

INSTRUCTIONS FOR INSTALLING A-A231 SPROCKET - AD 78-20-11, SB 78-002
THE FOLLOWING MUST BE DONE BY AN F.A.A. APPROVED MECHANIC

1. Set ailerons in neutral position. Clamp ailerons to wings with wood flats at trailing edge. Notice left and right control wheel in level position.
2. Remove or raise front of deck panel (cover panel on top of instrument panel) to gain access by removing self tapping screws to instrument panel and a screw just behind compass. NOTE: DO NOT REMOVE COMPASS. (Prior to removing deck panel, notice that front edge of panel is inserted underneath lip of windshield rubber channel around entire length).
3. Remove cotter pin (AN380-3-3) and nut (AN320-8) at left sprocket. Remove sprocket with chain in place (DO NOT REMOVE CHAIN FROM SPROCKET) by gently tapping sprocket with rubber or plastic mallet. Notice key (Woodruff) on sprocket shaft. Remove chain from sprocket.
4. Insert new sprocket assembly A-A231 as follows:
Keeping stops (clevis pins) into top position and centered on sprocket shaft as close as possible with hub of sprocket facing forward, insert sprocket into chain. DO NOT STRETCH CHAIN TO ALIGN WITH SPROCKET TEETH. STRETCHING OF CHAIN WILL THROW AILERONS OUT OF RIG.

If Woodruff key is not aligned with sprocket "keyway", turn left control wheel in desired position for alignment.

Pull sprocket with chain in place over threaded shaft (for easy installation top front portion of Woodruff key down) until retaining nut (AN320-8) can be started. Draw sprocket in place by tightening nut. Do not safety nut until item 5 is checked.

5. Remove aileron clamps. Check if ailerons are in neutral position with right wheel centered.

Check if aileron stops (clevis pins) on sprocket are engaging fully against stops on control column. Check up and down travel of left and right ailerons. To be acceptable it must be within $23^{\circ} \pm 4^{\circ}$. If above items are satisfactory, tighten sprocket retaining nut (AN320-8) until control binds. Back nut off slightly and safety nut with AN380-3-3 cotter pin.

6. If left control wheel is not centered when ailerons are in neutral position, accomplish following:
 - (a) Remove AN4-12A bolt attaching control shaft at universal joint. Remove shaft and wheel assembly from aircraft. Drill $1/4$ " dia. hole in the control shaft at universal joint end such that it is 90° to the existing hole and at the same distance from edge of the shaft.
 - (b) Reinstall control shaft and wheel assembly into aircraft utilizing newly drilled hole with AN4-12A bolt.