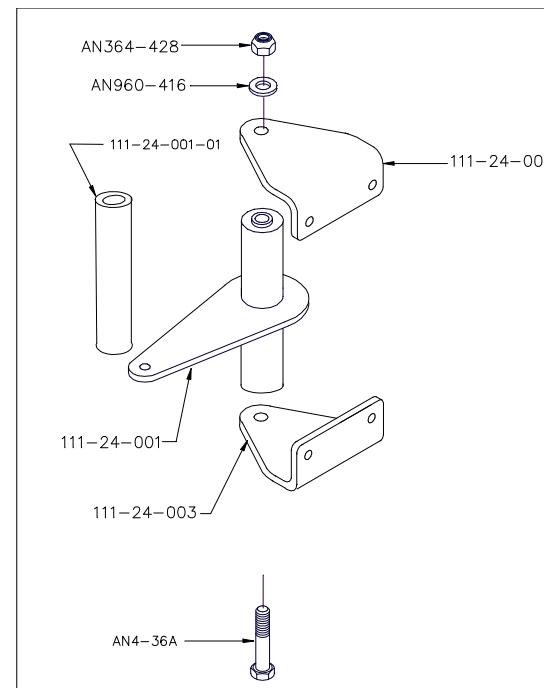


Procedure 3.060**Installation, Aileron Bellcrank****In this procedure...****The Aileron Bellcrank will be installed.**

<u>Part Numbers</u>	<u>Description</u>	<u>Quantify</u>
111-24-001	Bellcrank, Aileron	2
J68	Bearing Aileron Bellcrank	4
111-24-001-01	Spacer, Aileron Bellcrank	2
111-24-003	Bracket, Aileron Bellcrank	4
111-24-004	Backing Plate, Aileron Bellcrank	2
AN4-36A	Bolt	2
AN960-416	Washer	2
AN365-428	Nut	2
AN3-12A	Bolt	8
AN960-10	Washer	8
K2000-3	Anchor Nut	8
AN426AD-3-3	Rivet	16
BSP-4-3	Pop Rivet	4

Step 1 Mark and drill the first mounting hole in Rib C.

To locate the first bellcrank bracket hole, use a tape measure and a level. Measure 4.5" aft from the face of the main spar shear web on Rib C, and draw a vertical line with a marker. Measure 3.9" up from the upper wing skin along that line, and make a mark. Drill a 3/16" hole through the mark, being sure to keep the drill perpendicular to the rib.



Step 2 Locate and attach the upper bellcrank bracket.

Attach a bellcrank bracket (111-24-003) temporarily to the outboard side of Rib C. The flange with the two holes should face downward. Temporarily insert a bolt (AN3-12A) through the aft hole and the rib hole. Level the bracket using a bubble level, and spring clamp it in place. Drill the second hole through the bracket hole and into Rib C. Insert a bolt through that hole and into Rib C.

Step 3. Locate and drill backing plate.

With the 2 bolts partially in rib C, hold the backing plate up to the inboard side of the rib. Center the plate fore and aft on the bracket, and extend it .2" above the bracket height. The long side of the plate should be vertical. Check that the edge of the plate is level, and clamp it to Rib C and the bracket with 2 spring clamps.

Remove the bolts, and while holding a block of wood up against the backing plate. Use the 2 holes drilled earlier as drill guides and drill through the backing plate.

**Step 4. Assemble the bellcrank to the brackets.**

Bolts that are installed vertically in an aircraft must be installed with the head on top. This improves the chance that it would remain operational in the event the nut vibrates loose and off the bolt. There are some exceptions to this rule, which will be called out to you. Remember when using this rule in the wing, that the wing is inverted, so the head would be on the bottom.

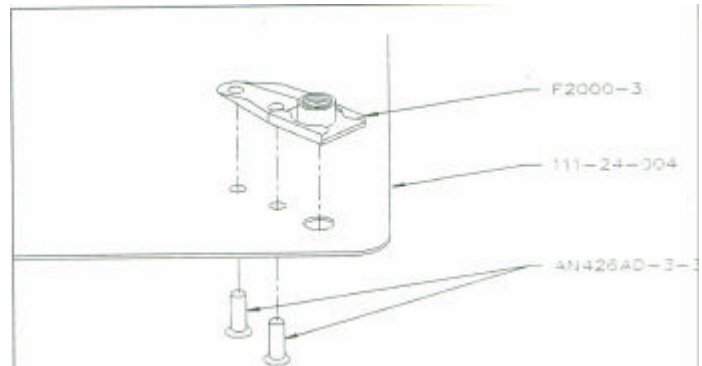
Assemble the bellcrank (111-24-001) and the two mounting brackets (111-24-003) using the bolt (AN4-36A), washers (AN960-416) and the elastic stop nut (AN365-428). Press the J68 bearings into the ends of the bellcrank. The bearing should be flush with the end of the bellcrank. Insert the spacer through the bearings. Install the AN3-36A bolt through the upper mounting bracket (Make sure the flange with two holes is pointing inward.) and through the bellcrank. Place the second mounting bracket on the bolt with the flange pointing inward. Place a washer on the bolt and screw on the elastic stop nut. Torque the assembly to 35 in/lb.

Step 5. Locate the lower bracket.

Insert the 2 bolts through the upper bracket, Rib C, and the backing plate. Attach with washers and nuts and tighten just enough to hold in place.

Step 6. Drill the remaining holes.

Hold a wood block up to the backing plate, and drill the two remaining holes through the lower bracket in into rib c and the backing plate. Check that all four bolts go through all parts when aligned.



Step 7 Install anchor nuts to backing plate.

Remove the backing plate. To install an anchor nut, insert a bolt through the hole and temporarily screw the anchor nut on the correct side. Position the anchor nut so the lug points toward the center of the plate.

Drill one rivet hole through the anchor nut hole and into the part. Insert a Cleco fastener in the rivet hole. Drill the second rivet hole, and then remove the Cleco and anchor nut. Countersink both rivet holes on the side opposite the anchor nut. Repeat this process for all four anchor nuts. Rivet the anchor nuts to the backing plate with rivet (AN426AD-3-3).

Step 8. Attach the brackets and backing plate to Rib C.

Keep the bellcrank and brackets assembled. Attach the brackets through Rib C and into the backing plate and anchor nuts and tighten to 25-in/lb torque.

Step 9. Rivet backing plate to Rib C.

Drill a No 30 hole between each anchor nut in the backing plate and carefully through one layer of the fiberglass in Rib C. Stop the drill when it reaches the foam core. Install a pull rivet through each hole, so the shank extends inside Rib C. These will hold the backing plate permanently in place.

