

CONSEW ^{Since 1898}®

CONSOLIDATED SEWING MACHINE CORP.

— INDUSTRIAL SEWING & CUTTING EQUIPMENT

OPERATING INSTRUCTIONS

CN 27A

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— INDUSTRIAL SEWING & CUTTING EQUIPMENT

400 VETERANS BLVD, CARLSTADT, NJ 07072

2. Technical Data.

Natures	Value
Model	CN27A
Speed	160~230 Bags/H
No. of needle	Double needle
Needle specification	DNx1; #25
Net Weight	6.4 kg
Noise level	79~84 dB(A)
Vibration Level	17~20 m/sec*2
AC Motor	1Ø; 220/240V;90W
DC Motor	12V or 24V

3. Emission of machine.

Noise Level :

measure in a distance of 1 m to machine surface (idle run)

noise level : $L_{wa} = 79\sim 82$ dB(A).

emission level according to working station :

$$L_{pa} = 81\sim 84 \text{ dB(A).}$$

Vibration Level :

measure on the handle of machine : 17~20 m/sec*2.

4. Unpacking of machine.

Check the following on receipt of machine

- packing of damage
- completeness of contents according to despatch note
- check the accessories when unpacking
- write down the serial number of machine on the cover page of instruction.
- notify the freight forwarder and the dealer of any damage immediately.

Contents :

1. General safety rules.
2. Technical data.
3. Emission of machine.
4. Unpacking of machine.
5. Defined application.
6. Explanation of symbols used on machine.
7. Residual risk.
8. Before operation.
9. Power connection & Use of Motor.
10. Operation.
11. Adjustments & Replacing Parts.
12. Cleaning.
13. Trouble Shooting.

1. General Safety Rules.

Warning! When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following.

Read all these instructions before operating this product and save these instructions.

1. Keep work area clean.
 - Cluttered areas and benches invite injuries.
2. Consider work area environment.
 - Do not expose machine to rain. Do not use machine in damp or wet locations. Keep work area well lit. Do not use machine where there is risk to cause fire or explosion.
3. Guard against electric shock.
 - Avoid body contact with earthed or grounded surfaces.
4. Keep children away.
 - Do not let visitors touch machine or extension cord. All visitors should be kept away from work area.
5. Store idle tools.
 - When not in use, tools should be stored in a dry, high or locked up place, out of reach of children.
6. Use the right needle.
 - Do not force small needles or attachments to do the job of a heavy duty. Do not use needles for purposes not intended.
7. Dress properly.
 - Do not wear loose clothing or jewellery; they can be caught in moving parts.

Wear protecting hair covering to contain long hair.

8. Do not abuse the cord.
 - Never carry the machine by cord or yank it to disconnect it from the socket. Keep the cord away from heat, oil and sharp edges.
9. Do not overreach.
 - Keep proper footing and balance at all times.
10. Maintain machine with care.
 - Follow instructions for lubrication and changing accessories. Inspect power cord and/or extension cord periodically and if damaged have it repaired by an authorized serviced facility. Keep handle dry, clean and free from oil and grease.
11. Disconnect tools.
 - When not in use, before servicing and when changing accessories.
12. Remove adjusting keys and wrenches.
 - Form the habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
13. Avoid unintentional starting.
 - Do not carry a plugged-in machine with a finger on the switch. Ensure switch is off when plugging in.
14. Use outdoor extension leads.
 - When machine is used outdoors, use only extension cords intended for outdoor use.
15. Stay alert.
 - Watch what you are doing. Use common sense. Do not operate machine when you are tired.
16. Check damaged parts.
 - Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, free running of moving parts, breakage of parts, mounting and any other conditions that may affect its operation.
17. Warning.
 - The use of any accessory or attachment, other than those recommended in this instruction manual, may present a risk of personal injury.
18. Have your machine repaired by a qualified person.
 - This machine is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.




Particular safety instruction for this bag closer.

1. This bag closer is designed for the operation of right handed use only.
2. Do not continuously operate this bag closer for more than 30 mins without any rest and/or any support of machine.
3. Be sure to wear hearing protection during operation.

5. Scope of application.

- a. This sewing machine is designed for the close sewing of any kinds of multiple layers thick paper bag, PE/PP weaving bag, cotton bag, and sisal bag.
- b. If special application is required, this machine could be modified for that special purpose under the supervision of qualified and authorized specialist.
- c. In case of closing the bag of sisal material, low speed sewing is more suitable. Therefore; it would be better that the motor speed is under 8000 rpm.

6. Explanation of Symbols used on machine :

Warning of Electric Shock	Warning of not to touch needle	Caution of Oiling
		

7. Residual risk :

It is possible that the following residual risk can still occur in spite of observing all relevant safety regulation due to the nature of the job the machine has been constructed for.

- Touching the stationary or moving needles with your finger.
- Touching live parts on a damaged terminal box, capacitor, or bare cable lead.
- Your sense of hearing can suffer due to continuous use of the machine without ear defenders.
- Your hand can suffer due to the vibration of machine when you keep on operating this machine without appropriate rest.

8. Before Operation.

- A. Needle Assembly / Disassembly : (See also Fig.01)
- Loosen the clamping nut (3200629) of needle bar (3200630) by using the special wrench.
 - Turn gear (3200601) so as to raise the needle to its highest position, and take off the worn needle.
 - Put the new needle into the bottom of needle bar as far as possible. Be sure to keep the needle scarf facing toward the looper cover (3200433) during the installation of new needle.
 - Turn and tighten the clamping nut of needle bar.

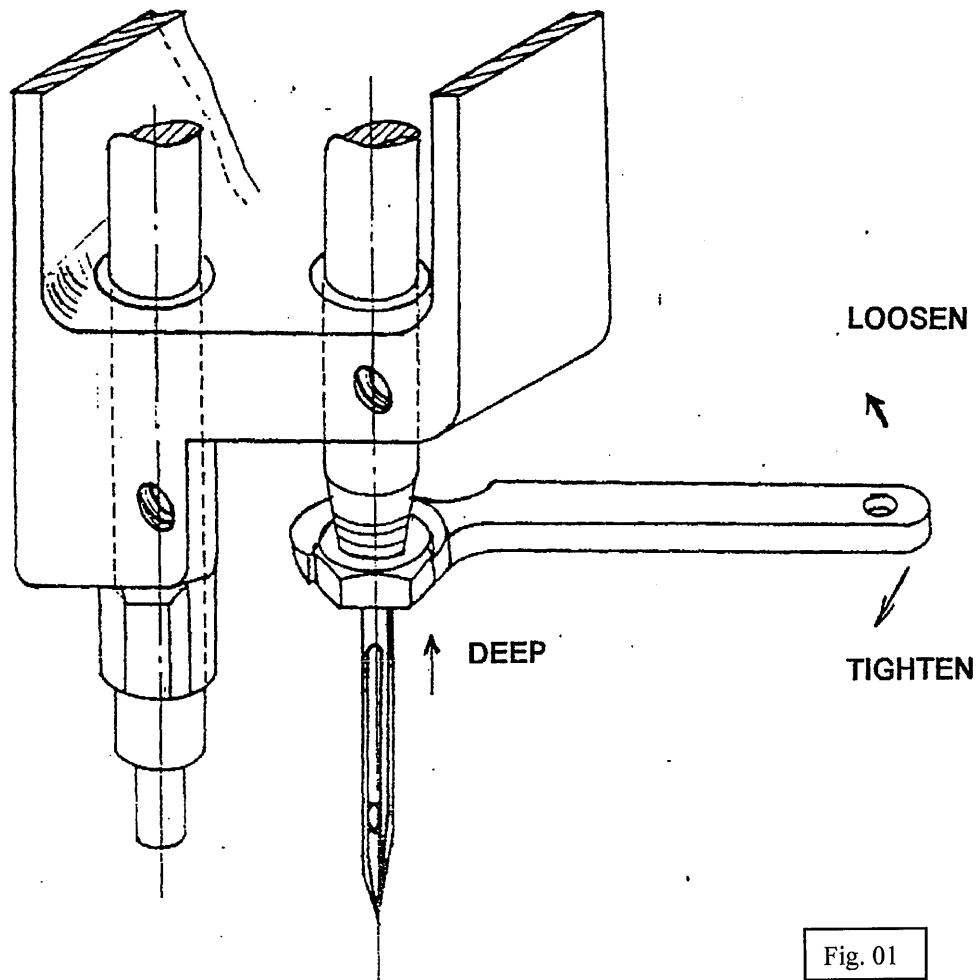


Fig. 01

B. Threading : (See also Fig.02)

- a. Threading procedure for CN27A Please refer Fig. 02
- b. While thread is tensioned too much, the thread is easy to break and the sewing surface is easy to wrinkle. While thread is not tensioned enough, the thread is easy to break and continuity of sewing line is not easy to be kept. Therefore; it is better to keep a suitable tension for the thread during threading.
- c. Be sure to inspect the spring of thread tension assembly (3200215). If worn, be sure to change it before threading. In order to get a suitable tension of thread, please adjust the screw (3206217) of thread tension assembly, and the nut of manual adjuster (3200216).

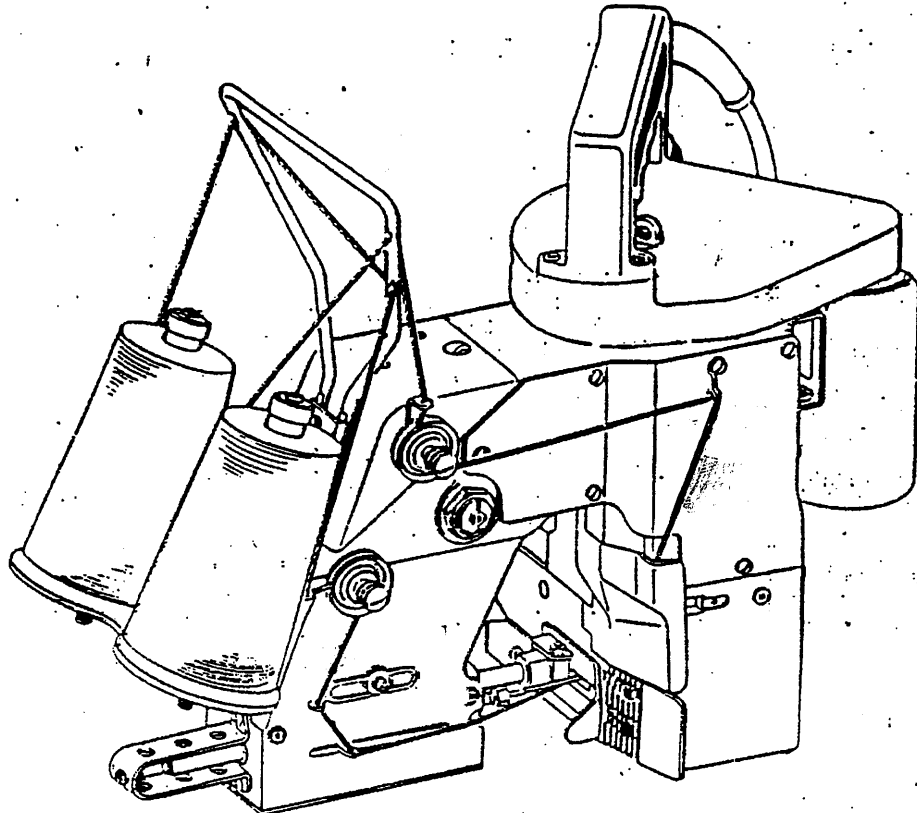


Fig. 02

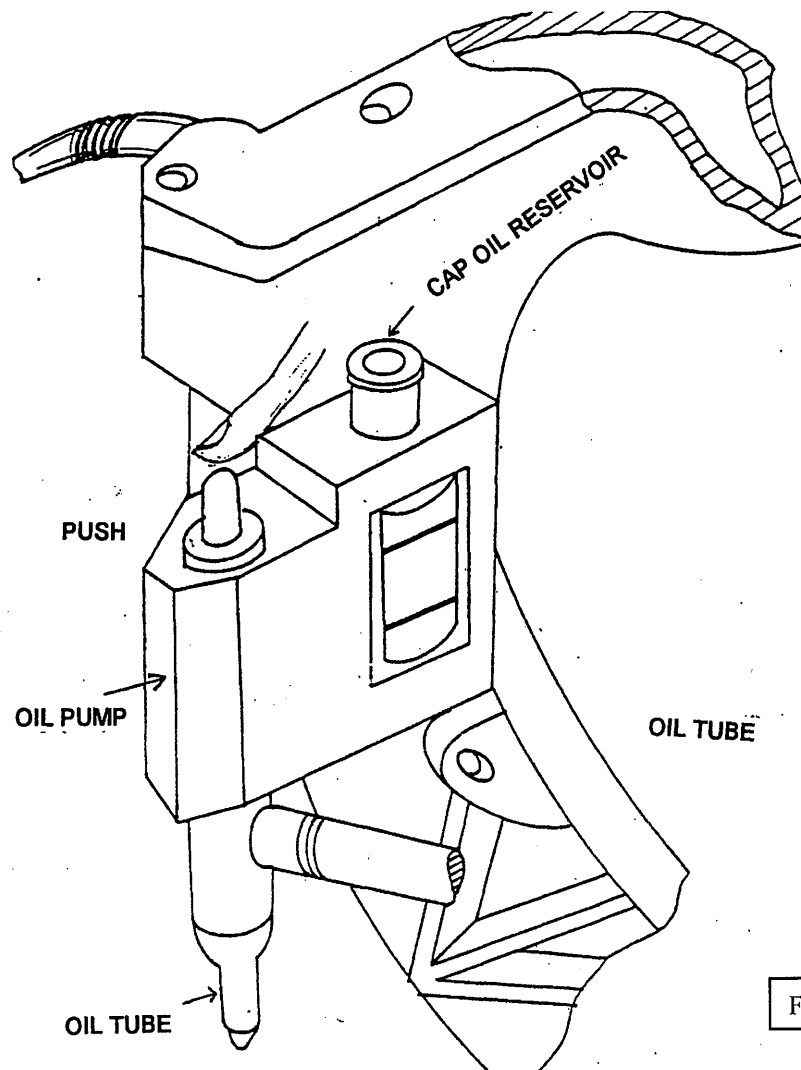


Fig. 03

C. Oiling : (See also Fig. 03)

- a. Be sure to fill the oil reservoir and cover the cap whenever you start your work.
- b. In order to keep the best performance, the operator shall push the oiling button to lubricate the parts of machine every 3 hours.
- c. The operator shall check and keep the normal oiling situation from time to time to prevent the damage due to the lack of lubrication.

9. Power Connection & Use of Motor.

- a. Be sure to check the correct specification of power source according to the specification marked on the name plate of motor.
- b. The motor of this machine is designed for the intermittent use. Do not continuously operate this machine for a long time. It will damage the performance of motor.
- c. Frequently inspect the brush of motor. If worn, change a new brush.

10. Operation of machine.

A. Machine Operation (See also Fig. 04)

- a. The raise bar (3200638) shall be released before start operation to prevent the damage of relative machine parts due to the impact of needle and needle bar.
- b. Hold the handle (3201216) and push the trigger button (3201221) with index finger to start machine. Machine will keep on running whenever the trigger button is pushed and machine stop as soon as the trigger button is released.

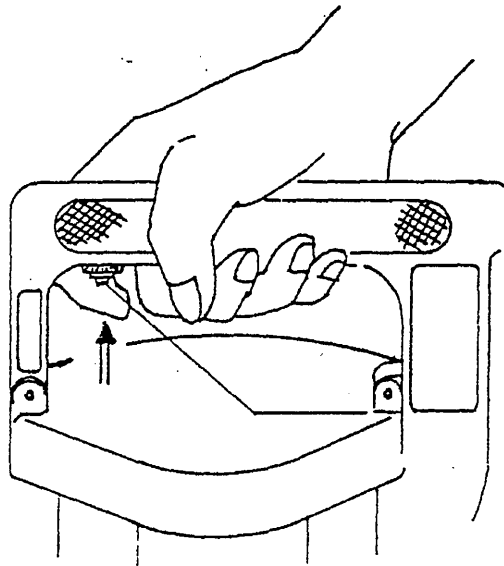


Fig. 04

B. Sewing Operation. (See also Fig. 05 & Fig. 06)

- a. Straighten the parts of bag where is ready to be sewed before sewing.
- b. Take an appropriate sewing distance from the top end of bag according to the material of bag. In general the appropriate distance would be 100 mm for weaving bag, 50 mm for paper and PE/PP bag, and 110 mm for the sisal bag or the bag of similar material.
- c. Hold the bag and insert the bag into between the pressure foot (3200644) and needle plate (3201024). During sewing, please just keep the sewing line straight and going forward. Do not pull the bag backward and upward or downward.
- d. After finishing sewing, please keep 30~40 mm thread distance and trim the thread to prevent the loose of sewing due to the lack of sufficient thread length.

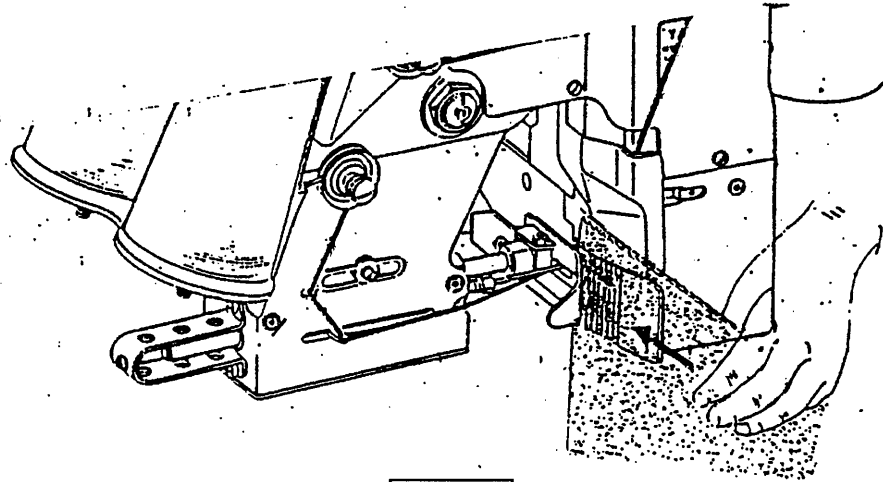


Fig. 05

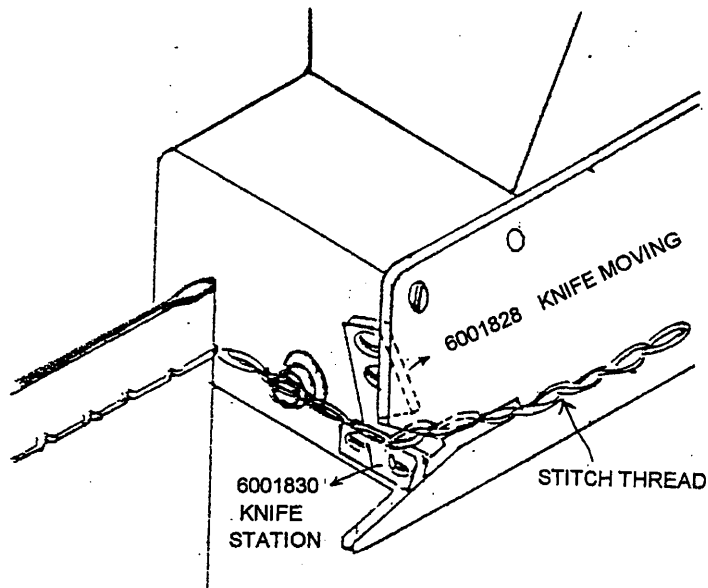


Fig. 06

11. Adjustments & Replacement of Parts.

A. Adjustment / Distance between the looper & needle. (Fig. 07)

- a. Turn the gear (3200601) in order to set the looper (3200827) to the right end and keep the distance between the top end of looper and needle is about 4.9 - 5.1 mm.
- b. Check whether the distance (1) of linkage (3200812) is about 86.9 - 87.10 mm
- c. Turn the gear (3200601) in order to set the looper (3200827) to the left end and keep the distance between the top end of looper and needle is about 4.9 - 5.1 mm. Then loosen (2) the nut (3 & 4) of linkage set (3200819) so as to adjust the distance at the normal level.

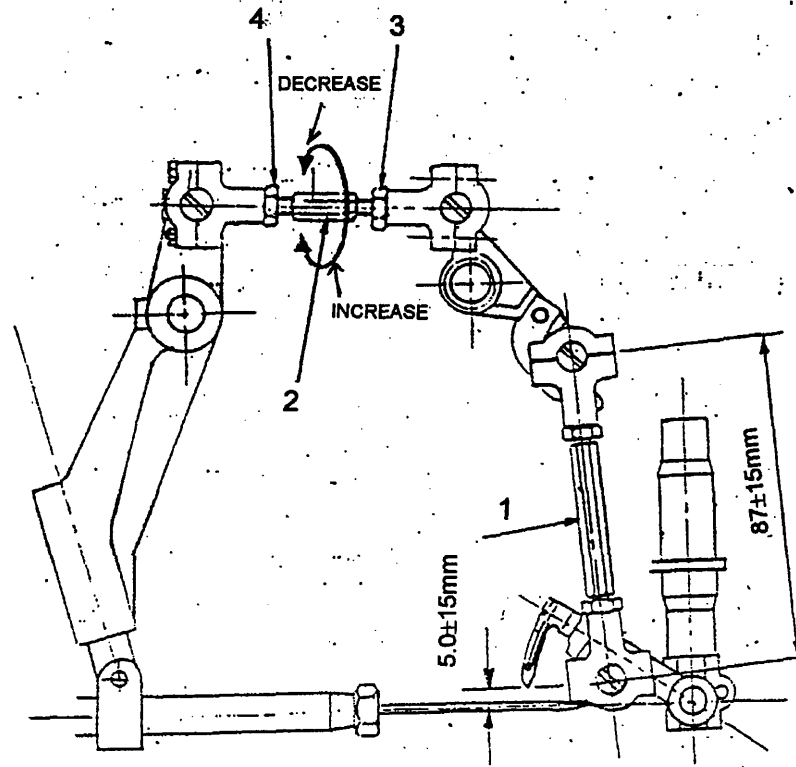


Fig.07

B. Adjustment / Height of needle. (Fig. 08)

- a. Turn the gear (3200601) to move looper right and left so as to keep the needle at its lowest end, In this situation the holes of needle and looper shall be matched shown as Fig.08
- b. Check whether the needle is placed at the bottom end of needle bar.
- c. Needle french shall face foreword looper while the needle move upward from its bottom.
- d. While the adjusting high of needle is required, remove plate (3200415) and move needle upward, then loosen screws (3200608, 6001435) and (3200624, 6001430) and adjust needle bar to an appropriate height. After adjustment, be sure to tighten all screws.
- e. While the adjusting low of needle is required, loosen screws (3200624, 6001430), and (3200624, and 6001430) and adjust needle bar to an appropriate height. After adjustment, be sure to tighten all screws.

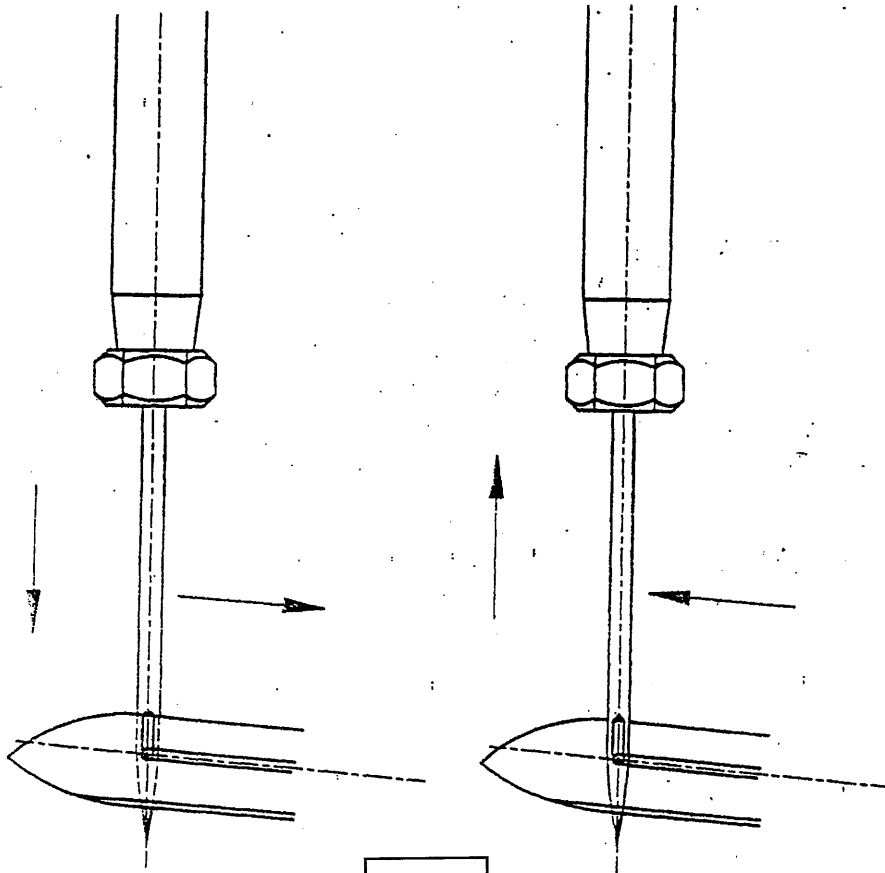
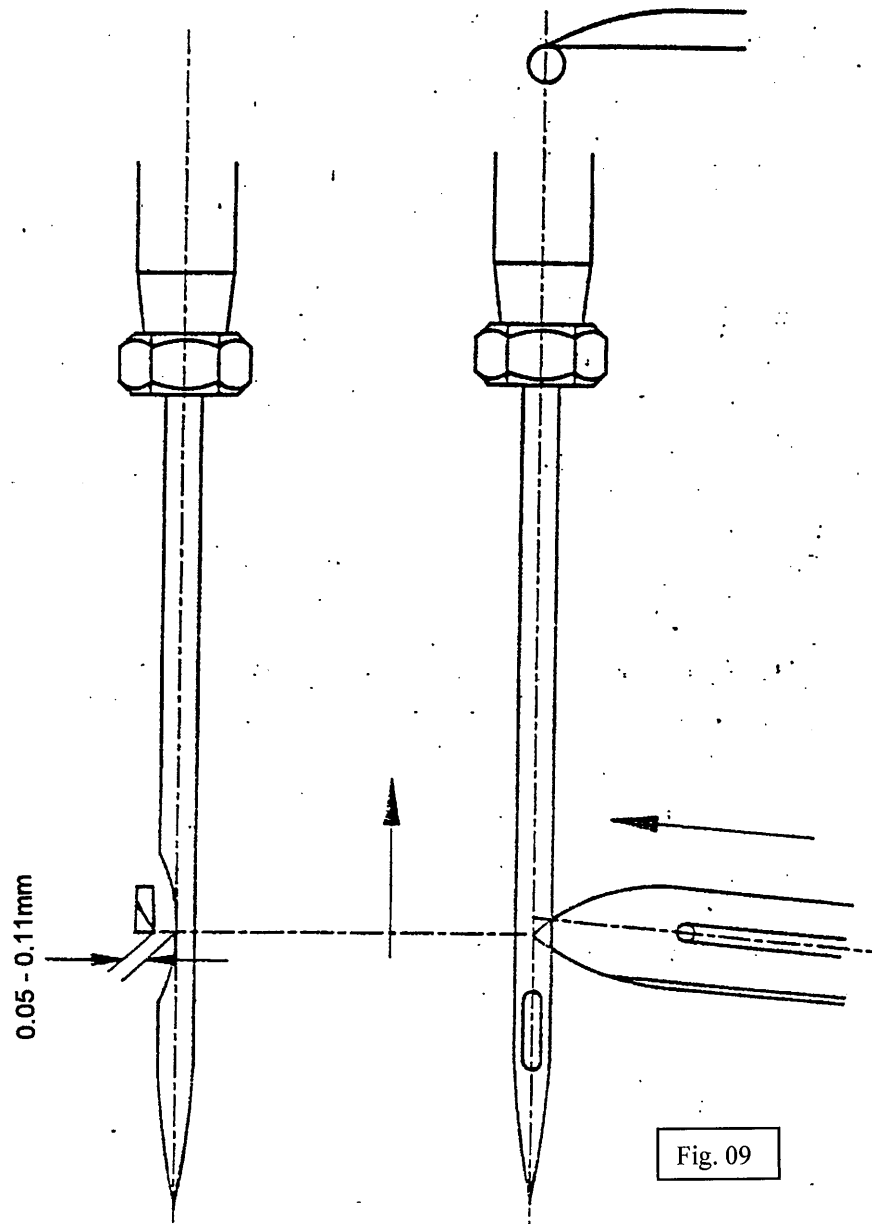


Fig. 08

C. Adjustment / Side clearance between the looper & needle. (Fig.09)

- a. Turn the gear(3200601) so as to make the looper just pass the back of needle, and keep the needle end at the center of needle. Then check whether the clearance between the needle stretch and looper is about 0.05-0.11 mm, and ensure that needle does not contact looper.
- b. If adjustment is found required, loosen the relative screws and adjust to an appropriate clearance. After adjustment, be sure to tighten screws again.



D. Adjustment 1 Height of feed dog. (Fig. 10)

- a. Loosen screws (3201023) and (3201015), and adjust the height of feed dog to be 1.2 mm ~ 1.5 mm. After adjustment, be sure to tighten screws again.

E. Adjustment / Height of pressure food. (Fig. 10)

- a. Loosen screws and remove plate (3200145) and connectors (3200634, 6001438), (3200635, 6001430) , and adjust the height of pressure food to an appropriate level, After adjustment, be sure to tighten screws again.

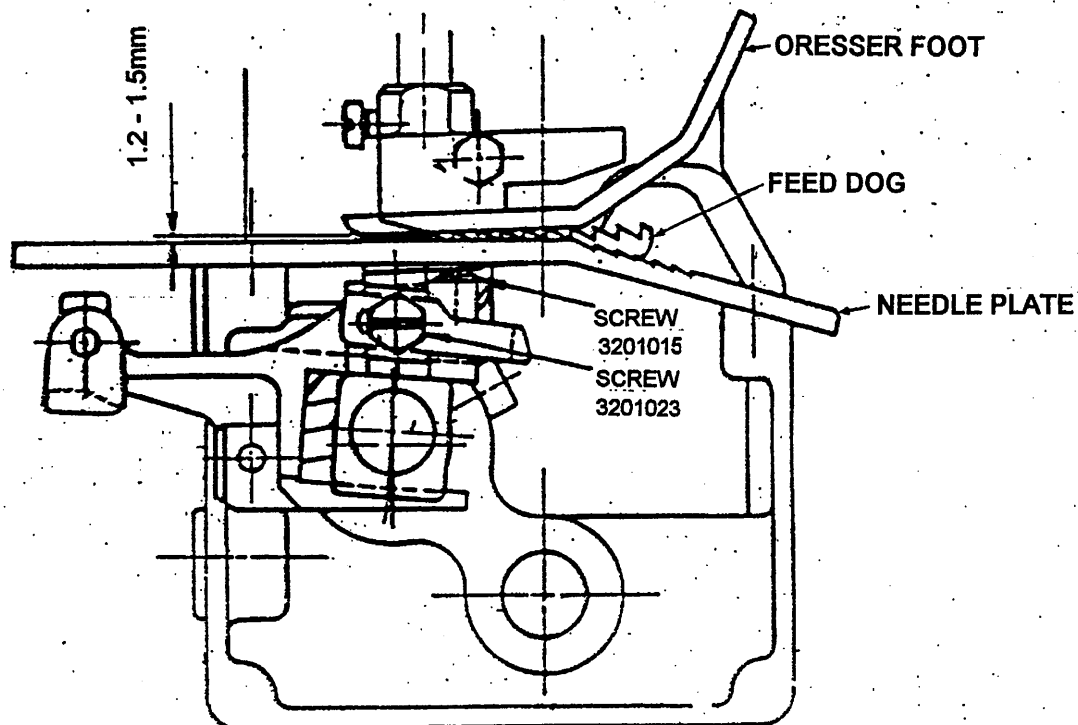


Fig. 10

12. Machine Cleaning.

- a. Immerse machine into the oil with level 110 ~ 130 mm heights for 20~30 sec. Be sure that the oil used could be the specified oil as shown in the following table.
- b. Do not immerse the motor and electric cable into the oil.
- c. Clean the dust on the machine frame and any internal parts with brush.

13. Trouble Shooting.

A. Thread break & Jump Needle.

- a. The thread shall be lubricated during sewing while the material of bag is that of bitumen or water proved material.
- b. Check whether the threading is correct, parts of thread passing is worn out, and the thread tension is suitable.
- c. Check whether the gap between needle and looper is correct. If looper is worn out replace a new one.

B. Needle break.

- a. Check whether the installation of needle is correct, and needle trench is faced leftward.
- b. Check whether the clearance of looper is normal.

C. Threading does not tie, or sewing distance is not uniform.

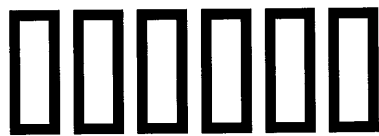
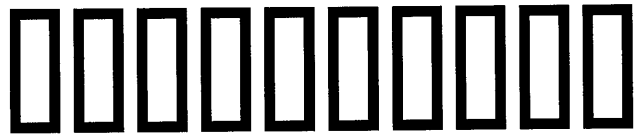
- a. Check whether the needle plate and pressure foot is worn out or distorted. If yes, replace it.
- b. Check whether the pressure on pressure foot is suitable. If not, adjust it.
- c. Check whether the feed dog is worn out. If yes, change it.

Additional Instruction for the replacement of feed dog.

1. Remove the feed dog as the following steps :
 - a. Turn the machine pulley until the feed dog is at its lowest position.
 - b. Remove the screw and the washer.
 - c. Pull the feed dog gently out off the carriage block.
2. Install new feed dog as the following steps :
 - a. Put the new feed dog to the carriage block.
 - b. Fix the screw and washer.

Additional Instruction for the replacement of motor brush.

1. Remove the worn brush as the following steps :
 - a. Loosen the screw at left side of motor.
 - b. Remove the brush set from its position shown as the following Fig.
2. install brush set as the following steps :
 - a. Put the new brush set into its position.
 - b. Fix the screw.



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