

Plex Supply
Chain Community



It Has To Be Done Right

“Advice from JDAN”

John Perry Dancoe, Principal Consultant

VON **BLITZ**  **DESIGN** LLC





“Never go to the moon without duct tape.”

John Perry Dancoe
from *My Very Best Advice*



“But with the throttle screwed on there is only the barest margin, and no room at all for mistakes.

It has to be done right...”


Hunter S. Thompson

from *Hell's Angels* A Strange and Terrible Saga





Who is John Perry Dancoe (aka “JDAN”)?

- 1991 - MSP Industries: Tooling and Process Design Engineer
- 1994 - BBC: Chief Engineer
 - Directed first implementation of Plexus Information System outside MSP
- 1997 - Plexus Systems: Application Developer
- 2007 - Plexus Systems: Sr. Implementation Project Manager
- 2011 - Plex Systems: Sr. Product Manager
 - Product Data Management (Parts, Routings, BOMs)
 - Quality Management System
 - Lot Management System
- 2021 - VON **BLITZ**  **DESIGN** LLC



What is **VONBLITZ** **DESIGN** LLC ?

➤ “von Blitz” means “of lightning”

➤ *Energy*

➤ *Speed*

➤ *Brilliance*

➤ Q: What does von Blitz design?

➤ A: *What do you need?*



What is **VONBLITZ** **DESIGN** LLC ?

- *IT consulting, with deep expertise in the Plex Manufacturing Cloud*
- Custom reporting and analytics development
- Configuration analysis and optimization
- Implementation services
- Quality management consulting
- Business process design and improvement
- Manufacturing process design and improvement
- Mechanical design
- Problem solving



Agenda

- Doing It Right with the Plex Quality Management System
- Ask Me Anything



It has to be done right.



Doing It Right with Plex QMS

- Advanced Product Quality Planning (APQP)
- Failure Mode and Effects Analysis (FMEA)
- Part and Process Specifications
- Control Plans, Checksheets, and SPC
- Gage Control
- Production Part Approval Process (PPAP)
- Supplier Quality Management (SQM)
- Problem Control
- Compliance and Audits



Doing It Right with Plex QMS

➤ Advanced Product Quality Planning (APQP)

PLEX | Dancos, John | Checklist Grid Detail

The Plex Manufacturing Cloud will be unavailable due to maintenance Sunday, February 14th for up to 4 hours from 7:30AM to 11:30AM EST.
Have a wonderful, productive day!

Print Download Download CSV Copy Revision History Section Summary Approvers Question Note Tool Tip Master Doc Document Attachments

CHECKLIST -

Checklist Question No	Question	Department	Group Responsible	Checklist Assigned	Due	Complete	Checked	Show on Customer View	Note	Master Doc	Document
Change											
10							<input type="checkbox"/>	<input type="checkbox"/>			
20							<input type="checkbox"/>	<input type="checkbox"/>			
30							<input type="checkbox"/>	<input type="checkbox"/>			
40							<input type="checkbox"/>	<input type="checkbox"/>			
50							<input type="checkbox"/>	<input type="checkbox"/>			
60							<input type="checkbox"/>	<input type="checkbox"/>			
70							<input type="checkbox"/>	<input type="checkbox"/>			
80							<input type="checkbox"/>	<input type="checkbox"/>			
90							<input type="checkbox"/>	<input type="checkbox"/>			
Checklist											
10							<input type="checkbox"/>	<input type="checkbox"/>			
10							<input type="checkbox"/>	<input type="checkbox"/>			
20							<input type="checkbox"/>	<input type="checkbox"/>			
30							<input type="checkbox"/>	<input type="checkbox"/>			
40							<input type="checkbox"/>	<input type="checkbox"/>			
50							<input type="checkbox"/>	<input type="checkbox"/>			
60							<input type="checkbox"/>	<input type="checkbox"/>			
70							<input type="checkbox"/>	<input type="checkbox"/>			

Status: New

Note:

Created: 2/22/2018, 5:47 PM

Updated:

Cancel Apply OK



Doing It Right with Plex QMS

➤ Failure Mode and Effects Analysis (FMEA) / PFMEAs

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PFMEA (Process Failure Mode and Effects Analysis)

Go to...

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Hide Filters

Save As Default

Search

Planning and Preparation

Structure Analysis

Function Analysis

Failure Analysis

Risk Analysis

Optimization

Delete

Print

Revision History

Associated Parts

PFMEA Terms

PLANNING AND PREPARATION

PFMEA Number	1528	PFMEA ID Number	Example	Subject	Example PFMEA
PFMEA Status	Approved	Part Number		Company Name	
Plant Location	Main	PFMEA Start Date	2/11/2021	Process Responsibility	
Customer Name		PFMEA Revision Date		Confidentiality Level	
Your Plant Function	Make It	Ship To Plant Function	Assemble It	End User Function	Use It
Model Year / Program		Cross-functional Team		Note	
Active	Yes				

Structure Analysis			Function Analysis			Failure Analysis					Risk Analysis					Optimization				
Process Item	Process Step	Process Work Element	Function of the Process Item	Function of the Process Step	Function of the Process Work Element	Your Plant Failure Effect	Ship To Plant Failure Effect	End User Failure Effect	S	Failure Mode	Failure Cause	Current Prevention Controls	O	Current Detection Controls	D	Special Characteristics	AP	RPN	Issue Number	Optimizations

Type your search criteria above, then press Search to find matching items.



Doing It Right with Plex QMS

➤ Part (and Process) Specifications

☰ PLEX Danceo, John Part Specifications

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Part No. Specification Type Active Only ☒

Show all filters Save As Default Search

Add Edit Copy Print Upload Reports Update Mode

Part No.	Revision	Specification No.	Symbol	Description	Image	Target	Plus	Minus	Measurement Text	Limits	Type	Note
		1				0.500 MPA	0.100	-0.100		0.600 0.400	Process	
		10				0.400 MPA	0.100	-0.100		0.500 0.300	Process	
		100				0.50 MPA	0.10	-0.10		0.60 0.40	Process	
		101				0.20 MPA	0.20	0.00		0.40 0.20	Process	
		102				0.50 MPA	0.10	-0.10		0.60 0.40	Process	
		103				Attribute					Process	
		104				Attribute					Process	
		105				Attribute					Process	
		106				Attribute					Process	
		107				0.50 MPA	0.05	-0.05		0.55 0.45	Process	
		108				0.10 MPA	0.10	-0.10		0.20 0.00	Process	
		109				Attribute					Process	
		11				0.400 MPA	0.100	-0.100		0.500 0.300	Process	
		110				0.50 MPA	0.05	-0.05		0.55	Process	



Doing It Right with Plex QMS

➤ Control Plans, Checksheets, and SPC

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Control Plan Lines

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⚙️

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Go to...

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Add

Edit

Copy

🖨️ Print

Edit Specification

Conversions

Conversions Setup

Customer View

Control Plan

Customer Part

Control Plan Number 167	Control Plan Type Pre-Launch	Part Number/Latest Change Level(Internal/External)
Date (Orig.)	Date (Rev.)	Key Contact/Phone
Core Team	Customer Engineering Approval Date (If Req'd)	Part Name/Description
Organization/Plant Approval Date (If Req'd)	Customer Quality Approval Date (If Req'd)	Organization/Plant
Organization Code	Other Approval date (If Req'd)	Notes

Part/Process Number	Operation	Machine / Device	Characteristics			Special Char. Class	Methods				Reaction Plan / Corrective Action
			No.	Product	Process		Product / Process Specification Tolerance	Evaluation Measurement Technique	Sample Size / Freq.	Control Method	
10			100				0.40 / 0.60 MPA	Machine Gage	Check at Start up	Checksheet	Stop / Hold, Notify Supervisor
			101				0.20 / 0.40 MPA	Machine Gage	Check at Start up	Checksheet	Stop / Hold, Notify Supervisor
			102				0.40 / 0.60 MPA	Machine Gage	Check at Start up	Checksheet	Stop / Hold, Notify Supervisor
			103					N/G master	Check at Start up	Checksheet	Stop / Hold, Notify Supervisor
			104					Machine Master	Check at Start up	Checksheet	Stop / Hold, Notify Supervisor
			105					N/G master	Check at Start up	Checksheet	Stop / Hold, Notify Supervisor
			106					Machine Master	Check at Start up	Checksheet	Stop / Hold, Notify Supervisor
			107				0.45 / 0.55 MPA	Machine Gage	Check at Start up	Checksheet	Stop / Hold, Notify Supervisor
			108				0.00 / 0.20 MPA	Machine Gage	Check at Start up	Checksheet	Stop / Hold, Notify Supervisor
			109					Machine Master	Check at Start up	Checksheet	Stop / Hold, Notify Supervisor
			110				0.45 / 0.55 MPA	Machine Gage	Check at Start up	Checksheet	Stop / Hold, Notify Supervisor



Doing It Right with Plex QMS

➤ Control Plans, Checksheets, and SPC

☰ PLEX Danceoe, John

Control Plan Lines

🔔 ⌚ ☆ ⚙️ ? Go to...

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Add Edit Copy Print Edit Specifications

Control Plan Number 15
Date (Orig.)
Core Team
Organization/Plant Approval Date (If Req'd)
Organization Code

Part/Process Number	Operation	Machine Device
10		

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Checksheets

🔔 ⌚ ☆ ⚙️ ? Go to...

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View Line Documents Print Control Plan History Add Instructions Add Control Plan Line Edit Control Plan Line Print Deviation Deviation Tracking Attachments Reaction Plan Operation Docs Checksheet Docs

CHECKSHEET

Workcenter No Value Selected

Part

Operation

Inspection Mode

Date/Time 2/11/2021, 3:43 PM

Inspector John Danceoe

Checksheet Rev Date 2/2/2018

Job No

Instructions Edit

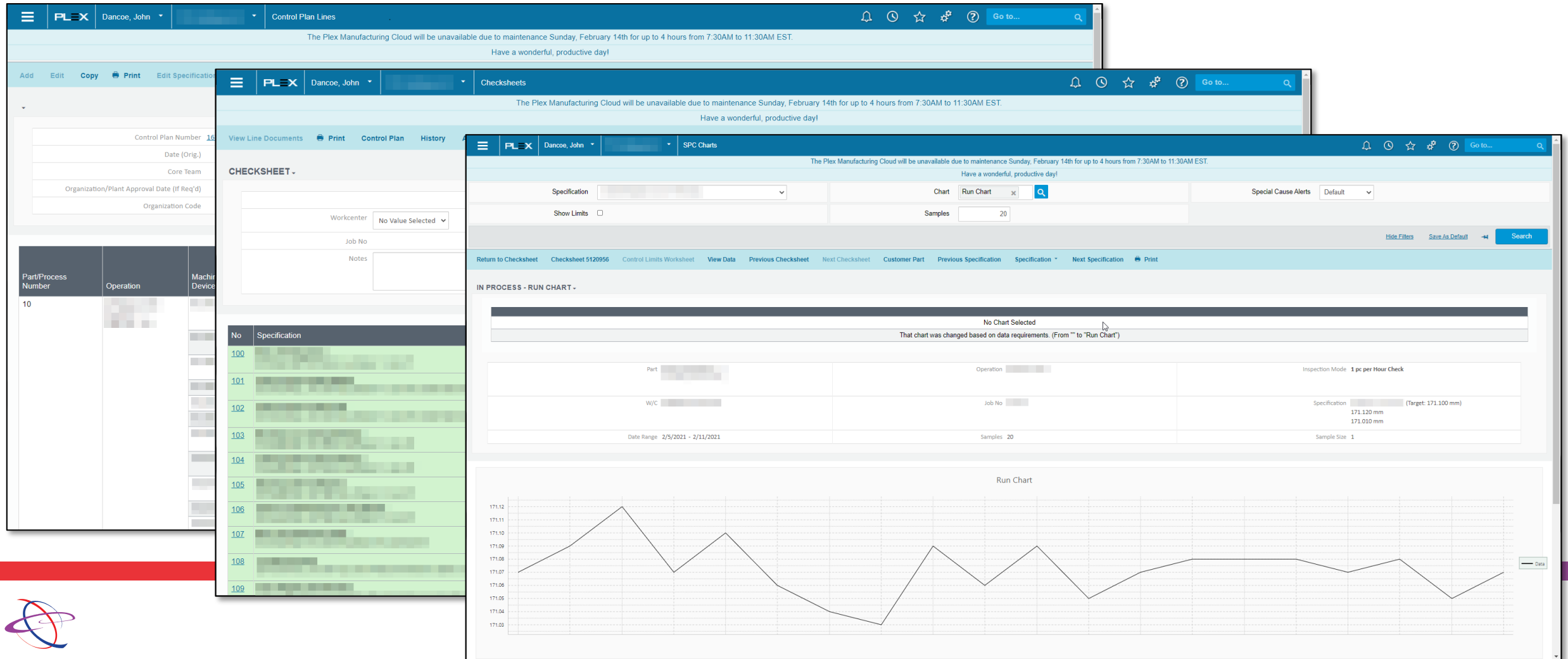
Notes

No	Specification	Target	Limits	Gage	Sample	Measurements	Reaction Plan
100		0.50 MPA	0.60 0.40	Machine Gage	Check at Start up	<input type="text"/> <input type="checkbox"/>	Stop / Hold, Notify Supervisor
101		0.20 MPA	0.40 0.20	Machine Gage	Check at Start up	<input type="text"/> <input type="checkbox"/>	Stop / Hold, Notify Supervisor
102		0.50 MPA	0.60 0.40	Machine Gage	Check at Start up	<input type="text"/> <input type="checkbox"/>	Stop / Hold, Notify Supervisor
103				N/G master	Check at Start up	<input type="radio"/> Pass <input type="radio"/> Fail <input type="checkbox"/>	Stop / Hold, Notify Supervisor
104				Machine Master	Check at Start up	<input type="radio"/> Pass <input type="radio"/> Fail <input type="checkbox"/>	Stop / Hold, Notify Supervisor
105				N/G master	Check at Start up	<input type="radio"/> Pass <input type="radio"/> Fail <input type="checkbox"/>	Stop / Hold, Notify Supervisor
106				Machine Master	Check at Start up	<input type="radio"/> Pass <input type="radio"/> Fail <input type="checkbox"/>	Stop / Hold, Notify Supervisor
107		0.50 MPA	0.55 0.45	Machine Gage	Check at Start up	<input type="text"/> <input type="checkbox"/>	Stop / Hold, Notify Supervisor
108		0.10 MPA	0.20 0.00	Machine Gage	Check at Start up	<input type="text"/> <input type="checkbox"/>	Stop / Hold, Notify Supervisor
109				Machine Master	Check at Start up	<input type="radio"/> Pass <input type="radio"/> Fail <input type="checkbox"/>	Stop / Hold, Notify Supervisor



Doing It Right with Plex QMS

➤ Control Plans, Checksheets, and SPC



Doing It Right with Plex QMS

➤ Gage Control

Gage ID	Gage Type	Description	Status	Mfg Serial No	Location	User	Note	Calibration Due	
0000055	Caliper	0-200mm Digimatic Inside Caliper	Active	***	Plate 37 / Press			6/18/2021	
0000171	Caliper	0-200mm Digimatic Inside Caliper	Active	***	QA / QA Dept			1/5/2021	
0000238	Caliper	0-450 Digimatic Caliper	Active		Machine Shop		Cabinet 201A	6/9/2021	
0000252	Caliper	0-150 Digimatic Caliper	Active	***	QA / QA Dept			9/16/2020	
0000393	Caliper	0-150 Digimatic Caliper	Active	***	QA / QA Dept			9/16/2020	
0000421	Caliper	0-150 Digimatic Caliper	Active	***	QA / QA Dept			9/16/2020	
0000574	Caliper	0-150 Digimatic Caliper	Active	***	QA / QA Dept			4/15/2021	
0000583	Inside Calipers	0-200 Digimatic Inside Caliper	Active		Plate 5A / Lock up Mfg			8/12/2021	
0000588	Caliper	0-200mm Digimatic Inside Caliper	Active	***	QA / QA Dept			1/5/2021	
000061	Digital Indicator	DGM-1005B	Active	***	AT Assy			7/31/2021	
0000739	Caliper	0-200mm Digimatic Inside Caliper	Active	***	QA / QA Dept			9/16/2020	
0000742	Caliper	0-200mm Digimatic Inside Caliper	Active	***	QA / QA Dept			9/16/2020	
0000744	Caliper	0-200mm Digimatic Inside Caliper	Active	***	QA / QA Dept			9/16/2020	



Doing It Right with Plex QMS

➤ Production Part Approval Process (PPAP)

PLEXDancoe, JohnProduction Part Approval Process (PPAP)

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Part No

PPAP Customers

Status

Active Parts Only

Original Part

Customer Part

ECR No

Expiration Date

Disposition

Hide Filters

Save As Default

Search

Add

Edit

Print

ECR

Attachments

Part No	Original Part	Part Name	Customer	Cust Part	ECR No	PPAP Level-Customer Revision	Due Date	PPAP Status	Submission Date	Expiration Date	Disposition	Disposition Date	Note
						Level 4	9/12/2018	Approved	9/12/2018	9/14/2019	Approved	9/14/2018	
						Level 4 --	8/10/2018	Approved	7/27/2018		Approved	8/24/2018	
						Level 4 --	8/10/2018	In-Process			Rejected		
					271	Level 4 --	2/16/2018	In-Process			Rejected		
					271	Level 4 --	2/16/2018	In-Process			Rejected		
					271	Level 4 --	2/16/2018	Approved	2/19/2018		Approved	3/2/2018	
					271	Level 4 --	2/16/2018	In-Process	2/19/2018		Approved	3/2/2018	
						Level 4	9/19/2017	Approved			Approved		
						Level 4 -	5/26/2017	In-Process			Approved	8/30/2017	
						Level 4 -	5/26/2017	In-Process			Rejected		
						Level 4 -	5/3/2017	Approved	1/9/2017		Approved	5/3/2017	
						Level 4 -	5/3/2017	Approved	10/4/2016		Approved	5/3/2017	
						Level 4 --		Approved			Approved		
						Level 4		Approved			Approved	7/13/2017	
						Level 4 A		Approved			Approved	6/11/2014	
						Level 4 -		In-Process			Approved	12/13/2016	



Doing It Right with Plex QMS

➤ Supplier Quality Management (SQM)

The screenshot displays the Plex QMS Supplier Quality Management (SQM) interface. The header bar includes the Plex logo, user name (Dancoe, John), and the title 'Supplier Quality Management (Supplier Quality Management)'. A notification banner states: 'The Plex Manufacturing Cloud will be unavailable due to maintenance Sunday, February 14th for up to 4 hours from 7:30AM to 11:30AM EST. Have a wonderful, productive day!'. Below the banner, there are links for 'Show all filters', 'Save As Default', and a 'Search' button. The main content area shows a table of suppliers with the following columns: Supplier, Name, Type, Status, Quality Certification, Supplier Category, Problems, and Quality Note. The table lists various suppliers with their respective types (Carrier, Service, MRO/Supplies, Associates, Component) and status (Active). The 'Problems' column shows the number of problems for each supplier. The 'Quality Note' column contains links to quality certifications.

Supplier	Name	Type	Status	Quality Certification	Supplier Category	Problems	Quality Note
		Carrier	Active			1	
		Carrier	Active			0	
		Service	Active			0	
		Service	Active			0	
		Carrier	Active			0	
		MRO/Supplies	Active			0	
		MRO/Supplies	Active			0	
		Service	Active			0	
		MRO/Supplies	Active			0	
		MRO/Supplies	Active			0	
		Associates	Active			0	
		Component	Active	ISO 14001 - (8/9/2020) IATF 16949 - (8/26/2021) ISO 14001 - (8/9/2023)		5	
		Carrier	Active			0	
		MRO/Supplies	Active			0	
		MRO/Supplies	Active			0	
		MRO/Supplies	Active			0	
		MRO/Supplies	Active			0	
		MRO/Supplies	Active			0	



Doing It Right with Plex QMS

➤ Problem Control

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Problem Control

Go to...

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Recorded Date

11/14/2020 - 2/11/2021

Active Only

UX Records Only

Show all filters

Save As Default

Search

Add

Edit

Print

Export As

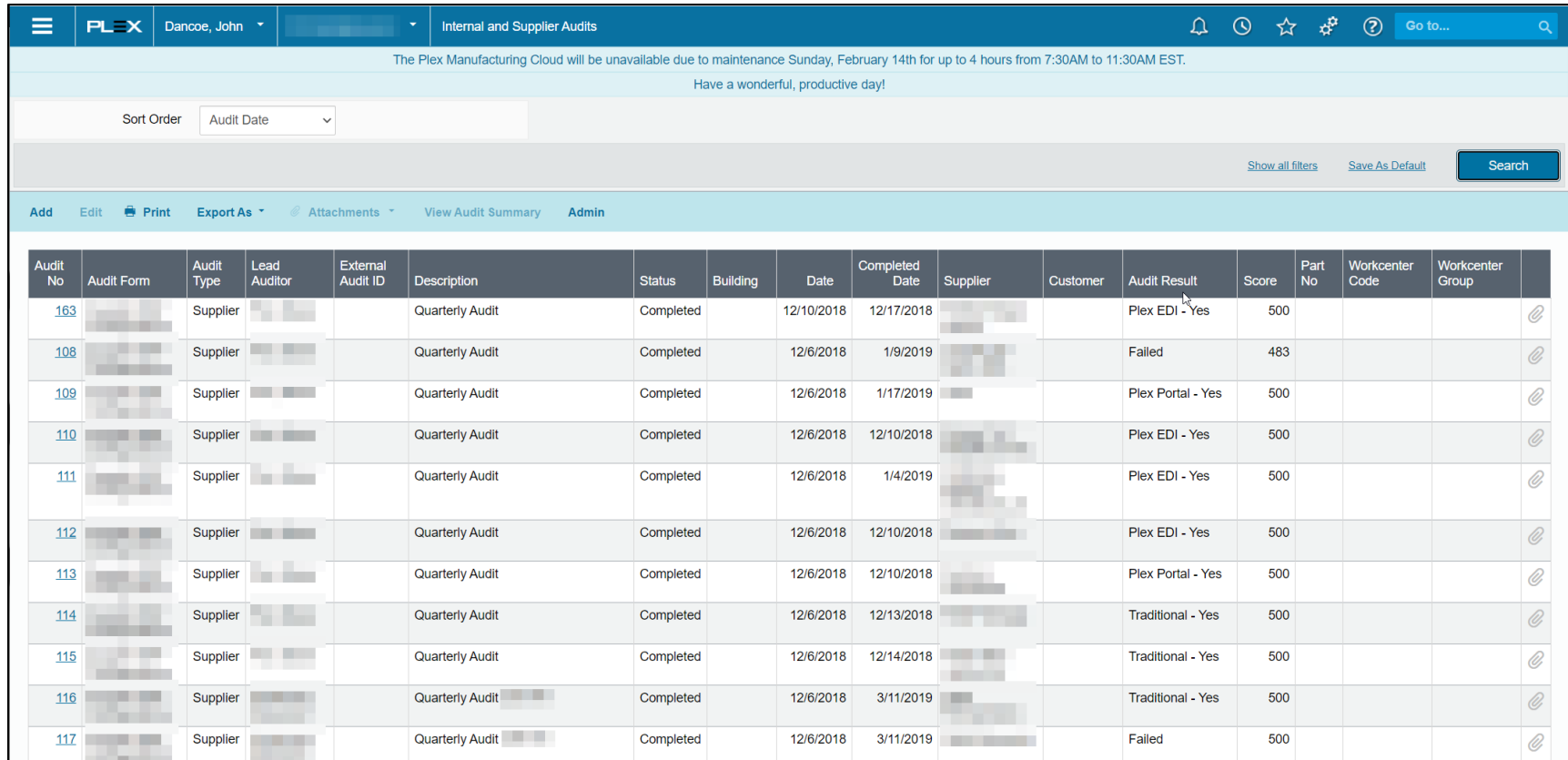
Attachments

Problem No	Problem Form	Problem Status	Part No	Brief Description	Problem Category	Champion	Supplier Code	Customer Code	Department Code	Building Code	Recorded Date	Problem Due Date	Recurrence Count	
6258		Open / In-Process			Internal						1/21/2021	1/25/2021	0	
6178		Open / In-Process			Internal						1/11/2021	1/15/2021	0	
6173		Open / In-Process			Internal						1/8/2021	1/15/2021	0	
6101		Open / In-Process			Internal						12/15/2020	12/18/2020	0	
6090		Open / In-Process			Internal						12/15/2020	12/18/2020	0	
6053		Open / In-Process			Internal						12/8/2020	12/11/2020	0	



Doing It Right with Plex QMS

➤ Compliance and Audits



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Sort Order: Audit Date

Show all filters Save As Default Search

Add Edit Print Export As Attachments View Audit Summary Admin

Audit No	Audit Form	Audit Type	Lead Auditor	External Audit ID	Description	Status	Building	Date	Completed Date	Supplier	Customer	Audit Result	Score	Part No	Workcenter Code	Workcenter Group
163		Supplier			Quarterly Audit	Completed		12/10/2018	12/17/2018			Plex EDI - Yes	500			
108		Supplier			Quarterly Audit	Completed		12/6/2018	1/9/2019			Failed	483			
109		Supplier			Quarterly Audit	Completed		12/6/2018	1/17/2019			Plex Portal - Yes	500			
110		Supplier			Quarterly Audit	Completed		12/6/2018	12/10/2018			Plex EDI - Yes	500			
111		Supplier			Quarterly Audit	Completed		12/6/2018	1/4/2019			Plex EDI - Yes	500			
112		Supplier			Quarterly Audit	Completed		12/6/2018	12/10/2018			Plex EDI - Yes	500			
113		Supplier			Quarterly Audit	Completed		12/6/2018	12/10/2018			Plex Portal - Yes	500			
114		Supplier			Quarterly Audit	Completed		12/6/2018	12/13/2018			Traditional - Yes	500			
115		Supplier			Quarterly Audit	Completed		12/6/2018	12/14/2018			Traditional - Yes	500			
116		Supplier			Quarterly Audit	Completed		12/6/2018	3/11/2019			Traditional - Yes	500			
117		Supplier			Quarterly Audit	Completed		12/6/2018	3/11/2019			Failed	500			



Doing It Right with Plex QMS



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AMA

- Topics with which I've recently been involved:
 - BOM Substitutions
 - Configurable UX problem control forms
 - AIAG & VDA PFMEA
 - Improved SPC notifications
 - Stand-alone Plex QMS
 - Improved Lot Trace report
 - 2021 MES roadmap:
 - Unit of measure rationalization
 - Multiple routings
 - Batch management
 - Yield management





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