

# User's manual



## **GIF-2500**

ANITA B s.r.o.

Průmyslová 2453/7

680 01 Boskovice

Czech Republic

tel: +420 516 454 774

+420 516 453 496

fax: +420 516 452 751

e-mail: [info@anita.cz](mailto:info@anita.cz)

<b>VERSION</b>	<b>CREATED ON</b>	<b>APPROVED BY</b>
MP03400EN_180903	03. 09. 2018	Jakub Lžičař
MP03400EN_181010	10. 10. 2018	Jakub Lžičař

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## 1. TECHNICAL PARAMETERS

<b>Machine type</b>	GIF-2500
<b>Use for materials</b>	Knit and woven materials
<b>Speed of sewing</b>	6 500 rpm
<b>Stitch length</b>	1,3 – 4,3 mm
<b>Needle system and force</b>	UY128GAS (Nm. 65-90)
<b>Foot stroke</b>	7 mm with top cover / 8 mm without top cover
<b>Weight</b>	Head 58 kg / Complete 86 kg
<b>Dimensions</b>	Head 65x45x62 cm / Complete 107x55x140 cm

### DESCRIPTION AND DETERMINATION:

Bottom and top cover machines are suitable for the production of home textiles, children's clothing, swimwear, underwear, sportswear and other similar products where either the underlying elastic stitch or top cover stitch is required

### MACHINERY LIQUIDATION INSTRUCTIONS:

After the technical life of the machine has ended, transfer it to ANITA B, s.r.o. or another company involved in the professional disposal of products.

## 2. SAFETY PRECAUTIONS

Do not put the sewing machine into operation until proper training is provided by an expert or qualified person and unless you are familiar with safety precautions.

1. Every sewing machine may only be operated by properly trained personnel.
2. Consider the applicable safety regulations of your country.
3. The sewing machine may only be used for the activity for which it is intended. Other uses are not permitted.
4. All safety precautions must be observed on the machine prior to commissioning or operation.
5. Protective glasses are recommended for personal safety.
6. If modifications or changes are made to the machine, safety regulations must be followed. Adjustments are only made on your own responsibility.
7. For the following work, the main switch of the machine must be switched off or the fork must be pulled out of the power socket (use mechanically operated clutch motors without a trip fuse to wait until the engine stops):
  - a) When threading the needles (needles), hooks, etc.,
  - b) When changing needles, presser foot, stitch plates, hooks, hooks, feeders, needle shields, fingers, work conductors, etc.,
  - c) When leaving the workplace and leaving the workplace unattended.
  - d) Machine maintenance (during cleaning).
8. Repairs, maintenance and servicing of machines may only be carried out by an expert or a qualified person. For repairs, only spare parts from the machine manufacturer must be used.
9. Work on the electrical installation of the machine may be carried out by an electromechanician or under the supervision and control of a qualified person.
10. Work on parts and equipment under power is not permitted.
11. Before the maintenance and repair of pneumatic equipment, it is necessary to disconnect the compressed air source. Residual compressed air must be drained before work starts.
12. It is the responsibility of the user if the safety measures in the operating instructions are not observed.
13. Instructions for the use of the respective drive are an integral part of these operating instructions and must be observed when working. In particular, "Security instructions".

**IMPORTANT NOTICE:**

To avoid malfunctions or damage, please observe the following points:

1. Clean the machine thoroughly and then oily before using it for the first time.
2. Check that the mains voltage corresponds to the voltage stated on the engine rating plate. If not, do not put the machine into operation at all.
3. When operating the machine, the hand wheel must be rotated towards the operator; If this is not the case, switch off the engine.
4. Do not exceed 3/4 of the maximum machine speed in the first two weeks.
5. Always set the threaded lever to its highest position before removing the seam.

**Safety instructions:**

1. The machine may only be used for its intended purpose. When adjusting for other designs, all applicable safety regulations must be observed.
2. The operation of the machine without protective equipment provided by the factory is not permitted.
3. The machine may only be switched on and operated by a properly instructed person (operator).
4. When replacing sewing tools, such as needles, presser foot, stitch plates, feeders and coils, when leaving the workplace and during maintenance work, the machine must first be switched off by mains switch or disconnected from the mains.
5. Work on wiring may only be carried out by electricians or by appropriately instructed persons.

### 3. INSTALLING THE MACHINE INTO OPERATION

To avoid malfunctions or damage to the machine, the following precautions must be observed: clean the machine from preservatives, drop 1-2 drops of oil into the hat, remove the front cover, and lubricate the eyebolts of the needle bar and the thread of the thread lever.

Have the expert check that the electrical installation of the machine is OK, including the appropriate electrical voltage. motor current and make sure that the handwheel of the machine rotates towards the operator after the electric motor is connected (according to the arrow). In the first two weeks, do not use the full machine speed, stitch only about 3/4 of the maximum speed.

#### **ATTENTION!**

**Do not interfere with the electrical installation of the machine, call an expert-electromechanician. Danger of electric shock.**

**When working on and near the machine, be careful not to cause injury. Ensure that no liquid can flow into the electrical installation and cause a short-circuit or other electrical installation failure. Observe generally valid safety regulations.**

**When working on the machine, be especially careful in the vicinity of the needle, cutting knives, yarn levers and pressure elements of the work.**

**When pivoting the machine on the pedestal, take extra care to avoid overturning the machine with the stand.**

**When folding the machine's head into the working position, grasp the head with both hands so that there can be no injury between the folding machine and the base plate.**

#### **1. Before use:**

- a) Do not start the engine when the pedal is depressed.
- b) Always switch off the main switch when leaving the workplace.
- c) When repairing the machine or changing the needle, make sure the machine is turned off.
- d) Ensure that the ground wires are firmly connected.
- e) Do not use a large number of connections per node.
- f) Observe the safe distance from noise sources.
- g) Wait a few minutes after switching off the machine for any electronic motor operation.
- h) If the system fails, first identify the type of error, clear the error, and then turn on the device again.
- i) Check the connection of all connectors and cables.
- j) After a long machine shutdown or when installing a new machine 2 to 3 times, inflate the oil to the marked position on the hem of the rim, pressure bars and rods.
- k) Set the first 4 - 5 days of use for less than 3,000 rpm for a perfect fit. With the oil mark, make sure the oil flows.

## 2. Installation:

### a) Motor, belt and belt cover:

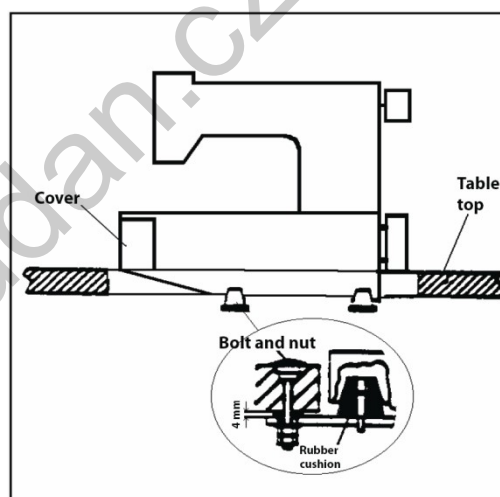
The maximum sewing speed of this machine is 6500 s. p. m. and ordinary speed is 5000 s. p. m. During the first 200 hours (or first month) of using the machine, please do not exceed 80% of the ordinary speed which is 4000 s. p. m.

- 1) Use v belt according to the pulley and be sure the motor running direction is clockwise and the motor belt tension can be pressed inward about 2 cm (Fig. A).
- 2) Don't forget install the cover of the belt and pulley (Fig. B)

### b) Table top installation:

Install the machine correctly referring to the illustration. Set bolts and nuts to machine table and put rubber cushions on bolts and rest the machine on them securely.

If using rubber cushion to adjust the height of machine then, must make sure there is no interference between machine and table top, so can open up the oil filter bolt and nut side cover without any problem.





## 4. LUBRICATION

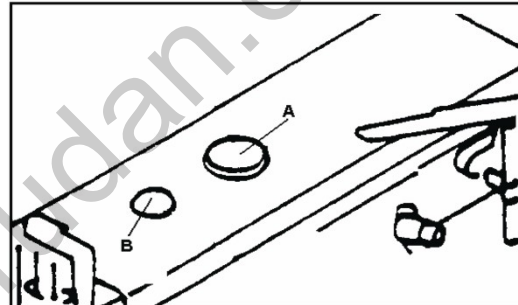
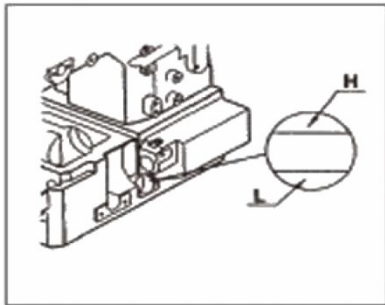
### 1. Lubrication oil and cooling oil:

Please use Garudan m22, Mobil #10 or equivalent oil for lubrication oil and use silicone oil for cooling oil.

### 2. Feeding oil:

The lubrication oil has been drained off completely before delivery, adding oil to the upper line of oil gauge (c) by removing seal plug (a). Also, please make sure the oil flows out of nozzle (b) at the start of operation.

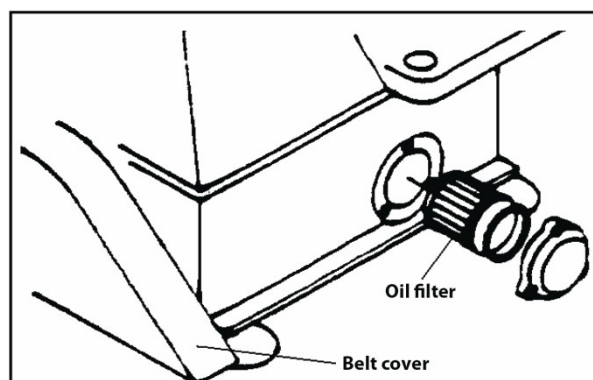
Before starting a brand new machine or a machine which has not been used for more than a couple of weeks, lubricate the needle bar first. Before using the machine, check the oil level is above the mark L



### 3. Changing oil:

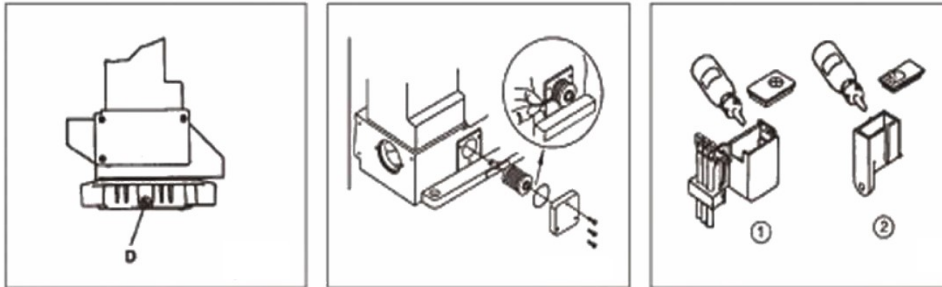
For the longer life of machine, change lubrication oil completely after 250 hours (or 4 weeks) of initial operation initial operation.

- A. After taking off belt cover, remove v-belt from motor pulley, and remove machine head from machine table.
- B. Loosen screw (d) and drain off all the oil from the machine.
- C. After draining, tighten screw (d) back.
- D. When replenishing oil please refer to paragraph 4-2 "feeding oil" above.



#### 4. Oil filter:

Although the machine is using oil pump lubrication and splashing lubrication systems, please check and clean oil filter every month. And when no oil or very little oil comes out of nozzle even indicator shows normal, please check oil filter and replace it if necessary.



#### 5. Adding cooling oil:

Avoid needle breaking, stitch jumping or thread melting problems etc. Please fill cooling oil tank and felt with silicone oil under some special circumstances, cannot use silicone oil or no need to use silicone oil then, you can take felt off from.

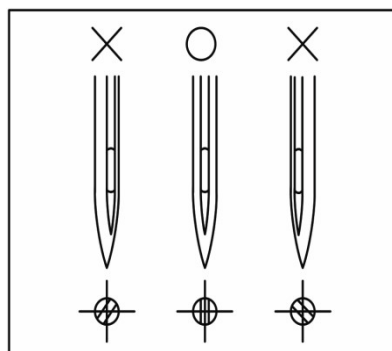
### 5. NEEDLE

#### 1. Needle selection:

Needle UY128gas of Groz Beekert is to be used. There are many sizes of needle according to the thickness and kind of fabrics used.

#### 2. How to replace the needle:

Replacing needle should be made correctly with the scarf facing rightly backward as shown in the illustration.



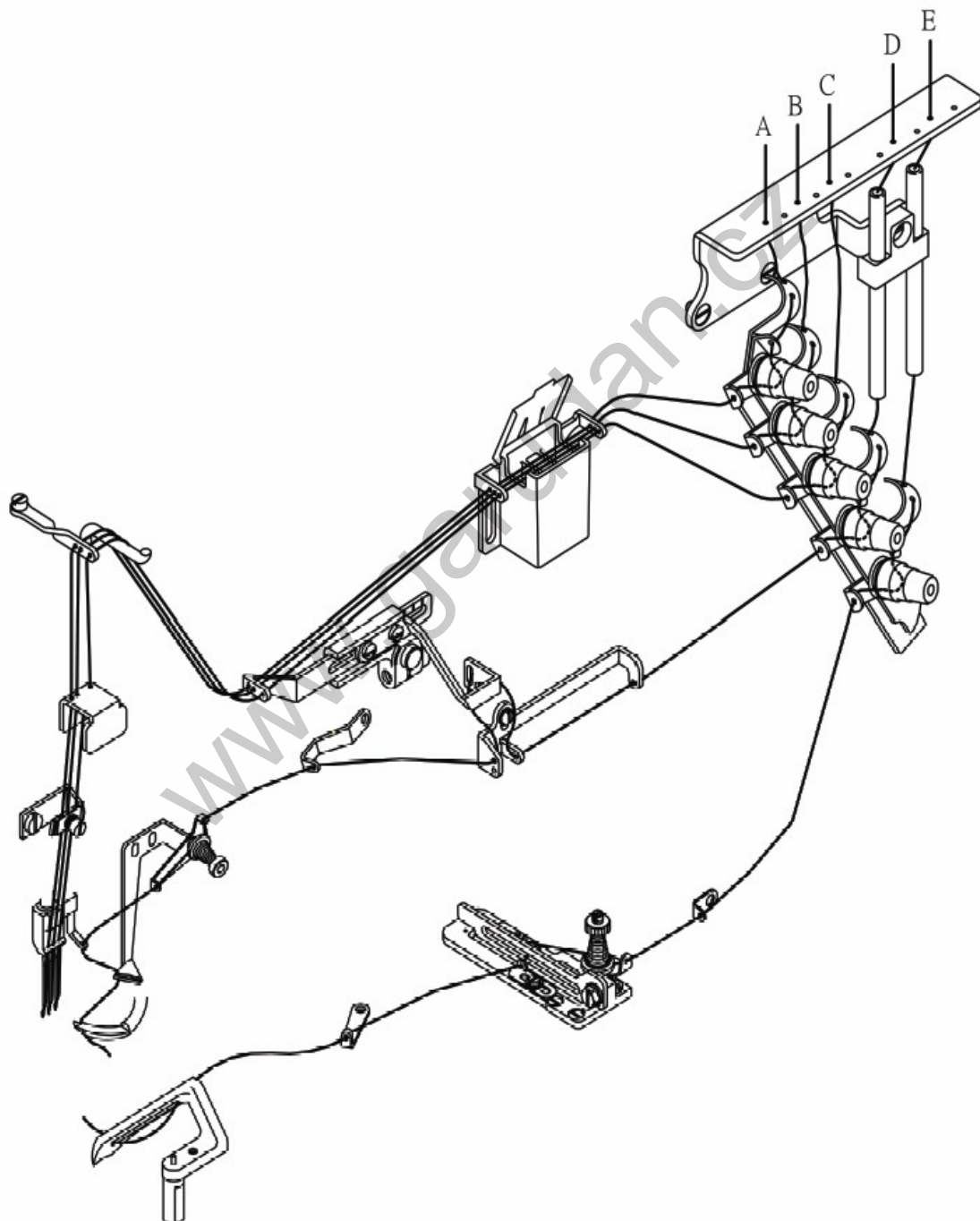
### 3. Threading:

Threading should be made correctly referring to the illustration. Improper threading might cause skip stitch, thread breakage and uneven seam etc. The threading for three needle machine is shown in the illustration below. For two needle machine, threading is the same except only two needle threads.

A, B, C – needle thread

D – top cover thread

E – looper thread

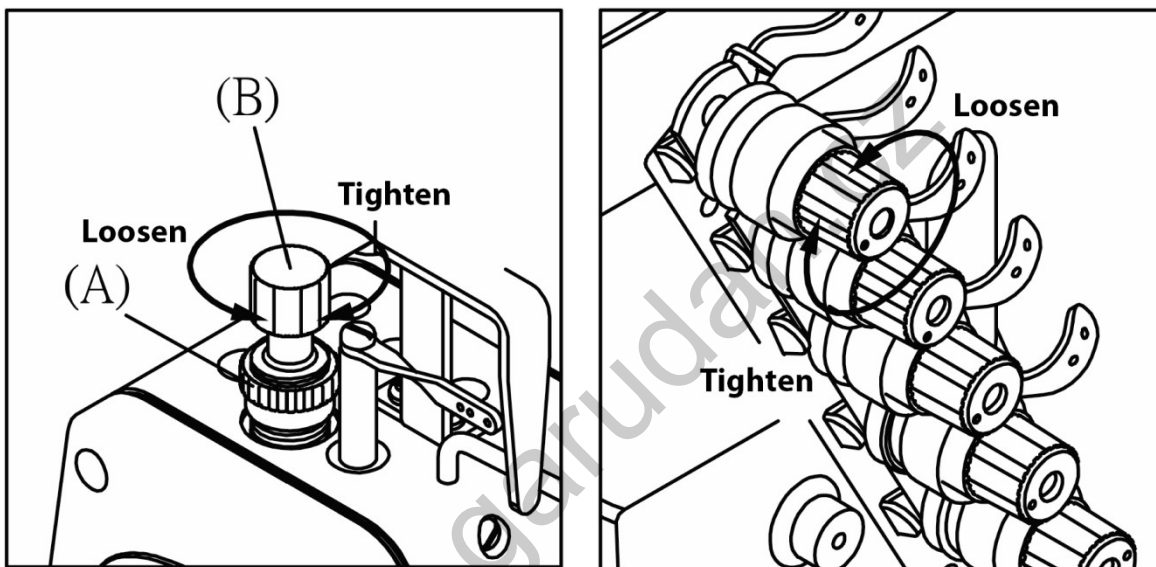


## 6. PROPER OPERATION ADJUSTMENT

Due to the thickness of fabrics, different materials different kinds of thread, Different stitch requirements the changes of differential ratio, all is affecting the sewing performance. Thus, must conduct the proper operation adjustment in order to get best sewing effects.

### 1. Pressure of presser foot:

To increase the pressure of presser foot, turn adjusting screw (b) clockwise after loosening lock nut (a) and to decrease, turn it counterclockwise. Pressure of presser foot should be as weak as possible so long as presser foot can operate properly.



### 2. Thread tension:

Different threads have different tensions and even same threads will have different tensions when go through different threading holes. Each thread tension can be adjusted by individual tension nut to increase thread tension, turn tension nut clockwise, to decrease thread tension, turn tension nut counterclockwise. Please use least thread tension as long as it will not affect the sewing effects.

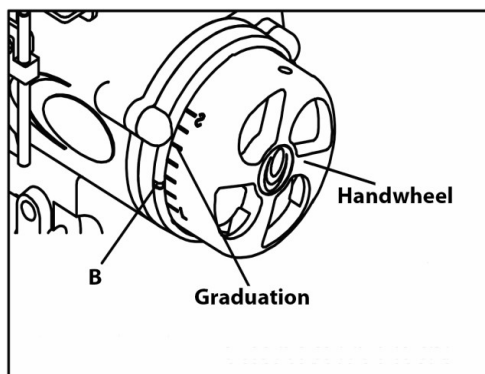
### 3. Adjusting stitch length:

Adjustment of stitch length can be made steplessly from 1.4mm/per stitch to 3.6mm/per stitch.

Stitch length	Stitch number	Stitch number
4,2mm	6 per inch	7 per 30 mm
3,6 mm	7 per inch	8 per 30 mm
2,4 mm	10,5 per inch	12,5 per 30 mm
1,4 mm	18 per inch	21 per 30mm

#### 4. Stitch length adjustment:

Turn hand wheel. One graduation on the Circumference of hand wheel indicates a stitch length (m. m). Which should be aligned with the mark (B). Then release hand.



#### Change of stitch length:

Press Push-button (A) with left hand lightly until its tip can be noticed to touch inner parts. Press it lightly, turn hand wheel with right hand until the Pushbutton drops in, then press in the Pushbutton strongly and turn hand wheel. (Fig. 1)

When getting graduation "L" closer mark (B) by turning hand wheel to the right, the stitch length becomes long. (Fig. 2)

At the position "L", the stitch length is about 4.2 mm. When getting graduation "S" closer to mark (B) by turning hand wheel to the left, the stitch length becomes short. At the position "S" the stitch length is about 1.4 mm. Even with the same graduation, the stitch length varies according to the kind and thickness of fabrics and amount of differential, etc. In the case, re-adjust hand wheel for proper position.

Note: When changing stitch length, turn switch of motor "OFF" without fail.

#### Push-button stop:

Use the stop (D) to keep determined stitch length. To actuate the stop, loosen screw (C), turn pushbutton stop (D) upward and set it under pushbutton then tighten screw (C). (Fig. 3)

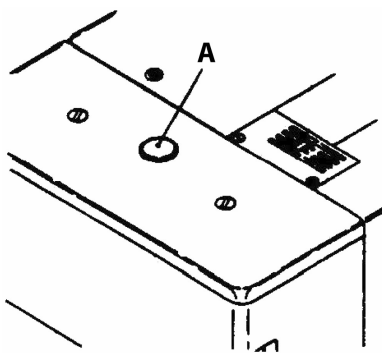


Fig. 1

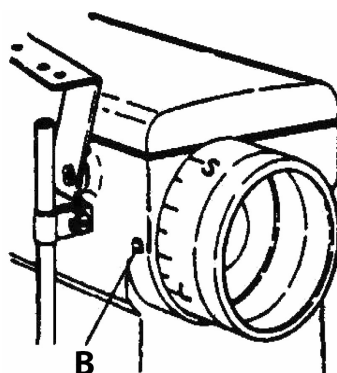


Fig. 2

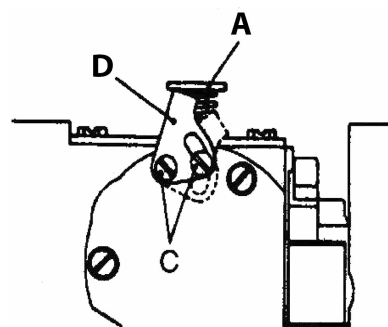
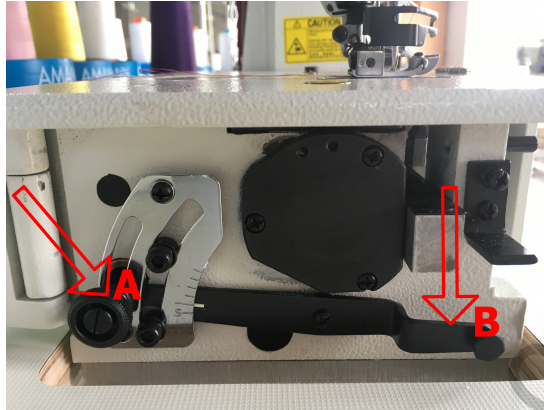


Fig.3

### Differential feed:

Used to adjust the feeders to each other, respectively to stretch the stitch.

The setting is done as follows: fold the cover to the left, loosen screw A, adjust the stitch length using lever B and tighten screw A. Fig. 4



### 5. Adjusting the needle thread take-up:

Different threads have different stretch tension and cause skip stitching thread breaking and unstable stitching easily. This machine equipped with thread take-up, front needle thread guide, rear thread guide and auxiliary thread tension control guide in order to give better control of the looper thread take-up and stabilize the stretching of looper thread.

The thread take-up and rear thread guide were set at standard position before shipment. As shown on figure A/B. And also can be adjusted as arrow directions if necessary

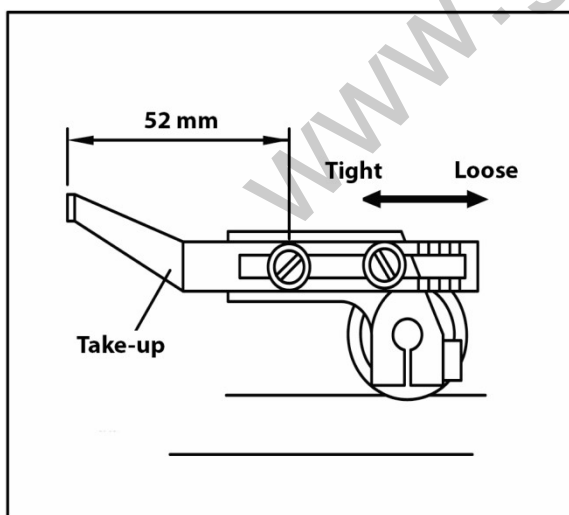


Fig. A

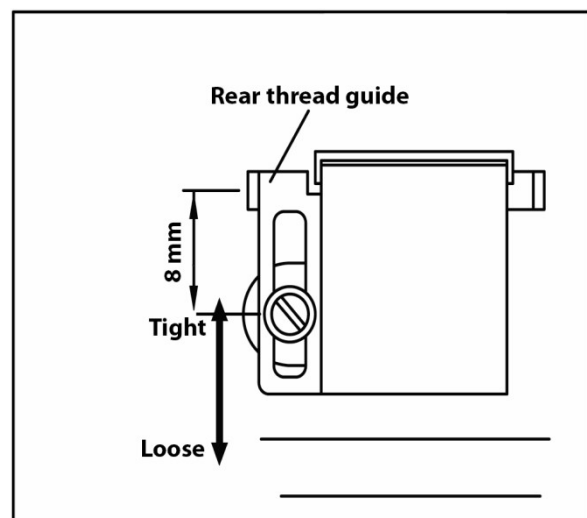


Fig. B

Sometimes, it is not so easy to make loop for some kinds of thread and also make it difficult for looper to catch the needle thread, causing skip stitch. In such case, can use auxiliary thread tension control guide to stabilize the threads (Fig. C)

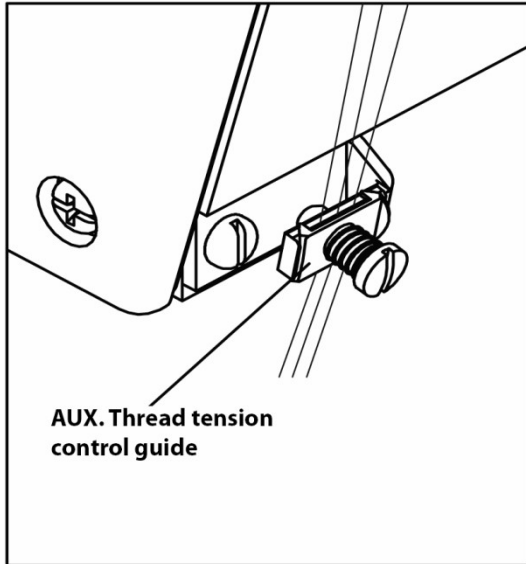


Fig. C

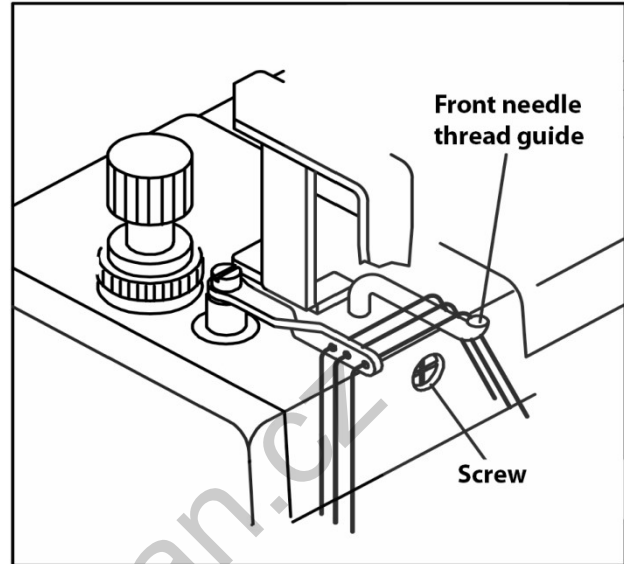


Fig. D

In case the formation of needle thread loop is unstable when using stretchable thread, you can solve this by adjusting the height of front needle thread guide, especially when looper move from right to the left. If the left needle skip the stitch when using synthetic thread or right needle interfere with the formation of thread loop when using blended thread, you can use front needle thread guide, with needle bar at the lowest position, the center of thread hole of rear thread guide eyelet should be even with the surface of front needle thread guide and front needle thread guide and rear thread guide should be parallel with each other (Fig. D)

### 6. Adjusting the looper thread take-up:

When left needle comes down to the half point (Fig. E), the thread must get off from the highest position of looper thread take-up. The adjustment is made by loosening screw, turn the looper thread take-up to the proper position and tighten the screw (Fig F).

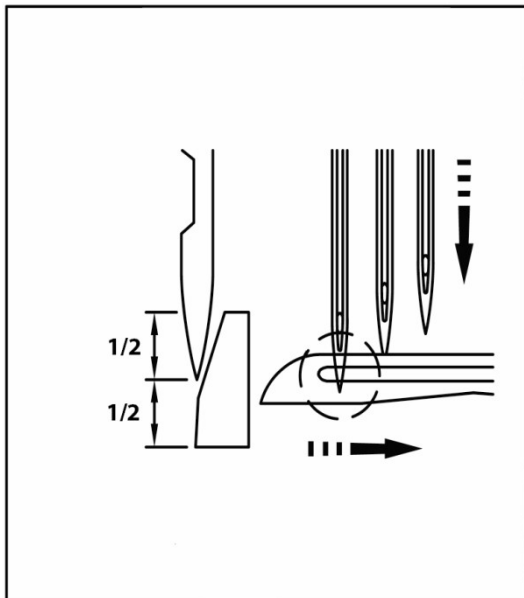


Fig. E

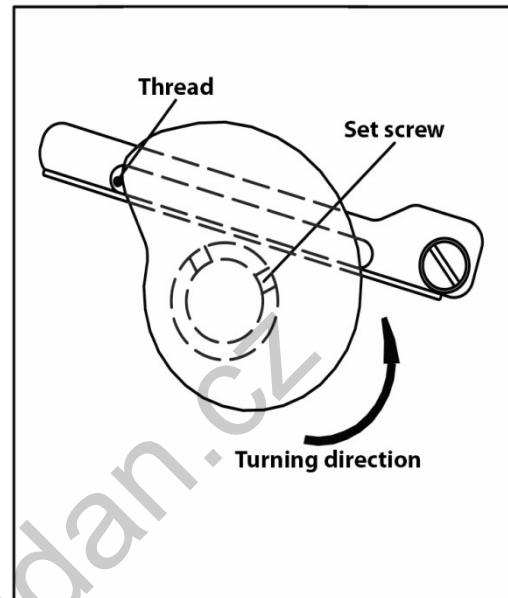


Fig. F

To decrease the amount of looper thread in the seam move thread guide eyelet to Aligning mark to increase, move it backward (Fig. G)

For stretchable threads, move right and left thread guides to aligning mark and also do not pass the thread between thread guide.

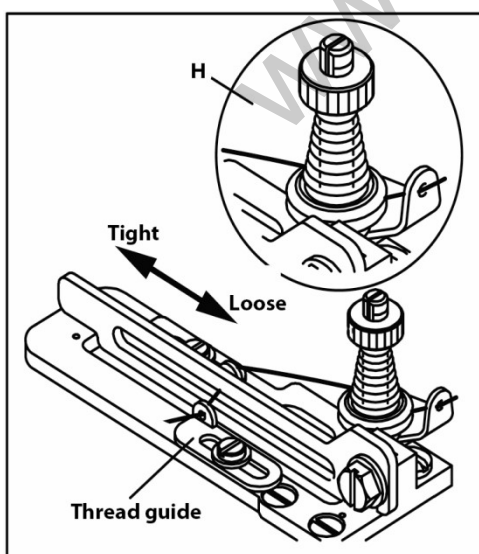


Fig. G

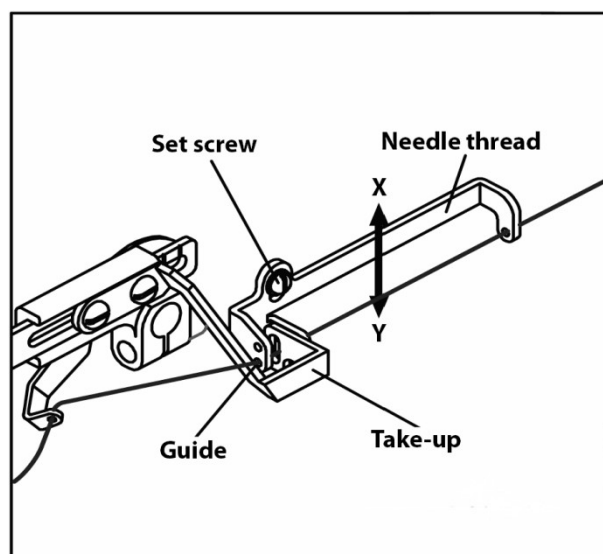


Fig. 1



## 7. Adjusting spreader thread take –up:

The thread amount of top cover thread is adjusted by spreader thread take-up. For standard position, loosening set screw, push thread guide upward to its highest position as x direction show. Then tighten the set screw.

Stretchable thread, push the thread guide downward as y direction and thread must pass through the eyelet of thread guide.

## 7. ADJUSTING OF MACHINE

This machine was sent to the standard position before delivery and it's unnecessary to re-adjust unless under some situation as changing the needle, looper, different kind of fabric or different sewing threads. Please adjust according to following items:

### 1. Adjusting presser foot and petting the height of presser foot:

It will be easier to conduct some adjustments by taking off the presser foot as follows:

Loose the lifter arm and loosen the screw from presser foot and stopper, lifting up the presser bar, you can take presser foot very easily. After changing, remember put it back in reverse sequence (Fig. A, B).

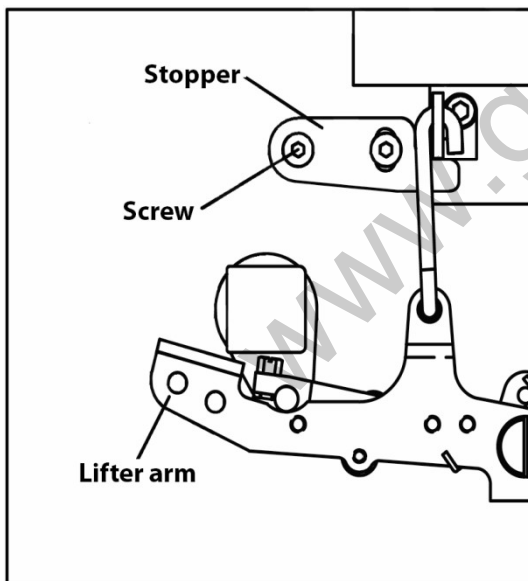


Fig. A

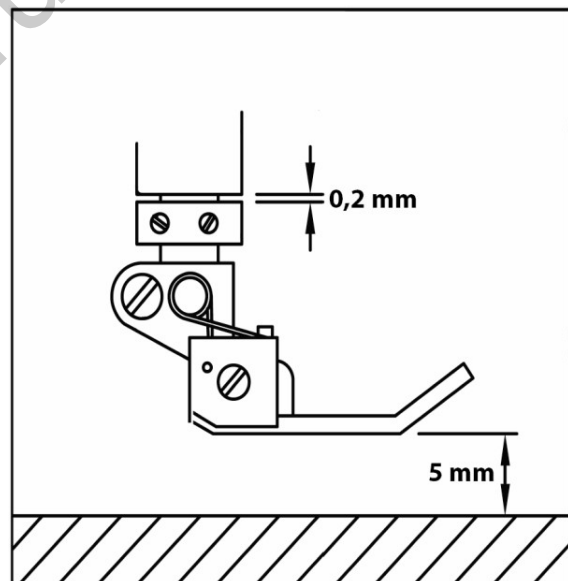


Fig. B

## 2. Adjusting the height of needle bar and needle drop point:

When the tip of looper comes to the center of left needle, the looper should be positioned above the upper end of needle eye by 0.5-1.0 mm as this is the standard position for needle bar (Fig. C).

Loosen the screw of needle bar clamp and adjust the needle bar to get proper height (Fig. D).

After adjustments, tighten the screw of needle bar clamp and make sure the needles are in the center of needle drop hole of needle plate (Fig. E).

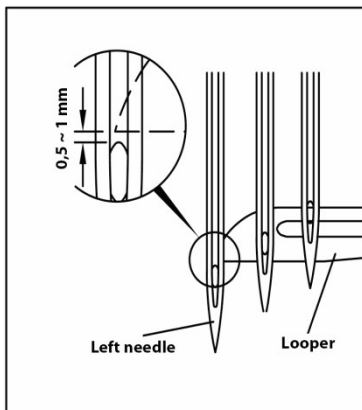


Fig. C

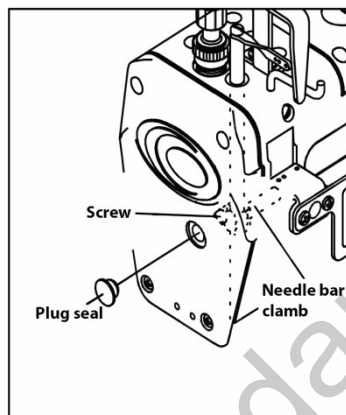


Fig. D

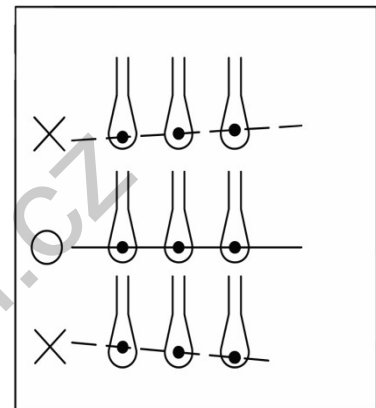


Fig. E

## 3. Installation looper:

Inserting looper all the way into looper holder and please make sure looper is fully fitted into proper position, then tighten screw (A), (Fig. F).

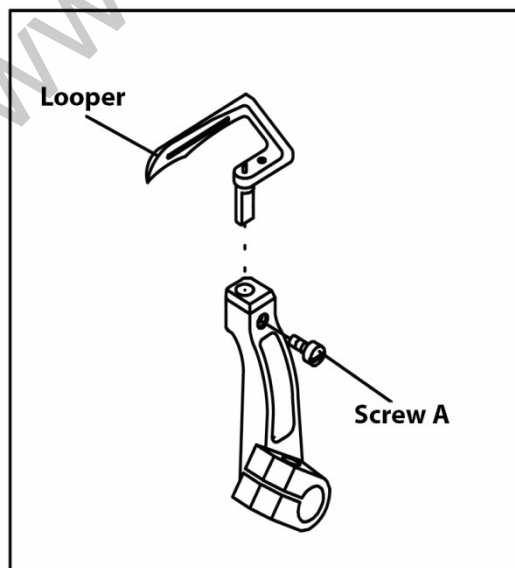
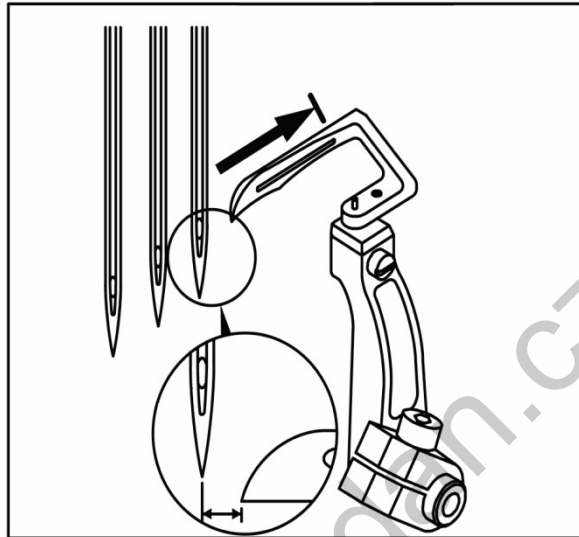


Fig. F

#### 4. Setting looper:

The looper is located at the extreme right when needle bar decent to its lowest Point. And the distance between the tip of looper and the center of right needle is various according to the needle distance. Please refer to the table below for Adjustment and the adjustment is made by loosening the screw (B) of looper holder (Fig. G)



Obr. G

NEEDLE DISTANCE	LOOPER MOVEMENT TO THE RIGHT
3,2 mm	4,4 mm
4,0 mm	4,0 mm
4,8 mm	3,6 mm
5,6 mm	3,2 mm
6,4 mm	2,8 mm

## 5. The clearance between looper and needle:

**GIF-2500-356**

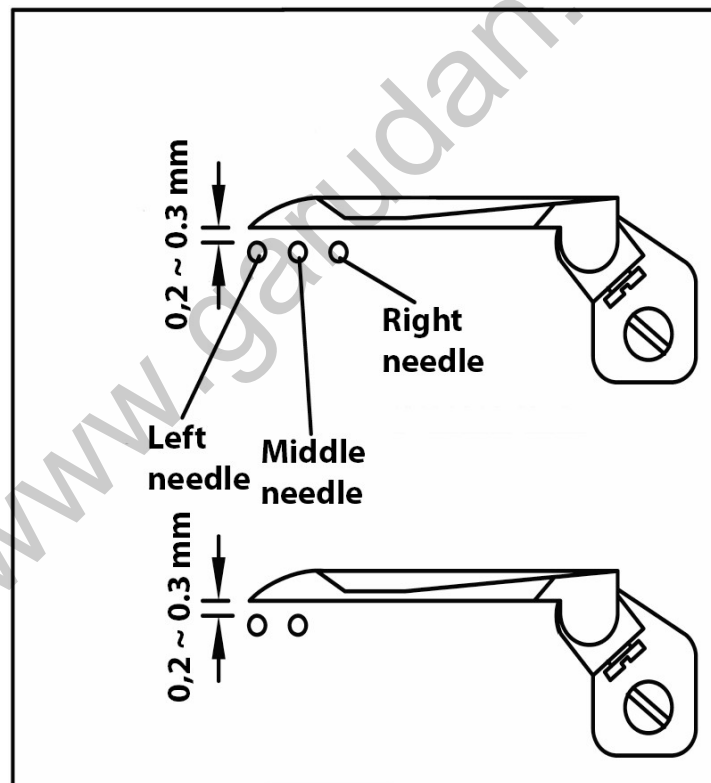
**GIF-2500-364**

When the tip of looper meets the center of left needle. The clearance between them should be 0.2-0.3mm. When the tip of looper meets the center of middle needle. The clearance between them should be minimal. When the tip of looper meets the center of right needle. Giving the clearance of 0-0.05 mm between the tip of looper and needle by pushing rear needle guard 0.2-0.3 mm against the needle. The adjustment is made by loosening screw of looper holder.

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**GIF-2500-248**

When the tip of looper meets the center of left needle, the clearance between them should be 0.2-0.3 mm. When the tip of looper meets the center of right needle, the rear needle guard should push needle 0.2-0.3 mm in order to get the clearance of 0-0.05 mm between the tip of looper and needle.



## 6. The relation between needle and rear needle guard:

### 6.1 Setting the height of rear needle bar:

When needles descend to the lowest position. The ridge line (A) of rear needle guard (B) align with the center of the eye of each needle. The adjustment of the height of rear needle guard is made by loosening the screw (Fig. I).

### 6.2 Setting the angle and timing of rear needle guard:

When the tip of looper passes the center of right needle. The rear needle guard will slightly push the right needle forward about 0.2-0.3 mm. And at this time, the clearance between looper and right needle is 0-0.05 mm and looper will touch middle needle slightly and the clearance between looper and left needle is 0-0.05 mm. These adjustments are made by loosening the set screws (C) and (D), (Fig. J, K).

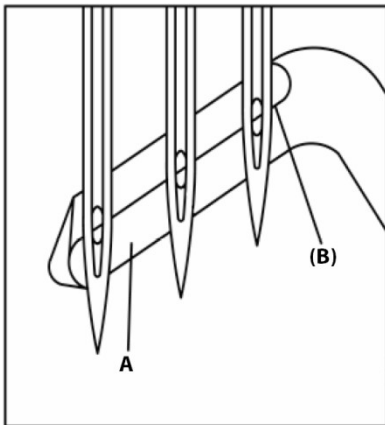


Fig. I

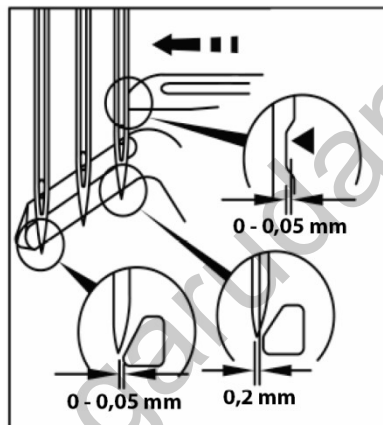


Fig. J

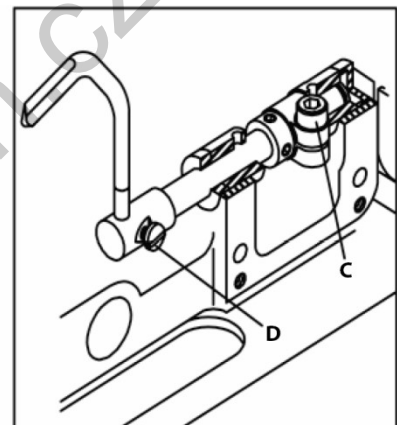


Fig. K

## 7. The relation between needle and front needle guard:

### 7.1 Setting the angle and timing of front needle guard:

When the tip of looper comes to the center of left needle and right needle, adjust the clearances between those needles and front needle guard should be 0 - 0.3 mm. The adjustments are made by loosening set screw (E) and move front needle guard to its proper position. Then, tighten the set screw (E), (Fig A).

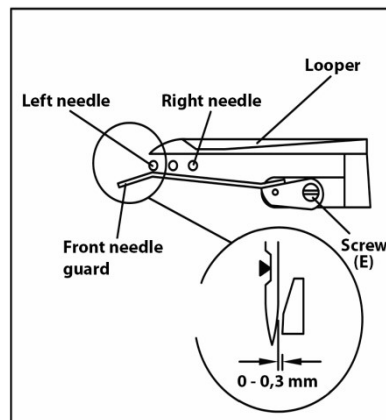


Fig. A

## 8. Setting the height of feed dog:

When feed dogs rise to the upper most, their height of feed dogs is 1 - 1.2 mm above the surface of needle plate and differential and main feed dog are parallel to the surface of needle plate (Fig. B)

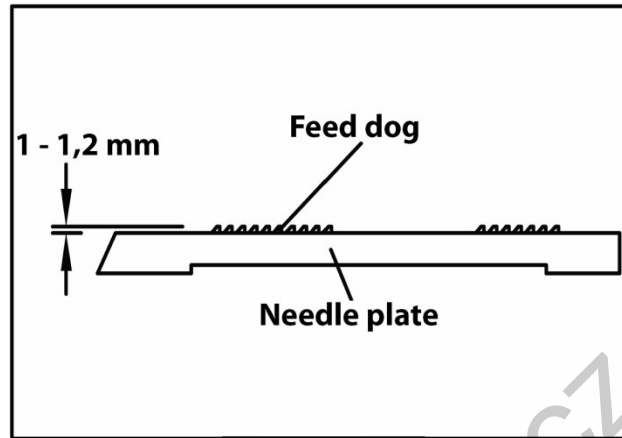


Fig. B

## 9. Top cover stitch:

### 9.1 Installing and petting the spreader:

The height of spreader is 9-11 mm above the surface of needle plate (Fig. C)

When spreader move to the left and passes behind the left needle, the clearance is 0.5- 0.8 mm. And when spreader reaches the extreme left, the distance between tip of hooking part and the center of left needle is 4.5-5.5 mm (Fig. D).

The adjustments are made by loosening screw (a) for the height of looper and loosening screw (b) for moving position of looper (Fig. E)

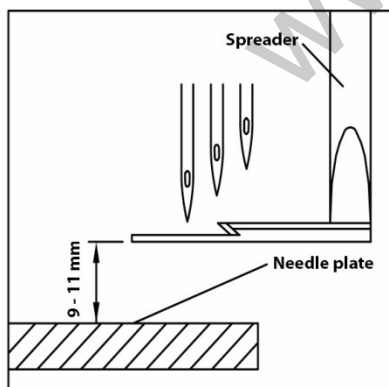


Fig. C

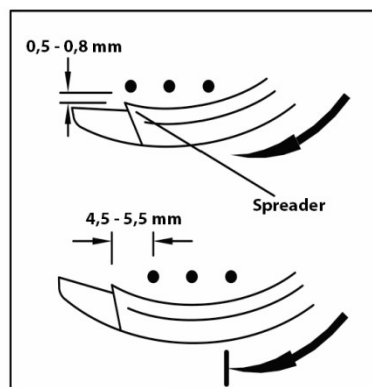


Fig. D

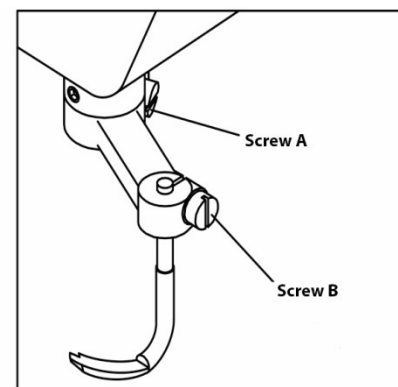


Fig. E

## 9.2 Setting the top cover thread guide:

There must be a clearance of 0.5 mm between the bottom of the top cover thread guide and spreader and when spreader comes to the extreme right, and at this position, the thread is caught by thread hooking part properly. And hanging loosely on the top cover thread guide (Fig. F).

When needle bar at the lowest position. The clearance between the surface of top cover thread guide (a) and the undersurface of top cover thread eyelet (b) is 1.0 mm. Set the thread hole of top cover thread eyelet on the center line of the slot of top cover thread guide then tighten screw (Fig. G.).

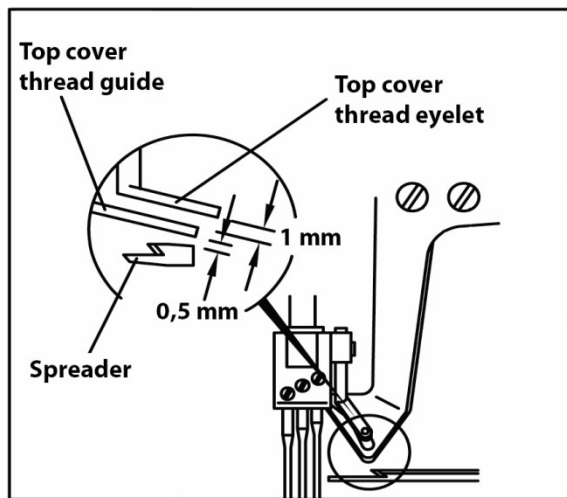


Fig. F

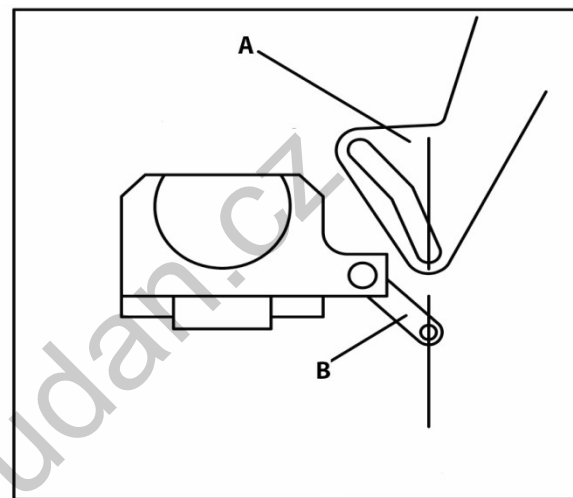


Fig. G

Katalog náhradní dílů  
Spare Parts List



**GIF-2500**

ANITA B s.r.o.  
Průmyslová 2453/7  
680 01 Boskovice  
Czech Republic  
tel: +420 516 454 774  
+420 516 453 496  
fax: +420 516 452 751  
e-mail: [info@anita.cz](mailto:info@anita.cz)



<b>VERSION</b>	<b>CREATED ON</b>	<b>APPROVED BY</b>
MP03400EN_190830	30. 08. 2019	Jakub Lžičař

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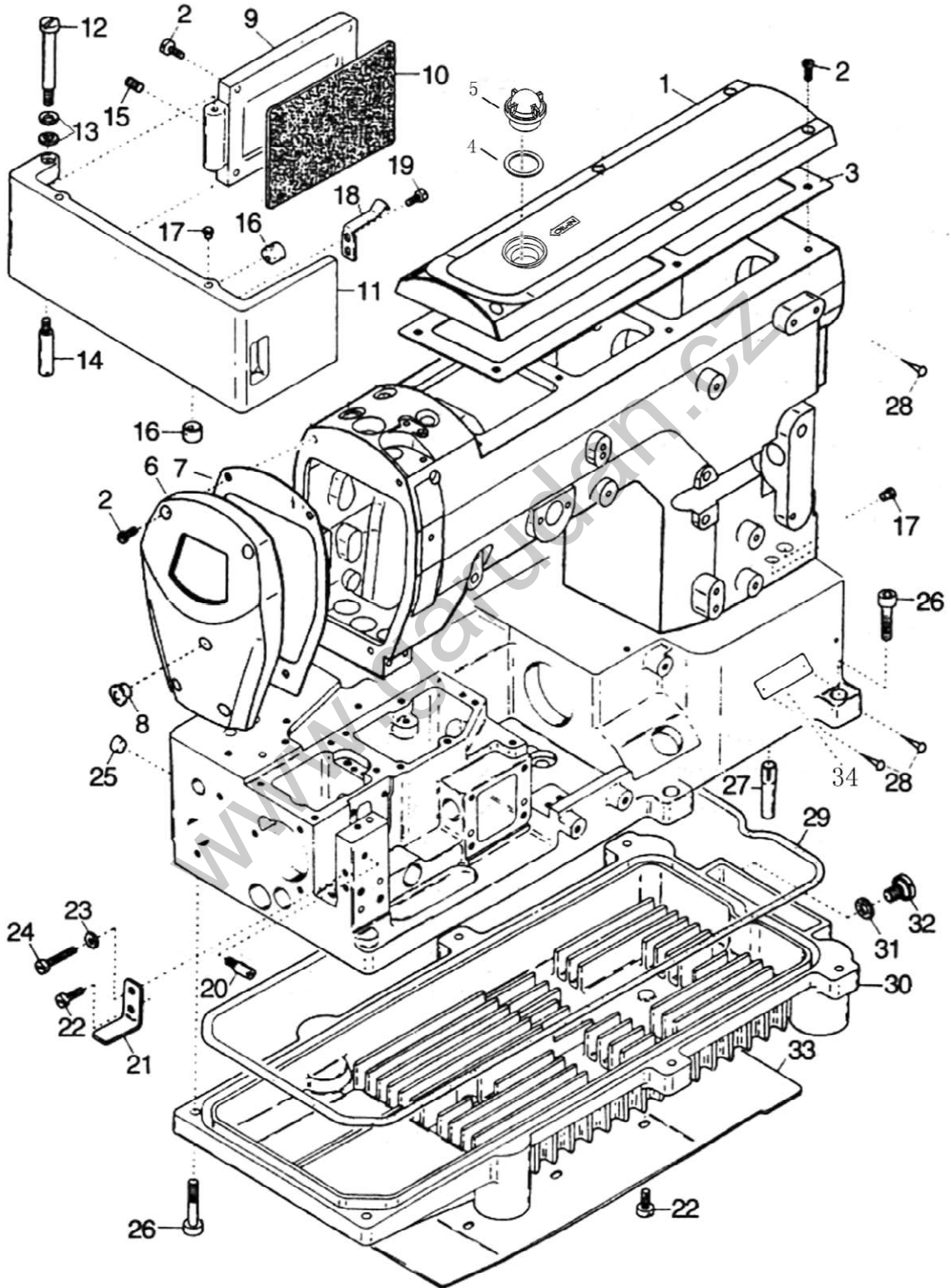
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## Content

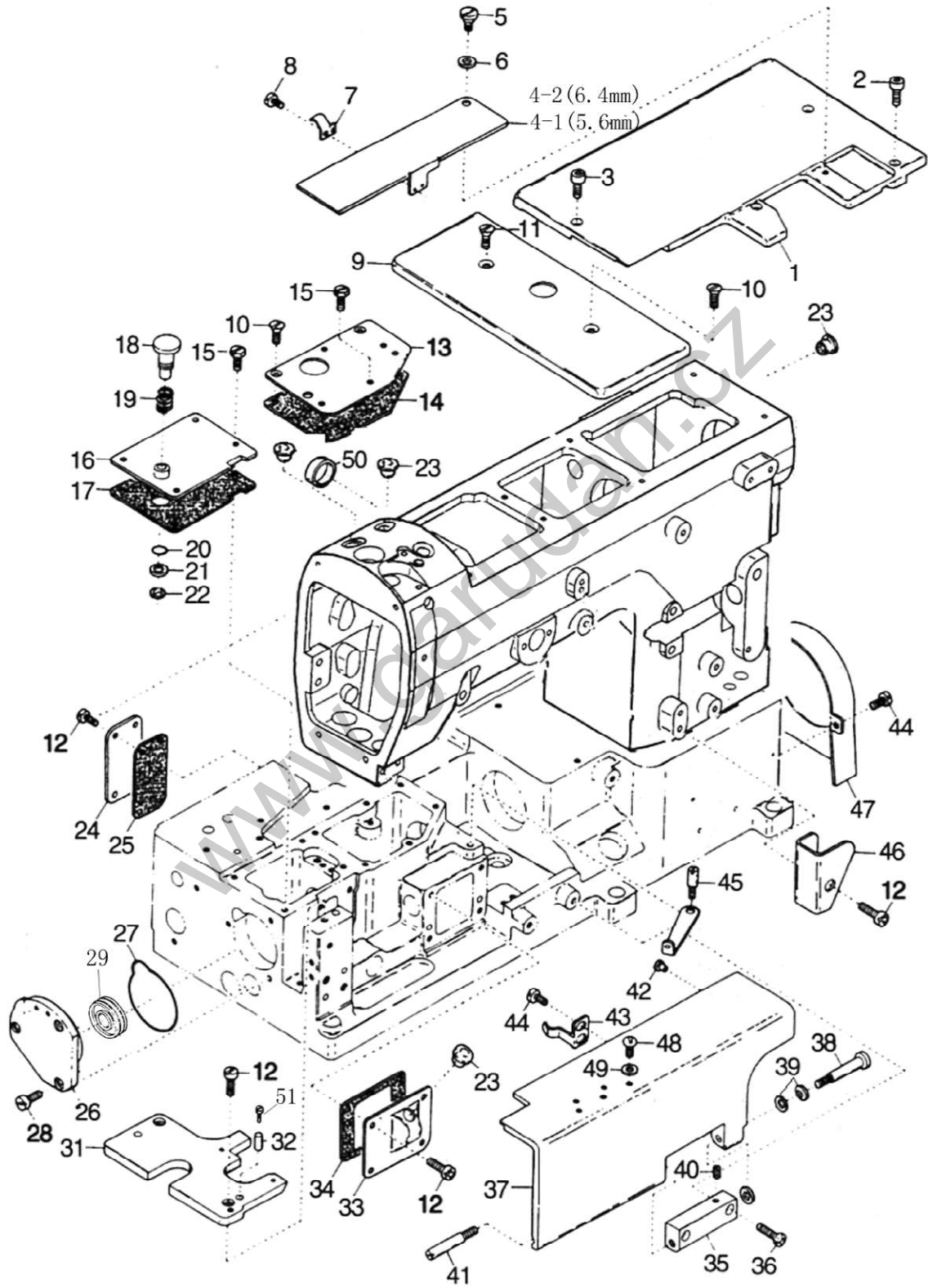
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### 1. MISCELLANEOUS COVERS (1)



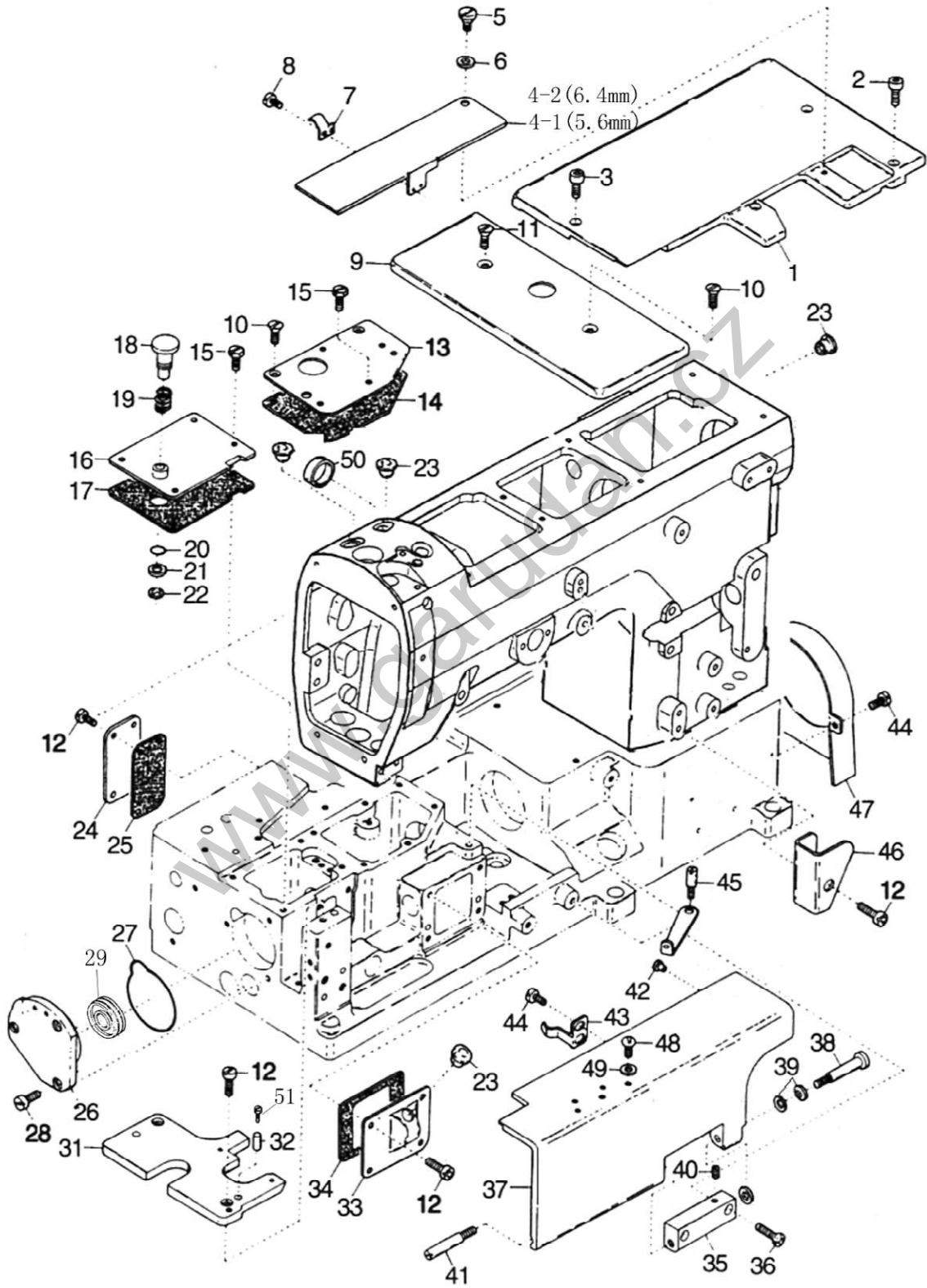
1. MISCELLANEOUS COVERS (1)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	20003608	Top Cover		1	
2	10042387	Screw	M4x12	14	
3	10012294	Top Cover Gasket		1	
4	10009156	Oil Sight Window		1	
5	10008938	Plug		1	
6	20006670	Head Cover		1	
7	10010189	Head Cover Gasket		1	
8	10013170	Plug		9	
9	20003692	Bed Rear Cover		1	
10	10010998	Bed Rear Cover Gasket		1	
11	20003708	Side Cover		1	
12	10010795	Screw	M4x8	1	
13	10010793	Washer		2	
14	10010832	Screw	M4x6	1	
15	10010196	Screw	M3x3	1	
16	10010831	Plug		2	
17	10010790	Plug		2	
18	10010794	Spring		1	
19	10010837	Screw	M4x5	2	
20	10010694	Pin		1	
21	10011003	Side Cover Holder		1	
22	10011264	Screw	M4x8	4	
23	10009471	Nut		1	
24	10010688	Screw	M4x16	1	
25	10011050	Seal Plug		1	
26	10010997	Screw	M6x20	6	
27	10011002	Machine Frame Supporting Bar		4	
28	10002840	Rivet		3	
29	10011009	Oil Reservoir Gasket		1	
30	10014048	Oil Reservoir		1	
31	10011258	Washer			
32	10011259	Screw	SM3/8"x24		
33	10011262	Wind Guide Plate			
34	10004891				

## 2. MISCELLANEOUS COVERS (2) (1/2)



2. MISCELLANEOUS COVERS (2) (1/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	20003696	Cloth Plate		1	
2	10003138	Screw	M4x16	3	
3	10005692	Screw	M4x10	1	
4-1	10014058	Looper Thread Take-up Cover	For 4 mm, 4.8 mm, 5,6 mm	1	
4-2	10011329	Looper Thread Take-up Cover	For 6,4 mm	1	
5	10011253	Screw		1	
6	10011261	Washer		1	
7	10011250	Spring		1	
8	10011257	Screw	M3x2.5	2	
9	20003693	Cloth Plate		1	
10	10011049	Screw	M4x8	3	
11	10010999	Screw	M4x15	1	
12	10011264	Screw	M4x8	10	
13	10011043	Bed Top Cover		1	
14	10011008	Bed Top Cover Gasket		1	
15	10011005	Screw	M4x9	8	
16	10010792	Bed Top Cover		1	
17	10011045	Gasket		1	
18	10010830	Pin		1	
19	10010791	Spring		1	
20	10010796	O-ring		1	
21	10010835	Washer		1	
22	10009653	Collar		1	
23	10013170	Plug		7	
24	10011042	Bed Rear Cover		1	
25	10011046	Bed Rear Cover Gasket		1	
26	10004543	Ball Bearing Housing		1	
27	10011000	Gasket		1	
28	10042412	Screw	M4x10	3	
29	10051023	Bearing		1	
30	10009246	Washer		1	
31	10010829	Stitch Plate Support		1	
32	10013872	Pin		2	
33	10011047	Bed Front Cover		1	
34	10011007	Bed Front Cover Gasket		1	
35	20003695	Front Cover hinge		1	
36	10009075	Screw	M4x16	2	
37	20003694	Front Cover		1	
38	10011247	Screw		1	
39	10010793	Washer		2	

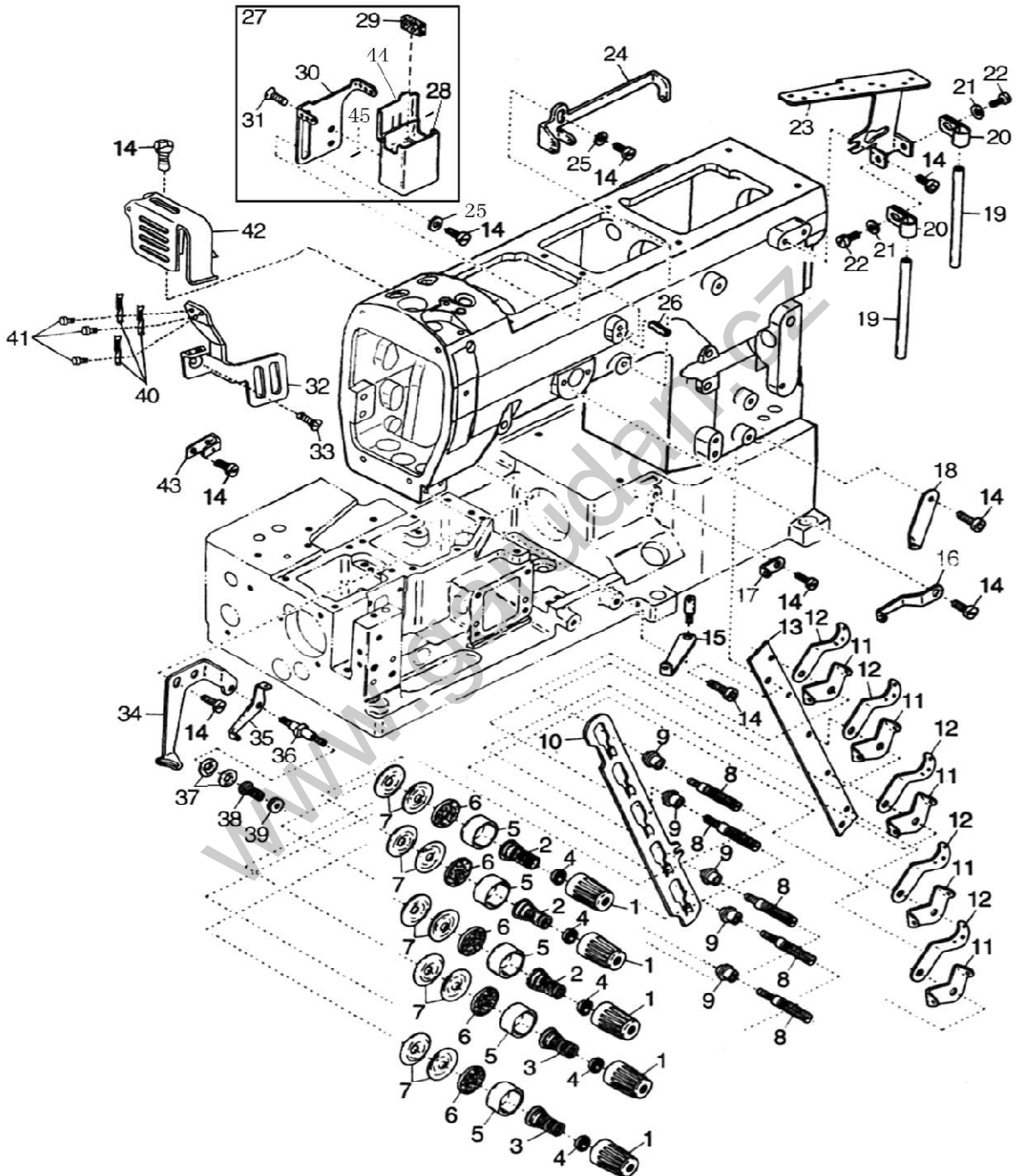
## 2. MISCELLANEOUS COVERS (2) (2/2)



<b>2. MISCELLANEOUS COVERS (2) (2/2)</b>					
<b>Ref. No</b>	<b>Parts No.</b>	<b>Name of parts</b>	<b>Description</b>	<b>Qty</b>	<b>Note</b>
40	10009074	Screw	M4x4	1	
41	10011251	Screw	M4x6	1	
42	10010790	Plug		2	
43	10011254	Spring		1	
44	10010837	Screw	M4x5	2	
45	10011048	Screw	M4x7	1	
46	10011001	Eyelet Cover		1	
47	10011004	Oil Cooling Fan Cover		1	
48	10011260	Screw	M5x12	2	
49	10011249	Washer		2	
50	10010931	Gasket		1	
51	10012253	Screw	M3x8	2	

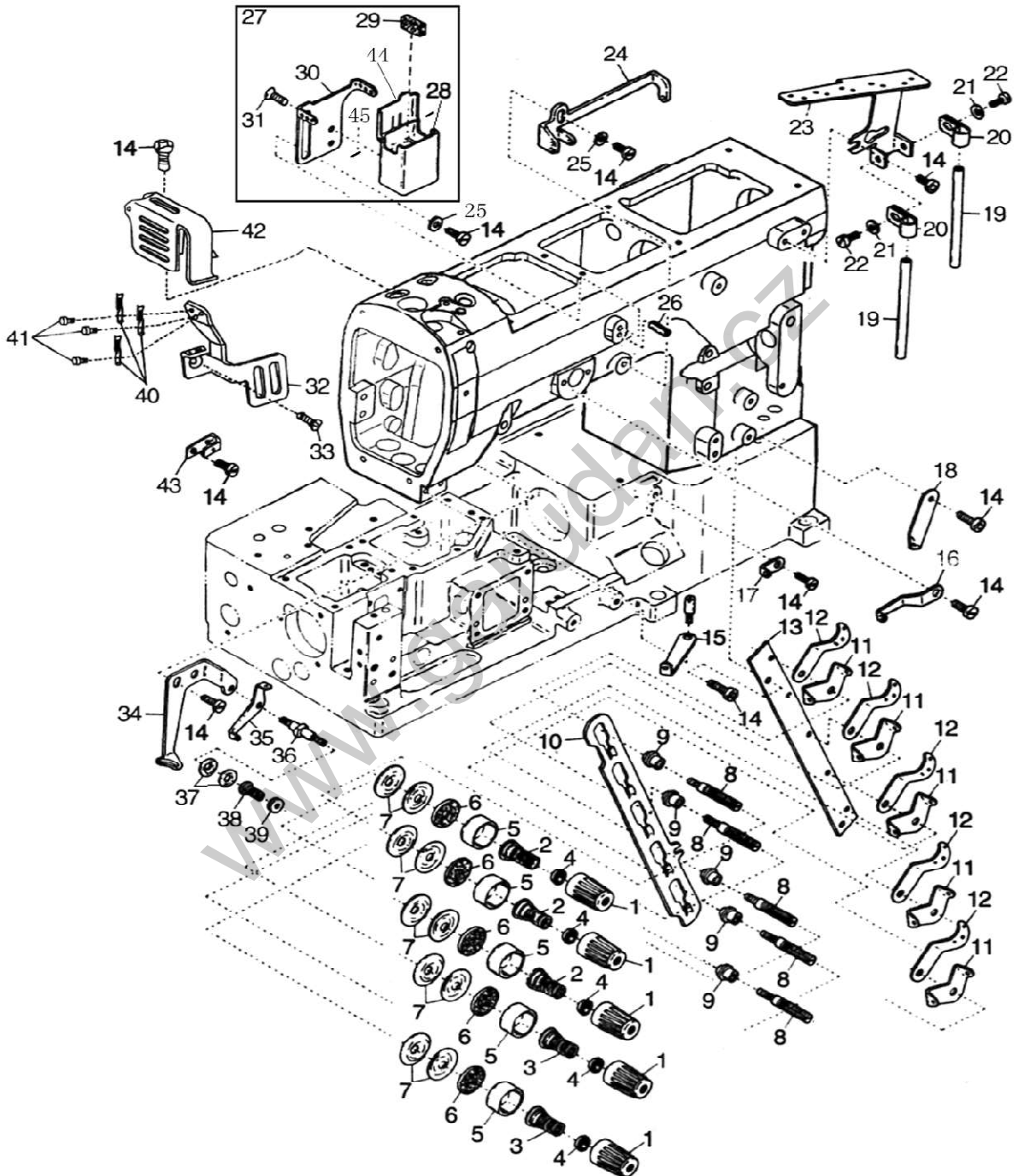


### 3. MISCELLANEOUS THREAD EYELETS (1/2)



3. MISCELLANEOUS THREAD EYELETS (1/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	10002538	Thread Tension Spring Cap		5	
2	10004233	Spring		3	
3	10004240	Spring		2	
4	10003111	Tension Spring Disc Support		5	
5	10004231	Thread Tension Spring Retainer		5	
6	10004238	Felt		5	
7	10003116	Tension Disc		10	
8	10004232	Screw		5	
9	10004236	Tension Post Ferrule		5	
10	10004234	Tension Disc Separate		1	
11	10004239	Tension Disc Eyelet		5	
12	10004241	Thread Lead-in Guide		5	
13	10004235	Tension Post Support		1	
14	10011264	Screw	M4x8	13	
15	10010758	Looper Thread Eyelet		1	
16	10010486	Top Cover Thread Eyelet		1	
17	10010752	Looper Thread Eyelet		1	
18	10010746	Looper Thread Eyelet		1	
19	10033698			2	
20	10008228			2	
21	10010696	Washer		2	
22	10009325	Screw		2	
23	10010691	Thread Guide Plate		1	
24	10010754	Top Cover Thread Eyelet (Right)		1	
25	10010761	Washer		2	
26	10010750	Pin		1	
27	20002103	SP Device, Complete Set		1	
28	10010753	SP Container		1	
29	10010687	Felt		1	
30	10010695	Needle Thread Eyelet		1	
31	10053226	Screw		2	
32	10010499	Needle Thread Eyelet		1	
33	10011049	Screw	M4x8	1	
34	10004237	Top Cover Thread Guide		1	
35	10010747	Supplementary Thread Guide		1	
36	10004254	Screw		1	
37	10004255	Supplementary Tension Disc		2	
38	10005522	Spring		1	
39	10004253	Nut		1	
40	10010523	Needle Bow Diapylasis Plate		3	

### 3. MISCELLANEOUS THREAD EYELETS (2/2)

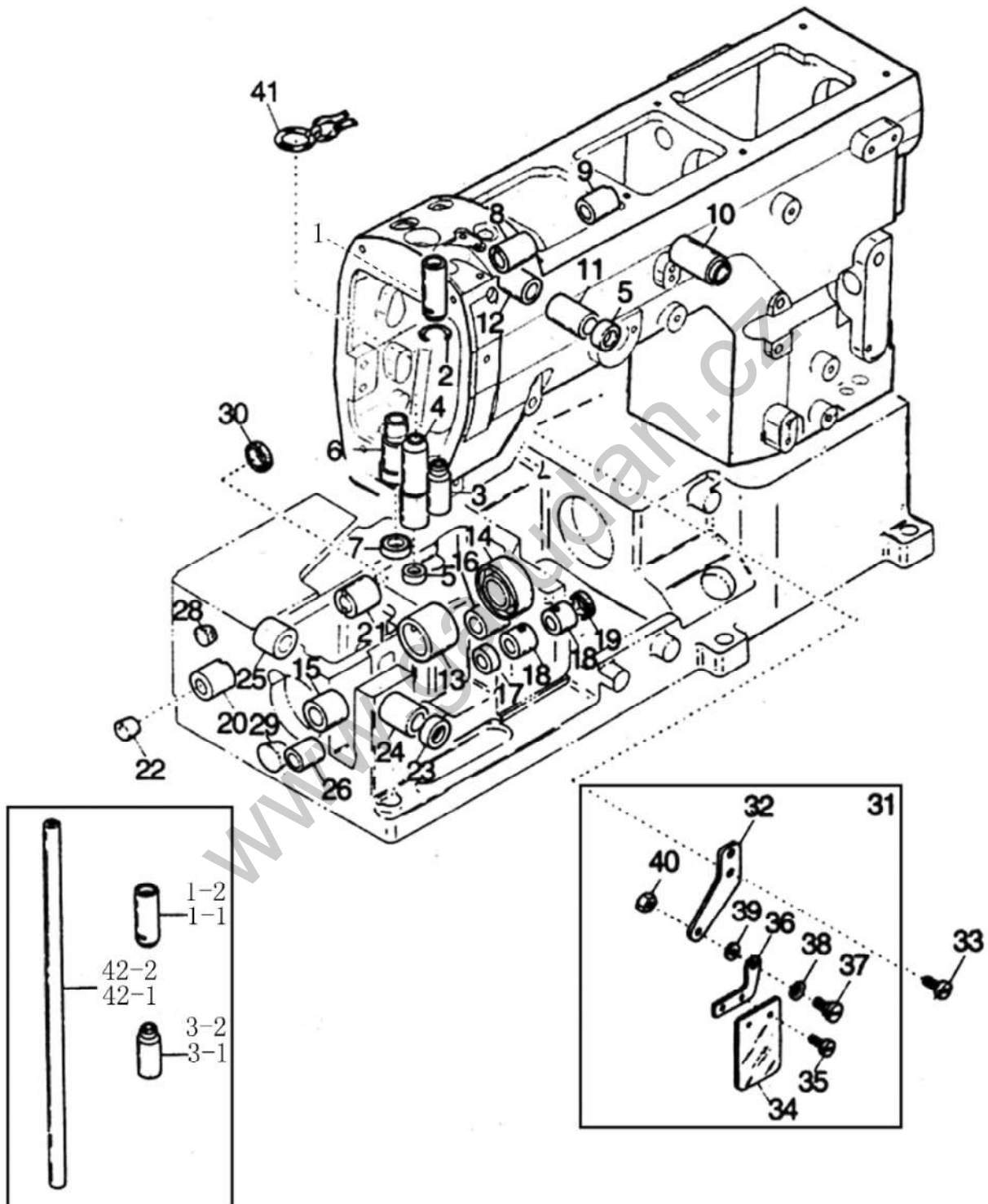


**3. MISCELLANEOUS THREAD EYELETS (2/2)**

<b>Ref. No</b>	<b>Parts No.</b>	<b>Name of parts</b>	<b>Description</b>	<b>Qty</b>	<b>Note</b>
41	10014413	Screw	M2.5x4	3	
42	10013910	Needle Thread Take-up Guard		1	
43	10010760	Needle Thread Retainer Support		1	
44	10010757			1	
45	10002880	Pin		2	

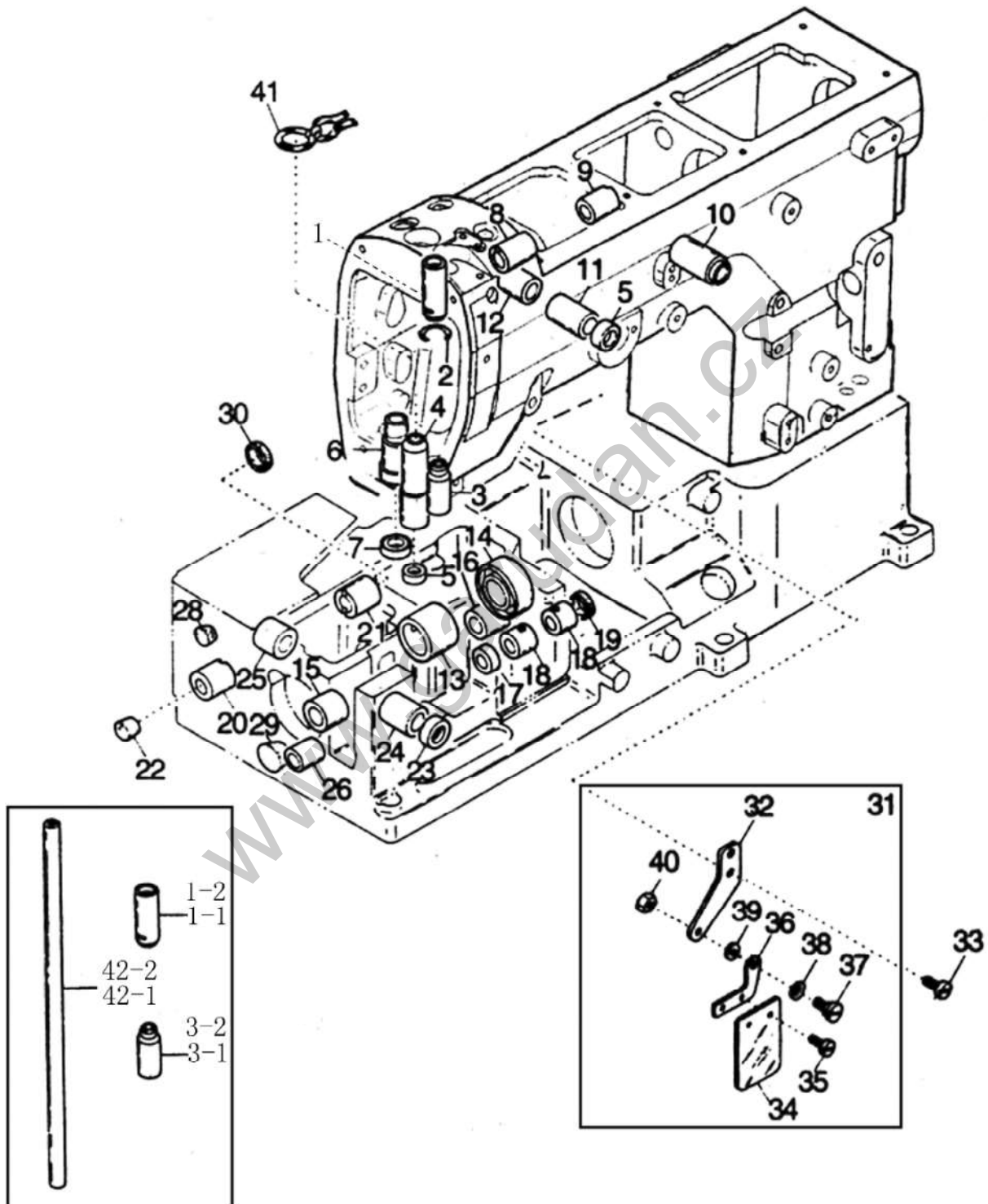
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#### 4. MISCELLANEOUS BUSHINGS & EYE GUARD (1/2)



4. MISCELLANEOUS BUSHING & EYE GUARD (1/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1-1	10051696	Bushing		1	
1-2	10051697	Bushing		1	
3-1	10051694	Bushing		1	
3-2	10051695	Bushing		1	
4	10011108	Bushing		1	
5	10011180	Gasket		2	
6	10011110	Bushing		1	
7	10011657	Gasket		1	
8	10011106	Bushing		1	
9	10011116	Bushing		1	
10	10011105	Bushing		1	
11	10011112	Bushing		1	
12	10011115	Bushing		1	
13	10111113	Bushing		1	
14	10010936	Gasket		1	
15	10011119	Bushing		1	
16	10011117	Bushing		1	
17	10014068	Gasket		1	
18	10011109	Bushing		2	
19	10010931	Gasket		1	
20	10011118	Bushing		1	
21	10011114	Bushing		1	
22	10012053	Plug		1	
23	10010927	Gasket		1	
24	10011111	Bushing		1	
25	10011107	Bushing		1	
26	10010836	Bushing		1	
28	10011462	Plug		1	
29	10014072	Plug		1	
30	10011895	Plug		1	
31	20002142	Eye Guard, Complete Set		1	
32	10011179	Safety Plate Support		1	
33	10011618	Screw	M6x9	1	
34	10011164	Safety Plate		1	
35	10011176	Screw	SM3/32"x56	2	
36	10011167	Safety Plate Holder		1	
37	10011178	Screw	SM11/64"x40	1	
38	10011261	Washer		1	
39	10011168	Washer		1	

#### 4. MISCELLANEOUS BUSHINGS & EYE GUARD (2/2)



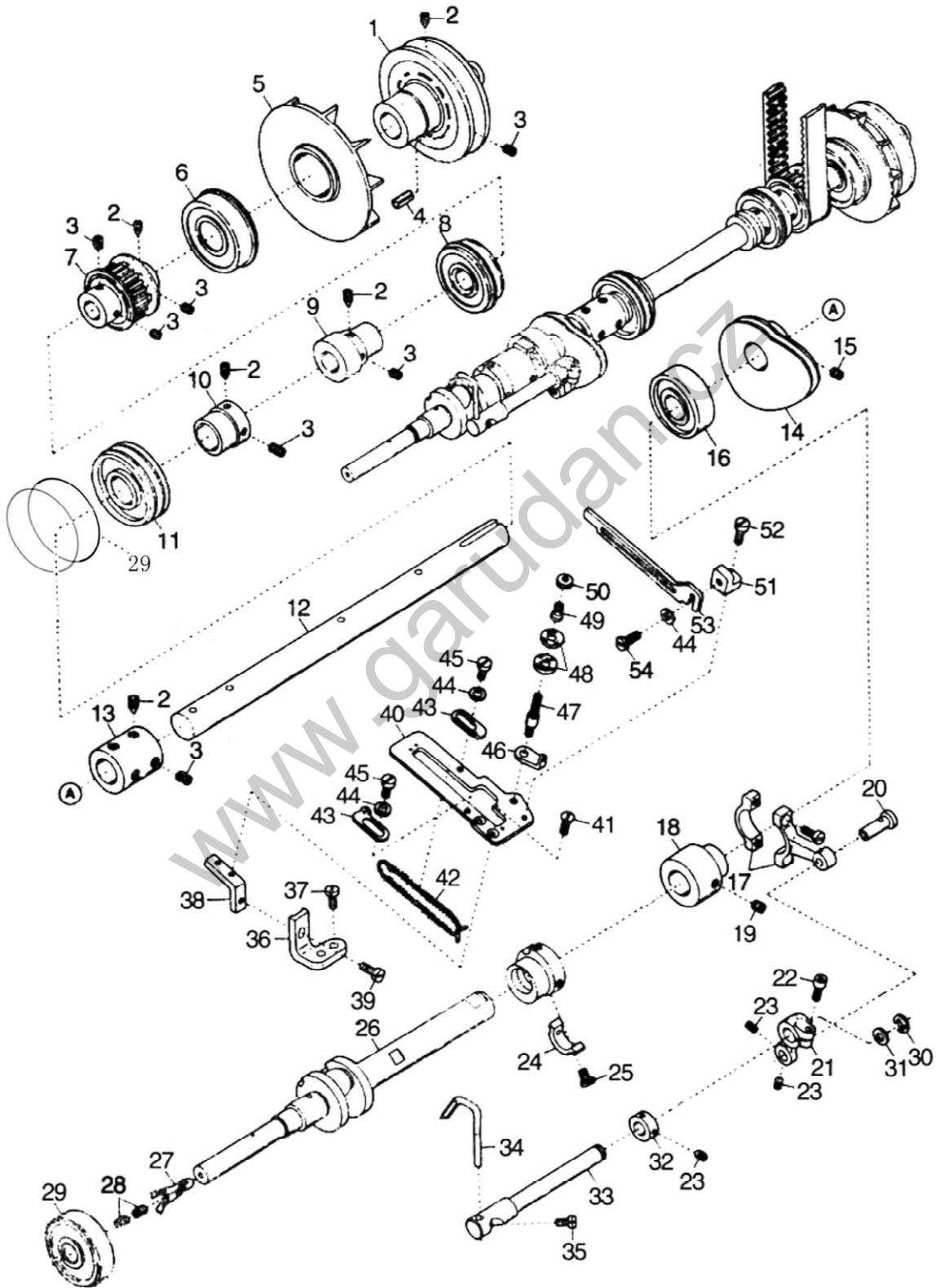
**4. MISCELLANEOUS BUSHING & EYE GUARD (2/2)**

<b>Ref. No</b>	<b>Parts No.</b>	<b>Name of parts</b>	<b>Description</b>	<b>Qty</b>	<b>Note</b>
40	10011170	Nut		1	
41	10008075	Oil Wick		1	
42-1	10051698	Needle Bar		1	
42-2	10051699	Needle Bar		1	

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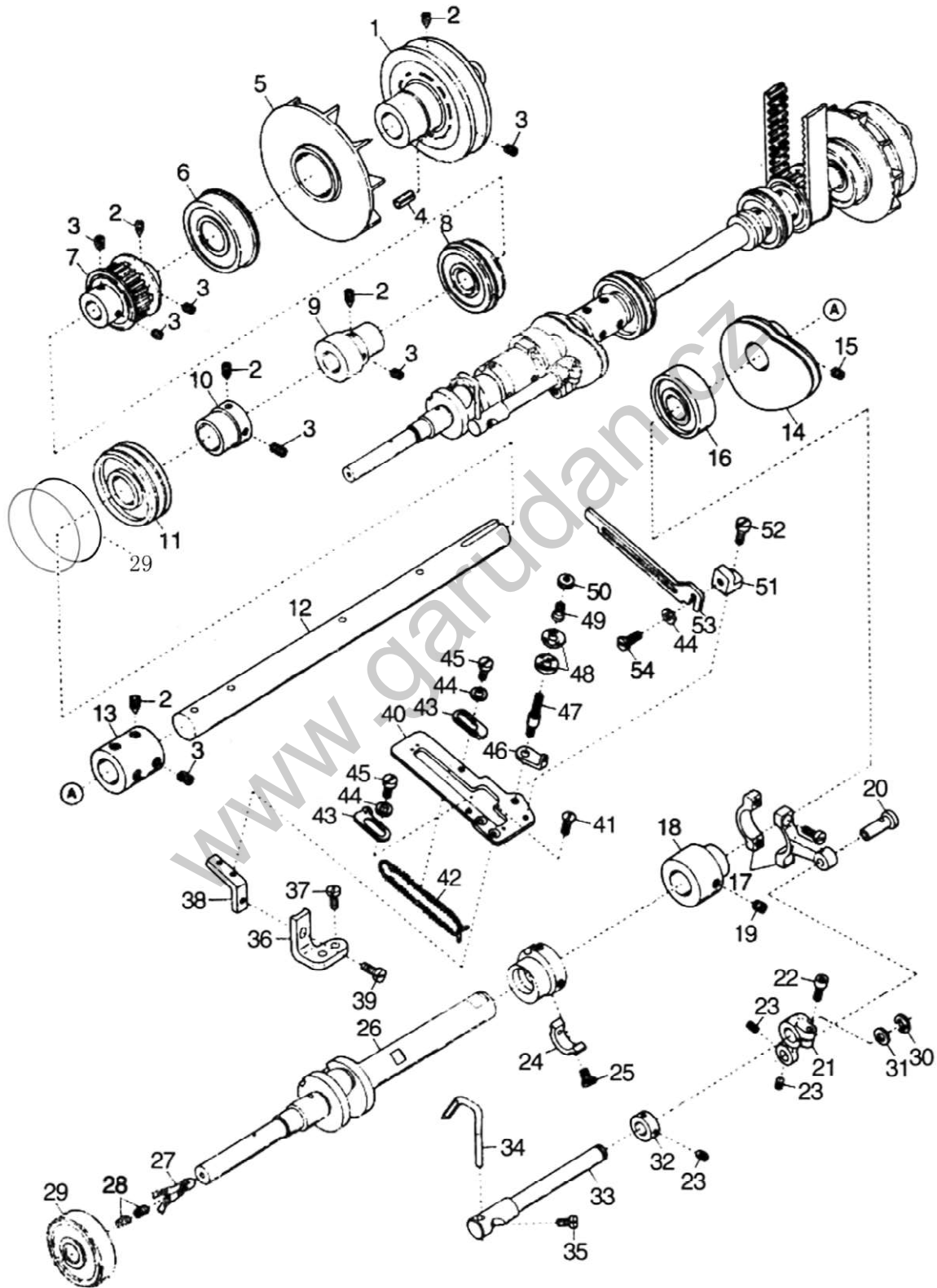


### 5. MAIN SHAFT DRIVING MECHANISMUS (1/2)



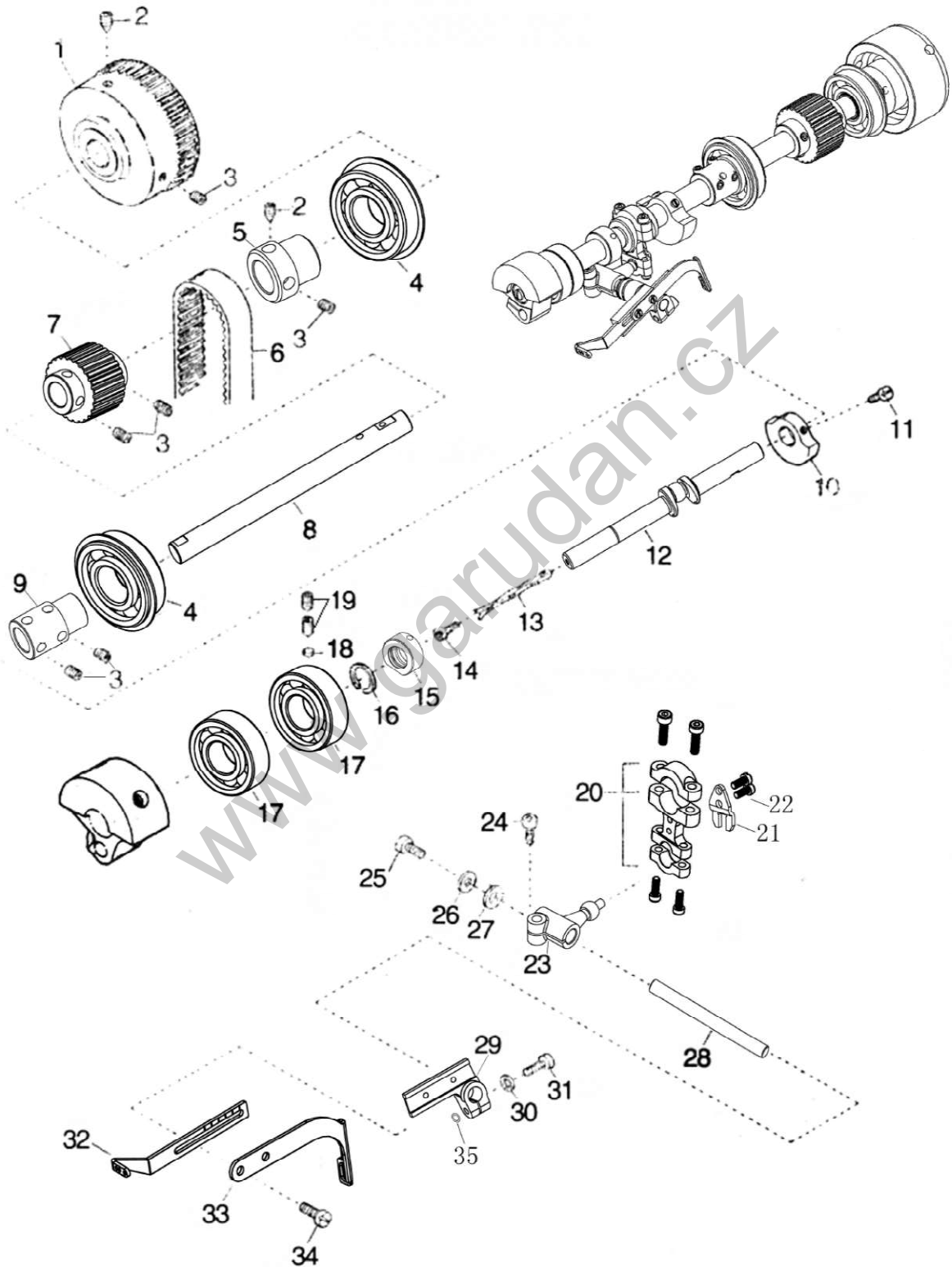
5. MAIN SHAFT DRIVING MECHANISMUS (1/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	10010937	Pulley		1	
2	10011966	Screw	M6x8	5	
3	10010907	Screw	M6x6	9	
4	10002772	Pin		1	
5	10010934	Oil Cooling Fan		1	
6	10025870	Bearing		1	
7	10011267	Main Shaft Sprocket		1	
8	10025881	Bearing		1	
9	10010923	Oil Pump Driving Worm		1	
10	10010950	Collar		1	
11	10025877	Bearing		1	
12	10010928	Lower Shaft		1	
13	10010908	Lower Shaft Joint		1	
14	10010933	Looper Thread Take-up, C. Set		1	
15	10012014	Screw	M5x4	2	
16	10025893	Bearing		1	
17	10004280	Needle Guard Connecting Rod, C. Set		1	
18	10004355	Needle Guard Eccentric		1	
19	10012162	Screw	M5x5	2	
20	10010935	Pin		1	
21	10010930	Needle Guard Driving Shaft Arm		1	
22	10011376	Screw	M5x12	1	
23	10010196	Screw	M3x3	4	
24	10011955	Counterweight		1	
25	10009600	Screw	M3x6	2	
26	10004351	Lower Crankshaft		1	
27	10008062	Oil Wick		1	
28	10009074	Screw	M4x4	2	
29	10011805			2	
30	10009654	Collar		1	
31	10010932	Washer		1	
32	10010929	Collar		1	
33	10010924	Needle Driving Shaft		1	
34	10010925	Needle Guard		1	
35	10011051	Screw	M3.5x4	1	
36	10010749	Supporting Plate Stay		1	
37	10042412	Screw	M4x10	2	
38	10010755	Supporting Plate Stay		1	
39	10011264	Screw	M4x8	1	

### 5. MAIN SHAFT DRIVING MECHANISMUS (2/2)



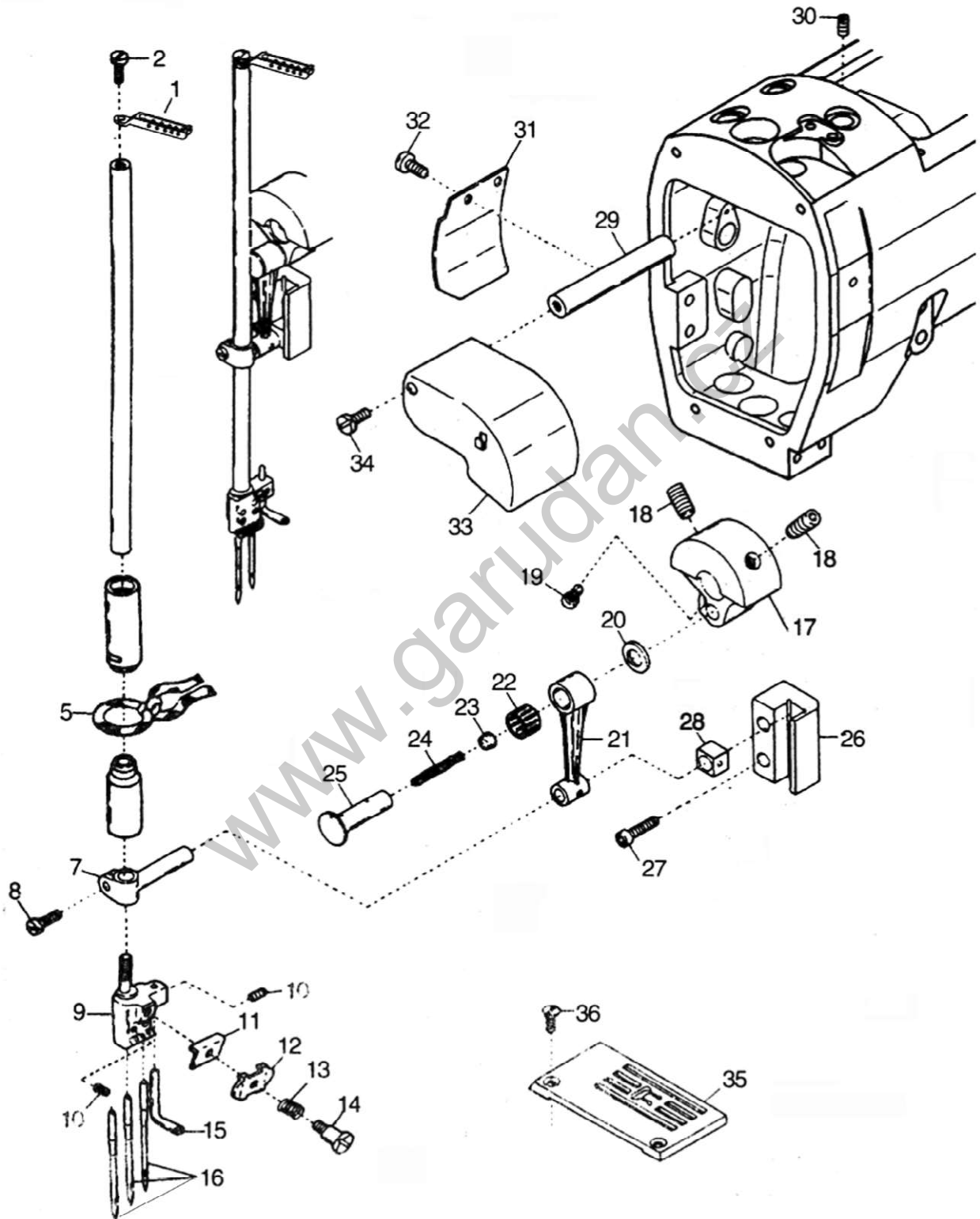
5. MAIN SHAFT DRIVING MECHANISMUS (2/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
40	10010906	Supporting Plate		1	
41	10009626	Screw	M3x4.3	2	
42	10008265	Laced Wire		2	
43	10014507	Thread Take-up Eyelet		2	
44	10010696	Washer		3	
45	10014508	Screw	SM1/8"x44	2	
46	10010823	Looper Thread Eyelet		1	
47	10004254	Screw		1	
48	10004255	Supplementary Tension Disc		2	
49	10005522	Spring		1	
50	10004253	Nut		1	
51	10010905	Cast-off Plate Bracket		1	
52	10013161	Screw	M3.5x7	1	
53	10010824	Cast-off Plate		1	
54	10010904	Screw	SM9/64"x40	1	

### 6. UPPER SHAFT & NEEDLE THREAD TAKE-UP MECHANISM



6. UPPER SHAFT & NEEDLE THREAD TAKE-UP MECHANISMS					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	20013866	Hand Wheel		1	
2	10011966	Screw	M6x8	2	
3	10010907	Screw	M6x6	10	
4	10025881	Bearing		2	
5	10010950	Collar		1	
6	10008146	Timing Belt (Upper)		1	
7	10010952	Upper Shaft Sprocher		1	
8	10011163	Upper Shaft		1	
9	10011172	Upper Shaft Joint		1	
10	10010955	Counterweight (Small)		1	
11	10011264	Screw	M4x8	2	
12	10004407	Upper Crankshaft		1	
13	10008063	Oil Wick		1	
14	10012723	Screw	M4x5	1	
15	10011072	Oil Sleeve		1	
16	10003290	Collar		1	
17	10025896	Bearing		2	
18	10011174	Plug		1	
19	10011177	Screw	M6x5	2	
20	10004406	Connecting Rod		1	
21	10011052	Guide Fork		1	
22	10040191	Screw	SM1/8"x44	2	
23	10004409	Driving Lever		1	
24	10009008	Screw	M6x16	1	
25	10010953	Screw	M5x10	1	
26	10010954	Washer		1	
27	10011171	Washer		1	
28	10010959	Driving Shaft		1	
29	10010956	Bracket		1	
30	10005537	Washer		1	
31	10010958	Screw	M5x14	1	
32	10010960	Needle Thread Take-up		1	
33	10010957	Top Cover Thread Take-up		1	
34	10013159	Screw	M3.5x7.5	2	
35	10032265	Washer		1	

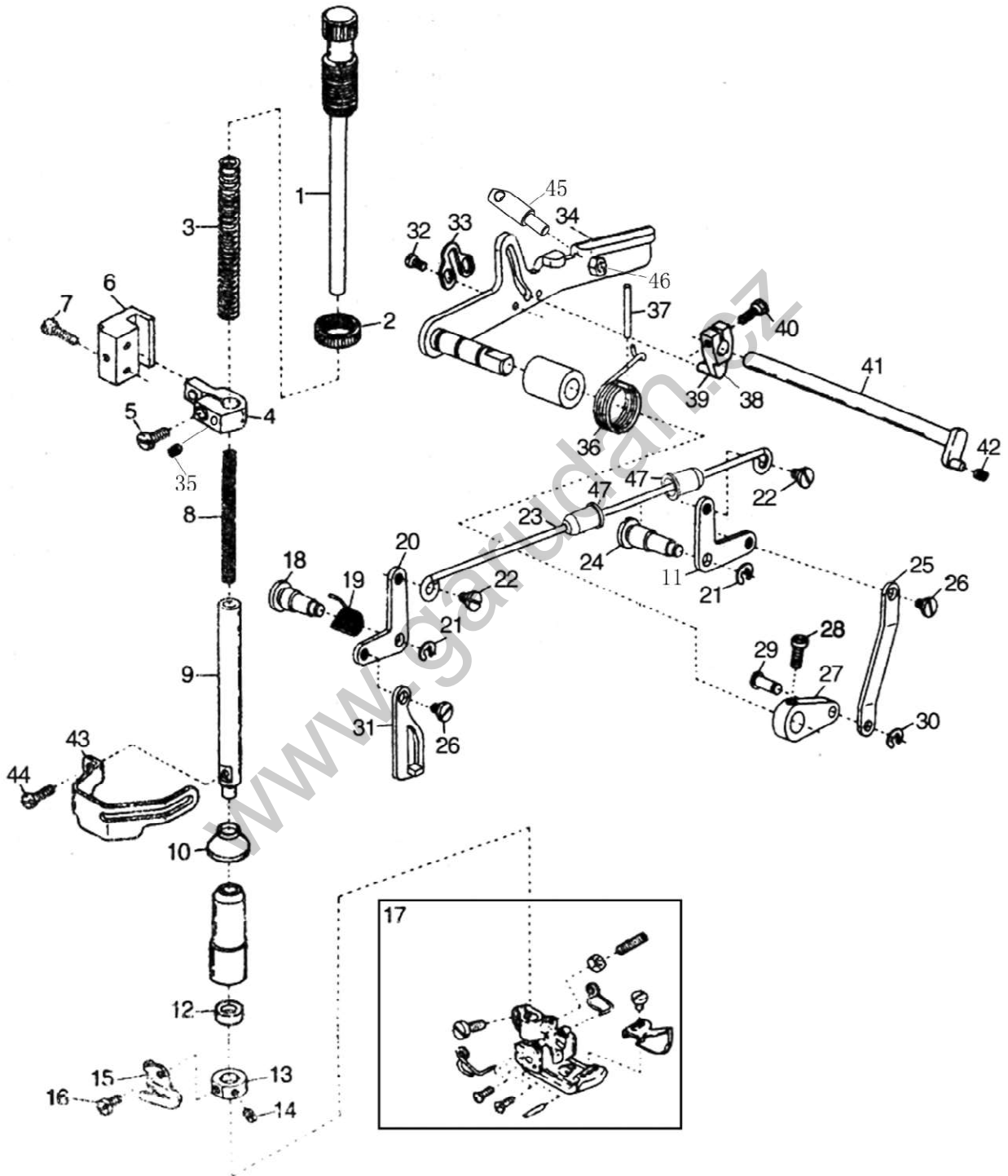
### 7. NEEDLE BAR MECHANISM



7. NEEDLE BAR MECHANISM					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	10013191	Needle Bar Thread Eyelet		1	
2	10010904	Screw	SM9/64"x40	1	
5	10008075	Oil Wick		1	
7	10011616	Needle Bar Bracket		1	
8	10042412	Screw	M4x10	1	
9	See Page 48	Needle Clamp		1	
10	10009255	Screw	SM1/8"x44	4	
11	10011349	Thread Retainer Disc Support		1	
12	10011345	Needle Thread Retainer Disc		1	
13	10011338	Spring		1	
14	10011348	Screw	SM1/8"x44	1	
15	10011627	Top Cover Thread Eyelet		1	
16	10004902	Needle		3	
17	10013017	Counterweight		1	
18	10011582	Screw	SM5/16"x24	2	
19	10010953	Screw	M5x10	1	
20	10011622	Washer		1	
21	10011629	Connecting Rod		1	
22	10007397	Bearing		1	
23	10011175	Plug		1	
24	10008066	Oil Wick		1	
25	10011169	Pin		1	
26	10011619	Needle Bar Guide		1	
27	10009103	Screw	M4x16	2	
28	10011340	Slide Block		1	
29	10011165	Pin		1	
30	10009074	Screw	M4x4	1	
31	10011173	Connecting Rod Cover (Rear)		1	
32	10013040	Screw	M3x6	2	
33	10011581	Connecting Rod Cover (Front)		1	
34	10010837	Screw	M4x5	1	
35	See Page 48	Throat Plate		1	
36	10010833	Screw	SM9/64"x40	2	

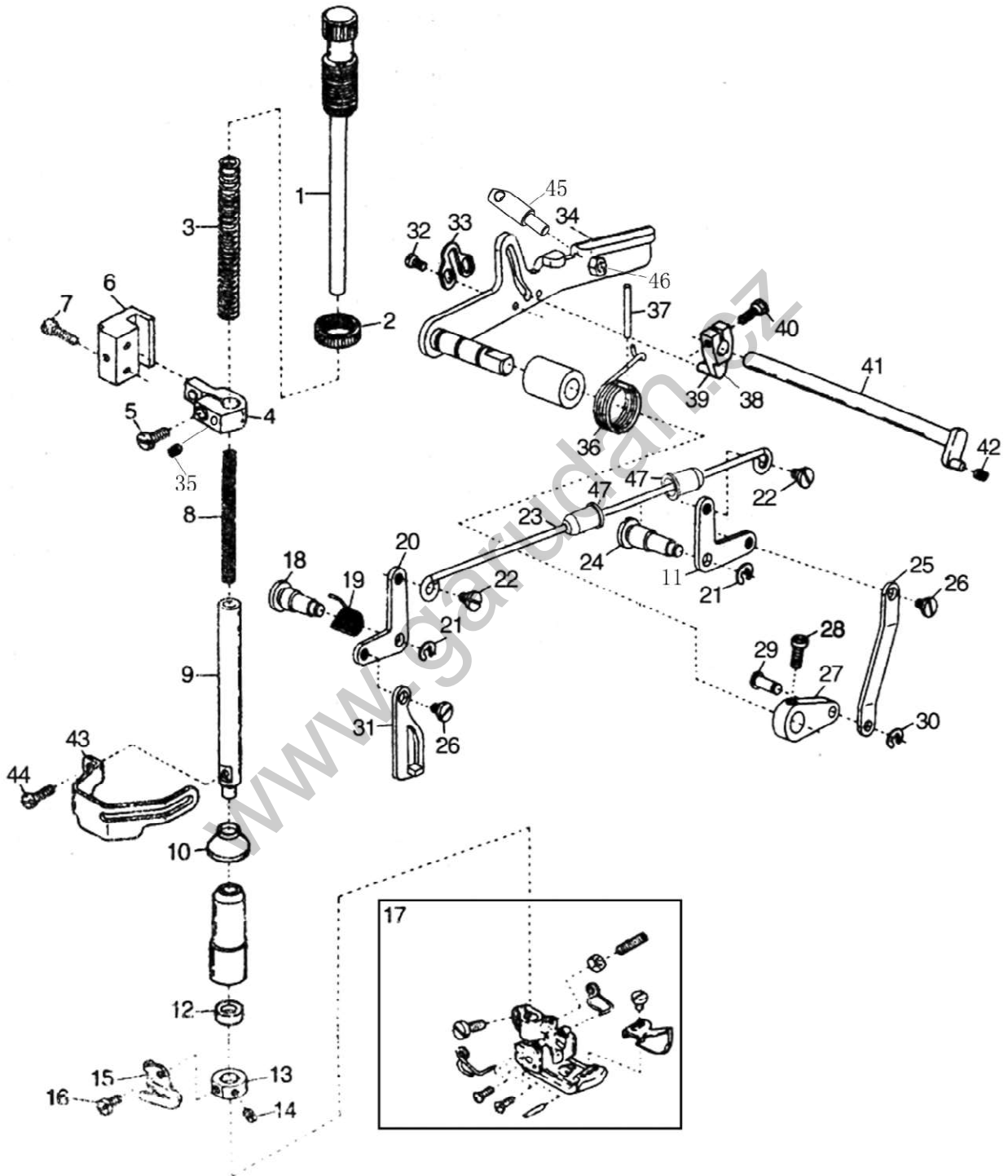


### 8. PRESSER FOOT MECHANISM (1/2)



8. PRESSER FOOT MECHANISM (1/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	10004127	Screw		1	
2	10011913	Nut		1	
3	10010492	Spring		1	
4	10011879	Presser Bar Connecting Bracket		1	
5	10009037	Screw	M4x12	1	
6	10011883	Presser Bar Guide		1	
7	10013732	Screw	SM11/64"x40	2	
8	10011888	Spring		1	
9	10011885	Presser Bar		1	
10	10011457	Oil Protector Cover		1	
11	10010460			1	
12	10032359	Gasket		1	
13	10011878	Collar		1	
14	10011887	Screw	SM9/64"x40	2	
15	10011912	Cutter		1	
16	10011877	Screw	M3x3.5	1	
17	See Page 48	Presser Foot, Complete Set		1	
18	10010521	Pin		1	
19	10010493	Spring		1	
20	10010463	Presser Foot Lever		1	
21	10010649	Collar		2	
22	10013217	Screw	SM3/16"x40	2	
23	10010464	Presser Foot Rod		1	
24	10010524	Pin		1	
25	10010403	Connecting Plate		1	
26	10003496	Screw		2	
27	10010458	Lifter lever		1	
28	10011664	Screw	SM15/64"x28	1	
29	10011886	Pin		1	
30	10003248	Collar		1	
31	10010487	Lifter Link Plate		1	
32	10010904	Screw	SM9/60"x40	2	
33	10011889	Lifter Lever Stop		1	
34	10010469	Lifter Lever		1	
35	10013652	Screw	SM3/16"x32	1	
36	10010495	Spring		1	
37	10002772	Pin		1	
38	10011617	Tension Release Lever		1	
39	10011628	Pin		1	
40	10011625	Screw	SM11/64"x40	1	

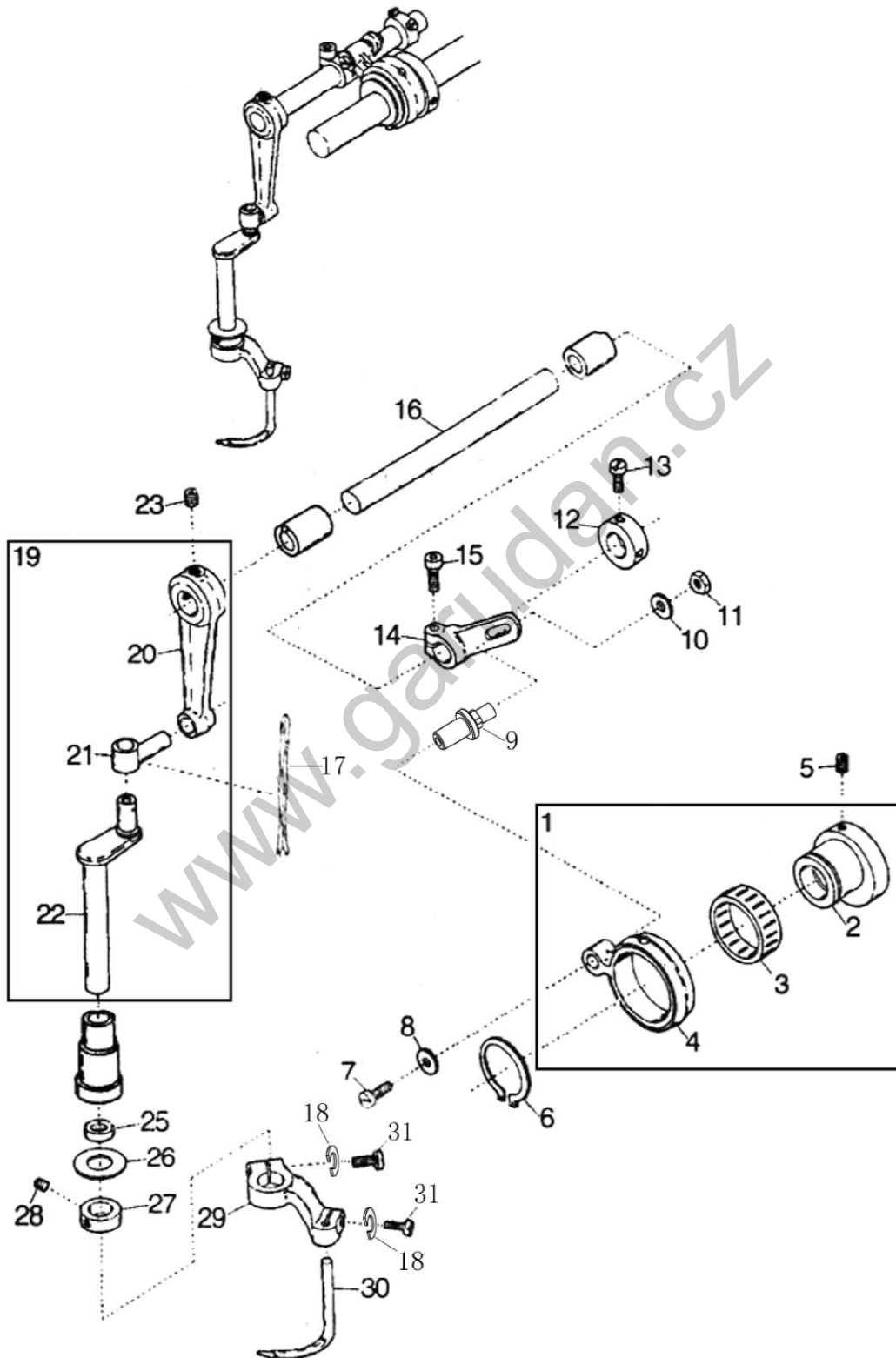
### 8. PRESSER FOOT MECHANISM (2/2)



<b>8. PRESSER FOOT MECHANISM (2/2)</b>					
<b>Ref. No</b>	<b>Parts No.</b>	<b>Name of parts</b>	<b>Description</b>	<b>Qty</b>	<b>Note</b>
41	10014069	Tension Release Shaft		1	
42	10011880	Spring		1	
43	10011881	Finger Guard		1	
44	10011882	Screw	M3x4.6	1	
45	10011884	Pin		1	
46	10003084	Nut		1	
47	10004599	Seal Plug		2	

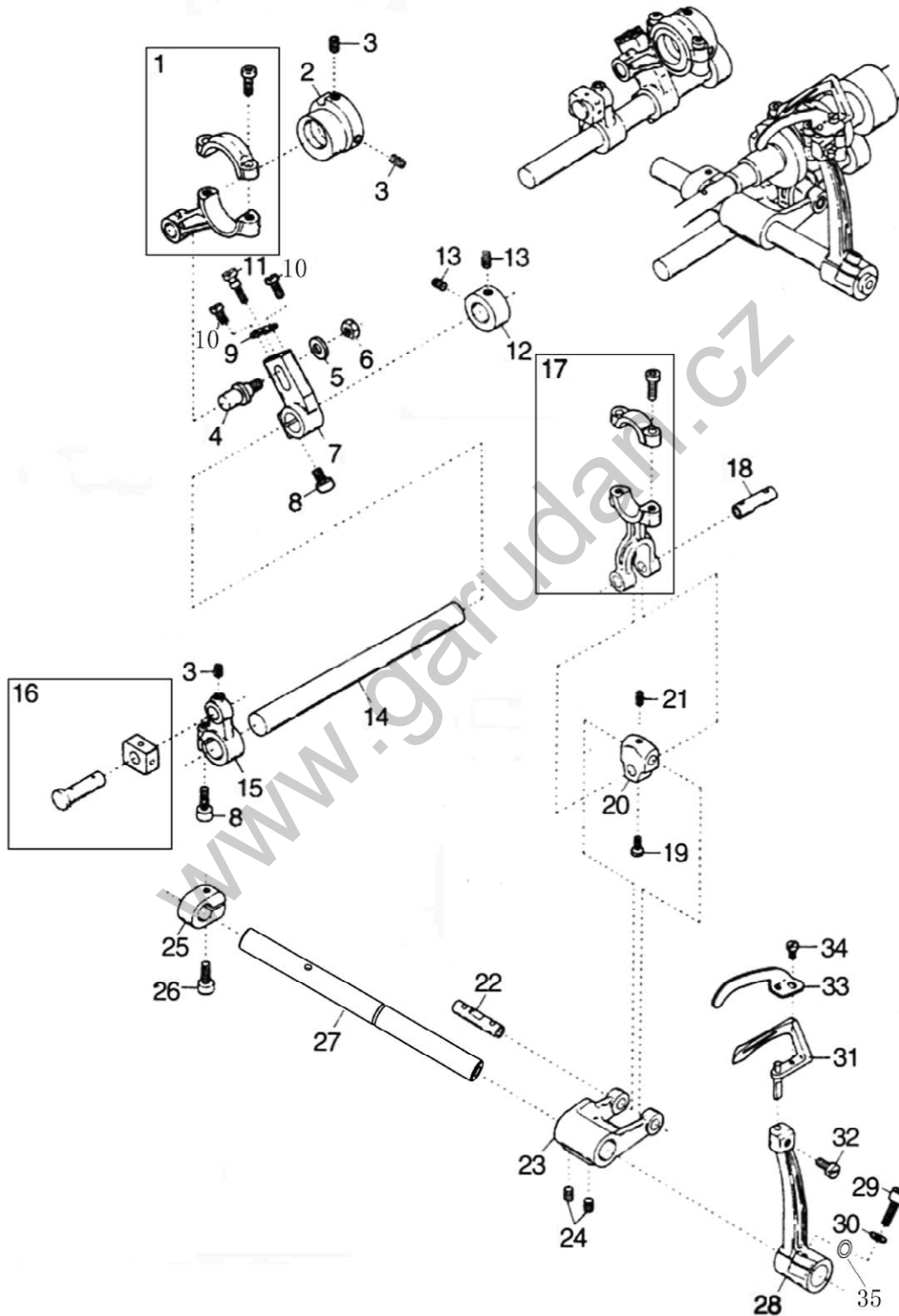
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### 9. SPERADER MECHANISM



9. SPERADER MECHANISM					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	20001428	Connecting Rod, Complete Set		1	
2	10011074	Eccentric		1	
3	10007400	Bearing		1	
4	10011071	Connecting Rod		1	
5	10012162	Screw	M5x5	2	
6	10007935	Collar		1	
7	10011005	Screw	M4x9	1	
8	10011055	Washer		1	
9	10011053	Pin		1	
10	10012393	Washer		1	
11	10003084	Nut		1	
12	10013016	Collar		1	
13	10013015	Screw	SM11/64"x40	2	
14	10011073	Adjusting Lever		1	
15	10009008	Screw	M6x16	1	
16	10011658	Driving Shaft		1	
17	10008069			1	
18	10012756	Washer		2	
19	10007588	Needle Bar Rocking Arm, Complete Set		1	
20	10011666	Rocking Arm		1	
21	10011651	Rocking Pin		1	
22	10011656	Spreader Bar		1	
23	10010907	Screw	M6x6	2	
25	10011657	Gasket		1	
26	10011665	Washer		1	
27	10011722	Collar		1	
28	10011887	Screw	SM9/64"x40	2	
29	10011659	Spreader Holder		1	
30	5221SL00560	Spreader		1	
31	10009037	Screw	M4x12	2	

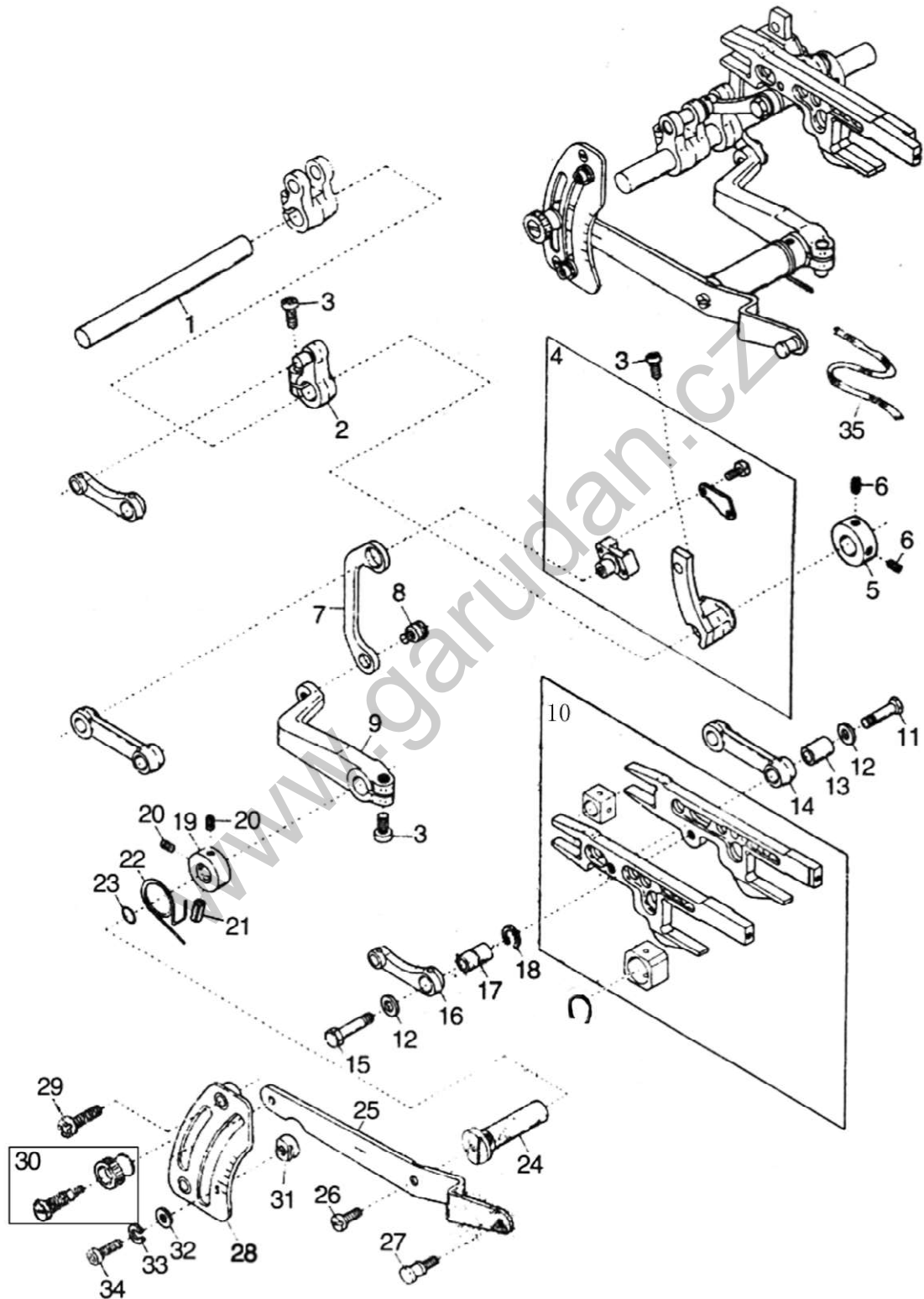
### 10. LOOPER DRIVING MECHANISM



10. LOOPER DRIVING MECHANISM					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	10010951	Looper Rocker Connecting Rod		1	
2	10010926	Looper Rocker Eccentric		1	
3	10012162	Screw	M5x5	3	
4	10012025			1	
5	10011653	Washer		1	
6	10009467	Nut		1	
7	10011655	Looper Rocker Lever		1	
8	10011376	Screw	M5x12	2	
9	10011661	Looper Rocker Adjusting Guide Plate		1	
10	10009676	Screw	M2.5x6	2	
11	10011654	Screw		1	
12	10014080	Collar		1	
13	10009074	Screw	M4x4	2	
14	10011946	Looper Rocker Shaft		1	
15	10011652	Looper Rocker Arm		1	
16	10007591	Looper Slide Block Pin Sets		1	
17	10004350	Looper Connecting Rod		1	
18	10011954	Pin		1	
19	10013015	Screw	SM11/64"x10	1	
20	10004479	Looper Driving Lever Link		1	
21	10011070	Screw	SM11/64"x40	1	
22	10004478	Pin		1	
23	10004470	Looper Driving Lever		1	
24	10010907	Screw	M6x6	2	
25	10011951	Collar		1	
26	10014395	Screw	M4x14	1	
27	10011949	Looper Bar		1	
28	10014096	Looper Holder		1	
29	10012073	Screw	M5x16	1	
30	10003073	Washer		1	
31	5221LL00561	Looper		1	
32	10012032	Screw	M4x7	1	
33	10014097	Needle Guard		1	
34	10014098	Screw	SM3/32"x56	1	
35	10032265	Washer		1	

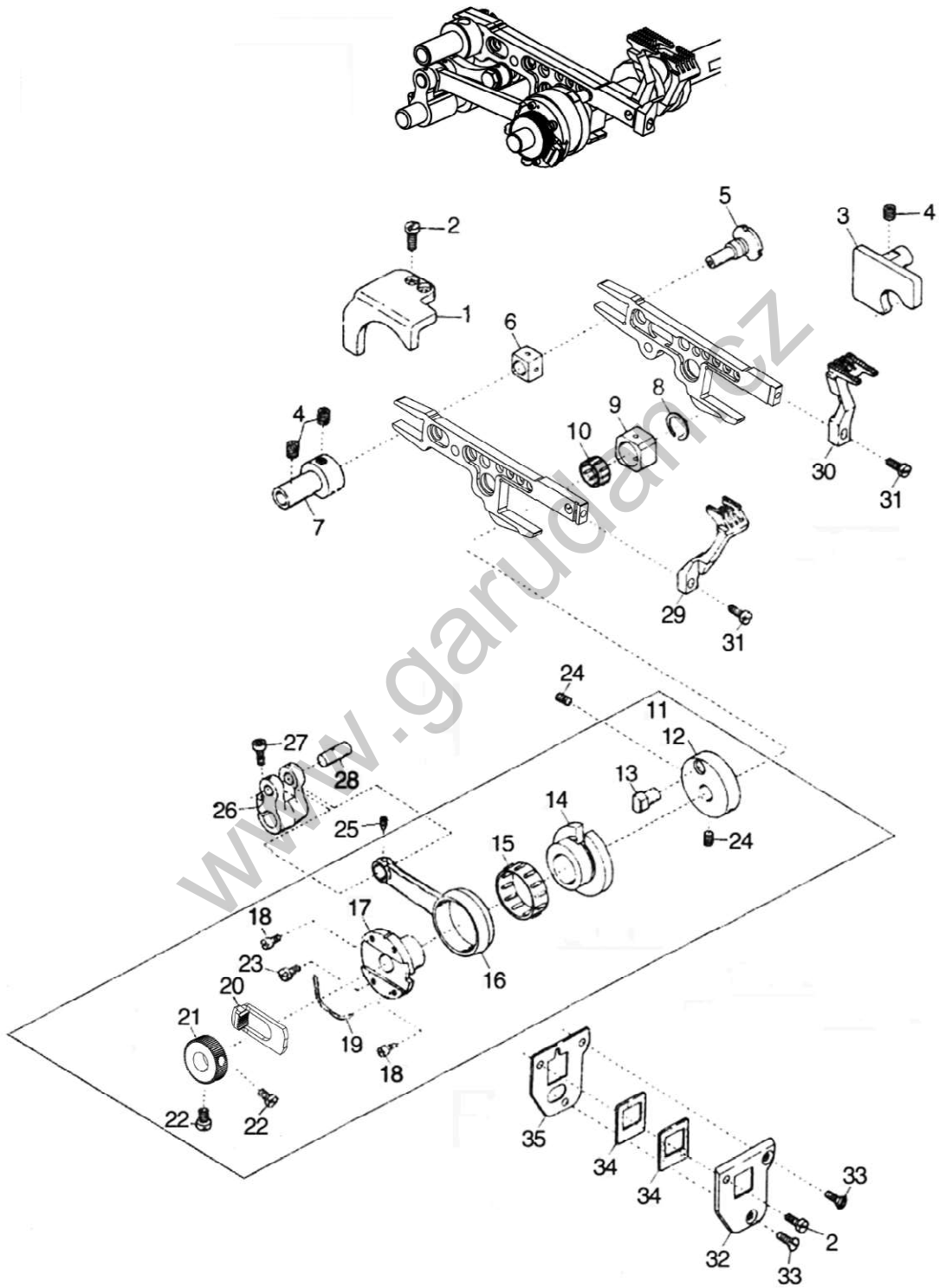


### 11. FEED DRIVING CONTROL MECHANISM



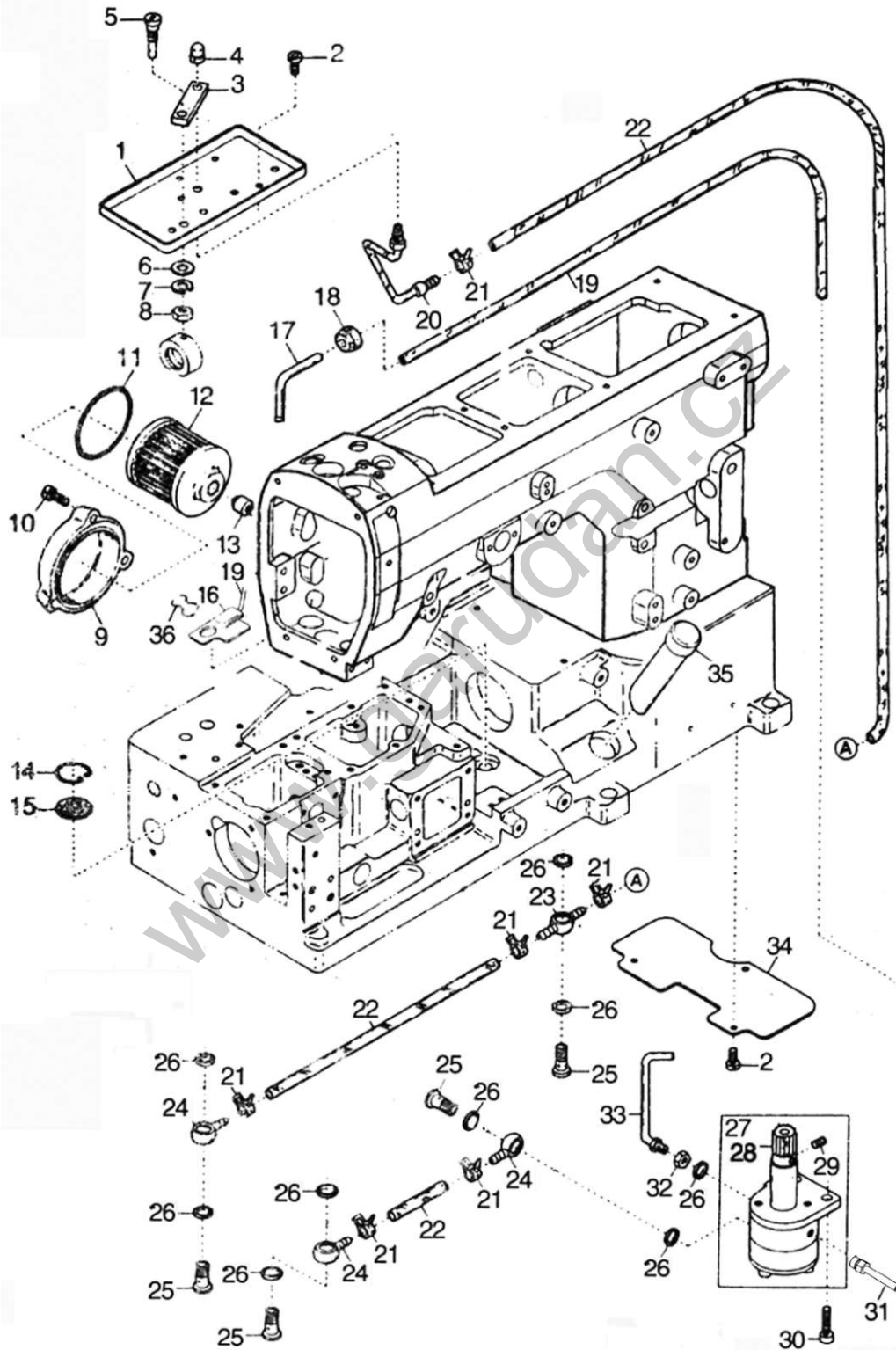
11. FEED DRIVING CONTROL MECHANISM					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	10011900	Feed Bar Driving Shaft		1	
2	10012056	Main Feed Bar Lever		1	
3	10011313	Screw	M6x12	3	
4	10011901	Differential Rocker, C. Set		1	
5	10011893	Collar		1	
6	10012162	Screw	M5x5	2	
7	10011899	Slider Link		1	
8	10011898	Screw	SM15/64"x28	1	
9	10011848	Differential Lever (Inner)		1	
10	10006766	Feed Bar, C. Set		1	
11	10011960	Screw	M5x21.5	1	
12	10011963	Washer		2	
13	10011953	Connection Bushing		1	
14	10011958	Differential Feed Bar Connection		1	
15	10011956	Screw	M5x18.5	1	
16	10011952	Main Feed Bar Connection		1	
17	10011959	Connection Bushing		1	
18	10011957	Collar		1	
19	10014080	Collar		1	
20	10009074	Screw	M4x4	2	
21	10002848	Pin		1	
22	10011890	Spring		1	
23	10009608	O-ring		1	
24	10011894	Differential Lever Shaft		1	
25	10011849	Differential Lever (Left)		1	
26	10011264	Screw	M4x8	1	
27	10011891	Screw	SM11/64"x40	1	
28	10013767	Differential Feed Graduation		1	
29	10042387	Screw	M4x12	2	
30	10027405	Adjusting Nut, C. Set		1	
31	10011892	Nut		2	
32	10003073	Washer		2	
33	1005537	Washer		2	
34	10012028	Screw	M5x8	2	
35	10008095	Oil Wick		1	

## 12. FEED DRIVING MECHANISM



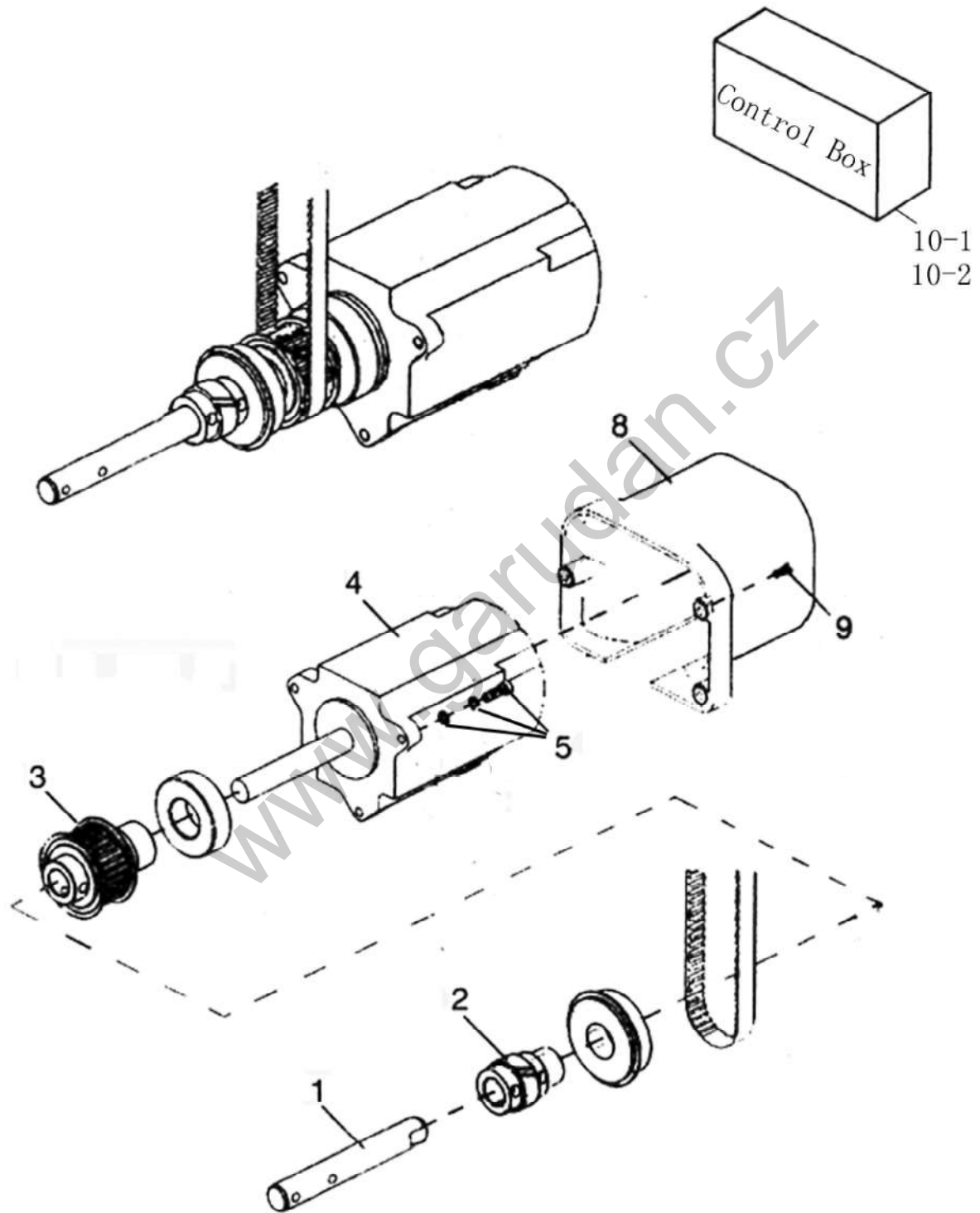
12. FEED DRIVING MECHANISM					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	10012054	Feed Bar Guide (Left)		1	
2	10011264	Screw	M4x8	3	
3	10012046	Feed Bar Guide (Right)		1	
4	10010907	Screw	M6x6	3	
5	10012048	Pin		1	
6	10011993	Feed Bar Block (Rear)		1	
7	10011458	Feed Bar Guide (Rear)		1	
8	10012052	Collar		1	
9	10012049	Feed Bar Block (Front)		1	
10	10006161	Bearing		1	
11	10012051	Feed Dog Eccentric, C. Set		1	
12	10004850	Feed Dog Eccentric Pin		1	
13	10004844	Pin		1	
14	10004836	Feed Dog Eccentric		1	
15	10004848	Bearing		1	
16	10004845	Feed Dog Driving Connecting Rod		1	
17	10004847	Feed Dog Regulating Eccentric		1	
18	10012050	Screw	M3x4	2	
19	10011995	Spring		1	
20	10004846	Feed Dog Regulating Plate		1	
21	10004849	Feed Dog Regulating Gear		1	
22	10014081	Screw	M5x8	2	
23	10012047	Screw	M3x6.2	1	
24	10012162	Screw	M5x5	2	
25	10034398	Screw		1	
26	10011994	Feed Dog Driving Shaft Lever		1	
27	10011313	Screw	M6x12	1	
28	10012055	Pin		1	
29	5221DF00563	Differential Feed Dog		1	
30	5221FD00567	Main Feed Dog		1	
31	10013159	Screw	M3.5x7.5	2	
32	10011463	Feed Bar Shield Holder (Front)		1	
33	10011049	Screw	M4x8	2	
34	10011459	Feed bar Shield		2	
35	10011469	Feed bar Shield Holder (Rear)		1	

### 13. LUBRICATING MECHANISM



13. LUBRICATING MECHANISM					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	10011465	Oil Receiver		1	
2	10010837	Screw	M4x5	5	
3	10011468	Lubricant Guiding Block		1	
4	10011467	Top Nozzle		1	
5	10011464	Screw		1	
6	10011653	Washer		1	
7	10005537	Washer		3	
8	10009467	Nut		1	
9	20003697	Oil Filter Cap		1	
10	10009037	Screw	M4x12	3	
11	10012090	O-ring		1	
12	10043169	Oil Filter		1	
13	10012093	Screw	M6x5	1	
14	10003330	Collar		2	
15	10012087	Oil Filter Screen		2	
16	10012328	Felt		1	
17	10012331	Suction Pipe		1	
18	10012092	Plug		1	
19	10007795	Oil Tube		1	
20	10011461	Oil Pipe Unit		1	
21	10011471	Oil Tube Clam		6	
22	10007796	Oil Tube		1	
23	10012095	Oil Tube Joint, Two Way		1	
24	10012103	Oil Tube Joint, One Way		3	
25	10012091	Screw		4	
26	10012086	Washer		9	
27	10012083	Oil Pump, C. Set		1	
28	10004893	Oil Pimp Driving Worm Gear		1	
29	10011887	Screw	SM9/64"x40	2	
30	10009008	Screw	M6x16	2	
31	10014067	Suction Pipe, C. Set		1	
32	10012088	Nut		1	
33	10011460	Oil Nozzle For Worm Gear, C. Set		1	
34	10011275	Dustproof Plate		1	
35	10011271	Oil Sight Gauge Oil Receiver		1	
36	10012332	Felt Clam		1	

### 14. MOTOR

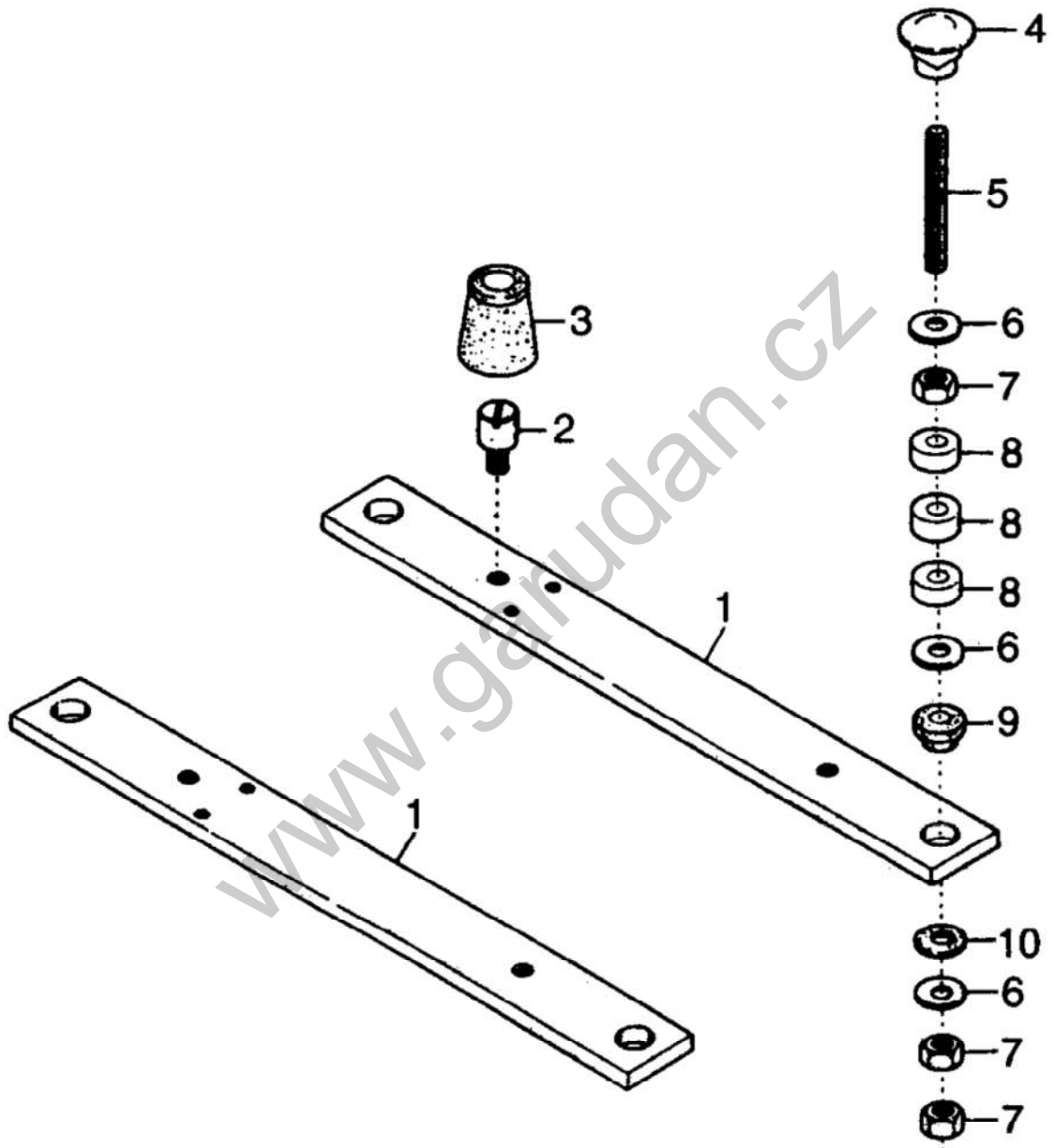


14. MOTOR					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	10014400	Lower Shaft		1	
2	10012166	Oil Pump Driving Worm		1	
3	10014495	Main Shaft Sprocket (Lower)		1	
4	10017026	Directly Driving Type Mini-Servo Motor		1	
5	10043235	Screw	M5x17	3	
8	10012174	Mini-Servo Motor Cover		1	
9	10042412	Screw	M4x10	3	
10-1	10038109	Control Box		1	
10-2	10037004	Control Box		1	

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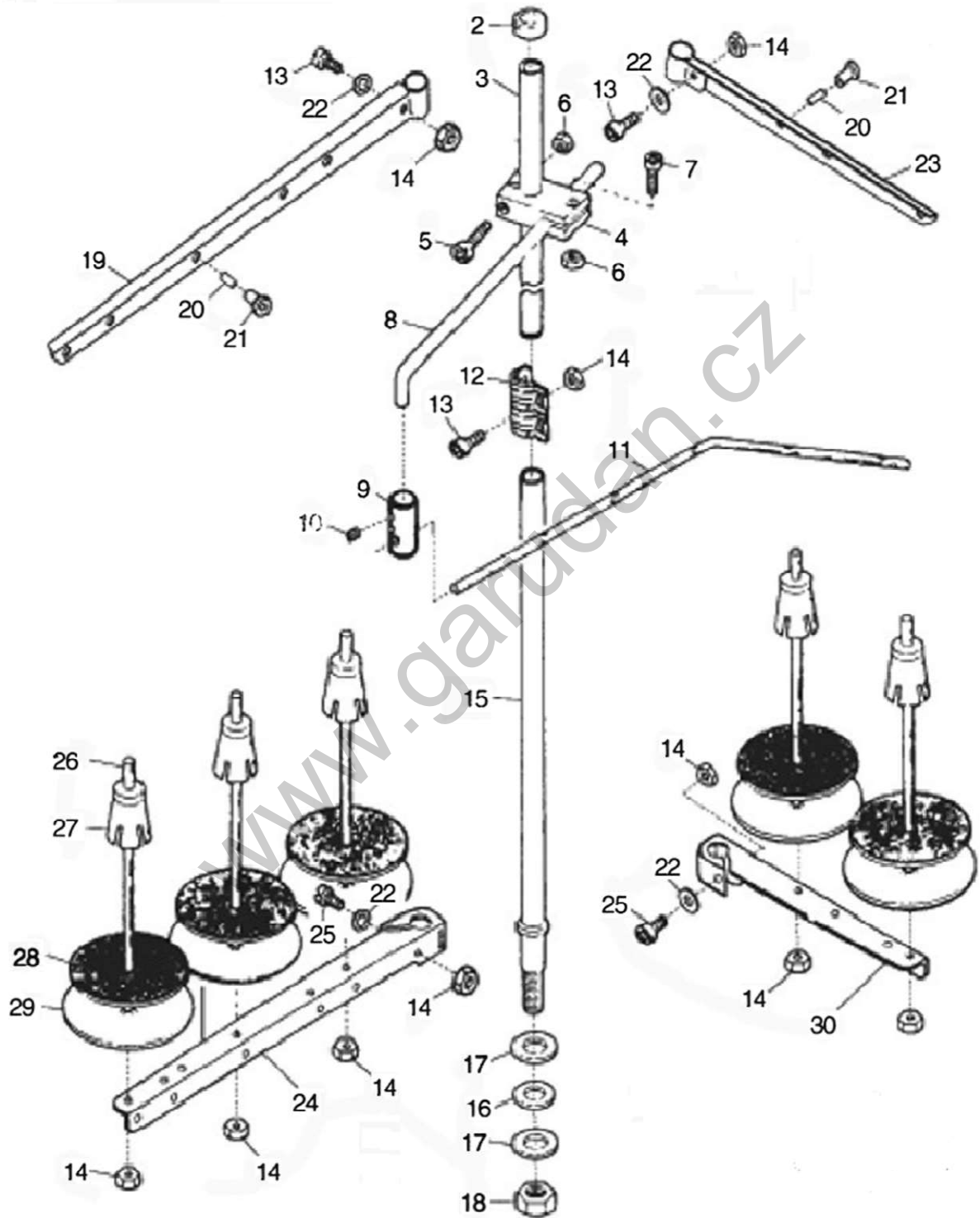
### 15. SUPPORTING BOARD



15. SUPPORTING BOARD					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	10011278	Supporting Board		2	
2	10012098	Screw	M6x15	4	
3	10011269	Oil Reservoir Rubber Cushion		4	
4	10011280	Nut		4	
5	10011277	Screw	M8x95	4	
6	10011279	Washer		12	
7	10003125	Nut		12	
8	10011270	Washer		12	
9	10011276	Supporting Board Rubber Cushion		4	
10	10012097	Washer		4	

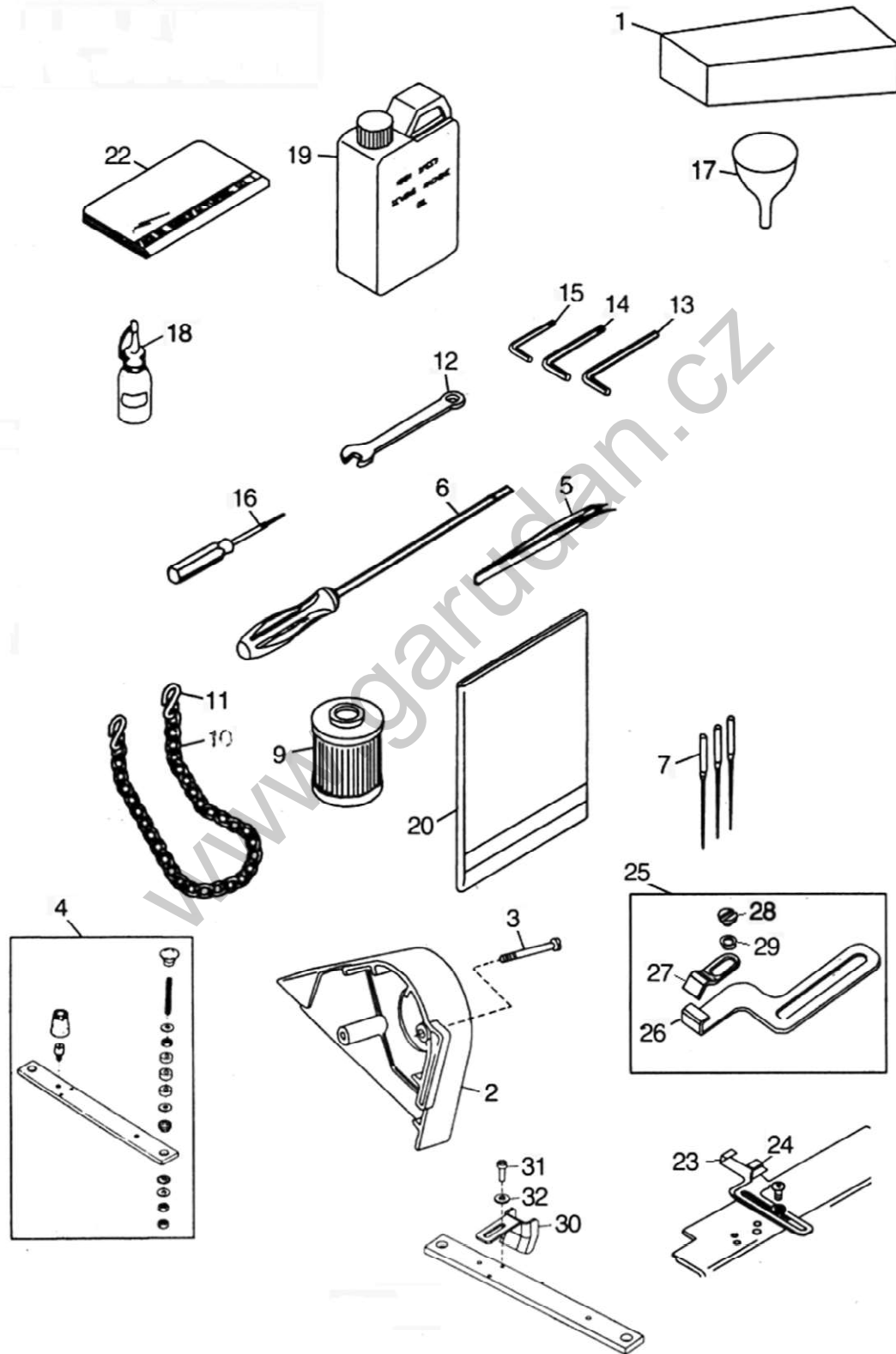
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### 16. THREAD STAND



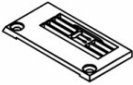






16. THREAD STAND					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	10004956	Thread Stand			
2	10004282	Column Cop		1	
3	10004293	Column Pipe		1	
4	10004335	Thread Guide Holder		1	
5	10002937	Screw	M4x25	1	
6	10005297	Nut		2	
7	10002958	Screw	M4x12	1	
8	10004346	Thread Guide Arm		1	
9	10004334	Thread Guide Holder		1	
10	10002851	Screw	M6x5	2	
11	10006076	Thread Guide		1	
12	10004286	Column Pipe Connector		1	
13	10003301	Screw	M5x14	4	
14	10002953	Nut		11	
15	10004291	Column Pipe		1	
16	10004295	Washer		1	
17	10004290	Washer		2	
18	10002985	Nut		1	
19	10006345	Thread Hanger		1	
20	10004289	Thread Guide Pipe		5	
21	10004285	Thread Guide Bushing		5	
22	10003022	Washer		4	
23	10004298	Thread Hanger		1	
24	10006351	Thread hanger		1	
25	10003312	Screw	M5x30	2	
26	10004288	Spool Pin		5	
27	10004287	Spool Cushion		5	
28	10004281	Spool Mat		5	
29	10004299	Spool Seat Disc		5	
30	10004284	Thread Hanger		1	

### 17. ATTACHMENT BOX



17. ATTACHMENT BOX					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	10004956	Thread Stand		1	
2	10011274	Beef Cover		1	
3	10011272	Screw	M6x46	2	
4	20003189	Supporting Board. C. Set		1	
5	10004247	Thread Tweezers		1	
6	10013982	Screwdriver		1	
7	10050369	Needle		3	
9	10010300	Oil Filter		1	
10	10011360	Chain		1	
11	10014203	Hook		2	
12	10014122	Spanner (7#)		1	
13	10009687	Hexagonal Wrench (4#)		1	
14	10009685	Hexagonal Wrench (2#)		1	
15	10009686	Hexagonal Wrench (2.5#)		1	
16	10009270	Hexagonal Screwdriver		1	
17	10008932	Funnel		1	
18	10011155	HP Oiler		1	
19	10004882	Jerrican		1	
20	10005523	Explain Book		1	
22	10011311	Machine Cover		1	
23	10011547	Left		1	
24	10011486	Right		1	
25	20002539	Eyelet		1	
26	10011548	Fabric Guide (Left)		1	
27	10011542	Fabric Guide (Right)		1	
28	10011545	Screw	M3x3.3	1	
29	10002998	Washer		1	
30	10011309	Prevent Chain Plate		1	
31	10013178	Screw	M4x12	1	
32	10010761	Washer		1	

## 18. GAUGE PART LIST

Main Parts								
Needle	m.m	Throat plate	Presser foot asm	Main feed dog	Diff feed dog	Needle clamp	Upper looper	Lower looper
2	4.0	5222TP00401	5220PF00404	5221FD00567 5221DG00211	5221DF00563	5220NC00400	5221SL00560	5221LL00561
2	4.8	5220TP00484	5220PF00484	5221FD00567 5221DG00211	5221DF00563	5220NC00480	5221SL00560	5221LL00561
3	4.8	5220TP00484	5220PF00485	5221FD00567 5221DG00211	5221DF00563	5220NC00485	5221SL00560	5221LL00561
3	5.6	5220TP00564	5220PF00564	5221FD00567 5221DG00211	5221DF00563	5227NC00560	5221SL00560	5221LL00561
3	6.4	5220TP00642	5220PF00644	5221FD00646 5221DG00221	5221DF00643	5227NC00640	5221SL00560	5221LL00561

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