

# OPERATORS' GUIDE



## PDY-1220

12 TON HYDRAULIC CRIMPING TOOL

### WARNING



All information found in this guide must be read and understood before use or testing of this tool.

Failure to read and understand these warnings and safe handling instructions could result in severe personal injury and or death.



# RELIABLE EQUIPMENT & SERVICE CO., INC.

1220 Manual 01-16

# DISTRIBUTED BY

## REGISTRATION

UPON RECEIPT OF THIS TOOL, COMPLETE THE REGISTRATION BELOW.

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

\_\_\_\_\_

PHONE \_\_\_\_\_ FAX \_\_\_\_\_

SERIAL NUMBER \_\_\_\_\_

DATE OF PURCHASE \_\_\_\_\_

DEALER NAME \_\_\_\_\_



CAU-  
TION

The information in this manual is intended to guide the user in the use and application of this tool. It is not intended as a substitute for proper training and experience in safe work practices for this type of equipment.

Consult your supervisor or safety personnel if you have any questions regarding the safe operation of this tool.

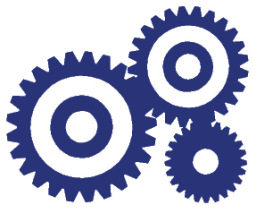
# TABLE OF CONTENTS

<b>DISTRIBUTOR INFORMATION .....</b>	<b>2</b>
<b>REGISTRATION .....</b>	<b>2</b>
<b>TABLE OF CONTENTS.....</b>	<b>3</b>
<b>TOOL SPECIFICATIONS</b>	
<b>PDY 1220 .....</b>	<b>4</b>
<b>SAFETY INFORMATION AND WARNINGS .....</b>	<b>5-8</b>
<b>DAILY MAINTENANCE .....</b>	<b>9</b>
<b>OPERATING INSTRUCTIONS .....</b>	<b>9</b>
<b>TYPICAL DOUBLE ACTING SET-UP .....</b>	<b>10</b>
<b>LABELS .....</b>	<b>10</b>
<b>MAINTENANCE .....</b>	<b>11</b>
<b>PDY 1220</b>	
<b>PARTS DRAWING .....</b>	<b>12</b>
<b>PARTS LIST .....</b>	<b>13</b>
<b>MAINTENANCE RECORDS .....</b>	<b>14</b>
<b>CONTACT INFORMATION .....</b>	<b>14</b>

If you have any questions regarding the information found in this manual please contact RELIABLE EQUIPMENT at 800-966-3530 or FAX 215-357-9193.



**THIS SYMBOL INDICATES ITEMS OF EXTREME IMPORTANCE.**  
Safety of user and others may be in jeopardy if these instructions are not read and understood.



# RELIABLE EQUIPMENT & SERVICE CO., INC.

## PDY-1220



## 12 TON DOUBLE ACTING HYDRAULIC CRIMPING TOOL

The **PDY-1220** is the industry's most commonly used Crimping Head. Easy, one-hand operation, and 360° rotating head allows easy head orientation for precision control of crimping to improve safety and reliability. Designed for connectors requiring 12 ton crimping forces, and feature double-acting hydraulic power to eliminate die hang-up.

### Optional Configuration:

**PCY-1220** Features high pressure couplings installed for double acting coupled applications.

### SPECIFICATIONS

System	Double-Acting
Jaw Capacity	1-3/16"
Crimping Force	24,300 lb.
Return Force	4,030 lb.
Oper. Pressure	10,000 psi (690 bar)
Return Pressure	5,000 psi (345 bar)
Couplers	Direct Connect
Dies Accepted	Y-35 or Equal
Head Rotation	360°

**Weight:** 10 lbs.  
**Length:** 9.5 inches  
**Width:** 3 inches

Accepts Reliable "U" style dies as well as dies from Alcoa, Burndy, Blackburn, and Thomas & Betts.



## RELIABLE EQUIPMENT & SERVICE CO., INC.

301 Ivyland Road • Warminster, PA 18974  
Phone: 800-966-3530 • Fax: 215-357-9193  
Visit us on the web at [www.Reliable-Equip.com](http://www.Reliable-Equip.com)



WARNING

BEFORE USING THIS TOOL, READ THE WARNINGS and the recommended practices described in this manual. Failure by the operator to read and fully understand these warnings will leave this person unqualified to use and operate this tool. Property damage, severe personal injury, and/or death could result by not following these warnings.

These warnings will appear in appropriate locations when they are pertinent to the particular subject being shown. Read each one carefully and follow them strictly.



### Eye Protection

WARNING

Always wear eye protection to avoid injury from flying debris or hydraulic oil leaks. Failure to do so can result in serious personal injury.



### Dust Mask

WARNING

Always wear a dust mask. Failure to observe this warning may result in serious health issues and/or breathing difficulty.



### Hard Hat

WARNING

Always wear a hard hat to avoid injury from falling debris. Failure to do so can result in serious personal injury.



### Foot Protection

WARNING

Always wear foot protection. Failure to do so can result in serious personal injury.



### Hearing Protection

WARNING

Always wear hearing protection, to avoid hearing loss due to long term exposure to high noise levels.



### Protective Gloves

WARNING

Always wear protective gloves. Failure to do so can result in serious personal injury.



WARNING

## SAFE OPERATION & CARE

**USE THIS TOOL FOR ITS INTENDED PURPOSE ONLY**  
Any other use can result in personal injury or property damage.

**INSPECT TOOL BEFORE USE.** Replace any worn, damaged or missing parts. A damaged or improperly assembled tool may malfunction, injuring operator and/or nearby personnel.

**INSPECT HYDRAULIC HOSES AND COUPLINGS** before each use. Repair or replace if any cracking, leakage, wear or damage is found. Worn or damaged hoses may fail resulting in personal injury or property damage.

**CLEAR WORK AREA** of all bystanders and unnecessary personnel before operating this tool.

**KEEP ALL PARTS OF THE BODY AWAY FROM MOVING PARTS.**

Failure to observe this warning could result in serious injury.



WARNING

## HYDRAULIC POWER SUPPLY

**DO NOT** attempt to make any changes to any of the component parts or accessories when connected to the power source.

**DO NOT** adjust, inspect, or clean tool while the tool is connected to the power source. The tool could accidentally start up and cause serious injury.

**DO NOT** lock the tool in the On Position. In an emergency, serious damage or injury could occur during the time required to stop the tool.



WARNING

## OIL INJECTION INJURY

Hydraulic oil or fluid under the skin is a serious injury. Oil under pressure can penetrate the skin and may cause dismemberment or loss of life. Seek medical assistance immediately if such an injury should occur.

Always wear safety gloves, eye protection and all required safety equipment when operating or handling this tool.

**DO NOT** use fingers or hands to attempt to locate a leak.

**DO NOT** handle hoses or couplers while system is pressurized.

**NEVER** open or service the system before depressurizing.



WARNING

## HOSES AND FITTINGS

There exists the potential for shock in using anything other than certified nonconductive hoses and hydraulic oil with dielectric properties, when using system components near energized electrical lines. Failure to recognize these conditions could cause electrocution.

Hoses and fittings used with this tool must comply with S.A.E. J1273 which covers recommended practice for selection, installation, and maintenance of hose and hose assemblies. The **correct hoses and fittings are available from your supplier.**

**WARNING:** Failure to comply with these warnings could result in severe bodily injury.



WARNING

## UNIT/HOSE CONNECTIONS

**ALWAYS DISCONNECT** pump/power source and move toggle switch to **OFF** before connecting or disconnecting any components.

**ALWAYS DEPRESSURIZE** hydraulic system, before slowly disconnecting this unit or any of the systems components.

**ALWAYS TIGHTEN** couplings completely. Loose or improperly tightened couplings will not allow fluid to pass through the hose creating a blockage in the supply or return line.

**ALWAYS INSPECT HOSES AND CONNECTORS** before connection to tool. Replace or repair if any leakage is evident. Leakage is a sign of deterioration in component parts. Worn or leaking parts must be repaired or replaced, or tool damage or severe injury could result.



CAUTION

## HOSE INSTALLATION

**ALWAYS ENSURE CONNECTORS ARE CLEAN**

**DOUBLE ACTING** - Care must be taken to assure the correct connection of the hoses to the pressure and return (tank) ports. Connect the return hose to the return (tank) port on the power source, then to the return port on the tool.

Connect the pressure hose to the pressure port on the tool, then to the "P" pressure port on the power source.

Operation with hydraulic flow reversed can cause malfunction. Failure to fully comply can result in severe injury or death.



WARNING

Operation/Safety methods may vary in accordance with the working guidelines established by each utility or contractor.

For your own safety, ensure that you fully comply with all safe operation guidelines required by your employer.



WARNING

## ELECTRICAL SHOCK HAZARD

Always wear and use the necessary clothing, equipment and safety practices to protect against electrical shock. Failure to follow these rules can result in serious personal injury or death.



## GENERAL SAFETY



**USE ALL APPROPRIATE AND APPLICABLE PERSONAL SAFETY EQUIPMENT** as required by the operating company.

**ALWAYS INSPECT TOOL** for wear or deterioration every day.

Replace all parts that show signs of wear or damage.

**INSPECT TOOL BEFORE USE.** Replace any worn, damaged or missing parts. A damaged or improperly assembled tool may injure operator and/or nearby personnel.

**KEEP ALL PARTS OF THE BODY AWAY** from moving parts of the tool.

**KEEP HANDS OUT FROM BETWEEN CRIMPING JAWS AT TOOL HEAD.**

**ALL BODY PARTS SHOULD BE OUTSIDE DANGER ZONE PRIOR TO CRIMPING.**

**MAKE SURE** there is no person in close proximity to you or the tool who could be injured by any operation being performed, tool malfunction or flying debris.

**DO NOT OVEREXTEND** your position by overreaching or unbalancing the footing necessary to maintain physical control of your body and the tool.

**ALWAYS MAINTAIN** a firm grip on the tool to avoid loss of control during an operation, causing property damage, serious injury or death.

**USE THIS TOOL FOR THE MANUFACTURERS' INTENDED PURPOSE ONLY.**

**OBSERVE CLOSELY ALL SAFETY RULES FOR A PARTICULAR JOB CLASS**

**FAILURE TO HEED THESE WARNINGS COULD RESULT IN  
PROPERTY DAMAGE, SERIOUS PERSONAL INJURY OR DEATH.**



# DAILY MAINTENANCE

The life, reliability, and safety of the tool is dependent on proper maintenance.

Clean all surfaces including head, die seat, ram, and body.

Inspect for wear and damage. Worn or damaged parts may malfunction during operation.

**All parts must be replaced with new parts if signs of wear or damage are evident.**

Keep Label Set clean and legible. Replace decals when necessary.

## OPERATION

Read entire manual prior to using this tool.

(Refer to all safety recommendations and warnings)

Observe all safety precautions and procedures required by the operating company. Also refer to SAFETY information found on pages 5 and 6)

Before crimping, ensure that crimp is within the capacity listed for the tool.

Ensure that you are using the proper die, as recommended by the connector manufacturer.

Insert proper die into die seat using die buttons.



### NEVER OPERATE TOOL WITHOUT DIES

Serious damage or personal injury could occur.



Place tool over connector.

Advance ram to connector with fast advance feature on handle.

Align jaw as necessary to ensure proper crimp.

**NOTE:** Jaw may be released as needed at any point in the crimp cycle.

Continue pumping until desired pressure has been achieved.

Crimp is complete.

To release ram from connector, operate directional valve. (Double Acting Models)

Ram will retract automatically when pressure is released. (Single Acting Models)

Repeat steps above as necessary.

Manufacturer recommends regular testing for proper pressure and operation.

Test at least every 6 months, test more often under heavy usage.

**IF YOU HAVE ANY QUESTIONS REGARDING THE PROPER USE  
AND/OR OPERATION OF THIS TOOL, CONSULT YOUR AREA SUPERVISOR,  
OR CONTACT RELIABLE EQUIPMENT AT 800-966-3530**

## TYPICAL DOUBLE-ACTING HIGH-PRESSURE CUTTING OR CRIMPING SYSTEM

**L/P Power Source**



**Intensifier**

Hydraulic Power Source  
(Vehicle or Portable Power Unit;  
3-8 gpm @ 1,000-2,000 psi)

**Electric Hydraulic Pump**



**Double Acting Control Valve**

**High Pressure Hose Set**



**Double Acting Crimping Heads**

High-pressure hoses may be used for remote head operation.



**Double Acting Cable Cutters**

The one-hand valve operation is safer and easier to use, leaving your other hand free to control the tool head. Each valve has two pressure reliefs for extra safety: One to reduce the return cycle pressure to prevent damage to the tool; The second to protect against over pressurizing.



**WARNING**

BEFORE USING THIS PRODUCT READ THE SAFETY WARNINGS and recommended practices described in the manual. Failure by the operator to read and fully understand the warnings will leave this person unqualified to use and operate the tool.

Failure to observe all warnings and instructions could result in property damage, severe personal injury, and/or death.

**CAUTION**

Operation and safety methods may vary in accordance with the guidelines established by each utility. For your safety, ensure that you fully comply with all safe operation guidelines established by your respective power utility.

REL-SM

**DANGER**

The user should be properly trained in the correct procedures required for work on or around electrical lines.

**CAUTION**

Do not operate without dies.

NOTE: Keep Label Set clean and legible. Replace decals when necessary.

# MAINTENANCE

**Complete disassembly is not recommended. Return the unit to an authorized dealer for total disassembly and/or repair.**

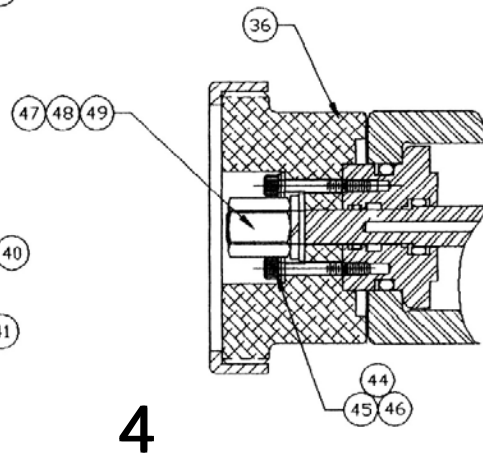
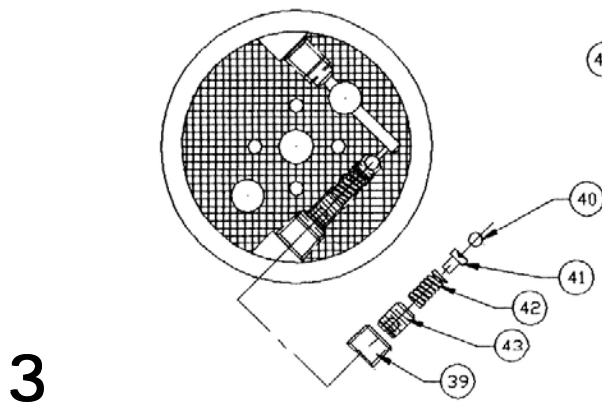
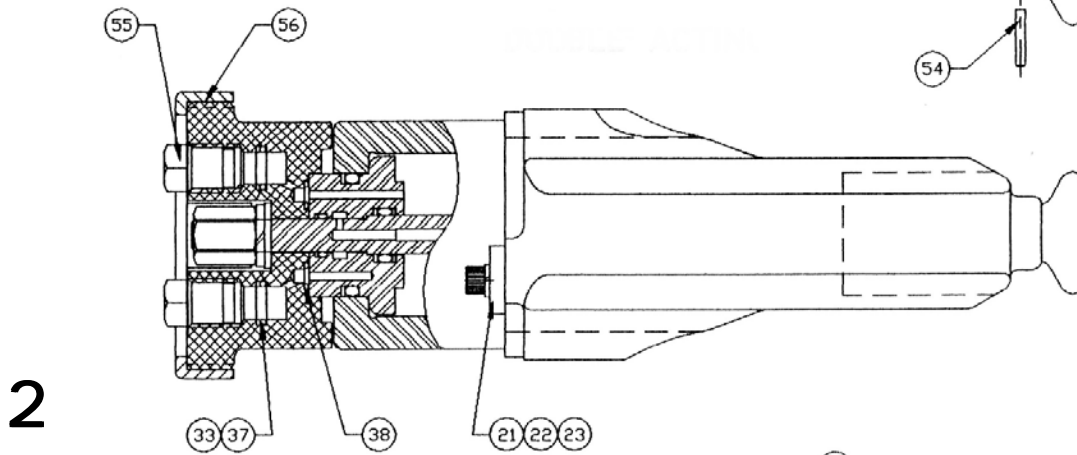
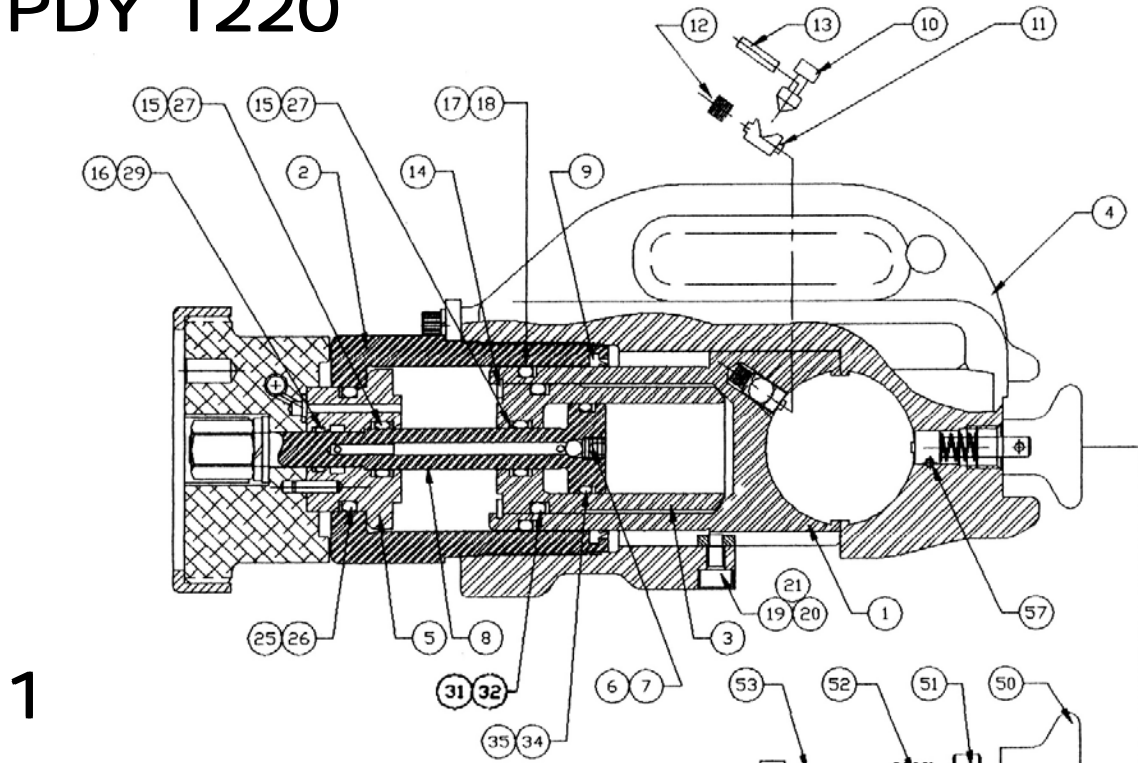
All maintenance or disassembly should take place on a flat, clean work surface covered with towels or wipers so as to have a clean space for the disassembled parts.

Inspect each part during disassembly for wear, scratches, and cuts. Discard the worn or damaged parts and replace with new factory authorized parts.

O-rings are sensitive to sharp edges. Inspect closely for cuts or damage. A small cut will cause a leak. When assembling or disassembling O-rings, use hydraulic fluid as a lubricant to help disassembly or installation.

**IF YOU HAVE QUESTIONS REGARDING THE REPAIR AND MAINTENANCE OF  
THIS TOOL CONTACT RELIABLE EQUIPMENT AT 800-966-3530**

# PDY 1220



# PDY 1220 PARTS LIST

ITEM	QTY	PART NO	DESCRIPTION	DRAWING #
1	1	12802	RAM	1
2	1	12806	CYLINDER, OUTER	1
3	1	12807	CYLINDER, INNER	1
4	1	REL-430-01	C-FRAME	1
5	1	12809	PISTON RETAINER	1
6	1	W/ 12808	BALL (3/16")	1
7	1	W/ 12808	FLAT POINT SET SCREW	1
8	1	12808	INNER PISTON	1
9*	1	18044	WIPER	1
10	1	R13810	DIE BUTTON	1
11	1	R13811	DIE PIN RETAINER	1
12	1	R13817	COMPRESSION SPRING	1
13	1	R13813	SPRING PIN	1
14	1	1220-2	RETAINING RING	1
15*	4	*	BACK UP RING	1
16*	1	*	BACK UP RING	1
17*	1	*	O-RING	1
18*	1	*	BACK UP RING	1
19	1	28001	KEY	1
20	2	28002	SCREW	1
21	1	28003	LOCK WASHER	2
22	1	28004	SCREW	2
23	1	28005K	STOPPER	2
25*	1	*	O-RING	1
26*	1	*	BACK UP RING	1
27*	2	*	O-RING	1
29*	1	*	O-RING	1
31*	1	*	BACK UP RING	1
32*	1	*	O-RING	1
33*#	2	* #	BACK UP RING	2
34*	1	*	O-RING	1
35*	1	*	BACK UP RING	1
36	1	12120	END CAP (# ITEMS ARE INCLUDED WITH END CAP)	4
37*#	2	* #	O-RING	2
38*	3	*	O-RING	2
39#	2	#	PIPE PLUG	3
40#	1	#	CHECK BALL	3
41#	1	#	PINTLE	3
42#	1	#	COMPRESSION SPRING	3
43#	1	#	SET SCREW	3
44	4	1220-10	FLAT VWASHER	4
45	4	1220-12	SCREW	4
46	4	1220-11	LOCK WASHER	4
47	1	1220-8	NUT	4
48	1	1220-14	LOCK WASHER	4
49	2	1220-13	FLAT WASHER	4
50	2	1220-20D	DIPPED BUTTON	1
51	2	1220-3	SCREW	1
52	1	1220-4	SPRING	1
53	1	1220-5	PIN, DIE RETAINER	1
54	1	1220-16	ROLL PIN	1
55	2	1/4"	CAP PLUG	2
56	1	1220-19	THREAD PROTECTOR	2
57	1	1220-17	ROLL PIN	1
*	1	PDY1220SK	SEAL KIT INCLUDES PARTS MARKED *	

## Maintenance Records

Date	Parts or Service Required

If you have any questions regarding the information found in this manual please contact RELIABLE EQUIPMENT at the address, phone or fax numbers shown below.



### **RELIABLE EQUIPMENT & SERVICE CO., INC.**

301 Ivyland Road • Warminster, PA 18974

Phone: 800-966-3530 • Fax: 215-357-9193

Visit us on the web at [www.Reliable-Equip.com](http://www.Reliable-Equip.com)