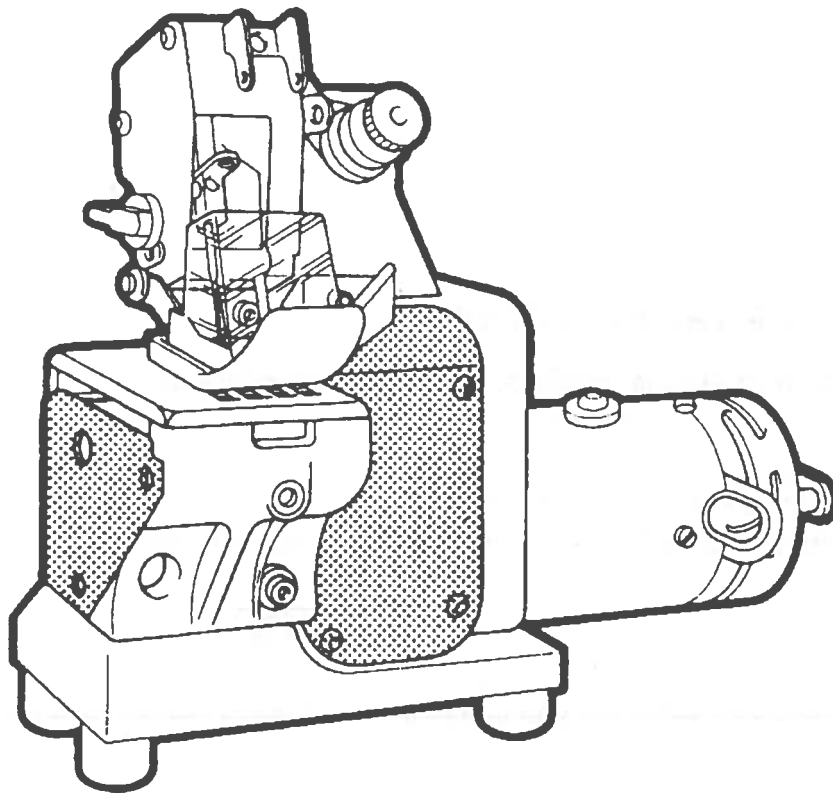


Instruction manual BUTT- SEWING MACHINE

GB



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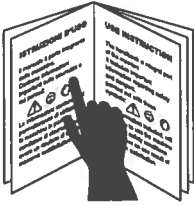
MOD. TC 105



MONTI-MAC s.r.l.

**Macchine da cucire speciali
e impianti di cucitura per l'industria tessile**

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Instruction manual

BUTT- SEWING MACHINE

MOD. TC 105

IMPORTANCE OF THE HANDBOOK

Keep this instruction manual ready to hand with the product!

The handbook is integral part of the machine.

It includes important information regarding safety and danger, pointed out by these symbols:



The information included will allow you to use the machine in perfect safe conditions and to obtain the best results.



INDEX

ENGLISH

GB

1. DELIVERY NOTE-CONFORMITY CERTIFICATE	page	3
2. MACHINE IDENTIFICATION	page	3
3. GENERAL DELIVERY NOTE	page	4
4. MACHINE DESCRIPTION AND TECHNICAL CHARACTERISTICS	page	4
5. SAFETY RULES	page	5
6. SET UP AND START UP OF MACHINE	page	6
7. SEWING OF FABRICS	page	7
8. CHANGING THE NEEDLE	page	7
9. CHANGING THE LOOPERS	page	8
10. CHANGING OF CUTTER BLADES	page	8
11. SEWING ADVICE	page	9
12. ADJUSTMENTS	page	9 - 10
13. CLEANING	page	10
14. LUBRICATION	page	11
15. MAINTENANCE	page	11
16. THREAD REQUIREMENTS	page	12
17. ACCESSORIES ON REQUEST	page	12
18. FAULT-FINDING	page	13
19. ORDERING OF SPARE PARTS	page	13
20. SPARE PARTS LIST FOR MACHINE MOD. TC 105	page	14 - 15
SPARE PARTS DRAWINGS - MACHINE MOD. TC 105	page	16 - 20

1. DELIVERY NOTE-CONFORMITY CERTIFICATE



Dear customer,

We would like first of all to thank you for the preference given to our product and we feel certain that your confidence will be rewarded by the reliable service of our machine.

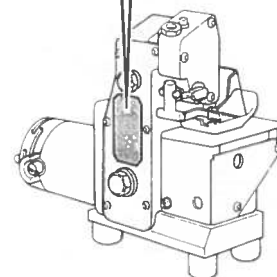
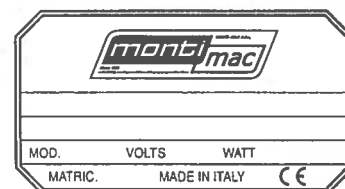
The machine supplied complies with the safety regulations required by the EEC (Directive 2006 / 42 / CE and subsequent modifications) and does not present any danger for the operator if used according to the instructions provided in this manual and provided that the safety devices are kept in good working condition.

Our company cannot be held responsible for any damage caused by failure to observe the above mentioned regulations.

We attract your attention over the fact that any form of reproduction of the manual without permission is prohibited and that the characteristics described can be changed without warning.

2. MACHINE IDENTIFICATION

In any communications with MONTI-MAC s.r.l. or with our Service Centres, always quote the serial number and model of the machine as given on the identification plate.



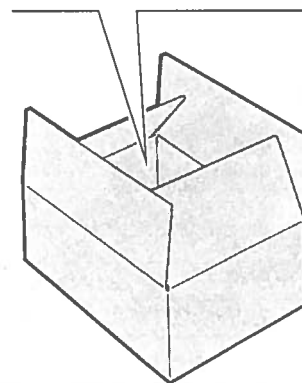
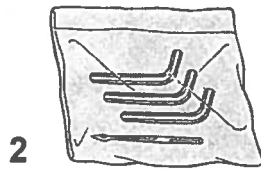
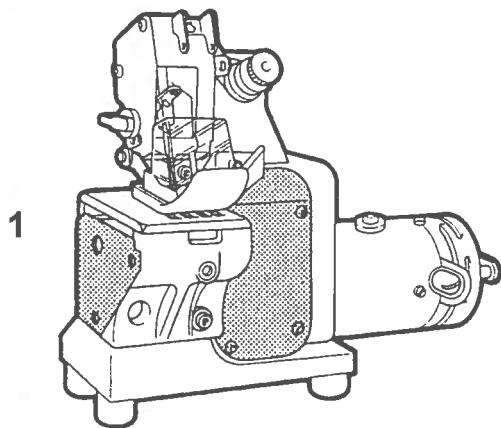
Upon receipt of the machine, check that the packing is intact, that the goods supplied correspond to those in the order (see delivery note) and that they are not damaged.

In case of damage or missing parts, immediately inform in detail the Forwarding Agent, MONTI - MAC or its Area Representatives. The dimensions given in the catalogue are not binding and they refer to the standard machine. Drawings and other documents sent with the machine are the property of MONTI - MAC who reserves all rights.

Sale documents must not be made available to third parties.

The reproduction, even in part and without permission of the text and figures, is prohibited.

1. SEW-CUTTING MACHINE
2. ACCESSORIES AND SPARE NEEDLE
3. BOTTLE OF LUBRICATING OIL



4. MACHINE DESCRIPTION AND TECHNICAL CHARACTERISTICS

This manual contains instructions for use, maintenance, and parts replacement of the butt-sewing machine Model TC 105.

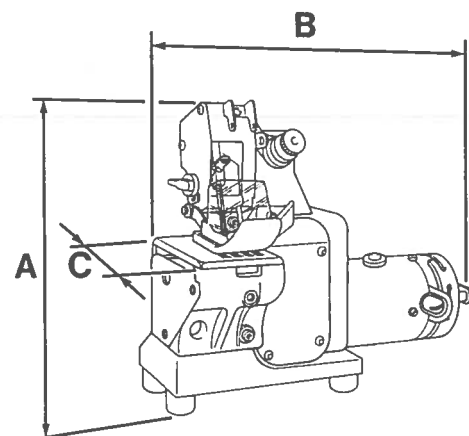
This machine, made entirely of metal, has been manufactured with the most modern technology and it leaves our plant only after the most detailed tests. It must be remembered however that its life and efficiency also depend upon appropriate use and maintenance.

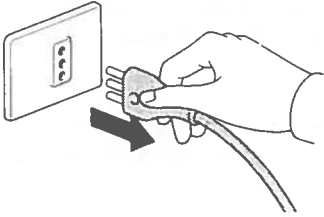
The machine Model TC 105 operates with a 44 Volt singlephase ac. motor (24 volt on request - this special motor can also run on a 24 Volt dc. current battery supplied).

The mains cable includes an earth wire. The electrical socket should be checked to ensure that it too is earthed.

It should be remembered that the presently in force Safety Regulations oblige the earthing of electrical devices. Our company cannot be held responsible for any damage caused by failure to observe the above mentioned regulations.

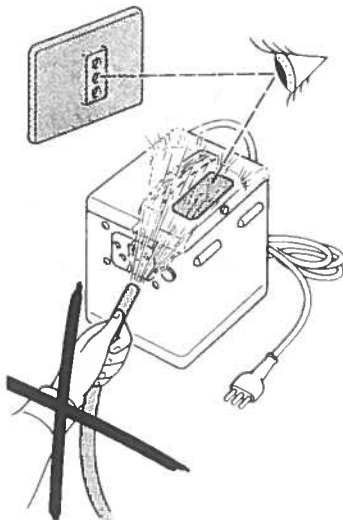
MODEL	TC 105	
DIMENSIONS	A	200 mm circa
	B	270 mm circa
	C	110 mm circa
WEIGHT	4,1 kg about	
STITCH LENGTH	2+5 mm about	
DEPTH OF CUT	6+12,5 mm about	
STITCH WIDTH	11+22 mm about	
STITCHING SPEED	10 m/min. max	
STITCHING THICKNESS	8 mm max.	
MOTOR	Single phase ac. or dc.	
LUBRICATION	Automatic oil bath	
PRESSURE FOOT	Movable	
NEEDLE CLAMP	Adjustable in height	
CUTTER	Self sharpening	
FEEDDOG	self-cleaning	





Before any maintenance or repairs to the machine, disconnect the machine from the electrical supply by removing the plug from the socket.

If not, the machine may cause heavy damages to operator.



Check that the mains tension is the same as the supply tension reported on the registration plate of the transformer (optional).

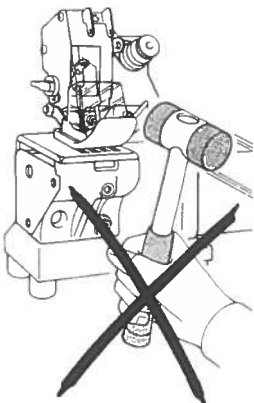
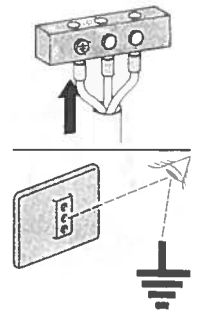
Do not spray water on the transformer.

If the machine is not supplied mounted on the special mobile table, then the electrical cable must be connected to a low tension supply (44 Volt, or 24 Volt).

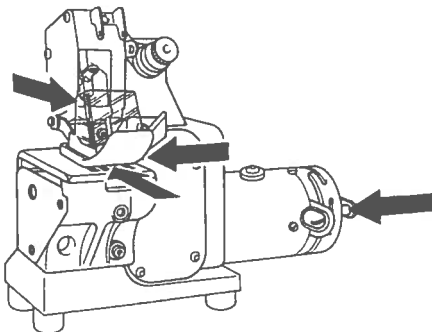
Check that the mains is earthed.

It should be remembered that the safety regulations presently in force oblige the earthing of electrical devices.

Our company cannot be held responsible for any caused by failure to observe the above mentioned regulations.



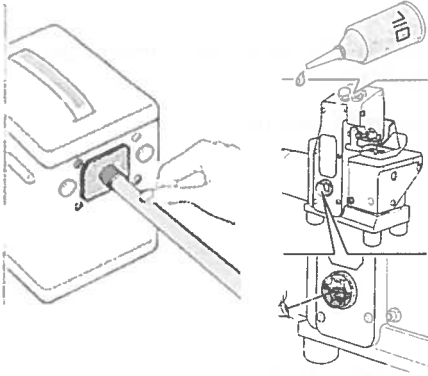
Hammering can damage the delicate parts of the machine.



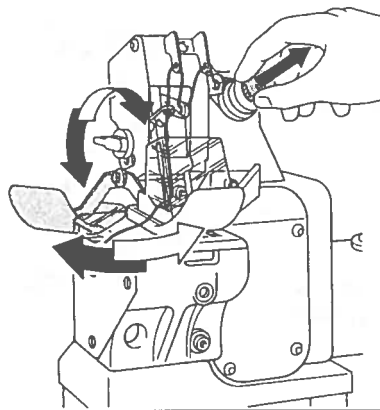
Do not insert your hands or your fingers where there are moving parts.



Allow only specialised technicians to tune the machine.



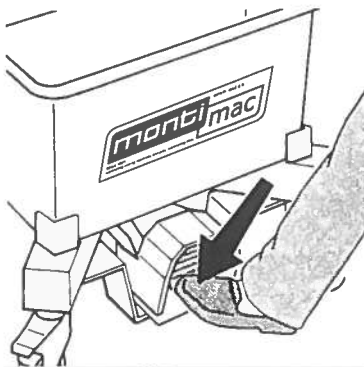
1. Connect the electrical cable of the machine to the transformer (supplied as optional) making sure that the voltage of the machine is equal to the supply source.
2. If the machine speed's varies as a result of changes in the transformer input current, it is possible to set the required speed by selecting the appropriate voltage on the transformer.
3. Pour the lubricating oil provided with the machine into the hole existing in the upper part of the machine until it can be seen in the transparent level indicator.



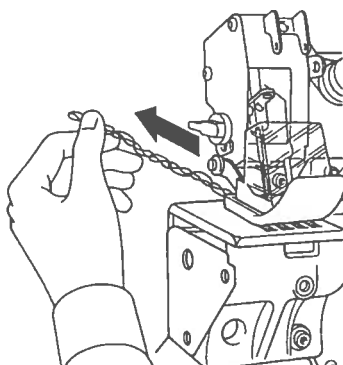
4. Thread the machine as shown in the figure without missing any of the stages. To ease the threading it is possible to free the needle area, releasing the foot from its working position by rotating the lever forward, and tilting back the foot. When the foot is returned to its working position, rotate the lever back to its original position and check that the foot is correctly locked.

Remember: if pressure foot is not locked in the right position the first run will break the needle.

5. Lightly lift the tension disc with the fingers, the thread should run freely.



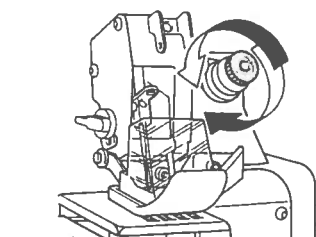
6. Press the pedal starter, pushing it completely down (if the machine is installed on a mobile table). The pedal starter is equipped with a safety device, which avoid the accidental start of the machine if the foot is not well inside the pedal starter.



7. The stitch is formed and comes out as an empty chain from behind the foot.

It should be noted that thread tension is adjusted by rotating the grooved knob on the tension unit in a clockwise or anti-clockwise direction.

This regulation is necessary and depends upon the type and quality of fabric/ being sewn.

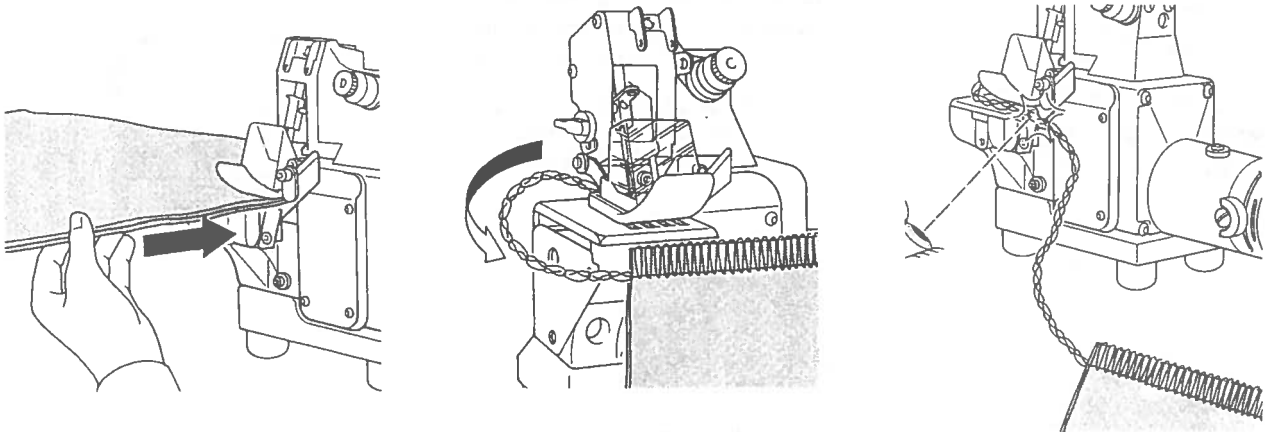


ADVICE:

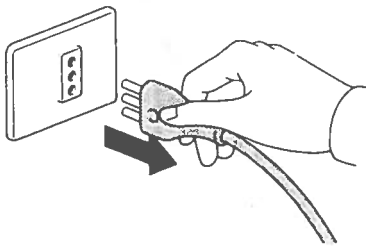
The stitch should be adjusted by rotating the knob for 1/4 of a turn at a time until the correct stitch characteristics are obtained.

Move the doubled edges of the material towards the pressure foot and the cutter so that a few millimetres of the fabric is being cut. Press the drive pedal (if the machine is installed on a mobile table) and follow the fabric that is automatically advanced by the sewing mechanism.

At the end of the sewing run, continue the sewing chain for a few centimetres and then cut it with the automatic cutter by moving the end of the fabric towards the front of the machine.

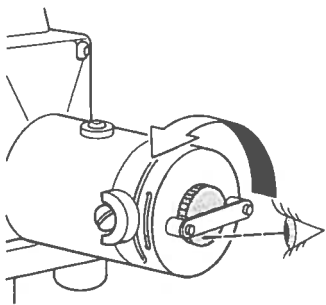


8. CHANGING THE NEEDLE

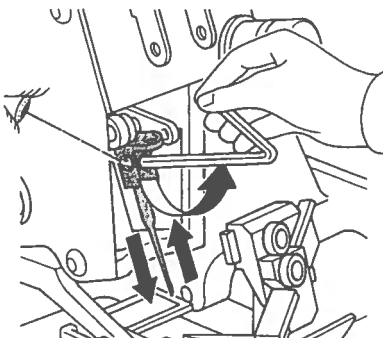


1. Before any maintenance or repairs to the machine, disconnect the machine from the electrical supply by removing the plug from the socket.

If not, the machine may cause heavy damages to operator.

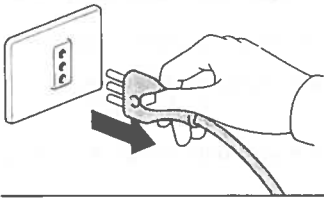


2. Turn the ridged knob in the direction shown by the arrow until the needle reaches the upper dead point - that is, fully upwards.



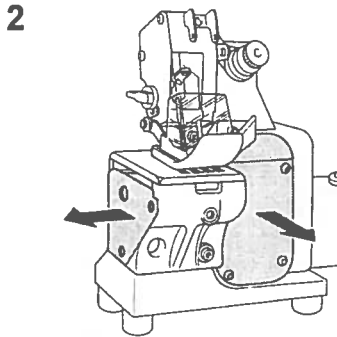
3. Loosen the clamp screw with the hexagonal key supplied with the machine.
4. Replace the broken or blunt needle with a new one.
5. Push the needle right into its seat and make sure that the guide face of the needle is orientated towards the needle fixing screw.
6. Check that the needle is completely inserted into its seat: it should be visible through the hole in the clamp.

NOTE: different types of needles are available according to the different nature of the fabrics to be treated: for very delicate textile use needle TC560/TC561; for thick materials use needle TC563; for hard materials (showing a difficult penetration) use needle TC564.



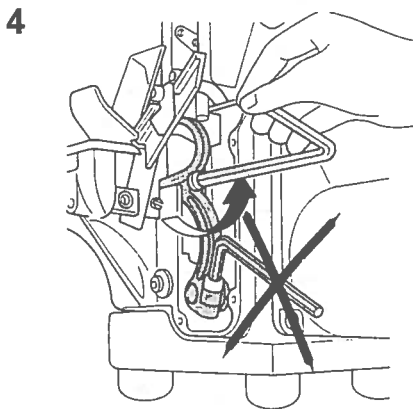
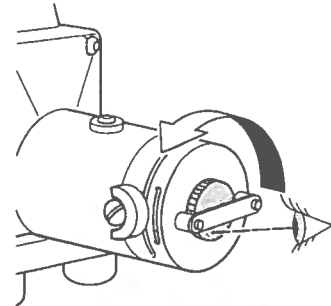
1. Before any maintenance or repairs to the machine, disconnect the machine from the electrical supply by removing the plug from the socket.

If not the machine may cause heavy damages to operator.



2. The replacement of the upper and lower loopers is achieved by opening the casing at the front and on the cutter side.

3. Turn the ridged knob in the direction shown by the arrow until the looper moves into an accessible position.

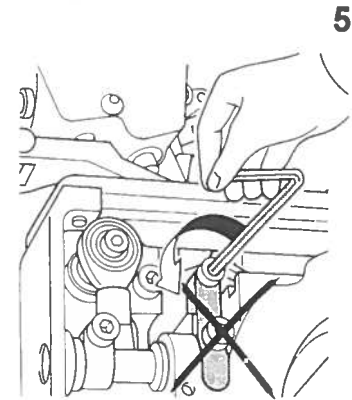


4. Unscrew the locking screw with the hexagonal key supplied.

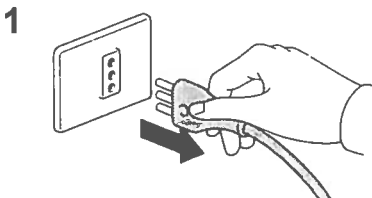
5. Replace the looper with a new one and tighten the locking screw firmly.

WARNING:

only specialised technicians should carry out the phasing of the machine.

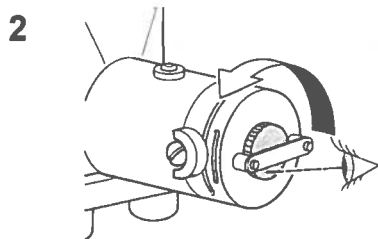


10. CHANGING OF CUTTER BLADES



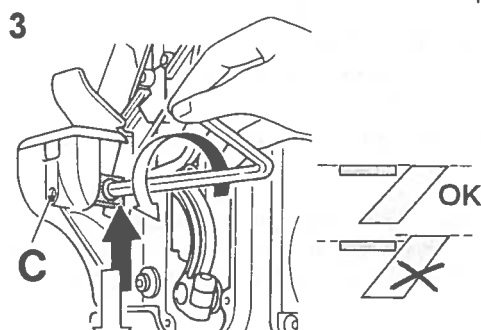
1. Before any maintenance or repairs to the machine, disconnect the machine from the electrical supply by removing the plug from the socket.

If not the machine may cause heavy damages to operator.



2. Turn the ridged knob of the manual starter in the direction of the arrow, until the cutter arrives at the upper dead point, that is, fully up.

3. Move the cutter support as much as possible to the left, and then screw in the stop screw of the fixed cutter support (C). Now the blades can easily be extracted as follows. Loosen the locking device screw to change fixed cutter. Slide out the old blade and insert the new one, positioning it at the same level as the needle plate. Take care that the cutting level of the cutter is correctly positioned so that the blade of the mobile cutter, at its lowest point of movement, is covering completely the latter.

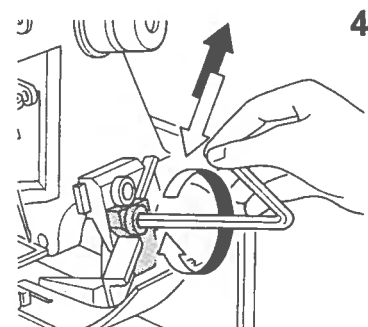


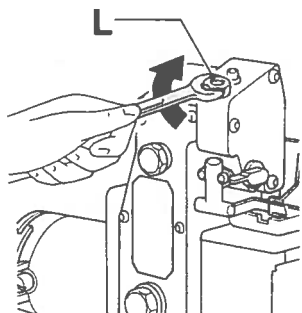
4. The mobile cutter blade is replaced by loosening the locking screw.

Slide out the old blade and insert the new one, setting the blade so that it touches the outside face of the fixed cutter.

When one of the two blades has been replaced, loosen screw (C), which stops the horizontal slide of the fixed cutter support.

The internal spring pushes the fixed cutter towards the mobile cutter providing sufficient pressure for coupling.

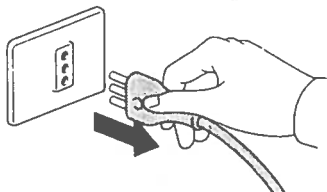




The quality of the sewing stitch depends both on the material and the quality of the thread used (see Chapter THREAD REQUIREMENTS).

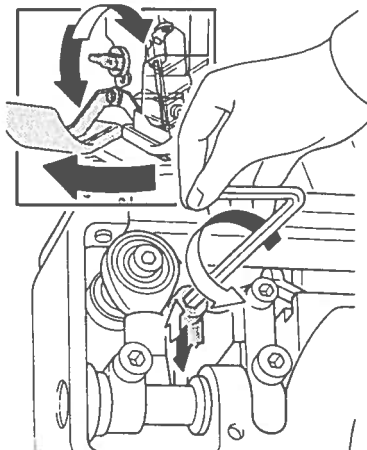
If it is found that the transport of material being sewn is irregular, it is necessary to adjust the foot pressure by using a hexagonal key.

12. ADJUSTMENTS



1. Before any maintenance or repairs to the machine, disconnect the machine from the electrical supply by removing the plug from the socket.

If not the machine may cause heavy damages to operator.

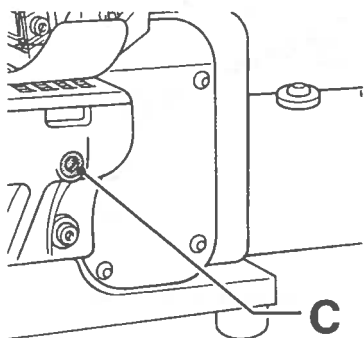


12. 1 SEWING PITCH

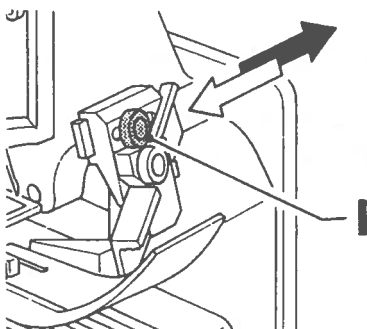
1. Free the pressure foot and rotate it.
2. Loosen the screw that fixes the feeding dog to its support; by raising or lowering the position of the feeder the sewing pitch can be increased or decreased.
3. Tighten the screw on completion of the adjustment.
4. Move the pressure foot back to its working position and lock it.

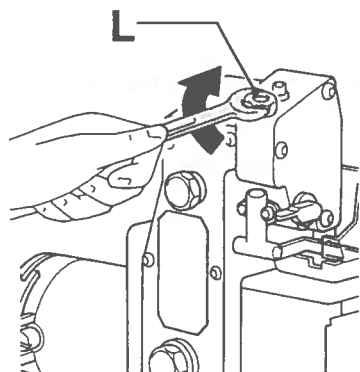
12. 2 CUTTING DEPTH / KIND OF SEAM

The seam can be FLAT or OVERLAPPED adjusting the trimmers position



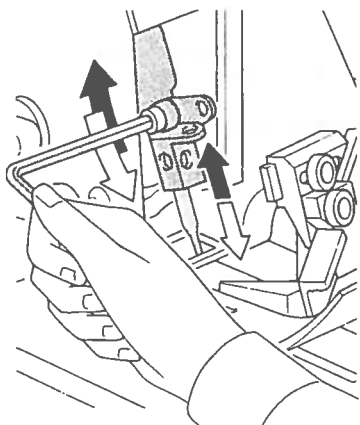
1. Release the foot and rotate it.
2. Move the fixed cutter support completely to the left, and then tighten screw (C).
3. Loosen screw (I) and choose the depth of cut required.
4. First tighten screw (I) and then release screw (C) taking care to remove any threads from between the blades.
5. Move the foot back to its working position and lock it.
6. If a further decrease in the cutting depth is required, up to the minimum possible, it is necessary to replace the foot TC662 (standard) with the optional foot TC661. If a larger cut is required, use the optional needle plate TC620. If a wider stitch is required use the optional tongue TC628.





12. 3 PRESSURE FOOT

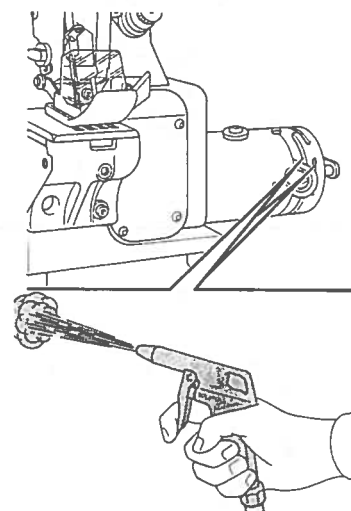
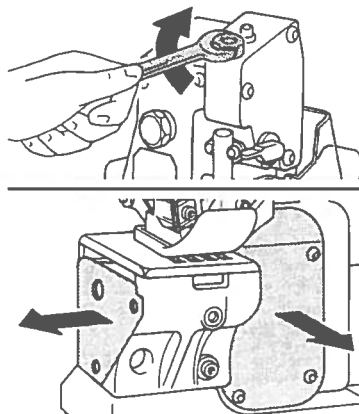
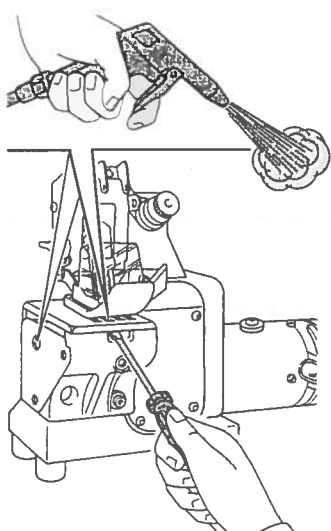
Tighten or loosen the screw (L) to obtain an increase or decrease in pressure.



12. 4 NEEDLE HEIGHT

1. Loosen the locking screw of the needle clamp and move it to the position required.
2. When the adjustment is correct, tighten the locking screw ensuring that the clamp is correctly orientated, with the thread guide forward.
3. It is necessary to carefully check that the new needle height is compatible with the machine timing.

13. CLEANING

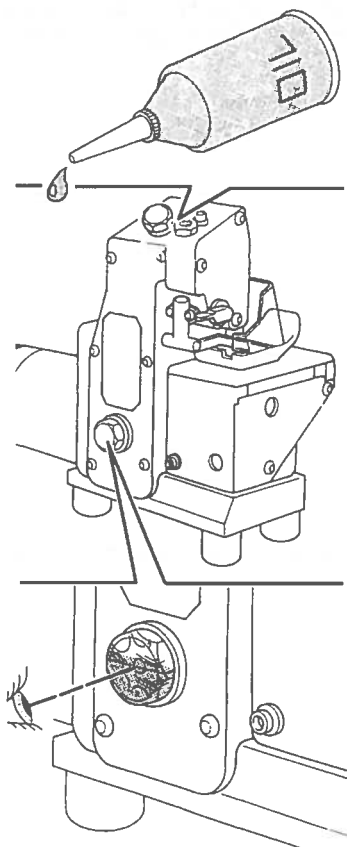


Systematic cleaning of the machine extends its life; the frequency depends upon the cleanliness of the work environment and the use of the machine.

- 1) Daily cleaning with an air jet:
 - a) The automatic cutter.
 - b) The stitching devices (put the air pistol into the hole in the side of the casing and rotate it: the dirt will come out of the hole above).
 - c) The claw teeth through the opening in the body of the machine. If necessary with the help of a fine screwdriver.
- 2) In the case of excessive accumulation of material under the foot, unscrew the spring pressure device and clean carefully with an air jet, screwing it up again afterwards.
- 3) Annual cleaning:
 - a) Remove the front and side casing; clean the sewing unit area.
 - b) Clean the electric motor and its carbon brushes with an air jet.

Lubrication occurs automatically from the oil reserve inside the machine. It should be borne in mind that consistently good lubrication increases the life of the machine.

We suggest to use the **oil PV-OIL-T4310** especially made for Industrial Stitching Machines and supplied in small bottles with predetermined quantity.



- **Monthly:**

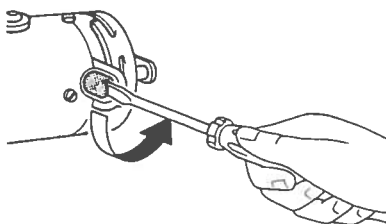
1. Check the oil level through the transparent Indicator at the back of the machine.
2. If necessary add oil through the hole at the back of the machine.

- **Annually:**

1. Completely change the oil.

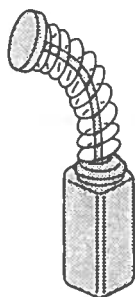
Recommended is the use of the special oil for sewing machines having the right viscosity (**oil PV-OIL-T4310**).

15. MAINTENANCE



- **Annually:**

1. Unscrew the brush holder knob.
2. Check the wear of the brushes, and if necessary replace them.
3. Re-insert the knob.

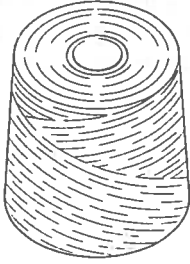


WARNING:

Change the brushes in good time, otherwise the motor could deteriorate irreparably.

Note that an heavy use of the machine will require a more frequent change of the brushes.

Keep in mind that an accurate periodical maintenance and the use of the original spare parts, reduce considerably unproductive stops and expensive repair made in a hurry.

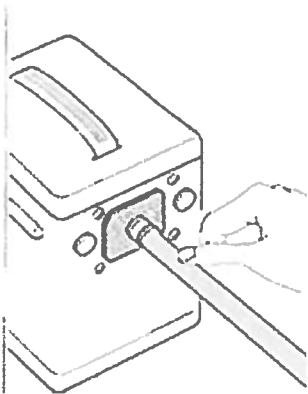


Our sewing machines use reels of specially designed thread produced in different quality grades. This ensures strong, even stitching, and satisfies our clients' most diverse needs.

We attract your attention over the fact that the use of an unsuitable quality of thread may cause unnecessary damages to the stitching parts of the machine beyond producing a non-satisfactory stitching.

Our Technical Service Department is available to supply technical advice on the matter.

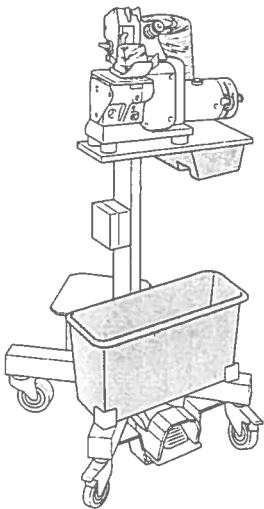
17. ACCESSORIES ON REQUEST



The following accessories are available on request:

Electrical transformer:

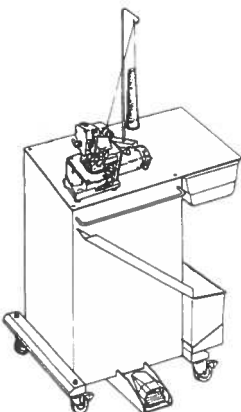
to transform the voltage into the voltage of the machine. We remind that for safety reasons, the machine TC105 operates at low tension.



Mobile table:

that allows the machine to be used at different work stations.

(available in two versions, painted and in stainless steel AISI304)



Battery operated mobile table:

equipped with self-contained battery charger to allow the use of the machine in different sites with no need of electrical connection.

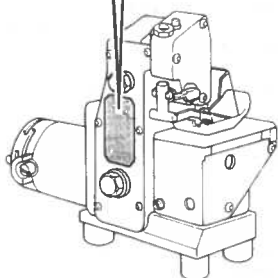
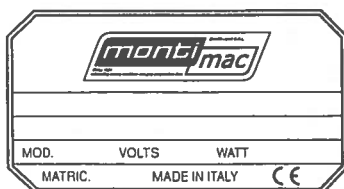
(entirely in stainless steel AISI304)

Below are indicated some faults that can be experienced during the operation of the machine and the possible remedies to be adopted.

In case it will be impossible to obtain again acceptable working conditions, it will be necessary to contact one of our Service Centres or our Technical Service Department.

- **IRREGULAR STITCH:** Check thread tensions, check machine threading.
- **MISSING STITCH:** Check thread tension, check machine threading, check position of loopers, check that needle is well inserted in its support, check orientation of needle (the facet on needle should be oriented against the needle blocking screw), check if needle is suitable.
- **THREAD BREAKS:** Check if thread tension is too high; check the threading; check that thread is suitable for the application.
- **NEEDLE BREAKS:** Check if the needle is bent, check position of loopers, check position of needle, check if needle guard is properly positioned.
- **HOLES ON FABRIC:** Check that needle is not blunt, check if size of the needle is suitable for the fabric.
- **FABRIC DEFORMATION:** Check if needle is suitable for the fabric.
- **IRREGULAR TRANSPORT:** Check foot pressure, check cleaning of pressure foot.
- **THREAD ACCUMULATING IN THE NEEDLE PLATE:** Check machine threading, check if tension is insufficient.
- **BREAKING OF THE LOWER LOOPER:** Needle size not suitable, bent needle, inappropriate needle type, phasing of upper looper incorrect.
- **BREAKING OF UPPER CROCHET:** cutter low efficiency one or both loopers badly positioned, loopers timing incorrect.

19. ORDERING OF SPARE PARTS



When ordering spare parts always mention the serial number and part code number, along with a description of the part.

Model and serial number of the machine are indicated on the label put on the back side of the machine.

Example:

Machine mod. TC 105,
serial number 2158,
part TC597
Upper Looper.

20. SPARE PARTS LIST FOR MACHINE MOD. TC105

SPARE PARTS DRAWINGS -MACHINE MOD. TC105 - page 16 - 20

6197	Connection type B	TC532	Key
9046	Vibration damper	TC533	Key
9050	Base	ΔΔΔ TC535	Lubrication screw
K65F	Cover	TC536	Washer
K110	Tension spring	TC537	Ball bearing
K111	Tension cup	TC539	Washer
K112TC	Tension washer	TC540	Spacer
K113	Tension knob	TC541	Eccentric needle drive
K138	Screw	TC542	Needle cage
K143	Grub screw	TC543	Disc
K149	Grower	TC544	Needle rod
** K166 FV	Motor brush 44V	TC545	Bush
** K167FV	Brush cover 44V	TC548-1	Collar
** K166	Motor brush 24V	TC548-2	Shaft
** K167	Brush cover 24V	TC548-3	Additional collar
K206	Hexagonal key mm. 2	TC549	Needle bar
K207	Hexagonal key mm. 3	TC550	Needle lever
K275	Hexagonal key mm. 2,5	TC551	Needle pin
M173	Button	TC552	Needle joint
M209	Tension pin	TC553	Needle guide
M539	Gasket	TC554	Needle clamp
M540	Screw	Δ TC560	Finish needle 100 SUK
M556	Screw	Δ TC561	Finish needle 100
M557	Grub screw	Δ TC563	Finish needle round 140
M558	Grub screw	Δ TC564	Finish needle square point 140
M559	Grub screw	TC567	Thread stretcher
M563	Nut	TC570	Eccentric lower looper
M565	Nut	TC571	Needle cage
M569	Washer	TC572	Lower looper head
M575	Spring ring	TC573	Lower looper pin
M578	Cup spring	TC574	Lower looper joint
ΔΔ M592	Trasformer 220/44V	TC580	Bush
ΔΔ M593	Trasformer 220/24V	TC581	Lower looper shaft
TC59	Lower looper	TC582	Lower looper arm
TC66	Press blade spring	TC583	Lower looper support
TC70	Bearing	TC585	Looper screw
* TC504	Motor group a 24V	TC590	Upper looper eccentric
* TC505	Motor group 44V	TC591	Upper looper head
TC508	Lever pressure foot group	TC592	Looper end
TC510	Motor power cable group	TC594	Upper looper shaft
TC517	Machine body	TC595	Upper looper arm
TC522	Motor casing	TC596	Upper looper support
TC527	Motor pinion	TC597	Upper looper
TC528	Spring pin	TC602	Transport support
TC529	Driven pulley	TC603	Feed dog
TC531	Feed dog shaft	TC610-561	Needleplate (specify code needle)

TC610-563	Needleplate (specify code needle)	TC721	Plate
TC610-564	Needleplate (specify code needle)	TC722	Nut
TC626	Needle plate screw	TC748	Screw
TC627	Feather standard	TC750	Screw
TC628	Feather (large cut)	TC754	Screw
TC630	Needle guard	TC755	Screw
TC640	Pressure foot bush	TC756	Washer
TC641	Pressure foot bush	TC757	Spring ring
TC642	Pressure foot bar	TC758	Grub screw
TC643	Pressure foot spring	TC759	Spring ring
TC644	Pressure foot clamp	TC760	Spring ring
TC650	Pressure foot support	TC786	Lower cover
TC651	Pressure foot washer	TC788	Screw
TC652	Pressure foot joint	TC789	Screw
TC653	Pressure foot pin	TC791	Transport guide
TC654	Pressure foot lever	TC792	Label Mod. TC105
TC655	Pressure foot screw	TC793	Transport bar
☞ TC661	Pressure foot (small cut)	TC794	Protection
☞ TC662	Pressure foot (deep cut)	TC795	Screw
TC671	Raise pressure foot bush	TC798	Gasket
TC672	Raise pressure foot nut	TC799	Washer
TC673	Raise pressure foot eccentric	TC810	Black cover
TC680	Blade support bush	TC811	Black cover gasket
TC681	Blade support bush	TC812	Screw plug
TC682	Blade support pin	TC813	Oil level indicator
TC683	Blade support	TC814	Lurification felt
TC684	Lower blade stirrup	TC815	Wick tube guide
TC685	Lower blade	TC816	Oil discharge tube
TC690	Disc	TC817	Screw
TC691	Upper blade eccentric	TC818	Thread guide
TC692	Needle cage	TC819	Screw
TC693	Spacer	TC820	Oil bottle
TC694	Upper blade connection rod	TC821	Spoon
TC695	Lever blade bush	TC822	Washer
TC697	Upper blade arm	TC823	Screw
TC698	Upper blade lever	TC824	Flush rivet
TC699	Upper blade support	TC825	Screw
TC700	Upper blade stirrup	TC826	Screw
TC701	Upper blade	ΔΔΔ TC827	Greaser
TC710	Upper cover	TC828	Pressure foot guide (former TC645)
TC712	Front cover		

* Motor Group TC505 AND TC504 are supplied with TC527 and TC528

** Brush K166FV and cover brush K167FV are for 44 V motors. For 24 V. motors use brush K166 and cover brush K167

☞ Pressure foot TC662, needle plate TC610 and feather TC627 are standard. On request: pressure foot TC661, needle plate TC610-563, needle plate TC610-564 and feather TC628

Δ See instruction "change of needle"

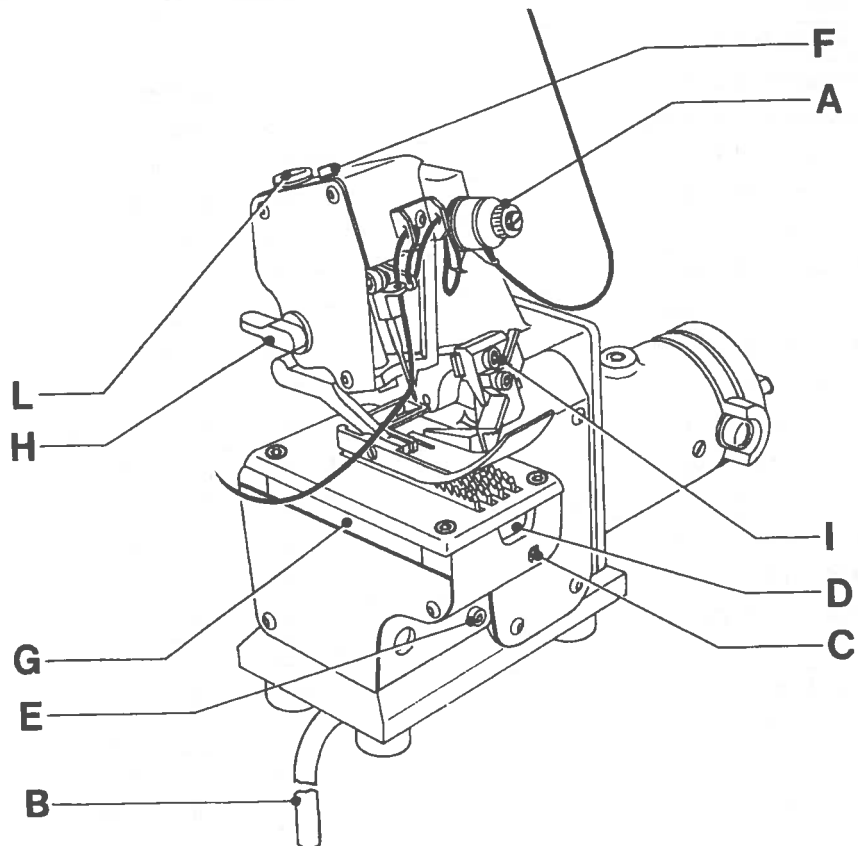
ΔΔ On request. Be sure that tension corresponds to machine tension , as shown on machine label

ΔΔΔ TC535 for grease lubrication only

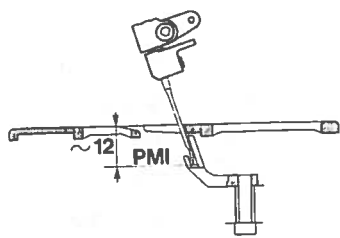
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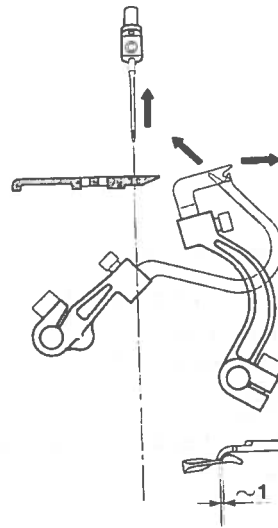
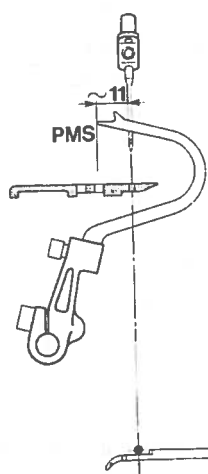
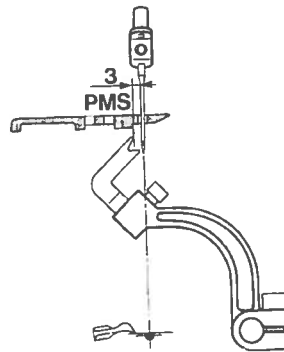
DRAWING 1



Fase Ago
 Needle phase
 Phase aiguille
 Nadelphase
 Fase aguja

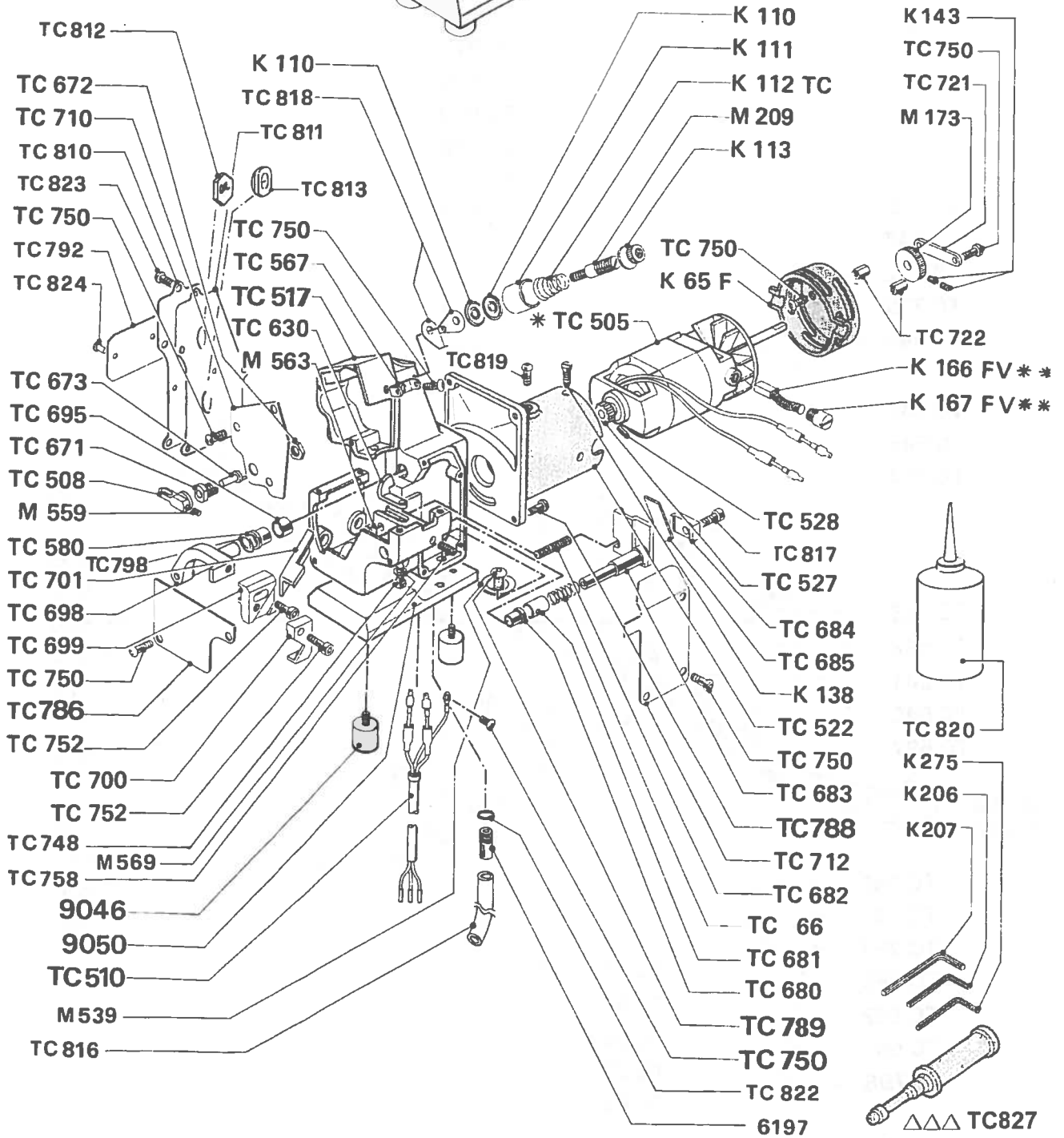
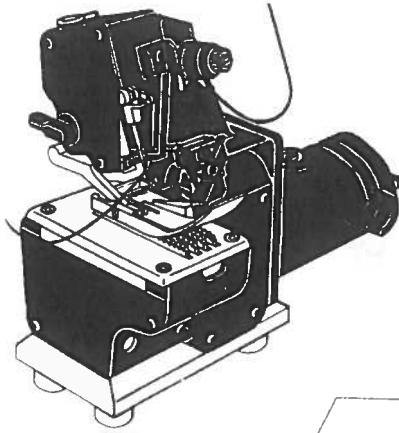


Fase Crochet Inferiore
 Lower looper phase
 Phase crochet inf.
 Phase unteren haken
 Phase Crochet inferior



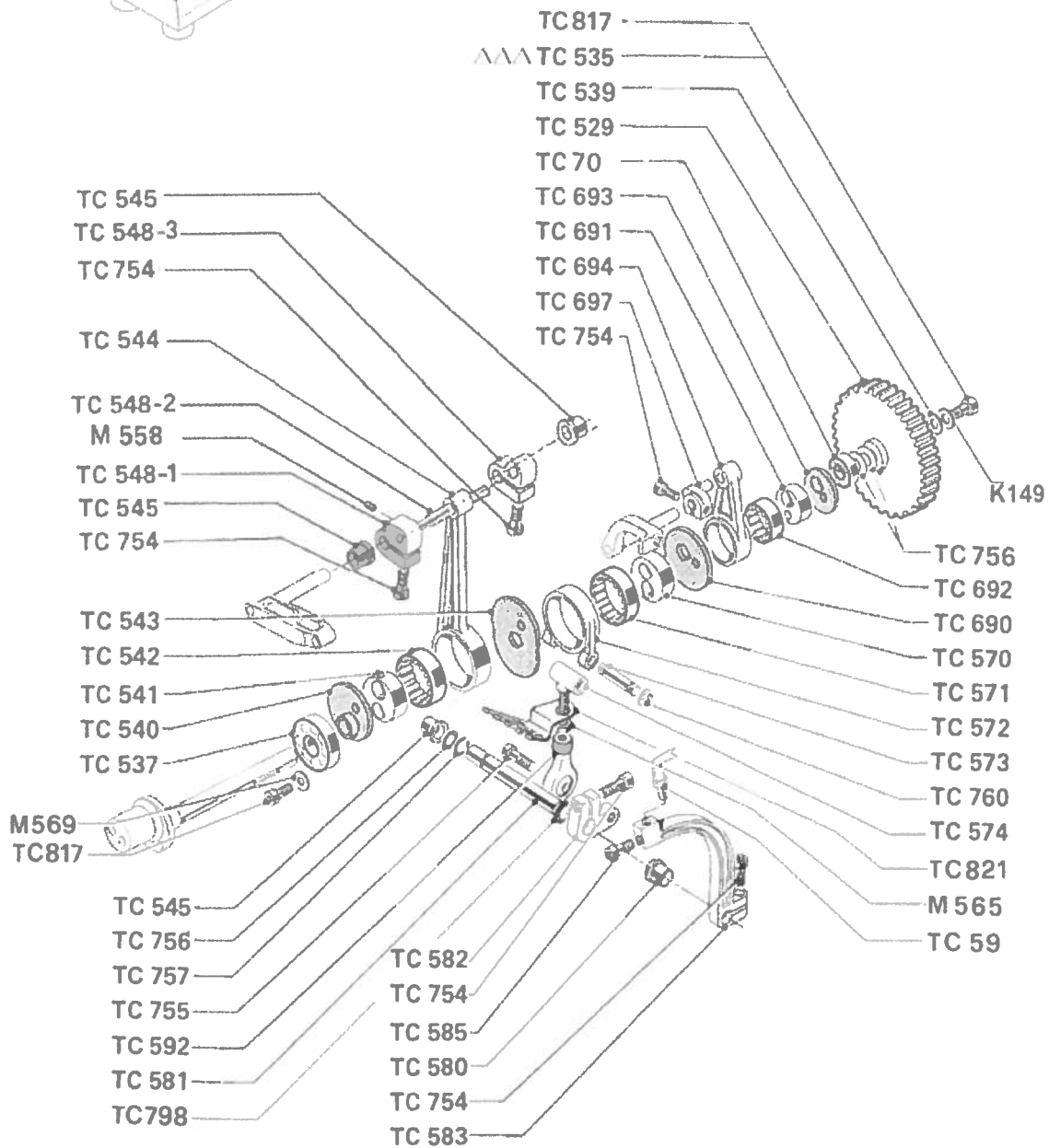
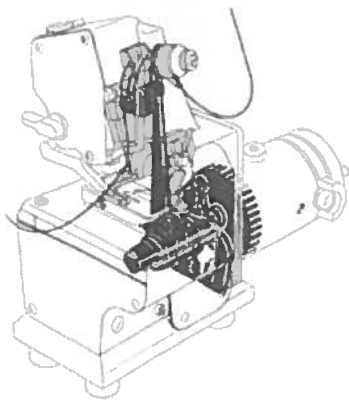
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DRAWING 2



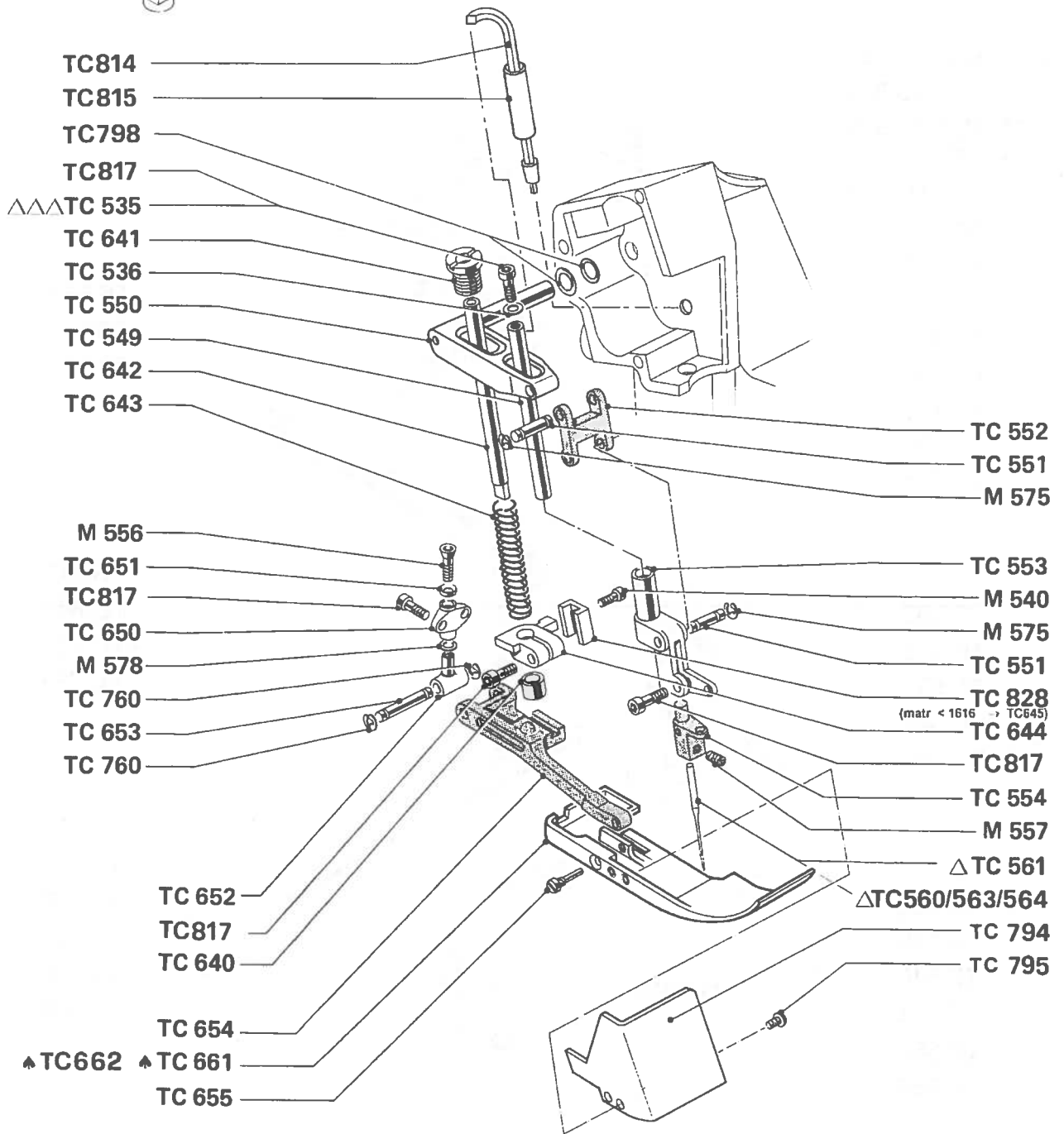
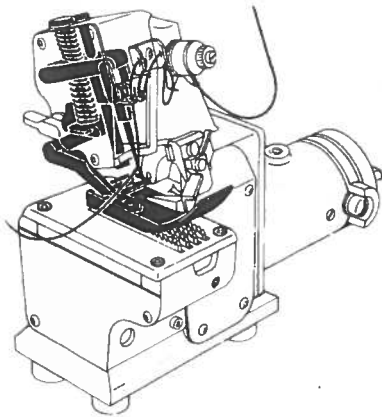
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DRAWING 3



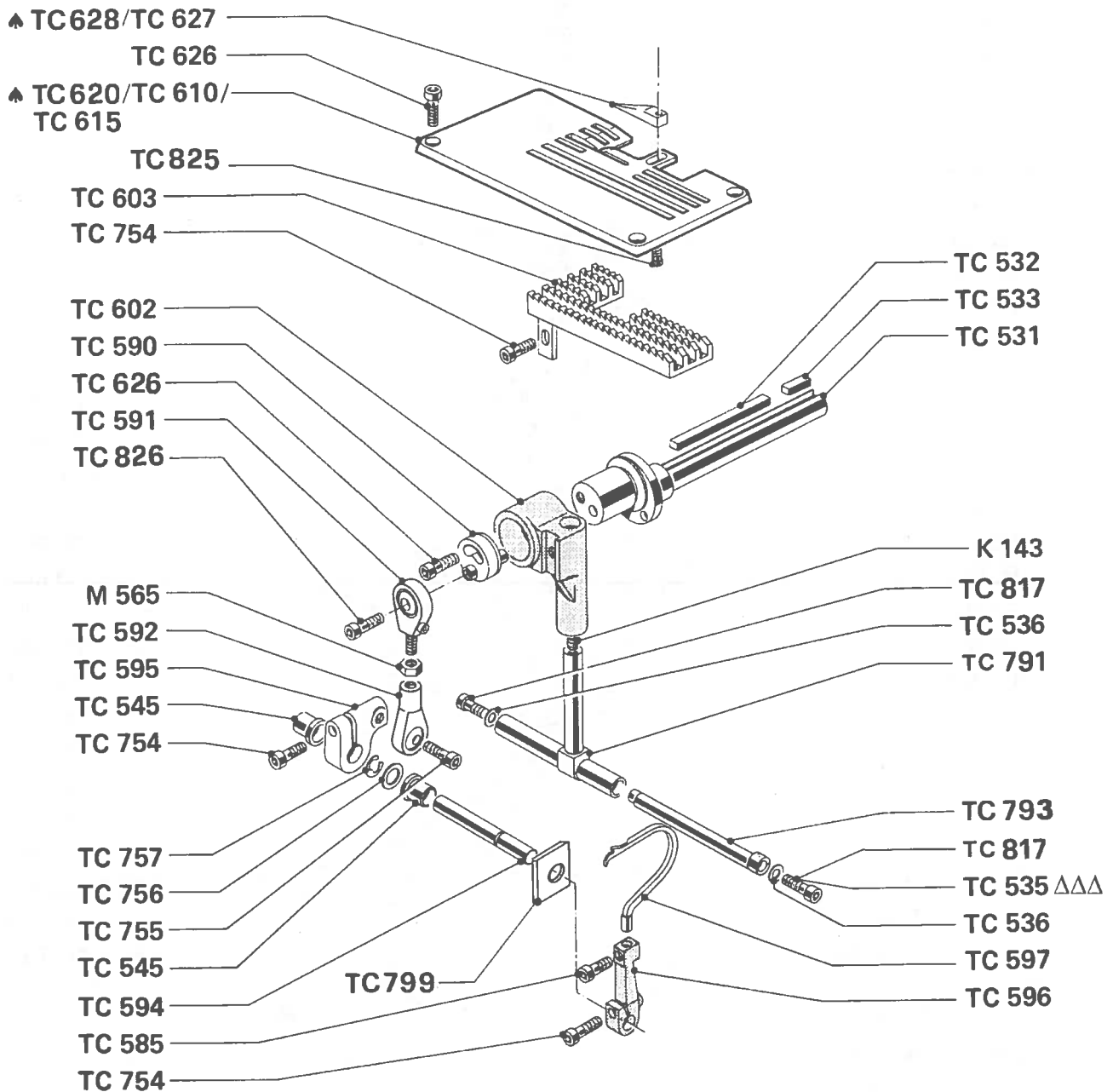
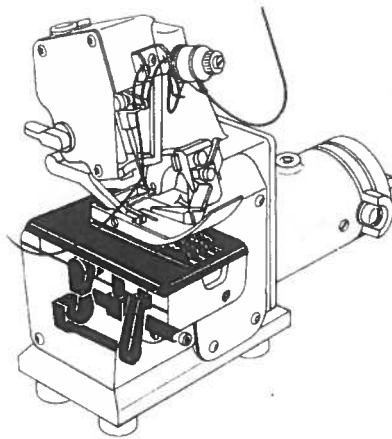
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DRAWING 4



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DRAWING 5



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