

## **Propeller Vibration Checklist**

### **Propeller Checks:**

- (1) If the propeller has been recently repaired or repainted, it **MUST** be rebalanced statically for horizontal and vertical balance. The best static balance is completed with the spacer attached, and using an end mount type balance stand. This is the first step in removing unwanted vibration.

### **Spacer Checks:**

- (1) If the spacer has a serial number on it, then the spacer and propeller should both be stamped with the same serial numbers. If they are not, a careful inspection of the assembly must be made to insure that the center bore of the spacer is aligned with the center bore of the propeller. The bolt holes must also be properly aligned. Otherwise there will be vibration in the assembly.
- (2) When attached to the propeller, the spacer should be aligned so that the "1" stamped on the side of the spacer is aligned with the #1 blade of the propeller. The #1 blade is indicated by a small "1" stamped just outside the hub circle on the front hub face.
- (3) If the spacer has been removed for spinner bulkhead installation has it been properly re-installed. (See Propeller Installation Instructions for Sensenich Fixed-Pitch Metal Propellers.)

### **Spinner Checks:**

- (1) If a spinner bulkhead is installed either between the propeller and spacer or between the spacer and engine flange, check the spinner rear bulkhead to insure it has a consistent thickness. We have found some cases where the bulkhead thickness varied causing propeller face tracking problems and vibration.
- (2) Check the spinner for balance. If it has been installed between the spacer and propeller, have the entire assembly balanced together.
- (3) Check spinner dome alignment when completing installation. Ensure that the spinner dome runs true, a dial indicator may be used on the nose of the dome for centering.

### **Installation Checks:**

- (1) Install the propeller in accordance with "Propeller Installation Instructions for Sensenich Fixed-Pitch Metal Propellers"
- (2) After the propeller has been installed check that the mounting face of the spacer or propeller is tight against the engine flange.
- (3) Verify that the attaching bolts have reached their required torque and have not bottomed out of the threads.
- (4) Check the face alignment of the tips.
- (5) If the vibration persists remove propeller, rotate 180 degrees and re-install.
- (6) Have a dynamic balance completed by a local FBO.