



巨輪興股份有限公司

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油壓螺帽破壞器 操作手冊

NSC



中文 : C1~C4

中文
English
Ver.24

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。



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。



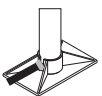
警告事項：禁止超載使用。
超載使用易造成設備損害及人員損傷。液(油)壓缸設計最大使用壓力為 700 bar (10,000psi)。



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：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。

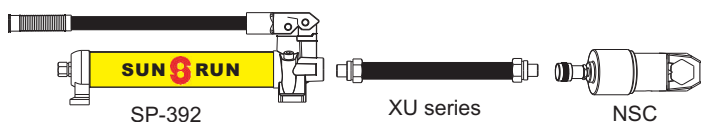


重要事項：液壓設備必需由合格的液壓技工進行維修。需要修理時，請聯繫就近的 SUN RUN 服務據點並使用 SUN RUN 液壓油保固方為有效。

2. 規範

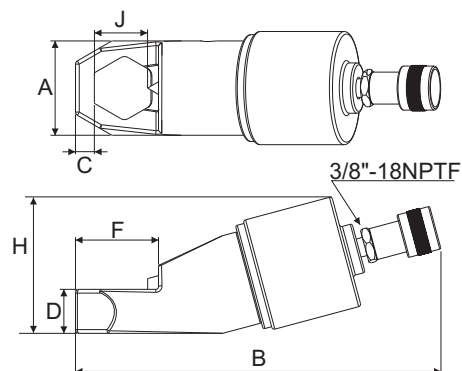
Model No. 型號	Hex. Nut Range 六角螺帽		Bolt Range 螺栓		Capacity 能力 (ton)	Oil Capacity 總油量 (cm ³)	Dimensions(mm) 尺寸								Weight 重量 (kg)
	(in)	(mm)	(in)	(mm)			A	B	C	D	F	H	J		
NSC-1319	0.50-0.75	10-19	0.31-0.50	M6-M12	5	15	40	200	6	19	28	48	21	0.8	
NSC-1924	0.75-0.94	19-24	0.50-0.63	M12-M16	10	20	55	227	8	25	38	71	25	2.0	
NSC-2432	0.94-1.13	24-32	0.63-0.88	M16-M22	15	60	66	260	10	31	49	76	33	3.0	
NSC-3241	1.13-1.56	32-41	0.88-1.13	M22-M27	20	80	75	286	15	35	56	89	43	4.4	
NSC-4150	1.56-2.00	41-50	1.13-1.38	M27-M33	35	155	96	325	21	45	73	109	54	8.2	
NSC-5060	2.00-2.25	50-60	1.38-1.50	M33-M39	50	240	106	366	27	54	92	126	60	11.8	
NSC-6075	2.38-2.88	60-75	1.50-1.88	M39-M48	90	492	156	366	27	75	110	180	78	34.1	

螺帽破壞器組-建議選配 Nut Splitters Sets-Opt



- ※可重新研磨重型刀頭。
- ※單動，彈簧回縮油壓缸。
- ※頭部特殊角度，適用各作業。
- ※操作壓力: 700bar (10,000psi).

SUN RUN 螺帽破壞器由二片螺紋體、刀片、回縮彈簧、油封及 SQB-3/8UF 母快速接頭組成。此外螺帽破壞器附有備用固定螺栓、備用刀片及更換刀片用扳手。



3.操作

3.1 將螺帽破壞器接頭與油管接頭相連接。

3.2 接頭鎖緊防止液壓油外洩。

注意：泵浦的通氣/加油孔，必須在 "VENT通氣" 位置，以便泵浦正常工作。

3.3 關閉泵浦洩壓閥。

注意：要排出泵浦、油管或破壞器內的空氣，可將刀片來回伸縮數次即可。

3.4 將螺帽破壞器放在螺帽上。

注意：刀具的平坦面必須和其中螺帽齊平且螺帽破壞器必須放在平坦面上。請參考 (Fig. 3.4)

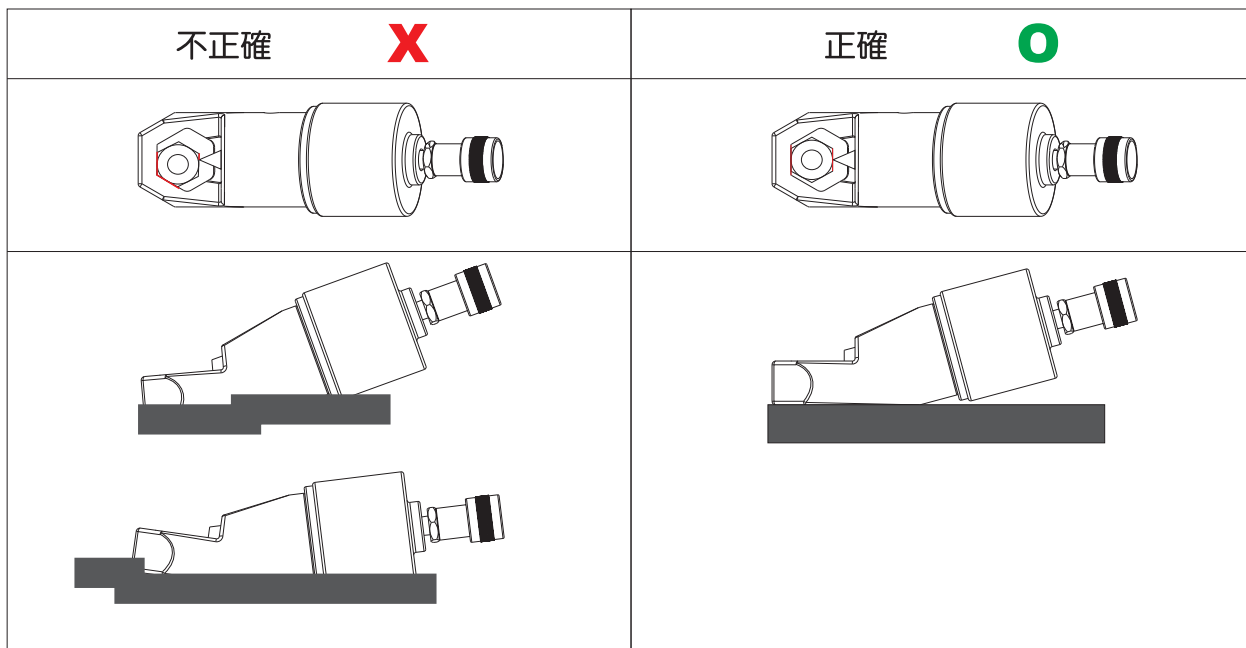


Fig. 3.4



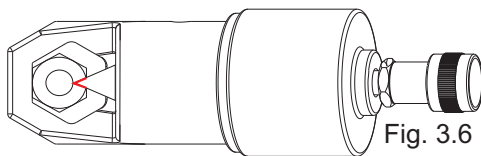
如果螺帽破壞器在螺帽上的放置方式不正確，可能導致破壞器頭出現損壞。
為防止意外，切割過程中勿將手指接近刀片。

3.5 將螺帽破壞器放在正確位置。

3.6 操作泵浦直到刀片切開螺帽為止。

注意：為防止損傷螺栓螺牙，請在切開螺帽後儘快關閉泵浦。

參考 Fig3.6 即表示正確的刀片切割停止點。



3.7 打開泵浦洩壓閥將刀片回縮。

3.8 將螺帽破壞器自割開的螺帽上提起。

3.9 在螺帽另一側重覆切開程序 (與螺帽第一次切開呈180°角)。

3.10 一旦螺帽被完全割開，請立刻回縮刀片。

3.11 取出螺帽破壞器及割開後的螺帽。

注意：切割不銹鋼和硬化鋼螺帽時塗抹適合的切削液，以減少刀片損耗和斷裂的可能。

4. 刀片替換

- 4.1 打開泵浦洩壓閥使螺帽破壞器洩壓。
- 4.2 將連接破壞器和油管的快速接頭分開。
- 4.3 取下螺帽破壞器側面的塞頭。
- 4.4 再將相同位置裏面更小的螺栓取出。
- 4.5 注意刀片角度的位置，以便日後能正確安裝。
- 4.6 將刀片自本體中拉出。
- 4.7 檢查刀鋒是否有裂痕、明顯的缺口和鋒利狀態。
- 4.8 更換損壞的刀片。
注意：刀刃可重新研磨，但去除的材料不可以超過1/16"並應保持原來切割角度。
- 4.9 在刀柄上塗一層潤滑油。
- 4.10 將刀柄插入主體內。
- 4.11 將刀片依步驟5的說明位置對齊。
- 4.12 將小顆螺栓鎖回螺栓孔。
- 4.13 再將塞頭鎖回原來的位置。
- 4.14 將油管接頭接上。
- 4.15 將刀片來回伸縮數次，以檢查刀具操作是否正常。



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OPERATING INSTRUCTIONS HYDRAULIC NUT SPLITTER **NSC**



English : E1~E4

中文
English
Ver.24

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.



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).



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: 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.

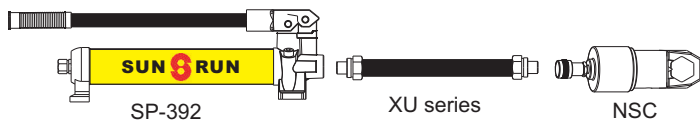


IMPORTANT: Hydraulic equipment must only be serviced by a qualified hydraulic technician. For repair service, contact the SUN RUN Service Center in your area. To protect your warranty, use only SUN RUN oil.

2.SPECIFICATIONS

Model No. 型號	Hex. Nut Range 六角螺帽		Bolt Range 螺栓		Capacity 能力 (ton)	Oil Capacity 總油量 (cm ³)	Dimensions(mm) 尺寸								Weight 重量 (kg)
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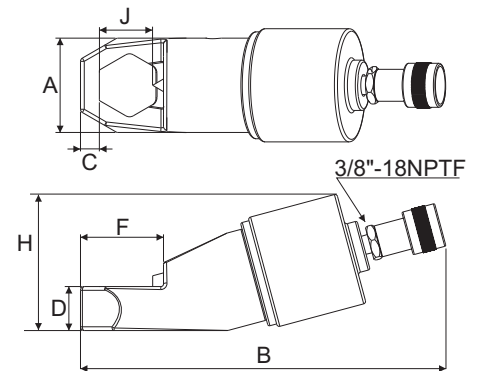
螺帽破壞器組-建議選配 Nut Splitters Sets-Opt



- ※ Heavy-duty chisels can be reground.
- ※ Sing-acting, spring return cylinder.
- ※ Unique angled head allows flush access.
- ※ Operating pressure: 700bar (10,000psi).

SUN RUN Nut splitters consist of two-piece thread body, cutting blade, return spring, plunger, seal and SQB-3/8UF female coupler.

Spare setscrews, a spare blade and wrenches for removing and replacing the blade, are included with the nut splitter.



3. OPERATION

3.1 Connect the nut splitter coupler to the hose coupler.

3.2 Firmly tighten the couplers to prevent restricted oil flow.

NOTE: Pump vent/ oil cap must be in "VENT" position for proper pump functioning.

3.3 Close the pump release valve.

NOTE: To remove air trapped in the pump, hose, or cutter, freely advance and retract the cutter blade several times.

3.4 Place the nut splitter head over the nut.

NOTE: The flat surface of the cutter must rest flush against one of the nut flats, and the head must rest on a flat surface. (Fig. 3.4)

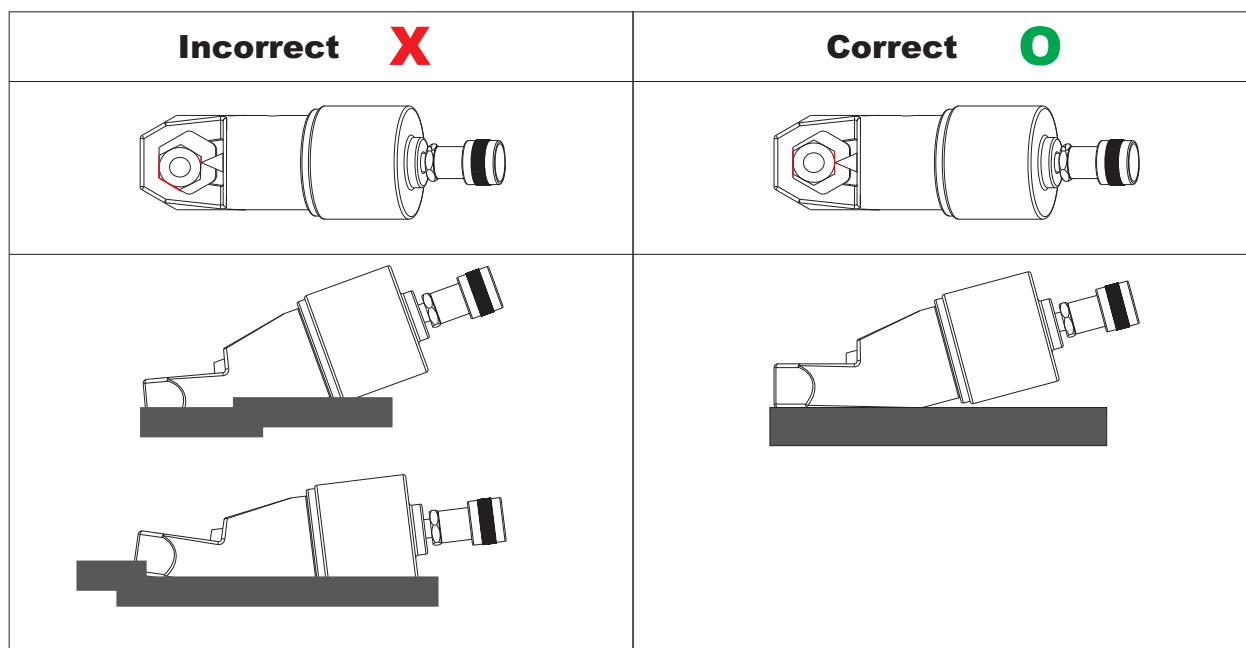


Fig. 3.4



Improper placement of the nut splitter on the nut may cause the head to fail.

To prevent injury, keep fingers away from the cutter blade during splitting operations.

3.5 Hold the nut splitter in proper position.

3.6 Operate the pump until the cutter blade cuts through the nut.

NOTE: To avoid damage to the bolt thread, turn off the pump as soon as the nut is split.

See Fig3.6 for correct cutter blade stopping point.

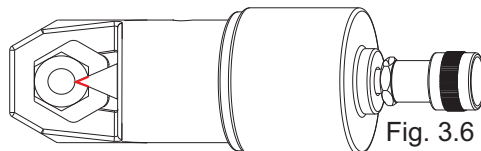


Fig. 3.6

3.7 Open the pump release valve to retract the cutter blade .

3.8 Lift the nut splitter off the split nut.

3.9 Repeat the cutting process on the other side of the nut (180° from the first cut).

3.10 Once the nut is completely split, retract the cutting blade.

3.11 Remove the nut splitter and split nut.

NOTE: Apply a suitable cutting fluid to stainless steel and hardened steel nuts before splitting to reduce cutter blade wear and breakage.

4. BLADE REMOVAL/ REPLACEMENT

- 4.1 Open the pump release valve to remove hydraulic pressure from the nut splitter.
- 4.2 Disconnect the hose and nut splitter coupler halves.
- 4.3 Remove the plug from the side of the nut splitter body.
- 4.4 Remove the smaller setscrew from the same hole in the side of the nut splitter body.
- 4.5 Note the position of the blade angle for correct installation later.
- 4.6 Pull the blade out of the cutter body.
- 4.7 Inspect the blade edge for cracks, large nicks, and sharpness.
- 4.8 Replace the blade if it is damaged.

NOTE: The edge can be resharpened, but avoid removing more than 1/16" of material and maintain the original cutting angle.

- 4.9 Apply a coat of grease to the blade shaft.
- 4.10 Insert the blade shaft-first into the cutter body.
- 4.11 Align the blade to the position noted in step 5.
- 4.12 Insert the small setscrew and tighten.
- 4.13 Insert the larger setscrew and tighten firmly.
- 4.14 Connect the cutter and hose couplers.
- 4.15 Check cutter operation by advancing and retracting the blade several times.