HORIZON®

How to Read an Oil Report

These instructions will walk you through how to read your sample report, a definition of what each section means and how to interpret the information.

Sample Information and Result Summary

Open a sample report in HORIZON® using one of the methods in the "Find a Sample" instructions. The top of the report has all of the information you need to take action on the results.

1. Severity Scale

The overall sample severity is a color-coded scale to help you assess the internal conditions of the equipment at a glance. The color-coded scale ranges from 0-4 and is based on comments, not individual test results.

SEVERITY 0 - All test parameters including wear metals are within normal limits.

SEVERITY 1 - Test parameters and wear metals are within normal limits but one or more are slightly out of limits but not yet abnormal. Continue to monitor for changes in upward trends with wear and changes with the fluid properties. In the Data Analyst comments, language used for severity 1 is MINOR.

SEVERITY 2 - Test parameters and wear metals are within lower levels of abnormal limits with one or more that are increasingly out of limits. This level of severity brings the oil and equipment into a state of closer monitoring for wear, contamination and/or changes with the fluid properties. In the Data Analyst comments, language used for severity 2 is MODERATE.

SEVERITY 3 - Test parameters and wear metals are within higher levels of abnormal limits with several or more that are increasingly out of limits. This level of severity brings the oil and equipment into a higher state of closer monitoring and suggested maintenance action(s). In the Data Analyst comments, language used for severity 3 is SIGNIFICANT.

SEVERITY 4 - Test parameters and wear metals are within much higher levels of abnormal limits with several or more that are increasingly out of limits. This level of severity brings the oil and equipment into a highest state of monitoring and suggested maintenance action(s). In the Data Analyst comments, language used for severity 4 is SEVERE.

Lubricant Analysis Report
North America: +1-877-808-3750

0	1	2	3	4
NORMAL		ABNORMAL		CRITICAL

Overall report severity based on comments.

Account Information	Component Information	Sample Information
Account Number: DEMO01-0001-0053	Serial #: 404-2010-01 E	Tracking Number: 79101P03489
Company Name: The Aggregate Company	Model #: CS53	Lab Number: Q-075718
Contact: John The Aggregate Company	Component Type: DIESEL ENGINE	Lab Location: Indianapolis
Address: 123 The Aggregate Company Street COLCHESTER, IL 62326 US	Manufacturer: JOHN DEERE Model: 824K Application: QUARRY	Data Analyst: KRM Sampled: 27-Mar-2018 Received: 30-Mar-2018
Phone Number: 555-555-5555	Sump Capacity: 10 gal	Completed: 31-Mar-2018

Filter Information	Miscellaneous Information	Product Information
Filter Type: FULLFLOW Micron Rating: 15		Product Manufacturer: CONOCO Product Name: FLEET SUPREME EC ENGINE OIL Viscosity Grade: SAE 15W40

Comments	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. FUEL DILUTION is at a MINOR LEVEL. FUEL DILUTION possibly caused by excessive idling; Lubricant and filter change acknowledged.

2. Information Summary

This area contains information about the account, component, sample, filter, product (fluid) and miscellaneous information. Providing this information is vital for data analysts to correctly apply the specific flagging limits for your equipment.

Filling in miscellaneous information is not required when submitting the sample. Examples of miscellaneous information can include the time the sample was taken or the initials of the person taking the sample.

3. Comments

This section includes the analysis of the test results, including maintenance recommendations and feedback from our data analysis team. These comments, in conjunction with individual test results, determine the overall severity of the report.

Test Results

The numerical test results are included in the sample report. Results from past samples can either be displayed above or below the current results. The orientation of the report results can be controlled in your user settings.

4. Elemental Analysis
The elemental analysis data will detect wear particles, contaminants, multi-source metals and additive metals.

5. Sample Information
This area contains information about the sample to be considered by the data analyst (date sampled, date received, lube time, unit time, lube change, lube added and filter change).

| Sample # | Wear Metals (ppm) | | | | | | | | | | Contaminant Metals (ppm) | | | Multi-Source Metals (ppm) | | | | | | Additive Metals (ppm) | | | | |
	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
BL	1	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	1	0	1	0	160	0
12	14	0	0	0	2	0	0	0	0	0	3	0	0	1	1	1	0	0	3	12	2459	0	1044	1201
13	4	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	7	2132	0	1056	1095
14	17	0	0	0	1	0	0	0	0	0	3	0	1	0	0	2	0	0	2	5	2227	0	921	1103
15	18	0	0	1	1	0	1	0	0	0	2	1	0	0	0	0	0	0	2	7	2280	0	956	1100
08-Feb-2018	Repair			1000 HR																				
16	8	0	0	0	2	1	0	0	0	0		0	0	0	0	0	0	0	2	7	2141	0	910	10

| Sample # | Sample Information | | | | | | | Contaminants | | | Fluid Properties | | | | | |
| | Date Sampled | Date Received | Lube Time | Unit Time | Lube Change | Lube Added | Filter Change | Fuel Dilution | Soot | Water | Viscosity 40°C | Viscosity 100 °C | Acid Number | Base No. D4739 | Oxidation | Nitration |
			h	h		gal		% Vol	% Vol	% Vol	cSt	cSt	mg KOH/g	mg KOH/g	abs/cm	abs/0.1 mm
BL	22-Feb-2015	03-Mar-2015			Unk		Unk			<.1 - Hotplate	62.6		2.73			
12	28-Oct-2017	03-Nov-2017	252	1500	Yes		Yes	3.5 - GC	0.1 - E2412	<.1 - FTIR		13.0				
13	11-Nov-2017	15-Nov-2017	100	1600	No			<1 - GC	<.1 - E2412	<.1 - FTIR		13.7				
14	04-Dec-2017	09-Dec-2017	251	1751	Yes			4.1 - GC	0.2 - E2412	<.1 - FTIR		13.1				
15	01-Feb-2018	07-Feb-2018	249	2000	Yes		Yes	2.8 - GC	<.1 - E2412	<.1 - FTIR		13.1				
	08-Feb-2018	Repair		1000	Yes		No	Ryan						WO1235		
16	27-Mar-2018	30-Mar-2018	256	2256	Yes		Yes	2.0 - GC	<.1 - E2412	<.1 - FTIR		13.2				

6. Additional Tests
Additional tests will be performed based on the fluid type and test package ordered.

8. Links to Additional Sources
Test fields with blue font contain a hyperlink to a description and additional information about the test, including possible sources.

7. Flagged Results
Results are evaluated individually and are flagged with color-coding that aligns with the severity of the scale at the top of the report.

9. Baseline Samples and Maintenance Tracking
When a baseline sample is submitted for an account, it appears at the top of the report for components using that lubricant. Maintenance events tracked in HORIZON will also appear in the reports, but will be slotted based on date.

| Historical Comments | 12 | Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. FUEL DILUTION is at a MODERATE LEVEL; FUEL DILUTION possibly caused by excessive idling; Lubricant and filter change acknowledged. Report has been regenerated. |
	13	Data indicates no abnormal findings. Resample at normal interval.
	14	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. FUEL DILUTION is at a MODERATE LEVEL; FUEL DILUTION possibly caused by excessive idling; Iron is at a MINOR LEVEL. IRON SOURCES in engines can be cylinder liners, iron pistons, hardened steel camshafts, crankshafts, gears, hardened rocker arms, valve bridges,alloyed steel cam follower rollers, etc. Lubricant and filter change acknowledged.
	15	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. FUEL DILUTION is at a MINOR LEVEL. FUEL DILUTION possibly caused by excessive idling; Lubricant and filter change acknowledged.

10. Historical Comments

Comments from previous sample reports are included along with the severity of the overall report.

| Posted Messages | 01-Apr-2019 | John Doe | Use kidney loop filter and re-sample. |

11. Messages

Messages about the sample will be posted below the comments with a date stamp and the user who posted it.
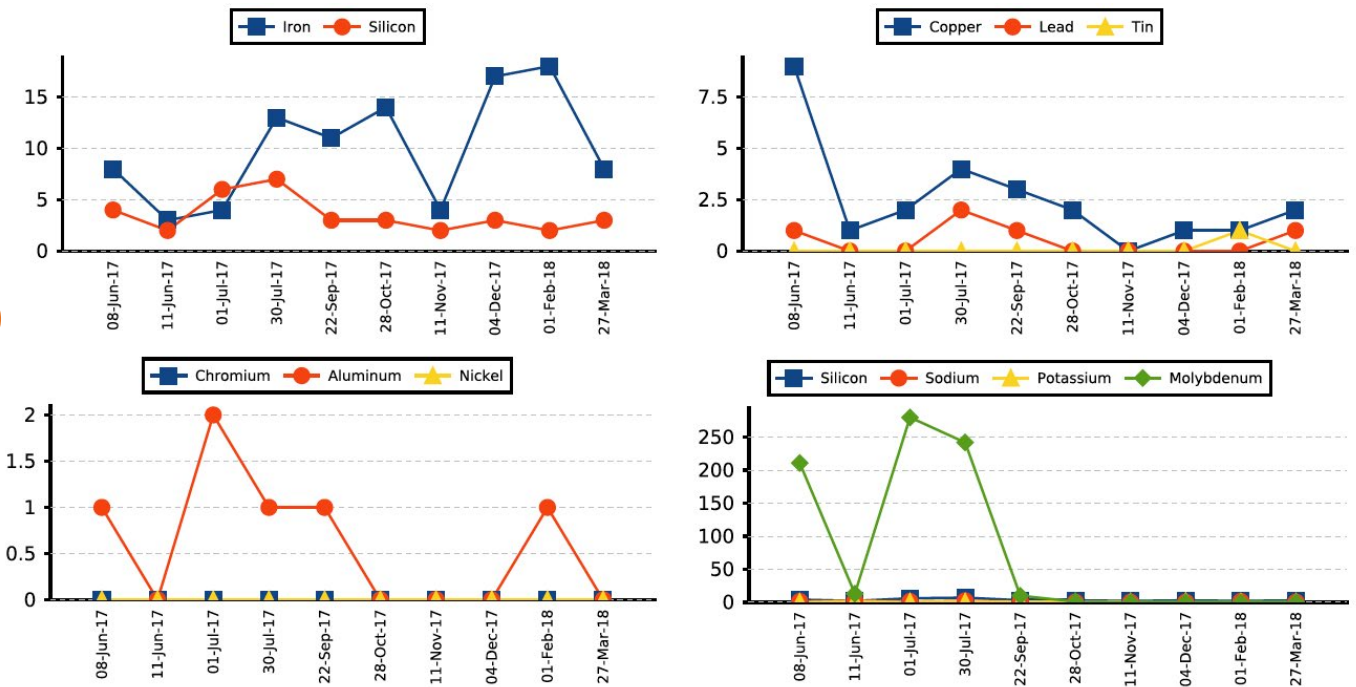
12. Sample Graphs

The graphs that display on the report can be turned on and off using the "Sample Report Display" settings under "My Settings" in your HORIZON account.

If you have additional questions, the Technical Library in HORIZON includes how-to-guides, videos and other resources to help you. You can also contact us at **custserv@eoilreports.com.**