Learning instruction	Learning guide 29

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

• Removal/replacement of consumable components or parts
• Replacement of fluids and lubricants
• Thorough cleaning of machine parts and assembly
• Flushing running machine with cleaning fluid to wash off dirt and gummed oil from bearing
• Completing records and other documentation of setting and maintenance work

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

• Remove/replace consumable components or parts
• Replace of fluids and lubricants
• Clean machine parts and assembly thoroughly
• Flush running machine with cleaning fluid to wash off dirt and gummed oil from bearing
• Complete records and other documentation of setting and maintenance work

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in number 3 to 7.
3. Read the information written in the “Information Sheet 1” and “Information Sheet
2. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-Check 1” in page 11 and “Self-Check 2” in page 16,” self check 3” in page 27 and “self check 4” in page 32s.
5. Ask your teacher to evaluate your work.

6. If you earned a satisfactory evaluation proceed to “Operation Sheet 1” in page 34-37,

“Operation Sheet 2” in page 38-40, “Operation Sheet 3” in page 41-47

. If your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Instruction #3.

7. Do the “LAP Test 1, and 2”in page 48, and 49 respectively (if you are ready). Request your teacher to evaluate your performance and outputs. Your teacher will give you feedback and the evaluation will be either satisfactory or unsatisfactory. If unsatisfactory, your teacher shall advice you on additional work. But if satisfactory you can proceed to next Learning Guide.

Information sheet 1	Removal/replacement of consumable components or parts

Regular planned preventive maintenance

- Mainer repairs
- Medium repairs
- Major over hauls

Mainer repairs current repair under taken to restore individual parts and assembles to working order.

The scale of work is comparatively small and is carried out on the spot at the machine

Workers shop or department maintenance fitters or shop mechanic.

Time not longer than the time a machine is expected to be idle and is laid down in the maintenance schedule.

Work to be done during minor repair

- Replacement of damaged bolts, keys, or worn parts
- Cleaning and truing of key ways
- Filling of burrs (rough edges) from journals bushes, and gear teeth;
- Mending or repairing of guards and protection devices;
- Welding of cracks

The total volumes of minor repairs in any periods is about 20% of the volumes of work of planned major over hauls

Medium repair

Medium repairs are minor over hauls and are carried out as planned in the maintenance scheduled by the maintenance men.

Medium repair include all maintenance activities which takes placed during routine work and minor repair.

Work to be done – involves partial dismantling of the machine, but not the foundation and frames

Worn parts are replaced or repaired

Mechanisms are adjusted, and the accuracy is checked.

Workers the work is supervised by the shop mechanic

Time should not exceed the time laid down on the schedule

The volume of the work is about 50%-60% of that of major over hauls

Major over hauls

This is the largest scheduled repair work

It involves complete dismantling of the equipment

Replacement or reconditioning of worn parts and assemblies including base plates

Over hauling is often combined with work to modify and modernize

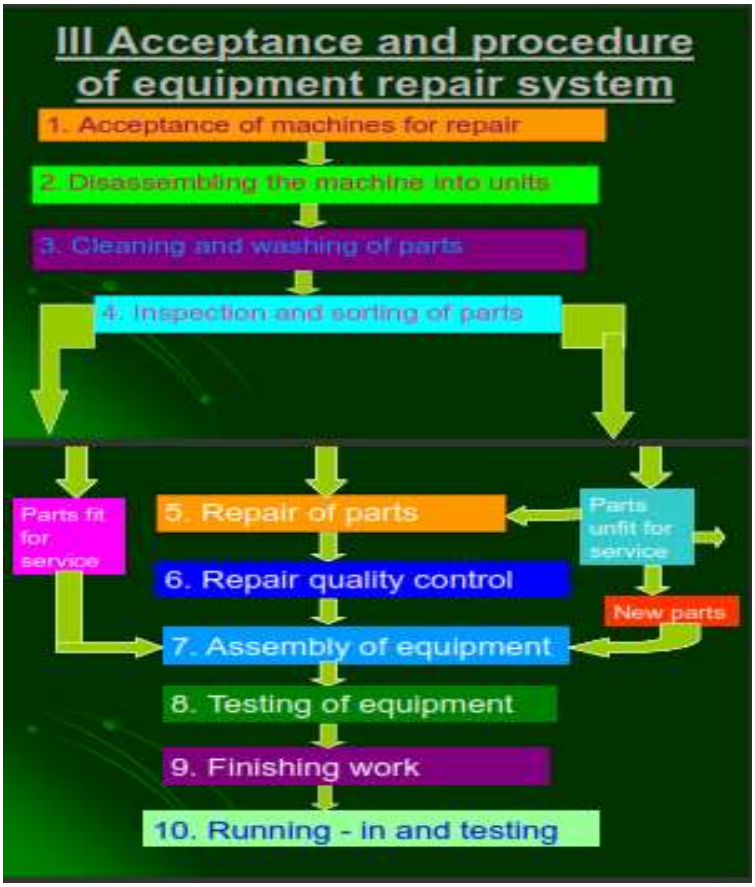
All levels are checked and fixed

All precision units are gauged and fixed

Down time, should not exceed the scheduled period

The scale of the work is determined from facts

- Inspection report
- Manufacturer recommendation
- Experience
- Design modification
- Statutory regulations



	month	S	O	N	D	J	F	M	A	M	J	J	A
NS	Machine code												
1	L0101	S	I	M	I	S	I	S	I	O	I	S	I
2	L0102	I	S	I	M	I	S	I	S	I	O	I	S
3	L0103	S	I	S	I	M	I	S	I	S	I	O	I
4	L0104	I	S	I	S	I	M	I	S	I	S	I	O
5	L0105	S	I	S	I	M	I	S	I	S	I	O	I
6	L0106	I	S	I	M	I	S	I	S	I	O	I	S
7	L0107	S	I	M	I	S	I	S	I	O	I	S	I
8	L0108	I	S	I	M	I	S	I	S	I	O	I	S
9	L0109	S	I	S	I	M	I	S	I	S	I	O	I
10	L0110	I	S	I	S	I	M	I	S	I	S	I	O
11	L0201	S	I	S	I	M	I	S	I	S	I	O	I
12	L0202	I	S	I	M	I	S	I	S	I	O	I	S
13	L0203	S	I	M	I	S	I	S	I	O	I	S	I
14	L0204	I	S	I	M	I	S	I	S	I	O	I	S

15	L0205	S	I	S	I	M	I	S	I	S	I	O	I
16	L0206	I	S	I	S	I	M	I	S	I	S	I	O

Where L01 –the line of the machine which located

The next digit indicate the number the machine in the line

General cleaning

As you clean the machine, it is best to clean one area at a time. Remove only a parts involved and be sure to note where each part is from, its positions, and which side is top. Remove all parts possible in order to clean the machine thoroughly. Keep the parts in order to make it easier to replace them.

When removing parts remember that “left is looses and right is tight” on practically all screws and bolts.

To remove any dirt and oil, dip a cloth to brush in cleaning fluid and scrub all parts of the machine that can be reached. Use a needle, knife, or other pointed instrument to dig or scrape away any remaining gummed dirt or lint in the feed dog, around the bobbin cases and in other areas.

How to change/ replace sewing machine needls

Changing your needle is a really simple operation if you are starting to get tangled a lot or drop stitches then changing your needle is good first fix to see if that sorts out

1. Loosen the needle set screw
2. Pull the needle downwards and out of the needle bar
3. Insert a new needle, push upward until the butt of the needle hits the stop
4. If using industrial sewing machine turn the needle so the scarf is on the same side as the hook assembly on the machine
5. Tighten the needle set screw

How to replace bobbin

1. Turn of sewing machine
2. Locate the bobbin compartment cover
3. Remove the cover to expose the compartment
4. Put the release lever away from the bobbin case. The release lever is on a hinge
5. Slip the bobbin case onto the spool inside the compartment

6 Release the leaver on the bobbin case

7 Twist the case gently to ensure the case is properly secured the case is

Different types of sewing machine parts/ components

Sewing machine components if it is damaged during production can replaced or changed by other spare parts when perform maintenance. The following figure show that different types of machine parts or spare parts it can easily replaced if damaged by other spare parts.

Bobbin

Rotating Hook

Bobbin Winder

Shuttle Hook

Shuttle Race

Raw-edge Binder

Feed Dog

Presser Foot with Lift Mechanisms

Tension Complete

Model

Self-Check 1	Written Test

Name: _____ **Date:** _____

Instructions:

Write all your answers in the provided answer sheet page

Test: Short Answer Questions

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

1. **How to change/ replace sewing machine needls? (5 pt)**
2. **How to change/ replace sewing machine bobbins?(5pt)**

Note: **Satisfactory rating - 15 points** **Unsatisfactory - below 15 points**

You can ask you teacher for the copy of the correct answers

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

_____

1. _____

_____

2. _____

__

_____

_____

Information Sheet-2	Replacement of lubricants

Replacement of lubricants, oils

Sewing machine to operate effectively regular lubricant oil change is great choice for maintaining the longevity of the machine. Failure to change the oil in conversely, carefully selected and changed at the right time oil may help to prevent damage of machine.

When it is necessary to change lubricants

It is important to note that the oil change frequency may depend on the using time or production time and conditions. Also, the air temperature, machine condition and the quality of lubricants used have a significant influence

Sewing machine lubricant alternatives

Sewing machine oil is used for the lubrication of all types of sewing machine and models. Used correct, this can enhance the performance and shelf life of sewing machine. Traditionally sewing machine oil was created from common lubricants, such as petroleum products, but a verity of other sewing machine oil alternative both artificial and natural are available, created from common source such as coconut oil.

Petroleum products

All sewing machine oil ingredients come from a product derived from petroleum, lubricants refer to as petrochemicals. These natural lubricants are composed of minerals and ingredients found in crude oil, specifically petroleum

Natural sewing machine oil alternatives

A verity of natural, safe and domestic lubricants can be used as effective sewing machines oils. Product such as olive, coconut and silicon oils that are normally found. The ingredient for individual's sewing machines oils are similar in their chemistry to the lubricant used for sewing machines.

How to oil sewing machine

Before to start the oiling process, it is important to make sure you have researched the ingredients' you are using as sewing machines oil as well as all the steps necessary to prepare the machine for lubrication. This include cleaning, the tools and equipment needed and any additional parts may needed

Gather the right tools

For cleaning try using soft fabric, dust cleaners and stiff brush like lint brushes or toothbrushes. Cleaning is an important step to take before lubricating the inside of the machine with sewing machine oil.

Remove additional machine parts

Excess thread, the stitching plate needles and hooks should be removed, ensuring the machines is disconnected from the power source

Using compressed air, blow away dust and lint from inside of the machine it's important that small pieces of dirt and debris are removed

Using a piece of soft fabric or dust cloth, clean the larger surface and space and space in the machine 3

Lubricating and oiling

When applying any of your sewing machine oil ingredients such as coconut oil any use a few drop at a time. Excessive amounts of oil can make it difficult to clean and can slow down components of the inside of the sewing machine

Self-Check 2	Written Test

Name: _____ **Date:** _____

Instructions:

Write all your answers in the provided answer sheet page

Test: Short Answer Questions

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

1 Explain in detail How to oil sewing machine?5(points)

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

1

_____

_____

_____

_____

_____

_____

Information Sheet-3	Thorough cleaning of machine parts and assembly

Cleaning of grimy parts covered with old oil and gunk

Method #1

Place sewing machine parts in a glass jar filled with acetone (from the hard ware store) to soak. Scrub with an old toothbrush, rags, paper towels or q- tips. No rinsing or drying is needed.

Method #2

Use a dental pick to get grime out of tiny little crevices like feed dogs, bobbin winders, screw threads, needle clamps, etc. Be very careful not to slip, because it can cause nasty scratches. Toothpicks can also work, but they tend to break and/or wear down quickly. They are safer though for valuable machines.

Method #3

Use a jeweler's ultra sonic cleaner that has a heat function. Place parts in basket. Set timer for an hour. They should be clean when you return, if not run them through again. Rinse with water, and dry with a hair dryer. You must immediately remove all moisture or they will rust.

Cleaning of rusted parts

Method #1

Use a scotch brite pad to scrub them clean by hand. This is the gentlest method for use on items with minor rust. No rinsing is needed.

Method #2

You can use a household cleaner (available in super markets), which is a powdered form of oxalic acid. It will remove all the rust, but will permanently dull and darken the nickel or chrome finish turning the item a dull gray. Only use this on very rusty nasty looking sewing machine parts. Scrub the cleaner in with a scotch brite pad or some steel wool. Rinse and dry with hair dryer.

Method #3

Use a jewelers flex shaft or any attachments to remove rust, scratches and burs.

This method will probably remove the plated finish as well, so it will never look new, but it will be clean and smooth. Scrub thoroughly with soap and hot water to remove any residue. Dry with hair dryer.

Polishing metal

Once you have all of the old oil, gunk, grime and rust removed you'll want to get your pieces as shiny as possible. If the plating is worn and flaky you can still try to polish up the metal underneath. If it isn't flaky or worn, use the gentlest methods Nos.1, 2 or 3.

Method #1 for nickel-plated items

Use a silver polishing cloth that you can find in may, super markets or jewelry stores. It is impregnated with jewelers rouge. Simply buff the items with the cloth and they will shine up again.

Method # 2 for nickel-plated items

Use ordinary household silver polish from the supermarket. Anything that is tinted pink will work. These are the ones that have rouge in them. Wipe it on with a rag or paper towel, then take an old toothbrush and scrub the polish into all the nooks and crannies. This works well on ornate faceplate and back plates. Buff with a clean soft rag or paper towel till shiny, then rinse with water, and dry thoroughly with a hair dryer.

Method #3 for chrome items

Follow instructions above for #2, but buy a polish suited for chrome.

Method #4 for chrome or nickel-plated items

The item must be spotlessly clean of all residues from any other cleaning process.

All rust, oil and other gunk must already be removed too. Start with a muslin or felt buff. Buff till very shiny. Scrub clean with hot soapy water.

Finish with jewelers rouge on a clean separate muslin buff.

Never use the same buffs, always scrub all residues off of the piece before using rouge or you will contaminate the rouge, and you will not get a mirror finish.

There are special rouges on the market for chrome. Make sure you use separate buffs for each compound. Keep them in little Ziploc bags that are clearly labeled so you don't get them confused. After you are done with the Rouge you can use the ultra

sonic cleaner (if you have one) to get the residue off between steps, instead of scrubbing. About 20-30 minutes should do it.

Throat plate

Step 1

The throat plate is fitted first by ‘offering’ the throat plate up onto the shelf with the two locating legs sitting against the front side of the water shelf. It is virtually impossible to fit upside down as it will not stay in place. Take care not to do this though, as it may slide to the back of the shelf and prove difficult to retrieve.

Step 2

The rear cleaning / access plate should be fitted next. Slide the plate up between the gap at the back of the shelf and the rear of the fire bed. The location tab should rest at the bottom of the rear flue outlet, Please note the ’S’ shape of the plate and ensure that it is the correct way as illustrated so as to form a slight trough rather than a raised lip.

Presser foot

Presser foot lever

The presser foot lever raises and lowers the presser foot. It can be raised about 1/4" (0.6 cm) higher than the nor mal top position to facilitate removal of the presser foot or to help you place heavy fabric under the foot.

Lowered position

Normal up position

Highest position

Changing the Presser Foot

> **CAUTION:**
> Turn OFF the power switch before changing the presser foot holder.

• To remove:

Turn the hand wheel toward you to raise the needle bar to its highest position. Raise the presser foot.

Push the presser foot release lever to snap off the presser foot holder.

• To attach:

Place the presser foot so that the pin on the foot lines up directly below the groove of the presser foot holder. Lower the presser foot.

Attaching and removing the presser foot holder

CAUTION:

Turn OFF the power switch before changing the presser foot holder. Setscrew Presser foot holder

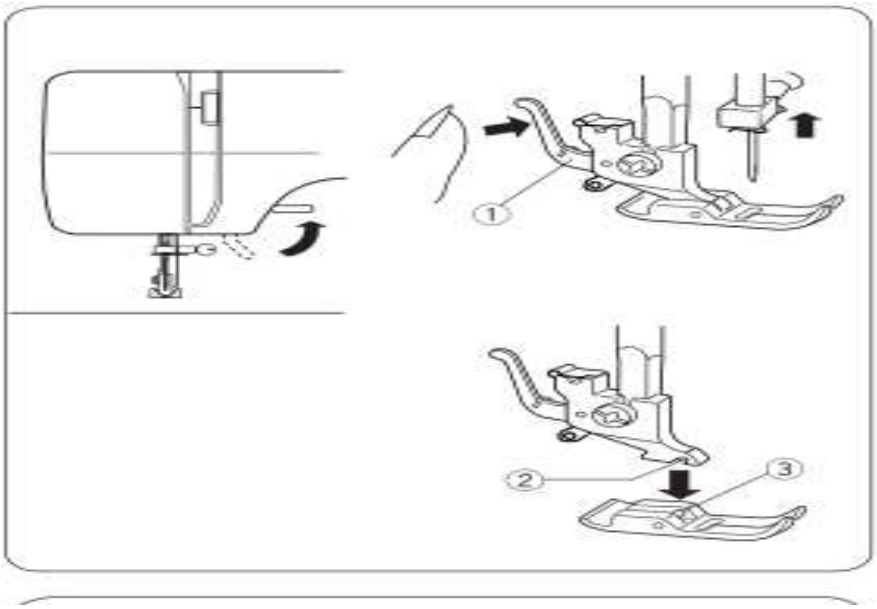
Threaded hole

• To remove:

Remove the setscrew by turning it counterclockwise with a screwdriver.

• To attach:

Match the hole in the presser foot holder with the threaded hole in the presser bar. Fit the setscrew into the hole. Tighten the screw by turning it clockwise with screwdriver.



Feed dog

Cleaning the feed dog

> **CAUTION:**
> Always switch off the power switch and/or unplug the machine from the power supply before cleaning the feed dog.

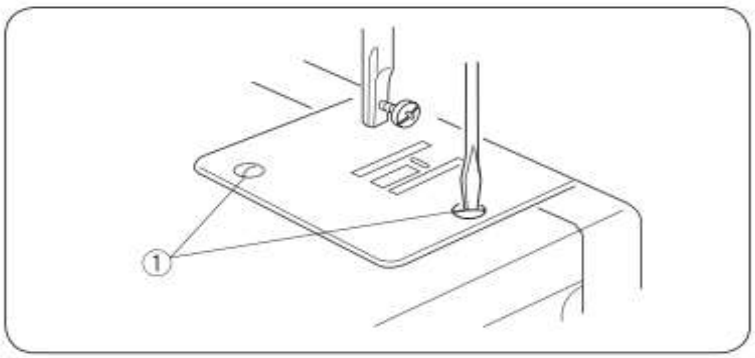
Remove the needle and the presser foot.

Remove the stitch plate setscrew and remove the stitch plate.

1 Setscrew

Remove dust and lint from the feed dog using a brush.

Reset the stitch plate.



Bobbin case

Removing or Inserting the Bobbin Case

Remove the sewing table by pulling it to the left.

Open the bobbin cover.

1 Bobbin cover

Raise the needle by turning the handwheel toward you.

Take out the bobbin case by holding the latch.

2 Latch

When inserting the bobbin case, place the horn into the recess of the hook race.

3 Horn

Winding the Bobbin

1. Pull the handwheel out.
2. Draw the thread from the spool.
   Guide the thread around the bobbin winder pretension.
3. Insert the thread through the hole in the bobbin from the inside to the outside.
   Put the bobbin on the bobbin winder spindle.
4. Push it to the right.
5. With the free end of the thread held in your hand, depress the foot control.

Stop the machine when it has made a few turns, and cut the thread close to the hole in the bobbin.

6. Depress the foot control again.

When the bobbin is fully wound, stop the machine. Return the bobbin winder spindle to its original position by moving the spindle to the left, and cut the thread.

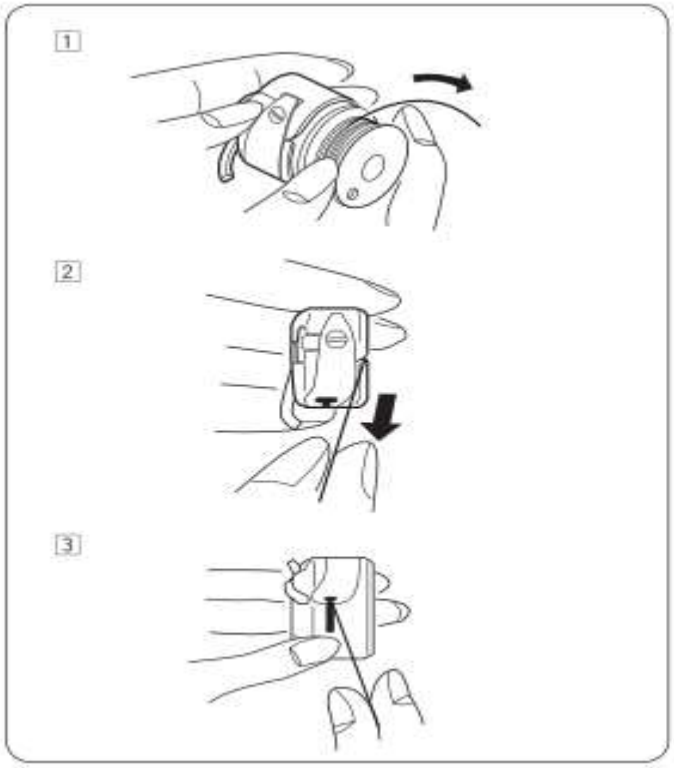
7. Push the handwheel back into the original position.

PLEASE NOTE: When stopping the machine, push the bob winder spindle to the left.

Threading the Bobbin Case

1. Place the bobbin into the bobbin case. Make sure the thread unwinds in the direction of arrow.
2. Pull the thread into the bobbin case slot.

3 Draw the thread under the tension spring and into the delivery eye. Pull a thread roughly 4" (10 cm) long from the bobbin.



Cleaning the Bobbin Case and the Shuttle Race

WARNING:

Always switch off the power switch and/or unplug the machine from the power supply before disassembling or cleaning the machine.
The machine must only be disassembled as described in this section.

CAUTION:

Do not store the machine in a high-humidity area, near a heat radiator, or in direct sunlight.

Removing the shuttle race unit

Raise the needle to its highest position and open the bobbin cover.

Open the hinged latch of bobbin case and take it out of the machine.

Open the shuttle race ring holders and remove the shuttle race ring.

Remove the shuttle.

Clean the shuttle race with a brush and a soft dry cloth.

1 Bobbin case

2 Shuttle race ring holder

3 Shuttle race ring

4 Shuttle

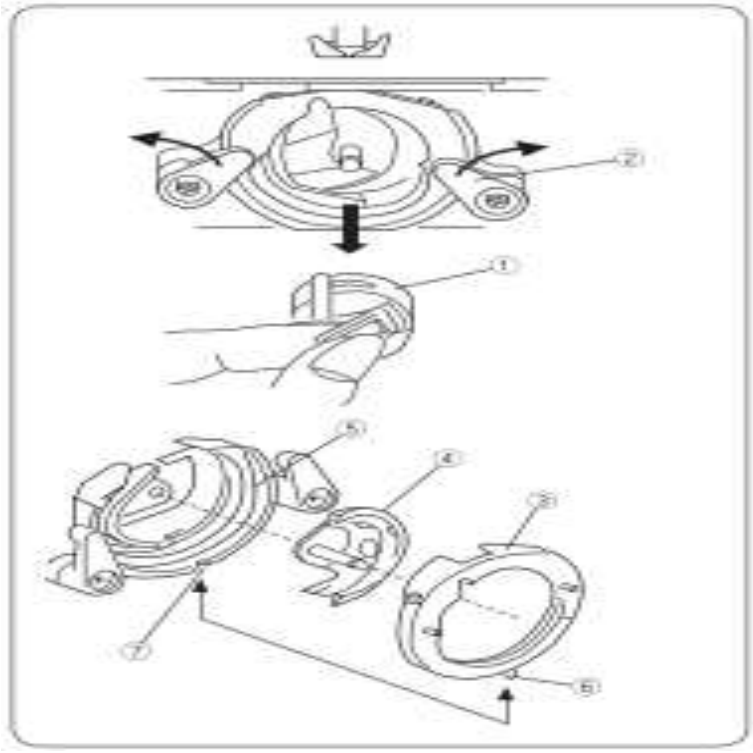
5 Shuttle race

Assembling Shuttle Race Unit

Hold the shuttle by the center pin and fit it carefully back into the shuttle race, forming a perfect circle with the shuttle driver. Attach the shuttle race ring making sure the bottom pin fits into the notch. Lock the shuttle race ring by turning the holders back into position. Insert the bobbin case.

1 Pin

2 Notch



Self check 3	Written test

Name: _____ **Date:** _____

Instructions:

Write all your answers in the provided answer sheet page 7.

Test: Short Answer Questions

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

1. Write in brief one method of cleaning of grimy parts covered with old oil and gunk. (5 points)
2. Write in brief one method of cleaning of rusted parts. . (5 points)

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Test: Short Answer Questions

1. _____

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2. _____

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Note: *Satisfactory rating = 6 and above; Unsatisfactory rating = below 6 points. You can ask your teacher to correct your work.*

Information Sheet-4	Completing records and other documentation of setting and maintenance work

Recording the process information:

Records:

It is consist of information created, received and maintained as evidence of business activities.

A record is a “recorded information produced or received in the initiation, conduct or completion of an institutional or individual activity and that comprises content, context and structure, sufficient to provide evidence of the activity.

While the definition of a record is often identified strongly with a document, a record can be either a tangible object or digital information which has value to an organization.”

Records often consist of documents, but they can also contain other forms of content, such as photographs, blueprints, maps, audio files or even Web pages.

Example: Birth certificates, medical x-rays, office documents, databases, application data and e-mail are all examples of records.

Recording:

• The act or process of making a record is known as recording.

• As the title indicates recording the process information is nothing but keeping the information by recording on paper, CD, pictorials etc.

• When we came to our working condition we have different working formats to do every activity of the factory for example product development recipe, leaflet, machine working procedure , different label that should be kept on the product or chemical or machine in order to understand by any concerned group and transfer the information needed.

While recording or keeping any records one should keep in mind the following point:

An accurate record should be kept of:

- Date and time of incident/disclosure
- Parties who were involved, including any witnesses to an event What was said or done and by whom

- Any action taken by the organization to look into the matter
- Any further action taken
- Where relevant, the reasons why a decision was taken not to refer those concerns to a statutory agency
- Any interpretation/inference drawn from what was observed, said or alleged should be clearly recorded as such
- Name of person reporting on the concern, name and designation of the person to whom the concern was reported, date and time and their contact details.
- The record should be signed.

Record can be different type like:

• Video-and audio recordings

• Newspaper clippings

• Software development

• Participant observation

Information Transfer:

Information can be transferred in deferent form depending on the type and size of the information we have. Information transfer is the process of moving messages containing user information from a source to a sink via a Communication channel. In this sense, information transfer is equivalent to data transmission which highlights more practical, technical aspects.

Ways of Transfer:

• Written form example- letter, reports, manuals

• Oral information transfer - such as talking to oneself, dialogue, discussion between two people, telephone phone calls etc.

• Electronic transfer –which is communication facilitate by an interface with a computer, modem, telephone fax, email etc.

Mode of Transfer:

This will depend upon on the situation.

• Report need to be communicated to others.

• It has to follow a daily schedule.

• But Information should be also delivered according to its Urgency. Suppose, if it is very urgent then need to act promptly, otherwise need to maintain normal flow.

Self check 4	Written test

Name: _____ **Date:** _____

Instructions:

Write all your answers in the provided answer provided below

Test: Short Answer Questions

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

1. What is a record? (3points)
2. List four types of record. (5 points)
3. List two ways of transfer of information. (2 points)

Note: *Satisfactory rating = 10 and above; Unsatisfactory rating = below 10 points.*

You can ask your teacher to correct your work

Answer Sheet

Score = _____

Rating: _____

Test: Short Answer Questions

1. _____

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2. _____

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3. _____

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Operation sheet 1	**Removal/Replacement of Consumable component or part**

PURPOSE: To show how to insert and remove needle

CONDITIONS OR SITUTATIONS FOR THE OPERATION: Trainees should know the technique of inserting and removing of needle from machine.

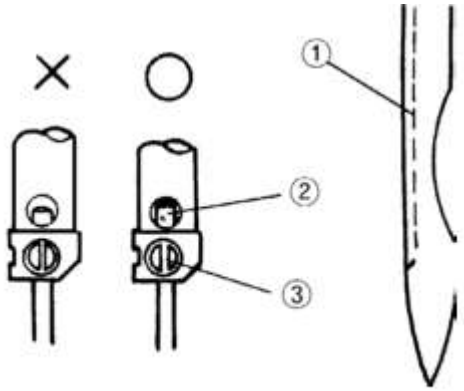
EQUIPMENT, TOOLS AND MATERIALS: needle screw driver etc…

PROCEDURES:

Steps

Needle Insertion

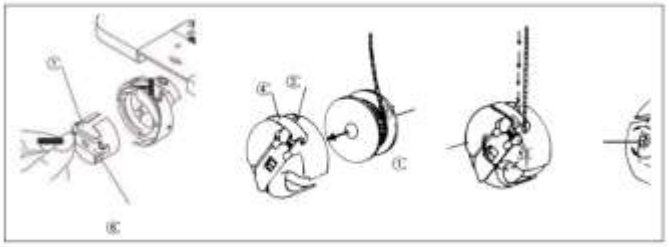
With the needle groove (1) facing left, insert the needle tip into the upper end of the Stopper hole (2) and fasten the needle with the clamp screw (3)



Inserting Lower Thread and Tension Adjustment

After placing a bobbin (2) in a bobbin case (1), push the thread through the thread groove (3) and hook it under the tension adjusting plate spring (4). To tighten the lower thread, turn the tension adjusting screw (5) clockwise; turn it counterclockwise to loosen. Adjust the tension of the lower thread so that it will fall slowly by gravity when the bobbin case (1) is dropped while holding the end of the thread. Inserting and Removing the Bobbin Case

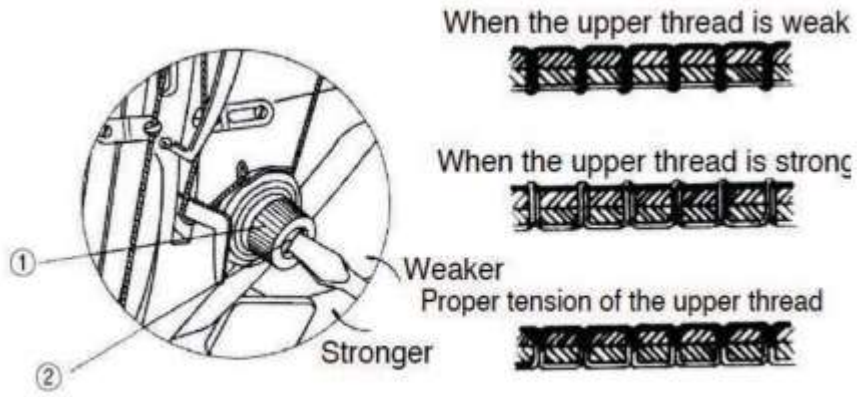
Hold the bobbin case handle (6) and insert it into the hook. Pull the handle (6) to remove. (The bobbin (2) will fall out if the handle is let go.)



Upper Thread Adjustment

Main thread adjustment device

The tension of the upper thread gets tighter if the tension adjusting nut (1) as in Fig. is turned in a clockwise direction and it gets looser when turned in the opposite direction. The tension of the thread should differ according to the sewing conditions which depend on the material, thread, stitch length, etc. So the tension should be adjusted as seen fit for the conditions.



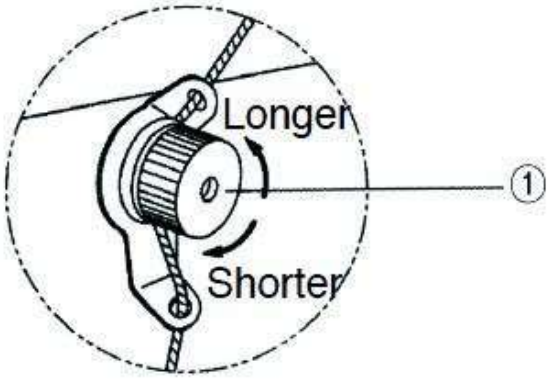
Tension adjustment of thread takes up lever spring

As in Fig., use a driver in the thread adjustment shaft groove (2) to adjust the spring tension. The thread take up lever spring grows tighter when the driver is turned clockwise and looser when turned counterclockwise.

Auxiliary thread adjuster

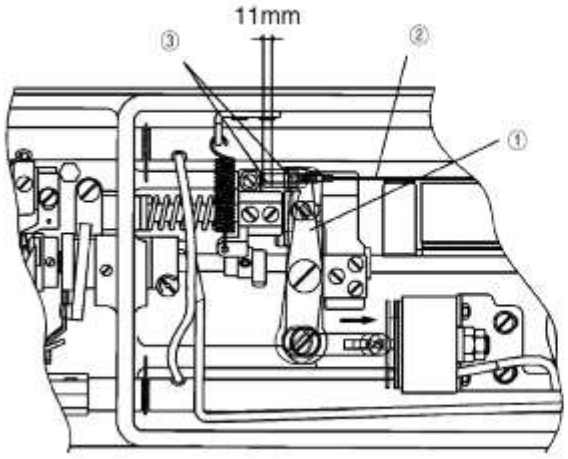
Turn the auxiliary thread tension adjusting nut (1) in clockwise direction to make the remaining thread length on the needle after trimming shorter and in counterclockwise

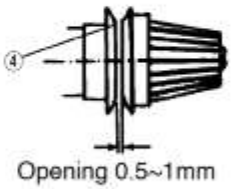
direction to make it longer, as shown in Fig. The appropriate length of the upper thread remaining after trimming is 30~40mm



Thread release control

The thread release takes place simultaneously with the movement of the trimming solenoid.





As seen in Fig., the amount of thread release is controlled by moving the fixed position of the thread release wire (2), which is connected with the clutch lever

(1), left and right. Loosen the two fixing nuts (3) and pull the cable wire (2) to the left. Then fasten the nuts (3) to release the thread to a large extent. If the cable wire is pushed to the right and the nuts (3) tightened, the thread release happens on a lesser scale. After adjustment, tighten the nuts (3) once again and check whether the opening of the thread guide plate (4) of the thread adjuster is about 0.5-1mm when the thread releaser is in operation. There should be no opening when the thread releaser is not in operation; the thread guide plates@ should be touching back to back. The moving stroke of the thread release lever (1) is 11mm. Adjust such that the thread guide plates (4) do not open when the cable wire is pulled about 0-8mm and that the plates open when the cable wire is pulled about 8-11mm.

PRECAUTIONS:

- Use the right tools when required

QUALITY CRITERIA:

1. All steps were completed in the correct sequence,
2. The needle fix properly

Your work should be neat and accurate

Operation sheet 2	Replacement of Fluids and Lubricants

PURPOSE: To show how to replace the fluid and lubricants

CONDITIONS OR SITUTATIONS FOR THE OPERATION: Trainees should know the technique of replacing lubricants of machine.

EQUIPMENT, TOOLS AND MATERIALS: different types of lubricant etc…

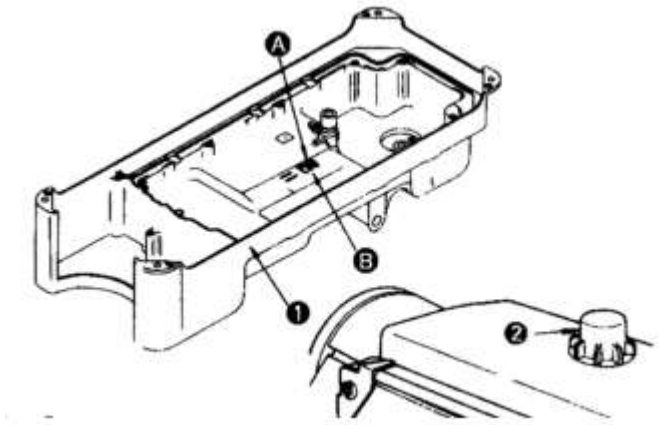
PROCEDURES:

Steps

1. Fill oil pan (1) with sewing machine oil up to HIGH mark A.

2. When the oil level lowers below LOW mark B, refill the oil pan with the specified oil.

3. When you operate the machine after lubrication, you will see splashing oil through oil sight window (2) if the lubrication is adequate.



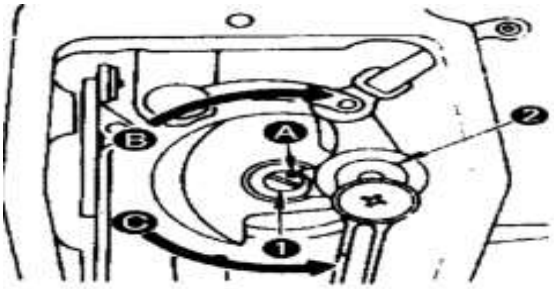
Note that the amount of the splashing oil is unrelated to the amount of the lubricating oil.

Adjusting the amount of oil supplied to the face plate parts

1. Adjust the amount of oil supplied to the thread take-up and needle bar crank (2) by turning adjust pin (1).

2. The minimum amount of oil is reached when marker dot A is brought close to needle bar crank (2) by turning the adjust pin in direction B

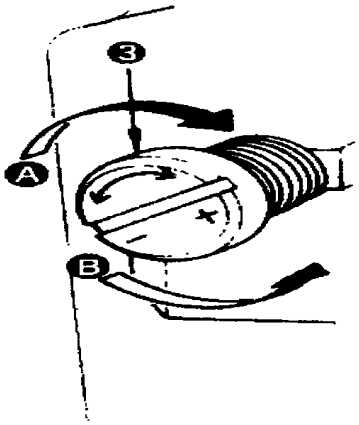
3. The maximum amount of oil is reached when marker dot A is brought to the position just opposite from the needle bar crank by turning the adjust pin in direction C



Adjusting the amount of oil supplied to the hook

1. More oil is supplied as oil amount adjust screw (3) mounted on the hook driving shaft is turned toward+ (in direction A)

2. As the oil amount adjust screw (3) is turned toward - (in direction B), the amount of oil



Precaution

When you first operate your machine after set up or after an extended period of disuse, run your machine at 3,000 s.p.m. to 3,500 s.p.m. for about 10 minutes for the purpose of break-in.

QUALITY CRITERIA:

1) All steps were completed in the correct sequence,
2) The machine lubricate and operate correctly,
3) The amount and choice of lubricant should be correct

Your work should be neat and accurate

Operation sheet 3	**Thorough Cleaning of Machine Parts and Assembly**

PURPOSE: To show how to clean the machine parts and assemble

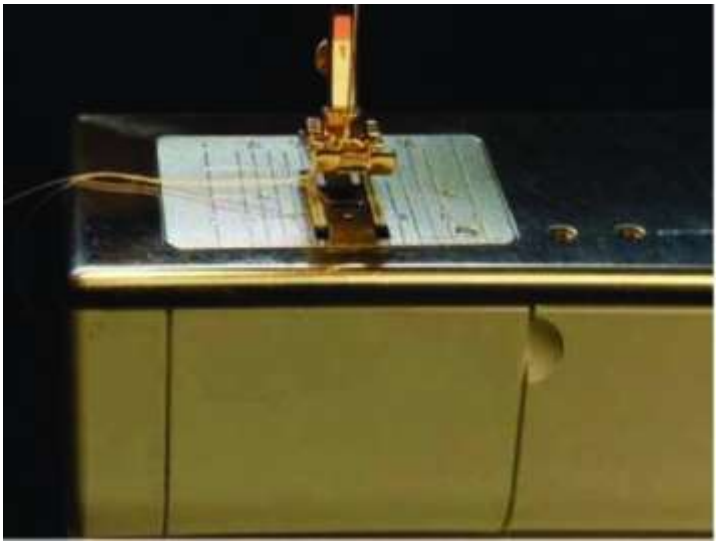
CONDITIONS OR SITUTATIONS FOR THE OPERATION: Trainees should know the technique of cleaning machine parts and assemble.

EQUIPMENT, TOOLS AND MATERIALS: different types of cleaning tools, etc…

PROCEDURES:

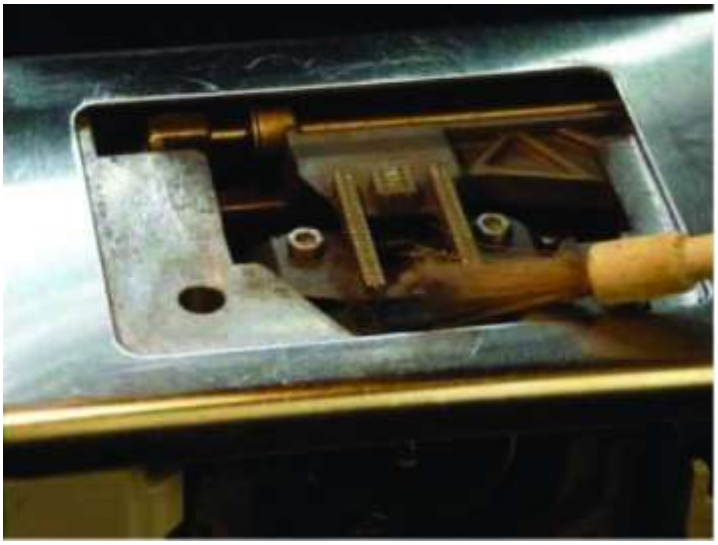
Steps

1. **First, remove the foot and the needle**.



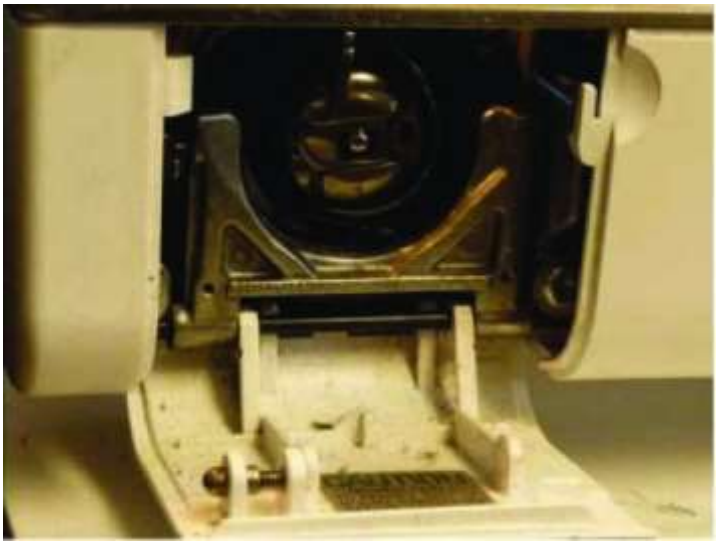
2. Then remove the throat plate

3. Remove the lint from the feed dogs and the area under the throat plate



4. Wipe it down with a soft cloth and replace the throat plate.

5. Now direct your attention to the bobbin



6. Remove the bobbin and lift the lever to
gain access to the bobbin hook and race.Clean each part as you go with a small brush.

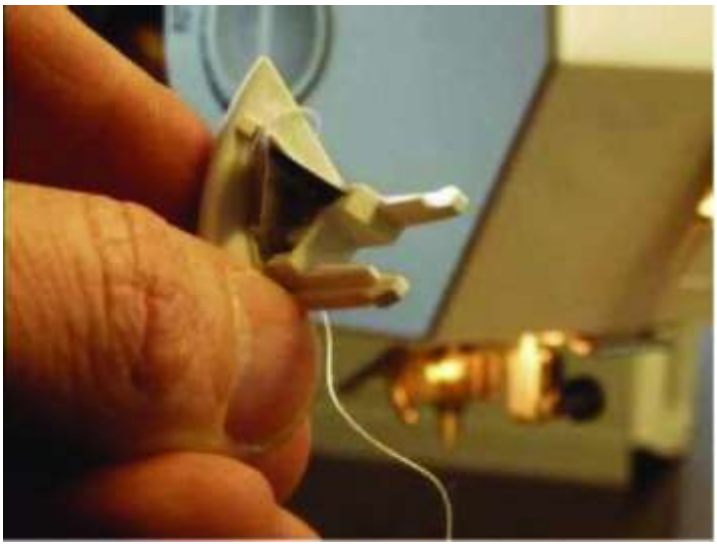
6. Remove the bobbin hook and wipe any lint off.

8. Inspect the hook for blunting, burring or damage at the point.
This could cause skipped stitches, split threads or other problems.

8 Use a pin to clean out the groove near the race that accumulates lint. Once it's clean, place a drop of clear machine oil on the race. Replace the hook, close the latch and reinsert the bobbin

9 If you have a thread cutter, remove it.

11. Clean the debris from the thread cutter and put it back in place



12. DON’T use compressed air; it simply blows the dirt deeper into the machine. This can cause future problems or premature wear of hard-to-reach parts.

DO use vacuum attachments for small scale cleaning. They are available online, vacuum repair stores or often at computer stores

PRECAUTIONS:

- Use the right cleaning tools when required

QUALITY CRITERIA:

1. All steps were completed in the correct sequence,
2. All machine parts should clean,

Your work should be neat and accurate

LAP Test 1	Practical Demonstration

Name: _____ **Date:** _____

Time started: _____ **Time finished:** _____

Instructions:

Task1. Fix a new needle in the sewing machine

Task2. Refill the sewing machine with new machine oil.

Task3. Clean the throat plate

Task4. Clean the bobbin case

LAP Test 2	Practical Demonstration

Name: _____ **Date:** _____

Time started: _____ **Time finished:** _____

Instructions:

Task 1 Adjust the amount of oil supplied to the face plate parts

Task 2 Adjust the amount of oil supplied to the hook

LAP Test 3	Practical Demonstration

Name: _____ **Date:** _____

Time started: _____ **Time finished:** _____

Instructions:

Task 1 Remove the foot and the needle

Task2 remove the throat plate

Task 3 Remove the lint

Task 4 Replace the throat plate

Task 5 Remove the bobbin

Task 6 Insert the hook

Task7 Clean the grove

Task 8 Clean the debris