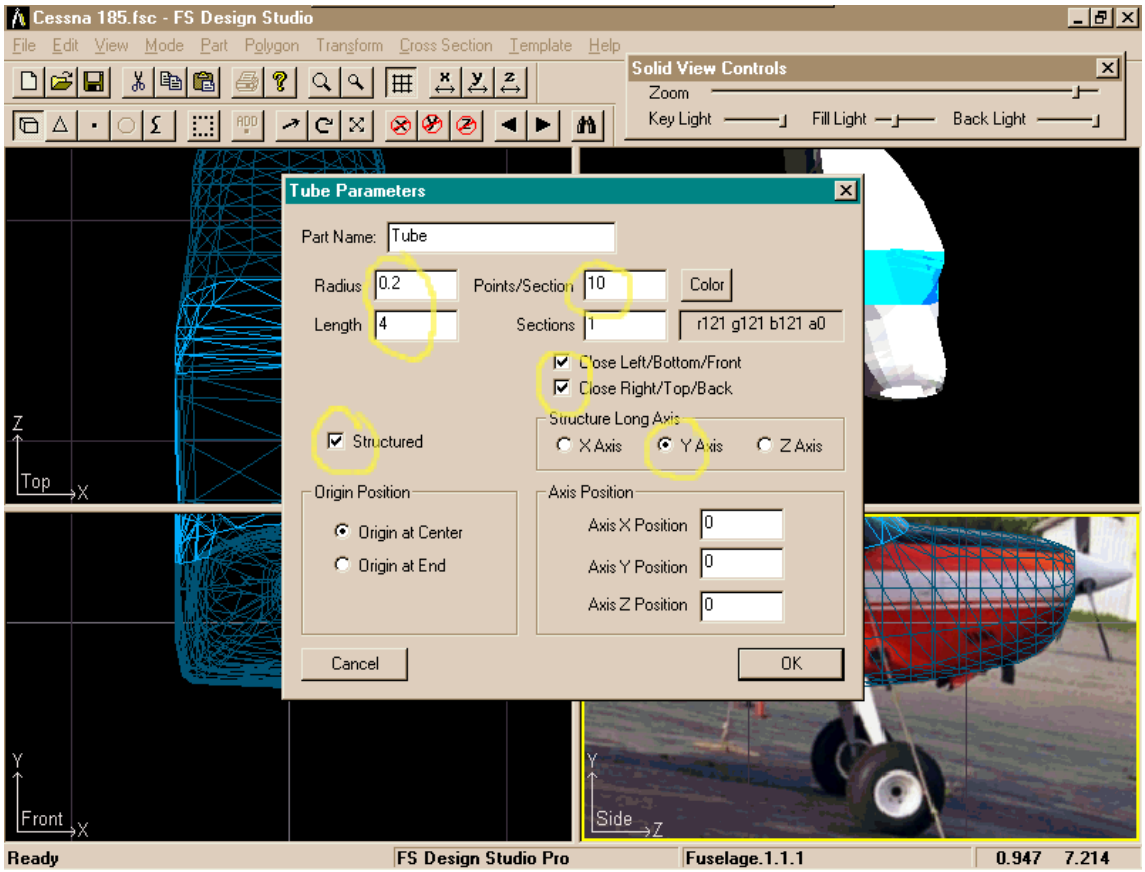
# FS Design Studio

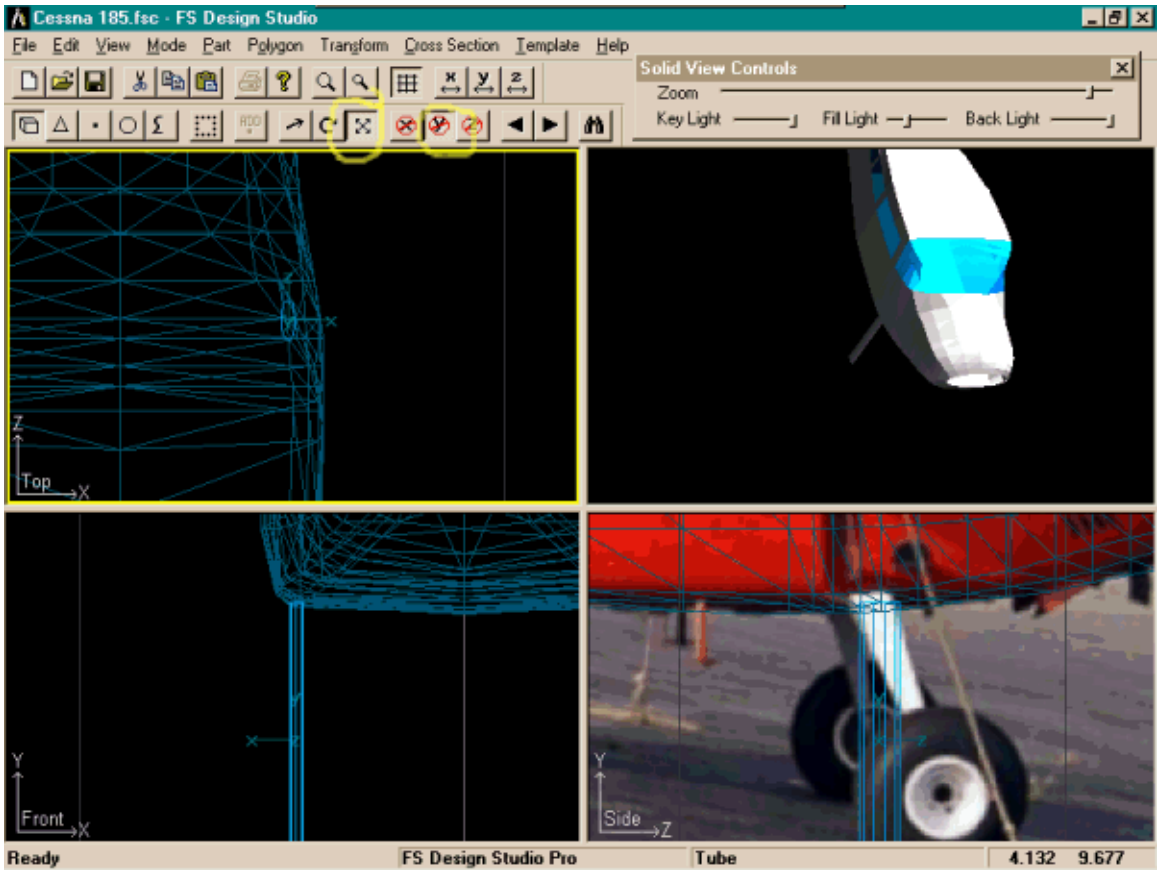
Making an Aircraft - Tutorial Part 2, by Ron Anderson

If you need to Split your fuselage to refine the shape in certain areas just be sure you don't move any points where the split piece joins the whole fuselage. Once you have finished you can rejoin the Split part.

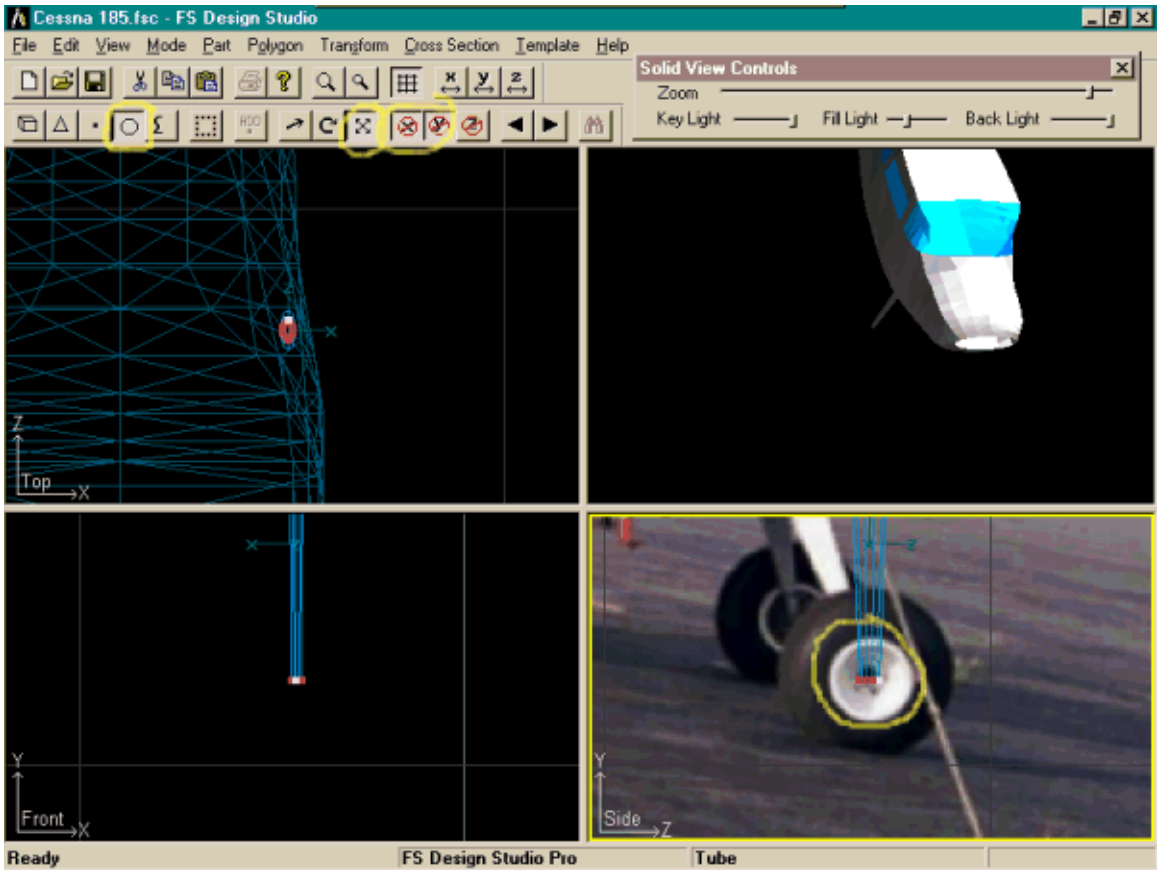
Now let's add some landing gear. Begin by selecting Part, Add, and select Tube. Set the length to 4, radius to 0.2, points/section to 12, sections to 1, select the closed top and bottom and long axis in the Y as pictured below.



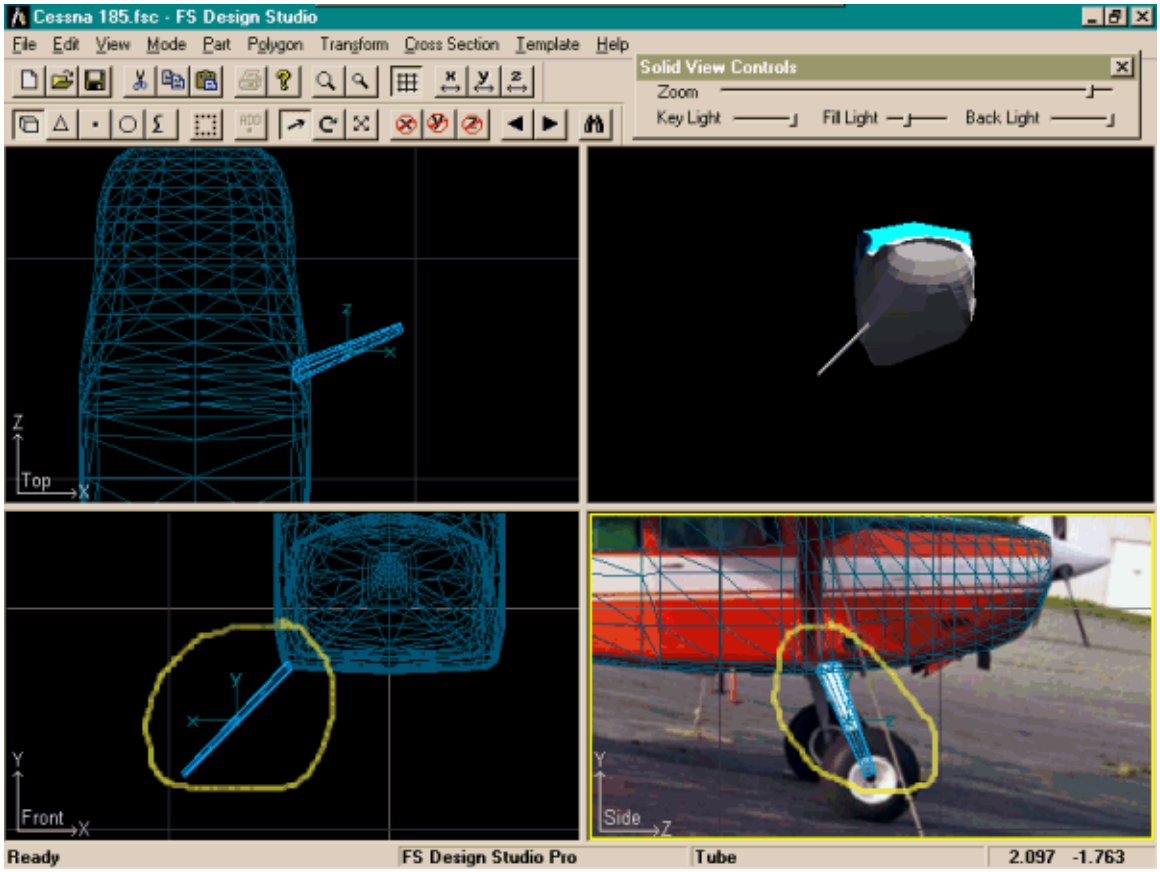

Select the Scale mode and Part mode, restrict the Y and Z axis and shape the tube into an ellipse when looking at it in the top view.



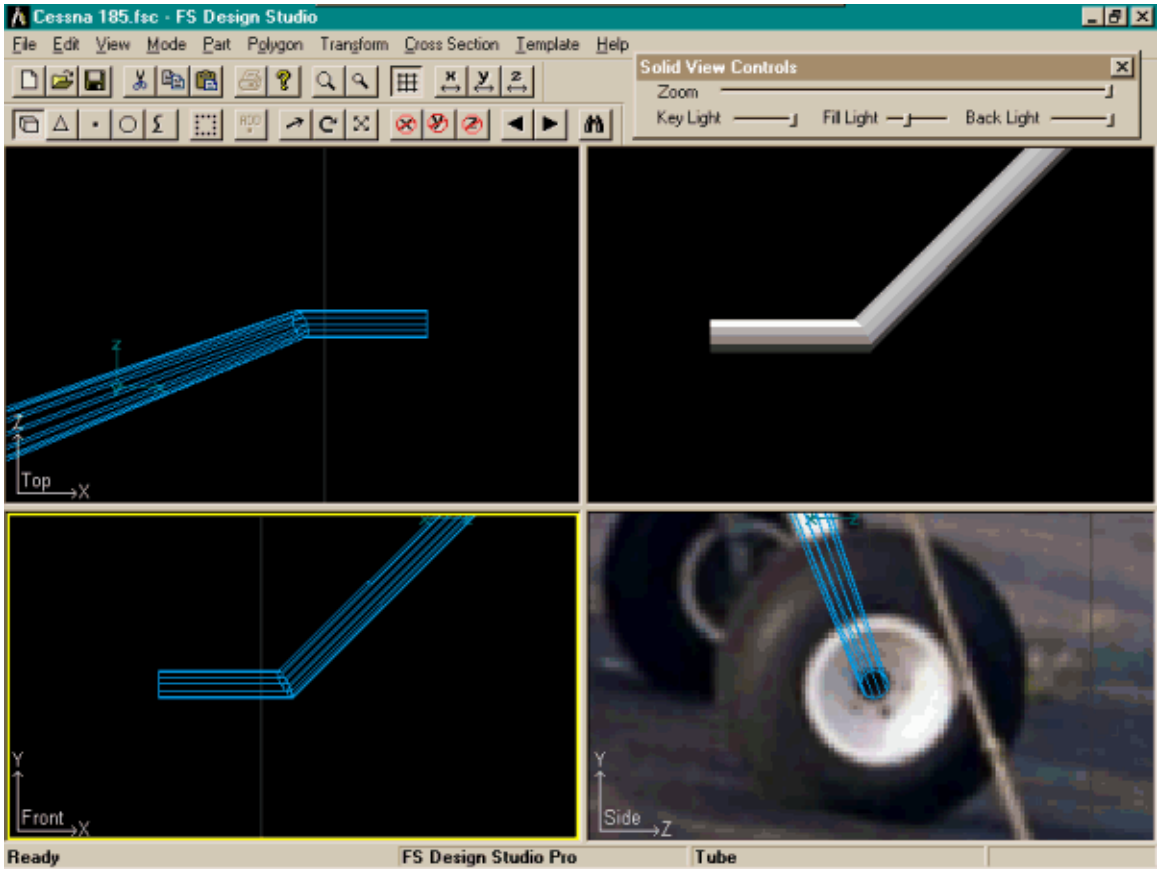

Select the Move Mode and move the part to the Front Gear position. Now select Cross section and press N to select the lower Cross section. And Scale Mode, restrict the Y axis and rescale the Cross Section until it's about the size of the lower part of the landing gear strut of the backdrop. You will have to select restrict the X or Z axis as well at some point to make the strut the correct shape so experiment. Rescale it in one axis at a time if you feel more comfortable this is your project. Note that I have used the axle as a reference to rescale the lower Cross Section.



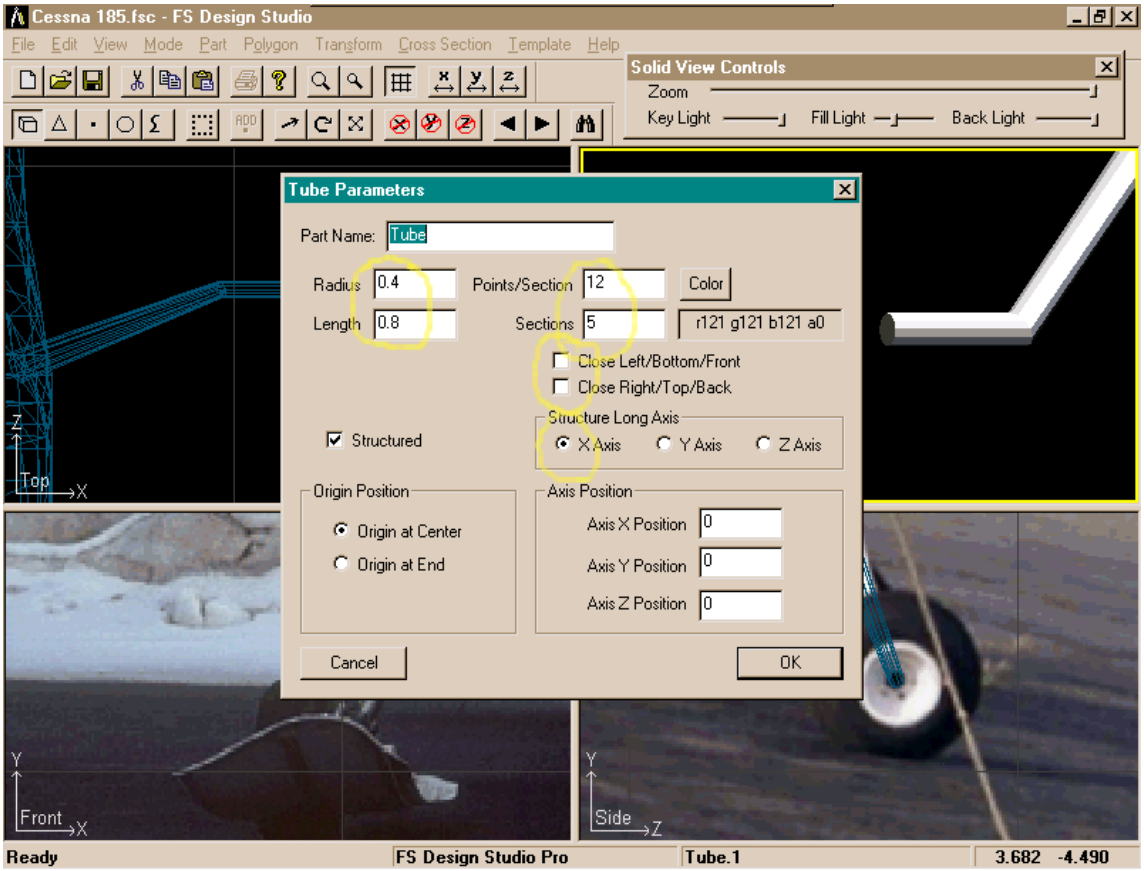

Now select Part Mode, select Transform from the menu and Rotate 45 degrees in the Z. Then select Transform, Rotate -20 degrees in the X. Select Move Mode and move the Strut into position over the backdrop.



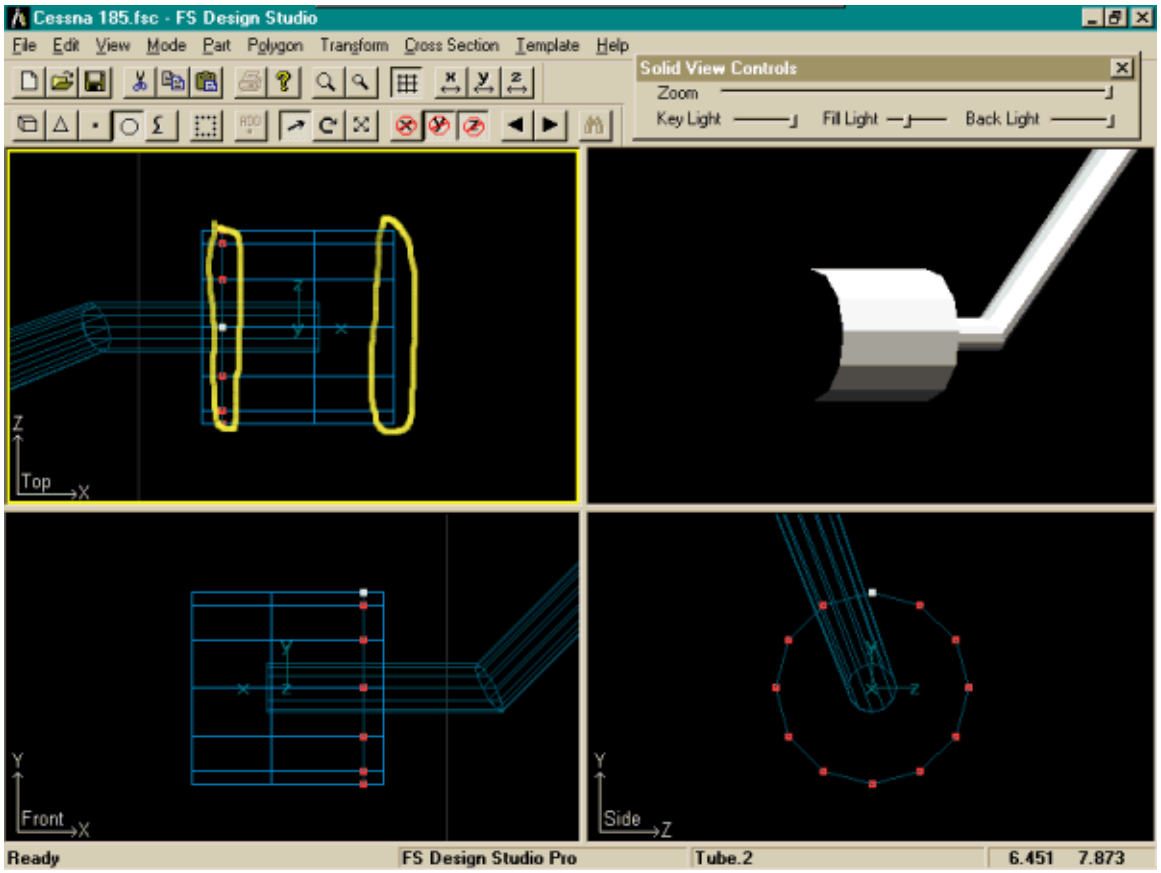

Save the Part as Landing Gear Strut R. Now select Part, Add, Tube and set the radius to 0.1, length to. 55, points/section 12, Closed Left/Right, 1 section and long axis X. Then move it over the axle on the backdrop and rescale it until it is the proper size to intersect with the strut. Move points on the lower part of the strut to make it conform to the axle tube and save as Landing Gear Strut R. When you're finished it will look something like this.



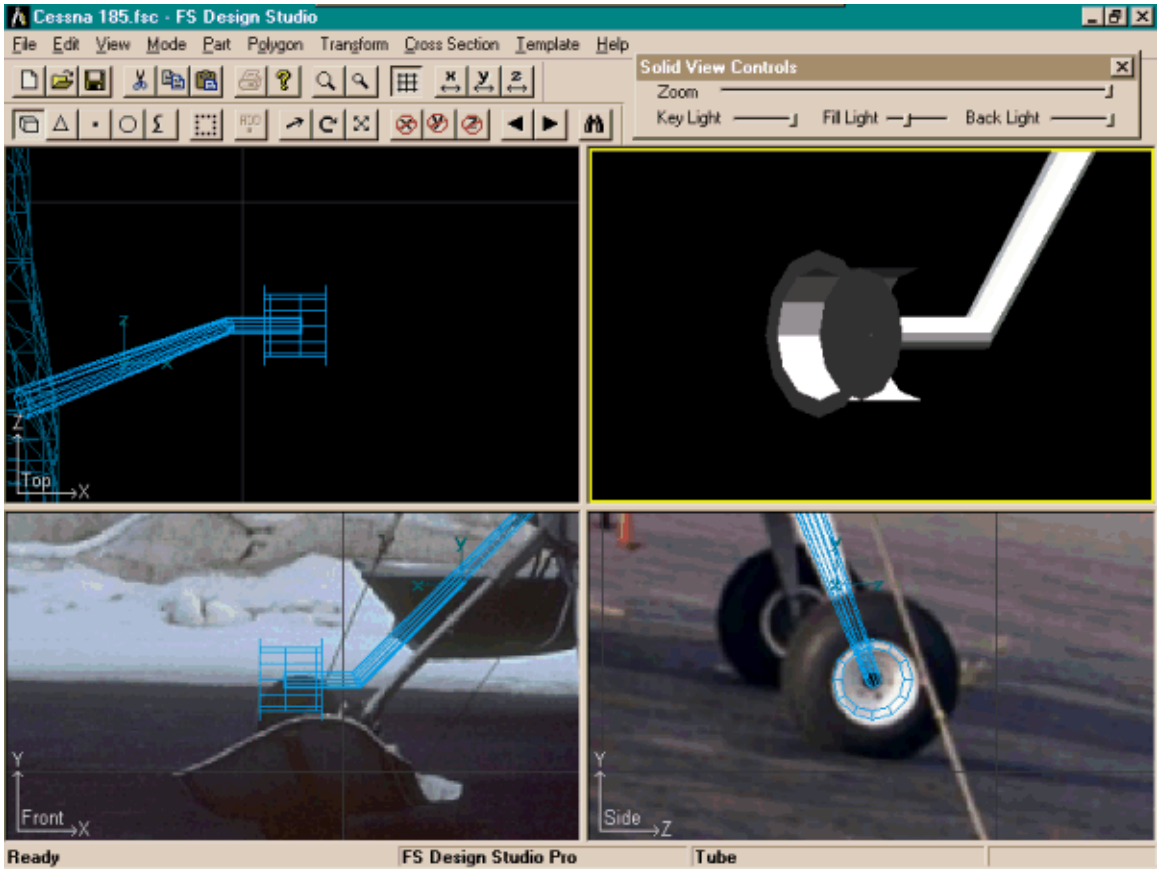

Now Save the Project file. Select Part, Add, Tube. Set the radius .4, length .8, 12 points/section, long axis X, 5 sections and open ends. Move this tube into position over the axle and wheel.



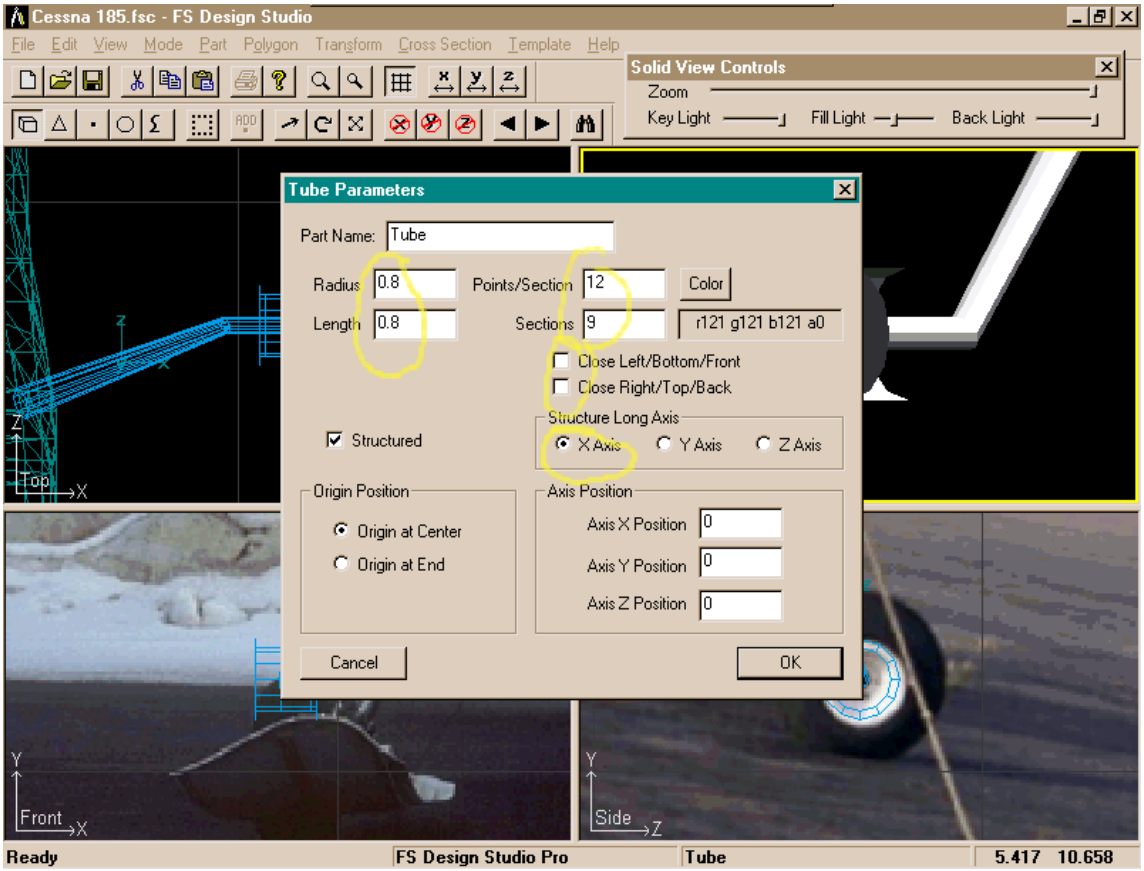

Center the view on the axle and zoom in. Using the centerline of the axle line up the tube. Now select Cross Section mode, restrict Y and Z axis and move the inner Cross sections to form the wheel hub and the brake backing plate then move the Cross Sections nearest the end Cross Sections out toward the ends until they line up.



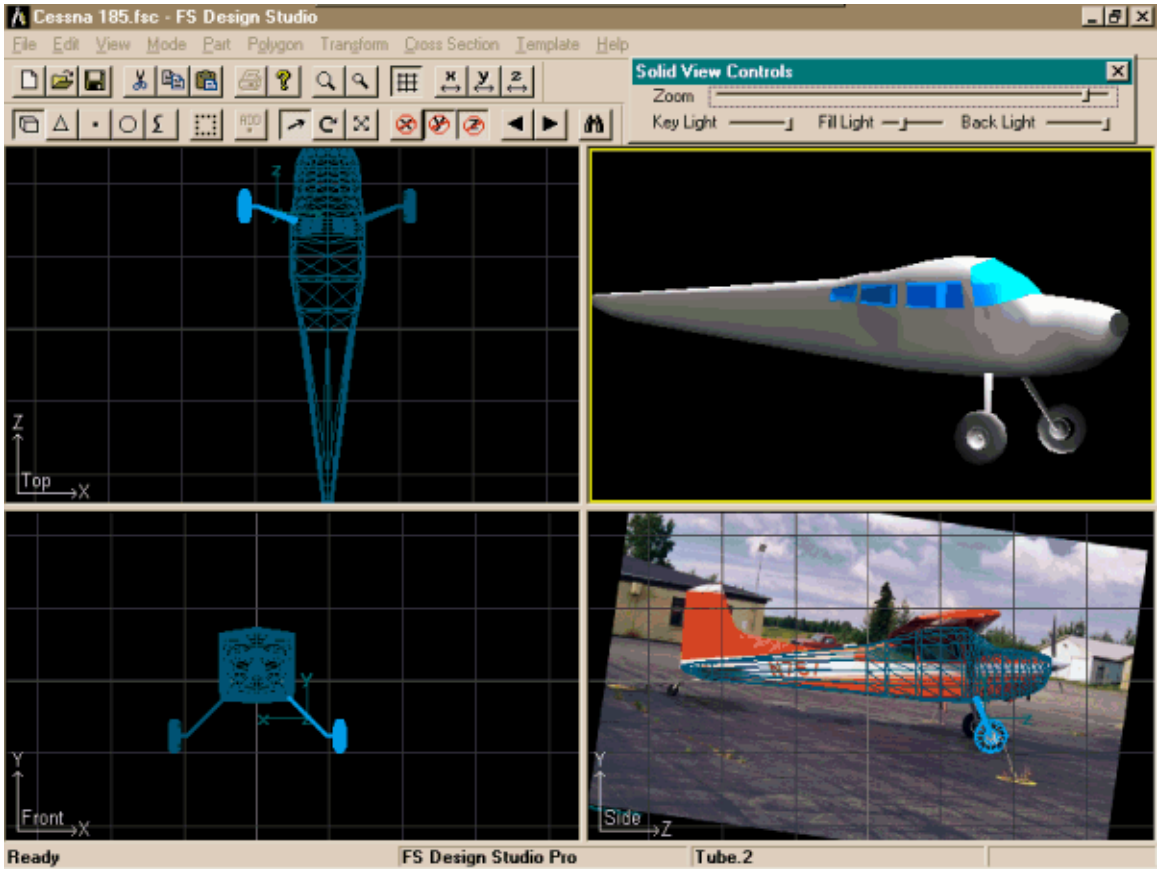

Select Scale mode and scale the end cross sections until they form the rim or the wheel. Select Point mode and using the Selection tool, select the points that form the 2 center Cross sections one at a time. Then select Polygon, Make Polygon and flip if necessary until the visual flag points toward the center. Select Polygon Mode, press "A", select Polygon, Flip all selected. Press shift U to unselect all polygons. Then using "N" or "P" cycle through the Polygons until you have selected the one that will make the brake backing plate. Right click on a window and select properties. Set the color to dark grey. Select Part Mode, press shift "S", using the "N" or "P" select the landing gear strut then press shift "S". Now select Part, Join selected and save it as Landing Gear R.

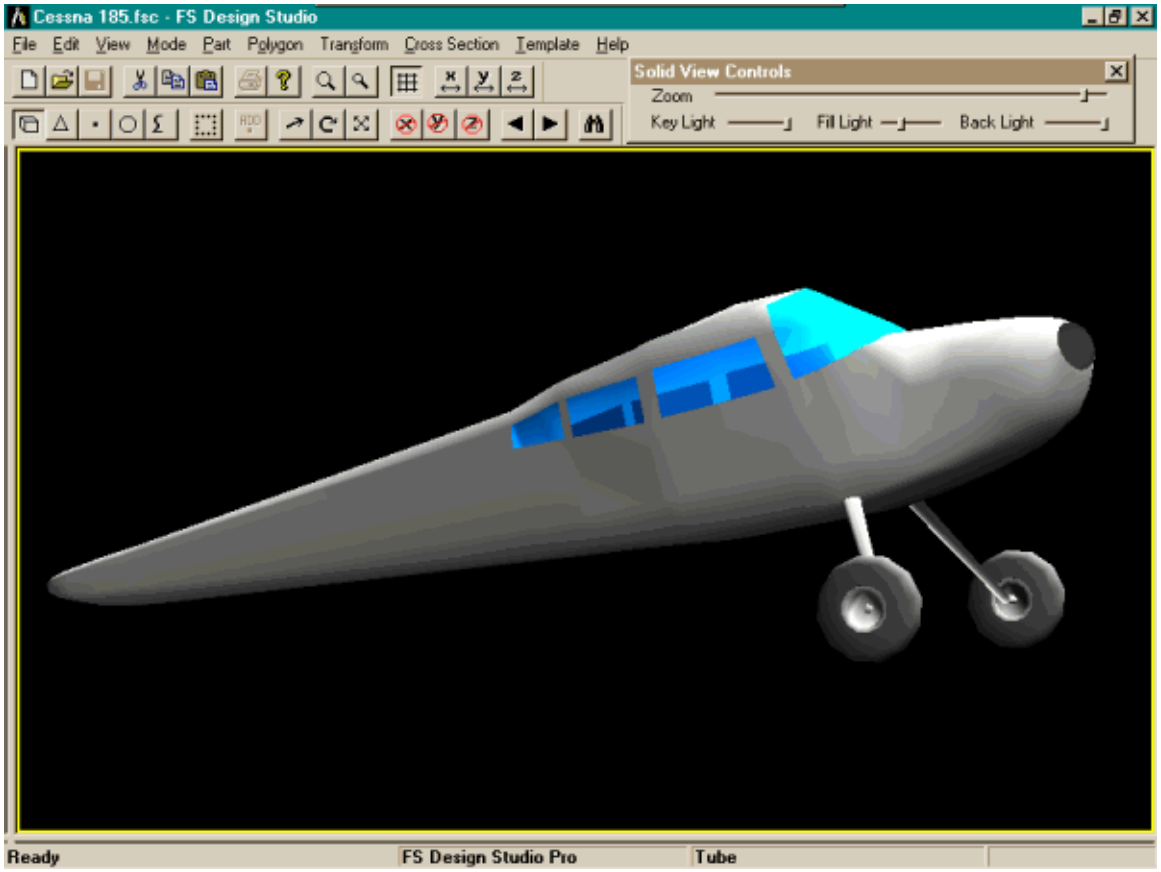



Select Part, Add, Tube, make the radius.8, length .8, 12 points/section, 9 sections, long axis X and open on the ends.




Move it into position over the wheel and center it on the axle as we did with the wheel. Select Scale mode, Cross Section mode and one at a time rescale the Cross Sections until you have a rounded shape for your tire making sure the end Cross Sections match the rim of the wheel. Right click, select Properties and set the color to dark grey. Save this as Tire R. Then press shift "S", using "N" or "P" select the Landing Gear R, press shift "S", select Part, Join selected and save as Landing gear R. Press control "C" control "V", select Transform, Flip Y, Transform, Rotate Z 180. Select Move mode, restrict Y and Z axis and move the Left Gear into position then save this as Landing Gear L. Now Save your Project file. You have just made the Main Gear for your Cessna 185, Congratulations!!!


Cessna 185.fsc - FS Design Studio
File Edit View Mode Part Polygon Transform Cross Section Template Help
Solid View Controls
Zoom
Key Light
Fill Light
Back Light
Top
Front
Side
Ready
FS Design Studio Pro
Tube.2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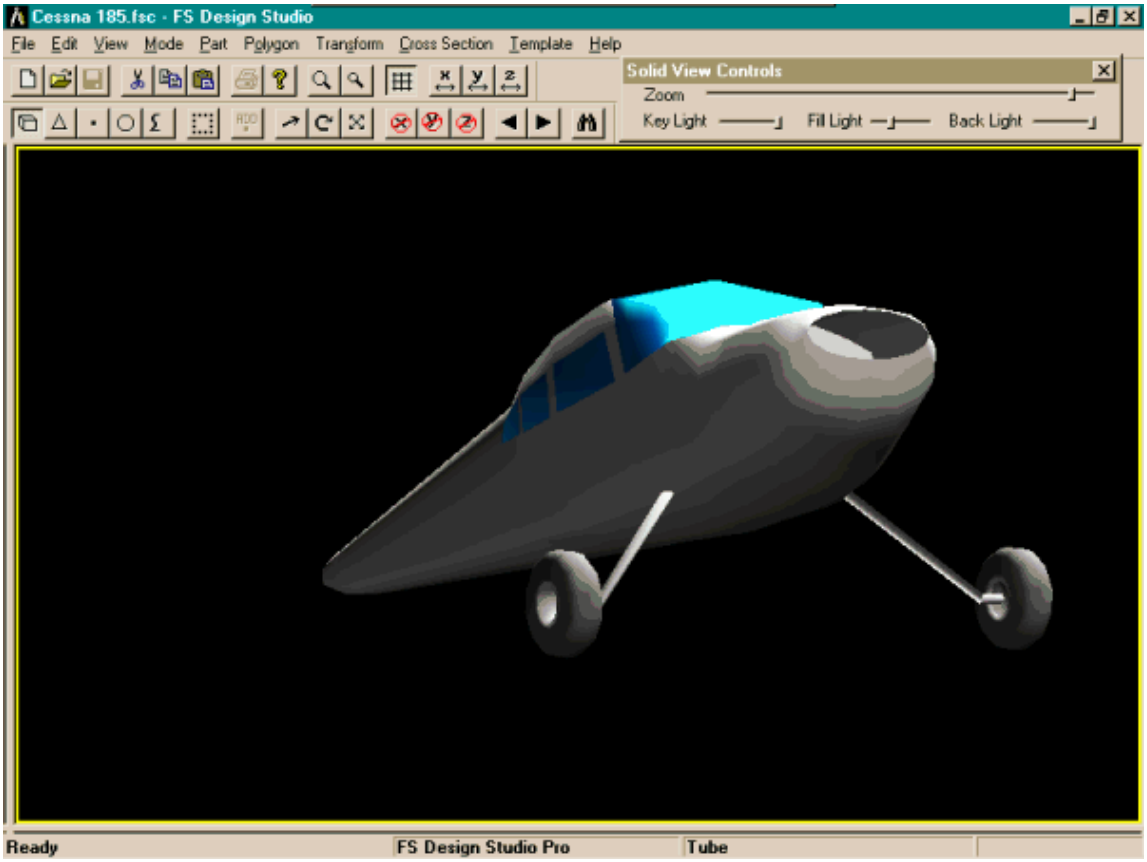


Now, using the method you just learned, make a tail gear.

Part 1 Part 3