

【INSTRUCTION MANUAL】

Pneumatic strap cutting tool




Model : CA-32







– CONTENTS –

1. Safety Instructions	2
2. Specifications	5
3. Pneumatic Information	5
4. Operating Instructions	6
5. Exploded-view Drawing & Bill of Materials	8
6. Major Parts Replacement Procedures	10
7. Troubleshooting	12

Safety instructions

- Please read carefully before use.
(operation, maintenance, inspection)
- Notes shown in this manual are designed to assist you safe operation, to prevent danger and the damage to you and other people beforehand.
- If this device is used without following notes in the manual, serious personal accidents such as the death or serious injuries might be caused, although this device is designed and manufactured in consideration of safety.
- Please use this device after you are skilled in the knowledge of the equipment, safety information, and all of notes.
- In this manual, the ranks of the safety notes have been divided with **【  DANGER 】** , **【  WARNING 】** , and **【  CAUTION 】** .

【  DANGER 】	When there is possibility of death or serious injury which is assumed highly urgent, also there is possibility that extremely dangerous state happens when handling is mistaken.
【  WARNING 】	When there is a possibility that a dangerous state happens when handling is mistaken, and the possibility of the death or the serious injury is assumed
【  CAUTION 】	When there is a possibility that a dangerous state happens when handling is mistaken, the injury of medium level and the possibility to receive minor injury are assumed, and the generation only of material injury is assumed

The matter described to **【  CAUTION 】** has the possibility to relate to an important result according to the situation. Those important safety instruction has described and should be defend those contents for your safety.

1. Safety Instructions

1-1. General precautions


(1) Always keep “safety” in mind when using this tool.

For proper use of this tool, sufficiently understand the safe use methods.

(2) Please carefully read this instruction manual to understand proper usage before running, inspection, and maintenance of the tool.

[ DANGER] (3) Never remove any safety device such as a safety cover attached to the tool.

[ WARNING] (4) Do not remove or make illegible labels and indications affixed to the tool.

[ WARNING] (5) When not using the tool or during inspection or maintenance of the tool, shut off the air supply. And, do not touch the knife part (tip) with your bare hands.

(6) If you notice any unusual movement or abnormality, stop using the tool.


(7) Please inform us of any comments or questions you may have concerning safe use of our tools.

1-2. Application

Never use this tool, which is intended to cut a tied strap, for any other purpose.

1-3. Work wear

When using this tool, wear protective equipment such as “protective glasses,” “protective mask,” “earplugs,” “leather gloves,” “protective footwear,” and a “helmet.”

[ WARNING] In addition, make sure to wear long-sleeve outer wear and button the cuffs before use.

Be careful so that neckties and long hair do not become tangled in the tool.


1-4. Protective equipment

[ DANGER] (1) Protective glasses


If a strongly bound strap is cut by scissors, a rebound strap may damage the eyes of an operator and make the operator blind. Never fail to wear protective glasses.

Also, dust attached to the tool may enter your eyes when cleaning the tool by air blow.


Never fail to wear protective glasses.

[ WARNING] (2) Protective mask

Turbine oil is contained in exhaust air from the tool. Never fail to wear a protective mask.


[ CAUTION] (3) Earplugs

It is recommended to wear earplugs in order to protect ears from running noise and exhaust noise from the tool.


[ WARNING] (4) Protective gloves

For handling straps and sharp objects, wear protective gloves because touching them accidentally or carelessly may cause an incision wound.

1-5. Precautions

[ DANGER] When the strap cutting piston is in operation, never touch the cutter part with your fingertips, because doing so may cause an incision wound or a cut.


1-6. Inspection and repair

[ WARNING] (1)Remove the tool from the air hose or stop feeding compressed air before inspection or repair.
(2)Stop using the tool before inspection and repair any worn or damaged parts.
Please contact us wherever necessary.

1-7. Disposal of the tool

“Steel,” “aluminum alloy,” “copper alloy,” “rubber,” or “plastics,” etc., are used for the tool.
Please pay attention to the disposal method so as not to cause environmental pollution.

1-8. Inspection before work

[ CAUTION] (1)Check the tool to confirm that there is no looseness or damage of the bolts before work every day.
(2)Lubricate turbine oil of second class ISO VG32 to each sliding part.
(3)Open the drain cock of the drain tank and discharge the drain.
(4)Check the air pressure to confirm whether it is proper. (0.5MPa)
(5)Check the lubricator to confirm whether the level of oil and the amount of oil drop are proper.

2. Specifications

	Strap used			Full length	Weight	Air pressure
	Width	Thickness	Tensile strength (Our track record)			
	(mm)	(mm)	(N/mm ²)	(mm)	(kg)	(MPa)
CA-32	19~32	0.7~1.2	~785	1.161	3.3	0.5~0.6
				1.661	3.8	

Note) ◇ Minimum operating pressure changes according to the Thickness of strap and seal etc.

3. Pneumatic Information

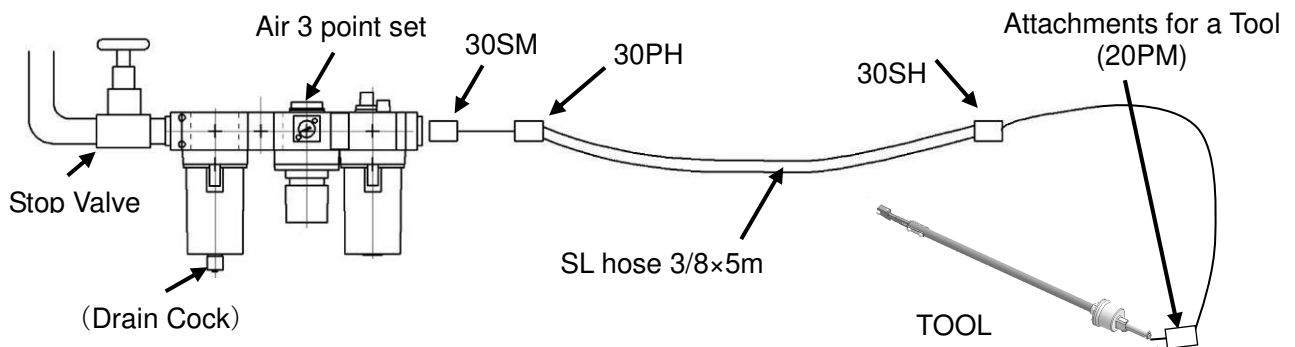
1) Air source

As an air source of this tool, use a compressed air source of which the air pressure (source pressure) is 0.5MPa or more in the plant with a piping diameter of 3/8B (10A) or more, air flow rate of 1Nm³/min or more. Also, confirm that the minimum pressure is 0.4MPa or more by use of a pressure gauge when the pressure decreases during running of the tool.

2) Used air component

The following components are recommended for this tool.

SL hose: WS18Z-06(3/8)×5m (Yokohama Rubber), Plug 30SH, 30SM, 30PH (Nitto Kohki)



Caution

If you use hoses other than the specified hoses, use hoses which is 9.5 or more in inner diameter and 5m or less in length. Use of hoses other than the above-specified hoses will cause a drastic reduction in pressure during operation. Please pay attention.

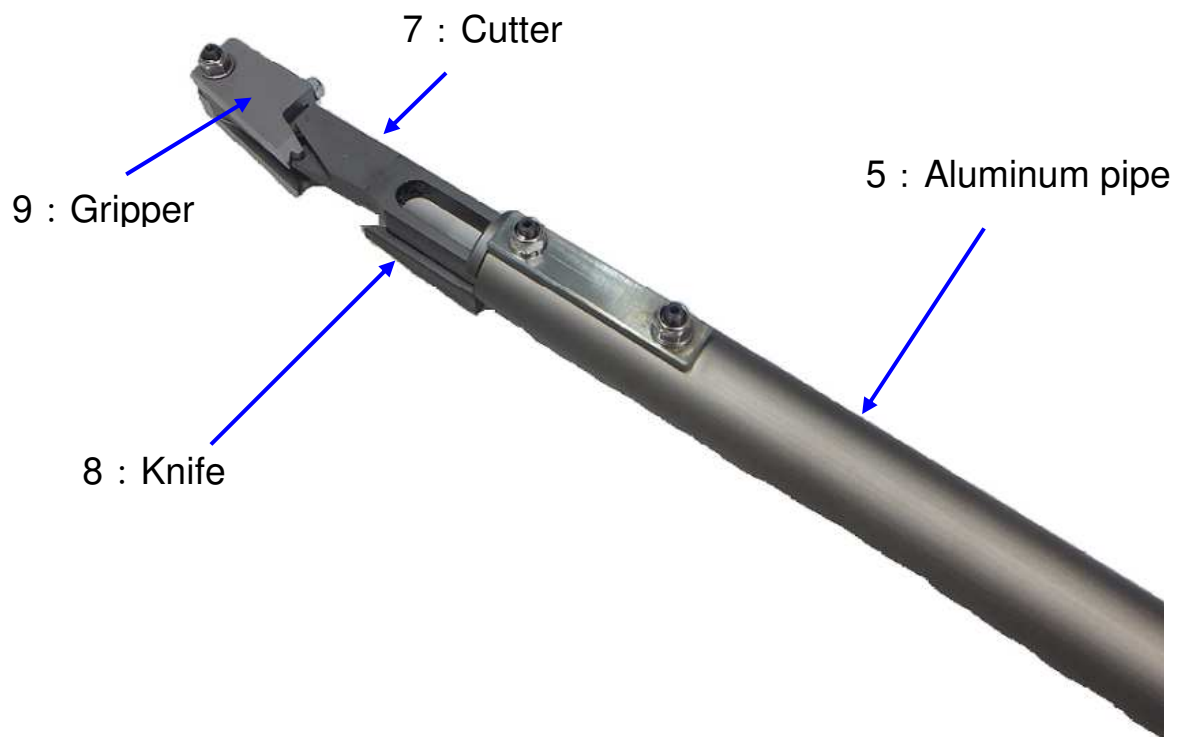
3) Precautions for piping

- (1) Attach an air set of 3/8B or larger (filter, regulator, and lubricator) to the air source.
- (2) To prevent a reduction in pressure during operation, completely use parts of 3/8B or larger for piping.
- (3) Be careful not to allow drain, rust, and pieces of seal tape in the piping to enter in the tool.

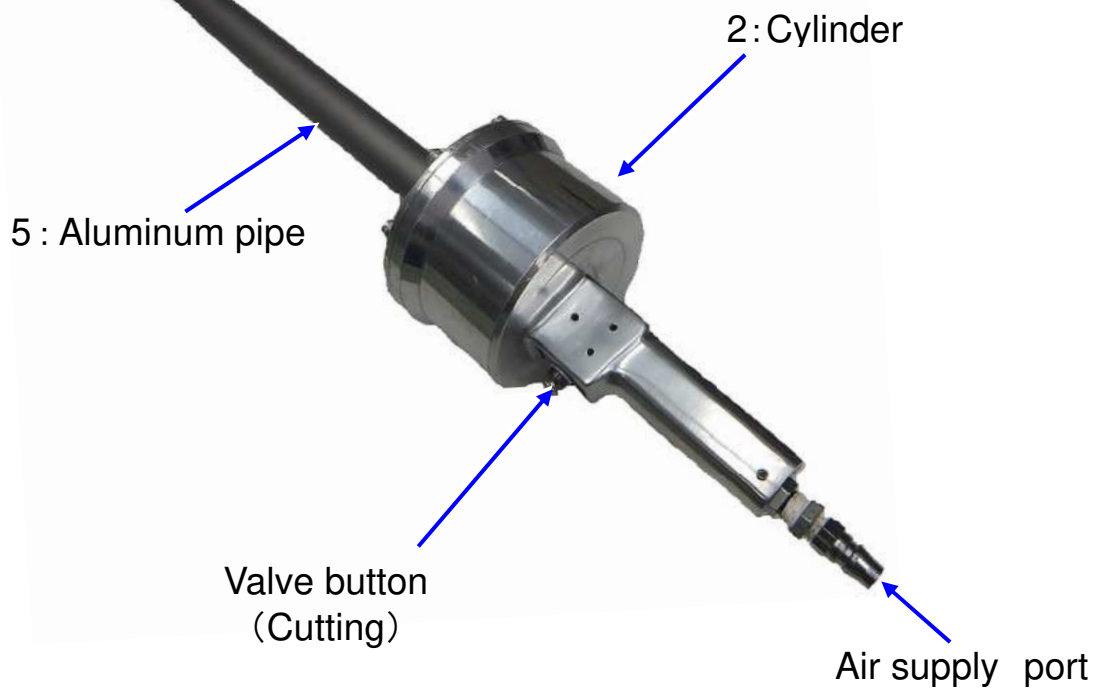
4. Operating Instructions

Exterior

Part of the cutter

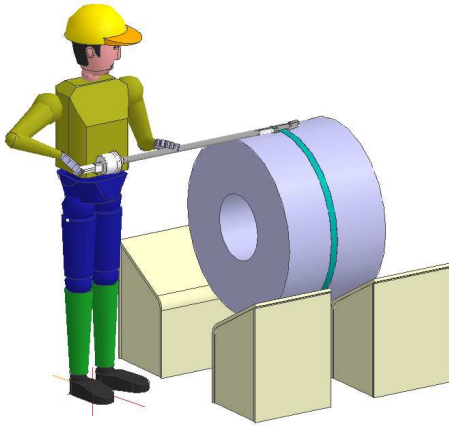


Part of the handle



4-1 Operating method

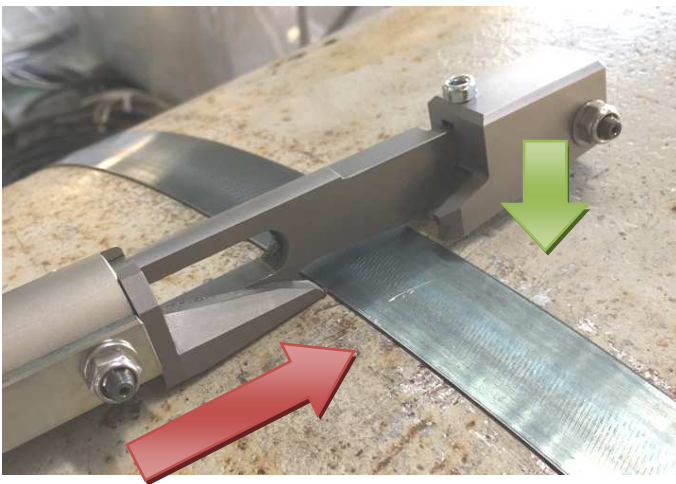
1) Mounting of cutter



- ① Direct this tool perpendicular to the strap to cut.

【⚠️WARNING】

Do not direct this tool toward people.



- ② Run the tip of the knife against or into the end face of the strap.

※Red arrow

- ③ Press the tip of the gripper against the coil surface parallelly.

※Green arrow

【⚠️DANGER】

When setting, do not touch the edge part.

2) Cutting of the strap



- ④ While holding the cutter in a set state, push the valve button with your index finger to cut the strap.

【⚠️WARNING】

Since the cut strap is not held by the tool, it may jump in the strapping direction. Confirm safety around you before working.

【⚠️CAUTION】

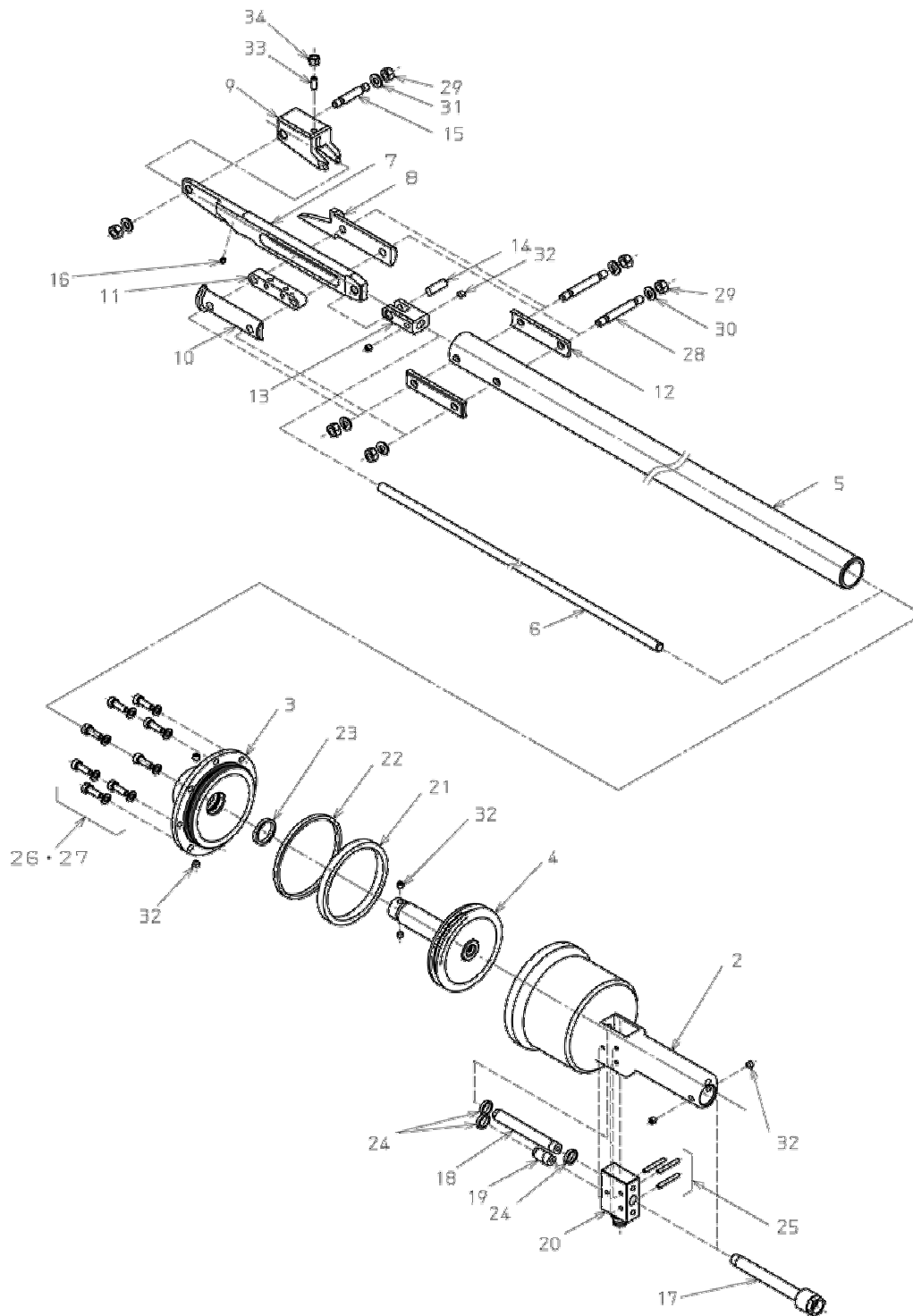
If the valve button is pushed while the cutter-set condition is uncertain, the knife or gripper will pass over the strap to cause miscutting.

【⚠️CAUTION】

There is an exhaust opening right beside the air supply opening in the handle. Do not move your face close to it because air comes out during cutting.

5. Exploded-view Drawing & Bill of Materials

5-1. Exploded

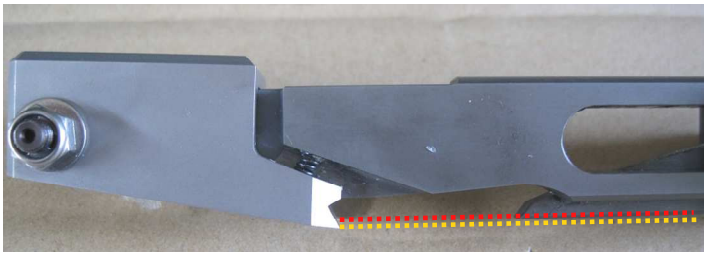


5-2. Bill of Materials

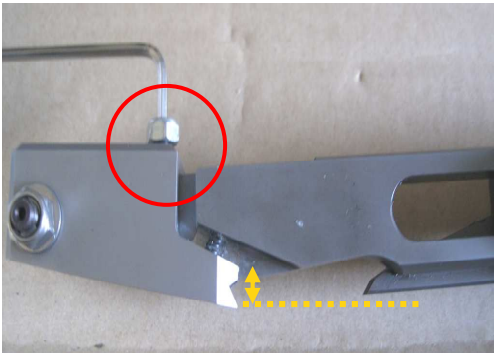
KEY NO.	Parts Name	(Parts No.)	DWG. No	Q'ty		Expendable -Parts	Overhaul -parts
				Full length (1.161mm)	Full length (1.661mm)		
1-1	Assembly drawing DIMENSION(イ)	-----	B24146-2	○	-----		
1-2	Assembly drawing DIMENSION(ウ)	-----	B24146-3	-----	○		
2-2	Cylinder DIMENSION(イ)	-----	C24139-1	1	1		
3-2	Cylinder cover DIMENSION(イ)	-----	D51481-1	1	1		
4-2	Piston DIMENSION(イ)	-----	D51482-1	1	1		
5-1	Aluminum pipe	-----	D51483-1	1	-----		
5-2	Aluminum pipe DIMENSION(イ)	-----	D51483-2	-----	1		
6-1	Rod	-----	D51484-1	1	-----		
6-2	Rod DIMENSION(イ)	-----	D51484-2	-----	1		
7	Cutter	0723	D51485-1	1	1	○	○
8	Knife	0724	D51486-1	1	1	○	○
9	Gripper	-----	D51487-1	1	1	○	○
10	Slider	-----	E45026-1	1	1		
11	Guide block	-----	E45027-1	1	1		
12	Clamp plate	-----	E45028-1	2	2		
13	joint	-----	E45029-1	1	1		
14	Rod pin	-----	E45030-1	1	1		
15	Gripper pin	-----	E45031-1	1	1		
16	Spring	-----	E45032-1	1	1		
17	Supply tube	-----	E45033-1	1	1		
18	Center tube	-----	E45034-1	1	1		
19	Return tube	-----	E45035-1	1	1		
20	TAC ² valve 41P	-----	(Purchase)	1	1		
21-2	O-Ring P90	-----	(Purchase)	1	1	○	○
22-2	O-Ring G95	-----	(Purchase)	1	1	○	○
23	O-Ring P20	-----	(Purchase)	1	1	○	○
24	O-Ring P10	-----	(Purchase)	3	3	○	○
25	Spring pin φ 3×25	-----	(Purchase)	3	3		
26	Hexagon Socket Head Bolt M5×15	-----	(Purchase)	8	8		
27	Spring washer M5	-----	(Purchase)	8	8		
28	Cutter pin	-----	E45617-1	2	2	○	○
29	U nut M6	-----	(Purchase)	6	6		
30	Spring washer M6	-----	(Purchase)	4	4		
31	Plain washer M6	-----	(Purchase)	2	2		
32	Hexagon Socket headed set screw M5×5	-----	(Purchase)	8	8		
33	Hexagon Socket headed set screw M5×12	-----	(Purchase)	1	1		
34	U nut M5	-----	(Purchase)	1	1		

6. Major Parts Replacement Procedures

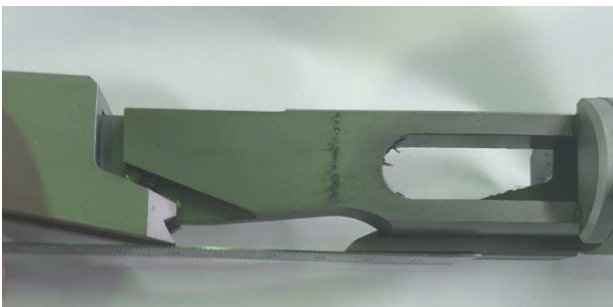
6-1. Adjustment method of the gripper



① Before a cutting test, check the coil contact surfaces of the gripper and knife (fixed). Adjust the angle of the gripper because if it is retracted, the knife will not catch the strap in cutting.



② Loosen the nut, and turn the gripper angle adjustment bolt to make an adjustment. Tightening the bolt raises the position of the gripper tip, and loosening it lowers the position.



③ Tighten the bolt to make an adjustment so that it becomes parallel to the knife tip.

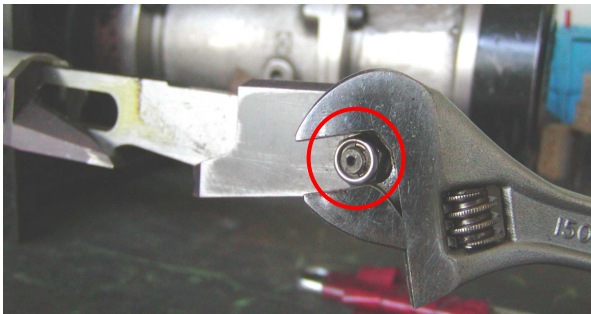


④ As the bolt is fixed with a hexagon wrench to prevent it from being displaced after adjustment, tighten the nut to fix the position of the gripper.

6-2.Exchange of the gripper

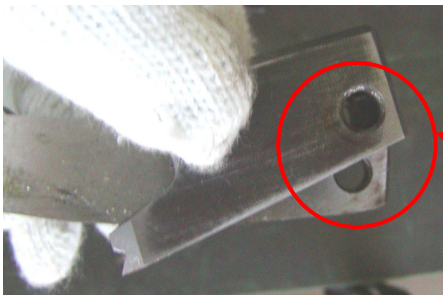


- ① Remove the M5 hexagon socket set screw from the underside of the gripper.



- ② Please remove the gripper.

【CAUTION】
During removal, be careful not to drop the gripper.

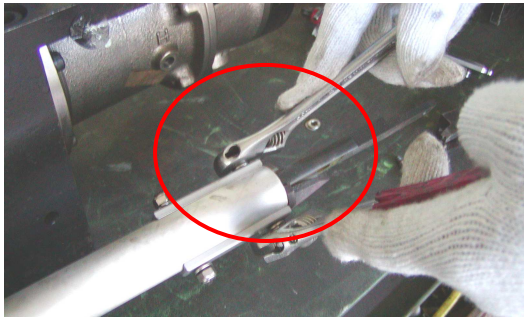
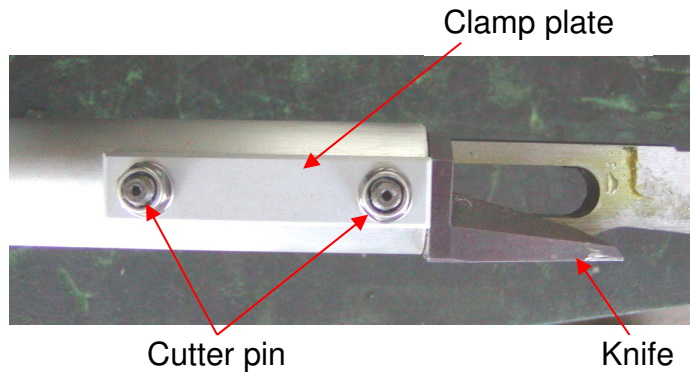


State after removing
the gripper



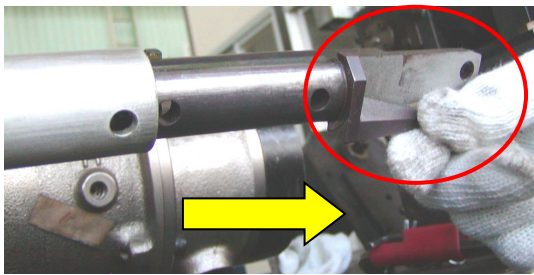
6-3. Exchange of the knife

Names of parts



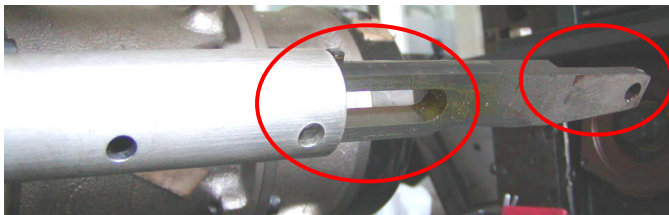
① Remove the clamp plate attached with the cutter pins.

【⚠CAUTION】
During removal, be careful not to drop the clamp plate.



② Pull in the direction of to take out the knife.

【⚠CAUTION】
When pulling out the knife, be careful not to cut your hands.



State after removing the gripper.



Longer cutter pin

Shorter cutter pin

6. Troubleshooting

Trouble condition	Cause	Remedy
Strap cutting failure	1.Worn or damaged cutter part	1. Check the edge surface of the knife and gripper for wear or damage. 2. Check that movements reach the cutting limit from the origin position in a no-loaded state.
	2.Wrong strap cutting place	Cut avoiding seal and double portions.
	3.Low air pressure	1. Low air pressure will cause a cutting failure of the straps. Check to see if the air pressure is as specified. 2. Check the tool body for air leaks.
	4.Tool not in perpendicular contact with the coil	See page 7 of this instruction manual.



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