

Strut Assembly

13.1 Wing Install

NOTE: Before attaching the Wing to the Fuselage **Read the following completely!**

When attaching the Wing to the Fuselage it is important to have a fairly snug fit on all bolt holes to eliminate enlarging of holes during normal flight loads. Although not absolutely necessary, it is highly recommended to drill undersize holes and then ream to final size.

To attach the Wing to the Fuselage, the front attach point of the two will need to be reamed out to a 3/8" final size. An AN6-16A bolt, one AN960-616 washer and one AN365-624 fiber nut will be used.

To attach the rear Wing and Fuselage attach points, they will need to be reamed out to a 1/4" final size. An AN4-6A bolt, AN960-416 washer and AN365-428A fiber nut will be used.

The lower Strut to Fuselage will be reamed out to 3/8" final size. An AN6-20A bolt, two AN-960-616 washers and an AN365-624 fiber nut will be used.

The upper Strut attach point to Wing will be reamed out to 3/8" final size. An AN6-20A bolt, two AN960-616 washers and one AN365-624 fiber nut will be used.

NOTE: On initial setup of the aircraft using castle nuts will save the fiber in the fiber nuts until really needed. It is also easier to remove the bolts when limited man power is around. On final install spacers will have to be used to take up the gap on the front Wing Attach Bracket.

1) Place the Fuselage on two saw horses. Level the Fuselage longitude and latitude using the cage as a reference point. Figure 13.1.1.

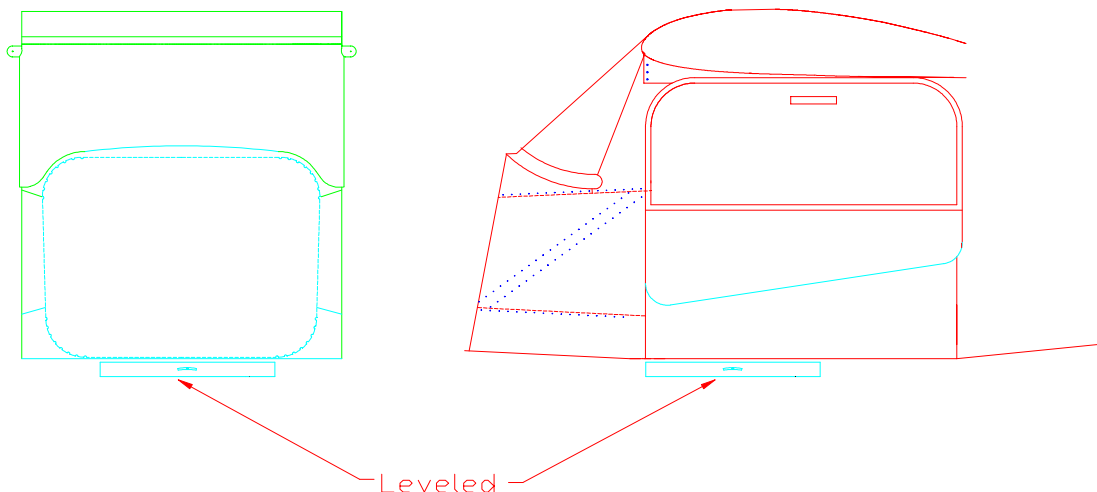


Figure 13.1.1

2) Install the left Wing on the Fuselage. Brace the tip so that the Wing has 1° of dihedral. Use a level and a 5/8” block to achieve this. Figure 13.1.2.

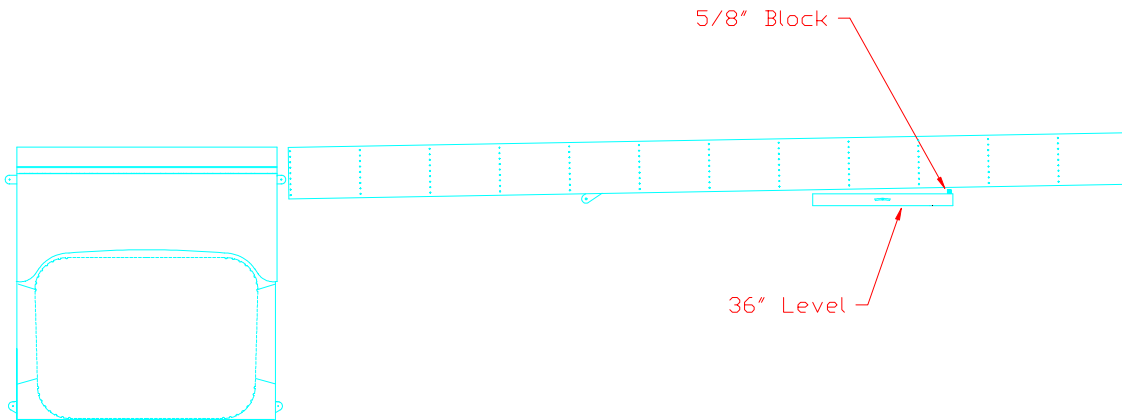
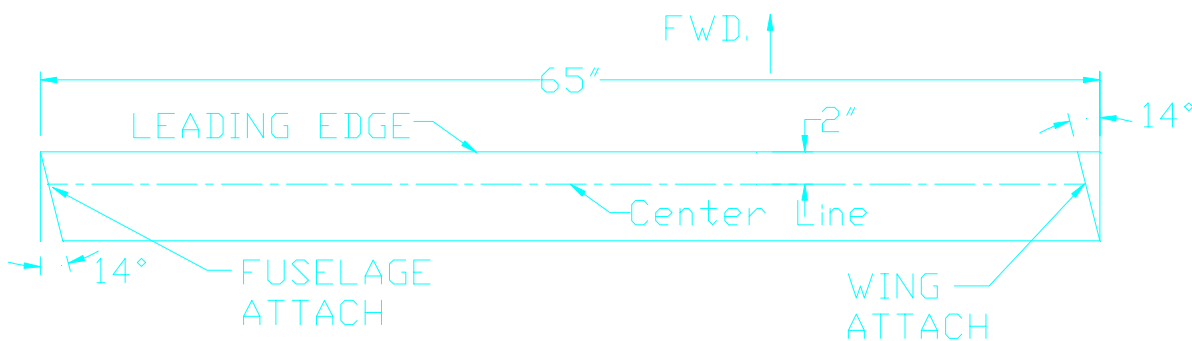


Figure 13.1.2

3) Repeat the procedures for the right side Wing. Make sure the Fuselage is level.

13.2 Strut Install

- 1) Ream the holes in the FUS-424 brackets out to 3/8” final size.
- 2) Bolt two W-618 Strut Fittings between the two FUS-424 Carrythrough Gussets.
- 3) Bolt two W-618 Strut Fittings (one on each side) to the Wing Strut Attach Brackets (W-616 and W-617).
- 4) Cut a piece of 1/2” or 3/4” plywood out using the dimensions on figure 13.2.1. Make sure you draw a



“center line” down the plywood.

Figure 13.2.1

5) Clamp the plywood to the top surface of the W-617 Strut Fitting, back drill through the fitting (using the existing holes on the fitting) into the plywood. Use a #11 drill. **NOTE:** The “center line” marked on the plywood should be centered between the W-618 fittings. Figure 13.2.2.

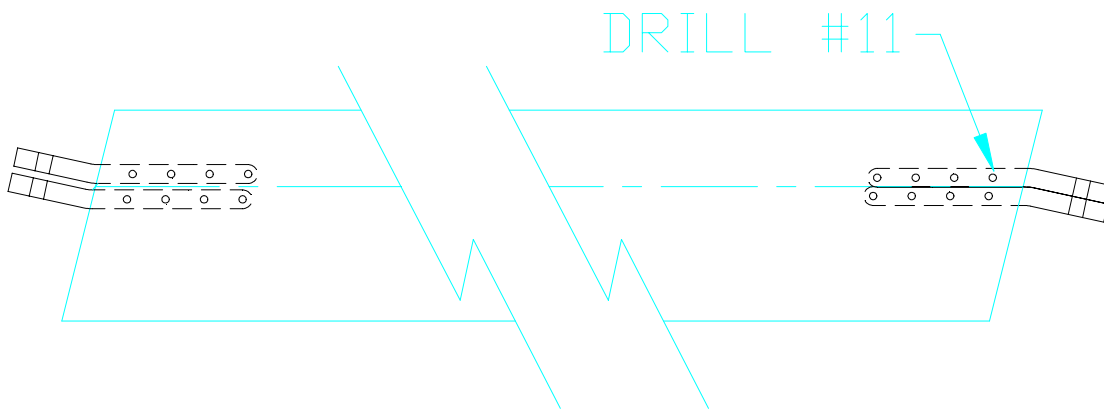


Figure 13.2.2

- 6) Cut a length of Strut Extrusion to the same dimensions as figure 13.2.1.
- 7) Center the piece of plywood on top of the cut Extrusion and clamp firmly in place.
- 8) Using the plywood as a drill guide, dimple the Strut Extrusion with a #11 drill. Do not drill through the Strut at this time, just make a mark on the surface.
- 9) Remove the plywood, center a #40 drill in each dimple and drill through one side only. Drill the holes out to #30 then finally out to #11.
- 10) Insert the Strut Fitting into the Extrusion. Pin them into position. One hole at a time, drill #11 holes through the Extrusion using the fittings as a drill guide. Pin the hole just drilled and drill the next hole through. Keep the fittings pinned securely.
- 11) Once all the holes have been drilled, disassemble, debur, chromate and bolt together with AN3-20A bolts, AN960-10 washers and AN365-1032 fiber nuts.
- 12) Repeat for the other side of the aircraft.