



**NEOMETRIX**  
**DEFENCE**





## **Working Manual**

### **Petrol Power Pack**

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



## Content

- Technical specification
- Safe operation
- Correct use
- Function
- Product operation
- Cleaning and preservation of equipment
- Inspection and maintenance
- Common fault and troubleshooting
- Packing list
- Warranty



## Petrol Power Pack

Model	Hydraulic Petrol Power Pack
Make	SHPP – 3.5
Brand	NEOMETRIX
Operating Pressure	720 bars
Cooling	Air cooled
Engine Speed	3400 RPM
Oil Sump Capacity	3.5 L
Engine	4 stroke Petrol Engine
Weight	30 Kg
Power	2.3 Kw
Pump Type	2 Stage Axial Pump
Connection	2 Tools
Dimension	450 x 450 x 370 mm
Noise Level	Less than 85 dB



### **Safety operation:**

M/s Neometrix product can do the best only. When used correctly, our company considers the product safety operation fully while designing it. In spite of this any mistake or improper operation may lead to the occurrence of an accident. Therefore only through the product training and understanding the safe operation personnel can operate product.

Please use the tools in strict accordance with the safety signs of the equipment.

In the process of equipment use in addition to compliance with the relevant provision of the operation manual the domestic and International related accident prevention Methods and environmental protection laws should be observe.

### **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.

### **Recommended Hydraulic Oil:**

32 No reputed make (Bharat Petroleum, Savsol, Veedol, Shell Oil) 3 Liter .

### **Recommended Engine Oil:**

15 W 50 No Castrol or reputed make 350 to 400 ml

At the time of first use

### **Fuel :**

1 Liter (Regular Petrol)

## Hydraulic Power Pack

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

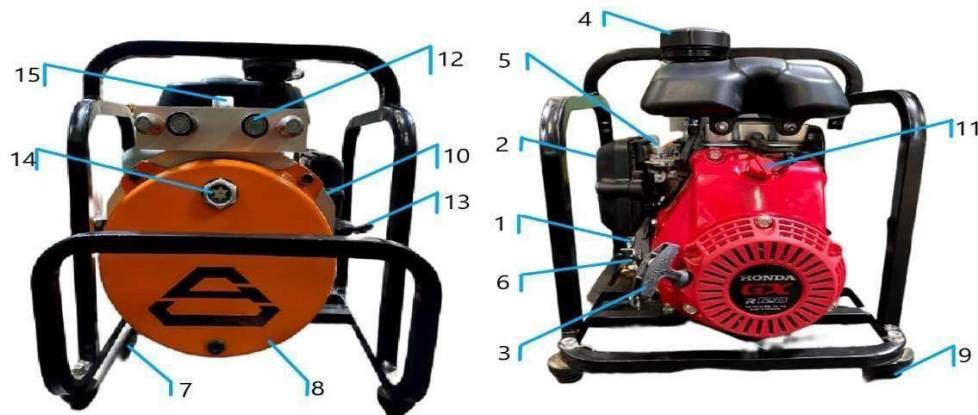
Smart hydraulic tool is specially designed for the rescue operation such as road accident, Railway accident, aircraft, building collapse, and so on, Rescue tool can break the door, window, roof beam and so on with the function of cutting or spreading also can save people through dismantle vehicles.

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- 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 this material.

## Function Hydraulic Pump

- The Hydraulic motor pump is driven by the high pressure hydraulic oil to drive the piston so as to produce a powerful lifting force to complete the lifting operation.
- Name of parts



1. Gasoline engine crankcase lubricating oil
2. Gasoline engine air cleaner
3. Gasoline engine starting handle
4. Gasoline tank filler
5. Fuel valve switch
6. Speed controller
7. Support foot
8. Oil tank
9. Support foot
10. Pump plate
11. Motor switch
12. Two houses with single coupling
13. Turbo speed valve
14. Oil induction
15. Oil filler

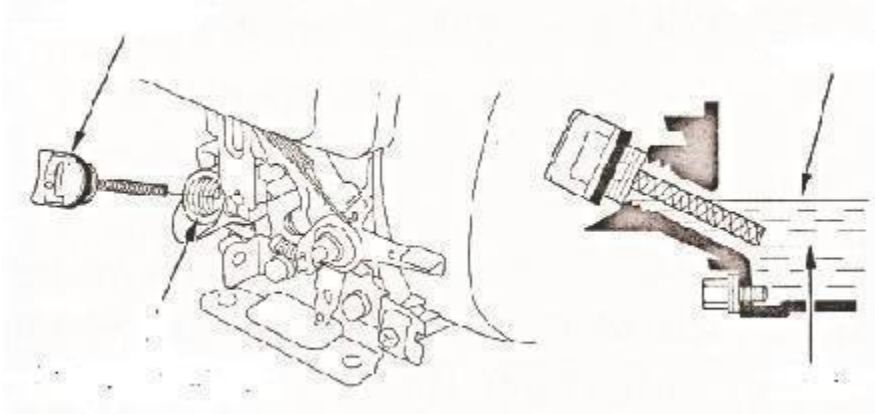
**Note:** Person overtired or drunk operating products are prohibited strictly.



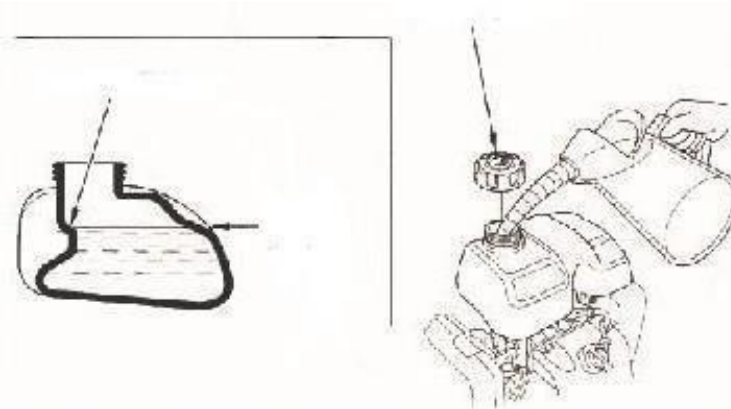
## Operation Hydraulic pump

### a) Check before starting motor pump

- Check lubricating oil of the gasoline engine pull out the oil level gauge and check the height of the oil surface. The oil surface should be between the upper and lower scale of the oil ruler.



- Check the hydraulic oil. Oil tank on the window check oil level of oil on the window, the oil level of tank should be in the median of oil window. You can add oil if it is not enough.
- Check the gasoline open the gasoline tank filler cap, check the amount of gasoline.



## Connect tools:

- 1) Connect motor pump tool with by 5 meter Hydraulic hose such as shear or a multi-functional clamp (fast interface is fasten and dust proof caps are connected with each other to prevent dust).

Turn on the gasoline tank switch:



- 2) Turn bumper door to right plate to the closed state.

Note: If the gasoline engine is hot or the temperature is high, do not use the air proof door.



- 3) Switch handle of motor pump counter clockwise rotation to pressure relief state.

Note: The mono coupler does not have the pressure relief knob and the coupler has the pressure relief function itself.



4) Pull the speed lever of the gasoline engine to the middle position.



5) Switch the circuit ignition switch "OFF" position to "ON" position.



6) Pull gasoline engine start handle lightly force fast pull when feel resistance.

Note: Do not release the handle suddenly to prevent damaging the machine when the handle rebounded violently. The handle should be put at its position.



7) Pull the damper left to the open position after start.



- 8) Put speed lever of the gasoline engine to the maximum position.
- 9) Switch handle of the motor pump is transferred to “working” state.



### After work:

- 1) Turn switch handle of the motor pump counter clockwise to the pressure relief position.
- 2) Pull the speed lever of the gasoline engine to the idle speed position for 1-2 minutes.
- 3) Switch the speed lever of the gasoline engine to the shutdown position (The speed lever is to be pulled to the natural position) and the gasoline engine stops running.
- 4) The circuit ignition switch “ON” position to “OFF” position gasoline engine stops operation.
- 5) Shut off the gasoline tank switch.
- 6) Disconnect tools from 5 meters hydraulic hose cover the dust cap pack up hose put them into package after the machine is fully cooled.



### Operation under special circumstances:

The operation of motor pump in special environment will affect the performance of the engine the temperature is lower than -20C.

Extremely dust environment:

Above 1500 meters above altitude.

Note: The nozzle of the internal combustion engine vaporizer should be replaced when the pump is used, under the condition of altitude above 150 mtr. The standard mixture of air and gasoline will be too high if operated at an altitude of more than 1500 mtr. The modified engine for use in areas above 1500 mtr altitude will lead to overheating if used in low altitude areas.

## 6. Inspection and maintenance

All the equipment is controlled by the internal hydraulic pressure. But the basic visual inspection is essential, before and after each use of the equipment should be inspected again and again. If it is not used for a long time, visual inspection should be essential. The damage to the surface of the equipment can be detected by visual inspection in order to repair it in time to prevent damage caused by equipment in the process of use.

The periodic table is as follows:

		Inspection cycle				
Item	Operation	Use each time	The first month or 20 hours later	Every quarter or 50 hours later	Every half a year or 100 hours later	Every year or 200 hours later
Engine oil	Check oil level	✓				
	replace		✓		✓	
Hydraulic oil	inspect	✓	✓			
	replace		✓			✓
Hydraulic oil tank	Clean					✓
Hydraulic quick join	Check, clean, lubricate	✓				
Dust cover	inspect	✓				
Air filter	inspect	✓				
	Clean			✓		
	replace					✓
Spark plug	Check, clean				✓	
	replace					✓
Spark eliminator (selected purchase)	clean				✓	
Idling	Check and adjust					✓
combustion chamber	Clean	Every three hundred hours				
Valve gap	Check - readjustment					✓
Fuel tank / fuel filter	Clean				✓	
Tubing	Inspect	Every two years (if necessary)				

**Common Fault and elimination method:**

Equipment trouble	Cause analysis	Solution
Oil tank cover leaking when pressure rise	Hydraulic oil is too much	Release the excess oil so that the oil level is kept in half of the oil window
Not up to pressure at work	<ol style="list-style-type: none"> <li>1. High pressure pump body doesn't absorb oil</li> <li>2. The seal of one way valve at the bottom of the pump plate is not good</li> <li>3. High pressure overflow is too loose</li> </ol>	<ol style="list-style-type: none"> <li>1. Replacement of high pressure pumps body.</li> <li>2. Change the right side valve.</li> <li>3. Tighten the wrench with a overflow.</li> </ol>
The gasoline engine can't start	No fuel injection	Add above 90# of gasoline to the gasoline tank (must be pure gasoline)
	Sparks plug damage or spark plugs have carbon deposition	Replace a new spark plug or clean up carbon on the spark plug
	Ignition switch is broken	Replace the ignition switch
	The inversion of the motor pump causes the oil enter the air	Remove the air filter, pull the air bar several times, start the pull rod, drain the oil in the filter, then use gasoline to clean the filter cotton in the filter, then dry it and install it
Quick connection of the oil leaking	A filter, a locking channel, known as submerged cylinder	Replacing a new type of O ring
Fast connection cannot be connected with tubing	When fastening to the wire, the force is too big to cause the O type ring to be scratched by the thread	Remove the fast socket and unload the high pressure
	There is high pressure in the tubing	Replace a new fast joint





The engine quickly extinguished after the engine was started	Fast interface damage	When the engine is normally started, open the damper door (the chock is revolving counter clockwise to the arrow)
	After the engine was started, the throttle was not opened, causing the gasoline engine to suffocate	Remove the air filter, pull the air bar several times, start the pull rod, drain the oil in the filter, then use gasoline to clean the filter cotton in the filter, then dry it and install it
After the engine is started the spark is injected	It may also be the problem of flooding	Add a proper amount of oil, usually between the top and down scales of the oil scale
	Excessive oil addition	After the air filter is processed, the boot handle is pulled out to make the excess oil out of the air