



**NEOMETRIX**  
**DEFENCE**

*Fast, Safe & Reliable  
On Track*



## Working Manual

### Hydraulic Cutter



- Please use the rescue tool by professionally trained person.
- It is a prohibited strictly to use rescue tool near the combustible gas and liquid.



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## **Technical Specification**

### SMART HYDRAULIC CUTTER

Make	NEOMETRIX
Model	Cutter RS - 2000
Blade opening	240 mm
cutting force	48 Ton
Weight	17.5 Kg
Capable of cutting Round bar	28 mm
Working Pressure	720 Bar
Test Pressure	750 Bar

## Safety operation:

“NEO” SAEPL products are developed and manufactured in order to guarantee the best performance and quality when used properly.

Operator safety is the most important aspect of the product design.

The equipment may only be operated by persons with appropriate training in the safety aspects of such equipment – otherwise, there is a danger of injury occurring.

We would like to point out to all users that they should read carefully the operating instructions and the instructions contained therein before they use the equipment, and that they should carefully follow such.



Wear helmet with face protection



Wear safety gloves



Wear safety shoes



Read and observe operating instructions



**Never work when you are overtired or intoxicated!**





### **Instruction for proper operation:**

“NEO” hydraulic tool is specially designed for the rescue operation such as road accident, railway accident, aircraft, building collapse, and so on, rescue tool can break the door, window, roof beam and so on with the function of cutting or spreading also can save people through dismantle vehicles.

### **Warning:**

- Never make any modification, addition or conversion which might affect safety without the approval. This also applies to the installation and adjustment safety device and valve.
- Aggressive material (acid, lye, solvent, and vapor) can damage the tool, it is necessary to clean the whole tool, if it must be exceptionally operated under such condition or gets into touch with these materials.

## Hydraulic Cutter

### Function Hydraulic Cutter

#### **Principal:**

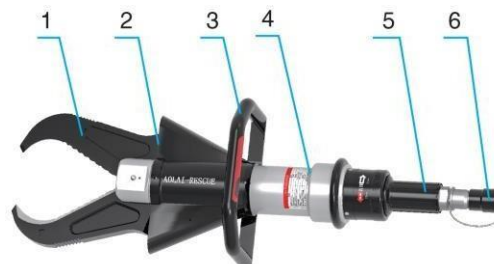
The equipment is designed such that, via a hydraulically activated piston, two equal, opposite blade arms are symmetrically opened / closed by mechanical joints, cutting objects.

All cutters and combi tools ensure full load-holding function when disconnected from the hydraulic supply (e. g. when being unintentional decoupled; defective hose, and so on).

“SMART” cutter and combi tools can also be used under water.

Part -

E.g.



**Hydraulic Cutter**

- 1) Cutter blades, replaceable blade arms
- 2) Protection cover
- 3) Handle
- 4) Oil cylinder
- 5) Handhold
- 6) Coupler and dust protection cap







**Visual inspection:**

1. Blade opening/closing
2. Hose connections easy to connect.
3. Hydraulic Oil level

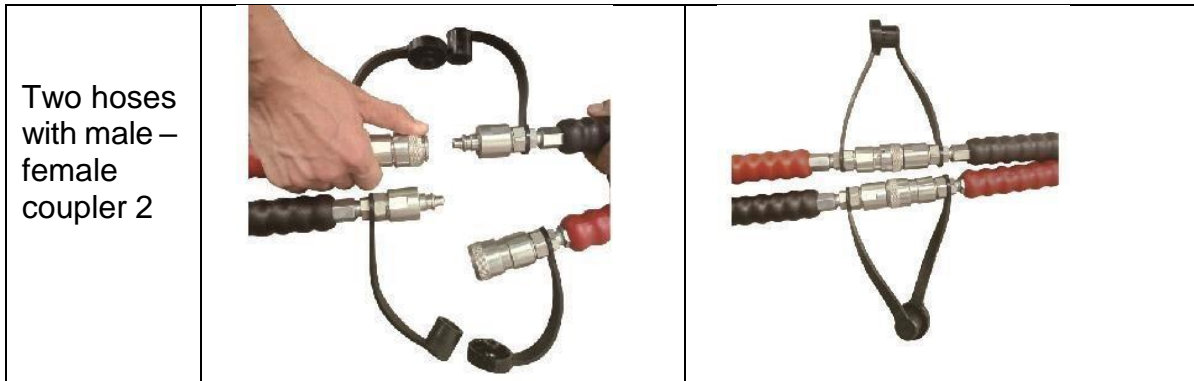
**Operation Hydraulic Cutter**

**Hoses:**

The pump unit and the rescue tool are connected by hoses.

	Before connection	After connection
Single hose with mono coupler 1		
Single hose with mono coupler 2		
Two hoses with male – female coupler 1		





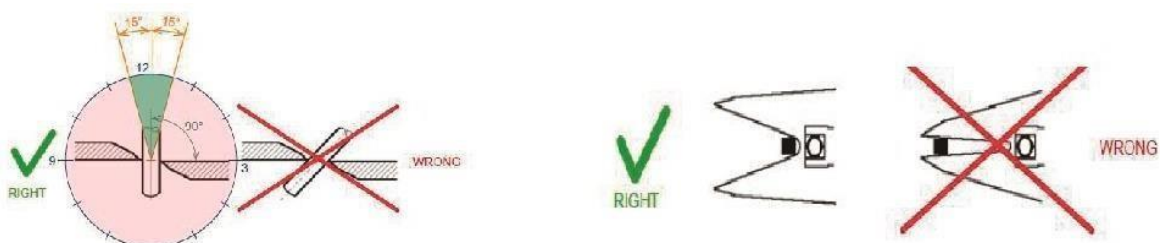
Before the connection, please open the dust proof cap. To protect the coupler please use the dust protection cover after the rescue operation.

### Operation:

- 1) Before operating tools follow the below points.
  - a) Connect the equipment to the hydraulic pump.
  - b) Open and close the blade arms of the tool without any load 1-2 times.

### Precautions:

- 1) Before the rescue operation begins the object to be worked upon must be stabilized.
- 2) The blades must be applied at right angle (90°) to the object to be cut. To enhance cutting performance cut as close as possible to the blade's fulcrum. On cutting the gap between the blade tips must not be larger than 3 mm. (Risk of blade fracture).



### Cleaning and Storage:

After operation close the blades to a distance of few mm. This relaxes unit hydraulically and mechanically.

Clean the blades if there are acidic or alkaline things wash the blades with water and dry it with fabric, coated with anti-rust oil. Maintain the tools to avoid rusting and aging.

**Attention:** Never store the cutter / combi tool with fully closed blade arms. The complete closure of the blade arms can cause hydraulic and mechanical stress to build up again.

Free the rescue equipment of any stubborn dirt which may have become attached during use. If the equipment is to be stored for a longer period of time, the exterior is to be cleaned completely and the mechanically mobile parts are to be lubricated. Avoid storing the rescue equipment in a damp environment. Observe also the separate manual for the hydraulic hoses.

### Inspection and Maintenance:

All the tool are controlled by the inside hydraulic parts, but visual check has to be accomplished normally tool should be inspected both before and after the use. To find the problem and maintain it in time, avoid any accident during the rescue operation. In addition, central bolt also should be check from time to time.

Item	Operation	Every time	Every month or after working 20 hours	Every three month or after working 50 hours	Every six month or after working 100 hours	Every year or after working 200 hours
Coupler	Inspect, clean, lubricate	√				
Dust protection cover	Inspect	√				
Hose	Inspect	Every two year (if necessary)				
Hand valve	Inspect	√				



Check valve	Inspect clean					√
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Gap between the blade tips	Inspect (1)	√				
Central bolt	Tighten			√ (2)		
Blade	Inspect Clean	√			√	

Note:

- 1) The tips clearance of the blade should not exceed 3 mm.
- 2) The tightening torque is 200 Nm.

### Common fault and troubleshooting:

Fault	Inspect	Cause	Solution
Blade arms move slowly or jerkily when activated	Are the hoses connected properly?	Air in the hydraulic system	Open and closing of the blades for some times to remove any air. If it doesn't work contact the manufacturer
	Does the pump unit work?		
Device doesn't perform at its given power	Check the hydraulic fluid level in the supplying pump	Insufficient hydraulic fluid in the pump	Top up hydraulic fluid, deaerate
Control handle doesn't rotate smoothly or gets stuck	Apparently hurts or control valve doesn't rotate smoothly	There is something wrong with the return spring	Replace the spring or contact the manufacturer

		<p>The valve or control valve has foreign object</p> <p>The valve is broken</p> <p>There is something wrong with other parts</p>	
Leakages on the piston rod		<p>Seal defective</p> <p>piston rod defective</p> <p>Malfunction of the piston rod</p>	Maintenance required by company technician
Hydraulic fluid leak on the hoses or the fixing-ins	Defective hoses	Mechanical damages, leak possible damage	Replace hoses

If it isn't possible to rectify the malfunctions, inform contact us immediately!

**Repair/note:**

- All tools can only be repaired only by manufacture.
- Company does not bear any responsibility for the accident caused by the customer's unauthorized use or replacement of parts.
- "SAEPL" spares to be used to replace the components.
- Before using any other couplings, hydraulic oil please contact **SAEPL** for the same.

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