

The "Lift Reserve Indicator" is as an angle of attack (AoA) indicator and consists of a rectangular probe projecting into the air stream linked to a commercially available differential pressure gauge. There are two air pressure ports, each on separate faces of the probe. The differential pressure between the two ports yields lift reserve readouts. The high pressure port on the gauge is connected to the top surface port.

The gauge used is a "DWYER MINIHELIC II" pressure gauge. Part number 2-5002. This gauge reads 0-2" of water column. The gauge face is modified to have 3 separate zones.

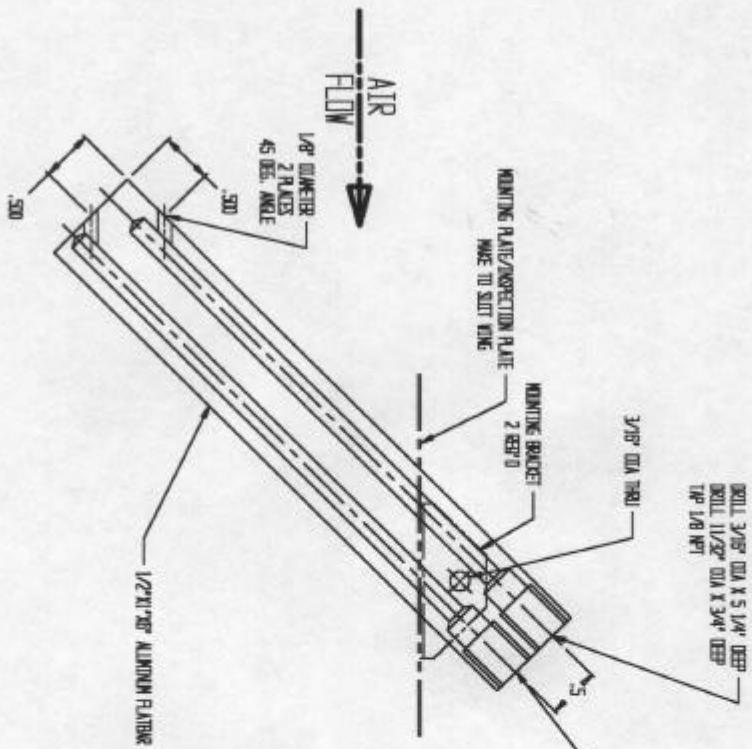
**The Red zone** registers from 0 to .5" Hg. and indicates that the airplane is not generating enough lift to sustain level flight

**The Yellow zone** registers from .5" to 1.0" Hg. The top of the red sector and the bottom of the yellow sector is the point that wing is generating "just" enough lift to support the aircraft. During takeoff the needle just clears the red sector and moves into the yellow sector at the point that the plane has enough lift for takeoff. During landing the goal is to get the tyres to just touch the runway when the needle is one mark from the top of the red sector (0.4"). The Yellow sector indicated the slow speed region of the aircraft The final approach on landing is flown with the needle centred in the yellow zone. The turn to final should be done with the needle no lower than the white/ green zone.

**The green zone** register from 1.0" to 2.0" Hg and indicates the region where there is ample lift. The needle will most probably be pegged. At 4.0" Hg

**Location** The probe should located on the leading edge and angled down about 50 degrees

**Adjustment** The probe should be adjusted so that the needle is at this point at touch-down.



DRILL 3/16" DIA X 5 7/8" DEEP  
DRILL 1/2" DIA X 3/4" DEEP  
TP 1/8 WT

- 1) 3/16" BARBED FITTING CONNECT PROBE TO HOSES
- 2) 3/16" BOLT FASTENS THE PROBE TO ANGLE BRACKETS AND IS ADJUSTED AS PER INSTRUCTIONS
- 3) GAUGE USED IS A "OWNER MINIHELIC II" PART NUMBER 2-5002 (0-2" H2O)
- 4) 3/16" DIAMETER HOSES USED TO CONNECT PROBE TO GAUGE
- 5) PROBE IS MOUNTED AT 15-30% OF WING CHORD FROM LEADING EDGE
- 6) HIGH PRESSURE PORT IS CONNECTED TO THE HOLE DRILLED 5 1/4" DEEP
- 7) PROBE SHOULD BE ADJUSTED SO THAT THE NEEDLE IS AT 0.4° OF H2I AS THE TIRES TOUCH IN A FULL STALL LANDING

AIRSPEED ANGLE OF ATTACK INDICATOR

SCALE	FULL	SHEET	1 OF 1
SIZE	10x14 IN.		
			87