



巨輪興有限公司

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液壓移動式拉拔器 操作說明

SPR-RSR5013E



中文 : C1~C5

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：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。



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)。



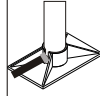
警告事項：系統操作壓力絕不可超過最低壓力元件之值最低值。系統中應加裝壓力錶藉以監測系統中的壓力並了解使用狀態。



警告事項：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：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。



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。



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。

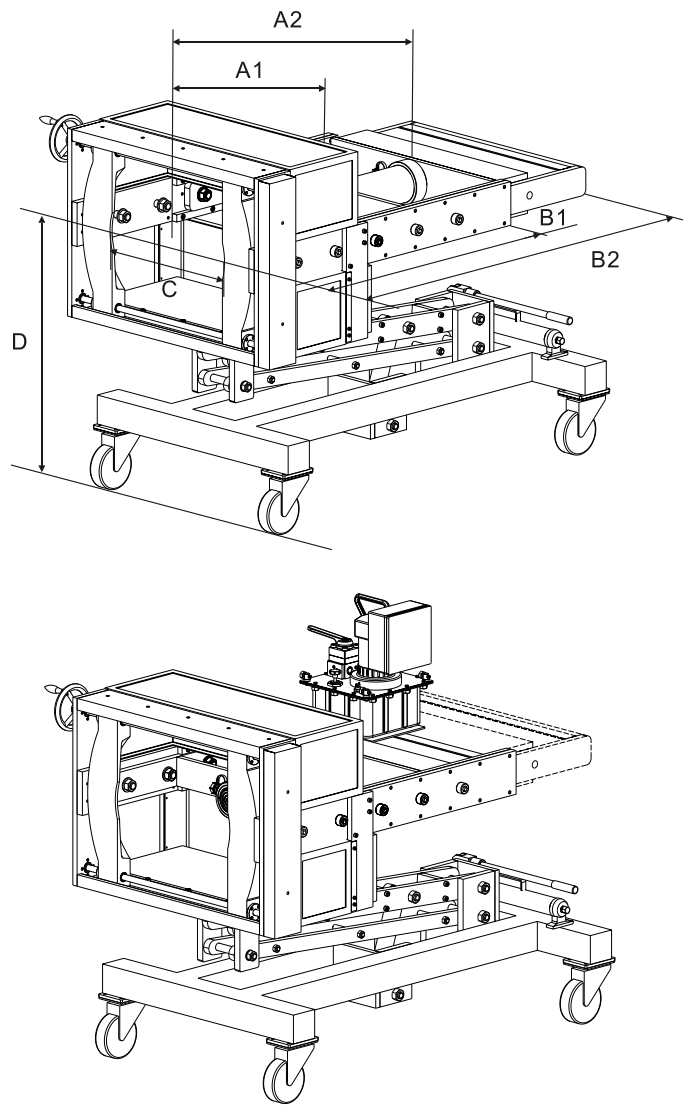


警告事項：當零件出現裂痕或損壞時，應立即以SUN RUN 零件更換。正確標準的零件可防止人員或設備損傷。SUN RUN零件經特別設計可完全適用並適用產品標稱的額定荷載或壓力。



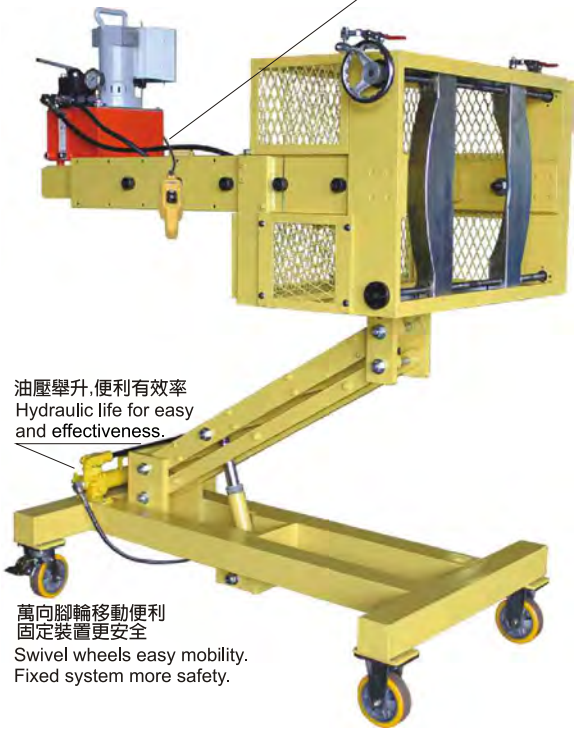
重要事項：液壓設備必需由合格的液壓技工進行維修。需要修理時，請連繫就近的SUN RUN服務據點並使用SUN RUN 液壓油保固方為有效。

2. 規範



選配泵浦
Optional pump

手動手泵浦操作
Manual hand pump control.
油壓電動泵浦線控操作
Hydraulic electric pump remote control.

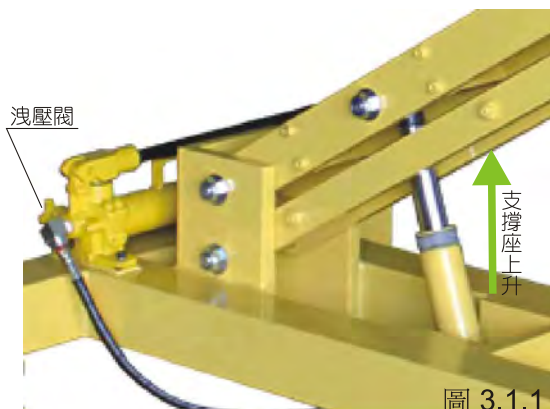


油壓舉升,便利有效率
Hydraulic lift for easy and effectiveness.
萬向腳輪移動便利
固定裝置更安全
Swivel wheels easy mobility.
Fixed system more safety.

Model Number	Cap.	Stroke cylinder	Pump hydraulic manual/electric	In standard position	In extended position	Frame length in standard position	Frame length in extended position	Max. Dia.	Set-up height
型 號	能力 (tons)	揚程 (mm)	油壓泵浦類型	A1 標準狀態 (mm)	A2 延伸狀態 (mm)	B1 框架標準狀態 (mm)	B2 框架延伸狀態 (mm)	C 最大撐開距離 (mm)	D 升降高度 (mm)
SPR-RSR5013E	50	334	Double-acting Electric Pump 電動型雙動泵浦	790	1170	1210	1590	590	939~1469

3.操作

3.1 夾持



3.1.1 先將手動泵浦洩壓閥關閉，開始操作手動泵浦。支撐座開始上升。

當支撐座無法再揚升時手動泵浦即無法再下壓操作。

3.1.2 旋轉門閘手輪打開門閘並調整所需大小。

3.1.3 手動控制閥-前進 (圖3.1.3)

四口手控閥用來設計操作雙動液壓缸(請參考圖3.1.3閥門位置)

1. 下列為四口手控閥的各位置功能：

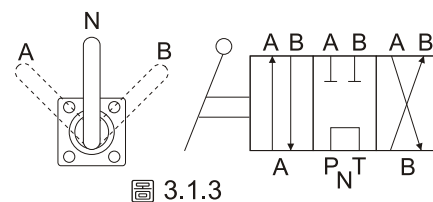
V(A) 流向孔 "A"; 則孔 "B" 為回油流向油箱

(N) 中立; 孔 "A" 和孔 "B" 均為封閉狀態

(B) 流向孔 "B" 則孔 "A" 為回油流向油箱

2. 操作泵浦至完成工作

3. 視需要改變閥門位置



3.1.4 遙控開關-前進 (圖3.1.4)

請先檢查電壓為 110V 或 220V。電源線最適長度為 6呎(1.8M)。

1. 將啟動 / 停止桿推向 "ON" 方向

2. 持續按下遙控器 "UP" 鍵，則油壓工具持續向前動作

3. 放鬆按鈕則油壓中斷呈持壓狀態

4. 按下 "DOWN" 鍵，則油壓工具回縮；油壓洩壓

3.1.5 操作前，必須確認拉拔器與待拆之工件的中心線，成一直線。如未正確的將拉拔器與待拆工件成一直線，則於高壓出力狀態下，將會導致危險的操作情形！

3.1.6 請以持續且漸進的方式施壓。

3.1.7 當拉拔器與待拆卸工件結合後，絕對不可以任何方式加熱待拆卸工件。此動作會造成拉拔器零件受損，工具失效。

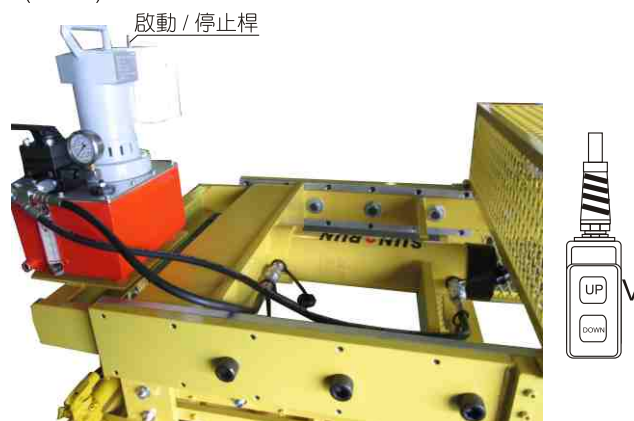


圖 3.1.4

3. 操作

3.2 放鬆

3.2.1 手動控制閥-回縮 (圖3.1.3)

四口手控閥用來設計操作雙動液壓缸(請參考圖3.1.3閥門位置)

1. 下列為四口手控閥的各位置功能：

(A) 流向孔 "A"; 則孔 "B" 為回油流向油箱

(N) 中立; 孔 "A" 和孔 "B" 均為封閉狀態

V(B) 流向孔 "B" 則孔 "A" 為回油流向油箱

2. 操作泵浦至完成工作

3. 視需要改變閥門位置

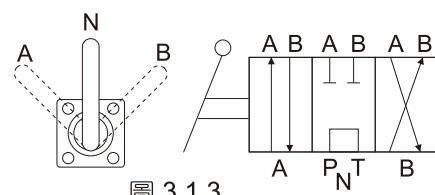


圖 3.1.3

3.2.2 遙控開關-回縮 (圖3.1.4)

請先檢查電壓為 110V 或 220V。電源線最適長度為 6 呎(1.8m)。

1. 將啟動 / 停止桿推向 "ON" 方向

2. 持續按下遙控器 "DOWN" 鍵，則油壓工具持續回縮動作

3. 放鬆按鈕則油壓中斷呈持壓狀態

3.2.3 請以持續且漸進的方式施壓。

3.2.4 緩慢放鬆手動泵浦洩壓閥，支撐座開始慢慢下降。

3.2.5 旋轉門閘手輪打開門閘。

※工作完成需完全回縮主軸及下降支撐座。

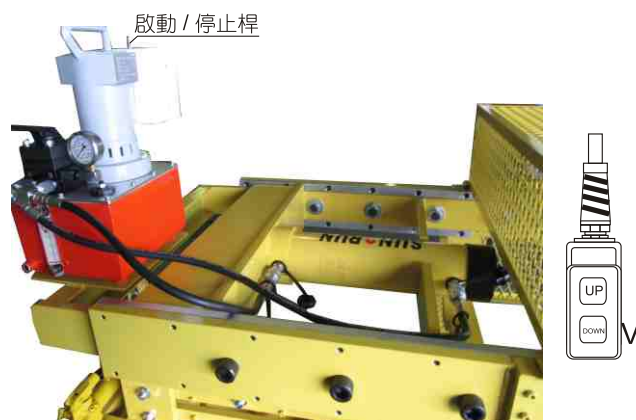


圖 3.1.4

4. 維修及保養

4.1 每使用10小時後即需確認液壓油油位。

確認油位時油缸軸心需完全退回至未使用狀態，檢查油位是否維持在加油孔下約1/2" (15mm) 位置。

4.2 一般使用300小時的液壓油需完全排出後重新倒入乾淨且合乎使用的液壓油(AW32)。更新頻率視使用程度或是使用環境而定。



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)。

出廠證明暨保固書

產品名稱：

型 號：

序 號：

出廠日期： / /

保固期間： / / ~ / /

該產品經公司嚴格品質管制,並測試合格出廠,本產品自驗收合格日起保固一年,如非人為使用不當或天然不可抗拒之災害,本公司免費維修,如非以上之原因本公司將酌收材料成本負責維修。

公司：巨輪興有限公司

負責人：蘇明益

高雄市岡山區岡山北路199號

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OPERATING INSTRUCTIONS MOBILE HYDRAULIC PULLERS

SPR-RSR5013E



English : E1~E5

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



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



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



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.



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



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.



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.



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.

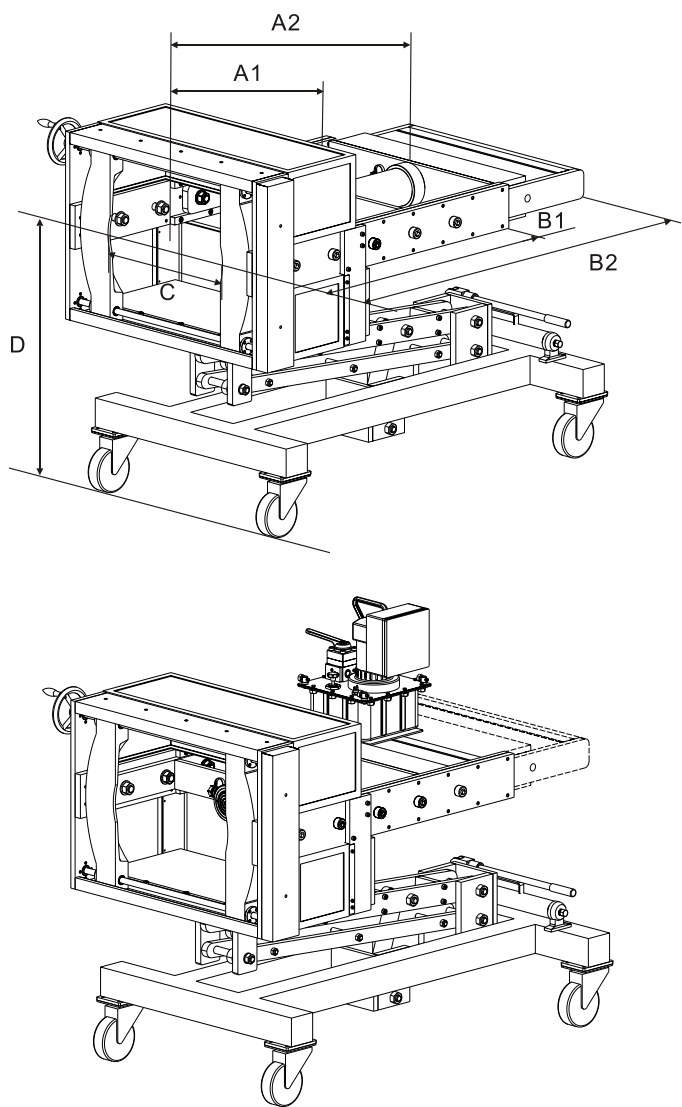


WARNING: Immediately replace worn or damaged parts with genuine SUN RUN parts. SUN RUN parts are designed to fit properly and withstand rated loads.



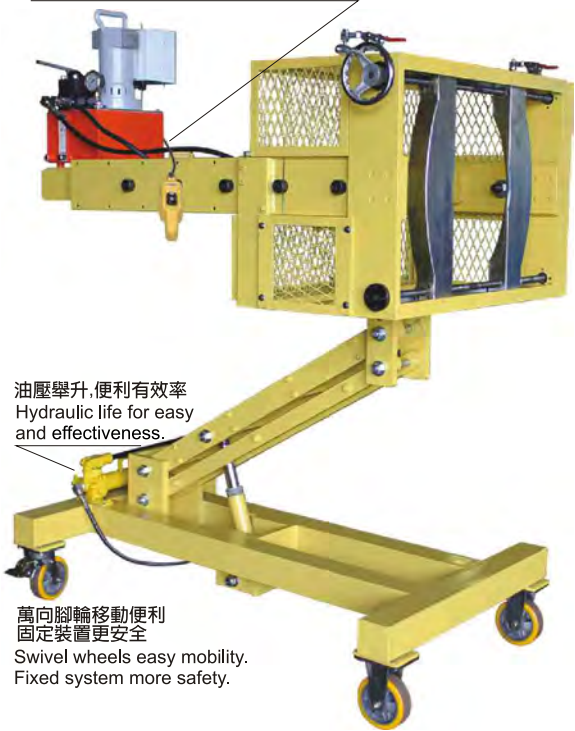
IMPORTANT: Hydraulic equipment must only be serviced by a qualified hydraulic technician. For repair service, contact the SUN RUN Service Center in your area. To protect your warranty, use only SUN RUN oil.

2. SPECIFICATION



選配泵浦
Optional pump

手動手泵浦操作
Manual hand pump control.
油壓電動泵浦線控操作
Hydraulic electric pump remote control.



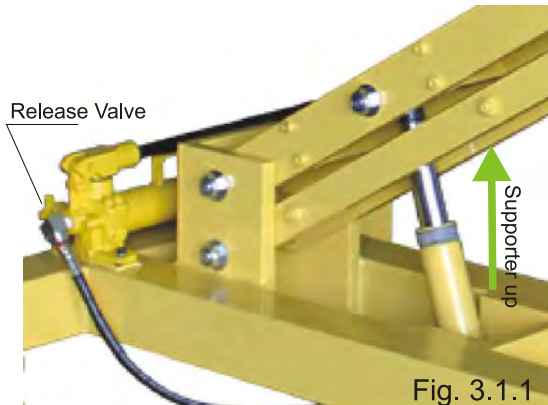
油壓舉升,便利有效
Hydraulic lift for easy and effectiveness.

萬向腳輪移動便利
固定裝置更安全
Swivel wheels easy mobility.
Fixed system more safety.

Model Number	Cap. (tons)	Stroke cylinder (mm)	Pump hydraulic manual/electric	In standard position A1 (mm)	In extended position A2 (mm)	Frame length in standard position B1 (mm)	Frame length in extended position B2 (mm)	Max. Dia. C (mm)	Set-up height D (mm)
SPR-RSR5013E	50	334	Double-acting Electric Pump 電動型雙動泵浦	790	1170	1210	1590	590	939~1469

3. OPERATION

3.1 Clamp



3.1.1 Turn off handle pump release valve and start to work handle pump.

Supporter start to go up. As the supporter reach limit, the handle pump will not press anymore.

3.1.2 Roll the gate wheel to open and adjust gate which enquire.

3.1.3 Manual Control Valve (Fig. 3.1.3)

Pumps with 4-way control valves are designed to operate double-acting cylinders. See Figure 3.1.3 for valve positions.

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

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

(N) Neutral ; port "A" and "B" are blocked

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

2.Operate pump to perform work.

3.change valve positions as needed.

3.1.4 Switch Operation (Fig. 3.1.4)

Check voltage enquire by 110V or 220V. The pump power cord is 6 ft. (1.8 meters) long.

1.Put Start/ Stop shaft to "ON" position.

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

3.Release the button will hold pressure.

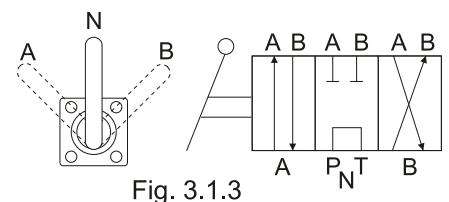
4.Press the button "DOWN" the tool will go back and pressure release.

3.1.5 Align the puller on the same centerline as the part being removed. Failure to align parts correctly can result in a dangerous operating situation because of the high hydraulic pressure used !

3.1.6 Always apply force gradually.

3.1.7 DO NOT USE HEAT, hammers, or impact tools on these pullers.

This will cause damage that voids the pullers warranty.



3. OPERATION

3.2 Release

3.2.1 Manual Control Valve (Fig. 3.1.3)

Pumps with 4-way control valves are designed to operate double-acting cylinders. See Figure 3.1.3 for valve positions.

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

- (A) Flow to port "A"; port "B" returns flow to the reservoir
- (N) Neutral ; port "A" and "B" are blocked

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

- 2.Operate pump to perform work.
- 3.change valve positions as needed.

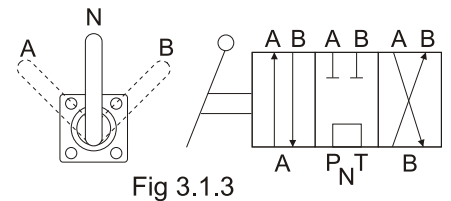


Fig 3.1.3

3.2.2 Switch Operation (Fig. 3.1.4)

Check voltage enquire by 110V or 220V. The pump power cord is 6 ft. (1.8 meters) long.

- 1.Put Start/ Stop shaft to "ON" position.
- 2.Press the button "DOWN" the tool will go back and pressure release.
- 3.Release the button will hold pressure.

3.2.3 Continually press and advance gradually.

3.2.4 **Slowly** open the handle pump release valve to mak supporter go down.

3.2.5 Finally roll the gate wheel to open the gate.



Fig. 3.1.4

※ It is necessary to return plunger and goes down the supporter after working.

4. Maintain oil level

4.1 Check the oil level in the reservoir after each 10 hours of use.

Proper oil level is 1/2" (15mm) from the top of the fill hole when all wrench plungers are retracted.

4.2 Drain, flush, and refill the reservoir with an approved, high-grade hydraulic oil (Aw32) after approximately every 300 hours of use. The frequency of oil changes will depend upon the general working conditions, severity of use, and overall cleanliness and care given the pump.



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).