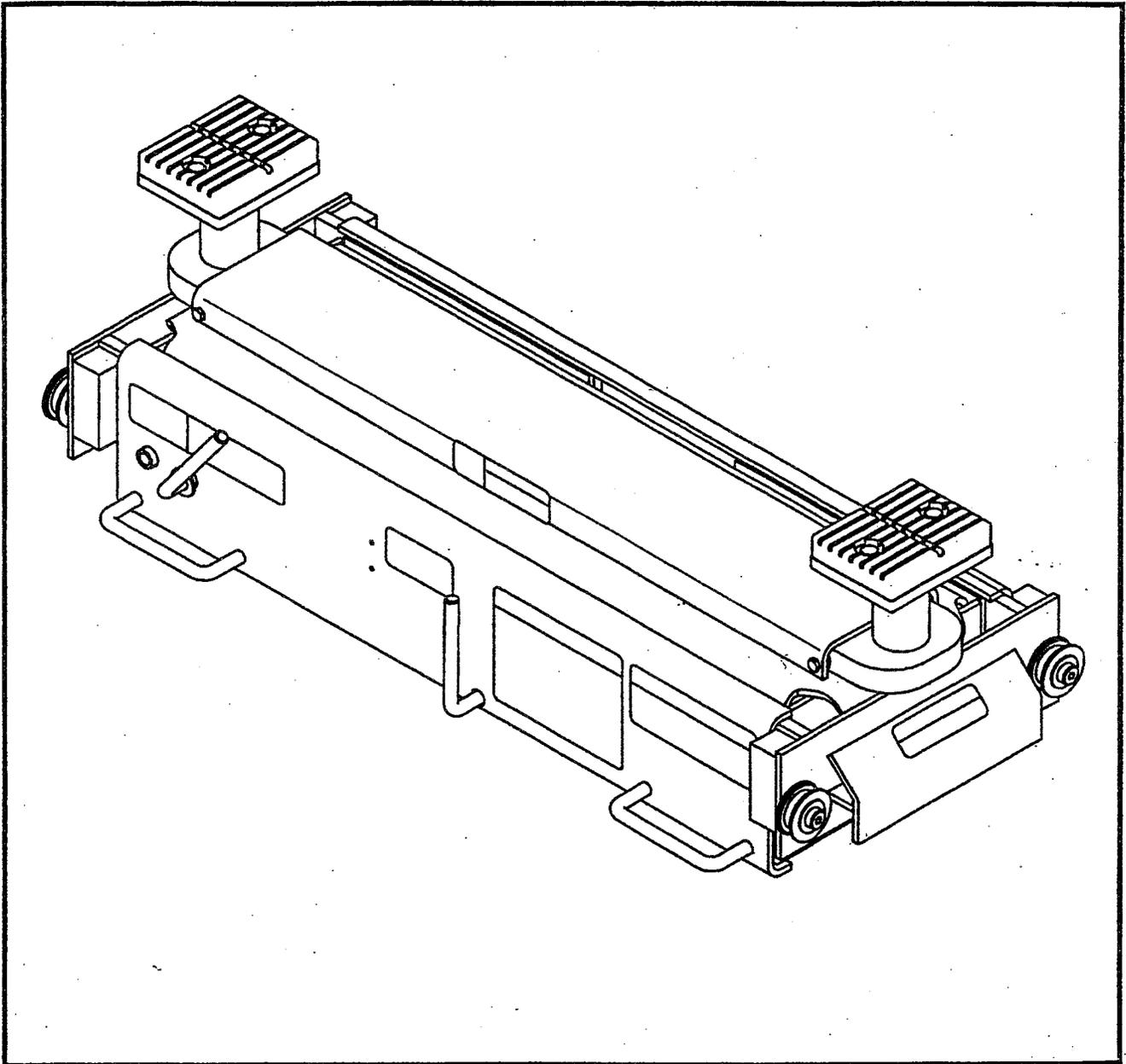

Branick[®]
INDUSTRIES, Inc.

8600 Series
8900 Series
Rolling Air Jacks

Installation, Operation
and Repair Parts
Information



- NOTICE -

**AIR SUPPLY MUST HAVE IN-LINE FILTER/REGULATOR/LUBRICATOR
(NOT INCLUDED) TO VALIDATE THE ROLLING AIR JACK WARRANTY**

Branick Industries, Inc. • 4245 Main Avenue • P.O. Box 1937 • Fargo, North Dakota 58103

CAUTION

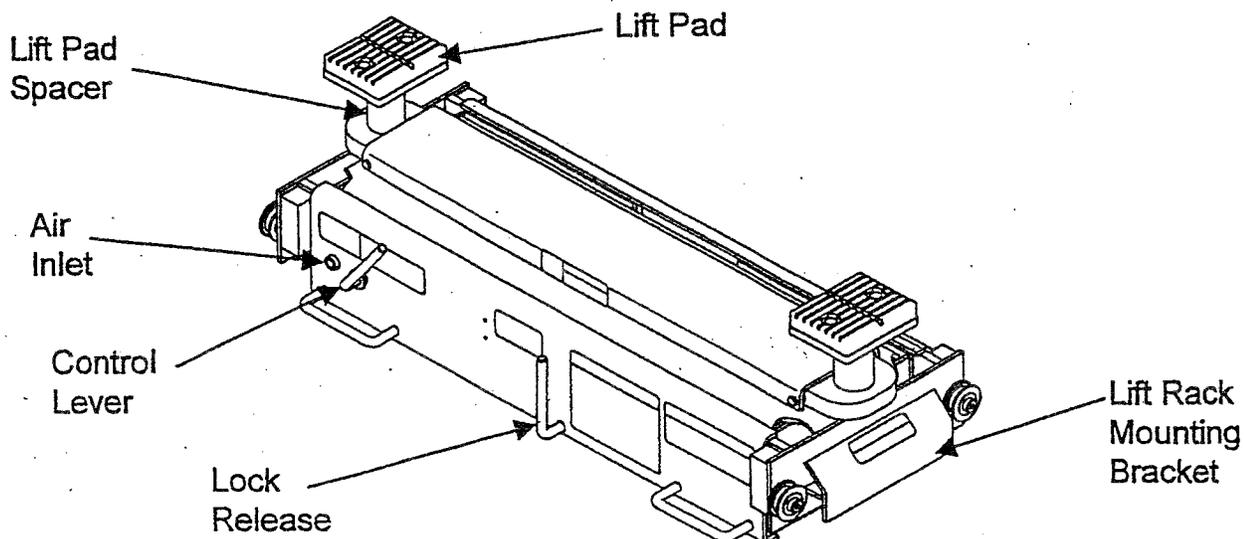
- ◆ Before using this product, read and fully understand the operating instructions and all decals on the product. This is necessary to prevent injury to the operator and damage to the product.
- ◆ Roll jack forward before moving vehicle on or off lift.
- ◆ Do not attempt to use this jack for anything other than it's intended purpose.
- ◆ If jack begins to tilt as the vehicle is raised, STOP! Lower the jack and reposition the vehicle.
- ◆ Do not use this jack if it is visibly worn, distorted or damaged.
- ◆ Maximum air operating pressure not to exceed 120 p.s.i. Air supply must have in-line filter/regulator/lubricator.
- ◆ Always wear appropriate eye protection.

WARNING

- ◆ Maximum lift capacity of 8600 series jack is 6000 lbs. (2722 kg)
Maximum lift capacity of 8900 series jack is 9000 lbs. (4082 kg)
Exceeding this could result in severe personal injury or death.
- ◆ Lift vehicle at manufacturer's recommended pick-up points only.
Vehicle weight must be evenly distributed on each jack lift pad.
- ◆ Keep fingers and hands clear of all pinch points at all times.

SPECIFICATIONS

Lift Capacity 8600 Series.....	6000 lbs. (2722 kg)
Lift Capacity 8900 Series.....	9000 lbs. (4082 kg)
Maximum Air Pressure.....	120 p.s.i. (8.25 bar)
Lift Height.....	10 inches (254 mm)
Lift Pad Spread.....Min.....	33 inches (838 mm)
Max.....	50 inches (1270 mm)



INSTALLATION

- 1) Install a 1/4 NPT male quick-disconnect coupling (not included) in air inlet to match shop fittings. Install an in-line filter/regulator/lubricator (not included) within 20 feet of jack. Operating pressure 80-120 p.s.i.
- 2) Install lift rack mounting brackets per instructions included with brackets.

NOTE:

Check each jack Mounting Bracket application decal to be certain the Mounting Brackets and the model lift rack on which it is installed are compatible.

- 3) Place jack assembly on lift rack rails.

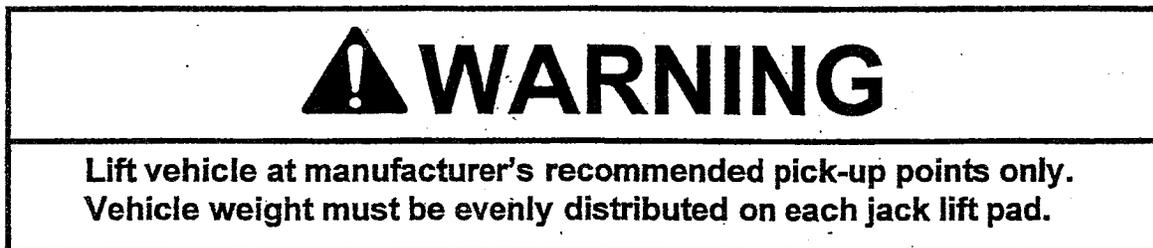
OPERATION

NOTE:

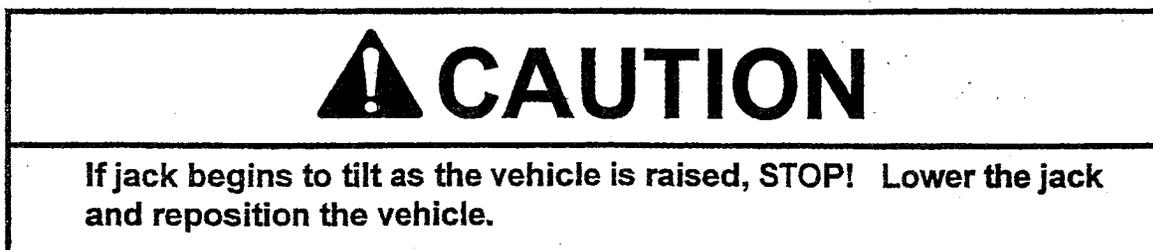
Before lifting a vehicle, operate the jack through a couple of cycles to become familiar with the controls.



- 1) Roll jack forward before moving vehicle on lift rack. Be sure vehicle is centered on rack, apply parking brake and chock wheels.
- 2) Roll jack to the vehicle manufacturer's recommended pick-up points. Extend Lift Pad Arms to proper lift points. Use Lift Pad Spacers if necessary.



- 3) Raise jack by moving the Control Lever to the "RAISE" position.



- 4) Raise vehicle to desired height.
- 5) To lower jack, hold the Lock Release Lever to the left while moving the Control Lever to the "LOWER" position. If jack does not lower, raise it slightly while holding the Lock Release Lever to the left until you feel the lock move past the detent, then continue to lower jack.
- 6) Lower jack completely, slide Lift Pad Arms in and remove Lift Pad Spacers (if used). Roll jack forward before moving vehicle off rack.

MAINTENANCE

DAILY - Inspect jack and it's components for damage or excessive wear. Replace parts as required (see repair parts).

DAILY - Inspect air/hydraulic system for leaks.
Check in-line lubricator oil level.

ANNUALLY - Check hydraulic pump fluid level (see below).

FLUID LEVEL CHECK & FILL PROCEDURE

- 1) Raise jack all the way up.
- 2) Locate the two 1/4" spring pins in the pivot pin blocks. Using a 1/4" punch, drive the spring pins into the pivot pins. Remove the pivot pins and be sure to punch the spring pins out and save for reassembly (Fig. 1).
- 3) Remove the two 1/2" allen head screws (Fig. 1).
- 4) Remove the top section of the jack.
- 5) Completely lower the jack lift arms.
- 6) Block up the "cylinder end" of jack about 6 inches.
- 7) Wipe area around filler plug to prevent contamination of oil. Remove filler plug and check oil level (Fig. 2). Oil level should be at the top of the filler plug hole.
- 8) Fill as required with ATF, Dextron II, or 5605 oil. Take care to prevent contamination during fill.
- 9) Remove blocks and level jack. Top off fluid to the top of filler plug hole.
- 10) Reinstall plug, **hand tighten only**.

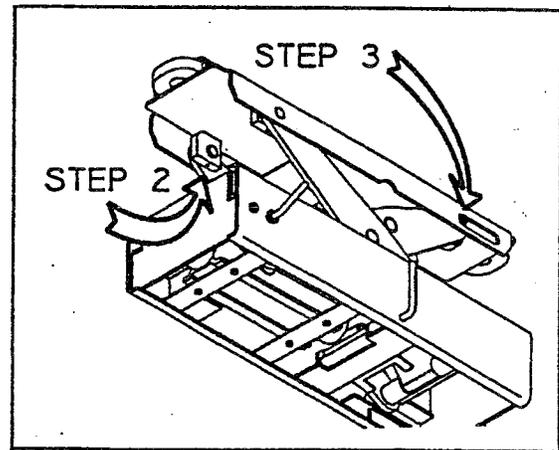


Fig. 1

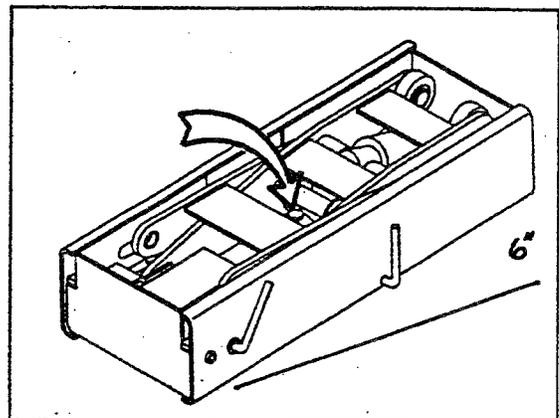


Fig. 2

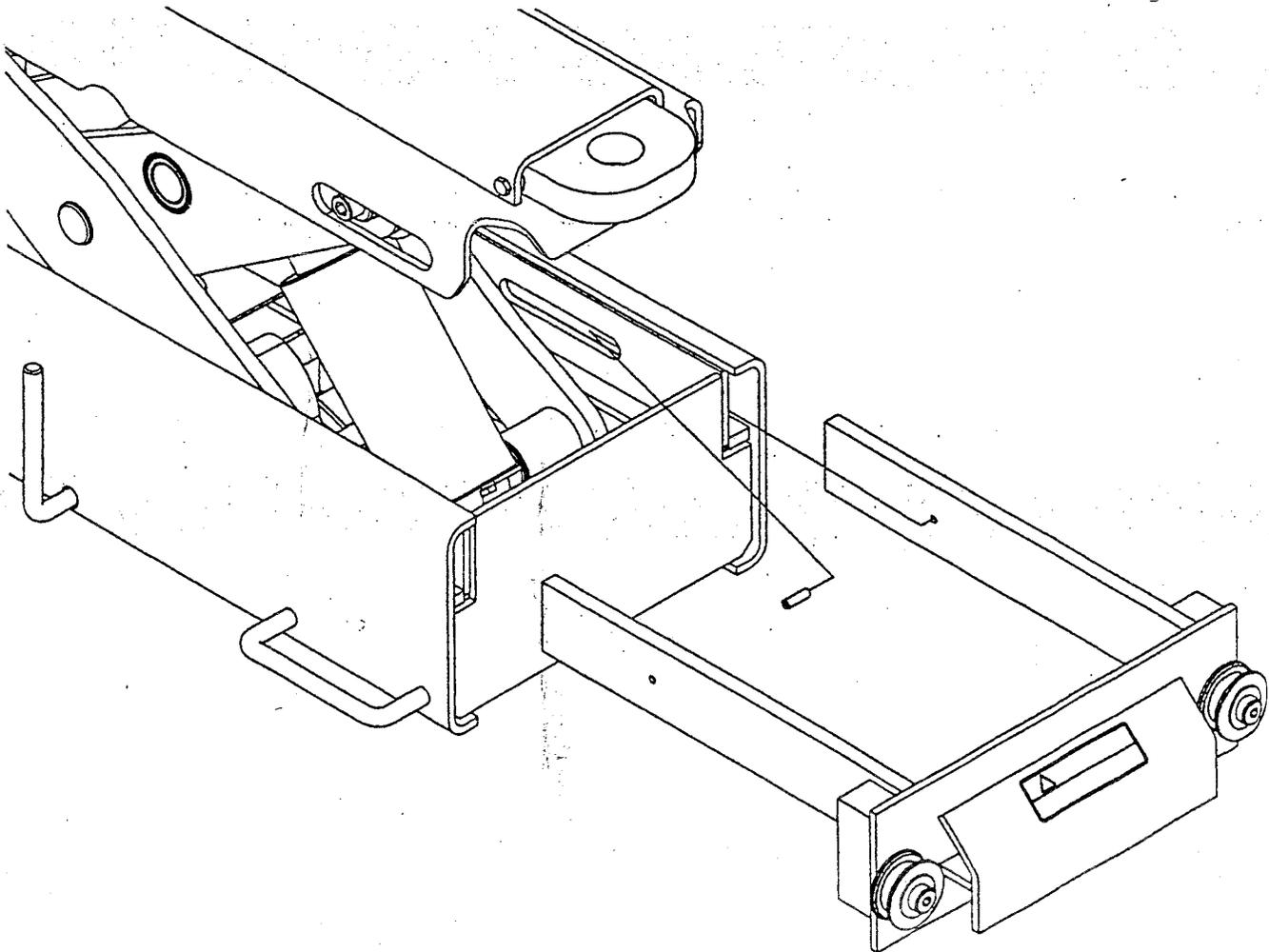
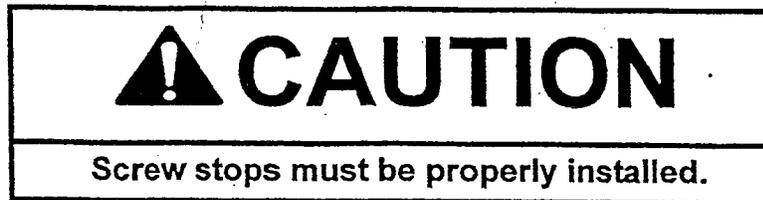
MOUNTING BRACKETS

FOR

Wheeltronic Style Lifts

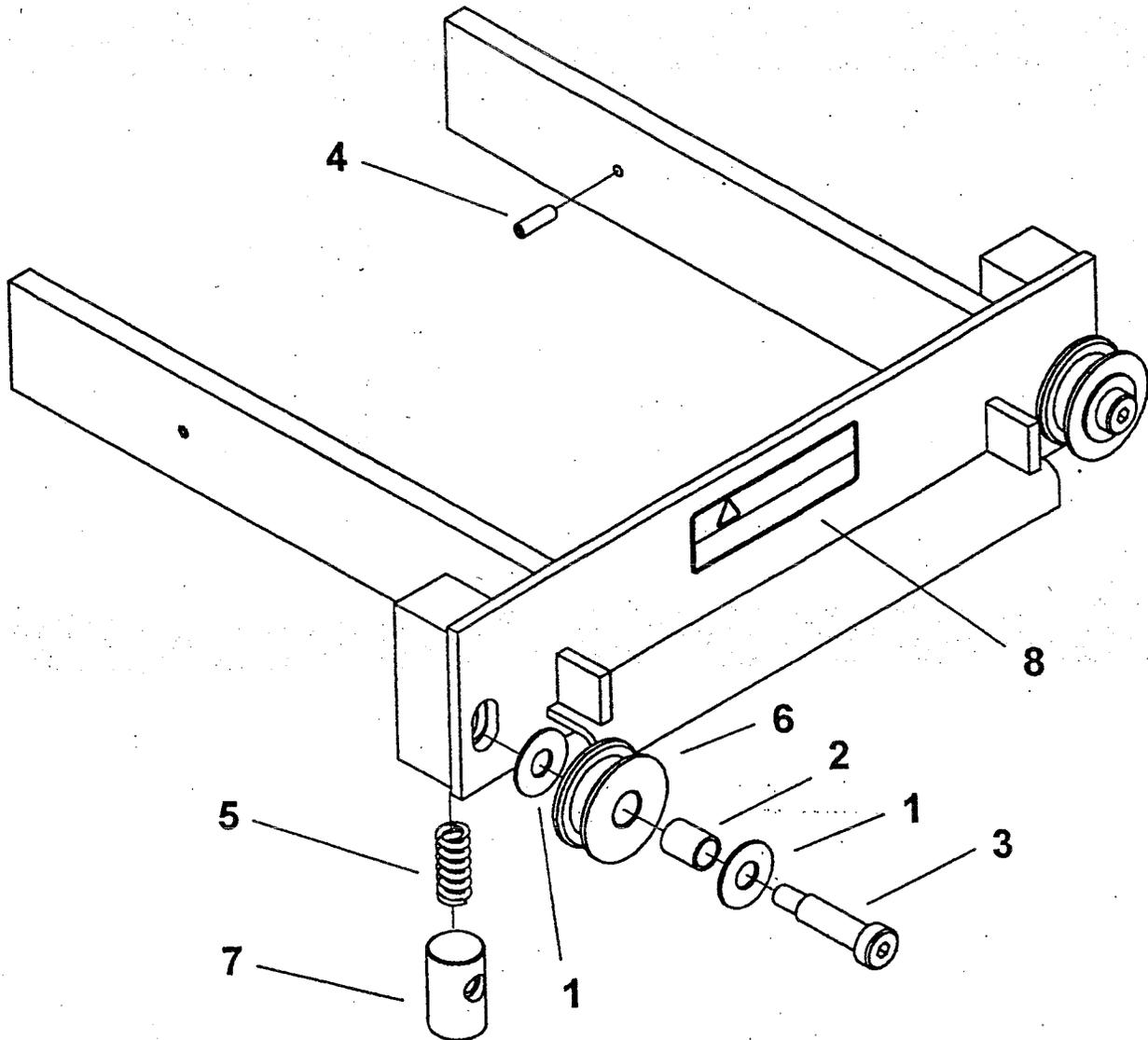
INSTALLATION

- 1) Lift jack all the way up.
- 2) Remove the two 1/4" socket setscrew stops from the mounting brackets.
- 3) Slide mounting bracket into jack frame.
 - a) Installations with lift runways less than 36 inches; setscrews do not need to be reinstalled.
 - b) Installations with lift runways between 36-43 inches wide reinstall setscrews as shown.



P/N: 81-0032B

MOUNTING BRACKET REPAIR PARTS



ITEM	PART NO	QTY	DESCRIPTION
1	108-144	4	Nylon Washer
2	20-0006	2	Sleeve Bushing
3	50-0026	2	1/2 X 1-1/2 Hex Socket Head Shoulder Screw
4	50-0069	2	1/4-20 X 7/8 Socket Set Screw
5	55-0013	2	Spring
6	73-0490	2	Roller
7	73-0510	2	Roller Bar
8	80-0094	1	Decal

SPX Corporation
 2121 West Bridge Street
 Owatonna, MN 55060 USA
 Phone: (507) 455-7100
 Tech. Services: (800) 477-8326
 Fax: (800) 765-8326
 Order Entry: (800) 541-1418
 Fax: (800) 288-7031

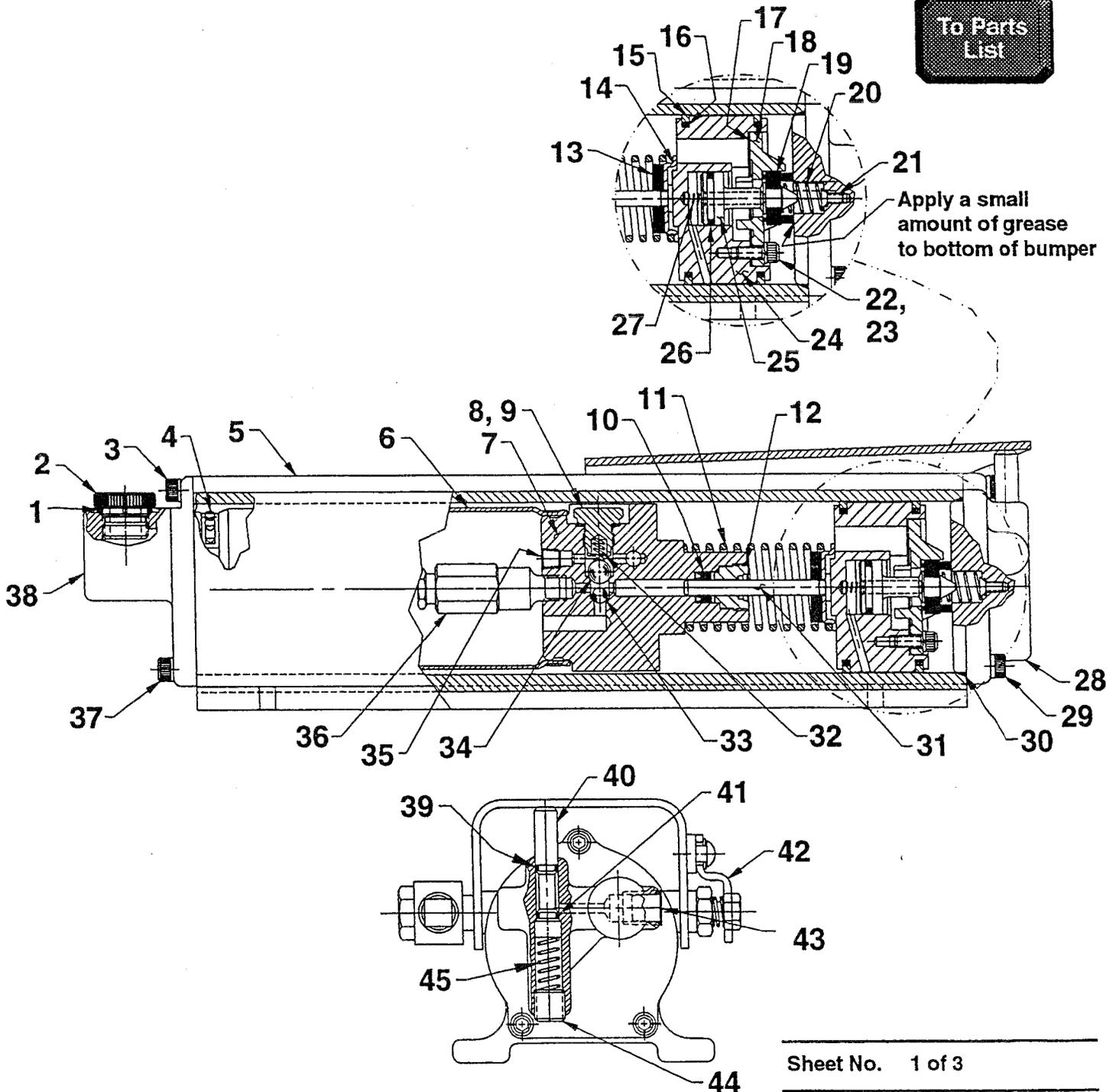
International Sales: (507) 455-7150
 Fax: (507) 455-7122
 Internet Address:
<http://www.powerteam.com>

Parts List for:

63-0005
 63-0012

MODEL B AIR/HYDRAULIC PUMP TUBE STYLE

To Parts List



Sheet No. 1 of 3

Rev. 8 Date: 21 Sept. 1999

Parts List, Form No. 101849, Back sheet 1 of 3

Item No.	Part No.	No. Req'd	Description
1	10274	1	O-ring (.87 X .68)
2	351245	1	Filler Cap
3	10807	1	Screw (1/4-20 x 1/2 Lg.; Torque to 60/80 in. lbs.)
4	*252303	2	Clamp
5	65438	1	Pump Housing
6	*421332	50	Bladder (Cut to 6.092 / 6.032 Lg.)
7	65308	1	Pump Body
9	*14874	1	Copper Washer (.70 X .50)
10	*13934	1	U-cup (.50 X .25 X .25H)
11	13938	1	Spring (1.45 O.D. X 4.4)
12	304295	1	Retainer (Note: See "INSTRUCTIONS FOR RETAINER REPLACEMENT" on sheet 3 of 3.)
13	*203143	1	Bumper
14	210994	1	Spring Guide
15	*14265	2	Piston Ring (2.77 X 2.54; Split)
16	*251835	2	O-ring (2.31 X 2.12)
17	*28239	1	Gasket
18	33822	1	Piston End Plate Casting
19	28183	1	Piston Poppet
20	*205679	1	Spring (.49 O.D. X .92)
21	*205674	1	Flat Hd. Screw (8-32 X 3/8; Torque to 12/18 in. lbs.)
22	211054	3	Soc. Hd. Screw (10-24 X 1/2; Torque to 50/55 in. lbs.)
23	*10241	3	Lockwasher (.33 X .20)
24	52390	1	Piston Body
25	305475	1	Exhaust Valve Stem
26	*211052	1	O-ring (.90 X .70)
27	*12692	1	Spring (.18 O.D. X 1.70)
28	58961	1	Rear Head
29	10008	3	Screw (1/4-20 x 3/4 Lg.; Torque to 120/140 in. lbs.)
30	*252349	1	O-ring (2.75 X 2.65)
31	28226	1	Piston (1/4")
32	*10444	1	Spring (.25 O.D. X .41)
33	*10375	1	Steel Ball (1/4" Dia.; Seat at assembly)
34	*10378	1	Steel Ball (3/8" Dia.; Seat at assembly)
35	11084	1	Plug Fitting (1/16 NPTF)
36	21278-60	1	Relief Valve (Set at 6,100 to 6,700 PSI)
	21278-90	1	Relief Valve (Set at 9,100 to 9,700 PSI)
37	10008	2	Screw (1/4-20 x 3/4 Lg.; Torque to 60/80 in. lbs.)
38	421460	1	Oil Filler End Cap
39	*10266	1	O-ring (.37 X .25; Apply a small amount of grease at assembly)
40	351423	1	Valve Stem
41	*12522	1	O-ring (.37 X .25; Urethane; Apply a small amount of grease at assembly)
42	351371	1	Release Clip (Adjust release clip so that hydraulic pressure starts to release when pedal is lifted off the top of the valve stem .050/.150.)
43	14794	1	Plastic Cap
44	10566	1	Set Screw (1/2-13 X 1/2; Apply thread sealant)
45	253479	1	Spring (.36 O.D. X 1.0)

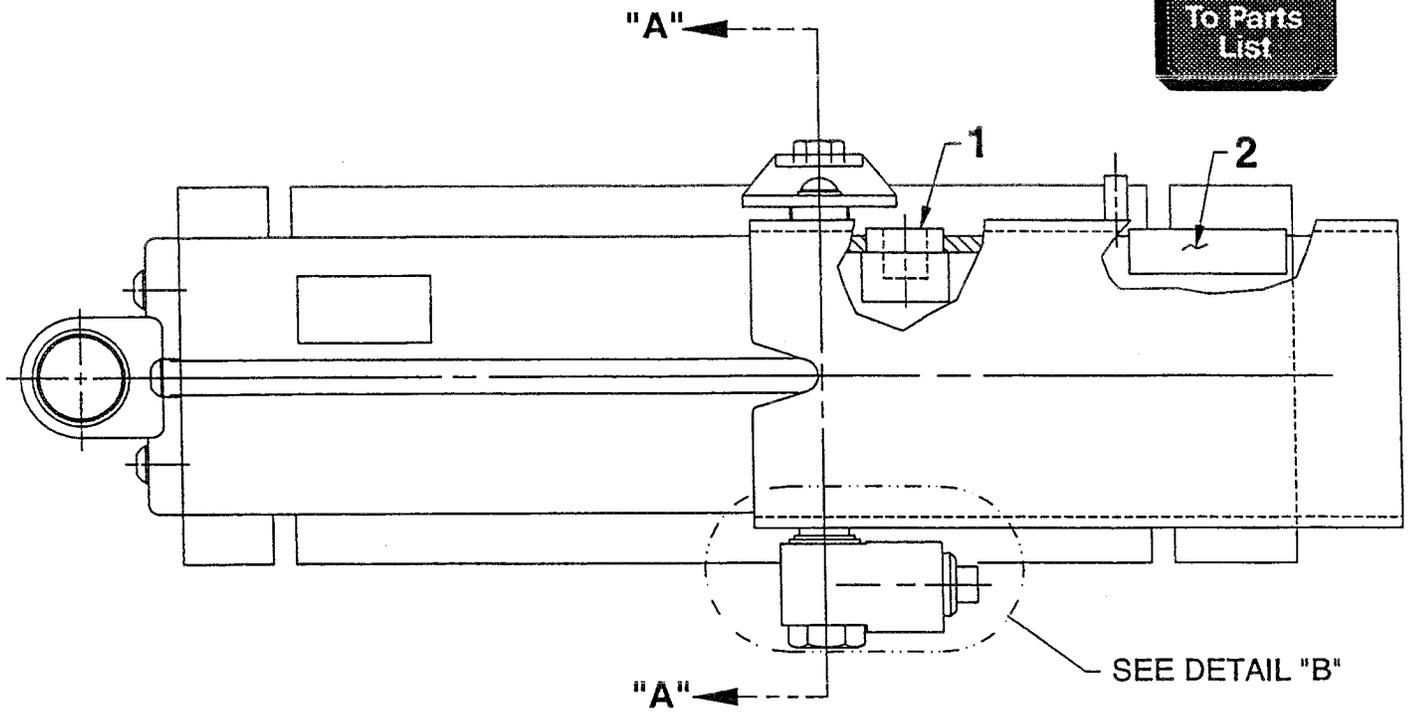
Part numbers marked with an asterisk (*) are contained in Repair Kit No. 300949.



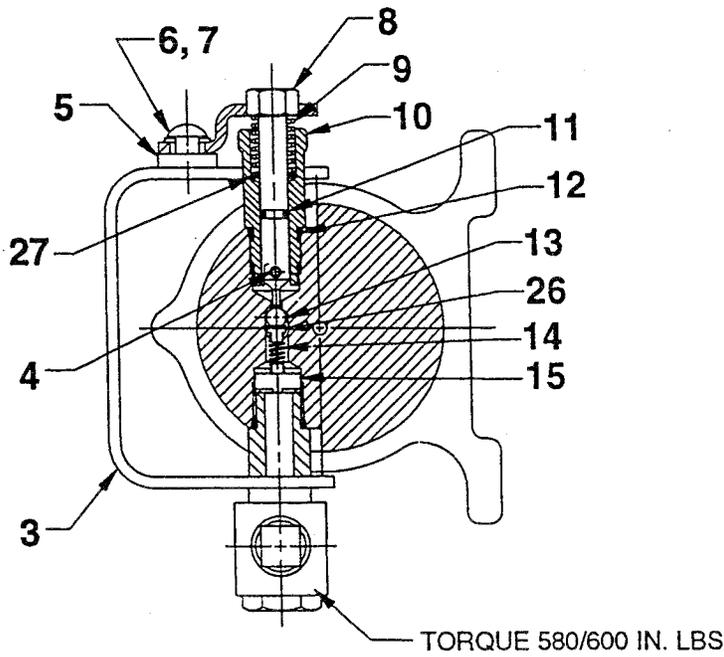
Note: Shaded areas reflect last revision(s) made to this form.

TOP VIEW

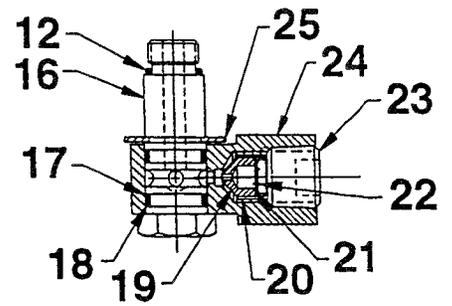
To Parts List



SECTION A-A



DETAIL "B"



Item No.	Part No.	No. Req'd	Description
1	*252300	2	Muffler
2	*14350	1	Warning Decal
3	58880BK2	1	Foot Pedal
4	10796	1	Dowel Pin (.13 X .50)
5	252471	1	Bushing
6	28822	1	Button Hd. Screw (1/4-20 X 3/4 Lg.)
7	12719	1	Flat Washer
8	252526	1	Release Pin (Release pin must move freely through clip when assembled)
9	253223	1	Spring (.49 O.D. X 1.0)
10	351413	1	Pivot Cam (Torque to 280/300 in. lbs.)
11	*10265	1	O-ring (.31 X .18)
12	*10300	2	O-ring (.62 X .46)
13	*10374	1	Steel Ball (7/32" Dia.; Seat at assembly)
14	*14282	1	Compression Spring (3/16 O.D. X 1/2 Lg.)
15	252445	1	Spring Guide
16	351375	1	Swivel Fitting
17	11284	2	O-ring (.68 X .56)
18	12391	2	Backup Washer (.69 X .56)
19	251966	1	Poppet
20	253643	1	Poppet Retainer
21	12201	1	Internal Retaining Ring (.18 X .010)
22	214596	1	Filter Disc
23	16232	1	Plug Fitting (3/8 NPTF; Apply Loctite #545 or equiv. and torque to 15 ft. lbs.)
24	351450	1	Swivel Block
25	11902	1	External Retaining Ring (.57 X .050)
26	252856	1	Ball Guide
27	253663	2	Washer

Part numbers marked with an asterisk (*) are contained in Repair Kit No. 300949.



Refer to any operating instructions included with this product for detailed information about operation, testing, disassembly, reassembly, and preventive maintenance.

Items found in this parts list have been carefully tested and selected. **Therefore: Use only genuine Power Team replacement parts!**

Additional questions can be directed to our Technical Services Department.

Note: Shaded areas reflect last revision(s) made to this form. Also removed 16669 spring from "Parts Included But Not Shown".

INSTRUCTIONS FOR RETAINER REPLACEMENT

Your pump's retainer is locked into place by one of the two following methods. Determine which method was used on your pump's retainer, then follow the appropriate steps to remove the old and install and stake the new.

Method 1 - Retainer shows no sign of stake marks

1. This retainer has been locked in place with a Loctite product. To replace it, a moderate amount of heat needs to be applied to the cylinder nut (in the area of the retainer) to soften the existing Loctite allowing it to be removed.
2. Install the new retainer into the cylinder nut and torque to 80/100 in. lbs. **Note: Do not use a Loctite product this time but stake the new retainer in place according to instructions in Step 3.**
3. To lock retainer into place, use a center punch positioned in the seam between the retainer and the cylinder nut and stake the new retainer in two places approximately 180° apart.

Method 2 - Retainer has two stake marks in the seam between the retainer and the cylinder nut

1. For replacement of this retainer, the stake marks must be removed. Using a 1/8" or larger diameter drill bit, remove the existing stakes by drilling a short distance into the stake marks. Remove the retainer.
2. Install the new retainer into the cylinder nut and torque to 80/100 in. lbs.
3. To lock retainer into place, use a center punch positioned in the seam between the retainer and the cylinder nut and stake the new retainer in two places approximately 180° apart.

NOTE: Do not stake in the old stake marks.

AIR HYDRAULIC PUMP

Max. Pressure: See Pump Data Plate

Workstation Sound Pressure Level: 80 dB(A) at Rated Capacity

Definition: An air hydraulic pump delivers hydraulic fluid under pressure through the use of compressed air as a power source.

SAFETY EXPLANATIONS

Two safety symbols are used to identify any action or lack of action that can cause personal injury. Your reading and understanding of these safety symbols is very important.



DANGER - Danger is used only when your action or lack of action will cause serious human injury or death.



WARNING - Warning is used to describe any action or lack of action where a serious injury can occur.

IMPORTANT - Important is used when action or lack of action can cause equipment failure, either immediate or over a long period of time.



WARNING: It is the operator's responsibility to read and understand the following safety statements,

- Only qualified operators should install, operate, adjust, maintain, clean, repair, or transport this machinery.
- These components are designed for general use in normal environments. These components are not specifically designed for lifting and moving people, agri-food machinery, certain types of mobile machinery or special work environments such as: explosive, flammable or corrosive. Only the user can decide the suitability of this machinery in these conditions or extreme environments. Power Team will supply information necessary to help make these decisions.

These instructions are intended for end-user application needs. Most problems with new equipment are caused by improper operation or installation. Detailed service repair instructions or parts lists can be obtained from your nearest Power Team facility (see listing).

SAFETY PRECAUTIONS

WARNING

General Operation

- All WARNING statements must be carefully observed to help prevent personal injury.
- Before operating the pump, all hose connections must be tightened with the proper tools. Do not overtighten. Connections should only be tightened securely and leak-free. Overtightening can cause premature thread failure or high pressure fittings to split at pressures lower than their rated capacities.
- Should a hydraulic hose ever rupture, burst, or need to be disconnected, immediately shut off the pump and release all pressure. Never attempt to grasp a leaking pressurized hose with your hands. The force of escaping hydraulic fluid could cause serious injury.
- Do not subject the hose to potential hazard such as fire, sharp surfaces, extreme heat or cold, or heavy impact. Do not allow the hose to be altered or kink, twist, curl, crush, cut, or bend so tightly that the fluid flow within the hose is blocked or reduced. Periodically inspect the hose for wear, because any of these conditions can damage the hose and possibly result in personal injury.
- Do not use the hose to move attached equipment. Stress can damage hose and possibly cause personal injury.
- Hose material and coupler seals must be compatible with the hydraulic fluid used. Hoses also must not come in contact with corrosive materials such as creosote-impregnated objects and some paints. Consult the manufacturer before painting a hose. Hose deterioration due to corrosive materials can result in personal injury. Never paint the couplers.
- Inspect machine for wear, damage, and correct function before each use. Do not use machinery that is not in proper working order, but repair or replace it as necessary.
- Replace worn or damaged safety decals.
- Modification of a product requires written Power Team authorization.
- Use only components with the same pressure rating when assembling a system or machine.

Pump

- Do not exceed the hydraulic pressure rating noted on the pump data plate or tamper with the internal high pressure relief valve. Creating pressure beyond the rated pressure can result in personal injury.
- Before replenishing the fluid level, retract the system to prevent overfilling the pump reservoir. An overfill can cause personal injury due to excess reservoir pressure created when cylinders are retracted.

Air Supply

- Shut off and disconnect the air supply when the pump is not in use or before breaking any connections in the system.

PREPARATION & SET-UP

Air Supply Hook-Up

Remove the thread protector from the air inlet of the pump. Select and install the threaded fittings which are compatible with your air supply fittings. The air supply should be 20 CFM (.57 M³/min.) and 100 PSI (7 BAR) at the pump to obtain the rated hydraulic pressure. Air pressure should be regulated to a maximum of 140 PSI (9 BAR). Secure your pump fitting to the air supply. See illustrations on following pages.

 **WARNING:** If improperly used, pressurized equipment can be potentially hazardous. Therefore:

- Hydraulic connections must be securely fastened before building pressure in the system.
- Release all system pressure before loosening any hydraulic connection in the system.

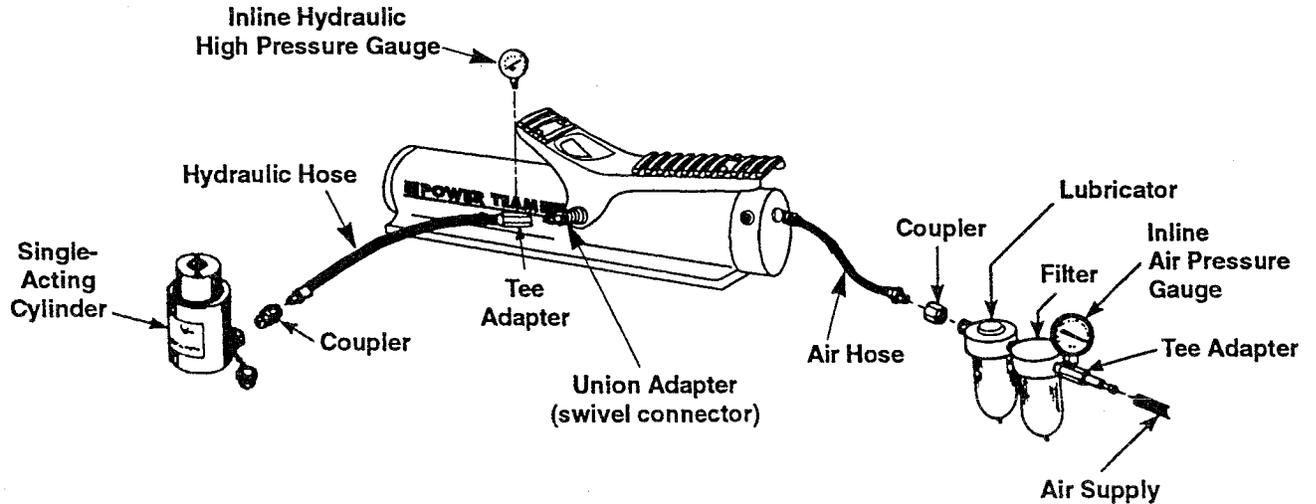


Hydraulic Connections

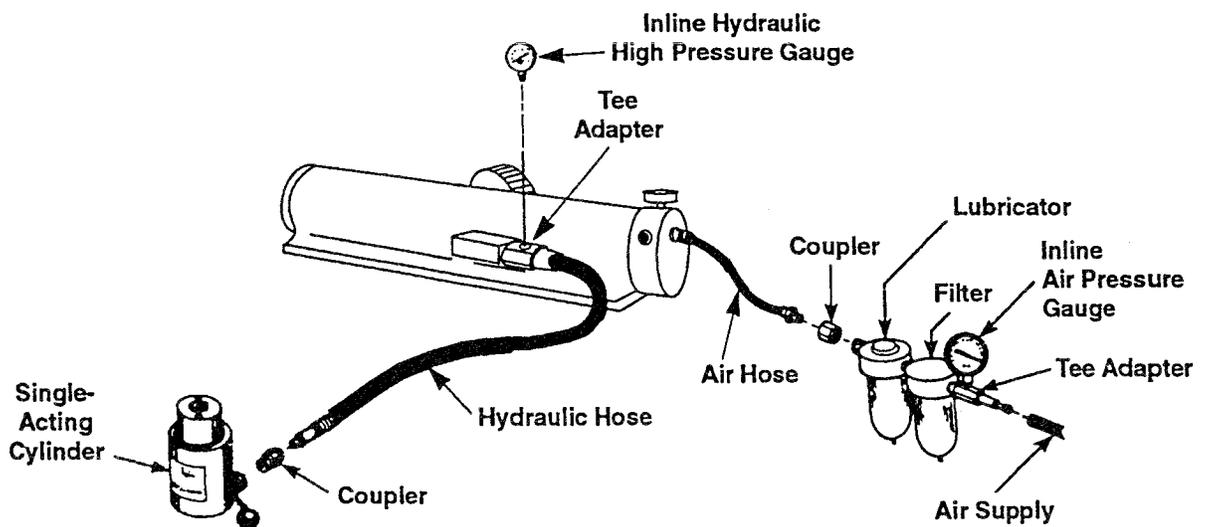
Clean all the areas around the fluid ports of the pump and cylinder. Inspect all threads and fittings for signs of wear or damage and replace as needed. Clean all hose ends, couplers and union ends. Remove the thread protectors from the hydraulic fluid outlets. Connect the hose assembly to the hydraulic fluid outlet and couple the hose to the cylinder. See illustrations below.

IMPORTANT: Seal all external pipe connections with a high grade, nonhardening thread sealant. Teflon tape may also be used to seal hydraulic connections, provided only one layer of tape is used. Apply the tape carefully, two threads back, to prevent it from being pinched by the coupler and broken off inside the system. Any loose pieces of tape could travel through the system and obstruct the flow of fluid or cause jamming of precision-fit parts.

For Hand/Foot Operated Pumps:



For Push Button Operated Pumps:

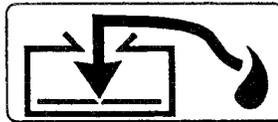


OPERATION

PICTOGRAM DEFINITIONS



Activating the pump with the pedal end marked with this pictogram, the flow of fluid is directed out of the reservoir.



Activating the pump with the pedal end marked with this pictogram, the flow of fluid is directed back to the reservoir.

Pump Operation

For Hand/Foot Operated Pumps:

1. To extend the cylinder, depress the pedal on the end marked .
2. To hold the cylinder in position, release the end of foot pedal marked with  to deactivate the pump.
3. To retract the cylinder, depress the pedal on the end marked .

For Push Button Pumps:

1. To extend the cylinder, depress the button on the remote hand control marked .
2. To hold the cylinder in position, release the  button.
3. To retract the cylinder, depress the button on the remote hand control marked .

For Pumps With Air Regulators:

1. Open the air shut-off valve (if so equipped) or connect the air quick coupler (if so equipped).
NOTE: under certain circumstances the pump may need to be primed before operation. Refer to the method described in the section entitled "Priming the Pump Unit."
2. Slowly turn the air regulator control on unit clockwise to increase pressure, counterclockwise to decrease pressure. As air is admitted to the pump unit, it will begin to deliver fluid to the system. Continue to slowly turn the air regulator control clockwise until gauge reads the maximum hydraulic pressure rating as stated on the pumps data plate. A maximum hydraulic pressure reading should be obtained if air pressure is approximately 100 PSI (7 BAR).
3. Cycle the system several times by manually shifting or the push button (if so equipped). Set the air regulator to obtain the desired hydraulic pressure. When decreasing pressure, shift the valve after each adjustment before measuring actual hydraulic pressure.
4. Shut off and disconnect air supply to the pump and shift pump valve or push button (if so equipped) two times to release all system pressure. Check fluid level with hydraulic system retracted. The pump is now ready for operation.

NOTE: • The hydraulic pressure is increased or decreased by adjusting the air inlet pressure at the regulator.

• On two stage pumps, the air pressure regulator that is mounted on the pump controls only the output from the high pressure stage. The output of the low pressure stage of the pump is determined by the air line pressure coming from the remote regulator. A remote regulator is required to control the air pressure from the air line. The independent functioning of the low and high pressure stages of this pump can best be described as follows. At the minimum air line pressure of 40 PSI (3 BAR), the low pressure stage of the pump will deliver 480 PSI (33 BAR) hydraulic pressure (with the pump regulator turned counterclockwise to prevent air pressure from activating the high pressure stage of the pump.) At the minimum air line pressure of 40 PSI (3 BAR) the high pressure stage of the pump will deliver 4,000 PSI (275 BAR) hydraulic pressure (with the pump regulator turned clockwise to allow air pressure to reach the high pressure stage.) Always remember that the pump regulator must be turned fully counterclockwise when the pump is used to produce 1,200 PSI (83 BAR) or less.



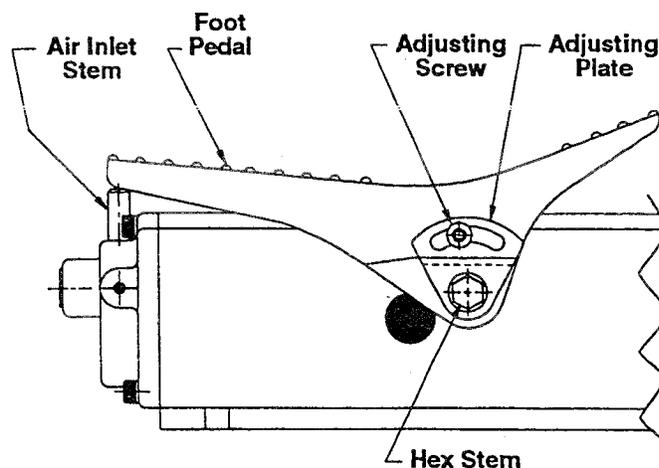
OPERATION (CONTINUED)

Adjusting The Release Mechanism

1. Loosen the "Adjusting Screw".
2. Verify that the "Adjusting Plate" is free.
3. Depress the "Air Inlet Stem" with the "Foot Pedal". The pump will now run and build pressure.
4. Release the "Foot Pedal". The pump will stop running, but the hydraulic pressure will be held.
5. With the "Foot Pedal" resting on the "Air Inlet Stem" rotate the "Adjusting Plate" clockwise until a stop is felt.

Note: If the end of the slot in the "Adjusting Plate" is met before a stop is felt, the "Adjusting Plate" must be repositioned one step counterclockwise on the "Hex Stem", then repeat step #5.

6. Tighten the "Adjusting Screw". The release mechanism is now properly set.



PREVENTIVE MAINTENANCE

- IMPORTANT:**
- Any repair or servicing that requires dismantling the pump must be performed in a dirt-free environment by a qualified technician.
 - Dispose of machine and oil properly.

Lubrication

For Hand/Foot and Push Button Operated Pumps:

If the pump is operated on a continuous duty cycle for extended periods, the manufacturer recommends installing an automatic air line oiler in the air inlet line as close to the pumping unit as possible. Set the unit to feed approximately one drop of oil per minute into the system. Use SAE grade oil (5W to 30W).

Bleeding Air From The System

During the first moments of operation or after prolonged use, a significant amount of air may accumulate within the hydraulic system. This entrapped air may cause the cylinder to respond slowly or behave in an unstable manner. To remove the air, run the system through several cycles (extending and retracting the cylinder) free of any load. The cylinder must be at lower level than the pump to allow air to be released through the pump bladder.

Inspecting The Hydraulic Oil Level

Check the oil level in the bladder after every 10 hours of use. Drain and replenish the bladder with Power Team hydraulic oil after every 300 hours of use approximately.

Note: Shaded areas reflect last revision(s) made to this form.



PREVENTIVE MAINTENANCE (CONTINUED)

Draining And Flushing The Reservoir

IMPORTANT: Wipe the pump exterior completely clean before attempting this procedure!

1. Drain the bladder of all oil and refill half full with clean hydraulic oil. Rinse the filter clean.
2. Run the unit for several minutes.
3. Drain and clean the bladder once more.
4. Refill the bladder with Power Team hydraulic oil.

IMPORTANT: Drain and clean the other hydraulic system components (hoses, cylinders, etc.) before reconnecting them to the pump. This will prevent contaminated fluid from entering the pump again.

Refilling The Bladder

If additional oil must be added to the bladder, use only Power Team hydraulic oil (215 SSU @ 100° F [38° C]). Clean the entire area around the filler plug before adding oil to the bladder. Remove the filler plug, and insert a clean funnel with filter. The cylinder must be fully retracted and the air supply disconnected when adding the oil to the bladder.

Periodic Cleaning

IMPORTANT: The greatest single cause of failure in hydraulic pumps is dirt. Keep the pump and attached equipment clean to prevent foreign matter from entering the system.

A routine should be established to keep the pump as free from dirt as possible. All unused couplers must be sealed with thread protectors. All hose connections must be free of grit and grime. Any equipment hooked up to the pump should also be kept clean. Use only Power Team hydraulic oil in this unit and change as recommended (every 300 hours).

ACCESSORIES

Gauges and accessories may not be included with the pump. However, a hydraulic gauge is strongly recommended whenever the pump is used!



- WARNING:**
- The gauge must be of the proper rating for the pressure used!
 - Use only Power Team approved accessories, hydraulic oil, and repair parts!

Installing An In-line Air Pressure Gauge

1. Remove the male fitting from the air filter and install a tee adapter, with gauge, between the hose and air filter.
2. Install male fitting into the tee adapter and securely clamp the hose to the male fitting.

Installing An In-line Hydraulic Pressure Gauge

1. Remove the thread protector from the hydraulic outlet port and inspect the threads and fittings for signs of wear.
2. Install a tee adapter, with gauge, between the hose coupling and the pump hydraulic outlet port.
3. Tighten all connections securely! **DO NOT OVERTIGHTEN HOSE CONNECTIONS.**

Fire-Resistant Hydraulic Fluid

Flame Out 220™ fire-resistant hydraulic fluid is compatible with all Power Team hydraulic equipment. The use of this fluid does not require the changing of seals in any Power Team pump or cylinder and is available through your local Power Team distributor.

OPERATOR TROUBLESHOOTING GUIDE

If this guide does not resolve your pump problem,
contact an authorized hydraulic service center or a company headquarters listed on back sheet 4 of 4.

PROBLEM	CAUSE	SOLUTION
Pump reciprocates but no oil delivery (cylinder will not extend)	<ol style="list-style-type: none"> 1. Low oil level. 2. Release improperly adjusted. 	<ol style="list-style-type: none"> 1. Add oil as instructed in Preventive Maintenance section. 2. See adjustment instructions.
Low fluid delivery (cylinder extends slowly)	<ol style="list-style-type: none"> 1. Inadequate air supply <ol style="list-style-type: none"> a. Check air input supply. b. Contamination, check air side of pump (plugged air inlet screen). 2. Hydraulic failure <ol style="list-style-type: none"> a. Air in hydraulic system. 3. Release improperly adjusted. 	<ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> a. Should be 20 CFM (.57 M³/min.) minimum. b. Clean and reassemble. 2. <ol style="list-style-type: none"> a. Remove reservoir and clean intake filter and reinstall. 3. See adjustment instructions.
Pump will not build to maximum pressure (no visible leakage)	<ol style="list-style-type: none"> 1. Check the air supply. 2. Pressure regulator improperly adjusted (if so equipped). 3. Release improperly adjusted. 	<ol style="list-style-type: none"> 1. 100 PSI (7 BAR) is required to obtain maximum pressure. 2. Adjust according to instructions in Operation section. 3. See adjustment instructions.
Pump builds pressure but will not hold system pressure	<ol style="list-style-type: none"> 1. Check the hydraulic connections and other system components for leakage, including 3 way/4 way valve (if so equipped). 2. Release improperly adjusted. 	<ol style="list-style-type: none"> 1. Refit or repair as needed. 2. See adjustment instructions.
Pump will continue to run slowly even after desired pressure is reached.	<ol style="list-style-type: none"> 1. Output pressure equal to or higher than relief valve setting. 	<ol style="list-style-type: none"> 1. Normal operation.
Excess oil spray from muffler.	<ol style="list-style-type: none"> 1. Air lubricator is set too rich (if so equipped). 	<ol style="list-style-type: none"> 1. Set at one drop per minute.
Pump will release not release pressure	<ol style="list-style-type: none"> 1. Release improperly adjusted. 	<ol style="list-style-type: none"> 1. See adjustment instructions.

POWER TEAM FACILITIES

SPX POWER TEAM



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For more information, Internet address: <http://www.powerteam.com> (or) <http://www.hytec.com>

EC Declaration of Incorporation

as defined by

European Communities Directive 89/392/EEC, Annex II(B)

MANUFACTURER'S NAME:

SPX POWER TEAM

MANUFACTURER'S ADDRESS:

2121 West Bridge Street
Owatonna, Minnesota 55060
USATelephone: 507-455-7100
Fax: 507-455-7122

TYPE OF EQUIPMENT: RECIPROCATING AIR PISTON HYDRAULIC PUMP.

ORDER NUMBER OR PART NUMBER: PA9 Series

APPLICATION OF EC COUNCIL DIRECTIVE(S): 89/392/EEC as amended by 91/368/EEC, 93/44/EEC,
and 93/68/EEC.

STANDARD(S) TO WHICH CONFORMITY IS DECLARED: EN292-1, and EN292-2.

I, the undersigned, hereby declare that the equipment specified above conforms to the above European Communities Directive(s) and Standard(s). This product is not to be put into service until the machine has been declared in conformity with the provisions of the European Communities Directive(s).

PLACE: Owatonna, Minnesota USA



(Signature)

DATE: 15 Feb. 1997
(date / month / year)Michael S. O'Brien
Director Quality / Technical Services

SPX Corporation
2121 West Bridge Street
Owatonna, MN 55060 USA
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Order Entry: (800) 541-1418
Fax: (800) 288-7031

International Sales: (507) 455-7150
Fax: (507) 455-7122
Internet Address:
<http://www.powerteam.com>

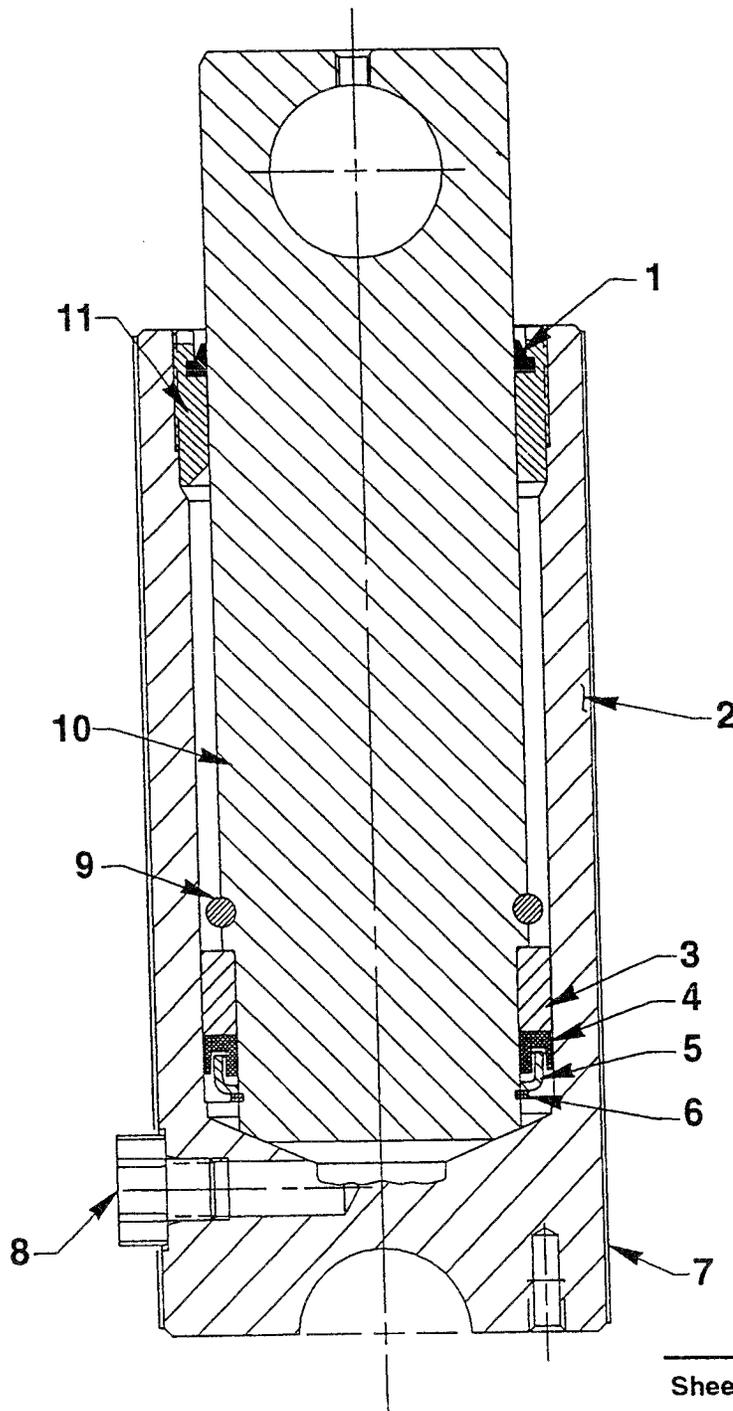
Parts List for:

63-0004

SINGLE-ACTING, GRAVITY RETURN HYDRAULIC CYLINDER

Maximum Capacity: 25.8 Ton at 10,000 PSI

To Parts
List



Note: Shaded areas reflect last revision(s) made to this form.

Sheet No. 1 of 1

Rev. 1 Date: 7 Apr. 1999

Parts List, Form No. 101781, Back sheet 1 of 1

Item No.	Part No.	No. Req'd	Description
1	*16085	1	Rod Wiper
2	58890	1	Cylinder Body
3	201352	1	Piston Head (Assemble with groove toward shoulder.)
4	*15915	1	U-Cup
5	201353	1	Slip Retainer
6	*16084	1	Retaining Ring (External)
7	421441	1	Full Coverage Decal
8	250961	1	Plastic Plug Fitting
9	201447	1	Retaining Ring (Internal)
10	421440	1	Piston Rod
11	351056	1	Retainer Nut (Torque to 90/100 ft. lbs.)

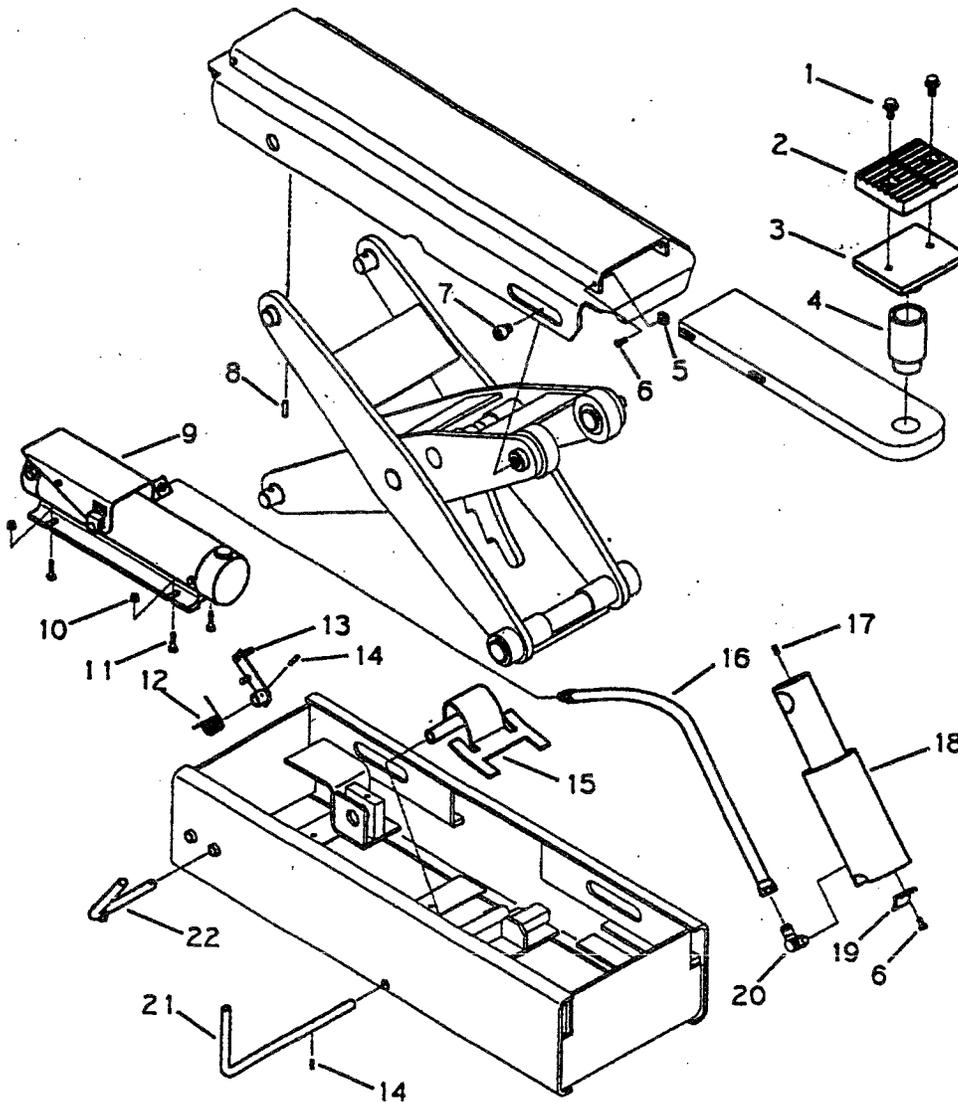
Part numbers marked with an asterisk (*) are contained in Repair Kit No. 300147.



Refer to any operating instructions included with this product for detailed information about operation, testing, disassembly, reassembly, and preventive maintenance.

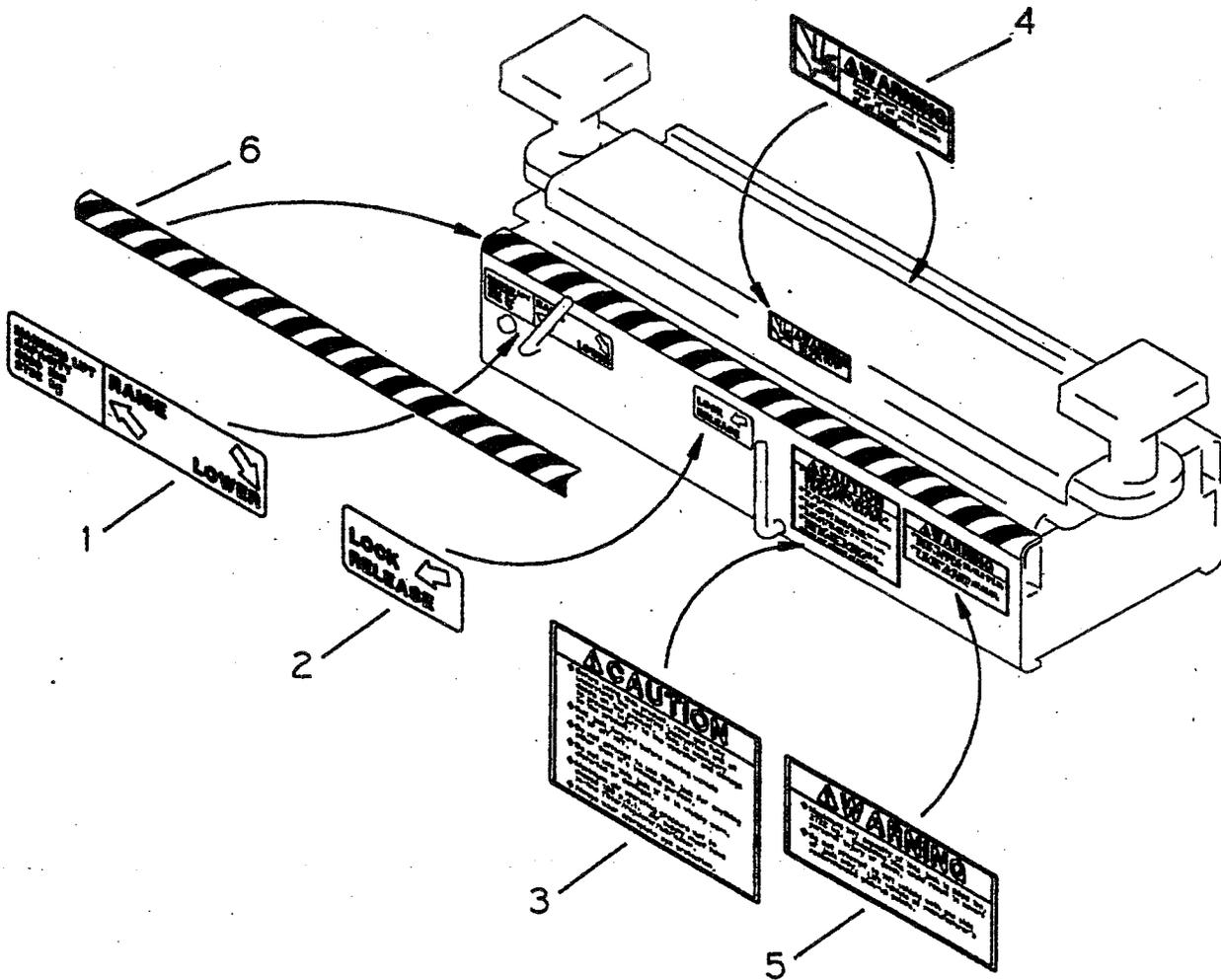
Items found in this parts list have been carefully tested and selected. **Therefore: Use only genuine Power Team replacement parts!**

Additional questions can be directed to our Technical Services Department.



ROLLING AIR JACK REPAIR PARTS

ITEM	PART NO	QTY	DESCRIPTION
1	50-0065	4	3/8-16 X 3/4 Serrated Hex Head Flange Screw
2	10-0017	2	Rubber Lift Pad
3	03-0131	2	Lift Pad
4	73-0349	2	Lift Pad Spacer
5	51-0016	4	1/4-20 Heavy Square Nut
6	028-132	5	1/4-20 X 1/2 Hex Head Cap Screw
7	50-0043	2	1/2-13 X 1/2-Hex Socket Head Cap Screw
8	061-091	4	1/4 X 7/8 Spring Pin
9	63-0005	1	8600 Series Air/Hydraulic Pump (6000 lb)
	63-0012	1	8900 Series Air/Hydraulic Pump (9000 lb)
10	055-160	4	1/4-20 Nylon Hex Lock Nut
11	028-141	4	1/4-20 X 1 Hex Head Cap Screw
12	55-0012	1	Torsion Spring
13	03-0126	1	Linkage Bar
14	061-032	2	1/8 X 3/4 Spring Pin
15	03-0132	1	Latch
16	62-0002	1	Hydraulic Hose
17	50-0066	1	1/4-20 X 3/8 Set Screw
18	63-0004	1	Hydraulic Cylinder
19	73-0343	1	Retainer Tab
20	60-0023	1	90 Degree Male Elbow Fitting
21	73-0332	1	Latch Pivot Rod
22	03-0129	1	Linkage Rod



INSTRUCTIONAL DECALS

ITEM	PART NO	QTY	DESCRIPTION
1	80-0078	1	8600 Series Raise/Lower Decal (6000 lb)
	80-0103	1	8900 Series Raise/Lower Decal (9000 lb)
2	80-0079	1	Lock Release Decal
3	80-0080	1	Caution Decal
4	80-0083	2	Warning Decal
5	80-0084	1	8600 Series Warning Decal (6000 lb)
	80-0104	1	8900 Series Warning Decal (9000 lb)
6	M00-003	128"	Caution Stripe Tape

COMMERCIAL WARRANTY

This product is warranted by BRANICK INDUSTRIES, INC. to the original user-owner against defective materials or workmanship for a period of one year from the date of delivery. During the warranty period, product found to be defective will be repaired or replaced at, BRANICK INDUSTRIES, INC.'s option, without charge. The product must be returned, with prior approval, transportation charges prepaid and with proof of original delivery date, to BRANICK INDUSTRIES, INC., 4245 Main Ave., Fargo, North Dakota 58107. The repaired or replacement product will be returned with transportation charges prepaid by Branick.

This warranty does not cover defects in the product caused by ordinary wear and tear, abuse, misuse, overloading, accident (including shipping damage), improper maintenance, alteration, or any other cause not the result of defective materials or workmanship.

REPAIR OR REPLACEMENT IS THE EXCLUSIVE REMEDY FOR DEFECTIVE PRODUCT UNDER THIS WARRANTY. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OF THIS PRODUCT. BRANICK INDUSTRIES, INC. SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES.

BRANICK INDUSTRIES, INC. reserves the right to make changes in the design or construction of our products without obligation to incorporate such changes in products already sold and without notice.

Service parts, warranty, and regular repair service for products are available from Branick authorized distributors or from:

BRANICK INDUSTRIES, INC.
4245 Main Ave.
Box 1937
Fargo, North Dakota 58107
701/281-8888

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INDUSTRIES, Inc.

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