



48 INCH PAN AND BRAKE BOX OWNER'S MANUAL



WARNING:
Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item# 49676



48 INCH PAN AND BRAKE BOX OWNER'S MANUAL

Thank you very much for choosing a Klutch product. For future reference, please complete the owner's record below:
Serial Number/Lot Date Code: _____ Purchase Date: _____
Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This pan and brake box is designed for certain applications only. Northern Tool and Equipment cannot be responsible for issues arising from modification or use of this product in an application for which it was not designed. We strongly recommend that this product not be modified and/or used for any application other than that for which it was designed.

For technical questions please call 1-800-222-5381.

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Intended Use

The Pan and Brake Box is used as a hand-brake as well as to form a box or pan with four sides and a bottom from one sheet of metal. The machine is mostly used in the manufacture of electric switch boxes and panel board cabinets. Other applications are forming cases, buckets, carry boxes and all kinds of boxes and pans.

Technical Specifications

Property	Specification
Max. Lift Height (in.)	7/8
Bending Applications	Mild steel, stainless steel, aluminum, copper plate
Dimensions (in.)	64.2 (L) x 23.6 (W) x 16.2 (H)

CAPACITY

The capacity of the brake is determined by the bending edge thickness provided by the Angle Bar (25) when mounted on the bending leaf (22).
The Angle Bar (25) allows the full-rated 1" flange or wider on mild steel. Narrower flanges can be bent on lighter metal.
On capacity work, the reinforcing Angle Bar must be in the normal or top position.
The capacity of brake is reduced by four gauges if the brake is used without the Angle Bar.

Important Safety Information**⚠ WARNING:**

- Read and understand all instructions. Failure to follow all instructions may result in serious injury.
- The warnings, cautions, and instructions in this manual cannot cover all possible conditions or situations that could occur. Exercise common sense and caution when using this tool. Always be aware of the environment and ensure that the tool is used in a safe and responsible manner.
- DO NOT allow persons to operate or assemble this product until they have read this manual and have developed a thorough understanding of how the product works.
- DO NOT modify the product in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the product. There are specific applications for which the product was designed.
- Use the right tool for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. It will do the job better and more safely at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.
- Industrial or commercial applications must follow OSHA requirements.

⚠ WARNING:

- This product may contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

**⚠ WARNING:
WORK AREA SAFETY**

- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well lit. Cluttered, wet, or dark work areas can result in injury. Using the box in confined work areas may put you dangerously close to other cutting tools and rotating parts.
- Do not use the box where there is a risk of causing a fire or an explosion; e.g., in the presence of flammable liquids, gases, or dust. The tool can create sparks, which may ignite the dust or fumes.
- Do not allow the box to come into contact with an electrical source. Contact will cause a shock.
- Keep children and bystanders away from the work area while operating the box. Do not allow children to play with the box.
- Be aware of all power lines, electrical circuits, water pipes, and other mechanical hazards in your work area. Some of these hazards may be below the work surface hidden from your view and may cause personal harm or property damage if unintentionally contacted.

PERSONAL SAFETY

- Stay alert, watch what you are doing, and use common sense when operating the box. Do not use the box while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the box may result in serious personal injury.
- Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught.
- Use ANSI-Z87.1 compliant safety goggles or safety glasses with side shields, or when needed, a face shield. Use a dust mask in dusty work conditions. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate. This applies to all persons in the work area.
- Do not overreach. Keep proper footing and balance at all times.
- Secure the work with clamps or a vise instead of your hand when practical. This safety precaution allows for proper tool operation using both hands.

**⚠ CAUTION
TOOL USE AND CARE**

- Do not force the box. Tools do a better and safer job when used in the manner for which they are designed. Plan your work, and use the correct tool for the job.
- Check for damaged parts before each use. Carefully check that the box will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the box with a damaged part.
- Store the box when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the box for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with the box. Accessories that may be suitable for one tool may create a risk of injury when used with another tool.
- Inspect the for damage or wear before each use. If you find damage do not use the box.

Specific Operation Warnings**⚠ WARNING:**

- Never bend metal sheet heavier than the rated capacity, even in short lengths.
- Never use pipe extensions on the Handle Cover (2) for leverage.
- Bending against seams can be done only when the swivels, left and right (7 & 8) are adjusted to clamp the full multiple thickness of the seam. Simultaneously, the top leaf must be set back for clearance of the same full multiple thickness.
- Be sure to have the Angle Bar (25) mounted to the Bending Leaf (22) when making capacity bends.

**Assembly
RECEIVING AND UNPACKING**

On receiving the box, examine the shipping packing to see if it is in good condition. Then, remove the packaging to check for any damage or loss caused during transportation. If any is found, please immediately notify the transportation and your supplier. Some parts are shipped detached from the box to save transportation space. You must check those parts in extra care. Then attach them on to the box according to the parts diagram.

INSTALLATION

The product must be installed indoors on a solid level floor (see Figure 1). For easy operation, a space of one meter or more must be reserved on four sides of the machine. The work place must be well light to help prevent any incorrect or dangerous operation. Clean the machine only with kerosene after installation.



Figure 1

Before Each Use

Clean Up

The unpainted surfaces are coated with a waxy oil to protect them from corrosion during shipment. Remove this protective coating with a solvent cleaner or citrus-based degreaser.

Floor and Workbench Load

BEFORE moving the brake onto a wood floor, inspect it carefully to determine that it will be sufficient to carry the load of the machine, the lifting device and its operators. If you question the strength of your floor, you should consider having it inspected for possible reinforcement.

Working Clearances

Working clearances can be thought of as the distances between machines and obstacles that allow safe operation of every machine without limitation. Consider existing and anticipated machine needs, size of material to be processed through each machine, and space for auxiliary stands or work tables. Also consider the relative position of each machine to one another for efficient material handling.

Lighting

Lighting should be bright enough to eliminate shadows and prevent eye strain.

Fix the machine onto the floor before use.

Check the condition of the box and that its free of scraps or other debris and clean enough for the next operation.

Operating Instructions

FINGER ADJUSTMENT

Clearance for bends is adjusted by moving the fingers (16) backward or forward at the bending edge with wobble shaft (15). If the material to be bent is within 22 gauges of capacity, move the fingers backward 1.5 times of the thickness of the material. If the material is lighter, move the fingers forward proportionately depending on the sharpness of the bend desired. (see Figure 2)



Figure 2

To adjust the fingers, loosen the clamp bar screws (17) holding them in place, adjust the fingers to align then retighten the screws.

Clamping pressure of the swivels (#7 & #8) is changed by adjusting the nuts (#18) (see Figure 3)



Figure 3

JAW ALIGNMENT

Before bending, check that the fingers (16) form a straight bending edge. If not, perform the following: loosen the clamp bar screws (17). With the angle bar (25) mounted, rotate the bending leaf (22) straight up, straighten the fingers so they are in line, then retighten the clamp bar screws. (see Figure 4)

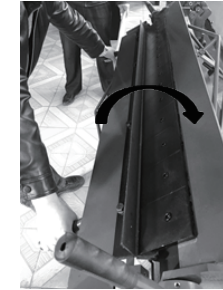


Figure 4

FOR RADIUS BENDS

The angle bar (25) must be mounted on the bending leaf (22) to bend material around Radius Nose Bar.

REMOVABLE FINGERS

The fingers (16) are interchangeable. Special types of fingers such as Radius fingers or round fingers can be used for a variety of applications. (These other types of fingers are not included.) A full length of fingers can be used as a standard hand brake.

OVERBENDING ADJUSTMENT

When bending sheet further (to a greater angle) on one side than the other, move the fingers (16) backward on the end where sheet is bending further. Loosen the clamp bar screws (17) slightly on the side that is bending further. Then adjust these fingers with the wobble shaft (15) on that end. Retighten the clamp bar screws.

BOWED BENDING LEAF ADJUSTMENT

If the bending leaf becomes bowed in center after a lot of use, tighten both tension bolts (27,28) until the center is in a straight line with both ends. (see Figure 5)

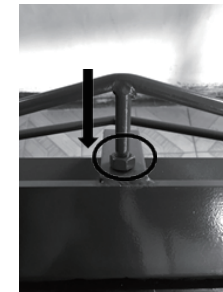


Figure 5

After Each Use

1. Clear away any scraps or debris to setup for the next operation.

2. Clean the machined surfaces so no metal shavings, burrs, or foreign material exists.

Note: Use a mild solvent and soft rag. Harsh solvents like thinners, gasoline, and acetone will damage painted surfaces and can permanently etch metal surfaces.

3. Wipe a light coat of machine oil on all machined surfaces to prevent rust and oil the machine in necessary places.
4. Check for the following conditions and repair or replace when necessary:
 - Loose mounting bolts.
 - Worn fingers.
 - Worn or cracked pivot pins or links.
 - Bent or cracked levers.
 - Any other condition that could hamper the safe operation of this tool.

Maintenance

Maintain your box. It is recommended that the general condition of any tool be examined before it is used. Keep the box in good repair by adopting a program of conscientious repair and maintenance in accordance with the recommended procedures found in this manual.

Keep handles dry, clean, and free from oil and grease.

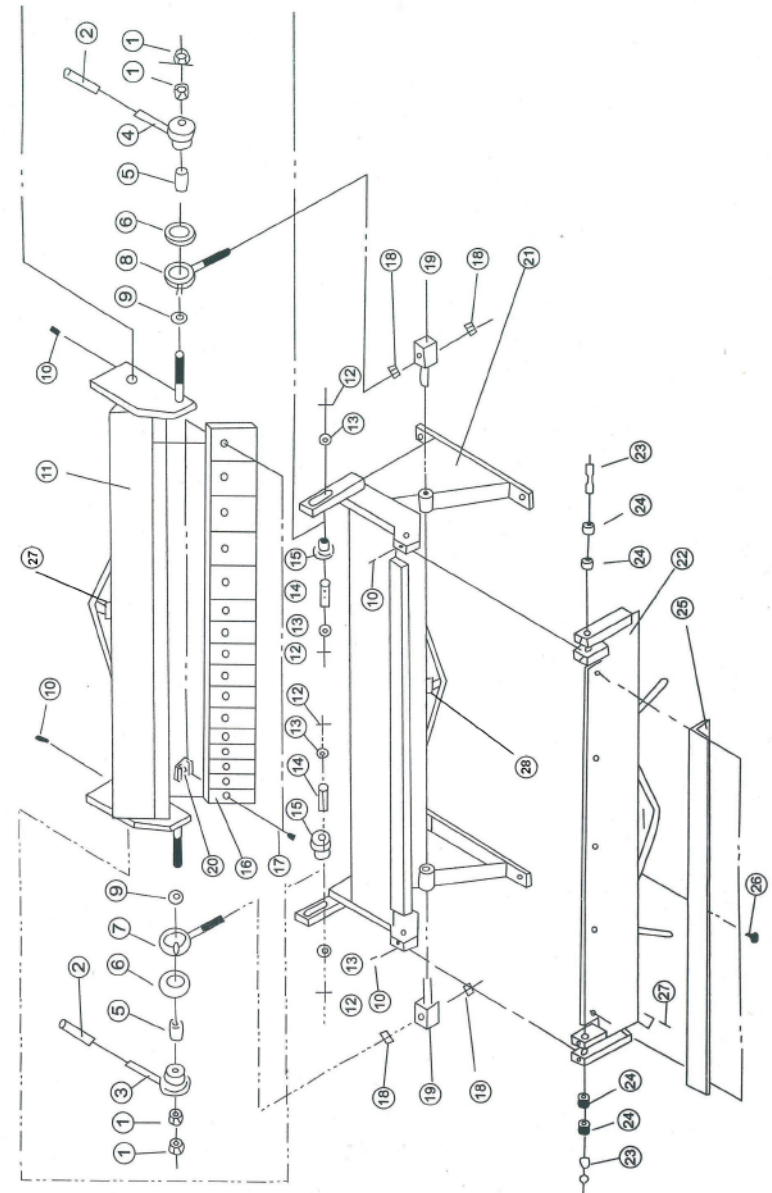
LUBRICATION

Lubricate the box occasionally by putting SAE-30 oil on all rotating parts to ensure smooth, trouble-free operation for a long time.

Parts List

Part No.	Description	Part No.	Description
1	NUT	16-1	FORMING FINGERS2"
2	HANDLE COVER	16-2	FORMING FINGERS3"
3	HANDLE LEFT	16-3	FORMING FINGERS4"
4	HANDLE RIGHT	17	SCREW
5	BUSH	18	NUT
6	SHAFT SLEEVE	19	KNOB BLOCK
7	SWIVEL LEFT	20	CLAMP
8	SWIVEL RIGHT	21	STAND
9	WASHER	22	BENDING LEAF
10	SCREW	23	SHAFT
11	BREAK SUPPORT	24	BUSH
12	PIN	25	ANGLE BAR
13	WASHER	26	SCREW
14	SHAFT	27	Tension bolt
15	WOBBLE SHAFT	28	Tension bolt

Parts Diagram



Replacement Parts

- For replacement parts and technical questions, please call Customer Service at 1-800-222-5381.
- Not all components are available for replacement. The illustrations provided are a convenient reference to the location and position of parts.
- The following are required when ordering parts: model number, serial number/lot date code, and description.
- The distributor reserves the rights to make design changes and/or improvements to product lines and manuals without notice.

Limited Warranty

Northern Tool and Equipment Company, Inc. ("We" or "Us") warrants to the original purchaser only ("You" or "Your") that the Ironton Air Tool product purchased will be free from material defects in both materials and workmanship, normal wear and tear excepted, for a period of one year from date of purchase. The foregoing warranty is valid only if the installation and use of the product is strictly in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with this limited warranty, Your sole and exclusive remedy is that We will, at our sole option and within a commercially reasonable time, either replace the product without charge to You or refund the purchase price (less shipping). This limited warranty is not transferable.

Limitations on the Warranty

This limited warranty does not cover: (a) normal wear and tear; (b) accessories both consumable and durable; (c) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (d) damage from misapplication, overloading, or improper installation; (e) improper maintenance and repair; and (f) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

Obligations of Purchaser

You must retain Your product purchase receipt to verify date of purchase and that You are the original purchaser. To make a warranty claim, contact Us at 1-800-222-5381, identify the product by make and model number, and follow the claim instructions that will be provided. The product and the purchase receipt must be provided to Us in order to process Your warranty claim. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs or costs related to Your return visit to a retail store.

Remedy Limits

Product replacement or a refund of the purchase price is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for: service or labor charges or damage to Your property incurred in removing or replacing the product; any damages, including, without limitation, damages to tangible personal property or personal injury, related to Your improper use, installation, or maintenance of the product; or any indirect, incidental or consequential damages of any kind for any reason.

Assumption of Risk

You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

Governing Law

This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. Some states do not allow limitations or exclusions on implied warranties or incidental or consequential damages, so the above limitations may not apply to You. This limited warranty is governed by the laws of the State of Minnesota, without regard to rules pertaining to conflicts of law. The state courts located in Dakota County, Minnesota shall have exclusive jurisdiction for any disputes relating to this warranty.



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