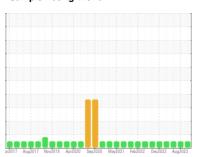


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



NOVA BUS 1633

Component

Natural Gas Engine

VALVOLINE PREMIUM BLUE 9200 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Moor

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

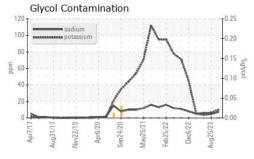
Fluid Condition

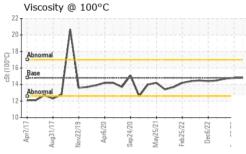
The condition of the oil is acceptable for the time in service.

GAL)		pr2017 Aug20	117 Nov2019 Apr2020 S	sp2020 May2021 Feb2022 Dec203	22 Aug2023	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0878043	WC0849881	WC0811481
Sample Date		Client Info		29 Nov 2023	25 Aug 2023	29 May 2023
Machine Age	kms	Client Info		461393	0	425146
Oil Age	kms	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Vater		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
ron	ppm	ASTM D5185(m)	>50	14	15	12
Chromium	ppm	ASTM D5185(m)	>4	2	1	1
lickel	ppm	ASTM D5185(m)	>2	<1	0	<1
itanium	ppm	ASTM D5185(m)		0	<1	1
Silver	ppm	ASTM D5185(m)	>3	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>9	2	2	2
_ead	ppm	ASTM D5185(m)	>30	9	9	7
Copper	ppm	ASTM D5185(m)	>35	<1	<1	<1
-in	ppm	ASTM D5185(m)	>4	<1	<1	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
/anadium	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)		16	5	8
Barium	ppm	ASTM D5185(m)		<1	0	0
Nolybdenum	ppm	ASTM D5185(m)		57	53	55
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		893	884	880
Calcium	ppm	ASTM D5185(m)		1323	1294	1364
Phosphorus	ppm	ASTM D5185(m)		778	748	756
Zinc	ppm	ASTM D5185(m)		935	913	905
Sulfur	ppm	ASTM D5185(m)		1985	1953	1978
_ithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINANTS	3	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>+100	8	6	5
Sodium	ppm	ASTM D5185(m)		7	5	4
Potassium	ppm	ASTM D5185(m)	>20	10	6	6
Glycol	%	ASTM D7922*		0.0		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	12.6	13.9	13.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	25.7	26.9	25.5
FLUID DEGRADA	ATION	method	limit/base	ourrent.	hiotory1	history2
TEOD BEATTABL	ATION	memou	IIIIII/Dase	current	history1	1113101 y 2



OIL ANALYSIS REPORT





VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
FILIID PROPERTIES		method	limit/hasa	current	history1	history2

Visc @ 100°C	cSt A	ASTM D7279(m)	14.8	14.8	14.	8	14.7
GRAPHS							
Iron (ppm) Severe Abnomal Abnomal Abnomal	Sep24/20 Nav25/21 Nav25/	Feb.55/22	Aug25/23 - 1	Lead (ppm		Sep.24/20 May25/21	Feb.25/22 + Des6/22 + Aug.25/23
Aluminum (ppm)	0, 2	_	d.	Chromium		0, 2	Δ 4
20 Severe				Severe			
E 10 - Abnormal				Abnormal			
5				2		~	_
Aug31/17	Sep24/20 -	Feb25/22 +	Aug25/23	Aug31/17	Apr6/20	Sep24/20 May25/21	Feb25/22 Dec6/22 Aug25/23
Copper (ppm)				Silicon (pp	m)		
Aug 31/17 Aug 31	Sep24/20 Ma/25/21	Feb.25/72	Aug25,723	150 - Abnormal	Apr6/20	Sep24/20	Feb.25/22 Dec6/22 Aug.25/23
Viscosity @ 100°C				Additives			
20 - Abnomal Base Abnomal 12 - Abnomal 13 - Abnomal 14 - Abnomal 15 - Abnomal 15 - Abnomal 15 - Abnomal 16 - Abnomal 16 - Abnomal 17 - Abnomal 17 - Abnomal 18 -	^		udd		phorus		~~
Apr7/17- Aug31/17- Jov22/19-	Sep24/20	-eb25/22 Dec6/22	wg25/23	Apr7/17-	Apr6/20	Sep 24/20	-eb25/22 Dec6/22 wg25/23



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5694295 Test Package : MOB 1 (Additional Tests: Glycol, Visual)

: WC0878043 : 02601210

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

Validity of results and interpretation are based on the sample and information as supplied.

Received Diagnosed Diagnostician : Wes Davis

: 06 Dec 2023 : 06 Dec 2023

CITY OF HAMILTON 2200 UPPER JAMES,, MOUNTAIN TRANSIT STOREROOM MOUNT HOPE, ON CA LOR 1W0

Contact: Jeff Parr jeff.parr@hamilton.ca T: (905)546-2424

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.

F: (905)679-4502