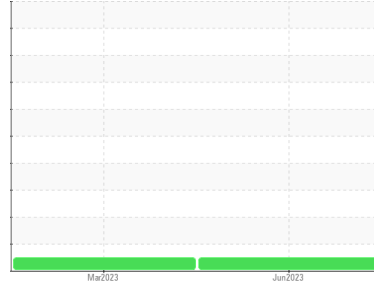


# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**[450159496]**  
Machine Id  
**CD-71001A**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

### 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	history 1	history 2
Sample Number	Client Info			<b>PC</b>	PC0052214	---
Sample Date	Client Info			<b>09 Jun 2023</b>	07 Mar 2023	---
Machine Age	hrs	Client Info		<b>0</b>	0	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed	Client Info			<b>N/A</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

CONTAMINATION		method	limit/base	current	history 1	history 2
Fuel	WC Method	>5		<b>&lt;1.0</b>	<1.0	---
Glycol	WC Method			<b>NEG</b>	NEG	---

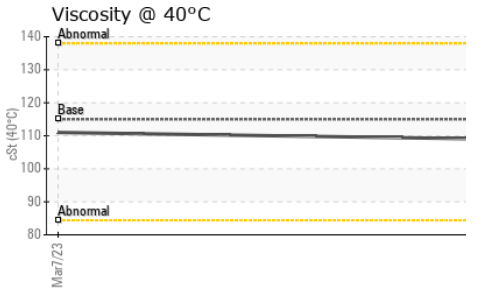
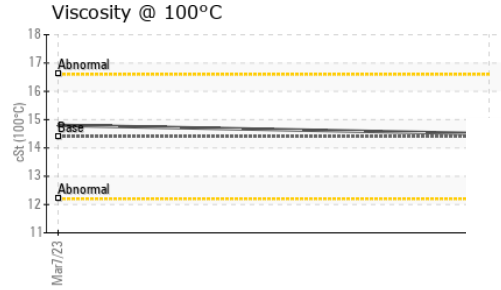
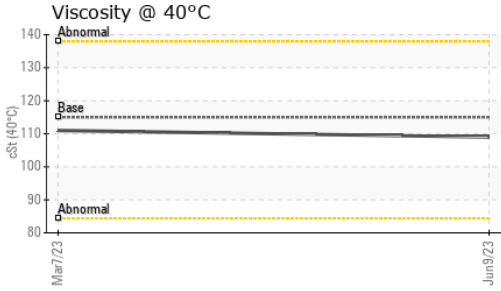
WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185(m)	>100	<b>3</b>	3	---
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	---
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	<1	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	---
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	---
Aluminum	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	1	---
Lead	ppm	ASTM D5185(m)	>40	<b>2</b>	2	---
Copper	ppm	ASTM D5185(m)	>330	<b>6</b>	6	---
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	---
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	---

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185(m)	250	<b>1</b>	2	---
Barium	ppm	ASTM D5185(m)	10	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185(m)	100	<b>53</b>	57	---
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185(m)	450	<b>906</b>	939	---
Calcium	ppm	ASTM D5185(m)	3000	<b>969</b>	1051	---
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1010</b>	1069	---
Zinc	ppm	ASTM D5185(m)	1350	<b>1101</b>	1124	---
Sulfur	ppm	ASTM D5185(m)	4250	<b>2474</b>	2669	---
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	---

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	4	---
Sodium	ppm	ASTM D5185(m)	>158	<b>1</b>	1	---
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	---

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>4.4</b>	4.6	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>17.4</b>	20.3	---

# OIL ANALYSIS REPORT

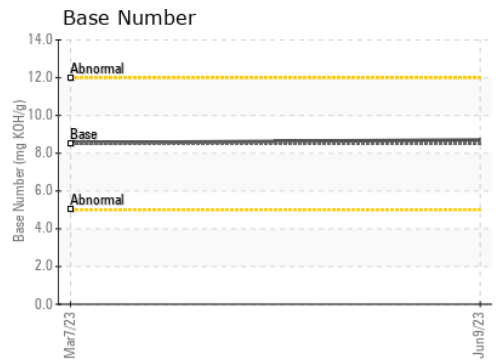
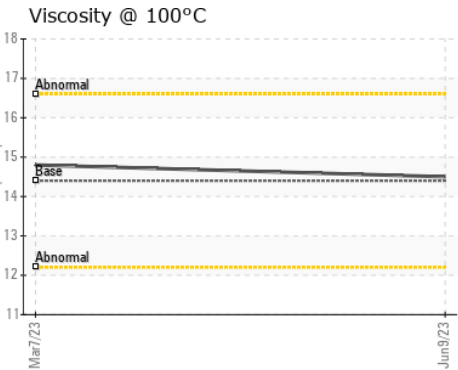
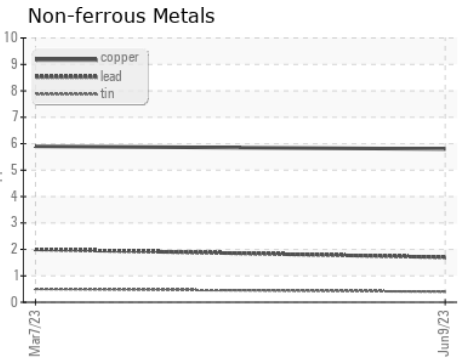
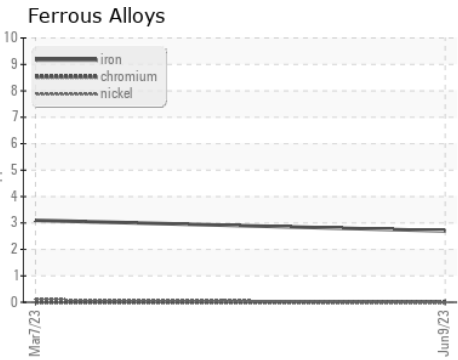


FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>13.0</b>	13.0	---
Base Number (BN)	mg KOH/g	ASTM D2896*	8.5	<b>8.71</b>	8.55	---

VISUAL		method	limit/base	current	history 1	history 2
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	---
Free Water	scalar	Visual*		<b>NEG</b>	NEG	---

FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279(m)	115	<b>109</b>	111	---
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	<b>14.5</b>	14.8	---
Viscosity Index (VI)	Scale	ASTM D2270*	126	<b>136</b>	137	---

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC **Received** : 06 Jul 2023  
**Lab Number** : **02568183** **Diagnosed** : 07 Jul 2023  
**Unique Number** : 5605229 **Diagnostician** : Kevin Marson  
**Test Package** : MAR 2 ( Additional Tests: KV40, VI )

**Suncor - Terra Nova Projects**  
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 CA A1C 1B6  
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 dbadcock@suncor.com  
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 F: (709)724-2784

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.