of your quilting machine. Failure to oil your machine regularly can void your warranty.

The one oiling spot marked with red arrow is marked with red paint on your machine. An oil bottle is included with your machine. The one oiling spot marked with a blue arrow contains a dip stick. Remove the dip stick by lifting it up with a finger nail or screw driver. Place drops of oil in this same hole if you find no oil on the dip stick.

Recommended oiling:

After every finished quilt place 3 to 4 drops of oil at the location with a red spot towards the front (needle side) of the machine. This is located on the top of the machine. see figure 44 oil spot on top
The other location is the oil dip stick found just behind the needle. At this time make sure oil is present on dip stick. If not add 3-4 drops of oil where you pulled the dip stick out. Run machine to lubricate use a clear high grade sewing machine oil. (Note: the machine pictured here is before complete assembly from factory; your machine has more components attached.)

Oil Spot on top Figure 44



Oil Reservoir location Figure 45

Oil dip stick lifted Figure 46

Oil Dip stick out Figure 47

Bobbin Winder and Bobbins

A bobbin winder is included with your machine. The thread on a properly wound bob
ers of thread. A sloppy or mushy wound bobbin will result in poor stitch quality.

Figure 48

How do I wind a Bobbin?
Step 1. Insert an empty bobbin on the bobbin winder spindle. See figure 48

Step 2. Place a cone of thread on the holder.

Step 3. Bring the thread up through the guide over the cone of thread. See figure 49

Figure 49

Step 4. Insert the thread through the top guide hole then around the tension disk and through the bottom thread guide. See figure 50

Step 5. Wrap the thread around the bobbin clockwise three or four times

Step 6. Push trip mechanism forward until it snaps into position See figure 51

Use step 7 if you plan to quilt while your bobbin is winding. or use step 8 if you are winding bobbins without quilting.

Step 7. Bobbin winder will start winding the bobbin once you press the start/stop key. You can quilt while your bobbin is winding once it is full it will stop.

Figure 50

Step 8. If you wind your bobbin only (When not quilting) ensure that you do not have thread in the needle to prevent jams. Also remove the bobbin and bobbin case to prevent damage. Select Constant stitch mode, then press and release the start/stop button. Once the bobbin is full press and release the start/stop button again to stop the machine. ***Note: The Needle will continue to move up and down while you are filling the bobbin.***

The bobbin will fill until the trip mechanism is pushed out by the thread. It will then disengage the wheel. The bobbin should fill to just below the rim. Having the bobbin too full will cause tension problems.

Figure 51

Check the tension of the bobbin by holding the loaded bobbin case in one hand. With one hand under the bobbin case, hold the tail of thread and watch as the thread flows out of the bobbin case. A slight bounce should cause the bobbin case to slide down the thread. If the thread slides out of the case as you pick it up, it needs more tension. If it barely moves down the thread or doesn't move at all, it needs less tension.
See figure 52

To adjust the tension: See figure 53
Use a small screwdriver to turn the largest set screw on the bobbin case to adjust tension.
Make very small adjustments.
Be very careful not to remove the screw as it is very small and difficult to find if lost.
Remember, righty (clockwise) tighty, lefty (counter clockwise) loosey.

To place the bobbin into the machine:
Step 1. Insert the bobbin into the bobbin case. It does not matter which way you put the bobbin in but once you have it one way just keep doing it that way.

Step 2. Holding the bobbin case pull the thread through the slot.

Step 3. Draw the thread down and under the spring, making sure the thread is in the highest position of the bobbin case.

Step 4. Place the bobbin case in the machine. Always listen for the pop as it engages in the machine. See figure 55

We suggest using a soft bristle brush to wipe out the bobbin case and the bobbin area. Canned air only blows the lint around. By using the soft bristle brush you collect the dust on the brush.

Use a business or index card to clean under the tension spring on the bobbin case see figure 56

Each day before you start quilting, unthread your machine past the take up lever and remove the bobbin case, place a small drop of oil in the bobbin hook area before you begin quilting. This will clean out the fuzz and lint. Place a drop of oil in the bobbin hook area. Turn your machine on to run at the slowest setting.

Figure 52

Figure 53

Figure 54

Figure 55

Figure 56

TIP: Lint has a tendency to build up in the bobbin case especially with cotton threads. A tiny amount of lint can cause a huge headache! Check the bobbin case each time you change a bobbin to keep it clean.

Threading overview with names

This is a diagram of the front side of your TinLizzie18DLS.

This is the side that faces the fabric. The back of your machine has the electrical outlet and stitch regulator connectors.

The numbers have been assigned in threading order.
See figure 57

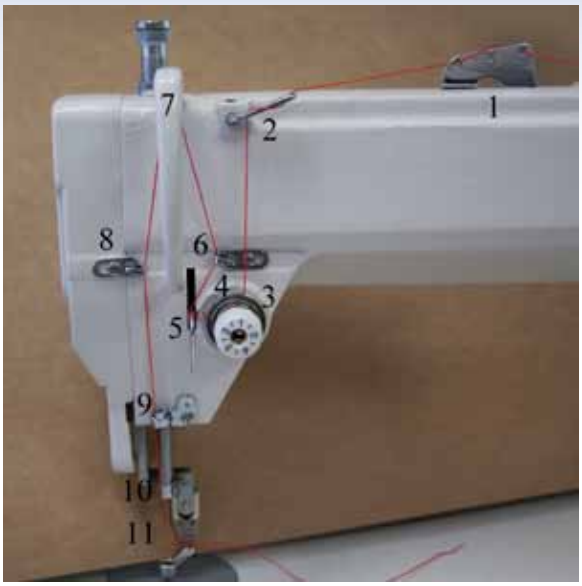


Figure 57

1. Upper Thread Guide
2. Three Hole Thread Guide
3. Tension assembly disc
4. Check Spring
5. Silver Angle Bracket
6. Thread Guide
7. Take Up Lever
8. Thread Guide
9. Thread Guide
10. Thread Eyelet above the needle
11. Needle

Threading Your TinLizzie18DLS

Your TinLizzie18DLS is capable of sewing with many types of threads. One thing to keep in mind is this machine is an industrial machine so very light threads will be harder to use that the more traditional machine quilting threads. Use of the other threads is alright as long as you adjust the tension and slow down. These machines are test sewn with Superior King Tut thread which has a long staple and is a machine quilting thread. When we are at quilt shows we use the King Tut on top with a sofine on the bottom. The reason for this is two threads of equal size will ride on top of each other and fight to interlock. When using a smaller thread in the bobbin you can get more thread on the bobbin and the threads will interlock faster and with less fighting as the smaller thread will nestle right down into the twist of the larger threat creating a better locking of the stitches.

Lets get started threading the machine:

Step 1. Place a cone of thead on the thread holder.

Step 2. Pull the thread through eyelet above the cone of thread. Make sure to use the eyelet directly above the cone of thread. See figure 58

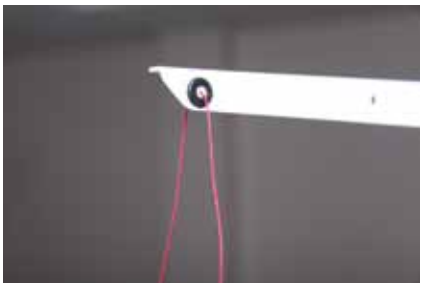


Figure 58

Step 3. Thread upper thread guide as show in figure 59
(if you use all three holes it will add drag/tension to the thread)

Step 4. Weave thread as shown on the three hole thread guide.
(if you use all three holes it will add drag/tension to the thread)
See figure 60

Step 5. Take thread between the two tension discs from back to front all the way around. See figure 61 (release the tension on the tension disc using the tension release lever. This will help to ensure your thread gets between the disc easier.)

Step 6. While holding the thread up over the top of the tension hook the check spring. The tension spring should come down as you pull thread.

Step 7. Thread now need to run under the silver angle bracket See figure 62 for details.

Step 8. Now bring the thread up to thread guide #6 above the tension assembly. You will be able to slide the thread into this thread guide. See figure 63

Step 9. The thread will now be threaded through the take up lever from the back towards the front. See figure 64

Step 10. Now bring the thread down the front of the machine snapping the thread into thread guide 8 and thread guide 9 on the way down to the needle. See figure 65 and figure 66

Step 11. The thread will now go into the Thread eyelet above the needle. See figure 67 This is a hole and you will need to thread this spot.
(TIP: Use a dental floss threader to thread the guide above the needle. The threader will also help thread the needle.)

Step 12. Thread the needle from the front to the back of the needle. See figure 68


Figure 59


Figure 60


Figure 61


Figure 62


Figure 63


Figure 64


Figure 65


Figure 66


Figure 67


Figure 68

How do I change the Needle?

A 134RSAN needle (size 18) will be installed on your TinLizzie18DLS from the factory. When it is time to replace the needle you can easily install one. Be sure the power switch is off on the machine. Remove the bobbin case.

To remove the needle use the smaller screwdriver included with your machine.

Step 1. Loosen the screw just above the thread guide on the needle bar; the needle should fall out as you loosen the screw.

Look closely at the needle. Your home sewing machine needle shank (top of the needle) has a flat side. The top of the long arm machine needle is round. On the point end of the needle there is a scarf, or notch, in one side. **The scarf must face the back of your machine. The long groove at the eye of the needle faces you as you insert the needle.**

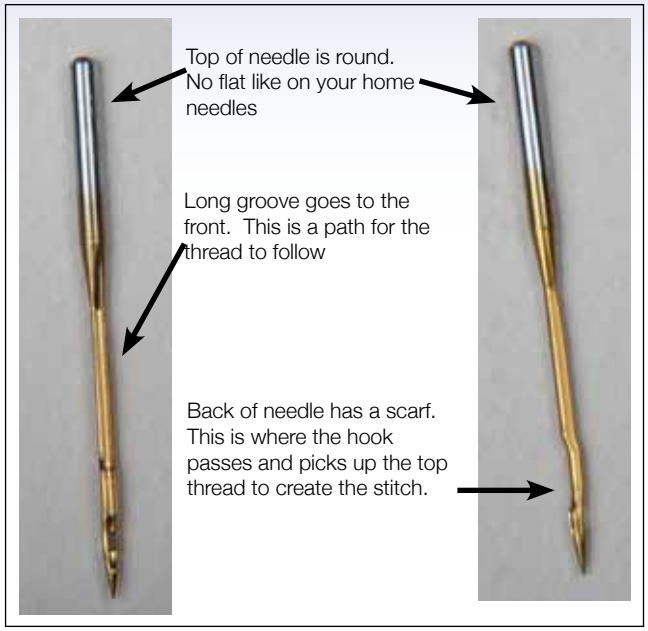


Figure 69

Why does the scarf go to the back of the machine?
When the needle goes down through the fabric into the bobbin case, the hook comes around behind the needle to pick up the thread. The scarf has to be there to provide a way for the hook to get between the needle and the thread in order to pick up the thread.

Step 2. Place the new needle up in the slot, making sure the needle is up in the needle bar as far up as it will go. Make sure the scarf is facing the back of your machine. Tighten the screw on the needle bar while holding the needle up.

TIP: *Use the old needle to hold the new needle in place while you tighten the screw. By placing the point of the old needle into the eye of the new needle you can see how straight you are placing the scarf of the needle.*

Before you turn your machine on go to the back of the machine and turn the hand wheel a complete turn making sure the needle goes down in the center of the throat plate and the hook in the bobbin area rotates with the needle smoothly. Put the needle down as far as possible. In the bobbin area, you should be able to see you the eye of the needle. When the hook rotates it picks up the thread at the back of the needle then the top thread pulls the bobbin thread up to create a stitch. The scarf must face the back of your machine.

How do I make adjustments to make the perfect stitch?

Understanding how your long arm machine makes a stitch will help you make the proper adjustments to make the perfect stitch. The technique all long arm machines use to make a stitch is basically opposite of the home sewing machine. The home sewing machine is designed to press together two layers of fabric and sew while the fabric is held in place by the presser foot. Long arm machines are designed to press and sew multiple layers together while the machine head is moving. The difference is that there is practically no needle deflection on a standard sewing machine and a large amount of needle deflection on the long arm. The higher the tension, the more the needle will deflect. Another cause for the needle to deflect on a standard machine is the type of fabric being sewn. A tightly woven fabric tends to force the needle in different directions as it penetrates the fabric. This type of deflection depends greatly on the type of needle and type of point you use, such as a ball point or sharp point.

Needle deflection, what is needle deflection? What causes needle deflection? How is needle deflection related to the stitches on my quilt?

On a long arm quilting machine a stitch is mechanically created the same as a home sewing machine except the quilter is the feeddog moving the machine head over the fabric. The hopping foot presses the fabric together tighter and quicker than a home sewing machine presser foot because the fabric must be able to slide between the foot and the needle plate as the machine is sewing. This means that the machine is moving while the needle is in the fabric. The worst thing for a needle is to be in the fabric while the machine is moving which bends the needle, creating needle deflection.

Good stitches will interlock in the batting between the quilt top and backing. In real life, this goal is rarely achieved. For this reason, you need to be aware that you will have “pokies” if you use different colors of thread on top and in the bobbin. Pokies are where you can see tiny dots of the contrasting thread where the bobbin catches the top thread. If there is slightly more tension on the top than on the bottom, then you will see the pokies on the top side of the quilt. If the greater tension is on the bobbin, then you will see the pokies on the back of the quilt. If the pokies are objectionable to you, use the same color thread on both top and bottom.

TIP: *A general rule of thumb is that if the stitch looks bad on the top it is the bottom tension. If the stitch looks bad on the bottom it is the upper tension. The upper and lower threads play tug of war with each other.*

Tension, Tension, Tension ....

This probably causes more problems than anything else. You need correct tension on the top and bottom threads but you also must have correct tension on the quilt held between the bars. You should be able to gently rock the belly bar where the backing fabric is attached. This allows enough movement of your quilt layers for the needle to penetrate and make good stitches.

Before you start making adjustments to your machine ask yourself, "What changed?" If your machine was stitching great and all of a sudden it has loopies on the back or puckers, "What changed?" Did you just change the bobbin? Did you just lift the take up bar? Did you lower the take up bar after finishing your last quilt? Did you recently change the needle? Did you just roll the quilt?

If the take up bar with the quilted portion of your quilt is too high, it will result in poor stitch quality. You need a finger tip space between the quilt and the machine bed. Higher will result in poor stitch quality. Lower and the quilt will create a drag on your machine's movement.

Look at your bobbin, a sloppy wound bobbin will not create a good stitch. Make sure that the threads on the bobbin are snug and evenly wound. Check to see if there is a piece of lint in the bobbin case.

Tension Trouble shooting checklist

- Is the side tension lever down?
- Have I oiled my machine regularly?
- Is the quilt too tight on the frame?
- Is the thread coming off the cone freely?
- Has your thread jumped out of the tension discs?
- Check your threading. Has anything been missed or has the thread flipped itself around something, increasing your tension?
- Is the hopping foot too high or too low?
- Is your take up bar too high? Did you lower the take up bar after your last quilt?
- Do you need to change your needle?
- Is your needle in properly?

Top Thread Breaking

- Check to see that your thread is coming off the spool freely. The thread guide is centered over the spool and has not developed any burrs or catches.
- Check to see if the thread has looped itself around the spool pin.
- Check to see if the needle is in correctly, with the scarf facing the back of the machine.
- Have you recently changed the needle? Is it as high as it will go in the needle bar?

The Stitch Regulator does not keep up with me? Just like driving your car you need to make controlled starts and stops, practice being consistent in your movements.

Eyelashes

Eyelashes on the back of the quilt can be caused by too little top tension. Turn the thread tension disk clockwise ¼ turn. Make small adjustments. Repeat until stitch quality is good. Remember the upper and lower thread play tug of war with each other.

Loose Top Stitch

Is the tension lever handle down? It lowers the hopping foot and applies the tension disk.
Is the bobbin thread inserted in the slot of the bobbin case?
Adjust the tension disk small turns clock wise. Repeat until stitch quality if good.

Quilt Top Puckers
Is your backing fabric stretched too tight? While the backing fabric needs to lie flat and without wrinkles, stretching it too tight can make the quilt top pucker. After stitching and releasing the backing fabric the top will pucker.

The top tension is too tight. Adjust the tension disc small turns counter clockwise. Repeat until stitch quality is good.

Stitches are Skipped
Skipped stitches leave needle holes without thread while large and small stitches in regulated mode means the encoders are not picking-up the signal of your movements because of lint or thread stopping or slowing the reading.

First, check to see that your machine is threaded correctly. Look at the check spring, does the thread lay in the check spring? When properly threaded the check spring will move up and down as the machine is stitching and the thread is flowing freely.

Check the needle. Be sure it is all the way up into the shaft and the scarf is toward the back. If it has been used for some time, replace the needle. A blunt needle will make a popping sound as it penetrates the quilt sandwich.

Machine Drags Making it Difficult to Move
Check to make sure the quilt on the take up bar is not dragging on the bed of the machine. A finger tip distance between the take up bar and the bed of the machine is all that is necessary. Elevating the take up bar too high can cause loopies on the back. Look for lint or thread that might be snagging as you move the machine.

Difficult to Control the Movement of the Machine
Check for lint or other debris on the track and bars. Sometimes the smallest pieces of thread create the biggest headaches.

Check spring replacement/Tension Knob

From time to time you may need to replace the check spring. We will use a series of photos to help you.

Tension Assembly with Broken Spring. (old tension knob)

Figure 70

Tension Assembly with good spring (new Tension knob)

Figure 71

Screw on inside of machine loosen only. **DO NOT REMOVE**

Figure 72

Remove assembly from machine
Be careful of release pin

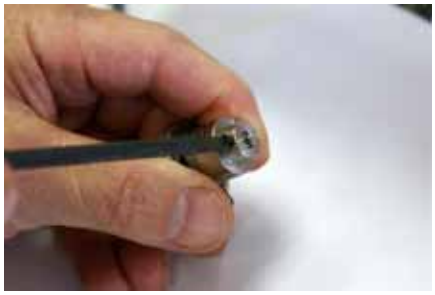
Figure 73

Machine with tension assembly removed

Figure 74

Tension assembly out of machine
DO NOT LOOSE PIN

Figure 75



Loosen screw only
DO NOT REMOVE

Figure 76

Remove tension assembly from barrel

Figure 77

Tension assembly, Barrel

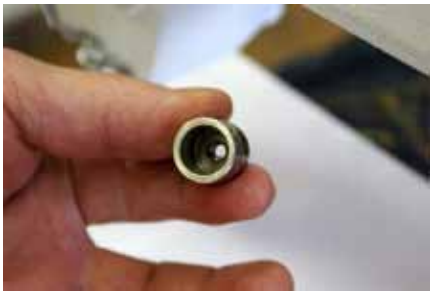
Figure 78

Remove spring

Figure 79

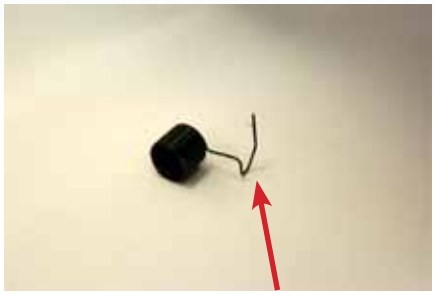
Spring Removal

Figure 80



Spring Removed

Figure 81



New Spring, This tail is what was broken

Figure 82

Insert the new spring

Figure 83

Twist while inserting the new spring

Figure 84

New spring in place

Figure 85

Insert the tension assembly back into the barrel. REMEMBER DO NOT LOOSE THE PIN

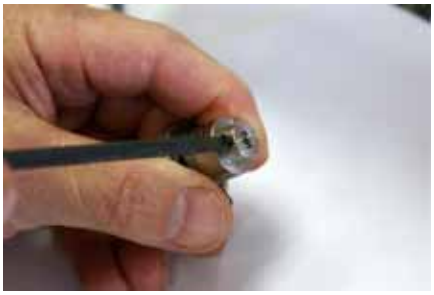
Figure 86

Insure that you are all the way in

Figure 87

Give the tension assembly a twist until you feel resistance on the check spring

Figure 88



Tighten screw. Make sure the pin is still there.

Figure 89

Place the assembly back into your machine

Figure 90

Once in ensure that your check spring is at 11:00

Figure 91

Press in and notice the tension disk opens

Figure 92

Release and the disk will close; this is the proper place for your tension assembly

Figure 93

Tighten screw on your machine

Figure 94

Tension assembly back in place with new check spring at 11:00

Figure 95

For fine adjustment of check spring insert screwdriver turn clockwise for more tension

Figure 96

Machine will not sew. I cannot turn the hand wheel.

No matter how hard you try to keep the bobbin area free of loose threads and lint we sometimes with get a jam. Most jams start with the needle down as the jam is because something gets into the bobbin race. The bobbin race is a part of the bobbin hook which keep the hook rotating smoothly and no wandering as it rotates.
Don't panic this can be cleared it just sometimes take some work.

Step 1. Turn the power off

Step 2. Remove the belt guard so that you can get a good grip on the hand wheel. See page 10 for instructions

Normal sew rotation if you are standing at the back of the machine looking at the hand wheel is counter clockwise. If you turn the machine counter clockwise you will force what ever is jamming the machine deeper into the bobbin race.

Step 3. Rotate the hand wheel clockwise to back the jam out of the bobbin race. (This may take some work to get it worked free.) See figure 97

Step 4. Normally when you get it backed up it will fall out and you will be able to make a full rotation with the hand wheel.

Once it feels free take the needle plate off the machine and give it a good cleaning in the bobbin area. Prior to putting the needle plate back on rotate the hand wheel counter clockwise (normal machine rotation)

While rotating the hand wheel by hand ensure that you have free movement of the machine. If everything is working well you can put the needle plate back on and put the belt guard back on, You will be ready to start quilting again.

Figure 98 shows thread caught
Figure 99 show the race

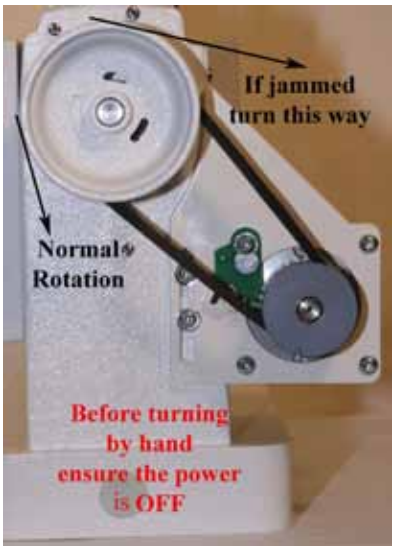
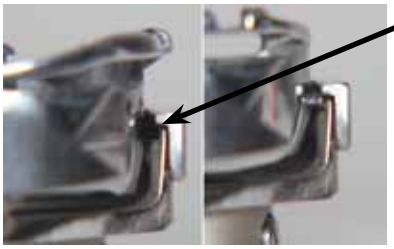


Figure 97

Figure 98



The Race is this small space here on the hook assembly

Figure 99

Timing between needle and rotating hook

If you need to adjust the timing of the machine follow these steps to help get the proper timing on your machines.

Step 1. Remove the two needle plate screws from your machine and set the needle plate to the side

Step 2. Remove the two screws on the protection cover at attach it to the face plate of the machine. See figure 100

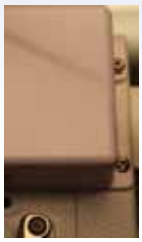


Figure 100

Step 3. Remove the three screws holding the face plate to the machine. Remove the face plate and set this part aside.

Step 4. Check the protection flange of the position bracket (A). This should be engaged in the notch (B) of the bobbin case holder. (D) in the drawing shows the set screw to adjust hook timing. See figure 101

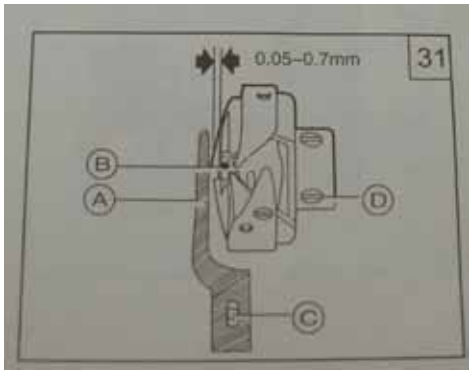


Figure 101

Step 5. Turn the hand wheel to locate the needle to it's lowest position. Note: correct needle position is when you can see a small portion of the eye of the needle. See figure 102

Step 6. If the needle is not stopping in the correct position you will need to proceed to the next step. If it is in the correct position move to step 9

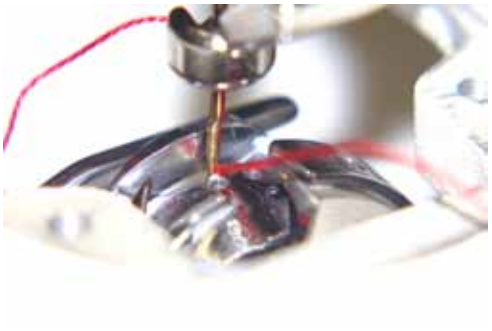


Figure 102

Step 7. Loosen Needle bar connecting screw (A)
This will allow you to raise and lower the needle bar for correct location. NOTE: CHECK ALL PHOTOS BEFORE MAKING ANY ADJUSTMENTS See figure 103

Step 8. Once you have the needle in the correct location tighten Needle bar connecting screw (A) to prevent the needle bar from moving out of position.

Adjusting rotating hook point timing with needle

Step 9. Turn the hand wheel counter clockwise to locate needle to its lowest position.

Step 10. At lowest position turn the hand wheel to raise the needle 2.5 mm (1/8") See figure 104

Step 11. Hook point should be just above eye of the needle. See figure 105

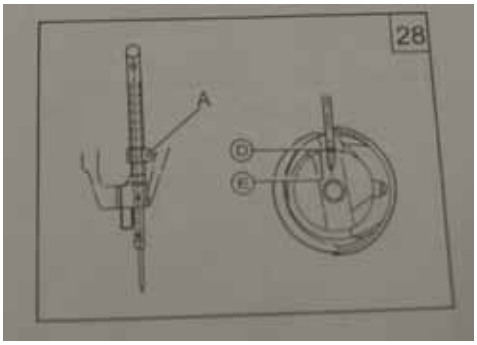


Figure 103

Step 12. If the hook point is in the correct position then move to step 18. If the hook point is past this point or not yet reached this position then you will need to follow the next few steps to adjust the hook so that when the hook point reaches this position it is just above the eye of the needle. Proceed to the next step.

Step 13. Refer to drawing 31 see figure 101 for position of the three screws (D). Loosen the three screws holding the hook assembly to the shaft. (Note you will have to rotate the hand wheel to get to all three screws.)

Step 14. With the hook loose reposition the needle to the lowest position. Rotate the hand wheel counter clockwise to bring the needle up 2.5mm (1/8") see figure 104

Step 15. Now rotate the hook so that the point of the hook is just at the edge of the needle. See figure 105

Step 16. Lock one screw holding the hook into this position.

Step 17. Rock the hand wheel back and forth to ensure that you have the hook in the right position to pass the back of the needle just above the eye of the needle.

Step 18. When adjusting the rotating hook point timing also note that clearance between notch bottom of needle D and hook point C must be maintained. HOOK CAN NOT RUB AGAINST NEEDLE.

Step 19. Once you feel like everything is in the right place tighten all screws you loosened.

Step 20. Return all covers and screws back into place on your machine.

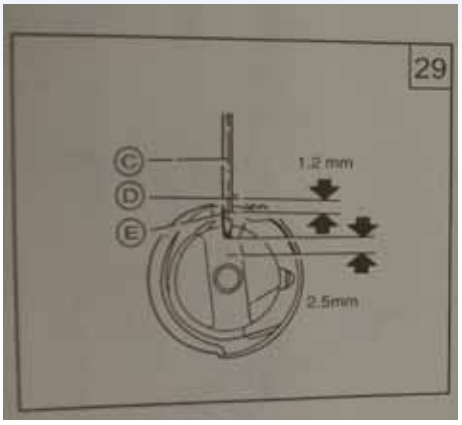


Figure 104

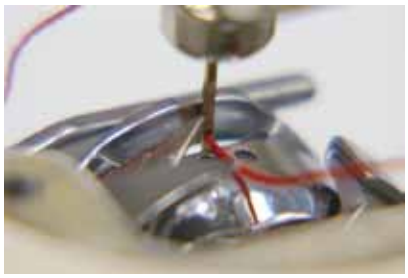


Figure 105

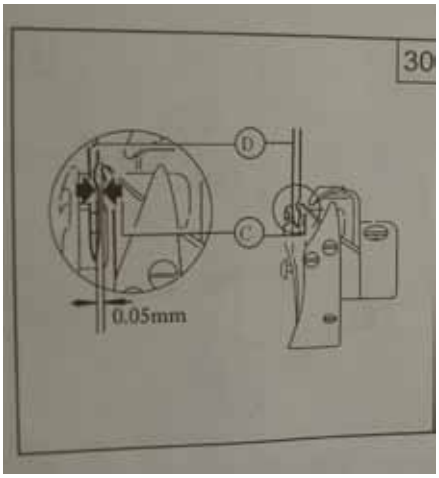


Figure 106

Adjusting the bobbin winder lever (amount of fill on the bobbin)

Step 1. Using your allen wrench loosen the set screw (A) holding the Bobbin winder Lever (B) in place. See figure 107 and 108
Note you do not need to pull the bobbin winder out to adjust this setting.

Step 2. Move the Bobbin winder lever in for less fill and out for more fill

Step 3. Tighten set screw (A) to prevent Bobbin winder lever (B) from moving

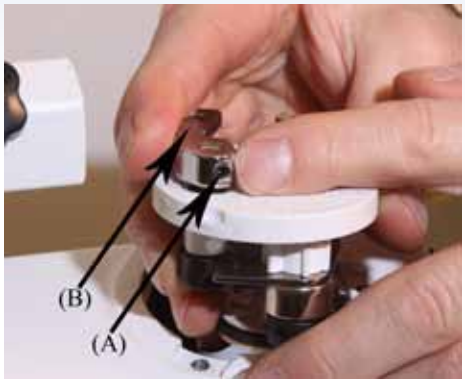


Figure 107

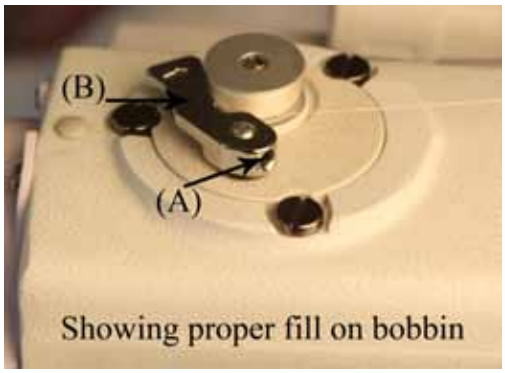


Figure 108

Adjusting the tension assembly thread guides for proper fill.

Step 1. Loosen the set screw (D) so that you can adjust the tension assembly thread guides (E). Adjust tension assembly thread guides (E) up and down until bobbin fills evenly top to bottom.
See figure 109

Step 2. Tighten the set screw.

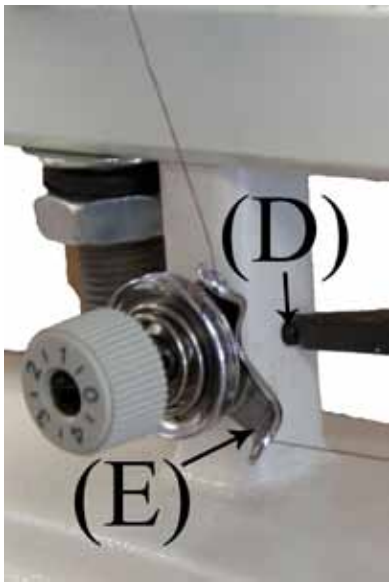


Figure 109

Adjusting bobbin winder and contact with the shaft

Step 1. Loosen the three (3) screws (A) holding the bobbin winder in place but do not remove them. See figure 110

Step 2. Twist the bobbin winder (B) to the right for more contact with the inner shaft or mover left for less contact.

Note: When twisting the bobbin winder (B) you need to stand on the side of the machine with the access panel

Step 3. The bobbin winder disk with the friction ring needs to contact the disk on the upper shaft when engaged. See figure 111

Step 4. Once done moving the bobbin winder retighten the screws to hold the bobbin winder in place.

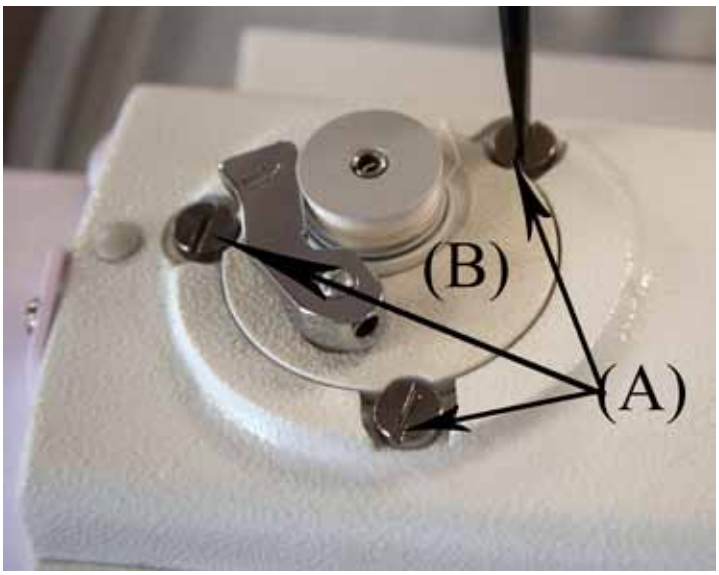


Figure 110

Turning the bobbin winder to the right will move the friction wheel closer

Turning the bobbin winder to the left will move the friction wheel away

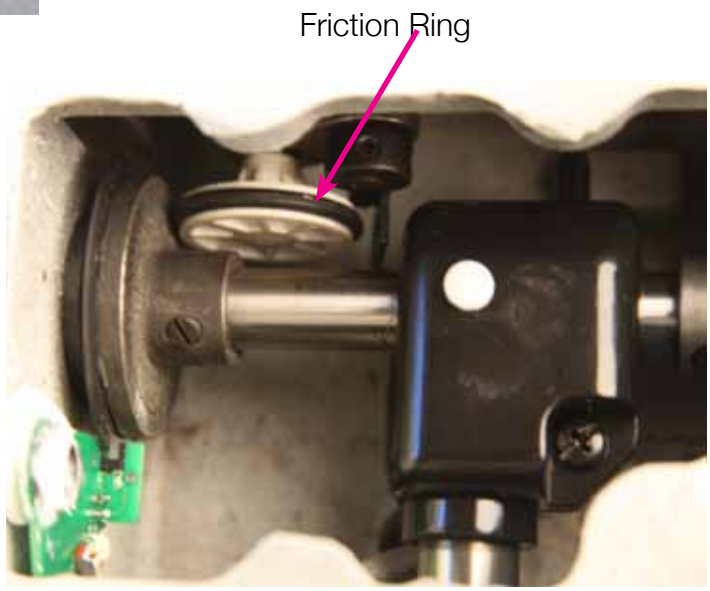


Figure 111

Setting up Optional Rear Handles using the DLS

The Digital LS Electronics consist of a main DLS controller (Shipped on the left handle) and a Thumb controller (shipped on the right handle). They are connected to each other using a RJ50 cable which is a short cable. They are connected to the main controller with a long RJ50 cable. Both cables are included with the set.

(Note: front and rear DLS controllers must have the small switch located in fig 3 moved to the off position.)

Figure 112

Figure 113

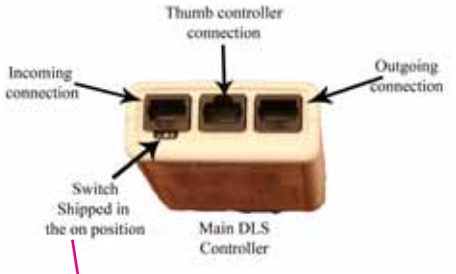


Figure 114

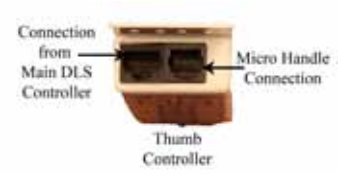


Figure 115

In figure 112 the main DLS controller there are three (3) connections points which two (2) of these are used when you only have the one handle connected. In Figure 113 the thumb controller has two (2) connection points. we will be using the let connection only. Figure 114 and 115 are for reference only.

Connecting the rear handle bar electronics

The Rear controller will use the three (3) connections.
The left connection (when looking at the LCD screen) will have a short RJ50 cable connected to it and then connected to the machine
The middle connector will also have a short RJ50 cable connected to it and then connected to the Left connector on the thumb control.
The Right connector on the LCD will have a long RJ50 cable connected to it and then connected to the left connector on the front handle bars.

Using a controller

If both controllers show inactive simply touch one of the buttons on the controller you want to use.

This will activate the controller so that you can use it. If you are done or you can not get control of the machine from the controller you want to use then you will need to check to see if the other controller is in the inactive state.

To Deactivate the DLS controller follow these steps.

Step 1. Press and release the menu button
Step 2. Use the "-" button to move the cursor down to deactivate
Step 3. Press and release enter.
The DLS controller is now inactive. See figure 116

Figure 116

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