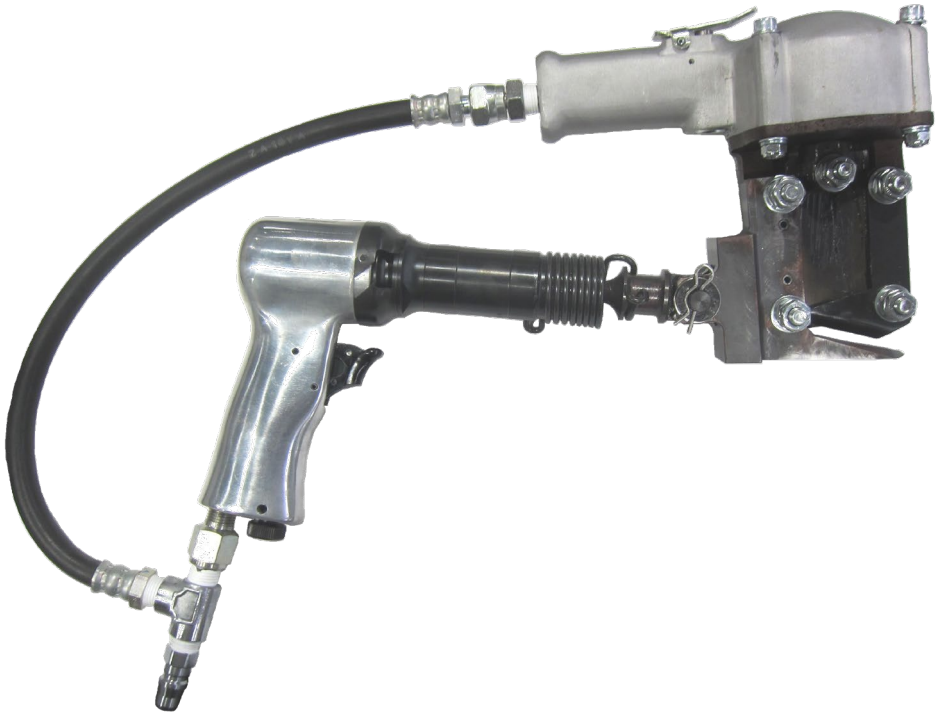
INSTRUCTION MANUAL

FOR

BESTOP STRAPPING TOOL

HS-AH-32



KohanKogyo

KOHAN KOGYO CO., LTD.

Ver.7

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Safety instructions

- Before starting operation, maintenance or inspection of this device, carefully read this instruction manual.
- Contents shown in this instruction manual are described to assist safe operation and prevent danger and the damage to you and other people beforehand.
- For individual operation, observe the contents of this instruction manual. Although this device is designed and manufactured in consideration of safety, failure to follow this precaution may cause serious personal accidents such as the death or serious injuries.
- Before starting individual operation, understand the knowledge of the equipment, safety information, and all contents of this instruction manual.
- In this instruction manual, the ranks of the safety precautions have been divided with “Danger” , ”Warning” , ”Caution” ,and “Notes”.

【⚠ DANGER】	Indicates a hazardous situation which, if not avoided, will result in death or serious bodily injury.
【⚠ WARNING】	Indicates a hazardous or potentially dangerous situation which, if not avoided, could result in death or serious bodily injury.
【⚠ CAUTION】	Indicates a hazardous or potentially dangerous situation which, if not avoided, could result in minor or moderate bodily injury or property damage.
【※ Notes】	Indicates that mishandling may cause an operational mistake.

Even if the matter described to “Caution”, there is the possibility to relate to an important result according to the situation. Observe all safety precautions because the important contents have been described.

1. Safety Instruction

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 use before running, inspection, and maintenance of the tool.
(3)Never remove any safety device such as a safety cover attached to the tool.
(4)Do not remove or make illegible labels and indications affixed to the tool.
(5)When not using the tool or during inspection or maintenance of the tool, shut off the air supply. And, do not touch the cutter part with your bare hands.
(6)If you notice any unusual movement or abnormality, stop using the tool.
(7)Do not modify this tool.
(8)Any use of this tool that does not comply with this instruction manual is considered misuse and abuse. We are not responsible for any injuries or damages caused by misuse and abuse.
(9)Please inform us of any comments or questions you may have concerning safe use of our tools.

1-2. Application

This tool is designed to bind various kinds of objects by using straps. Please do not use for purposes other than binding.

1-3. Work wear

When using this tool, wear protective equipment such as “protective glasses”, “protective mask”, “earplugs”, “protective gloves”, “protective shoes” and a “Hard hat”.
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

(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.

(2)Protective mask

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

(3)Earplugs

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

(4)Protective gloves (Leather gloves)

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

(5)Protective shoes

Wear protective shoes as heavy objects may drop and injure your feet.

(6)Hard hat

Wear a hard hat as the strap after cutting may snap back and injure your head.

1-5. Precautions

(1)Never touch the cutter part with your fingertips, because doing so may cause injury or cutoff of fingers.

(2)Vibration

- 3-axis composite vibration value is measured based on the description in "JIS B 7761-2:2004 (ISO 5349-2:2001)" using a vibration meter specified in "JIS B 7761-1:2004" and "JIS B 7761-3:2007 (ISO 5349-1:2001)".
- Depending on the total operating time, operators may be at risk. Get a physical checkup based on "Guidelines for Preventive Measures against Vibration Hazards in Work with Vibratory Tools other than Chain Saws," etc., and take measures, safety and health education, and exercise based on the checkup result.

1-6. Inspection and repair

(1)Remove the tool from the air hose or stop feeding compressed air before inspection or repair.

(2)Check the attached portion of the tool to which a suspension (lifting component) is attached for looseness before operation.

(3)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., is used for the tool. Please dispose of the tool according to the related ordinances etc., of the laws and regulations of the related national and local governments.

1-8. Inspection before work

(1)Check the tool to confirm that there is no looseness or damage of the bolts before daily work. If the bolt is looseness, tighten the bolt again. If the bolt is damaged, stop using the tool. Then, replace to the new bolt immediately.

(2)Discharge the drain in the air supply piping.

(3)Check if the air pressure is correct (0.6MPa) at the pipe end.

(4)Check if oil level and drop amount of lubricant (turbine oil ISO VG32) in the lubricator are correct.

(5)When connecting the air piping, do not push the valve button.

(6)Check the tool to confirm that a "spring retainer" is installed to the inside of a "hammer" certainly.

1-9. Monthly inspection

A "hinge pin" connects an "air hammer" with an "anvil". Confirm that wear of the "hinge pin" is less than 1mm. If the wear of "hinge pin" is more than 1mm, replace a unit of the "hinge pin". Please refer to "6. Recommended replacement parts" for the unit of "hinge pin".

2. Specifications

	Strap used		Weight	Air pressure	3-axis Composite vibration
	Width	Thickness			
	(mm)	(mm)	(kg)	(MPa)	(m/s^2)
HS-AH-32	16~32	0.5~1.0	4.1	0.6	11.03

Note.1) ◇ Minimum operating pressure changes according to the Thickness of strap and seal etc.

Note.2) ◇ 3-axis composite vibration value is measured based on JIS B 7761-2:2004 (ISO5349-2:2001). Daily vibration exposure limit: 5.0m/s^2 or less.

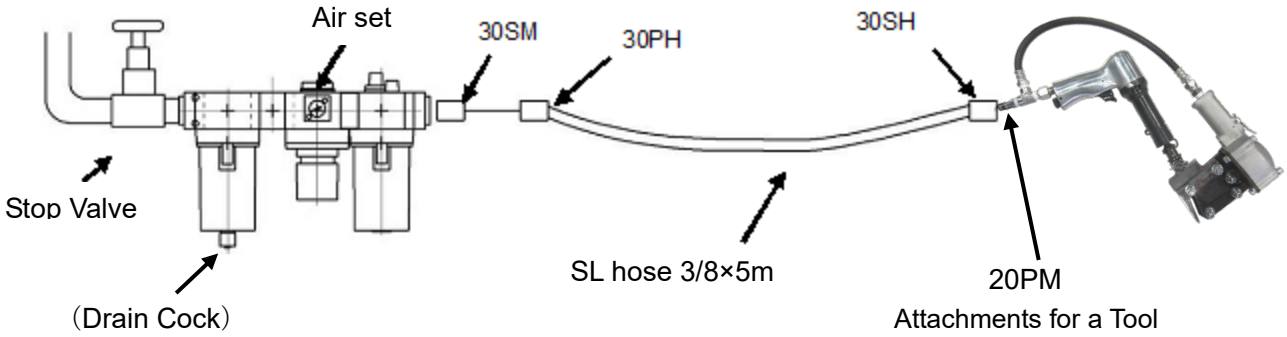
3. Pneumatic Information

3-1. Air source

As an air source of this tool, use a compressed air source of which the air pressure (source pressure) is 0.6MPa or more in the plant with a piping diameter of 3/8B (10A) or greater, air flow rate of 1Nm^3 /min or more.

3-2. 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 at 9.5mm 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.

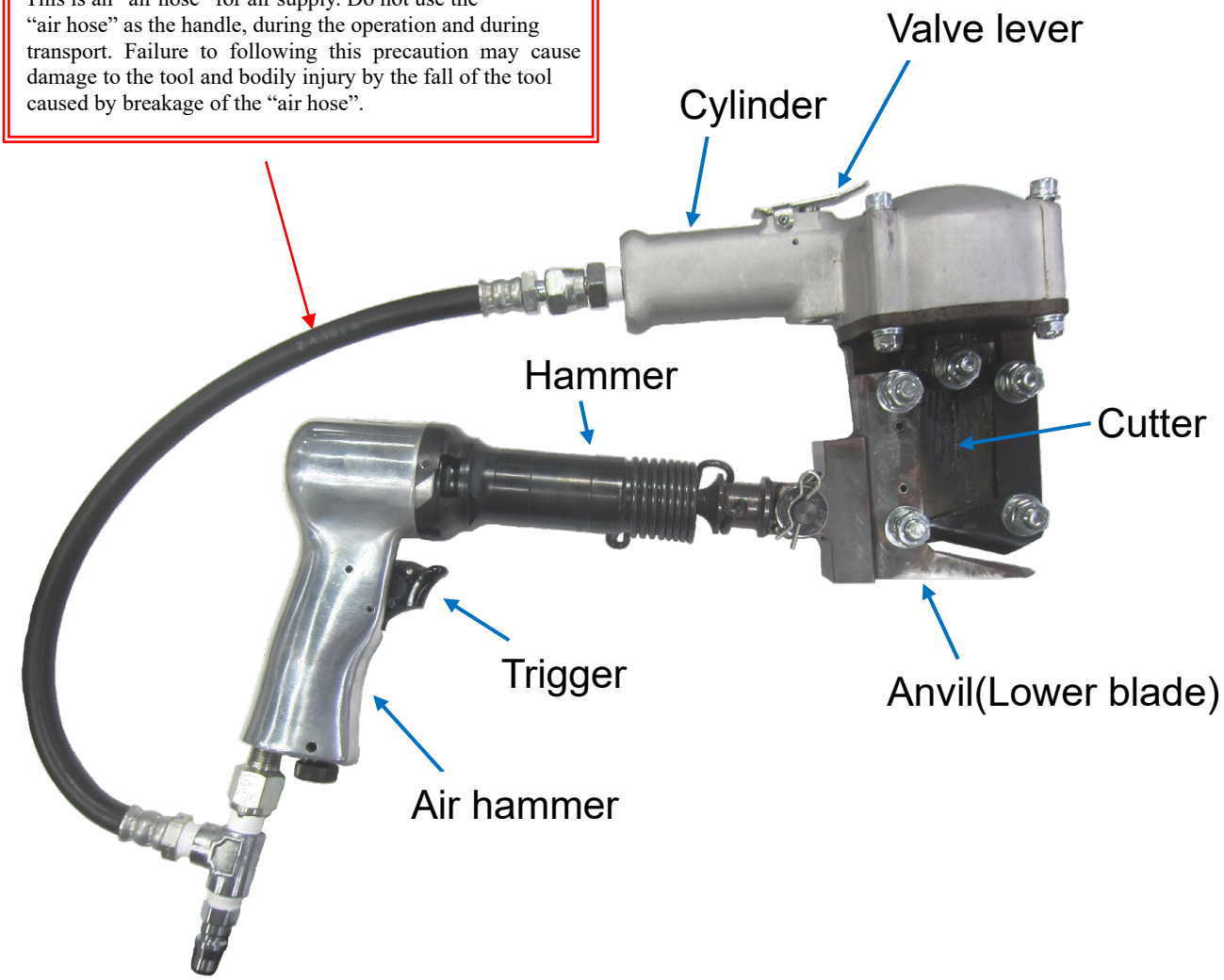
3-3. Precautions for piping

(1)Attach an air set of 3/8B or greater (filter, regulator, and lubricator) to the air source.
(2)To prevent a reduction in pressure during operation, completely use parts of 3/8B or greater for piping.
(3)Be careful so as not to allow drain, rust, and pieces of seal tape in the piping to enter in the tool.
(4)As the rotor of the air motor rotates at a high speed, if lubrication oil is insufficient in the supplied air, the rotational number may drastically decrease or the tool may not start running. Always, pay attention to the level of lubrication oil (turbine oil: ISO VG32) of the lubricator, and adjust the oil drop amount so that 20 to 30 drops drip per minute.

4. Operating Instructions and Adjustments

4-1.Exterior

【⚠ WARNING】
This is an “air hose” for air supply. Do not use the “air hose” as the handle, during the operation and during transport. Failure to following this precaution may cause damage to the tool and bodily injury by the fall of the tool caused by breakage of the “air hose”.



4-2. Operating method

1) Anvil(Lower blade) setting

(1)Hold a “cylinder” and an “air hammer”. Then, push a tip of an “anvil(lower blade)” between a bound strap and the object. At this time, operate while mainly supporting the “cylinder”.

【⚠CAUTION】
Do not insert the hand between the “anvil” and object.

(2)While push a tip of the “anvil” between the bound strap and the object, pull a “trigger” of the “air hammer”. At this time, the “air hammer” vibrates. So push the “anvil” over there while supporting the “cylinder” securely.

【⚠ CAUTION】
If you operate the “air hammer” without pushing the “anvil” against something, a “hinge pin” connecting the “air hammer” with the “anvil” will be over loaded. As a result, the “hinge pin” may be damaged.
As much as possible, push the “anvil” into the gap between the bound strap and the object. The gap is a seal part of the strap, a coil end part of the object, etc..

【⚠ CAUTION】
Make sure the “anvil” is completely between the bound strap and the object. Failure to following this precaution may cause fail to cut the bound strap.

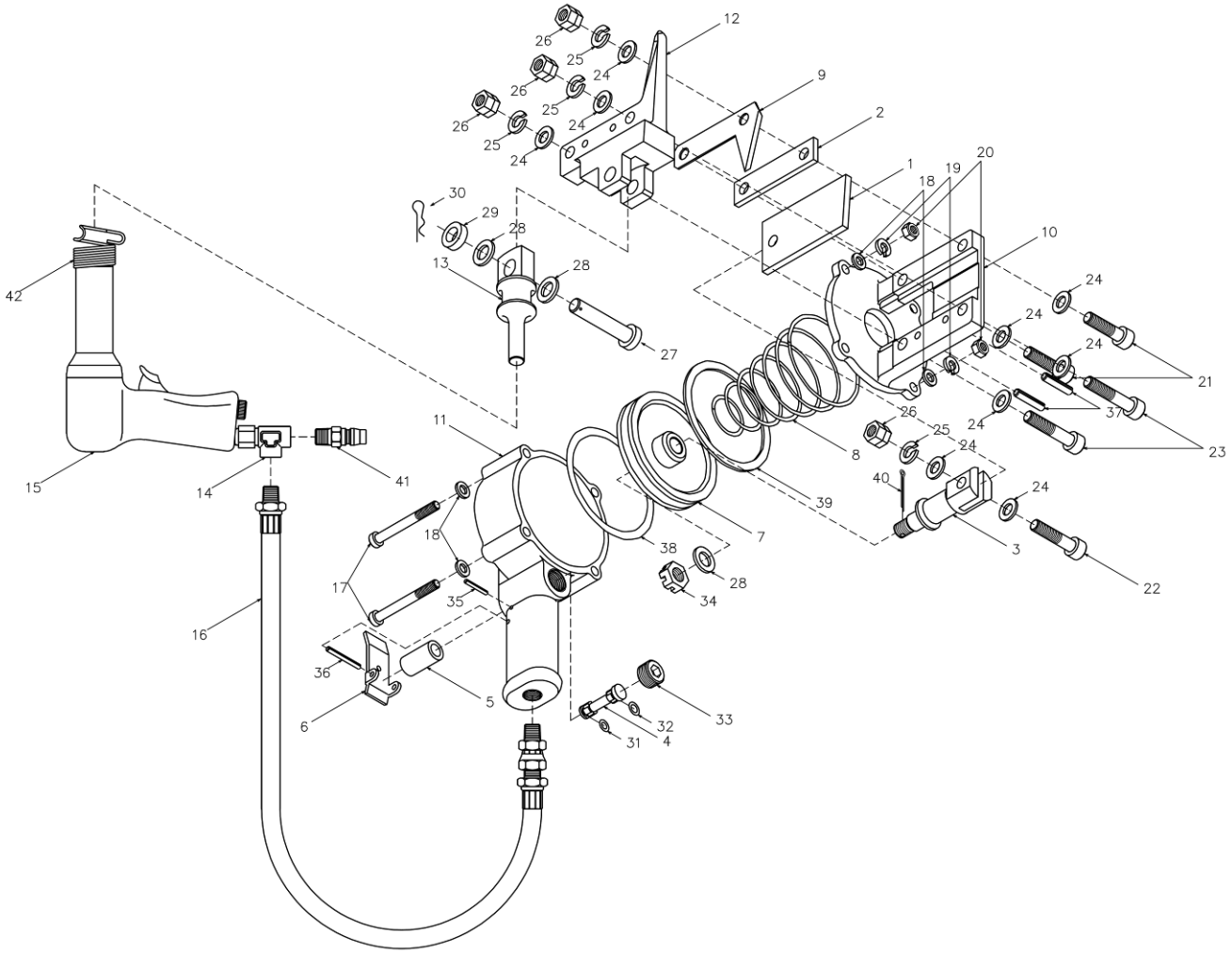
2) Cutting

(1)Push a “valve lever”. As a result, a “cutter” is lowered and the bound strap is cut.

【⚠ CAUTION】
When the bound strap is cut, the cut strap and/or the coil end of the object may spring back to the operator, resulting in bodily injury.
Perform the cutting operation after ensuring safety according to the work environment.

5. Exploded-view Drawing & Parts list

5-1. Exploded-view Drawing: HS-AH-32



5-2. Parts list

KEY NO.	Parts Name	Parts No.	DWG. No. (Model No.)	Q'ty	Consumables
1	Cutter	07021	EK14914-1	1	○
2	Plate	0703	EK14893-1	1	
3	Piston rod	0706	EK14270-1	1	
4	Stem	0711	EK18387-1	1	
5	Stem bush	0712	EK13834-1	1	
6	Valve lever	0713	EK13835-1	1	
7	Piston	0715	DK12578-1	1	
8	Cylinder spring	0717	DK12599-1	1	○
9	Safety cover	0719	EK0378-1	1	
10	Base	0701	DK16988-1	1	○
11	Cylinder	0716	CK6784-2	1	
12	Anvil	0705	DK16323-1	1	○
13	Shank	07051	EK18540-1	1	○
14	Service tee	1558	EK10456-1	1	
15	Air hammer	0720	DK18927-1	1	
16	Air hose	0721	DK14690-1	1	
17	Hex. socket head screw	Purchase	(M6×55)	4	
18	Plain washer	Purchase	(M6)	8	
19	Spring washer	Purchase	(M6)	4	
20	U-Nut	Purchase	(M6)	4	
21	Hex. socket head screw	Purchase	(M8×35)	2	
22	Hex. socket head screw	Purchase	(M8×40)	1	
23	Hex. socket head screw	Purchase	(M8×45)	2	
24	Plain washer	Purchase	(M8)	10	
25	Spring washer	Purchase	(M8)	5	
26	Hard-Lock-Nut	Purchase	(M8)	5	
27	Hinge pin	Purchase	(HCMGH10-35)	1	○
28	Plain washer	Purchase	(M10)	3	○
29	CR washer	Purchase	(CRW-1020-30)	1	○
30	Snap pin	Purchase	(B87-0010)	1	○

KEY NO.	Parts Name	Parts No.	DWG. No. (Model No.)	Q'ty	Consumables
31	O-Ring	Purchase	(P6)	1	○
32	O-Ring	Purchase	(P6)	1	○
33	Hex. socket plug	Purchase	(PT3/8)	1	
34	Fluted nut(low type)	Purchase	(M10)	1	
35	Spring pin	Purchase	(φ2.5×20)	1	
36	Spring pin	Purchase	(φ3×25)	1	
37	Spring pin	Purchase	(φ5×25)	2	
38	O-Ring	Purchase	(P70)	1	○
39	Buffer	-----	EK4685-1	1	
40	Split pin	Purchase	(φ2.5×25)	1	
41	Plug	Purchase	(20PM)	1	
42	Spring retainer	-----	DK17067-1	1	○

6. Recommended spare parts

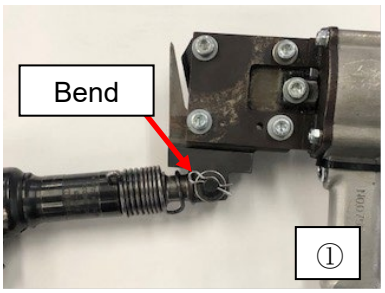
KEY NO.	Parts Name	Parts No.	DWG. No. (Model No.)	Q'ty	Consumables	Replacement –frequency ※4	Cause
1	Cutter	07021	EK14914-1	1	○※1	---	When the strap cannot be cut.
8	Cylinder spring	0717	DK12599-1	1	○	---	When the strap cannot be cut.
10	Base	0701	DK16988-1	1	○	---	When the strap cannot be cut even if replacing the "cutter" and "anvil".
12	Anvil	0705	DK16323-1	1	○※1,2	---	The wear condition varies depending on the materials, thickness, width, etc. of the strap to be cut.
13	Shank	07051	EK18540-1	1	○※2	---	When the contact area between the "anvil" and this part is significantly worn.
27	Hinge pin	Purchase	φ10×35	1	○※2,3	50 hours	When this "hinge pin" diameter is worn by 1mm.
28	Plain washer (T=1.5)	Purchase	M10	2	○	50 hours	When the "hinge pin" is replaced.
29	CR washer	Purchase	M10	1	○	50 hours	When the "hinge pin" is replaced.
30	Snap pin	Purchase	φ10	1	○	50 hours	When the "hinge pin" is replaced.
31	O-Ring	Purchase	P6	1	○	---	When an air leak occurs during the cutting operation.
32	O-Ring	Purchase	P6	1	○	---	When an air leak occurs during the cutting operation.

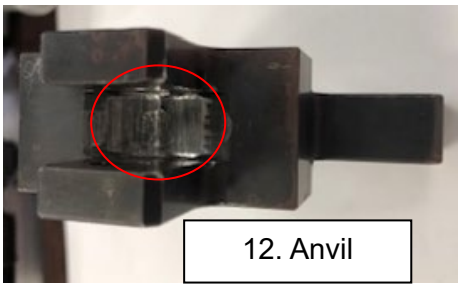
※1 The wear of the "cutter" and the "anvil" varies depending on the materials, thickness, width, etc. of strap to be cut.

※2 If the connecting part of the "anvil" and the "shank" is significantly worn, the "air hammer" will bend about 90 degrees as shown in "①" below. In this case, replace them as soon as possible.

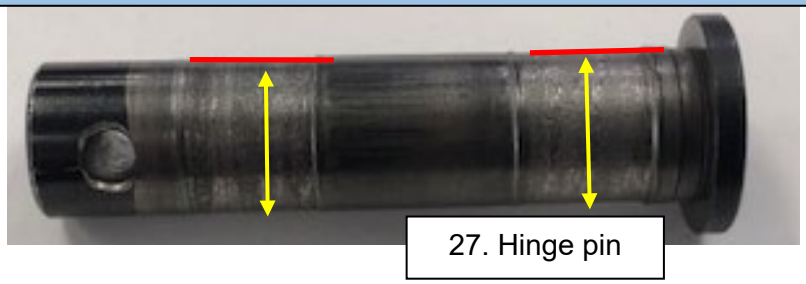
※3 If the shaft diameter of the "hinge pin" is 9mm or less, replace it as soon as possible. The shaft diameter of the new "hinge pin" is 10mm.

※4 The replacement frequency is a guide.





⇔Replace when it becomes φ9mm or less. The new one is φ10mm.



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