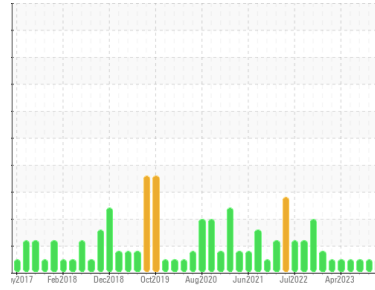




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**NOVA 157**

Component  
**Rear Diesel Engine**

Fluid  
**ESSO XD-3 EXTRA 15W40 (--- GAL)**

## 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 condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0866602</b>	WC0866564	WC0816505
Sample Date	Client Info		<b>12 Dec 2023</b>	24 Oct 2023	20 Jul 2023
Machine Age	kms	Client Info	<b>0</b>	0	0
Oil Age	kms	Client Info	<b>9115</b>	9570	9416
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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 D5185(m)	>75	<b>40</b>	54	42
Chromium	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	2	1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>15	<b>3</b>	5	3
Lead	ppm	ASTM D5185(m)	>25	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>100	<b>1</b>	2	1
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		<b>83</b>	64	57
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)		<b>&lt;1</b>	2	9
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)		<b>18</b>	34	114
Calcium	ppm	ASTM D5185(m)	3780	<b>2266</b>	2261	2176
Phosphorus	ppm	ASTM D5185(m)	1370	<b>957</b>	937	1016
Zinc	ppm	ASTM D5185(m)	1500	<b>1195</b>	1150	1178
Sulfur	ppm	ASTM D5185(m)	3800	<b>2815</b>	2690	2774
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

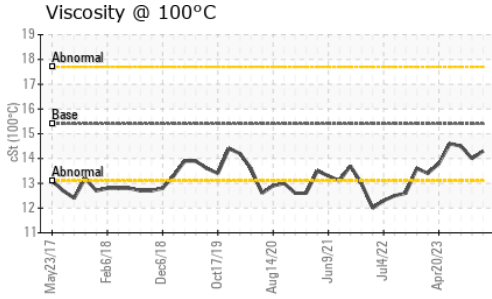
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>7</b>	9	8
Sodium	ppm	ASTM D5185(m)	>192	<b>3</b>	5	4
Potassium	ppm	ASTM D5185(m)	>20	<b>6</b>	7	7

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>6	<b>1.2</b>	1.4	1.2
Nitration	Abs/cm	ASTM D7624*	>20	<b>12.5</b>	13.6	13.4
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>29.1</b>	37.0	36.6

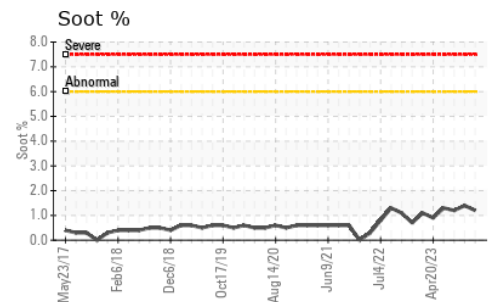
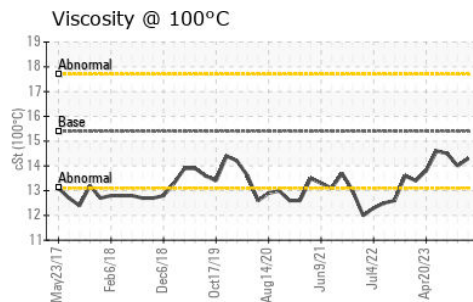
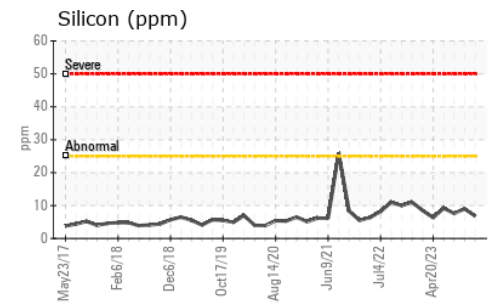
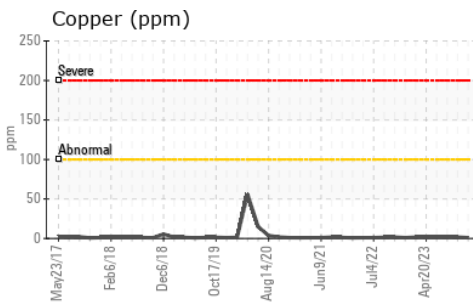
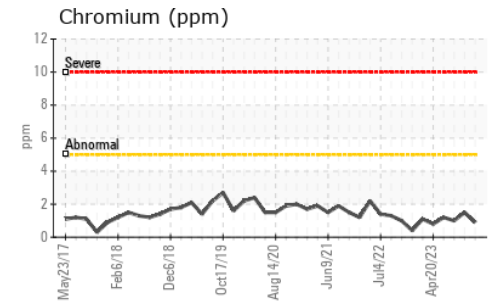
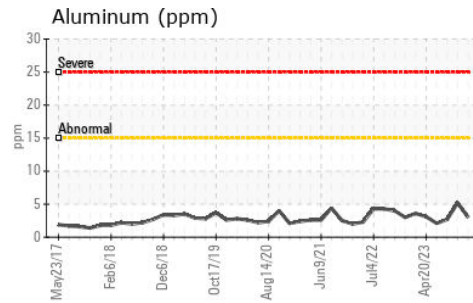
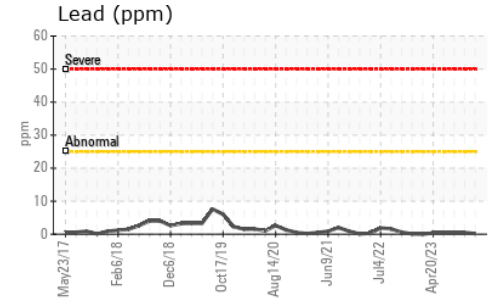
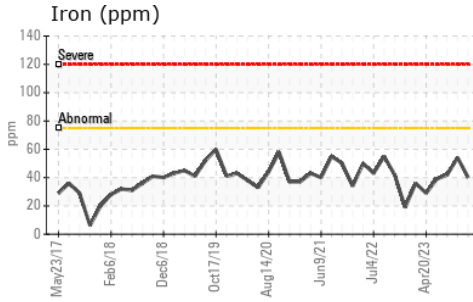


# OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>27.8</b>	42.1	41.9
VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>14.3</b>	14.0	14.5

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0866602      **Received** : 14 Dec 2023  
**Lab Number** : **02603121**      **Diagnosed** : 14 Dec 2023  
**Unique Number** : 5696206      **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1

**CITY OF THUNDER BAY**  
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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.