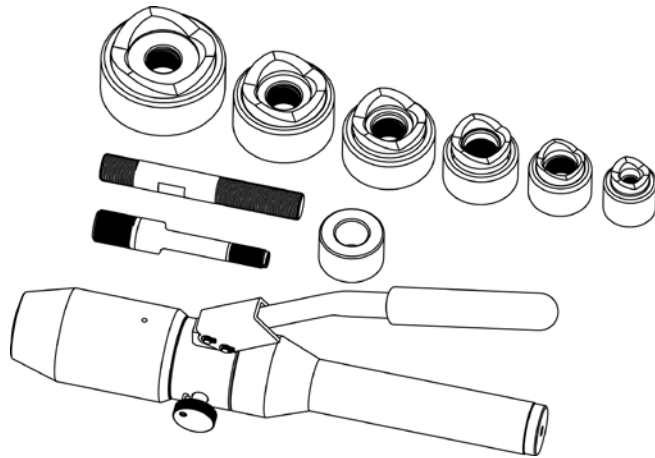


Instruction Manual

Hydraulic Punch Driver 902-482



Due to continuing improvements, actual product may differ slightly from the product described herein.



Read this material before using this product.

Failure to do so can result in serious injury.

SAVE THIS MANUAL

LIMITED 1 YEAR WARRANTY

We make every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of one year from the date of purchase (90 days if used as rental equipment). This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. **THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.**

To take advantage of this warranty, the product or part must be returned to Eclipse with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

The warranty gives you specific legal rights and you may also have other rights which vary from place to place.

GENERAL SAFETY RULE

SAVE THIS MANUAL

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the month and year of purchase. Keep this manual and the receipt in a safe and dry place for future reference.

IMPORTANT SAFETY INFORMATION

In this manual, on the labeling, and all other information provided with this product:



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.



DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

TO WORK IN SAFE CONDITIONS WITH THIS TOOLING, IT IS IMPERATIVE TO READ THE DIRECTIONS CAREFULLY FOR USE AND TO FOLLOW THE INSTRUCTIONS IT CONTAINS. IF YOU DO NOT RESPECT THE INFORMATION WRITTEN IN THE INSTRUCTION MANUAL THE WARRANTY WILL BE VOIDED.

1. Work area safety

- a. Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- b. This tool is not insulated; please do not use it on live conductor.
- c. Keep children and bystander away while operating the hydraulic punch driver. Distractions will cause you to lose control.
- d. Please do not use or store this tool under high temperature, or one surrounding filling with corrosive fluid. Pay attention to the sealing kits becoming aging.

2. Personal safety

- a. Stay alert, watch what you are doing and use common sense when operating the tool. Do not use the tool while you are tired or under the influence of drugs, alcohol or medication.. A moment of inattention while operating hydraulic tools may result in serious personal injury.
- b. Use safety equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid shoes, hard hat, or hearing protection used for appropriate conditions will reduced personal injuries.
- c. Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes jewelry or long hair can be caught in moving parts.
- d. Do not force the tool. Use the correct power tool for your application .The correct power tool will do the job better and safer at the rate for which it was

designed.

- e. Store idle power tools out of the reach of children and do not allow persons unfamiliar with the hydraulic punch driver. This tool is dangerous in the hands of untrained users.
- f. Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the Hydraulic Punch Driver operation. If damaged, have the Hydraulic Punch Driver repaired before use. Many accidents are caused by poorly maintained power tools.
- g. Use the Hydraulic Punch Driver, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of tool, taking into account the working conditions and the work to be performed. Use of the Hydraulic Punch Driver for operations different from those intended could result in a hazardous situation..

3. Service

Have your Hydraulic Punch Driver serviced by a qualified service technician using only identical replacement parts. This will ensure that the safety of the Hydraulic Punch Driver Kit is maintained. For service contact Eclipse Tools at 804-561-2610 for instructions.



Dust or air inside the tool will damage the sealing kit caused the tool lose function. Make sure the oil is clear and no dust enters into oil when changing oil. Wait for a while and exhaust the oil completely out of the oil tubes before inserting the oil plug.

TROUBLESHOOTING

FAULT	ANALYSIS	SOLUTION
A. Does not punch hole	1. Improper assembly or use of punch, die, or accessories 2. Low oil level	1. Refer to "Operation" and Capacity and Draw Stud selection Guide." 2. Refer to "Adding Hydraulic Oil: in the "Maintenance" section
B. Requires excessive lever force.	1. Improper assembly or use of punch, die, or accessories. 2. Material being punched is too thick or too hard.	1. Refer to "Operation" 2. Refer to "Capacity and Draw Stud Selection Guide"
C. Pump does not build pressure.	1. Air in system 2. Oil leakage on the ram	1. Prefer to "Adding Hydraulic Oil" in the Maintenance Section. 2. Contact manufacturer or distributor and replace it by trained person

SPECIFIC SAFETY RULES

1. Maintain labels and nameplates on the tool which carry important safety information. If unreadable or missing, contact the agent to replace.
2. This product is not a toy, keep it out of reach of children.
3. Do not slide your fingers in the punch & dies profile.
4. Do not put your fingers in the head of the tool when you slide the dies inside it. Your fingers could be pinched very severely.
5. Do not use the tool without punch & die.
6. Hand-tighten all couplers completely before operating the pump.
7. Do not use hands to check for leakage.
8. Do not hold hose or coupler while the hydraulic system is pressurized.
9. Do not use this tool near live circuits.
10. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



SAVE THESE INSTRUCTIONS

UNDERSTAND YOUR TOOL

The 902-482 punch is for punching mild metal plate. It carries many advantages of good design, easy operation, high pressure, high efficiency etc. They are the perfect tool to be used in construction site.

Item	902-482
Punching range:	7/8" to 2.5" below 10 gauge mild steel plate
Punching force:	6.6 Tons
Stroke:	0.875 inches
Length:	Approx.. 12.6 inches
Weight:	Approx 6.0 pounds
Package:	plastic box
Weight of box:	Approx. 2.6 pounds
Oil capacity:	Approx. 2.02 ouncesl
hydraulic oil:	15#
Ambient temperature:	-4°F - 104°F
Accessories:	
Round Knockout Punches Type D:	.89, 1.11, 1.36, 1.71, 1.96 and 2.43 inches
Draw Stud:	7/16 x 3/4": 1pc
Draw Stud:	3/4"x 3/4": 1pc
Spacer:	1pc
Sealing kit:	1set
Plastic box:	1pc

The size of punch & die is marked on the surface of the lower punch half (die).

ADDING HYDRAULIC OIL:

- Place the driver in a vise in a vertical position with the handles up. Unscrew the reservoir handle and remove the bladder plug. Open the turn screw to assure the ram is fully extended.
- Fill the rubber bladder to the point of overflow with hydraulic oil.
- Purge air from the system: Pump the lever handle several times to remove air from the pumping chamber. Close the turn screw until the ram completes its full travel. Repeat as necessary.

CAUTION

Open the turn screw slowly so the ram extends slowly. Rapid return of oil and air may cause the oil to overflow the rubber bladder.

If this procedure fails to remove air, remove the bladder plug and open the turn screw. Place thumb over the plug hole in the bladder and squeeze the bladder while pumping the lever handle several times. Close the turn screw and pump the pump handle until the ram completes its full travel. Repeat as necessary.

- Fill the rubber bladder to the point of overflow and replace the bladder plug. Wipe the bladder clean of excess oil and reassemble the reservoir handle.

OIL LEAKS

- Check for external oil leaks
- Check that the turn screw and stem are closed tightly and seating properly.
- Remove the reservoir handle and check for oil leaks around the rubber bladder and bladder plug.

CAUTION

Please wear the rubber gloves to avoid skin touching the oil directly, if touches it, please wash the skin by soap and water quickly. In order to protect the environment please drain the waste oil to the treatment center where was approved by local or federal governments.

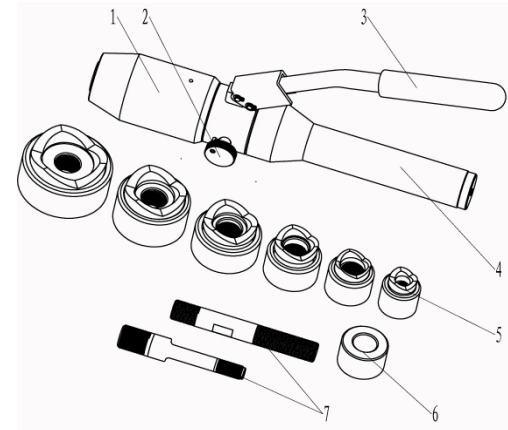
MAINTENANCE AND SERVICING

⚠WARNING

Damaged equipment may cause serious personal injury. Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further using.

1. **Before each use**, inspect the general condition of the tool. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, or any other condition that may affect its safe operation.
2. **After using**, clean external surfaces of the tool with clean, moist, smear the rust preventing oil on the metal surface of the tool and the dies to avoid rusty. Store the tool in the dry environment.
3. Service to the tool should only be done by a qualified Service Technician.
4. After a long time, the sealing kits will be damaged, if there is leakage please contact the manufacturer and/or the distributor to have the sealing kits changed.

1. Description of the components.



Code	Name	Function
1	Ram	Output high pressure to active the piston
2	Turn screw	To release the pressure
3	Active handle	For operating
4	Fixed handle	For storing oil and protect rubber bladder
5	Punch & die	For punching
6	Spacer	To protect the ram and assist tool for punching
7	Draw Stud	For connecting cylinder with punch & die

Capacity and Draw Stud Selection Guide

Draw Studs and Accessories	Standard Round Knockout Punches (Type D)					
	.89"	1.11"	1.36"	1.71"	1.96"	2.43"
7/16" Draw Stud + Spacer	▲					
3/4" Draw Stud + Spacer		▲	▲	▲		
3/4" Draw Stud					▲	▲

OPERATING INSTRUCTIONS.

Read the entire SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before using this product.

Use this tool for the manufacture's intended purpose only. Use other than that which is described in this manual can result injury or property damage.

1. Select the appropriate punch die set. Ask an authorized facility or distributor to choose proper punch die set for hole punching.

⚠WARNING

Do not exceed the rated capacity of this tool, otherwise it will caused a component failure, which could throw broken parts with great force. Failure to observe this warning can result injury or death.

2. Drill a pilot hole 1/2" diameter with an electric or cordless drill on the metal sheet.
3. Turn the turn screw counterclockwise to fully extend the ram
4. Thread the draw stud completely into the ram.
5. Slide the spacer in necessary onto the draw stud, and the die after, then let the metal sheet go through the draw stud by the hole. Finally, thread the punch facing the steel plate. Make sure the spacer, punch, die and material are tightly aligned.

⚠DANGER

An improper setup could cause the components damage.

⚠CAUTION

Do not operate the pump after ram motion stops. Continuing to operate the pump lever after the ram stops will damage the ram. If the ram stops before the hole is complete, stop pumping, check that the setup is correct and that you have not exceeded the tool's capacity. See the setup instruction. If necessary, disassemble the setup and add or remove the spacer.

6. Pump the handle lever until completely punched through.

⚠CAUTION

Make sure the punching operation is completed to avoid the scrap

remaining the lower half of the punch.

7. Turn the screw counterclockwise to release the pressure at the pump.

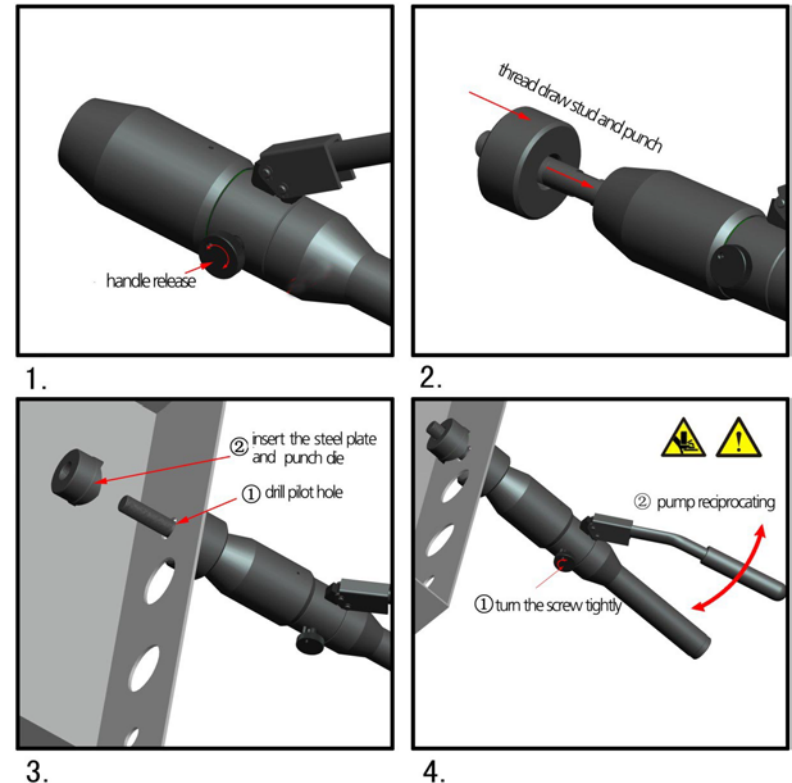
Step-up Punching

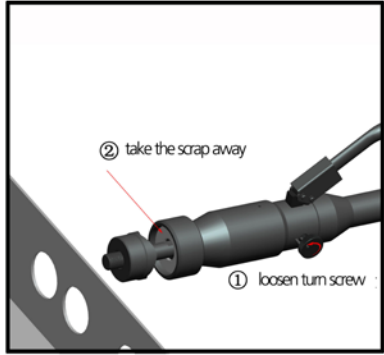
The 1/2" conduit-size punch is often used to increase the size of the pilot hole, this is called "step-up punching." After enlarging the pilot hole, the 3/4" draw stud is used to punch the final hole.

⚠WARNING

Do not allow anyone to stand in front of the punch or behind the hydraulic ram. Ignoring this warning can result in injury or damage.

PLEASE SEE THE ILLUSTRATION BELOW:





5.