

MANUAL

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FEATURES:

- 90 psig air pressure develops 10,000 psig hydraulic pressure.
- Foot pump provides hands free pumping and release of load.
- Designed to be used with single acting cylinders only.
- Internal overload valve.
- Durable aluminum reservoir.
- Release lock function enables pedal to be locked in the released position without having to depress and hold the pedal.
- Hydraulic filter prevents contaminants from entering into the hose and ram and also from returning into the pump.



SPECIFICATIONS

Maximum Output Pressure	10,000 psig
Air Input Range.....	90 to 175 psig
Usable Oil Capacity.....	98 cu. in.
Flow Rate, No Load	42 cu. in/min.
Flow Rate, With Load.....	8.5 cu. in/min.
Air Thread Connection	1/4" NPT
Hydraulic thread Connection.....	3/8" NPT
Valve Function	Advance/Hold/Retract
Length	10.312"
Width	5.312"
Height	7.312"
Net Weight	19 Lbs.

WARNING INFORMATION



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

WARNING

WARNING: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



IMPORTANT: READ THESE INSTRUCTIONS BEFORE OPERATING

BEFORE USING THIS DEVICE, READ THIS MANUAL COMPLETELY AND THOROUGHLY, UNDERSTAND ITS OPERATING PROCEDURES, SAFETY WARNINGS AND MAINTENANCE REQUIREMENTS.

It is the responsibility of the owner to make sure all personnel read this manual prior to using the device. It is also the responsibility of the device owner to keep this manual intact and in a convenient location for all to see and read. If the manual or product labels are lost or not legible, contact Sunex for replacements. If the operator is not fluent in English, the product and safety instructions shall be read to and discussed with the operator in the operator's native language by the purchaser/owner or his designee, making sure that the operator comprehends its contents.



THE NATURE OF HAZARDOUS SITUATIONS

WARNING

The use of portable automotive lifting and support devices is subject to certain hazards that cannot be prevented by mechanical means, but only by the exercise of intelligence, care, and common sense. It is therefore essential to have owners and personnel involved in the use and operation of the equipment who are careful, competent, trained, and qualified in the safe operation of the equipment and its proper use. Examples of hazards are dropping, tipping or slipping of loads caused primarily by improperly secured loads, overloading, off-centered loads, use on other than hard level surfaces, and using equipment for a purpose for which it was not designed.

METHODS TO AVOID HAZARDOUS SITUATIONS

WARNING

-  Read, study, understand and follow all instructions before operating this device.
-  Wear eye protection that meets ANSI Z87.1 and OSHA standards (users and bystanders).
- Do not use hoses in systems exceeding 10,000 psig (700 bar).
- The system operating pressure must not exceed the pressure rating of the lowest rated component in the system.
- Avoid sharp bends and kinks when routing hydraulic hoses.
- Do not drop heavy objects on hose.
- Do not use the hydraulic hose to carry a hydraulic component.
- Keep hydraulic equipment away from flames and heat.
- Keep hose away from sharp objects and eliminate abrasion.
- Do not modify or alter this device.
- Inspect the system before each use.
- Replace questionable components immediately.
- Use only compatible fluids.
- Make sure quick disconnect fittings are correctly and completely fastened together. Quick disconnect couplers should be hand tightened only. Never use tools to tighten quick disconnect fittings.
- Never attempt to disconnect couplers while under system pressure.
- Be sure pressure system and setup are stable before using.
- This product may contain one or more chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. *Wash hands thoroughly after handling.*
- Failure to heed these warnings may result in personal injury and/or property damage.

CONSEQUENCES OF NOT AVOIDING HAZARDOUS SITUATIONS

WARNING

Failure to read this manual completely and thoroughly, understand its OPERATING INSTRUCTIONS, SAFETY WARNINGS, MAINTENANCE INSTRUCTIONS and not comply with them, and neglecting the METHODS TO AVOID HAZARDOUS SITUATIONS could cause accidents resulting in serious or fatal personal injury and/or property damage.

OWNER'S MANUAL

SETUP INSTRUCTIONS



This is the safety alert symbol used for the SETUP INSTRUCTIONS section of this manual to alert you to potential personal injury hazards. Obey all instructions to avoid possible injury or death.

Refer to parts breakdown on page 5 and 6:

1. Remove the plug fittings in the air and hydraulic access holes. The threaded air inlet hole is at the end of the pump where the word "pump" is on the foot pedal. The threaded hydraulic hole is at the opposite end of the pump. Remove any remnants of teflon tape or thread sealer from the holes before installing hoses or air disconnect fittings.
2. Make sure the hose fitting threads are not cross threaded. Use at least 1-1/2 wraps of teflon tape (or suitable sealant) on the threads. Make sure the first complete thread is free from tape or sealant so they do not enter and contaminate the hydraulic system.
3. Install the air quick disconnect configuration of your choice in the threaded hole back by the foot pump pedal labeled "pump". Apply teflon tape or sealant to the threads as instructed in step 2 before installation. At the other end of the pump, install the hydraulic hose in the same manner.
4. If tubing is used instead of hose, make sure the tubing is supported. Unsupported tubing can lead to premature fitting failure. Always hard mount valves and gauges and never allow tubing to support them. Place tube supports 4 to 7 inches behind the fitting.
5. The top forward section of the pump includes an air vent screw (#81) that is closed during shipment. The screw must be turned counter-clockwise two complete turns before the pump is operated. The pump will not work to its maximum efficiency unless the air vent screw (#81) is opened.
6. An in-line filter/regulator/lubricator should be installed close to pump. Add a few drops of SAE 30 oil to the air intake weekly if no lubricator is used or when pump will be idle for a long time.

OPERATING INSTRUCTIONS



This is the safety alert symbol used for the OPERATING INSTRUCTIONS section of this manual to alert you to potential personal injury hazards. Obey all instructions to avoid possible injury or death.

1. Determine the layout of your hydraulic system based on the work to be performed. If the pump is used with a ram in collision repair work or in a press as a power source, there will most likely not be a need to consider installing a flow control valve. If the pump is used with a ram that activates a shop crane boom or any other mechanical leverage that would increase the rate of descent of such leverage when the pump pedal is released, install a flow control valve between the pump and the ram.

IMPORTANT: Before using the pump under load, become familiar with operating the foot pump. Depressing the foot pedal end marked "pump" activates the ram. To activate the ram a small distance, it is necessary to use incremental taps of your foot on the foot pedal until the ram reaches the desired distance. Retracting the ram is accomplished by depressing the foot pedal end marked "RELEASE". The pump is equipped with a two speed release mechanism. Gently depressing the foot pedal end marked "RELEASE" retracts the ram slower than if you depress the pedal all the way down. If you want to retract the ram slower than the low speed release, use gentle incremental taps of your foot on the "RELEASE" pedal.

2. Be sure hoses do not have cracks, kinks, cuts or other damage which might cause the hoses to leak. If hoses include spring guards, make sure the springs protect the crimped areas of each end of the hose.
3. Hose should not be twisted or bent too sharply. The bend radius should not be less than nine times the outside diameter of the hose. Always use as few bends as possible.
4. Make sure all hose ends, couplers, or union ends are clean and threads are in good condition.
5. Make sure all hose connections between pump and rams are tight and leak free. Do not over-tighten connections. Excessive tightening may cause premature thread or fitting failure.
6. When using quick disconnect fittings, make sure fittings are correctly and completely fastened together.

PREVENTATIVE MAINTENANCE



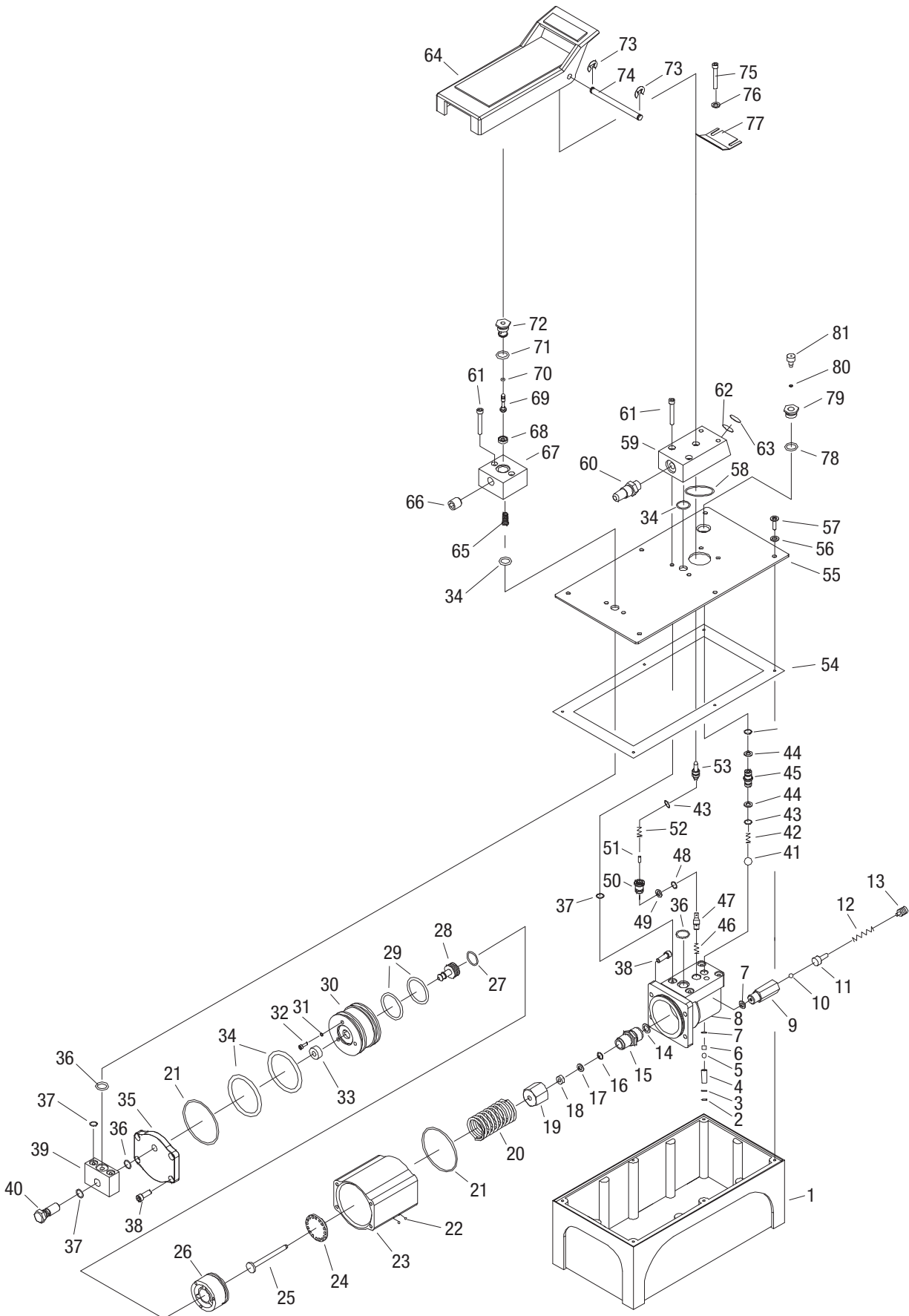
This is the safety alert symbol used for the PREVENTATIVE MAINTENANCE section of this manual to alert you to potential personal injury hazards. Obey all instructions to avoid possible injury or death.

1. Always store the pump in a well protected area where it will not be exposed to inclement weather, corrosive vapors, abrasive dust, or any other harmful elements. The pump must be cleaned of water, snow, sand, grit, oil, grease or other foreign matter before using.
 2. Keep components clean at all times. Use every precaution to guard against dirt entering the system.
 3. Cover couplers with dust caps when not connected to the system. All coupler threads must be clean and lubricated regularly.
 4. Leave hydraulic hoses in the carton until needed.
 5. Store hoses away from direct sunlight, moisture or temperatures above 75° F (24° C) or below 50°F (10° C).
 6. Do not stack hoses. The weight of the pile may flatten hoses on the bottom. Hang the hoses.
 7. Inspect hoses and connections daily. Replace damaged components as needed.
 8. Over prolonged usage, hydraulic fluid will leak from the quick disconnect connections, reducing the original hydraulic fluid level in the pump's reservoir. To fill the fluid level in the reservoir to the proper height, follow these steps:
 - a. Use only good quality hydraulic jack oil. Never use brake fluid, transmission fluid, motor oil, alcohol or glycerin. Use of other than good quality hydraulic jack oil voids warranty.
 - b. Disconnect the hydraulic hose and air source from the pump.
 - c. With the pump in its normal position, remove the air vent screw (#81) by turning it in a counterclockwise direction until removed from the pump.
 - d. Place a small funnel in the air vent screw (#81) opening and fill the pump's reservoir to within 1/4" of the opening.
 - e. Replace the air vent screw (#81) by turning it in a clockwise direction until tight. Then turn the air vent screw (#81) in a counterclockwise direction two complete turns.
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TROUBLESHOOTING

This unit is virtually trouble free. However if poor performance is noted, check the following:

1. Check to see the shop air supply is between 90 to 175 psig at no less than 7.8 cfm. The pressure should be checked at the pump's connection to the shop's air line.
2. Check to see the pump's reservoir is filled to the required height. See step #8 in the PREVENTATIVE MAINTENANCE section of this manual for complete information on proper fluid level and specified fluid.
3. Check to see the air vent screw (#81) on top of the pump is opened two full turns from its stop position by turning it in a counterclockwise direction. Refer to step #5 of the SETUP section of this manual for full details.
4. Check to see that all hydraulic and air components in the SETUP section, including quick disconnect components, are properly and fully connected.



PARTS LIST AND DRAWING

Index No.	Part No.	Description	Qty.	Index No.	Part No.	Description	Qty.
1	RS499801	Oil Reservoir	1	42	*	Spring	1
2	*	Gasket	1	43	*	O-Ring	3
3		Filter	1	44	*	Nylon gasket	2
4		Oil pipe	1	45		Valve Connector	1
5	*	Steel ball	1	46	*	Spring	1
6		Valve block	1	47	RS499847A	Valve Assembly (incl. #47-51)	1
7	*	Copper washer	2	48	*	O-Ring	1
8		Valve	1	49	*	Nylon gasket	1
9	RS499809A	Safety valve (incl. #9-13)	1	50		Release Valve Seat	1
10	*	Steel ball	1	51		Thimble	1
11		Ball seat	1	52	*	Spring	1
12	*	Spring	1	53		Oil Release Valve Rod	1
13		Bolt	1	54	RS499854	Gasket	1
14	*	Copper washer	1	55		Panel	1
15	RS499815	Pump cylinder	1	56	*	Copper washer	6
16	*	Y-seal	1	57	RS499857	Bolt (incl. #56-57)	6
17	*	Nylon gasket	1	58	*	O-Ring	1
18	*	Copper washer	1	59	RS499859	Fixing Base	1
19	RS499819	Nut	1	60		Exhaust Muffler	1
20	RS499820	Spring	1	61		Bolt	4
21	*	O-Ring	2	62		Round Filter	1
22	*	Steel Ball	4	63	*	Gasket	1
23	RS499823	Air pump housing	1	64	RS499864	Pedal	1
24	*	Washer	1	65	*	Spring	1
25	RS499825	Cylinder pump	1	66		Coupler	1
26		Piston	1	67	RS499867	Valve	1
27	*	O-Ring	1	68	*	Seal	1
28	RS499828	Air Shuttle valve	1	69		Air Valve Rod	1
29	*	O-Ring	2	70	*	O-Ring	1
30	RS499830	Piston	1	71	*	O-Ring	1
31	*	O-Ring	3	72		Coupler	1
32		Bolt	3	73		Snap Ring	2
33		Fixing base	1	74	RS499874	Pin (including #73 (2), 74)	1
34	*	O-Ring	2	75		Bolt	2
35		Rear cover	1	76		Washer	2
36	*	O-Ring	5	77		Lock blade	1
37	*	O-Ring	7	78	*	Seal	1
38		Bolt	8	79		Breather Plug	1
39		Connect Valve	1	80	*	O-Ring	1
40		Bolt	1	81		Air Vent Screw	1
41	*	Steel ball	1		RS4998PLK	Label Kit (not shown)	1

* Only available in Repair Kit RS4998SK

Only index numbers identified by a part number are available separately.