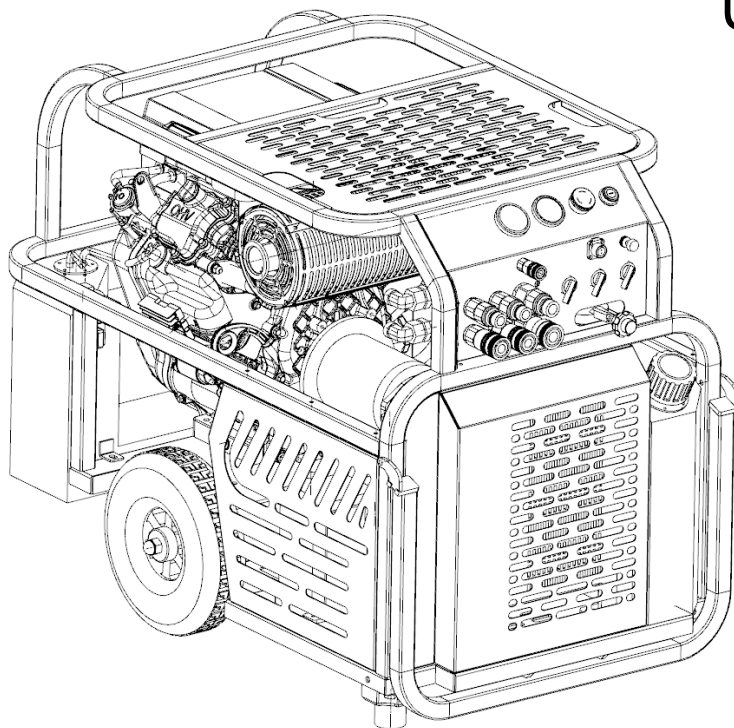


35HP Hydraulic Power Station

Safety, Operation, and Maintenance

User Manual



T a b l e o f c o n t e n t s

Chapter 1 Security 1

 1.1. Security symbol 1

 1.2. Safety Precautions 1

Chapter Two: Product Introduction 3

 2.1. Product Features 3

 2.2. Technical Specifications 3

 2.3 . Working principle 3

Chapter 3 Operation 4

 3.1. Preparations before operation 4

 3.1.1. Engine crankcase oil level 4

 3.1.2. Engine fuel level 4

 3.1.3. Hydraulic oil 5

 3.1.4. Battery 5

 3.2. Operation 5

 3.2.1. Oil pipe connection 5

 3.2.2. Startup 6

 3.2.3. Shut down the equipment 6

 3.2.4. Winter Start-up 7

Table of contents




Hydraulic Power Station Product Manual

Chapter 4 Maintenance and Care	8
4. 1. Fuel System Inspection and Maintenance	8
4. 2. Hydraulic System Maintenance	8
4. 3. Store	8

Chapter 1 Security

1.1. Safety symbol

When operating, maintaining, and repairing equipment, pay attention to the symbols and markings on the following equipment. Ignoring these warnings may result in serious personal injury or death, as well as equipment damage.

symbol	project	Remark
 危险	Danger	Be vigilant about highly dangerous situations that, if not avoided, will result in death or serious injury.
 警告	warn	Be wary of moderate hazards, as these are potential dangers that, if not avoided, could lead to serious injury.
 注意	Notice	Be vigilant about minor dangers, as they could potentially lead to minor or moderate injury if not avoided.

Please comply with the safety requirements and precautions marked above to avoid unnecessary personal injury and equipment damage.

Local safety regulations: Please fill in the relevant local safety laws and regulations in the table below as supplementary information to the safety operation instructions in this manual. Operators and maintenance personnel must also comply with these regulations.

1.2. Safety Precautions

Operators, equipment maintenance, and repair personnel must comply with the safety operating instructions in this manual (including the safety instructions on the labels of the equipment and pipelines).

Follow safety operating instructions to ensure personal safety. Before operating the equipment, carefully read the safety instructions.

Enterprise safety supervisors should add relevant safety production content to this safety instruction booklet based on the characteristics of their region and fill it in the corresponding columns.

1. Personnel not authorized to perform the work are prohibited from entering the work area. Flying debris can cause personal injury. Operators must be familiar with

- hazardous work environments, such as exceptionally steep ramps.
2. Establish a system for training operators before they are allowed to work.
 3. Do not operate the equipment until you have fully mastered its operation or when no safety supervisor is present.
 4. Operators must wear appropriate personal protective equipment such as masks, safety helmets, safety shoes, ear protectors, and goggles when working.
 5. Do not perform any maintenance on hydraulic tools while they are running. Such actions could result in serious personal injury.
 6. Before using the tool, double-check that the oil pipe connection is correct.
 7. Power stations should not be operated in enclosed spaces. This is because the exhaust fumes from the engine can cause poisoning and suffocation among personnel.
 8. Do not wear overly loose clothing into the work area, as rotating parts may trap clothing in the equipment, causing serious injury.
 9. All operating components must be kept away from any person's body.
 10. Do not place items on top of the device while it is in use.
 11. Do not add fuel to the power station while the engine is running or has just stopped.
 12. Do not start the engine when you have just refueled and the smell of fuel is still strong around the power station.
 13. Do not use flammable solvents to clean engine surfaces.
 14. After using the power station, the engine should be allowed to cool naturally before being returned to the warehouse.
 15. The maintenance and repair of hydraulic tools must be performed by professionals authorized by the company.
 16. Do not use hydraulic tools on dangerous slopes or other unstable locations to avoid the equipment tipping over during operation.
 17. Do not use tools beyond the scope of the design.
 18. Power stations must be operated in a well-ventilated environment and must not be operated in places with explosion hazards, enclosed environments, or near flammable materials.
 19. When inspecting electrical components of the power station, please disconnect the starting battery; otherwise, the electrical circuit may be burned out.
 20. During the transfer, transportation, and storage of power stations, it is forbidden to invert the power station to prevent engine damage.
 21. When starting the engine by turning the key switch, if the engine does not start normally, do not keep it in the START position for an extended period of time. Turn the key switch to OFF, wait 10 seconds, and then try to start it again. If the engine fails to start after three consecutive attempts, the equipment needs to be inspected to prevent damage.

Chapter 2 Product Introduction

Mobile hydraulic power units provide a convenient and reliable power source for various hydraulic tools. They are characterized by high efficiency, small size, light weight, and strong power, and are widely used in disaster relief, highway and municipal engineering and other fields.

2.1. Features

1. All moving parts operate within a relatively enclosed hydraulic oil environment, making it difficult for contaminants to enter. This not only ensures that the hydraulic power unit is easy to maintain, has a low failure rate, and a long service life, but also significantly reduces your maintenance and repair costs.
2. It has a compact structure and is lightweight. It can be placed in a small utility cart, making it easy and economical to transport.
3. It employs a diesel/gasoline engine, a large-capacity hydraulic oil tank, and a highly efficient cooling system, enabling the machine to operate continuously for extended periods.

2.2. Technical Specifications

Table 1 Technical parameters of 35-80 hydraulic power unit

Serial Number	project	parameter
1	engine	35HP diesel
2	Hydraulic flow	2 x 40 lpm / 1 x 80 lpm
3	Hydraulic oil pressure	175 bar
4	Body dimensions (length * width * height)	1130mm*660mm*845mm
5	Body weight	205kg
6	Gasoline tank capacity	27L

2.3. Working Principle

The hydraulic power unit is driven by a diesel/gasoline engine to rotate a gear pump.

The gear pump draws oil from the oil tank and pressurizes it, converting mechanical energy into hydraulic oil pressure energy. The hydraulic oil is regulated in direction, pressure and flow through an integrated valve block, and then provides hydraulic power to various tools through external pipelines.

Chapter 3 operate

3. 1. Preparation before operation

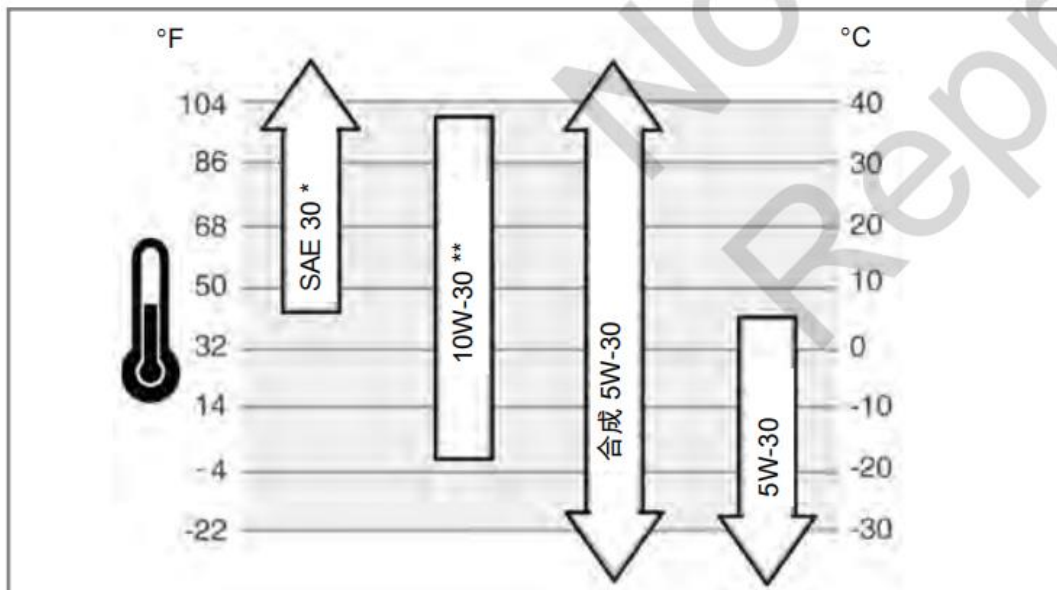
Do not operate or repair hydraulic tools until you have fully read and understood the performance characteristics of the equipment.

3. 1. 1. Engine crankcase oil level

Before each start, check the engine oil level. The engine oil level should be between the F and L marks on the dipstick, but not too full. We recommend using Briggs-certified oil for optimal performance. Other premium oils listed as SF, SG, SH, SJ, or higher are also acceptable. Never use special additives.

Outdoor temperature determines the appropriate viscosity of engine oil. Use Table 4 to select the optimal engine oil for different outdoor temperature ranges.

Table 4 Optimal Engine Oil for Different Temperature Ranges



* Below 40° F (4° C), using SAE30 will result in difficulty starting.

**Using 10W-30 above 80° F (27° C) will increase oil consumption. Please check the oil level frequently.

3. 1. 2. Engine fuel level

Check the engine oil level and add clean, non-deteriorated fuel. It is recommended to fill the fuel tank before each trip to use the hydraulic power station.

3. 1. 3. hydraulic oil

Check the hydraulic oil level and add hydraulic oil that meets the standards. The hydraulic oil viscosity must have a wide operating temperature range, allow moisture to separate and precipitate from the oil layer, and inhibit microbial growth. Hydraulic oils with other properties that meet or exceed these requirements also meet our usage requirements.

The following are some commonly used types of hydraulic oil.

3. 1. 4. Battery

The battery is DC 12V, maintenance-free, and fully charged.

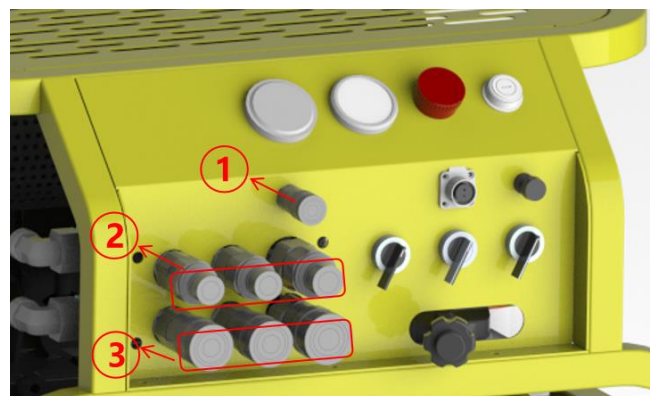
The cable must be tightly connected to the electrode and the connecting post.



When the battery is fully charged, the voltage should reach 12.8V-13.0V. Overcharging the battery will cause it to overheat and damage it. If using an automatic charger, please refer to the user manual.

3. 2. operate

3. 2. 1. Oil



pipe
connection

①卸油接口 ②出油接口 ③进油接口

It can provide two sets of 40 lpm hydraulic flow and one set of 80 lpm hydraulic flow. Connect the hydraulic hoses to the corresponding interfaces according to the hydraulic tools used.



The three flow control knobs on the control panel control the opening and closing status of the three quick connectors respectively.

3. 2. 2. start up



1. Before starting the engine, check the engine oil level and the hydraulic oil tank level.
2. Connect the oil pipes as required.
3. The steps to start the engine are as follows: ① Release the emergency stop switch; ② Gently pull out the choke handle (diesel engines do not have a choke); ③ Turn the ignition switch to ON, wait 3-5 seconds, pull the choke and hold it , while simultaneously turning the ignition switch to START; ④ Once the engine starts normally, immediately release the ignition switch (it will automatically turn to ON), and simultaneously push the choke back to its original position; ⑤ According to the quick connector of the oil pipe connection, open the corresponding control knob

switch. At this time, the power station outputs high-pressure hydraulic oil through the oil pipe. The amount of hydraulic oil output can be controlled by slowly increasing or decreasing the throttle.

3. 2. 3. Turn off the device

1. When stopping the machine, slowly move the throttle to idle speed, wait for 5 seconds, and then rotate the flow switch to the OFF position to cut off the pressure oil output .
2. Turn the key to the OFF position to turn off the engine.
3. Press the emergency stop button to cut off the power to the entire machine.



If the engine runs out of fuel or stalls during operation, leaving the starter switch in the ON or RUN position will cause the starter battery to continue discharging and damage it. Therefore, once the engine stalls, immediately turn the knob to the OFF position.

3. 2. 4. Winter Start

1. In winter, start the engine according to the starting procedure and continue with the following steps.
2. Hydraulic oil tends to be more viscous in winter, so run the engine at idle until the hydraulic oil temperature rises to 10° C.
3. If you feel that the hydraulic hoses and tools are also cold, wait until the oil temperature in the hoses rises before proceeding with normal operations.

Chapter 4 Maintenance

Perform routine maintenance on the equipment in accordance with this manual, the accompanying engine user manual, and other relevant technical manuals.

4. 1. Fuel system inspection and maintenance

1. The fuel supply system needs to be inspected annually, and any parts found to be leaking oil should be replaced immediately.
2. Inspect the oil pipes, oil tank, joints, etc. for leaks, cracks, etc., and replace any faulty parts.
3. The replacement parts must be identical to the original parts, and their installation direction must also be identical to that of the original parts.

4. 2. Hydraulic system maintenance

1. Check the hydraulic oil level daily and add hydraulic oil as recommended in this manual if necessary.
2. Drain all the oil from the hydraulic oil tank and store it in a clean container.
3. After storing the extracted oil for a period of time, carefully pour the settled oil slowly into the hydraulic oil tank, being careful not to pour in water.
4. Check the hydraulic hoses and joints daily for leaks.
5. Hydraulic oil filters need to be replaced every 200 hours of operation. Especially on days when dust and moisture can easily enter the oil, timely replacement is even more crucial.
6. Inspect the hydraulic oil cooler. Blow away any debris from its surface with compressed air.

4. 3. Storage

1. Before storing the product, wipe the surface of the equipment clean. Do not use a high-pressure water gun to clean the equipment.
2. The equipment must be stored in a clean, dry place.
3. Check the hydraulic oil tank for water. If water is present in the hydraulic oil, replace it with the type of hydraulic oil specified in this manual.