Lesson 2.7 The Overlocker:

Purpose and Features

The overlocker above is a standard 4 thread twin needle made by JUKI, this machine sews a seam as it neatens. Four and five thread overlockers are the most used in the industry, because they create a strong flexible (stretchy) seam. However, there are a variety of different overlockers that use from one to five threads. They are used for various jobs as listed below:

One thread: End-to-end seaming or “butt-seaming” of piece goods for textile finishing.

Two threads: Edging and seaming, stitching elastic and lace to lingerie, and hemming. The stitch can be used for single ply and the hemming of tee shirts (sometimes known as welting)

Three threads: Can be used on pintucks, narrow rolled hems, finishing fabric edges to stop fabric fraying and for joining 2 or more plies together.

Four threads: For finishing and seaming, giving extra strength while retaining flexibility. The stitch is used to finish seams that require greater security. There are four versions of four thread overedge stitch.

Five threads: Neatening safety stitches utilizing two needles creating a very strong, flexible seam, used to finish seams that require greater seam security. This stitch combines chainstitch with three thread overedge. The chain stitch element bears the load while the overlock stitch element covers the edge of the material and provides additional seam security, making it also is one of the most used in industry

The overlocker stitch itself is adjustable in width and length. Adjusting the stitch width can make it more/less dense. The highest density can give a solid-looking edges. The stitch width indicates how wide or deep the stitch is from the edge of the fabric, see an example of the three-thread overlocking stitch below:

There are numerous manufacturers of overlockers, all with different logos. The makes below are commonly used in the industry but many other brands exist:

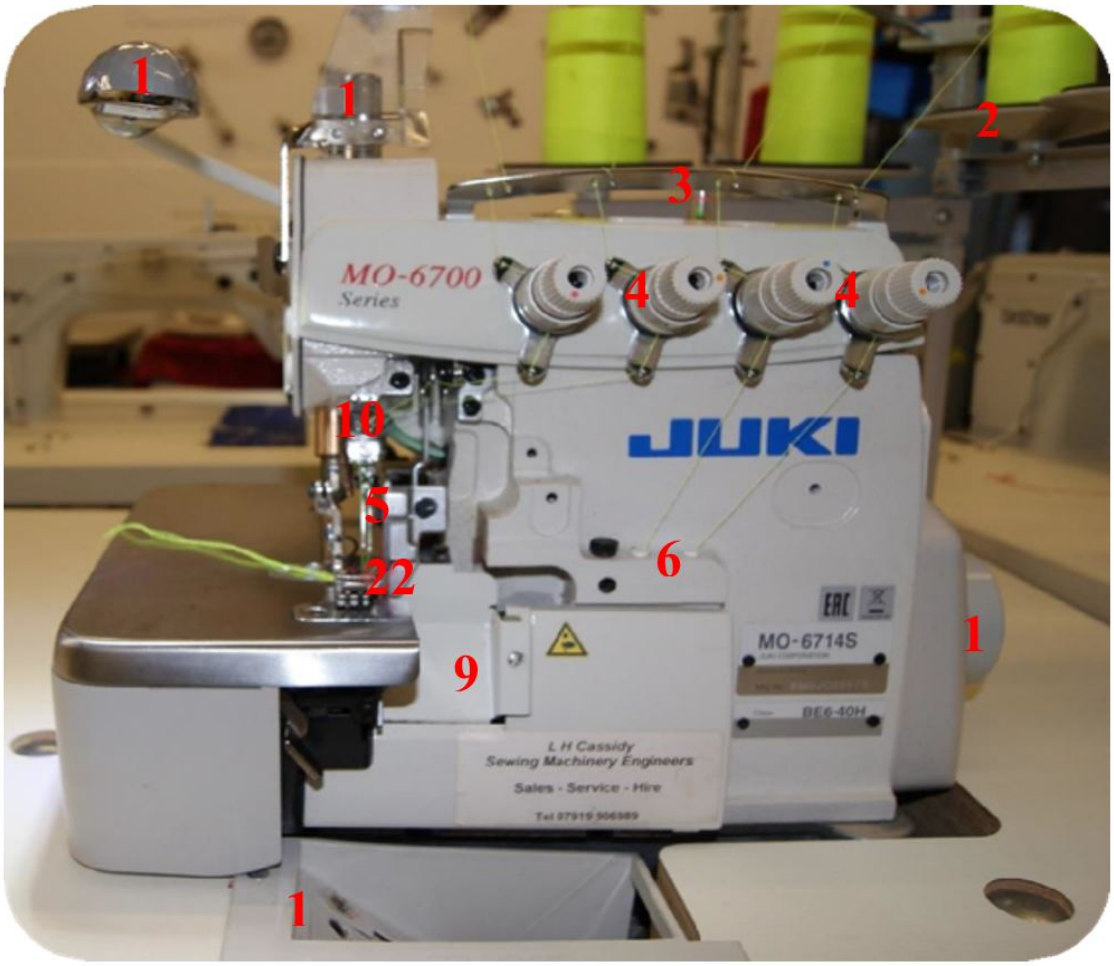
brother at your side

MAUSER

KANSAI

Rimoldi

Overlocker Features



The four-thread overlocker is one of the more commonly used models, it has approximately twenty-seven features, all of which have a purpose. The red numbers on the images below indicate the features, and the list tells what each feature is and what it does. Note: Features may vary slightly on different models.

1. **Light:** To illuminate immediate work area

2. **Thread pin:** Holds thread whilst sewing or winding the bobbin/spool

3. **Thread guides:** Guides thread through to needle and maintains thread stability whilst sewing

4. **Tension discs:** Controls the amount of pressure applied to the thread for an even feed to the machine needle ensuring an evenly formed stitch

5. **Needle bar:** Holds the needle in place; screw must be loosened to remove the needle

6. **Thread guides:** Guides thread to lower mechanism

7. **Presser foot:** Holds the fabric in place while sewing. Presser feet can be changed to accommodate different sewing tasks

8. **Feed dogs:** Moves the fabric whist the machine is stitching, feed dogs can be lowered to accommodate certain sewing different fabrics

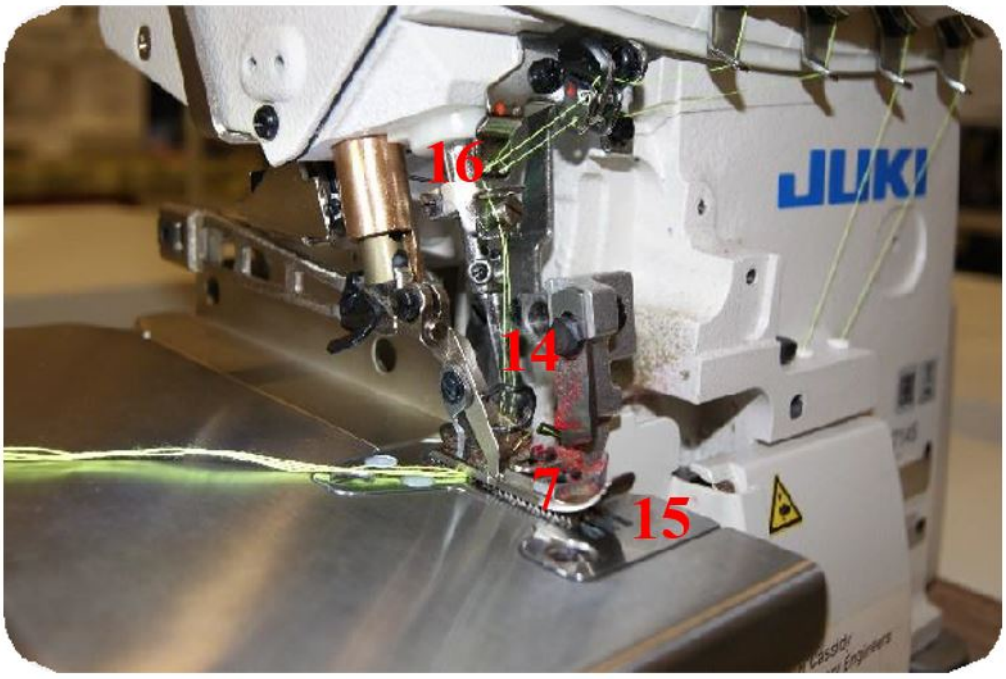
9. **Access shutter:** Moves to the right to give access to lower mechanism

10. **Perspex eye guard:** Protects the eyes from broken needle splinters

11. **Waste chute:** Trim /waste produced whilst sewing goes down this chute into bin

12. **Balance wheel:** Linked directly to machine motor with a belt and turns when sewing the balance wheel can be turned by hand to raise or lower the needle

13. **Pressure nub:** This can be turned to adjust the pressure spring regulator increase or decrease the pressure of the presser foo

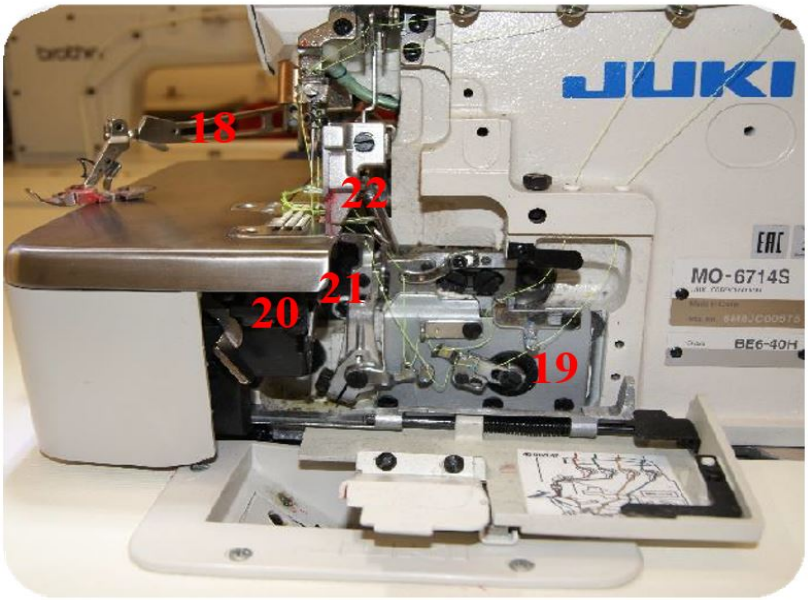


14. Needles: Two removable needles that penetrates cloth to form the stitch

15. Throat plate: The cover around the feed dogs covering the lower mechanism

16. Thread guides: Guides thread through to needles and maintains thread stability whilst sewing.

17. Machine Motor: Specified according to the type of work required– higher rpm motors provide more speed while lower rpm motors provide more torque and piercing power.



18. Presser foot arm: Arm holding the presser foot which can be released and swung to the right to allow access to the needles. Note: there is a latch situated at the back end of the arm that releases it and allows it to swing across

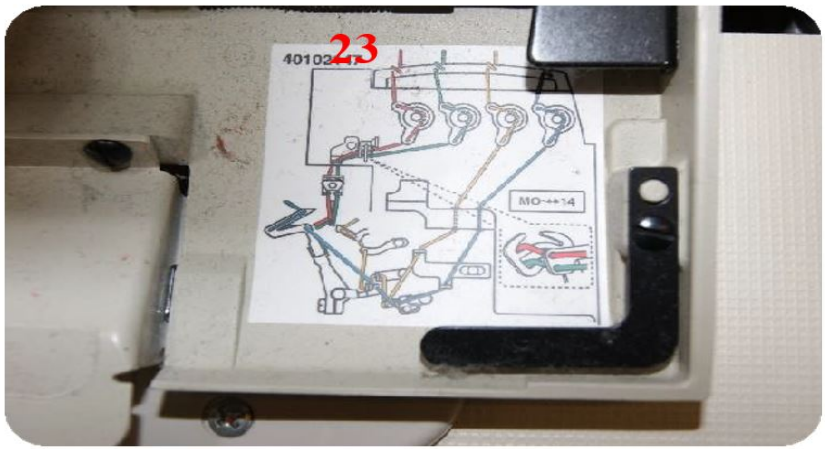
19. Thread guides: Guide thread up towards the loopers and needles and maintains thread stability whilst sewing

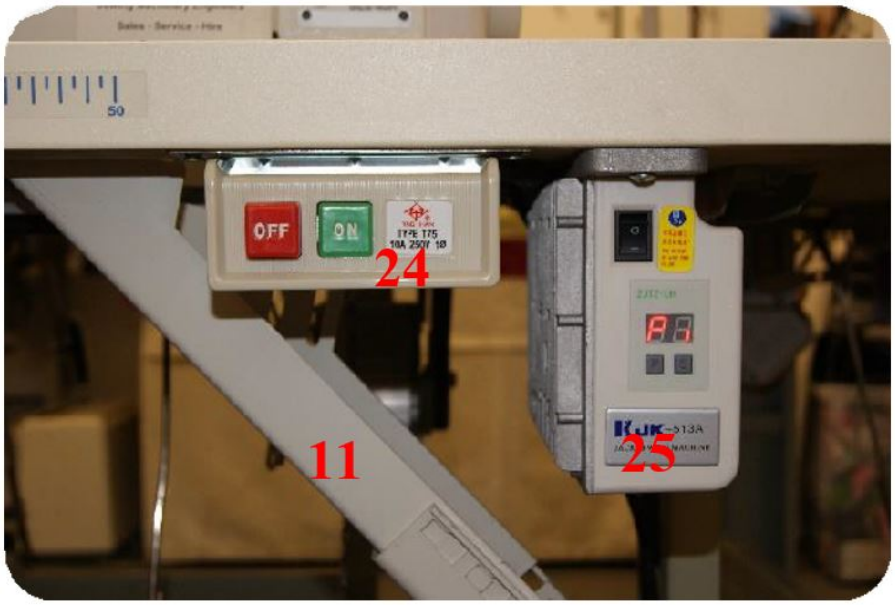
20. Lower Looper: Guides thread to needle to form the stitch

21. Lower looper: Guides thread to need le to form the stitch

22. Knife: Removable knife that trims cloth during sewing knife

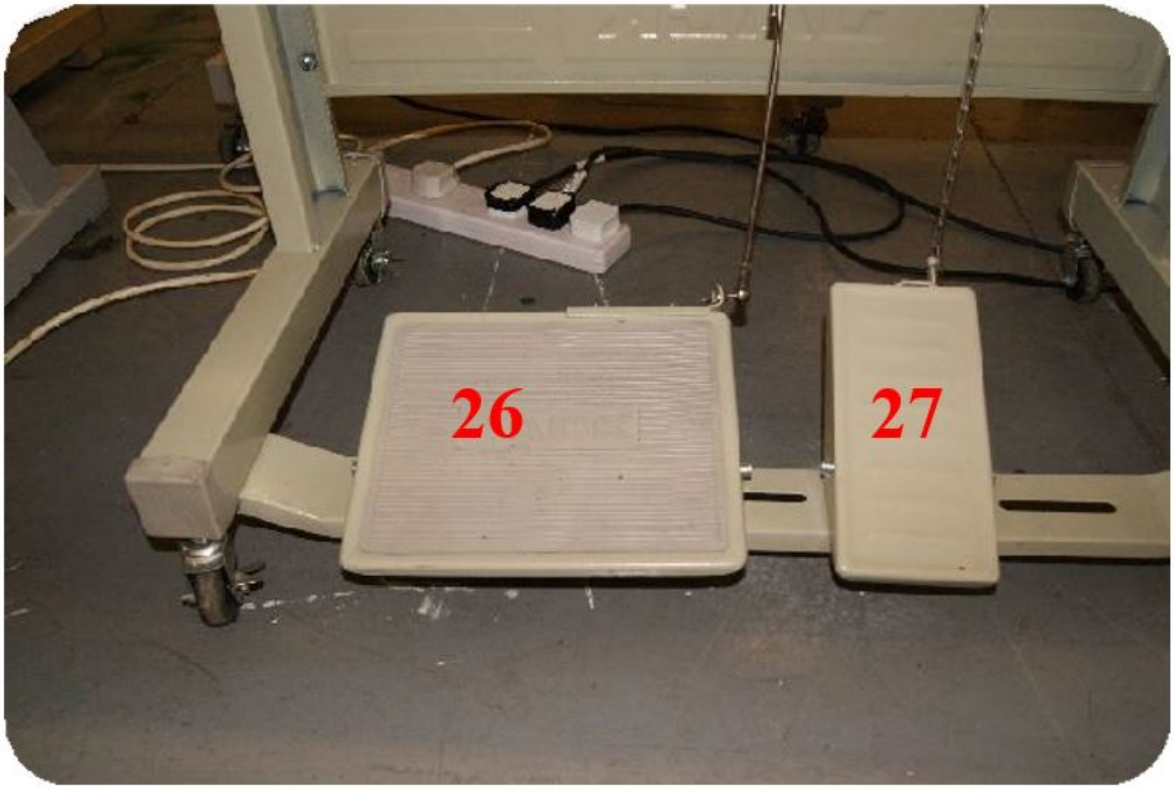
23. Threading guide: Colour coded heading guide with diagrams of each looper, needles, tension discs etc these are usually found stuck to the inner access plates





24. ON/ OFF Switch: Press to turn machine off and on

25. Speed regulator: Regulates the sewing speed of the machine, this usually is pre- set to factory requirements

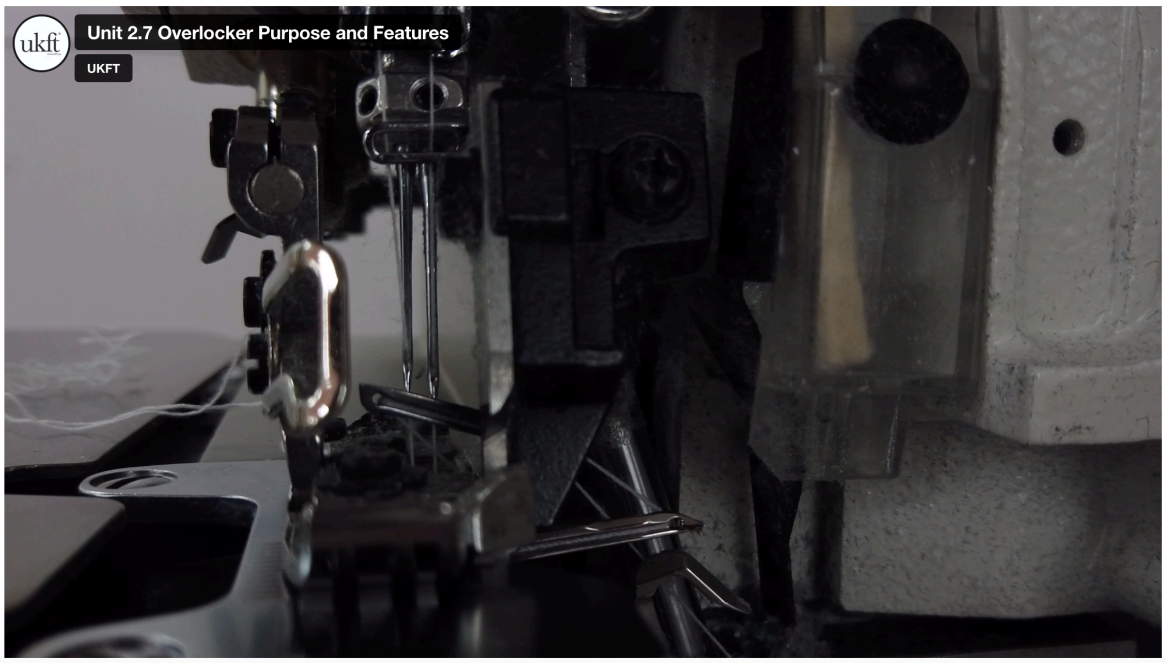


26. Treadle: Foot controls the sew, stops, starts, and controls speed of the machine

27. Presser foot pedal: Releases presser foot to allow positioning of cloth

NOTE: NEVER attempt to change the blade or remove the Perspex eye guard from an overlocker, this is there to protect you from injury.

Watch the video below to see more on the features of an overlocker machine. **Note:** to confirm instructions within the video. Thread comes from below via loopers, these threads originate from cones of top thread they do not come from a lower bobbin as on Lockstitch machine.



Knowledge Challenge 2.16

The overlocker has many features. Draw a line to match the key features to their function.

Presser Foot	Controls the amount of pressure applied to the thread as it goes through the machine
Knife	Holds the fabric in place while sewing
Needle bar	Moves the fabric whist the machine is stitching
Feed dogs	Protects the eyes from broken needle splinters
Lower loopers	Guide lower threads needle to form the stitch
Tension disc	Trims cloth during sewing
	Holds the needle in place

GROUNDWORK: Completing this groundwork is an option, it will help you to gain a better understanding of the machine functions. For those undertaking an apprenticeship these activities will help you gather information relevant to the End Point Assessment. For those learners, who are independent and not yet working as an employed production sewing machinist, alternative

The functions of YOUR machine (overlocker) As explained in Section 2.1 industrial sewing machines come in various makes and models and though most will have the same functions, they may be positioned differently on the machine you work on.

To complete this groundwork, take photographs the overlock machine you work on, print them out in A4 size and label each function clearly in red pen. Keep this for reference in your folder.

