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**Subject:** Clarification on Use of Hartzell Type-Certificated vs Experimental (“X”) Propellers

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Hartzell Propeller manufactures both type-certificated (TC) propellers and experimental (“X”) designated propellers. While certain models may appear physically similar or share common design features, these propellers are produced, documented, and controlled under fundamentally different regulatory frameworks and intended applications.

Type-certificated propellers are approved for installation on certificated aircraft under applicable FAA Type Certificate (TC) or Supplemental Type Certificate (STC) data. Approved propeller/aircraft/engine combinations, including associated operating limitations and restrictions, are identified within the Hartzell Application Guide, Hartzell Manual 159. These configurations have undergone validation, including vibration testing and compliance with applicable airworthiness standards.

Experimental (“X”) propellers, although they may share similar geometry or components with certificated models, are specifically designated for use on experimental aircraft only and are not approved under any FAA TC or STC. Guidance for experimental propeller applications, including compatibility, integration considerations, and example configurations, is provided in Hartzell Manual 193 Volume 1, Hartzell Manual 193 Volume 2, and Hartzell Manual 193 Volume 3. These documents are informational in nature and do not constitute approved data for certificated aircraft.

The distinction between TC and “X” propellers is critical to maintaining regulatory compliance and operational safety. Even in cases where an experimental propeller may be dimensionally or structurally similar to a certificated version, it must not be installed on a type-certificated aircraft. Such installation would result in a configuration that is not approved and may not have been evaluated for vibration characteristics, structural loads, or operational limitations within a certificated environment.

Additionally, experimental aircraft installations place responsibility on the builder and operator to ensure proper integration and safe operation, as outlined within the referenced experimental guidance documents. This differs significantly from certificated aircraft, where approved data defines installation and operating limitations.



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For these reasons, Hartzell Propeller clearly distinguishes experimental (“X”) propellers from certificated propellers through part number designation, documentation, and intended application. This distinction ensures proper use, supports regulatory compliance, and helps prevent inadvertent installation on certificated aircraft.

If there are any questions regarding propeller applicability, configuration approval, or proper selection, Hartzell Propeller Product Support is available to assist in verifying correct applications and complying with applicable requirements.

Regards,

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