

ZJ3800 Series

使用说明 零件手册 PARTS BOOK

捷缝纫机股份有眼公司

IMPORTANT SAFETY INSTRUCTIONS

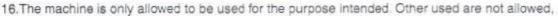
To get the most out of the many functions of this machine and operate it in safety, it is necessary to use this machine correctly.

Please read this Instruction Manual carefully before use. Whe hope you will enjoy the use of your machine for a long time.

Please remember to keep this manual in a safe place.

- Observe the basic safety measures, including, but not limited to the following ones, whenever
 you use the machine.
- 2.Read all the instructions, including, but not limited to this Instruction Manual before before you use the machine, In addition, keep this Instruction Manual so that you may read it at anytime when necessary.
- 3.Use the machine after it has been ascertained that it conforms with safety rules/standards valid in your country.
- 4.All safety devices must be in position when the machine is redady for work or in operation. The operation without the specified safety devices is not allowed.
- This machine shall be operated by appropriately-trained operators.
- For your personal protection, we recommend that you wear safety glasses.
- 7. For the following, turn off the power switch of disconnect the power plug of the machine from the receptacle.
 - 7-1 For threading needle (s).
 - 7-2 For replacing part (s) of needle, presser foot, throat plate, feed dog, cloth guide etc,
 - 7-3 For repair work.
 - 7-4 When leaving the working place of when the working place is unattended.
- 8.If you should allow oil, grease, etc. used with the machine and devices to come in contact with your eyes or skin or swallow any of such liquid by mistake, immediately wash the contacted areas and consult a medical doctor.
- Tampering with the live parts and devices, regardless of whether the machine is powered, isprohibited.
- Repair, remodeling and adjustment wokrs must only be done by appropriately trained technicians or specially skilled personnel.
- 11. General maintenance and inspection works have to be done by appropriately trained personnel.
- 12.Repair and maintenance works of electrical components shall be conducted by qualified electric technicians or under the audit and guidance of specially skilled personnel.
 - Whenever you find a failure of any of electrical components, immediately stop the machine.
- 13. Periodically clean the machine throughout the period of use.

- 14. Grounding the machine is always necessary for the normal operation of the machine. The machine has to be operated in an envivronment that is free from strong noise sources such as high-frequency welder.
- 15.An appropriate power plug has to be attached to the machine by electric technicians, Power plug has to be connected to a grounded receptacle.



- 17.Remodel or modify the machine in accordance with the safety rules/standards while taking all the effective safety measures. We assumes no responsibility for damage caused by remodeling or modification of the machine.
- 18. Warning hints are marked with the two shown symbols.



Danger of injury to operator or service staft



Items requiring special attention





FOR SAFE OPERATION



1.To avoid electrical shock hazards, neither open the cover of the electrical box for the motor nor touch the components mounted inside the electrical box.



- 1.To avoid personal injury, never operate the machine with any of the belt cover, finger guard of safety daevices removed.
- 2.To prevent possible personal injuries caused by being caught in the machine, keep your fingers, head and clothes away from the handwheel, V belt and the motor while the machine is operation. In addition, place nothing around them.
- 3.To avoid personal injury, never put your hand under the needle when you turn "ON" the power switch or operate the machine.
- 4.To avoid personal injury, never put your fingers into the thread take-up cover while the machine is in operation.
- 5. The looper rotates at a high speed while the machine is in operation, To prevent possible injury to hands, be sure to keep your hands away from the vicinity of the looper during operation. In addition, be sure to turn OFF the power to the machine when replacing the looper.
- 6.To avoid possible personal injuries, be careful not to allow your fingers in the machine when tilling/raising the machine head.
- 7.To avoid possible accidents because of abrupt start of the machine, turn OFF the power to the machine when tilting the machine head or removing the belt cover and the V belt.
- 8.If your machine is equipped with a servo-motor, the motor does not produce noise while the machine is at rest. To avoid possible accidents due to abrupt start of the machine, be sure to turn OFF the power to the machine.
- 9.To avoid electrical shock hazards, never operate the sewing machine with the ground wire for the power supply removed.
- 10.To prevent possible accidents because of electric shock or damaged electrical component(s), turn OFF the power switch in prior to the connectrion/disconnection of the power plug.

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4) After the

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6) Do not guard.

REFORE OPERATION

CAUTION:

To avoid malfunction and damage of the machine, confirm the following:

· Before you put the machine into operation for the first time after the set-up, clean it thoroughly.

Remove all dust gathering during transportation and oil it well.

· Confirm that the voltage has been correctly set.

Confirm that the power plug has been properly connected to the power supply.

- Never use the machine in the state where the voltage type is different from the designated one.
- · Confirm that the direction of rotation of the motor pulley is correct.
- Operate your machine at the normal sewing speed or less for the first month after the set-up.

1. Pre-start check

- 1) The machine shall not be started running until the completion of oiling.
- 2) The rotating direction of the balance wheel, when the machine is started running, shall be in counter-clockwise one. (View from the right side of the balance wheel.) A warning shall be given in advance against making the machine run while balance wheel turning clockwise.
 - 3) The machine shall be under operation at less than 4,500 S.P.M. for the first month.
- 4) Check power source, voltage, and phase number to see whether they are in accordance with the ratings on the name plate of the motor to be used.

2. Operating instructions

- 1) Do not put your hands under the lower part of the needle when the machine is running.
- 2) Do not put your fingers into the thread take-up lever cover when the machine is running.
- 3) Only when the machine stops can you turn the balance wheel by hand.
- 4) After the motor switch being turned off, due to inertia, the motor will continue to rotate for a while. Be careful not to have the machine tilted unless is stops.
- 5) Keep away from the balance wheel, V-belt, winder and the motor.
- 6) Do not start running the machine during mounting or replacing the belt cover. finger guard, etc.

3. specification

Stitch type Two-needle double-row chain stitch

 Speed
 Max. 4,500 s.p.m.

 Needle
 TV×7 *9~*21

 Stitch length
 1.4~4mm

Stitch length 1.4~4mm Stroke of needle bar 30mm

Gauges of double-row 1/8" 5/32" 3/16" 7/32" 1/4" 5/16" 3/8" 1/2"

Chain stitch

Thread take-up type Needle bar thread take up type

Looper Separately adjustable type, for the range of 1/8" to 1/2"

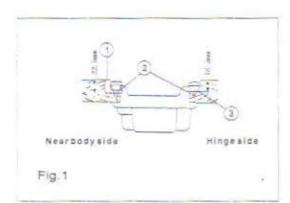
Needle guard Oscillating type and rigid type

Light clearance of knee lifter 8-10mm

Oil supply Impeller-type pump

Lubricating oil "2 while oil

4. installation of the machine(Fig.1)



1. To install the oil reservoir:

Put the oil reservoir rubber cushion

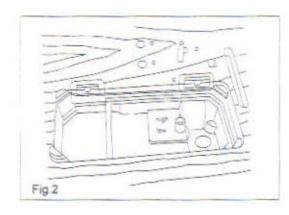
and oil reservoir felt cushion

on four corners of the opening of the table,
fix them with the wood screws

then install the oil reservoir (Fig1)

 Put the machine connecting hooks into the holes to engage respectively two hinges seated in the table, then place the machine on the four cushions.

5. Oiling



- Oiling shall be made in oil reservoir and the oil surface also be made to level the mark "High" before the machine is started running (Fig. 2)
- Oiling shall be kept on until the oil surface has been brought above the mark "Low" (Fig3)

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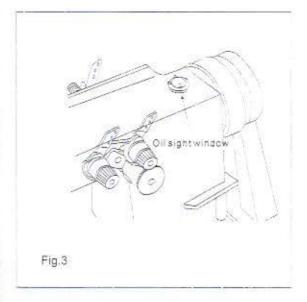
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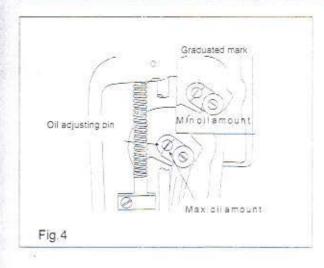
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- The normal condition of lubrication is that
 the oil shall spray onto the oil sight. The
 amount of oil spraying onto the oil sight is
 not at all proportional to the total amount
 of oil in the oil reservoir. There is nothing
 to worry about.
- Only when the drain cover screw is loosened and taken off can old oil be drained out and new oil is supplied again.
- When a new model or those standing idle for long time is to be operated, presser foot shall be lifted and run idle for about ten minutes.

6. How to regulate oil amount by means of manipulating elements on the face plate (Fig 4)



To turn oil-amount adjusting pin to regulate oil amount of the thread take-up crank, min. oil amount will be supplied when the mark of adjusting pin moves to the thread take-up crank as near as you desire. Otherwise, max. oil amount will be supplied.

7. The threading of needle thread.

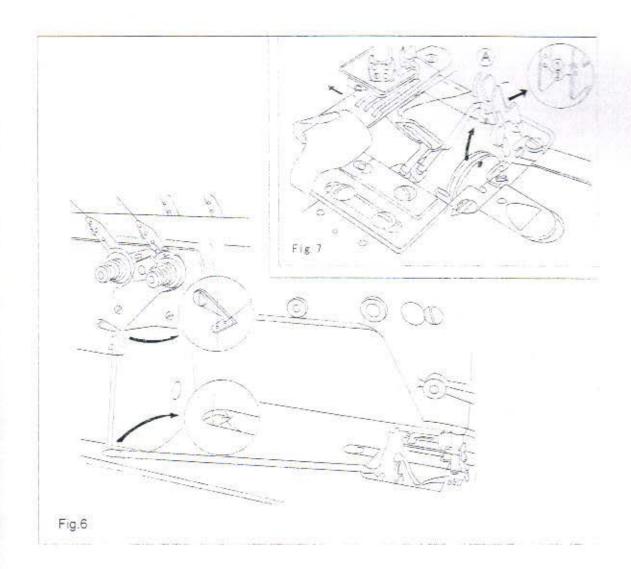
To thread the eyes of the needles in the order as shown in Fig.5:

- 1) To make thread go through the eye of the needle outwards. (View from the operator's side)
- To pull out 100mm of the remaining thread after needle thread going through the eyes of the needles.

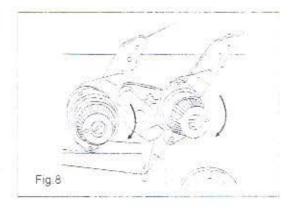
8. The threading of bobbin thread (Fig 6 and 7)

To make bobbin thread going through the eye of the needle in the order as shown in (Fig6 and 7)

- Make the bobbin thread go through the tension guide plate; go through the two holes when thread of harder twist fibre is used and feed gauge is wider than Usual.
- 2) Pull the spring toward the operator, as shown in Fig.7 and part A will rise upwards.
- 3) When threading the looper, the thread shall be made go through the eye of the needle with a tweezer as shown in Fig.7 and 50mm of remaining thread be pulled out.



9. Thread tension asm. (Figs 8,9 and 10)



To adjust needle thread tension is accordance what sewing working conditions we can adjust needle thread tension by tension spring. Turn the tension nut clockwise to increase the tension: turn counter-clockwise to decrease the tension.

To adjust bobbin thread tension;

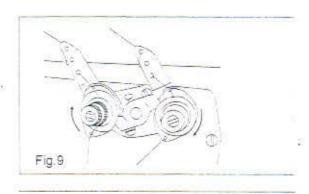
Turn tension screw clockwise to increase the tension; turn tension screw counterclockwise to

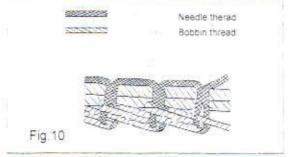
Fig.1

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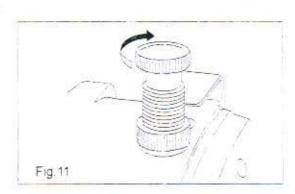




Tension: turn tension screw counterclockwise to decrease the tension.

The relation between the needle thread and the bobbin thread as shown in (Fig.10) depicts the forming of chain stitch.

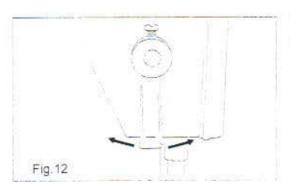
10. Presser foot (Fig.11 and 12)



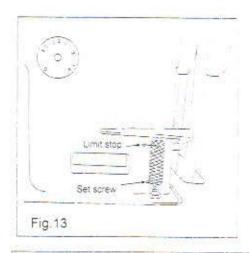
Adjustment of pressure on presser foot (Fig.11)

Turn pressure regulating thumb screw clockwise to increase the pressure; turn pressure-regulating thumb screw counter-clockwise to decrease the pressure. For general fabric the standard height of pressure regulating thumb screw is about 27-30mm (5kg)

The presser bar lifter shall be turned either leftward or rightward in order to keep the presser foot under the condition of lifting position.

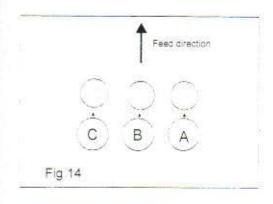


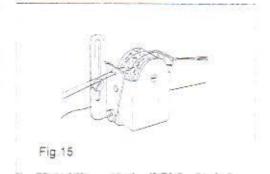
11. To adjust stitch length (Fig.13)



- 1. Turn feed regulating dial to the figure desired. The value of graduation is shown in millmetre(mm)
- If you intend to change the stitch length, press down the reverse feed lever while turning the feed regulating dial.
- Max., stitch length is 4mm; Min.stitch length is 1.4mm.
- 4. When reverse feed lever is pressed down, tight-needle stitch of 1.4mm will be formed: this version of stitch is suitable for beginning and end seaming or partaking.
- 5. The machine can not make reverse stitching.

12. Setting-up of the needle (Fig14 and 15)





When thread of chemical fibre is used, the direction of the needle eye shall not be in that one, as shown in part C of Fig.14. Needle types to be desired fall within the range of *9 to *21 of TV×7; Oil tank shall be custom-made when thread of chemical fibre is used; silicone oil can be placed like that, as indicated in Fig.15.

13. Adjustment of the height of the presser bar: (Fig 16)



For the requirements of either replacing the presser foot or changing the height and angle of presser foot, the following shall be observed.

- Take off the rubber plug in the hole from the face plate as shown in Fig. 16.
- 2. Loosen the presser bar guide bracket set screw.
- 3. After adjusting, retighten the screw,

14 Adjustment of the height of the feed dog (Figs17 and 18)

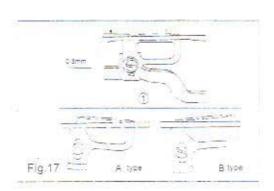


Fig. 18

Loosen the set screw ②, as shown in Fig.18, the angle of the feed dog can be adjusted to the specified one of standard version, A version, and B version. The Max.height of 0.8mm of the projection from dog is adjustable by the adjusting of screw ① as shown in Fig.17.

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Fig. 19

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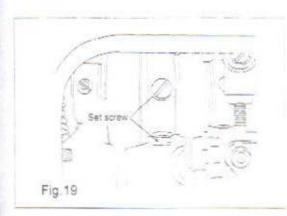


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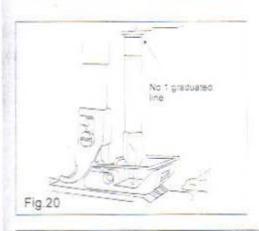
Fig.21

15. The timing of feed dog and needle: (Fig.19)



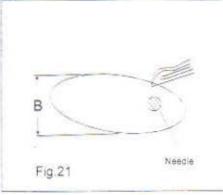
When the point of needle lowering down to the location of 3mm from the upper surface of the throat plate, the feed dog is right at the position below the upper surface of the throat plate, viz. The running of feed dog being well regulated in relation to the motion of needle.

16. Adjustment of the height of needle bar: (Fig 20)



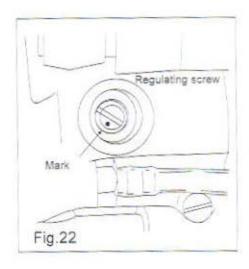
When the needle of TV×7 is used, if the graduation on the needle bar is at the bottom dead centre, the mark of graduation shall be in line with the lower end of the needle bar bushing, lower, as indicated in Fig20.

17. Adjustment of the needle and looper (Fig21 and 22)



Adjustment of forward & backward motion of the looper: The dimension of part B of the looper in an elliptic motion can be measured, (refer to Fig21). The max.dimension of part B is usually 3.7mm, suitable for sewing operation of needles of all kinds of sizes.

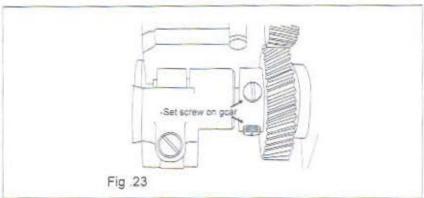
The adjusting procedure is as follows:



- Take off the rubber plug on the crank case of the looper (refer to Fig22)
- 2) Turn the balance wheel by hand.
- First loosen set screw and positioning screw, and then adjust marked screw.
- Turn clockwise the adjustable screw on which punch mark is printed, and the dimension of part B will be increased in value.
- 5) Tighten set screw and positioning screw.

18. The timing of looper in reference to needle (Fig. 23)

The looper shall be moved backward to the lowest position while the needle is at the bottom dead centre; loosen the screw on the gear and make timing adjustment of the looper in relation to the needle (refer to Fig23.)



19. Thread-guiding amount of the looper(refer to Fig. 24)

- The standard value of the vertical distance of the point of the looper away from the upper end of the eye of the needle is 2mm, then the graduation mark on the lower part of the needle bar shall be in line with the lower end of the needle bar bushing, lower.(refer to Fig.24)
- The value of the stroke moved backward by the looper is about 3.5mm.
- The relation between the eye of the needle and the eye of the looper is indicated in Fig.24.
 (Note that the left looper and the right one can be separately adjusted.)

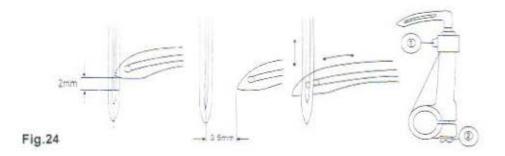
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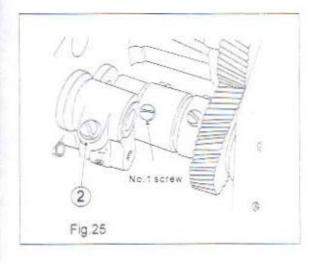
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20. The clearance of looper and needle

After adjusting the needle guard, the clearance of a given value between the needle and the looper shall be kept unchanged; the needle shall not touch at the point of the looper when it is pressed down softly. If the clearance is narrower that usual, the side of the needle and the point of the looper are apt to incur breakage due to the impact of the needle side against the looper point.

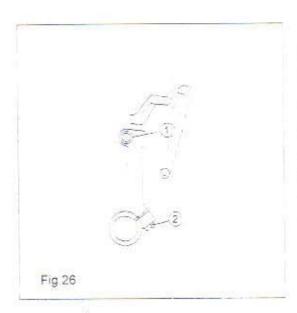
21. The timing of needle guard(Fig25)



The timing of the needle guard depends on the condition of the plane on the rock shaft of the looper when no.1 screw has been screwed into this rock shaft.

22. Position of needle guard (Fig 26)

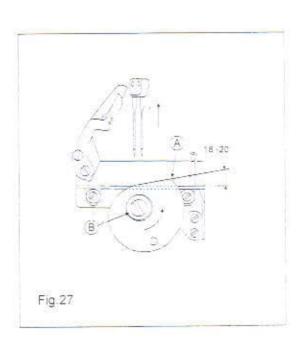
Oscillating the needle guard to make the needle tip contact with needle gauge slightly.



It is recommended that the height adjustment shall not fall within the area of the left counter needle guard. The adjustment can be made by loosening screw ① and ②. The relation between left counter needle guard and the counter needle guard is as represented in Fig 26; the clearance from the needle falls within the range of 0.1 to 0.2 mm.

Note that the forced clamp of the needle shall be prohibited when the machine is in motion.

23. Looper thread take-up cam(Fig27)



Its position can be seen as shown in Fig.27 when the needle bar is at the top dead centre, the planes of the cam and the steel wire are in parallelism; the projecting part of the cam can slightly rise at the angle of 18 to 20 degrees. first loosen screw B, and then make adjustment, finally tighten the screw firmly. Pay close attention to the following; the needle tip shall entirely come into the thread loop of the looper when the bobbin thread rejecting from the projecting part of the cam.

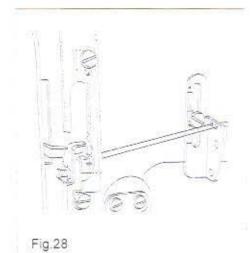
24. The position of the thread-amount adjusting plate of the thread take-up lever: (Fig 28)

Fig.28

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The thread-amount adjusting plate will retain the bobbin at thread when the needle bar is the bottom dead centre; in such a way the loop of the needle thread is to become bigger when the needle thread is hooked. In addition to the foregoing there is a function of the tight pulling of the needle thread loop. The thread-amount adjusting plate usually reduces to the lowest point when a thread finer than normal is used.

Note that take-up thread tension lever is another name for thread-amount adjusting plate.

25 . Frame thread eyelet: (Fig 29)

The improper-positioning of the frame thread eyelet may be the cause of occurrence of skipping stitch.

The following locations are generally regarded as criteria (refer to Fig29)

Cotton thread *80~*50

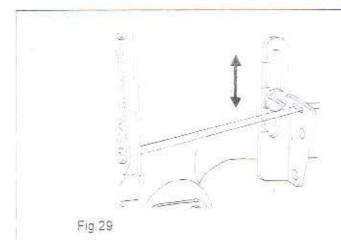
Graduation marked on the frame thread eyelet 2-3

Cotton thread "80~"50

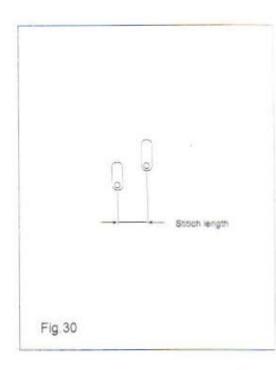
Graduation marked on the frame thread eyelet 3-4

Thread of chemical fibre "80~"50 Graduation marked on the frame thread eyelet 1-2

Thread of chemical fibre "80~"50 Graduation marked on the frame thread eyelet 2-3



26. Replacement of throat plate: (Fig.30)



The standard size of the throat plate in parts book, which is stipulated by the manufactory, is 1/4", equivalent to 6.4mm.(Fig.30)

The replacement of the following components is usually needed at the time when changing the gauge of double-row thread stitch.

1.Needle clamp 2. Hinged foot 3.Throat plate 4.Feed dog 5.Rear moving needle guard 6.Curler

The left and right loopers within the range of the sizes of 1/8" to 1/2" are interchangeable.

In addition to the aforesaid, the replacement of slide plate and cam cover shall be made when the width of thread plate is on the increase.

27. Maintenance of the machine

The following shall be adhered in order to keep the machine in good working condition.

- (1) Daily checking
- I . The oil shall spray onto the oil sight when the machine is running.
- II. Repairman shall be sent for when abnormal sound is heard during the operation of the machine.
 - (2) Locations to be checked once a week:
- I .To take off throat plate, slide plate, and cam cover; to clean dust of the slotted feed dog with a brush.
- II. To turn over the head to rid both the oil filter screen on the oil pump and the interior of the oil reservoir of oil stain and dust.
- III.Loosen drain hole screw and take it off; drain all the dirty oil from the oil reservoir and reoil it.
- IV.Oil level must be above the lowest oil-level-indicating line marked "Low"
- V.The black powder, adhering to the magnet in the oil reservoir shall be wiped with sponge cloth.

Six.	Breakdown
	Thread breakage
	Skipping stitch

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No.	Breakdown	Cause	Measures to be taken
1	Thread breakage	1 Poor thread quality 2 Thread being too thick 3 Fusing thread due to high temperature of needle caused by machine s operation at high speed 4 Tension being too higher 5 Breakage of needle, looper, throat plate, and needle guard at the location of thread guide 6 Failure to adjust thread amount	Quality thread to be used. Replacement to be made by an appropriate thread Silicone oil to be used and speed to be reduced The tension nut to be loosened First grinding with oil stone and then polishing Adjusting the thread amount adjusting plate
2		1.Skipping stitch of needle thread (leaking of two stitches due to the loopers failure to hook the needle thread)	 Adjusting thread-hooking amount of looper. Adjusting clearance between looper and needle. The timing of needle in reference to looper. Adjusting the thread-amount adjusting plate on thread amount changing conditions. Adjusting the frame thread eyelet. Checking whether the mounting position of the needle is proper or not. To see if the location of needle guard is in ar appropriate way and the timing of it is well regulated in relation to another. To see if the needle thread threading is in a proper way.
		2.skipping stitch of bobbin thread (leaking of one stitch, needle failure to enter the looper eyelet)	1) Reference to the above cases 1 and 2, as to skipping stitch of the needle of the needle thread. 2) To see if the timing of bobbin thread cam has been well regulated. 3) Increasing tension of bobbin thread a bit higher. 4) To see if the threading of bobbin thread is in a correct way.
		3.Skipping stitch when thread of chemical fribre being in use	Using sillicone oil Reducing speed Using needle for thread of chemical fibre.

		4. Skipping stitch when thread of polyester fibre being in use	1 Reducing speed 2 Silicone oil to be used
3	Twisted stitches	Needle thread tension being too low. Bobbin thread tension being too low Sewing thread being too thick Improper position of the frame thread eyelet. Improper position of thread take-up tension plate Throat plate	Tightening tension nut of needle thread. Tightening tension nut of bobbin thread. Needle of large size to be used. Readjusting it to a proper position. Readjusting its position in an appropriate way. The eyelet of throat plate to be used being bigg than normal one.
4	Breakage of needle	1) Needle being bent. 2) The operation of feed dog being not well regulated in reference to the motion of needle. 3) Setting-up of the presser foot 4) The problem of the timing of needle guard remaining unsolved 5) Needle thread tension being too high. 6) Needle being too thick.	Readjusting the timing to feed dog in respect to t needle.
5	Puckering	 Thread tension being too high. 	Decreasing thread tension, esp. tension of bobb thread. Readjusting of the very cam said to solve the timit problem. Surface finishing all the parts on the thread guide. Turning counter-clockwise the pressure-regulating screw.

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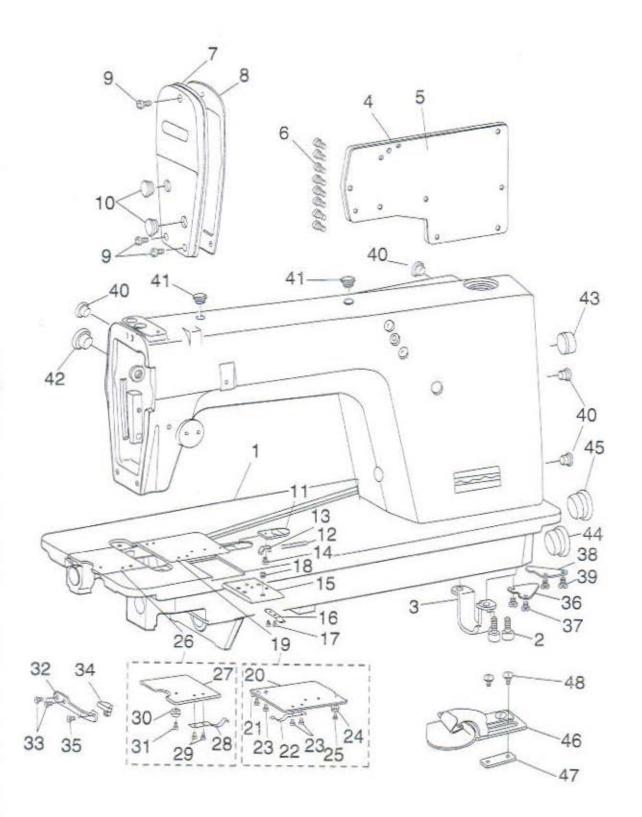
1. Arm bed components

Ref. No.	Part No	Description	Arm. Req.
	GQ202/13	Arm bed complete	1
1 2 3 4 5 6 7 8	GS0127	Bed screw stud	2 1
2	GR1823	Bed support	1
3	GK186	Side plate	1
4	GR1812	Gasket	1
5	GS100	Side plate screw	8
6	GR1757/2		1
7		Face plate asm.	î
8	GR1758	Face plate gasket	3
9	GS100	Screw	2
10	GR1458	Rubber plug	8 1 1 3 2 1
11	GR1813	Cam cover latch	1
12	GW287	Spring	1
13	GR1814	Spring suspension	1
14	GS069	Screw	1
15	GM241	Attachment installing plate	1
16	GW288	Spring	1 1 1 2
17	GS0128	Screw	2
18	GS012	Screw	
19	GM242/9	Cam cover asm	(1)
20	GM243	Cam cover	1
21	GW289	Cam cover	1
22	GW290	Spring	1
23	GS045	Screw	4
24	GR1815	Cam cover guide	1 1 1 4 1
25	GS0129	Screw	
26	GM244/6	Bed slide asm.	(1)
27	GM245	Bed slide	1
28	GW291	Spring	
29	GS045	Screw	2
30	GR1816	Bed slide guide	1
31	GS0129	Screw	1
32	GW292	Bed slide lock spring	1
33	GS010	Screw	2 1 1 1 2 1
34	GR1817	Latch	
35	GS44	Screw	1
36	GR1818	Bed oil shield	1
37	GS010	Screw	2
38	GR1819	Bed oil shield	1
39	GS010	Screw	2
40	GR1461	Rubber plug	1 2 1 2 4 2
41	GR1462	Rubber plug	2
42	GR1463	Rubber plug	
43	GR1464	Rubber plug	1
44	GR1465	Rubber plug	1
45	GR1466	Rubber plug	1
46	GR1916/5	Folder	1
47	GR1923	Gasket	1 2
48	GS0148	Screw	2







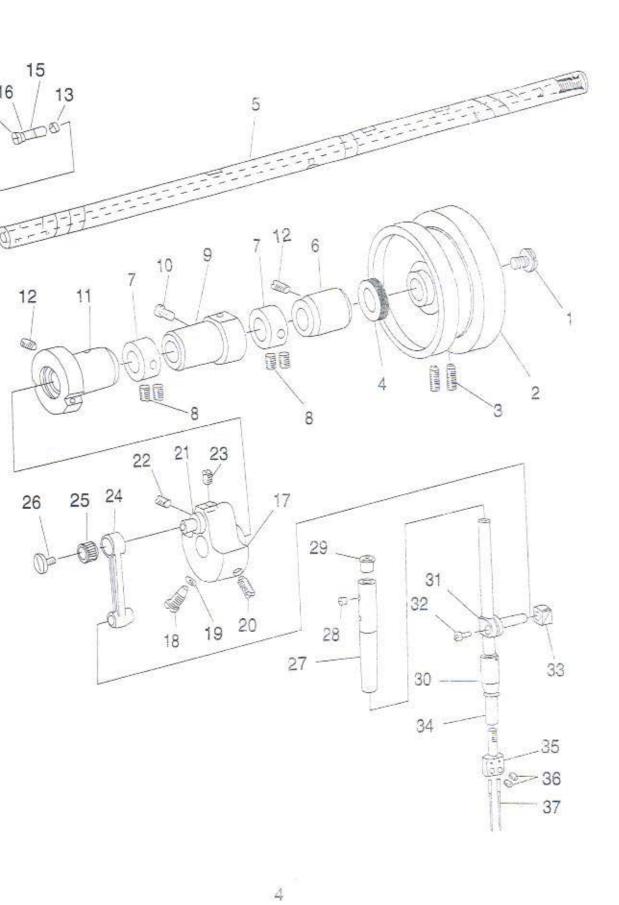


2. Main shaft & needle bar components

Ref.No.	Part No	Description	Arm.Req.
1	GS02	End screw	1
2	GP132	Hand wheel	1
3	GS03	Screw	2
	GR1468/2	Oil seal	1
4 5	GZ303	Main shaft	1
6	GO262/2	Main shaft bushing, rear	
7	GR1824	Main shaft thrust collar	1 2
8	GS33	Screw	4
9	GO265	Main shaft bushing intermediate	1
10	GS05	Screw	1
11	GO303/2	Main shaft bushing, front	1
12	GS04	Screw	2
13	GR1470	Roller felt	1
14	GX334	Crank oil adjusting pin	1
15	GO269	Rubber bushing	1
16	GR1471	O-Rubber ring	1
17	GH378	Counterweight asm.	1
18	GS06	Screw	1
19	GR1472	O-Rubber ring	1
20	GS07	Screw	1
21	GH379	Needle crank	1
22	GS48	Screw	1
23	GS041	Screw	1
24	GH334	Needle bar crank rod	1
25	GO270	Needle roller bearing	1
26	GS09	Left twist screw	1
27	GO271	Needle bar bushing upper	1
28	GS012	Screw	1
29	GR1479	Rubber plug	1
30	GO288	Needle bar bushing, lower	1
31	GR1478	Needle bar connection asm.	1
32	GS011	Screw	1
33	GU168	Crank slide block	1
34	GZ304	Needle bar	1
35	GR1826	Needle clamp(1/4")	1
36	GS0130	Screw	2
37	GV18	Needle	2

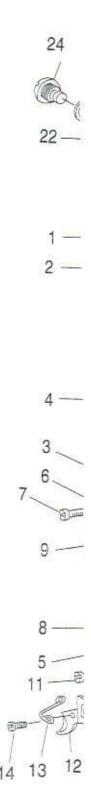


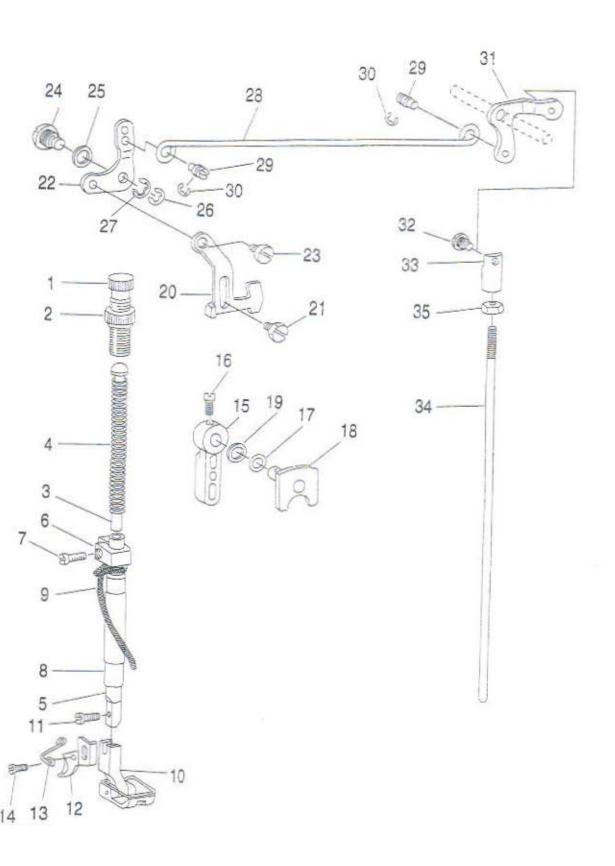




3. Presser bar components

Ref.No.	Part No.	Description A	mt.Req.
1	GS018	Presser spring regulator	1
	GL18	Nut	1
2	GR1494	Presser bar guide bar	1
4	GW253	Presser spring	1
5	GZ305	Presser bar	1
6	GR1827	Presser bar guide bracket asm.	1
7	GS019	Screw	1
8	GO273	Presser bar bushing, lower	1
9	GR1525	Oil wick	1
10	GM246/5	Presser foot asm.	1
11	GS020	Screw	1
12	GR1832	Thread knife	1
13	GR1833	Thread knife guide	1
14	GS0129	Screw	1
15	GR1499	Hand lifter	1
16	GS021	Screw	1
17	GR1500	Washer	1
18	GR1501/2	Hand lifter cam asm.	1
19	GR1503	Rubber ring	1
20	GR1504	Lifting lever	1
21	GS022	Hinge screw	1
22	GR1505	Lifting link for lifting lever	1
23	GS023	Hinge screw	1
24	GS024	Hinge pin	1
25	GR1506	Lifting lever gasket	1
26	GR1508	Snap ring	1
27	GR1507	Snap ring	1
28	GR1834	Lifting lever connecting rod	1
29	GS025	Screw	2
30	GR1510	Snap ring	2
31	GR1835	Lifting lever link rear	1
32	GS0131	Hinge screw	1
33	GR1836	Swivel	1
34	GX378	Lifting lever connecting rod, vertice	al 1
35	GL19	Nut	1

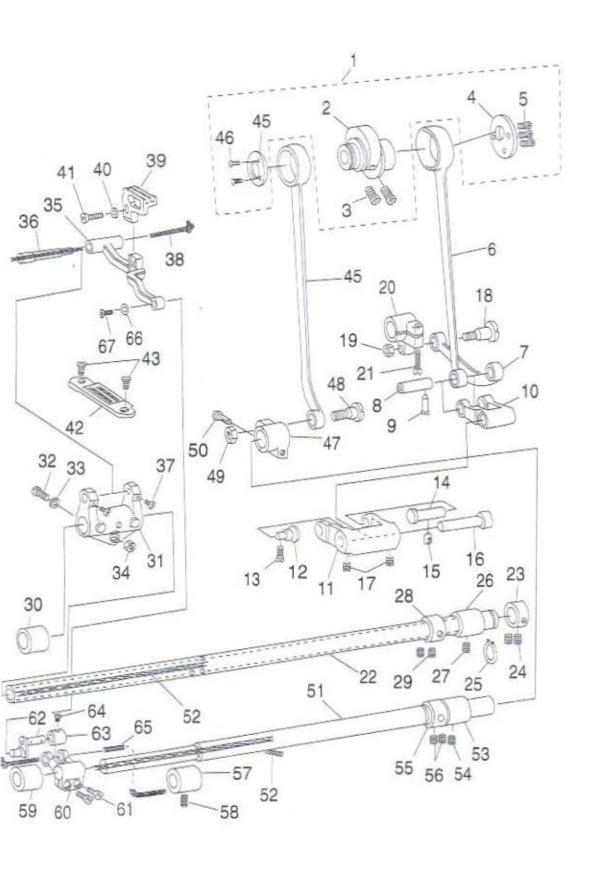




4. Feed mechanism components

Ref No.	Part No.	Description	Amt.Req.
	GT160/10	Feed eccentric cam asm.	1
1434567899011234	GT161 GS034 GR1521	Feed eccentric cam Screw	1 1 2 1 3
4	GR1521	Feed eccentric thrust washer	1
6	GR1521 GS035 GH380 GX340 GS036 GR1522 GR1523 GX341 GS037 GX342 GS05 GZ279 GS038 GS039 GL7	Screw Feed rocker shaft connecting rod	1
7	GH380	Connecting rod Connecting pin	1
9	G\$036	Screw	1
10	GR 1522 GR 1523	Feed driving rocker asm. Reed driving rocker	1
12	GX341	Hinge stud	į
13	GS037 GX342	Screw Hinge pin	i
iş	GS05	Screw	1
10	GS038	Hinge pin Screw	2
18	GS039 GL7	Hinge screw	1
20		Feed rocker shaft crank	į
21	GH337 GS040 GZ280	Screw Feed rocket shaft	1
23	GR1890	Thrust collar	į
24 25	GR1890 GS032 GR1524	Screw Retaining ring	1
26	GO285 GS41	Bushing rear	1
27	GR1469	Screw Thrust collar	1
29	G\$41 GR1469 GS39 GO286 GR1838 GS040 GR1528	Screw Feed rocker shaft bushing, front	1 2 1 1 1 1 2 1 1 2 1 2 1 2 1 2 1 2 1 2
31	GR1838	Feed rocker	Î
32 33	GS040 GR1528	Screw Washer	1
34	GL20	Nut	1
35 36	GK1839 GX396	Feed bar Feed bar shaft	1
37	GS0100	Screw	2
39	GR1526 GL26 GR1839 GX396 GS0100 GR1837 GM247	Oil wick Reed dog (1/4)	į
40	URIDZO	Washer Screw	1
42	GS019 GM248	Throat plate (1/4)	į
15 167 189 221 223 245 227 228 230 331 233 345 367 389 367 444 445	GS044 GH381 GR1840 GS0115	Screw Feed driving shaft connecting rod	ī
45	GR1840	Feed driving shaft connecting rod Feed driving eccentric thrust washe Screw	er l
46 47	GH397	Feed driving shaft crank rear	Ĩ
48 49	GH397 GS039 GL7 GS040	Hinge screw Nut	i
50	G\$040	Screw	1
52	GZ306 GR1837	Feed driving shaft Oil wick	2
53	GO285 GS48	Bushing, rear Screw	1
55	GR1469	Thrust collar	į
56 57	G\$39 GO300	Screw Bushing, intermediate	1
50 512 534 554 556 557 559	GS04	Screw	1
60	GO306 GH382	Feed rocker shaft bushing, front Feed rocker shaft crank	į
61 62	GS0132 GH383	Screw Feed bar link	
63	GR1841	Thrust collar	į
64 65	GS013 GR1837	Screw Oil wick	i
65 66	GR1842 GS0133	Counter-sunk washer	1
67	030133	Screw	1.5



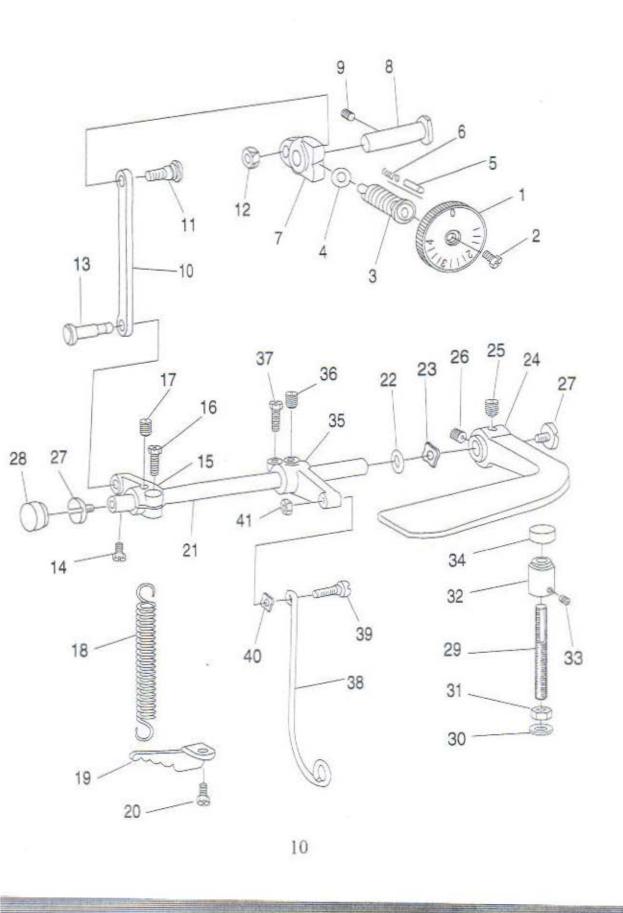


5. Feed regulating components

Ref.No	. Part No.	Description	Amt.Req.
1	GR1536/3	Stitch dial asm.	1
2	GS046	Screw	1
3	GS047	Feed regulating screw	1
4	GR1538	O-Rubber ring	1
5	GX345	Stitch dial lock pin	1
6	GW257	Stitch dial lock spring	1
7	GR1843	Feed regulator	1
8	GX346	Hinge pin	1
9	GS48	Screw	1
10	GH341	Feed regulator connecting rod	1
11	GS048	Hinge screw	1
12	GL20	Nut	1
13	GR1540	Tension spring suspension stud	1
14	GS100	Screw	1
15	GH342	Tension spring suspension crank	
16	GS049	Clamp screw	1
17	GS48	Screw	1
18	GW258	Tension spring	1
19	GR1547	Suspension bracket	1
20	GS01	Screw	1
21	GZ282	Reverse feed control lever shaft	1
22	GR1542	Rubber ring, large	i
23	GR1543	Waved washer	1
24	GR1544	Reverse feed control lever	1
25	GS050	Screw	
26	GS033	Screw	1 1
27	GS051	End screw	2
28	GR1545	Rubber plug	2
29	GS0134	Sorew	i
30	GR1599	Washer	i
31	GL21	Nut	1
32	GR1844	Lever stopper	î
	GS0135	Screw	1
	GR1845	Rubber cushion	1
	GH344	Control lever crank, rear	1
36	GS48	Screw	1
	GS049	Screw	î
	GH345	Feed driving rocker arm connecting	g 1
	GS052	Screw	1
40	GR1546	Washer	1
41	GL20	Nut	1

28 27

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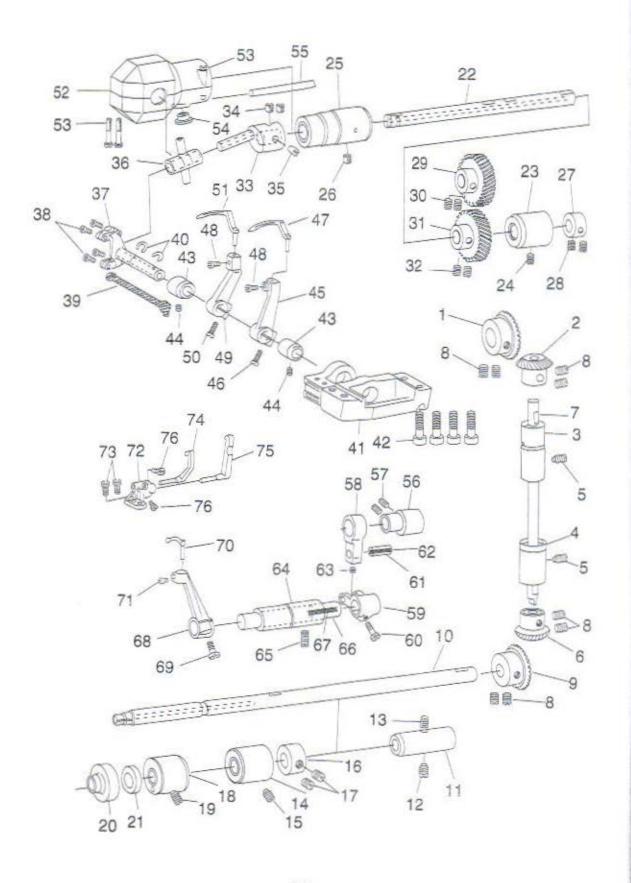
6. Looper thread retainer components

Ref. N

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Ref. No.	Part No.	Description	Amt.Req.
1	GC168	Gear asm.	1
2	GC167	Pinion asm.	1
3	GO283	Bushing, upper	1
4	GO280/2	Bushing, lower	1
5	GS04	Screw	2
6	GC167	Gear asm.	1
7	GZ307	Upright, shaft	1
8	GS033	Bushing, front asm, screw	8
9	GC169	Gear asm	1
10	GZ308	Lower shaft asm.	1
11	GO307	Bushing, rear	1
12	GS04	Screw	1
13	GR1847	Felt	1
14	GO308/2	Bushing, intermediate	1
15	GS04	Screw	1
16	GR1848	Thrust collar asm	1
17	GS033	Screw	2
18	GO311/2	Bushing, front	1
19	GS04	Screw	1
20	GR1849	Looper thread guard bushing	1
21	GR1850	Oil seal	1
22	GZ309	Looper rocker shaft	1
23	GO308/2	Bushing, intermediate	1
24	GS04	Screw	1
25	GO314/2	Bushing, front	1
26	GS48	Screw	1
27	GR1848	Thrust collar asm	1
28	GS033	Screw	2
29	GC170	Gear asm. upper	1
30	GS033	Screw	2
31	GC171	Gear asm. lower	1
32	GS033	Screw	2
33	GH384	Looper crank asm.	1
34	GS033	Screw	2
35	GS0136	Looper crank adjusting screw	1
36	GR1851/5	Trunnion asm.	1
37	GZ310/3	Looper rocker shaft asm	1
38	GS0100	Screw	4

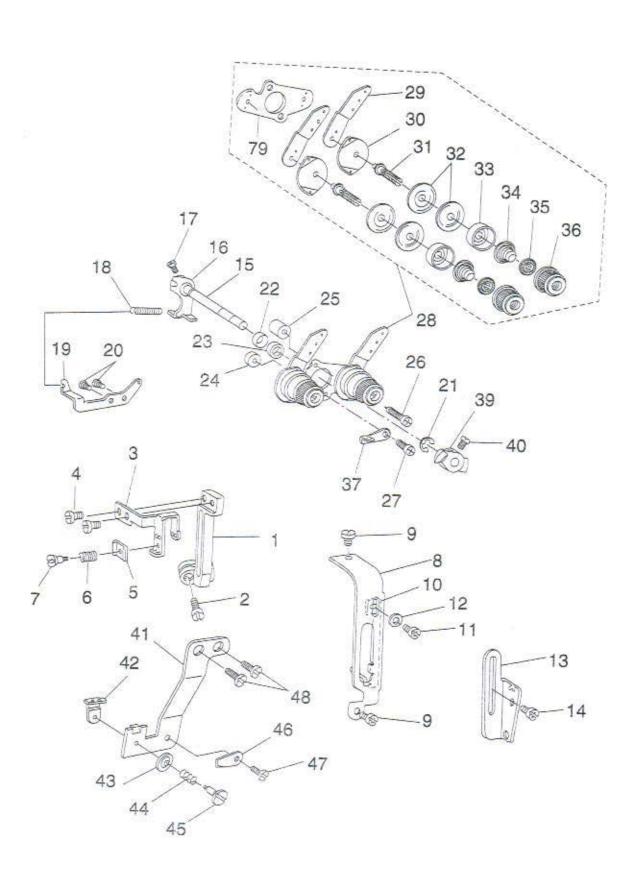
Ref No.	Part No.	Description A	mt.Req.
39	GR1837	Oil wick	1
40	GR1854	Snap ring	2
41	GR1855	Looper mounting base	1
42	GS0137	Screw	4
43	GO318	Bushing, rear	2
44	GS032	Screw	2
45	GH385	Looper holder asm. (left)	1
46	GS040	Screw	1
47	GN169	Looper (left)	1
48	GS0138	Screw	2
49	GH386	Looper holder asm. (right)	1
50	GS040	Screw	1
51	GN170	Looper (right)	
52	GK187/7	Crank cover asm	1
53	GS0139	Screw	3
54	GR1462	Rubber plug	3 1
55	GR1856	Vinyl tube	
56	GT162	Needle guard cam asm.	1
57	GS48	Screw	2
58	GH387	Needle guard crank rod	
59	GH388	Rear needle guard rocker fork	1
60	GS019	Screw	1
61	GX380	Pin	1
62	GR1837	Oil wick	1
63	GS032	Screw	1
64	GO319	Bushing	1 1 1
65	GS48	Screw	
66	GZ312	Needle guard driving shaft asm	1
67	GR1837	Oil wick	I
68	GH389	Rear needle guard rocker arm as	
69	GS040	Screw	1
70	GR1857	Driving needle guard (1/4)	1
71	GS0100	Screw	1
72	GR1858	Needle guard base	1
73	GS030	Screw	2
74	GR1859	Counter needle guard, left	1
75	GR1860	Counter needle guard, right	1
76	GS011	Screw	2

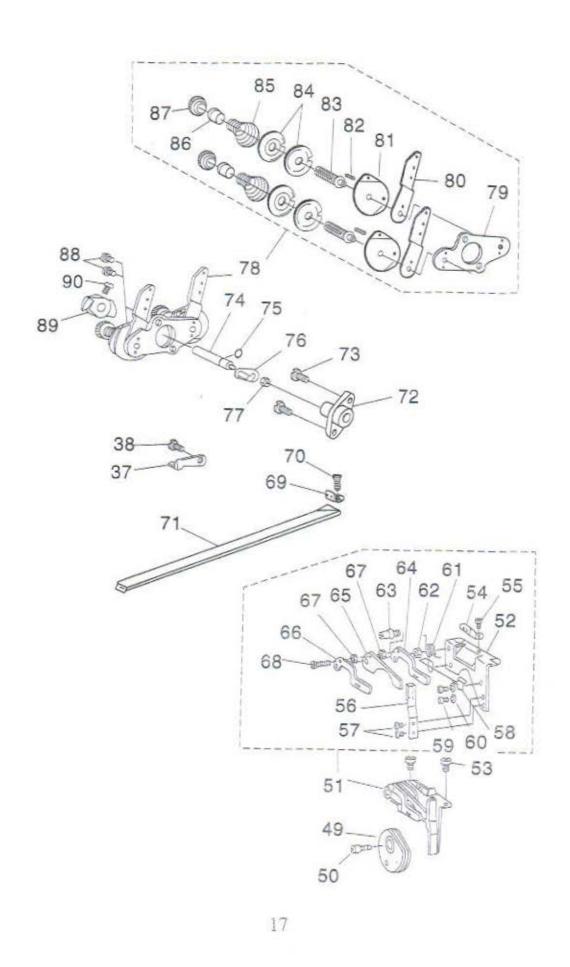


7. Thread take-up, tension, and tension releasing assembly complete

Ref No.	Part No.	Description	Amt.Req.
	GH390	Thread take-up lever	1
1 2	GS0140	Screw	1
3	GH392	Thread take-up	1
4	GS011	Screw	2
5	GR1861	Tension plate	1
6	GW294	Tension spring	1
7	GS0141	Screw	1 2 1 1 1 2 1
8	GK190	Thread take-up lever guard	1
9	GS010	Screw	2
10	G1862	Take-up thread tension lever	1
11	GS010	Screw	
12	GR1528	Washer	1
13	GR1863	Frame thread eyelet	1
14	GS010	Screw	1
15	GZ313	Tension release shaft	1
16	GH393/2	Tension release arm asm.	1
17	GS082	Screw	1
18	GW295	Spring	1 1
19	GR1865	Suspension bracket	1
20	GS81	Screw	2 1
21	GR1507	Snap ring	1
22	GR1866	Oil seal ring	1
23	GR1867	Tension release shaft spacer	1
24	GR1868	Spacer (A) for installing plate	1
25	GR1869	Spacer (B) for installing plate	1
26	GS0142	Screw	1
27	GS079	Screw	1
28	GR1870/19	Needle thread tension asm.	(1)
29	GR1871	Needle thread tension guide plate	2
30	GR1872	Tension thread guide	2 2 2 4 2
31	GS0143	Looper thread tension post	2
32	GR1488	Tension disc	4
33	GR1873	Tension disc presser tube	
34	GW251	Tension spring	2
35	GR1490	Tension disc stopper	2 2 2 2 1 1 1
36	GL34/2	Tension nut	2
37	GR1875	Frame thread guide	2
38	GS010	Screw	1
39	GR1876	Tension release latch	1
40	GS082	Screw	
41	GR1907	Tension controller installing plat	e i 1 1 1
42	GR1908	Take-up thread guide	1
43	GR1493	Attachment installing plate	1
44	GW299	Take-up thread tension sprin,	
45	GS0149	Take-up thread tension po-	1

Ref. No.	Part No.	Description	Amt.Req.
46	GR1986	Thread tension release guide latch	1
47	GS043	Screw	1
48	GS010	Screw	2
49	GR1877	Looper thread take-up cam	1
50	GS0144	Screw	1
51	GR1878/20	Looper thread guide asm.	1
52	GR1879	Thread guide plate	1
53	GS010	Screw	2
54	GR1880	Looper thread guide	1
55	GS069	Screw	
56	GW296	Thread guide stopper spring	1
57	GS069	Screw	2.
58	GR1881	Cast-off wire	1
59	GS44	Screw	2
60	GR1882	Washer	2
61	GW297	Thread guide spring	2 2 1
62	GL31	Nut	1
63	GS0145	Thread guide stud	1
64	GR1883	Looper thread guide, right	1
65	GR1884	Cast-off plate	1
66	GR1885	Looper thread guide, left	1
67	GR1886	Collar	2
68	GS065	Screw	1
69	GR1887	Looper thread guide	1
70	GS0146	Screw	1
71	GR1888	Looper thread guide tube	1
72	GR1889	Tension release shaft bushing	1
73	GS0150	Screw	2
74	GZ314	Looper thread release shaft	1
75	GR1503	Rubber ring	1
76	GH395/2	Tension release arm asm.	1
77	GL31	Nut	1
78	GR1891/19	Lower thread tension asm.	(1)
79	GR1892	Tension installing plate	
80	GR1893	Looper thread tension control plate	2
81	GR1894	Thread guide	2
82	GX382	Spring pin	2
83	GS0143	Looper thread tension post	2
84	GR1895	Tension disc	4
85	GW298	Looper thread tension spring	2
86	GR1896	Tension spring bushing	2
87	GL36	Tension post nut	2 2 2 2 2 4 2 2 2 2 2
88	GS010	Screw	2
89	GR1897	Looper thread release latch	1
90	GS082	Screw	I

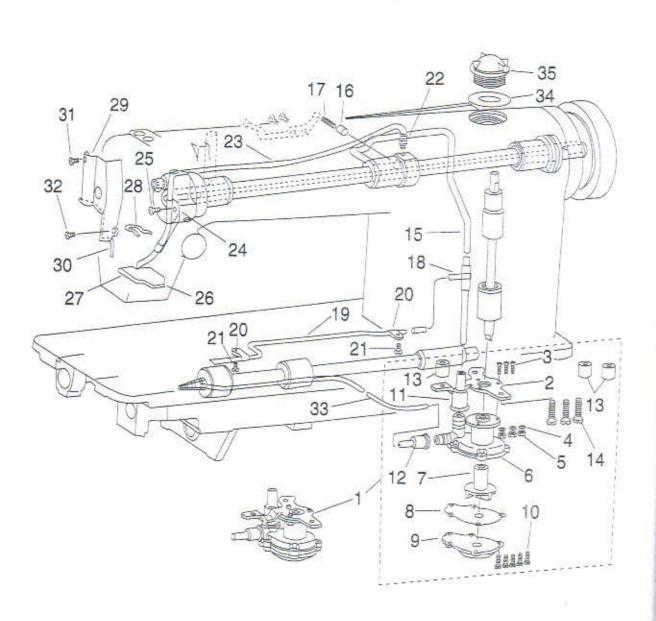




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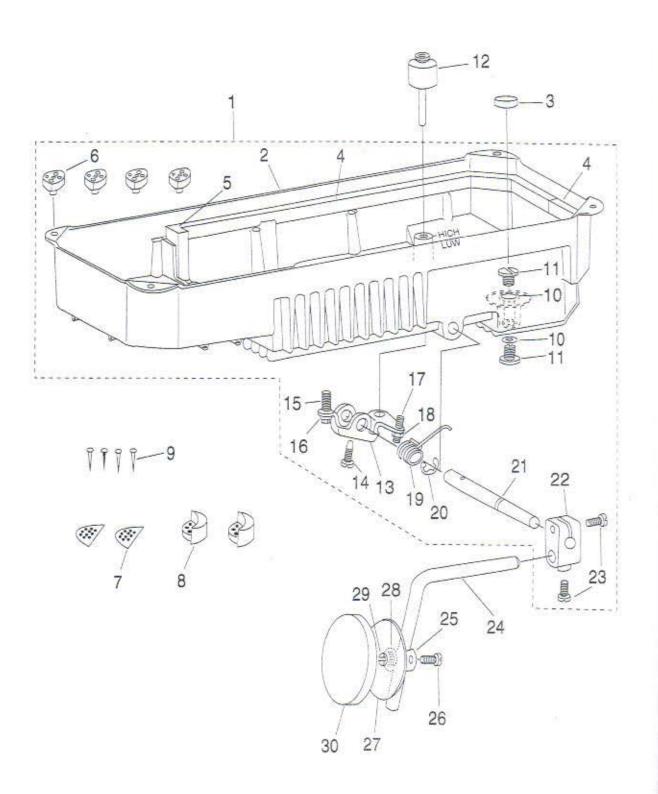
8. Lubrication

Ref.No.	Part No.	Description	Amt.Req.
1	GR1899/21	Lubricating oil pump asm.	(1)
2	GR1549	Oil pump installing base	1
3	GS553	Screw	3
4	GR1550	Washer	3
5	GL138	Nut	3
6	GR1551	Lubricating oil	1
7	GR1900	Oil pump impeller	1
8	GR1553	Oil pump impeller cover	1
9	GR1554/2	Lubricating oil pump cover	1
10	GS554	Screw	5
11	GR1557	Rubber joint	1
12	GR1559	Rubber joint	1
13	GR1901	Collar	3
14	GS0109	Screw	3
15	GR1902	Main shaft oil tube	1
16	GR1563	Oil return pump plunger	1
17	GW260	Plunger spring	1
18	GR1903	Oil sight window base	1
19	GR1904	Gear oil pipe	1
20	GR1566	Holder	2
21	GS81	Screw	2
22	GS055	Connecting screw	1
23	GR1565	Oil return tube asm.	1
24	GR1566	Oil return tube holder	1
25	GS81	Screw	1
26	GR1567	Oil felt presser	1
27	GR1568	Oil felt	1
28	GR1569	Oil felt presser	1
29	GR1906	Arm oil shield	1
30	GR1735	Oil wick	1
31	GS069	Screw	
32	GS010	Screw	1
33	GR1909	Oil tube	1
34	GR1562	O-Rubber ring	1
35	GR1561	Oil sight window	1



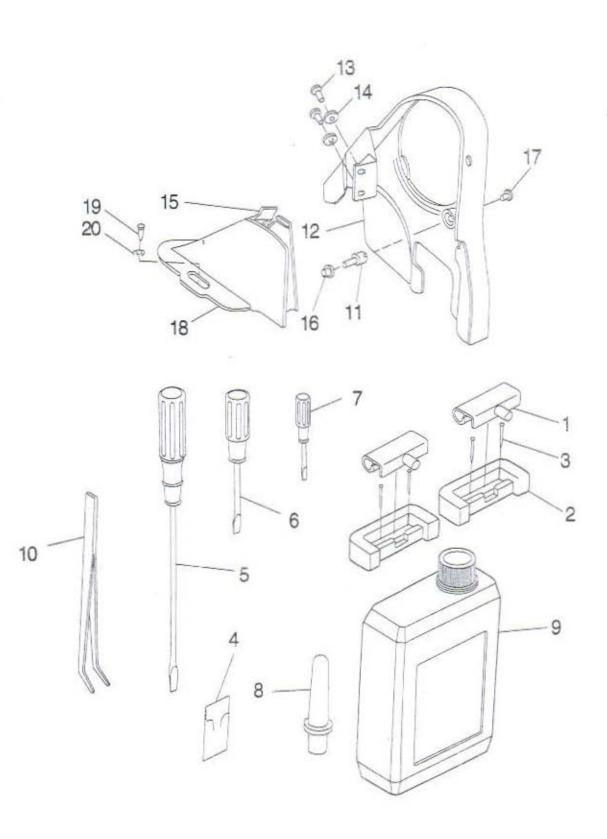
9. Oil reservoir & knee lifter components

Ref.No.	Part No.	Description	Amt.Req.
1	GR1910/13	Oil reservoir asm.	(1)
2	GR1911	Oil reservoir	1
3	GR1576	Oil reservoir magnet	1
4	GR1912	Gasket	2
5	GR1913	Gasket	1
6	GR1577	Rubber cushion	4
7	GR1578	Oil reservoir felt cushion	2
8	GR1579	Oil reservoir rubber cushion	2
9	GBX105	Nail	4
10	GR1575	Oil drain cap gasket	2
11	GS02	Oil drain screw	
12	GR1581	Knee press lifter rod	2 1 1
13	GR1582	Lifting	1
14	GS056	Positioning screw	1
15	GS057	Positioning screw	1
16	GL21	Nut	1
17	GS058	Positioning screw	1
18	GL21	Nut	1
19	GW261	Spring	1
20	GR1583	Thrust ring	1
21	GZ283	Knee press rod	1
22	GR1584	Bearing bracket	1
23	GS059	Clamp screw	2
24	GR1586	Knee lifter plate rod	1
25	GR1587	Knee press plate cover joint	1
26	GS08	Screw	1
27	GR1588	Knee press plate	1
28	GW262	Knee press plate spring	1
29	GS060	Screw	1
30	GKR13	Knee press plate cover	1



10, Machine head accessories

Ref.No.	Part No.	Description	Amt.Req.
1	GR1590/2	Machine hinge plate asm.	2
2	GR1593	Machine hinge plate	2
3	GBX105	Nail	4
4	GV18	Needle	lpack
5	GR1601	Screw driver (L)	1
6	GR1602	Screw driver (M)	1
7	GR1603	Screw driver (S)	1
8	GBR148	Machine rest pin	1
9	GR1604/3	Lubricating unit case asm.	1
10	GR558/2	Tweezer	10
11	GS061	Belt cover support stud	1
12	GR1447	Belt-cover A	1
13	GS062	Screw	2
14	GR1599	Washer	2
15	GR1448	Belt-cover B cover asm.	1
16	GL38	Nut	1
17	GS0574	Screw	1
18	GR1449	Belt-cover B	1
19	GBS120	Driving belt cover wood screw	2
20	GBR147	Wood screw washer	2



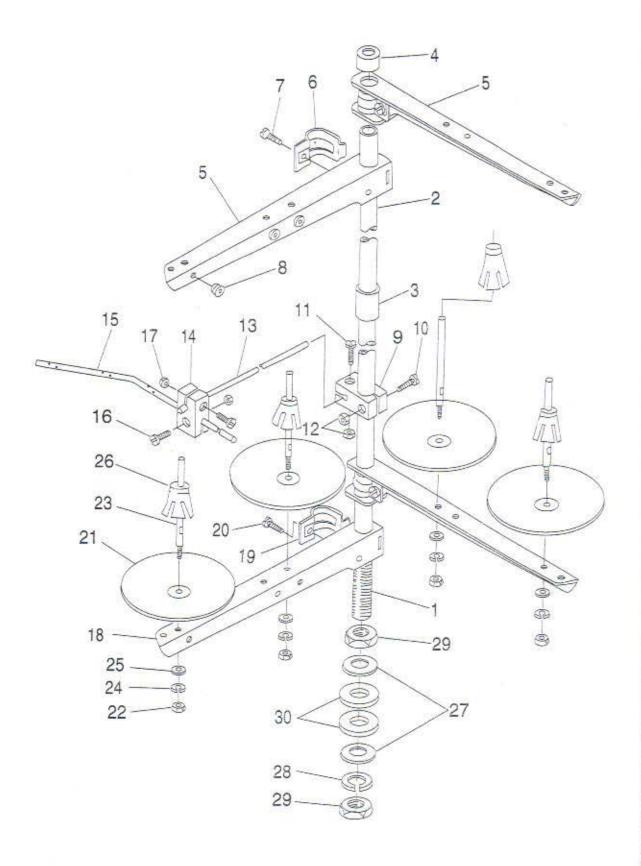
11. Quadruple-thread spool stand asm.

Ref.No.	Part No.	Description	Amt.Req.
1	GZ315	Spool rest rod (upper)	1
2	GZ316	Spool rest rod (lower)	1
3	GR1932	Spool rested joint	1
4	GR1744	Spool rest rod rubber cap	1
5	GR1825	Thread guide asm.	2*
6	GR1745	Thread guide asm joint	2*
7	GS558	Screw	
8	GR1784	Thread guide ring	2*
9	GR1933	Thread guide arm holder	6**
10	GS149	Screw	1
11	GS113	Screw	1
12	GL104	Nut	1
13	GZ317		2
14	GR1934	Thread guide arm	
15	GR1935	Thread guide arm holder	15
16	GS231	Lower thread guide Screw	I
17	GL110		2
18	GR1825	Nut	2
19	GR1745	Spool rest arm.	2*
20	GS558	Thread guide arm joint	2*
21	GR1811	Screw	2*
22	GL23	Spool rest	4***
23	GS067	Nut	4***
24	GR1625	Spool pin	4***
25	GR1626	Spring washer	4***
26	GR1215	Washer	4***
	GR1696	Spool cushion	4
27	GR1751	Washer	2
28	GL158	Spring washer	1
29		Nut	2
30	GR1753	Rubber washer	2

^{* 1} pc. for model ZJ4810N

^{** 3} pcs. for model ZJ4810N

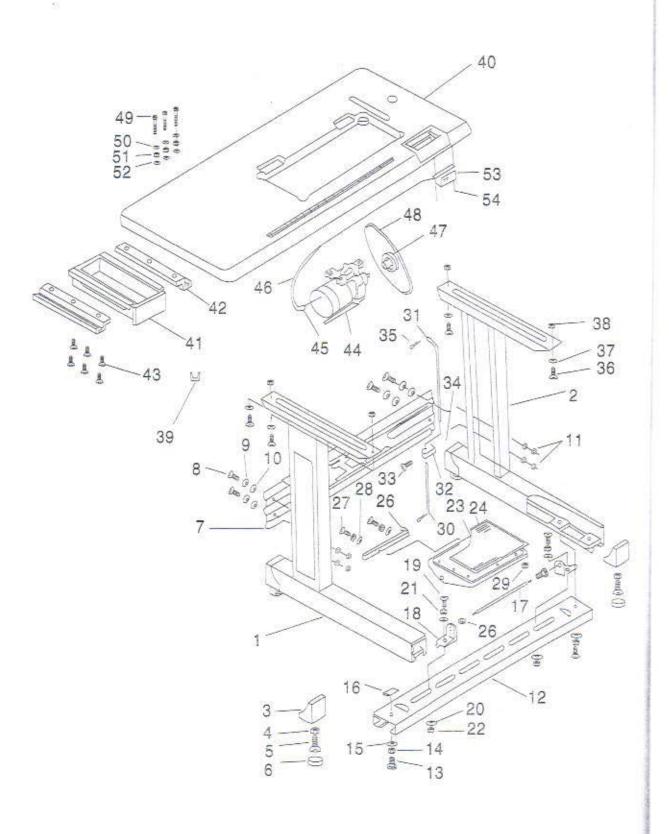
^{*** 2} pcs. for model ZJ4810N



12, Machine stand, table & electric appliance components *

Ref.No.	Part No.	Description A	mt.Req.
	GKR302/5	Stand side asm, left	1
2	GKR305/5	Stand side asm. right	1
3	GKR318	Rubber cushion	4
4	GKL104	Nut	4
1 2 3 4 5 6 7 8	GKR196/2	Screw	1 4 4 4 4 4 1 4 4 4 4 1 2 2 2 2 1 1 2 1 2
6	GKR198	Space ring	4
7	GKR309	Stand side support	1
8	GKS110	Screw	4
	GKR106	Spring washer	4
10	GKR122	Washer	8
11	GKL101	Nut	4
12	GKR310	Treadle brace	1
13	GKS110	Screw	2
14	GKR106	Spring washer	2
15 16	GKR122	Washer	2
17	GKR311 GKX301	Treadle brace lock nut plate	2
18	GKR317	Treadle shaft	1
19	GKS110	Treadle bracket Screw	2
20	GKR122	Washer	2
21	GKR106	Spring washer	4
22	GKL101	Nut	2
22 23	GKR312	Treadle	1
24	GKR313	Gasket	1
25	GKR314	Collar	2
26	GKR315	Treadle pitman	1
27	GKS102	Screw	2
28	GKR112	Washer	4
29	GKL102	Nut	2
30	GKR116	Pitman rod, lower	ĩ
31	GKR118	Pitman rod, upper	I
32	GKR183	Joint	1
33	GKS110	Joint screw	1
34 35	GKL101	Joint nut	1 1 4 4
36	GKX101 GBS114	Pitman rod split pin (upper)	1
37	GKR112	Table wood screw	4
38	GKR112 GKR186	Table wood screw washer	4
39	GBR156	Table washer	4
40	GBR158/2	Drawer limit plate Table	1
41	GBR203/2	Drawer	1
42	GBR206	Drawer rail	1 2 6
43	GBS121	Drawer rail wood screw	2
44	GD234	Model GFC4024 motor	1
45	GD219	Motor connecting wire plug	i
46	GD108	Motor wire	i
47	GD23/3	Motor pulley	î
48	GE122	Machine driving belt	î
49	GKS122	Motor & table connecting screw	ŝ
50	GKR209	Motor & table connecting washer	1 3 3 3 3
51	GKR106	Motor & table connecting spring washer	3
52	GKL101	Motor & table connecting nut	3
53	GD227	Power source switch	
54	GBS104	Power source switch wood screw	2

^{*} Note that parts above mentioned shall be purchased in a separate order

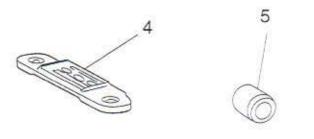


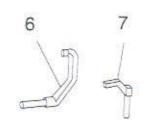
13. Model one-needle high speed chainstitcher

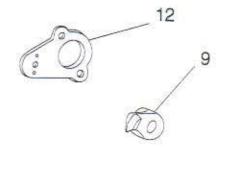
Ref.No.	Part No.	Description	Amt.Req.
1	GM274	Attachment installing plate	1
2	GM275/7	Presser foot asm.	1
3	GM276	Feed dog	1
4	GM277	Throat plate	1
5	GR1998	Throat collar	1
5	GR1999	Driving needle guard	1
7	GR2000	Counter needle guard	1
8	GR2001/9	Needle thread tension asm.	1
9	GR2002	Tension release latch	1
10	GR2003/11	Lower thread tension asm.	1
11	GR2005	Looper thread release latch	1
12	GR2004	Tension installing plate	2
13	GZ318	Needle bar	1
14	GS071	Screw	1
15	GR1481	Needle bar thread guide	1
16	GR1480	Thread guide	1

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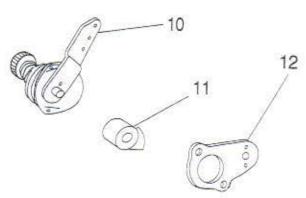


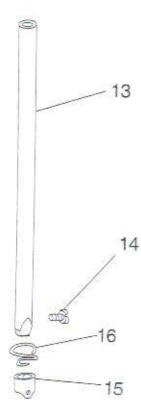












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/	Name	Throat plate	Needls clamp	Presser foot asm.	Feed dog	Rear moving needle guard	Right fix needle guard	Left needle guard
Spec	rifications					Po		
*1	1/8"(3.2mm)	GM252	GR1937	GM253/5				
2	5/32"(4.0mm)	GM255	GR1944	GM256/5	GM254	GR1936	GR1936 GR1857 GR1860 GR1960	GR1859
3	3/16"(4.8mm)	GM251	GR1929	GM249/5	GM250			
4	7/32"(5.6mm)	GM257	GR1951	GM258/5				
5	1/4"(6.4mm)	GM248	GR1826	GM246/5	GM247	GR1857		
6	5/16"(7.9mm)	GM259	GR1958	GM260/5	GM261			
7	3/8"(9.5mm)	GM263	GR1966	GM264/5	GM265	GR1960		
8	1/2"(12.7mm)	GM266	GR1973	GM267/5	GM268	GR1975		
Z	J3820N							
9	0	GM272	GR1989	GM271	GM273	GR1992	GR	1993

/	Name	Right looper	Left looper	Bed slide	Cam cover	Folder
Spec	cifications					
*1	1/8"(3.2mm)					GR1939/5
2	5/32"(4.0mm)					GR1946/5
3	3/16"(4.8mm)				GM243	GR1924/5
4	7/32"(5.6mm)		GN169	GM245		GR1953/5
5	1/4"(6.4mm)	GN170	OSSIGNATION .			GR1916/5
6	5/16"(7.9mm)				C11.40.C2	GR1961/5
7	3/8"(9.5mm)				GM262	GR1968/5
8	1/2"(12.7mm)			GM269	GM270	
7	LJ3820N					
9	0	GN170	GN169	GM245	GM243	k.

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