

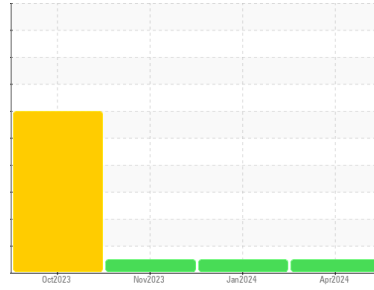


# OIL ANALYSIS REPORT



Area  
**Bridgewater**  
 Machine ID  
**CATERPILLAR 5148**  
 Component  
**Diesel Engine**  
 Fluid  
**GIBRALTAR 15W/40 SUPER S-3 LX (--- QTS)**

Sample Rating Trend



**NORMAL**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0864831</b>	WC0875296	WC0875308
Sample Date	Client Info		<b>06 Apr 2024</b>	12 Jan 2024	30 Nov 2023
Machine Age	hrs	Client Info	<b>13413</b>	500	12378
Oil Age	hrs	Client Info	<b>250</b>	0	129
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>8</b>	13	15
Chromium	ppm	ASTM D5185m >20	<b>0</b>	1	1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>&lt;1</b>	7	19
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>0</b>	<1	<1
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>4</b>	3	7
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 66	<b>62</b>	58	57
Manganese	ppm	ASTM D5185m	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m 1000	<b>980</b>	951	868
Calcium	ppm	ASTM D5185m 1050	<b>1256</b>	1156	1077
Phosphorus	ppm	ASTM D5185m 1150	<b>1121</b>	1028	1001
Zinc	ppm	ASTM D5185m 1270	<b>1282</b>	1290	1218
Sulfur	ppm	ASTM D5185m	<b>3873</b>	3019	3025

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>2</b>	5	6
Sodium	ppm	ASTM D5185m	<b>2</b>	1	<1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	2

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.4</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.2</b>	7.4	6.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.4</b>	18.9	18.2

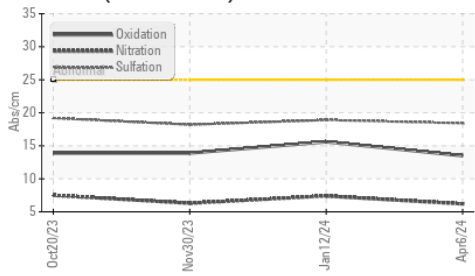
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.5</b>	15.6	13.9
Base Number (BN)	mg KOH/g	ASTM D2896 10.1	<b>8.5</b>	8.28	10.19

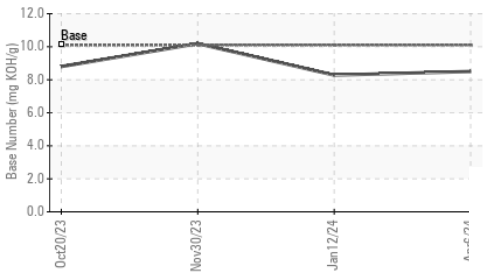


# OIL ANALYSIS REPORT

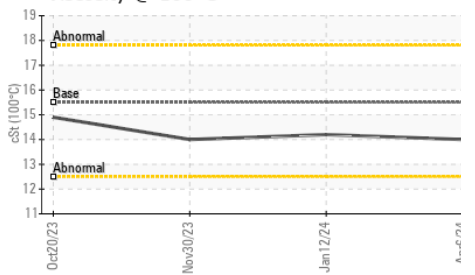
FT-IR (Direct Trend)



Base Number



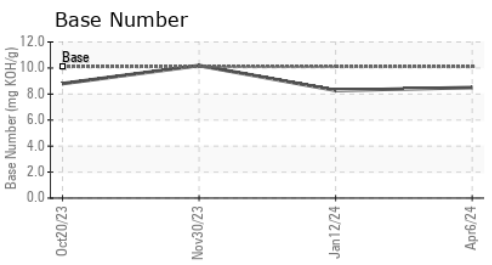
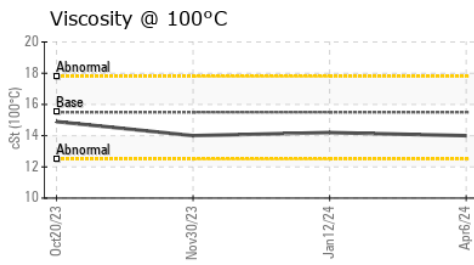
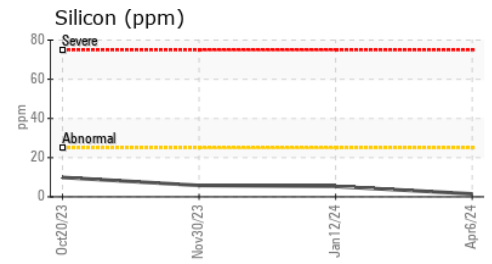
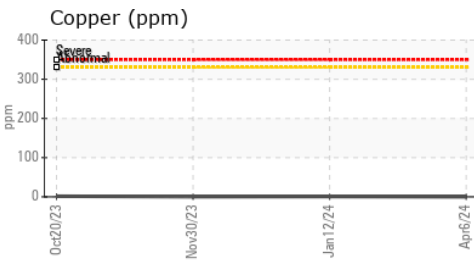
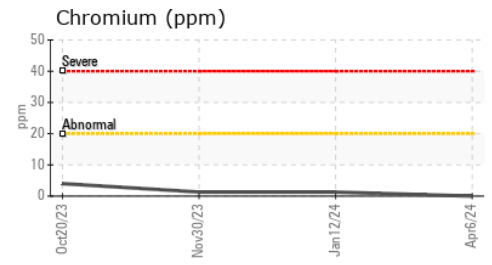
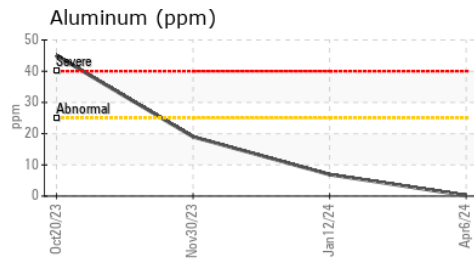
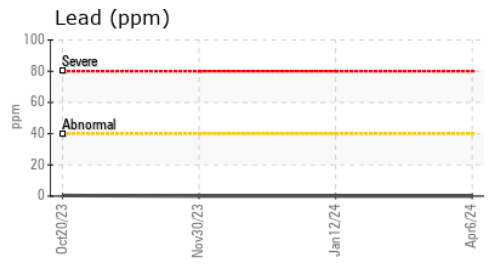
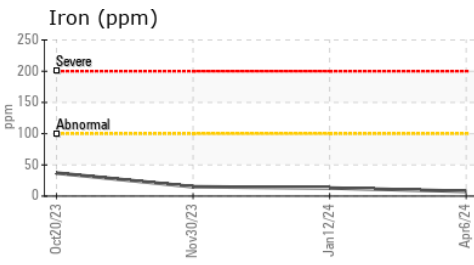
Viscosity @ 100°C



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.5	14.0	14.2

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0864831      **Received** : 12 Apr 2024  
**Lab Number** : 06146982      **Tested** : 15 Apr 2024  
**Unique Number** : 10977060      **Diagnosed** : 15 Apr 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**INTERSTATE WASTE-BRIDGEWATER**  
 15 POLHEMUS LANE  
 BRIDGEWATER, NJ  
 US 08807  
 Contact: PABLO CHARDON  
 PChardon@interstatewaste.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)