



Advanced System Overview (ASO)

RJG, Inc.
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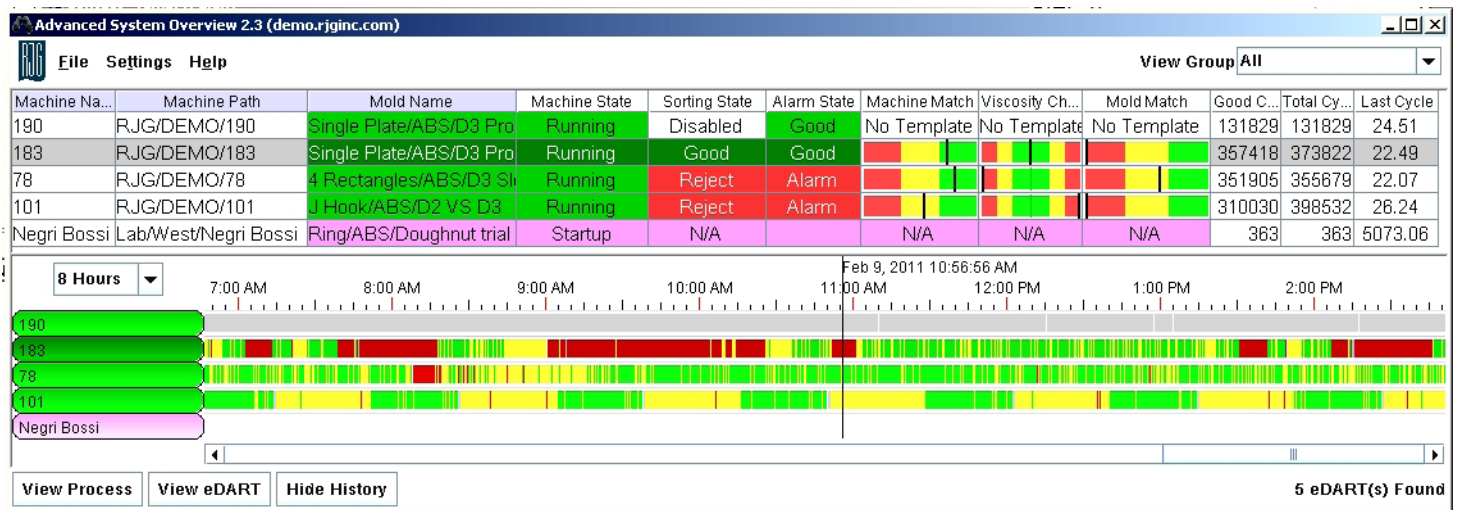
The Advanced System Overview brings the entire process from the floor onto your computer through the eDART™ network. Easy color coding lets you quickly recognize what is happening on each machine in your network.

Green lets you know that things are running optimally. Yellow indicates that there are suspect issues and Red means rejects and alarms. View all the important information regarding your process, machines status, production data from the plant floor with ease.

The following pages will show how to customize and work with Advanced System Overview menu options.

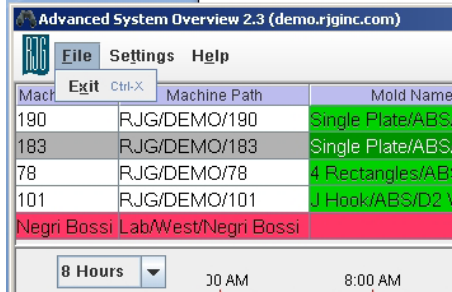


To open the ASO, double click on the binocular icon on your desktop. The following screen should appear.

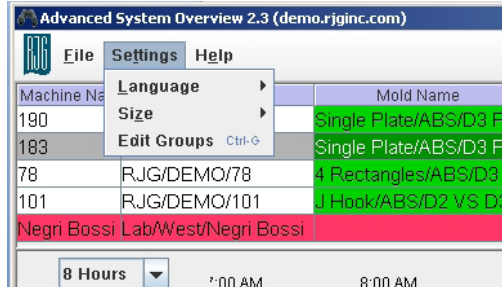


From the Menu:

File:



Exit (ctrl + x)
Close the program and exit

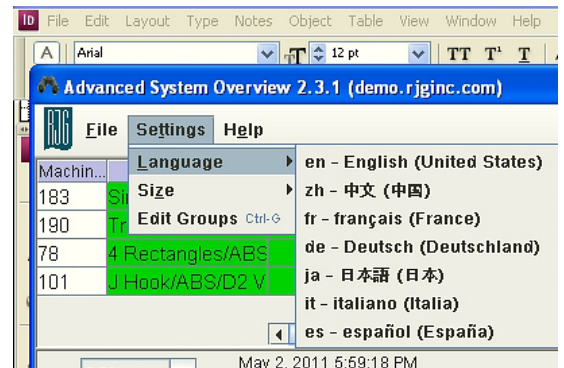


Settings:

There are 3 options under the Settings:

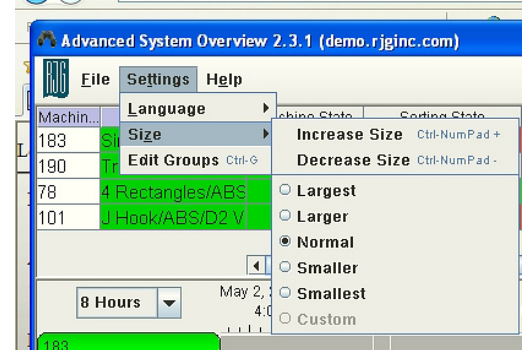
➤ Language

Set your language of choice from English, Chinese, French, German, Italian, Japanese and Spanish. The menu options will then be set to the language of choice. The language set on the eDART™ itself will not affect the language setting of the ASO.



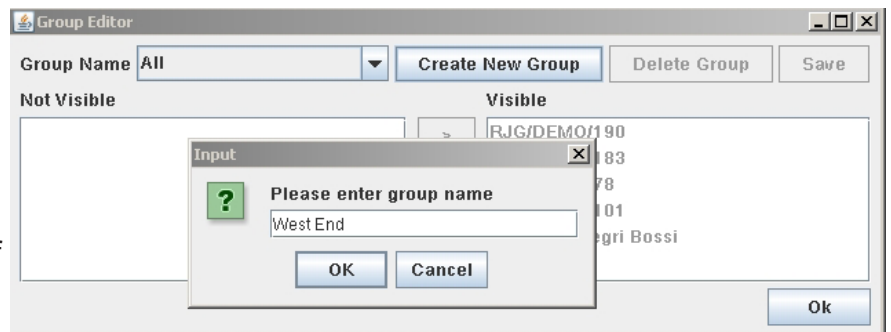
➤ Size

Set the display font according to your liking. The display defaults to font Arial with size 9 and that can be increased to 16 or decreased to size 6.



➤ Edit Groups

Users can view eDART™s on ASO by the group the eDART™s belong to. These group names are created automatically from what has been configured in the eDART™ itself. Typically, these groups are created based on the machine sizes, types of molds the machines will run, locations, etc. However, if you need to create additional group/s of eDART™s to view on ASO, you may do so by creating a new group and placing the eDART™s you want to include in this group.




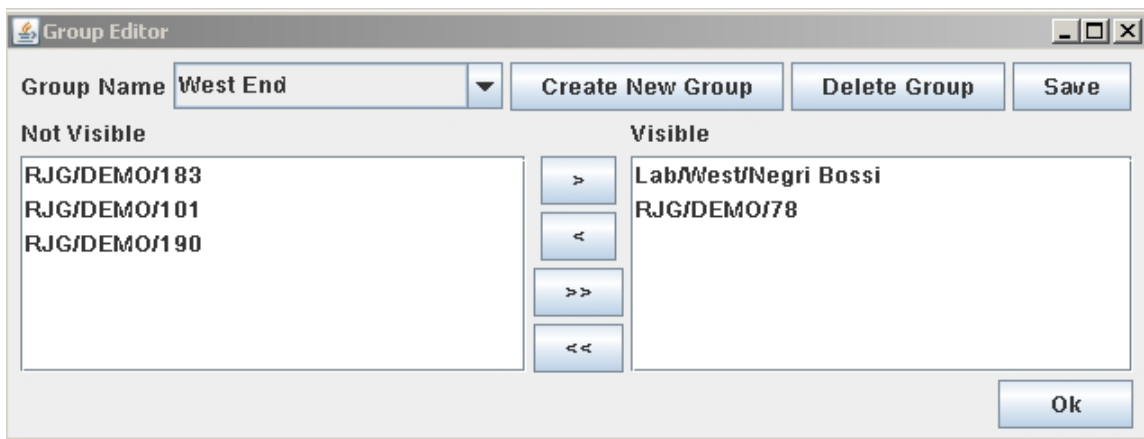
When you create new eDART™ groups on ASO it will not make any changes to group that is defined in the eDART™'s configuration page for cross-copy purpose.

Edit Groups cont.

Users may create groups by the machine locations, floor plans or by the type of machine or products or customers, etc.

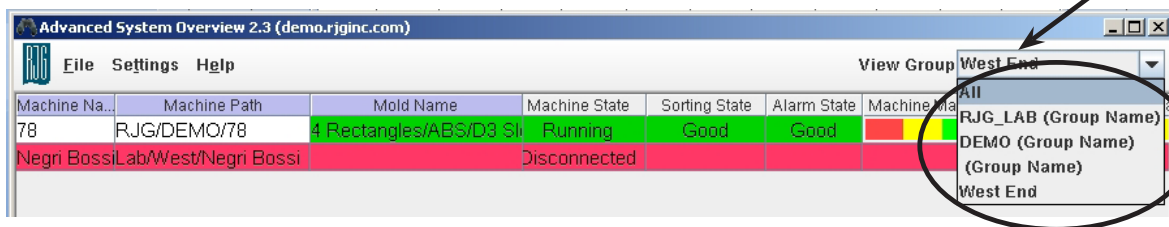
Click on Create New Group button and enter a descriptive name and click OK.

Next, remove the *eDART*™s that do not belong to this group from the **Visible** side by highlighting the *eDART*™s you wish to remove and clicking on the  button to move to **Not Visible** side. Click Save. OK to exit.



Highlight an *eDART*™ and click on the  button to bring that *eDART*™ back into the group.

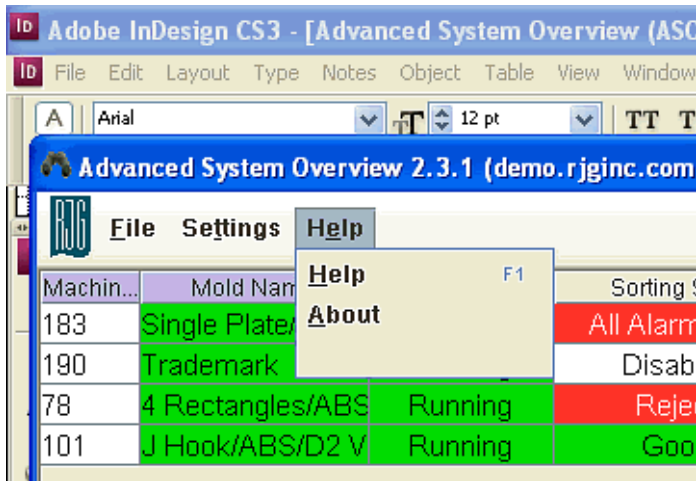
After exiting the edit mode you may toggle between the group views by clicking on the **View Group** button.



Help:

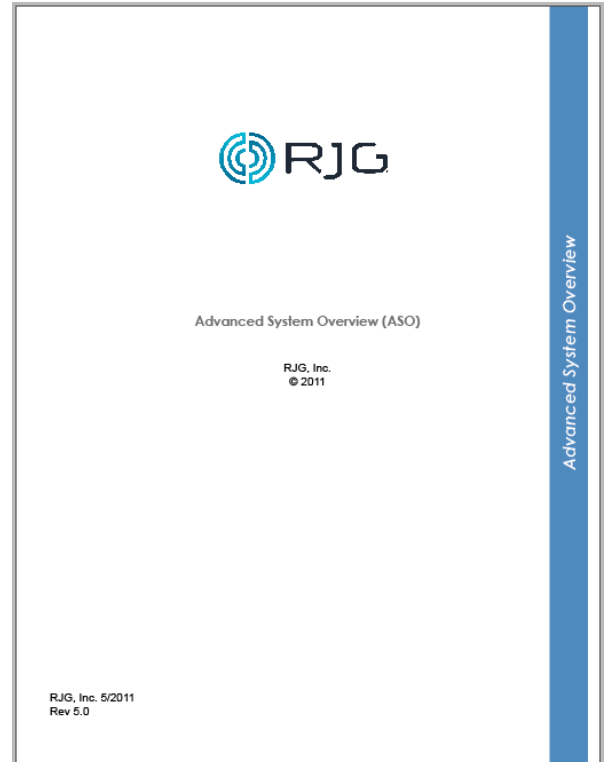
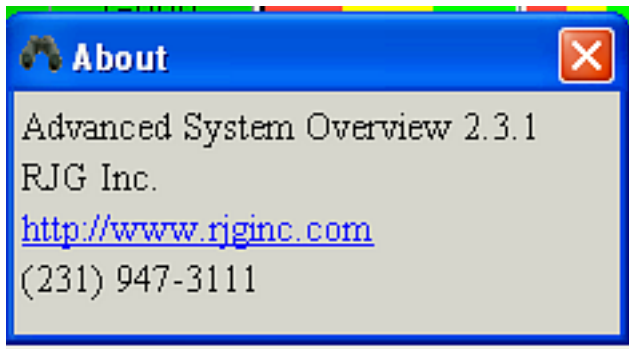
There are 2 Options under the Help button.

Left click on the Help for the drop down to appear

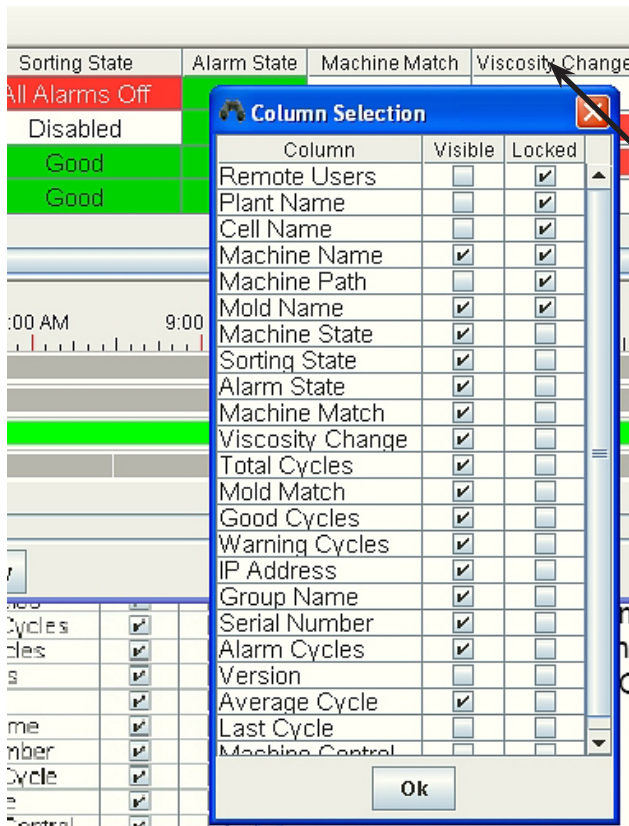


- **Help:**
The Help feature will take you to a link that has the Advanced System Overview Manual.

- **About:**
This will show you a window that allows you to see what version you are currently running.



Adding/Removing/Locking Columns:



To customize your view on the EDM, right click on any column header to enable the Column Selection. Choose a value you would like to display on the ASO and put check mark on the box under Visible column.

By checking the box in the Locked column, the column will not scroll out of sight as you move the slider to the right to view columns that do not fit in the screen. Hit OK to save your settings and close this tool.

➤ Decoding the colors:

Green is good, Red is reject and Yellow is a warning. Purple is when the press hasn't cycled or is down, and Pink means the eDART™ system is starting up.

➤ Sorting State:

Green means the part is being diverted to good bin, red to reject. Yellow means it's going to a suspect bin when 3-Way sorting is implemented. If you are not using 3-Way Sorting, the suspect parts should be going to the reject bin. A descriptive text will show the condition of the cycle.

If the text is **No Alarms Set** it means, exactly that, no alarms are set with upper or lower limits.

Machine State	Sorting State
01/27/11 17:39:57	Press Not Cycled
Running	No Alarms Tool
Running	No Alarms Set
Running	All Alarms Off
01/28/11 07:00:50	Disabled
Startup	N/A
Startup	N/A
Startup	N/A
01/28/11 07:00:50	Press Not Cycled
Running	All Alarms Off
01/28/11 06:14:51	Press Not Cycled
01/28/11 06:43:06	Press Not Cycled
Startup	N/A
01/28/11 08:30:59	All Alarms Off
01/28/11 08:31:01	All Alarms Off
01/28/11 06:59:50	Press Not Cycled
01/28/11 05:57:54	No Alarms Tool
Running	All Alarms Off
01/28/11 01:49:10	Press Not Cycled
Running	Good
Startup	N/A
Startup	N/A

Sorting State: continued

The signal to sort parts is sent to a conveyor or robot when alarms are set and the “sort” options checked. Conditions described below are known as **Part Diverter Disabled Operation**, which means a sort signal cannot be sent to Sorting device:

1. Press Not Cycled – Machine is idle
2. No Alarms Tool – Alarm tool is not running
3. No Alarms Set – No alarms are currently set
4. All Alarms Off – Alarms are set but the sort output is unchecked from alarm tool
5. Machine in Manual – The Machine in Manual trigger is on.
6. Don't Sort Pressed – **Don't Sort** button on the part diverter is pushed, etc.

Under these conditions, a user could choose to send the part to either the Reject (Red), Good (Green) or Suspect bin (Yellow).

Alarm State vs Sorting State

Machine State	Sorting State	Alarm State
01/27/11 17:39:57	Press Not Cycled	
Running	No Alarms Tool	Good
Running	No Alarms Set	Good
Running	All Alarms Off	
01/28/11 07:00:50	Disabled	
Startup	N/A	
Startup	N/A	
Startup	N/A	
01/28/11 07:00:50	Press Not Cycled	
Running	All Alarms Off	Alarm
01/28/11 06:14:51	Press Not Cycled	
01/28/11 06:43:06	Press Not Cycled	
Startup	N/A	
01/28/11 08:30:59	All Alarms Off	
01/28/11 08:31:01	All Alarms Off	
01/28/11 06:59:50	Press Not Cycled	
01/28/11 05:57:54	No Alarms Tool	
Running	All Alarms Off	Good
01/28/11 01:49:10	Press Not Cycled	
Running	Good	Good
Startup	N/A	
Startup	N/A	

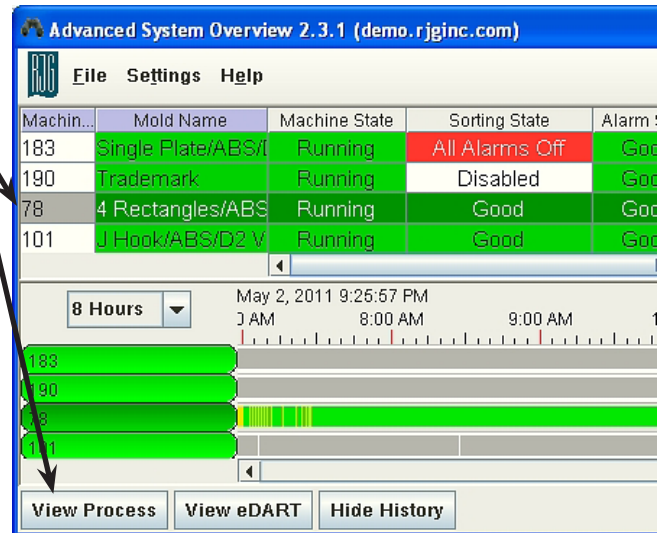
In the **Alarm State** column, “Good” green means all the values ran within set limits of the alarms/warnings and parts are going to the good bin. “Alarm” or “Suspect” is when process values violated the upper or lower limit(s).

The **Sorting State** deals with the output to the robot or conveyor telling them to put parts in specific bin. **Alarm State** deals with the system checking whether the cycle ran within the imposed upper/lower limits or alarm outputs. Given this, the **Sorting State** and **Alarm State** colors can be different, or the same, at any given time. For example the figure on the left, row 2, **Sorting State** is yellow with **No Alarms Tool** but the **Alarm State** is green and reads Good.

Check both the Sorting State and the Alarm State for complete information. If Sorting State shows “All Alarms Off” and the Alarm State shows “Good” (or “Alarm” or “Suspect”), it means that alarms have been set but the sort option is disabled in Alarm Settings on the eDART™.

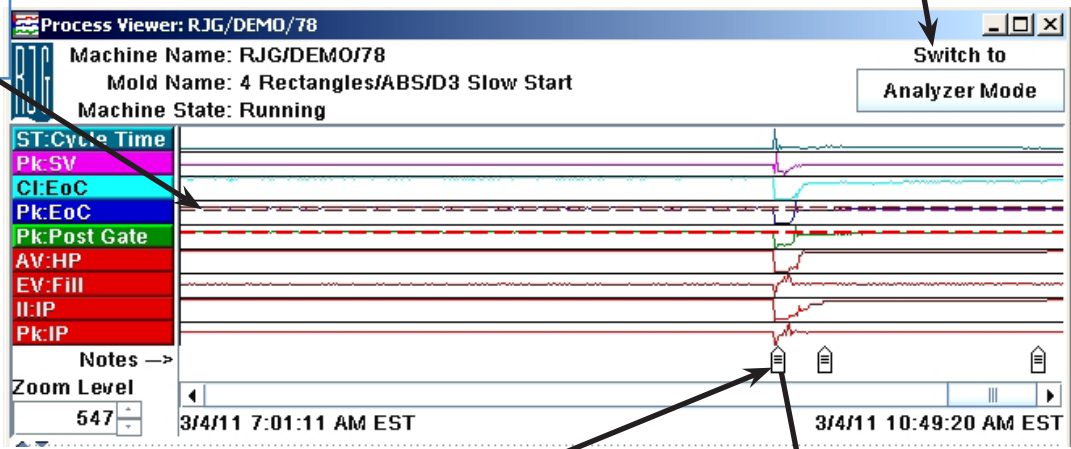
View Process

Choose an eDART™ from the list and click on View Process button to look at how the process is running and how it has run since the job was loaded. Real time data, produced by the sensors in the mold and machine, is displayed on the Cycle graph. Based on the available sensors, data is summarized at the end of the cycle and is displayed on Summary graph.



Alarm set to signal part sorting or light tree on sensor by location.

Click here to go between Analyzer Mode, which reviews previous cycles, or Real Time Mode for the current cycle.

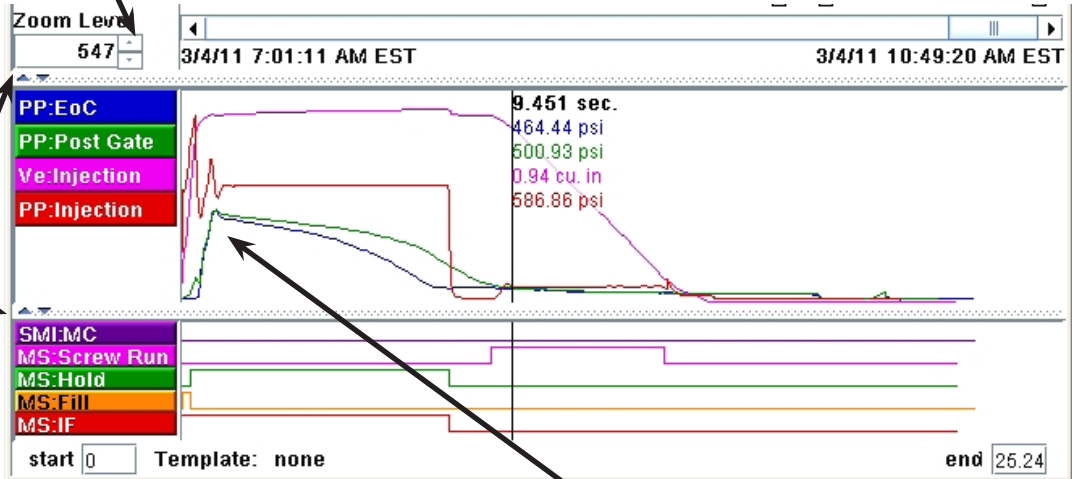


Click on this icon to read saved note



View Process, cont.

Click to display the number of cycles you want to view.

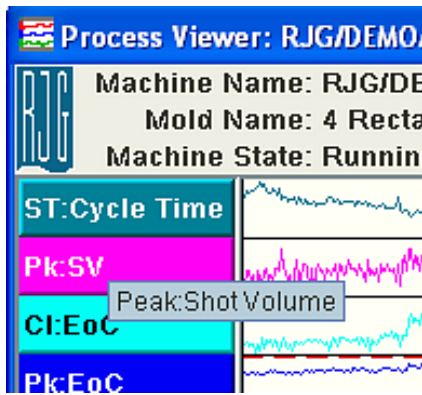


Click these buttons to Minimize or Maximize the display pane.

Cycle Graph displaying data from available sensors.

When switching to the **Analyzer Mode** you can view the cycle curve from previous data by clicking on the summary graph.

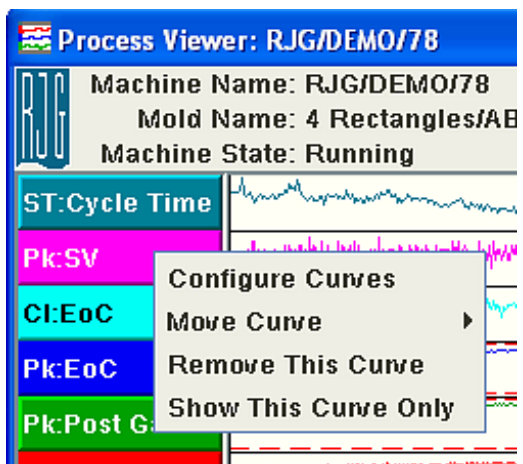
Navigating the Process Viewer:



When you hold your cursor over the graph label a pop up will appear giving the descriptive name of the curve such as **Peak: Shot Volume**. This helps you recognize the curves without having to widen the label columns.

Configure the Curves:

Right Click: In order to add, remove, or arrange curves right click on the left column or on a curve label.



To add curves choose **Configure Curves** and click on the column on the left for **Types** of values and click on **Visible** column for the **Location** to display and click on **Color** (a color palette will appear) to apply to it.

Scroll up and down to locate the Types

From Summary Curves: You can change individual colors or hide individual curves

Configure Curves

Types	Location	Visible	Color
Average Value	Back Pressure	<input type="checkbox"/>	
Cooling Rate	Coolant Delta Pr.	<input type="checkbox"/>	
Cycle Integral	End of Cavity Temp.	<input type="checkbox"/>	
Decompression	Fill Flow Rate	<input type="checkbox"/>	
Dynamic Pressure Los	Fill Speed	<input type="checkbox"/>	
Effective Melt Tempera	Hold Pressure	<input checked="" type="checkbox"/>	
	Job Cycle Time	<input type="checkbox"/>	
	Processor Temperature	<input type="checkbox"/>	

Type:Location	Visible	Color
Sequence Time:Cycle Time	<input checked="" type="checkbox"/>	
Peak:Shot Volume	<input checked="" type="checkbox"/>	
Cycle Integral:End of Cavity	<input checked="" type="checkbox"/>	
Peak:End of Cavity	<input checked="" type="checkbox"/>	
Peak:Post Gate	<input checked="" type="checkbox"/>	
Average Value:Hold Pressure	<input checked="" type="checkbox"/>	
Peak:Injection Pressure	<input checked="" type="checkbox"/>	

Accept Cancel Reset to eDART

If you want to view the curves as they are set on the eDART™'s summary graph click on this button.

Configure the Curves cont.

Right Click, cont.

To Move Curves, right click on the curve you wish to move, left click on Move Curve then choose where you want it to go.

To Remove Curves, right click on the curve you wish to remove, then left click on Remove Curve.

To view only one curve, right click on the curve you wish to view by itself then left click on Show This Curve Only.

The screenshot shows the 'Process Viewer: RJG/DEMO/78' interface. At the top, it displays 'Machine Name: RJG/DEMO/78', 'Mold Name: 4 Rectangles/ABS/D3 Slow St', and 'Machine State: Running'. Below this is a graph area with several colored curve labels: 'ST:Cy', 'Pk:SV', 'Cl:EO', 'Pk:EO', and 'Pk:Post Gate'. A context menu is open over the 'Pk:EO' curve, listing the following options: 'Configure Curves', 'Move Curve', 'Remove This Curve', and 'Show This Curve Only'. The 'Move Curve' option is expanded, showing sub-options: 'Move To Top', 'Move Up', 'Move Down', and 'Move To Bottom'. Three callout boxes provide instructions: one points to 'Remove This Curve' with the text 'Click on this when you want to remove this curve from the graph.'; another points to 'Show This Curve Only' with the text 'To view just a single selected curve click on this option.'; and a third points to the 'Move Curve' sub-menu with the text 'You can rearrange the order in which the curve is displayed by choosing one of these directions or you may simply drag the curve label up or down.'

Configure the Curves cont.

Left Click:

When you need to set scale of the curve, change Unit type, change or set color, left click on the curve label.

Set Color:
Same as previous applications

Choose a unit of choice from the list

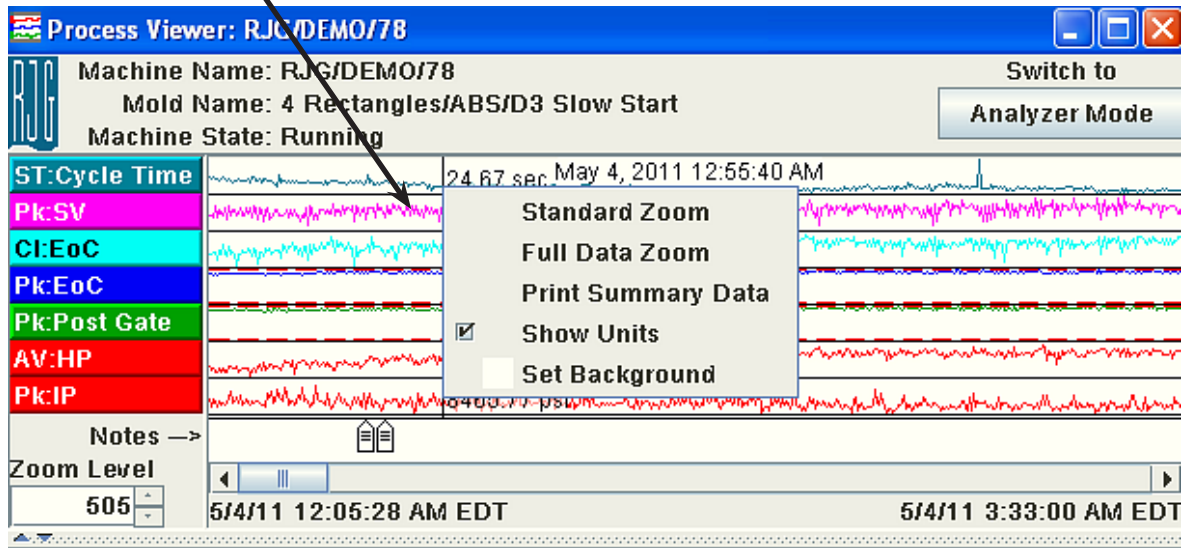
When you need to adjust the scaling manually uncheck the **Continuous Auto Scale** and enter Max/Min values.

Scaling

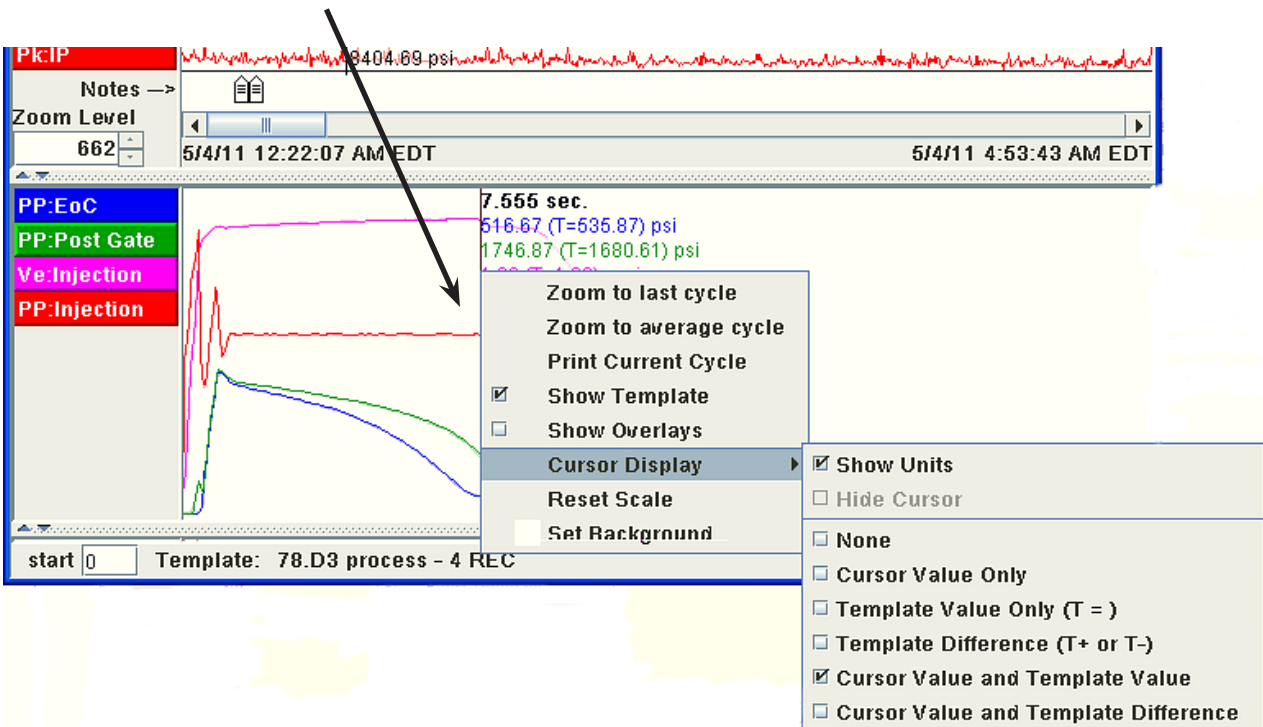
Scale Max 4250 Auto Scale 4272.71
Scale Min 3000 3000.00 Continuous Auto Scale

Configure the Curves cont.

Right click in the Summary Graph curves to adjust the zoom, print data, show the units and set Background color.



Right click in the Cycle Graph curves to adjust the Zoom, print cycle, show templates, overlays, adjust cursor display, reset scale or change background color.



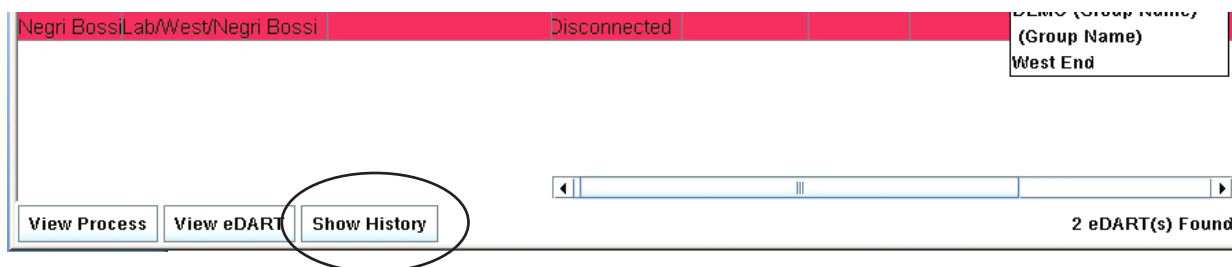
For the next two buttons to function you will require additional software.

View eDART™

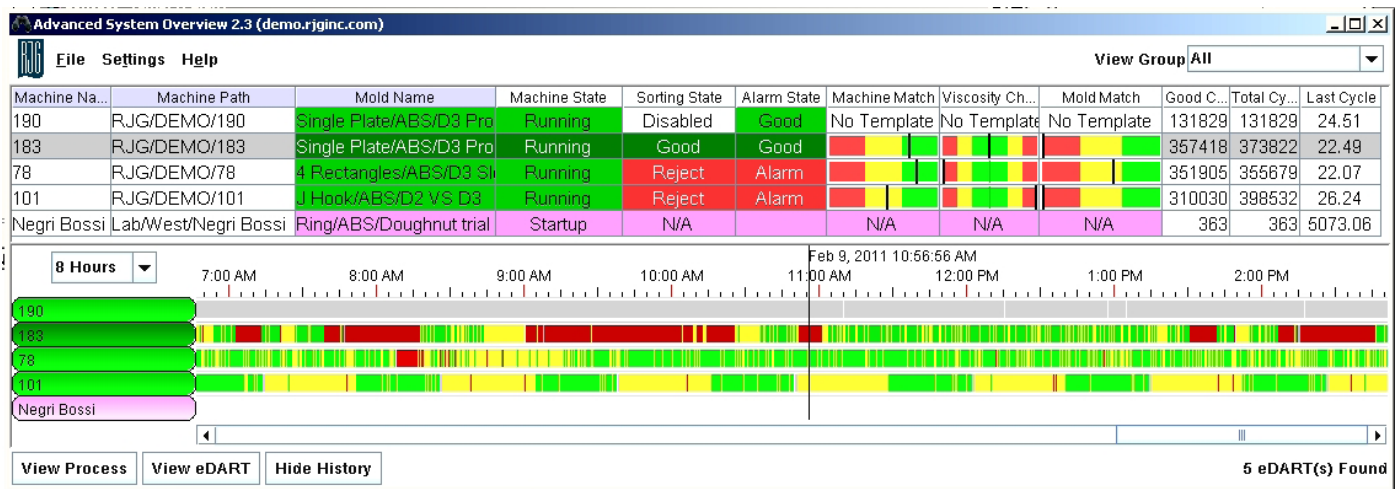
Note: The Phindows from QNX® Photon® microGUI windowing system, must be installed on your computer to view eDART™ remotely.

While it's possible to remotely control your process, you must exercise caution while using Phindows. With Phindows you can make modifications to the eDART™'s controls, alarms, etc. remotely, as though you were in front of the machine. However, since you cannot look at the part, or the machine, your changes may cause damage your tool or the machine itself. Also, it is highly recommended that permissions are secured on your network to avert undesirable tampering with the settings.

Show History



The **History** will show how a machine ran against its template values on ASO. Every cycle that ran optimally will have a **green** sliver added to the time line. rejects will show as **red** and suspect **yellow**. Many red slivers means a lot of adjustments (tweaking) were made, or that the machine is not capable of running a repeatable process – such as leaking checkring, bad hydraulic valves, etc.



Note: For eDART™s with version 9.0, the **Process Stability Dashboard (PSD)** must be activated on the eDART™ for the **Show History** to function.

If you have any further questions, please feel free to contact RJG Customer Support at 1-800-482-0566