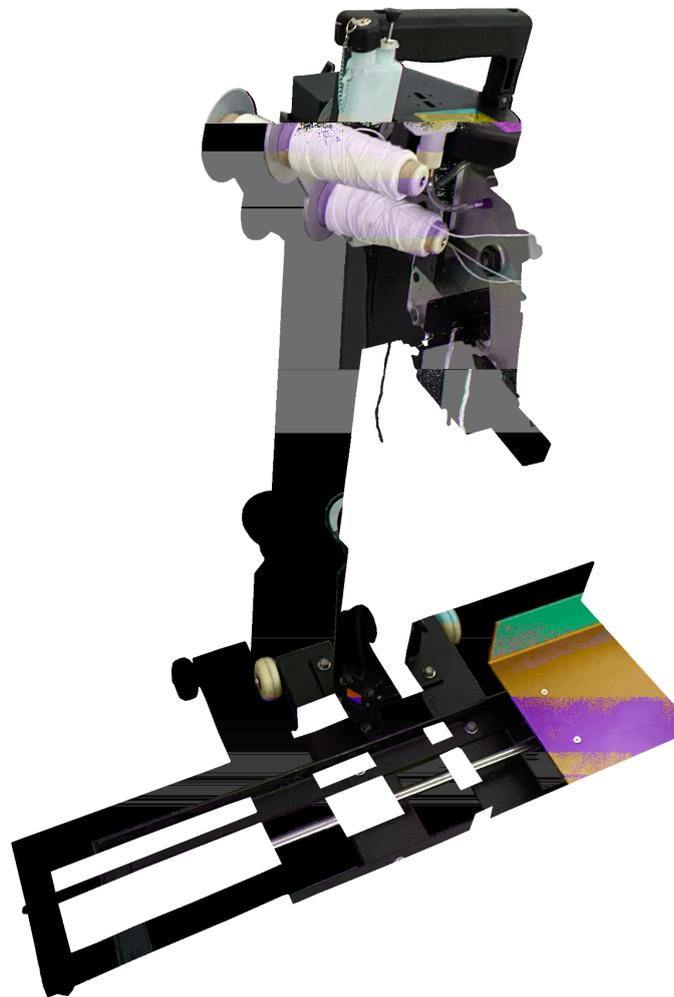


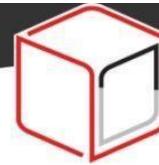


## STEP SK26-2A Bag Closing with Stand (Manual)



42811020 Manual UK 061221  
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## COMPANY INTRODUCES

"We believe packaging solutions for our customers should be simple, easy to use, ergonomic and sustainable.

We offer a wide range of packaging products and solutions, and web design and engineer production lines specifically built to your needs.

Our motto is simple: Sal-Tech Easy Packaging makes your life simpler through engineering and good design, and your job less stressful. We Keep Things Together."

Gunnar Salbæk  
Owner/CEO

## About Sal-Tech

Sal-Tech Easy Packaging offers a wide range of solutions for simple and reliable packaging of your products.

If it is a standard or a special solution that's needed for your assignment, we have a creative input to solve your needs, securing you an up to date packaging application.

Sal-Tech Easy Packaging is 100% owned by Gunnar Salbæk,

CVR no.: DK18429098 Salbæk Easy Packaging v/Gunnar Bjørn Salbæk.

Our team works together on a 100% virtual platform and therefore please forward all correspondence and invoices to e-mail til [invoice@sal-tech.com](mailto:invoice@sal-tech.com).

Bank connection: Nordea Denmark.





## **WARNING**

PERSONAL INJURY MAY RESULT IF THE FOLLOWING SAFETY PRECAUTIONS ARE NOT OBSERVED

1. Be sure the area surrounding machine is free of all hazards such as fire, water, oil, rubbish or anything that can cause injury.
2. Do not operate machine in an explosive area or under wet conditions. The machine is not an explosion-proof type nor water type.
3. Do not operate machine before reading instruction manual.
4. Do not operate machine on voltages other than specified for the machine.
5. Be sure machine is connected to building electrical safety ground (earth).
6. Be sure power (and air supply) is off before performing machine maintenance, parts replacement, adjustments or cleaning.
7. Do not operate machine with guards and covers removed.
8. Do not touch needle, pulley, belt and moving parts when machine is in operation.
9. Be sure machine is placed on a smooth (level) surface when performing maintenance, parts replacement, adjustments, cleaning or storage.
10. Be sure the material to be sewn or closed complies with the machine specifications.
11. Do not use spare parts other than genuine parts.

## **SAFETY RULES**

To prevent personal injury:

- All power sources to the machine must be turned off before threading, oiling, adjusting or replacing parts.
- All covers and guards must be in position before operating machine.
- Do not tamper with safety cover, guards, etc., while machine is in operation.

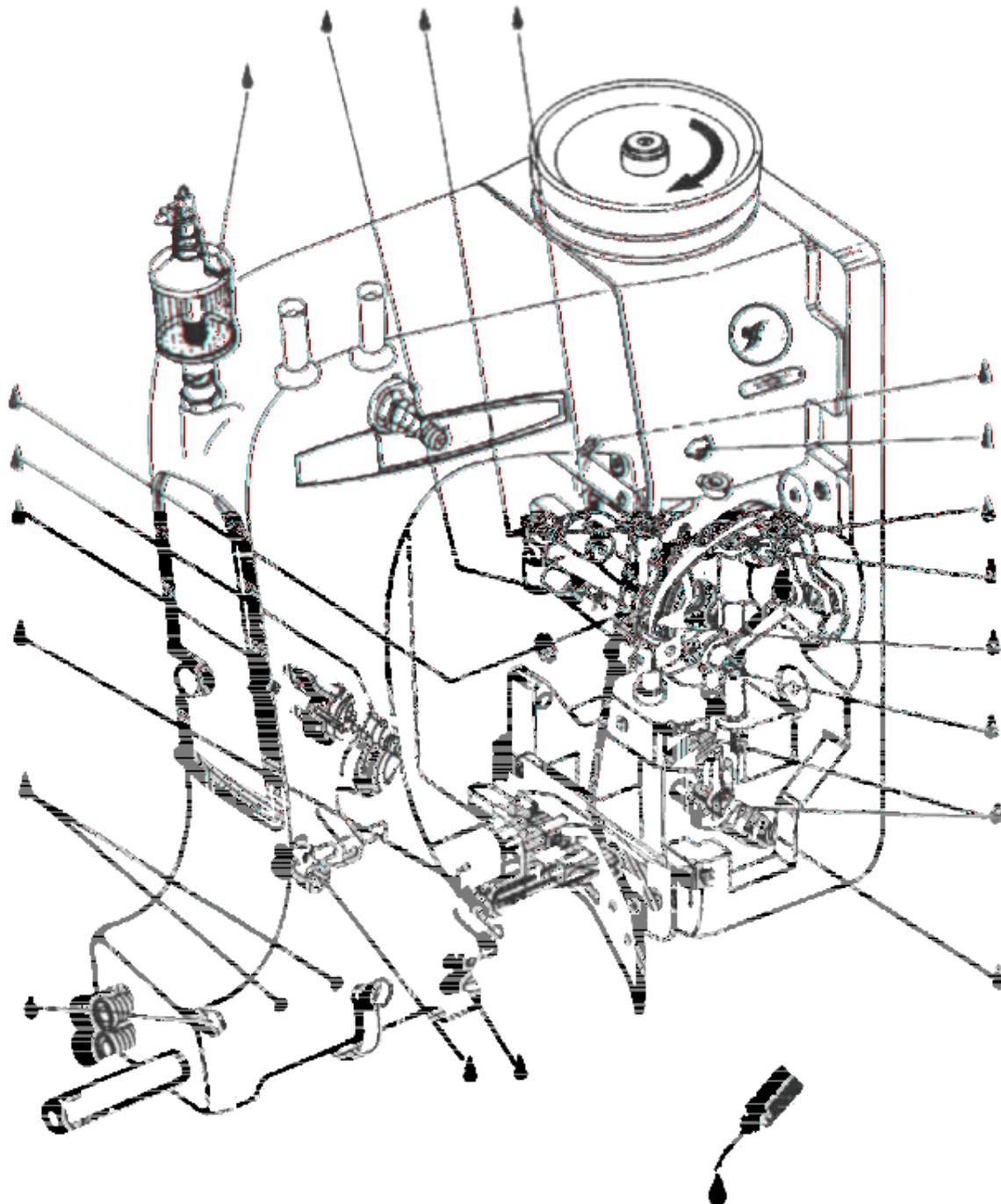
## **SAFETY PRECAUTIONS**

1. Always turn power off before threading, oiling, and adjusting machine or replacing parts.
2. Wear safety glasses.
3. Make sure, before starting the machine, that all covers and shields are in place and closed.
4. Do not touch on the machine when it is run.
5. Turn power off and make sure the needle does not operate before you put your fingers under the needles to adjust.
6. Do not touch on the machine when it is run.

## **MAINTENANCE**

- Please keep in mind to handle the machine carefully and to maintain the machine in good condition.
- Thread fuzz or dust must be cleaned with air or brush on throat plate, in the groove of feed dog or around looper after the day's work.
- Wipe the area easy to rust with oil cloth.
- Check the machine for loose screws and tighten them, if any, once a month.
- Good maintenance will prolong the machine life.





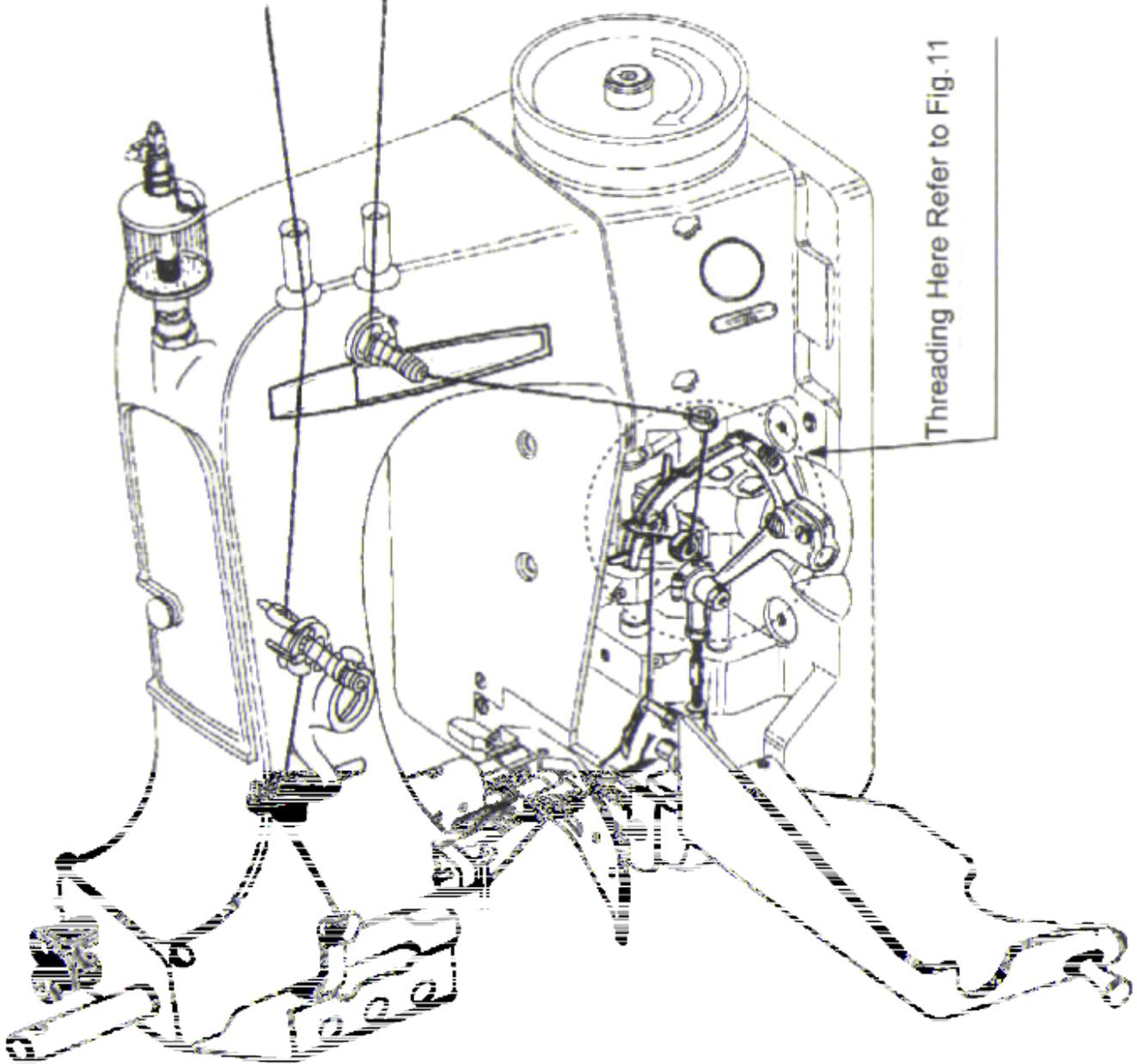
Lubricating Points





Upper Thread    Lower Thread

Threading Here Refer to Fig.11





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## I. CHARACTERISTICS AND APPLICATIONS

STEP SK26-2A Bag Closing with Stand machines fall into three types, man operated start and stop of machine with semi-automatic thread chain cutter, automatic start and stop of the machine with solenoid operated thread chain cutter, and with electro- pneumatically operated thread chain cutter. All these machines adopt semi- closed structure for easy maintenance. Crank shaft tail end adopts closed rolling bearing mechanism for the purpose of high speed, wear resistance and flexibility. Lubrication system falls into permeating oil cups with felt reservoir and spray types. Main parts adopt wear resistance materials such as alloy steel and alloy copper etc., All types of thread chain cutters adopt safe built-in structure. All types of machine heads hang on column support combined with feeding devices for closing filled bags and sacks made of cotton, jute, plastic and paper etc.

## II. SPECIFICATIONS

Model	STEP SK26-2A Bag Closing with Stand
Item number	42811020
Max. Speed	1900 rpm
Working Speed	1700 rpm
Thickness of Material	8mm
Range of Stitch Width	6.5 - 11 mm
Stitch Type	Double Thread Chain Stitch
Thread Type	20/6, 20/9 Synthetic Fibre Thread or Cotton Thread
Needle	Modeol 80800 200 ~ 250#
Pulley	114mm
Thread Chain Cutter	Manual Operated
Motor	Common Motor
Motor Power	370W
Weight	27kg
Size (L x W x H)	350 x 215 x 440 (mm)

## III. GENERAL DESCRIPTION

Equipped with mechanical thread chain cutter which makes reciprocating motion by running of the machine. The bag being fed into the machine will continue to sew a length of thread chain after closing the bag. Push the thread chain together with materials into open slot in the throat plate to cut. Start and stop of the machine are operated.

## IV. THE POINTS BEFORE OPERATION

New machine or through long time storage machines must be checked before operation. Cleaning the anti-rust grease and dust on the surface of the machine, and filling sewing machine oil or white spindle oil 60\$ into oil cups and oil holes. Turning the pulley clockwise by hand. Check for the same and cooperation. Check motor rotating direction for the same as that of the machine running. Then starting the machine for test sewing.



For automatic style machine, check electrical equipments, circuits and pneumatic cells whether they are good. Before threading, filling, oiling, adjusting or replacing parts, all power source must be cut to prevent personal injury.

**V. LUBRICATING**

Routing maintenance is important to prolong the machine life. Machines have to be cleaned and lubricated twice a day at the lubricating points according to the oiling diagram (Fig 1), making oil felt soaked in oil. The sight feed oiler and oil sprayer have to be kept filled and should be adjusted so that it feeds two or three drops of oil per minute.

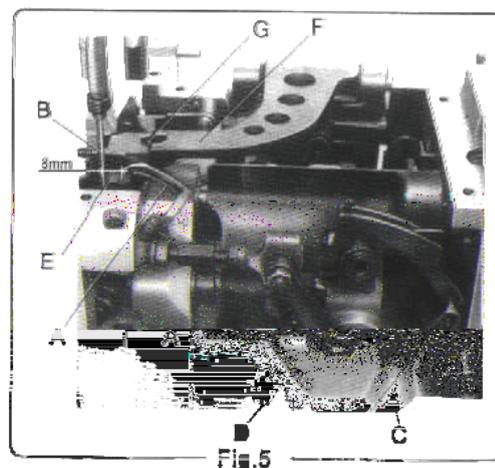
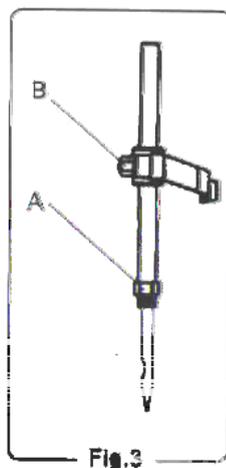
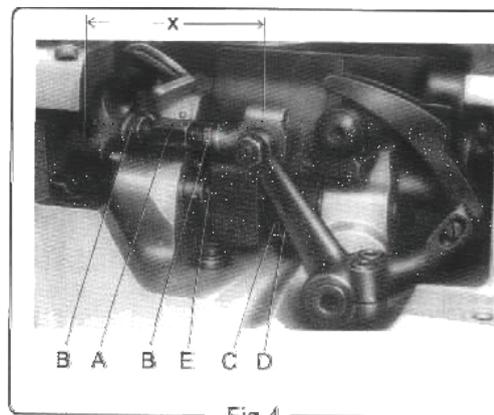
**VI. NEEDLE, THREAD AND THREADING**

Selections of needle and thread depend on quality and technical demand of sewing material. Good combination of the needle and thread is one of the basic condition to get perfect sewing performance. The needle point must be sharp, and the thread must be strong enough.

Thread machine as illustrated in Fig 2, draw out upper and lower thread from needle eye and looper hole about 50mm.

**VII. INSERTING NEEDLE**

The needle eye wears out obviously, needle point wears dull or bends, replace it. When replacing it, turn the pulley until the bar reaches its highest position. Loosen the needle bar nut, and insert a new needle with the shank as possible into the needle bar. The needle long groove must point to the sewing direction of the sewing materials. then retighten the needle set screw.





## VIII. ADJUSTING

### 1. Looper

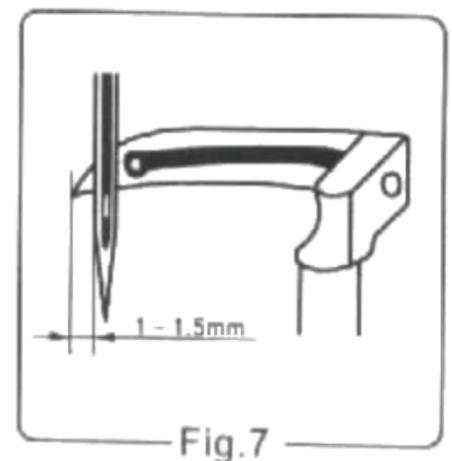
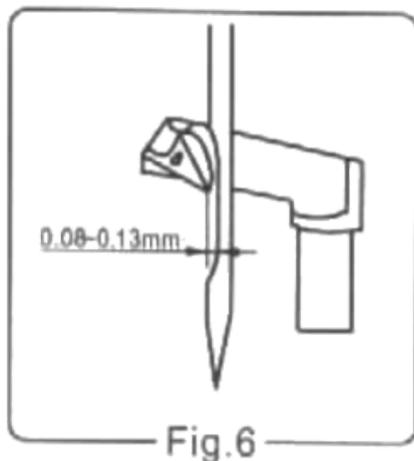
- a. First set the looper connecting rod A (Fig 4), so the distance X (Fig 4) between the centre lines of the two ball joints is 69.8mm. For adjustment, loosen the two nuts B and turn connecting rod A forward or backward as required to obtain specified dimension. Retighten nuts B.  
Caution: Left nut is left hand thread.
- b. Rotate the machine pulley clockwise by hand, so that the needle bar moves to the lowest point, at the same time the looper moves back to its farthest position to the right. The distance from the point of the looper A (Fig 5) to the centreline of the needle is 8mm. For adjustment, loosen two screws C in the looper drive lever, rotate looper drive lever D left or right as required to obtain specified dimension and retighten screws C.  
Caution: Pull looper drive lever rocker back tightly when tighten screws C so that the end face of the looper drive lever rocker leans against that of shaft bushing, assuring that clearance between both ends is taken out. (Otherwise it will make noises.)
- c. Rotate the machine pulley so that the looper A (Fig 5) moves from right to left. The looper point should pass close as possible as the buck of the needle without contracting, about 0.08 ~ 0.13mm (Fig 6) clearance. For adjustment, loosen screw D (Fig 4) in the looper eccentric fork C and turn rocker shaft E on the looper rocker with the looper forward or backward as required. Retighten screw D.

### 2. Needle Bar

Remove the throat plate. Rotate the machine pulley in operating direction until the looper moving to the left. When the looper point projects 1- 1.5 mm left of the needle, the lower edge of looper and the upper edge of the needle eye must be flush in this position (Fig 7) For adjustment, loosen clamp screw B (Fig 3) in the needle bar up or down as required. Retighten screw B and remount throat plate.

### 3. Needle Guard

The needle guard E (Fig 8) will protect the needle and prevent it from bending or breaking when the needle goes down. The clearance between the needle and the needle guard is 0.08 ~ 0.13mm (Fig 8). For adjustment, rotating pulley in the direction of operating, so that the needle guard moves against the needle. Loosen set screw C on feed dog holder (Fig 5) move the needle guard accordingly. Retighten screw



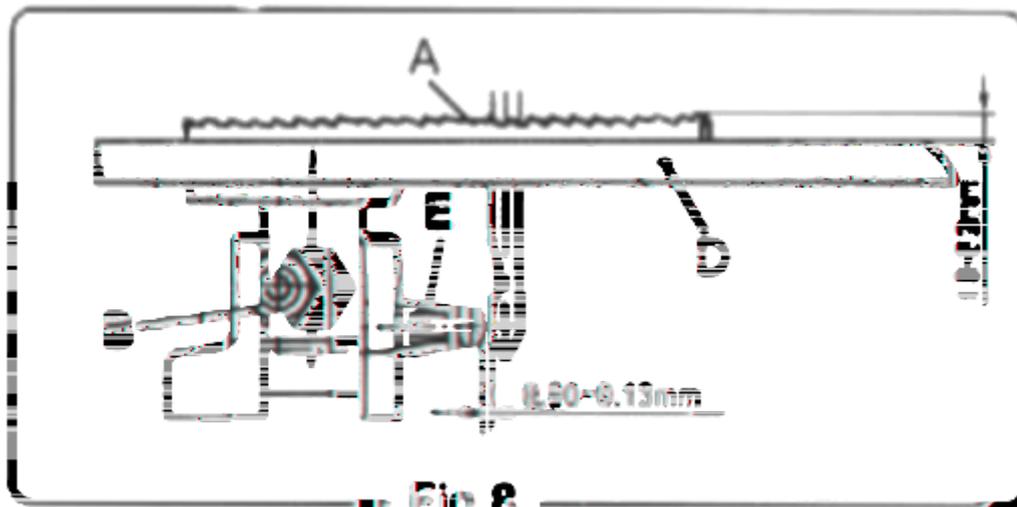


Fig. 8

#### 4. Feed Dog

The height of the feed dog A (Fig 8) is determined by the quality and the thickness of the sewing materials. For closing thin material such as bags made of cloth and plastic, teeth surface should project 1.8mm above the throat plate D top surface, and for sacks about 2.2mm above the throat plate. For setting, move the feed dog to the highest position, loosen nut B and adjust feed dog by raising or lowering it. Retighten screws B.

If feed dog is not in the centre in the throat plate slots. Loosen screws D in the feed rocker C. (Fig 9). move the feed rocker right or left as required. Then retighten screws D.

#### 5. Stitch Length

The length of the stitch can be adjusted by raising or lowering the stud A in the segment slot of the feed rocker C (Fig 9) Lowering the stud will shorten the stitch. After loosening nut B.

Caution: Any change of stitch length necessitate a corresponding change of clearance between the needle guard and needle.

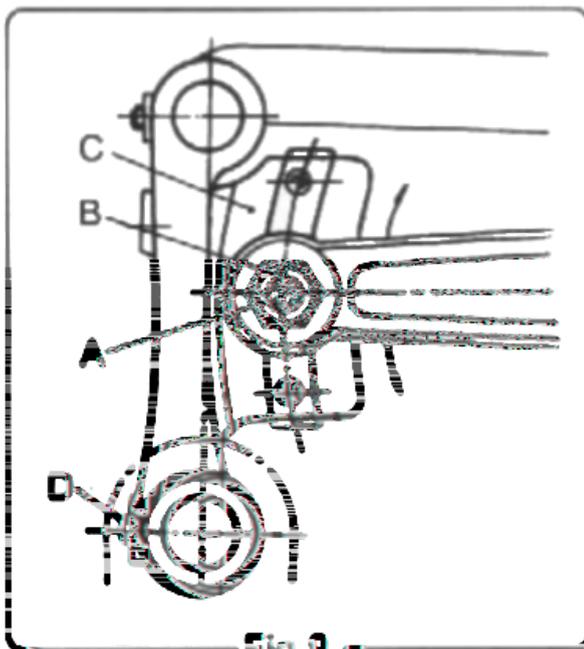
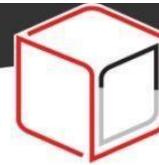


Fig. 9





#### 6. Pressure of Presser Foot

The pressure of presser foot is determined by the thickness of the sewing material. When sewing thin materials, decrease pressure; When sewing thick materials, increase pressure. When feed sewing materials smoothly and stitches are uniform, don't increase pressure, to reduce parts wear. For setting pressure; turn two collars A in to increase pressure, turn out to decrease pressure.

#### 7. Thread Tension

Thread tension is adjusted by thread tension assembly B. and C (Fig 10), tension of upper thread is generally stronger than that of lower thread. Turn thread tension B and C in to increase the tension, turn them out to decrease the tension. If the stitch is still not good, should adjust the height of thread adjusting bar D. The height of the thread adjusting bar D is at the same level with the thread eye of the needle bar connection at its highest position.

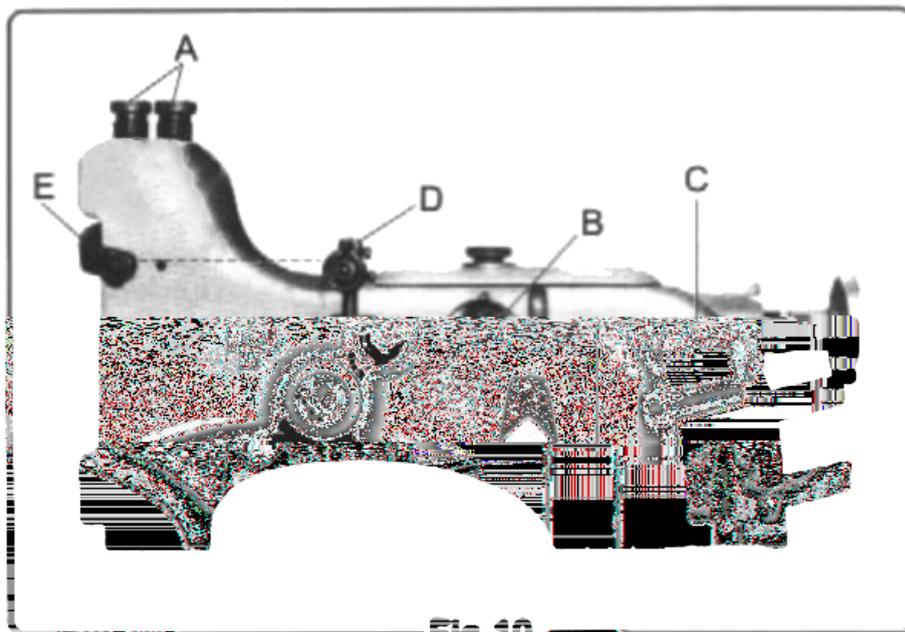
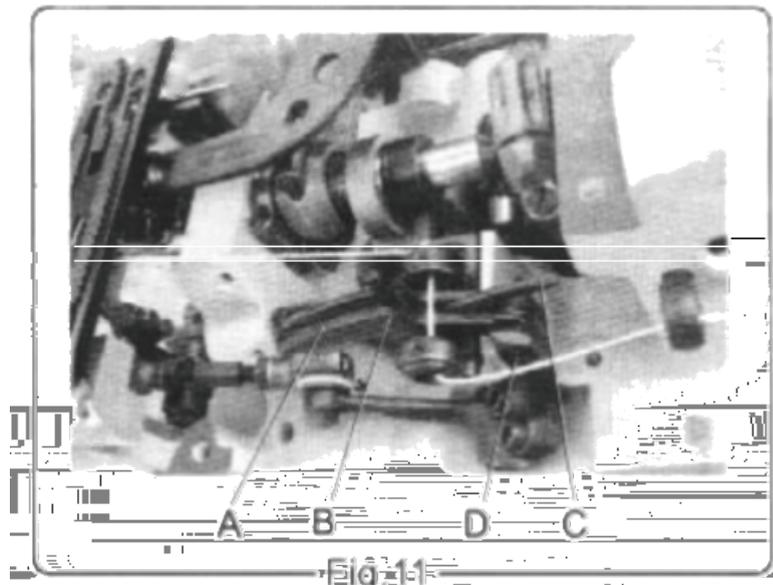


Fig. 10





8. Loper thread take- up mechanism consists of looper thread take- up A (Fig 11) and cast-off hook C. When the needle falls into the loop formed by looper, the point of the descending needle is flush with the lower edge at looper or projects up to 1mm below the lower thread is released in R angle B from the looper thread; lowering the looper thread take-up to move up the releasing of the lower thread. Retighten screw D. It is very important for stitch forming to adjust thread take-up correctly.

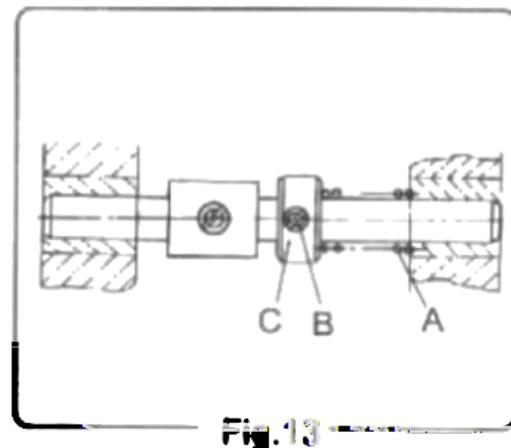
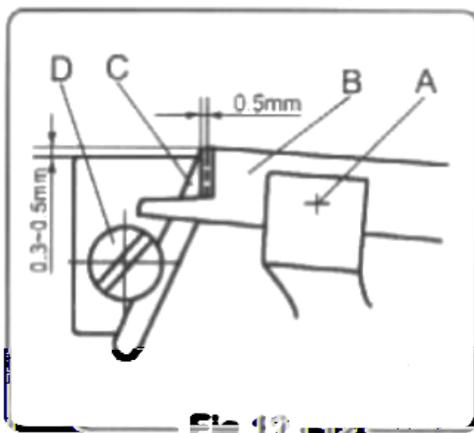


9. Mechanism Thread Chain Cutter

STEP SK26-2A Bag Closing thread chain cutter is driven by mechanism. The knife C (Fig 12) is positioned in tapered slot in the front of the basic by screw D. The cutting steel B is positioned in the slot of the knife holder by screw A and goes back and forth with the running of the machine. In cutting, the edge of the cutting steel and the screw A and D, ser as required, relighten screw.

Caution: The tips of the knife and the cutting steel should be positioned 0.3 ~ 0.5mm below the throat plate bottom surface.

The lateral pressure between the knife and the cutting steel is activated by the spring A (Fig 13). And it is determined by actual requirements in thread chain cutting. For adjustment, loosen the collar C of spring and Screw B, increase or decrease the pressure as required, then retighten screw B.



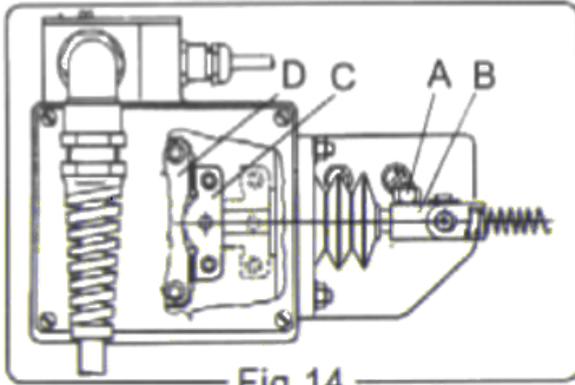


Fig. 14

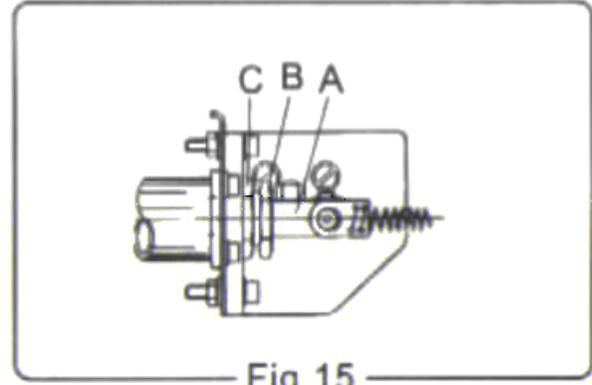


Fig. 15

#### 10. Solenoid and Electro- pneumatic Cutter

STEP SK26-2A Bag Closing thread chain cutter is driven by electro-magnet. When the thread chain cutter is in its home position below the throat plate, the knife tip of the chain cutter S (Fig 16) should be positioned 0.5mm below the throat plate top surface. To obtain this, adjust the knife lever stop screw T with lock nut in the bottom of the bed casting accordingly, retighten nut. In cutting position, above the throat plate top surface, the cutting edges of the chain cutters should overlap by 0.3mm.

Caution: The piston of the air cylinder should not strike against the cylinder inside when actuated. The stroke of piston must be limited by clamp A (Fig 17) striking against hexagon head stop screw B. Operating pressure of air cylinder is 0.3 - 0.5Mpa.

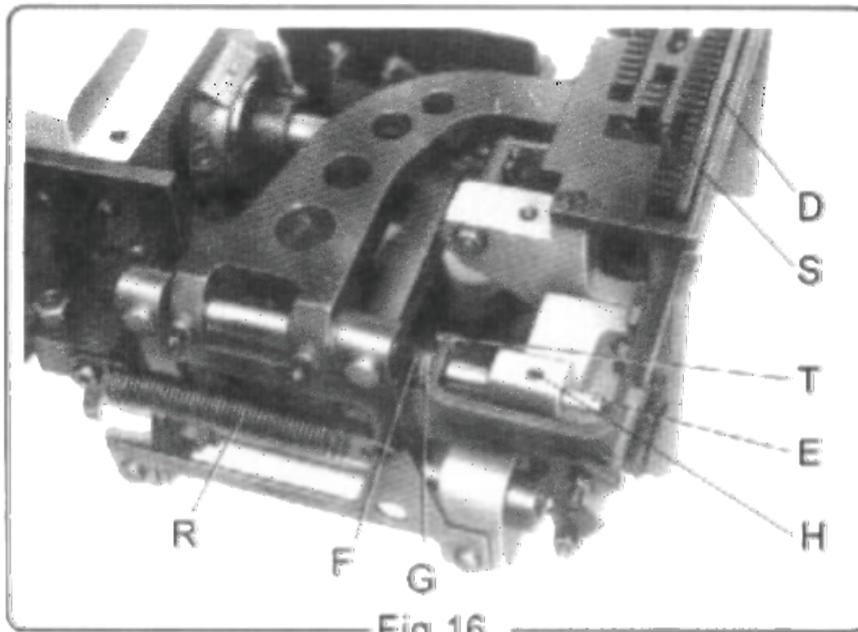
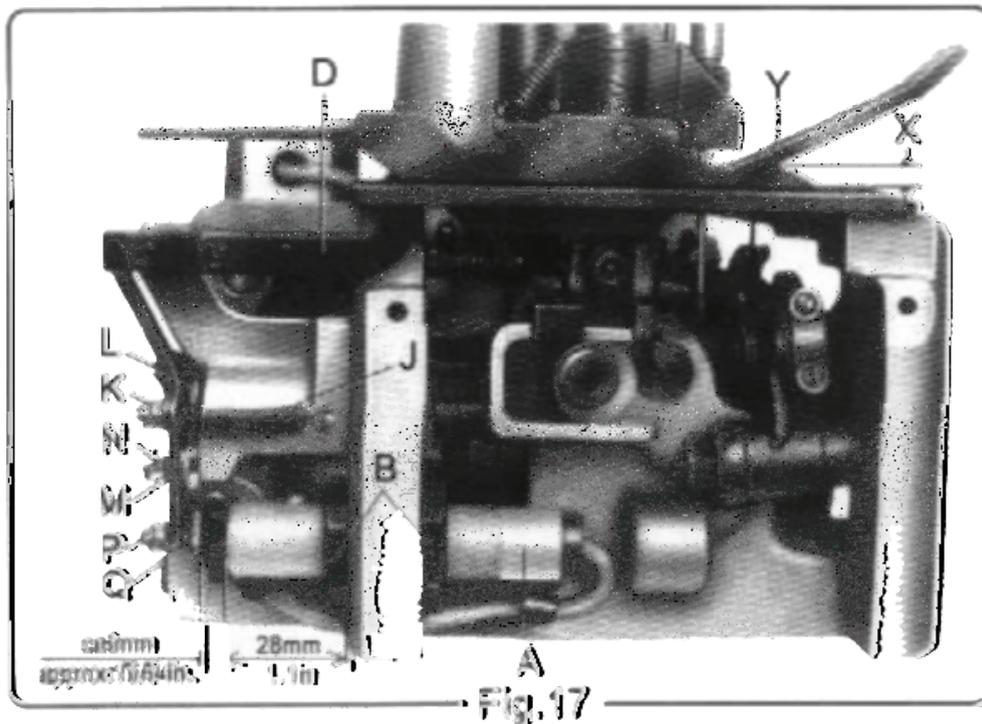


Fig. 16





### 11. Setting the Feeler

#### a. Mounting the Proximity Switch

Remove cloth plate and left end cover, mount the electronic proximity switch A (Fig 17) to the dimension of 28mm as shown in (Fig 17). When retighten two plastic nut B, don't damage the proximity switch.

#### b. Setting the Feeler

The feeler D (Fig 16 and Fig 17) is adjusted initially with the two fastening screws for the feeler support bracket. The feeler should not have any lateral play, but should turn readily. For this, loosen lock nut G (Fig 16), turn fastening screws F in or out as required until the feeler turns readily. Retighten lock nut G.

The feeler D should be in the centre of the throat plate and the slot of the presser foot. For this, loosen lock screw H (Fig 16) and centre the feeler D in the throat plate and presser foot slot by moving the centre shaft E. (Fig 16) laterally. Retighten screw H.

#### c. Setting the height of the Feeler

The Dimension X (Fig 17) between upper throat plate surface and the feeler should not be less than 7mm (set as high as possible). The distance between upper edge Y of feeler and lower edge of the feeler slot cut-out in the presser foot should be approx. 1mm to prevent impacting. For adjustment, loosen nut K and turn off screw L, so that the head of screw does not contact the magnet in the feeler support bracket. Loosen nut and turn the feeler stop screw N in or out as required, to adjust the correct feeler height X, secure the set feeler height with lock nut M.

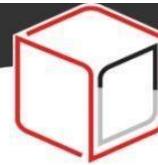
#### d. Setting the Switching Pressure (Fig 17)

The switching pressure on the feeler D is determined by the distance between screw L and the magnet in the feeler support bracket. The closer the head of screw L to the magnet, the higher the switching pressure on the feeler. For adjustment, turn screw L slowly towards the magnet in the feeler, then turn it back ½ turn, so that the feeler moves freely, secure the position of screw with lock nut K.

#### e. Setting the Switching Point (Fig 17)

The electrical switching point of the proximity switch A is determined by screw Q. When the feeler is in home position, the distance between screw head and the face of the proximity switch is approx. 6mm (just for reference, should connect the machine electrically to set). With the feeler in home position set the proper switch in point as





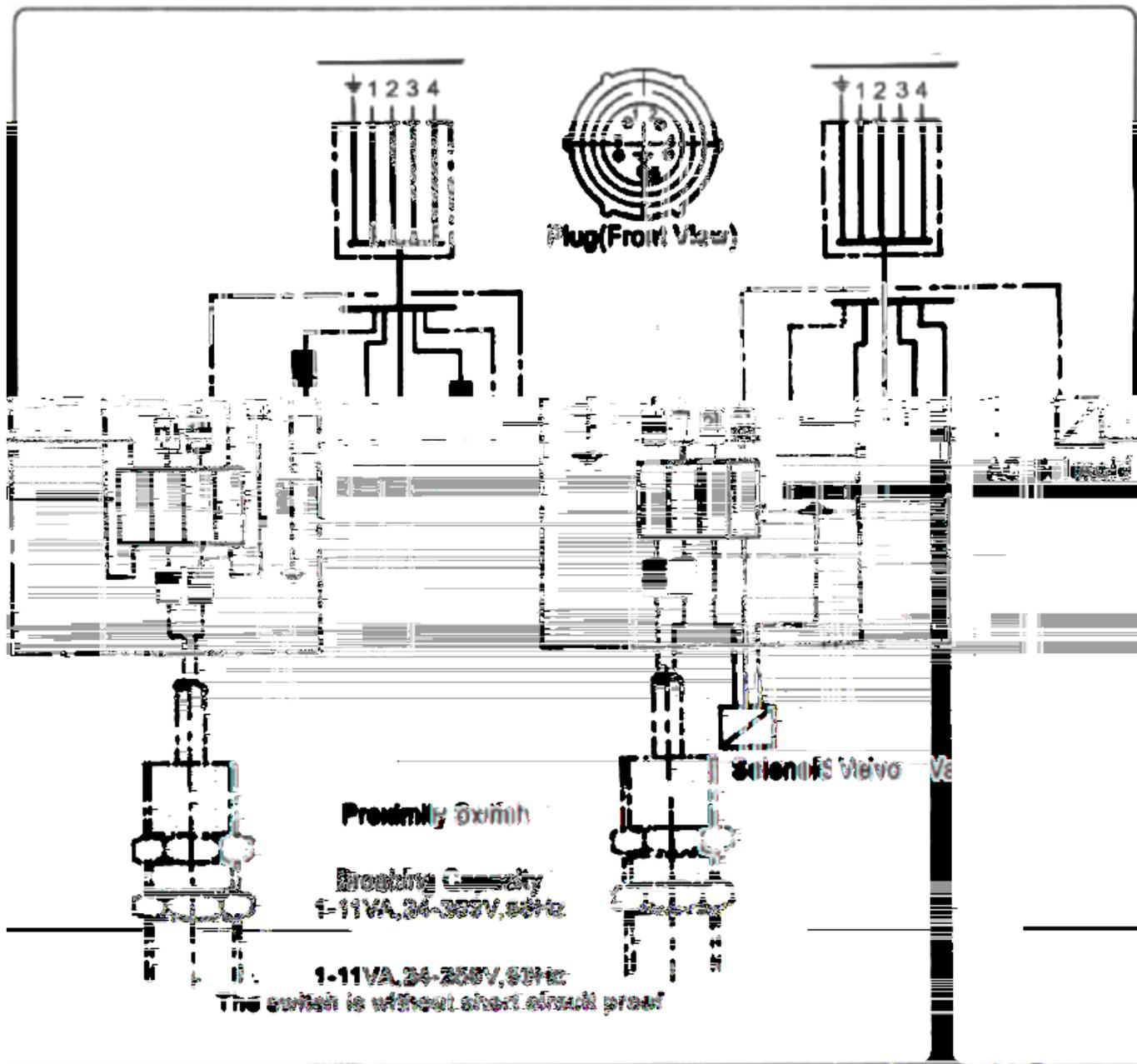
follows. Loosen nut P, turn screw Q away from switch, until the switch switched off. Now turnscrew a further ½ run towards the switch. Secure this position of screw Q with lock nut P.

### 12. Setting the Time Delay Relay

Setting the time delay relay in the switch bx of the sewing station under following conditions.

- a. The sewing machine does not fully stop, the cutter is actuated.
- b. After the bag on the feeder is closed, it will continue to sew out a length of thread chain. When the thread chain hasn't been tightened, the cutter is actuated.

Caution: When setting the relay, there is line- voltage on the open switch box.





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Large Noises	1. Driving parts are vulnerable, lead to clearance increasing	Replace parts	5
	2. Set screw is loose, lead to parts striking each other	Tighten screw	
	3. Oil connections are not smooth, lack of oil	Cleaning and oiling	

