WEAR CONTAMINATION **FLUID CONDITION**

NORMAL NORMAL NORMAL

$\begin{array}{c} {}^{\text{Machine Id}} \\ \hline \textbf{T001090 (S/N 11-M-03-1412)} \end{array}$

Component Diesel Engine

Test	UOM	Method	Limit/Abn	Current	History1	History2
	OOW		LIIIIII/AUII		-	
-	hrs					
-	hrs					
Oil Changed		Client Info		N/A		
Filter Changed		Client Info		N/A		
Sample Status				NORMAL		
		40714854054	400			
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			>10			
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Silicon	ppm	ASTM D5185(m)	>25	2		
Potassium	ppm	ASTM D5185(m)	>20	<1		
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
Soot %			>3	0		
			>20			
				18.9		
Emulsified Water	scalar	Visual*	>0.2	NEG		
Sodium	ppm	ASTM D5185(m)	>158	1		
Boron		ASTM D5185(m)	250	8		
Barium	ppm	ASTM D5185(m)	10	0		
Molybdenum	ppm	ASTM D5185(m)	100	65		
Manganese	ppm	ASTM D5185(m)		0		
Magnesium	ppm	ASTM D5185(m)	450	977		
Calcium	ppm	ASTM D5185(m)	3000	1113		
Phosphorus	ppm	ASTM D5185(m)	1150	1025		
Zinc	ppm	ASTM D5185(m)	1350	1176		
Sulfur	ppm	ASTM D5185(m)	4250	2787		
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.6		
Base Number (BN)	mg KOH/g	ASTM D2896*	8.5	9.66		
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	12.9		
	Sample Number Sample Date Machine Age Oil Age Filter Age Oil Changed Filter Changed Sample Status Iron Chromium Nickel Titanium Silver Aluminum Lead Copper Tin Vanadium Silicon Potassium Fuel Water Glycol Soot % Nitration Sulfation Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Base Number (BN)	Sample Number Sample Date Machine Age hrs Oil Age hrs Filter Age hrs Oil Changed Filter Changed Sample Status Iron ppm Chromium ppm Nickel ppm Titanium ppm Silver ppm Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm Silicon ppm Fuel Water Glycol Soot % % Nitration Abs/.1mm Emulsified Water scalar Sodium ppm Boron ppm Boron ppm Manganese ppm Magnesium ppm Calcium ppm Cym Cym Sulfur ppm Calcium ppm Calcium ppm Cym Calcium ppm Cym Calcium ppm Calcium ppm Calcium ppm Cym Cym Cym Cym Calcium ppm Cym Cym Cym Cym Cym Cym Cym Cym Cym Cy	Sample Number Sample Date Client Info Machine Age hrs Client Info Oil Age hrs Client Info Oil Age hrs Client Info Oil Changed Filter Age Oil Changed Filter Changed Client Info Sample Status Iron Chromium ppm ASTM D5185(m) Nickel ppm ASTM D5185(m) Titanium ppm ASTM D5185(m) Aluminum ppm ASTM D5185(m) Lead ppm ASTM D5185(m) Copper ppm ASTM D5185(m) Vanadium Popm ASTM D5185(m) Vanadium Popm ASTM D5185(m) Vanadium Popm ASTM D5185(m) Fuel WC Method Water Glycol Soot % ASTM D5185(m) Fuel WC Method Soot % ASTM D5185(m) Fuel WC Method Water Glycol Soot % ASTM D5185(m) Fuel WC Method Soot % ASTM D5185(m) Fuel ASTM D5185(m) ASTM D5185(Sample Number Client Info Sample Date Client Info Machine Age hrs Client Info Oil Age hrs Client Info Filter Age hrs Client Info Oil Changed Client Info Filter Changed Client Info Sample Status Iron ppm ASTM D5185(m) >100 Chromium ppm ASTM D5185(m) >20 Nickel ppm ASTM D5185(m) >4 Titanium ppm ASTM D5185(m) >3 Aluminum ppm ASTM D5185(m) >20 Lead ppm ASTM D5185(m) >40 Copper ppm ASTM D5185(m) >33 Tin ppm ASTM D5185(m) >15 Vanadium ppm ASTM D5185(m) >20 Ead ppm ASTM D5185(m) >25 Potassium ppm ASTM D5185(m) >25 Potassium ppm ASTM D5185(m) >20 <td>Sample Number Client Info WC0848459 Sample Date Client Info 13 Feb 2024 Machine Age hrs Client Info 8124 Oil Age hrs Client Info 0 Filter Age hrs Client Info N/A Filter Changed Client Info N/A Sample Status NORMAL Iron ppm ASTM D5185(m) >100 6 Chromium ppm ASTM D5185(m) >20 0 Nickel ppm ASTM D5185(m) >4 <1</td> Titanium ppm ASTM D5185(m) >3 0 Aluminum ppm ASTM D5185(m) >3 0 Aluminum ppm ASTM D5185(m) >3 0 Aluminum ppm ASTM D5185(m) >20 2 Lead ppm ASTM D5185(m) >330 1 Tin ppm ASTM D5185(m) >20 2 Lead ppm ASTM D5185(m) <td>Sample Number Client Info WC0848459 Sample Date Client Info 13 Feb 2024 Machine Age hrs Client Info 0 Oil Age hrs Client Info 0 Filter Age hrs Client Info N/A Oil Changed Client Info N/A Filter Changed Client Info N/A Sample Status NORMAL Iron ppm ASTM D5185(m) >100 6 Chromium ppm ASTM D5185(m) >20 0 Nickel ppm ASTM D5185(m) >3 0 Silver ppm ASTM D5185(m) >3 0 Silver ppm ASTM D5185(m) >40 <1</td> Copper ppm ASTM D5185(m) >40 <1 Vanadium ppm ASTM D5185(m)	Sample Number Client Info WC0848459 Sample Date Client Info 13 Feb 2024 Machine Age hrs Client Info 8124 Oil Age hrs Client Info 0 Filter Age hrs Client Info N/A Filter Changed Client Info N/A Sample Status NORMAL Iron ppm ASTM D5185(m) >100 6 Chromium ppm ASTM D5185(m) >20 0 Nickel ppm ASTM D5185(m) >4 <1	Sample Number Client Info WC0848459 Sample Date Client Info 13 Feb 2024 Machine Age hrs Client Info 0 Oil Age hrs Client Info 0 Filter Age hrs Client Info N/A Oil Changed Client Info N/A Filter Changed Client Info N/A Sample Status NORMAL Iron ppm ASTM D5185(m) >100 6 Chromium ppm ASTM D5185(m) >20 0 Nickel ppm ASTM D5185(m) >3 0 Silver ppm ASTM D5185(m) >3 0 Silver ppm ASTM D5185(m) >40 <1





ISO 17025:2017
Accredited
Laboratory

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

 Sample No.
 : WC0848459
 Received
 : 15 Feb 2024

 Lab Number
 : 02615896
 Tested
 : 16 Feb 2024

Diagnosed

: 16 Feb 2024 - Wes Davis

Unique Number : 5733006
Test Package : MOB 2

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.

RWF Industries 873 Devonshire Ave. Woodstock, ON CA N4S 8Z4 Contact: Tami Arnold tamia@rwfbron.com

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