

Eastwood

DO THE JOB RIGHT.

Part #13928

MIG STUD WELDING KIT

INSTRUCTIONS



The **Eastwood MIG Stud Welding Kit** transforms your MIG welder into a Stud Welder which can be used to repair and remove dents from sheet metal.

WARNINGS

- **DO NOT** insert pins with bare hands as the nozzle will get very hot and will cause a burn.
- Follow all safety precautions in your Welder's Instruction Manual.
- Wear appropriate safety equipment: Welding Helmet (Min Shade #11), Gloves, Long Sleeve Shirt and Pants, etc.
- Do not touch pin, nozzle, or welding wire while in use.
- Do not use on, near, or around fuel tanks.
- Be aware of your surroundings.
- Notify anyone in your area before using.

SPECIFICATIONS

The following items are included with your Eastwood MIG Stud Welding Kit:

- Stud Welding Nozzle
- Slide Hammer
- 100 2mm Pins
- Replacement Slide Hammer Knurled Locking Cam



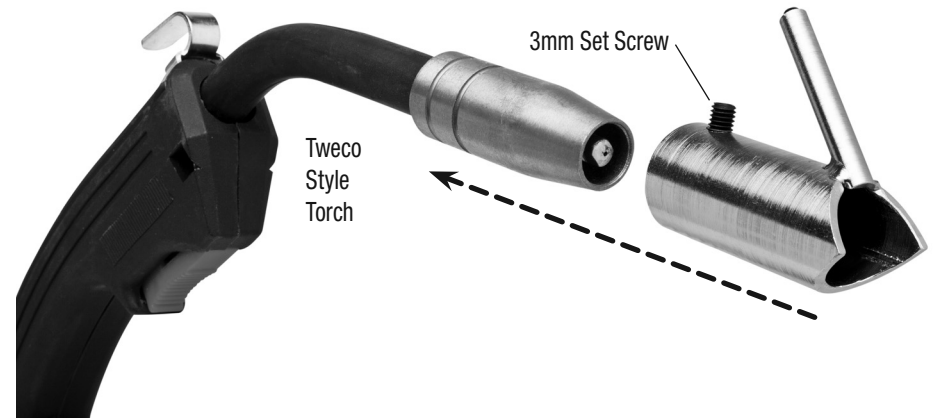
SET UP

To utilize your Eastwood MIG Stud Welder Kit, you will need a MIG welder with a minimum of 100 Amp output that utilizes a Tweco style nozzle

NOTE: This was designed for Tweco Style torches but may work on other styles.

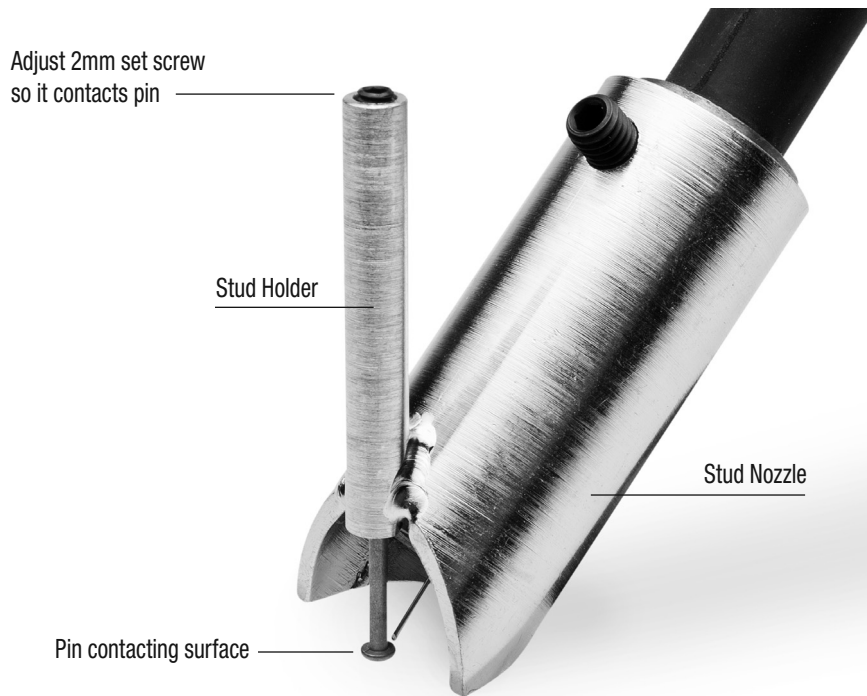
NOTE: All of the following steps **MUST** be completed with the welder turned off and unplugged.

1. Loosen the set screws on the body of the Stud Nozzle and slide it over your gas nozzle.

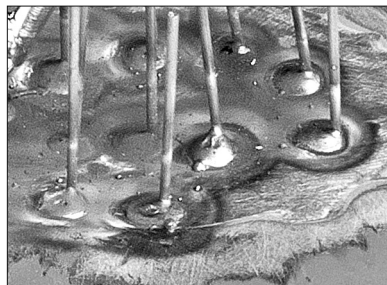


2. Tighten the set screws once the Stud Nozzle has been put in place but keep in mind that it may need to be adjusted when getting started for optimum results.





3. Insert a pin into the Stud Nozzle and place the torch on a flat surface as shown.
4. Adjust the set screw in the Stud Holder so that when the Stud Nozzle is resting as shown above the pin is making contact with the flat surface as well as the set screw in the Stud Nozzle. (NOTE: If desired a magnet can be wiped across the surface of the holder portion of the Stud Nozzle to allow the pins to stay in the Nozzle easier.)
5. Use a scrap piece of metal and adjust the Stud Nozzle to get a solid weld of the pin to the metal.
6. Weld bead does not have to be centered, just securely attached to metal.



OPERATION

There are multiple adjustments that need to be made to optimize the Eastwood MIG Stud Nozzle before it will operate properly:

- Depth of MIG Gas Nozzle into the Stud Nozzle
- Set Screw Depth of Pin Holder
- Volt Setting on MIG Welder
- Wire Speed Setting on MIG Welder

Using the Eastwood MIG135 and MIG175 the stud welder worked optimally with the following settings:

Welder	MIG135	MIG175
Arc Volts	I	D
Wire Speed	6	4

NOTE: These settings can vary on electrical input, specific welding situation, ambient temperature, material cleanliness, and material thickness and are offered as a starting point.

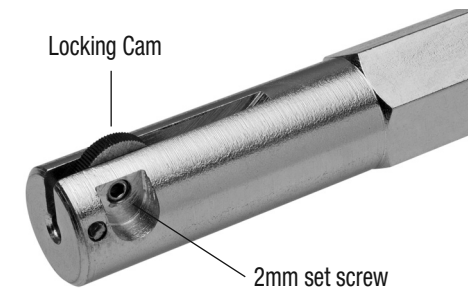
Once the Stud Nozzle has been installed onto your torch and adjusted for proper use, the welding process can begin:

1. Remove paint and any other coatings from the damaged area.
2. Insert pin into the Stud Welding Nozzle.
3. Place the flat surface of the Nozzle against the panel.
4. Hold the trigger down for ~2 seconds or until the head of the pin is securely fused to the panel. If the pin is not properly welded to the panel, it will easily be pulled off by the slide hammer.
5. Hold the Stud Welding Nozzle on the pin for a minimum of 3 seconds after the arc has stopped to allow the weld puddle to cool before lifting the torch.
6. Weld as many studs as required to pull the dent.
7. Use the slide hammer by sliding the hammer over the pin. **Roll your finger over the locking cam on the slide hammer to make sure that the pin is being held by the hammer.**
8. Use a solid pull on the slide hammer to pull the dent. Some dents will require more force than others.
9. Repeat slide hammer process on all of the pins in the damaged area.
10. Once the dent has been successfully 'pulled', the pins need to be removed from the surface. Snip the pins with cutters and then use a grinder to remove the remaining stud. It is suggested to use a flap disc on the grinder to minimize heat put into the panel.

NOTE: The Locking Cam may become worn.

To replace, follow these steps:

1. Remove the 2mm set screw holding the Locking Cam in place.
2. Install the replacement Locking Cam.
3. Insert set screw back into place.



APPLICATION

Stud welding is a method used for removing dents in sheet metal its advantages really stand out when using on panels where it is not possible to get to the backside where a hammer and dolly will not work. As with many other repair tasks it will take some practice so it is recommended to test and hone in your skills on scrap metal or parts from a junk yard before using on your project. To remove a dent you can follow the following basic steps:

1. Identify where the dent is located on the panel.
2. Use either a grinder with a flap disc or a DA Sander with 40 Grit paper to remove all of the paint. If there are deep areas which a disc cannot get into, use a wire brush on an angle grinder or drill.
3. Once all of the paint is removed locate the lowest spots of the dent and start by adding pins to these locations.
4. Expand out and add more pins to the areas that are not as deep. These shallow areas will require less pins be welded.
5. Allow the metal to cool to keep from pulling the pins off the panel.
6. Slide the pin holder of the slide hammer over the pin and move your finger over the locking cam to make sure the pin is locked onto the hammer.
7. Pull back on the slide of the hammer with a quick motion to pull the metal back. It may help to tap the metal around the pin with a body hammer to relax it and allow for the metal to move easier. When choosing which pins to pull you should start at the outside of the dent and work towards the center. Ideally the dent should be repaired enough so that the maximum amount of filler used should be 1/16" or less.
8. If the dent is still not removed enough, go back and add more pins and pull the dent more.
9. Once the dent has been repaired, the pins can be cut off near the heads and ground down using a DA Sander or Flap Disc on a Grinder. Do not allow the metal to get to hot when grinding or it could warp the panel.
10. Properly clean the surface and apply body filler as necessary followed by primer and a top coat.

TROUBLESHOOTING

- When using the slide hammer the pin pulls off the panel.
 - If the pin is being pulled off the panel, it is not completely fused. Make adjustments to the welder and/or the position of the Stud Weld Nozzle.
 - Make sure the panel is free of dirt, grease, paint, wax, etc.
- The slide hammer slips off the pin when operating.
 - The knurled cam on the slide hammer may be worn out or clogged with copper from the pins. Either clean out the knurling or replace the knurled cam.
- When lifting the torch off the piece after the welding, the pin lifts up with it.
 - Allow the weld puddle to cool before lifting the torch off the pin.
- An excessive weld bead needs to be formed to get the pin to fuse to the panel.
 - Adjust the Stud Weld Nozzle so that the wire is in direct contact with the head of the pin.

ACCESSORIES

For accessories and replacement parts, visit Eastwood.com >> **KEYWORD: 13928**

NOTES

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

The Eastwood Technical Assistance Service Department:

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