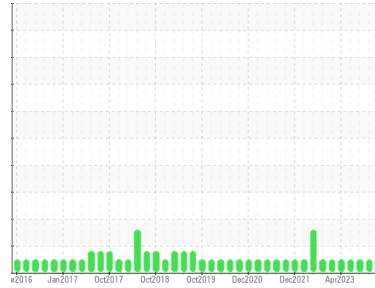




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**146**

Component

**Rear Diesel Engine**

Fluid

**ESSO XD-3 EXTRA 15W40 (--- LTR)**

## 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>WC0866600</b>	WC0866560	WC0816404
Sample Date	Client Info			<b>11 Dec 2023</b>	23 Oct 2023	18 Aug 2023
Machine Age	kms	Client Info		<b>1083240</b>	1073788	0
Oil Age	kms	Client Info		<b>9451</b>	10556	8221
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>11</b>	15	11
Chromium	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	1	1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>15	<b>2</b>	2	2
Lead	ppm	ASTM D5185(m)	>25	<b>1</b>	2	1
Copper	ppm	ASTM D5185(m)	>100	<b>1</b>	2	1
Tin	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<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

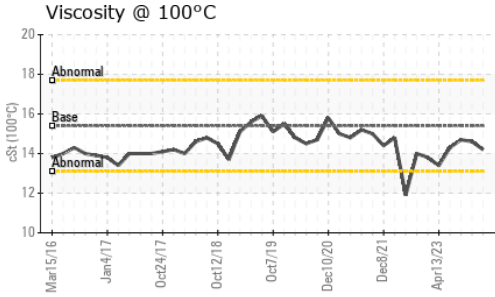
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<b>119</b>	94	110
Barium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	2
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)		<b>13</b>	15	29
Calcium	ppm	ASTM D5185(m)	3780	<b>2214</b>	2180	2187
Phosphorus	ppm	ASTM D5185(m)	1370	<b>936</b>	912	995
Zinc	ppm	ASTM D5185(m)	1500	<b>1169</b>	1105	1158
Sulfur	ppm	ASTM D5185(m)	3800	<b>2915</b>	2771	2899
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>2</b>	3	2
Sodium	ppm	ASTM D5185(m)	>192	<b>2</b>	2	2
Potassium	ppm	ASTM D5185(m)	>20	<b>5</b>	4	5

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	<b>0.1</b>	0.2	0.1
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.8</b>	9.6	8.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.6</b>	23.6	22.5

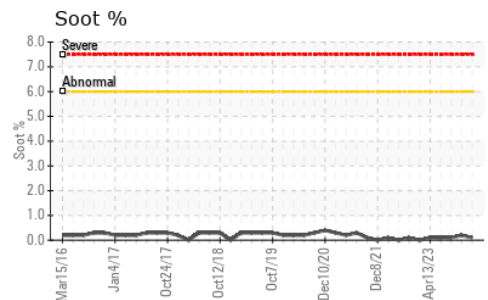
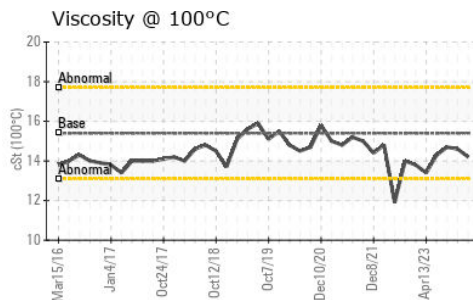
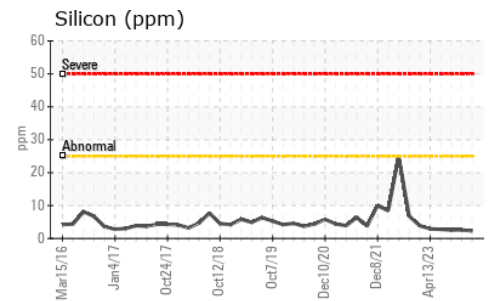
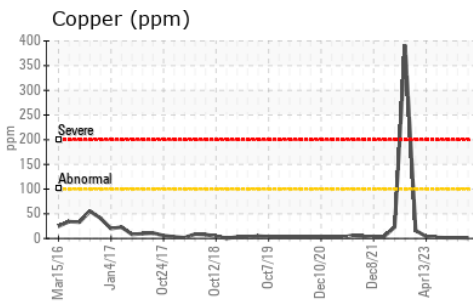
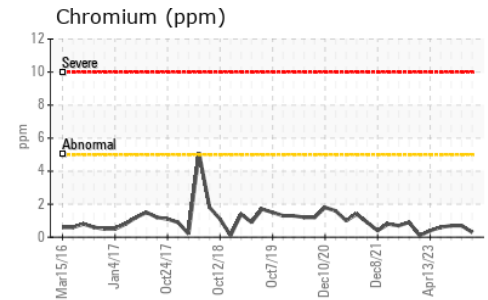
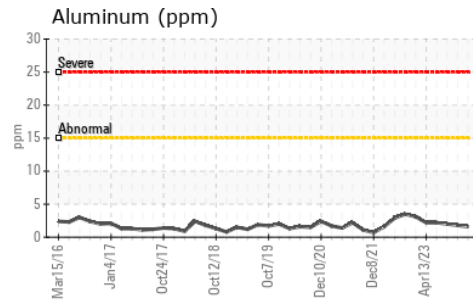
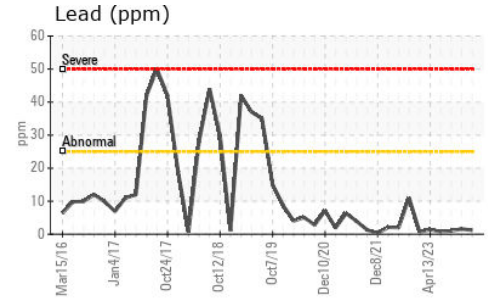
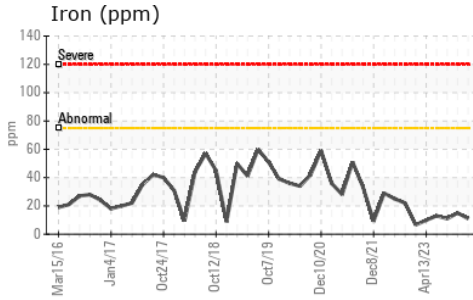


# OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>19.9</b>	21.5	18.5
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>14.2</b>	14.6	14.7

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0866600 **Received** : 14 Dec 2023  
**Lab Number** : **02603120** **Diagnosed** : 14 Dec 2023  
**Unique Number** : 5696205 **Diagnostician** : Wes Davis  
**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.