

LUSCOMBE AIRPLANE CORPORATION

RIGGING INSTRUCTIONS

MODEL 8 SILVAIRE WITH METAL WINGS

The All-Metal Silvaire (Model 8 Series) is fabricated according to the most modern methods of metal aircraft construction. Production jigs and fixtures are designed to insure the uniformly high performance for which the Silvaire is reputed. The stressed skin metal wing is manufactured to close tolerances to insure proper stability and flight characteristics. This is extremely important in a wing of this type, since it cannot be twisted for adjustment in the field as the obsolescent fabric-covered wing. Factory flight tests of new Silvaires at the factory determine the ability of each airplane to trim properly in level flight at cruising power with "hands and feet off." Subsequent weather changes may cause some deviation from the original trim condition due to different coefficients of expansion between the aluminum alloy spars, the skin, the steel control cables, etc. To adjust for such deviation, you will note that small trailing edge tabs are provided on both ailerons and the rudder. In order that the use and effect of such tabs may be understood by all owners and operators, the following instructions and rules have been prepared:

1. Engine torque normally causes airplane to "yaw" or turn to the left. This may be overcome by bending the rudder tab to the left (when airplane is viewed from the rear).
2. "Wing heaviness" may be adjusted for by bending down the tab on the opposite aileron. (To correct right wing heaviness, bend down left aileron tab). Additional assistance may be obtained by bending up the aileron tab on the "heavy" wing.
3. No tab should be bent more than  $45^{\circ}$  ( $10$  to  $30^{\circ}$  is usually sufficient). Beyond  $45^{\circ}$  the tab begins to add excessive drag without materially improving trim.

Trimming Sequence: If any difficulty is encountered in application of the above rules, it is recommended that this sequence be followed:

1. Straighten all tabs.
2. Fly airplane level at cruising power, then, holding wings level with the stick, remove feet from rudder pedals to observe yawing tendency.
3. Land and bend tab  $15^{\circ}$  in same direction as yaw.
4. Repeat 2 and 3 as necessary up to  $45^{\circ}$  tab angle.
5. Fly airplane level at cruising power, then, holding airplane on a straight course with rudder, release stick and observe tendency of either wing to drop.

6. Land and bend tabs as recommended in rules above.
7. Repeat 5 and 6 as necessary.
8. When correct tab adjustments are made, the airplane should trim level, hands and feet off, in moderately smooth air without difficulty.

In the event any difficulty is encountered in applying the rules of if for any reason the desired trim is not obtained, please contact Luscombe Airplane Corporation Service Department with full details, and a special investigation will be made.

/s/ E. W. Norris  
E. W. Norris,  
Vice-President - Engineering

/s/ O. W. Hoernig  
O. W. Hoernig,  
Service Manager

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