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# **User Manual**

BDAP1

JD² Model 32 Bender Digital Angle Pin

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## Safety

Read the Manual – Before using this tool, carefully read and understand this user manual and that of your bender.

Wear Proper PPE - Always use safety glasses, gloves, and other required protective gear.

Inspect Before Use - Check the tool for damage, wear, or defects before operating.

Use as Intended – Only use this tool for its intended purpose and within specified operating limits.

Keep Work Area Safe – Ensure the workspace is clean, well-lit, and free of hazards.

Disconnect Power – When performing maintenance, adjustments, or changing accessories, disconnect the bender from all power sources.

Keep Hands Clear - Maintain a safe distance from moving parts and cutting edges.

Proper Storage – Store the tool in a dry, secure place when not in use.

Failure to follow these safety guidelines can result in injury or equipment damage. Myers Made Industries, LLC. is not responsible for misuse or failure to adhere to safety precautions.

Stay safe and work smart!

### Overview

The Bender Digital Angle Pin is a practical upgrade for JD2 Model 32 tube benders, adding a digital angle readout to improve accuracy and efficiency. It replaces the stock pin, providing a clear, real-time display of the bend angle, eliminating the need for manual measurements. It comes fully assembled and ready to use, with the only modification required being to drill and tap your dies for a locking bolt. Easy to install and built to last, it's a straightforward solution for anyone using a JD2 Model 32 who wants precise bends without the hassle. Ideal for tube fabrication tasks like roll cages and other custom-designed tube structures, it enhances the bender's functionality with minimal fuss.

### Installation

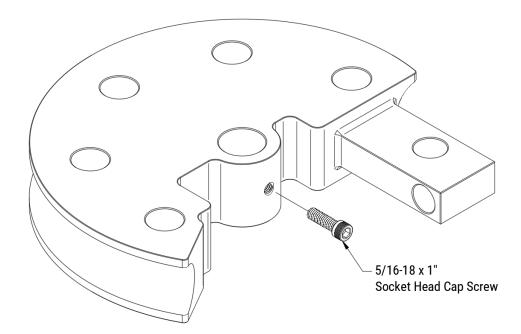
## Modifying Dies for Locking Bolt

Before using your new Bender Digital Angle Pin, each die must be modified to accept a locking bolt. Follow these steps:

#### 1. Remove the die from the bender.

#### 2. Modify the Die

Drill and tap a 5/16-18 hole in the die as shown in the illustration below. The exact location isn't critical, but aim for a square alignment. For best results, use a vise on a drill press or mill. If necessary, you can carefully do this by hand with a hand drill.



#### 3. Install Locking Bolt

Insert a 5/16-18 x 1" Socket Head Cap Screw into the hole you just tapped.

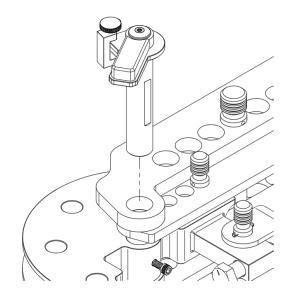
### Installation of Digital Angle Pin into Bender

### 1. Replace the Factory Die Pin

Remove the factory-equipped die pin and install the Digital Angle Pin. Apply a small amount of grease to the holes in the bender where the pin inserts. The Digital Angle Pin should slide in easily and seat fully when properly aligned.

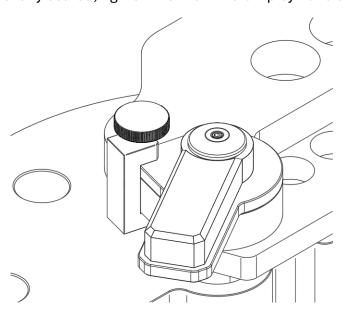
#### Note:

Do not use excessive force or a blunt object to push it down.



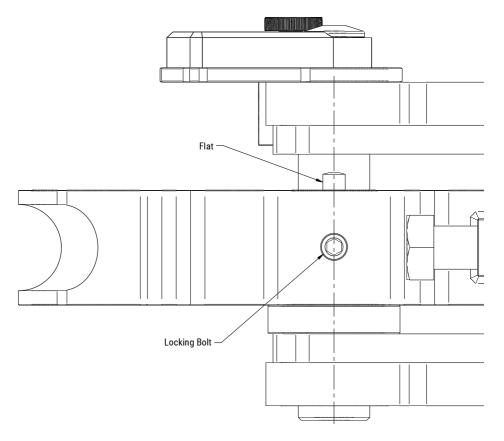
#### 2. Secure the Pin

Once the pin is fully seated, tighten the Die Pin Clamp by hand until snug.



### 3. Align and Lock

Rotate the die and/or Digital Angle Pin until the flat on the pin aligns with the locking bolt. Tighten the locking bolt snugly using a wrench.



### 4. Test Functionality

Turn on the display by pressing the Power On Button [ $^{\mbox{$\psi$}}$ ]. Slowly rotate the die and verify that the readout display changes as expected.

#### Note:

It is safe to rotate the Die Pin a full 360° and beyond. Doing so will not damage the display.

## Usage

#### 1. Load Tubing

Mark and load your tubing as you normally would per your bender manufacturer's instructions.

#### 2. Turn On the Display

If you have not already turned on the display do so by short pressing the Power On Button  $[{}^{\mbox{$ \dot{0}$}}]$ .

#### 3. Prepare to Bend

Take the slack out of the bender by pulling the swing arm forward by hand until the tubing is seated in the Die and Shoe.

#### 4. Zero the Display

Reset the display to read 0° by short pressing the Power On Button [6].

#### 5. Perform Your Bend

Continue with your bend as you normally would. The display should accurately show how far you have rotated the die.

#### 6. Turn Off the Display

Power off the display when you are done by pressing and holding the Power On Button  $[{}^{\mbox{$0$}}]$ .

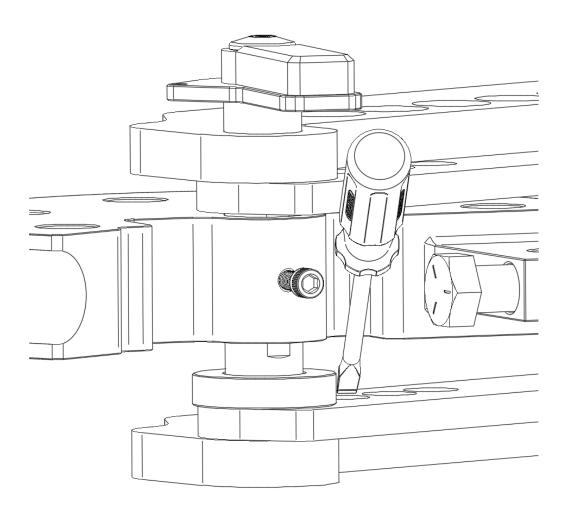
#### Note:

Do NOT press the [MTR/DEG] button on the display. This button is for Miter Mode and does not apply for this application. In Miter Mode the displayed angle will be off by a factor of two. If the MTR is illuminated, press the [MTR/DEG] button again to make it go away.

## Removal of the Digital Angle Pin

Removing the Digital Angle Pin is generally the reverse of the installation process. Follow these steps:

- 1. If the pin slides out easily, simply reverse the installation steps.
- 2. If the pin resists removal, *do not* force it out by prying on the display or driving it upward. Instead:
  - o Keep the locking bolt tightened on the die pin.
  - Use a flat-blade screwdriver or small pry bar to lift the Die, raising the Digital Angle Pin assembly.
  - Loosen the locking bolt to separate the die from the pin, then remove the Digital Angle Pin.



## **Tips**

- For hydraulic benders, seating the tube in the die and shoe by hand when setting the
  zero point ensures more consistent results. Using the hydraulic cylinder while
  setting zero can introduce several degrees of error. To set it manually, remove the pin
  connecting the hydraulic cylinder to the swing arm, seat the tubing manually, adjust
  the zero position, and then proceed with your bend using the hydraulic cylinder. This
  method provides greater consistency.
- Although the display will automatically time out and power off after a while, the timeout period is fairly long. To extend battery life, try to make a habit of manually powering off the display when it's not in use.

## **Troubleshooting**

### Die Pin Doesn't Fit Easily into the Bender

- Check for debris or damage on the Die Pin or bender components.
- Verify alignment of bender parts. If needed, slightly loosen the two ¾" bolts securing the bender, insert the Die Pin to align the components, then retighten the bolts.

### Display Doesn't Change During Bending

• Ensure the display isn't in Hold Mode. Look for an illuminated "H" on the screen. If present, press the [HOLD] button briefly to exit Hold Mode.

## Displayed Angle Is Wrong

• Confirm the display isn't in Miter Mode. Miter Mode will cut the displayed angle by half. (e.g. 90° bend reads 45°). Check for an illuminated "MTR" on the screen. If visible, press the [MTR/DEG] button briefly to switch to Degree Mode.

## Limited 90-Day Warranty

#### Coverage

Myers Made Industries, LLC warrants the [BDAP1] Bender Digital Angle Pin against defects in materials and workmanship under normal use for a period of 90 days from the date of original purchase. This warranty applies only to the original purchaser and is non-transferable.

#### Remedy

If a defect arises within the 90-day warranty period, Myers Made Industries, LLC will, at its sole discretion, either repair or replace the product with a new or refurbished unit, provided the defect is verified upon inspection. The remedy will not exceed the original purchase price of the product, excluding shipping, taxes, or other fees.

#### **Exclusions**

This warranty does not cover damage resulting from misuse, abuse, improper installation, unauthorized modifications, accidents, or normal wear and tear. It is void if the product is altered, repaired by unauthorized parties, or used in a manner inconsistent with the provided instructions.

#### **Claim Process**

To make a warranty claim, contact Myers Made Industries, LLC customer support within the 90-day period with proof of purchase (e.g., receipt or order number). Return the product as instructed, with shipping costs borne by the purchaser unless otherwise specified by Myers Made Industries, LLC.

#### **Limitation of Liability**

Myers Made Industries, LLC's liability is limited to the repair or replacement of the product, not exceeding the original purchase price. Myers Made Industries, LLC is not responsible for incidental or consequential damages, including loss of use, time, or profits.

## Disclaimer

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