

JOHNSON'S ADASTRA NEARING FIRST FLIGHT

by R. TERRY WHITE

The time fast approacheth when someone will crack (gently) a bottle of portentous *Rheinwein* over the nose block of Dick Johnson's new two-place sailplane *Adastra*. For at the time of this writing, Johnson lacked only the upper wing skins, instrument, skid and canopy installations and a few minor details before the ship would be ready for its first flight.

Adastra is a rather large sailplane, with a span of 58 feet, a foot and a half less than the big *Weihe*.

Two features of the *Adastra* which set it apart from other sailplanes are the Y-tail and the eight-slat Schempp-Hirth type terminal velocity dive brakes. Four 30-inch slats — two upper, two lower — on each wing

can be jugged into the breeze to form a total of 10 square feet of dive brake frontal area.

The tail group is a Y instead of a T by reason of 15 degrees of dihedral in the "horizontal" tailplane.

Adastra's fuselage is oval in cross-section, with beaver-tail Raspet bubble canopies. (Johnson plans to add the rear canopy and seat after logging several hours on the ship.) Plans for a retractable wheel were abandoned in favor of a fixed wheel which projects one-fourth of its diameter below the skid.

CONSTRUCTION

Fuselage bulkheads and rings are spruce laminated, and all skins are popular core mahogany aircraft plywood. All fuselage longerons, keel-

sons and other primary structural members are of spruce. Resorcin resin glue has been used throughout the sailplane.

The wing spars are a bridge-builder's delight, although the wing panels are no heavier than those of a *Weihe* and lighter than those of the RJ-5.

Solid spruce, 1.75 inches thick, faced with .75-inch ash, tapers from the root 21 feet out where the spars become conventional box construction to the tip.

Main fittings were machined from 75ST dural and mounted over sheet dural root plates. Epoxy resin bonding of fitting straps to root plates supplements the dural bolts through the fittings.

Mahogany plywood .25-inch thick was bandsawed for the wing and tail group ribs. Glue area for the skins was increased by the addition of .25-inch square cap strips on each side of the ribs.

Except for the fabric-covered elevators and rudder, the entire sailplane is mahogany plywood covered.

Left: The husky dural main wing fittings are shown prior to construction of the center section stub and fillets. Dive brake actuating gears in the wing roots automatically mesh with those in the center section when the wings are attached. Right: Sturdiness of construction is apparent in this shot taken through the nose toward the steel-tube landing gear frame.

Photo: Terry White

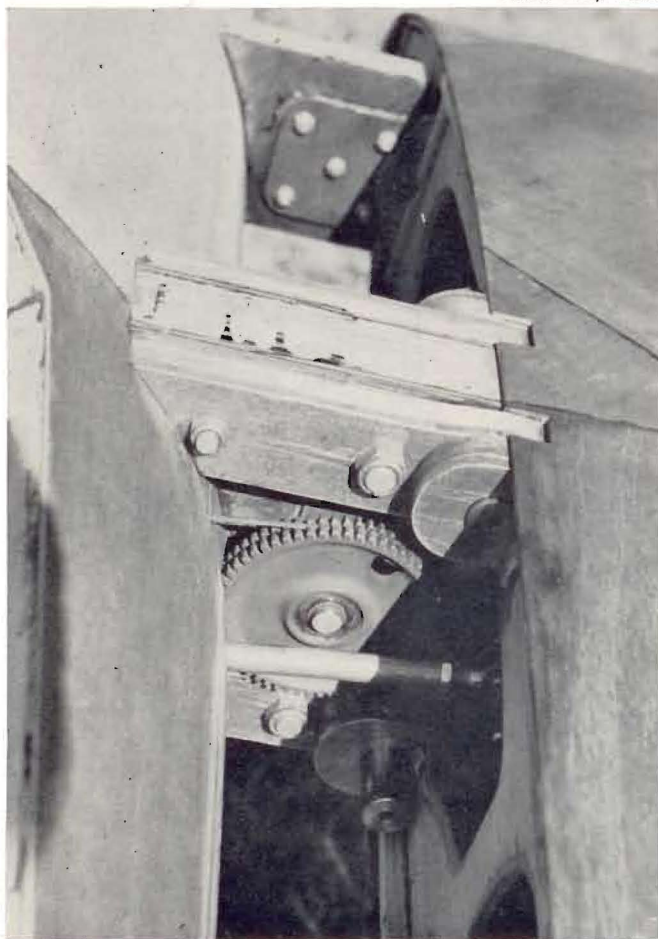


Photo: Terry White

