

KLUTCH®

24in. Box and Pan Brake

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 #101738

READ & SAVE THESE INSTRUCTIONS

Thank you very much for choosing a Klutch product!

For future reference, please complete the owner's record below:

Serial Number/Lot Date Code (if applicable): _____

Purchase Date: _____

Save the receipt, warranty, and this manual. It is important that you read the entire manual to become familiar with this product before you begin using it.

This product is designed for certain applications only. Northern Tool & Equipment is not responsible for issues arising from modification or improper use of this product such as 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

This Box and Pan Brake is an indispensable tool if you need to increase the strength of sheet metal plates with bends, or you intend on fabricating more complicated brackets, gussets, boxes, or fixtures.

This machine is suitable for processing carbon steel plate with thickness no more than 0.04in., with width no more than 24in. and other plate materials, such as non-ferrous metal, etc. with similar thickness.

Packaging Contents

- Box and Pan Brake (1)

Technical Specifications

Property	Specification
Steel capacity	0.04in. (1mm,20gauge) sheet metal
Width capacity	24in. (610mm)
Working height	9in. (230mm)
Overall dimension	30 11/16 x 11 x 14 3/8 in.

Important Safety Information

⚠WARNING

- Read and understand all instructions. Failure to follow all instructions may result in serious injury or property damage.
- 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 the product until they have read this manual and have developed a thorough understanding of how it works.
- Do not modify this 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 be a safer experience and do the job better 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

PROP 65

- This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to www.p65warnings.ca.gov.
- Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:
 - - lead from lead-based paints,
 - - crystalline silica from bricks and cement and other masonry products, and
 - - arsenic and chromium from chemically-treated lumber.
- Your risk from these exposures 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 dust masks that are specially designed to filter out microscopic particles.
- Handling power cords on corded products may expose you to lead, a chemical known to the state of California to cause cancer and birth defects or other reproductive harm. Wash your hands after handling.

⚠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 product in confined work areas may put you dangerously close to cutting tools and rotating parts.
- Do not use the product where there is a risk of causing a fire or an explosion; e.g., in the presence of flammable liquids, gases, or dust. The product can create sparks, which may ignite the flammable liquids, gases, or dust.
- Do not allow the product to come into contact with an electrical source. The tool is not insulated and contact will cause electrical shock.
- Keep children and bystanders away from the work area while operating the tool. Do not allow children to handle the product.
- Be aware of all power lines, electrical circuits, water pipes, and other mechanical hazards in your work area. Some of these hazards may be hidden from your view and may cause personal injury and/or property damage if contacted.

⚠WARNING

PERSONAL SAFETY

- Stay alert, watch what you are doing, and use common sense when operating the tool. Do not use the tool while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool 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 in moving parts. Air vents on the tool often cover moving parts and should be avoided.
- Wear the proper personal protective equipment when necessary. Use ANSI Z87.1 compliant safety goggles (not 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.

⚠CAUTION

PRODUCT USE AND CARE

- Do not force the product. Products are safer and do a better job when used in the manner for which they are designed. Plan your work and use the correct product for the job.
- Check for damaged parts before each use. Carefully check that the product will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the product with a damaged part.
- Store the product when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the tool for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with your product. Accessories that may be suitable for one product may create a risk of injury when used with another tool. Never use an accessory that has a lower operating speed or operating pressure than the tool itself.
- Keep guards in place and in working order. Never operate the product without the guards in place.

Assembly Instructions

Remove machine from packaging.

Put the bending brake on a workbench which can support the weight of the unit and the stock being bent.

Using a pencil, mark through the holes in the body (#3) feet onto the workbench.

Drill 8 mm (5/16") holes into the work bench for mounting bolts.

Secure the bending brake with 4bolts, lock washers, and nuts (not provided).

Operating Instructions

⚠WARNING

Always wear safety glasses or other approved eye protection while operating or servicing the machine.

Do not attempt to bend stock which is thicker than 1mm (20gauge). Damage could occur to bending brake. If you are not sure of the stock thickness, try bending the stock. If it does not easily bend, either the stock is too thick, or the bending brake needs adjustment.

When bending, keep spectators clear of the work area.

1. Lift handle jacket (#15) all the way to open the upper press assembly.
2. Insert the sheet metal to be bent over the body (#3) and under the upper press assembly (#4). Slide the sheet metal in and align the bend mark on the stock to the inner lip of the bending assembly (#1). In general, leave a 3mm(1/8") gap to make the bend clean. This gap will increase when bending thicker materials.
3. Press the handle jacket (#15) to the locked position. This action causes the upper press assembly to clamp down on the stock. If the handle jacket does not come down all the way and lock, either the stock is greater than 1mm (20gauge), or the bending brake needs to be adjusted.
4. Using both hands, lift up on the bending assembly (#1) with the handles until the desired angle is reached on the stock.
5. Lift the handle jacket (#15) all the way up and remove the sheet metal.
6. If you want to bend a box or a pan, you must choose a die or some dies assembly which length close to the pan or box side length.

Adjustments.

It may become necessary to adjust the position of the upper press assembly (#4) or the eccentric shaft (#5) to accommodate a thicker or thinner piece of sheet metal.

Adjust for thickness of sheet metal.

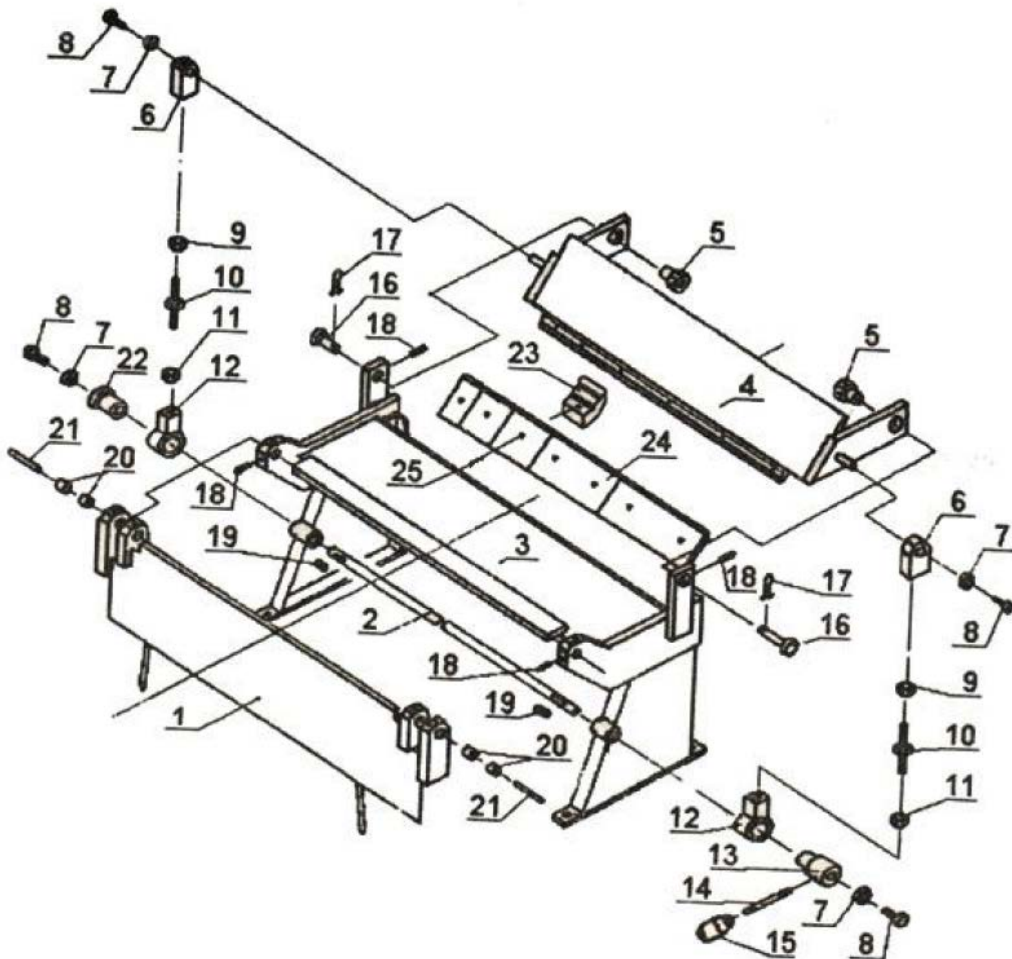
1. Lift handle jacket (#15) all the way.
2. Loosen nuts (#9 and #11) to enable bolt (#10) to move up or down.
3. Turn bolt (#10) clockwise to move the upper press assembly (#4) down, or counterclockwise to move it up (for large stock). Count the number of turns.
4. Tighten nuts (#9 and #11) to secure bolt (#10) in place.
5. On the opposite side of the bending brake, repeat step 7.1.1 through 7.1.4. adjust bolt (#10) with the same number of turns. The upper press assembly (#4) must be flush with the bending assembly (#1) when closed.
6. Turn the eccentric shaft (#5) to move the upper press assembly forward or backward slightly. Do this equally to both sides.

Maintenance

Maintain the product by adopting a program of conscientious repair and maintenance in accordance with the following recommended procedures. It is recommended that the general condition of any tool be examined before it is used. Keep your tool in good repair. Keep all cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control. Keep handles dry, clean, and free from oil and grease. Also refer to the engine manufacturer's instruction manual for additional information about engine maintenance. The following chart is based on a normal operation schedule.

Maintenance Interval	Maintenance Point
Every month	Store idle equipment. When not in use tools must be stored in a dry location to inhibit rust.
Every week	Lubricate all moving parts and surfaces weekly with a light oil. This will keep the parts moving freely, and prevent rusting.

Parts Diagram



Parts List

Reference	Part Number	Part Description	Quantity
1	1	Bending assembly	1
2	2	Shaft	1
3	3	Body	1
4	4	Upper press assembly	1
5	5	Eccentric shaft	2
6	6	Connecting block	2
7	7	Washer	4
8	8	Screw	4
9	9	Nut	2
10	10	Bolt	2
11	11	Nut	2
12	12	Bushing	2
13	13	Right eccentric shaft	1
14	14	Screw rod	1
15	15	Handle jacket	1
16	16	Pin shaft	2
17	17	Split pin	2
18	18	Screw	4
19	19	Flat key	2
20	20	Bushing	4
21	21	Small shaft	2
22	22	Left eccentric shaft	1
23	23	Clamp cake	6
24	24	bending die	6
25	25	screw	6

Replacement Parts

- For replacement parts and technical questions, please call Customer Service at **1-800-222-5381**.
- Not all product components are available for replacement. The illustrations provided are a convenient reference to the location and position of parts in the assembly sequence.
- When ordering parts, the following information will be required: item description, item model number, item serial number/item lot date code, and the replacement part reference number.
- The distributor reserves the rights to make design changes and 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 Klutch 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 or product component 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) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation; (d) improper maintenance and repair; and (e) 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 product component; 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.

KLUTCH[®]

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