Basic apparel production

Level I

LEARNING GUIDE # 35

UNIT OF COMPETENCE: Prepare sewing machines

MODULE TITLE: Preparing sewing machines

LG Code: **IND BAP1 M06 LO 01 LG 35**

TTLM Code: **IND BAP1** TTLM 1019V1

LO1 Prepare workstation

Instruction sheet	Learning guide 1

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics.

- ✓ Workbench and seating are set up to achieve operator comfort and to minimize fatigue
- ✓ ***Machine*** (May include: single needle lockstitch machine, three threads and four threads over lock machines, computerized single needle lockstitch machine and double needle lockstitch machine) is cleaned and parts are checked for damage or worn and reported or replaced according to specifications
- ✓ Work area is organized to maximize safety and productivity
- ✓ Records are maintained

This guide will also assist you to attain the learning outcome stated in the coverage. Specifically up on completion of this learning guide, you will be able to: **-Prepare work station**

Learning Instructions

1. Read the specific objective of this learning guide.

2. Follow the instruction describes.

3. Read the information, and try to understand what are being discussed. Ask your teachers for assistance if the content is hard.

4. Accomplish the self-check.

5. Ask Key answers from your teachers or you can request your teacher to correct your Answer. You are going to get the key answer only after you finished answering the self-check.

6. Submit your accomplished self-check. This will from part of your training portfolio

Information sheet - 1	Setting up workbench and seating

1.1 Setting up workbench and seating

Set upping work bench and seating according to OHS practices

Include:

- standard operating safety procedures
- personal protective equipment
- safe materials handling
- equipment or machine safety
- Personal responsibilities for safety
- ergonomic arrangement of workplaces

➢ Standard operating safety procedures

- Protection equipment: including personal protective equipment (PPE) for ears, eyes, face.
- Protective clothing, respiratory devices
- Protective shields and barriers shall be provided.
- Before doing work that requires the use of PPE, the trainee must be trained.

❖ When PPE is necessary:

- What type PPE is necessary
- How to properly done doff, adjust and wear PPE
- The limitation of the PPE &
- The proper care, maintenance, useful life and disposal of the PPE

❖ Way to learn and understand safety

1) Accidental experience: experiences which were caused by accidents.
2) Safety education: a method which makes us aware of dangerous situations to avoid accident or injury.

➢ Personal safety protective equipment

Personal safety protections include:

- Eye and face protection
- Hearing protection
- Respiratory protection
- Wearing apparel

➢ Safe materials handling
- Keep the materials in well manner
- Use the material as enough as required.

➢ Equipment/machine safety
- Every morning the trainees wipe and clean the equipment's.
- After work, they have to cover the equipment's

➢ Personal responsibilities for safety
- Observe all, before, safety precautions related to your work.
- Report unsafe conditions or any equipment or materials you think might be unsafe.
- Warn others about the hazards.
- Report any injury or ill
- Wear protective clothing
- Be safety consuls
- Always inspect equipment and associated attachments for damage before using.

- Safety precautions concerning people
  - ➢ When working, wear appropriate protective clothing properly.
  - ➢ Never remove safety device or safety covers from equipment
  - ➢ Be careful of high clothes. Never touch switches with wet hands.
  - ➢ When an accident occurs, it should be reported immediately to proper authority.
- Safety precautions concerning facilities
  - ➢ Facilities must be adequately illuminated, clean, neat and dry.
  - ➢ Keep the area organized so that there are no obstacles lying around the floor.
  - ➢ The equipment and floor should be free from dust and any chipping.
  - ➢ Work benches must be strong.

- Ergonomic arrangement of work place

  Ergonomic is a science which is used for arrange the work place.

  Ergonomics on the hand:

  - Combine all of the issues to improve workers efficiency and well being
  - Maintain industrial production through the design of improved work places.

  OHS & Ergonomics applications:

  - to satisfy the needs of changing local people‘s attitudes.
  - to change local work methods
  - to change the traditional ways of doing things.

  Therefore, OHS & Ergonomic applications are a major source of work place improvement

Self check - 1	Short answers

WRITE SHORT ANSWERS FOR THE FOLLOWING QUESTIONS

1, List some of the safety precaution concerning people (2 pts)

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……
……

2, What are some of the Personal responsibilities for safety on work place (2 pts)

……
……
……

3, List some of the Safety precautions concerning facilities (2 pts)

……
……
……

4, what is ergonomics (2 pts)

……
……

5, List some of the Standard operating safety procedures (2 pts)

……
……
……

Rating:

Scores 6 and above = Satisfactory

Scores below 6 = Not Satisfactory

Information sheet 2	Checking and cleaning machine parts

1.2 Checking and cleaning machine parts

It's really important to clean your sewing machine once in a while. But how often should you do it? and how do you do it properly? There are some really important things to consider before you start cleaning your sewing machine**.** If you do it the wrong way (or use the wrong tools) you might end up causing more damage than good.

We have a lot of different sewing machine types today. In this article, we will primarily look at your standard sewing machine. However, almost everything we cover in this article can also be applied directly to other special machines.

Supplies and Equipment

You need the following equipment and supplies for the job:

- Pie or cake pan for soaking parts in cleaning fluid
- Small screwdriver
- Large screwdriver
- Small adjustable wrench
- Hammer (optional)
- Small oil can (clean) for cleaning fluid
- Cleaning brush (narrow, nylon)
- Paring knife (or pocket knife)
- Long needle or small crochet hook
- Tweezers
- Cleaning cloths
- Fabric to test stitching
- Can of sewing machine oil (check your machine instruction booklet for the type recommended)
- Tube of sewing machine lubricant (check your machine instruction booklet for the type recommended)
- Small bottle or can of cleaning solvent that will not flash flame at temperatures below 120°F. It is usually available at gasoline stations or cleaning establishments. **Never use gasoline**; it is highly flammable.
- Newspapers
- Plastic wrap (household type)
- Rubber gloves

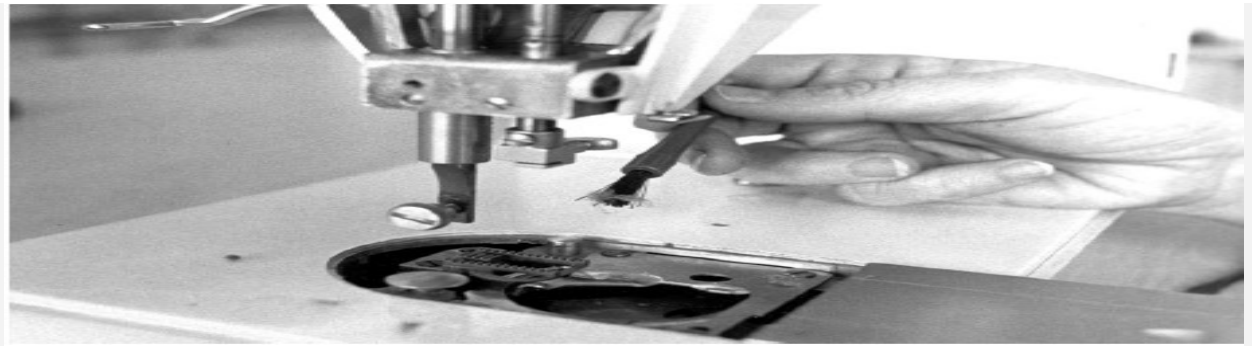
- Magnifying glass (optional)
- Flashlight (optional)

After assembling all supplies and equipment, unplug and move the machine to a cleaning area that is well lit. Protect the floor and table top with newspapers. A good floor or table lamp to light the work area from over your shoulder will be helpful. A flashlight is also helpful for adding light in hard-to-see areas. As you clean the machine, it is best to clean one area at a time. Remove only the parts that are involved and be sure to note where each part is from, its position, and which side is top

When removing parts, remember that "left is loose and right is tight" on practically all screws and bolts. When using a screwdriver, put the pressure on the push, not on the twist. If a screw will not loosen easily, soak it with cleaning fluid. Then set the screwdriver in the slot and tap sharply with a hammer before attempting to loosen. The screwdriver blade should be as wide as the slot in the screw is long. Always use a wrench—not pliers—on bolts.

First, remove the needle, presser foot, slide plate, throat plate, bobbin case, and the face plate. Put them in a pan and cover with cleaning fluid. Set aside to soak while cleaning other areas.

Next, wrap the motor (if necessary) and wire with plastic wrap to protect them from oil and cleaning solvent. **Be sure the machine has been unplugged!**



(Figure 1)

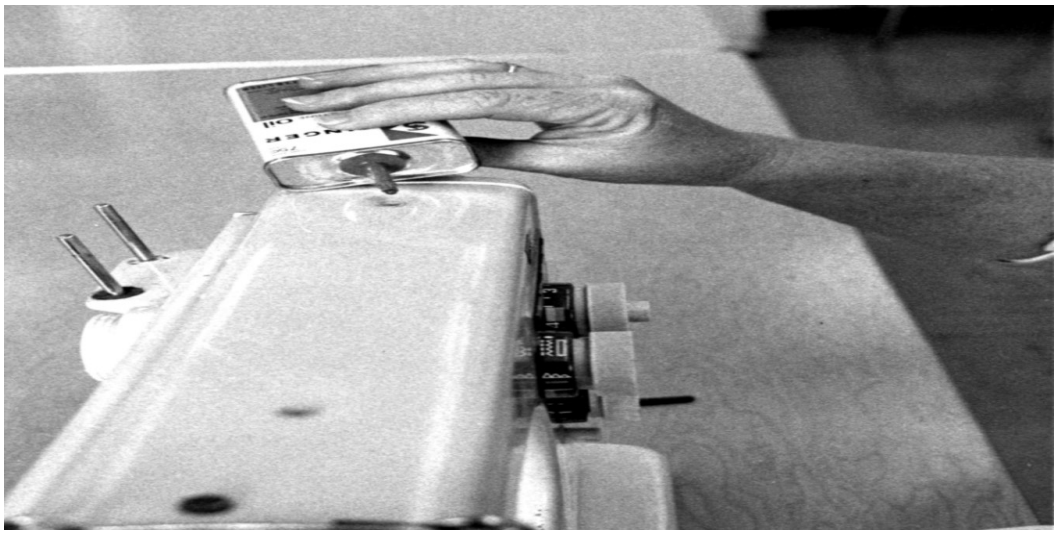
Now, it is time to begin work to clean the machine head. With a sharp pointed tool, clean out all oil holes. Then, with your hand, turn the hand-wheel to run the machine. At the same time, squirt cleaning fluid into all the oil holes, on all bearings, and on all other places where one part rubs against or turns within another (Figure 2).

Allow the machine to stand overnight so excess cleaning fluid can evaporate before oiling and lubricating it. Check your machine instruction booklet to determine the type of oil lubricant to use and where to use it.

Some machines have bearings that are nylon or graphite-impregnated bronze and do not require oil or lubricant. Also, some machines do not need oiling because they are designed with oil impregnated in the bearing casings. If your machine does not require oil, do not use it.

Do not oil the tension discs, the handwheel release, or the belts and rubber rings on any machine.

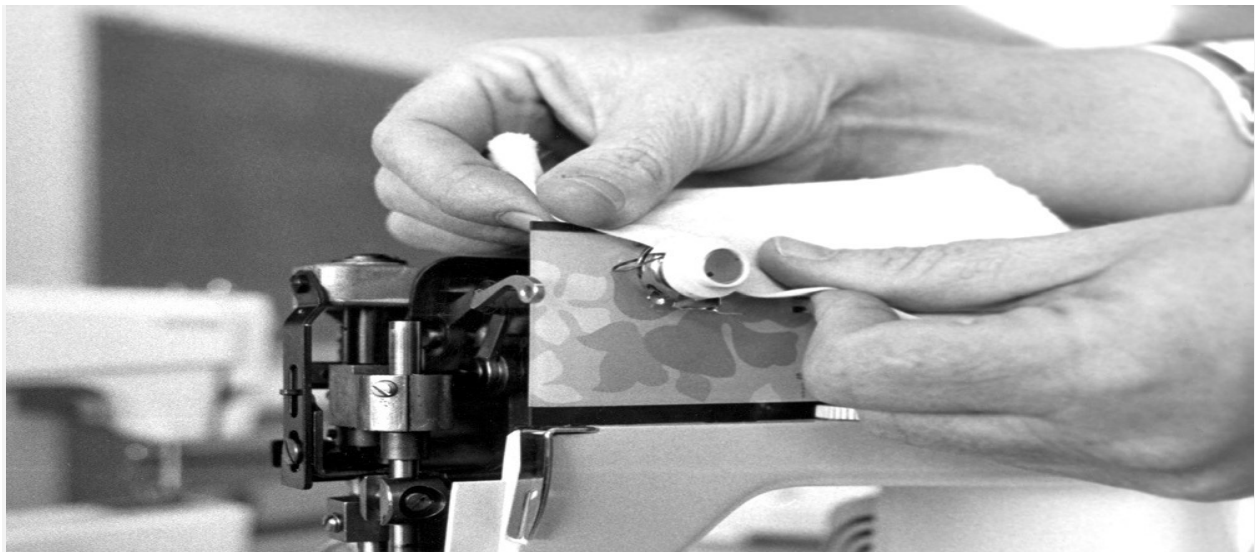
In the holes designated, and on all parts that rub against or within one another, squirt a little oil



(Figure 2)

Upper thread tension.

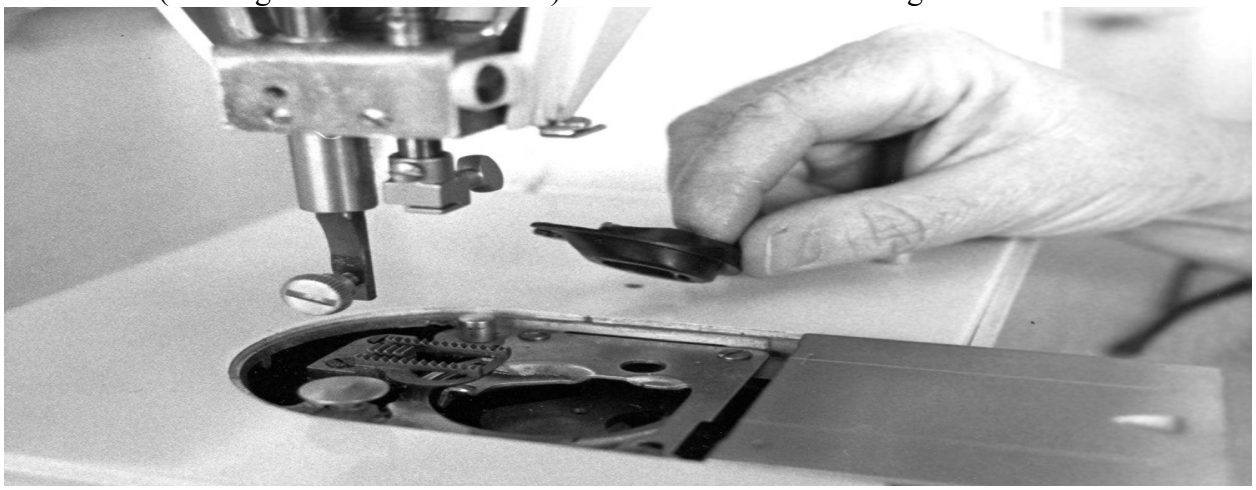
Pull a piece of cloth soaked in solvent back and forth between the discs to clean (Figure 3).



(Figure 3)

Bobbin and Hook Area

Clean carefully to remove lint using a soft brush. Tweezers may be helpful in removing stray threads. Lint is the primary offender in this area. The bobbin case can be removed on all makes of machines. Use a dry brush to clean out all lint (Figure 4). Remove any thread that may be wound up around the hook shaft. On many machines, the hook assembly can also be removed for more complete cleaning. Place one drop of oil on the exterior perimeter of the hook and the bobbin race (the ledge that the hook sits on) to lubricate it after cleaning.

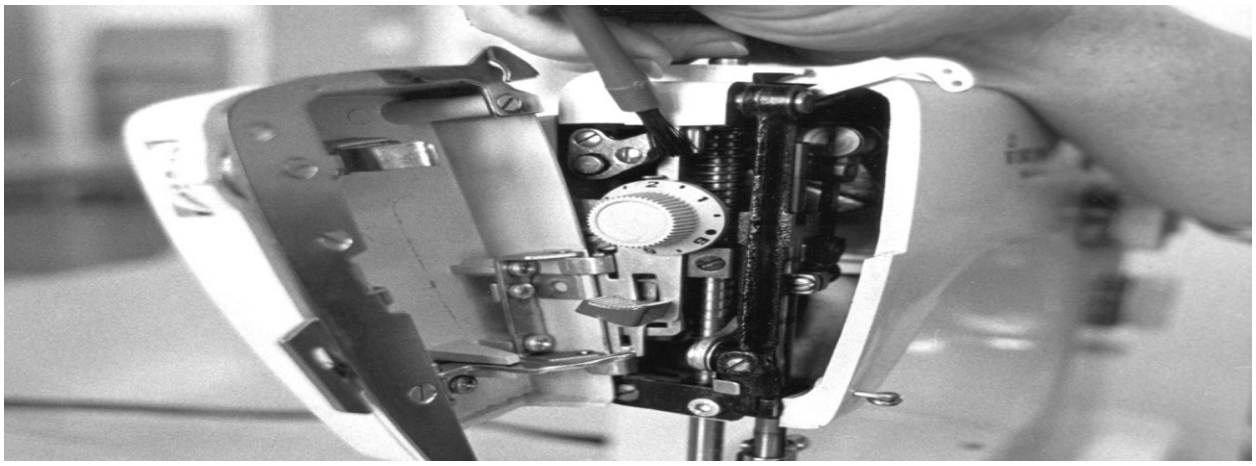


(Figure 4)

Face plate area.

Remove lint from the face plate area using a soft brush. A cloth dipped in solvent can be used to remove grease and grime. The face plate on most machines is held in place with one or two screws. By removing these, the plate can be easily removed for cleaning both the needle and presser foot bars. On some newer machines, the face plate is a part of a housing that is mounted on hinges, which makes it easy to move the entire housing away from the bars and mechanisms behind it.

No other parts need to be removed for cleaning in this area. First use a dry brush to clean out all lint and other foreign material (Figure 5). A small piece of cloth with a little solvent on it can be used to clean the needle bar and presser bar of any gummy grease. After thoroughly cleaning, place a drop or two of oil on each shaft where it slides through the housing. Oil all other moving parts according to your instruction book before replacing the face plate.



(Figure 5)

Making sure that your machine is lint and dust free is the most important factor to keeping it running smoothly. Cover your machine when not in use. This will prevent household dust, lint, and pet hair from settling in and on the machine. Covers are available for purchase, an old pillow case can be used, or your sewing skills can be used to custom design one.

A good habit follow is to clean your machine following each project or at least after the machine has been used for six to eight hours. Tension disks can accumulate thread lint and can be cleaned by sliding a folded piece of plain muslin between them. This will help dislodge any lint or fuzz that may have accumulated. When doing this, be sure the presser foot is raised to release the pressure between the disks. Compressed air ("canned air") may also be used to blow loose particles out and away from the machine. Never blow the air into the machine, as this can further compound the problem by packing the particles into the machine rather than removing them. Blowing into the machine yourself is not a good idea, either. Human breath contains moisture that can eventually cause corrosion.

Do not use household oil on your sewing machine; only use light oil that is recommended for sewing machines. If the oil has turned yellow, it should not be used, discard it and replace it with new oil. It is recommended that you take your machine to an authorized sewing machine technician every two years for a thorough cleaning, oiling, and possible adjusting.

Self check - 2	Multiple choice

I. Multiple choice

Select the best answer for each question. Do this by circling the identifying letter next to your answer. (2 pts each)

1. Which of the following tools/equipments is **not** important for cleaning machine parts?
   A. Screw driver
   B. Cleaning clothes
   C. Sewing machine oil
   D. Cleaning brush
   E. None of the above
2. Which of the following statements is **False**?
   A. When removing parts with screw driver left is tight and right is loose
   B. When using a screwdriver, put the pressure on the push, not on the twist
   C. The screwdriver blade should be as wide as the slot in the screw is long
   D. All of the above
3. Which of the following Part of the machine is that we do not have to oil?
   A. Oil holes on the machine head
   B. Presser bar shaft
   C. Needle bar shaft
   D. Tension discs
4. Which of the following statements is **False**?
   A. A good habit follow is to clean your machine following each project
   B. Blowing air into the machine is not a good idea
   C. Making sure that your machine is lint and dust free is the most important factor to keeping it running smoothly
   D. None
5. To clean the machine thoroughly we have to remove all the parts listed below except
   A. Throat plate
   B. Face plate
   C. Bobbin case
   D. None

Rating:

Scores 6 and above = Satisfactory
Scores below 6 = Not Satisfactory

Information sheet - 3	Organizing work area

1.3 Organizing work area

The general condition of your living environment affects your personal productivity. Working in a clustered and messy environment has the ability to keep you distracted and in most cases, create negative energy. While some might give excuses about their space limitations, there are creative ways to keep your pace neat and organized while staying productive.

A well organized work space has tremendous benefits. It makes you feel in control and clearly focus and define areas that may need proper attention. An organized space can literally eliminate distractions, position you for success, save you time and help you stay super productive. Finding neat and simple ways to save space by organizing items will help you keep a tidy work space and avoid losing them in piles of clutter.

Every major change starts with a purge! De-clutter your space, empty, shred and get rid of literally any frivolous thing that adds no value to your productivity. Focus on one area at a time, Take out unnecessary furniture, files, and group items according to their differently useful categories. Doing a 'Work area purge' will help you analyze the items that you need to keep or toss. Don't miss this step.

Choose a proper labeling and color system for your Workstation. Take the time to label shelves, folders, bins and drawers. This labeling process helps you to put items in the right places and reduces the risk of losing important items or documents.

This time is ideal for assessing goals and priorities, and determining how to get started. You don't have to have dedicated tons of space, but you do need some work space essentials that will make your sewing more efficient, and more enjoyable. Speaking of which, sewing should be fun! It's a hobby after all, so get started with a well situated sewing space.

Self check - 3	Short Answer

1. Write the benefits of well organized work space (5 pts)

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Information sheet - 4	Maintaining records

1.4 Maintaining records

Following good records practices will not only help you meet legal requirements, they will benefit you and the company in many ways such as:

- Improving access to information;
- Controlling the growth of materials taking up valuable work space;
- Reducing operating costs;
- Minimizing litigation risks;
- Safeguarding vital information;
- Supporting better management decision making;

Self check - 4	Short answer

1. Write the details for the benefits of following good records practices (5 pts)

……
……

Basic apparel production

Level I

LEARNING GUIDE # 36

UNIT OF COMPETENCE: Prepare sewing machines

MODULE TITLE: Preparing sewing machines

LG Code: **IND BAP1 M06 LO 02 LG 36**

TTLM Code: **IND BAP1** TTLM 1019 V1

LO2 Check machine condition

Instruction sheet	Learning guide 2

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics.

- ✓ ***Machine settings*** (May include: correct thread, needle size and type; needle guard, time for length of stitches and stitch lock (computerized machine), tension setting and attachment) are adjusted according to manufacturer instructions and specifications for work
- ✓ ***Machine requirements*** (May include: thread type and needle type, stitch settings and spool requirements, accessories and attachments) are identified and attachments installed
- ✓ Threads are selected according to specifications
- ✓ Needle types, attachments and parts are checked, and worn needles and parts are changed as necessary

This guide will also assist you to attain the learning outcome stated in the coverage. Specifically up on completion of this learning guide, you will be able to: -**Check Machine condition**

Learning Instructions

1. Read the specific objective of this learning guide.

2. Follow the instruction describes.

3. Read the information, and try to understand what are being discussed. Ask your teachers for assistance if the content is hard.

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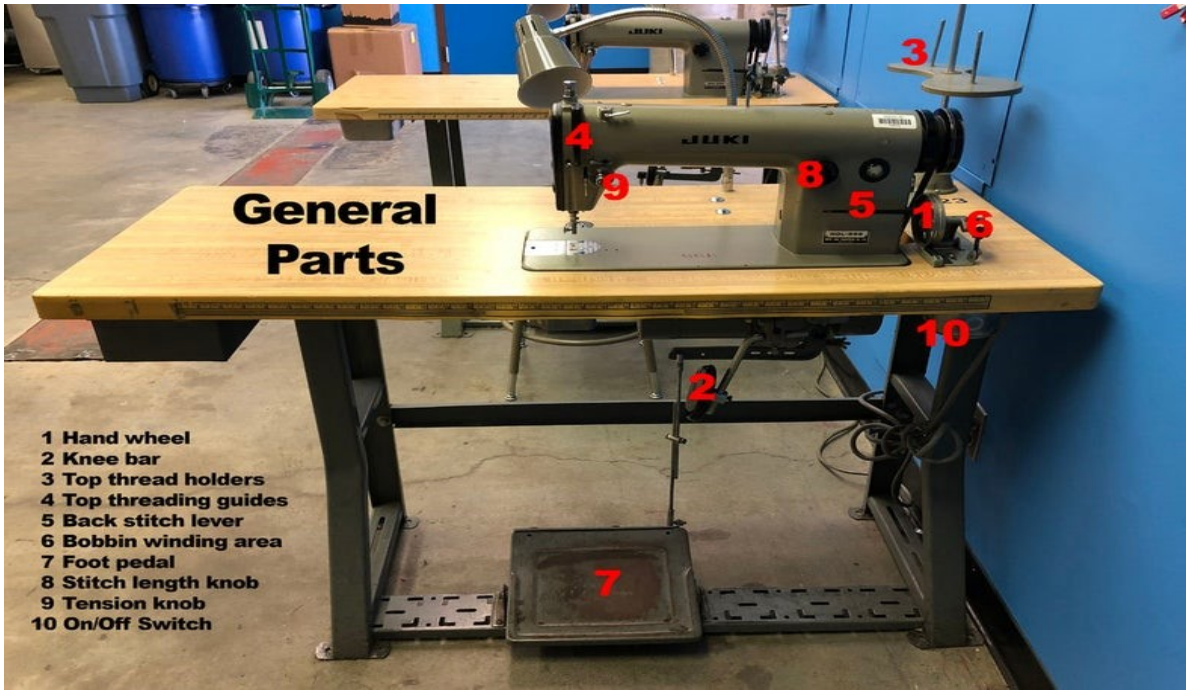
Information sheet - 1	Adjusting machine settings

2.1 Adjusting machine settings

Machine settings may include: threading the machine, inserting needle, winding the bobbin, Setting the bobbin into the bobbin case, adjusting stitch length (for details see 3.3), tension setting and adjustment (for details see 3.1), adjusting and installing pressure of the presser foot (for details see 3.4)

Threading the machine

Before threading the machine, let's get to know the various machine components and small pieces we will be using to get the machine threaded and ready to sew.

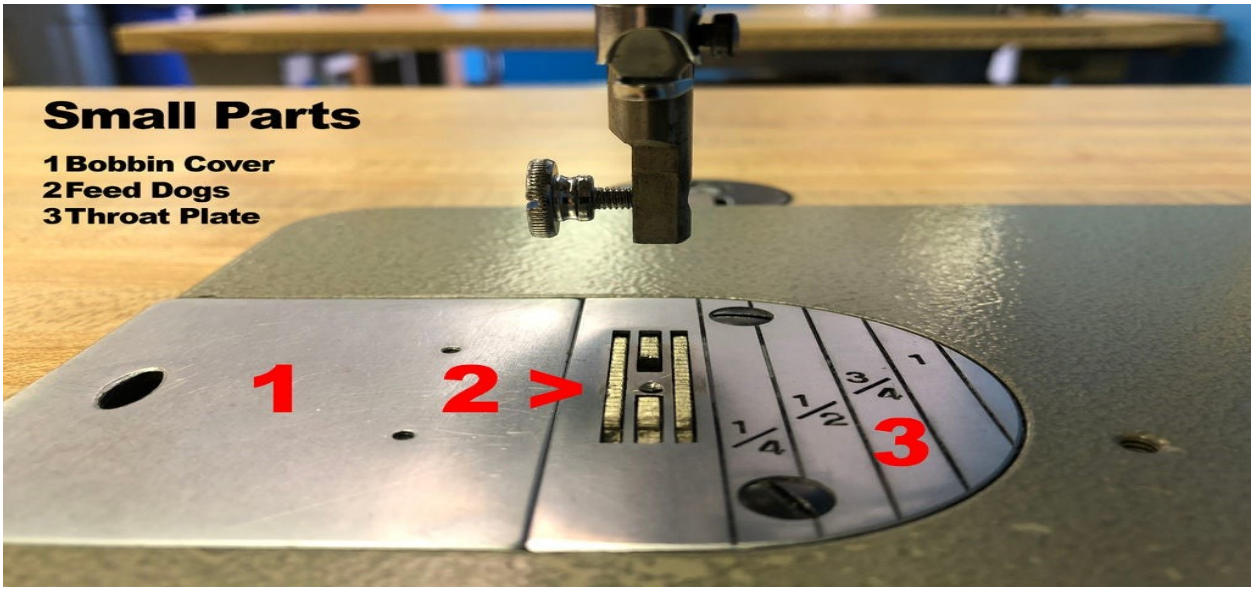


General parts:

1. Hand wheel

- Allows controlled/sew sewing

2. Knee bar
- Raises and lowers foot; push to the right using knee and foot raises
3. Top thread holders
- Holds your thread in place
4. Top threading guides
- All the little parts that guide your thread along to the needle to create the right amount of tension
5. Back stitch lever
- Used to stitch backwards/lock off the end of a row of stitching
6. Bobbin winding area
- Where you will thread the bobbin
7. Foot pedal
- The foot pedal is GO; it is what makes the machine sew
8. Stitch length knob
- Adjusts the length of the individual stitches
9. Tension knob
- Adjusts the tension of your
10. On/Off Switch
- Turns your machine on and off; some machines will have a switch (like a light switch) and some will have buttons labeled "on" and "off". Always make sure to turn off your machine when you are done using it.



Small Parts

1. Bobbin Cover

- Flat metal piece which covers the area where the bobbin is installed

2. Feed Dogs

- Serrated metal pieces that pull your fabric forward as you sew

3. Throat Plate

- Flat metal piece which provides guides for seam allowances

4. Needle

- Make sure you have a needle for an *industrial sewing machine.* Home sewing machine needles that would purchase at a fabric or craft store WILL NOT WORK.

5. Foot

- Holds the fabric in place

6. Bobbin

- Holds the bottom thread; Like the thread, you must make sure that your bobbin is the correct one for your Juki machine - NOT ALL BOBBINS ARE CREATED EQUAL and using the wrong one can damage your machine.

7. Bobbin Case

- Holds the bobbin

8. Mini Scissors

- For snipping thread

9. Screwdrivers

- Mini screwdriver (yellow) to install your needle, foot, and ultra mini screwdriver (green) to adjust the tension on your bobbin case

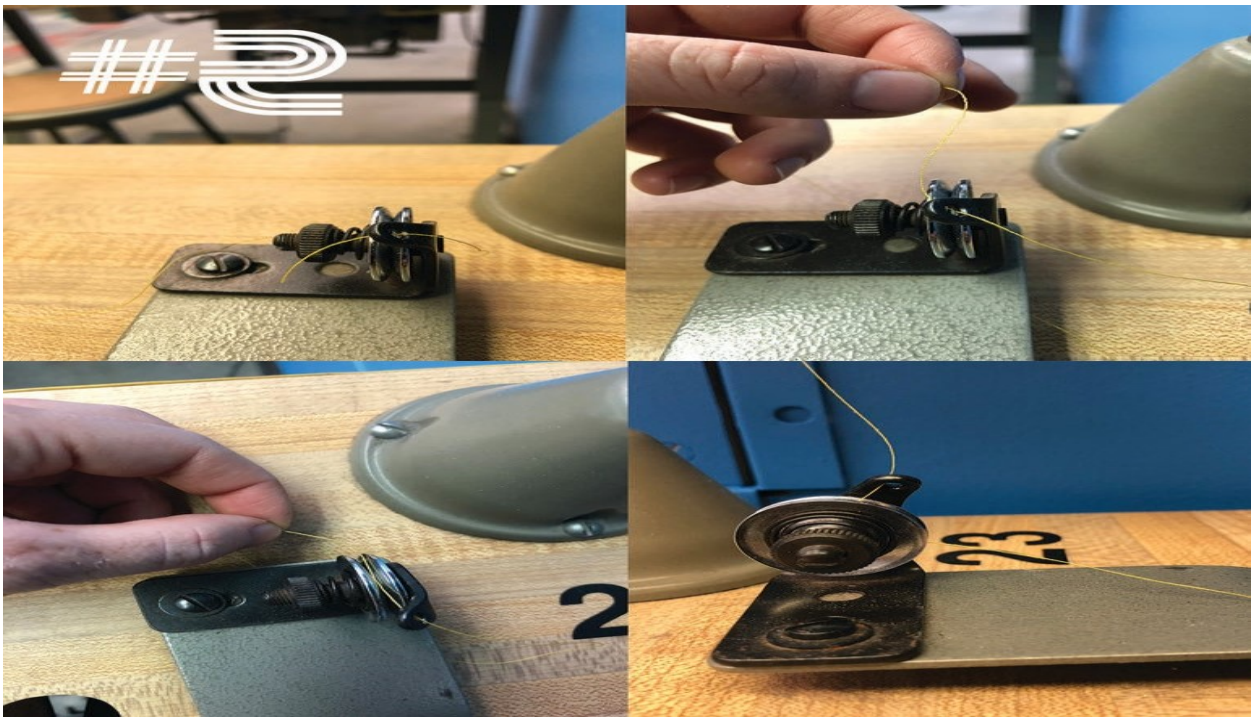
Step 1: Winding the Bobbin

Sewing machines sew with thread coming from the bottom of machine as well as the top. Before loading the bottom thread into the machine, you have to prepare the thread by winding it onto a bobbin. **Note: This is the ONLY time in the whole threading process (aside from sewing your sample) when your machine should be on.**

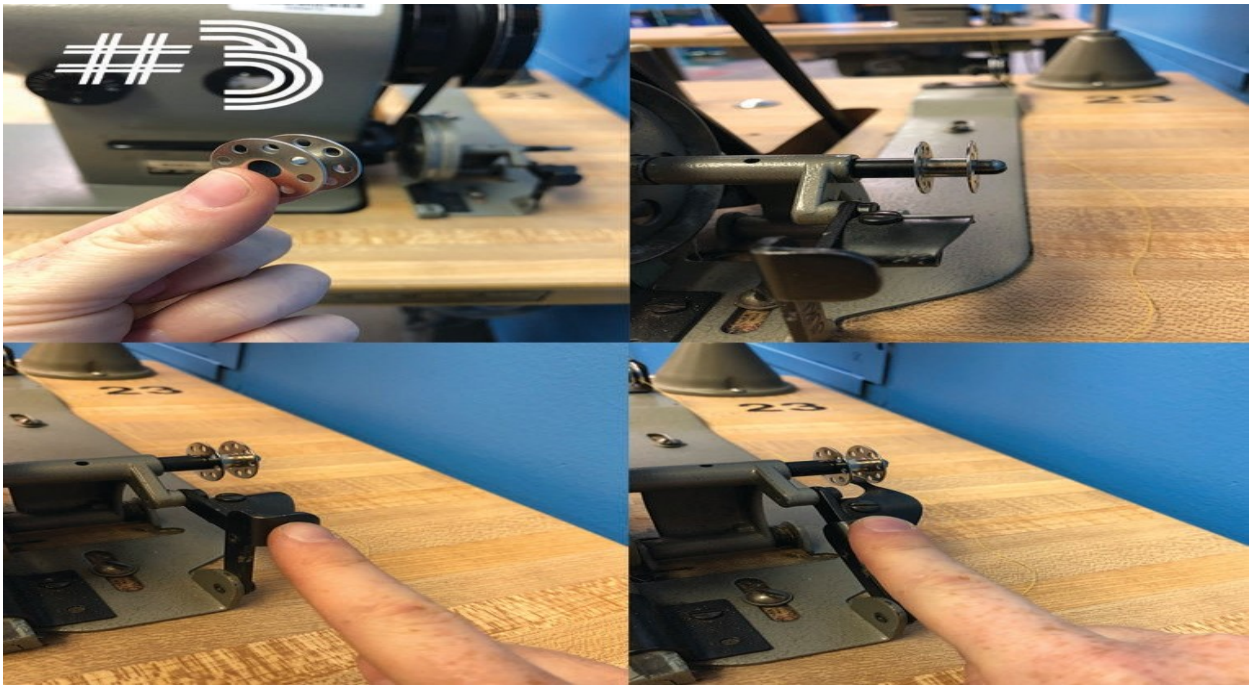
Steps:

1. Start by placing the thread color your want on the thread holder. Loop it through one (or both) of the metal hooks above it.

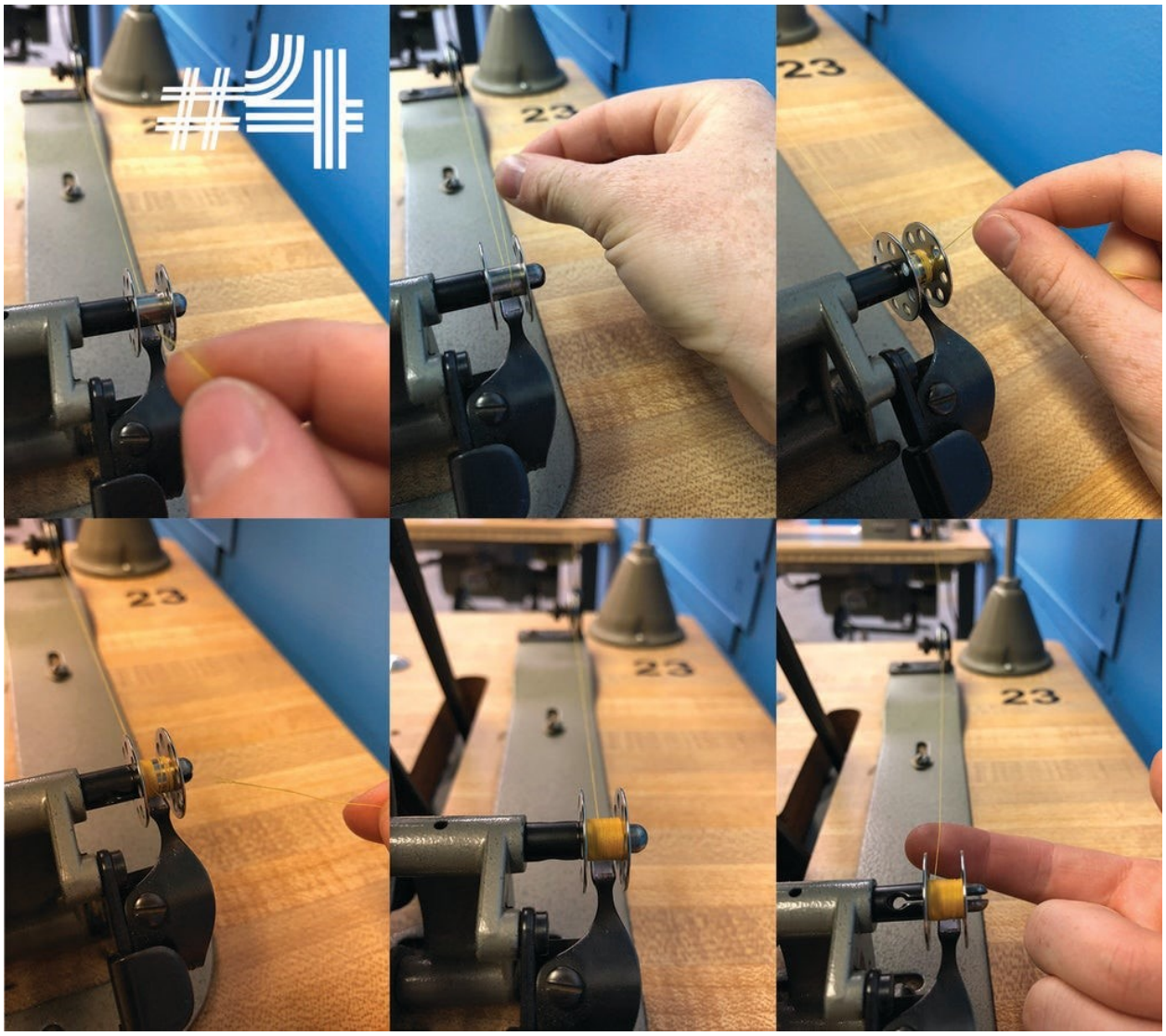
2. Bring the thread down to the bobbin winding area and place the end through the small hole. Loop the thread around the back of the wheel and then towards the front. Pull it tightly so the thread is deep in the groove.



3. Grab your bobbin and place it on the black knob for winding. Push it all the way on (to the left). Push the black metal piece connected to it *forward.* This will switch the machine from regular sewing to bobbin winding mode.



4. Wrap your thread under the bobbin and then wrap it around the bobbin manually a number of times. Pull the end through one of the small holes in the bobbin and hold it taught off to the right. Locate the on/off switch or button(s) on your machine and **turn on the machine.** Use the foot pedal to start winding the bobbin - after a couple seconds, the thread in your right hand should break off and the bobbin with continue to wind. Try to keep it at a *medium* speed. **Note: While your machine is now in bobbin winding mode, the needle (if installed) will continue to go up and down, so *keep your hand out of the regular sewing area!* This is a good general rule, but keep it in mind at this time.**



Once the bobbin is all the way wound, the piece that your pushed forward in step #3 will automatically bounce back to its original position. Snip your thread to release it. Your bobbin should be wound tightly and evenly. If it is loose and squishy, it has not been wound correctly and you must re-do it because it will not sew correctly and cause you problems if installed. If it is nice and tight and neat, you've wound the bobbin successfully and are ready to install it. TURN OFF YOUR MACHINE.

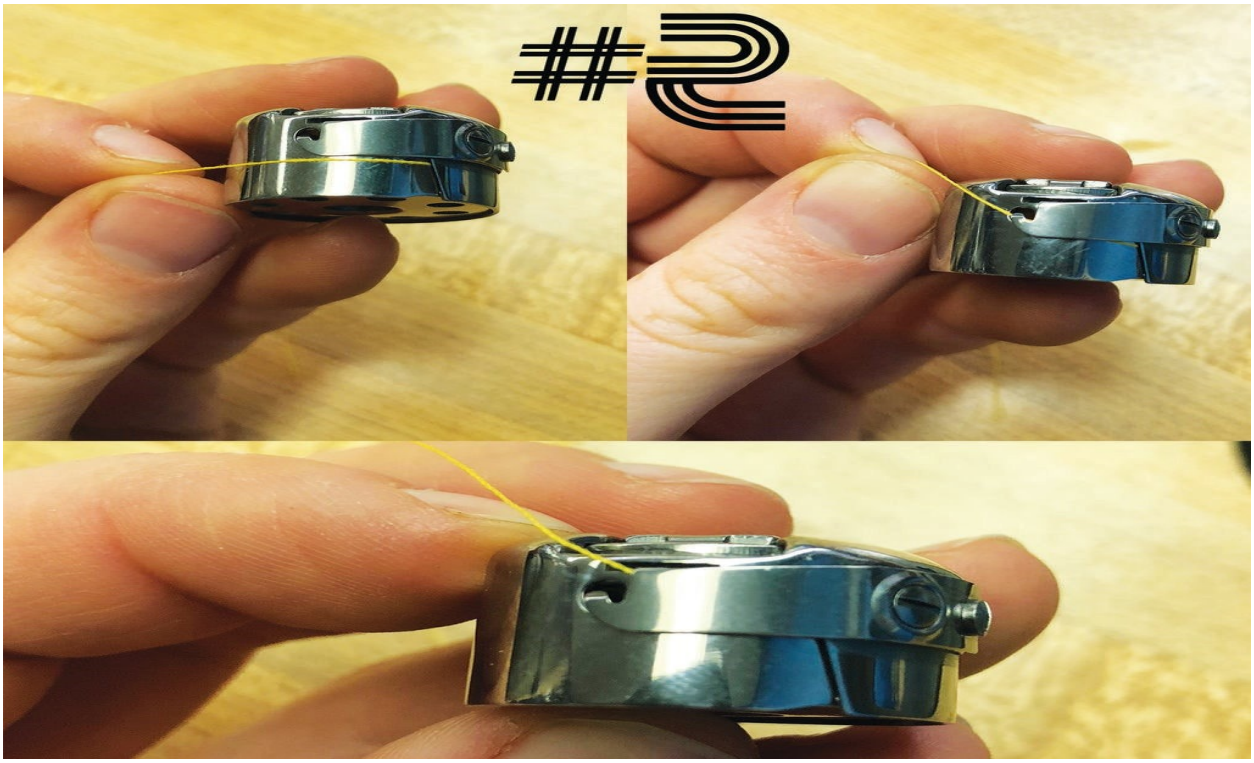
Step 2: Installing the Bobbin

Though the bobbin is successfully wound, it needs to go into its case before going into the machine. Once the bobbin is placed correctly in the bobbin casing, it is placed *underneath* the throat plate, in the underside of the machine.

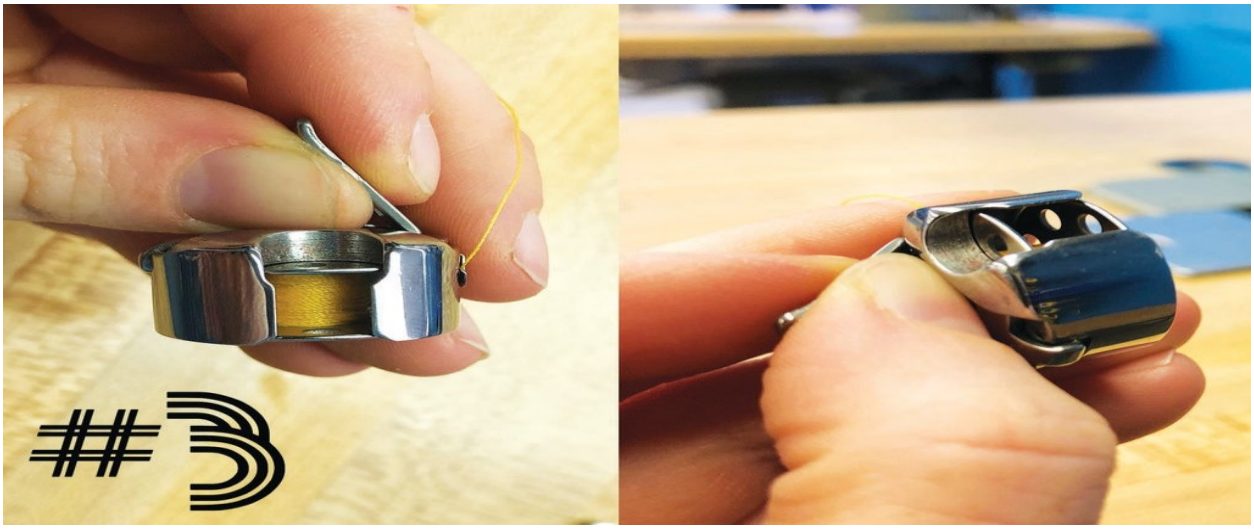
1. Position the bobbin so that the loose thread is coming from the ***top***, and facing *right.* This is super important!! The thread cannot be coming from the bottom and cannot be facing left. TOP RIGHT ONLY! Place it in this orientation into the bobbin case. Gently pull the thread through the small slit.

2. Pull the thread gently to the left and slightly back. With gentle pulling, it will slip underneath the thing metal piece behind the slit.

- At this point you need to test the bobbin tension. You will do this by holding the loose thread and dangling the bobbin case over your hand. With average/correct tension, the bobbin will slowly fall into your hand. If it falls super fast, the small screw on side of the bobbin case should be tightened a bit. If it doesn't fall at all, the screw needs to be loosened.

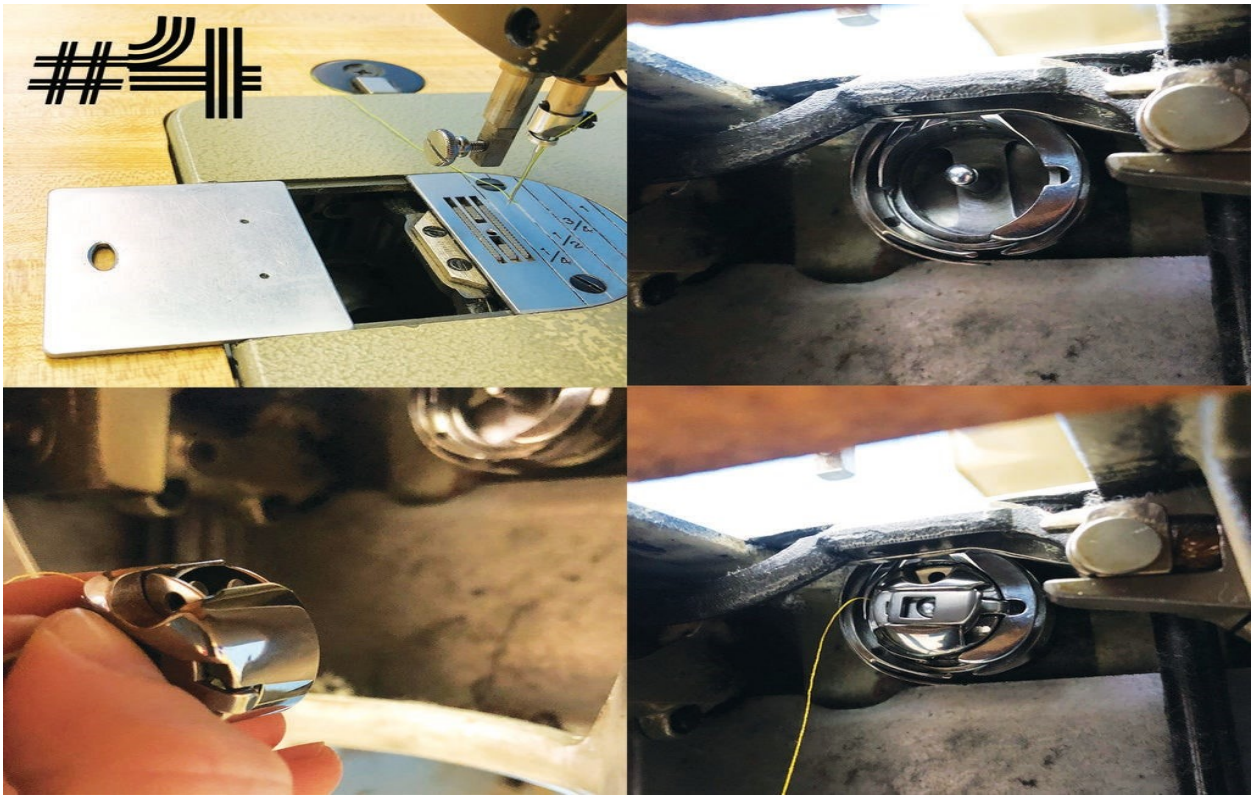


3. Pulling and holding the little tab on the top of the bobbin case will lock the bobbin into place.



4. Open the throat plate. Look *underneath* the machine, just under the throat place, and notice the small, bobbin case shaped indentation. This is where the bobbin case goes! While holding onto the lock tab, place the bobbin and bobbin case into the indentation, with the open gap **FACING UP.** The open gap will align perfectly with the machine.

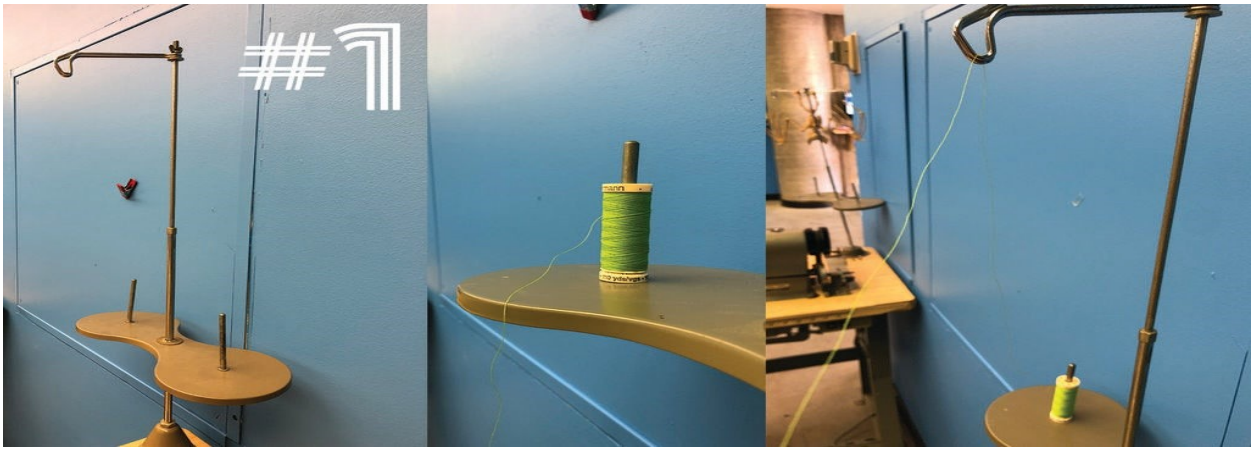
- ***IMPORTANT >>>*** Once you have placed it in the machine and the gap is facing up and aligned, gently jiggle the case from side to side to make sure it is locked in place!! The bobbin case can seem like it is in, but is not actually aligned. If you start sewing and the bobbin case is not properly locked into place, the needle will most likely lodge itself into the bobbin case and become fully stuck. This is NOT an easy fix, and will require a machine mechanic to fix.



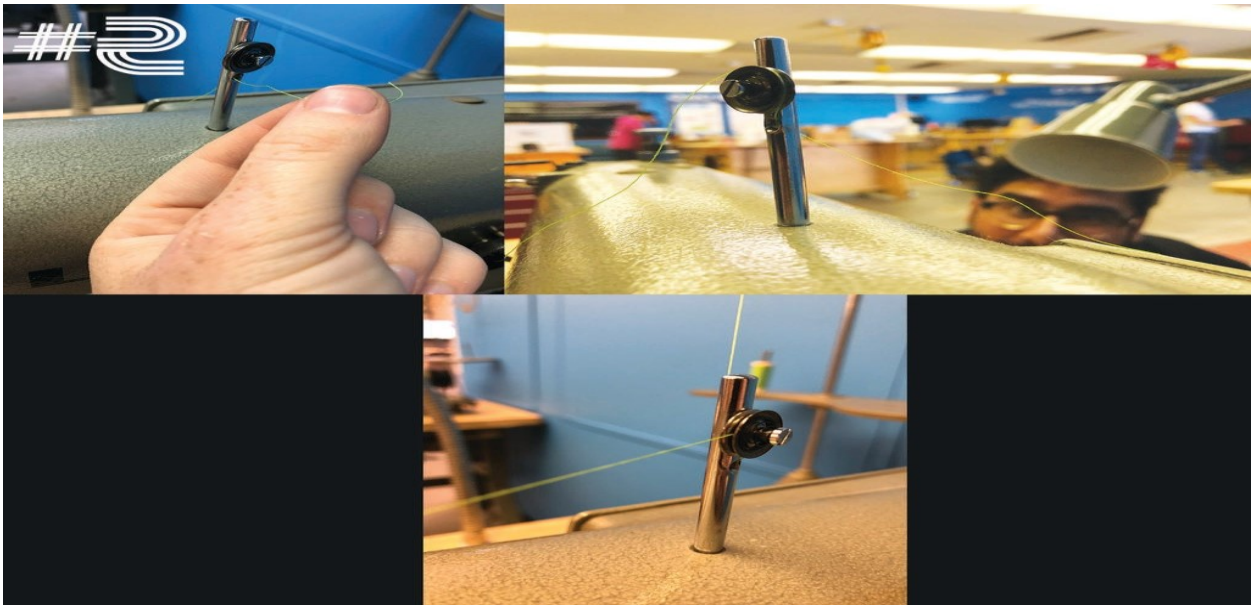
Step 3: Threading the Top Thread

This is arguably the most tricky part of threading your machine, simply because there are so many steps and they *must* be done in a super specific order. But fear not! I will provide a detailed picture guide for every step.

1. Place your top thread spool or cone on the top thread holder plate. Bring the thread through the wire guides above the plates. (You can put it through one or both, just make sure nothing is twisted or crossing.)

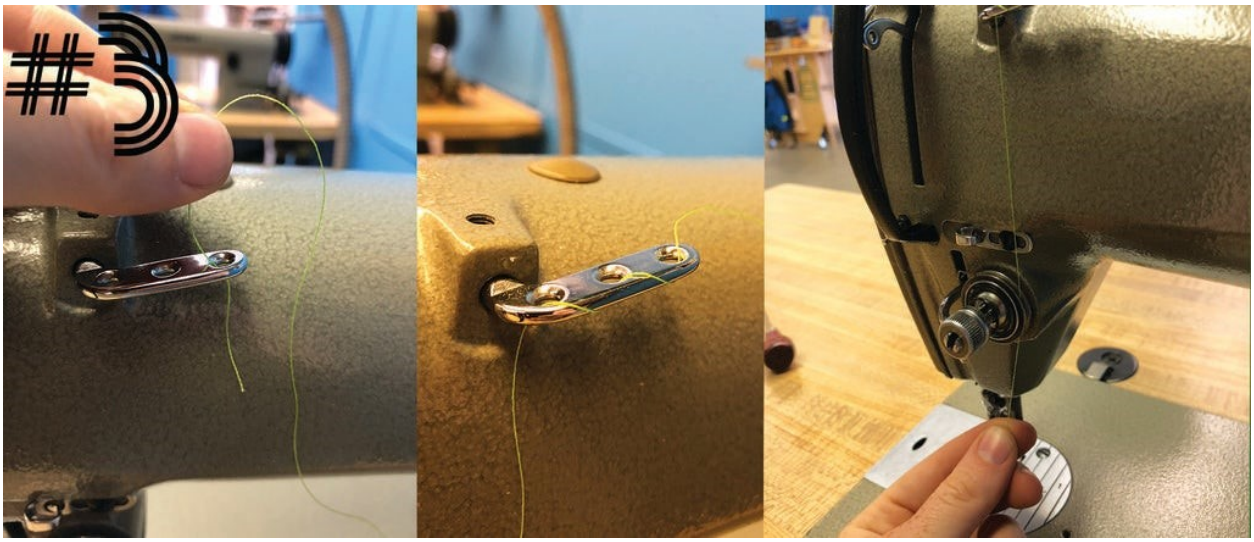


2. Bring the end of the thread through the small hole on the vertical metal piece on the top right of the machine. You should bring the thread in through the *back*. Then, from right to left, guide the thread across the top of the small disc attached to this piece. Pull it taught so it your thread is firmly inside of the disc, not just sitting loosely on top.

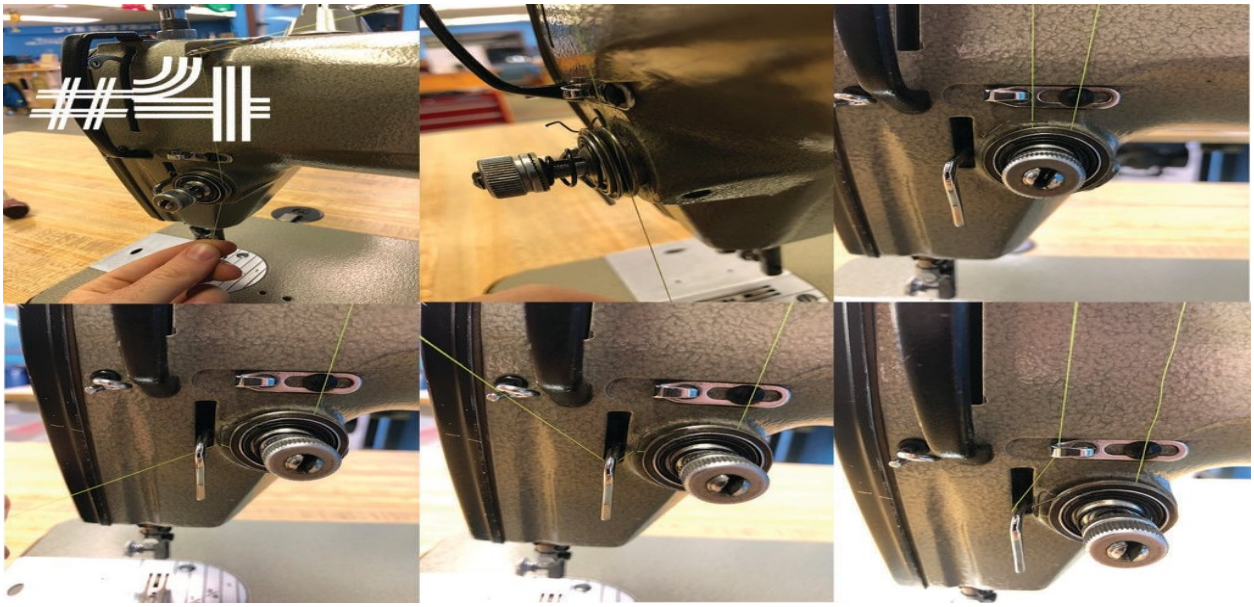


3. Bring the end of the thread over to the metal piece on the top left of the machine with three small holes. Start from the top and bring your thread *down* through the furthest right hole. Now bring your thread *down* through the next hole. Bring it *down* through the third hole. (This small piece

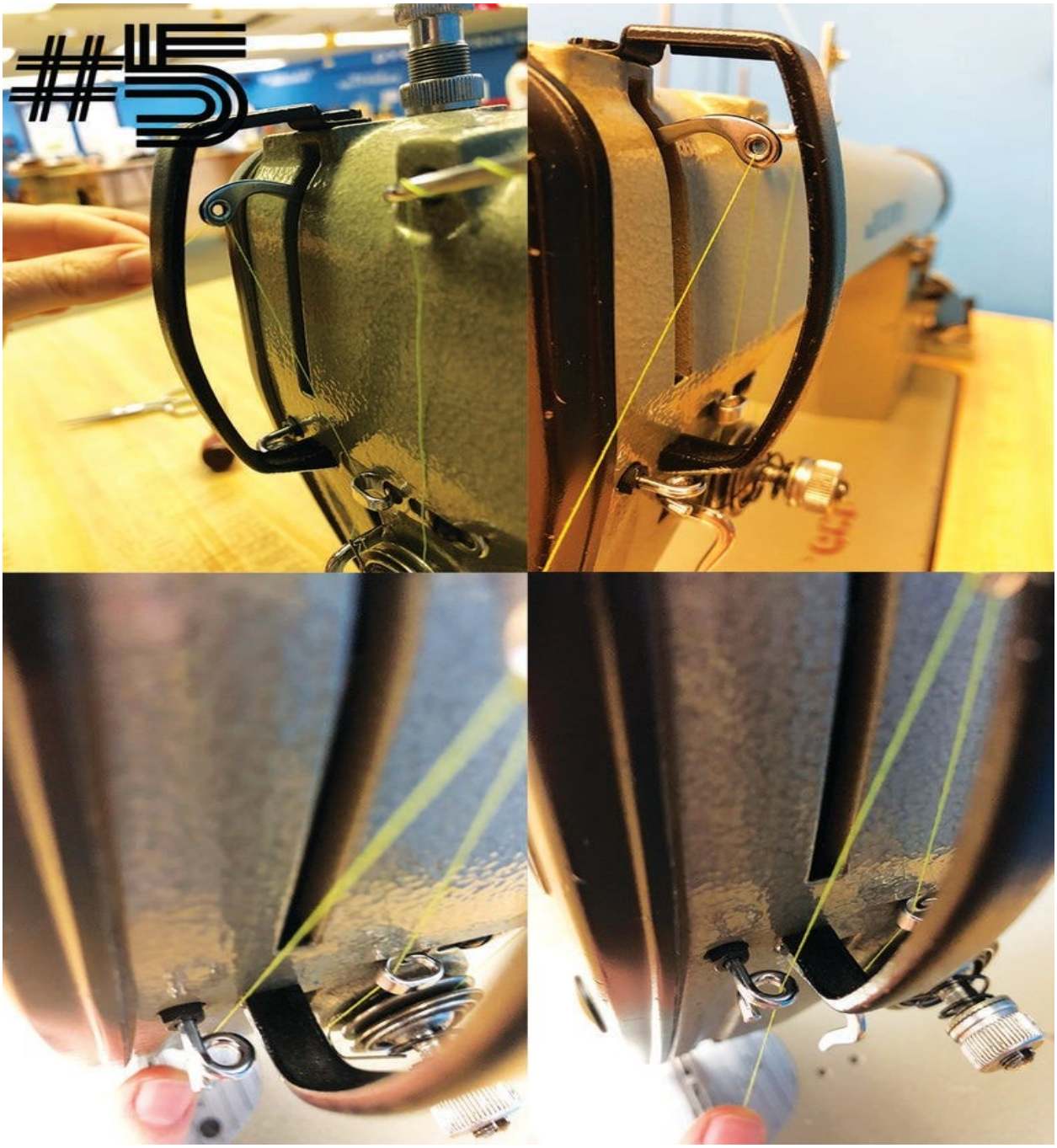
may be in a different orientation depending on your machine, most likely vertical instead of horizontal - follow these steps and you should be able to thread it properly.)



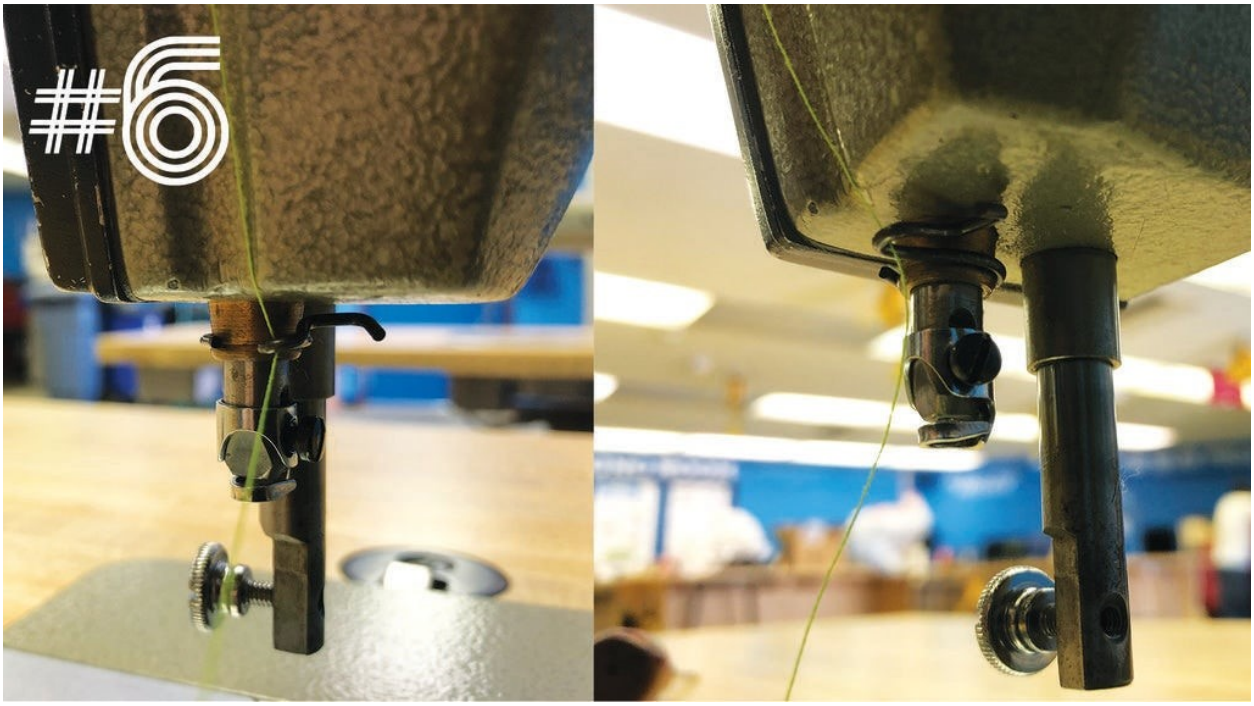
4. Now we get into some of the thread guides that are all right next to each other, so make sure you do everything in the correct order. Pull your thread down towards the disc just behind the tension knob. Guide the thread through the center of the disc (*not behind it; check this).* While sandwiched in the disc, pull it under, to the left and up, securing the thread in the disc. Now pull the thread down next to the disc and pull it under the shiny metal piece directly to the left of the disc. Now pull it up and under the small metal hook just above the disc.



5. Locate the thread guide with another small hole in it that is directly behind the black handle-like piece on your machine. Thread the end of your thread through this hole from right to left. Pull it down and behind the shiny wire loop location below it a few inches. Pulling the thread tightly behind this loop should situate it *in* the loop. (See pictures).



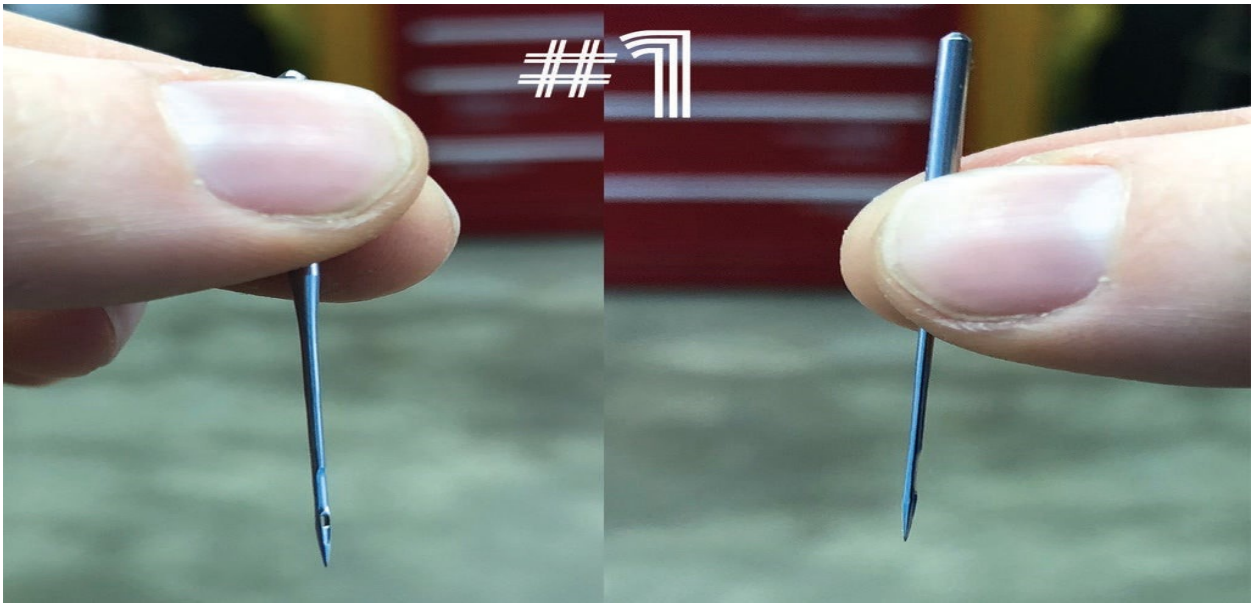
6. Right above where you will install your needle, you will see a small black wire guide. (This might not be black on your machine, but it should be in the same location.) Bring the thread behind this wire. The end of your thread should be facing down towards your throat plate.



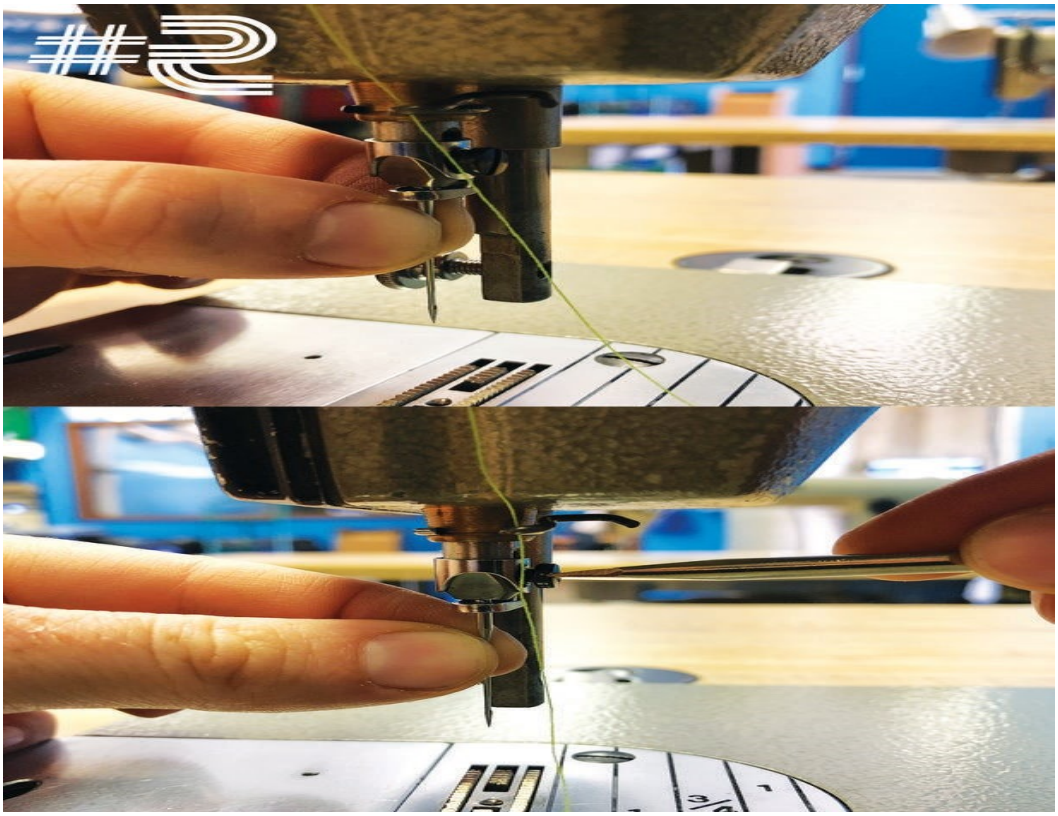
Step 4: Installing & Threading the Needle

Now that the bobbin is wound and installed, and the top threaded is threaded through all those many parts, you are ready to install the all important NEEDLE! **Note: Double check that you are using a needle for an industrial sewing machine! A size 12 or 14 is standard for medium weight fabrics.**

1. Take a close look at your needle. At the pointy end, you will see a small groove that cuts into the needle. This groove is called the ***scarf.*** When placing the needle into the machine, the scarf must be facing ***right.***



2. Underneath where the thread is hanging is a small hole where the needle fits in. Holding it tightly in your left hand with the scarf facing right, insert your needle into this opening and push it all the way up. With your right hand, grab one of your small screwdrivers and screw the small screw to the right of the needle tightly until the needle is in place. **TIP: Place a piece of paper or fabric over the throat plate to avoid dropping a loose needle into the machine (it's a pain in the behind!!).**

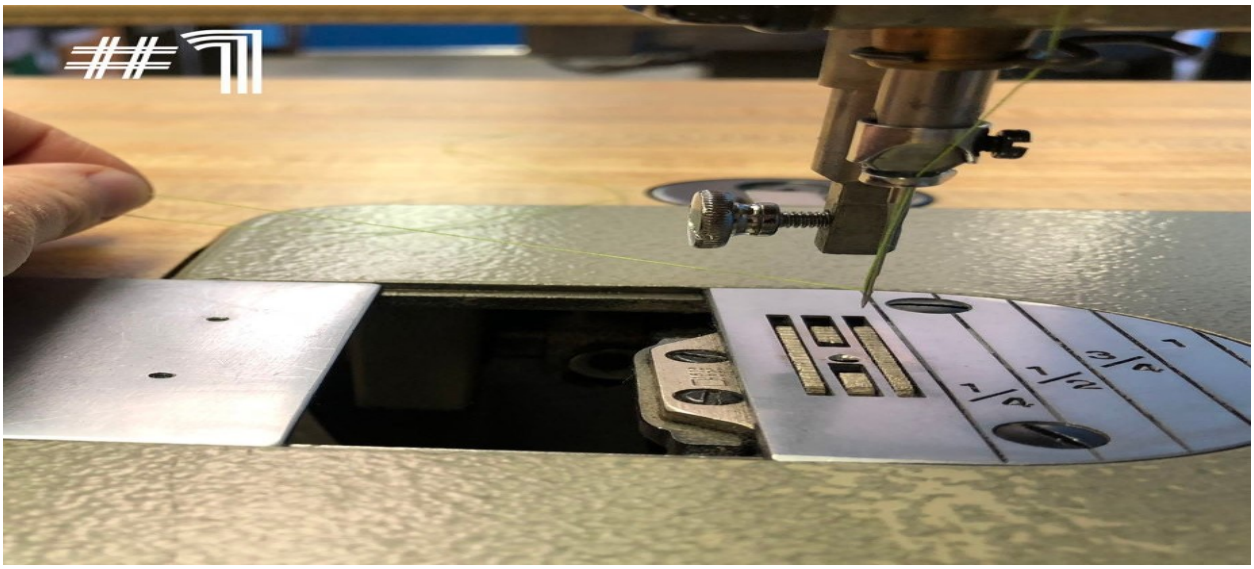


3. Pull the thread behind the last small metal thread guide. From left to right, thread the end of your thread through the eye (hole) of the needle. Pull the end of the thread to the back.

Step 5: Bringing Up the Bobbin Thread

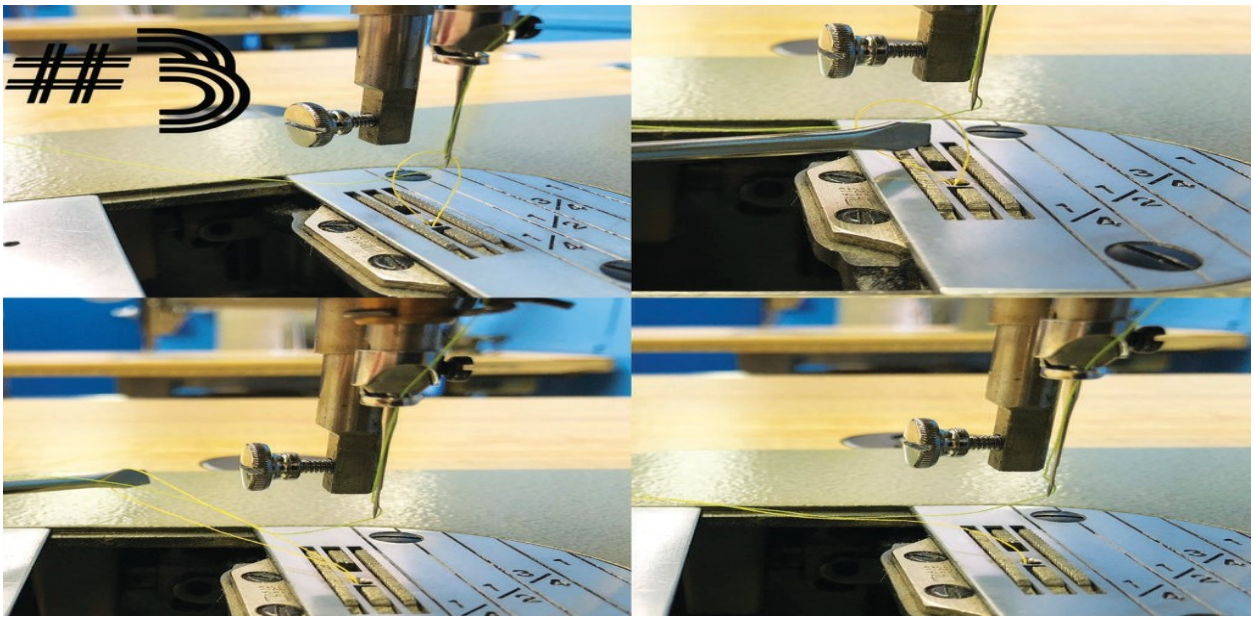
Bringing up the bobbin thread is the final step in threading your machine before sewing. You will be using your hand wheel for this part of the process.

1. Keep the bobbin cover plate open. With your left hand, pull the top thread gently to the left/back and hold it in place.

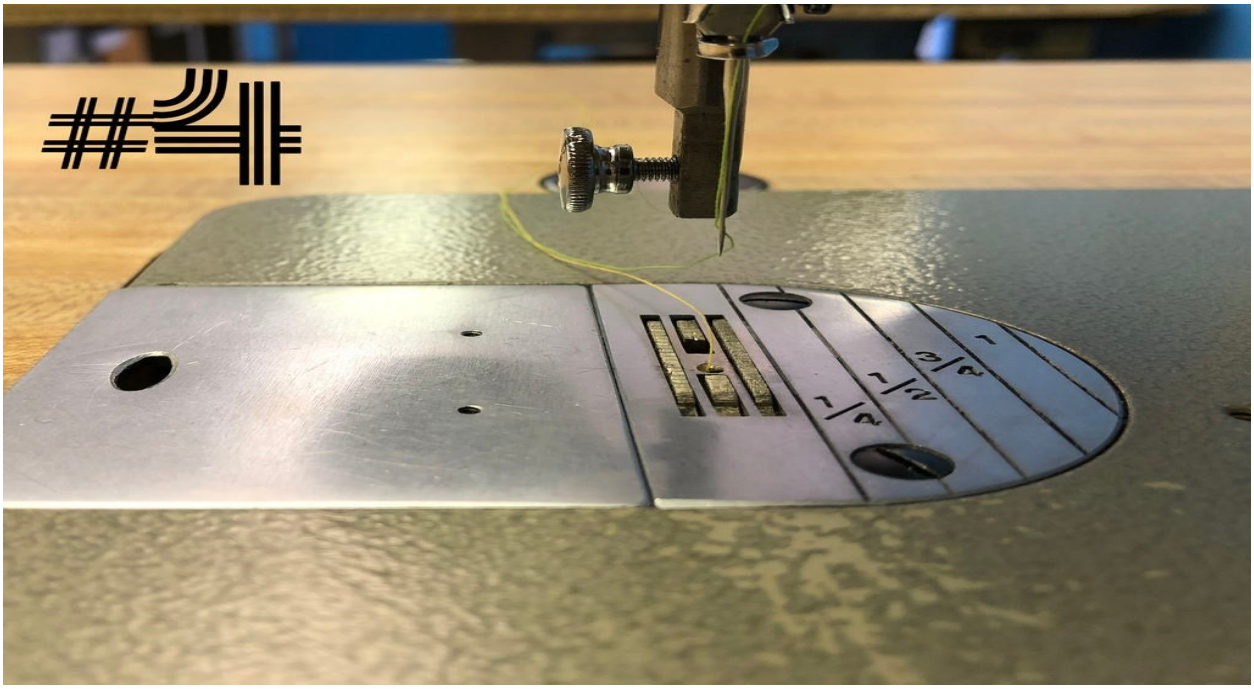


2. Turn the hand wheel slowly towards you until the thread from the bobbin jumps up from the bottom of the machine. You should see it looped around the top thread in between your needle and the feed dogs.

3. Use one of your screw drivers to pull the loop out, leaving you with a bobbin thread that is ready to go!



4. Pull the threads to the back and close the throat plate.



Self check -	Short answer

II Matching Type

Select the best answer from column "B" for each question in column "A" .

Column A	Column B
_____ 1. Control the stitch length by regulating the distance which the feed dog moves the fabric for each stitch	A. Take-up lever B. Tension regulator
_____ 2. Separate the needle and the bobbin areas	C. Throat plate & slide cover
_____ 3. Device used during threading of over lock m/c	D. Feed dog
_____ 4. Used to hold the cloth in place for stitching	E. Presser foot
_____ 5. Used to pull the cloth up to the needle	F. Pressure regulator
_____ 6. Used to help regulate the initial speed of m/c	G. Clutch screw
_____ 7. Works up and down with each stitch to take-up the slack in the thread	H. Bobbin winder I. Spool pin
_____ 8. Controls the force exerted on the fabric by the Presser foot	J. Stitch length regulator K. Hand (Balance) wheel
_____ 9. Holds the spool of the thread	L. Tweezer
_____ 10. Controls the interlocking of the thread as they form a stitch	

Operation sheet - 1	Inserting the needle to SNLS industrial sewing machine

Operation sheet

OPERATION TITLE: Inserting the needle to SNLS industrial sewing machine.

PURPOSE: To show how to insert the needle for SNLS Industrial Sewing machine.

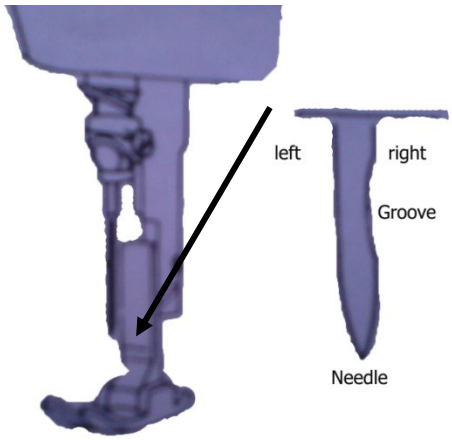
CONDITIONS OR SITUTATIONS FOR THE OPERATION:

- Trainees should know the structure of needle type DBX1.
- Trainees should know the parts used to insert the needle to SNLS Industrial sewing machine..
- Switch off the main switch before commencing the adjustment.

EQUIPMENT,TOOLS AND MATERIALS: SNLS Industrial sewing machines, needle type DB X 1 of size 8-18, thread wounded bobbin with case, small or medium screw driver, scrap of fabric for testing.

PROCEDURES:

1. Switch off the main switch.
2. Using hand wheel, Move the needle bar to its highest stroke.
3. Loose screw 1.
4. Remove the broken needle,
5. Insert the new one until it gets stack and the scarf is towards the right hand side.
6. Securely tighten screw 1.
7. Thread the machine,
8. Testing. i.e. hold approximately 10 cm length of thread from the needle eye up right and rotate the hand wheel slowly until the bobbin thread is seen above the throat plate. If NOT make an amendment in the insertion of the needle provided all adjustments are okay!



PRECAUTIONS:

- Switch off the main switch before inserting the needle.
- Use the specified size of screw driver for loosening & tightening of the screw.
- Do NOT operate the machine before checking the correctness of the inserted needle.
- Use new needle and change the needle immediately when it is broken or it gets blunt.

QUALITY CRITERIA:

1. During testing, the needle should NOT collide with presser foot and throat plate; and the needle thread should catch the bobbin thread.
2. The needle should NOT collide with the presser foot.

Lap test - 1	Inserting the needle to SNLS industrial sewing machine.

JOB TITLE– Inserting the needle to SNLS industrial sewing machine.

UNIT OF COMPETENCY:-Prepare sewing machine

OBJECTIVES: -At the end of this session trainees will be able to

The student will **insert the needle to SNLS industrial sewing machine.**

LABORATORY WORK: Materials Required:

Sewing machine

Needle;

Screw driver;

Supplies and Materials	Tools and Instruments	Equipment
Needle; Screw driver	Sewing machine	

EVALUATION: Trainer examination and inspection, using the following criteria;

1) All steps were completed in the correct sequence,
2) The needle is inserted completely,
3) The size and the name indicated on the needle packet must be compatible with the machine.

Operation sheet - 2	Threading a SNLS Industrial Sewing Machine Head

Operation sheet

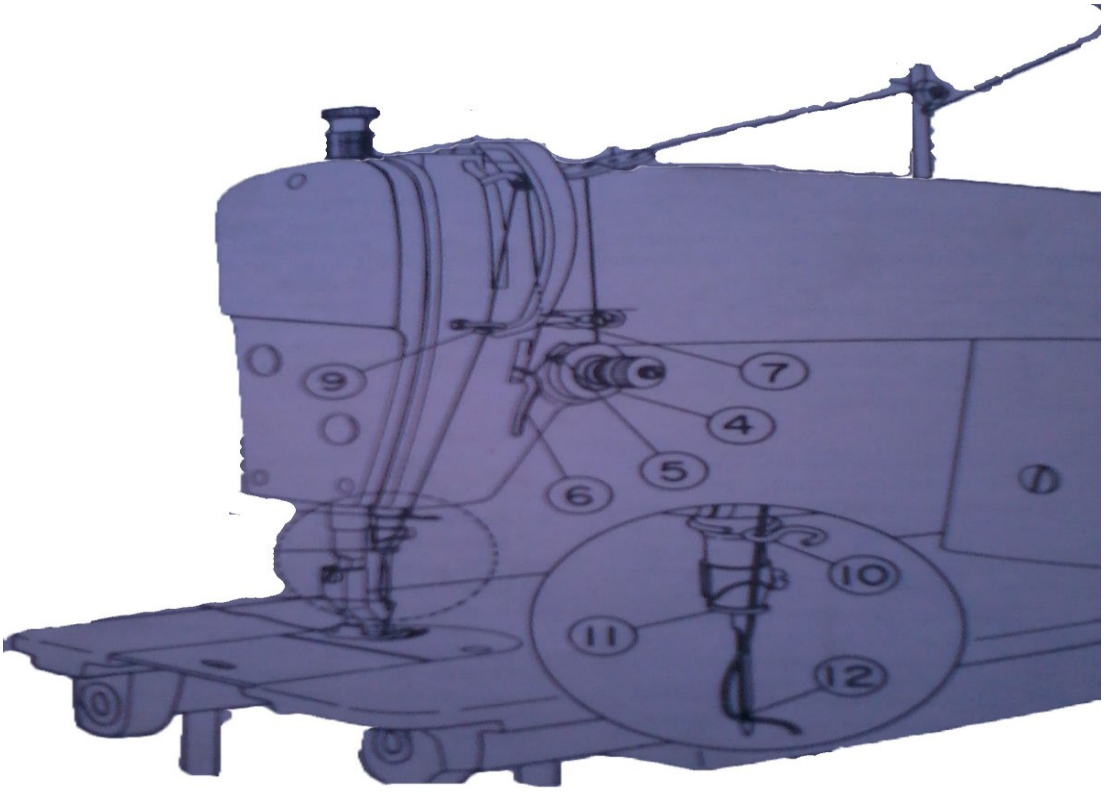
OPERATION TITLE: Threading a SNLS Industrial Sewing Machine Head

PURPOSE: To thread a SNLS Industrial Sewing Machine Head as per the shown picture & instruction.

CONDITIONS OR SITUTATIONS FOR THE OPERATION: Trainees should be introduced the different parts of SNLS Industrial Sewing machine.

EQUIPMENT,TOOLS AND MATERIALS: SNLS Industrial sewing machines, needle type DBX1 or DAX1, Sewing thread, thread trimmer/ scissor & Tweezers.

PROCEDURES:



Steps:

9. Check the correctness of the needle attachment. The short, groove around the needle eye should be towards the right.
10. Load the cones or spools on the cone trays installed on the thread stand.
11. Thread the needle thread as shown below.
12. Check whether the threading is right or wrong. And take a corrective action.

PRECAUTIONS:

- Switch off the main switch before commencing threading.
- Turn the hand wheel to lift the needle bar to its highest point of its stroke when you arrive to insert the thread thorough the eye of the needle.
- Do NOT press the foot pedal towards back when you try to rotate the hand wheel.
- Practice the threading of SNLS Industrial Sewing Machine Head, because, if the threading is wrong, the machine may NOT work properly or improper stitch may be created.

QUALITY CRITERIA:

3. The machine should work properly.
4. Approximately, ideal stitch should be created when tested.

Lap test - 2	Threading a SNLS Industrial Sewing Machine Head

JOB TITLE– Threading a SNLS Industrial Sewing Machine Head

UNIT OF COMPETENCY:-Prepare sewing machine

OBJECTIVES: -At the end of this session trainees will be able to

The student will **thread a SNLS Industrial Sewing Machine Head.**

LABORATORY WORK: Materials Required:

Sewing machine

Needle;

Screw driver;

Sewing thread;

Supplies and Materials	Tools and Instruments	Equipment
Needle Sewing thread	Sewing machine	Screw driver

EVALUATION: Trainer examination and inspection, using the following criteria;

1) All steps were completed in the correct sequence,
2) The thread is inserted from top to bottom entirely,

Information sheet - 2	Identifying machine requirements

2.2 Identifying machine requirements

ONE OF THE MOST IMPORTANT THINGS WITH LEARNING TO SEW IS TO HAVE A GOOD UNDERSTANDING OF THE ESSENTIAL FUNCTIONS OF A SEWING MACHINE AND HOW THEY WORK.

These include:

- WHAT TYPE OF THREAD TO USE FOR EACH PROJECT. (see 2.2.1 for thread type)
- HOW TO WIND A BOBBIN.
- HOW TO THREAD THE MACHINE PROPERLY.
- WHICH IS THE PROPER TYPE AND SIZE OF NEEDLE TO USE?
- HOW TO PLACE THE BOBBIN INTO THE SEWING MACHINE.
- HOW TO ADJUST TENSION CORRECTLY.

2.2.1 Thread type and needle type

There are all around threads out there on the market which consists of sew-all types of thread. The contents are of 100% polyester. You can use this thread in all different kinds of materials and fabrics. For use in sewing machines and hand sewing. Therefore, the purpose of this thread is useful for seams, quilting seams, buttonholes, stitching on buttons, decorative stitches, decorative seams and even in the serger.

Overlock Thread This thread is for the serger. Overlock thread is the same as serger thread. It usually consists of a spun polyester. For use in high-speed sewing and serging, Serger Cone Thread is ideal to use for all kinds of sewing projects with your serger. It is a beautiful thread when used with multiple cones. The composition of this thread is 100% polyester. It is designed to tiny in sergers at high speeds and different tensions. Each large cone spool of sewing thread contains a couple thousand yards. Do not use this thread in sewing machines. It isn't as strong as regular sewing thread and can create a lot of thread dust in your sewing machine.

THE USE OF HAND SEWING THREAD SHOULD NEVER BE PUT TO USE IN ANY SEWING MACHINE. YOU CAN USE ANY SEWING MACHINE THREAD AS HAND SEWING THREAD.

Self check – 2	Discussion

Discuss about the following question

1, why do we use 100% polyester sewing thread in all different kinds of materials and fabrics?

……

……

Information sheet – 3	Selecting threads according to specifications

2.3 Selecting threads according to specifications

Thread is a tightly twisted filament of two or more plies of yarn that are circular when cutting in cross section. 95% of sewing thread is manufactured for the commercial and industrial purposes. Usually, thread is spinning on spools or large cone that is marked on their ends with the size or fineness of the thread. Currently, thread manufacturers produce several categories of thread for different purposes with thousands of colors. Various improvements of thread industry have given a wide variety of choices along with greater quality.

Sewing threads are manufactured by twisting staple fibers or by continuous filaments yarns. At times two or more yarns are combined to make the thread to get the required strength. There are various factors depending on general and specific end uses, which when carefully analyzed can help in better selection of appropriate thread for sewing apparel to achieve optimum performance. Factors like type of seam, stitch type, stitches per inches, sew-ability, loop strength, linear seam strength, type of material being sewn, type of sewing machines, elongation, shrinkage, abrasion resistance, color fastness and resistance to chemicals, heat light conditions under which the product must perform; normal life of the product; and cost effectiveness etc. must be considered while selecting sewing thread.

Types of Sewing Threads:

THERE ARE THREE MAIN TYPES OF INDUSTRIAL THREAD; NYLON, POLYESTER, AND KEVLAR(R).

NYLON INDUSTRIAL SEWING THREAD

The most common use is nylon industrial thread. It comes in different weights for different sewing

applications. Use nylon thread for projects that are not subject to UV light (sunlight). Because, UV light will fade, discolor and break down the thread over time.

POLYESTER INDUSTRIAL SEWING THREAD

Use Polyester in applications where items are subject to UV light. It is colorfast and will not degrade and break down over time. Great for use when sewing outdoor cushions, outdoor canvas, and marine applications.

KEVLAR(R) INDUSTRIAL SEWING THREAD

Kevlar(R) thread is extremely strong, and you can sew with it at high speeds. Because of its high tolerance of extremely high heat, the use of Kevlar(R) in applications where the temperature can get upwards of 400 degrees is recommended. It will not melt or break under those circumstances. Uses for this thread include fire suits, tactical gear, racing suits and other various items where strength and extreme temperatures are in play.

Kevlar(R) thread comes in two types; bonded and spun. Bonded is the strongest of the two.

Self check – 3	Short answer

1. Write the main type of industrial sewing thread

…….

2. Write down some of the factors considered while selecting sewing thread

…….

Information sheet – 4	Checking needle types, attachments and parts

2.4 Checking needle types, attachments and parts

Needle

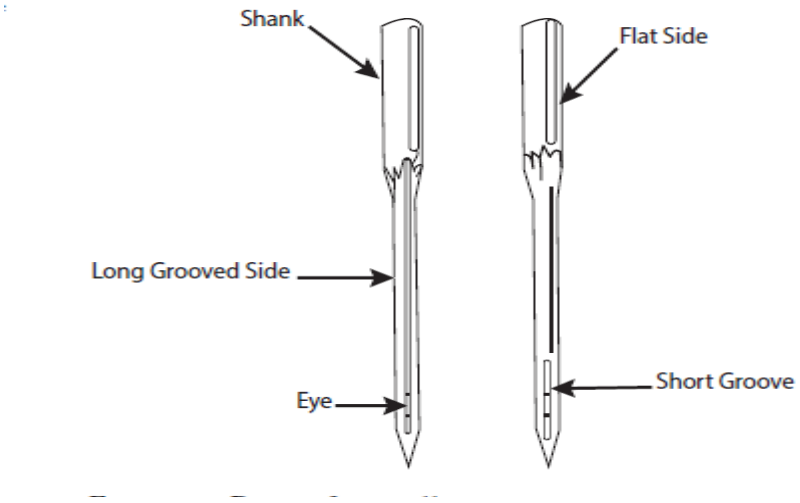
First, be sure the needle is the proper length. Use the needle length or number recommended in your manual.

Second, use a needle with a diameter that is suitable for the fabric and thread size you intend to sew on. Charts in your operator's manual, in a sewing machine center, or reputable online websites give the recommended size for sewing with different thread sizes. Using a larger diameter needle results in an unattractive stitch with larger than necessary needle holes in the fabric.

Third, be sure the needle is straight and does not have a dull point or burr.

Fourth, choose needles for sewing special fabrics, such as a ballpoint needle for knits and a wedge needle for leather.

The needle should be inserted in the needle bar clamp with the long groove of the needle facing the side from which you thread the needle (Figure 1). It should be inserted all the way into the clamp until it hits the stop pin. On machines with adjustable needle bar housing, adjust the position of the needle bar until the needle goes through the center of the needle hole in the needle plate.



(Figure 1)

Needle Plate (Throat Plate)

Manufacturers of some machines recommend using the needle plate with the round hole for straight stitching and the elongated hole for the zig-zag stitch. Unless you use the proper needle plate, you may experience skipped stitches when making a straight stitch. This is especially true when sewing some synthetic fabrics. Check the needle (throat) plate for rough places and remove them with an emery paper or cloth.

Feed Dog

The teeth on the feed dog should project above the needle plate so that the bottom of the teeth, or serrations, are level with the top of the needle plate when the dog moves the material before the next stitch is made by the needle.

A good general setting is one that results in 10 to 12 stitches per inch of seam. On very thin and fine material, it may be necessary to use a shorter stitch such as 14 to 16 stitches per inch of seam. On leather or vinyl, a longer stitch may be more desirable, such as 6 to 10 stitches per inch of seam.

Presser Foot

There should be just enough pressure on the presser foot to hold the fabric on the feed dog so that a uniform length of stitch is made. As a general rule, heavy fabrics require light pressure. Pressure may be increased by pushing down on an inner pin, or decreased by releasing an outer ring. Some machines may have a thumb screw or a dial to regulate pressure. Check your machine booklet for instructions on how to adjust the presser foot of your machine.

On slippery fabrics, loosely knit fabrics, vinyl, or velvet a roller-type presser foot may produce better feeding than the standard presser foot. When darning, either reduce the pressure on the presser foot or lower the feed dog on machines with a drop feed button, or use a cover plate.

Basic apparel production

Level I

LEARNING GUIDE # 37

UNIT OF COMPETENCE: Prepare sewing machines

MODULE TITLE: Preparing sewing machines

LG Code: **IND BAP1 M06 LO 3 LG 37**

TTLM Code: **IND BAP1** TTLM 1019V1

LO3 Check machine performance

Instruction sheet	Learning guide - 3

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics.

- ✓ Tension faults are identified and corrected/adjusted according to specifications
- ✓ Defect thread performance is identified and corrected
- ✓ Stitch length is set and tested against specifications
- ✓ Presser foot selection and performance is checked and changed as necessary
- ✓ Machine is tested for correct operation

This guide will also assist you to attain the learning outcome stated in the coverage. Specifically up on completion of this learning guide, you will be able to: -**Check machine performance**

Learning Instructions

1. Read the specific objective of this learning guide.

2. Follow the instruction describes.

3. Read the information, and try to understand what are being discussed. Ask your teachers for assistance if the content is hard.

4. Accomplish the self-check.

5. Ask Key answers from your teachers or you can request your teacher to correct your Answer. You are going to get the key answer only after you finished answering the self-check.

6. Submit your accomplished self-check. This will from part of your training portfolio

Information sheet 1	Identifying and correcting/adjusting tension faults

3.1 Identifying and correcting/adjusting tension faults

Thread Tension

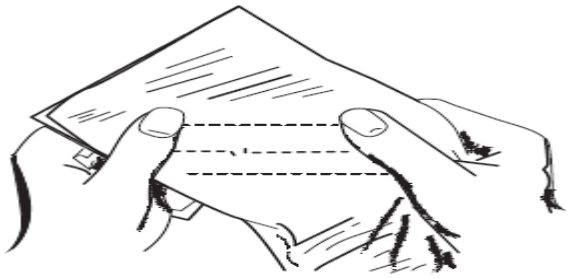
Upper and lower tension must be balanced to produce a perfect stitch. The upper tension is located differently on different machines. It may be on the face plate, on the face of the needle bar housing, on the front of the needle bar housing, or on the upper arm of the machine head.

The lower tension, located on the shuttle or bobbin case, is adjusted by a screw (Figure 1). If two screws fasten the lower tension spring to the bobbin case, adjust by turning the screw nearest the center of the spring—**not the screw on the end**.

If, during the cleaning, the lower tension spring has been removed or its adjustment changed, the adjusting procedure is the same as in the ordinary use of the machine. That is, assume the lower tension to be correct until proved wrong. Make all adjustments on the upper tension first.

If the lower tension has been disturbed, set both lower and upper tension so there will be a slight drag on each thread. Use the same size thread on both bobbin and spool. After adjusting the tension, take a look at the stitching the machine makes. To help you to see the stitches clearly, use contrasting colors of thread on the spool and in the bobbin. Set the stitch-length control for a medium stitch length. Fold a 6- to 8-inch square of sheeting or average weight cloth and stitch diagonally across it at an angle of about 45°.

Now inspect the stitching (Figure 1). In a perfect stitch, threads are locked in the center, midway between the two layers of cloth, with no loops on the top or bottom of the seam and no puckers in the cloth (Figure 2).



(Figure 1).

(Figure 2)

If loops of the bobbin thread show on the top side of the seam and the top thread is straight, the upper tension is tighter than the lower. In this case, loosen the top tension (Figure 3).

(Figure 3)

If loops of the spool thread show on the underside of the seam and the lower thread is straight, the upper tension is looser than the lower and should be tightened (Figure 4).

(Figure 4).

Operation sheet - 1	Adjusting tension of thread on SNLS industrial sewing machine.

Operation sheet

OPERATION TITLE: Adjusting tension of thread on SNLS industrial sewing machine.

PURPOSE: To show how to adjust the thread tensions per the given diagram.

CONDITIONS OR SITUTATIONS FOR THE OPERATION: Trainees should know factors that affect the thread tension.

Trainees should know the parts used to adjust the thread tension.

EQUIPMENT,TOOLS AND MATERIALS: SNLS Industrial sewing machines, needle type DBX1 or DAX1, Sewing thread, thread trimmer/ scissor, scrap of fabric for testing & Tweezers.

PROCEDURES:

Step 1: Adjusting the needle thread tension

13. As you turn thread tension nut 1 clockwise (indirection A), the needle thread tension will be increased.
14. As you turn thread tension nut 1 counterclockwise (indirection B), the needle thread tension will be decreased.

Step 2: Adjusting the bobbin thread tension

1. As you turn tension adjust screw 2 clockwise (indirection C), the bobbin thread tension will be increased.
2. As you turn tension adjust screw 2 counterclockwise (indirection D), the bobbin thread tension will be decreased.

Step 3: Testing and Checking

3. Test and check whether the tension is properly adjusted or NOT. If the tension is still wrong, take corrective action by trial and error.

PRECAUTIONS:

- Switch off the main switch before pulling out the bobbin case from the hook.
- Turn the hand wheel to lift the needle bar to its highest point of its stroke before pulling out the bobbin case from the hook.
- Do NOT press the foot pedal towards back when you try to rotate the hand wheel.
- Approximate ideal stitch will be achieved through trial and error, so be patient and exercise repeatedly.

QUALITY CRITERIA:

5. Approximate ideal stitch should be achieved. i.e. the needle & bobbin thread should intersect at the middle of the fabric
6. No repeated thread breakage.

Lap test - 1	Adjusting tension of thread on SNLS industrial sewing machine.

JOB SHEET/Lap Test-1

JOB TITLE– Adjusting tension of thread on SNLS industrial sewing machine.

UNIT OF COMPETENCY:-Prepare sewing machine

OBJECTIVES: -At the end of this session trainees will be able to

The student will **Adjust tension of thread on SNLS industrial sewing machine.**

LABORATORY WORK: Materials Required:

Sewing machine
Sewing thread
Bobbin & bobbin case
Small & large screw drivers

Supplies and Materials	Tools and Instruments	Equipment
Sewing thread	; Sewing machine	Bobbin & bobbin case Small & large screw drivers

EVALUATION: Trainer examination and inspection, using the following criteria;

1) All steps were completed in the correct sequence,
2) The upper thread tension and lower thread tension balanced equally
3) The stitch should be perfectly balanced When tested on fabric .

Information sheet 2	Correcting and identifying defective thread performance

3.2 Correcting and identifying defective thread performance

Sewing thread plays an influential role in fabric seam design. Sewing thread tension varies during the sewing process of fabric. Quality of thread should be judged by breaking strength, elongation at break, thread liveliness and twist direction, but other properties of thread such as lubrication ratio, type of wax applied and thread ply also influence the sewing process and seam quality.

It was established that sewing thread size, structure, fiber type, lubrication ratio, type of finish and twist influences the sewing process. Thread tension in different zone of sewing machine and sewing thread elasticity plays a vital role in achieving good quality seam. Sewing thread construction-like ply needs to be well-thought-out for good seam quality.

Self check - 2	Discussion/short answer

1. Discuss about factors to judge the quality of sewing thread.
   …….
   …….

Information sheet 3	Testing and setting stitch length

3.3 Testing and setting stitch length

The **stitch length** determines how much fabric is fed under the presser foot. When the stitch is shortened, less fabric is fed under the presser foot, and when the stitch is lengthened more fabric is fed under the presser foot.

Stitch-length regulator

This device controls the stitch length by regulating the distance which the feed dog moves the fabric for each stitch. As stitch-length regulators control the size of the stitch, they also determine the number of stitches per inch. On certain machines, the position of the stitch-length regulator may be reversed for back stitching.

Stitch lengths:

2mm is the short stitch length that should be used for lightweight fabrics, for satin stitching, and decorative stitching.

2.5 - 3mm is the average stitch length range that should be used for medium weight fabrics.

4 - 5mm is the long stitch length range that should be used for basting and topstitching.

Self check - 3	Discussion/short answer

Write short answer for the following questions.

1. Why do we need to control the stitch length?

   .....
   .....

2. ……mm is the short stitch length that should be used for lightweight fabrics.
3. ……...determines how much fabric is fed under the presser foot.
4. ……..is the long stitch length range that should be used for basting and topstitching.
5. What is “stitch per inch” ……...

Information sheet - 4	Checking and changing presser foot selection and performance

3.4 Checking and changing presser foot selection and performance

The job of the presser foot on your sewing machine is to hold the fabric against the feed dogs and guide it in a straight line as you sew. That's why you have to raise the presser foot when you want to move your fabric out from under the needle. You can do quite a lot of sewing with just the standard foot that came with your machine, however, some techniques can be a bit of a challenge with this very basic foot. That's when it helps to know about all the great specialty feet that are available. Sewing machine feet come in a wide array of designs; picking the right one for the job can make things go so much easier and faster, and can also give you much more professional looking results.

All purpose foot

Also called the Standard Foot or Zig Zag Foot, this is foot that is traditionally attached when you lift your sewing machine out of the box. You can use the foot for all kinds of general sewing, just like the name implies: straight sewing, zig zig, even decorative stitching.

Zipper Foot

The Zipper Foot is used for – you guessed it – attaching zippers. But that isn't the only use of this versatile foot. Use it whenever you need to get in close, such as when creating your own piping.

Walking foot

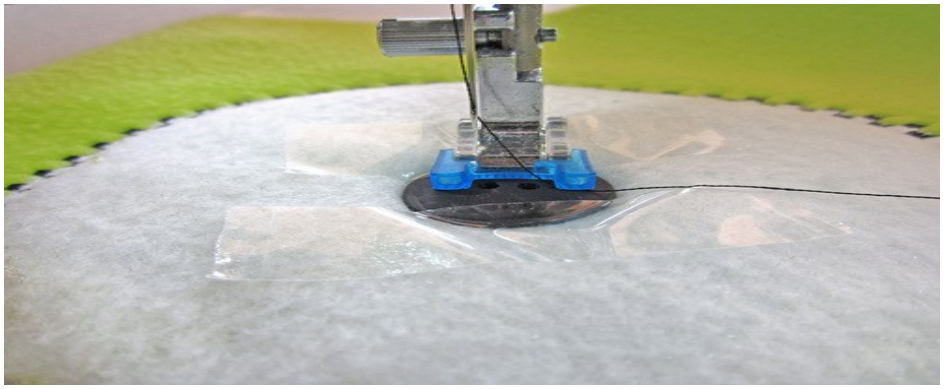
Use this when your fabric is slippery or when need to sew several layers at once without shifting. This is a favorite foot among quilters.

Button hole foot

This foot allows you to create buttonholes that exactly correspond to the size of the buttons you are using in your project. Simply place the button in the foot, and the machine uses the foot as a gauge as it creates a perfectly-sized buttonhole for you.

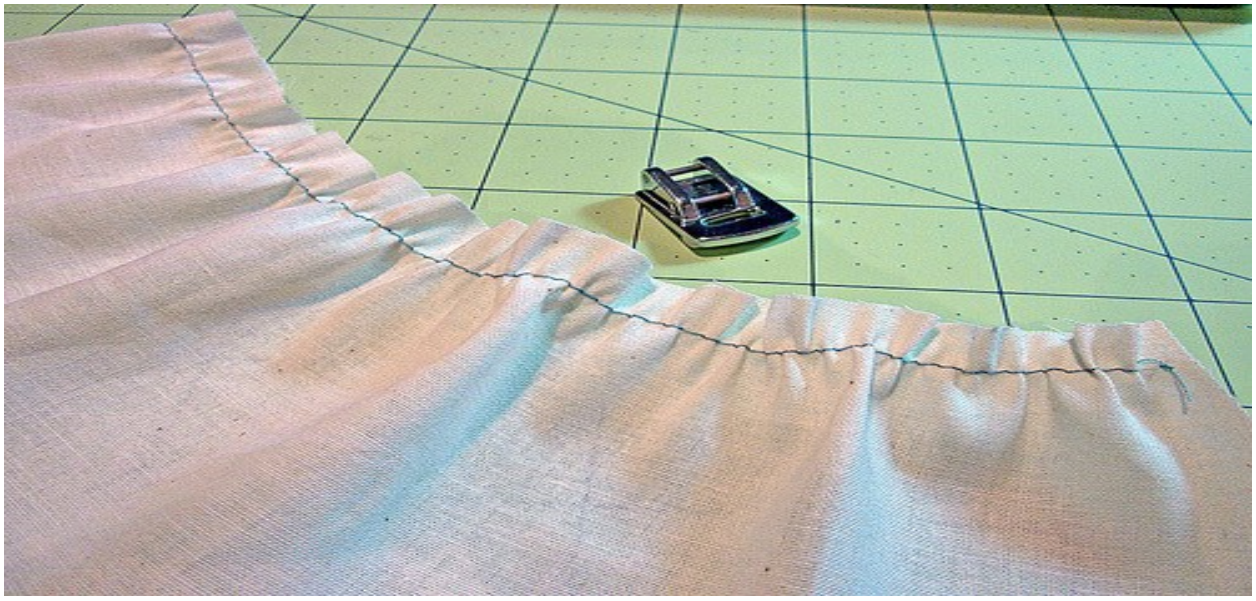
Button Sewing Foot

The Button Sewing Foot attaches buttons (Didn't see that one coming, did you?). It contains a bar on the bottom for extra stability, and often has a rubber covering to help grip the button as it sews. You can only use it to attach flat buttons; it doesn't work for buttons that have a shank back.



Gathering Foot

The Gathering Foot will create soft gathers in your fabrics. The bottom of the foot is specially designed to feed the fabric so it gathers between each stitch, creating a soft gathered edged as you sew. Density is controlled by varying the stitch length, the longer the stitch the more gathers. This is a different technique than full-on rufflers. We list more about the Ruffler foot below as well as a link to our ruffling tutorial.



blind hem foot

A blind hem is exactly what it sounds like: a hem with stitches you barely notice. It's perfect for window coverings, garment hems, or anywhere you want a clean finished edge. The Blind Hem Foot has a metal guide in the center. When sewing, the fold in your fabric will rest against this guide so you can maintain an accurate seam. The foot also has grooves on the bottom, which grip your fabric to prevent slipping as you sew.

Self check - 4	short answer

Write short answer for the following questions

1. What is the job of the presser foot?

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   Write the specific use for the following presser feet.

2. Zipper foot……..?
3. Blind hem foot……..?
4. Walking foot……..?
5. Button holing foot……..?

Information sheet - 5	Testing machine

3.5 Testing machine

Perform a basic stitch (two different lengths) on multiple fabrics, and evaluate the quality of the stitch. To test sewing machine, fill and load the bobbin, and sew a straight line changing the presser foot, and changing the tension, speed, and stitch type. Perform basic stitch on multiple layers of fabric and a quilt swatch, and evaluate the quality of the stitch.

Test your stitch settings on a piece of scrap fabric to make sure they're correct and the machine is on the right setting.

If stitches aren't being produced correctly, check to make sure the machine is properly threaded. Try re-threading; you sometimes can't tell its threaded incorrectly just by looking.

Check that you have the right tension set. Otherwise, stitches may not be produced correctly. Make sure you have the right needle for hard-to-sew fabrics, such as chiffon, denim, and leather. Evaluate the comfort of the pedal, buttons, and the hand wheel. Measure the sound of each machine while sewing.

Step 1

Sew a test seam. Using a small swatch of fabric, run a couple of seams down the middle of the square. Observe the top and bottom surface of the seams, using a magnifying glass if need be.

- Remember you want your stitches to look even on both sides of your fabric. If the thread is so tight it’s causing the fabric to bunch around it or if the stitching is loose and falling apart, you might have an issue with the tension.
- If your stitches look perfect and your sewing machine is sewing wonderfully, don’t touch your tension knobs!

Step 2

Identify your problem. You’ve sewn a test seam or two and you’ve inspected the seams. A perfect stitch will have threads locked midway between the two layers of cloth, with no loops on the top or bottom of the seam and no puckers in the cloth.[3]

- An easy way to think of the thread balance is tug of war. You have your top thread and your bobbin thread pulling on each side. If they're both pulling equally, the seam will be even and consistent. If one side is pulling too much, the thread from the other side will be visible.
- If the bobbin thread shows on the top side of the seam and the top thread is straight, the upper tension is too tight. If top thread shows on the underside of the seam and the lower thread is straight, the upper tension is too loose.

Step 3

Inspect your machine. There are multiple problems that could be causing issues with your sewing machine that aren't the tension. Make sure to check these possible causes before adjusting your tension knobs.

- Incorrectly threaded machine: Is all of the thread running through the thread guides? Is thread unwinding freely from the spool or is it catching? Is the bobbin inserted correctly?
- Dirty machine: Thread ends can get lodged between tension discs, around the bobbin case, and under the throat pale. This can cause an increase in resistance and restrict the thread flow. Check all of these areas to ensure they're clear.
- Damaged machine parts: Bent needles and bobbins and rough or damaged surfaces on the needle eyes, thread guides, tension discs, take-up lever, throat plate, presser foot, bobbin case, or in the bobbin area can all cause problems. Give your machine a general inspection and remember that even the tiniest damage can distort tension.

Step 4

Pay attention to your needles, threads, and fabrics. Different thread sizes on the top and in the bobbin can throw off your basic tension settings. A needle that is too large or too small can also unbalance your stitches. If you're getting puckers on a lightweight fabric, trying shortening the stitch length to 1.75mm. All of these small details can wreak havoc on your project so make sure you're detail-oriented when setting up your machine for a project.

- Polyester thread is a true all-purpose thread, and it's a good choice for most sewing projects. Wool thread, on the other hand, is very thick and if you were to use it, you'd have to adjust your tension.
- Common heavy duty fabrics include canvas and burlap while cotton and polyester are common fabrics with a standard weight. If you're switching between heavy fabrics and something of a lighter weight, you'd have to adjust your tension to keep the stitches even.

- Needles come in various sizes for different purposes. There are thicker needles designed for denim that won’t break when they’re being used and thin needles that won’t damage thin, delicate fabrics.

Self check - 5	Brief answer

Discuss about the following questions and write a brief answer

1. Write down all the necessary steps we have to follow when we test our sewing machine?

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References

1) Complete Guide to Sewing; THE READER'S DIGEST ASSOCIATION LIMITED; 1987.

2) Sturm, Grieser, Lyle and Roberts. Guide to modern clothing, pp 221-222

3) Jones, Frances M. Modern Sewing, c 1972, pp 32-38

Untitled handouts