



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>MARGINAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**NOVA BUS 160**  
Component  
**Rear Diesel Engine**  
Fluid  
**ESSO XD-3 EXTRA 15W40 (24 LTR)**

## RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0889027</b>	WC0889133	WC0889177
Sample Date		Client Info		<b>06 May 2024</b>	15 Feb 2024	27 Dec 2023
Machine Age	kms	Client Info		<b>0</b>	0	0
Oil Age	kms	Client Info		<b>9029</b>	9083	10139
Filter Age	kms	Client Info		<b>9029</b>	9083	10139
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>MARGINAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>75	<b>44</b>	30	35
Chromium	ppm	ASTM D5185(m)	>5	<b>1</b>	1	1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>15	<b>8</b>	3	3
Lead	ppm	ASTM D5185(m)	>25	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>100	<b>&lt;1</b>	<1	1
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## CONTAMINATION

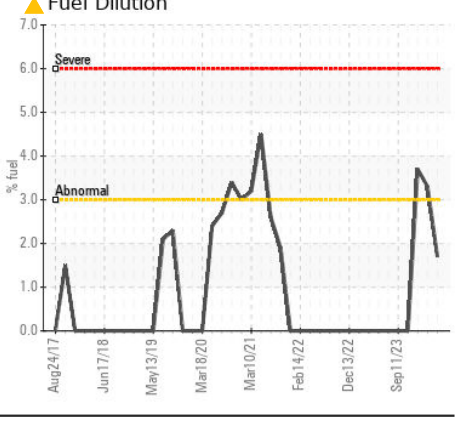
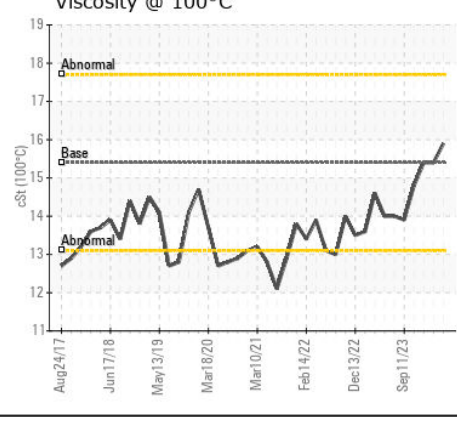
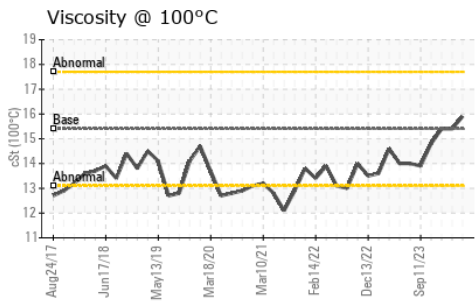
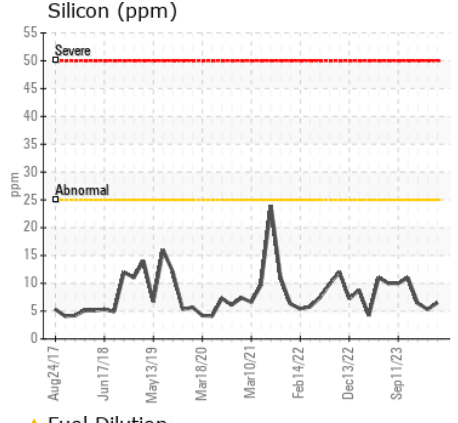
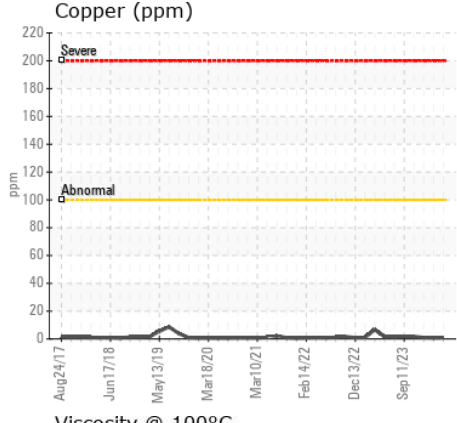
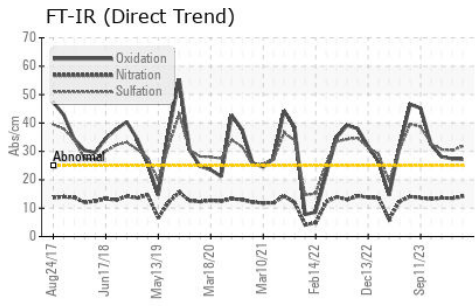
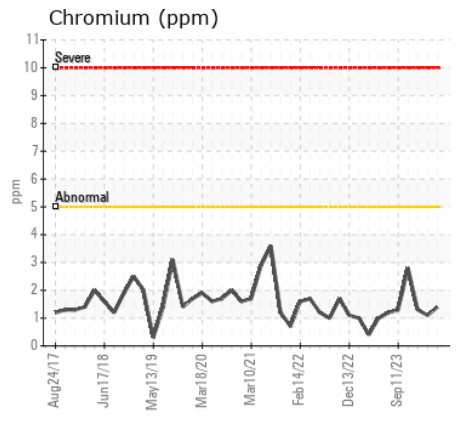
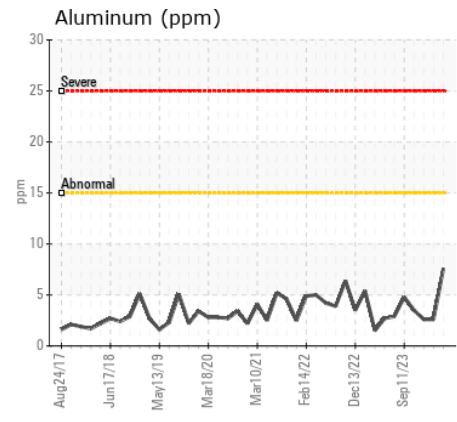
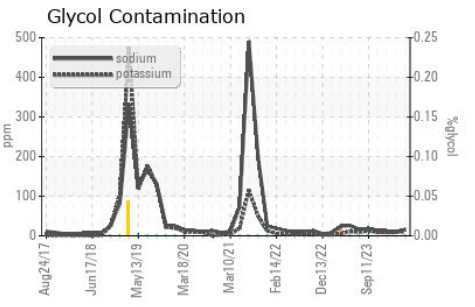
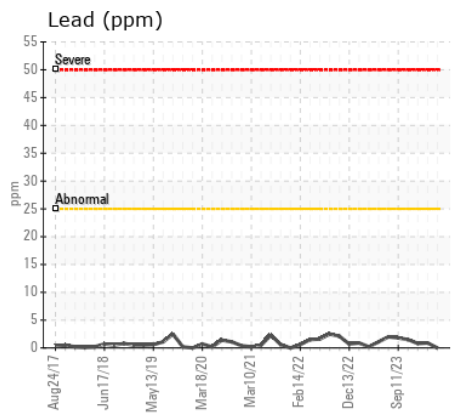
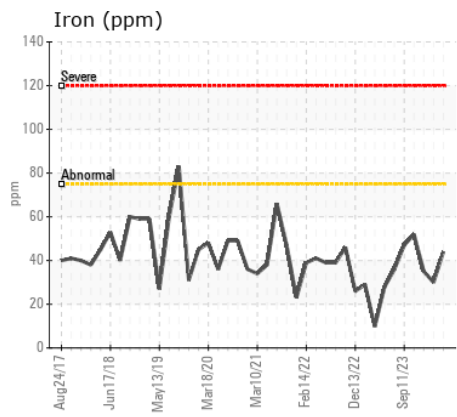
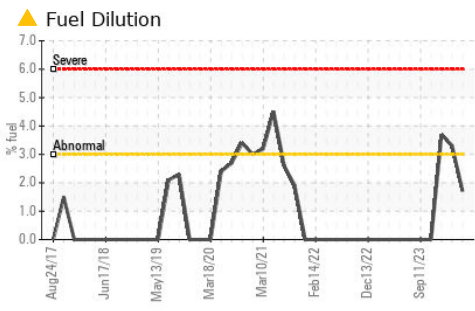
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>6</b>	5	6
Potassium	ppm	ASTM D5185(m)	>20	<b>10</b>	9	8
Fuel	%	ASTM D7593*	>3.0	<b>▲ 1.7</b>	▲ 3.3	▲ 3.7
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	ASTM D7922*		<b>0.0</b>	NEG	NEG
Soot %	%	ASTM D7844*	>6	<b>1.9</b>	1.7	1.6
Nitration	Abs/cm	ASTM D7624*	>20	<b>14.1</b>	13.5	13.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>31.8</b>	30.3	30.7
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>192	<b>15</b>	11	12
Boron	ppm	ASTM D5185(m)		<b>66</b>	64	69
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>&lt;1</b>	1	<1
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185(m)		<b>20</b>	22	16
Calcium	ppm	ASTM D5185(m)	3780	<b>2590</b>	2459	2419
Phosphorus	ppm	ASTM D5185(m)	1370	<b>1066</b>	1013	1002
Zinc	ppm	ASTM D5185(m)	1500	<b>1313</b>	1222	1221
Sulfur	ppm	ASTM D5185(m)	3800	<b>2947</b>	2939	2979
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>27.2</b>	27.4	28.1
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>15.9</b>	15.4	15.4



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0889027 **Received** : 13 May 2024  
**Lab Number** : 02634901 **Tested** : 14 May 2024  
**Unique Number** : 5776054 **Diagnosed** : 14 May 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: Glycol, PercentFuel )

**CITY OF THUNDER BAY**  
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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.