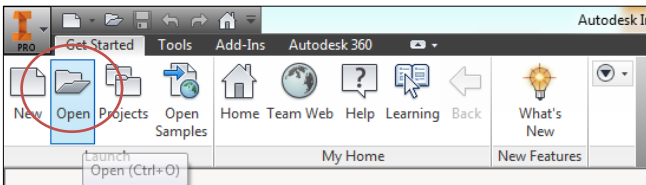


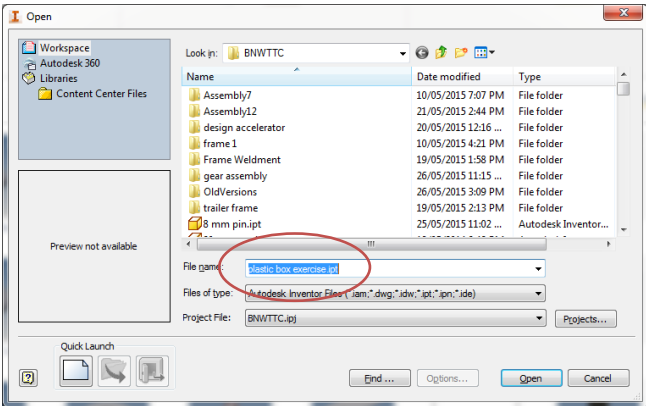
Plastic Part.

Use Plastic Part tools to create a small plastic instrument box suitable for 3D Printing.



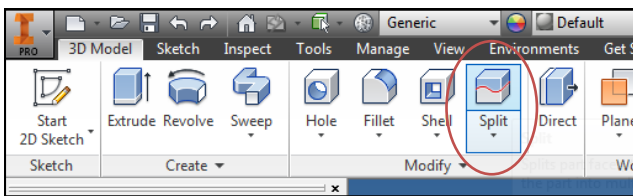
Step # 1. From the *Get Started* Tab , select *Open*.

FIG 1.0

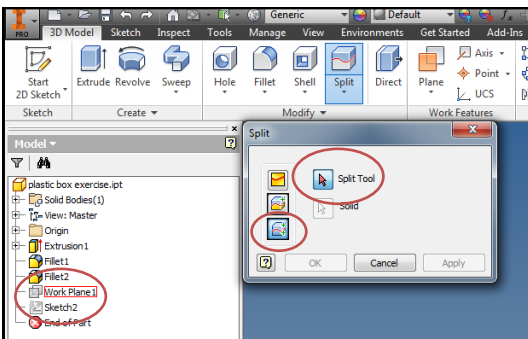


Select *Plastic Box Exercise.ipt* , select *Open*.

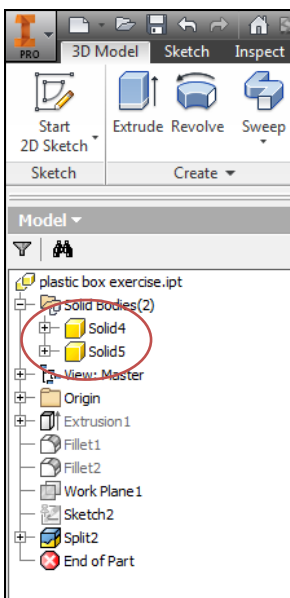
FIG 2.0



Step # 2. On the *3D Model* tab select the *Split Command*.



Step #3. In the *Split Command* dialog box , use *Workplane 1* as the *Split Tool* and *Split Solid* as the *Type of Split*.



After the solid is *Split*, 2 new Solid Bodies should be visible in the Browser.

FIG 3.0

Step # 4. In the Browser, right click on the upper solid body and select Properties as in Fig 4.0

In the *Body Properties* Dialog , Select *Clear* as a Body Appearance. (Fig 5.0)

OK the Dialog Box, this will allow easier viewing into the part.

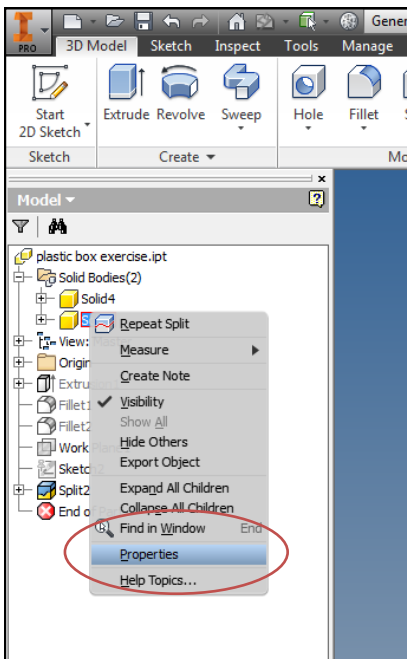


FIG 4.0

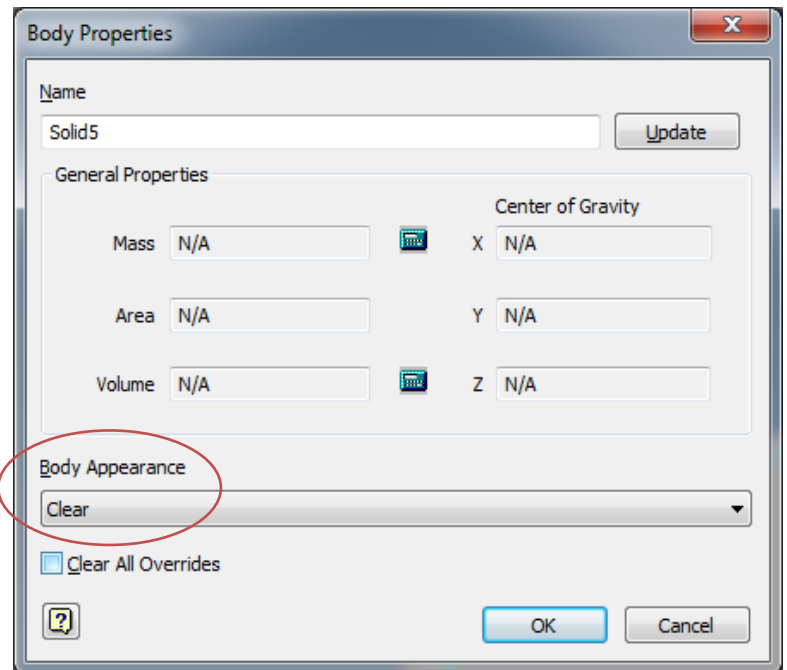
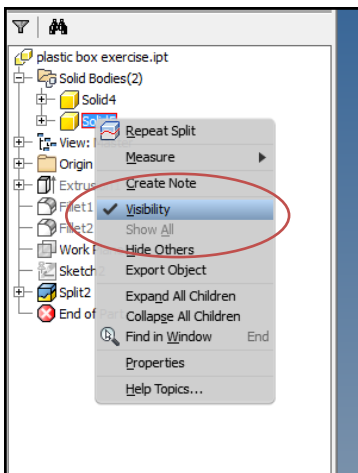


FIG 5.0

Step # 5. Shell the two solids to form cavities.



In the Browser right click one of the two solids and uncheck *Visibility*.

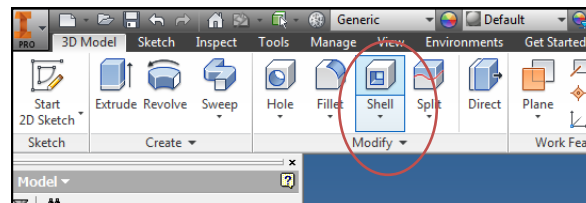
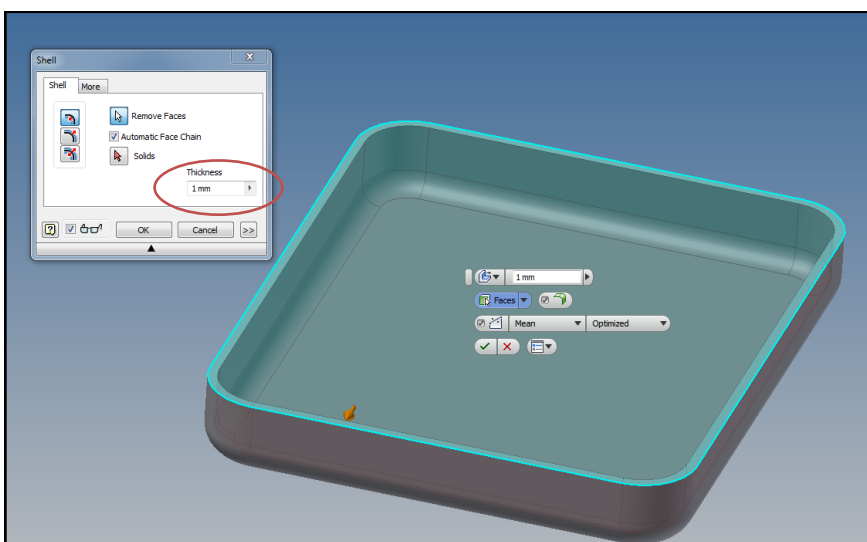


FIG 6.0



Step # 6. Fig 6.0 Using the *Shell* command, remove the face created by the Split Command.

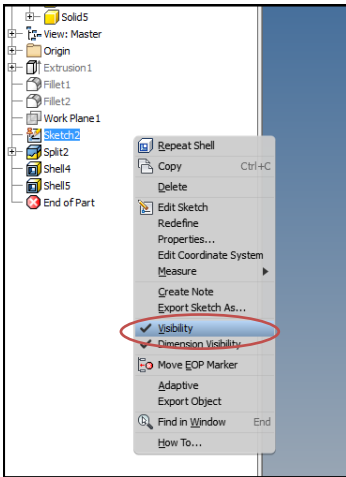
Give the *Shell* a Thickness of 1 mm.

OK the dialog box.

Repeat this process with both Solid Bodies.

FIG 7.0

Step # 7. In the Browser, right click on Sketch 2 and check Visibility.



Step # 8. Create Boss features on Sketch 2. On the *Plastic Part* Panel select Boss.

Sketch 2 already has four Points positioned for this example.

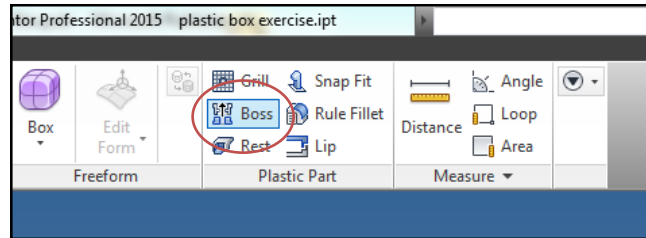


Fig 8.0 and 8.0a show the values for the creation of the Head Part of the Boss feature.

Be sure to select the Solid Body you wish to have as the Head side of the Boss Feature.

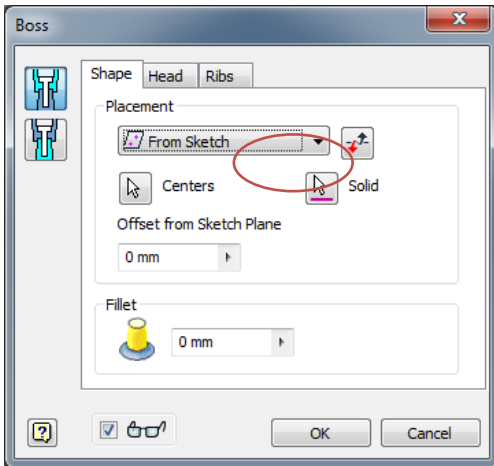


FIG 8.0

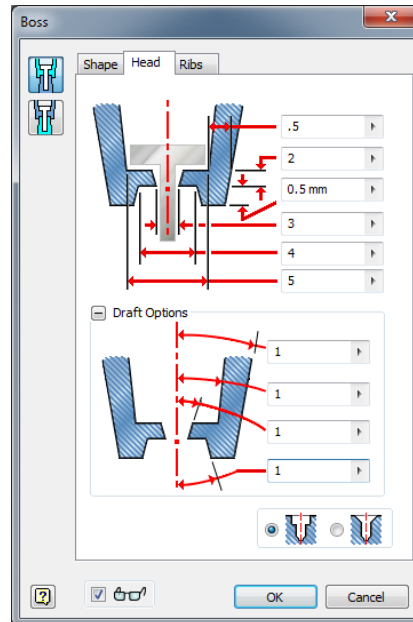
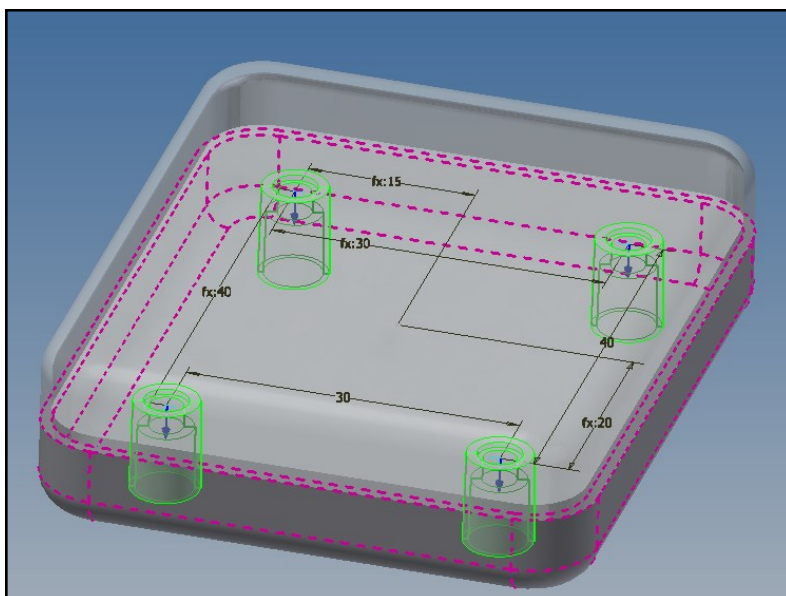


FIG 8.0a



Previewed results from Boss Head creation.

Step # 9. In the Browser, right click on Sketch 2 and check Visibility.

The same sketch can be re-used to create the *Thread* part of the Boss.

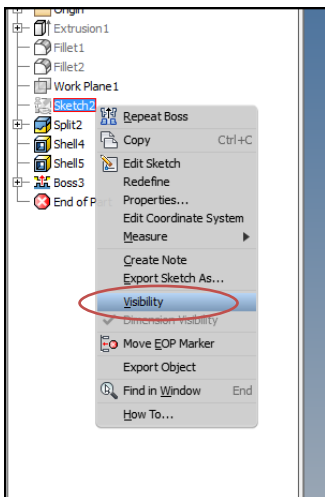


FIG 9.0

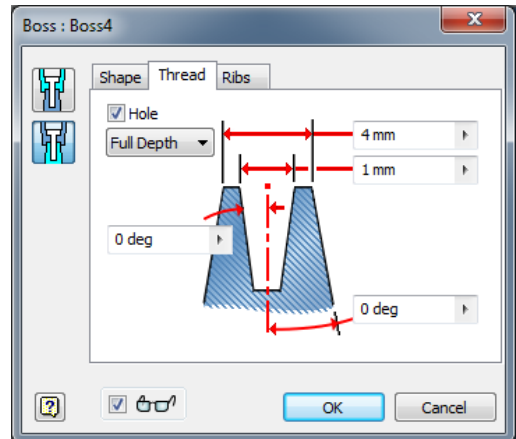
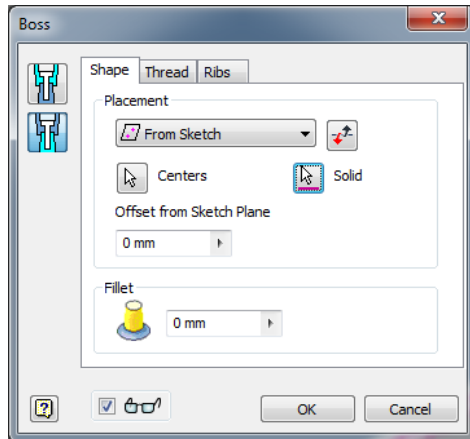
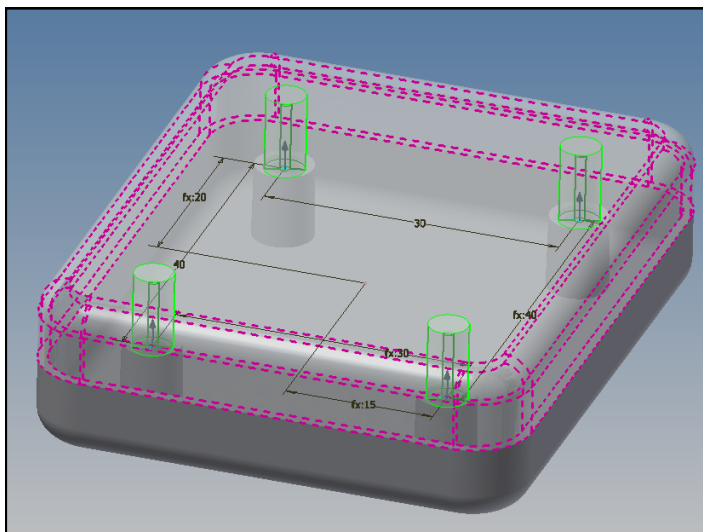


FIG 9.0a

Fig 9.0 and 9.0a show the values for the creation of the Thread Part of the Boss feature.

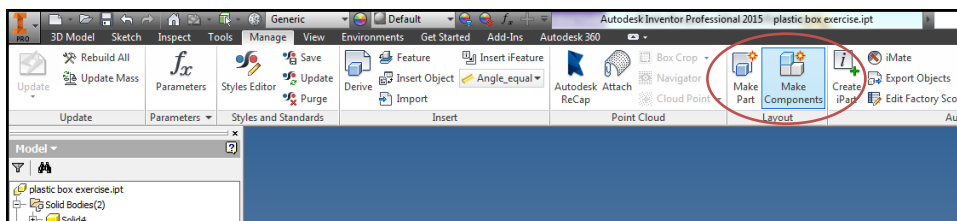
Be sure to select the Solid Body you wish to have as the Thread side of the Boss Feature.



Previewed results from Boss Thread creation.

Step # 10. Separate Solid Bodies into parts.

On the *Manage Tab*, in the *Layout Panel* Select *Make Components*.



Step # 11. Add to the selection the two solid bodies by left clicking on the model themselves, or in the Browser. Click Next.

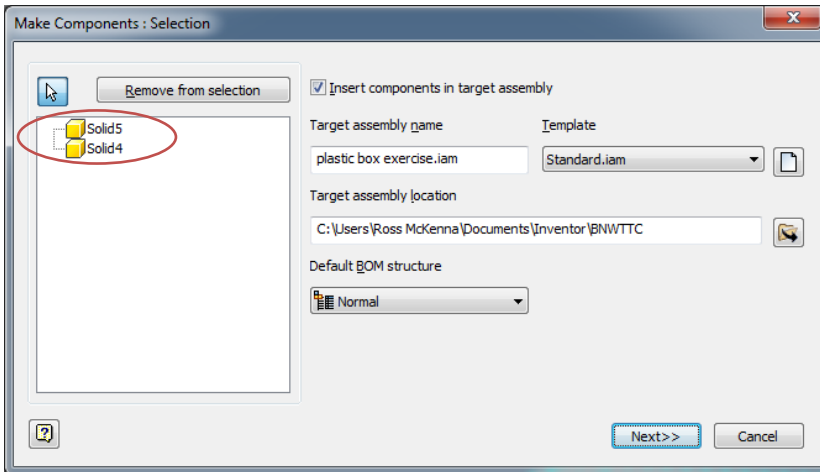


FIG 10.0

Step # 12. Change the names of the Solid Bodies as shown in Fig 11.0
Click OK.

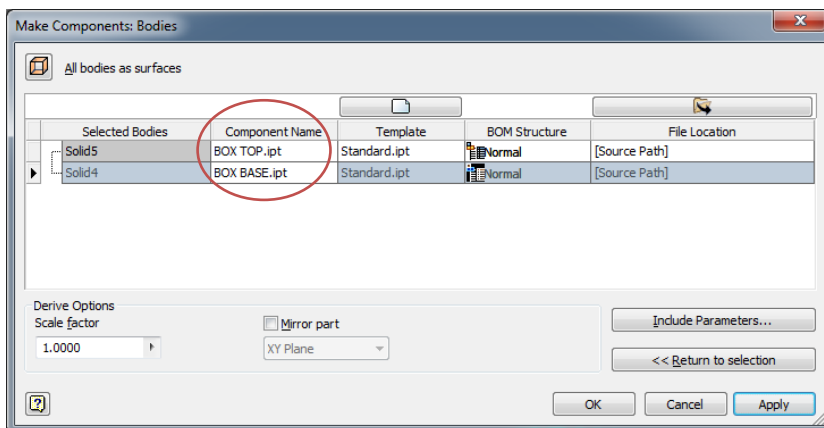
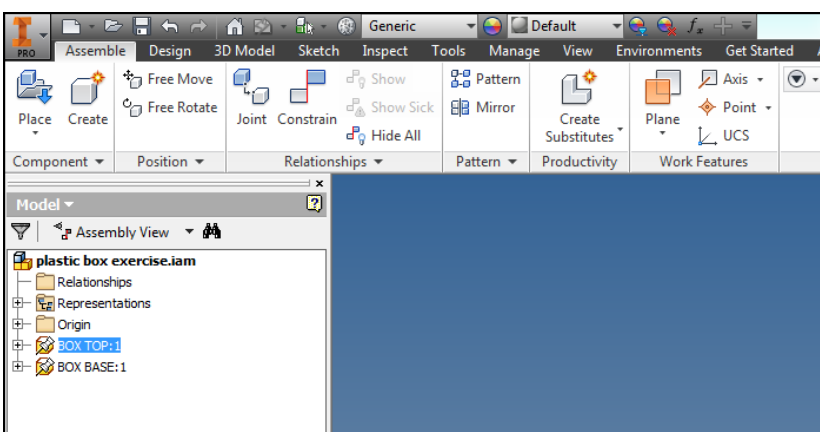


FIG 11.0

An assembly file will be automatically created with grounded parts.



Step # 13. Output .STL files suitable for 3D Printing.

Open the individual part file in the assembly by double left clicking on it in the Browser. In the Main File Menu select "Save As" then "Save Copy As".

In "Save As Type" select .STL