AMGO® Hydraulics

Power Unit Manual

C ETL LISTED US
Intertek
5013694

MODEL: 071204

Note: Please make sure to read and understand entire contents of this manual before operating the equipment.Failure to comply with instructions may result in equipment damage.Conduct routine maintenance in accordance with the manual.Please retain this manual for instruction reference.

INTRODUCTION

In order to operate this product safely and effectively, this manual describes the precautions, maintenance, adjustment methods, schematics and dimensions in the application process. The operators who install, operate and maintain this power unit must acquire certain basic knowledge of hydraulic.

This product is used for car lift and motorcycle lift. Please read this manual and other related instruction carefully before use. Make sure that the operator fully understands the correct method.

The company reserves the right to modify this manual. As the product is updated, any changes to the content will not be notified separately. Thank you for your understanding. If necessary, please contact the product manufacturer to update the manual.

WARRANTY

The warranty period for hydraulic components is 3 years, electrical components and other components are warranty for 2 year. During the warranty period, the company will provide free warranty parts for replacement.

This warranty does not cover damage caused by normal wear and tear, improper use, damage in transit, or damage caused by lack of maintenance.

CONTENTS

I.PRODUCT DESCRIPTION

These power units are mainly used for car lifts, hydraulic forklifts, straddle carrier, and scissor lifts,have passed the inspection and obtained the ETL certification.

1.Adopting a high pressure gear pump with a displacement 2.1cc/r, the highest pressure up to 25MPa;
2. Plug-in design high-pressure relief valve, with a relief pressure set at 25MPa;
3. Electromagnetic release valve control descent;
4. Adjustable reflux speed by throttle valve;
5. Longevity & easy maintenance;
6. Oil outlet is provided on both sides, dual hydraulic system;
7. 24L Iron oil tank

II. SPECIFICATION

Part No.	Voltage	Frequency	Power	Pressure	Displacement	Tank	Oil Outlet
071204	220V Single Phase	60Hz	2.0HP	25MPa	2.1cc/r	24L	3/8SAE

III.PACKING AND DIMENSION

1.Product packaging instruction

Protect the motor with foam, fix the whole power unit on the bottom cardboard with packing belt, and seal the outer box with packaging tape.

2.Dimension

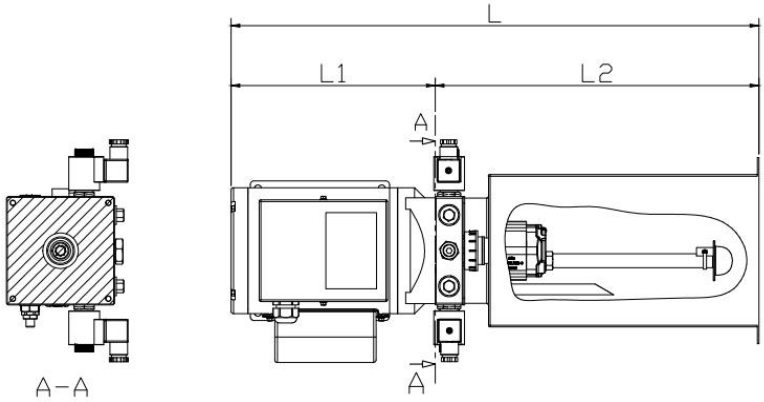


Fig.1

Part No.	L	L1 (mm)	L2 (mm)
071204	25 9/16"	9 5/16"	16 5/16"

IV.HYDRAULIC SCHEMATIC DIAGRAM

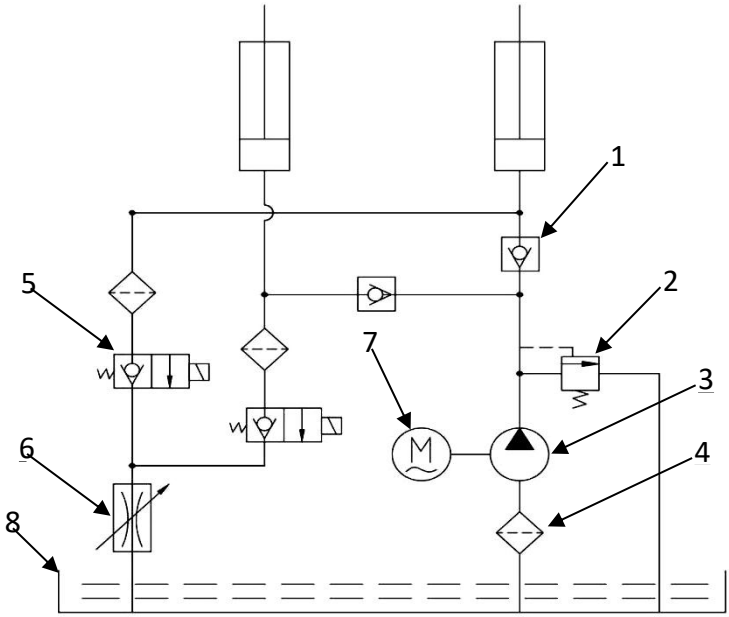
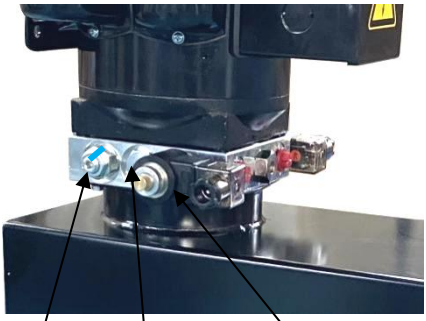


Fig.2

Item	Description
1	Check valve
2	Relief valve
3	Gear pump
4	Filter
5	Electromagnetic release valve
6	Throttle valve
7	Motor
8	Oil tank

V .CONTROL METHOD

1. Hydraulic valve for power unit



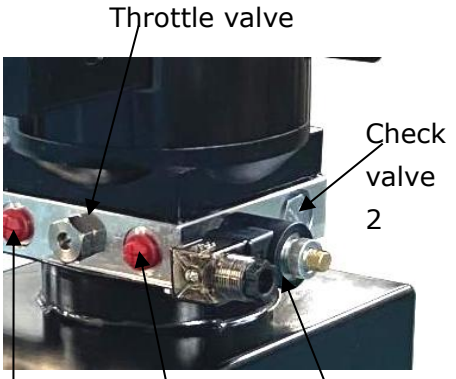


Fig.3

2. Pressure adjustment

The hydraulic system pressure of this product has been set at the factory, and there is a marker line for identification, users do not need to re-adjust under normal circumstances. If it is necessary to adjust, it can be operated in the following way.

Loosen the lock nut first, and rotate the screw clockwise with the allen wrench to increase the pressure. Conversely, rotate the screw counterclockwise to reduce the pressure. It is recommended to check the system pressure after each rotation of 15 degrees, and then gradually adjust the system pressure in the same way. Finally lock the nut after adjustment.

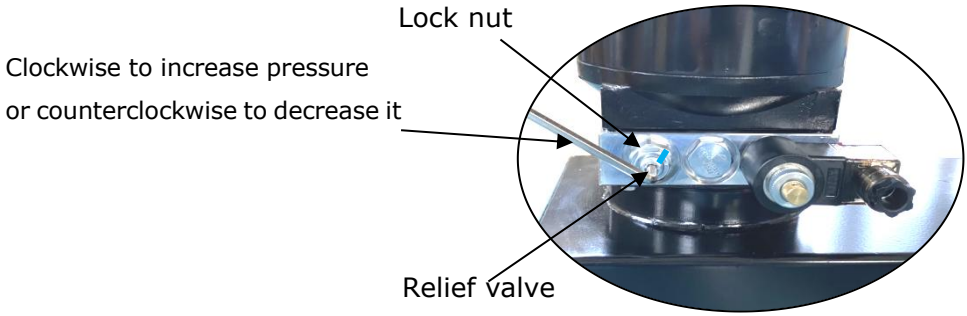
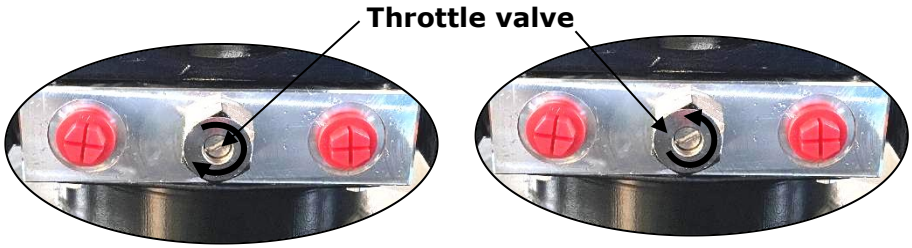


Fig.4

3.Adjustment of descent speed

Rotate the throttle valve with a flat-head screwdriver: clockwise for slow down the descent speed, counterclockwise for speed up the descent speed. It is recommended to each rotation with 15 degrees.



Clockwise to slow down the descent speed

Counterclockwise for speed up the descent speed

Fig.5

VI.WIRING INSTRUCTIONS

Connect the power supply according to the circuit diagram and the motor nameplate requirements.

Note: To ensure the safety of the operator, the circuit must be well grounded. The wires diameter of the single-phase motor must be larger than 12AWG

⚠ DANGER The motor must be grounded in accordance with local and national electrical regulations to prevent severe electric shocks.

VII. IMPROTANT INSTRUCTIONS

1. Warning Note:

● Read and clarify all safety warning procedures before operating the equipment.

● Keep your hands dry before operating the equipment to avoid electric shock.

● Check the parts frequently. If the parts are damaged, do not operate the equipment.

● When the power unit is in operation or in the pressure holding state, please do not disassemble any hydraulic components, otherwise the high-pressure hydraulic oil will splash out and hurt people. The hydraulic components are not allowed to be disassembled before the pressure relief of the power unit.

● Do not frequently turn on or start the power unit during operation. After stopped motor working, there must be interval a 5-second before restarting at least, otherwise it may cause the motor to burn out.

●This power unit need to be operated by intermittently and periodically, and cannot run continuously. It is required that the motor run continuously for 1 minute before stopping for 9 minutes, otherwise it may cause damage to the motor due to temperature rise.

2. Environmental instructions

● There has generate arc light and sparks components inside the motor. Do not be exposed to flammable and explosive gases, there is a risk of explosion.

● Do not install the power unit outdoors to avoid rainwater getting wet and causing electrical leakage.

● Avoid the power unit to work under severe vibration or electromagnetic interference.

● Operating temperature :-25℃~ 60℃ .

3. Working conditions

● The power supply voltage during the operation of the power unit is not lower than 85% of the voltage and not higher than 115% which are marked on the nameplate.

● Insulation level: adopts B class insulation structure, the maximum allowable temperature of insulation material is 130℃ .

● Protection level: IP44

4.Hydraulic oil

● The correct selection and regular inspection and maintenance of hydraulic oil are important to prolong the service life of the hydraulic system. The role of hydraulic oil is to transfer energy from the gear pump to the executive components.

● It is recommended to use L-HM46 anti-wear hydraulic oil, the viscosity of hydraulic oil should be 15-46 centistokes. Do not use automotive engine oil in hydraulic system. Recommend to use L-HM32 anti-wear hydraulic oil at low temperatures

5.Maintenance hydraulic oil

● When running the hydraulic system at the first time, check the oil to ensure enough.

● The hydraulic system should be kept clean and pollution-free.

● After the equipment completely descent, the oil level should be between the highest oil level and the lowest oil level required by the tank. The temperature of the tank during normal operation should not exceed 60℃, otherwise it needs to be cooled.

● When replacing hydraulic oil, the oil hose and oil tank of the hydraulic system must be thoroughly cleaned.

● The hydraulic oil should be replaced after 3 months by the first operation of the system, and the inlet hose filter and the oil tank should be cleaned. Replace the hydraulic oil once a year.

6.Maintenance power unit

The service life of the hydraulic system may be affected by many factors, such as natural environment, human factors or the life of the hydraulic components of the system, and regular maintenance will reduce the probability of failure.

Maintenance

● Before operate maintaining power unit, ensure that the power supply to the equipment is disconnected as well as the equipment has been fully descended on ground.

● Regarding replacement wires, hydraulic hoses, or hydraulic components, make sure that component is the same specification as the original component.

● Before removing the hydraulic hose or the hydraulic valve, make sure the hydraulic system has been decompressed fully.

● Equipment and surrounding environment should be cleaned and kept dry frequently.

Daily inspection

● The operating equipment runs a cycle to ensure that the hydraulic station can maintain pressure and relieve pressure normally.

● Pay attention to whether there is abnormal noise during operation.

● Check the motor temperature regularly to ensure that the temperature of the motor is not higher than the normal temperature (-25℃-60℃).

● Check whether the hydraulic hose has cracks, wear and oil leakage, if so, please replace it in time

Monthly inspection

● Check the insulation layer of the power cord for cracks, wear and cuts,and replace it promptly if necessary.

● Check the hygiene status of the oil filter and the oil tank. If the cleanliness is poor, please replace the hydraulic oil or clean the hydraulic system in time.

● Check the oil capacity, when the equipment stays in the lowest position, the oil capacity height shall not be lower than the lowest oil level, if necessary, the hydraulic oil must be added in time.

VIII.EXPLOSIVE VIEW AND PART LIST

1. Explosive view

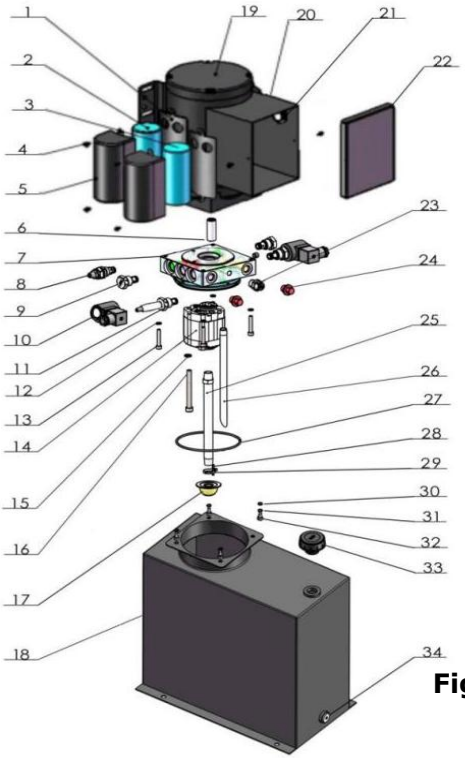


Fig.6

Item	Part No.	Description	Specification	Qty.
1	81400180	Rubber pad		2
2	81400250	Start capacitor	300UF/250VAC	1
3	81400200	Running capacitor	80UF/450VAC	1
4	1061K052	Round head bolt with flat washer	M4*8	6
5	81400527	Capacitor cover		2
6	81400363	Motor connecting shaft	L=53mm	1
7	80101027-02	Manifold block	YLK007-02	1

Item	Part No.	Description	Specification	Qty
8	81400266	Relief valve	LRV-08-36 (DARV-08T-36/0220)	1
9	81400566	Check valve	DCV-080-PB-N	2
10	81400420	Solenoid Valve Coil	24VAC (DAH-17-002)	2
11	81400423	Electromagnetic release valve	LSV2-08-2NCP-M	2
12	10209149	Lock washer	Φ6	4
13	85090142	Socket bolt	M6*35	4
14	81400280	Gear pump	2.1cc/r	1
15	10209034	Lock washer	Φ8	2
16	81400295	Socket bolt	M8*80(8.8 classic)	2
17	81400290	Filter	Φ47 80 Z3/8	1
18	81400328	Oil tank	24L	1
19	80101043	Motor	220V/60Hz single phase	1
20	80101036	Motor terminal box		1
21	10420088A	Wire connector	M20*1.5	1
22	80101038	Cover of motor terminal box		1
23	81400560-01	Throttle valve	AMGO-JL-02	1
24	81400259	Red plastic plug	9/16UNF-18	2
25	81400380	Oil-suction hose	L=10 1/16"	1
26	81400376	Oil-return hose	L=6 11/16"	1
27	81400365	O ring	Φ112*3.55(70°)	1
28	10209152	Tie	3*150	1
29	85090167	Magnet	Φ20*Φ5*5	1
30	10420152	Flat washer	Φ5	4
31	10209143	Spring washer	Φ5	4
32	81400438	Hex bolt	M5*10	4
33	80101040	Oil tank cover		1
34	81400276	Socket iron plug	G3/8-19 with o ring	1

IX.TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Motor runs,the cylinder does not run or runs slowly	1.Low oil level	1.Fill tank
	2.The inlet oil hose is damaged	2.Replace
	3.The coupling is damaged	3.Replace
	4.The inlet hose filter is blocked	4.Clean or replace the inlet hose filter
	5.The relief valve is blocked	5.Clean or replace the relief valve
	6.The pressure of relief valve is low	6.Set the relief valve pressure higher
	7.Gear pump damaged	7.Replace
	8.Cylinder damaged	8.Repair and replace the cylinder
	9.The temperature of hydraulic oil in the tank exceeds the operating temperature	9.Stop working until the temperature of hydraulic oil in the tank returns to normal temperature
When unloading, the cylinder descends slowly or does not descend	1.The release valve spool is stuck with impurities	1.Clean or replace release valve
	2.Throttle valve is not adjusted properly	2.Counterclockwise adjustment increases the lower speed
	3.Solenoid Valve Coil failure	3.Replace

TROUBLE	CAUSE	REMEDY
After raising,the hydraulic system does stay up.	1.The check valve is stuck	1.Clean or replace the check valve
	2.The release valve is stuck	2.Clean or replace the release valve
	3.The fitting of oil hose is not tightened or the seal is damaged	3.Check and tighten the fitting or replace the seal.
	4.The hydraulic oil has deteriorated or become contaminated.	4.Replace the hydraulic oil and clean the inlet filter and tank
The motor starts abnormally with load	1.Low voltage	1.Use voltage stabilizer
	2.The wire diameter is too thin	2.Choose thicker wires
	3.Start capacitor damaged	3.Replace
The sound of power unit is abnormal	1.Motor burned out	1.Replace
	2.Low oil level	2.Fill tank
	3.Overload lifting	3.Relieve the loading
	4.Relief valve leakage	4.Crank up the pressure
	5.The inlet hose filter is blocked	5.Clean the inlet hose filter
	6.Gear pump out of operation	6.Replace
	7.Relief valve broken	7.Replace relief valve
Press the button and the motor does not run	1.Circuit failure	1.Check or replace the wires
	2.Motor burned out	2.Replace

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