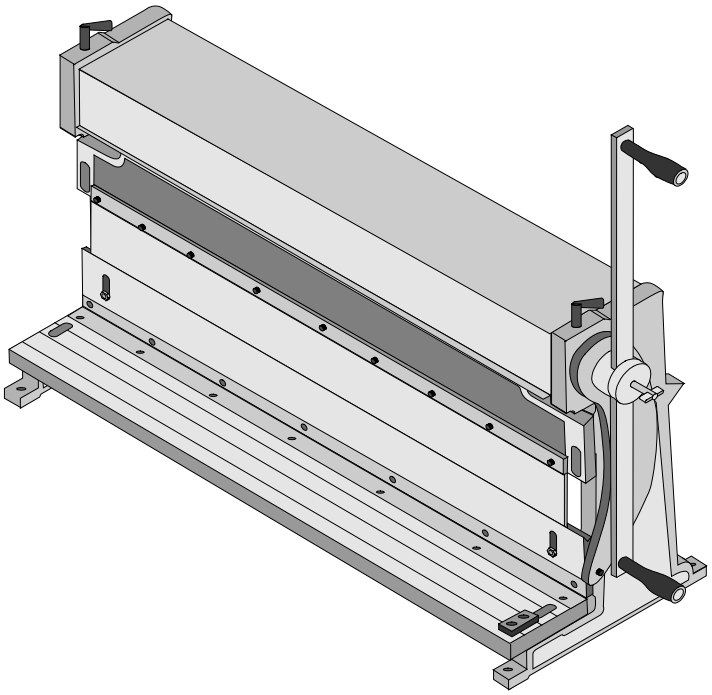
CENTRAL MACHINERY®

30” SHEAR BRAKE ROLL

Model 05907

Assembly & Operating Instructions



Diagrams within this manual may not be drawn proportionally.
Due to continuing improvements, actual product may differ slightly from the product described herein.

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Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.

For technical questions or replacement parts, please call 1-800-444-3353.

SAVE THIS MANUAL

You will need this manual for the safety instructions, assembly and operating instructions and parts list. Put it in a safe, dry place for future reference. **Keep your invoice with this manual. Write the invoice number on the inside front cover.**

READ ALL INSTRUCTIONS BEFORE OPERATING THE 30" SHEAR BRAKE ROLL.

SPECIFICATIONS

Characteristic	Value
Measurements	40" x 14 1/2" x 23 1/2"
Weight	297 lb.
Maximum Work Piece Width	30"
Maximum Work Piece Thickness	20 Gauge

SAFETY WARNINGS & CAUTIONS

1. **KEEP WORK AREA CLEAN.** Cluttered areas invite injuries.
2. **KEEP CHILDREN AWAY.** All children should be kept away from the work area. Don't let them handle the tool.
3. **DO NOT OPERATE THE TOOL IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to operate.
4. **AVOID MOVING PARTS DURING OPERATION.** Keep fingers and hands away from all moving parts.
5. **USE EYE PROTECTION.** Wear ANSI approved impact safety goggles. Goggles are available from Harbor Freight Tools.
6. **DRESS SAFELY.** Protective, gloves and non-skid footwear or safety shoes are recommended when working with and operating the tool. Don't wear loose clothing or jewelry. They can get caught in moving parts. Also, wear a protective hair covering to prevent long hair from getting caught in the tool.
7. **DON'T OVERREACH.** Keep proper footing and balance at all times.
8. **STAY ALERT.** Watch what you are doing. Use common sense. Do not operate any tool when you are tired.
9. **REPLACEMENT PARTS AND ACCESSORIES.** When servicing, use only identical replacement parts. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
10. **STORE IDLE EQUIPMENT.** When not in use, the tool should be stored in "closed" position and in a dry location to reduce rust. For safety, keep out of reach of children.

ADJUSTMENT

Handle Removal and Adjustment

The HANDLE (#18) may be adjusted or moved by removing one of the handle knobs and loosening the wing nut that holds the handle in place. It may then be slid out of the handle socket, moved to the opposite side of the tool, and tightened in the most convenient position.

Bending Die Adjustment and Removal

The UPPER BRAKING DIE (#12) is segmented and can be used for varying sizes of box and pan forming. When forming a smaller box or pan, choose the desired size UPPER DIE finger, center it and remove the others. See below for adjustment instructions.

The SHEAR BRAKE ROLL can be used to bend sheet metal up to 20 gauge. The space between the UPPER DIE and the MOVING CUTTER PLATE (#11) is adjustable. To adjust the spacing, perform the following steps:

Step 1. Place a flat straight piece of wood between the UPPER BRAKING DIE and MOVING CUTTER PLATE and raise the MOVING CUTTER PLATE so that the material just touches the UPPER DIE as shown in Figure 1.

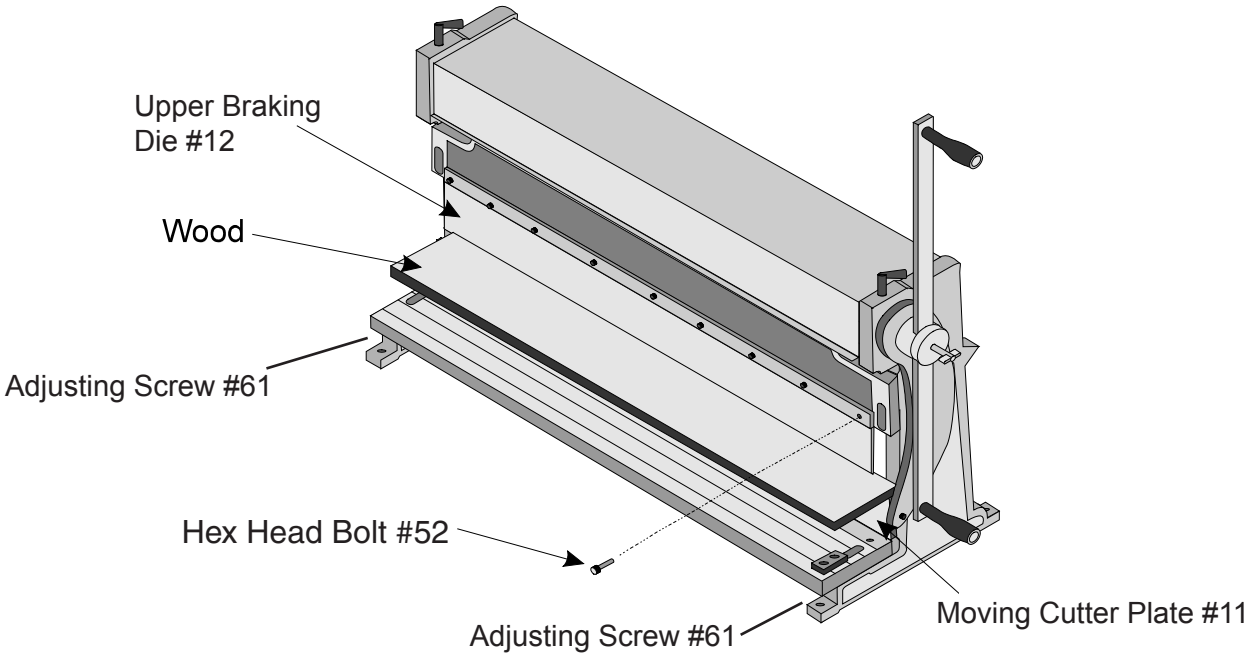


Figure 1 — Adjusting the Dies

Step 2. Loosen the HEX SCREWS (#52) holding the UPPER DIE fingers in place. It is not necessary to remove them.

Step 3: Remove any unneeded UPPER DIE fingers.

Step 4. Raise and lower the MOVING CUTTER PLATE and use the block of wood to adjust the alignment of the UPPER DIE fingers.

Step 5: Tighten the UPPER DIE HEX SCREWS.

Removal and Installation of Upper Cutting Blade

Step 1: Remove the HEX SCREWS (#56) from the upper cutting BLADE (#23) as shown in Figure 2.

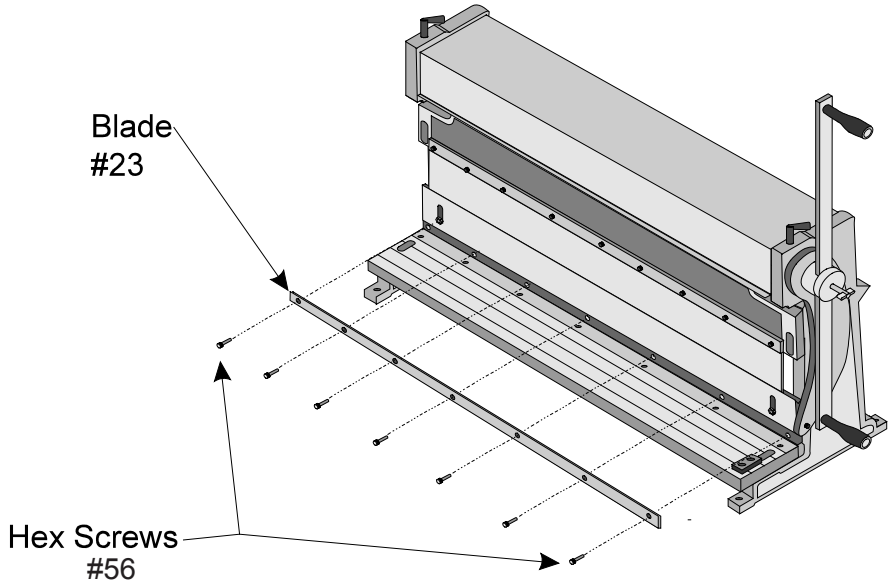


Figure 2 — Upper Blade Removal

Step 2: Remove the upper cutting BLADE.

Step 3: Align the upper cutting BLADE so that it is flush with the MOVING CUTTER PLATE (#11) and secure with its SCREWS.

Adjustment of Upper Blade

Step 1: Place a 30” piece of thin cardboard or paper between the UPPER and LOWER BLADES (#23).

Step 2: Rotate the HANDLE (#18) and cut the material.

Step 3: Use a straightedge to determine the straightness of the cut and if the BLADE is in need of adjustment.

Step 4: If the BLADE is bowed out, away from the front of the tool, turn the adjustment NUT (#49) counter-clockwise (see Figure 3). This will tighten the SUPPORTING PLATE (#22) and push the middle of the UPPER BLADE (#23) out while pulling its ends in.

Step 5: If the BLADE is bowed in, towards the back of the tool, turn the adjustment NUT clockwise (see Figure 3). This will loosen the SUPPORTING PLATE and pull the middle of the UPPER BLADE in while pushing its ends out.

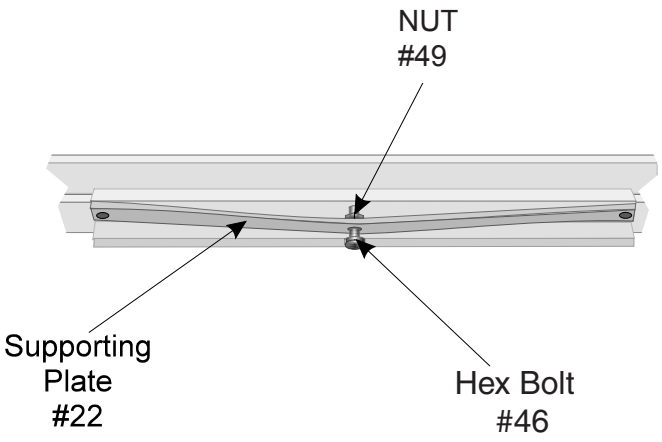


Figure 3 — Upper Blade Alignment

Removal and Installation of Lower Blade

Step 1: Remove the HEX HEAD SCREWS (#58) from the lower cutting BLADE (#23) as shown in Figure 4.

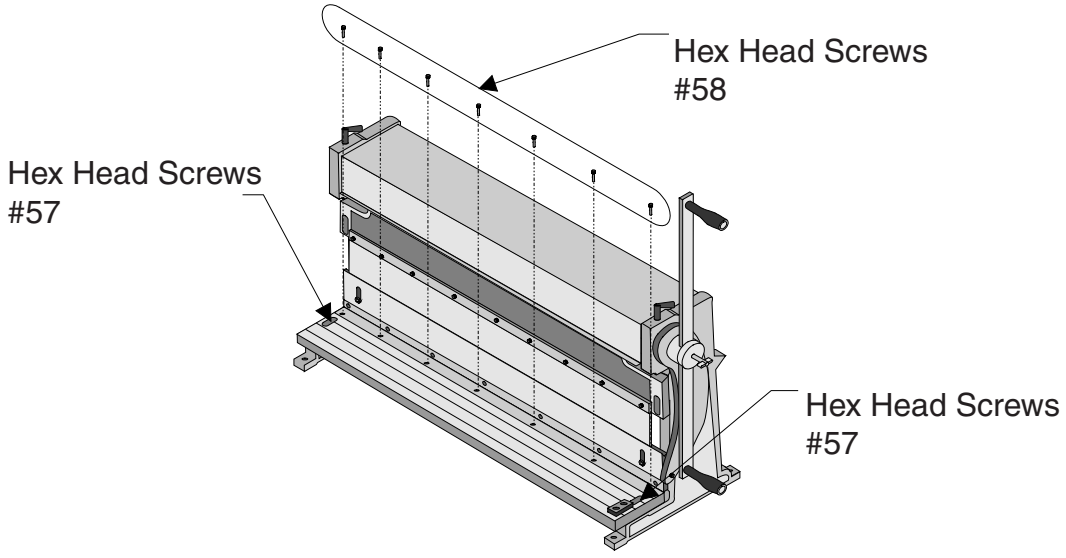


Figure 4 — Removal and Installation of Lower Blade

Step 2: Remove the lower cutting BLADE (#23).

Step 3: Replace the lower cutting BLADE and secure using its HEX SCREWS.

Adjustment of Lower Cutting Blade

Step 1: Lower the upper BLADE (#23) to its lowest position.

Step 2: Loosen the two inset HEX HEAD BOLTS (#59) located on top of the WORK TABLE (#2) as shown in Figure 4.

Step 3: Adjust the lower cutting BLADE by turning its ADJUSTMENT SCREWS (#61) as shown in the Parts Diagram on page 13. The distance between the lower cutting BLADE and the upper cutting BLADE should be 5 to 8 percent of the thickness of the workpiece.

Step 4: Tighten the two inset HEX HEAD BOLTS (#59) located on top of the WORK BENCH (#2).

OPERATION

Shearing

Step 1: Scribe the cutting mark on the material.

Step 2: Slide the material between the upper BLADE (#23) and the lower BLADE (#23) so that the upper BLADE is positioned directly above the mark and the right hand side of the material rests against the GUIDE (#16) as shown in Figure 5.

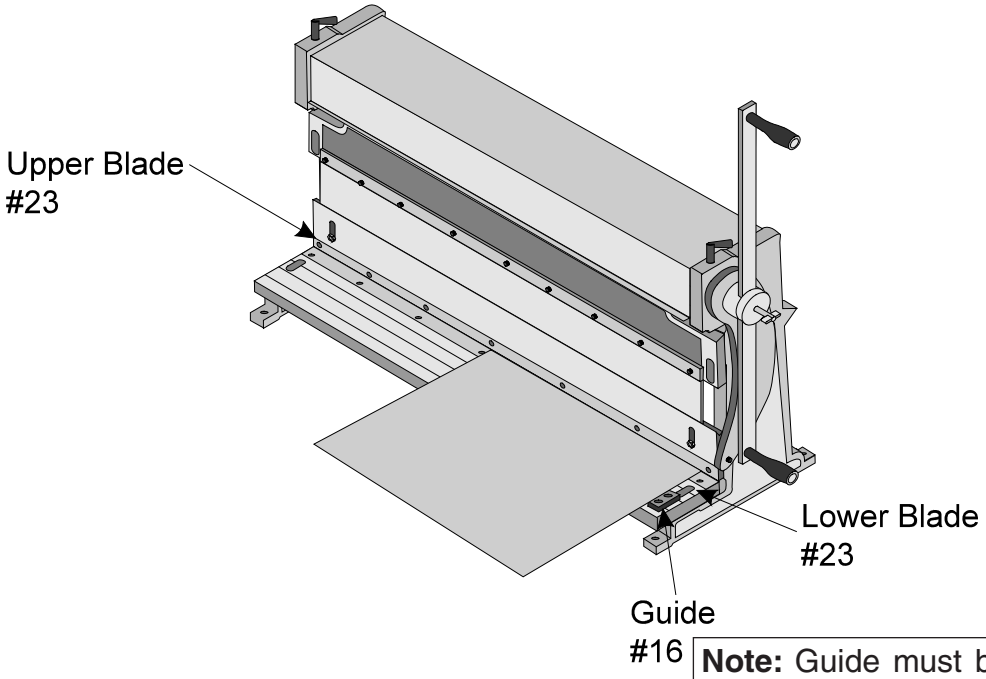


Figure 5 — Shearing

Note: Guide must be on this side of tool (as shown in this illustration).

Step 3: While holding the material steady, rotate the HANDLE until the material has been cut.

Angle Bending

Step 1. Mark the work piece where you want to bend the material.

Step 2. Place material above the MOVING CUTTER PLATE (#11) as shown in Figure 6.

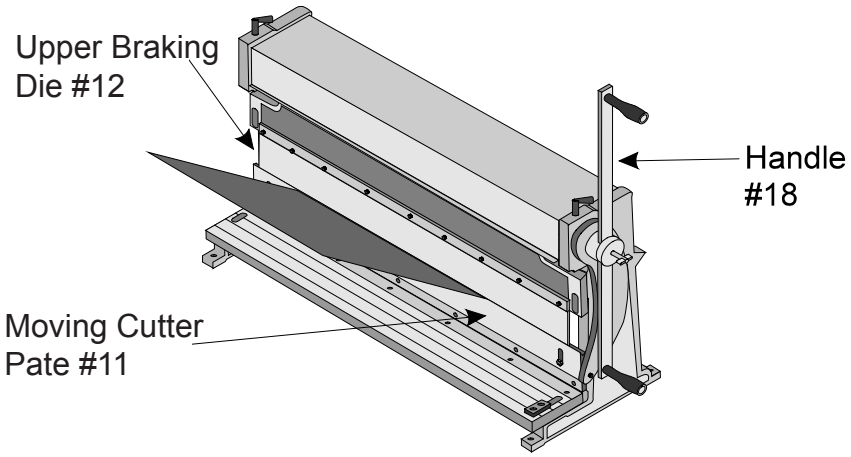


Figure 6 — Angle Bending

Step 3. Align the bending mark with the front edge of the UPPER DIE.

Step 4. Rotate the HANDLE (#18) until the desired angle has been formed. Use a protractor or other measuring tool to ensure accuracy.

Radius Bending

Radius bending is most commonly used to make cylinders and cones, as shown in Figure 7. Both shapes are formed by making a series of small, closely spaced bends in the work piece.

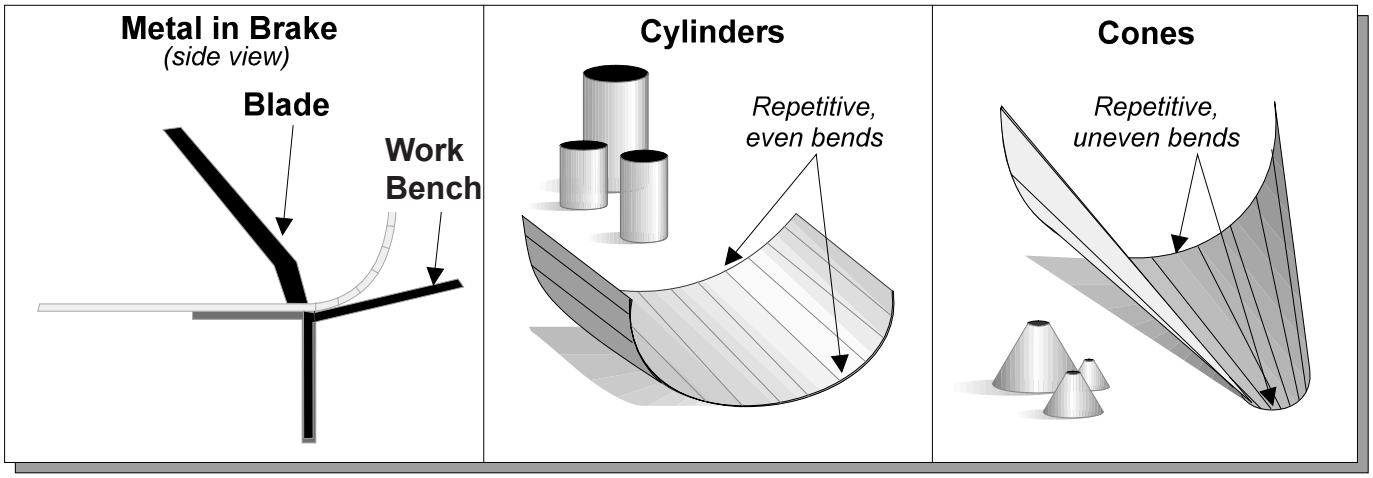


Figure 7 — Radius Bending

For cylinders, the bends are evenly spaced, i.e. every bend is identical.

For Cones, simply move one side of your stock out further than the other every time you make a bend.

Pan Forming

The Hand Brake Roll can be used to make various sizes of pans. The maximum lip (side) height supported by this tool is 1".

To form a pan:

Step 1. Pre-measure and cut your material before bending. Notch the corners according to the desired lip height as shown in Figure 8.

Step 2. Insert material between the UPPER BRAKING DIE (#12) and the MOVING CUTTER PLATE (#11). Bend the material until as 90 degree angle has been formed.

Step 3. Rotate the material 90º counterclockwise. Allow the completed side to extend just beyond the dies. Bend the second side.

Step 4. Repeat Step 3 for the third side.

Step 5. Rotate to the final side, and insert work piece between the dies. Your formed sides will be on the outside of the dies.

Step 6. Before bending, tap one corner nearer to the middle of the machine. This will allow the material to clear the UPPER BRAKING DIE when raised.

Step 7. Bend the fourth side.

Step 8. Using a block or piece of wood, tap the corner of material back into place. plaplace.

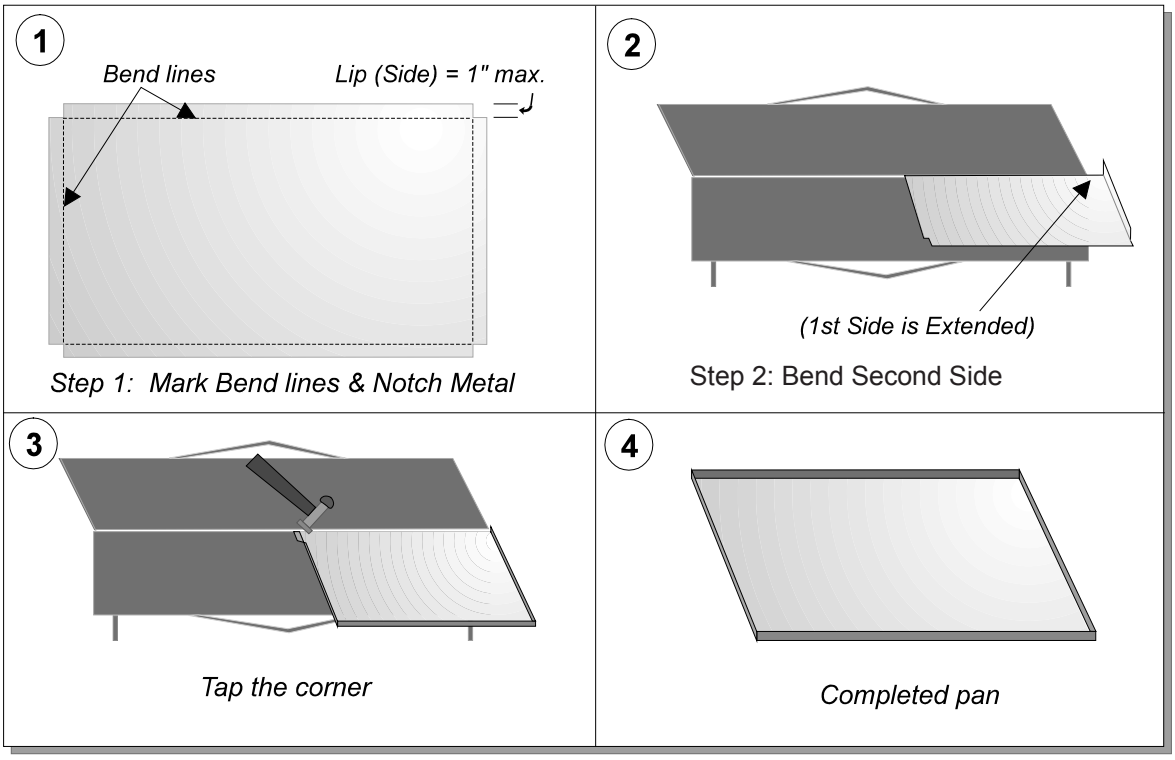


Figure 8 — Pan Forming

Rolling

Step 1: Move the COVER (#33) back and out of the way.

Step 2: Drop the BACK PRESSING ROLL (#24) by loosening the Roller Adjustment with Knob (#25).

Step 3: Insert just the leading edge of your workpiece between the UPPER PRESSING ROLL (#32) and LOWER PRESSING ROLL (#31), and tighten the roll bar gap ADJUSTABLE SCREW (#27) until the ROLL BARS are barely snug against the workpiece.

Step 4: Advance the ROLLER ADJUSTMENT WITH KNOB (#25) as much as desired depending upon the tightness of the roll to be accomplish. (The tighter the roll, the more the knobs must be advanced.)

Step 5: Crank the HANDLE ASSEMBLY (#18 & 26) until the proper roll has been achieved. The material should feed itself through the rollers as you crank the HANDLE ASSEMBLY.

Wire Rolling

Step 1: Use the proper groove in the UPPER PRESSING ROLL (#32) depending upon the gauge of the wire being rolled.

Step 2: Follow the procedures as listed above in “Rolling”.

Pressing

Step 1: Slide the PRESS PLATE BRACKETs (#8) of the Press Plate Assembly into the receiver holes of the MOVING CUTTER PLATE (#11). Note that the PRESSING PLATE (#10) should be facing down.

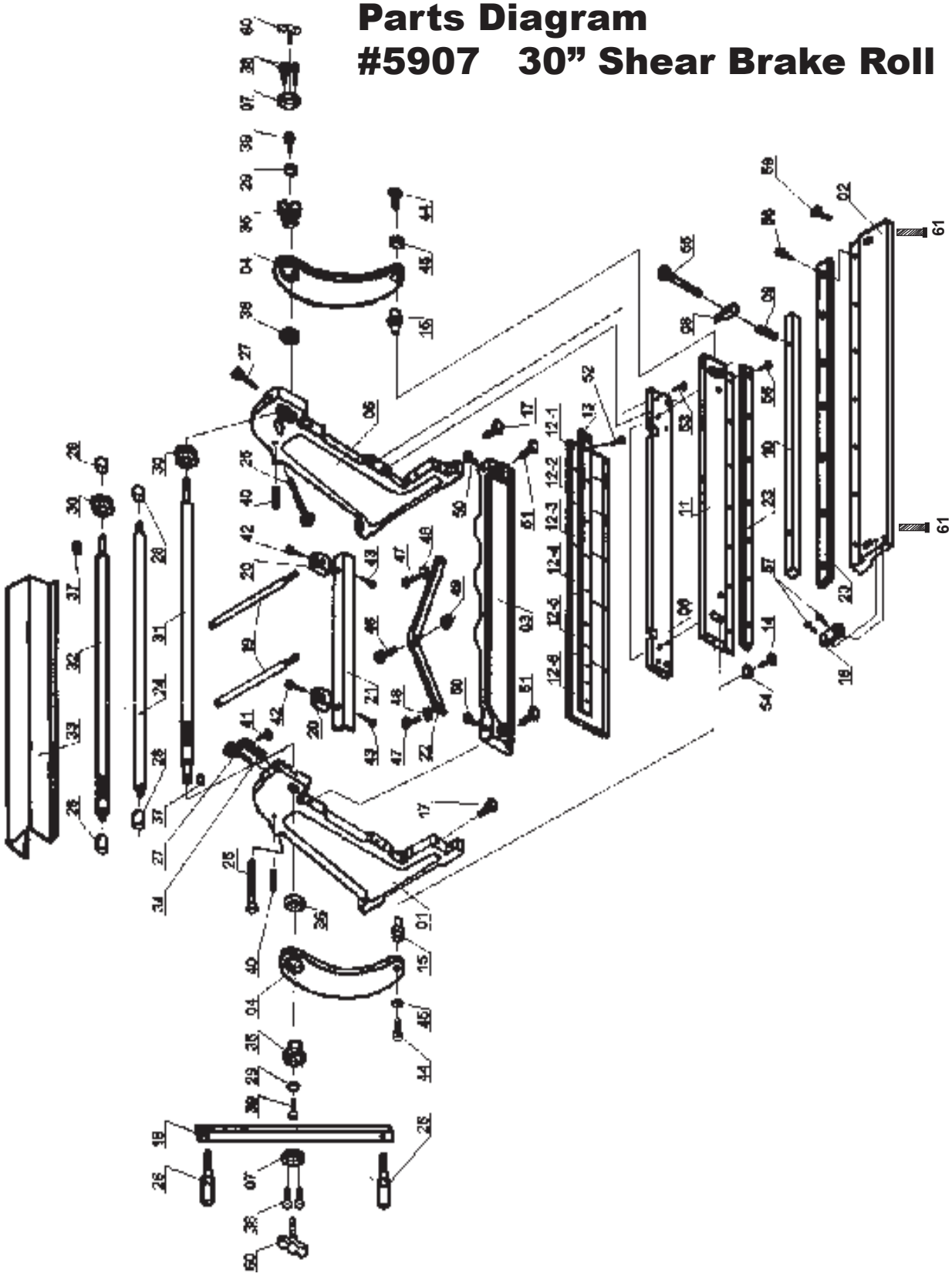
Step 2: Place the workpiece so that it is centered under the PRESS PLATE.

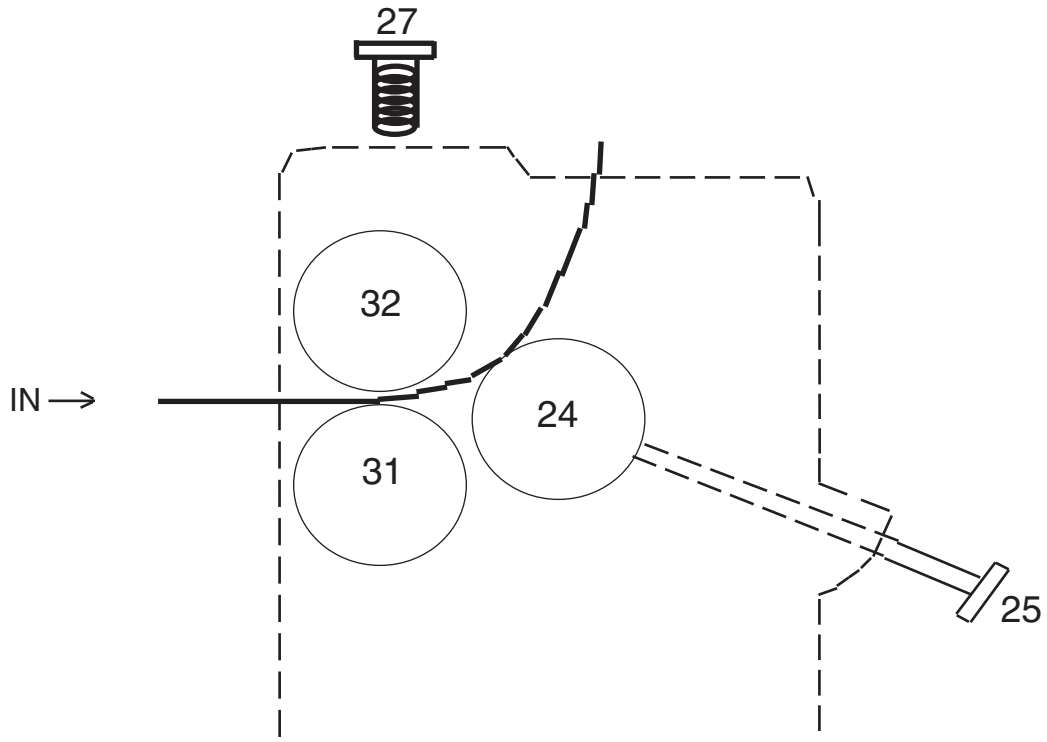
Step 3: Rotate the HANDLE (#18) to press the workpiece.

PARTS LIST

PART #	DESCRIPTION	Qty	PART #	DESCRIPTION	Qty
1	Left Wall	1	32	Upper Pressing Roll	1
2	Work Bench	1	33	Cover	1
3	Crossbeam	1	34	Pressing Roll Lock	1
4	Crank Arm	2	35	Eccentric Shaft	2
5	Right Wall	1	36	Washer	2
6	Bear Frame	1	37	Roll Key	4
7	Cover	2	38	Hex Bolt	4
8	Press Plate Bracket	2	39	Hex Head Bolt	2
9	Spring	2	40	Hex Bolt	2
10	Pressing Plate	1	41	Hex Bolt	1
11	Moving Cutter Plate	1	42	Hex Bolt	2
12	Upper Braking Die	1	43	Hex Head Bolt	2
13	Pressing Plate	1	44	Hex Head Bolt	2
14	Hex Head Bolt	2	45	Washer	2
15	Rolling Wheel	2	46	Hex Bolt	1
16	Guide	1	47	Hex Bolt	2
17	Adjustable Bolt	2	48	Washer	2
18	Handle	2	49	Hex Nut	1
19	Positioning Bar	2	50	Hex Head Bolt	2
20	Positioner	2	51	Hex Head Bolt	2
21	Positioning Plate	1	52	Hex Head Bolt	7
22	Support Plate	1	53	Hex Screw	4
23	Blades	2	54	Washer	2
24	Back Pressing Roll	1	55	Hex Bolt	2
25	Roller Adjustment with Knob	2	56	Hex Screw	7
26	Handle Knob	2	57	Hex Head Screw	2
27	Adjustable Screw	2	58	Hex Head Screw	7
28	Roll Bushings	4	59	Hex Head Screw	2
29	Washer	2	60	Clamp Screws	2
30	Gear	2	61	Adjusting Screws	2
31	Lower Pressing Roll	1			

Parts Diagram
#5907 30” Shear Brake Roll





SKU 05907

SHEET METAL & WIRE FORMING

Remove the COVER (#33) from the machine. The roller gears (#30) should have a coating of general purpose grease for smooth operation. Clean any dirt or excess grease from the rolls.

The following steps apply to both wire and sheet metal bending.

Adjust screws (#27) to the thickness of the stock. It should feed between rollers (#31) and (#32) without slipping or binding when the handle (#18) is turned. The material is fed into the rollers from the front of the machine.

Back Pressing Roll (#24) forms the radius in the material. The closer it is to the feed rollers, the smaller the radius will be. ROLLER ADJUSTMENT WITH KNOB (#25) adjusts the spacing of the back roller.

Metals will have different bending characteristics. Some are very pliable, while others have considerable spring or memory. Practice before beginning an important project.

LIMITED 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We 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 product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

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

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