

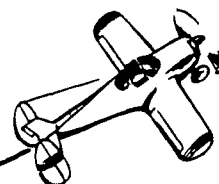
**ERCOUPE
SERVICE
MEMORANDUM**

No. 35A

**REVISION: A
09/01/2008**

Erco **MEMORANDUM**

**SUBJECT: Rigging—Elevator
Model E and Model F**



The 1948 model Ercope is equipped with a new type elevator. The procedure outlined below is suggested for use in rigging, or making adjustments to the rigging, of this elevator.

1. On the rudder lay out a line perpendicular to the trailing edge of the vertical fin from a point 15/16 of an inch above the lower forward attaching bolt of the center hinge and running to the trailing edge of the rudder. (See sketch B of Memo 35.)
2. The intersection of the line and the trailing edge of the rudder is the neutral position of the elevator. With the elevator in neutral position, place a bubble protractor on top of the end rib of the elevator and level the bubble.
3. Check the up travel by moving the control wheel to the full aft position as limited by the stop on the control wheel shaft. Be certain that the control wheel is completely against the stop and not being limited by the lower speed warning cushion spring.
4. With the control wheels in the full aft position, the elevator should be up 20° from the neutral position. Any error is corrected by the adjustment of the elevator control cables. Tension on the cables should be re-rigged between 160 and 190 pounds per square inch as measured on a tensionmeter. The down travel of the elevator should be 9°, but it is not critical and can, therefore, be neglected.

a. Rigging of the trim tab.

1. Operation of the trim tab is the same as the model 415-CD. The trim tab up travel limit stop on top of the elevator should be set at $9\frac{1}{2}^{\circ} \pm 0^{\circ}$. The down travel of the trim tab is $38^{\circ} - 0^{\circ}$. It may be necessary to lengthen the slot in the quadrant on the instrument panel in order to obtain the 38° down travel due to the backlash of the trim control handle which is caused by the friction of the wire running through the conduit. Bend the fixed trailing edge of the left panel of the elevator down $11\frac{1}{2}^{\circ}$.

b. Flight test adjustments.

1. Power off *minimum* airspeed is 60 M.P.H. Any necessary corrections are made at the adjustable rear attaching fitting of the lower speed warning cushion spring. This fitting is designed so that the spring may be shortened or lengthened by placing the attaching bolt in any one of three holes. If the airspeed is below minimum speed, shorten the spring; if above, lengthen. Should the airspeed be slightly above 60 M.P.H., and after making an adjustment it drops below 60 M.P.H., return the spring to its original position.