



巨輪興股份有限公司

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電動液壓泵浦-油壓缸專用 操作手冊

SPE-554TQJ



中文 : C1~C7

中文
English
Ver. 16

1. 安全預防措施



不遵守以下的注意事項和警告將引起設備損失及人員傷害。



重要事項：未滿18歲人員不得擅自操作。操作SUN RUN油壓設備前請先仔細閱讀並了解相關操作手冊、安全事項和警告事項。操作人員負有油壓設備週邊之人員及環境之安全責任。



警告事項：為確保避免人員傷害和設備作業損失，請確認所有油壓設備及週邊配件，使用最大壓力為 **700 bar(10,000psi)**。



警告事項：操作人員於使用期間為避免傷害，需全程配戴安全防護措施。



警告事項：不得使用油壓設備作為支撐重物使用。當液(油)壓缸作為負載頂昇設備時，僅可頂昇，不可用來支撐重物使用。當完成頂升作用後，需使用機械性工具來固定支撐。



警告事項：必須使用硬性物體來支撐重物。慎選能承受重物的鋼鐵或木塊來支撐荷載。不要在頂升或持壓使用中將液(油)壓缸當做墊塊使用。



危險事項：為避免人員傷害，請於操作過程中手、腳遠離液(油)油壓缸和液壓設備。



警告事項：禁止超載使用。超載使用易造成設備損害及人員損傷。液(油)壓缸設計最大使用壓力為 **700 bar(10,000psi)**。



危險事項：千萬不可將溢流(安全)閥的壓力值設定高於泵浦的額定壓力。超載的壓力值可能引起設備損壞及人員損傷。尤其千萬不可拆除溢流(安全)閥。



警告事項：系統操作壓力絕不可超過最低壓力元件之值最低值。系統中應加裝壓力錶藉以監測系統中的壓力並了解使用狀態。



警告事項：避免損壞油壓管。捲收油管時，避免油管強烈彎曲或打結。使用彎曲或打結油管易引起背壓。強烈彎曲或打結的油管亦易引起內部損壞或提早油管老化。



千萬不要重壓油管。劇烈的撞擊會造成油管內鋼絲網損壞。使用受損的油管可能導致油管破裂。



重要事項：千萬不要利用油管來提攜其他油壓設備(例如:小型油壓缸、泵浦..等)。



危險事項：液(油)壓設備應遠離火或熱源。高溫會軟化包裝和密封材料，導致液壓油洩漏；高溫同時也會造成油管材質與包裝變質。為確保最好狀態，不要將液(油)壓設備暴露於 **65°C(150°F)** 高溫。在電焊場所時亦應注意防止電焊火花噴到油管。



危險事項：不要用手對油管施加壓力(包括拉或舉高) 高壓下洩漏的液壓油會穿透皮膚造成嚴重傷害。當液壓油侵入皮膚請立即就診。

1. 安全預防措施



警告事項：液(油)壓缸只能在已連接好的液壓油路中使用；快速接頭尚未確實連接時禁止使用或加壓，否則高壓情況下接頭的油封及鋼珠會高速噴出造成人員傷亡。



警告事項：頂昇荷載前，請確保油壓裝置平穩。油壓缸必須放在平穩可支撐重物的基座上。若情況許可，可使用油壓缸基座來增加穩定性。千萬不可使用焊接或其他方法將油壓缸與所使用的基礎面(支撐座)連接一起。



避免荷載不直接作用在油壓缸的主軸中心上。偏心荷載易導致油壓缸和主軸受損。此外，重物亦可能因傾斜而滑落，引發潛在危險。



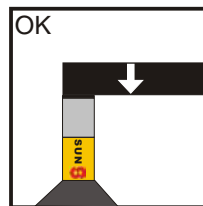
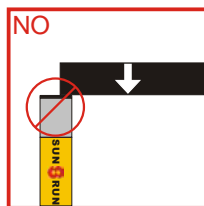
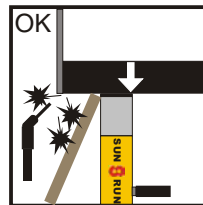
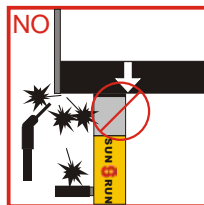
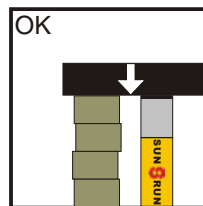
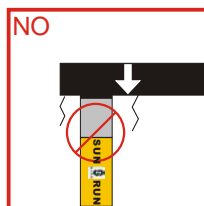
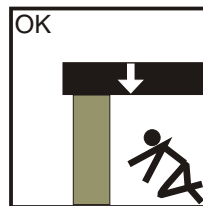
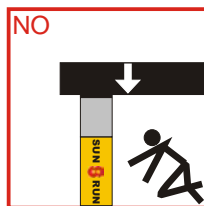
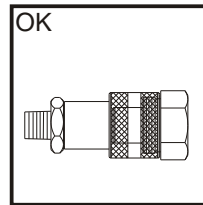
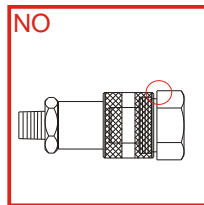
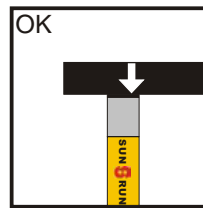
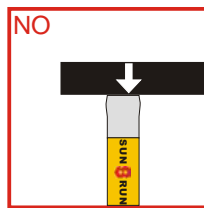
將荷載平均的分布在墊塊表面。傾斜墊塊可消除偏荷載。當無使用螺牙連接其他附件時，一定要使用墊塊以保護主軸。



警告事項：當零件出現裂痕或損壞時，應立即以**SUN RUN**零件更換。正確標準的零件可防止人員或設備損傷。**SUN RUN**零件經特別設計可完全適用並適用產品標稱的額定荷載或壓力。



重要事項：液壓設備必需由合格的液壓技工進行維修。需要修理時，請連繫就近的**SUN RUN**服務據點並使用**SUN RUN**液壓油保固方為有效。



2.規範

電泵型號選擇：Custom build your Electric Pump:

SPE-554TQJ 1 5 1 8 4 WO

0 1 2 3 4 5 6

- 0.樣式
TQ=扭力扳手專用
TQJ=一般舉升適用

1.電壓
1=115V
2=230V

2.Hz
5=50Hz / 60Hz

3.相數
1=1ph

4.油箱 (Lx0.26=gal)
8=8L(2.1gal)
20=20L(5.2gal)
★亦可依客戶訂製

5.閥 (僅限TQJ型使用)
3=手動三口方向閥
4=手動四口方向閥
7=三口逆止式電磁閥
8=四口逆止式電磁閥

6.選配
W=輪子
O=冷卻系統
G=油壓錶
- 0.Type
TQ= just use in Torque Wrench
TQJ= using in lift applications

1.Voltage
1=115V
2=230V

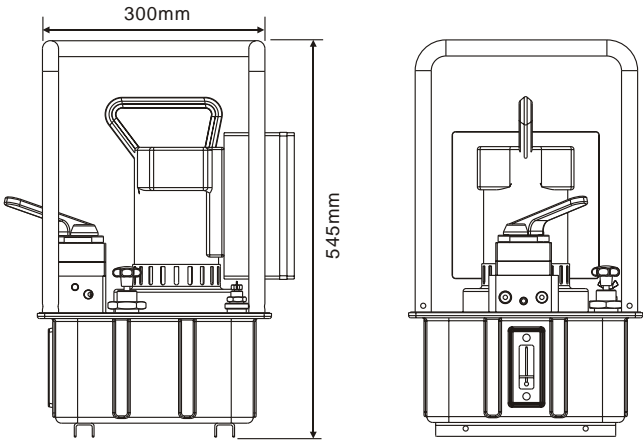
2.Hz
5=50Hz / 60Hz

3.Phase
1=1ph

4.Reservoir (Lx0.26=gal)
8=8L(2.1gal)
20=20L(5.2gal)
★User can order suitable reservoir.

5.Valve (just use in TQJ series)
3=Manual 3Way
4=Manual 4Way
7=Check Solenoid 3Way
8=Check Solenoid 4Way

6.Optional
W=Castor wheel
O=Cool system
G=Pressure Gauge



Model Number	Rpm	DBa at Idle and 700bar 噪音值	Hp	Amp at 700bar	Flow rate @ 115VAC(L/min)				Oil tank	Usable oil	Weight (with oil)
型 號	轉速		馬力	安培	流量				油箱	可用油量	重量 (含油)
					0 (bar)	50 (bar)	350 (bar)	700 (bar)			
SPE-554	12000	80	1-1/8	25 /110V	11.3	7.1	1.2	0.9	8	7	32
				13 /230V							

3. 安裝說明

3.1 泵浦連接

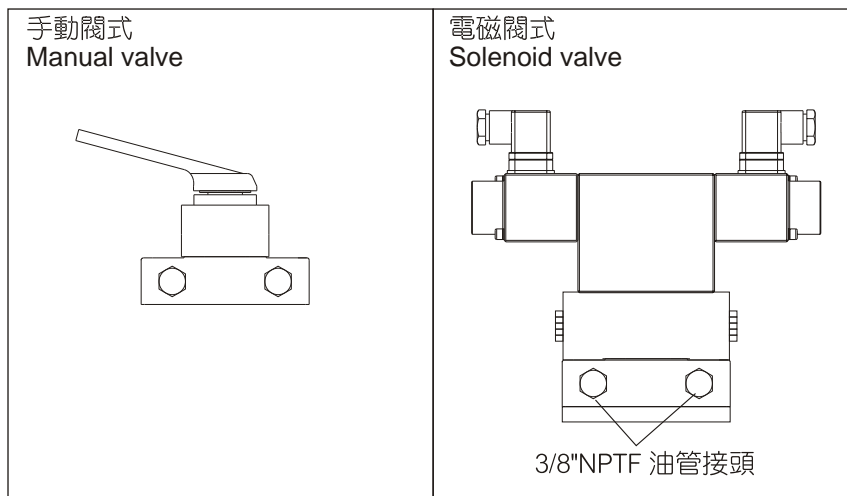
先將油管接上泵浦出油口。使用一圈半的鐵弗龍帶(或其他螺紋密封材質)纏在油管接頭上。螺紋第一圈不可被密封帶遮住，避免密封帶脫落流入液壓系統引發危害，修剪鬆散的密封帶尾端。

警告

為確保正確操作泵浦，應避免過份彎折或鎖太緊的油管。倘若發現油管出現過份彎折或其他危害應立刻汰換。已損害的油管容易在高壓時破裂造成人員傷亡。

3.2 標準安裝

將油管3/8-18NPTF接頭鎖油管接口。



3.3 規格確認



4.操作事項

注意: 為避免電力和馬達之間消耗無謂的動(電)力，應儘量縮短電線(延長線)的使用長度。
馬達低伏特運轉時馬達速度和油流量也會相對減少。

- 1.首先先確認系統內是否所有接頭皆已正確且牢固連接，無洩露。
- 2.檢查液壓油是否足夠，必要時請加入液壓油。
- 3.將泵浦前方的加油/通氣塞打開(如標示所示)旋轉1~2圈。

警告

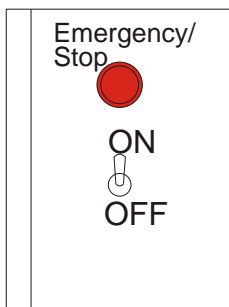
泵浦動作時通氣口需隨時保持打開通氣狀態。



加油/ 通氣塞標示

4.1 電源開關

請先檢查電壓為 110V 或 220V 。電源線最適長度為 50呎(1.5M)。
將啟動 / 停止桿推向"ON"方向；關閉電源則推向 OFF 。

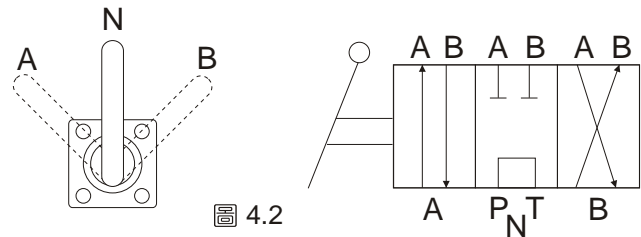


4.操作事項

4.2 手動控制閥 (圖4.2)

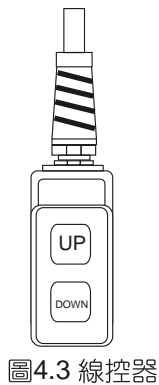
四口手控閥用來設計操作雙動或單動液壓缸

- 1.下列為四口手控閥的各位位置功能：
(A) 流向孔 "A"; 則孔 "B" 為回油流向油箱。
(B) 流向孔 "B" 則孔 "A" 為回油流向油箱。
- 2.操作過程中決不可扳向N位置。



4.3 線控操作 (圖4.3)

- 1.持續按下遙控器"UP"鍵，則油壓工具持續向前動作
- 2.放鬆按鈕則油壓中斷呈持壓狀態
- 3.按下"DOWN"鍵，則油壓工具回縮；油壓洩壓



	前進&持壓 Advance & Hold		回縮&持壓 or 洩壓 Retract & Hold or Release	
	手動時持壓 Manual Hold	電動時持壓 Electric Hold	手動時持壓/ 洩壓 Manual Hold/ Release	電動時持壓/ 洩壓 Electric Hold/ Release
 單動油缸 S/A Cyl.				
 雙動油缸 D/A Cyl.				

4.4 調壓 (圖4.4)

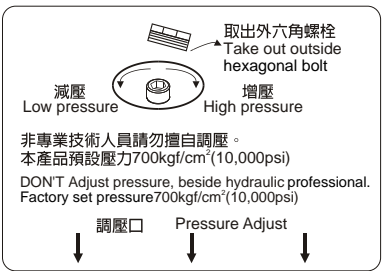


圖4.4 調壓閥標示

5.疑難排除

問題	原因 / 解決方法
馬達無法啟動	先確認電源線是否正確。確認斷路器運行迴路是否正常。檢查所有線路是否正常。確認馬達電容器是否正常。確認電源是否相符，延長線的使用是否荷載。
操作時有雜音	1.系統內有空氣 2.檢查液壓油是否超過正常液面 3.檢查所有空氣可能進入的接觸點
泵浦內的液壓油過熱	1.液壓油黏性過高 2.檢查上壓板在高壓時的洩漏量。 (軸心有洩漏) 3.液面太低。將液壓油加到正常液面或是更換較大的油桶滿足使用油量。
泵浦在運轉但無法輸出液壓油	1.泵浦不是第一次使用。暖機幾分鐘後，然後稍微左右搖晃一下。 2.確認外部調壓閥是否正確，再確認內部釋放閥是否正常。 3.O型環損壞。請尋找就近的油壓服務中心維修。 4.控制閥損壞 (逐步檢修)。



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OPERATING INSTRUCTIONS

HYDRAULIC ELECTRIC PUMP

SPE-554TQJ



English : E1~E7

中文
English
Ver. 16

1. SAFETY PRECAUTIONS



Fail to comply with the following cautions and warnings could cause equipment damage and personal injury.



IMPORTANT : Minimum age of the operator must be 18 years The operator must have read and understood all instructions, safety issues, cautions and warnings before starting to operate the SUN RUN equipment. The operator is responsible for this activity towards other persons.



WARNING : To avoid personal injury and possible equipment damage, make sure all hydraulic components withstand the maximum pressure of 700 bar(10,000psi).



WARNING: Always wear safety glasses. The operator must take precaution against injury due to failure the tool or workpiece.



WARNING: Stay clear of loads supported by hydraulics. A cylinder, when used as a load lifting device, should never be used as a load holding device. After the load has been raised or lowered, it must always be blocked mechanically.



WARNING: USE ONLY RIGID PIECES TO HOLD LOAD. Carefully select steel or wood blocks that are capable of supporting the load. Never use a hydraulic cylinder as a shim or spacer in any lifting or pressing application.



DANGER: To avoid personal injury keep hands and feet away from cylinder and workpiece during operation.



WARNING : Do not overload equipment. Overloading cause equipment failure and possible personal injury. The cylinders are designed for a max. Pressure of 700 bar (10,000psi).



DANGER: NEVER set the relief valve to a higher pressure than the maximum rated pressure of the pump. Higher settings may result in equipment damage and/ or personal injury. Do not remove relief valve.



WARNING : The system operating pressure must not exceed the pressure rating of the lowest rated component in the system. Install pressure gauges in the system to monitor operating pressure. It is your window to what is happening in the system.



CAUTION: Avoid sharp bends and kinks that will cause severe back-up pressure in hoses. Bends and kinks lead to premature hose failure.



DO NOT drop heavy objects on hose. A sharp impact may cause internal damage to hose wire strands. Applying pressure to a damaged hose may cause it to rupture.



IMPORTANT: Do not lift hydraulic equipment by the hoses or couplers. Use the carrying handle or other means of safe transport.





CAUTION : KEEP HYDRAULIC EQUIPMENT AWAY FROM FLAMES AND HEAT. Excessive heat will soften packings and seals, resulting in fluid leaks. Heat also weakens hose materials and packings. For optimum performance do not expose equipment to temperatures of 65°C(150°F) or higher. Protect hoses and cylinders from weld spatter.




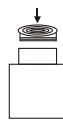
DANGER: Do not handle pressurized hoses. Escaping oil under pressure can penetrate the skin causing serious injury. If oil is injected under the skin, see a doctor immediately.


1. SAFETY PRECAUTIONS


 **WARNING:** Never pressurize uncoupled couplers. Only use hydraulic equipment in a coupled system.

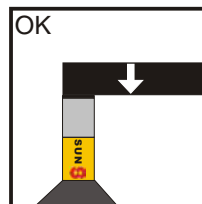
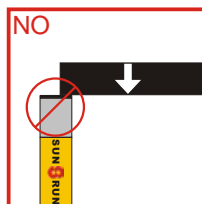
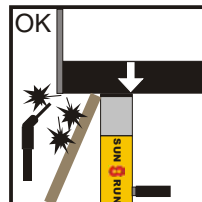
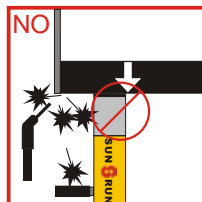
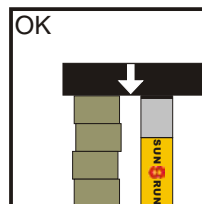
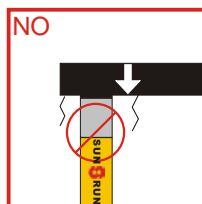
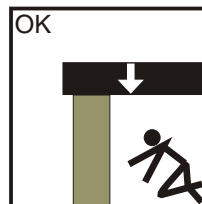
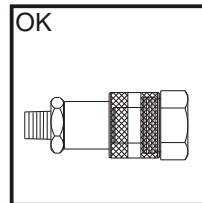
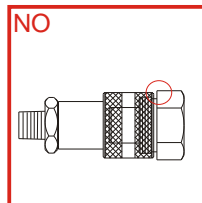
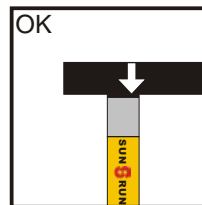
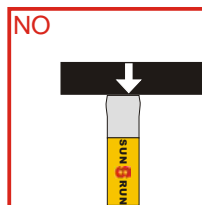
 **WARNING: BE SURE SETUP IS STABLE BEFORE LIFTING LOAD.** Cylinders should be placed on a flat surface that can support the load. Where applicable, use a cylinder base for added stability. Do not weld or otherwise modify the cylinder to attach a base or other support.

 **Avoid** situations where loads are not directly centered on the cylinder plunger. Off-center loads produce considerable strain on cylinder and plungers. In addition, the load may slip or fall, causing potentially dangerous results.

 Distribute the load evenly across the entire saddle surface. Always use a saddle to protect the plunger.

 **WARNING:** Immediately replace worn or damaged parts with genuine SUN RUN parts. SUN RUN parts are designed to fit properly and withstand rated loads.

 **IMPORTANT:** Hydraulic equipment must only be serviced by a qualified hydraulic technician. For repair service, contact the SUN RUN Service Center in your area. To protect your warranty, use only SUN RUN oil.



2.SPECIFICATIONS

電泵型號選擇：Custom build your Electric Pump:

SPE-554TQJ 1 5 1 8 4 WO

0 1 2 3 4 5 6

- 0.樣式
TQ=扭力扳手專用
TQJ=一般舉升適用

1.電壓
1=115V
2=230V

2.Hz
5=50Hz / 60Hz

3.相數
1=1ph

4.油箱 (Lx0.26=gal)
8=8L(2.1gal)
20=20L(5.2gal)
★亦可依客戶訂製

5.閥 (僅限TQJ型使用)
3=手動三口方向閥
4=手動四口方向閥
7=三口逆止式電磁閥
8=四口逆止式電磁閥

6.選配
W=輪子
O=冷卻系統
G=油壓錶
- 0.Type
TQ= just use in Torque Wrench
TQJ= using in lift applications

1.Voltage
1=115V
2=230V

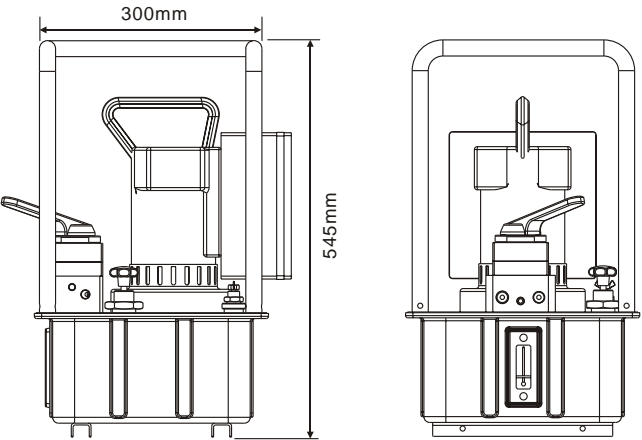
2.Hz
5=50Hz / 60Hz

3.Phase
1=1ph

4.Reservoir (Lx0.26=gal)
8=8L(2.1gal)
20=20L(5.2gal)
★User can order suitable reservoir.

5.Valve (just use in TQJ series)
3=Manual 3Way
4=Manual 4Way
7=Check Solenoid 3Way
8=Check Solenoid 4Way

6.Optional
W=Castor wheel
O=Cool system
G=Pressure Gauge



Model Number 型 號	Rpm 轉速	DBa at Idle and 700bar 噪音值	Hp 馬力	Amp at 700bar 安培	Flow rate @ 115VAC(L/min) 流量ℓ q				Oil tank 油箱	Usable oil 可用油量	Weight (with oil) 重量 (含油)
					0 (bar)	50 (bar)	350 (bar)	700 (bar)	(L)	(L)	(kg)
SPE-554	12000	80	1-1/8	25 /110V	11.3	7.1	1.2	0.9	8	7	32
				13 /230V							

3.INSTALLATION

3.1 Hydraulic Connect

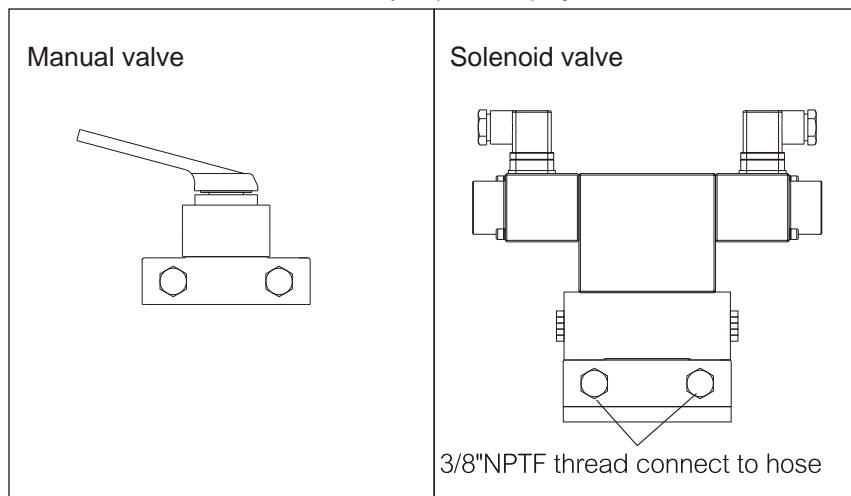
Use 1-1/2 wraps of teflon tape (or suitable thread sealant) on all threads, leaving the first complete thread free of tape to ensure that the tape does not shed into the hydraulic system, causing damage. Trim loose end.

WARNING

To ensure proper operation, avoid kinking or tightly bending hose. If a hose becomes kinked or otherwise damaged, it must be replaced. Damaged hoses may rupture at high pressure, causing personal injury.

3.2 Standard install (Fig. 1)

Connect 3/8-18NPTF with 10,000psi (700 bar) hydraulic hose.



3.3 Data/ Model plate



4.OPERATION

NOTE: To avoid power losses between the electrical outlet and pump motor, use the shortest possible extension cord.

The pump motor will function at low voltage, but motor speed and oil flow will be reduced.

- 1.Check all system fittings and connections to be sure they are tight and leak free.
- 2.Check the fluid level and add fluid, if necessary.
- 3.Open the Oil / Air vent ,reference Fig.1 by turning it 1 or 2 complete turns.

CAUTION

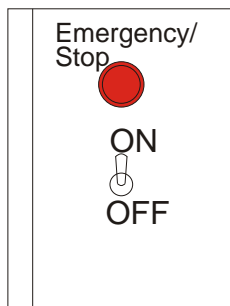
The vent plug must be open whenever the pump is running.



4.1 Motor start (Fig. 4.1)

Check voltage enquiry by 110V or 220V. The pump power cord is 5 ft. (1.5 meters) long.

Put Start/ Stop shaft to "ON" position and start power, if push shaft to "OFF" which will stop power.



4.OPERATION

4.2 Manual Control Valve (Fig. 4.2)

Pumps with 4-way control valves are designed to operate double-acting cylinders.

1.Position lever on 4 way valve to select function as follows:

(A) Flow to port "A"; port "B" returns flow to the reservoir

(B) Flow to port "B" port "A" returns flow to the reservoir

2.Never turn the handle to N position as pressure.

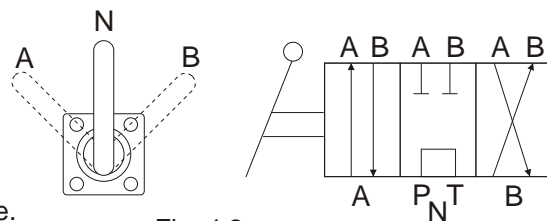


Fig. 4.2

4.3 Remote Control (Fig. 4.3)

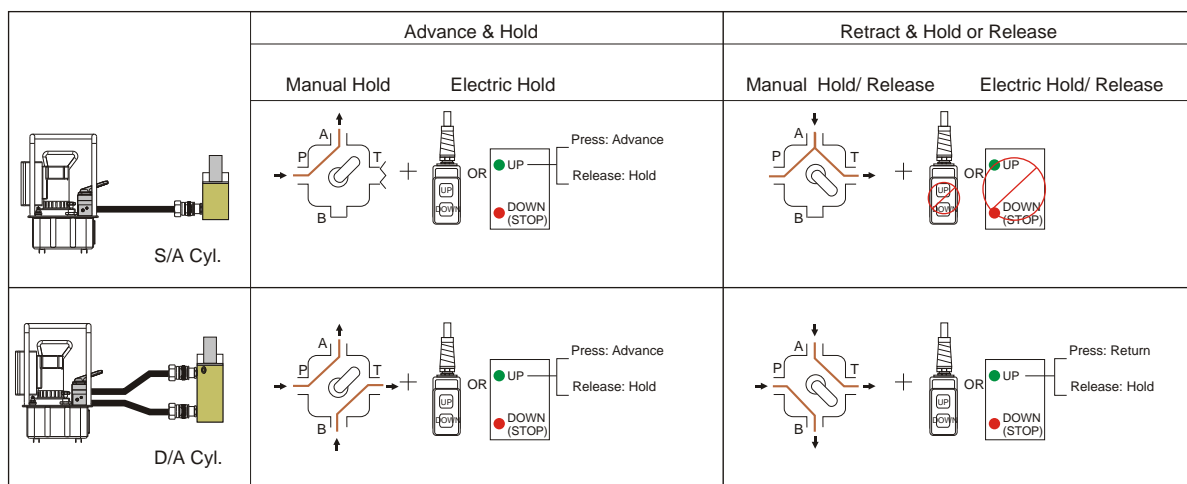
2.Then press switch "UP" button continually, the tool will go advance.

3.Release the button will hold pressure.

4.Press the button "DOWN" the tool will go back and pressure release.



Fig 4.3 Remote



4.4 Pressure adjusting (Fig. 4.4)

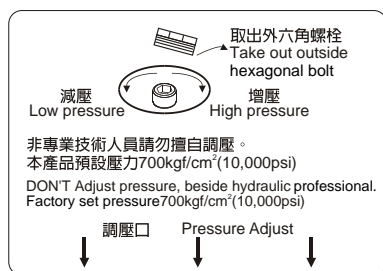


Fig 4.4 Pressure adjust

5.TROUBLESHOOTING

Problem	Cause/ Solution
Motor will not start	Be sure power cord is not damaged. Check for tripped circuit breaker-- be sure breaker is of adequate size. Have qualified electrician inspect for loose or faulty wiring. Have motor checked for defective motor capacitor. Be sure electrical supply and extension cords are adequate.
Noisy Operation	1.Air in system. 2.Be sure the oil reservoir is filled to normal level. 3.Check all points where air might leak into system.
Pump oil is over heating	1.Oil viscosity too high. 2.Check for high-pressure leakage on upper pressure plate.(Leaking at plug.) 3.Oil level is low. Fill reservoir to normal level , or refit the pump with larger reservoir.
Pump runs but will not pump oil	1.Pump is not primed. Run pump a few minutes tipping from side to side. 2.Check to make sure that externally adjustable relief valve set properly. Check internal relief valve. 3.Damaged O-ring. Take to nearest authorized service center for repair. 4.Defective control valve. (Troubleshoot separately).