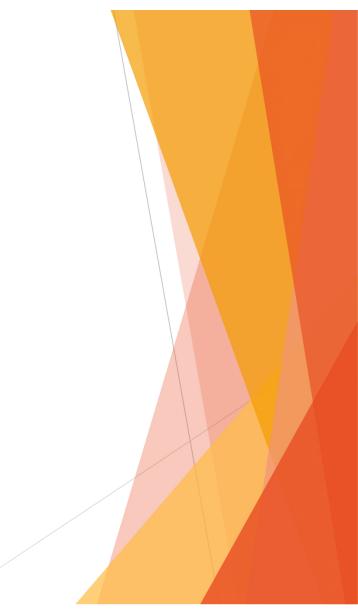


# LubeAlert® PROGRAM

David Turner, CLS, OMA-I, CLGS Erica McDonald Julio Acosta, OMA-I, MLA II, POLARIS Laboratories





## David Turner, CLS, OMA-I, CLGS

- CITGO Sr. Technical Services Representative
- BS, Chemical Engineering
- 40 Years Experience in Lubricants
- STLE Certified
  - Certified Lubrication Specialist
  - Oil Monitoring Analyst I
- NLGI Certified
  - Certified Lubricating Grease Specialist
- Active in STLE, NLGI, and ASTM



## Erica McDonald

- CITGO Lubricants Product Specialist
- BS, Integrative Biology with Minor in Chemistry
- 10 Years in the Lubricants Industry, including extensive experience at the CITGO Cicero Lab
- LubeAlert Oil Condition Monitoring Program Support



# JULIO ACOSTA / POLARIS LABORATORIES®

Technical Business Consultant for LubeAlert



**Julio Acosta** Technical Business Consultant



#### **Industry Experience**

- BS in Mechanical Engineering from University of Houston
- MBA from University of Houston
- Lubricant sales, distribution
- Mining, automotive, construction, fleet maintenance
- Field engineering and laboratory operations at BP
- Supply chain management, business analyst and account services at Shell Oil
- OMA I certified by STLE and MLA II certified by ICML



### LubeAlert<sup>®</sup> User Guide



What is LubeAlert?

What is LUBORART: "Lucificiant at the last will be used from the value of the grade then With density of nullestat delay. Lucified the constraints from a scale apparent reaction on a do not built can machine and epidemic." "Any polytomed and reactance by reply scale that Liberary reviewments - Standar or you'de or any 7% can also do do not mu displicable for matt supported that have been polytomed by the do signed data beends. - Canternal data query proceeding that have also signed data beends.

Text Packages Lote Rent makes fund analysis simple. Collect the sample, log it unline and ship in the same day to have the results local an Engines, Gaar Boxes, Transmissions, Hydraulics, and Compo

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ele Count (ASTM D7617-10) er FPM by Karl Fucher (mod. ASTM D6304C) h Fairt - Oured Cun (ASTM 03828)

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#### Managing Preventive Maintenance





# LubeAlert<sup>®</sup> Login

#### www.lubealert.com



Email Address	
Password	

FLUID CONDITION MONITORING SERVICE





### LubeAlert<sup>®</sup> Dashboard



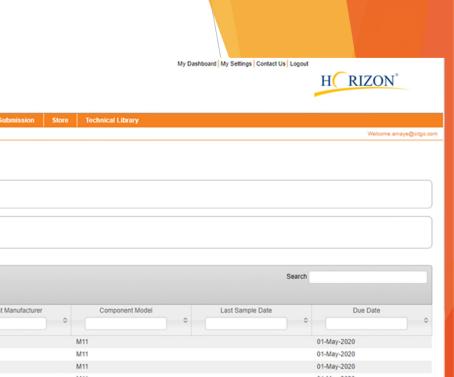
lert - Action Required	Unviewed Results	by Severity - Past 30 Days	Top Repeat Severit	ies - Last 12 Months	*	Components Due or	Overdue	~	Severity Summary Pi	ie Chart - Last Mont
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		142	WAMPLER RIDOE 3 E	4EK04079	6	MD12117069 E	1	3-Apr-2017 4		144
Shortcuts			WAMPLER RIDGE 4 E	BEN00478	5	HD02318045 E		7-Dec-2017 4		
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nviewed Sample Reports - Severities 3, 4	1: 1,033 (35%)		MARSHALL HUB C-6702		5	HD04817030 E		3-Feb-2017 4	1: 1,033 (35%)	
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			FOFLAR GAP B C	5153416	4	HD05318402 E		8-Feb-2018 4		
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156 <b>&gt;</b>	Severity Summary	Trend - Last 3 Months	rop 5 Accounts by	Sample Volume	~	Components on Ass	et Watch	e	Shipping & Processin	ng Time - Last 3 Months
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	16420 E		6-2020							
Google Play	32 E		6-2020							
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Questions? custserv@eoilreports.com Terms of Service Privacy Policy





# LubeAlert<sup>®</sup> Equipment List





			Sample Reports Manageme	ent Reports Equipment Managem	ent - Sample Submission	Store Technical Library		
🏠 > Sample	Submission							Welcome amaye@citgo.co
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	BEST CARTAGE	118 E		DIESEL ENGINE	CUMMINS	M11		01-May-2020
	BEST CARTAGE	135 E		DIESEL ENGINE	CUMMINS	M11		01-May-2020
	BEST CARTAGE	165 E		DIESEL ENGINE	CUMMINS	M11		01-May-2020
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	BEST CARTAGE	326 E		DIESEL ENGINE	CUMMINS	M11		01-May-2020
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	BEST CARTAGE	335 E		DIESEL ENGINE	CUMMINS	M11		01-May-2020
	BEST CARTAGE	337 E		DIESEL ENGINE	CUMMINS	M11		01-May-2020
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	BEST CARTAGE	40870 E		DIESEL ENGINE	CUMMINS	X15		01-May-2020
	BEST CARTAGE	40871 E		DIESEL ENGINE	CUMMINS	X15		01-May-2020
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	BEST CARTAGE	40873 E		DIESEL ENGINE	CUMMINS	X15		01-May-2020



# LubeAlert<sup>®</sup> Equipment List

		My Dashboard   L	ab Number Lookup My Settings I	Private Labels User Admin Accou	nt Admin Send Fluid Reports L	aboratories Sample N	tification Search Contact Us Logout	H RIZON
> Sample	e Reports	Sample Reports	Management Reports	Equipment Management 🔹	Sample Submission	Store Techni	cal Library	Welcome relstro@polarislabs.com
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	TECHNICAL COMPLIANCE SOLUTION		RECIPROCATING COMPRESSOR	KNIGHT		767027	4	17-Dec-2018
	TECHNICAL COMPLIANCE SOLUTION		RECIPROCATING COMPRESSOR	KNIGHT		767025	4	11-Dec-2018
	TECHNICAL COMPLIANCE SOLUTION	APC Hamilton E	NATURAL GAS ENGINE	WAUKESHA	F817G	767024	4	11-Dec-2018
	TECHNICAL COMPLIANCE SOLUTION	1 E #2	NATURAL GAS ENGINE	CATERPILLAR	3304NA	753650	10	10-Dec-2018
	TECHNICAL COMPLIANCE SOLUTION	2 C #2	COMPRESSOR	ARIEL	JG/2	753653	9	10-Dec-2018
	TECHNICAL COMPLIANCE SOLUTION	1 Johnsonburg	NATURAL GAS ENGINE	CATERPILLAR	3408TA	765438	7	07-Dec-2018
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	TECHNICAL COMPLIANCE SOLUTION	1 Trimarchi	NATURAL GAS ENGINE	CATERPILLAR	3306 TA	765440	7	28-Nov-2018

### LubeAlert<sup>®</sup> Kits





#### SUBMITTING YOUR LUBRICANT, COOLANT AND FUEL SAMPLES

#### **SAMPLE INFORMATION & COMPONENT REGISTRATION FORMS**



Lube**∆le** 

#### **Shipping Samples**

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Attach the return address label for the laboratory location nearest you to the black mailer.

- Include sample jar and sample information form, if applicable, in soft plastic envelope. (Note: the envelope has a special pouch for the sample paperwork to keep is safe from leaks during transit.)
- Ship by trackable delivery service such as UPS, FedEx or DHL.

LubeAlert.

### LubeAlert® CITGOA EZ Label



00000400000

ADVANCED MOBILE

1-877-808-3750 | www.eoilreports.com AMP | Oil/Coolant Samples Only

M

Submit

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11

LUBEALERT LAB 10910 W. SAM HOUSTON PKWY N STE 700 HOUSTON, TX 77064–9903

Send an email to:

Management

complete form) -----

them online

Apply label to sample jar

custserv@eoilreports.com to establish an online account

Log into your online account to add or edit components under Equipment

Use Sample Submission to send

sample information to the laboratory (if online access is not available, please

Ship sample to laboratory via trackable

delivery service (see address list below)

Receive results via email or access

#### ONLINE SUBMISSION INSTRUCTIONS



RETAIN FOR



Date Taken

Component ID

00000A00000

LUBEALERT LAB 7451 WINTON DRIVE P.O. BOX 68983 INDIANAPOLIS, IN 46268

LUBEALERT LAB P.O. BOX 30820 3060 CALIFORNIA AVE, STE B SALT LAKE CITY, UT 84104



LubeAlert.

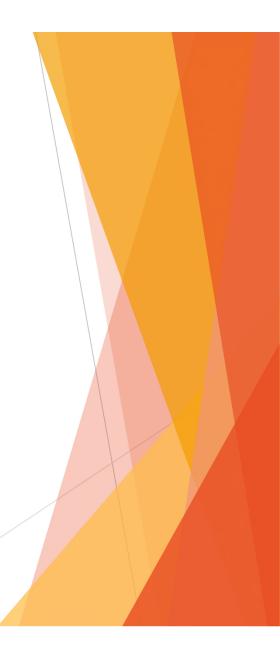
Complete this form **only** if online access is not available. Utilize HORIZON to provide the laboratory with more detailed component/sample information.

ACCOUNT IN Distributor/Sale		(/	ACCT: CITGOA)
Company Nam	e		
Contact			
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SAMPLE INFO	DRMATION	New F	luid Reference 🛛
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COMPONENT INFORMATION	For first time normalize or shanges called
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# LubeAlert<sup>®</sup> Sample Submission Online

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Component Manufacturer CUMMINS Component Model M11 Application O-T-R TRUCKING Hydraulic System Pressure 0		Fluid Time	Miles	<ul> <li>Purchase Order</li> </ul>		
Sump Capacity 11 Filter Type Filter Micron Rating 0		Component Time	Miles Calculate Fluid Time 2	▼ Misc.		@
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### Managing Preventive Maintenance

LubeAlert Analysis results are accessible via HORIZON®, a web-based data management application designed to help you manage your data and your program efficiently and effectively. Using this system, results are available almost immediately after sample processing is complete. HORIZON Management Reports stretch the user's fluid analysis dollar by providing information that can affect significant change in everyday maintenance practices by:

- Keeping sampling schedules on track
- Identifying bottlenecks in turnaround time
- Influencing future purchasing decisions
- Monitoring samples submitted online
- Graphing to quickly pinpoint trends

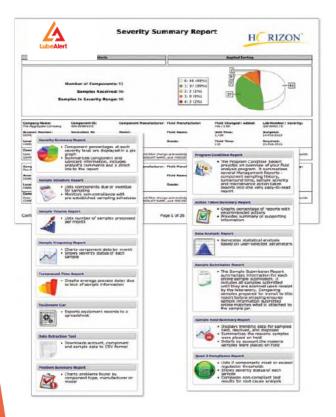
To download the latest information and resources, go online to LubeAlert.com.







### LubeAlert<sup>®</sup> Management Reports









Severity Summary Report

comments and a direct link to the report

Sample Schedule Report

Sample Frequency Report

Shows severity status of each sample

Turnaround Time Report

Sample Submission Report

· Graphs average process delay due to lack of sample information

· Summarizes information for each online sample submission

· Includes all samples submitted until they are scanned upon receipt by the laboratory

Comparing samples prepared for transit to this report before shipping ensures sample information submitted online matches what is attached to the sample Jar

· Charts component date by month

· Lists components due or overdue for sampling

· Component percentages at each severity level are displayed in a pie graph

Summarizes component and lubricant information, includes analyst's

· Monitors non-compliance with pre-established sampling schedules

















Problem Summary Report · Charts problems found by component type, manufacturer or model



**Program Condition Report** · Provides an overview of your fluid analysis program

Summarizes several Management Reports – component sampling history, turnaround time, sample severity and maintenance action taken reports into one very easy-to-read report



Action Taken Summary Report · Graphs percentage of reports with recommended actions Provides summary of supporting information



Data Analysis Report Generates statistical analysis based on user-selected parameters



Equipment List Exports equipment records to a spreadsheet



Sample Hold Summary Report

- Displays trending data for samples held, resolved, and disposed
   Summarizes the reasons samples were placed on held
   Datails by account the reasons samples were placed on hold



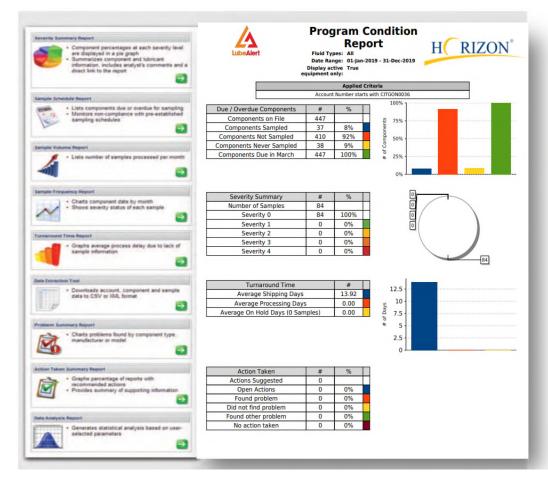
Quad Z Compliance Report

· Lists If components meet or acceed regulation thresholds





### Keep Program on Track



Example Only. No data in the system to create reports yet



### Identify Biggest Problems

## Example. No data to create

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|                       | Acc<br>Units On File<br>Number of Samples<br>Units Not Sampled<br>Management Data<br>Disassemblies<br>Secondary Maintenance<br>Severity 0<br>Severity 1<br>Severity 2<br>Severity 3<br>Severity 3<br>Severity 4<br>Disassemblies<br>Piston<br>Lubricant Information<br>Mis-Identified Lube<br>Minor Maintenance / Co<br>Diagnostics<br>Change Filter<br>Change Filter<br>Change Filter<br>Change Lube<br>Miscellaneous<br>Beginning Coolant Leak | Account Numbries Account Numbries On File EN Units On File EN Units On File EN Units On File EN Units Not Samples EN | Applied Criteria         Account Number starts with 0         Natural GAS         Units On File       54         Units On File       54         Number of Samples       89         Units Not Sampled       23         Management Data       Disassembiles       1       1½         Secondary Maintenance       1       1½         Severity 0       79       83½         Severity 1       7       8½         Severity 3       1       1½         Severity 3       1       1½         Severity 3       1       1½         Disassemblies       1       1½         Piston       1       1½         Disassemblies       1       1½         Disansemblies       0       0½         Piston       1       1½         Change Filter       1       1½         Change Filter       1       1½         Change Filter       1       1½         Miscoellaneous       3       3½ | Applied Criteria         Account Number starts with CITI540019         NATURAL GAS       UNIDEL         Units On File       54       ENGINE         Units On File       54       1         Units Not Samples       89       7         Management Data | Applied Criteria         Account Number starts with CIT1540019         Natural GAS       UNIDENTIFIED         ENGINE       ENGINE         Units On File       54         Units On File       54         Units Not Sampled       29         Secondary Maintenance       1         1       1%       0         Secondary Maintenance       1       1%         Severity 0       73       83%       74         Severity 1       7       8%       0         Severity 3       1       1%       0       0%         Severity 3       1       1%       0       0%         Severity 3       1       1%       0       0%         Severity 4       1       1%       0       0%         Disassemblies       Piston       1       1%       0       0%         Mise-Identified Lube       3       3%       0       0%       Change Filter         Diagnostics       0       0%       0       0%       Change Filter       1       1%       0       0%         Miso-Identified Lube       3       3%       0       0%       0%       0% </td <td>Applied Criteria           Account Number starts with CIT1540019           Account Number starts with CIT1540019           Natural GAS         UNIDENTIFIED<br/>ENGINE         Reciprod<br/>ENGINE           Units On File         54         15         1           Number of Samples         89         75         5           Units On File         23         5         5           Units Not Sampled         23         5         5           Disassemblies         1         1½         0         0½         0           Secondary Maintenance         1         1½         0         0½         0           Severity 0         78         89½         74         93½         50           Severity 1         7         8½         0         0½         2           Severity 3         1         1½         0         0½         0           Severity 3         1         1½         0         0½         0           Severity 3         1         1½         0         0½         0           Disassemblies         1         1½         0         0½         0           Disassemblies         0         0½         0         <td< td=""><td>Applied Criteria         Report Type:           Applied Criteria         Account Number starts with CIT540019         Report Type:           Nature starts with CIT540019         ReCiPROCATING ENGINE         ReCiPROCATING COMPRESSOR           Units On File         54         15         18           Number of Samples         89         75         52           Units On File         29         5         7           Units Not Sampled         29         5         7           Management Data              Disassemblies         1         1½         0         0½           Severity 0         73         83½         74         93½         50         96½           Severity 1         7         8½         0         0½         2         4½           Severity 3         1         1½         0         0½         0         0½           Severity 3         1         1½         0         0½         0         0½           Severity 3         1         1½         0         0½         0         0½           Severity 4         1         1½         0         0½         0         0½</td><td>Applied Criteria         Fluid Types:<br/>Date Range:<br/>Report Type:         All<br/>01-Jan-2<br/>Report Type:         Ol-Jan-2<br/>Compone           Applied Criteria         Account Number starts with CITI540019         Compression         Ol-Jan-2           Management Data         NATURAL GAS         UNIDENTIFIED         RECIPROCATING<br/>COMPRESSOR         HYDE           Units On File         54         15         18         HYDE           Units On File         54         15         18         HYDE           Number of Samples         83         75         52         4           Disassemblies         1         1½         0         0½         0           Severity 0         79         83½         74         93½         50         96½         42           Severity 1         7         8½         0         0½         0         0         0           Severity 2         1         1½         0         0½         0<!--</td--><td>Fluid Types: All<br/>Date Range:<br/>Date Range:<br/>Da</td><td>Management Data         Management Data         Management Data         Management Data           Disassemblies         1         1%         0         0%         0         0%         0           Severity 3         1         1%         0         0%         0         0%         0           Severity 4         1         1%         0         0%         0         0%         0           Disassemblies         1         1%         0         0%         0         0%         0           Management Data         1         1%         0         0%         0         0%         0           Beverity 1         7         8%         0         0%         0         0%         0           Severity 3         1         1%         0         0%         0         0%         0           Severity 4         1         1%         0         0%         0         0%         0           Disassemblies         1         1%         0         0%         0         0%         0           Severity 4         1         1%         0         0%         0         0%         0           Severity 3</td><td>Image: Problem Summary Report           Image: Problem Summary Report           Fluid Types:         All<br/>Date Range:           Of-Jan-2019 - 31-Dec-2019           Report Type:         Component Type           Applied Criteria<br/>Account Number stars with CITI540013         Problem Summary Report           Matureal GAS         Unidentified<br/>Engine         ReCiPROCATING<br/>COMPRESSION         PryDRAULIC         Diesel Engine           Units On File         54         15         18         14         12           Number of Samples         83         75         52         42         18           Units On File         11         14         12         14         12           Namagement Data         00%         00%         00%         00%         00%         00%           Disassembles         1         1%         00%         00%         00%         00%         00%         00%           Severity 0         73         83%         74         93%         50         98%         42         100%         00%           Severity 2         1         1%         0         0%  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    16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Beasersembles         1         12½         0         0½         0         0½         0           Beasersembles</td><td>Problem Summary Report           Elicit Types: All<br/>Date Range: 01-Jan-2019 - 31-Dec-2019<br/>Report Type: Component Type           Applied Criteria<br/>Account Number starts with CITIS40019           NATURAL GAS         UNIDENTIFIED<br/>RECIPROCATING<br/>COMPRESSOR         IFVDRAULIC<br/>DIESEL ENGINE         COMPRESSOR<br/>Account Number starts with CITIS40019           Units On File         NATURAL GAS         UNIDENTIFIED<br/>ENGINE         RECIPROCATING<br/>COMPRESSOR         If VDRAULIC         DIESEL ENGINE         COMPRESSOR         GAS T           Units On File         53         75         52         42         18         3           Units Net Sampled         29         5         7         3         2         0           Becentry On         73         63%         74         93%         50         9%         42         100%         1         33%         0           Beventry 2         1         1         1%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%</td><td>Problem Summary Report           Bate Range:         III           Date Range:         III           Date Range:         III           Component Type           Comparesson         Gas Tunbine           Munice of Samples         83         75         52         42         10         8           Management Data         Component Type           Comparesson         Gas Tunbine           Management Data         Comparesson         Gas Tunbine           Comparesson         Comparesson         Gas Tunbine           <th< td=""><td>Problem Summary Report           Fluid Types: All<br/>Date Range: 01-Jan-2019 - 31-Dec-2019<br/>Report Type: Component Type           Maintenance 1           Applied Citextia<br/>Account Number starts with CITI540013           Index Type: Component Type           Component Type: Component Type           Maintenance 1         NATURAL GAS         WINDENT IF ECOMPORATING<br/>Component Type         Component Type           Maintenance 1         NATURAL GAS         WINDENT IF ECOMPORATING<br/>Compression Starts with CITI540013           Maintenance 1         NATURAL GAS         WINDENT IF ECOMPORATING<br/>Compression Starts with CITI540013           Maintenance 1         NATURAL GAS         WINDENT IF ECOMPRESSON         Maintenance 1         Not Not Not Not Not Not Not Not Not Not</td></th<></td></th></td></th<></td></td></td<></td> | Applied Criteria           Account Number starts with CIT1540019           Account Number starts with CIT1540019           Natural GAS         UNIDENTIFIED<br>ENGINE         Reciprod<br>ENGINE           Units On File         54         15         1           Number of Samples         89         75         5           Units On File         23         5         5           Units Not Sampled         23         5         5           Disassemblies         1         1½         0         0½         0           Secondary Maintenance         1         1½         0         0½         0           Severity 0         78         89½         74         93½         50           Severity 1         7         8½         0         0½         2           Severity 3         1         1½         0         0½         0           Severity 3         1         1½         0         0½         0           Severity 3         1         1½         0         0½         0           Disassemblies         1         1½         0         0½         0           Disassemblies         0         0½         0 <td< td=""><td>Applied Criteria         Report Type:           Applied Criteria         Account Number starts with CIT540019         Report Type:           Nature starts with CIT540019         ReCiPROCATING ENGINE         ReCiPROCATING COMPRESSOR           Units On File         54         15         18           Number of Samples         89         75         52           Units On File         29         5         7           Units Not Sampled         29         5         7           Management Data              Disassemblies         1         1½         0         0½           Severity 0         73         83½         74         93½         50         96½           Severity 1         7         8½         0         0½         2         4½           Severity 3         1         1½         0         0½         0         0½           Severity 3         1         1½         0         0½         0         0½           Severity 3         1         1½         0         0½         0         0½           Severity 4         1         1½         0         0½         0         0½</td><td>Applied Criteria         Fluid Types:<br/>Date Range:<br/>Report Type:         All<br/>01-Jan-2<br/>Report Type:         Ol-Jan-2<br/>Compone           Applied Criteria         Account Number starts with CITI540019         Compression         Ol-Jan-2           Management Data         NATURAL GAS         UNIDENTIFIED         RECIPROCATING<br/>COMPRESSOR         HYDE           Units On File         54         15         18         HYDE           Units On File         54         15         18         HYDE           Number of Samples         83         75         52         4           Disassemblies         1         1½         0         0½         0           Severity 0         79         83½         74         93½         50         96½         42           Severity 1         7         8½         0         0½         0         0         0           Severity 2         1         1½         0         0½         0<!--</td--><td>Fluid Types: All<br/>Date Range:<br/>Date Range:<br/>Da</td><td>Management Data         Management Data         Management Data         Management Data           Disassemblies         1         1%         0         0%         0         0%         0           Severity 3         1         1%         0         0%         0         0%         0           Severity 4         1         1%         0         0%         0         0%         0           Disassemblies         1         1%         0         0%         0         0%         0           Management Data         1         1%   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Units On File         54         15         18         14         12           Number of Samples         83         75         52         42         18           Units On File         11         14         12         14         12           Namagement Data         00%         00%         00%         00%         00%         00%           Disassembles         1         1%         00%         00%         00%         00%         00%         00%           Severity 0         73         83%         74         93%         50         98%         42         100%         00%           Severity 2         1         1%         0         0%         0         0%         0         0%           Severity 3         1         1%         <th< td=""><td>Problem Summary Report           Eluid Types: All<br/>Date Range: OI-Jan-2019 - 31-Dec-2019<br/>Report Type: Component Type           Applied Criteria           Account Number starts with CIT1540019           Manage: OI-Jan-2019 - 31-Dec-2019<br/>Report Type: Component Type           Number starts with CIT1540019           Marcount Numerestarts with CIT1540019           <th cols<="" td=""><td>Image: Problem Summary Report         Fluid Types: All         Date Plange: 01-Jan-2013 - 31-Dec-2013           Image: Display Criteria         Date Plange: 01-Jan-2013 - 31-Dec-2013         Image: 01-Jan-2013 - 31-Dec-2013           Applied Criteria         Date Plange: 01-Jan-2013 - 31-Dec-2013         Image: 01-Jan-2013 - 31-Dec-2013           Account Number stats with CITI540013         Component Type: Component Type         Compression           Mature of Samples         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Beasersembles         1         12½         0         0½         0         0½         0           Beasersembles</td><td>Problem Summary Report           Elicit Types: All<br/>Date Range: 01-Jan-2019 - 31-Dec-2019<br/>Report Type: Component Type           Applied Criteria<br/>Account Number starts with CITIS40019           NATURAL GAS         UNIDENTIFIED<br/>RECIPROCATING<br/>COMPRESSOR         IFVDRAULIC<br/>DIESEL ENGINE         COMPRESSOR<br/>Account Number starts with CITIS40019           Units On File         NATURAL GAS         UNIDENTIFIED<br/>ENGINE         RECIPROCATING<br/>COMPRESSOR         If VDRAULIC         DIESEL ENGINE         COMPRESSOR         GAS T           Units On File         53         75         52         42         18         3           Units Net Sampled         29         5         7         3         2         0           Becentry On         73         63%         74         93%         50         9%         42         100%         1         33%         0           Beventry 2         1         1         1%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%</td><td>Problem Summary Report           Bate Range:         III           Date Range:         III           Date Range:         III           Component Type           Comparesson         Gas Tunbine           Munice of Samples         83         75         52         42         10         8           Management Data         Component Type           Comparesson         Gas Tunbine           Management Data         Comparesson         Gas Tunbine           Comparesson         Comparesson         Gas Tunbine           <th< td=""><td>Problem Summary Report           Fluid Types: All<br/>Date Range: 01-Jan-2019 - 31-Dec-2019<br/>Report Type: Component Type           Maintenance 1           Applied Citextia<br/>Account Number starts with CITI540013           Index Type: Component Type           Component Type: Component Type           Maintenance 1         NATURAL GAS         WINDENT IF ECOMPORATING<br/>Component Type         Component Type           Maintenance 1         NATURAL GAS         WINDENT IF ECOMPORATING<br/>Compression Starts with CITI540013           Maintenance 1         NATURAL GAS         WINDENT IF ECOMPORATING<br/>Compression Starts with CITI540013           Maintenance 1         NATURAL GAS         WINDENT IF ECOMPRESSON         Maintenance 1         Not Not Not Not Not Not Not Not Not Not</td></th<></td></th></td></th<></td></td></td<> | Applied Criteria         Report Type:           Applied Criteria         Account Number starts with CIT540019         Report Type:           Nature starts with CIT540019         ReCiPROCATING ENGINE         ReCiPROCATING COMPRESSOR           Units On File         54         15         18           Number of Samples         89         75         52           Units On File         29         5         7           Units Not Sampled         29         5         7           Management Data              Disassemblies         1         1½         0         0½           Severity 0         73         83½         74         93½         50         96½           Severity 1         7         8½         0         0½         2         4½           Severity 3         1         1½         0         0½         0         0½           Severity 3         1         1½         0         0½         0         0½           Severity 3         1         1½         0         0½         0         0½           Severity 4         1         1½         0         0½         0         0½ | Applied Criteria         Fluid Types:<br>Date Range:<br>Report Type:         All<br>01-Jan-2<br>Report Type:         Ol-Jan-2<br>Compone           Applied Criteria         Account Number starts with CITI540019         Compression         Ol-Jan-2           Management Data         NATURAL GAS         UNIDENTIFIED         RECIPROCATING<br>COMPRESSOR         HYDE           Units On File         54         15         18         HYDE           Units On File         54         15         18         HYDE           Number of Samples         83         75         52         4           Disassemblies         1         1½         0         0½         0           Severity 0         79         83½         74         93½         50         96½         42           Severity 1         7         8½         0         0½         0         0         0           Severity 2         1         1½         0         0½         0 </td <td>Fluid Types: All<br/>Date Range:<br/>Date Range:<br/>Da</td> <td>Management Data         Management Data         Management Data         Management Data           Disassemblies         1         1%         0         0%         0         0%         0           Severity 3         1         1%         0         0%         0         0%         0           Severity 4         1         1%         0         0%         0         0%         0           Disassemblies         1         1%         0         0%         0         0%         0           Management Data         1         1%         0         0%         0         0%         0           Beverity 1         7         8%         0         0%         0         0%         0           Severity 3         1         1%         0         0%         0         0%         0           Severity 4         1         1%         0         0%         0         0%         0           Disassemblies         1         1%         0         0%         0         0%         0           Severity 4         1         1%         0         0%         0         0%         0           Severity 3</td> <td>Image: Problem Summary Report           Image: Problem Summary Report           Fluid Types:         All<br/>Date Range:           Of-Jan-2019 - 31-Dec-2019           Report Type:         Component Type           Applied Criteria<br/>Account Number stars with CITI540013         Problem Summary Report           Matureal GAS         Unidentified<br/>Engine         ReCiPROCATING<br/>COMPRESSION         PryDRAULIC         Diesel Engine           Units On File         54         15         18         14         12           Number of Samples         83         75         52         42         18           Units On File         11         14         12         14         12           Namagement Data         00%         00%         00%         00%         00%         00%           Disassembles         1         1%         00%         00%         00%         00%         00%         00%           Severity 0         73         83%         74         93%         50         98%         42         100%         00%           Severity 2         1         1%         0         0%         0         0%         0         0%           Severity 3         1         1%         <th< td=""><td>Problem Summary Report           Eluid Types: All<br/>Date Range: OI-Jan-2019 - 31-Dec-2019<br/>Report Type: Component Type           Applied Criteria           Account Number starts with CIT1540019           Manage: OI-Jan-2019 - 31-Dec-2019<br/>Report Type: Component Type           Number starts with CIT1540019           Marcount Numerestarts with CIT1540019           <th cols<="" td=""><td>Image: Problem Summary Report         Fluid Types: All         Date Plange: 01-Jan-2013 - 31-Dec-2013           Image: Display Criteria         Date Plange: 01-Jan-2013 - 31-Dec-2013         Image: 01-Jan-2013 - 31-Dec-2013           Applied Criteria         Date Plange: 01-Jan-2013 - 31-Dec-2013         Image: 01-Jan-2013 - 31-Dec-2013           Account Number stats with CITI540013         Component Type: Component Type         Compression           Mature of Samples         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Units On File         54         15         16         14         12         2           Beasersembles         1         12½         0         0½         0         0½         0           Beasersembles</td><td>Problem Summary Report           Elicit Types: All<br/>Date Range: 01-Jan-2019 - 31-Dec-2019<br/>Report Type: Component Type           Applied Criteria<br/>Account Number starts with CITIS40019           NATURAL GAS         UNIDENTIFIED<br/>RECIPROCATING<br/>COMPRESSOR         IFVDRAULIC<br/>DIESEL ENGINE         COMPRESSOR<br/>Account Number starts with CITIS40019           Units On File         NATURAL GAS         UNIDENTIFIED<br/>ENGINE         RECIPROCATING<br/>COMPRESSOR         If VDRAULIC         DIESEL ENGINE         COMPRESSOR         GAS T           Units On File         53         75         52         42         18         3           Units Net Sampled         29         5         7         3         2         0           Becentry On         73         63%         74         93%         50         9%         42         100%         1         33%         0           Beventry 2         1         1         1%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%         0         0%   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Component Type           Maintenance 1         NATURAL GAS         WINDENT IF ECOMPORATING<br/>Compression Starts with CITI540013           Maintenance 1         NATURAL GAS         WINDENT IF ECOMPORATING<br/>Compression Starts with CITI540013           Maintenance 1         NATURAL GAS         WINDENT IF ECOMPRESSON         Maintenance 1         Not Not Not Not Not Not Not Not Not Not</td></th<></td></th></td></th<></td> | Fluid Types: All<br>Date Range:<br>Date Range:<br>Da | Management Data         Management Data         Management Data         Management Data           Disassemblies         1         1%         0         0%         0         0%         0           Severity 3         1         1%         0         0%         0         0%         0           Severity 4         1         1%         0         0%         0         0%         0           Disassemblies         1         1%         0         0%         0         0%         0           Management Data         1         1%         0         0%         0         0%         0           Beverity 1         7         8%         0         0%         0         0%         0           Severity 3         1         1%         0         0%         0         0%         0           Severity 4         1         1%         0         0%         0         0%         0           Disassemblies         1         1%         0         0%         0         0%         0           Severity 4         1         1%         0         0%         0         0%         0           Severity 3 | Image: Problem Summary Report           Image: Problem Summary Report           Fluid Types:         All<br>Date Range:           Of-Jan-2019 - 31-Dec-2019           Report Type:         Component Type           Applied Criteria<br>Account Number stars with CITI540013         Problem Summary Report           Matureal GAS         Unidentified<br>Engine         ReCiPROCATING<br>COMPRESSION         PryDRAULIC         Diesel Engine           Units On File         54         15         18         14         12           Number of Samples         83         75         52         42         18           Units On File         11         14         12         14         12           Namagement Data         00%         00%         00%         00%         00%         00%           Disassembles         1         1%         00%         00%         00%         00%         00%         00%           Severity 0         73         83%         74         93%         50         98%         42         100%         00%           Severity 2         1         1%         0         0%         0         0%         0         0%           Severity 3         1         1% <th< td=""><td>Problem Summary Report           Eluid Types: All<br/>Date Range: OI-Jan-2019 - 31-Dec-2019<br/>Report Type: Component Type           Applied Criteria           Account Number starts with CIT1540019           Manage: OI-Jan-2019 - 31-Dec-2019<br/>Report Type: Component Type   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LubeAlert<sup>®</sup> Mobile App

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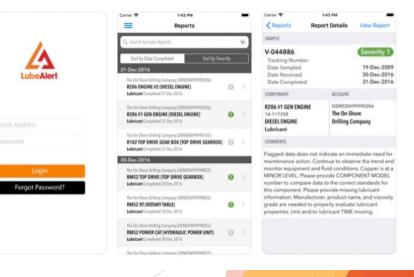
> Take Action. Anytime. Anywhere.

Save five minutes per sample with electronic submission and report alerts



CITGO LubeAlert Powered by HORIZON







### **Maintenance Tracking**

#### Monitor Maintenance Services, Repairs and Rebuilds in HORIZON<sup>®</sup>

- See elevated wear particles as a result of break-in wear of new or rebuilt components
- Confirm your maintenance action corrected problem of high severity trending
- Quickly associate how oil changes impact testing results

1		Samp	le Inform	nation					Co	rrosi	on Me	tals	(pr	om)			ninants om)	Cor	rosion (pp		itors	Carrie (ppn	er Salt n/10)
Sample #	Date Sampled	Date Received	Coolant Time	unit Time	Coolant Change	SCA	Filter Change	Iron	Aluminum	Copper	Lead	Tin	Silver	Zinc	Titanium	Calcium	Magnesium	Silicon	Phosphates	Boron	Molybdenum	Sodium	Potassium
1	05-Dec-2014 1	5-Dec-201	4		Unk		Unk	55	2	2	29	8	0	11		2	0	76	2542	187	315	105	26
	05-Jan-2015 S	ervice / Pl	4		Yes		Yes							Luke S.							113	8	
2	18-May-2015 22	2-May-201	5		Unk		Unk	50	2	3	27	7	0	15		1	0	51	2186	181	265	100	26
	02-jun-2015 S	ervice / Pl	4		Yes		Yes							Luke S.							128	9	
3	28-Oct-2015 02	2-Nov-201	5		Unk		Unk	0	0	0	0	0	0	0		2	0	14	77	4	575	373	7
	15-Mar-2016 S	ervice / Pl	4		Yes		Yes							Poe D.							144	1	
4		8-Oct-201			Unk	_	Unk	50	2	19	34	9	0	12		1	0	36	1916	172			24
		ervice / Pl			Yes		Yes			-				Poe D.							153		
5	27-Mar-2017 3	0-Mar-201	7		Unk		Unk	46	2	20	27	7	0	10		0	0	36	1809	163	169	91	23
									1	/isua	Test	ing											
#	Foam		Cold	or		0	il			F	uel				agne				agnetic			Odor	
1	None		Clear G		1	No					lone				None			No			_	None	
2	None		Clear G	reen		No	ne			N	lone				None	e		No	ne			None	
3	None	0	lear Red	Orange		No	ne			N	lone				None			No	ne			None	
4	None		cloudy Dar			No	ne			N	lone				None	9		No	ne			None	
5	None		Very Cloue			No	ne			N	lone				None	e		No	ne			None	
	1		Grave	20									_		_		-			_			
-		-		Antif	reeze	*	_	_			Test otal	ing	-		_	5	pecific	- T				Carbo	xylic
#	Freeze Poin (°F)		Point (°F)	Per	cent %)		W Ho		5	Hai	dnes	s		Nitrit (ppm			ductan (null)		SCA N	umbe		Aci Pass /	id
1	-21		222	4	15		9.				5			656 - S	-	-	3230	-	1	.7	-		
	05-Jan-2015 S	iervice / Pl	м											Drain &	refi	with St	0/50				1		
2	-23		223	4	16		9.	7			2			873 - 5	trip		3040		1	.8			_
	02-Jun-2015 S	ervice / Pl	м								1	Drain	an	d flush.	Swit	ched to	OAT cool	ant.			1		
3	-38		226	5	2		8	6			5			594 - S	trip		3170		2.	.4			_
	15-Mar-2016 5	ervice / Pl	н									Dra	in, I	Flush, R	cfill	convent	ional 50/	50					
4	-23	1	223	4	16		9.	6			2			544 - S	trip		2660		1	.2			
	26-Oct-2016	iervice / Pl	м										D	rain, Fl	ush, I	Refilled	50-50						
5	-23		223	4	16		8	7			0			547 - S	trip		3220		1	1			

3 4 Maintenance history will appear in black on future reports. Test results and

maintenance actions will sort themselves into chronological order.



#### POLARIS LABORATORIES®: YOUR TRUSTED PARTNER





#### INNOVATIVE TECHNOLOGY SOLUTIONS

Manage your fluid analysis program through online sample submission, mobile app, maintenance tracking feature, data alignment and more.

#### ADVANCED CONSULTING

Our Technical Business Consultants have more than 30 years of proven results and experience in the fluid analysis, maintenance and field service industries.



#### COMPREHENSIVE PARTNER

We are invested in the success of our customers' fluid analysis program and committed to providing accurate results and maintenance recommendations.

#### SOLUTION FOCUSED

We provide you the tools to drill down into the details of your test results and identify solutions for your equipment's maintenance and reliability.

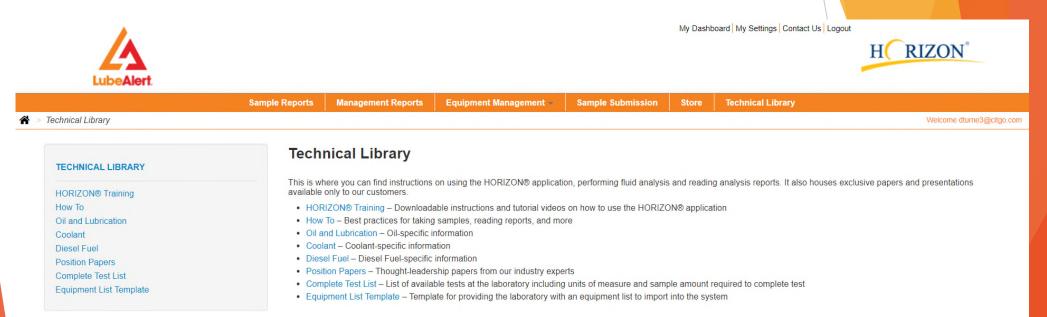


#### PROVEN PROCESS

PROVEN IMPACT: Better reporting and benchmarking PROVEN UPTIME: Less unscheduled maintenance PROVEN SAVINGS: Improve ROI and lower maintenance costs







#### Questions? custserv@eoilreports.com Terms of Service Privacy Policy



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LubeAlert.	Sample Reports Manager	ment Reports Equipment Management 👻	Sample Submission	Store Technical Library	
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TECHNICAL LIBRARY	HORIZON®	Training			
HORIZON® Training How To Oil and Lubrication Coolant Diesel Fuel	HORIZON® App • Mobile Sample S • HORIZON® App	ructional PDFs or watch videos to familiarize your Submission – (PDF) (Video 3:46) – How to submit p Notifications – (PDF) – Adjust push notification s on Mobile Devices – (PDF: English   Nederlands )	sample information from the F settings on a mobile device	HORIZON® App	
Position Papers Complete Test List Equipment List Template	<ul><li>The Dashboard</li><li>Selecting, Sortin</li></ul>	ation and Password Reset – (PDF: English   Ned – (PDF: English   Nederlands) (Video 4:37) – A d ng, and Filtering Video – (Video 2:47) – Tips on fin ettings – (Video 8:30) – Customize appearance ar	escription of the features locate ding and selecting items in HC	ed on the Dashboard	en password
	<ul><li>Editing Equipme</li><li>Transferring Equ</li></ul>	ement ent – (PDF: English   Nederlands) (Video: English ent – (Video 4:51) – Modify the information about ( uipment – (PDF) (Video 2:43) – Move component: acking – (PDF) – Add maintenance events to com	existing components from one account to another	ionents	
	<ul><li>Online Sample S</li><li>Optimize Sample</li></ul>	s rders – (Video 3:09) – Create printable PDFs with Submission – (PDF: English   Nederlands) (Video le Processing – (PDF) – Techniques to speed up a sion Management – (Video 3:46) – Edit data on s	English   Español) – How to s administrative work when subm	ubmit sample information online	

### LubeAlert® Technical Library / Training

#### Sample Reports

- Sample Report Delivery (PDF) (Video 5:34) Set up subscriptions for sample reports
- Finding a Sample Report (Video 4:27) Multiple ways of finding a sample report
- Reading a Sample Report (PDF: English | Nederlands) (Video 9:50) How to understand the information and features of a sample report
- Sample Report Management (PDF) How to use online sample report features
- Submitting Actions Taken (Video 4:19) Send maintenance actions and feedback to the lab staff

#### Management Reports

- Management Report Overview (PDF) (Video 5:04) A description about the management report features
- Severity Summary Report (PDF) (Video 5:04) Identify the equipment that need immediate maintenance
- Sample Schedule Report (PDF) (Video 2:57) Find components due or overdue for sampling
- Sample Volume Report (Video 3:07) Quantify sample volume per month
- Sample Frequency Report (Video 4:53) Chart sample results by component and severity
- Turnaround Time Report (Video 4:40) Examine how quickly samples are shipped and tested
- Equipment List Downloads (Video 5:11) Extract a CSV file with component information
- Data Extraction Tool (PDF) (Video 3:47) Download raw data from your sample results
- Problem Summary Report (PDF) (Video 8:54) Identify problems by equipment type, manufacturer, or model
- Program Condition Report (Video 4:01) A summary of your oil analysis program
- Data Analysis Report (Video 4:10) Run statistics on test result values
- Sample Submission Report (Video 3:09) Extract a list of samples submitted online

#### Videos

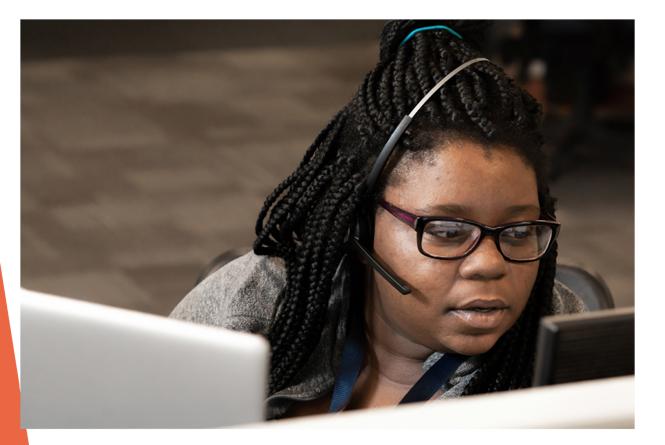
- Part 1: Introduction to HORIZON® (Video 56:33) Introductory training for new HORIZON® users, this course will teach you how to track your sample's progress through our laboratory, view your reports online, configure your account settings, and set or change subscription options.
- Part 2: Simplify Equipment and Sample Management with HORIZON® (Video 44:45) This course teaches core skills for daily HORIZON® users, including adding and editing equipment lists, submitting and editing sample information online, placing specific equipment on watch, and using the interactive online sample reports.
- Part 3: HORIZON® Management Reports (Video 52:34) Unlock the true power of a managed fluid analysis program with HORIZON® Management Reports. These reports will help you pinpoint, track, and resolve issues- decreasing maintenance costs and equipment downtime.

#### Questions? custserv@eoilreports.com Terms of Service Privacy Policy





### **Customer Service Contacts**







# Questions | Discussion

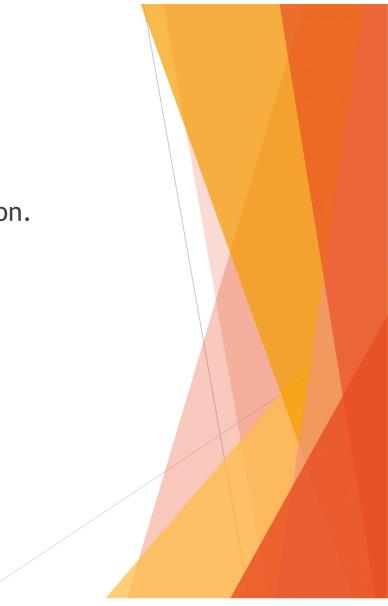






### Questions

Please post your questions using the Q&A function.



### How to Contact CITGO

Lubes Answer Line

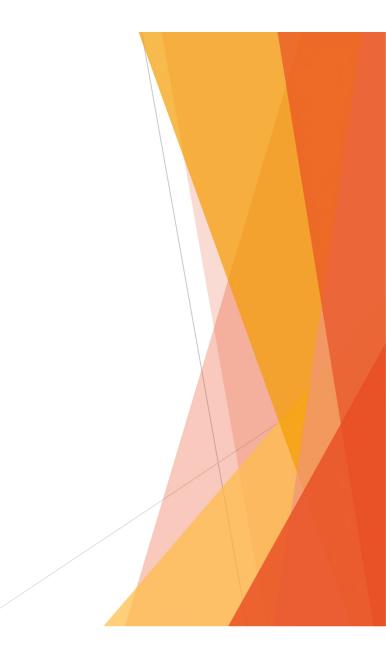
800-248-4684

▶8:00 AM - 12:00 PM, 1:00 PM - 5:00 PM CT

Monday through Thursday

8:00 AM - 12:00 PM, 1:00 PM - 4:30 PM CT
Friday

lubeshelp@citgo.com



### **Future Webinars**

- September 17, 2021 Sales to Heavy Duty Fleet Prospects
- October 1, 2021 Stationary Natural Gas Engine Oils



# **THANK YOU!**



