

*Eastwood*<sup>®</sup>

DO THE JOB RIGHT.<sup>®</sup>

Item #20629

# 2-3/4" SHRINKER STRETCHER

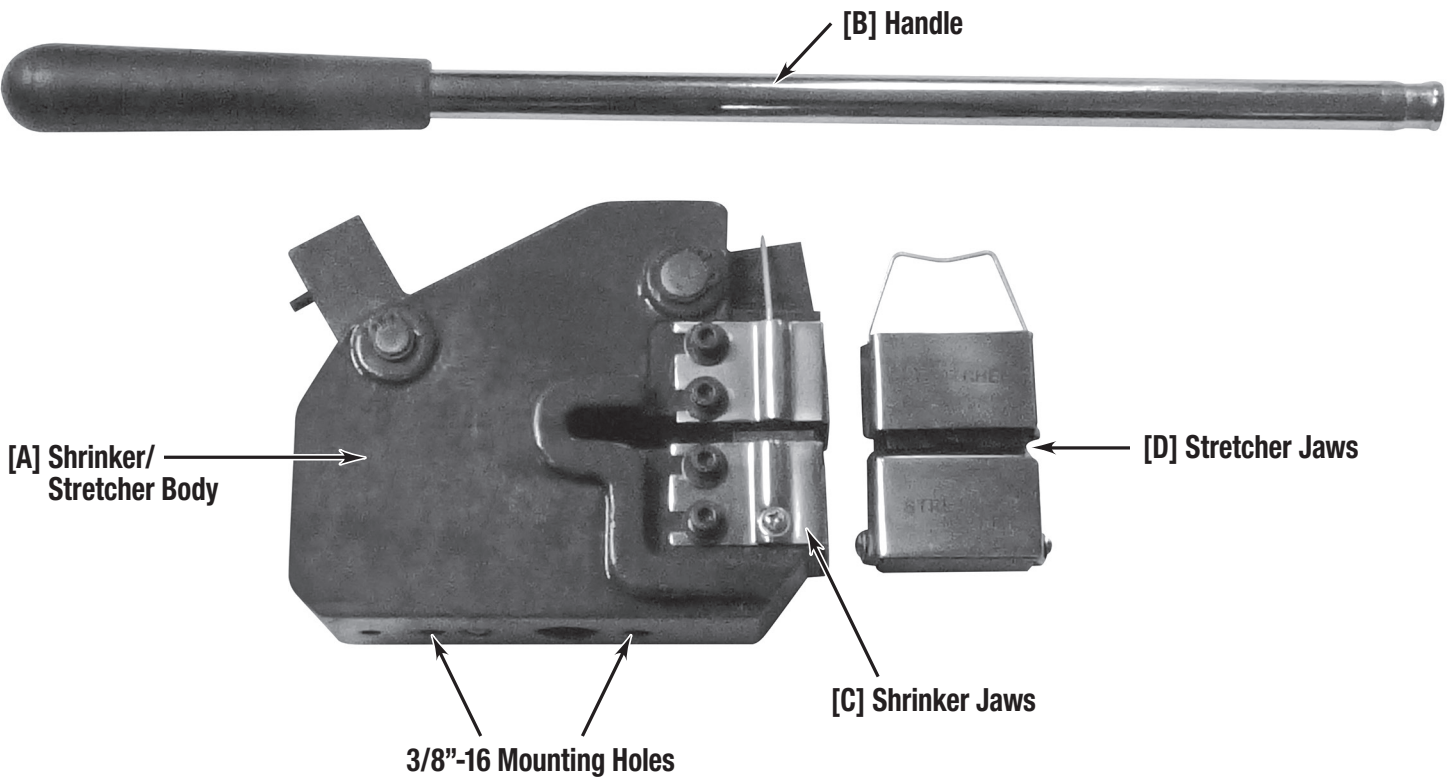
## INSTRUCTIONS



Form complex compound curves in metal and create patch panels for rust repair. The **EASTWOOD 2-3/4" SHRINKER STRETCHER** can form curves down to a 3" radius in a variety of metals: mild steel (up to 18 gauge), stainless steel (up to 20 gauge), and aluminum (up to 16 gauge). They are perfect for forming complicated pieces for such areas as headlight rims, rear wheel arches, dog legs, window frame edges, and trunk opening edges.

## INCLUDES

- (1) Shrinker Stretcher Body [A]
- (1) Handle [B]
- (1) Shrinker Jaws [C]
- (1) Stretcher Jaws [D]



## SPECIFICATIONS

- Maximum Jaw Depth:** 2-3/4"
- Minimum Shrinking Radius:** 3" (**NOTE:** For mild steel only. High carbon steel, stainless steel and aluminum will be larger)
- Maximum Workable Metal Thickness:** Mild Carbon Steel: 18 Gauge  
Aluminum: 16 Gauge  
Stainless: 20 Gauge

# SAFETY INFORMATION

The following explanations are displayed in this manual, on the labeling, and on all other information provided with this product:

## **⚠ DANGER**

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

## **⚠ WARNING**

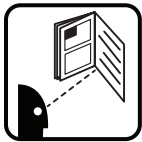
WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

## **⚠ CAUTION**

CAUTION used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

## **⚠ NOTICE**

NOTICE is used to address practices not related to personal injury.



### **⚠ READ INSTRUCTIONS**

- Thoroughly read and understand this manual before using.
- Save for future reference.



### **⚠ WARNING INJURY HAZARD!**

- This tool has leveraged movable components that generate greatly amplified crushing and bending forces which can quickly cause severe injury! Keep fingers and hands away from moving parts when operating.
- Handling sharp metal can cause serious cuts. Wear thick, well-fitting work gloves to prevent cuts from handling sharp metal.



### **⚠ WARNING INJURY HAZARD!**

- Tremendous external loads are placed on this Shrinker Stretcher during operation. This tool cannot be operated without adequate support or severe personal injury or property damage can occur if it should suddenly become dislodged or moves while in use. Before beginning ANY work with this tool, it is absolutely necessary that it be securely bolted to a heavy, sturdy, anchored workbench.



### **⚠ WARNING FALL HAZARD!**

- Strenuous physical force may need to be applied to the Shrinker Stretcher during use. Failure to ensure proper footing can quickly result in a fall which could inflict serious personal injury or property damage. Always work in a clean, uncluttered environment.
- Be sure there is sufficient working room around the tool to allow for safe handling of various lengths of material.



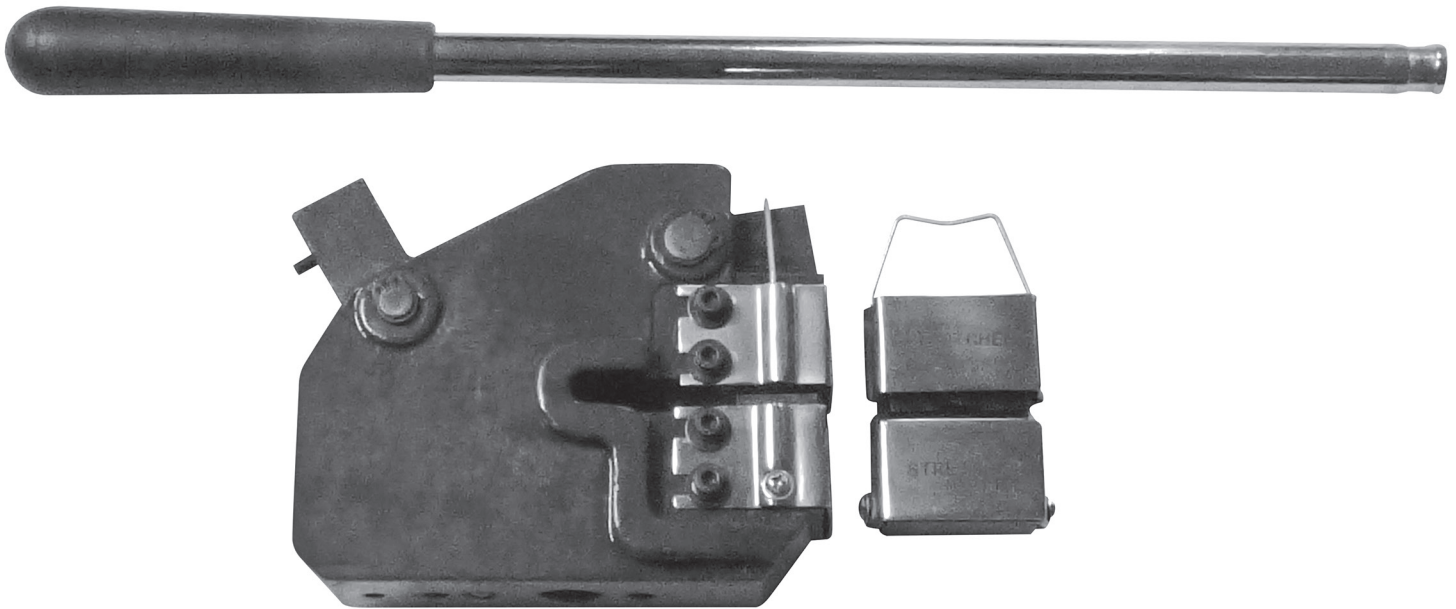
### **⚠ CAUTION EYE INJURY HAZARD!**

- Particles of metal, filings and other debris may be ejected from the workpiece during operation. Wear approved eye and skin protection at all times while operating.



### **⚠ NOTICE INJURY HAZARD!**

- Excessive resistance while operating could indicate a defect with the workpiece material or broken or damaged Shrinker Stretcher components. To avoid injury, stop work immediately and inspect workpiece material for nicks, dents, welds, excessive scale or remaining coatings. Clean or repair as necessary or discard and begin with a new piece. Also inspect Shrinker Stretcher components for looseness or damage.



## ASSEMBLY

### ⚠ CAUTION

The Eastwood Shrinker Stretcher consists of moderately heavy metal components which can be present a hand/finger pinch hazard and cause potentially serious injuries if dropped on feet. Avoid pinching hands while handling parts during use and wear thick, well-fitting work gloves to prevent cuts from handling sharp metal. The use of safety shoes is strongly recommended.

### ⚠ NOTICE

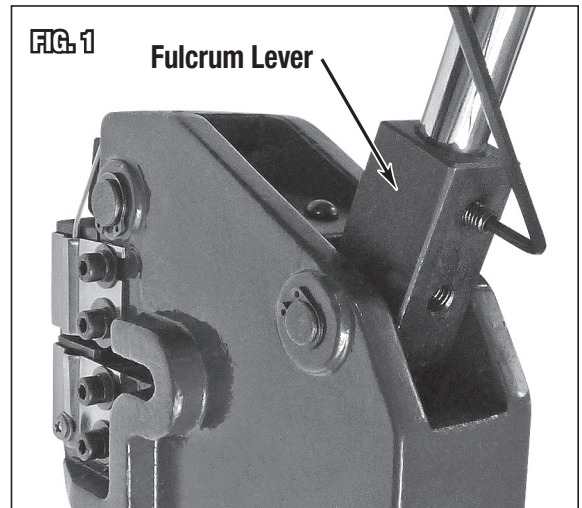
Avoid pressing the Jaws together accidentally without a workpiece or permanent damage to Jaw teeth can occur. Remove Handle when not in use.

1. Select a clean, level work surface with clear access to Handle and sufficient room to manipulate workpieces through the Jaws.

### ⚠ WARNING

Tremendous external torque loads are placed on this Shrinker Stretcher during operation. This tool cannot be operated without adequate support or severe personal injury or property damage can occur if it should suddenly become dislodged or moves while in use. Before beginning ANY work with this tool, it is absolutely necessary that it be securely bolted to a heavy, sturdy, anchored workbench.

2. With the (2) 3/8" holes in the baseplate as a guide, mark the locations and centers on a piece of paper with a pencil.
3. Transfer the hole locations then drill (2) 1/2" [12mm] mounting holes in work surface.  
**NOTE:** A minimum thickness of 3/16" steel or 1/2" of a wood-based surface is strongly recommended.
4. Use (2) 3/8"-16 bolts (not included) washers and nuts to secure baseplate to work surface.
5. Place Handle [B] into bore in Fulcrum Lever (FIG 1) so that the annular groove is positioned under the Set Screw.
6. Using a 3mm Hex Key (not included) tighten Set Screw in Fulcrum Lever to retain Handle (FIG 1).



# OPERATION

## ⚠ WARNING

Tremendous external torque loads are placed on this Shrinker Stretcher during operation. This tool cannot be operated without adequate support or severe personal injury or property damage can occur if it should suddenly become dislodged or moves while in use. Before beginning ANY work with this tool, it is absolutely necessary that it be securely bolted to a heavy, sturdy, anchored workbench.

## ⚠ CAUTION

The Eastwood Shrinker Stretcher exerts tremendous bending and crushing forces in operation which can present a hand/finger pinch hazard and cause potentially serious injuries. Avoid moving parts while operating and wear thick, well-fitting work gloves to prevent cuts from handling sharp metal. The use of safety shoes is strongly recommended.

## ⚠ CAUTION

The Eastwood Shrinker Stretcher was specifically designed to be operated by one person only. Never have one person operate the Handle while another handles the material workpiece or serious injury could occur.

## ⚠ NOTICE

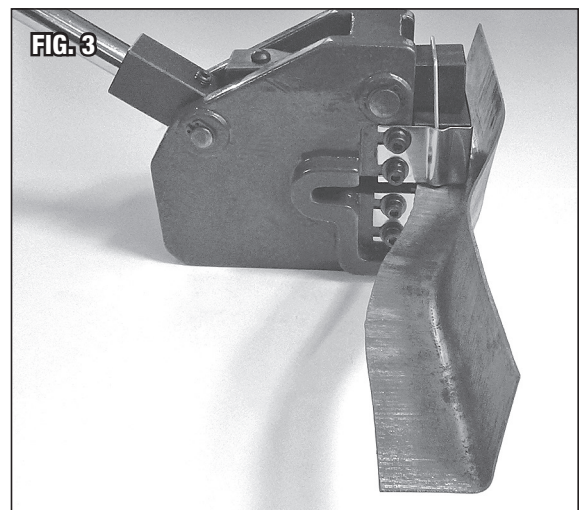
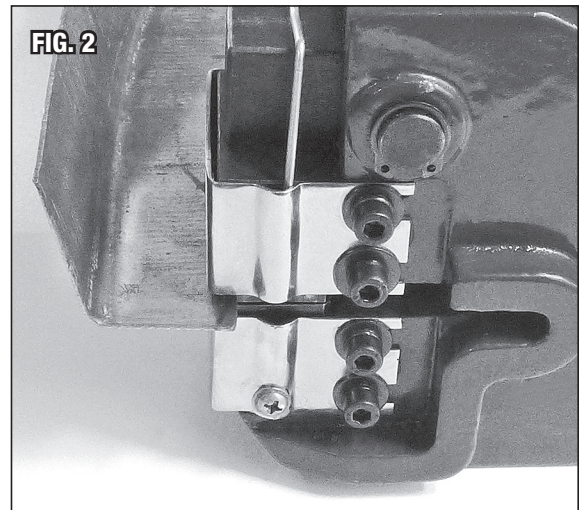
Workpiece material should be clean of any rust, burrs, nicks, welds or coatings before attempting to bend or interference and binding may occur.

## ⚠ NOTICE

Apply a minimal amount of a light lubricant to material and jaw surfaces to ease bending process. Do not over lubricate.

1. Before fabricating on the Shrinker Stretcher, pre-bend the metal to be formed to a 90° angle along its length on a sheet metal brake (The #14042 Eastwood Versa Bend 20 Inch Offset Sheet Metal Brake works well), creating a maximum flange depth that is no greater than 2-3/4" (FIG 2).
2. Make a template of the piece to be formed out of medium bodied cardboard or manila folder material. Tracing the outline of the piece you want to form is critical to achieving a good fit with minimal filler use.
3. Work the leading edge of the metal piece first. This "breaks down" the maximum resistance and permits easy and accurate working thereafter (FIG 2).
4. Always work the piece a little at a time moving the piece through the Jaws along its entire planned length so that each area is exposed to the Jaws numerous times rather than trying to shrink or stretch "all in one bite" (FIG 3).
5. For best results and maximum forming power, insert metal only halfway into the Jaws. The "bunching" or "pocketing" that typically occurs when shrinking can be quickly hammered out, or smoothed by inserting the metal deeper into the jaws.
6. Maximum control is achieved with the pressure exerted on the handle and number of strokes used while forming the metal. Move the metal back and forth along its length until the desired radius is obtained.

**NOTE:** The Shrinker and the Stretcher Jaws are "toothed" to allow them to grip and "push" or "pull" the metal. These teeth leave slight markings which, depending on the hardness of the metal, can be removed with an abrasive cloth or wheel.



## SWITCHING JAWS

The Upper and Lower Shrinker and Stretcher Jaws [C] [D] are retained by (4) Socket Head Cap Screws and washers each.

### REMOVE JAWS FROM BODY (FIG 4)

1. Loosen (Do Not Remove) Upper Jaw Cap Screws (2 per side) with a 4mm Hex Key (not Included).
2. Pull Upper Jaws away from Body and slide Wire Bail off the Actuating Bar.
3. Loosen Lower Jaw Cap Screws (Do Not Remove) (2 per side) with a 4mm Hex Key (not Included).
4. Pull Upper Jaws away from Body.

### ATTACH JAWS TO BODY (FIG 5)

1. Slide Lower Jaws onto Body with screw slots located under Cap Screws and Washers.
2. Tighten Lower Jaw Cap Screws with a 4mm Hex Key (Not Included).
3. Slide Upper Jaws onto Body with screw slots located under Cap Screws and Washers. Place Wire Bail over top of Actuating Bar.
4. Tighten Upper Jaw Cap Screws with a 4mm Hex Key (Not Included).

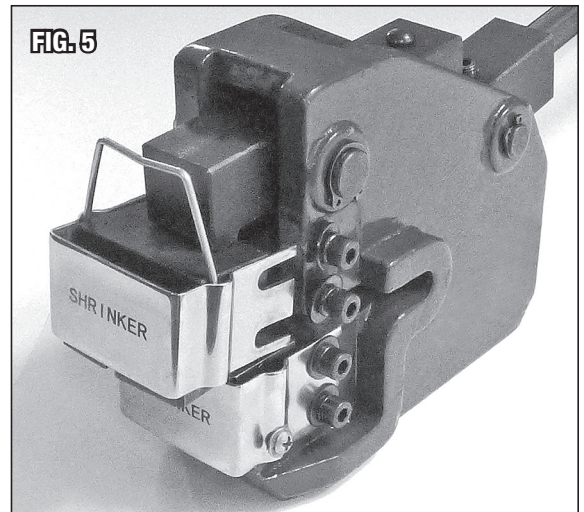
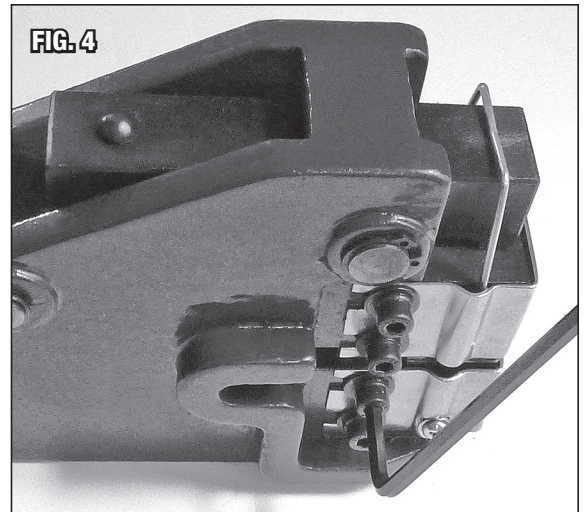
## STORAGE

1. Remove Handle for safety.
2. Apply a thin film of light oil or rust-preventive to all bare steel areas.
3. Store in a clean, dust-free, dry, dampness free area preferably covered with plastic sheeting.

## MAINTENANCE

**NOTE:** Maintenance should be performed before each use.

1. Clean dirt and debris from Jaw Gripping Teeth.  
**NOTE:** Forming aluminum will cause a buildup of aluminum in Gripping Teeth. They must be cleaned with a wire brush periodically when working with aluminum.
2. Check tightness of all hardware.
3. Check operation for binding. Lubricate sliding parts and pivot points periodically with medium bodied oil.  
**NOTE:** Use care to avoid getting oil on Jaw Gripping Teeth.



# TROUBLESHOOTING

PROBLEM	CAUSE	CORRECTION
<b>Shrinker or Stretcher Jaws Not Shrinking or Stretching</b>	Gripping Teeth of Jaws Filled with Metal Particle Accumulation	Remove Jaws from Body and use wire brush to remove metal particle accumulation and filings from Gripping Teeth.
	Jaw Retaining Screws Loose	Tighten Jaw Retaining Screws with a 4mm Hex Key (not included).
<b>Shrinker or Stretcher Jaws Slipping</b>	Excessive Oil or Debris on Gripping Teeth	Remove Jaws from Body and use wire brush to remove metal particle accumulation and filings from Gripping Teeth.
		Use Eastwood PRE or suitable solvent to remove excessive oil from Gripping Teeth.
	Paint or Rust on Surface of Workpiece Metal	Clean metal surface completely before continuing.
		Clean Jaw Gripping Teeth with a wire brush before continuing.
<b>Shrinker or Stretcher Binding or Difficult to Operate</b>	Pivot Points and Sliding Surfaces Needing Lubrication	Lubricate all pivot points and sliding surfaces with medium-bodied lubricating oil. <b>NOTE:</b> Use care to avoid getting oil on Gripping Teeth.
	The Metal Gauge Being Used is Too Thick	Choose a thinner gauge material. 18 Gauge Mild Carbon Steel, 16 Gauge Aluminum, 20 Gauge Stainless.

## OPTIONAL ITEMS

- #13475 Eastwood Electric Metal Shears
  - #11797 Throatless Shear
  - #14042 Versa Bend Sheet Metal Brake
  - #20254 Eastwood 24" Slip Roll
  - #51430 Heavy Duty Shrinker Stretcher
  - #51433 Heavy Duty Shrinker Stretcher with Foot Operated Stand
- A Full Line of Eastwood Welders

---

**If you have any questions about the use of this product, please contact**

The Eastwood Technical Assistance Service Department: 800.544.5118 >> email: [techelp@eastwood.com](mailto:techelp@eastwood.com)  
PDF version of this manual is available online >> [eastwood.com/20629manual](http://eastwood.com/20629manual)

The Eastwood Company 263 Shoemaker Road, Pottstown, PA 19464, USA  
US and Canada: 800.345.1178 Outside US: 610.718.8335  
Fax: 610.323.6268 [eastwood.com](http://eastwood.com)