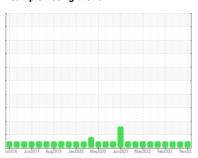


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



NOVA BUS 1611

Component

Natural Gas Engine

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Woor

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

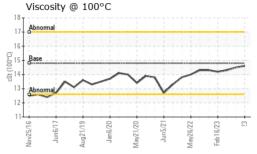
Fluid Condition

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

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SAMPLE INFORM	MATION	method	limit/base	current	history1	history2				
Sample Number		Client Info		WC0877962	WC0849880	WC0811477				
Sample Date		Client Info		30 Nov 2023	25 Aug 2023	26 May 2023				
Machine Age	kms	Client Info		439520	0	405090				
Oil Age	kms	Client Info		0	0	0				
Oil Changed		Client Info		N/A	N/A	N/A				
Sample Status				NORMAL	NORMAL	NORMAL				
CONTAMINATION		method	limit/base	current	history1	history2				
Water		WC Method	>0.1	NEG	NEG	NEG				
WEAR METALS		method	limit/base	current	history1	history2				
Iron	ppm	ASTM D5185(m)	>50	10	11	10				
Chromium	ppm	ASTM D5185(m)	>4	<1	<1	<1				
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1				
Titanium	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				
Lead	ppm	ASTM D5185(m)	>30	5	5	7				
Copper	ppm	ASTM D5185(m)	>35	1	1	1				
Tin	ppm	ASTM D5185(m)	>4	<1	<1	<1				
Antimony	ppm	ASTM D5185(m)		0	0	0				
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)		8	7	11				
Boron Barium	ppm ppm	ASTM D5185(m) ASTM D5185(m)		8 <1	7	0				
		. ,								
Barium	ppm	ASTM D5185(m)		<1	0	0				
Barium Molybdenum	ppm	ASTM D5185(m) ASTM D5185(m)		<1 56	0 53	0 53				
Barium Molybdenum Manganese	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		<1 56 0	0 53 <1	0 53 <1				
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		<1 56 0 838	0 53 <1 840	0 53 <1 857				
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		<1 56 0 838 1291	0 53 <1 840 1281	0 53 <1 857 1311				
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		<1 56 0 838 1291 693	0 53 <1 840 1281 703	0 53 <1 857 1311 757				
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m)		<1 56 0 838 1291 693 913	0 53 <1 840 1281 703 905	0 53 <1 857 1311 757 880				
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	limit/base	<1 56 0 838 1291 693 913 1966	0 53 <1 840 1281 703 905 1939	0 53 <1 857 1311 757 880 1959				
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	limit/base >+100	<1 56 0 838 1291 693 913 1966 <1	0 53 <1 840 1281 703 905 1939 <1	0 53 <1 857 1311 757 880 1959 <1				
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)		<1 56 0 838 1291 693 913 1966 <1 current	0 53 <1 840 1281 703 905 1939 <1 history1	0 53 <1 857 1311 757 880 1959 <1				
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)		<1 56 0 838 1291 693 913 1966 <1 current	0 53 <1 840 1281 703 905 1939 <1 history1	0 53 <1 857 1311 757 880 1959 <1 history2				
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	>+100	<1 56 0 838 1291 693 913 1966 <1 current 5	0 53 <1 840 1281 703 905 1939 <1 history1 4	0 53 <1 857 1311 757 880 1959 <1 history2				
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	>+100 >20	<1 56 0 838 1291 693 913 1966 <1 current 5 4 0	0 53 <1 840 1281 703 905 1939 <1 history1 4 3 <1	0 53 <1 857 1311 757 880 1959 <1 history2 5 4 0				
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	>+100 >20	<1 56 0 838 1291 693 913 1966 <1 current 5 4 0 current	0 53 <1 840 1281 703 905 1939 <1 history1 4 3 <1 history1	0 53 <1 857 1311 757 880 1959 <1 history2 5 4 0				
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>+100 >20 limit/base	<1 56 0 838 1291 693 913 1966 <1 current 5 4 0 current	0 53 <1 840 1281 703 905 1939 <1 history1 4 3 <1 history1 0	0 53 <1 857 1311 757 880 1959 <1 history2 5 4 0 history2 0				
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>+100 >20 limit/base >20	<1 56 0 838 1291 693 913 1966 <1 current 5 4 0 current 0 13.2	0 53 <1 840 1281 703 905 1939 <1 history1 4 3 <1 history1 0 12.8	0 53 <1 857 1311 757 880 1959 <1 history2 5 4 0 history2 0 12.9				



OIL ANALYSIS REPORT



VISUAL		method	limit/base	current	history1	history2		
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG		
Free Water scala		Visual*		NEG	NEG	NEG		
FLUID PROPERTIES		method	limit/base	current	history1	history2		
Visc @ 100°C	cSt	ASTM D7279(m)	14.8	14.6	14.5	14.3		
GRAPHS								
Iron (ppm)				Lead (ppm)				

GR	APH	S																
	n (pp	m)									d (pp	om)						
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CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5694294 Test Package : MOB 1

: WC0877962 : 02601209

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

: 06 Dec 2023 : 06 Dec 2023 Diagnostician : Wes Davis

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

F: (905)679-4502

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.