

a scratch awl. Check to see if your cabane drawing no. 54-1, sheet 5 of 5 is of revision dated 8/83 or later. If it is, use two #10 fittings instead of the #14 fittings (for a total of four #10 fittings). This is due to the landing wire attachment being moved from the wing root to the cabane assembly. If you do use fitting #14, the landing wire lobe position should be changed so that it is 4-1/2" out from the vertical reference line and 1-7/8" down from the horizontal reference line in order to clear the lower capstrip of the butt rib. This change will put the hole directly below the outer attach hole and avoid having to cut through the capstrip to allow the butt rib to fit in as far as it has to. When scribing out the fitting outlines, punch the centers of all contour internal radii. All contour internal radii are 7/16" so a 7/8" hole saw can be used before sawing the contour.

Use a metal cutting blade at a metal cutting speed and cut the fittings just outside the scribed outlines. Use a little wax on the blade to prevent galling. Finish to outline with disc or belt sander and file edges smooth. Match mark your fittings into pairs. Using a drill press, drill starting holes in the matched pairs.

A drill guide will be necessary while drilling fitting holes after wing assembly has been started to ensure drilling the holes perpendicular to the surface. Also, use a drill bit that is 1/64 to 1/32" smaller than the final size.

For the holes that will be for the bolts through the spars, drill only one fitting of each pair, except for those matching the holes previously drilled in the spar, which you drill through both plates. Use these for bolting the wing fittings into position for final drilling. The holes outside the spar area can be drilled and reamed full size. Use a spacer the thickness of the spar between the fittings to avoid flexing the fittings while drilling.

After the fittings are bolted into place, drill the final holes using a drill guide. Insert the drill through the guide, then through the hole in the fitting on one side. Drill through the spar and through the fitting on the other side. (drill ream size holes). All of the above will ensure perfect hole alignment through both spar and fittings.

The following operations may be performed prior to finish application. Drill .250" dia. and countersink one side 100 degrees for a MS24693-S294 screw. Do this for one of each pair of fittings # 11, 13, 15 and 17 and one side of every #1 fitting. Debur, pre-chemical treat the surfaces and coat them with aircraft primer.

Make a wing root setting gage. A gage machined from 7/8" max. thickness oak or other hardwood will both position and help hold your opposite fittings in alignment with each other.

The drawing shows how to make drag wire fittings from stainless steel. Or you may use # AN665-21R rod end clevises. They are much more expensive and not any better except that you save time.

The aileron hinge fittings marked inboard have large torque tube holes. The outboard fitting is actually the same as the inboard fitting, but with a 1/2" hole. The outboard fitting has to have the feet, adjacent to the aileron, cut off so it can fit closer to the aileron.

The oilite bushing is to be a running fit in the inboard bracket even after it is slid onto the aileron torque tube. These fittings or material may be obtained through B.O.A. The compression strut locators may be machined as shown or purchased ready machined through B.O.A.

## DRAG-WIRES.

Cut the drag wires to the proper length and thread one end 1-1/2" and the other 1". Each wire requires 4 jam nuts and one elastic stop nut. Lock one set of jam nuts on the 1" end of the wire leaving about 3 threads showing at the end. Run the other pair of jam nuts up the wire to the end of the threads and jam them together. This provides a spot to wrench the wire during adjustment. This avoids any danger of marring the threads while trying to adjust them with pliers. Install the end fittings while installing the jam nuts. Install the elastic stop nut inside the fitting on one end and the two jam nuts, jammed together, at the other end. Install this as a unit as you proceed with wing assembly.

