MOB I

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
2008 NOVA 156
Component
Rear Diesel Engine
Fluid
ESSO XD-3 EXTRA 15W40 (--- GAL)

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.

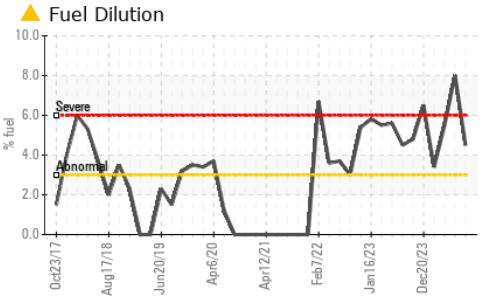
CONTAMINATION

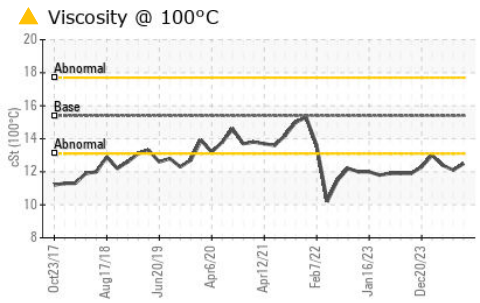
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

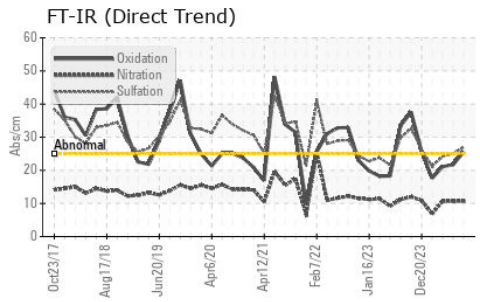
FLUID CONDITION

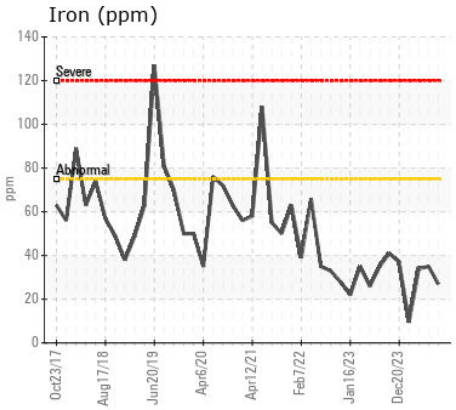
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

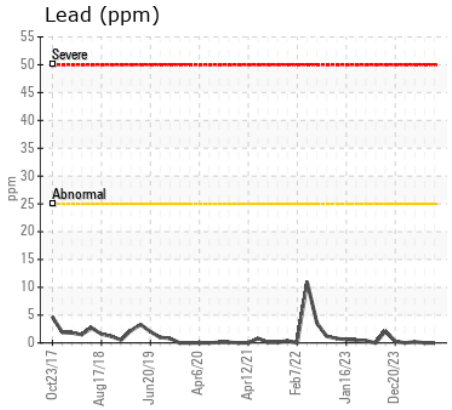
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0866480**	WC0888999	WC0889113
Sample Date		Client Info		**07 Jun 2024**	08 Apr 2024	20 Feb 2024
Machine Age	kms	Client Info		**0**	0	0
Oil Age	kms	Client Info		**7991**	9280	9513
Filter Age	kms	Client Info		**7991**	9280	9513
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	SEVERE	ABNORMAL
Iron	ppm	ASTM D5185(m)	>75	**27**	35	34
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	**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>15	**4**	5	5
Lead	ppm	ASTM D5185(m)	>25	**0**	0	<1
Copper	ppm	ASTM D5185(m)	>100	**1**	1	1
Tin	ppm	ASTM D5185(m)	>4	**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Silicon	ppm	ASTM D5185(m)	>25	**5**	4	4
Potassium	ppm	ASTM D5185(m)	>20	**7**	7	7
Fuel	%	ASTM D7593*	>3.0	▲ **4.5**	▲ 8	▲ 5.5
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	ASTM D7844*	>6	**0.9**	0.9	0.7
Nitration	Abs/cm	ASTM D7624*	>20	**10.7**	10.7	10.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	**26.9**	25.1	24.1
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Sodium	ppm	ASTM D5185(m)	>192	**4**	3	4
Boron	ppm	ASTM D5185(m)		**79**	85	83
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**<1**	0	1
Manganese	ppm	ASTM D5185(m)		**<1**	<1	0
Magnesium	ppm	ASTM D5185(m)		**13**	16	21
Calcium	ppm	ASTM D5185(m)	3780	**2082**	2115	2127
Phosphorus	ppm	ASTM D5185(m)	1370	**903**	894	902
Zinc	ppm	ASTM D5185(m)	1500	**1088**	1094	1059
Sulfur	ppm	ASTM D5185(m)	3800	**2683**	2659	2902
Oxidation	Abs/.1mm	ASTM D7414*	>25	**25.6**	21.7	21.1
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ **12.5**	▲ 12.1	▲ 12.4

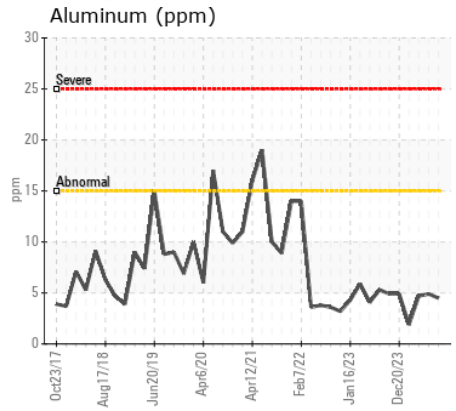


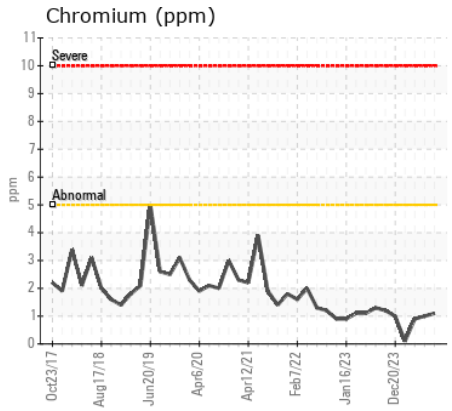


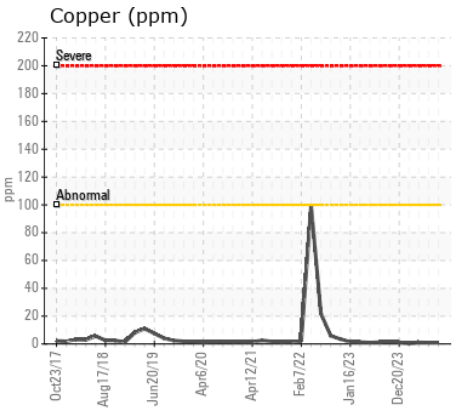


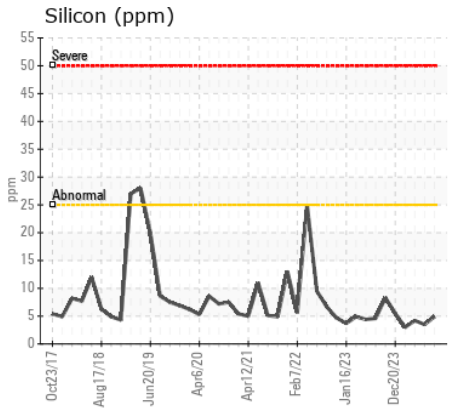


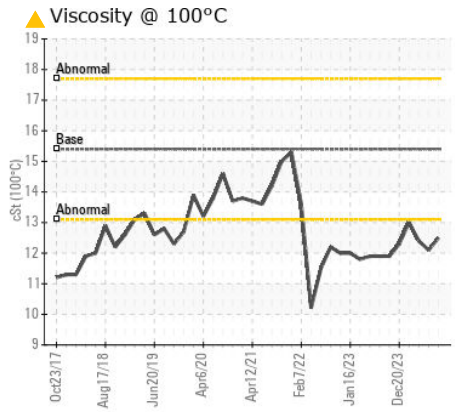


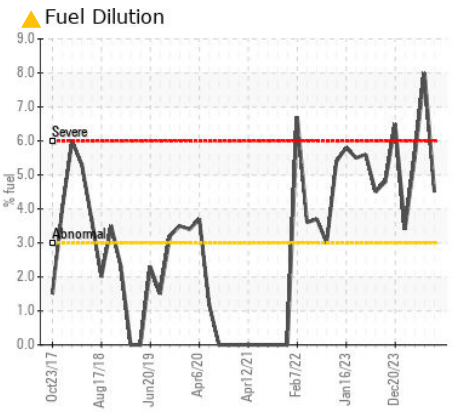












ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0866480 **Received** : 24 Jun 2024
Lab Number : 02643650 **Tested** : 25 Jun 2024
Unique Number : 5801189 **Diagnosed** : 25 Jun 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PercentFuel)

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.

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