



Operating Instructions and Parts Manual Hydraulic Pipe Bender

Models: JHPB-20 (2-inch), JHPB-30 (3-inch)



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Warranty and Service

Walter Meier (Manufacturing) Inc., warrants every product it sells. If one of our tools needs service or repair, one of our Authorized Service Centers located throughout the United States can give you quick service. In most cases, any of these Walter Meier Authorized Service Centers can authorize warranty repair, assist you in obtaining parts, or perform routine maintenance and major repair on your JET® tools. For the name of an Authorized Service Center in your area call 1-800-274-6848.

MORE INFORMATION

Walter Meier is consistently adding new products to the line. For complete, up-to-date product information, check with your local Walter Meier distributor, or visit waltermeier.com.

WARRANTY

JET products carry a limited warranty which varies in duration based upon the product (MW = Metalworking, WW = Woodworking).

90 DAY WARRANTY	1 YEAR WARRANTY	Body Repair Kits Bottle Jacks Cable Pullers Cold Saws Hoists-Air Hoists-Electric Metal forming Mill/Drills Milling Machines MW Bandsaws MW Drill Presses MW Finishing Equipment MW Lathes MW Precision Vises	2 YEAR WARRANTY	Palet Trucks Rigging Equip. Service Jacks Stackers Surface Grinders Tapping Trolleys-Air Trolleys-Electric Web Slings Winches-Electric	3 YEAR WARRANTY	WW Benchtop Tools	5 YEAR WARRANTY	Beam Clamps Chain Hoist-Manual Lever Hoists Pullers-JCH Models Scissor Lift Tables Screw Jacks Trolleys-Geared Trolleys-Plain Winches-Manual WW Air Filtration WW Bandsaws WW Buffers	5 YEAR WARRANTY	WW Drill Presses WW Dust Collectors WW Dust Filters WW Dust Fittings WW Jointers WW Lathes WW Planers WW Sanders WW Shapers WW Tablesaws	LIFE LIFETIME WARRANTY	Fastening Tools Mechanics Hand Tools Striking Tools Vises (no -precision) Clamps
Warranty reverts to 1 Year Warranty if woodworking (WW) products listed above are used for industrial or educational purposes.												

WHAT IS COVERED?

This warranty covers any defects in workmanship or materials subject to the exceptions stated below. Cutting tools, abrasives and other consumables are excluded from warranty coverage.

WHO IS COVERED?

This warranty covers only the initial purchaser of the product.

WHAT IS THE PERIOD OF COVERAGE?

The general JET warranty lasts for the time period specified in the product literature of each product.

WHAT IS NOT COVERED?

Five Year Warranties do not cover woodworking (WW) products used for commercial, industrial or educational purposes. Woodworking products with Five Year Warranties that are used for commercial, industrial or education purposes revert to a One Year Warranty. This warranty does not cover defects due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair or alterations, or lack of maintenance.

HOW TO GET SERVICE

The product or part must be returned for examination, postage prepaid, to a location designated by us. For the name of the location nearest you, please call 1-800-274-6848.

You must provide proof of initial purchase date and an explanation of the complaint must accompany the merchandise. If our inspection discloses a defect, we will repair or replace the product, or refund the purchase price, at our option. We will return the repaired product or replacement at our expense unless it is determined by us that there is no defect, or that the defect resulted from causes not within the scope of our warranty in which case we will, at your direction, dispose of or return the product. In the event you choose to have the product returned, you will be responsible for the shipping and handling costs of the return.

HOW STATE LAW APPLIES

This warranty gives you specific legal rights; you may also have other rights which vary from state to state.

LIMITATIONS ON THIS WARRANTY

WALTER MEIER (MANUFACTURING) INC., LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG THE IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

WALTER MEIER SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL, OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

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Warnings

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace the warning labels if they become obscured or removed.
4. This pipe bender is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a pipe bender, do not use until proper training and knowledge have been obtained.
5. Do not use this machine for other than its intended use. If used for other purposes, Walter Meier (Manufacturing) Inc., disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear approved safety glasses/face shields while using this machine. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
7. Before operating this pipe bender, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Remove all loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do not wear gloves.
8. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
9. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
10. Provide for adequate space surrounding work area and non-glare, overhead lighting.
11. Keep the floor around the machine clean and free of scrap material, oil and grease.
12. Keep visitors a safe distance from the work area. **Keep children away.**
13. Give your work undivided attention. Looking around, carrying on a conversation and “horse-play” are careless acts that can result in serious injury.
14. Maintain a balanced stance and do not overreach or use excessive force to perform any machine operation.
15. Use the right tool. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and safer.
16. Use recommended accessories; improper accessories may be hazardous.
17. Maintain tools with care and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.

Familiarize yourself with the following safety notices used in this manual:

CAUTION This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.

WARNING This means that if precautions are not heeded, it may result in serious injury or possibly even death.

- - SAVE THESE INSTRUCTIONS - -

Specifications

Model.....	JHPB-20.....	JHPB-30
Stock Number	331900.....	331910
Pipe Size Capacity (in.).....	1/2 – 2.....	1/2 – 3
Max. Pipe Wall Thickness (in.).....	1/5.....	6/25
Maximum Load (Tons)	9.....	20
Piston Stroke (in.)	10-1/4.....	12-5/8
Ram Diameter (in.)	1-3/4.....	2-1/3
Net Weight (lb)	115.....	260
Shipping Weight (lb).....	198.....	370
Assembled Dimensions (LxWxH)(in.)	38-3/4 x 26 x 28-3/4.....	40 x 35 x 28-3/4

The above specifications were current at the time this manual was published, but because of our policy of continuous improvement, Walter Meier (Manufacturing) Inc., reserves the right to change specifications at any time and without prior notice, without incurring obligations.

Unpacking

Contents of Shipping Container

- 1 Bending Die (A) – see also Table 1
- 1 Hardware Bag (B)
- 1 Hydraulic Pump Unit (C)
- 1 Tripod Seat (D)
- 1 Swaging Block (E)
- 1 Support Assembly (F)
- 1 Hinge Pin (G)
- 1 Upper Wing Plate (H)
- 1 Lower Wing Plate (J)
- 1 Handle (K)
- 3 Tripod Leg (L)
- 3 Tripod Pole Base (M)

Bending Die Size	Model	
	JHPB-20 (2-in)	JHPB-30 (3-in)
1/2"	X	X
3/4"	X	X
1"	X	X
1-1/4"	X	X
1-1/2"	X	X
2"	X	X
2-1/2"		X
3"		X

Table 1

Table 1 lists the bending die sizes that are included with each hydraulic pipe bender model.

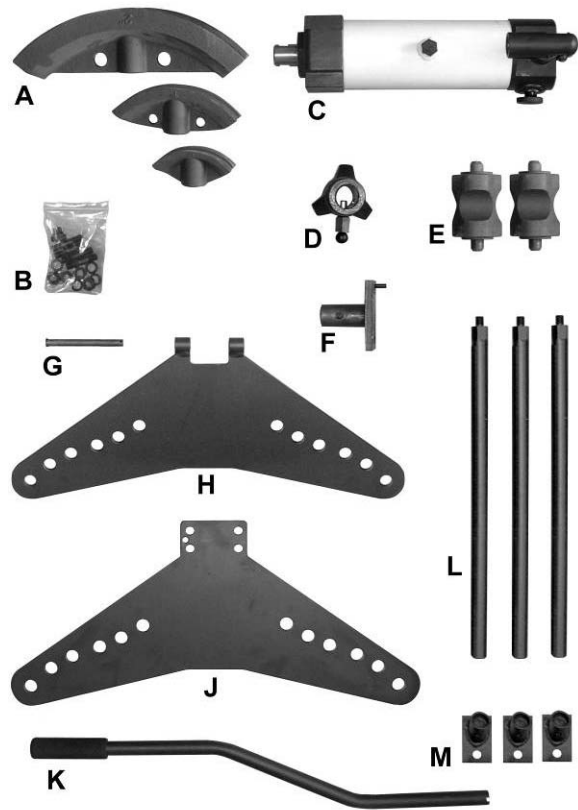


Figure 1: Shipping Contents

Contents of Hardware Bag

- 4 Double-Ended Threaded Stud (M)
- 4 M12 Lock Washer (N)
- 4 M12 Hex Nut (O)
- 1 Vented Oil Plug (P)
- 1 O-Ring (Q)
- 1 Cotter Pin (R)

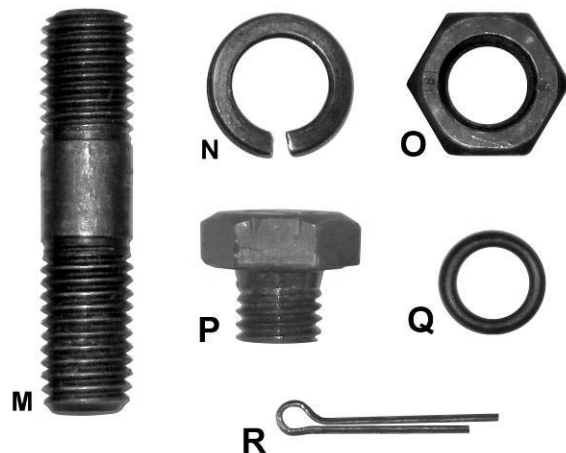


Figure 2: Contents of Hardware Bag

Assembly

Referring to Figure 1:

1. Screw three *tripod pole bases* (M) onto three *tripod poles* (L).
2. Screw *tripod poles* (M) into the *tripod seat* (D).

For steps 3 – 13 refer to Figure 4.

3. Pull the *knob* (D₁, Fig. 3) on the tripod seat and
4. Insert the *support assembly* (F) onto the *tripod seat* (D) by first pulling out the *knob* (D₁, Fig. 3) on the *tripod seat* (D). When the knob is released, the support assembly will be secured to the tripod seat.
5. Screw four *double-ended threaded studs* (M) (short-threaded end) into bottom of the *housing base* (C₁) of the hydraulic pump unit.
6. Place the *hydraulic pump unit* (C) onto the lower wing plate such that the studs protrude through the bottom of the wing plate.

Note: The alignment holes in the *wing plate* and *pump unit* must line up. If not, flip the wing plate over.

7. With the assistance of a second person, lift the *hydraulic pump unit* (C) and *lower wing plate* (J) as a unit and place it on top of the *support assembly* (F).

The *studs* (M) should protrude through the bottom of the *support assembly* plate (F) and the *spring pin* should fit into the alignment holes of the *wing plate* (J) and *pump unit* (C).

8. Secure the *pump unit* (C) and *wing plate* (J) to the *support assembly* (F) with four each M12 *lock washers* (N) and M12 *hex nuts* (O). Tighten with a 7/8" wrench.
9. Mount *swaging blocks* (E) onto the end-holes of the wing plate (J). These will be adjusted as required later.
10. Place the *upper wing plate* (H) onto the *pump unit* (C) and *swaging blocks* (E).
11. Insert *hinge pin* (G) through the upper wing plate and pump unit hinge holes and secure the hinge pin with *cotter pin* (R).
12. Insert the *handle* (K) into the *handle cap* (C₂) on the pump unit.
13. Remove the factory installed *oil plug* (P) and replace with the *vented oil plug* (P) and *rubber O-ring* (Q) from the hardware bag.

Important: Failure to replace the oil plug will cause improper operation.

Assembly is complete and the pipe bender is ready for use.

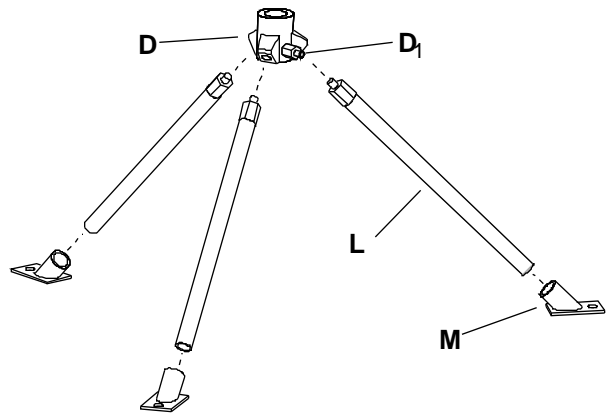


Figure 3

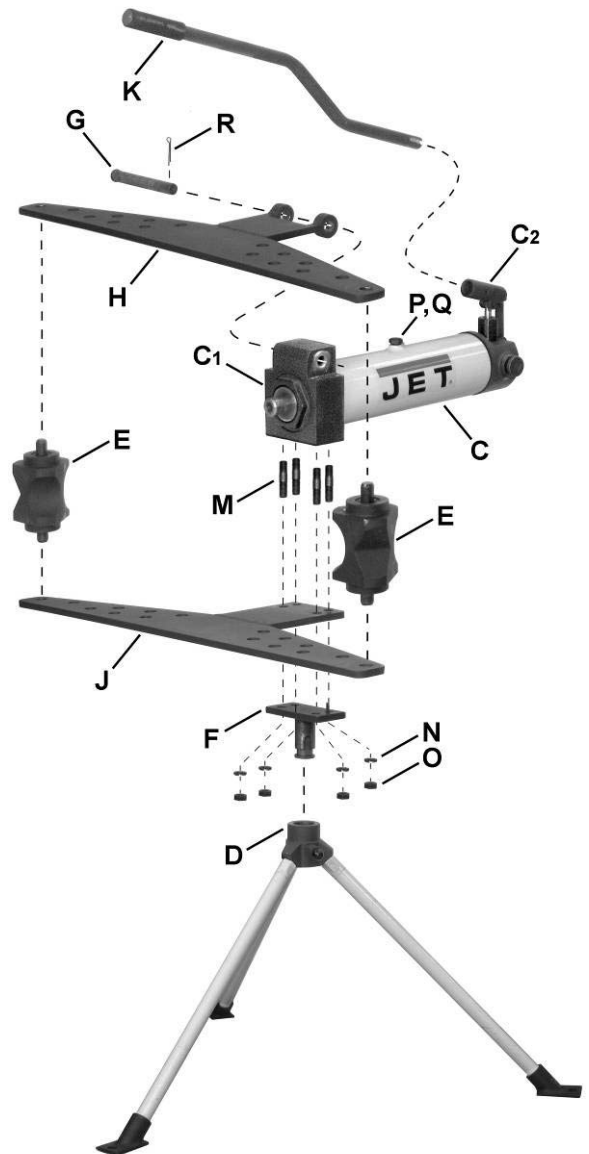


Figure 4

Operation

Securing the Pipe Bender

The JHPB-20 and JHPB-30 Hydraulic Pipe Bender can be secured to the floor with three bolts through the holes on the tripod pole bases if desired for increased stability.

Direction of the Pipe Bender

The direction of the pipe bender can be adjusted by pulling out the *knob* on the *tripod seat* (D₁, D, Fig. 3) and rotating the pump unit. When the knob is released, the pipe bender can still be adjusted. The machine can only be fixed in one position by rotating the pipe bender until the position rod resets into the indent in the base of the tripod seat.

When Using for the First Time

If the pipe bender is being used for the first time, be sure to change the shipping plug on the top of the pump unit (see Assembly Step 13) with the oil plug in the hardware bag, which contains a vent hole on the top. Failure to remove the shipping plug will cause improper operation. The shipping plug comes without the vent hole to prevent oil leakage during the shipment.

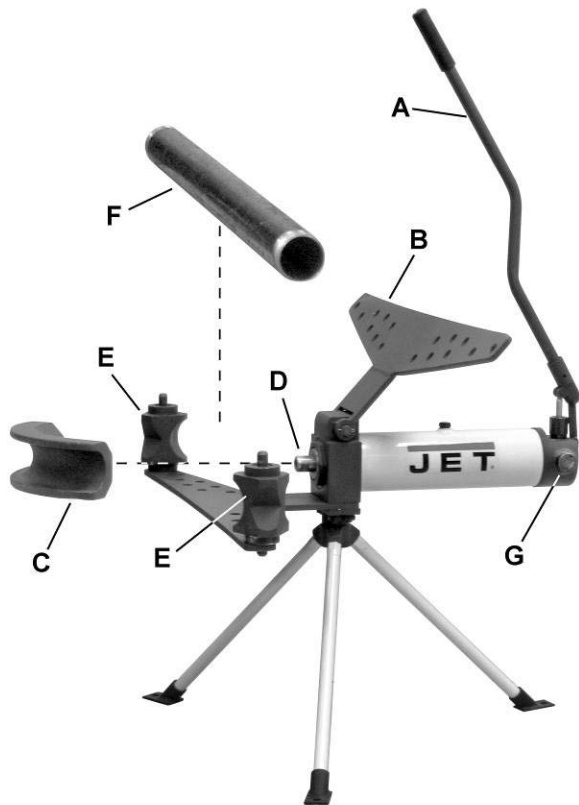


Figure 5

To Bend a Pipe

Referring to Figure 5:

1. Raise the *handle* (A).
2. Raise the *upper wing plate* (B).
3. Select the suitable *bending die* (C) for the pipe to be bent and slip it on the end of the *cylinder ram* (D).
4. Select the positions of the *swaging blocks* (E) for the pipe. For shorter pipes, position the swaging blocks closer together to account for the pipe shortening during the bending process.
5. Turn the *swaging blocks* (E) so the notch that best fits the diameter of the pipe to be bent faces in the direction of the bending die.

Note: Lubricating the swaging blocks will promote ease of movement.

6. Place the pipe you are going to bend.

Note: Keeping the *bending die* (C) lubricated will promote easy removal of pipe after the bend is made.

7. Lower the *upper wing plate* (B).
8. Close the *release valve* (G) by turning clockwise.
9. Pump the *handle* (A) to bend the pipe.

Note: Applying heat to the pipe will promote ease in bending.

CAUTION When applying heat to the pipe, the pipe must be free of oil and other flammable material.

10. When the bend has been made, release the pressure by opening the *release valve* (G). The ram will automatically retreat.

Lubrication

Check the oil level regularly by removing the vented oil plug found on the top of the pump housing. When changing or adding oil, fill the tank through the Cap Screw. Normally about 820 ml of *ISO VG of 22* or *ISO VG of 32 hydraulic oil* is recommended for model JHPB-20 Hydraulic Pipe Bender and 1700 ml for model JHPB-30. Lightly grease all moving parts if necessary.

Troubleshooting

Problem	Probable Cause	Remedy
Hydraulic unit does not lift, Pipe Bender does not work.	<ol style="list-style-type: none"> Oil low in tank. Air in pump. Worn UN-Ring in ram cylinder. Function Fail. 	<ol style="list-style-type: none"> Make sure there is no oil leakage. Check that the oil level is full. Pump the handle repeatedly until the ram piston stops to lift. Tilt the pump housing to about 45 degrees. Loose the release valve to allow any trapped air to escape from the oil tank. Change the UN-Ring (Parts List Item 39). Check if the steel bolt (Parts List Item 43) touching the release valve (Parts List Item 50) fell off. If so, tighten the release valve clockwise.
Piston does not advance or retract smoothly.	<ol style="list-style-type: none"> Air inside the oil tank. Low oil in the oil tank. Incorrect oil type. Debris or dirt in the oil flow. 	<ol style="list-style-type: none"> Pump the handle repeatedly until the ram piston stops to lift. Tilt the pump housing to about 45 degrees. Loose the release valve to allow any trapped air to escape from the oil tank. Fill oil. Change to ISO VG of 22 or ISO VG of 32 hydraulic oil. Flush the oil from inside the pump unit with gasoline.
Leakage from the Ram piston or Plunger Piston	Worn Seals	Change the seal kits in the seal kits bag.

Parts

Replacement Parts

Replacement parts are listed in the Parts List on the following pages. To order parts or reach our service department, call 1-800-274-6848 Monday through Friday (see our website for business hours, www.waltermier.com). Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

Parts List – Models JHPB-20and JHPB-30

Index No.	Part No.	Description	Size	Qty
1	JHPB20-1	Upper Wing Plate		1
	JHPB30-1	Upper Wing Plate *		1
2	JHPB20-2-1	1/2" Bending Die	1/2"	1
	JHPB20-2-2	3/4" Bending Die	3/4"	1
	JHPB20-2-3	1" Bending Die	1"	1
	JHPB20-2-4	1-1/4" Bending Die	1-1/4"	1
	JHPB20-2-5	1-1/2" Bending Die	1-1/2"	1
	JHPB20-2-6	2" Bending Die	2"	1
	JHPB30-2-7	2-1/2" Bending Die *	2-1/2"	1
	JHPB30-2-8	3" Bending Die *	3"	1
3	JHPB20-3	Snap Ring		4
4	JHPB20-4	Shaft		2
	JHPB30-4	Shaft *		2
5	JHPB20-5	Swaging Block		2
	JHPB30-5	Swaging Block *		2
6	JHPB20-6	Tripod Seat		1
7	JHPB20-7	Tripod Leg		3
8	JHPB20-8	Spring Pin	M6x30	1
9	JHPB20-9	Tripod Leg Base Foot		3
10	JHPB20-10	Handle End Cap		1
11	JHPB20-11	Handle Grip		1
12	JHPB20-12	Handle		1
13	JHPB20-13	Handle Cap		1
14	JHPB20-14	Rod		1
15	JHPB20-15	Lower Wing Plate		1
	JHPB30-15	Lower Wing Plate *		1
16	JHPB20-16	Hinge Pin		1
	JHPB30-16	Hinge Pin *		1
17	JHPB20-17	Spring Pin	M6x32	1
18	JHPB20-18	Cotter Pin		1
19	JHPB20-19	Joint Shaft		2
20	JHPB20-20	Joint Pin		1
21	JHPB20-21	E-Ring		6
22	JHPB20-22	Support Assembly		1
	JHPB30-22	Support Assembly *		1
23	JHPB20-23	Double-Ended Threaded Stud		4
	JHPB30-23	Double-Ended Threaded Stud *		4
24	TS-2361121	Lock Washer	M12	4
	TS-2361141	Lock Washer *	M14	4
25	TS-1540081	Hex Nut	M12	4
	TS-154009	Hex Nut *	M14	4
26	JHPB20-26	Hydraulic Pump Unit		1
	JHPB30-26	Hydraulic Pump Unit *		1
27	JHPB20-27	Socket Set Screw	M16x25	1
28	TS-2238911	Socket Head Cap Screw	M8x100	1
29	JHPB20-29	Copper Washer		1
30	JHPB20-30	Ram Piston		1
	JHPB30-30	Ram Piston *		1
31	JHPB20-31	Spring		1
	JHPB30-31	Spring *		1
32	JHPB20-32	Dust Seal		1
	JHPB30-32	Dust Seal *		1
33	JHPB20-33	Pump Housing Cap		1
	JHPB30-33	Pump Housing Cap *		1
34	JHPB20-34	O-Ring	59x3	1
	JHPB30-34	O-Ring *	78.97x3.53	1

Parts List – Models JHPB-20and JHPB-30

Index No.	Part No.	Description	Size	Qty
35	JHPB20-35	Ram Piston Housing		1
	JHPB30-35	Ram Piston Housing *		1
36	JHPB20-36-1	Solid Shipping Oil Plug (for shipping use only)		1
	JHPB20-36-2	Vented Oil Plug		1
37	JHPB20-37	O-Ring	11.8x2.65	1
38	JHPB20-38	Piston Slipcover		1
	JHPB30-38	Piston Slipcover *		1
39	JHPB20-39	UN-Ring	40x50x6	1
	JHPB30-39	UN-Ring *	55x65x6	1
40	JHPB20-40	Washer		1
	JHPB30-40	Washer *		1
41	JHPB20-41	Bolt		2
42	JHPB20-42	Spring		2
43	SB-6MM	Steel Ball	6mm	3
44	JHPB20-44	Housing Base		1
	JHPB30-44	Housing Base *		1
45	JHPB20-45	O-Ring	88x4	2
	JHPB30-45	O-Ring *	101.19x3.53	2
46	JHPB20-46	Oil Tank		1
	JHPB30-46	Oil Tank *		1
47	JHPB20-47	Filter		1
48	JHPB20-48	Steel Wire		1
49	JHPB20-49	Bolt		1
50	JHPB20-50	Release Knob		1
51	JHPB20-51	E-Bolt		1
52	JHPB20-52	O-Ring	13.2x2.65	1
53	JHPB20-53	Pump Housing		1
	JHPB30-53	Pump Housing *		1
54	JHPB20-54	Plunger Piston Housing		1
55	JHPB20-55	Copper Washer		1
56	JHPB20-56	Bolt		2
57	SB-4MM	Steel Ball	4mm	2
58	JHPB20-58	Reposition Spring		1
59	JHPB20-59	Adjustable Spring		1
60	JHPB20-60	UN-Ring	20x28x5	1
61	JHPB20-61	U-Packing		1
62	JHPB20-62	Plunger Piston		1
63	JHPB20-63	UN-Ring	14x22x5	1
64	JHPB20-64	Dust Seal		1
65	JHPB20-65	Position Rod		1
66	JHPB20-66	Stop Bolt		1
67	JHPB20-67	Knob		1
68	JHPB20-68	Spring		1
	JHPB20-JL	JET Logo Label (not shown)		1
	JHPB20-ID	ID Label (not shown)		1
	JHPB30-ID	ID Label (not shown) *		1

NOTE: * denotes for use on Model JHPB-30 only.

Parts Breakdown – Models JHPB-20 and JHPB-30

