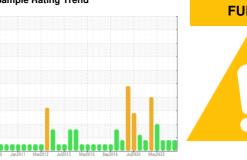


## **OIL ANALYSIS REPORT**

#### Sample Rating Trend



# FUEL

NOVA BUS 60051

Component

Rear Diesel Engine

**VALVOLINE 15W40 (24 LTR)** 

### 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.

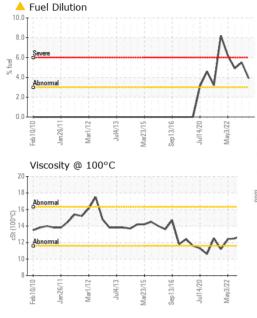
#### **Fluid Condition**

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

		b2010 Jan20	011 Mar2012 Jul2013	Mar2015 Sep2016 Jul2020 1	May2022	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0809091	WC0770709	WC0734900
Sample Date		Client Info		16 Aug 2023	30 Jan 2023	05 Oct 2022
Machine Age	kms	Client Info		711174	685624	663387
Oil Age	kms	Client Info		10000	10000	10000
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
CONTAMINATION	١	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	37	31	22
Chromium	ppm	ASTM D5185(m)	>5	2	2	1
Nickel	ppm	ASTM D5185(m)	>4	0	<1	0
Titanium	ppm	ASTM D5185(m)	>2	0	<1	0
Silver	ppm	ASTM D5185(m)	>2	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>15	2	2	1
Lead	ppm	ASTM D5185(m)	>25	4	3	9
Copper	ppm	ASTM D5185(m)	>100	2	1	3
Tin	ppm	ASTM D5185(m)	>4	<1	<1	<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)		2	1	4
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		61	58	56
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)		991	931	885
Calcium	ppm	ASTM D5185(m)		1054	1057	1103
Phosphorus	ppm	ASTM D5185(m)		1041	1001	961
Zinc	ppm	ASTM D5185(m)		1186	1129	1086
Sulfur	ppm	ASTM D5185(m)		2419	2387	2330
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	8	4	7
Sodium	ppm	ASTM D5185(m)		15	8	8
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	0
Fuel	%	ASTM D7593*	>3.0	<b>△</b> 3.9	<b>△</b> 5.5	<b>▲</b> 4.9
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	1	0.6	0.7
Nitration	Abs/cm	ASTM D7624*	>20	12.8	12.1	11.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	28.2	24.5	25.5
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	27.6	22.9	26.4



## **OIL ANALYSIS REPORT**



VISUAL		method	limit/base	current	history1	history
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
FLUID PROPER	TIES	method	limit/base	current	history1	history
/isc @ 100°C	cSt	ASTM D7279(m)		13.4	12.8	12.5
GRAPHS						
Iron (ppm)	inana sana		60	Lead (ppm)		;
Severe			50	Severe		
Apnormal		Λ	40			
1 1	1	/ W	튎30	Abnormal		
11/1/	W	7	20	Λ Λ /	$\Lambda$	
· · · · · · · · · · · · · · · · · · ·			10	JUV	~	~~
Jan26/11- Mar1/12 -	Mar23/15 -	Sep 13/16 -	May3/22 +	Feb10/10 Jan26/11-	Jul4/13 -	Jul14/20
E -	Mar	Sep	⊠ S	. ,	≥	Sep Jul'
Aluminum (ppm)			12	Chromium (	ppm)	7-1-1-1-1-1-1-1
Severe			- 10	Severe		
			8			
Abnormal			E 6	Abnormal	Λ	<b>N</b>
		Λ,	4	X III		/ \
~~~	^~	1~	2	<b>/</b> ~~	$\sim$	· ~~
Jan26/11 Mar1/12	Mar23/15	Sep13/16	May3/22 +	Feb10/10 Jan26/11	Jul4/13	Jul14/20
	Mari	Sep Jul	a ⊠		~	Sep Jul Ma
Copper (ppm)			140	Silicon (ppm	I) 	75375537537
1			120			
Severe	1111111		100			
$\Lambda$			E 60	Severe		
Abnormal		1	40		Λ Λ	
V	1		20	1	17V~	
Jan 26/11  Marl/12  Jul4/13	23/15	Sep13/16	May3/22 -	710	Jul4/13	Jul14/20
型 与 至 う Viscosity @ 100°C	_	Sep 1	Š.	Fuel Dilution		Jull <sup>4</sup>
viscosity @ 100°C			9.0	Fuel Dilution		7537537537
Abnormal			8.0 7.0			Λ.
Abnormal		+	6.0			
~	~~	1.	<u>19</u> 5.0 ≈4.0	Abnormal		N
Abnormal			3.0	+ a anoma		
			1.0			
b10/10 an26/11 Aar1/12	ar23/15	p13/16	1ay3/22 +	an26/11	Jul4/13	ul14/20-



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5630070

: WC0809091 : 02577010

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received Diagnosed

: 21 Aug 2023 : 23 Aug 2023 Diagnostician : Kevin Marson

Test Package : MOB 1 ( Additional Tests: PercentFuel )

**CITY OF PETERBOROUGH** 791 WEBBER AVENUE,, MUNICIPAL OPERATIONS CENTRE PETERBOROUGH, ON

CA K9J 8N3 Contact: Frank Curran fcurran@peterborough.ca T: (705)742-7777

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.

F: (705)743-3223