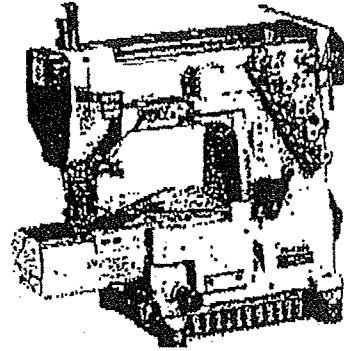




MODEL
697CVF

INSTRUCTION MANUAL

Since 1898
CONSEW®



MODEL 697CVF

Super High Speed Cylinder Bed
Interlock Stitch Sewing Machine

INSTRUCTIONS

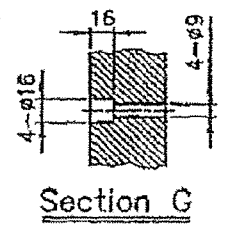
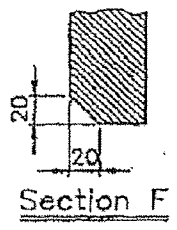
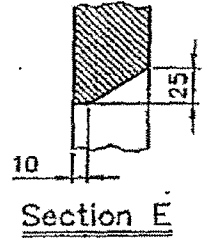
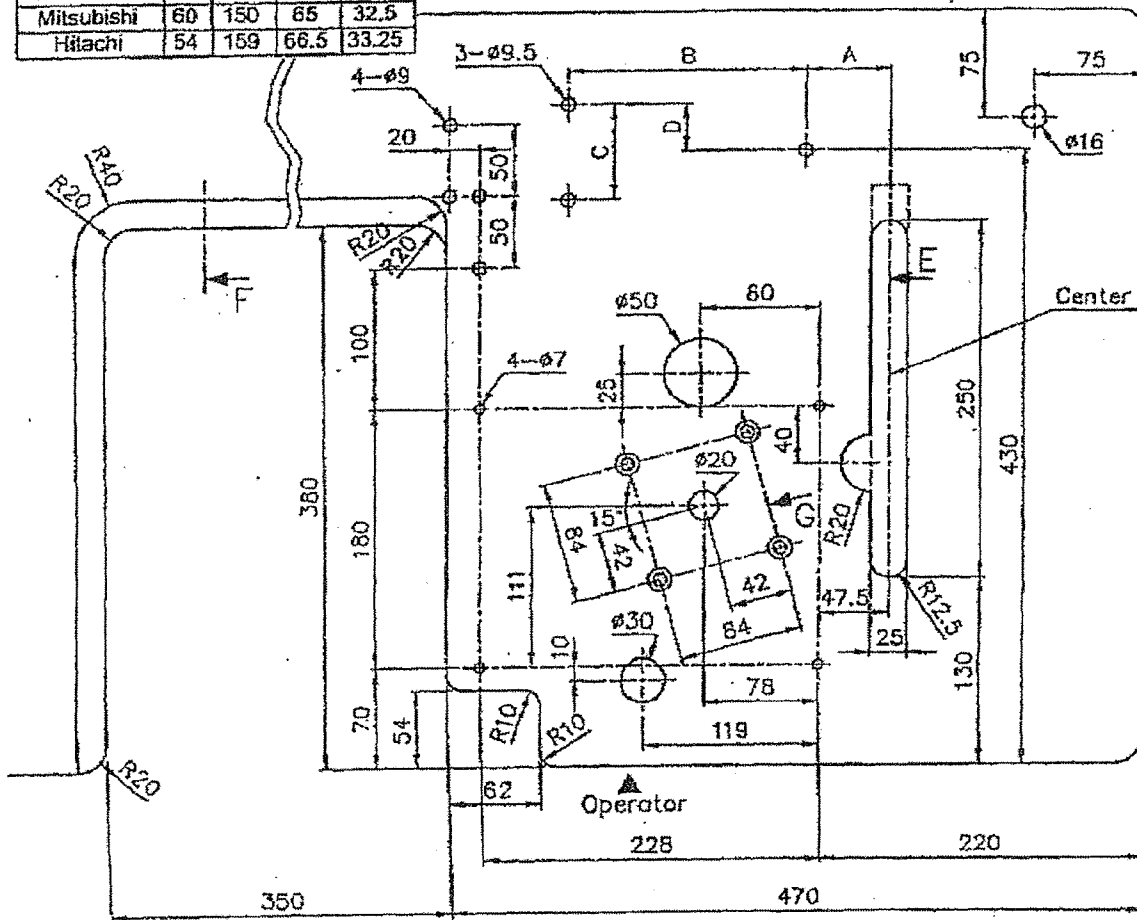
Installation

Specifications

Model.....	697CVF
Description.....	Super High Speed Cylinder Bed 2 or 3 Needle Interlock Stitch Sewing Machine
Dimensions.....	475 (Length) x 220 (Width) x 405 (Height) mm
Circumference of Cylinder Bed.....	280 mm
Weight.....	3kg
Stitch Type.....	ISO 406, 407, 602, 605
Application.....	General seaming of knitted material
Sewing Speed Max.....	6,000 stitch/mm (4500 spm with Puller)
Stitch Length.....	1.4-3.6 mm
Stitch number.....	7-18 stitch/inch, 6-21 stitch/30 mm
Needle Type.....	Schmetz or Organ UYI 28QAS #65"40
Needle Gauge.....	for double needle: 3.2, 4.0, 4.8, 5.8, 6.4 mm for 3 needle; 5,6, 8.4 mm
Needle Stroke.....	31mm
Presser Foot Lift.....	Max. 7 mm (5 mm for machine with cover lock))
Feed Regulation by push-button	
Differential Ratio.....	Max. normal differential ratio: 1:2.9 Max. Reverse differential ratio: 1:0.3
Differential Feed Regulation by Adjusting Screw or by Control lever (Adjusting during operation from outside is possible by moving Control Lever up and down.)	
Lubrication Automatic lubrication by Oil Pump (combined use with splashing lubrication)	
Lubrication.....	Consew lily white oil
Oil Reservoir Capacity.....	1,000 cc
Installation Table Top Installation or Semi-submerged installation (using exclusive Supporting Board)	

Drawing of Table Top Cutout Table Top Installation (Type A: Standard)

Motor Maker	A	B	C	D
Panasonic	57	159	86.5	33.25
Mitsubishi	60	150	65	32.5
Hitachi	54	159	66.5	33.25



2

Table top installation (type B)

Motor Maker	A	B	C	D
Panasonic	57	159	66.5	33.25
Mitsubishi	60	150	65	32.5
Hitachi	54	159	66.5	33.25

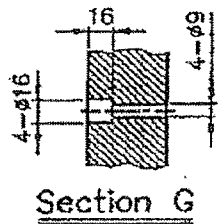
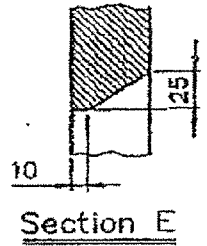
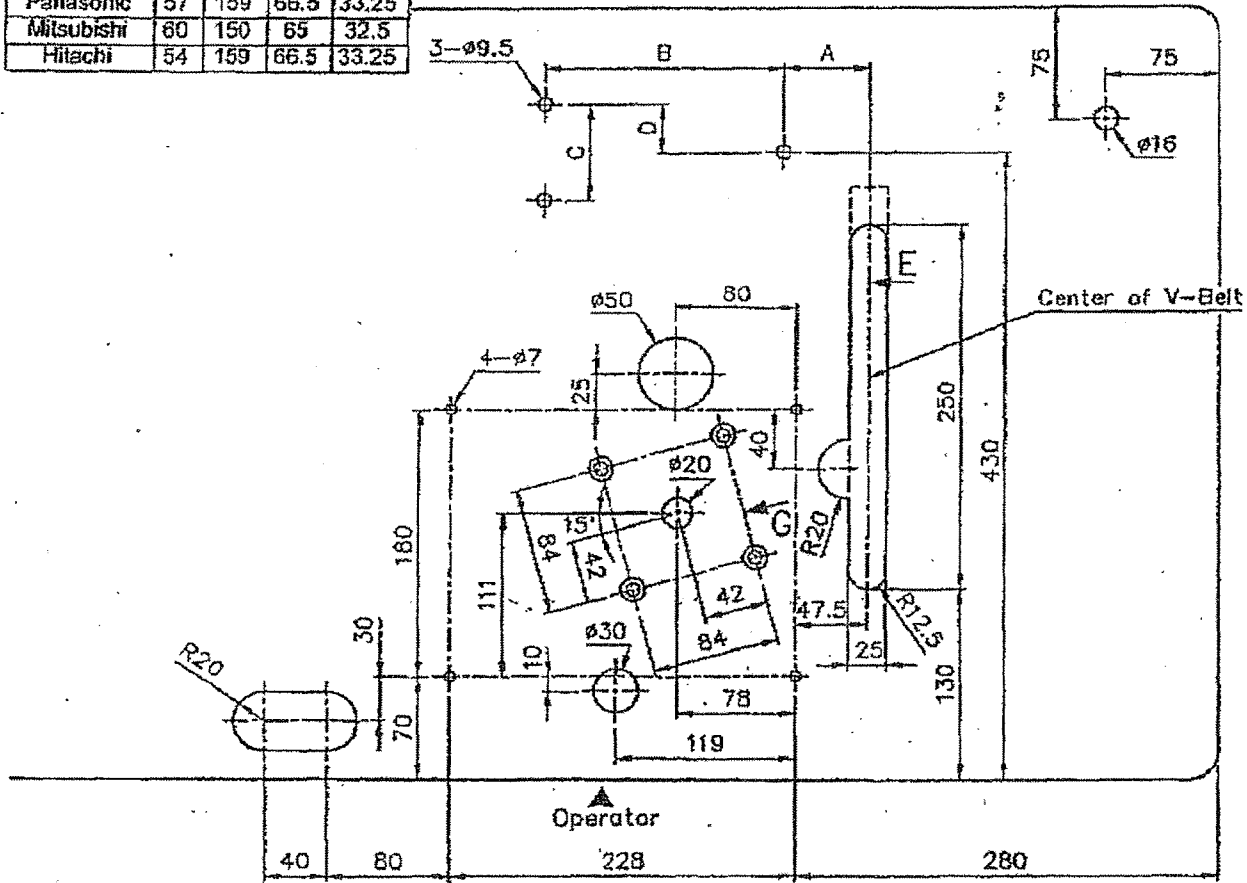
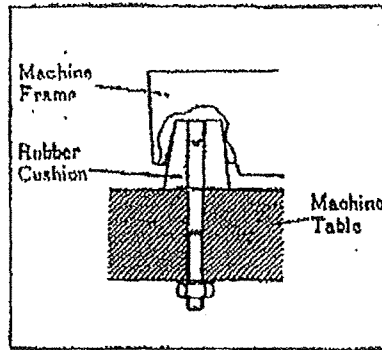


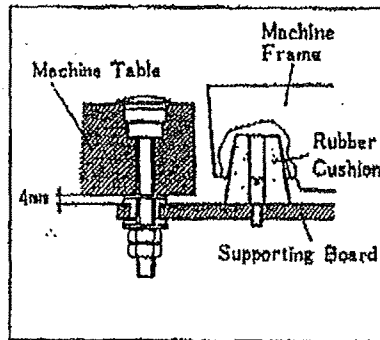
Table Top Installation

Install the machine by referring to the illustration. Set nuts and bolts on Machine Table and put Rubber cushions on bolts and place the machine on them securely.



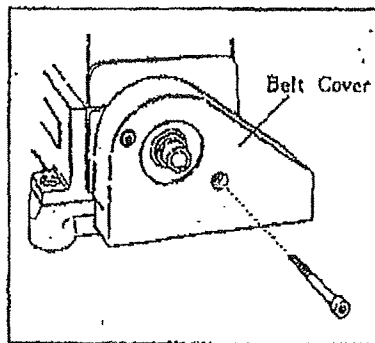
Semi-submerged installation

Set Screws on Supporting Board and set Supporting Board on Machine Table. Then place Rubber Cushions on screws upon which the machine will rest securely.



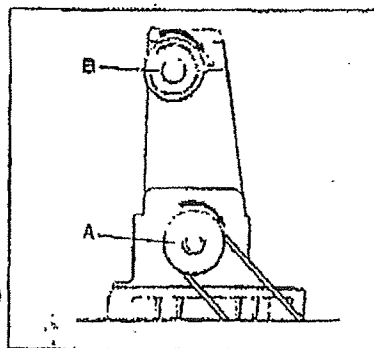
Installing the Belt Cover

Install the belt cover as shown in the illustration below.



Sewing Speed and direction of pulley

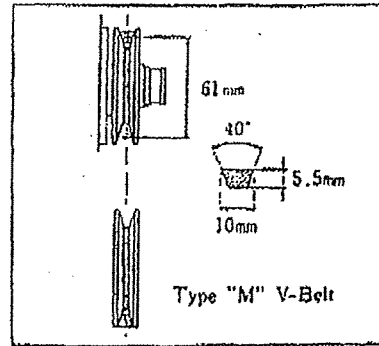
The maximum sewing speed of this machine is 6000 s.p.m. The normal speed is 5,500 s.p.m. (for a machine with a Puller the max. speed is 4,500 s.p.m. and normal is 4,000 s.p.m.). When operating a new machine, it is recommended, to insure durability, operate at 5,000 s.p.m for the first 200 hours (about a month) then operate at the normal speed. The Pulley, (A) should turn clockwise like the Hand wheel,(B) as shown in the illustration.



Motor and Belt

Use a clutch motor of 3-phase, 2-pole, 400 W (1/2 HP) and a V-Belt of M-type. Fix the position of motor so that the centers of Motor Pulley and Machine Pulley align when Motor pulley shifted to the left by treading Pedal.

Dia. Of Motor Pulley(mm)	s.p.m. of machine	
	50 Hz	60 Hz
75	-	4,000
80	-	4,200
85	-	4,500
90	4,000	5,000
100	4,500	5,500
110	5,000	6,000
120	5,500	-
130	6,000	-



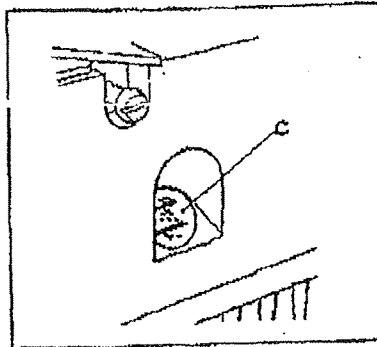
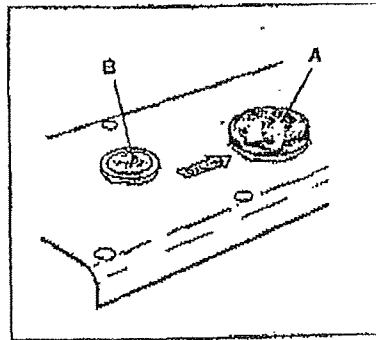
As the diameters of pulleys available are in increments of 5mm, the diameters shown in the above table are to the nearest calculated value.

Lubrication Oil

Use Consew sewing machine oil for lubrication.

As the oil in the machine is drained completely prior to shipment, replenish the oil up to the highest line of Oil Gauge(C). Remove Seal Plug indicated by (A) in Figure below and fill before operating the machine, without fail.

Check Oil Gauge(C) before operating the machine everyday. If the oil level is below the double lines, refill the oil reservoir. Make sure that oil flows freely from Nozzle (B) at the start of operation.

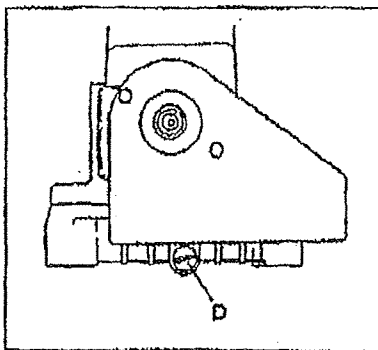


Oil Change

To ensure a long life for the machine, change lubrication oil completely after the first 250 hours of operation.

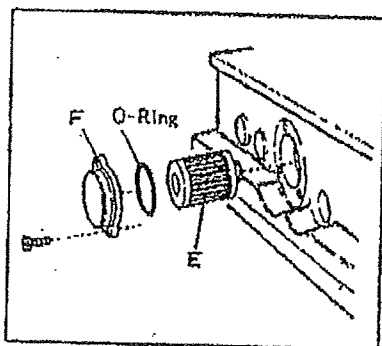
Oil change procedure:

- (1). After removing the V Belt, remove the machine head.
- (2). Remove screw (D) and drain the oil. Be careful not to get oil on the V-Belt.
- (3). After draining the reservoir, replace and tighten Screw (D). (4). Refill the oil reservoir; refer to previous chapter for instructions.



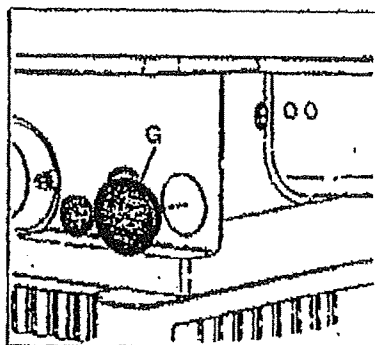
Changing and replacing the oil filter

When the oil filter is clogged with dust, proper lubrication is blocked. Generally check Oil Filter once every six months. If the flow of oil is sluggish or non-existent even though there is enough oil in the Reservoir, check the Oil Filter. Remove Oil Filter Cap (F). If it is clogged with dust or residue, clean it. Note: When removing Oil Filter Cap, take care not to spill oil from within the filter.



Cleaning the Machine

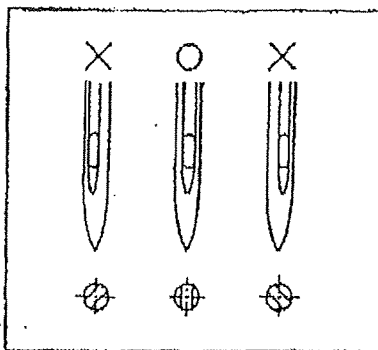
Every day after operation, clean the machine to remove dust and remnants of thread. Open the Side and Front Cover and clean using compressed air to dislodge and remove any accumulation of dirt. Remove rubber Seal Plug (G) behind the machine and remove any obstructions around the Oil Filter Screen using tweezers and compressed air once a week. When the Oil Filter Screen is clogged, oil around the Feed bar does not return to the Reservoir, resulting in a spillover of oil by the Loper Thread Take-up.



Proper Operation

Needles: Schmetz or Organ Needle UYI28GAS should be used. There are many size needles, and the size of the needle should be determined by the thickness and the kind of material being sewn.

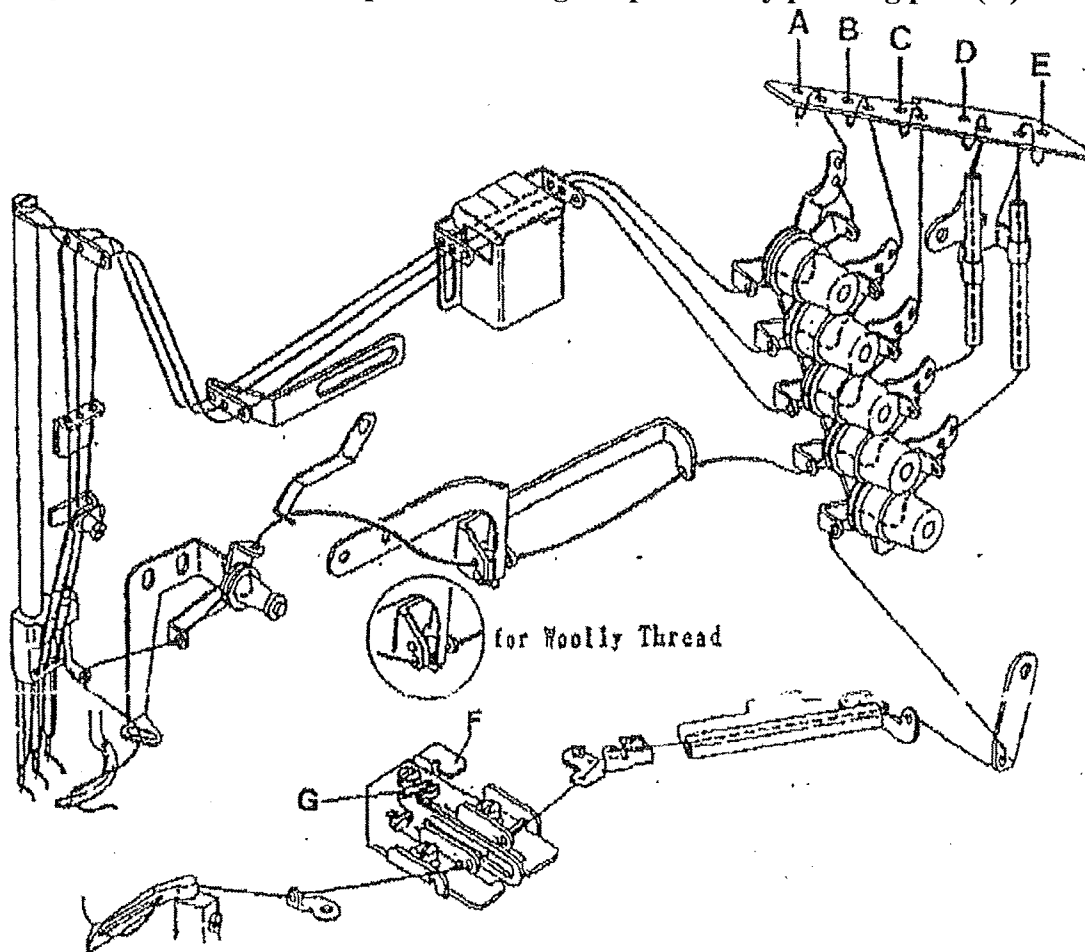
Replacing the needle should be done correctly with the scarf facing backwards as shown in the illustration below.



Threading

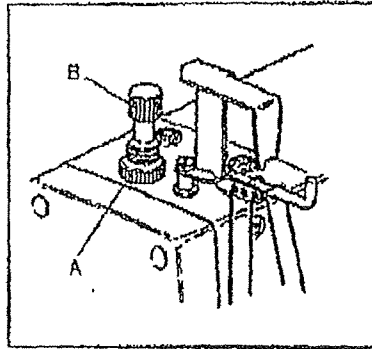
Threading should be done correctly by referring to the illustration, improper threading might cause stitches to skip, thread breakage and uneven tension.

Follow this sequence; A B C....needle thread, D.....top cover thread E,.... looper thread Threading for a three needle machine is shown in the illustration below. For a two needle machine, threading is the same except there are only two needle threads. To make the process a little easier, lift up the Supporting Plate by pressing Lever (F'). After threading, be sure to return the plate to its original position by pressing part (G).



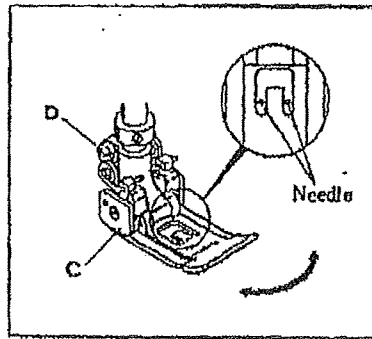
Presser Foot Pressure

To Increase the pressure on Presser Foot, turn Adjusting Screw (B) clockwise after loosening Lock Nut (A). To decrease turn it counter clock wise. Pressure on Presser Foot should be as low as possible so long as the Presser Foot operates properly.



Adjusting the Presser Foot

Adjust the right/left position of the needle drop point of Presser Foot(C) to the center by loosening screw (D) and moving the tip of Presser Foot left and right. After the adjustment, tighten screw (D).



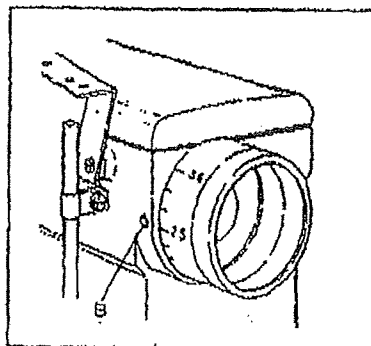
Adjusting the Stitch Length

Adjustment of stitch length can be made smoothly from 1.4mm to 3mm. The table below shows the stitch length, number of stitches per inch (25.4mm) and stitches per 30mm.

Stitch Length (mm)	Stitch Number (per inch)	Stitch Number (per 30mm)
3.6	7	8
2.4	10.5	12.5
1.4	18	21

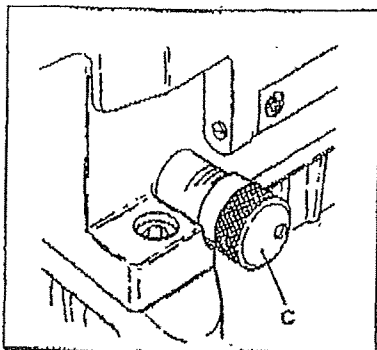
Changing stitch length

Push button (A) gently with your left hand until the tip makes contact with a part inside. Keep pushing while you turn the Hand wheel with your right hand till the button engages. At this point, press in button A forcefully and turn the hand wheel. The stitch length is indicated on the Hand wheel in mm release. Once the desired length is achieved, release the hand wheel. Note: in the case of a machine with a UT Device (Lower Thread Trimmer) equipped with an Automatic Needle Positioning System, the switch must be turned off when changing the stitch length.

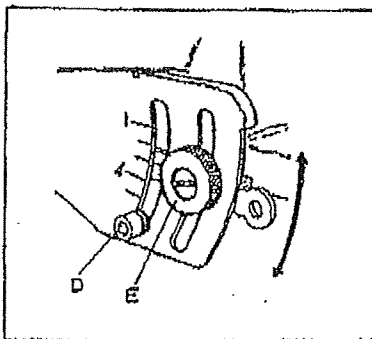


Adjusting the Differential Feed

Normal differential feed or reverse differential feed can be easily set by turning Knob (G). As the differential feed and main feed are driven individually, when the main feed (stitch length) is changed, the differential ratio changes accordingly. In this case readjustment is necessary. The graduation shows the amount of differential feed. For instance, in case the desired feed amount (stitch Length) is 2" and the setting at 2" by turning Knob(C), the differential ratio becomes 1:1. When the setting is over 2, it becomes normal differential and setting it under 2, it becomes reverse differential. For the main feed, the upper limit is 4".



When using the Differential Feed Control Lever, fix it at the desired position with Nut (E) within the range from the position of graduation On Lever when turning Knob(C) to Stopper (D) At the time of using max differential feed, turn Knob(C) and set Lever at 1. To adjust feed amount during operation, attach a chain to the Lever. (The range of differential ratio varies according to the stitch length. Refer to the table below.)

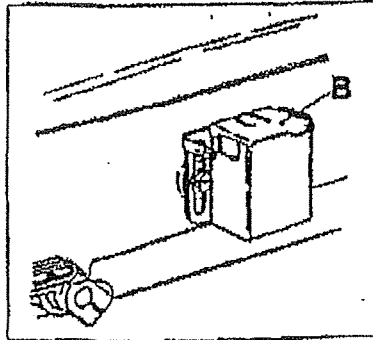
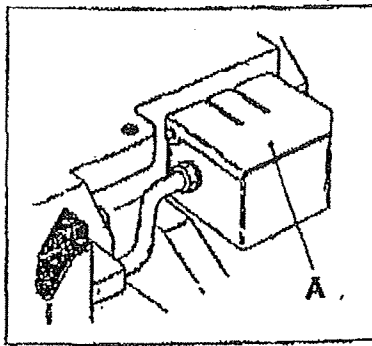


Stitch Length (mm)	Max. Normal Differential	Max. Reverse Differential
3.6	1:1.1	1:0.3
2.5	1:1.6	1:0.4
2.0	1:2.0	1:0.5
1.4	1:2.9	1:0.7

HR and SP Device

Sometimes heat is generated on the needle by friction the material at high speeds and causes such troubles as thread breakage, skip stitch and widening of stitch hole, especially when using synthetic threads and fabrics. To reduce these problems a HR Device (needle point cooling or heat reduction) and SP Device (needle thread oiling) are standard equipment for this machine. Using silicone based oil in the system is most effective.

Note 1: Open Lid (A) of HR Container and lid (B) of SP Container and check the oil. If it is running short, replenish the supply. Note 2: Though it is recommended to use HR and SP Devices, when they are not used judging from the sewing condition, remove Felt because it is better for the needle and thread not to come in contact with the dry Felt because it causes more friction and heat.

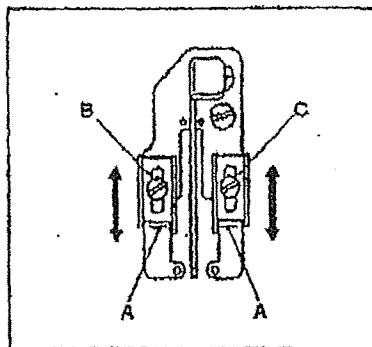


Adjustments on the Sewing Machine

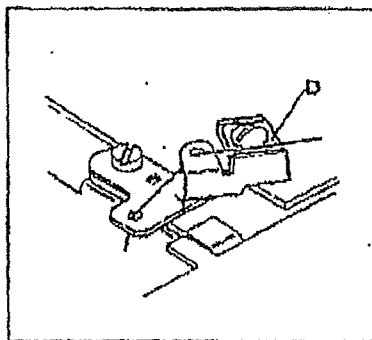
Looper Thread Tension

Align Mark (A) of Supporting Plate and thread holes of Thread Eyelet(s) and (C). That is the standard adjustment. To Increase take-up amount of looper thread, move Looper Thread Eyelet forward after loosening of Thread Eyelet (B) and (C), and to decrease move them backward.

Note: Too much slack on the looper thread will cause stitches to skip.

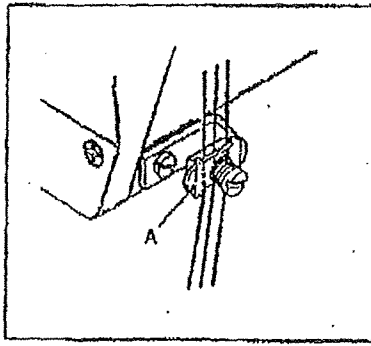


When using heavy wool thread, move Thread Eyelet (B) and (C) all the way forward so the thread does not pass between Supplementary Tension Discs (D).

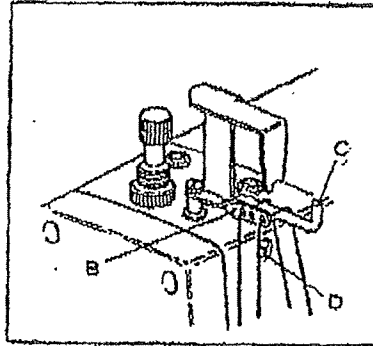


Needle Thread Tension

With some kinds of thread it is not easy to make a loop. This makes it difficult for the looper to catch the needle thread, thus causing the stitch to skip. In such a case, pass the needle thread through Supplementary Tension Disc (A) as shown in the illustration.



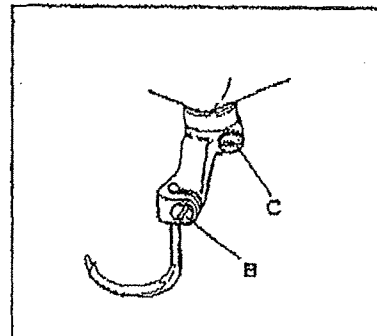
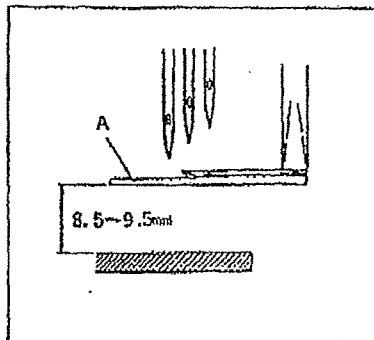
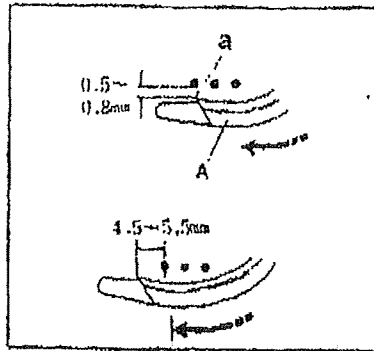
In case the formation of needle thread loop is unstable when using stretchable thread like synthetic thread, use the Needle Thread Guide. With the Needle Bar at the lowest position, the center of thread hole of Needle Thread Eyelet (B) should be even with the surface of Needle Thread Guide (C); and (B) and (C) should be parallel with each other. This is standard. The adjustment of the height and left right position of Needle Thread Guide (C) is made by loosening Screw (D) and moving Needle Thread Guide (C) up and down and left to right.



Needle and Spreader

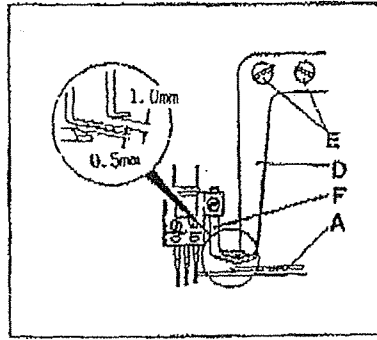
Installing the Spreader

Provide a clearance of 0.5-0.8mm between left needle end the tip of thread hooking part (a) of Spreader (A) when Spreader moves to the left. Give the distance of 4.5-5.5mm from the center of left needle to the thread hooking part (a) when Spreader comes to the extreme left. The height from the surface of Stitch Plate up to the undersurface & Spreader (A) should be 8.5-9.5mm. The adjustment is made by loosening Screw (B) of Spreader and screw (C) of Spreader Holder.



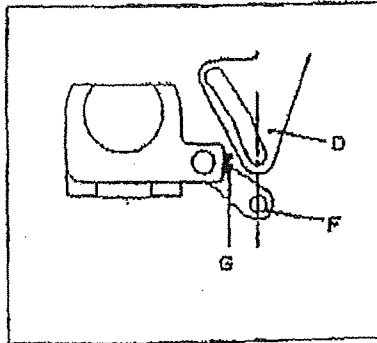
Installing the Top Cover Thread Guide

Provide a clearance of 0.5mm between under surface of Top Cover Thread Guide (D) and the surface of Spreader (A) and tighten Screw (E) so that the thread is caught by thread hooking part properly when Spreader comes to the extreme right.



Installing the Top Cover Thread Eyelet

When the Needle Bar is at the lowest position, provide a clearance of .0mm between the surface of Top Cover Thread Guide (D) and the undersurface of Top Cover Thread Eyelet (F). And set the thread hole of Top Cover Thread Eyelet (F) on the center line of slot of Top Cover Thread Guide (D), and then tighten Screw (G). Adjustments (1), (2) and (3) should be made according to the thread being used.



Adjusting Feed length on a Puller

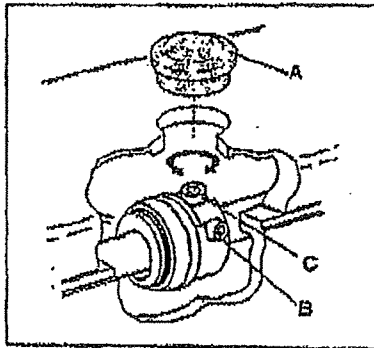
The adjustment procedure of feed length is as follows:

Remove Seal Plug (A) on Top Cover.

Turn Hand wheel till Screw (B) of Feed Roller eccentric appears and then loosen Screw (B).

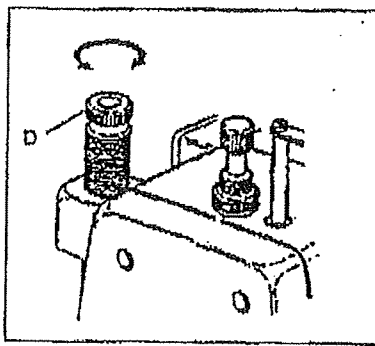
Turn Hand wheel till Adjusting Screw (C) appears at the Seal Plug hole.

To increase the feed length, turn Adjusting screw (C) counterclockwise and to decrease it turn clockwise, loosen Screw(s) of Feed Roller Eccentric. Use the Hex Screwdriver from the accessory box.



Pressure of Upper Feed Roller

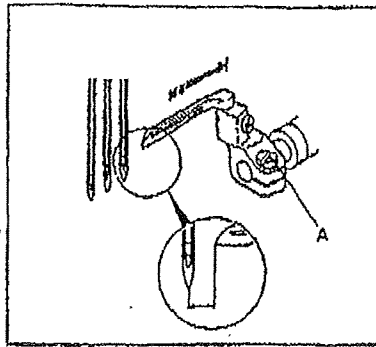
The pressure should be the least necessary for feeding fabric between Upper and Lower Feed Roller. To increase the pressure, turn Adjusting Screw (D) clockwise and to decrease, turn it counterclockwise.



Adjusting the Timing of Needle and Loper

Looper movement to the right.

With the needle at the lowest point and the looper at the extreme right, the distance from the tip of the looper to the center of right needle varies according to the needle distance and should be adjusted referring to the value shown below. The adjustment is made by loosening Screw (A) of the Loper Holder. For any needle distance the distance from the center of Needle Bar to the tip of the looper is 6.0mm.

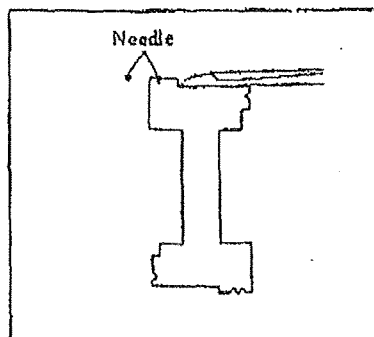


Needle (Symbol) Distance	Gauge Symbol	Looper Movement to the Right
3.2mm (32)	A	4.4mm
4.0mm (40)	B	4.0mm
4.8mm (48)	C	3.6mm
5.6mm (56)	D	3.2mm
6.4mm (64)	E	2.8mm

* For easy adjustment of Loper movement to the right, use Timing Gauge. As the timing Gauge is optional, inquire about availability from the dealer where you purchased the machine.

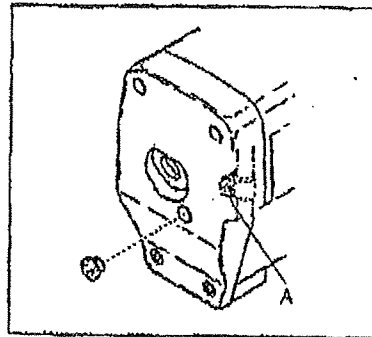
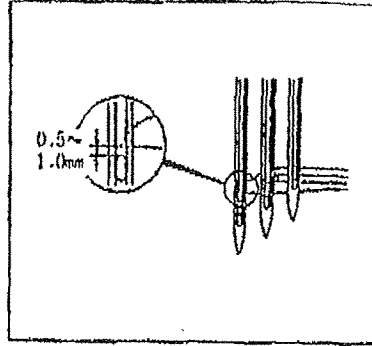
Application of Timing Gauge

Symbol (A, B, C, D, and E) for each needle distance are inscribed on the Timing gauge. With Loper at its extreme right in the condition that the right needle put in the V-groove for desired needle distance, apply the tip of Loper to Timing Gauge, then tighten screw (A) of Loper Holder.



Needle height

When the tip of the Looper comes to the center of left needle, it should pass 0.5-4.0mm over the upper end of needle eye. That is, the needle height is set in relation to the Looper. Of course needle must be installed into the needle hole of Needle Clamp correctly while Looper must be put all the way into Looper Holder and be tightened securely. The adjustment of needle height should be made by inserting screwdriver through access hole of Head Cover, loosening Screw (A) of Needle Bar Bracket and moving Needle Bar up and down.



Front/Rear position of Needle and Looper

For 3-needle:

When the tip (A) of Looper meets the Left Needle (B), clearance between them should be 0.2-0.3mm. The adjustment is made by loosening Screw (D) of Looper Holder.

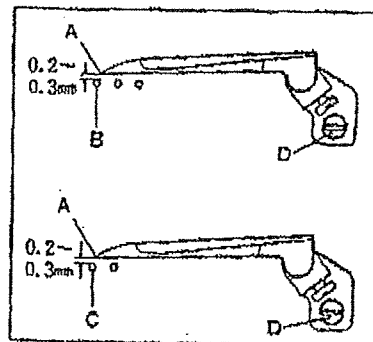
* For 2-needle:

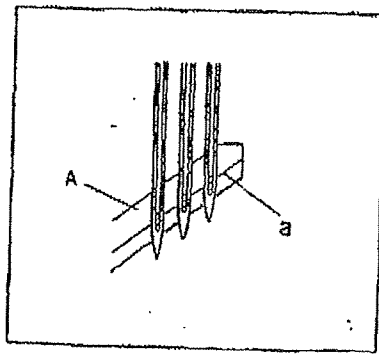
When tip (A) of Looper meets the Left Needle (C), clearance between them should be 0.2-0.3mm. The adjustment is made by loosening screw (D) of Looper Holder.

Needle and Needle Guard (Rear)

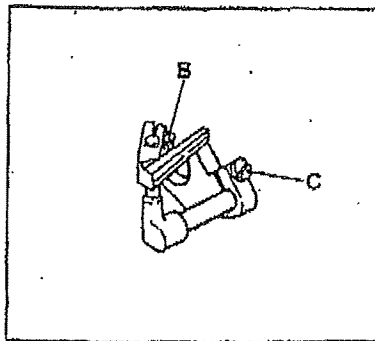
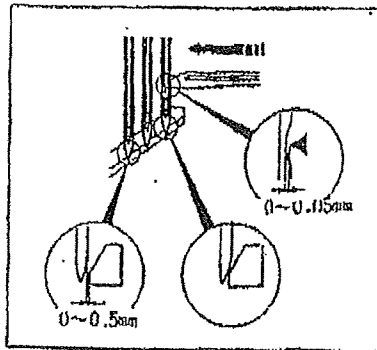
* Height of Needle Guard (Rear)

With Needle bar at the lowest position, align the centers of needles with the line(s) of Needle Guard (A) (Rear).



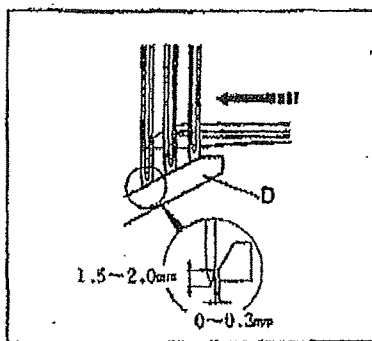


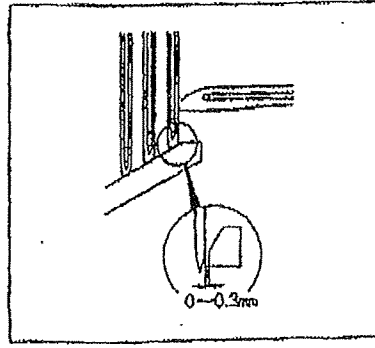
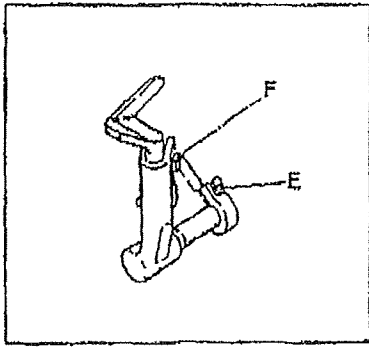
Front/Rear position of Needle Guard (Rear). When the tip of Looeper comes to the center of right needle, adjust the clearance between Needle and Looeper to 0-0.05mm by pressing Needle Guard (Rear). At this time, provide a clearance of 0-0.05mm between left needle and Needle Guard (Rear). These adjustments are made by loosening Screw (R) and (C).



Needle and Needle Guard (Front)

When the tip of Looeper comes to the center of Left Needle, make it 1.5-2mm higher than the Needle. At this time, provide a clearance of 0-0.3mm between the Needle and Needle guard (Front). And when the tip of Looeper is returned to the right Needle provide a clearance of 0-0.3mm between the Needle and Needle Guard (Front). These adjustments are made by loosening Screw (E) and (F).





Consolidated Sewing Machine Corp.
Website: www.consew.com

MAIN office

131 W. 25th Street
New York, NY 10001
Tel: 212-741-7788
Fax: 212-741-7787
e-mail: consew@att.net

Miami, FL

4013 N.W. 79th Avenue
Miami, FL 33166
Tel: 305-471-0200
Fax: 305-471-0243
e-mail: miamisales@consew.com

Los Angeles, CA

2320 South Hill Street
Los Angeles, CA 90007
Tel: 213-745-8844
Fax: 213-745-8855
e-mail: lasales@consew.com