

# LESSON 2 ADVANCE EXTRUSION LAB 01 (CON-ROD)

IDE 3301 CAID

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LECTURE 2-3

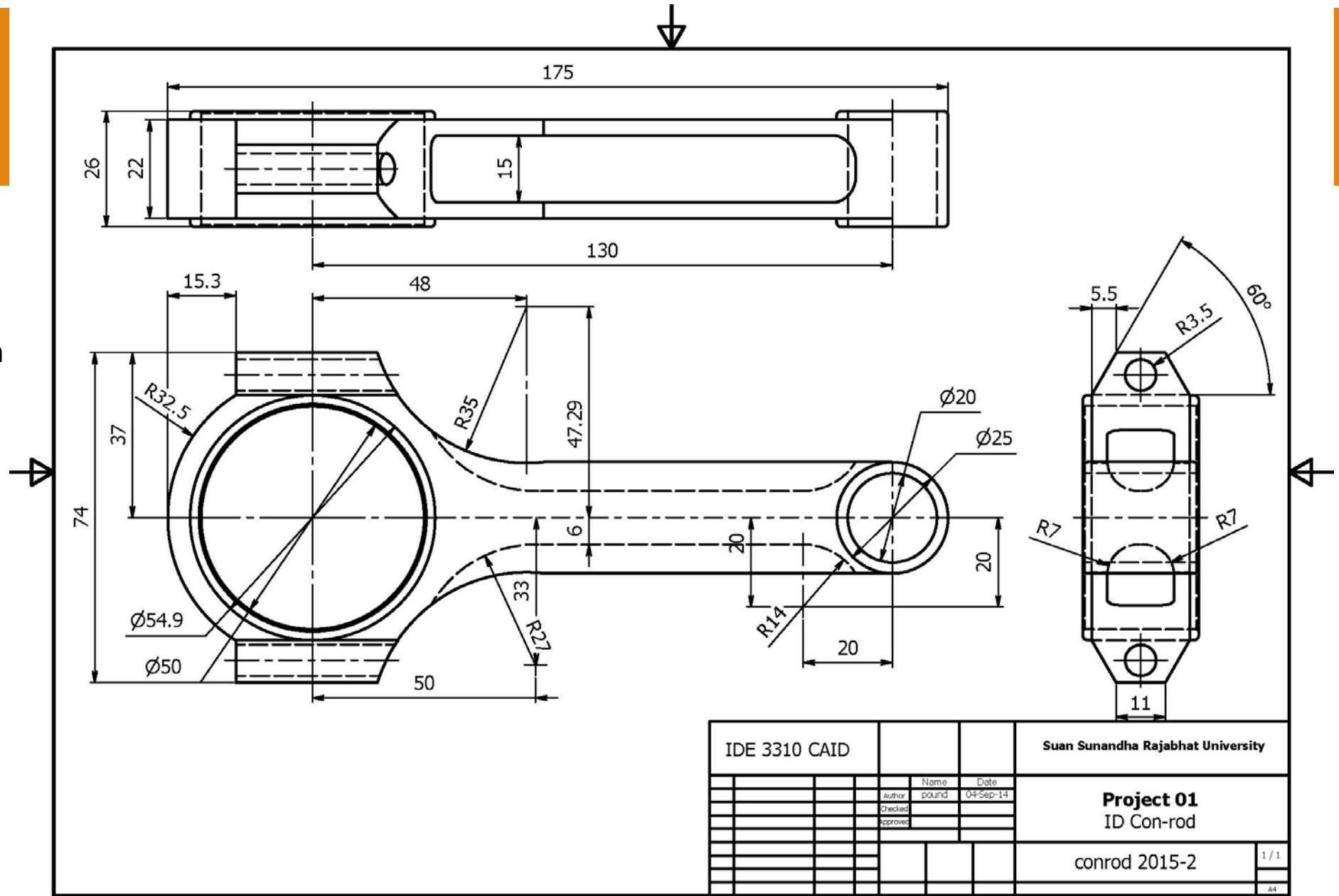


Connection Rod  
Step by step  
reveal

# DRAWING

## Keys process

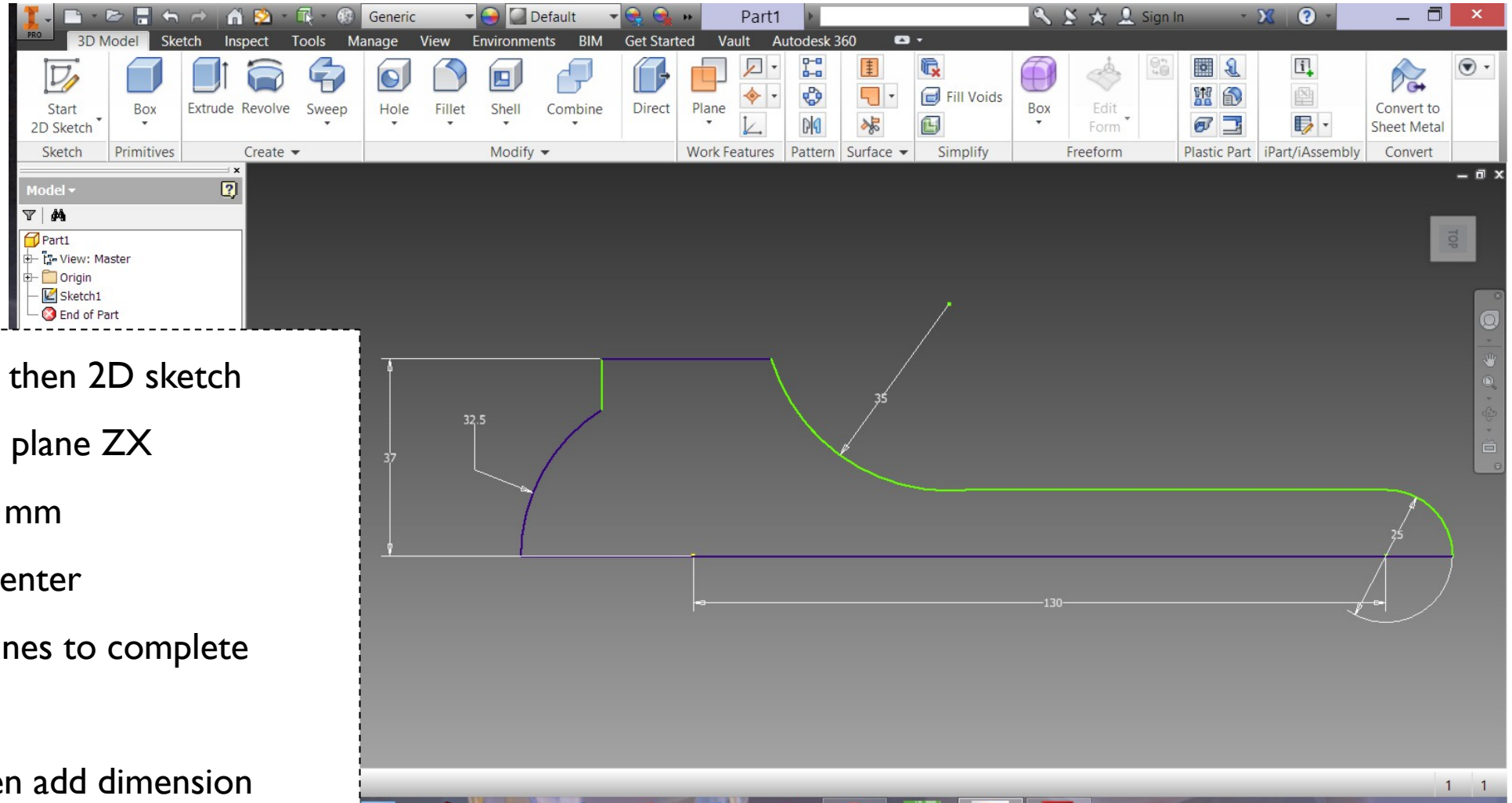
1. Design construction of part
2. 2D sketch
3. Add Constraints
4. Add dimension
5. Add feature



# DESIGN THE CONSTRUCTION OF PART

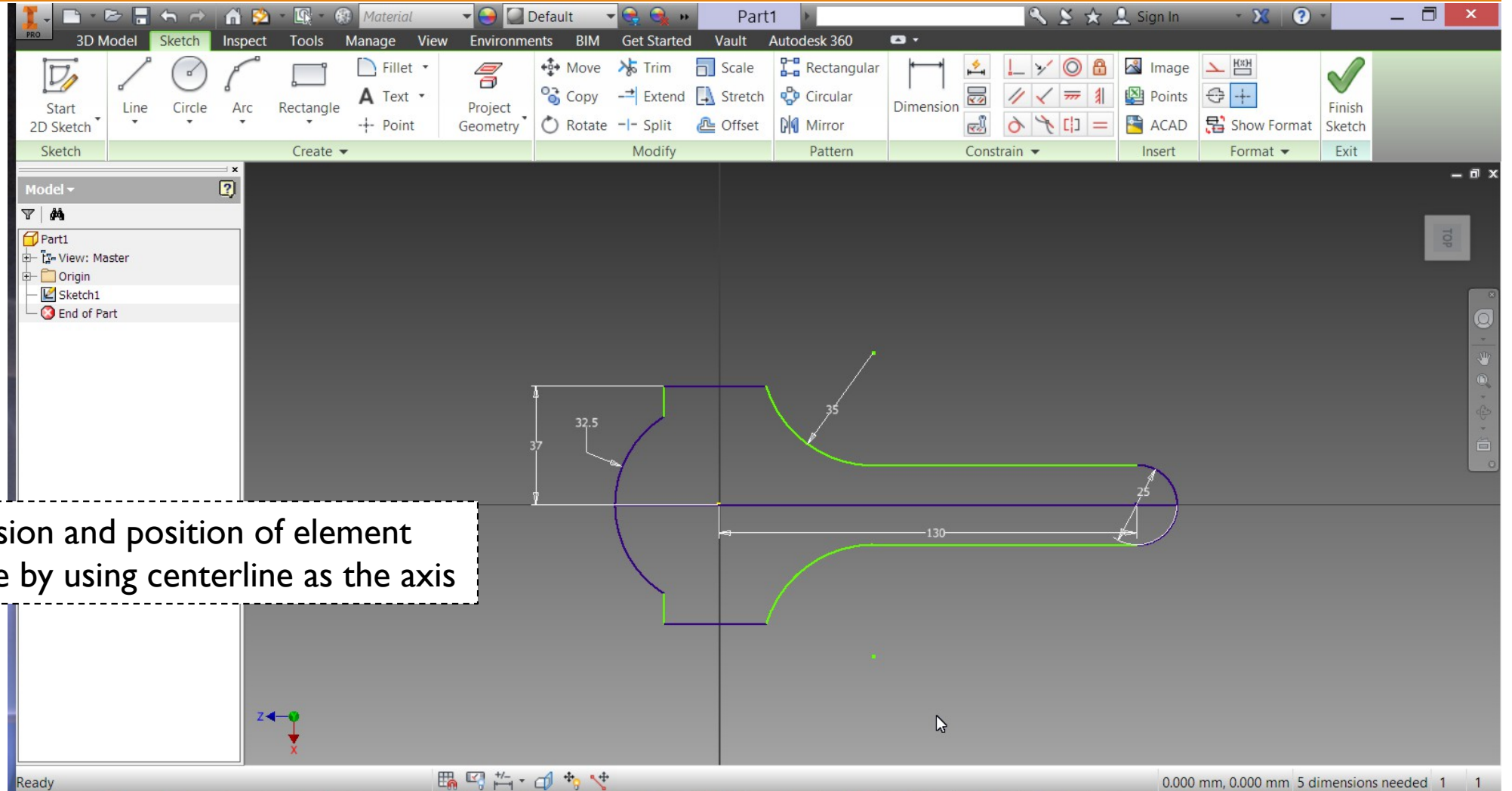
1. Think about primitive form
2. How many component and how to combine
3. Reference position of each component
4. Plan for step of modeling

# STEP 01 OUTLINE SKETCH



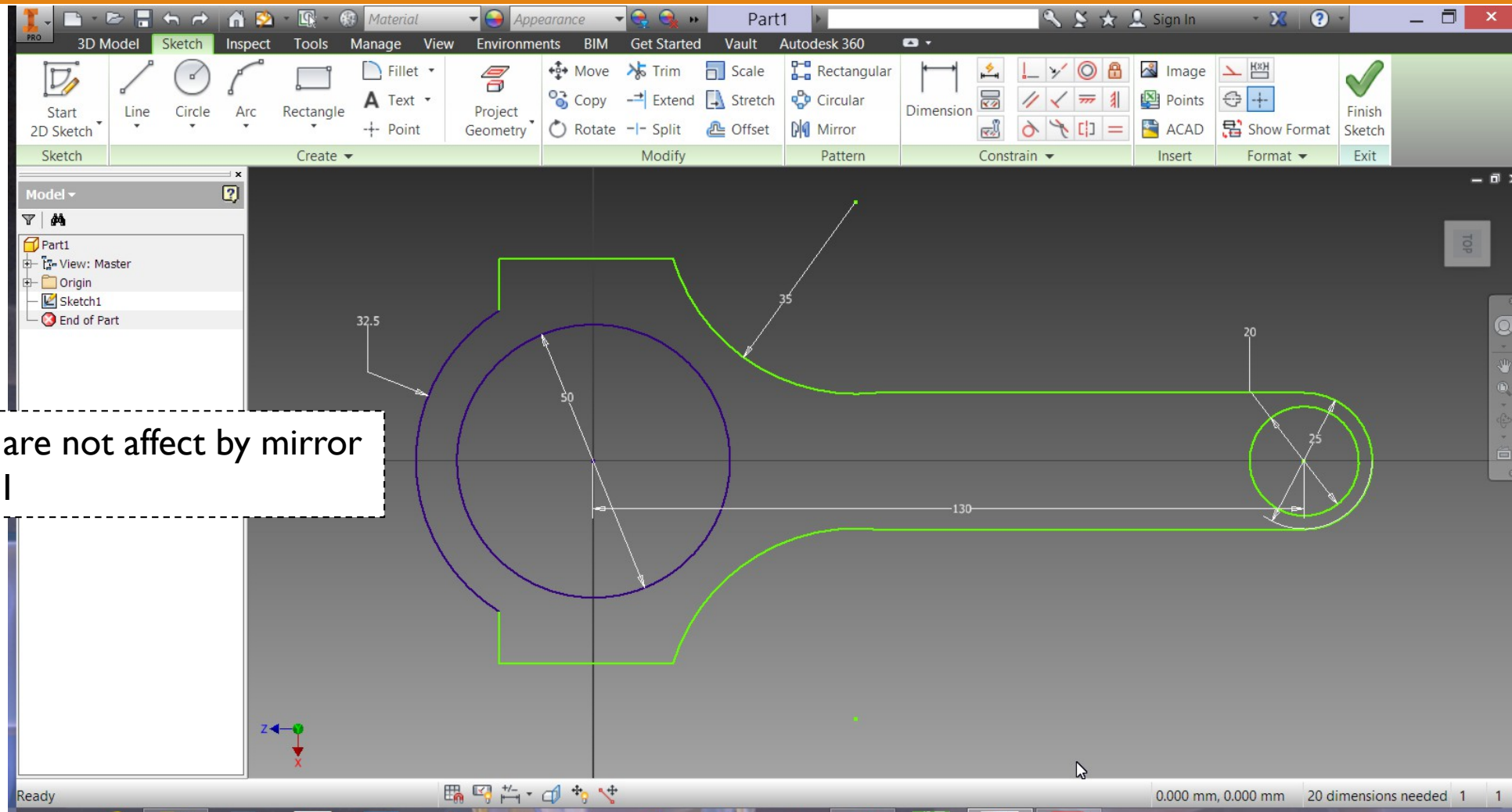
1. Select sketch face then 2D sketch
2. Draw 2 circles on plane ZX
3. Add distance 130 mm
4. Offset line from center
5. Draw curve and lines to complete sketch
6. Add constrain then add dimension

# MIRROR

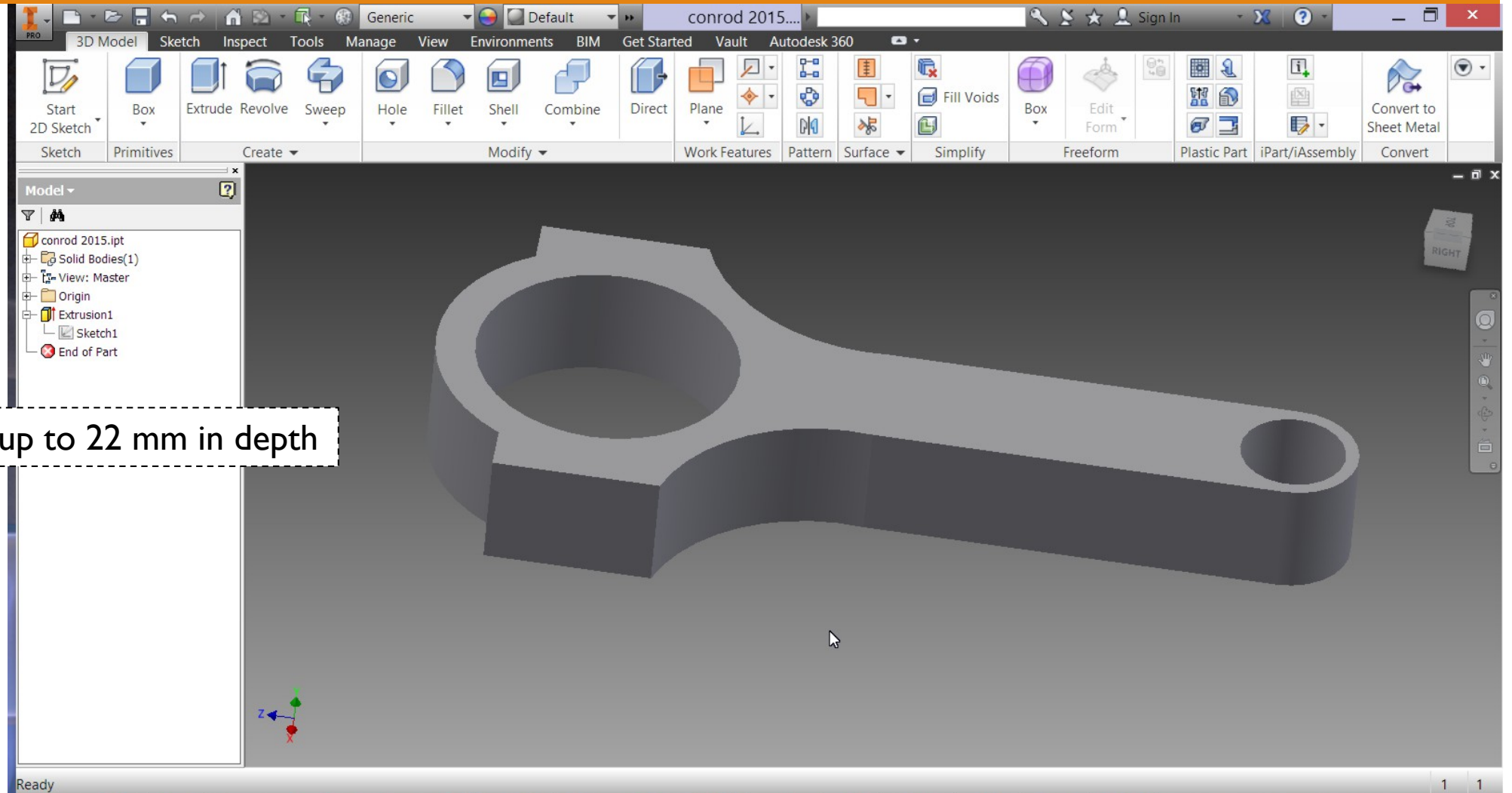


1. Check dimension and position of element
2. Mirror outline by using centerline as the axis

# ADD DETAILS

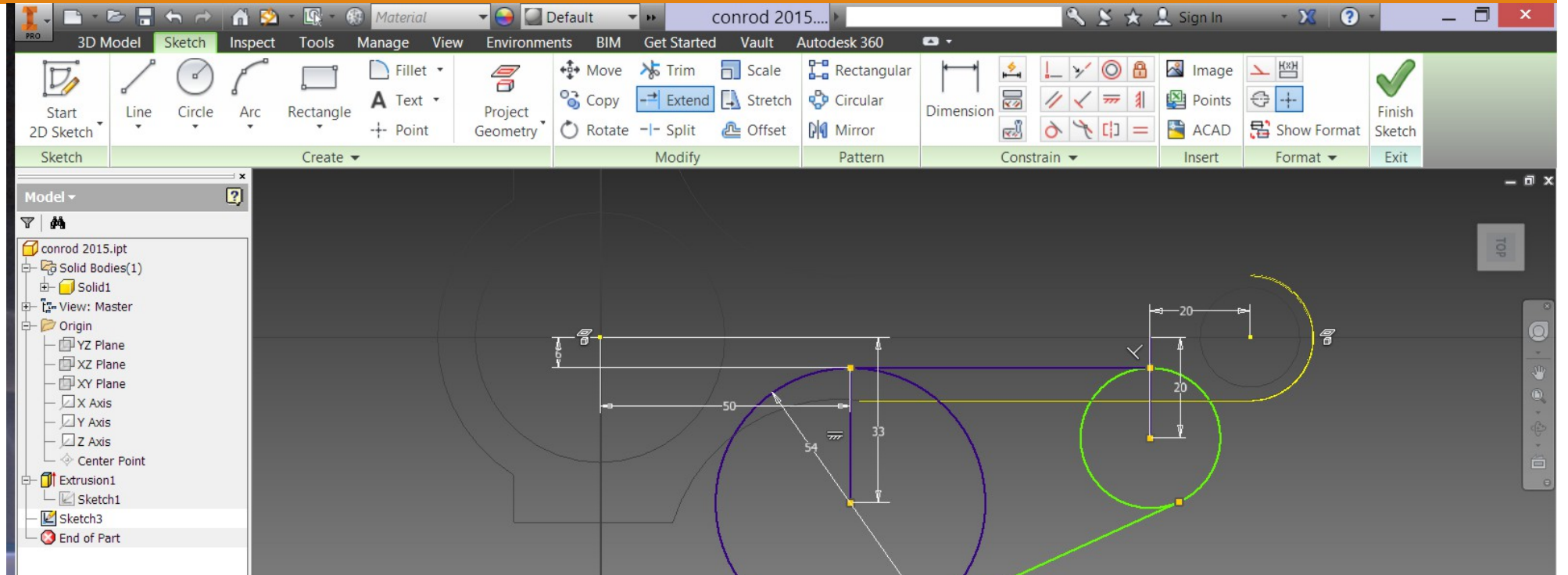


# EXTRUDE FEATURE



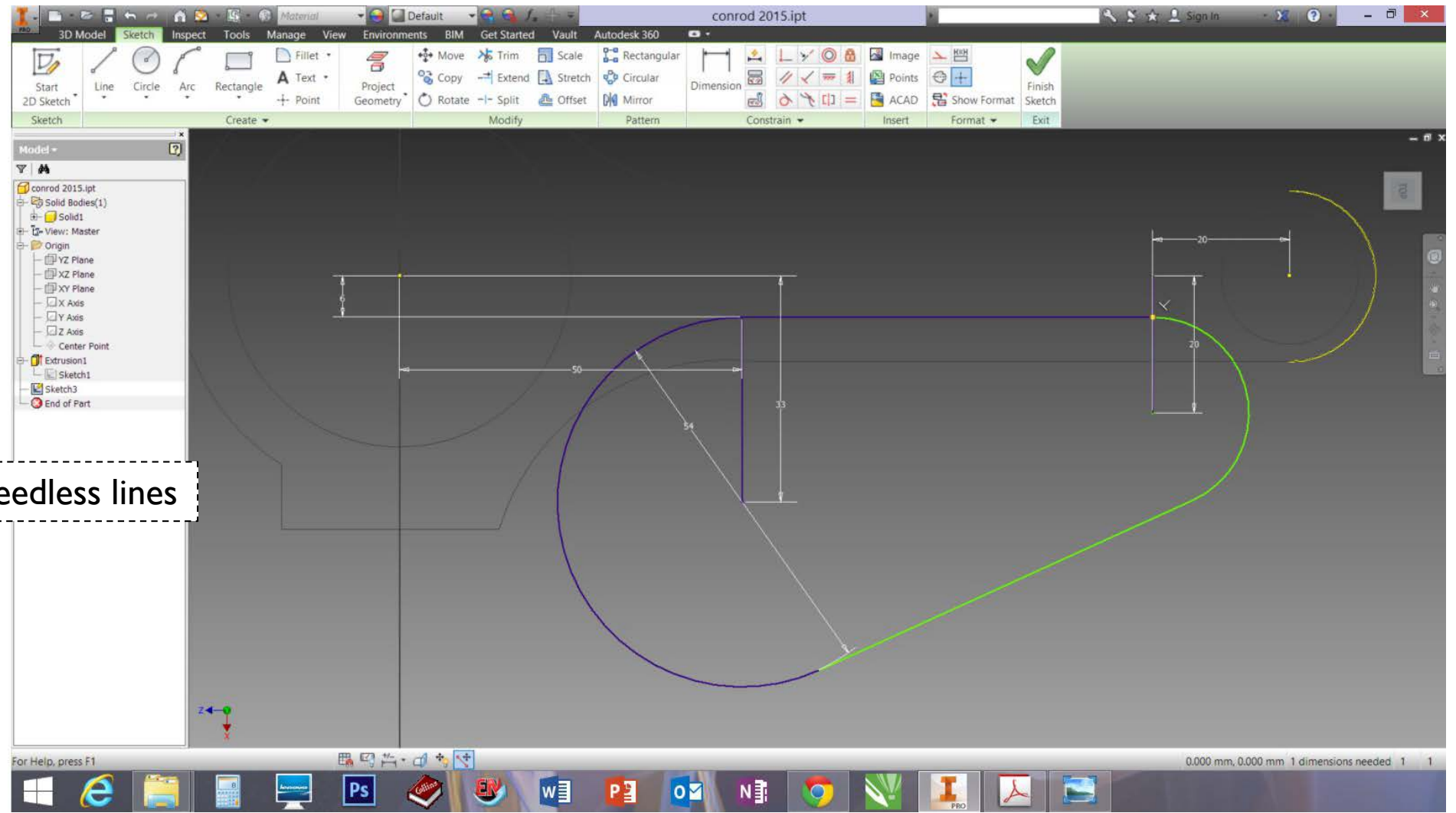
Extrude sketch up to 22 mm in depth

# SKETCHING TOOL-BODY



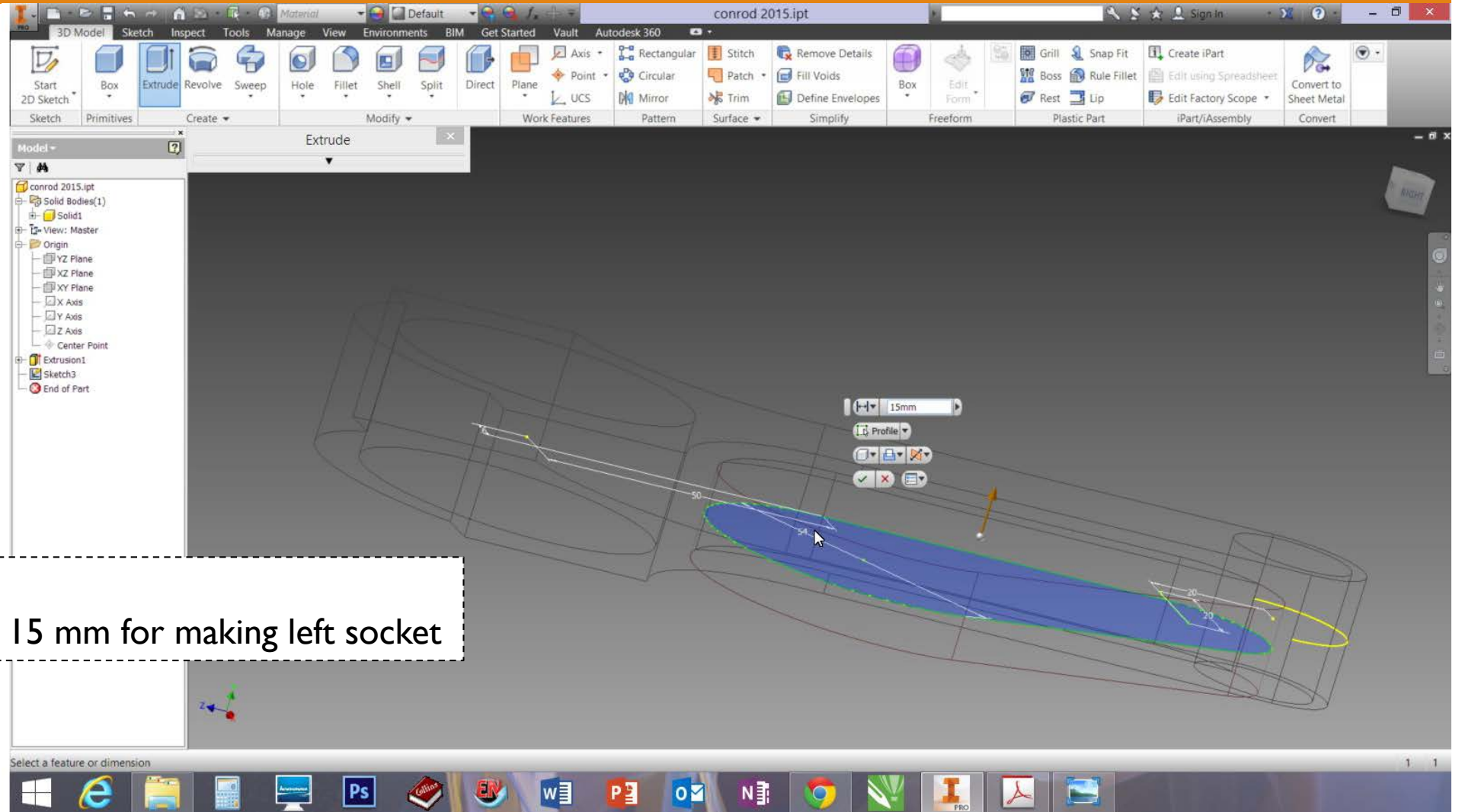
1. Create sketch 2 for cutting as a tool-body
2. Draw 2 circles on plane ZX by referencing to the circles on sketch 1
3. Add lines and constrain then add dimension

# REFINEMENT SKETCH FOR TOOL-BODY



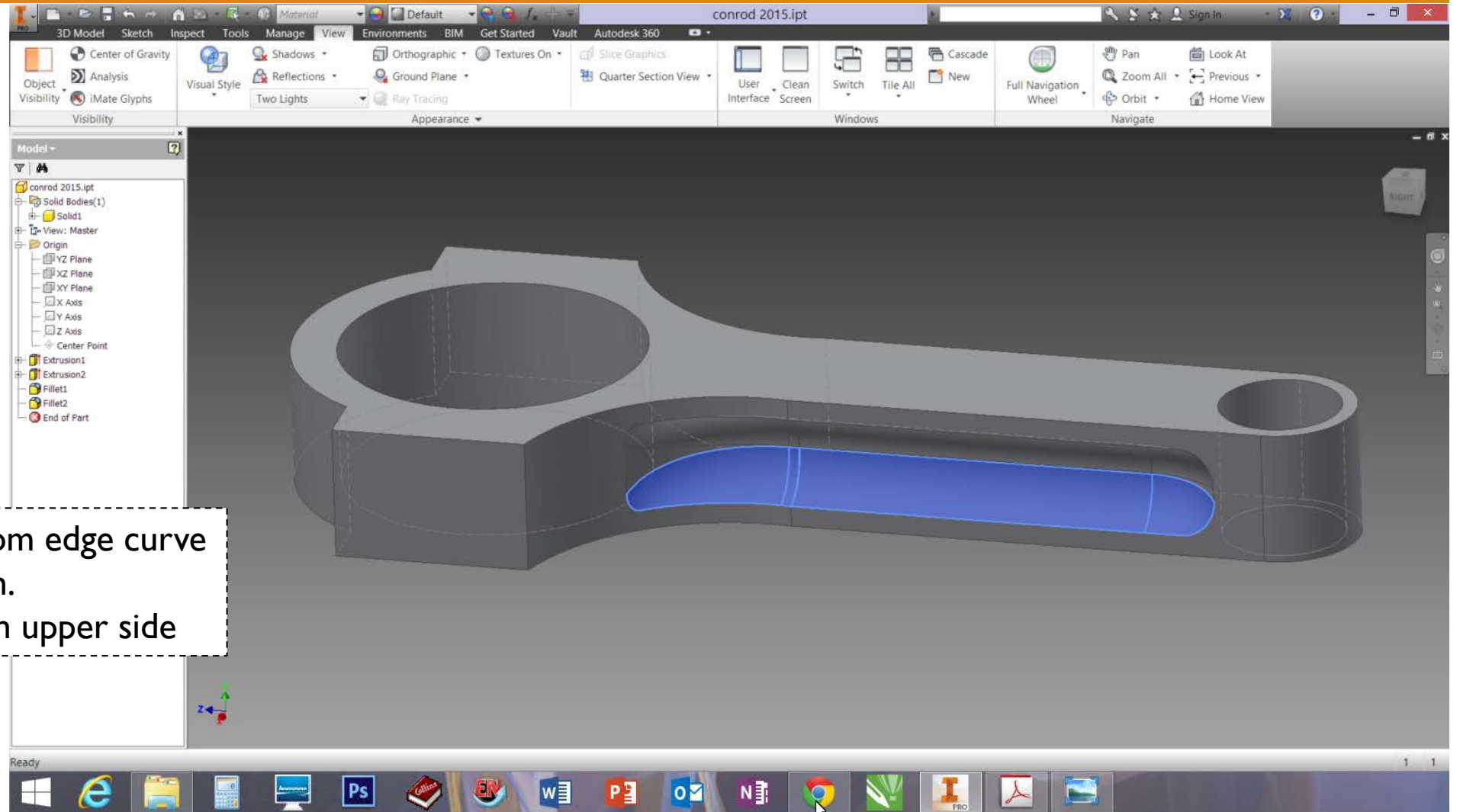
I. Trim and delete needless lines

# CUTTING SOCKET



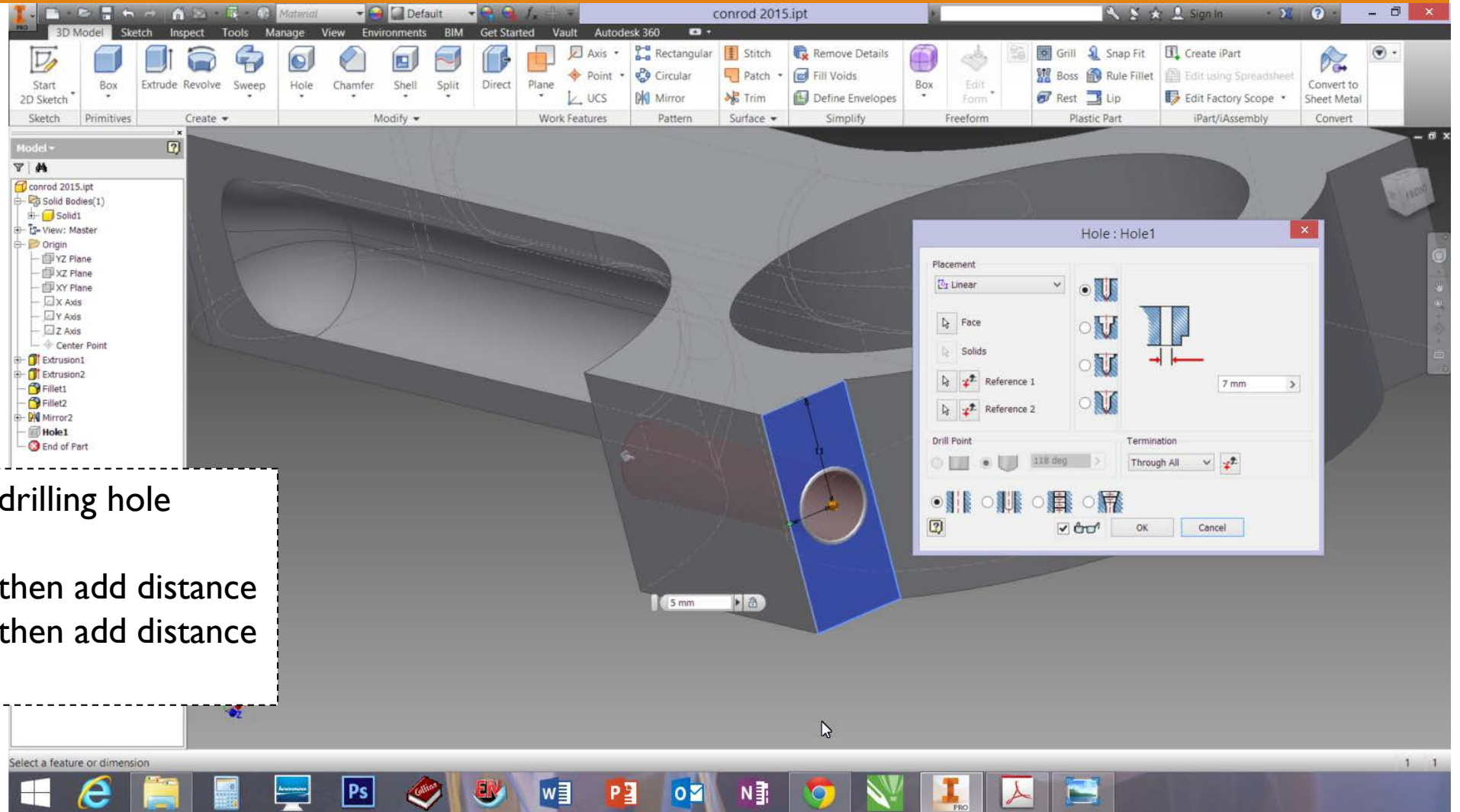
1. Finish sketch 2
2. Extrude cut up to 15 mm for making left socket

# REFINEMENT SOCKET



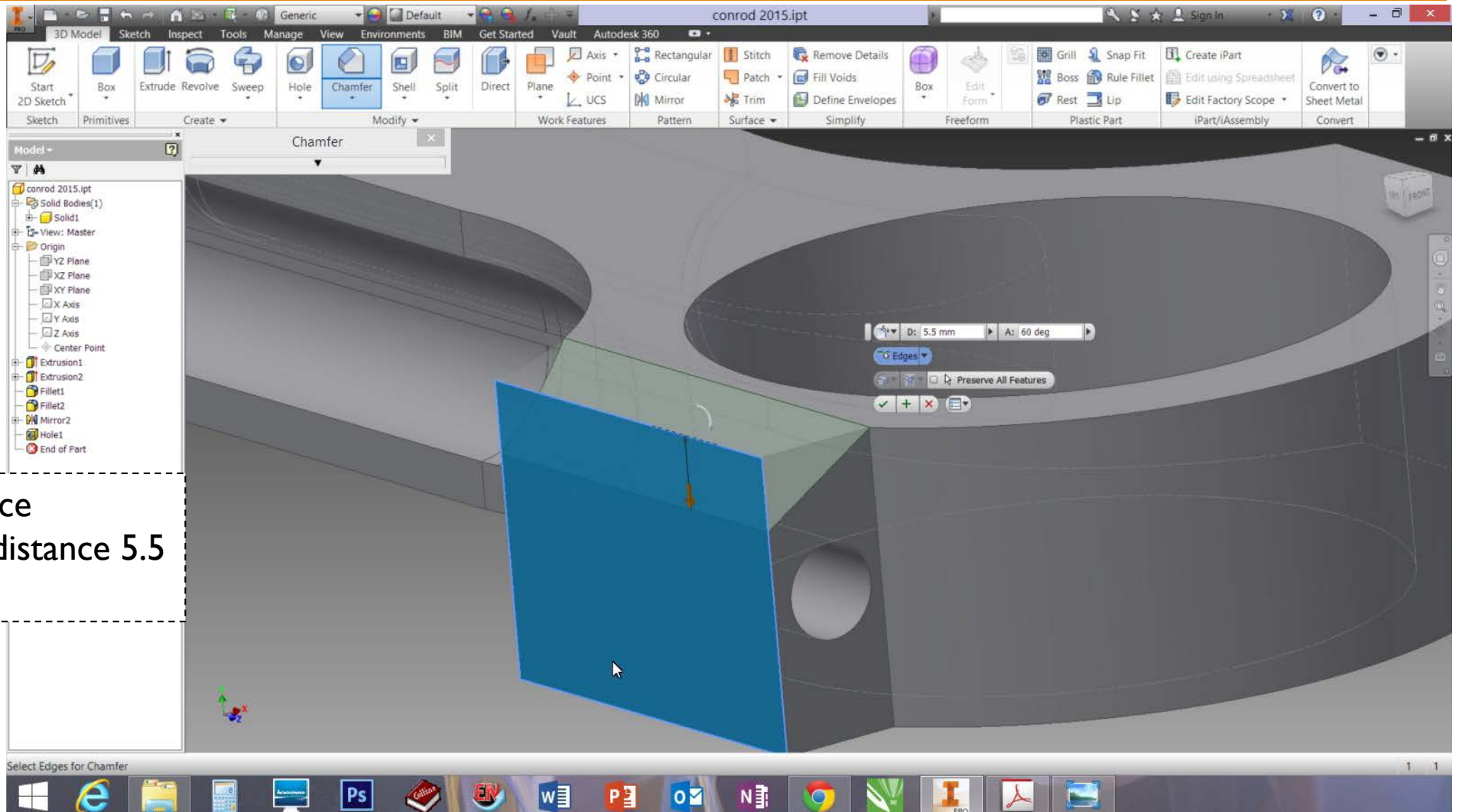
1. Select inside bottom edge curve
2. Chamfer for 7 mm.
3. Repeat chamfer on upper side

# DRILLING HOLE



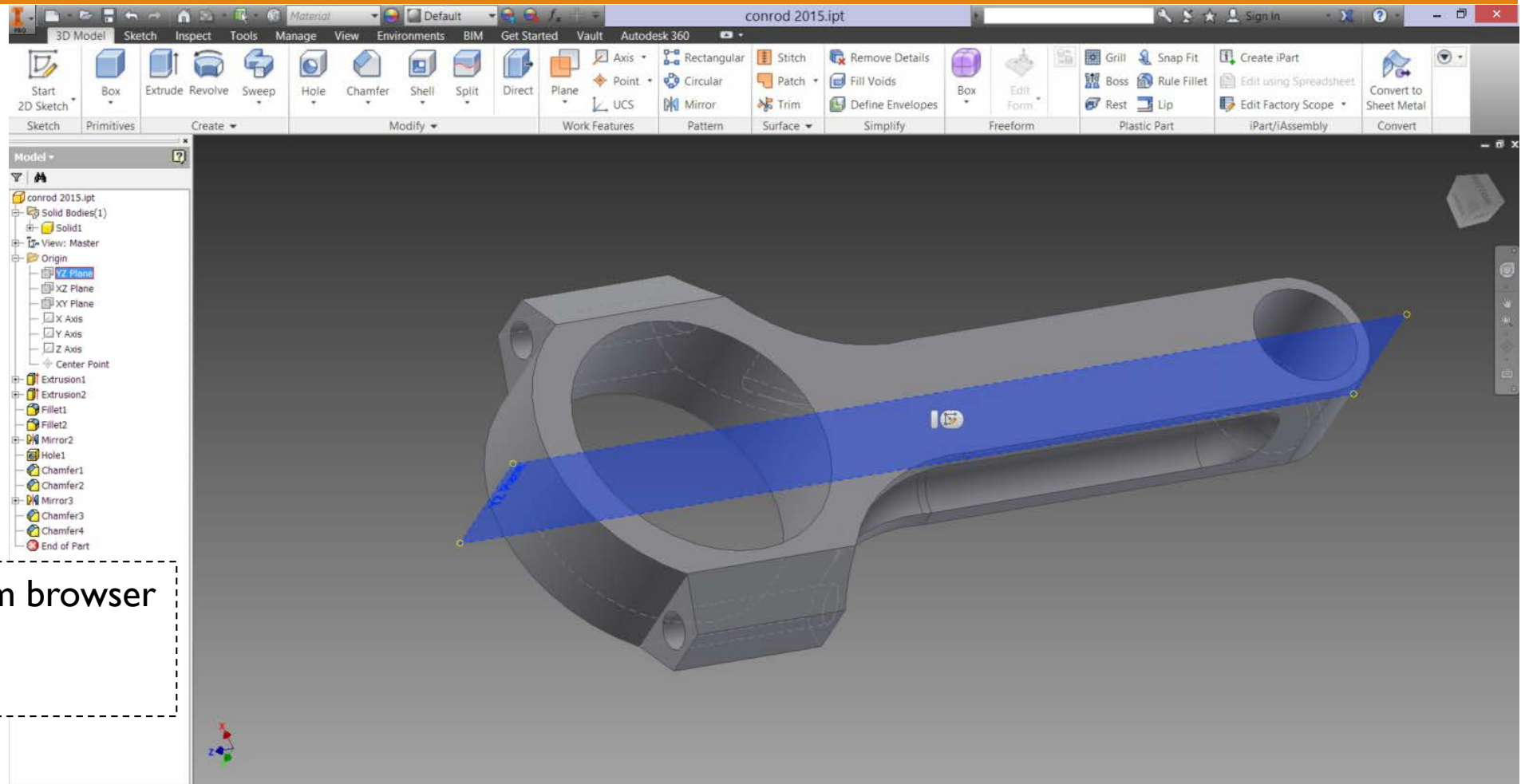
1. Select surface for drilling hole
2. Add diameter
3. Select reference1 then add distance
4. Select reference2 then add distance
5. Click OK

# EDGE CHAMFER



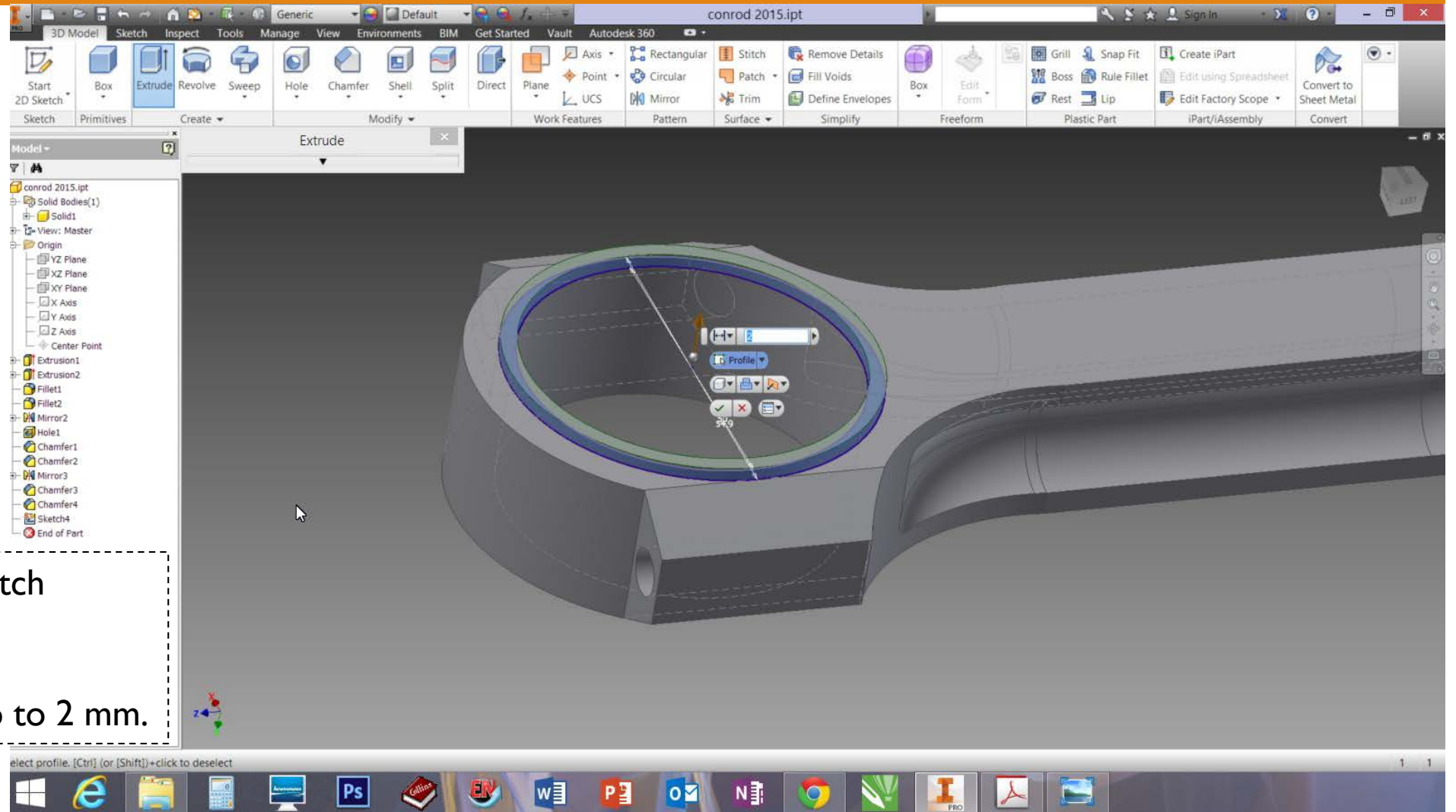
1. Select reference face
2. Add angle 60 and distance 5.5
3. Select edge

# MIRROR FEATURE



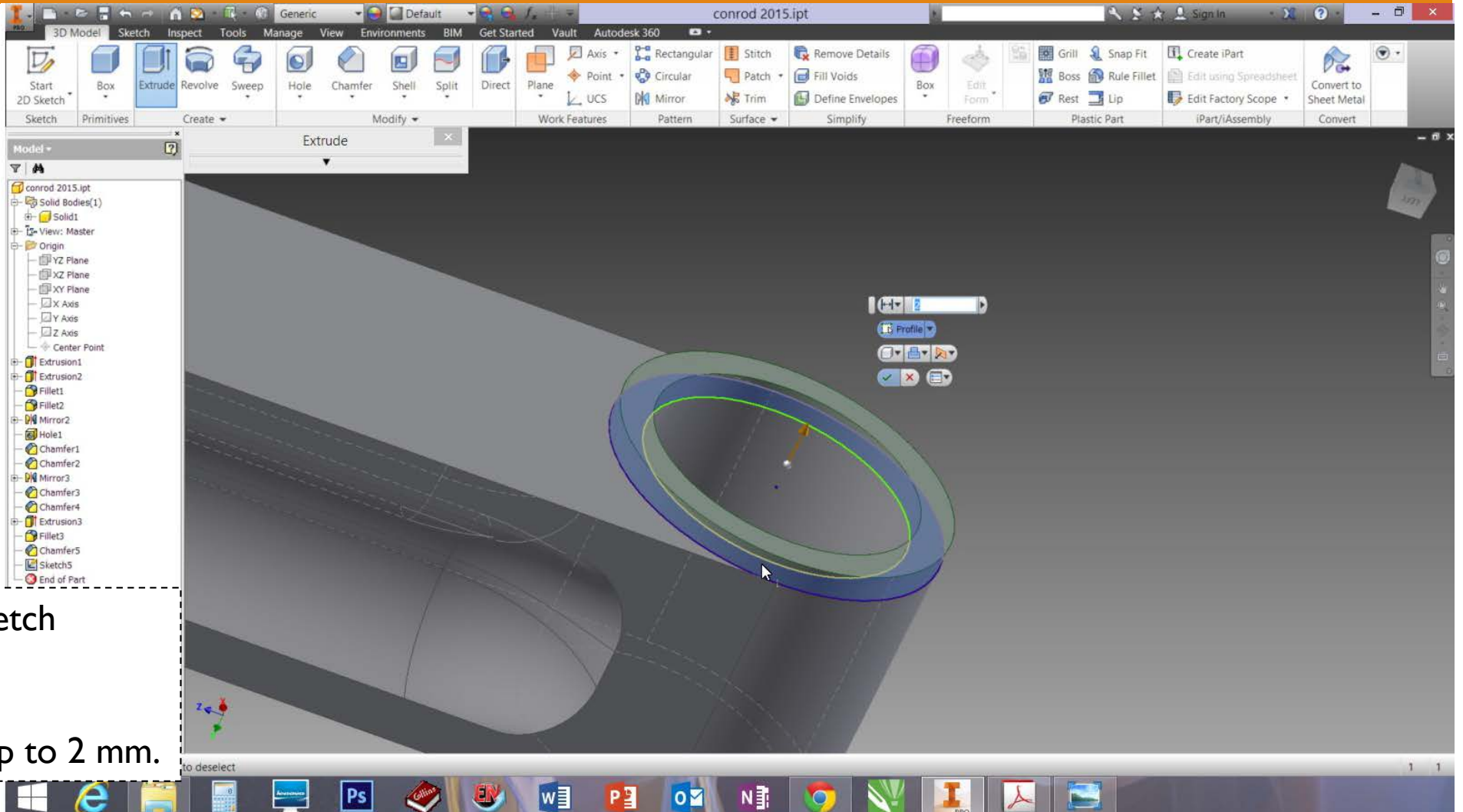
1. Select feature from browser
2. select plane YZ
3. Click OK

# EXTRUDE O-RING (BIG BROTHER)



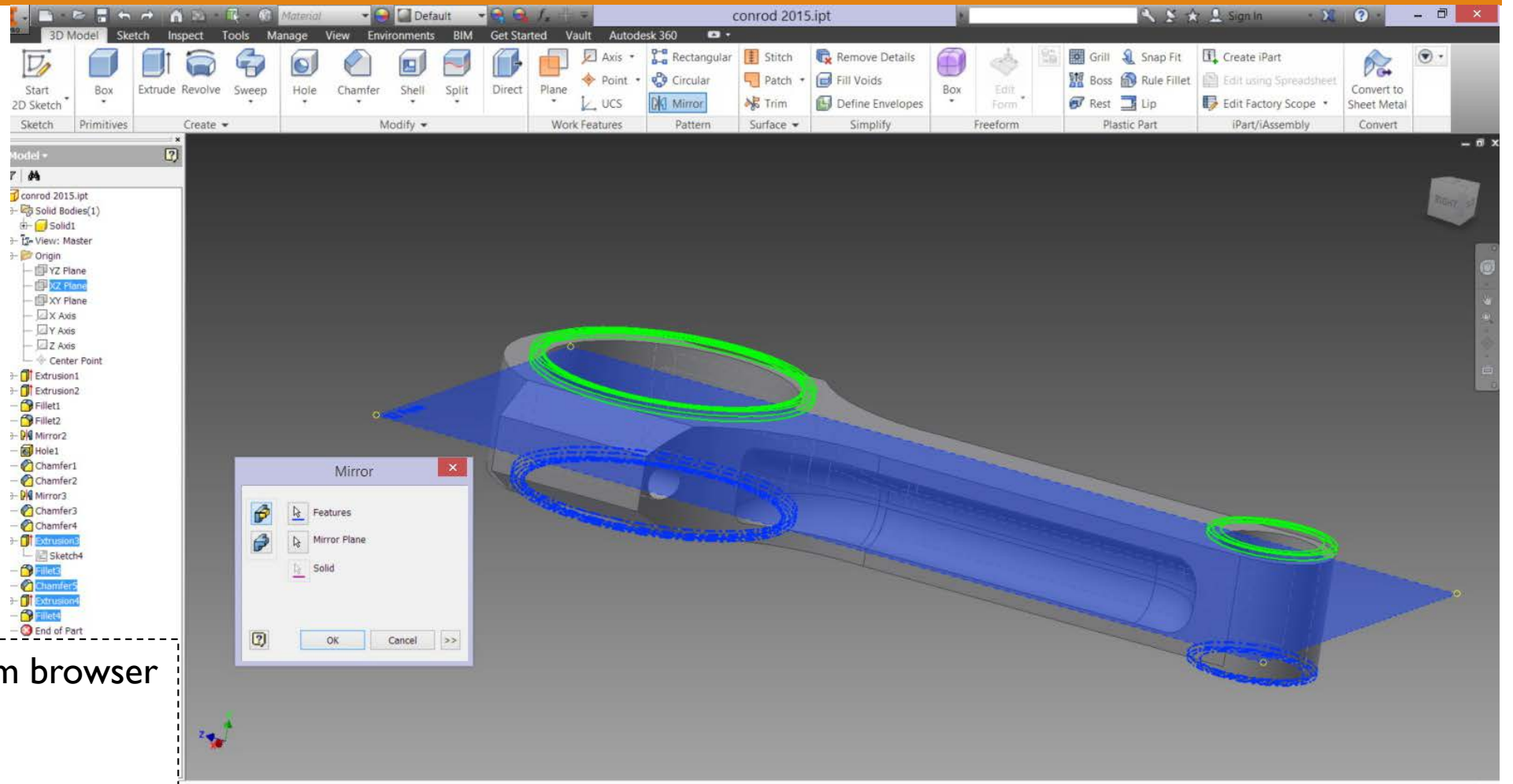
1. Select face for sketch
2. Sketch O-ring
3. Finish sketch
4. Extrude O-ring up to 2 mm.

# EXTRUDE O-RING (LITTLE ONE)



1. Select face for sketch
2. Sketch O-ring
3. Finish sketch
4. Extrude O-ring up to 2 mm.

# MIRROR O-RINGS

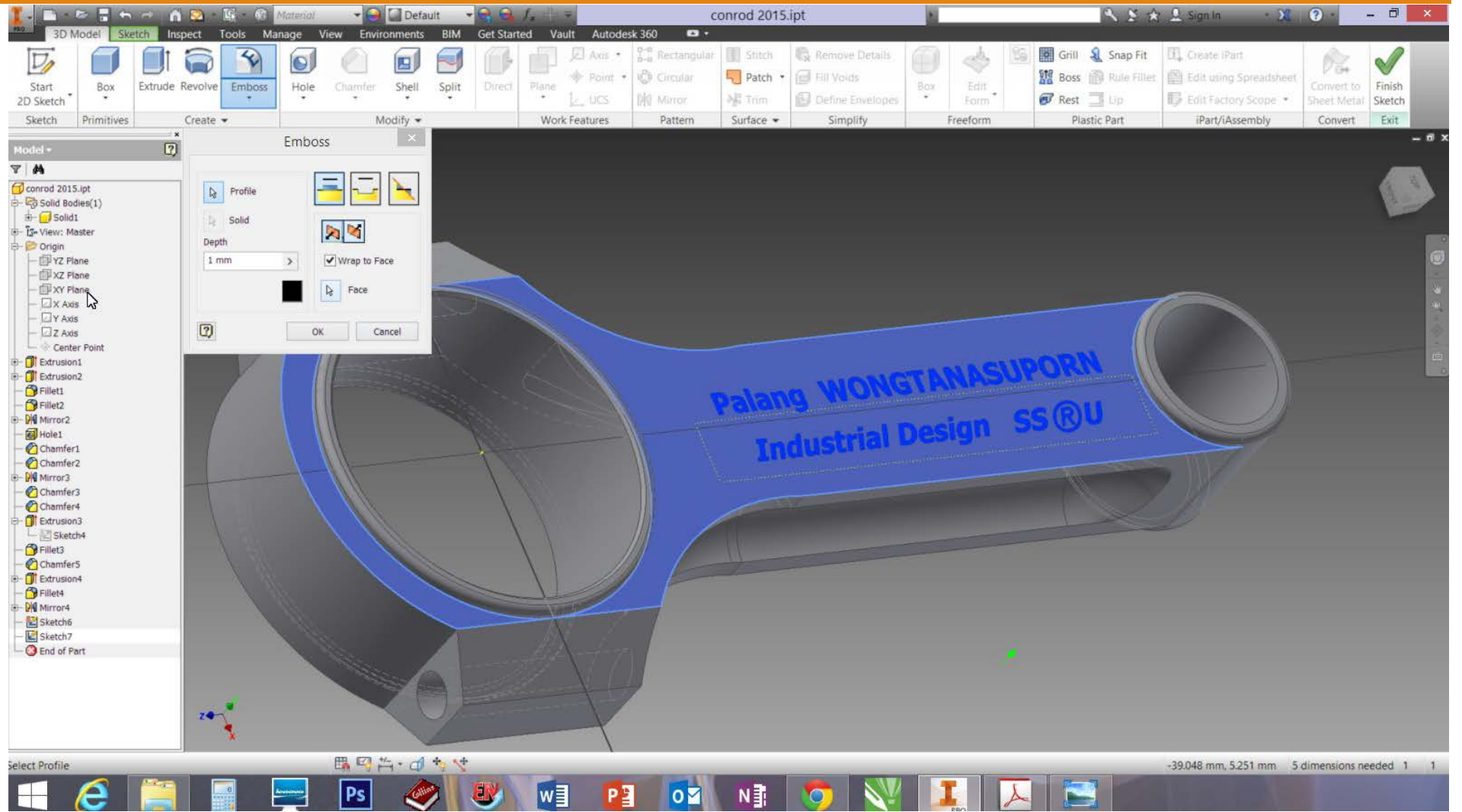


1. Select feature from browser
2. select plane XZ
3. Crick OK

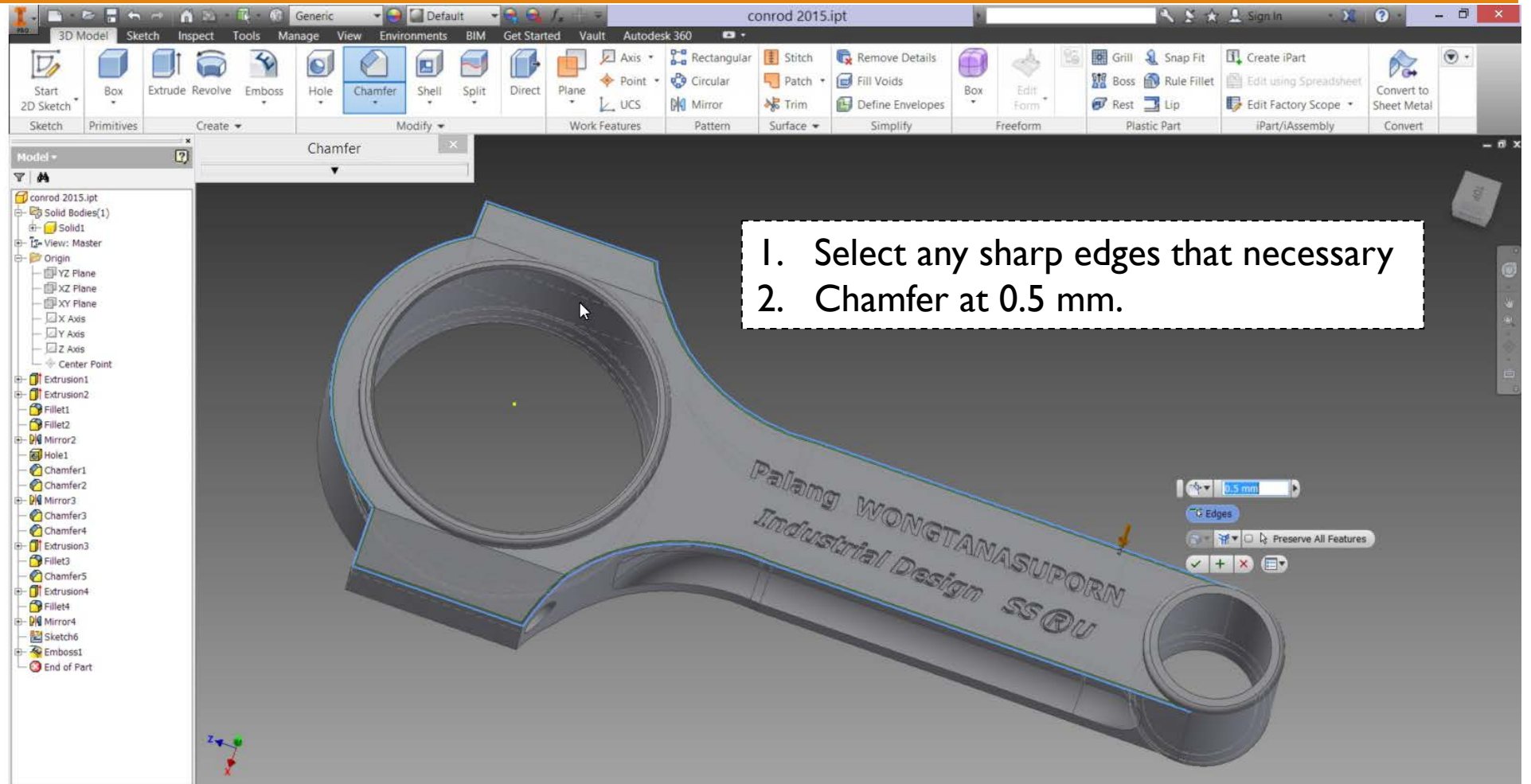


# EMBOSS TEXT

1. Select sketch face
2. click 2D sketch
3. Type text on face
4. Finish sketch
5. Select emboss
6. Select sketch
7. Select face
8. OK

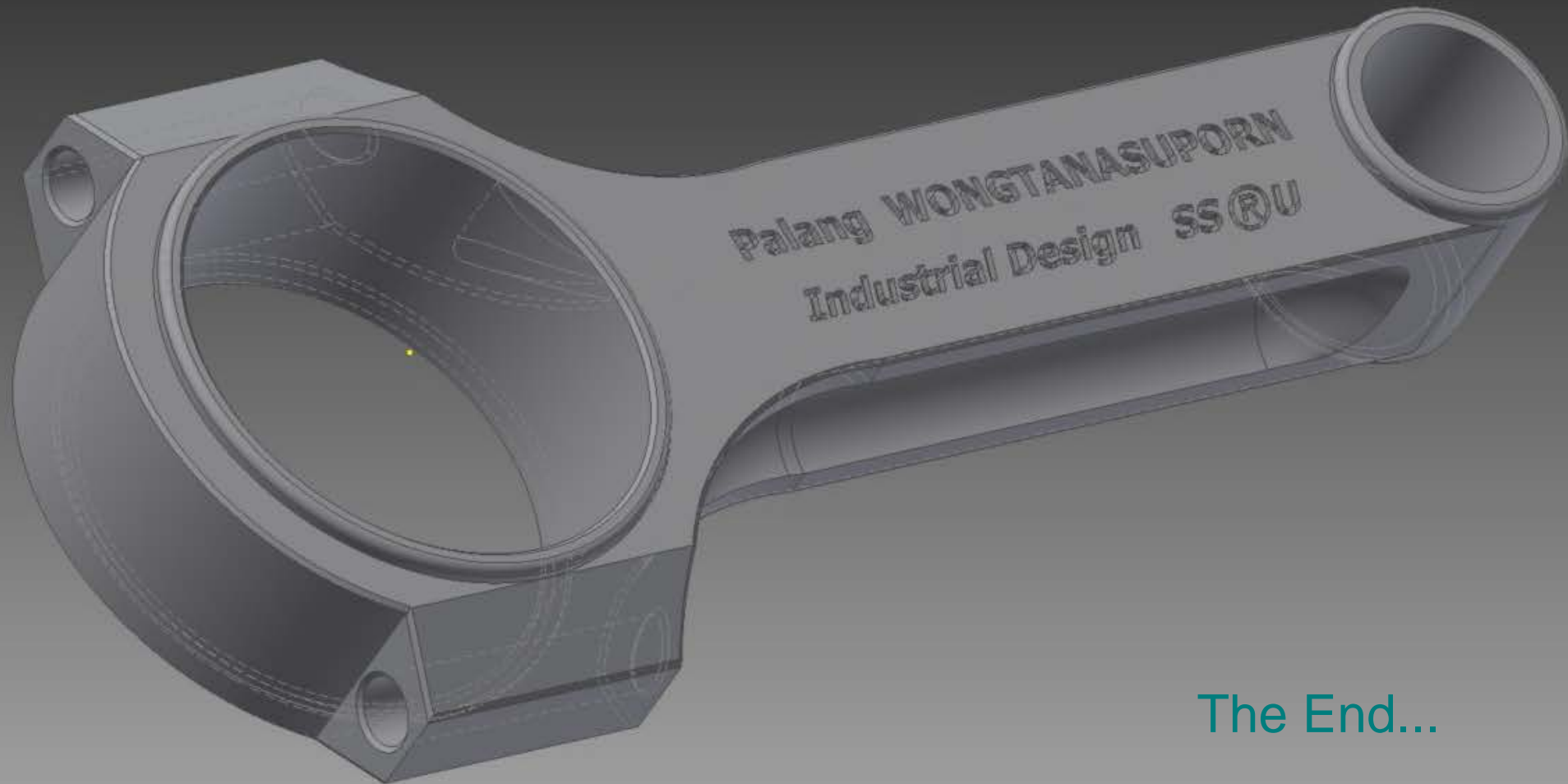


# REFINEMENT SHARP EDGES



Select Edges for Chamfer

# FINAL MODEL



The End...

Thank you for your attention.