

Instruction Manual

Parts List

HIGHT SPEED CYLINDER BED 3-NEEDLE INTERLOCK STITCH MACHINE
WITH LEFT-HAND TRIMMING MECHANISM

VES3712-8

Adjustments differed from VES2700-8 has been described in this book. Read both INSTRUCTION and PARTS LIST of VES2700-8.

Before using this sewing machine, please read the instruction manual and understand the contents well.

After reading the instruction manual, please keep it in a location where it is easy to access for operators.



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* * * * ILLUSTRATED PARTS LIST * * * *

Attention

- ♦ This instruction manual is designed mainly for technicians, but it is advisable that also operators read the instructions with mark to use the machine properly.
- The numbers in lower left corners of figures are figure numbers. We use them in texts as needed for your reference.

Attention

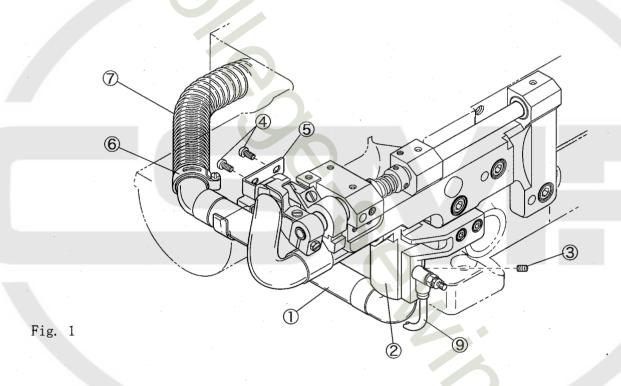
The description in this instruction manual is subject to change for improvements of the commodity without notice.

1.Installation

Connecting suction pipe

Install the the suction pipe (rear), the suction pipe holder, and the dust hose as accessories on the machine as follows:

- (1) Insert the suction pipe (rear) ① into the hole on the bottom of the lower knife holder bracket ② and fix them with the screw ③.
- (2) Remove the screws 4 at the rear of the machine frame.
- (3) Using the screws 4, fix the suction pipe support 5 in the place the screws 4 located.
- (4) Set the suction pipe (rear) ① on the suction pipe support ⑤.
- (5) Insert the dust hose fitted with the hose band into the suction pipe (rear) , and fix the dust hose with the hose band .



O Using air pipe

without the air pipe.

Connect the suction pipe and the air source (regulator or solenoid valve) with the air pipe ③.

Set the pressure of the regulator 8 to 0.1 - 0.2 MPa (1 - 2 kgf/cm²). With UT-A device, set it to 0.4 - 0.5 MPa (4 - 5 kgf/cm²).

O Using vacuum system Connect the dust hose 7 to the vacuum system

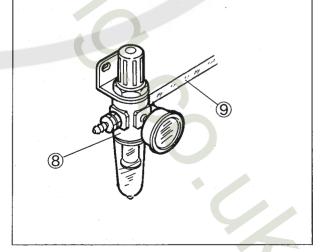


Fig. 2

2. Proper operation

2.1 Threading



When not threaded, thread correctly as shown in Fig. 3.

When threaded, rethread after knotting preset threads.

A: Needle thread

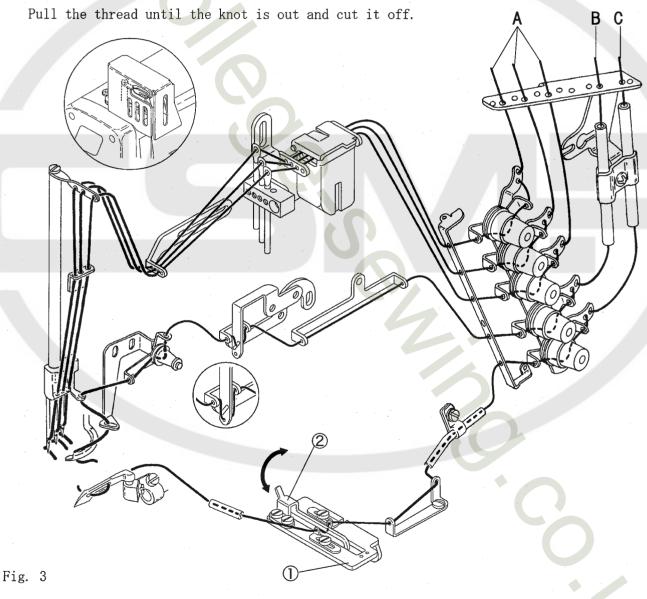
Pull out the thread unitl it is front of the needle. Then cut off the knot before needle eye to rethread.

Thread correctly for the left needle in the inmost position as shown in Fig. 3.

B: Spreader thread

Pull the thread until the knot is out.

C: Looper thread



NOTE

For easy threading, pull the looper thread take-up eyelet support ① frontward.

After threading, push the cast-off plate ② to reset the looper thread take-up eyelet support ① securely.

2.2 Lubrication



Supply oil in the trimming mechanism by hand.

O Bearing parts: Supply a drop of oil into the holes ①, ②, and ③ once or twice a day.

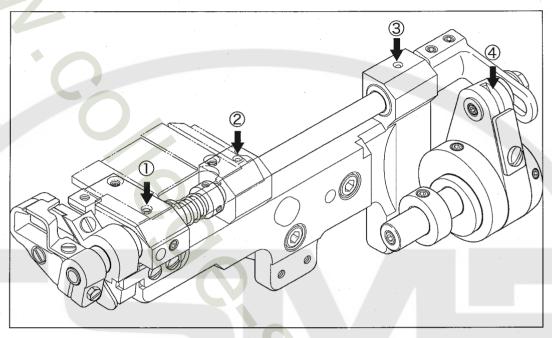


Fig. 4

O Rod part: Remove the seal plug (5) of the upper knife rod cover and supply a few drops of oil into the rod(4) once or twice a day.

NOTE

Remove and clean the upper knife rod oil receiver 6 once a week.

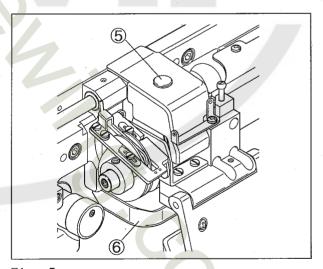


Fig. 5

WARNING —

Before operating, ALWAYS turn the motor switch OFF and check that the motor has already stopped.

2.3 Adjusting suction pipe (front)

Make the clearance between the suction pipe (front) ① and the upper knife holder ② to about 2 mm to adjust left-and-right position of the suction pipe (front) ①.

Loosen the screw 3 to adjust the position of the suction pipe (front) 1.

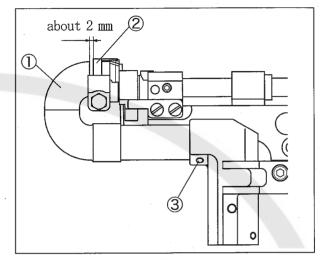


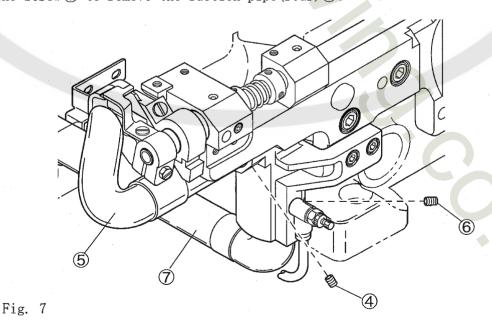
Fig. 6

2.4 Cleaning suction pipe



Remove the suction pipes to clean away chips from them when clogged.

- (1) Open the front cover.
- (2) Loosen the screw 4 to remove the suction pipe (upper) 5.
- (3) Loosen the screw (6) to remove the suction pipe (rear) (7).



3. Trimming mechanism

3.1 Adjusting edge guide



Adjust the trimming width of the fabric edge with the edge guide(left)①. Adjust the folding width of the fabric with the edge guide(right)③. Loosen the screws② and ④ to adjust them.

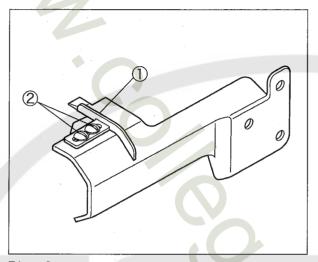


Fig. 8

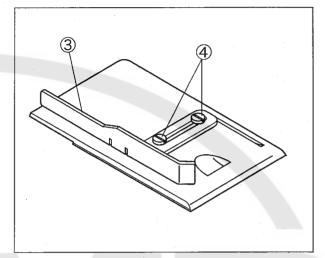


Fig. 9

3.2 Trimming width of fabric

Loosen the screw⁵ to move the upper knife holder ⁶ and the lower knife holder ⁷ right or left simultaneously.

Tighten the screw 5 securely after adjusting required position.

⚠ CAUTION

- 1. Tightening torque is 1.5 2 N·m (15 20 kgf/cm). Do not tighten with too much torque.
- 2. See "2.3 Adjusting suction pipe(front)" to set the position after adjusting trimming width of fabric.

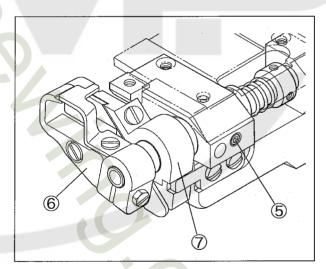


Fig. 10

3.3 Removing and installing lower knife

Removing:

- (1) Open the front cover.
- (2) Loosen two screws ① of the collar ①.
- (3) Push the upper knife holder ② to the left to make a clearance between the upper and the lower knives.
- (4) Tighten two screws ① slightly.
- (5) Loosen the screw3 to pull out the lower knife

 (4) downward.



(1) Make the lower knife 4 blade on a level with the top of the stitch plate. Then tighten the screw 3 securely.

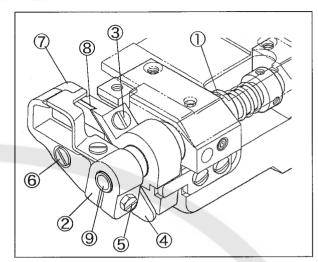


Fig. 11

- (2) Loosen two screws ①. The upper knife engages with the lower knife by its spring.
- (3) Check the sharpness of the baldes by setting a thread between the upper and the lower knives while rotating the pulley manually.
- (4) Tighten two screws 1 securely.
- (5) Recheck the sharpness of the blades.

3.4 Removing and installing upper knife

See Fig. 11 to follow the steps.

Removing:

- (1) Loosen the screw 5 to remove the upper knife holder 2.
- (2) Loosen the screw 6 to remove the upper knife 7.

Installing:

- (1) Align the upper knife (7) with the key groove on the upper knife holder (2). Fix them with the screw (6) securely.
- (2) Fix the upper knife holder ② to the upper knife shaft ③. Rotate the handwheel manually to lower the upper knife ⑦ at the lowest point. Move the upper knife holder ② so that the upper knife tip is 0 0.5 mm above the top surface of the lower knife ⑧. Then tighten the screw ⑤ securely.
- (3) Check the sharpness of the blades by setting a thread between the upper knife? and the lower knife. while rotating the handwheel manually.

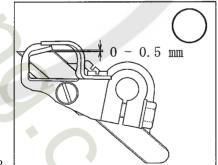


Fig. 12

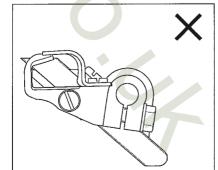


Fig. 13

NOTE

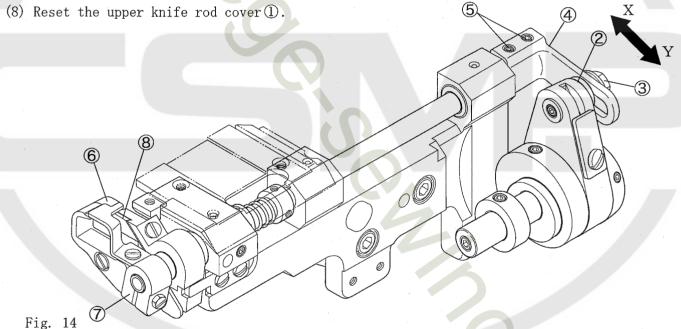
Too much engagement pushes up a fabric by upper knife tip. It cannot trim fabric edge.

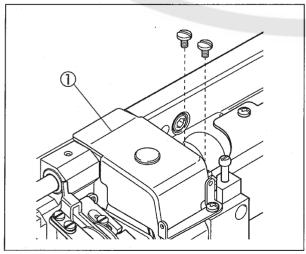
3.5 Adjusting upper knife stroke

The standard stroke of the upper knife is about 4.5 mm.

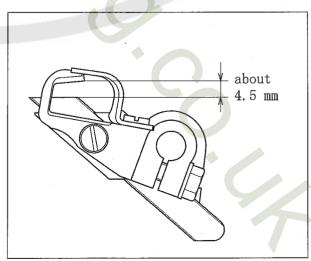
Adjusting stroke:

- (1) Remove the upper knife rod cover ①.
- (2) Loosen the nut 3 of the adjusting lever pin 2.
- (3) Move the adjusting lever pin2 to adjust the stroke.
 - To make the stroke large, move it in the direction X.
 - To make the stroke small, move it in the direction Y.
- (4) Loosen the screw 3 securely.
- (5) Loosen the screws 5 on the upper knife shaft lever 4.
- (6) Rotate the handwheel manually to lower the upper knife® at the lowest point. Move the upper knife holder® so that the upper knife tip is 0 0.5 mm above the top surface of the lower knife®. Then tighten the screws⑤ securely.
- (7) Check the sharpness of the blades by setting a thread between the upper[®] and the lower[®] knives while rotating the handwheel maunually.









WARNING

Before adjusting, ALWAYS turn the motor switch OFF and check that the motor has already stopped.

3.6 Removing and replacing trimming parts

This model can be used as VES2711-8 machine by replacing exclusive parts after removing trimming parts.

Order the stitch plate, the main feed dog, and the differential feed dog for interchanging as options.

Removing:

- (1) Remove four screws ① to remove the front cover ②.
- (2) Remove the upper knife rod cover 3.
- (3) Remove the upper knife rod oil receiver 4.
- (4) Remove the slide cover 5.
- (5) Loosen the screw 6 to remove the suction pipe (rear) 7.
- (6) Remove the suction pipe holder 8.
- (7) Remove the stitch plate support 9 and the stitch plate as a set.
- (8) Loosen two screws 10 of the collar.
- (9) Remove the screws 10 of the upper knife shaft lever 10.

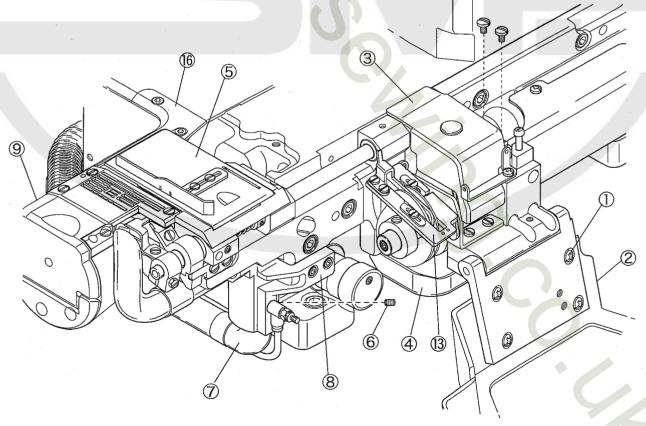


Fig. 17

- (10) Pull up the looper thread take-up eyelet support (3) frontward.
- (11) Remove the lower knife holder bracket 4.
- (12) Reset the looper thread take-up eyelet support 3.
- (13) Replace the main and the differential feed dogs (option).
- (14) Replace the stitch plate support (accessories) (15) and the stitch plate (option).
- (15) Replace the cylinder cover(rear) (6) with the cover(accessories) (17).
- (16) Insert the shaft lever support® (accessories) into the upper knife shaft lever® and fix them on the shaft lever supporting plate®. Insert the collar(accessories)® through the shaft lever support® and fix it.
- (17) Reset the upper knife rod cover 3.
- (18) Reset the upper knife rod oil receiver 4.
- (19) Replace the front cover (accessories) 2.
- (20) Replace the cylinder cover (accessories) 22.
- (21) Set the fabric edge guides (right) ② and (left) (accessories) ④.

NOTE

Keep the parts removed from the machine without missing.

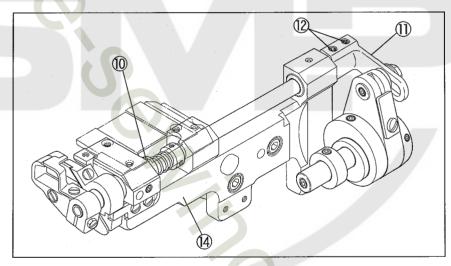


Fig. 18

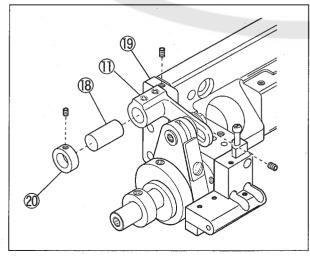


Fig. 19

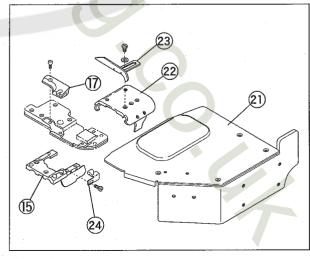


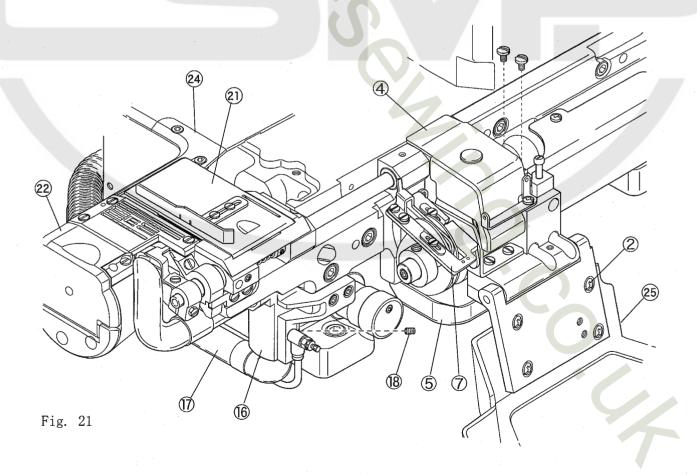
Fig. 20

AWARNING —

Before adjusting, ALWAYS turn the motor switch OFF and check that the motor has already stopped.

Replacing:

- (1) Remove the cylinder cover ①.
- (2) Remove four screws 2 to remove the front cover 3.
- (3) Remove the upper knife rod cover 4.
- (4) Remove the upper knife rod oil receiver 5.
- (5) Remove the stitch plate support[®], the stitch plate, and the fabric edge guide(left) as a set.
- (6) Pull up the looper thread take-up eyelet support 7 frontward.
- (7) Remove the collar 8, the screw 9, and then the shaft lever support 10.
- (8) Insert the upper knife shaft lever[®] into the upper knife shaft[®] and fix the lower knife holder bracket[®] with three screws.
- (9) Tighten the screws (15) securely.
- (10) Reset the looper thread take-up eyelet support ⑦.
- (11) Set the suction pipe holder 16.
- (12) Fix the suction pipe (rear) 17 with the screw 18.
- (13) Adjust the engagement of the upper knife.
- (14) Adjust the engaging pressure of the knives and fix the collar (9) with four screws (20).



- (15) Set the slide cover 2.
- (16) Replace the exclusive main and differential feed dogs.
- (17) Set the exclusive stitch plate support@ after setting the stitch plate.
- (18) Replace the cylinder cover (rear) 3 with the exclusive cover 4.
- (19) Reset the upper knife rod cover 4.
- (20) Reset the upper knife rod oil receiver 5.
- (21) Replace the exclusive front cover 25.

NOTE

- 1. Keep the parts removed from the machine without missing.
- 2. See "3.4 Removing and installing upper knife" to adjust the engagement of the knives.

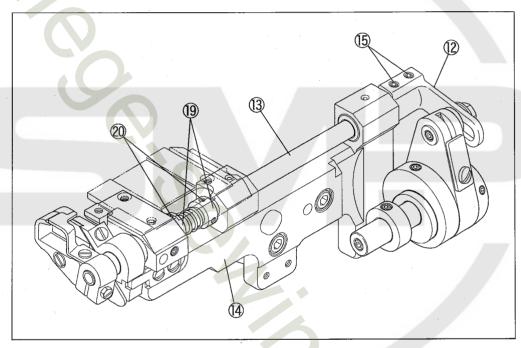


Fig. 22

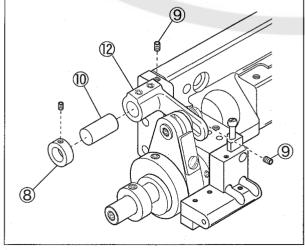


Fig. 23

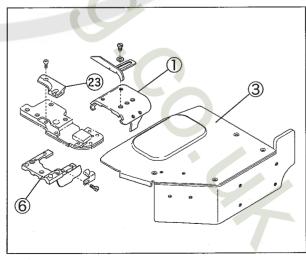
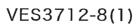


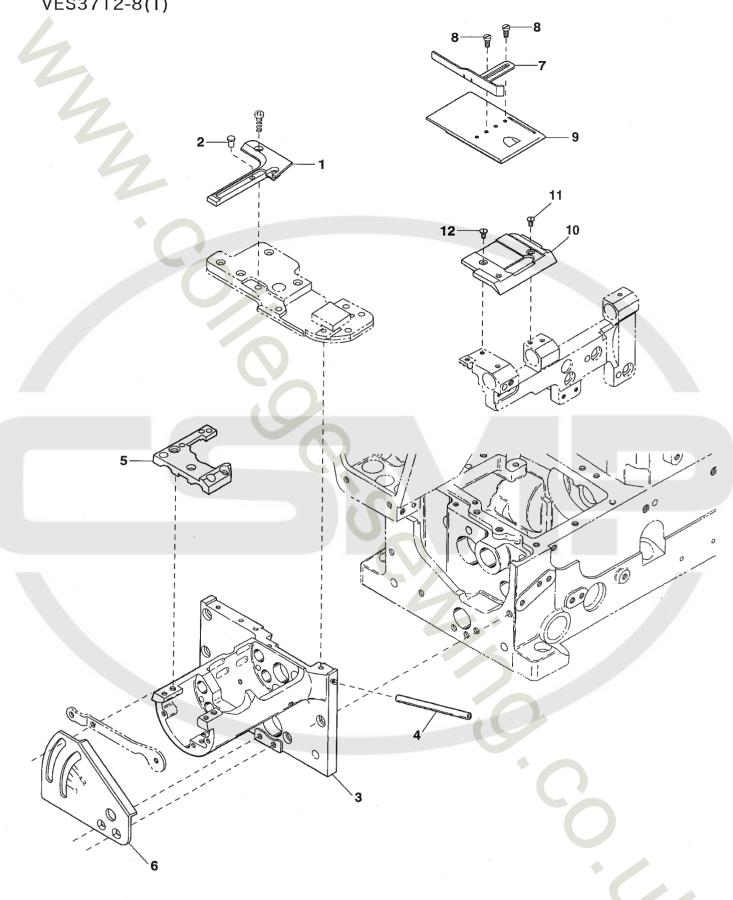
Fig. 24

4. Specifications

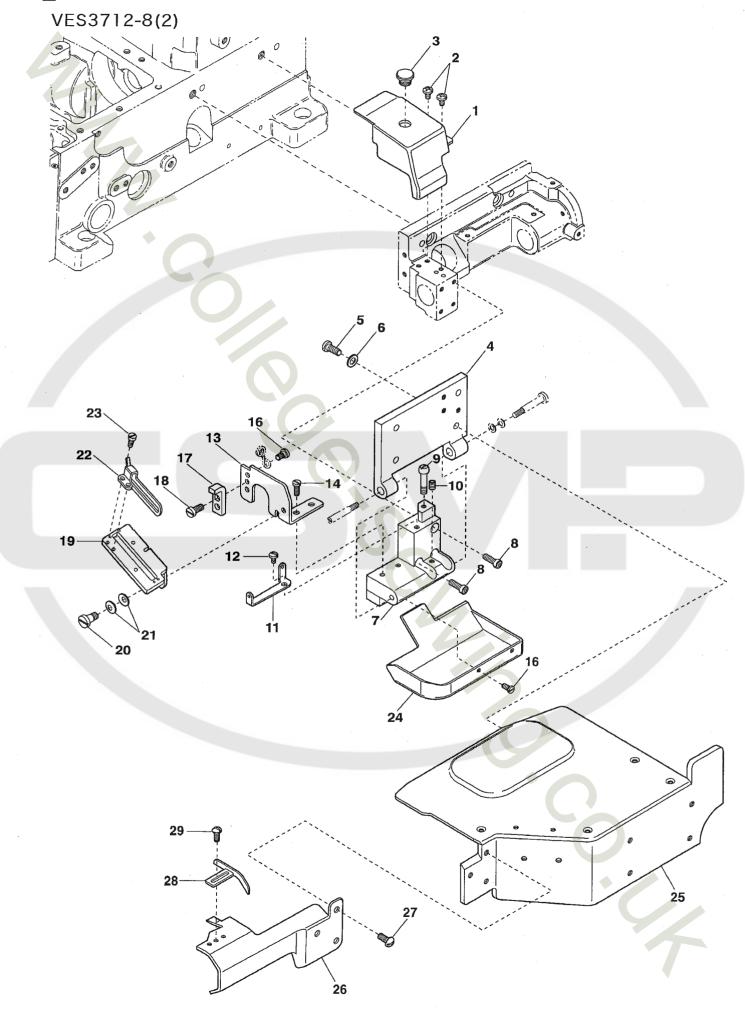
Model	VES3712-8
Description	High speed cylinder bed 3-needle interlock stitch machine with variable top feeder and left-hand trimming mechanism
Dimensions	451 mm (L) $ imes$ 274 mm (W) $ imes$ 423 mm (H)
Outer Circumference of Cylinder	265 mm
Weight	50 kg
Stitch Type	ISO 406, 407, 602, 605
Application	Hemming operation of knitted or woven fabrics
Sewing Speed	Up to 4500 rpm (during intermittent operation)
Stitch Length	1.4 - 4.2 mm Number of stitches per inch(25.4 mm) 6 - 18 stitches per 30 mm 7 - 21 stitches
Needle System	UY×128GAS #65 - 90 (#9 - 14)
Needle Distance	4.8 mm, 5.6 mm
Needle Stroke	31 mm
Upper Knife Stroke	4.5 - 7.0 mm (at shipment: 4.5 mm)
Suction of Chips	Venturi (standard) or vacuum (option) system
Presser Foot Lift	Max. 5.5 mm (without spreader: 7.5 mm)
Feed Regulation	By lever (or by adjusting screw)
Differential Ratio	Max. normal differential: 1:1.4 Max. reverse differential: 1:0.8
Differential Feed Regulation	Adjustable by control lever (banana type, adjustable with screwdriver)
Movements of top feed dog	Front-and-rear movements: 1.6 - 7.0 mm Up-and-down movements: standard: 4 mm, 3.5 - 6.0 mm (with spreader: max. 5 mm)
Lubricating Oil	YAMATO SF OIL #28
Lubrication	Lubrication automatically by trochoid-shaped pump with splash system
Capacity of Oil Reservoir	800 ml
Installation	Table top type, or semi-submerged type (with exclusive supporting board)

ILLUSTRATED SPARE PARTS LIST

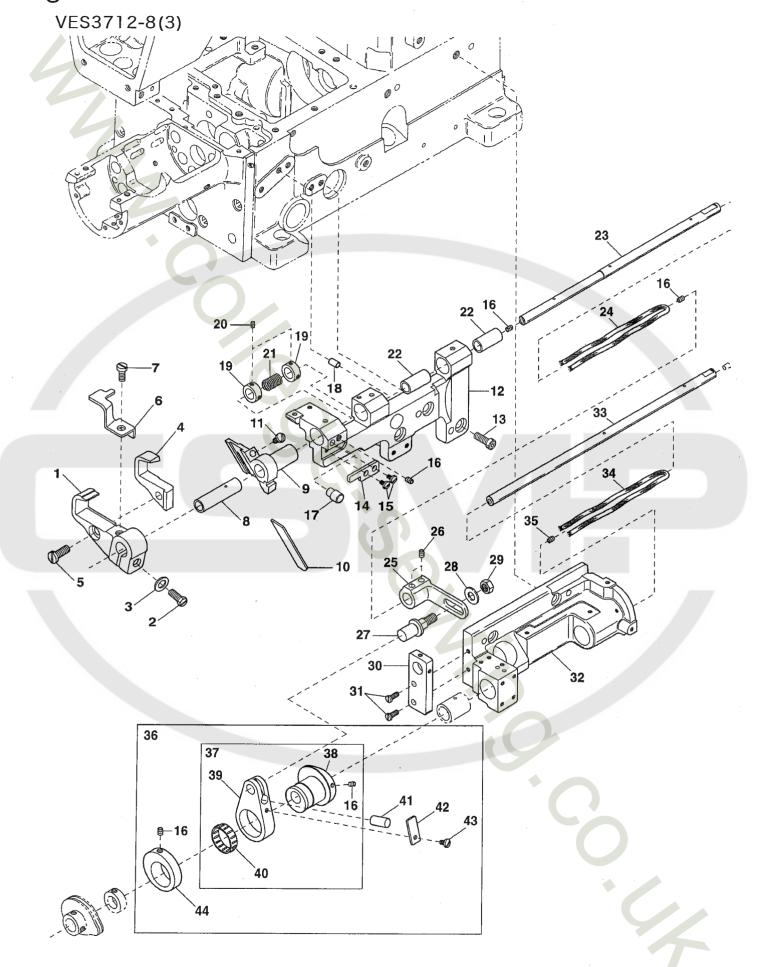




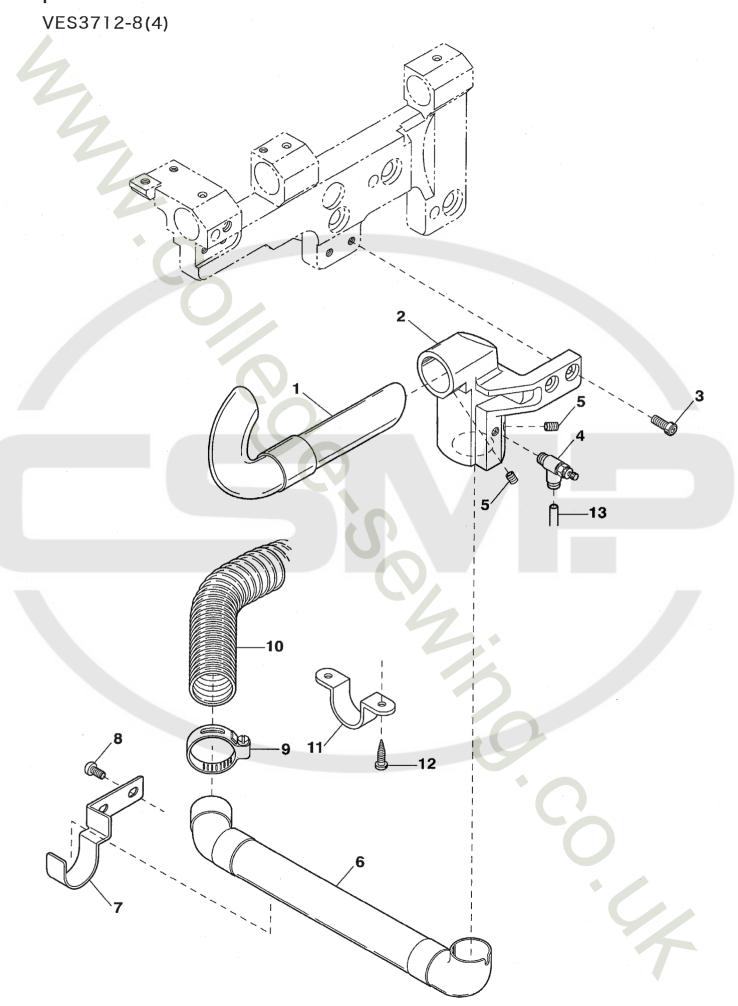
Ref.No	Parts No.	Description	品 名	Amt. Req
	3150455	Cylinder Cover(Rear)	シリンダカバー(後)	1
2	3200033	Cushion	クッション	1
3	3150404	Cylinder	シリンダ	1
4	3150465	Thread Eyelet Pipe	糸道パイプ	1
5	3150408	Stitch Plate Support	針板取付板	1
6	3150447	Feed Graduations	送り目盛板	1
7	3150444	Fabric Edge Guide(Right)	裾引キガイド(右)	1
8	110101	Screw(M3-0.5 × 3)	止ネジ	2
9	3150441	Slide Cover	滑り板	1
10	3150440	Slide Cover Holder	滑リ板台	1
11	130028	Screw(M3-0.5 × 2)	止ネジ	1
12	130023	Screw(M3-0.5 × 3.5)	止ネジ	1



Ref.No	Parts No.	Description	品 名	Amt. Req
1	3150431	Upper Knife Rod Cover	上メスロッドカバー	. 1
2	110012	Screw(M4-0.7 × 5)	止ネジ	2
3	3150442	Seal Plug	 詰栓	1
4	3150407	Front Cover Hinge	前開キカバーヒンジ	1
5	110013	Screw(M4-0.7 × 8)	止ネジ	4
6	001123	Washer	ワッシャ	4
7	3150406	Front Cover Hinge Bracket	前開キカバーヒンジ台	1
8	120001	Screw(M4-0.7 × 14)	止ネジ	3
9	190078	Screw(M4-0.7 × 5)	バネ掛ケネジ	1
10	160001	Screw(M4-0.7 × 4)	止ネジ	1
11	3150466	Hinge Bracket Eyelet	ヒンジ台糸道	1
12	110012	Screw(M4-0.7 × 5)	止ネジ	1
13	3150435	Looper Thread Take-up Eyelet Bracke	tカム糸道台	1
14	110009	Screw(M4-0.7 × 8)	止ネジ	2
15				
16	110002	Screw(M3-0.5 × 5)	止ネジ	3
_17	3150437	Take-up Eyelet Support Stop	カム糸道取付板ストッパ	1
18	007627	Screw(M4-0.7 × 6)	止ネジ	2
19	3150436	LooperThreadTake-upEyeletSupport	カム糸道取付板	1
20	170010	Screw(M4-0.7 × 4)	止ネジ	1
-				
21	300100	Conical Spring Washer	皿バネワッシャ	2
22	3150438	Cast-off Plate	ルーパ糸案内	1
23	110054	Screw(M3-0.5 × 3.5)	止ネジ	2
_24	3150430	Upper Knife Rod Oil Receiver	上メスロッド油受ケ	1
25	3150450	Front Cover Unit	前開キカバー(組)	1
26	3150457	Bracket Cover	ブラケットカバー	. 1
_27	110104	Screw(M4-0.7 × 8)	止ネジ	3
28	3150443	Fabric Guide(Left)	布ガイド(左)	1
29	110101	Screw(M3-0.5 × 3)	止ネジ	2

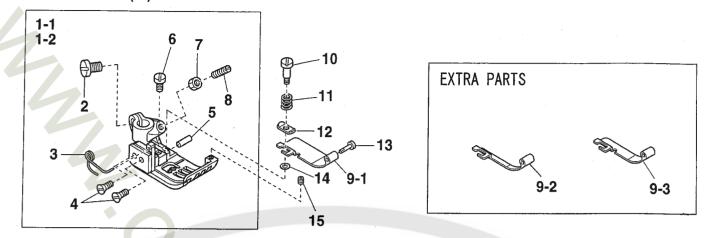


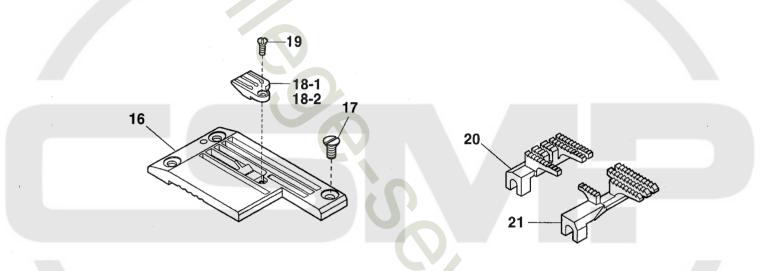
Ref.No	Parts No.	Description	品名	Amt. Req
1	3150425	Upper Knife Holder	 上メス台	7,11112 1109
2	140019	Screw(M5-0.8 × 14)	上 <u>^</u> 止ネジ	1
3	300000	Washer	<u>エ</u> イン ワッシャ	1
4	3150426	Upper Knife	<u> </u>	
5	110035	Screw(M4-0.7 × 10)	<u> </u>	<u>-</u>
6	4150427	Upper Knife Cover	<u>エ</u> イン 上メスカバー	1
7	110001	Screw(M4-0.7 × 5.4)	エススカハー 止ネジ	
8	3150416	Lower Knife Holder Bushing	<u>_</u> 下メス台ブッシュ	1
9	3150413	Lower Knife Holder Lower Knife Holder		1
10	3150415		下メス台	1
10	3150415	Lower Knife	下メス	1
11	110010	Screw(M4-0.7 × 16)	 止ネジ	1
12	3150411	Lower Knife Holder Bracket	下メス台ブラケット	1
13	120013	Screw(M6-1 × 15)	止ネジ	3
14	3150414	Lower Knife Holder Guide	 下メス台ガイド	1
15	110009	Screw(M4-0.7 × 8)	<u>ー ドススロル1ト</u> 止ネジ	·
16	006212			7
17	3150486	Screw(M5-0.8 × 6)	止ネジ	
18	000779	Cushion	クッション	1
19	3200086	Knock Pin	ノックピン	1
		Collar(8 × 13 × 6mm)	カラー	2
	1600000	Screw(M3-0,5 × 3)	止ネジ	4
21	0004577	Umark is 0	1	1
	0094577	Upper Knife Spring	上メスバネ	1
22	3150412	Upper Knife Shaft Bushing	上メス軸ブッシュ	2
23	3150424	Upper Knife Shaft	上メス軸	<u> </u>
24	310128	Oil Wick(400mm)	油芯	1
25	3150423	Upper Knife Shaft Lever	上メス軸腕	<u> </u>
26	160003	Screw(M5-0.8 × 5)	止ネジ	2
27	3100309	Adjusting Lever Pin	調節レバーピン	1
28	000528	Washer	ワッシャ	Ţ_
29	100003	Nut	ナット	1
30	3150476	Shaft Lever Supporting Plate	軸腕支工取付板	1
	11000			
31	110035	Screw(M4-0.7 × 10)	止ネジ	2
32	3150405	Take-up Shaft Bracket	カム軸ブラケット	1
33	3150434	Take-up Shaft	カム軸	1
34	310127	Oil Wick(340mm)	油芯	1
35	160015	Screw(M6-1 × 6)	止ネジ	1
36	3150419	Upper Knife Rod, C. Set	上メスロッド(組)	1
37	3150420	Upper Knife Rod, C. Set(1)	上メスロッド(組 1)	1
38	3150433	Upper Knife Eccentric	上メスエキセン	1
39	3150421	Upper Knife Rod	上メスロッド	1
40	0068146	Roller Bearing	ニードルベアリング	1
41	3150439	Oil Wick	油芯	1
42	3150429	Upper Knife Rod Rid	上メスロッド蓋	1
43	110054	Screw(M3-0.5 × 3.5)	止ネジ	1
44	3150432	Collar	カラー	



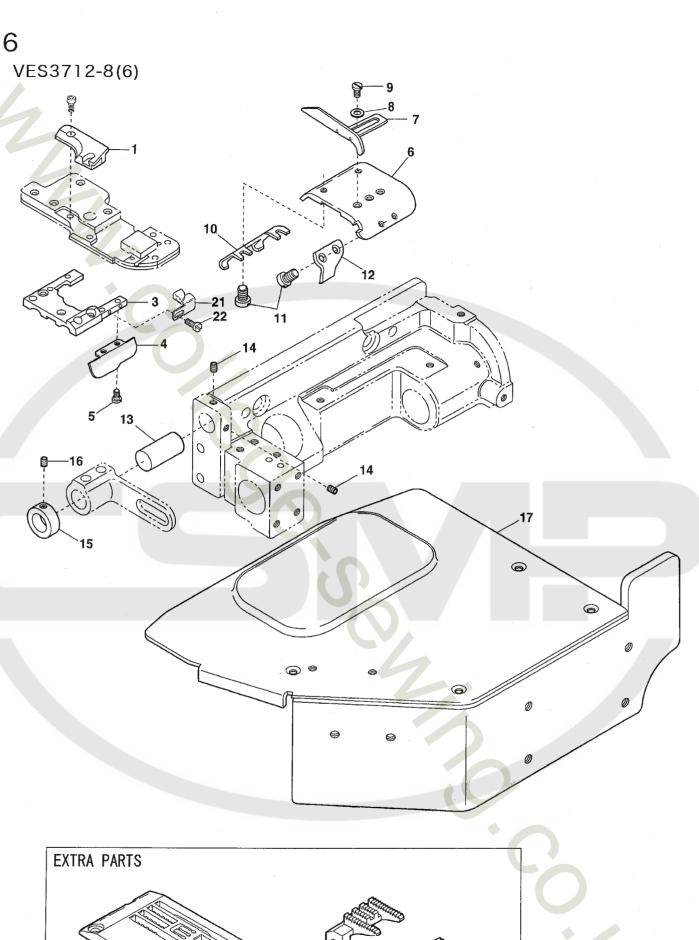
Ref.No	Parts No.	Description	品名	Amt. Req
1101.110				7111111 1109
1	3150468	Suction Pipe(Upper) Unit	吸込管(上)(組)	<u> </u>
2	3150460	Suction Pipe Holder	吸込管取付台	1
3	120009	Screw(M4-0.7 × 12)	止ネジ	2
4	1095002	Speed Controller	スピードコントローラ	1
5	160001	Screw(M4-0.7 × 4)	止ネジ	2
6	3501552	Suction Pipe(Rear) Unit	吸込管(後)(組)	1
7	3150473	Suction Pipe Holder	吸込管支工	1
8	004127	Screw(M4-0.7 × 6)	止ネジ	2
9	1253061	Hose Clamp	ホースクランプ	1
10	0012480	Dust Hose(1500mm)	集塵ホース	1 .
11	0013648	Hose Band	ホースバンド	1
12	006921	Wood Screw(ϕ 4.8 × 25)	木ネジ	2
13	1096030	Air Tube(6 × 4mm)(Black)	エアチューブ(黒)	-

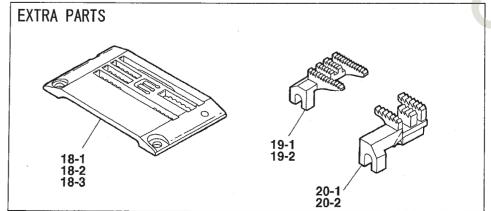
VES3712-8(5)





Ref.No	Parts No.	Description	品名	Amt. Req
1-1	3517002	Presser Foot, C. Set(48)	押工(組)	1
1-2	3517003	Presser Foot, C. Set(56)	押工(組)	1
2	110004	Screw(M3.5-0.6 × 8)	止ネジ	1
3	3107303	Presser Foot Spring(Left)	小押エバネ(左)	1
. 4	130016	Screw(M2.5-0.45 × 6)	止ネジ	2
5	3247022	Presser Foot Hinge Pin(56)	押エヒンジピン	1
6	110084	Screw(M3.5-0.5 × 4.2)	止ネジ	1
7	000327	Lock Nut	ロックナット	1
8	003302	Adjusting Screw(1/8-44 × 11)	調節ネジ	1
9-1	3517039	Fabric Presser (width 25.4mm)	布押工	1
9-2	3517037	Fabric Presser (width 15.9mm) (Extra)	布押工(特注部品)	1
9-3	3517038	Fabric Presser (width 19mm) (Extra)	布押工(特注部品)	1
10	170058	Screw(M2-0.4 × 2.5)	止ネジ	1
11	3517031	Fabric Presser Spring	布押エバネ	1
12	2150112	Spring Holder	バネ受ケ	1
13	3517032	Fabric Presser Shaft	布押工軸	1
14	300068	Washer	ワッシャ	1
15	160033	Screw(M2.5-0.45 × 3)	止ネジ	1
16	3528000	Stitch Plate	針板	1
17	009142	Screw(9/64-40 × 4.8)	止ネジ	1
18-1	3508154	Stitch Plate Tongue(48S8)	針板爪	1
18-2	3508155	Stitch Plate Tongue(56S8)	針板爪	1
19	004182	Screw(3/32-56 × 2)	止ネジ	1
20	3159081	Main Feed Dog	後送り	1
21	3159083	Differential Feed Dog	前送リ	1





Ref.No	Parts No.	Description	品 名	Amt. Req
	3150102	Cylinder Cover(Rear)	シリンダカバー(後)	<u>'</u>
2				
3	3150181	Stitch Plate Support		1
4	3150485	Cylinder Cover(Lower)	シリンダカバー(下)	1
5	001230	Screw(3/32-56 × 3.8)	止ネジ	2
6	3150095	Cylinder Upper Cover	シリンダ上カバー	1
7	3150165	Fabric Edge Guide(Right)	裾引キガイド(右)	1
8	000533	Washer	ワッシャ	2
9	007627	Screw(M4-0.7 × 6)	止ネジ	2
10	3150097	Cylinder Upper Cover Spring(Rear)	シリンダ上カバーバネ(後)	1
11	110091	Screw(M3-0.5 × 3)	止ネジ	4
12	3150096	Cylinder Upper Cover Spring(Front)	シリンダ上カバーバネ(前)	1
13	3150477	Shaft Lever Support	軸腕支工軸	1
14	160001	Screw(M4-0.7 × 4)	止ネジ	2
15	0032719	Collar(10 × 16 × 6mm)	カラー	1
16	001459	Screw(9/64-40 × 3)	止ネジ	1
17	3150480	Front Cover Unit	前開キカバー(組)	1
18-1	3158063	Stitch Plate(40M)	針板	1
18-2	3158064	Stitch Plate(48M)	針板	1
18-3	3158065	Stitch Plate(56M)	針板	1
19-1	3159038	Main Feed Dog(40, 48)	後送り	1
19-2	3159037	Main Feed Dog(56)	後送り	1
20-1	3159041	Differential Feed Dog(40, 48)	前送リ	1
20-2	3159040	Differential Feed Dog(56)	前送リ	1
0.1	2155010			
21	3155010	Fabric Edge Guide(Left)	裾引キガイド(左)	
22	110007	Screw(M2.5-0.45 × 6)	止ネジ	1

Lyamato ヤマトミシン製造株式会社 YAMATO SEWING MACHINE MFG. CO.,LTD.