

INSTRUCTION MANUAL

ITEM NO.: SF30T series

AUTOMATIC SCREW SUPPLIER

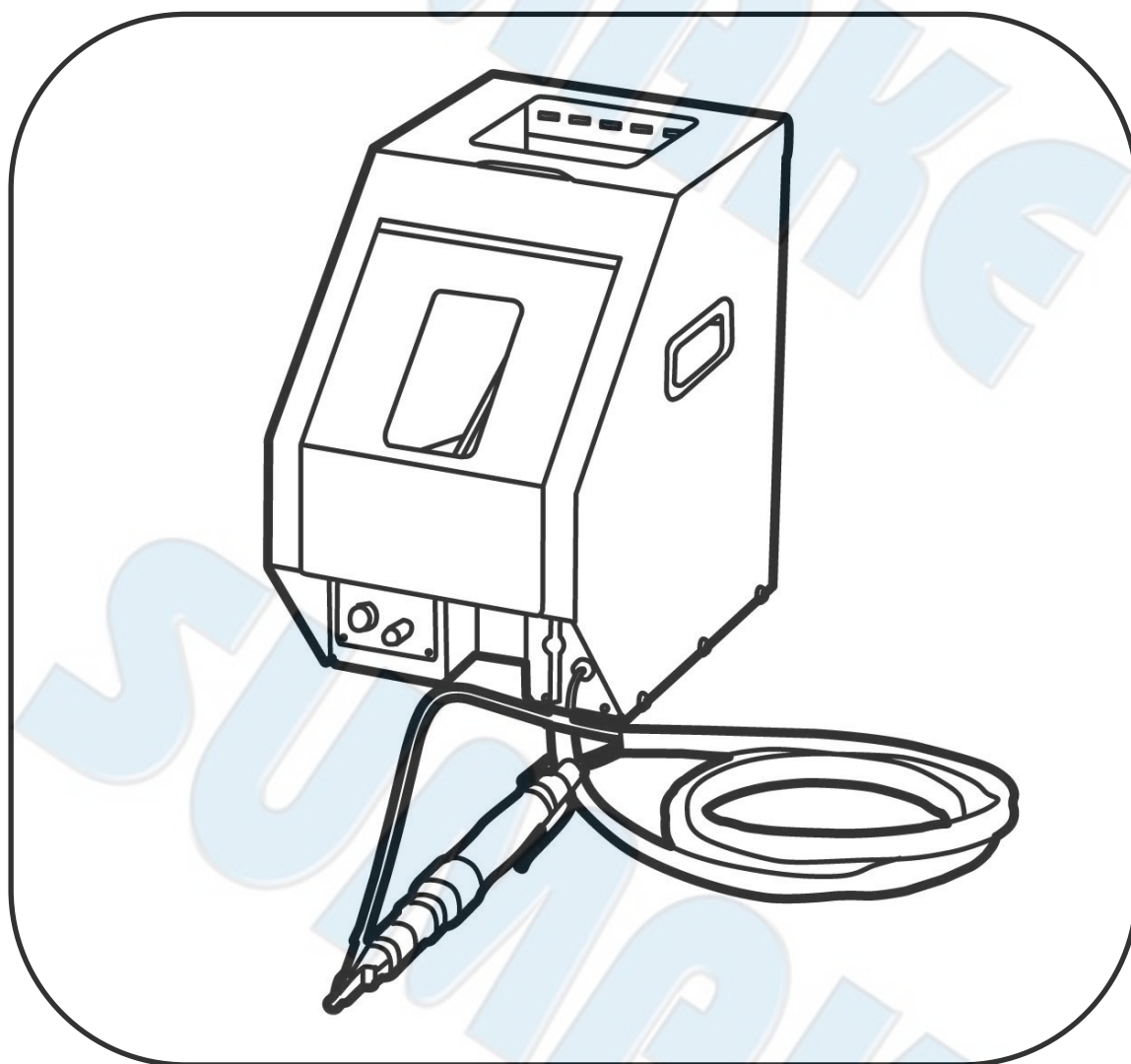


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I. About SF30T

1. Features

1. Designed for speed, stability, and convenience.
2. Improving screw driving speed and work efficiency by integrating pneumatic/ electrical screwdriver, high-tech automatic feeder, and high precision jaw.
3. The jaw is customized by particular screw and working environment to provide a stable operation.
4. Standard pneumatic screwdriver; optional models by customer also available.

2. Specification

Model	L / W / H	Weight	Voltage	Air Pressure
SF30T	35 / 25 / 38 (cm)	22 kg	AC 220 V	5~6 kg / cm ²





3. Working condition

- (1). Installation : general indoor
- (2). Working temperature : -10°C ~ +40°C
- (3). Working ambient humidity : 20% ~ 90% (no condensation)。








II. Safety precautions

To avoid endangering the lives and property of the individual and other and to prevent occurrence of dangerous, please follow and read this instruction.

1. Warning:

	【Prohibition Sign】 fire, electric shock or personnel injury or death may occur if not observed.
	【Alarm Sign】 Damage of properties, or electric shock or personnel injury may occur if not observed.

2. Safety:

	DO NOT place and operate the machine on an unstable table.
	Please use correct voltage and ensure whether the ground wire connected.
	Please use machine follow instruction of manual correctly.
	DO NOT disassemble or modify the machine.
	In case the machine emits smoke, the machine drops from a height, or water gets into the machine, please immediately remove the power plug; then send the product to repair.
	DO NOT place and operate the machine on an unstable table.
	Prohibit to place machine in flammable or corrosive gases position.



Prohibit hand in screw feeder when working to avoid dangerous



Please use specific power. Remove the power plug if the machine is to remain idle for a long period of time.



Do not place non-spec screws into the hopper.







Do perform regular maintenance of the machine as scheduled.

III. Installment

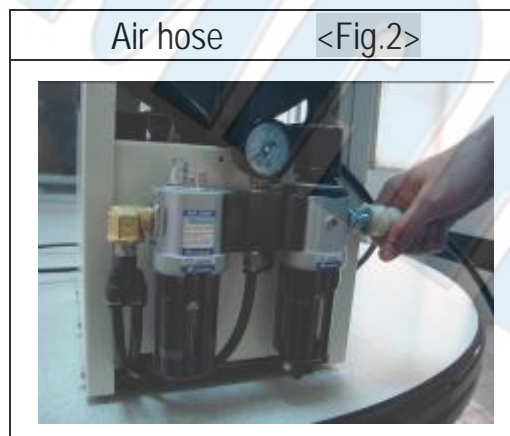
1. Preparation

1. Connect the screw delivery hose, screwdriver plug and signal cable to the feeder unit. See <Fig.1>
 - Take a balance of the driver unit for easier fastening. While taking balance, make sure that the signal cable and air hose do not contact with hook or balancer wire. Care should be taken to prevent excessive bending or twisting of hoses and cables, since this can cause damage or disconnection.
 - Connect the screw delivery hose between the feeder and the driver as soon as possible. Make sure that it is not excessively bent or twisted after installation.

<Fig.1>

Connect delivery hose	Screwdriver Plug
 <p>A hand is shown connecting a clear plastic delivery hose to the feeder unit. The hose is connected directly to the designated port without any sharp bends or twists.</p>	 <p>A hand is shown connecting a clear plastic delivery hose to the feeder unit. The hose is bent at a sharp angle, which is an incorrect installation method.</p>
<p>Correct Delivery hose installment</p>	<p>Incorrect Delivery hose installment</p>
 <p>A different angle showing the clear plastic delivery hose connected to the feeder unit, demonstrating the correct installation.</p>	 <p>A different angle showing the clear plastic delivery hose connected to the feeder unit, demonstrating an incorrect installation with a sharp bend.</p>

2. Connect feeder unit to compressed air source with an air hose supplied. See <Fig.2>
Air pressure for the feeder unit is 5-6 kg/cm².



- Since this unit has no provisions for adjusting air pressure, pressure must be controlled at the source. (PULL UP FIRST, AND ROTATE) see <Fig.3>

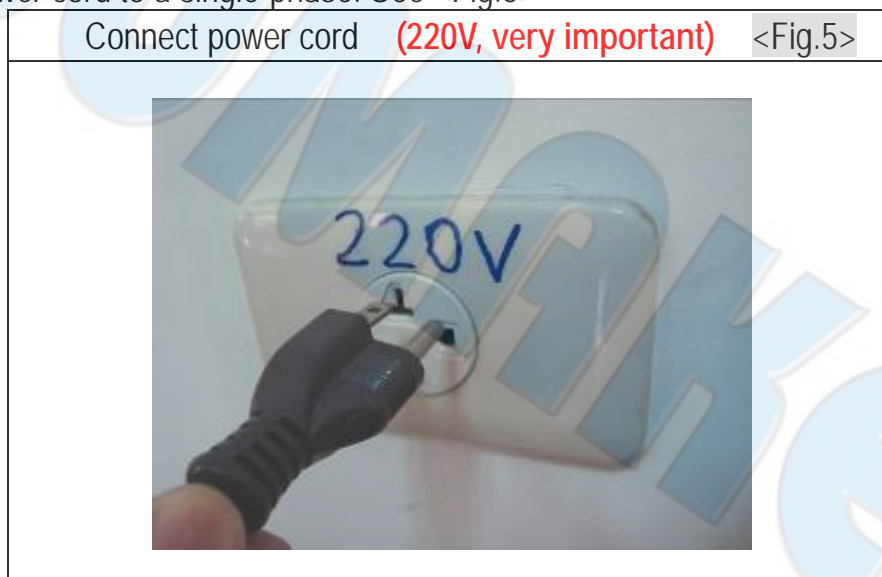


- Screw delivery timer check.
Check screw delivery timer setting on the front of the feeder unit. Standard operation setting is 0.5. see <Fig.4>

NOTE The timer needs to adjust for different length of delivery tube.

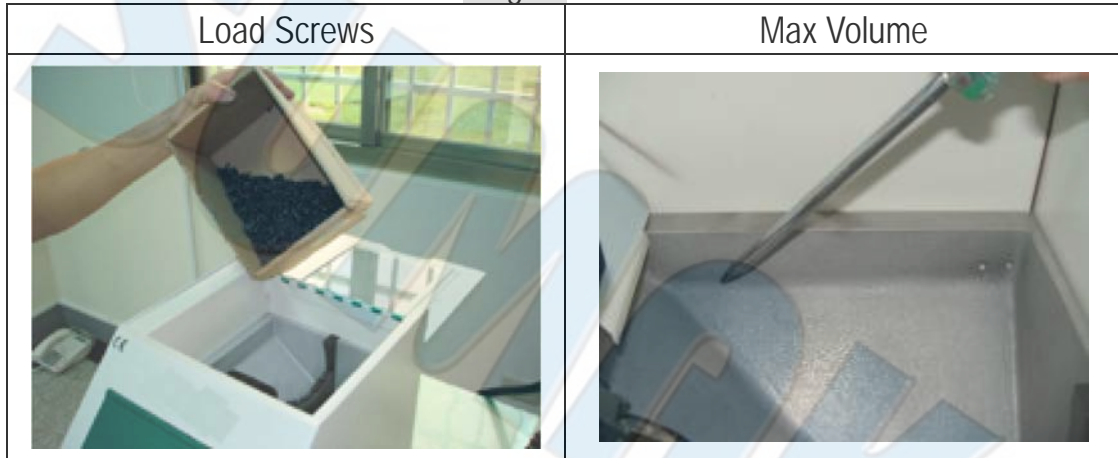


- Connect power cord to a single-phase. See <Fig.5>

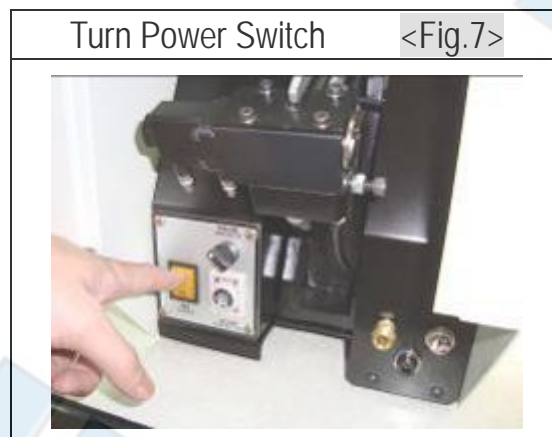


2. Tryout

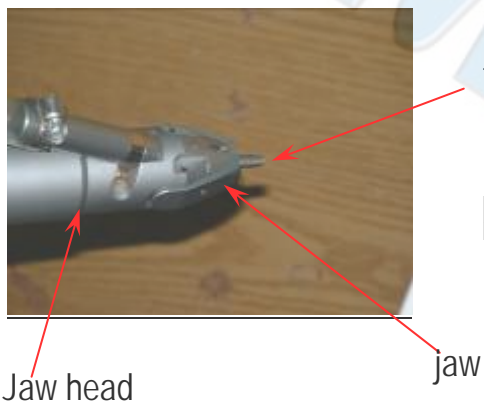
1. Open the hopper and cover and load hopper with a small quantity of screw. See <Fig.6>



2. Turn power switch on. See<Fig.7>
The power and motor pilot lamps will light, the feeding track will start reciprocating and screw will be fed into the chute.



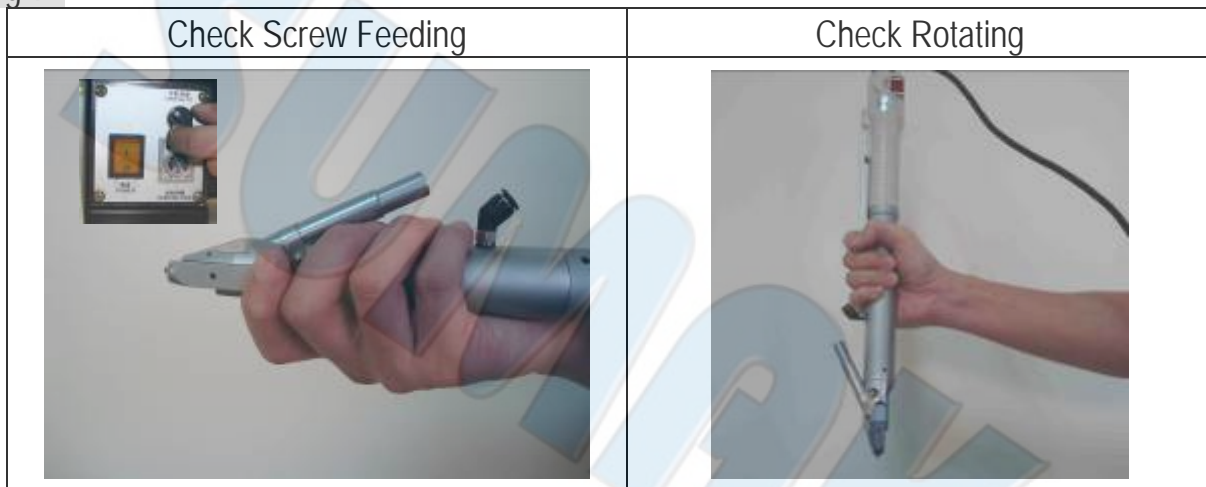
3. Check the operation of feeding is normal
 - ✓ Check whether the pushing board working continuously. Once the chute is filled, the rotary drum automatically stops and the motor pilot lamp will go off.
 - ✓ Check the screw can move forward smoothly.
 - ✓ Press the lever for 1 second then release, the screw will be fed.
 - ✓ Check the screw can reach tip of jaw after feeding and the thread expose from jaw. See <Fig.8> (The dimension of screwdriver will be different for different screw)



4. Confirmation of driver bit rotation.

- ✓ Check the screwdriver rotate after pressing lever and is there any abnormal sounds.<Fig.8>
- ✓ Please check screwdriver switch is correct or not- clockwise or counterclockwise. <Fig.9>

<Fig.9>



<Fig.10>

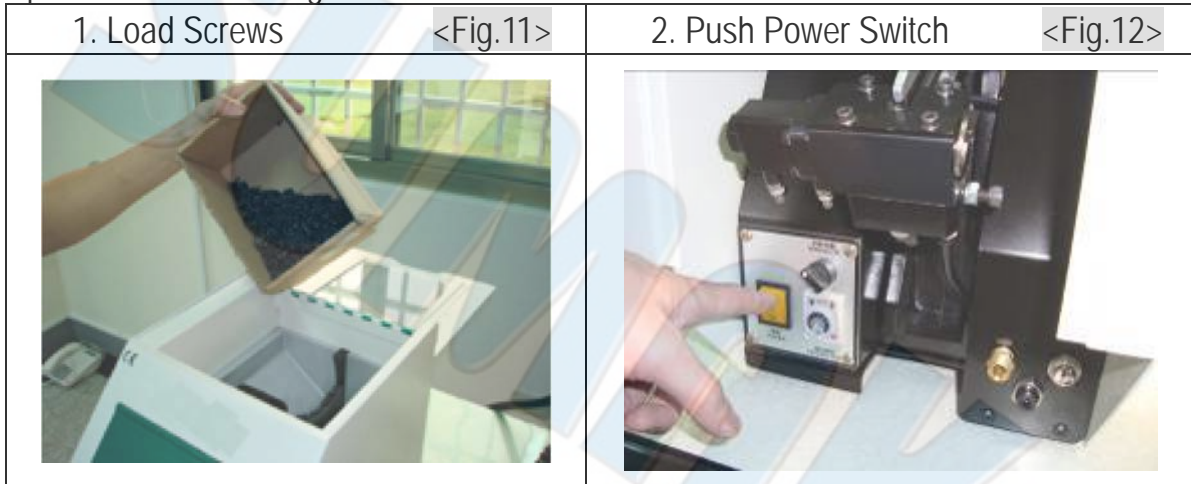


5. Check torque range is suitable or not

- ✓ Check torque range
- ✓ Screwing by current torque setting then check is it suitable or not.
- ✓ If not, the torque has to re-setting.
- ✓ Please make sure the driver is vertical to work surface.

3. Normal Operation

1. After all preparatory steps have been completed, load screw into the hopper. <Fig.11>
2. Turn power switch on. <Fig.12>



3. Press lever to feed first screw.
NOTE : Press lever for 1 second then release to feed.
4. Make sure screw reach tip of screwdriver and the thread expose from Jaw.
5. Align the screw at the driver tip vertically with the screw hole of the work-piece.
6. When the driver bit is pressed against the screw, the screw will be tightened.
7. Then, repeat steps 5 and 6 to tighten subsequent screw.

IV. Adjustment and replacement

1. Air volume adjustment

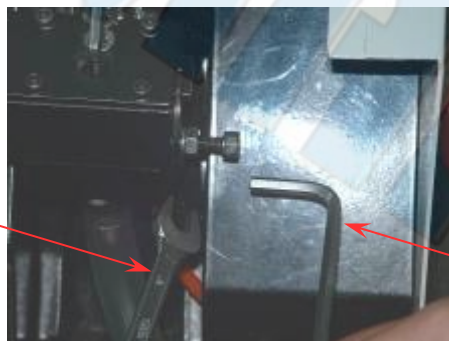
If the screw can't reach to screwdriver within feeding time, please adjust air volume by procedures as below.

- a. Use wrench to release nut of escapement.
- b. Then use wrench to adjust screw by procedures as below.
 - ※ Reduce air volume : Turn clockwise
 - ※ Increase air volume : Turn counter-clockwise
- c. Then assemble nut after adjusting.

Caution:

The different length of delivery hose will need different air volume. The jaw will be damaged easily if air volume is too strong. The proper volume just let screw deliver to tip of screwdriver.

Use 10mm hex-wrench to adjust



Use 5mm hex-wrench to adjust

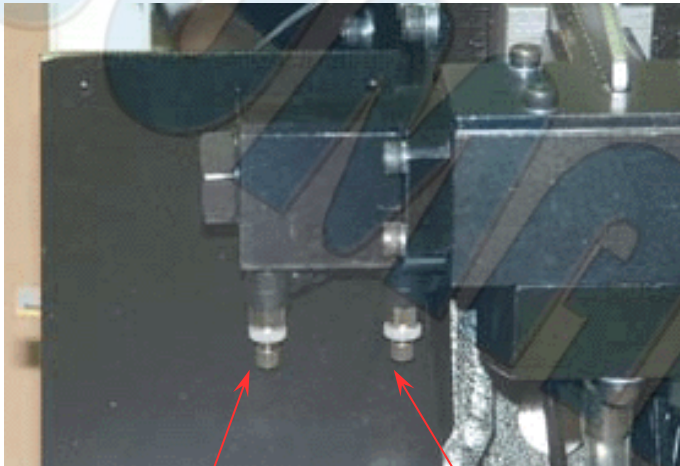
<Fig.13>

2. Adjustment of escapement speed

If the shutter of escapement works badly, then need to adjust speed value by procedures as below.

- a. Change shutter for rightward speed, adjust right valve
- b. Change shutter for leftward speed, adjust left valve.

<Fig.14>



left valve

right valve

3. Air Compressor Valve Adjustment :

Adjust the Air Compressor to control the pushing speed of BIT. <Fig.15>



Adjustment valve of screwdriver piston

<Fig.15>

4. Regulate plate adjustment :

If the regulate plate is too high or low, please adjust by 4mm hex-wrench and 8mm wrench to adjust.

<Fig.16>

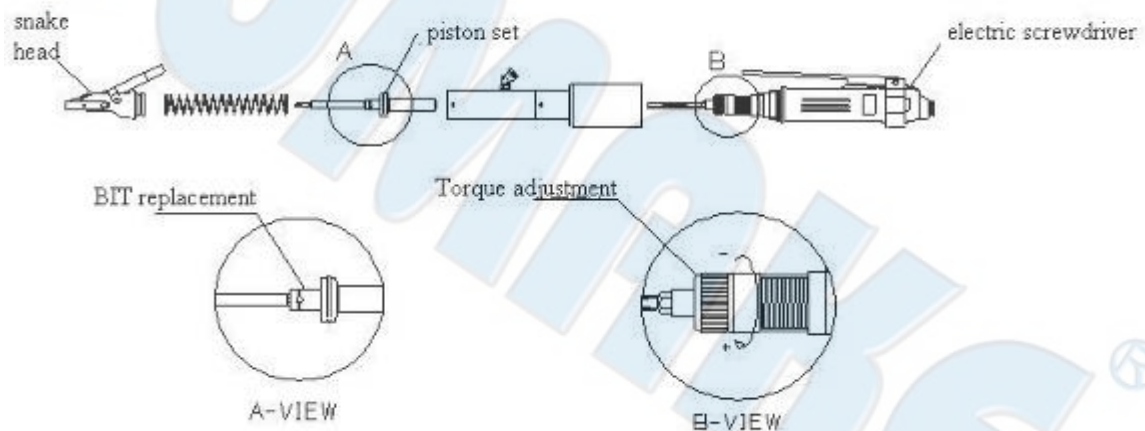


5. Torque adjustment or BIT replacement

The pipeline of screwdriver must be separated then disassemble before BIT replacement or torque adjustment. Steps are as below.

1. Turn off power of screw feeder.
2. Released power cord of screwdriver, tube and delivery hose.
3. To replace BIT, released screw of snake head and extract piston set then rotate screw at "A" point.
4. Adjust torque at "B" point. See <Fig.17>

<Fig.17>



V. Troubleshooting

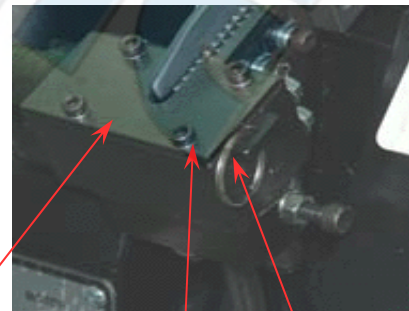
1. Screw can't reach tip of screwdriver :

- (1). The screw jammed or delivery hose disconnected.
 - ✓ Check whether there is miscellaneous material and tube didn't connect or not.
- (2). The air volume is too weak to feed screw from screw feeder to screwdriver.
 - ✓ Adjust air volume ◦ **【refer to IV. -1】**
- (3). Regulation plate chocked.
 - ✓ Please adjust regulation plate and clean screw on track then adjust regulation plate to appropriate position. **【refer to IV. -4】**
- (4). If feeding time is too short.
 - ✓ Please **【refer to II. 1-4】**
- (5). If screw can't fed in normal condition.
 - ✓ Make sure there are screws in hopper. ; If yes, please press lever for 1 second then release.

2. Screw can't fed through escapement:

- ◆ Please turn off power and air.
 - (1). The escapement is jammed by material.
- ✓ Move the ring around and try to remove. See <Fig.10>
- ✓ If it isn't useful. Please release screw to open ES. cover by 3mm Hex-wrench then clean it. Re-assembly after done well.

Fig.18



3. Screw can't fed through delivery hose:

- (1). Delivery hose is jammed by material.
 - ✓ Remove delivery hose from escapement then clean.
- (2). The hose joint is jammed by material.
 - ✓ Press both sides of jaw then clean. See <Fig.19>
 - ✓ Disassembly snake head and hose joint and use slot screwdriver to clean. See <Fig.20>

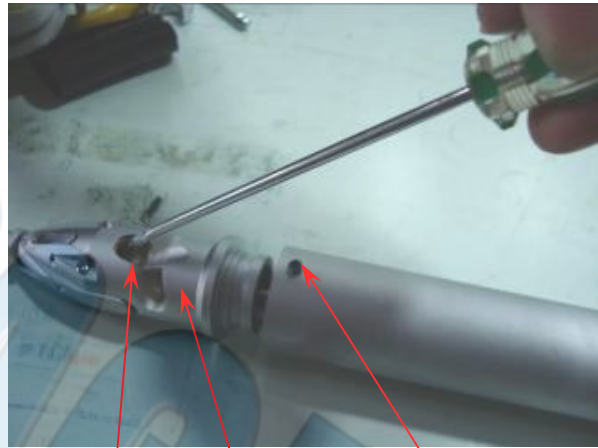
Escapement

Screw

Ring



Both sides of jaw



After removing
hose joint

Jaw head

Screw of cylinder

4. Feeding through track is not smooth :

- (1). The vibration equipment rail is dirty
 - Please use cotton dip alcohol to clean.
- (2). The regulation plate position is not appropriate or screw tolerance is too big.
 - Check regulation plate location. If it suppressed the screw, please adjust regulation plate.
【refer to IV. 4】
- (3). The track deformed or damaged.
 - If yes, please ship back to dealer or our company.

5. Machine doesn't operator in normal condition :

- (1). Power is not lit.
 - Chen whether the fuse broken, if yes, please replace it.
- (2). If screwdriver can't rotate.
 - Check whether power cord or air connected.

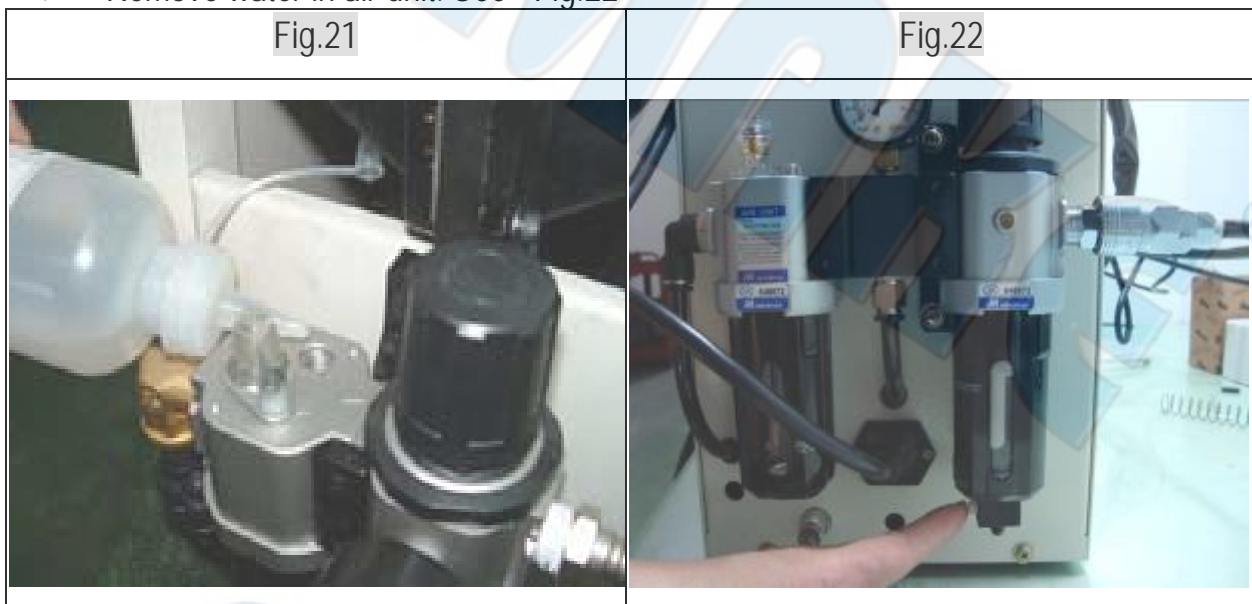
★.If the above trouble event happened, please contact dealer or our company.

VI. Maintenance

To make screw feeder and screwdriver set can be used in long state. Please lubricate and clean dirty parts regularly. Please also replace BIT regularly to avoid stripping.

★ .If working environment is harsh or frequent operation, please short time of maintenance.

- (1). Clean hopper.
 - Please clean miscellaneous material in hopper per week.
- (2). Check air unit
 - Please supply oil (w10) if oil level under 80%. See <Fig.21>
 - Remove water in air unit. See <Fig.22>



- (3). Clean escapement and track
 - Use air gun to clean regularly
 - Use cotton dip alcohol to clean track.
- (4). Check whether BIT damaged
 - BIT replacement **【refer to IV. -5】**

EU Declaration of Conformity (DOC)

We: **SUMAKE INDUSTRIAL CO., LTD.**

4F, No. 351, Yangguang St., Neihu District, Taipei City, Taiwan

declare in sole responsibility that the equipment

Equipment : **AUTOMATIC SCREW FEEDER**

Model/ Serial No. : **SNF-A1, SNF-A2, SNF-A3, SNF-A4, SNF-A8, SNF-A9,
SNF-A10, SNF-A11, SNF-A12, SNF-A13, SF40TH, SF30A,
SF30M, SF30T, SF40A, SF40T, SF501, SF501T, SF502,
SF502T, SAF-100S, SAF-100G, SAF-100L, SAF-100R, SDA,
SF-SERIES**

The object of the declaration described above is in conformity with the relevant union harmonization legislation:

- Machinery Directive 2006/42/EC
- Low Voltage Directive: 2014/35/EU
- RoHS 2011/65/EU

The following harmonised standards and technical specifications have been applied:

- EN ISO 12100:2010
- EN ISO 13849-1:2023
- EN ISO 13850:2015
- EN ISO 13857:2019
- EN ISO 4414:2010
- EN 60204-1:2018

Name and Signature/Position



Mike Su – Managing Director

Date and Place

2023/9/26

Taipei, Taiwan