

The Mosquito Bomber in WWII and the M-H Connection

The wings for the Mosquito bomber, for those that were built in Canada, were made by Massey Harris at their aircraft plant in Weston, Ontario. The Mosquito wing was built in one piece for strength and lightness, with two wooden box spars, laminated spruce flanges and plywood webs. The trailing edge was rakishly swept forward, and the wingtips were replaceable units. The aerofoil was a Percy Modified Section RAF 34. The center part of the wing carried the welded steel engine bearers and mountings for the radiators directly onto the front spar. A "D" section box for the outer wing leading edges was also attached to the front spar. Spanwise spruce stringers over the ribs supported the plywood wing skins. The upper surface had two skins, with the stringers sandwiched in between. After the whole thing was glued and screwed together, a final covering of Madapolam cotton fabric was stretched on with dope and painted. This resulted in an beautifully smooth surface that was virtually impossible to achieve in metal at that time.

The 10 internal fuel tanks were nested in the cavities between the spars, completely accessible from below. Outboard of the nacelles were two tanks of 32 and 24 gallons, inboard two of 79 and 65 gallons, and in the fuselage two of 68 gallons. Most later versions could carry external drop tanks of 50, 100, or eventually 200 gallons, or 500 lb. bombs, on pylons under the strengthened no. 8 rib. The undercarriage of the Mosquito was simplicity itself. It was deliberately designed to avoid as much machining as possible. The undercarriage legs were completely interchangeable, consisting of nothing more than stamped metal housings containing a stack of rubber blocks. The large low pressure tires helped to absorb some of the shock. This no maintenance system worked well, and was still being used on the Twin Otter some decades later with Neoprene blocks. The early Mosquito was not without its difficulties though. The original short engine nacelles caused tailplane buffeting because of disturbed air flow. The tail wheel was a weak point in the design that was never adequately resolved, and the exhaust system was troublesome to the end. Nevertheless, de Havilland produced a winner because they had the patience and gumption to address the inevitable development problems.