BARNEY OLDFIELD BABY LAKES
& BUDDY BABY LAKES
WEIGHT & BALANCE DATA

NOTES: For Baby Lakes builders incorporating dimensions, weight and/or horsepower changes from the standard plans!

1. Always maintain the established proportions and the specified rigging. With this small an:: airplane, even relatively small weight and/or dimension changes become very significant proportional changes. Also, any change in rigging specifications has proven to depreciate the performance.

2. When cockpit dimensions are changed to accommodate the size or weight of specific pilots, or when an engine of different weight is installed, computations must be made to determine what the effect will be in terms of the total "moment" change, around the center of lift.

3. All changes must be incorporated in such a manner that the center of gravity will fall within 4" forward or 3" aft of the M.A.C. center of lift (See Figure 1) at level (loaded) flight attitude for this aircraft! (This gives a C.G. range of 7" which is well under the actual controllable range for this airfoil but, in my opinion, it should be adhered to in the interests of maintaining its delightful inherently predictable flight characteristics.)

To attain optimum balance in the standard dimension and weight aircraft, (as Oldfield designed it), it was assumed to have:
170 lb. Pilot (Oldfield)
175 lb. Engine (Cont A-80)

The pilots C.G. was assumed to be at the navel height and 8 inches forward of his back (what ever his seating position). The Bare engine C.G. is given as 6.2" forward of the rear face of mounting lugs. Considering the weight of the tail cone and empanage, the resulting configuration worked out for Figure 1 below.

The result is nearly perfect balance when equipped with a Hartzel ground adjustable prop (at 20 lbs.) and a bit toward the AFT. C.G. with lighter props.