



# DELUXE FOOT SHEAR

## 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# 49677**



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 deluxe foot shear 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

This sheet metal shear is used to cut sheet metal up to 52 inches wide and is capable of cutting 16-ga. mild carbon steel up to 0.06 inches (1.5mm) thick, 30-ga. stainless steel up to 0.01 inches (0.3mm) thick, aluminum up to 0.08 inches (2mm) thick, and more.

### Technical Specifications

| Property                      | Specification        |
|-------------------------------|----------------------|
| Max. Cutting Length (in.)     | 52                   |
| Max. Cutting Thickness (mm)   | 1.5                  |
| Max. Lift Height (in.)        | 1/4                  |
| Max. Depth (in.)              | 37                   |
| Max. Cutting Dimensions (in.) | 52                   |
| Dimensions L x W x H (in.)    | 60 x 86 3/4 x 45 1/4 |

**Important Safety Information** **WARNING:**

- Read and understand all instructions. Failure to follow 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 a 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.
- Do not use the shear 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 shear 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 shear. Do not allow children to operate the shear.
- 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 shear. Do not use the shear while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the shear 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-approved 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.
- Do not overreach. Keep proper footing and balance at all times.

 **CAUTION:****SHEAR USE AND CARE**

- Do not force the shear. 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 tool will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the tool with a damaged part.
- Use only accessories that are recommended by the manufacturer for use with the shear. Accessories that may be suitable for one tool may create a risk of injury when used with another tool.
- Keep guards in place and in working order. Never operate the tool without the guards in place.
- Inspect the shear and accessories for damage or excessive wear before each use. If you find damage do not use the shear.

**Specific Operation Warnings** **WARNING:**

- The blades are very sharp. Take extra care in operating the shear and keep hands away from the reach of the blades.
- Never take off the protective guard. Keep the clearance down to the minimum gap required to feed the material.
- Never use the shear to cut rod or material exceeding its designed capacity.
- Never attempt to cut any material less than a 1/2" cut across length of the table under full capacity.

**Assembly****PRIOR TO INSTALLATION AND OPERATION**

Read the following instructions carefully and thoroughly to ensure the shear functions perfectly and avoid possible dangers.

**RECEIVING AND UNPACKING**

On first receiving the shear, examine if the outer packing is in good condition. Then, remove the cover to inspect whether there is 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 shear to save transportation space. You must check those parts and accessories in extra care. Then, attach them on to the shear according to the parts diagram.

**INSTALLATION**

Install the shear on a solid level floor. The work area should be well light to help prevent any incorrect or dangerous operation.

Secure the shear to the floor with anchor bolts to help prevent vibration. Use a precision level on the table surface to level the shear. Insert metal shims between floor and the shear mounting surface to adjust the level. Tighten all of the bolts after those being adjusted.

Carefully clean all painted surfaces with a mild soap and a soft rag. Do not use lacquer thinner, paint thinner, or gasoline as these will damage painted surfaces.

Coat all machined surfaces with a light coat of oil to inhibit rust.

### Before Each Use

#### ⚠ WARNING:

- Inspect the shear and accessories for damage or excessive wear before each use. If you find damage do not use the shear.
- Clean all moving parts or sliding contact surfaces.
- Refer to the weight and footprint specification of your machine. Some residential floors may require additional reinforcement to support both the machine and operator.
- Considering existing and anticipated needs, size of material to be processed through each machine and space for auxiliary stands, work tables or other machinery when establishing a location for your new machine.
- Check the condition of the shear and that its free of scraps or other debris and clean enough for the next operation.
- Test the functionality of the shear, possibly with test material, to verify it is ready for operation.

### Operating Instructions

The chart below is a material conversion comparison to show equivalent capacities of material other than mild steel.

|                      |       |
|----------------------|-------|
| MILD STEEL GAUGE     | 1.5mm |
| ALUMINUM             | 2mm   |
| BRASS YELLOW         |       |
| SOFT                 | 1.8mm |
| 1/2 HARD             | 1.6mm |
| HARD                 | 1.6mm |
| BRONZE PHOSPHOR      |       |
| ANNEALED             | 1.6mm |
| COPPER               |       |
| SOFT                 | 1.8mm |
| HARD                 | 1.6mm |
| PLASTIC ABS COMPOUND | 2.5mm |

### BACK GAUGE ADJUSTMENT

To adjust the back gauge, loosen the adjustment knobs (66), slide the angle (61), move the rod (59) forward or backward so the scales (69) to read zero on the pointers. (See Figure 1) Lock the bracket again and perform a further adjustment with the wheel (62).



Figure 1

Tighten the socket screws to lock the rods in place. (See Figure 2)



Figure 2

### BLADE CLEARANCE ADJUSTMENT

To adjust blade clearance, loosen the front screws (18, 19) and table lock screws (21), then loosen the table bolts on both sides (62).

1. Loosen the table lock screws (21) on both sides.
2. Adjust the front screws (19) to move the worktable (1) forward and adjust the screws (18) to move it backward. (see Figure 3)



Figure 3

3. For fine adjustment, it is no need to loosen the table lock screws, but adjust the front screws (18, 19) directly.

Then, tighten all screws. (See Figure 4)

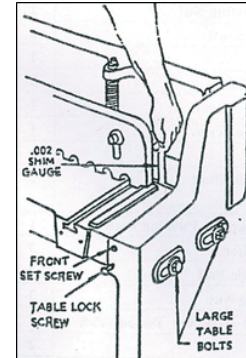


Figure 4

### CUTTER HEAD ADJUSTMENT

The bow bolt (70) can be adjusted if the cutter head cannot cut the workpiece. Tighten the bolt with forward strength, which can help reduce the clearance between upper blade (24) and lower blade (25). (See Figure 5)

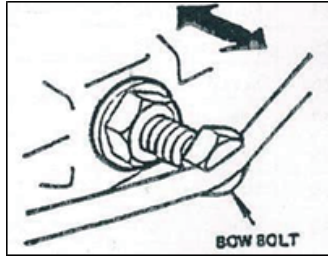


Figure 5

To adjust the blade up or down, loosen the nut (52) and drop the pin (52) on the treadle (54). Adjust the yoke (2) up or down. Reassemble them. (See Figure 6 & 7)

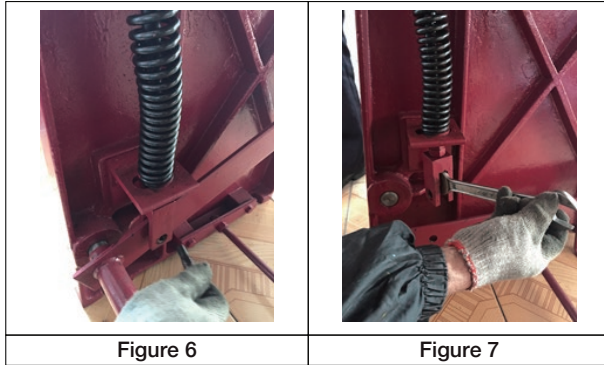


Figure 6

Figure 7

Loose lock screws may cause shake of blade in operation. Check and make sure they are rightly against shims. But be careful not to dimple them.

### TO SHARPEN THE BLADE

The upper blade (24) has two cutting edges which are ground with a 2-edge relief. Reverse the blade to expose the new cutting edge as soon the first edge is dull. The blade can be sharpened on both sides using a surface grinder or grinding machine.

The lower blade (25) has one cutting edge with a 2-edge relief and a 1-face relief. It can be sharpened on a surface grinder by grinding the wide side of the blade having the 1-face relief. (See Figure 8)

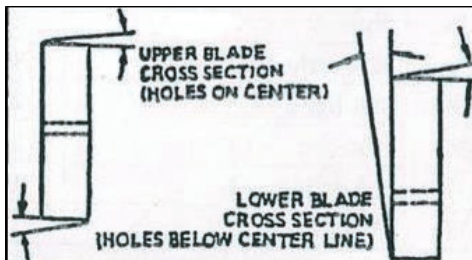


Figure 8

### After Each Use

- Clear away any scraps or debris to setup for the next operation.
- Check for loose bolts, cracked welds, casting, or fingers and replace damaged parts
- To prevent rust, all unpainted cast iron surfaces should be regularly maintained with a surface protectant.

### Maintenance

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

- Keep the cutting blades sharp and clean. Properly maintained blades with sharp cutting edges are less likely to bind and are easier to control.
- Keep handles dry, clean, and free from oil and grease.

#### • Daily Check:

Loose bolts, cracked welds, casting, or fingers.

Worn or damaged pins.

Any other unsafe condition

#### • Lubrication

Four main areas need to be lubricated:

- Shearing blades (24, 25). (See Figure 9)



Figure 9

- Micro adjusting stop assembly (59, 61, 62). (See Figure 10)

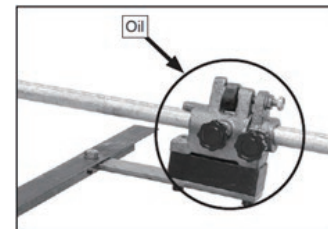


Figure 10

- Gibs and slides (31). (See Figure 11)

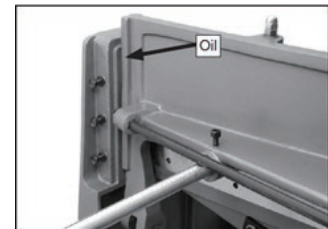


Figure 11

- Foot pedal linkage (44-48). (See Figure 12)

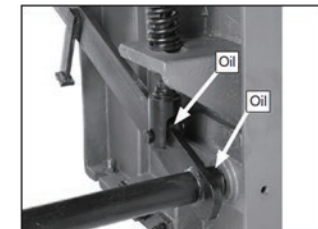
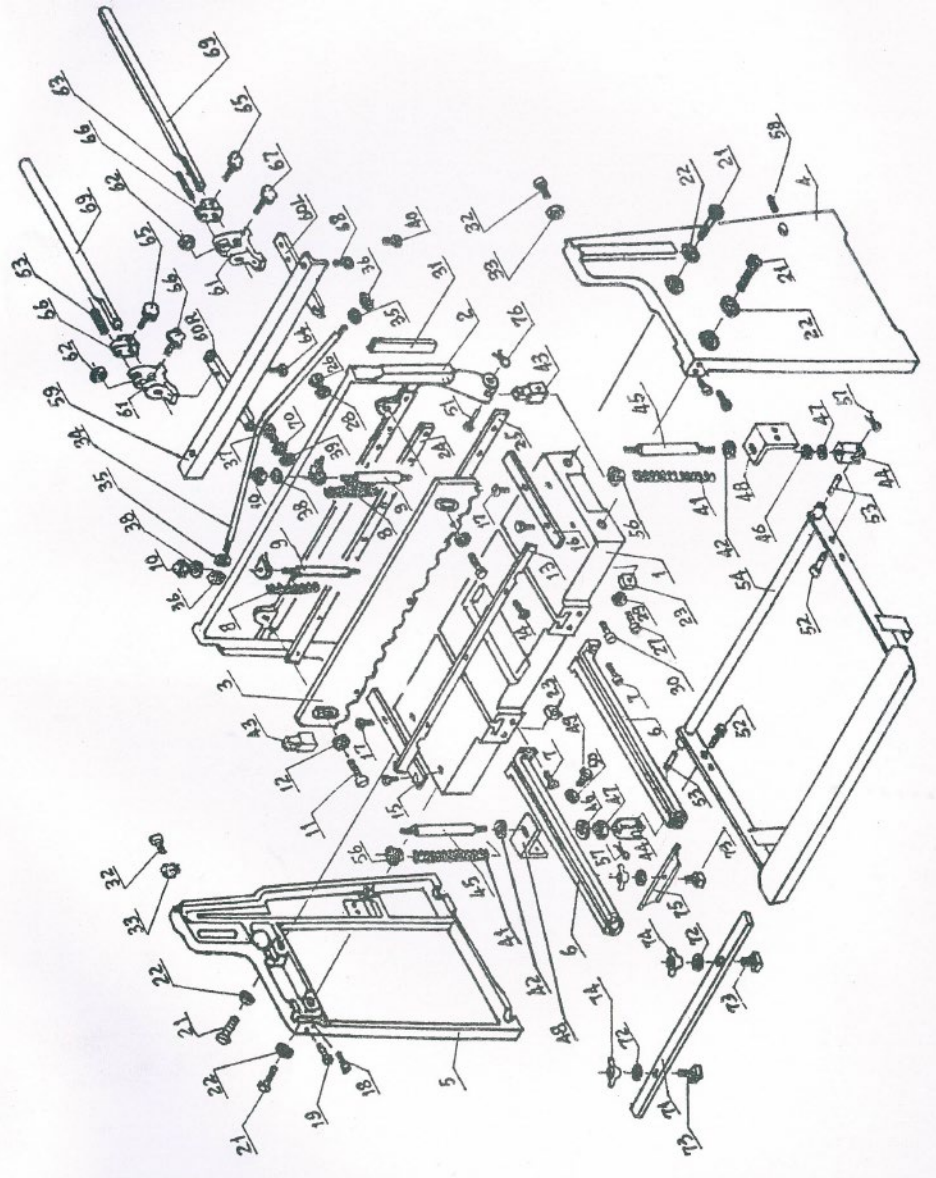


Figure 12



### Parts Diagram



### Parts List

| Part No. | Description       | Q'ty | Part No. | Description                   | Q'ty |
|----------|-------------------|------|----------|-------------------------------|------|
| 1        | Work Table        | 1    | 39       | Washer                        | 1    |
| 2        | Frame             | 1    | 40       | Screw                         | 2    |
| 3        | Pressing plate    | 1    | 41       | Spring                        | 2    |
| 4        | Right Stand       | 1    | 42       | Washer                        | 2    |
| 5        | Left Stand        | 1    | 43       | Upper Connecting Block        | 2    |
| 6        | Connecting Rod    | 2    | 44       | Lower Connecting Block        | 2    |
| 7        | Screw             | 4    | 45       | Bolt                          | 2    |
| 8        | Spring            | 2    | 46       | Washer                        | 2    |
| 9        | Bolt              | 2    | 47       | Nut                           | 2    |
| 10       | Nut               | 2    | 48       | Connecting Plate              | 2    |
| 11       | Screw             | 2    | 49       | Bolt                          | 4    |
| 12       | Washer            | 2    | 50       | Washer                        | 4    |
| 13       | Protecting Board  | 1    | 51       | Upper Pin                     | 2    |
| 14       | Screw             | 3    | 52       | Lower Pin                     | 2    |
| 15       | Workpiece Stop    | 2    | 53       | Small Shaft                   | 2    |
| 16       | Gauge             | 2    | 54       | Foot Stand Frame              | 1    |
| 17       | Screw             | 4    | 56       | Lid                           | 2    |
| 18       | Bolt              | 2    | 57       | Pin                           | 2    |
| 19       | Bolt              | 2    | 58       | Screw                         | 2    |
| 20       | Bolt              | 2    | 59       | Workpiece Stop                | 1    |
| 21       | Bolt              | 2    | 60R      | Right Fixing Plate            | 1    |
| 22       | Washer            | 4    | 60L      | Left Fixing Plate             | 1    |
| 23       | Nut               | 4    | 61       | Find Adjustment Stand         | 2    |
| 24       | Upper Blade       | 1    | 62       | Adjusting Nut                 | 2    |
| 25       | Lower Blade       | 1    | 63       | Bolt Shaft                    | 2    |
| 26       | Screw             | 8    | 64       | Bolt                          | 2    |
| 27       | Screw             | 9    | 65       | Small Screw                   | 2    |
| 28       | Washer            | 8    | 66       | Large Screw                   | 1    |
| 29       | Washer            | 9    | 67       | Large Screw                   | 1    |
| 30       | Screw             | 4    | 68       | Bolt                          | 2    |
| 31       | Sliding plate     | 2    | 69       | Gauge Shaft                   | 2    |
| 32       | Screw             | 6    | 70       | Nut                           | 1    |
| 33       | Nut               | 6    | 71       | Workpiece Pushing Plate       | 1    |
| 34       | Strengthening Rod | 1    | 72       | Washer                        | 3    |
| 35       | Washer            | 2    | 73       | T-style Bolt                  | 3    |
| 36       | Nut               | 2    | 74       | Wing Nut                      | 3    |
| 37       | Adjusting Bolt    | 1    | 75       | Small workpiece Pushing Plate | 1    |
| 38       | Washer            | 2    | 76       | Pin                           | 2    |

**Troubleshooting**

| Symptom                                   | Possible Cause  | Possible Solution   |
|---|---|---|
| Won't cut material.                       | 1. Improper blade gap distance.   | 1. Widen gap to accommodate thicker gauge material.   |
| Cuts aren't square.                       | 1. Blade gap unequal across length.<br>2. Too much bow in blade.<br>3. Inadequate hold down pressure.<br>4. Uneven contact with guides. | 1. Adjust blade gap to be equal across length.<br>2. Correct blade bow.<br>3. Adjust gap of hold down.<br>4. Maintain consistent contact with guides. |
| Poor quality of cuts, ripping or tearing. | 1. Dull blades.<br>2. Poor blade gap set up.<br>3. Loose gibs.  | 1. Replace or sharpen blades.<br>2. Adjust blade set up.<br>3. Remove play from gibs.   |

**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 will be required: 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 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.



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