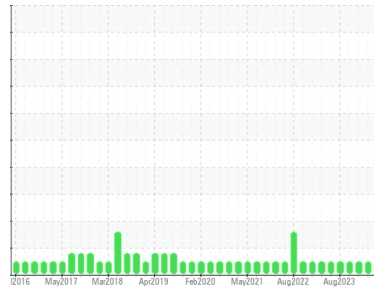




OIL ANALYSIS REPORT

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			WC0888993	WC0889171	WC0866600
Sample Date	Client Info			05 Apr 2024	06 Feb 2024	11 Dec 2023
Machine Age	kms	Client Info		0	0	1083240
Oil Age	kms	Client Info		9221	8868	9451
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0		<1.0	<1.0	<1.0
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>75	9	9	11
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>15	1	2	2
Lead	ppm	ASTM D5185(m)	>25	0	1	1
Copper	ppm	ASTM D5185(m)	>100	<1	<1	1
Tin	ppm	ASTM D5185(m)	>4	0	<1	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

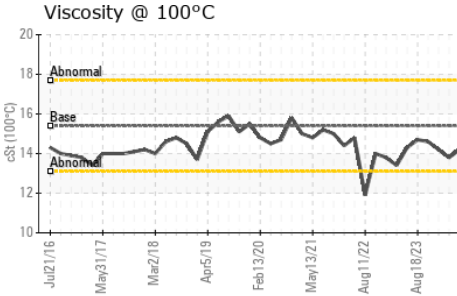
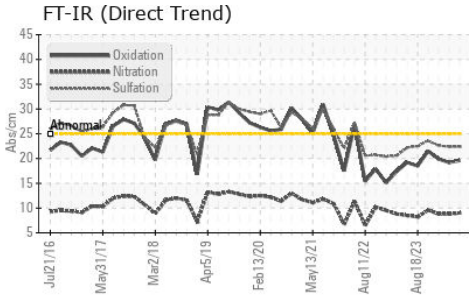
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		120	112	119
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		0	1	<1
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		14	20	13
Calcium	ppm	ASTM D5185(m)	3780	2224	2191	2214
Phosphorus	ppm	ASTM D5185(m)	1370	928	928	936
Zinc	ppm	ASTM D5185(m)	1500	1153	1131	1169
Sulfur	ppm	ASTM D5185(m)	3800	2799	3005	2915
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	1	2	2
Sodium	ppm	ASTM D5185(m)	>192	2	2	2
Potassium	ppm	ASTM D5185(m)	>20	5	6	5

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	0.1	0.1	0.1
Nitration	Abs/cm	ASTM D7624*	>20	9.0	8.8	8.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.4	22.4	22.6



OIL ANALYSIS REPORT



FLUID DEGRADATION

method	limit/base	current	history1	history2
Abs.:1mm	ASTM D7414*	>25	19.2	19.9

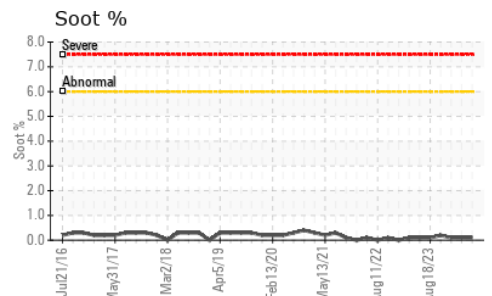
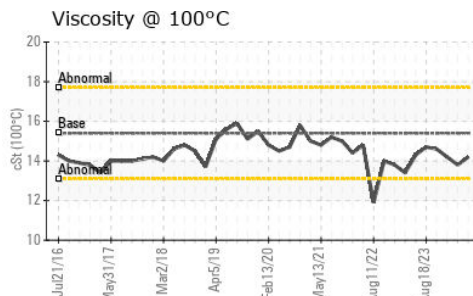
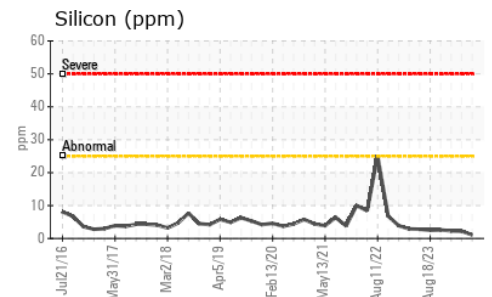
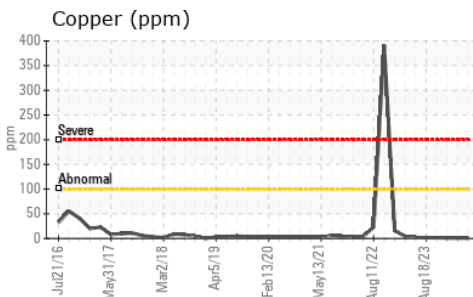
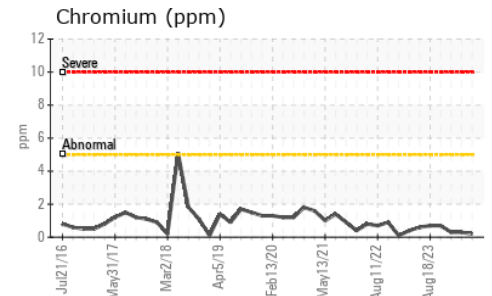
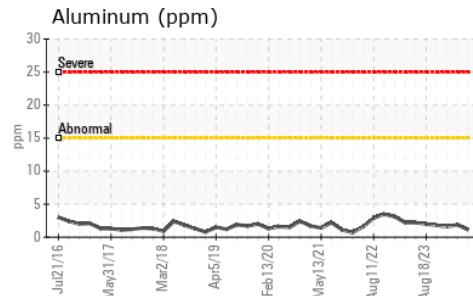
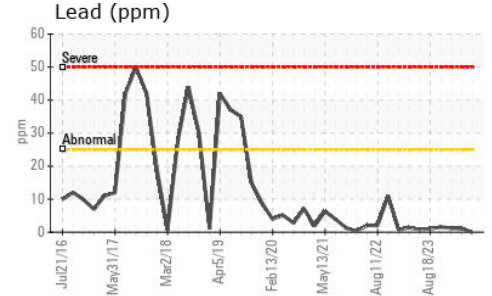
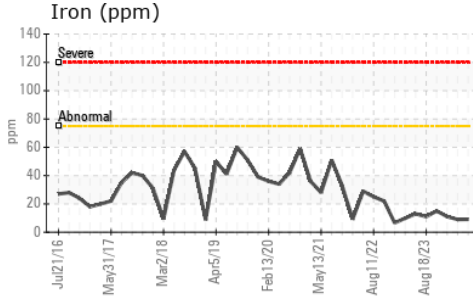
VISUAL

method	limit/base	current	history1	history2
scalar	Visual*	>0.2	NEG	NEG
scalar	Visual*	NEG	NEG	NEG

FLUID PROPERTIES

method	limit/base	current	history1	history2
cSt	ASTM D7279(m)	15.4	13.8	14.2

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0888993
Lab Number : 02628777
Unique Number : 5761909
Test Package : MOB 1

CITY OF THUNDER BAY
 AUTO MAINTENANCE STORES, 570 FORT WILLIAM ROAD
 THUNDER BAY, ON
 CA P7B 2Z8

Contact: Sean Malcolm
 sean.malcolm@thunderbay.ca
 T: (807)684-2716
 F: (807)344-0237

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.