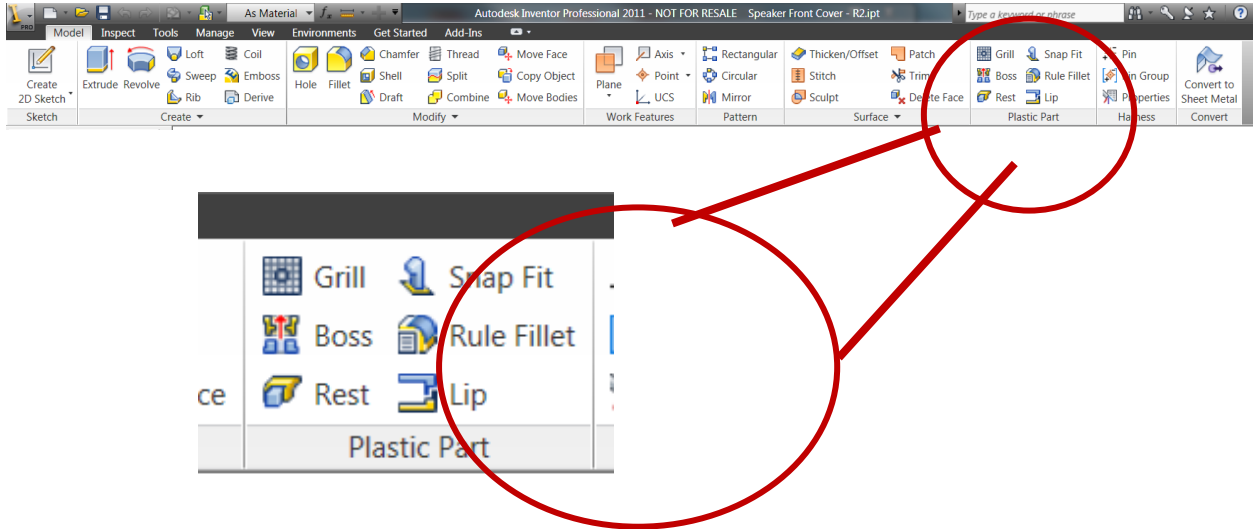




Creating Plastic Features in Inventor - Grills

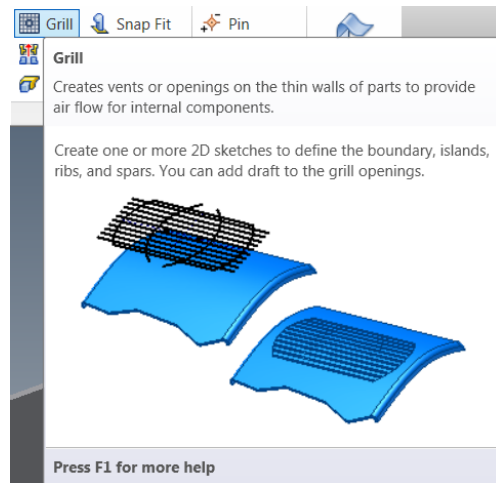
Inventor's plastic part design tools simplify the creation of many types of features common to plastic parts.

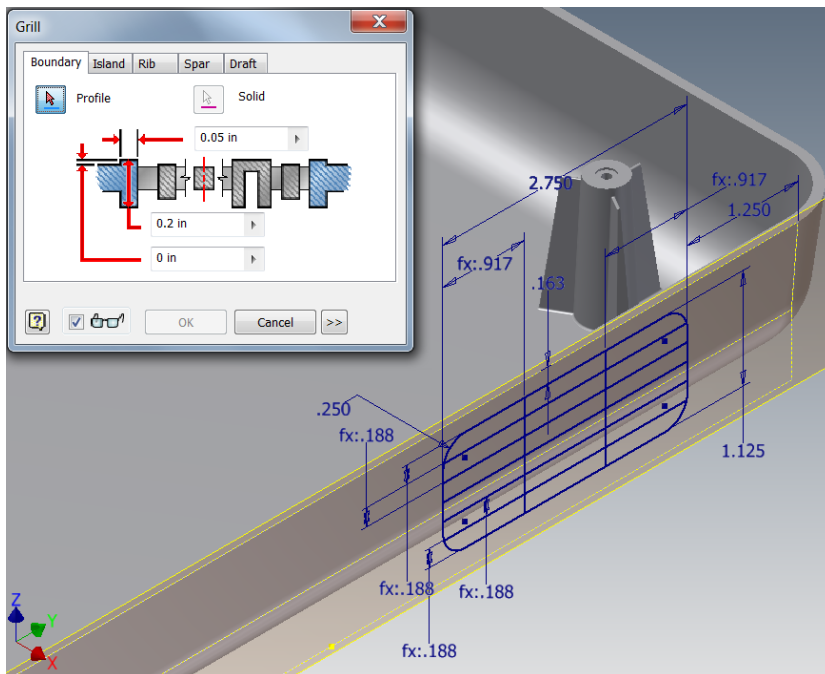
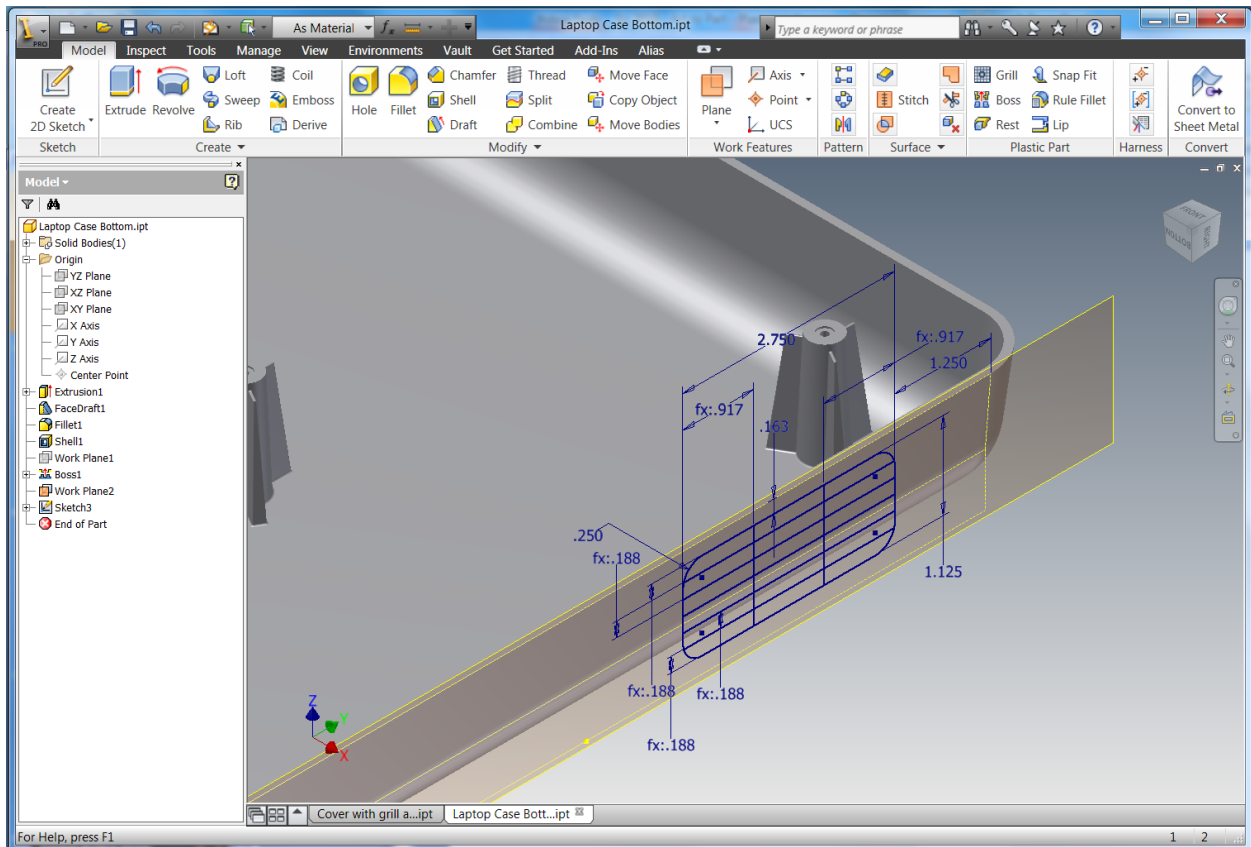


This paper will look at the Grill tool.

This tool allows the easy creation of openings in part, such as might be used for a cooling fan. It uses a single sketch to define the various elements of the grill.

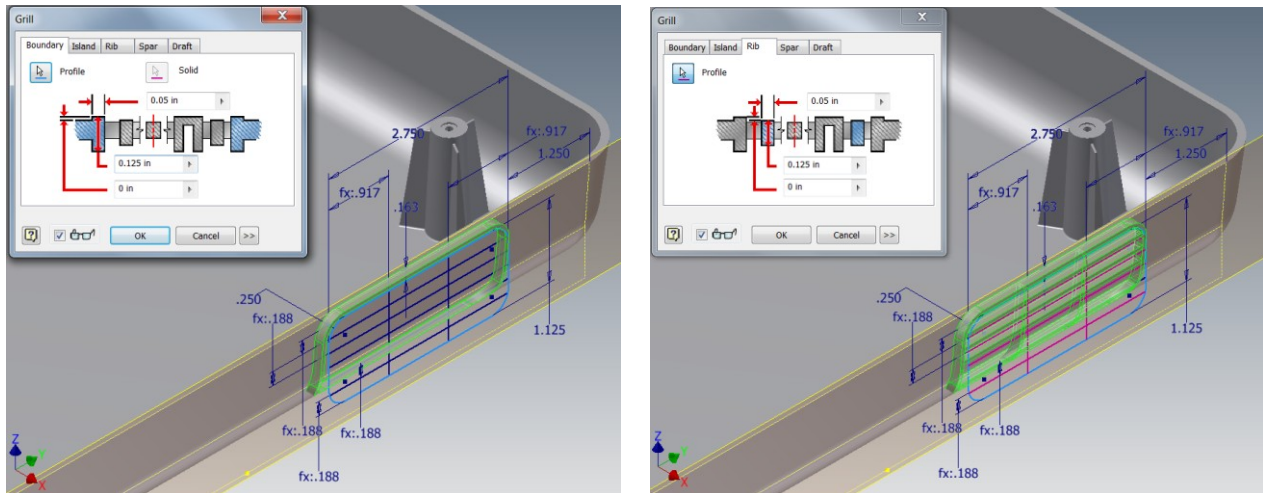
For this first example a simple inlet for a cooling fan will be created. It will have a rounded rectangular outline and several cross members.



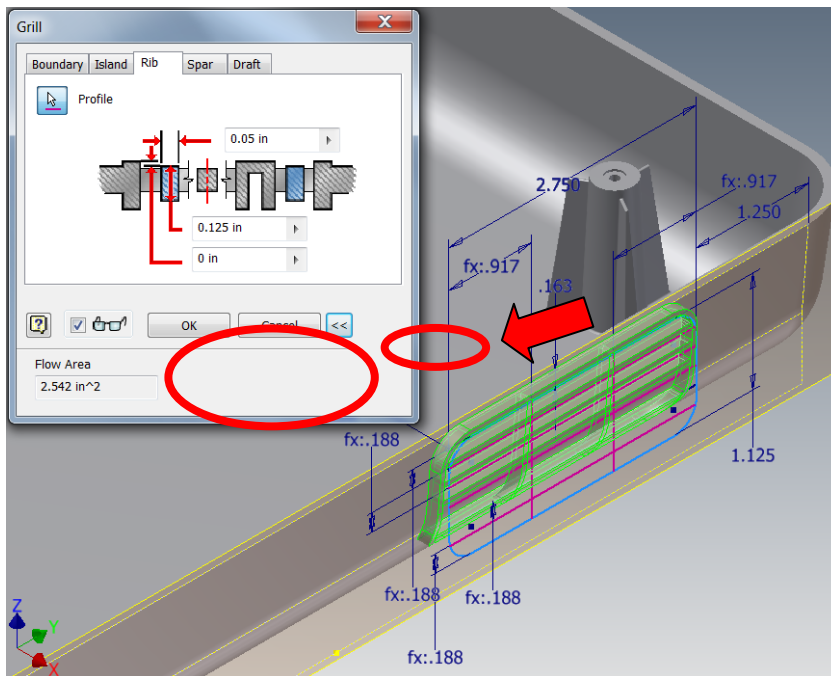




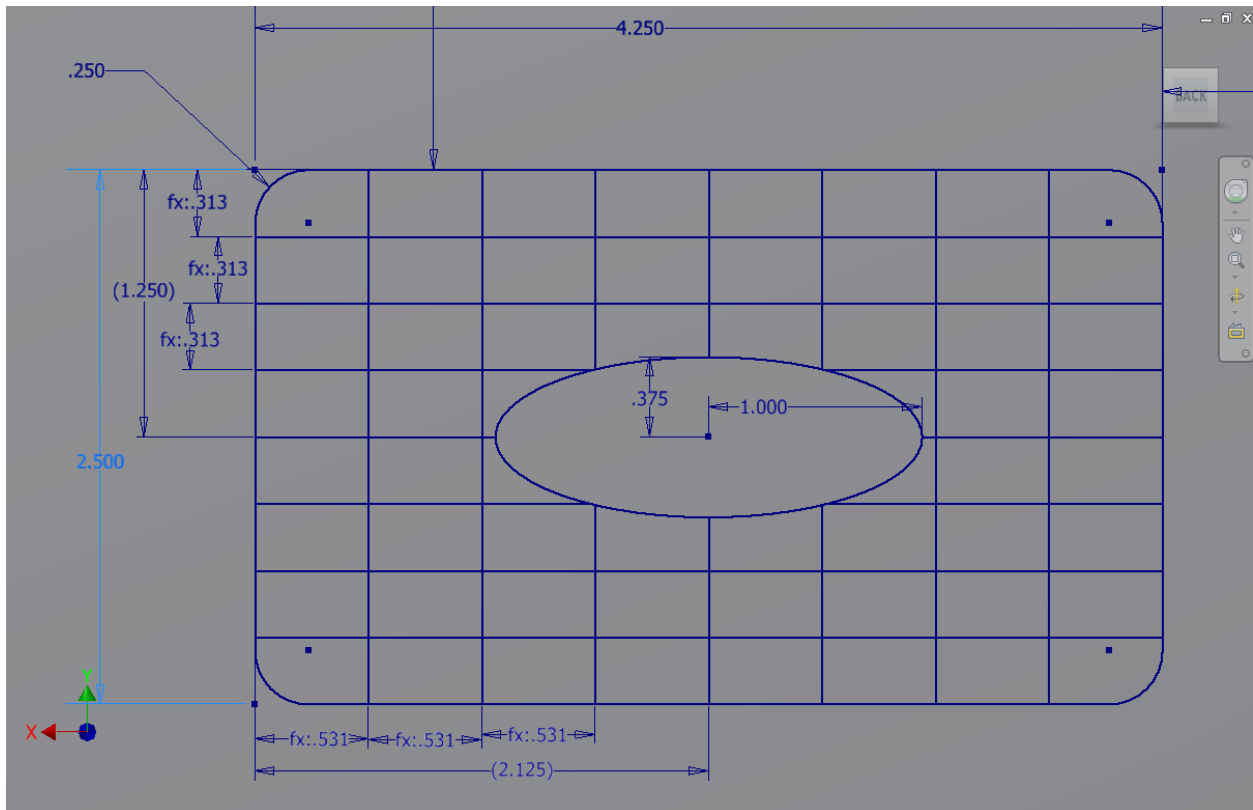
The details of each element are specified on the various tabs in the Grill dialog box. For this example only an outer boundary and inner ribs are needed.



Since this example is for a cooling vent it is important to check the size of the resulting opening, to see if there will be enough air flow. The opening's area can be checked by expanding the Grill dialog box.

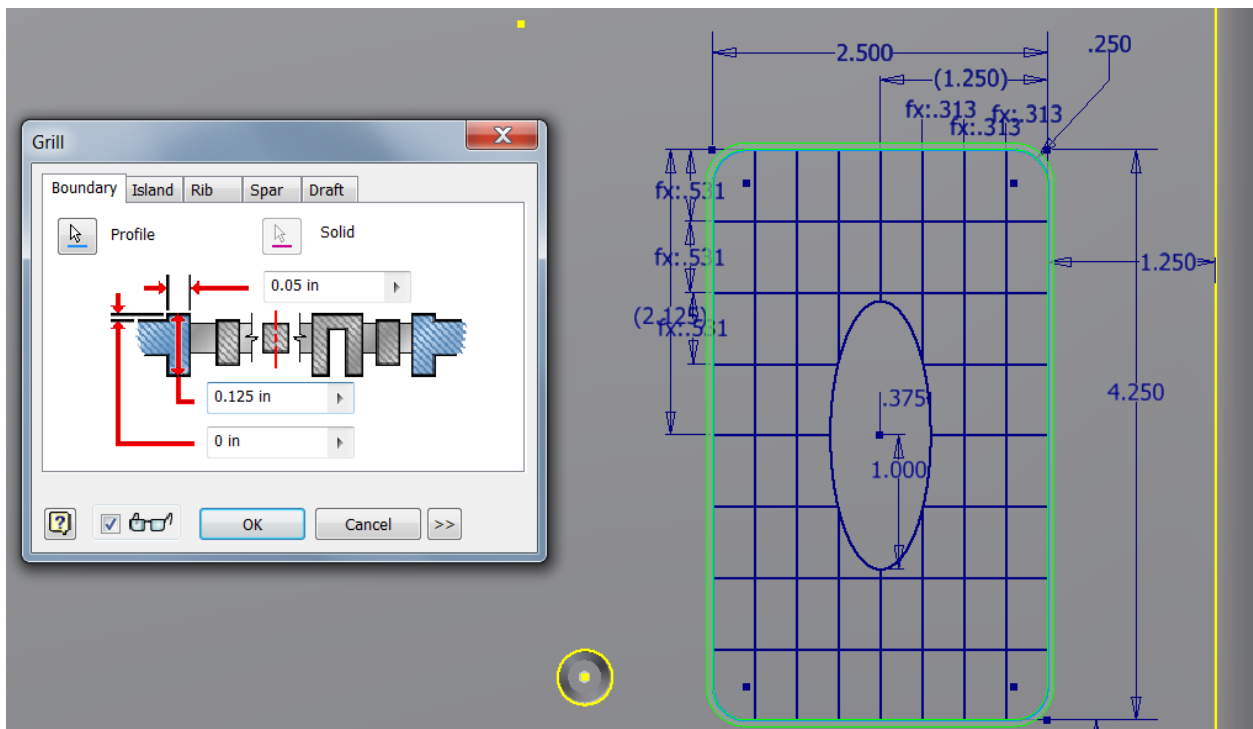


A more complex grill will be made in this next example. Again we start with a single sketch of all the elements.



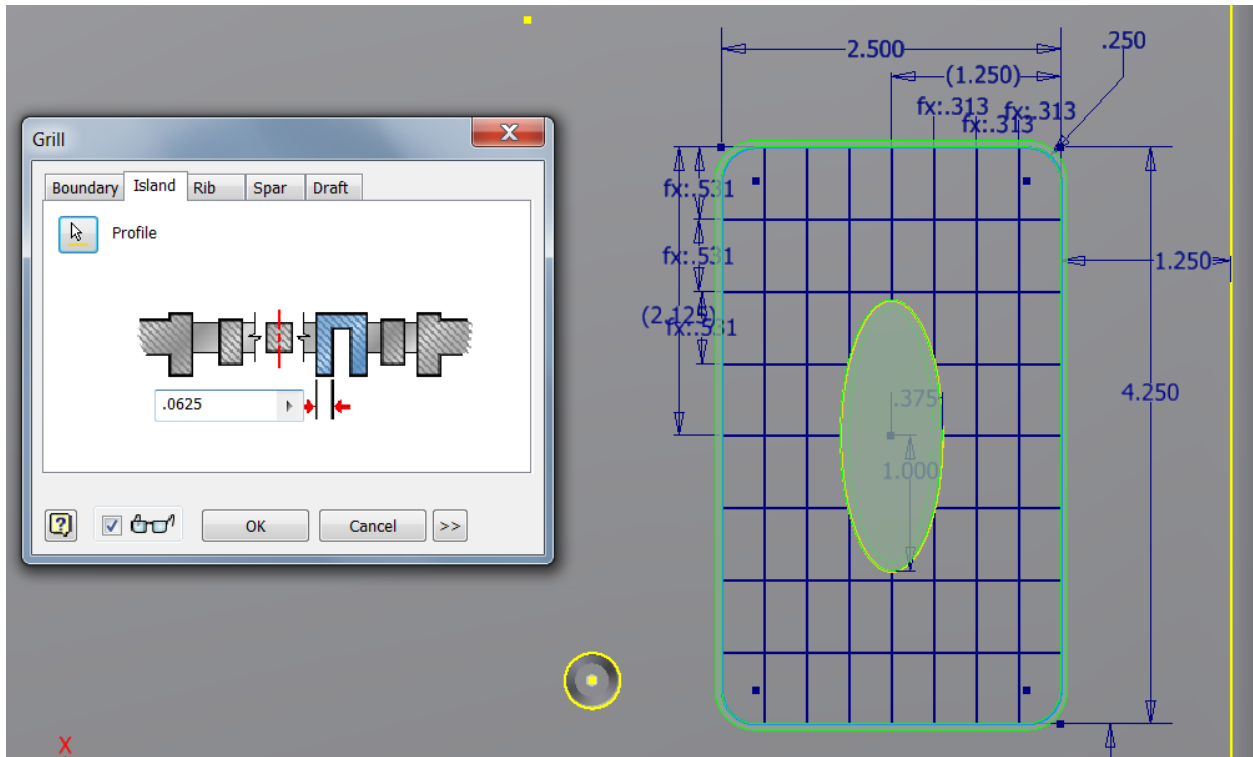
Then the Grill dialog box is used to define the various elements.

Boundary (outer border)

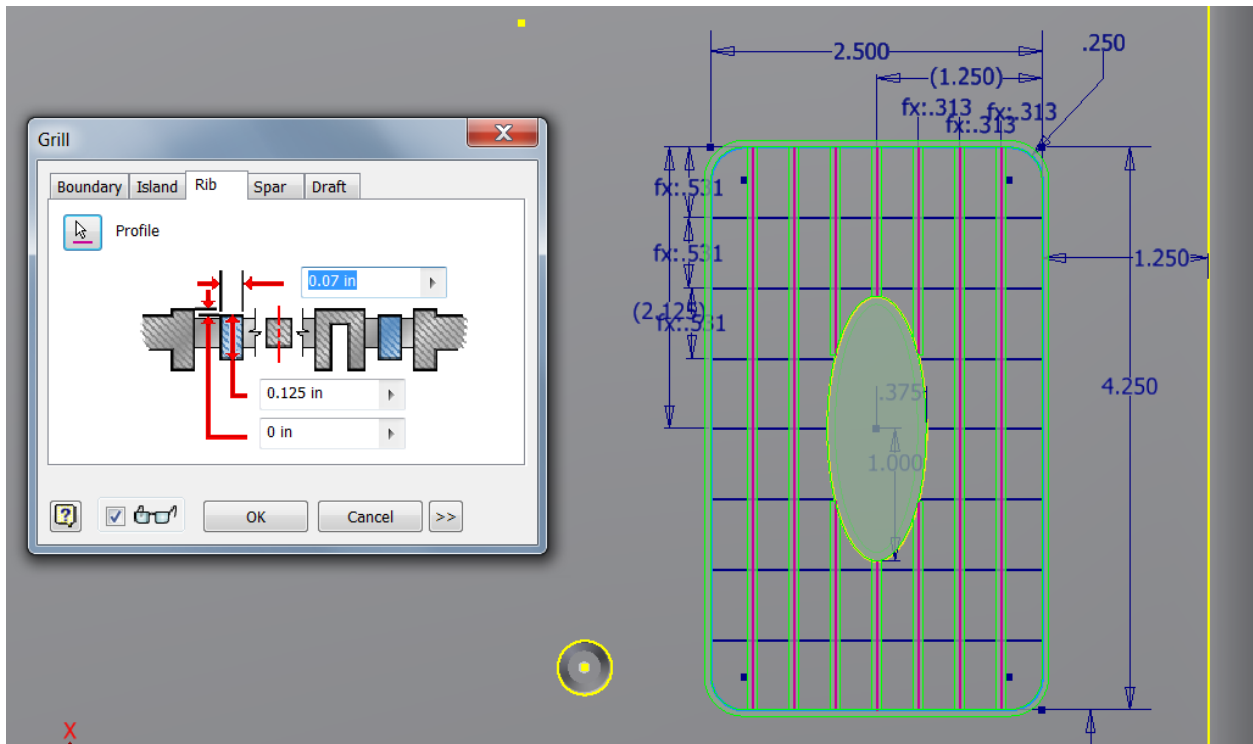




Island (inner border)

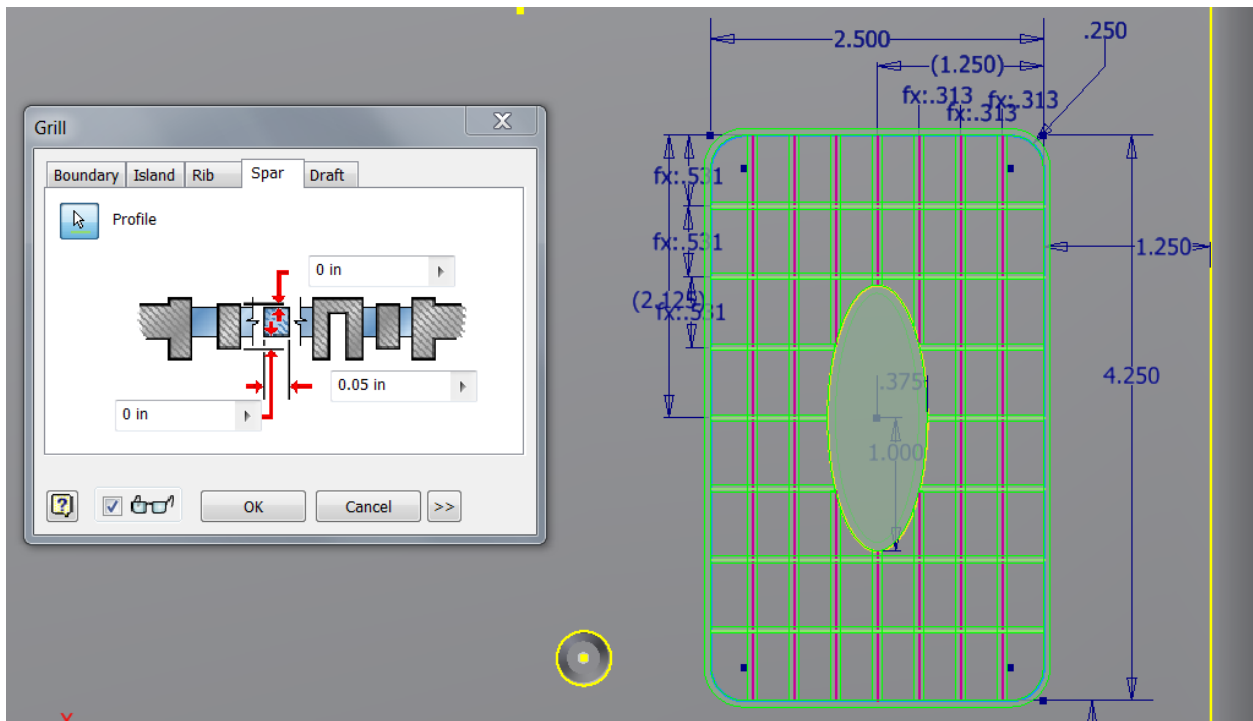


Rib (cross members)

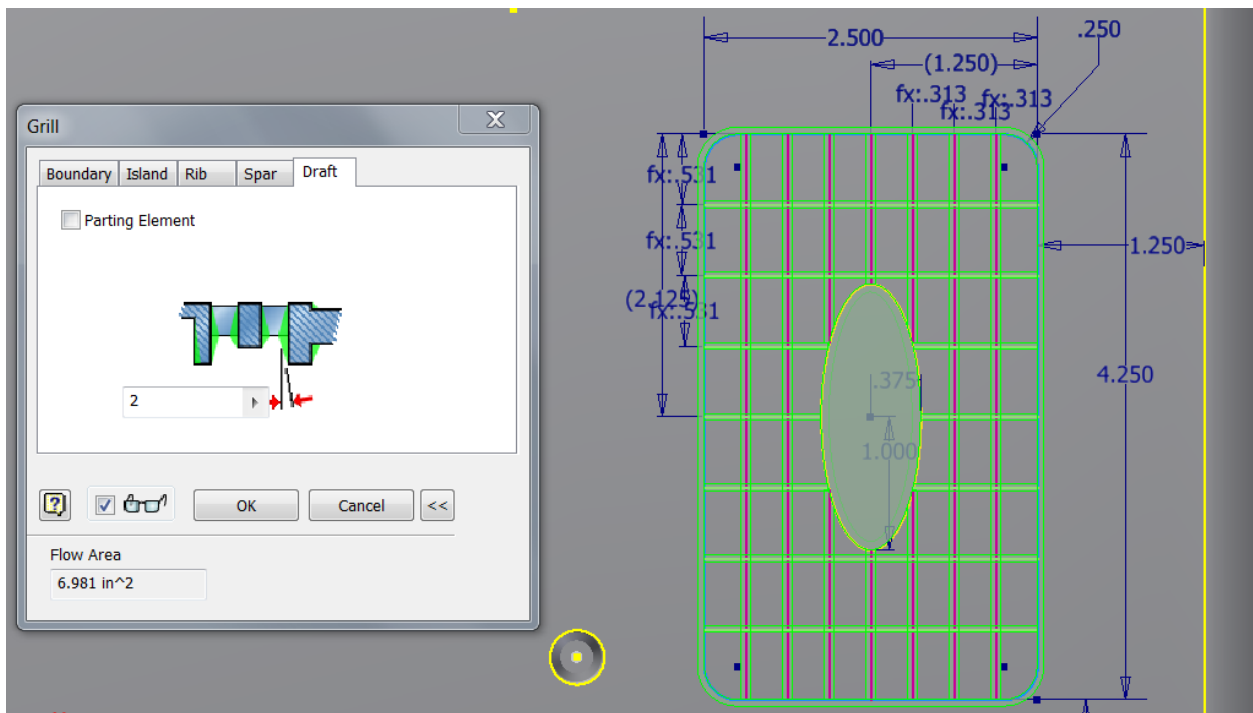




Spar (cross members with a different size than the ribs)



Draft (taper on all elements)





Note that the Parting Element option is left unchecked. This will leave the parting line at the inside of the main body. See the Help for more information on this option.

Here is the resulting feature:

