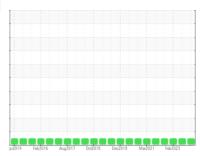


OIL ANALYSIS REPORT

Sample Rating Trend







NOVA BUS EQ60058

Component

Rear Diesel Engine

VALVOLINE 15W40 (24 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

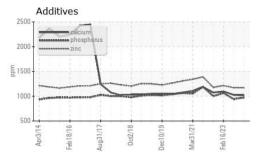
Fluid Condition

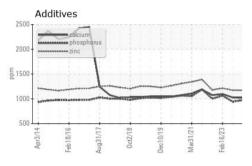
The condition of the oil is acceptable for the time in service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		WC0911691	WC0809112	WC0770722	
Sample Date		Client Info		20 Mar 2024	23 Nov 2023	16 Feb 2023	
Machine Age	kms			555462	509390		
Oil Age	kms	Client Info	10000 10000		10000		
Oil Changed		Client Info	N/A		N/A	Changed	
Sample Status				NORMAL	NORMAL	NORMAL	
CONTAMINATION	J	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	12	25	16	
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1	
Nickel	ppm	ASTM D5185(m)	>4	0	<1	0	
Titanium	ppm	ASTM D5185(m)		0	0	<1	
Silver	ppm	ASTM D5185(m)	>3	0	<1	0	
Aluminum	ppm	ASTM D5185(m)	>20	2	5	3	
Lead	ppm	ASTM D5185(m)	>40	0	<1	0	
Copper	ppm	ASTM D5185(m)	>330	2	4	6	
Tin	ppm	ASTM D5185(m)	>15	0	0	0	
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)	39	1	3	<1	
Barium	ppm	ASTM D5185(m)	1	0	<1	0	
Molybdenum	ppm	ASTM D5185(m)	49	58	58	59	
Manganese	ppm	ASTM D5185(m)		0	0	<1	
Magnesium	ppm	ASTM D5185(m)	616	974	946	967	
Calcium	ppm	ASTM D5185(m)	1554	1018	1027	1096	
Phosphorus	ppm	ASTM D5185(m)	899	972	942	1064	
Zinc	ppm	ASTM D5185(m)		1169	1171	1213	
Sulfur	ppm	ASTM D5185(m)	2624	2420	2377	2555	
Lithium	ppm	ASTM D5185(m)		<1	<1	<1	
CONTAMINANTS		method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	2	4	4	
Sodium	ppm	ASTM D5185(m)		5	6	5	
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1	
INFRA-RED		method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.3	0.3	0.1	
Nitration	Abs/cm	ASTM D7624*	>20	8.3	8.6	7.7	
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.2	19.7	19.5	



OIL ANALYSIS REPORT





FLUID DEGRADATION		method	method limit/base		history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	1 D7414* >25 15.8		16.9	14.8	
VISUAL	SUAL		limit/base currer		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)	13.6	14.0	.0 14.1 1		
GRAPHS							

GRAPHS Iron (ppm)					Lead	(ppm)				
					100					
Severe					80 - Severe					
Abnormal					60 Abnorma	al				
					20					
	-	\sim	_	~~	0			-	111	_
Apr3/14 Feb18/16 Aug31/17	Oct2/18	Dec10/19	Mar31/21	Feb16/23	Apr3/14	Feb18/16 Aug31/17	Oct2/18	Dec10/19	Mar31/21	111000
Aluminum (pp	m)				Chror	nium (pp	om)			
Severe					50 Severe					1
					30-					
Abnormal					Abnorma	ıl				
					10-					
Apr3/14	Oct2/18	61/0	1/21	9/23	Apr3/14	Feb18/16	Oct2/18	- 61/0	1/21	10.00
ш 4	Oct	Dec10/19	Mar31/21	Feb 16/23		_	Oct	Dec10/19	Mar31/21	3
Copper (ppm)	:-:-::				80 T Severe	n (ppm)				
Abnormal					70					
					50					
				٨	30 - Abnorma					
<u></u>				$/ \setminus$	10	_		^_	~-	_
Apr3/14 Feb18/16 Aug31/17	Oct2/18	Dec10/19	Mar31/21	Feb16/23	Apr3/14	Feb18/16 Aug31/17	Oct2/18	Dec10/19	Mar31/21	Coh 16703
Viscosity @ 10		ā	2	Œ.	Soot	-		ā	2	ŭ
Abnormal					5.0 Severe					
					4.0					
Base	~~		<u> </u>		53.0 Abnorma	al				
Abnormal					1.0					
Apr3/14	0ct2/18	- 61/	/21	/23	0.0	Feb18/16 -	0ct2/18 -	19	12/	3
Apr3/14 eb18/16 ug31/17	ct2/	Dec10/19	Mar31/21	Feb 16/23	Apr3/14	Feb18/16 Aug31/17	ct2/	Dec10/19	Mar31/21	Co.h.16.793



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

Test Package : MOB 1

: WC0911691 Lab Number : 02625516 Unique Number : 5750635

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

Diagnosed

: 01 Apr 2024

: 01 Apr 2024 : 01 Apr 2024 - Wes Davis

CITY OF PETERBOROUGH 791 WEBBER AVENUE,, MUNICIPAL OPERATIONS CENTRE

PETERBOROUGH, ON CA K9J 8N3

Contact: Frank Curran fcurran@peterborough.ca T: (705)742-7777 F: (705)743-3223

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.

Contact/Location: Frank Curran - CITPET