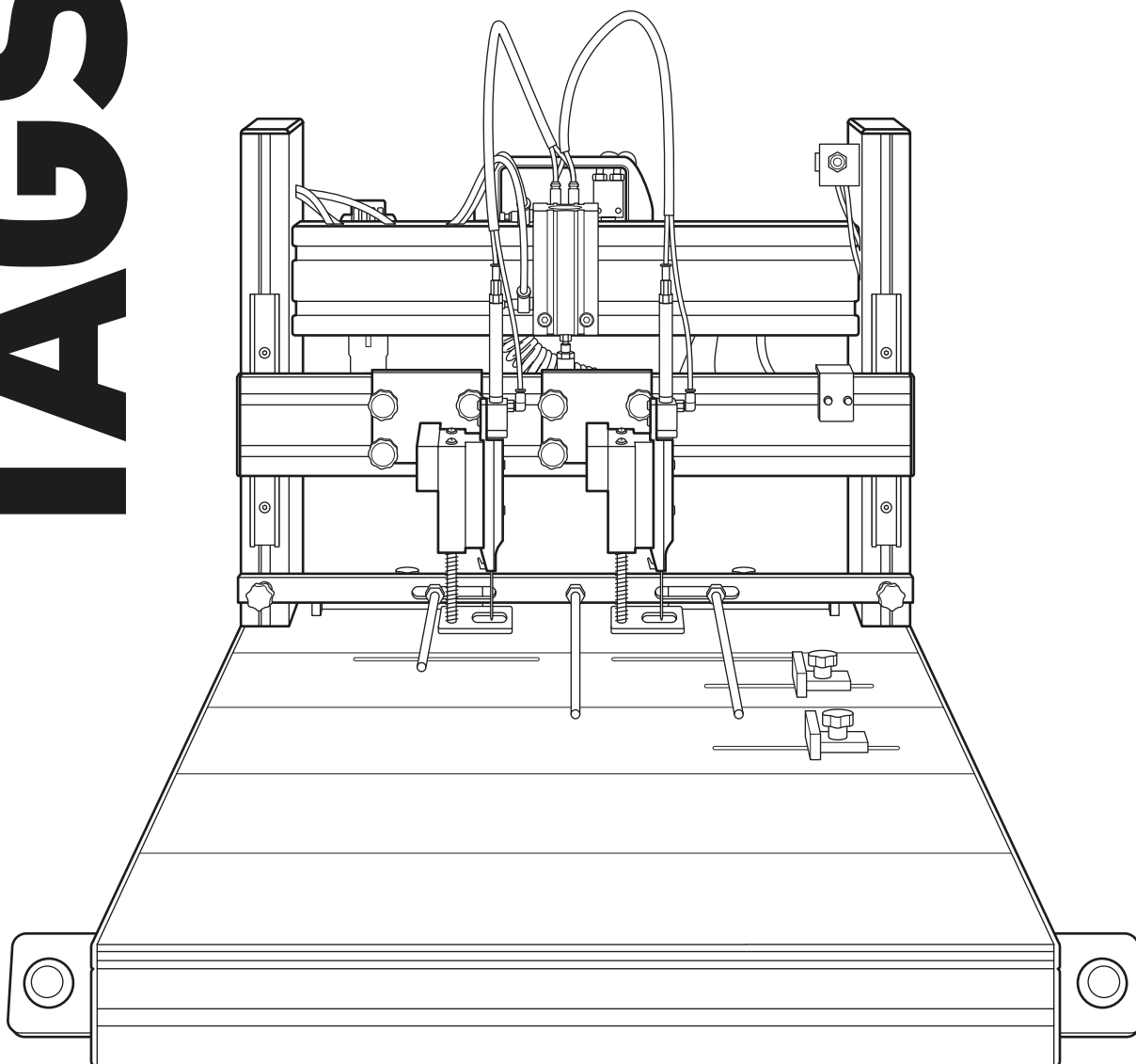


# TAGSON®



## PS-1/DUO

Automated double  
needle tagging  
machine

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## Technical information

**TAGSON®**

AUTOMATED DOUBLE NEEDLE  
TAGGING MACHINE

TYPE: PS-1/DUO

Air pressure: 6 bar / 80 psi

Production year: 2019

Made in Slovenia (EU)

Distributor:

Stular plus Ltd, Jahacev prehod 2  
SI-4000 Kranj, Slovenia

[www.tagson.eu](http://www.tagson.eu)



# Introduction

Thank you for purchasing TAGSON PS-1/DUO automated pneumatic tagging machine. PS-1 has two SPU (SwiftTach Power Units) by Avery Dennison. Pneumatic SPU modules can tag or pack cards with mats, pads, towels, micro fabrics, socks, fasten price, size and brand name tags to fabrics by inserting plastic fasteners through the tag and the underlying fabric or material. The main purpose of TAGSON PS-1/DUO is to be used in packaging applications.

PS-1 allows packaging of various types and thickness of products. By changing the module you can pack mats from 7 mm up to 50 mm. By choosing the correct needle you can pack the finest materials leaving no damage to fabrics.

This fastening system has been specially designed for your attaching needs. These operating instructions will guide you through the installation and operation of the many system combinations available. A manual instruction provides all of the information required to install, operate, troubleshoot, and service.

TAGSON automated tagging machine is designed and assembled in the EU.

# Important safety instructions

**This manual contains essential information for the protection of users and others from possible injury and/or equipment damage.**

**Read this manual before using the product, to ensure correct handling, and read the manuals of related apparatus before use.**

**Keep this manual in a safe place for future reference.**

**To ensure safety of personnel and equipment, the safety instructions in this manual and the product catalogue must be observed, along with other relevant safety practices.**



**WARNING!** For your safety, the information in this manual must be followed to prevent personal injury or loss of life.

- Before installing the machine or maintenance always switch off main valve **18** to disconnect the air supply from the machine.
- Machine should always be on a flat solid surface.
- Before using the machine make sure there is enough light necessary for safe work.
- Do not use the machine for other purposes than socks tagging.
- Do not put any other objects on the machine and on working area.
- Make sure there are no other persons around the machine when machine is in use.
- Only trained operators can work with the machine. All operators must read safety instructions before use.
- Operator must always wear eye protection glasses when using the machine.
- Any interference with the machine and change operation is prohibited.
- The needles are extremely sharp and can cause serious injury. Keep hands and clothing clear of needles while operating the machine.
- Always install the needle guard whenever the unit is not in use, or when servicing the SPU module. Do not remove or replace the needle without installing the needle guard.
- Do not attempt to disassemble any component while the Swiftach Power Unit is connected to the air supply.
- Disconnect the air supply before attempting to replace any component.
- Never under any circumstances try to put more than 125 psi (0.86 MPa) into the machine.



**CAUTION:** Improper use of lubricants may cause machine failure and/or damage to the product.

- Do not use any type of lubricant on the fastener path. Use only compressed air to clean.
- Do not use any solvents on the Swiftach Power Unit.

Only trained personnel should operate pneumatically operated machinery and equipment. Compressed air may be dangerous should an operator not be familiar with it.

Assembly, handling or repair of pneumatic systems should be performed by trained and experienced personnel.

Do not service machinery/equipment or attempt to remove components until safety is confirmed.

- 1) Inspection and maintenance of machinery/equipment should only be performed after confirmation of safe locked-out control positions.
- 2) When equipment is to be removed, confirm the safety process as mentioned above. Switch off air and electrical supplies and exhaust all residual compressed air in the system.
- 3) Before machinery/equipment is re-started, ensure all safety measures to prevent sudden movement of cylinders etc. (Supply air into the system gradually to create back pressure)



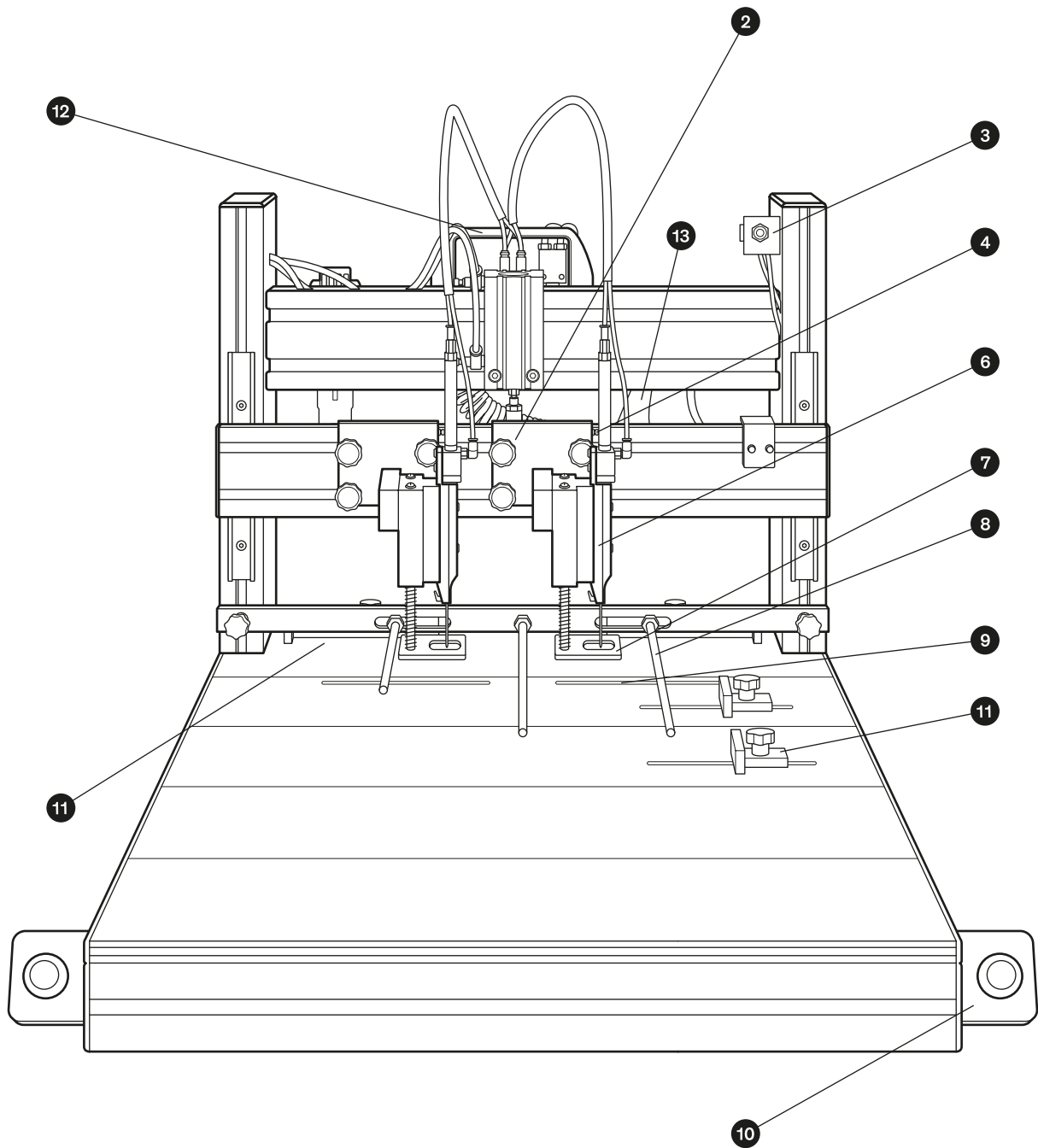
**WARNING!** Always install the needle guard whenever the unit is not in use, or when servicing the SPU module. Do not remove or replace the needle without installing the needle guard first.

Do not install the product unless the safety instructions have been read and understood.

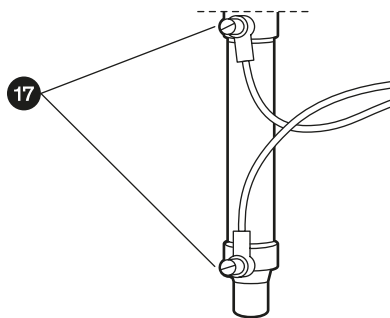
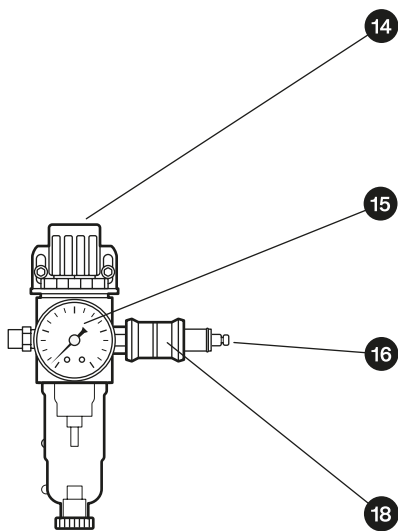
If air leakage increases, or if the equipment does not operate properly, stop the operation. Unexpected motion can cause injury and equipment damage.

Confirm proper mounting. Check that the piping is not disconnected or crushed. Connect the compressed air supply to the product and perform appropriate functional and leakage inspections to check it is mounted properly.

# PS-1/DUO (front view)



## (back view)



- 2 Locking screws for width adjustments
- 3 Ejector rod switch
- 4 Ejector rod timing adjustment screw
- 6 SwifTach Power Unit (SPU)
- 7 Compressing ski foot
- 8 Card holder
- 9 Needle plate
- 10 Two safety finger switches (optional: foot pedal)
- 11 Guides
- 12 Handle
- 13 Air blow gun
- 14 Knob for air level pressure
- 15 Air filter regulator
- 16 The main air connector
- 17 Speed adjustment screw
- 18 Main air valve ON/OFF for the air supply

# Installation of air supply



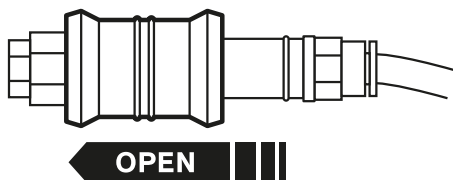
**WARNING! Turn off air supply before beginning installation.**

Before the first use:

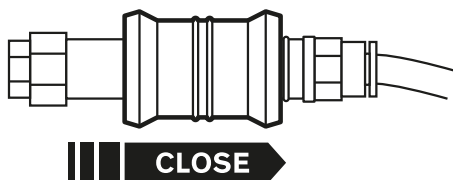
- Read safety and manual instructions.
- Take the machine out of the box and put it on the flat solid surface.
- Close main air valve 18 on the machine before connecting air supply.
- Install air supply hose (see page 8) and open main air valve 18 on the machine.
- Regulate knob for air pressure level 14 at the appropriate pressure (80 psi – 6 bar).
- Operate with the machine (see page 9, 10).

Before installing air to the machine make sure that main air supply valve 18 is closed. Install hose to the air line 16 in a vertical position on main air supply valve 18. Open main air supply valve 18.

To open main air supply valve 18 push it to the left.



To close main air supply valve 18 push it to the right.



Install hose to air line 16 in a vertical position on filter regulator 15 so that air flow is in the direction of arrow stamped on the unit's body.

Blow out the air line to remove scale or other foreign matter before installing the Filter/Regulator.

**NOTE:** Be sure air line is clean and emptied of water. Air lines tend to condense moisture from the atmosphere and precautions must be taken to prevent water from entering the attaching unit.

Before operating the SPU, pressurize the air line with knob 14 and check for leaks.

**NOTE:** Air supply should be regulated by a knob for air pressure level 14 at the appropriate pressure (80 psi).



**CAUTION: use air supply between 40-100 psi. Optimal air installation is 80psi.**



# Swiftach power unit (SPU) by Avery Dennison

**TAGSON tagging machine** has built-in your desired Swiftach Power Unit **6** (module). By changing the modules you also change type of the fasteners. The module is the main device that runs fasteners through the power unit. It is pneumatically operated and uses an air range between 40 and 100 psi. There are six basic Avery Dennison modules available:

## Standard module SPU1M (standard fasteners):

- Short needle SPU1M03
- Long needle SPU1M01
- Extra Long needle (optional)

## Fine module SPU2M (fine fabric fasteners):

- Short needle SPU2M04
- Long needle SPU2M02
- Extra Long needle M2FLL
- Ultra Long needle M2FULL

# Operations

This chapter explains how to operate the Tagson tagging machine.

**NOTE:** Before operating, please check the air level supply. Air supply must be 80psi (6 bar).



**WARNING!** Always install the needle guard whenever the unit is not in use, or when servicing the SPU module. Do not remove or replace the needle without installing the needle guard first.

## 1. LOADING FASTENERS

---

All clip fed fasteners are loaded into the power modules through the “T” shaped opening on the side of the module nose. Either end of the fastener clip can be loaded into the tool.

- Gently push the clip into the nose until you hear and feel a “click”. This will ensure that the clip has bottomed out and will not easily pull back.

**NOTE:** One cannot use standard fasteners on Fine Fabric module (SPU2M) or fine fasteners on standard module (SPU1M). To avoid jams and needle breaks, we recommend premium quality fasteners by Avery Dennison.

## 2. UNLOADING FASTENERS

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- Remove a clip of fasteners by pulling the clip straight back in the opposite direction as when loading the clip. You will feel some resistance from the spring-loaded detent.

**NOTE:** Machine has an ejector rod switch **3** in the front right upper corner. By pressing and holding the switch, you will activate the ejector rod. Holding the switch with one hand, one may safely remove the fastener clip from the module with the other hand.

### **3. CHOOSING PROPER LENGTH FASTENERS**

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The proper stroke length usually depends on the clearance needed to load the items under the SPU's needle. Please note that the shorter the stroke, the faster the cycle time.

All units should be connected to a filter/regulator to protect and control the SPU.

The thickness of the items to be fastened when compressed must never exceed the working length of the needle which is used. The spoon opening in the needle must penetrate the items in order for the fastener to toggle during insertion.



**WARNING! Under no circumstances should the dual anti-tie down hand switch be altered or replaced with a foot pedal or other actuation device.**

### **4. STARTING**

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Before starting, the following steps should be double checked:

- Air supply: filter regulator on the machine must be 80psi (6 bar).
- Needle position: the lowest point must be about 0.5 cm below the needle plate.
- Clear the working area.



**CAUTION: Always wear protective glasses to prevent eye injuries.**

How it works:

To complete the operation, machine has 3 cycles:

CYCLE A: by pressing and holding the finger switches **10** or foot pedal (optional), module goes down

CYCLE B: when the module is at its lowest position, the machine activates the ejector rod

CYCLE C: by releasing the finger switches **10** or foot pedal (optional), module goes up

**NOTE:** to activate cycle A, press finger switches with both hands at the same time or step on foot pedal and hold it until it ejects the fastener.

Starting to operate the machine:

- Load the fasteners
- Press switch for ejector rod **3** a few times to make sure the module ejects the fasteners properly
- Insert the mat below the ski foot **7**
- Adjust height card holder **8** and product guides **11**
- With both hands press the finger switches **10** and hold them in place (optional: foot pedal)
- While holding switches, the module will go down to its final position and eject the fastener through the product (while holding down foot on pedal)
- Release the switches **10** to lift the module to its upper position (foot pedal: release the foot)
- Remove the product from the working area

# Adjustments

## 1. HEIGHT ADJUSTMENTS

---

Height of the needles is adjusted in factory based on thickness level and can be changed with main screws behind the machine. Before making any height adjustments please contact your supplier or Tagson office.



**CAUTION:** By pressing two finger switches, the module goes to its final position. Check that the needle does not hit the surface below the needle plate ⑨ to prevent needle break. Verify that the needle enters the needle plate cleanly and does not touch the sides or bottom of the needle plate.

**OPTIMAL SETTINGS:** The optimal needle position is when the tip of the needle is about 0.5 cm below the needle plate ⑨ when the module is in its final position (cycle A).

## 2. ADJUSTING THE SPEED OF THE MODULE: cycle A, C

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You can also adjust the speed of the cycle A (module goes down) and cycle C (module goes up). Behind the machine, there is the main piston which has two adjustment screws ⑰.

By loosening the speed adjustment screw, the speed will increase. When you fasten the screw, the speed will be reduced.

Lower screw: speed adjustments for cycle A

Upper screw: speed adjustments for cycle C



**CAUTION:** Very high speed can lead frequent cases of needle breaking.

**NOTE:** Turn the screws gently. Settings are extremely sensitive.

## 3. ADJUSTING TIMING OF EJECTOR ROD: cycle B

---

With the ejector rod screw ④ you can adjust the timing of the ejector rod (cycle B). By gently turning the screw, you will set the timing of the ejector rod.

**NOTE:** The optimal setting of the “cycle B” is when the ejector rod launches the fastener while the module is 0.5 sec in its lowest position.

## 4. ADJUSTING NEEDLE SPACING

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The needle spacing is adjusted by loosening the front four screws ② on each module. By pushing modules on left/right side by hand you adjust your needed needle spacing.

After adjustment tightly screw four screws.

# Replacements

## 1. REPLACING THE NEEDLE

Needles may wear out or damage over time, and they should be visually checked regularly to ensure that the point is not bent, distorted, blunt or burred in any way, and that the shaft is straight. A damaged needle will damage fabric, so be sure to check thoroughly.

**NOTE:** If the needle has broken or has been damaged during operation of the tool, it is likely that the ejector rod has also been damaged. Check the ejector rod to verify that it is not bent or binding before replacing the needle. If damaged, refer to replacing the ejector rod on page 13.

### Disassembly

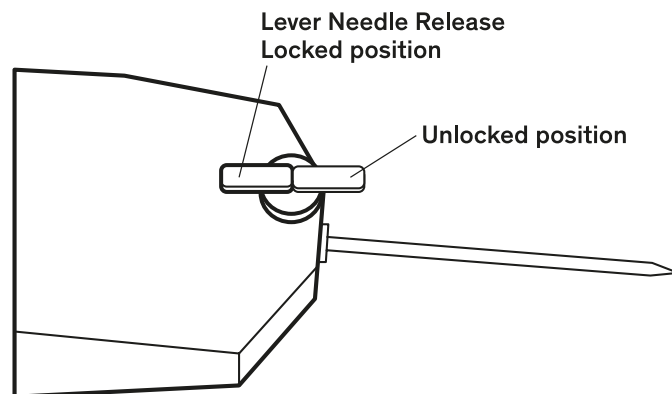


**WARNING!** Needles are extremely sharp and can puncture skin with very little pressure. Take extreme care and always install the needle guard whenever handling the needle.

**Should replacement of a needle be necessary, disconnect the air supply and remove any fasteners that may be in the feed area prior to changing needles.**

All units have a push button needle lock mechanism. They are immediately adjacent to the needle on the nose of the power unit. Holding the shaft of the needle with one hand, turn the needle lock lever towards the point of the needle until the needle can be pulled straight out of the module nose.

**NOTE:** If the needle cannot be removed easily, or if it is jammed, return the unit to STULAR PLUS LTD for service.



### Assembly



**WARNING!** Always install the needle guard whenever the unit is not in use, or when servicing the SPU module. Do not remove or replace the needle without installing the needle guard first.

1. Insert the replacement needle with the needle guard attached.
2. Align the slot in the needle with the slot in the tool.
3. Return the needle lock to the original locked position as shown.
4. Check that the needle is secure by pulling on the needle's shaft.
5. Remove the needle guard.



**WARNING!** Make sure the needle is securely locked before restarting the tool.

## 2. REPLACING EJECTOR ROD

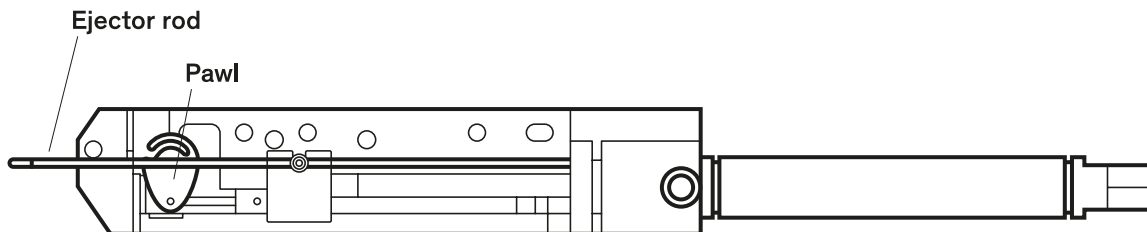
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**WARNING!** Prior to any maintenance or repair, the air supply must be switched off.

In order to replace the ejector rod, please take the following steps:

1. Turn off the air supply
2. Remove the front cover.
3. Remove the ejector rod.
4. Replace the ejector rod aligning the guide pin in the slot (see SPU parts list for proper replacement part).
5. Close the front cover.



## 3. REPLACING PAWL/FEED

---

Should the clip fasteners not move after activation to the next position, change the pawl/feed part. After a while, the pawl feed can be damaged and will not move the clip forward to its next position.



**WARNING!** Prior to any maintenance or repair, the air supply must be switched off.

In this case, replace the pawl as follows:

1. Turn off the air supply
2. Remove the front cover
3. Remove the ejector rod
4. Replace the pawl
5. Insert the ejector rod
6. Close the front cover

# Routine maintenance

This chapter explains the routine maintenance of the Tagson tagging machine. After finishing, always clear the machine with the air blow gun **13**, especially in the needle plate **9**.



**WARNING!** Prior to any maintenance or repair, the air supply must be switched off.



**WARNING!** Always install the needle guard whenever the unit is not in use, or when servicing the SPU module. Do not remove or replace the needle without installing the needle guard first.

Compressed air is required to operate the machine, and the air supply should be free of moisture or other contaminants. The supply must be capable of sustaining a line pressure of at least 80 psi for table mount units such as Tagson portable tagging machine.

Air supply should be regulated by a filter/regulator set **14** at the appropriate pressure (80 psi).

## Spare parts list

The spare parts list only applies to the Tagson PS-1 machine without Swiftach Power Unit (SPU). For the SPU spare parts list, please see the manual for SPU.

Item	Part number	Description	QTY
1.	PV5218	PV5218 Pneumatic valve	2
2.	DVV18	DVV18 Valve for two-handed activation	1
3.	H32	H32 M5 Valve for manual switching	1
4.	P22	P22 Black switch 32Q4	2
5.	ALI	Ali link 1/8	1
6.	V32QS	V 32 QS 4 Mechanical valve	1
7.	PCU2575	PCU 25 75 DDA Pneumatic cylinder	1
8.	AMH2075	AMH 25 75 BA Guide cylinder	1
9.	FR14	FR 14 Filter-regulator 0-8 Bar	1

# Trouble shooting

This chapter describes symptoms, possible causes and solutions to problems one may encounter when operating the Tagson tagging machine.

Symptom	Cause	Action
Fasteners breaking	Fastener size too small regarding sock thickness	Use larger fastener
	Card stock too tough	Add holes to card stock
	Bad material of the fasteners	Chose Avery Dennison polypropylene or nylon premium fasteners
Fastener not completely applied	Ejector rod launched too soon	Adjust timing of ejector rod
	Needle does not deep enough into the needle plate	Adjust height of the module. Needle must be 0.5 cm under needle plate
Fastener pulling out	Card stock too weak/thin	Change card stock
	Fastener pulling back through hole	Use larger fastener
Module does not go to its final position	Product too thick	Use thinner product. Max thickness approx. 40 mm
		Change module with extra long needle to increase thickness to 50 mm.
	Ski foot or module hits the guide	Clear working surface. Remove guides.
Fasteners are not feeding consistently	Feed pawl may be worn and needs to be replaced	Change the pawl feed inside the module
Ejector rod jumps out of the needle	Banded ejector rod or needle	Change ejector rod or needle
Water or oil dripping from the needle, cylinder or tool	The filter/regulator may be filled with water and/or oil.	Filter needs to be emptied or replaced. Also check the main air supply for condensation build-up.
Unit not cycling properly	Not enough air pressure	Air pressure must be 80 psi

**TAGSON®**

**STULAR PLUS LTD**

**TAGSON division**

Jahacev prehod 2

SI-4000 Kranj

Slovenia, Europe

Tel. 00386 59 049 860

Mail: [info@stular.com](mailto:info@stular.com)