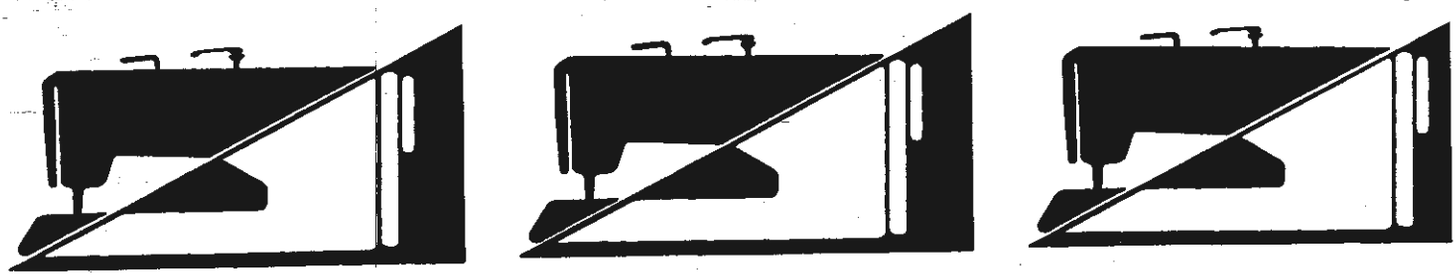
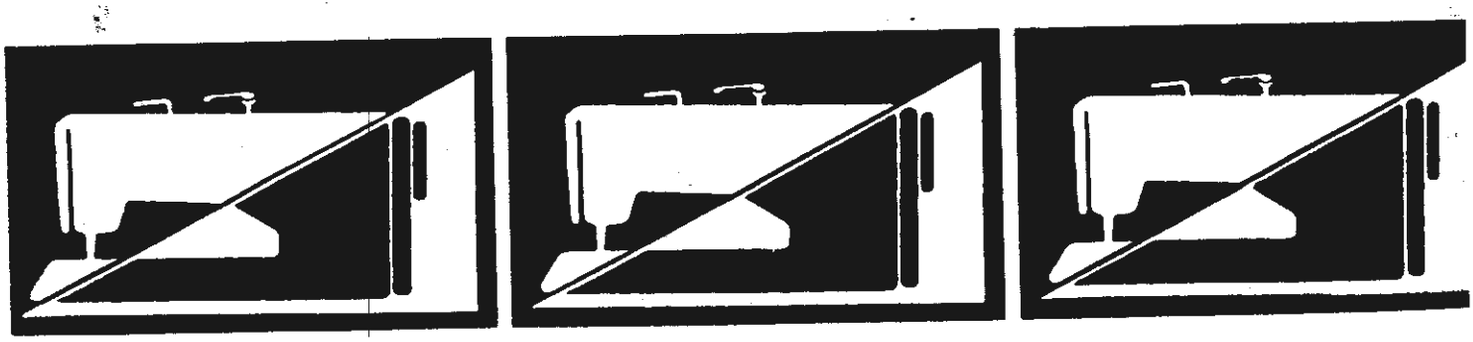


# GLOBAL® ZZ 566



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
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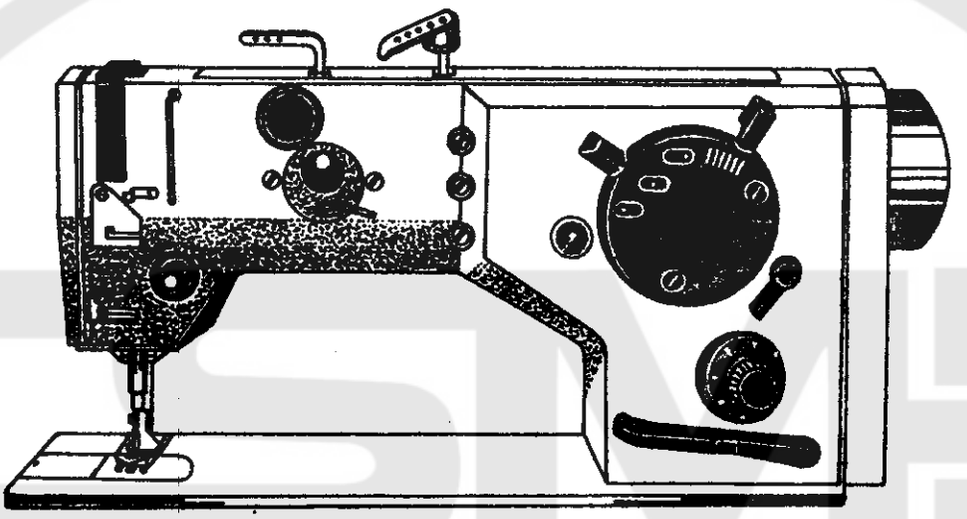
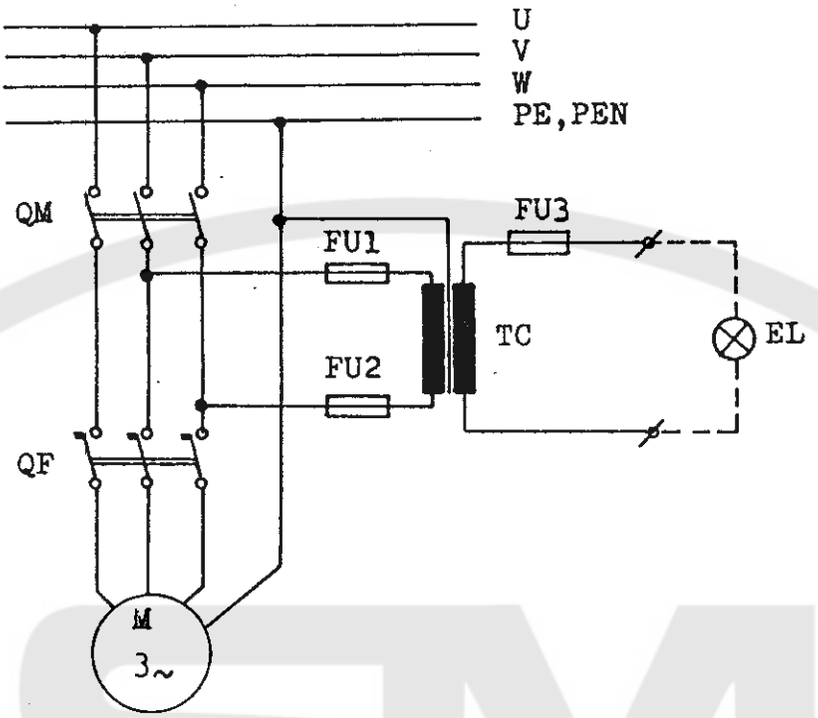


Application

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 si suitable for stitching materials made of wool, cotton, materials containing additions of synthetic fibres, and materials consisting exclusively of polyamide fibres, such as cord, gebardine, tweed, tessile, zibelline, 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,40VA |
| 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 matrial, zigzag stitch and thread used; with synthetic 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<br>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<br>synthetic threads: 10 tex x 3<br>14,5 tex x 3<br>12 tex x 2 |
| Presser foot stroke | 5 mm with hand lever<br>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 avaible 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 x2<br>12 tex x 2 x 2 | 3400 |
| | up to 3 mm thick mixed materiales | 797 CF CF Nos. 100-110 | cotton threads 10 tex x 2 x 2<br>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<br>12 tex x 2 x 2<br>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 x2<br>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 x2<br>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 x2<br>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 x2<br>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 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 quantitites. 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 electrotechnical and safety regulations. The lead-incable, supplied as a part of the machine, has a cross section of $4 \times 1\ mm^2$ and must be safeguarded accordingly in each phase. If the machine is provided with a plug, make sure always befor 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 cannnot

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 circum - ference. 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 $20^{o}C$ $mm^2.s^{-1}$ is recommended, and for the hook, bearing oil with viscosity of 5 - 9 at $50\ ^{o}C$ $mm^2.s^{-1}$. 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 oiltank. 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 advaisable 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 fronts 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 eperture 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 fised 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 uniformityof 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 caryy 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 collied 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 mechanician, 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 teh 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., bettween 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 ot 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 | 1. Slashed thread guides. | 1. Ascertain and exchange them |
| | 2. Too sharp hook point. | 2. Repair it. |
| | 3. Faulty feeding. | 3. Adjust it (see par. 5, page 16) |
| | 4. Faulty thread guiding or faulty needle threading. | 4. Thread the upper thread correctly (see par. 8, page 10) |
| | 5. Incorrect upper thread tension | 5. Adjust it (see par. 3, page 15) |
| | 6. Bad needle quality or bent needle. | 6. Exchange the needle (see par. 7, page 10) |
| | 7. The thread size is inadequate to the thickness of sewn material. | 7. Use adequate thread |
| | 8. Machine considerably soiled. | 8. 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 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

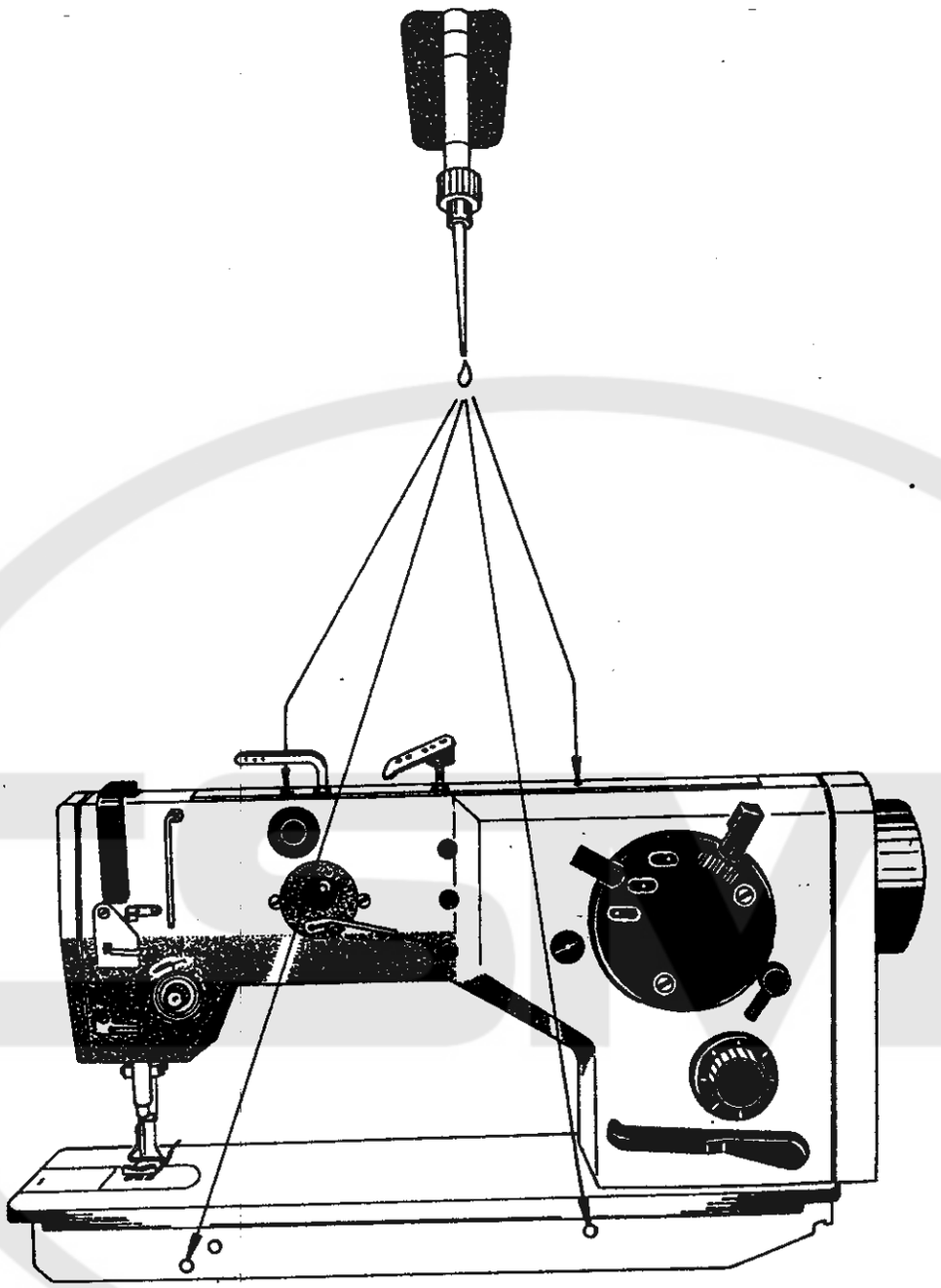
1. Marking of the piece
   (a six-digit number for pieces produced in our factory, a twelve-digit number for pieces purchased from other suppliers)

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 exlusively on the basis of the catalogue attached to the machine in question.

We wish you much success in your work.



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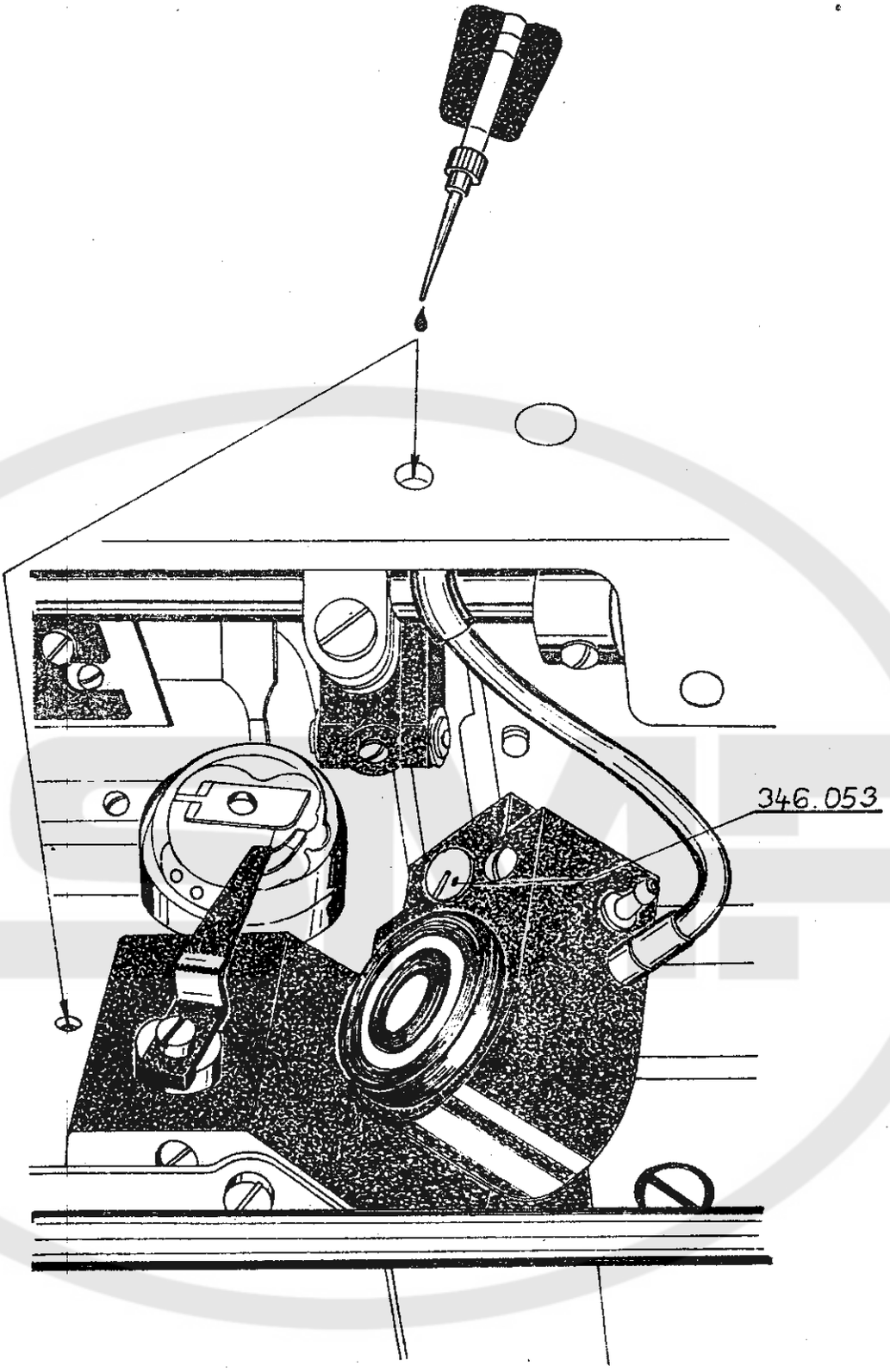
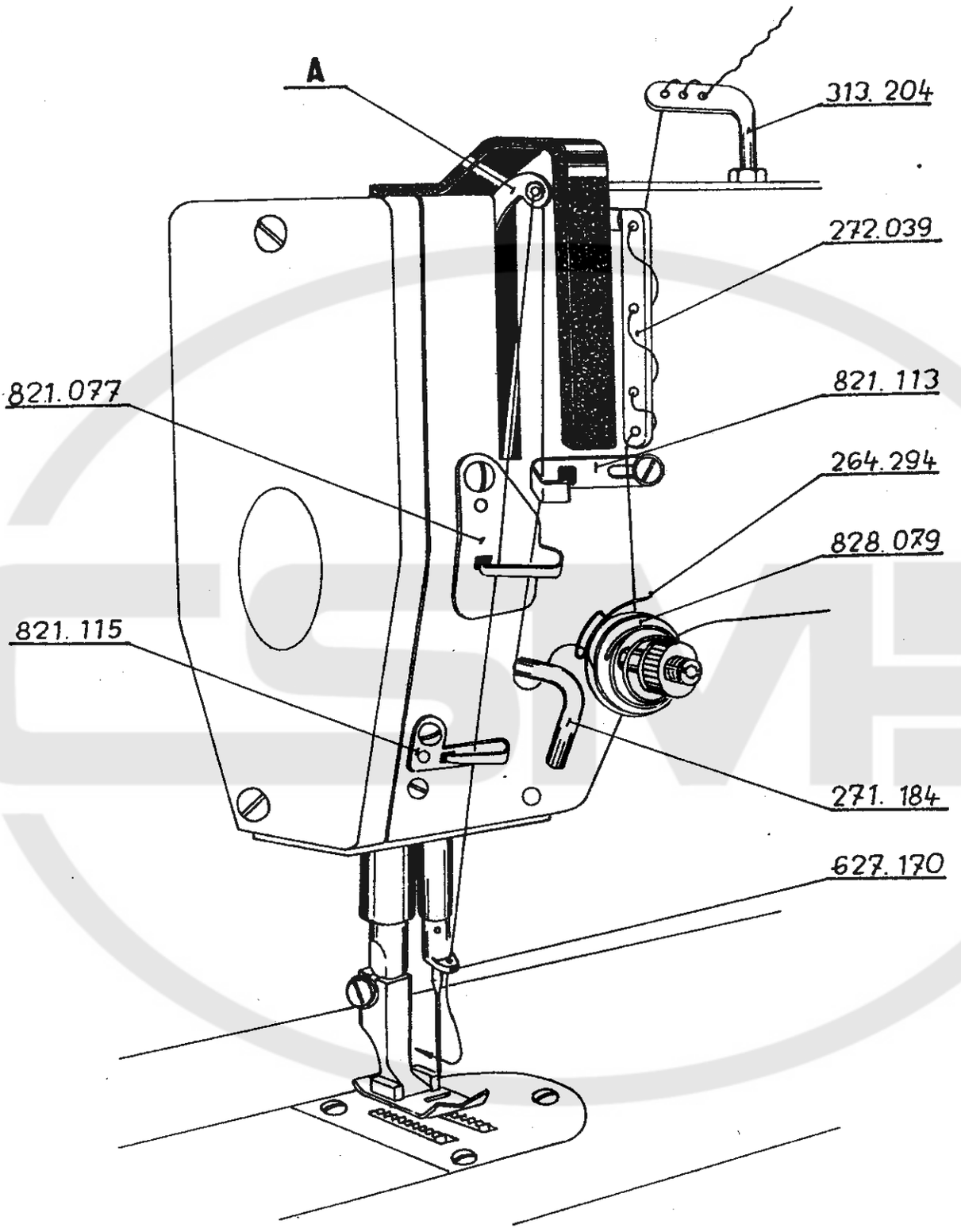



2


A
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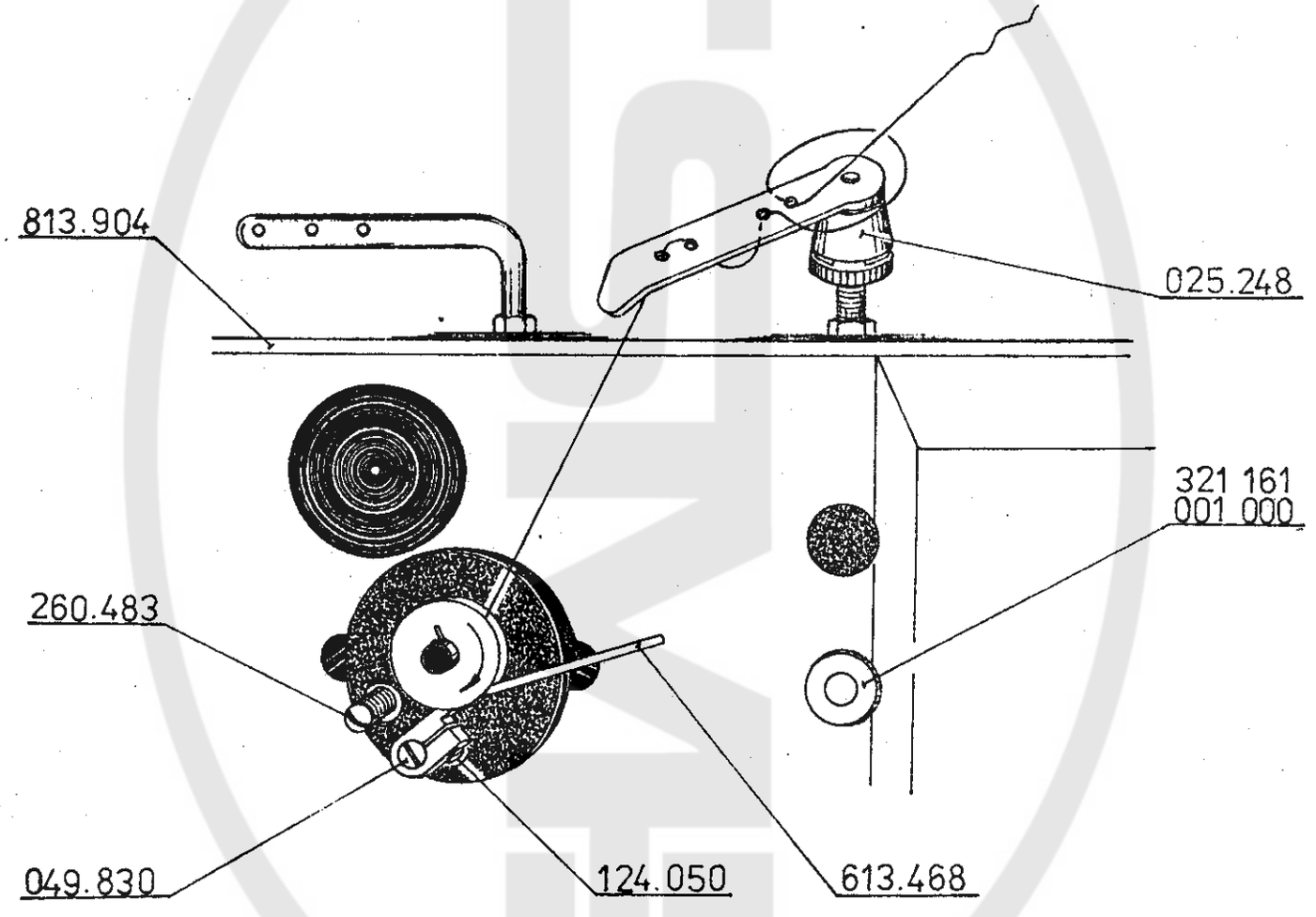
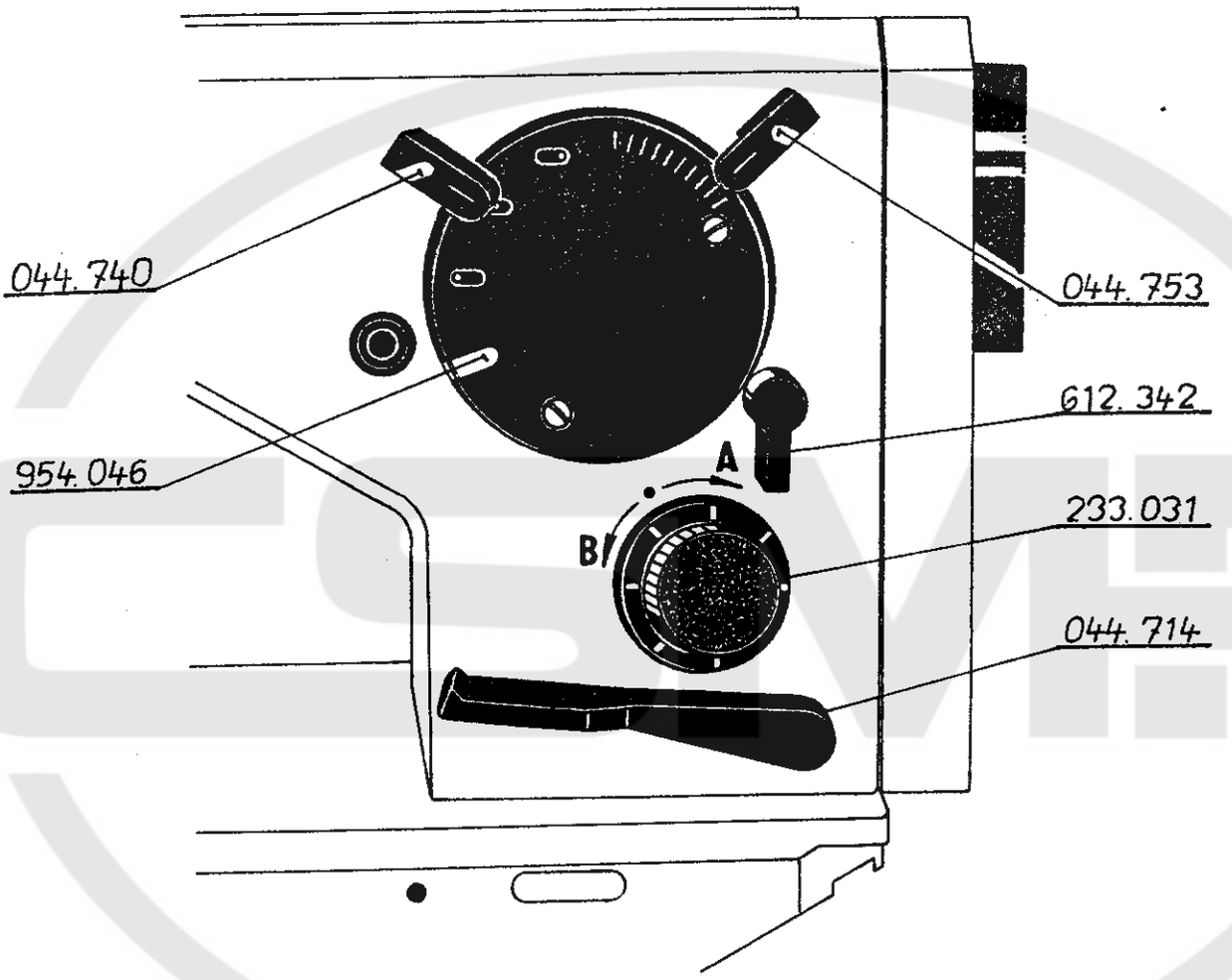
272.039
821.077
821. 113
264.294
828.079
821. 115
271. 184
627.170




4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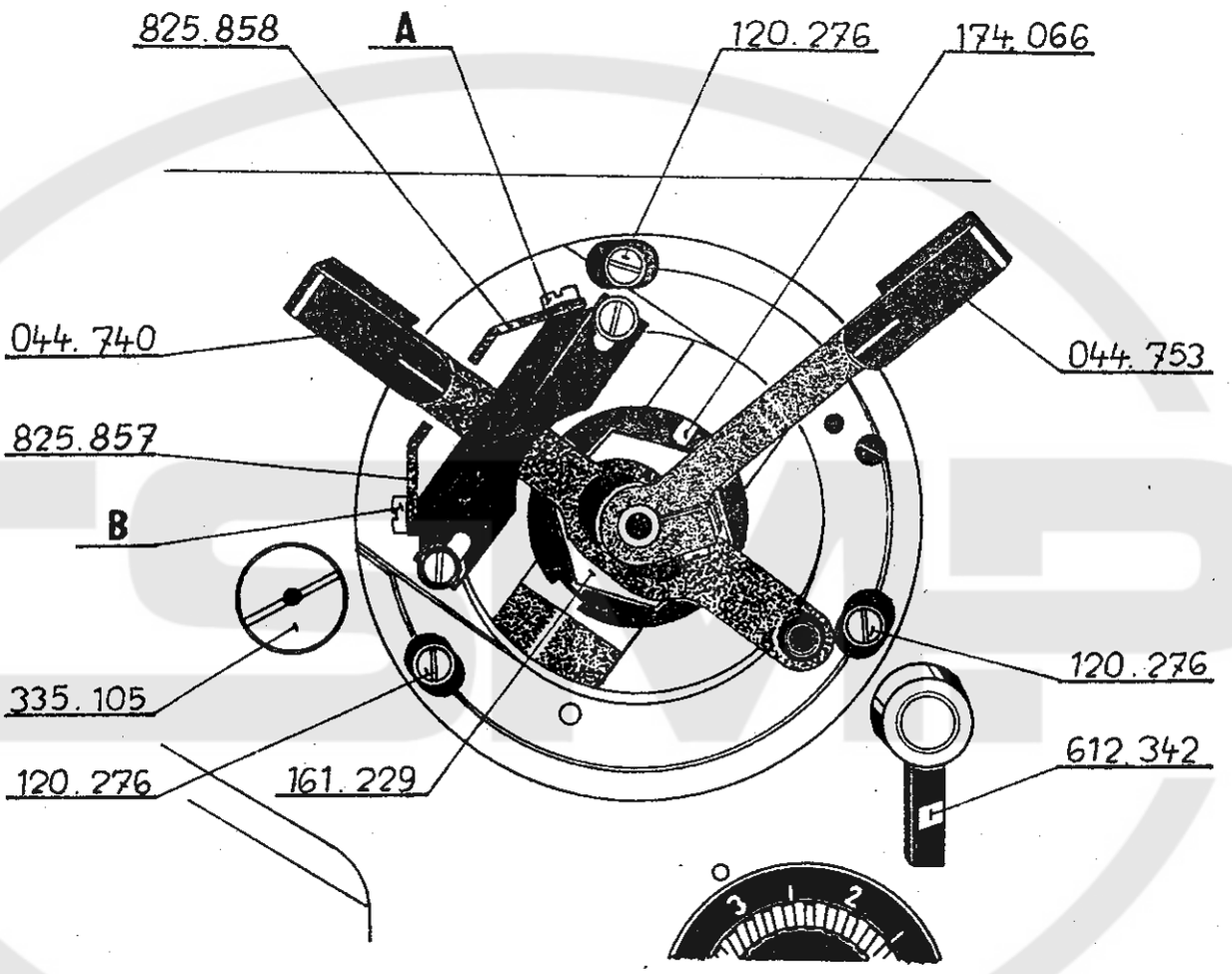
954.046
044.753
612.342
233.031
044.714
A
B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B
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120.276
161.229
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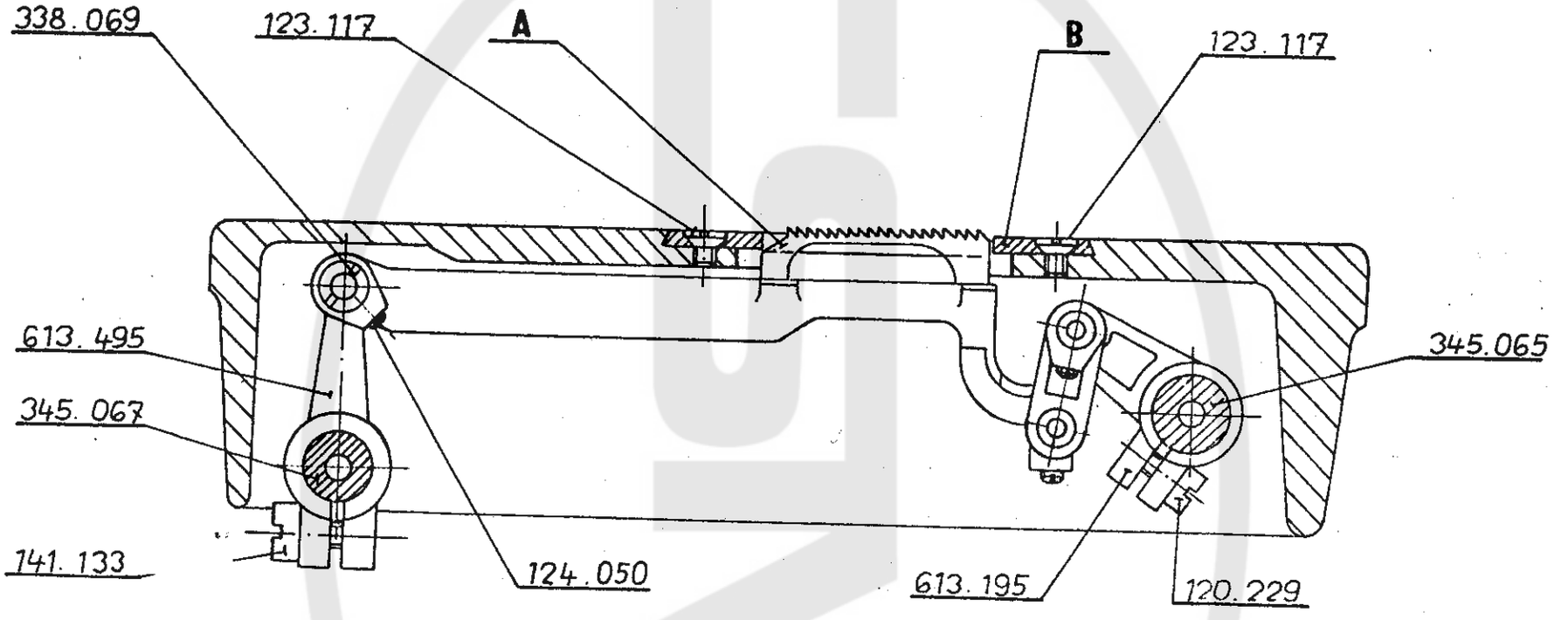
C
0
3
1
2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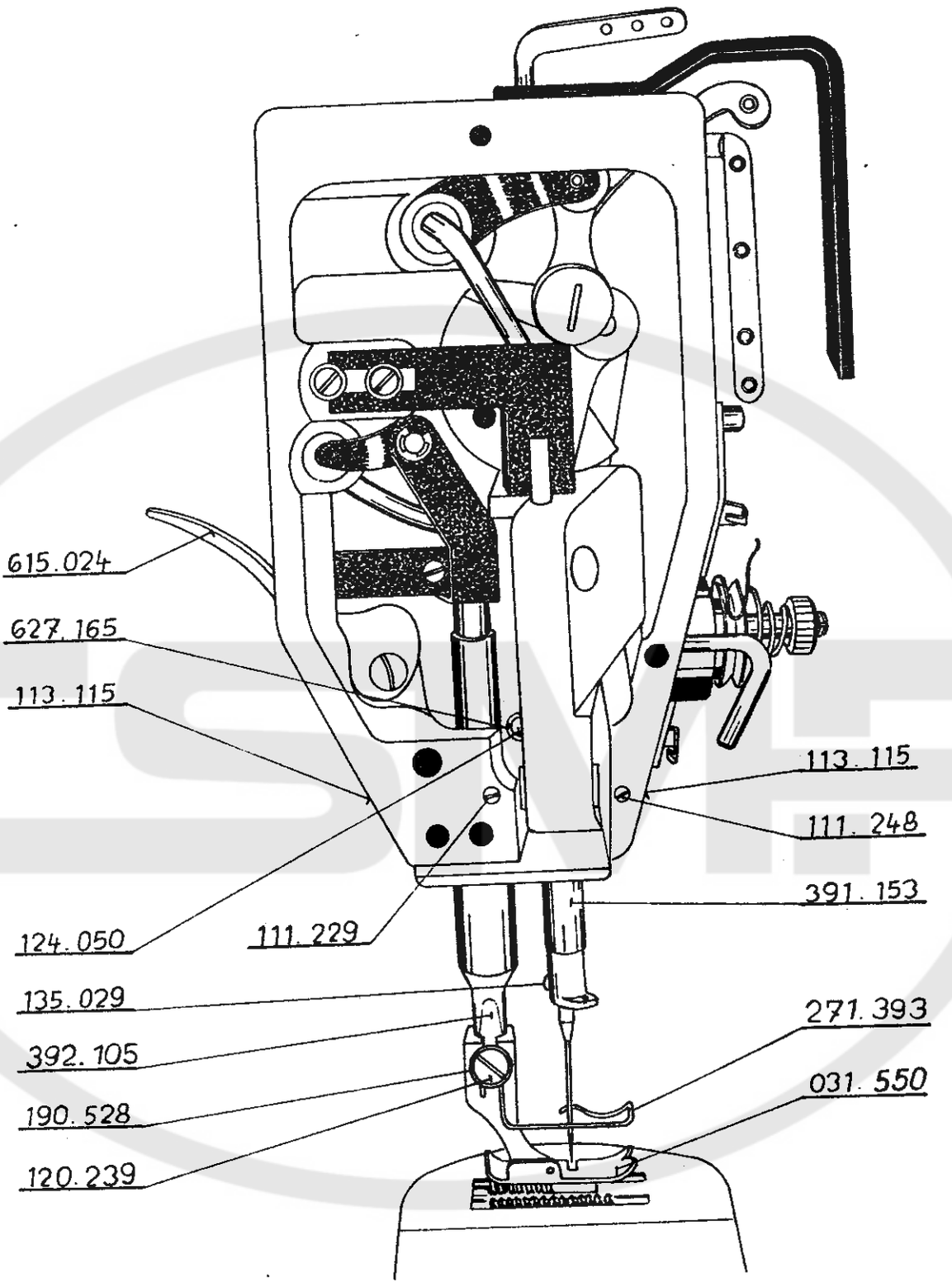
7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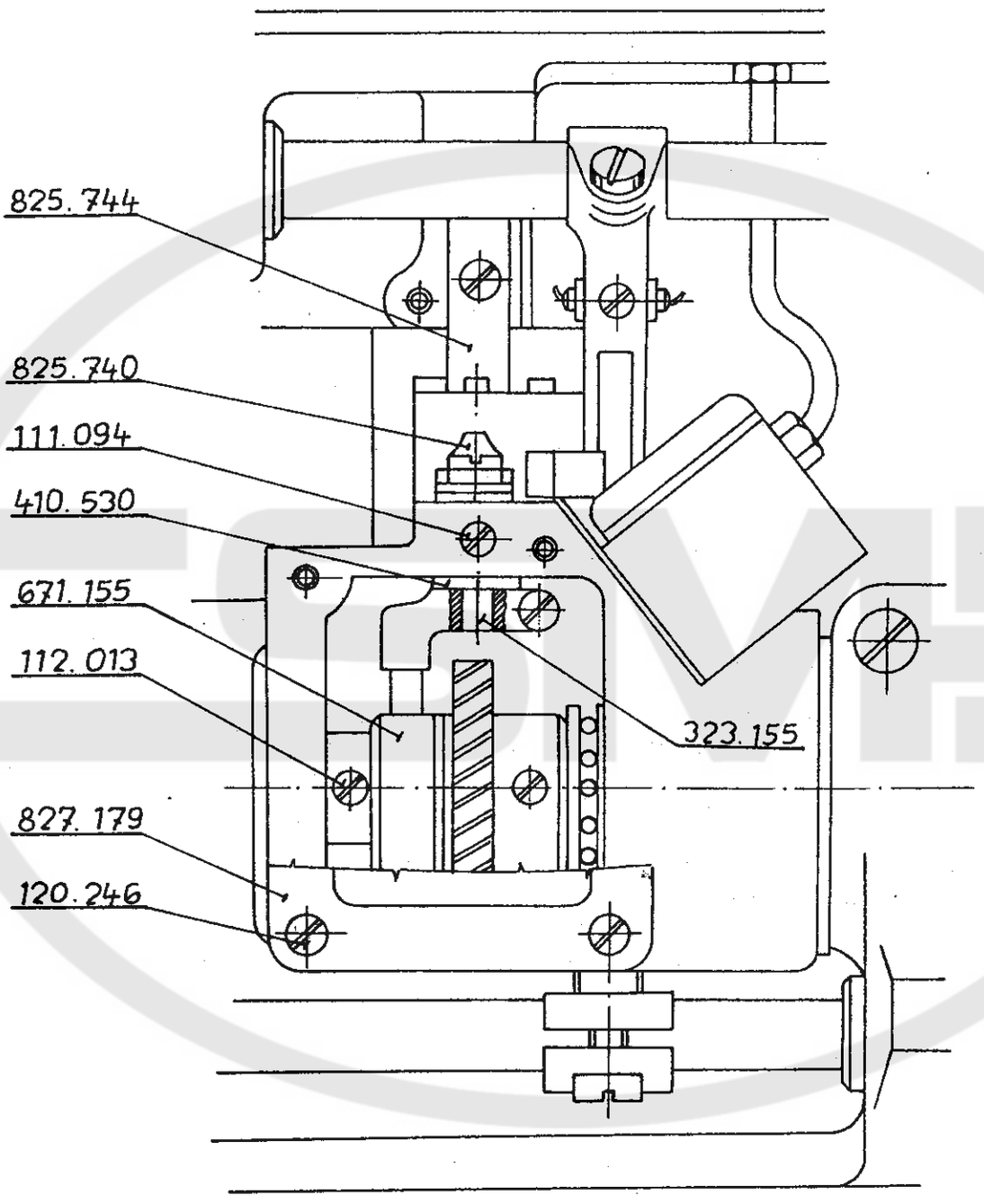
031.550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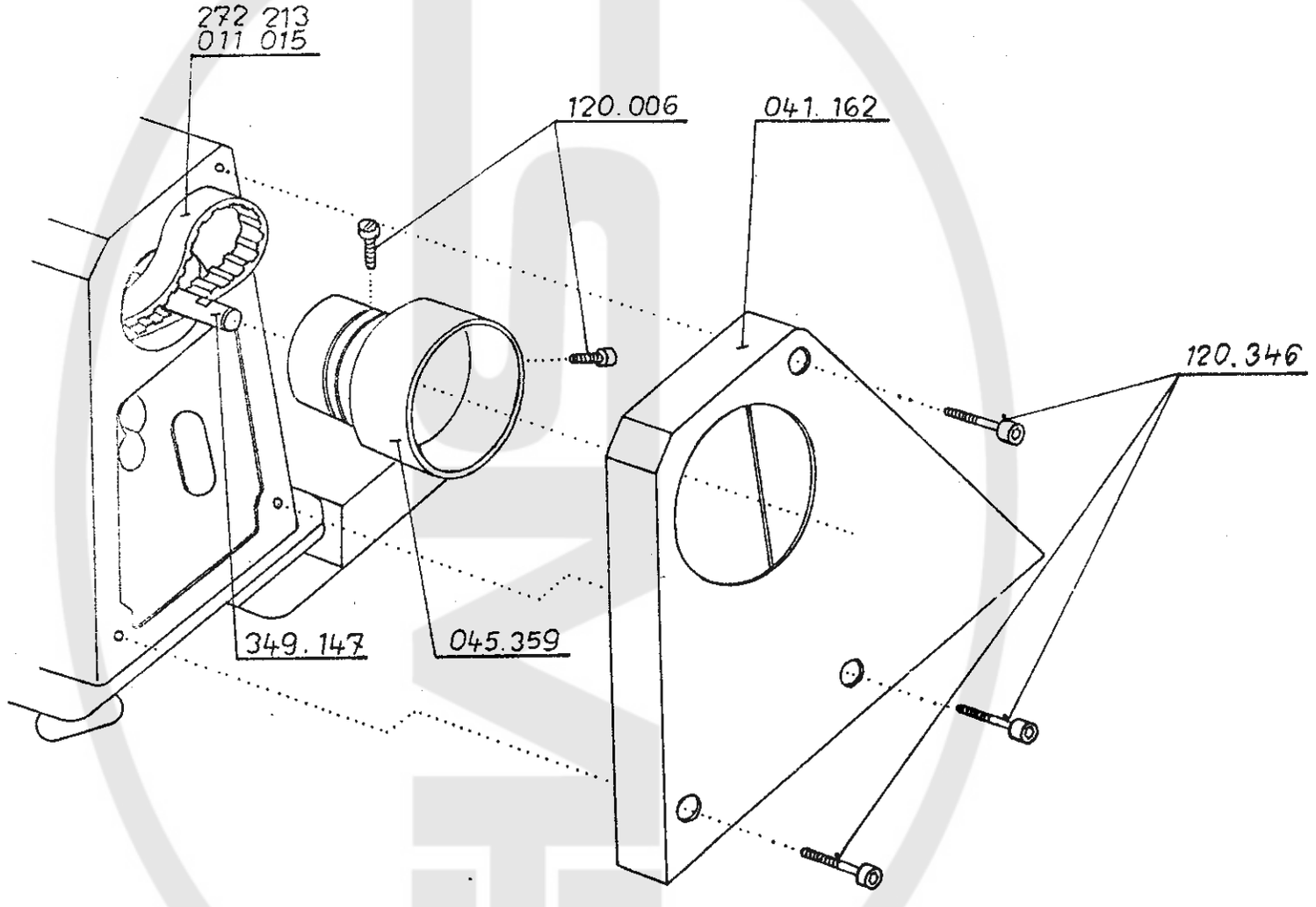
410.530
671.155
112.013
323.155
827.179
120.246


272 213
011 015
120.006
041.162
120.346
349.147
045.359

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



| Marking of the Piece | | Pieces per 1 Mach. | Name | Ill. in Table | N | A |
|---|---|---|---|---|---|---|
| | | | **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

| | | | | | | |
|---|---|---|---|---|---|---|
| | 111.238 | 1 | Screw M 5 x 10 | 3 | | |
| 522 080 | 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 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 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 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 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

| | | | | | | |
|---|---|---|---|---|---|---|
| * | 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 Ø3.5/4.8 x 60 | 7 | | |
| 283 366 002 000 | 1 | Tube Ø3.5/4.8 x 65 | 7 | | |
| 283 366 002 000 | 1 | Tube Ø3.5/4.8 x 70 | 3 | | |
| 283 366 002 000 | 1 | Tube Ø3.5/4.8 x 75 | 7 | | |
| 283 366 002 000 | 1 | Tube Ø3.5/4.8 x 90 | 4, 7 | | |
| 283 366 002 000 | 2 | Tube Ø3.5/4.8 x 100 | 5, 6, 7, 10 | | |
| 283 366 002 000 | 1 | Tube Ø3.5/4.8 x 150 | 7 | | |
| 283 366 002 000 | 1 | Tube Ø3.5/4.8 x 170 | 5 | | |
| 283 366 002 000 | 1 | Tube Ø3.5/4.8 x 200 | 7 | | |
| 283 366 002 000 | 1 | Tube Ø3.5/4.8 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 Ø | 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 Ø 2 x 40 | 10 |
| | 708 420 030 002 | 1 | Lubrication wick Ø 2 x 60 | 12 |
| | 708 420 030 002 | 1 | Lubrication wick Ø 2 x 80 | 3 |
| | 708 420 030 002 | 1 | Lubrication wick Ø 2 x 130 | 4, 7 |
| | 708 420 030 002 | 2 | Lubrication wick Ø 2 x 140 | 7, 10 |
| | 708 420 030 002 | 1 | Lubrication wick Ø 2 x 160 | 12 |
| | 708 420 030 002 | 1 | Lubrication wick Ø 2 x 220 | 12 |
| | 708 420 030 002 | 1 | Lubrication wick Ø 2 x 250 | 7 |
| | 708 420 030 002 | 1 | Lubrication wick Ø 2 x 270 | 7, 10 |
| | 708 420 030 002 | 1 | Lubrication wick Ø 2 x 320 | 7 |
| | 708 420 030 002 | 1 | Lubrication wick Ø 2 x 350 | 4, 12 |
| | 708 420 030 003 | 1 | Lubrication wick Ø 3 x 20 | 3, 10 |
| | 708 420 030 003 | 1 | Lubrication wick Ø 3 x 40 | 5 |
| | 708 420 030 003 | 1 | Lubrication wick Ø 3 x 50 | 10 |
| | 708 420 030 003 | 1 | Lubrication wick Ø 3 x 60 | 12 |
| | 708 420 030 003 | 1 | Lubrication wick Ø 3 x 110 | 7 |
| | 708 420 030 003 | 1 | Lubrication wick Ø 3 x 150 | 3 |
| | 708 420 030 004 | 1 | Lubrication wick Ø 4 x 300 | 7 |
| | 708 420 030 005 | 1 | Lubrication wick Ø 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 |

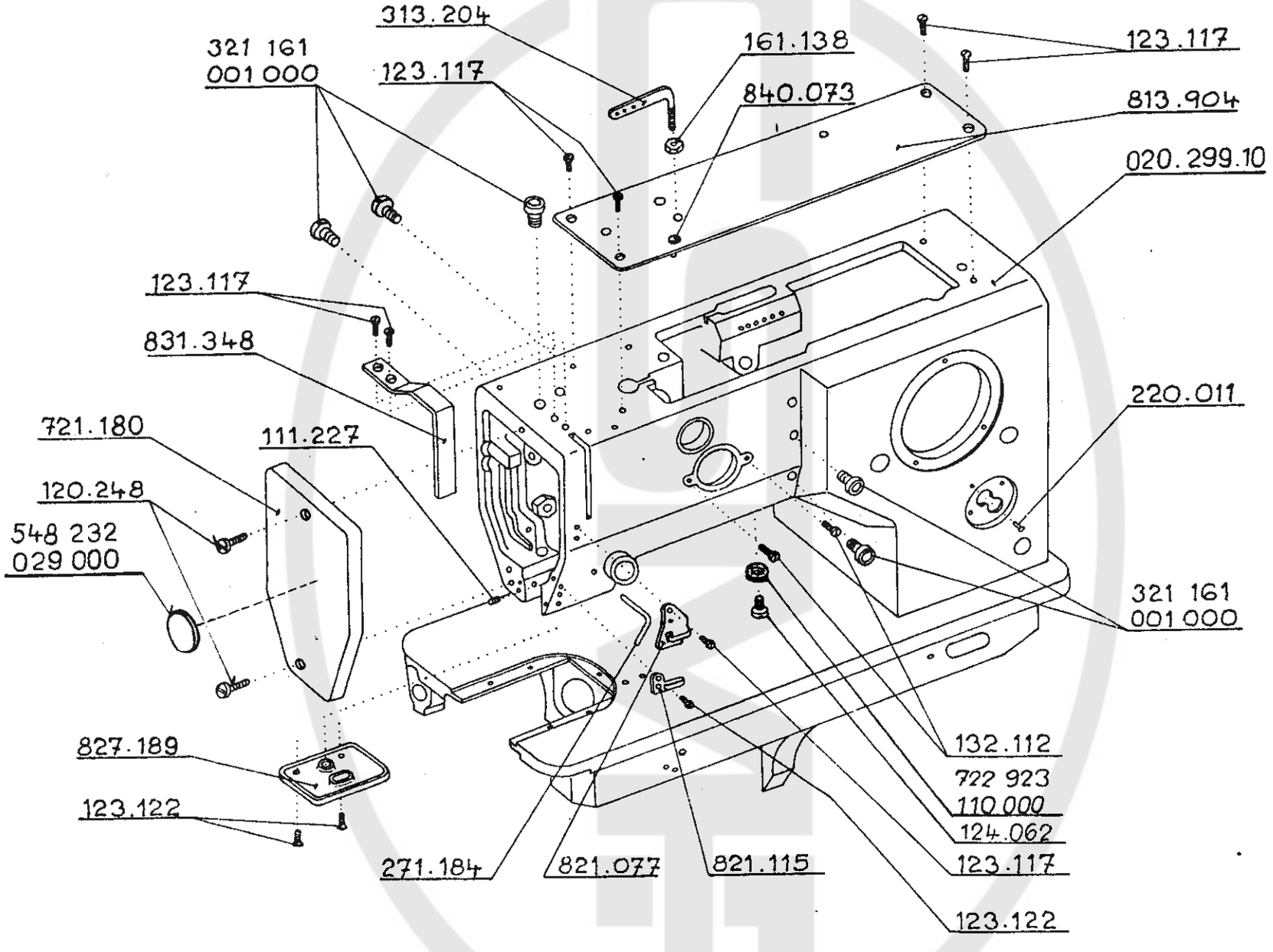
EQUIPMENT 295
522 791 995 014
Plug covering the mounting hole for bobbin winder

| | | | | |
|---|---|---|---|---|
| 522 080 | 814.355 | 1 | Cover | 16 |

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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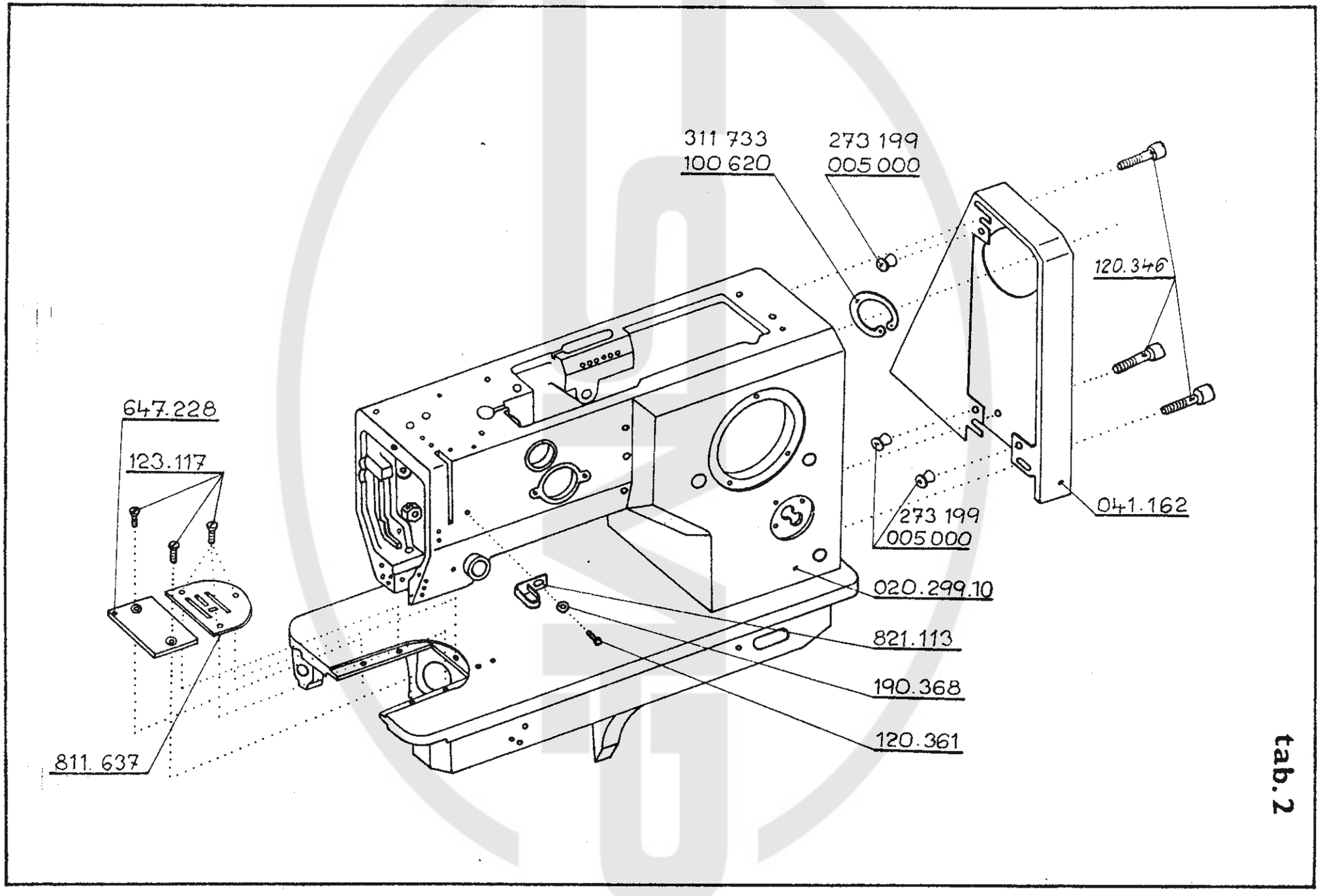
tab.1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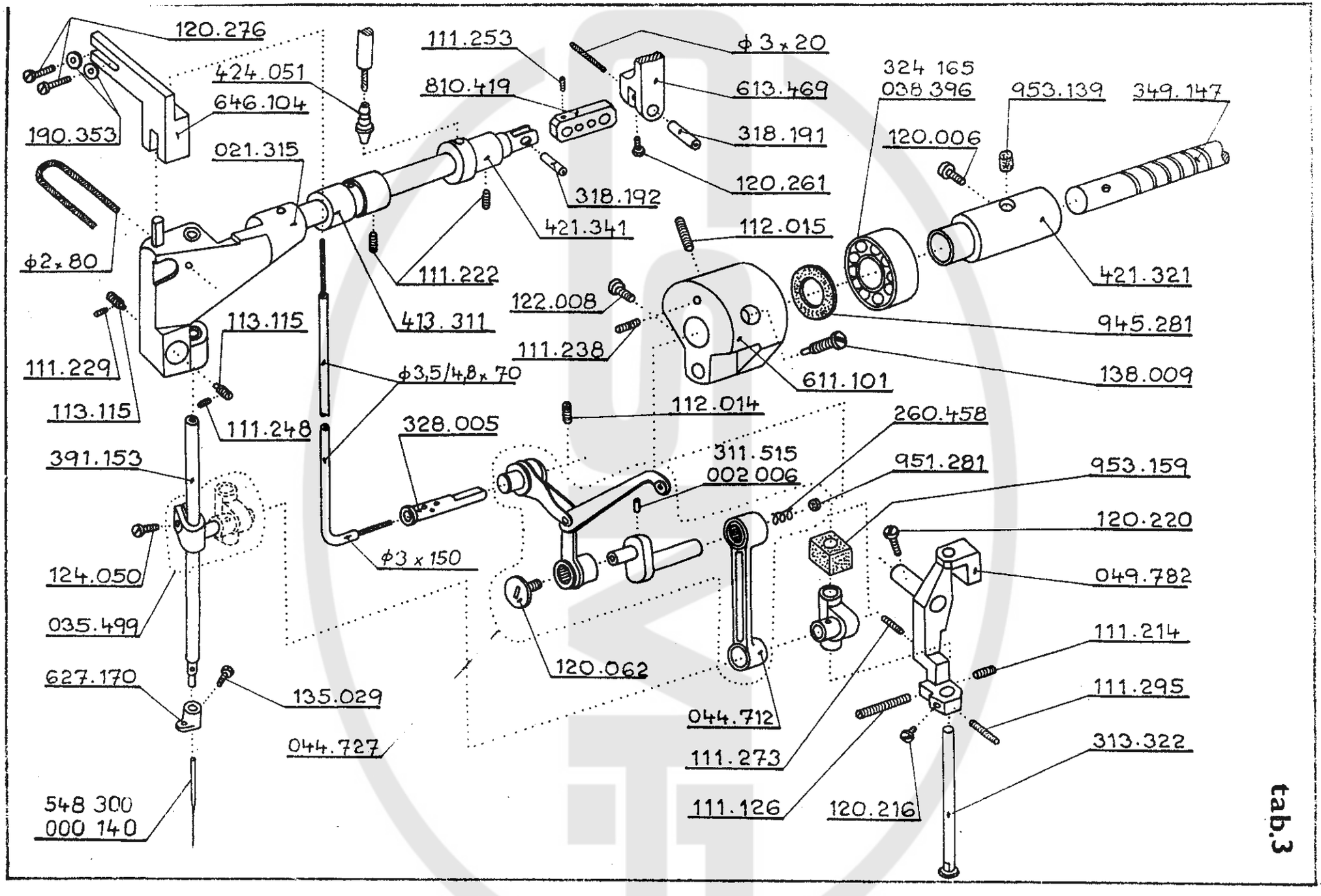
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113.115
113.115
111.248
391.153
124.050
035.499
627.170
135.029
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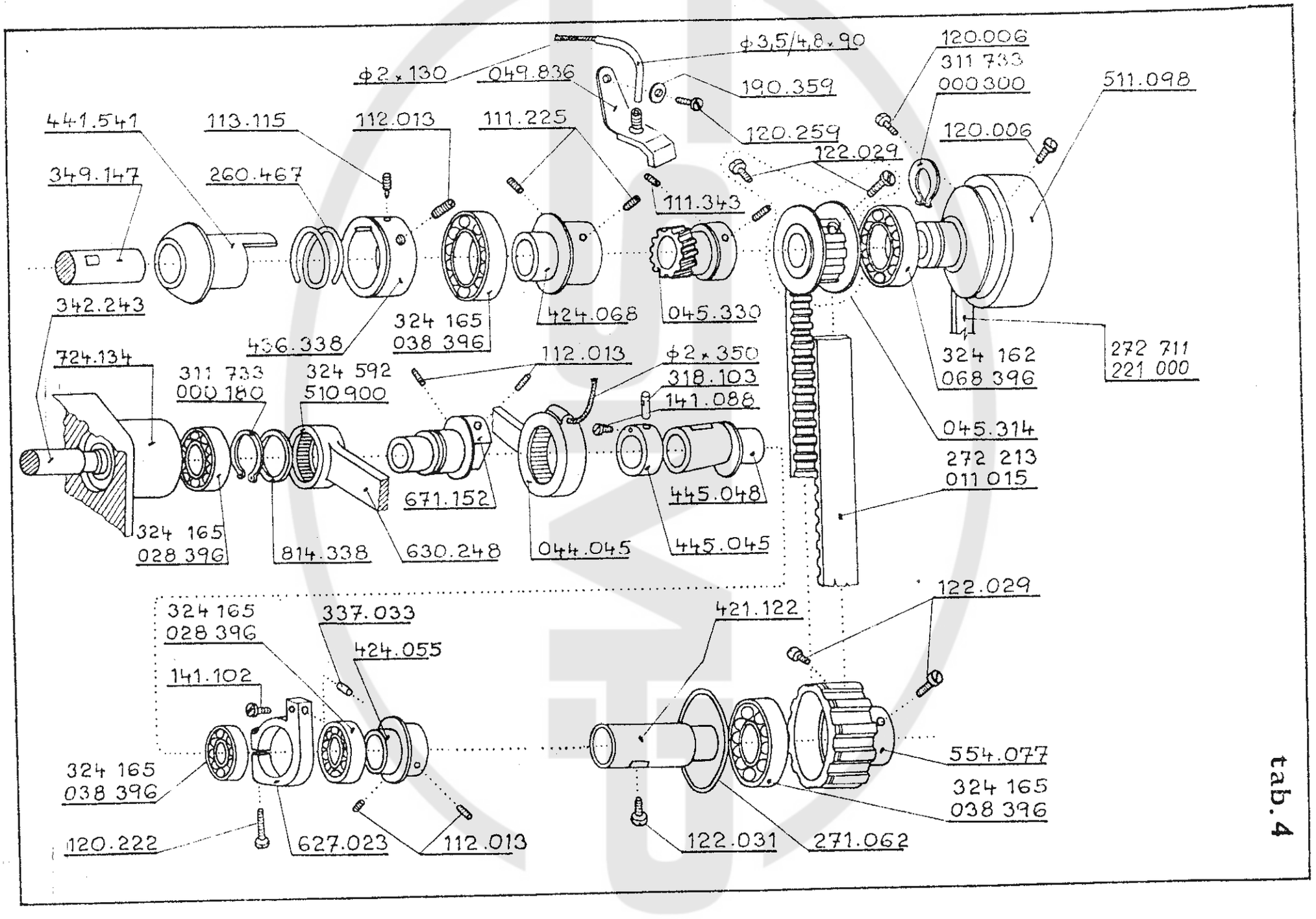
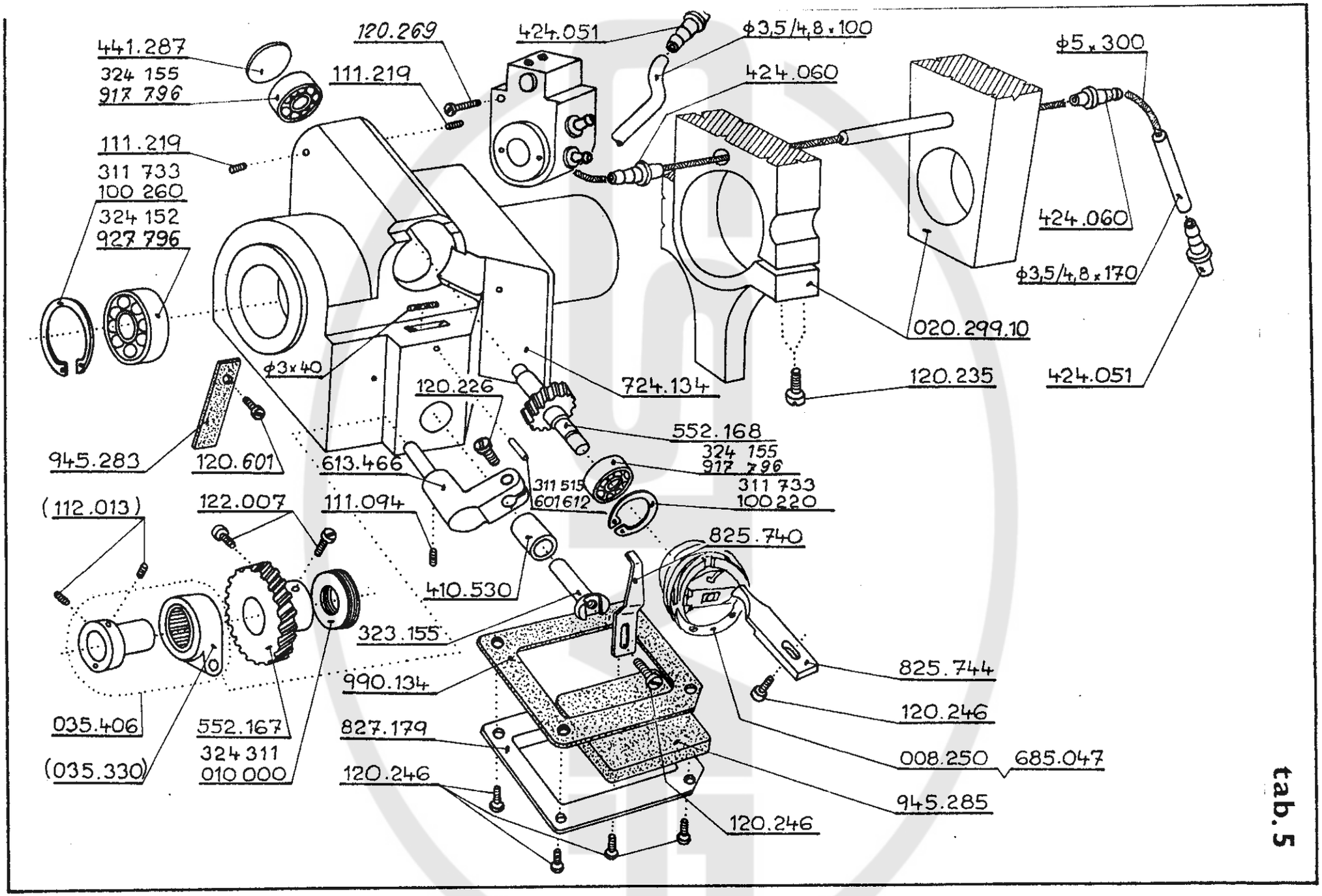
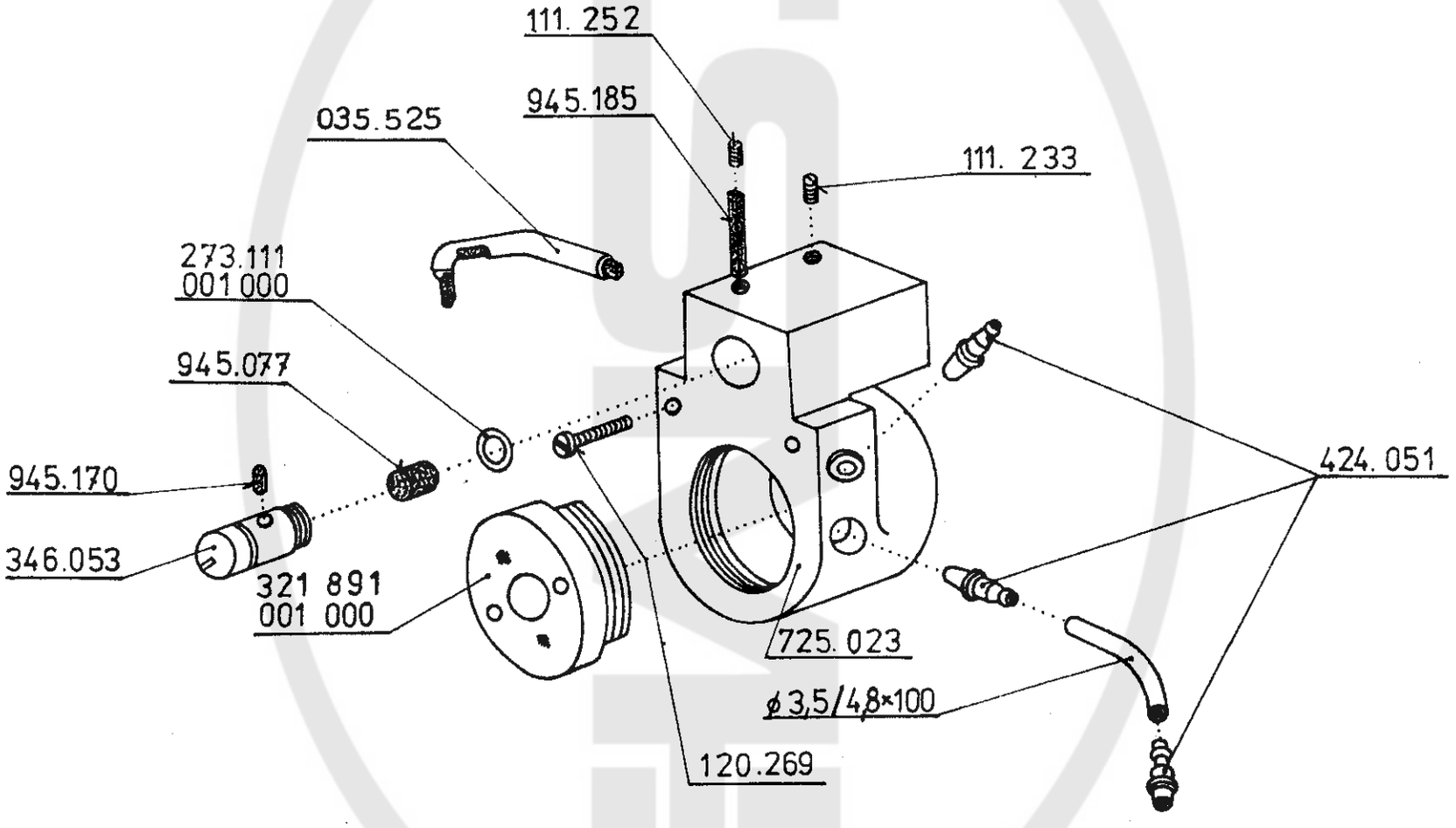
120.261
318.192
421.341
111.222
413.311
ϕ3,5/4,8x70
ϕ3x150
328.005
112.014
122.008
111.238
112.015
611.101
945.281
138.009
324 165
038 396
120.006
953.139
349.147
421.321
260.458
951.281
311.515
002 006
120.062
044.712
111.273
111.126
953.159
120.220
049.782
111.214
111.295
313.322
120.216
tab.3

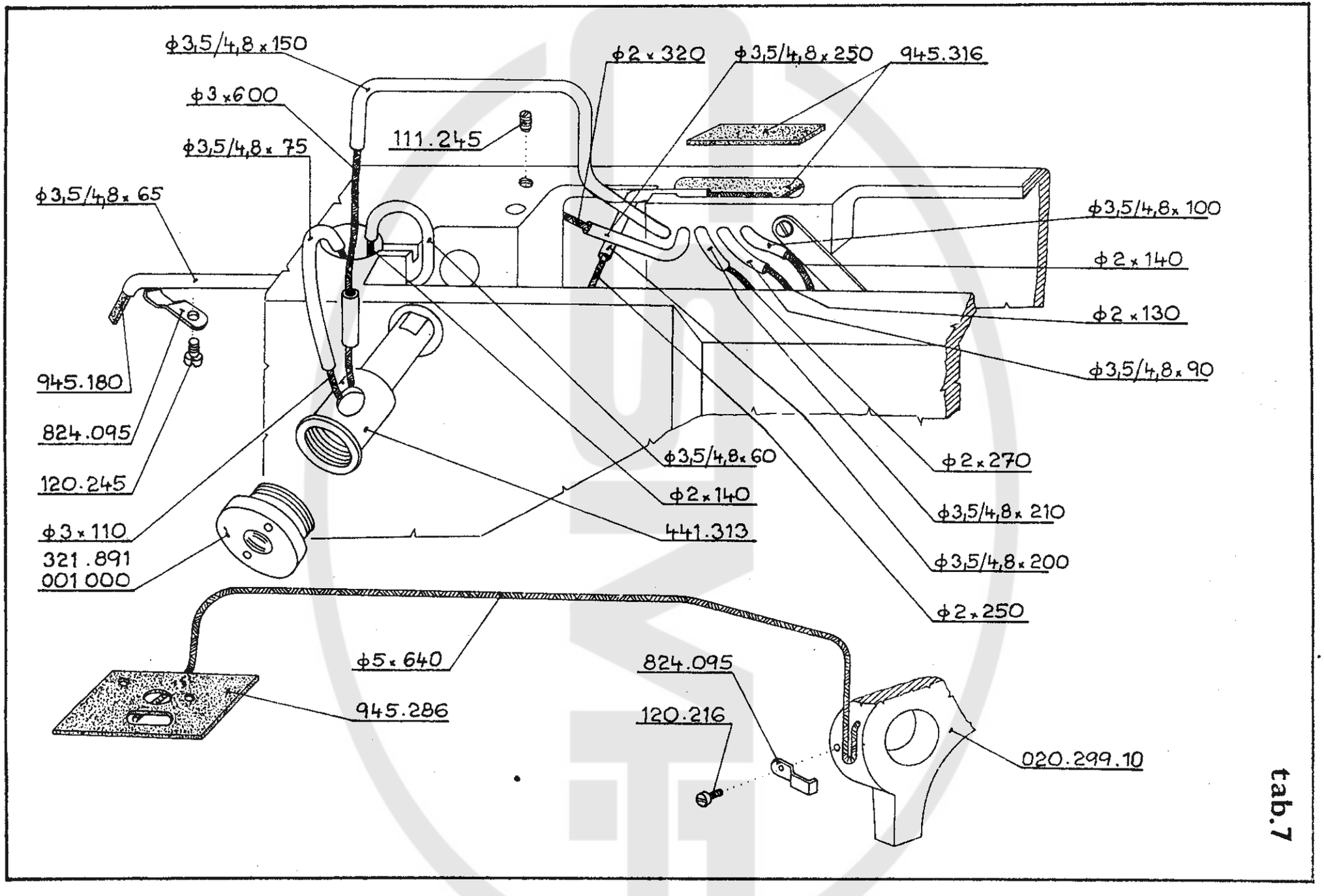

ϕ3,5/4,8×90
120.006
311 733
000 300
511.098
ϕ2×130
049.836
190.359
120.259
122.029
120.006
441.541
113.115
112.013
111.225
111.343
349.147
260.467
342.243
436.338
324 165
038 396
424.068
045.330
324 162
068 396
272 711
221 000
724.134
311 733
000 180
324 592
510 900
112.013
ϕ2×350
318.103
141.088
045.314
272 213
011 015
671.152
445.048
324 165
028 396
814.338
630.248
044.045
445.045
324 165
028 396
337.033
424.055
141.102
421.122
122.029
554.077
324 165
038 396
324 165
038 396
120.222
627.023
112.013
122.031
271.062

tab. 4

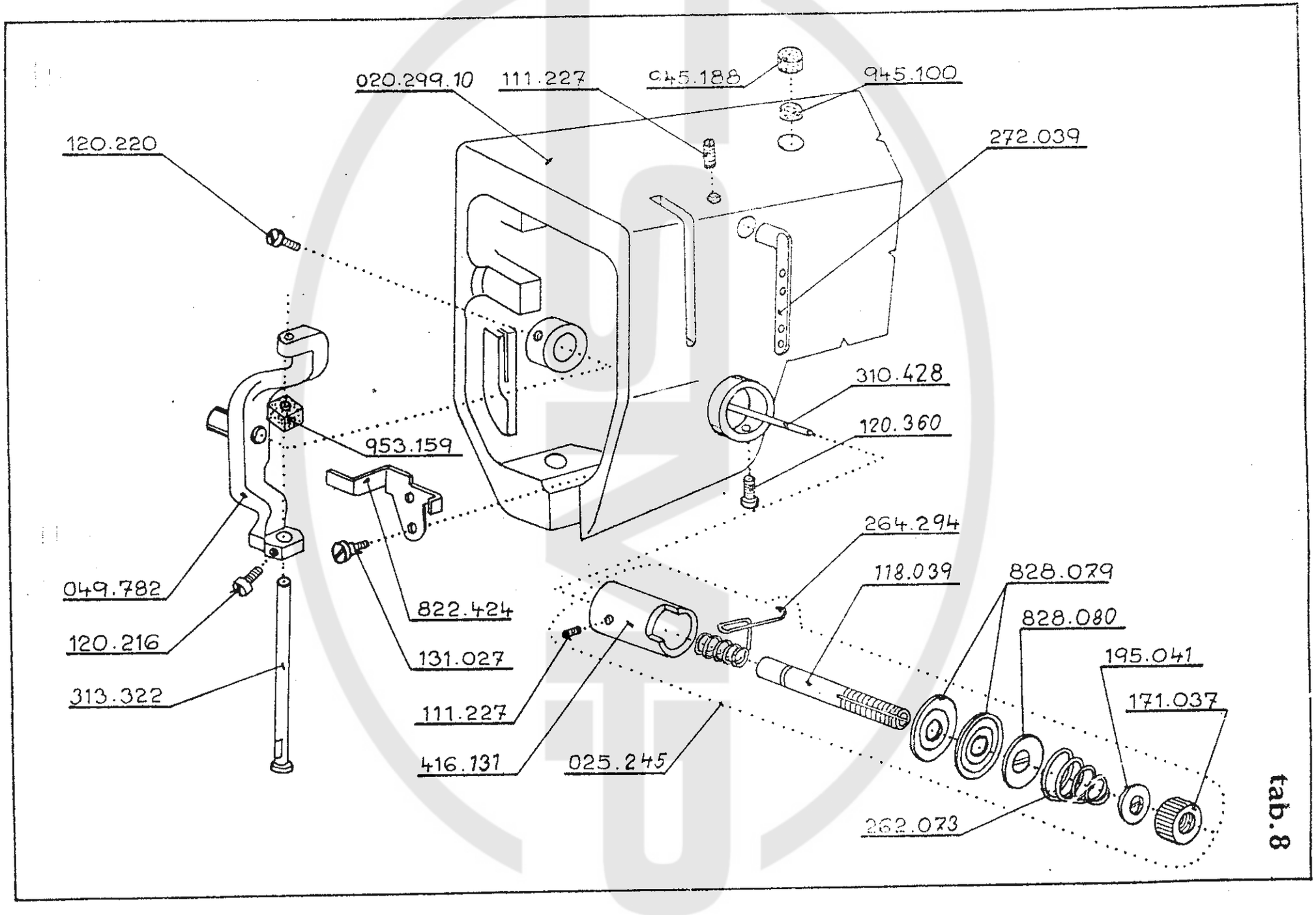

441.287
324 155
917 796
120.269
424.051
ϕ3,5/4,8 x 100
ϕ5 x 300
111.219
424.060
111.219
311 733
100 260
324 152
927 796
424.060
ϕ3,5/4,8 x 170
020.299.10
ϕ3x40
120.226
724.134
120.235
424.051
552.168
324 155
917 796
945.283
120.601
613.466
311 515
601612
311 733
100220
(112.013)
122.007
111.094
825.740
410.530
323.155
825.744
990.134
120.246
035.406
552.167
324 311
010 000
827.179
008.250
685.047
(035.330)
120.246
945.285
120.246
tab.5


111. 252
945.185
035.525
111. 233
273.111
001 000
945.077
945.170
346.053
321 891
001 000
424. 051
725. 023
ø 3,5/4,8×100
120.269

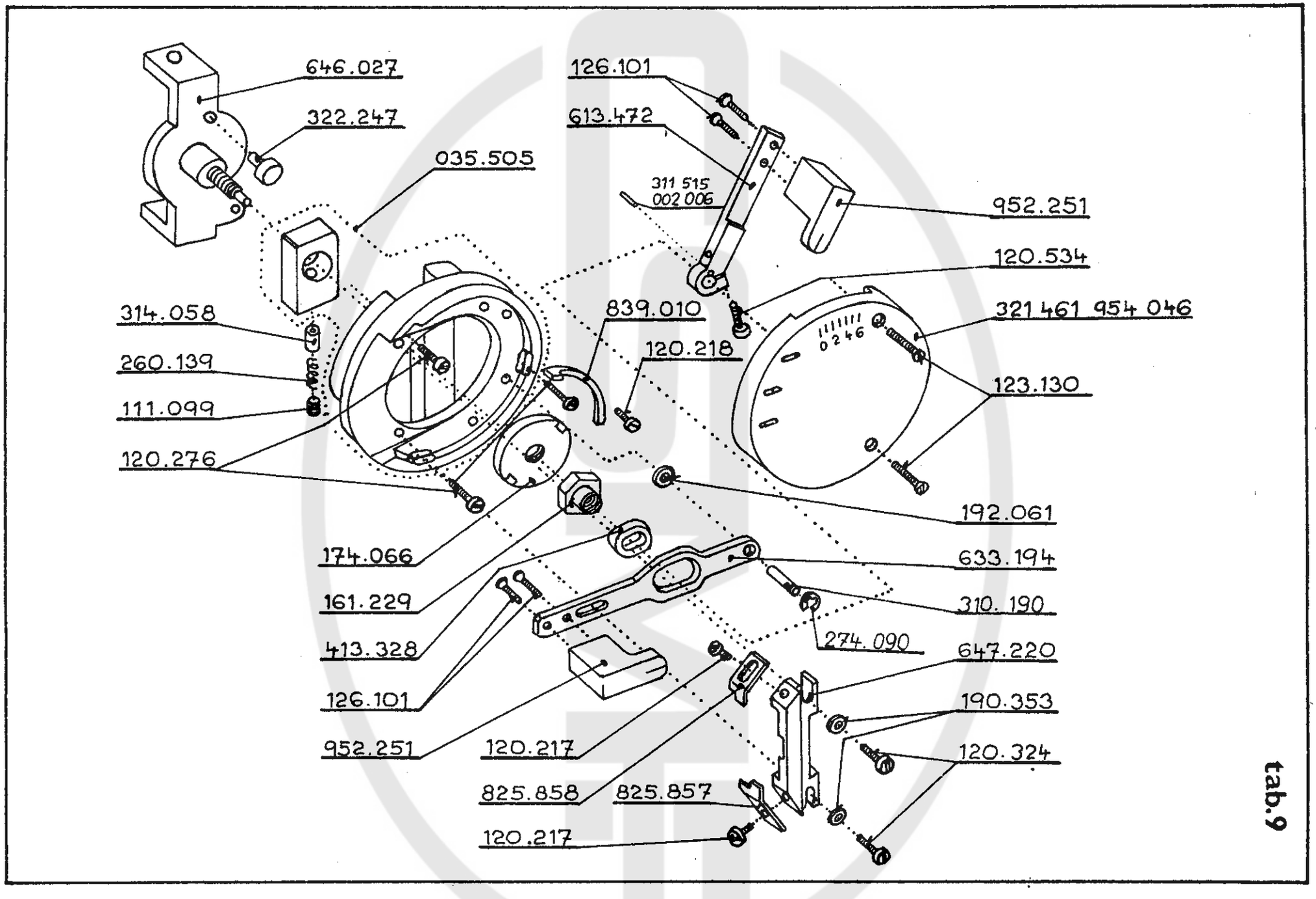
tab.6


ϕ3,5/4,8 x 150
ϕ3 x 600
ϕ3,5/4,8 x 75
ϕ3,5/4,8 x 65
945.180
824.095
120.245
ϕ3 x 110
321.891
001.000
111.245
ϕ2 x 320
ϕ3,5/4,8 x 250
945.316
ϕ3,5/4,8 x 100
ϕ2 x 140
ϕ2 x 130
ϕ3,5/4,8 x 90
ϕ3,5/4,8 x 60
ϕ2 x 140
441.313
ϕ2 x 270
ϕ3,5/4,8 x 210
ϕ3,5/4,8 x 200
ϕ2 x 250
ϕ5 x 640
945.286
824.095
120.216
020.299.10

tab.7


020.299.10
111.227
945.188
945.100
120.220
272.039
310.428
120.360
953.159
264.294
118.039
828.079
828.080
195.041
171.037
049.782
120.216
313.322
822.424
131.027
111.227
416.131
025.245
262.073

tab.8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322.247
035.505
126.101
613.472
311 515
002 006
952.251
120.534
321 461 954 046
123.130
839.010
120.218
314.058
260.139
111.099
120.276
192.061
633.194
310. 190
274. 090
647.220
190.353
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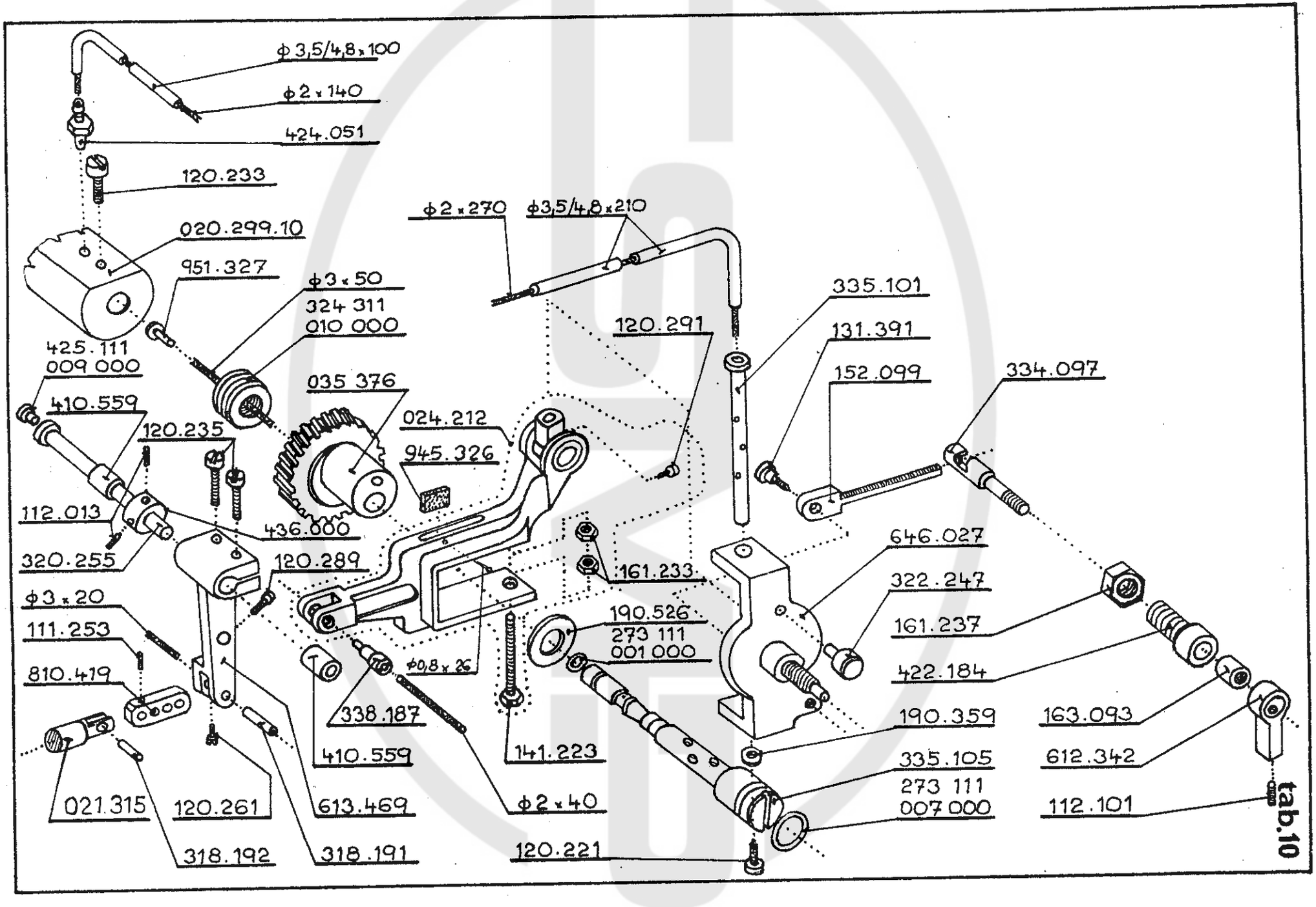
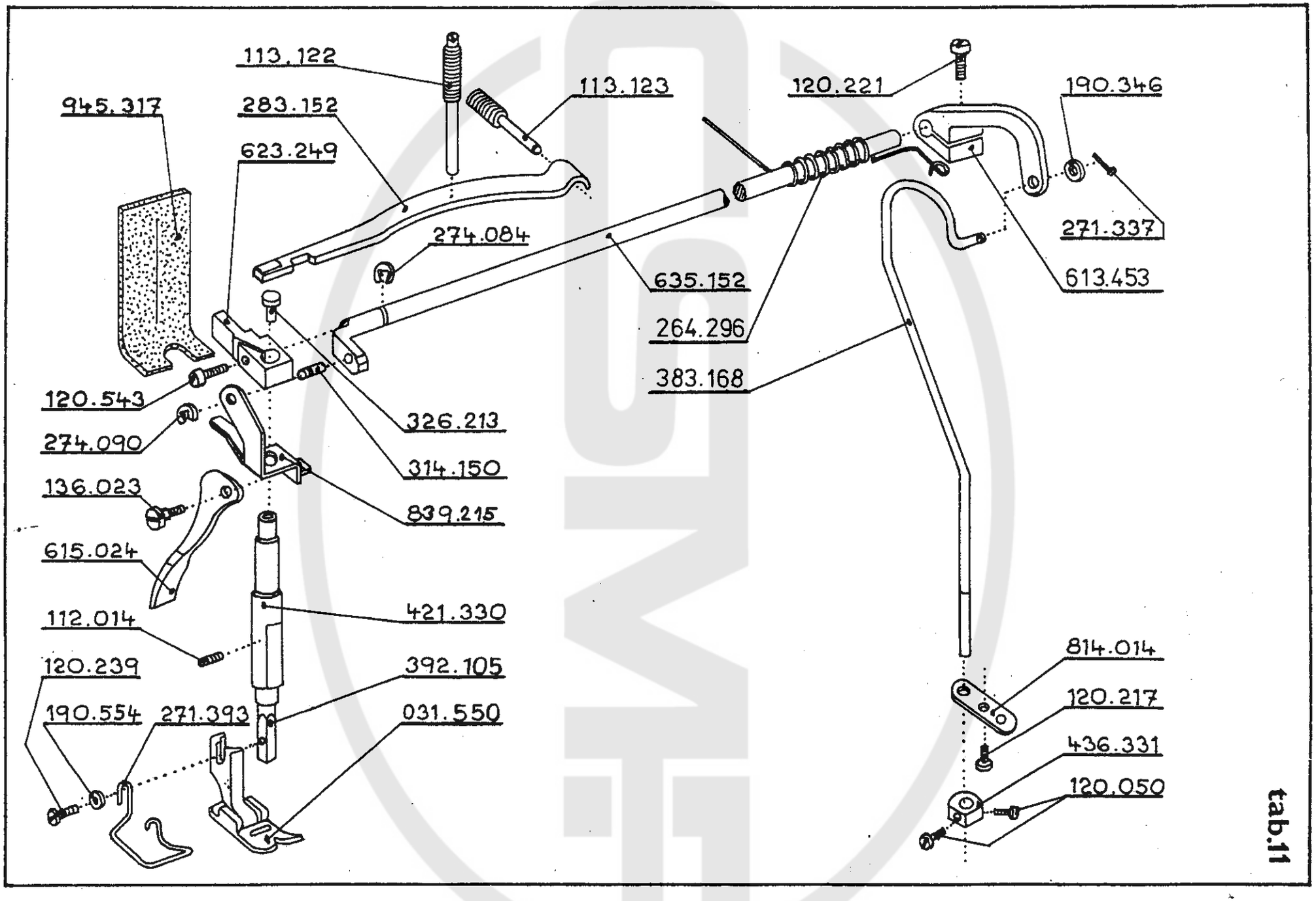
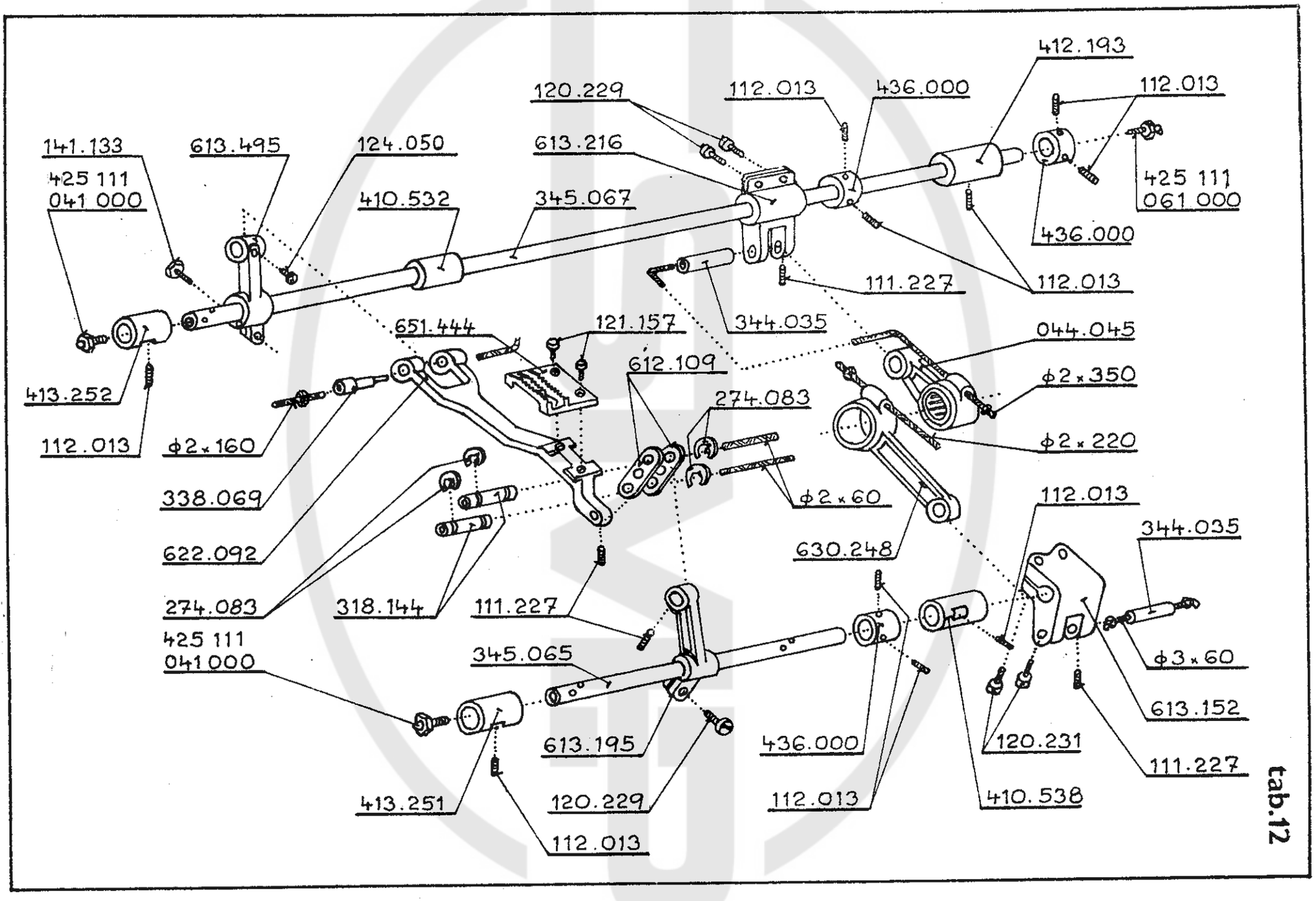
174.066
161.229
413.328
126.101
952.251
120.217
825.858
825.857
120.217
tab.9


ϕ 3,5/4,8 x 100
ϕ 2 x 140
424.051
120.233
020.299.10
951.327
ϕ 3 x 50
324 311
010 000
425.111
009 000
410.559
120.235
035 376
024.212
945.326
112.013
320.255
436.600
120.289
ϕ 3 x 20
111.253
810.419
021.315
120.261
318.192
613.469
318.191
338.187
410.559
ϕ0,8 x 26
ϕ 2 x 40
141.223
120.221
ϕ 2 x 270
ϕ 3,5/4,8 x 210
120.291
335.101
131.391
152.099
334.097
161.233
646.027
322.247
161.237
422.184
190.526
273 111
001 000
190.359
335.105
273 111
007 000
163.093
612.342
112.101
tab.10


113.122
113.123
120.221
190.346
945.317
283.152
623.249
271.337
274.084
635.152
613.453
264.296
383.168
120.543
326.213
274.090
314.150
136.023
839.215
615.024
421.330
112.014
814.014
120.239
392.105
120.217
190.554
271.393
031.550
436.331
120.050
tab.11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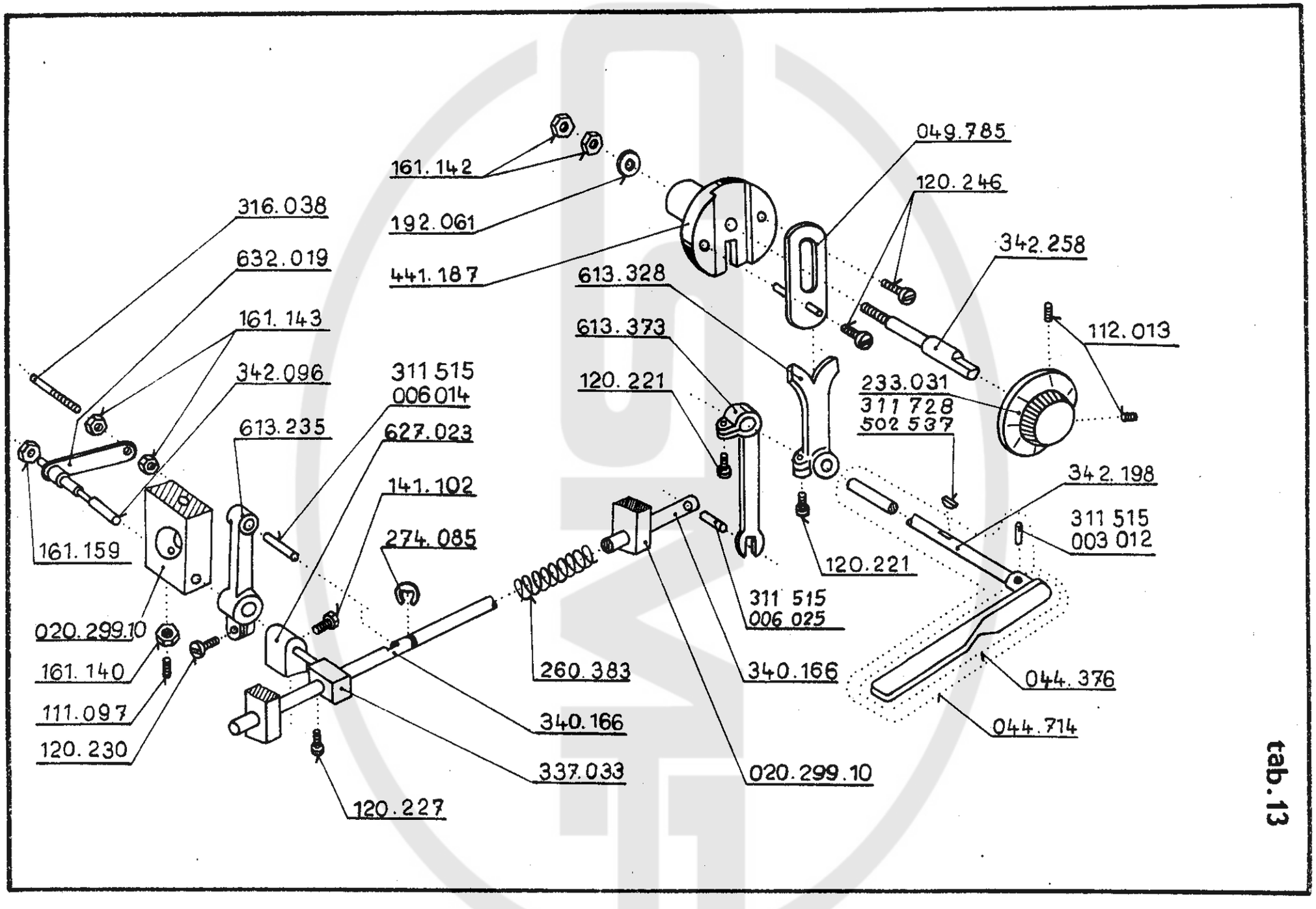
112.013
120.229
112.013
436.000
141.133
613.495
124.050
613.216
425 111
041 000
410.532
345.067
425 111
061 000
436.000
111.227
112.013
344.035
651.444
121.157
044.045
612.109
φ2×350
413.252
274.083
φ2×220
112.013
φ2×160
338.069
φ2×60
630.248
112.013
622.092
344.035
274.083
318.144
111.227
425 111
041 000
345.065
φ3×60
613.152
436.000
120.231
111.227
613.195
410.538
413.251
120.229
112.013
112.013
tab.12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192.061
441.187
316.038
632.019
161.143
342.096
311 515
006 014
613.235
627.023
141.102
274.085
161.159
020.299.10
161.140
111.097
120.230
260.383
340.166
337.033
120.227
049.785
120.246
342.258
613.328
613.373
120.221
112.013
233.031
311 728
502 537
342.198
311 515
003 012
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006 025
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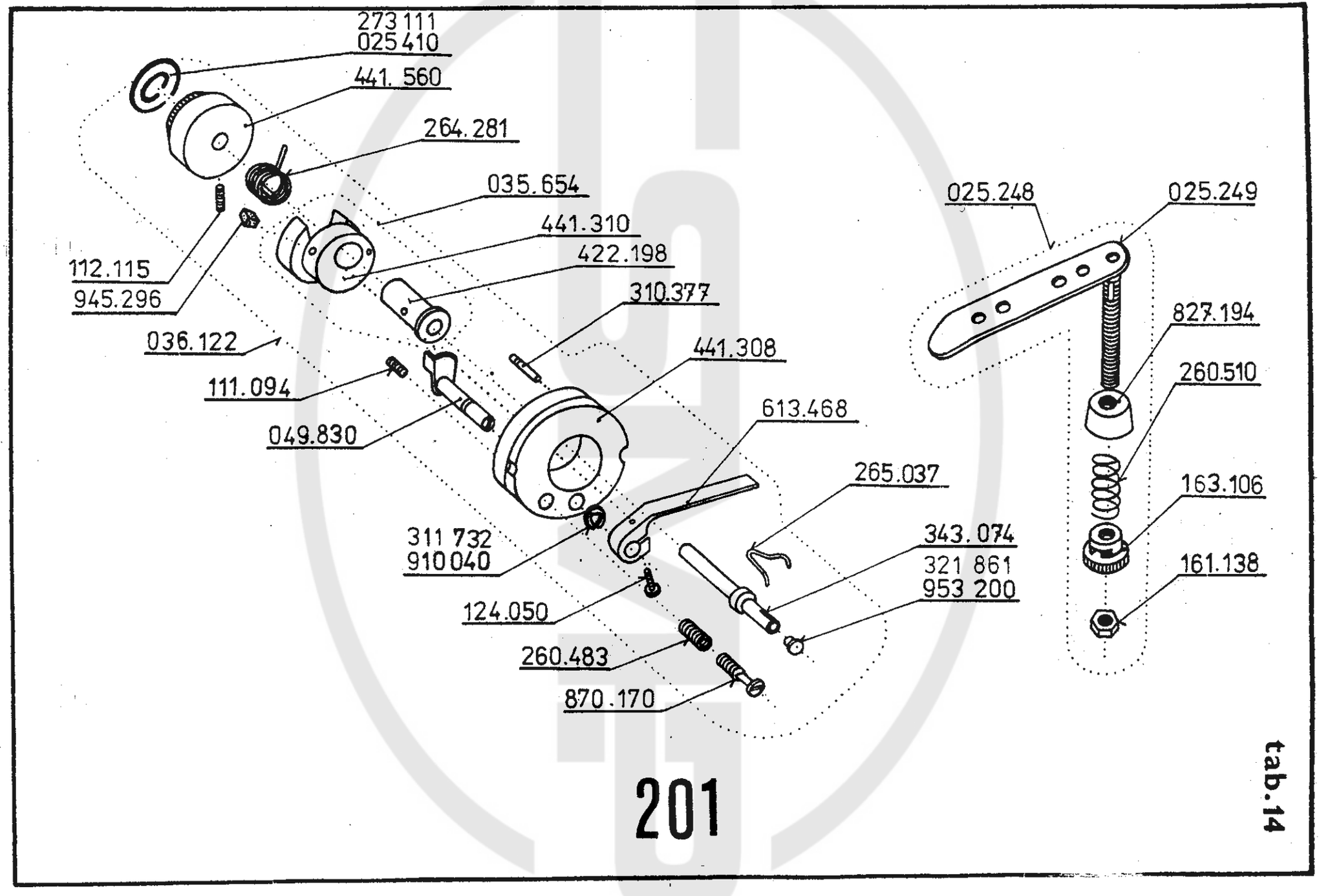
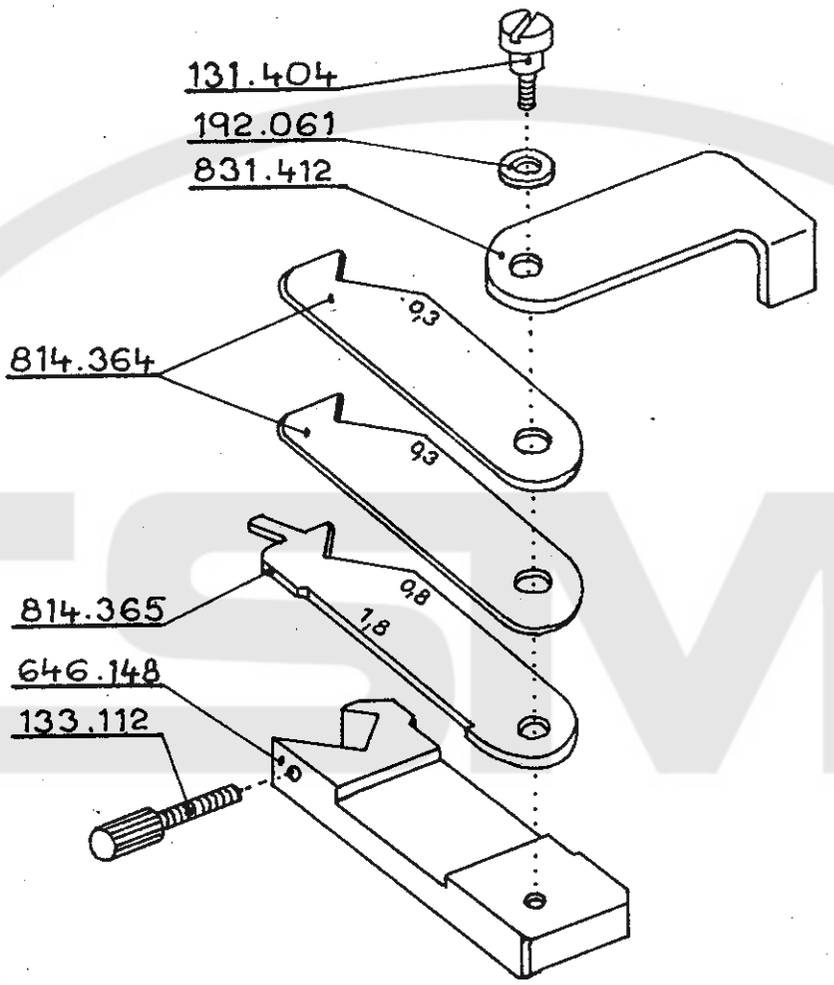
044.376
044.714
020.299.10

tab. 13


273 111
025 410
441. 560
264. 281
035. 654
441. 310
422. 198
310. 377
441. 308
613. 468
265. 037
343. 074
321 861
953 200
311 732
910 040
124. 050
260. 483
870. 170
112. 115
945. 296
036. 122
111. 094
049. 830
025. 248
025. 249
827. 194
260. 510
163. 106
161. 138
201
tab. 14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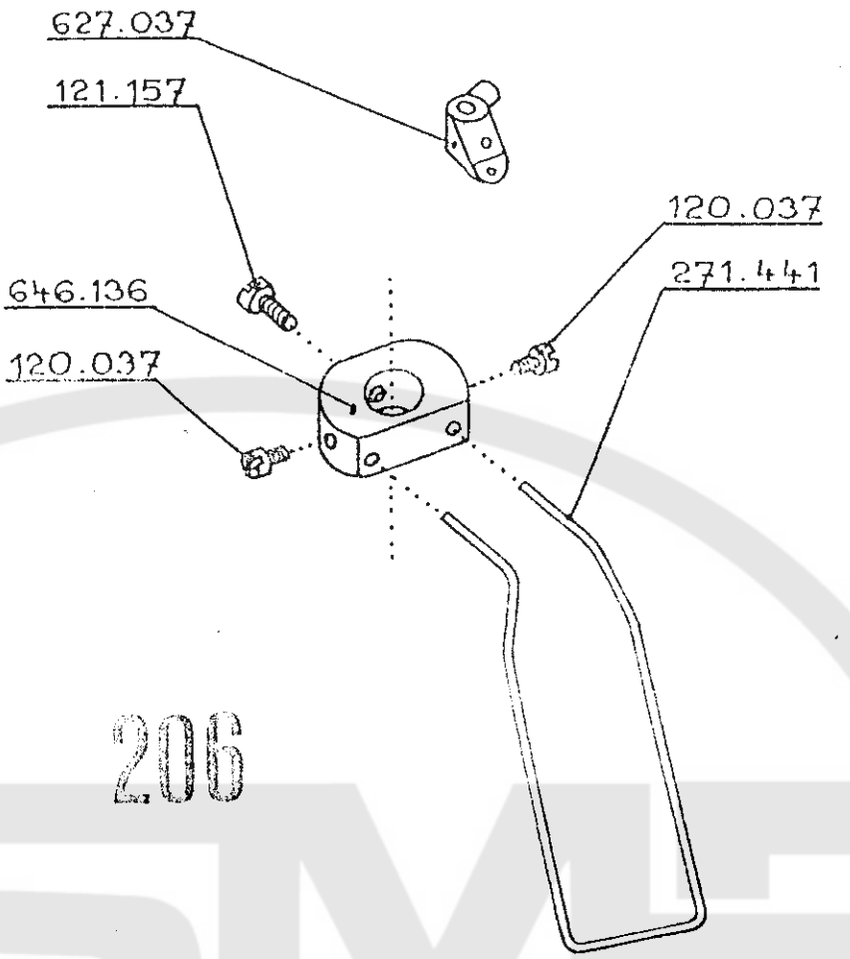
0,3
0,3
814.365
0,8
1,8
646.148
133.112

# 202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121.157
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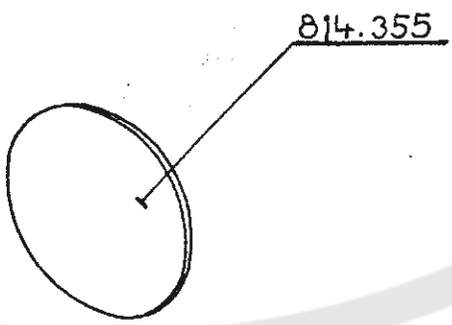
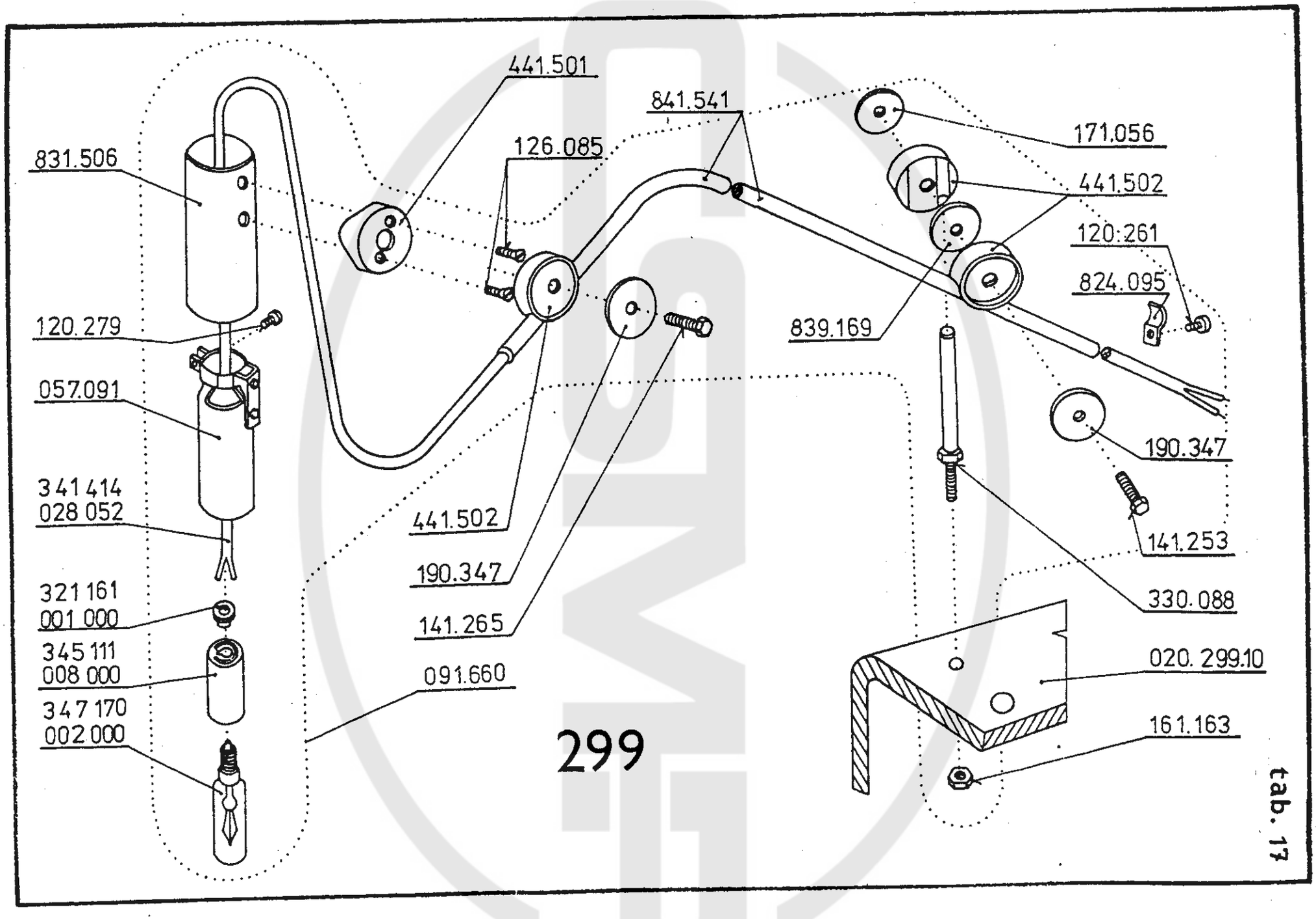
271.441
646.136
120.037
206


814.355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120.279
839.169
057.091
190.347
341 414
028 052
441.502
190.347
141.253
330.088
321 161
001 000
141.265
020. 299.10
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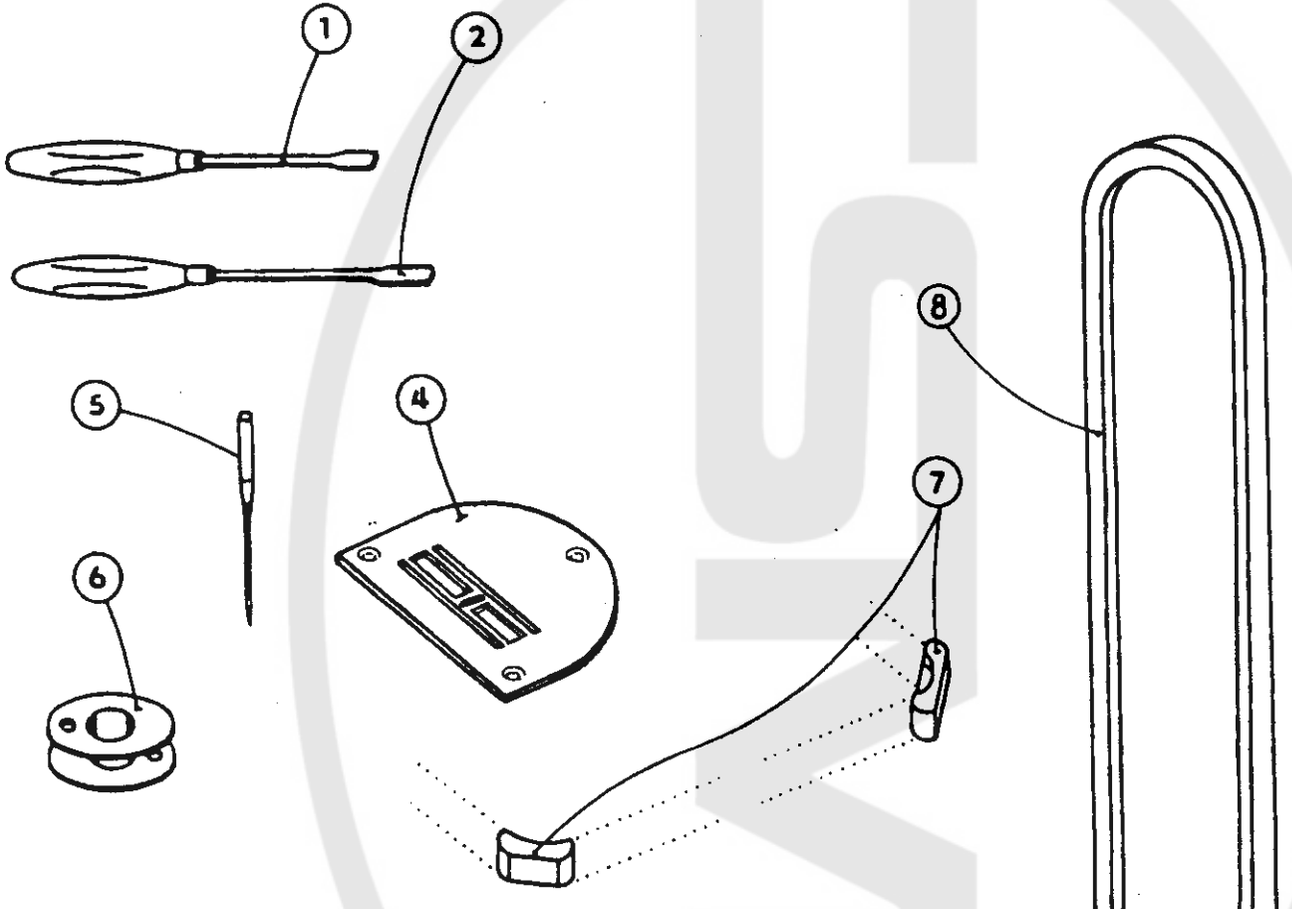
347 170
002 000
161.163
299
tab. 17

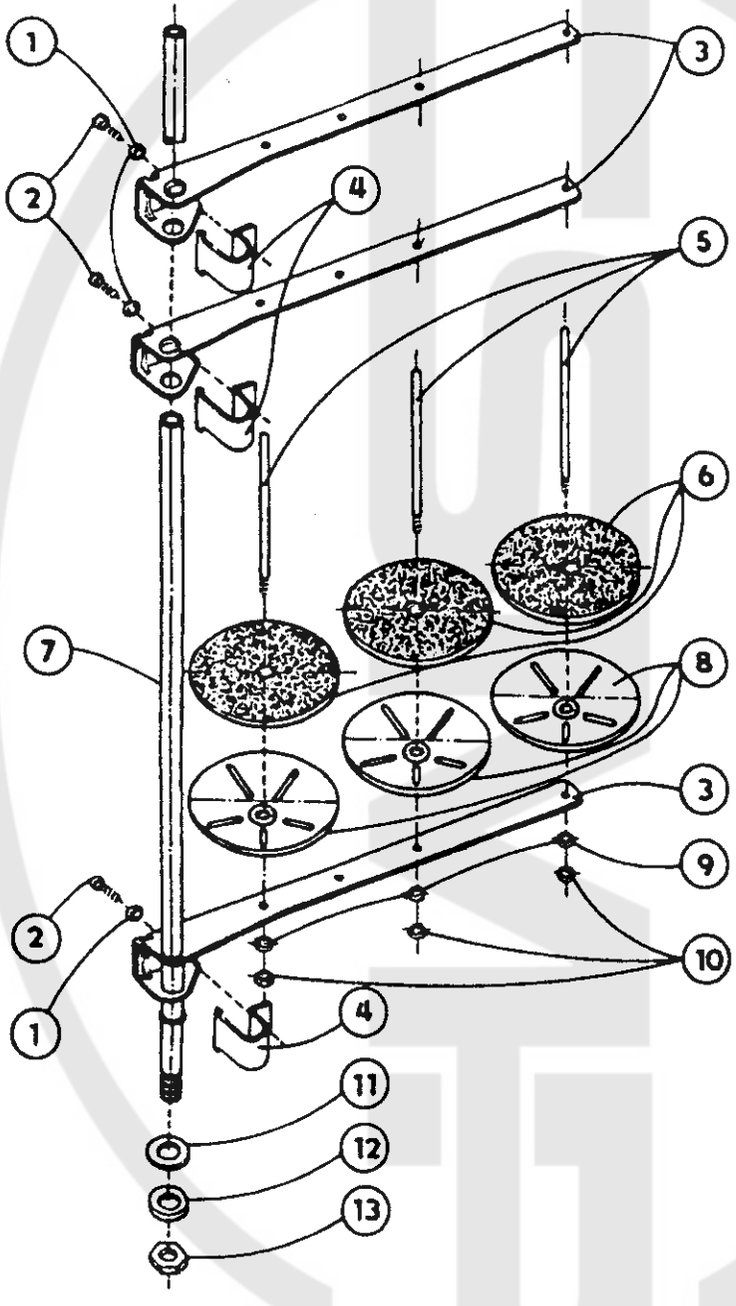
522 980 099 047

# ACCESSORIES

## 522 980 099 047 1



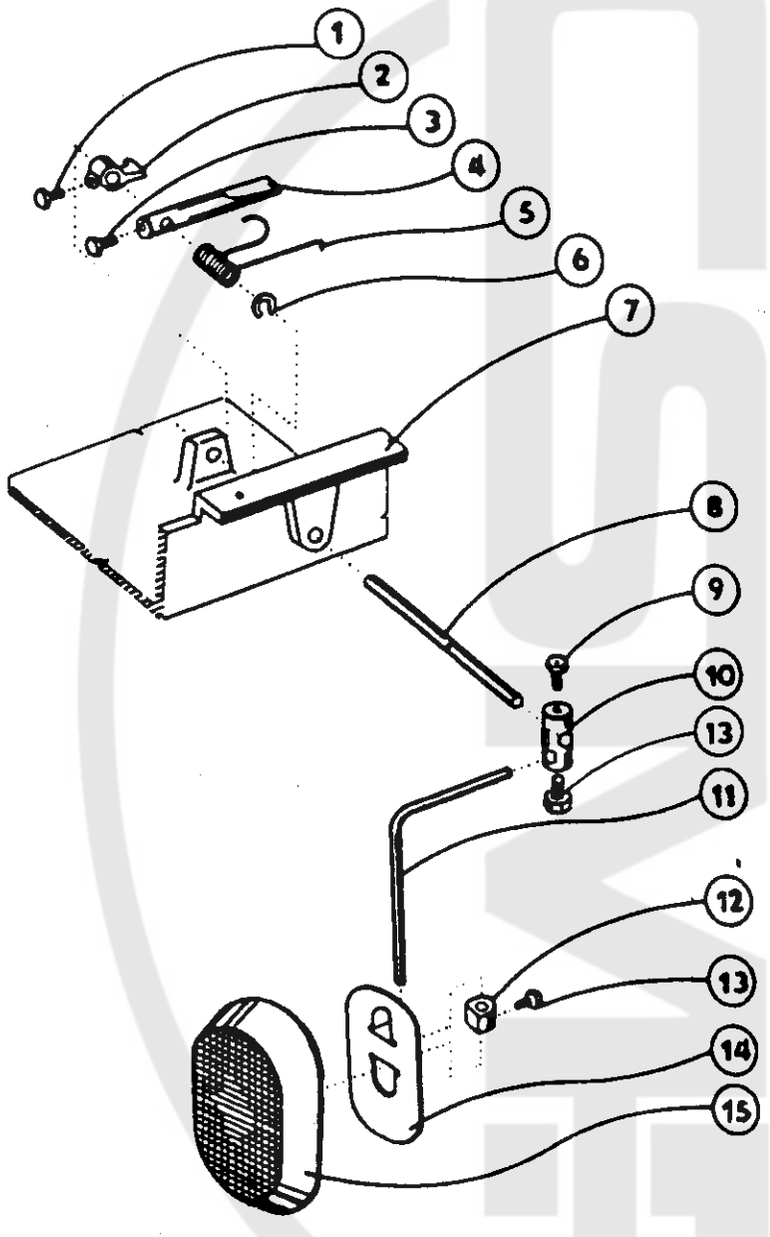

| | | |
|---|---|---|
| 1 | 413 621 731 023 | |
| 2 | 413 624 310 002 | |
| 4 | 522 080 811 637 | |
| 5 | 548 300 000 140 | 10 x |
| 6 | 522 080 685 047 | 5 x |
| 7 | 273 141 940 141 | |
| 8 | 272 711 221 000<br>10 x 1060 mm | |




## 522 980 099 047 2

| | | |
|---|---|---|
| 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 |

## 522 980 099 047 3




| | | |
|---|---|---|
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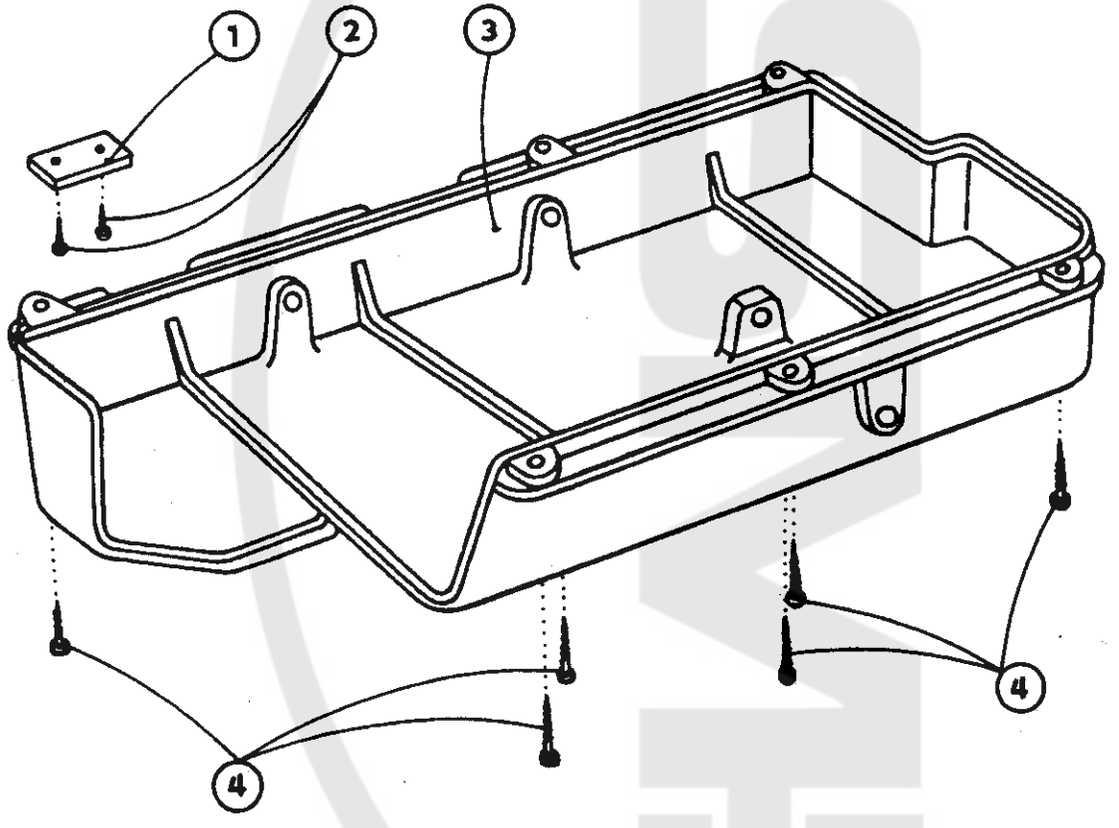
| 2 | 522 080 | 625 022 |
| 3 | 522 080 | 141 108 |
| 4 | 522 080 | 384 052 |
| 5 | 522 080 | 264 168 |
| 6 | 311 732 | 910 070 |
| 7 | 522 080 | 725 074 |
| 8 | 522 080 | 314 065 |
| 9 | 522 080 | 141 123 |
| 10 | 522 080 | 318 069 |
| 11 | 522 080 | 383 022 |
| 12 | 522 080 | 436 271 |
| 13 | 522 080 | 141 112 |
| 14 | 522 080 | 827 173 |
| 15 | 273 412 | 001 000 |

**522 980 099 047** 4




| | |
|---|---|
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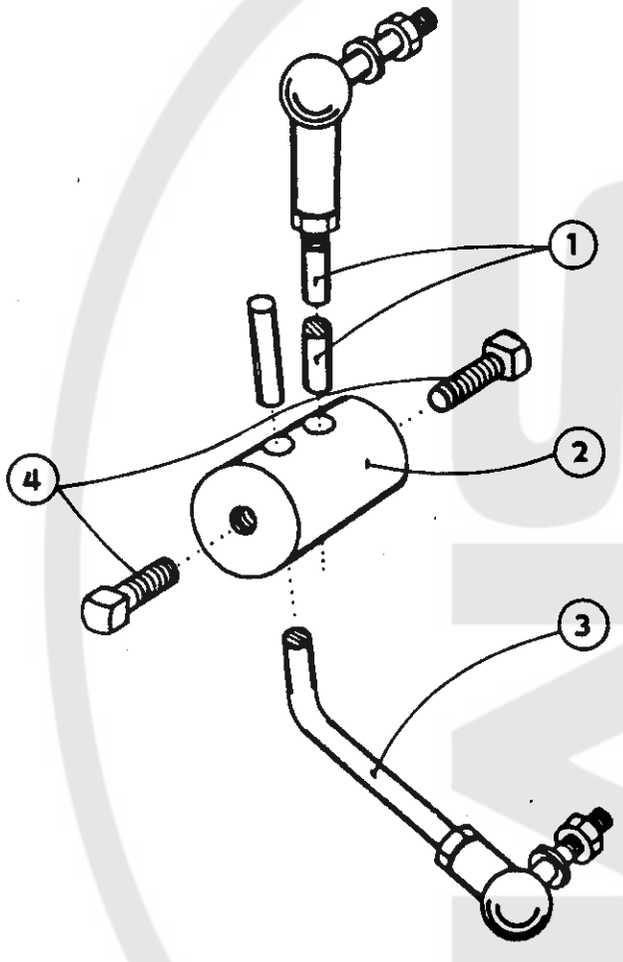
| 2 | 314 140 016 020 |
| 3 | 522 080 725 074 |
| 4 | 522 080 225 031 |




| | |
|---|---|
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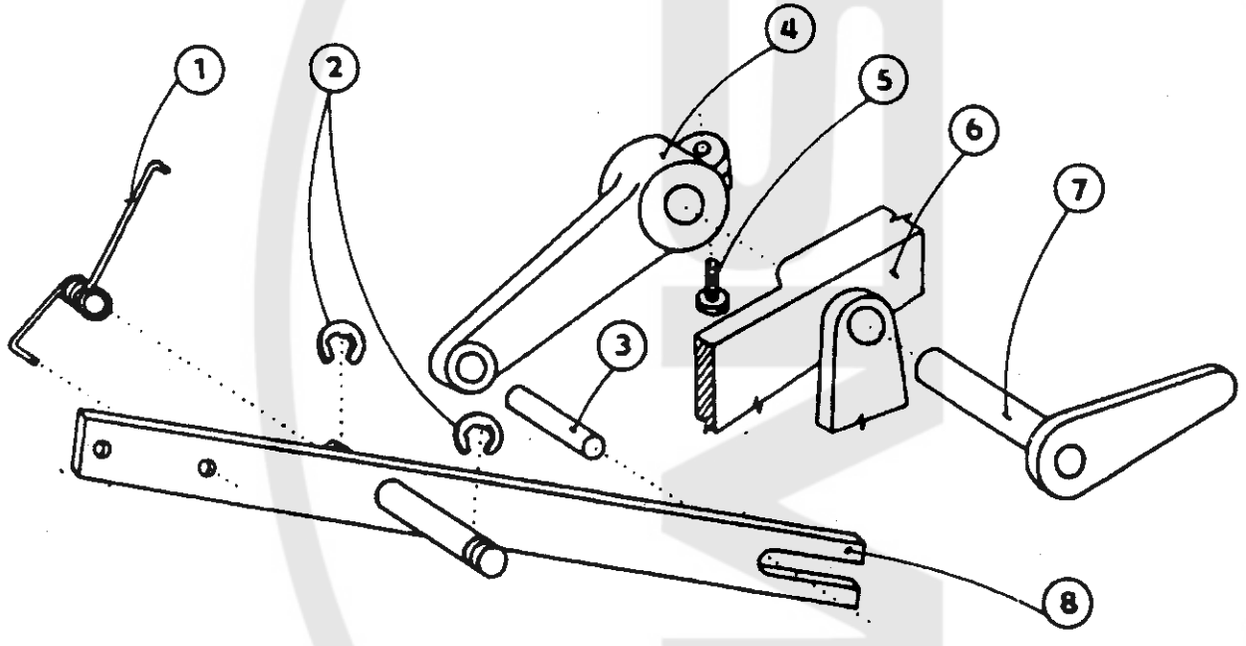
| 2 | 522 080 336 074 |
| 3 | 522 980 044 761 |
| 4 | 522 080 144 035 |

## 522 980 099 047 6




| | |
|---|---|
| 1 | 522 080 264 290 |
| 2 | 311 732 910 070 |
| 3 | 311 515 006 016 |
| 4 | 522 080 613 235 |
| 5 | 522 080 141 109 |
| 6 | 522 080 725 074 |
| 7 | 522 980 044 142 |
| 8 | 522 980 049 109 |