



Porto-Power Blackhawk Automotive is a licensed trademark

Air Actuated Hydraulic Treadle Pump

Operating Instructions & Parts Manual

B65425

B65426

B65427

SFA Companies ©2005
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816-891-6390
sales@blackhawk-automotive.com

- Before using this product, read this manual and follow all its Safety Rules and Operating Instructions

Made in Taiwan

SAVE THESE INSTRUCTIONS

For your safety, read and understand the information contained within. The owner and operator shall have an understanding of this product and safe operating procedures before attempting to use this product. Make certain that the operator thoroughly understands the inherent dangers associated with the use and misuse of the product. If any doubt exists as to the safe and proper use of this product as outlined in this factory authorized manual, remove from service immediately. **Inspect before each use.** It is recommended that, prior to each use, an inspection be done by qualified personnel and that any missing or damaged parts, decals, warning / safety labels or signs be replaced with factory authorized replacement parts only. Any pump that appears to be damaged in any way, is worn, leaking or operates abnormally shall be removed from service immediately until such time as repairs can be made. Any pump that has been or suspected to have been subject to a shock load (a load dropped suddenly, causing the system pressure to exceed 10,000 PSI), shall be removed from service immediately until checked by qualified personnel. Owners and operators of this equipment shall be aware that the use and subsequent repair of this equipment may require special training and knowledge. Labels and owners manuals are available from the manufacturer.

PRODUCT DESCRIPTION

Porto-Power Blackhawk Air Actuated Hydraulic Treadle Pumps are engineered to meet or exceed ANSI B30.1 Standards for Performance and Safety. Its unique hydraulic circuit allows quick displacement of hydraulic fluid under no load conditions and easy pumping in loaded conditions. These foot actuated pumps supply compressed hydraulic fluid to compatible applications i.e. rams, presses, spreaders, compactors and crimping machines, anywhere that 10,000 PSI of fluid pressure is needed. Special skill, knowledge and training may be required for a specific task and the product may not be suitable for all the jobs described above. Unsuitable applications would include applications that call for a device to move, level or support persons, animals, hazardous materials, mobile homes/ dwellings in general, mirrors and/or plate glass, and/or to connect/secure hatches, components, etc. between bulkheads. The user must ultimately make the decision regarding suitability of the product for any given task and assume the responsibility of safety for himself and others in the work area.

SPECIFICATIONS

Model Number	Usable Oil Capacity (in ³)	Rated Pressure (psi)	Output Flow Rate (in ³ /min)		Input Air Pressure (psi)	Output Port Threads	Input Port Threads	Weight (lbs w/fluid)
			No Load	Load				
B65425	91.5	10,000	66	11	90 - 175	3/8" -18NPTF	1/4" -18NPTF	18.1
B65426	36.6		61	9				14.1
B65427	122		65	11				20.1

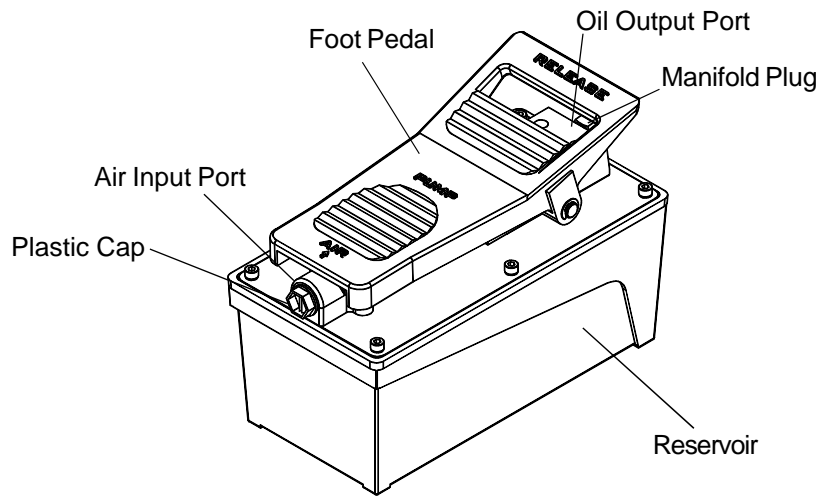


Figure 1 - Model B65425 Components

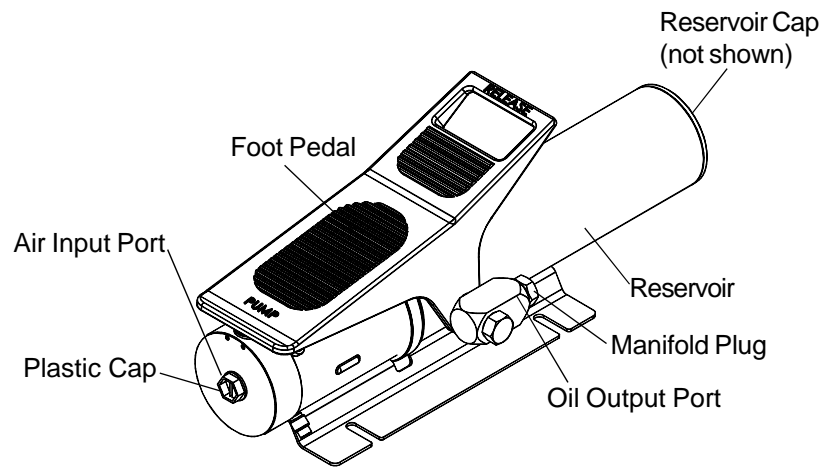


Figure 2 - Model B65426 Components

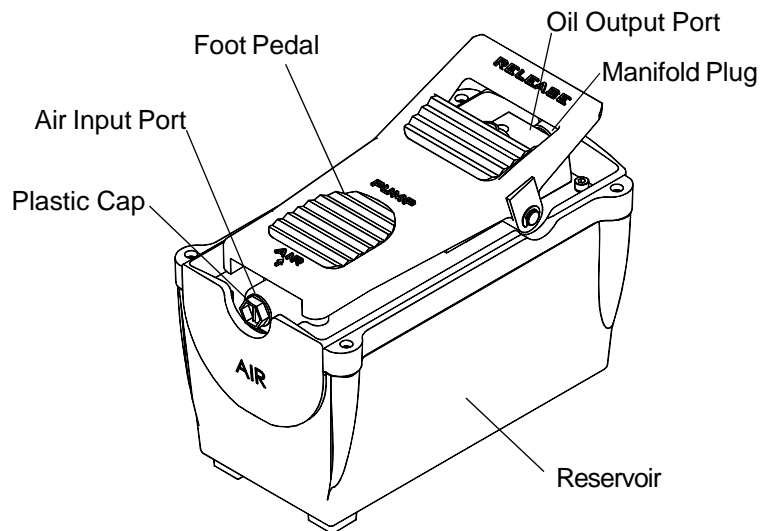


Figure 3 - Model B65427 Components

SAFETY INSTRUCTIONS

BEFORE USE

Replace shipping plug (red color) with air vent plug (black color) before use. (for model B65425 and B65427 only)

Note: Always check connections before using. Alteration of these products is strictly prohibited. Use only those adapters and attachments provided and approved by the manufacturer.

Note: Always secure threaded port connections with non-hardening pipe thread compound. Tighten securely to prevent accidental removal of components while in use. Take care not to introduce compound into port orifices. Familiarize yourself with the specifications and illustrations in this owners manual. Know your pump, its limitations and how it operates before attempting to use. Refer to Specification chart on page 2 for details of oil port thread size, usable oil capacity, and more.

WARNING

- Read and understand all warnings, instructions and owners manual information before attempting to use this equipment.
- Burst hazard exists if hose or connection pressure exceeds rated pressure.
- Do not exceed the rated capacity of this device.
- Use gauge or other load measuring instrument to verify load.
- Always inspect hoses and connections for damage prior to use.
- Always wear protective clothing and eye protection when operating this equipment.
- Always ensure that the chosen application is stable to work on and around.
- Do not work under a lifted load without adequately rated support devices such as jack stands.
- This device is not suitable for use as support device!
- Do not subject the pump and its components to shock loads.
- Do not connect to application which can return more oil to the reservoir than the pump reservoir can hold.
- Failure to heed these warnings may result in personal injury as well as property damage.

OPERATION

1. Remove plastic cap, connect air nipple to air input port before connecting air hose.
2. connect to suitable air supply, then connect to suitable application.
3. To operate pump, press on the horizontal portion of the foot pedal until desired pressure, load or position is reached. Always monitor pressure, load or position using suitable equipment. Pressure may be monitored by means of an optional manifold and gauge. Load may be monitored by means of a load cell and digital indicator. Correct application position can only be determined by the operator of the equipment.
4. To retract application, simply press the release valve by stepping on the raised, stirrup shaped portion of the foot pedal.

MAINTENANCE

1. Inspect hoses and connections daily. Replace damaged components immediately with Porto-Power Blackhawk replacement parts only.
2. Tighten connections as needed. Use non-hardening pipe thread compound when servicing connections.
3. Use only good quality hydraulic fluid. We recommend Hein-Werner HW93291 or equivalent.

When not in use or during storage

- a. Depressurize and disconnect hydraulic hoses from application.
- b. Wipe clean, thoroughly.
- c. Store in clean, dry environment. Avoid extreme temperatures.
- d. For transportation or long storage, replace air vent plug (black color) with shipping plug (red color). (for model B65425 and B65427 only)
- e. Shield pump with a protective cover.

MAINTENANCE (continued)

Adding Hydraulic Fluid

1. Depressurize and disconnect hydraulic hose from application.

2a. **For Model B65425 and B65427:**

With pump in it's upright, horizontal position, remove the air vent plug located on the top plate of the reservoir.

2b. **For Model B65426:**

With pump in it's vertical position, remove the reservoir cap located on the reservoir.

3. Use a small funnel to fill reservoir to within 3/4" (19mm) of the opening.

Note: Use only a good quality hydraulic jack fluid. **Never** use brake fluid, transmission fluid, turbine oil, motor oil, alcohol, glycerin etc. Use of other than good quality hydraulic oil will void warranty and damage the pump, hose, and application.

4. Wipe up any spilled fluid

5. Reinstall the air vent plug.

Changing Hydraulic Fluid

For best performance and longest life, replace the complete fluid supply at least once per year.

1. Depressurize and disconnect hydraulic hose from application.

2. Repeat #2 above, then pour used fluid into a sealable container.

4. Use a small funnel to fill reservoir to within 3/4" (19mm) of the opening.

5. Dispose of fluid in accordance with local regulations.

6. Fill with a good quality hydraulic oil as recommended above.

7. Reinstall air vent plug.

Lubrication

Use a light machine oil to lubricate pivot points, hinges etc.

Note: Never operate pump with release valve closed and disconnected from application. If operated in this condition, the hose and connections become pressurized. This increases burst hazard. Damage may occur to pump and its components

TROUBLESHOOTING

Symptom	Possible Causes	Corrective Action
Application will not extend, move or respond to pressurized fluid	<ul style="list-style-type: none"> • Overload condition 	<ul style="list-style-type: none"> • Remedy overload condition
Application responds to pressurized fluid, but system does not maintain pressure	<ul style="list-style-type: none"> • Overload condition • Hydraulic unit malfunction 	<ul style="list-style-type: none"> • Remedy overload condition • Contact Service Center
Application will not return fluid to pump (i.e. cylinder will not retract)	<ul style="list-style-type: none"> • Malfunctioning coupler, damaged application • Reservoir overfilled 	<ul style="list-style-type: none"> • Secure load by other means. Open release valve, depressurize pump and hose, remove coupler and/or application, then renew or replace • Secure load by other means. Open release valve, depressurize pump and hose, remove application, then drain fluid to proper level
Application will not fully extend (cylinder or spreader)	<ul style="list-style-type: none"> • Fluid level low 	<ul style="list-style-type: none"> • Secure load by other means. Open release valve, depressurize pump and hose, remove application, then ensure proper fluid level
Poor performance	<ul style="list-style-type: none"> • Fluid level low 	<ul style="list-style-type: none"> • Ensure proper fluid level

REPLACEMENT PARTS

Available Parts: Please refer to the Parts drawing when ordering parts. Not all components of the pump are replacement items, but are illustrated as a convenient reference of location and position in the assembly sequence. When ordering parts, give Model number, serial number and description below. Call or write for current pricing: SFA Companies 10939 N. Pomona Ave. Kansas City, MO 64153, U.S.A. Tel:(816)891-6390 Fax:(816)891-6599 E-Mail: sales@blackhawk-automotive.com

Model B65425 Replacement Parts

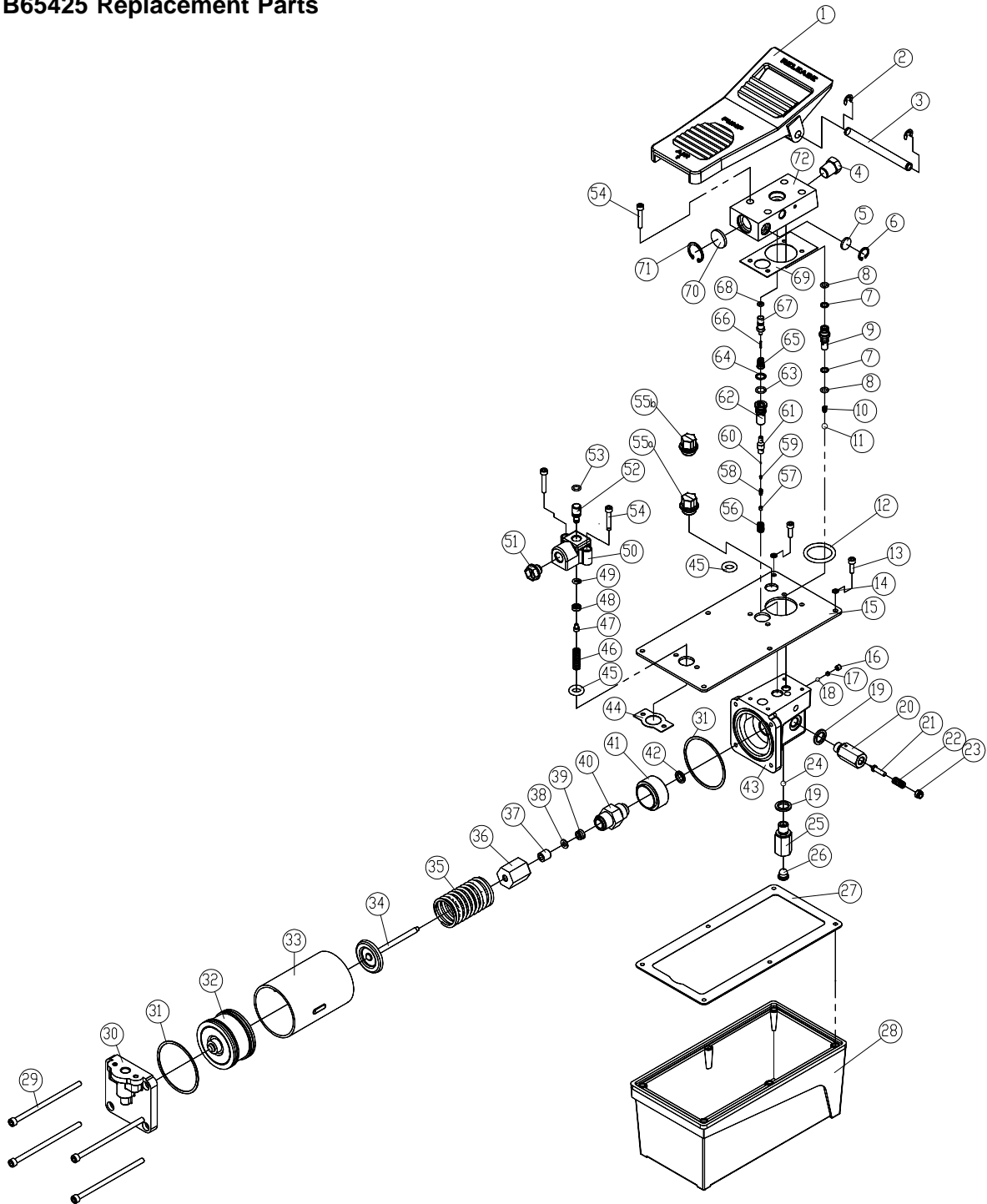


Figure 4 - Replacement Parts Illustration for B65425

Model B65425 Replacement Parts

Item	Part#	Description	Qty.	Item	Part#	Description	Qty.
1	A57-6-2001-108	Foot pedal	1	41	A57-6-1016-106	Washer	1
2	*	E-clip	2	42	H18-6-8103-104	Special washer	1
3	A57-6-2003-102	Foot pedal axle	1	43	A57-6-1001-204	Base	1
4	D05-6-1001-106	Manifold plug	1	44	A57-6-1605-105	Gasket	1
5	A57-6-3007-105	Noise suppressor	1	45	511-7-0140-200	O-ring	2
6	666-5-0160-107	C-clip	1	46	512-2-0092-101	Compression spring	1
7	*	Back-up ring	2	47	649-1-0040-007	Allen Screw	1
8	*	O-ring	2	48	A57-6-5004-109	Air entrance cap	1
9	A57-6-4002-201	Oil outlet valve	1	49	511-7-0053-104	O-ring	1
10	512-2-0043-108	Compression spring	1	50	A57-6-5001-103	Air entrance base	1
11	601-7-0009-001	Steel ball	1	51	A17-6-1105-103	Plastic cap (air)	1
12	511-7-0410-102	O-ring	1	52	A57-6-5003-107	Air entrance valve	1
13	649-1-0050-055	Allen Screw	6	53	511-7-0080-309	O-ring	1
14	*	Copper washer	6	54	649-1-0050-046	Allen Screw	6
15	A57-6-1603-202	Reservoir top plate	1	55a	A57-3-5007-107	Shipping plug (red)	1
				55b	A57-3-1900-109	Air vent plug (black)	1
16	644-1-0060-05311	Screw	1				
17	503-9-0050-106	Steel ball seat	1	56	512-2-0061-100	Compression spring	1
18	601-7-0006-005	Steel ball	1	57	644-1-0040-204	Screw	1
19	*	Special washer	2	58	*	Compression spring	1
20	A59-6-1017-102	High pressure valve	1	59	503-9-0035-100	Steel ball block	1
				60	601-7-0003-009	Steel ball	1
21	A17-6-1216-102	Valve stem	1				
22	512-2-0067-010	Compression spring	1	61	A57-6-3003-305	Release valve	1
23	A17-5-1603-300	Pressure adjust nut	1	62	A57-6-3004-307	Release valve seat	1
24	601-7-0008-009	Steel ball	1	63	*	O-ring	1
25	A59-6-1015-108	Oil entrance valve	1	64	*	Back-up ring	1
				65	552-2-0010-105	Compression spring	1
26	520-8-0134-101	Filter	1				
27	*	Gasket	1	66	*	Release valve pin	1
28	A57-6-1601-107	Reservoir	1	67	A57-6-3001-112	Release valve guide	1
29	649-1-0060-122	Allen Screw	4	68	*	O-ring	1
30	A57-6-1002-105	Motor cover	1	69	*	Gasket	1
				70	A17-6-1002-103	Noise suppressor	1
31	A17-6-2105-108	Gasket	2				
32	A17-4-2100-500	Air piston assy.	1	71	6 66-5-0250-108	C-clip	1
33	A57-6-1003-107	Cylinder	1	72	A57-6-4001-209	Oil manifold	1
34	A57-3-1011-108	Piston assy.	1	—	A57-3-9901-101	Repair kit	1
35	512-2-0410-017	Compression spring	1				
36	A57-6-1014-102	Piston cover	1	* Repair kit includes 2, 7, 8, 14, 19, 27, 39,			
37	A57-6-2023-108	Bushing	1	58, 63, 64, 66, 68, 69			
38	573-7-0120-105	Back-up ring	1				
39	*	U-cup	1				
40	A59-6-1013-105	Pump piston	1				

Model B65426 Replacement Parts

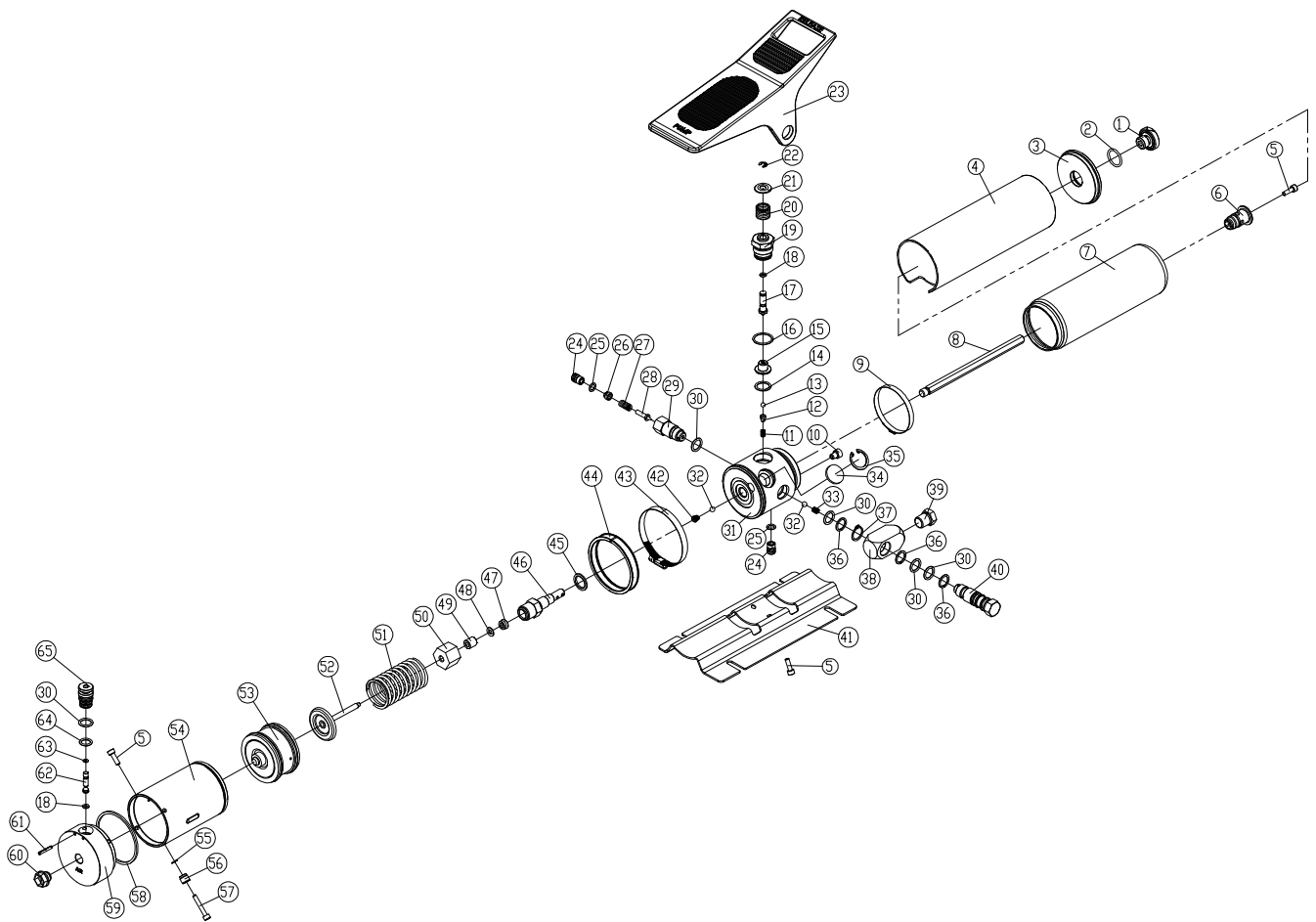


Figure 5 - Replacement Parts Illustration for B65426

Model B65426 Replacement Parts

Item	Part#	Description	Qty.	Item	Part#	Description	Qty.
1	A18-6-5011-101	Reservoir cap	1	36	*	Back-up ring	3
2	*	O-ring	1	37	667-5-0180-009	C-clip	1
3	A18-6-5012-204	Cover	1	38	A18-6-5002-100	Adapter	1
4	A18-6-5003-102	Cylinder	1	39	D05-6-1001-106	Manifold plug	1
5	649-1-0050-055	Screw M5x0.8x16L	5	40	A18-6-5001-209	Oil outlet valve seat	1
6	A18-6-5008-203	Cover adapter	1	41	A18-6-5009-104	Base plate	1
7	*	Reservoir	1	42	552-2-0008-108	Compressing spring D8.2x5.6x15L	1
8	A18-6-5004-205	Steel rod	1	43	A18-6-5028-108	Hose clamp	1
9	*	Hose clamp	1	44	A18-6-5014-107	Gasket	1
10	522-8-0113-107	Filter	1	45	*	Special Washer	1
11	512-2-0060-034	Compressing spring	1	46	A18-6-5013-105	Pump piston	1
12	503-9-0075-102	Steel ball block	1	47	*	U-cu	1
13	601-7-0007-007	Steel ball	1	48	*	Back-up ring	1
14	*	Copper washer	1	49	A27-6-2023-205	Bushing	1
15	A18-6-5006-209	Release valve	1	50	A18-6-5024-100	Piston cover	1
16	*	O-ring	2	51	512-2-0410-017	Compressing spring	1
17	A18-6-5005-106	Release bar	1	52	A18-3-5026-106	Piston assy.	1
18*	511-7-0050-300	O-ring	2	53	A17-4-2100-500	Air piston assy.	1
19	A18-6-5007-100	Release valve seat	1	54	A18-5-5016-105	Cylinder	1
20	511-2-0181-103	Compressing spring	1	55	*	Washer	4
21	A18-6-5023-108	Spring cover	1	56	A18-6-5030-105	Screw bushing	2
22	677-5-0050-105	E-clip	1	57	649-1-0050-046	Screw	2
23	A18-6-5021-104	Foot pedal	1	58	*	Washer	1
24	A17-6-2601-100	Screw D10.8x14.5L	2	59	A18-5-5017-107	Motor cover	1
25	*	O-ring	2	60	A17-6-1105-103	Plastic cap	1
26	A17-5-1603-300	Adjust screw	1	61	601-4-0030-059	Spring pin	2
27	512-2-0067-010	Compressing spring	1	62	A18-6-5019-107	Air entrance valve	1
28	A17-6-1216-102	Valve stem	1	63	*	O-ring	1
29	A18-6-5018-105	High pressure valve seat	1	64	*	O-ring	1
30	*	O-ring	5	65	A18-6-5020-102	Air entrance valve seat	1
31	A18-6-5010-200	Base	1	(*)	A18-3-9900-104	Repair kit	-
32	601-7-0005-009	Steel ball D1/4"	2	(*) Repair kit includes item # 2, 7, 9, 14, 16, 18, 25, 30, 36, 45, 47, 48, 55, 58, 63 & 64			
33	512-2-0063-104	Compressing spring	1				
34	A17-6-1002-103	Noice suppressor	1				
35	666-5-0250-108	C-clip	1				

Model B65427 Replacement Parts

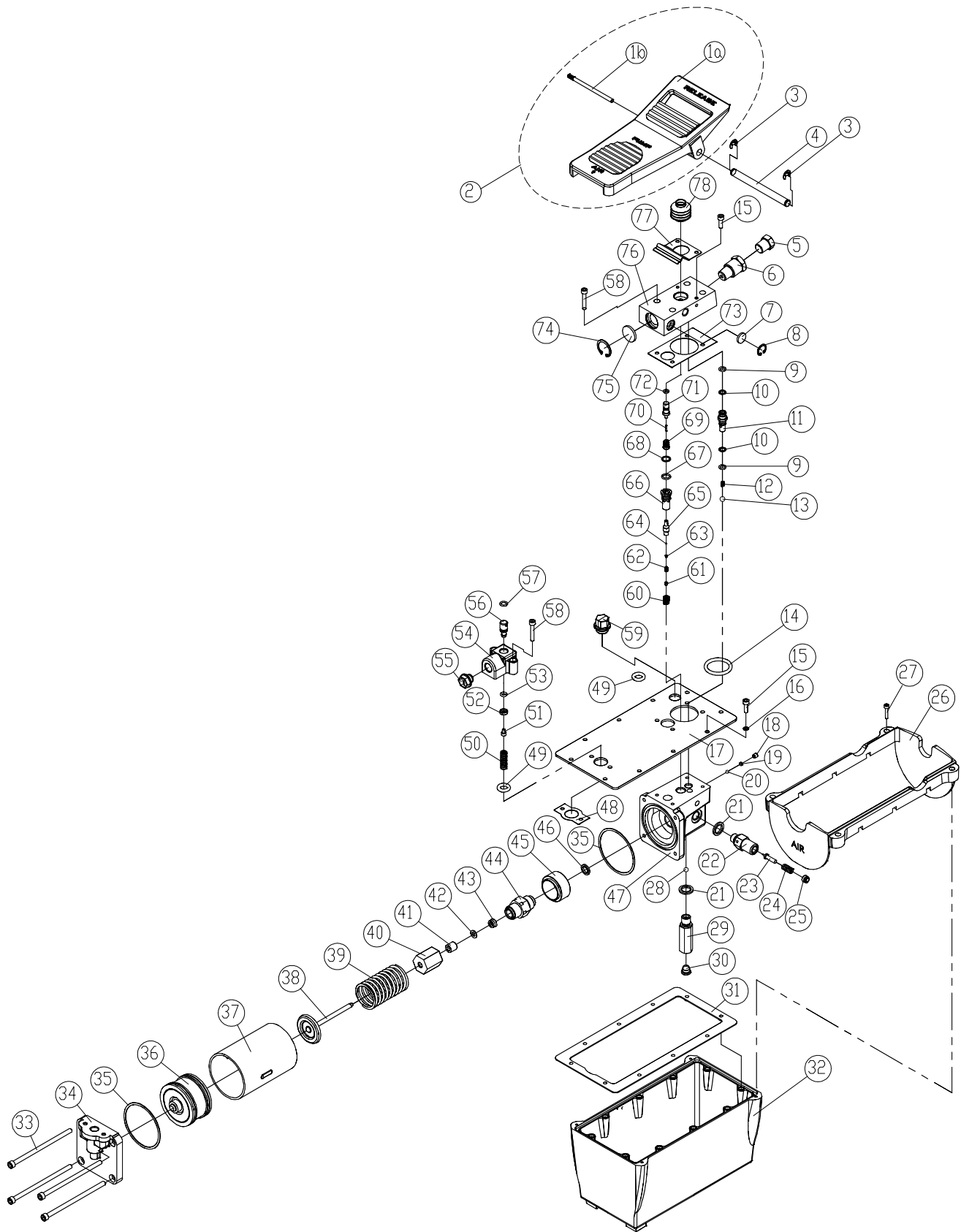


Figure 6 - Replacement Parts Illustration for B65427

Model B65427 Replacement Parts

Item Part#	Description	Qty.	Item Part#	Description	Qty.	
1a	N/A	1	41	A27-6-2023-205	Bushing	1
1b	N/A	1	42	573-7-0120-105	Back-up ring	1
2	A57-4-6003-100	-	43	*	U-cup	1
3	*	2	44	A58-6-1013-107	Pump piston cylinder	1
4	A57-6-2003-102	1	45	A57-6-1016-106	Spacer	1
5	D05-6-1001-106	1				
			46	H18-6-8103-104	Crush washer	1
6	A58-6-6008-109	1	47	N/A	Base	1
7	A57-6-3007-105	1	48	A57-6-1605-105	Gasket	1
8	666-5-0160-107	1	49	511-7-0140-200	O-ring	2
9	*	2	50	512-2-0092-101	Compression spring	1
10	*	2				
			51	649-1-0040-007	Allen screw (M4x0.7x6L)	1
11	A57-6-4002-201	1	52	A57-6-5004-109	Air intake cap	1
12	512-2-0043-108	1	53	511-7-0053-104	O-ring	1
13	601-7-0009-001	1	54	A57-6-5001-103	Air manifold	1
14	511-7-0410-102	1	55	A17-6-1105-103	Plastic cap (air)	1
15	649-1-0050-055	12				
			56	A57-6-5003-107	Air intake valve	1
16	*	10	57	511-7-0080-309	O-ring	1
17	A58-5-1603-102	1	58	649-1-0050-046	Allen screw (M5x0.8x30L)	6
18	644-1-0060-05311	1	59a	A57-3-5007-107	Shipping plug (red)	1
19	503-9-0050-106	1	59b	A57-3-1900-109	Air vent plug (black)	1
20	601-7-0006-005	1	60	512-2-0061-100	Compression spring	1
21	*	2	61	644-1-0040-204	Screw	1
22	A58-6-1017-105	1	62	*	Compression spring	1
23	A17-6-1216-102	1	63	503-9-0035-100	Steel ball seat	1
24	512-2-0067-010	1	64	601-7-0003-009	Steel ball	1
25	A17-5-1603-300	1	65	A57-6-3003-305	Release valve	1
26	A58-6-2201-103	1	66	A57-6-3004-307	Release valve seat	1
27	649-1-0040-108	4	67	*	O-ring	1
28	601-7-0008-009	1	68	*	Back-up ring	1
29	A58-6-1015-101	1	69	552-2-0010-105	Compression spring	1
30	520-8-0134-101	1	70	*	Release valve pin	1
31	*	1	71	A57-6-3001-112	Release valve cap	1
32	A58-5-1602-100	1	72	*	O-ring	1
33	649-1-0060-122	4	73	*	Gasket	1
34	A57-6-1002-105	1	74	666-5-0250-108	C-clip	1
35	A17-6-2105-108	2	75	A17-6-1002-103	Noise suppressor	1
36	A17-4-2100-500	1	76	A57-6-6004-104	Oil manifold	1
37	A57-6-1003-107	1	77	A57-6-5101-107	Detent spring	1
38	A27-3-2200-102	1	78	A57-6-6005-106	Dust boot	1
39	512-2-0410-017	1	—	A58-3-9903-102	Repair kit	1
40	A57-6-1014-102	1				

* Repair kit includes 3, 9, 10, 16, 21, 31, 43, 62, 67, 68, 70, 72, 73

ONE YEAR LIMITED WARRANTY

For a period of one (1) year from date of purchase, SFA Companies will repair or replace, at its option, without charge, any of its products which fails due to a defect in material or workmanship under normal usage. This limited warranty is a consumer's exclusive remedy.

Performance of any obligation under this warranty may be obtained by returning the warranted product, freight prepaid, to SFA Companies Warranty Service Department, 10939 N. Pomona Ave., Kansas City, MO 64153.

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(1) THE CONSUMER'S SOLE AND EXCLUSIVE REMEDY SHALL BE THE REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCTS AS DESCRIBED ABOVE.

(2) SFA COMPANIES SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGE OR LOSS WHATSOEVER.

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