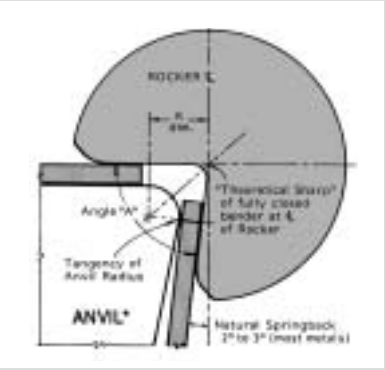
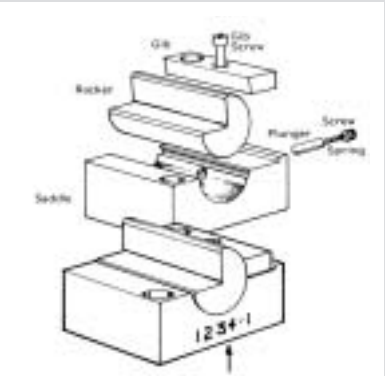


**NOTE: The back taper relief ground on the anvil is to allow for the overbend required without pinching the material at full closure. (85° minimum anvil angle suggested for all 90° bends). Always grind 2° to 3° more back taper on anvil than the rocker's angle "A" being used.*



Bender ID No. for replacement and back-up. (except HIB & RMC)

NOTES:

1. *Please reference* ***Bender ID*** *number, see above, when ordering replacement parts.*
2. ***Service Kits*** *with springs, wiper felt and new plunger available for modest fee.*

To order service kit, *state model number followed by "K".*

ORDER EXAMPLES:

H I B	100	X = 24"
READY Model Callout	Rocker Diameter 1 "	Specify Length of Bender

HMB	100	X = 610 mm
READY M odel Callout	Rocker Diameter 1 "	Specify Length of Bender

REC	100	X = DD
READY Model Callout	Rocker Diameter 1 "	Specify Length of Bender

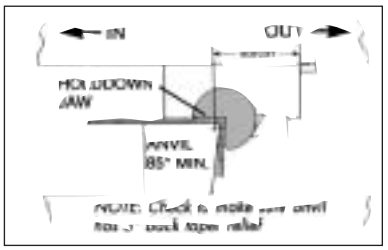
RMC	100	X = DD
READY Model Callout	Rocker Diameter 1 "	Specify Length Bender

READY

Setting Instructions

Steps to setting a READY Bender®

1. Remove return spring(s) and plunger(s) so the rocker can rotate. There is NO NEED to totally disassemble the bender for setting purposes or to remove rocker.
2. Using two pieces of the part material (median thickness preferred), place one piece on the anvil near to but not into the anvil radius (see drawing). Put the bender into approximate position.
3. Keeping the second piece of material flush to the bending lobe of the rocker like a feeler gage (moving up and down minorly), set the opening between the tangency of the anvil radius and the bending jaw of the rocker. Be sure your anvil section has more relief than angle A of the rocker 3° is recommended). Tighten bender screws and reassemble springs and plungers, oil lightly.
4. **KEY THE BENDER** to locate and resist bending pressure.
5. A final, very minor shut height adjustment will remove excess overbend if needed.



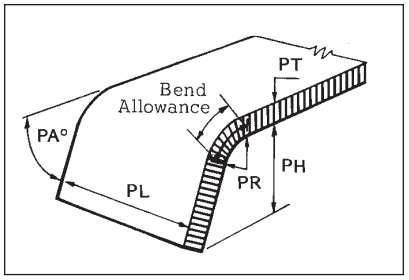
Once the holddown jaw is parallel to the material, ALL adjustment must be in or out. The rocker can be reground to add overbend.

CAUTION: *Die Setters and Press Operators* ***MUST*** *be instructed that they* ***CANNOT*** *use the exact same adjustment practices for READY Benders® as they use for Wipe Bending Tools.* ***BENDERS ARE BETTER,*** *but they are also "different". See "Trouble shooting" section.*

Setting READY® Zee Bends

Bending Zee or Offset Bends with READY Benders® requires more setting time since you are producing two Bends in a single press stroke. READY recommends a two-piece anvil section matched to the jaw of the rocker, usually ground to 90° (See sketch). Zee Bends rarely require any springback allowance! The lower Part Radius (PR2) is most successful when held to 1-1/2 times Part Material Thickness (PT). Smaller radii are possible, but not usually recommended due to tonnage and part consistency concerns.

1. Without the lower anvil insert in place, set the first leg of the Zee Bend per normal READY Bender® setting instructions.
2. Add the lower anvil insert and set the second leg of the Zee at the desired Part Height (PH). The lower anvil should have a generous radius to allow the first bent leg to be formed as far as possible before the second leg starts. (See sketch)
3. It is often necessary to reset or shim the bender closer to the anvil, and/or reposition the lower anvil insert, up or down, to "fine tune" the Zee Bend to required part tolerances.



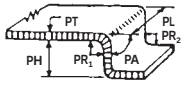
Bend Allowance

Zee Bend Notes:

A. A pad (built-in or independent) is normally required to act as a spacer to adjust the rocker diameter to the desired part height, while maintaining retention of the rocker. The pad distributes holddown pressure over the top of the part.

B. Additional holddown or pilots may be required to resist tilting and part movement during bending.

Zee Bend CB5



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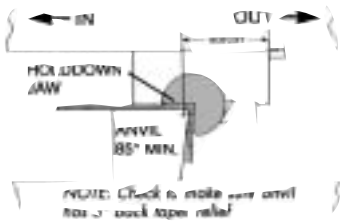
333 Progress Rd., Dayton, OH 45449
(800) 543-4355 • (937) 866-7200 • fax (937) 866-7226

Trouble Shooting



Bender Adjustment

Most problems with benders are easy to fix!

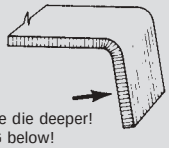
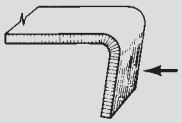
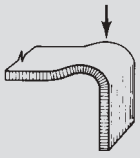
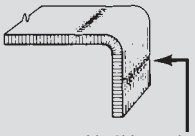
The most common problem is not enough back taper relief on the anvil or insert that the rocker forms material around.

Often the bender is simproperly located wither too close or too far away from the anivl or insert. Check the "K" dimension as per the setting instructions.

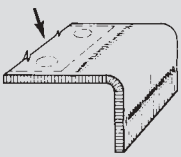
Bender Adjustment

You can vary overbend by minor shut height adjustments. Progressive dies are usually best adjusted by moving the bender slightly in (closer to anvil) for more overbend, or out (away from anvil) for less overbend. The standard 87° rocker only has 3° overbend.

Critical – Once the holddown jaw is parallel to the material, ALL adjustments must be in or out. The rocker can be reground to add overbend . . .

Problems	Possible Reasons	Solutions
1. UNDERBENT		
 **DO NOT** set the die deeper! See **WARNING** below!	1A. Bender is set "too open".....	Reset bender per instructions.
	1B. Material is too thick.....	Use the next larger bender.
	1C. Part radius is too large.....	Use the next larger bender, or reduce the part radius.
	1D. Material is "springy".....	Decrease angle A per Fig. 1 below and reset bender per instructions.
2. OVERBENT		
	2A. The bender is set too tight.....	Reset bender per instructions.
	2B. Part material is too soft.....	Increase angle A per Fig. 2 below and reset bender per instructions.
	2C. Part radius is too small.....	Increase angle A per Fig. 2 below. Another option is to match rocker and anvil to 90°. **No coining.**
3. HOOK		
	3A. Material is being "trapped" at the tangency (pinch point).....	Reset bender per instructions. Check anvil radius, it may be too small. Call READY Technology.
	3B. Rocker is too large for the material thickness.....	Refer to catalog page for correct rocker size and set per instructions.
4. EXCESSIVE MARKING		
 "Double Shinemark"	4A. Bender is set too tight.....	Reset bender per instructions.
	4B. Material is too thick or too strong for rocker diameter.....	Refer to catalog page for correct rocker size and set per instructions.
	4C. Not enough relief on the anvil.....	Increase relief angle to 2° - 3° less than angle A of rocker.

5. SADDLE IMPRINTING ONTO THE PART



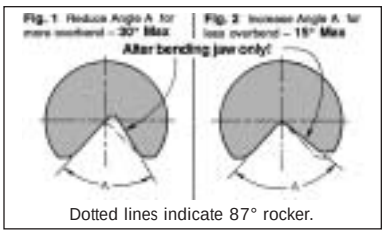
WARNING
Common practice to correct under-bent wipe bends is to close the die another .010" – .015". This simply **does not work** on READY® Benders!

Check to make sure the anvil has more relief angle than the rocker angle A. Rockers are easy to alter.

5A BENDER IS SET MUCH TOO DEEP!

STOP

Once the holddown jaw is parallel to the material, ALL adjustment must be in or out. The rocker can be reground to add overbend. . . **See bender adjustment top left of this page.**



Dotted lines indicate 87° rocker.

If problems persist, send a sample part to READY and explain your concerns, or call (800) 543-4355

Most setting problems are the result of improper setting of the "K" dimension (the bender is too close or too far away from the anvil) or NOT enough relief (back taper) on the anvil.