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Sewing machines have come a long way since the invention of treadle-powered machines in the late 1800s. But despite all the advances, every sewing machine still uses a set of basic parts. This means that understanding the parts of a sewing machine and their functions will help you sew! The basic parts of a sewing machine include the needle, the threading mechanism, and the bobbin. The thread path running from the thread spool through the tension discs and down to the needle also plays a key role in the machine's operation. User controls like stitch selectors, a power on/off switch, and a foot pedal also help run the sewing machine. In this article, you will learn about the basic parts of a sewing machine and how this kind of machine operates. You will discover thirty essential parts of a sewing machine and their function. Finally, you will find tips for locating parts for a Brother or Singer sewing machine. What are the Basic Parts of a Sewing Machine? The basic parts of a sewing machine are the pieces that operate the upper and lower thread, like the needle and the bobbin. Most modern sewing machines have a lot of somewhat essential parts, such as stitch selectors these days as well. But at its core, a sewing machine uses a needle, bobbin, and two threads to create stitches. So, what allows a sewing machine to do this? Let's take a quick look at the most basic operation of a sewing machine before you learn about each part. When you make a stitch using a handheld needle and thread, you pass the thread through the eye of the needle. Then you put the pointy tip of the needle into the fabric and push the needle and thread all the way through. When you push the needle and thread back through from the back side of the cloth, a portion of thread remains there, forming a stitch. This is not how a sewing machine makes a stitch. At first glance, the process may look similar because, of course. The machine still uses a needle and thread! But the mechanics of the process look quite different. A sewing machine uses two threads, not one thread like a handheld needle and thread. These threads come from the thread spool on the top of the machine and the bobbin below the needle. The kind of stitch made by a regular sewing machine is called a lock stitch. The machine forms this stitch by following these steps: The needle carries the upper thread down until both the needle and thread puncture the fabric. This happens very quickly in real life, but let's freeze-frame this instant for a moment and see what's going on here. At this point, the pointy tip of the needle and a loop of the top thread are both hanging out on the reverse side of the fabric, below the needle plate. Several other key pieces of the machine also hang out in this area below the needle plate, including the lower thread carried on a round bobbin. As the needle starts to rise back up, the shuttle around the bobbin rotates. The rotating shuttle has a hook on it. This hook catches on the loop of thread around the needle. As it catches, the hook also forces a loop of the bobbin thread out into the loop of the upper thread. In this one instant, the upper and lower threads interlock together. When the needle goes all the way back up, it leaves a section of its thread locked on the reverse of the fabric because of the bobbin thread. This creates a lockstitch. This basic process holds true whether you want to sew a straight stitch, a zigzag, or even a fancy row of leaves or flowers! How Many Parts Does a Sewing Machine Have? Every sewing machine has dozens of moving parts, though the exact number of parts varies depending on the type of machine. A high-end computerized machine will have a lot of computerized parts, while a mechanical machine will have fewer parts and simpler controls, for example. As you saw in the previous section, the basic function of most sewing machines remains the same no matter how fancy the machine is. But it's also true that fancier models provide additional features and often come with additional parts. You can add on extra parts to many sewing machines. You can attach a buttonhole maker to even a simple mechanical machine. This allows the machine to sew the edging around the buttonhole. Or you can insert a double needle into some machines and use two upper threads instead of just one. This allows you to sew a double row of stitches at the same time! This means that you can't pin down the average number of parts sewing machines generally contain. On the other hand, you can count the thirty core, essential parts of all sewing machines, as you will see in the next section! 30 Essential Parts of a Sewing Machine and Their Functions When you leave aside all the frills and optional extras, almost every sewing machine has thirty essential parts that drive its core functions. These include obvious elements like the needle and bobbin and pieces you may not know, like the needle bar and free arm. Understanding how these parts work will help you master your sewing machine. If you know how the machine is supposed to work, you can much more easily fix it when things go wrong! 1. Arm The arm forms one of the most important parts of a sewing machine's anatomy. When you look at a sewing machine, the body of the machine forms the shape of a rectangle missing the left side. The arm is the top of the rectangle and holds key elements like the tension discs, the upper thread, and the bobbin winding mechanism. The arm also contains many of the mechanics of a sewing machine and any computerized elements. It connects the rest of the machine to the powerful electric motor contained in the right-hand side of the casing, called the stem of the machine. Specialty models like quilting machines may have an extra-long arm to allow for more room for bigger sewing projects. 2. Throat When you look at a sewing machine, you see a space between the arm and the bed of the machine. If you think of a sewing machine as a rectangle, this space forms the middle of the rectangle. This space is called the throat. While not a part of the machine per se, it is essential because it is where you place your fabric to sew! You will also find that some models highlight the fact that they have extra throat space. This is a key feature for large-scale projects such as quilts. 3. Free Arm Almost all modern sewing machines provide the option of a free arm, which is a portion of the sewing machine bed sticking out into the air. Generally, you remove a portion of the sewing machine case from in front of the needle plate. This allows access to the back left corner of the sewing machine bed held off your table or work surface. You can slide tubular sewing projects like sleeves onto this free arm as you sew. 4. Needle The needle performs the essential task of carrying the upper thread through the fabric as you sew. The top portion of a sewing machine needle has a flat, rectangular shape called the shank. The narrow cylindrical portion of the needle is called the shaft, and the pointed part at the bottom of the needle is called the point. The hole in the needle is called an eye, just like it is in a handheld needle. Most sewing machine needles also have something called a scarf, or groove, on one side of the eye. This helps the loop of the upper thread catch onto the lower thread during the lockstitch process. You can use many different shapes and sizes of needles in the average sewing machine. You should always choose a needle to match the type of fabric you want to sew. Small, sharp needles work best for delicate or silky fabrics, while knit fabric requires a dull, rounded ballpoint needle. 5. Needle Plate Sometimes also called the throat plate, the needle plate sits on the base of the machine right below the needle. This small metal plate has several holes cut into it for the feed dogs and for the needle to go up and down. It also features sewing guides to the right that help you line up your seam allowance width as you sew. The needle plate almost always has a screw holding it in place. You may need to remove this and lift the needle plate to clean or repair things like the bobbin casing. If your machine has a top-loading bobbin, the needle plate will sit just behind the slot that opens to access the bobbin. 6. Needle Bar The needle bar holds the needle in place. It connects to the crankshaft, a long spinning device within the arm of the machine that is powered by the motor. This crankshaft drives the needle bar up and down, which in turn lifts the needle up and down! 7. Needle Clamp The needle camp loosens or tightens to allow easy access to the needle. This tiny device deserves its own mention, as it can cause lots of trouble if you insert a needle into the needle bar and do not tighten the clamp properly. The clamp looks like a small screw attached to a loop of metal that goes around the needle bar. To loosen or tighten the clamp, you use a special flathead screwdriver. 8. Needle Threader Many modern sewing machines come with a simple automatic threading device. A machine with this feature is called a self-threading sewing machine, though this is a bit of a misnomer since the self-threading does require some help from you! The automatic threader often looks like a small metal hook on a separate shaft next to the needle. As you thread the upper thread, you loop the tail of the thread beneath the hook, which turns sideways and inserts a loop of thread into the eye of the needle. This can save a lot of time as you sew. 9. Handwheel The handwheel can manually drive the crankshaft, raising and lowering the needle and essentially manually powering the machine. This device is always located on the stem of the machine on the far right, just above the power cord. Why do machines still feature a handwheel when they are powered by electric motors? This handy tool allows you to raise or lower the needle at the beginning and end of projects. It also allows you to test out how parts of the machine work without turning it on. 10. Bobbin The bobbin looks like a tiny cylindrical spool. It holds the lower thread and rotates as the machine runs, allowing the shuttle hook to catch the upper thread and create a lock stitch. Some machines have a top-loading bobbin that you drop into a hole in the bed of the machine in front of the needle. Other machines have a front-loading bobbin that you access through a small door in the base of the machine. While all sewing machines use bobbins, bobbins do come in slightly different shapes and sizes. Make sure you use the kind intended for your sewing machine! 11. Bobbin Case A bobbin case looks like a snail-like shell for the bobbin. It encloses the bobbin on all sides except the front and provides a slot for the bottom thread to go through. The bobbin case is what makes it easy for the bobbin to rotate smoothly during the sewing process. It also provides a small but key amount of tension for the lower thread. You can alter this tension by turning tiny screws on the bobbin case, though this tension is pre-set on most machines. 12. Bobbin Winder The bobbin winder looks like a small, stubby pin sticking up from the top of the sewing machine. Unlike the thread spool for the upper thread, the lower thread requires you to put thread onto each bobbin before use. This way, you can match the color of the thread for the upper and lower thread. The bobbin winding mechanism on most sewing machines is typically located on top of the arm, often to the right. You slot the empty bobbin onto this and then use the bobbin winder thread guide to move the thread from the spool to the bobbin. 13. Bobbin Winder Thread Guide The bobbin winder thread guide shows you the path the thread takes to get from the spool of thread to the empty bobbin slotted onto the bobbin winder. For most machines, you twist the thread around a small screw to provide tension before stretching the thread across the top of the machine to the bobbin winder. 14. Bobbin Winder Stopper The bobbin winder stopper looks like a small screw or pin located to the right of the bobbin winder. Once you have threaded the bobbin on the bobbin winder, you push the bobbin sideways till it bumps into the bobbin winder stopper. This alerts the machine that it should wind the bobbin instead of sewing when you step on the foot pedal. The bobbin winder stopper also has a feature that tells the machine to stop spinning the bobbin winder when the bobbin fills up with enough thread. 15. Shuttle Hook The final essential part of the bobbin apparatus is the shuttle hook. This part carries the thread around the bobbin case and is the hook that catches the upper thread and allows the lock stitch to form. Sewing machines can have either a rotary or an oscillating hook system. Generally, less expensive machines use an oscillating system that goes around half of the circle of the bobbin case and then rolls back up. It does not complete a full circle the way a rotary system does. Expensive and industrial-strength machines often use a rotary hook system. In this model, the shuttle hook makes a full circle around the bobbin case. This fancier system does not cause the machine to vibrate as much as it sews and provides a smoother, quieter sewing experience. 16. Feed Dogs Feed dogs look like two rows of tiny, triangular teeth that stick up out of the needle plate. These teeth move the fabric smoothly beneath the needle as you sew. Without the feed dogs, the needle would keep going up and down on the same spot in the fabric! A somewhat complex system of cams and gears drives the feed dogs. On more high-end machines, the feed dogs may also provide something called differentiated feed, which means that the machine can sense different kinds of material and operate the feed dogs accordingly. 17. Thread Spool Pin The thread spool pin provides slots through the middle of a spool of thread and holds the spool in place as it spins. On most machines, you can find this pin either on the top of the arm or behind the arm. The spool pin will also come with a spool cap that prevents the spool from flying off as you sew. 18. Thread Guide The thread guide describes the route the upper thread takes as it winds from the spool pin all the way down to the needle. On many sewing machines, you will find numbers or colored lines marked on the body of the machine to indicate this path. The thread path is one of the most important functions of the sewing machine because it forces the upper thread into the tension discs. 19. Tension Discs The tension discs typically hide behind the casing of the machine, but they provide the super-important function of controlling the pressure on the upper thread. With no tension, the thread would sag or droop on its way down to the needle and get all tangled up. When you thread the upper thread, the thread path carries the thread through the tension docs. This allows the discs to apply pressure. Most sewing machines provide a control knob or touchscreen settings to alter the tension applied by the discs. The most common tension setting is a 3 or 4, but you can increase or decrease tension for different fabrics. 20. Thread Take-Up Lever The thread take-up lever forms another key part of the thread path for the upper thread on a sewing machine. You can find this lever in the arm of the machine just over the needle. The lever rises up and down as the machine sews, helping the thread easily move up and down with the motion of the needle. As you follow the thread path, you will hook the upper thread through the thread take-up lever before you carry the thread down to the needle. 21. Presser Bar Lifter The presser bar lifter sits just behind the needle bar, usually to the right of the needle. You can raise or lower this small bar to manually raise the presser foot off the feed dogs. As you sew, you need the presser foot bar lowered. But you need to lift this bar for other functions, such as inserting the fabric beneath the needle. The presser foot attaches to the presser bar lifter and exerts a small amount of pressure on the top of the fabric to hold the fabric onto the feed dogs as you sew. A standard presser foot looks kind of like a very square foot with a hole in the center. You can also swap out the standard foot for many specialized types of presser feet that provide specific functions. To do this, you will find a small lever or button attached to the presser bar lifter that will release the current foot and allow you to click another foot into place. One of the most popular types of presser feet used almost exclusively on some types of machines is called a walking foot. A walking foot is a big presser foot that has extra feed dogs attached to it. It allows high-end sewing machines to regulate the amount of pressure used on different types of material. Another super important presser foot that comes with almost every kind of sewing machine is a zipper foot. This little guy allows the needle to stitch right next to the teeth of a zipper, which you cannot do using a standard presser foot. 25. Stitch Width Selector The stitch width selector allows you to determine how far a stitch will stretch side-to-side as the machine sews. If you plan to sew a straight stitch, you will leave the width at 0. But for a zig-zag or any other stitch that moves side to side, you need to set the width before you begin sewing. Your sewing machine may have knobs or buttons you press to select stitch width, or it may have a touchscreen panel. 26. Stitch Length Selector The stitch length selector determines how long each stitch will be on the fabric. Every sewing machine has some means of setting and altering this length, such as knobs, buttons, or a touchscreen. Why do you need to change stitch length? Different stitches work better on different fabrics. Plus, you sometimes want very long, loose stitches called basting stitches as a temporary way to hold pieces of fabric together. 27. Stitch Pattern Selector Most sewing machines offer various stitching patterns that you can select using buttons, knobs, or a touchscreen. The machine then uses the cams and gears in the arm to direct the needle to stitch in this pattern. The most common stitching patterns are a straight stitch and a zigzag stitch, but many machines also offer fancier options like double-needle designs, embroidered letters, or shapes like flowers and leaves. 28. Reverse Stitch Control Every sewing machine has a small button, switch, or tab you lift that tells the machine to sew in reverse. You sometimes see this called "back tacking," which is one of the best ways to secure a seam you have just stitched. You can find this feature in different places on different machines. Some models locate it on the arm above the needle. Others place it near the power switch on the stem of the machine, and others may put it near the stitch length controller. The foot pedal plugs into the machine near the power cord. This pedal works much like the gas pedal in your car by telling the machine when to sew and when to stop sewing without using your hands. Some high-end machines may use knee control instead, but the foot pedal remains the most popular option for most machines today. 30. Power Cord/Power Switch It seems super basic, but the power cord and an on/off switch also form an essential part of a sewing machine! Most of the time, you will find the place to connect the power cord and the on/off switch at the bottom of the stem of the machine, all the way to the right. You can often solve simple sewing machine issues by checking that the power cord is firmly plugged into the machine. Parts of a Sewing Machine Singer Singer sewing machines use all of the essential parts described in this article. Singer is one of the world's oldest and most respected sewing machine brands. Even cheap, beginner-level Singer models will perform all the basic functions you expect from a sewing machine. The other great thing about Singer sewing machines is that the large company provides good customer support. If you need replacement parts for your Singer sewing machine, you can often find what you need through the Singer website. Brother Sewing Machine Parts Brother is the oldest Japanese sewing machine brand in the world and has an excellent reputation for providing simple, durable sewing machines. Brother machines also use all of the basic parts described in this article. If you need replacement parts for a Brother sewing machine, you can try searching the Brother website. You can also search Amazon for parts and accessories for newer sewing machines. Old Sewing Machine Parts Finding old sewing machine parts for a vintage or antique model can get tricky, but you can try searching Etsy, Amazon, or specialty sewing stores online. Online forums like eBay and Amazon often link you to third-party sellers specializing in old sewing machine parts. Make sure you search for parts specific to the make and model of your old sewing machine, though. You will quickly learn that old sewing machines only work with the specific parts and accessories designed for that model! Conclusion No matter how fancy or expensive a sewing machine gets, it still provides many of the same functions and uses many of the same parts as a basic beginner-level model. This means that knowing the basic parts of a sewing machine can help you master your machine, no matter what model you use! A few of the most important parts of the machine include the needle and everything that attaches to the needle and the bobbin along with everything around the bobbin. The thread path is also a key part of the sewing machine because it provides the pressure that prevents the upper thread from tangling. User controls like stitch settings, the reverse tab, and the foot pedal all help you sew. Do you think you can name all the basic parts on your own sewing machine? Is there a part you can't name? Leave a comment below to let us know! The basic purpose of a sewing machine is to stitch different materials together with a thread. That is probably all that concerns you anyway. But if you are curious about the wonders of a sewing machine that stitches up beautiful clothes, you will need to know the parts of the sewing machine which help in this work. For details on this, check out the post "How to sew with a sewing machine and how it sews" You may use some of these names every day when sewing, like feet, foot pedal, etc. Some terms may be not-so-much (I learned when I wrote this post), like the rotary hook and the stop motion screw. The main parts of a sewing machine are Head, Arm, Handwheel, Needle bar, Spool pin, Bed, Presser feet, Presser foot bar and spring Presser foot lever or bar lifter, Thread cutter, Bobbin winder disc, Needle plate, Feed dog, Presser regulator, Thread take up lever, Thread guides, Needle, Bobbin case, Reverse sewing lever, Stitch length dial, Free arm, Stitch selector, Rotary hook, Bobbin winder, Stop motion screw, Needle clamp, Slide plate, Power switch and the Foot pedal. All these parts of your sewing machine should work optimally in tandem for you to sew. Just a little lint can clog them all up and stop the whole machine, so do not be hesitant in keeping all of these parts clean all the time (Cover your sewing machine pronto; dust is a killer to sewing machine parts). Check out this post onTips for Sewing Machine Upkeep for taking care of your sewing machine properly ; And also make this sewing machine cover to keep it dust free and working in good stead. and their uses [no_toc] This refers to the complete sewing machine (without the stand) – the whole of the upper part that comprises the primary working components responsible for the machine's sewing functions. This is the curved part of the sewing machine with the mechanism for driving the needle and handling the upper thread. Essentially, the arm is the bridge that connects the needle and needle bar with the main body of the sewing machine. Hand wheel is at the right of the head. The balance wheel, when turned, helps in manually moving the needle for precise control. It is used to manually move the needle up and down. Also called Balance wheel. TIP : The hand wheel should always be turned towards you, even when using a reverse stitch. The upright bar at the lower end of which the needle is attached.A needle clamp screw on this bar holds the needle in place. The upright metal rod fitted on the top of the arm where your spool of thread sits while you sew. Bed is the name for the flat portion of the head under which is the shuttle, feet and lower thread handling mechanism. This is a detachable portion of the sewing machine which holds the fabric or material in place while sewing. It keeps the material flat and tight for proper sewing and lets you guide the needle smoothly through the fabric. Different types of presser feet are available with different functions – zipper feet, buttonhole, feet etc. TIP : When you start to sew, pull some 4 inches of thread behind the presser foot. This tail is needed so that the machine does not 'eat' the thread. It is the type of stitch you are going to make that determines the sewing machine foot you are going to use. The type of foot you buy also depends on whether your sewing machine is high shank or low shank or snap-on. You have a low shank machine if the distance between the presser foot screw and the bottom of the feet is about 3/4 inch. You have a high shank machine if the distance between the presser foot screw and the bottom of the feet is about 1 1/4 inch . Snap-on feet just snaps itself to the lever. TIP : Keep the presser foot on down position for sewing. The presser foot lever is attached to the presser bar to control the up and down movement of the presser foot. This lowers the presser foot into place when you are ready to sew, and to lift it up when you want to move your fabric. This has to be lifted to take out the material from the machine. Thread cutter is a sharp tool fastened to the side of the presser foot bar, to cut the thread as you sew. Keeps your thread taut when you're winding a bobbin. When winding the bobbin you have to pass the thread through this disc for proper winding. A semi-circular flat disc with a hole to allow the needle to pass through it. It is situated below the needle. It usually has a seam guide that can help you in guiding the fabric edges as you sew. Tip : If you look at the seam guide as you sew instead of the needle you will be able to sew a straight line with even seam allowance. Feed dogs are the teeth-like parts that move the fabric through the machine as you sew. Feed dog consists of metal strips with little teeth that stick up from the needle plate and move your fabric along as you sew. When the machine is working the feed dog moves upwards and advances the fabric as each stitch is made. They move faster or slower depending on how hard you press the foot pedal. For some sort of stitching, you may want to pull the feed dog down – there will usually be a lever/switch in your machine for this. TIP : The feed dog will move your fabric automatically. You do not have to pull the fabric from the back – ofcourse, you know this. But once upon a time, I didn't. Presser regulator is a mechanism fixed to the face plate, which adjusts the amount of presser that the presser foot uses to hold your fabric down as you stitch. It controls the quality of stitches. The greater the pressure, the lighter the stitch. The thread take up lever which is fitted to the body of the arm, moves your thread up and down as you sew. It feeds the thread to the needle. The thread goes through this lever when you thread your sewing machine. This lever is always at the top when you start sewing and end the sewing. Thread guides are different points located in your sewing machine that keeps the sewing thread in place as you sew. If the order of guiding the thread to the needle is wrong the stitch will form tangled. Sewing machine needles come in different sizes. Additionally, there are many varieties of sewing machine needles. Twin needle is a very useful addition to your sewing accessory kit. Tip : Keep most of the fabric to the left of the needle so that you can look at the seam guide as you sew. Change the needle after 8 -10 hours of use. Turn the machine switch off when changing the needle. When changing the needle the flat side of the needle should be facing away from you and the curved side of the needle should be facing you. Bobbin case and shuttle holds the bobbin thread inside the sewing machine. Bobbin cases vary with different models of sewing machines in that some bobbin is inserted through the front, in some cases from the top (drop-in) . Some have a separate case; some machines come with inbuilt bobbin cases. This is the lever or button which allows you to sew backward when pressed. Stitch length dial is a regulator with which you can change the length of your stitches. Graduation marks present in the lever indicates the length selection choices. The accessory box is located around the free arm under the needle, attached to your sewing machine. It is a storage for your sewing accessories like feet, bobbins, etc., and serves an extended table for your fabric to rest when sewing. This mechanism allows you to sew tubular items like pant legs, sleeves, armholes, seams, etc. It has the stitch plate, feed dog, and bobbin case built into it and is revealed when you remove the accessory box. Stitch selector allows you to choose different stitches available with your machine like the zig zag stitch, as well as the width of the stitches. Rotary hook is that part of the sewing machine, that enters the loop or needle thread and carries it around the bobbin case to form the lock stitch. Bobbin winder is mechanism for winding thread on bobbin. It fills the thread evenly on the bobbin. Stop motion screw is used while winding the bobbin with the bobbin winder, so that stitching is temporarily stopped when the screw is pressed. It's typically located in the center of the handwheel or on the side, or near the bobbin winder, depending on the machine's design. It disengages the needle movement while allowing the bobbin to wind with thread. This is the device you manage with your feet, used to apply power to the sewing machine and control the stitching speed. You should always maintain an even and steady speed throughout. This is the portion of the sewing machine which connects the needle bar and needle. This is attached with the help of a screw. The presser foot is attached to this bar. Presser bar spring is a spring which controls the pressure asserted by the presser bar. Thread tension disc is a disc through which the upper thread is passed while threading the sewing machine so that the thread does not get knotted. Thread tension is critical for creating even stitches and is adjusted via this dial or a knob. The built-in light near the head to illuminate the sewing area. What I got from the sewing machine showroom (the basic presser feet) is enough for me to sew just about anything with my sewing machine, but just like a girl can never have enough dresses, a sewing girl can never have enough fabric and sewing accessories. You will be getting some very handy feet when you buy the sewing machine. But other special ones you may have to buy separately. There are some feet like the walking foot and blind hem foot which once you have them you wonder why you didn't earlier. The main types of sewing feet you should be having with your sewing machine are – Rolled hem foot, button hole foot, zipper foot, Straight stitch foot, Zig zag foot, walking foot, blind hem foot. More details on Pressure feet are given in the post – Sewing Machine Pressure feet guide Even the most grandiose-looking sewing machine works with these same parts. Different machines have these parts placed slightly differently from each other, that is all. Look out for these sewing machine parts in your sewing machine and read the Sewing Machine manual you got for a more thorough understanding of your particular machine's structure and workings. In fact, I recommend reading it at least twice, cover to cover, before starting to sew. Related posts : How to repair a sewing machine at home. ; Common stitching problems in a sewing machine Subscribe to get weekly notifications of posts in your email Often people get confused about the parts of a sewing machine, so here are some important elements for you to know. As you go about your daily business, you might notice that there is something about a sewing machine that seems familiar. It's not a painting or a piece of furniture, but it is a sewing machine, and many of us have one in our homes. The good news is that you probably know a lot of the parts that make up your sewing machine and what they all do. 1. Bobbin case A bobbin case is a small, cylindrical piece of a sewing machine that holds the bobbin in place. The bobbin is a small, spool-shaped piece of thread that is used in the sewing process. The bobbin case is typically located in the bottom or side of the sewing machine, and it is responsible for holding the bobbin in the correct position and ensuring that the thread is fed through the machine in the proper way. The bobbin case is a crucial part of the sewing machine, and it must be in good working condition in order for the machine to function properly. 2. Needle plate A needle plate is a flat metal or plastic plate that is located on the bed of a sewing machine, beneath the needle. It has a small opening or slot that guides the needle as it moves up and down, and it also helps to keep the fabric in place as it is sewn. The needle plate serves as a guide for the needle and fabric, ensuring that the fabric is sewn in a straight line and that the needle doesn't hit the metal parts of the machine. It also helps to protect the machine from damage caused by the needle hitting the metal parts. Some needle plates have designs or marking to help with the alignment of the fabric 3. Feed dog A feed dog is a small, toothed mechanism located in the bed of a sewing machine, near the needle plate. It is responsible for moving the fabric through the machine as it is sewn. The feed dog typically has several small teeth that grip the fabric and move it forward as the machine sews. The teeth are usually triangular or V-shaped, and they help to ensure that the fabric is moved forward at a consistent rate, creating a smooth and even stitch. Some sewing machines have multiple feed dogs, which can help to move the fabric more efficiently. 4. Bobbin winder A bobbin winder is a mechanism on a sewing machine that is used to wind thread onto a bobbin. It is typically located on the top or side of the machine, and it is used to create a bobbin that is filled with thread that can be used in the sewing process. The bobbin winder typically consists of a spindle or a cone where the empty bobbin is placed, a tensioner that regulates the thread tension, and a mechanism that spins the bobbin. It can be activated by a separate lever or button or it can be activated by engaging the winding function on the machine's stitch selector. When activated, the bobbin winder spins the bobbin while the thread is fed from the spool, creating a full bobbin of thread. Once the bobbin is full, the winding process stops automatically, and the bobbin can be removed and placed in the bobbin case of the machine. 5. Foot pedal A foot pedal is a device that controls the speed of a sewing machine. It is typically a small, rectangular pedal that is located on the floor and is operated by the user's foot. The foot pedal is connected to the sewing machine's motor, and when the pedal is pressed, it sends a signal to the motor to start or increase the machine's speed. When the pedal is released, the signal is sent to slow down or stop the machine. The foot pedal can be used to control the speed of the machine while sewing, which allows the user to sew at a comfortable pace and adjust the speed as needed. This makes it easy to sew intricate or delicate fabrics that require a slower speed or to increase the speed when working on thicker fabrics. The foot pedal is an essential component of a sewing machine, as it allows the user to control the machine's speed and make adjustments as needed. 6. Power cord A power cord is an electrical cable that connects a sewing machine to a power source, typically a wall outlet. It supplies power to the sewing machine, allowing it to operate. The power cord typically has a plug on one end that is inserted into the wall outlet, and the other end is connected to the sewing machine. The cord can be a variety of lengths, depending on the user's needs and the location of the sewing machine. It's important to check that the voltage of the sewing machine is the same as the one in your country and the plug on the power cord should match the power socket. It is also important to ensure that the power cord is in good condition, with no frayed or damaged wires, to avoid any electrical hazards. It's also essential to unplug the machine before cleaning it or changing the needle, presser foot, or any other parts of the device. 7. Handwheel A hand wheel, also known as a hand crank, is a small wheel located on the side or top of a sewing machine. It is used to manually raise and lower the needle of the machine. When the hand wheel is turned towards the user, it raises the needle, allowing the user to change the needle or thread the machine. When the hand wheel is turned away from the user, it lowers the needle, allowing the machine to start sewing. The hand wheel is also used to manually move the fabric under the needle when the machine is in reverse. This is useful when sewing in tight spaces or when the user wants to sew in reverse for a few stitches for reinforcement. It is an essential component of the sewing machine, as it allows the user to control the needle's movement and make adjustments as needed. The hand wheel is usually made of plastic or metal and should be turned gently to avoid damage to the machine. 8. Thread tensioner The thread tensioner is typically located near the thread spool, and it works by applying pressure to the thread as it is fed through the machine. This pressure helps to control the amount of slack in the thread, which affects the tightness of the stitches. The tension of the thread should be adjusted depending on the type of fabric, thread, and type of stitch. If the tension is too tight, the thread will be pulled too tightly, and the stitches will be tight and puckered. If the tension is too loose, the thread will be loose, and the stitches will be loose and flimsy. A thread tensioner is a critical part of a sewing machine, ensuring that the thread is pulled through the machine with the correct amount of tension so that the stitches are even and consistent. It is important to learn how to adjust the thread tensioners to achieve the best results while sewing. 9. Presser's foot It is located at the front of the machine, directly under the needle and it is typically clamped or snapped onto the machine's shank. The presser foot applies pressure to the fabric as it is sewn, holding it in place and preventing it from bunching or shifting. It also helps guide the fabric through the machine, ensuring that the stitches are straight and even. Different types of presser feet are available for different types of sewing tasks, like zigzags, invisible zippers, buttonholes, and more. The most common presser foot is the universal presser foot, which is suitable for general sewing tasks. Other presser feet include the zipper foot, buttonhole foot, and blindstitch foot. Each presser foot has a different shape and design to accommodate the specific needs of the task. it holds the fabric in place and prevents it from bunching or shifting, it also helps guide the fabric through the machine, ensuring that the stitches are straight and even. Changing the presser foot for different tasks will make the job easier and give better results. 10. Stitch selector The stitch selector is usually located on the front or side of the machine and it can be used to select the desired stitch. Some machines have a digital screen or LED displays that show the available stitches, while others have a dial or lever that can be turned or moved to select the desired stitch. The number and types of stitches that a machine can produce vary between models and brands, some machines have a limited number of stitches while others have more than a hundred. Some of the basic stitches include straight, zigzag, and stretch stitches, while more advanced machines may have more specialized stitches such as buttonholes, quilting, and embroidery stitches. The stitch selector is an important feature of a sewing machine, it allows the user to choose the type of stitch they want to use, depending on the task and the fabric, it will make the sewing easier, and give better results. 11. Throat plate A throat plate is a flat, metal plate that is located on the bed of a sewing machine, near the needle plate. It surrounds the needle and bobbin area and has a small opening or slot that guides the needle and fabric as they move through the machine. The throat plate serves as a guide for the needle and fabric, ensuring that the fabric is sewn in a straight line and that the needle doesn't hit the metal parts of the machine. It also helps to protect the machine from damage caused by the needle hitting the metal parts. The throat plate is typically removable, so it can be cleaned or changed as needed. The plate can have different designs or markings to help the user align the fabric or to indicate the maximum width of the zigzag stitch, for example. It's important to keep the throat plate clean of any lint or thread build-up, as this can cause the machine to jam or malfunction. It should be cleaned after each use, and it's good practice to check it regularly. It also helps to protect the machine from damage. 12. Bobbin A bobbin is a small, spool-shaped piece of thread that is used in the sewing process. It is typically made of plastic or metal, and it is used in conjunction with the sewing machine's upper thread to create the stitches. The bobbin is placed in the bobbin case, typically located at the bottom or side of the machine, and the thread from the bobbin is pulled through the machine to create the stitches. Bobbins come in different sizes, shapes, and materials depending on the type of sewing machine you are using. Some machines require specific bobbins, while others can use universal ones. The bobbin is usually filled with thread before it is placed in the bobbin case. The thread is wound around the bobbin by using the bobbin winder, a mechanism on the sewing machine. It's important to use the correct bobbin for your machine and to make sure that it is wound correctly and placed in the bobbin case correctly. A poorly wound or incorrectly placed bobbin can cause the thread to become tangled or jammed, resulting in uneven or broken stitches. it is used in conjunction with the sewing machine's upper thread to create the stitches. It is placed in the bobbin case and it's important to use the correct bobbin for your machine and make sure that it is wound and placed correctly. 13. Needle A needle is a thin, pointed metal shaft that is used in a sewing machine to pass through the fabric and create the stitches. The needle is typically made of steel and it has an eye, the hole through which the thread is passed, at the top, and a sharp point at the bottom. The needle is inserted into the needle bar of the sewing machine and is held in place by a needle clamp. Needles come in different sizes and styles, each designed for a specific type of fabric or task. The size of the needle is indicated by a number (e.g. size 9, size 14) and the style of the needle can be universal, denim, stretch, leather, embroidery, and more. It is important to use the correct needle for the fabric and task you are working on. Using the wrong size or type of needle can cause damage to the fabric, uneven stitches, or even breakage of the needle, which can be dangerous. Needles should be changed regularly, depending on the frequency of use and the type of fabric you are working on. A worn or damaged needle can cause skipped stitches, uneven stitching, and even damage to the fabric. A needle is a critical component of a sewing machine, it is responsible for passing through the fabric and creating the stitches, it is important to use the correct needle for the fabric and task you are working on, to avoid damage to the fabric, uneven stitches or even breakage of the needle. 13. Spool pin It is typically located on the top of the machine, near the thread tensioner. The spool of thread is placed on the spool pin, and the thread is unwound from the spool and fed through the machine to create the stitches. Spool pins come in different sizes and styles depending on the type of sewing machine. Some machines have a single spool pin, while others have multiple spool pins, allowing the user to work with multiple threads at the same time. The spool pin should be used with the proper size and type of thread spool, to avoid thread tangling or breaking. Some machines have a horizontal spool pin suitable for flat-bottom spools, while others have a vertical spool pin suitable for cone-shaped spools. It is important to check that the spool pin is tightened and in good condition. A loose or damaged spool pin can cause the thread to become tangled or jammed, resulting in uneven or broken stitches. The spool pin is an essential component of a sewing machine, it holds the spool of thread in place and allows the thread to be unwound and fed through the machine. It is important to use the proper size and type of thread spool and to keep it in good condition to avoid thread tangling or breaking. 14. Finger guard A finger guard, also known as a needle guard, is a small, plastic or metal attachment on a sewing machine that is designed to protect the user's fingers from the needle while sewing. It is typically located at the front of the machine, near the needle. The finger guard is designed to keep the user's fingers away from the needle while sewing, reducing the risk of injury. It is typically a removable piece that can be easily attached or detached depending on the task. Some machines have a built-in finger guard that is a part of the machine's design. The finger guard is an important safety feature of a sewing machine, it is designed to protect the user's fingers from the needle while sewing, reducing the risk of injury. It is important to use the finger guard whenever you are using the machine and to check that it is securely attached before starting to sew. It is also important to be aware of the location of the needle at all times when sewing and to avoid putting your fingers near the needle. It's also good practice to unplug the machine before cleaning it or changing the needle or presser foot. 15. Lightbulb A lightbulb is a small electric lamp that is used to illuminate the sewing area on a sewing machine. It is typically located near the needle plate and it helps the user to see the fabric and the needle while sewing. The lightbulb is usually powered by the machine's electrical circuit and it can be controlled by a switch or button located on the machine or in the power cord. Lightbulbs come in different types, the most common is incandescent, but LED and fluorescent bulbs are also used in some machines. LED bulbs are energy-efficient and have a longer lifespan than incandescent bulbs. It's important to use the correct type and wattage of lightbulb for your machine, as specified in the manual. Using the wrong type of bulb can cause damage to the machine or even cause a fire hazard. it helps the user to see the fabric and the needle while sewing, it is important to use the correct type and wattage of the lightbulb and to change it regularly to ensure proper visibility while sewing. 16. Motor A motor is an electrical device that converts electrical energy into mechanical energy, it powers the sewing machine's mechanism, allowing it to operate. It is typically located inside the sewing machine and it is connected to the machine's power supply by a power cord. The motor is responsible for driving the machine's mechanism and controlling the speed of the machine. Motors can be AC or DC, the most common type of motor used in sewing machines is AC, it can be controlled by a foot pedal, allowing the user to adjust the speed of the machine. Some machines have a built-in speed control feature that allows the user to set the speed of the machine. The motor is one of the most important components of a sewing machine, as it provides the power to operate the machine. It is important to use the correct voltage of the motor and to check that the power cord is in good condition. A malfunctioning motor can cause the machine to stop working or even cause a fire hazard. Regular maintenance of the motor is important to ensure the longevity of the machine, it should be cleaned and lubricated as specified in the manual. It is also important to unplug the machine before cleaning or performing any maintenance tasks. 16. Power switch A power switch is an important safety feature of a sewing machine, it allows the user to turn off the machine quickly in case of emergency or when not in use. It is important to turn off the machine when not in use or when performing maintenance tasks such as cleaning or changing the needle or presser foot. It's also important to note that a power switch is not a substitute for unplugging the machine. Even when the switch is off, the machine can still hold a charge and can be dangerous if tampered with. It's always good practice to unplug the machine when not in use or when performing maintenance tasks. A power switch is an important component of a sewing machine, it controls the flow of electricity to the machine, allowing the user to turn off the machine quickly in case of emergency or when not in use. It is important to turn off the machine when not in use and to unplug it when performing maintenance tasks. 17. Speed control Speed control is an important feature of a sewing machine, it allows the user to adjust the speed of the machine to suit the task at hand. For example, when working with delicate fabrics or when doing detailed work, it is best to sew at a slower speed to avoid any mistakes or accidents. On the other hand, when working with thick or heavy fabrics, a faster speed can be used to get the job done more quickly. Some machines have a built-in speed control feature that allows the user to set the speed of the machine, others have a foot pedal that can be adjusted to control the speed. 18. Reverse lever It is typically a lever or button located on the machine that can be moved from a forward position to a reverse position. When the lever is in the forward position, the machine sews in the normal direction. When the lever is moved to the reverse position, the machine sews in the opposite direction. The reverse lever is used to lock the stitches in place at the beginning and end of a seam, it's important to use it for this purpose to prevent unraveling. It can also be used to make reinforcement stitches at the beginning and end of the seam or to create a decorative effect. It's important to note that the reverse lever should be used with caution, as it can cause the machine to vibrate and make it difficult to control. Also, it's always good practice to unplug the machine before adjusting the reverse lever to avoid any accidents.