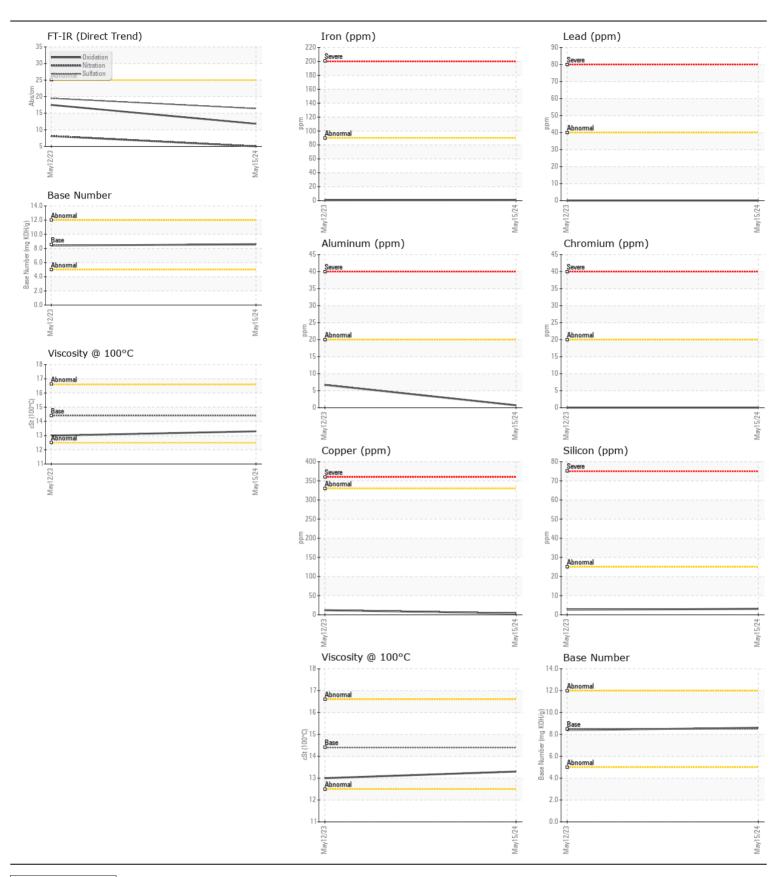
WEAR CONTAMINATION **FLUID CONDITION** **NORMAL NORMAL NORMAL**

[20242294]

Onan 7001 Columbia Gateway 150 kw Diesel Engine

DIESEL ENGINE OIL SAE 15W40 (8 GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		DC0030644	DC0029787	
	Sample Date		Client Info		15 May 2024	12 May 2023	
	Machine Age	yrs	Client Info		0	0	
	Oil Age	yrs	Client Info		1	1	
	Filter Age	yrs	Client Info		1	1	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				NORMAL	NORMAL	
VEAR	Iron	ppm	ASTM D5185m	>90	<1	<1	
MEAIT	Chromium	ppm	ASTM D5185m		0	0	
All component wear rates are normal.	Nickel		ASTM D5185m		0	0	
		ppm					
	Titanium	ppm	ASTM D5185m		<1	<1	
	Silver	ppm	ASTM D5185m		0	0	
	Aluminum	ppm	ASTM D5185m		<1	7	
	Lead	ppm	ASTM D5185m		0	0	
	Copper	ppm	ASTM D5185m		4	12	
	Tin	ppm	ASTM D5185m	>15	0	0	
	Vanadium	ppm	ASTM D5185m		<1	0	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	3	3	
	Potassium	ppm	ASTM D5185m	>20	1	0	
There is no indication of any contamination in the oil.	Fuel		WC Method		<1.0	<1.0	
	Water		WC Method		NEG	NEG	
	Glycol		WC Method		NEG	NEG	
	Soot %	%	*ASTM D7844	>6	0.1	0.1	
	Nitration	Abs/cm	*ASTM D7624	>20	5.0	8.1	
	Sulfation	Abs/.1mm	*ASTM D7415		16.4	19.5	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris						
		scalar	*Visual	NONE	NONE	LIGHT	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
LUID CONDITION	Sodium	ppm	ASTM D5185m		<1	2	
	Boron	ppm	ASTM D5185m	250	12	60	
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m	10	0	0	
	Molybdenum	ppm	ASTM D5185m	100	49	53	
	Manganese	ppm	ASTM D5185m		<1	0	
	Magnesium	ppm	ASTM D5185m	450	658	814	
	Calcium	ppm	ASTM D5185m		1391	1458	
	Phosphorus	ppm	ASTM D5185m		927	830	
	Zinc	ppm	ASTM D5185m		1212	1051	
	Sulfur	ppm	ASTM D5185m		3726	3179	
	Oxidation	Abs/.1mm	*ASTM D7414		11.8	17.5	
	Base Number (BN)				8.6	8.4	
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Certificate L2367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Lab Number : 06211020

: DC0030644

Unique Number: 11083884

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Received **Tested**

Diagnosed Test Package : MOB 1 (Additional Tests: TBN)

: 18 Jun 2024

: 14 Jun 2024

: 18 Jun 2024 - Wes Davis

US 20706 Contact: E. NOEL enoel@phalconusa.com T: (240)623-4398

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F:

JE RICHARDS

LANHAM, MD

4600 HARGROVE DR