



## **QUICK START GUIDE**

# **ANALYTICS & GRAPHING**

**Learn How To:**

- 1. Create Trend Graphs to Analyze Individual Components**
- 2. Create Compare Graphs to Compare Units by Make/Model**
- 3. Save and Print Graphs to Share**

# GRAPHING EXPLANATION

## Trend Graphing

- Track trends in abnormal test results for individual pieces of equipment using multiple parameters
- Overlay maintenance events and alarm limits
- Normalize the data

## Compare Graphing

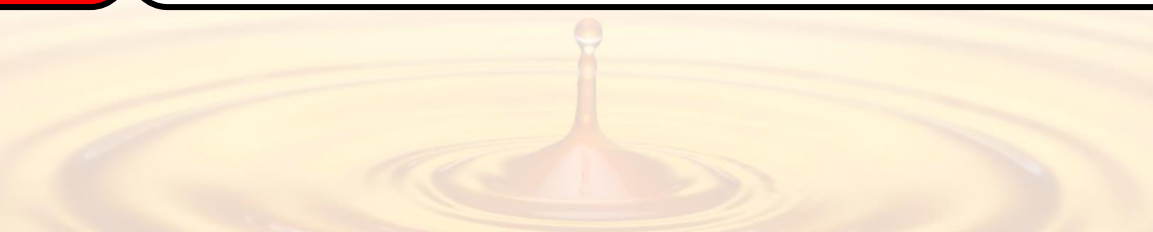
- Overlay test results by make or model to compare equipment performance between individual units or across populations of units.

## Static Graphs

- View up to 15 static graphs on your Sample Details page. You can export these graphs into multiple formats and print these graphs.

## Widget Graphs

- Customize widgets on the Home tab to display the data you want to see, in the order you see it.



# TREND GRAPH

← BACK

TREND GRAPH

SEND EMAIL

DOWNLOAD PDF

Graphs  Attachments  Comments  Actions

Sample Condition Acceptable

Status **A**

**ACCOUNT INFORMATION**

Lab Customer ID#: 319182  
 Company Name: ACME Demo  
 Worksite: Houston, TX  
 Address: 123,  
 Edmonton, Alberta, T6B 3M9

**SAMPLE INFORMATION**

Lab No.: 202111010678  
 Sample Tracking #: E202110270873  
 Sampled Date: 10/05/2021  
 Received Date: 11/01/2021  
 Completed Date: 11/02/2021

**OTHER SAMPLE INFORMATION**

PO No.:  
 Work Order No.:  
 Reference No.: 3177404  
 Filter Age:  
 Make Up Oil Amount:

**UNIT INFORMATION**

Unit ID: 632407  
 Unit Manufacturer: Freightliner  
 Unit Model: M2106  
 Unit Serial:  
 Unit Worksite: Houston, TX

**COMPONENT INFORMATION**

Component Description: ENGINE  
 Component Manufacturer: Mercedes-Benz  
 Component Model: MBE 906  
 Component Serial:  
 Component Type: ENGINE

**FLUID INFORMATION**

Fluid Manufacturer: CASTROL  
 Fluid Brand/Product: VECTON CK-4  
 Fluid Grade: 15W40

**RECOMMENDATIONS**

Maintenance for Lab No.: 202111010678  
 Test results are acceptable. No corrective action indicated. Resample at normal interval.  
 Evaluated By: TGIBBONS

Results History Actions Graphs Attachments Comments

**SPECTROCHEMICAL ANALYSIS IN PARTS PER MILLION**

LAB NO.	SAMPLE DRAWN	WEAR METALS								CONTAMINANTS				ADDITIVES			
		Iron	Chromium	Nickel	Aluminum	Lead	Copper	Tin	Silver	Aluminum	Iron	Sulfur	Phosphorus	Aluminum	Iron		
0678	10/05/2021	5	<1	<1	2	<1	1	<1	<0.1								
0383	02/10/2021	10	<1	<1	4	<1	2	<1	<0.1								

To run a **Trend Graph**, from the Sample Details page, simply click on the **Trend Graph** button.

# TREND GRAPH

Trend Compare

Component

632407, Freightliner M2106, ENGINE

Date

All Data

Test List

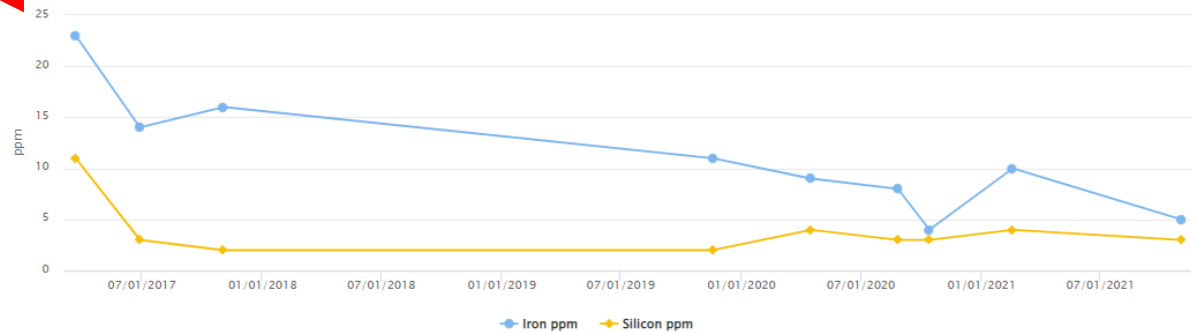
General Wear

Test

- Aluminum
- Antimony
- Barium
- Boron
- Calcium
- Chromium
- Copper
- Fuel %
- Glycol Pos/Neg
- Iron
- Lead
- Magnesium
- Molybdenum
- Nickel

Trend Graph

632407, Freightliner M2106, ENGINE



After selecting the *Trend Graph* button, the **ANALYTICS** tab will open. The trend graph will display with the Date and Test List pre-selected. Simply click on the drop down to change the selection.

# TREND GRAPH

Trend Compare

Component

632407, Freightliner M2106, ENGINE

Date

All Data

Test List

Select A Graph Type

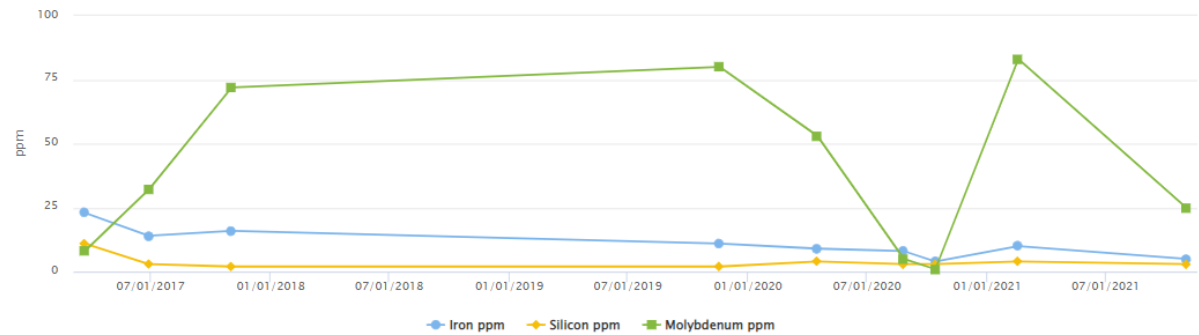
Test

- Aluminum
- Antimony
- Barium
- Boron
- Calcium
- Chromium
- Copper
- Fuel %
- Glycol Pos/Neg
- Iron
- Lead
- Magnesium
- Molybdenum
- Nickel



Trend Graph

632407, Freightliner M2106, ENGINE



You can add individual test values by selecting the checkbox next to each element.

# TREND GRAPH

Trend Compare

Component

632407, Freightliner M2106, ENGI...

Date

All Data

Test List

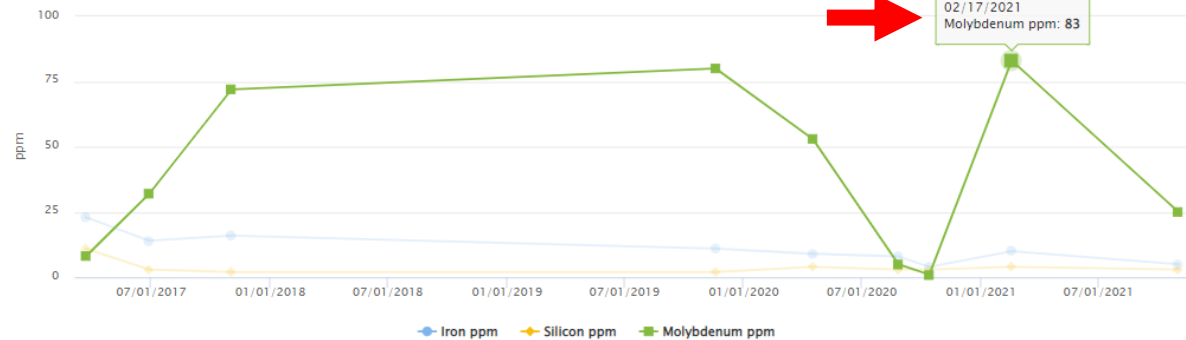
Select A Graph Type

Test

- Aluminum
- Antimony
- Barium
- Boron
- Calcium
- Chromium
- Copper
- Fuel %
- Glycol Pos/Neg
- Iron
- Lead
- Magnesium
- Molybdenum
- Nickel

Trend Graph

632407, Freightliner M2106, ENGINE



Hover over a point on the graph to reveal more information.

# TREND GRAPH

Trend Compare

Component

632407, Freightliner M2106, ENGINE

Date

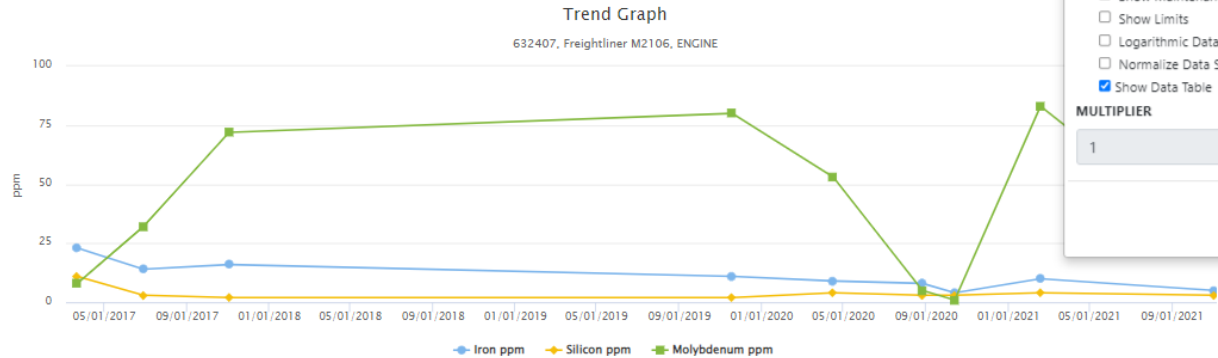
All Data

Test List

Select A Graph Type

Test

- Aluminum
- Antimony
- Barium
- Boron
- Calcium
- Chromium
- Copper
- Fuel %
- Glycol Pos/Neg
- Iron
- Lead
- Magnesium
- Molybdenum
- Nickel



DATA OPTIONS

- Show Maintenance Events
- Show Limits
- Logarithmic Data Scale
- Normalize Data Scale
- Show Data Table

MULTIPLIER

1

OK

Click on the gear icon to open your data options. Make your selections and click the OK button.

# TREND GRAPH

Trend Compare

Component

632407, Freightliner M2106, ENGINE

Date

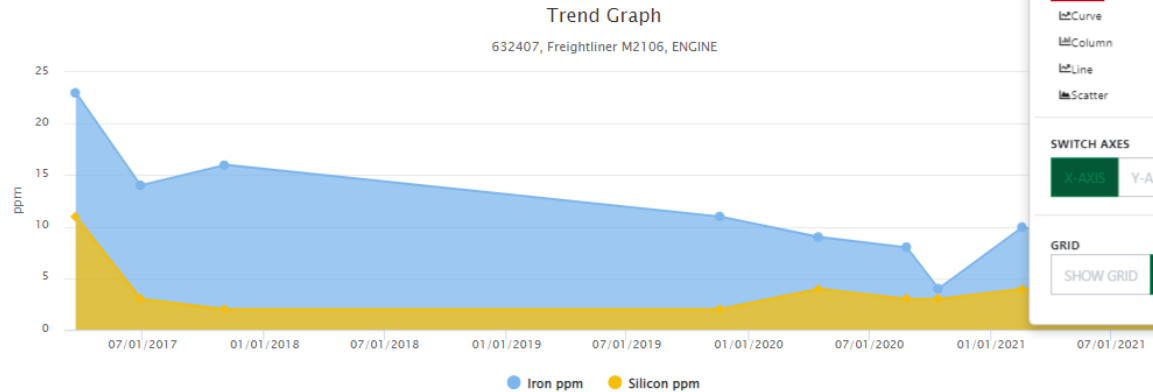
All Data

Test List

Select A Graph Type

Test

- Aluminum
- Antimony
- Barium
- Boron
- Calcium
- Chromium
- Copper
- Fuel %
- Glycol Pos/Neg
- Iron
- Lead
- Magnesium
- Molybdenum
- Nickel



GRAPH TYPES

- Area
- Curve
- Column
- Line
- Scatter

SWITCH AXES

- X-AXIS
- Y-AXIS

GRID

- SHOW GRID
- HIDE GRID

Click on the graph icon to open your graph types. Make your selection to update the display.



# TREND GRAPH

Trend Compare

Component

632407, Freightliner M2106, ENGINE

Date

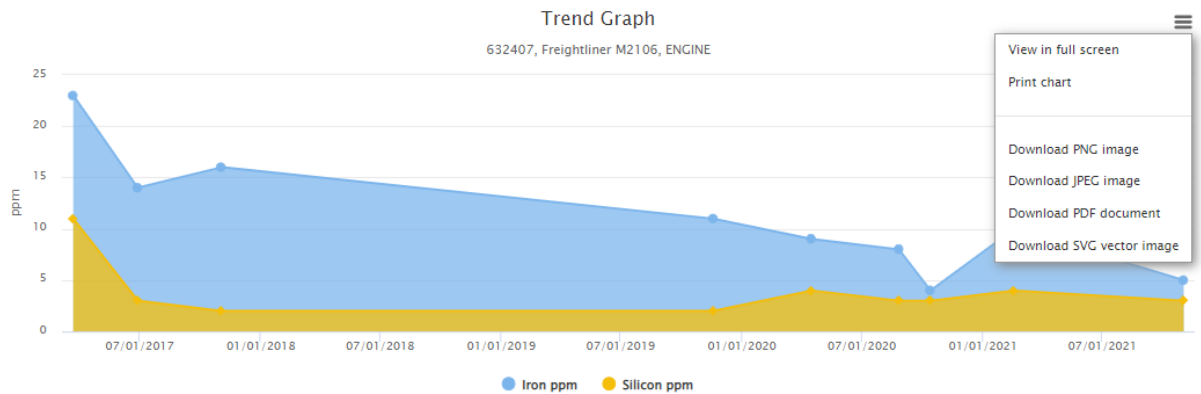
All Data

Test List


General Wear

Test

- Aluminum
- Antimony
- Barium
- Boron
- Calcium
- Chromium
- Copper
- Fuel %
- Glycol Pos/Neg
- Iron
- Lead
- Magnesium
- Molybdenum
- Nickel



- View in full screen
- Print chart
- Download PNG image
- Download JPEG image
- Download PDF document
- Download SVG vector image

To print your graph or export it to a different file type, click on the  icon.

# COMPARE GRAPH

## Equipment

[Equipment](#) / [Browse Equipment](#)

- 192/CUSTER 7/AUX Caterpillar 3512
- 2 Airman SDG65S
- 21039/ELMER FUDD/AUX
- 21039/ELMER FUDD/MAIN
- 25-326 Unknown/Unspecified UNKNOWN
- 302214 BLACK BEAN MAIN - -
- 302214/COLFAX ANTRIM 29 Caterpillar 3408
- 307581-018/MAIN Waukesha F3521
- 308565/EXCELSIOR B-124 Caterpillar 3512
- 345 Airman SDG65S
- 366215
- 3956/HAYES 34 AUX Caterpillar 3516
- 50831/ST KAL H-16/COOL Caterpillar 3306
- 50831/STKALH13/310 Waukesha -
- 632407 Freightliner M2106
  - BACK DIFFERENTIAL
  - COOLING SYSTEM
  - ENGINE
  - HYDRAULIC
  - TRANS-AUTO
- 642/BRILEY 19B/ENG Caterpillar 3306
- 649/CHESTER 12-BOOSTER/MAIN Caterpillar

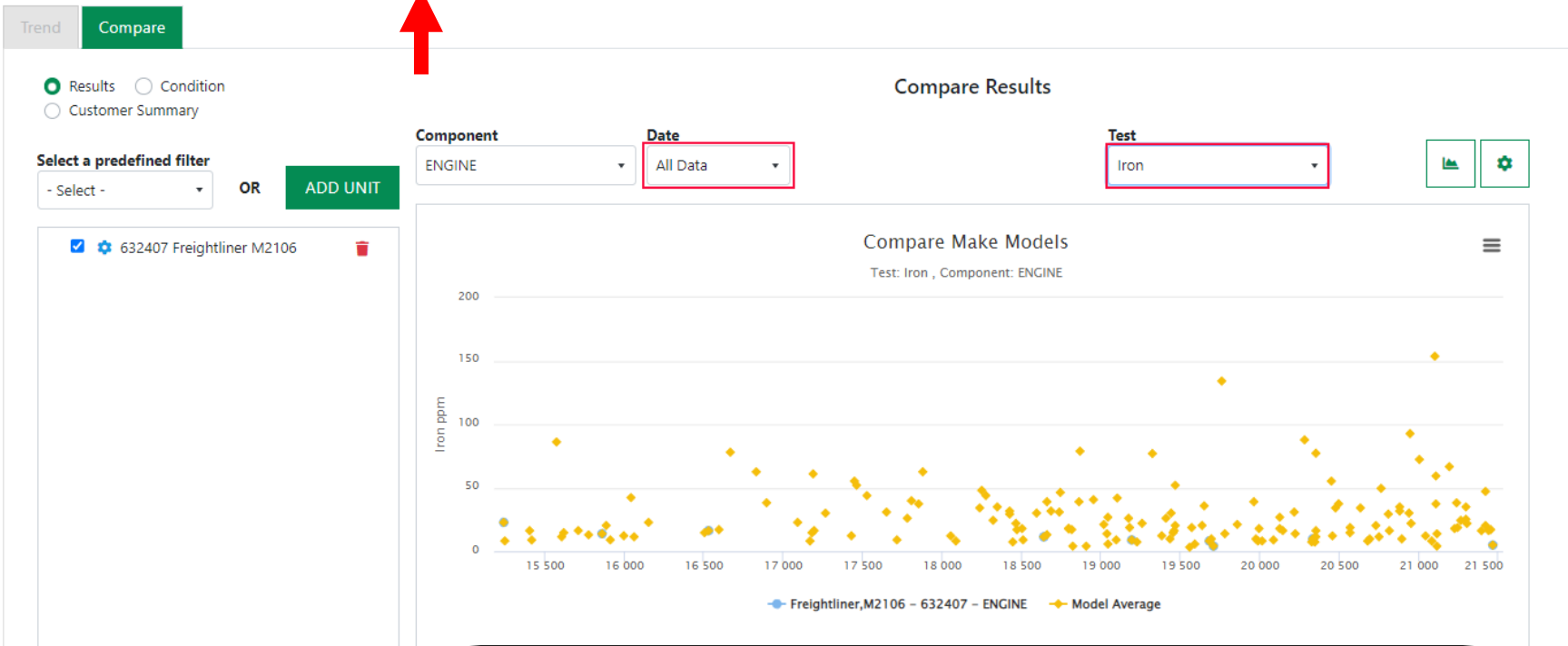
### ENGINE DETAILS

<b>Component</b>	ENGINE	<b>Position</b>	
<b>Manufacturer</b>	Mercedes-Benz	<b>Model</b>	MBE 906
<b>Serial</b>		<b>Fuel Type</b>	Diesel
<b>Oil Mfg.</b>	CASTROL	<b>Oil Brand</b>	VECTON CK-4
<b>Oil Grade</b>	15W40	<b>Oil Capacity</b>	
<b>Oil Units</b>	GL	<b>Cooling System Type</b>	ANTIFREEZE
<b>Sample Frequency</b>	90	<b>Next Sample</b>	01/02/2022
<b>Last Sample</b>	10/05/2021		

SAMPLE ID	SAMPLED DATE	SEVERITY	COMPONENT AGE
<a href="#">202111010678</a>	10/05/2021	<b>A</b>	21468
<a href="#">202102170383</a>	02/10/2021	<b>A</b>	20333

To create a **Compare Graph** from the equipment hierarchy, locate and select the component and simply click on the **Compare Graph** button.

# COMPARE GRAPH



By selecting the **Compare Graph** button, the **ANALYTICS** tab will open. The compare graph will display with the selected Component and the Date and Test pre-selected. Simply click on the drop down arrow to change the selection.

# COMPARE GRAPH

Trend Compare

- Results  Condition  
 Customer Summary

Select a predefined filter

- Select -

OR

**ADD UNIT**

 632407 Freightliner M2106 

## Compare Results

Component

ENGINE

Date

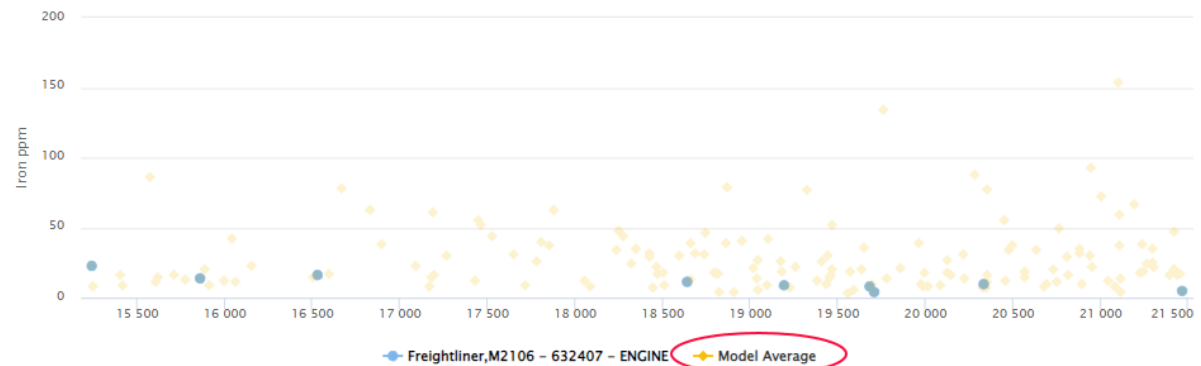
All Data

Test

Iron

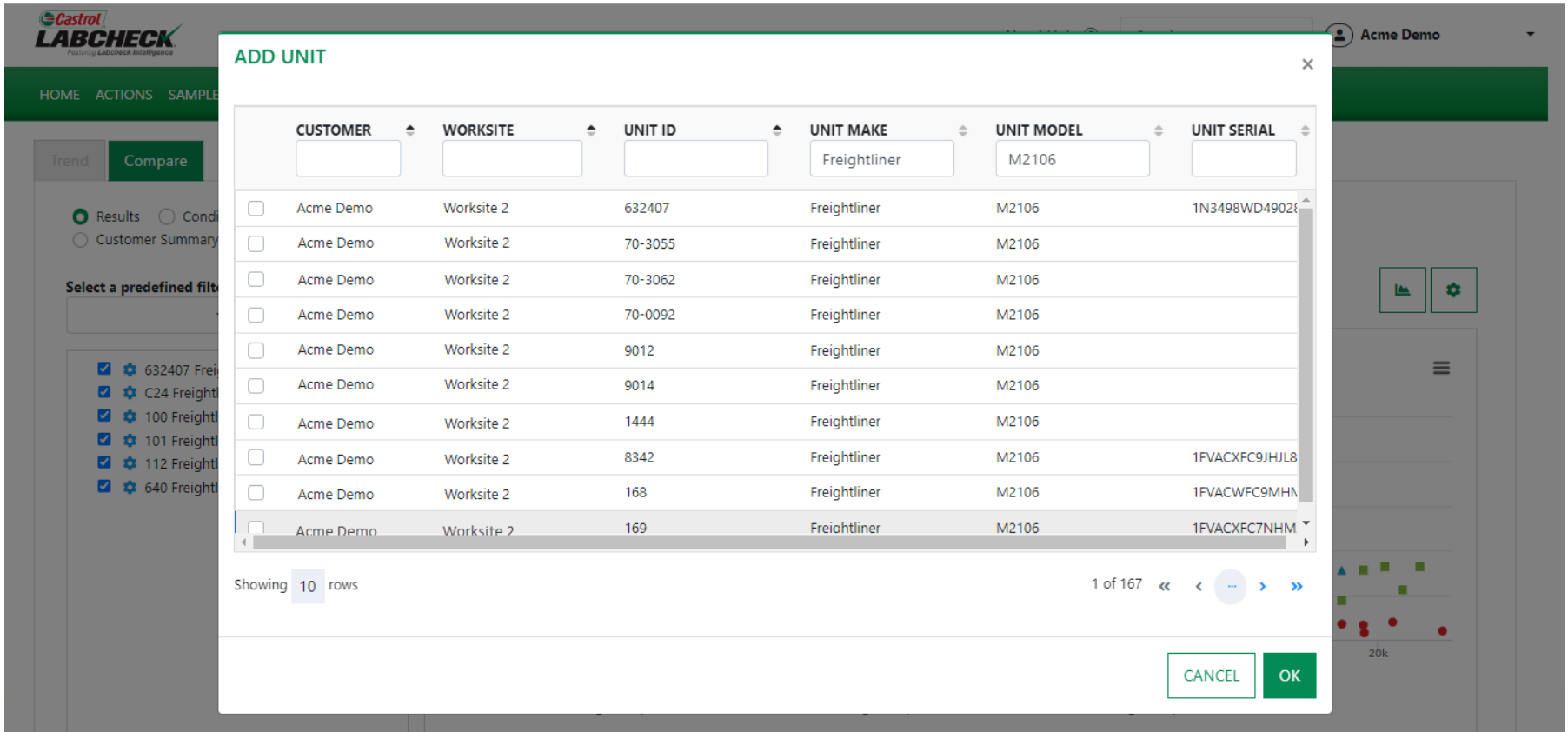
## Compare Make Models

Test: Iron , Component: ENGINE



By default, you will see your selected component and the Model Average. With your mouse, hover over the component on the x-axis to highlight the data points. To add units to compare, select the **ADD UNIT** button.

# COMPARE GRAPH



**ADD UNIT**

CUSTOMER	WORKSITE	UNIT ID	UNIT MAKE	UNIT MODEL	UNIT SERIAL	
<input type="checkbox"/>	Acme Demo	Worksite 2	632407	Freightliner	M2106	1N3498WD49026
<input type="checkbox"/>	Acme Demo	Worksite 2	70-3055	Freightliner	M2106	
<input type="checkbox"/>	Acme Demo	Worksite 2	70-3062	Freightliner	M2106	
<input type="checkbox"/>	Acme Demo	Worksite 2	70-0092	Freightliner	M2106	
<input type="checkbox"/>	Acme Demo	Worksite 2	9012	Freightliner	M2106	
<input type="checkbox"/>	Acme Demo	Worksite 2	9014	Freightliner	M2106	
<input type="checkbox"/>	Acme Demo	Worksite 2	1444	Freightliner	M2106	
<input type="checkbox"/>	Acme Demo	Worksite 2	8342	Freightliner	M2106	1FVACXFC9JHJL8
<input type="checkbox"/>	Acme Demo	Worksite 2	168	Freightliner	M2106	1FVACWFC9MHM
<input checked="" type="checkbox"/>	Acme Demo	Worksite 2	169	Freightliner	M2106	1FVACXFC7NHM

Showing 10 rows

1 of 167

CANCEL OK

Add units with the same Make & Model. Remove or change the filters to locate other units. Use the checkbox(es) to select those you want to add.

# COMPARE GRAPH

Trend Compare

Results  Condition  
 Customer Summary

## Compare Results

Select a predefined filter

OR

ADD UNIT

Component

ENGINE

Date

All Data

Test

Iron

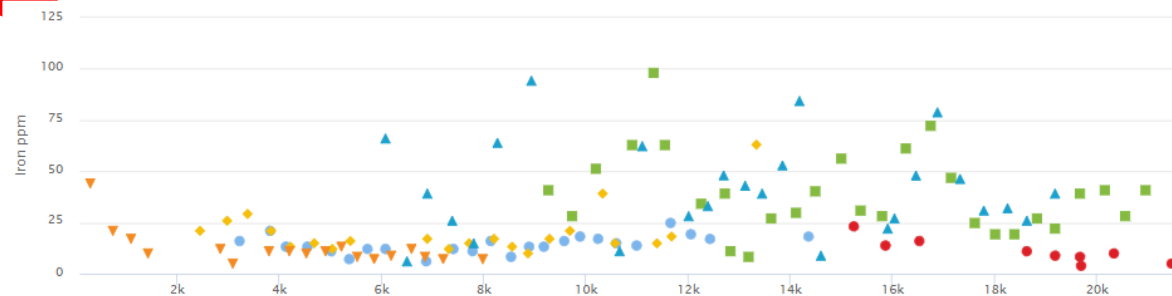


-  632407 Freightliner M2106 
-  C24 Freightliner M2106 
-  100 Freightliner M2106 
-  101 Freightliner M2106 
-  112 Freightliner M2106 
-  640 Freightliner M2106 



## Compare Make Models

Test: Iron , Component: ENGINE



● Freightliner,M2106 - 100 - ENGINE    ◆ Freightliner,M2106 - 101 - ENGINE    ■ Freightliner,M2106 - C24 - ENGINE  
▲ Freightliner,M2106 - 640 - ENGINE    ▼ Freightliner,M2106 - 112 - ENGINE    ● Freightliner,M2106 - 632407 - ENGINE

Click on the  icon to remove a unit.

# COMPARE GRAPH

Trend Compare

- Results  Condition  
 Customer Summary

Select a predefined filter

OR

ADD UNIT

- 632407 Freightliner M2106
- C24 Freightliner M2106
- 100 Freightliner M2106
- 101 Freightliner M2106
- 112 Freightliner M2106
- 640 Freightliner M2106

Component

ENGINE

Date

All Data

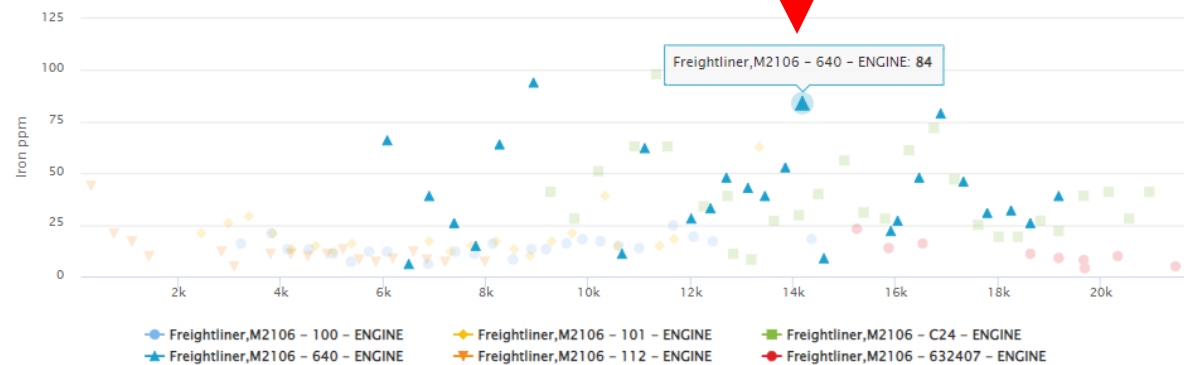
Test

Iron

## Compare Results

### Compare Make Models

Test: Iron , Component: ENGINE



Hover over a point on the graph to reveal more information.

# COMPARE GRAPH

Trend Compare

- Results  Condition  
 Customer Summary

Select a predefined filter

OR

ADD UNIT

-  632407 Freightliner M2106 
-  C24 Freightliner M2106 
-  100 Freightliner M2106 
-  101 Freightliner M2106 
-  112 Freightliner M2106 
-  640 Freightliner M2106 

Component

ENGINE

Date

All Data

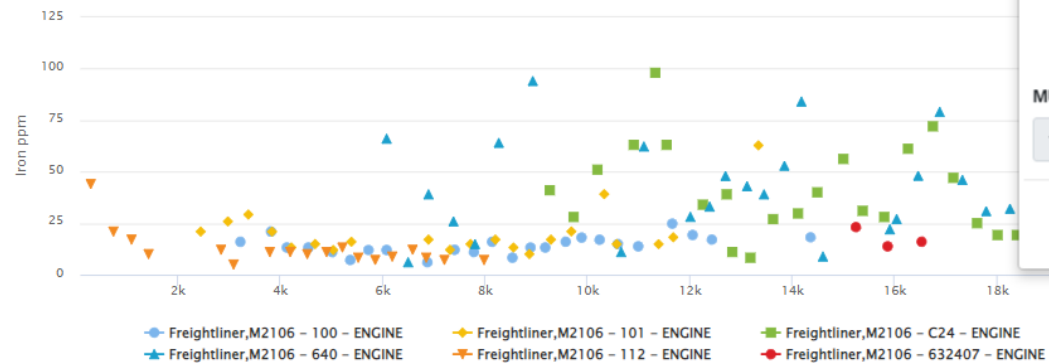
Test

Iron

## Compare Results

### Compare Make Models

Test: Iron , Component: ENGINE



#### DATA OPTIONS

- Show Maintenance Events
- Show Limits
- Logarithmic Data Scale
- Normalize Data Scale
- Show Data Table

#### MULTIPLIER

1

OK

Click on the gear icon to open the data options. Make your selections and click the OK button.



# COMPARE GRAPH

Trend **Compare**

- Results  Condition  
 Customer Summary

Select a predefined filter

OR

**ADD UNIT**

- 632407 Freightliner M2106
- C24 Freightliner M2106
- 100 Freightliner M2106
- 101 Freightliner M2106
- 112 Freightliner M2106
- 640 Freightliner M2106

Component

ENGINE

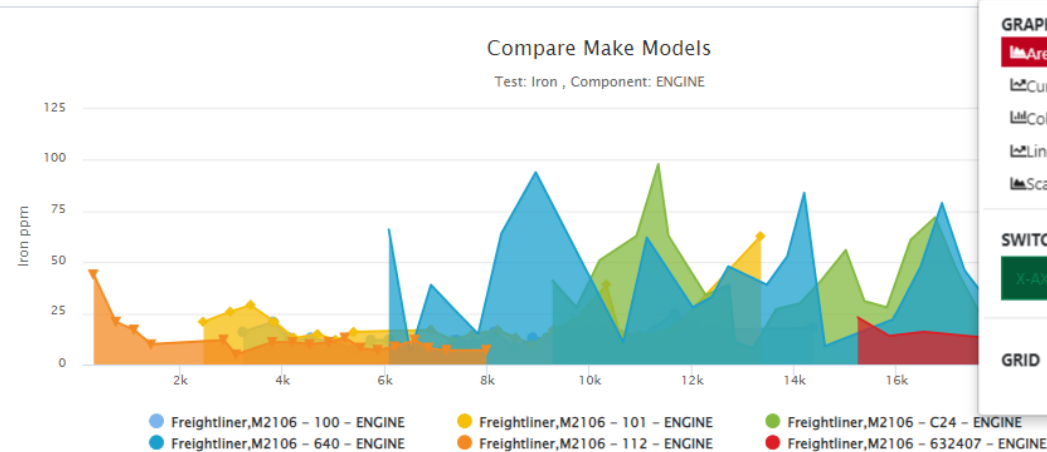
Date

All Data

Test

Iron

Compare Results



GRAPH TYPES

**Area**

Curve

Column

Line

Scatter

SWITCH AXES

**X-AXIS**

Y-AXIS

GRID

SHOW GRID

**HIDE GRID**

Click on the graph icon to open your graph types. Make your selection to update the display.

# COMPARE GRAPH

Trend Compare

- Results  Condition  
 Customer Summary

Select a predefined filter

OR

ADD UNIT

- 632407 Freightliner M2106
- C24 Freightliner M2106
- 100 Freightliner M2106
- 101 Freightliner M2106
- 112 Freightliner M2106
- 640 Freightliner M2106

Component

ENGINE

Date

All Data

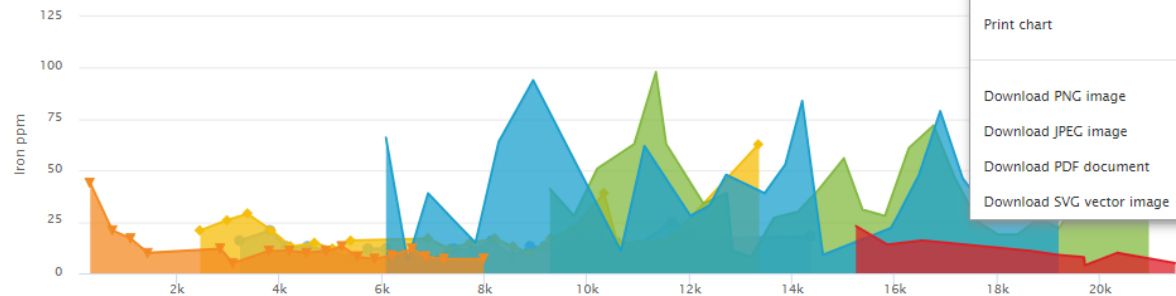
Test

Iron


## Compare Results

### Compare Make Models

Test: Iron , Component: ENGINE



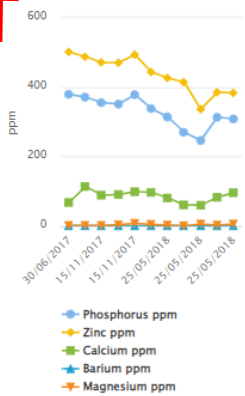
- Freightliner,M2106 - 100 - ENGINE
- Freightliner,M2106 - 101 - ENGINE
- Freightliner,M2106 - C24 - ENGINE
- Freightliner,M2106 - 640 - ENGINE
- Freightliner,M2106 - 112 - ENGINE
- Freightliner,M2106 - 632407 - ENGINE

To print your graph or export it to a different file type, click on the  icon.

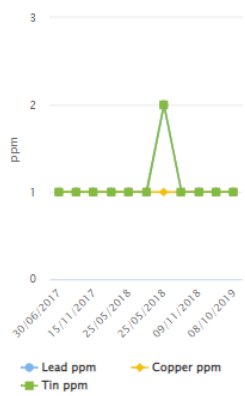
# STATIC GRAPHS

[Graph Settings](#)

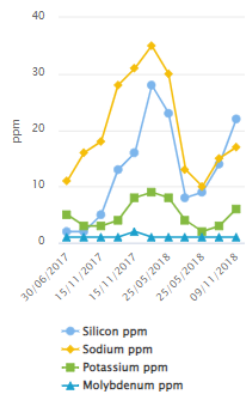
### Additives



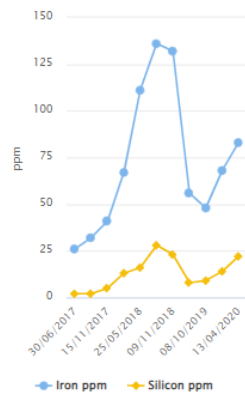
### Bearing Wear



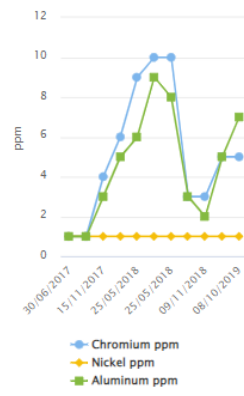
### Contaminants



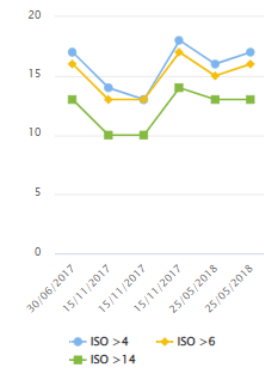
### General Wear



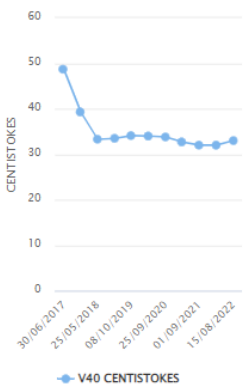
### Other Wear



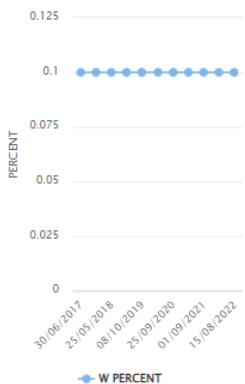
### Particle Count (ISO Cleanliness Code)



### Viscosity (V40)

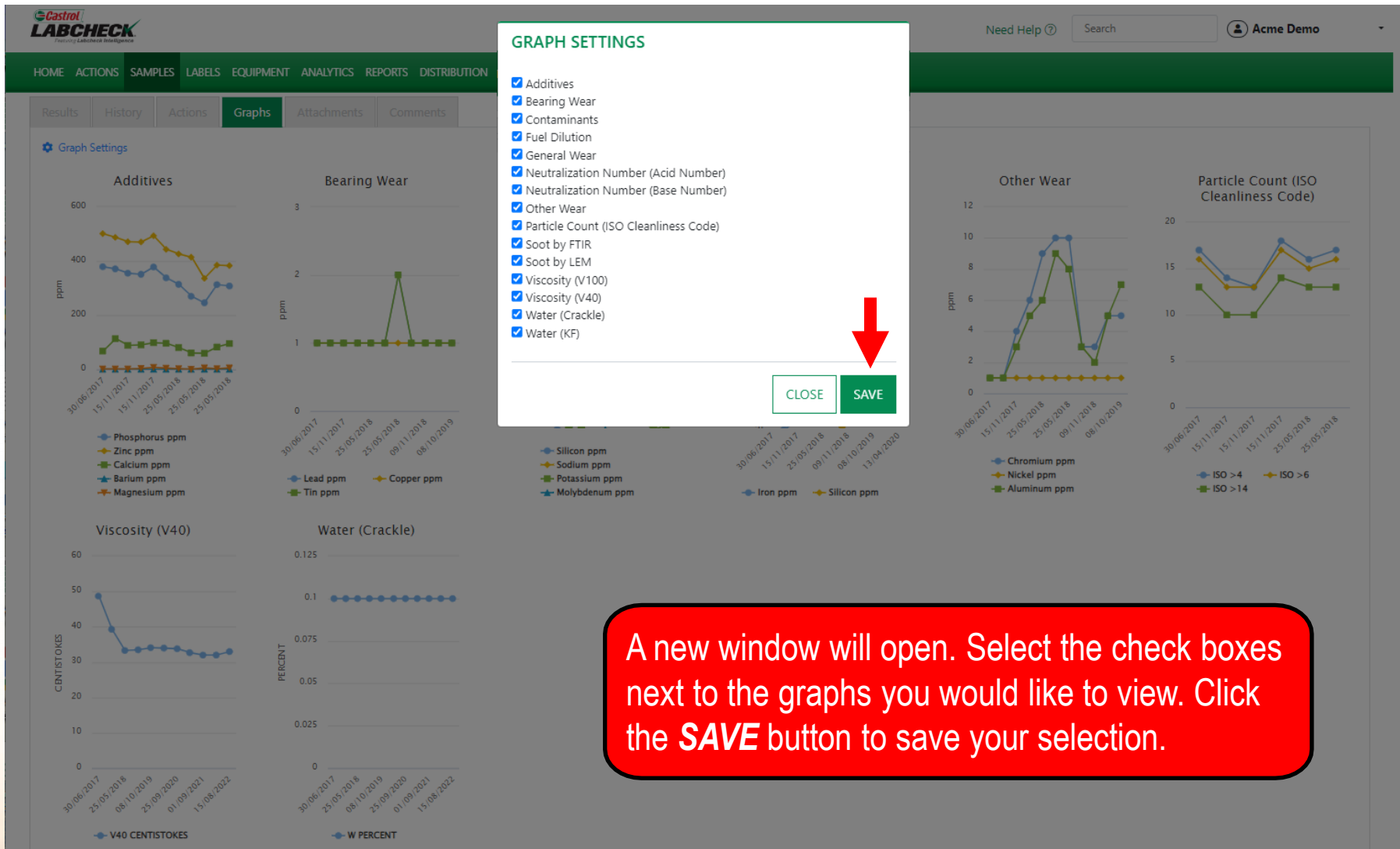


### Water (Crackle)



To view **Static Graphs**, click on the **Graphs** tab on the Sample Details page. To choose which graphs you would like to display or hide, click on the **Graph Settings** link.

# STATIC GRAPHS



The screenshot displays the Castrol LABCHECK software interface. A 'GRAPH SETTINGS' dialog box is open in the center, listing various oil analysis parameters with checkboxes. A red arrow points to the 'SAVE' button in the dialog. The background shows a dashboard with several line graphs: 'Additives', 'Bearing Wear', 'Other Wear', 'Particle Count (ISO Cleanliness Code)', 'Viscosity (V40)', and 'Water (Crackle)'. Each graph has a legend below it listing the parameters being tracked.

**GRAPH SETTINGS**

- Additives
- Bearing Wear
- Contaminants
- Fuel Dilution
- General Wear
- Neutralization Number (Acid Number)
- Neutralization Number (Base Number)
- Other Wear
- Particle Count (ISO Cleanliness Code)
- Soot by FTIR
- Soot by LEM
- Viscosity (V100)
- Viscosity (V40)
- Water (Crackle)
- Water (KF)

**Graphs and Legend:**

- Additives:** Phosphorus ppm, Zinc ppm, Calcium ppm, Barium ppm, Magnesium ppm
- Bearing Wear:** Lead ppm, Tin ppm, Copper ppm
- Other Wear:** Chromium ppm, Nickel ppm, Aluminum ppm
- Particle Count (ISO Cleanliness Code):** ISO >4, ISO >6, ISO >14
- Viscosity (V40):** V40 CENTISTOKES
- Water (Crackle):** W PERCENT
- Additional Parameters (from legend):** Silicon ppm, Sodium ppm, Potassium ppm, Molybdenum ppm, Iron ppm, Silicon ppm

A new window will open. Select the check boxes next to the graphs you would like to view. Click the **SAVE** button to save your selection.


# WIDGET GRAPHS

## Dashboard

### WELCOME

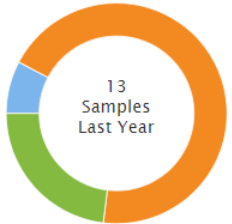
Welcome to Labcheck

Get the most out of your oil analysis program by using our brand new Management Report.



### SAMPLE STATUS

13 Samples Last Year



● In Progress ● In Transit ● Complete

### NEWS

USER UPDATE 03/23/2023  
Acme Demo added user demoabc (Demo Abc) to CUSTOMER ACME Demo Area 1

USER UPDATE 03/09/2023  
Acme Demo added user JSmith@email.com (John Smith) to CUSTOMER ACME Worksite 1

USER UPDATE 03/09/2023  
Acme Demo added user JSmith@email.com (John Smith) to CUSTOMER Acme Demo Worksite 2

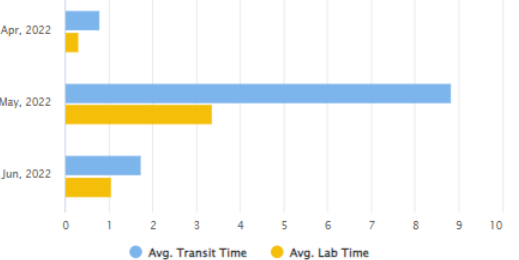
USER UPDATE 03/09/2023

### CRITICAL CONDITION

UNIT	COMPONENT	CONDITION
417037	TRANS-AUTO	Wear
310465	ENGINE	Coolant/Wear
413211	COOLING SYSTEM	Additive
212033	FRONT DIFFERENTIAL	Dirt/Wear

### TRACK SAMPLES

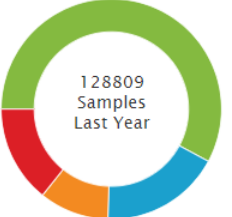
### SAMPLE TURNAROUND



● Avg. Transit Time ● Avg. Lab Time

### RECENT SAMPLES BY SEVERITY

128809 Samples Last Year



● A ● B ● C ● D

You can view additional graphs on your home tab. To view more information on these graphical widgets, see the **Widgets** quick start guide.



## **CASTROL LABCHECK SUPPORT DESK:**

Phone: **866-LABCHECK (522-2432)**

[Labchecksupport@bureauveritas.com](mailto:Labchecksupport@bureauveritas.com)

<https://www.labcheckresources.com/>

