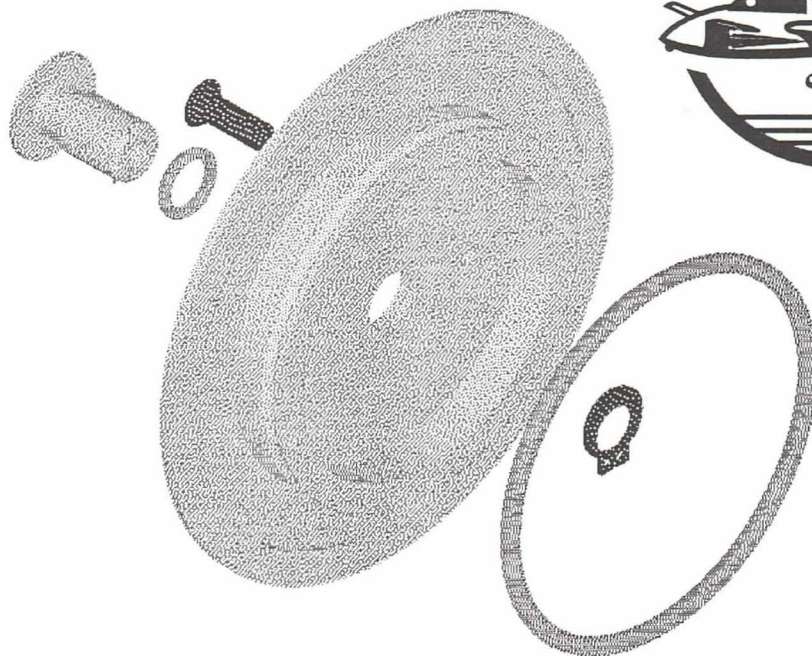


# N<sup>2</sup>EXAP<sup>TM</sup>

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## **Leak Proof Gas Caps That Fit Original FI-17 Filler Neck Receptacles Without Modifications**

- MACHINED FROM AIRCRAFT ALUMINUM
- SHEDS WATER WITHOUT DEPENDING ON O-RINGS ALONE TO SEAL
- O-RINGS ALSO FOR DOUBLE PROTECTION FROM LEAKS

# FUEL SIGHT GAUGE

## Installation Instructions

### GENERAL DESCRIPTION

Developed for the Rutan composite aircraft, these sight gauges provide the pilot with a clear view of the exact level of fuel in the tanks. These gauges solve the hard to read darkening with time, per plans sight gauges.

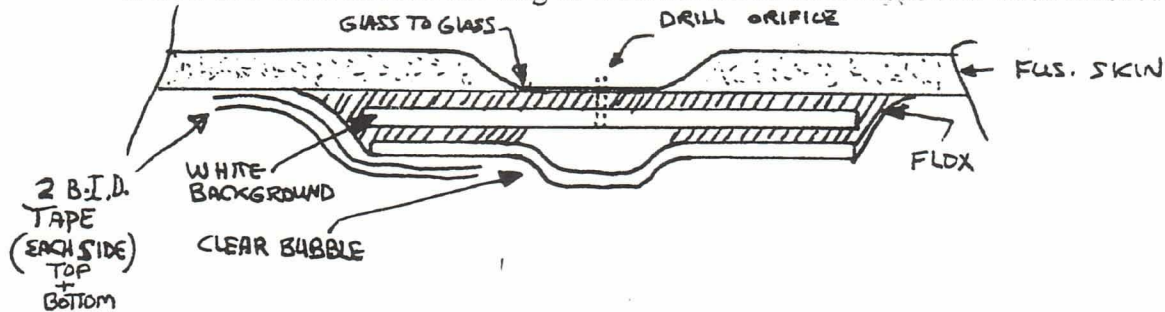
These gauges are intended for use with AVGAS or AUTO FUEL.

### INSTALLATION

Read and understand all the instructions before installing. It will take you two nights at about an hour each night to install these units.

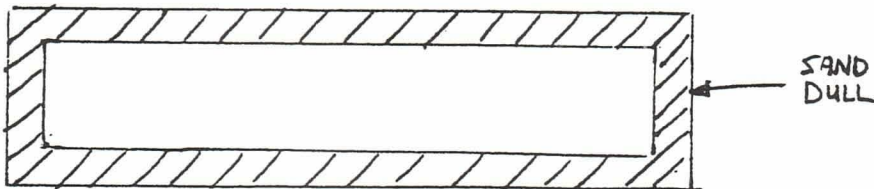
1. PREPARE BASE AND GAUGE
2. PREPARE EXISTING SIGHT-GAUGE ARE, AND MOUNT BASE GAUGE.
3. DRILL TWO HOLES AND MOUNT CLEAR BUBBLE.
4. B.I.D.. TAPE IN PLACE, LET DRY, LEAK TEST.

Below is a cross-section drawing of what the installation looks like when finished.



#### STEP ONE; PREPARATION OF BASE AND GAUGE.

A. BASE: Sand a 3/8" wide margin dull all around on both the front and back sides of the base.

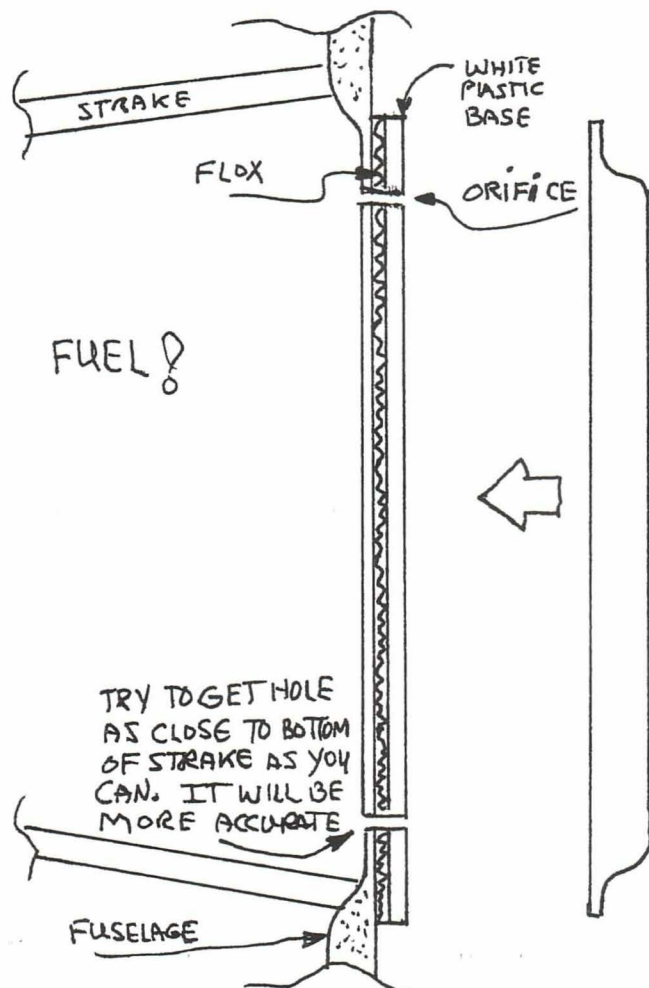


B. GAUGE: Same as above for gauge back side. On the front side protect the gauge with gray tape and sand dull to edge of tape.



## Mounting Base and Gauge.

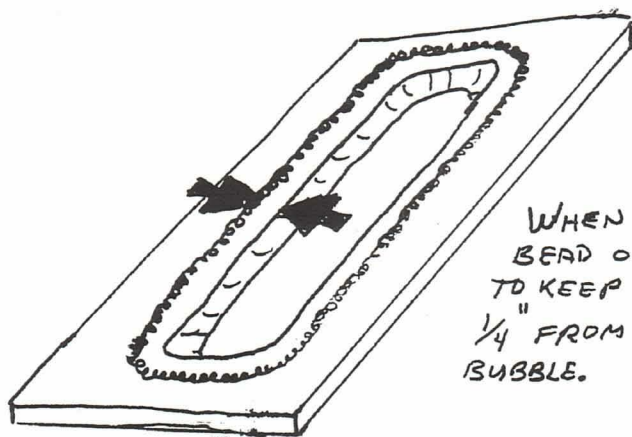
- A. If retrofitting, EMPTY THE TANK !
- B. Decide if you want to use Safety Pox, West system, or 5-Min. epoxy or 30-min epoxy. The advantage of using the clear type of epoxies such as West System or 5-Min or 30-min is it will dry clear and if any squeezes into the glass bubble, it wont show
- C. Locate the gauge vertically on the sanded existing sight gauge area. The bottom Edge of the base must be located at the same level as the bottom surface of the inside of the gas tank. For example; on the COZY or LONG EZ, built per plans, the bottom edge of the gauge base will be 9.15" below the top of the longeron. Mark around its selected position with a pencil..
- D. Mix epoxy and wet the sight-gauge area on your aircraft where you sanded dull in B. above. Wet the sanded area ( $3/8$ ") on the backside of the base. Mix a little flox of medium to wet consistency and trowel it over the  $3/8$ " area about  $1/32$ " thick. Be sure there are no voids. Mix a little bondo. Place the base in position using the penciled outline as a guide and gently press in place. Don't squeeze the flox out. Just make sure you have a good intimate contact all around. Holding the base in place, put small tacks of bondo all around the edges as appropriate to hold the base in position as it dries



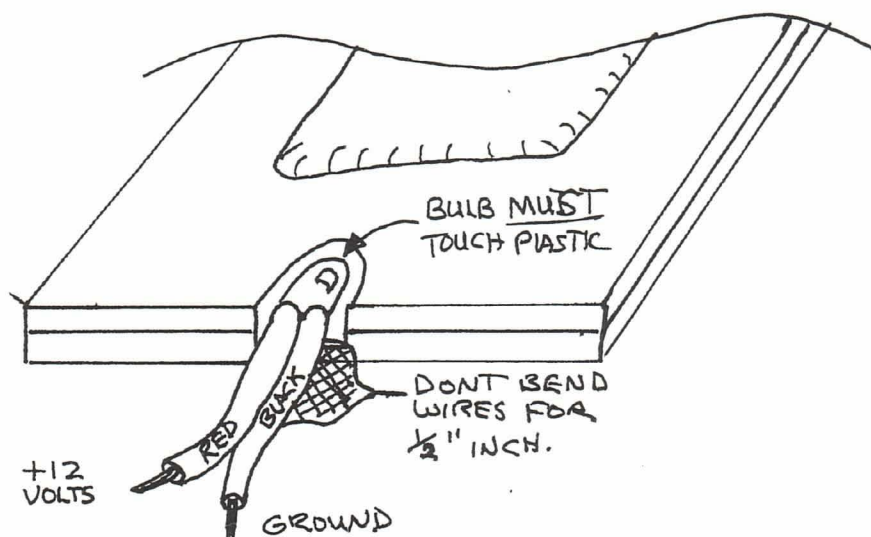
E. When dry, re-drill the inflow and outflow orifices using  $1/16$ " drill. Try to get as close to the bottom of the fuel tank as you can get. This way, it will be most accurate.

F. If you have the lighted gauges, you will notice a notch on one end. This is where the light will go after bonding on the clear bubble, but before the 2 BID goes on around the edges. The light can be at the top or bottom...your choice. Keep the notch clear of bid and flox until the light is installed. Now, wet the white base with epoxy around the  $3/8$ " outside margin area you sanded dull in step one. Also wet the  $3/8$ " dull area around the back side of the gauge. Then trowel  $1/32$ " of flox around this area on





WHEN TROWELING  
BEAD OF FLOX, TRY  
TO KEEP BEAD ABOUT  
 $\frac{1}{4}$ " FROM EDGE OF  
BUBBLE.



LED MUST BE FLUSH OR LOWER WITH TOP



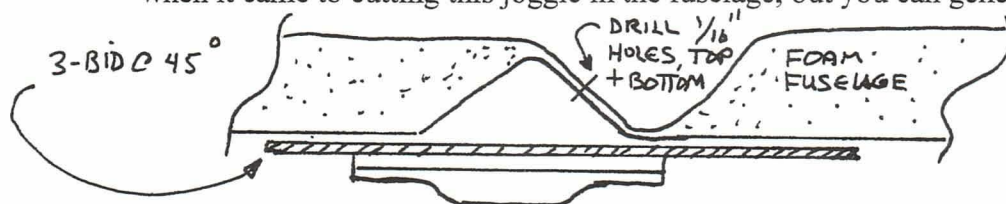
I'd recommend two coats of black paint over the area where the LED is installed. You can hand paint this 2-inch area, then finish with what ever interior paint you have decided on.

### CALIBRATION

Don't use lacquer. I used plastic stick on numbers and cut thin strips for the same material to stripe across the curved face of the gauge.

### Vari EZ

Below is a drawing to adapt this gauge to a Vari EZ. Not all builders followed Burts plans when it came to cutting this joggle in the fuselage, but you can generally see how it works.



the gauge. Mix more bondo !

**Make sure the orifices are clear !**

Gently press the gauges in place against the base. Be sure there are no voids and the flox **doesn't squeeze inward**. Tack in place with bondo and let dry !

After the clear bubble is dry and you are happy with it, resand the existing sight gauge area on your bird at least one inch wide all around the gauge base. At this time place the LED into the notch with the lens touching the plastic fuel gauge. You can use some instant glue, sparingly, to hold it there. Then, use 5-min epoxy to fill the area around the LED. Let dry for an hour and then sand off area so all is flush. Mix up some medium flox and trowel all around the sides of the gauge so as to make a nice fillet. While it is still wet lay up a two BID tape around the perimeter, up to the gray tape protecting the raised bubble. If you use peel-ply, do a neat job so you don't end up with the frizzes where the tapes meet the duct tape.