

NOTE: Mark bolts and nuts with a center punch before loosening in order to tighten to the same tension. Using a plastic mallet and placing a cloth over root of blade, tap heel of blade lightly to effect pitch change until the new mark on blade lines up with index mark on the blade clamp. Tighten nuts on the clamp bolts to the same position as before according to the center punch marks.

3. Exercise the utmost care in adjusting propeller control cable before attaching it to the A-117 servo valve control lever. When connecting the control cable to lever A-117, position piston in forward position as shown in sketch, and servo valve body  $\frac{3}{8}$  inch from plate (near mid position); also, push-pull control should be pulled out from dash approximately  $\frac{1}{8}$  inch for spring back cushion.
4. After installation is completed, run up engine and set low pitch stop to provide proper ground (static) rpm (1975 - 2025).
5. Make an operational check of the jack plate clearance. In the full forward position of the diaphragm, (maximum rpm) with engine running, there must be a minimum of  $\frac{1}{8}$  inch clearance between the jack plate collar and propeller hub. Clearance may be observed from the side of the airplane while the engine is running.

NOTE: This clearance must be observed while the engine is running, as the propeller counterweights will cause a change in the propeller pitch as the engine is stopped. It is realized that no measurement can be taken while the engine is running, however, if the clearance obviously is less than  $\frac{1}{8}$  inch, low pitch stop must be adjusted to provide clearance.

6. It is important that this jack plate to hub clearance be maintained to preclude any possibility of over loading engine thrust bearing with propeller. If the desired maximum rpm cannot be obtained with this basic adjustment, the blade settings in the hub must be changed rather than use additional spacers back of the rear cone as is sometimes done in the case of -1 or -5 Hartzell Propeller.
7. If the foregoing instructions are fully complied with, the maximum static rpm will be approximately 2025. This adjustment should give a maximum sea level take-off rpm of 2300 with approximately a 400 rpm control range when the propeller control is moved from full increase to full decrease rpm.

DO NOT attempt to increase this control range as it will cause over deflection of the diaphragm of more than  $\frac{3}{16}$  of an inch forward.

DO NOT attempt to increase the maximum take-off rpm above 2300 as the engine, airplane and propeller combination is not approved for any