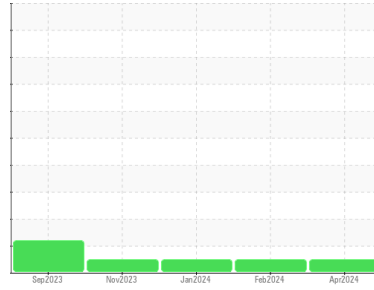




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
241
 Component
Diesel Engine
 Fluid
ESSO XD-3 EXTRA 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

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			WC0888997	WC0889081	WC0889109
Sample Date	Client Info			09 Apr 2024	28 Feb 2024	08 Jan 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		9165	38894	9625
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<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)	>100	6	7	8
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	1	2	2
Lead	ppm	ASTM D5185(m)	>40	0	0	0
Copper	ppm	ASTM D5185(m)	>330	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>15	0	0	0
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

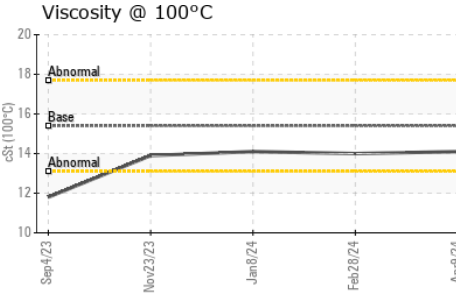
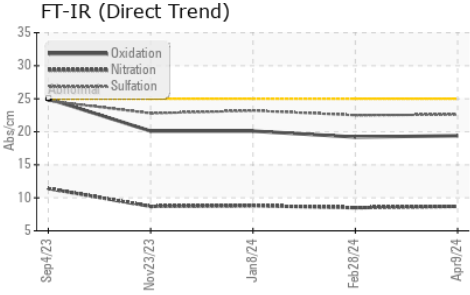
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		121	114	109
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	1	1
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		14	22	22
Calcium	ppm	ASTM D5185(m)	3780	2216	2153	2193
Phosphorus	ppm	ASTM D5185(m)	1370	965	973	989
Zinc	ppm	ASTM D5185(m)	1500	1146	1125	1134
Sulfur	ppm	ASTM D5185(m)	3800	2847	3020	3027
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	1	2	3
Sodium	ppm	ASTM D5185(m)	>192	2	2	2
Potassium	ppm	ASTM D5185(m)	>20	6	7	6

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0	0.1	0.1
Nitration	Abs/cm	ASTM D7624*	>20	8.7	8.5	8.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.6	22.5	23.2



OIL ANALYSIS REPORT

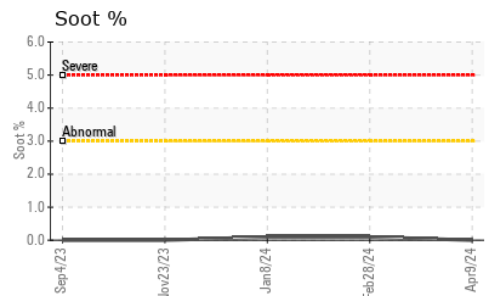
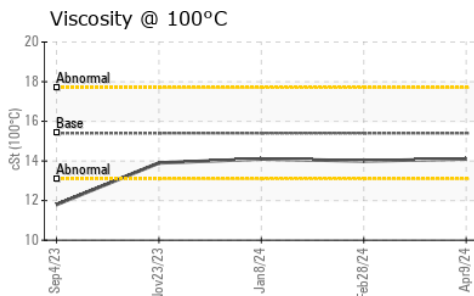
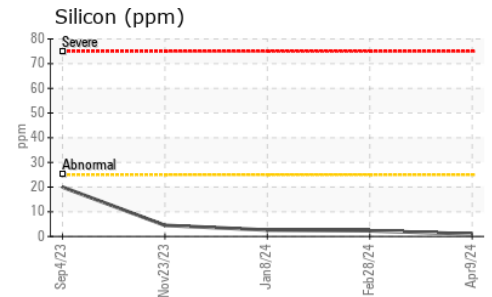
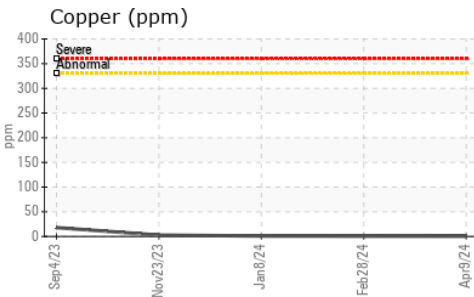
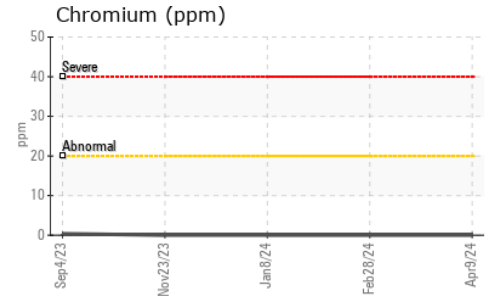
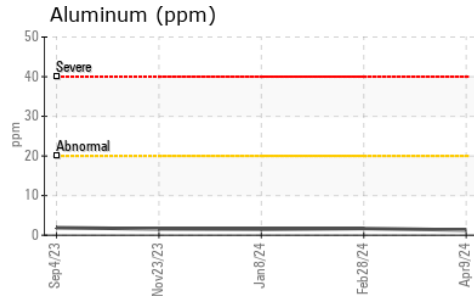
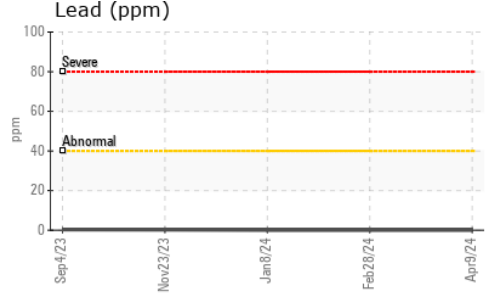
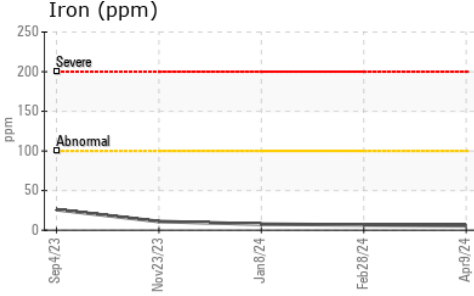


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	19.4	19.2	20.1

VISUAL	method	limit/base	current	history1	history2	
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.1	14.0	14.1

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0888997
Lab Number : 02628775
Unique Number : 5761907
Test Package : MOB 1
Received : 15 Apr 2024
Tested : 16 Apr 2024
Diagnosed : 16 Apr 2024 - Wes Davis

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