

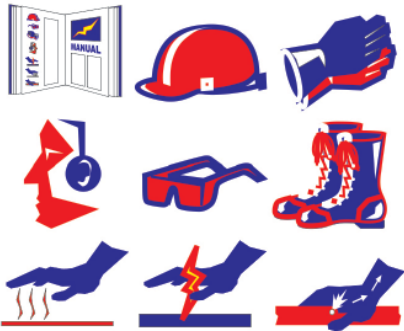
OPERATORS' GUIDE

REL-PL-P Hydraulic Pole Puller

The REL-PL-P will make Pole Pulling with a boom a thing of the *PAST*. Reduce boom damage and potential for injury related to pole pulling. Simple installation and operation combined with **RELIABLE** performance will make the **REL-PL-P (Pole Puller)** a **"Must Have Accessory"** for pole pulling operations.

NOTICE

Sizes, weights and specifications listed in this manual are subject to change without notice. Please consult factory for information and updates.



BACK PLATE INCLUDED

QUICK DISCONNECT COUPLING SET INCLUDED



RELIABLE EQUIPMENT & SERVICE CO., INC.

REL-PL-P Manual 07-17



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

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

A digital copy of this manual is available on line at www.Reliable-Equip.com



THIS SYMBOL INDICATES ITEMS OF EXTREME IMPORTANCE.

Obey all safety messages that follow this symbol to avoid possible injury or death. Safety of user and others may be in jeopardy if these instructions are not read and understood.



This Safety Alert and Signal Word indicate a imminently hazardous situation which if not avoided, will result in death or serious injury.



This Safety Alert and signal word indicate a imminently hazardous situation which if not avoided, could result in minor or moderate injury.



This Safety Alert and signal word indicate a imminently hazardous situation which if not avoided, may result in minor or moderate injury.



This Signal word indicate a imminently hazardous situation which if not avoided, may result in Property Damage.



This Signal Word indicate a imminently hazardous situation which if not avoided, will result in Damage to the Equipment.



This Signal word indicate a imminently hazardous situation which if not avoided, may result in Damage to the Equipment.

Always observe these warnings to avoid tool damage, serious injury or death.



WARNING

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.

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REGISTRATION

UPON RECEIPT OF THIS TOOL, COMPLETE THE REGISTRATION BELOW.

COMPANY _____

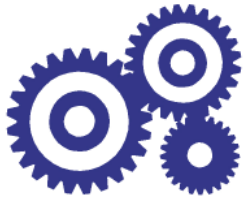
ADDRESS _____

PHONE _____ FAX _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

DEALER NAME _____



RELIABLE EQUIPMENT & SERVICE CO., INC.

REL-PL-P

Hydraulic Pole Puller

Operating Pressure 2,800 psi

Includes:

- Hydraulic Cylinder with Flush Face Coupler Set
- Swivel Chain Hook Assembly
- Chain (1/2" X 6' Alloy)
- Base Plate
- Back Plate

Optional:

- Pole Puller Pad

The REL-LP-P will make Pole Pulling with a boom a thing of the PAST.

Reduce boom damage and potential for injury related to pole pulling.

Simple installation and operation combined with RELIABLE performance will make the REL-PL-P (Pole Puller) a "Must Have Accessory" for all of your pole pulling operations.



301 Ivyland Road • Warminster, PA 18974
Call: 215-357-3500 Fax: 215-357-9193
On the web at www.Reliable-Equip.com

SPECIFICATIONS

Operating Pressure:	2,800 psi
Recommended Flow:	4-8 gpm
Lift at Max. Pressure:	50,120 lbs.

Part	Wt.
Hydraulic Cylinder	57 lbs.
Base Plate	25 lbs.
Back Plate	7 lbs.
Swivel Chain Hook Assy.	36 lbs.
Chain (1/2" X 6' Alloy)	15 lbs.
Pad (optional)	25 lbs.



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.



WARNING

Eye Protection

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



WARNING

Skin Irritation

Hydraulic oil may cause irritation. Use care to prevent contact with skin. In case of accidental contact, wash affected area immediately



WARNING

Hard Hat

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



WARNING

Foot Protection

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



WARNING

Hearing Protection

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



WARNING

Protective Gloves

Always wear protective gloves & cloths. 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 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

TURN HYDRAULIC SOURCE OFF before making any connection

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 any 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.



DANGER

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 non-conductive 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 or death.



WARNING

UNIT/HOSE CONNECTIONS

ALWAYS DISCONNECT pump/power source and turn the key to the **OFF** position before connecting or disconnecting any components.

ALWAYS DEPRESSURIZE hydraulic system, before connecting or disconnecting any of the systems components.

ALWAYS TIGHTEN COUPLINGS COMPLETELY. Loose or improperly connected couplings may 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.

Connect hoses and confirm proper flow direction to & from tool.



WARNING

SERIOUS BURN HAZARD

HOT SURFACES MAY CAUSE SERIOUS BURN INJURY

The hydraulic motor may be hot during and after operation.

CAUTION: HYDRAULIC FLUID MAY CAUSE SERIOUS BURNS

Never disconnect tool, hoses, or fittings while the hydraulic power source is running or if the hydraulic fluid is hot.

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



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 & APPLICABLE PERSONAL SAFETY EQUIPMENT as required by the operating company.

DO NOT USE DERRICK TO PULL OR ASSIST IN THE PULLING OPERATION.

The derrick boom is to be used to capture, stabilize, and remove the loosened pole.

ALWAYS INSPECT TOOL for wear or deterioration or damage every day. Worn or damaged parts may cause malfunction of tool or unsafe circumstance.

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

MOVE OUTSIDE DANGER ZONES BEFORE OPERATING.

MAKE SURE THERE IS NO PERSON IN CLOSE PROXIMITY to you, the tool, who could be injured by any operation being performed, tool malfunction, falling or flying debris.

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

USE THIS TOOL FOR THE MANUFACTURERS' INTENDED PURPOSE ONLY.

OBSERVE CLOSELY ALL SAFETY RULES FOR A PARTICULAR JOB CLASS



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.

Consult your training or safety personnel or supervisor as needed.

HYDRAULIC SYSTEM REQUIREMENTS

Operating Pressure:	1,200-2,800 PSI (70-193 bar)
Max. Relief Setting:	2,800 psi (193 bar)
Lift at Max. Pressure:	50,120 lbs.
Flow Range:	<u>6-8 gpm</u>
Max. Backpressure:	250 psi (17 bar)
Cooling System:	Recommended
Min. Filtration:	25 Micron
Sound Pressure	<85 dBA @ 1m
Hydraulic Fluids:	All hydraulic fluids that meet these listed specifications or listed HTMA specifications may be used for this tool.

S. U. S.

@ 100° F (38° C)	140 TO 225
@ 210° F (99° C)	40 minimum
FLASH POINT	340° F min. (170° C min.)
POUR POINT	-30° F min. (-34° C min.)

Hydraulic Hoses:	2500 psi (175 bar) min. working pressure (Ref. J517) Hose assembly should include flush face quick disconnect couplers as recommended by the HTMA. (Hydraulic Tool Manufacturers Association)
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SPECIFICATIONS

Part #	Description	Wt.
REL-PP-50-000K	Hydraulic Cylinder	57 lbs.
R81519	Base Plate	25 lbs.
R81532	Back Plate	7 lbs.
R81533	Swivel Chain Hook Assy.	36 lbs.
140408006	Chain (1/2" X 6' Alloy)	15 lbs.
REL-PL-PAD	Pad (optional)	25 lbs.



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.**
Consult your training or safety personnel or supervisor as needed.

OPERATION

Do not use this tool under unsafe working conditions or locations.

Use this tool only for its intended purpose.

Read Entire Manual prior to use of this tool. (Refer to Safety, Notes & warnings)

Observe ALL safety precautions & procedures required by the operating company.

Follow practices as established by the Utility or Contractor for this operation.

Secure the pole with the boom of a derrick truck or appropriate alternative

⚠ WARNING DO NOT use the derrick to pull or assist in the pulling operation.

The derrick boom is to be used to capture, stabilize, and remove the loosened pole.

Place the Pole Puller Base at the base of the pole.

NOTE: Use of the optional **REL-PL-PAD** (Polyethylene Pad) or acceptable alternative is highly recommended to provide a strong, stable surface under soft ground conditions, and to distribute the extreme force of the pulling operation.

Pad in use: Place the Pad with the curved section around the pole base. (Fig. 1)

Place the puller Base Plate within the (4) control pegs. (Fig. 2) These pegs will help to prevent the base from moving away from the pole during the operation.

Seat the Cylinder onto the Pivot Rod at the center of the Base Plate with the couplers facing away from the pole. **(FIG. 3) Cylinder should pivot.**

Lower the Swivel Chain Hook Assembly onto the Cylinder until it sets on the shoulder at the base of the Cylinder. **(Fig. 4)**

Install Chain through Back Plate. (Included with REL-PL-P) (Fig. 5)

Raise Chain Swivel Bar and secure into Support Hook. (Fig. 6)

Install Chain into Chain Seat. (Included with REL-PL-P) (Fig. 7)

Wrap chain around base of pole, with teeth of the Back Plate on the inside (toward the pole) leaving minimal slack and install the chain into the chain seat. **(Fig. 8)**

NOTE: Ensure that the chain has been securely installed into the swivel assembly.

Release the Support Hook from Chain Swivel Bar to increase tension. (Fig. 9)

WARNING: Turn OFF hydraulic source and move valve to the OFF position.

Connect appropriate Hydraulic Hose to the tools' return and pressure ports. (Length may vary) Use a length of hose that will not restrict free movement, or pose any hazard to the operator or other personnel on the work site.

Turn ON Hydraulic Source: Select an appropriate pressure & flow for the tool.

NOTE: In colder weather allow hydraulic fluid to warm 3-5 min. before operating.

Activate the Control Valve moving the Cylinder to its full extension and stop.

Retract the Cylinder. Ensure that Swivel Hook Assembly retracts with Cylinder.

NOTE: You may need tap the Back Plate or Weldment to free the teeth from the pole. If the chain becomes too tight remove a cotter ring from the Chain Swivel Assembly.

Repeat the operation adding slack when needed until the pole has been freed.

Pre-Operation On-site Assembly

Figure 1



Optional Base Pad provides a strong, stable surface under soft ground conditions, and distributes the extreme force of the pulling

Figure 2



Seat Base Plate within the Control Pegs.

Figure 3



Install Cylinder onto Pivot Bar in Base Plate. Cylinder should Pivot.

Figure 4



Figure 5



Standard Chain is 6 ft. in length. Contact Reliable for lengths up to 9 ft.

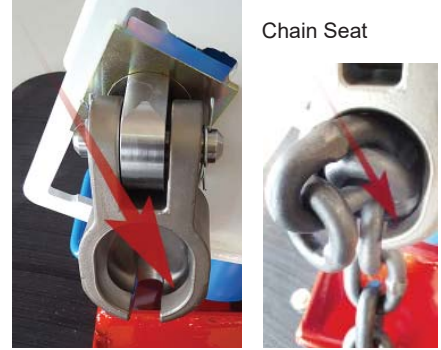
Figure 6

Secure Chain Swivel Bar into Support Hook.



Figure 7

Install supplied Chain into Chain Seat of Swivel Assembly



Chain Seat

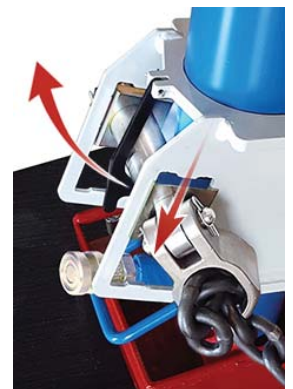
Figure 8

Wrap Chain around pole with Teeth of the Back Plate facing pole. Secure the loose end of chain, removing as much slack as possible.



Figure 9

Release Support Hook to increase chain tension.



DAILY MAINTENANCE



IMPORTANT: The greatest cause of hydraulic system failure is dirt. Prevent the introduction of foreign matter into the pump via hydraulic fluid, dirty connections or accumulation of sediment in the hydraulic system.

The life, reliability, and safety of the tool is dependent on proper maintenance. Maintenance must be performed by authorized and trained personnel ONLY. Inspect tool for wear or damage. Worn/damaged parts may malfunction during operation. **All parts must be replaced with new parts if signs of wear or damage are evident. Inspect the fittings, and hydraulic lines.** (i.e. kinks, leaks, dirt, etc.) *Do Not use hands!* **Inspect Hoses.** Worn or damaged and aged hoses may malfunction during operation. **Clean and inspect Entire Tool before storage.**

CAUTION: Visually Inspect for hydraulic leaks, Chain damage, wear or elongation, Weldment bending, cracks, breakage, and/or excessive wear. **Replace as required.** **Inspect and clean hydraulic couplers before and after each use.**

If you have any questions regarding the information in this manual please contact RELIABLE EQUIPMENT at the 215-357-3500.

EXTREME CAUTION SHOULD BE TAKEN TO ENSURE THE SAFETY OF ALL PERSONNEL

Any attempt to resolve a performance related issue, or to repair a product that is not working as expected in the field, will require knowledge of the tool and the application being performed.

WARNING: ALL tool repair and service must be performed by authorized and trained personnel ONLY. Improper maintenance or tampering could result in malfunction causing damage to equipment and/or injury to personnel.

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 damage, 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.

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



CAUTION

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



REL-PL-P

Hydraulic Pole Puller

Operating Pressure 2,800 psi

Includes:

- Hydraulic Cylinder
- Base Plate
- Back Plate
- Swivel Chain Hook Assembly
- Chain (6 Feet)

Optional:

- Pole Puller Pad



301 Ivyland Road • Warminster, PA 18974
Call: 215-357-3500 Fax: 215-357-9193
On the web at www.Reliable-Equip.com



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.

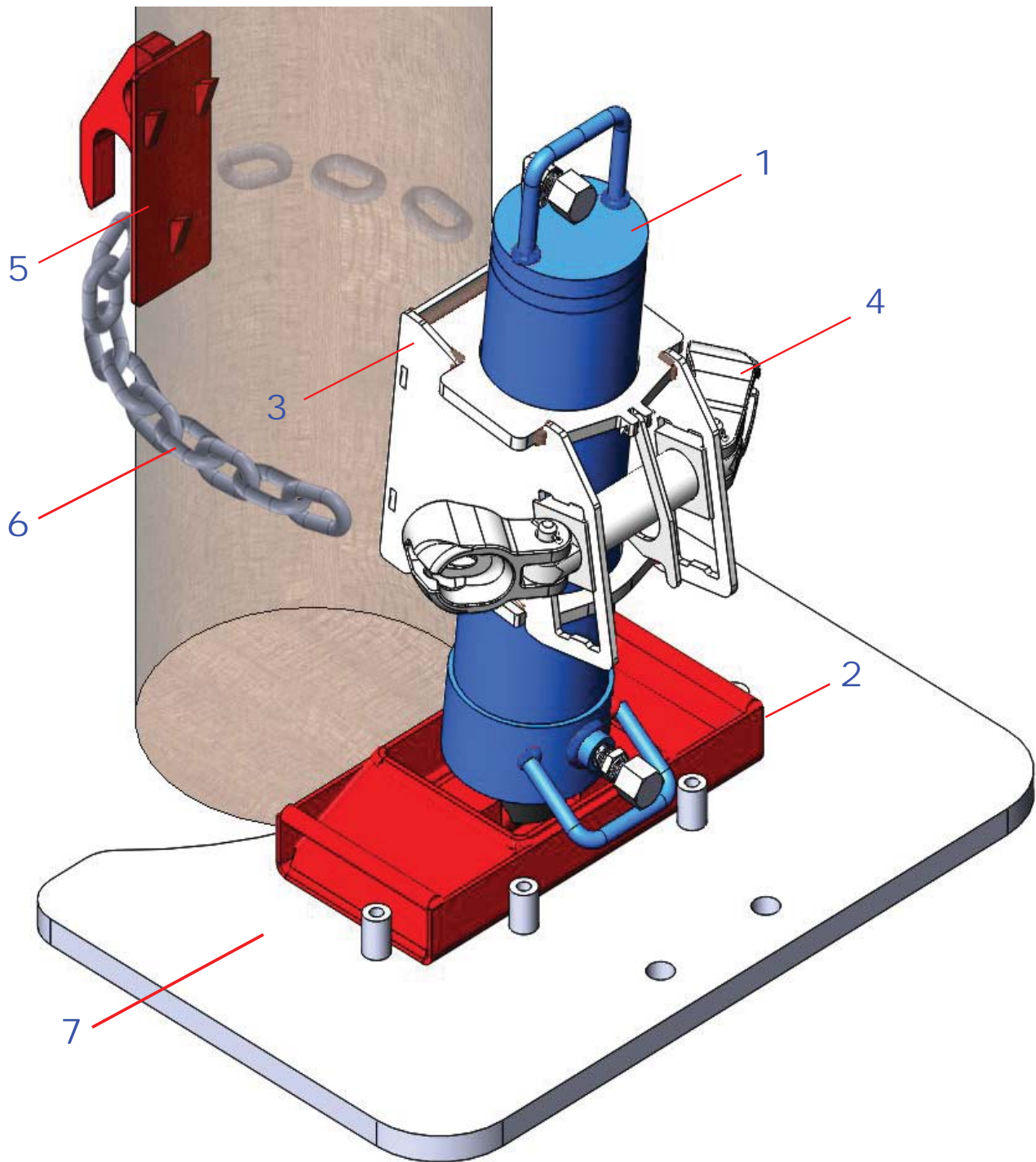
REL-SM

DANGER



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

Contact Parts@Reliable-Equip.com for Labels and Authorized Parts

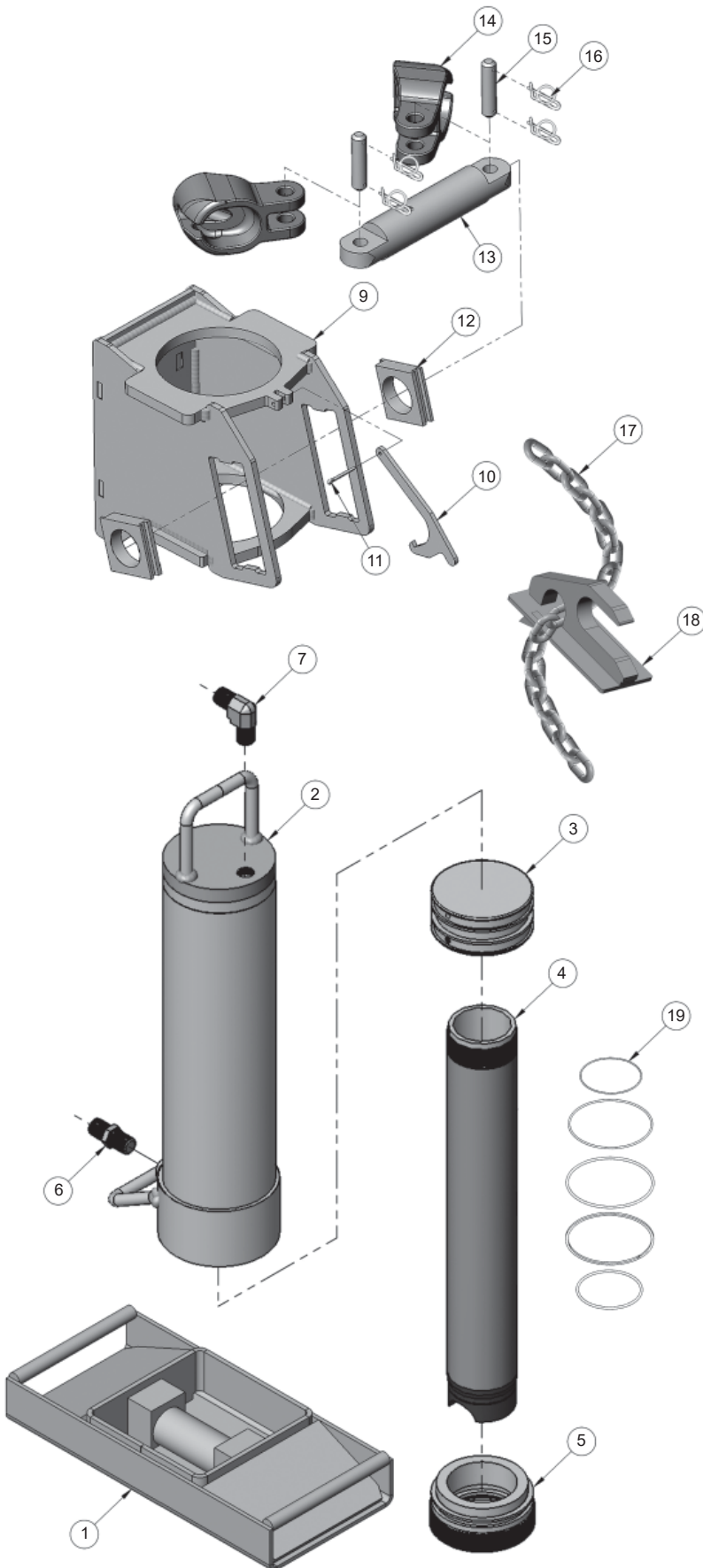


REL-PL-P

HYDRAULIC POLE PULLER

REL-PL-P MAJOR COMPONENTS		
#	DESCRIPTION	PART#
1	CYLINDER	R81539
2	BASE PLATE	R81519
3	HOOK WELDMENT	R81537
4	CHAIN SWIVEL ASSY.	R81530A
5	BACK PLATE	81532
6	CHAIN	81549
7	PAD (OPTIONAL)	81536

REL-PL-P PARTS LIST



#	PART #	DESCRIPTION	QTY
1	R81519	BASE PLATE	1
REL-PP-50-000K		CYLINDER (Includes #2-8)	
2	R81509	CYLINDER TUBE	1
3	R81505	PISTON	1
4	R81504	PISTON TUBE	1
5	R81510	CYLINDER END RING	1
6	R81550	FITTING, NIPPLE 1/2" NPT	1
7	R81547	FITTING(M), 90° 1/2" NPT	1
8	FF-370-8FP	COUPLER SET (NOT SHOWN)	1
9	81533	HOOK WELDMENT (Incl. #9-11)	1
10	81522	HOOK	1
11	81541	COTTER PIN	1
	81530A	CHAIN SWIVEL ASSY. (#12-16)	1
12	81531	SLIDING BLOCK	2
13	81530	CHAIN SWIVEL BAR	1
14	81521C	SWIVEL, CHAIN SEAT	2
15	81529	CHAIN SWIVEL PIN	2
16	81540	COTTER RING	4
17	140408006	CHAIN - 6' OF 1/2" ALLOY	1
18	81532	BACK PLATE	1
19	81538	SEAL KIT (Includes below)	
		O-RING	1
		PISTON SEAL	1
		O-RING, INNER CYL.	1
		ROD SEAL	1
		SPLIT BACK-UP RING	1

If you have questions regarding parts or assemblies for this tool contact Reliable Equipment at 800-966-3530.

USER NOTES

If you have any questions regarding the information 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



Read Manual



Protective Head Wear



Protective Eye Wear



Protective Clothing



Hearing Protection



Protective Foot Wear



Electrical Shock



Hot Surfaces



Hydraulic Injection