

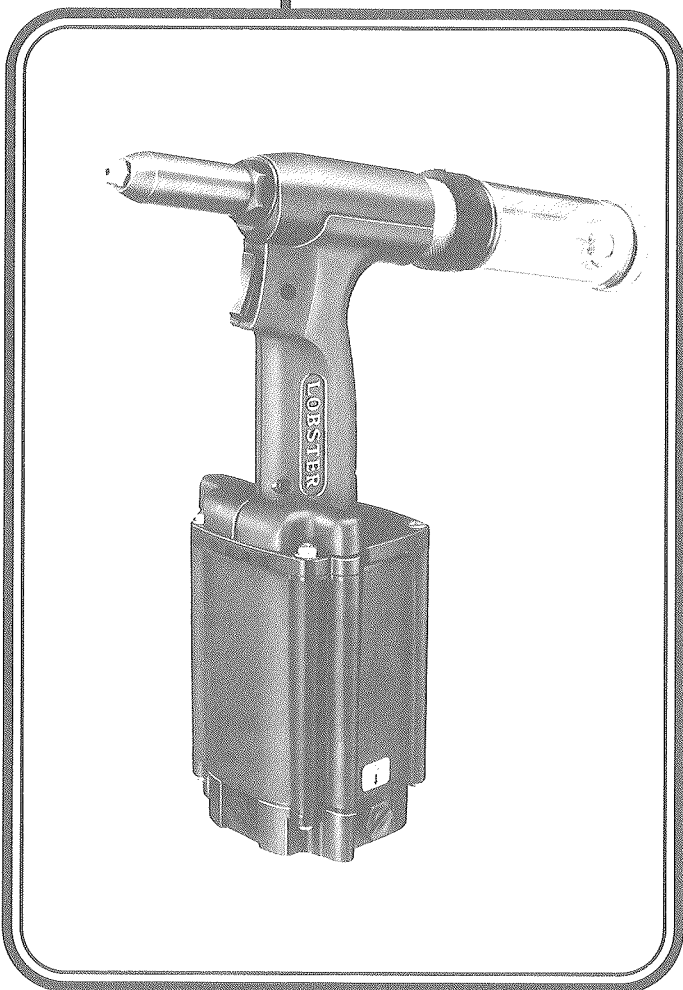


# AIR RIVETER

## INSTRUCTION MANUAL

BUILT-IN ON-DEMAND  
VACUUM SYSTEM

英語  
ENGLISH



# AR 2000SV AR 2000MV AR 2000HV

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Professional model of air riveter to install blind rivets.

- Thank you very much for purchasing "LOBSTER" air riveter. To ensure correct operation, please read this instruction manual carefully, and keep it in a safe place for later reference.
- This instruction manual contains information for models AR2000SV, AR2000MV and AR2000HV. Be sure to refer to information that is applicable to the model you are using.

MANUFACTURER

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# IMPORTANT SAFETY INSTRUCTIONS



◆ Be sure to read the following Important Safety Instructions carefully and make sure that you understand them thoroughly before using this tool.



◆ Always wear eye-protection at all times during use. If this is not observed, the rivet shaft (cut mandrel) may eject out when the rivets are cut and cause serious injury.



◆ This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

◆ The Important Safety Instructions are divided into **⚠ WARNING** and **⚠ CAUTION**. The differences between these two levels are described below.

**⚠ WARNING** : Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury to the operator.

**⚠ CAUTION** : Indicates a potentially hazardous situation which, if not avoided, may result in moderate injury to the operator or physical damage.

Moreover, failure to follow the instructions marked with the **⚠ CAUTION** symbol or cautions without a **⚠ CAUTION** symbol which appear in the text of this manual may also have serious results in some cases. Always be sure to observe the instructions given in the Important Safety Instructions.

◆ After reading this manual, keep it in a safe place where it is easily accessible to tool users.

## **⚠ WARNING**

- 1. The air pressure should be kept within the range of 0.49 to 0.59 MPa (5 to 6 kgf/cm<sup>2</sup>, 71 to 85 psi).**
  - If an air pressure which is greater than this is used, the tool may become damaged, and injury or damage to property may result.
- 2. Never look into the nosepiece of the tool, and never point the nosepiece toward other persons.**
  - If the tool is used while the rivet shafts (cut mandrels) are still inside the tool not being ejected, these shafts may be ejected from the tool's nosepiece during use and cause serious injury.
- 3. Always attach the tank unit before use.**
  - If this is not observed, the rivet shafts (cut mandrels) may be ejected when the rivets are cut and cause serious injury.
- 4. Be sure to remove the frame head when adding hydraulic oil through the cylinder.**
  - If the frame head is not removed before adding oil, excess oil may remain inside the tool, and damage to the tool or personal injury may result. (Except the case when adding hydraulic oil through the bleed plug.)
- 5. Make sure that the tool and the air source are connected securely.**
  - If the threads of the joints do not match or if the screws are not inserted far enough, the air hose may become disconnected during use and injury may result.
  - Use hose bands to securely connect the air hose joint and air hose. If they are not connected securely enough, the air hose may become disconnected during use and injury may result.
- 6. Turn off the air supply before disconnecting the tool from the air source.**
  - Compressed air may cause the air hose to whip around, and injury may result.
- 7. Check that all the tool parts are free from damage before use. Any damaged parts should be repaired before the tool is used.**
  - If the tool is used while any parts are still damaged, injury may result.
  - If the tool is damaged by objects being dropped onto it, for instance, the damaged part may break and accident or injury may result.
- 8. If using in elevated locations, use a safety harness, and take care to avoid dropping rivets or the tool itself.**
  - Accident or injury may result if this practice is not followed.

## CAUTION

### 1. Always turn off the air supply before disassembling the tool for cleaning and maintenance purposes.

- If the tool is cleaned or disassembled with the air supply connected, injury may result.

### 2. Do not use the tool with the frame head removed.

- Items such as fingers may become caught in the mechanism.

### 3. Do not bring your face close to the air outlet holes.

- Pressurized air containing fine particles is discharged from the air outlet holes during use. Keep eyes away from this area.

### 4. Avoid skin contact with substances such as hydraulic oil, lubricating oil and grease.

- Such substances may cause inflammation of the skin. If they come into contact with your skin, wash the affected area thoroughly.

### 5. Make sure that the workplace is safe, clean and organized.

- Accidents can easily occur in untidy workplaces.
- If the cut-mandrels are allowed to fall onto the floor, you may slip on them, and injury may result.

### 6. Avoid uncomfortable postures while working.

- You may fall down and injury may result.

### 7. Keep people who are not involved in work away from the workplace.

- Accidents or injury may result.

### 8. Maintain the tool with due care.

- Refer to the Instruction Manual for details on replacing parts and attachments, otherwise injury may occur.
- Keep the grip clean and dry at all times, and never let it become greasy, otherwise injury may occur during use.

### 9. Use the tool carefully and concentrate on correct operation at all times.

- Use the tool with proper care, paying full attention to methods of handling and operation and surrounding conditions. Accidents and injury may result if this practice is not followed.
- Use common sense at all times, otherwise accidents or injury may result.
- When you are tired, do not use the tool, otherwise accidents or injury may result.

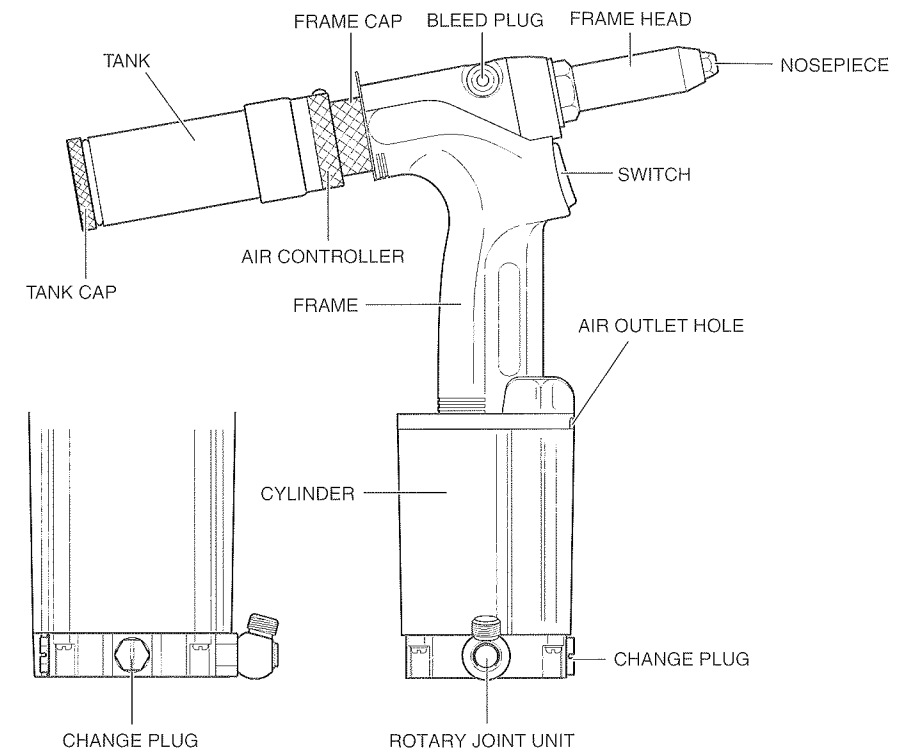
### 10. Ask Lobtex to carry out any repair work required.

- Repair work should only be carried out by a qualified technician. Please contact your nearest "LOBSTER" distributor, representative, or direct to Lobtex Co., Ltd., Osaka. If the tool is repaired by someone without the necessary qualifications and experience, the tool may not perform to optimum standards, and accidents or injury may result.

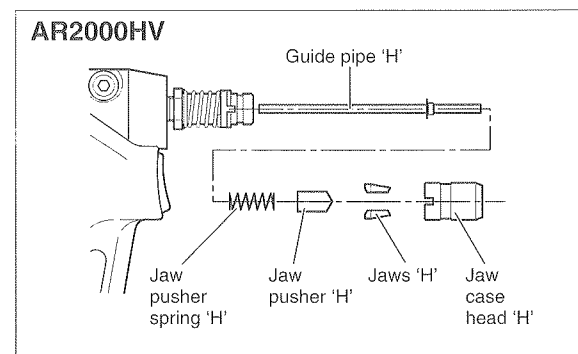
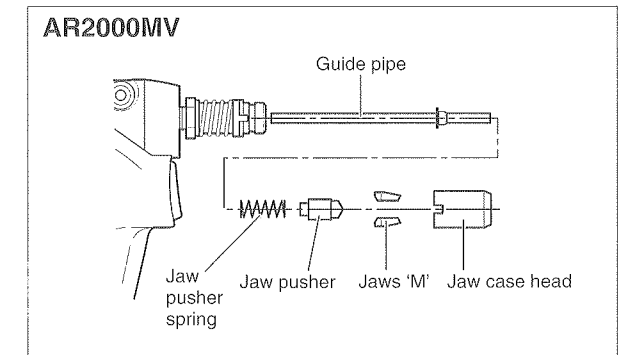
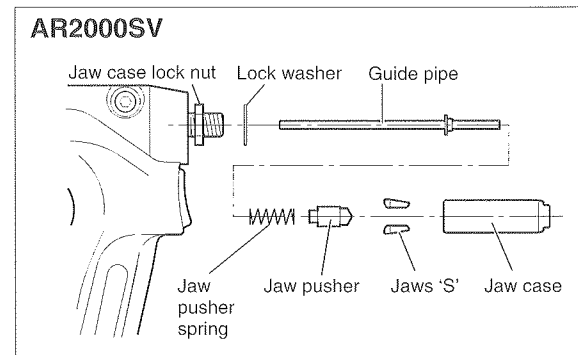
### 11. Do not attempt to modify the tool.

- Unauthorized modifications may cause malfunctions which can lead to accidents or injury.

## NOMENCLATURE



## FRAME HEAD INTERNAL PARTS



# TECHNICAL DATA

Model No.		AR2000SV	AR2000MV	AR2000HV
Weight	kg (lbs)	1.2 (2.65)	1.4 (3.09)	1.8 (3.97)
Operating air pressure		0.49 ~ 0.59 MPa (5 ~ 6 kgf/cm <sup>2</sup> , 71 ~ 85 psi.)		
Dimensions (Length×Height×Width) mm		284×240×95	302×283×95	328×323×105
Air consumption per minute	ℓ (c.ft.)	90 (3.18)	90 (3.18)	120 (4.24)
Tool stroke	mm (inch)	14 (35/64)	16 (5/8)	18.5 (23/32)
Traction power at 0.59 MPa	kN (kgf)	4.2 (430)	8 (820)	12 (1,250)
Applicable rivets (rivet diameters)	φ mm	2.4, 3.2, 4.0*	2.4, 3.2, 4.0, 4.8	4.8, 6.4
	φ inch	3/32, 1/8, 5/32*	3/32, 1/8, 5/32, 3/16	3/16, 1/4

\* 4.0 mm stainless steel rivets can not be used.

- Product specifications and design are subject to change for improvement without notice.
- Weight and dimensions given are standard values. Actual products may differ slightly from the values given.
- AR2000HV is available to install 3.2 (1/8") and 4.0 (5/32") blind rivets subject to conversion of jaw case head, ultra jaws, jaw pusher and nosepiece. Furthermore, use the H4.8 guide pipe (yellow) which is installed in the tool as a standard accessory.

Index no.	Part name	Code no.
3	Jaw case head 'M'	14378
4	Ultra jaws (pair) 'M'	10281
6	Jaw pusher 'H'	10224
1	Nosepiece 'M' 3.2 (1/8)	10214
1	Nosepiece 'M' 4.0 (5/32)	10215

## ■ Air consumption calculation method ■


Use the following calculation method to obtain the required air consumption, and select the compressor accordingly.

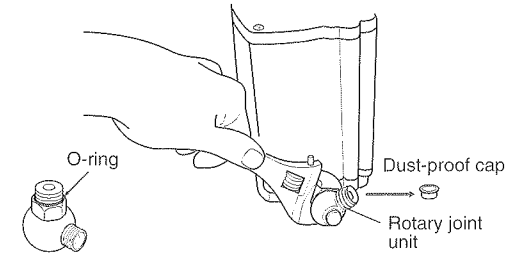
$$\text{Required air consumption} = \text{Air consumption per minute}$$

Make sure that this corresponds to the compressor discharge capacity (per minute).

# PREPARATION BEFORE USE

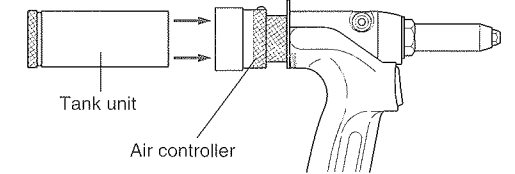
## 1 Remove the dust-proof cap on the bottom of the tool, and then connect the rotary joint unit.

- ☑ Connect the end of the rotary joint unit which has the O-ring fitted to the tool. **⚠ WARNING 5 (P.1)**
- ☑ Connect the rotary joint unit to the place indicated by the  label. (Either the left or right connector can be used.) Be sure to insert the change plug into the connector which is not being used.



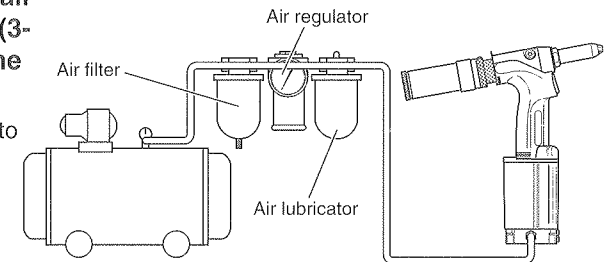
## 2 Install the tank unit to the tool.

- ☑ Fit the tank unit onto the air controller securely as shown in the illustration. **⚠ WARNING 3 (P.1)**



## 3 Set up the compressor, and be sure to install an air filter, air regulator and air lubricator (3-device set) between the compressor and the tool.

- ☑ Adjust the drip-feed amount of the air lubricator to the minimum setting.



### ATTENTION:

In case of the usage in the cold district, the moisture contented air in the tool body may be frozen on the inside cylinder surface. As the result, it may not work. To dehydrate, we recommend to add the air-dryer unit to the normal three units (Regulator, Filter, and Lubricator).

## 4 Use the air regulator to adjust the operating air pressure to 0.49 ~ 0.59 MPa (5 ~ 6 kgf/cm<sup>2</sup>, 71 ~ 85 psi). **⚠ WARNING 1 (P.1)**

- ☑ If installing stainless steel rivets with a diameter of 4.8 mm (3/16") with the AR2000MV, set the air pressure to 0.54 ~ 0.59 MPa (5.5 ~ 6 kgf/cm<sup>2</sup>, 78 ~ 85 psi).

### ATTENTION:

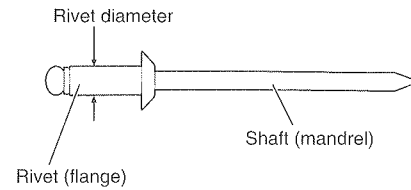
If the air pressure is too high, damage to parts may occur. If the pressure is too low, some size of the rivet may not be correctly installed (cut).

# OPERATING THE AIR RIVETER

5

Replace the nosepiece and guide pipe as indicated below to conform to the size of the rivet being used.

Refer to "Jaw maintenance" on page 8 for details on replacing the guide pipe.



Part No.	Rivet Dia.	Nosepiece	Guide Pipe
AR 2000SV	2.4 mm (3/32")	2.4	
	3.2 mm (1/8")	3.2	
	4.0 mm (5/32")	4.0	
AR 2000MV	2.4 mm (3/32")	2.4	
	3.2 mm (1/8")	3.2	
	4.0 mm (5/32")	4.0	
	4.8 mm (3/16")	4.8	
AR 2000HV	4.8 mm (3/16")	4.8	
	6.4 mm (1/4")	6.4	

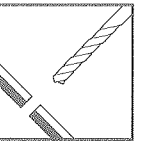
Shaded areas indicate parts which are installed in the tool as standard accessories.

\* If using the AR2000SV or AR2000MV, either guide pipe X or guide pipe Y can be used for 3.2 mm (1/8") diameter rivets.

1) Select a rivet of a size which is suitable for the workpiece to be riveted.

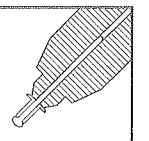
2) Replace the nosepiece with one which matches the size of the rivet to be used.  
(Refer to item 5) in "Preparation Before Use" on page 6.)

3) Drill a hole of appropriate size (0.1 to 0.2 mm larger than the diameter of the rivet) into the workpiece.

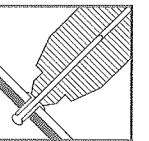


4) Turn the air controller in the ON direction to switch on the vacuum system. Turn the air controller at least 1/4 of a turn. Insert the shaft (mandrel) of the rivet into the tool's nosepiece.

**ATTENTION:**  
Some rivets have shafts (mandrels) with sharp ends. Be careful not to injure your fingers on these ends.

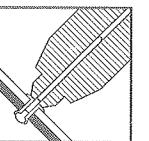


5) After inserting the shaft (mandrel) of the rivet into the nosepiece, insert the head of the rivet into the hole.

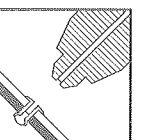


6) Gently press the nosepiece of the air riveter against the workpiece. After checking that there is no gap between the nosepiece and the workpiece, press the switch.

When you pull the switch or during the keeping pull position, you may find a little air leak from the point of this switch. This is not the defective of the quality but the normal condition.



7) The rivet will be installed into the workpiece.

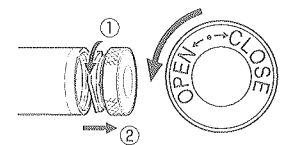


8) Release the switch. The cut mandrel (shaft) will then be drawn into the tank unit.  
**NOTE:** Make sure that the cut mandrel has been completely removed before proceeding to the next riveting.

**WARNING 3 (P.1)**

9) Once the tank unit is about half full, turn the tank cap at the end of the tank in the OPEN direction to remove the cap. Then empty out the cut mandrels from inside the tank unit.

**NOTE:** It is strongly recommended to dispose of the spent mandrels as soon as the Mandrel collection tank become half filled. Failure to do this, jamming of the spent mandrels inside the Guide Pipe will occur and the vacuum will cease to function, resulting in a back flow of air from the Nosepiece.



<Operating temperature> The ambient temperature for working is within the range of 4° ~ 35°C.

# MAINTENANCE

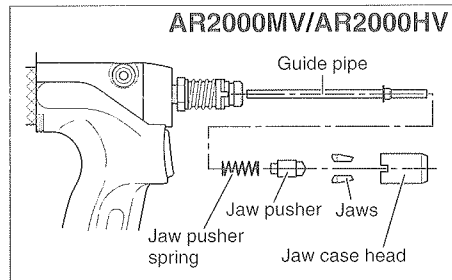
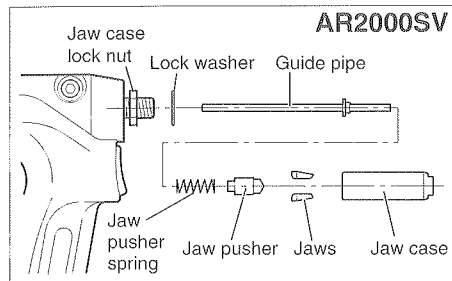
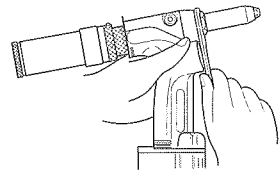
After long periods of use, debris from rivet shafts (mandrels) and other foreign materials tend to build up in various parts of the tool, and the hydraulic oil level also drops, both of which can lead to operating problems. The tool should be cleaned periodically.

## 1 Jaw maintenance Also refer to this section when replacing parts.

- If debris builds up, the jaws will not move smoothly and normal operation will not be possible.
- The jaws should be cleaned on average once every 3,000 riveting operations.

**1** Turn off the air supply. ⚠ CAUTION 1 (P.2)

**2** Use a spanner or similar tool to remove the frame head. ⚠ CAUTION 2 (P.2)

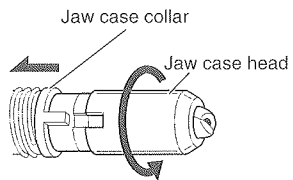


**3** **AR2000SV**  
Use a spanner or similar tool to loosen and remove the jaw case, and then remove the jaw pusher spring, jaw pusher and jaws.

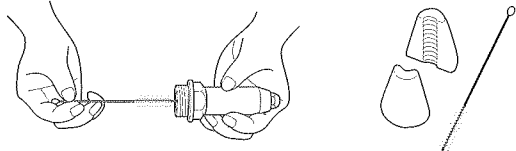
### AR2000MV/AR2000HV

Pull backwards the jaw case collar to loosen and remove the jaw case head, and then remove the jaw pusher spring, jaw pusher and jaws.

- ☑ If the guide pipe is hard to pull out during removal, use long nose pliers or a similar tool to pull it out.



**4** Use a brush or similar to clean all parts.



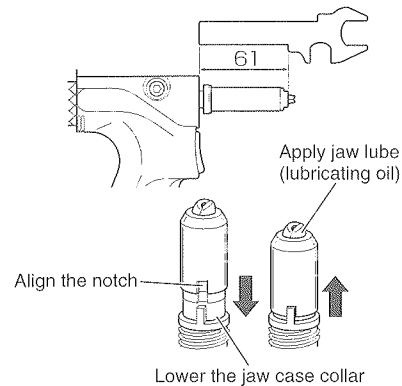
**5** **AR2000SV**  
Reassemble by following the disassembly procedure in reverse. Install the jaw case so that its distance matches those shown in the illustration at right.

### AR2000MV/AR2000HV

Reassemble by following the disassembly procedure in reverse. Tighten the jaw case head fully, and then turn it back so that the notch is aligned with the tab on the jaw case collar, and move the collar in place.

- ☑ Apply "LOBSTER" brand jaw lube (sold separately) to the backs of the jaws.
- ☑ It will be easier to install the guide pipe if you turn the pipe while inserting it.

### < Jaw case setting position >

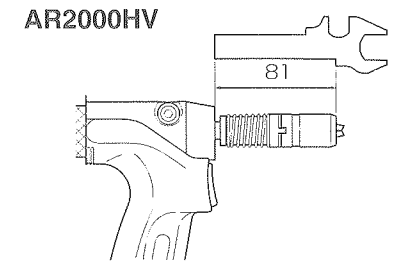
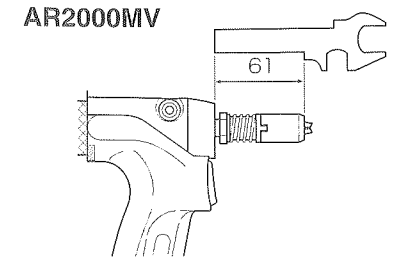


## RE-ASSEMBLY

### NOTE:

- When re-assembling, be sure to apply a lubricant such as grease to all moving and sliding parts.
- Be careful not to leave out any parts, and tighten all connections securely.
- The jaws are consumable parts, and they should be replaced periodically.
- In the case of the AR2000MV and AR2000HV, the jaw case and jaw case lock nut do not need to be removed during maintenance. If they are removed by mistake, replace them so that the distance matches those shown in the illustration at right.

### < Jaw case setting position >

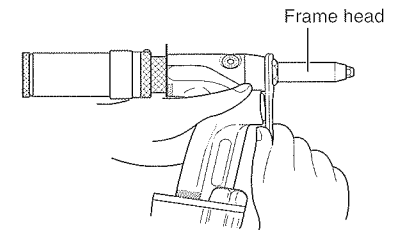


## 2 Cleaning and filling the cylinder

- If foreign materials build up in the cylinder, it will not operate smoothly and service life will be reduced.

**1** Turn off the air supply. ⚠ CAUTION 1 (P.2)

**2** Use a spanner or similar tool to remove the frame head.

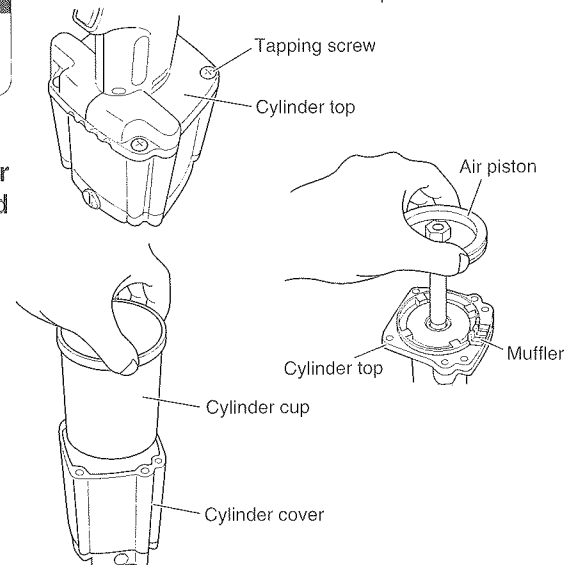


### ⚠ WARNING 4 (P.1)

Be sure to remove the frame head when adding hydraulic oil through the cylinder.

**3** Use a Phillips screwdriver to remove the four tapping screws on the cylinder top, and then separate the cylinder and the frame.

- ☑ Hold the frame vertical, as the hydraulic oil will spill out if it is tipped sideways.



**4** Hold the frame upside down and pull the air piston out from the cylinder top.

**5** Remove the cylinder cup from the cylinder cover.

## DISASSEMBLY

## CLEANING

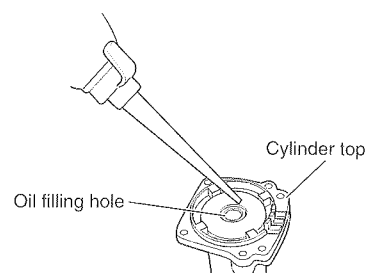
## RE-ASSEMBLY

CLEANING

6 Use a rag, brush or similar to clean all parts.

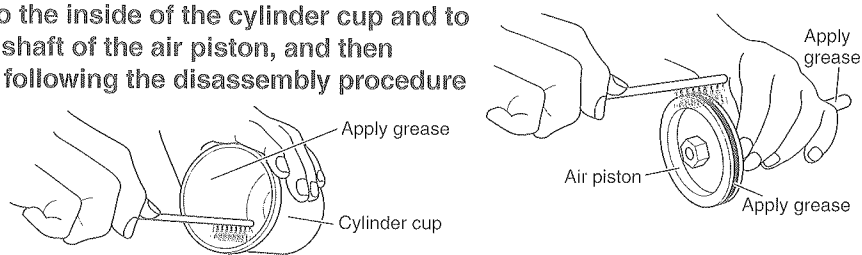
FILLING OIL

7 Fill with hydraulic oil until just before the oil starts running out from the filling hole.

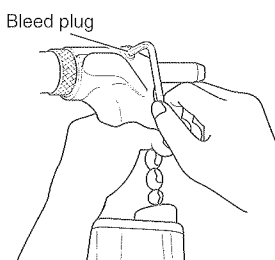


RE-ASSEMBLY

8 Apply grease to the inside of the cylinder cup and to the O-ring and shaft of the air piston, and then reassemble by following the disassembly procedure in reverse.



9 After all parts have been reassembled but before the frame head has been re-attached, hold the tool so that the bleed plug (hexagon socket head cap screw) is facing directly upward, and use the accessory hex key wrench to loosen the bleed plug to drain any excess oil. After checking that no more oil is coming out, re-tighten the bleed plug.



Be careful when loosening the bleed plug, as the hydraulic oil may spurt out strongly.

10 Wipe away any oil outside the tool and clean up any spilt oil before using the tool. CAUTION 4 (P.2) CAUTION 8 (P.2)

11 After checking the jaw case setting position, install the frame head. (Refer to pages 8 and 9.)

NOTE:

- Be careful not to allow any debris or other foreign materials get into the hydraulic oil or the cylinder during disassembly and re-assembly.
- The best indicator to replenish hydraulic oil is performed every 500,000 cycles (or at least once a year).

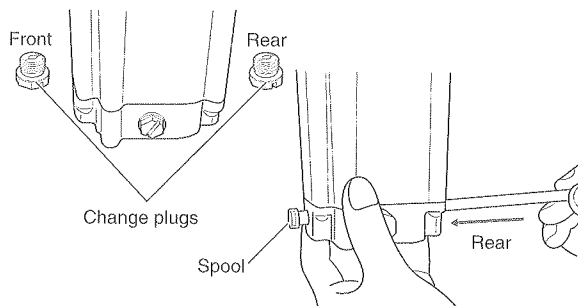
### 3 Cleaning the spool

DISASSEMBLY

1 Turn off the air supply. CAUTION 1 (P.2)

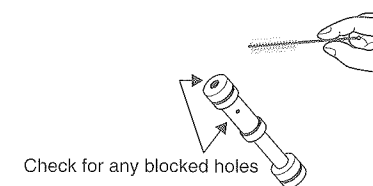
2 Use a spanner or similar tool to remove the change plugs at the front and back.

3 Use a plastic screwdriver or similar to push out the spool from the rear hole.



CLEANING

4 Use a brush or similar to clean all parts. Check the spool thoroughly to ensure that none of the small holes in the spool are blocked.



RE-ASSEMBLY

5 Reassemble by following the disassembly procedure in reverse.
- Apply grease to the O-ring of the spool before reassembly.
- The front and rear change plugs and the change plug of the air hose connector (refer to page 3) have the same shape, so be careful not to confuse them.

### 4 Cleaning the nozzle

DISASSEMBLY

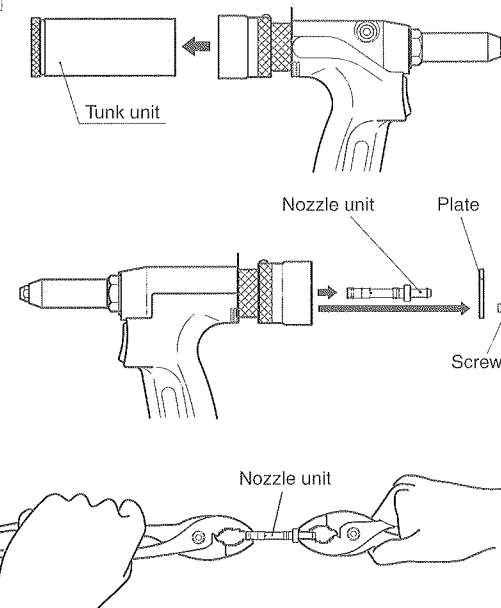
1 Turn off the air supply. CAUTION 1 (P.2)

2 Remove the tank unit.

3 Loosen the screw which is pressing the plate.

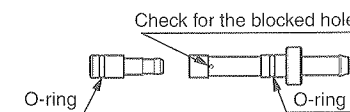
4 Remove the plate, and pull out the nozzle unit.

5 Disconnect the joint part of the nozzle unit using a plier. Clean the hole of nozzle B and the top part of nozzle A.



CLEANING

6 Use a brush or similar tool to clean the nozzle. Check for the blocked hole.



RE-ASSEMBLY

7 Reassemble by following the disassembly procedure in reverse.
- Apply grease to each O-ring before installing them.

# TROUBLESHOOTING

If a problem occurs, check the followings.

If the problem persists after checking the items in the table below, contact your nearest "LOBSTER" dealer or direct to us.

In making any enquiries about this product or requests for repair work, first check the troubleshooting items below, and then make a note of the model number, the usage conditions and the trouble symptoms in as much detail as possible. If you can provide this kind of information, it will contribute to reducing the amount of time required for delivery or repairs to be completed.

Trouble	Cause	Countermeasure
<b>The rivet does not go in, or the shaft does not come out after riveting.</b>	1 Incorrect combination of replacement parts being used.	Replace with the correct part which matches the rivet size. (Refer to page 6.)
	2 Nosepiece or frame head is loose.	Use a spanner or similar to tighten securely.
	3 Jaw case is incorrectly assembled.	Check the jaw case setting position. (Refer to pages 8 and 9.)
	4 Contact surfaces between the jaws and the jaw case head are not smooth.	Clean the jaws and inside the jaw case head, and apply "LOBSTER" brand jaw lube (or spray-type lubricating oil or the accessory hydraulic oil) to the backs of the jaws. (Refer to page 8.)
	5 The inside of the cylinder is dirty so that the air piston cannot return to its proper position.	Clean inside the cylinder, and apply grease inside the cylinder and to the O-ring. (Refer to pages 9 and 10.)
	6 Oil filling was not performed correctly, so that there is excess hydraulic oil inside the tool.	Loosen the bleed plug to allow the excess hydraulic oil to drain out. (Refer to page 10.)
<b>Number of switch operations increases before riveting is complete.</b>	1 The rivet length is not correct for the workpiece thickness.	Use rivets which match the workpiece thickness.
	2 Compressor air pressure is incorrect.	Check the air pressure.
	3 Jaw case is incorrectly assembled.	Check the jaw case setting position. (Refer to pages 8 and 9.)
	4 Jaws are worn.	Replace the jaws. (Refer to page 8.)
	5 Insufficient hydraulic oil, causing a shorter stroke.	Add hydraulic oil. (Refer to page 12.)
<b>Piston does not operate, or returns very slowly, or operation is not smooth.</b>	1 Spool is not moving properly.	I Remove the rear part of changeplug (refer to page 10) and push the spool 2~3mm with a plastic (soft) stick. In case of no improvement, take the II measure. II Clean the spool and apply grease to the O-rings. (Refer to page 10.)
	2 Air outlet hole muffler is blocked.	Replace the muffler. (Refer to pages 9 and 10.)
	3 The inside of the cylinder is dirty so that the air piston cannot return to its proper position.	Clean inside the cylinder, and apply grease inside the cylinder and to the O-ring. (Refer to pages 9 and 10.)
<b>The suction power is weak and the shafts (cut mandrels) cannot be drawn out.</b>	1 The air controller is not open far enough.	Turn the air controller at least 1/4 of a turn.
	2 There are too many cut mandrels inside the tank unit.	Remove the tank cap and empty out the cut mandrels from inside the tank unit.
	3 The guide pipe is blocked with cut mandrels.	Take out the guide pipe and remove the cut mandrels which are blocking it. (Refer to page 8.)
	4 The nozzle is dirty, causing the suction power to drop.	Clean the nozzle. (Refer to page 11.)
	5 Oil filling was not performed correctly, so that there is excess hydraulic oil inside the tool, and the air holes are misaligned, causing the suction power to drop.	Loosen the bleed plug to allow the excess hydraulic oil to drain out. (Refer to page 10.)

## 01 Adding oil

Oil addition should always be carried out by following the simple procedure given below.

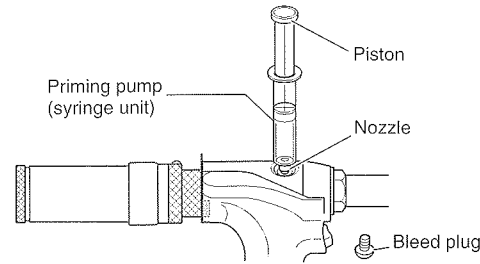
**1 Turn off the air supply.**

**CAUTION 1 (P.2)**

**2 Use the accessory hex key wrench to remove the bleed plug, and attach the priming pump (syringe unit) to the hole.**

Make sure that the priming pump contains the necessary amount of oil beforehand.

If you hold the main body of the priming pump while tightening, the pump may become damaged. Use pliers to hold the nozzle of priming pump while tightening.



**3 Gently depress the piston of the priming pump.**

When enough hydraulic oil has been added, the piston will become hard to push. Stop adding oil at this point.

**4 Install the bleed plug.**

## STORAGE

- Store in a place which is well-ventilated and free from excessive dust and humidity, and where there is no danger that the tool will fall.
- If not using the tool for an extended period of time, carry out a maintenance inspection before storing it away. (Refer to "Maintenance" on pages 8 ~ 12.)
- To increase the working life of the tool, it is recommended that you give it periodic overhauls. Contact the place of purchase or your nearest "LOBSTER" dealer for any overhauls and repair work required. (A charge will be made for this service.)

### ULTRA JAWS (AR2000MV/AR2000HV)

The AR2000MV and AR2000HV use ultra jaws which have greater durability. Be sure to specify "Ultra jaws M" (for AR2000MV) or "Ultra jaws H" (for AR2000HV) as replacement parts for these models.

"LOBSTER" brand Hydraulic Oil is supplied in a plastic filler bottle with the tool, and can also be obtained from your "LOBSTER" dealer or agent in your town. If this is not possible, a good quality mineral oil with the following properties should also be used.

Viscosity ISO : VG46                      Viscosity Index : 113  
 Viscosity at 40°C : 46 c.s.t.              Viscosity at 100°C : 7.06 c.s.t.  
 Flash Point : 228

### HYDRAULIC OIL REQUIREMENTS

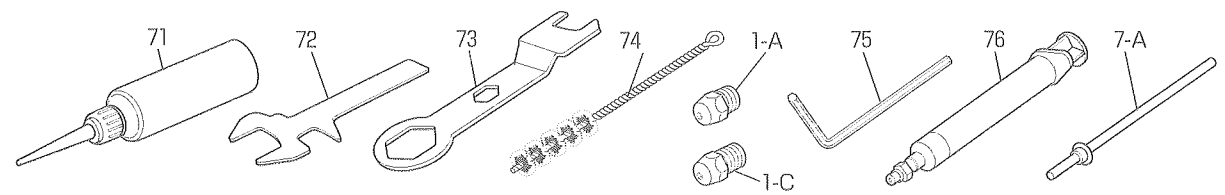
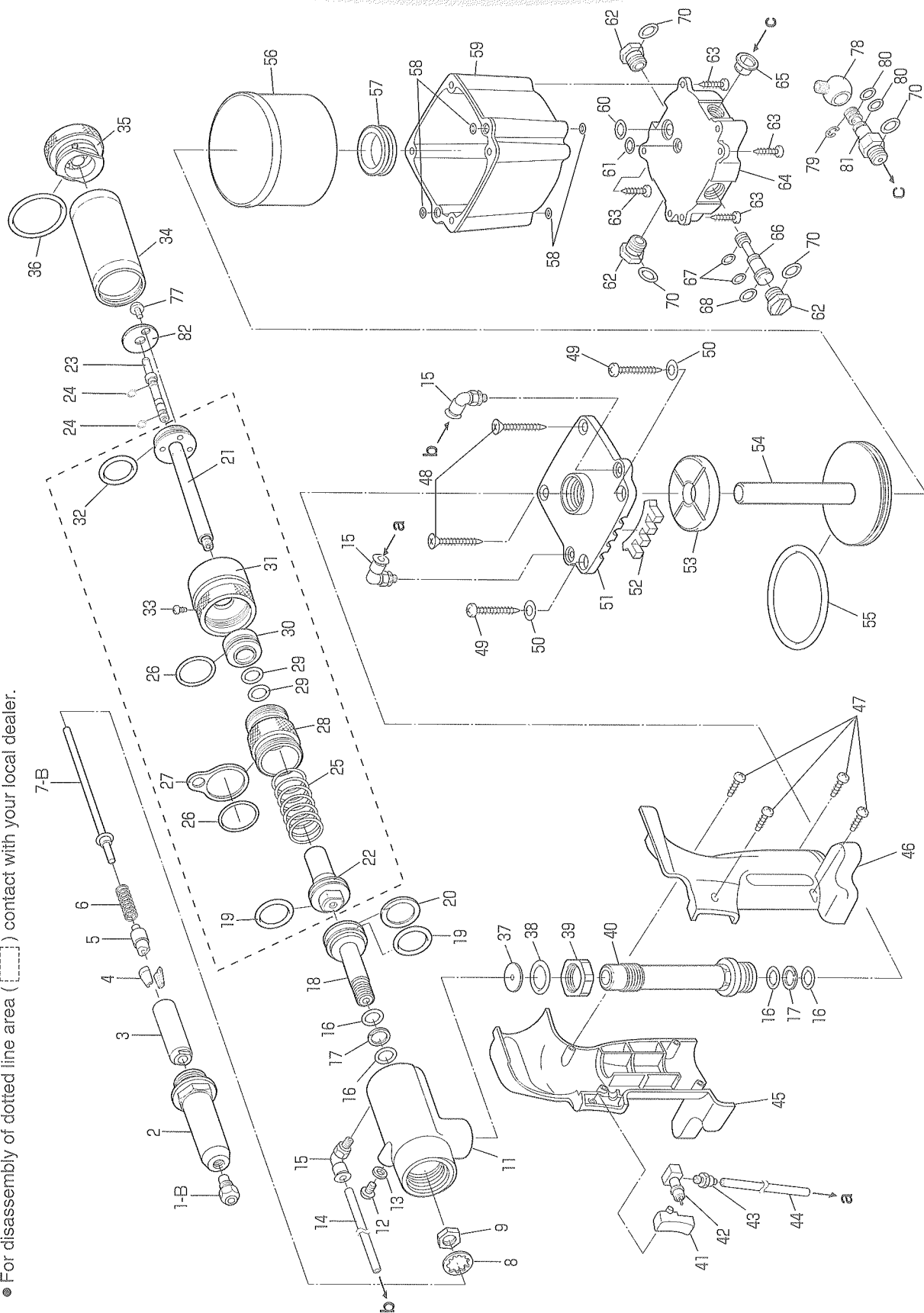
Use only clean hydraulic oil, as the viscosity of the oil used will affect tool performance.

RECOMMENDED OILS are:

Shell Tellus No. 46                      Esso Teresso No. 46  
 Mobil D.T.E. 25 Oil (Medium)



# AR2000SV PARTS TABLE



Index No.	Part name	Code No.	Index No.	Part name	Code No.
1-A	Nosepiece 'S' 2.4 (3/32)	10027	40**	Oil sleeve unit	29633
1-B	Nosepiece 'S' 3.2 (1/8)	10028	41	Switch	29348
1-C	Nosepiece 'S' 4.0 (5/32)	10029	42	Valve sleeve	29350
2	Frame head 'S'	29801	43	Terrapin connector	29351
③	Jaw case 'S'	10173	44	Polyurethane tube 105 mm	29352
④	Jaws (pair) 'S'	10032	45	Frame cover 'R'	29338
⑤	Jaw pusher	10132	46	Frame cover 'L'	29339
⑥	Jaw pusher spring	10133	47	Pan head tapping screw 3×10	29340
7-A	Guide pipe 'X'	16779	48	Flat head tapping screw 5×35	29367
7-B	Guide pipe 'Y'	14492	49	Pan head tapping screw 5×35	29608
8	Lock washer	10148	50	Flat washer No.5	29609
9	Jaw case lock nut	10113	51	Cylinder top (with muffler)	29634
11**	Frame unit 'S'	29803	52	Muffler	29377
12	Bleed plug (Hexagon socket head cap screw)	29337	53	Rubber cushion	29358
13	Pack seal 6 mm	10355	54**	Air piston unit 'S'	29820
14	Polyurethane tube 205 mm	29353	55	O-ring P-60	10134
15	Connector	29354	56	Cylinder cup 'S'	29824
16	O-ring P-12	10128	57	Grommet	29361
17	B-ring P-12	10129	58	O-ring S-5	10276
18	Oil piston 'X'	41258	59	Cylinder cover 'S'	29822
19	O-ring P-18	23683	60	O-ring P-10	10274
20	B-ring P-18	23684	61	O-ring P-6	10150
21	Back piston 'Y'	41215	62	Change plug	29375
22	Flange 'X'	41212	63	Pan head tapping screw 4×20	29610
23	Nozzle unit (with O-ring)	41199	64	Cylinder bottom	29366
24	O-ring S-5	10276	65	Dust-proof cap	29611
25	Return spring 'S'	29815	66	Spool	29612
26	O-ring S-24	10185	67	O-ring P-5 (4D)	29613
27	Hanger clip 'S'	29819	68	O-ring P-8 (4D)	29614
28	Frame cap 'SV'	29680	70	O-ring P-9	10219
28U	Frame cap unit 'SV'	29705	71	"LOBSTER" brand hydraulic oil	10012
29	O-ring P-10	10274	72	Spanner 'B'	29642
30	Air valve (with O-rings)	29701	73	Spanner 'A'	10183
31**	Air controller 'Y'	41222	74	Cleaning brush	10143
32	O-ring P-30	14445	75	Hex key wrench 5 mm	25777
33	Pan head tapping screw 3×6	29670	76	Priming pump (syringe unit)	29624
34	Mandrel tank 'S'	29681	77	Cross recessed head screw 6 x 10	20916
34U	Mandrel tank unit 'S' (with cap)	29837	78	Rotary joint	10294
35	Tank cap (with O-ring)	29703	79	Retaining ring E-7	10285
36	O-ring P-34	24311	80	O-ring P-7	10149
37	Shock plate	29378	81	Nipple	12130
38	O-ring P-18 (1B)	29617	82	Plate	41299
39	Aluminum lock nut	29381			

\*1 Part no. 11 includes part nos. 12, 13, 16, 17, 37 and 38.  
 \*\* Part no. 31 includes part no. 33.  
 \*\*\* Part no. 40 includes part nos. 16 and 17.  
 \*2 Part no. 54 includes part nos. 53 and 55.  
 Part no. 28U includes part nos. 26, 27 and 29.  
 Parts with circled Index No. are consumable parts. They should be replaced periodically.

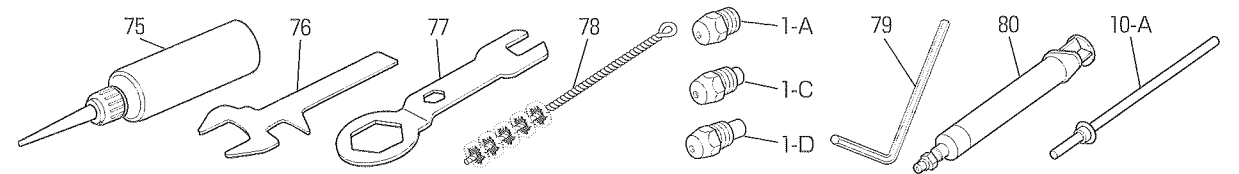
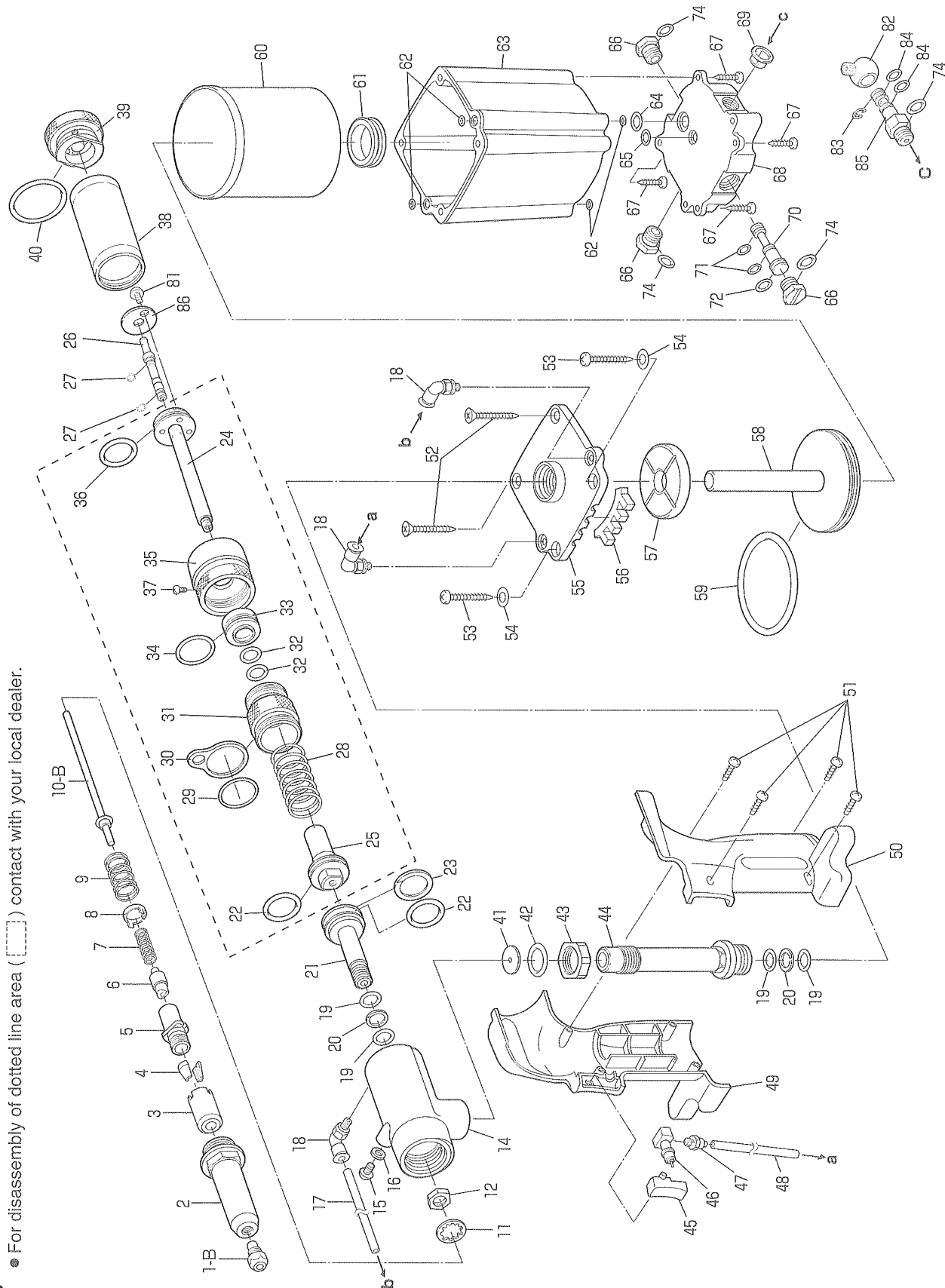
## ORDERING PARTS

Indicate the tool model, part name, code no. and quantity as shown below when ordering.

Model	Part Name	Code No.	Qty.
AR2000SV	Jaws (pair) 'S'	10032	1
AR2000SV	Frame head 'S'	29801	1

\* When parts are modified for improvement, the older parts are kept in stock for a period of five years.

# AR2000MV PARTS TABLE



Index No.	Part name	Code No.	Index No.	Part name	Code No.
1-A	Nosepiece 'S' 2.4 (3/32)	10027	41	Shock plate	29378
1-B	Nosepiece 'S' 3.2 (1/8)	10028	42	O-ring P-18 (1B)	29617
1-C	Nosepiece 'S' 4.0 (5/32)	10029	43	Aluminum lock nut	29381
1-D	Nosepiece 'S' 4.8 (3/16)	10030	44*	Oil sleeve unit	29633
2	Frame head 'M'	29332	45	Switch	29348
③	Jaw case head	10280	46	Valve sleeve	29350
④	Ultra jaws (pair) 'M'	10281	47	Terrapin connector	29351
⑤	Jaw case 'M'	10279	48	Polyurethane tube 105 mm	29352
⑥	Jaw pusher	10132	49	Frame cover 'R'	29338
⑦	Jaw pusher spring	10133	50	Frame cover 'L'	29339
8	Jaw case collar	10286	51	Pan head tapping screw 3×10	29340
9	Collar spring	10287	52	Flat head tapping screw 5×35	29367
10-A	Guide pipe 'X'	16779	53	Pan head tapping screw 5×35	29608
10-B	Guide pipe 'Y'	14492	54	Flat washer No.5	29609
11	Lock washer	10148	55	Cylinder top (with muffler)	29634
12	Jaw case lock nut	10113	56	Muffler	29377
14*	Frame unit 'M'	29627	57	Rubber cushion	29358
15	Bleed plug (Hexagon socket head cap screw)	29337	58**	Air piston unit 'M'	29635
16	Pack seal 6 mm	10355	59	O-ring P-60	10134
17	Polyurethane tube 205 mm	29353	60	Cylinder cup 'M'	29360
18	Connector	29354	61	Grommet	29361
19	O-ring P-12	10128	62	O-ring S-5	10276
20	B-ring P-12	10129	63	Cylinder cover 'M'	29359
21	Oil piston 'Y'	41264	64	O-ring P-10	10274
22	O-ring P-22A	10130	65	O-ring P-6	10150
23	B-ring P-22A	10131	66	Change plug	29375
24	Back piston 'Y'	41215	67	Pan head tapping screw 4×20	29610
25	Flange 'Y'	41213	68	Cylinder bottom	29366
26	Nozzle unit (with O-ring)	41199	69	Dust-proof cap	29611
27	O-ring S-5	10276	70	Spool	29612
28	Return spring 'M'	29345	71	O-ring P-5 (4D)	29613
29	O-ring S-30	23685	72	O-ring P-8 (4D)	29614
30	Hanger clip 'M'	10106	74	O-ring P-9	10219
31	Frame cap 'MV'	29666	75	"LOBSTER" brand hydraulic oil	10012
31U	Frame cap unit 'MV'	29700	76	Spanner 'B'	29642
32	O-ring P-10	10274	77	Spanner 'A'	10141
33	Air valve (with O-rings)	29701	78	Cleaning brush	10143
34	O-ring S-24	10185	79	Hex key wrench 5 mm	25777
35**	Air controller 'Y'	41222	80	Priming pump (syringe unit)	29624
36	O-ring P-30	14445	81	Cross recessed head screw 6 x 10	20916
37	Pan head tapping screw 3×6	29670	82	Rotary joint	10294
38	Mandrel tank	29674	83	Retaining ring E-7	10285
38U	Mandrel Tank unit (with cap)	29838	84	O-ring P-7	10149
39	Tank cap (with O-ring)	29703	85	Nipple	12130
40	O-ring P-34	24311	86	Plate	41299

\*1 Part no. 14 includes part nos. 15, 16, 19, 20, 41 and 42. \*3 Part no. 44 includes part nos. 19 and 20.  
 \*\* Part no. 35 includes part no. 37. \*4 Part no. 58 includes part nos. 57 and 59. Part no. 31U includes part nos. 29, 30 and 32.  
 Parts with circled Index No. are consumable parts. They should be replaced periodically.

## ORDERING PARTS

Indicate the tool model, part name, code no. and quantity as shown below when ordering.

Model	Part Name	Code No.	Qty.
AR2000MV	Ultra jaws (pair) 'M'	10281	1
AR2000MV	Frame head 'M'	29332	1

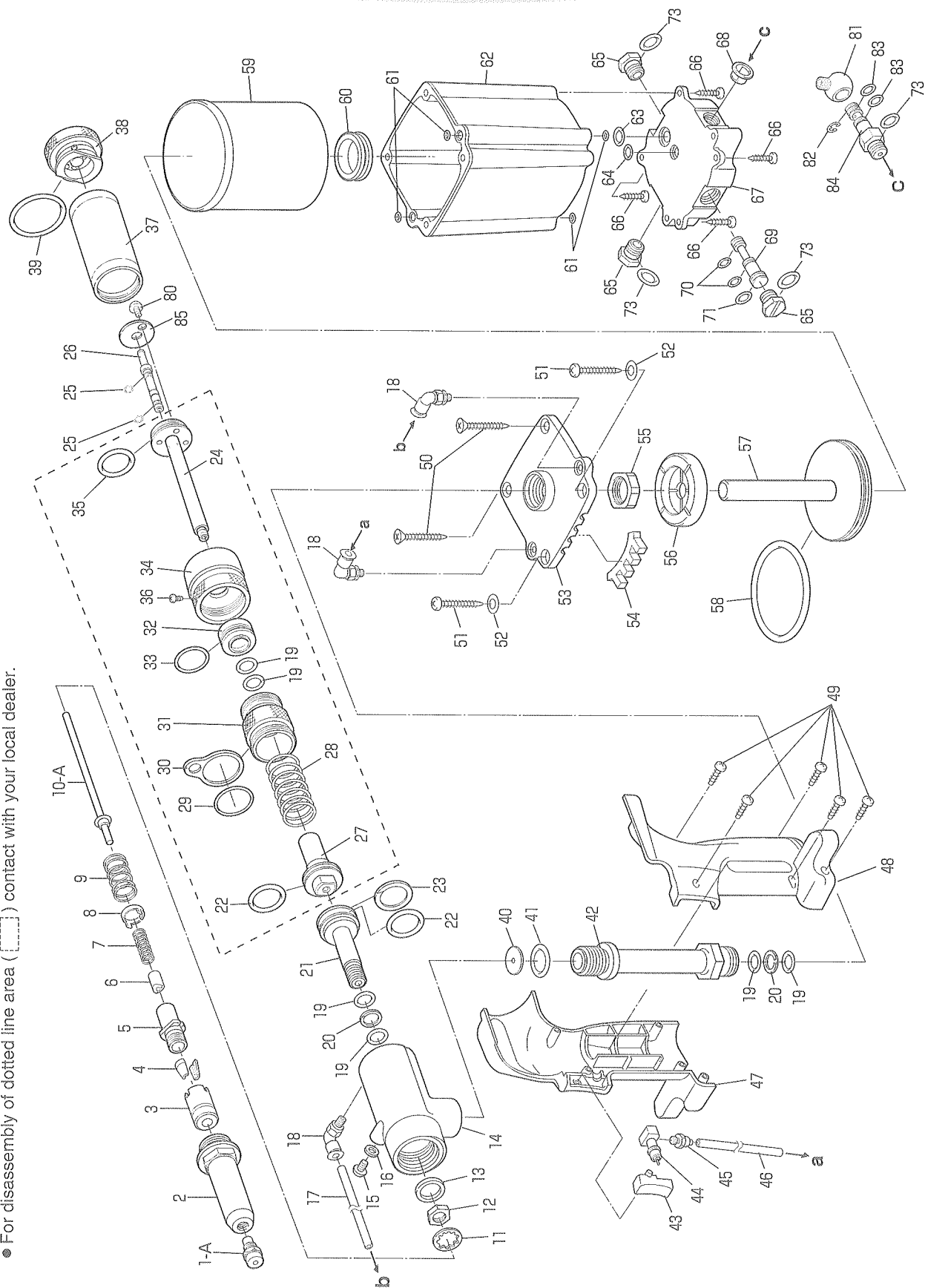
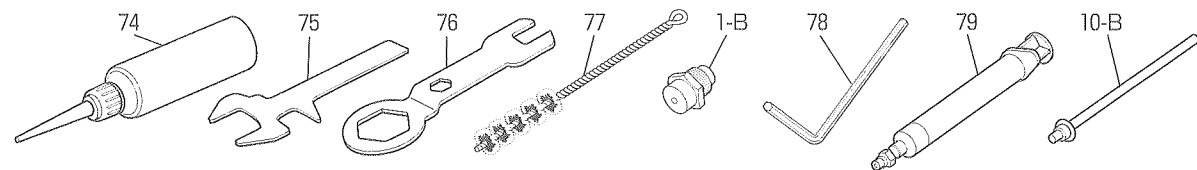
\* When parts are modified for improvement, the older parts are kept in stock for a period of five years.

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● For disassembly of dotted line area ( ) contact with your local dealer.

# AR2000HV PARTS TABLE



Index No.	Part name	Code No.	Index No.	Part name	Code No.
1-A	Nosepiece 'L' 4.8 (3/16)	10216	41	O-ring P-20 (1B)	29731
1-B	Nosepiece 'H' 6.4 (1/4)	10226	42*	Oil sleeve unit 'H'	29755
2	Frame head 'H'	29709	43	Switch	29348
③	Jaw case head 'H'	10447	44	Valve sleeve	29350
④	Ultra jaws (pair) 'H'	10493	45	Terrapin connector	29351
⑤	Jaw case 'H'	10429	46	Polyurethane tube 115 mm	29729
⑥	Jaw pusher 'H'	29710	47	Frame cover 'H-R'	29718
⑦	Jaw pusher spring 'H'	29711	48	Frame cover 'H-L'	29717
8	Jaw case collar 'H'	10448	49	Pan head tapping screw 3×10	29340
9	Collar spring 'H'	10449	50	Flat head tapping screw 5×35	29367
10-A	Guide pipe 'E' 4.8 (3/16)	41203	51	Pan head tapping screw 5×35	29608
10-B	Guide pipe 'F' 6.4 (1/4)	29752	52	Flat washer No.5	29609
11	Lock washer	10148	53	Cylinder top (with muffler)	29756
12	Jaw case lock nut 'H'	29712	54	Muffler	29377
13	Stop ring	23634	55	Frame lock nut 'H'	29757
14*1	Frame unit 'H'	29749	56	Rubber cushion 'H'	29736
15	Bleed plug (Hexagon socket head cap screw)	29337	57**	Air piston unit 'H'	29758
16	Pack seal 6 mm	10355	58	O-ring P-70	10212
17	Polyurethane tube 220 mm	29730	59	Cylinder cup 'H'	29741
18	Connector	29354	60	Grommet	29361
19	O-ring P-12	10128	61	O-ring S-5	10276
20	B-ring P-12	10129	62	Cylinder cover 'H'	29740
21	Oil piston 'Z'	41270	63	O-ring P-10	10274
22	O-ring P-24	10207	64	O-ring P-7	10149
23	B-ring P-24	10208	65	Change plug	29375
24	Back piston 'Z'	41216	66	Pan head tapping screw 4×20	29610
25	O-ring S-7	12114	67	Cylinder bottom 'H'	29739
26	Nozzle unit (with O-ring)	41201	68	Dust-proof cap	29611
27	Flange 'Z'	41214	69	Spool	29612
28	Return spring 'H'	29726	70	O-ring P-5 (4D)	29613
29	O-ring S-32	29727	71	O-ring P-8 (4D)	29614
30	Hanger clip	10192	73	O-ring P-9	10219
31	Frame cap 'HV'	29690	74	"LOBSTER" brand hydraulic oil	10012
31U	Frame cap unit 'HV'	29831	75	Spanner 'B'	29642
32	Air valve 'H' (with O-rings)	29832	76	Spanner 'A'	10217
33	O-ring S-24	10185	77	Cleaning brush	10143
34**	Air controller 'Y'	41222	78	Hex key wrench 5 mm	25777
35	O-ring P-30	14445	79	Priming pump (syringe unit)	29624
36	Pan head tapping screw 3×6	29670	80	Cross recessed head screw 6 x 10	20916
37	Mandrel tank	41146	81	Rotary joint	10294
37U	Mandrel tank unit (with cap)	41149	82	Retaining ring E-7	10285
38	Tank cap (with O-ring)	29703	83	O-ring P-7	10149
39	O-ring P-34	24311	84	Nipple	12130
40	Shock plate	29378	85	Plate	41299

\*1 Part no. 14 includes part nos. 13, 15, 16, 19 and 20.    \*\* Part no. 42 includes part nos. 19, 20 and 41.  
 \*2 Part no. 34 includes part no. 36.    \*\*\* Part no. 57 includes part nos. 56 and 58.    Part no. 31U includes part nos. 19, 29 and 30.  
 Parts with circled index No. are consumable parts. They should be replaced periodically.

## ORDERING PARTS

Indicate the tool model, part name, code no. and quantity as shown below when ordering.

Model	Part Name	Code No.	Qty.
AR2000HV	Ultra jaws (pair) 'H'	10493	1
AR2000HV	Frame head 'H'	29709	1

\* When parts are modified for improvement, the older parts are kept in stock for a period of five years.

## WARRANTY & SERVICE

LOBSTER® WARRANTS THAT GOODS COVERED BY THIS MANUAL WILL CONFORM TO APPLICABLE SPECIFICATIONS AND DRAWINGS AND THAT SUCH GOODS WILL BE MANUFACTURED AND INSPECTED ACCORDING TO GENERALLY ACCEPTED PRACTICES OF COMPANIES MANUFACTURING INDUSTRIAL TOOLS. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE FOREGOING.

THE LIABILITY OF LOBSTER® ON PARTS FOUND TO BE DEFECTIVE IS LIMITED TO RE-WORK OR THE REPLACEMENT OF SUCH GOODS AND IN NO CASE TO EXCEED THE INVOICE VALUE OF THE SAID GOODS. UNDER NO CIRCUMSTANCES WILL LOBSTER® BE LIABLE FOR DAMAGES OR COSTS INCURRED BY THE BUYER OR SUBSEQUENT USER IN REPAIRING OR REPLACING DEFECTIVE GOODS.

ROUTINE MAINTENANCE AND REPAIR OF LOBSTER® RIVET TOOLS CAN BE PERFORMED BY AN AVERAGE MECHANIC. HOWEVER, IF YOU HAVE A LOBSTER® RIVET TOOL THAT IS IN NEED OF MAJOR REPAIR WE RECOMMEND THAT IT BE SENT DIRECTLY TO US POSTAGE PAID FOR SERVICE AT A REASONABLE CHARGES.

MANUFACTURER

**LOBTEX CO., LTD.**

(Formerly "LOBSTER" TOOL CO.,LTD.)

OSAKA, JAPAN

 EC-DECLARATION OF CONFORMITY FOR MACHINERY  
EC-KONFORMITÄTSERKLÄRUNG NACH DER MASCHINENRICHTLINIE  
EC-DECLARATION DE CONFORMITE A LA DIRECTIVE MACHINES  
EU-VERKLARING VAN OVEREENSTEMMING VOOR MACHINES

We / Wir / Nous / Wij / Lobtex Co.,Ltd., 12-8 Shijo-Cho Higashi-Osaka, Osaka 579-8053  
Japan / declare / erklären / déclarons / verklaren,

that the machine as described below / dass die untenstehende Maschine / que la machine désignée ci-dessous / dat de hieronder omschreven machine

"Lobster" pneumatic-hydraulic blind rivet tool Model AR2000 Type SV, MV, or HV (with built-in vacuum system)/ "Lobster" pneumatisch-hydraulisches Blindniet-werkzeug Modell AR2000 Typ SV, MV, oder HV (mit eingebautem Vakuumsystem)/ outil à river oleo-pneumatique "Lobster" Modele AR2000 Type SV, MV, ou HV (avec système vacuum interne montée)/ "Lobster" pneumatisch-hydraulisch blindklinkapparaat Model AR2000 Type SV, MV, of HV (met ingebouwd vacuum afzuigsysteem)

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conforms to the requirements of the Machinery directive and to relevant national legislations applicable to the directive / mit den Bestimmungen der überarbeiteten Maschinenrichtlinie und mit den zu deren Umsetzung erlassenen nationalen Gesetzgebungen konform ist / est conforme aux dispositions de la Directive machines modifiée et aux législations nationales la transposant / in overeenstemming is met de bepalingen van de Machinerichtlijn, zoals laatstelijk gewijzigd en met nationale bepalingen

also conforms the requirements of the following European directives / ebenfalls mit den Bestimmungen folgender Europäischer Richtlinien konform ist / est également conforme aux dispositions des directives Européenes suivantes / In overeenstemming is met de bepalingen van de Europese richtlijnen:

89/392/EEC, 91/368/EEC, 93/44/EEC & 93/68/EEC.

Osaka, \_\_\_\_\_  
(country, place and date)

Lobtex Co.,Ltd.

*M. Hosoda*

M.Hosoda  
Production Manager  
Fastener Tool Division

\_\_\_\_\_  
(name, address & signature or equivalent stamp of authorized person)