

BLACK & WEBSTER

AIR PRESS

MODEL AP400

INSTALLATION, OPERATING & MAINTENANCE INSTRUCTIONS



Black & Webster Products Division

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MACHINE GUARDING

Machine guarding is the responsibility of the user. Provisions must be made to protect the operator and other employees from injury as a result of contact with work in progress, moving parts, mechanical motions of the press, etc. Air-Hydraulics cannot provide “standard” guards for its products due to the variety of tooling used by its owners. However, Air-Hydraulics will be happy to install guards and similar safety devices for operator protection. These safety devices must be produced at the request of and with the design approval of the purchaser.

WARRANTY

We warrant to the original user that all products of our manufacture will be free from defects in material and workmanship and will possess the characteristics represented in writing by us. Claim for breach of the above warranty must be made within a period of one (1) year from the date of delivery to the user. Upon satisfactory proof of claim, we will make any necessary repairs or corrections, or, at our option, replace defective parts at the factory, transportation charges prepaid. Charges for correcting defects will not be allowed, nor can we accept goods returned for credit unless we are notified in writing and the return or correction is authorized by us in writing. The **FOREGOING IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION OF THE PRODUCT.** This paragraph sets forth the extent of our liability for breach of any warranty in connection with the sale or use of our products. It is understood we will not be liable for consequential damage such as loss of profit, delays, or expense whether based on tort or contract.

INSTALLATION

1. Place press on rigid bench or table at a convenient height for operator. Bolt securely to the bench.
2. Connect 100 P.S.I. filtered shop air supply (40 micron min) to 3/8 N.P.T. inlet port of pressure regulator.

SET UP AND OPERATION

1. Loosen locknut and adjust pressure regulator until pressure gauge reads desired pressure (100 P.S.I.). **CAUTION:** Do not operate at pressure greater than 125 P.S.I.
2. Adjust speed control valve to slow descent of shaft by turning outer hex sleeve.
3. Check to make sure safety sleeve assembly is in the correct position on the press before operating
4. Keeping hands clear of shaft, actuate press by depressing hand valve pedal (s).
5. Release pedal (s). Shaft should return to fully retracted position.
6. Remove safety sleeve from press.
7. Loosen locking nut and adjust stop nut to obtain desired stroke. Distance between bottom of the stop nut and top surface of stop cap or frame is the stroke of the shaft. **CAUTION:** Do not back off locking nut beyond top of threaded shaft. Doing so may damage packings.
8. Replace safety sleeve and re-actuate press.
9. If necessary, re-adjust stop nut, speed control and pressure regulator to obtain desired setting. **CAUTION:** Never operate press unless safety sleeve is in place and hands are clear of shaft.
10. Install tooling into hole provided in shaft, securing with set screw.
11. Install dies, nests or anvils onto base using tapped holes provided.
12. Make any final stroke, speed and pressure adjustments to obtain desired workpiece configuration with tooling in place.

MAINTENANCE

LUBRICATION

Air presses are lubricated at the factory and should require no additional lubrication. However, if a press is disassembled for service or replacement of parts, all internal surfaces should be coated with a light bearing grease such as Lubriko M6 (Master Chemical Co.) or equivalent.

PRESS DISASSEMBLY

Should press disassembly become necessary, use extreme caution. This press has a heavily compressed return spring under the piston. When removing cylinder end cap, the cap should be securely held in position until retaining screws are removed and then raised very slowly until spring compression is fully released. Failure to do so will result in various parts separating abruptly, possibly causing injury to personnel. Re-assembly should be approached in the same cautious manner. **Torque cylinder mounting fasteners to 23 ft. lbs. each.**

Air-Hydraulics, Inc. maintains complete facilities at all times for the repair of presses. If qualified maintenance personnel are not available at a customer's plant, the press may be returned to the Air-Hydraulics, Inc. for service.

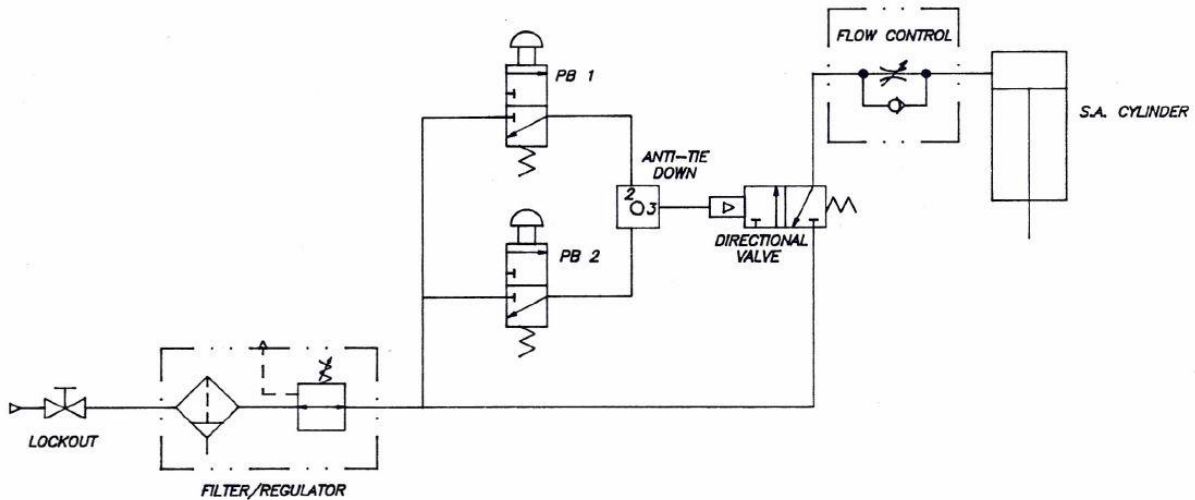
TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	REMEDY
A. Shaft fails to extend after hand valve actuated or fails to return to rest position	<ol style="list-style-type: none"> 1. Insufficient air pressure 2. Speed control valve closed or clogged 3. Power valve not shifted 4. Hand valve clogged 5. Shaft bent 6. Anti-rotation key jammed 7. Return spring jammed or broken 	<ol style="list-style-type: none"> 1. Clean supply, adjust or clean regulator 2. Open speed control valve or clean valve 3. Check for adequate pilot air from hand valve & for jammed spools 4. Clean hand valve 5. Replace shaft 6. Disassembly key, check for wear or damage, replace if necessary 7. Free spring or replace
B. Ram moves erratically	<ol style="list-style-type: none"> 1. Insufficient lubrication 2. Air Leaking past packings 3. One or more valves clogged or leaking 	<ol style="list-style-type: none"> 1. Re-lubricate press (see maintenance) 2. Replace packing 3. Clean or repair valves
C. Excess rotation of shaft	<ol style="list-style-type: none"> 1. Anti-rotation key worn 	<ol style="list-style-type: none"> 1. Inspect key, replace if necessary
D. Reduced force at a given pressure	<ol style="list-style-type: none"> 1. Air leaking past packings 	<ol style="list-style-type: none"> 1. Replace packings

PNEUMATIC DIAGRAM

SINGLE ACTING CYLINDER WITH DUAL PALMS & ANTI-TIE DOWN

*SINGLE ACTING CYLINDER WITH
DUAL PALMS & ANTI-TIE DOWN*



AP 1200

Length of Stroke	0-2" adjustable
Throat Depth	5.00"
Opening of Ram to Base	5.00"
Tool Hole in Ram	.56 dia. X 1.50 deep
Force at 100 P.S.I.	Up to 400 lbs.
Ram Style	Keyed
Net Weight (less controls)	48 lbs.
Controls (optional)	Flow Control Valve Pressure Regulator Pressure Gauge Exhaust Air Muffler

PARTS LIST

AP400 AIR PRESS

ITEM	PART #		DESCRIPTION	QTY
1	203210		Angle Base	1
2	203211		Frame	1
3	203212		Cylinder	1
4	203231		Shaft	1
5	203214 02		Stop cap	1
6	203224		Cap washer	1
7	203226		Bottom cup washer	1
8	203230		Key	1
9	203221		Shaft Seal	1
10	203225		Packing	1
11	203007		Retaining washer	1
12	203222		O-Ring	1
13	203228		Spring	1
14	203279		Safety sleeve assy.	1
15	203215		Downstop Nut	1
16	36261		Downstop Locknut	1
17	37475		Piston Nut	1
18		*	Lock washer	1
19		*	Hex head bolt	2
20		*	Locking nut	1
21	20325002	*	Straight Base Option	1
22	203251	*	1" Riser Block Option	1
23	203252	*	2" Riser Block Option	1
24	203240	*	Repair kit	1

* Not shown on drawing

AP400

PARTS DRAWING

