

MFG502332

Making Prodsmart Smarter by Using Autodesk Fusion 360 and Fusion Team

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Autodesk

Learning Objectives

- How to connect Autodesk Fusion 360 3D models and 2D drawings to Prodsmart to ensure that your production floor always has the latest files.
- How to connect Autodesk Fusion 360 setup sheets and NC files to Prodsmart to ensure that your production floor always has the latest file/s
- How to use Fusion Team to store work instructions in video form
- How to import a Fusion 360 3D model directly into Prodsmart
- How to view the Prodsmart Dashboard from within Fusion 360

Description

Keeping your production floor productive is more important than ever before. After all, a computer numerical control (CNC) machine or worker sitting idle costs your business money. Prodsmart already helps manufacturers and fabricators to schedule, track, and trace their production and quality processes in real time. But what if you want to go further? In this live demonstration, you'll learn how you can maximize Autodesk Fusion 360 software, Fusion Team, and Prodsmart to further improve your production efficiency.

Speaker(s)

Jason is a Fusion 360 and Prodsmart expert who focuses on product design and development. He comes from an education in mechanical engineering and over 15 years of industry experience bringing innovative consumer products to market. Jason's specialties include: plastic product design and development (especially for injection molding), 3D printing, 3D scanning, reverse engineering and laser cutting. When Jason isn't working on Fusion 360 projects, he spends his summers riding mountain bikes & camping and his winters skiing & snowboarding

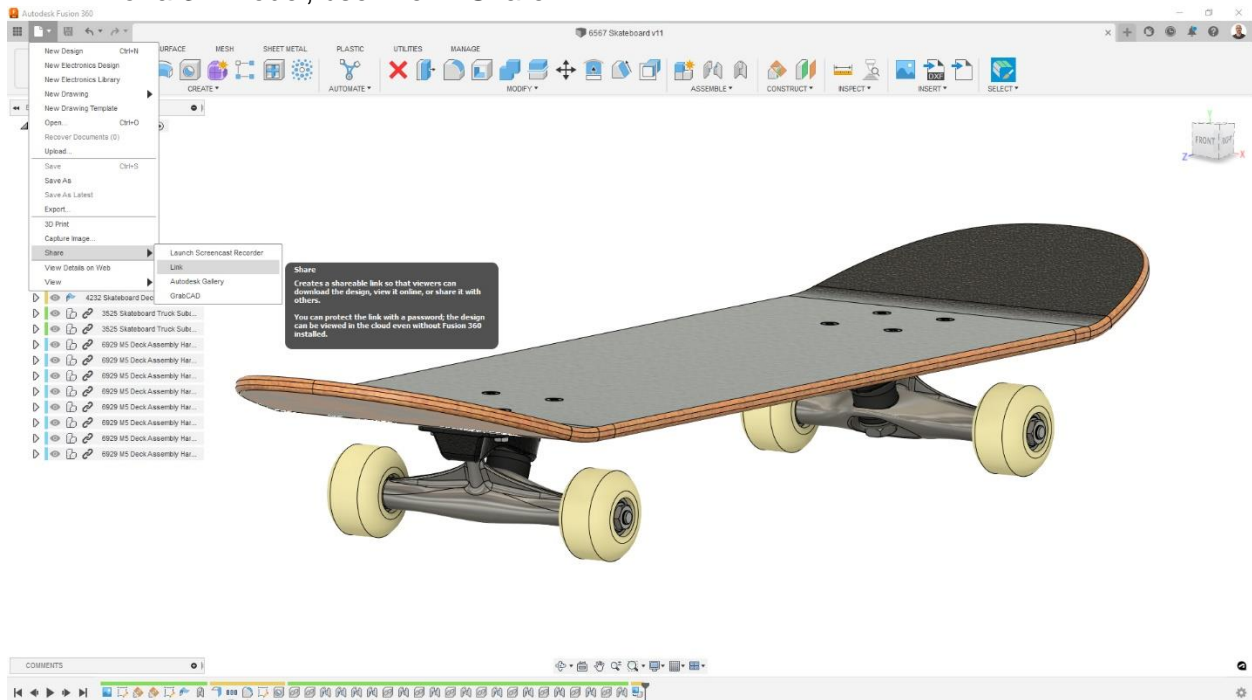
Connecting Autodesk Fusion 360 3D Models and 2D Drawings to Prodsmart

The main benefit of doing this is to ensure that people on your shop floor always have access to the latest 3D models and 2D drawings

How to Connect Fusion 360 3D Models and 2D Drawings to Prodsmart

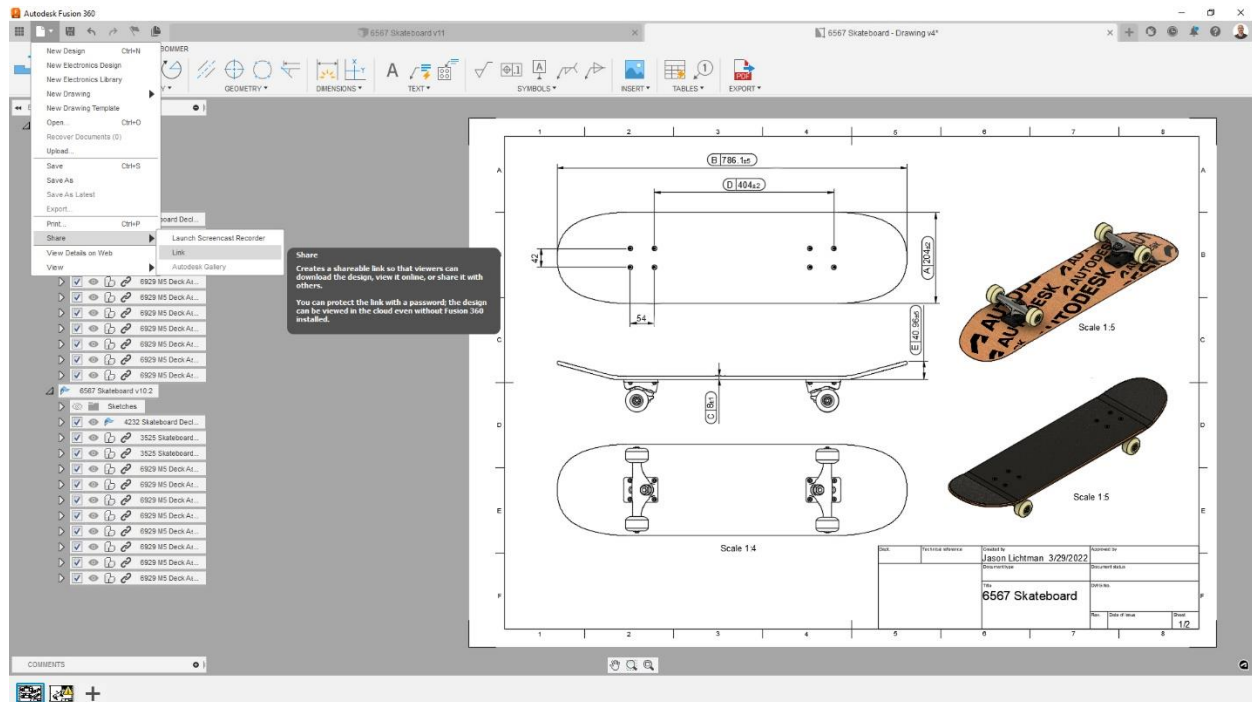
Step 01 – Create a Shared Link to a Fusion 360 File

For a 3D model, use File -> Share -> Link



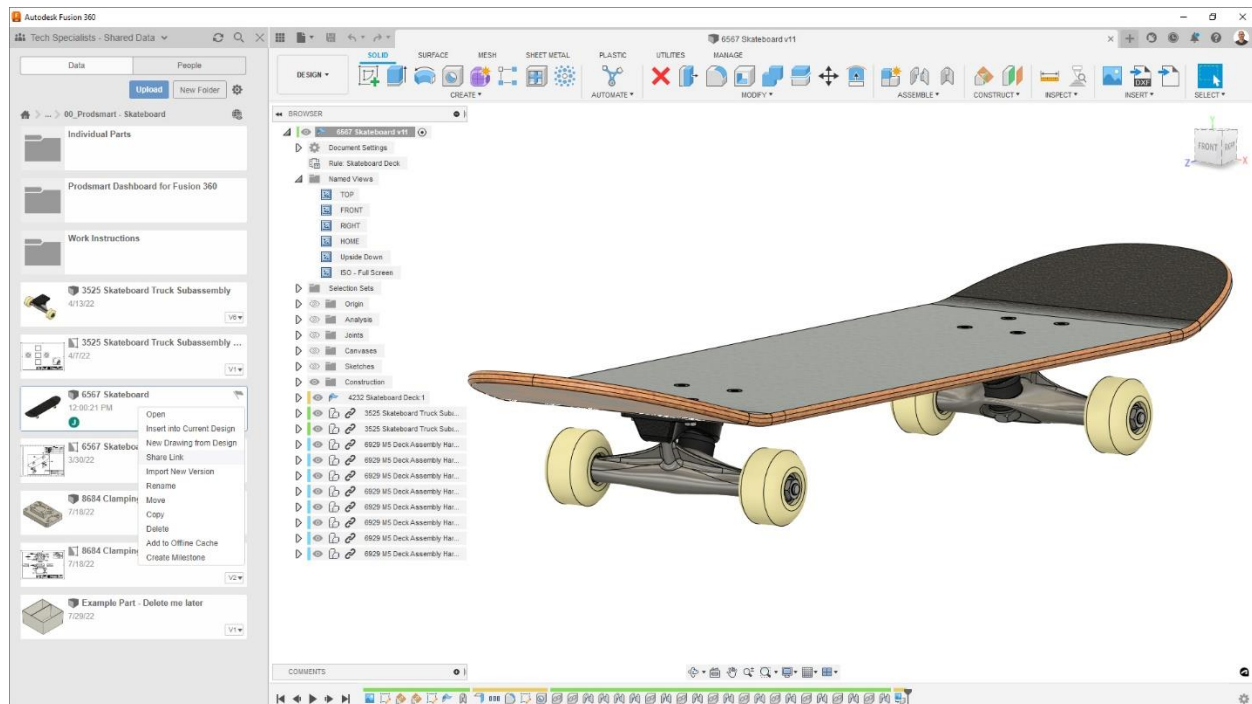
Creating a Shared Link from a Fusion 360 3D Model

This method works exactly the same for 2D drawings



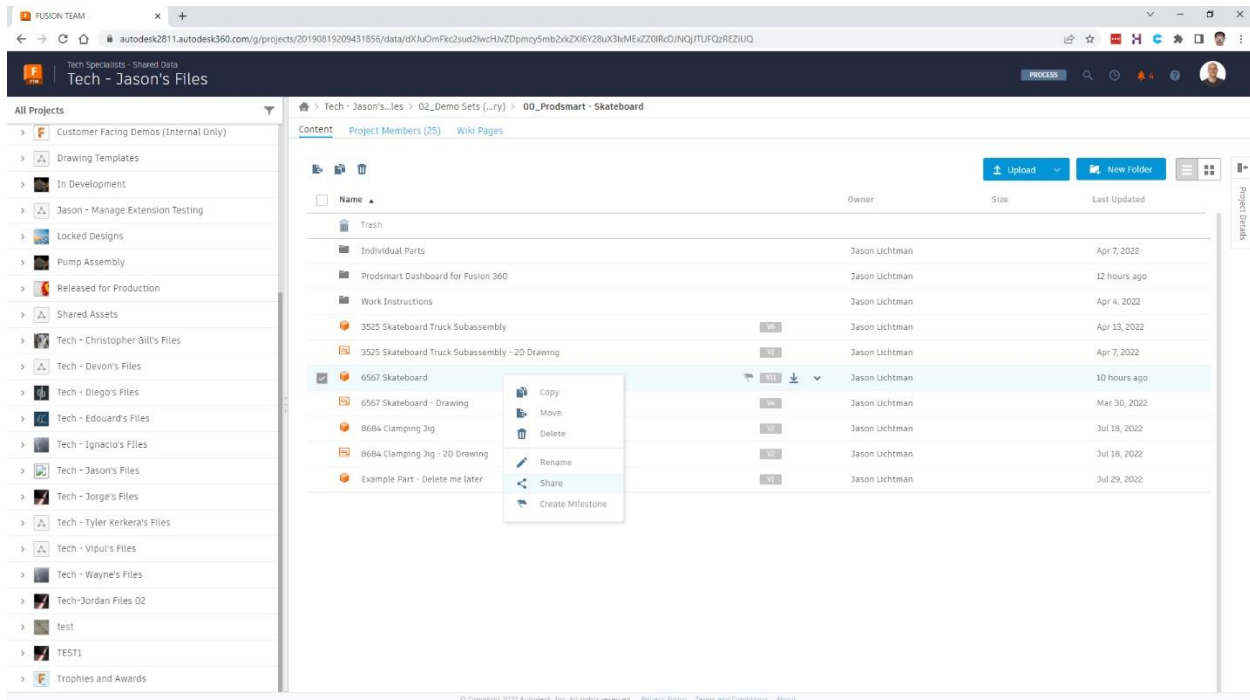
Creating a Shared Link from a Fusion 360 2D Drawing

This can also be done from the Data Panel by right clicking on a file and choosing “Share Link”



Creating a Shared Link from the Data Panel

Lastly, you can create a shared link from Fusion Teams (the web interface where you can access Fusion 360 data)

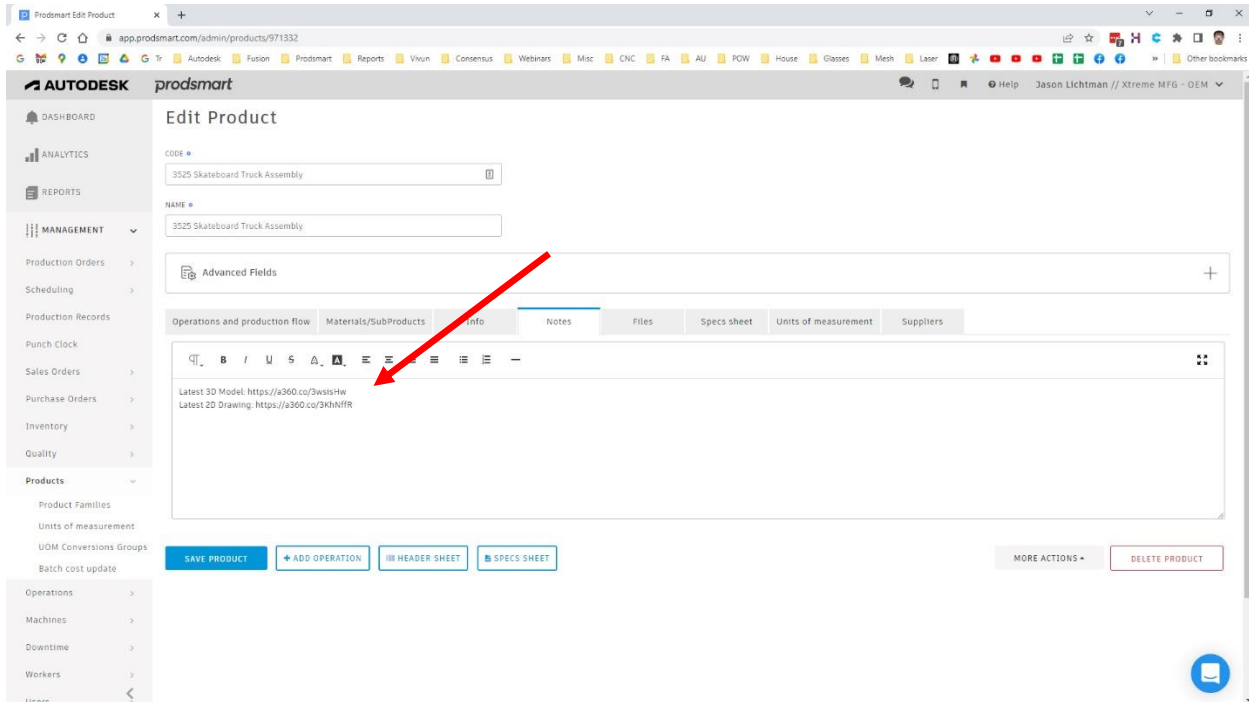


Creating a Shared Link from Fusion Team

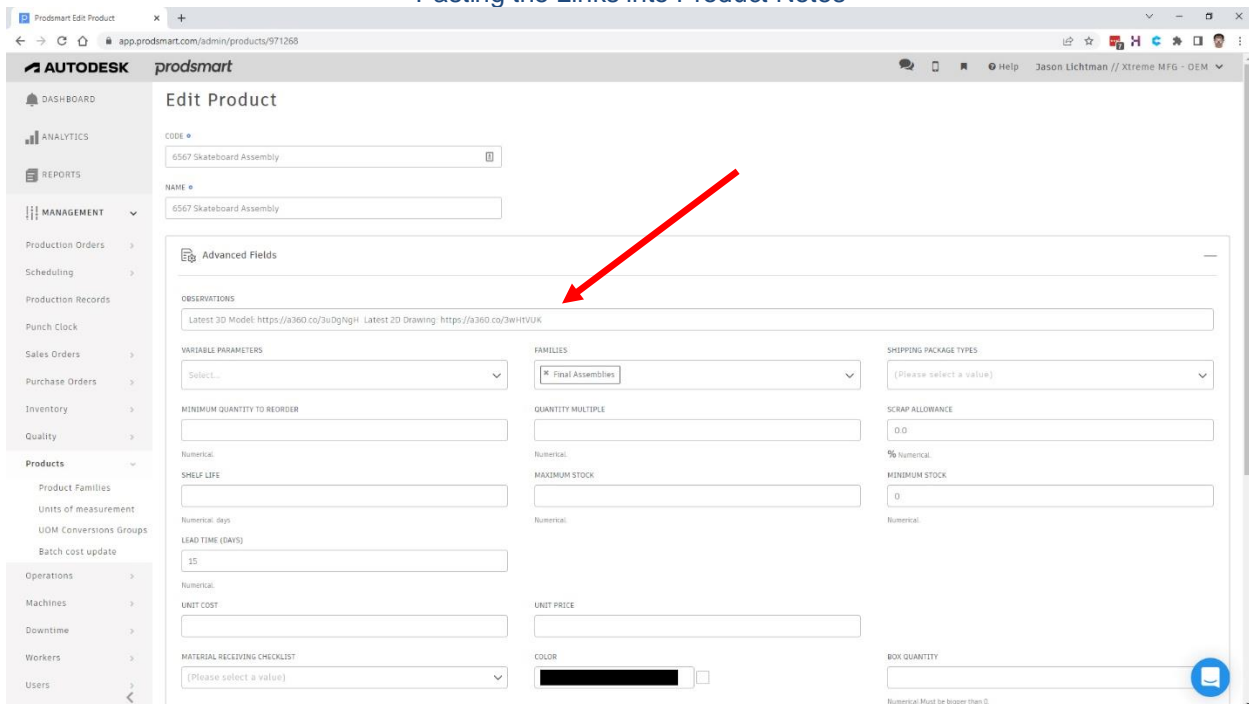
Step 02 – Copy the Link

Step 03 – Paste the Links into Prodsmart

I recommend putting the links in the Notes section of a product as well as the Observations section



Pasting the Links into Product Notes



Pasting the Links into Product Observations

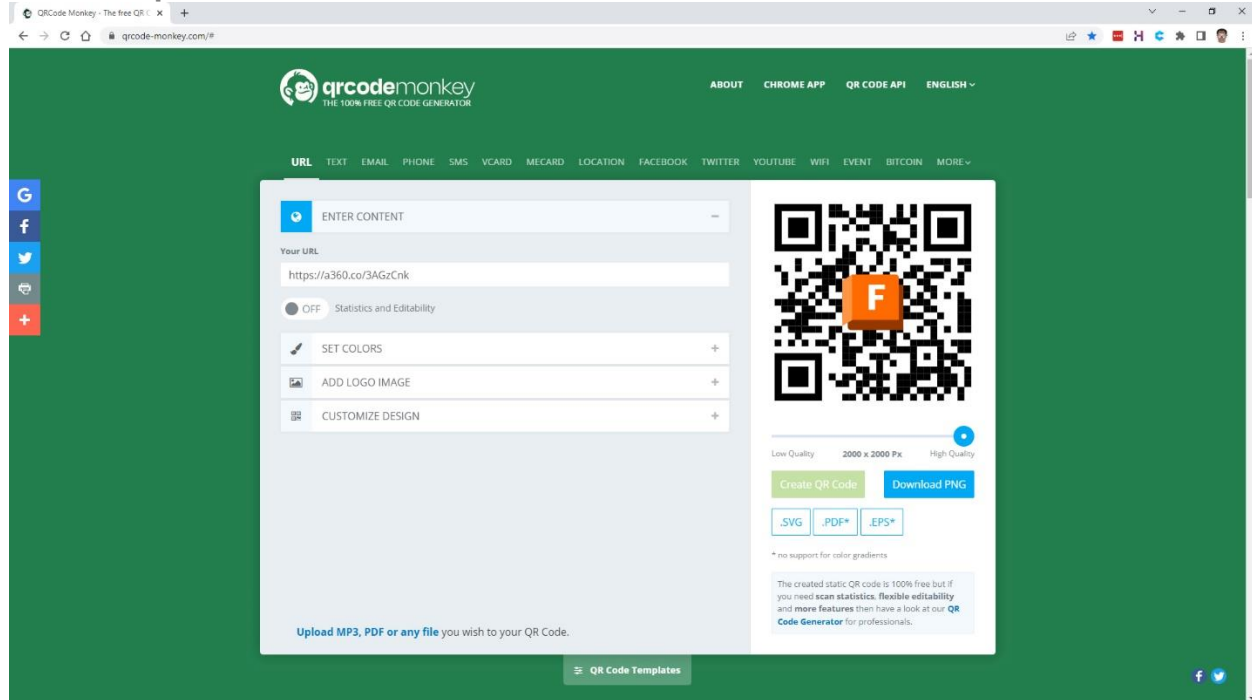
There are limitations on how you can use these links in Prodsmart. Currently, you can see the links from a tablet or mobile device, but you cannot click on them.

As a result, I recommend a temporary workaround of using QR code images

How to Create a QR Code to Access Fusion 360 Files

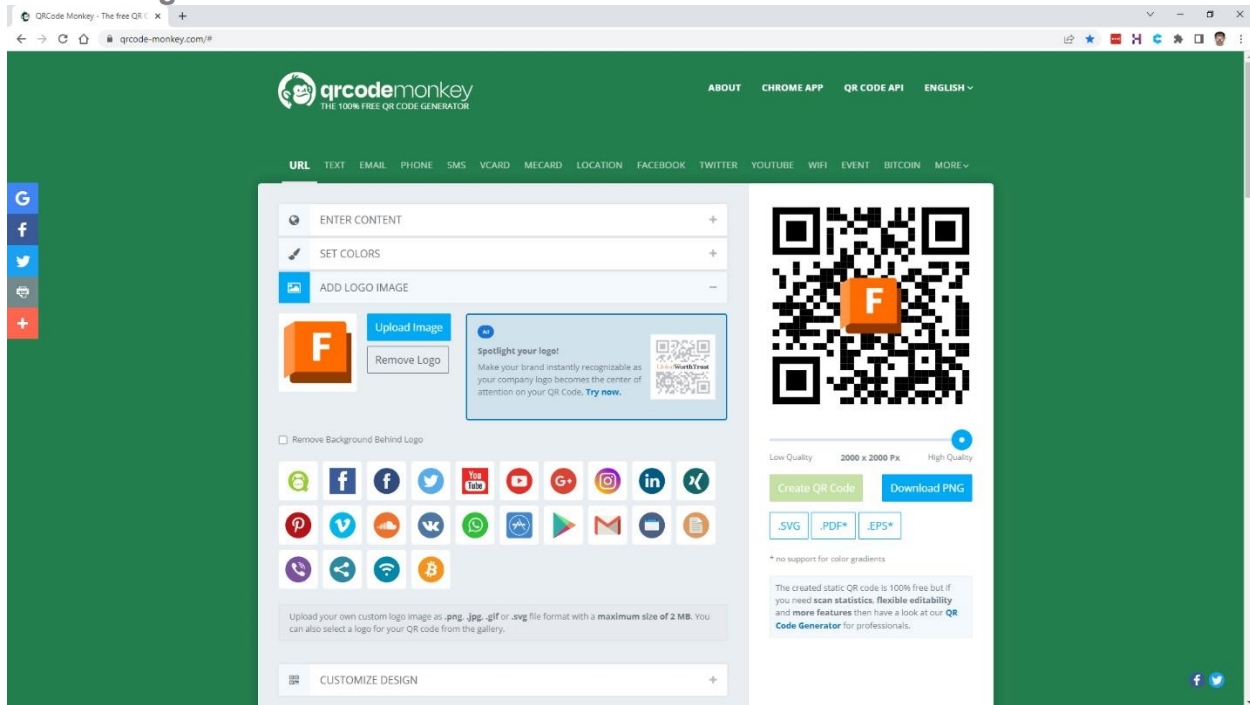
Step 01 – Go to QR Code Monkey (<https://www.qrcode-monkey.com/>)

Step 02 – Paste the Fusion 360 Link into the “Content” Section



Creating QR Code Image for Fusion 360 3D Model

Step 03 – Upload the Fusion 360 Logo or Autodesk Logo into “Add Logo Image” Section

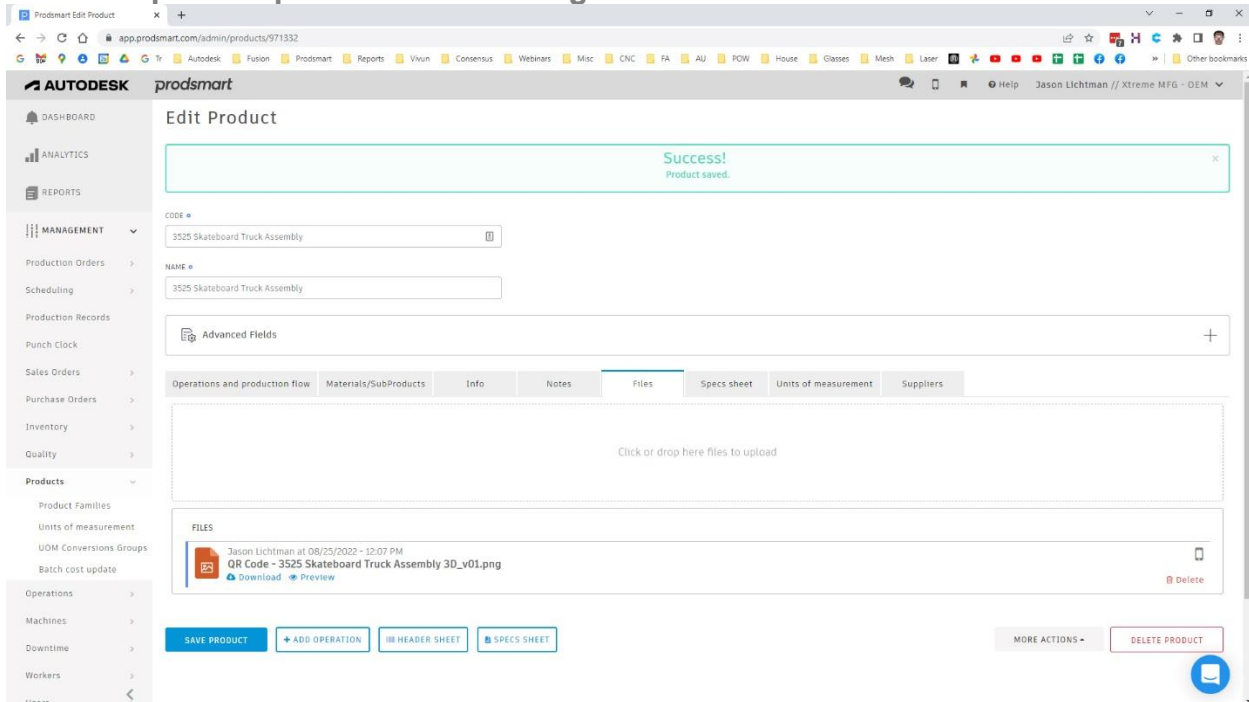


Creating QR Code Image for Fusion 360 3D Model

Step 04 – Click “Create QR Code”

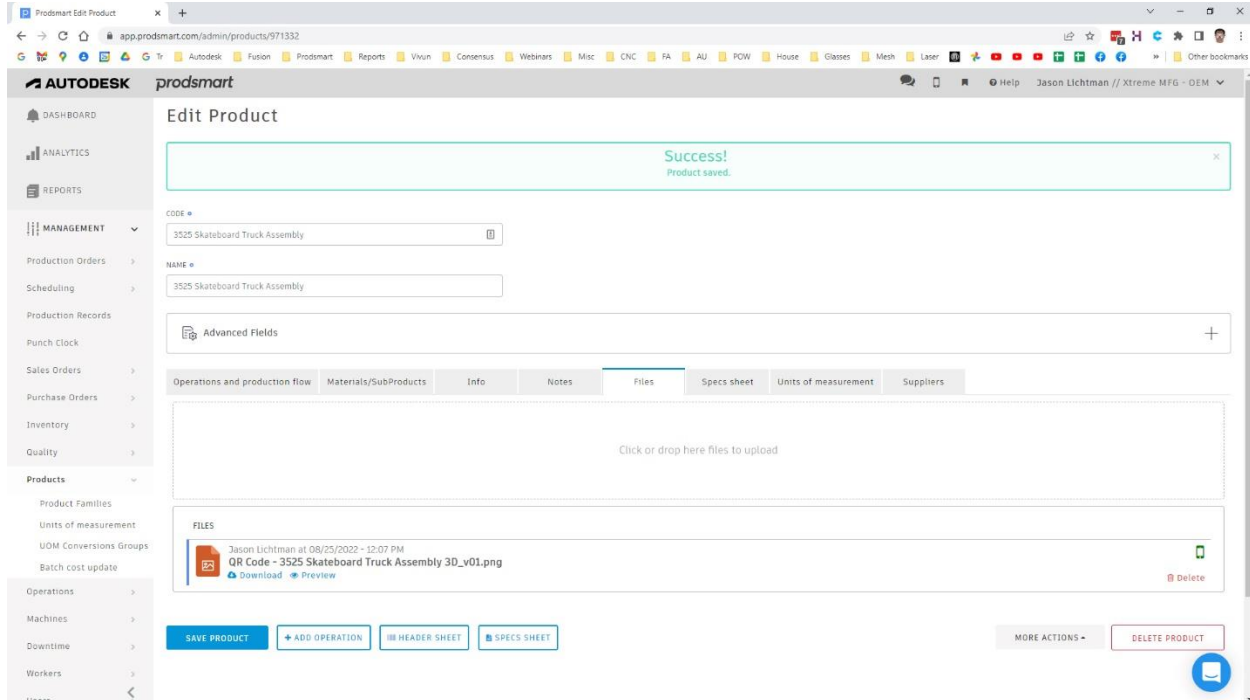
Step 05 – Download QR Code Image

Step 06 – Upload QR Code Image to Prodsmart Product Files



Uploading QR Code Image to Prodsmart

Step 07 – Click the small Mobile Device Icon on the right so that the file is accessible from a mobile device



Activating File to be Accessible via Mobile Device

Now, someone can access the QR code from the files section of the Prodsmart mobile app. You would need to scan the QR code using a secondary device, but this is still faster than trying to replicate the URL

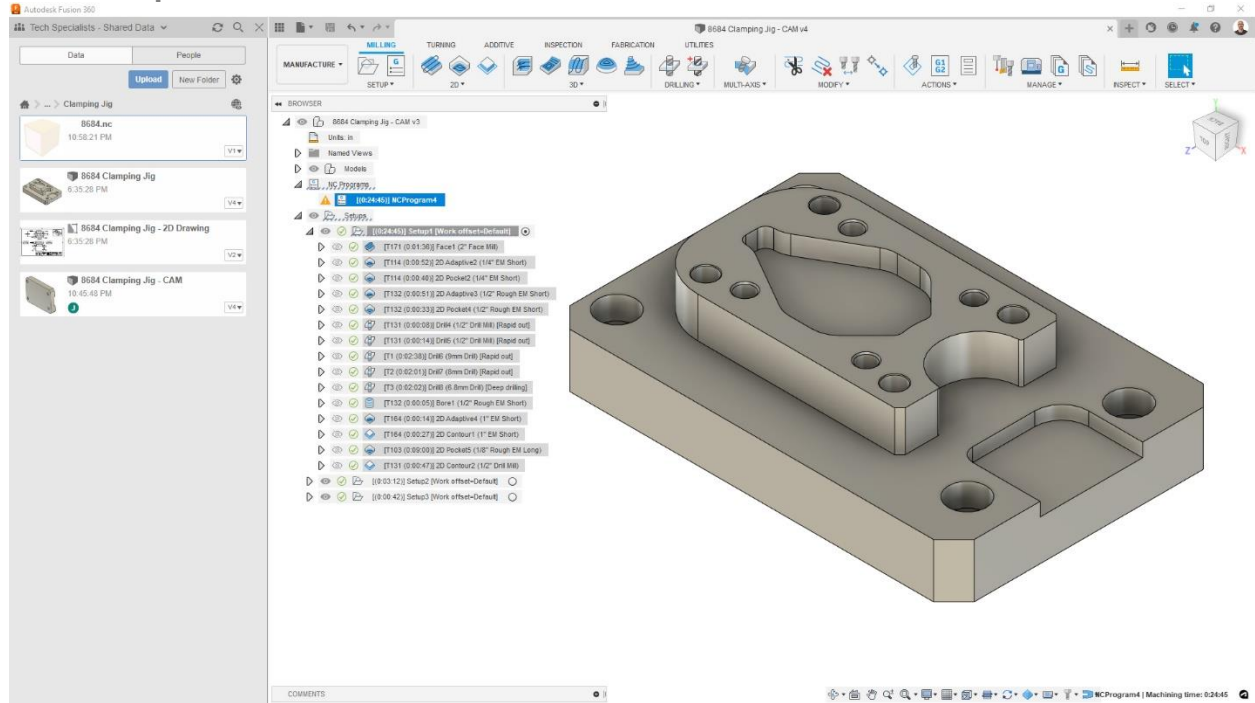
Connecting Autodesk Fusion 360 NC Files and Setup Sheets Prodsmart

The main benefit of doing this is to ensure that people on your shop floor always have access to the latest NC Files and Setup Sheets for CNC Machining

The concept behind this is exactly the same as for 3D models and 2D drawings

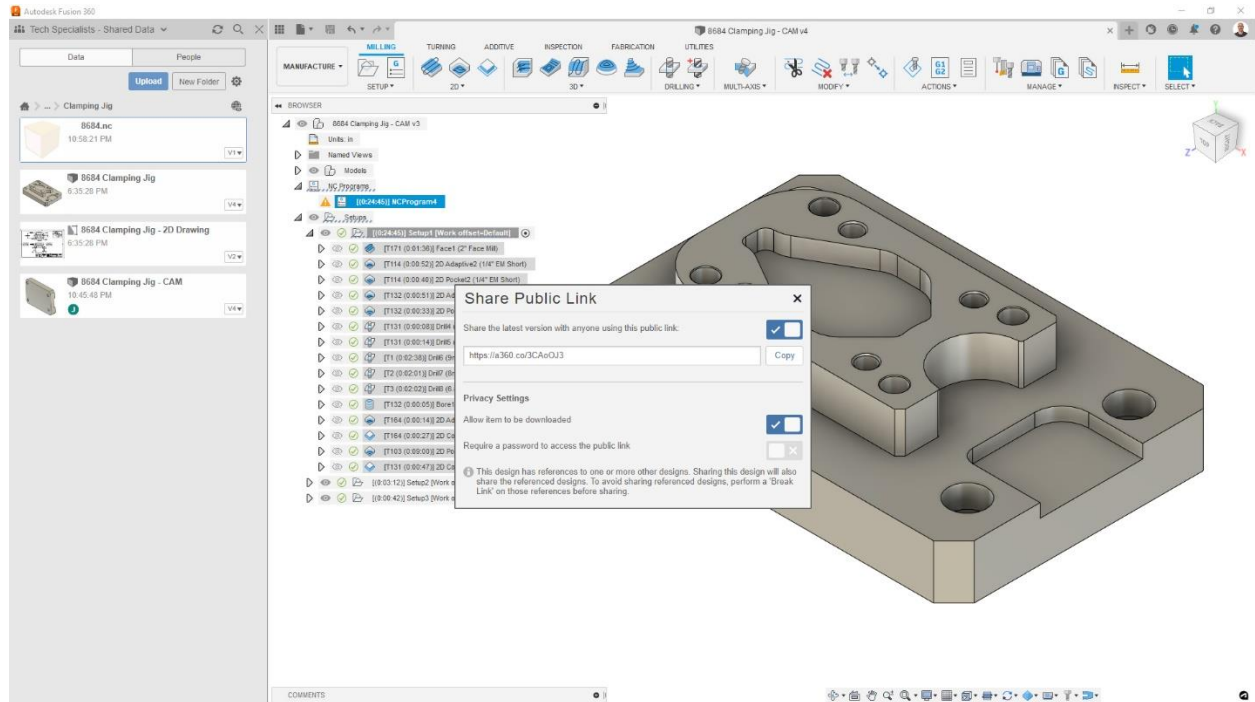
How to Connect Fusion 360 NC Files to Prodsmart

Step 01 – Create Your NC File and Save it to Fusion Team



Post Process Your Fusion 360 Toolpaths and Save NC File into Fusion Team

Step 02 – Create a Shared Link to the NC File

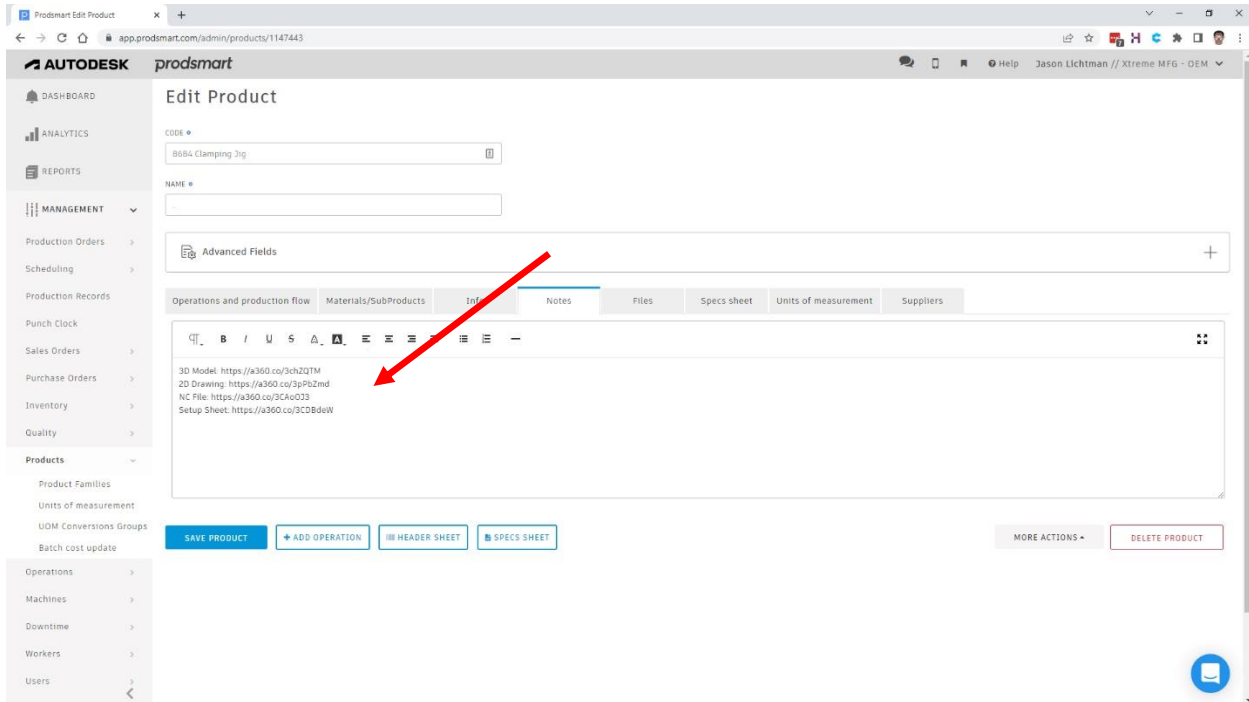


Creating a Shared Link from a Fusion 360 NC File

Step 03 – Copy the Link

Step 04 – Paste the Links into Prodsmart

I recommend putting the link in the Notes section of a product as well as the Observations section



Autodesk Prodsmart - Edit Product

CODE: 8684 Clamping Jig

NAME:

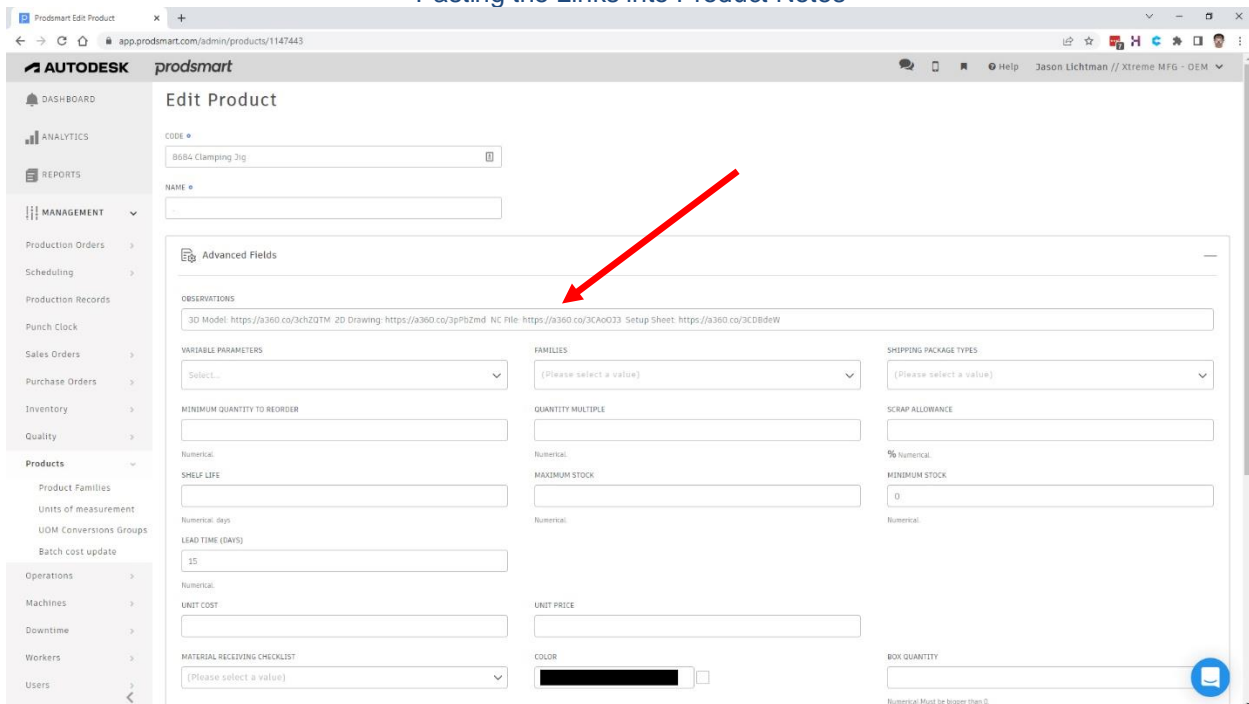
Advanced Fields

Operations and production flow | Materials/SubProducts | Info | **Notes** | Files | Specs sheet | Units of measurement | Suppliers

3D Model: <https://a360.co/3chZQTM>
 2D Drawing: <https://a360.co/3pPbZmd>
 NC File: <https://a360.co/3CAo033>
 Setup Sheet: <https://a360.co/3CDBdeW>

Buttons: SAVE PRODUCT, ADD OPERATION, HEADER SHEET, SPECS SHEET, MORE ACTIONS, DELETE PRODUCT

Pasting the Links into Product Notes



Autodesk Prodsmart - Edit Product

CODE: 8684 Clamping Jig

NAME:

Advanced Fields

OBSERVATIONS

3D Model: <https://a360.co/3chZQTM> 2D Drawing: <https://a360.co/3pPbZmd> NC File: <https://a360.co/3CAo033> Setup Sheet: <https://a360.co/3CDBdeW>

VARIABLE PARAMETERS: Select...

FAMILIES: (Please select a value)

SHIPPING PACKAGE TYPES: (Please select a value)

MINIMUM QUANTITY TO REORDER: Numerical

QUANTITY MULTIPLE: Numerical

SCRAP ALLOWANCE: Numerical

SHELF LIFE: Numerical, days

MAXIMUM STOCK: Numerical

MINIMUM STOCK: Numerical

LEAD TIME (DAYS): Numerical, 15

UNIT COST: Numerical

UNIT PRICE: Numerical

MATERIAL RECEIVING CHECKLIST: (Please select a value)

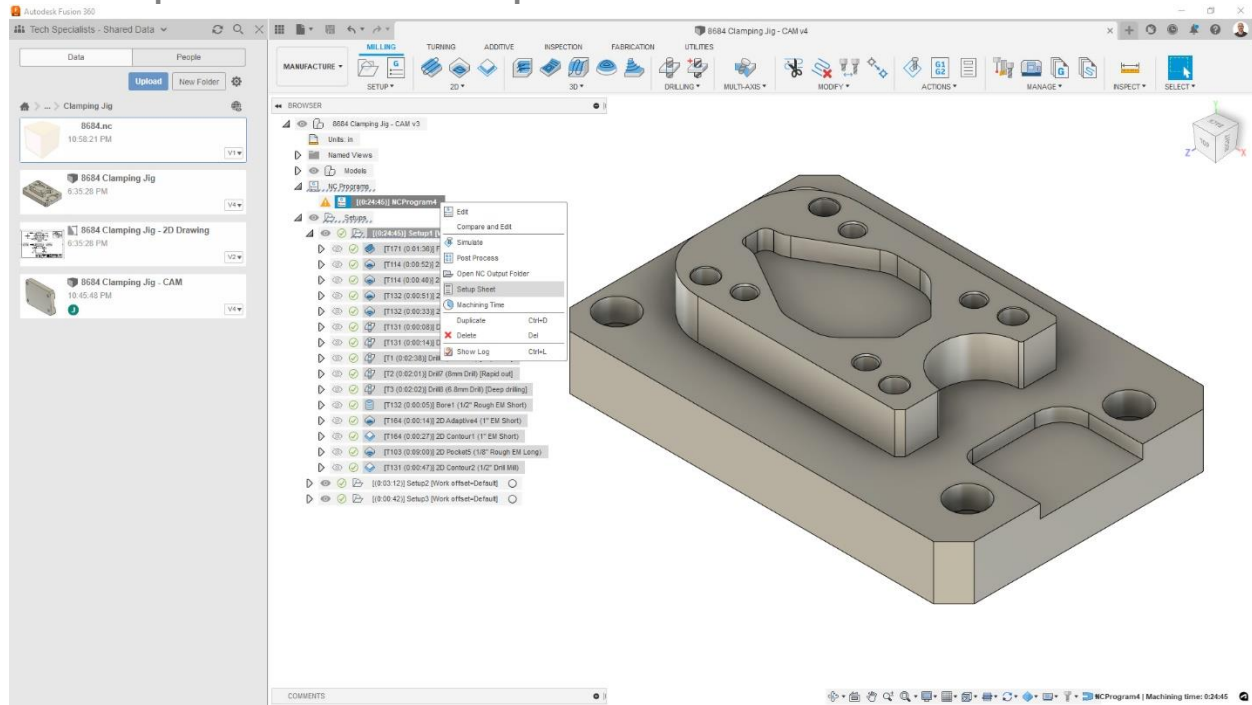
COLOR: [Color Picker]

BOX QUANTITY: Numerical

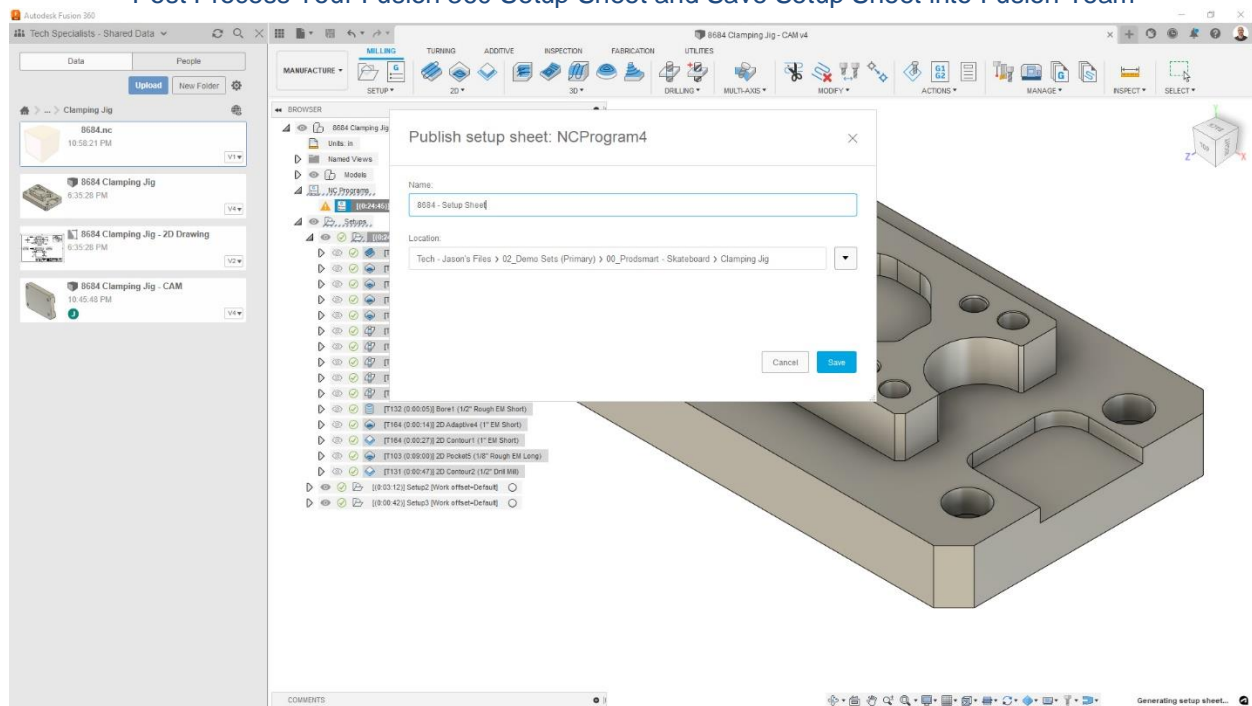
Pasting the Links into Product Observations

How to Connect Fusion 360 Setup Sheets to Prodsmart

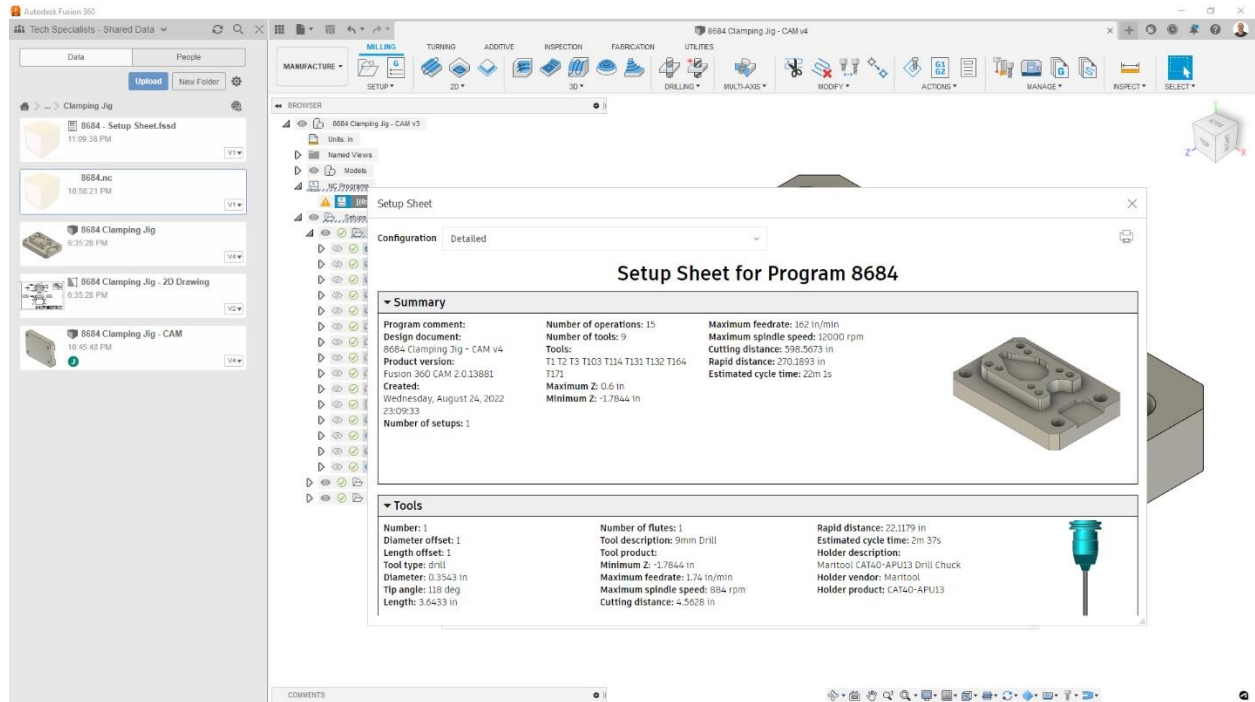
Step 01 – Create Your Setup Sheet File and Save it to Fusion Team



Post Process Your Fusion 360 Setup Sheet and Save Setup Sheet into Fusion Team

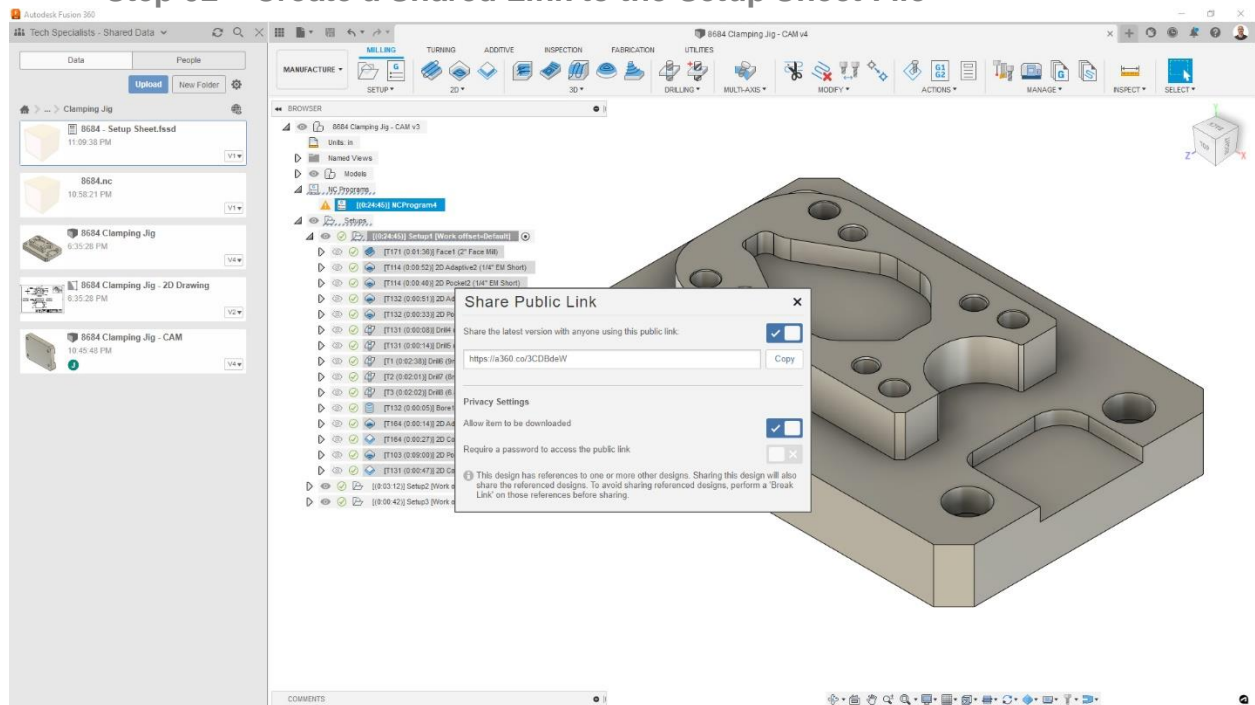


Post Process Your Fusion 360 Setup Sheet and Save Setup Sheet into Fusion Team



Post Process Your Fusion 360 Setup Sheet and Save Setup Sheet into Fusion Team

Step 02 – Create a Shared Link to the Setup Sheet File

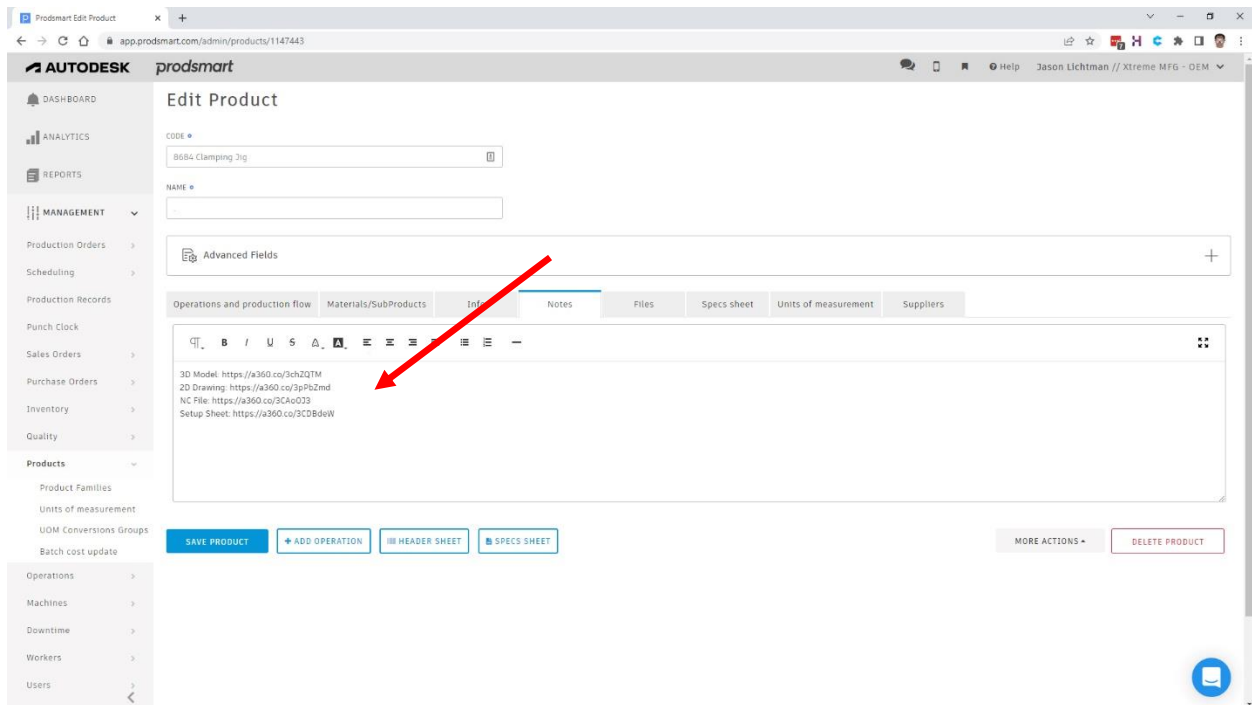


Creating a Shared Link from a Fusion 360 Setup Sheet File

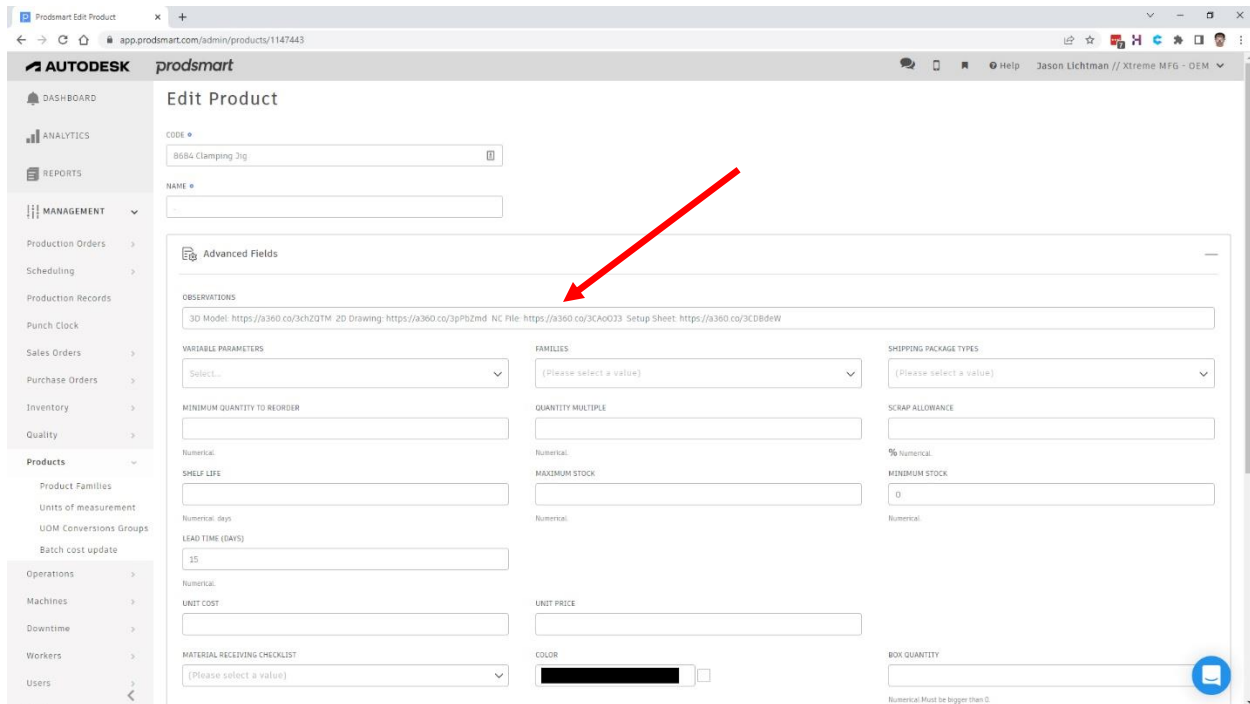
Step 03 – Copy the Link

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Pasting the Links into Product Notes



Pasting the Links into Product Observations

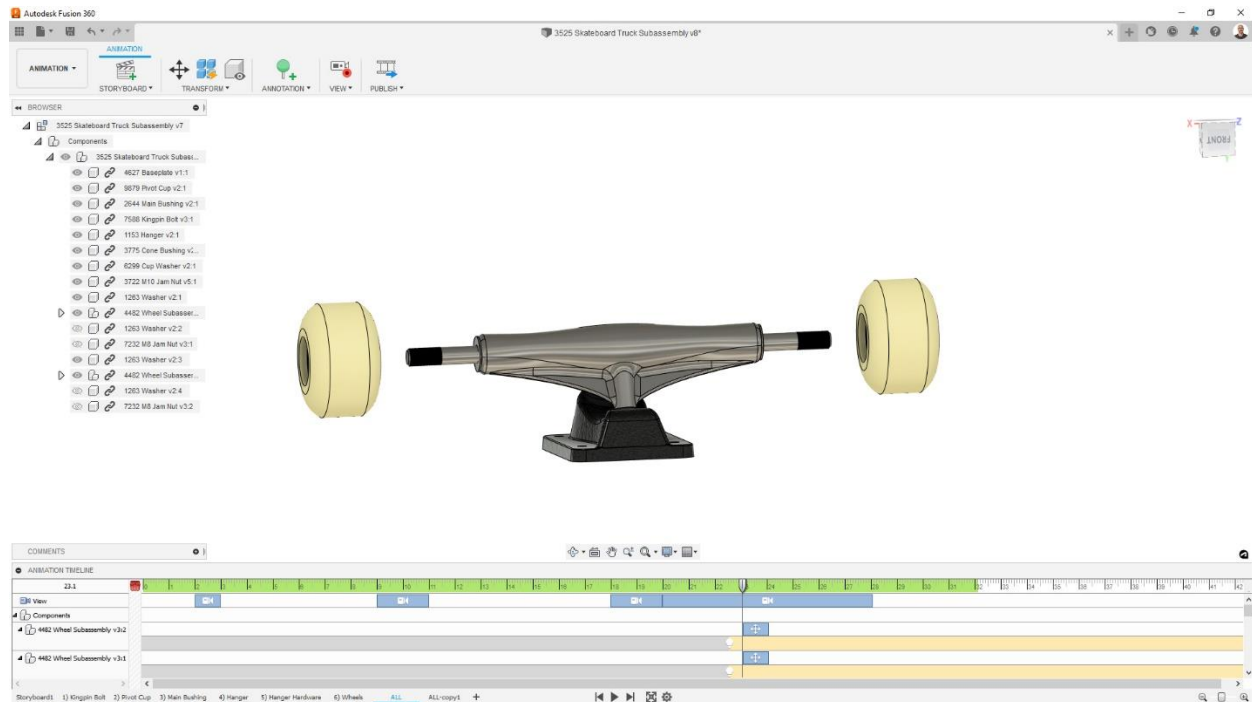
Use Fusion Team to Store Work Instructions in Video Form

Work Instructions are meant to provide a worker with instructions on how to perform a certain manufacturing operation. One way to provide clear instruction is by using videos that the worker can watch.

How to Create a Video Animation of Assembling a Product

Step 01 – Create an Animation of Dissassembling Your Product

This can be done from the Animation Workspace



Create Animation from Fusion 360 Animation Workspace

Step 02 – Reverse the Animation

This will make the animation of ASSEMBLING the product instead of Dissassembling it.

Step 03 – Output the Animation as a Video

How to Access Video via Work Instructions

Step 01 – Upload Video to Fusion 360 / Fusion Team

Step 02 – Create a Shared Link to the Video

Step 03 – Add the link to the Work Instructions

Step 04 – Create a QR Code image that links to the URL you created for the Video

Step 05 – Upload Video's QR Code to Product Files

Step 06 – Upload Video's QR Code to Work Instructions

Step 07 – Paste URL itself to Work Instructions as well

Import a Fusion 360 3D Model Directly into Prodsmart

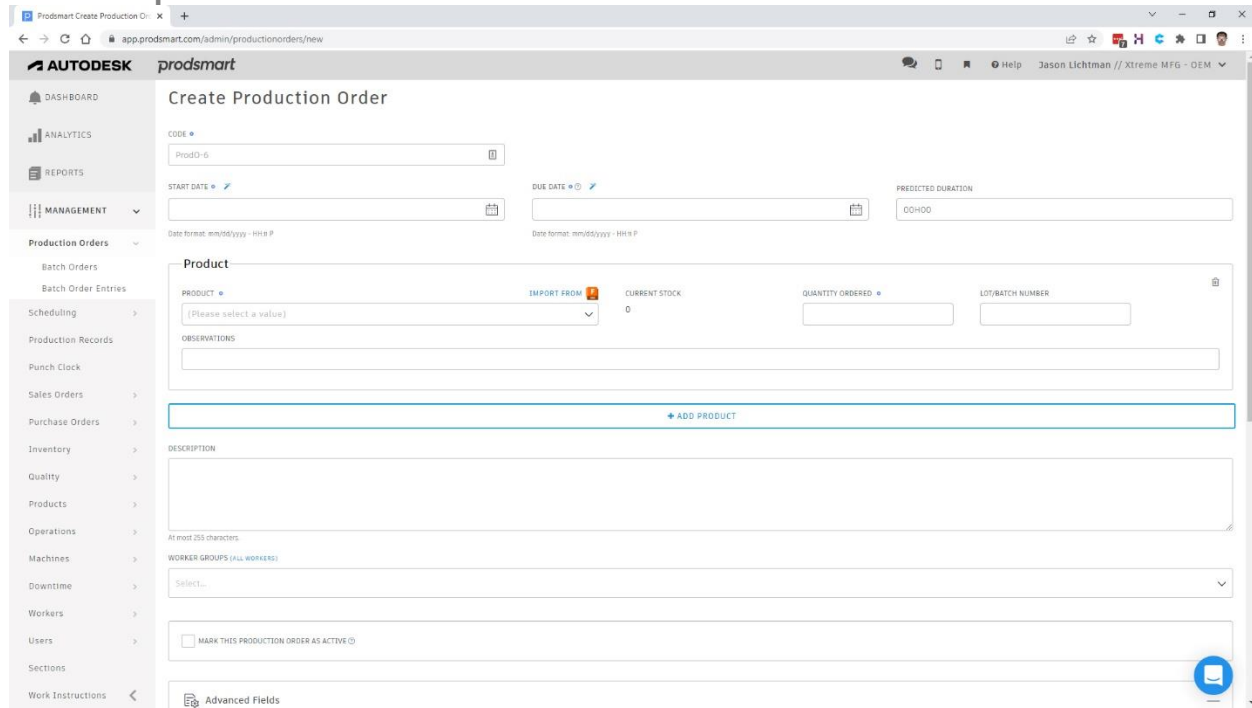
Since Autodesk acquired Prodsmart, tremendous efforts have been put into place to connect the two products together.

You can now import a Fusion 360 3D model directly into Prodsmart.

Note: This is currently limited to a single part file. This does not currently work for assemblies

How to Import a Fusion 360 3D Model into Prodsmart

Step 01 – Go to Prosmart and Create a New Production Order



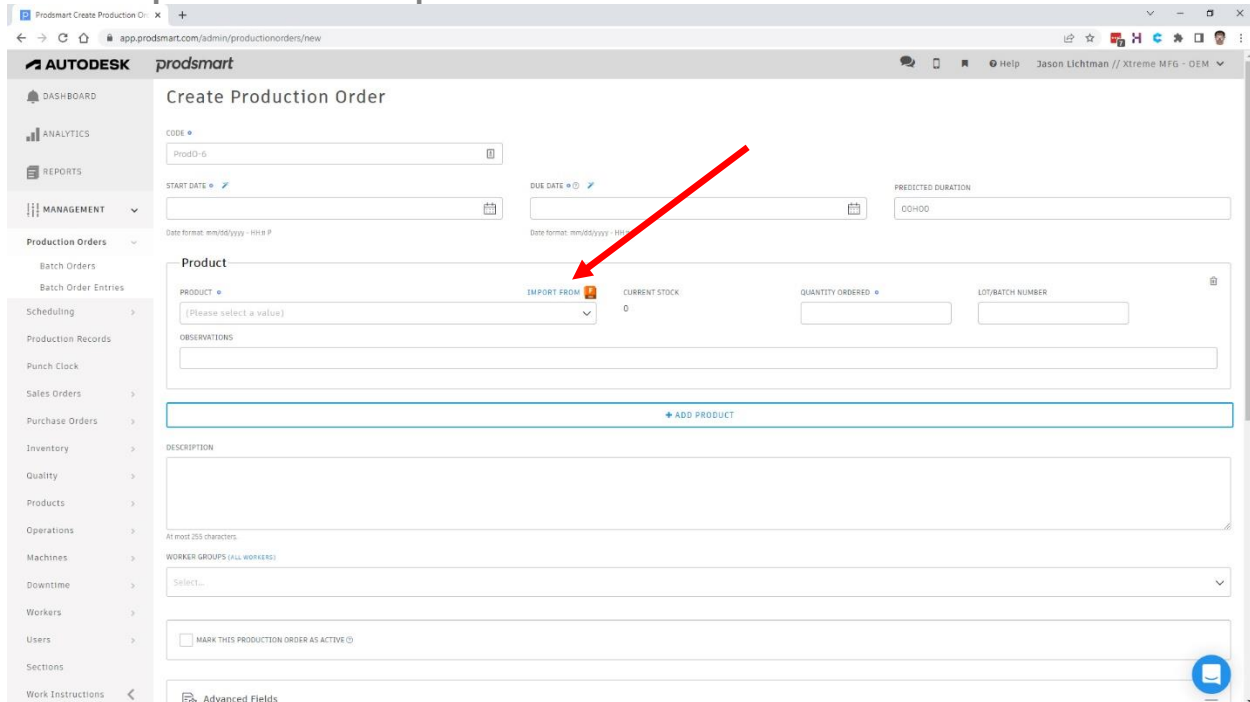
The screenshot shows the 'Create Production Order' form in the Prodsmart application. The form is titled 'Create Production Order' and is located at the URL 'app.prodsmart.com/admin/productionorders/new'. The form includes several fields for creating a new production order:

- CODE**: A text field with the value 'ProdQ-6'.
- START DATE**: A date picker field.
- DUE DATE**: A date picker field.
- PREDICTED DURATION**: A text field with the value '00:00'.
- Product**: A section containing:
 - PRODUCT**: A dropdown menu with the value '(Please select a value)'.
 - IMPORT FROM**: A button with a plus icon.
 - CURRENT STOCK**: A text field with the value '0'.
 - QUANTITY ORDERED**: A text field.
 - LOT/BATCH NUMBER**: A text field.
 - OBSERVATIONS**: A text area.
- DESCRIPTION**: A text area.
- WORKER GROUPS (ALL WORKERS)**: A dropdown menu with the value 'Select...'.
- MARK THIS PRODUCTION ORDER AS ACTIVE**: A checkbox.

At the bottom of the form, there is a button labeled 'ADD PRODUCT' and a section for 'Advanced Fields'.

Create Production Order

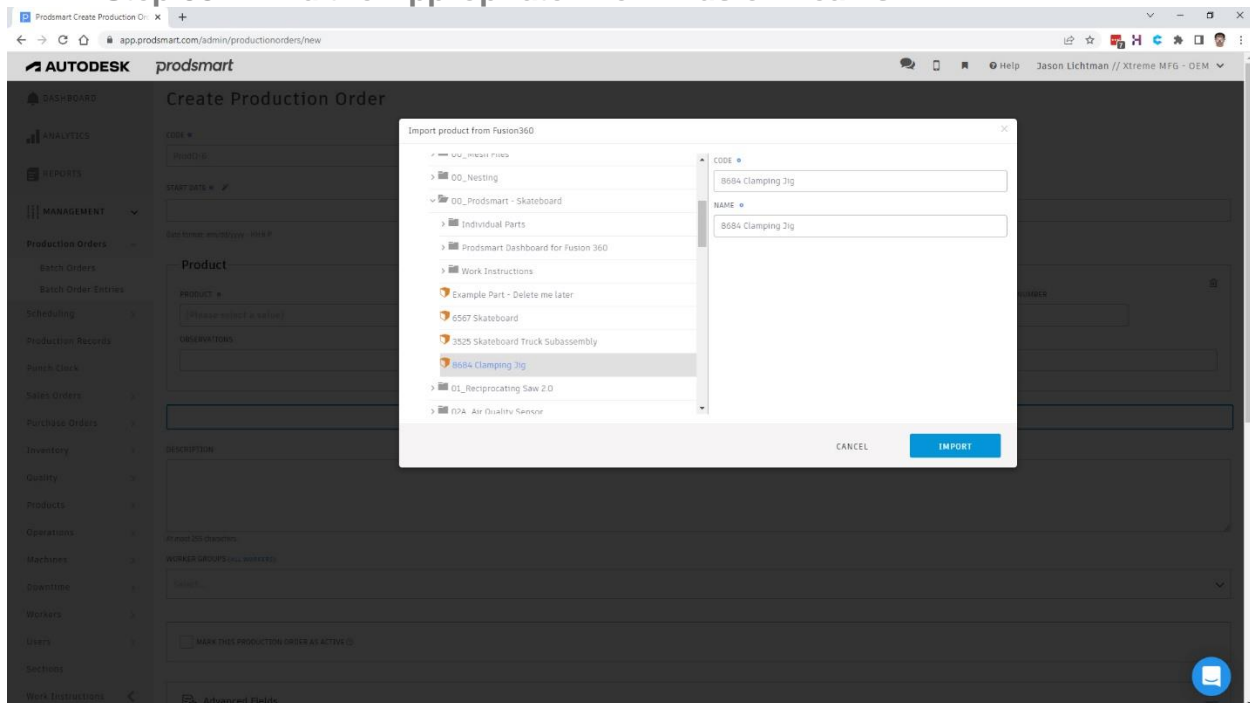
Step 02 – Choose Import From Fusion 360



The screenshot shows the 'Create Production Order' form in the Autodesk Prodsmart application. The form includes fields for CODE, START DATE, DUE DATE, and PREDICTED DURATION. A red arrow points to the 'IMPORT FROM' button in the 'Product' section, which is located next to the 'PRODUCT' dropdown menu. The 'PRODUCT' dropdown currently shows '(Please select a value)'. Below the 'PRODUCT' dropdown is a text area for 'OBSERVATIONS'. At the bottom of the form, there is a section for 'Advanced Fields'.

Insert from Fusion 360 Button Found via Create Production Order

Step 03 – Find the Appropriate File in Fusion Teams



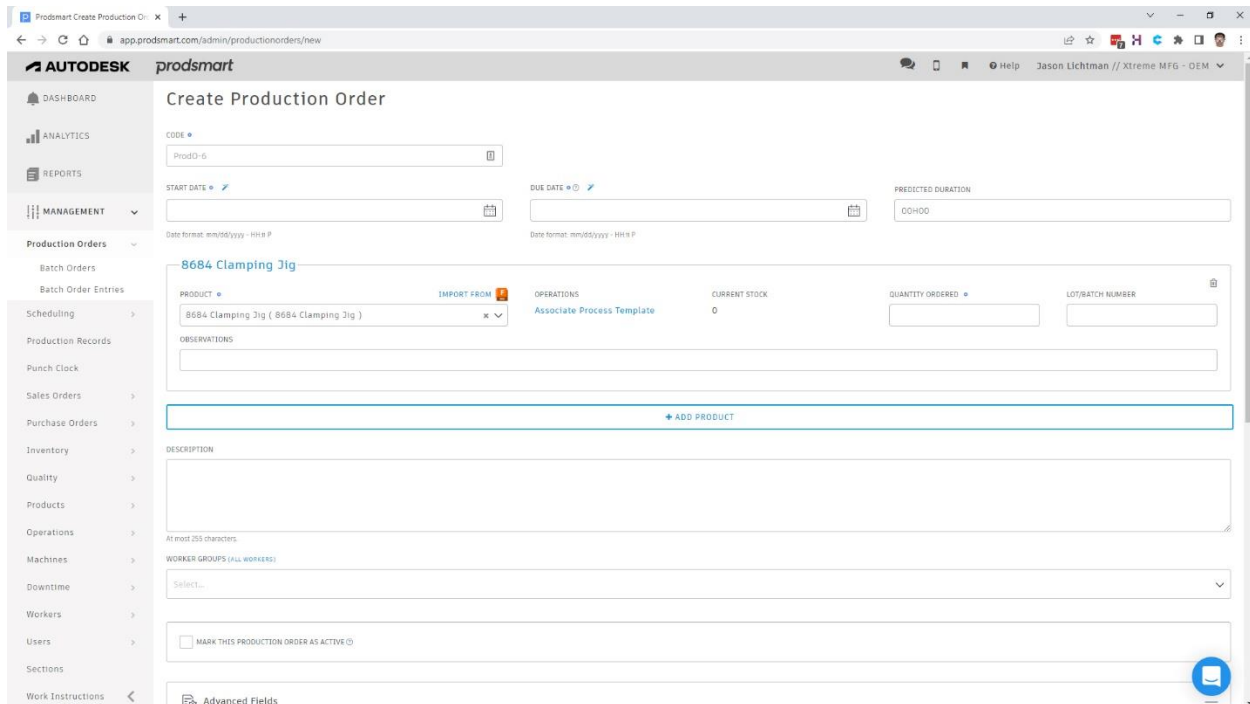
The screenshot shows the 'Create Production Order' form with the 'Import product from Fusion360' dialog box open. The dialog box displays a list of files, including '8684 Clamping Jig', which is highlighted. The 'CODE' field in the dialog box is set to '8684 Clamping Jig'. The 'NAME' field is also set to '8684 Clamping Jig'. The 'IMPORT' button is visible at the bottom right of the dialog box.

Choosing a Fusion 360 File to Import into Prodsmart

Step 04 – Confirm Selection and Complete Import

At this point, the Production Order will show your product listed.
There is no need to finish creating the Production Order itself (unless you would like to).

If the goal is to simply create a Prodsmart Product that comes from Fusion 360 and includes the 3D model, you are done.



Prodsmart Production Order Showing Imported Product from Fusion 360

View Prodsmart Dashboard from Within Fusion 360

Matthew Nichols from Autodesk was kind enough to create a Prodsmart Dashboard App for Fusion 360.

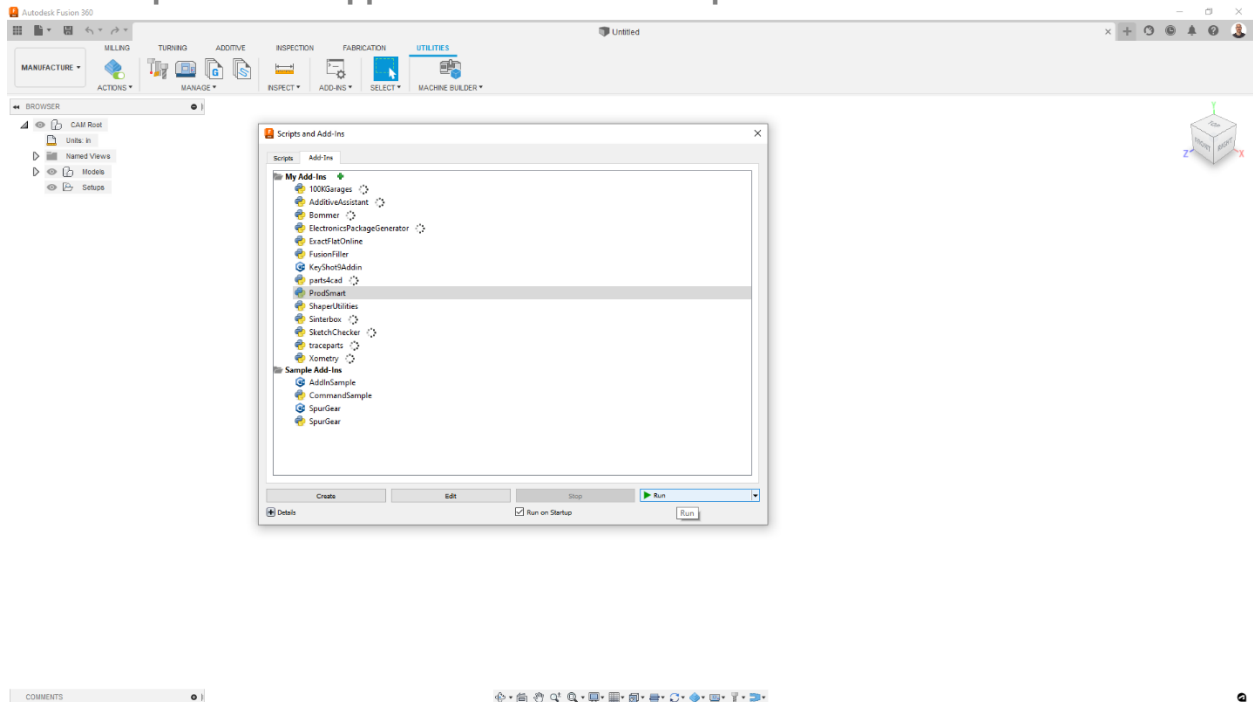
Using this app, you gain access to the Prodsmart Dashboard while you are using Fusion 360

How to Install and Use Prodsmart Dashboard for Fusion 360

Step 01 – Download App from <https://a360.co/3CcMNgV>

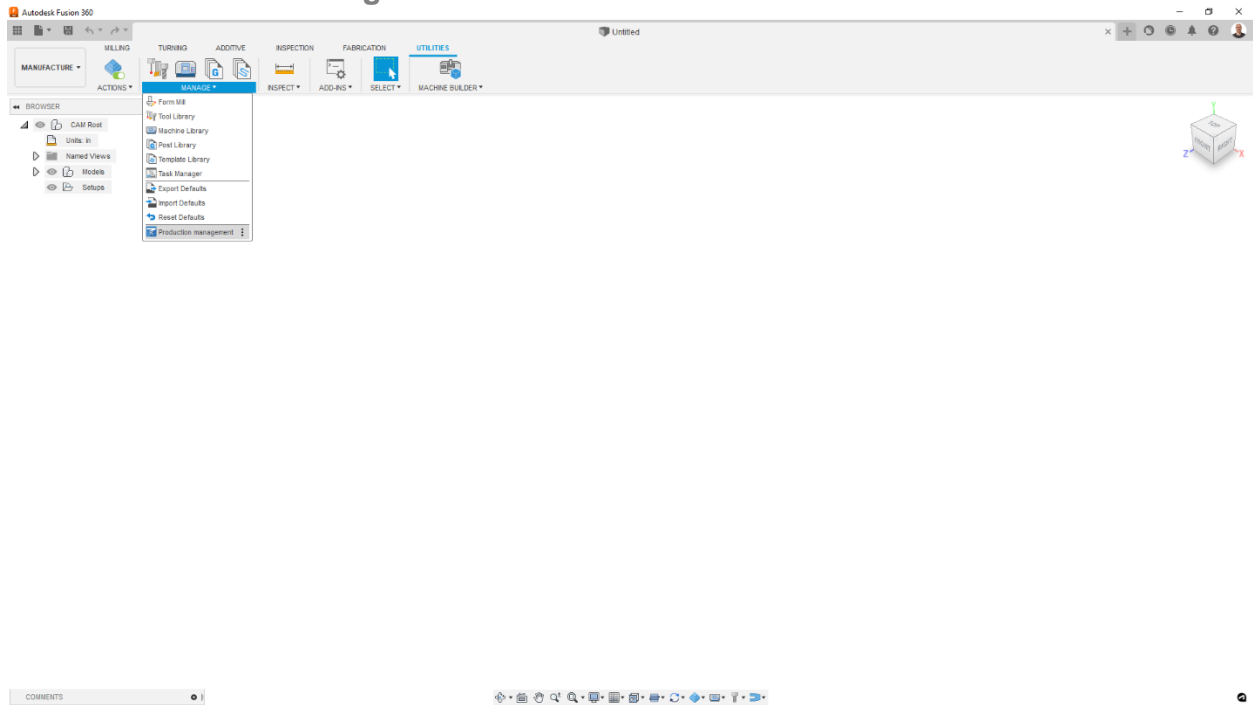
Step 02 – Install App Like You Would Any Fusion 360 App

Step 03 – Run App from Fusion 360 Scripts and Add-Ons



Starting App from Scripts and Add Ins

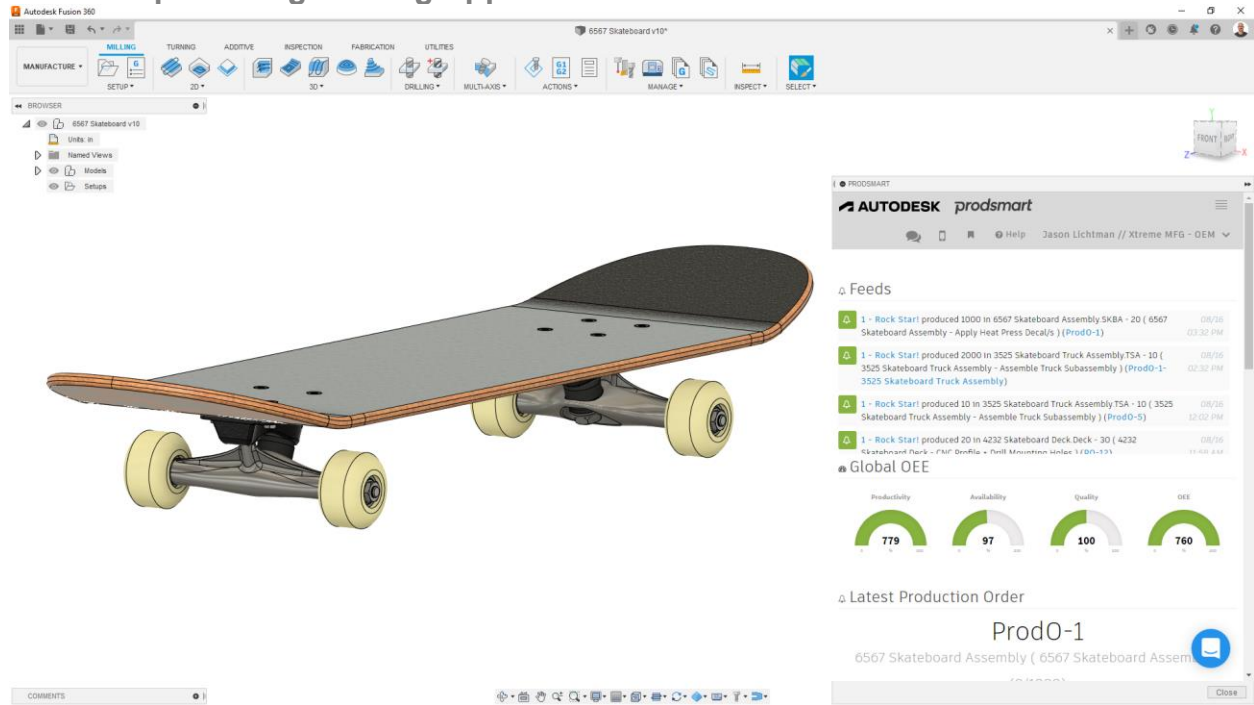
Step 04 – Run App from Manufacture Workspace -> Utilities -> Manage -> Production Management



Opening App from Manufacture -> Utilities -> Manage

Step 05 – Log into Prodsmart using Prodsmart Credentials

Step 06 - Begin Using App



Prodsmart Dashboard for Fusion 360 App