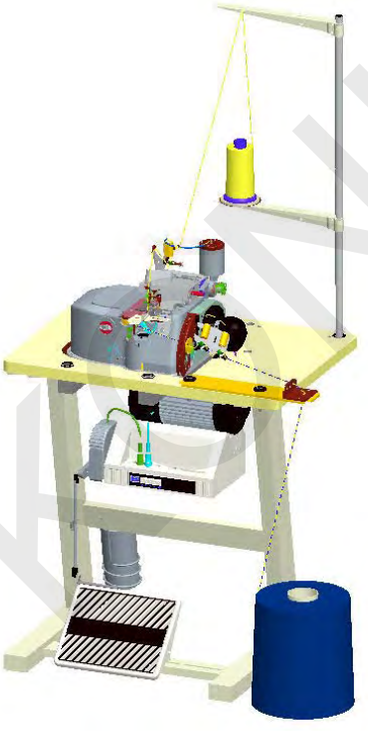
TITAN DK 2500

English

OPERATOR'S MANUAL



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Chapter 1: Installation and lubrication

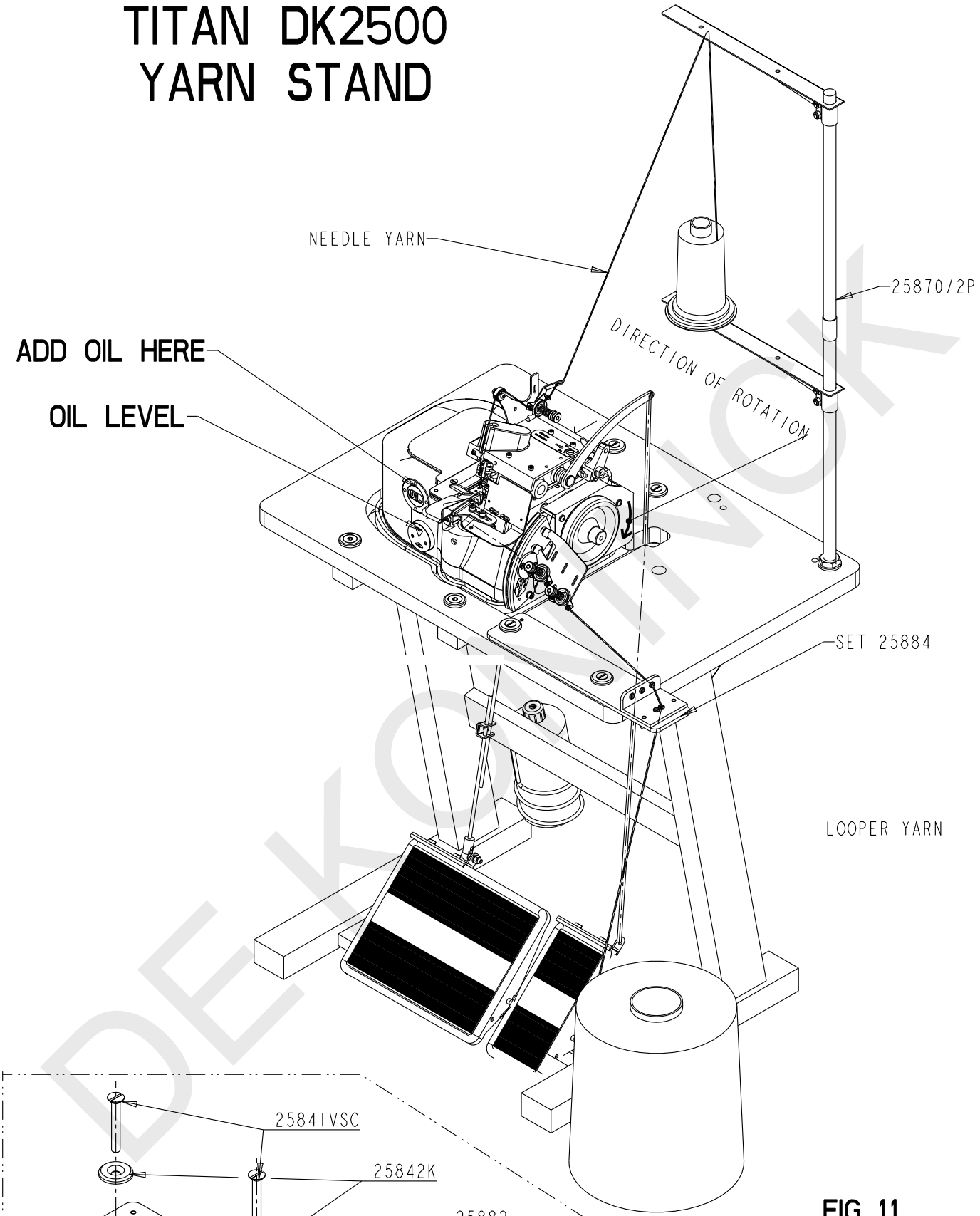
Chapter 2: Threading

Chapter 3: Stitch formation

Chapter 4: Mechanic adjustment of the sewing head

Chapter 5: Maintenance schedule

TITAN DK2500
YARN STAND



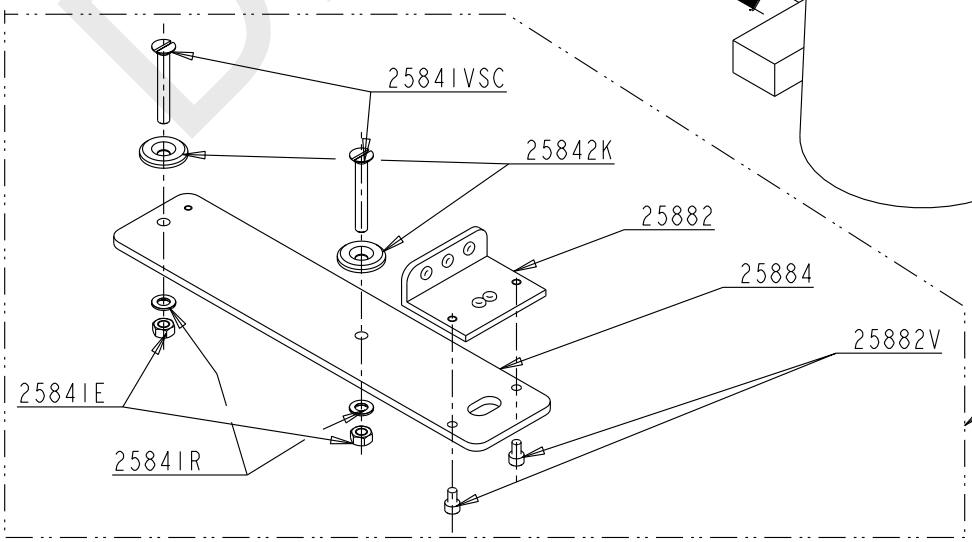


FIG 1.1

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Chapter 1: Installation and lubrication

1. Installation

a. Complete machine - with motor and table

For units, supplied complete with motor and table, use FIG 1.1+1.4

1. Mount the yarn-stand 25850/2P en screw it on the table.

2. Mount the yarn guide plate SET 25884 on the table.

3. Place the black rubber anti-vibration blocks(25840) in the aluminium holders .

4. Take the TITAN DK 2500 machine out of its box. TAKE CARE NOT TO LIFT UP the machine by holding the UPPER PARTS. Instead, place your hands underneath the closing plate of the machine, and lift the machine. Place the 3 little feet attached at the lower plate, precisely in the black rubber blocks.

5. Look underneath the table, and loosen the nut of the motor, with a flat key of 24. This allows the motor to rotate upwards or downwards .

6. Push with one hand the motor upwards, and place the driving belt (attached to the sewing machine) (M10012) around the pulley of the motor. Push the motor down to stretch the belt slightly as seen in FIG 1.2.

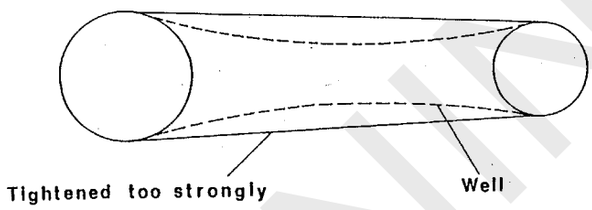


FIG 1.2

7. Unscrew the cover marked “OIL” on the machine. Take the two oil bottles out of the box and fill the machine with 1.5 L oil. Check if sufficient oil has been added by looking at the oil-level glass. The oil level should be exactly between the two red arrows. Close the cover again.

The electric motor is supplied, connected for use on 380V/3 PHASE supplies. For use on 220V/3PH supplies, use the connection diagram (FIG 1.3). Connect the cores of the mains to the receptacles of a plug designed for local operation (not included). Verify that the direction of rotation is correct (FIG 1.1).

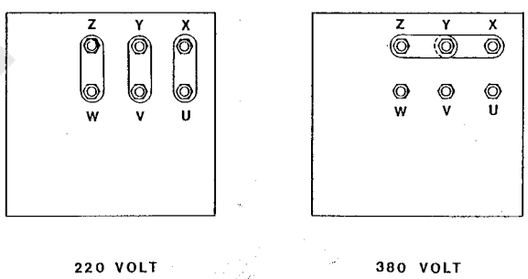
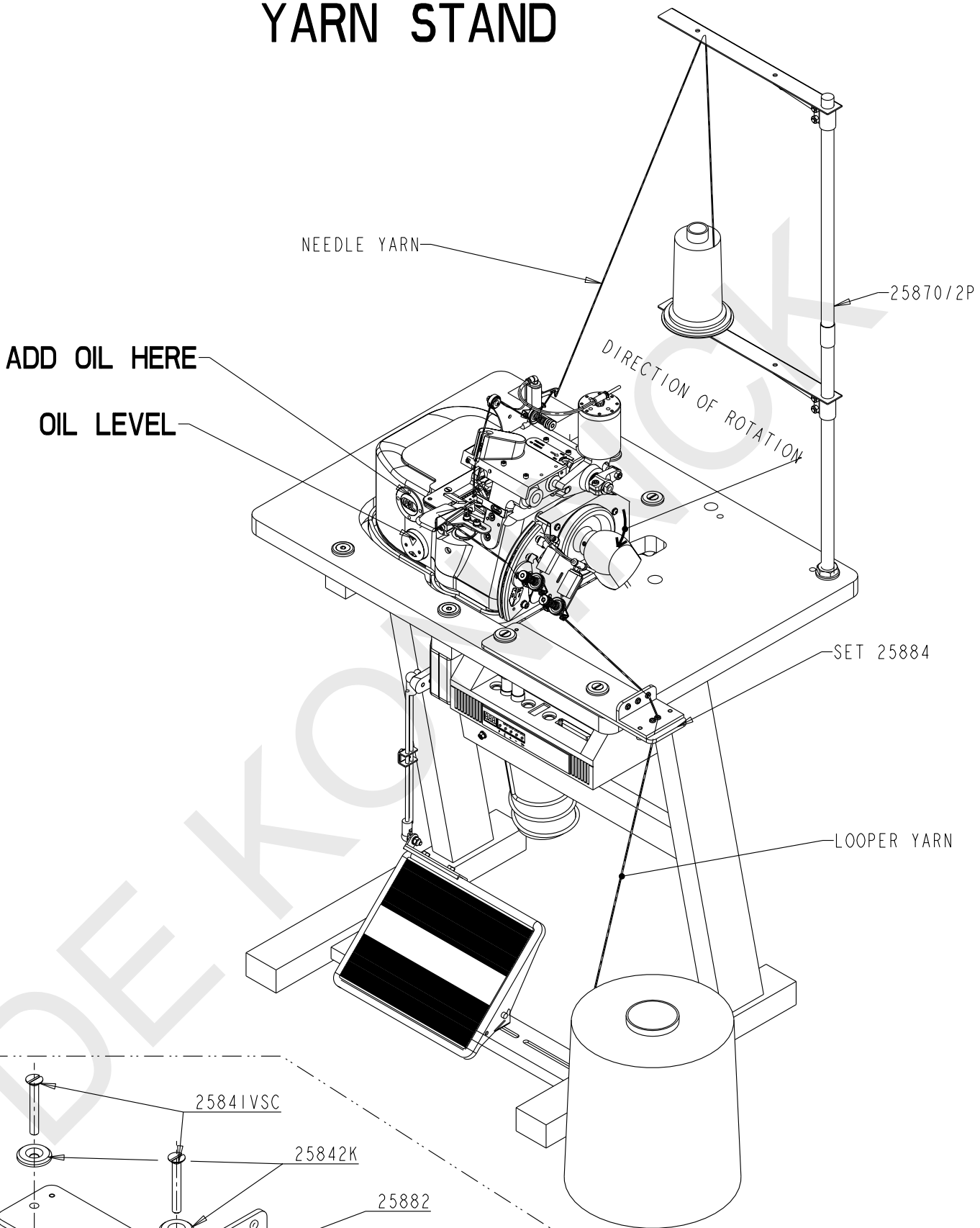


FIG 1.3

TITAN DK2500 ELECTRONIC MOTOR
YARN STAND



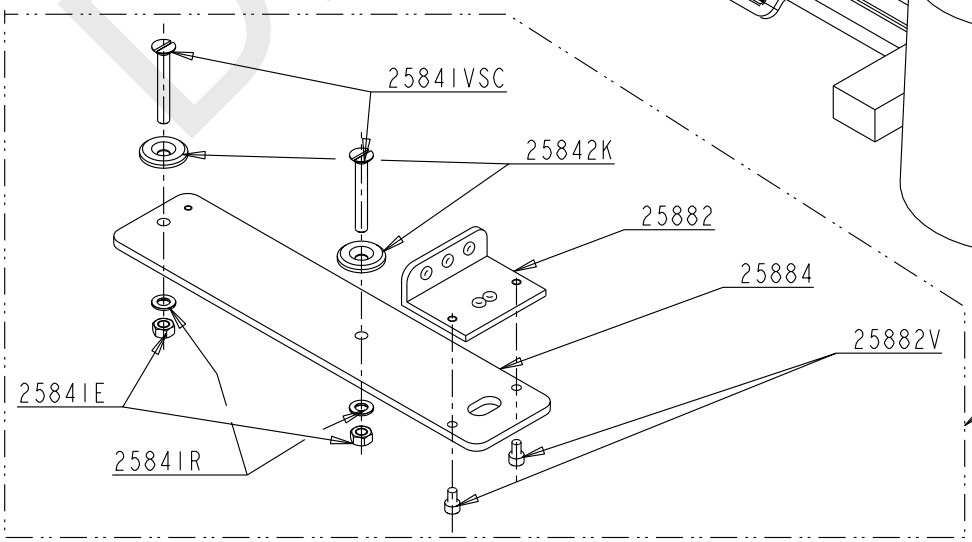


FIG 1.4

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b. Sewing head only

The sewing head requires a drive motor that must meet the following specifications: motor rating ¾ HP and rated load speed 2.800 rpm.
Use a pulley 80 mm in diameter to match the V belt.
Verify direction of rotation (FIG 1.1)

Prior to starting the sewing machine, always make sure to pour about 1,5 l of oil into the machine.

See previous paragraph for more information about this.

2. Lubricating the sewing head

Utilising splash lubrication, the sewing head is designed for optimum lubrication of all the components concerned. To get the maximum performance, never run the machine with oil level lower than the minimum level line. The sight-glass allows quick determination of the oil level (see FIG 1.1+1.4).

ATTENTION: the machine should NEVER RUN WITHOUT OIL.

The machine will loose daily a small amount of oil. An inspection at periodical intervals is recommended. If required, refill the oil reservoir by unscrewing the filler plug marking OIL just above the sight-glass.

Very important: oil type SP68.
The type of oil to be used in this sewing machine should be of following viscosity: **SP68.**
Recommended oil types: CASTROL-ALPHA SP68 or any similar oil grade.

ATTENTION: Use of low-viscosity oils will result in poor lubrication properties and excessive wear, which in turn will necessitate early renewal of the internal parts. Conversely, use of high-viscosity oils will lead to lines clogging, which in turn will necessitate early renewal of the spare parts from lack of lubrication.

VERY IMPORTANT: OIL should be completely removed and new oil should be added (1.5 l.) **ONCE A MONTH. This is best done after a few hours of operation**
Remove the plug for oil draining underneath the machine and let the oil leak in a bucket. Replace the plug and add new oil (1.5 l) through the plug marked OIL.
If the oil is strongly polluted, it is recommended to remove the cover underneath the machine and to remove all excess deposit, which has accumulated on the cover. Change the gasket (25839J) and close the cover. Place the machine on the table and refill the machine with oil as described above.

TITAN DK2500
THREADING DIAGRAM

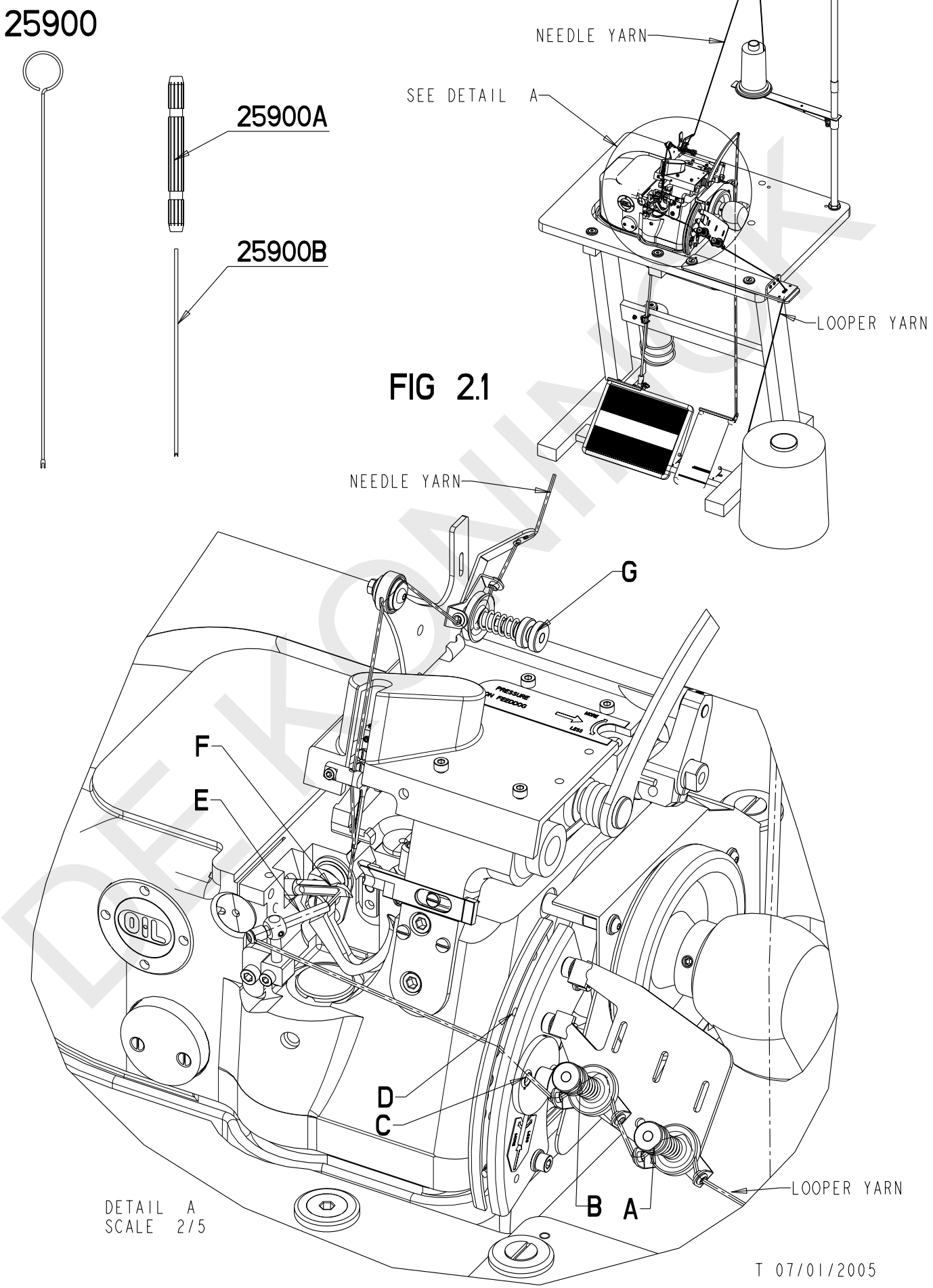


FIG 2.1

Chapter 2: Threading

1. Types of yarns

a. Needle yarn:

Many types of yarns can be used on the machine. Good results have been obtained with following qualities : Nylon polyamide yarn of thickness 30 or 40,
Monofil (invisible) thread of 750 denier. (0,3 mm diameter) or
cotton (for example, mercerized cotton, thickness No.18).

b. Chain yarn (or "looper yarn"):

A wide range of threads can be used with DK 2500 machines.
Good results have been obtained with following qualities:
Polypropylene and Polyamide Nylon are most frequently used in thickness ranging from 1800 detex till 5200 detex. The threads should be very lightly twined. This gives better results after sewing, because the thread flattens out and covers the carpet better.
Other qualities like wool, acrylic or cotton have also been used with success.

2. Threading

Remark: always switch off the motor prior to threading the yarns!

a. Needle thread

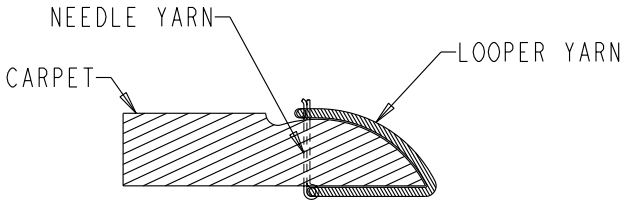
Refer to **FIG 2.1 THREADING DIAGRAM** for the details.

b. Chain yarn

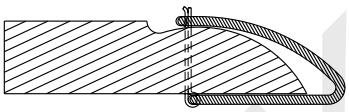
1. Turn the hand-wheel by hand and bring the take-up **D** in its topmost position. Lead the yarn thru the tension-adjusters **A** and **B** and by hole **C** thru the plates on both sides of the take-up **D**.
2. Turn the hand-wheel by hand and bring the take-up **D** in its bottommost position. In this position the eye of the lower looper faces the threading tube **E**
3. Thoroughly clean (if necessary, using the threading needle, part 25900) the lower looper's eye.
4. Tightly wrap the chain yarn around the point of the threading needle and push it all the way (as far as possible) into the threading tube and through the eye of the lower looper **F**.
5. Gently remove the threading needle and push some more chain yarn into the threading tube in order to obtain a small tangle of chain yarn behind the lower looper's eye **F**. **REMARK: Remember : remove the THREADING NEEDLE ALWAYS.**
6. Turn the flying-wheel by hand to make sure the chain yarn extends above the needle plate.
7. Make sure the needle thread remains threaded. The sewing machine is now ready for use.

Note: For improved covering, use two or three thinner threads in the lower looper.

TITAN DK2500
STITCH ADJUSTMENT LOOPER YARN

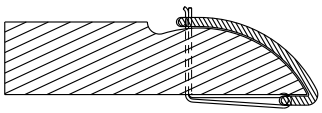


A: OK

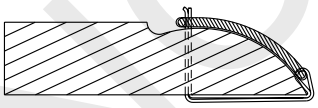


B: NOT OK

FIG 3.1



C: NOT OK



D. NOT OK

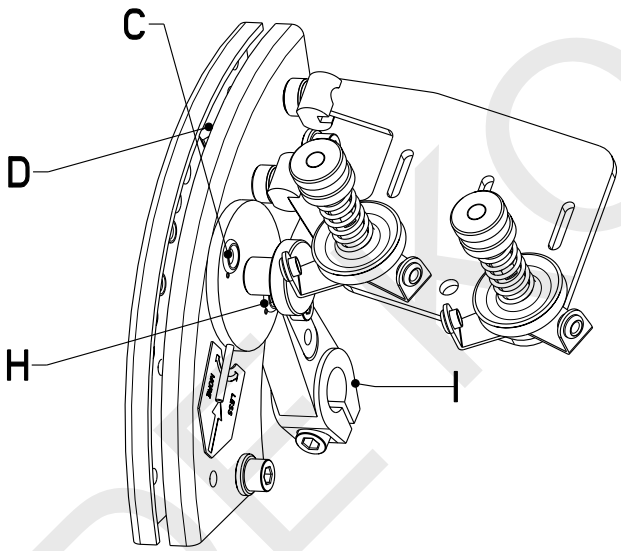


FIG 3.2

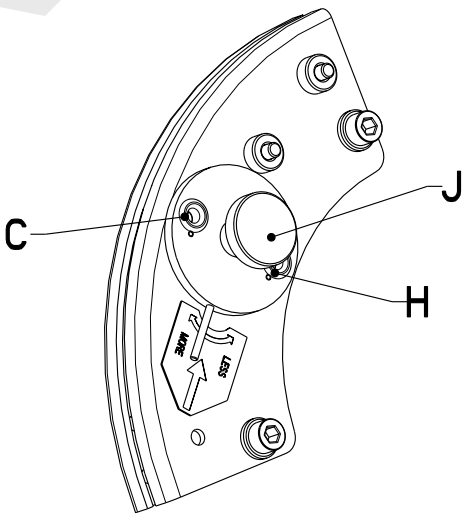
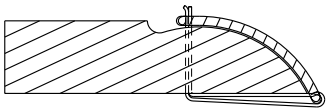


FIG 3.3

FIG 3.4

IMITATION 3-THREADSTITCH



Chapter 3: Stitch formation

1. Chain yarn feed

It is recommended to keep the pressure on the springs to a minimum on the thread tensioners **A, B** and **G** (FIG 2.1).

Note:
Always make sure the chain yarn is positioned *underneath* the yarn drawing lever **D** (or "take-up") (see FIG. 2.1-3.2). Failure to do so, will result in improper stitch formation. To avoid this, check if the machine has been threaded properly (see chapter 2b).

FIG 3.1A: Correct stitch formation, the chain yarn and the needle thread have both absolutely uniform tensions.
FIG 3.1B: Either insufficient chain yarn tension, or excessive needle thread tension
FIG 3.1C&D: Either excessive chain yarn tension, or insufficient needle thread tension

With the take-up lever **D** correctly set, the amount of thread thus fed will assure successful overlocking of the carpet.

In the event of *insufficient* thread feed (or with thicker carpets), however, undue tension will be placed on the chain yarn along the edges of the carpets, which in turn will pull the needle thread from the carpet backing (see figure 3.1C).
To remedy: adjust the take-up lever **D** slightly in the direction of C3 (see figure 3.5).

Conversely in the event of *excessive* thread feed (or with thin carpets), the chain yarn will be found to be slack around the carpet edges (see figure 3.1B).
To remedy: adjust the take-up lever **D** slightly in the direction of C1 (see figure 3.5).

If the machine isn't equipped with RFR fine adjustment gear (see figure 3.3), the position of take-up lever **D** is to be changed as follows:
Untighten the screw of the arm **I** (figure 3.2) and place the take-up lever **D** into the wanted position (higher=less thread, lower=more thread) afterwards, tighten the screw of arm **I** again.

RFR fine adjustment assembly: standard in the new machines (from 2004 on)
To adjust the thread feed : loosen the screw **J** (FIG 3.3). Push the bar (lever) towards "+" to increase thread feed, towards "-" to decrease thread feed.

Note: For the typical two-thread overlock stitch, insert the chain yarn in the **C** eye as illustrated in figure 3.2 and 3.3

For special stitch formation similar to a three-thread stitch (see figure 3.4), pass the chain yarn through the **H** eye (see figure 3.2 and 3.3) and then adjust thread feed so that the stitch thus formed is similar to the one shown in figure 3.4.

TITAN DK2500
STITCH ADJUSTMENT STITCH WIDTH

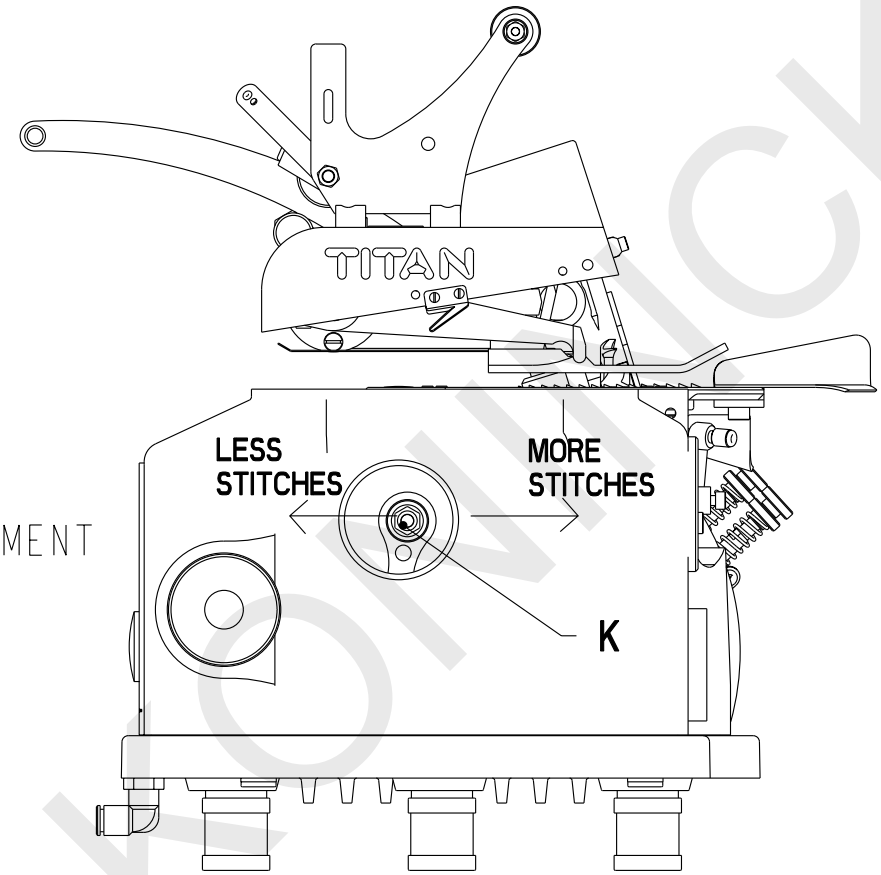


FIG 3.6

STITCH ADJUSTEMENT
STANDARD

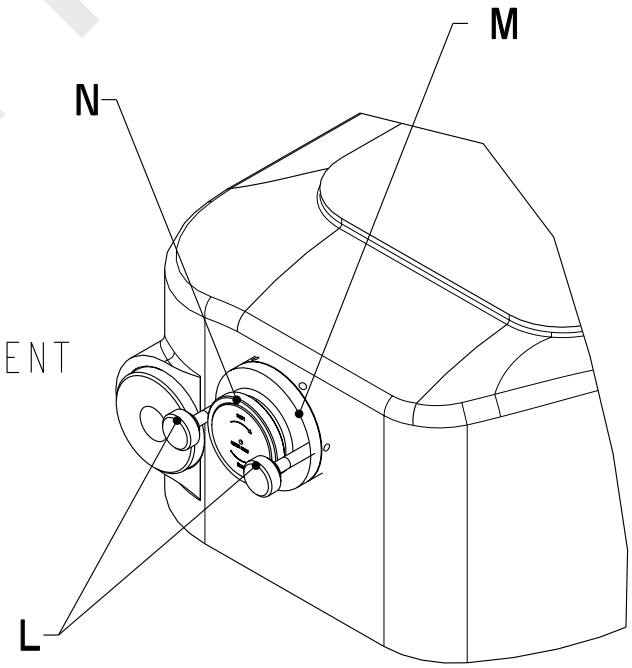


FIG 3.7

STITCH ADJUSTEMENT
WITH RPR

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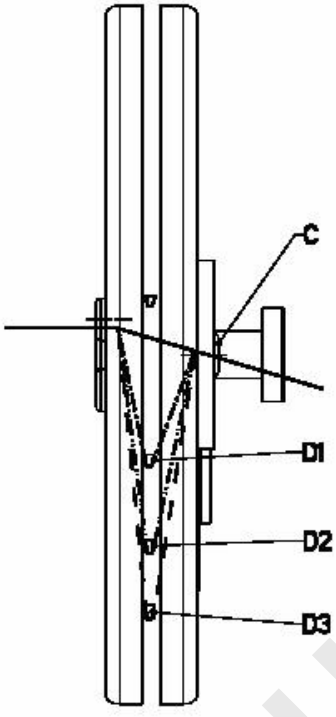

FIG 3.5

2. Stitch density setting (per cm)

a. On standard equipment

- Unscrew and remove the big knurled screw to allow access to nut **K** (FIG 3.6).
- Turn the hand-wheel by hand to secure the needle in its bottommost position.
- Holding the hand-wheel in position with your right hand, unscrew (counter clockwise) the nut **K** by ½ a turn using a M10 hex key.
- Place the nut **K** either forward or backward as appropriate. Thus you will increase/reduce stitch density per cm (see figure 3.6).
- Retighten the nut **K** and replace the knurled screw on the sewing head!

b. With the stitch density regulator (RPE/DK 2500 SEE OPTIONAL ATTACHMENTS)

The RPE option as illustrated in figure 3.7 is fitted on to the left-hand side of the sewing machine.

- Loosen both **L** screws.
- Turn the disc **M** counter clockwise.
- By turning the adjuster screw **N** *clockwise*, you *increase* stitch density.
  By turning the adjuster screw **N** *counter clockwise*, you *decrease* stitch density.
- *For best results, we recommend to sew first on a small piece of carpet to see if the correct amount of stitches per cm has been obtained.*
- To secure the adjuster screw **N** into position, turn disc **M** clockwise until it can not move further.
- Slightly tighten both **L** bolts to lock the settings.

The RPE option is designed to guarantee optimum sewing result with any carpet quality and/or yarn thickness.

TITAN DK2500
NEEDLE REPLACEMENT & ADJUSTMENT

PLACE NEEDLEBAR IN HIGHEST POSITION.

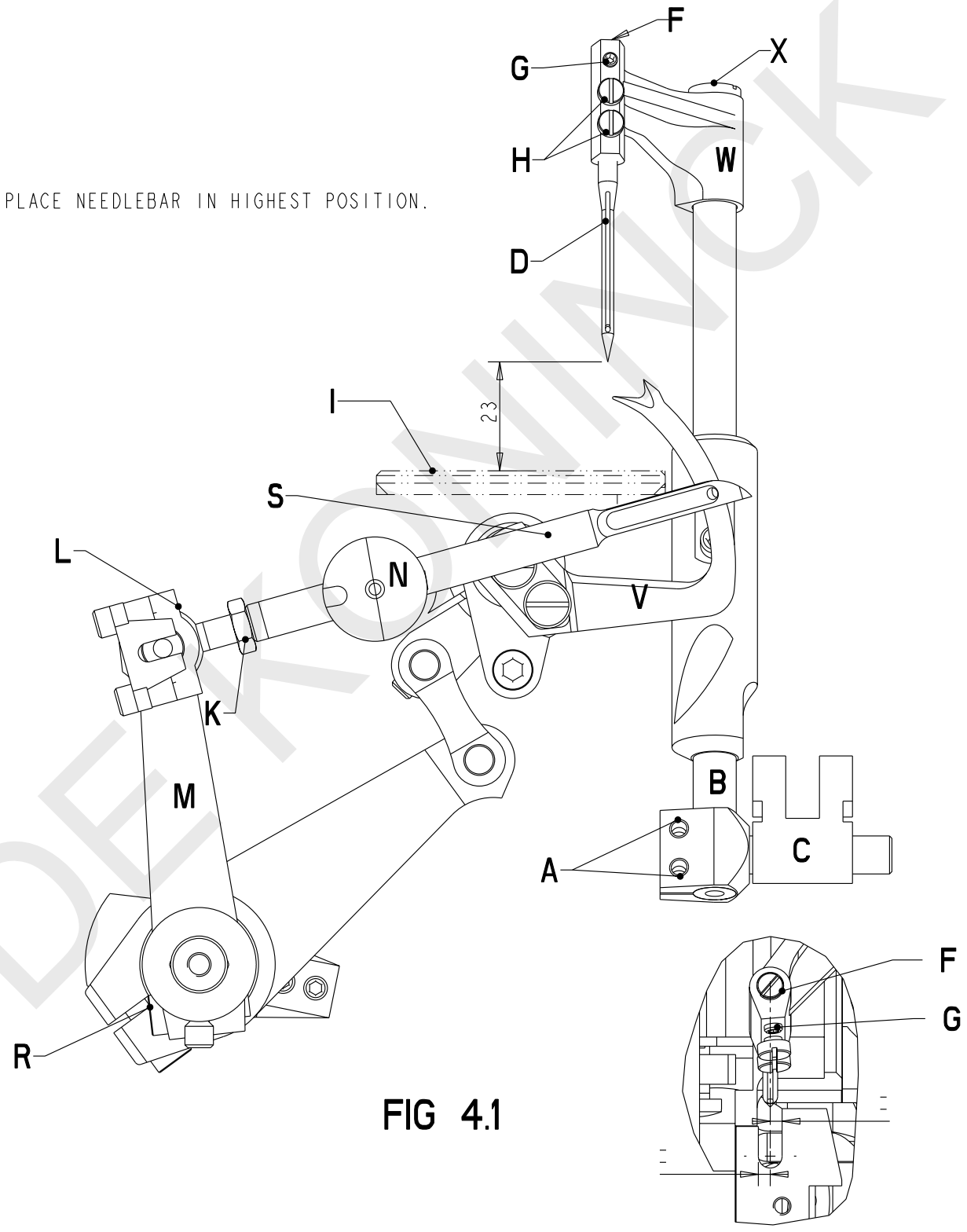

FIG 4.1

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Chapter 4: Mechanic adjustment of the sewing head.

!! Remark: Always switch off the motor before adjusting whatever part of the machine !!

1. The needle

The table below is a breakdown of typical needle types.

Type:	Description	Suitable for:
7713/230T	Standard needle	Medium carpets
7713-99/230T	Square pointed needle	Heavy car carpets
7713-99/230TP	Needle with flat holder	Heavy Car carpets
7713-99/230TPC	Golden needle	For automatic systems DK 4600
7713-200T	Medium thick needle	Light carpets
7713/180T	Medium thin needle	Light carpets
7713/160T	Thin needle	Blankets
7713/130T	Ultra thin needle	Fabrics (butt-seamer DK 2500E and 2510E series)
For special purposes, please contact our service department for additional information. tel.: ++32/2-216.31.40		

a. How often are the needles to be replaced?

Considering the typical up and down movement of needles on DK 2500 series sewing machines is about 2.800 movements per minute, needles will need replacing after a couple of days as they become blunt, thin, and the groove disappears, thus result : false stitches.
Assuming the machine is used for one 8-hour shift, the needle will have pierced the carpet approximately 6 million times in one week (40h). Depending on carpet quality, we advise to replace the needle at least once a week.

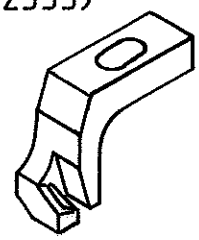
b. Needle replacement

While sewing, a circle of dust will be built up around the *needle holder*. It is very important to remove *first* any dust that may have accumulated, prior to fitting a replacement needle! If not, dust accumulation in the needle holder may probably modify the exact movement of the needle, which will result in false or bad stitch formation and may drastically decrease the life time of internal parts.

Needle guide.
DK 2500.

PART NR.	NEEDLE NR.
- 25559-230	- 7713/230
	- 7713-99/230
- 25559-200	- 7713/200

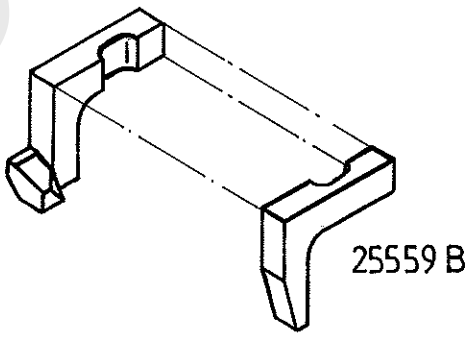
25559



HEAVY CARPETS

PART NR.	NEEDLE NR.
- 25559A	- 7713/110
25559B	- 7713/130
	- 7713/160
	- 7713/180
	- 7713/200

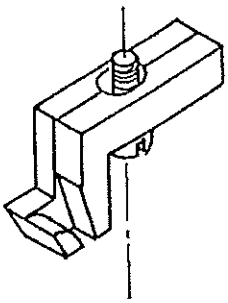
25559A

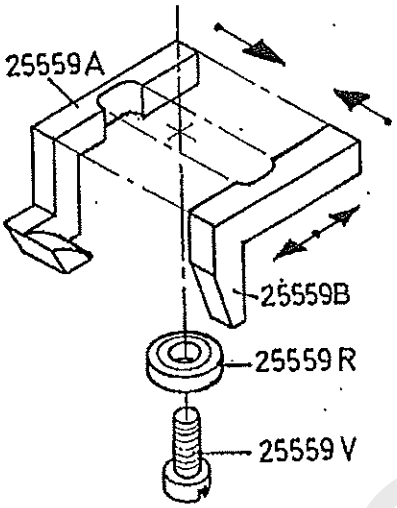


25559B

NORMAL CARPETS

SET 25559A





Afstelling van de naaldgeleiding.

- Stukken 25559A en 25559B worden los op de naaldplaat bevestigd met schroef 25559V.
- Stukken 25559A en 25559B maximaal openschuiven.
- De afstelling gebeurt steeds met een nieuwe naald.
- We zetten de naald in haar onderste dode punt.
- We sluiten stukken 25559A en 25559B rond de naald zodat er geen voorwaartse of achterwaartse speling meer is.
- We schroeven, schroef 25559V vast.

Reglage du guide-aiguille.

- Pièces 25559A et 25559B sont fixées mobile sur la plaque à aiguille avec la vis 25559V.
- Ouvrir les pièces 25559A et 25559B maximum.
- L'ajustement se fait toujours avec une nouvelle aiguille.
- Positioner l'aiguille à son point mort inférieur.
- Fermer les pièces 25559A et 25559B autour de l'aiguille si bien qu'il n'y a plus de jeu en avant ou en arrière.
- Serrer la vis 25559V.

Adjustment of the needle-guide.

- Fix parts 25559A and 25559B mobile on the needle plate with screw 25559V.
- Push the parts 25559A and 25559B maximum open.
- Adjustment must always be done with a new needle.
- Put the needle in her lowest death point.
- Close parts 25559A and 25559B around the needle in such a way that there is no more backward or forward play.
- Fix the screw 25559V.

Einstellung der nadelfuhrung.

- Teile 25559A und 25559B müssen Mobil auf die Nadel-Platte befestigt werden mit Schraube 25559V.
- Teile 25559A und 25559B maximal aufschieben.
- Die Einstellung musz immer geschehen mit einer neue Nadel
- Setzen Sie die Nadel in Ihre unterste Tode Punkt.
- Schlieszen Sie Teile 25559A und 25559B rund die Nadel sodasz es kein vorwärts oder rückwärts Spiel mehr gibt.
- Schraube 25559V fest schrauben.

TITAN DK2500
NEEDLE REPLACEMENT & ADJUSTMENT

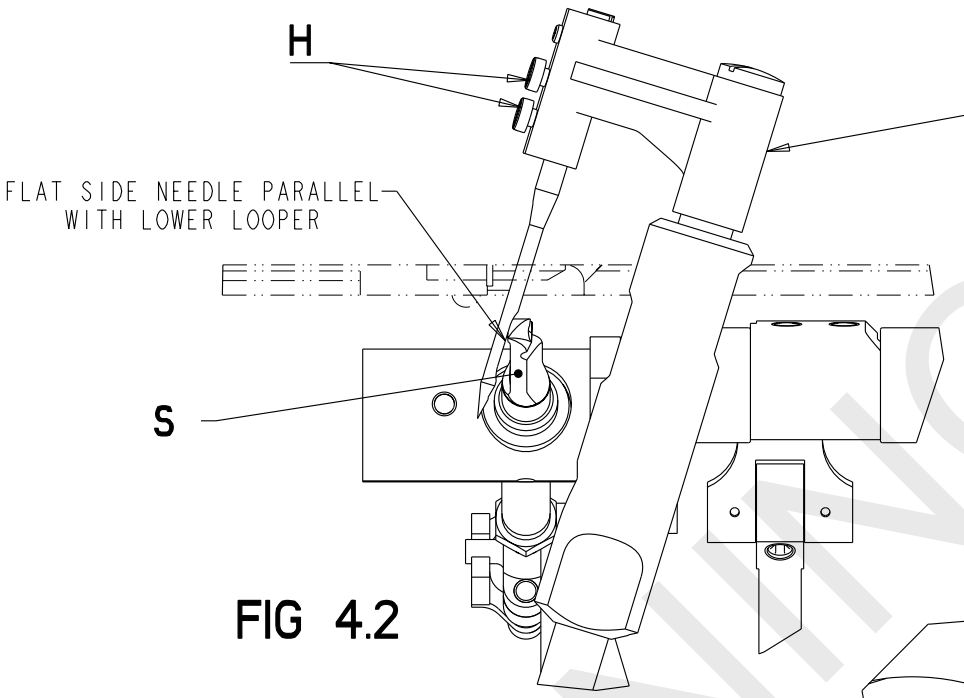
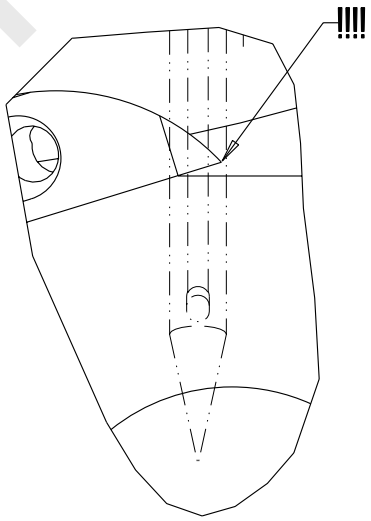


FIG 4.2



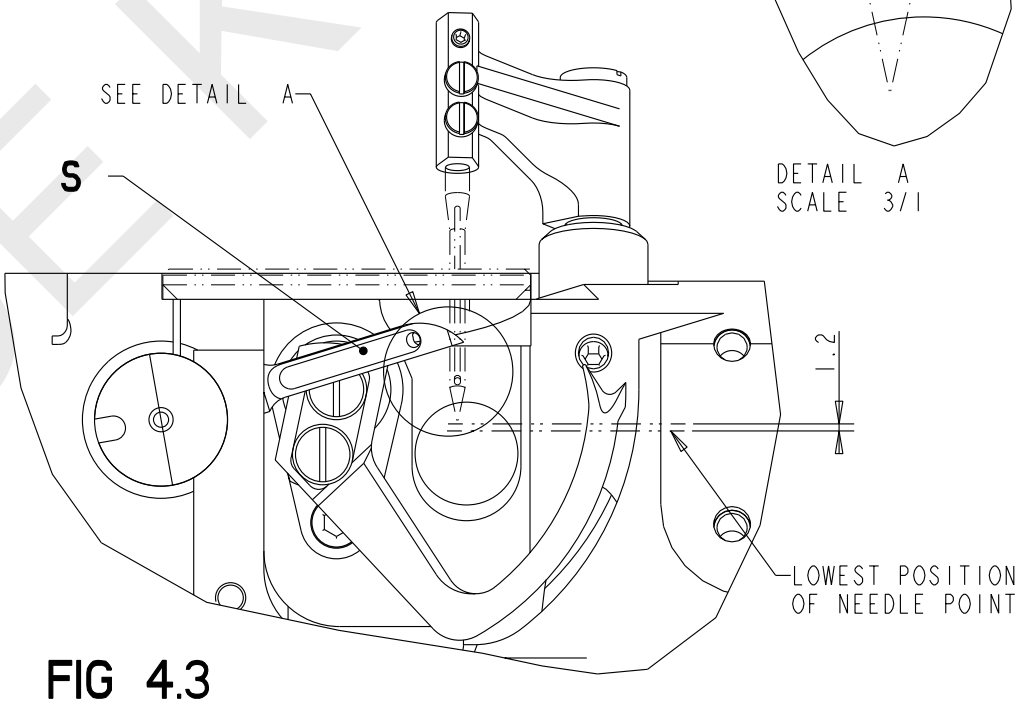


FIG 4.3

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To replace worn out or broken needles, proceed as follows:

- Loosen the screw **H** (see figure 4.1) and remove the needle.
- Remove accumulated dust in the needle-holder.
- Fit in a replacement needle. Make sure to position and push the new needle fully home into the needle-holder.
- Be sure the groove of the needle faces the front and that the flat side on the back of the needle is mounted parallel to the flat face of the lower looper **S** (FIG 4.2). To check this, turn the hand-wheel by hand and have the lower looper and the needle cross.
- Retighten the screw **H**.
- Check the needle position according to chapter 4.1c .

c. Needle height adjustment

With the needle having reached the top of its stroke, distance between the needle point and the needle plate must be exactly 23 mm (see figure 4.1).

For fine adjustment of the needle height:

- Loosen the screws **H** first while holding the needles by hand (see figure 4.1).
- Push the needle against the screw **F.**
- If adapting screw **F,** you first have to unscrew the screw **G**.
- By turning the screw **F**, the needle height will be increased or reduced (clockwise/counter-clockwise).
- Retighten the screw **G** and also screw **H**

!! The following instructions are restricted to qualified personnel only !!

d. Replacing the needle bar and adjusting the needle height.

Replacing the needle bar

- Loosen the screws **A** and remove the worn out needle bar **B** (figure 4.1) from clamp C.
- Loosen the screw **X** and recuperate the needle holder **W**.
- Fit the needle holder **W** into the new needle bar and tighten screw **X** to secure the needle bar.
- Place a new needle in the needle holder **W**.
- Check the parallelism between the needle and the needle bar. If these 2 parts are not parallel, it is strongly advised to replace the needle holder **W**
- Fit the new needle bar into the holder **C** and lightly tighten the screws **A**.
- Turn the hand-wheel by hand to place the needle at the top of its stroke (highest position).
- In this position, the distance between the needle point and the needle plate (25558) must be exactly 23 mm (figure 4.1).

Adjusting the needle height

- Loosen the screws **A in FIG 4.1**. By doing this, the holder **C** will loose its grip on needle bar **B** (figure 4.1).
- The position of the needle can be adjusted to the top dead point being 23 mm.
- Retighten the screws **A**.
- Verify, by turning the hand-wheel by hand, if the needle is moving up and down right in the centre of the needle plate (Fig.4.1 Detail).

Optimum needle thread loop formation setting

To achieve optimum needle thread loop formation, make sure the position of the needle with respect to the lower looper **S**, is correct.

- Turn the hand-wheel by hand and bring the needle to reach the bottom of its stroke (lowest position)
- Turn the hand-wheel a little further (see figure 4.3) until the needle has travelled 1,2mm on the upward stroke.
- In this position, the point of the lower looper should just pass behind the needle as seen in Fig. 4.3 + Detail A.

TITAN DK2500
UPPER LOOPER ADJUSTMENT

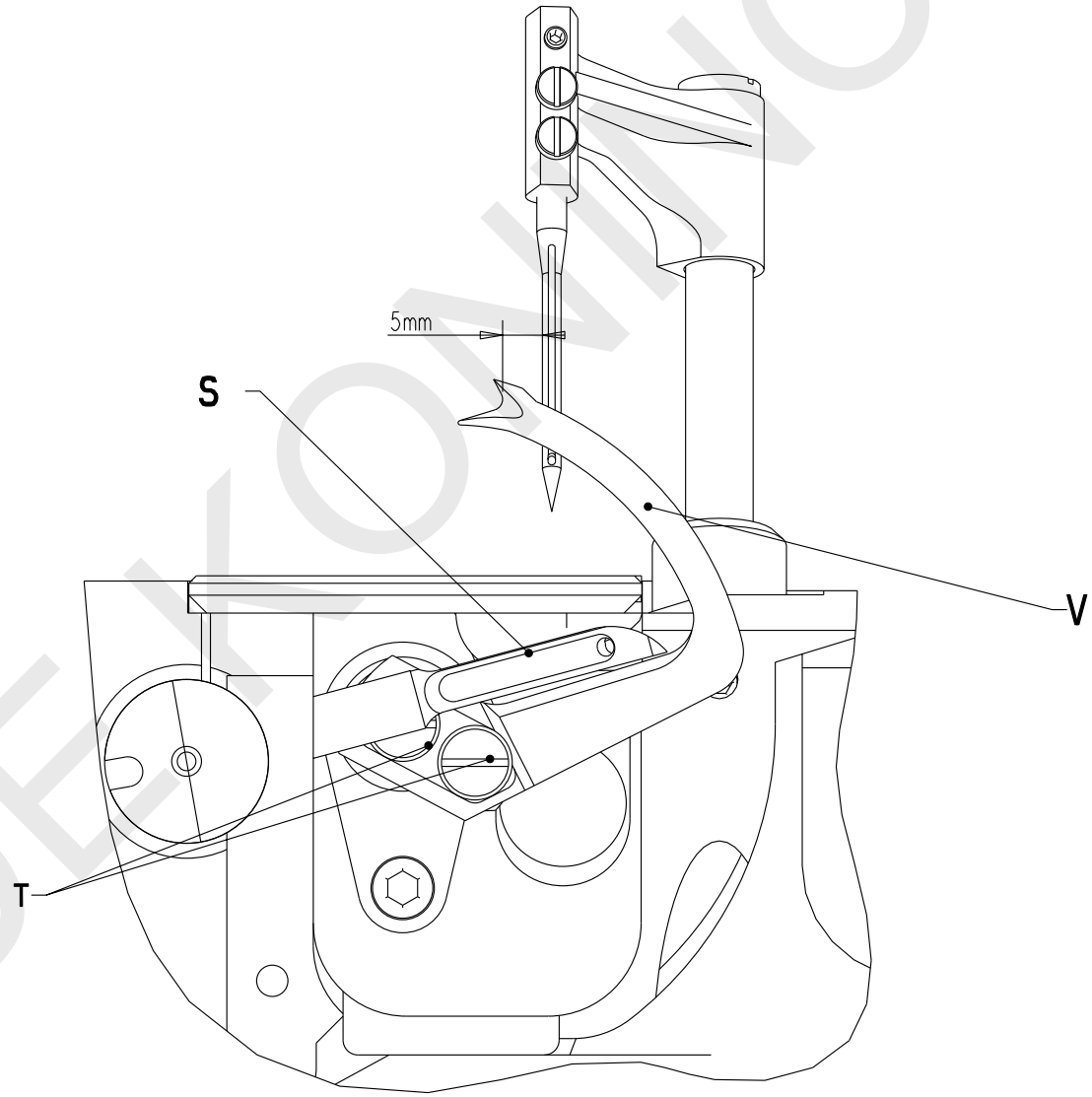

FIG 4.4

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2. Upper looper

a. Preparatory work

In order to replace the upper looper, the cover and some other parts have to be removed. We strongly advise to proceed as follows:

- Loosen the two screws 25833V and remove the protective plate (25833).
- Release the pressure on the pressure foot.
- Loosen the two screws 25556V and remove the needle (7713/230T).
- Loosen the two screws 25558V and remove the needle plate (25558).
- Loosen the screw 25804VL and remove the threader unit (25804).
- Loosen the screw 25655V and remove the lower blade (25655).
- Loosen the screw 25744V and remove the feed dog (25744).
- Loosen the two screws 25700V and remove the upper looper (25705).

b. Replacing the upper looper

- Turn the handwheel by hand and push the lower looper to its furthermost backward position. This action will give the operator access to the screws **T** (FIG 4.4).
- Unscrew these and replace the worn out upper looper with a new one (25705).
- Retighten the screws **T**.
- Turn the hand-wheel by hand for the upper looper to reach its top of its stroke.
- Make sure the outer end of the upper looper extends for 5mm beyond the edge of the needle, as illustrated in figure 4.4.
  If this is not the case, adjust correct position via the screws **T** as in figure 4.4.

c. Upper looper fine adjustment

Our sewing machines are factory-set to sewing medium quality carpets with medium quality yarns.
When using thicker/finer yarns deviating from the factory-set typical yarn thickness, we recommend that the position of the upper looper be adjusted as follows:
Loosen the T screws (figure 4.4) and turn the hand-wheel by hand for the upper looper to reach the top of its stroke (highest position).

In the event of thick yarns, move the point of the upper looper a little to the left (0,5mm maximum), so that the distance between the outer end of the upper looper and the edge of the needle is 5,5mm.

In the event of fine yarns, move the outer end of the upper looper a little to the right (0,5mm maximum), so that the distance between the outer end of the upper looper and the edge of the needle is 4,5mm.

Note: With every change of the upper looper, check the following points while turning the hand-wheel by hand:
When the upper looper **V** and the lower looper **S** (figure 4.5) cross one another on the upper looper upward stroke, the end of the upper looper **S** must travel right in the centre of the recess of the lower looper **S**.
On its upward stroke towards the needle, the end of the upper looper **V**, must not touch the lower looper **S** and needle (no contact is allowed). Should this occur anyway, follow the steps below. After having adjusted the upper looper, put back all parts and put back again the pressure on the pressure foot.

TITAN DK2500
LOWER LOOPER ADJUSTMENT

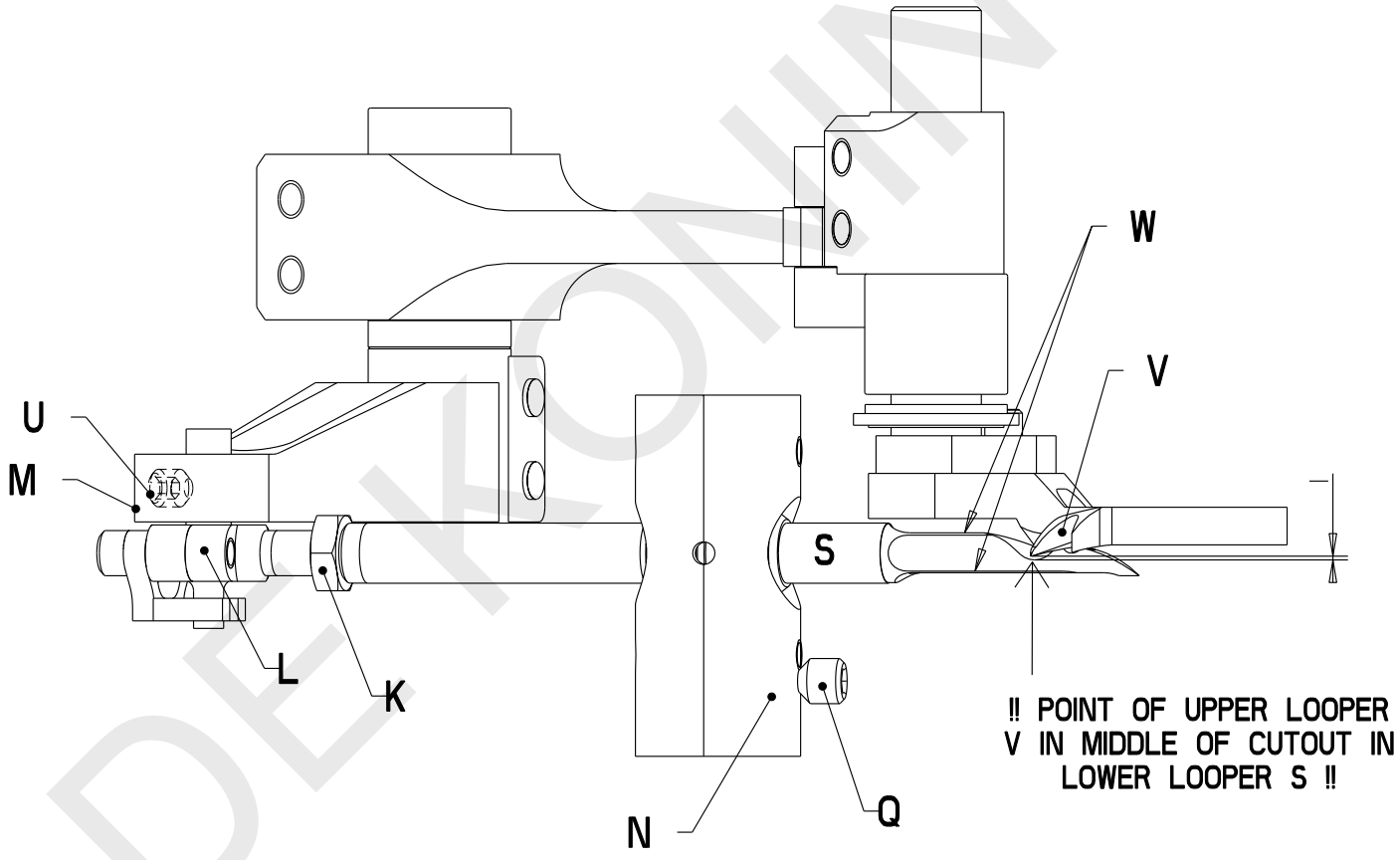


FIG 4.5

T 30/11/04

!! The following instructions are restricted to qualified personnel only !!

With the upper looper in its bottom dead centre, make sure the outer end of the upper looper aligns with the centre of the screw (25557V) that fixes the needle bar bushing (Fig. 4.3).

Should this not be the case, loosen the two 25698VL screws (see part list – Upper looper mechanism) and bring the upper looper in the right position as described in previous paragraph 4.2b.
Turn the hand-wheel by hand for the upper looper to reach its upper position and make sure the outer end of the upper looper extends for 5 mm beyond the edge of the needle (see figure 4.5).

Should this not be the case, loosen the two 25698VL screws and bring the upper looper in the right position as described in previous paragraph -
b. replacing the upper looper

3. The lower looper

a. Preparatory work

To gain access to the lower looper, proceed as follows:

- Turn to figure 2.1, titled '*Threading Diagram',* and locate the screw-on/off fitting cap with the wording OIL marked on it.
- Loosen and remove the cap. This will give the operator access to the lower looper.

b. Replacing the lower looper

To replace a worn out lower looper, proceed as follows:

- Use an open ended spanner n° 6 to retain the base **W** (Fig. 4.5) of the lower looper into position while using an open ended spanner n° 10, loosening the nut **K** for **½ a turn (MAXIMUM).**
- Gently unscrew the worn out lower looper and remove it.
- Fit in the replacement lower looper.

Note: Prior to fixing the lower looper into position, perform positioning of the lower looper relative to the recess on the rear of the needle as described below (see figure 4.2-4.3-4.5).

Turn the hand-wheel by hand while making sure that when the lower looper is passing beyond the needle, both flat faces on both parts are parallel. The lower looper can under no condition touch the needle !

In the event of exact parallelism as shown in figure 4.2, retain the lower looper **S** in position using an open ended spanner n° 6, while screwing the block nut **K** (figure 4.5) through ½ a turn, using an open ended spanner n° 10.

TITAN DK2500
LOWER LOOPER ADJUSTMENT

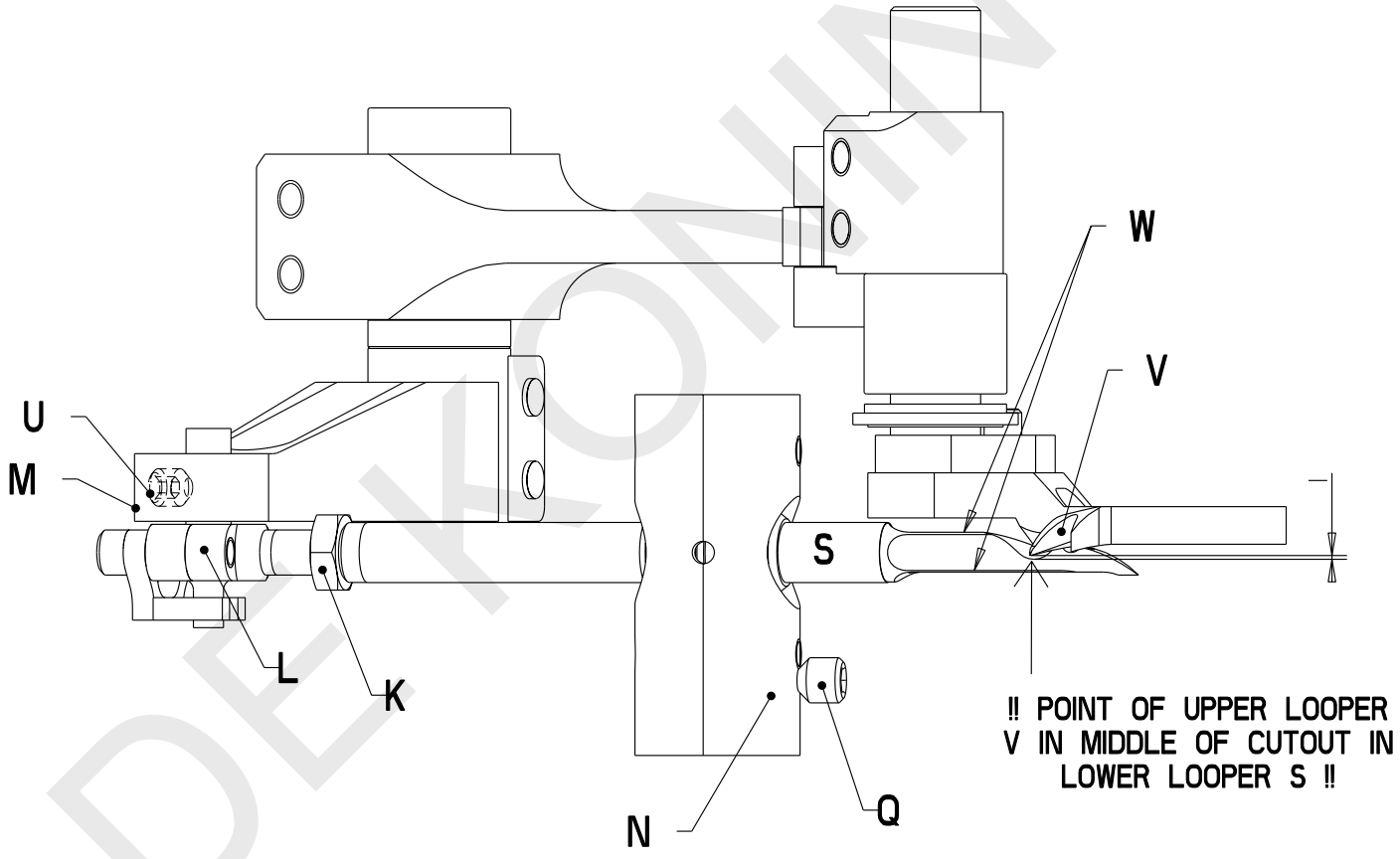


FIG 4.5

T 30/11/04

!! The following instructions are restricted to qualified personnel only !!

c. <u>Adjusting the upper looper to the lower looper</u>

Prior to adjusting, perform the steps detailed in previous paragraphs.

On the upper looper upward stroke and with the lower looper moving to its forward dead point, as illustrated in figure 4.5, the outer end of the upper looper **V** must pass right in the centre of the recess of the lower looper **S**.
In other words, when both loopers cross each other, the end of the upper looper **V** must pass right in the centre of the recess of the lower looper **S**.

Should this not be the case, follow the steps below to adjust the position of the lower looper **<u>inside</u>** the sewing machine.

- Loosen the screw **R**, therefore enabling the lever **M** to move freely on the shaft (Fig. 4.1).
- Turn the hand-wheel whilst making sure that the outer end of the upper looper passes right in the centre of the recess located at the rear of the lower looper, when both loopers cross one another.
- If necessary, adjust the position of the lever **M**.
- Retighten the screw **R** thus securing the lever **M** position.

d. <u>Adjusting the distance between needle and lower looper</u>

Prior to adjusting, perform the steps detailed in previous paragraphs.

Turn the hand-wheel such that the outer end of the lower looper **S** passes the rear of the needle. Make sure that the distance between the needle and the lower looper is in the range 0.2mm to 0.3mm (Fig. 4.2).
(These measures apply to machines equipped with standard needles, size 230.
When using different needles, contact our Service Department at +32/2.216.31.40).

If the distance measured above is either inferior to 0.2mm or superior to 0.3mm, proceed as follows.

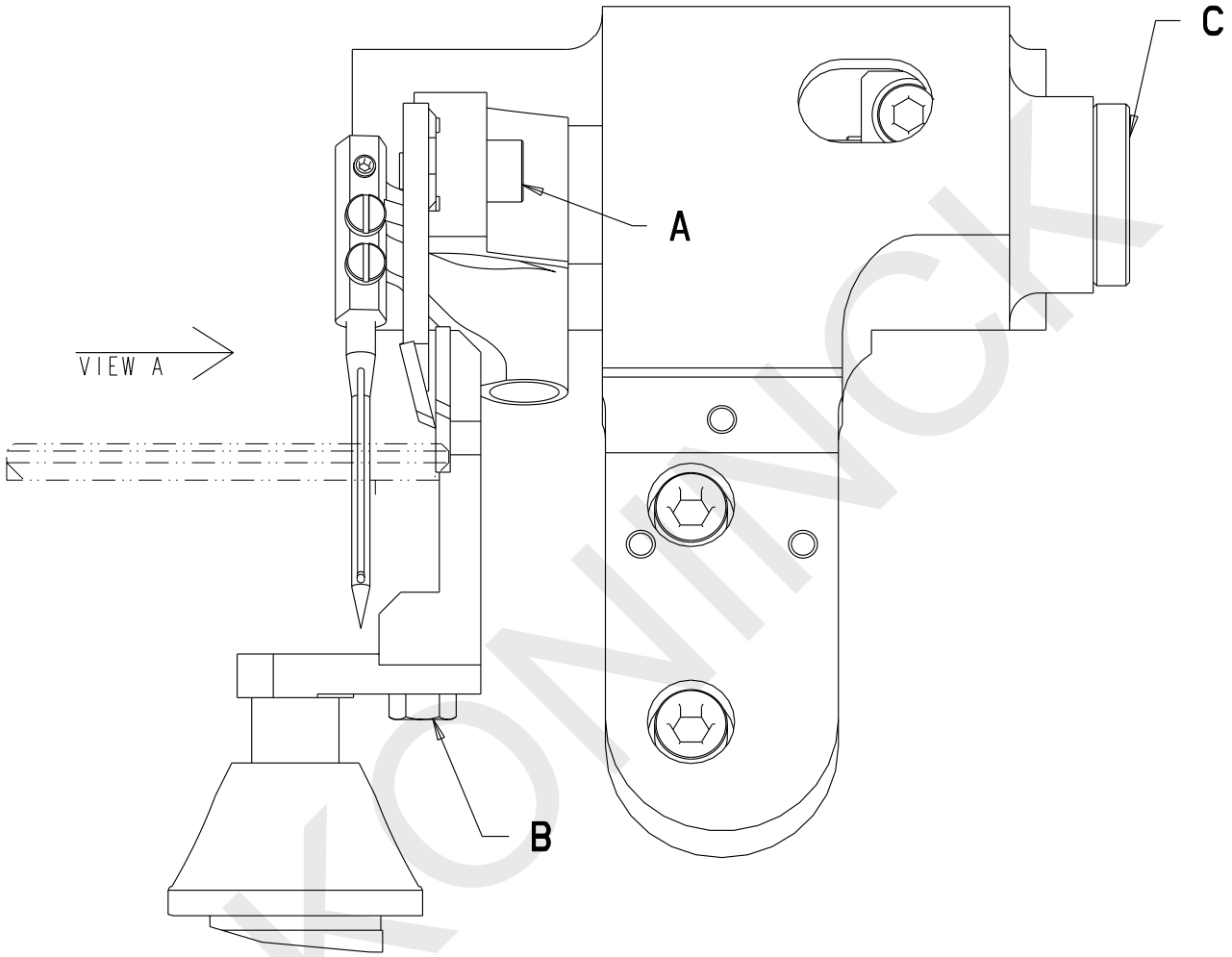
- Loosen the screw **Q** of figure 4.5.
- Manually move the part **N** forward or backward, so that the distance between the needle and the lower looper is in the range 0.2mm to 0.3mm (figure 4.2).

Gently turn the flying wheel by hand while making sure that the distance between the outer end of the upper looper **V** and the flat face of the recess on the rear of the lower looper **S** is 1mm (see figure 4.5).

Should this not be the case, follow the steps below.
Unscrew the screw **U** (see figure 4.5) by **<u>1/4 of a turn maximum</u>**, to enable the part **L** to move freely in the holder **M**. Manually move the part **L** a little forward or backward whilst ensuring the distance between the outer end of the upper looper and the rear of the lower looper is approximately 1 to 2 mm (see figure 4.5). Retighten the screw **U**.

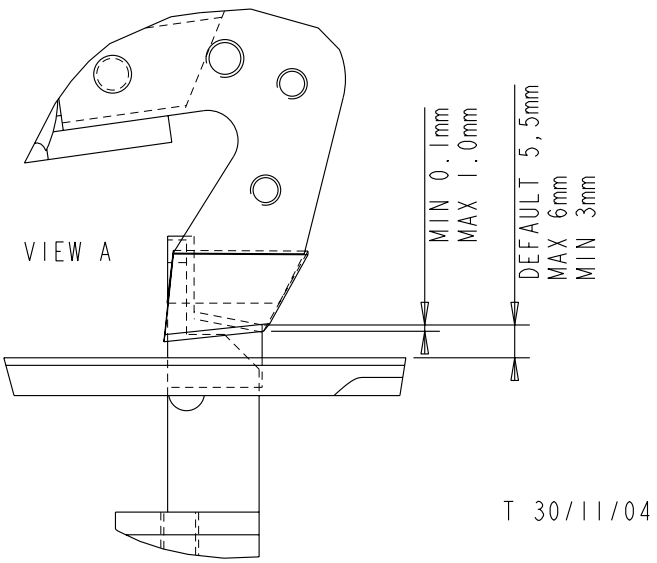
Note: After every change, it is essential to check the position of the outer end of the upper looper in relation to the rear of the needle and if necessary to adjust as described in the previous chapters.
Upon completion of any such adjustment, turn the handwheel and re-check the position of the upper looper relative to the lower looper. Adjust, if necessary.
For each adjustment, remember to re-check all the positions and adjust until the positions of the three parts are concordant.

TITAN DK2500
KNIFE ADJUSTMENT



LOWER KNIFE IN HIGHEST POSITION

FIG 4.6



4. The cutting motion

For an extended operational life, the lower knife (25655) and the upper knife (25656) of TITAN DK 2500 series machines are equipped with special hardened steel.

a. Renewing the upper knife

- Loosen the screw **C** (see figure 4.6).
- Entirely remove the screw **A** retaining the upper knife.
- Replace the worn upper knife with a new item (25656) and retighten screw **A**.

b. Renewing the lower knife

- Unscrew the screw **B** (see figure 4.6) retaining the lower knife.
- Replace the worn lower knife with a new one (25655) and retighten the screw **B**.

c. Knife fine adjustment

Upon completion of knife renewal, take great care to align both knifes by turning the screw **C**.

Note: Do not over-tighten the screw **C** as this will put both knifes too close to one another thus leading to their early wear. (The mobile under knife will produce a cut in the upper knife.)
Secondly, as the knifes experience trouble sliding because too tightly screwed, extreme pressure should be produced by the internal parts to drive the cutting motion, which in turn will promote early wear or jam the internal parts.

d. Aligning the lower blade with the needle plate

With the needle having reached its lowest stroke, ensure that the lower knife protrudes 6 to minimum 3 mm above the needle plate (see figure 4.6). If this is not the case renew both knives

5. The presser foot

For optimum sewing performance, a good control of presser foot pressure is very important.

Insufficient presser foot pressure will lead feed-dog to skid, which will endanger the continued health of the feed-dog on the one hand, and will result in irregular stitch formation on the other hand. When overlocking soft foam rubber backed carpets, the carpet backing will be damaged.

However, carpet backings will show only small, virtually invisible signs of wear when presser foot pressure is correct.

Conversely, when the presser foot pressure is too high, the feed-dog will break!

Typical rated torque setting is 80 N/m. Use a torque wrench for correct presser foot setting (see figure 4.8).

Following is a breakdown of the presser feet available (for schematic representations refer to fig. 14A).

TITAN DK2500
PRESSURE ON PRESSUREFOOT

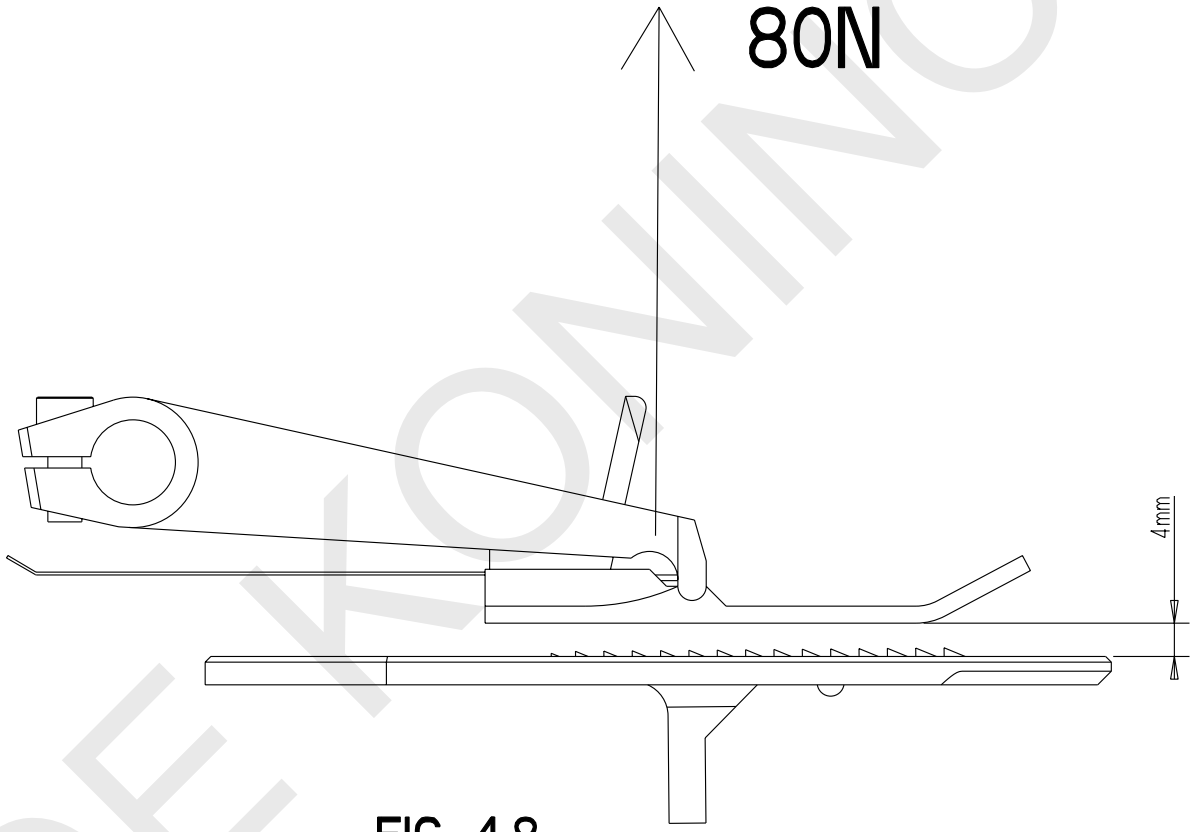
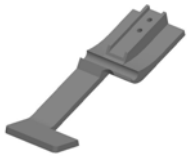
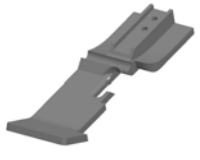


FIG 4.8

T 01/12/04

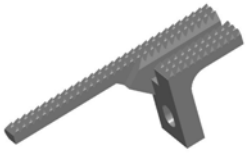
Part	Suited for…	
25583	Standard presser foot	
25583 BIS	Presser foot for fine delicate fabrics	
30583K	Presser foot for blankets; used in conjunction with guides.	
25583EEK	Presser foot for carpets fine overlocking, typical stitch width 5,5mm	
25583B	Buttseamer presser foot	
25583E BIS	Buttseamer presser foot for fine delicate fabrics.	
25280	For car carpets DK 2500Ag	

6. Feed-dog

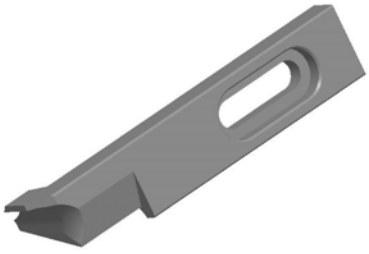
With every up and down movement of the feed dog, some dust will accumulate. To avoid excessive dust accumulation, we recommend to blow carefully the space underneath the needle plates with compressed air at the end of each shift. Furthermore, remove the stitch plate every two weeks, to thoroughly remove any compressed dust built up underneath.

Failure to do so will result in dust mixing with the machine's oil. The sticky black mixture formed will act as abrasive paper and score critical components, resulting in a premature wearing out of internal components such as bearings.

Available feed-dog types:

Part	**Suited for**…	
25744	Standard, for medium quality carpets	
25744K	With fine teeth, for light or delicate materials	
25744CAR	Heavy duty	
25744KPCAR	Heavy duty, with pyramid shaped teeth	

7. Chain guide



For optimum stitch formation, it is recommended for the chain guide to be adjusted to the carpet thickness.

Find hereunder the available chain guides :

Part Number	Suited for…
25560	Normal carpets
25560B	High pile carpets
25560H	Heavy carpets
25560EE	Normal carpets with small-sized over locking (2500 EEK)
30560GR	Normal carpets with tape insertion
25560C	Blankets (DK 2500C type)
25560K	Butt-seamer (DK 2500 E type)

8. Stitch plate finger

The type of stitch plate finger used will depend on different factors such as :

- Thickness of yarn
- Thickness of needle
- Stitch width

Phone our technical department for advice or mail : +32-2-216.31.40

CHAPTER 5 : MAINTENANCE SCHEDULE

MAINTENANCE SCHEDULE : to prolong the life time of your TITAN Machine.

TO DO EVERY 8 HOURS (+/- DAY)

- Blow clear the machine with compressed air at the end of each shift!

TO DO EVERY 40 HOURS (WEEK)

- Change needle every 40 working hours .
- Before replacement of the needle, thoroughly remove any dust that may have accumulated round the needle holder.
- Remove dust beneath both the stitch plate and the feed-dog once a week!
- Check oil level every week + add oil accordingly.

TO DO EVERY 200 HOURS (MONTH)

- Change the oil once a month minimum! OIL TYPE : 15W30
- Check and if necessary replace any worn out parts such as loopers, knives, needle guide, chain guide with new ones.!

TO DO EVERY YEAR

- Check if the parts are still mounted tightly, if there is no play on the upper and lower looper – needle bar – knifes and other parts. Open up the machine and replace necessary parts such as bearings, and others
- If you have no maintenance engineer, you can send back your sewing head, and the company DE KONINCK will give service to you. Consult our technical or sales department at TEL +32-2-216.31.40 or by email at : info@titansew.com

PARAMETER SETTINGS ON THE EFKA MOTOR

PLEASE NOTE

As the Controller is programmed with a memory key from Titan and you want to change some parameters. It is necessary to erase the settings from the memory key by changing the parameter 399 cFP.
To activate this parameter you have to do following steps :

1. Enter Code 3112
2. Go to parameter 399 and push ENTER
3. Push on the arrow and ENTER again CODE 3112
4. Press two (2) times on P
5. Power off, wait for one second
6. Power on.

ELECTRONIC MOTOR SETTINGS EFKA :DC 1500/1550 SERIES
USE SETTINGS ONLY FOR DK 2500 OVEREDGING MACHINES!!

- POWER OFF
- POWER ON AND PRESS P KEY
- PRESS >> KEY
- SET SUPPLIER LEVEL CODE NUMBER 3112
- PRESS E KEY
- PARAMETER .2.0.0. IS DISPLAYED
- PRESS KEY >> AND CHANGE PARAMETER .2.0.0. TO .1.1.1.
- PRESS E KEY
- SET VALUE ON 2800 BY PRESSING + OR – KEY
- PRESS E KEY
- PARAMETER .1.1.2. IS DISPLAYED
- PRESS >> KEY AND CHANGE PARAMETER .1.1.2. TO .1.1.9.
- PRESS E KEY
- SET VALUE ON 3 WITH + OR – KEY
- PRESS E KEY
- PARAMETER .1.2.1. IS DISPLAYED
- PRESS >> KEY AND CHANGE PARAMETER .1.2.1. TO .1.5.3.
- PRESS E KEY
- SET VALUE ON 15 WITH + OR – KEY
- PRESS E KEY
- PARAMETER .1.5.5. IS DISPLAYED
- PRESS >> KEY AND CHANGE PARAMETER .1.5.5. TO .5.0.0.
- PRESS E KEY
- SIR- IS DISPLAYED
- PRESS >> KEY
- PARAMETER .2.9.0. IS DISPLAYED
- PRESS E KEY AND SET VALUE TO 05WITH + OR – KEY
- PRESS E KEY
- PARAMETER .1.6.1. IS DISPLAYED
- PRESS E KEY AND SET VALUE TO 0 WITH + OR – KEY
- PRESS E KEY
- PARAMETER .2.7.2. IS DISPLAYED
- PRESS E KEY AND SET VALUE TO 0739 WITH + OR – KEY
- PRESS E KEY

- PARAMETER .2.7.0. IS DISPLAYED
- PRESS E KEY ANDSET VALUE TO 3 WITH + OR – KEY
- PRESS E KEY
- PARAMETER .4.5.1. IS DISPLAYED
- PRESS E KEY AND TURN HANDWHEEL CLOCKWISE AND
- SET NEEDLE ON LOWEST POINT
- PRESS E KEY
- PARAMETER .4.5.3. IS DISPLAYED
- PRESS E KEY AND TURN HANDWHEEL CLOCKWISE AND
- SET NEEDLE ON TOP POINT
- PRESS E
- PARAMETER .2.9.0. IS DISPLAYED
- PRESS TWO TIMES P KEY
- RUN THE MACHINE FOR ONE (1) SECOND
- POWER OFF
- POWER ON