INSTRUCTIONS

1. SENDER DIMENSIONS
Page 2 of this form will tell you how to calculate the dimensions of a sender with a bend.

2. WIDE @ ?? O’CLOCK
For a bent sender to point the correct direction in the tank when installed, the bend must be at the correct orientation with respect to the five mounting screws. The template on this page will provide a "wide @ ?? o’clock" number for Centroid to use. NOTE: if you will drill the five mounting screw holes to match the sender, we will use our default orientation of "wide @ 8:00".

A. Cut out the dotted square and circle below. YOU MUST DO THIS. Please dont just eyeball it.

B. Rotate the cutout on the tank opening or face of the original sender (not the back) through all 5 rotations of the tick marks.

C. Once you’ve found the best of the 5 rotations, which o’clock number is pointing the direction you want the bend to point?____________

Drawing changes:
2. DIMENSIONS OF A SENDER WITH A BEND

A. OVERVIEW
When a bent sender is needed, it is typically at 90 degrees for a side-mount, usually when the top of the tank is not accessible or has insufficient clearance to insert the sender. Occasionally a top-mounted sender has a bend too, when the tank opening is not above the deepest part of the tank. However, often the fuel being missed in this situation is a small percentage of the total gallons, even if it is a bigger percentage of the inches. In that case, it's generally better just to leave that small percent of gallons as a reserve than to have the sender bend toward it. Otherwise the reading will drop surprisingly quickly in this section due to small gallons in bigger inches.

B. CENTROID’S TUBING BENDER
Our bend jig makes bends approximately 3 inches from the head. Rather than have customers make trigonometric calculations, the form below has you specify the desired vertical and horizontal offsets from the center of the mounting hole to the tip of the sender. (In the case of a 90 degree bend, the horizontal offset is 3 inches).

C. EXISTING SENDERS WITH BEND
A modern bent sender (ie with a white label) will show a part number of the form CGFP-12.5+2.5@90-...-w@8:00. This gives sufficient information for us to duplicate the bend.

And old sender (ie with silver labels) will not show this information. Often Mary will be able to find your original order (we have order information back to 1990 or so) and get the information that way. Or if you put the sender head against the edge of a table, you'll be able to measure the vertical and horizontal offsets from the center-bottom of the sender's head to the tip of the sender. (You'll also need the 'wide @ ?? o'clock' from the first page of this form).

![Diagram showing vertical (V) and horizontal (H) measurements.]