

SYL M17A B1 1.0

Lesson
Subject
17A.1 Fundamentals Blade element theory; High/low blade angle, reverse angle, angle of attack, rotational speed; Propeller slip; Aerodynamic, centrifugal, and thrust forces; Torque; Relative airflow on blade angle of attack; Vibration and resonance.
17A.2 Propeller Construction Construction methods and materials used in wooden, composite and metal propellers; Blade station, blade face, blade shank, blade back and hub assembly; Fixed pitch, controllable pitch, constant speed propeller; Propeller/spinner installation.
17A.3 Propeller pitch control Speed control and pitch change methods, mechanical and electrical/electronic; Feathering and reverse pitch; Overspeed protection.
17A.4 Propeller synchronising Synchronising and synchrophasing equipment.
17A.5 Propeller ice Protection Fluid and electrical de-icing equipment.
17A.6 Propeller Maintenance Static and dynamic balancing; Blade tracking; Assessment of blade damage, erosion, corrosion, impact damage, delamination; Propeller treatment/repair schemes; Propeller engine running.
17A.7 Propeller Storage and Preservation Propeller preservation and depreservation