LOBSTER®

AIR RIVETER CE

INSTRUCTION MANUAL

英語／ENGLISH

AR 2000S(A)
AR 2000M(A)
AR 2000H(A)

CONTENTS

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 AR2000S(A), AR2000M(A) and AR2000H(A). Be sure to refer to information that is applicable to the model you are using.
- This is Original instructions. (Original Instruction Manual is written in English language.)

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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 cut mandrels 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 0.5 to 0.6 MPa (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. Always attach the safety cap before use.

- If this is not observed, the cut mandrels may eject out when the rivets are cut and cause serious injury.

3. 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.)

4. 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.

5. 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.

6. 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 hose is damaged by objects being dropped onto it, for instance, the damaged part may rupture and accident or injury may result.
- Don't pull and drag the tool by the air hose. It may trigger some damages on the tool body, breakage of Rotary Joint or some other defects and lead serious troubles with injuries.

⚠WARNING

7. 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.

8 Never look into the nosepiece of the tool, and never point the nosepiece toward other persons.

- If the tool is used while the cut mandrels are still inside the tool not being ejected, these mandrels may be ejected from the tool's nosepiece during use and cause serious injury.

9 Wear protective glasses during use.

- Failure to do so may result in an accident or personal injury in case that a rivet or a piece of cut mandrels jumps out toward you.

⚠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.

12. Only for EU countries, do not dispose of electric tools together with household waste material !
- In observance of European Directive 2002/96/EC on waste electrical and electronic equipment and its implementation in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

13. The parts to be used must be those supplied from us or recommended by us. Select and attach parts applicable to your rivet.
- Otherwise the unit may not produce maximum performance and may sometimes malfunction resulting in an accident or personal injury.

14. Do not leave the floor littered with cut-mandrels.
- Cut-mandrels are dangerous because their ends are sharp. Stepping on them is also dangerous easily causing a slip and fall accident.

⚠CAUTION

15. The production date of this product is shown brevity code below the tools. (on page6)

16. Important information and clue about the use are listed in main body label. When contents cannot read by contamination or by the damage of the label, please order a new label and put it.
The new label could be ordered from us (Lobtex) via distributor.

17. This product is a tool for exclusive use of the professional business. When you are the one who uses this tools for the first time, please receive an instruction from the one who have already used this tools before, also please read the Instruction Manual carefully and understand the content.

- Wear protective goggles or safety glasses.
- When this product is damaged, please do not use.

18. For the maintenance of the main body, for every 30,000 installation of the fastener or in one year.

19. Only qualified and trained operators should install, adjust or use the assembly power tool for non-threaded mechanical fasteners.

20. Do not modify this assembly power tool. Modifications can reduce the effectiveness of safety measures and increase the risks to the operator.

21. Slips, trips and falls are major causes of workplace injury. Be aware of slippery surfaces caused by use of the tool and also of trip hazards caused by the air line or hydraulic hose.

22. Proceed with care in unfamiliar surroundings. There can be hidden hazards, such as electricity or other utility lines.

23. This assembly power tool is not intended for use in potentially explosive atmospheres and is not insulated against contact with electric power.

24. Ensure that there are no electrical cables, gas pipes, etc., which can cause a hazard if damaged by use of the tool.

25. If you experience numbness, tingling, pain or whitening of the skin in your fingers or hands, stop using the assembly power tool, tell your employer and consult a physician.

26. Air under pressure can cause severe injury:

- always shut off air supply, drain hose of air pressure and disconnect tool from air supply when not in use, before changing accessories or when making repairs;
- never direct air at yourself or anyone else.

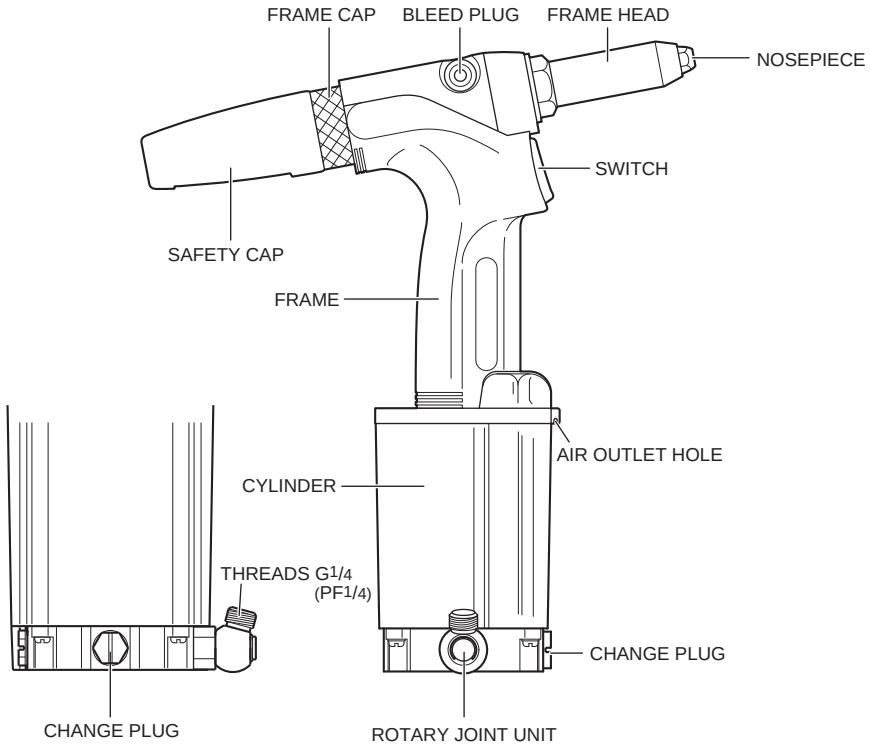
27. Whipping hoses can cause severe injury. Always check for damaged or loose hoses and fittings.

28. Never carry an air tool by the hose.

29. The regular preventative maintenance shall be carried out, for instance after a specified time of operation, a specified number of cycles/operations or a stated number of times per year.

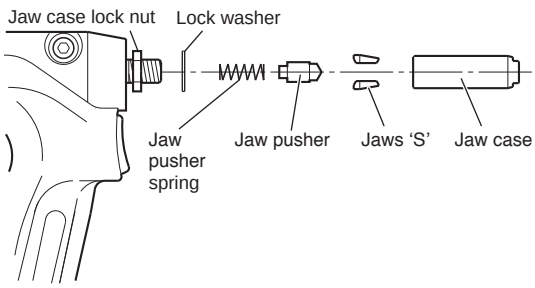
30. When disposing this tool, please follow the regulations and the rules of the country and autonomous community.

NOMENCLATURE

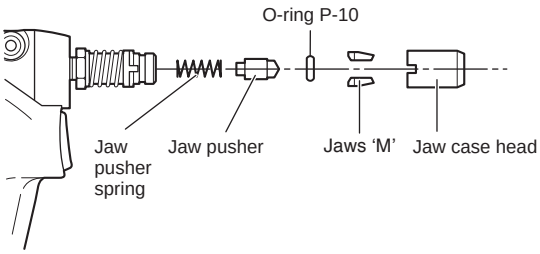


FRAME HEAD INTERNAL PARTS

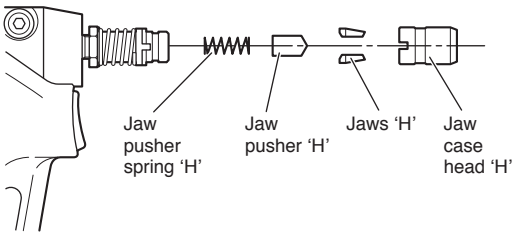
AR2000S(A)



AR2000M(A)



AR2000H(A)



TECHNICAL DATA

Model No.		AR2000S(A)	AR2000M(A)	AR2000H(A)
Weight	kg (lbs)	1.1 (2.43)	1.2 (2.65)	1.6 (3.53)
Operating air pressure		0.5 ~ 0.6 MPa (71 ~ 85 psi.)		
Dimensions (Length×Height×Width) mm		266×240×95	270×283×95	295×323×105
Air consumption per rivet	ℓ (c.ft.)	0.6 (0.021)	1.7 (0.060)	3.6 (0.127)
Tool stroke	mm (inch)	14 (35/64)	16 (5/8)	18.5 (23/32)
Traction power at 0.6 MPa	kN (kgf)	4.8 (489)	9.1 (928)	14.0 (1,428)
Applicable rivets (rivet diameters)	ϕ mm ϕ inch	2.4, 3.2, 4.0* 3/32, 1/8, 5/32*	2.4, 3.2, 4.0, 4.8 3/32, 1/8, 5/32, 3/16	4.8, 6.4 3/16, 1/4
Operating environment	Temperature	4° to 35 °C		
	Relative humidity	80%RH max. (no condensation)		
Sound	Pressure level (Lpa)	75 dB		
Vibration	Emission value	Less than or equal to 2.5 m/sec^2		
Air intake (Rotary joint)		Size of screw G1/4 (PF1/4)		

* 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.
- AR2000H(A) is available to install 2.4 (3/32”), 3.2 (1/8”) and 4.0 (5/32”) blind rivets subject to conversion of jaw case head, ultra jaws, jaw pusher and nosepiece.

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 ‘L’ 2.4	10213
1	Nosepiece ‘L’ 3.2	10214
1	Nosepiece ‘L’ 4.0	10215

Manufacturing year of unit	➡	Indicated on the Cylinder top unit
Caution label	➡	Attached on the side of Air Cylinder

* Rated plate and caution plate is identical.

How to check manufactured date

A year/month of manufacture	1	2	3	4	5	6	7	8	9	10	11	12
An English character	A	B	M	N	K	W	T	Y	U	O	L	Z

Example
year: 201④ month:⑧→ NY
N Y

■ Air consumption calculation method ■

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

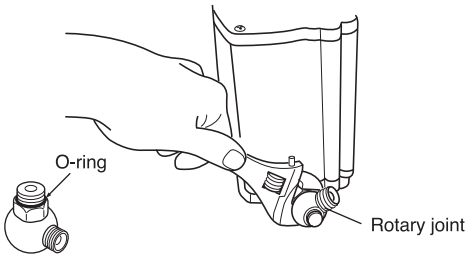
Required air consumption = Air consumption per rivet × No. of rivets per minute

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

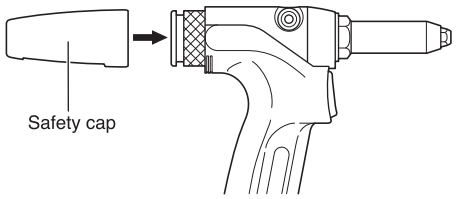
PREPARATION BEFORE USE

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 4 (P.1)**



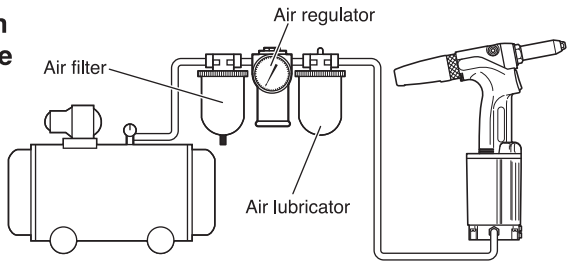
2 **Install the safety cap to the tool.** **⚠WARNING 2 (P.1)**



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.**

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 0.5~ 0.6 MPa (71 ~ 85 psi).** **⚠WARNING 1 (P.1)**

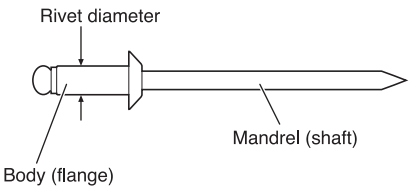
- If installing stainless steel rivets with a diameter of 4.8 mm (3/16") with the AR2000M(A), set the air pressure to 0.55 ~ 0.6 MPa (78 ~ 85 psi).

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).

5 **Replace the nosepiece to conform to the size of the rivet being used.**

The rivet size indicates the diameter of the rivet.



NOTE:

- Different-sized rivets can be used just by replacing the nosepiece.
- At the time of purchase, the AR2000S(A) and AR2000M(A) are fitted with a 3.2 nosepiece, and the AR2000H(A) is fitted with a 4.8 nosepiece.
- If you wish to use other sizes, use a spanner to remove and replace the nosepiece.

⚠CAUTION **Nosepiece Selection**

Conform the size to be used, and replace the nosepiece with the corresponding one. Wrong size selection of the nose piece will cause jamming the spent mandrel inside.

OPERATING THE AIR RIVETER

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

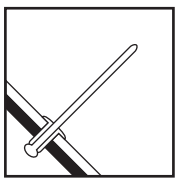
2 **Replace the nosepiece with one which matches the size of the rivet to be used.**
(Refer to item 5 in "Preparation Before Use" on page 7.)

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

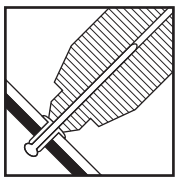
4 **Insert the rivet into the hole.**

ATTENTION:

Some rivets have mandrels with sharp ends.
Be careful not to injure your fingers on these ends.

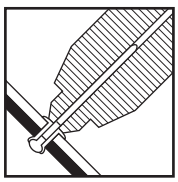


5 **Place the nosepiece of the air riveter over the mandrel of the rivet.**

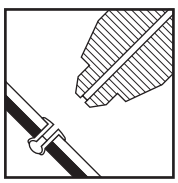


6 **Gently press the nosepiece of the air riveter against the workpiece. After checking that there is no gap between the nosepiece and the workpiece, press the switch.**

- 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 set into the workpiece.**



8 **Release the switch, and then tilt the air riveter to remove the cut mandrel from the nosepiece or safety cap.**

NOTE: Make sure that the cut mandrel has been completely removed before proceeding to the next riveting.

＜Operating temperature＞

The ambient temperature for working is within the range of 4° ~ 35°C (40° ~ 95°F).

MAINTENANCE

After long periods of use, debris from rivet cut 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.

⚠WARNING **In case you have some trouble and failure, please refer "Troubleshooting" in the Instruction Manual.**

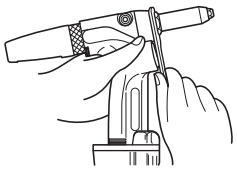
1 Jaw maintenance

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.

DISASSEMBLY

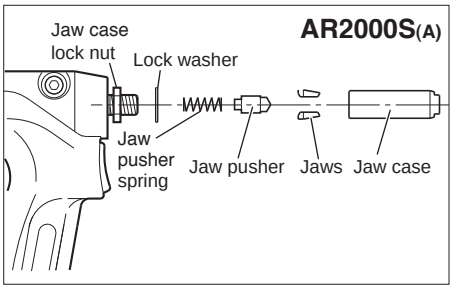
1 **Turn off the air supply.** **⚠CAUTION 1 (P.3)**



2 **Use a spanner or similar tool to remove the frame head.** **⚠CAUTION 2 (P.3)**

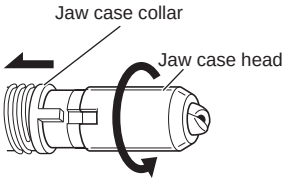
3 **AR2000S(A)**

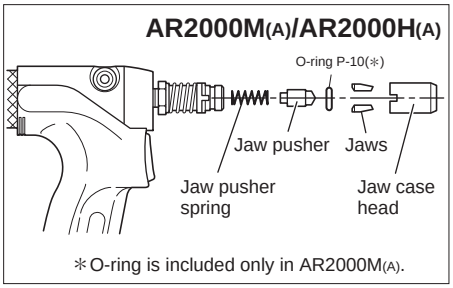
Use a spanner or similar tool to loosen and remove the jaw case, and then remove the jaw pusher spring, jaw pusher and jaws.



AR2000M(A)/AR2000H(A)

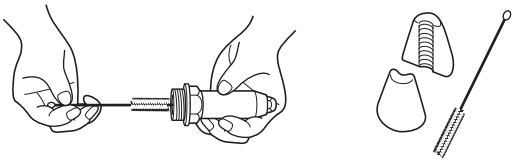
Pull backwards the jaw case collar to loosen and remove the jaw case head, and then remove the jaw pusher spring, jaw pusher, O-ring and jaws.





CLEANING

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



5

AR2000S(A)

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

AR2000M(A)/AR2000H(A)

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 into place.

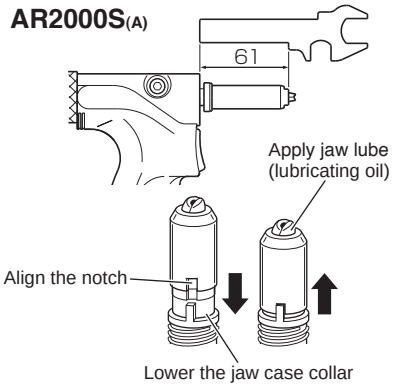
- Apply “LOBSTER” brand jaw lube (sold separately) to the backs of the jaws.

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 AR2000M(A) and AR2000H(A), 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.

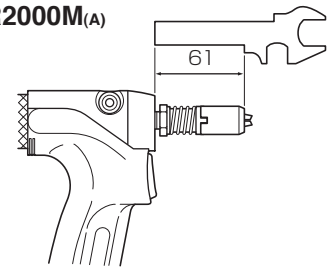
＜Jaw case setting position＞

AR2000S(A)

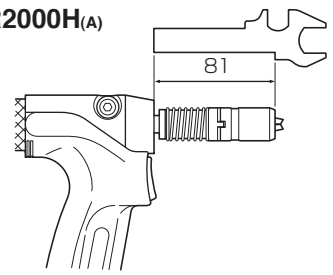


＜Jaw case setting position＞

AR2000M(A)



AR2000H(A)



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.

DISASSEMBLY

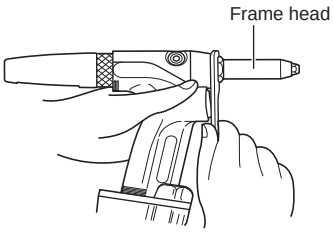
1 **Turn off the air supply.**

⚠CAUTION 1 (P.3)

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

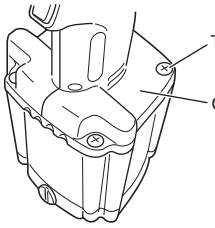
⚠ WARNING 3 (P.1)

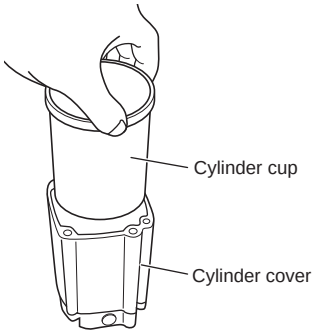
Be sure to remove the frame head when adding hydraulic oil through the cylinder.



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

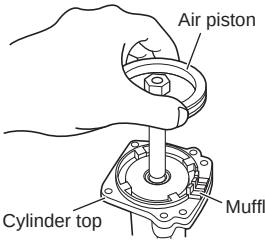
- Hold the frame vertical, as the hydraulic oil will spill out if it is tipped sideways.





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

- Air Piston may remain inside Cylinder cup.



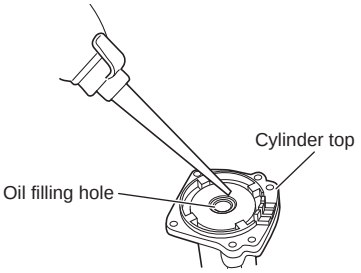
5 **Remove the cylinder cup from the cylinder cover.**

CLEANING

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

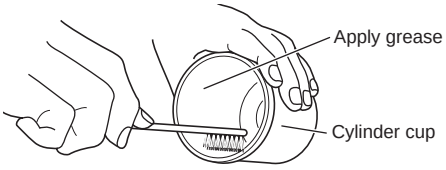
FILLING OIL

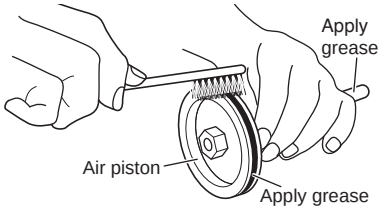
7 **Fill with hydraulic oil until just before the oil starts running out from the filling hole.**



RE-ASSEMBLY

8 **Apply grease to the inside of the cylinder cup and to the O-ring and rod of the piston.**



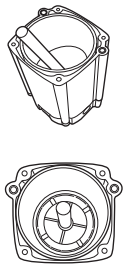


9 **Put the cylinder cup back in the cylinder cover.**

10 **Put the air piston back inside the cylinder cup.**

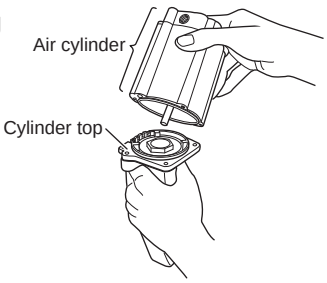
- At that time, the air piston is susceptible to falling inside the cylinder cup. Carefully press the air piston straight to the bottom. (10-1)
  If the piston inclines, remove it and then press it again. Do not forcibly press the inclining piston. (10-2)

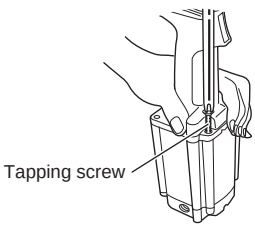
10-1



10-2

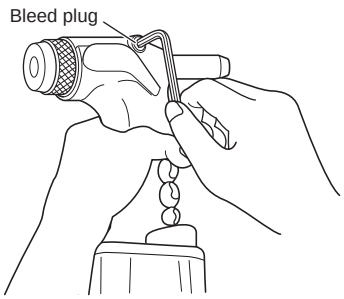
11 **Put the air cylinder containing the air piston together with the cylinder top. Hold them down while fastening the four tapping screws.**





12 **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.



13 **Wipe away any oil outside the tool and clean up any spilt oil before using the tool.**

⚠CAUTION 4 (P.3) ⚠CAUTION 8 (P.3)

14 **After checking the jaw case setting position, install the frame head. (Refer to pages 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 hydraulic oil should be changed on average once every 500,000riveting operation.

3 Cleaning the spool

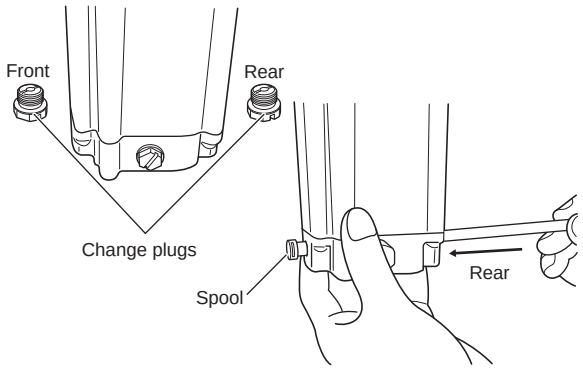
DISASSEMBLY

1 **Turn off the air supply.**

⚠CAUTION 1 (P.3)

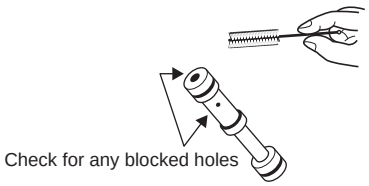
2 **Use a spanner or similar tool to remove the change plugs at the front and back.**

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 5) have the same shape, so be careful not to confuse them.

4 Adding oil

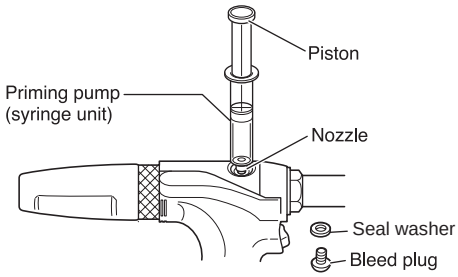
◎ Oil addition should always be carried out by following the simple procedure given below.

DISASSEMBLY

1 **Turn off the air supply.** ⚠CAUTION 1 (P.3)

2 **Use the accessory hex key wrench to remove the bleed plug and seal washer, 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.



ADDING OIL

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.

RE-ASSEMBLY

4 **Install the bleed plug and seal washer.**

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.
- 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.)

TROUBLESHOOTING

If a problem occurs, check the following.
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
The rivet does not go in, or the cut mandrel does not come out after riveting.	1	Incorrect combination of replacement parts being used.	Replace with the correct part which matches the rivet size. (Refer to page 7.)
	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 9 and 10.)
	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 pages 9 and 10.)
	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 11 and 12.)
	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 12.)
Number of switch operations increases before riveting is complete.	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 page 10.)
	4	Jaws are worn.	Replace the jaws. (Refer to page 9.)
	5	Insufficient hydraulic oil, causing a shorter stroke.	Add hydraulic oil. (Refer to page 14.)
Piston does not operate, or returns very slowly, or operation is not smooth.	1	Spool is not moving properly.	I Remove the rear part of changeplug (refer to page 13) 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 13.)
	2	Air outlet hole muffler is blocked.	Replace the muffler. (Refer to pages 11 and 12.)
	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 11 and 12.)

ULTRA JAWS (AR2000M(A)/AR2000H(A))

The AR2000M(A) and AR2000H(A) use ultra jaws which have greater durability. Be sure to specify “Ultra jaws M” (AR2000M(A)) or “Ultra jaws H” (AR2000H(A)) as replacement parts for these models.

HYDRAULIC OIL REQUIREMENTS

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

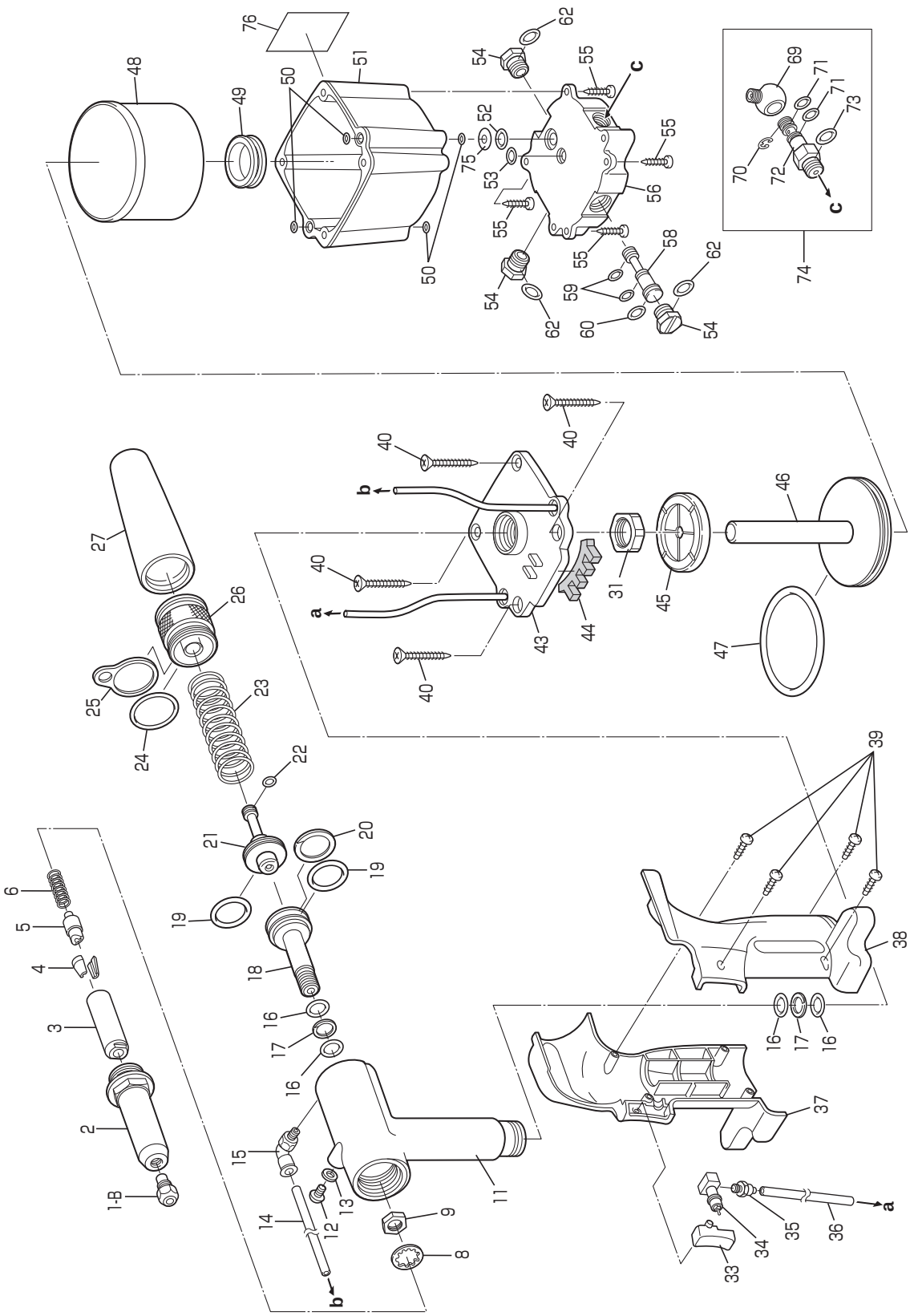
“LOBSTER” brand Hydraulic Oil is supplied in a plastic filler bottle with the tool, and can also be obtained from your “Lobster” dealer or agent in your town. If this is not possible, a good quality mineral oil with the following properties should also be used.

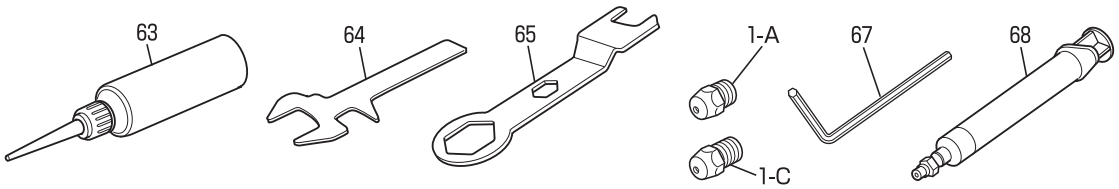
Viscosity ISO : VG46
Viscosity Index : 113
Viscosity at 40°C : 46 c.s.t.
Viscosity at 100°C : 7.06 c.s.t.
Flash Point : 228

RECOMMENDED OILS are:

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

AR2000S(A) PARTS TABLE





Index No.	Part name	Code No.	Index No.	Part name	Code No.
1－A	Nosepiece ‘S’ 2.4 (3/32)	10027	39	Pan head tapping screw 3×10	29340
1－B	Nosepiece ‘S’ 3.2 (1/8)	10028	40	Flat head tapping screw 5×35	29367
1－C	Nosepiece ‘S’ 4.0 (5/32)	10029	43*2	Cylinder top unit	44562
2	Frame head ‘S’	29801	44	Muffler	29377
③	Jaw case	10173	45	Rubber cushion ‘H’	29736
④	Jaws (pair) ‘S’	10032	46	Air piston unit ‘S’	44704
⑤	Jaw pusher	10132	47	O-ring P-60	10134
⑥	Jaw pusher spring	10133	48	Cylinder cup ‘S’	29824
8	Lock washer	10148	49	Grommet	29361
9	Jaw case lock nut	10113	50	O-ring S-5	10276
11*1	Frame unit ‘SA’	44561	51	Cylinder cover ‘S’	29822
12	Bleed plug (Hexagon socket head cap screw)	29337	52	O-ring P-10	10274
13	Seal washer	63209	53	O-ring P-6	10150
14	Polyurethane tube 220 mm	44706	54	Change plug	29375
15	Connector	29354	55	Pan head tapping screw 4×20	29610
16	O-ring P-12	10128	56	Cylinder bottom	29366
17	B-ring P-12	10129	58	Spool	29612
18	Oil piston ‘X’	41258	59	O-ring P-5 (4D)	29613
19	O-ring P-18	23683	60	O-ring P-8 (4D)	29614
20	B-ring P-18	23684	62	O-ring P-9	10219
21	Back piston ‘X’	41261	63	“LOBSTER” brand hydraulic oil	10012
22	O-ring P-7	10149	64	Spanner ‘B’	29642
23	Return spring ‘S’	29815	65	Spanner ‘A’	10183
24	O-ring S-24	10185	67	Hex key wrench 5 mm	25777
25	Hanger clip ‘S’	29819	68	Priming pump (syringe unit)	29624
26	Frame cap ‘S’	29817	69	Rotary joint	42501
27	Safety cap	42505	70	Retaining ring E-7	10285
31	Frame lock nut	29757	71	O-ring P-7	10149
33	Switch	29348	72	Nipple	42479
34	Valve sleeve	29350	73	O-ring S-10	10151
35	Miniature Connector	42510	74	Rotary joint unit	42502
36	Polyurethane tube 115 mm	44705	75	Exhaust plate	42838
37	Frame cover ‘MA-R’	42478	76	Warning label	61075
38	Frame cover ‘MA-L’	42500	separately sold	LOBSTER lubricant oil JO-50	889

*1 Part no. 11 includes part nos. 12, 13, 16, and 17.
*2 Part no. 43 includes part nos. 14, 34, 35, 36 and 44.
Parts with circled Index No. are consumable parts. They should be replaced periodically.

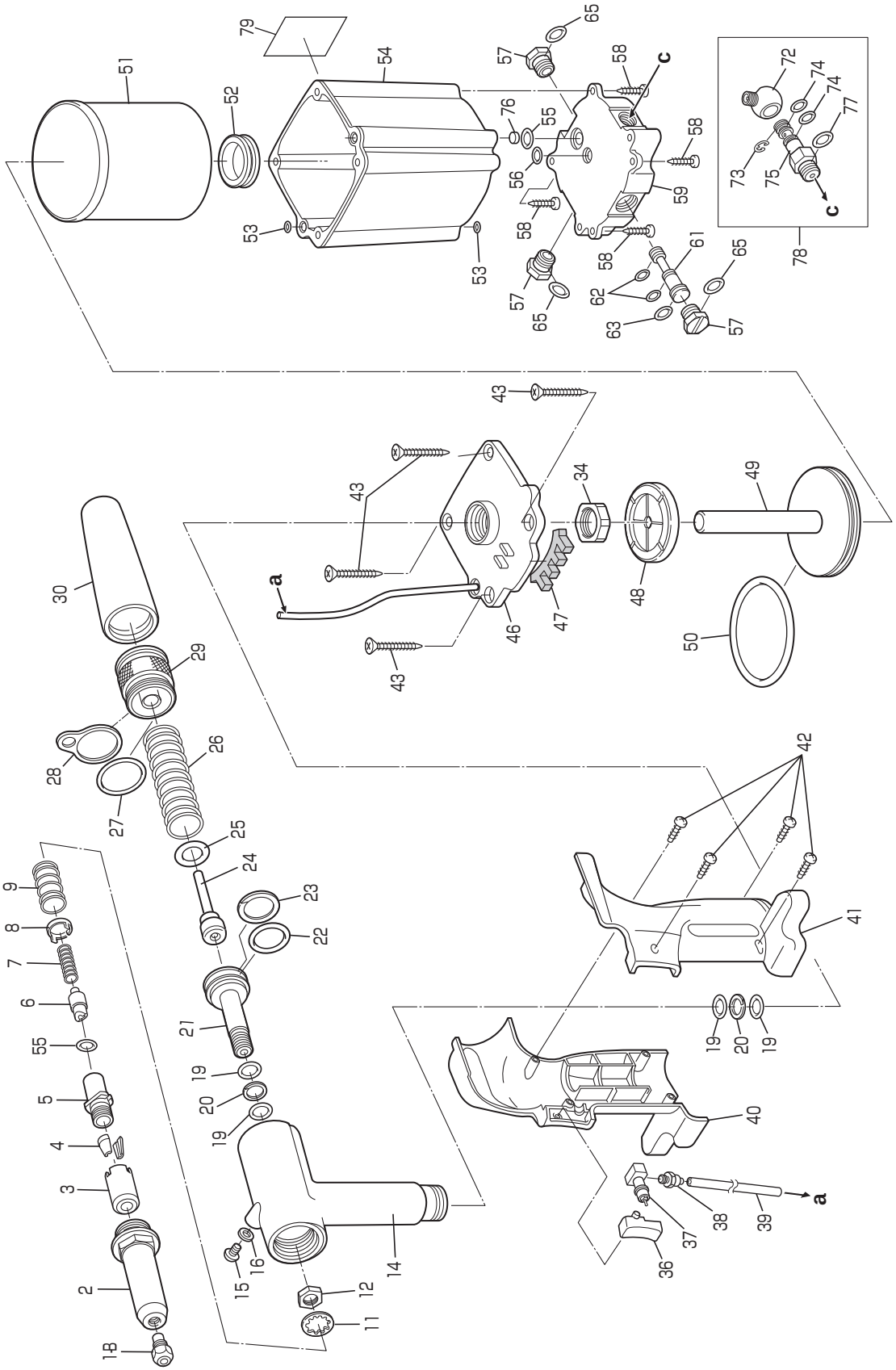
ORDERING PARTS

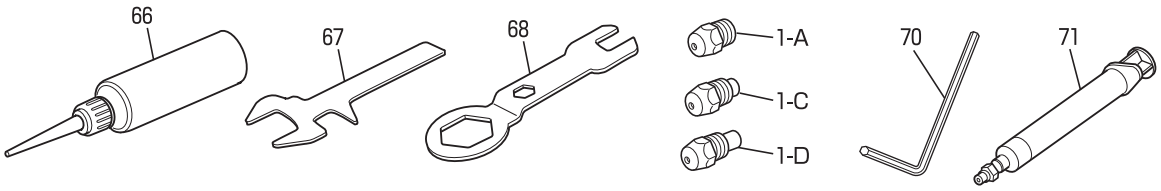
Indicate the tool model, part name, code no. and quantity as shown below when ordering.

Model	Part Name	Code No.	Qty.
AR2000S(A)	Jaws (pair) ‘S’	10032	1
AR2000S(A)	Frame head ‘S’	29801	1

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

AR2000M(A) PARTS TABLE





Index No.	Part name	Code No.	Index No.	Part name	Code No.
1－A	Nosepiece ‘S’ 2.4 (3/32)	10027	41	Frame cover ‘MA-L’	42500
1－B	Nosepiece ‘S’ 3.2 (1/8)	10028	42	Pan head tapping screw 3×10	29340
1－C	Nosepiece ‘S’ 4.0 (5/32)	10029	43	Flat head tapping screw 5×35	29367
1－D	Nosepiece ‘S’ 4.8 (3/16)	10030	46*2	Cylinder top unit	42492
2	Frame head ‘M’	29332	47	Muffler	29377
③	Jaw case head	10280	48	Rubber cushion	29736
④	Ultra jaws (pair) ‘M’	10281	49	Air piston unit ‘M’	29635
⑤	Jaw case	10279	50	O-ring P-60	10134
⑥	Jaw pusher	10132	51	Cylinder cup ‘M’	29360
⑦	Jaw pusher spring	10133	52	Grommet	29361
8	Jaw case collar	10286	53	O-ring S-5	10276
9	Collar spring	10287	54	Cylinder cover ‘M’	29359
11	Lock washer	10148	55	O-ring P-10	10274
12	Jaw case lock nut	10113	56	O-ring P-6	10150
14*1	Frame unit ‘MA’	42486	57	Change plug	29375
15	Bleed plug (Hexagon socket head cap screw)	29337	58	Pan head tapping screw 4×20	29610
16	Seal washer	63209	59	Cylinder bottom	29366
19	O-ring P-12	10128	61	Spool	29612
20	B-ring P-12	10129	62	O-ring P-5 (4D)	29613
21	Oil piston ‘Y’	41264	63	O-ring P-8 (4D)	29614
22	O-ring P-22A	10130	65	O-ring P-9	10219
23	B-ring P-22A	10131	66	“LOBSTER” brand hydraulic oil	10012
24	Piston sleeve	42498	67	Spanner ‘B’	29642
25	Flat washer 12 x 24	42504	68	Spanner ‘A’	10141
26	Return spring ‘M’	29345	70	Hex key wrench 5 mm	25777
27	O-ring S-30	23685	71	Priming pump (syringe unit)	29624
28	Hanger clip	10106	72	Rotary joint	42501
29	Frame cap ‘M’	42487	73	Retaining ring E-7	10285
30	Safety cap (with bottom plate)	42505	74	O-ring P-7	10149
34	Frame lock nut ‘H’	29757	75	Nipple	42479
36	Switch	29348	76	Rubber plate MA	42836
37	Valve sleeve	29350	77	O-ring S-10	10151
38	Miniature Connector	42510	78	Rotary joint unit	42502
39	Polyurethane tube 115 mm	44705	79	Warning label	61075
40	Frame cover ‘MA-R’	42478	separately sold	LOBSTER lubricant oil JO-50	889

*1 Part no. 14 includes part nos. 15, 16, 19 and 20.
*2 Part no. 46 includes part nos. 37, 38, 39 and 47.
Part no. 49 includes part nos. 48 and 50.
Parts with circled Index No. are consumable parts. They should be replaced periodically.

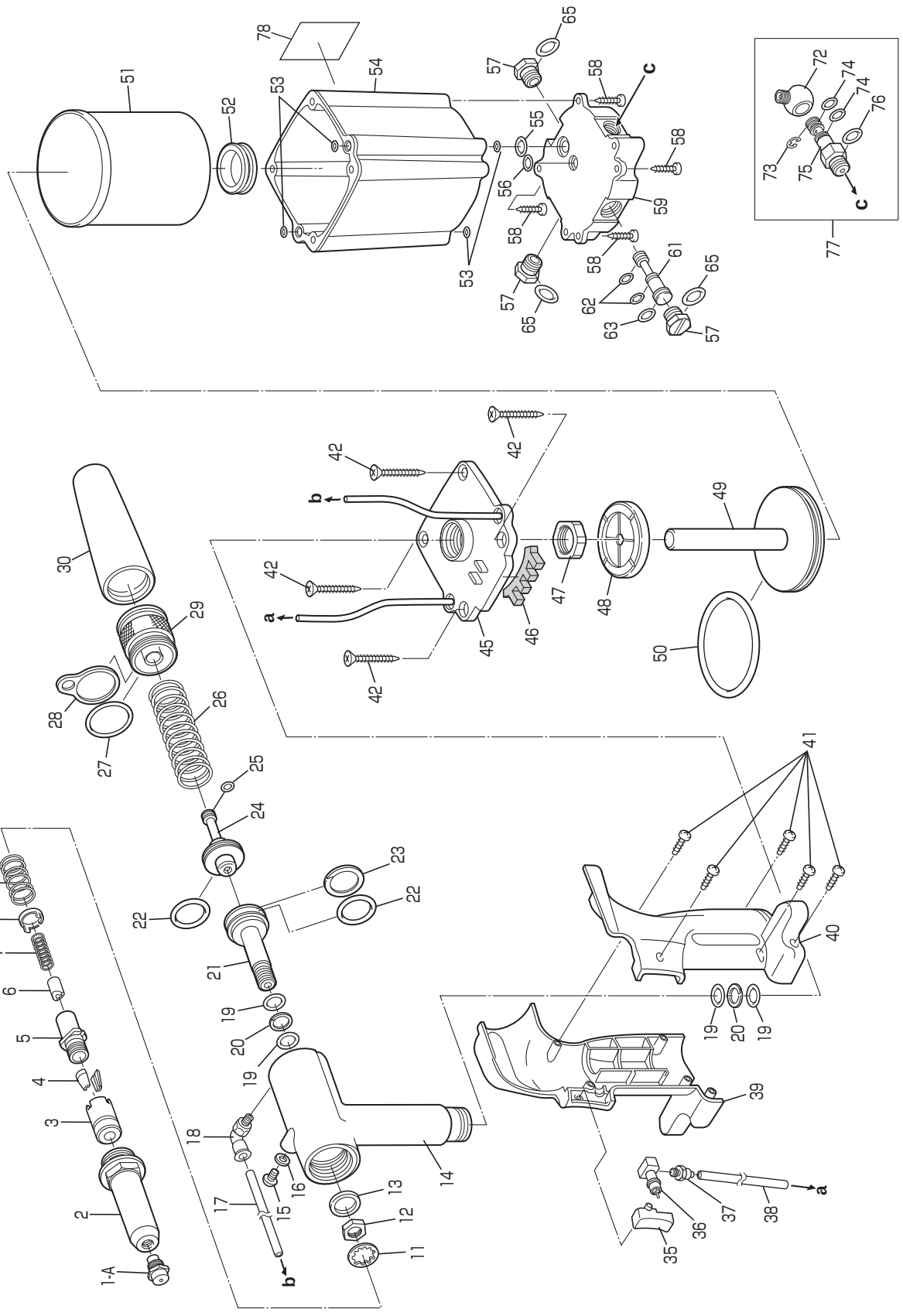
ORDERING PARTS

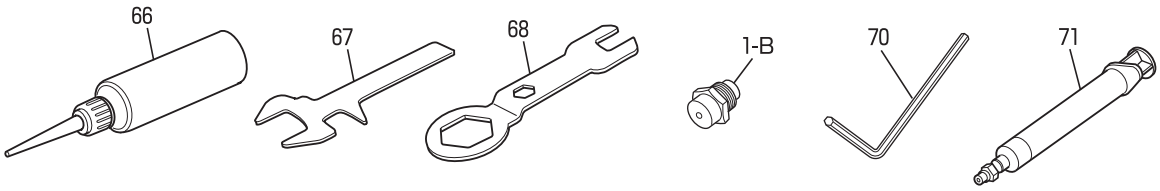
Indicate the tool model, part name, code no. and quantity as shown below when ordering.

Model	Part Name	Code No.	Qty.
AR2000M(A)	Ultra jaws (pair) ‘M’	10281	1
AR2000M(A)	Frame head ‘M’	29332	1

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

AR2000H(A) PARTS TABLE





Index No.	Part name	Code No.	Index No.	Part name	Code No.
1－A	Nosepiece ‘L’ 4.8 (3/16)	10216	40	Frame cover ‘HA-L’	44552
1－B	Nosepiece ‘H’ 6.4 (1/4)	10226	41	Pan head tapping screw 3×10	29340
2	Frame head ‘H’	29709	42	Flat head tapping screw 5×35	29367
③	Jaw case head ‘H’	10447	45*2	Cylinder top unit	43586
④	Ultra jaws (pair) ‘H’	10493	46	Muffler ‘HA’	44567
⑤	Jaw case	10429	47	Frame lock nut ‘H’	29757
⑥	Jaw pusher ‘H’	29710	48	Rubber cushion ‘H’	29736
⑦	Jaw pusher spring ‘H’	29711	49	Air piston unit ‘H’	29758
8	Jaw case collar	10448	50	O-ring P-70	10212
9	Collar spring	10449	51	Cylinder cup ‘H’	29741
11	Lock washer	10148	52	Grommet	29361
12	Jaw case lock nut ‘H’	29712	53	O-ring S-5	10276
13	Stop ring	23634	54	Cylinder cover ‘H’	29740
14*1	Frame unit ‘HA’	44703	55	O-ring P-10	10274
15	Bleed plug (Hexagon socket head cap screw)	29337	56	O-ring P-7	10149
16	Seal washer	63209	57	Change plug	29375
17	Polyurethane tube 230 mm	29730	58	Pan head tapping screw 4×20	29610
18	Connector	29354	59	Cylinder bottom ‘H’	29739
19	O-ring P-12	10128	61	Spool	29612
20	B-ring P-12	10129	62	O-ring P-5 (4D)	29613
21	Oil piston ‘Z’	41270	63	O-ring P-8 (4D)	29614
22	O-ring P-24	10207	65	O-ring P-9	10219
23	B-ring P-24	10208	66	“LOBSTER” brand hydraulic oil	10012
24	Back piston ‘Z’	41273	67	Spanner ‘B’	29642
25	O-ring P-8	10336	68	Spanner ‘A’	10217
26	Return spring ‘H’	29726	70	Hex key wrench 5 mm	25777
27	O-ring S-32	29727	71	Priming pump (syringe unit)	29624
28	Hanger clip	10192	72	Rotary joint	42501
29	Frame cap ‘H’	29728	73	Retaining ring E-7	10285
30	Safety cap	42505	74	O-ring P-7	10149
35	Switch	29348	75	Nipple	42479
36	Valve sleeve	29350	76	O-ring S-10	10151
37	Miniature Connector	42510	77	Rotary joint unit	42502
38	Polyurethane tube 125 mm	29729	78	Warning label	61075
39	Frame cover ‘HA-R’	44551	Separately sold	LOBSTER lubricant oil JO-50	889

*1 Part no. 14 includes part nos. 13, 15, 16, 19 and 20.
*2 Part no. 45 includes part nos. 17, 36, 37, 38 and 46.
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.
AR2000H(A)	Ultra jaws (pair) ‘H’	10493	1
AR2000H(A)	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 RE-PAIRING 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.

OSAKA, JAPAN