A look at how propellers achieve balance

Technology

A propeller can be balanced by removing it from the aircraft and doing the balancing from a specialized fixture. Static weights are added or removed to achieve the balance needed. Propeller static unbalance usually occurs when the propeller’s gravitational center does not coincide with the rotation of the axis (FAA, 2012).

This is a concept that has captured my attention for a greater deal of my study. Achieving a perfect balance to ensure that the plane remains in motion while in the air is rather paramount. The static balancing can be done by various methods like the suspension or the knife-edge method. With the suspension method, the propeller is hanged by a cord and the imbalance noted by the eccentricity between the disks attached firmly and the cylinder that is attached to the part under test (FAA, 2012). However, the suspension method is not used frequently as compared to the knife-edge method which is simpler and accurate to carry out.

Whenever a propeller is balanced statically, it remains in that position as compared to the one that is not statically balanced (FAA, 2012).