

SOLIDWORKS Tips & Tricks

Mark Dolinar

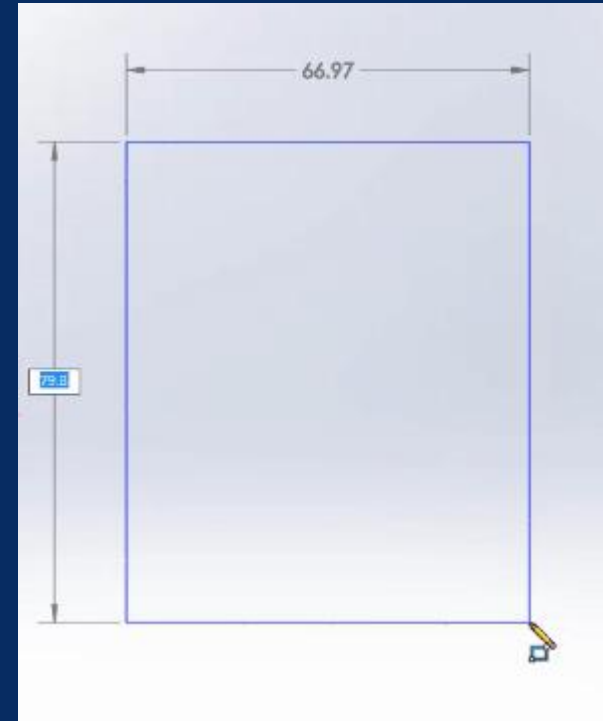


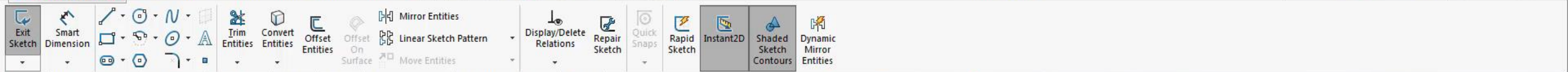
HAWK RIDGE SYSTEMS

Your Source for Engineering Design Solutions

1. On Screen Numeric Input

- ▶ Apply Dimensions simultaneously while sketching



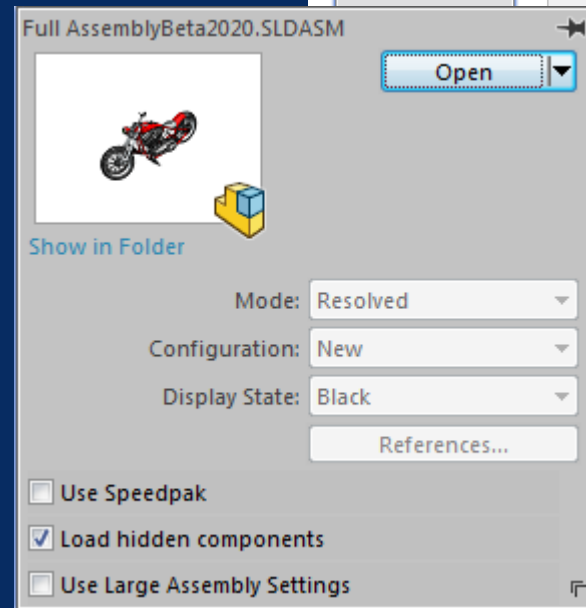
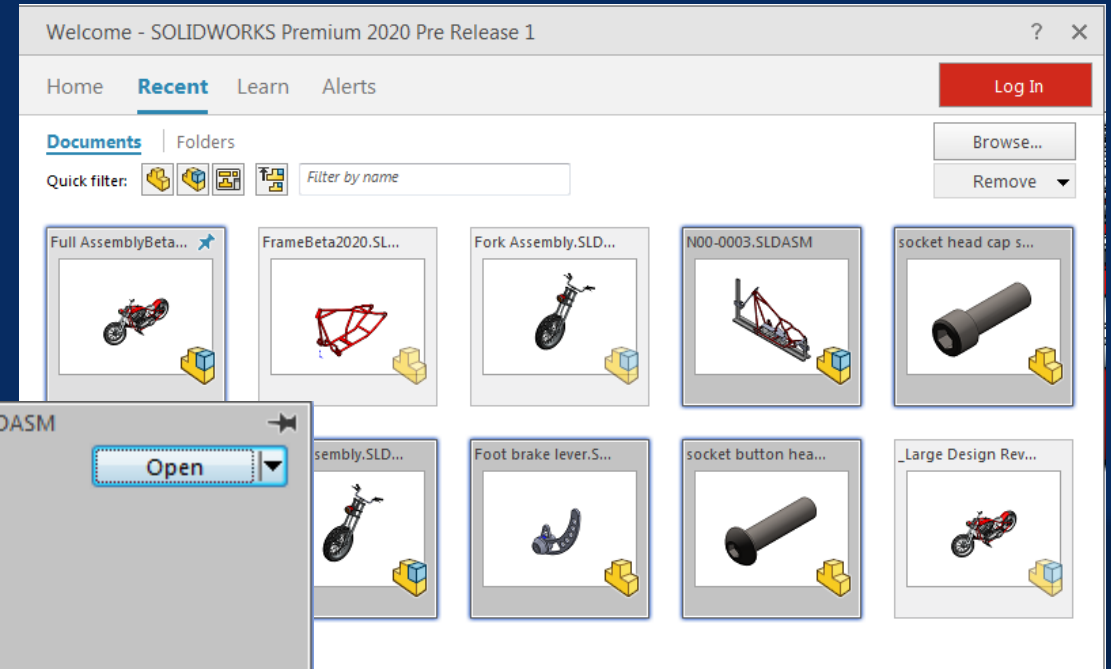


- Part3 (Default <Default>_Display State)
 - History
 - Sensors
 - Annotations
 - Material <not specified>
 - Front Plane
 - Top Plane
 - Right Plane
 - Origin
 - (-) Sketch2



2. Recent Documents

- ▶ Open recent documents by selecting “R” key
- ▶ Pin most important documents to the top of the list
- ▶ Double Click on Start Screen
- ▶ Open using advanced options





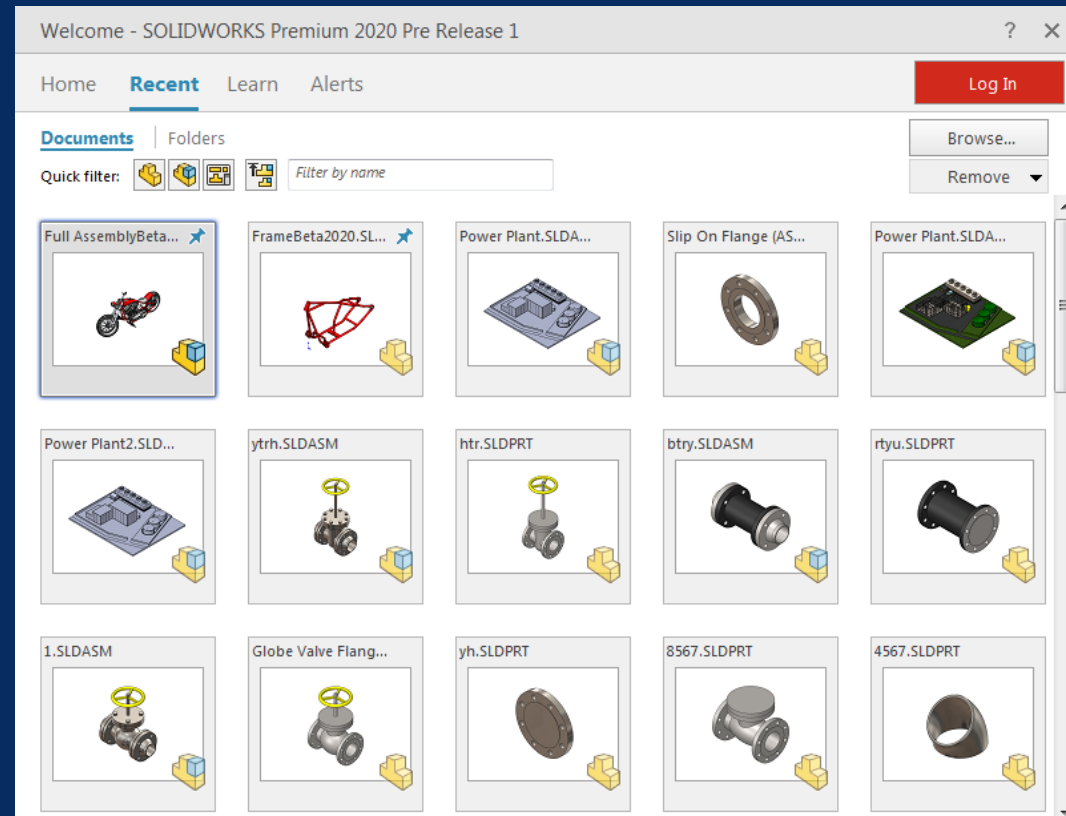
Assembly Layout Sketch Markup Evaluate SOLIDWORKS Add-Ins

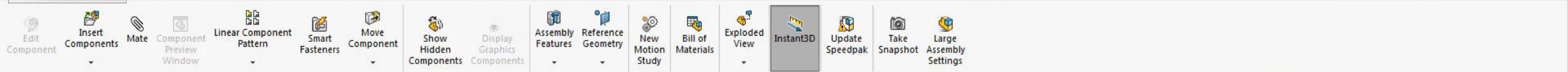
- Full AssemblyBeta2020 (New<Display State-1>)
- History
- Sensors
- Annotations
- Front Plane
- Top Plane
- Right Plane
- Origin
- Frame/ Tins
 - (f) FrameBeta2020<1> -> (Default<As Machined>)
 - Rear FenderBeta2020<1> ->? (Default<<Default>_)
 - (f) Gas Tank-RNBeta2020<2> -> (Default<<Defaul
 - [Oil Tank^Full AssemblyBeta2020]<1> -> (Defaul
 - SeatBeta2020<1> -> (Default<<Default>_Display S
 - Gas TankBeta2020<1> (Default)
- Rims/ Tires
- Fork
- Imported Components
 - (-) Air-Filter<1> (Default<<Default>_Display State 1>)
 - (-) Front Wheel<1> (Default)
 - (f) Oil Tank<1> (Default<<Default>_Display State 1>)
 - [Part13^Full AssemblyBeta2020]<1> -> (Default<<De
 - (-) [Assem2^Full AssemblyBeta2020]<1> (Default<Di
 - (-) 5 Ah battery<1> (Default<<Default>_Appearance D
 - (-) Rear Rotor<1> (Default<<Default>_Display State 1>
 - (-) Rear Brake Caliper<1> (Default<<Default>_Display
 - (f) [Part4^Full AssemblyBeta2020]<2> (Default<<Def
 - [Part5^Full AssemblyBeta2020]<1> -> (Default<<Def
 - [Part6^Full AssemblyBeta2020]<1> -> (Default<<Def
 - [Part6^Full AssemblyBeta2020]<2> -> (Default<<Def
 - [Part1^Full AssemblyBeta2020]<1> -> (Default<<Def
- Mates
 - MirrorComponent1
 - MirrorComponent3



3. Toggle Open Documents

- ▶ Window -> Browse Open Documents
- ▶ “Ctrl + Tab”





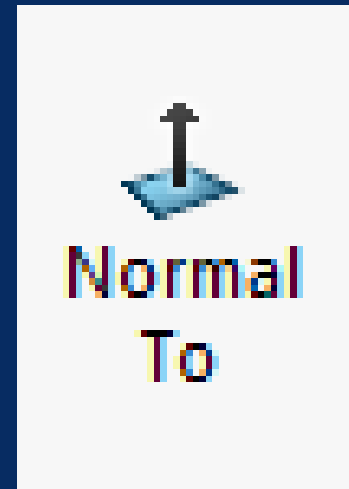
Assembly Layout Sketch Markup Evaluate SOLIDWORKS Add-Ins

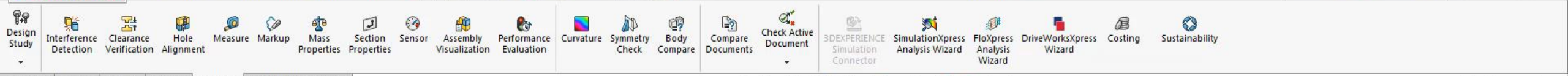
- (f) FrameBeta2020<1> -> (Default<As Machi
- Rear FenderBeta2020<1> ->? (Default<Defa
- (f) Gas Tank-RNBeta2020<2> -> (Default<C
- [Oil Tank^Full AssemblyBeta2020]<1> -> (C
- SeatBeta2020<1> -> (Default<<Default>_Dis
- Gas TankBeta2020<1> (Default)
- Rims/ Tires
 - Rear TireBeta2020<1> (Default)
 - (-) Front TireBeta2020<1> (Default)
 - (-) _Rear Tire NewBeta2020<2> ->? (Spokes 2
 - (-) PINKI.pA_Zadnji_TocakBeta2020<1> (Defa
- Fork
 - ForkBeta2020<1> -> (Default<<Default>_Dis
 - (-) Fork Assembly<1> (Default<Display State
 - Mates in Full AssemblyBeta2020
 - History
 - Sensors
 - Annotations
 - Front Plane
 - Top Plane
 - Right Plane
 - Origin
 - (f) Fork<1> (Default)
 - (f) _Front TireBeta2020<1> ->? (Spokes 2
 - Front Hub<1> -> (Default<<Default>_D
 - (f) Drop Down Bracket<1> ->? (Default<
 - (-) Top Tube Hub<1> ->? (Default<<Def
 - Front Brake Rotor<1> ->? (Default<<Def
 - (-) Front Brake Caliper<1> ->? (Default<
 - (-) 7211102 Handle Bar Riser DualBeta202
 - (f) Handle Bar<1> ->? (Default<As Mach
 - (-) 7211122 Grip<1> (Default<<Default>
 - (-) Clutchlever_asswmbly<1> (Default<C
 - (-) Clutchlever_asswmbly<2> (Default<C
 - (-) 7211122 Grip<2> (Default<<Default>



4. Normal Too

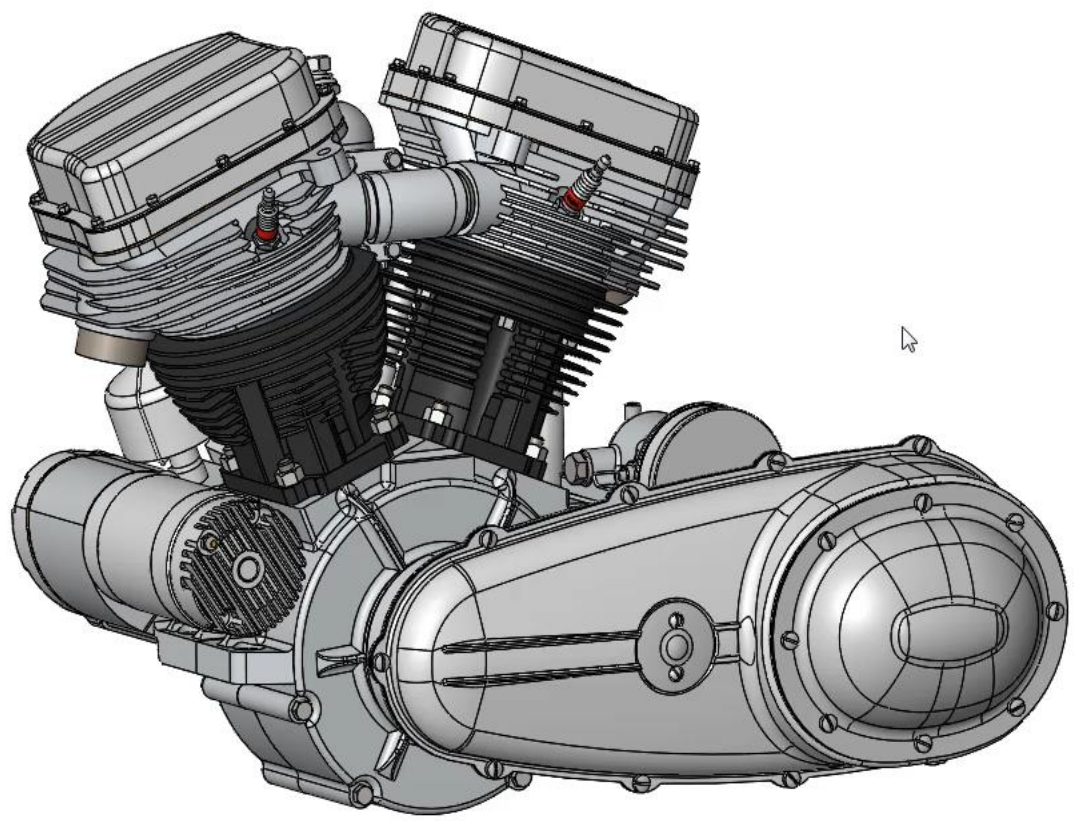
- ▶ Automatically Rotate to the Optimal Sketching View
- ▶ Select on desired face
- ▶ Customize Keyboard for Hot Key





Assembly Layout Sketch Markup Evaluate SOLIDWORKS Add-Ins

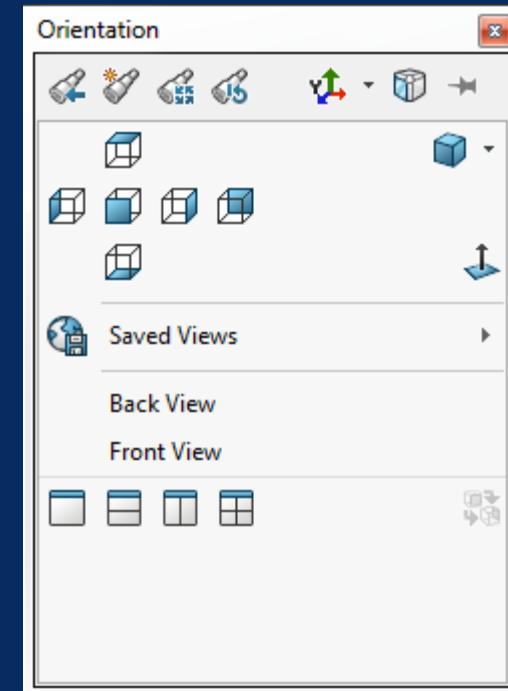
- Pan HeadBeta2020 (Default-Defau)
- History
- Sensors
- Annotations
- Front Plane
- Top Plane
- Right Plane
- Origin
- (f) 1952 Panhead Bottom Assyl
 - Mates in Pan HeadBeta2020
 - History
 - Sensors
 - Annotations
 - Solid Bodies(47)
 - Material <not specified>
 - Front Plane
 - Top Plane
 - Right Plane
 - Origin
 - LS Case-2-solid1
 - RS Case-2-solid1
 - RS Cover Assy-1/RS Cover
 - RS Cover Assy-1/RS Cover
 - RS Cover Assy-1/1-4 hex I-
 - RS Cover Assy-1/1-4 hex I-
 - RS Cover Assy-1/1-4 Fillist
 - RS Cover Assy-1/1-4 Fillist
 - RS Cover Assy-1/1-4 Fillist
 - RS Cover Assy-1/1-4 Fillist
 - RS Cover Assy-1/1-4 Fillist
 - RS Cover Assy-1/1-4 Fillist
 - RS Cover Assy-1/1-4 Fillist
 - RS Cover Assy-1/1-4 Fillist
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 - RS Cover Assy-1/1-4 Fillist
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 - RS Cover Assy-1/1-4 Fillist
 - RS Cover Assy-1/1-4 Fillist
 - RS Cover Assy-1/1-4 Fillist
 - RS Cover Assy-1/1-4 Fillist

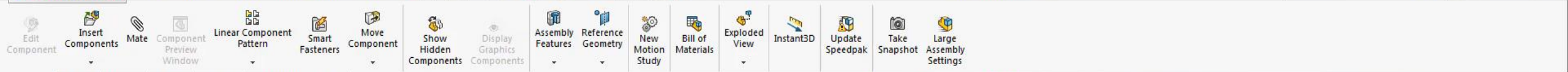


Front View

5. View Manipulation

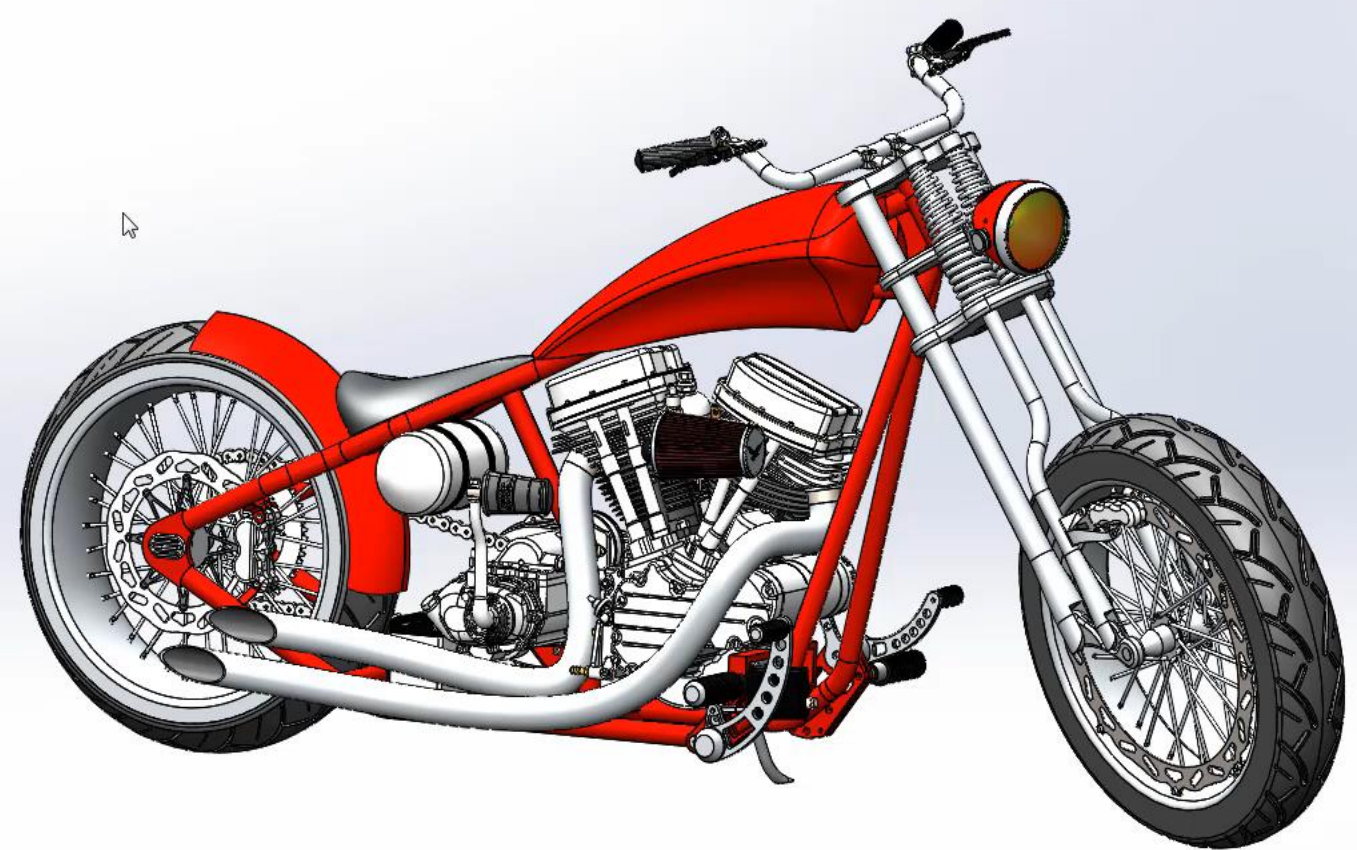
- ▶ Ctrl + Arrow Pan
- ▶ View Orientation Short Cut
- ▶ Save View





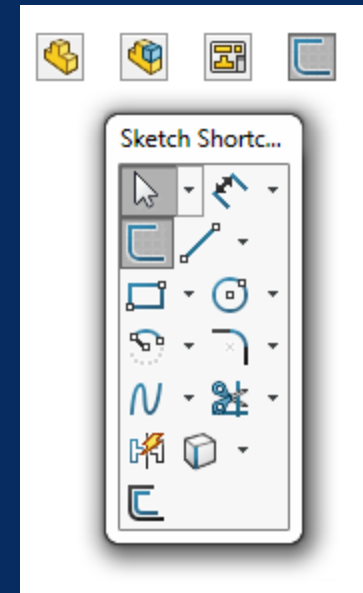
Assembly Layout Sketch Markup Evaluate SOLIDWORKS Add-Ins

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 - Rear FenderBeta2020<1> ->? (Default<<Default>_)
 - (f) Gas Tank-RNBeta2020<2> -> (Default<<Default
 - [Oil Tank^Full AssemblyBeta2020]<1> -> (Default
 - SeatBeta2020<1> -> (Default<<Default>_Display S
 - Gas TankBeta2020<1> (Default)
- Rims/ Tires
- Fork
- Imported Components
- (-) Air-Filter<1> (Default<<Default>_Display State 1>)
- (-) Front Wheel<1> (Default)
- (f) Oil Tank<1> (Default<<Default>_Display State 1>)
- [Part13^Full AssemblyBeta2020]<1> -> (Default<<De
- (-) [Assem2^Full AssemblyBeta2020]<1> (Default<Di
- (-) 5 Ah battery<1> (Default<<Default>_Appearance D
- (-) Rear Rotor<1> (Default<<Default>_Display State 1>
- (-) Rear Brake Caliper<1> (Default<<Default>_Display
- (f) [Part4^Full AssemblyBeta2020]<2> (Default<<Def
- [Part5^Full AssemblyBeta2020]<1> -> (Default<<Def
- [Part6^Full AssemblyBeta2020]<1> -> (Default<<Def
- [Part6^Full AssemblyBeta2020]<2> -> (Default<<Def
- [Part1^Full AssemblyBeta2020]<1> -> (Default<<Def
- Mates
- MirrorComponent1
- MirrorComponent3



6. Shortcut Key

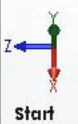
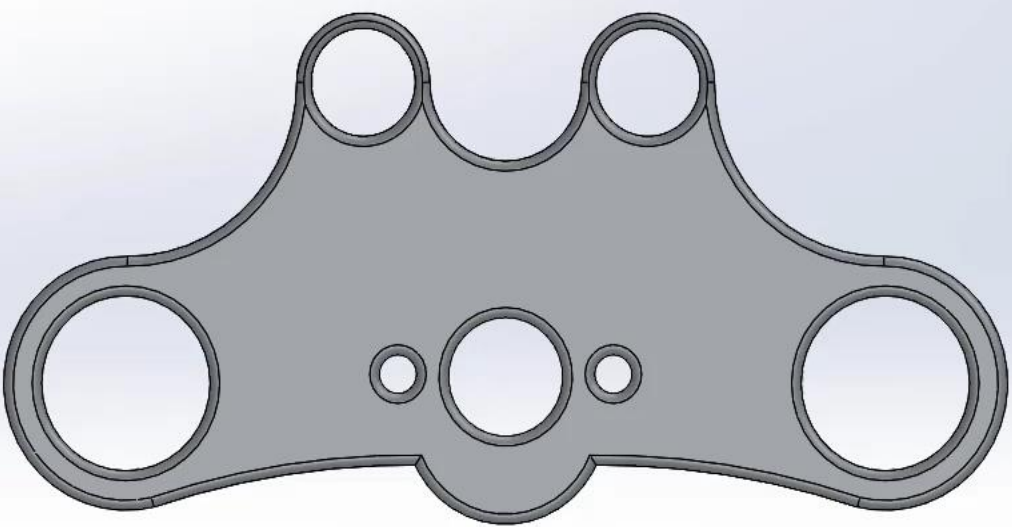
- ▶ Access the shortcut tool bar by selecting “S” Key
- ▶ Search for tools with the search command
- ▶ Customize the User interface
- ▶ Dynamic Mirror Entities



Exit Sketch Smart Dimension Trim Entities Convert Entities Offset Entities Mirror Entities Linear Sketch Pattern Display/Delete Relations Repair Sketch Quick Snaps Rapid Sketch Instant2D Shaded Sketch Contours

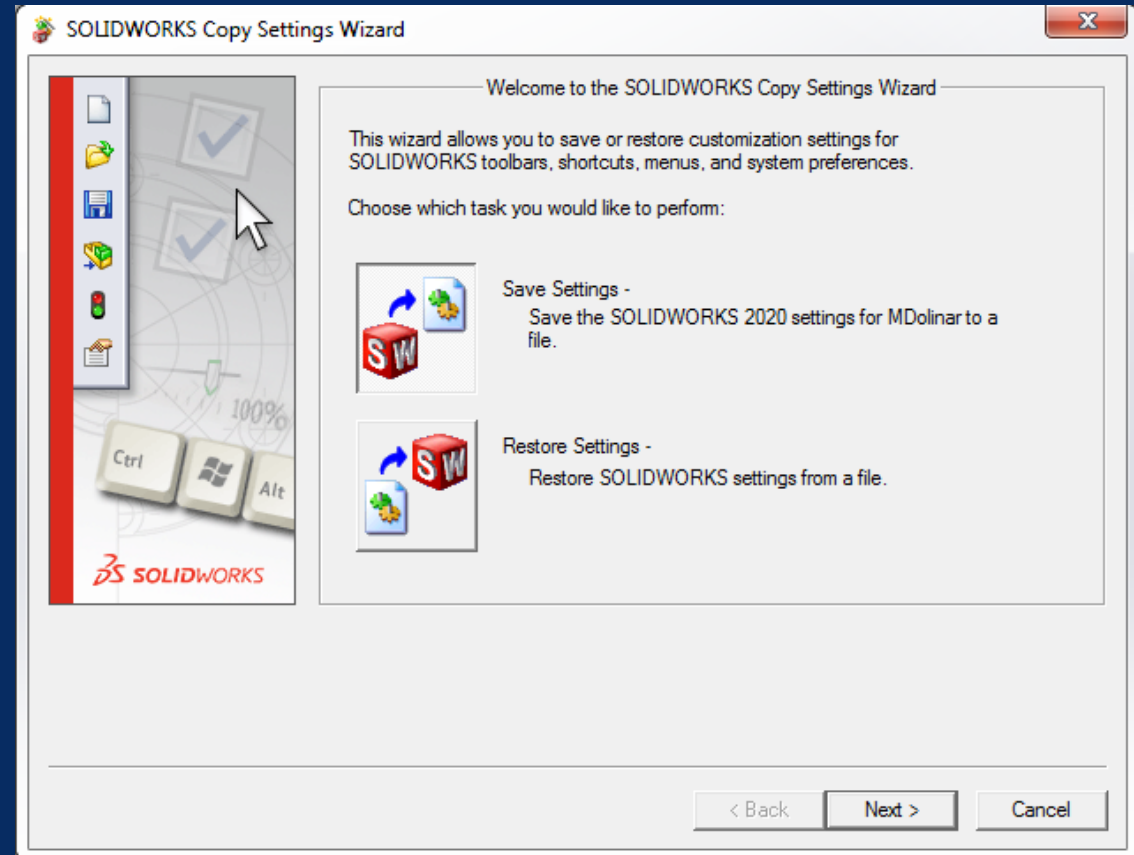
Features Sketch Surfaces Sheet Metal Weldments Markup Evaluate MBD Dimensions SOLIDWORKS Add-Ins MBD

Insert Line
Message: Edit the settings of the next new line or sketch a new line.
Orientation: As sketched, Horizontal, Vertical, Angle
Options: For construction, Infinite length, Midpoint line, Add dimensions



7. Copy Settings Wizard

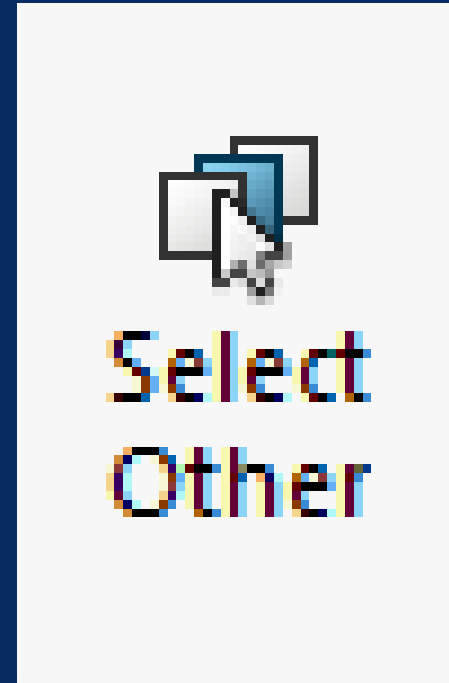
- ▶ Easily Transfer Settings from computer to computer
- ▶ Makes upgrades painless

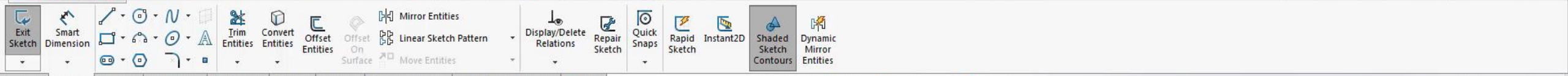


SOLIDWORKS
2020

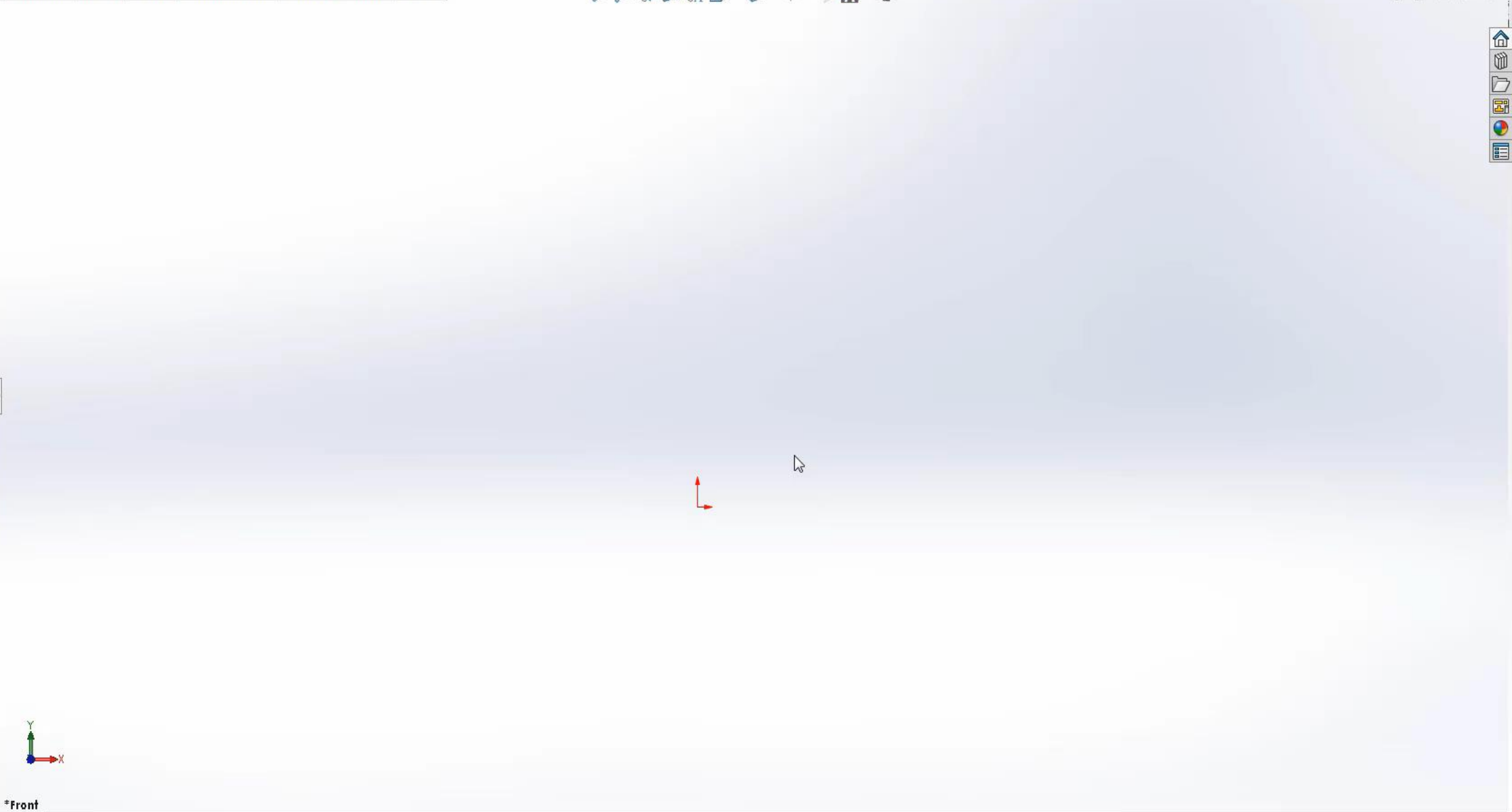
8. Select Other Sketch

- ▶ Right Click on Selected Entity
- ▶ Grab hidden sketch lines
- ▶ Available in Parts & Assemblies



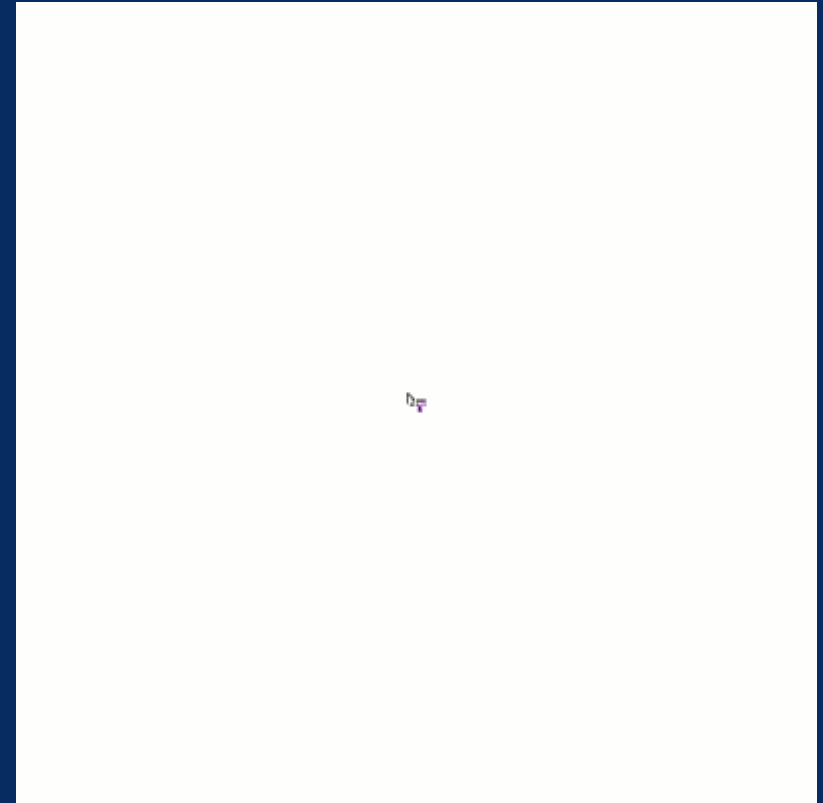


- Part32 (Default << Default >> Display State)
 - History
 - Sensors
 - Annotations
 - Material <not specified>
 - Front Plane
 - Top Plane
 - Right Plane
 - Origin
 - (-) Sketch1



9. Selection Filter

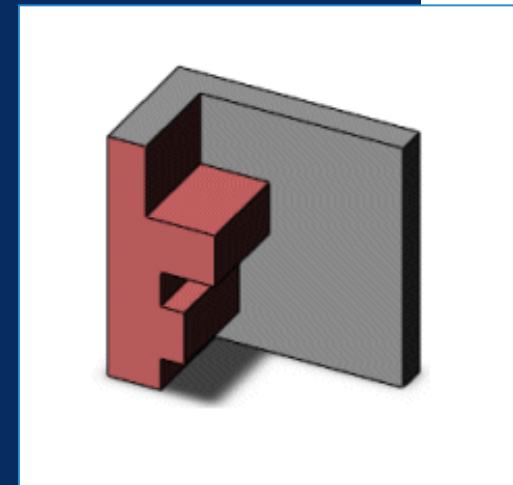
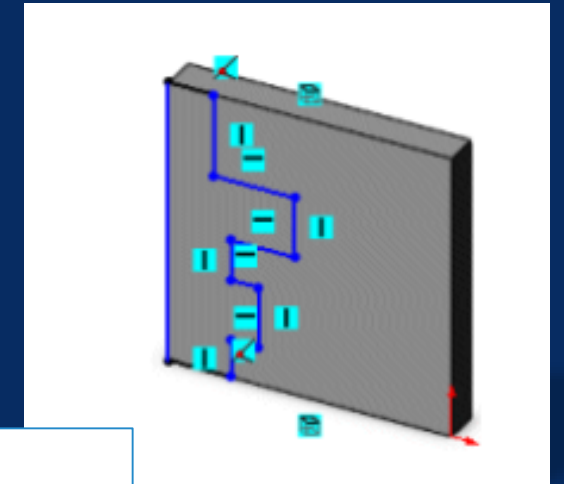
- ▶ Preselect what sketch entities you want to grab
- ▶ “F5” Activates Selection Tool Bar
- ▶ “F9” Deactivates all selections





10. Automatically Close Sketch

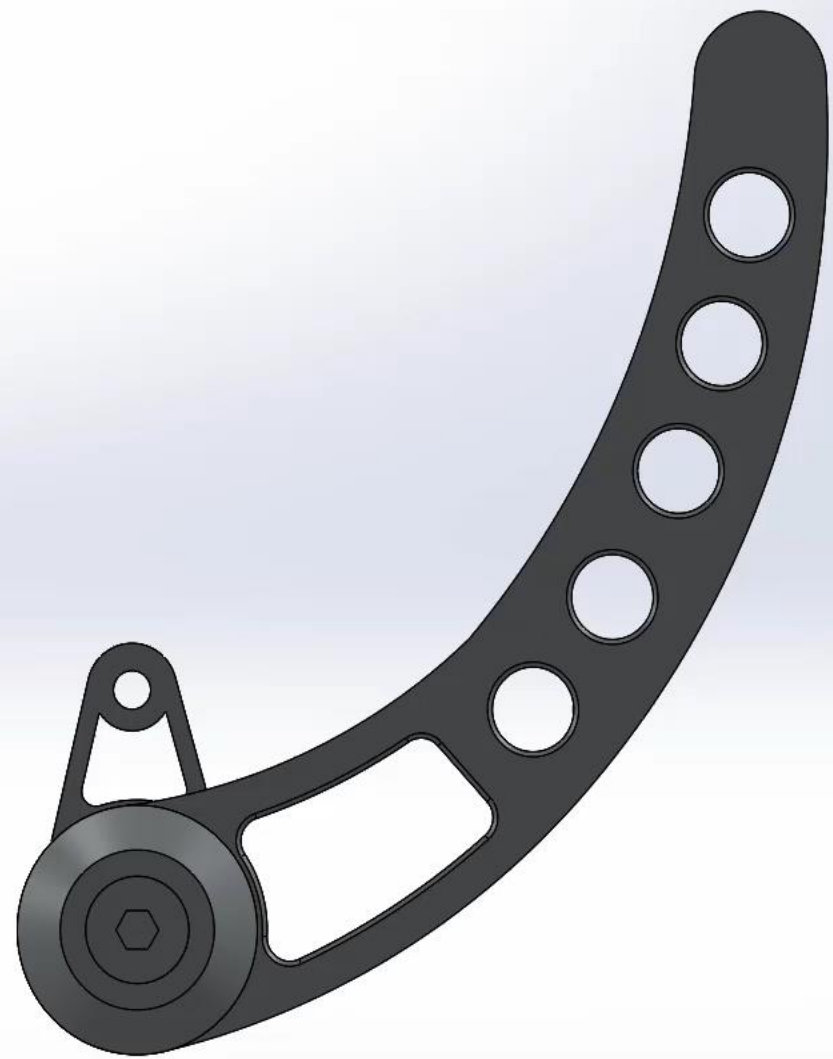
- ▶ Sketch close to model edge
- ▶ SOLIDWORKS will recognize edge and contain sketch



Design Study Interference Detection Measure Markup Mass Properties Section Properties Sensor Performance Evaluation Check Geometry Analysis Import Diagnostics Body Compare Deviation Analysis Draft Analysis Symmetry Check Zebra Stripes Undercut Analysis Thickness Analysis Check Active Document 3DEXPERIENCE Simulation Connector SimulationXpress Analysis Wizard FloXpress Analysis Wizard DFMXpress Analysis Wizard DriveWorksXpress Wizard Costing Sustainability Part Reviewer

Features Sketch Surfaces Sheet Metal Weldments Markup Evaluate MBD Dimensions SOLIDWORKS Add-Ins MBD

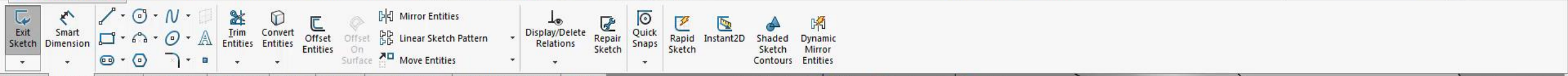
- Home
 - File
 - View
 - Insert
 - Tools
 - Window
 - Help
 - Design Study
 - Interference Detection
 - Measure
 - Markup
 - Mass Properties
 - Section Properties
 - Sensor
 - Performance Evaluation
 - Check
 - Geometry Analysis
 - Import Diagnostics
 - Body Compare
 - Deviation Analysis
 - Draft Analysis
 - Symmetry Check
 - Zebra Stripes
 - Undercut Analysis
 - Thickness Analysis
 - Check Active Document
 - 3DEXPERIENCE Simulation Connector
 - SimulationXpress Analysis Wizard
 - FloXpress Analysis Wizard
 - DFMXpress Analysis Wizard
 - DriveWorksXpress Wizard
 - Costing
 - Sustainability
 - Part Reviewer
- Features Sketch Surfaces Sheet Metal Weldments Markup Evaluate MBD Dimensions SOLIDWORKS Add-Ins MBD
- Home
 - File
 - View
 - Insert
 - Tools
 - Window
 - Help
 - Design Study
 - Interference Detection
 - Measure
 - Markup
 - Mass Properties
 - Section Properties
 - Sensor
 - Performance Evaluation
 - Check
 - Geometry Analysis
 - Import Diagnostics
 - Body Compare
 - Deviation Analysis
 - Draft Analysis
 - Symmetry Check
 - Zebra Stripes
 - Undercut Analysis
 - Thickness Analysis
 - Check Active Document
 - 3DEXPERIENCE Simulation Connector
 - SimulationXpress Analysis Wizard
 - FloXpress Analysis Wizard
 - DFMXpress Analysis Wizard
 - DriveWorksXpress Wizard
 - Costing
 - Sustainability
 - Part Reviewer
- Foot brake lever 1 (Default << Default)
- History
 - Sensors
 - Annotations
 - Solid Bodies(1)
 - Material <not specified>
 - Front Plane
 - Top Plane
 - Right Plane
 - Origin
 - Revolve1
 - Boss-Extrude1
 - Boss-Extrude2
 - Boss-Extrude3
 - Cut-Extrude1
 - Cut-Extrude2
 - Boss-Extrude4
 - Boss-Extrude5
 - Cut-Extrude3
 - Hole1
 - Hole2
 - Hole3
 - Fillet1
 - Chamfer1
 - Fillet2
 - Fillet3



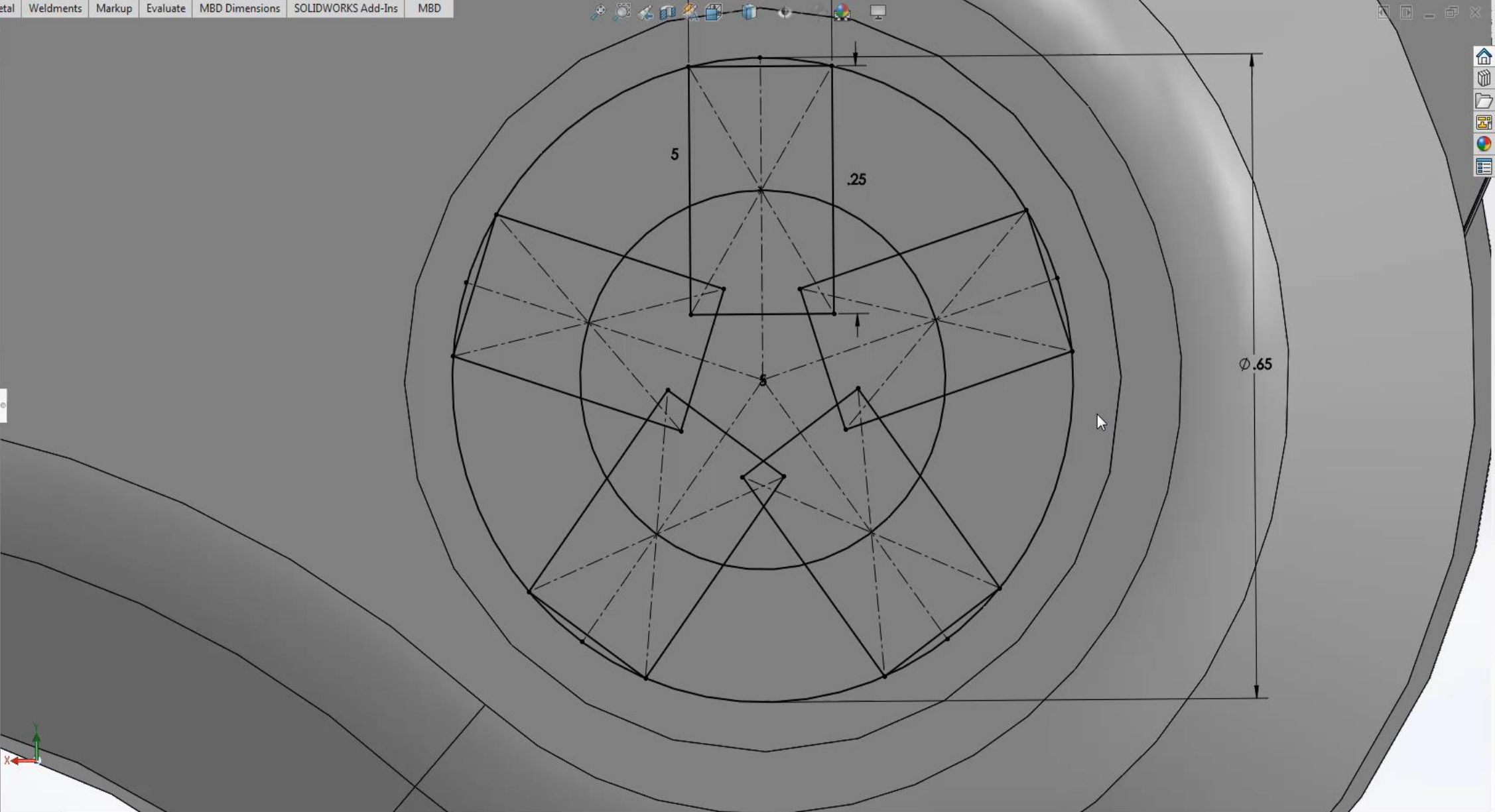
11. Trim Entities

- ▶ Click select to trim individual sketch segments
- ▶ Reverse over red box to undo delete



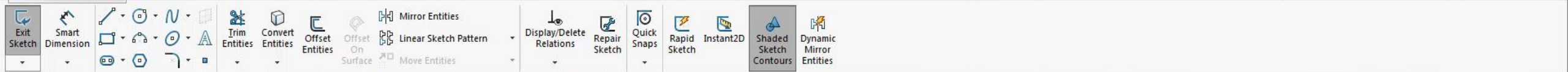


- Boss-Extrude8
- Boss-Extrude3
- Sketch7
- Boss-Extrude4
- Sketch8
- Cut-Extrude1
- Boss-Extrude5
- (-) Sketch10
- Sketch11
- Boss-Extrude6
- Fillet1
- Sketch12
- Boss-Extrude7
- Sketch14
- Sketch15
- Sketch13
- Cut-Extrude2
- Cut-Extrude3
- Cut-Extrude4
- Fillet2
- Sketch2
- Sketch18
- Boss-Extrude9
- Sketch19
- Boss-Extrude10
- Fillet3
- Fillet4
- Fillet5
- Sketch20->?
- Boss-Extrude11{->?}
- Sketch21->?
- Boss-Extrude12{->?}
- 5/16-24 Tapped Hole1->{->?}
- 5/16-24 Tapped Hole2->{->?}



12. Trim Extend

- ▶ Automatically increase the length of existing line



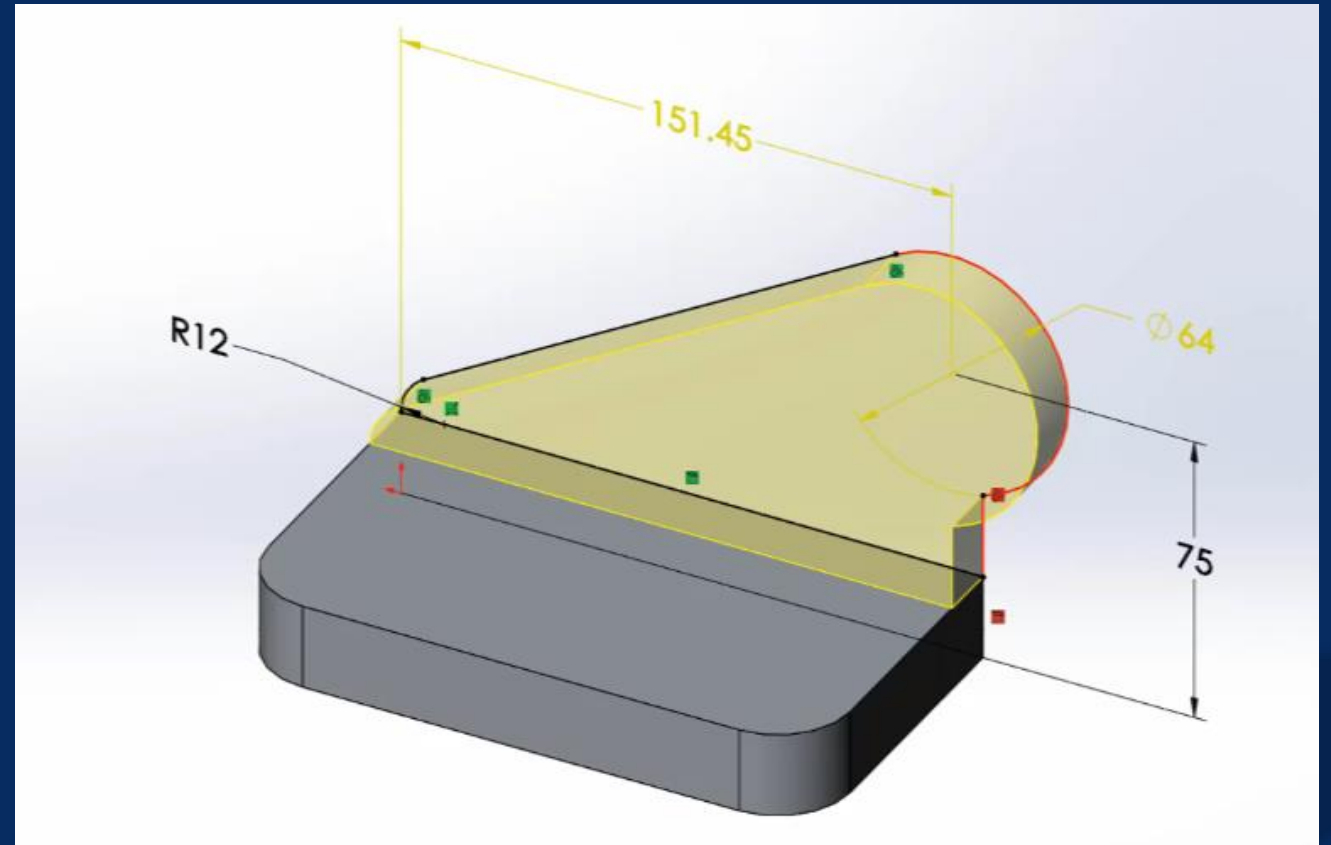
Features Sketch Surfaces Sheet Metal Weldments Markup Evaluate MBD Dimensions SOLIDWORKS Add-Ins MBD

- Part37 (Default <<Default>_Display State)
 - History
 - Sensors
 - Annotations
 - Material <not specified>
 - Front Plane
 - Top Plane
 - Right Plane
 - Origin
 - (-) Sketch3



13. SketchXpert

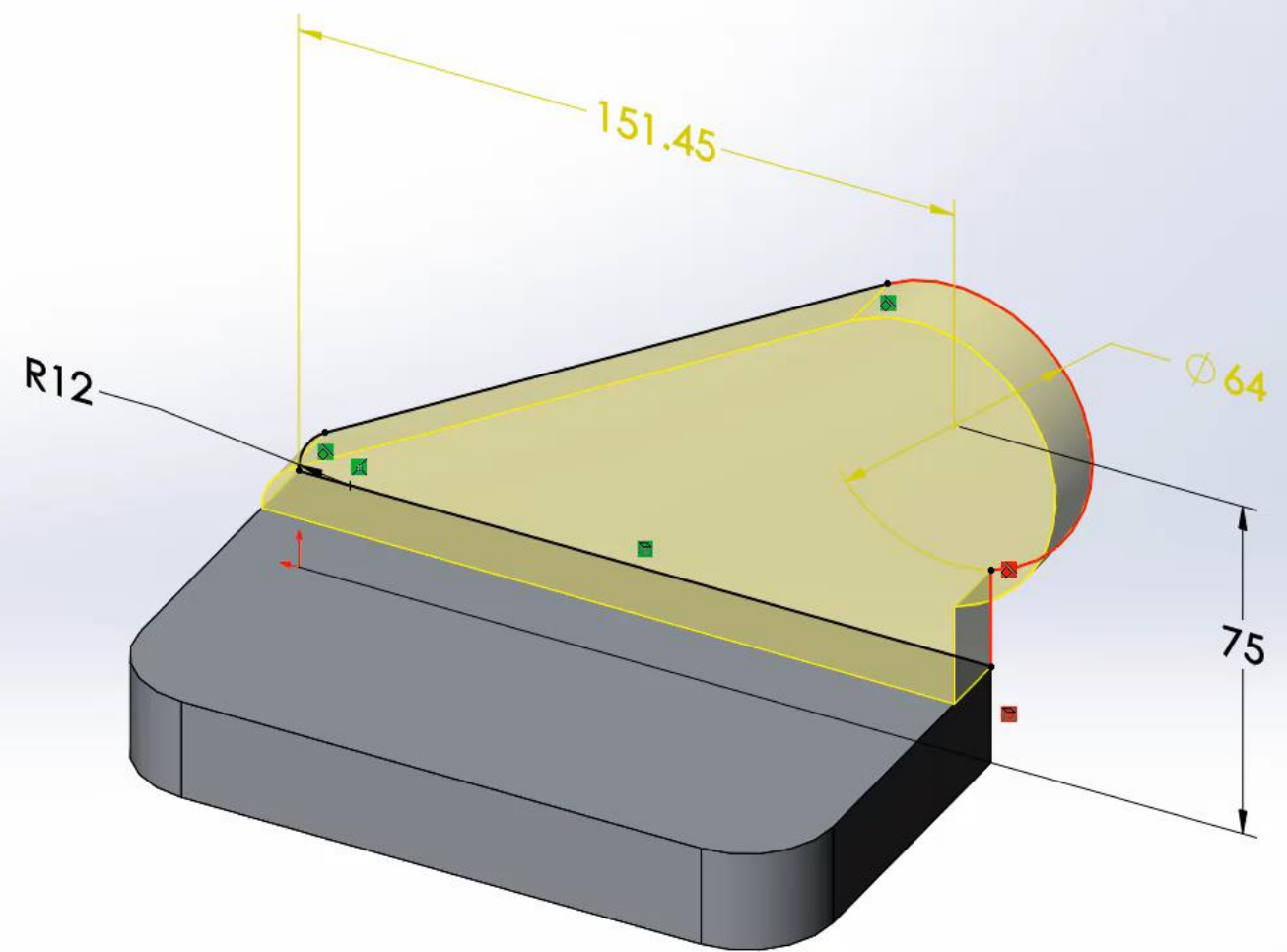
- ▶ Diagnose Potential Problem
- ▶ Optional Solutions to solve error





Features Sketch Surfaces Sheet Metal Weldments Markup Evaluate MBD Dimensions SOLIDWORKS Add-Ins MBD

- Editing_Design_Changes (Default << Def.)
- History
- Sensors
- Annotations
- Solid Bodies(1)
- Comments
- Material <not specified>
- Front
- Top
- Right
- Origin
- Base_Plate
- Base_Fillet
- Vertical_Plate
- Circular_Plane
- Circular_Boss
- Rib_Under
- Wall_Thickness
- CounterBore
- LPattern1
- Rib_Fillet
- Circ_Fillet



*Trimetric

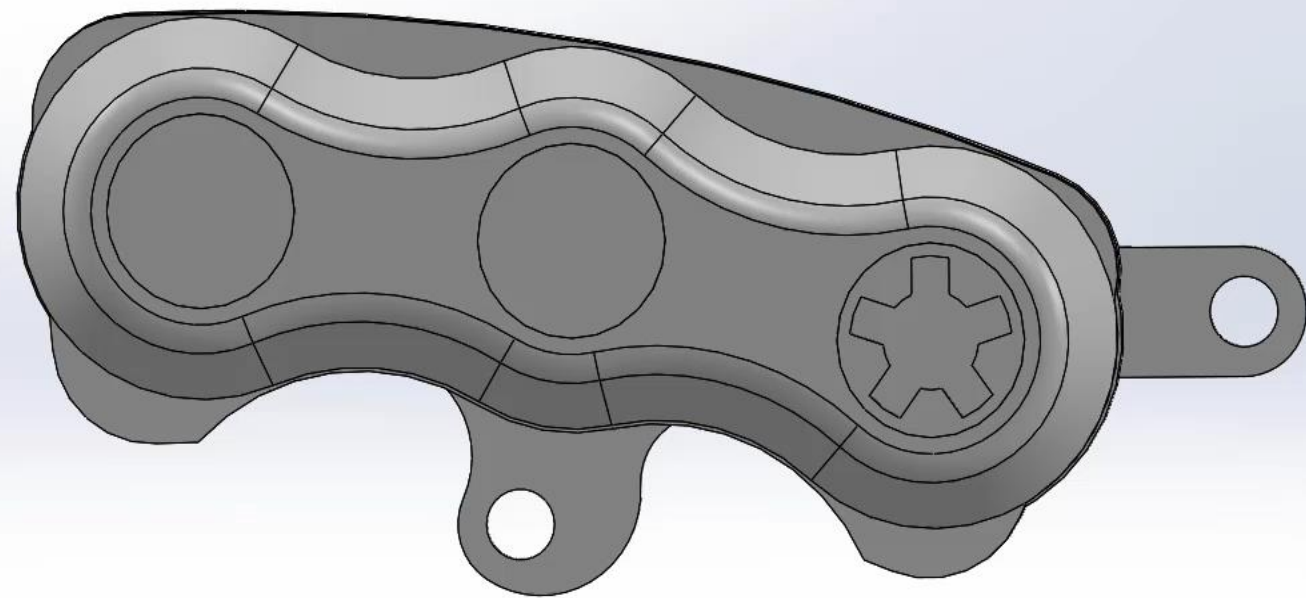
14. Derived Sketch

- ▶ Links Sketches
- ▶ Restricts editing of “Child” Sketches
- ▶ Easily duplicate complex sketches

Extruded Boss/Base Revolved Boss/Base Swept Boss/Base Swept Cut Lofted Boss/Base Boundary Boss/Base Extruded Cut Hole Wizard Revolved Cut Lofted Cut Boundary Cut Fillet Linear Pattern Rib Draft Intersect Reference Geometry Curves Instant3D Shell Mirror

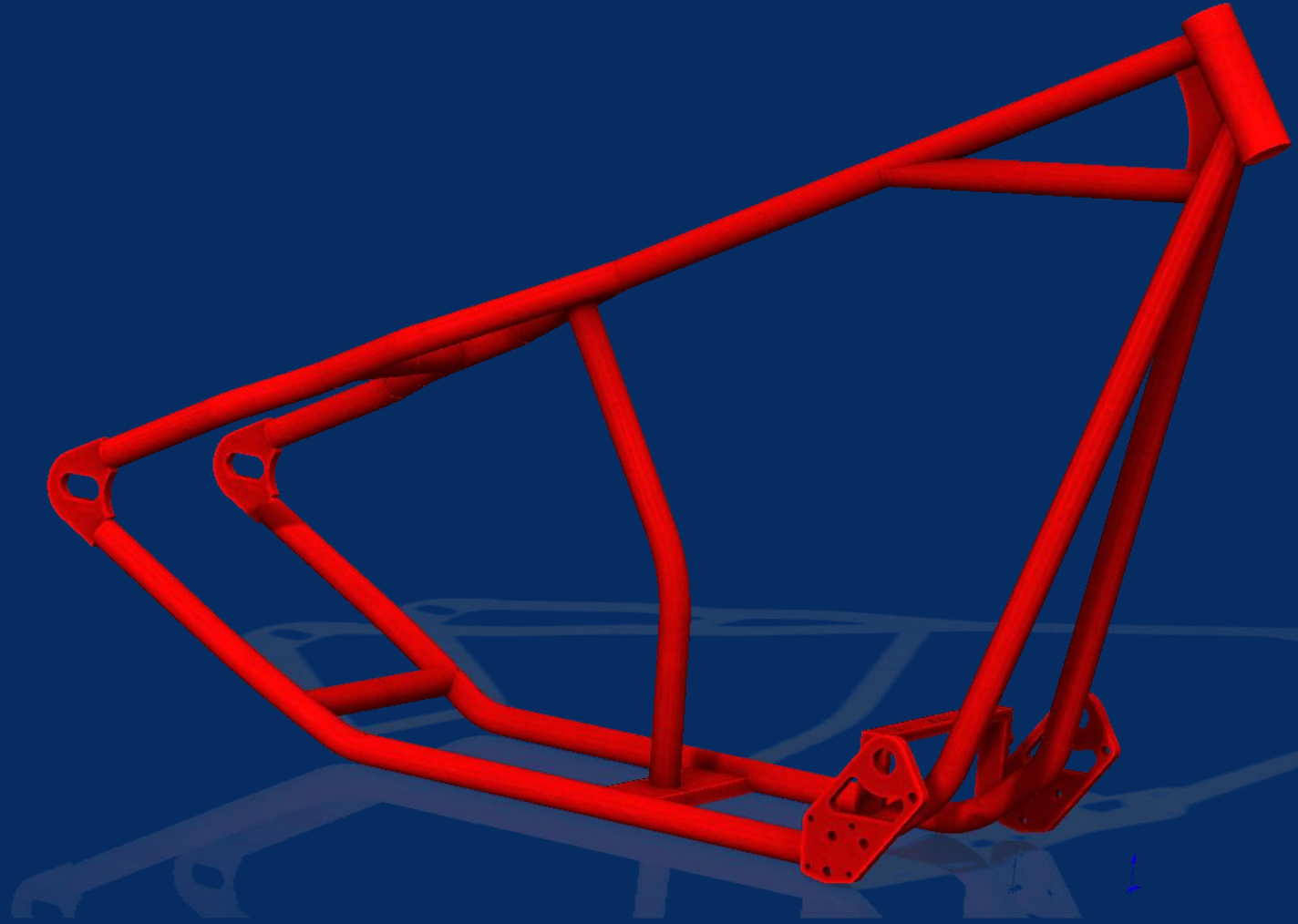
Features Sketch Surfaces Sheet Metal Weldments Markup Evaluate MBD Dimensions SOLIDWORKS Add-Ins MBD

- Sketch5
- Plane1
- Boss-Extrude2
- Sketch17
- Sketch9
- Boss-Extrude8
- Boss-Extrude3
- Sketch7
- Boss-Extrude4
- Sketch8
- Cut-Extrude1
- Boss-Extrude5
- (-) Sketch10
- Sketch11
- Boss-Extrude6
- Fillet1
- Sketch12
- Boss-Extrude7
- Sketch2
- Sketch18
- Boss-Extrude9
- Sketch19
- Boss-Extrude10
- Fillet3
- Fillet4
- Fillet5
- Sketch20->?
- Boss-Extrude11{->?}
- Sketch21->?
- Boss-Extrude12{->?}
- 5/16-24 Tapped Hole1->?{->?}
- 5/16-24 Tapped Hole2->?{->?}
- Sketch13
- Cut-Extrude2



15. Advanced Sketching Tips

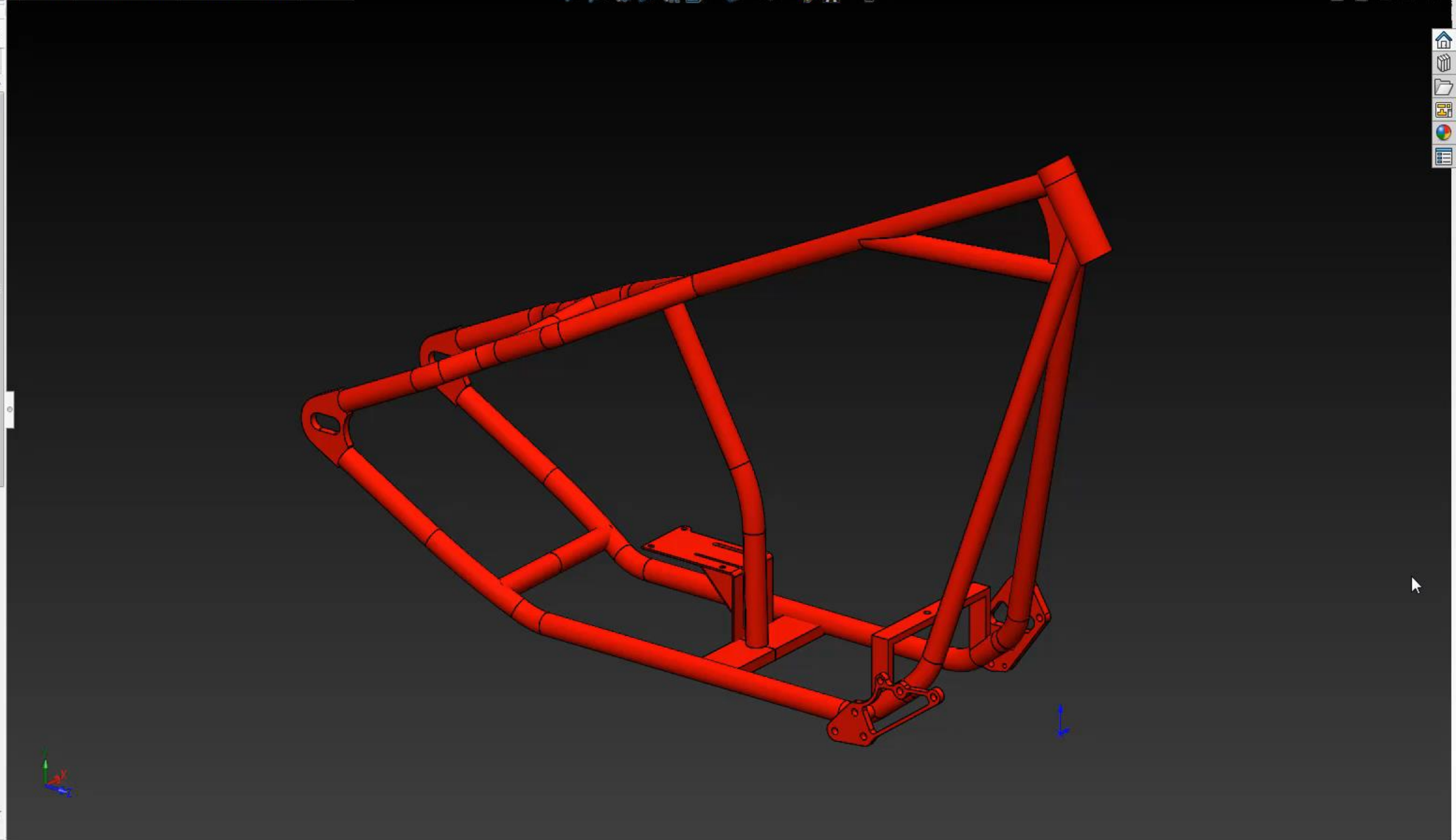
- ▶ Sketch Pictures
- ▶ Projected Curves





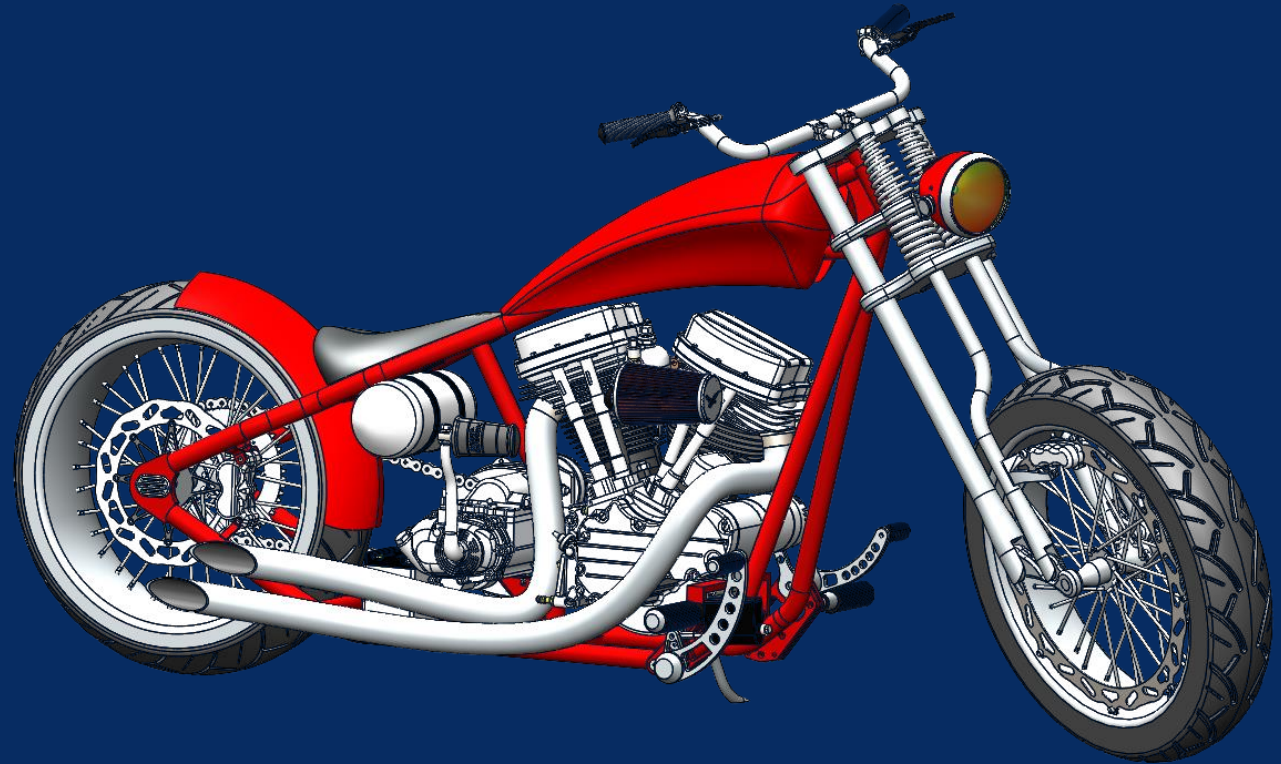
Features Sketch Surfaces Sheet Metal Weldments Markup Evaluate MBD Dimensions SOLIDWORKS Add-Ins MBD

- FrameBeta2020 (Default<As Machined><<Default>_Display S ^
- History
- Sensors
- Annotations
- Cut list(63)
- Equations
- Material <not specified>
- Front Plane
- Top Plane
- Right Plane
- Origin
- Weldment
- Sketches
- Right Sketch
- Curve1
- 3D 3DSketch2
- Al round tubing 2 OD X 0.125 WALL(1)
- 3D (-) 3DSketch3
- Curve2
- 3D 3DSketch4
- Al round tubing 1.25 OD X 0.063 WALL(6)
- 3D (-) 3DSketch6
- 3D 3DSketch5
- (-) Sketch116
- 3D (-) 3DSketch7
- 3D (-) 3DSketch8
- Al round tubing 1.25 OD X 0.063 WALL(3)
- Plane9
- Boss-Extrude1
- Boss-Extrude2
- Boss-Extrude3
- Cut-Extrude2
- Mirror2
- Plane10
- Cut-Extrude1



16. Quick Renders

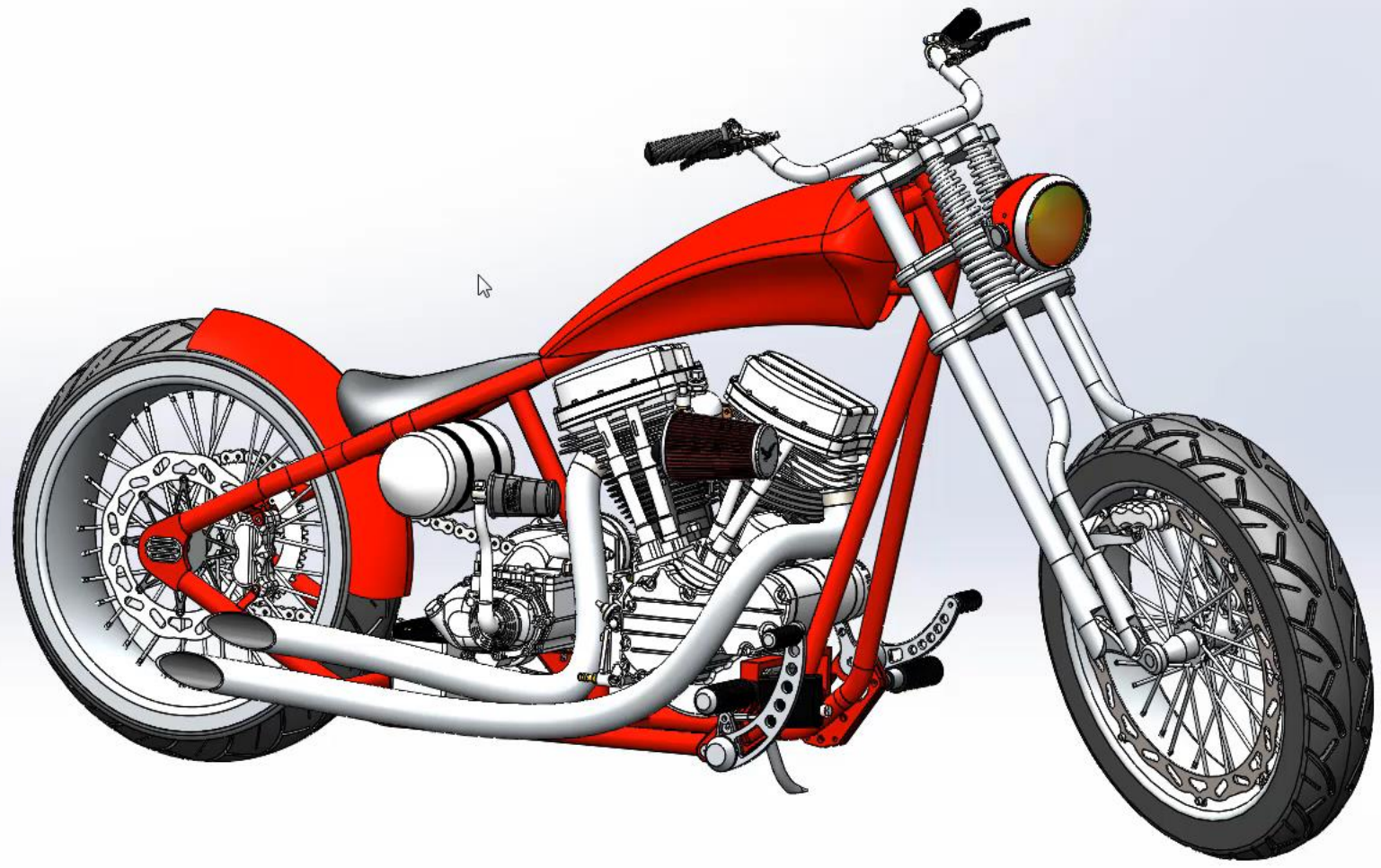
- ▶ Easily Create Presentation Graphics
- ▶ .Png File
- ▶ Remove Background





Assembly Layout Sketch Markup Evaluate SOLIDWORKS Add-Ins

- (f) FrameBeta2020<1> -> (Default<As Machi
- Rear FenderBeta2020<1> ->? (Default<<Defa
- (f) Gas Tank-RNBeta2020<2> -> (Default<<D
- [Oil Tank^Full AssemblyBeta2020]<1> -> (C
- SeatBeta2020<1> -> (Default<<Default>_Dis
- Gas TankBeta2020<1> (Default)
- Rims/ Tires
 - Rear TireBeta2020<1> (Default)
 - (-) Front TireBeta2020<1> (Default)
 - (-) _Rear Tire NewBeta2020<2> ->? (Spokes 2
 - (-) PINKI_pA_Zadnji_TocakBeta2020<1> (Defa
- Fork
 - ForkBeta2020<1> -> (Default<<Default>_Dis
 - (-) Fork Assembly<1> (Default<Display State
 - Mates in Full AssemblyBeta2020
 - History
 - Sensors
 - Annotations
 - Front Plane
 - Top Plane
 - Right Plane
 - Origin
 - (f) Fork<1> (Default)
 - (f) _Front TireBeta2020<1> ->? (Spokes 2
 - Front Hub<1> -> (Default<<Default>_D
 - (f) Drop Down Bracket<1> ->? (Default<
 - (-) Top Tube Hub<1> ->? (Default<<Def
 - Front Brake Rotor<1> ->? (Default<<Def
 - (-) Front Brake Caliper<1> ->? (Default<
 - (-) 7211102 Handle Bar Riser DualBeta202
 - (f) Handle Bar<1> ->? (Default<As Mach
 - (-) 7211122 Grip<1> (Default<<Default>
 - (-) Clutchlever_asswmbly<1> (Default<C
 - (-) Clutchlever_asswmbly<2> (Default<C
 - (-) 7211122 Grip<2> (Default<<Default>



17. Navigating Large Assemblies

- ▶ Breadcrumbs
 - ▶ “D” place breadcrumbs by cursor
 - ▶ Also Works for quick exit in sketch
- ▶ Collapse Tree “Shift + C”





Assembly Layout Sketch Markup Evaluate SOLIDWORKS Add-Ins

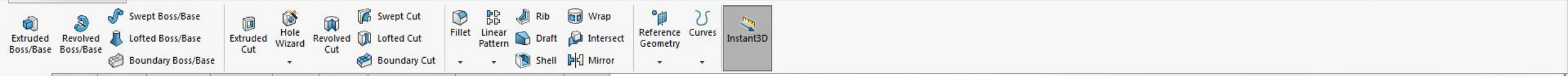
Full AssemblyBeta2020 (New<Display State-1>)

- History
- Sensors
- Annotations
 - Front Plane
 - Top Plane
 - Right Plane
- Origin
- Frame/ Tins
- Rims/ Tires
- Fork
- Imported Components
- (-) Air-Filter<1> (Default<<Default>_Display State 1)
 - History
 - Sensors
 - Annotations
 - Surface Bodies(1)
 - Surface-Loft1
 - Solid Bodies(3)
 - Cut-Extrude1[1]
 - Cut-Extrude1[2]
 - Cut-Extrude2
 - Material <not specified>
 - Front Plane
 - Top Plane
 - Right Plane
 - Origin
 - Axis1
 - Plane1
 - Loft1
 - Revolve-Thin3
 - Revolve-Thin4
 - Surface-Loft1
 - SurfaceCut1
 - CirPattern1



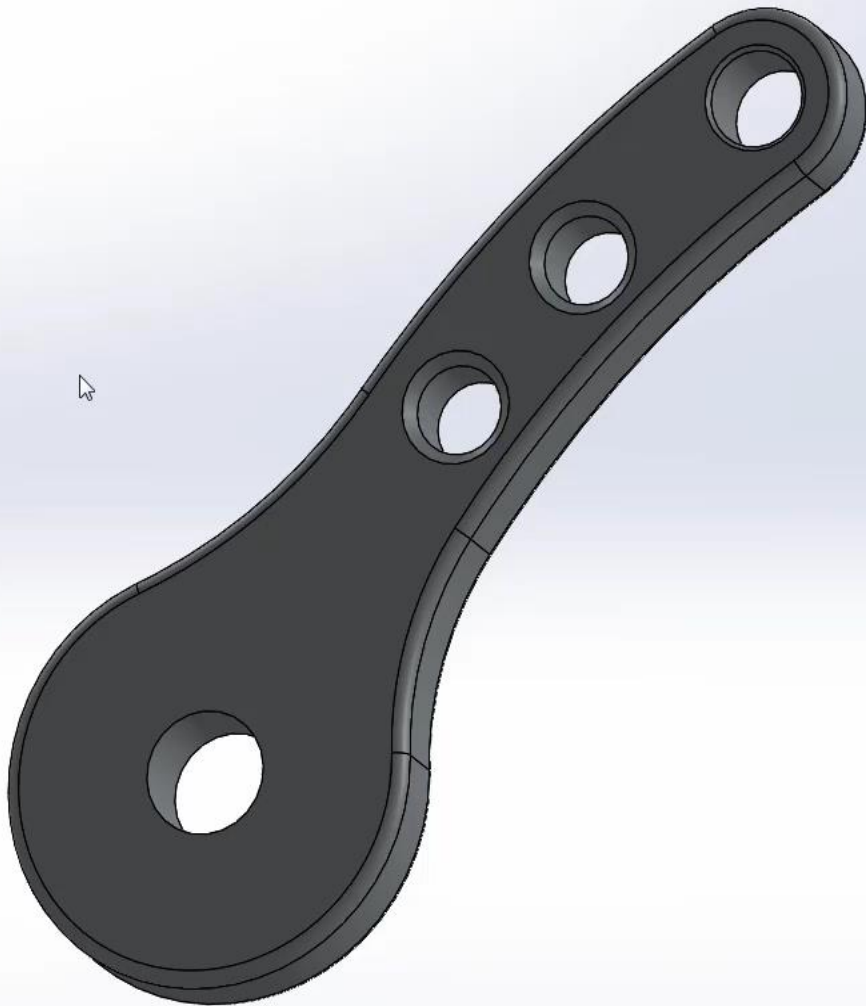
18. Dynamic Feature Works

- ▶ Saves Time
- ▶ Only create features for desired entities



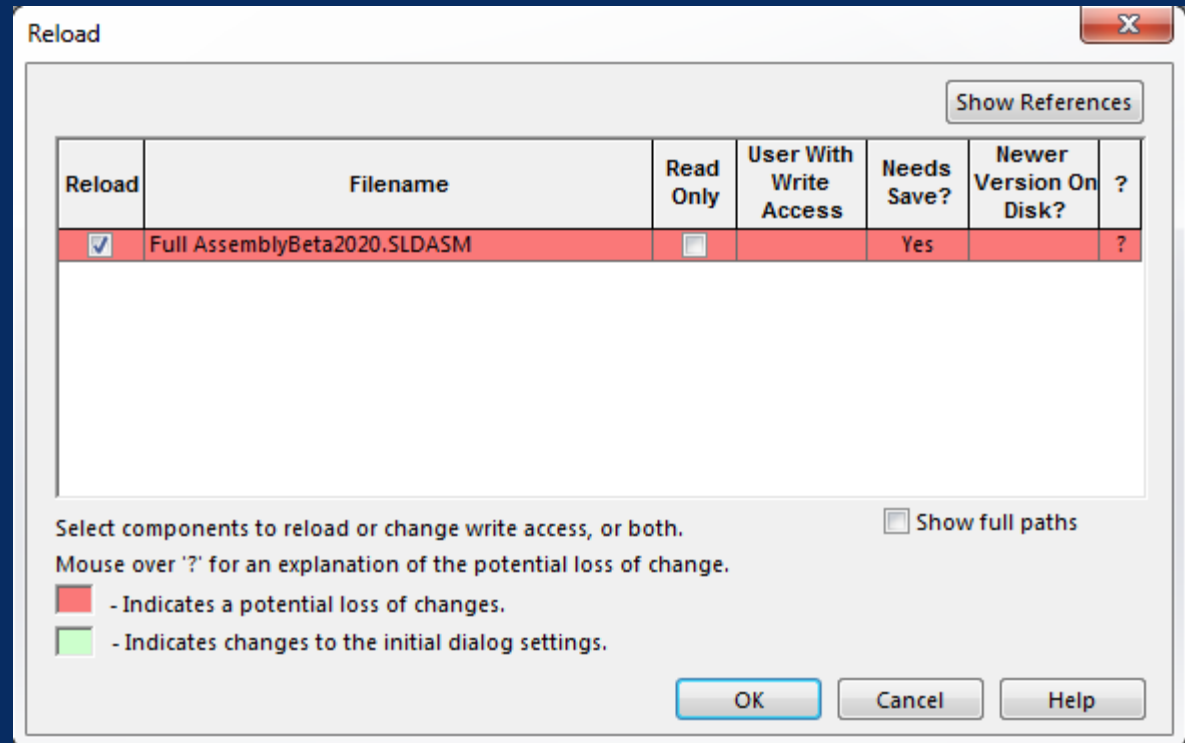
LS Foot Control Shift LeverBeta2020 (1)

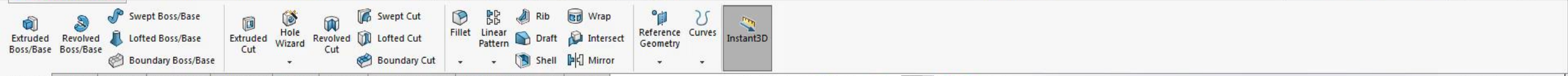
- History
- Sensors
- Annotations
- Solid Bodies(1)
 - Material <not specified>
 - Front Plane
 - Top Plane
 - Right Plane
 - Origin
 - Imported1



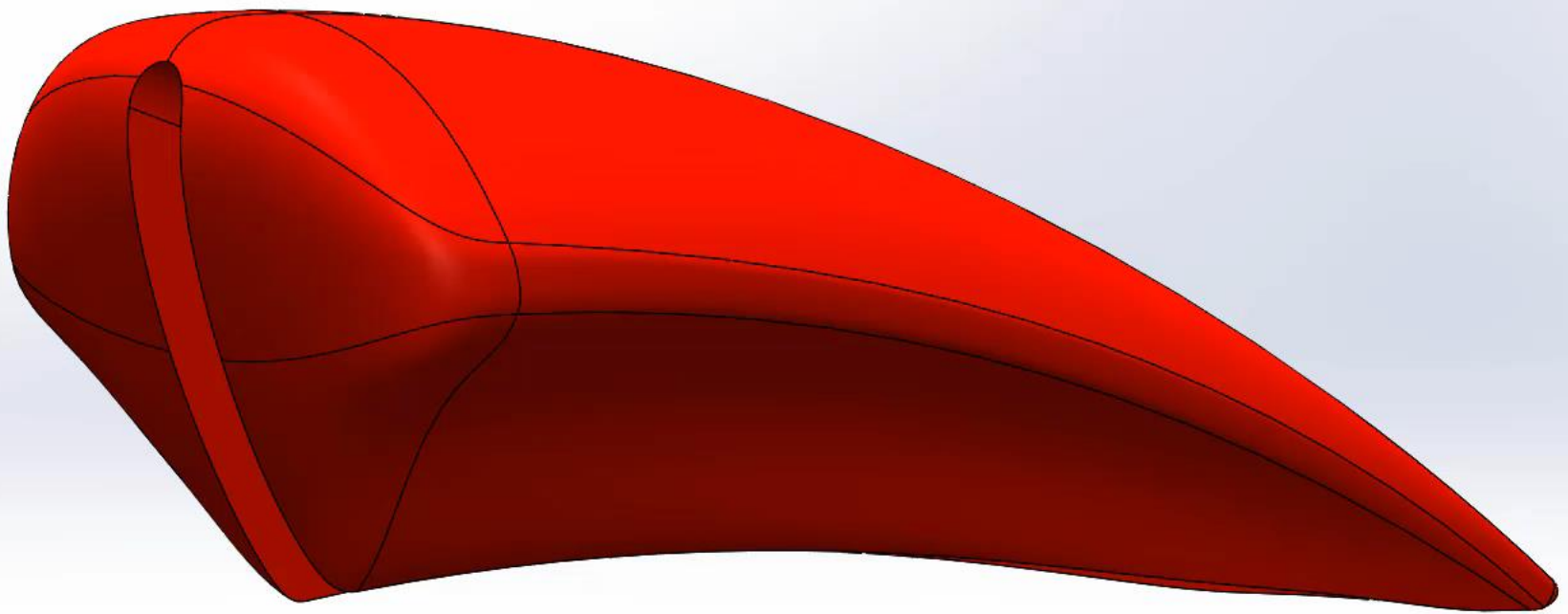
19. Reload

- ▶ Reloads file from Disk
- ▶ Checks for current version
- ▶ Closes and reopens file automatically





- Gas Tank-RNBeta2020 (Default <<)
- History
- Sensors
- Annotations
- Solid Bodies(1)
- Material <not specified>
- Front Plane
- Top Plane
- Right Plane
- Origin
- OLD
- (-) Sketch18
- Plane7
- TOP-BOUNDARY
 - (-) FRONT
 - MID
 - REAR
 - (-) GUIDES
- BOTTOM-BOUNDARY
 - (-) FRONT-SIDE
- Split Line1
- DeleteFace1
- BLEND-BOUNDARY
 - Surface-Knit2
- Draft Reference Extrudes
- BLEND-TO-FRONT-BOUNDAR
 - TOP-FRONT-FILL
 - BOTTOM-FRONT-FILL
- CLEANUP-DELETE-BODIES
- TAIL-FILL
 - Surface-Knit5
- Fillet18
- TOOL BODY FOR FRAME
 - Indent3
 - Surface-Offset1

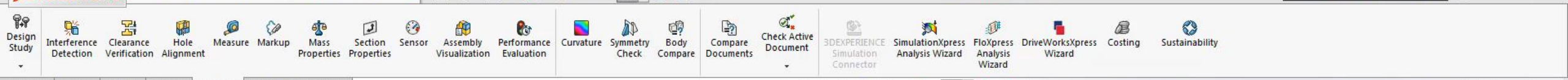


20. Previous Selection

- ▶ Saves lost selections
- ▶ Right Click once lost

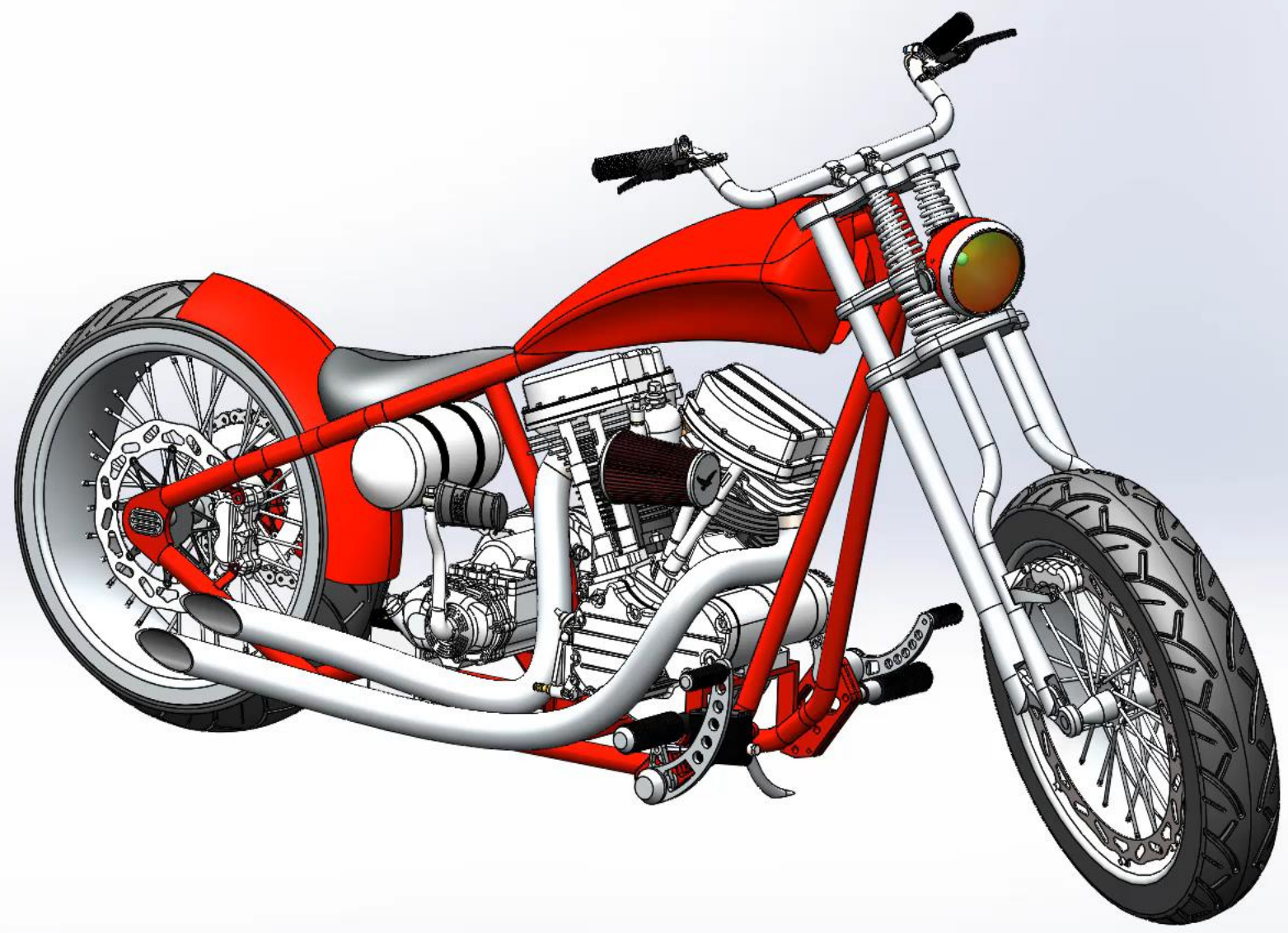
21. Zoom to Selection

- ▶ Right-Click on desired item



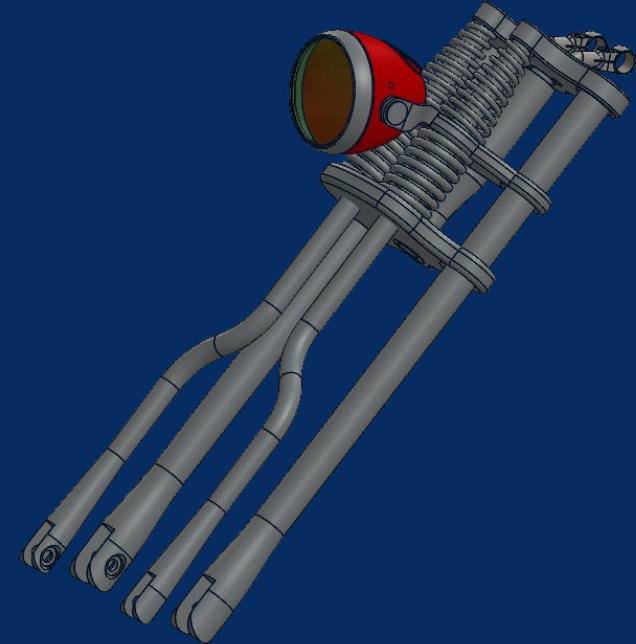
Assembly Layout Sketch Markup Evaluate SOLIDWORKS Add-Ins

- 7211122 Grip<1> (Default<<Default>
- Clutchlever_asswmbly<1> (Default<
- Clutchlever_asswmbly<2> (Default<
- 7211122 Grip<2> (Default<<Default>
- 7211102 Handle Bar Riser DualBeta202
- Cut-Extrude8<1> ->? (Default<<Defa
- Loft1<1> ->x (Default<<Default>_Dis
- Body3<1> ->? (Default<<Default>_D
- Body4<1> ->? (Default<<Default>_D
- Body5<1> ->? (Default<<Default>_D
- Body6<1> ->? (Default<<Default>_D
- Sweep4<1> ->? (Default<<Default>_
- Cut-Extrude2[3]<1> ->? (Default<<D
- Body9<1> ->? (Default<<Default>_D
- Mirror4<1> ->? (Default<<Default>_
- Cut-Extrude6[2]<1> ->? (Default<<D
- Mirror7[1]<1> ->? (Default<<Default
- Mirror6[2]<1> ->? (Default<<Default
- Body14<1> ->? (Default<<Default>_
- Body15<1> ->? (Default<<Default>_
- Boss-Extrude10<1> ->? (Default<<De
- Body17<1> ->? (Default<<Default>_
- Mirror6[1]<1> ->? (Default<<Default
- Cut-Extrude2[2]<1> ->? (Default<<D
- Body20<1> ->? (Default<<Default>_
- Sweep5<1> ->? (Default<<Default>_
- Body22<1> ->? (Default<<Default>_
- Body23<1> ->? (Default<<Default>_
- Fillet4<1> ->? (Default<<Default>_Di
- Fillet2<1> ->? (Default<<Default>_Di
- Body26<1> ->? (Default<<Default>_
- Mirror7[2]<1> ->? (Default<<Default
- Fillet3<1> ->? (Default<<Default>_Di
- Mates
- PLANE1



22. Save Bodies

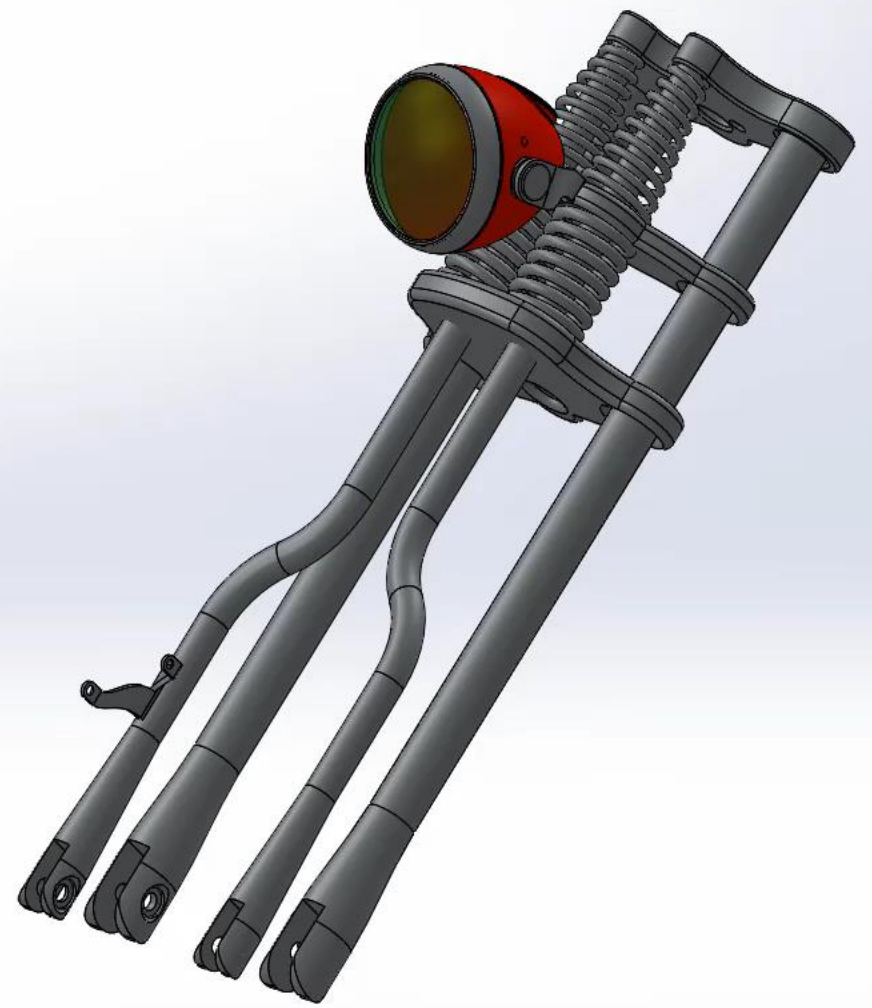
- ▶ Create complex designs without using assemblies
- ▶ No need to worry about mates or file relations



Extruded Boss/Base Revolved Boss/Base Swept Boss/Base Lofted Boss/Base Boundary Boss/Base Extruded Cut Hole Wizard Revolved Cut Swept Cut Lofted Cut Boundary Cut Fillet Linear Pattern Rib Draft Intersect Reference Geometry Curves Instant3D Shell Mirror

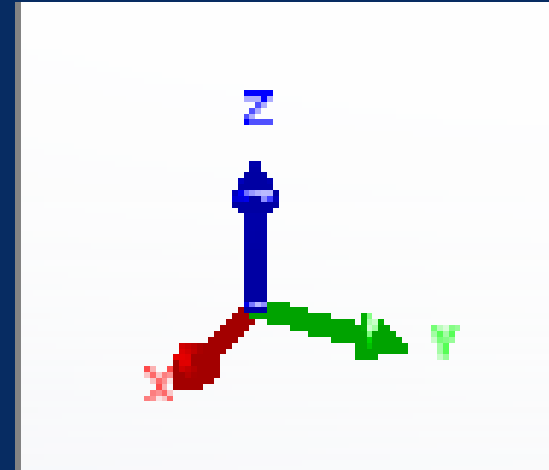
Features Sketch Surfaces Sheet Metal Weldments Markup Evaluate MBD Dimensions SOLIDWORKS Add-Ins MBD

- Home
- File
- History
- Sensors
- Annotations
- Solid Bodies(28)
- Material <not specified>
- Front Plane
- Top Plane
- Right Plane
- Origin
- Sketch1->?
- Plane1
- Extrude-Thin1
- (-) Sketch3->?
- Plane2
- Boss-Extrude1
- Plane3->?
- (-) Sketch5
- Sweep2{ ->?}
- Plane4
- Plane5
- Helix/Spiral1
- Mirror1
- UPPER TREEBeta2018
- Body-Move/Copy3
- Plane6
- Body-Move/Copy4
- Boss-Extrude2
- LPattern1
- Plane7
- Helix/Spiral2
- Sweep4
- Plane8
- Boss-Extrude3
- Helix/Spiral3



23. Apply Z for Up Views

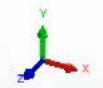
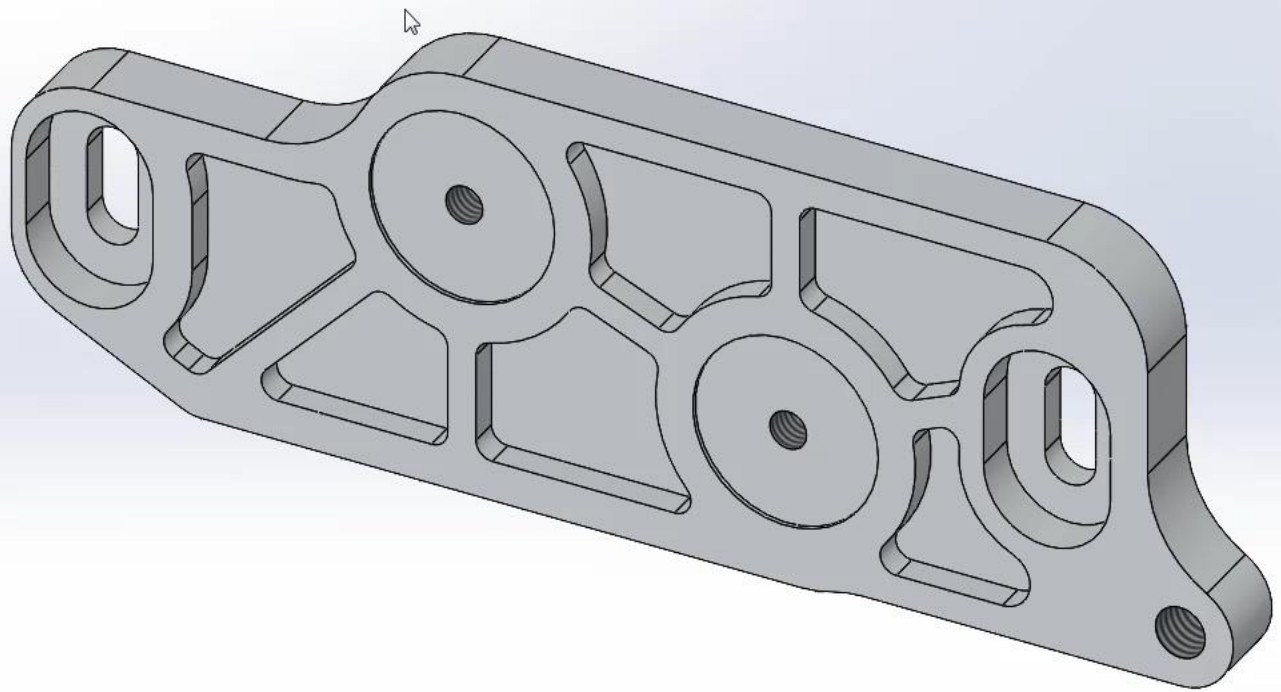
- ▶ Available in 2020
- ▶ Option found in view orientation menu



Define Machine Coordinate System Stock Manager Setup Extract Machinable Features Generate Operation Plan Generate Toolpath Simulate Toolpath Step Thru Toolpath Save CL File Post Process Sort Operations Mill Feature 2.5 Axis Mill Operations Hole Machining Operations 3 Axis Mill Operations Turn Operations Probe Operation Save Operation Plan Default Feature Strategies Tolerance Based Machining Technology Database Message Window Process Manager User Defined Tool/Holder SOLIDWORKS CAM NC Editor Create Library Object Insert Library Object Publish eDrawings SOLIDWORKS CAM Options

Features Sketch Surfaces Sheet Metal Weldments Markup Evaluate MBD Dimensions SOLIDWORKS Add-Ins MBD SOLIDWORKS CAM SOLIDWORKS CAM TBM

- 62-02-9000-13 (Default)
 - History
 - Annotations
 - Sensors
 - Solid Bodies(1)
 - Equations
 - 6061-T6 (SS)
 - Front Plane
 - Top Plane
 - Right Plane
 - Origin
 - Extrude1
 - Cut-Extrude1
 - Extrude2
 - Cut-Extrude2
 - Extrude4
 - 3/8-16 Tapped Hole2
 - 1/2-13 Tapped Hole1
 - LW Pockets
 - Chamfer3
 - Profile
 - Cut-Extrude3



*Trimetric

24. Applying Mates to Small Components

- ▶ Activate Magnify glass by selecting “G”
- ▶ Prevent rotation
- ▶ Select Other



Assembly Layout Sketch Markup Evaluate SOLIDWORKS Add-Ins

- Annotations
- Cut list(10)
- Material <not specified>
- Front Plane
- Top Plane
- Right Plane
- Origin
- Weldment
- (-) 3DSketch1->?
- Beta 2018 HANDLE BAR(1)
 - Plane2
 - Boss-Extrude1
 - Dome1
 - Mirror1
- (-) 7211122 Grip<1> (Default<<Default>_Display S
- (-) Clutchlever_asswmbly<1> (Default<Display Sta
- (-) Clutchlever_asswmbly<2> (Default<Display Sta
- (-) 7211122 Grip<2> (Default<<Default>_Display S
 - Mates in Fork Assembly
 - History
 - Sensors
 - Annotations
 - Solid Bodies(1)
 - Material <not specified>
 - Front Plane
 - Top Plane
 - Right Plane
 - Origin
 - Revolve1
 - Fillet1
 - Fillet3
 - Axis1
- 7211102 Handle Bar Riser DualBeta2020<2> (Defau
- (-) _0.25 Socket button head cap screw<2> (Defau
- Mates



25. Smart Fasteners

- ▶ Quickly Apply the correct fastener to all available features
- ▶ Customize Stacking



Assembly Layout Sketch Markup Evaluate SOLIDWORKS Add-Ins



- (-) Cut-Extrude8<1> -> (Default<<Default>_Display State 1>)
- (-) Loft1<1> ->x (Default<<Default>_Display State 1>)
- (-) Body3<1> -> (Default<<Default>_Display State 1>)
- (-) Body4<1> -> (Default<<Default>_Display State 1>)
- (-) Body5<1> -> (Default<<Default>_Display State 1>)
- (-) Body6<1> -> (Default<<Default>_Display State 1>)
- (-) Sweep4<1> -> (Default<<Default>_Display State 1>)
- (-) Cut-Extrude2[3]<1> -> (Default<<Default>_Display State 1>)
- (-) Body9<1> -> (Default<<Default>_Display State 1>)
- (-) Mirror4<1> -> (Default<<Default>_Display State 1>)
- (-) Cut-Extrude6[2]<1> -> (Default<<Default>_Display State 1>)
- (-) Mirror7[1]<1> -> (Default<<Default>_Display State 1>)
- (-) Mirror6[2]<1> -> (Default<<Default>_Display State 1>)
- (-) Body14<1> -> (Default<<Default>_Display State 1>)
- (-) Body15<1> -> (Default<<Default>_Display State 1>)
- (-) Boss-Extrude10<1> -> (Default<<Default>_Display State 1>)
- (-) Body17<1> -> (Default<<Default>_Display State 1>)
- (-) Mirror6[1]<1> -> (Default<<Default>_Display State 1>)
- (-) Cut-Extrude2[2]<1> -> (Default<<Default>_Display State 1>)
- (-) Body20<1> -> (Default<<Default>_Display State 1>)
- (-) Sweep5<1> -> (Default<<Default>_Display State 1>)
- (-) Body22<1> -> (Default<<Default>_Display State 1>)
- (-) Body23<1> -> (Default<<Default>_Display State 1>)
- (-) Fillet4<1> -> (Default<<Default>_Display State 1>)
- (-) Fillet2<1> -> (Default<<Default>_Display State 1>)
- (-) Body26<1> -> (Default<<Default>_Display State 1>)
- (-) Mirror7[2]<1> -> (Default<<Default>_Display State 1>)
- (-) Fillet3<1> -> (Default<<Default>_Display State 1>)
- Mates
- PLANE1
- MirrorComponent1
- Smart Fastener2
- Smart Fastener3
- MirrorComponent8
- LocalCirPattern1



26. Quickly Load Assemblies

- ▶ Fully Resolved
- ▶ Lightweight Mode
- ▶ Large Design Review





3.5 Seconds

Large Design Review

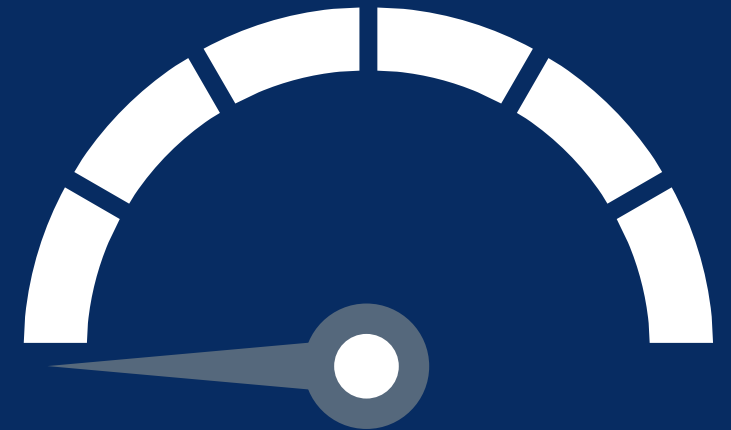
Only Loads bare essentials



23.5 Seconds

Lightweight Mode

Loads only a Subset of the models
information



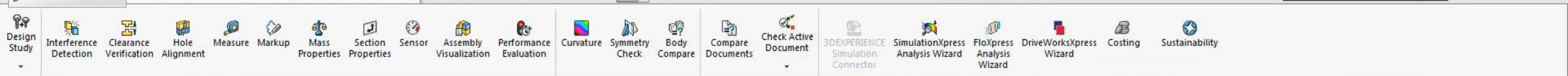
40.5 Seconds

Fully Resolved

Loads all information of model

27. Hide/Show Parts

- ▶ Tab to hide component
- ▶ Tab + Shift to show component
- ▶ Right click show hidden bodies



Assembly Layout Sketch Markup Evaluate SOLIDWORKS Add-Ins

- Full AssemblyBeta2020 (New<Black>)
- History
- Sensors
- Annotations
- Front Plane
- Top Plane
- Right Plane
- Origin
- Frame/ Tins
- Rims/ Tires
- Fork
- Imported Components
- (-) Air-Filter<1> (Default<<Default>_Display State
- (-) Front Wheel<1> (Default)
- (f) Oil Tank<1> (Default<<Default>_Display State
- [Part13^Full AssemblyBeta2020]<1> -> (Default<
- (-) [Assem2^Full AssemblyBeta2020]<1> (Defaul
- (-) 5 Ah battery<1> (Default<<Default>_Appear
- (-) Rear Rotor<1> (Default<<Default>_Display Sta
- (-) Rear Brake Caliper<1> (Default<<Default>_Dis
- (f) [Part4^Full AssemblyBeta2020]<2> (Default<
- [Part5^Full AssemblyBeta2020]<1> -> (Default<
- [Part6^Full AssemblyBeta2020]<1> -> (Default<
- [Part6^Full AssemblyBeta2020]<2> -> (Default<
- [Part1^Full AssemblyBeta2020]<1> -> (Default<
- Mates
- MirrorComponent1
- MirrorComponent3





DESIGN TO MANUFACTURING
CONFERENCE

CONFERENCE