

The Hub

SOFTWARE USER GUIDE

The 10,000 foot view
has never looked better.



*Training and Technology for
Injection Molding*

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The Hub

SOFTWARE USER GUIDE

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INTRODUCTION

Read, understand, and comply with all following instructions.
This guide must be kept available for reference at all times.

DISCLAIMER

Inasmuch as RJG, Inc. has no control over the use to which others may put this material, it does not guarantee that the same results as those described herein will be obtained. Nor does RJG, Inc. guarantee the effectiveness or safety of any possible or suggested design for articles of manufacture as illustrated herein by any photographs, technical drawings, and the like. Each user of the material or design or both should make his own tests to determine the suitability of the material or any material for the design as well as the suitability of the material, process, and/or design for his own particular use. Statements concerning possible or suggested uses of the material or designs described herein are not to be construed as constituting a license under any RJG, Inc. patent covering such use or as recommendations for use of such material or designs in the infringement of any patent.

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ALERTS

The following three alert types are used as needed to further clarify or highlight information presented in the manual:



TERM

A definition or clarification of a term or terms used in the text.



NOTE

A note provides additional information about a discussion topic.



CAUTION

A caution is used to make the operator aware of conditions that can cause damage to equipment and/or injury to personnel.

REQUIREMENTS

To use this product, the following is required:

- Computer with Network Access
- Networked CoPilot™ Systems

PRODUCT OVERVIEW






The Hub™ provides summary and detail reports of networked molds and machines with installed CoPilot systems, along with the following:







- Overall machine performance and status
- Mold settings
- Alarms or issues
- Historical CoPilot data backup
- Individual machine processes and trends*

**for The Hub with trends license only.*






SOFTWARE ICONS AND NAVIGATION

The following details commonly used icons and their functions in The Hub's software.

OBJECT	FUNCTION	DESCRIPTION
	Reload Page	Click the object to reload The Hub Dashboard view.
	Settings	Click the object to view available settings for the current item.
	Connection Status	Click the object to view pop-up window detailing connection status of system, machines, jobs, and alerts.
	Exit Window	Click the object to exit an open window.
	Print Window	Click the object to print the current window.

OBJECT	FUNCTION	DESCRIPTION
	Check Box	Click the object to select or deselect.
	Expand	Click the object to expand the selection.
	Reset Defaults	Click the object to reset any settings in the current window to the default.
	Select Columns/ Select Graphs	Click the object to view and select optional table columns. Click the object to view and select optional graphs.
	Reorder	Click, hold, and drag the object to reorder the selection.
	Delete	Click the object to remove the selection.

OBJECT	FUNCTION	DESCRIPTION
	Show Job Details	Click the object to view Job Details pop-up window, including overview, statistics, and trends.
	Sort Column	Click a table heading to sort the contents alphabetically or numerically, click again to change sorting by either ascending or descending order.
Display: <input type="text" value="10"/>	Display More/Less	Click the drop-down box to select the number of items to view, either 10, 25, 50, or 100.
	Navigate to Previous/Next Page	Click a page number to navigate to that page, or click the Previous or Next buttons to view the previous or next page.
	Remote View Device	Click the icon to remote view the associated device.

OBJECT	FUNCTION	DESCRIPTION
	Date Range	Click on the object to select a start or end date to filter records.
	Filter by Keyword or Phrase	Click in the field next to the object and enter a keyword or phrase by which to filter the records.
	Connected/Activated & Not Connected/Not Activated	The object indicates a connection or activation status.
	Information	Hover the mouse pointer over the object for additional information.
	User Guide	Click the object to view the User Guide.

QUICK START GUIDE

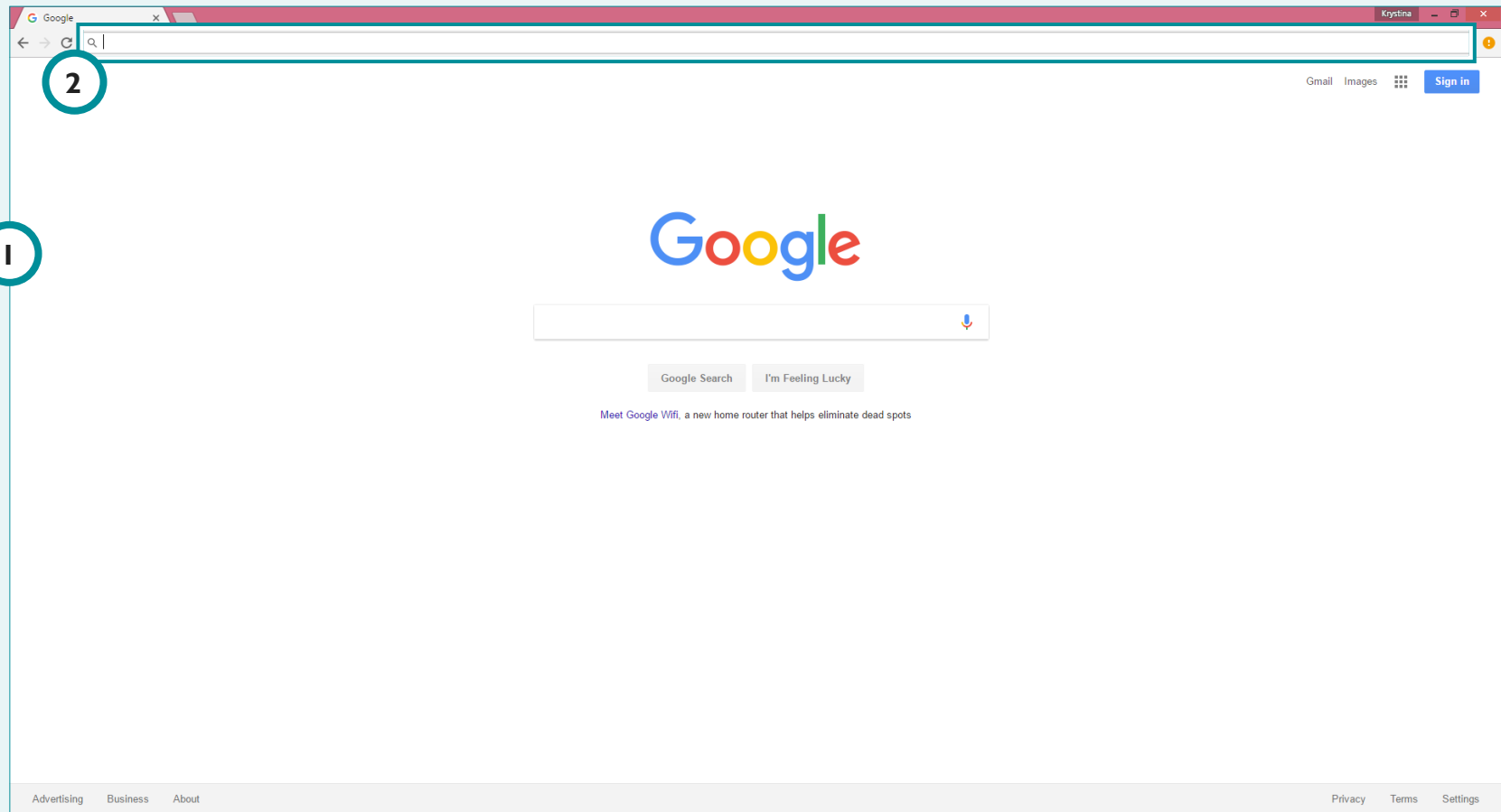
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THE HUB®

To view The Hub process data networking software, open

1 Google Chrome.

Enter the assigned IP address or domain in the 2 browser address bar.



LOGIN

Enter the assigned 1 username and 2 password, then click the 3 Sign In button to log in to the Hub.

Users without usernames and passwords may view the dashboard only; click the 4 View Dashboard button to view the Dashboard.

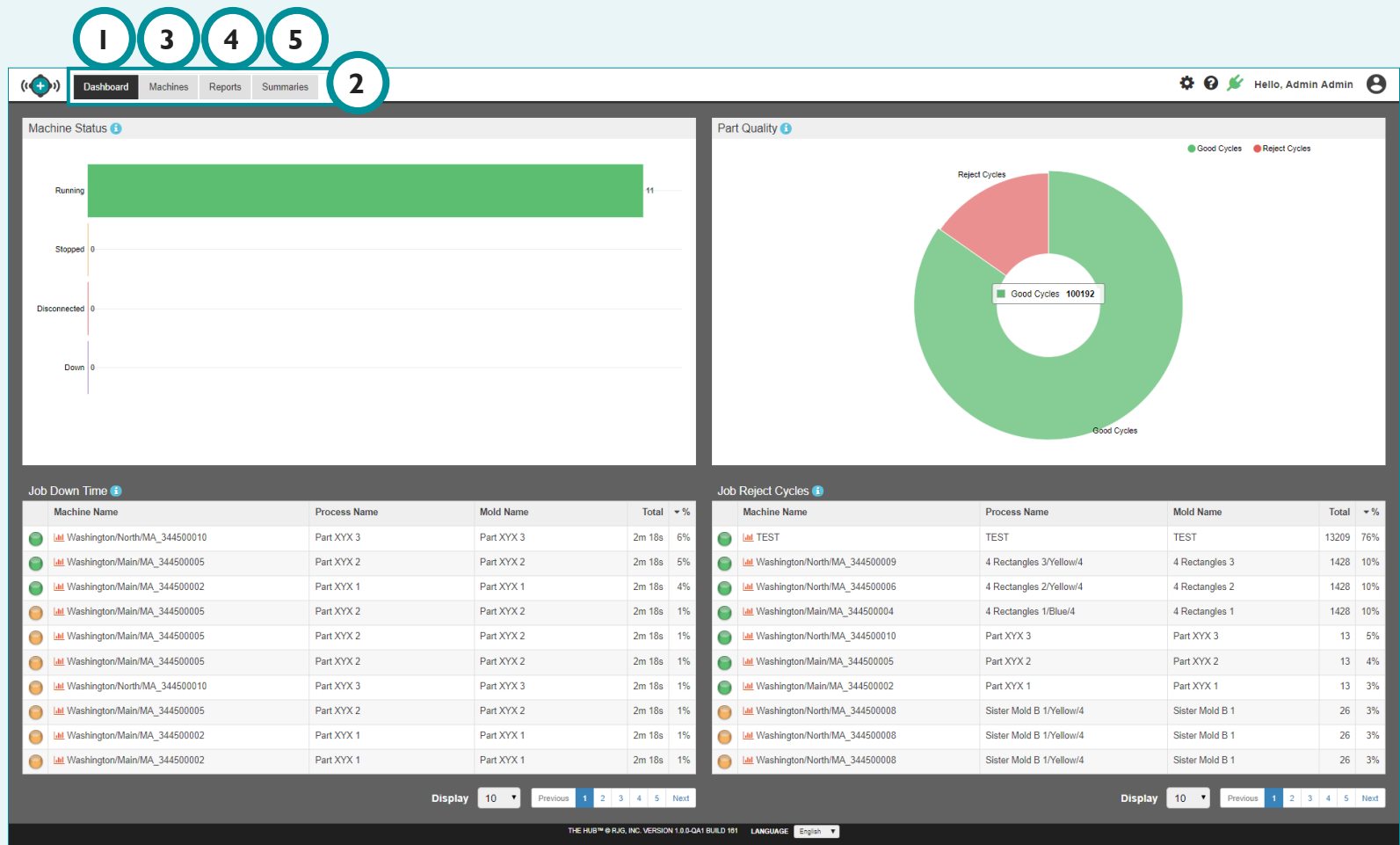


VIEW JOBS, MACHINES, AND MOLDS

The Hub **1** Dashboard provides facility overviews.


The **2** navigation bar provides navigation between the Dashboard, Machines, Reports, and Summaries views.


Click **3** the **Machines** tab on the navigation bar to view machine information, the **4** **Reports** tab to view job histories, the **5** **Summaries** tab to view job summaries, or the **1** **Dashboard** tab to return to the facility overview.






ALERTS



Alerts provide notifications for five critical machine conditions.

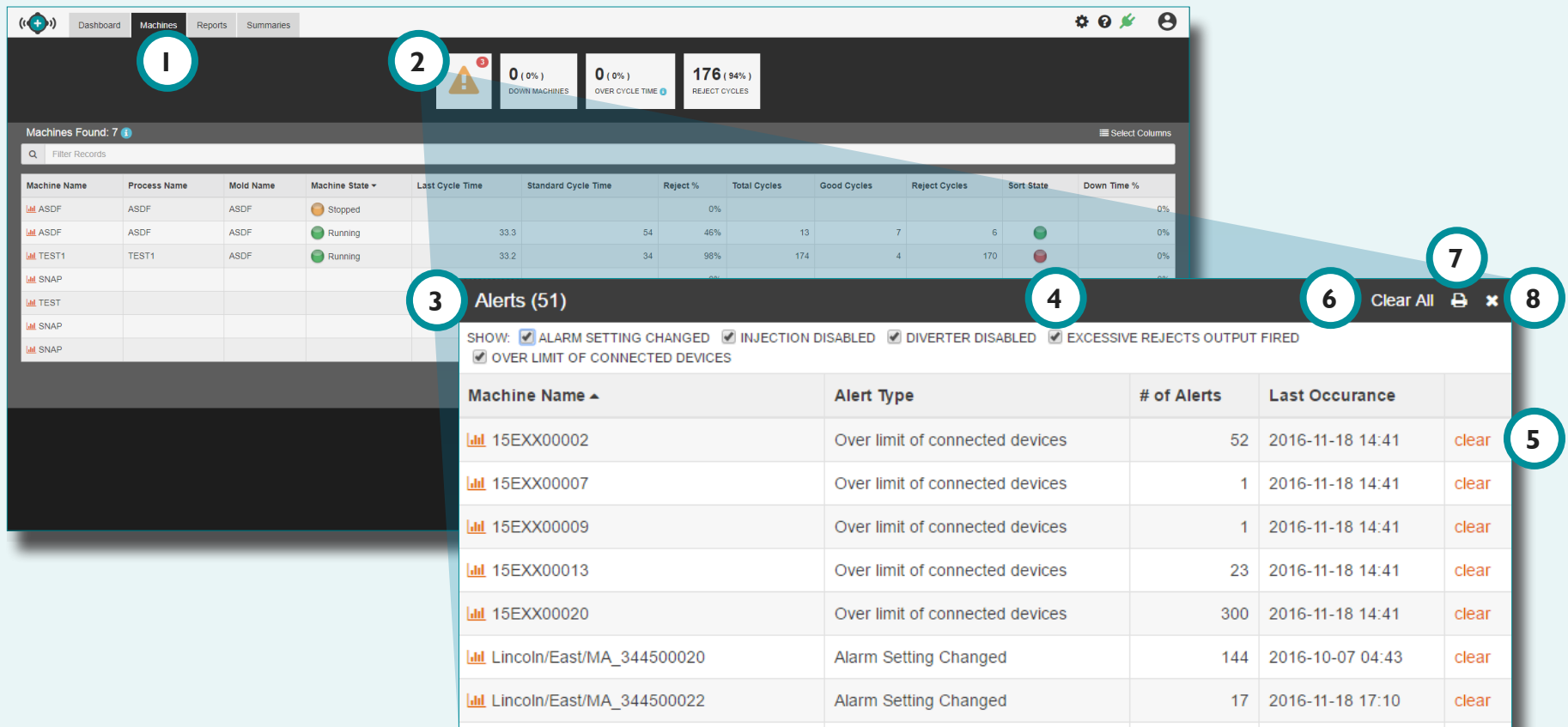
Click  **1** [Machines](#) on the navigation bar. The number of **2** [Alerts](#) (if any) will be indicated in the alerts icon.

Click  the **2** [Alerts](#) icon to view an expanded **3** [Alerts](#) summary.

Click  the **4** [check boxes](#) to select/deselect which alert types to display.

Click  **5** [Clear](#) next to the alert information to clear the alert; Click  **6** [Clear All](#) to clear every alert.


Click  the **7** [printer](#) icon to print the alerts. Click  the **8** [exit](#) icon to exit without clearing the alert(s).




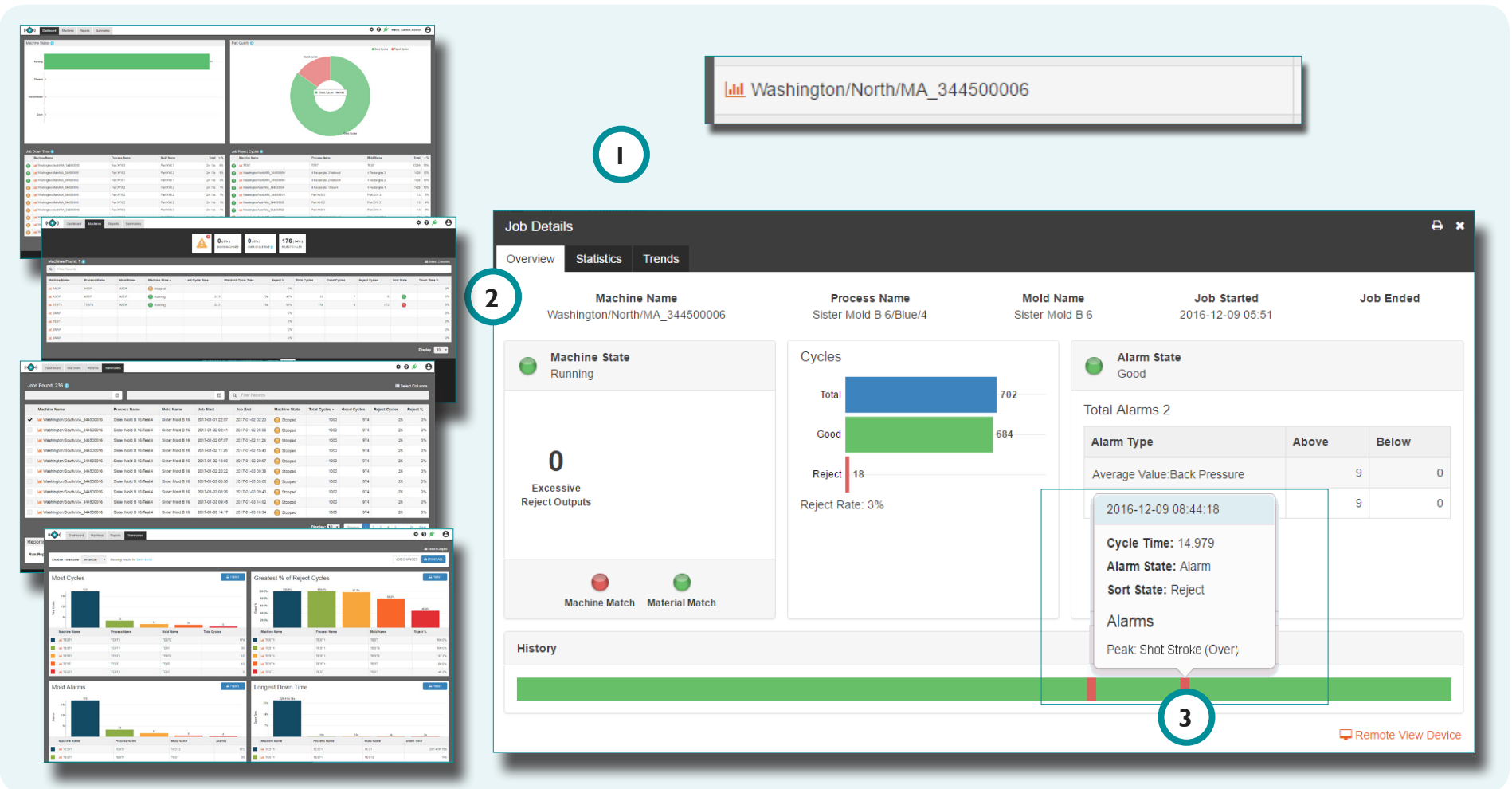
The screenshot shows the 'Machines' tab in the navigation bar. The 'Alerts' icon in the top right corner shows a red triangle with a white exclamation mark and the number '2'. The 'Alerts' summary panel is expanded, showing a list of alerts. The panel includes a 'SHOW:' section with checkboxes for 'ALARM SETTING CHANGED', 'INJECTION DISABLED', 'DIVERTER DISABLED', 'EXCESSIVE REJECTS OUTPUT FIRED', and 'OVER LIMIT OF CONNECTED DEVICES'. Below this is a table of alerts with columns for 'Machine Name', 'Alert Type', '# of Alerts', and 'Last Occurance'. Each row has a 'clear' button next to it.

Machine Name	Alert Type	# of Alerts	Last Occurance	Action
15EXX00002	Over limit of connected devices	52	2016-11-18 14:41	clear
15EXX00007	Over limit of connected devices	1	2016-11-18 14:41	clear
15EXX00009	Over limit of connected devices	1	2016-11-18 14:41	clear
15EXX00013	Over limit of connected devices	23	2016-11-18 14:41	clear
15EXX00020	Over limit of connected devices	300	2016-11-18 14:41	clear
Lincoln/East/MA_344500020	Alarm Setting Changed	144	2016-10-07 04:43	clear
Lincoln/East/MA_344500022	Alarm Setting Changed	17	2016-11-18 17:10	clear

JOB DETAILS OVERVIEW

Click  a **1 machine name** in the Dashboard Job Down Time or Job Reject Cycles summary, Machines report, Reports view, or any Summaries report to view **2 Job Details Overview** for a specific machine.

Mouse over  the Job Details **3 History** bar to view Cycle Date/Time, Cycle Time (length), Alarm State, Sort State, and Alarm(s) for data points in the last 100 cycles of the machine's job history.



1 Machine Name: Washington/North/MA_344500006

2 Job Details Overview

3 History

Machine State: Running

Excessive Reject Outputs: 0

Cycles: Total: 702, Good: 684, Reject: 18, Reject Rate: 3%

Alarm State: Good

Total Alarms: 2

Alarm Type	Above	Below
Average Value: Back Pressure	9	0
	9	0

History: 2016-12-09 08:44:18
 Cycle Time: 14.979
 Alarm State: Alarm
 Sort State: Reject
 Alarms: Peak: Shot Stroke (Over)

JOB DETAILS—STATISTICS REPORT

From the **1** Job Details pop-up window, click **2** the **2** Statistics tab to select **3** job cycle data statistics to view or print.

Click **3** a **3** job cycle data statistic to expand to view **4** cycle data types.

Click **4** a check box to select the desired **4** cycle data types.

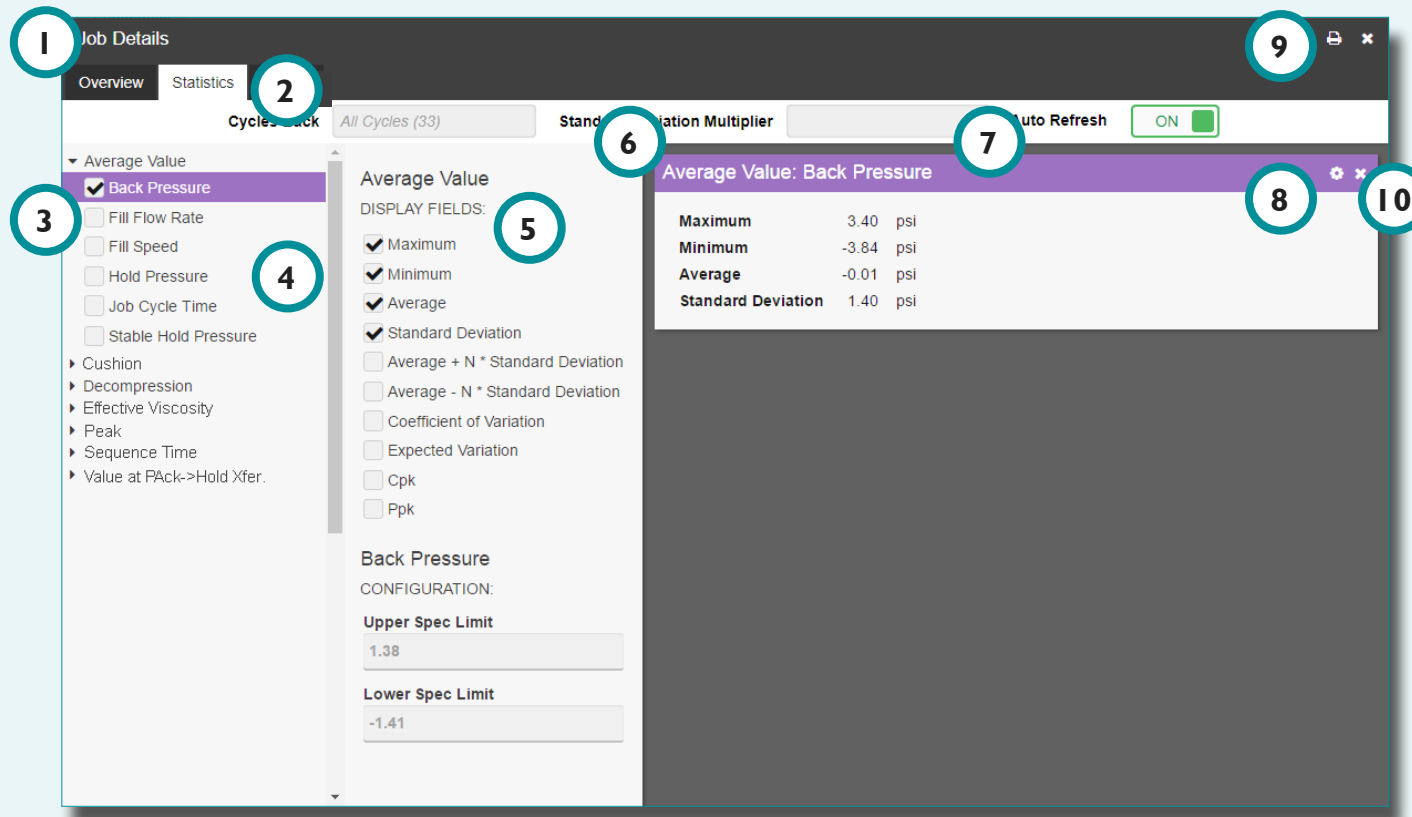
Click **5** a check box to select the desired **5** Display Fields.

Enter **6** the desired **6** Cycles Back and **7** Standard Deviation Multiplier at the top of the window, if desired.

Click **8** the **8** settings icon to collapse the **5** Display Fields.

Click **9** the **9** printer icon to print the selected statistics.


Click **10** the **10** exit icon to dismiss the selected statistics.





JOB DETAILS—TREND GRAPHS

From the [Job Details](#) pop-up window, click  the **1 Trends** tab to view configurable [Trend Graphs](#).

i NOTE Must have The Hub Trends license to view trend graphs.


Click  **2 Show Alarm Events, Show Alarm Changes, OR Show Alarm Levels** to view trends with alarm events, changes, or levels for the selected machine, or perform the following to view user-selected job data trends.

Click  the **3 Add/Remove Trends** button to expand and view **4 cycle data trends**. Click  on a check box to select the desired **4 cycle data trends**.

Click  the **5 Settings** button to view a job data type and curve pop-up menu. Enter  the desired Max Display and Min Display limits, or select a graph color in the **6 Configuration** menu, if desired.



JOB DETAILS—TREND GRAPHS (continued)

Click  the **1 delete** icon to dismiss the selected trend graph. Any selected job data types and curves for the selected machine will remain selected for that machine each time trends are viewed until the data types or curves are dismissed.

Click , hold, and drag the **2 double arrows** on the left of a graph to reorder the graphs.

Click , hold, and drag the **3 trend graph bars** to select a specific time range of data.


Click  **4 Zoom Out** to view all data.

Click  the **5 printer** icon to print the selected graphs, or click the **6 exit** icon to close the Job Details pop-up window.



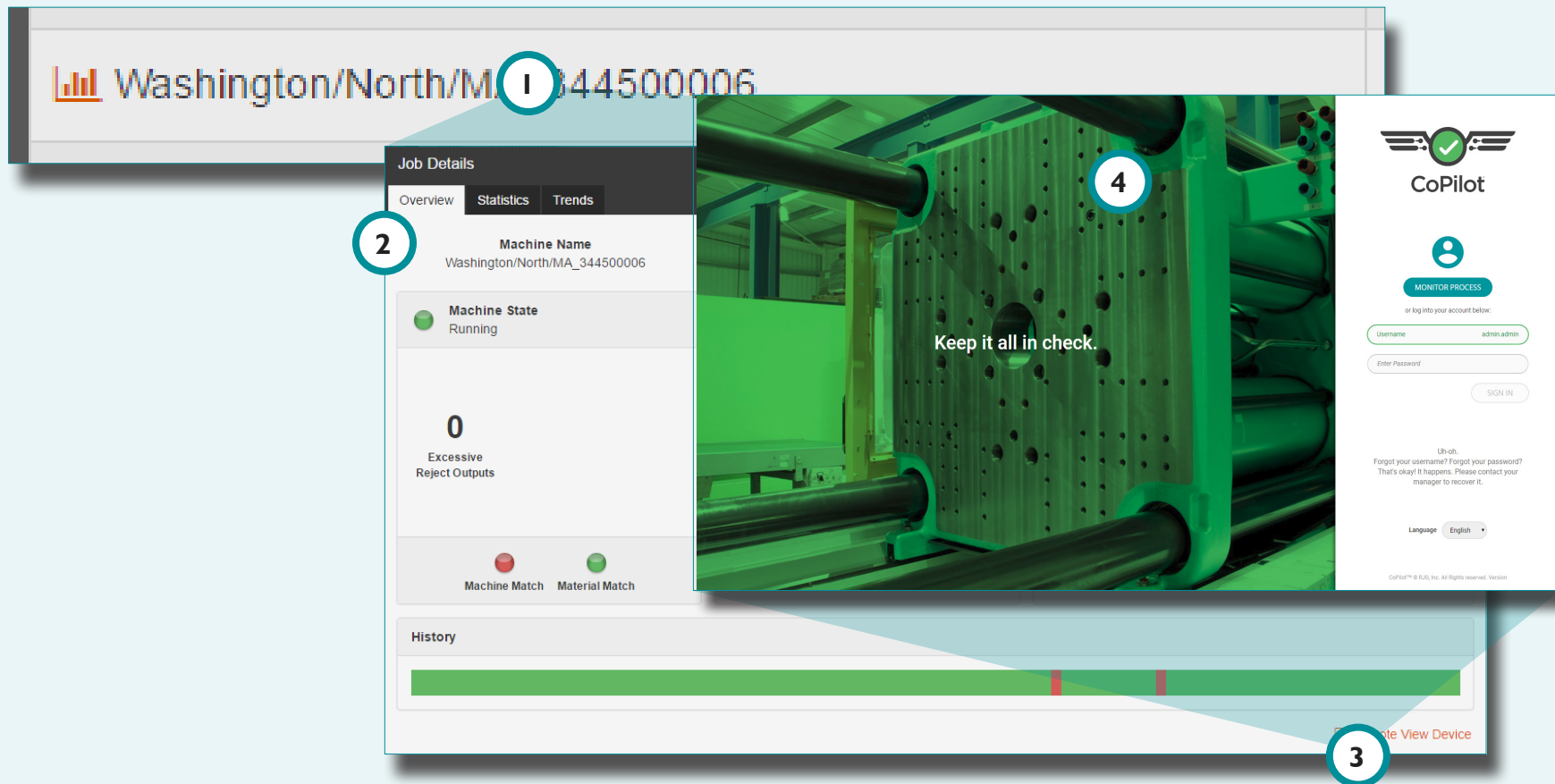
REMOTE VIEW DEVICE

NOTE The current CoPilot process may not be running the same job as selected; if this is the case, the Remote View Device link will indicate the processes do not match.

Click  on a job **1** machine name in the Dashboard Job Down Time or Job Reject Cycles summary, Machines report, Reports

view, or any Summaries report to view **2** Job Details for a specific machine.

Click  **3** Remote View Device in the bottom right-hand corner of the **2** Job Details pop-up window to view the selected machine's current CoPilot **4** screen.



The screenshot displays the CoPilot interface with several numbered callouts:

- 1** Points to the machine name "Washington/North/MA_344500006" in the Job Details pop-up window.
- 2** Points to the "Job Details" pop-up window, which shows the machine name, state (Running), and excessive reject outputs (0).
- 3** Points to the "Remote View Device" link in the bottom right corner of the Job Details pop-up window.
- 4** Points to the CoPilot screen, which shows a green-tinted video feed of a machine with the text "Keep it all in check."

The CoPilot screen also includes a login section with fields for Username and Password, a SIGN IN button, and a Language dropdown menu.


GENERATE REPORTS AND RECORDS

Generate printable reports and graphs from the Reports and Summaries views.

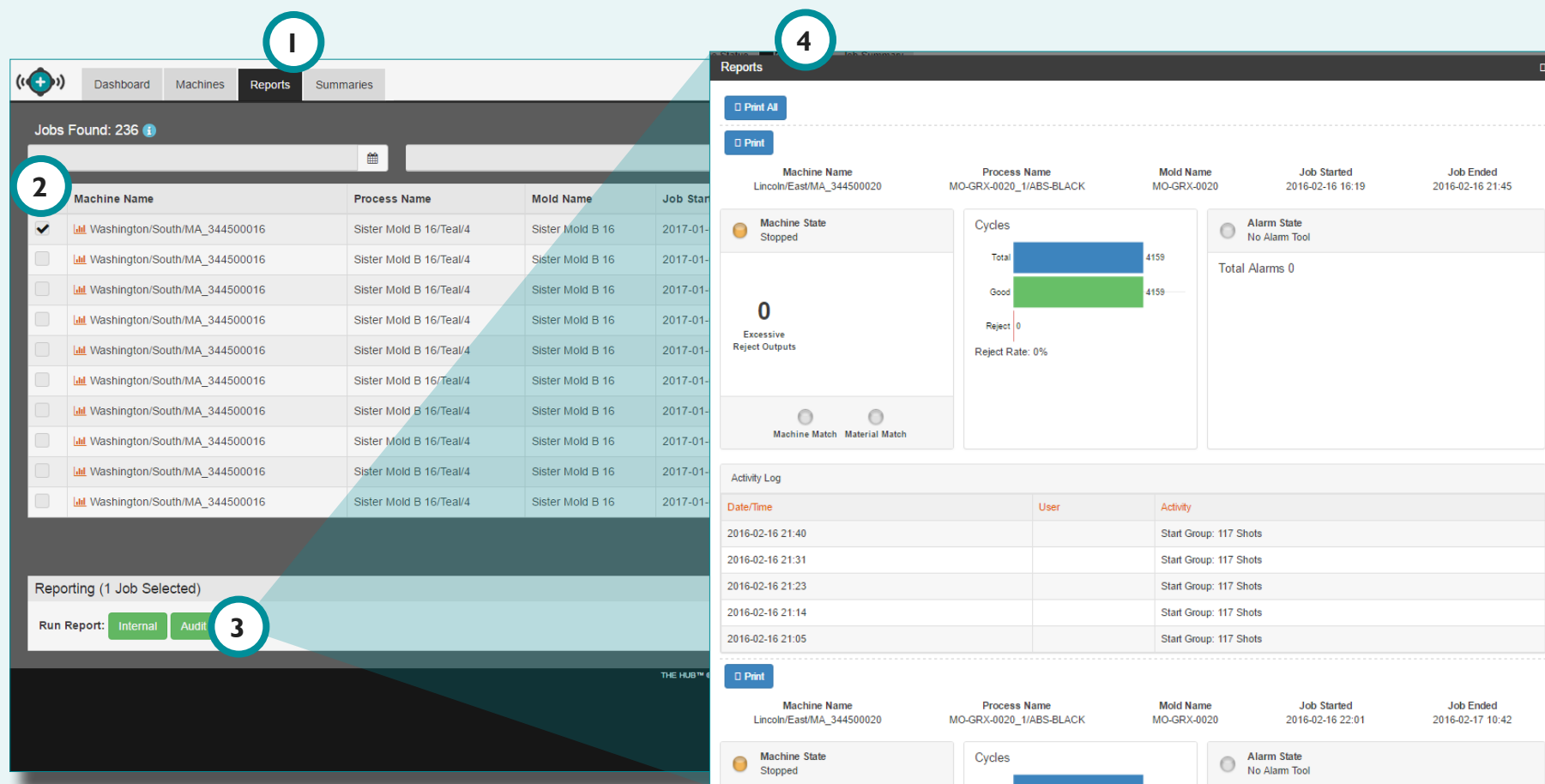
JOB REPORTS

Click  the **1 Reports** tab on the navigation bar.

Click  the **2 check boxes** to select the desired machine(s).

Click  Run Report: **3 Internal** or **Audit** at the bottom of the Jobs view.

The selected **4 report** will display in a pop-up window.



The screenshot illustrates the process of generating a report. On the left, the 'Jobs' view is shown with a table of jobs. A callout '1' points to the 'Reports' tab in the navigation bar. A callout '2' points to the 'Machine Name' column header. A callout '3' points to the 'Run Report' buttons ('Internal' and 'Audit'). A callout '4' points to the 'Print' button in the pop-up report window.

Jobs Found: 236

Machine Name	Process Name	Mold Name	Job Start
<input checked="" type="checkbox"/> Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-
<input type="checkbox"/> Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-
<input type="checkbox"/> Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-
<input type="checkbox"/> Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-
<input type="checkbox"/> Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-
<input type="checkbox"/> Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-
<input type="checkbox"/> Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-
<input type="checkbox"/> Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-
<input type="checkbox"/> Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-
<input type="checkbox"/> Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-
<input type="checkbox"/> Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-
<input type="checkbox"/> Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-

Reporting (1 Job Selected)

Run Report: **Internal** **Audit**

4

Reports

Machine Name: Lincoln/East/MA_344500020 Process Name: MO-GRX-0020_1/ABS-BLACK Mold Name: MO-GRX-0020 Job Started: 2016-02-16 16:19 Job Ended: 2016-02-16 21:45

Machine State: Stopped

Cycles: Total 4159, Good 4159, Reject 0, Reject Rate: 0%

Alarm State: No Alarm Tool, Total Alarms 0

0 Excessive Reject Outputs

Machine Match Material Match

Activity Log

Date/Time	User	Activity
2016-02-16 21:40		Start Group: 117 Shots
2016-02-16 21:31		Start Group: 117 Shots
2016-02-16 21:23		Start Group: 117 Shots
2016-02-16 21:14		Start Group: 117 Shots
2016-02-16 21:05		Start Group: 117 Shots

Machine Name: Lincoln/East/MA_344500020 Process Name: MO-GRX-0020_1/ABS-BLACK Mold Name: MO-GRX-0020 Job Started: 2016-02-16 22:01 Job Ended: 2016-02-17 10:42

Machine State: Stopped


Cycles: [Bar Chart]


Alarm State: No Alarm Tool


SUMMARIES REPORTS

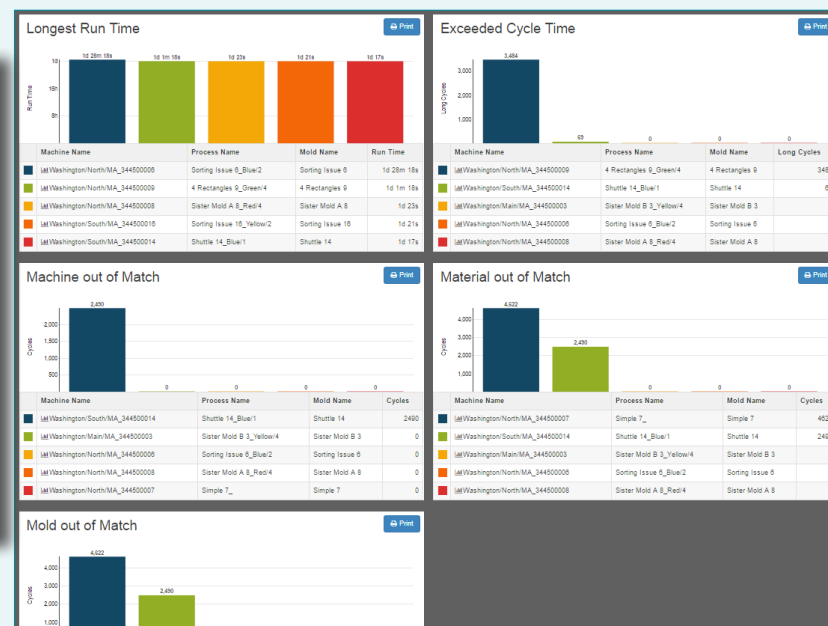
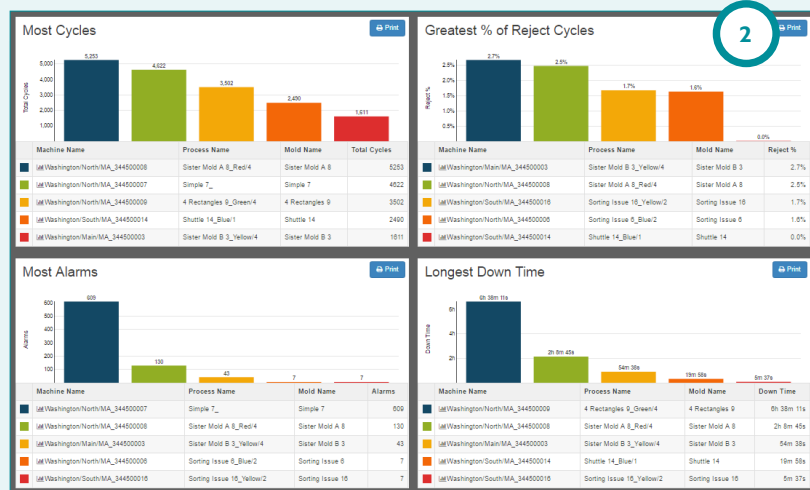
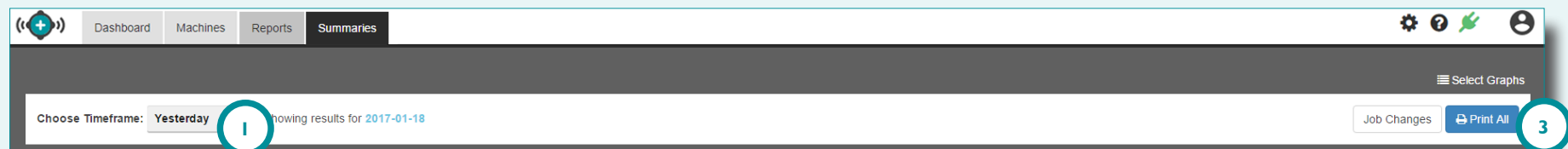
The Summaries view provides nine pre-populated reports, including the following:

- Most Cycles
- Greatest Percent (%) Reject Cycles
- Most Alarms
- Longest Down Time
- Longest Run Time
- Exceeded Cycle Time
- Machine Out of Match
- Material Out of Match
- Mold Out of Match

Click  **1 Choose Timeframe:** drop-down menu in upper left-hand corner of the Summaries view to select the data date range (Yesterday, Last Hour, Last 8 hours, Last Week, or Last Month).


Click  the **2 Print** button in upper right-hand corner of a report to print the report.

Click  the **3 Print All** button in upper right-hand corner of the Summaries view to print all reports.




JOB CHANGES REPORT

The Job Changes report displays each job, alarm settings, and diverter change made during the selected time period.

Click  **1** **Choose Timeframe:** drop-down menu in upper left-hand corner of the Summaries view to select the data date range (Yesterday, Last Hour, Last Week, or Last Month).

Click  the **2** **Job Changes** button in the upper right-hand

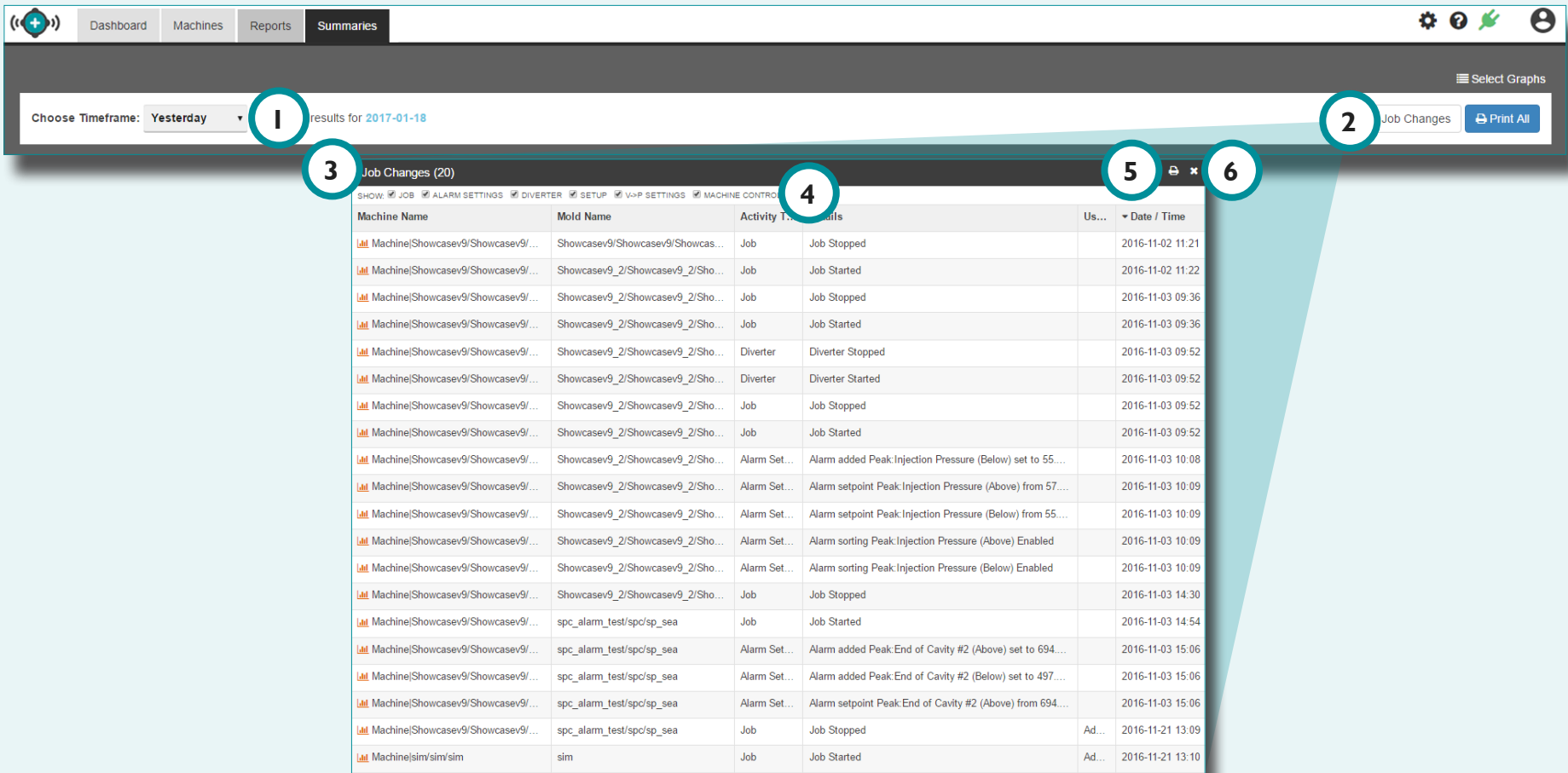
corner of the Summaries view. The selected **3** report will display in a pop-up window.

Click  a check box to select or deselect the **4** **Job Changes types**.

Click  the **5** **printer** icon to print the selected statistics.

Click  the **6** **exit** icon to dismiss the selected statistics.

MANAGE SETTINGS





The screenshot shows the 'Summaries' tab in the top navigation bar. Below it, the 'Choose Timeframe:' dropdown is set to 'Yesterday' (callout 1). To the right, the 'Job Changes' button is highlighted (callout 2). Below the button, a table titled 'Job Changes (20)' is displayed (callout 3). The table has columns for Machine Name, Mold Name, Activity Type, and Date / Time. The first four rows show 'Job' activity: 'Job Stopped', 'Job Started', 'Job Stopped', and 'Job Started'. The next four rows show 'Diverter' activity: 'Diverter Stopped', 'Diverter Started', 'Diverter Stopped', and 'Diverter Started'. The following eight rows show 'Alarm Set...' activity with various alarm descriptions. The last two rows show 'Job' activity: 'Job Stopped' and 'Job Started'. Callout 4 points to the 'Job Changes types' column header. Callout 5 points to the printer icon in the top right of the table. Callout 6 points to the exit icon in the top right of the table.



Machine Name	Mold Name	Activity Type	Date / Time
Machine>Showcase9>Showcase9/...	Showcase9>Showcase9/Showcas...	Job	2016-11-02 11:21
Machine>Showcase9>Showcase9/...	Showcase9_2>Showcase9_2/Sho...	Job	2016-11-02 11:22
Machine>Showcase9>Showcase9/...	Showcase9_2>Showcase9_2/Sho...	Job	2016-11-03 09:36
Machine>Showcase9>Showcase9/...	Showcase9_2>Showcase9_2/Sho...	Job	2016-11-03 09:36
Machine>Showcase9>Showcase9/...	Showcase9_2>Showcase9_2/Sho...	Diverter	2016-11-03 09:52
Machine>Showcase9>Showcase9/...	Showcase9_2>Showcase9_2/Sho...	Diverter	2016-11-03 09:52
Machine>Showcase9>Showcase9/...	Showcase9_2>Showcase9_2/Sho...	Job	2016-11-03 09:52
Machine>Showcase9>Showcase9/...	Showcase9_2>Showcase9_2/Sho...	Job	2016-11-03 09:52
Machine>Showcase9>Showcase9/...	Showcase9_2>Showcase9_2/Sho...	Alarm Set...	2016-11-03 10:08
Machine>Showcase9>Showcase9/...	Showcase9_2>Showcase9_2/Sho...	Alarm Set...	2016-11-03 10:09
Machine>Showcase9>Showcase9/...	Showcase9_2>Showcase9_2/Sho...	Alarm Set...	2016-11-03 10:09
Machine>Showcase9>Showcase9/...	Showcase9_2>Showcase9_2/Sho...	Alarm Set...	2016-11-03 10:09
Machine>Showcase9>Showcase9/...	Showcase9_2>Showcase9_2/Sho...	Alarm Set...	2016-11-03 10:09
Machine>Showcase9>Showcase9/...	Showcase9_2>Showcase9_2/Sho...	Job	2016-11-03 14:30
Machine>Showcase9>Showcase9/...	spc_alarm_test/spc/sp_sea	Job	2016-11-03 14:54
Machine>Showcase9>Showcase9/...	spc_alarm_test/spc/sp_sea	Alarm Set...	2016-11-03 15:06
Machine>Showcase9>Showcase9/...	spc_alarm_test/spc/sp_sea	Alarm Set...	2016-11-03 15:06
Machine>Showcase9>Showcase9/...	spc_alarm_test/spc/sp_sea	Alarm Set...	2016-11-03 15:06
Machine>Showcase9>Showcase9/...	spc_alarm_test/spc/sp_sea	Job	2016-11-21 13:09
Machine sim sim sim	sim	Job	2016-11-21 13:10

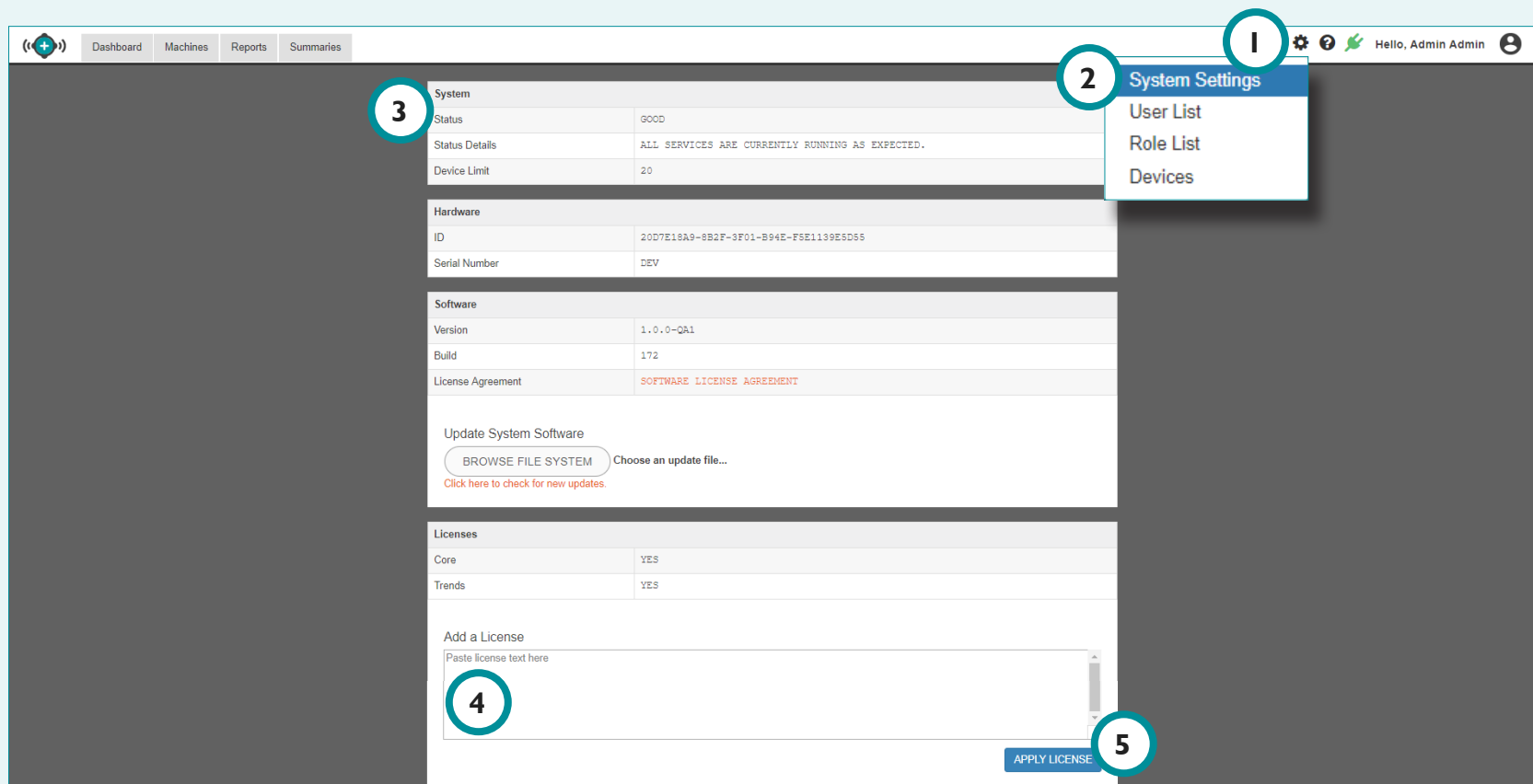
SYSTEM SETTINGS

The System Settings page provides The Hub system, hardware, software, and licensing information.

System information includes status, status details, and device limit. Hardware information includes the hardware identification and serial number. Software information includes the version and build numbers. Licenses information includes the core and trends information, and license addition capability.

Click  the **1 Settings** button and then click  **2 System Settings** from the drop-down menu to view **3 System Configuration**.

Paste  **4 license text** in the provided field; click  the **5 Apply License** button to apply the new licensing.



The screenshot shows the 'System Settings' page in a web application. The page is divided into several sections: System, Hardware, Software, and Licenses. The 'System' section shows status as 'GOOD', status details as 'ALL SERVICES ARE CURRENTLY RUNNING AS EXPECTED.', and device limit as '20'. The 'Hardware' section shows ID as '20D7E18A9-8B2F-3F01-B94E-F5E1139E5D55' and serial number as 'DEV'. The 'Software' section shows version as '1.0.0-QA1', build as '172', and license agreement as 'SOFTWARE LICENSE AGREEMENT'. The 'Licenses' section shows core as 'YES' and trends as 'YES'. There is an 'Add a License' section with a text area for pasting license text and an 'APPLY LICENSE' button. A dropdown menu is open from the 'Settings' button in the top right corner, showing options: 'System Settings', 'User List', 'Role List', and 'Devices'. The 'System Settings' option is highlighted. Numbered callouts are placed over the interface: 1 points to the 'Settings' button, 2 points to the 'System Settings' option in the dropdown, 3 points to the 'System' section header, 4 points to the 'Paste license text here' input field, and 5 points to the 'APPLY LICENSE' button.

System	
Status	GOOD
Status Details	ALL SERVICES ARE CURRENTLY RUNNING AS EXPECTED.
Device Limit	20

Hardware	
ID	20D7E18A9-8B2F-3F01-B94E-F5E1139E5D55
Serial Number	DEV

Software	
Version	1.0.0-QA1
Build	172
License Agreement	SOFTWARE LICENSE AGREEMENT

Licenses	
Core	YES
Trends	YES

Update System Software

Choose an update file...

[Click here to check for new updates.](#)

Add a License

Paste license text here

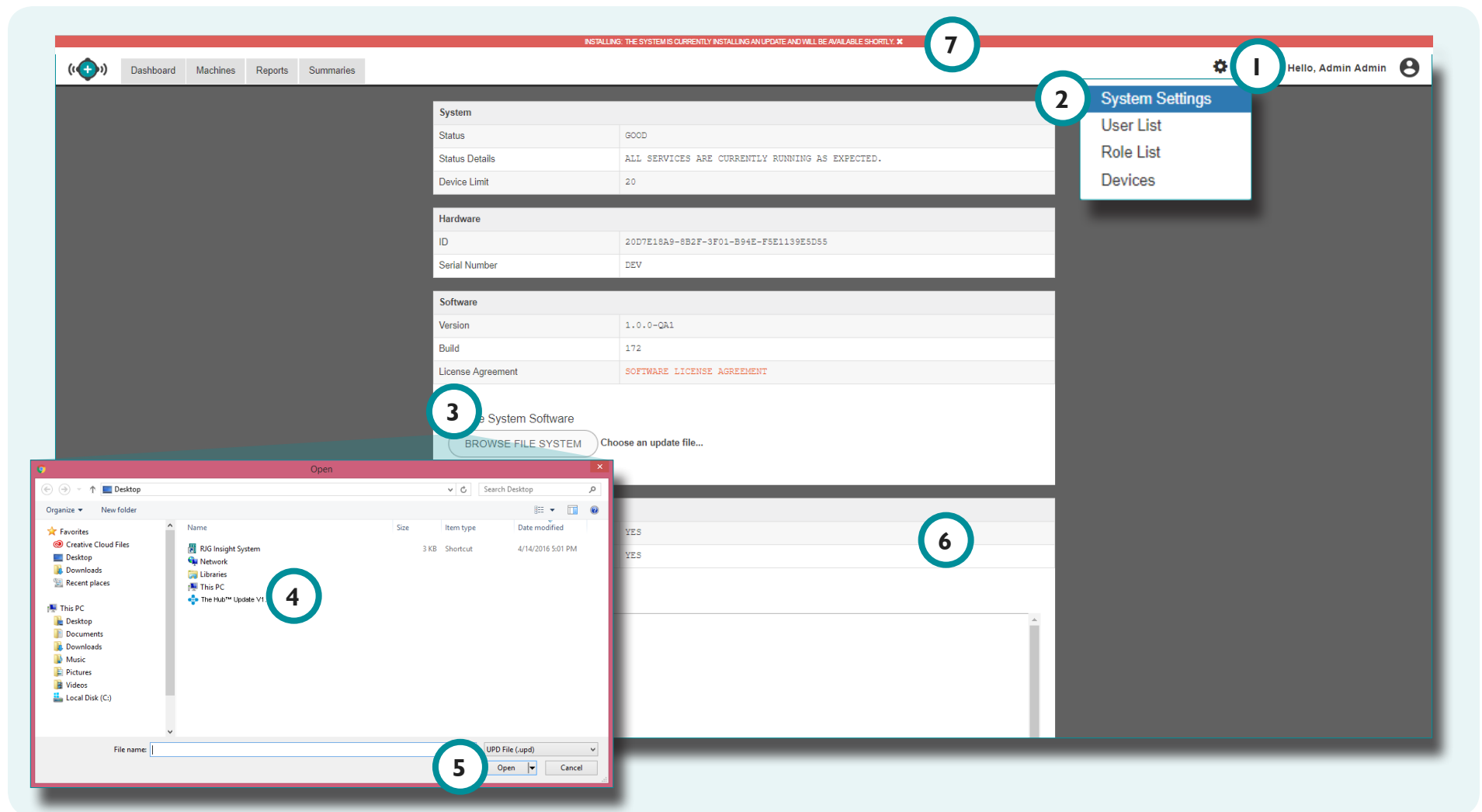
SYSTEM UPDATES

Keep The Hub software up-to-date.

Click the **1 Settings** icon, then click **2 System Settings** from the drop-down menu. Click the **3 Browse File System** button to browse for an update file.

Select the **4 update file (.UPD)** from the window, then click the **5 Open** button. Click the **6 Install Update** button.

The Hub will update, and will be inaccessible until completed; an **7 update notification** will appear across the top of the page.



CONNECTED COPILOT SYSTEMS

View CoPilot systems connected to The Hub.

Click **1** **Devices** from the Settings icon drop-down menu. Any CoPilot system connected to The Hub will display the **2** **Connected Icon** in the **3** **Connected** column. If the **3** **Connected** column is not visible, click **4** **Select Columns** and then click the check box next to **5** **Connected** to select it for viewing.

ACTIVATED COPILOT SYSTEMS

View CoPilot systems activated on The Hub.

Click **1** **Devices** from the Settings icon drop-down menu. Any CoPilot systems activated on The Hub will display the **6** **Activated Icon** in the **7** **Activated** column. If the **7** **Activated** column is not visible, click **4** **Select Columns** and then click the check box next to **8** **Activated** to select it for viewing.

The screenshot displays the 'Devices' page in the CoPilot Systems interface. The top navigation bar includes 'Dashboard', 'Machines', 'Reports', and 'Summaries'. The main content area shows a table of devices with columns for 'Serial Number', 'Machine Name', 'IP Address', 'Version', 'Connected', and 'Activated'. A 'Select Columns' dialog box is open, showing a list of columns with checkboxes. The 'Connected' and 'Activated' columns are checked. A 'Settings' icon drop-down menu is also visible, showing options like 'System Settings', 'User List', 'Role List', and 'Devices'. Numbered callouts (1-8) indicate the steps for navigating to the 'Connected' and 'Activated' columns.

Serial Number	Machine Name	IP Address	Version	Connected	Activated
0172160221		172.16.0.221	1.1.0	<input type="radio"/>	<input type="radio"/>
0172160224		172.16.0.224	1.1.0	<input checked="" type="radio"/>	<input checked="" type="radio"/>
0172160222		172.16.0.222	1.1.0	<input type="radio"/>	<input checked="" type="radio"/>
1234123412		172.16.0.84	1.1.0	<input type="radio"/>	<input checked="" type="radio"/>

Select Columns

- ☒ Serial Number
- ☒ Machine Name
- ☒ IP Address
- ☐ Subnet Mask
- ☐ Default Gateway
- ☐ MAC Address
- ☐ ID
- ☐ Node
- ☒ Version
- ☒ Connected
- ☒ Activated

Settings

- System Settings
- User List
- Role List
- Devices**

OVERVIEW

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The HUB

The Hub has four main pages, or views, where users can access data, view graphs and records, and generate reports.

1 Dashboard

The Dashboard view provides an overall view of the machine status and part quality in the network.

2 Machines

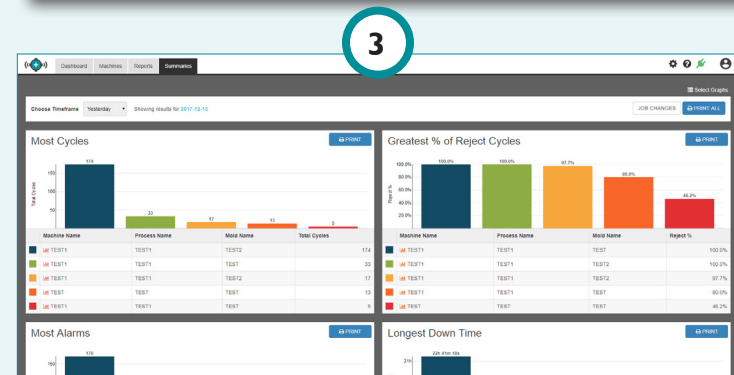
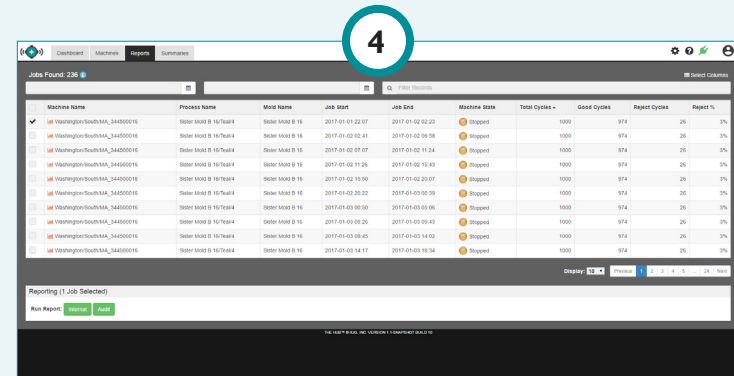
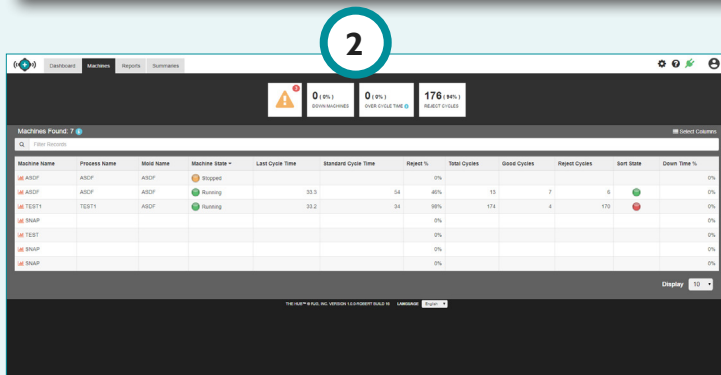
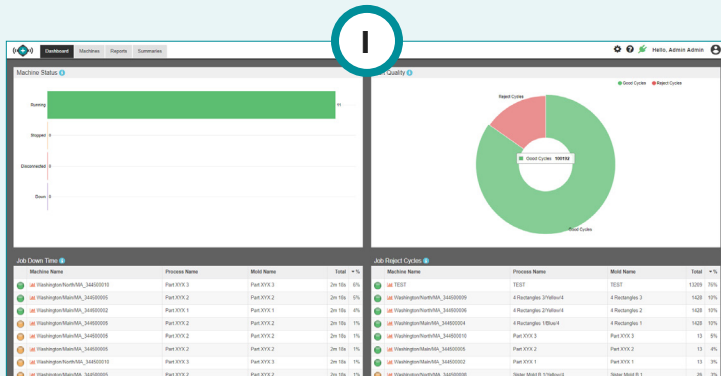
The Machines view provides a detailed view of each machine and machine status in the network.

3 Reports

The Reports view provides a record of Jobs by machine

4 Summaries

The Summaries view provides nine pre-populated, printable mini-reports selectable by time frame.



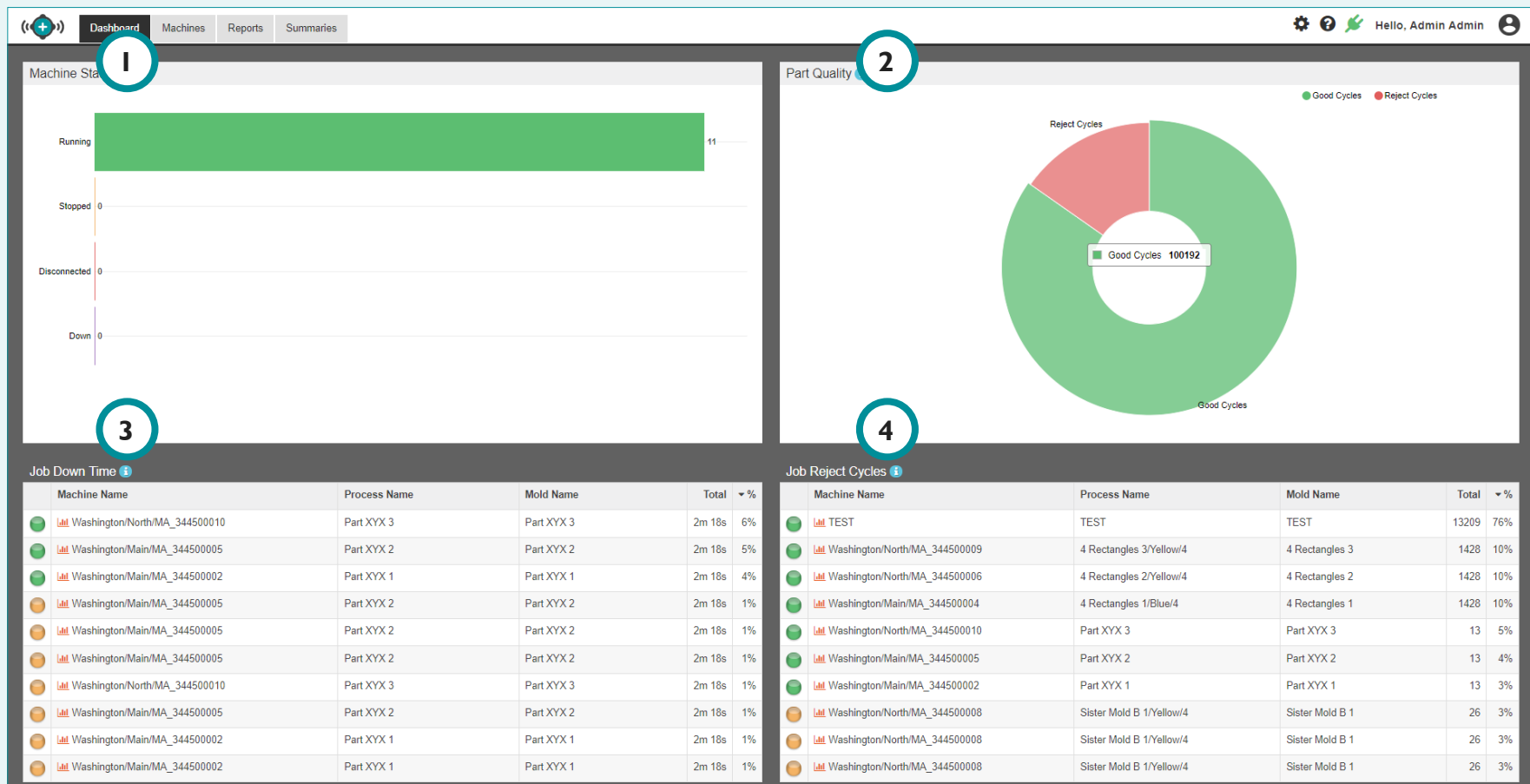
DASHBOARD

The [Dashboard](#) provides an overall view of machine status and part quality in the network in the following graphs and summaries:

- 1 Machine Status Graph
- 2 Part Quality Graph
- 3 Job Down Time Summary
- 4 Job Reject Cycles Summary



NOTE The Dashboard displays job data from jobs that have been active within the past 24 hours.

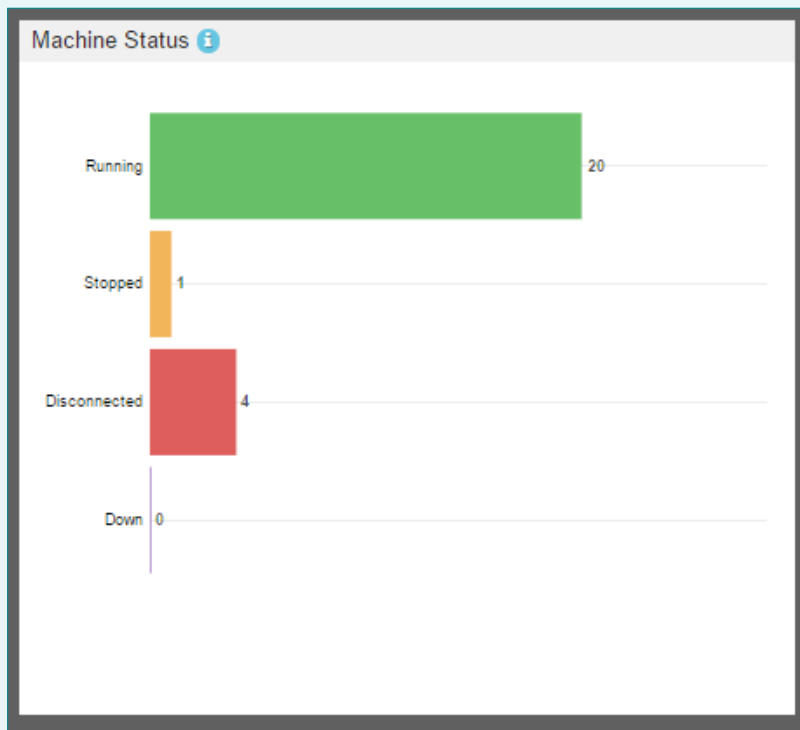


MACHINE STATUS GRAPH

The [Machine Status](#) graph displays—in real-time—the number of

- running,
- stopped,
- disconnected, and
- down

machines in the facility.



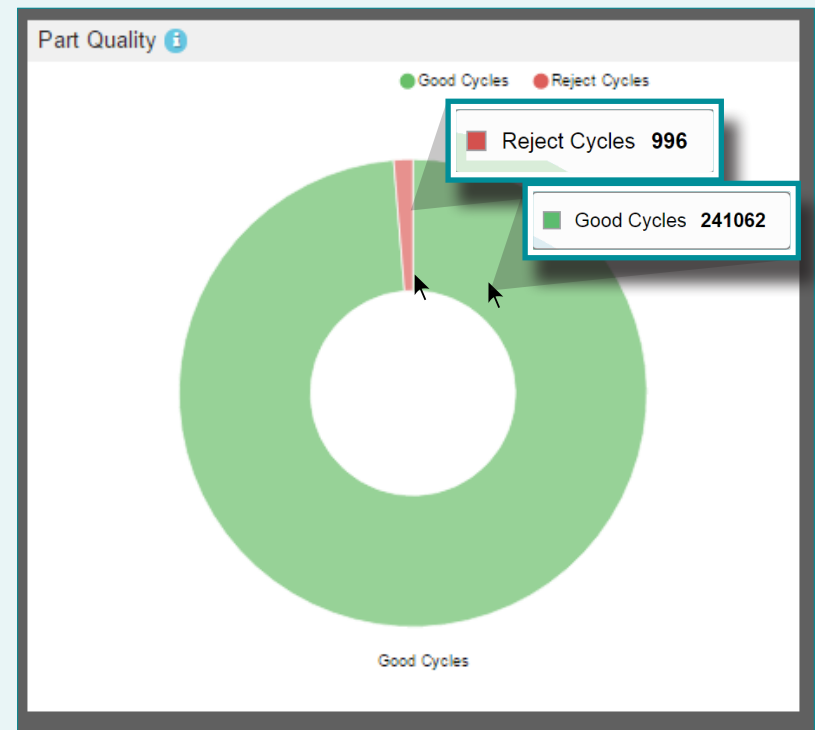
PART QUALITY GRAPH

The [Part Quality](#) graph displays the number of

- good,
- suspect, and
- reject

cycles from jobs that have been active within the past 24 hours.

Mouse over the cycles in the graph to view the number of good, suspect, or reject cycles.



JOB DOWN TIME SUMMARY

The **Job Down Time** summary provides a table view of each job that has been active within the past 24 hours, and lists the following:

- 1 Machine Name
- 2 Process Name
- 3 Mold Name
- 4 Total Down Time
- 5 Down Time Percent (%)



Down Time

The length of time a machine is idle while a job is running. **Total Down Time** is the length of time a machine is down over the duration of a job, measured in hours, minutes, and seconds, or days. **Down Time Percent (%)** is the percentage of time that the machine is down compared to its full run time duration from start to stop.

Job Down Time i				
Machine Name 1	Process Name 2	Mold Name 3	Total 4	% 5
Washington/North/MA_344500009	Part XYX 3	Part XYX 3	2m 18s	4%
Washington/North/MA_344500008	Part XYX 2	Part XYX 2	2m 18s	3%
Washington/North/MA_344500009	Part XYX 3	Part XYX 3	2m 18s	1%
Washington/North/MA_344500008	Part XYX 2	Part XYX 2	2m 18s	1%
Washington/Main/MA_344500003	Part XYX 1	Part XYX 1	2m 18s	1%
Washington/North/MA_344500009	Part XYX 3	Part XYX 3	2m 18s	1%
Washington/North/MA_344500008	Part XYX 2	Part XYX 2	2m 18s	1%
Washington/Main/MA_344500003	Part XYX 1	Part XYX 1	2m 18s	1%
Washington/North/MA_344500009	Part XYX 3	Part XYX 3	2m 18s	1%
Washington/North/MA_344500009	Part XYX 3	Part XYX 3	2m 18s	1%

JOB REJECT CYCLES SUMMARY

The [Job Reject Cycles](#) summary provides a table view of each job that has ran within the past 24 hours, and lists the following:

- 1 Machine Name
- 2 Process Name
- 3 Mold Name
- 4 Total Reject Cycles
- 5 Reject Percent (%)



Reject Cycles

Cycles which produce unusable parts. **Total Reject Cycles** is the count of reject cycles a machine produces during operation. **Reject Percent (%)** is the percentage of reject cycles that the machine produces during operation.

Job Reject Cycles i					
	1 Machine Name	2 Process Name	3 Mold Name	4 Total	5 %
	Washington/North/MA_344500007	Sister Mold B 2/Blue/4	Sister Mold B 2	26	3%
	Washington/East/MA_344500019	Sister Mold B 4/Red/4	Sister Mold B 4	26	3%
	Washington/South/MA_344500015	Sister Mold B 3/Yellow/4	Sister Mold B 3	26	3%
	Washington/Main/MA_344500002	Sister Mold B 1/Red/4	Sister Mold B 1	26	3%
	Washington/North/MA_344500007	Sister Mold B 2/Blue/4	Sister Mold B 2	26	3%
	Washington/South/MA_344500015	Sister Mold B 3/Yellow/4	Sister Mold B 3	26	3%
	Washington/East/MA_344500019	Sister Mold B 4/Red/4	Sister Mold B 4	26	3%
	Washington/Main/MA_344500002	Sister Mold B 1/Red/4	Sister Mold B 1	26	3%
	Washington/North/MA_344500007	Sister Mold B 2/Blue/4	Sister Mold B 2	26	3%
	Washington/South/MA_344500015	Sister Mold B 3/Yellow/4	Sister Mold B 3	26	3%

MACHINES

The **Machines** view provides details of each machine in the network, including the following:

- 1 Alerts
- 2 Down Machines Percent (%)
- 3 Over Cycle Time Percent (%)
- 4 Reject Cycles Count and Percent (%)
- 5 Customizable Machine Status Report

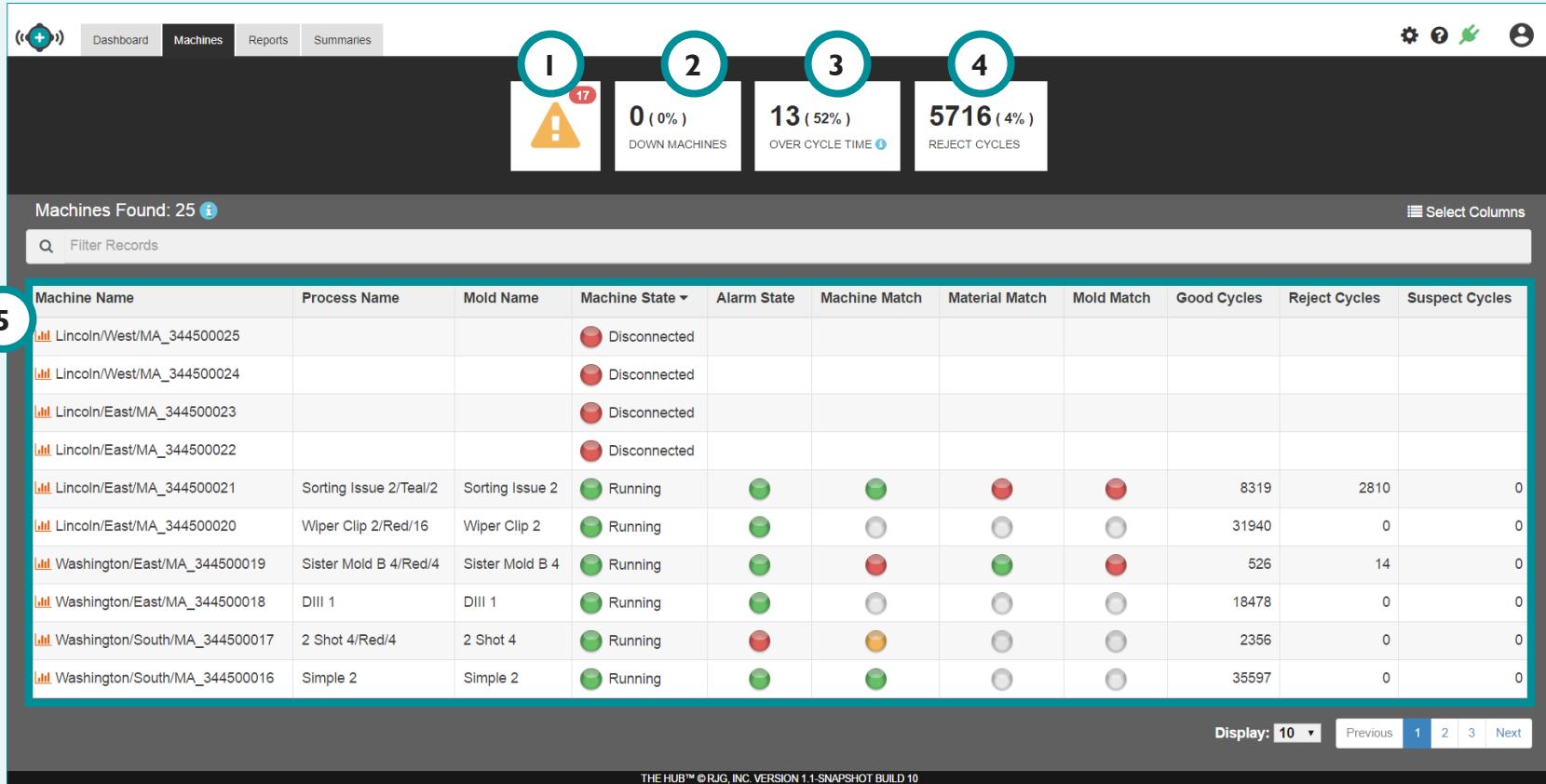


NOTE The Machines view displays every networked machine in the facility, regardless of current state (running, stopped, down, or disconnected).



Over Cycle

Cycles which are longer than the targeted cycle time. Over Cycle Time Percent (%) is the percentage of time a machine is running over cycle during operation. The Hub shows the Over Cycle Time Percent of the total number of machines.



ALERTS

The **1 Alerts** icon provides the number of machine-related alerts (if any) which may require troubleshooting. Five separate alerts may occur: Alarm Setting Changed, Diverter Disabled, Excessive Rejects Output Fired, Injection Disabled, and Over Limit of Connected Devices. Click **2** the **1 Alerts** icon to view **2** an **expanded summary** of the machine-related alerts including:

3 Machine Name

5 Number (#) of Alerts

4 Alert Type

6 Last Occurrence

Click **7** **Clear** next to the alert information to clear the alert. Click **8** **Clear All** to clear every alert. Click **9** the **printer** button to print the alerts. Click **10** the **exit** button to exit without clearing the alert(s).
































The screenshot shows the Alerts interface. At the top, there are four summary cards: 1. Alerts (14) with a warning icon, 2. DOWN MACHINES (0 (0%)), 3. OVER CYCLE TIME (4 (27%)), and 4. REJECT CYCLES (1579 (1%)). Below these is a section titled 'Alerts (51)' with a 'Clear All' button and printer and exit icons. A table lists the alerts with columns for Machine Name, Alert Type, # of Alerts, Last Occurrence, and a 'clear' button. The table contains 7 rows of data. Callouts 1 through 10 point to specific elements: 1. Alerts icon, 2. Alerts (51) title, 3. Machine Name column, 4. Alert Type column, 5. # of Alerts column, 6. Last Occurrence column, 7. clear button, 8. Clear All button, 9. printer icon, and 10. exit icon.

Machine Name 3	Alert Type 4	# of Alerts 5	Last Occurrence 6	7
15EXX00002	Over limit of connected devices	52	2016-11-18 14:41	clear
15EXX00007	Over limit of connected devices	1	2016-11-18 14:41	clear
15EXX00009	Over limit of connected devices	1	2016-11-18 14:41	clear
15EXX00013	Over limit of connected devices	23	2016-11-18 14:41	clear
15EXX00020	Over limit of connected devices	300	2016-11-18 14:41	clear
Lincoln/East/MA_344500020	Alarm Setting Changed	144	2016-10-07 04:43	clear
Lincoln/East/MA_344500022	Alarm Setting Changed	17	2016-11-18 17:10	clear

MACHINES REPORT

The **Machines** report provides the following 22 machine, mold, and job variables:

- Alarm State
- Down Time
- Down Time Percent (%)
- Good Cycles
- IP Address
- Last Cycle Time
- Machine Match
- Machine Name
- Machine State
- Material Match
- Mold Match
- Mold Name
- Process Name
- Reject Percent (%)
- Reject Cycles
- Run Time
- Serial Number
- Sort State
- Standard Cycle Time
- Suspect Cycles
- Total Cycles
- Version

<div> <div>Q</div> <div>Filter Records</div> </div>							
Machine Name ▾	Process Name	Mold Name	Machine State	Alarm State	Mold Match	Reject %	Down Time %
 Washington/South/MA_344500077	Sister Mold B 77_Teal/4	Sister Mold B 77	 Running			3%	0%
 Washington/South/MA_344500076	Sister Mold B 76_Blue/4	Sister Mold B 76	 Stopped			0%	0%
 Washington/South/MA_344500075	Shuttle 75_Blue/1	Shuttle 75	 Running			0%	0%
 Washington/South/MA_344500074	Sister Mold A 74_Teal/4	Sister Mold A 74	 Running			2%	9%
 Washington/South/MA_344500073	Shuttle 73_Teal/1	Shuttle 73	 Stopped			0%	0%
 Washington/South/MA_344500072			 Disconnected			0%	0%
 Washington/South/MA_344500017	MM2 17_	MM2 17	 Running			0%	2%
 Washington/South/MA_344500016	Sister Mold B 16_Blue/4	Sister Mold B 16	 Stopped			0%	0%
 Washington/South/MA_344500015	Sister Mold B 15_Red/4	Sister Mold B 15	 Running			3%	0%
 Washington/South/MA_344500014	Simple 14_	Simple 14	 Down			0%	1%

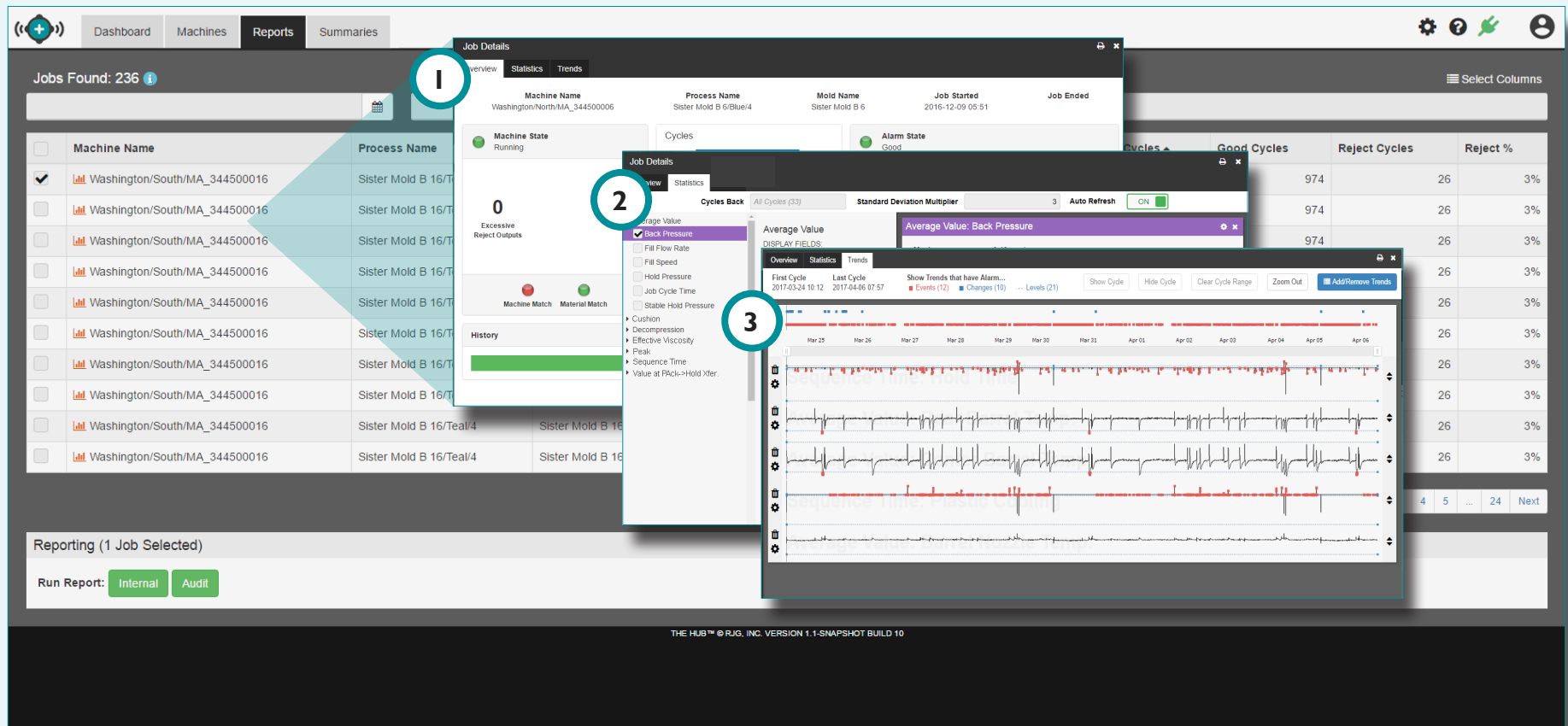
REPORTS

The [Reports](#) view provides records of all job histories and generates:

- 1 Job Details Overview
- 2 Job Details Statistics
- 3 Job Details Trends Graphs



NOTE Must have The Hub Trends license to view trend and cycle graphs.

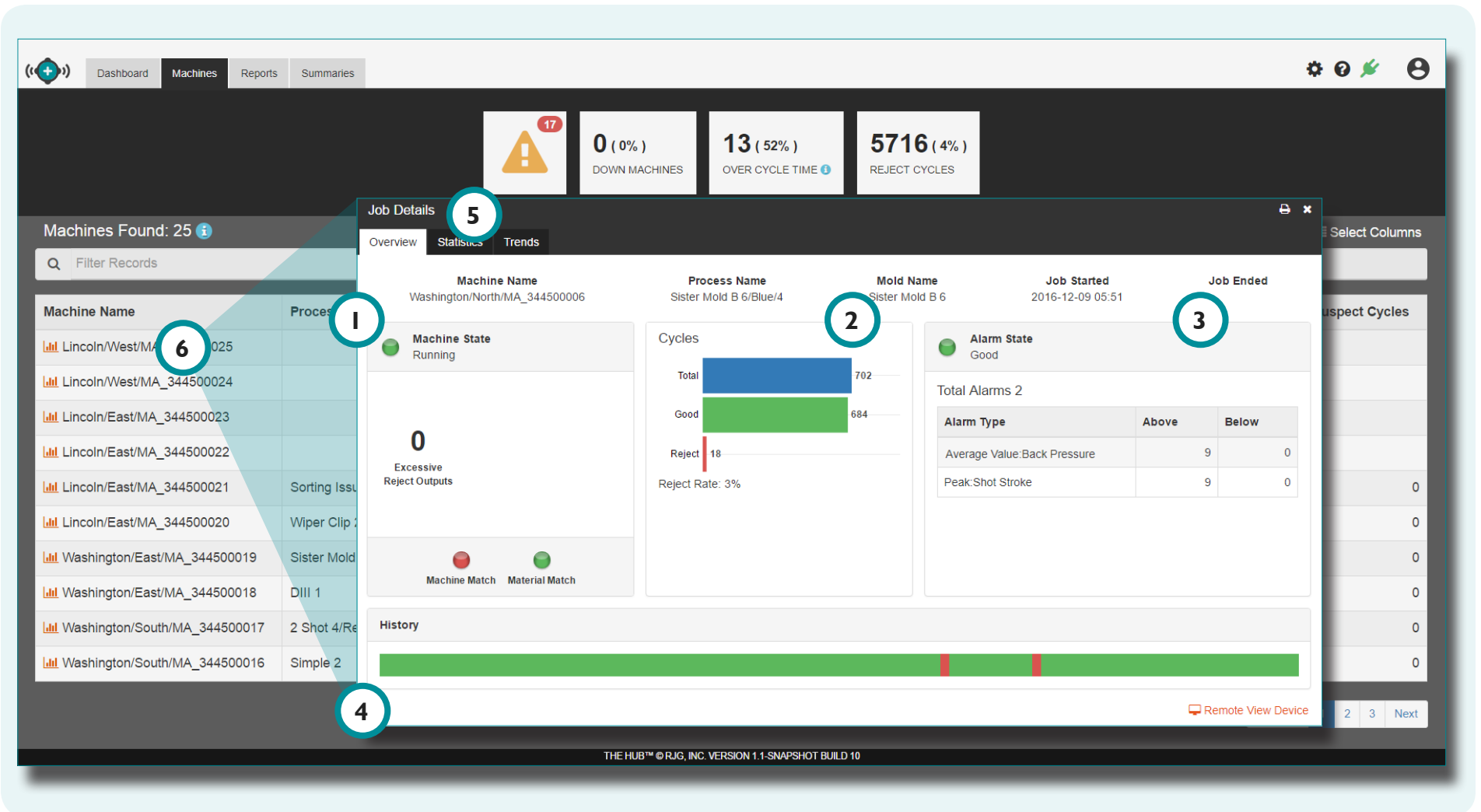


JOB DETAILS OVERVIEW

The [Job Details](#) pop-up window provides machine, process, mold, and job information, and the following:

- 1 Machine State
- 2 Sort State
- 3 Alarm State
- 4 History
- 5 Statistics

To view Job Details, **Click**  on the desired **6 machine name** in the Reports summary. The Job Details is also accessible from the Job Down Time summary, Job Reject Cycles summary, Machines report, or Summaries mini-reports.



Job Details

Overview Statistics Trends

Machine Name
Washington/North/MA_344500006

Process Name
Sister Mold B 6/Blue/4

Mold Name
Sister Mold B 6

Job Started
2016-12-09 05:51

Job Ended

Machine State
Running

Cycles

Cycles	Value
Total	702
Good	684
Reject	18

Reject Rate: 3%

Alarm State
Good

Total Alarms 2

Alarm Type	Above	Below
Average Value: Back Pressure	9	0
Peak: Shot Stroke	9	0

History

Machine Match Material Match






Remote View Device

2 3 Next

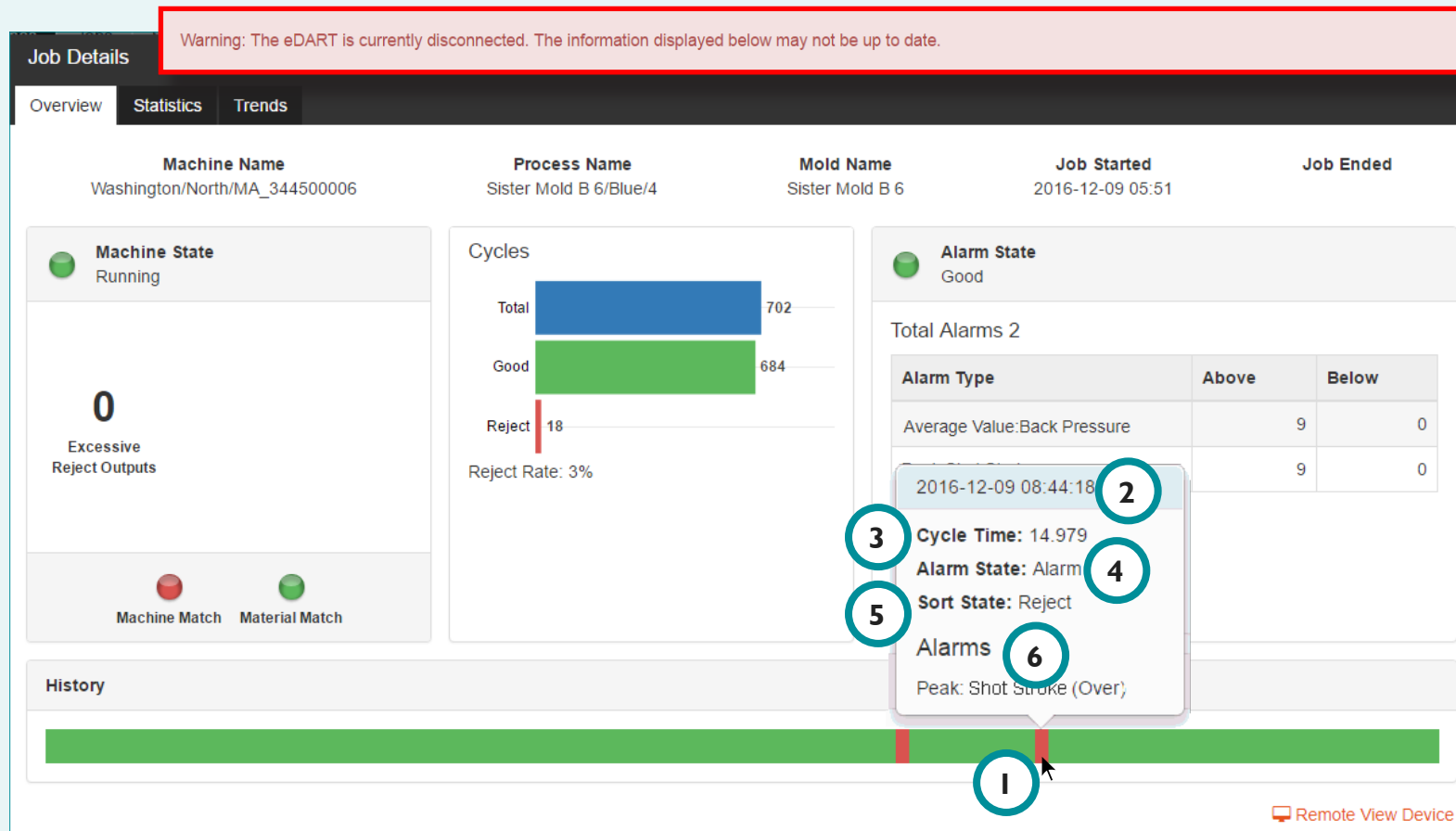
THE HUB™ © RJG, INC. VERSION 1.1-SNAPSHOT BUILD 10

JOB DETAILS OVERVIEW (continued)

Mouse over  the Job Details  History bar to view the following cycle details:



-  Cycle Start Date and Time
-  Cycle Sort State
-  Cycle Time (length of cycle)
-  Alarms
-  Cycle Alarm State

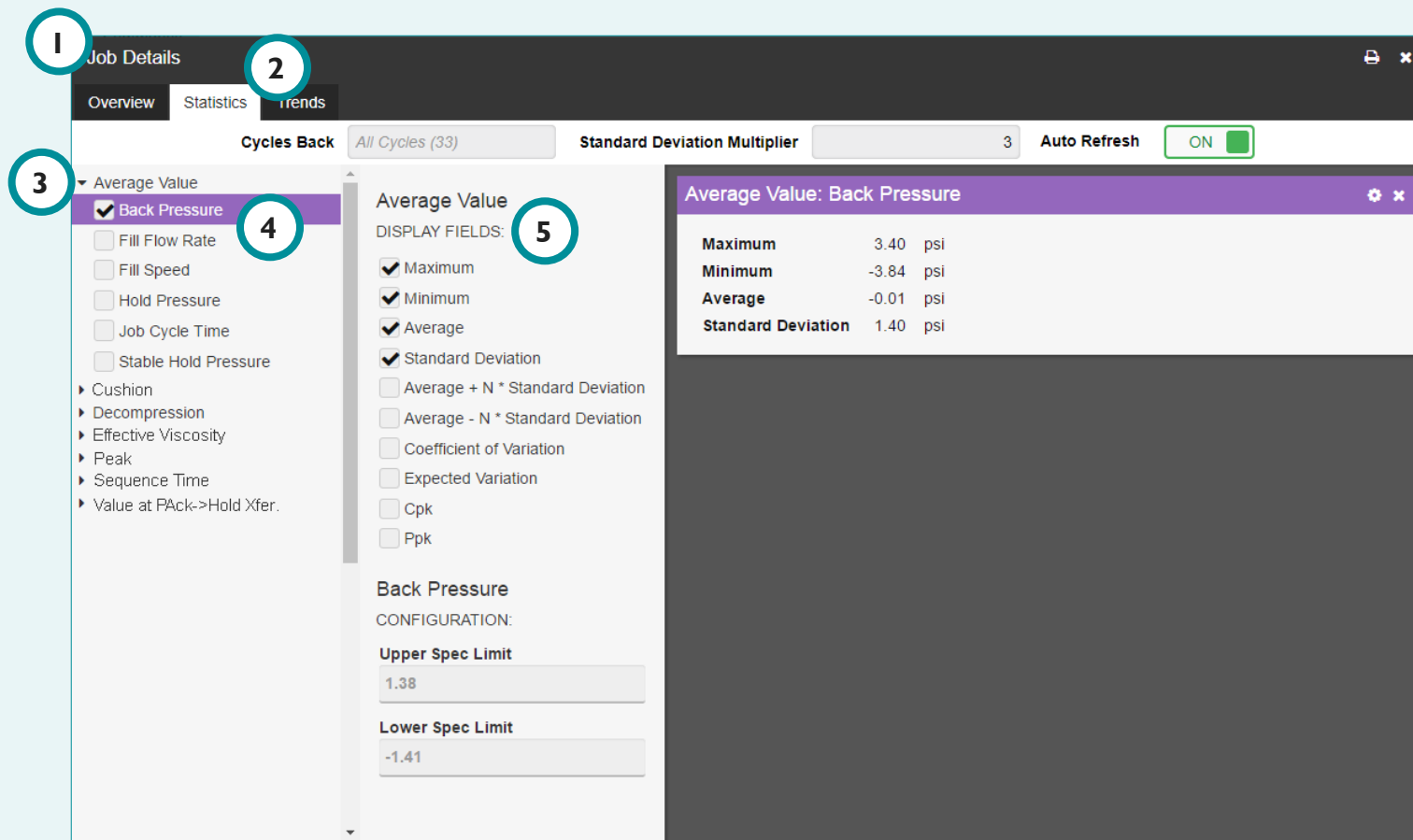
The Job Details pop-up window may display a warning to indicate that the CoPilot is disconnected, in which case information may not be up-to-date.



JOB DETAILS—STATISTICS REPORT

The **1 Job Details** **2 Statistics** tab provides a selection of up to 26 **3 job cycle data statistics**, each with **4 cycle data types**, which the user can select up to 10 **5 Display Fields** to view or print.

To view **1 Job Details** **2 Statistics**, click  on a machine name in the Job Down Time summary, Job Reject Cycles summary, Machines report, Reports view, or Summaries mini-reports, and then click  the **2 Statistics** tab in the **1 Job Details** pop-up window.



The screenshot shows the 'Job Details' window with the 'Statistics' tab selected. The interface includes a left sidebar with a list of statistics, a central panel for selecting display fields, and a right panel showing the selected statistics data.

1 Job Details (Window Title)

2 Statistics (Tab)

3 (Left Sidebar - List of Statistics)

- Average Value
 - ☒ Back Pressure
 - ☐ Fill Flow Rate
 - ☐ Fill Speed
 - ☐ Hold Pressure
 - ☐ Job Cycle Time
 - ☐ Stable Hold Pressure
- Cushion
- Decompression
- Effective Viscosity
- Peak
- Sequence Time
- Value at Pack->Hold Xfer.

4 (Left Sidebar - Cycle Data Types)

- ☐ Fill Flow Rate
- ☐ Fill Speed
- ☐ Hold Pressure
- ☐ Job Cycle Time
- ☐ Stable Hold Pressure

5 (Central Panel - Display Fields)

DISPLAY FIELDS:

- ☒ Maximum
- ☒ Minimum
- ☒ Average
- ☒ Standard Deviation
- ☐ Average + N * Standard Deviation
- ☐ Average - N * Standard Deviation
- ☐ Coefficient of Variation
- ☐ Expected Variation
- ☐ Cpk
- ☐ Ppk

Back Pressure

CONFIGURATION:

Upper Spec Limit: 1.38

Lower Spec Limit: -1.41

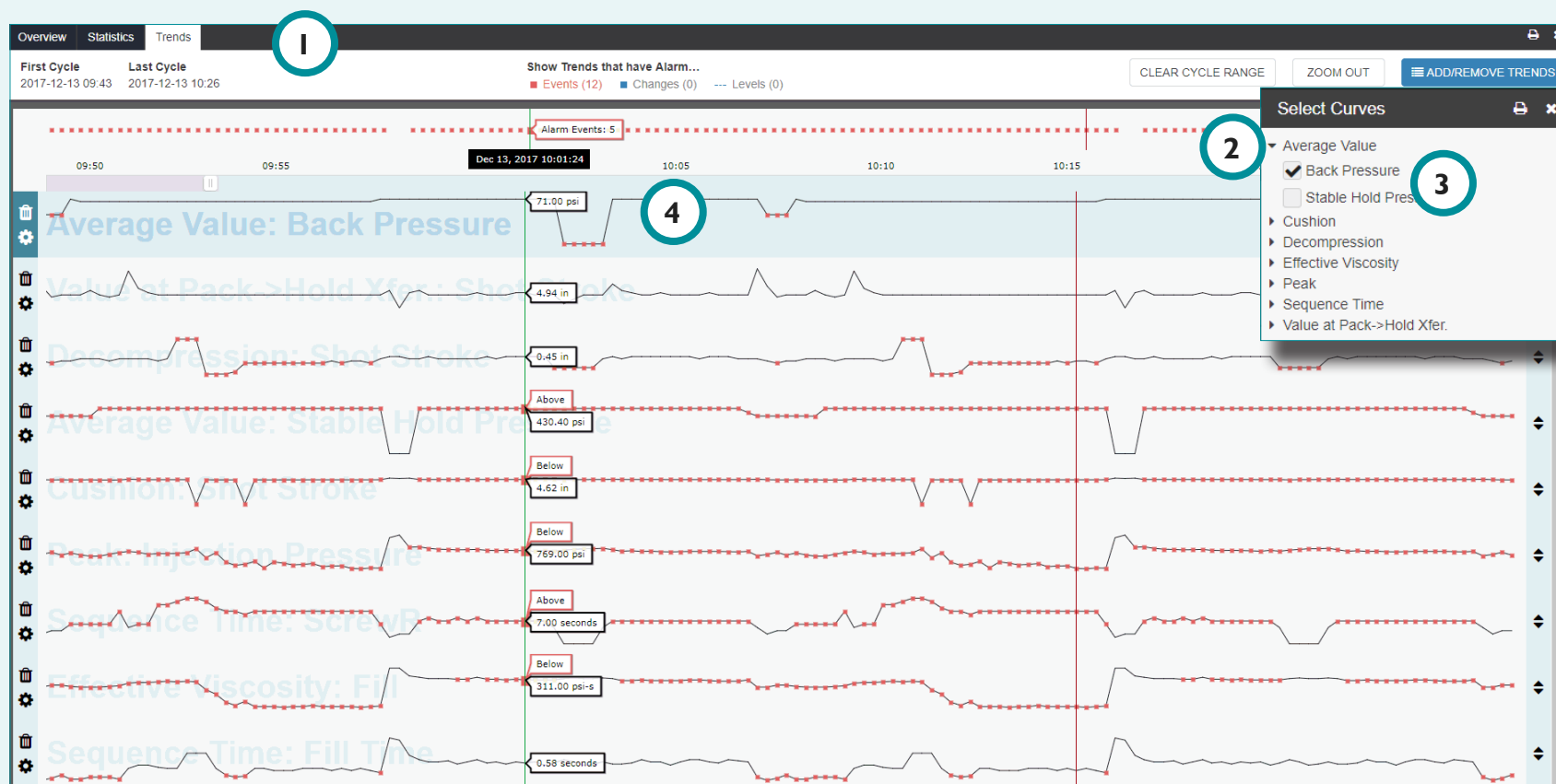
Right Panel - Average Value: Back Pressure

Statistic	Value	Unit
Maximum	3.40	psi
Minimum	-3.84	psi
Average	-0.01	psi
Standard Deviation	1.40	psi



JOB DETAILS—TRENDS GRAPHS



The **Job Details** **I Trends** tab provides the selection and graphical display of **2 job cycle data types** that form trends, and highlight alarm conditions.

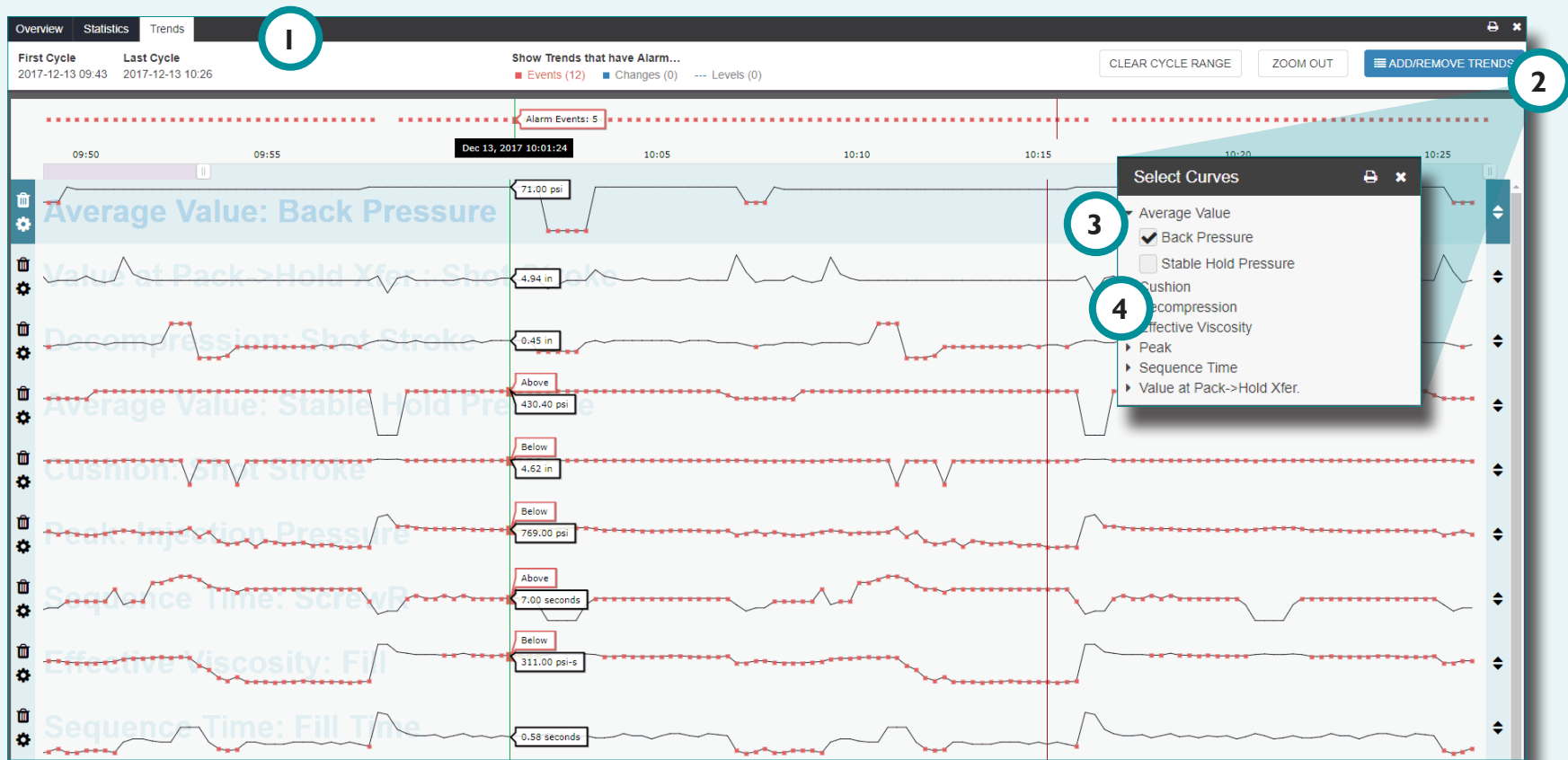
Each **2 job cycle data type** provides lynx device inputs or machine sequences **3 cycle data** to view or print as **4 trend graphs**. The **3 cycle data** are cycle summary values; a single data point represents a cycle. Data points are displayed together, creating a curve and allowing the viewing of trends. The type and number of **3 cycle data** **4 trend graphs** available depends upon machine and equipment.



JOB DETAILS—TRENDS GRAPHS (continued)


To view [Trend Graphs](#), click  on a machine name in the Job Down Time summary, Job Reject Cycles summary, Machines report, Reports view, or Summaries mini-reports, and then click  on the **1 Trends** tab in the Job Details pop-up window.


Click  the **2 Add/Remove Trends** button to expand and view **3 cycle data trends**. Click  the check box(es) to select the desired **4 cycle data trend(s)**.



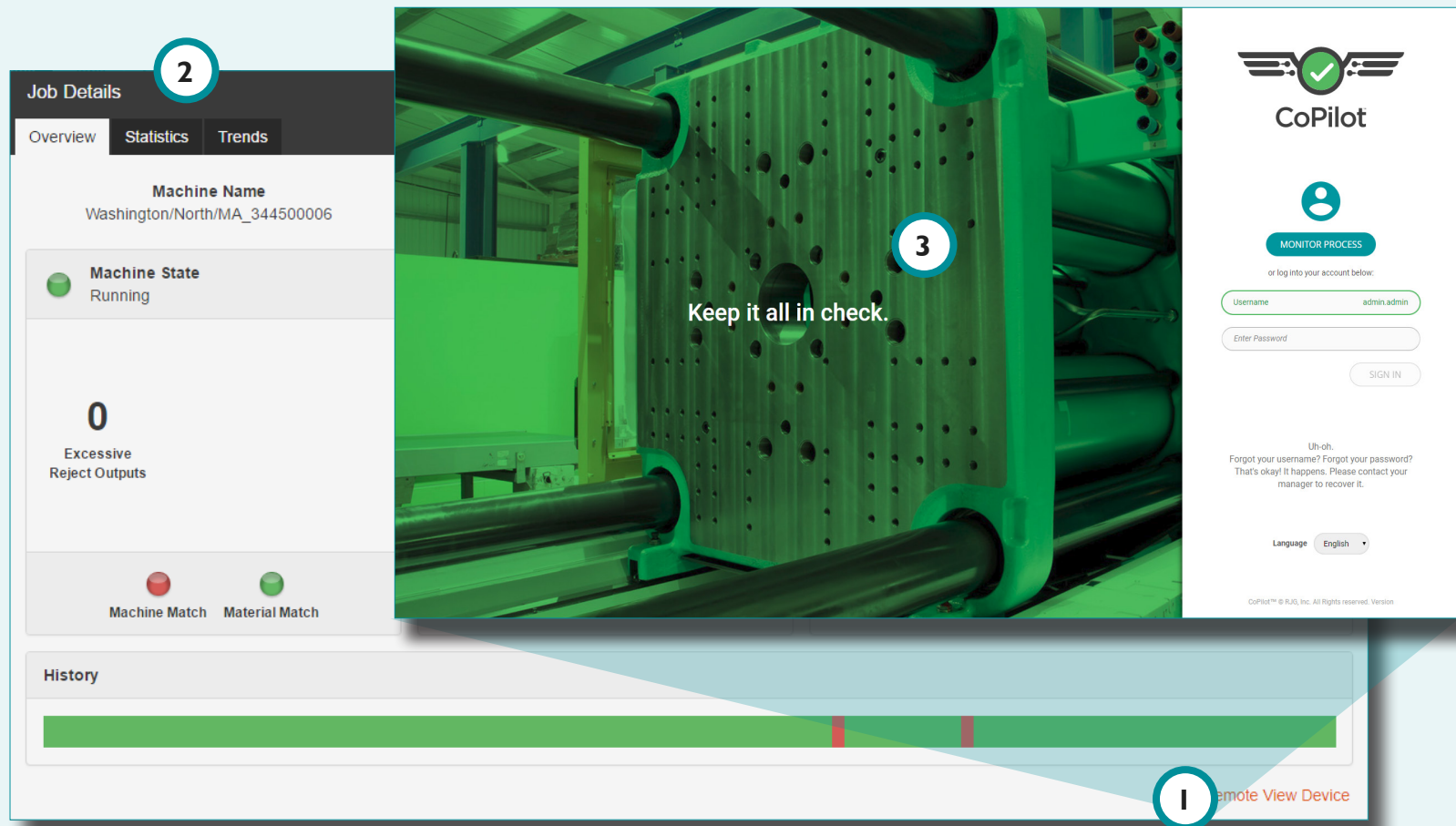
REMOTE VIEW DEVICE

Remotely view the CoPilot of a job from the Job Down Time summary, Job Reject Cycles summary, or Machine Status report Job Details pop-up window.

Click  on a job machine name in the Job Down Time summary, Job Reject Cycles summary, or Machines report view.


Click  **1 Remote View Device** in the bottom right-hand corner of the **2 Job Details** pop-up window; the selected machine's current CoPilot **3 window** will open.

i NOTE The CoPilot's current process may not be running the same job as selected; if this is the case, the Remote View Device link will indicate the processes do not match.



The screenshot displays the CoPilot interface. On the left, the 'Job Details' pop-up window is shown, featuring a 'Machine Name' field with the value 'Washington/North/MA_344500006', a 'Machine State' indicator showing 'Running', and a 'History' section with a green bar. A blue circle with the number '2' is positioned over the 'Job Details' header. In the center, a large image of a machine with a green overlay and the text 'Keep it all in check.' is displayed, with a blue circle containing the number '3' over it. On the right, the 'CoPilot' window is visible, showing a login form with fields for 'Username' (admin.admin) and 'Enter Password', a 'SIGN IN' button, and a 'Language' dropdown set to 'English'. A blue circle with the number '1' is positioned over the 'Remote View Device' link in the bottom right corner of the 'Job Details' window.

SUMMARIES

The job [Summaries](#) view provides nine pre-populated, printable mini-reports, and a comprehensive Job Changes report. Click  **1 Choose Timeframe:** drop-down menu to select Yesterday, Last Hour, Last 8 Hours, Last Week, or Last Month of data views.

CYCLE REPORTS

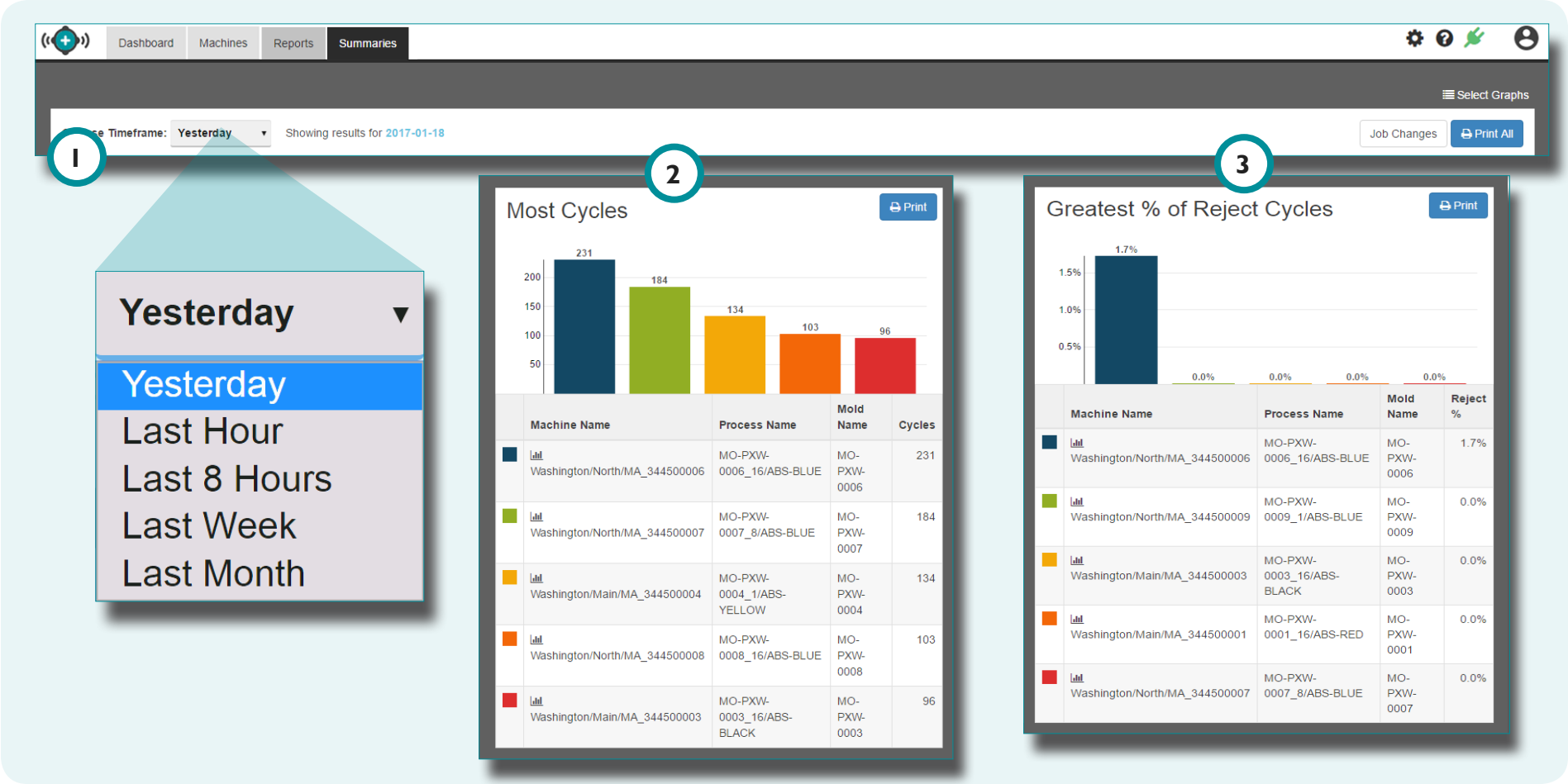
The [Summaries](#) view provides two pre-populated, printable cycle-based reports.

2 Most Cycles Report

The Most Cycles Report details the top five machines with the most completed cycles.

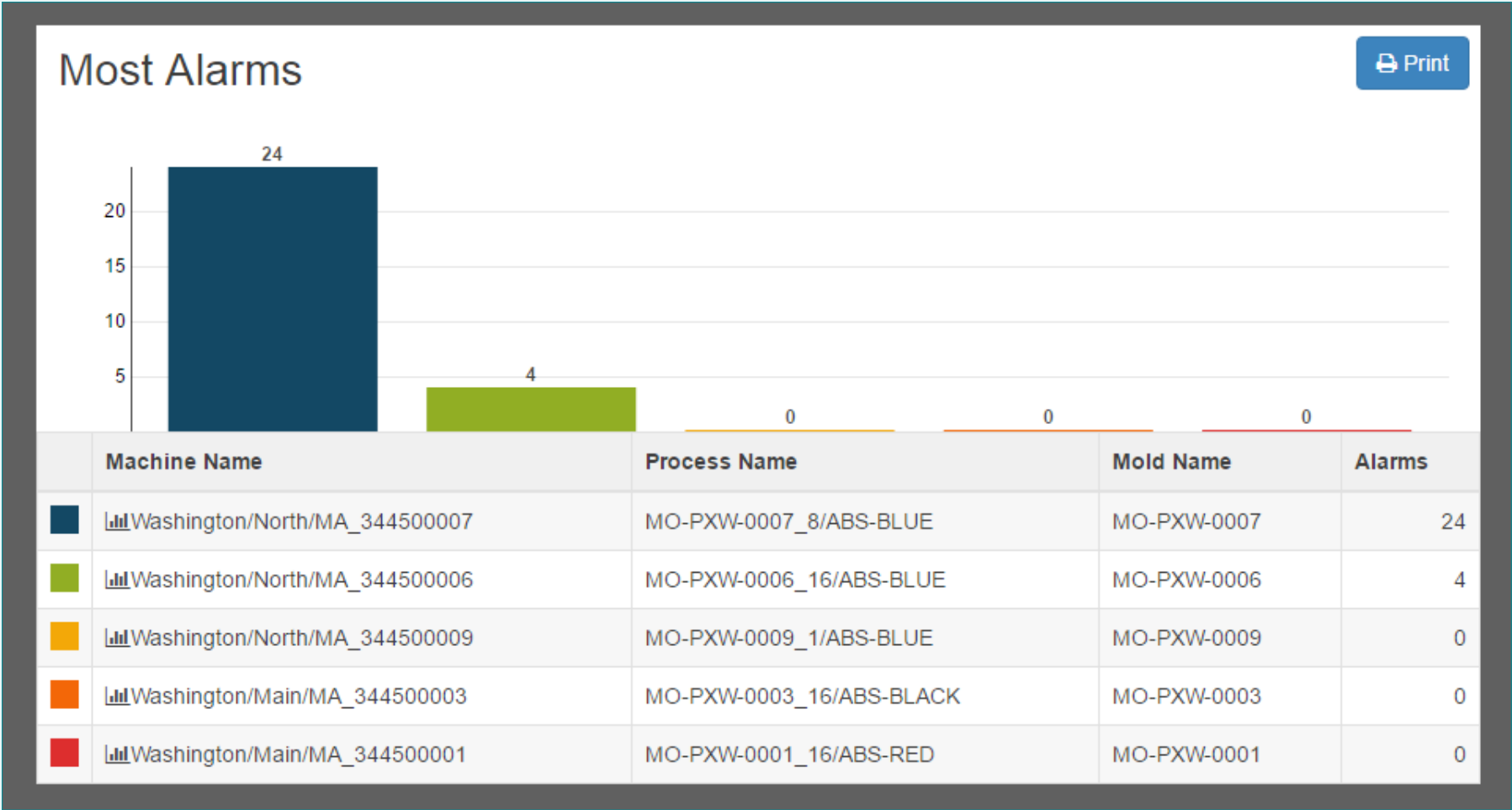
3 Greatest Percent (%) Reject Cycles Report

The Greatest Percent (%) Reject Cycles Report details the top five machines with the greatest percent of reject cycles.



MOST ALARMS REPORT

The [Summaries](#) view provides one pre-populated, printable report that details the top five jobs with the most alarms.



TIME REPORTS

The [Summaries](#) view provides three pre-populated, printable, time-based reports.

1 Longest Down Time Report

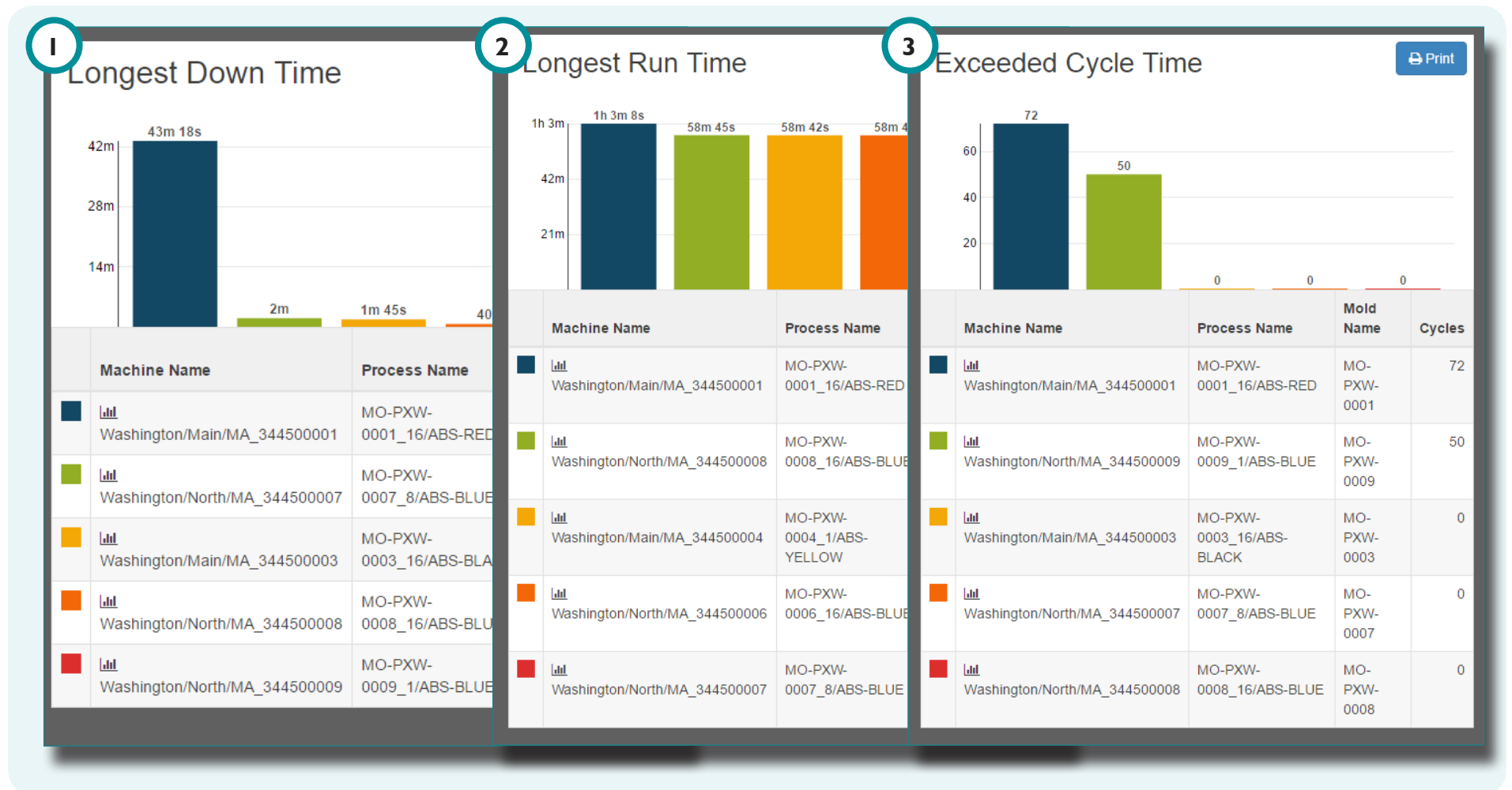
The Longest Down Time Report details the top five machines with the most down time.

2 Longest Run Time Report

The Longest Run Time Report details the top five machines with the longest run times.

3 Exceeded Cycle Time Report

The Exceeded Cycle Time Report details the top five machines with the most cycles that exceeded time constraints.



MATCH REPORTS

The [Summaries](#) view provides three pre-populated, printable match-based reports.

1 Machine Out of Match Report

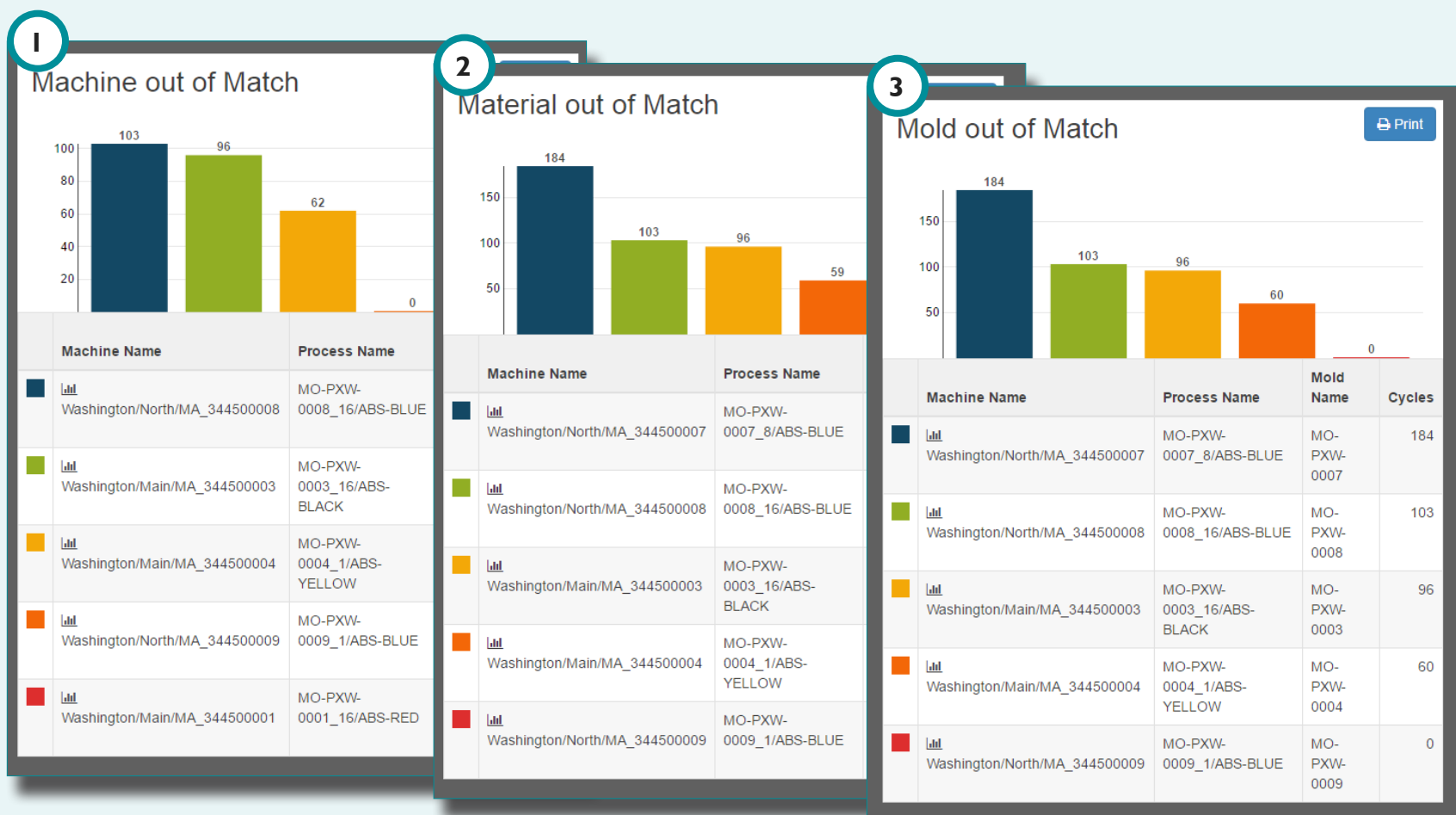
The Machine Out of Match Report details the top five jobs with the most occurrences of being out of process match.

2 Material Out of Match Report

The Material Out of Match Report details the top five jobs with the most occurrences of being out of process match.

3 Mold Out of Match Report

The Mold Out of Match Report details the top five jobs with the most occurrences of being out of process match.



JOB CHANGES REPORT

The Job Changes report is a comprehensive time-based report which displays each job, alarm settings, diverter, setup, V to P settings, and machine control change made during the selected time period.

Job Changes include the **1 machine name**, the **2 mold name**, the **3 activity type**, **4 details**, **5 user**, and the **6 date/time** of the change.

Click **7 Choose Timeframe**: drop-down menu in upper left-hand corner of the Summaries view to select the data date range (Yesterday, Last Hour, Last Week, or Last Month).

Click **8 Job Changes** button in the upper right-hand corner of the Summaries view.

Choose Timeframe: Last 8 Hours **7**

results for 00:00 through 07:59

8 Job Changes Print All

1	2	3	4	5	6
Machine Name	Mold Name	Activity Type	Details	User	Date / Time
Machine Washington/North/MA_344500...	Part XYX 2	Job	Job Stopped		2017-01-20 00:08
Machine Washington/North/MA_344500...	Part XYX 2	Job	Job Started		2017-01-20 00:18
Machine Washington/North/MA_344500...	1	Alarm Setting...	Alarm setpoint Process Time:Cavity Fill #Low (Above) from .5...	John	2017-01-20 00:19
Machine Washington/North/MA_344500...	1	Alarm Setting...	Alarm setpoint Process Time:Cavity Fill #Low (Above) from .7...	Admi...	2017-01-20 00:21
Machine Washington/North/MA_344500...	1	Diverter	Diverter Stopped		2017-01-20 00:26
Machine Washington/North/MA_344500...	1	Diverter	Diverter Started		2017-01-20 00:27
Machine Washington/Main/MA_344500...	Sister Mold B 1/Red/4 ...	Job	Job Stopped		2017-01-20 00:27
Machine Washington/North/MA_344500...	1	Alarm Setting...	Alarm setpoint Process Time:Cavity Fill #Low (Above) from .5...	John	2017-01-20 00:30
Machine Washington/North/MA_344500...	1	Alarm Setting...	Alarm setpoint Process Time:Cavity Fill #Low (Above) from .7...	Admi...	2017-01-20 00:32
Machine Washington/North/MA_344500...	Part XYX 3	Job	Job Stopped		2017-01-20 00:35
Machine Washington/North/MA_344500...	Part XYX 3	Job	Job Started		2017-01-20 00:37
Machine Washington/North/MA_344500...	1	Alarm Setting...	Alarm setpoint Process Time:Cavity Fill #Low (Above) from .5...	John	2017-01-20 00:38
Machine Washington/North/MA_344500...	1	Alarm Setting...	Alarm setpoint Process Time:Cavity Fill #Low (Above) from .7...	Admi...	2017-01-20 00:40
Machine Washington/North/MA_344500...	1	Diverter	Diverter Stopped		2017-01-20 00:45
Machine Washington/North/MA_344500...	1	Diverter	Diverter Started		2017-01-20 00:46
Machine Washington/Main/MA_344500...	Sister Mold B 1/Red/4 ...	Job	Job Started		2017-01-20 00:46
Machine Washington/North/MA_344500...	1	Alarm Setting...	Alarm setpoint Process Time:Cavity Fill #Low (Above) from .5...	John	2017-01-20 00:49


USER TOOLS




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GRAPHS

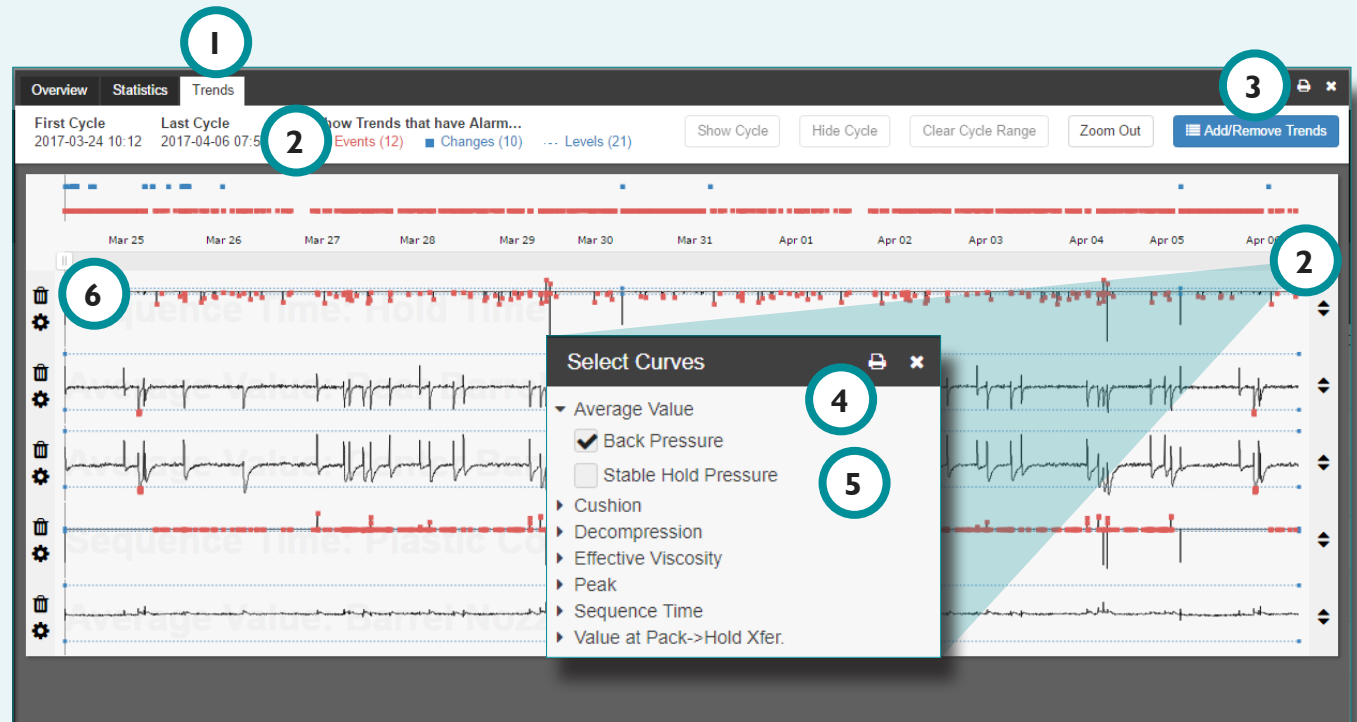
JOB DETAILS—TRENDS GRAPHS

Click  the **1 Trends** tab from the Job Details pop-up window.

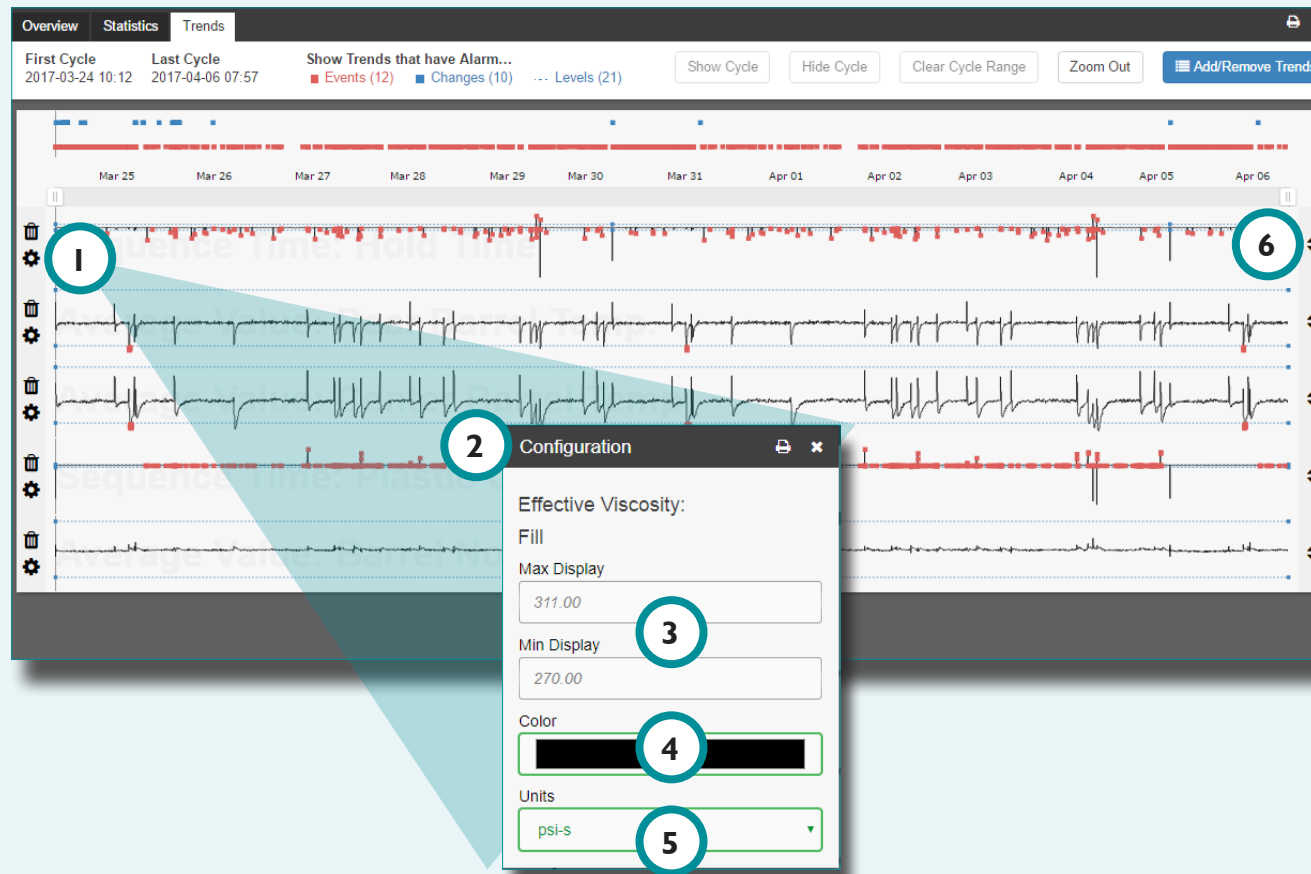
View Trends that have Alarm Events, Changes, or Levels. Click  the **2 Events, Changes, or Levels** links. The affected trends will display—alarms are denoted on the trend line by a red dot.

Select additional Trends to view. Click  the **3 Add/Remove Trends** button. Click  the desired **4 job cycle data type**, then click  the check boxes to select **5 cycle data curves**.

Dismiss visible Trends. Click  the **6 delete icon** next to a trend to dismiss the trend.



JOB DETAILS—TRENDS GRAPHS (continued)



Configure visible Trends.
Click the **1** Settings icon next to a trend to open the **2** Configuration menu.

Maximum (Max) and minimum (Min) display limits are auto-scaled to show all data points in the trend. If desired, enter **3** Max and Min Display limits. Entering a Max or Min Display limit removes auto-scaling until the trend is dismissed.

Click **4** Color to select a color for the trend.


Click the **5** Units drop-down menu to select a unit of measurement for the trend.


Click the **1** Settings icon to collapse or expand the **2** Configuration menu.


Arrange Trend graphs.


Click, hold, and drag the trend **6** double arrows up or down, and then drop to move the trend.


JOB DETAILS—TRENDS GRAPHS (continued)

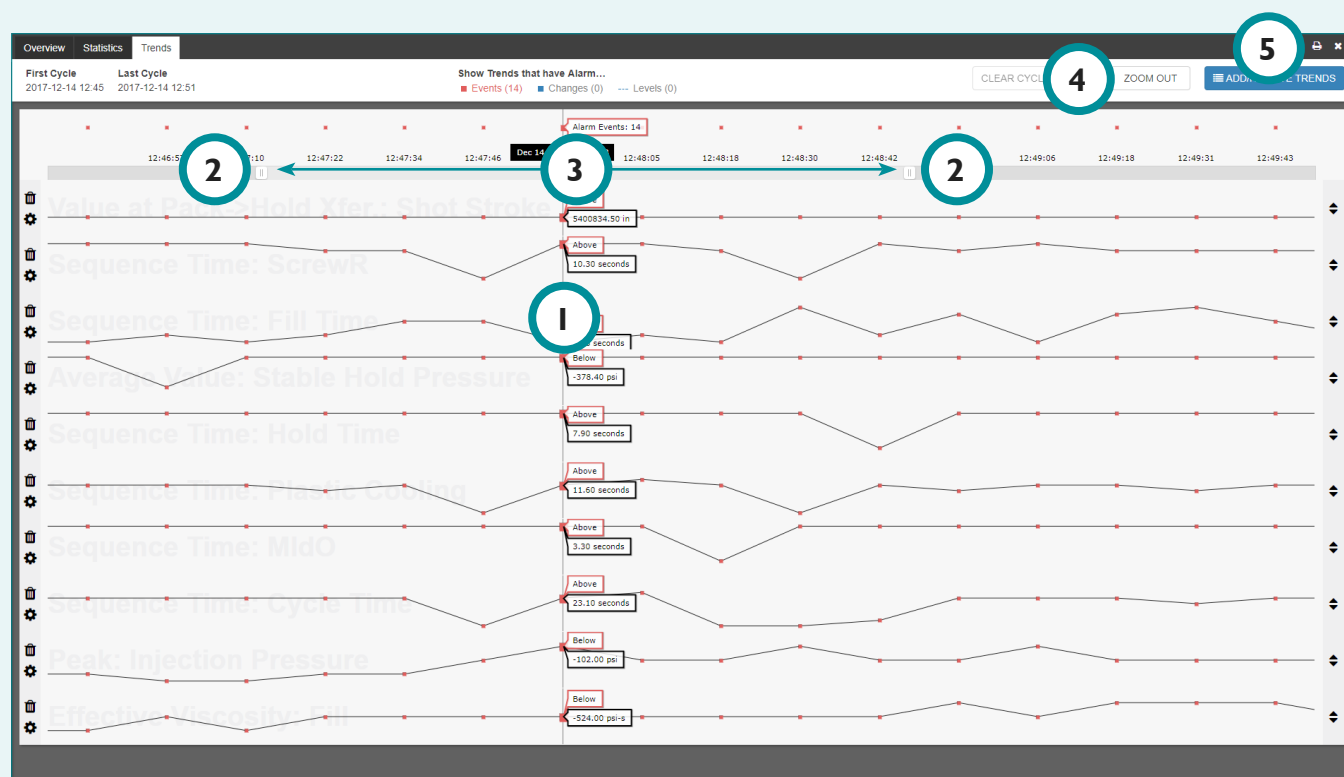
View Summary Data Point values. Click  on a **1** data point within a graph to view data point-specific details.

Zoom to a select time period in Trends. Click , hold, and drag the **2** graph bars to zoom to/select a desired time period.

Click , hold, and drag **3** between the graph bars to move the zoom area to a different time period.

Click  **4** Zoom Out to return to the entire job data curve.

Click  the **5** printer icon to print the selected graph(s).



REPORTS

MACHINES REPORT

The **Machines** report displays up to 22 machine, mold, and job **variables**.

Click **2** **Select Columns** to choose the displayed **variables**.

Click **1**, hold, and drag **variables** in the **Select Columns** pop-up window to reorder the **Machines** report columns.

Click **3** the **exit** icon to exit the **Select Columns** pop-up window.

The screenshot shows the 'Machines' report interface. At the top, there are navigation tabs: Dashboard, Machines, Reports, and Summaries. Below the tabs, there are three summary cards: '0 (0%) DOWN MACHINES', '13 (52%) OVER CYCLE TIME', and '5716 (4%) REJECT CYCLES'. A 'Machines Found: 25' indicator is present. A search bar labeled 'Filter Records' is above a table. The table has columns: Machine Name, Process Name, Mold Name, Machine State, Alarm State, Machine Match, Material Match, Mold Match, Good Cycles, Reject Cycles, and Suspect Cycles. A 'Select Columns' pop-up window is open, showing a list of variables with checkboxes. A 'Display: 10' dropdown and pagination controls (Previous, 1, 2, 3, Next) are at the bottom right of the table.

Machine Name	Process Name	Mold Name	Machine State	Alarm State	Machine Match	Material Match	Mold Match	Good Cycles	Reject Cycles	Suspect Cycles
Lincoln/West/MA_344500025			Disconnected							
Lincoln/West/MA_344500024			Disconnected							
Lincoln/East/MA_344500023			Disconnected							
Lincoln/East/MA_344500022			Disconnected							
Lincoln/East/MA_344500021	Sorting Issue 2/Teal/2	Sorting Issue 2	Running					8319	2810	0
Lincoln/East/MA_344500020	Wiper Clip 2/Red/16	Wiper Clip 2	Running					31940	0	0
Washington/East/MA_344500019	Sister Mold B 4/Red/4	Sister Mold B 4	Running					526	14	0
Washington/East/MA_344500018	DIII 1	DIII 1	Running					18478	0	0
Washington/South/MA_344500017	2 Shot 4/Red/4	2 Shot 4	Running					2356	0	0
Washington/South/MA_344500016	Simple 2	Simple 2	Running					35597	0	0

Select Columns

- ☒ Machine Name
- ☒ Machine State
- ☒ Process Name
- ☒ Alarm State
- ☒ Mold Name
- ☒ Mold Match
- ☒ Reject %
- ☒ Down Time %
- ☐ Sort State
- ☐ Machine Match
- ☐ Material Match
- ☐ Total Cycles
- ☐ Good Cycles
- ☐ Reject Cycles
- ☐ Suspect Cycles
- ☐ IP Address
- ☐ Version
- ☐ Serial Number
- ☐ Last Cycle Time
- ☐ Standard Cycle Time
- ☐ Run Time
- ☐ Down Time


Display: 10 Previous 1 2 3 Next


REPORTS: INTERNAL REPORTS

The Reports Internal reports provides the Job Details view with an added Activity Log (including Date/Time, User, and Activity) in a printable format for the selected jobs.

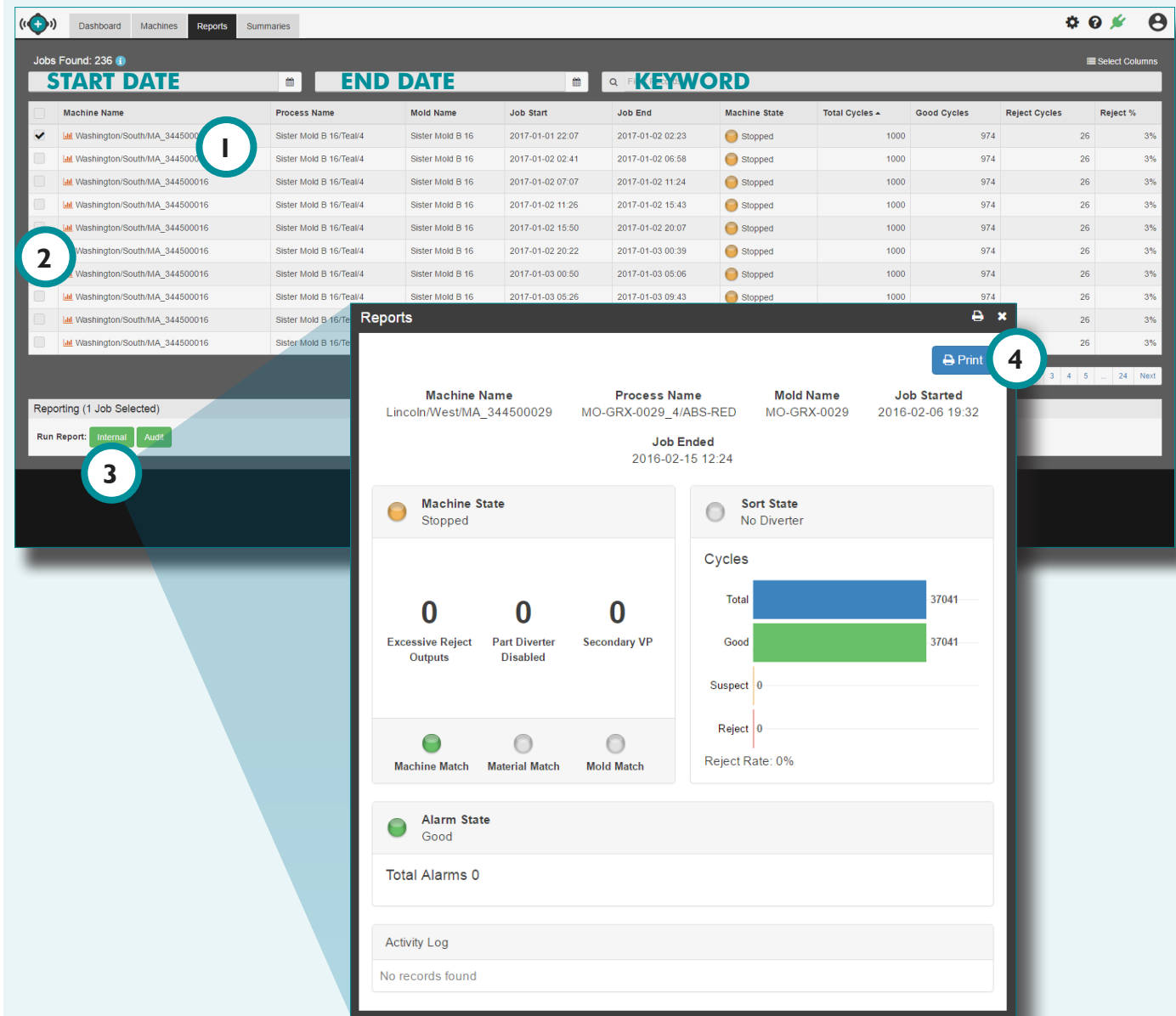
Click  the **1 Reports** tab on the navigation bar.

If desired, select a start date, end date, or keyword to filter records.

Click  the **2** check boxes next to the desired machine name(s).

Click  Run Report:
3 Internal.

Click  **4 Print** above the report to print the report.



The screenshot displays the 'Reports' section of a software interface. At the top, there are tabs for 'Dashboard', 'Machines', 'Reports', and 'Summaries'. Below the tabs, a search bar allows filtering by 'START DATE', 'END DATE', and 'KEYWORD'. A table lists jobs with columns for Machine Name, Process Name, Mold Name, Job Start, Job End, Machine State, Total Cycles, Good Cycles, Reject Cycles, and Reject %. A 'Run Report' button is visible below the table. A detailed report for a selected job is shown, including Machine Name, Process Name, Mold Name, Job Started, Job Ended, Machine State, Sort State, Cycles (Total, Good, Suspect, Reject), Alarm State, and Activity Log.

Machine Name	Process Name	Mold Name	Job Start	Job End	Machine State	Total Cycles	Good Cycles	Reject Cycles	Reject %
Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-01 22:07	2017-01-02 02:23	Stopped	1000	974	26	3%
Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-02 02:41	2017-01-02 06:58	Stopped	1000	974	26	3%
Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-02 07:07	2017-01-02 11:24	Stopped	1000	974	26	3%
Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-02 11:26	2017-01-02 15:43	Stopped	1000	974	26	3%
Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-02 15:50	2017-01-02 20:07	Stopped	1000	974	26	3%
Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-02 20:22	2017-01-03 00:39	Stopped	1000	974	26	3%
Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-03 00:50	2017-01-03 05:06	Stopped	1000	974	26	3%
Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-03 05:26	2017-01-03 09:43	Stopped	1000	974	26	3%

Reports

Machine Name: Lincoln/West/MA_344500029 | Process Name: MO-GRX-0029_4/ABS-RED | Mold Name: MO-GRX-0029 | Job Started: 2016-02-06 19:32 | Job Ended: 2016-02-15 12:24

Machine State: Stopped

Sort State: No Diverter

Cycles:

Cycle Type	Count
Total	37041
Good	37041
Suspect	0
Reject	0

Reject Rate: 0%

Alarm State: Good

Total Alarms: 0

Activity Log:

No records found

Dashboard
Machines
Reports
Summaries

Jobs Found: 236

START DATE

END DATE

KEYWORD

Select Columns

<input type="checkbox"/>	Machine Name	Process Name	Mold Name	Job Start	Job End	Machine State	Total Cycles	Good Cycles	Reject Cycles	Reject %
<input checked="" type="checkbox"/>	Washington/South/MA_34450016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-01 22:07	2017-01-02 02:23	Stopped	1000	974	26	3%
<input type="checkbox"/>	Washington/South/MA_34450016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-02 02:41	2017-01-02 06:58	Stopped	1000	974	26	3%
<input type="checkbox"/>	Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-02 07:07	2017-01-02 11:24	Stopped	1000	974	26	3%
<input type="checkbox"/>	Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-02 11:26	2017-01-02 15:43	Stopped	1000	974	26	3%
<input type="checkbox"/>	Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-02 15:50	2017-01-02 20:07	Stopped	1000	974	26	3%
<input type="checkbox"/>	Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-02 20:22	2017-01-03 00:39	Stopped	1000	974	26	3%
<input type="checkbox"/>	Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-03 00:50	2017-01-03 05:06	Stopped	1000	974	26	3%
<input type="checkbox"/>	Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-03 05:26	2017-01-03 09:43	Stopped	1000	974	26	3%
<input type="checkbox"/>	Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-03 09:45	2017-01-03 14:02	Stopped	1000	974	26	3%
<input type="checkbox"/>	Washington/South/MA_344500016	Sister Mold B 16/Teal/4	Sister Mold B 16	2017-01-03 14:17	2017-01-03 18:34	Stopped	1000	974	26	3%

Display: 10
Page: 1 2 3 4 5 ... 24 Next

Reporting (1 Job Selected)

Run Report: Internal Audit

Machine Name

RJG4/RJG5/RJG6

Process Name

RJG1/RJG2/RJG3

Mold Name

RJG1

Job Started

2016-10-21 10:09

Job Ended

2016-10-21 10:14

Print

Machine State

Running

Sort State

No Diverter

Alarm State

Good

0

Excessive Reject Outputs

0

Part Diverter Disabled

0

Secondary VP

Machine Match

Material Match

Mold Match

Cycles

Total

Good

Suspect

Reject

11

11

0

0

Reject Rate: 0%

No records found

Initial Alarm Configurations

Name	Enabled	Upper Limit	Lower Limit
Peak End of Cavity #2	true	22000	20790

Initial V-P Configurations

No records found

Activity Log

Date/Time	User	Activity
2016-10-21 10:09	Admin	Job Started
2016-10-21 10:16	Admin	Job Stopped

REPORTS: AUDIT REPORTS

The [Reports Audit](#) reports provides the Job Details view with an added Activity Log (including Date/Time, User, and Activity), Alarm Configurations (including set points), and V→P Configurations (including set points) in a printable format for the selected jobs.

Click the **1** [Reports](#) tab on the navigation bar.

If desired, select a start date, end date, or keyword to filter records.

Click the **2** [check boxes](#) next to the desired machine name(s).

Click Run Report: **3** [Audit](#).

Click **4** [Print](#) above the report to print the report.

JOB DETAILS STATISTICS REPORT

From the **1** Job Details pop-up window, click the **2** Statistics tab.

Click **3** a job cycle data statistic to expand and view **4** cycle data types.

Click **4** a check box to select the desired statistic **4** cycle data types.

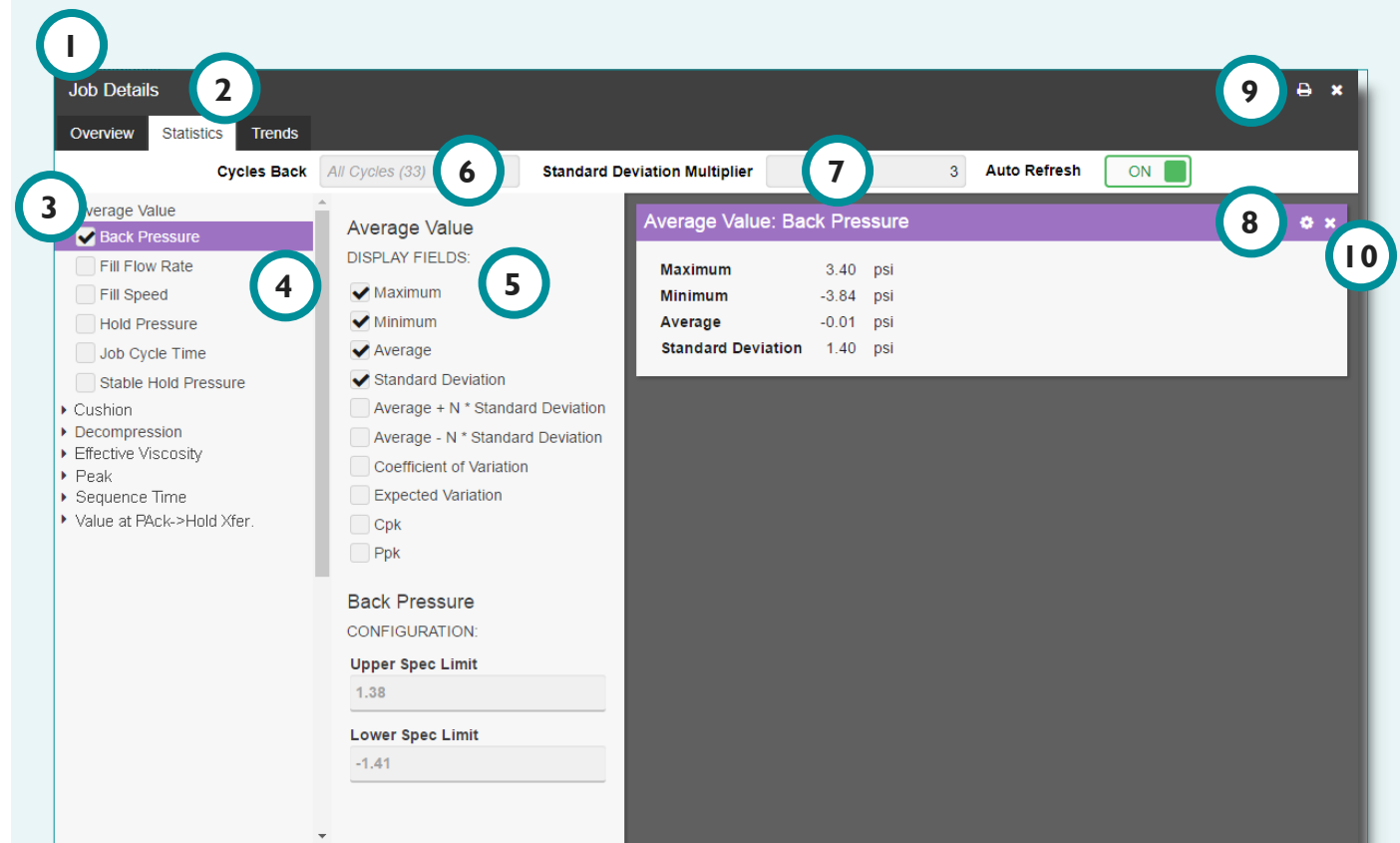
Click **5** a check box to select the desired **5** Display Field(s).

Enter **6** the desired **6** Cycles Back and **7** Standard Deviation Multiplier at the top of the window, if desired.

Click **8** the **8** settings icon to collapse the **5** Display Field(s).

Click **9** the **9** printer icon to print the selected job cycle data statistics.

Click **10** the **10** exit icon to dismiss the selected job cycle data statistics.



1. Most Cycles

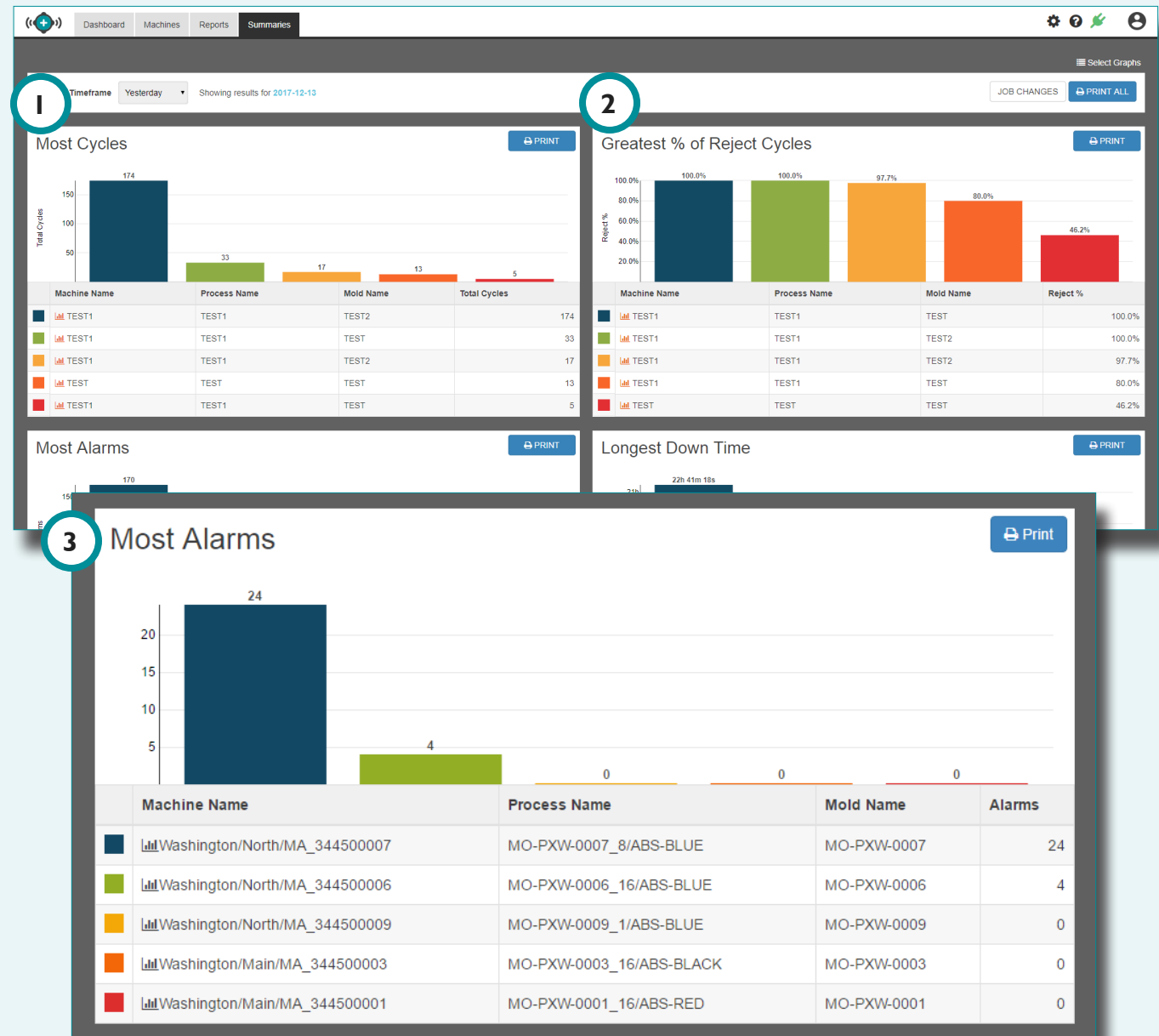
The Most Cycles mini-report displays the top five machines with the greatest count of total cycles.

2. Greatest Percent (%) Reject Cycles

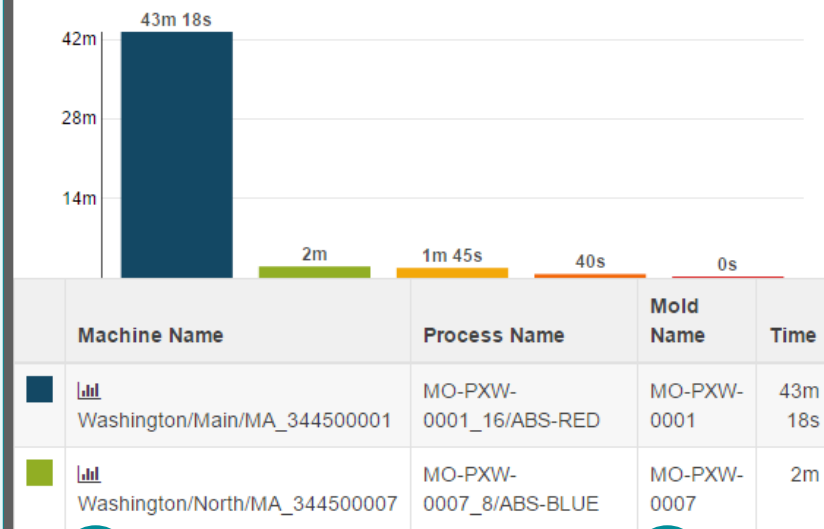
The Greatest Percent (%) Reject Cycles mini-report displays the top five machines with the greatest percent of reject cycles.

3. Most Alarms

The Most Alarms mini-report displays the top five machines with the greatest count of total alarms.



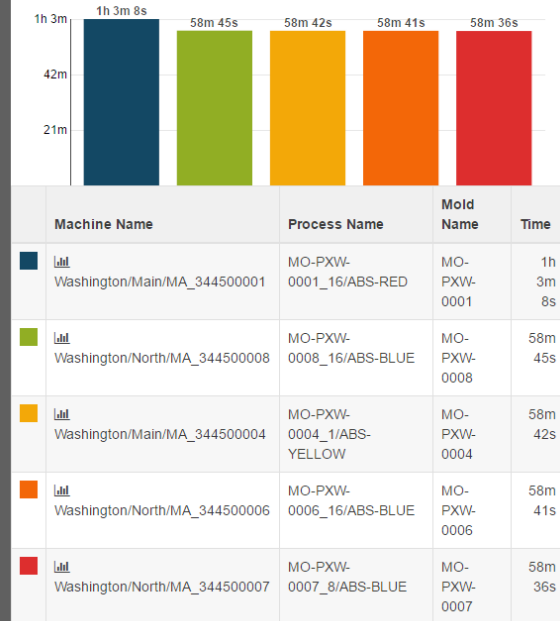
4. Longest Down Time



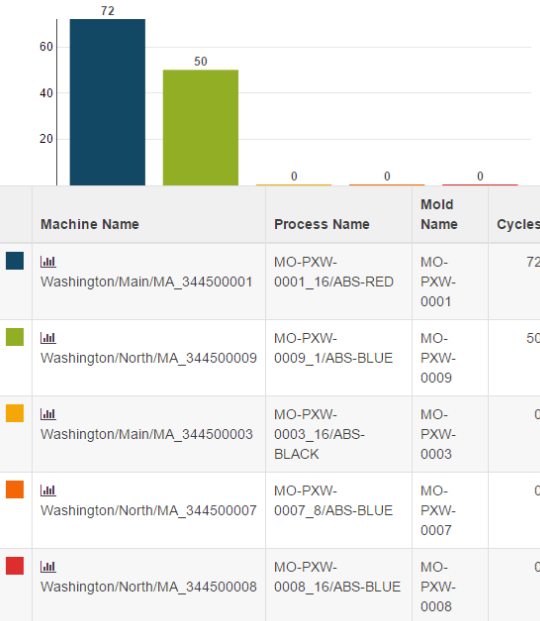
4. Longest Down Time

The Longest Down Time mini-report displays machines the top five machines with the greatest down time.

5. Longest Run Time



6. Exceeded Cycle Time



5. Longest Run Time

The Longest Run Time mini-report displays the top five machines with the greatest run time.

6. Exceeded Cycle Time

The Exceeded Cycle Time mini-report displays the top five machines with the greatest count of exceeded cycle times.

7. Machine Out of Match

The Machine Out of Match mini-report displays the top five machines with the greatest amount of machine out of match cycles.

8. Material Out of Match

The Machine Out of Match mini-report displays the top five machines with the greatest amount of material out of match cycles.

9. Mold Out of Match

The Machine Out of Match mini-report displays the top five machines with the greatest amount of mold out of match cycles.



JOB CHANGES REPORT

Click the **1** **Summaries** tab on the navigation bar.

Click **2** **Choose Timeframe**: drop-down menu in upper left-hand corner of the Summaries view to select the data date range (Yesterday, Last Hour, Last 8 Hours, Last Week, or Last Month).

Click the **3** **Job Changes** button in the upper right-hand corner of the Summaries view. The selected **4** report will display in a pop-up window.

Click a check box to select or deselect the **5** **Job Changes types**.

Click on a **6** machine name to view the machine's Job Details.

Click the **7** printer icon to print the selected statistics. Click the **8** exit icon to dismiss the selected statistics.

The screenshot shows the 'Summaries' tab selected in the navigation bar. A 'Choose Timeframe' dropdown menu is open, showing options: Yesterday, Last Hour, Last 8 Hours, Last Week, and Last Month. The 'Job Changes' button is visible in the upper right. Below, a table titled 'Job Changes (20)' displays a list of machine activities. The table has columns for Machine Name, Mold Name, Activity Type, Details, and Date / Time. A printer icon and an exit icon are located in the top right of the report area.

Machine Name	Mold Name	Activity Type	Details	Us...	Date / Time
Machine Showcase9/Showcase9/...	Showcase9/Showcase9/Showcas...	Job	Job Stopped		2016-11-02 11:21
Machine Showcase9/Showcase9/...	Showcase9_2/Showcase9_2/Sho...	Job	Job Started		2016-11-02 11:22
Machine Showcase9/Showcase9/...	Showcase9_2/Showcase9_2/Sho...	Job	Job Stopped		2016-11-03 09:36
Machine Showcase9/Showcase9/...	Showcase9_2/Showcase9_2/Sho...	Job	Job Started		2016-11-03 09:36
Machine Showcase9/Showcase9/...	Showcase9_2/Showcase9_2/Sho...	Diverter	Diverter Stopped		2016-11-03 09:52
Machine Showcase9/Showcase9/...	Showcase9_2/Showcase9_2/Sho...	Diverter	Diverter Started		2016-11-03 09:52
Machine Showcase9/Showcase9/...	Showcase9_2/Showcase9_2/Sho...	Job	Job Stopped		2016-11-03 09:52
Machine Showcase9/Showcase9/...	Showcase9_2/Showcase9_2/Sho...	Job	Job Started		2016-11-03 09:52
Machine Showcase9/Showcase9/...	Showcase9_2/Showcase9_2/Sho...	Alarm Set...	Alarm added Peak:Injection Pressure (Below) set to 55...		2016-11-03 10:08
Machine Showcase9/Showcase9/...	Showcase9_2/Showcase9_2/Sho...	Alarm Set...	Alarm setpoint Peak:Injection Pressure (Above) from 57...		2016-11-03 10:09
Machine Showcase9/Showcase9/...	Showcase9_2/Showcase9_2/Sho...	Alarm Set...	Alarm setpoint Peak:Injection Pressure (Below) from 55...		2016-11-03 10:09
Machine Showcase9/Showcase9/...	Showcase9_2/Showcase9_2/Sho...	Alarm Set...	Alarm sorting Peak:Injection Pressure (Above) Enabled		2016-11-03 10:09
Machine Showcase9/Showcase9/...	Showcase9_2/Showcase9_2/Sho...	Alarm Set...	Alarm sorting Peak:Injection Pressure (Below) Enabled		2016-11-03 10:09
Machine Showcase9/Showcase9/...	Showcase9_2/Showcase9_2/Sho...	Job	Job Stopped		2016-11-03 14:30
Machine Showcase9/Showcase9/...	spc_alarm_test/spc/sp_sea	Job	Job Started		2016-11-03 14:54
Machine Showcase9/Showcase9/...	spc_alarm_test/spc/sp_sea	Alarm Set...	Alarm added Peak:End of Cavity #2 (Above) set to 694...		2016-11-03 15:06
Machine Showcase9/Showcase9/...	spc_alarm_test/spc/sp_sea	Alarm Set...	Alarm added Peak:End of Cavity #2 (Below) set to 497...		2016-11-03 15:06
Machine Showcase9/Showcase9/...	spc_alarm_test/spc/sp_sea	Alarm Set...	Alarm setpoint Peak:End of Cavity #2 (Above) from 694...		2016-11-03 15:06
Machine Showcase9/Showcase9/...	spc_alarm_test/spc/sp_sea	Job	Job Stopped	Ad...	2016-11-21 13:09
Machine sim/sim/sim	sim	Job	Job Started	Ad...	2016-11-21 13:10

SETTINGS

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SYSTEM SETTINGS

The Hub System Settings include **1** System, **2** Hardware, **3** Software, and **4** License information and utilities.

Click **5** the settings icon from any page, then click **6** System Settings to access system, hardware, software, and license information and utilities.

The screenshot displays the Hub System Settings interface. The top navigation bar includes a settings icon (5) and a user profile. The main content area is divided into four sections: System (1), Hardware (2), Software (3), and Licenses (4). A dropdown menu (6) is open, showing options for System Settings, User List, Role List, and Devices.

System

Status	GOOD
Status Details	ALL SERVICES ARE CURRENTLY RUNNING AS EXPECTED.
Device Limit	20

Hardware

ID	20D7E18A9-8B2F-3F01-B94E-F5E1139ESD55
Serial Number	DEV

Software

Version	1.0.0-QA1
Build	172
License Agreement	SOFTWARE LICENSE AGREEMENT

Update System Software

[BROWSE FILE SYSTEM](#) Choose an update file...

[Click here to check for new updates.](#)

Licenses

Core	YES
Trends	YES

Add a License

Paste license text here

SYSTEM

The Hub process data networking [System](#) information provides the system **1** status, **2** status details, and **3** device limit.


HARDWARE



The Hub process data networking system [Hardware](#) information provides the hardware **4** identification code and **5** serial number.

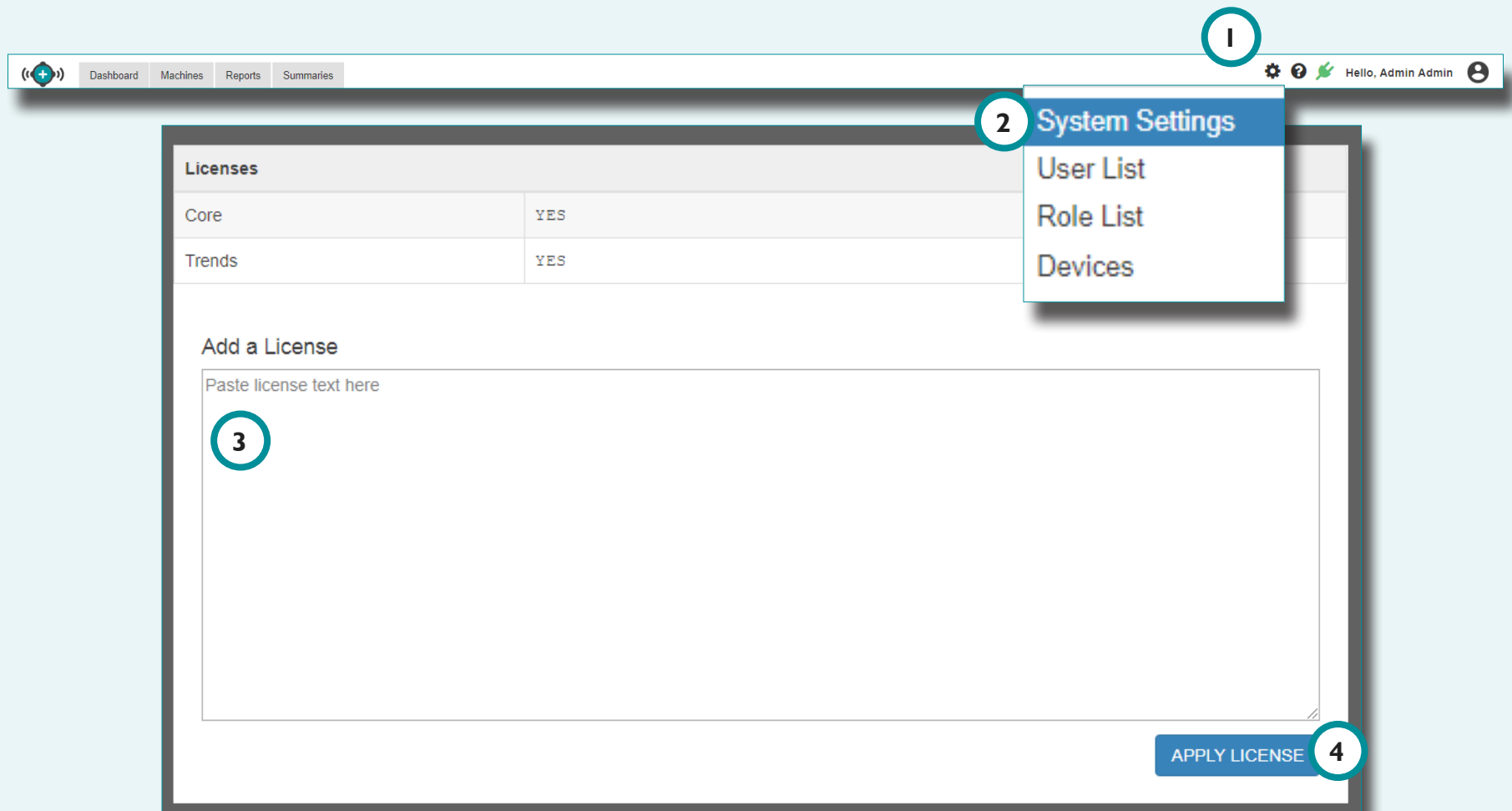
System		
1	Status	GOOD
2	Status Details	ALL SERVICES ARE CURRENTLY RUNNING AS EXPECTED.
3	Device Limit	20
Hardware		
4	ID	20D7E18A9-8B2F-3F01-B94E-F5E1139E5D55
5	Serial Number	DEV

SOFTWARE LICENSING

The Hub process data networking software must be licensed for use with eDARTs. Some features may not be available to core-only licensed users.

Click  the **1 Settings** icon from any page, then click **2 System Settings** from the drop-down menu.

Copy (Ctrl+C) and Paste  (Ctrl+V) the license text into the **3 Add a License** field; Click  the **4 Apply License** button to apply the license.



The screenshot shows the eDARTs user interface. At the top, a navigation bar includes a settings icon (1) and a user profile. A dropdown menu (2) is open, showing 'System Settings', 'User List', 'Role List', and 'Devices'. Below this, a 'Licenses' table is visible. The 'Add a License' section contains a large text area (3) for pasting license text and an 'APPLY LICENSE' button (4).

Licenses	
Core	YES
Trends	YES

Add a License

Paste license text here

3

4 APPLY LICENSE

UPDATES

The Hub process data networking software can be updated directly from System Settings. Update The Hub as necessary for the latest bug fixes and new features.

Click the **1 Settings** icon, then click the **2 System Settings** from the drop-down menu. Click the **3 Browse File System** button to browse for an update file.

Select the **4 update file (.UPD)** from the window, then click the **5 Open** button. Click the **6 Install Update** button.

The Hub will update, and will be inaccessible until completed; an **7 update notification** will appear across the top of the page.


The screenshot displays the 'System Settings' page in The Hub. The top navigation bar shows the settings icon (1) and a dropdown menu with 'System Settings' (2), 'User List', 'Role List', and 'Devices'. The 'System Settings' page has a 'Software' section with fields for Version (1.1-SNAPSHOT) and Build (10). Below this is the 'Update System Software' section with a 'Browse File System' button (3) and a text field 'Browse for an update file...'. A file explorer window is open, showing the 'Desktop' folder with a file named 'The Hub™ Update' (4). The 'Open' button (5) is highlighted in the file explorer. The 'Install Update' button (6) is located at the bottom of the 'Update System Software' section. A red notification bar at the top of the page indicates 'INSTALLING: THE SYSTEM IS CURRENTLY INSTALLING AN UPDATE AND WILL BE AVAILABLE SHORTLY' (7).




USER LIST

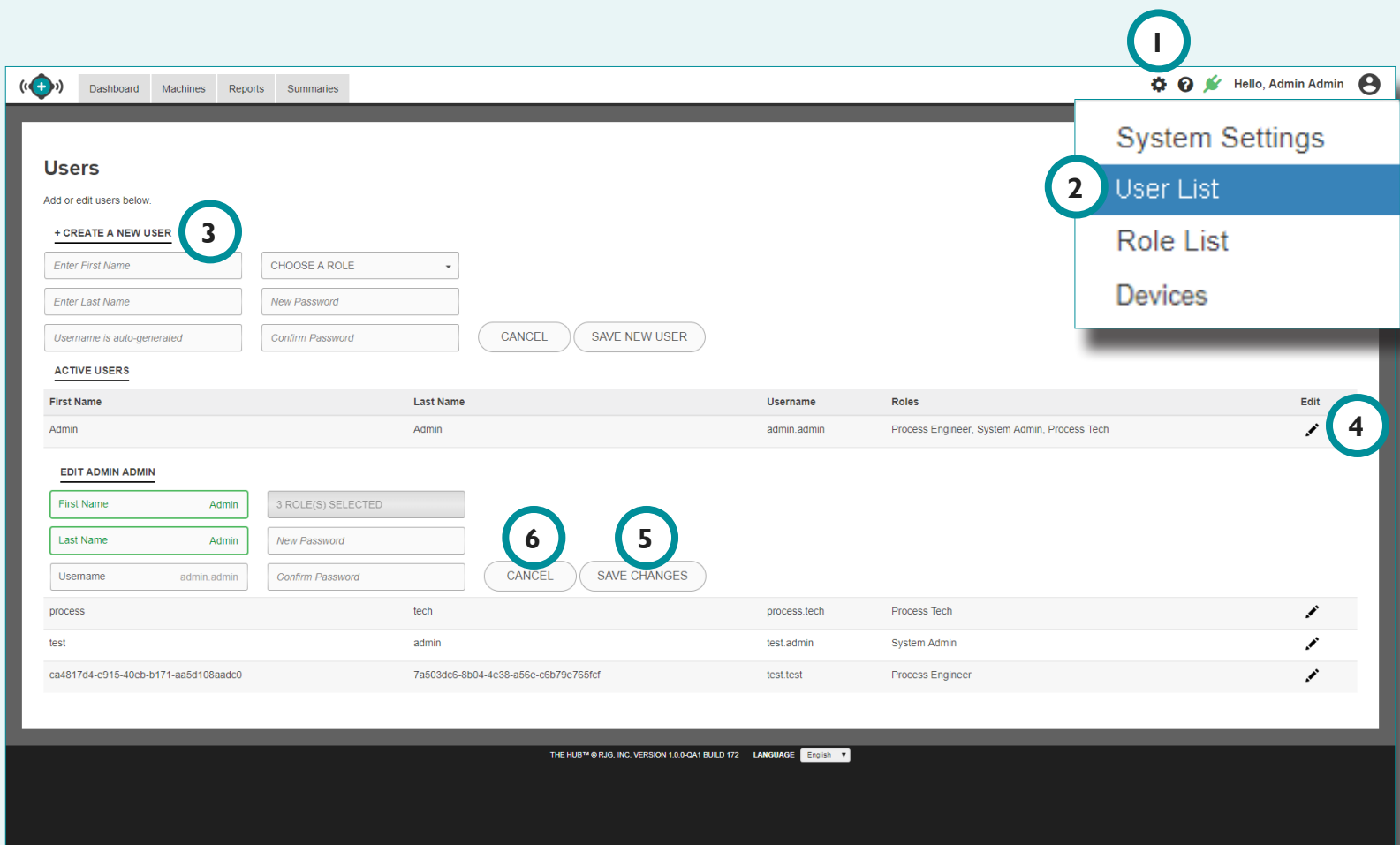
Manage users for The Hub and CoPilot softwares from the [User List](#); add or edit users from the User List.

Click  the **1 Settings** icon from any page, then click  **2 User List** from the drop-down menu.

Click  the **3 Create a New User** button to add a new user

to the system;  **enter** the required user information and select a role for the user from the drop down menu.

Click  the **4 edit** icon next an existing user to edit the user account; click  the **5 Save Changes** button to save any changes, or click  the **6 Cancel** button to discard any changes.



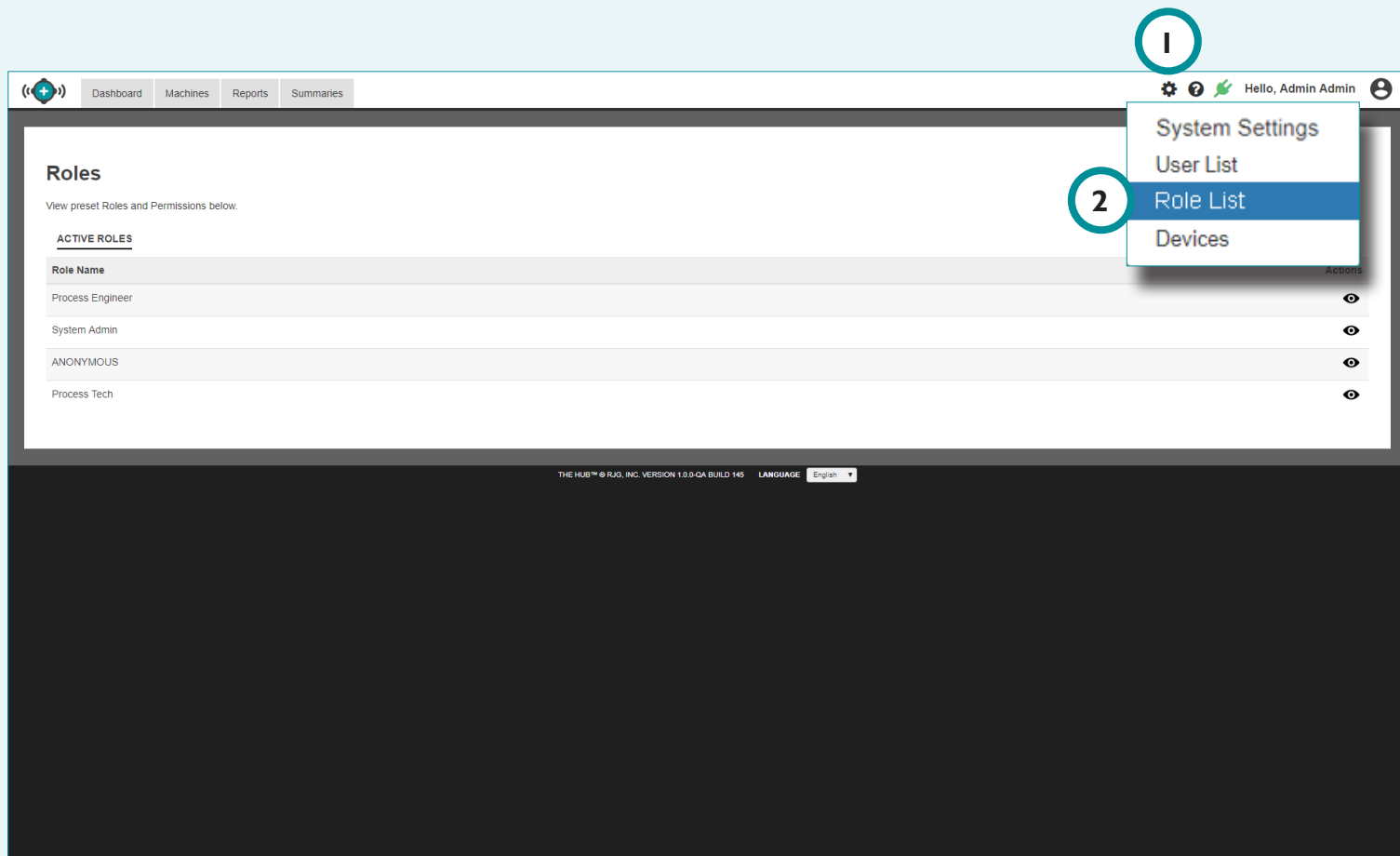
The screenshot shows the 'Users' management page. At the top right, a settings menu is open, with 'User List' selected (callout 2). The main area has a 'CREATE A NEW USER' section (callout 3) with fields for First Name, Last Name, Username (auto-generated), New Password, and Confirm Password, along with a 'CHOOSE A ROLE' dropdown and 'CANCEL'/'SAVE NEW USER' buttons. Below is the 'ACTIVE USERS' table with columns for First Name, Last Name, Username, Roles, and an 'Edit' icon (callout 4). The first row shows 'Admin' user with roles 'Process Engineer, System Admin, Process Tech'. Below the table is the 'EDIT ADMIN ADMIN' section with fields for First Name, Last Name, Username, New Password, and Confirm Password, and 'CANCEL'/'SAVE CHANGES' buttons (callouts 5 and 6). The footer shows 'THE HUB™ © RUJ, INC. VERSION 1.0.0-QA1 BUILD 172' and a language selector set to 'English'.

ROLE LIST

Manage user roles for The Hub and CoPilot softwares from the [Role List](#); view, create, or edit user roles and user role permissions from the Role List.

Click  the **1** [Settings](#) icon from any page, then click  **2** [Role List](#) from the drop-down menu.

The predefined roles System Admin, Process Tech, and Process Engineer include permissions for creating, reading (viewing), editing, deleting, or other actions for each function in The Hub and CoPilot software.



PERMISSIONS—THE HUB

The table below displays the permissible actions for each preset role in The Hub software.

	FUNCTION	SYSTEM ADMIN	PROCESS ENGINEER	PROCESS TECHNICIAN
CREATE	Job Templates	+	+	
	User Roles	+		
	Users	+		
VIEW	Alerts	+	+	+
	Configs	+	+	+
	Devices	+	+	+
	Job Activity	+	+	+
	Alarm Configurations	+	+	+
	Job Changes	+	+	+
	Job Cycles	+	+	+
	Cycle Graphs	+	+	+
	Job Statistics	+	+	+
	Job Templates	+	+	+
	Job Trends	+	+	+
	Job VP Configurations	+	+	+
	Job Details	+	+	+
	Job Summaries	+	+	+
	Machines	+	+	+
	Molds	+		
	Processes	+		
	Stat Counts	+	+	+
	System Details	+	+	+
	User Roles	+		
	Users	+		

	FUNCTION	SYSTEM ADMIN	PROCESS ENGINEER	PROCESS TECHNICIAN
EDIT	Configs	+	+	
	User Roles	+		
	Users	+		
	Apply System License			
	Apply System Update	+		
	Disable Devices	+		
DELETE	Disable Machines	+		
	Alerts	+	+	
	User Roles	+		
	Users	+		

PERMISSIONS—COPILOT™

The table below displays the permissible actions for each preset role in the CoPilot software.

	FUNCTION	SYSTEM ADMIN	PROCESS ENGINEER	PROCESS TECHNICIAN
CREATE	Configs	✓	✓	
	Change Logs		✓	✓
	Machines		✓	
	Molds		✓	
	Processes		✓	
VIEW	Configs	✓	✓	✓
	Display Units	✓	✓	✓
	Sequence Events	✓	✓	✓
	System Details	✓	✓	✓
	Raw Data	✓	✓	✓
	System Diagnostics	✓	✓	✓
	System Logs	✓	✓	✓
	System Timzone	✓	✓	✓
	Change Logs		✓	✓
	Current Cycle		✓	✓
	Cycle Advice		✓	✓
	Job Setup		✓	✓
	Machines		✓	✓
	Molds		✓	✓
	Processes		✓	✓
	Connected Sensors		✓	✓
	Sorting		✓	✓

	FUNCTION	SYSTEM ADMIN	PROCESS ENGINEER	PROCESS TECHNICIAN
EDIT	Configs	✓	✓	
	Display Units	✓	✓	✓
	System Details	✓	✓	
	System Timezone	✓		
	Change Logs		✓	✓
	Job Setup		✓	✓
	Machines		✓	✓
	Molds		✓	✓
	Processes		✓	
	Sorting		✓	
	Apply System Update	✓		
	Report a Problem	✓	✓	✓
	Start/Stop Data Download	✓	✓	✓
	Start/Stop Jobs	✓	✓	✓
	Start/Stop Sequencer	✓	✓	✓
DELETE	Clear Excessive Rejects		✓	✓
	Start/Stop Output Sensor Signals		✓	✓
	Set Hydraulic Pressure to Zero		✓	✓
	Set Screw Bottom		✓	✓
	Machines		✓	
	Molds		✓	
	Processes		✓	

COPILOT SYSTEMS

The CoPilot Systems view provides details of each CoPilot system in the network. Click the **1 Settings** icon from any page, then click **2 CoPilots** from the drop-down menu to view network and CoPilot system information.

Click the **3 Serial Number** icon to remotely view the associated CoPilot S.

Click **4 Select Columns**, and then click on the check boxes to select or deselect column headings to view/hide; click, hold, and drag headings to reorder them.


The screenshot displays the CoPilot Systems interface. At the top, there is a navigation bar with tabs: Dashboard, Machines, Reports, and Summaries. A user profile icon shows 'Hello, Admin Admin'. Below the navigation bar, a section titled 'Devices Found: 4' contains a search bar labeled 'Filter Records'. A table lists four devices with columns: Serial Number, Machine Name, IP Address, Version, and Connected. The first device has a red status icon, while the others have green checkmarks. A dropdown menu is open from the 'Settings' icon (1), showing options: System Settings, User List, Role List, and Devices (2). A 'Select Columns' dialog box (4) is open, showing a list of columns with checkboxes: Serial Number (checked), Machine Name (checked), IP Address (checked), Subnet Mask (unchecked), Default Gateway (unchecked), MAC Address (unchecked), ID (unchecked), Node (unchecked), Version (checked), Connected (checked), and Activated (checked). A 'Display' dropdown is set to 10.

Serial Number	Machine Name	IP Address	Version	Connected
0172160221		172.16.0.221	1.1.0	
0172160224		172.16.0.224		✓
0172160222		172.16.0.222	1.1.0	
1234123412		172.16.0.84		✓


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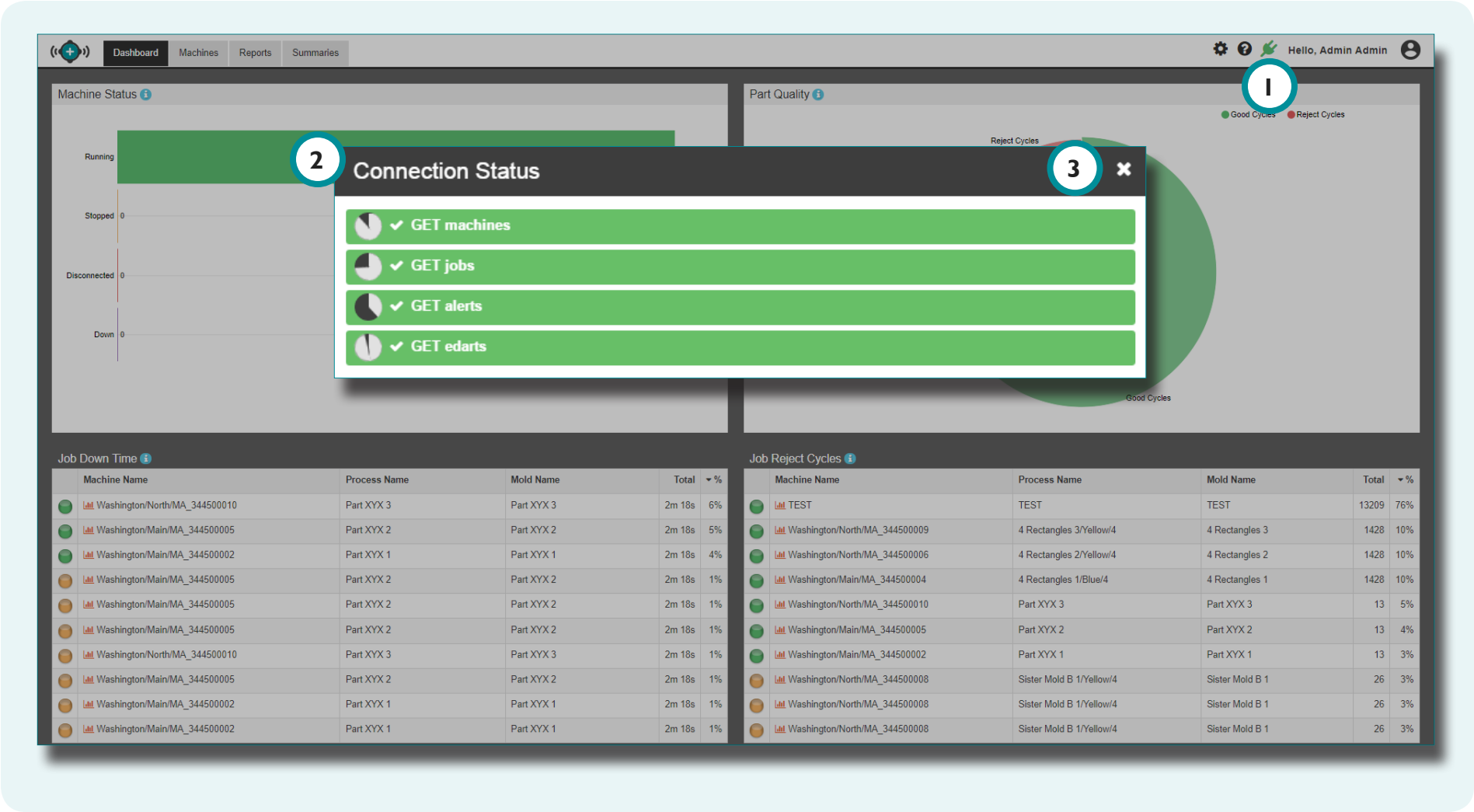
CONNECTIONS

The Hub process data networking software must be networked with CoPilot systems to get machine, job, and CoPilot information.

Click  the **1 Connections** icon from any page to view the connection status.

The **2 Connection Status** pop-up window will display whether the software is connected with machines, jobs, and CoPilot systems. The Hub monitors the connection status periodically. If machines, jobs, and CoPilot systems are connected, they will be green; if they are not connected, they will be red.

Click  the **3 exit** icon to exit the pop-up window.



TROUBLESHOOTING

KNOWLEDGE BASE

66

CUSTOMER SUPPORT

67

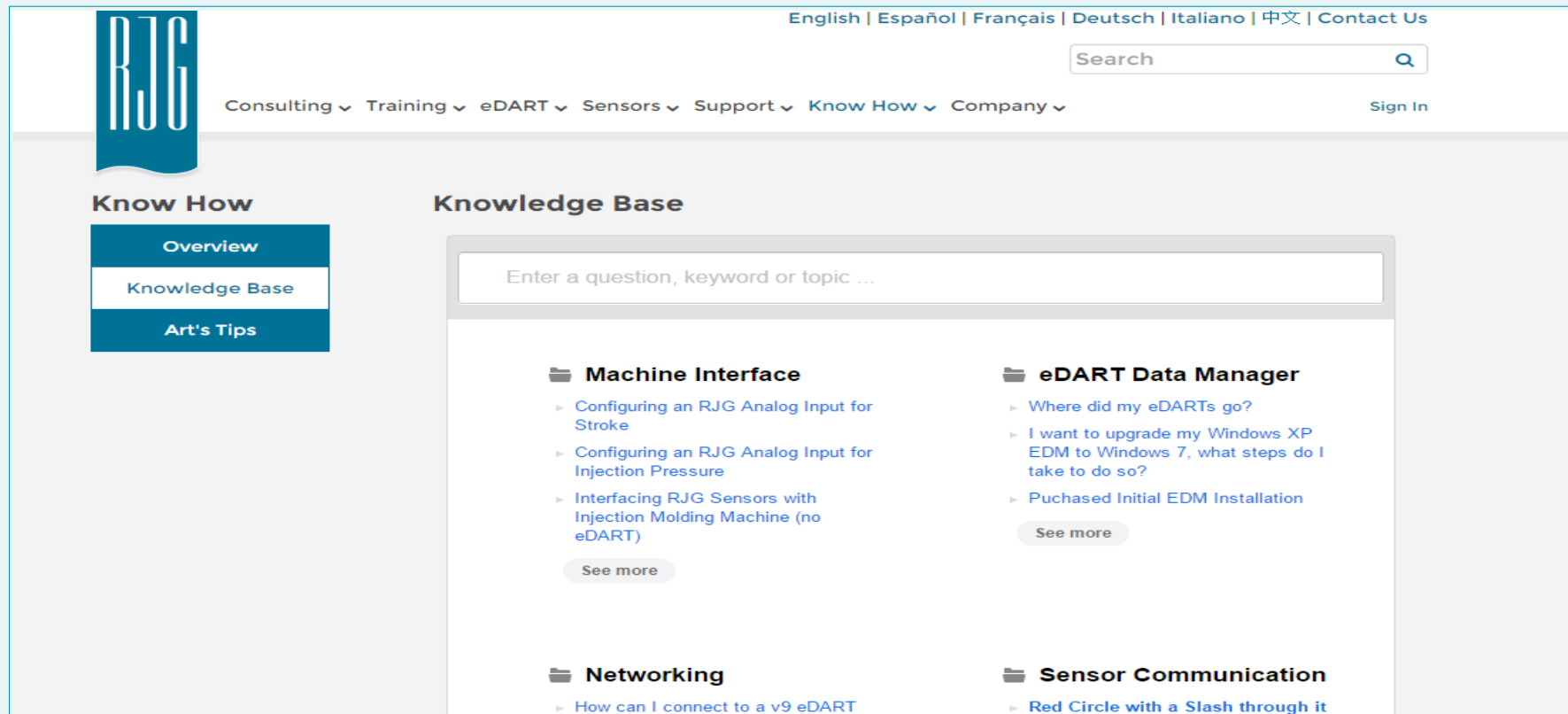
KNOWLEDGE BASE

For further information, visit

<https://www.rjginc.com/know-how/knowledge-base>

RJG's searchable virtual help library.

Topics include Machine Interface, eDART Data Manager, Networking, Sensor Communication, Extracting eDART Data, Advanced System Overview, Microsoft Windows, Valve Gate, System Utilities Software, Hardware, and other product-related issues.



CUSTOMER SUPPORT

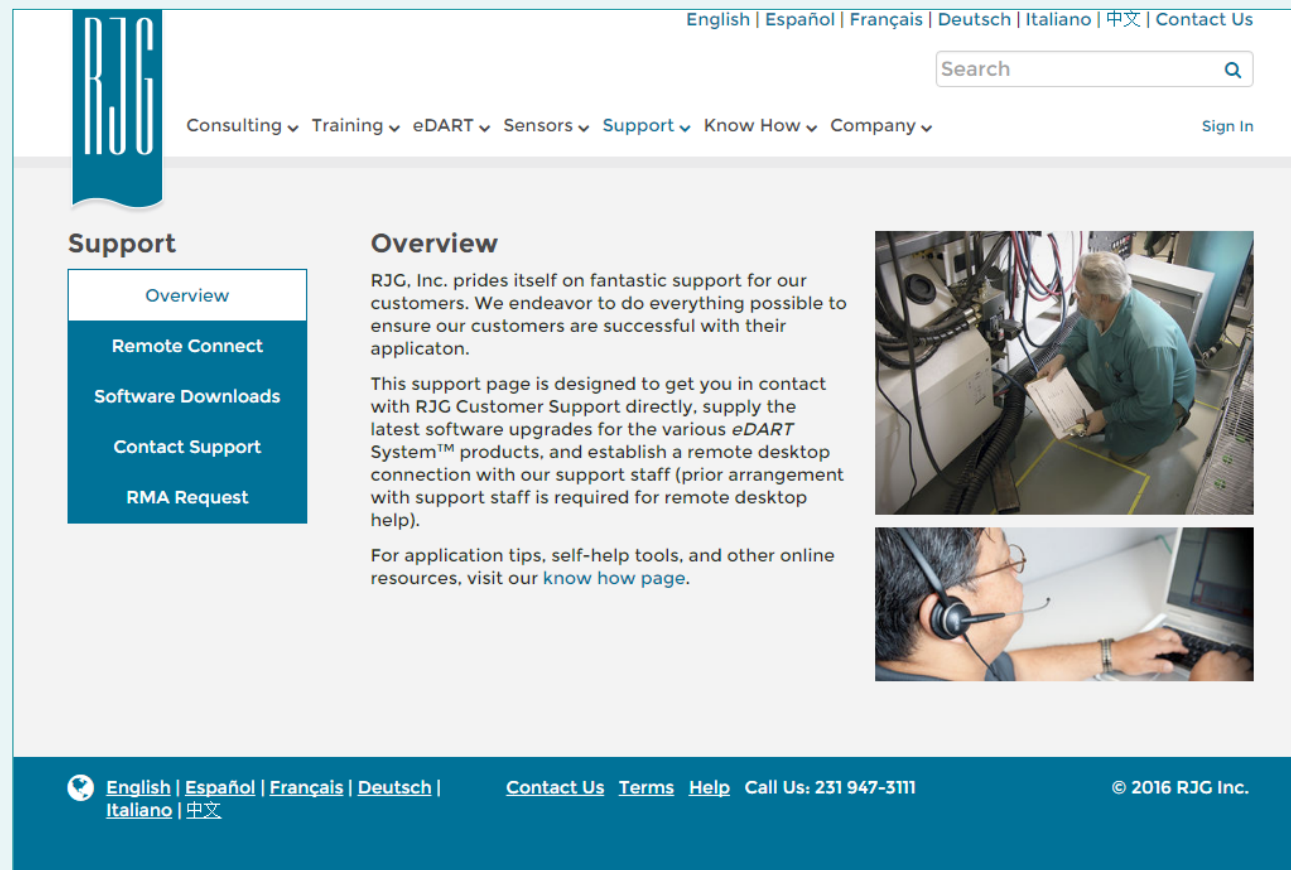
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