

Work Instruction: Completing an Engineering Operation

1. Audience

Engineering

2. Objective:

Reviewing, completing approvals and releasing a job from Engineering in M1

3. Revision and Approval

Rev.	Date	Nature of Changes	Approved By
N	6/2/18	Original issue.	Eicher
001	09/30/2019	Updated to include the electrical design steps.	Wagner
002	5/16/2023	Update to procedures	Rigotti

4. Scope

Provide information on when a job is in different stages of the Engineering design process.

5. Prerequisites

Knowledge on operating M1.

6. Records

- Job and Sales order Record (Electronic)
- The approval drawing will be attached in M1
- Engineering Operations KPI

7. Associated Documents

- The electronic copy of the approval drawing is in M1 attachments
- Engineering Job Status Report
- Elec Engineering Job Status Report

8. Evaluative Factors

- On-Time measurements in Power BI

9. Responsibility

Engineering

10. Instructions

Step 1

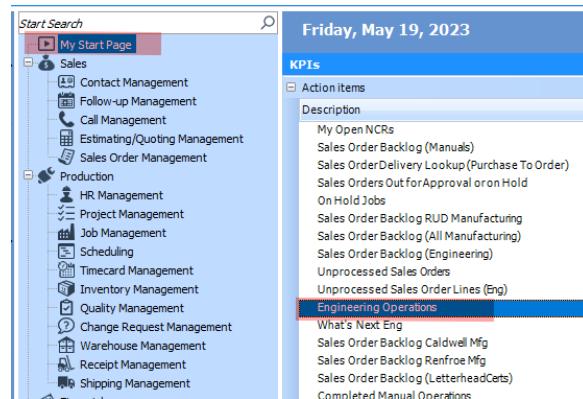
To see a list of the jobs assigned to you, go to the Engineering Operations KPI found on My Start Page.

Double click on the Engineering Operations to open it.

Find your name and click on the “+” sign to open your job queue.

Once open, double click on a Job ID to open the job.

This grid is your schedule and will contain all job operations assigned to you in chronological order.



Process ID	Part Description
uatDescription : 3 of 265 rows	
uatDescription Brian Wagner: 49 of 265 rows	
uatDescription Chad Ludlum: 20 of 265 rows	
uatDescription Dale Kelly: 2 of 265 rows	
uatDescription Dan Mongan: 6 of 265 rows	
uatDescription Dave Comisso: 26 of 265 rows	
uatDescription Dave Szymanski: 33 of 265 rows	
uatDescription Henry Vara: 3 of 265 rows	
uatDescription Ian Vara: 40 of 265 rows	
uatDescription Jason Schabacker: 8 of 265 rows	
uatDescription Mark Blomberg: 6 of 265 rows	
uatDescription Michael Stitt: 1 of 265 rows	
uatDescription Nagarjun Rao: 6 of 265 rows	

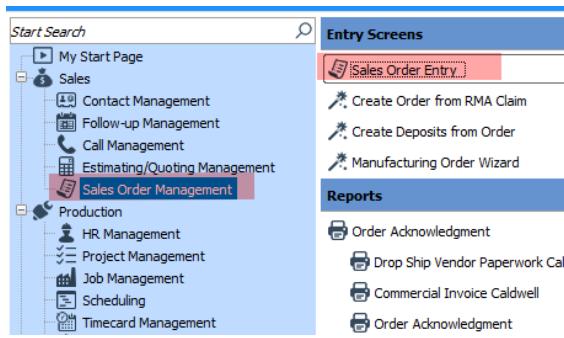
Process ID	Part Description	Long Description	Job ID	Start Date	Due Date	Est Prod Hrs	Engineering Review	On Hold?
uatDescription : 3 of 265 rows								
uatDescription Brian Wagner: 49 of 265 rows								
uatDescription Chad Ludlum: 20 of 265 rows								
uatDescription Dale Kelly: 2 of 265 rows								
uatDescription Dan Mongan: 6 of 265 rows								
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uatDescription Mark Blomberg: 6 of 265 rows								
uatDescription Michael Stitt: 1 of 265 rows								
uatDescription Nagarjun Rao: 6 of 265 rows								
APDSN - Approval Design	85R-33-72 Telescoping Coil Grab	Engineering Approval Design	158938-01-01	6/5/2023	6/5/2023	0.03		
APPS - Approvals Update & Send to Sales	85R-33-72 Telescoping Coil Grab	Update & Send to Sales	158938-01-01	6/8/2023	6/9/2023	0.50		
APDSN - Approval Design	23S-, 25M-70 Roll Lifting Beam	Engineering Approval Design	158237-02-01	6/12/2023	6/12/2023	1.00		
APDSN - Approval Design	Parking Stand for Model 23S-, 25M...	Engineering Approval Design	158237-01-01	6/14/2023	6/14/2023	1.00		
APPS - Approvals Update & Send to Sales	23S-, 25M-70 Roll Lifting Beam	Update & Send to Sales	158237-02-01	6/13/2023	6/14/2023	0.50		
APPS - Approvals Update & Send to Sales	Parking Stand for Model 23S-, 25M...	Update & Send to Sales	158237-01-01	6/15/2023	6/16/2023	0.50		
APDSN - Approval Design	60MS-5-48 , Heavy Duty Sheet Lif...	Engineering Approval Design	156704-01-01	7/12/2023	7/12/2023	3.00	<input checked="" type="checkbox"/>	
APPS - Approvals Update & Send to Sales	60MS-5-48 , Heavy Duty Sheet Lif...	Update & Send to Sales	156704-01-01	7/13/2023	7/14/2023	0.50	<input checked="" type="checkbox"/>	
								7.03

Receiving and Reviewing a New Order

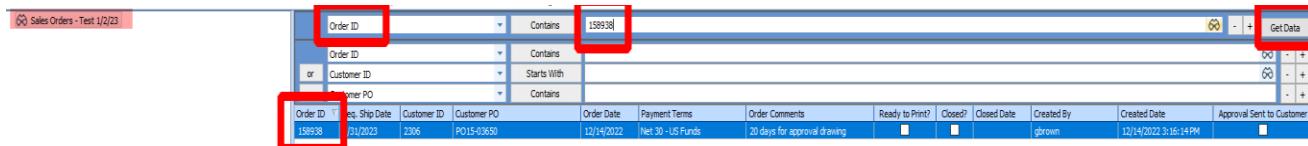
Step 2

When the Engineering Scheduler chooses a Designer for a job, he/she will send an email requesting estimated hours to complete the approval. Once the designer receives this request, they will review all of the information in the order.

To review an order, open the sales order by clicking on Sales Order Management, then click on Sales Order Entry.



Type in sales order number next to Order ID and click on Get Data.



Double click on the order ID to open the order.

Review all information (including Part Description/Model Number, Long Description and any attachments) to verify all info required to complete the approval is present. If electrical design is required, the electrical engineer will also review the order to make sure all information required is in the description or attached.

If either engineer is missing required information, they will send an e-mail to the salesperson responsible for the order and the engineering scheduler requesting the information. At this time, the order may be put on hold if required (see WI-20-049-Using Job Holds).

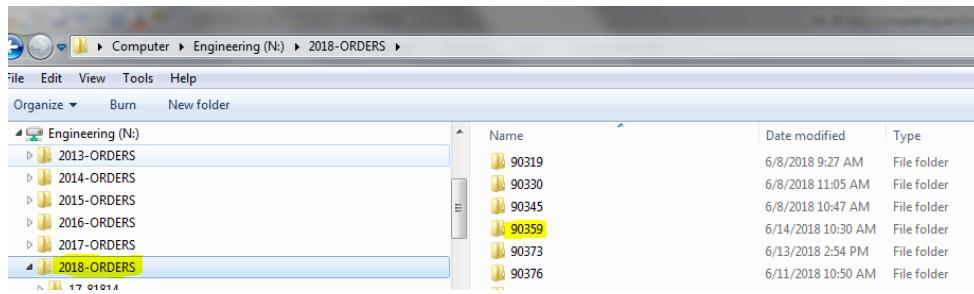
Note: To find the Salesperson responsible for a particular order, open the sales order and click on the sales order number.

Look under Salesperson Info. Any correspondence on the order should go to the TSR. If a TSR is not available refer to the Account Manager. If neither of these are available, choose the Created By person listed.

Once you verify all information required is there, respond to the email from the Engineering Scheduler stating the estimated time to complete approvals.

Step 3

Create a job folder in the engineering drive under the current year to store all drawings and paperwork related to the job.

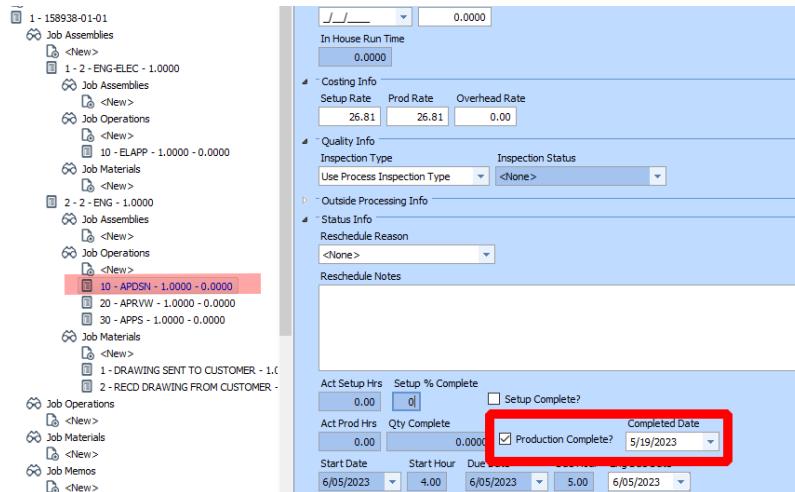


Completing and Sending an Approval Drawing

Step 4

When an approval drawing is done, it requires review from a qualified Engineer. Send an email to the Engineering Scheduler and the Engineering Manager stating that the approval is ready for review.

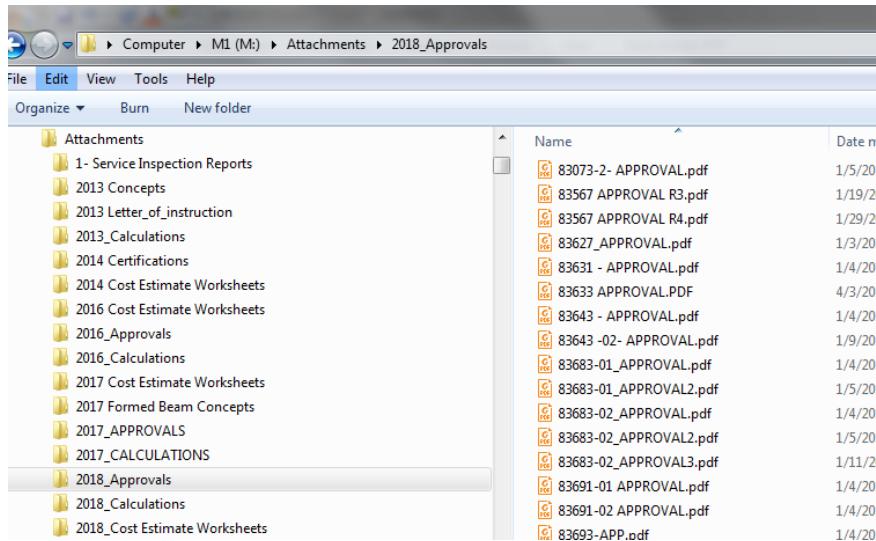
Check the Production complete box on the APDSN operation on the job.



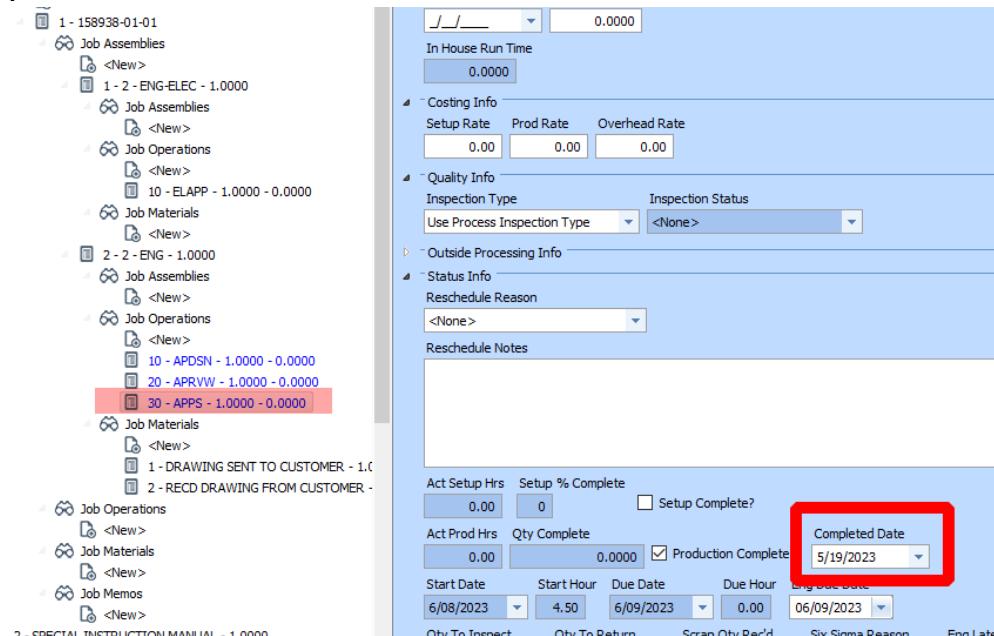
Step 5

When the qualified Engineer has reviewed and sent notes back, make the updates. If further review is required, send it back for review.

Once all updates are made and approved, a PDF copy needs to go into M1 attachments current year folder.



Check the Production complete box on the APPS operation on the job.



Then send an e-mail with the approval drawing attached or a link to the approval drawing to the Salesperson handling the order.

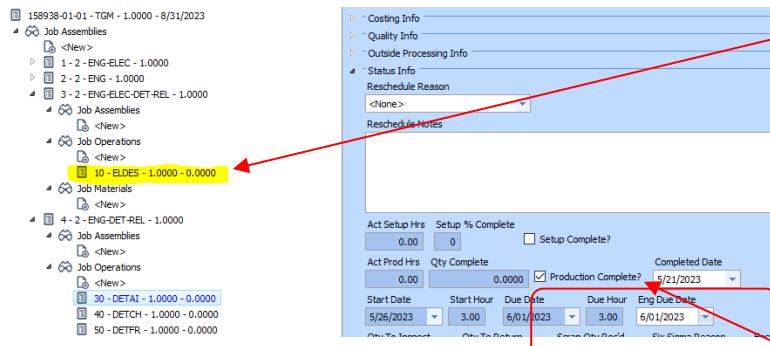
Attach a copy of the approval drawing to the job and sales order.

Releasing a Job

Step 6

When the mechanical designer completes the details for a job, the drawings go to the checking process. Click on the DETAI operation in the job and check the Production Complete box. Then the designer will send an email to the Engineering Scheduler and Engineering Manager stating the Details are ready for checking.

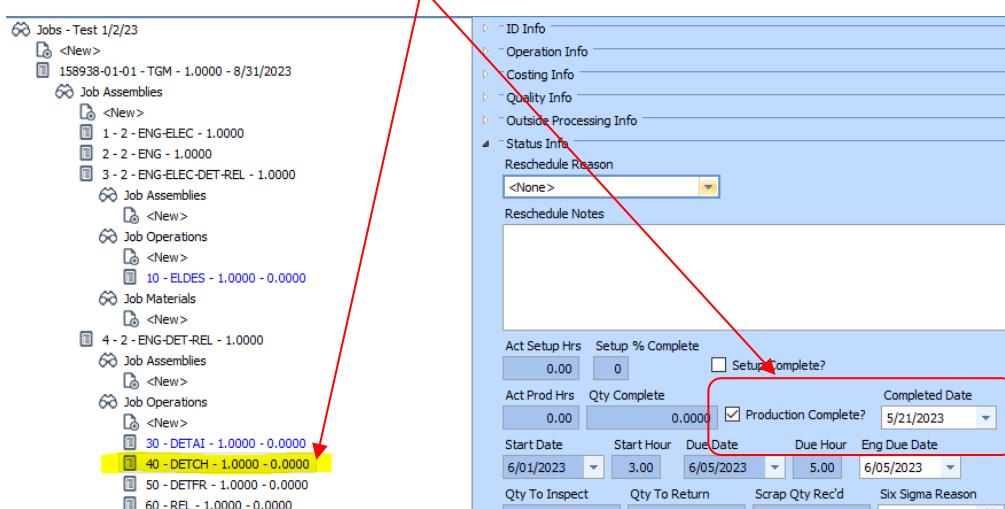
The Engineering scheduler will forward the email to the assigned checker, alerting them that the drawings are ready for checking.



If Electrical Design is required and completed, the electrical designer will give the electrical drawing to the Engineering Manager to check. When the drawing is returned and updated, the electrical engineer will attach the electrical drawing to the order and job. Click on the ELDES operation and check the Production Complete box.

Step 7

When the checker has finished reviewing the details, they will send an email to the designer with a summary of any errors found or suggestions. The checker will then check the Production Complete box on the DETCH operation.

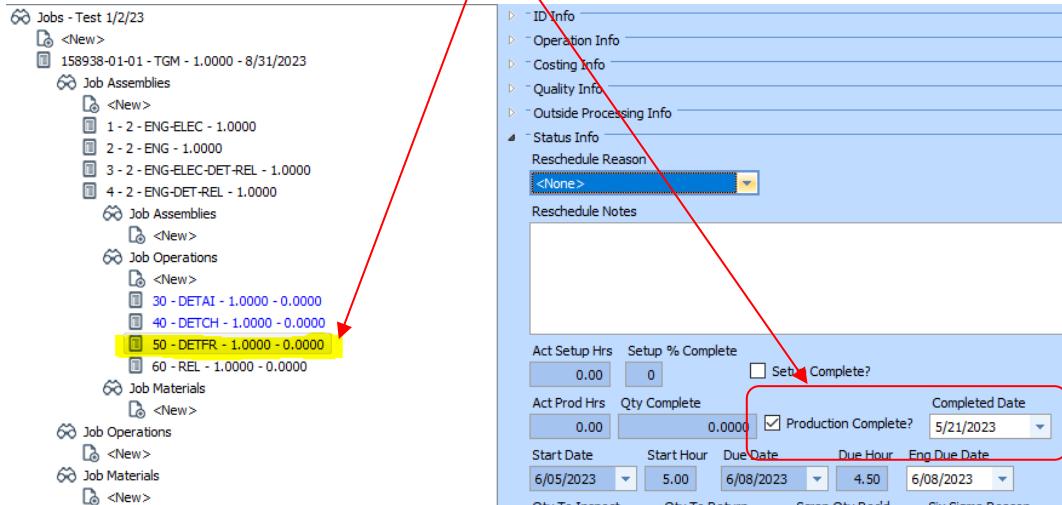


Once the designer has made updates, they will email the Engineering Scheduler and the Engineering Manager to notify them that the drawings are ready for final review.

Step 8

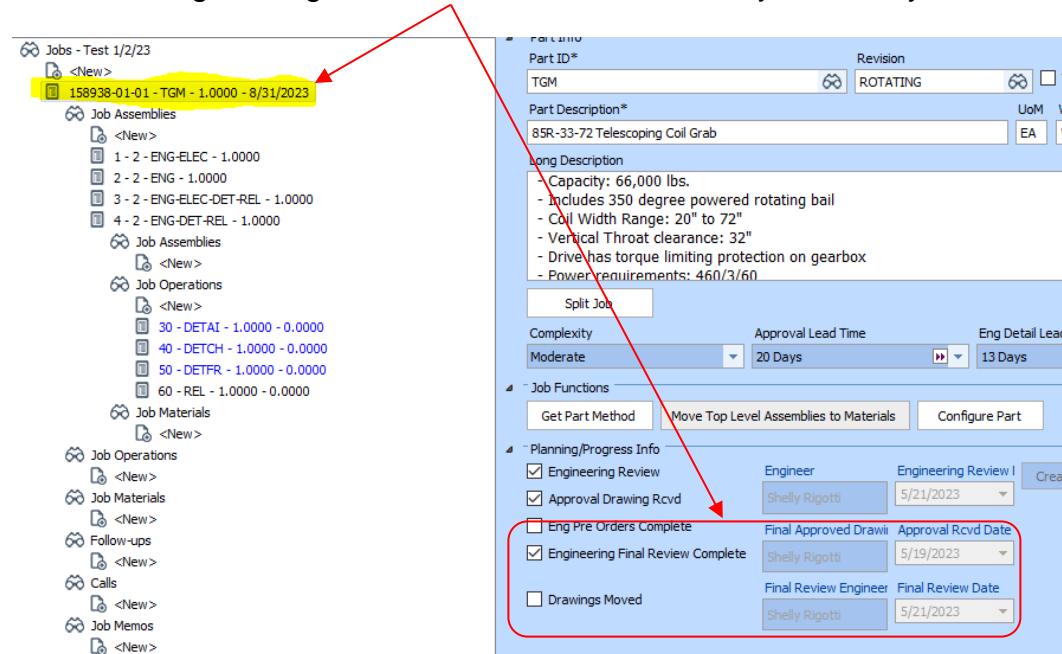
After checking, the job will go through a qualified Engineer/Manager for final review. After the final review is complete, an email will be sent to the designers with the results for them to update.

The qualified Engineer/Manager will then check the Production Complete box on the DETFR operation.



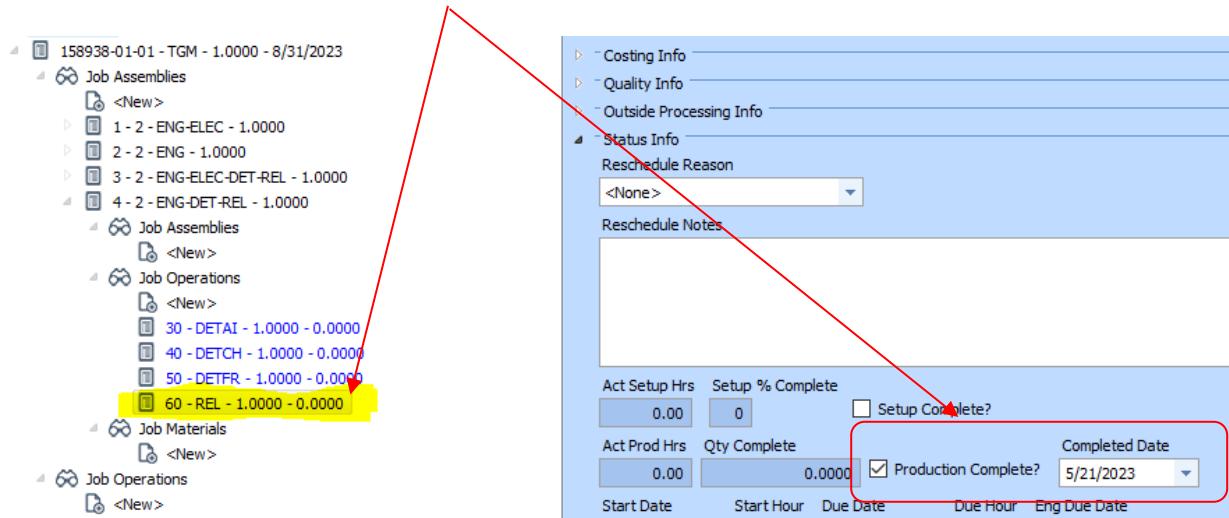
Step 8

Now the qualified Engineer/Manager will click on the job in the tree to the right and check the Engineering Final Review Box to show the job is ready for release.



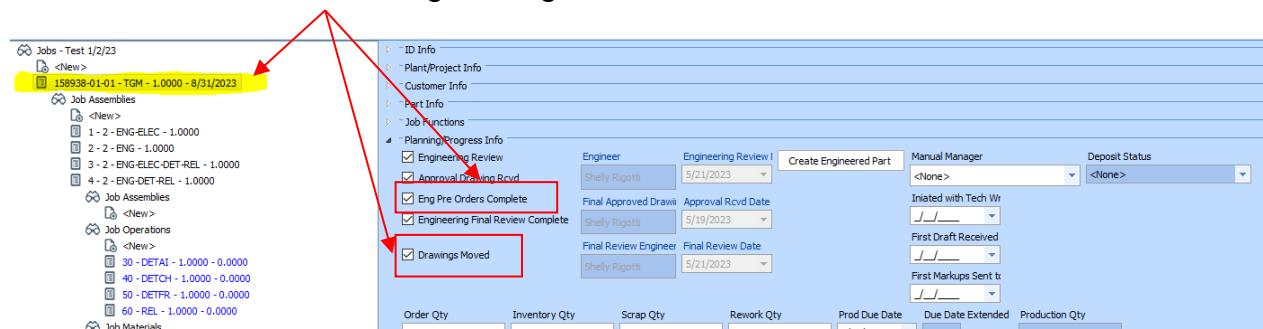
Step 9

Once the designer has completed all updates, they will release the job. Go to the job and click on the “REL” operation and check the “Production Complete” box.



Step 10

- Click on the Job ID in the tree on the left and go to the Planning/Progress Info section on the right side of the screen.
- Make sure any Pre-Order are emailed to the “Z – Preorder” group and check the Eng Pre Orders Complete box.
- Make sure all of the drawing are moved to their appropriate folders and check the Drawings Moved.
- Click on the Create Engineering Part button.



Note: The ENG Pre Orders Complete, Engineering Final Review Complete and Drawings Moved must all be checked for the Create Engineering Part button to be available.

Step 11

Under “Part ID*” enter the main assembly drawing number for the job and hit enter.

ID Info		Part Type*	Reorder Method	PrevItemNo	Created By		
Part ID*	85-9856	Manufactured	<None>		SRUGOTTI		
Part Description*	85R-33-72 Telescoping Coil Grab	Qty On Hand	0.0000	Update Job			
Long Description	<ul style="list-style-type: none"> Capacity: 66,000 lbs. Includes 350 degree powered rotating ball Coil Width Range: 20" to 72" Vertical Throat clearance: 32" Drive has torque limiting protection on gearbox Power requirements: 460/3/60 						
Part Details		Part Name	Part Number	Revision	Attachments		
Part Revisions		<table border="1"> <tr> <td><New></td> <td>85R-33-72 Telescoping Coil Grab</td> </tr> </table>				<New>	85R-33-72 Telescoping Coil Grab
<New>	85R-33-72 Telescoping Coil Grab						
Attachments							

Click on <New> under “Part Revisions”.

Step 11

Put the main assembly drawing number in “Drawing Number”.

ID Info		Revision	UPC	Drawing Number
Part ID*	85-9856			85-9856

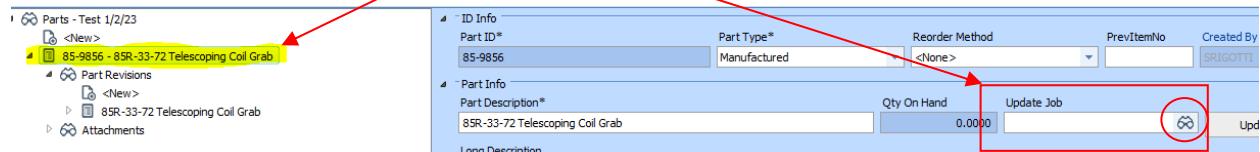
Step 12

Scroll down to the “ASME” section and fill in the “Rated Capacity” (in pounds), “Service Class” and “Design Category”.

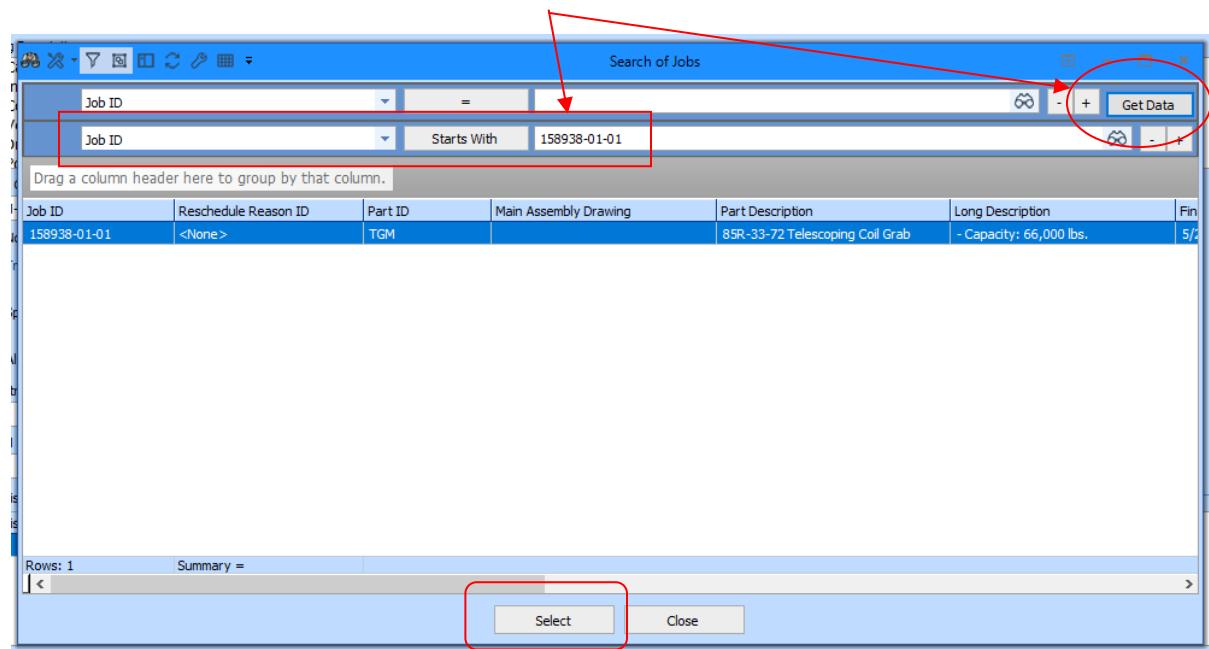
- Includes "Anti-Clam", touch plates built into lens					
Eff Start Date*	Eff End Date	Part Image File Name	Lot And		
5/21/2023					
CustomerLeadTimes					
Complexity	Approval Lead Time	Eng Detail Lead Time	Eng Release Lead Time	MFG Lead Time	
<None>	<None>	<None>	<None>	<None>	<None>
Web Settings					
Other Info					
Preferred Supplier	Pur. Location	Name	Vendor ID	Configured?	
EA	/ EA	= 1.0000000 0			
Requires Inspection?	Scrap %	Length	Width	Height	
<None>	0.00	Update Material Scrap %	0.000	0.000	0.000
ASME					
Rated Capacity (lbs)	Jaw Min (in)	Jaw Max (in)	Unit Weight (lbs)	Service Class	Design Category
66,000.000	0.000	0.000	0.000	2	B

Step 13

Click back on the Parts level and click on the binoculars next to “Update Job” on the right side of the screen.



Enter the Job number click on Get Data.



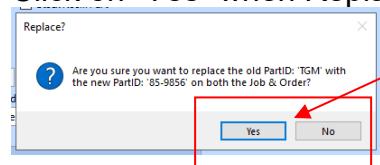
Click on “Select” button at the bottom of the screen.

Step 13

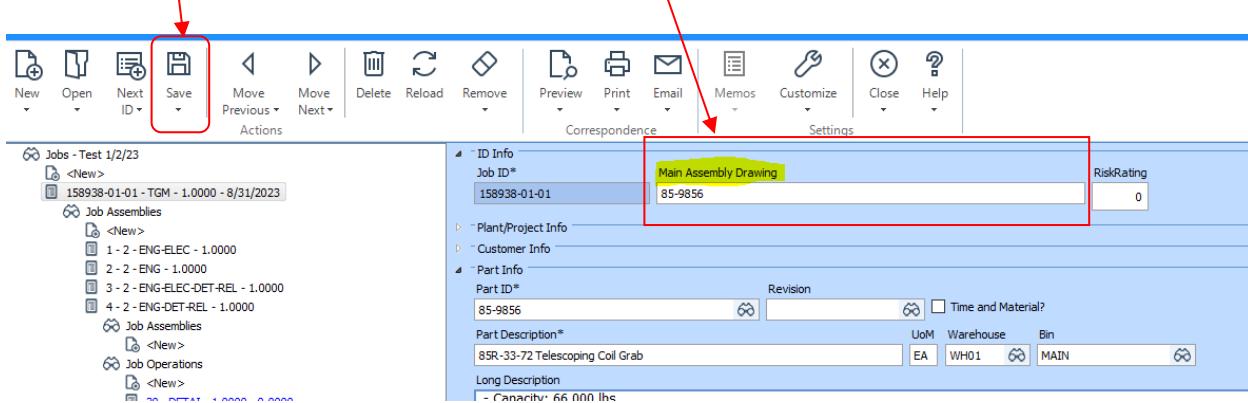
Click on the Update Job’s Part button.



Click on “Yes” when Replace? Box pops up.



Add the Main assembly Drawing Number when the Job appears and hit Save in the upper Left Hand corner.



The job & sales order are now updated and released to the manufacturing group to process.