

# SERVICE

# MEMO

Service Memo No. 6

## RIGGING PROCEDURE - PIPER COUPE (J4)

**RIGGING PROCEDURE:** Raise the tail of the airplane to approximate level flight position and support it there.

**LEVELING:** Level the airplane as follows:

Laterally - Raise the carpet and place a level on the floor just aft of the joint in the floor. Adjust blocks under wheels to bring the bubble to the center.

Longitudinally - Place a 30 inch level against the bottom of the wing at the second rib outboard from the fuselage, with the front end at the location of the front spar (9 inches back from the leading edge) and with the back end blocked down from the rib by a 1/4 inch block.

Raise or lower the support at the tail to bring the bubble to the center. Check on both wings and divide the error, should any exist.

**DIHEDRAL ANGLE:** To check the dihedral angle at the front spar proceed as follows: Open root fairing on the top of the wing, in the vicinity of the front spar, by removing the screws.

Stretch a string along the top of the wing above the front spar, from wing tip to wing tip, and draw it tight.

Check the dimension vertically from the flat top surface of the fuselage front spar fitting to the string. For correct dihedral this dimension should be 3 inches. Obtain this dimension by adjusting the front struts in or out. However, no more than 15 threads showing on clevis are permitted.

To check for equal dihedral in each wing, proceed as follows:

Using the 30 inch level (without any spacer blocks) hold it spanwise against the bottom of the wing under the front spar in the space between the jury struts and lift strut attachments. Note the position of the bubble and do the same on the other wing. Re-adjust the front struts until both wings show the amount off level, being careful with each adjustment to set the left strut out the same number of turns as the right one is set in, and vice versa.

**WASH OUT:** To adjust the wash out in the wing (or dihedral of the rear spar) proceed as follows: Set a 9/16 inch spacer block on top of the 30 inch level at one end.

Working on the rib adjacent to the outer end of the aileron, hold the level fore and aft along the bottom of the rib with the spacer block at the rear and the front end at the location of the front spar. The correct wash out will exist when the bubble is centered. Adjust the rear struts in or out to obtain this condition.

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TAIL ASSEMBLY: With the airplane in level position the stabilizers should be leveled at their rear spars. The hinge line should be straight from tip to tip. Plumb the fin at the rudder hinges.