

## PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

**Record Product's Serial Number Here:** \_\_\_\_\_

**Note: If product has no serial number, record month and year of purchase instead.**

**Note: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.**

The material in this manual is for informational purposes only. The product(s) it describes are subject to change without prior notice, due to the manufacturer's continuous development program. XtremePowerUS makes no representations or warranties with respect to this manual or with respect to the products described herein. XtremePowerUS shall not be liable for any damages, losses, costs or expenses, direct, indirect or incidental, consequential or special, arising out of, or related to the use of this material or the products described herein.

## Questions, issues or missing parts?

Before returning to your retailer, our customer service team is here to help.



Call Us: 909.628.0880

Email Us: [customer@xtremepowerusa.com](mailto:customer@xtremepowerusa.com)

Hours of Operation: 9am - 3pm PST Monday - Friday

**MADE IN CHINA**

Symptom	Possible Cause	Possible Solution
Workpiece surface is marred or scratched.	<ol style="list-style-type: none"> <li>1. Too much wheel pressure.</li> <li>2. Wheels are dirty.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce wheel pressure.</li> <li>2. Clean and protect all wheel surfaces (see Page 16).</li> </ol>
Workpiece does not move through wheels without excessive force.	<ol style="list-style-type: none"> <li>1. Too much wheel pressure.</li> <li>2. Wheel bearings at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce wheel pressure.</li> <li>2. Replace wheel bearings.</li> </ol>
Workpiece curve is too high.	<ol style="list-style-type: none"> <li>1. Lower wheel radius is too great.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use a lower wheel with less radius (crown).</li> </ol>
Workpiece curve is not high enough.	<ol style="list-style-type: none"> <li>1. Lower wheel radius is not enough.</li> </ol>	<ol style="list-style-type: none"> <li>1. Start with lower wheel of least radius and work up to correct radius for the operation.</li> </ol>
Workpiece curve will not form.	<ol style="list-style-type: none"> <li>1. Not enough wheel pressure.</li> <li>2. Lower wheel has flat surface.</li> </ol>	<ol style="list-style-type: none"> <li>1. Gradually increase wheel pressure.</li> <li>2. Use lower wheel(s) with a radius (crown).</li> </ol>
Workpiece has wrinkles.	<ol style="list-style-type: none"> <li>1. Tracking pattern at fault.</li> <li>2. Too much wheel pressure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use a consistent and smooth tracking pattern that overlaps with each back-and-forth pass.</li> <li>2. Start with least amount of pressure, then gradually increase pressure when the curve stops forming.</li> </ol>

## WARNING!

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, cement and other masonry products.
- 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 those dust masks that are specially designed to filter out microscopic particles.



**MACHINE DATA SHEET**

**MODEL 61088  
English Wheel Metal Shaping Benchtop**

**Product Dimensions:**

Weight ..... 18 lbs.  
Width (side-to-side)/Depth (front-to-back)/Height ..... 1" x 23¼" x 19⅛"

**Shipping Dimensions:**

Type ..... Cardboard Box  
Content ..... Equipment  
Weight ..... 30 lbs.  
Width/Depth/Height ..... 2" x 21" x 25"

**Overall Dimensions:**

Number of Upper Wheels ..... 1  
Upper Wheel Diameter ..... 149mm (5⅞")  
Upper Wheel Contour ..... Flat  
Number of Lower Wheels ..... 7  
Lower Wheel Diameters ..... 50mm (2")  
Lower Wheel Contours ..... Flat, ½" Radius, 1" Radius, 1½" Radius, 2½" Radius, 5" Radius, 9" Radius  
Throat ..... 15⅝"

**Main Specifications:**

Capacity ..... 16 Gauge Mild Steel, Aluminum, Copper

**Construction**

Frame ..... Steel Tubing  
Wheels ..... Hardened Steel  
Paint ..... Powder Coated

**Other Specifications:**

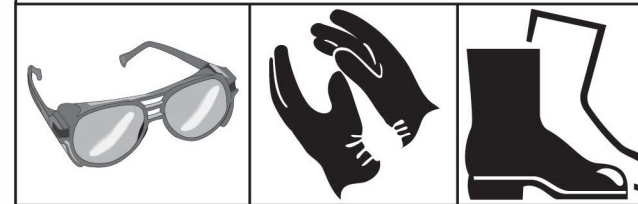
Country Of Origin ..... China  
Warranty ..... 1 Year  
Assembly Time ..... 10 Minutes

**Features:**

Quick-Release Lever  
Bench Mounted  
1 Upper Wheel, 7 Lower Wheels  
Wheel Storage Rack

**⚠ WARNING**

Damage to your eyes, hands and feet could result from using this tool without proper protective gear. Always wear safety glasses, leather gloves, and steel toe footwear when operating this tool.



**NOTICE**

If you are not experienced with this type of machine, WE STRONGLY RECOMMEND that you seek additional training outside of this manual. Read books/magazines or get formal training before beginning any projects. Regardless of the content in this section, Stark Tools will not be held liable for accidents caused by lack of training.

**Tracking Tips**

- Stretching metal into a curve should be a gradual process. Always start with just enough wheel pressure to prevent the workpiece from skipping or slipping through the wheels. After the initial curve has formed, increase the pressure slightly and continue stretching the metal. Repeat this process until the desired curve is attained. Using too much pressure will damage the workpiece surface and produce poor results.
- Start with the lower wheel that has the least radius (crown), then increase the wheel radius a step at a time until the desired curve is reached.
- Practice with a scrap piece that is the same material and thickness as the final operation.
- Leave a frame around the workpiece of approximately 1" that does not go through the wheels. As the center of the workpiece stretches and the frame does not, the metal is forced to bend into a curve.
- Take your time. Many passes through the wheels with gradual increases in pressure and lower wheel radii will produce good results and reduce the risk of damaging the workpiece surface.
- Overlap each pass with the previous one in a back-and-forth, smooth movement through the wheels. There are many patterns of tracking that will produce different results. Choosing the correct pattern for your operation is a matter of research and experience.

## ⚠ WARNING

**WEARING PROPER APPAREL.** Do not wear clothing, apparel or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips, which could cause loss of workpiece control.

**HAZARDOUS DUST.** Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material, and always wear a NIOSH-approved respirator to reduce your risk.

**HEARING PROTECTION.** Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

**REMOVE ADJUSTING TOOLS.** Tools left on machinery can become dangerous projectiles upon startup. Never leave chuck keys, wrenches, or any other tools on machine. Always verify removal before starting!

**INTENDED USAGE.** Only use machine for its intended purpose and never make modifications not approved by Grizzly. Modifying machine or using it differently than intended may result in malfunction or mechanical failure that can lead to serious personal injury or death!

**AWKWARD POSITIONS.** Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

**CHILDREN & BYSTANDERS.** Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.

**GUARDS & COVERS.** Guards and covers reduce accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly.

**FORCING MACHINERY.** Do not force machine. It will do the job safer and better at the rate for which it was designed.

**NEVER STAND ON MACHINE.** Serious injury may occur if machine is tipped or if the cutting tool is unintentionally contacted.

**STABLE MACHINE.** Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify machine is stable and mobile base (if used) is locked.

**USE RECOMMENDED ACCESSORIES.** Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase the risk of serious injury.

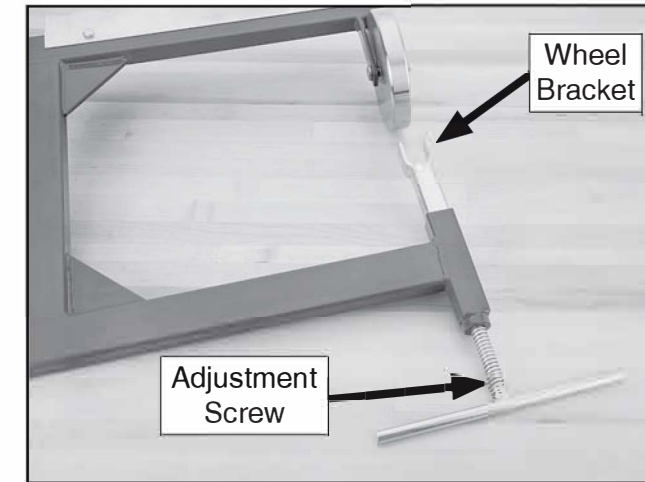
**UNATTENDED OPERATION.** To reduce the risk of accidental injury, turn machine **OFF** and ensure all moving parts completely stop before walking away. Never leave machine running while unattended.

**MAINTAIN WITH CARE.** Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. A machine that is improperly maintained could malfunction, leading to serious personal injury or death.

**CHECK DAMAGED PARTS.** Regularly inspect machine for any condition that may affect safe operation. Immediately repair or replace damaged or mis-adjusted parts before operating machine.

**MAINTAIN POWER CORDS.** When disconnecting cord-connected machines from power, grab and pull the plug—NOT the cord. Pulling the cord may damage the wires inside. Do not handle cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet/damp locations.

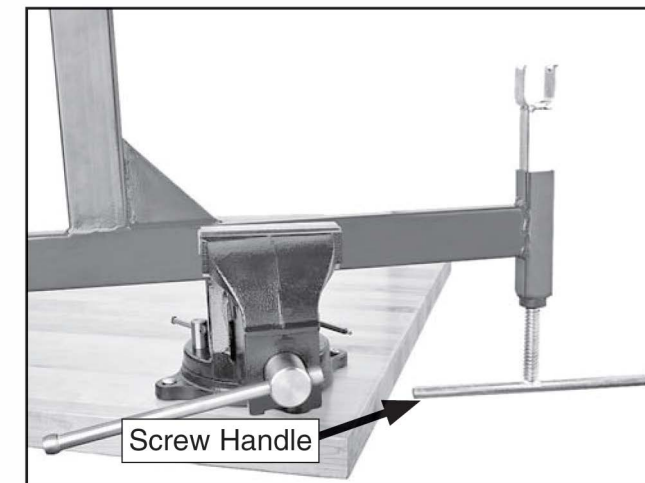
3. Lay the frame down flat and thread the lower wheel adjustment screw into the frame opposite the wheel bracket (see **Figure 6**).



**Figure 6.** Lower wheel adjustment screw installed.

4. Secure the assembly into the bench-mounted vise, as described on the previous page.

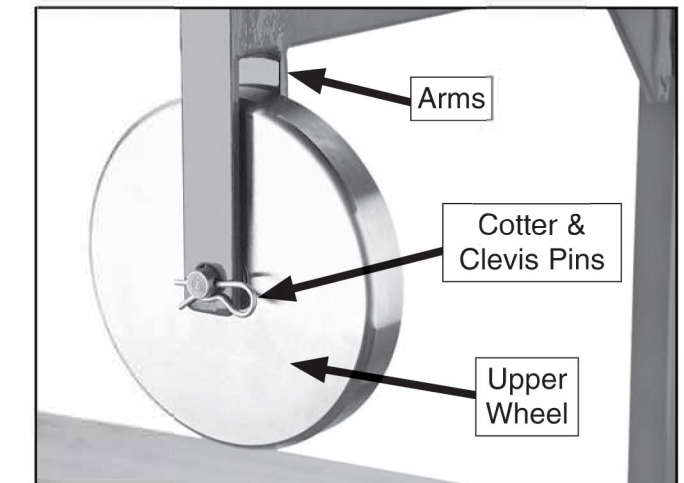
**Note:** Make sure the adjustment screw handle has enough clearance from the bench to fully rotate (see **Figure 7**).



**Figure 7.** Adequate clearance to fully rotate adjustment screw handle.

5. Position the upper wheel between the frame arms, insert the upper wheel clevis pin through the arms and wheel, and secure the pin with the hairpin cotter pin (see **Figure 8**).

**Note:** If the cotter pin does not easily slide into the clevis pin hole, insert it as far as you can and use a small hammer to tap it the rest of the way.



**Figure 8.** Upper wheel installed.

Continued on next page →

## Unpacking

Your machine was carefully packaged for safe transportation. Remove the packaging materials from around your machine and inspect it.

Save the containers and all packing materials for possible inspection by the carrier or its agent. *Otherwise, filing a freight claim can be difficult.*

When you are completely satisfied with the condition of your shipment, inventory the contents.

## Needed for Setup

The following are needed to complete the setup process, but are not included with your machine.

Description	Qty
• Small Hammer.....	1
• Wrench or Socket 12mm.....	1
• Wrench or Socket 14mm.....	1
• Vise Secured to Workbench.....	1
• Sturdy Workbench.....	1



**WARNING**  
**SUFFOCATION HAZARD!**  
 Keep children and pets away from plastic bags or packing materials shipped with this machine. Discard immediately.

## Inventory

The following is a description of the main components shipped with your machine. Lay the components out to inventory them.

If any non-proprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

Shipping Inventory: (Figure 2)	Qty
A. Frame .....	1
B. Upper Wheel .....	1
C. Lower Wheel Adjusting Screw.....	1
D. Lower Wheels.....	1
—1/2" Radius.....	1
—1" Radius.....	1
—1 1/2" Radius.....	1

—2 1/2" Radius.....	1
—5" Radius .....	1
—9" Radius .....	1
—Flat.....	1
E. Lower Wheel Bracket .....	1
F. Bracket Spacer Rod .....	1
G. Hairpin Cotter Pin 3/8" x 1 7/8".....	1
H. Hex Nuts 1/4"-20 .....	2
I. Hex Bolts 1/4"-20 x 1 1/4" .....	2
J. Lower Wheel Axle Rods.....	7
K. Upper Wheel Clevis Pin .....	1
L. Wheel Storage Racks.....	2

### NOTICE

If you cannot find an item on this list, carefully check the machine and the packaging materials. Some of these items may be pre-installed for shipping or become misplaced during unpacking.

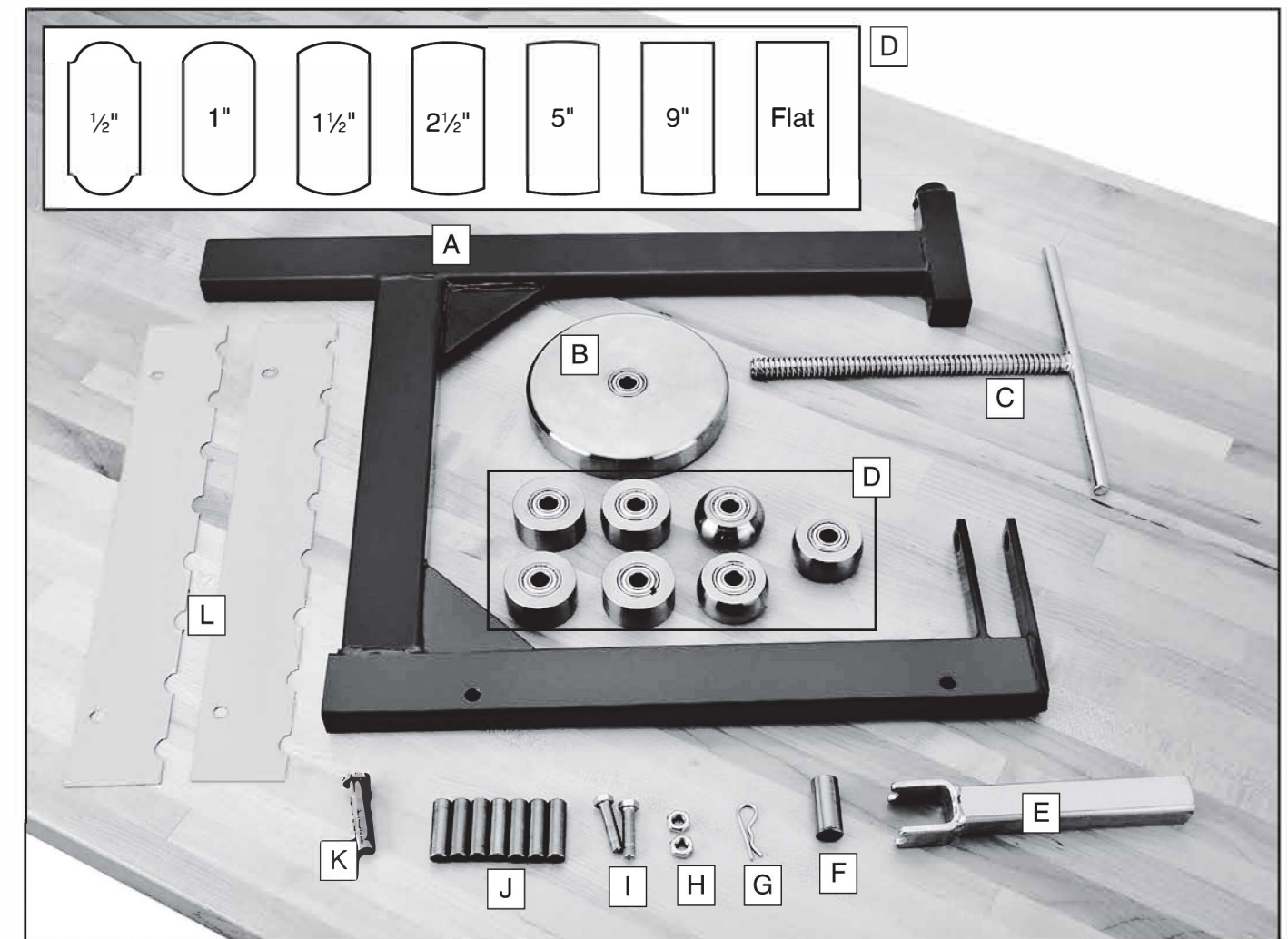


Figure 2. Model 61088

## Workbench Mounting

The forces exerted on the English wheel during operation are substantial. The English wheel must be firmly secured in a vise (see **Figure 3** for an example) that is solidly attached to a workbench or table that will support the weight and dynamic pressures of the operation.

*Make sure that you have a workbench and vise setup for the English Wheel before performing the **Assembly** instructions. Refer to **Page 15** for options.*

**Note:** Use pieces of cardboard or wood between the vise jaws and the frame to prevent frame damage.



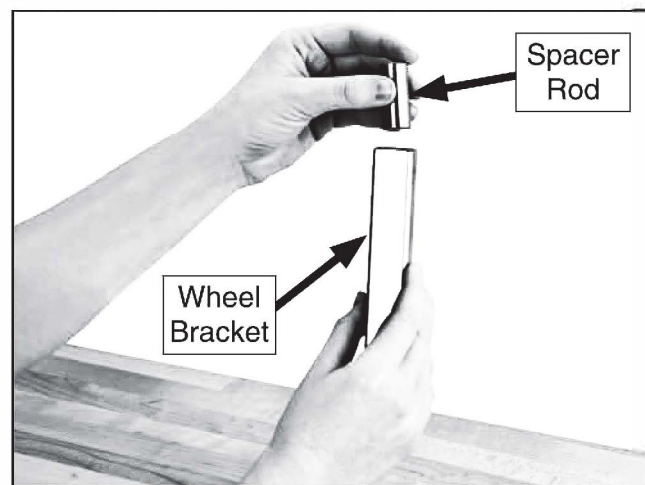
**Figure 3.** Example of Model 61088 secured in vise mounted to a workbench.

**CAUTION**  
Make sure the workbench that the English wheel will be mounted on is stable and can support the weight of the tool, the workpiece, and the forces exerted during operation.

## Assembly

To assemble the English wheel:

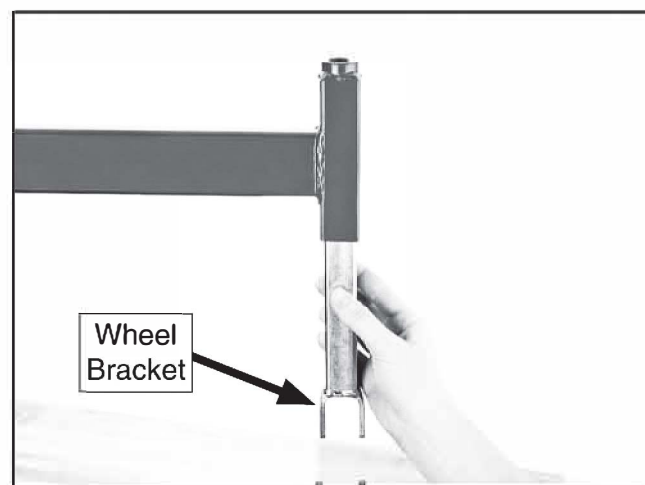
1. Insert the bracket spacer rod into the bottom of the lower wheel bracket, as shown in **Figure 4**.



**Figure 4.** Inserting spacer rod into wheel bracket.

2. Turn the frame upside down and insert the lower wheel bracket into the frame, as shown in **Figure 5**.

**Note:** Inserting the wheel bracket into the frame when it is upside down will keep the spacer rod inside the bracket.



**Figure 5.** Inserting wheel bracket into frame.

## WARNING

### Additional Safety for English Wheel Metal Shaping Benchtop

**METAL EDGES.** The sharp edges of sheet metal can quickly cut your fingers or hands. Always wear heavy leather gloves when handling sheet metal. Always chamfer and deburr sharp metal edges before inserting them into the English wheel.

**INCHING HAZARD.** The rolling momentum of the wheels can pull your fingers between them resulting in pinching injuries. Always keep your hands away from the wheel path when moving the workpiece through the wheels.

**RUSHING HAZARD.** If the heavy wheels or frame should unexpectedly fall, crushing injuries could result. Always make sure the frame is firmly secured to a bench-mounted vise that can properly support the weight and pressures of the operation. Make sure the wheels are properly installed on the support brackets or storage rack. Wear steel-toed boots.

**TOOL INSPECTION.** Using the English wheel with excessively worn or damaged parts could cause the tool to fail and present injury hazards, as well as yield poor results. Always inspect each part of the English wheel before beginning operations.

**TOOL USAGE.** This English wheel was designed only to form curves in sheet metal material such as steel or aluminum. Do not attempt to process any other material (e.g., glass, ceramic, plastic, etc.) that could result in material or tool breakage. Do not modify this tool in any way and do not exceed the capacity of 16 gauge sheet metal.

**BODY POSITION.** Using your balance while tracking could result in impact injuries or laceration injuries from the sheet metal. Make sure your body and footing are balanced and in a good position to support your movement and momentum while tracking.

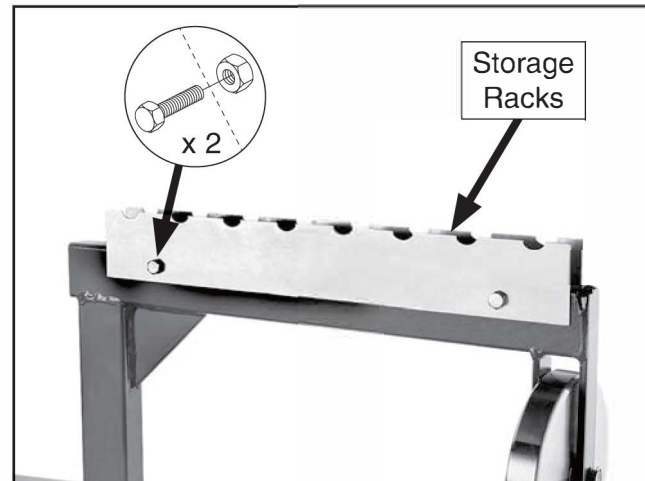
## WARNING

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to decrease the risk of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

## CAUTION

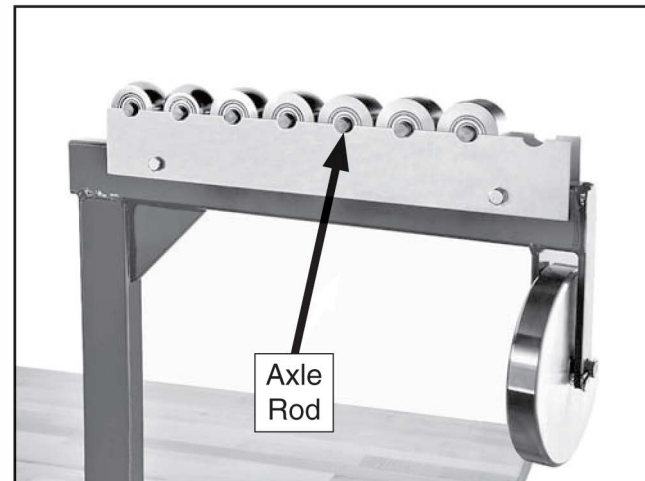
No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.

6. Attach the lower wheel storage racks to the frame top with (2) 1/4"-20 x 1 1/4" hex bolts and (2) 1/4"-20 hex nuts (see **Figure 9**).



**Figure 9.** Storage racks installed.

7. Insert a lower wheel axle rod into each lower wheel, then place the assemblies on the wheel storage racks (see **Figure 10**).



**Figure 10.** Lower wheel assemblies on wheel storage racks.

## For Your Own Safety, Read Instruction Manual Before Operating This Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures. Always use common sense and good judgment.

**⚠ DANGER** Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

**⚠ WARNING** Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

**⚠ CAUTION** Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

**NOTICE** This symbol is used to alert the user to useful information about proper operation of the machine.

## Safety Instructions for Machinery

### ⚠ WARNING

**OWNER'S MANUAL.** read and understand this owner's manual **BEFORE** using machine.

**TRAINED OPERATORS ONLY.** untrained operators have a higher risk of being hurt or killed. only allow trained/supervised people to use this machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make workshop kid proof!

**DANGEROUS ENVIRONMENTS.** Do not use machinery in areas that are wet, cluttered, or have poor lighting. operating machinery in these areas greatly increases the risk of accidents and injury.

**MENTAL ALERTNESS REQUIRED.** Full mental alertness is required for safe operation of machinery. never operate under the influence of drugs or alcohol, when tired, or when distracted.

**ELECTRICAL EQUIPMENT INJURY RISKS.** you can be shocked, burned, or killed by touching live electrical components or improperly grounded machinery. to reduce this risk, only allow qualified service personnel to do electrical installation or repair work, and always disconnect power before accessing or exposing electrical equipment.

**DISCONNECT POWER FIRST.** always disconnect machine from power supply **BEFORE** making adjustments, changing tooling, or servicing machine. this prevents an injury risk from unintended startup or contact with live electrical components.

**EYE PROTECTION.** always wear ansi-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are not approved safety glasses.

## Basic Operations

The individual results from using an English wheel are countless. Practice, read books/internet sites, watch videos, and seek advice from experienced wheelers to gain necessary knowledge and experience to produce good results.

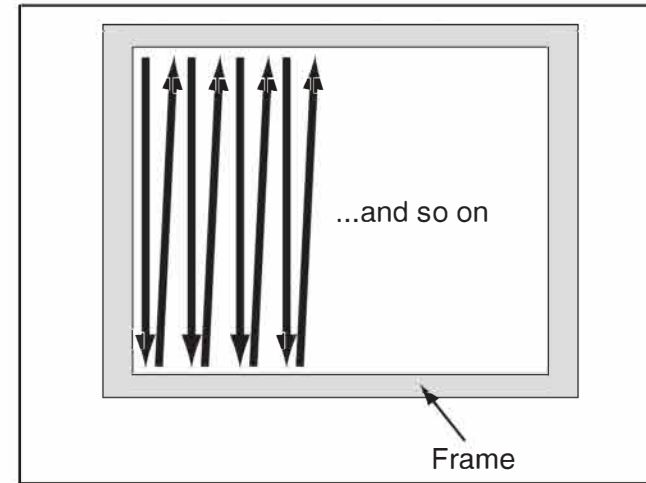
The procedure below is an example of a very basic operation.

### To use the English wheel:

1. Make sure the frame is firmly secured in a bench-mounted vise that is solidly attached to a bench or table that will support the weight and pressures of the operation.
2. Put on safety glasses, leather gloves, and steel-toed boots.
3. Deburr the sharp edges of the workpiece (see **Accessories** on **Page 15** for an optional deburring tool).
4. Mark a frame around the workpiece of approximately 1".
5. Clean the wheels to remove any abrasive material that could damage the surfaces of the workpiece or wheels.
6. Install the lower wheel with the least radius (crown).
7. Use the lower wheel adjustment screw to raise the lower wheel up, leaving enough room to insert the workpiece between the wheels.
8. Insert the workpiece between the wheels and adjust the lower wheel so that the wheel pressure is just enough to prevent the workpiece from skipping or slipping through the wheels.

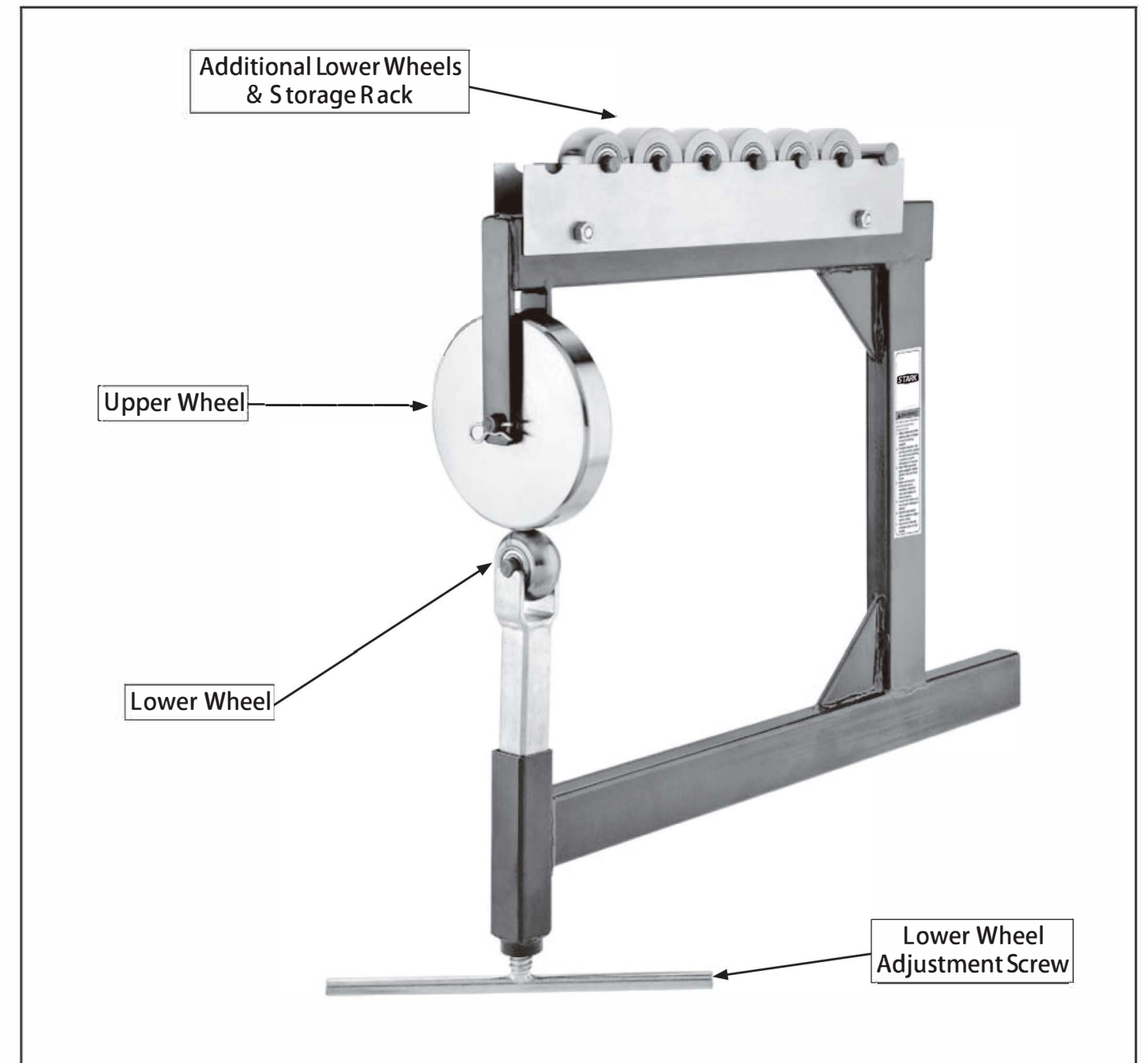
6. Move the workpiece back and forth through the wheels in an overlapping pattern (see example in **Figure 11**).

**Note:** *This example is just one of many patterns of tracking.*

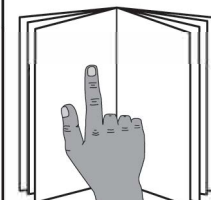


**Figure 11.** Example of basic back-and-forth tracking pattern.

7. When the workpiece no longer stretches, rotate the lower wheel adjustment screw clockwise to slightly increase the pressure.
8. When maximum wheel pressure is reached and the workpiece no long moves through the wheels, change the lower wheel to the next highest radius.
9. Repeat **Steps 5–8** until the desired curve is attained.



**Figure 1.** Model 61088



**⚠ WARNING**  
To reduce your risk of serious injury, read this entire manual **BEFORE** using machine.

---



---

## Schedule

---



---

For optimum performance from your tool, follow this maintenance schedule and refer to any specific instructions given in this section.

**Daily Check:**

- Damaged wheels.
- Damaged or cracked frame.
- Any other unsafe condition.

**Daily Maintenance:**

- Clean and protect wheels.

---



---

## Cleaning & Protecting

---



---

Use clean shop rags to clean all wheel surfaces and the wheel axle rods. Apply a metal protectant (see **Page 15**), then wipe off any excess to leave a thin coat.

---



---

## Lubrication

---



---

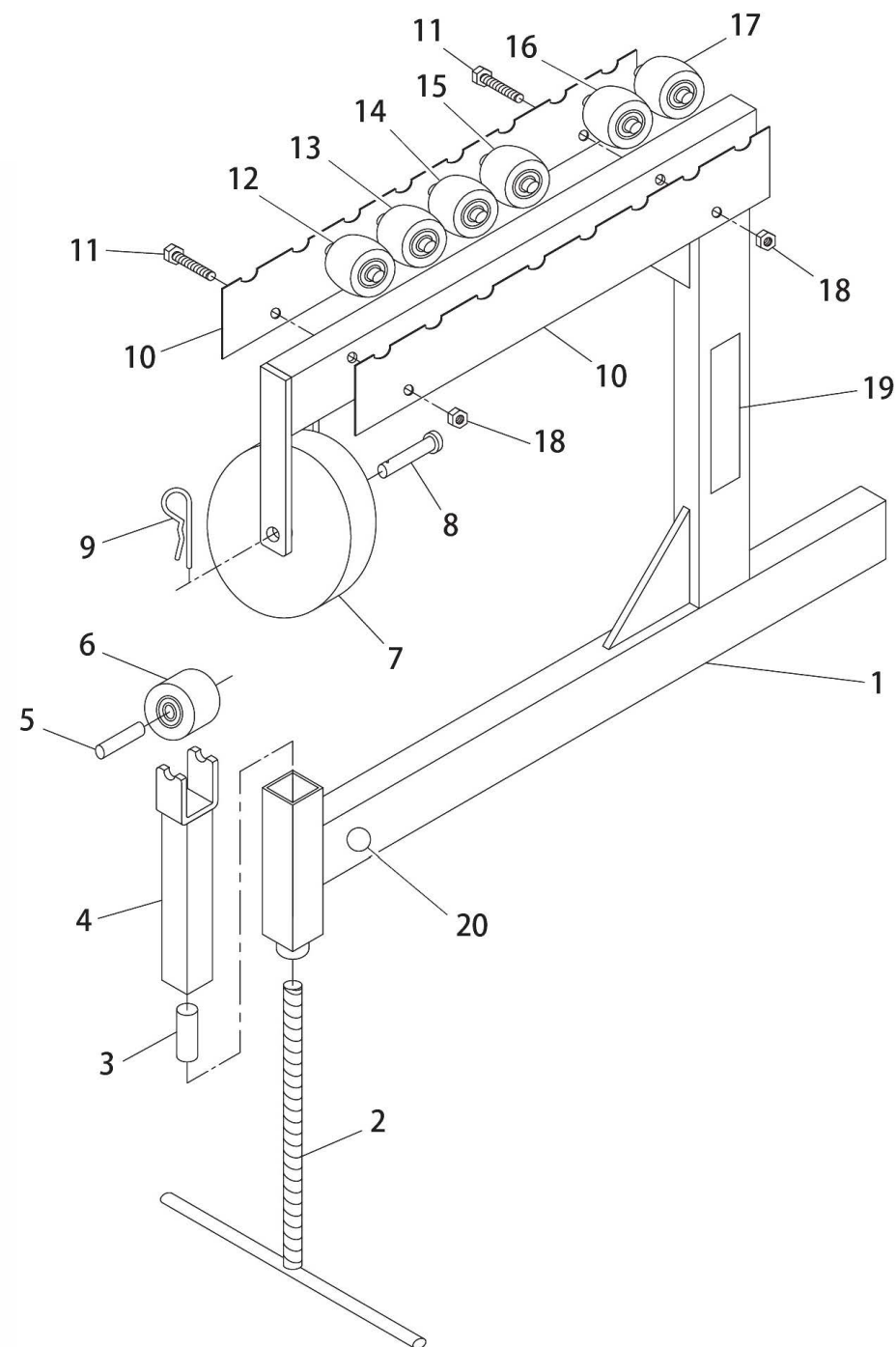
The wheel bearings are factory lubricated and sealed, and do not require lubrication. Merely leave them alone unless they need replacement.

Periodically, remove the lower wheel adjustment screw and wipe the threads with a lightly-oiled shop rag.

<b>INTRODUCTION</b> .....	<b>2</b>
Machine Description.....	2
Contact Info.....	2
Manual Accuracy.....	2
Identification.....	3
Machine Data Sheet.....	4
<b>SECTION 1: SAFETY</b> .....	<b>5</b>
Safety Instructions for Machinery.....	5
Additional Safety for English Wheels.....	7
<b>SECTION 2: SETUP</b> .....	<b>8</b>
Unpacking.....	8
Needed for Setup.....	8
Inventory.....	9
Workbench Mounting.....	10
Assembly.....	10
<b>SECTION 3: OPERATIONS</b> .....	<b>13</b>
Tracking Tips.....	13
Basic Operations.....	14
<b>SECTION 4: ACCESSORIES</b> .....	<b>15</b>
<b>SECTION 5: MAINTENANCE</b> .....	<b>16</b>
Schedule.....	16
Cleaning & Protecting.....	16
Lubrication.....	16
<b>SECTION 6: SERVICE</b> .....	<b>17</b>
Troubleshooting.....	17
<b>SECTION 7: PARTS</b> .....	<b>18</b>



# PARTS INFORMATION



## REF DESCRIPTION

1	FRAME
2	LOWER WHEEL ADJUSTMENT SCREW
3	BRACKET SPACER ROD
4	LOWER WHEEL BRACKET
5	LOWER WHEEL AXLE ROD
6	FLAT LOWER WHEEL
7	UPPER WHEEL
8	UPPER WHEEL CAPTIVE PIN
9	HAIRPIN COTTER PIN 3/8 X 1-7/8
10	WHEEL STORAGE RACK

## REF DESCRIPTION

11	HEX BOLT 1/4-20 X 1-1/4
12	LOWER WHEEL 1/2" RADIUS
13	LOWER WHEEL 1" RADIUS
14	LOWER WHEEL 1-1/2" RADIUS
15	LOWER WHEEL 2-1/2" RADIUS
16	LOWER WHEEL 5" RADIUS
17	LOWER WHEEL 9" RADIUS
18	HEX NUT 1/4-20
19	MACHINE ID LABEL
20	GRIZZLY GREEN TOUCH-UP PAINT

# STARK®

U.S.A.

## METAL SHAPING BENCHTOP ENGLISH WHEEL

ITEM # 61088



## OWNER'S MANUAL AND SAFETY INSTRUCTIONS

SAVE THIS MANUAL. KEEP THIS MANUAL FOR SAFETY WARNINGS, PRECAUTIONS, ASSEMBLY, OPERATION, INSPECTION, MAINTENANCE AND CLEANING PROCEDURES. WRITE THE PRODUCT'S SERIAL NUMBER ON THE BACK OF THE MANUAL, OR THE MONTH AND YEAR OF PURCHASE IF PRODUCT HAS NO SERIAL NUMBER