

## 6-HCR HYDRAULIC CUTTER TOOL



### INTRODUCTION

The 6-HCR Hydraulic Cutter Remote is a lightweight, compact and extremely durable tool that has been designed for cutting a wide variety of materials.

The Cutter features insert type blades that can be easily replaced in the field with the use of only a screwdriver. Other features include a hinged "Flip Top" Head and a full 360 Degrees of head rotation.

The Cutter can be operated with any suitable hand or power pump capable of pressure output of 10,000 PSI. No special control valves are required since the cutter piston is spring returned.

### WARNING



The 6-HCR is not to be used for hot line work.

### SPECIFICATIONS

Blade Opening:	7/8 Inch.
Head Rotation:	360 Degrees
Head Pivot on Hinge:	90 Degrees (Retracted)
Cutting Force:	12,265 lbs. at 10,000 PSI.
Oil required for full stroke:	1-1/2 Cu. In.
Total Weight:	4.6 lbs. (2.1 kg.)
Mating quick coupler:	Power Team Part No 25599

### CUTTING CAPACITIES (MAXIMUM)

(See Notes)

Wire Rope:	3/4 inch Diameter
Soft Copper Bar:	5/8 inch Diameter
Soft Aluminum Bar:	1/2 inch Diameter
Soft Steel Bolts:	5/8 inch Diameter
Reinforcing Bar:	1/2 inch Diameter
Bare Stranded Copper Wire:	3/4 inch Diameter
Bare Stranded Aluminum Wire:	3/4 inch Diameter
ACSR:	3/4 inch Diameter
Stranded Galvanized Steel Wire:	5/8 inch Diameter
Underground Power Cable:	3/4 inch Diameter

#### Notes:

Size shown are for stranded bare wires. When cutting insulated wire, size is over insulation. Rating for soft steel should not exceed ASTM 1022. Rating for hard drawn steel wire should not exceed ASTM 1042.

## IMPORTANT SAFETY INFORMATION



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

Denotes an imminently hazardous situation which, if not avoided, will result in death or serious injury.



### WARNING

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



### CAUTION

Denotes a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

### CAUTION

Caution used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

### IMPORTANT

Denotes an operating or service procedure or condition considered essential for expedient and efficient operation and service.



### WARNING



It is the operators responsibility to read and understand the following safety statements,

- Only qualified operators should install, operate, adjust, maintain, clean, repair, or transport this machinery.
- Inspect tool before use. Replace any worn or damaged parts. Failure to observe these warning can result in severe injury or death.



### WARNING



Keep hands away from the cutter head assembly head when cutting.



To help prevent personal injury,



- Always wear eye protection whenever operating hydraulic equipment.



- Always wear hearing protection as required.

- Operation, repair, or maintenance of hydraulic equipment should be performed by a qualified person who understands the proper function of hydraulic equipment per local directives and standards.
- Hydraulic equipment must be assembled correctly and then checked for proper function before use. Use hydraulic components of the same hydraulic pressure ratings. An appropriate hydraulic pressure gauge is recommended to monitor pressure.



- Never place your hands or other body parts near a hydraulic fluid leak. Never use your hands or other body parts to check for a possible leak.

High pressure fluid can be injected under your skin causing serious injury and/or infection.



### WARNING

- Do not exceed cutting capacity of materials listed on sheet one. Cutting of too large or too hard materials could cause blades to shatter and cause injury.



- This tool is not insulated. When using this unit near energized electrical lines, use proper personal protective equipment.



### CAUTION

- Do not cut piano or music wire.
- Do not operate cutter with top support open.

### IMPORTANT

- Properly dispose of all fluids, components, and assemblies at the end of their useful life.
- Hydraulic fluid should be compatible with all hydraulic components.

## OPERATING INSTRUCTIONS

Connect cutter and hose to any suitable hydraulic pump that has pressure output of 10,000 PSI. The mating half of quick-coupler supplied with cutter is Power Team Part No. 25599.

Pump should be equipped with 2 or 3-way valve. Put the valve in the retract position and retract cutter piston fully.

If part to be cut is very long, open cutter head by pulling out pull pin assembly, slide cutter over part and close head, locking in place with pull pin assembly fully engaged.

Place valve in advance position and advance piston with pump until lower blade closes on material. Continue pumping until material is cut and stop pump when cut is complete to avoid bottoming out piston in cutter and pumping over relief valve. Although cutter has been designed to overcome this, repeated bottoming of piston in tool puts unnecessary load on tool and shortens the life of relief valve.

Retract piston and remove material from cutter.

Note:

After extended use or cutting hard materials, blades will become worn and pitted. Kit No. 4-1238 is available from the factory for blade replacement. Replace worn or damaged blades to maintain safe, efficient cutting operations.

### Blade Replacement (Kit No. 4-1238)

To replace top blade, withdraw pull pin assembly and open top support. Remove slotted screw and top blade. Insert new top blade with flat side facing bottom blade and secure with new slotted screw and lockwasher.

To replace bottom blade, advance piston until bottom blade screw is exposed. Remove hex socket screw and bottom blade. Insert new bottom blade with flat side facing top blade and secure with new screw.

Close top support and replace pull pin assembly. Cutter is now ready for use.

## PERIODIC MAINTENANCE:

Occasionally lubricate pull pins and pivot pins with a molybdenum disulfide grease. The greatest single cause of failure for hydraulic tools is dirt. Extreme caution should be used to prevent the entry of contaminant's into the unit.

### Oil Leaks

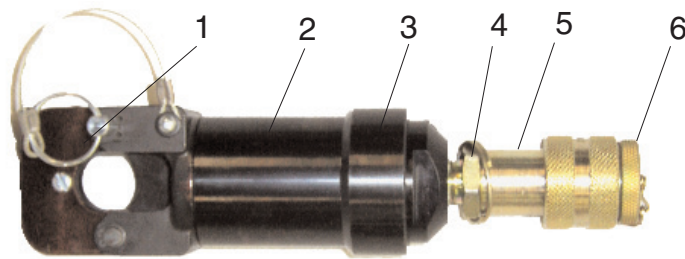
A slight weeping of oil from the ram and pump seals is normal and required to keep moving parts lubricated. Excessive leakage indicates a need for seal replacement.

### Seal Replacement

Maintenance and repairs of this type should only be preformed by properly trained personnel in repair shops under clean conditions. In addition to all parts shown on keyed parts list, 4-1162 Seal Kit is available for this purpose.



**6-HCR (Open Position)**



Illustration

- |                         |                   |
|-------------------------|-------------------|
| 1. Pull Pin Assembly    | 4. Connector      |
| 2. Cutter Head Assembly | 5. Female-coupler |
| 3. Adapter              | 6. Dust-Cap       |

## **TROUBLE SHOOTING**

If the blade will not extend completely, it will generally be found that there is an insufficient amount of oil in the cutter's hydraulic system.

If the blade will not retract completely, it will generally be found that there is too much oil in the cutter's hydraulic system. Drain enough to permit complete retraction. If the blade will not retract and the oil reservoir is not full, the ram is likely being held by a deformed washer.

A small amount of leakage is desirable around the ram; to lubricate this part. If enough leakage occurs to cause the oil to run, the packing should be replaced.

### **Compatible Hydraulic Fluids:**

The use of Amoco Rykon MV oil is recommended. Compatible fluids include:

Mobil DTE 13  
Mobil ATF 220  
Shell Tellus 32  
Arco Dexron III  
Citgo AW32  
Citgo Dexron III

Other fluids also may be used if they meet or exceed the following specifications:

Viscosity: 180 SSU at 100 degree F.  
Flash Point: 350 degree F  
Pour Point: -50 degree F

**INSTRUCTIONS FOR CONVERSION TO 6-HHC TOOL**



6-HHC TOOL



CONVERSION ASSEMBLY  
(PART NUMBER 4-0766)

- 1-RETAINING WIRE
- 1-WRAP AROUND DECAL

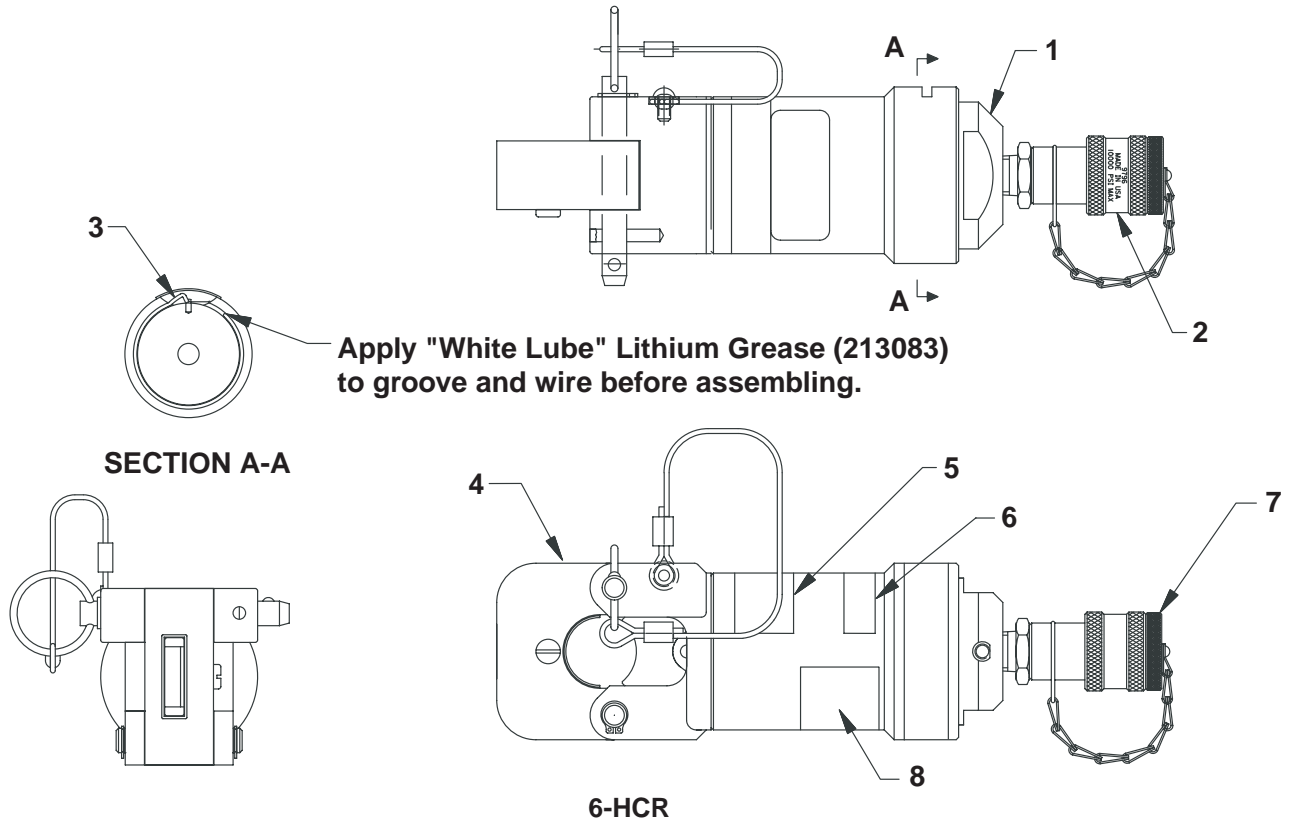


CUTTER HEAD SUB-ASSEMBLY  
(PART NUMBER 4-0866)

PUMP ASSEMBLY  
(PART NUMBER 3000089)

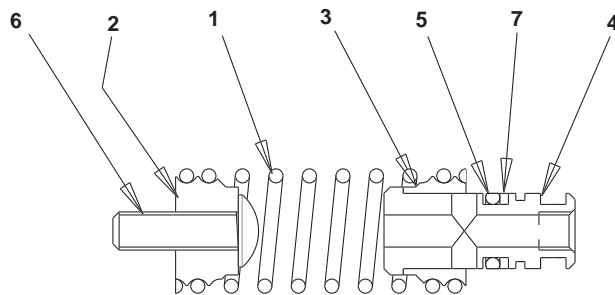
1. Fully retract tool ram and make sure all pressure has dissipated. Disconnect tool from hose to pump.
2. Remove adhesive label covering slot in cylinder.
3. Using a thin-bladed screwdriver or punch, pry hooked end of retaining wire out of slot in cylinder.
4. Holding hooked end of wire with pliers, rotate cylinder to force retaining wire out of groove and through slot. Discard wire.
5. Carefully separate end cap assembly from cylinder assembly.
6. Apply lubricant to groove in pump block and to retaining wire.
7. Insert pump block assembly into back end of cylinder assembly, holding discharge spring in place. Rotate cylinder assembly until hole in pump block appears in slot in cylinder.
8. Place hooked end of new wire from conversion kit into hole in pump block. Align free length of wire along slot in cylinder. Rotate cylinder assembly in opposite direction to feed wire through slot and into groove.
9. When wire is fully engaged, hooked end will snap out of hole in end cap to permit full head rotation. Wedge spring pin in slot in cylinder, allowing wire to move freely beneath. Seal slot with new adhesive label.
10. Purge air from remote tool and pump system using normal fill and bleed procedures.

### PARTS LIST



Item No.	Part No.	No. Req'd	Description
1	3-9990	1	Cap, End
2	9796	1	Coupler, Female (3/8" NPTF)
3	3-9678	1	Wire, Retaining
4	4-0866	1	Head Assembly, 6-Ton Cutter
5	1000054	1	Decal, Warning

Item No.	Part No.	No. Req'd	Description
6	1000056	1	Decal, (Tradename Power Team)
7	9797	1	Plug, Dust
8	420691	1	Decal, Product Blank

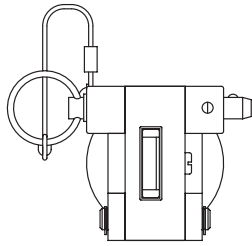


### SPRING ASSEMBLY 4-0695

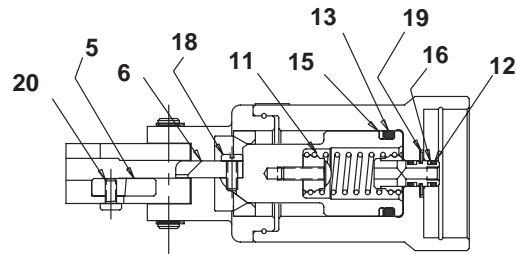
Item No.	Part No.	No. Req'd	Description
1	4-1263	1	Spring, Tension
2	4-0697	1	Retainer, Fixed
3	4-0698	1	Retainer, Swivel
4	4-0699	1	Tube, Transfer

Item No.	Part No.	No. Req'd	Description
5	10266	1	O-Ring
6	5-3880	1	Screw, BHSC
7	5-3245	1	Ring, Back-up

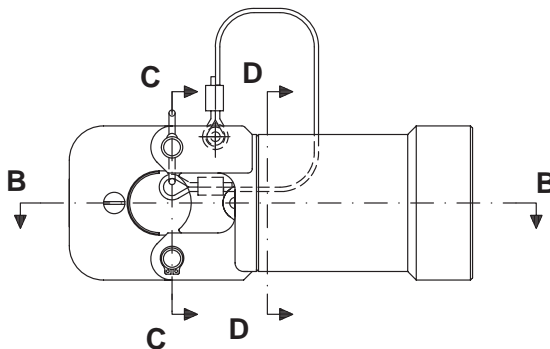
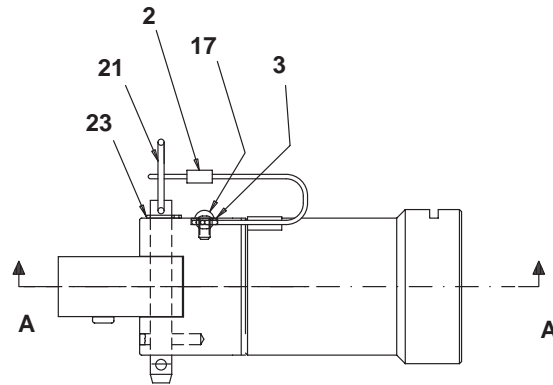
**PARTS LIST**



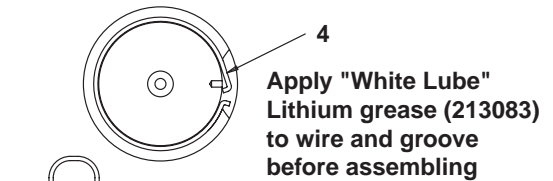
**SECTION C-C**



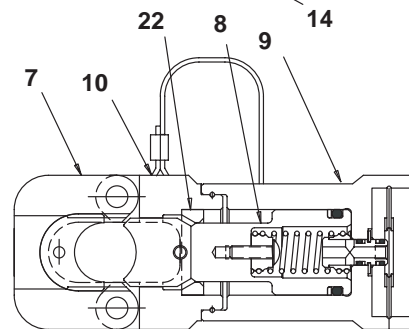
**SECTION B-B**



**HEAD ASSEMBLY 4-0866**



**SECTION D-D**



**SECTION A-A**

Item No.	Part No.	No. Req'd	Description
1	3-8682	1	Pin, Pivot
2	3-9008	1	Cable Assembly
3	3-9166	1	Washer
4	4-0981	1	Wire, Retaining
5	3-9694	1	Blade, Top
6	3-9695	1	Blade, Bottom
7	3-8672	1	Support, Top
8	4-0691	1	Piston
9	4-0692	1	Cylinder
10	4-0694	1	Yoke
11	4-0695	1	Spring, Assembly, Return
12	10266	1	O-Ring

Item No.	Part No.	No. Req'd	Description
13	10279	1	O-Ring
14	251925	2	Ring, Retaining
15	19140	1	Ring, Back-up
16	5-3245	1	Ring, Back-up
17	5-3627	1	Screw, Drive
18	5-3678	1	Screw, Bottom Blade
19	11032	1	Ring, Retaining
20	5-3624	1	Screw, Top Blade
21	5-3867	1	Pin Assembly, Pull
22	4-0985	1	Bushing
23	5-3868	1	Ring, Grip