



Operating Instructions and Parts Manual BP-1696H Box and Pan Brake



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Warranty and Service

JET® warrants every product it sells against manufacturers' defects. If one of our tools needs service or repair, please contact Technical Service by calling 1-800-274-6846, 8AM to 5PM CST, Monday through Friday.

Warranty Period

The general warranty lasts for the time period specified in the literature included with your product or on the official JET branded website.

- JET products carry a limited warranty which varies in duration based upon the product. (See chart below)
- Accessories carry a limited warranty of one year from the date of receipt.
- Consumable items are defined as expendable parts or accessories expected to become inoperable within a reasonable amount of use and are covered by a 90 day limited warranty against manufacturer's defects.

Who is Covered

This warranty covers only the initial purchaser of the product from the date of delivery.

What is Covered

This warranty covers any defects in workmanship or materials subject to the limitations stated below. This warranty does not cover failures due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair, alterations or lack of maintenance. JET woodworking machinery is designed to be used with Wood. Use of these machines in the processing of metal, plastics, or other materials may void the warranty. The exceptions are acrylics and other natural items that are made specifically for wood turning.

Warranty Limitations

Woodworking products with a Five Year Warranty that are used for commercial or industrial purposes default to a Two Year Warranty. Please contact Technical Service at 1-800-274-6846 for further clarification.

How to Get Technical Support

Please contact Technical Service by calling 1-800-274-6846. **Please note that you will be asked to provide proof of initial purchase when calling.** If a product requires further inspection, the Technical Service representative will explain and assist with any additional action needed. JET has Authorized Service Centers located throughout the United States. For the name of an Authorized Service Center in your area call 1-800-274-6846 or use the Service Center Locator on the JET website.

More Information

JET is constantly adding new products. For complete, up-to-date product information, check with your local distributor or visit the JET website.

How State Law Applies

This warranty gives you specific legal rights, subject to applicable state law.

Limitations on This Warranty

JET LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

JET 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.

JET sells through distributors only. The specifications listed in JET printed materials and on official JET website are given as general information and are not binding. JET reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever. JET® branded products are not sold in Canada by JPW Industries, Inc.

Product Listing with Warranty Period

90 Days – Parts; Consumable items; Light-Duty Air Tools
1 Year – Motors; Machine Accessories; Heavy-Duty Air Tools; Pro-Duty Air Tools
2 Year – Metalworking Machinery; Electric Hoists, Electric Hoist Accessories; Woodworking Machinery used for industrial or commercial purposes
5 Year – Woodworking Machinery
Limited Lifetime – JET Parallel clamps; VOLT Series Electric Hoists; Manual Hoists; Manual Hoist Accessories; Shop Tools; Warehouse & Dock products; Hand Tools

NOTE: JET is a division of JPW Industries, Inc. References in this document to JET also apply to JPW Industries, Inc., or any of its successors in interest to the JET brand.



Warnings

1. For your own safety read instruction manual before operating grinder.
2. Read and understand the entire owner's manual before attempting assembly or operation.
3. 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.
4. This hand brake 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 hand brake, do not use until proper training and knowledge have been obtained.
5. Do not exceed the rated capacity on this hand brake.
6. Do not use this hand brake for other than its intended use. If used for other purposes, JET disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
7. Wear eye protection and always use guards and eye shields.
8. Always wear approved safety glasses/face shields while using this bench grinder. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
9. Before operating this bench grinder, 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.
10. Wear ear protectors (plugs or muffs) during extended periods of operation.
11. Some dust created by power sanding, sawing, grinding, drilling and other construction activities contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead based paint.
 - Crystalline silica from bricks, cement and other masonry products.
 - Arsenic and chromium from chemically treated lumber.Your risk of exposure varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area and work with approved safety equipment, such as face or dust masks that are specifically designed to filter out microscopic particles.
12. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
13. **KEEP GUARDS IN PLACE** and in working order at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately.
14. Make sure the hand brake is firmly secured to the floor before use.
15. 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.
16. **SHEET METAL STOCK HAS SHARP EDGES.** To prevent cuts, use caution when handling.
17. **KEEP HANDS AND FINGERS** clear of the area in front and rear of the brake.
18. Provide for adequate space surrounding work area and non-glare, overhead lighting.
19. Make your workshop child proof with padlocks, master switches or by removing starter keys.
20. Keep visitors a safe distance from the work area. **Keep children away.**

Warnings

21. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents. DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted. Keep the floor around the machine clean and free of scrap material, oil and grease.
22. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
23. Do not overreach or use excessive force to perform any machine operation.
24. Use the right machine. Do not force a machine or attachment to do a job for which it was not designed. The right tool will do the job better and safer.
25. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
26. Make sure the work piece is securely attached or clamped to the table. Never use your hand to hold the work piece.
27. Do not stand on the machine. Serious injury could occur if the machine tips over.
28. Remove loose items and unnecessary work pieces from the area before starting the machine.
35. DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.

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



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



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

- - SAVE THESE INSTRUCTIONS - -

Specifications

Model	BP-1696H
Stock Number.....	752102
Capacity (mild steel)	16 Gauge
Bending Length Capacity.....	96"
Maximum Box Depth	4"
Maximum Lift of Beam	2-1/4"
Beam Adjustment	1"
Number of Fingers and Width	5 at 3"; 6 at 4"; 9 at 5"; 2 at 6"
Finger Nose Angle.....	45
Finger Nose Radius	1/32"
Overall Dimensions (Width x Depth x Height).....	122"x31"x63"
Weight.....	1,985 lbs

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



Read and understand the entire contents of this manual before attempting assembly or operation! Failure to comply may cause serious injury.

Unpacking

1. Remove the crate from around the machine.
2. Carefully clean all rust protected surfaces with a mild solvent or kerosene and a soft rag. Do not use lacquer thinner, paint thinner, or gasoline. These will damage painted surfaces.
3. Coat all machined surfaces with a light coat of oil to inhibit rust.
4. Remove the bolts holding the machine to the skid.
5. Carefully move the machine to a well-lighted area on a solid, level workbench, and secure to the bench with lag screws or bolts.

Machine location must allow access to all sides.

Assembly

The BP-1696H does not require assembly. However, it is important to make sure that the machine is level; otherwise the brake will not bend properly.

Use a machinist's level and shims if necessary.

Adjustments

The (#) in the text refers to the *Item Number* in the *Parts Breakdown* section.

The *apron* assembly has been adjusted at the factory for use with material having the capacity as listed in the Specifications section. During shipment of this unit the machine may have come out of alignment.

The forward edge of the *holddown fingers* (1, 2, 3, 4) should be adjusted parallel to the pivot edge of the clamp block. Release clamping pressure on the *holddown assembly* (800) by pushing the clamp handles (8, 9) to the rear. Adjust the hex cap screws as necessary for parallelism.

The center of the *apron* can be adjusted by tightening the *truss nut* on the apron assembly (803).

Finger alignment can be achieved by loosening all cap screws (15) and rotating the *apron* (803) to the 90-degree position. Push the *fingers* forward against the *angle bar* (36) for proper alignment. Tighten screws (15).

Operation

Adjusting for Metal Thickness

The *holddown assembly* (800) must be adjusted to allow for clearance when making bends according to the thickness of the material. Clearance for material within four gauges of the capacity should be twice the thickness of the material. For lighter gauges use 1-1/2" times the thickness. The forward edge of the holddown fingers should be adjusted parallel to the pivot edge of the clamp block. Release clamping pressure on the holddown assembly by pushing *clamp handles* (8, 9) slightly to the rear. Adjust hex cap screws (16) as necessary for parallelism. The center of the *apron* can be adjusted by tightening the *truss nut* on the apron assembly (803).

Adjusting the Clamping Pressure

The clamping pressure should be adjusted according to the thickness of the material. The clamping pressure should be great enough to hold the material securely in place but not so much that it is difficult to lock the *clamp handles* (8, 9). Clamping pressure can be adjusted by turning the nuts (24) on the threaded rod portion of the *toggle assembly* (10, 11).

Flange Capacity

The recommended minimum flange capacity is one inch.

Repeat Bends

Adjust the *gauge stop* (26) on the *gauge rod* (31) to limit the swing of the *apron* assembly.

Counter Weight

The *counter weights* (44) can be moved up or down to provide more or less leverage.

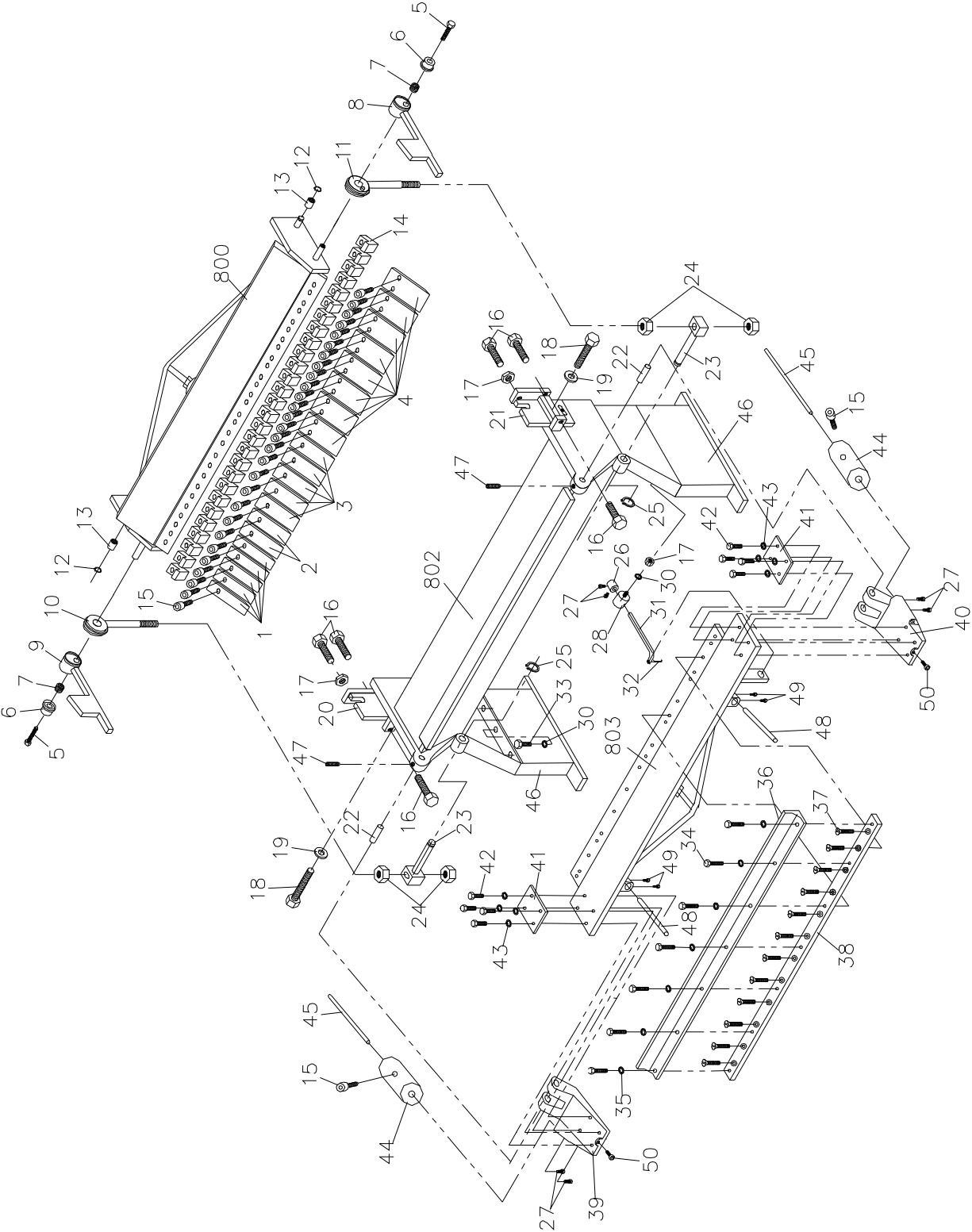
Lubrication

The machine must be lubricated every day of service with a few drops of oil. Oil pinholes are located at both *toggle assemblies* (10, 11) and the *apron assembly* (803) near the *swivel pin* (23). Lightly oil the machined parts when not in use to prevent rust.

BP-1696H Parts List

Index No	Part No	Description	Size	Qty
1	BP1696F-01	Finger,3"		5
2	BP1696F-02	Finger,4"		2
3	BP1696F-03	Finger,5"		5
4	BP1696F-04	Finger,6"		8
5	HB1697H-05	Hex Head Screw	M16x35	2
6	HB1697H-06	Cover		2
7	HB1697H-07	Spring		2
8	HB1697F-06	Clamp Handle R.H.		1
9	HB1697F-09	Clamp Handle L.H.		1
10	HB1697F-9	Toggle Assembly L.H.		1
11	HB1697F-08	Toggle Assembly R.H.		1
12	HB1697F-10	C-Clip	20mm	2
13	HB1697F-11	Brass Bushing	26x20.2x20	2
14	BP1697F-14	Finger Clamp		28
15	TS-1506041	Socket Head Cap Screw	M12x35	30
16	HB1697F-13	Hex Head Screw	M12x80	6
17	TS-1540081	Hex Nut	M12	7
18	TS-2213501	Hex Head Screw	M16x50	2
19	TS-155010	Plain Washer	16mm	2
20	HB1697H-20	Step Bracket Comp.L.H.		1
21	HB1697H-21	Step Bracket Comp.R.H.		1
22	HB1697F-17	Brass Pivot Pin		2
23	HB1697F-18	Swivel Pin Assembly		2
24	TS-1540231	Hex Nut	M24	4
25	HB1697H-25	C-Clip	32mm	2
26	HB1697F-16	Gauge Stop		1
27	TS-1505041	Socket Cap Screw	M10x30	6
28	HB1697F-15	Gauge Ring		1
30	TS-2361121	Spring Washer	12mm	7
31	HB1697F-24	Gauge Rod		1
32	HB1697H-32	Cotter Pin	4x35mm	1
33	TS-1492031	Hex Head Screw	M12x35	6
34	TS-1505051	Socket Cap Screw	M10x35	7
35	TS-1550071	Plain Washer	10mm	7
36	HB1697F-36	Angle Bar		1
37	TS-1516011	Socket Head Flat Screw	M10x20	12
38	HB1697F-38	Insert Bar		1
39	HB1697F-39	Support Apron Assembly L.H.		1
40	HB1697F-40	Support Apron Assembly R.H.		1
41	HB1697F-41	Fixing Plate		2
42	TS-1492051	Hex Head Screw	M12x50	8
43	TS-2360121	Plain Washer	12mm	8
44	HB1697F-20	Counterweight		2
45	HB1697F-45	Counterweight Rod		2
46	HB1697H-46	Stand		2
47	TS-1525041	Set Screw	M10x20	2
48	HB1697H-48	Bending Handle		2
49	TS-1491031	Hex Head Screw	M8x25	4
50	TS-1504051	Socket Head Cap Screw	M12x30	2
800	BP1696F-800	Hold-down Assembly		1
802	HB1697H-802	Base Assembly		1
803	HB1697F-803	Apron Assembly		1
	STRIPE-1-3/4	JET Stripe	1-3/4"W	per ft.

BP-1696H Assembly Drawing



Replacement Parts

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



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