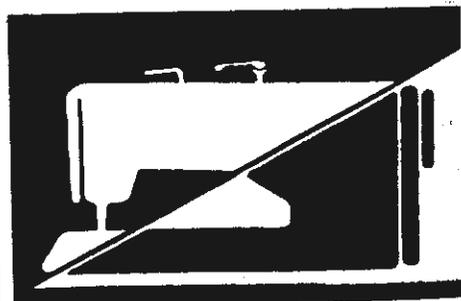
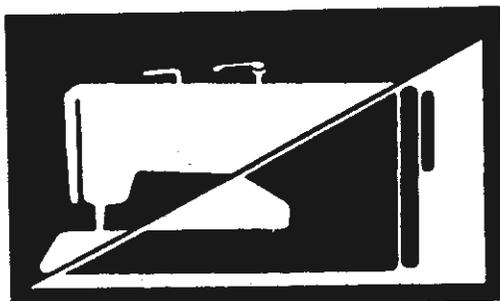
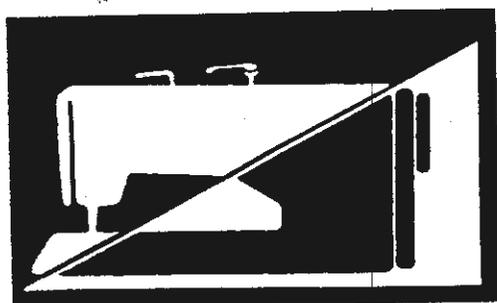




GLOBAL[®] ZZ 566

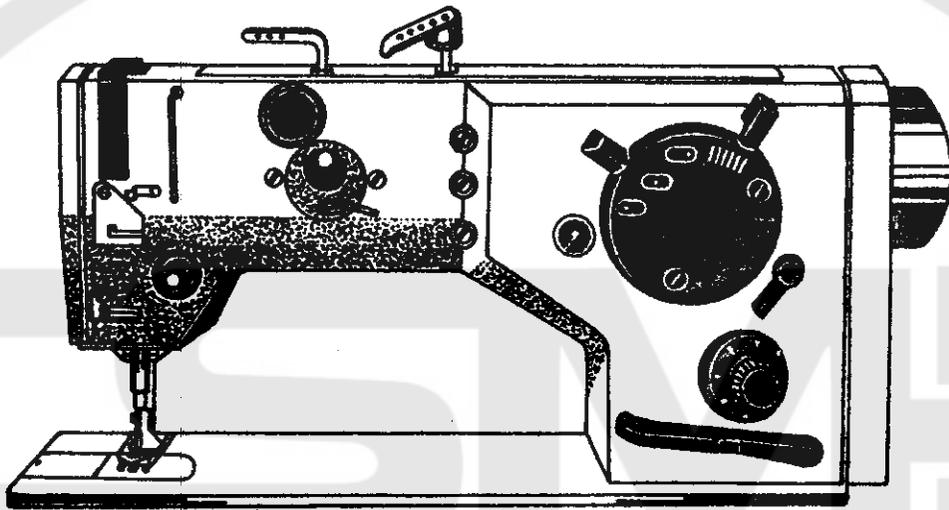


INSTRUCTIONS MANUAL FOR ADJUSTMENT
AND SERVICING AND LIST OF PARTS FOR
SINGLE-NEEDLE FLAT-BED ZIGZAG
INDUSTRIAL SEWING MACHINE

ZZ 566

SINGLE-NEEDLE FLAT-BED ZIGZAG
INDUSTRIAL SEWING MACHINE

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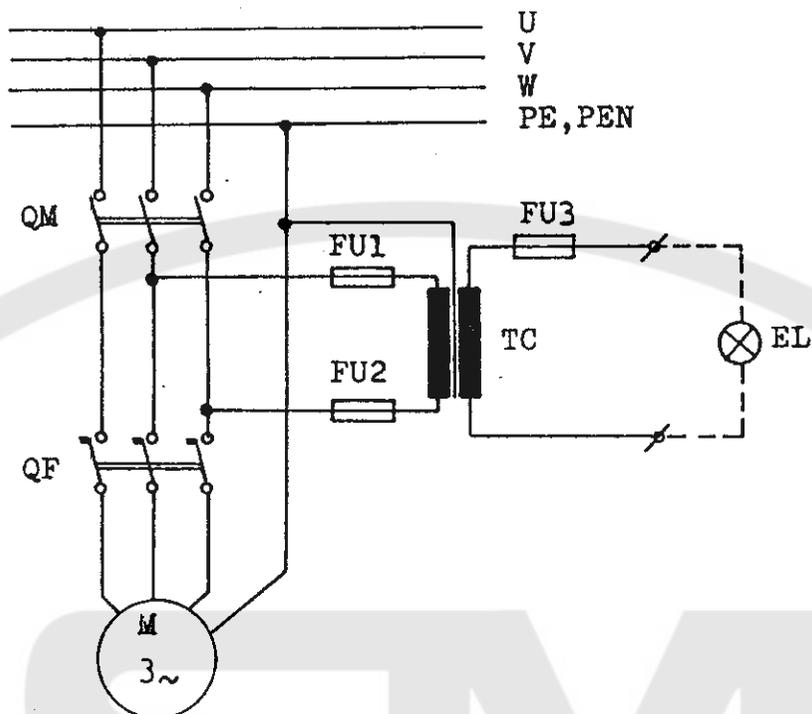


Application

The machine is used for attaching under collars to jacket necklines, upper collars to falls of under collars, lining collars to upper parts of trousers, facings to pocket bags of trousers, for overedging, and for similar operations on outerwear.

It is suitable for stitching materials made of wool, cotton, materials containing additions of synthetic fibres, and materials consisting exclusively of polyamide fibres, such as cord, gabardine, tweed, tessile, zibellino, fleece, loden cloth, etc., as well as for stitching linen interlinings with hair canvas etc.

Wiring diagram of the machine



Legend:

QM	switch	S 25, VS 16A, 500V
QF	circuit brraker	ITM 500V
M	electric motor	DNK 130/2 3x380/220V
TC	transformer	JBC E 2532, 380/220V, 24V,4QVA
FU1,FU2	fuses	048 B 1A/500V
FU3	fus	048 A 2A/250V
EL	lighting	see instruction manual

To observe:

Once a year, the electrical equipment of the machine should be checked, the clamps tightened, and faults removed, if any.

Any defect of the electrical equipment should be repaired by an expert electrician.

The machine operator is obliged to switch off the main switch any time he leaves the working site.

Specifications

Speed	up to 4,400 stitches per min. according to sewn material, zigzag stitch and thread used; with syn- thetic threads, use Equipment No. 205 to reduce the speed adequately
Stitch length	up to 5 mm, forward and reverse
Stitch width	up to 10 mm
Zigzag stitch position	right-side, left-side, median
Hook	Schmetz 797 CFCF Nos. 90 to 110 134 Nos. 80 to 110
Hook	R 250
Thickness of sewn material	up to 5 mm
Threads	cotton threads: 7.4 tex x 2 x 2 to 12 tex x 2 x 2 synthetic threads: 10 tex x 3 14,5 tex x 3 12 tex x 2
Presser foot stroke	5 mm with hand lever 7 mm with knee lever
Clear work space	265 x 120 mm
Machine drive	electric motor 0.4 kW; 3x380/220 V
Weight of machine head	35 kg

Technical description

The model ZZ 566 is a single-needle flat-bed two-thread zigzag lockstitch sewing machine with horizontal rotary hook driven from the lower shaft by means of a gearing seated in a gear box. The drive is transmitted from the upper shaft to the lower one by a drive belt. The machine is adapted for forward and reverse stitching. The reverse stitching can be actuated by a hand lever or by the left side treadle. The zigzag stitch width and position can be set by means of small levers situated on the front side of the column of the machine arm. The stitch length can be steplessly adjusted by a revolving knob. The presser foot can be raised by a hand lever or by a knee lever, at will of the operator. The principal parts of the mechanisms exposed to increased strain are seated in rolling-contact bearings. The machine is fitted with a group wick lubrication and with

automatic lubrication of the hook. A suspension-type lighting of the working area is available as Equipment No. 299.

Machine equipments and their use

Equipment No.	Ordering No.	Name
201	522 792 112 010	Incorporated bobbin winder, complete
202	522 791 947 001	Adjusting set
206	522 791 149 001	Overedging equipment
295	522 791 995 014	Plug covering the mounting hole for bobbin winder
299	522 794 222 006	Suspension-type lighting for work area

The equipment is supplied on special order only.

Table of technological use of the machine ZZ 566
with respect to sewn work and Schmetz needles

Example of use	Sewn work	Recommended needle Schmetz	Threads	Sewing speed (stitches per min.)
Sewing with up to 10 mm wide zigzag stitch	up to 3 mm thick cotton materials	797 CF CF Nos. 90-110	cotton threads 10 tex x 2 x 2	4400
			7.4 tex x 2 x 2 12 tex x 2 x 2	3400
	up to 3 mm thick mixed materials	797 CF CF Nos. 100-110	cotton threads 10 tex x 2 x 2 12 tex x 2 x 2	3400
Sewing with up to 8 mm wide zigzag stitch	up to 5 mm thick cotton materials, up to 5 mm thick mixed materials	797 CF CF Nos. 100,110	cotton threads 10 tex x 2 x 2 12 tex x 2 x 2 synthetic threads 14.5 tex x x 3	3400
Overedging	up to 3 mm thick cotton or mixed materials	797 CF CF No. 100	cotton threads 7.4 tex x 2 x 2 10 tex x 2 x 2	3400
Sewing with plain stitch in median position	up to 5 mm thick cotton materials,	797 CF CF No. 100 (134 No.100)	cotton threads 7.4 tex x 2 x 2 10 tex x 2 x 2	4400
	up to 5 mm thick cott. mat., up to 5 mm thick mixed mat.	797 CF CF No. 100 (134 No.100)	cotton threads 10 tex x 2 x 2 synthetic 14,5 tex x 3	3400
Linen stitching with use of reverse stitch, zigzag stitch width up to 10 mm	up to 2 mm thick cotton or mixed materials	797 CF CF Nos. 100,100	cotton threads 10 tex x 2 x 2 12 tex x 2 x 2	4400

In sewing mixed materials, high sewing speeds result in the material getting melted and sticking to the needle and, consequently, in thread ruptures and skipped stitches. To avoid it, reduce the sewing speed as needed. The reverse stitching is used in the sense of bar tacking at the seam beginning or end, except in operation of linen stitching on materials thick 2 mm or less.

I. INSTRUCTIONS FOR SERVICING THE MACHINE

A. GENERAL INSTRUCTIONS

1. Read the instruction manual carefully and adhere to them.
2. During transport and while unpacking the machine, proceed in accordance with the instructions and marks on the packing.
3. Report any damage which has occurred during transport to the railway authorities or to the forwarding agents at once. Immediately after unpacking, check the contents against the order and report any discrepancies to us. We cannot recognize claims submitted at a later date.
4. Having transported the machine to its work site, remove the preserving grease coating and all impurities from the machine head. Make sure that no machine part has become loose and that its mechanism is free of any foreign bodies.
5. Lubricate the machine daily. Before lubrication, always check whether the lubrication places are clean. It is advisable to lubricate it frequently in small quantities. Those parts of the machine which are exposed to increased friction or strain should be lubricated several times a day, as needed. Refill oil into the hook lubrication tank as required.
6. Clean the machine daily, especially the parts which become choked by impurities from the sewn material. During the cleaning, carefully check whether no machine part has become loose.
7. Once a week, during thorough cleaning, carefully check the whole machine to see that no parts are damaged and that all machine mechanisms operate correctly. Any faults ascertained must be repaired immediately. Once a year, general overhaul should be carried out. The machine should be dis-

mantled, thoroughly cleaned, individual pieces as well as the parts of the electrical equipment inspected, faulty or worn out pieces repaired or exchanged.

8. Adhere to the safety regulations. Never clean the machine or repair defects until the machine is at rest. Do not remove covers or other safety devices.
9. The electrical equipment of the machine should be kept in a good and faultless state, in accordance with the electro-technical and safety regulations. The lead-cable, supplied as a part of the machine, has a cross section of $4 \times 1 \text{ mm}^2$ and must be safeguarded accordingly in each phase. If the machine is provided with a plug, make sure always before plugging in that all switches are off. Never try to repair any defects of the electrical equipment by yourself but call in an expert electrician.
10. We cannot assume any responsibility for the consequences resulting from the non-observance of these instructions.

B. PACKING, UNPACKING, CLEANING AND LUBRICATION OF MACHINE

1. Packing of machine

The machine head is placed in a separate case.

2. Unpacking of machine

When taking over the machine from the railway authorities or in the works make sure whether it has arrived in good order. Report any damage which has occurred during the transport to the railway authorities or to the forwarding agents immediately. Unpacking should be carried out carefully so as to prevent damage to the machine parts. Further check the accessories of the machine against the order and report any discrepancy immediately, as we cannot

consider belated claims.

3. To set the machine on stand

After the machine has been brought to its work site, set it on the rubber washers of the stand. When seated properly, a gap of approximately 1.5 mm will appear between the bed plate and the rim of the stand on the whole of its circumference. Check the reverse stitching by the left side treadle and the raising of the presser foot by the knee lever. Otherwise, the machine is furnished in a mounted and ready-to-work state.

4. To set and fix the machine

The machine is designed as a stable unit with the stand, requiring no fixing to the floor.

5. To clean and lubricate the machine (Fig. 1)

After unpacking and before putting the machine into operation, remove the protective grease coating and clean the machine thoroughly. For lubrication of all machine mechanisms bearing oil with viscosity of 18 - 21 at 20°C $\text{mm}^2 \cdot \text{s}^{-1}$ is recommended, and for the hook, bearing oil with viscosity of 5 - 9 at 50°C $\text{mm}^2 \cdot \text{s}^{-1}$. With an oil can, drip oil into the marked holes of the machine arm once a day, before the beginning of the work shift. Check also the oil level at the indicator of the hook oil tank. The gear wheels of the hook gear box receive oil from a felt-like inlay situated on the gear box bottom. The hook and its mechanism should be cleaned several times a day. Apply two or three drops of kerosene to all soiled parts of the hook and of the surrounding mechanism, let the machine run at high speed then stop it, wipe off flushed-out dirt, and oil the hook with ist mechanism with the recommended oil. This cleaning should be carried out daily, especially after the end the work shift, in order to prevent dirt from drying on the hook and its mechanism. From time to time, use grease nipple to refill the shafts

(345.065 and 345.067) with lubrication grease (see Table 12). Before proceeding to clean the machine, unthread it and take the hook bobbin out of the hook. Once a week, the machine should be thoroughly freed of settled oil and of all impurities.

6. To adjust the hook lubrication (Fig. 2)

To adjust the oil flow to the hook turn with a screwdriver the adjusting pin (346.053), situated on the right side wall of the oil tank under the bed plate, from zero to maximum (to the left, anticlockwise). Adjusted at zero, the regulation still provides for a minimum oil flow to the hook, preventing it from seizing. After the machine has been put into service, check at regular intervals the oil level both in the hook oil tank and in the oil tank situated on the machine arm.

To observe:

At the beginning of work after a relatively long interval, e.g., at the beginning of the morning shift, it is advisable to remove first the gathered superfluous oil from the hook, either by letting the machine run idly for a short period or by producing a few stitches (approximately 20 cm) on a test material, to prevent the sewn work from getting soiled by oil.

C. PREPARING THE MACHINE FOR SEWING

1. General inspection

Inspect the machine thoroughly for loose parts as well as for the presence of foreign bodies. Rotating the hand wheel by hand, check first whether it revolves freely and whether the machine is adjusted correctly. Further check the correct working of the mechanism controlling the presser bar, i.e., the lifting and sinking of the presser foot by means of the knee lever or hand lever, and the reverse stitching by means of the left-side treadle or by a hand lever.

2. Sense of rotation

The correct sense of rotation of the machine hand wheel is anticlockwise, viewing the machine from the side of the hand wheel.

3. Electrical equipment

An electrician connects the machine to the mains. Switch on the electric motor and check whether the pulley turns in the correct direction, i.e., to the left. If this is not the case, the plug of the lead-in cable must be taken out and the cable must be switched over on the plug or on the terminal board of the electric motor. An incorrect sense of rotation of the pulley is inadmissible.

4. V-belt and its tension

The correct belt tension ensures transmission of full power with losses reduced to minimum. To check the tension of the V-belt, depress it lightly in the middle part between the hand wheel and the pulley; if the belt tension is correct, the pressed-on part will yield some 20 mm sideways. Excessive tension of the V-belt reduces the machine output and increases both the power consumption and the wear of the bearings. To mount the V-belt, proceed as follows: Tilt the machine head, screw out the screws (331.145) and remove the upper belt guard (041.162). First set the V-belt onto the motor pulley, then pass the V-belt between the tank and the stand plate, and mount it into the hand wheel groove. Lift the machine head to its working position, check the V-belt for correct tension, and mount the upper belt guard back.

5. To lift the presser foot (Fig. 8)

The lifting and sinking of the presser foot is controlled by the knee lever mechanism. To lift the presser foot and to lock it in the lifted position, the hand lifting lever (615.024) situated at the rear side of the machine arm can also be used. To sink the presser foot onto the sewn work, first slightly depress the knee lever thus disengaging the locking of the lifted presser foot by tilting the hand lever, and then release the knee lever to let the presser foot sink onto the sewn work. Never start the machine if the presser foot has been sunk onto the throat plate directly, with no material interposed between them.

6. Needles and threads

The machine requires the use of needles Schmetz 797 CFCF and 134 R of current sizes. Considering the high machine performance and the resulting needle heating, it is advised to use chromium plated needles. The size of the needle depends on the size of the thread, since it must freely through the needle eye. It is advisable to choose a rather thin needle, just permitting the free passage of the thread through the needle eye but partially preventing the upper thread from being threaded out of the needle eye at the beginning of stitching after the previous thread trimming. The most important factor in choosing the needle size is the thickness of sewn work. A needle too thin with respect to the thickness of sewn material is subject to excessive strain (impacts of the needle punches into the work, upper thread tension, heat generated by friction between the needle and the sewn work, etc.) and thus exposed to the risk of deviations from the correct needle course followed by irregular formation of upper thread loops and resulting in skipped stitches. Only high quality threads should be used. Especially suitable are conical cross-wound bobbins. S-twist thread should be used for the needle, while both S-twist and Z-twist thread is suitable as lower thread. A coarse

thread or one which has to overcome considerable resistance when passing through the needle eye reduces the machine performance and increases its trouble incidence. With synthetic threads, use equipment No. 205 to reduce adequately the machine speed, and apply a needle of the type "Special" or "Super special" to improve the heat removal from the needle eye in order to avoid melting thread.

7. To insert the needle (Fig. 8)

For easier needle insertion sink the presser foot onto the sewn work and rotate the hand wheel toward you until the needle bar has reached its top position, i.e., until the greatest possible distance between the needle bar and the throat plate has been obtained. Loosen the screw (135.029) of the thread guide (627.170) and insert the needle into the needle bar up to the stop. Be sure that the long groove of the needle is directed towards the operator. Looking through the cross slot provided in the needle bar check whether the needle shaft has arrived up to the bottom of the needle channel, and fix the needle by retightening the screw. Each time you insert a new needle check whether it is straight and whether it passes through the centre of the needle hole provided in the throat plate. Never use a needle chosen haphazardly but choose it with respect to the character of sewn material and to the thread size.

8. To thread the upper thread (Fig. 3)

Put the bobbin on the bobbin stand, unwind a sufficient portion of it, and pass it through the thread guide of the bobbin stand, then through the thread guides (313.204) and (272.039) between the tensioner discs (828.079), then lead it through the adjusting spring (264.294) and the thread guides (271.184 and 821.077) into the thread take-up lever (A), then downwards through the thread guide (821.077) and the lower thread guide (821.115) to the thread guide (627.170) on the needle bar, and from there to the needle. Insert it into the needle eye the from the

front side (i.e., from the operator) to the rear side.

To-observe:

For overedging attaching curtains, and for stitching thin materials with the use of equipment 206, the upper thread should be threaded into the lower aperture of the thread guide (627.037) provided on the needle bar. For current stitching operations, it should be threaded into the upper aperture of the thread guide.

9. To wind the hook bobbin (Fig. 4)

To wind the lower thread on the hook bobbin, a built-in bobbin winder, supplied separately as equipment No. 201, can be mounted onto the front side of the machine arm. Lead the thread from the bobbin stand through the aperture provided on the arm of the bobbin stand, through the aperture of the thread guide (025.248), and to the bobbin mounted on the winder shaft, wind it a few times anticlockwise on the bobbin, lead the thread end to the spring (260.483), insert it between the spring coils, and draw it lightly so as to cut it by the knife located inside the spring. When mounting the bobbin on the winder shaft mind that the carrier spring enters the notch of the bobbin front. By swinging the control lever (613.468) between the bobbin front you render the bobbin winder operative. Switching on the electric motor and depressing the right treadle, you start the machine and the winder as well. During the winding, the thread is evenly distributed along the whole of the bobbin width. As soon as the bobbin is fully wound, the control lever springs off thus disconnecting the winder drive and braking the winder shaft. The winding is now completed. Use the knife situated in the spring (260.483) to cut off the thread end.

To time the stop of winding, loosen the screw (124.050) of the control lever (613.468) mounted on the disconnecting pin (049.830), hold the disconnecting pin by means of a screwdriver in its position, and change the angular position of the control lever on the disconnecting pin as required.

10. To take out the hook bobbin

Rotate the hand wheel until the thread take-up lever has reached its top position. With your left hand, open the lock of the bobbin case and take the bobbin case out. As long as the bobbin case lock is open, the bobbin is held in the bobbin case. Release the lock, turn the bobbin case so as to direct its open side downwards, and the bobbin will fall out.

To observe:

When taking the bobbin case out of the hook, hold your feet away from the stand treadles in order to avoid an incidental start of the machine.

11. To thread the lower thread

Insert the fully wound bobbin into the bobbin case and the thread end first into the notch of the bobbin case and then under the pressure spring of the bobbin case. Insert the bobbin case with the bobbin into the hook. To prevent the bobbin from falling out of the case, while being inserted into the hook, tilt the lock fixing the bobbin in the case. With your thumb, push the bobbin case until you hear a distinct click. The correct position of the bobbin case signalled by this sound is very important, because otherwise the needle rupture or another breakdown could occur at the following machine start.

12. To catch the lower thread

Hold lightly with your left hand the end of the upper thread without stretching it. With your right hand revolve hand wheel towards you until the threaded needle reaches subsequently its bottom and top positions, thereby catching the lower thread. Draw then lightly the upper thread until the lower thread shows through the aperture provided in the throat plate. Lay the two thread ends in the direction behind the needle. While threaded, the machine may be started only after a bit of material has been inserted under the presser foot. Both when

starting and when finishing the sewing, the thread take-up lever should be placed in its top position to avoid the risk that the upper thread will thread out and possibly catch in the hook course.

13. Sewing - work proper

Insert the material to be sewn under the presser foot, switch on the electric motor and start the machine by gradually pressing the right treadle. As the treadle is being depressed, the sewing speed increases up to the maximum. Releasing the treadle will disengage the clutch of the electric motor, brake the motor and stop the machine. During the sewing avoid pulling the material but guide it only. By pulling the material, you bend the needle with the risk of breaking it in case of a collision with the edge of the needle aperture provided in the throat plate. Repeated collisions of this kind burr the needle aperture which causes thread ruptures. When the stitching operation is completed, lift the presser foot and remove the sewn work.

To observe:

Having put the new machine in operation, do not charge it fully from the very beginning. During the first two or four weeks, when the machine is running-in, increase its speed gradually from about 3,500 stitches per min. and check carefully its running. Throughout this time, pay special attention to the machine lubrication. By keeping to these rules you will obtain a long service life and perfect precision of the machine even at its full performance.

II. INSTRUCTIONS FOR ADJUSTMENT OF MACHINE MECHANISMS

This section describes those adjustments that can be carried out on the work site. Larger adjustments, requiring more time, should be carried out by a skilled sewing machine mechanician.

1. Stitch length adjustment (Fig. 5)

The stitch length can be steplessly adjusted by turning the knob (223.031) provided on the vertical part of the machine arm, through a range between 0 and 5 mm. By turning it in the sense of the arrow "A" (i.e., to the right), you increase the stitch length, by turning it in the sense of the arrow "B" (i.e., to the left), you decrease it. For reverse stitching, depress the lever (044.714) downwards. When released, the lever automatically resumes its previous position and the machine its forward stitching.

2. To adjust the zigzag stitch width and position (Fig. 5)

Before any adjustment of the zigzag stitch width or position, the machine must be stopped with the needle outside the sewn work. The locking lever (612.342) must be turned to the left (anticlockwise) and held there until the adjustment is carried out, since its original position (i.e., turned to the right) serves to lock the adjusted stitch width and position. The stitch width can be steplessly adjusted from 0 to 10 mm by means of the lever (044.753) protruding over the cover (954.046) of the zigzag stitch mechanism. By displacing the lever to the right, i.e., towards the hand wheel, you increase the zigzag stitch width up to its maximum, by displacing it to the left, you decrease the stitch width up to zero. The zigzag stitch position is controlled by the lever (044.740) protruding on the side of the cover (954.046) of the zigzag stitch mechanism. The basic, i.e., the median position is adjusted by the central position of the lever (044.740), i.e., on the mark , in which the lever enters the fixing notch. To change the adjustment, slight-

ly depress the lever in the direction away from the operator and displace it either upwards, to the mark , to obtain the right-side, or downwards, to the mark , to obtain the left-side, zigzag stitch position. After the adjustment turn the locking lever (612.342) to the right to lock the adjusted (chosen) zigzag stitch position. When used for straight stitching, the machine should be set to the median stitch position, i.e., to the mark .

3. Thread tension adjustment

The tension of the upper and the lower thread must be so interrelated that the stitch interlacing takes place in the middle layer of sewn material. To adjust the upper thread tension, turn the tensioner nut either to the right (clockwise) to increase the tension, or inversely, to reduce it. To adjust the lower thread tension, use the screw located in the middle part of the pressure spring on the bobbin case. By turning the screw to the right you increase the pressure of the spring on the bobbin case (the thread passes between the spring and the bobbin case) and, consequently, the lower thread tension, and inversely. If the lower thread tension has been originally adjusted correctly, the adjustment of the upper thread tension by means of the tensioner nut will be sufficient, as a rule, to restore the desired quality of stitching.

4. To adjust the feed-dog height above the throat plate (Fig.7)

The feed-dog (A) height should be adjusted so that its teeth show up the throat plate (B) 0.8 to 1.2 mm, according to the kind of sewn material. To adjust it, loosen the screw (120.229) of the lifting lever (613.195) on the shaft (345.065), adjust the required height of the feed-dog teeth, and retighten the screw thoroughly with a screwdriver. To adjust the teeth horizontally, loosen the screw (124.050) of the feed lever (613.125) on the shaft (345.067) and adjust the rear part of the teeth by correspondingly adjusting the angular position of the eccentric pin (338.069), then retighten the screw (124.050).

5. To adjust the movement of needle with respect to feed-dog
Loosen the two screws of the lower belt wheel and turn the hand wheel so as to set the feed-dog to a position in which the feeding ends and the feed-dog teeth are at a level the throat plate, then rotate the hand wheel so as to position the needle point, during its downward movement, approximately 5 mm above the throat plate, and retighten the screws of the wheel.
6. To adjust the throat plate (Fig. 7)
The throat plate (B) must be properly seated and fixed by screws (123.117) in a position ensuring that the needle passes through the centre of the needle aperture even at the top width of the zigzag stitch. The needle aperture must not be burred or otherwise damaged since it would unfavourably affect the quality of stitching.
7. To adjust the presser bar pressure
The presser bar pressure is actuated by the adjusting screw situated under the upper cover of the machine arm and accessible through a hole provided in this cover. By turning the adjusting screw to the right, you increase the pressure, by turning it to the left, you reduce it. The pressure of the presser foot must be sufficient to ensure reliable and continuous feeding even at the top speed. On the correct adjustment of the presser bar depends the uniformity of damage-free feeding as well as that of the stitch length.
8. To adjust the needle bar height (Fig. 8)
The hook must be so interrelated with the needle that at the moment when the hook point begins to take up the upper thread loop, the upper edge of the needle eye is approximately 1 mm under the hook point, at the maximum stitch width and in the right-side position of the needle bar. If the needle bar height is not adequate to this requirement loosen the screws of the front plate remove it, loosen the screw (124.050) of the carrier (627.165) of

the needle bar (391.153), adjust the needle bar height correctly, and mount the front plate back.

9. To adjust the hook course

Adjust the stitch width to zero and turn the hand wheel towards you until the needle bar reaches its bottom position and reascends by $2.1 + 0,3$ mm. In this position, the hook point must lie in the needle axis, the distance between the needle and the hook being 0.1 mm or less. If it is not the case remove the throat plate, loosen the hook and adjust its angular position on the hook shaft, then retighten the screws, and mount the throat plate.

10. To adjust the hook holder

After the hook course adjustment, loosen the fixing screw and adjust the hook holder so as to obtain a gap of approximately 0.7 mm between the holder lug and the bottom of the inner part of the hook. A gauge of the equipment No. 202 is suitable for this adjustment.

11. To adjust the elliptical path of the feed-dog movement

(Fig. 7)

If the machine is adjusted correctly the feed-dog describes an elliptical path both with forward and with reverse stitching. The adjustable eccentric is positioned by means of a pin in the aperture of the lower shaft and commands the length of feeding. Another eccentric, stationary and situated in front of the adjustable one, commands the correct interrelation between the major and the minor axe of the ellipse. The stationary eccentric is secured by two screws located in its collar. The eccentricity of the stationary eccentric is constant so that the height of the ellipse remains the same regardless of the height adjustment of the fee-dog teeth. The adjustment should be carried out as follows: When the eccentricity of the adjustable eccentric equals zero (so that no feeding takes place) adjust the feed-dog holder to the centre of the slot provided in the throat plate, having first loosened the screws of the lever (613.495) on the feed shaft (345.067). Ensure that the feed-

-dog reaches its top height about the middle of the feed-dog movement.

12. To adjust the length of feeding

Loosen the screw of the lever on the pin of the reverse stitching hand lever, set the stitch length regulation knob to its zero position, adjust the traversable sleeve of the adjustable eccentric to a position corresponding to the zero eccentricity of this eccentric, retighten the screw of the lever, and check whether the feeding is equally long for both forward and reverse stitching.

13. To adjust the hook opening (Fig. 9)

During the stitching, the gap between the sides of the groove provided in the inner part of the hook and the hook holder (825.744) is positively periodically opened by means of the opening lever (825.740) and eccentric (671.155) for easier lower thread movement out of the hook. The eccentric is situated in the hook box at the end of the lower shaft. Adjust first the gap between the lug of the hook holder and the recess provided in the inner part of the hook, and simultaneously, the opening lever, i.e., its lug, with respect to the face of the inner part of the hook. Loosen the screw (111.094) fixing the position of the bobbin case (410.530) contacted by the pin (323.155) with the opening lever and adjust a gap of 0.8 mm between the lug of the opening lever and the lower surface of the inner part of the hook by tapping lightly on the opening lever. At the same time, set the opening lever so as to produce a gap of approximately 0.5 mm between the recess of the inner part and the hook holder required to let the thread pass.

Having adjusted the opening lever, retighten the

screw (111.094). Before proceeding to carry out the adjustment, remove the throat plate. The timing of the opening lever with respect to the hook is best carried out only during the running in of the machine. First screw out the four screws (120.246) on the cover (827.179) of the hook box, remove the cover, take out the lubrication inlay, loosen the two screws (112.013) of the eccentric (671.155) and set its angular position on the lower shaft so as to time the opening of the inner part of the hook to begin prior to the moment when the upper thread begins to pass across the recess of the inner part of the hook and the lug of the hook holder. Check also the correct passage of the upper thread around the hook bottom, when the opening lever approaches the opening lug to open the passage around the inner part of the hook for the upper thread. The correct adjustment is best checked on the adjusting spring that must only slightly move while the thread passes freely. After the adjustment of the eccentric, retighten its screws, insert the lubrication inlay, and mount the cover of the hook box.

14. To exchange the presser foot (Fig. 8)

To exchange the presser foot (031.550) first lift the presser bar (392.105) to its top position and lock it by the hand lifting lever (615.024). Lift also the needle to its top position, then loosen the attachment screw (120.239) of the presser foot with the washer (190.528), and remove first the finger guard (271.393) and then the presser foot from the presser bar. To insert the presser foot, proceed inversely. Having fixed a new presser foot check, in its top position, whether the needle bar does not collide with the presser foot during its motion.

15. To dismantle and mount the drive belt (Fig. 10)

Screw out the three screws (120.346)

remove the belt guard (041.162) from the machine arm, tilt the machine head onto the supporting pin

located on the bed plate, take the V-belt out of the hand wheel groove, loosen the two screws (120.006), and remove the hand wheel (045.359) out of the machine arm and from the upper shaft (349.147). Pass the drive belt (272 213 032 015) through the aperture thus created in the machine arm, set it on the two belt wheels and mount the complete hand wheel on the upper shaft in such a position that the first screw (120.006) - considered in the sense of rotation of the hand wheel - comes to sit on the small flat surface of the upper shaft when tightened. Retighten the screws (120.006) of the hand wheel, set the V-belt on the hand wheel, tilt the machine head back to its working position and mount the belt guard back.

16. To adjust the needle punches into the centre of the slot of the throat plate in longitudinal direction (Fig. 8) Adjust the zigzag stitch to its median position and to the zero width and turn the hand wheel until the needle bar with the needle reaches its bottom position. The needle should be in the centre of the throat plate slot both longitudinally and transversely. In case of longitudinal deviation (in the feed direction of sewn material) screw out the two screws of the front plate, remove the latter, loosen the securing screws (111.229, 111.248) and finely adjust the angular position of the screws (113.115) both on the front and on the rear side of the machine arm so as to set the needle longitudinally into the centre of the throat plate slot. Retighten the screws (111.229 , 111.248) and mount the front plate back.

To observe:

When adjusting the needle position with respect to the throat plate, do not tighten the adjustmet screws (113.115) completely but leave a minimum play between them and the needle bar holder in order to let the transverse motion of the needle bar holder, required for the zigzag stitch formation, proceed unimpeded.

17. To adjust the needle punches into the centre of the slot of the throat plate in transverse direction

Adjust the zigzag stitch to its median position and to the zero width, and turn the hand wheel until the needle bar with the needle reaches its bottom position. In case of transverse deviation from the central needle position screw out the four attachment screws, remove the upper cover (813.904, Fig. 4), take the plug (321.161.001.000, Fig. 4) out of the machine arm, loosen the screw (120.289) situated under the upper cover, insert a screwdriver into the hole created by the plug removal, adjust the angular position of the eccentric pin (338.187) so as to set the needle transversely into the slot centre, retighten the screw (120.289), insert the plug into the hole and mount the upper cover back. Check the needle punch position at the maximum stitch width and be sure that there is a play between the needle and the slot edge in each lateral position of the needle. With zigzag stitch width adjusted at zero, the needle bar with the needle should react with no lateral movement to the hand wheel rotation. If it does react, the basic zero position of the zigzag stitch should be adjusted by an experienced sewing machine mechanic, since such adjustment is rather extensive.

18. To adjust the zigzag stitch mechanism to positions right side - left side (Fig. 6)

After the adjustment of the median position and of the maximum width of the zigzag stitch the left and the right zigzag stitch position can be adjusted. Screw out the two attachment screws, remove the cover of the zigzag stitch mechanism, loosen the locking lever (612.342) and set the zero stitch width by means of the lever (044.753). Rotating the hand wheel, set the needle bar with the needle to its bottom position. Displace the lever (044.740) upwards, i.e., for the right side stitch position, and observe the simultaneously proceeding movement of the needle in the needle in the throat plate slot to its extreme right position. Loosen the screw (A) and adjust the stop

(825.858) so as to let enter its notch into the recess provided in the lever (044.740), then retighten the screw (A). Proceed analogically for adjusting the left side needle position. Displace the lever (044.740) downwards, towards the bed plate, loosen the screw (B), set the stop (825.857) correctly, and retighten the screw (B). Having adjusted the right side and the left side position mount the cover of the zigzag stitch mechanism back.

19. To adjust the needle bar lateral movement

If the machine is adjusted properly the needle bar begins to carry out its lateral movement, even at the maximum width of the zigzag stitch, only after the needle, during its upward movement, comes to lie about 4 mm above the throat plate. For correct adjustment, loosen the screws (111.343) of the gear wheel (045.330) on the upper shaft (349.147), adjust the angular position of the hand wheel accordingly, and retighten the screws (111.343) thoroughly.

20. To adjust the control force required for stepless adjustment of zigzag stitch width

For stepless tilting of the zigzag stitch bracket (646.027), the inlay of the zigzag stitch mechanism body contains a braking roller (314.058) with a spring (260.139) and an adjustment screw (111.099). Turning the screw to the right increases the pressure exerted on the roller and, consequently, the force required to adjust the stitch width. A lever (612.342, Fig. 6) actuated mechanism serves to fix the adjusted stitch width, and must be turned to the left prior to proceeding to the stitch width adjustment which is carried out by the lever (044.753, Fig. 6) whose extreme left position (up to the stop) produces the zero zigzag stitch width that can be increased up to 10 mm by shifting the lever to the right. The number marking on the cover (954.046) shows the approximative stitch width values at the respective lever positions. To adjust the control force, first take the ~~complete~~ zigzag stitch mechanism out of the column, i.e. the vertical part, of the machine arm.

Screw out the two screws (123.130) of this mechanism, remove its cover (954.046), screw out the three attachment screws (120.276) from the body of the zigzag stitch mechanism, then screw out the securing screw (120.221) on the pin (335.101), remove the pin from the guiding (646.027), loosen the fixing lever (612.342), and take the screw (152.099) out of engagement, thus releasing the body of the zigzag stitch mechanism that can be taken out of the machine arm. During the assembly, proceed inversely.

21) To adjust the control force required for stepless adjustment of the zigzag stitch position

For adjusting steplessly the zigzag stitch position (and, to some extent, the zigzag stitch width as well) a nut (174.066, Fig.6) with a locking nut (161.229, Fig. 6) is screwed on the guiding (646.027). The adequate position of the nut (174.066) fixed by the locking nut (161.229) will provide for the required displacement control force and define the force fixing the adjusted zigzag stitch position. Any adjustment of the zigzag stitch position can be carried out only with the locking lever (612.342) released.

22. To adjust the tooth play of the zigzag transmission mechanism

The tooth play of the zigzag stitch transmission mechanism is actuated by the eccentric pin (335.105, Fig. 6). To adjust the tooth play, first screw out the four attachment screws (123.117), remove the upper cover (813.904), and loosen the screw (120.233) situated in the lug of the machine arm. Then turn the eccentric pin (335.105) to adjust the tooth play of the zigzag transmission mechanism, i.e., between the complete cam (035.376) and the gear wheel (045.330) mounted on the upper shaft (349.147). Lock the adjusted position by thoroughly tightening the screw (120.233).

23. To adjust the needle bar position with respect to that of the hook shaft

After a substantial adjustment of machine mechanisms the median (vertical) needle bar position with respect to that of the hook shaft should be checked. The hook shaft axis is displaced to the left of needle bar axis. For adjustment, loosen the two screws (120.235) ensuring the locking joint between the bed plate and the hook gear box. In correct position, the hook gear box is in direct contact with the lug of the bed plate. The stop pin on the front side of the gear box is inserted into the split section of the bed plate lug and is in contact with the upper part of the split lug. Lock the gear box in its position by tightening the two screws (120.235).

24. To adjust the operation of the adjusting spring

Loosen the screw (111.229, Table 8) and take the complete upper thread tensioner (025.245, Tabel 8) out of the machine arm. To adjust the tension of the adjusting spring (264.294), loosen the screw (111.227) on the bushing (416.131) and adjust the angular position of the pin (118.039) with a screwdriver. By turning the pin to the left, reduce the spring tension, and inversely. In the same manner is adjusted the value of the spring arm stroke. Sew a few stitches and check the adjustment of the adjusting spring. Displace the right-side sliding plate and check the thread action. With correct adjustment, the thread passing around the hook bottom shall produce a slight movement of the adjusting spring without being tensioned.

25. Electrical equipment of machine

The machine is equipped with an electric motor situated in the machine stand. The electrical equipment of the machine should be kept in good state according to the electrotechnical and safety regulations. To change the sense of rotation of the electric motor change over the lead-in cable either at the plug or at the terminal board of the electric motor. In the latter case, do not omit first

to take the plug of the lead-in cable out of the socket.

To observe:

Any failure of the electrical equipment of the machine should be repaired by a skilled electrician.



III. MAINTENANCE

1. Machine cleaning

Plain machine lines help to keep clean outer machine parts. From time to time, it is necessary to remove the waste between the feed-dog and the throat plate. Otherwise, the machine should be cleaned daily.

2. General overhaul and repair of the machine

Should be carried out once a year. The machine should be set out of operation, cleaned, dismantled, faulty pieces exchanged and due repairs carried out. The machine should be then assembled and tested. The electric motor and the electrical equipment should be inspected and tested. The general overhaul of the machine should be carried out so thoroughly as to enable the machine to run without major troubles for another year.

3. To store the machine

After the machine has been set out of operation, it should be cleaned, inspected, and faulty pieces exchanged, if any. The machine should then be tested, coated with protective grease, and stored with all the tools and accessories.

IV. FAULTS AND HOW TO REMOVE THEM

Fault	Cause	Remedy
Heavy machine run	The machine has been out of use for considerable time: dried oil and impurities deposited in the bearings	Inject some drops of kerosene into all lubrication holes and on sliding surfaces and let the machine run rapidly so as to clean the lubrication holes in the bearings. Then oil the machine carefully with sewing machine oil (see par. 5, page 6)
b) Slow machine start	Insufficient belt tension	Increase the belt tension by tilting the electric motor
c) Upper thread breakage	<ol style="list-style-type: none">1. Slashed thread guides.2. Too sharp hook point.3. Faulty feeding.4. Faulty thread guiding or faulty needle threading.5. Incorrect upper thread tension6. Bad needle quality or bent needle.7. The thread size is inadequate to the thickness of sewn material.8. Machine considerably soiled.	<ol style="list-style-type: none">1. Ascertain and exchange them2. Repair it.3. Adjust it (see par. 5, page 16)4. Thread the upper thread correctly (see par. 8, page 10)5. Adjust it (see par. 3, page 15)6. Exchange the needle (see par. 7, page 10)7. Use adequate thread8. Unscrew the throat plate, clean the mechanism, and set the throat plate (see par. 6, page 16).

Fault	Cause	Remedy
	9. Thread wound on the hook .	9. Remove the thread
	10. The thread is too thin or not strong enough	10. Use adequate thread.
d) Lower thread breakage	1. The thread is incorrectly threaded into the bobbin case	1. Thread it correctly (see par. 11, page 12)
	2. The thread is too thin or not strong enough.	2. Use adequate thread.
	3. The thread is incorrectly wound on the bobbin	3. Wind it on the bobbin correctly
	4. Damaged bobbin	4. Exchange it
	5. Too sharp pressure spring on the bobbin case	5. Exchange the spring
e) Skipped stitches	1. Needle inserted incorrectly	1. Insert it correctly (see par. 7, page 10)
	2. Blunt or bent needle	2. Exchange it (see par. 7, page 9)
	3. Slashed or broken hook point	3. Exchange the hook
	4. Excessive needle aperture in the throat plate	4. Exchange the throat plate and set it correctly (see par. 6, page 16)
	5. Broken adjusting spring for upper thread tension	5. Exchange the spring and adjust the upper thread tension (see par. 3, page 15)
	6. Needle bar positioned too high or too low	6. Adjust it (see par. 8, page 16)
	7. Overturned hook incorrect hook course	7. Adjust the hook course (see par 9, page 17)

Fault	Cause	Remedy
	8. Soiled hook mechanism	8. Clean it with kerosene and oil it
f) Needle breakage	1. Feed-dog positioned too high	1. Adjust it in height (see par. 4, page 15)
	2. Faulty attendance - pulling the material	2. Let the material pass freely
	3. Needle too thin with respect to material	3. Exchange the needle (see par 7, page 10)
	4. Needle inserted incorrectly	4. Insert it correctly (see par 7, page 10)
	5. Loosened throat plate	5. Set the throat plate correctly (see par. 6, page 16) and fix it by screws
	6. Excessive upper thread tension	6. Adjust it (see par. 3, page 15)
g) Heavy and irregular feeding	1. Feed-dog positioned too low	1. Adjust it in height (see par. 4, page 15)
	2. Worn-out feed-dog	2. Exchange it
	3. Clogged or blunt teeth of feed-dog	3. Clean or exchange the feed-dog
	4. Insufficient pressure of presser foot	4. Increase the pressure (see par. 7, page 16)
h) Stitch forming below sewn material	1. Tensioner discs slashed by upper thread	1. Exchange them and adjust the upper thread tension (see par. 3, page 15)

Fault	Cause	Remedy
	2. The thread does not pass smoothly around the hook or catches the bobbin case	2. Clean the hook and adjust the bobbin case
	3. The upper thread is not threaded between the tensioner discs	3. Thread it correctly (see par. 8, page 10)
	4. Thread broken and caught between the tensioner discs	4. Clean the thread tensioner and adjust it (see par. 3, page 15)
	5. Incorrect proportion between the upper and lower thread tensions	5. Correct the proportion (see par. 3, page 15) and check it from time to time
i) Stitch forming above sewn material	1. Damaged spring on the bobbin case, lower thread is braked insufficiently	1. Exchange the spring
	2. The lower thread is not threaded under the spring of the bobbin case	2. Thread it correctly (see par. 11, page 12)
	3. Lower thread broken and caught under the spring of the bobbin case	3. Remove the thread
	4. Incorrect proportion between the upper and lower thread tensions	4. Correct the proportion (see par. 3, page 15)
	5. Premature feeding	5. Adjust it (see par. 5. page 16)

Fault	Cause	Remedy
j) Locked hook	Thread rests caught in the hook	Rotate the hand wheel in each direction regardless of the considerable resistance until the caught thread rests are cut to pieces. Remove them and start the unthreaded machine. Let it run for a period, then drip two or three drops of oil recommended in par. 5, page 6 onto the hook



V. HOW TO ORDER SPARE PARTS

When ordering spare parts, please, specify

1. Marking of the piece

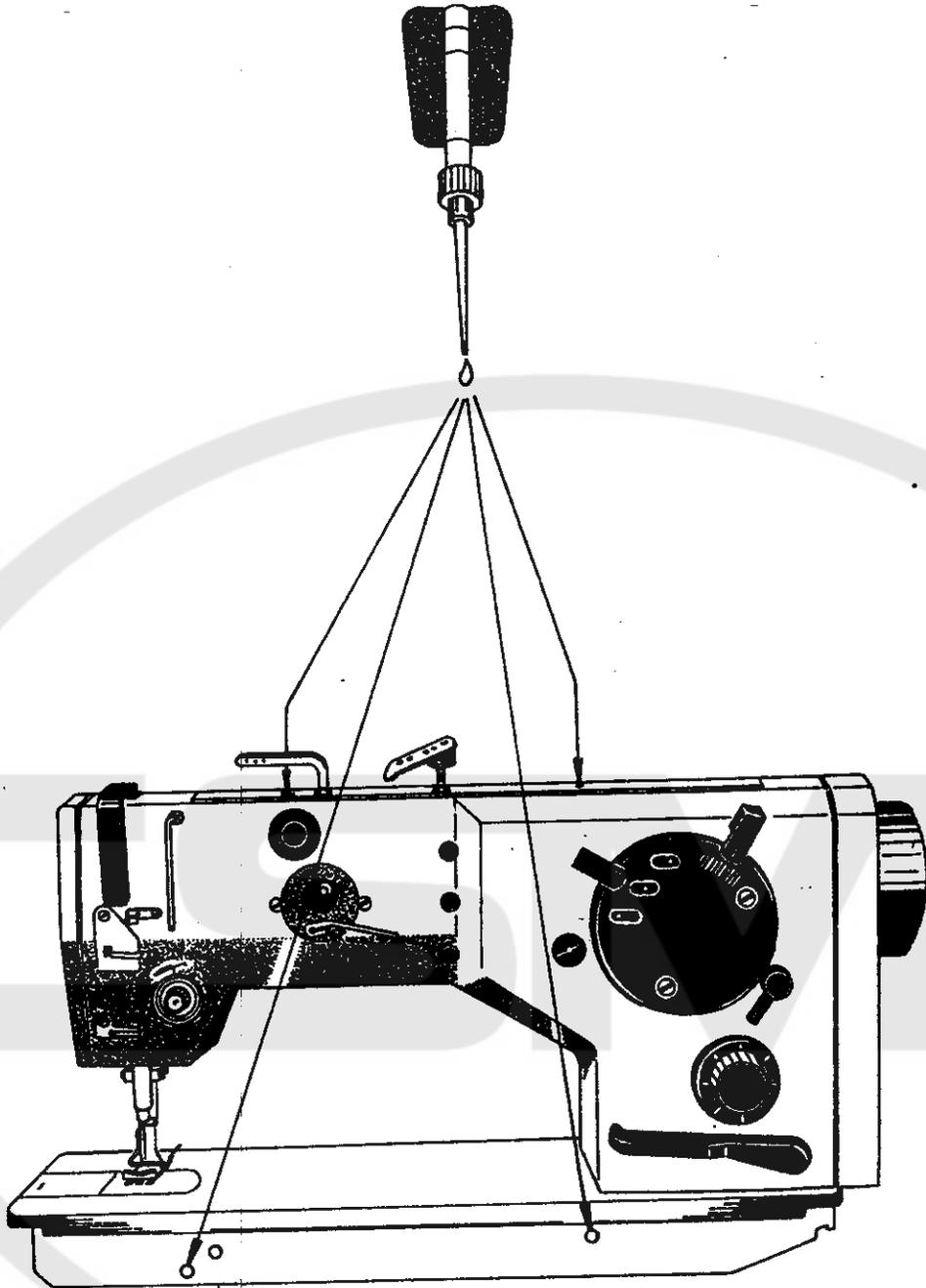
(a six-digit number for pieces produced in our factory,
a twelve-digit number for pieces purchased from other
suppliers)

2. Number of pieces

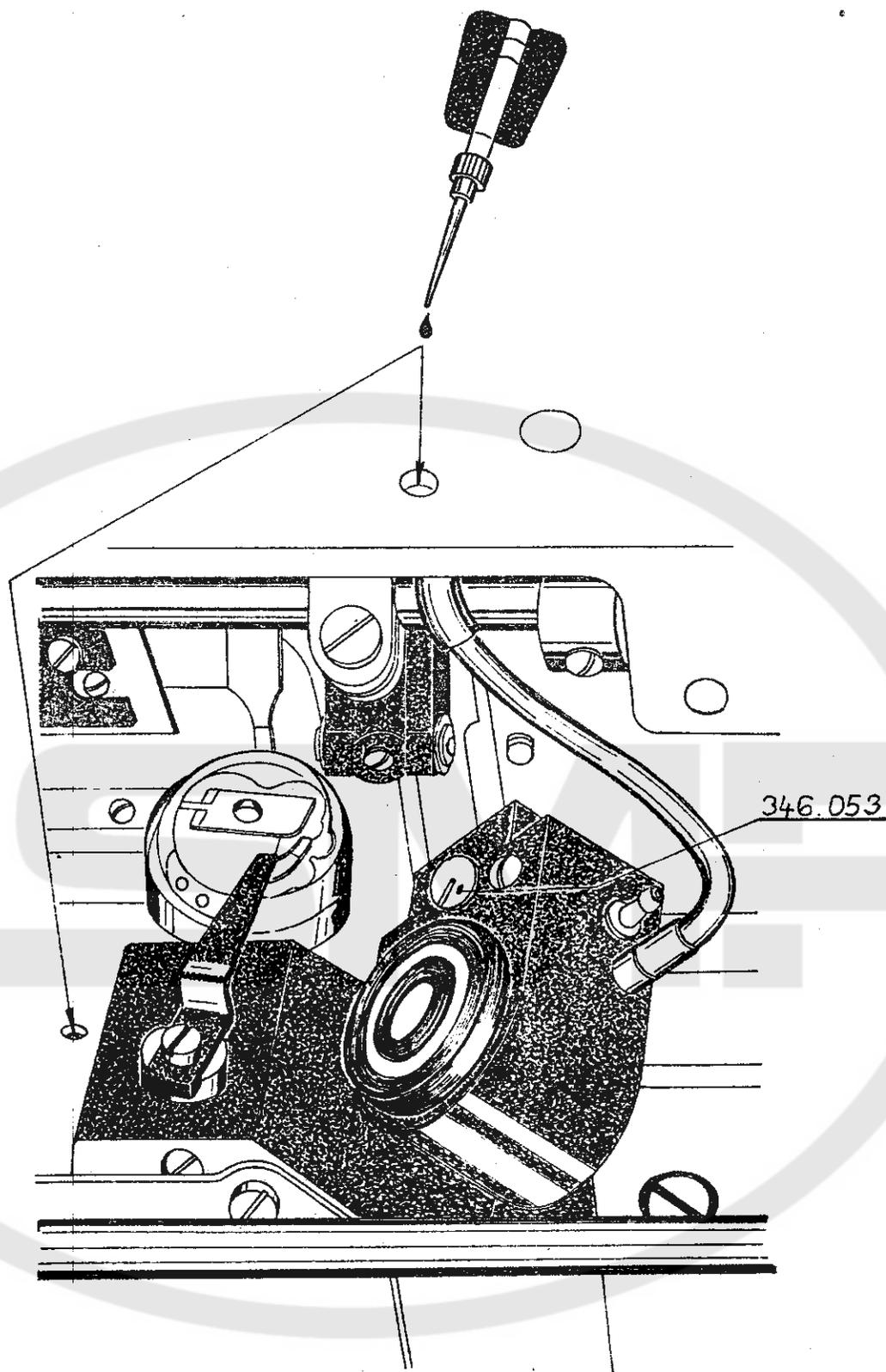
Example of an order	021.243	2 pieces
	828.079	4 pieces
	272 213 017 015	1 piece
	323 114 618 117	1 piece

As we are continually endeavouring to improve our machines we amend also the accompanying technical documentation accordingly. It is, therefore, strongly recommended to order spare parts exclusively on the basis of the catalogue attached to the machine in question.

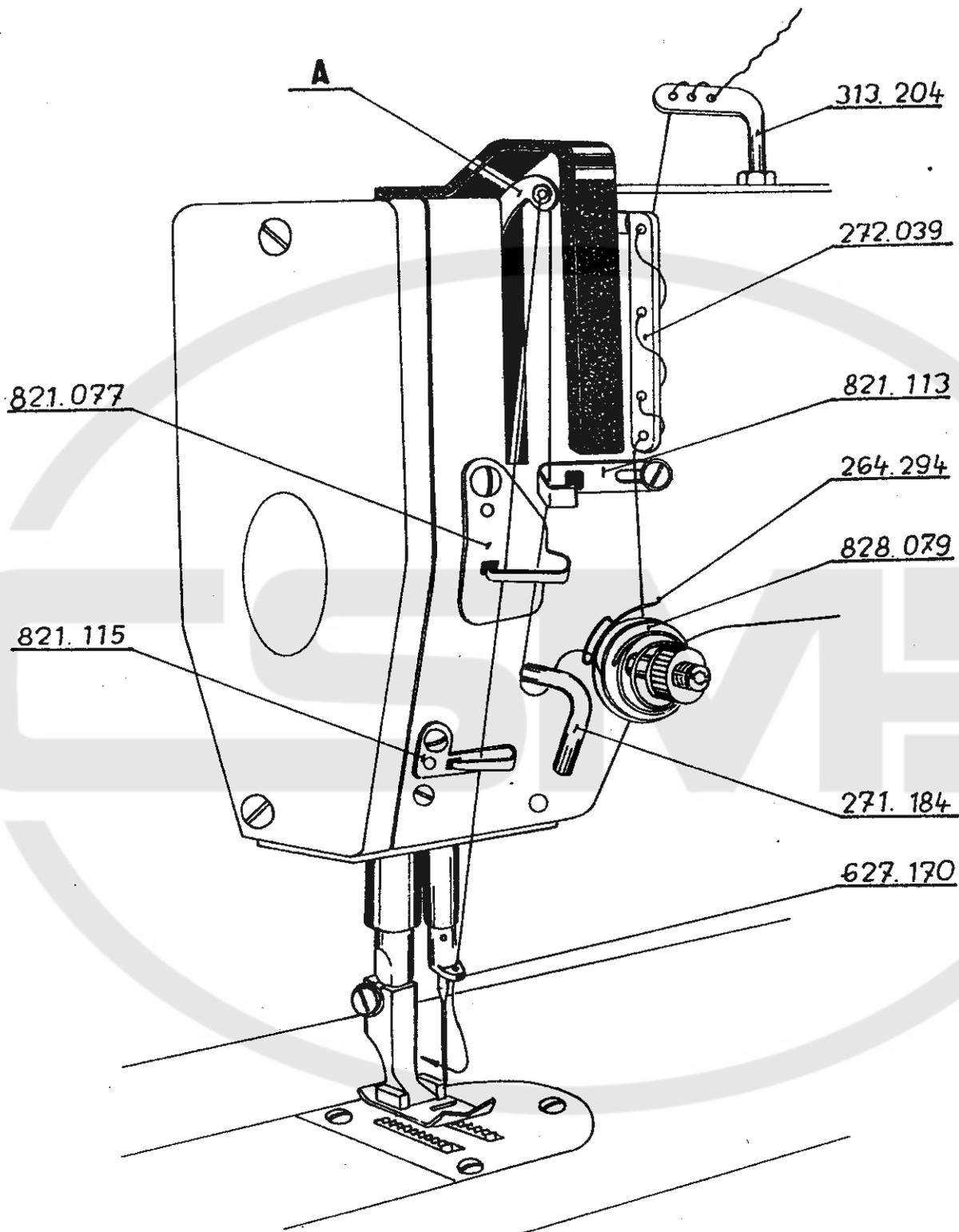
We wish you much success in your work.



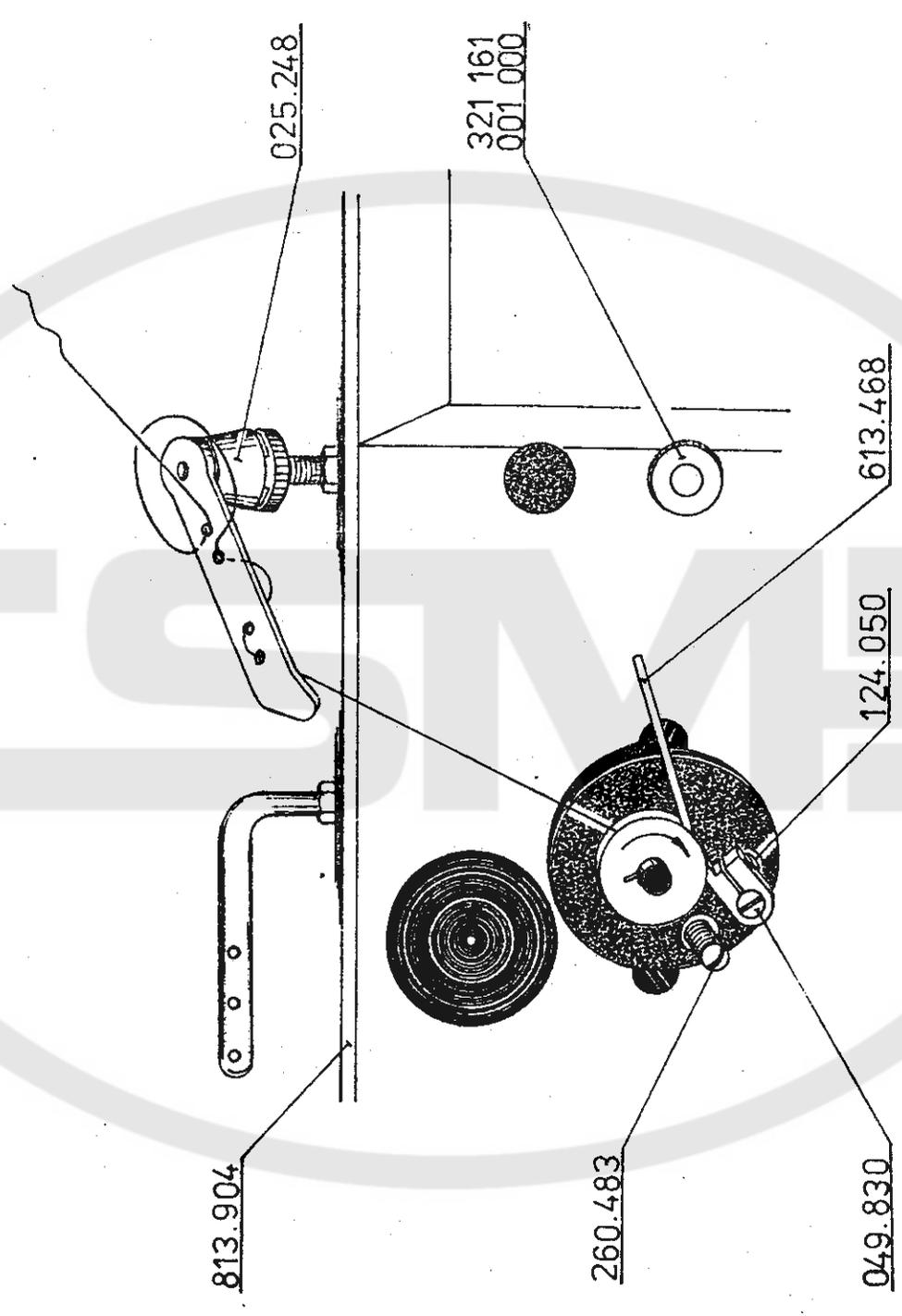
1

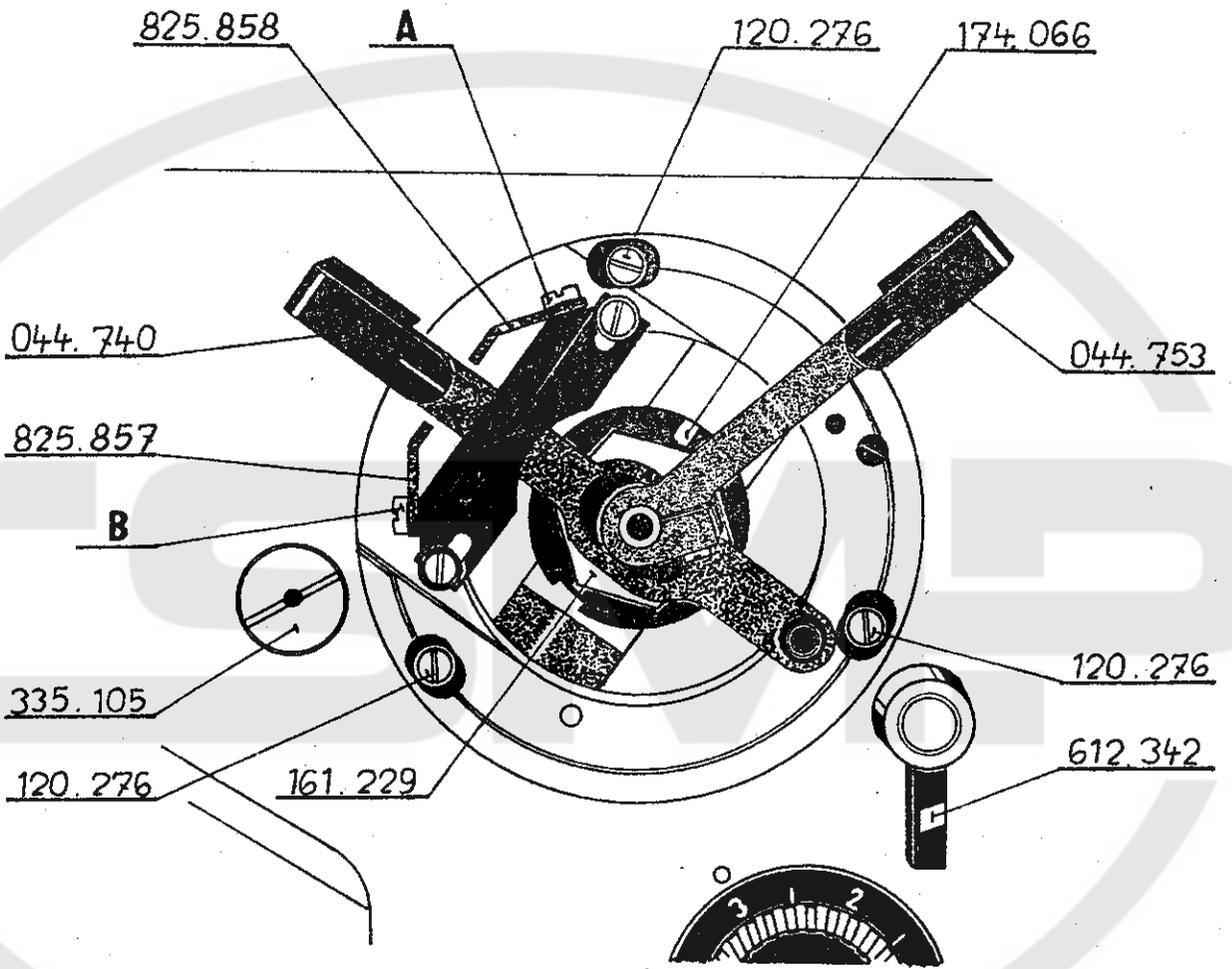


2

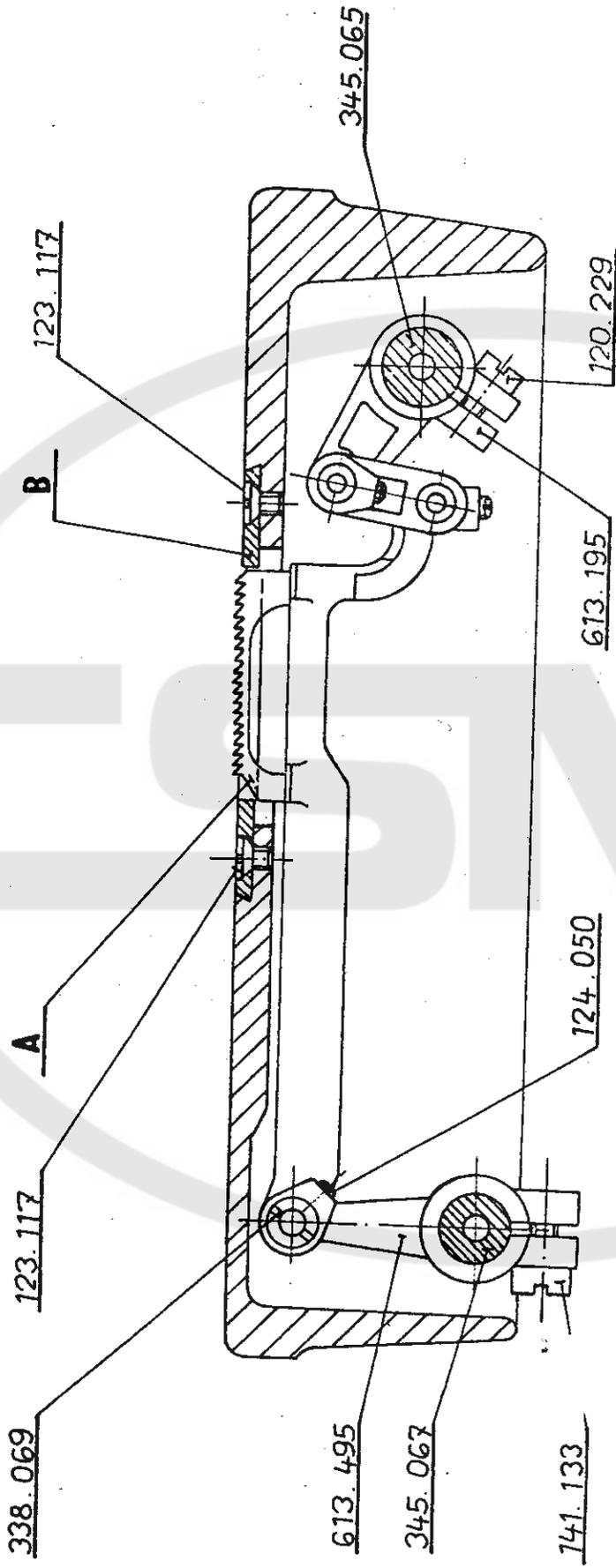


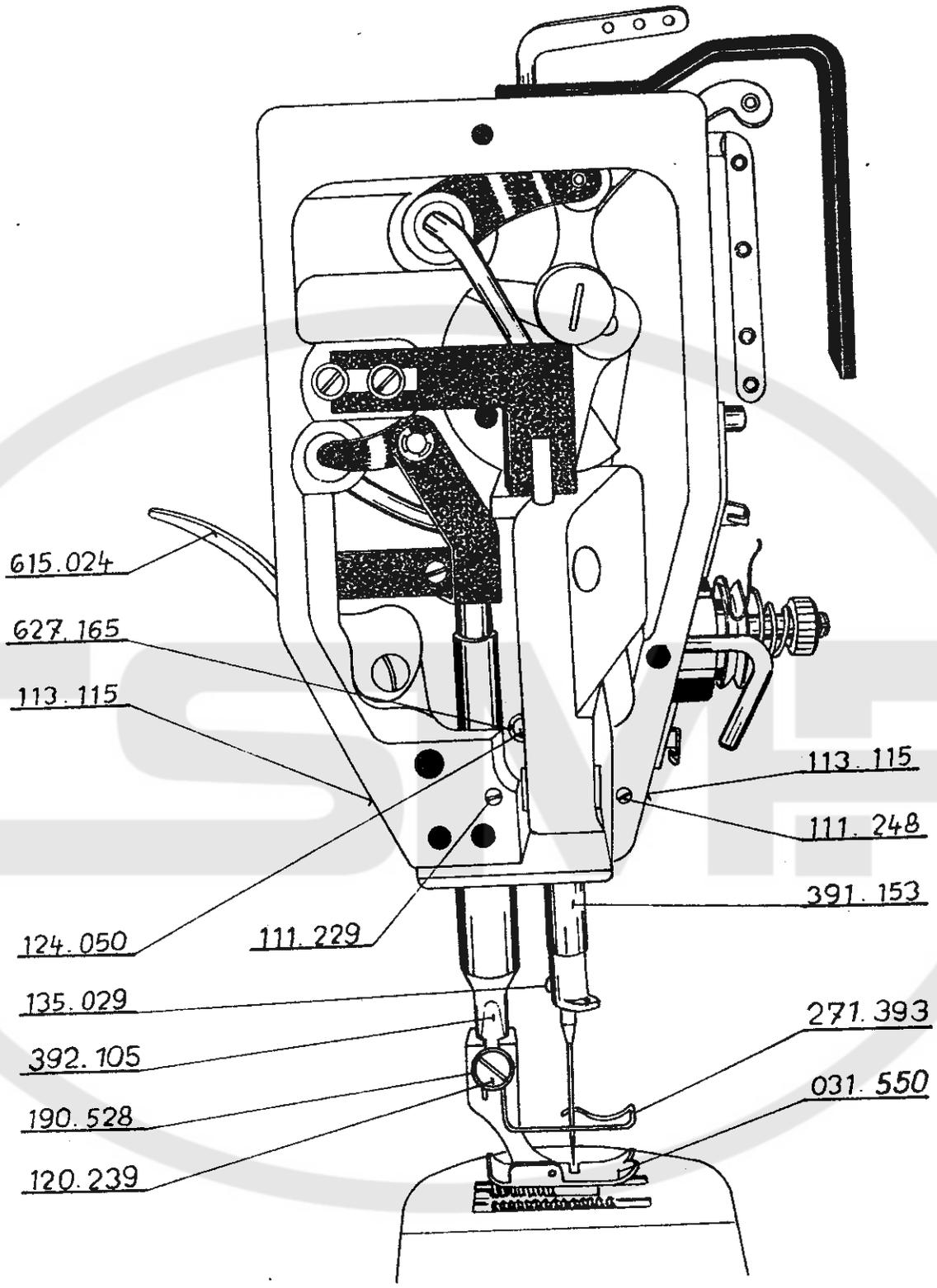
3





6





825.744

825.740

111.094

410.530

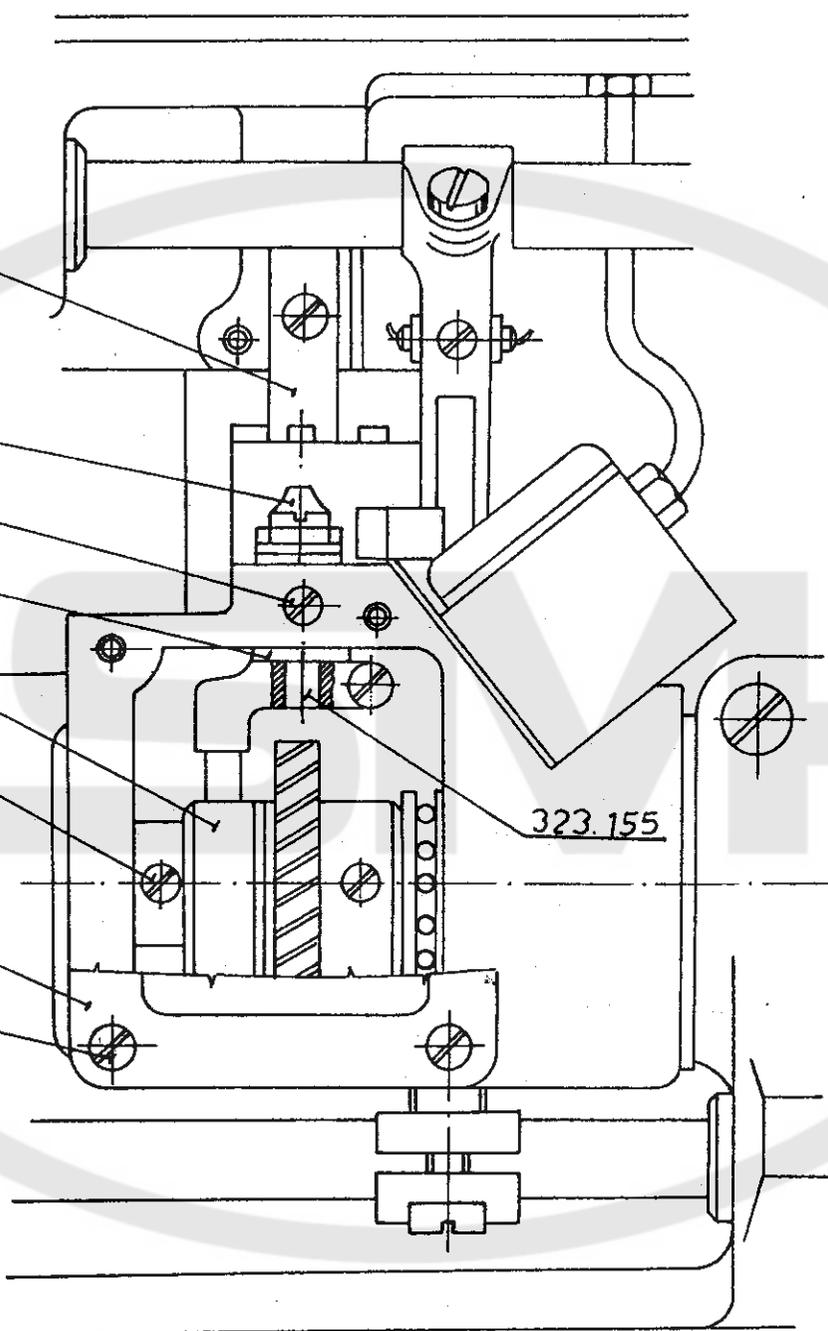
671.155

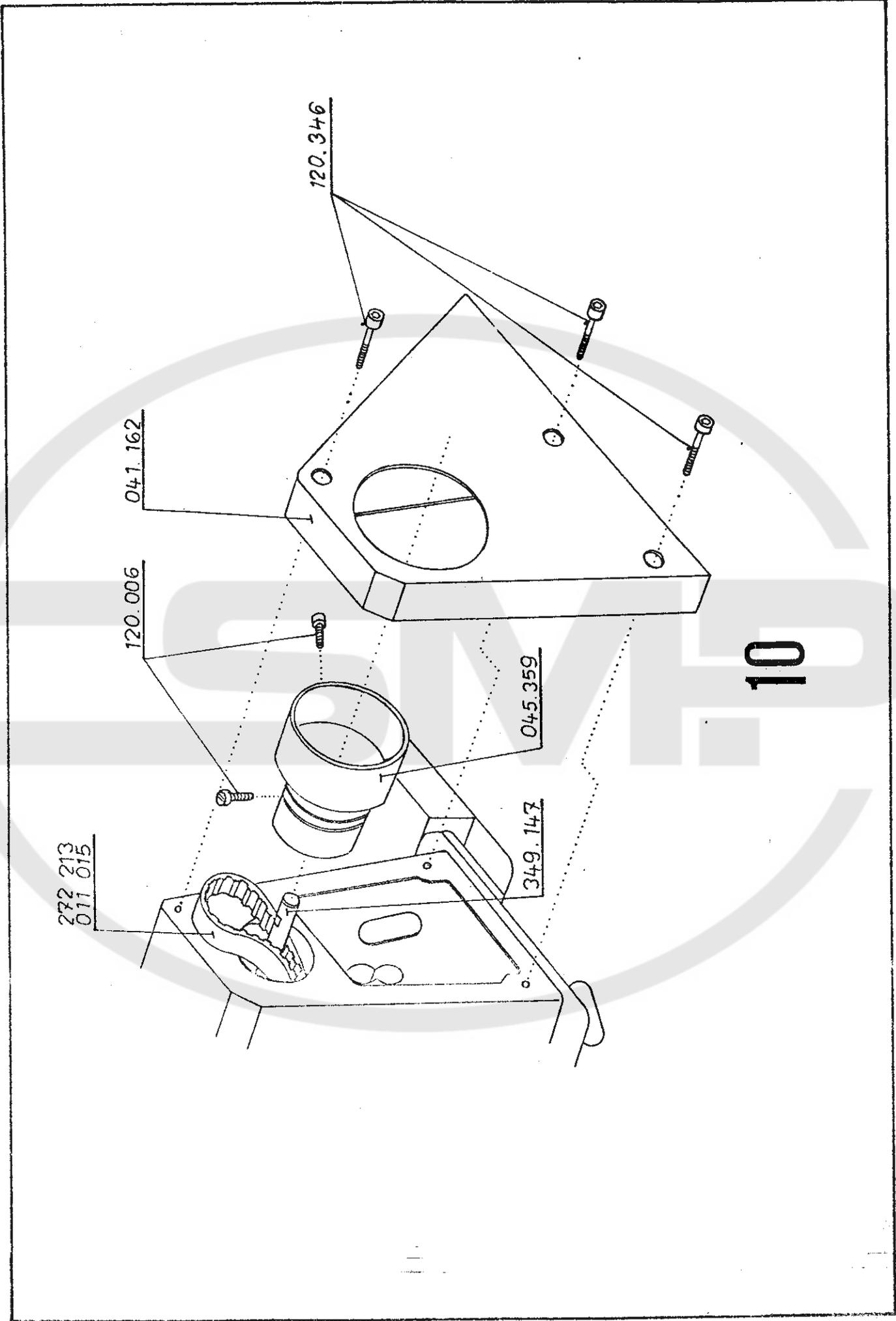
112.013

827.179

120.246

323.155





List of Parts for Single Needle Flat Bed Zigzag Industrial Sewing Machine

Page 1
ZZ 565
ZZ 566

Marking of the Piece	Pieces per 1 Mach.	Name	Ill. in Table	N	A
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PARTS PRODUCED

* 522 980	008.235	1	Hook R 235	5	N	1
**	008.250	1	Hook R 250	5	N	1
*	020.290.10	1	Machine arm with bed plate	1, 2, 5, 7, 8, 10, 13		
**	020.299.10	1	Machine arm with bed plate	1, 2, 5, 7, 8, 10, 13		
	021.315	1	Needle bar holder, complete	3, 10		
	024.212	1	Complete fork	10		
	025.245	1	Complete thread tensioner	8		
**	031.550	1	Complete presser foot	11	N	1
*	031.586	1	Complete presser foot	11	N	1
	035.330	1	Complete slide block	5		
**	035.376	1	Complete cam	10	N	1
*	035.405	1	Complete eccentric	5		
**	035.406	1	Complete eccentric	5		
*	035.430	1	Complete cam	10	N	1
	035.499	1	Complete carrier	3		
**	035.525	1	Complete tube	6		
*	035.526	1	Complete tube	6		
	035.505	1	Complete body	9		
	041.162	1	Complete cover	2		
	044.045	1	Complete connecting rod	4, 12		
*	044.376	1	Complete lever	13		
	044.711	1	Complete crank	3	N	1
	044.712	1	Complete connecting rod	3		
	044.714	1	Complete lever	13		
**	044.727	1	Complete crank	3	N	1
	045.314	1	Complete wheel	4		
	045.330	1	Complete gear wheel	4		
	049.782	1	Complete guiding	3, 8		
	049.785	1	Complete guiding	13		
	049.832	1	Complete shaft	10		
	049.836	1	Complete cover	4		
522 080	111.094	1	Screw	5		
	111.097	1	Screw	13		
	111.099	1	Screw	9		
	111.126	1	Screw	3		
	111.214	1	Screw	3		
	111.219	2	Screw	5		
	111.222	2	Screw M 6 x 8	3		
	111.223	1	Screw	6		
	111.224	1	Screw M 5 x 8	10		
	111.225	3	Screw M 6 x 6	4, 9		
	111.227	7	Screw M 4 x 5	1, 8, 12		
	111.229	2	Screw M 4 x 5	3, 8		

Legend: N = spare part
A = number of parts required for one machine for one year

* for the type ZZ 565

** for the type ZZ 566

List of Parts for Single Needle Flat Bed Zigzag Industrial Sewing Machine

522 080	111.238	1	Screw M 5 x 10	3			
	111.245	1	Screw M 4 x 8	7			
	111.248	1	Screw M 3 x 4	3			
	111.252	1	Screw	6			
	111.253	1	Screw M 2,5 x 3	3, 10			
	111.273	1	Screw M 4 x 12	3			
	111.295	1	Screw	3			
	111.343	2	Screw	4		N	2
	112.013	21	Screw	4, 5, 12, 13		N	10
	112.014	2	Screw	3, 11		N	2
	112.015	1	Screw	3			
	112.101	1	Screw M 4 x 8	10			
	113.115	3	Screw	3, 4			
	113.122	1	Screw	11			
	113.123	1	Screw	11			
	113.124	2	Screw	17			
	118.039	1	Screw	8		N	1
	120.006	3	Screw	3, 4			
	120.050	2	Screw M 4 x 0,5	11			
	120.062	1	Screw	3		N	1
	120.106	1	Screw	5			
	120.216	3	Screw M 3 x 5	3, 7, 8			
	120.217	3	Screw M 4 x 6	9, 11			
	120.218	1	Screw M 4 x 8	9			
	120.221	6	Screw M 5 x 12	3, 8, 10, 11, 13			
	120.222	1	Screw M 5 x 30	4			
	120.226	1	Screw M 4 x 10	5			
	120.227	1	Screw M 4 x 12	13			
	120.229	3	Screw M 5 x 10	12			
	120.230	1	Screw M 5 x 12	13			
	120.231	2	Screw M 5 x 14	12			
	120.233	1	Screw M 6 x 12	10			
	120.235	2	Screw M 6 x 18	10			
	120.239	1	Screw M 3,5 x 10	11		N	10
	120.245	1	Screw M 3 x 6	7			
	120.246	9	Screw M 4 x 8	5, 12, 13			
	120.248	2	Screw	1			
	120.259	1	Screw M 5 x 8	4			
	120.261	2	Screw M 3 x 5	3, 10			
	120.269	1	Screw	5, 6			
	120.276	5	Screw M 4 x 14	3, 9			
	120.288	1	Screw	10			
	120.291	1	Screw M 2 x 4	10			
	120.324	2	Screw	9			
	120.346	3	Screw	2			
	120.360	1	Screw	8			
	120.361	1	Screw M 3 x 6	2			
	120.430	2	Screw	5			
	120.543	2	Screw	9, 11		N	2
	120.601	1	Screw	5			
	121.157	2	Screw	12		N	4
	122.001	2	Screw	5			
	122.008	1	Screw	3		N	1
	122.029	4	Screw	4		N	4
	122.031	1	Screw	4			

List of Parts for Single Needle Flat Bed Zigzag Industrial Sewing Machine

Page 3
ZZ 565
ZZ 566

	123.117	12	Screw	1, 2	N	6
522 080	123.122	3	Screw M 3 x 8	11		
	123.130	2	Screw M 4 x 18	9		
	124.050	1	Screw	3	N	2
	124.062	1	Screw	1		
	126.101	4	Screw M 3 x 12	9		
	131.027	1	Screw	8		
	131.391	1	Screw	10		
	132.112	2	Screw	1		
	135.029	1	Screw	3	N	1
	136.023	1	Screw	11		
	138.009	1	Screw	3		
	141.088	1	Screw	4		
	141.102	2	Screw M 4 x 6	4, 13		
	141.141	1	Screw	12		
	141.223	1	Screw	10		
	152.099	1	Screw	10		
	161.138	1	Nut M 5	1		
	161.140	1	Nut	13		
	161.142	2	Nut M 6	13		
	161.143	3	Nut M 5	5, 13		
	161.159	1	Left handed rotation nut	13		
	161.229	1	Nut	9		
	161.233	2	Nut	10		
	161.237	1	Nut	10		
	163.093	1	Nut	10		
	171.037	1	Nut	8		
	174.066	1	Nut	9		
	190.346	1	Washer 6.4	11		
	190.353	4	Washer 4.3	3,9		
	190.359	3	Washer 5.3	1, 10		
	190.368	1	Washer 3.2	2		
	190.526	1	Washer	10		
	190.554	1	Washer 3.7	11		
	192.061	2	Washer 6.4	9, 13		
	195.041	1	Washer	8		
522 080	220.011	1	Nail 2 x 6	1		
	233.031	1	Knob	13		
	260.139	1	Spring	9		
	260.383	1	Spring	13		
	260.458	1	Spring	3		
	260.467	1	Spring	4		
	260.479	1	Spring	10		
	262.073	1	Spring	8	N	2
	264.288	1	Spring	11		
	264.294	1	Spring	8	N	5
	271.062	1	Ring	4		
	271.184	1	Thread guide	1		
	271.337	1	Split pin 1.6 x 12	11		
	271.393	1	Guard	11		
	272.039	1	Thread guide	8		
	274.083	4	Ring	12		
	274.084	1	Ring 6	11		
	274.085	2	Ring	13		
	274.090	2	Ring 4	9, 11		

	283.152	1	Lifting spring	11
522 080	310.190	1	Pin	9
	310.428	1	Release pin	8
	313.204	1	Pin	1
	313.322	1	Pin	3, 8
	314.058	1	Pin	9
	314.150	1	Pin	10
	316.038	1	Pin	13
	318.103	1	Pin	4
	318.144	2	Pin	12
	318.191	1	Pin	3, 10
	318.192	1	Pin	3, 10
	320.255	1	Pin	10
	322.347	1	Pin	9, 10
	323.155	1	Pin	5
	326.191	1	Pin	11
	328.005	1	Pin	3
	334.097	1	Safety pin	10
	335.101	1	Pin	10
	335.105	1	Eccentric pin	10
	337.033	1	Carrier	4, 13
	338.069	1	Eccentric pin	12
	338.187	1	Pin	10
	340.166	1	Shaft	13
	342.096	1	Shaft	13
	342.243	1	Shaft	4
	342.258	1	Shaft	13
	344.035	2	Shaft	12
	345.065	1	Shaft	12
	345.067	1	Shaft	12
	346.053	1	Pin	6
	349.147	1	Shaft	3, 4
	383.178	1	Tie rod	11
	391.153	1	Needle bar	3
	392.105	1	Presser bar	11
522 080	410.530	1	Bushing	5
	410.532	1	Bushing	12
	410.538	1	Bushing	12
	410.559	2	Bushing	10
	412.193	1	Bushing	12
	413.251	1	Bushing	12
	413.252	1	Bushing	12
	413.311	1	Bushing	3
	413.328	1	Inlay	9
	416.131	1	Bushing	8
	421.122	1	Bushing	4
	421.321	1	Bushing	3
	421.330	1	Bushing	11
	421.341	1	Bushing	3
	422.184	1	Bushing	10
	424.051	5	End piece	3, 5, 6, 10
	424.055	1	Ring	4
	424.060	2	Inlay	5
	424.068	1	Ring	4

List of Parts for Single Needle Flat Bed Zigzag Industrial Sewing Machine

Page 5
ZZ 565
ZZ 566

	436.000	4	Ring	10, 12		
522 080	436.331	1	Ring	11		
	436.338	1	Ring	4		
	441.187	1	Bushing	13		
	441.278	1	Ring	5		
	441.287	1	Ring	5		
	441.313	1	Oil tank	7		
	441.541	1	Complete body	4	N	1
	445.045	1	Ring	4		
	445.048	1	Body of eccentric	4		
522 080	511.098	1	Hand wheel	4		
*	552.165	1	Gear wheel	5	N	1
*	552.166	1	Gear wheel	5	N	1
**	552.167	1	Gear wheel	5	N	1
**	552.168	1	Gear wheel	5	N	1
	554.077	1	Belt wheel	4		
522 080	611.101	1	Crank head	3		
	612.109	2	Lever	12		
	612.342	1	Lever	10		
	613.152	1	Lever	12		
	613.195	1	Lever	12		
	613.216	1	Lever	12		
	613.235	1	Lever	13		
	613.328	1	Lever	13		
	613.373	1	Lever	13		
	613.466	1	Lever	5		
	613.469	1	Lever	3, 10		
	613.472	1	Lever	9		
	613.495	1	Lever	12		
	615.024	1	Lifting lever	11		
	622.092	1	Feed-dog holder	12		
	623.249	1	Guiding	11		
	627.023	1	Guiding	4, 13		
	627.170	1	Sleeve	3	N	1
	630.248	1	Connecting rod	4, 12		
	632.019	1	Lever	13		
	633.194	1	Lever	9		
	633.196	1	Lever	11		
	635.152	1	Lever	11		
	646.027	1	Guiding	9, 10		
	646.104	1	Guiding	3		
	647.220	1	Bridge	9		
	647.228	1	Plate	2		
*	651.473	1	Feed-dog	12	N	1
**	651.444	1	Feed-dog	12	N	1
	671.152	1	Eccentric	4		
*	685.017	1	Bobbin	5	N	4
**	685.047	1	Bobbin	5	N	4
*	686.020	1	Holder	5	N	1
522 080	721.173	1	Cover	1		

* for the type ZZ 565

** for the type ZZ 566

List of Parts for Single Needle Flat Bed Zigzag Industrial Sewing Machine

*	724.132	1	Casing	4, 5		
**	522 080 724.134	1	Casing	4, 5		
	725.023	1	Oil tank	6		
	522 080 810.419	1	Lever	3, 10		
*	811.701	1	Throat plate	2	N	1
**	811.637	1	Throat plate	2	N	1
	813.904	1	Cover	1		
	814.014	1	Packing piece	11		
	814.338	1	Washer	4		
	821.077	1	Thread guide	1		
**	821.113	1	Guide	2		
	821.115	1	Guide	1		
	822.424	1	Lever	8		
	824.095	2	Clip	7		
**	825.740	1	Releaser	5	N	1
*	825.743	1	Releaser	5	N	1
**	825.744	1	Holder	5	N	1
	825.857	1	Stop	9		
	825.858	1	Stop	9		
	827.179	1	Cover	5		
	827.180	1	Cover	1		
	828.079	2	Tensioner disc	8	N	2
	828.080	1	Releaser disc	8		
	839.215	1	Lifting piece	11		
	831.342	1	Cover	1		
	839.010	1	Stop	9		
	840.073	1	Lubrication tube	1		
	522 080 945.077	1	Inlay	6		
	945.100	1	Inlay	8		
	945.180	1	Inlay	7		
	945.183	1	Lubrication inlay	6		
	945.185	1	Lubrication inlay	6		
	945.186	1	Lubrication inlay	6		
	945.188	1	Inlay	8		
	945.281	1	Washer	3		
	945.283	1	Lubrication inlay	5		
	945.285	1	Lubrication inlay	5		
	945.286	1	Lubrication inlay	7		
	945.316	3	Inlay	7		
	945.317	1	Inlay	11		
	945.326	1	Inlay	10		
	951.281	1	Plug	3		
	951.327	1	Plug	10		
	952.251	2	Knob	9		
	953.139	1	Inlay	3		
	953.159	1	Inlay	3, 8		
	990.134	1	Packing	5		

* for the type ZZ 565

** for the type ZZ 566

PARTS PURCHASED FROM OTHER SUPPLIERS

272 213 011 015	1	Drive belt 024.037	4	N	1
273 111 001 000	3	Ring 6 x 2 ČSN 02 9281	6, 10		
273 111 007 000	1	Ring 18 x 14 ČSN 02 9281	10		
273 199 005 000	3	Inlay 940.029	2		
283 366 002 000	1	Tube \varnothing 3.5/4.8 x 60	7		
283 366 002 000	1	Tube \varnothing 3.5/4.8 x 65	7		
283 366 002 000	1	Tube \varnothing 3.5/4.8 x 70	3		
283 366 002 000	1	Tube \varnothing 3.5/4.8 x 75	7		
283 366 002 000	1	Tube \varnothing 3.5/4.8 x 90	4, 7		
283 366 002 000	2	Tube \varnothing 3.5/4.8 x 100	5, 6, 7, 10		
283 366 002 000	1	Tube \varnothing 3.5/4.8 x 150	7		
283 366 002 000	1	Tube \varnothing 3.5/4.8 x 170	5		
283 366 002 000	1	Tube \varnothing 3.5/4.8 x 200	7		
283 366 002 000	1	Tube \varnothing 3.5/4.8 x 210	7, 10		
283 366 002 000	1	Tube 3.5/4.8 x 250	7		
311 515 002 006	1	Pin 2 x 6 ČSN 02 2150.1	3, 9		
311 515 006 014	1	Pin 6 x 14 ČSN 02 2150.1	13		
311 515 006 025	1	Pin \varnothing	13		
311 515 601 612	1	Pin 1.6 x 12 ČSN 02 2156	5		
311 728 502 537	1	Parallel key	13		
311 733 000 180	1	Ring 18 ČSN 02 2930	4		
311 733 000 300	1	Ring 30 ČSN 02 2930	4		
** 311 733 100 220	1	Ring 22 ČSN 02 2931	5		
* 311 733 100 240	1	Ring 24 ČSN 02 2931	5		
311 733 100 260	2	Ring 26 ČSN 02 2931	5		
311 733 100 620	1	Ring 62 ČSN 02 2931	2		
321 161 001 000	5	Plug PE 12.5	1		
* 321 461 954 044	1	Cover	9		
** 321 461 954 046	1	Cover	9		
321 891 001 000	2	Oil level indicator M 24 x 1.5 ČSN 02 7488	6, 7		
324 152 927 796	1	Bearing 629 2Z/C6 ČSN 02 4640	5		
* 324 155 920 086	2	Bearing UR 609 2Z/C6 ČSN 02 4640	5		
** 324 155 910 796	2	Bearing UR 608 B 2Z/C6 ČSN 02 4640	5		
324 162 068 396	1	Bearing UR 6206 2Z/C6 ČSN 02 4640	4		
324 165 020 020	2	Bearing UR 6002 2Z/C6 ČSN 02 4640	4		
324 165 038 396	4	Bearing UR 6003 2Z/C6 ČSN 02 4640	3, 4		
324 311 010 000	2	Bearing 51101 ČSN 02 4730	5, 10		
324 592 510 900	1	Bearing K 18 x 22 x 13 ČSN 02 4696	4		
425 111 009 000	1	Plug 01 400	10		
425 111 041 000	2	Lubrication head M6 x 1 01 412	12		

* for the type ZZ 565

** for the type ZZ 566

425 111 061 000	1	Lubrication head M8 x 1 01 378	12
548 232 029 000	1	Label	1
* 548 300 000 130	1	Needle Schmetz 797 CFCF No. 100	3
** 548 300 000 140	1	Needle Schmetz 797 CFCF No. 110	3
708 420 030 002	1	Lubrication wick \varnothing 2 x 40	10
708 420 030 002	1	Lubrication wick \varnothing 2 x 60	12
708 420 030 002	1	Lubrication wick \varnothing 2 x 80	3
708 420 030 002	1	Lubrication wick \varnothing 2 x 130	4, 7
708 420 030 002	2	Lubrication wick \varnothing 2 x 140	7, 10
708 420 030 002	1	Lubrication wick \varnothing 2 x 160	12
708 420 030 002	1	Lubrication wick \varnothing 2 x 220	12
708 420 030 002	1	Lubrication wick \varnothing 2 x 250	7
708 420 030 002	1	Lubrication wick \varnothing 2 x 270	7, 10
708 420 030 002	1	Lubrication wick \varnothing 2 x 320	7
708 420 030 002	1	Lubrication wick \varnothing 2 x 350	4, 12
708 420 030 003	1	Lubrication wick \varnothing 3 x 20	3, 10
708 420 030 003	1	Lubrication wick \varnothing 3 x 40	5
708 420 030 003	1	Lubrication wick \varnothing 3 x 50	10
708 420 030 003	1	Lubrication wick \varnothing 3 x 60	12
708 420 030 003	1	Lubrication wick \varnothing 3 x 110	7
708 420 030 003	1	Lubrication wick \varnothing 3 x 150	3
708 420 030 004	1	Lubrication wick \varnothing 4 x 300	7
708 420 030 005	1	Lubrication wick \varnothing 5 x 300	5
708 420 030 005	1	Lubrication wick 5 x 640	7
722 923 110 000	1	Packing	1

EQUIPMENT 201

522 792 112 010

Incorporated bobbin winder, complete

522 980 025.248	1	Complete thread guide	14
025.249	1	Thread guide	14
035.654	1	Complete body	14
036.122	1	Frictional bobbin winder, complete	14
049.830	1	Complete lever	14
522 080 111.094	1	Screw	14
112.115	1	Screw	14
124.050	1	Screw	14
161.138	1	Nut M 5 ČSN 02 1401.28	14
163.106	1	Nut	14
260.483	1	Spring	14
260.510	1	Spring	14
264.281	1	Spring	14
265.037	1	Spring	14
310.377	1	Pin	14
343.074	1	Shaft	14
522 080 441.308	1	Body	14
422.198	1	Bushing	14
441.310	1	Body	14
441.560	1	Wheel	14

* for the type ZZ 565

** for the type ZZ 566

522 080 613.468	1	Lever	14
827.194	1	Plate	14
870.170	1	Knife	14
945.296	1	Lubrication inlay	14
273 111 025 410	1	Ring	14
311 732 910 040	1	Ring 4 ČSN 02 2929.02	14
321 861 953 200	1	Plug	14

EQUIPMENT 202

522 791 947 001

Adjusting set

522 980 035.456	1	Adjusting set	15
522 080 131.404	1	Screw	15
133.112	1	Screw	15
192.061	1	Washer 6.4 ČSN 02 1733.02	15
646.148	1	Block	15
814.364	1	Packing piece	15
814.365	1	Packing piece	15
831.412	1	Cover	15

EQUIPMENT 206

522 791 149 001

Overedging equipment

522 080 120.037	2	Screw	16
121.157	1	Screw	16
271.441	1	Thread guide	16
627.037	1	Thread guide	16
646.136	1	Sleeve	16

EQUIPMENT 295

522 791 995 014

Plug covering the mounting hole for bobbin winder

522 080 814.355	1	Cover	16
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EQUIPMENT 299

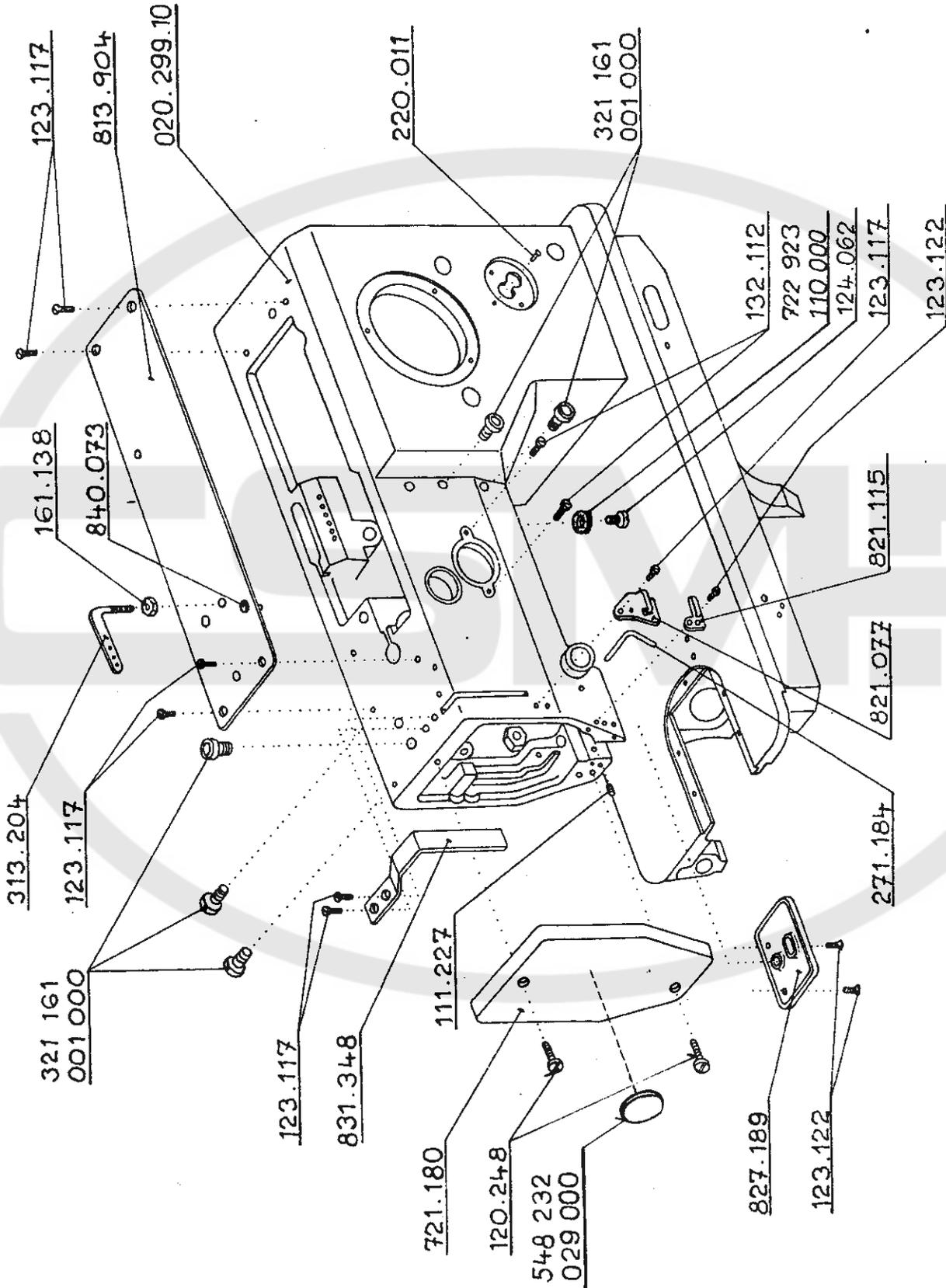
522 794 222 006

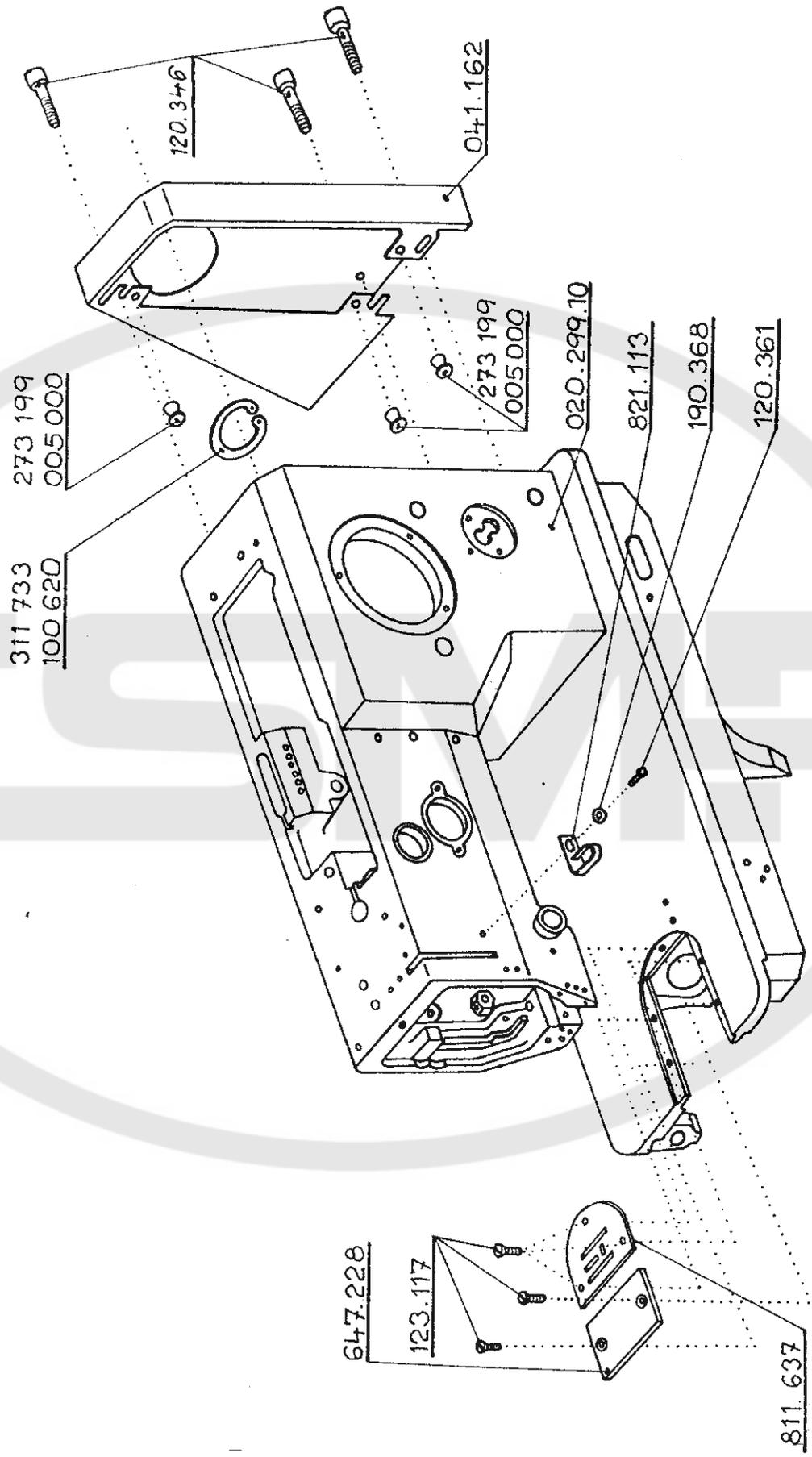
Suspension-type lighting for work area

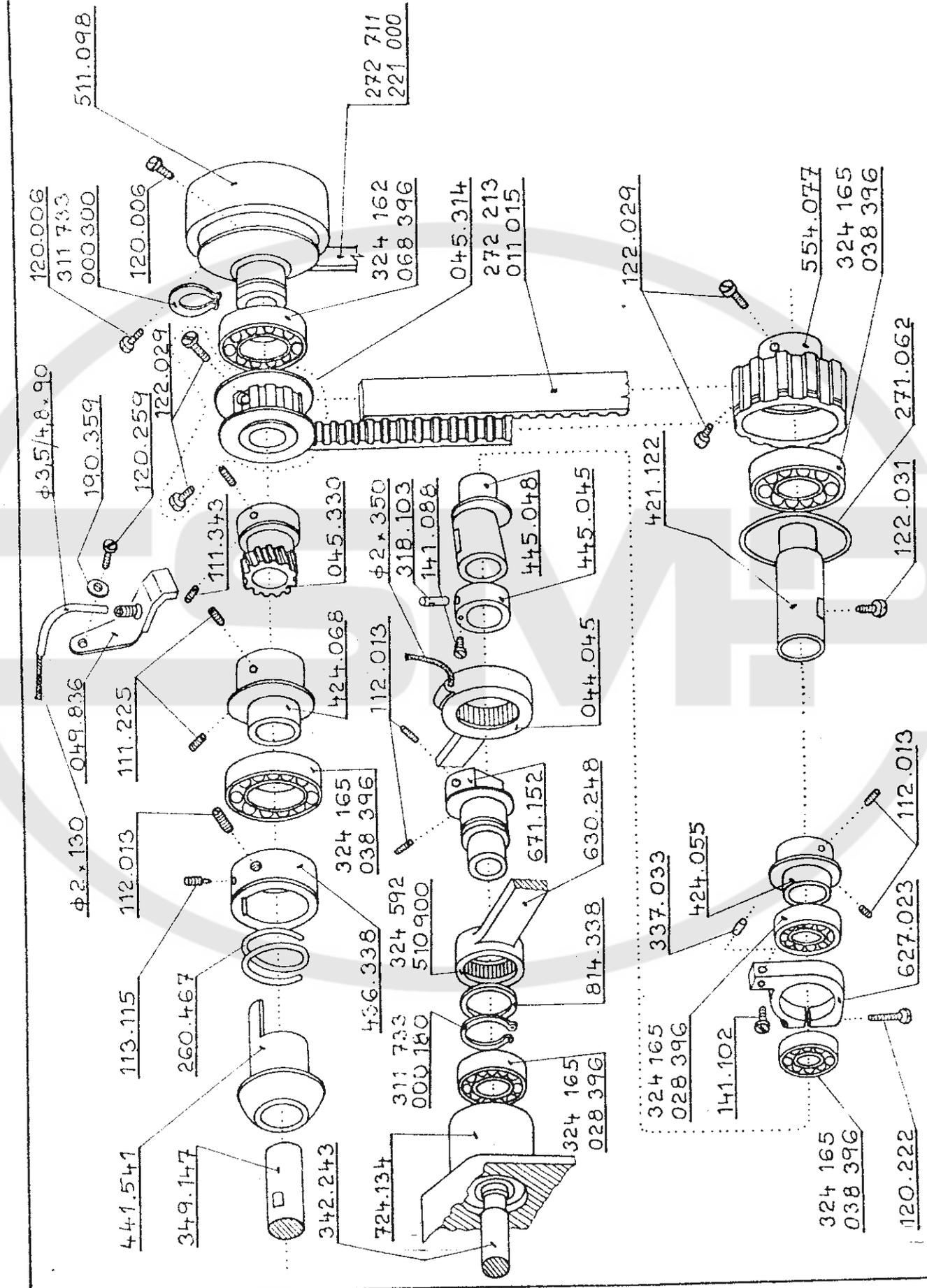
522 980 057.091	1	Complete lampshade	17
091.660	1	Suspension-type lighting complete	17
522 080 120.261	1	Screw M 3 x 5 ČSN 02 1131.27	17
120.279	1	Screw M 3 x 8 ČSN 02 1131.27	17
126.085	2	Screw M 3 x 10 ČSN 02 1151.22	17
141.253	1	Screw M 6 x 30	17
141.265	1	Screw M 6 x 16	17
161.163	1	Nut M 6	17
171.056	1	Nut	17
190.347	2	Washer	17

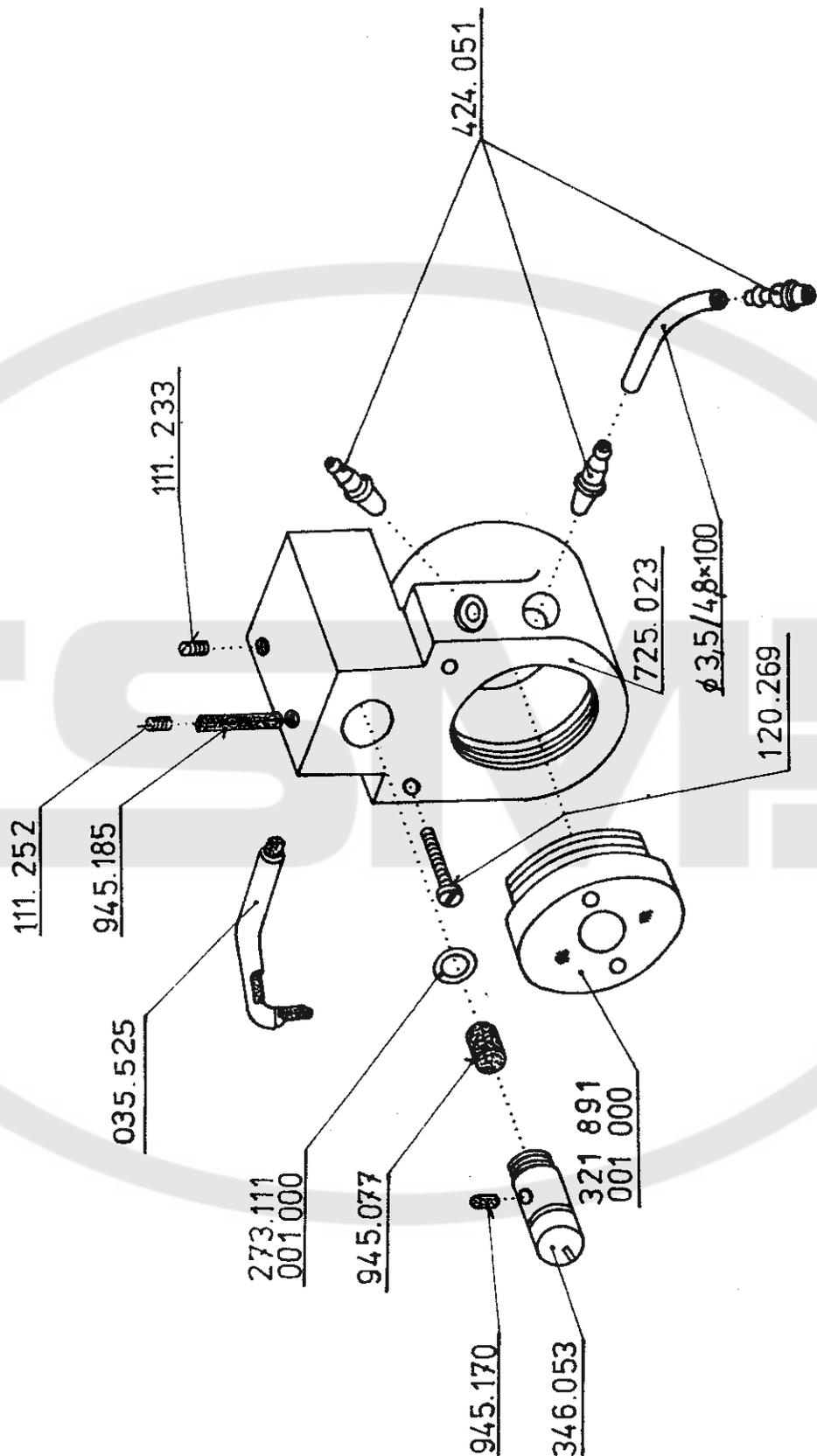
330.088	1	Pivot	17
522 080 441.501	1	Inlay	17
441.502	3	Segment	17
824.095	1	Clip	17
831.506	1	Guard	17
839.169	1	Washer	17
841.541	1	Tube	17
321 161 001 000	1	Plug PE 12.5	17
341 414 028 052	1	Cord YH 2 x 0.35	17
345 111 008 000	1	Socket 1252-036	17
347 170 002 000	1	Bulb 25 V 15 W E 14	17

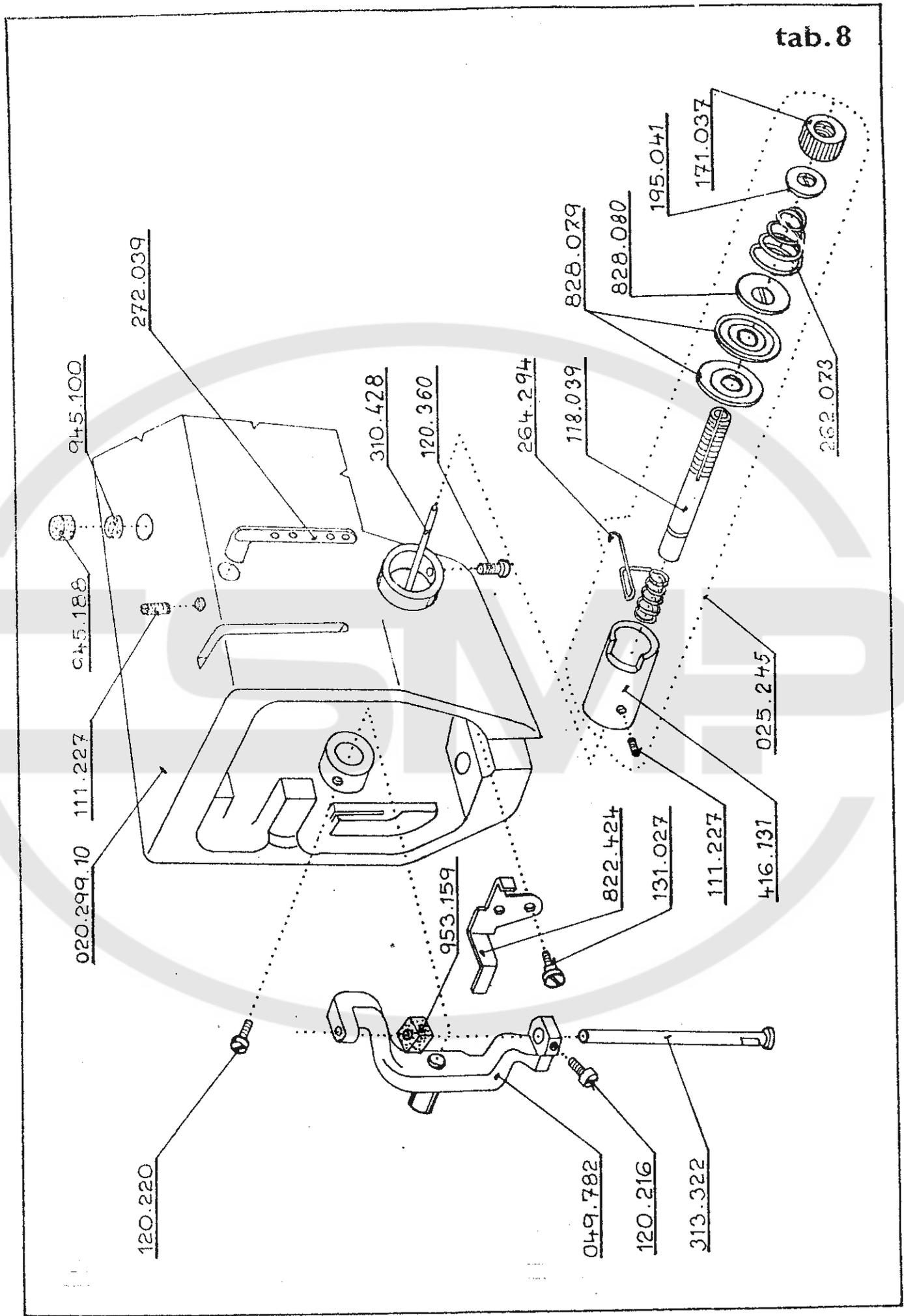
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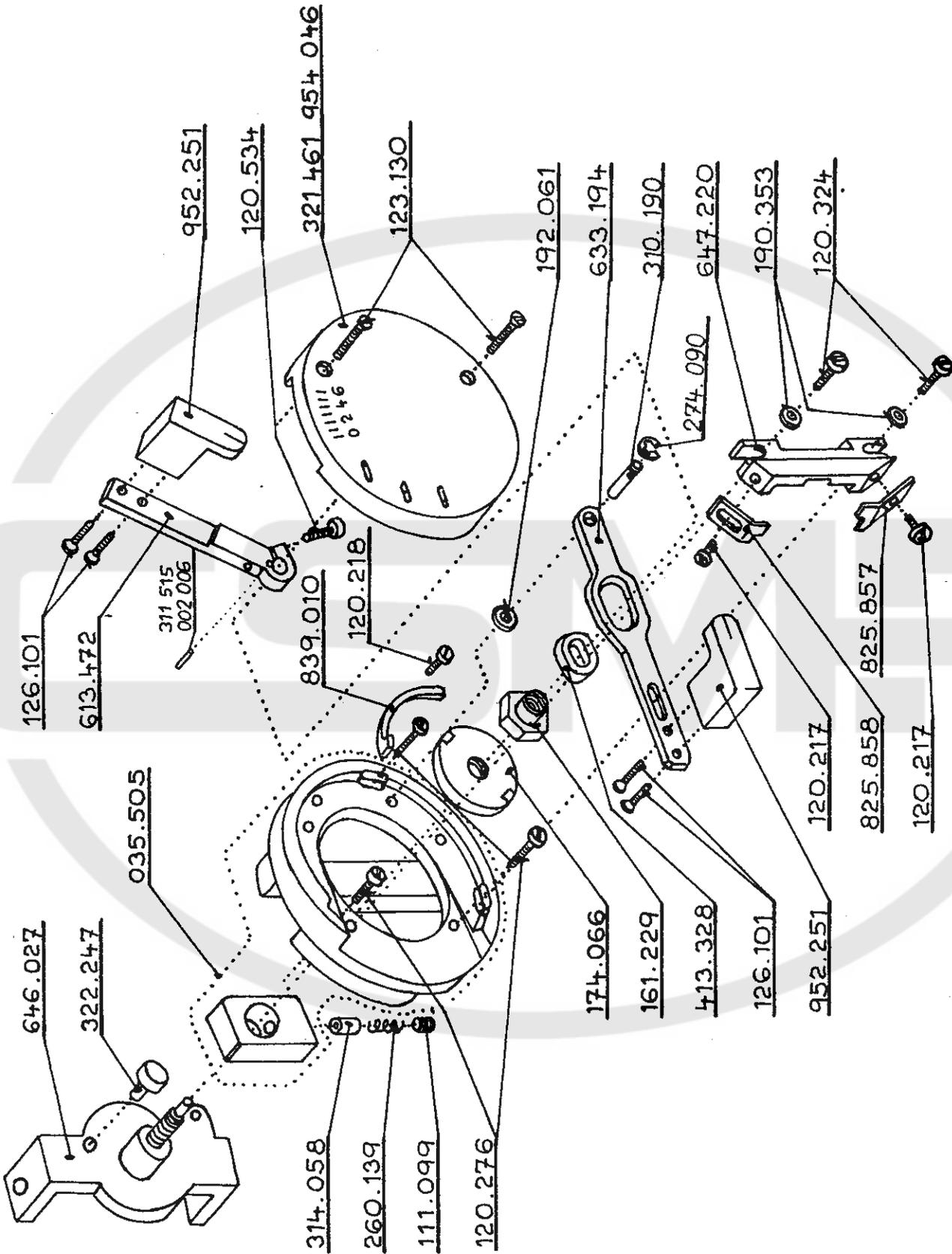


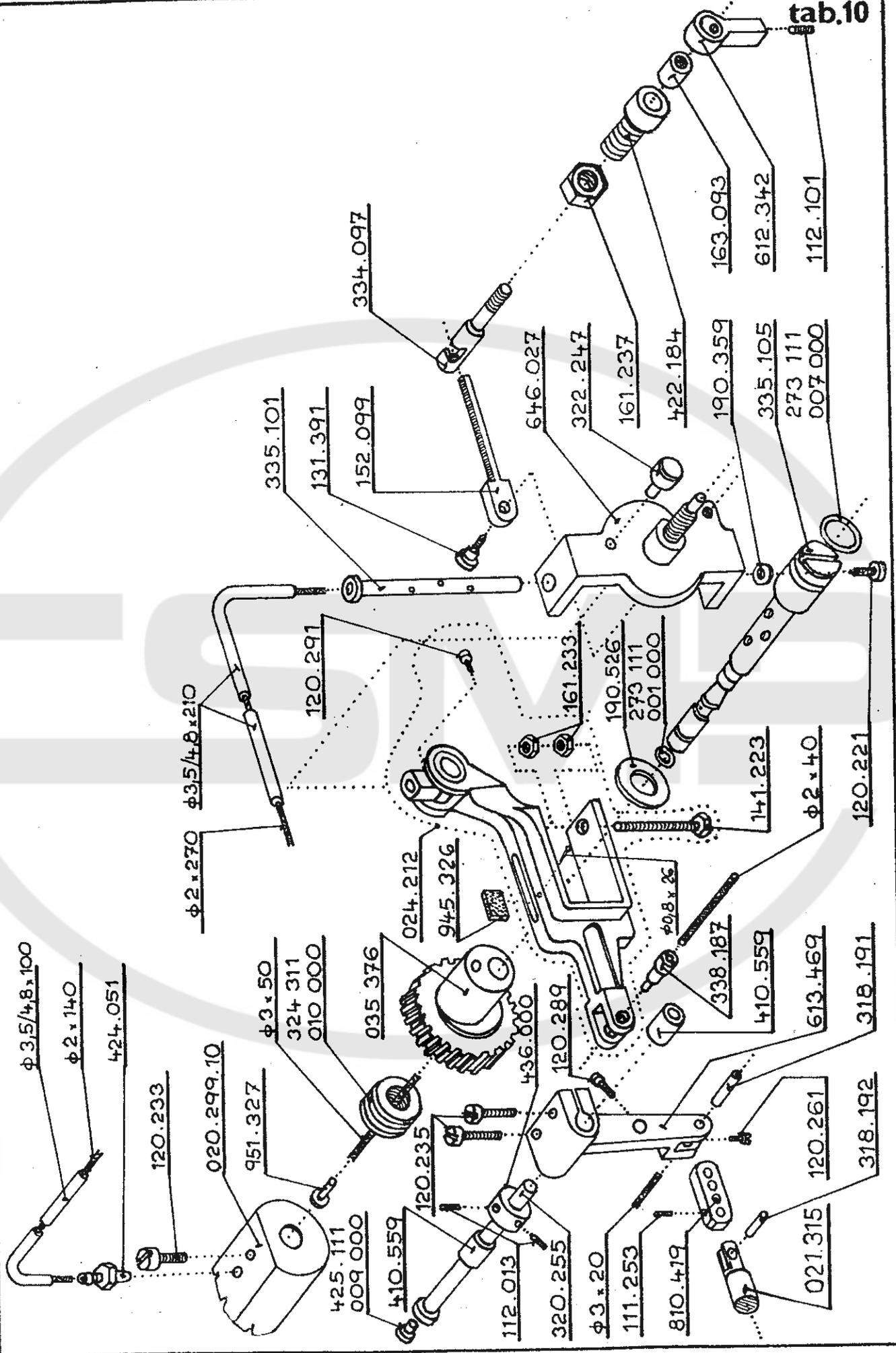












$\phi 3,5/4,8 \times 100$
 $\phi 2 \times 140$
424.051

120.233

020.299.10

951.327

$\phi 3 \times 50$
324.311
010.000

425.111
009.000

410.559

120.235

112.013

320.255

$\phi 3 \times 20$

111.253

810.419

021.315

120.261

318.192

$\phi 2 \times 270$ $\phi 3,5/4,8 \times 210$

120.291

335.101

131.391

152.099

334.097

646.027

322.247

161.237

422.184

190.359

335.105

273.111

007.000

161.233

190.526

273.111

001.000

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035.376

436.000

120.289

$\phi 0,8 \times 25$

338.187

410.559

613.469

141.223

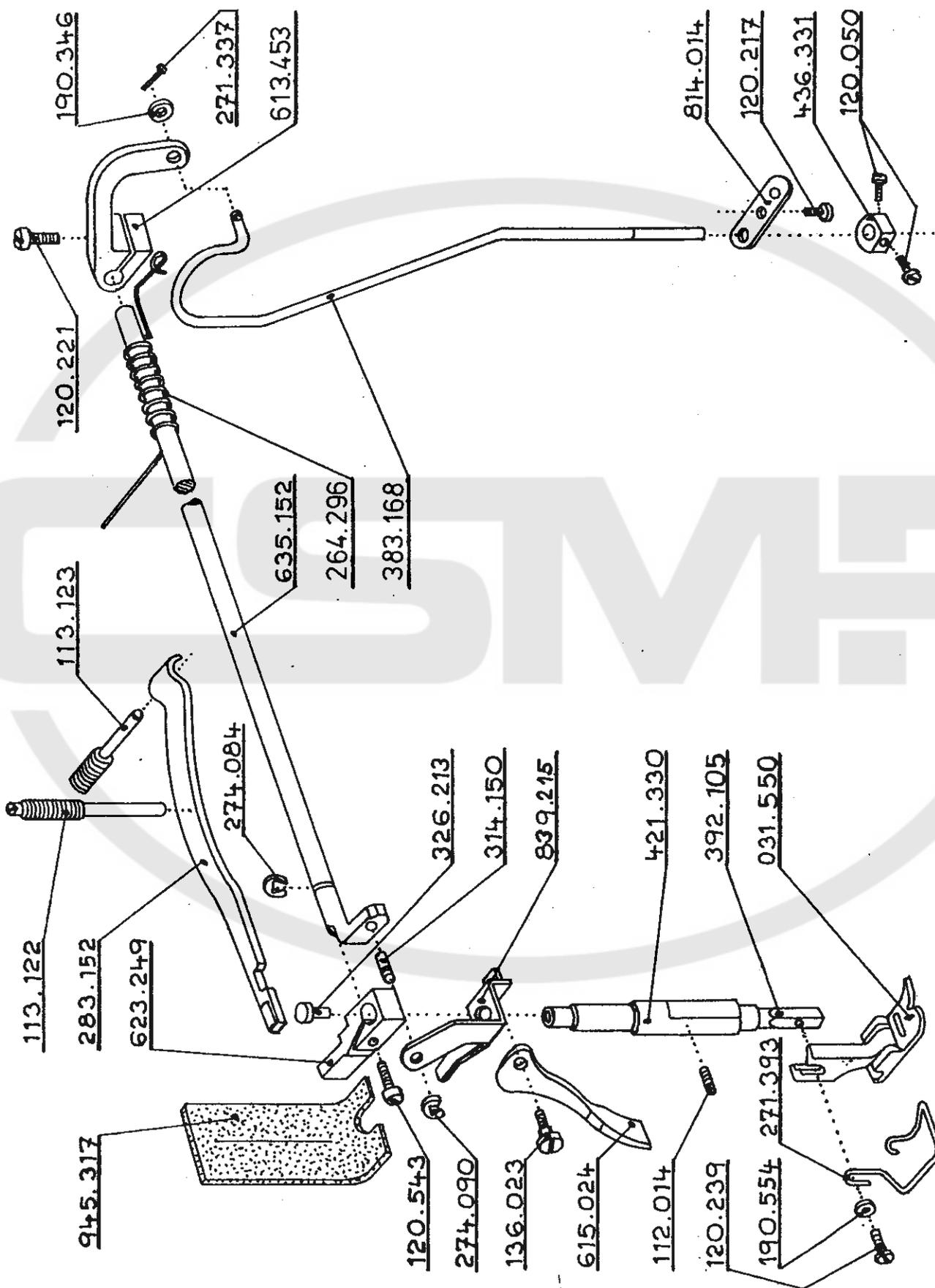
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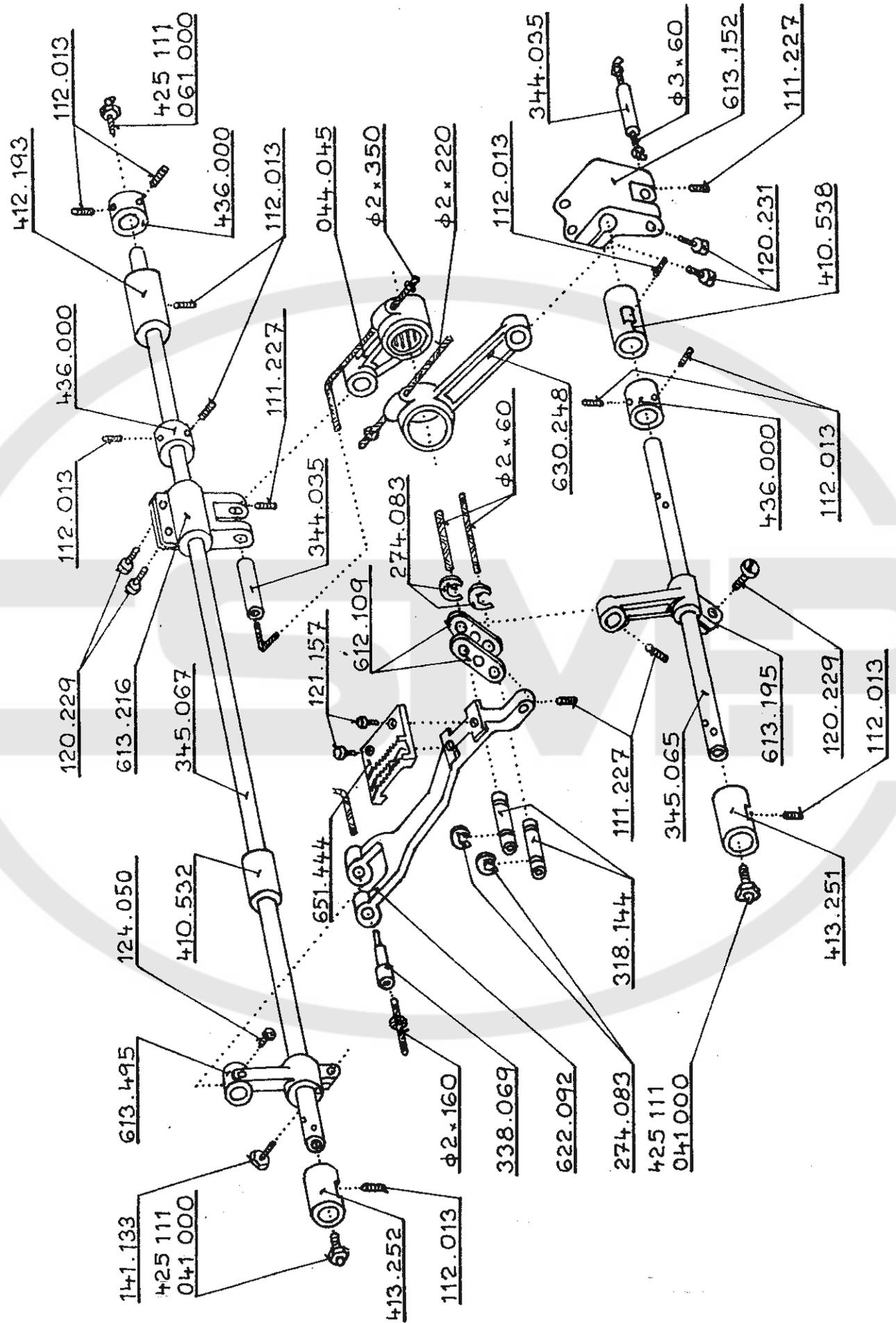
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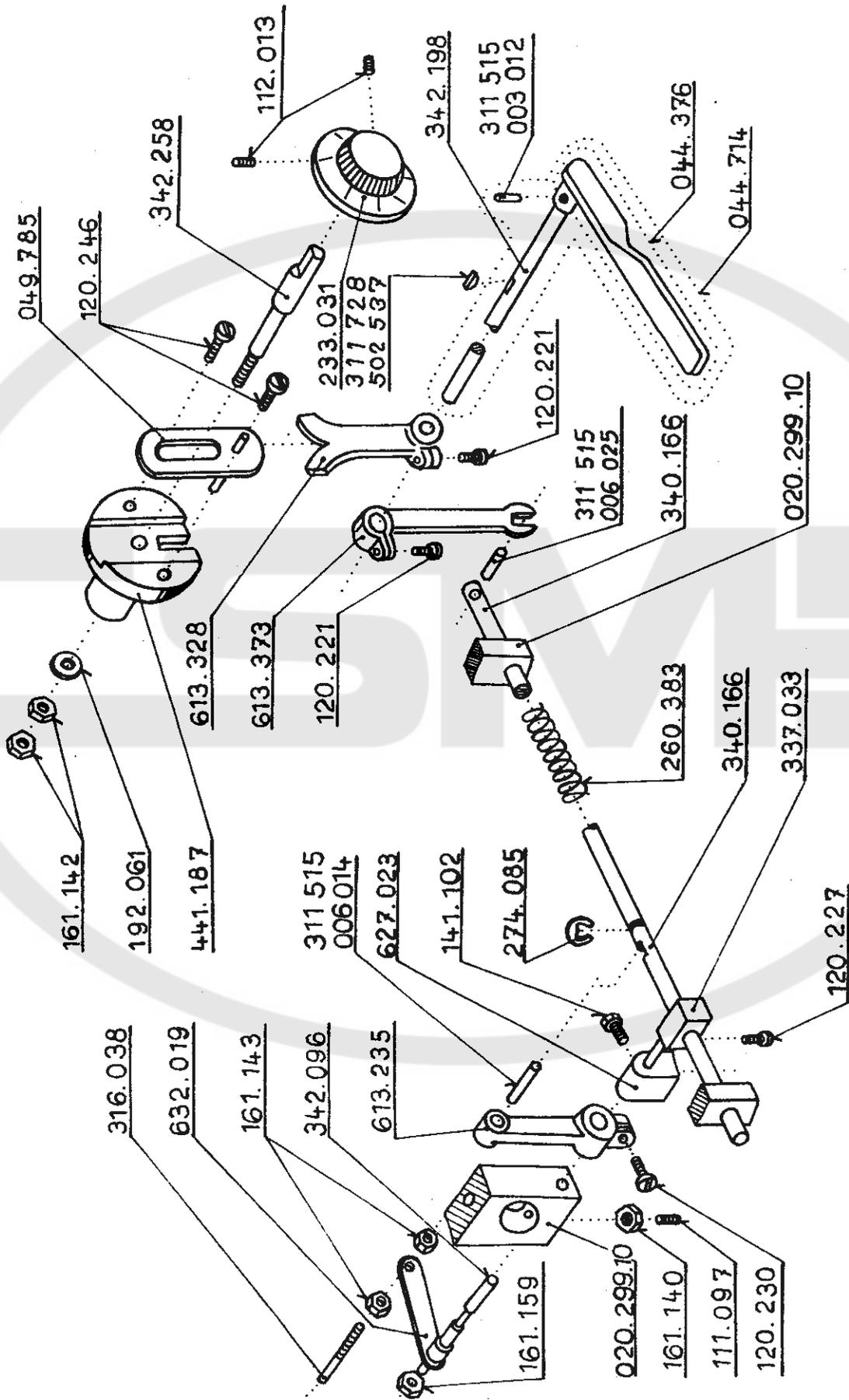
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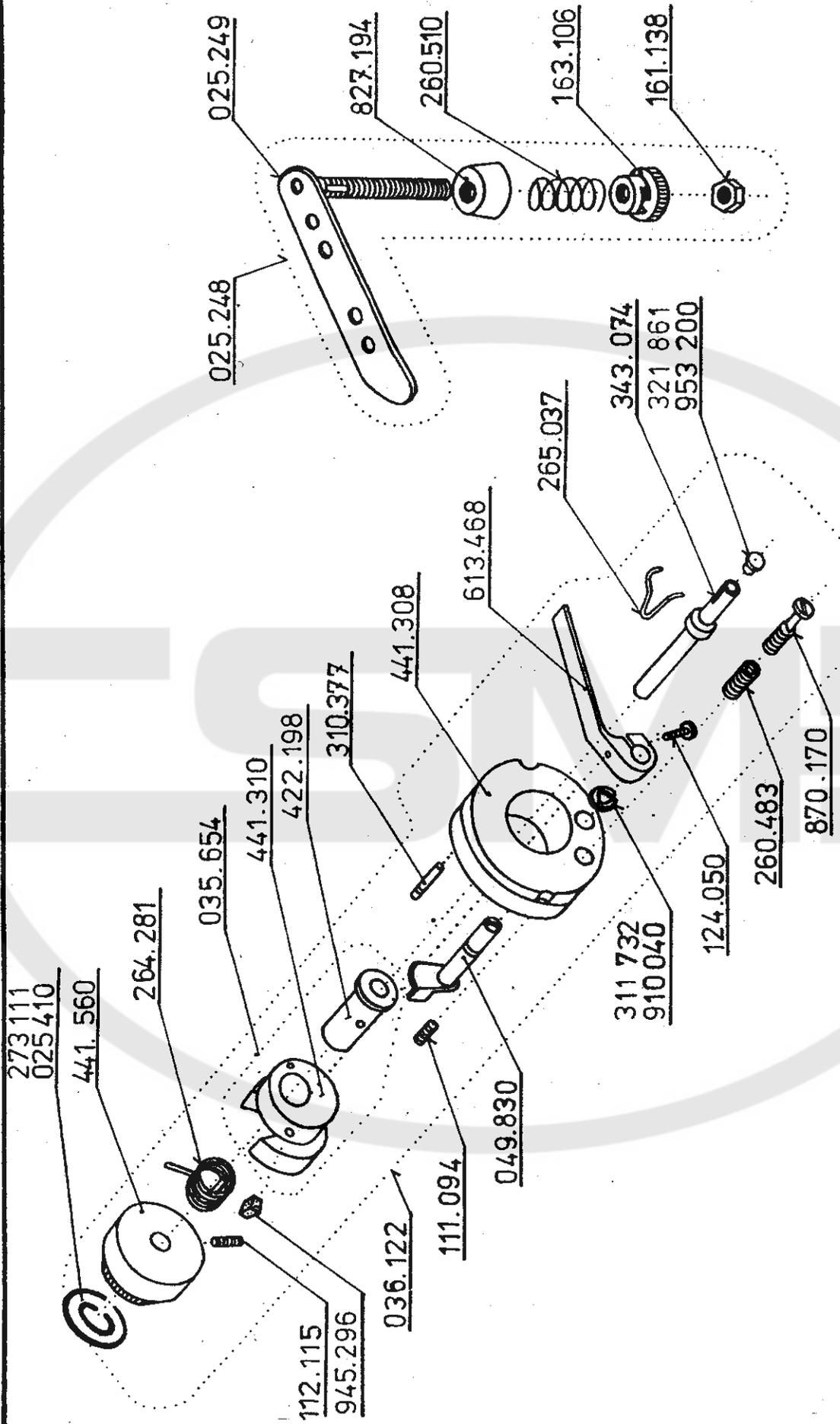
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112.101

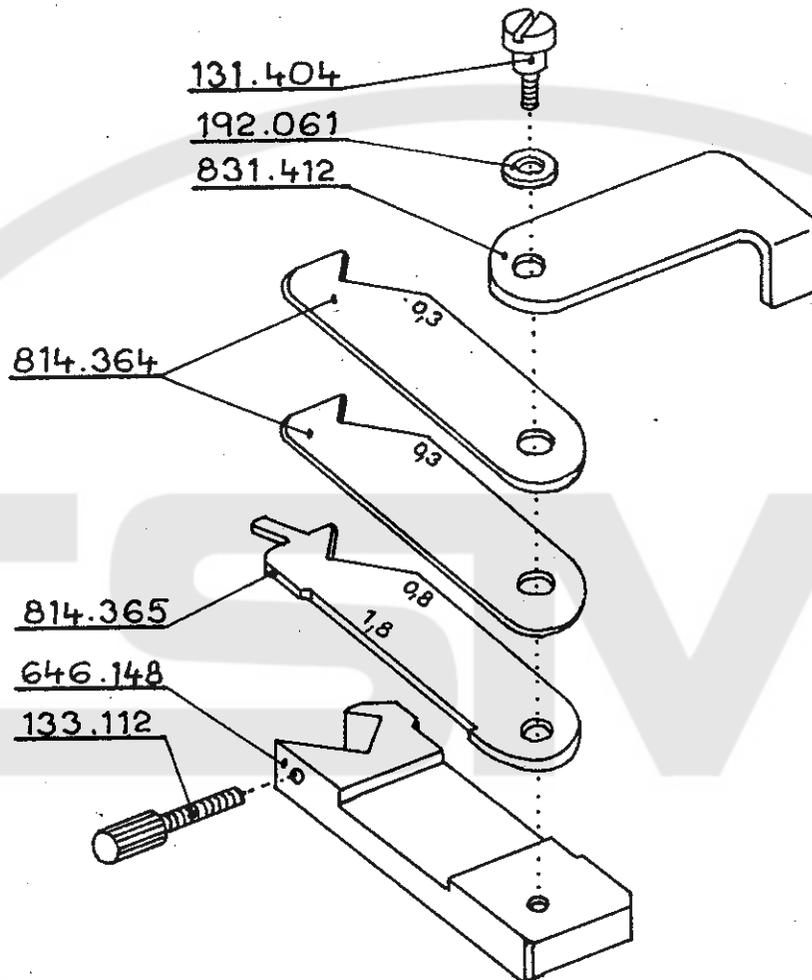




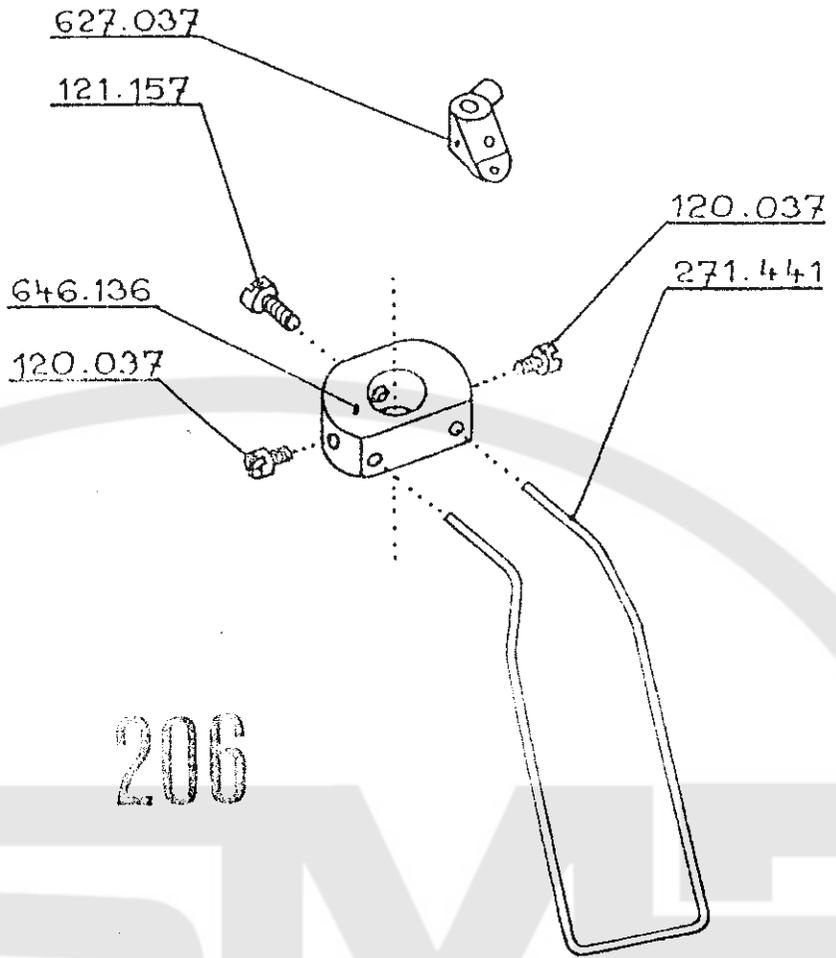




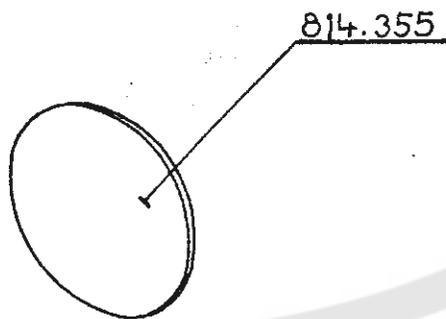
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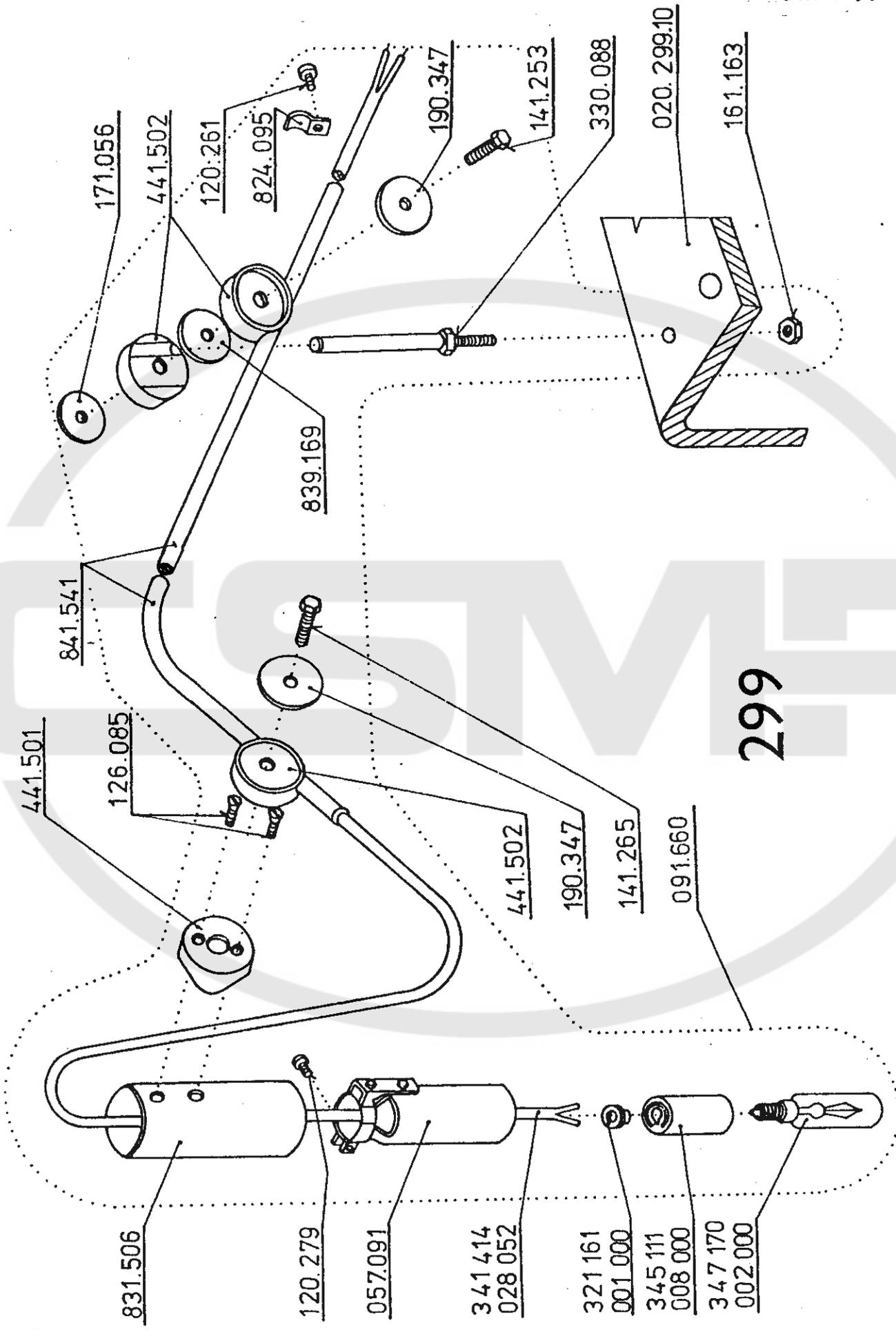


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522 980 099 047

ACCESSORIES

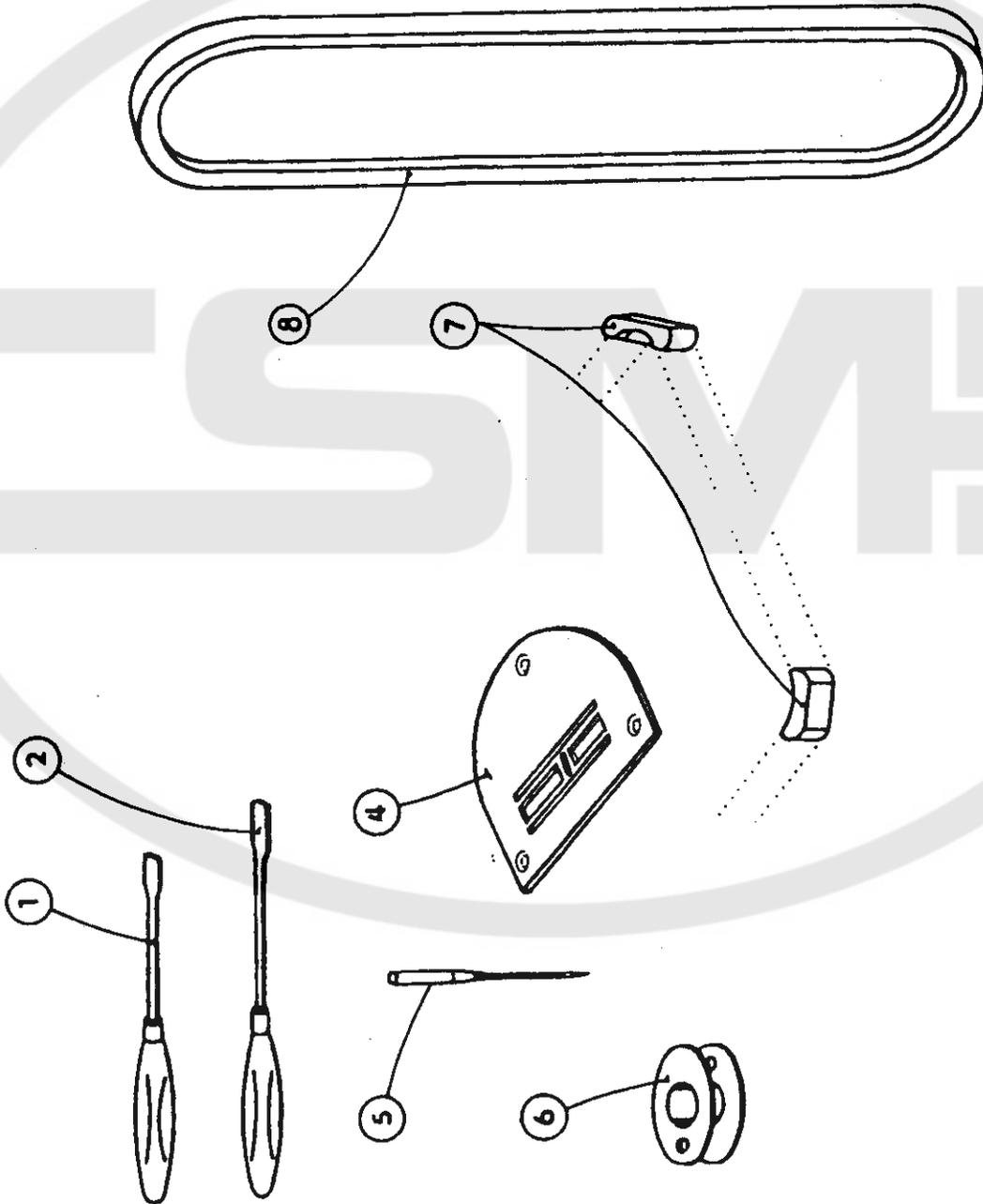
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413 621 731 023
413 624 310 002
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548 300 000 140
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273 141 940 141
272 711 221 000
10 x 1060 mm

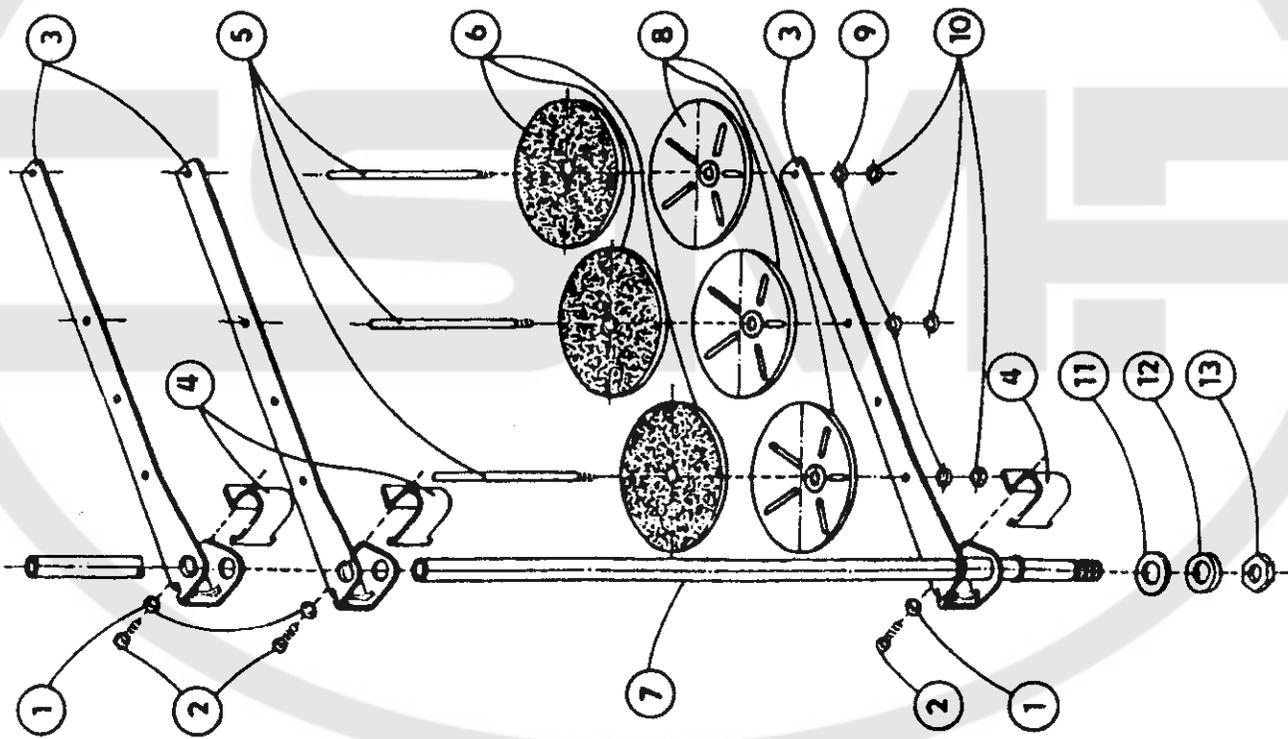
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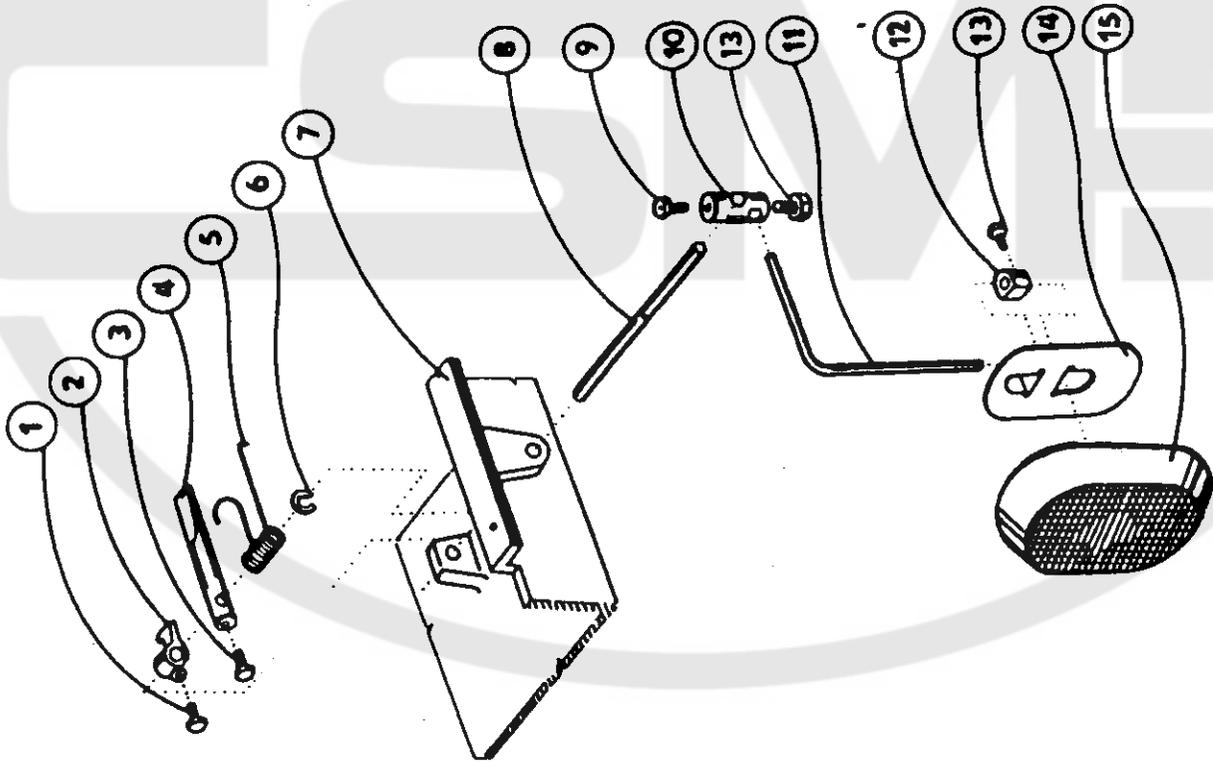
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1	523 081	200 025
2	522 080	120 283
3	522 080	826 162
4	522 080	826 159
5	522 080	313 277
6	522 080	953 042
7	522 980	044 969
8	522 080	839 031
9	522 080	191 107
10	522 080	161 137
11	522 080	441 509
12	522 080	190 585
13	522 080	161 255

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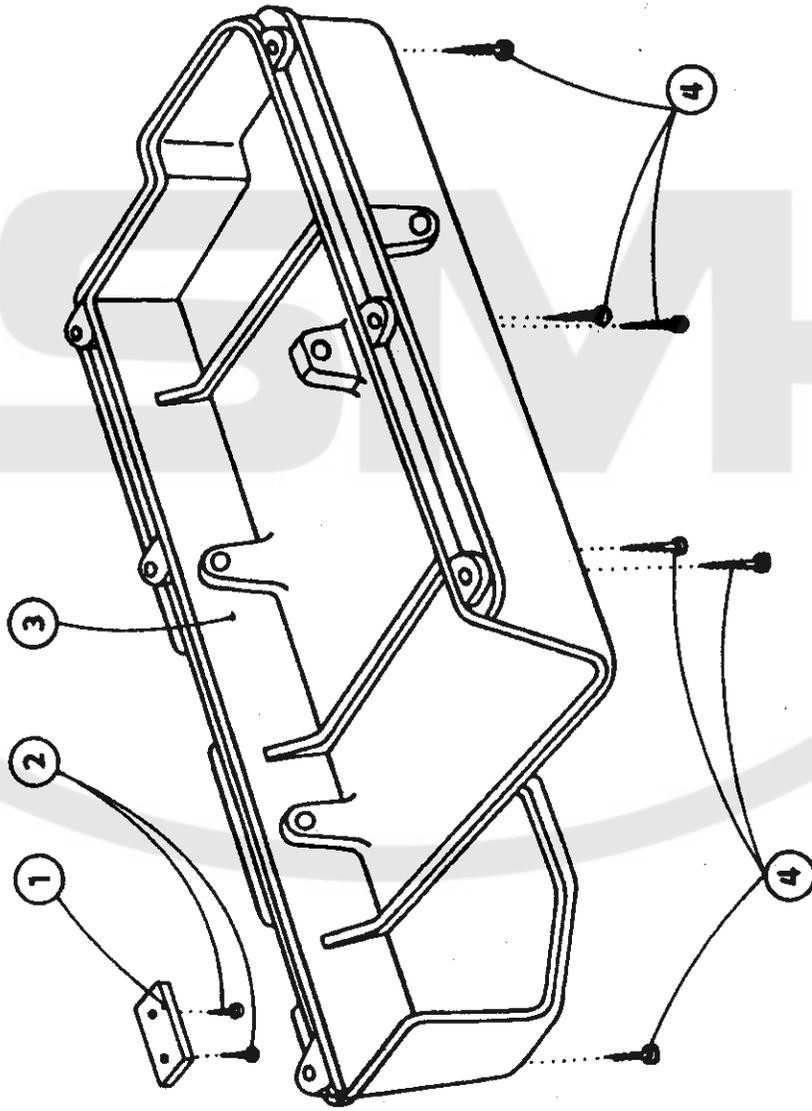
- 522 080 141 141
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- 522 080 384 052
- 522 080 264 168
- 311 732 910 070
- 522 080 725 074
- 522 080 314 065
- 522 080 141 123
- 522 080 318 069
- 522 080 383 022
- 522 080 436 271
- 522 080 141 112
- 522 080 827 173
- 273 412 001 000

522 980 099 047

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522 080 941 091
314 140 016 020
522 080 725 074
522 080 225 031

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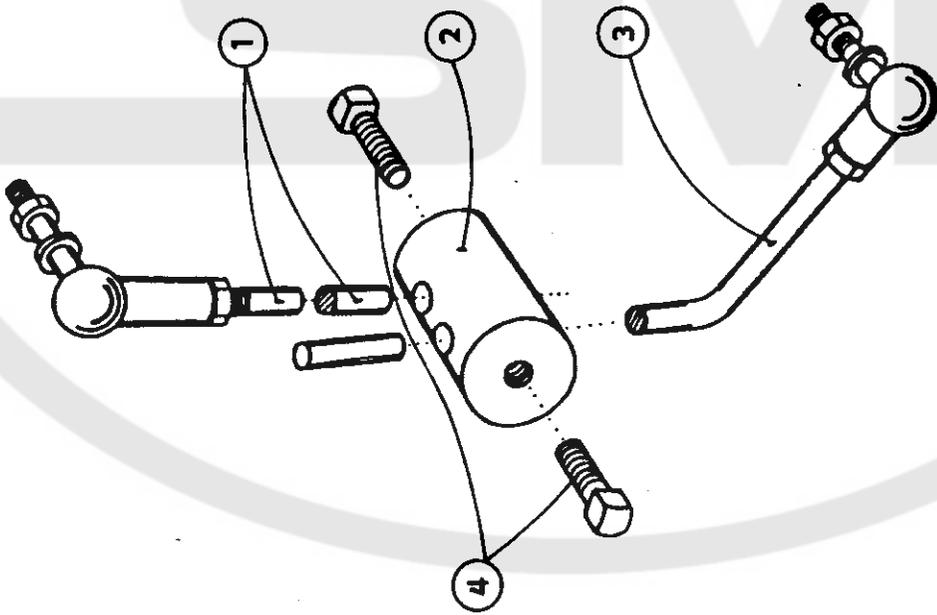


522 980 099 047

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522 980 044 704
522 080 336 074
522 980 044 761
522 080 144 035

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522 980 099 047

6

- 522 080 264 290
- 311 732 910 070
- 311 515 006 016
- 522 080 613 235
- 522 080 141 109
- 522 080 725 074
- 522 980 044 142
- 522 980 049 109

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