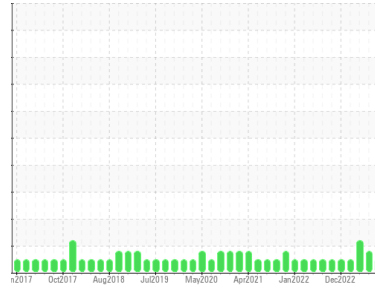




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
167
 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			WC0816358	WC0816478	WC0816452
Sample Date	Client Info			11 Oct 2023	09 Aug 2023	31 May 2023
Machine Age	kms	Client Info		0	0	0
Oil Age	kms	Client Info		10305	9506	9448
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	MARGINAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0		<1.0	▲ 2.1	▲ 3.8
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>90	22	23	22
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>20	1	2	2
Lead	ppm	ASTM D5185(m)	>40	<1	1	1
Copper	ppm	ASTM D5185(m)	>330	1	2	6
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
Antimony	ppm	ASTM D5185(m)		0	0	<1
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)		54	46	9
Barium	ppm	ASTM D5185(m)		<1	0	0
Molybdenum	ppm	ASTM D5185(m)		2	10	62
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		28	119	787
Calcium	ppm	ASTM D5185(m)	3780	2205	2082	1432
Phosphorus	ppm	ASTM D5185(m)	1370	905	932	1100
Zinc	ppm	ASTM D5185(m)	1500	1101	1086	1221
Sulfur	ppm	ASTM D5185(m)	3800	2835	2773	2685
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

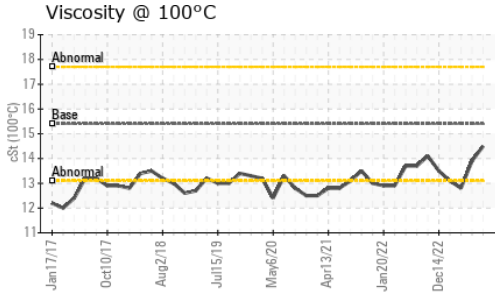
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	7	6	7
Sodium	ppm	ASTM D5185(m)	>192	5	4	3
Potassium	ppm	ASTM D5185(m)	>20	5	5	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	1.3	1.4	1.3
Nitration	Abs/cm	ASTM D7624*	>20	11.2	11.9	10.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	28.9	32.0	25.2

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	26.2	31.7	22.0



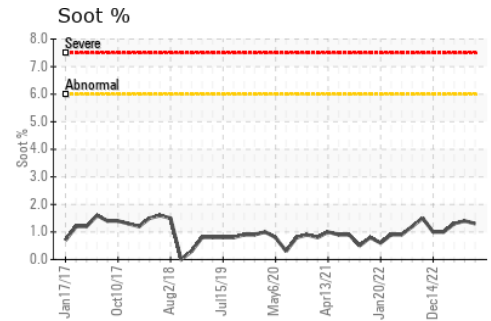
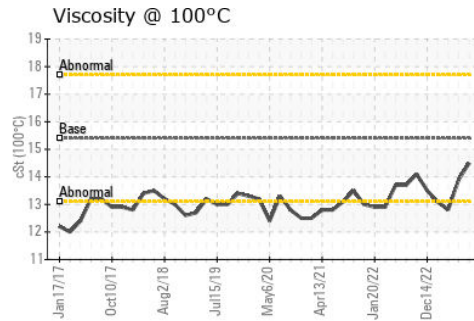
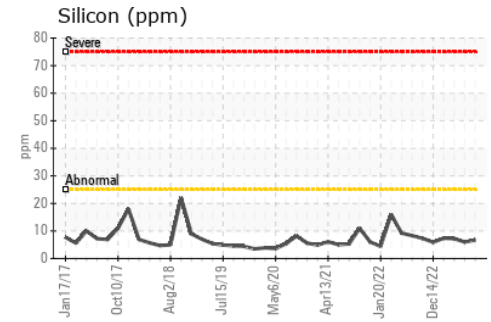
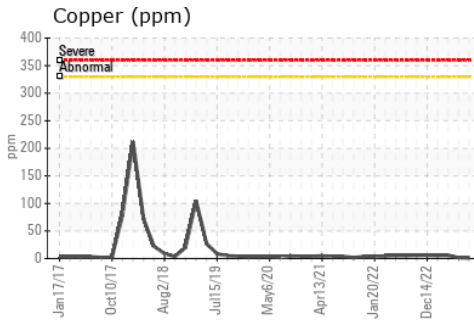
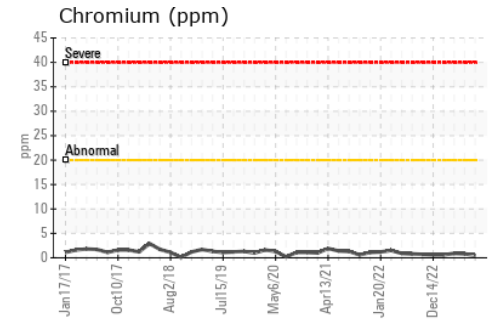
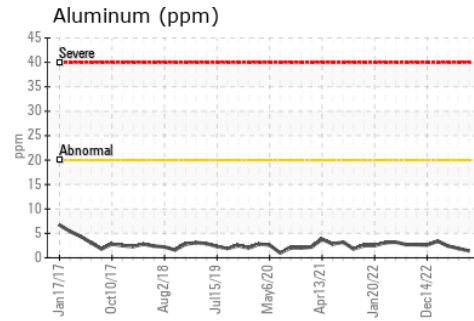
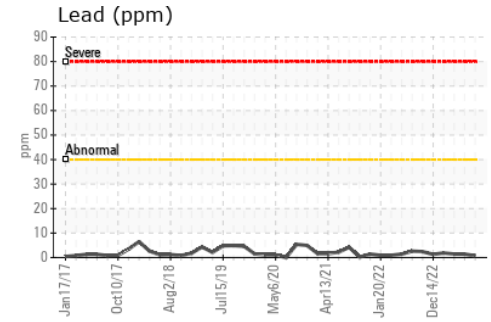
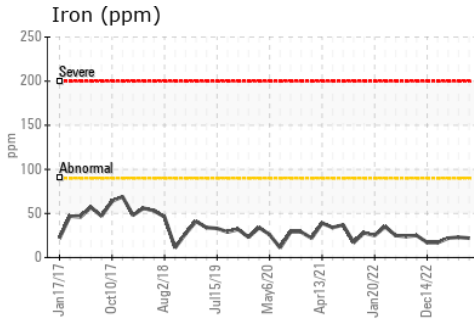
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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 D7279(m)	15.4	14.5	13.9
					▲ 12.8

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0816358
Lab Number : 02590234
Unique Number : 5659300
Test Package : MOB 1

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