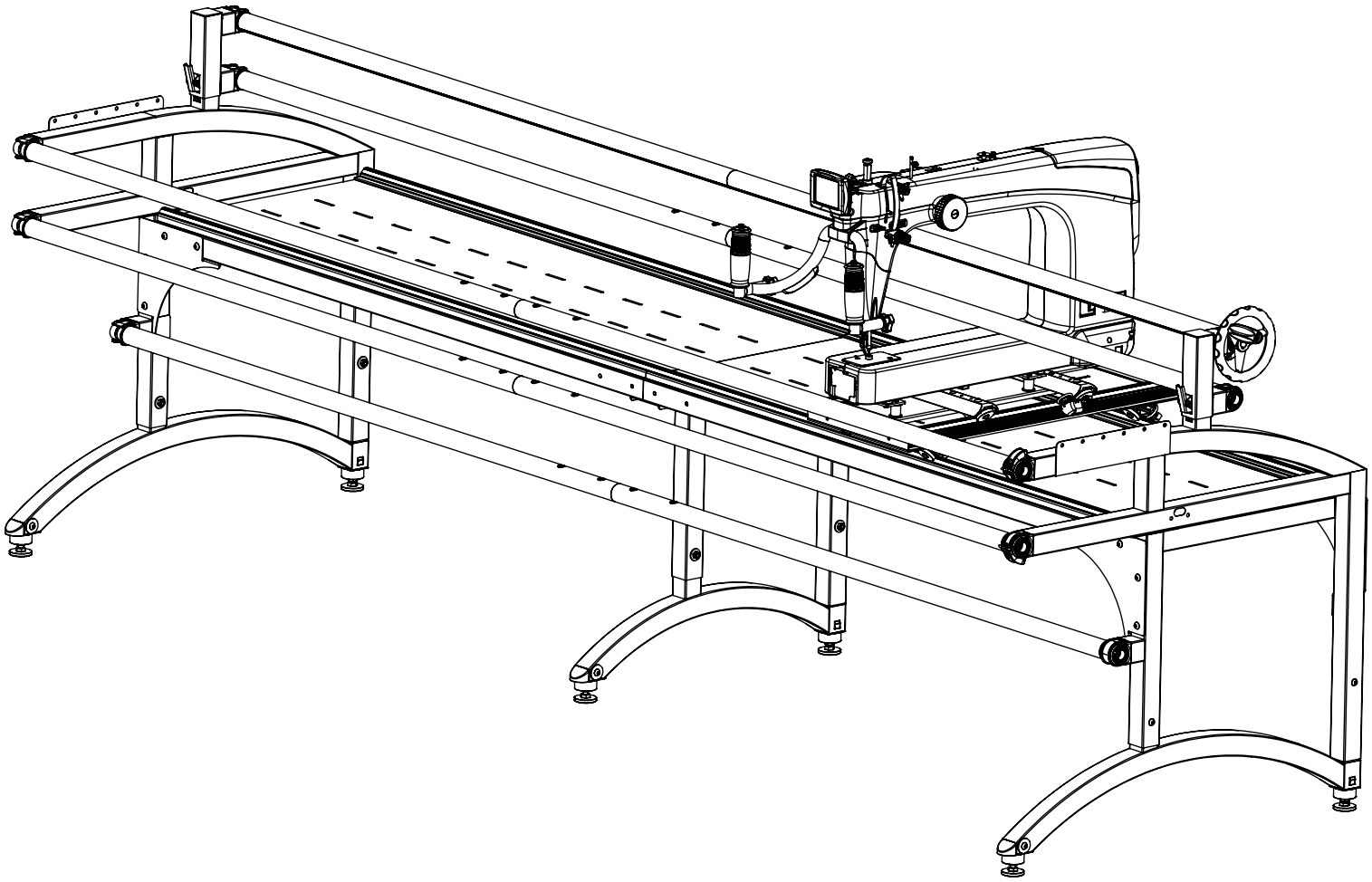
Juki Quilting Frame

Assembly and Use Instruction Manual



Max Overall Dimensions:

	Length	
Crib:	63 1/4"	Tall: 45 3/4" - 51 3/4"
King:	128 1/4"	Wide: 42"

Version 9.6

Contents

SAFETY INSTRUCTIONS

Read all instructions before using.
When using this machine, basic safety precautions should always be taken, including the following:

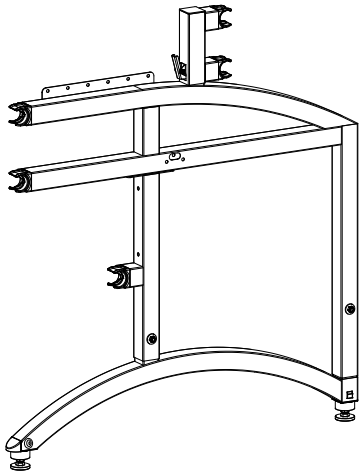
DANGER - To reduce the risk of electric shock:
• A quilting machine should never be left unattended when plugged in. Always unplug the machine from the electrical outlet immediately after using and before cleaning.

WARNING -

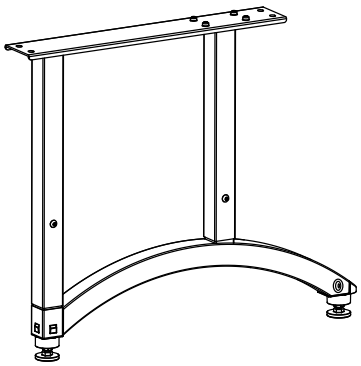
• Never operate this system if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged. Return the system to the nearest authorized dealer for repair or adjustment.
• Keep fingers away from all moving parts.
• To disconnect, always turn the power button to the off position before unplugging any cables.
• Keep the machine and frame free from the accumulation of lint, dust, and loose cloth.
• Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
• To reduce risk of injury have 2 people assemble the frame.

Parts List

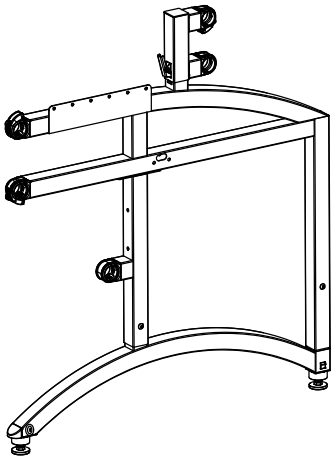
Box 1 Contents



Left Frame End (1)

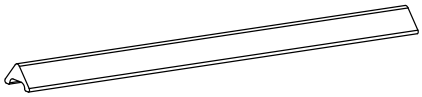


Middle Leg (1)

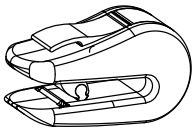


Right Frame End (1)

Hardware Box (Inside Box 1)

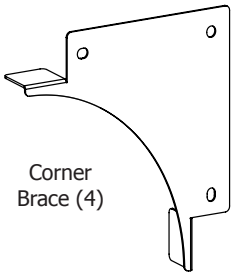


Track Support Coupler (2)



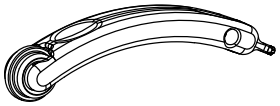
Bungee Clamp (4)

Bungee Lock (4)



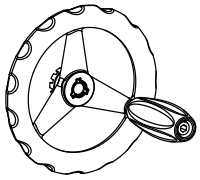
Corner Brace (4)

Wrench 13mm and 10mm (1)



Fabri-Fast Tool (1)

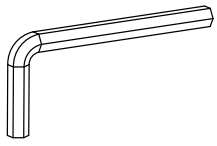
M10 Washer (1)



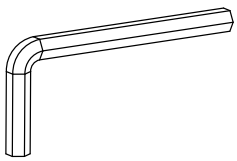
Handwheel (1)

3mm Allen Wrench (1)

4mm Allen Wrench (1)



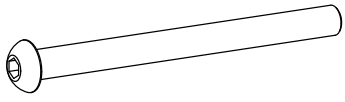
5mm Allen Wrench (1)



6mm Allen Wrench (1)

M8 x 16mm SBHCS (30)

M6 x 15mm Connector Bolt (16)

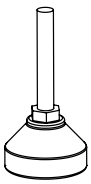


M10 x 120mm SBHCS (1)

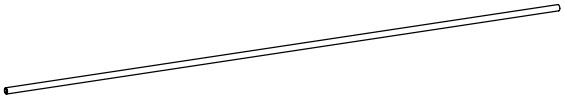
M6 x 10mm Set Screw (8)

Zip Tie (3)

Tie Mount (3)



Rubber Stopper (1)



Fabri-Fast Tubing (4)

Box 2 Contents

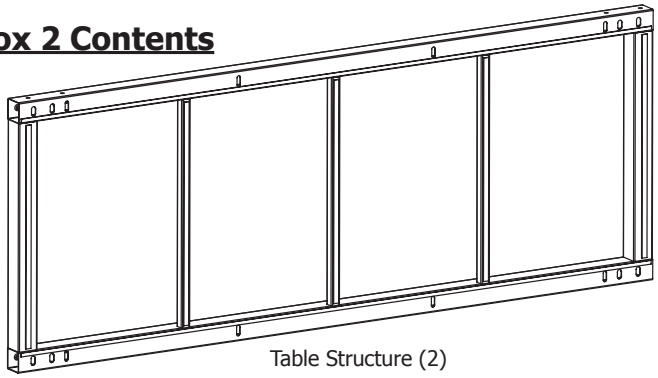


Table Structure (2)

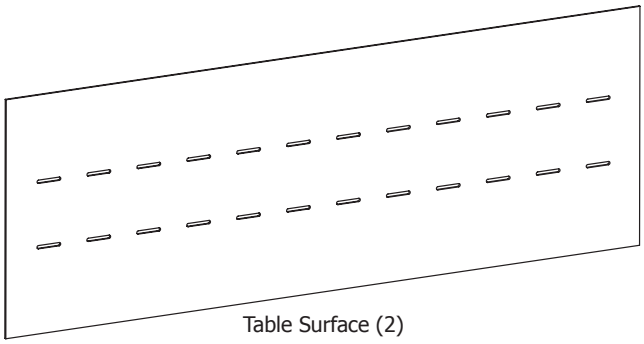
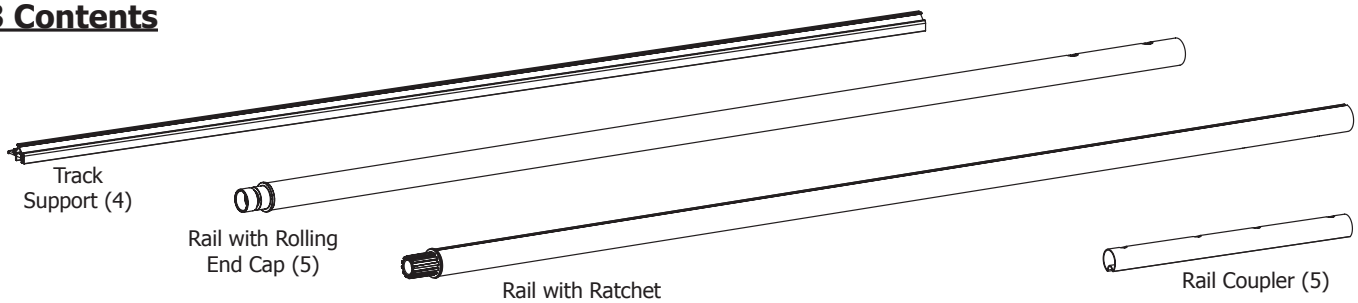


Table Surface (2)

10 ft Plastic Track (4)

5 ft Plastic Track (4)

Box 3 Contents



Track Support (4)

Rail with Rolling End Cap (5)

Rail with Ratchet End Cap (5)

Rail Coupler (5)

Box 4 Contents

M4 x 16mm SBHCS (1)

M3 x 16mm SBHCS (1)

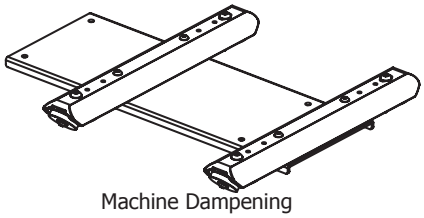
M6 x 10mm SBHCS (3)

M6 Lock Washer (4)

M6 Jam Nut (8)

M6 Washer (4)

Rubber Dampener (4)



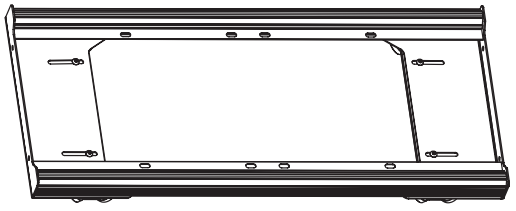
Machine Dampening Plate (1)

5mm Allen Wrench (1)

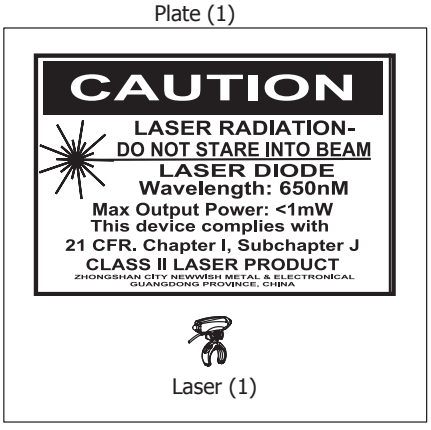
4mm Allen Wrench (1)

Top Encoder (Black Spring) (1)

Bottom Encoder (Silver Spring) (1)



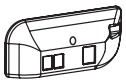
Bottom Plate (1)



Laser (1)

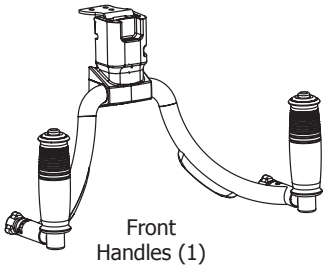
2.5mm Allen Wrench (1)

2mm Allen Wrench (1)

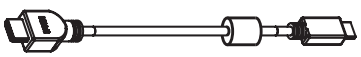


Sure Stitch (1)

LCD (1)



Front Handles (1)



HDMI cable (1)

Short Upper Encoder Cable (1)

Long Lower Encoder Cable (1)

Frame Assembly

Step 1: Corner Brace Assembly

Parts Needed:

- 1- Left Frame End
- 1- Right Frame End
- 1- Middle Leg
- 4- Corner Brace
- 8- M8 x 16mm SBHCS

Tools Required:

- 4mm Allen Wrench
- 5mm Allen Wrench
- Wrench 13mm and 10mm

Height of Fabric Chart

Top Hole:	40"	
6th Hole:	39"	↑ Taller
5th Hole:	38"	
4th Hole:	37"	→ (For People between 5' 4" and 5' 8")
3rd Hole:	36"	
2nd Hole:	35"	↓ Shorter
1st Hole:	34"	

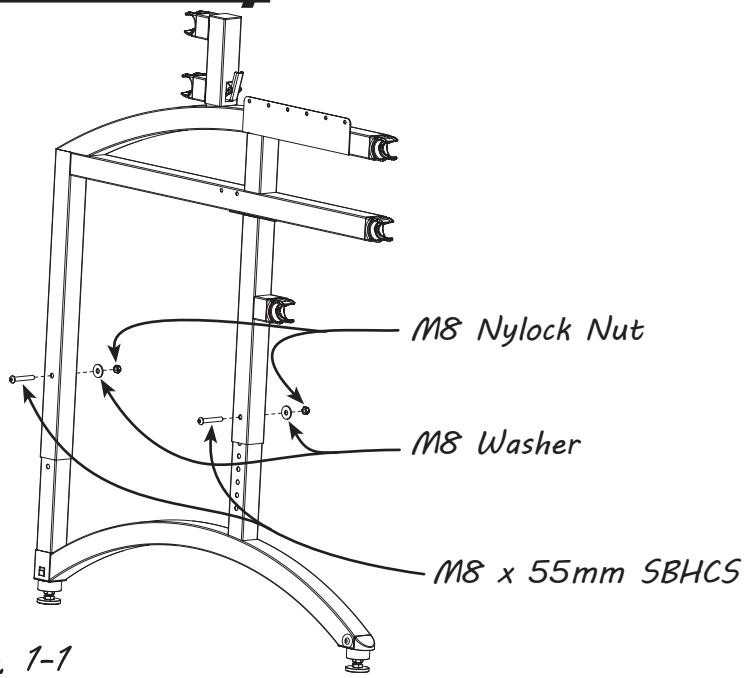


Fig. 1-1

1-1: Start by adjusting the height of the Legs on the Left and Right Frame Ends.

Note: Use the Height of Fabric Chart to determine which height will be the most comfortable for you while stitching your quilt. As a starting guide, we recommend starting at the 4th hole for people between 5' 4" and 5' 8". If you're taller, you may want to use a higher hole. If you're shorter, you may want to use a lower hole.

1-2: Remove the M8 x 55mm SBHCS from the Frame Ends as shown in Fig. 1-1 using the provided 4mm Allen Wrench, and the Wrench 13mm and 10mm. Now adjust the Legs to the height which you determined using the Height of Fabric Chart. Re-secure the Hardware, but don't over tighten the Nylock Nut, as it is possible to deform the Legs if over tightened.

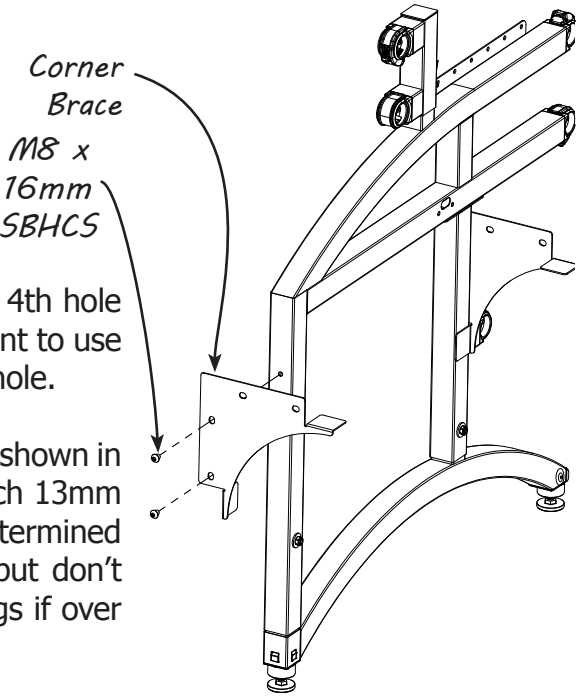


Fig. 1-2

1-3: Adjust the height of the middle leg by setting them at the same hole as you set the Frame End's Legs. It will be necessary to count the hole position as you slide the upper part of the leg up from the lowest hole upward to make sure the middle leg is set to the same height as the Frame Ends.

1-4: Next, attach the Corner Braces to the Frame Ends as shown in Fig. 1-2. Use the 5mm Allen Wrench to tighten the M8 x 16mm SBHCS Screws, by inserting the short end of the Allen Wrench into the Screw, and turn while holding the long end of the Allen Wrench. This will help you to adequately tighten the Screws while requiring less force, compared to holding the Allen Wrench by it's short end.

Step 2: King Table to Frame Ends

Parts Needed:

- 1- Left Frame End
- 1- Right Frame End
- 1- Middle Legs
- 2- Table Structure
- 12- M8 x 16mm SBHCS

Tools Required:

- 5mm Allen Wrench

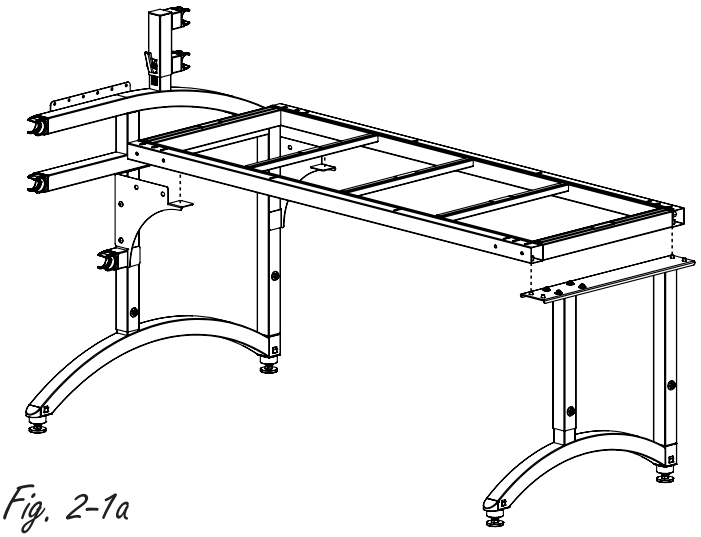


Fig. 2-1a

2-1: Set the table structure on top of the brackets and middle legs as shown Fig. 2-1a. It is advised that a second person hold one end for stability. Secure each table structure to both of the Frame Ends using M8 x 16mm SBHCS Screws, and the 5mm Allen Wrench (Fig. 2-2a and Fig. 2-2b).

2-2: Use the 5mm Allen Wrench to fasten the Middle Legs to the middle of the Frame using M8 x 16mm SBHCS Screws (Fig. 2-2c).

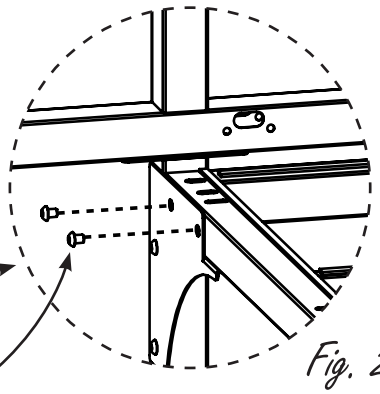


Fig. 2-2b

M8 x 16mm SBHCS

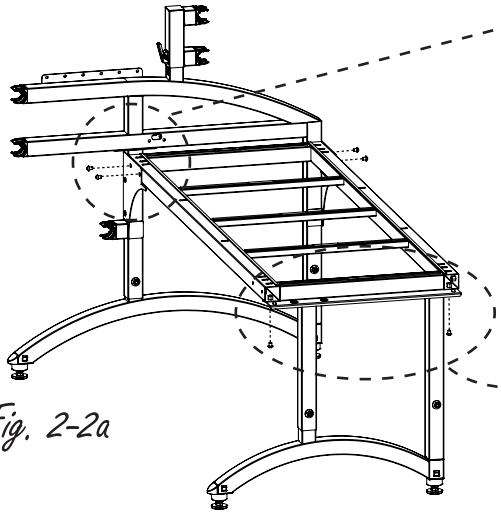


Fig. 2-2a

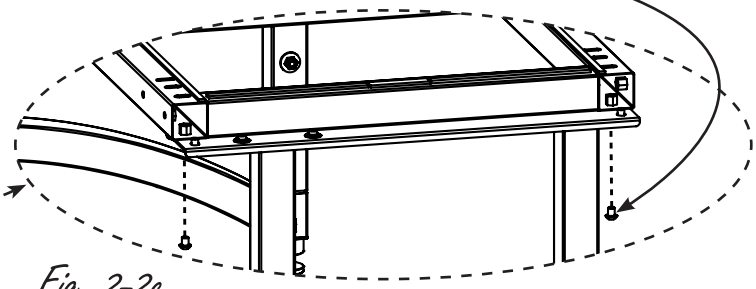


Fig. 2-2c

2-3: Repeat step 2-1 and 2-2 for the right side of the table structure.

Note: Tighten each Screw a little at a time, alternating screws. When all of the screws are tight, the top surfaces of both Table Structure's should be even with each other.

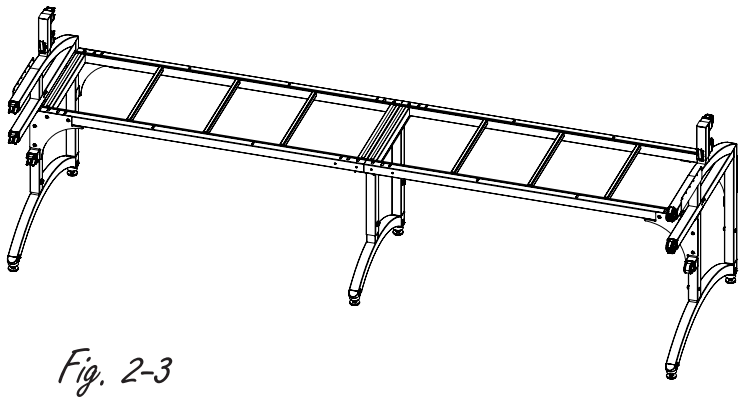


Fig. 2-3

Note: Perform the steps titled crib only if you are setting your frame up in crib size.

Crib Table to Frame Ends

Parts Needed:
- 1- Left Frame End
- 1- Right Frame End
- 1- Table Structure
- 8- M8 x 16mm SBHCS

Tools Required:
- 5mm Allen Wrench

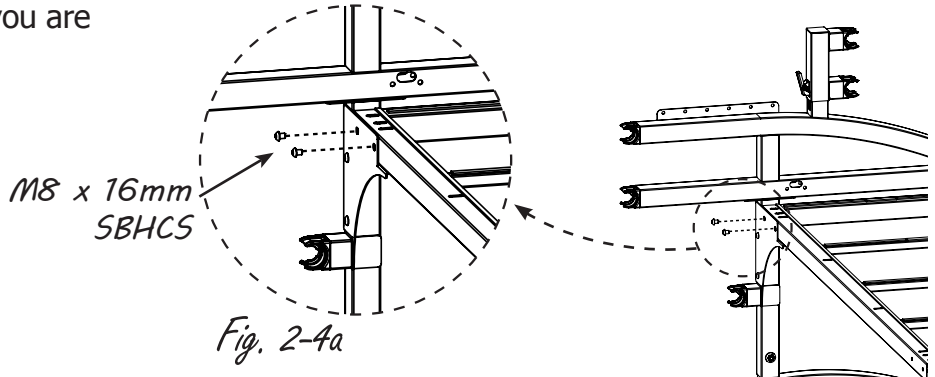


Fig. 2-4a

Fig. 2-4b

2-1-C: Secure the table structure to both of the Frame Ends using M8 x 16mm SBHCS Screws, and the 5mm Allen Wrench (Fig. 2-4a and Fig. 2-4b).

2-2-C: Repeat for the right frame end (Fig. 2-5).

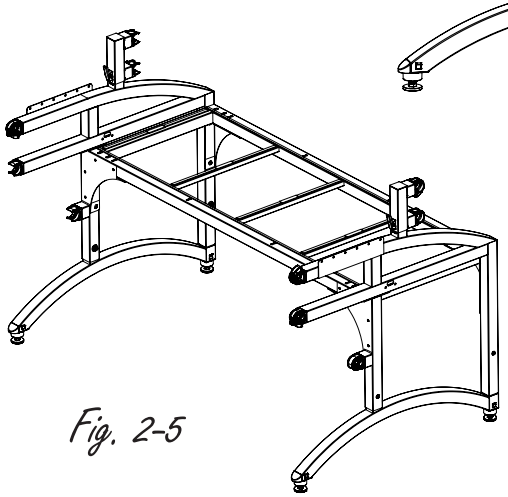


Fig. 2-5

Step 3: King Table Surface

Parts Needed:
- 2- Table Surface
- 4- 10 Foot Plastic Track
- 4- Track Support
- 2- Track Support Coupler
- 8- M6 x 10mm Set Screw
- 16- M6 x 15mm Connector Bolt

Tools Required:
- 3mm Allen Wrench

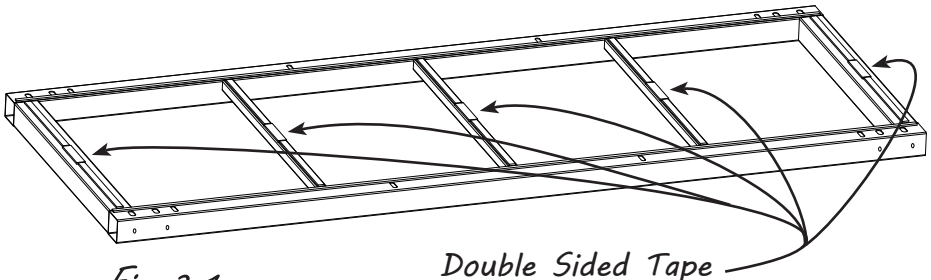


Fig. 3-1

3-1: Before placing the Table Surface onto the Table Structure remove the backing from the Double Sided Tape, located in the center of the Table Structures (Fig. 3-1).

3-2: Place the Table Surface panels onto the Table Structure. Center the Table Surface, so that there is an even amount of the Table Structure showing on both sides (Fig 3-2).

3-3: Insert a Track Support Coupler into the end of a Track Support, so approximately half of the Coupler is exposed (Fig 3-3).

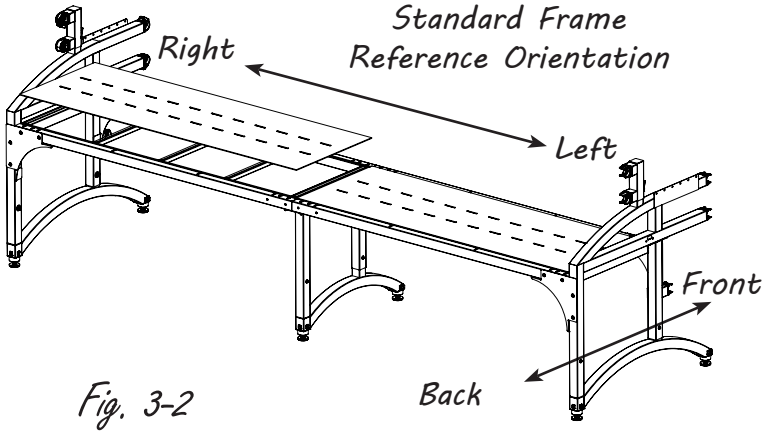


Fig. 3-2

3-4: Secure the Track Support Coupler into the Track Support using the 3mm Allen Wrench, and (2) M6 x 10mm Set Screws.

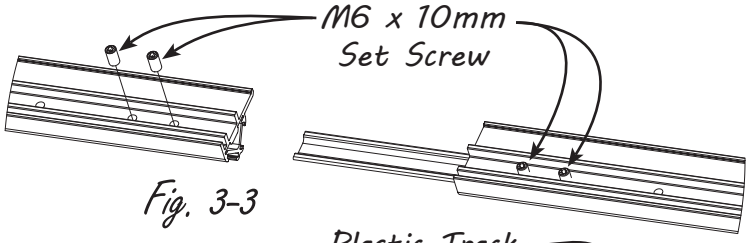


Fig. 3-3

3-5: Insert the exposed end of the Track Support Coupler into the end of an unused Track Support.

3-6: Secure the Track Support Coupler to the Track Support using (2) M6 x 10mm Set Screws, and tighten with the 3mm Allen Wrench. Make sure that the surfaces of the Track Supports are aligned with each other, and that there is no gap between them. Build the Remaining Track Support as done in steps 3-2 to 3-5.

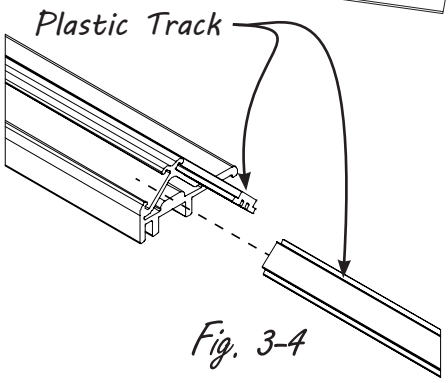


Fig. 3-4

3-7: Insert a piece of 10 Foot Plastic Track into each of the Track Slots, in each of the Track Supports. (Install 2 full length pieces of Track into each assembled Track Support, as shown in Fig. 3-4.)

3-8: Align (1) Track Support to the back of the Table Structure so that it is flush and so that the Track support overlaps over the table surface as shown in Fig. 3-5. Partially secure it using the (8) M6 x 15mm Connector Bolt from underneath the table structure as shown in Fig. 3-6. After all of the Bolts have been inserted, verify the track is straight and flush with the Table Structure and securely tighten all Bolts.

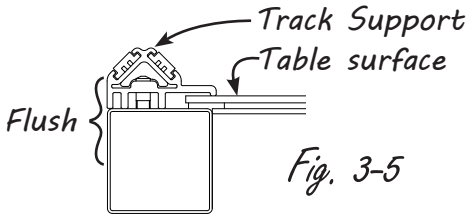


Fig. 3-5

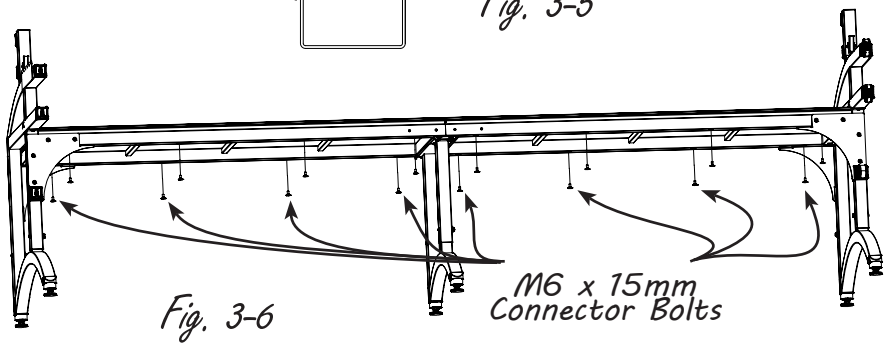


Fig. 3-6

3-9: Now attach a Track Support to the front of the Table Structure, but this time leave the Bolts a turn loose. You will adjust and secure the width of this Track Support in step 11.

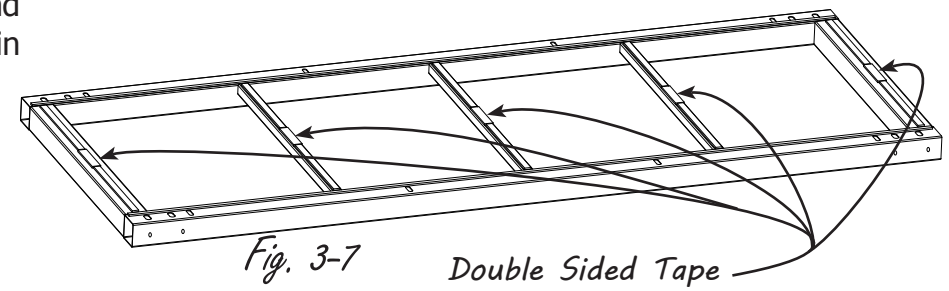


Fig. 3-7

Crib Table Surface

Parts Needed:

- 1- Table Surface
- 4- 5 Foot Plastic Track
- 4- Track Support
- 8- M6 x 15mm Connector Bolt

Tools Required:

- 4mm Allen Wrench

3-1-C: Before placing the Table Surface onto the Table Structure remove the backing from the Double Sided Tape, located in the center of the Table Structures (Fig. 3-7).

3-2-C: Place the Table Surface panel onto the Table Structure. Center the Table Surface, so that there is an even amount of the Table Structure showing on both sides.

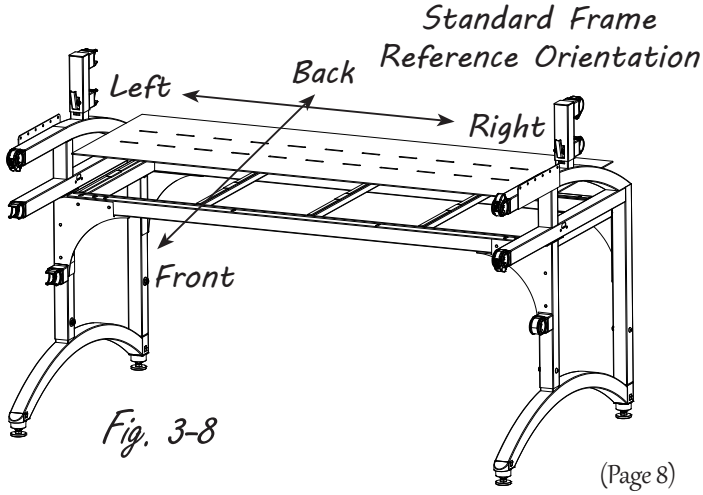


Fig. 3-8

3-3-C: Insert a piece of 5 Foot Plastic Track into each of the Track Slots, in each of the Track Supports. (Install two 5 foot full length pieces of Track into each Track Support, as shown in Fig. 3-9.)

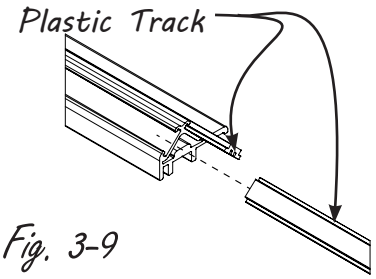


Fig. 3-9

3-4-C: Align a Track Support Flush to the back of the Table Structure. Partially secure the (8) M6 x 15mm Connector Bolts. After all of the Bolts have been inserted, verify the track is straight and Flush to the back of the Table Structure and securely tighten all Bolts (Fig. 3-10).

3-5-C: Now attach a Track Support to the front of the Table Structure, but this time leave the Bolts a turn loose (Fig. 3-10). You will adjust and secure the width of this Track Support in step 11.

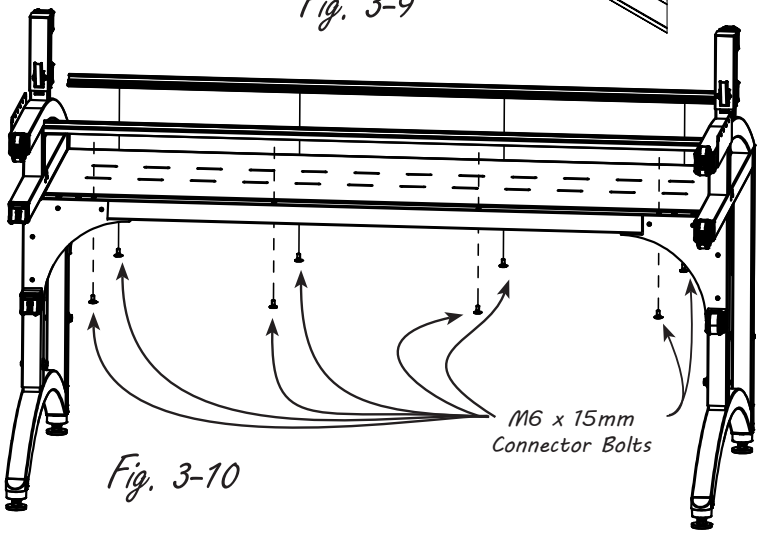


Fig. 3-10

Step 4: King Rail-Assembly

Parts Needed:
5- Rail with Ratchet End Cap
5- Rail with Rolling End Cap
5- Rail Coupler

Tools Required:
3mm Allen Wrench

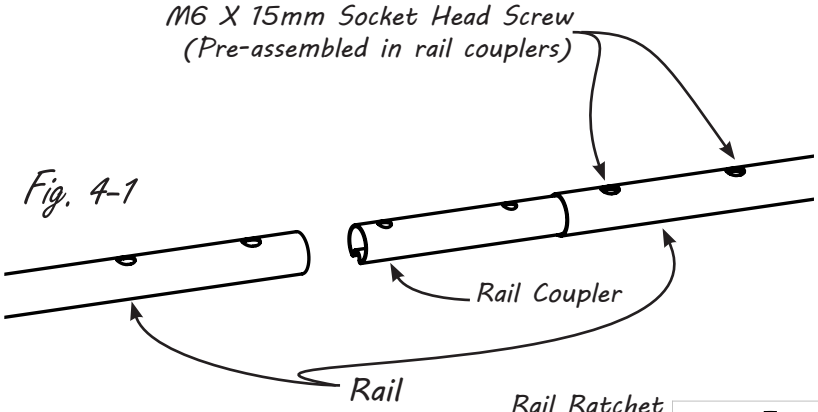


Fig. 4-1

4-1: Slide a Rail Coupler into a Rail with Ratchet End Cap. Align the holes on the Rail with the holes in the Rail Coupler. Tighten the (2) pre-installed M6 X 15mm Socket Head Screws using the 4mm Allen Wrench. (Locations shown in Fig. 4-1.)

4-2: Now, slide a rail with Rolling End Cap onto the exposed end of the Rail Coupler. Align the holes, then tighten the Socket Head Screws using the 3mm Allen Wrench, as done in Step 4-1.

4-3: Repeat Steps 4-1 and 4-2 to build the remaining 4 Rails.

Note: Put the assembled Rails on the floor in front of the Quilting Fame, with the Ratchets to the right end. You will install the Rails after you place your Sewing Machine onto the Quilting Frame in Step 10.

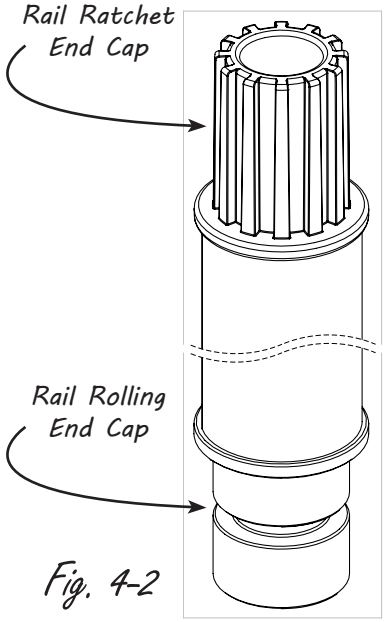


Fig. 4-2

Crib Rail-Assembly

Parts Needed:
5- Rail with Ratchet End Cap
5- Rail with Rolling End Cap

Tools Required:
6mm Allen Wrench

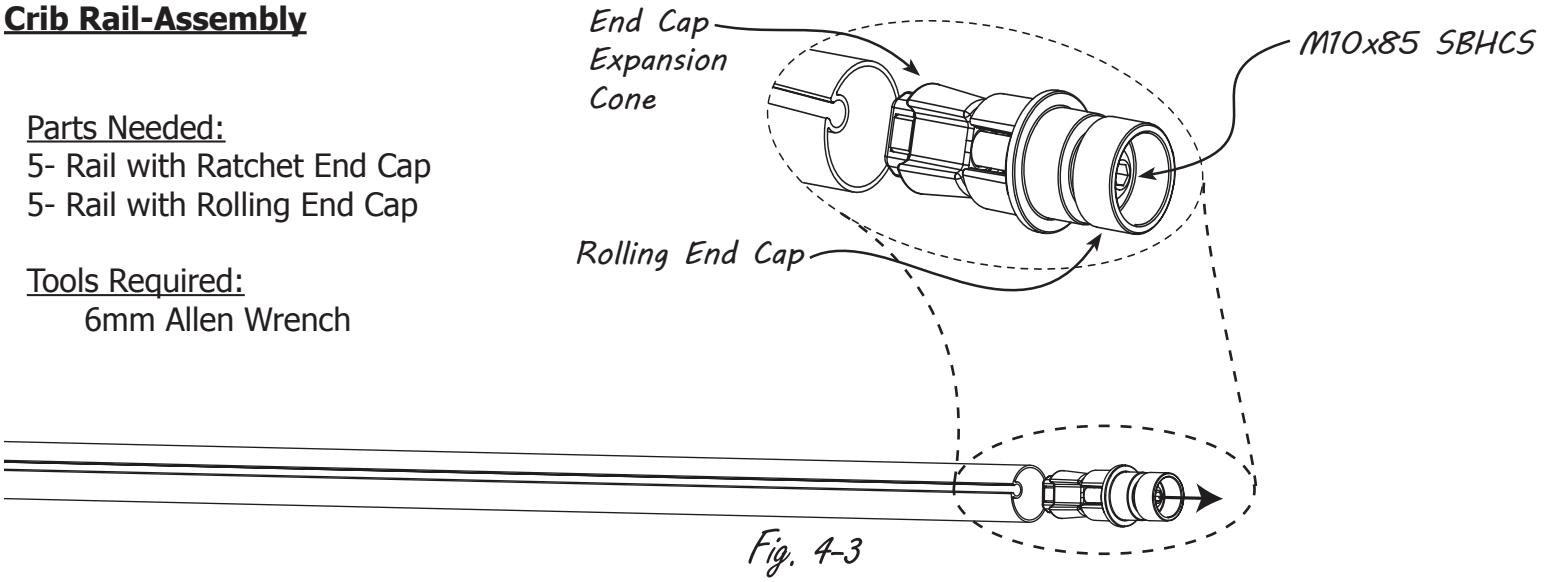


Fig. 4-3

4-1-C: Using the 6mm Allen Wrench, loosen the M10 x 85mm SBHCS in the Rolling End Cap, but do not completely unthread it. Loosen the bolt until it protrudes just beyond the Rolling End Cap. Hold the rail vertically with the rolling end cap down and tap the protruding bolt head on the floor. This will free the compressed end cap from the rail. Then remove the Rolling End Cap from the rail (Fig. 4-3).

4-2-C: Now, slide the Rolling End Cap into the exposed end of a Rail with Ratchet End Cap. Press the Rolling End Cap into the rail until it is flush with the end of the rail.

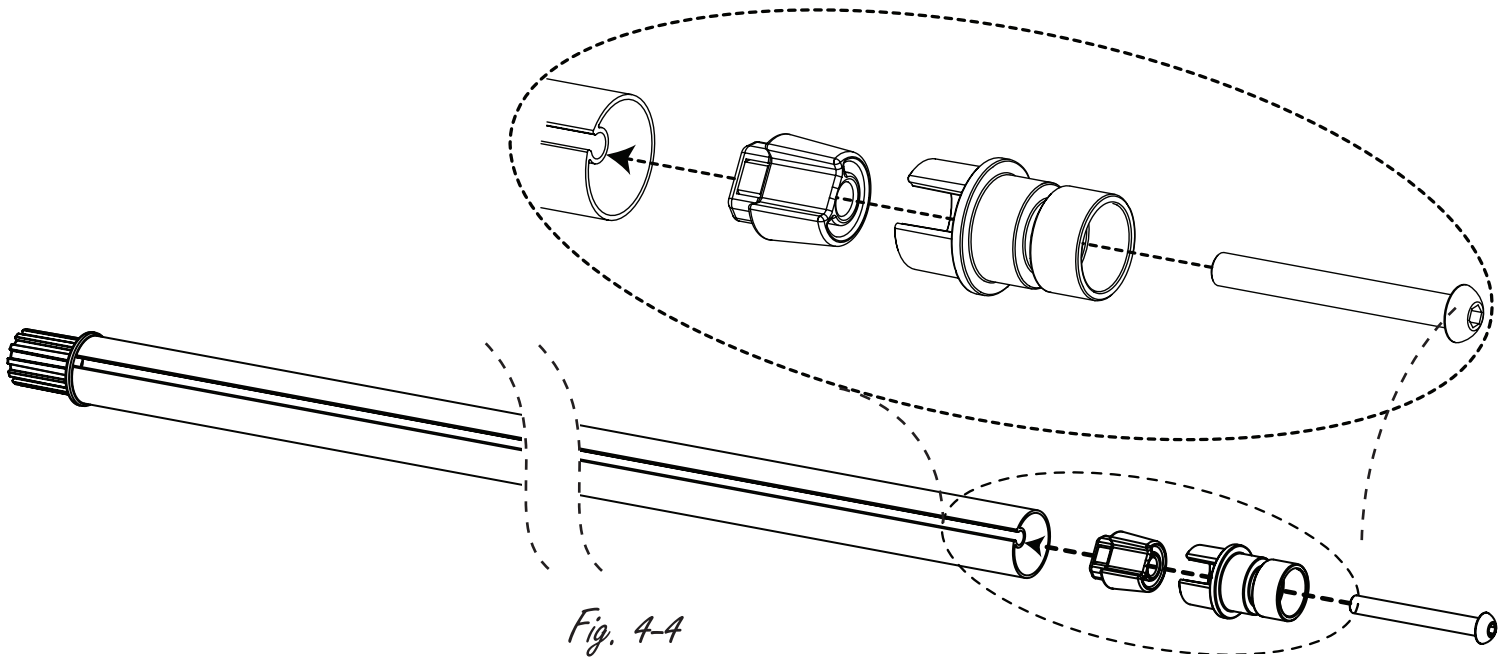


Fig. 4-4

4-3-C: Using the 6mm Allen Wrench tighten the M10 x 85mm SBHCS completely.

4-4-C: Repeat Steps 4-3 and 4-4 to build the remaining 4 Rails.

Note: Put the assembled Rails on the floor in front of the Quilting Fame, with the Ratchets to the right end. You will install the Rails after you place your Sewing Machine onto the Quilting Frame in Step 12.

Sewing Machine Prep

Step 5: Dampening Plate and Wheels

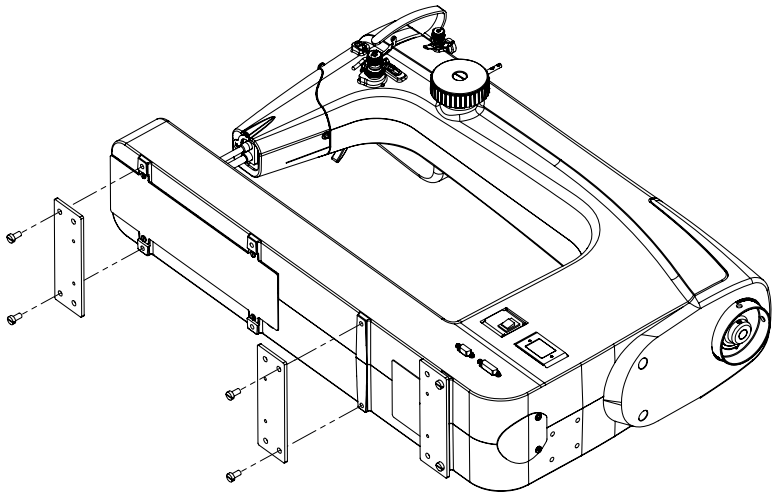


Fig. 5-1

Parts Needed:
1- Juki Quilt Virtuoso Pro
2- Sewing Machine Wheels
4- M6 Lock Washer (4)
5- M6 Washer (4)
6- M6 Jam Nut (8)
7- Machine Dampening Plate (1)
8- Rubber Dampener (4)

Tools Required:
1- 10mm Wrench
1- 5mm Allen Wrench

5-1: Using a 5mm Allen Wrench, remove the 2 screws from each of the 2 Mounting Plates from each end of the bottom of the Juki Machine as shown in Fig. 5-1.

5-2: Insert the short end of (2) Rubber Dampeners into the holes of each previously removed Mounting Plate as shown in Fig. 5-2. Tighten (1) M6 Jam Nuts onto the end of each bolt using the 10mm Wrench.

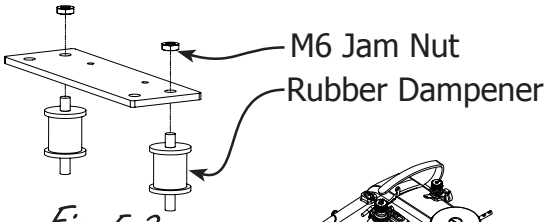


Fig. 5-2

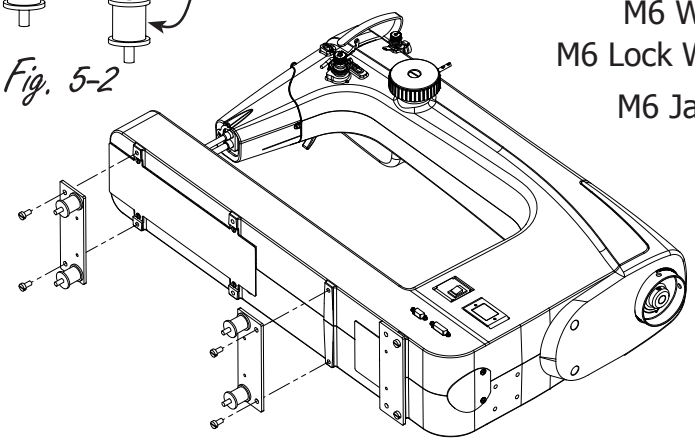


Fig. 5-3

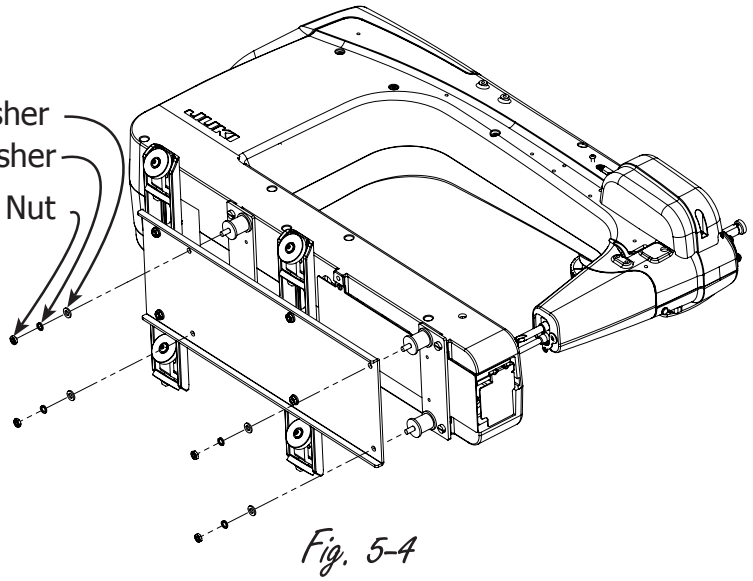


Fig. 5-4

5-3: Re-install the 2 Mounting plates using a 5mm Allen Wrench. Be sure that the Rubber Dampener side of each plate is pointing towards the middle of the machine as show in Fig. 5-3.

5-4: Attach the Machine Dampening Plate and Wheels to your Juki Quilt Virtuoso Pro by inserting the threaded rods of the Rubber Dampeners into the holes on the Dampening Plate as shown in Fig. 5-4. Slide (1) M6 Washers, (1) M6 Lock Washers, and (1) M6 Jam Nuts over each threaded rod and tighten using the M10 Wrench.

Step 6: Sure Stitch

Parts Needed:
- 1- Juki Quilt Virtuoso Pro
- 1- Sure-Stitch
- 1- M3 x 16mm SBHCS

Tools Needed:
- 2mm Allen Wrench

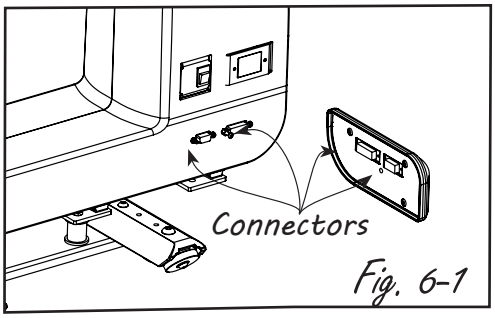


Fig. 6-1

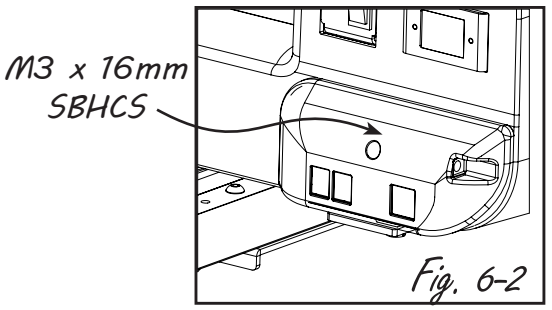


Fig. 6-2

6-1: Align the Connectors on the Sure-Stitch with the Connectors located at the back of your Sewing Machine and press firmly to join the two items.

6-2: Attach the Sure-Stitch and Juki Quilt Virtuoso Pro with a M3 x 16mm SBHCS.

Step 7: Front Handles

Parts Needed:
- 1- Juki Quilt Virtuoso Pro
- 1- Front Handles
- 3- M6 x 10mm SBHCS
- 1- M4 x 16mm SBHCS
- 1- Ziptie Cable Mount and Ziptie

Tools Needed:
- Phillips Screwdriver (not provided)
- 2.5mm Allen Wrench
- 4mm Allen Wrench

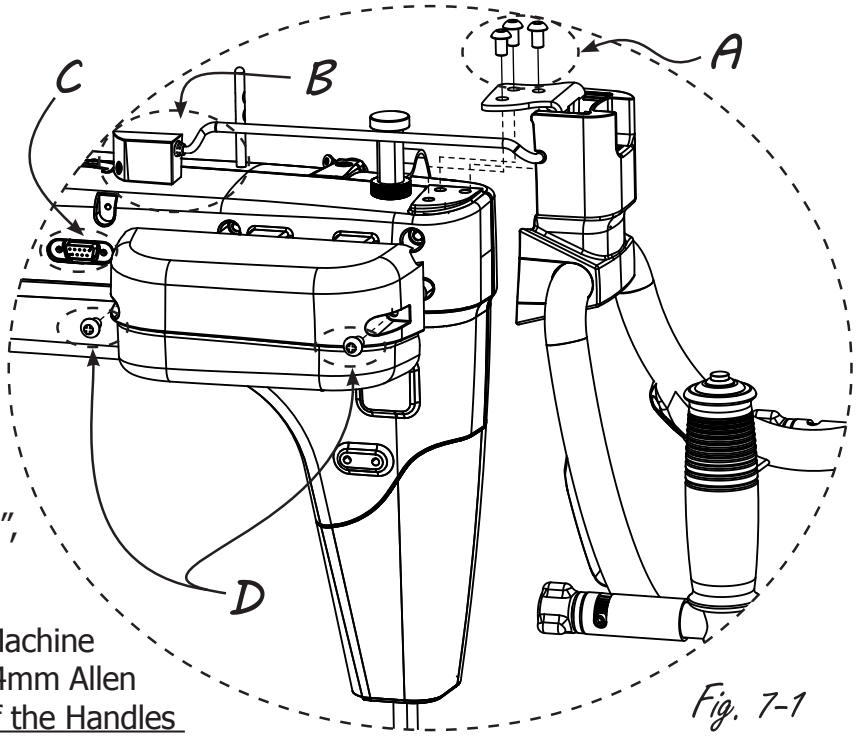


Fig. 7-1

7-1: Remove the Hopping Foot Mechanism Guard, by removing the Screws indicated with "D", using a Phillips Screw Driver.

7-2: Secure the Front Handles to your Sewing Machine using (3) M6 x 10mm SBHCS (See "A"), and the 4mm Allen Wrench. Make sure that the Cable coming out of the Handles exits the Notch in the left side of the Handlebar Housing.

7-3: Align the Cable Connector "B" with the Connector in your Sewing Machine "C" and press firmly to connect the handles to the machine. Use a M4 x 16mm SBHCS to fasten Cable Connect "B" to the Juki Quilt Virtuoso Pro as shown in Fig. 7-2.

7-4: Place a Ziptie Cable Mount to the body of the machine inside the 2 lever arm supports as shown in Fig. 7-2. Secure the cable with a ziptie and trim off the end with scissors.

7-5: Guide the Cable through the 2 Notches near the top of the Hopping Foot Mechanism Guard, then re-attach the Guard to your Sewing Machine.

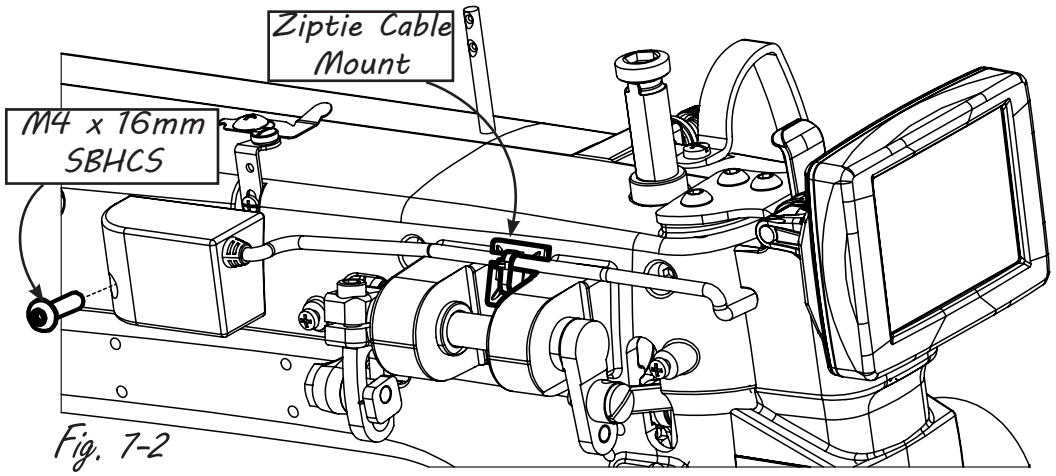


Fig. 7-2

Step 8: LCD

Parts Needed:
- 1- LCD
- 2- Front Handles
- 3- HDMI cable

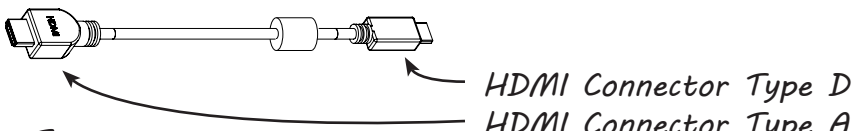


Fig. 8-1

8-1: Take the HDMI cable end (HDMI connector Type A see figure 8-1) and plug it into the front handles. Pass the cable through the LCD from the bottom (Fig. 8-2).

8-3: Clip the LCD into the front handles (Fig. 8-3).

8-2: Tilt the LCD Screen back ad plug the other HDMI cable end (HDMI connector Type D see figure 8-1) into the LCD (Fig. 8-4).

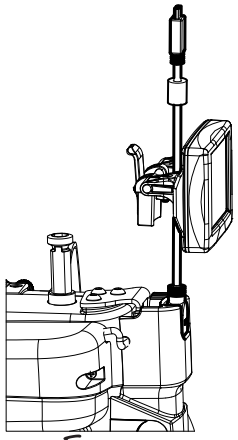


Fig. 8-2

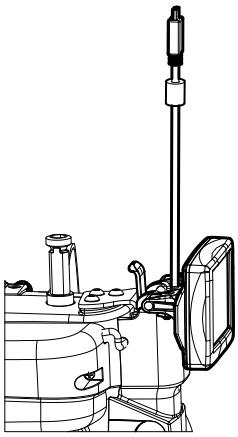


Fig. 8-3

Step 9: Encoders

Parts Needed:
- 1- Juki Quilt Virtuoso Pro
- 1- Top Encoder (Black Spring)
- 1- Bottom Encoder (Silver Spring)
- 1- Bottom Plate

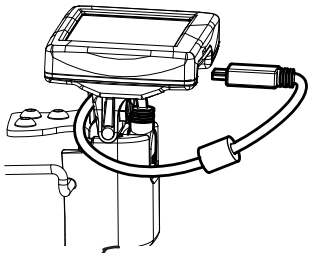
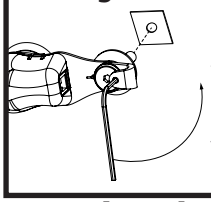


Fig. 8-4

Tools Needed:
- 4mm Allen Wrench
- 2mm Allen Wrench

9-1: Before attaching the Encoders, use the 2mm Allen Wrench to loosen the Set Screw in each of the Lock Collars, so that the Encoder Wheel Bolt can turn freely. Remove the paper holding the washer and spacer onto the bolt.


*Always hold the encoder with the bolt end up to prevent the spacers from falling off.

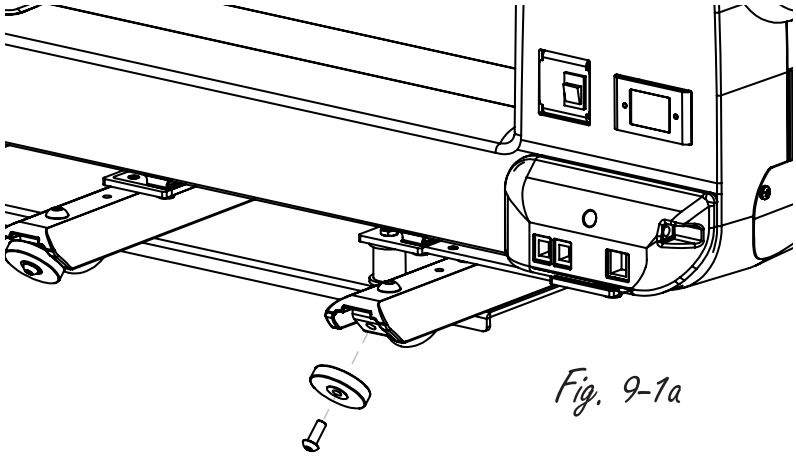


Fig. 9-1a

9-2: (Sewing Machine)
Use the 4mm Allen Wrench to remove the M6 x 16mm SBHCS Screw from the outer, right, rear wheel, in the sewing machine. (See Fig 9-1a)

9-3: Put the Wheel, which you just removed, onto the Top Encoder (Black Spring) Wheel Bolt, with the Flanged Hub Facing out.

9-4: Hold the Top Encoder upright to prevent the spacers from falling off and use the 4mm Allen Wrench to fasten the Top Encoder Wheel Bolt into the hole made available in Step 9-1.

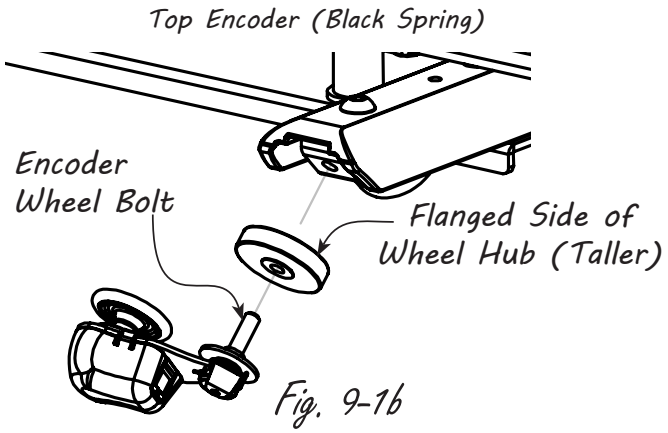


Fig. 9-1b

9-5: (Bottom Plate)
Use the 4mm Allen Wrench to remove the M6 x 16mm SBHCS Screw from the outer, right, rear wheel, in the Bottom Plate (See Fig 9-2).

9-6: Put the Wheel, which you just removed, onto the Bottom Encoder (Silver Spring) Wheel Bolt with the Flanged Hub Facing out.

9-7: Hold the Top Encoder upright to prevent the spacers from falling off and use the 4mm Allen Wrench to fasten the Encoder Wheel Bolt into the hole made available in step 8-4.

9-8: Keep the Spare Bolts with your Quilting Frames' spare parts.

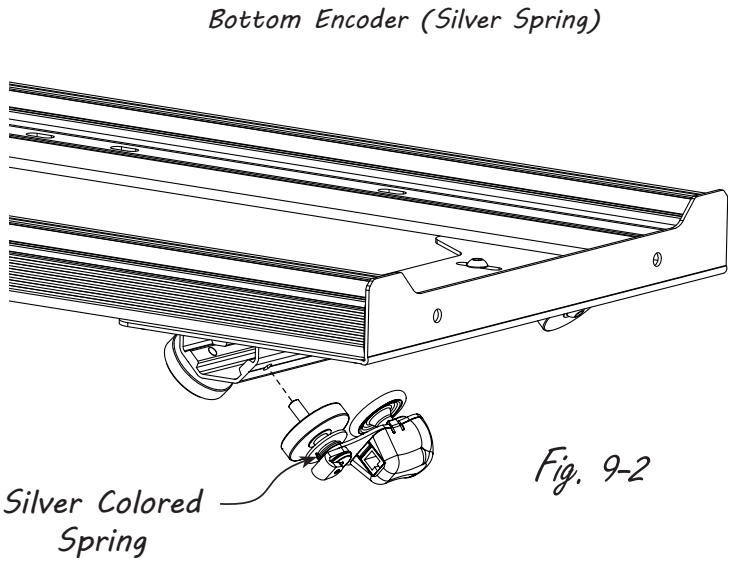


Fig. 9-2

Note: Leave the Encoder Set Screws loose. They will be tightened in Step 10.

Step 10: Sewing Machine Placement

Parts Needed:
- 1- Juki Quilt Virtuoso Pro
- 1- Short Encoder Cable
- 1- Long Encoder Cable
- 1- Tie Mount
- 1- Zip Tie
- 1- Rail

Tools Needed:
- 2mm Allen Wrench

10-1: Align the Wheels on the Bottom Plate with the Table Track, then place it onto the Quilting Frame, while holding the encoder so that it pivots toward the other set of wheels on the carriage as shown in Fig. 10-1.

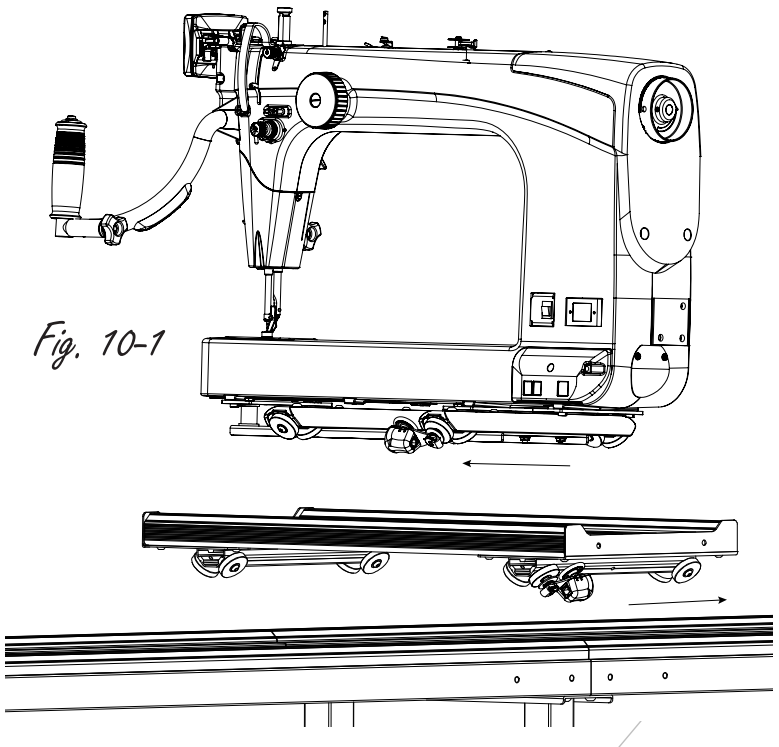


Fig. 10-1

10-2: Now, align the Wheels on the Sewing Machine with the Plastic Track on the Bottom Plate, while holding the encoder so that it pivots toward the front set of wheels of the sewing machine as shown in Fig. 10-1. (The Sewing Machine placed on Bottom Plate will commonly be called the Carriage throughout the remainder of this manual.)

10-3 Push the Lock Collar on each encoder up about 50 degrees or until you feel it adequate springing back and tighten the set screw using the 2mm Allen Wrench. (see Fig. 10-2)

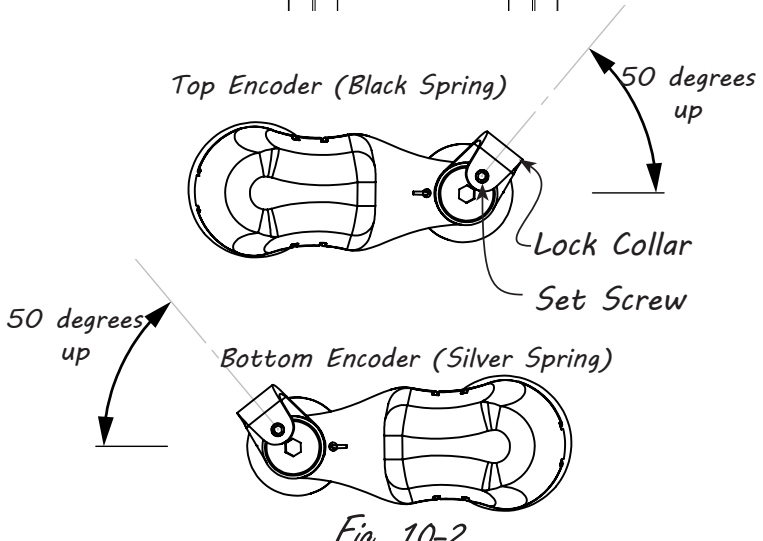


Fig. 10-2

10-4: (Idler Rail)
Roll the Sewing Machine to the far right end of the quilting frame. (As shown in Fig. 10-3)

10-5: Place the Ratchet End of a Rail through the Throat of your Sewing Machine, and into the Lower Ratchet Rail Holder. Push the other end of the Rail into the Lower Non-Ratchet Rail Holder, at the other end of the Quilting Frame. Push on the plastic rail end directly, it is designed to be a tight fit. (At this point your Sewing Machine is safe to leave unattended on your Quilting Frame.)

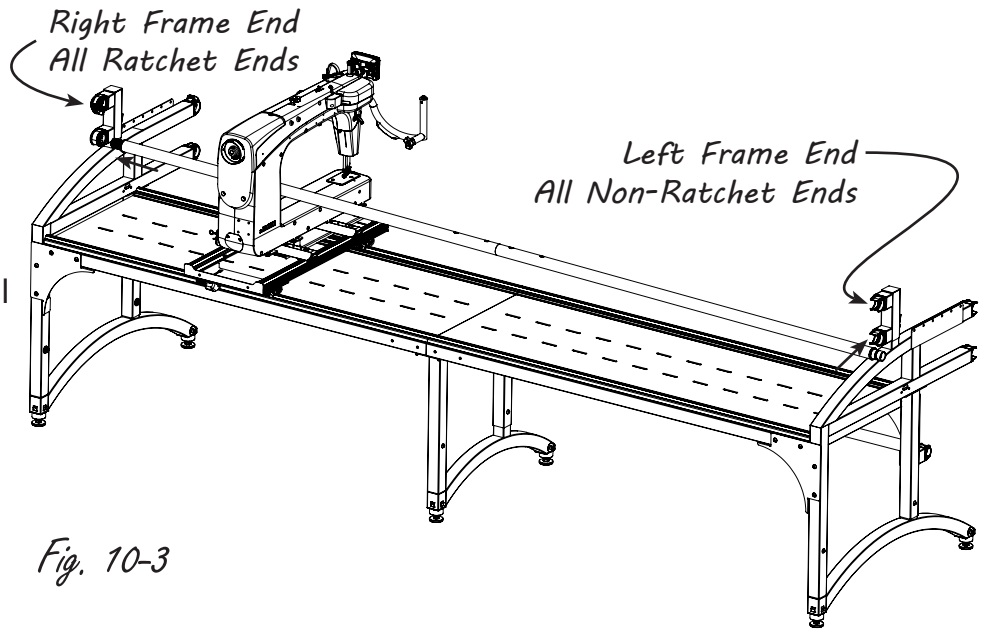


Fig. 10-3

10-6: To set the Top Encoder, twist the Lock Collar so that the Encoder Spring pushes the Encoder into the Plastic Track. Now, tighten the Set Screw to set the Encoder.

10-7: Plug the Short Encoder Cable into the forward most connector in the Sure Stitch. Plug the other end of this Cable into the Top Encoder.

10-8: Plug the Long Encoder Cable into the 2nd Connector in the Sure Stitch. Plug the other end of this Cable into the Bottom Encoder.

10-9: To prevent the Long Encoder Cable from interfering with Carriage movement, apply a Tie Mount to the back of the Carriage as shown in Fig. 10-4. Use a Zip Tie to secure the Long Encoder Cable vertically to the Tie Mount. Allow a small amount of extra Cable on the Encoder side of the Tie Mount before tightly securing the Cable with the Zip Tie. Trim the end of the Zip Tie using Utility Scissors.

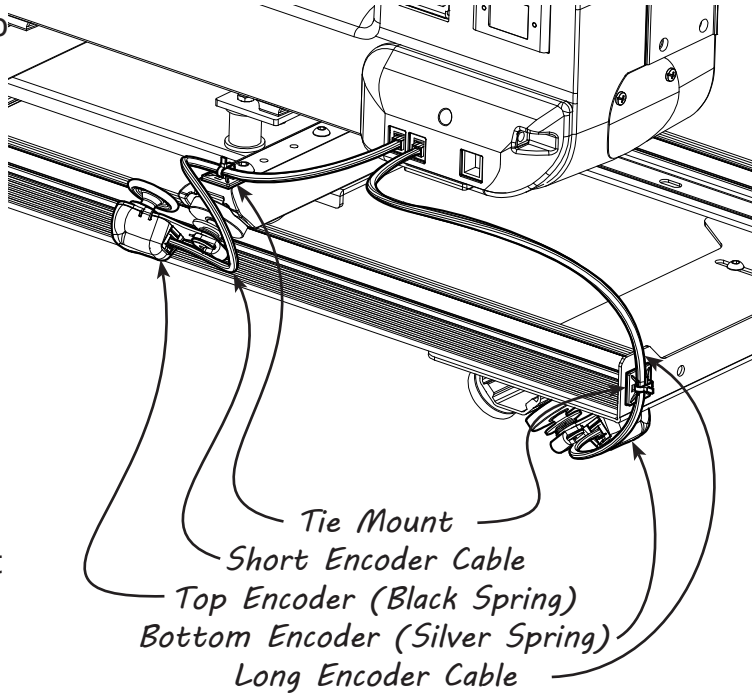


Fig. 10-4

10-10: To prevent the Short Encoder Cable from interfering with Carriage movement, apply a Tie Mount to the end of the Top plate extrusion and secure the short Encoder Cable using a zip tie as shown in Fig. 10-4. Allow a small amount of extra Cable on the Encoder side of the Tie Mount before tightly securing the Cable with the Zip Tie. Trim the end of the Zip Tie using Utility Scissors.

10-11: Test front to back Carriage travel to make sure that the Encoder Cables allow the full range of Carriage movement, as well as staying off of the Table Surface, and the Plastic Tracks. If the Cable drags at any point, use additional Tie Mounts and Zip Ties, if required, to keep the Cables in place.

Step 11: How to Adjust Track and Rails

Parts Needed:

4- Rails (Assembled is step 4)

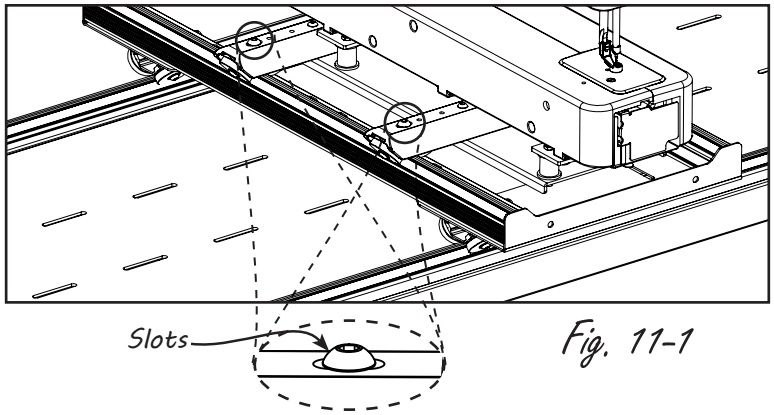


Fig. 11-1

11-1: Aligning Wheels to the Track (Fig 11-1). Using the 5mm Allen Wrench, loosen each of the bolts holding the wheels to the extrusions on the side of the sewing machine with the slots. Roll the machine slowly to the front and back of the carriage. Tighten the bolts again.

11-2: Align Front Track Slowly roll the Carriage from one end of the Quilting Frame to the other several times. This will adjust the Track so that it is centered under the Front Wheels and parallel to one another. Once adjusted, move the sewing machine to one end of the frame and using the 4mm Allen Wrench, tighten each of the (8) M6 x 12mm Connector Bolts as you roll the machine above each one.

11-3: Remaining Rails Install the 4 remaining rails, as done previously, into the remaining Rail locations (Fig 11-2).

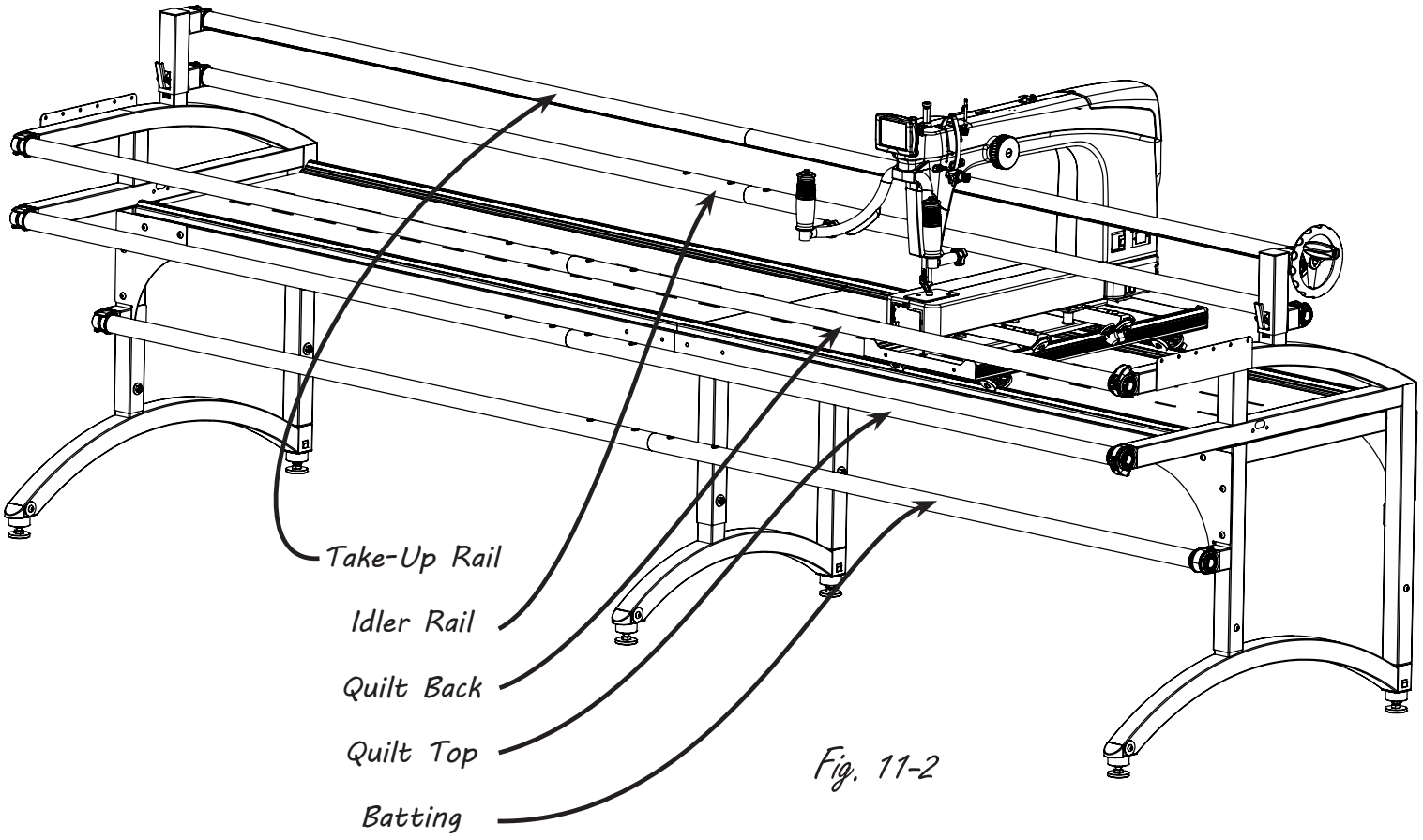


Fig. 11-2

Step 12: Handwheel

Parts Needed:

1- Handwheel
1- Handwheel Knob
1- Handwheel Shoulder Bolt
1- Handwheel Coupler
1- M10 x 120mm SBHCS
1- M10 Washer

Tools:

6mm Allen Wrench

12-1: Using the 6mm Allen Wrench, remove the Socket Head Screw out of the Take-Up Rail Ratchet End Cap, but leave the Ratchet End Cap in the Rail. (As shown in Fig. 12-1.)

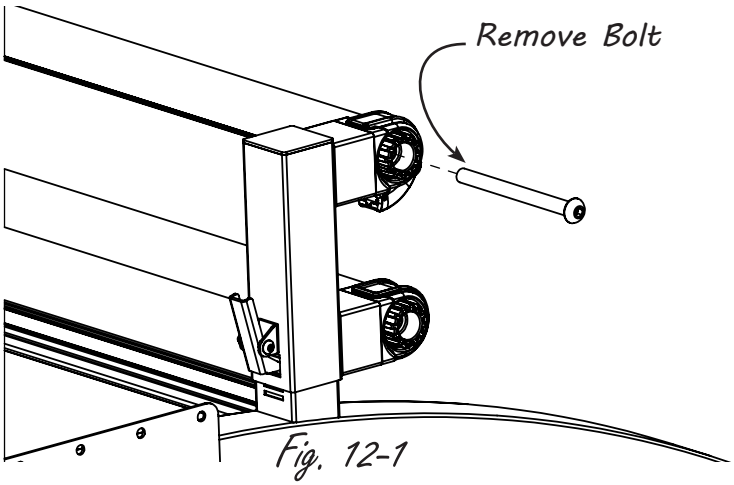


Fig. 12-1

12-2: Place the M10 x 120mm SBHCS through the M10 washer, and then the Handwheel. (See Fig. 12-2)

Note: The Handwheel Coupler ships pre-installed in the Handwheel

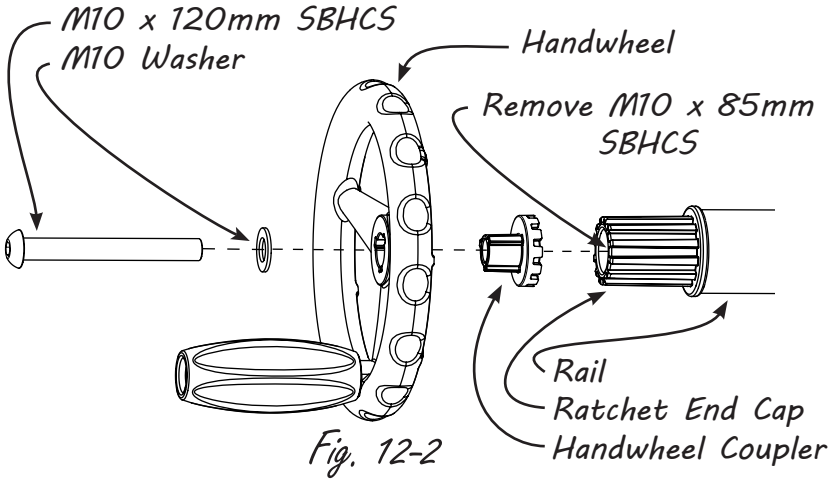


Fig. 12-2

12-3: Align the teeth in the Handwheel Coupler, so that they interlock with the teeth in the Ratchet End Cap. Now using the 6mm Allen Wrench, tighten the M10 x 120mm SBHCS into the Ratchet End Cap.

Step 13: Add Carriage Stop

Parts Needed:

1- Rubber Stopper

13-1: Thread the Rubber Stopper into the Right Frame End. (See in Fig. 13-1.)

13-2: Roll the Carriage up against the stopper and check that the Encoders are not able to touch the Right Frame End.

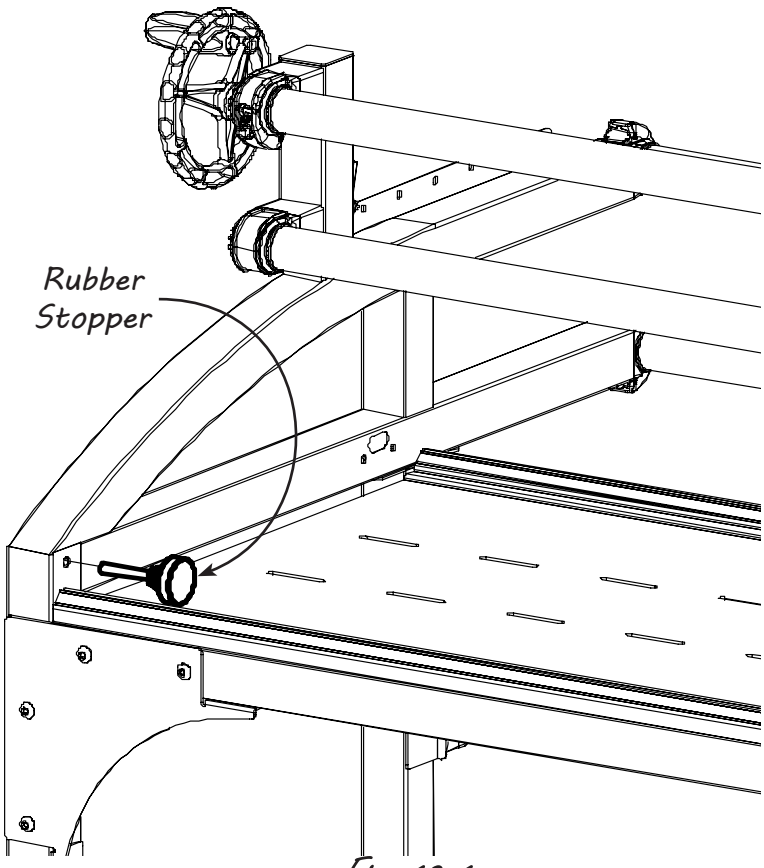


Fig. 13-1

Time to Quilt

The Fabri-Fast Quilting Concept:

Your quilting frame has specially designed Fabri-Fast rails. Installing your fabric is easier on The Grace Company Brand Quilting Frames than on any other brand of quilting frame.

Each rail has a Fabri-Fast slot, accompanying Plastic Tubing, and a Fabri-Fast Tool included with the Quilting Frame. These components work together to make your fabric installation much easier and faster than using tape, or tacks.

We recommend you begin using your Quilting Frame on some Practice Fabric before making an actual Quilt so that you can experiment with Machine Settings and Stitch Techniques. Keep in mind that picking out bad stitches is a lot of work, especially on a delicate pieced Quilt Top.

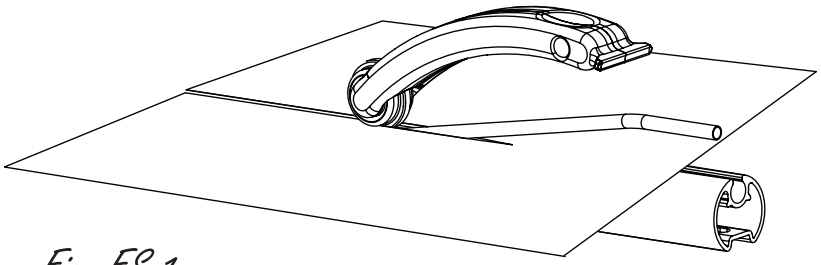


Fig. FS-1

Note: As you prepare your Fabric Layers, we recommend making the Quilt Backing about 12" longer and 2-4" wider than your Quilt Top. This will allow for a little give in the Quilt Backing. This is especially useful if using thicker batting.

Fabric Overview:

This is an outline to show which Quilt Layer goes onto each rail.

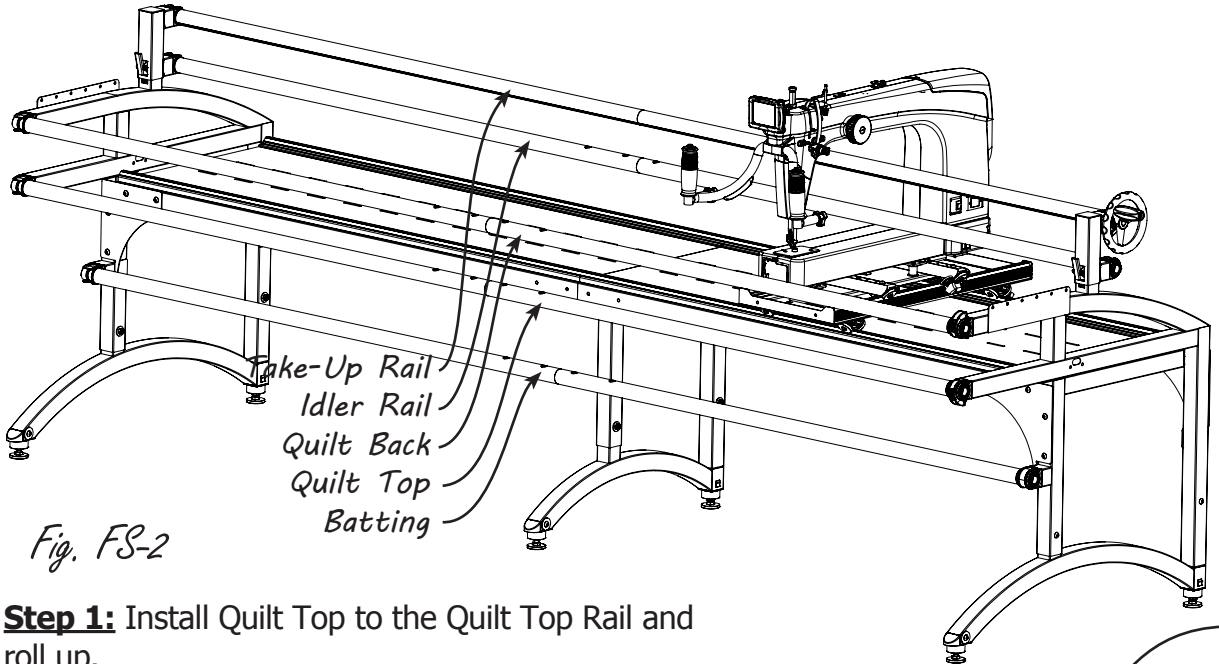


Fig. FS-2

The **IDLER RAIL** is not considered a Working Rail, since it won't have fabric attached directly to it.

Step 1: Install Quilt Top to the Quilt Top Rail and roll up.

Step 2: Install Quilt Backing to Backing Rail and roll up.

Step 3: Install Batting to Batting Rail and roll up.

Step 4: Attach all Quilt Layers to Take-up Rail.

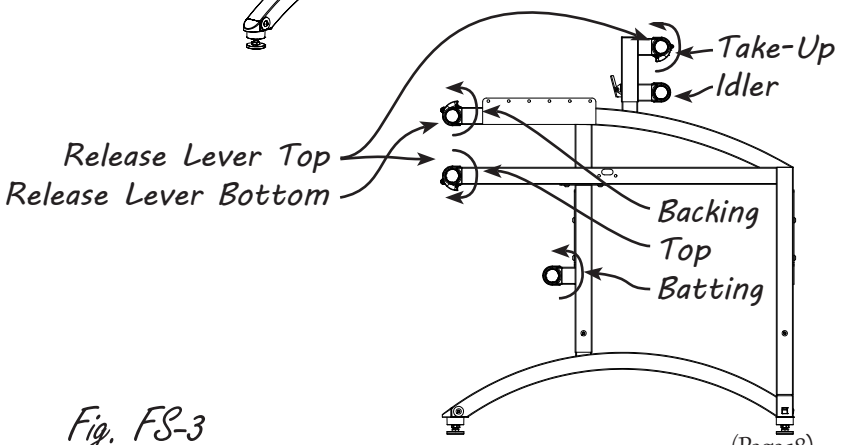


Fig. FS-3

Leader Cloth

Attaching a piece of fabric (Leader Cloth) to each of your working rails will allow you to pin your Quilt Fabric to the Leader Cloth. The Grace Company also proudly offers Leader Cloth, "Start-Right Cloth Leaders", which can be purchased from your preferred dealer.

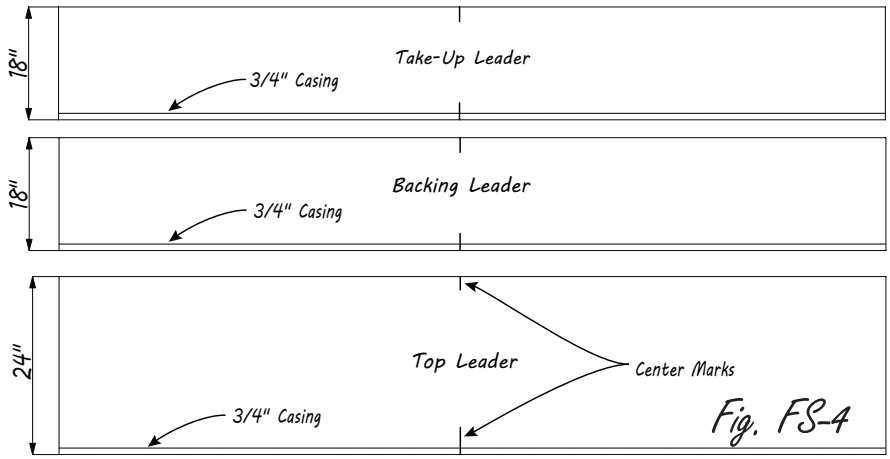


Fig. FS-4

How to Make Leader Cloth:

LC-1: (Selecting your cloth leader material)
We recommend using a quality Muslin or similar fabric that has a high thread count. Be aware however, that if the fabric is too thick, it may be difficult to install it into the rail's Fabri-Fast slot.

LC-2: Surge or hem your Cloth Leaders on all edges.

LC-3: Position Cloth Leaders so that their widths are as shown in the diagram to the right,and make the length 6" shorter than your Rails.

LC-4: Make a light line along the entire length of your Leader Cloth about ½" in from the edge. You will use this as a guide to help you insert the Leader Cloth into the Rails' Fabri-Fast Slot in a straight line.

(OPTIONAL): For an easier Leader Cloth installation, you may consider making a Casing, then push the Fabri-Fast Tubing into the Casing before installing it into the Fabri-Fast Slot. To do this, create a Casing on one edge of each Leader Cloth by folding over the fabric one inch (1"), sew, using your Conventional Sewing Machine Presser Foot as a guide, stitching the fabric together 3/4" from the fold. This will leave about ¼" of fabric beyond the stitching. Leave the edges open on both ends. You may then slide your fabri-fast tubing into the casing.

LC-5: Mark each Cloth Leader at the center (length-wise).

LC-6: Mark (or stitch in a contrasting color) a straight line about ½" in from the opposite (non-casing, or non-marked) end of the Leader Cloth. This will be the line to which you attach your Quilt Fabric Layers.

LC-7: Center your leader cloth lengthwise along the rail. Using Grace's Fabri-Fast™ System, take a piece of Fabri-Fast plastic tubing holding your cloth leader to the Fabri-Fast slot (lining up the light line), and press the Fabri-Fast tubing over the leader Cloth and into the Fabri-Fast slot.

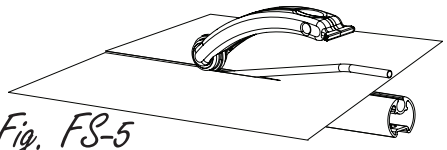


Fig. FS-5

LC-8: Use the Fabri-Fast tool to press the rest of the Fabri-Fast tube and fabric in the slot. If you have made a casing, line up the casing with the Fabri-Fast tubing over the Fabri-Fast slot and press it into the Fabri-Fast slot using the Fabri-Fast tool.

Note: The illustration to the right shows how the cloth leaders will look when installed on each rail prior to your quilt layers being installed.

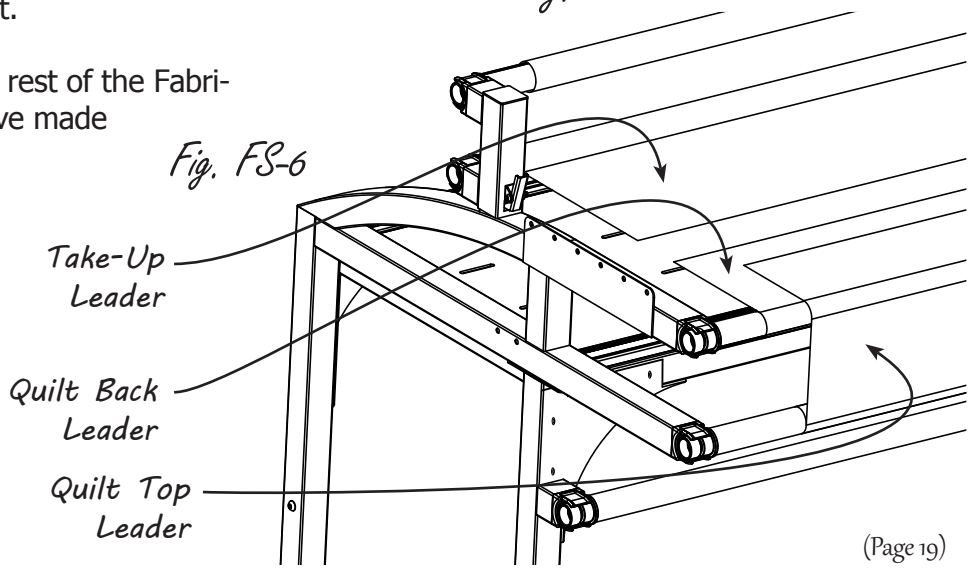


Fig. FS-6

Installing Fabric Layers To The Rails

Step 1: Quilt Top

(After the quilt top fabric is rolled onto the rail the finished side of fabric will be up)

QT-1: Fold your quilt top accordion style on the quilting table.

QT-2: Arrange the quilt top fabric so that the edge which will be the quilt's bottom edge is on top of the folded up fabric, with the finished side facing up, and its free edge facing the front of the quilting frame.

QT-3: Line up the center of your quilt top with the center of the quilt top leader Cloth.

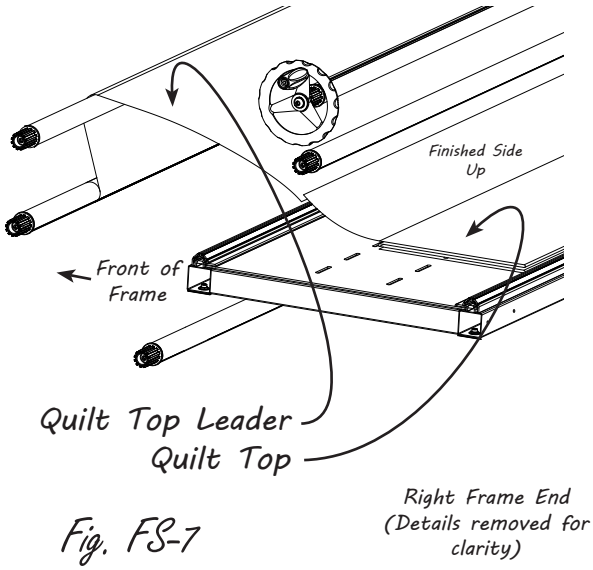


Fig. FS-7

QT-4: Pin the bottom edge of your quilt top to the quilt top leader cloth.
Do not stretch or pull the fabric during this process. Let the fabric lay as natural as possible.

QT-5: Carefully roll the Quilt Top Rail until the Leader Cloth and quilt top are completely rolled onto the rail. Make sure the fabric's edges stay lined up. Smooth out any wrinkles as you roll by brushing the fabric from the center out, being very careful not to stretch or pull the fabric.

Step 2: Quilt Backing

(After the quilt back fabric is rolled onto the rail the finished side of fabric will be down)

QB-1: Fold your quilt back accordion style on the quilting table.

QB-2: Arrange the quilt back fabric so that the edge which will be the quilts bottom edge is on top of the folded up fabric, with the finished side facing down, and its free edge facing the front of the quilting frame.

QB-3: Line up the center of your quilt back with the center of the quilt back leader Cloth.

QB-4: Pin the bottom edge of your quilt back to the quilt back leader cloth.
Do not stretch or pull the fabric during this process. Let the fabric lay as natural as possible.

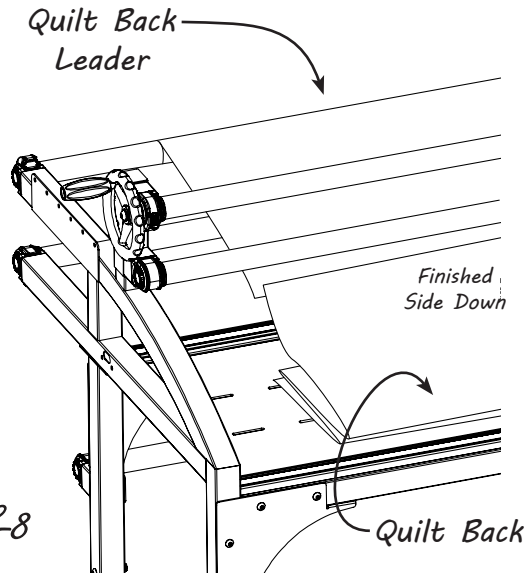


Fig. FS-8

QB-5: Carefully roll the Quilt Back Rail until the leader Cloth and quilt back are completely rolled onto the rail. Make sure the fabric's edges stay lined up. Smooth out any wrinkles as you roll by brushing the fabric from the center out, being very careful not to stretch or pull the fabric.

Step 3: Batting

(A light, bonded batting works best for machine quilting, and is recommended.)

B-1: Center the batting on the batting rail.

B-2: Now attach one end of the batting directly to the batting rail using the fabri-fast tubing.

(NOTE): Fabri-Fast tubing will work with most batting. However, if the batting is too thick to squeeze into the Fabri-Fast slot, you may need to tape the batting to the rail to keep it in place).

B-3: Roll the batting onto the batting rail, being sure to roll the proper direction so that it, like the quilt top, comes off the rail from the bottom when unrolling.

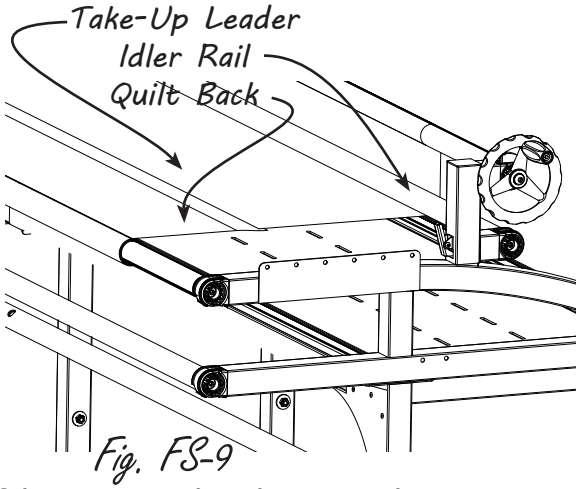


Fig. FS-9

Step 4: Quilt Fabric to Take-Up Rail

Quilt Backing

TR-1: Unroll enough of the quilt backing, and also the Take-Up leader cloth so that they can be pinned together.

TR-2: Pin the quilt backing to the take-up rail leader Cloth, keeping it straight, and smooth, without stretching the fabric.

TR-3: Place the pins as far apart as possible, while not allowing the fabric to stretch in between the pins, about every 10" to 18". You will need to use more pins if you like the quilt fabric to be tighter.

TR-4: Adjust the loose quilt back using the Take-Up Rail, and the Quilt Back Rail, so that the pinned edge is centered in your quiltable area.

TR-5: Adjust the tension of the Quilt Back so that it is held taut between the Quilt Back Rail, and the Idler Rail, but not tight enough to stretch the fabric.

Batting

TR-6: Bring the batting up between the Quilt Top Rail, and Quilt Back Rail. Now lay the batting onto the backing.

TR-7: Place the edge of the batting along the pin line of your Quilt backing.

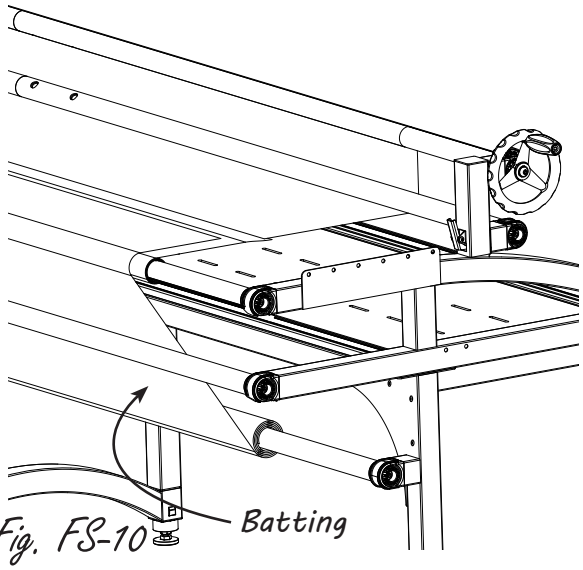


Fig. FS-10

Quilt Top

TR-8: Finally, bring the quilt top up and lay it over the batting.

TR-9: Adjust the edge of the Quilt Top so that it is lined up with the edge of the batting, along the pin line.

TR-10: Pin the Quilt Top and Batting along the same line as your Quilt backing so that it is straight, and smooth.

TR-11: Adjust the quilt fabric by releasing the Ratchet Stops on the Quilt Back, and Quilt Top Rails, then turn the Handwheel on the Take-Up Rail.

TR-12: Adjust the quilt fabric so that the top edge to be sewn is 2" to 3" away from the Idler Rail.

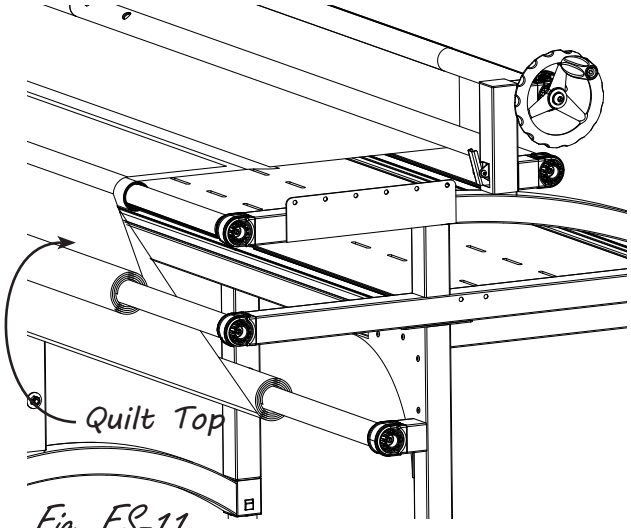


Fig. FS-11

Bungee Clamps
Parts Needed:
4) Bungee Clamps
4) Bungee Stops

BC-1: Thread the end of each of your bungee cords through one of the available holes on the Bungee plate, as shown in Fig. FS-12.

BC-2: Slide a Bungee Stop onto the end of the bungee cord.

BC-3: Next attach the Bungee Clamp to the edge of your Quilt fabric.

BC-4: With the Bungee clamp attached to the Quilt fabric, pull the Bungee Cord through the hole until you get adequate tension on the Quilt fabric. Now slide the Bungee Stop up the Bungee Cord to secure your bungee tension.

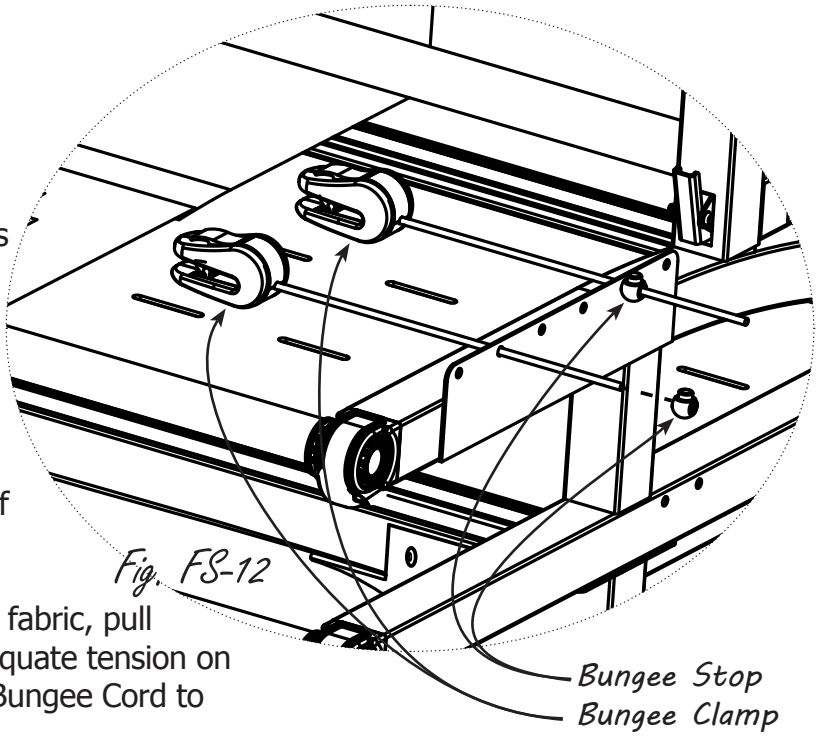


Fig. FS-12

Rolling Fabric
When you have completed your work area and are ready to roll the Quilt Fabric to the next quilting area:

RF-1: Remove the Bungee Clamps.

RF-2: Release the ratchet stops located on the Quilt Backing and Quilt Top rails, allowing them to roll freely. Do this by turning each rail back with one hand to release the pressure on the ratchet wheel and then pushing the ratchet release lever to unlock the ratchet stop.

RF-3: Next, roll the Take-Up Rail forward using the Handwheel, rolling the completed work area onto the Take-Up Rail.

RF-4: Re-engage the Ratchet Stops, and adjust the fabric tension on the Quilt Back Rail, and then the Quilt Top Rail.

RF-5: Re-attach the Bungee Clamps.

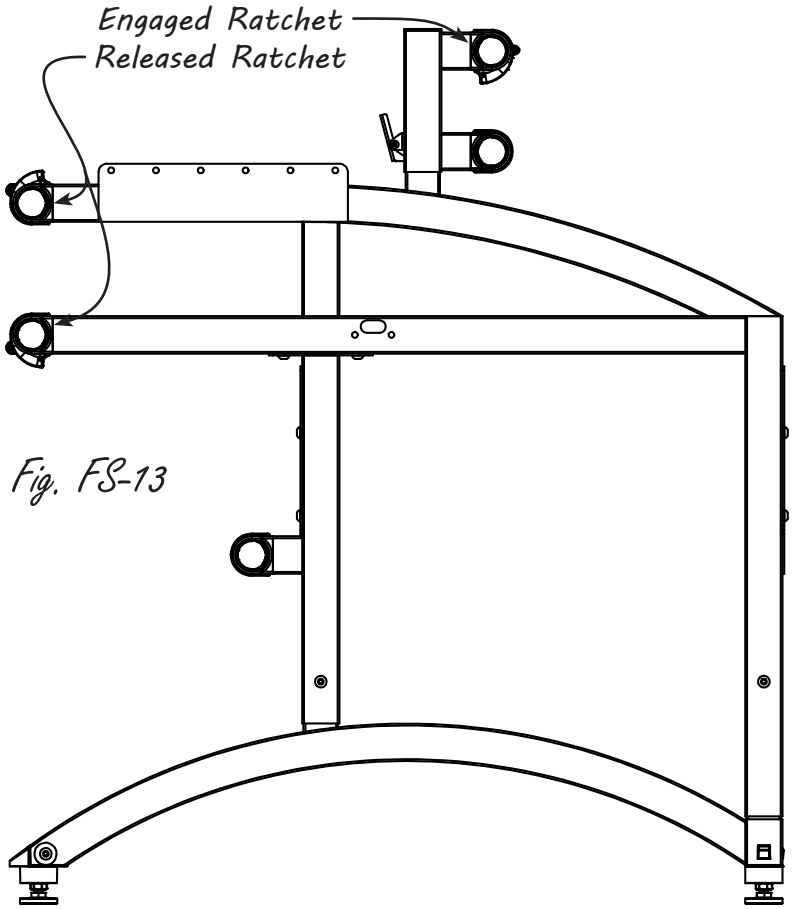
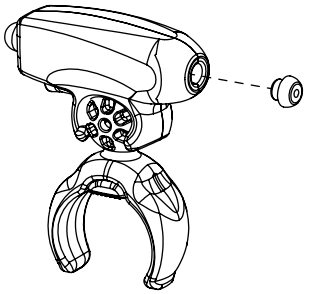


Fig. FS-13

Note: When rolling your fabric, it may be necessary (to prevent over stretching quilt) to turn the Take-Up rail using one hand, and turn the Backing Rail using your other hand.

Juki Laser



Caution: Do not look directly into laser light. Any modification of laser light could potentially be dangerous.

Note: The Laser comes with several different laser tips. The smaller the diameter of the tip the more focused the laser light will be. Remove the tip by pulling it out of the laser's body and reinsert the tip of choice.

Step 1: Clip Juki laser to Front handle (see Fig. FS-14).

Step 2: Plug Juki laser plug into right side of front assembly. Press the button on the back of laser to turn off and on.

Step 3: Move sewing machine with needle at the point where you wish to start your pattern. Adjust your laser to the start point of your pattern. Trace the pattern with the red dot.

Fig. FS-14

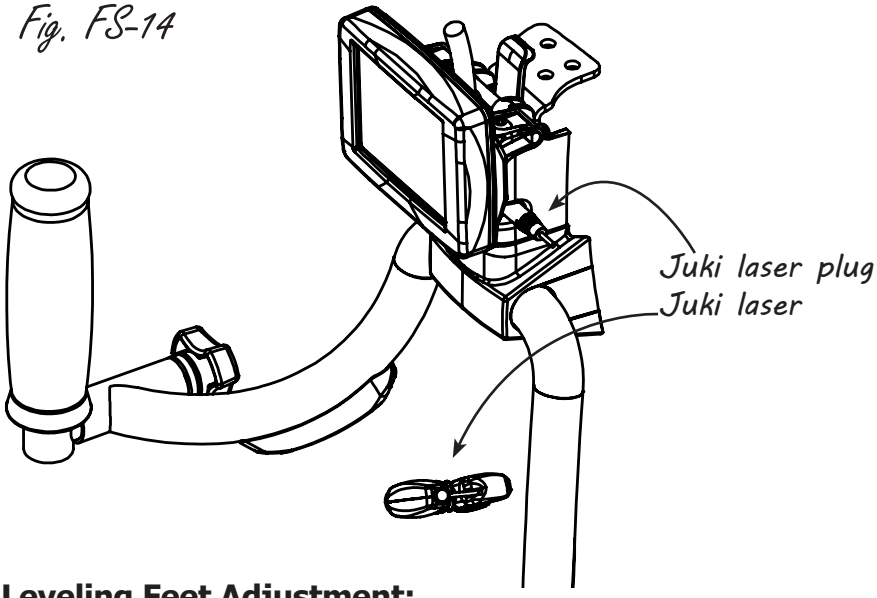
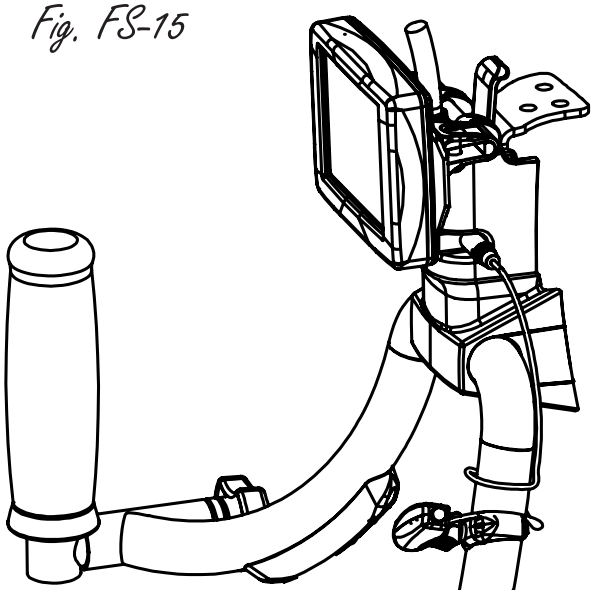


Fig. FS-15



Leveling Feet Adjustment:

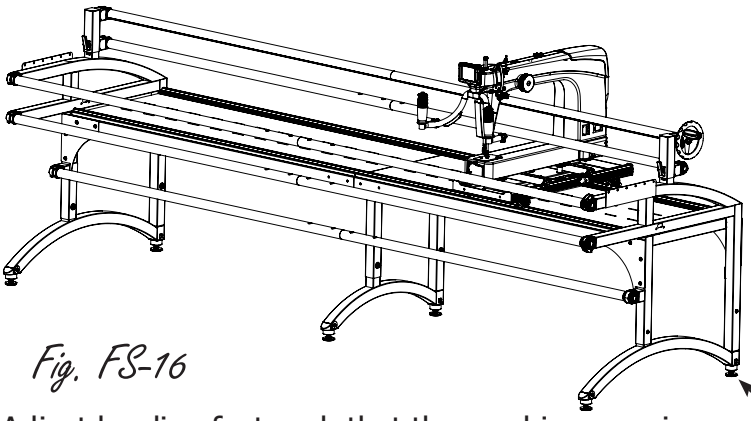


Fig. FS-16

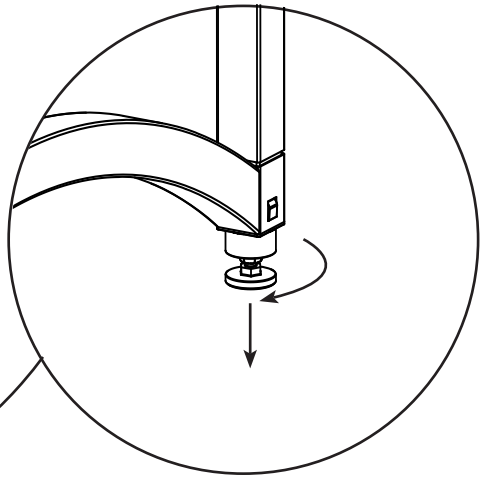


Fig. FS-17

Adjust leveling feet such that the machine remains stationary without interaction from the user. To raise the leg of the machine simply turn the foot clock-wise shown in figure FS-17 and reverse action to lower the

Congratulations you are now ready to Quilt!

Juki Handle Adjustment

Step 1: Remove the wing knob and Loosen the nylock nut counter clockwise to allow free handle movement (see Fig FS-18).

Step 2: Adjust the handle to the desired position, then tighten the nylock nut and reinstall the wing knob (see Fig. FS-19).

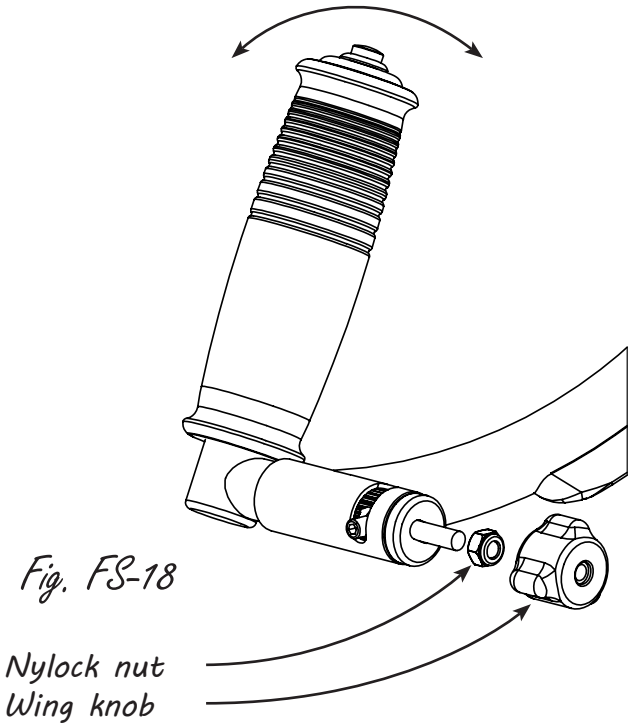


Fig. FS-18

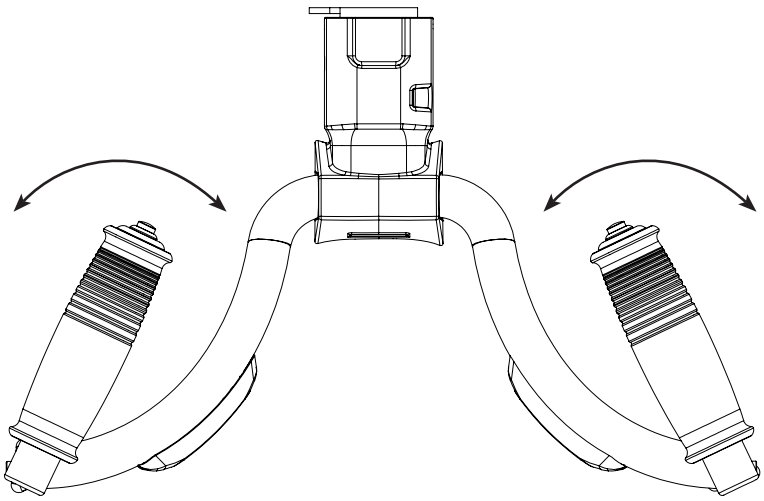


Fig. FS-19

Tips and Trouble Shooting

Stitch Regulating: If the machine only appears to be stitch regulating in one direction, make sure the encoder cords are plugged in tightly on both ends, into the encoder and also in the Sure Stitch box.

Bungee Clamps: If it is necessary to use the bungee clamps over the batting on your quilt, turn the bungee clamps upside down so the rubber grip in the clamp is gripping against the bottom fabric instead of the batting. Having the rubber grip clamp against the batting is less effective than having it clamp against the fabric.

Fabric Issues: Do not over tighten the fabric on the quilting frame. Stretching the fabric will result in a quilt that does lay flat when it is finished.

Frame Cleaning: Regularly clean the wheels and track of your carriage and frame. Lint from the batting will build up quickly causing the carriage not to roll as smoothly if neglected.