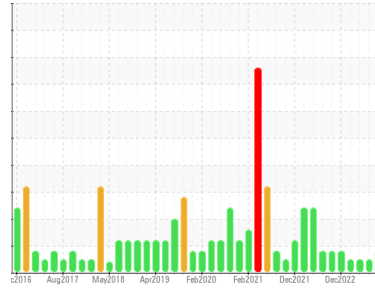




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
2008 NOVA 150

Component
Rear Diesel Engine

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

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0816374	WC0816474	WC0816457
Sample Date	Client Info		25 Sep 2023	03 Aug 2023	26 May 2023
Machine Age	kms	Client Info	0	0	0
Oil Age	kms	Client Info	9406	9031	9285
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >75	30	36	29
Chromium	ppm	ASTM D5185(m) >5	<1	1	1
Nickel	ppm	ASTM D5185(m) >4	<1	<1	0
Titanium	ppm	ASTM D5185(m) >2	0	<1	0
Silver	ppm	ASTM D5185(m) >2	<1	<1	0
Aluminum	ppm	ASTM D5185(m) >15	4	6	7
Lead	ppm	ASTM D5185(m) >25	2	2	1
Copper	ppm	ASTM D5185(m) >100	2	3	3
Tin	ppm	ASTM D5185(m) >4	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)	53	57	57
Barium	ppm	ASTM D5185(m)	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	2	11	33
Manganese	ppm	ASTM D5185(m)	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	30	82	84
Calcium	ppm	ASTM D5185(m) 3780	2188	2410	2283
Phosphorus	ppm	ASTM D5185(m) 1370	877	988	1042
Zinc	ppm	ASTM D5185(m) 1500	1062	1152	1154
Sulfur	ppm	ASTM D5185(m) 3800	2763	2680	2864
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	10	13	9
Sodium	ppm	ASTM D5185(m) >192	6	5	4
Potassium	ppm	ASTM D5185(m) >20	9	7	5
Fuel	%	ASTM D7593* >3.0	▲ 5.5	<1.0	<1.0

INFRA-RED

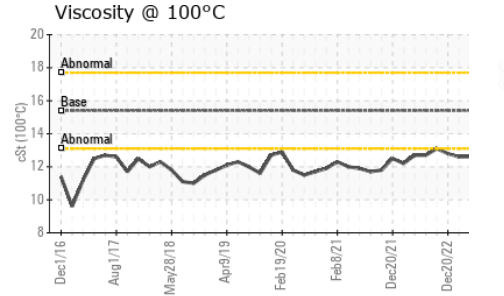
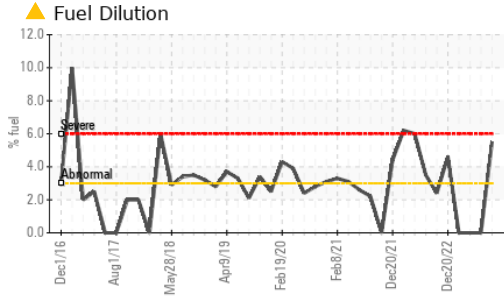
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >6	1.1	1	1
Nitration	Abs/cm	ASTM D7624* >20	13.3	13.1	11.9
Sulfation	Abs/.1mm	ASTM D7415* >30	34.4	34.4	26.5

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	39.5	37.8	24.5



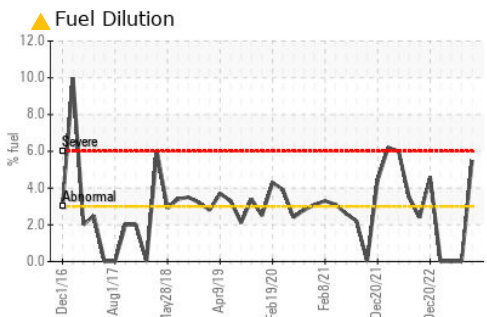
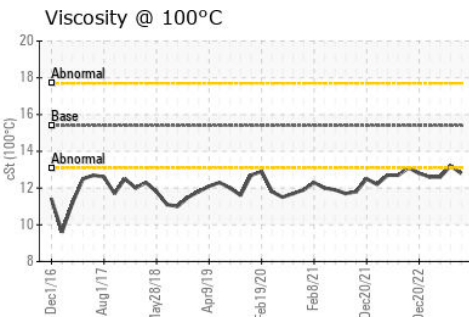
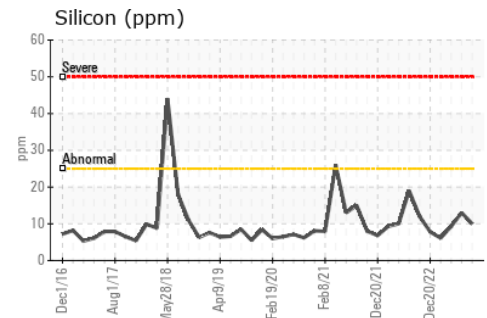
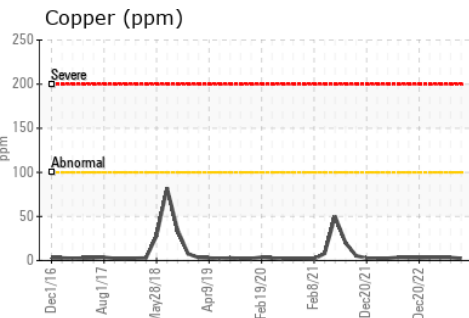
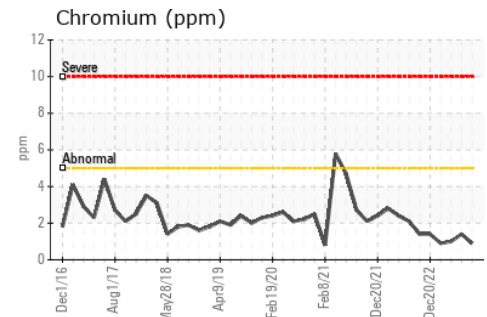
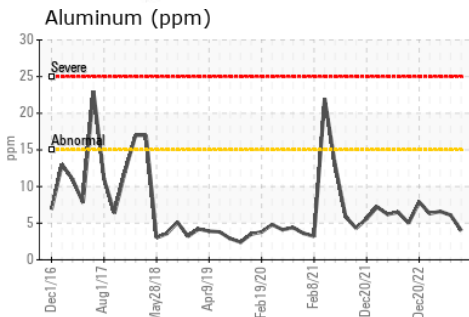
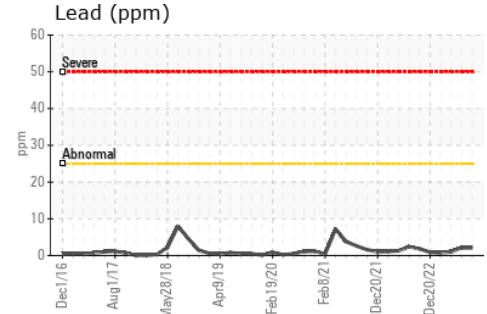
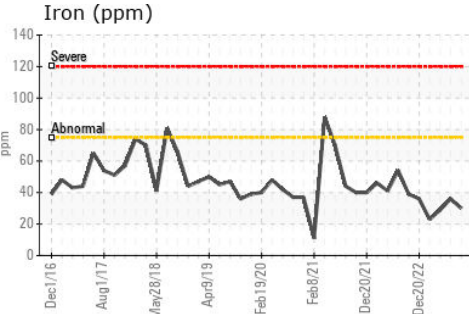
OIL ANALYSIS REPORT



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	12.8	13.2

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0816374 **Received** : 04 Oct 2023
Lab Number : **02586696** **Diagnosed** : 05 Oct 2023
Unique Number : 5655762 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

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.