

User Manual



GF-1130-4412 MH

GF-2230-4412 MH

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A BASIC INFORMATION

A1. PRODUCT DESCRIPTION AND INTENDED USE

The machines are designated for use in the apparel, home textiles, accessories and footwear production. It is suitable for making car seat covers, sofas, leather bags, tents, etc. Triple synchronous feed and special feeder provide smooth operation and even stitch even for heavy materials. Characteristic features of this machine are low level of noise and vibrations and large-capacity hook.

A2. TECHNICAL SPECIFICATIONS

Model	GF-1130-4412 MH	GF-2230-4412 MH
Number of needles	1	2
Needle gauge	-	6.4 mm / 7.9 mm / 9.5 mm / 12.7 mm
Use	Medium/Heavy materials	
Stitch type	2-thread lockstitch	
Max. stitch length	max. 9 mm	
Hand lever foot lift	9 mm	
Knee lever foot lift	19 mm	
Needle system	135x17 for fabrics, 135x16 for leather	
Needle size	Nm. 110 -180 *	
Hook type	Vertical with Ø 26 mm bobbin	
Lubrication	Automatic with oil pump	
Motor	Integrated servomotor 1x230V	
Machine head weight	58 kg	60 kg
Table weight	27 kg	
Working space	260 x 110 mm	
Machine table dimensions	515 x 180 mm	
Power	max. 850 W (for a short time during start-up)	
Ground plan dimensions (including frame)	1070 x 545 mm	
Bedplate height	740 – 800 mm	
Machine height including thread stand	1550 mm	
Noise level under standard conditions	82 dB/A	
Max. sewing speed	3000 st./min. **	

* Machine is preset for needle Nm. 160

** Do not exceed specified sewing speed due to the service life of the machine mechanism. This cannot be guaranteed under any conditions. It is necessary to reduce speed depending on the thread, needle and material, stitch length and the foot track.

B SAFETY INSTRUCTIONS

Read the instructions carefully before installation and use. Keep this manual for future reference.

B1. GENERAL INSTRUCTIONS

1. Do not operate the sewing machine until proper preparation has been made by a technician or qualified person and safety precautions have been taken.
2. Always follow the safety instructions when handling the machine.
3. This sewing machine may only be operated by properly trained personnel.
4. Maintenance, repair, inspection and adjustment of the machine may only be carried out by a qualified person.
5. Work on electrical equipment may only be performed by a qualified worker or person with the appropriate authorization. Work on electric parts and equipment on your own is not permitted.
6. The machine may only be used for its intended purpose.
7. The warranty does not cover any problems in the operation of the machine that are caused by unauthorized modifications to the machine, as well as problems caused by non-observance of the instructions given in this manual and generally known habits for the operation and maintenance of industrial sewing machines.

B2. INSTALLATION PRECAUTIONS

1. Immediately report visible damage to the carrier. Check the contents of the order shipment and report any defects immediately to the manufacturer. Later claims will not be accepted.
2. Use the machine after checking that it meets all the safety standards of your country.
3. The machine head is covered with a corrosion-proof coating. Wipe off the lubrication and dust layer with a cloth or petrol before placing it on the work surface.
4. The machine has been thoroughly inspected and tested before shipment. However, it may have been damaged by transport or impact. Check the operation of the machine with the handwheel, to detect extraordinary noises, heavy running, etc. before starting the test sewing.
5. Never start the machine if the oil level is under or over the marked lines.
6. Check that the power and phase are in accordance with the label instructions.
7. Proper grounding of the machine is necessary.
8. Use the correct grounding plug.
9. Do not use an extension cord.
10. Make sure that the power supply and voltage match the requirements on the label of the machine.
11. Do not use the machine in explosive or corrosive environment.
12. In the first two weeks, do not exceed 3/4 of the maximum machine speed.
13. Check that the air pressure is between 0.55 and 0.6 MPa.

B3. OPERATIONAL SAFETY INSTRUCTIONS

1. Do not use the machine without a belt cover, finger guards or other protective equipment.
2. All protective equipment of the machine must be in place before operation. Do not use the machine without covers and protective equipment.
3. Repair damaged covers or replace them immediately.
4. If the safety label is damaged, order a new one from the machine supplier and place it in its original position.
5. Switch off the machine and unplug it in these situations (the motor still rotates after turning off; wait until it stops completely):
 - when threading the needle (needles), hooks, etc.
 - when changing the needle, presser foot, needle plate, hooks, hook bobbins, feeders, needle guards, finger guards, work guides, etc.
 - when the machine is not in use and left unattended
 - when opening or removing the protective covers
 - for any maintenance, repair, inspection and adjustment of the machine
 - when cleaning the machine
6. Wear safety goggles and gloves when lubricating the machine. Do not drink oil under any circumstances, as it may cause vomiting and diarrhoea. Keep oil out of the reach of children.
7. Take special care when lifting / tilting the machine head. When tilting the machine head, make sure the machine is turned off. Always hold the machine head with both hands.
8. When handling cords and plugs, check if the machine is switched off to avoid electrical shock and injury.
9. Check the electrical cords for damage to avoid injury by touching an exposed wire.
10. Do not place any objects on the power cord.
11. Do not open or touch the inside of the junction box.
12. It is strictly forbidden to connect any connector while the machine is powered. Risk of damage to electrical components and drives.
13. Do not modify the machine in any way that could endanger safety.
14. Clean the machine regularly during operation.
15. Do not wipe the machine with thinner or acetone.
16. Use only original or approved spare parts from manufacturer.
17. Ensure adequate illumination of the work area and the surroundings of the machine.
18. Disconnect the compressed air supply before servicing and repairing pneumatic equipment. Drain off the residual compressed air before servicing.

B4. WORKING SAFETY INSTRUCTIONS

1. Make sure you know the position of Stop button before starting to work.
2. Do not touch any moving parts or put objects into the machine while sewing.
3. Be careful not to catch or place objects near the machine's moving mechanisms, particularly fingers, sleeves, clothing and hair.
4. Never touch the needle when the machine is turned on and sewing.
5. Never reach under the thread lever cover while the machine is on.
6. Do not place your fingers in the needle guard holder when feeding material manually.

7. Do not work on the machine under the influence of alcohol or drugs.
8. We recommend wearing safety goggles.
9. Do not remove covers or any other safety device while the machine is running.
10. Always turn off the main switch when leaving the machine.

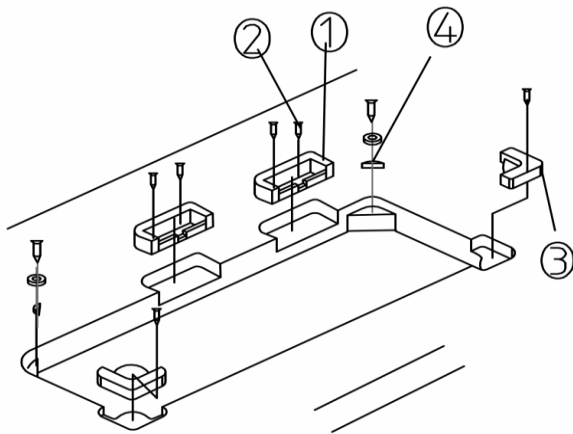
B5. DISPOSAL INSTRUCTIONS

For disposal of the machine contact your local dealer or manufacturer in accordance with legislation.

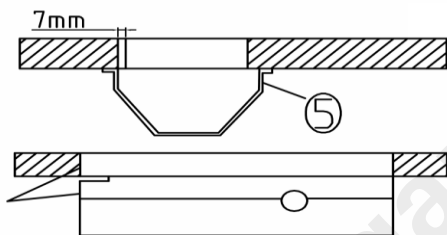
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C MACHINE SETUP

C1. OIL SUMP INSTALLATION



Insert rubber cushions ①, ③, ④ into the bedplate and tighten the screws ②.



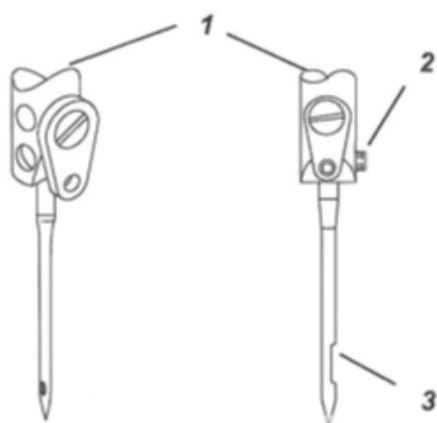
Installation of the oil sump:
According to the picture fasten the oil sump (5) to the plate with eight screws.

D OPERATING INSTRUCTIONS

D1. REPLACING THE NEEDLE

Turn off the main power switch. Replace the needle only when the sewing machine is off.

For 1-needle machine GF-1130:



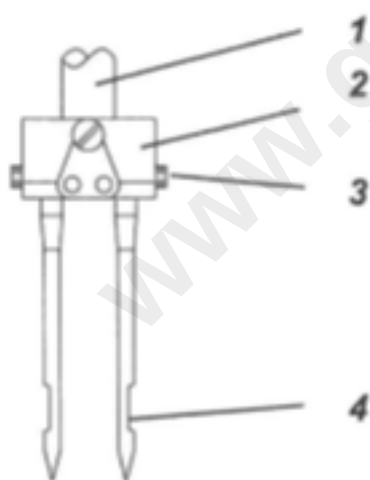
Turn the hand wheel to rise the needle bar 1 to the highest position.

Loosen the screw 2.

Pull out the needle from the needle bar 1 downwards.

Insert new needle into the opening in the needle bar 1 all the way up with the groove 3 to the right. Tighten the screw 2.

For 2-needle machine GF-2230:



Turn the hand wheel (CCW) to rise the needle bar 1 to the highest position.

Loosen the screw 3.

Pull out the needle from the needle holder 2 downwards.

Insert new needle into the opening in the needle holder 2 all the way up with the groove of the right needle 4 to the right and the groove of the left needle to the left (as shown).

Tighten the screw 3.

When changing the needle size, you must adjust the distance of the hook to the needles, otherwise it will lead to malfunctioning:

Using the smaller size of the needle:

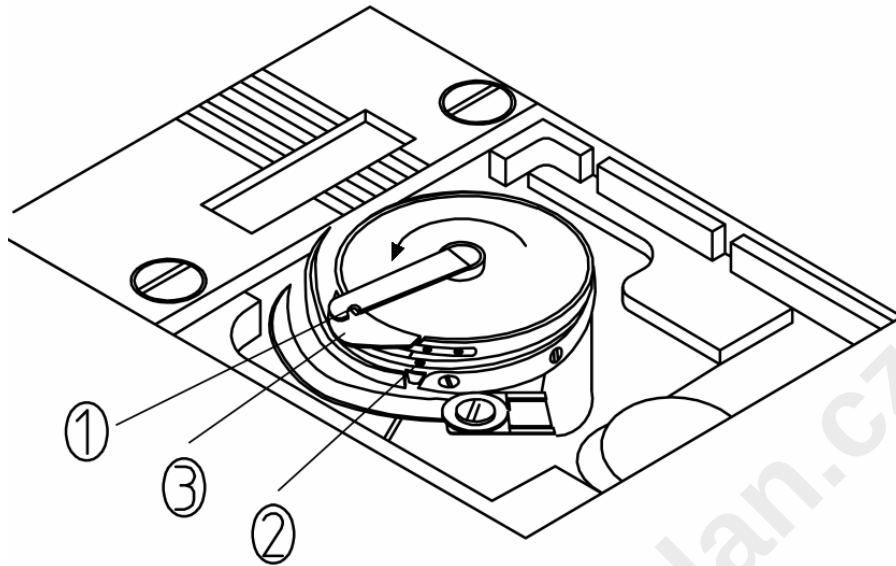
- Skipping the stitches
- Damaging the thread

Using the larger size of the needle:

- Damaging of the tip of the hook
- Damaging the needle

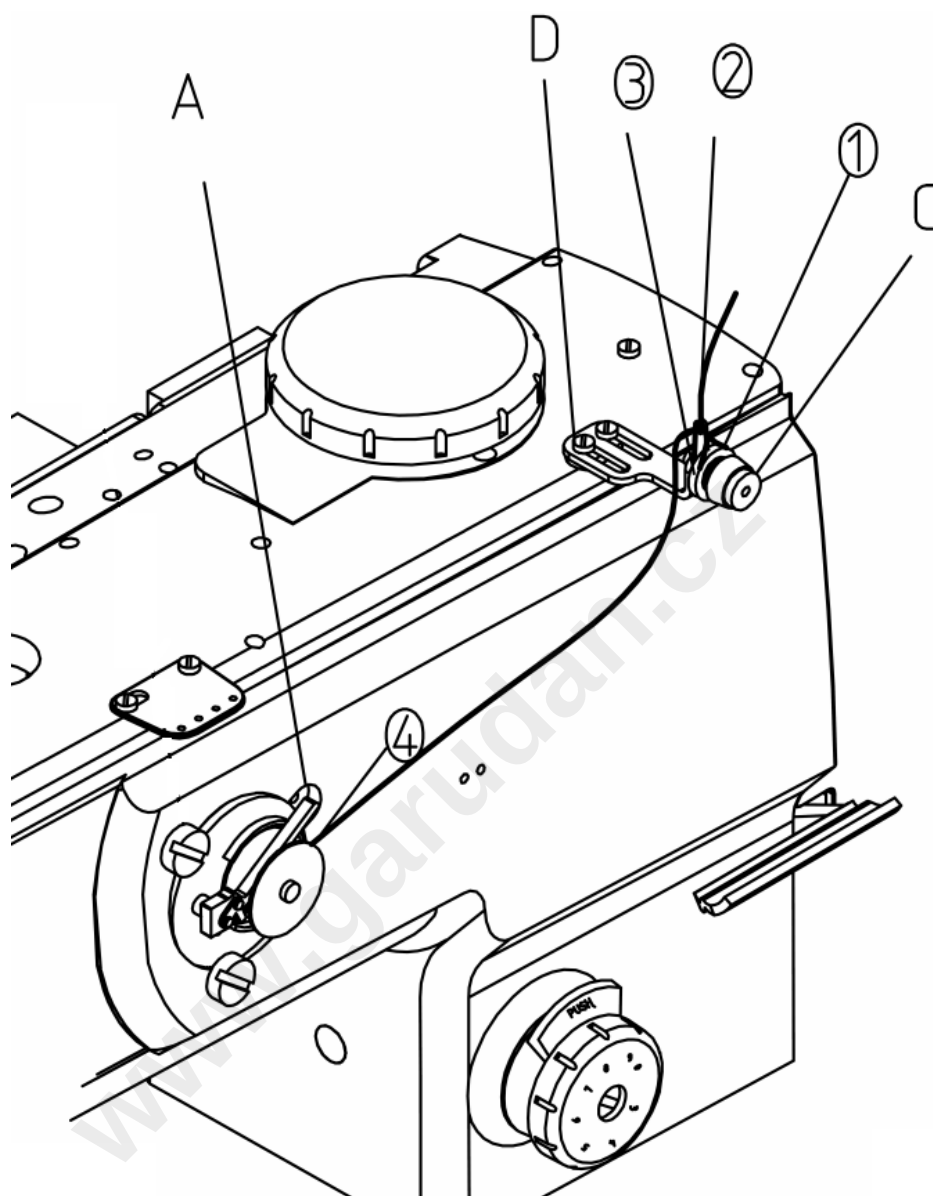
D2. THREADING THE MACHINE

D2.1. Threading the bottom thread



1. Pull the latch up ①.
2. Hold the bobbin with the loose end of the thread in a CCW direction and put it into the hook.
3. Pass the thread through the opening ② and ③ and under the bottom thread tension spring.
4. Pull the thread out, the bobbin must turn in a CCW direction (as in the picture).

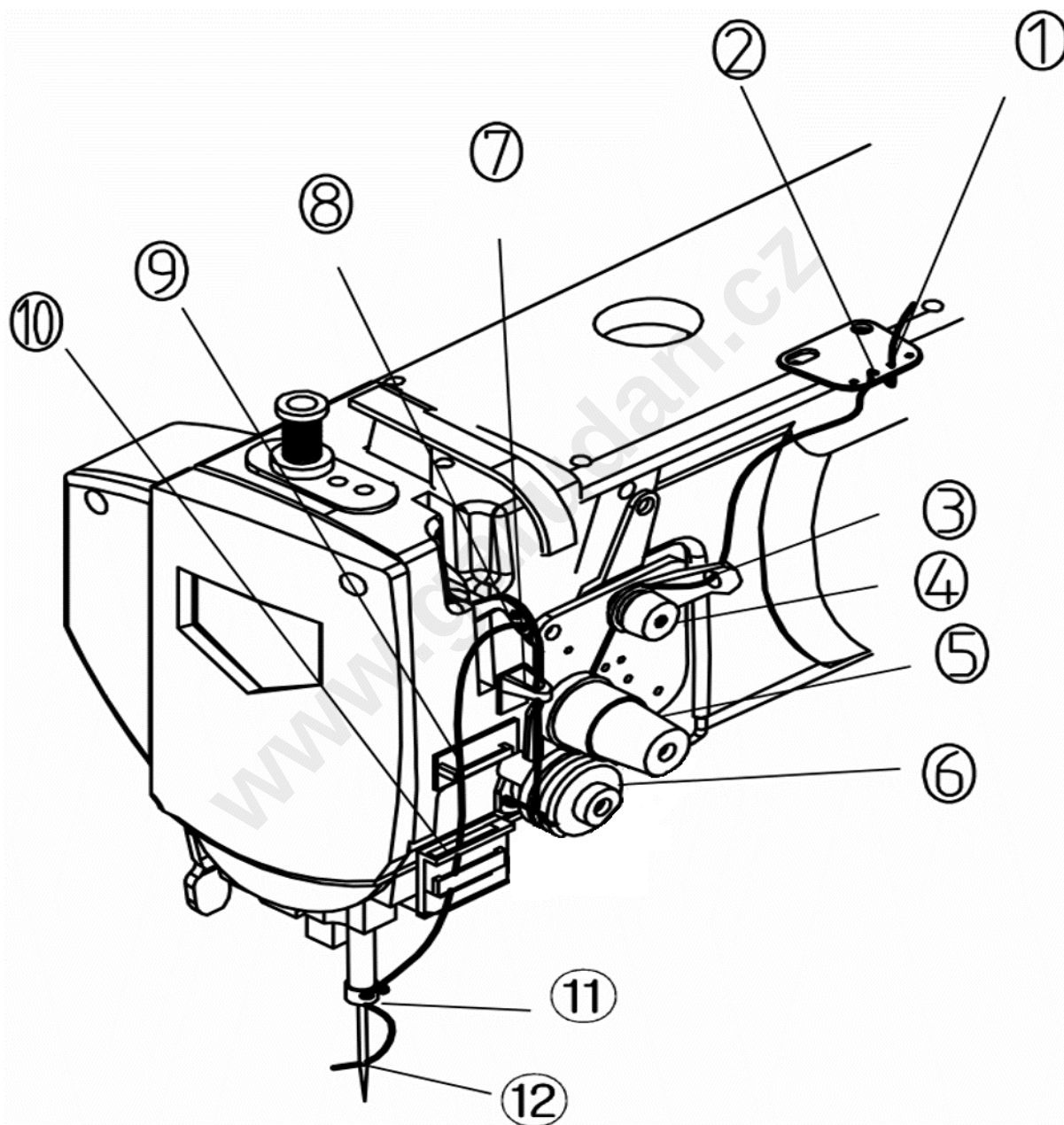
D2.2. Winding the bobbin



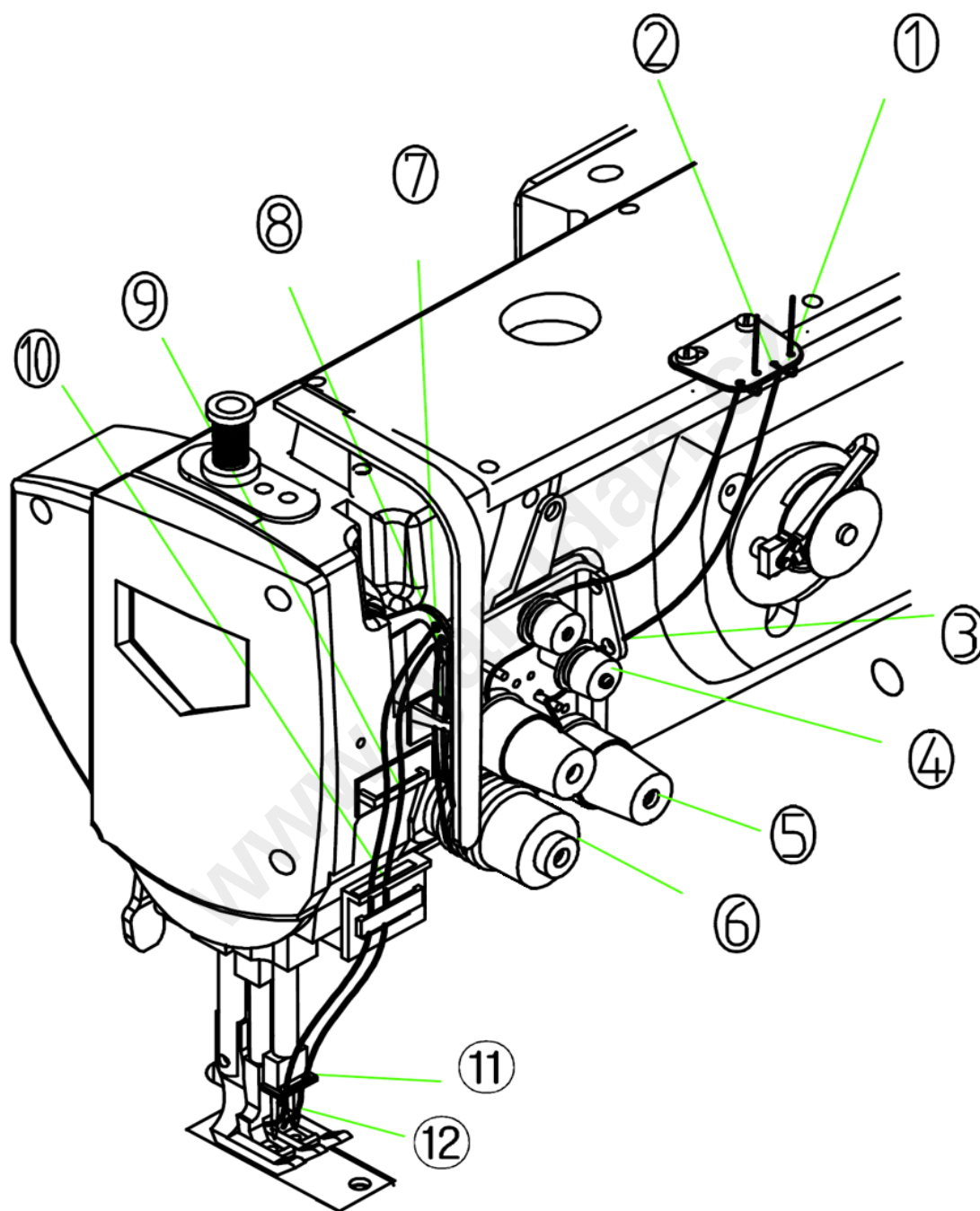
1. Put the bobbin on the winding pin. Pass the thread through points ① to ③ and wind the end of the thread a few times around the bobbin.
2. Press the winder lever ④. Press the foot controller and machine will start winding. When the bobbin is full, winding stops automatically.
3. You can adjust the amount of thread by the metal plate screwed on to the winder lever A. Loosen the screw and adjust position of the plate to stop winding at 80 % of the bobbin capacity.
4. It's necessary to wind the thread evenly. Center the thread tension ②, adjust the position forward / backward and tighten the screw ③.

D2.3. Threading the upper thread

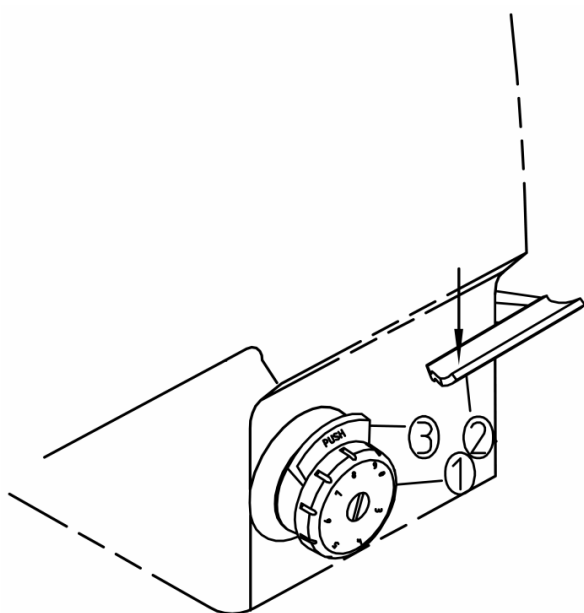
1. Thread the upper (needle) thread of GF-1130-4412 MH as shown in the picture.



2. Thread the upper (needle) threads of GF-2230-4412 MH as shown in the picture.

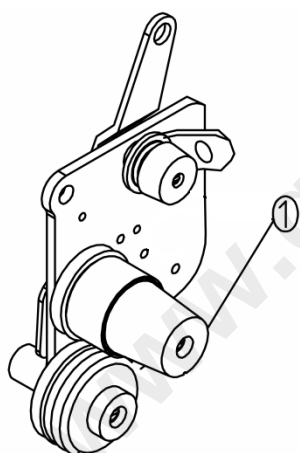


D3. ADJUSTING THE STITCH LENGTH AND REVERSE STITCH



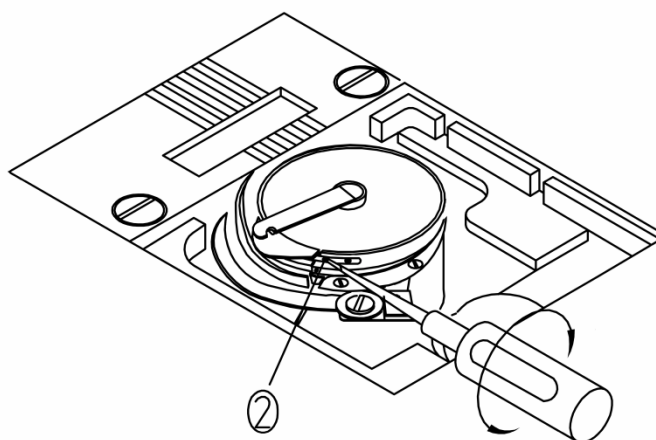
1. Press the locking plate (3) and set the desired stitch length by turning the dial (1).
2. Press the reverse lever (2), the machine will sew back. When the lever is released, the machine sews forward again.

D4. THREAD TENSION ADJUSTMENT



D4.1. Upper thread tension adjustment

Turn the thread tension nut (1) clockwise to increase the tension. Turn the nut counterclockwise to decrease the tension. In double-needle machines, each thread has its own tension wheel.

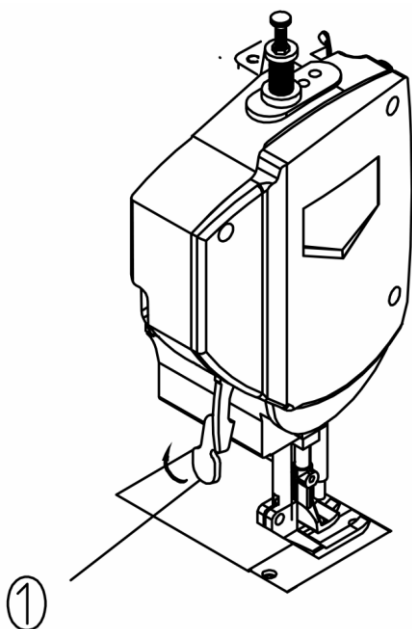


D4.2. Bottom thread tension adjustment

Turn the tension screw (2) clockwise to increase the tension. Turn the screw counterclockwise to decrease the tension.

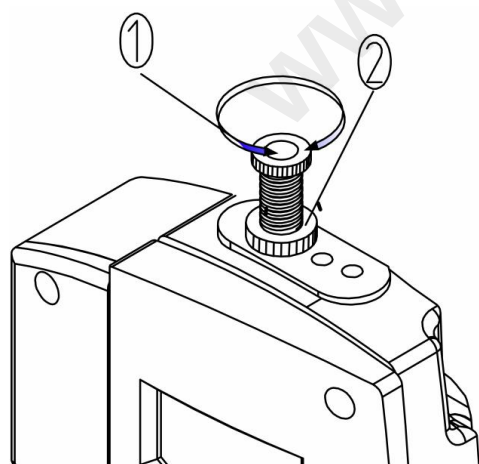
D5. PRESSER FOOT

D5.1. Presser foot lift



1. Raise the presser foot lever ① up to a height of 9 mm.
2. Lowering the lift lever will lower the foot.
3. You can also lift the presser foot up to 19 mm using the knee lever or by pressing the pedal backwards. Pressing the pedal backwards requires a pressurized air supply.

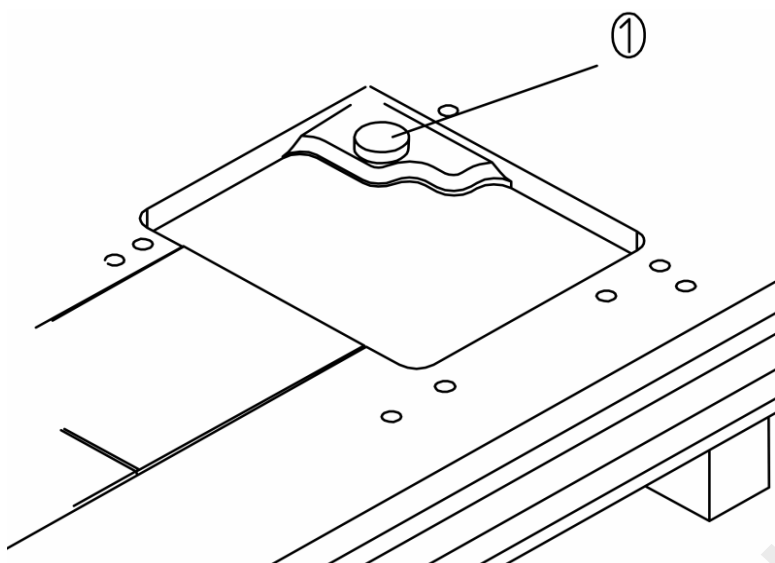
D5.2. Foot pressure adjustment



The nut ② is used to lock the screw ①. Loosen it before adjusting the pressure and tighten again after adjustment.

Turn the foot pressure screw ① clockwise to increase the foot pressure. Turn it counterclockwise to decrease the pressure.

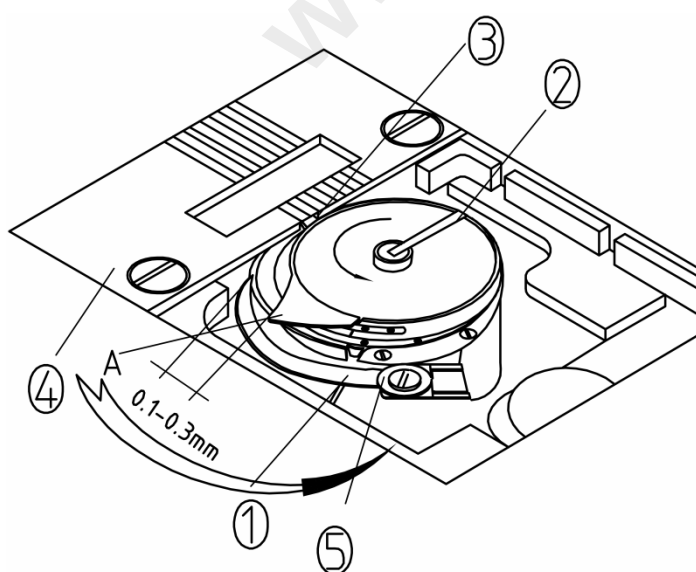
D6. HOOK SAFETY CLUTCH FUNCTION



During sewing, when the hook reaches beyond the limit, a safety lock is activated to lock it. The needle will be still moving, but not the hook. Always remove the cause before running.

1. Press the button ① and turn the handwheel (CCW) until button ① clicks. Keep the button pressed and turn the handwheel backward (CW), until you hear a click.
2. Before running the machine motor in the usual way, check the proper functioning by turning the handwheel manually.

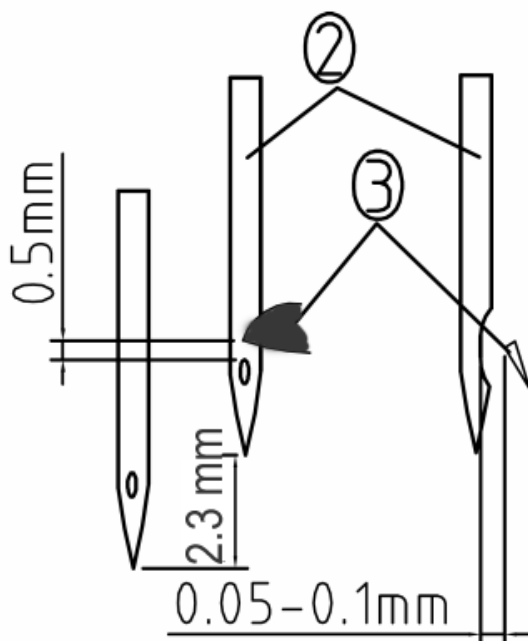
D7. TIMING OF THE HOOK OPENER



1. Turn the handwheel until hook opener ① moves to the far right.
2. Push the hook ② in the direction of the arrow to bring it as close as possible to the hook opener ① until the nose ③ touches the groove on the needle plate ④.
3. Loosen the screw ⑤ and set the distance between the hook opener ① and the hook inner part A to 0.1-0.3 mm.

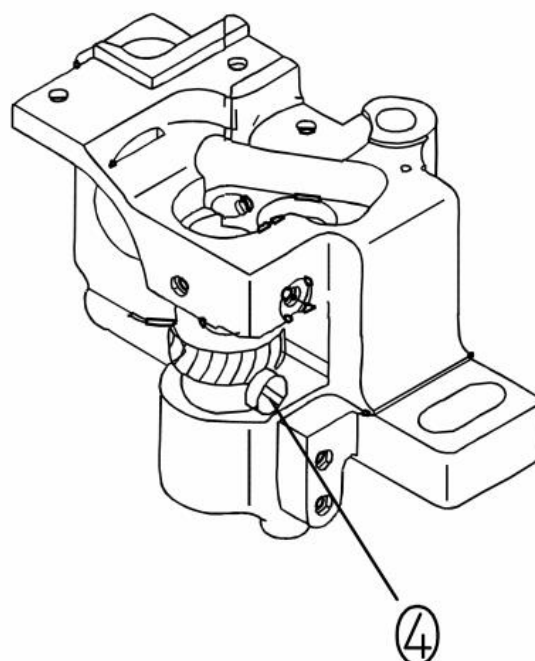
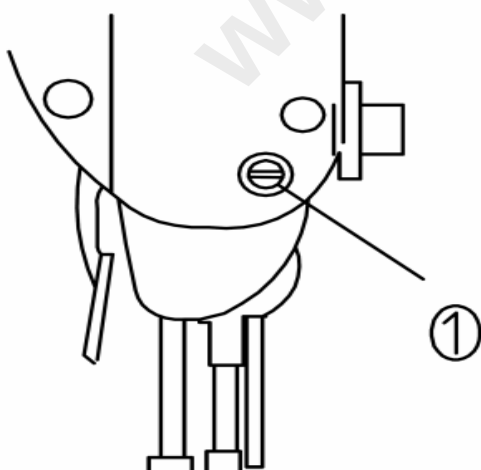
D8. TIMING OF THE HOOK AND THE NEEDLE

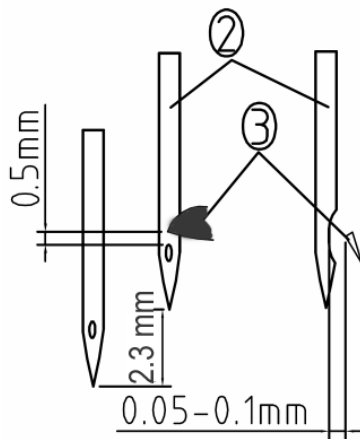
Make the settings below with the stitch length set to 0.



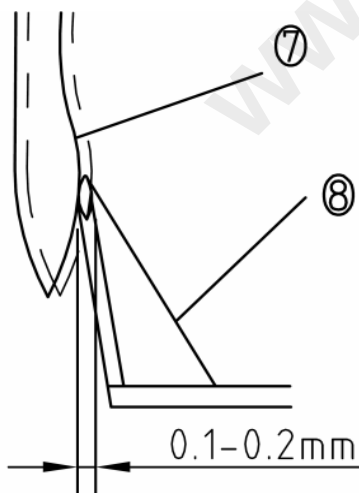
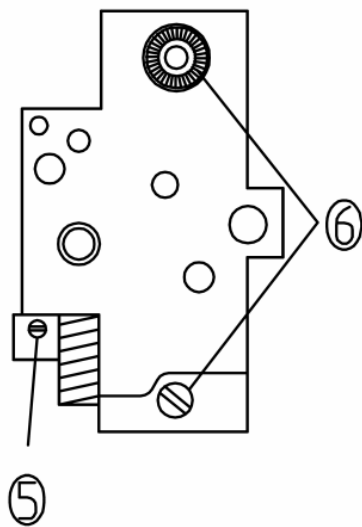
1. Turn the handwheel and raise the needle bar 2.3 mm from the lowest position. Check if the needle ② and the tip of the hook ③ align with each other. If not, loosen the two screws ④ of the small gear and rotate the hook to bring its tip to the center of the needle. We call this position "the machine at the set point of 2.3 mm."

2. Adjust the height of the needle bar to the point when "the machine is at the set point of 2.3 mm", the hook tip is about 0.5 mm above the upper edge of the needle eye. Loosen the needle bar screw ① and adjust the distance between the upper edge of the needle eye ② and the hook tip ③ to 0.5 mm. Tighten the screw.





3. To adjust the distance between the hook tip (3) and the needle (2), loosen the hook block screws (6) and the gear screws (5). Adjust the distance to 0.05-0.1 mm. Then tighten all screws.



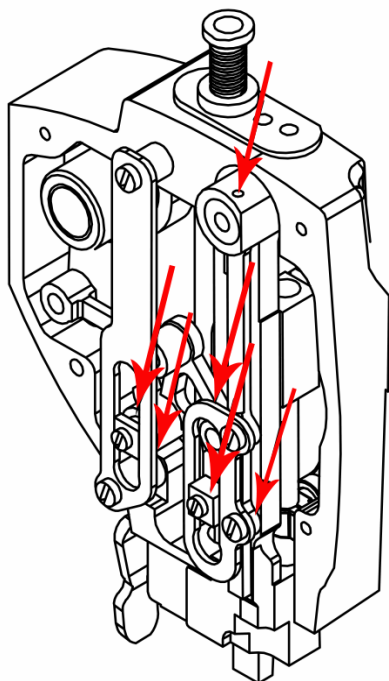
4. Adjust the guard plate of the hook by bending it so that the distance between the plate (8) and the needle (7) is 0.1-0.2 mm.
The guard plate is intended to prevent contact of the needle with the hook tip, if the needle bends.

Adjust the distance when changing the needle size.

E MACHINE MAINTENANCE

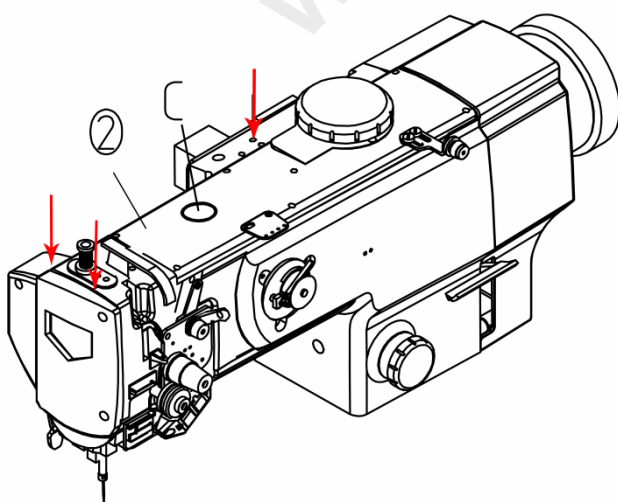
E1. LUBRICATING THE MACHINE

E1.1. Lubricating the front part of the machine head



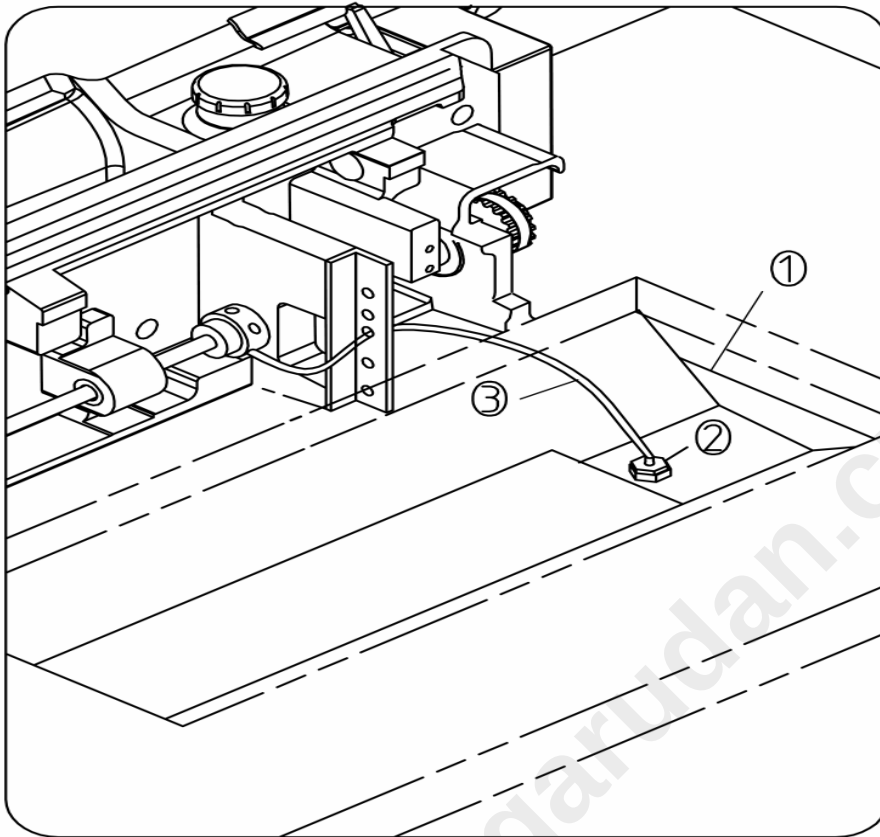
1. Loosen the front cover screws.
2. Remove the front cover.
3. Lubricate each day at the marked points.
4. Replace the cover.
5. Secure with screws.

E1.2. Lubricating the machine head



1. The lubrication points (openings) are marked red. Add a few drops of oil to these points every day. If the machine oil could not use all the oil, decrease the frequency of the lubrication.
2. Before first use or after the long-term stop, lubricate the machine at marked points, remove cover ② and apply oil to each felt and hose.
3. "C" is the upper oil tank. Check the operation of the oil pump through the window.

E1.3. Refilling the oil sump



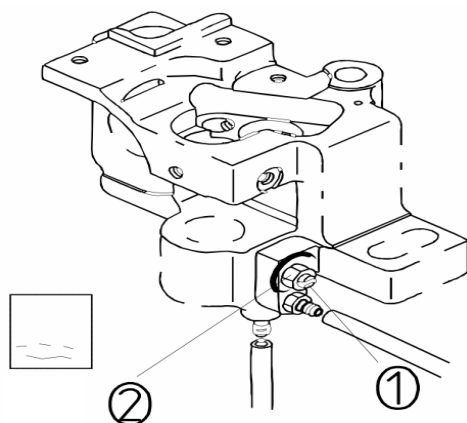
1. Place the oil filter head ② on the hose ③ and put it into the oil sump ① as shown. You can attach it using the magnet.

2 Add the oil until the cap ② is completely submerged.

3. If the oil level falls below $\frac{1}{3}$ of the head height ②, add more oil.

E2. ADJUSTING THE LUBRICATION

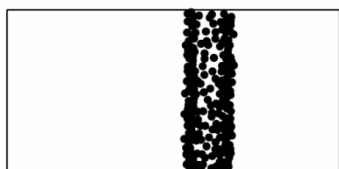
E2.1. Adjusting the lubrication of the hook



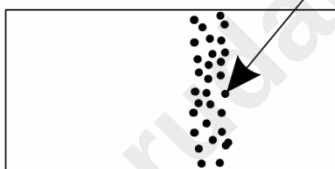
1. Loosen the nut (2) and adjust the amount of lubrication with the screw (1). Turn the screw clockwise to decrease or counterclockwise to increase the amount of oil.

2. Test the proper amount of lubrication with a paper. Place the paper close to the hook and bring the machine to maximum speed for a few seconds. You should see thin lines formed by the oil on the paper.

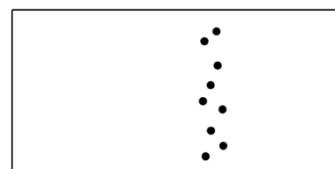
Too much oil



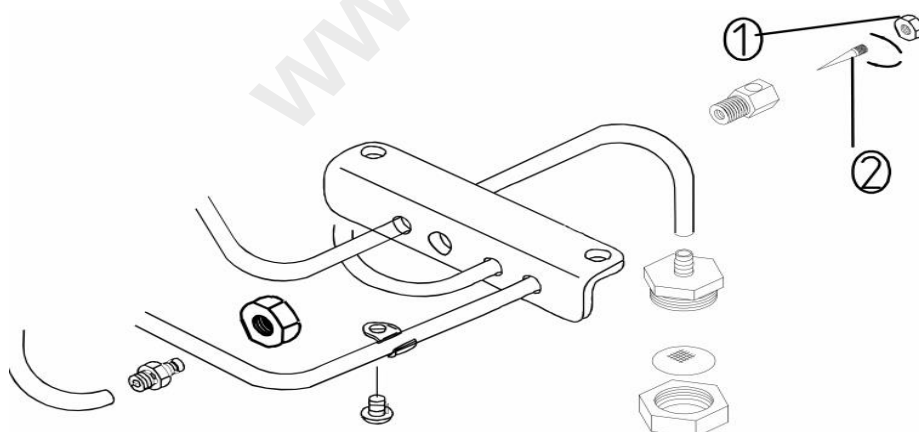
Correct amount of oil



Too little oil



E2.2. Adjusting the lubrication of the upper oil tank



1. If too much oil accumulates in the upper oil tank, tilt the machine head and loosen the nut (1). Turn the screw (2) counterclockwise. If the oil level is too low, turn the screw clockwise.

F TROUBLESHOOTING

Problem	Cause	Solution
1. Broken thread (2 - 3 mm left on the bottom side)	1. Damage in the path of thread, damaged tip of the needle or the hook. 2. Upper thread tension is too high. 3. The needle is touching the tip of the hook. 4. Insufficient oiling of the hook. 5. Upper thread tension is too low. 6. The thread lever spring is too strong, the range of movement is too small. 7. Incorrect timing of the needle and hook.	1. Sand the surface with sandpaper. Sand the hook with a file. 2. Reduce the upper thread tension. 3. Adjust the distance between the needle and the hook (see D8). 4. Adjust the amount of lubrication (see E2). 5. Increase the upper thread tension. 6. Reduce spring force, increase the range of motion. 7. Adjust needle and hook timing (see D8).
2. Skipping stitches	1. Incorrect timing of the needle and hook. 2. Foot pressure too low. 3. Incorrect distance between needle eye and the hook tip. 4. Incorrect needle type.	1. Adjust needle and hook timing (see D8). 2. Increase the foot pressure. 3. Adjust the distance (see D8). 4. Change the needle.
3. Thread too tight	1. Bobbin tension spring too tight. 2. Threads are threaded incorrectly. 3. Bobbin doesn't move. 4. Bottom thread tension is too low. 5. Bottom thread too thick. 6. Damaged tip of the needle.	1. Lower the bottom thread tension. 2. Check the threading of upper and bottom thread. 3. Check the bobbin. 4. Increase the bottom thread tension. 5. Use the thinner thread. 6. Change the needle.

G DRIVE UNIT MANUAL

G1. SAFETY INSTRUCTIONS

- 1) Read the manual carefully before installation and use.
- 2) Installation of the drive unit may only be carried out by a qualified person.
- 3) Follow all instructions indicated by symbols to avoid injury.
- 4) Do not use a multiple socket extension cord.
- 5) Make sure that the power supply and voltage match the requirements on the label of the machine.
- 6) Do not use in direct sunlight, outdoors and in the temperature over 45 °C or below 0 °C.
- 7) Do not use close to the heater. Humidity level must be between 30-95 %.
- 8) Do not use in dusty, corrosive or explosive environment.
- 9) Do not put heavy objects on the power cord, do not pull it or bend it.
- 10) Proper permanent grounding is necessary.
- 11) Use safety covers for all moving parts.
- 12) Do a test run at the slow speed and check the direction of the rotation.
- 13) Switch off the machine and unplug it in these situations:
 - threading the needle (needles), hooks, etc.
 - changing the needle, presser foot, needle plate, hooks, hook bobbins, feeders, needle guards, finger guards, work guides, etc.
 - the machine is not in use and left unattended
 - opening or removing the protective covers
 - any maintenance, repair, inspection and adjustment of the machine
 - cleaning the machine
- 14) Maintenance, repair, inspection and adjustment of the machine may only be carried out by a qualified person.
- 15) Use only original or approved spare parts from manufacturer.
- 16) Do not use heavy objects.

G2. DESCRIPTION AND INTENDED USE OF A DRIVE UNIT

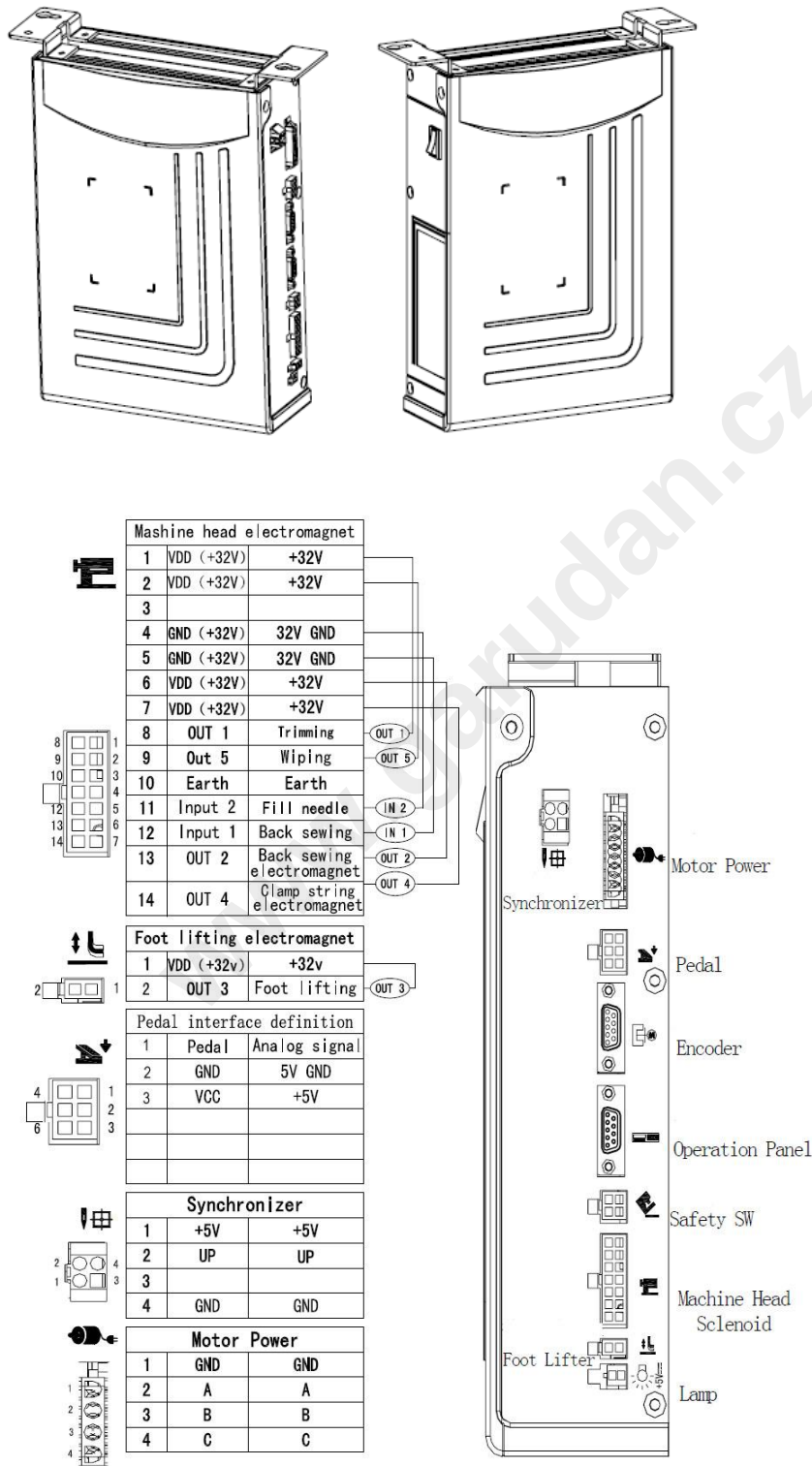
The ASD58 series are power units that are designated to drive sewing machines and to be built into a sewing machine. They consist of the engine itself, the control box and the control panel (keypad). Other use is not permitted.

G3. DRIVE UNIT TECHNICAL PARAMETERS

Product type	ASD58-5 ASU58-55 ASD58-75 ASU58-75 AHE58-55
Voltage	AC 230 ±20 % V
Frequency	50/60 Hz
Max. power	850 W

G4. INSTALLATION

G4.1. Connector description



Control box of the AS series

Connect the pedal and all connectors to the appropriate sockets as shown.

ATTENTION:

If you are unable to connect the connectors to the appropriate outlet, check the direction of the pins. Make sure you are plugging into the correct outlet.

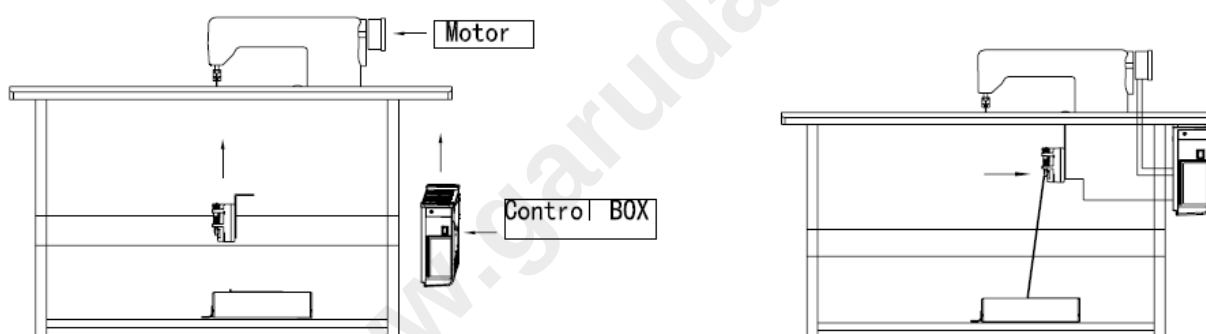
G4.2. Power supply and grounding

The grounding connection and checking of the correct connection parameters to the power supply may only be carried out by an electrician. The system ground - the yellow/green wire - must be securely connected to electrical outlet to ensure safe operation and to prevent machine malfunctions.

ATTENTION: All wires must be connected separately to avoid overloading and safe operation of the machine!

G4.3. Connecting and settings

For more information, consult the installation manual for your particular engine model.



Power unit control box installation

Make sure you have enough space on the right side of the plate to install the control box. The control box is mounted on the right side under the plate.

To install the foot controller (pedal), make sure it is placed right under the power unit and attached to the underside of the plate. If necessary, loosen the screws, adjust the position and angle, and retighten.

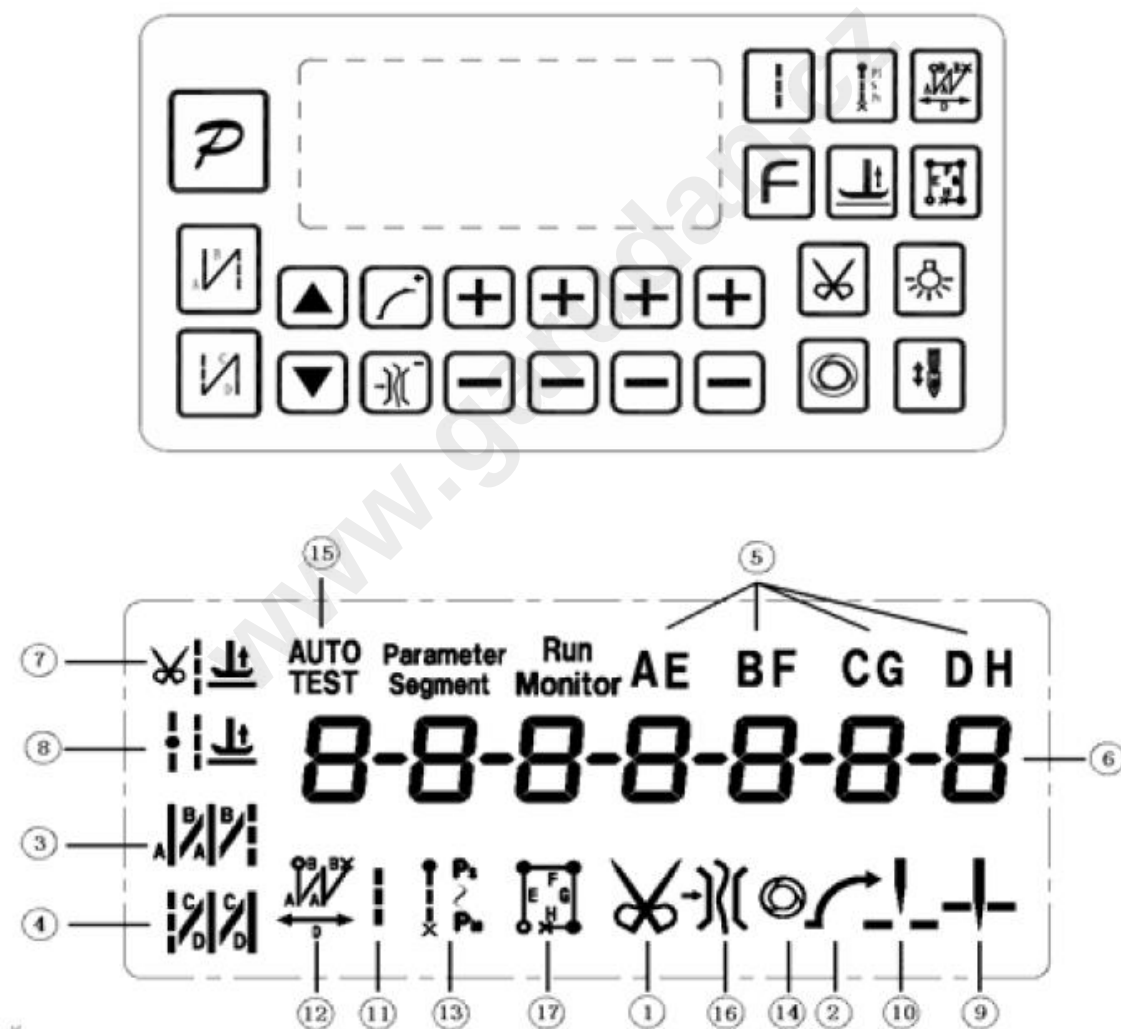
G5. CONTROL PANEL

G5.1. Control panel display

The drive unit can be used with different models of sewing machines, which can have different optional functions as thread cutting, programmable back-tacking, automatic foot lift, etc.

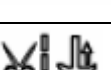
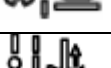
If your machine is not equipped with this option, some of the features described below will not be available for your model. They are shown on the display, but the machine will not perform them.

Control panel layout



Symbols of the LCD display

Display icons description

No.	Icon	Description	No.	Icon	Description
1		Automatic trimming	10		Needle up stop position
2		Slow start	11		Free sewing mode
3		Start back tacking	12		W sewing mode
4		End back tacking	13		Segment sewing
5		Sewing segment index	14		Multi-segment mode
6		Numeric display	15		Auto test
7		Foot lift after trimming	16		Clamp function
8		Foot lift after stopping	17		Four-segment sewing
9		Needle down stop position			

G5.2. Operation panel keys description

	Button	Name	Description
1		Function (Parameters)	Use the button to select and confirm parameter settings and return to the sewing mode.
2		Start back tacking	Selects and turns on the initial back tacking.
3		End back tacking	Selects and turns on the end back tacking.
4		Free sewing mode	Selects free sewing mode. The icon lights up on the display. Press the foot control to start sewing.
5		W sewing mode key	Press this key to enter the W sewing mode. LCD icon is on. In W sewing interface use the corresponding key „+“ or „-“, to set number of stitches of each segment (A, B, D) default range 1~F corresponds to the value 1~15.
6		Multi-segment sewing	Press this key to enter the multi-segment sewing mode. LCD icon is on. In multi-segment sewing interface use „+“ or „-“, key to set max. 24 segments. P01 is number of segments, -01 is current segment setting, -16 is number of stitches in the segment.
7		Four-segment sewing	Press this key to enter the four-segment sewing mode. LCD icon is on. In four-segment sewing interface use the „+“ or „-“, key to set number of stitches of each segment (E, F, G, H) default range 1~F corresponds to the value 1~15.
8		Slow start	When the icon is lit, the slow start mode is on. Press the key again for turning the slow start mode off.
9		Thread clamp	When the icon is lit, the thread clamp mode is on. Press the key again for turning the thread clamp mode off.
10		Needle up/down stop position	Set the stop position of the needle. When the icon is lit, the needle stops up. When the icon is lit, the needle stops down in the fabric. Note: you can select needle stop position directly as parameter

			H-43. Press  +  to enter the parameter.
11		Stitch compensation	Press for half stitch compensation. Press and hold for one stitch compensation. Hold for continuous compensational sewing.
12		Trimming	When the icon  is lit, auto trimming function is on. Press again for turning the function off.
13		Foot lift mode	Select the presser foot stop position up or down. Pressing the key repeatedly you change foot position sewing mode.
14		One-step multi segment sewing	When the icon  is lit, pressing the foot control the machine performs whole preprogrammed sewing in one step.
15		Lighting	Turning the light on/off.
16		Custom functions	You can preset any custom function for this key.
17	 	Speed	Increase or decrease the sewing speed or adjust the value.
18	 	Increase/decrease	Increase or decrease parameter values.

Katalog náhradních dílů Spare Parts List



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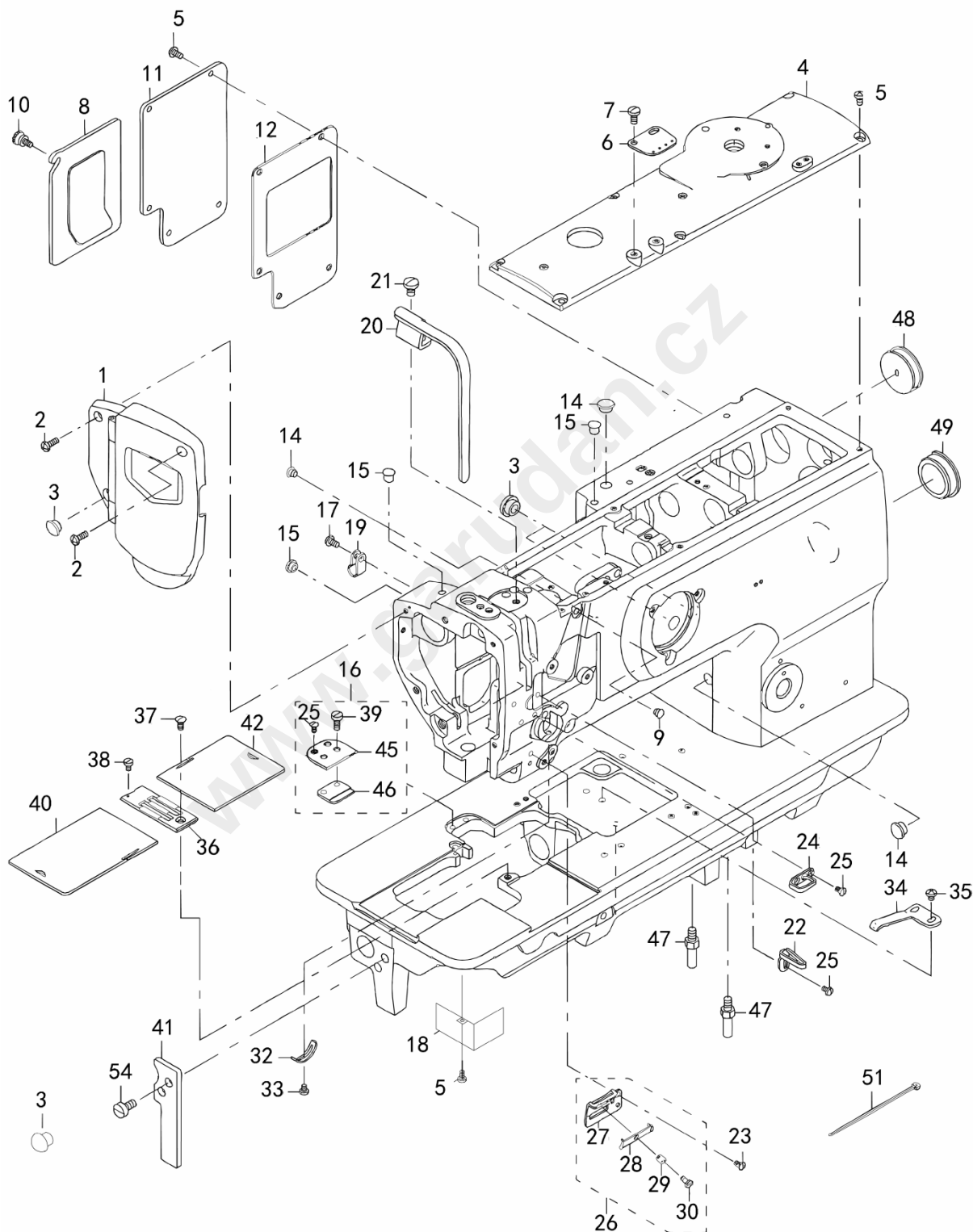
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Content

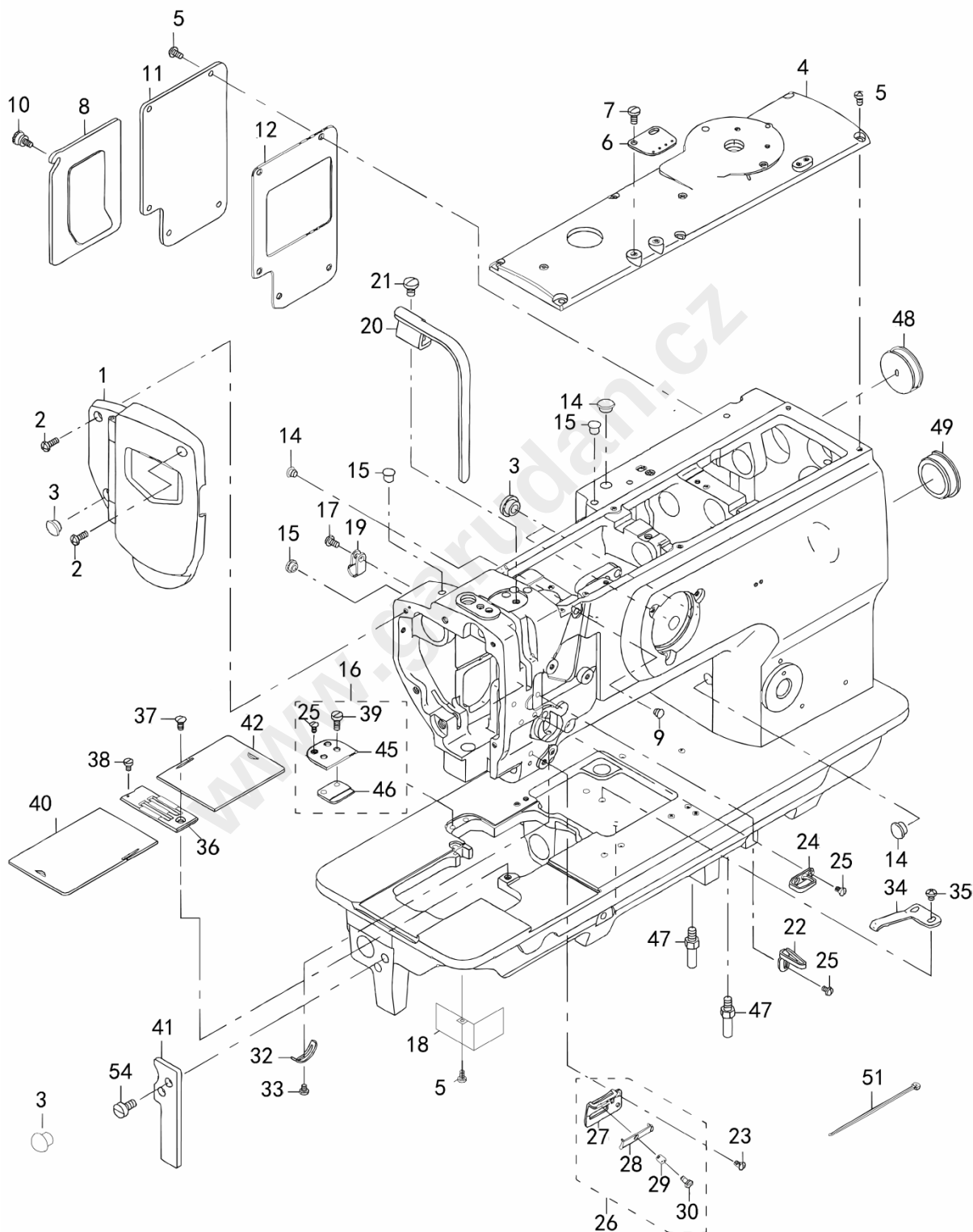
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A. FRAME & MISCELLANEOUS COVER (1/2)



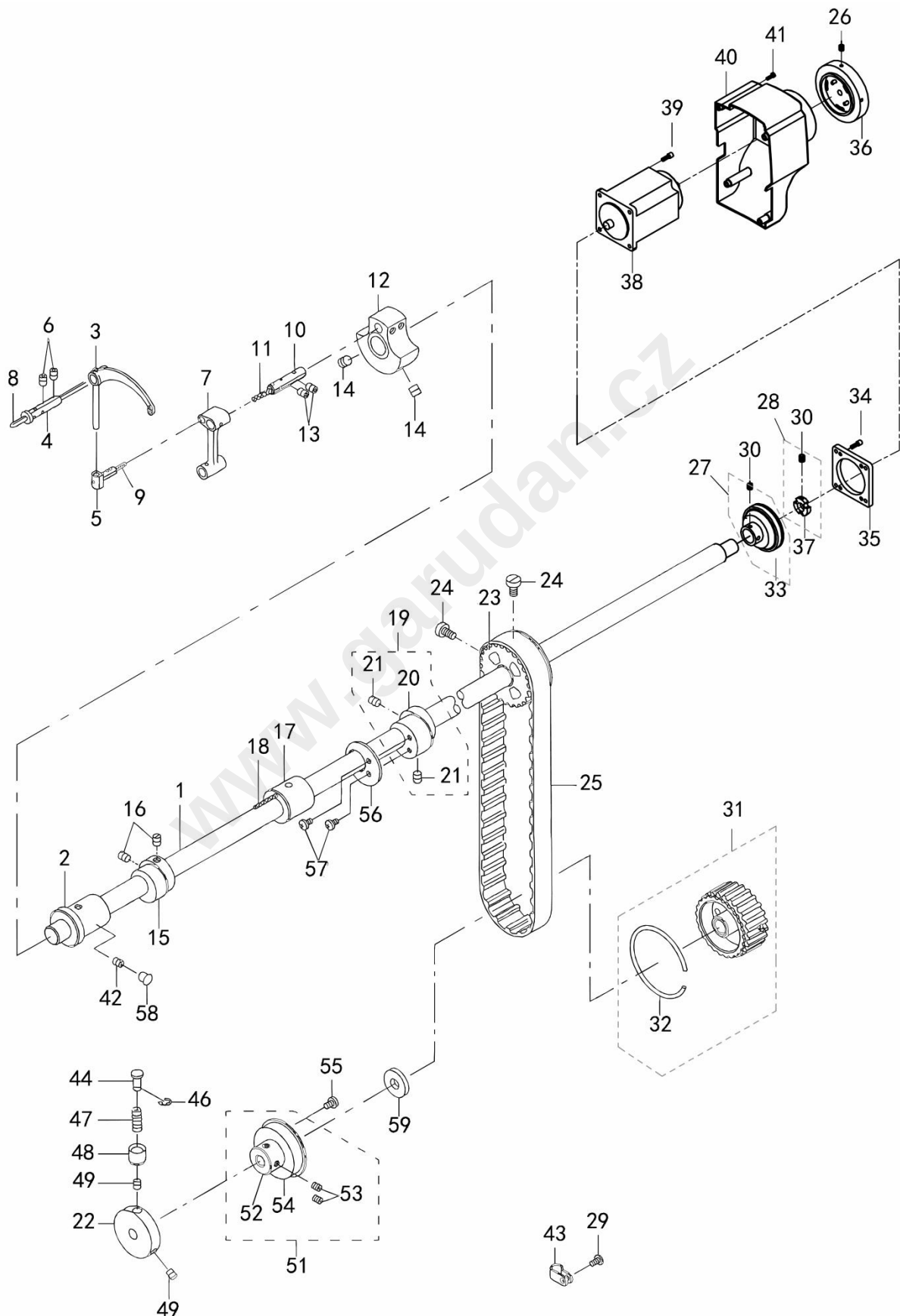
A. FRAME & MISCELLANEOUS COVER (1/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	40016798	Face plate asm.		1	
2	SS4111215SP	Screw	11/64-40 L=12	3	
3	40019114	Lubrication supplement		3	
4	21331301	Top cover B		1	
5	SS4110815SP	Screw	11/64-40 L=8	12	
6	21355904	Arm thread guide		1	
7	SS7621040SP	Screw	3/16-32 L=9.5	2	
8	21331756	Window plate A asm.		1	
10	21331202	Set screw		1	
11	21331806	Window plate B		1	
12	21332002	Window plate packing B		1	
14	TA1050504R0	Rubber plug		5	
15	TA0750704R0	Rubber plug		3	
16	23208556	Auxiliary cover asm.		1	
18	21332200	Oil baffle plate		1	
20	21331608	Balance cover		1	
21	SS7150910TP	Screw	15/64-28 L=9	1	
22	21355805	Thread guide		1	
23	SS5090610SP	Screw	9/64-40 L=6	1	
24	B1129051000	Frame thread guide upper		1	
25	SS2090710TP	Screw	9/64-40 L=7.2	5	
26	21408554	Thread guide asm.		1	
27	21408505	Thread guide plate		(1)	
28	17912106	Needle thread presser plate		(1)	
29	B1132521000	Thread presser plate spring		(1)	
30	SD0380551SL	Hinge screw	D=3.8 H=5.5	(1)	
31	SS2090710TP	Screw	9/64-40 L=7.2	2	
32	B3138512000	Take-up spring adjusting plate		1	
33	SS7090520TP	Screw	9/64-40 L=4.5	1	
34	B1111563000	Bed slide spring		1	
35	SS4110515SP	Screw	11/64-40 L=5	2	
36	21366406	Needle plate		1	
37	SS2110920TP	Screw	11/64-40 L=8.5	1	
38	SS6090630SP	Screw		1	
39	SS6111140SP	Screw	11/64-40 L=11	(2)	
40	21365606	Bed slide (left) A		1	
41	21361407	Bed support plate		1	
42	21365002	Bed slide (right) A		1	
45	23208507	Auxiliary cover		(1)	

A. FRAME & MISCELLANEOUS COVER (2/2)



A. FRAME & MISCELLANEOUS COVER (2/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
46	23208606	Sliding plate support		(1)	
47	22602601	Bed screw stud		2	
48	10201200A	Rubber plug		1	
49	22619100A	Cap		1	
51	EA9500B0100	Cable band		1	
54	SS6151210SP	Screw	15/64-28 L=12	2	

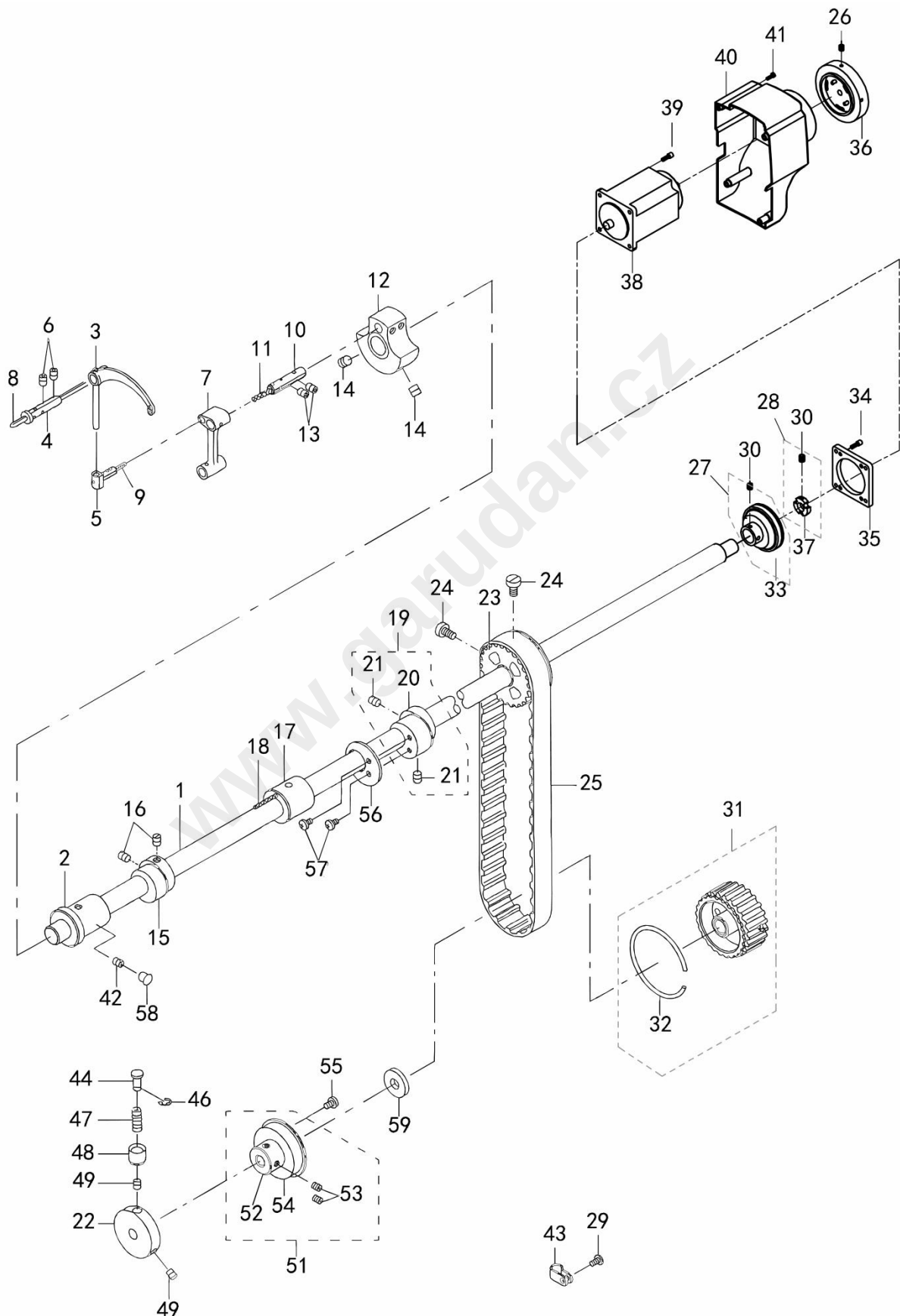
B. TAKE-UP AND UPPER SHAFT COMPONENTS (1/2)



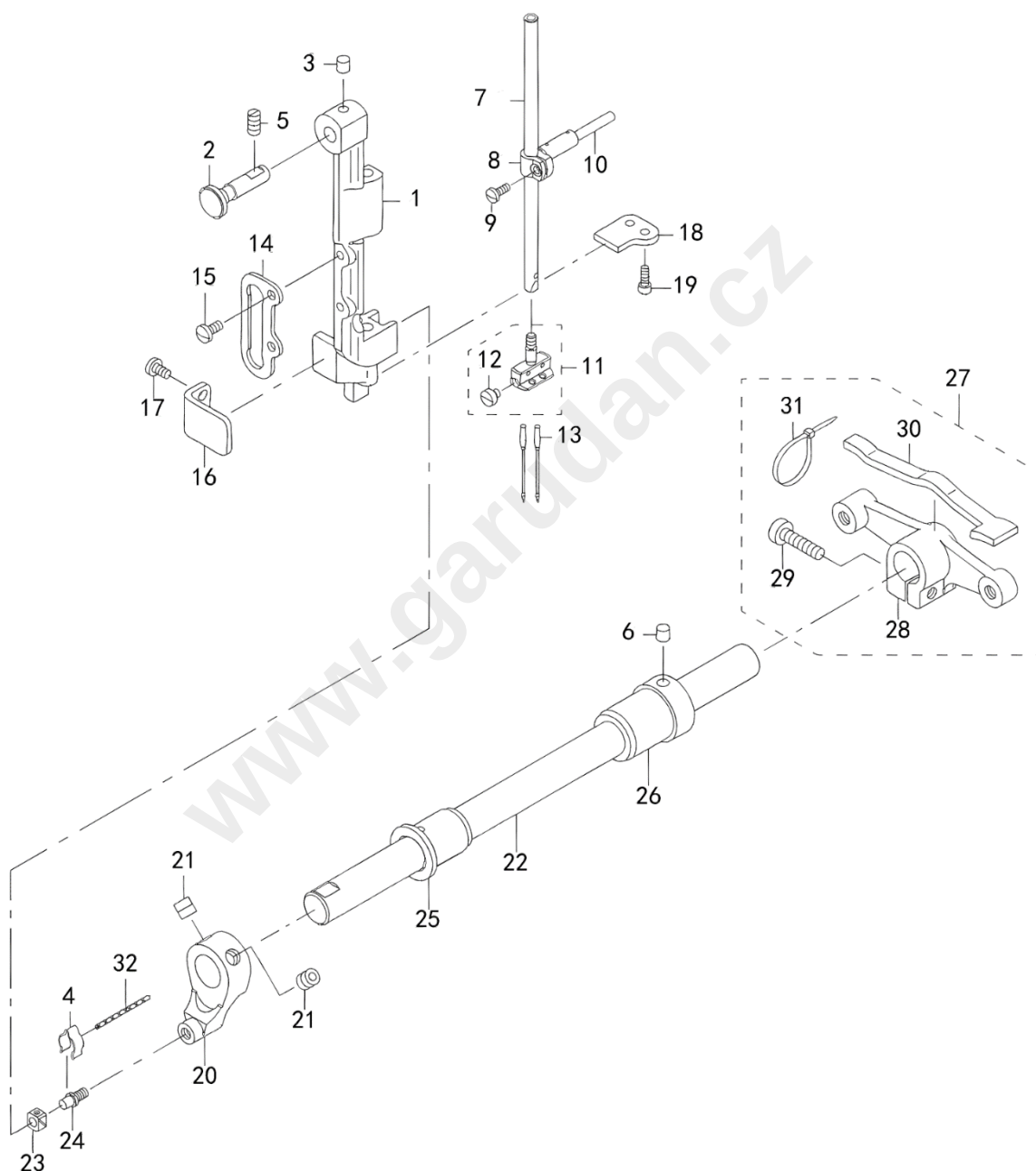
B. TAKE-UP AND UPPER SHAFT COMPONENTS (1/2)

Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	010259	Upper shaft		1	
2	21333000	Upper shaft front metal		1	
3	B1905520000	Thread take-up lever		1	
4	B1906051000	Take-up lever pin		1	
5	B1907057000	Thrust pin		1	
6	SS8150822TP	Screw	15/64-28 L=8	1	
7	21339106	Needle bar crank rod		1	
8	CQ303000000	Oil wick		0.45 m	
9	CQ202000000	Oil wick		0.03 m	
10	B1210051000	Needle bar crank pin		1	
11	CQ505000000	Oil wick		1	
12	21332507	Counter weight (A)	36 mm	1	
13	SS8150822TP	Screw	15/64-28 L=8	2	
14	SM8080812TP	Screw	M8x8	2	
15	21339502	Upper feed cam	3.5	1	
16	SS8660810TP	Screw	¼-40 L=8	2	
17	21333109	Upper shaft inner metal		1	
18	CQ202000000	Oil wick		0.15 m	
19	21336557	Eccentric cam A asm.		1	
20	21336508	Eccentric cam A		1	
21	SS8660810TP	Screw	¼-40 L=8	2	
22	21333703	Safety clutch disc		1	
23	22604904	Upper sprocket		1	
24	SS6661110SP	Screw	1/4-40 L=11	2	
25	22604300	Timing belt		1	
26	SS8150822TP	Screw		2	
27	010262	Bearing B		1	
28	010263	Bearing A		1	
29	SS4110815SP	Screw	11/64-40 L=8	1	
30	010258	Screw		2	
31	21387501	Lower sprocket		1	
32	B1214019000	Sprocket ring		1	
33	010254	Bearing A		1	
34	SS7151210SP	Screw	15/64-28 L=14	4	
35	010256	Motor plate		1	
36	010245	Hand wheel		1	
37	010255	Bearing B		1	
38	MDBMASD58A850A	Motor		1	
39	LS5A16	Screw		4	

B. TAKE-UP AND UPPER SHAFT COMPONENTS (2/2)

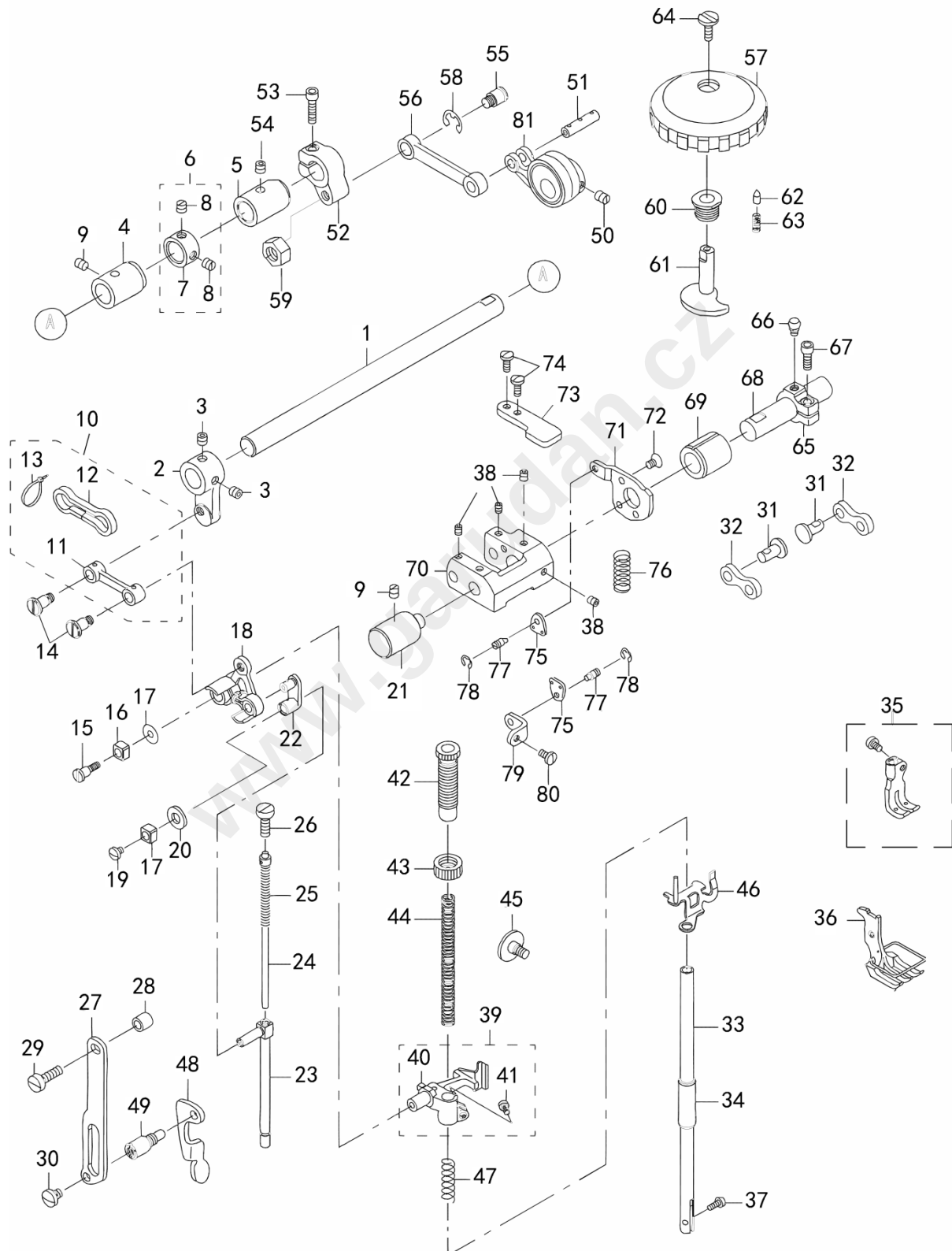


B. TAKE-UP AND UPPER SHAFT COMPONENTS (2/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
40	010153	Belt cover		1	
41	010426	Screw		4	
42	SS8150710TP	Screw	15/64-28 L=7	1	
43	HX00123000A	Cable clip		1	
44	B1312563000A	Safety clutch push button		1	
46	RE0500000K0	E-ring		1	
47	B1639051000	Spring		1	
48	B1313055000	Safety clutch knob sleeve		1	
49	SS8150710TP	Screw	15/64-28 L=7	2	
51	40038700	Thrust collar asm.		1	
52	40038702	Thrust collar		(1)	
53	SS8661030SP	Screw	1/4-40 L=10	(2)	
54	SB120000200	Bearing	20x42	1	
55	SS7120760SP	Screw	3/16-28 L=7.0	2	
56	21353008	Horizontal feed cam cover		1	
57	SS7110710SP	Screw	11/64-40 L=7	2	
58	TA0750704R0	Rubber plug		1	
59	40016148	Collar B washer		1	

C. NEEDLE BAR ROCKING

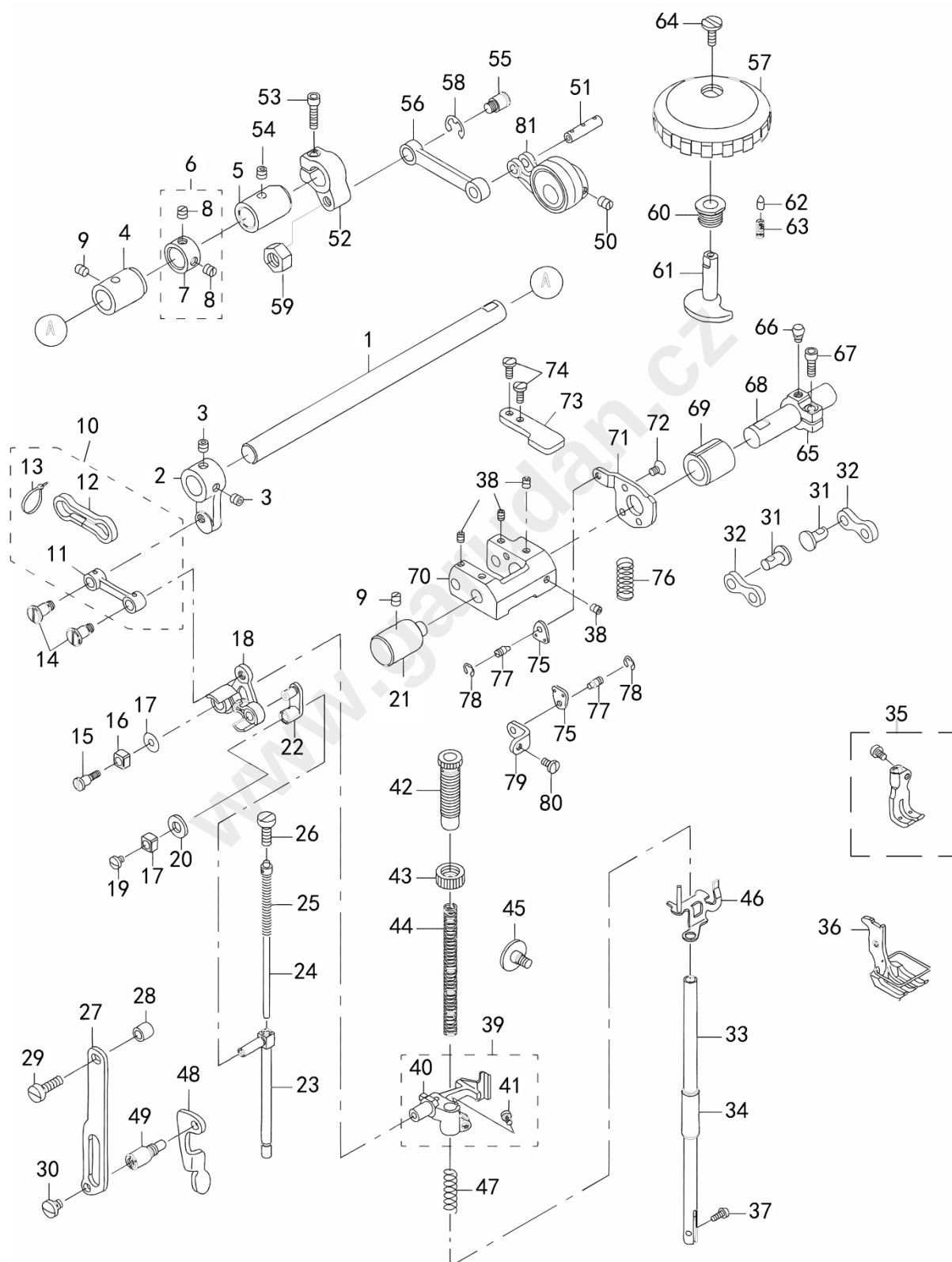
C. NEEDLE BAR ROCKING					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	21362504	Needle bar frame		1	
2	21405204	Hinge stud		1	
3	22814909	Felt		1	
4	B1437051000	Oil wick retainer		1	
5	SS8151150TP	Screw	15/64-28 L=10.5	1	
6	22814909	Felt		1	
7	B1401518000	Needle bar		1	
8	B1411521000	Needle rod holder		1	
9	SS7090910SP	Screw	9/64-40 L=8.5	1	
10	B1412051000	Felt		1	
11	21368451	Needle clamp 3/8 asm.		1	
12	SS6090410TP	Screw	9/16-40 L=3.5	2	
13	MC372001600	Needle SY3355 160		2	
14	B1467563000	Upper feed bar guide		1	
15	SS7110910TP	Screw	11/64-40 L=8.5	2	
16	21388400	Rocking base guide		1	
17	SS7110830SP	Screw	11/64-40 L=7.5	2	
18	21338603	Rocking front arm		1	
19	SS6091022TP	Screw		2	
20	21338801	Rocking front arm		1	
21	SM8080812TP	Screw		2	
22	21338900	Rocking shaft		1	
23	B1414232000	Square block		1	
24	B1410771000	Stud		1	
25	21339304	Rocking shaft front metal		1	
26	40027746	Bushing rear		1	
27	21339056	Rocking rear arm asm.		1	
28	21339007	Rocking rear arm		1	
29	SS6152440SP	Screw	15/64-28 L=23.5	1	
30	21347406	Rocking rear arm felt		1	
31	EA9500B0100	Cable band		2	
32	CQ202000000	Oil wick		0.05 m	

D. PRESSURE ADJUSTING & UPPER FEED MECHANISM (1/3)



D. PRESSURE ADJUSTING & UPPER FEED MECHANISM (1/3)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	21340401	Upper feed shaft		1	
2	21340500	Upper feed front arm		1	
3	SS8660612TP	Screw	1/4-40 L=6	2	
4	21341904	Front metal		1	
5	21378302	Feed shaft metal		1	
6	22904155	Main shaft thrust collar asm.		1	
7	22904106	Main shaft thrust collar		1	
8	SS8660610TP	Screw	1/4-40 L=6	2	
9	SS8150822TP	Screw	15/64-28 L=7	1	
10	40033027	Upper feed link asm.		1	
11	40033026	Upper feed link		1	
12	21347109	Felt		1	
13	EA9500B0000	Clip	CV-70S	2	
14	40018340	Screw		2	
15	SD0640701SP	Screw		1	
16	B1414555000	Slide block		2	
17	WP0501046SC	Washer	5x13x1	1	
18	40033029	Triangular lever asm.		1	
19	SS7110510SP	Screw	11/64-40 L=5	1	
20	10509701	Felt		1	
21	21337803	Feed adjusting base support		1	
22	40018341	Walking bar driving link		1	
23	40033030	Walking bar A		1	
24	B14670530A0	Walking bar asm.		1	
25	B1468053000	Walking bar spring		1	
26	SS6151780SP	Screw	15/64-28 L=17	1	
27	21406509	Upper feed guide plate		1	
28	26225201	Roller		1	
29	SS6151920SP	Screw	15-64-28 L=19	1	
30	SS7150740SP	Screw	15/64-28 L=7	1	
31	10714608	Support pin		2	
32	10714509	Connection link B		2	
33	B1501241H00	Presser bar		1	
34	B1510155000	Presser bar lower bushing		1	
35	21372651	Walking foot 1-1/4 asm.		1	
36	21367958	Presser foot asm. 3/8		1	
37	SS6090910TP	Screw	9/64-40 L=9	1	
38	SM8050602TP	Screw	M5 L=6	4	
39	40033032	Presser bar holder A asm.		1	

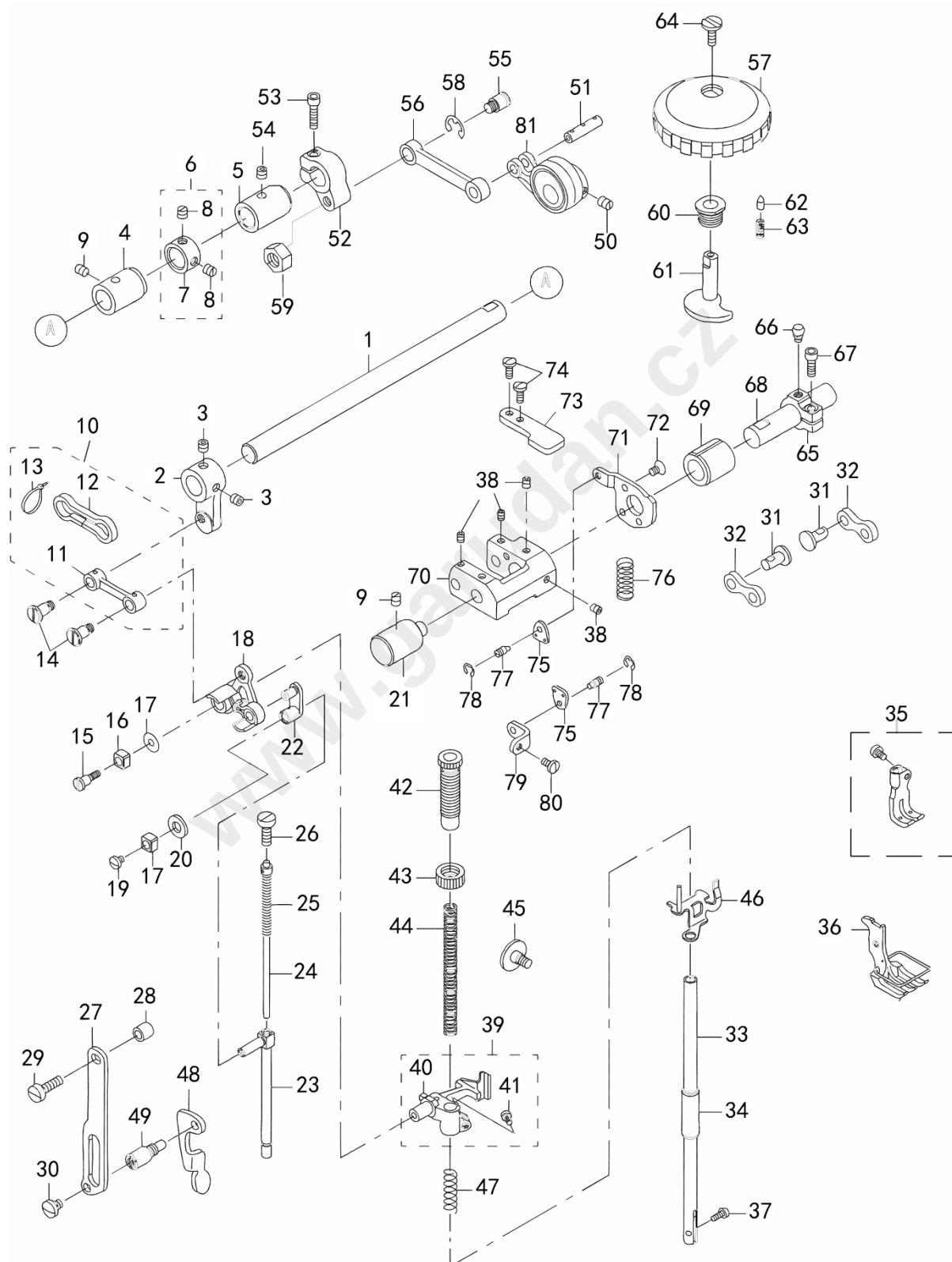
D. PRESSURE ADJUSTING & UPPER FEED MECHANISM (2/3)



D. PRESSURE ADJUSTING & UPPER FEED MECHANISM (2/3)

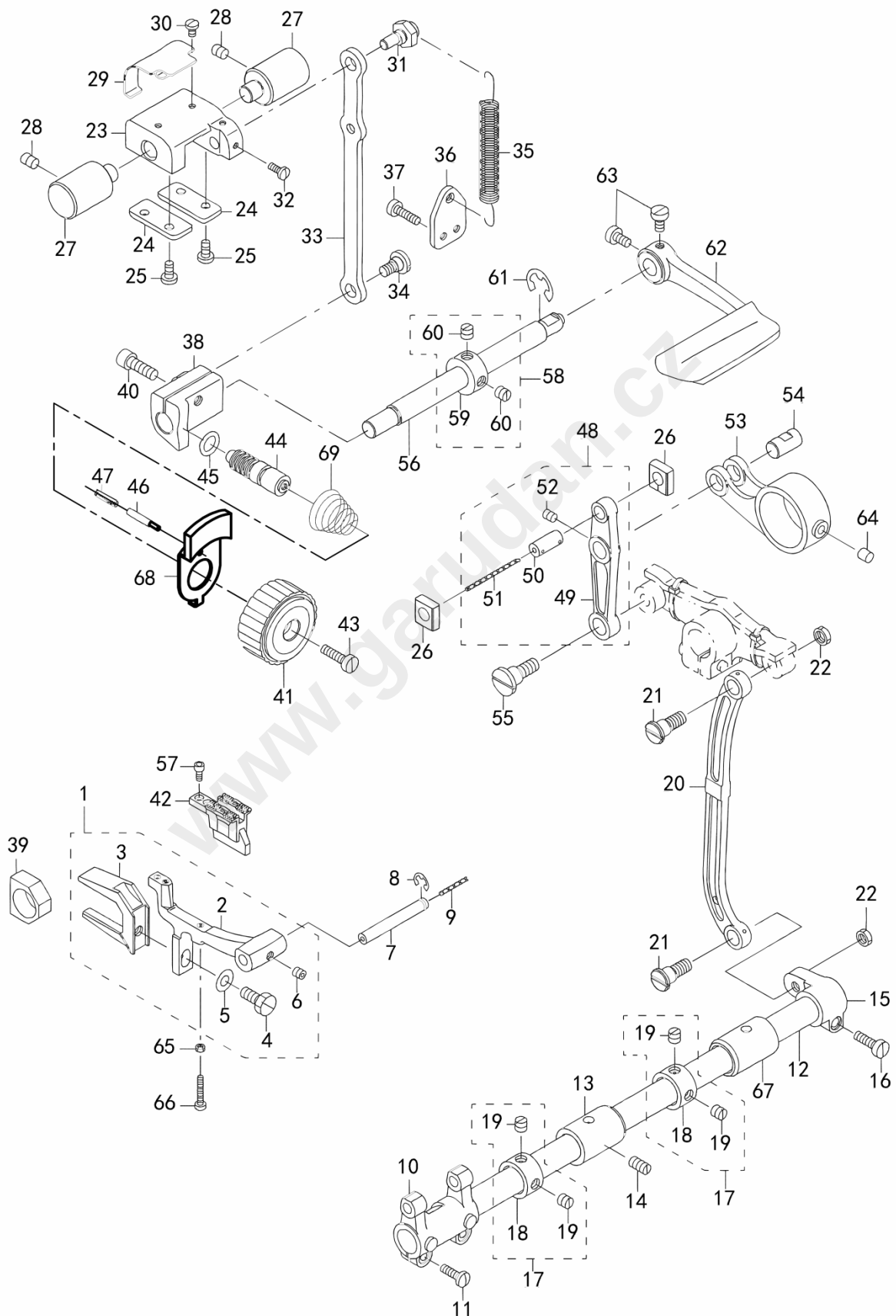
Ref. No	Parts No.	Name of parts	Description	Qty	Note
40	40033031	Presser bar holder A		1	
41	SS7110910TP	Screw	11/64-40 L=8.5	1	
42	21340906	Presser adjusting screw		1	
43	22907604	Presser spring regulator nut		1	
44	B1502246000	Presser spring		1	
45	SD0800481SP	Hinge screw	D=8 H=4.9	1	
46	21341151	Holding plate complete		1	
47	B1462053000	Thread release spring		1	
48	21406103	Presser lifter lever		1	
49	21406608	Guide plate spacer		1	
50	SS8660810TP	Screw	1/4-40 L=8	2	
51	10713808	Connection link pin B		1	
52	21340302	Upper feed rear arm (B)		1	
53	SM6052002TP	Scerw	M5 L=20	1	
54	010464	Screw	M8 L=10	1	
55	21048707	Hinge screw		1	
56	21340005	Upper feed link (B)		1	
57	10774354	Upper and lower dial asm.		(1)	
58	RE0800000K0	E-shaped snap ring	8 mm	1	
59	NS6680320SP	Nut	9/32-28	1	
60	10715100	Vertical dial shaft bushing		1	
61	10715001	Vertical adjusting cam		1	
62	10715704	Vertical dial pin		1	
63	B152652700G	Spring		1	
64	SS6110630TP	Screw	11/64-40 L=6	1	
65	21341607	Vertical adjusting arm		1	
66	10715308	Pin		1	
67	SM6051402TP	Screw	M5x0.8 L=14	1	
68	21341508	Vertical change base shaft		1	
69	10718203A	Feed shaft front metal		1	
70	10714202	Vertical change belt		1	
71	21438106	Stopper plate B		1	
72	SM1050801SR	Screw	M5 L=8	1	
73	21339700	Upper feed stopper plate (B)		1	
74	SS4110815SP	Screw		2	
75	10713501	Spring hook		2	
76	10716504	Vertical shaft spring		1	
77	B3416552000	Connecting rod hinge hook		2	
78	RE0500000K0	E-ring		2	

D. PRESSURE ADJUSTING & UPPER FEED MECHANISM (3/3)



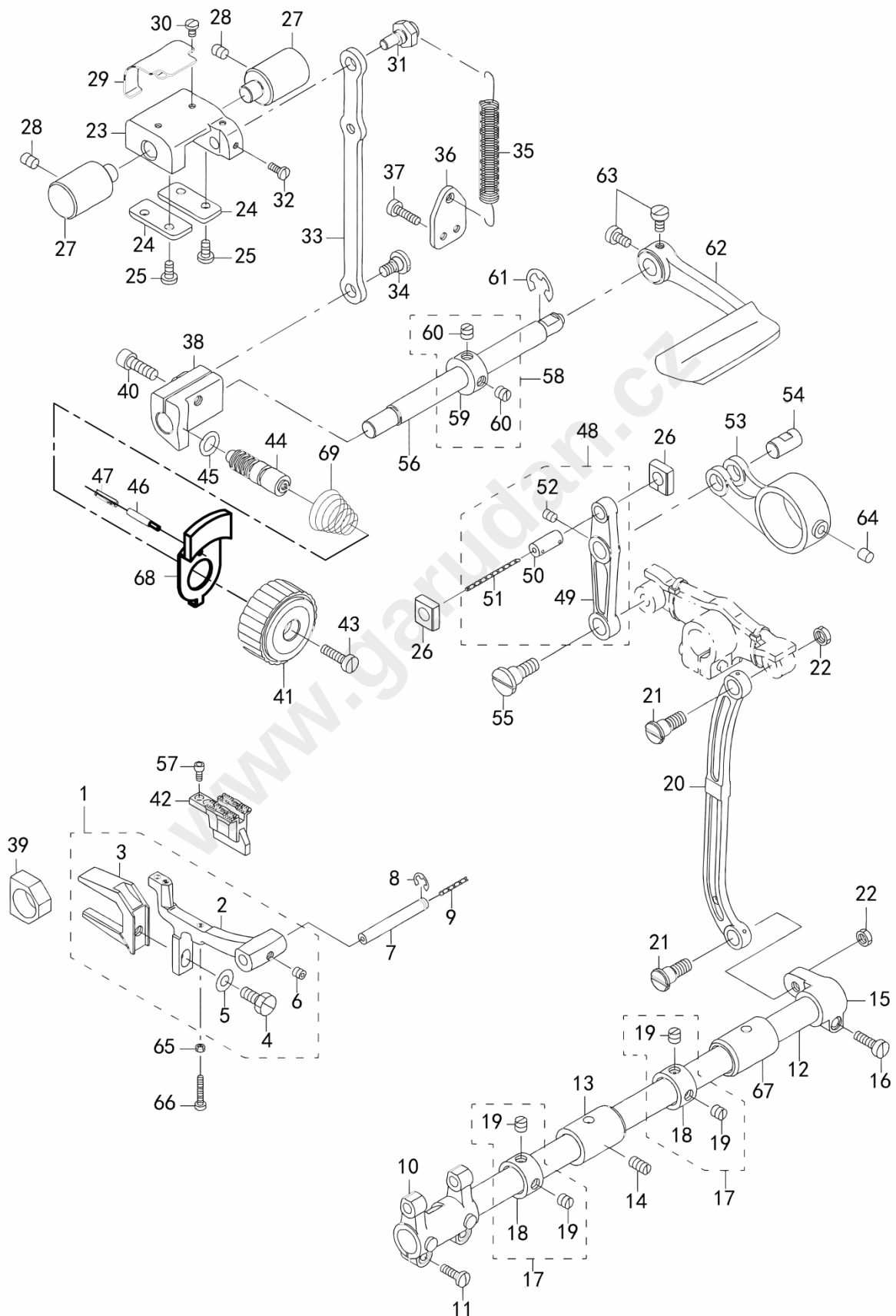
D. PRESSURE ADJUSTING & UPPER FEED MECHANISM (3/3)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
79	21339809	Upper feed dog spring hook		1	
80	SS7110830SP	Screw	11/64-40 L=7.5	1	
81	10713766A	Eccentric rod (set)		1	

E. FEED MECHANISM (1/2)



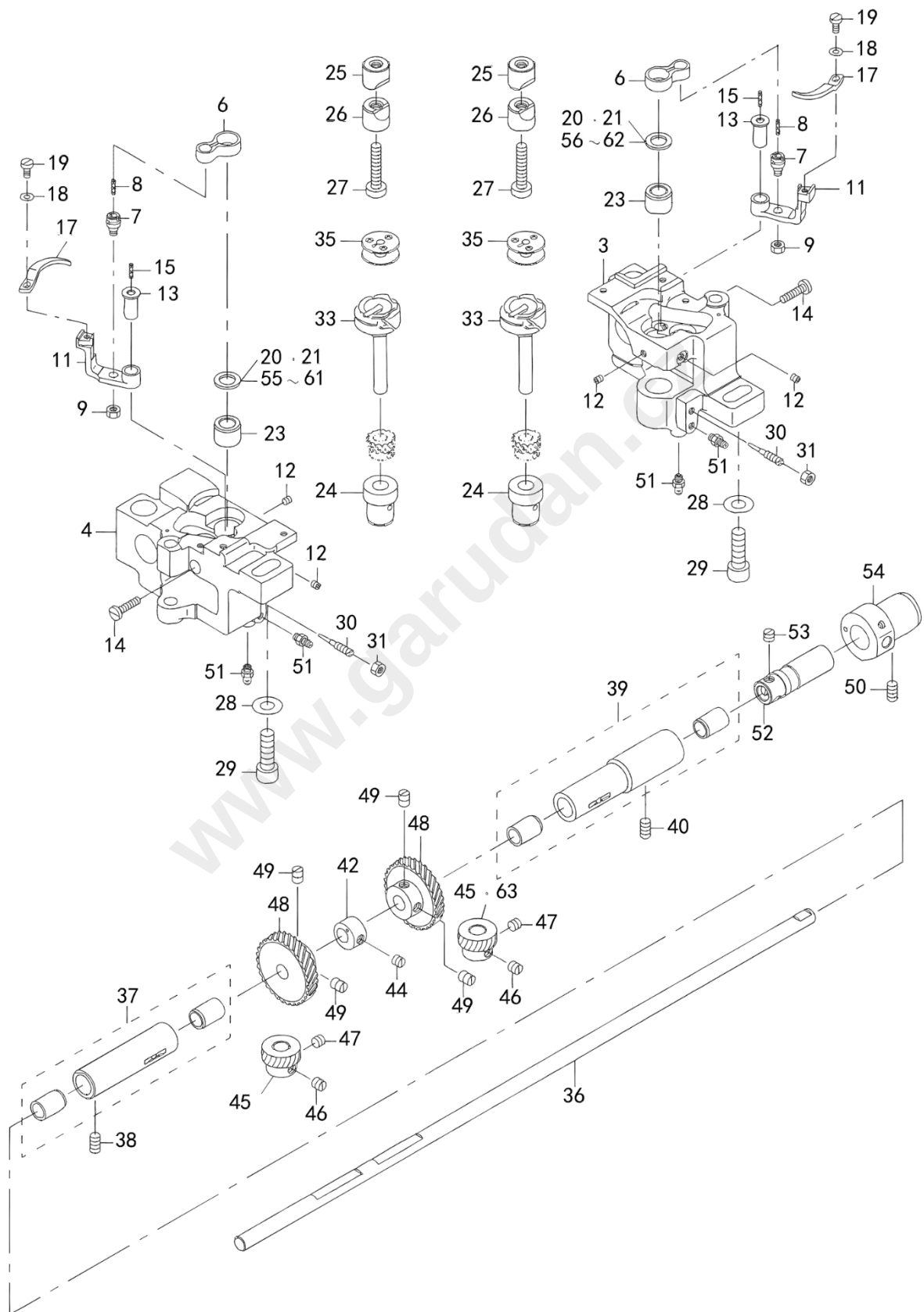
E. FEED MECHANISM (1/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	21364252	Feed base asm.		1	
2	21364203	Feed base		1	
3	10107902	Feed bar fork		1	
4	SS9151440CP	Screw	15/64-28 L=14	(1)	
5	WP0621016SD	Washer	6.2x13x1	(1)	
6	SM8050502TP	Screw	M5 L=5	(1)	
7	B1604012000A	Feed bar shaft		1	
8	RE0500711KP	Snap ring 5		1	
9	CQ202000000	Oil wick		0.14 m	
10	21364104	Feed rocker		1	
11	SS7111410SP	Screw	11/64-40 L=14	2	
12	22609408	Feed rock shaft		1	
13	21378302	Feed shaft metal		1	
14	020514	Screw	11/64-40 L=8.5	2	
15	22609309L	Feed rocker shaft crank		1	
16	SS6121610TP	Screw	3/16-28 L=15.5	1	
17	22904155	Main shaft thrust collar asm.		2	
18	22904106	Main shaft thrust collar		(1)	
19	SS8660610TP	Screw	1/4-40 L=6	(2)	
20	10205201	Needle bar frame rod		1	
21	SD0900701TP	Hinge screw	D=9 H=7	1	
22	NS6680320SP	Nut	9/34-28	1	
23	21337506	Feed adjusting base		1	
24	21337704	Feed adjusting base cover		2	
25	SS7110910TP	Screw	11/64-40 L=8.5	4	
26	21337407	Square block		2	
27	21337803	Feed adjusting base support		2	
28	SS8150822TP	Screw	15/64-28 L=8	2	
29	21338306	Felt support		1	
30	SS5090610SP	Screw	9/64-40 L=6	2	
31	21337902	Eccentric pin		1	
32	SS709010TP	Screw	9/64-40 L=8.5	2	
33	21337308	Feed adjusting rod		1	
34	SD0800402TP	Hinge screw	D=8 H=4	1	
35	21337605	Spring hook		1	
36	21338009	Screw	11/64-40 L=16	1	
37	SS7111410TP	Feed adjusting A		2	
38	21337209	Feed driving slide block		1	
39	B1610512000	Screw	M6 L=18	1	

E. FEED MECHANISM (2/2)



E. FEED MECHANISM (2/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
40	SM6061802TP	Screw	M6 L=15	1	
41	21336805	Feed dial A		1	
42	21366901	Feed dog	3/8	1	
43	SS6121860SP	Screw	3/16-28 L=18	1	
44	11009909	Feed regulator screw		1	
45	R0092270200	Rubber ring		1	
46	22912000	Feed regulator pin		1	
47	22912109	Feed regulator pin spring		1	
48	21336656	Feed link asm.		1	
49	21336607	Feed link		(1)	
50	B1418761000	Connecting forked link pin		1	
51	CQ202000000	Oil wick		0.04 m	
52	SM8050502TP	Screw	M5x6	1	
53	21336706	Feed rod A		1	
54	21338207	Feed link pin		1	
55	SD1000801SH	Hinge screw	D=10 H=8	1	
56	21336300	Backward feed lever shaft		1	
57	SS6580752TP	Screw	1/8-40 L=7	2	
58	CS1201010SH	Thrust collar asm.	D=12 W=10	1	
59	CS1201011SH	Thrust collar	D=12 W=10	(1)	
60	SS8660610TP	Screw	1/4-40 L=6	(2)	
61	RE0900000K0	E-ring	9	1	
62	21388004	Reverse feed control lever		1	
63	SS6120930TP	Screw	3/16-28 L=9	2	
64	22814909	Felt		1	
65	NS6080210SP	Nut	1/8-44	1	
66	SS6081810SP	Screw	1/8-44 L=18	1	
67	020568	Feed shaft metal		1	
68	010561	Bottom		1	
69	010562	Spring		1	

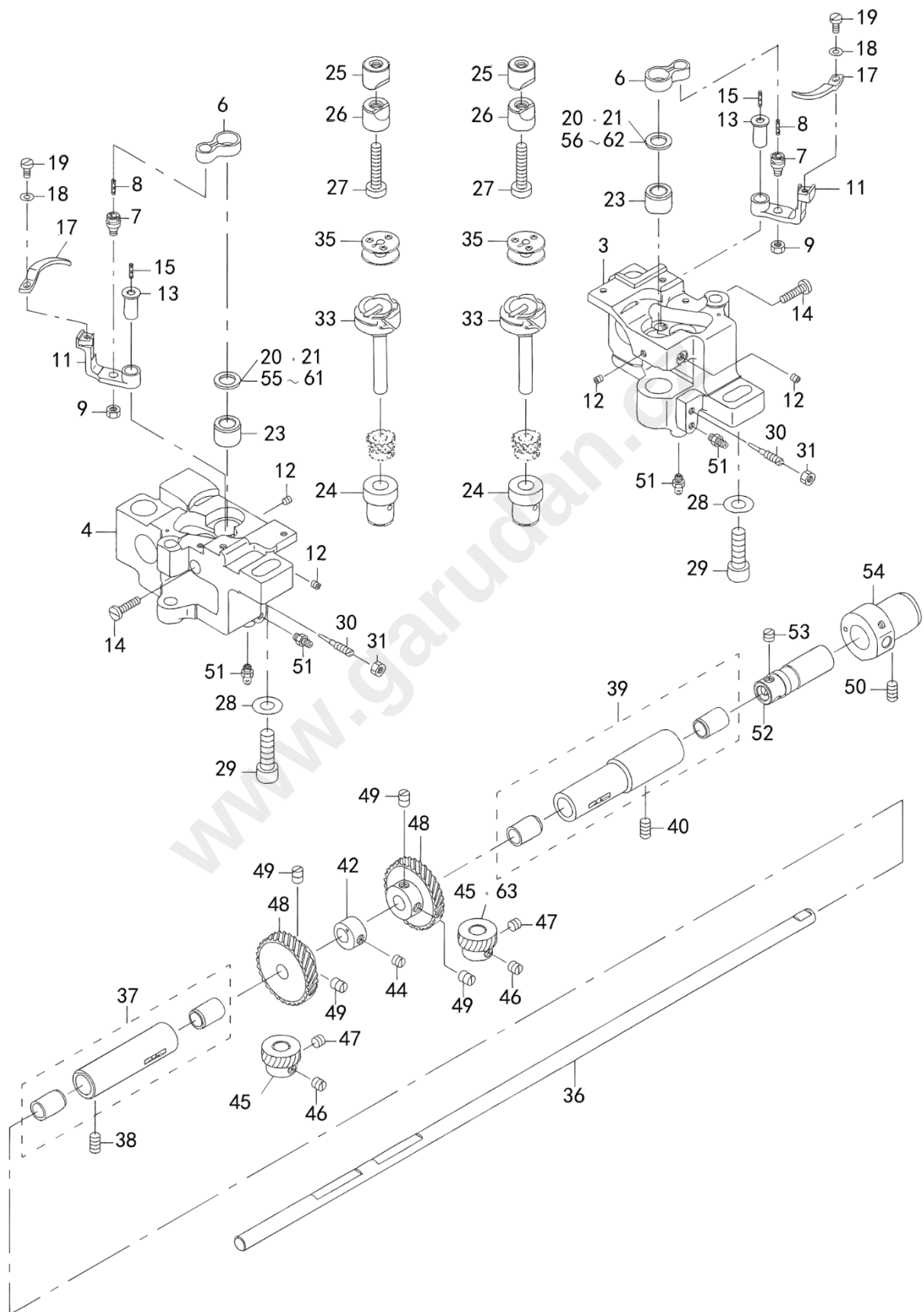
F. HOOK SHAFT & LOWER FEED MECHANISM (1/2)



F. HOOK SHAFT & LOWER FEED MECHANISM (1/2)

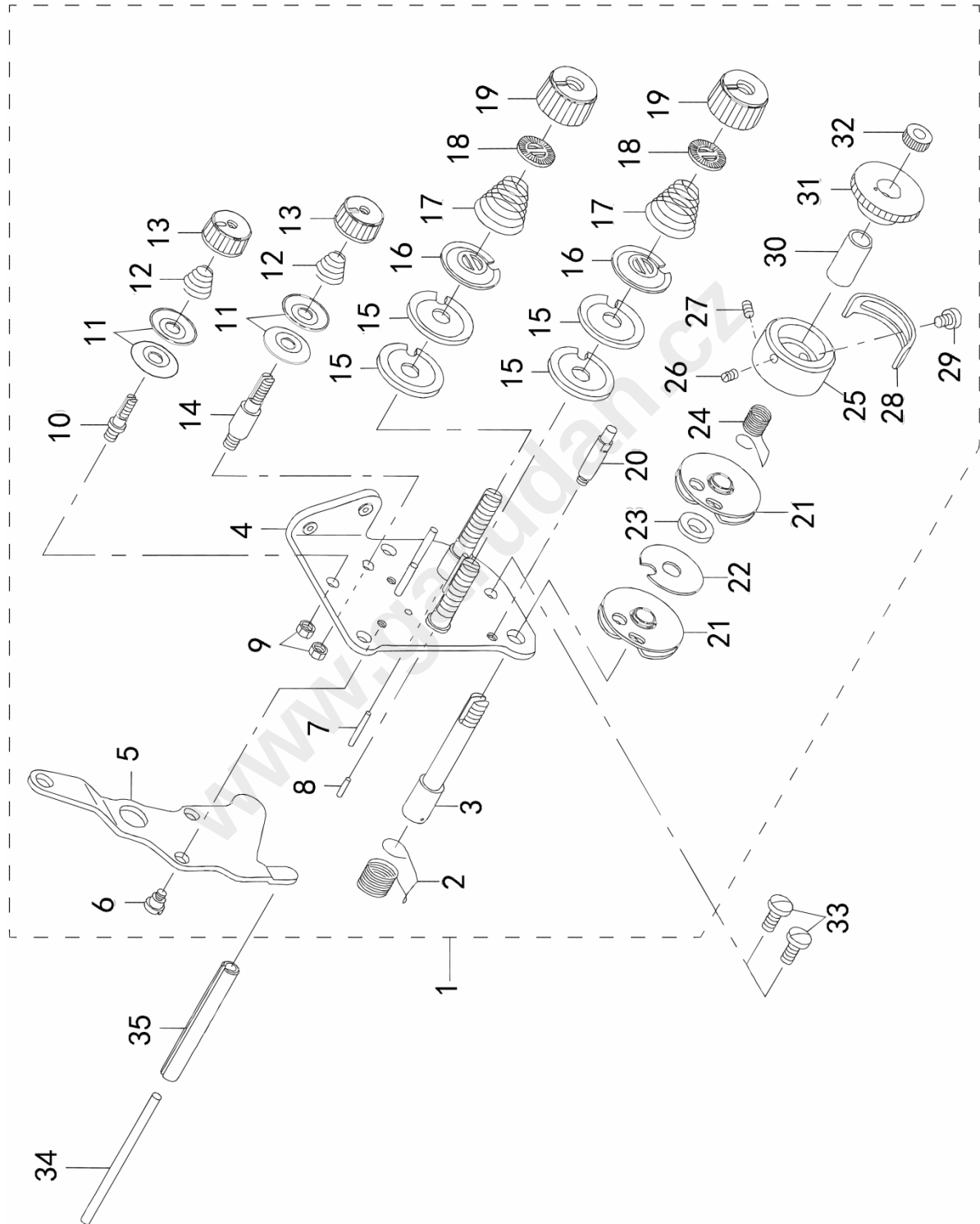
Ref. No	Parts No.	Name of parts	Description	Qty	Note
3	21335104	Hook shaft base (right)		1	
4	21362108	Hook shaft base (left)		1	
6	21334909	Bobbin case opening lever link		1	
7	B1821051000	Crank screw stud		2	
8	CQ202000000	Oil wick		0.02 m	
9	NS6110420SP	Nut	11/64-40	2	
11	B1822563000	Bobbin case opening lever crank		2	
12	SS8110422TP	Screw	11/64-40 L=4	4	
13	B1823051000	Opening lever crank pin		2	
14	SS7111810TP	Screw	11/64-40 L=18	2	
15	CQ202000000	Oil wick		0.02 m	
17	B1824563000	Bobbin case opening lever		2	
18	WP0371016SD	Washer	3.7x8x1	2	
19	SS6090810SP	Screw	9/64-40 L=7.5	2	
20	10111102	Thrust washer	1.3	2	
21	10112704	Thrust washer	1.8	2	
23	21378500	Hook shaft upper metal		2	
24	2134701	Hook shaft lower metal		2	
25	10109908	Saddle installing block upper		2	
26	10112407	Saddle installing block lower		2	
27	SS6153040SP	Screw	15/64-28 L=30	2	
28	WP0850002SP	Washer	8.5x18x1.6	2	
29	SM6082502TP	Screw	M8 L=25	2	
30	B1834512000A	Oil adjusting screw		2	
31	NS6110420SP	Nut	11/64-40	2	
33	B18305630A0	Vertical-axis sewing hook asm.		2	
35	21334800	Aluminum bobbin with knurl		2	
36	21361704	Lower shaft		1	
37	B18025120A0A	Bushing asm. Front		1	
38	SS8151150TP	Screw	15/64-28 L=10.5	1	
39	B18035150A0	Bushing asm. Intermediate		1	
40	SS8151150TP	Screw	15/64-28 L=10.5	1	
42	22609804	Feed driving cam		1	
44	SS8660530TP	Screw	1/4-40 L=4.5	1	
45	B1817051000	Hook driving shaft gear small		2	
46	SS8660670SP	Screw	1/4-40 L=6.1	2	
47	SS8660530TP	Screw	1/4-40 L=4.5	2	
48	B1816051000	Hook driving shaft gear large		2	
49	SS8660810TP	Screw	1/4-40 L=8	4	

F. HOOK SHAFT & LOWER FEED MECHANISM (2/2)



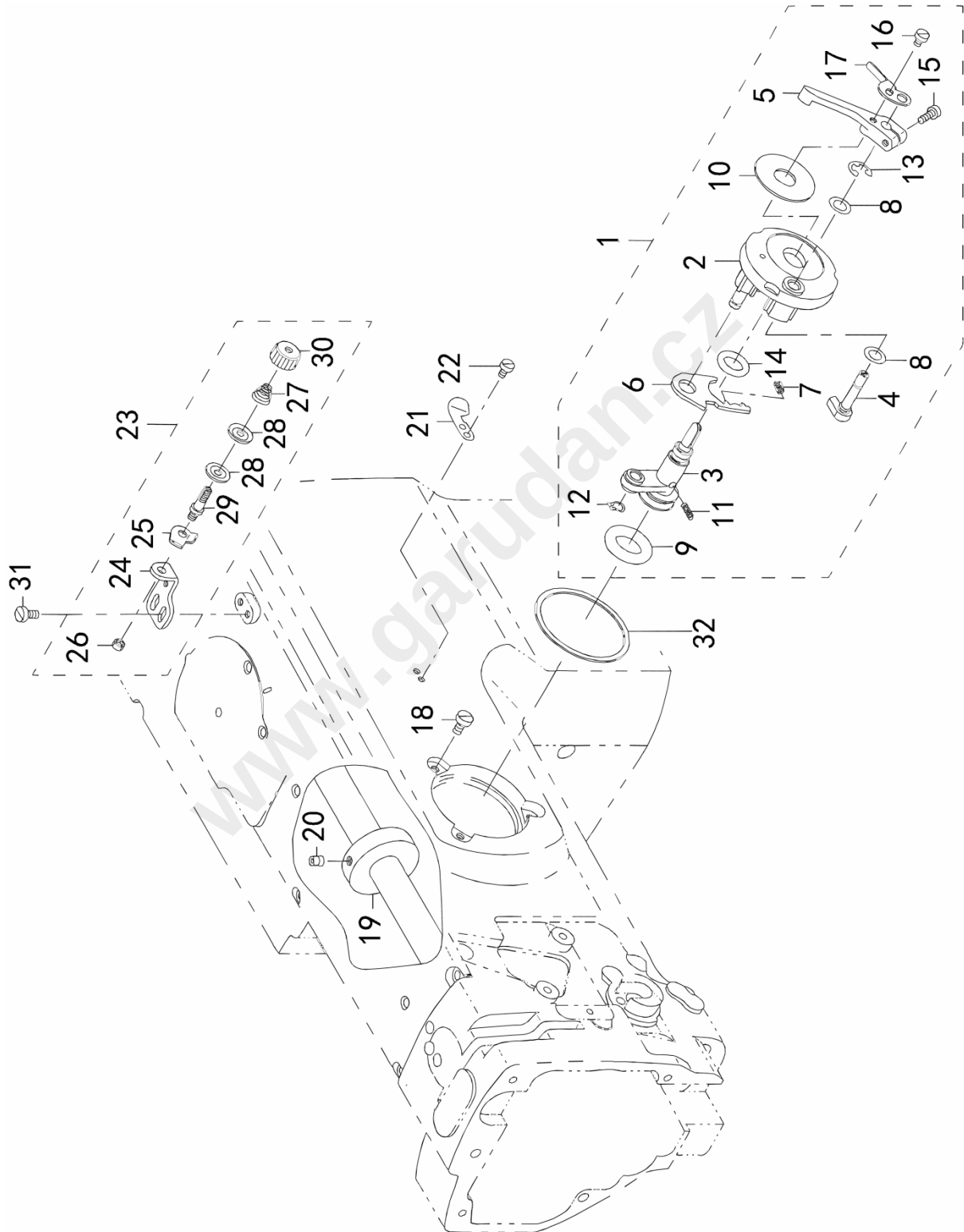
F. HOOK SHAFT & LOWER FEED MECHANISM (2/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
50	SS8151150SP	Screw	15/64-28 L=10.5	1	
51	SQ1110401MZ	Connecting screw		4	
52	22611909	Oil pump shaft		1	
53	SS8660530TP	Screw	1/4-40 L=4.5	3	
54	22611701	Plunger bushing B		1	
55	10109700	Thrust washer A		2	
56	10109809	Thrust washer B		2	
57	10110906	Bushing thrust	1.1	2	
58	10111003	Thrust washer	1.2	2	
59	10111201	Thrust washer F		2	
60	10112506	Thrust washer	1.6	2	
61	10112605	Thrust washer	1.7	2	

G. THREAD TENSION COMPONENTS



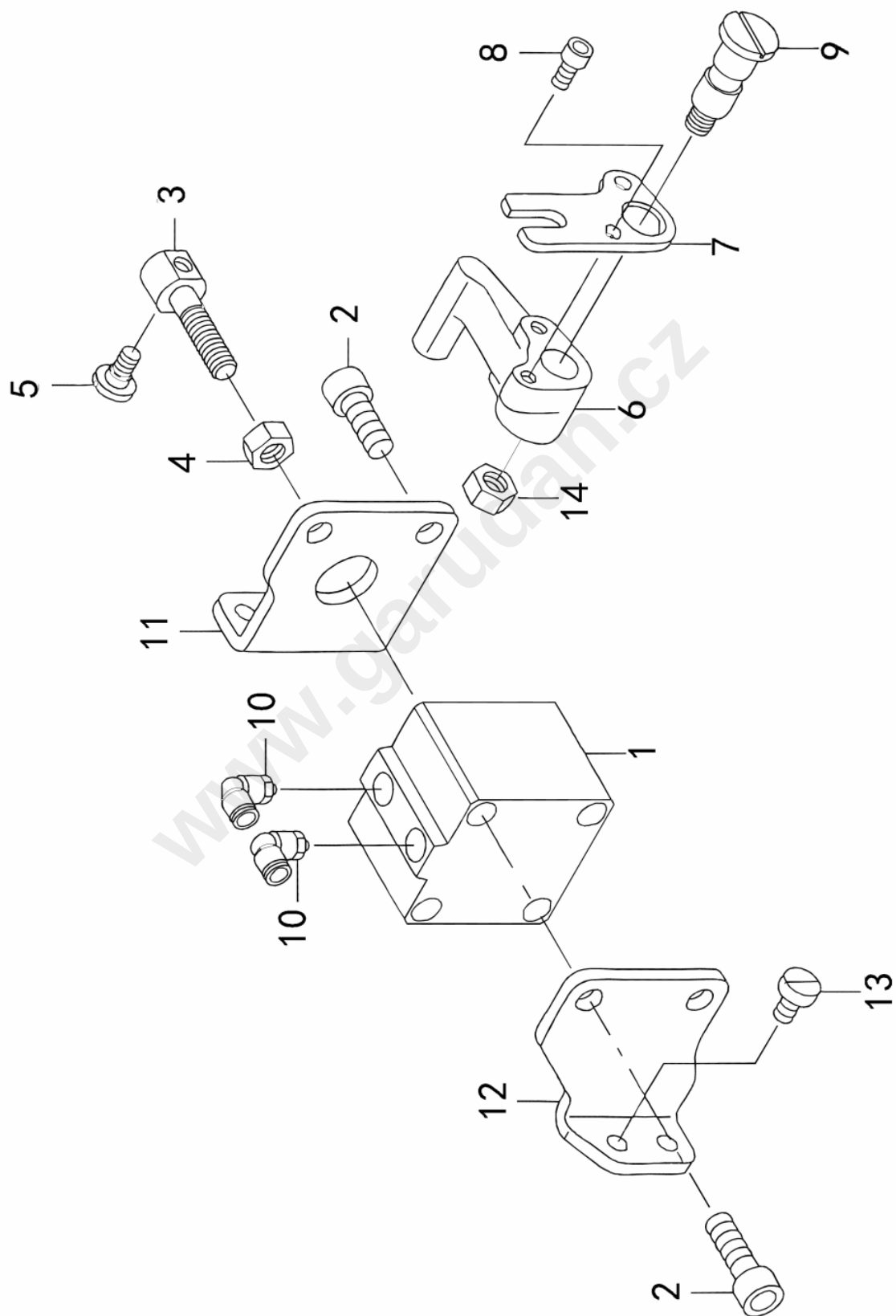
G. THREAD TENSION COMPONENTS					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	21390562	Thread tension asm.		1	
2	B3128051000	Thread take-up spring A		1	
3	10124501	Thread take-up spring stud		1	
4	21390554	Thread tension base complete		1	
5	21441100	Thread release plate		1	
6	SD0470281SP	Hinge screw	D=4.7 H=2.8	2	
7	B3127527000	Pin B		1	
8	B3127051000	Tension release pin short		1	
9	NS6110310SP	Nut	11/64-40	2	
10	10124204	Thread tension post A		1	
11	B3214047000	Bobbin winder tension disc		4	
12	D3168555H0B	Tension spring No.1		2	
13	11072402	Thread tension nut		2	
14	10124303	Thread tension post B		1	
15	B3126051000	Tension disc		4	
16	B3132051000	Tension disc holder		2	
17	B3129053000	Tension spring		2	
18	B3120125000	Rotating stopper		2	
19	11072204	Tension nut		2	
20	B3143527000	Take-up spring guide stud		1	
21	B31375270A0	Take-up spring guide asm.		2	
22	B3142527000	Take-up spring guide plate		1	
23	B3139527000	Collar		1	
24	B3128527000	Thread take-up spring B		1	
25	22617609	Thread tension post		1	
26	22618904	Set screw		1	
27	22618904	Set screw		1	
28	B3138527000	Adjusting plate B		1	
29	SS7090520SP	Screw	9/64-40 L=4.5	1	
30	B3141527000	Presser Collar		1	
31	B3125527000	Take-up spring guide		1	
32	B3125012000	Thread tension nut		1	
33	SS7110910TP	Screw	11/64-40 L=8.5	2	
34	21348206	Tension release bar		1	
35	PS0600502KP	Spring pin		1	

H. LOWER THREAD WINDER MECHANISM COMPONENTS



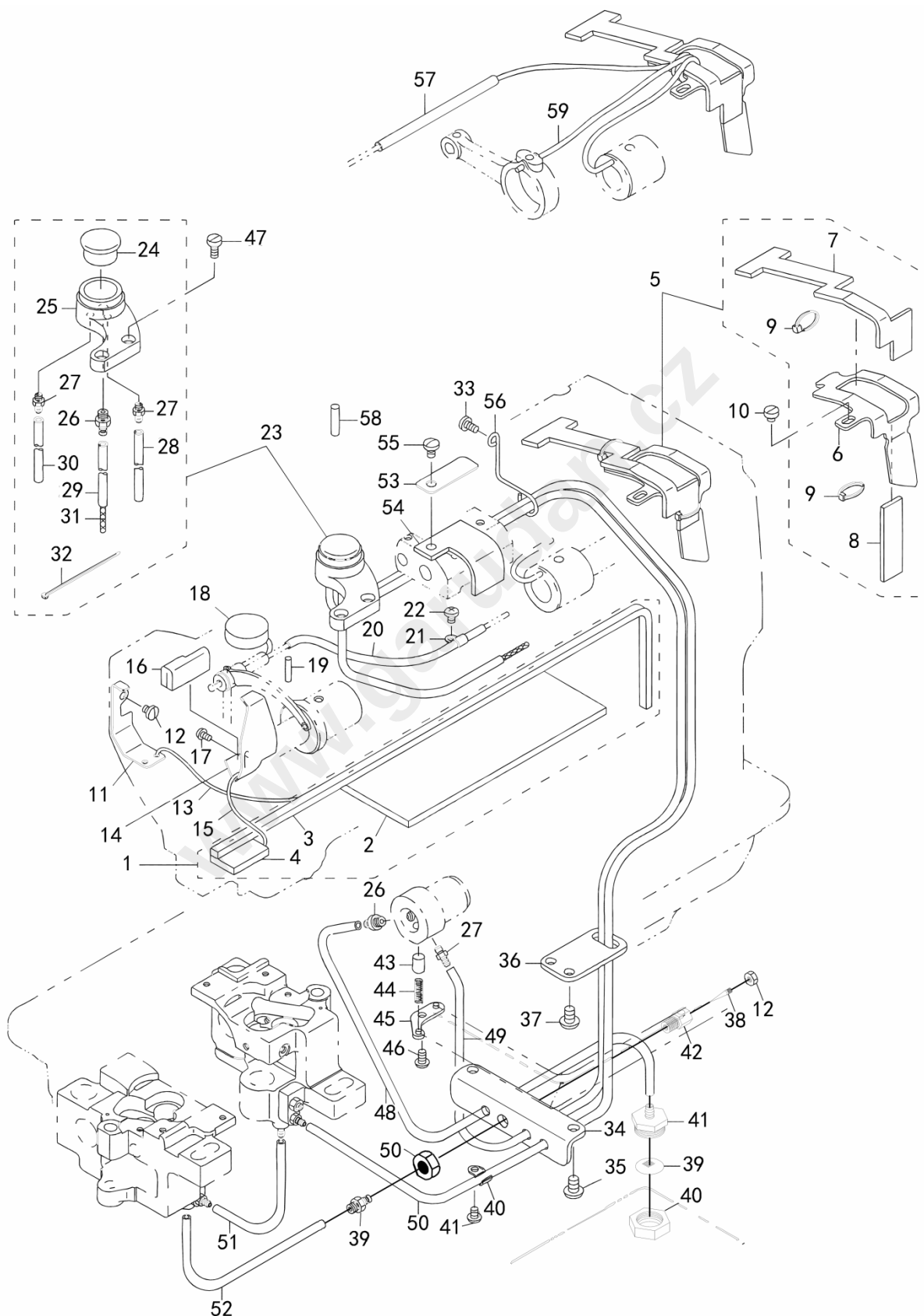
H. LOWER THREAD WINDER MECHANISM COMPONENT					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	21357967	Bobbin device asm.		1	
2	22537658	Bobbin fitting basis complete		1	
3	21357959	Bobbin shaft complete		1	
4	22538151	Bobbin cam shaft complete		1	
5	23636202	Bobbin lever		1	
6	21356001	Adjusting plate		1	
7	B152989000CA	Pressure foot spring		1	
8	10618304	Vertical roller washer		2	
9	21358205	Bobbin friction gear		1	
10	B3205210000	Cushion		1	
11	B1148555000	Spring		1	
12	RC0560711KP	Retaining ring		1	
13	RE0500000K0	E-ring		1	
14	R0092270200	Rubber ring		1	
15	SS7091410SP	Screw	9/64-40 L=13.5	1	
16	SS6090520SP	Screw	9/64-40 L=5.0	1	
17	14512503	Bobbin adjusting plate		1	
18	SS6110810TP	Screw	11/64-40 L=8	3	
19	10704807	Bobbin friction wheel		1	
20	SM8050602TP	Screw	M5 L=6	2	
21	10502300	Thread cutter		1	
22	SS6090620SP	Screw	9/64-40 L=6	2	
23	21355755	Lower thread guide asm.		1	
24	21355706	Fitting base		1	
25	S3162555B00	Thread guide		1	
26	NS6110310SP	Nut 11/64-40		1	
27	D3168555H0B	Tension spring No.1		1	
28	B3214047000	Bobbin winder tension disc		2	
29	21378708	Thread tension post		1	
30	11072402	Thread tension nut		1	
31	SM6040800SP	Screw		2	
32	22538706	Packing		1	

I. AUTOMATIC PRESSER LIFTING MECHANISM



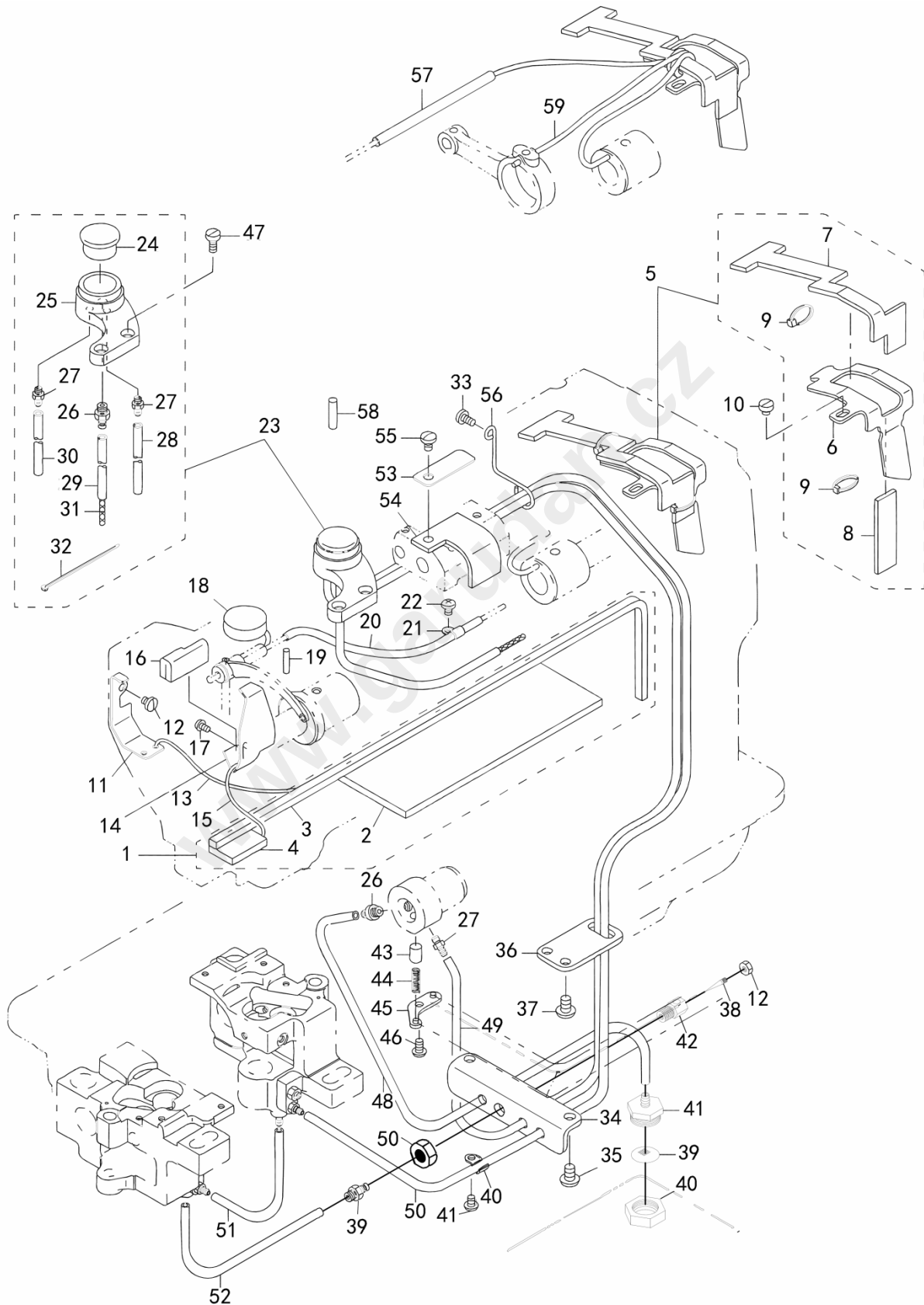
I. AUTOMATIC PRESSER LIFTING MECHANISM					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	ACQ40x15	Air cylinder		1	
2	SM6082002TP	Screw M8 L=20		4	
3	21356506	Cylinder Connecting screw		1	
4	NM6080001SE	Nut	M8	1	
5	SD0720331SP	Hinge screw	D=7.24 H=3.3	1	
6	21356605	Lever A		1	
7	21356803	Lever B		1	
8	SM6051002TP	Screw	M5x0.8 L=10	2	
9	21356704A	Shaft		1	
10	SPL4-01	Elbow		2	
11	21356308	Cylinder stay (front)		1	
12	21356407	Cylinder stay (rear)		1	
13	SS6151040SP	Screw	15/64-28 L=10	4	
14	21356704B	Nut		1	

J. LUBRICATION COMPONENTS (1/2)



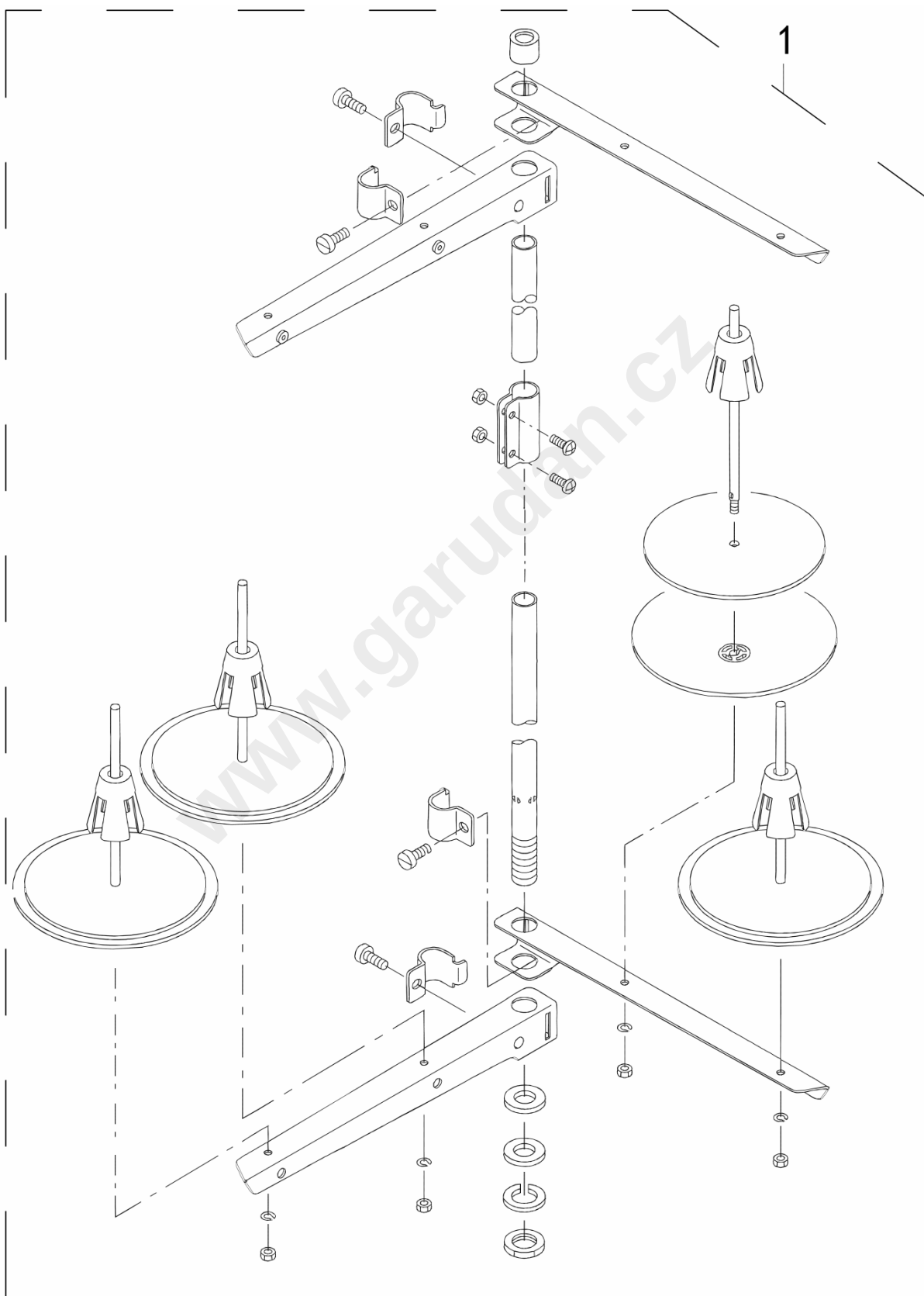
J. LUBRICATION COMPONENTS (1/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	21345756	Arm once through oil felt asm.		1	
2	21345707	Arm once through felt A		1	
3	21345806	Felt B		1	
4	21345905	Face once through felt		1	
5	21346358	Felt support asm.		1	
6	21346309	Felt		1	
7	21346507	Feed change felt		1	
8	21346408	Felt		1	
9	EA9500B0000	Clip	CV-70S	2	
10	SS7110710SP	Screw	11/64-40 L=4.3	2	
11	21340708	Upper feed oil bar plate		1	
12	010624	Nut 11/64-40		1	
13	CQ202000000	Oil wick		0.2 m	
14	21347000	Take-up oil plate		1	
15	CQ202000000	Oil wick		0.2 m	
16	21347208	Take-up lubrication felt		1	
17	SS3090610SP	Screw	9/64-40 L=6	1	
18	21346002	Felt		1	
19	B1412051000	Felt		1	
20	BT0600402EA	Oil tube		0.1 m	
21	B3538112000	Oil return tube holder		2	
22	SS4110615SP	Screw	11/64-40 L=6	2	
23	40051503	Arm oil tank asm.		1	
24	B3520586000	Oil sight window		1	
25	21345608	Arm oil tank		1	
26	SQ1110401MZ	Connecting screw		2	
27	SQ11150451MZ	Connecting screw		3	
28	23630007	Tube		0.5 m	
29	23630007	Tube		0.2 m	
30	23630007	Tube		0.6 m	
31	CQ252000000	Oil wick		0.7	
32	EA9500B0100	Cable band		3	
33	SS7110830SP	Screw	11/64-40 L=7.5	1	
34	21345103	Lubrication bracket		1	
35	SS4150915SP	Screw	15/64-28 L=9	2	
36	21345202	Oil pipe stay		1	
37	SS4150915SP	Screw	15/64-28 L=9	2	
38	010623	Screw		1	
39	021365	Filter		1	

J. LUBRICATION COMPONENTS (2/2)



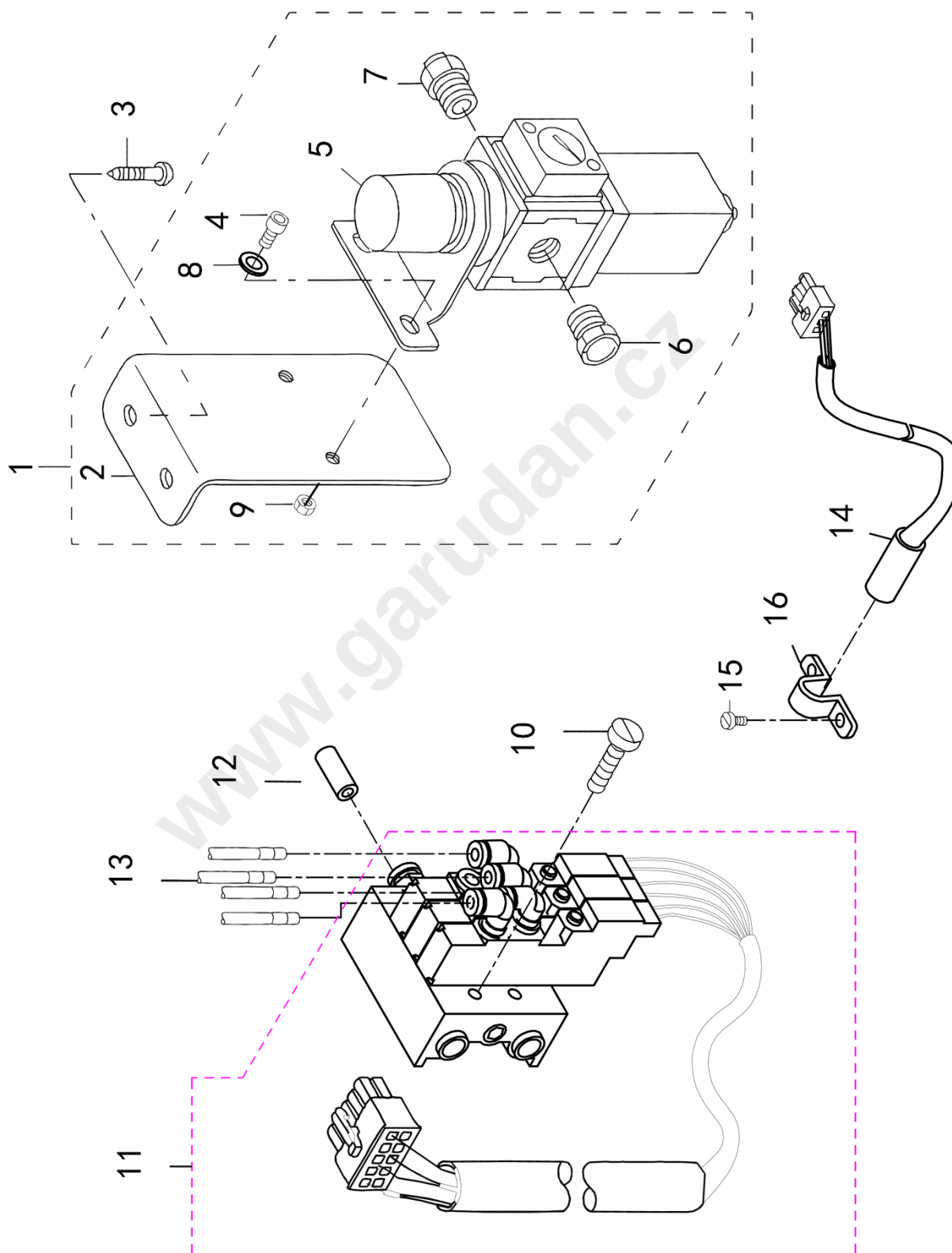
J. LUBRICATION COMPONENTS (2/2)					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
40	021364	Cover		1	
41	021363	Oil filter head		1	
42	021360	Throttle sleeve		1	
43	B3534155000	Plunger		1	
44	B1214038000	Plunger spring		1	
45	B3524552000	Plunger thrust plate		1	
46	SS4110815SP	Screw 11/64-40 L=8		1	
47	SS6111010SP	Screw 11/64-40 L=9.5		2	
48	23630007	Tube		0.36 m	
49	23630007	Tube		0.08 m	
50	LM8	Nut	8	1	
51	23630007	Tube		0.1 m	
52	23630007	Tube		0.5 m	
53	21338306	Lubrication felt presser		1	
54	SS5090610SP	Mutual vertical change felt		1	
55	SS5090610SP	Screw	3/16-28 L=7	1	
56	21346606	Pipe support		1	
57	23630007	Tube		0.22 m	
58	PS0500202KP	Spring pin	5x20	1	
59	CQ202000000	Oil wick		0.2	

K. THREAD STAND COMPONENTS



K. THREAD STAND COMPONENTS					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	26910158	Thread standing device asm.		1	

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L. AIR MECHANISM COMPONENTS

L. AIR MECHANISM COMPONENTS					
Ref. No	Parts No.	Name of parts	Description	Qty	Note
1	021724	Air apparatus (B) asm.		1	
2	021723	Mounting panel		1	
3	021703	Screw	D=4.1 L=20	2	
4	021704	Screw	M6 L=10	2	
5	021705	Filter regulator		1	
6	SPC8-01	Nipple		1	
7	SPL6-01	Nipple		1	
8	WP0621016SH	Flat pad		2	
9	LM6	Nut		2	
10	040151	Screw		3	
11	022236	Electromagnetic valve asm.		1	
12	APU0604 L=500	Tube ø6		1	
13	APU0425 L=500	Tube ø4		3	
14	021658A	Safety switch		1	
15	SS4110815SP	Screw		2	
16	021726	Pipe clamp		1	