



物理農業機械股份有限公司

WULI AGRICULTURE MACHINE CO., LTD.

動力噴霧機、高壓洗淨機、微霧系統專業設計製造

WL-520 SERIES USER'S MANUAL WL-520 系列操作手冊



感謝您購買物理產品，使用前請詳閱本說明。

Thank you for choosing our product.

Please read the manual before use

2024.01V

目錄 INDEX

泵浦使用說明	2~3
Attention	4~5
零件表/ Parts List	6~8
分解圖/ Diagram	9~10
自動洩壓總成 (G2)/ Unloading Valve Assy (G2)	11~12
自動洩壓總成 (G3)/ Unloading Valve Assy (G3)	13~14
安全弁 (G2)/ Safety Valve (G2)	15~16
安全弁 (G3)/ Safety Valve (G3)	17~18

泵浦使用說明

A. 危險注意事項：

- 1.嚴禁噴槍對人噴射。
- 2.泵浦、引擎/馬達運轉時會產生高溫，須小心使用。
- 3.噴霧機在高速運轉下，須注意皮帶及皮帶輪(普利)部份，不可碰觸，注意長髮或長袖等長條物遠離運轉處。
- 4.引擎須在戶外、空曠通風處運轉操作。

B. 使用前注意事項：

- 1.檢查每個扣件，確定噴霧機與引擎或馬達都穩固地裝在架子上。
- 2.兩個皮帶輪應裝於一直線上，皮帶應鬆緊適中。
- 3.檢查引擎齒輪箱是否加機油；使用燃料是否正確；馬達電壓是否正確。
- 4.啟動引擎前開關是否打開；化油器開關是否打開。
- 5.鎖好進水管、出水管及噴槍。
- 6.使用前須檢查泵浦內是否有機油、油量是否足夠及油品狀況是否正常。

C. 泵浦使用事項：

- 1.把吸水管鎖緊泵浦吸水口，同時將吸水過濾網放入水槽底部上方 20公分處，避免吸進底部泥沙，確保泵浦壽命。
- 2.吸水管給水量需大於泵浦使用水量，如此才能達到使用壓力。
- 3.打開泵浦球形閥(#56/#53A)排氣後啟動引擎/馬達，排洩泵浦內之空氣，確認正常出水，然後將排氣球閥關閉，連接水管及噴槍即可做噴霧工作。
- 4.壓力調整：使用安全弁加壓以順時針方向調整，調整壓力同時須打開噴槍，最高壓力不得高於泵浦設定壓力，以維護機械壽命。並可依實際壓力需求，逆時針降壓以確保最佳使用壓力。(請依照壓力錶上顯示之壓力作為調壓參考值)
- 5.暫停使用泵浦時或無水空轉時不宜超過 5分鐘，以確保 U 迫緊不受水溫升高而降低使用壽命。

泵浦使用說明

D. 使用後注意事項：

噴霧完畢，將安全弁(#70A)的調壓把手(#156/#84)拉至頂端，以清水操作噴霧機以清除內部殘留之化學品。AS系列沒有調壓把手，直接以清水操作噴霧機即可。

E. 日常保養：

1. 泵浦與引擎初使用10-15小時應更換機油，以後每隔70小時再更換一次。(使用前應注意機油是否變質。)
2. 機油冷卻後才可進行更換，更換機油時，請打開排油螺絲(#13A)排出骯髒之機油。
3. 加機油時，把排油螺絲(#13A)鎖緊，打開加油蓋(#14A)，注入SAE#30~#40車輛用重型清潔機油，正確加油量在油鏡(#12A)的2/3位置。

F. 簡易故障排除：

1. 無法供水及壓力不穩

- 檢查吸水管是否洩漏(破損或鬆脫)。
- 打開出水開關排掉多餘的空氣。
- 取下進水室(#31A)及出水室(#51)檢查活門組(#30A)是否阻塞或損壞。
- 檢查過濾網是否阻塞。
- AS系列：檢查自動洩壓總成(#61A)的柱塞活門組(#63A)及O形環(#61-2)是否洩漏。

2. 壓力不足

- 檢查壓力是否調整適當。
- 檢查皮帶是否太鬆。
- 檢查噴霧管與接頭是否洩漏或損壞。
- 噴嘴磨損或孔徑太大導致壓力下降。
- 檢查迫緊是否磨耗。

3. 汽缸洩漏

- 取出汽缸內的迫緊(#22, #23, #24, #26, #27)檢查是否磨耗。
- 檢查柱塞(#04/#04A)是否損壞，柱塞損壞可能導致汽缸洩漏或壓力不足。

Attention

●Warning

1. Never point the spray gun at people or animals.
2. To reduce the risk of burns, do not touch the surface of the pump while operating.
3. Keep hands and clothing clear of the belts and pulleys when operating the pump.
4. The engine must be operated outdoors in an open and ventilated place.

●Before Use

1. Please tighten every connector securely to prevent leaking and make sure that the sprayer and the engine/motor are installed firmly on the frame.
2. Set the two pulleys in a straight line and the belts at an appropriate tightness.
3. Make sure that the oil in the pump is sufficient and in good condition.
4. **Engine:** Check whether there is sufficient engine oil and use the right fuel. Before starting the engine, make sure both the ON/OFF SWITCHES of engine and carburetor are on.
5. **Motor:** Be sure to use the correct voltage and frequency for the motor.

●During Use

1. Couple the suction hose to the inlet of the sprayer. Leave the suction hose filter suspended 20cm from the bottom of the water tank.
2. Make sure the water supply is sufficient to allow the pump to reach its working pressure.
3. Open the exhaust BALL COCK (#56/#53A) to release air from the pump before starting the engine/motor. After pump air is released, close the exhaust cock. Couple the spray hose with the spray gun.
4. Before using the spray gun for spraying, be certain water in the pump is flowing properly.
5. Pressure Adjustment: The maximum pressure should not exceed the set pressure of the pump. When adjusting the pressure, the spray gun must be opened. Turn PRESSURE REGULATING SCREW in a clockwise direction to increase the pressure and counter-clockwise to reduce the pressure. Please use the PRESSURE GAUGE(#54) as the pressure reference when adjusting.
6. In order to avoid any damage to the packings and the pump, shut off the engine /motor when stopping the unit for more than 5 minutes.

●After Use

Pull up the PRESSURE REGULATING HANDLE (#156 or #84) on the SAFETY VALVE ASSY (#70A) to the top and operate the pump again with fresh water to clean out any remaining chemicals. AS series has no handle; use fresh water to operate the pump again.

Maintenance

1. Replace oil in the pump after the first 10~15 hours of use. After this, the oil should be changed after every 70 hours of use. Make sure the oil is in good condition before use.
2. After the oil has cooled, unscrew the DRAINAGE SCREW (#13A) and drain all oil and residue from the pump.
3. Tighten the DRAINAGE SCREW (#13A). Open the OIL INLET COVER (#14A) and refilling with clean motor oil SAE #30~#40 up to the level of 2/3 of the OIL WINDOW (#12A).

●Repair Instructions

1. Instability of working pressure and water supply:

- A. Check if the suction hose is blocked or leaking.
- B. Open the BALL COCK to release any air in the pump.
- C. Remove the SUCTION CHAMBER (#31A) and OUTLET CHAMBER (#51) to check if the VALVE ASSY (#30A) are stuck or clogged.
- D. Check if suction filter is stuck or clogged.
- E. AS series: check if the PISTON VALVE ASSY(63A) and O-RING(#61-2) in the UNLOADING VALVE ASSY(#61A) is leaking.

2. Insufficient pressure:

- A. Check whether the pressure has been adjusted properly.
- B. Check whether the belt is too loose.
- C. Check whether the spray hose and the coupling are damaged.
- D. Check whether the packings are worn or the nozzle is worn out.

3. Cylinder leakage:

- A. Check if the packings (#22, #23, #24, #26, #27) in the cylinder are damaged.
- B. Check if PISTONS (#04 or #04A) are worn out or damaged. This may lead to leaking and low pressure.

零件表 PARTS LIST

圖號 NO.	編號 CODE	名 稱	DESCRIPTION	Q'TY
01	B010101020	曲軸箱 (紅)	CRANKCASE (RED)	1
	B010101030	曲軸箱 (藍)	CRANKCASE (BLUE)	
01-1	B012901110	汽缸銷	SET PIN	2
02	B010201000	柱塞油封	PISTON OIL SEAL	3
03	B010301000	腳座	CRANKCASE STAND	2
03-1	BS11112016122	六角螺絲附華司	SET BOLT W/ WASHER	4
04	B010401010	不鏽鋼柱塞	SST PISTON	3
04A	B013007001	陶瓷柱塞組	CERAMIC PISTON ASSY	3
04-1	B013107000	柱塞桿	PISTON ROD	3
04-2	B013207001	陶瓷柱塞套	CERAMIC PISTON SLEEVE	3
04-3	B013307000	柱塞套固定螺絲	PISTON SCREW	3
04-4	B013407000	柱塞套固定螺帽	SET NUT	3
04-5	B013507000	柱塞套平墊圈	GASKET	3
04-6	BG10095014520	O 形環	O-RING	3
04-7	BG30101014010	背托環	BACK-UP RING	3
05	B010501110	柱塞銷	PISTON PIN	3
06A	B010601002	連桿組	CONNECTING ROD ASSY	3
06	N/A	連桿	CONNECTING ROD	3
06-1	BS11206025500	六角螺絲	SET BOLT	6
06-2	BS32206501	彈簧華司	SPRING WASHER	6
07	B010701050	軸承	BEARING	2
08	B010801000	曲軸	CRANKSHAFT	1
08-1	B012101110	曲軸鍵	CRANKSHAFT KEY	1
09	B010901000	曲軸油封	CRANKSHAFT OIL SEAL	2
10	B011002112	曲軸油封蓋	CRANKSHAFT OIL SEAL COVER	2
11	B011102111	曲軸油封蓋 (套筒)	CRANKSHAFT OIL SEAL COVER (CONE)	1
11-1	BS12108010100	大扁頭螺絲	SCREW	8
12	B011601021	曲軸箱後蓋 (紅)	REAR COVER (RED)	1
	B011601022	曲軸箱後蓋 (藍)	REAR COVER (BLUE)	
12-1	B012201020	油鏡	OIL WINDOW	1

零件表 PARTS LIST

圖 號 NO.	編 號 CODE	名 稱	DESCRIPTION	Q'TY
12-2	BG10234028700	O 形環	O-RING	1
12-3	B011701000	後蓋迫緊	REAR COVER PACKING	1
12-4	BS12108016101	大扁頭螺絲	SCREW	4
13A	B011801001	排油螺絲組	DRAINAGE SCREW ASSY	1
13	B011801000	排油螺絲	DRAINAGE SCREW	1
13-1	BG10110015	O 形環	O-RING	1
14A	B011901014	加油蓋組	OIL INLET COVER ASSY	1
21	B020101021	汽缸	CYLINDER	1
21-1	BS11110025122	六角螺絲附華司	SET BOLT W/ WASHER	6
22	B020301160	U 迫緊	U-PACKING	3
23	B020301141	U 迫緊墊片	SPACER	3
24	BG10290033	O 形環	O-RING	3
25	B020501010	U 迫緊固定環	SET RING	3
26	B020301170	防水迫緊	WATERPROOF PACKING	3
27	B020301151	防水迫緊墊片	SPACER	3
28	B020601000	迫緊防脫片	SET PLATE	1
29	B024102000	連接管	CONNECTING PIPE	2
29-1	BG10100014010	O 形環	O-RING	4
30A	B040001001	活門組	VALVE ASSY	6
30-1	B040301000	活門帽	VALVE CAGE	6
30-2	BJ20101000	活門彈簧	VALVE SPRING	6
30-3	B040101000	活門塞	VALVE PLUG	6
30-4	B040201000	活門座	VALVE SEAT	6
30-5	B040401000	活門皮	VALVE PACKING	6
31A	B031401032	進水室含銅接頭	SUCTION CHAMBER W/CONNECTOR	1
31-1	BS11112035122	六角螺絲附華司	SET BOLT W/ WASHER	2
32	B031501110	*進水口蓋(選配)	*SUCTION CHAMBER CAP (OPTIONAL)	1
51	B030201021	出水室 (WL-520/C)	OUTLET CHAMBER (WL-520/C)	1
	B030301021	出水室 (WL-520AS/ASC)	OUTLET CHAMBER (WL-520AS/ASC)	
51-1	BS15112060300	雙頭牙螺絲	DOUBLE-END SCREW	2

零件表 PARTS LIST

圖號 NO.	編號 CODE	名 稱	DESCRIPTION	Q'TY
51-2	BS21112100	六角螺帽	NUT	2
51-3	BS32112200	彈簧華司	SPRING WASHER	2
52	BG10140018500	O 形環 (AS/ASC)	O-RING (AS/ASC)	1
53	B030401110	空氣室 (WL-520/C)	AIR CHAMBER (WL-520/C)	1
53-1	BG10219027100	O 形環	O-RING	1
53A	B030901110	三通球形閥 (AS/ASC)	T-BALL VALVE (AS/ASC)	1
54	B031101000	壓力錶 (圓)	PRESSURE GAUGE (ROUND)	1
	B250001021	壓力錶 (橫)	PRESSURE GAUGE (HORIZONTAL)	
56	B031601110	球形閥 8.5mm	BALL COCK 8.5mm	2
57	B012405000	滴油孔蓋	DRIP CAP	3
*61A	B050001311	自動洩壓總成 (G2)	UNLOADING VALVE ASSY (G2)	1
	B050001331	自動洩壓總成 (G3)	UNLOADING VALVE ASSY (G3)	
61-1	BS13110047122	六角十字螺絲附華司 (AS/ASC)	SCREW & WASHER (AS/ASC)	2
*70A	B050001004	安全弁(G2,不含調壓螺絲組)	SAFETY VALVE (G2,W/O KNOB)	1
	B050001006	安全弁(G3)	SAFETY VALVE ASSY(G3)	
71-1	BS11110025122	六角十字螺絲附華司 (WL-520/C)	SCREW & WASHER (WL-520/C)	2
79A/166	B053001001	調壓螺絲組	PRESSURE REGULATING KNOB ASSY	1
ACC.	B150101001	吸水管組 3/4"*9尺	SUCTION HOSE ASSY 3/4"*9FT	1
ACC.	B150201001	迴水管組 1/2"*9尺	OVERFLOW HOSE ASSY 1/2"*9FT	1
ACC.	B150601110	過濾網申目	FILTER SOCKET	1
ACC.	B150901110	過濾網	FILTER	1
ACC.	BP11212190300	皮帶輪 7A2*19*5	PULLEY 7A2*19*5	1
ACC.	BS11110019121	皮帶輪螺絲	PULLEY SET BOLT	1

*61A(G2)零件表及展開圖請參閱第 11~12 頁。

*61A(G2) parts list & diagram please refer to page 11~12.

*61A(G3)零件表及展開圖請參閱第 13~14 頁。

*61A(G3) parts list & diagram please refer to page 13~14.

*70A(G2)零件表及展開圖請參閱第 15~16 頁。

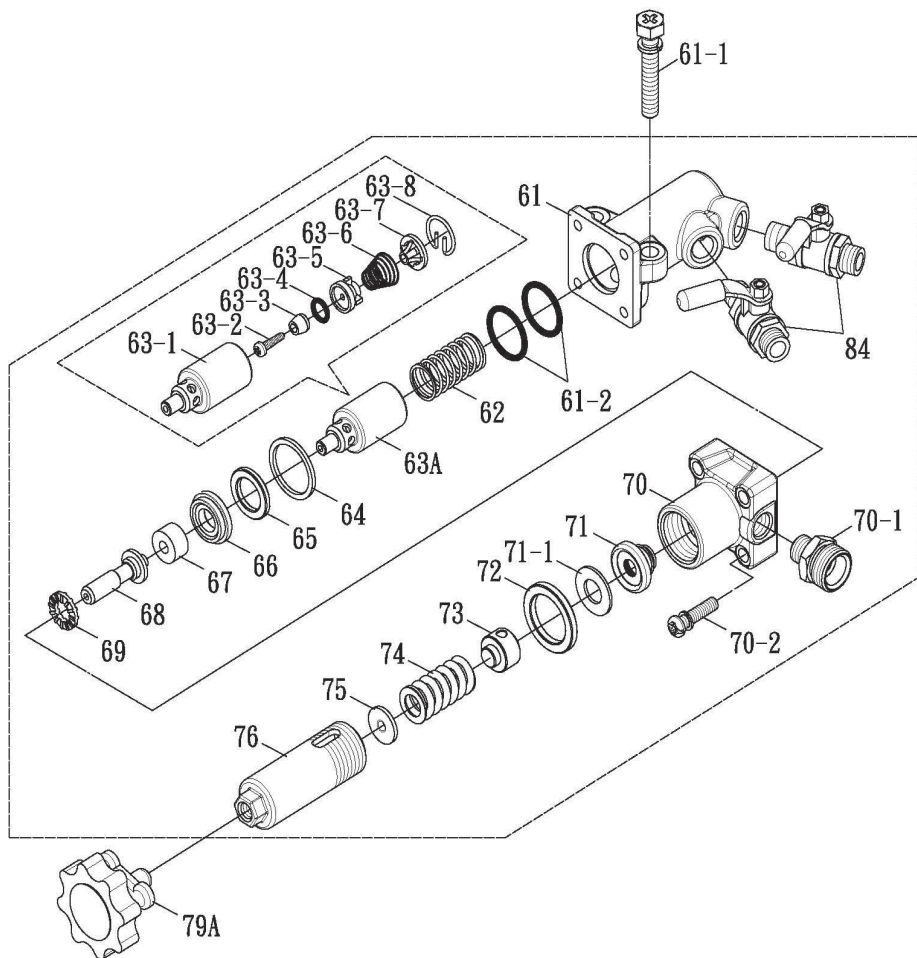
*70A(G2) parts list & diagram please refer to page 15~16.

*70A(G3)零件表及展開圖請參閱第 17~18 頁。

*70A(G3) parts list & diagram please refer to page 17~18.

自動洩壓總成(G2)分解圖 UNLOADING VALVE ASSY(G2)DIAGRAM

B050001311



自動洩壓總成(G2)零件表 UNLOADING VALVE ASSY(G2) PARTS LIST

圖 號 NO.	編號 CODE	名 稱	DESCRIPTION	Q'TY
61	B050201000	洩壓汽缸套	UNLOADING VALVE CYLINDER	1
*61-1	BS13110047122	六角十字螺絲附華司	SET BOLT W/ WASHER	2
61-2	BG10220027010	O 形環	O-RING	2
62	BJ50101000	洩壓輔助彈簧	AUXILIARY SPRING	1
63A	B052201001	柱塞活門組	PISTON VALVE ASSY	1
63-1	B052201000	柱塞活門體	PISTON VALVE BODY	1
63-2	BS18105016300	圓頭自攻螺絲	SCREW	1
63-3	B052401000	閥塞頭	VALVE PLUG	1
63-4	BG10080012010	O 形環	O-RING	1
63-5	B052501000	閥塞座	VALVE PLUG SEAT	1
63-6	BJ30101000	球閥固定彈簧	SPRING	1
63-7	B052301000	彈簧底座	SPRING SEAT	1
63-8	B052601000	C 扣環	C-CLIP	1
64	BG20250030	方形環	SQUARE RING	1
65	B052101110	壓力閥輔助片	AUXILIARY PLATE	1
66	B051001000	壓力閥座	VALVE SEAT	1
67	B050901000	壓力閥	PRESSURE VALVE	1
68	B050801120	壓力閥桿	VALVE ROD	1
69	B051901000	消音片	DAMPER PLATE	1
70	B050501000	迴水座	OVERFLOW CHAMBER	1
70-1	B051801110	迴水接頭	OVERFLOW COUPLING	1
70-2	BS14108025122	圓頭螺絲附華司	SCREW W/ WASHER	4
71	B050701020	伸縮套皮	COMPRESSION PACKING	1
71-1	B051101010	平墊圈	WASHER	1
72	B052001110	固定環	SET RING	1
73	B051401110	彈簧下座(有牙)	SPRING SEAT	1
74	BJ40101000	調壓彈簧	PRESSURE REGULATING SPRING	1
75	B051301000	彈簧上座	SPRING SEAT (UPPER)	1
76	B050401000	調壓彈簧套	PRESSURE REGULATING PIPE	1
*79A	B053001001	調壓螺絲組	PRESSURE REGULATING SCREW ASSY	1
84	B031601110	球形閥 8.5mm	BALL COCK 8.5mm	2

*61-1 不屬於自動洩壓總成標準零件，須另外訂購。

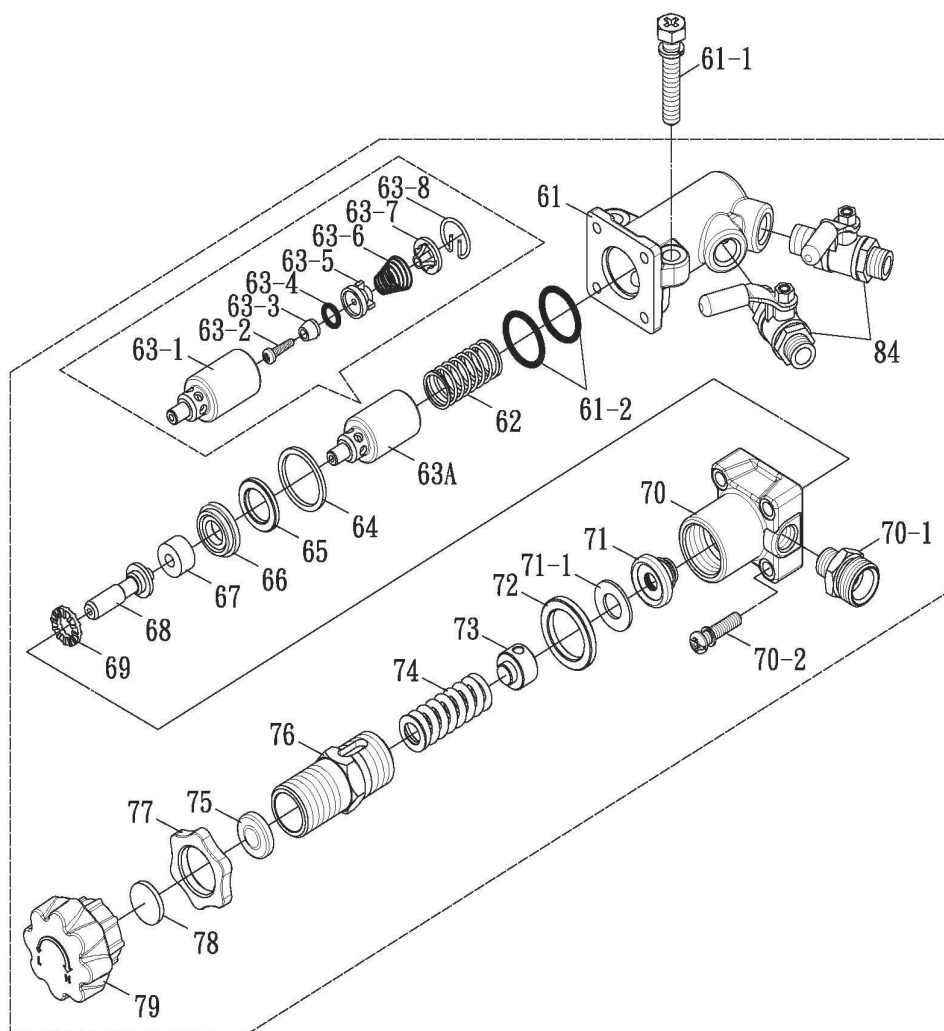
* 61-1 is not a standard part, please order it as needed.

*79A 不屬於自動洩壓總成標準零件，須另外訂購。

* 79A is not a standard part, please order it as needed.

自動洩壓總成(G3)分解圖 UNLOADING VALVE ASSY (G3) DIAGRAM

B050001331



自動洩壓總成(G3) 零件表 UNLOADING VALVE ASSY (G3) PARTS LIST

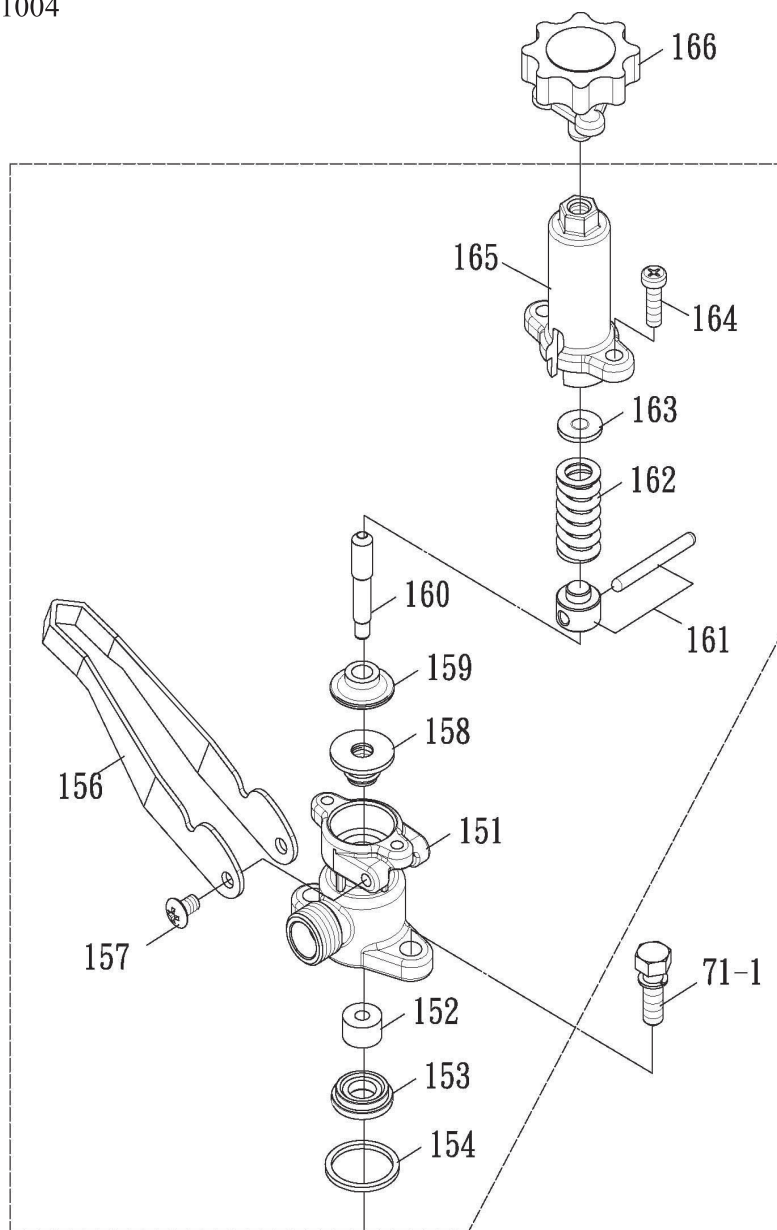
圖號 NO.	編號 CODE	名 稱	DESCRIPTION	Q'TY
61	B050201000	洩壓汽缸套	UNLOADING VALVE CYLINDER	1
*61-1	BS13110047122	六角十字螺絲附華司	SET BOLT W/ WASHER	2
61-2	BG10220027010	O形環	O-RING	2
62	BJ50101000	洩壓輔助彈簧	AUXILIARY SPRING	1
63A	B052201001	柱塞活門組	PISTON VALVE ASSY	1
63-1	B052201000	柱塞活門體	PISTON VALVE BODY	1
63-2	BS18105016300	圓頭自攻螺絲	SCREW	1
63-3	B052401000	閥塞頭	VALVE PLUG	1
63-4	BG10080012010	O形環	O-RING	1
63-5	B052501000	閥塞座	VALVE PLUG SEAT	1
63-6	BJ30101000	球閥固定彈簧	SPRING	1
63-7	B052301000	彈簧底座	SPRING SEAT	1
63-8	B052601000	C扣環	C-CLIP	1
64	BG20250030	方形環	SQUARE RING	1
65	B052101110	壓力閥輔助片	AUXILIARY PLATE	1
66	B051001000	壓力閥座	VALVE SEAT	1
67	B050901000	壓力閥	PRESSURE VALVE	1
68	B050801120	壓力閥桿	VALVE ROD	1
69	B051901000	消音片	DAMPER PLATE	1
70	B050501000	迴水座	OVERFLOW CHAMBER	1
70-1	B051801110	迴水接頭	OVERFLOW COUPLING	1
70-2	BS14108025122	圓頭螺絲附華司	SCREW & WASHER	4
71	B050701020	伸縮套皮	COMPRESSION PACKING	1
71-1	B051101010	平墊圈	WASHER	1
72	B052001110	固定環	SET RING	1
73	B051401110	彈簧下座(有牙)	SPRING SEAT	1
74	BJ40101002	調壓彈簧	PRESSURE REGULATING SPRING	1
75	B051301250	彈簧上座	SPRING SEAT (UPPER)	1
76	B050301002	調壓彈簧套	PRESSURE REGULATING PIPE	1
77	B052001010	安全弁固定環	SET RING	1
78	B053601000	調壓把手墊片	GASKET	1
79	B053001011	調壓把手	PRESSURE REGULATING KNOB	1
84	B031601110	球形閥 8.5mm	BALL COCK 8.5mm	2

*61-1 不屬於自動洩壓總成標準零件，須另外訂購。

* 61-1 is not a standard part, please order it as needed.

安全弁 (G2) 分解圖 SAFETY VALVE (G2) DIAGRAM

B050001004



安全弁 (G2) 零件表 SAFETY VALVE (G2) PARTS LIST

[illegible]

*71-1 不屬於安全弁標準零件，須另外訂購。

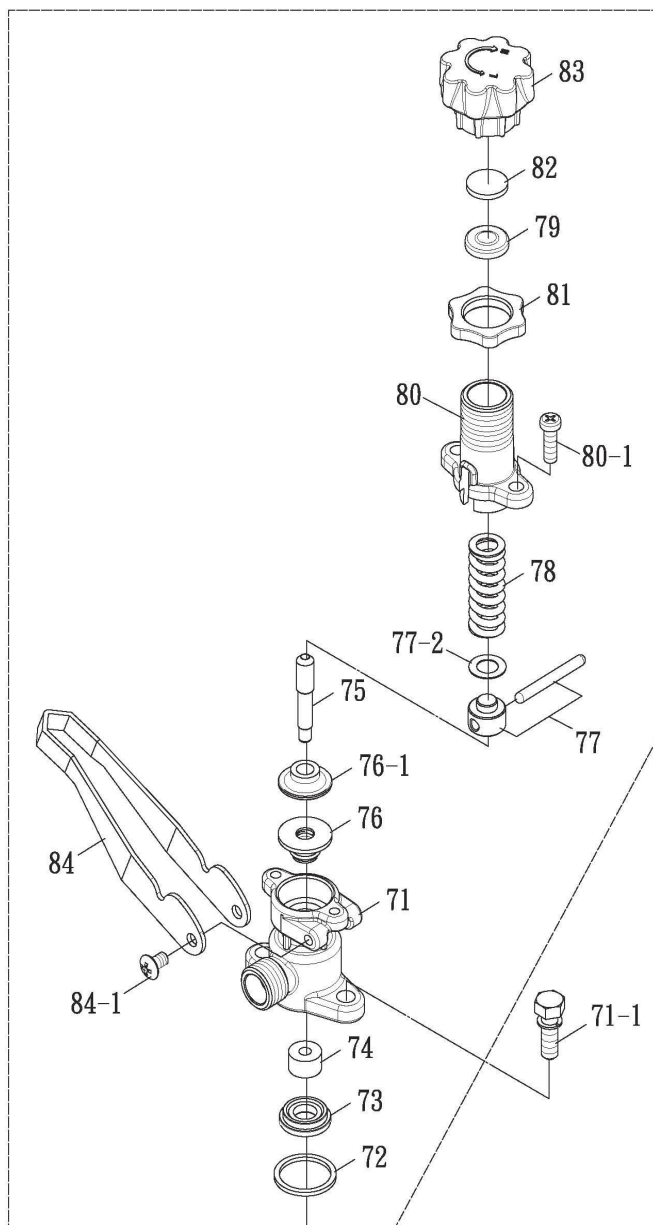
* 71-1 is not a standard part, please order it as needed.

*166 不屬於安全弁標準零件，須另外訂購。

* 166 is not a standard part, please order it as needed.

安全弁 (G3) 分解圖 SAFETY VALVE (G3) DIAGRAM

B050001006



安全弁 (G3) 零件表 SAFETY VALVE (G3) PARTS LIST

[illegible]

*71-1 不屬於安全弁標準零件，須另外訂購。

* 71-1 is not a standard part, please order it as needed.

