JKyeya®
Hydraulic tools

FB 204

Explosion-proof pump operation and maintenance manual

This manual includes the Jingke Hydraulic pump operating process、warnings、precautions and troubleshooting. Before use the pump, please read this manual carefully, thoroughly understand the content and keep it properly.

Safe Introduction

The safe use of hydraulic hydraulic pumps must be operated correctly and check regularly. Use this hydraulic pump after reading and understanding the safety instructions in this manual..

Precautions - prevent direct economic loss or property loss.

Warning - prevent personal injury.

In the process of use, in case of abnormal conditions, please turn off the power switch, pull out the power plug. Then please consult Jingke Hydraulic or its authorized agent.

Declaration: all product pictures are subject to change due to product improvement and upgrading without prior notice.

Warning!

1. When using this hydraulic pump, all personnel are prohibited from standing at the hydraulic oil outlet to prevent personal injury or property damage that may occur when the hydraulic oil is accidentally leaked; the hydraulic pump must be kept away from fire.

2. Before pressurizing, hoses and actuators or screw plugs should be installed to prevent high pressure hydraulic oil from rushing out and causing personal injury.

3. The maximum working pressure is 70MPa; The factory has set the pressure to 70MPa, and never adjust the pressure to exceed the set pressure.

4. If the hydraulic pump is used to operate other ancillary equipment, the working pressure of the supporting equipment should be less than 70MPa, and the pressure should be set to the working pressure of its supporting equipment, otherwise the supporting equipment may be damaged; The operation of adjusting the pressure valve please find the No.5.

5. Take full account of safety, please disconnect the power source before servicing.

6. Turn off the push button switch and turn on the hydraulic regulator before turning on the power source.

7. Make sure to ground and avoid electric shock.

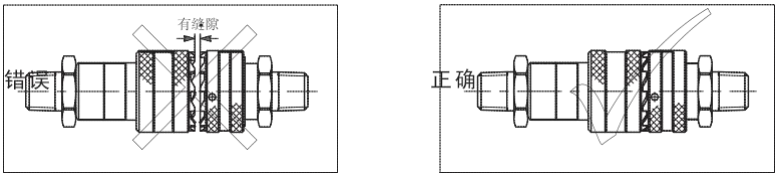
8. It is forbidden to start the hydraulic pump station without oil, which will cause equipment damage.

9.Do not modify the hydraulic pump. If you really need to modify it, you should first consult the authorized agent of Jingke Hydraulic. Without the written consent of Jingke Hydraulic, the modifications are not covered by the warranty.

10.Do not add hydraulic oil that exceeds the available oil. Otherwise, the hydraulic oil in the storage tank will overflow, causing environmental and equipment contamination.

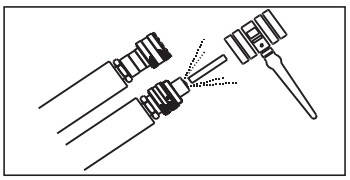
11.When the hydraulic pump station is working, the oil returning to the oil storage tank may overflow. If the fuel tank cap is opened at this time, it may cause equipment and environmental pollution.

12. When the quick connector is interconnected, it must be fully engaged (Fig. 1). Only in this way can the check valve in the connector be opened and the oil circuit can be opened. Otherwise, the check valve in the joint cannot be opened after the connection, causing the oil passage to be blocked. When the pressure is applied, there will be pressure at the pump station, and the wrench will not operate, and the automatic purging valve on the rotating body of the wrench will open and start to squish. This can result in quick connectors, wrench damage, and even personal injury.



False (Fig. 1) Correct

At this point, the hydraulic pump power source must be cut off, all hose connections must be removed, and all the quick connectors (including the wrench joints) should be inspected.Whether the valve can be pressed by hand or elastic. If you can't press it, you need to hit the check valve in the joint with a hammer (Fig. 2), and release the pressure in the joint (the hydraulic oil will be sprayed when the check valve is hit. Although there is no danger, you should be careful to splash the hydraulic oil on your body and stain your clothes), until you can press the steel ball in the joint by hand and reconnect.



(Fig. 2)

13. The hydraulic pump station must be kept clean, especially at the oil outlets, quick connectors, etc. The uncleaning of the hydraulic oil is the main cause of the hydraulic pump failure.

14. Keep away from areas where ultra-high pressure hydraulic oil may overflow; hydraulic oil may penetrate your hands and cause serious injury.

15. If hydraulic oil is sprayed into your eyes, rinse immediately with clean water for approximately 15 minutes, then go to the hospital to clean your eyes.

16. Do not touch the hose with pressure; if the hydraulic oil is sprayed, it can cause serious injury. Hydraulic hoses are consumable parts. There is no problem with visual inspection. There may also be cracks and pinholes inside. The hose should be replaced regularly in consideration of service conditions, and sharp bends should be avoided during use.

1.Overview

1.1 FB204 is a special pump for hydraulic wrench. It is assembled in an integrated manner. It is an independent and complete hydraulic device consisting of power unit, electric unit and control device. It has large flow, small size, light weight, simple structure, convenient operation and work. High pressure and high pressure outlet (A port) oil pressure can be adjusted between 70~700bar.

1.2 Hydraulic oil used in hydraulic hydraulic pump: 32# wear-resistant hydraulic oil. Hydraulic fluids containing water and corrosive media containing steel or aluminum are strictly prohibited.

1.3 Ambient temperature of hydraulic hydraulic pump: -10~60 °C (If you replace low temperature hydraulic oil, you can use it at -30 °C low temperature).

1.4 Hydraulic hydraulic pump is connected to the actuator through high-pressure hose and high-pressure joint. For work safety, please use Jingke Hydraulic high-pressure hose and high-pressure joint. The maximum working pressure of the high pressure hose used in JKyeya hydraulic pump is 70MPa. Please use the pressure system matched with it.

1.5 If you need to use the attached hydraulic products for this pump, please consult Jingke Hydraulic engineers.

1.6 Do not use hydraulic hydraulic pumps near the flame.

1.7 The maximum working pressure of hydraulic pump is 70MPa. Please do not adjust the pressure regulating valve arbitrarily during use to avoid equipment damage and personal injury caused by ultra high pressure. (If you have special requirements, please consult Jingke Hydraulic engineers.)

1.8 Please confirm that the voltage of the Jingke Hydraulic pump matches the voltage used in the field.

1.9 Please use this pump indoors as much as possible. Rainproof measures must be taken for outdoor use.

2. Component Overview

2.1 Storage tank store: The working hydraulic oil need to ensure the normal operation of the system (must have sufficient oil) to provide the pressure carrier required by the system. Pressure regulating valve (relieving valve): Adjusting this valve can set the working pressure of the hydraulic pump(The maximum working pressure is locked at the factory, and the locking pressure is prohibited from being raised).

2.2 Pressure gauge: shows the working pressure of the hydraulic pump, the range is 100 Mpa.

2.3 Oil pump protection frame: installed on the oil storage tank for carrying and protecting the hydraulic pump station.

2.4 Motor: Provide power source (select the appropriate motor according to the voltage and frequency of the place of use. For specific parameters, see the motor nameplate.

2.5 Level gauge: Observe the amount of hydraulic oil to ensure the best use of oil; when the hydraulic oil is lower than the 1/3 position of the oil mark, the hydraulic oil must be added, otherwise the pump station may be damage.

2.6 Unloading hole: screw plug G1/4", the hydraulic oil is discharged from the oil storage tank (used when replacing hydraulic oil).

2.7 Electronic control system: The electrical control part of the hydraulic pump realizes the control of starting the pressure, high and low pressure switching and stopping pressure of the hydraulic pump.

2.8 Fuel tank cap: seal the fuel tank and install hydraulic pump parts.
2.9 Directional valve: It realizes the commutation function of high and low pressure hydraulic oil output and oil return.

2.10 Quick joint: realizes hydraulic oil output and oil return function, and quickly connects the oil pipe; it has a built-in check valve, and the screw sleeve of the convex and concave joint is tightened. After the tooth is stuck, the threaded sleeve is not loosened during the step-up, step-down, and pulsation, and has a anti-loose function.

2.11 Valve group: Connect various hydraulic control valves in the hydraulic system to realize hydraulic oil output and oil return control to ensure the system works normally under the set pressure.

2.12 Ventilation oil hole: the passage of the oil tank for ventilation and injection of hydraulic oi.

3.Main technical parameters

Project / Model	EMP204
Pressure MPa	70
Flow L/min	6 / 1.1
Oil Tank L	4.5
Power kW	1.5
Power Supply	220V/50Hz
Reversing Mode	Solenoid Reversal
Size cm	56×37×64
Weight kg	75

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4.Characteristic

4.1 FB204 is a three-phase asynchronous motor with EXd II BT4, which is safe and suitable for explosion-proof applications. The electric control system adopts EXd II BT4 type explosion-proof magnetic starter, which is safe and explosion-proof.

4.2 External pressure regulating valve, the pressure is continuously adjustable between 7-70Mpa.

4.3 Flow rate: 6L/min at low pressure and 0.8L/min at high pressure.

4.4 Motor: See the motor nameplate for parameters.

4.5 Hydraulic oil temperature during normal operation: 40~70°C (use low temperature hydraulic oil when the ambient temperature is lower than -10°C).

4.6 Hydraulic oil: 32# wear-resistant hydraulic oil.

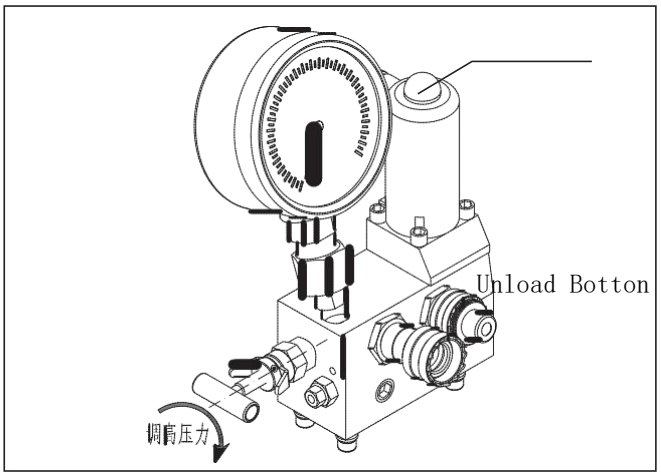
5.Method of operation

Fill the pump station with L-HM46# or L-HM32# hydraulic oil; if no hydraulic oil is applied, the pump station will suck in the air and produce no pressure.

5 . 1 preparation

5.1.1 Connect the high pressure outlet (port A) of the pump to the high pressure outlet (port A) of the hydraulic wrench, the low pressure outlet (port B) of the pump and the low pressure outlet (R port) of the hydraulic wrench with high pressure hose. The quick coupling on the hose when connecting should be inserted into the bottom and then tighten the fixing nut by hand.

5.1.2 Loosen the high pressure regulating valve.



5.2 Adjusting pressure

5.2.1 Turn on the power, press the start button of the electric control box, the motor runs, and press the [ON] button on the operation handle to make the pump work. At this time, the outlet of the pump station B outputs low pressure.

5.2.2 Press and hold the green button on the operating handle and adjust the high pressure regulating valve on the pump until the pump pressure gauge pointer points to the desired pressure and release the green button.

5 . 3 Use

5.3.1 Press and hold the green button on the operating handle. At this point, the pump station outputs high voltage and the wrench works. Release the green button on the operating handle. The pump station B outlet outputs low voltage and the wrench resets. Press the red button of the electric control box. The pump station stopped working.

5.3.2 After the operation, remove the high-pressure hose and screw the dust cap separately. Disconnect the power

Note: During the initial work or after maintenance, the motor should be jogged several times. After the high pressure pump is exhausted, the oil can be put into normal operation after the oil is normal!

6. Maintenance& Inspection

6. 1 Inspection items before use

6.11 Turn off the power supply and check if the power cable is loose or poorly connected. If it is found that the power wiring is loose, tighten the loose parts.

6.12 Check that the motor is grounded and the motor must be reliably grounded.

6.13 Check if the working voltage of the hydraulic hydraulic pump matches the voltage used in the field and whether the voltage is stable.

6.14 Check if the oil quantity of the hydraulic oil reaches the specified value. If it is insufficient, please add it in time.

6.15 When the direction control valve is switched, the tool is working and pressurized.

6.16 Check the piping and equipment for oil leakage. If such a phenomenon occurs, please find out the cause and dispose of it.

6. 2 Check items during operation. If any abnormal conditions are found in the following items, stop the machine immediately.

6.21 Is there any abnormality during the boosting process?

6.22 Whether the piping and equipment are leaking.

6.23 Does the motor have abnormal noise, vibration and odor during operation.

6.24 Is the hydraulic oil too hot?

6. 3 Inspection and maintenance after operation

6.31 The power must be turned off.

6.32 Check for oil leaks or other abnormal conditions. If an abnormal situation occurs, find out the cause and handle it.

6.33 Please clean after use and close the dust cap to the quick connector.

6. 4 Hydraulic oil should be replaced once a year in principle. If any of the following conditions are found, please replace it immediately.

6.41 When dust enters.

6.42 When there is an odor.

6.43 When water enters, the oil is milky white.

6.44 When the oil deteriorates to appear dark brown.

6.45 The pressure fluctuation range is abnormal.

6.5 Hydraulic oil replacement method

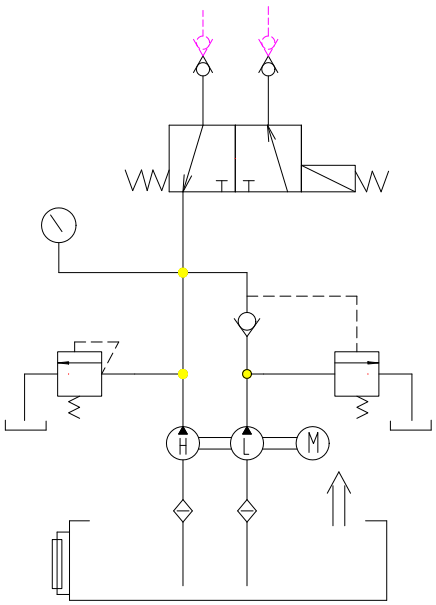
6.51 Open the venting filler plug on the hydraulic pump.

6.52 Remove the screw on the side of the tank.

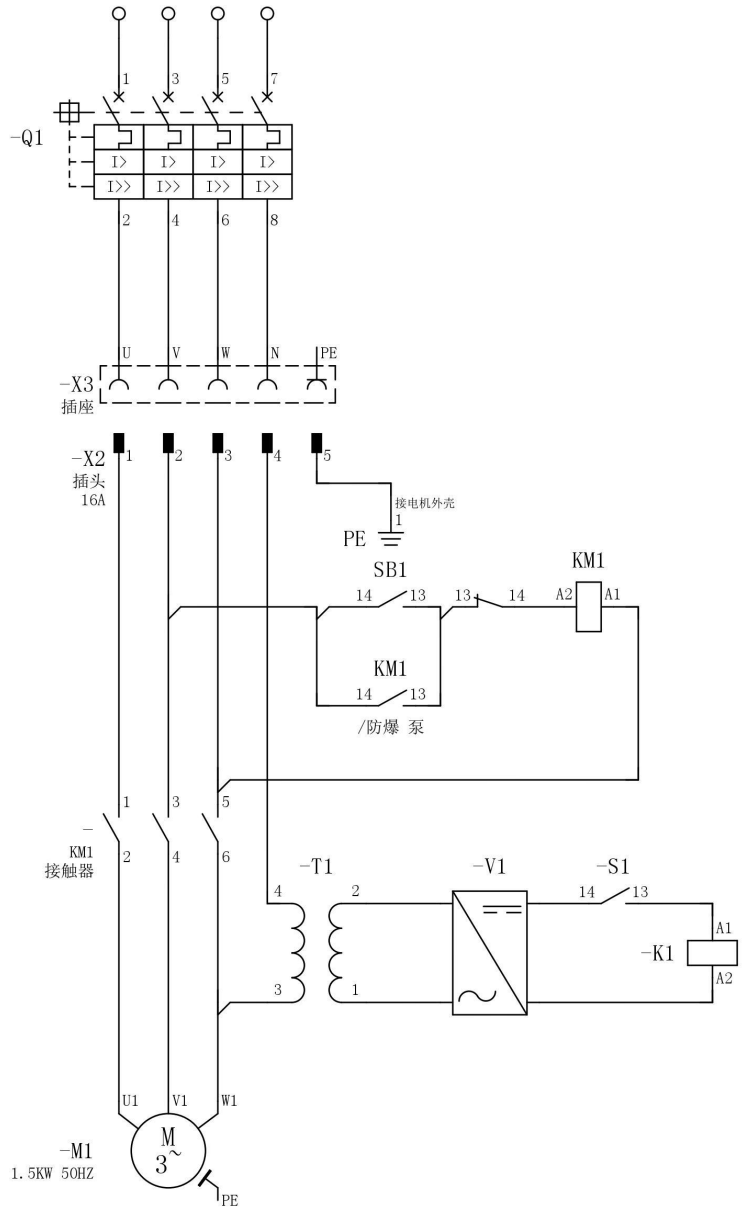
6.53 Clean the inside of the tank.

6.54 Install the oil drain screw and inject the oil into the fuel tank and close the oil filler plug.

7.Hydraulic Schematic



8、Electrical Schematic



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