

# Advanced NX4 Modeling, Assemblies and Sheet Metal Techniques

by

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of

**DESIGN  
VISIONARIES**



*"We make progress"*

May Unigraphics User Group Meeting Year 2006

# Overview of speech

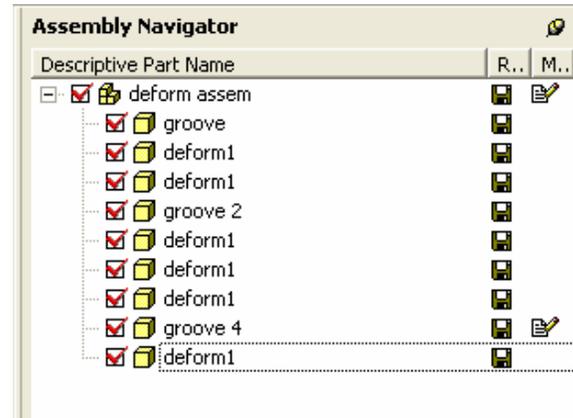
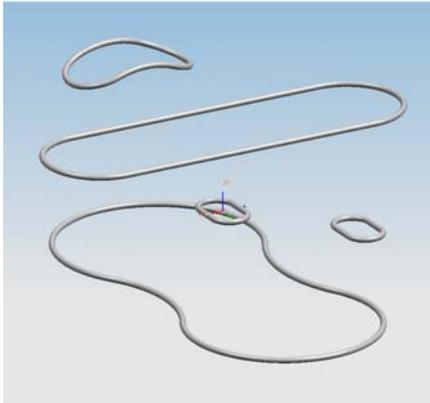
- NX4 has some goodies that enable faster more efficient design.
  - Roles
  - Deformable parts
  - Welding
  - Assembly cuts
  - NX sheet metal
- Ask any question at any time

# Roles

- Roles are a way of limiting the menus
- Be careful when you first experience the software. You may not see the menus that you are looking for.

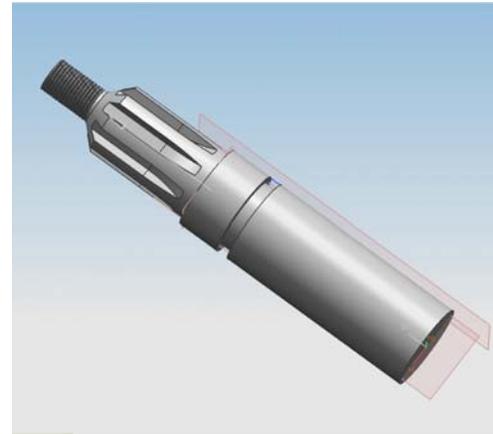
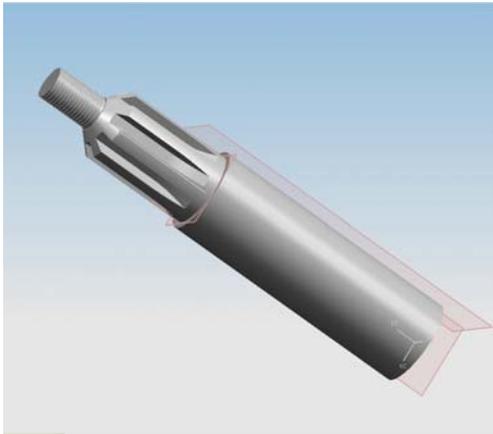


# O-ring design with deformable part

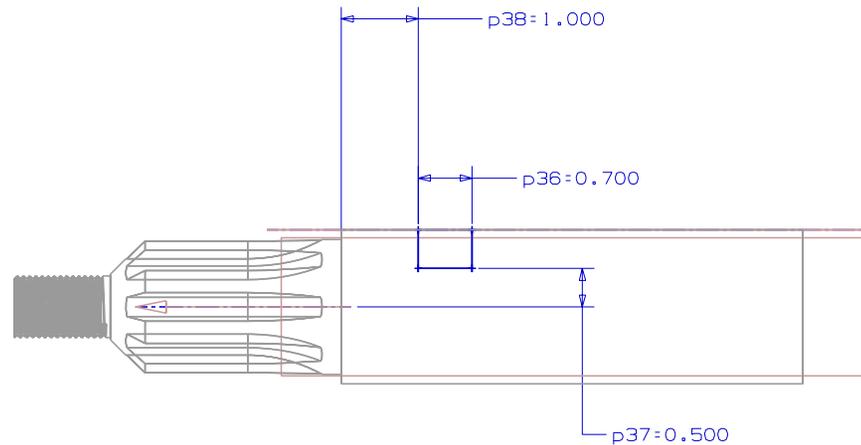


- Create an o-ring file with deformable part and references
- Create the assembly
- Create a part with the curve in it representing the center line of the o-ring
- Bring in the component and the deformable o-ring file

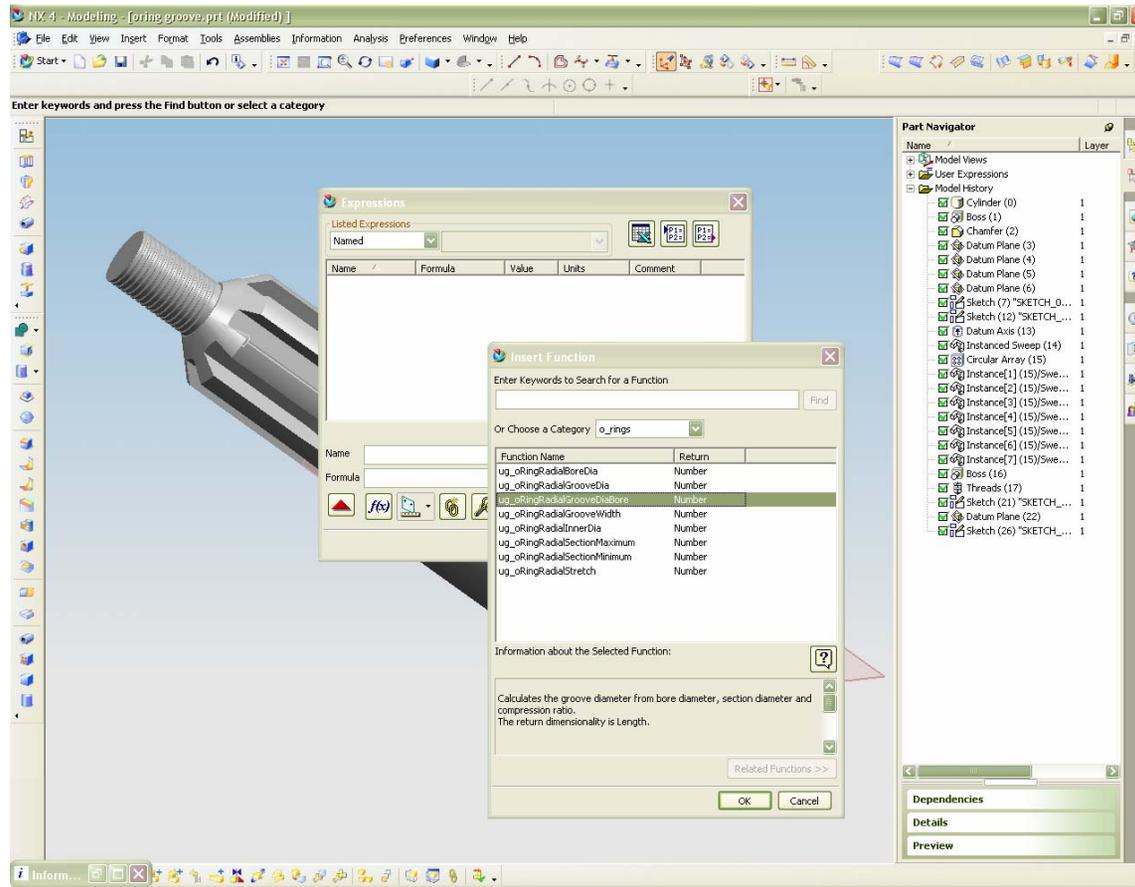
# Advanced expression has o-ring design function and many others



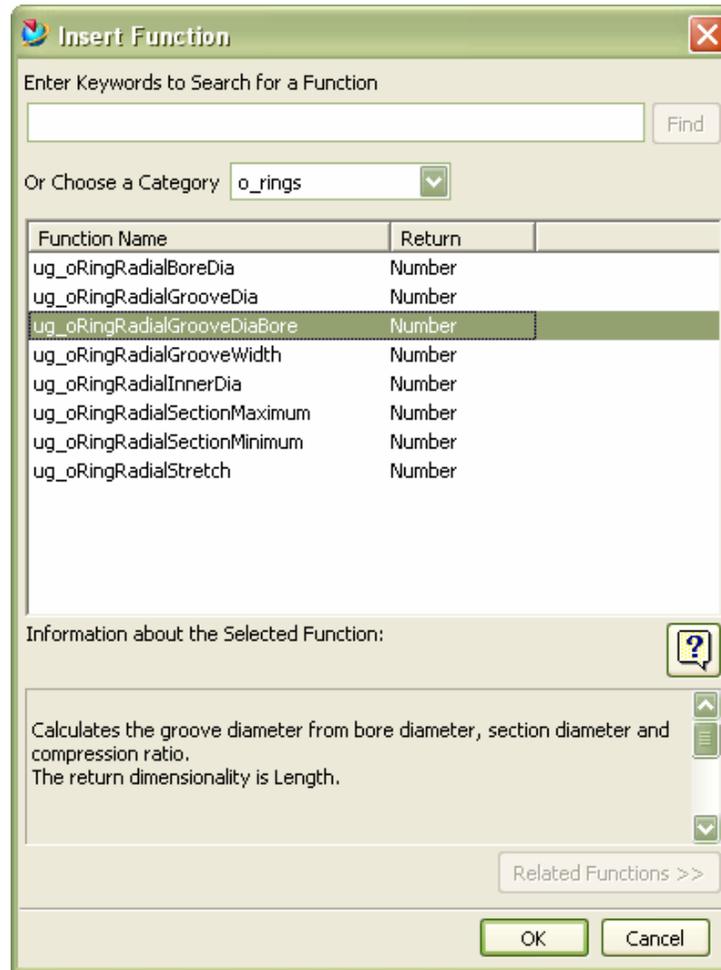
# Link the parameters of the sketch to the o-ring formulas

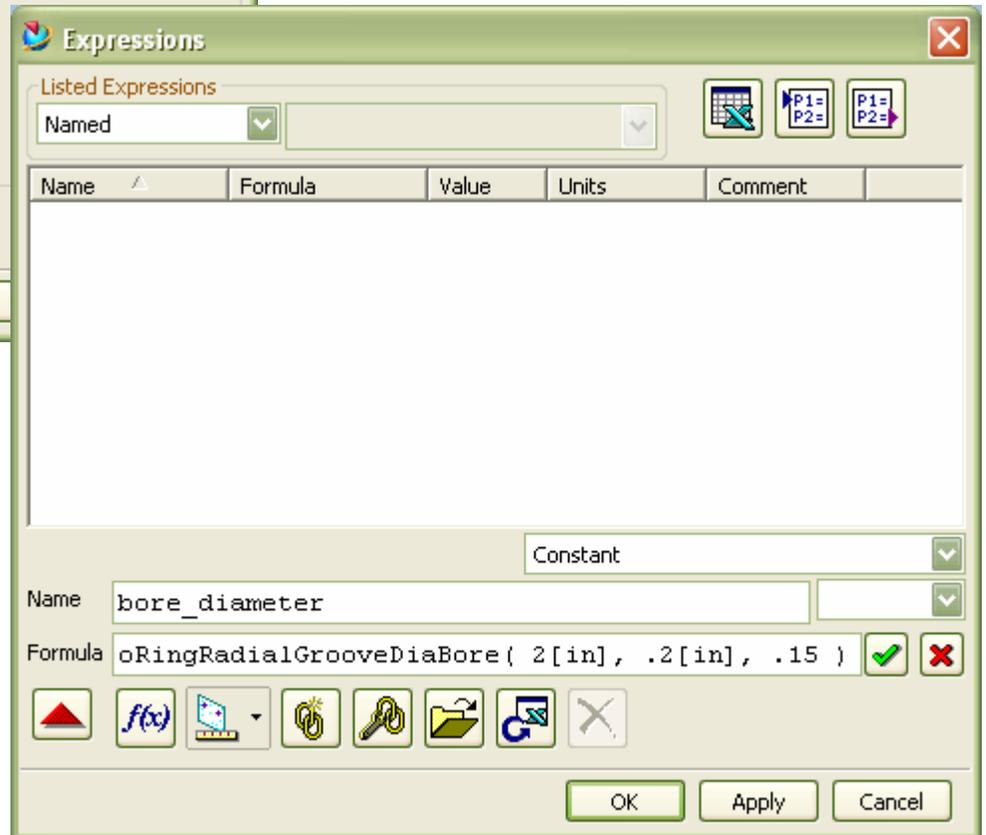
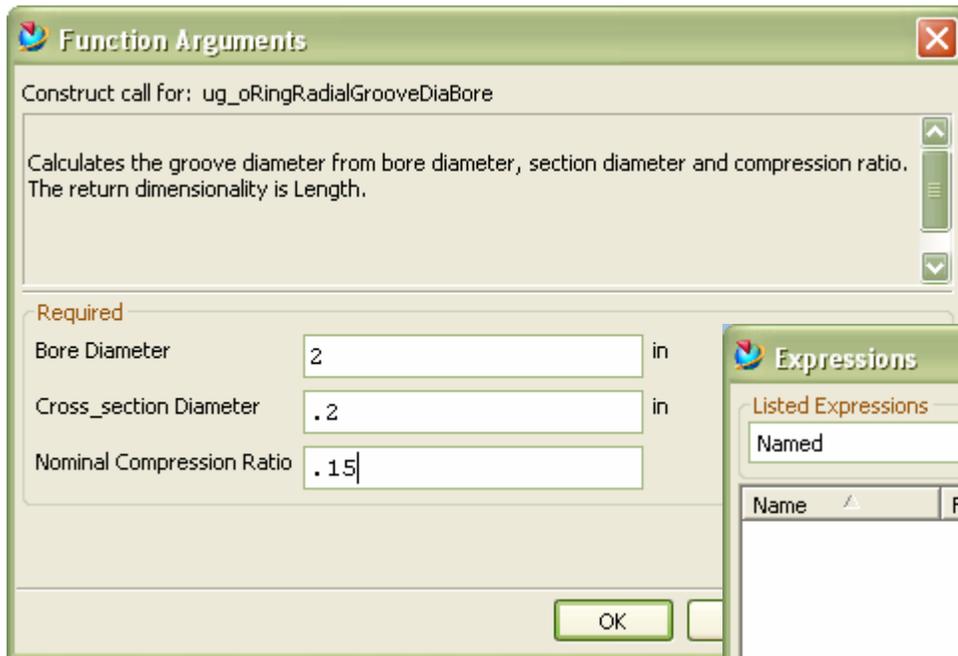


# Notice the multitude of expression choices

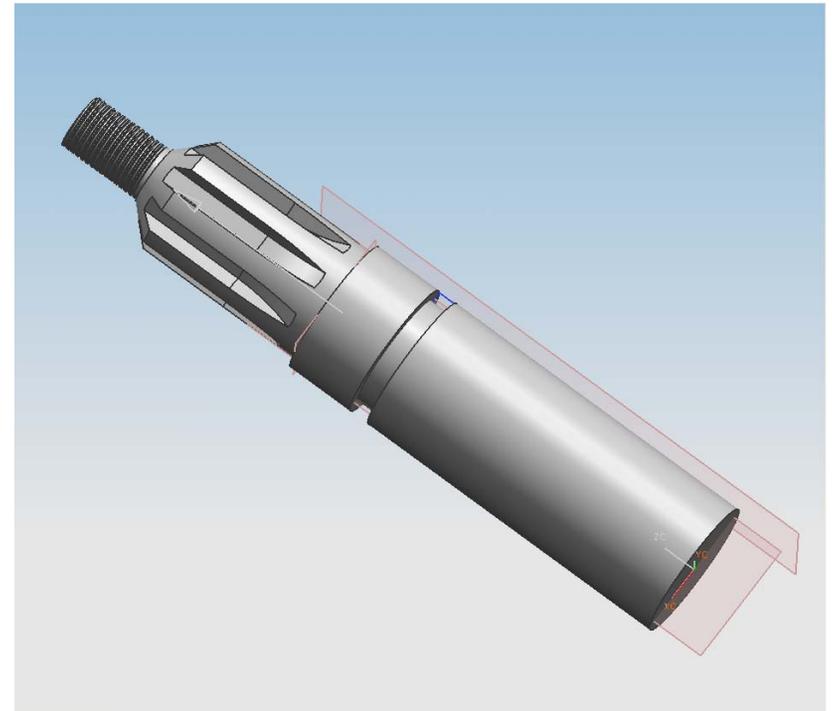
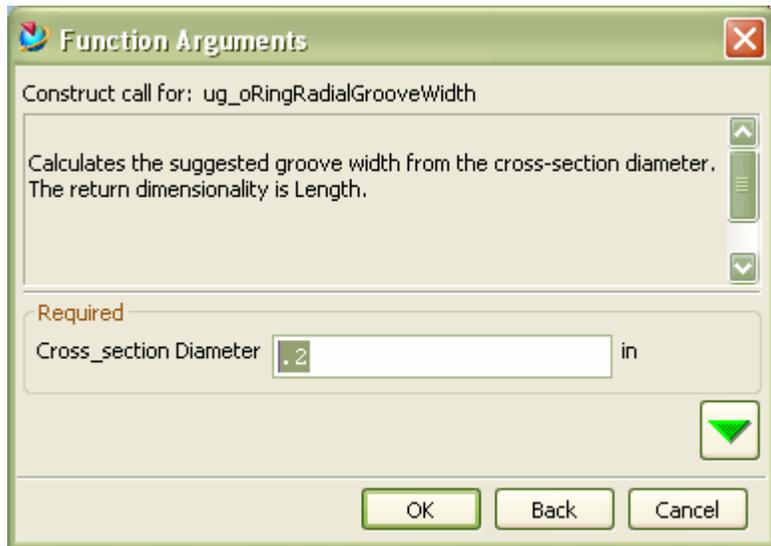


“Ug\_oRingRadialGrooveDiaBore” returns a groove diameter from other parameters.

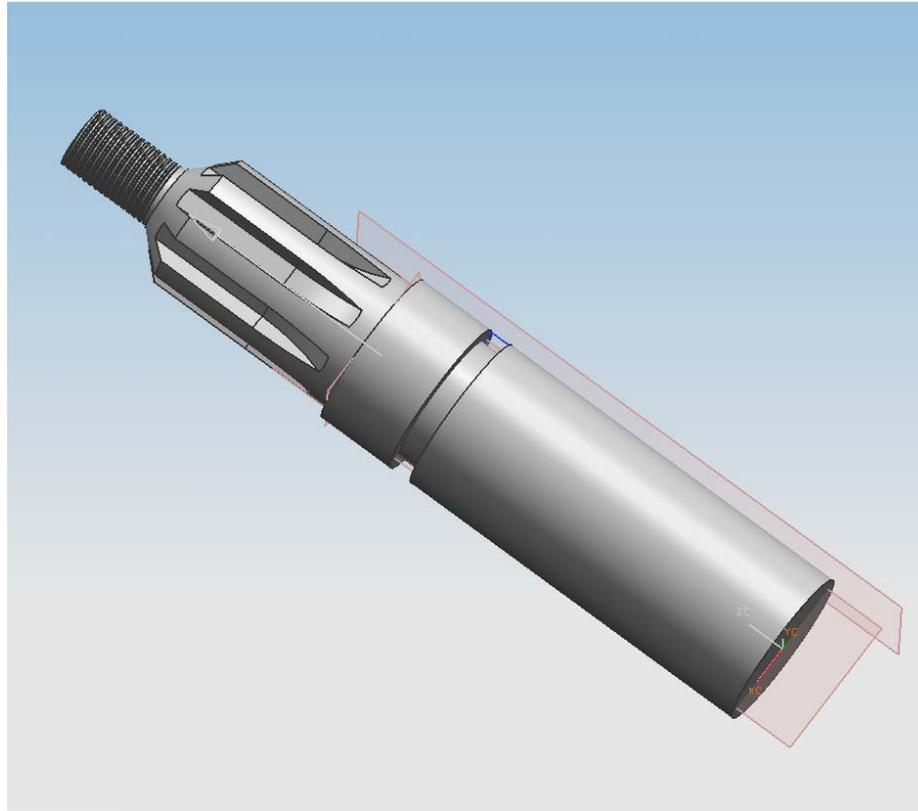




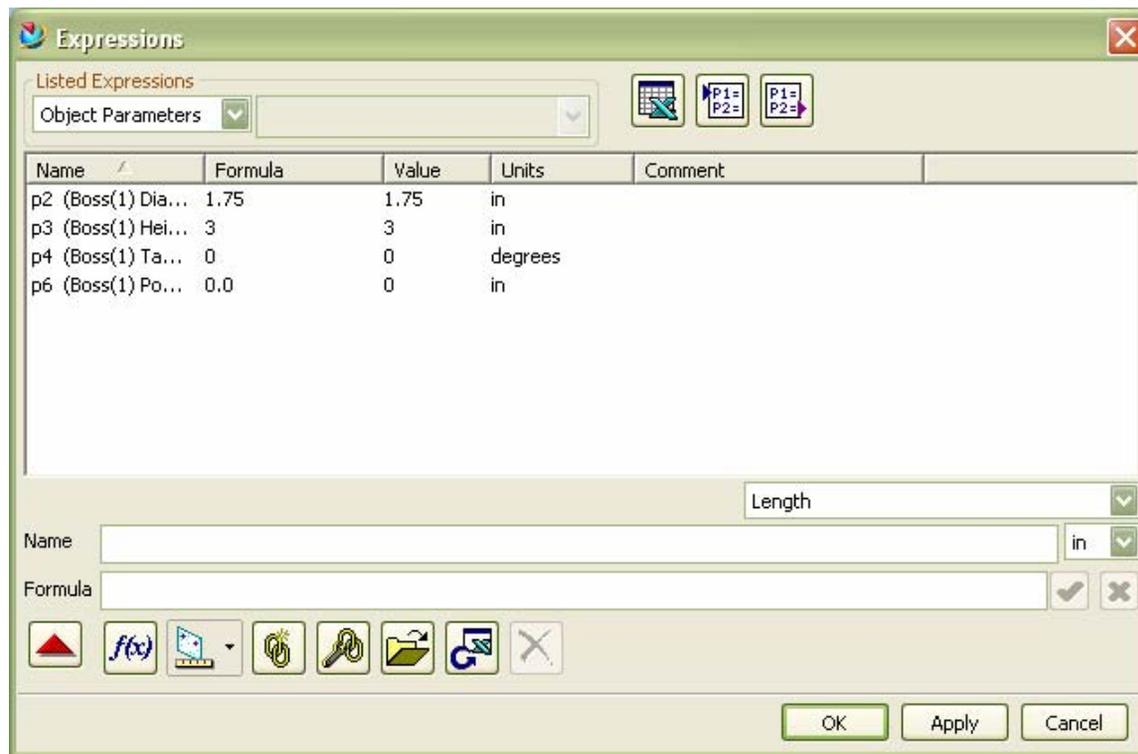
# Groove diameter is created with the a different function.



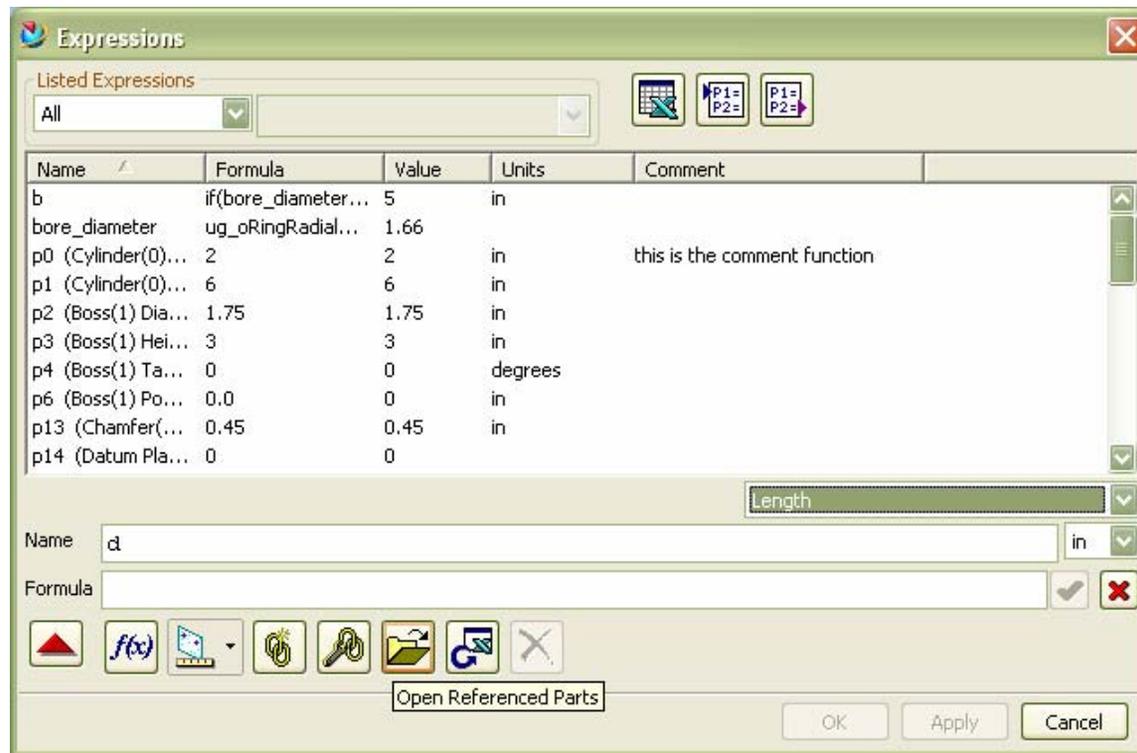
# Finished product



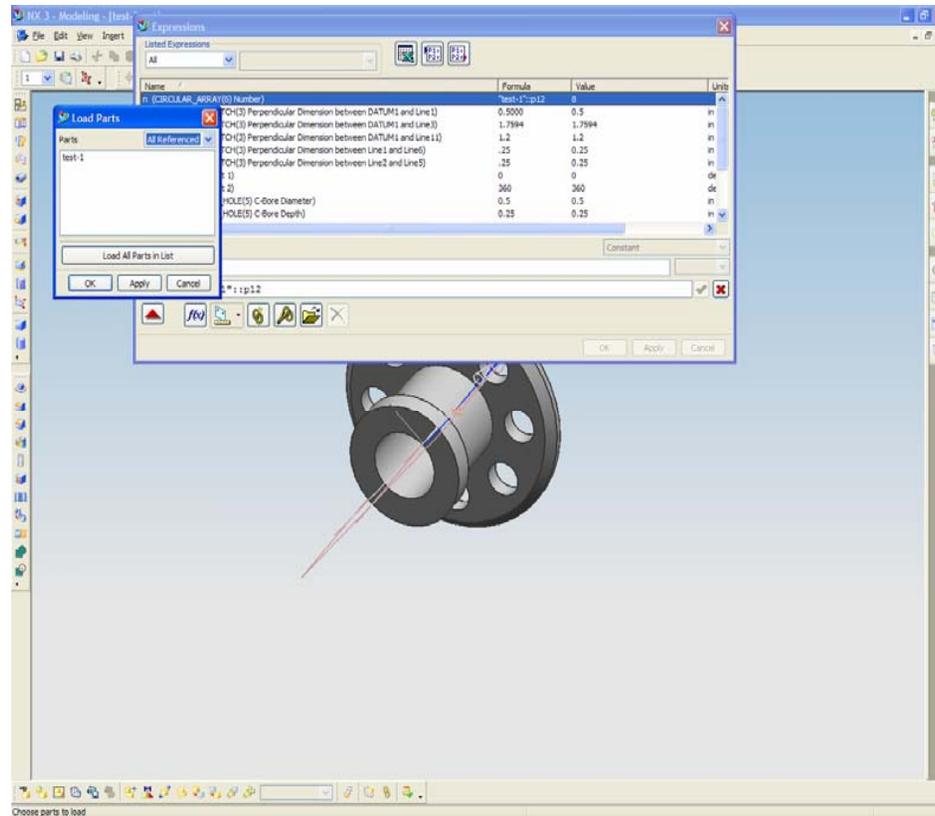
# Object Parameters Filter (Expressions)



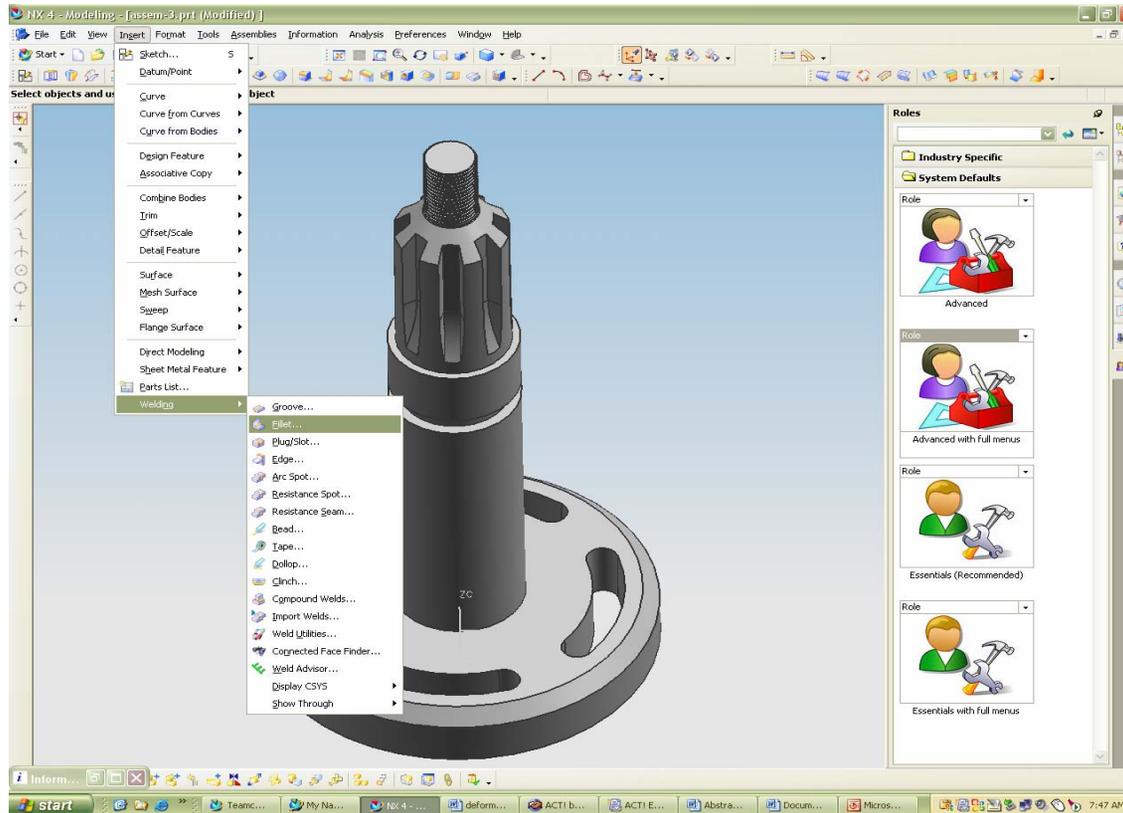
# Open referenced parts (Expressions)



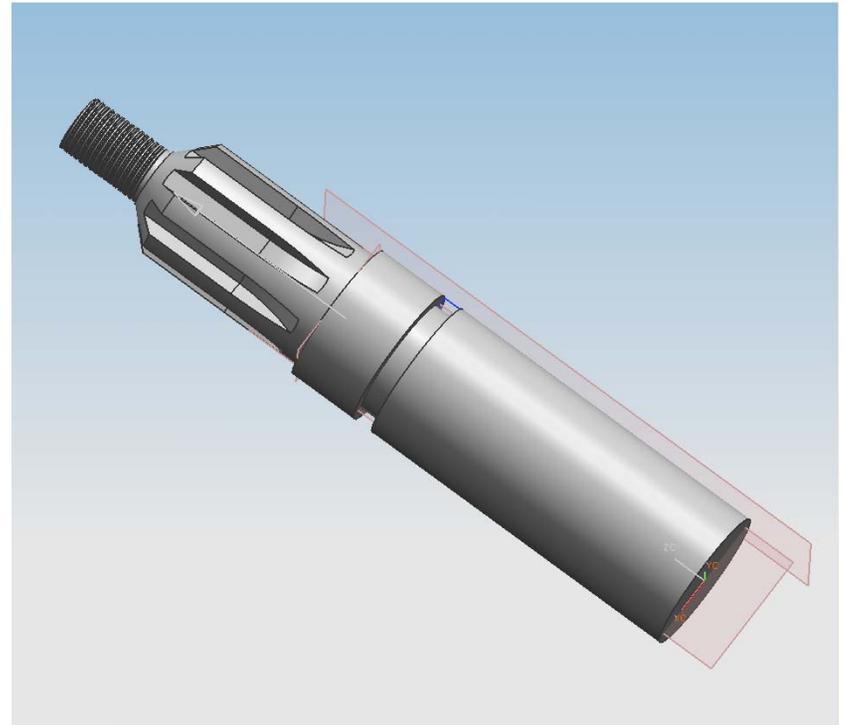
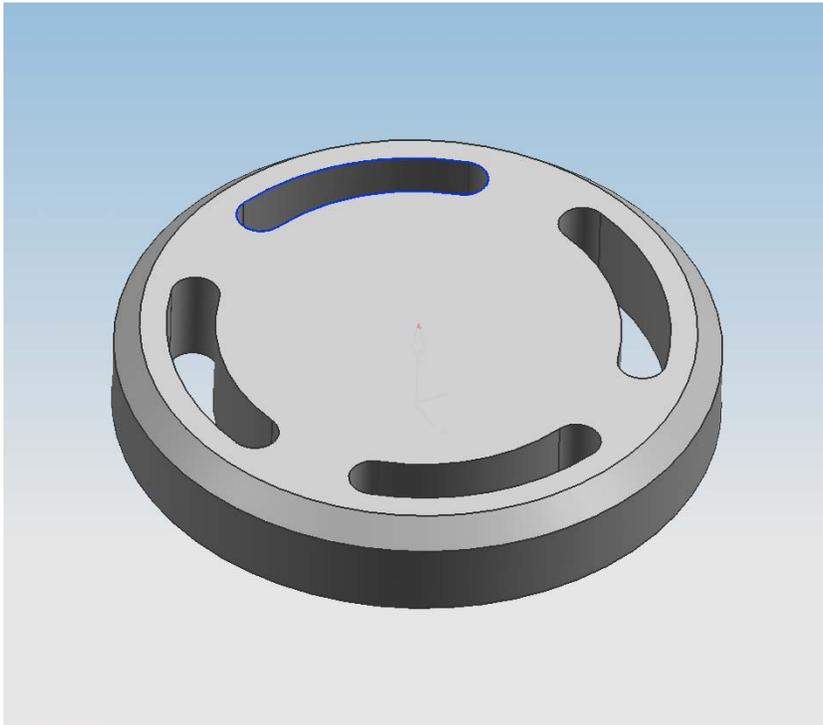
# Select the interpart expression and NX will open the part.



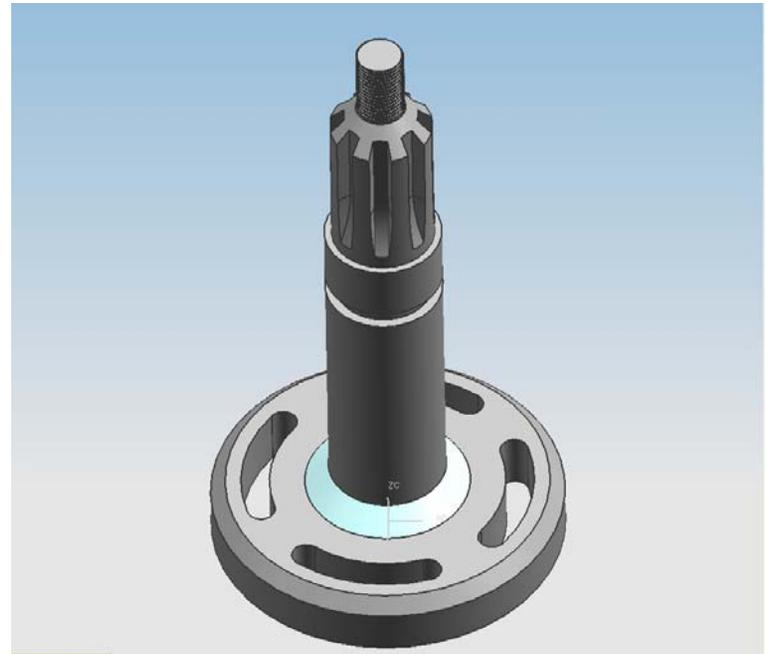
# Welding menu



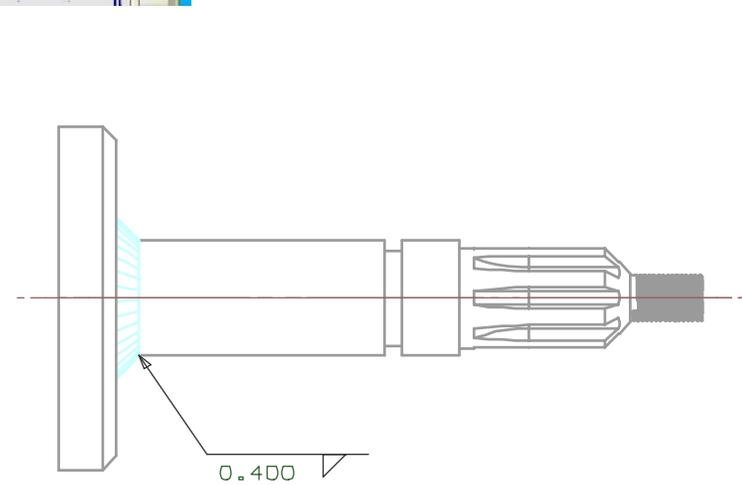
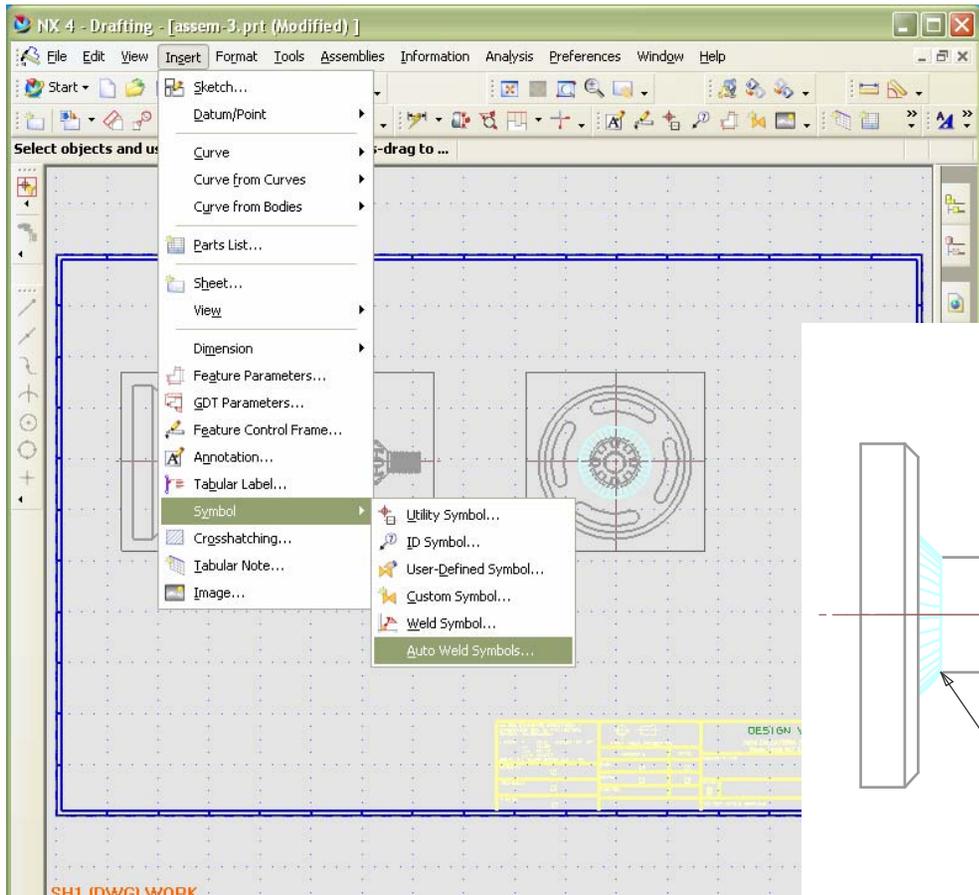
# Fillet Weld Function



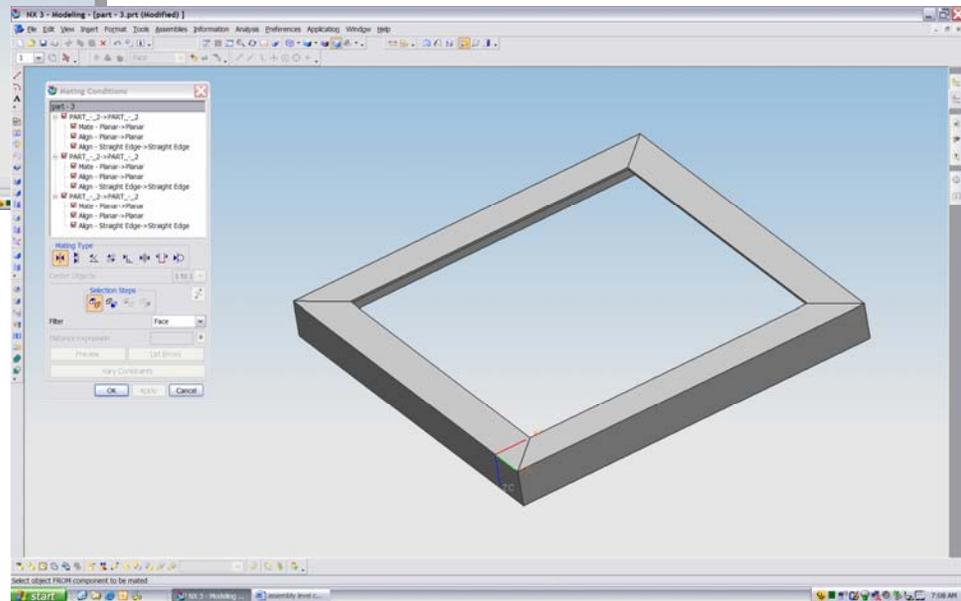
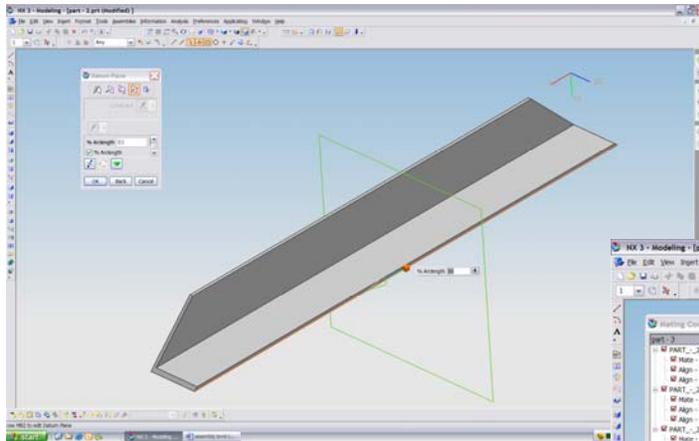
# Assemble components and weld.



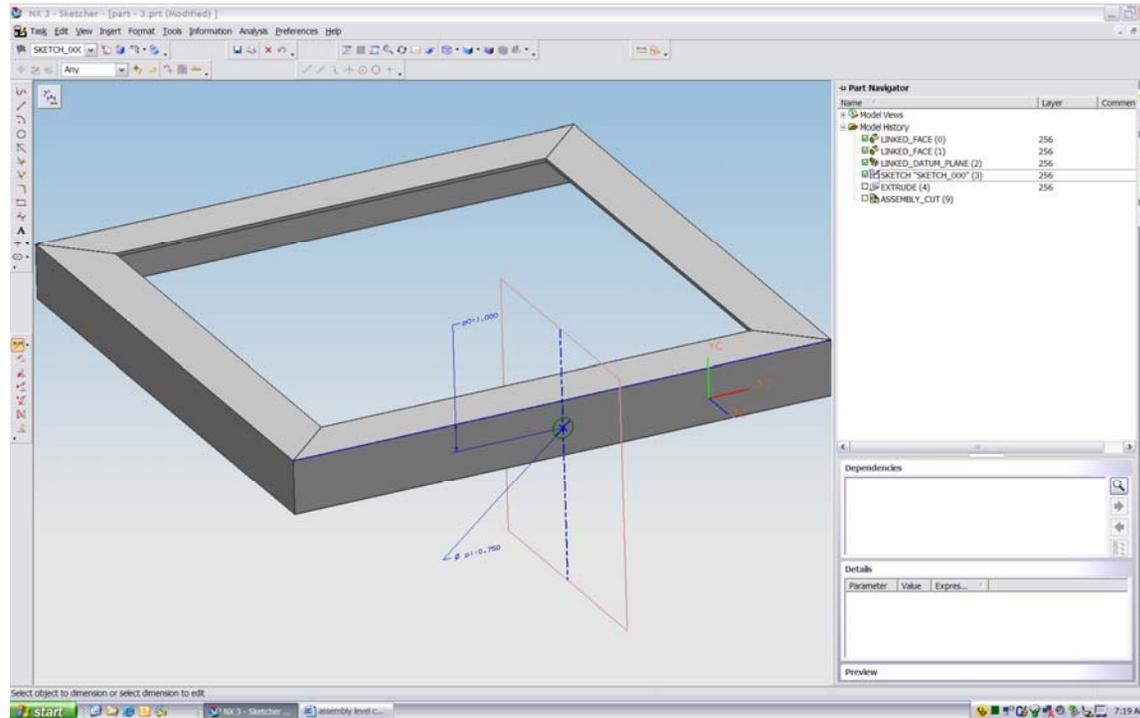
# Insert an auto weld symbol



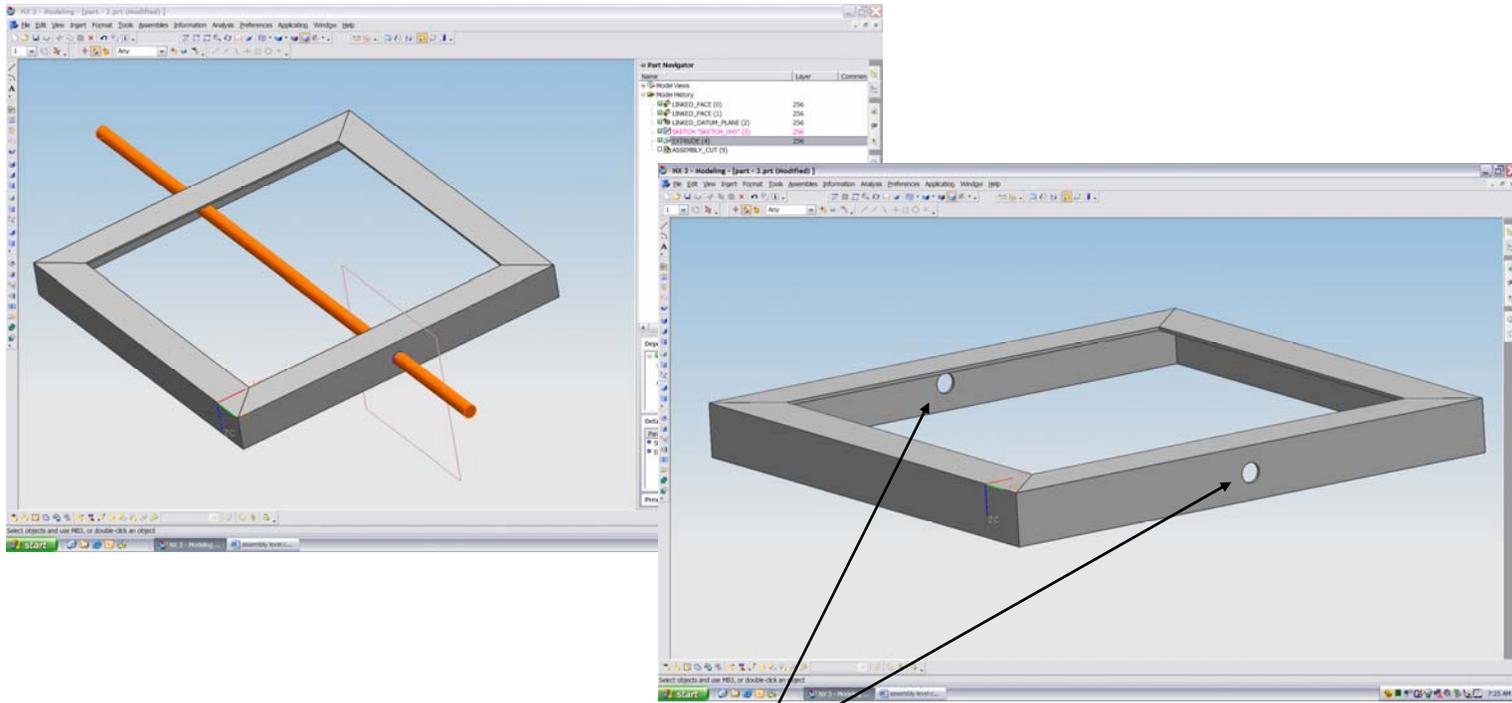
# Assembly level cut



# Create a sketch on an wave linked face



# Extrude the sketch and subtract form both bodies



The holes only exists in the assembly

# Improved NX Sheet metal

