

WEAR CONTAMINATION **FLUID CONDITION**

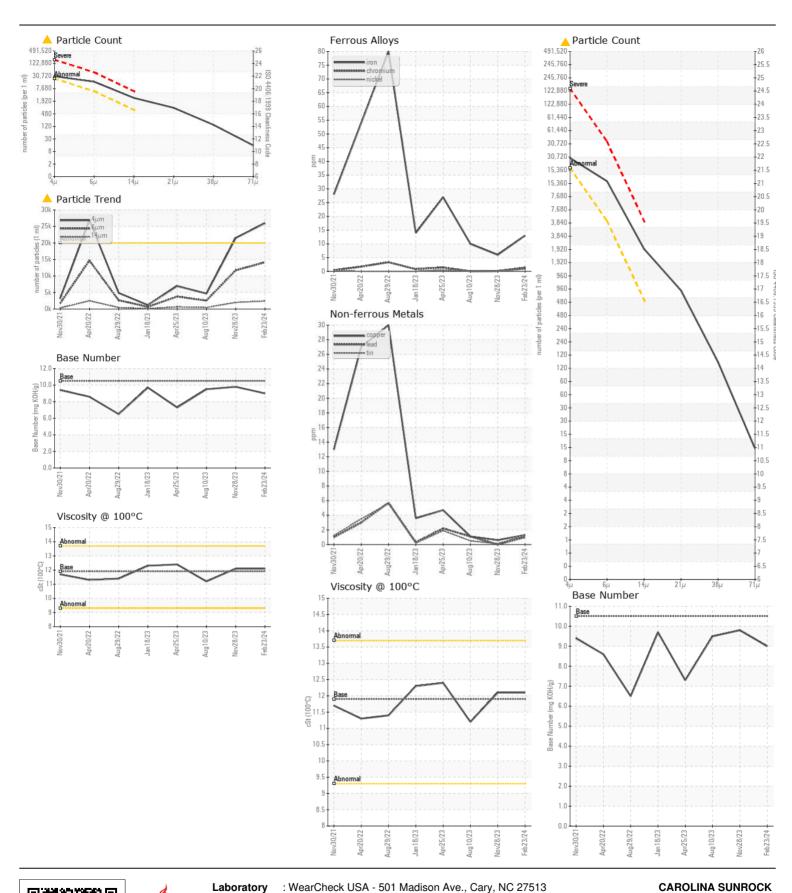
NORMAL ABNORMAL NORMAL

Mobile Fleet

8003 8003

Component Diesel Engine

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		WC0902909	WC0861554	WC0835063
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.	Sample Date		Client Info		23 Feb 2024	28 Nov 2023	10 Aug 2023
	Machine Age	hrs	Client Info		2528	2310	2065
	Oil Age	hrs	Client Info		218	245	289
	Filter Age	hrs	Client Info		218	245	289
	Oil Changed		Client Info		Changed	Not Changd	Changed
	Filter Changed Sample Status		Client Info		Changed ABNORMAL	Not Changd ABNORMAL	Changed NORMAL
WEAR	Iron	ppm	ASTM D5185m	>165	13	6	10
	Chromium	ppm	ASTM D5185m	>5	1	<1	0
All component wear rates are normal.	Nickel	ppm	ASTM D5185m	>4	<1	0	0
	Titanium	ppm	ASTM D5185m	>2	<1	0	0
	Silver	ppm	ASTM D5185m		0	0	<1
	Aluminum	ppm	ASTM D5185m		8	3	6
	Lead	ppm		>150	1	0	1
	Copper	ppm	ASTM D5185m		1	<1	1
	Tin	ppm	ASTM D5185m	>5	1	<1	<1
	Vanadium White Metal	ppm scalar	*Visual	NONE	<1 NONE	<1 NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
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CONTAMINATION	Silicon	ppm	ASTM D5185m	>35	10	8	9
	Potassium	ppm	ASTM D5185m	>20	23	8	18
There is a high amount of particulates present in the oil.	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
	Water		WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	*ASTM D7844		0.4	0.3	0.3
	Nitration	Abs/cm	*ASTM D7624	>20	8.0 22.3	6.6 21.7	7.4
	Sulfation Particles >4µm	Abs/.1mm	*ASTM D7415 ASTM D7647		≥2.3 ▲ 25970	△ 21.7	4672
	Particles >6µm		ASTM D7647		▲ 14148	▲ 11711	2545
	Particles >14µm		ASTM D7647		<u>^</u> 2408	<u>▲</u> 1993	433
	Particles >21µm		ASTM D7647		<u> </u>	<u></u> 671	146
	Particles >38µm		ASTM D7647	>40	125	1 04	23
	Particles >71µm		ASTM D7647	>10	<u> </u>	<u> </u>	2
	Oil Cleanliness		ISO 4406 (c)	>21/19/16	<u>22/21/18</u>	<u>22/21/18</u>	19/19/16
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
	Appearance Odor	scalar scalar	*Visual *Visual	NORML NORML	NORML NORML	NORML NORML	NORMI NORMI
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
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FLUID CONDITION	Sodium	ppm	ASTM D5185m		2	3	0
	Boron	ppm	ASTM D5185m		40	51	48
The BN result indicates that there is suitable alkalinity remaining in the	Barium	ppm	ASTM D5185m		1	0	2
oil. The condition of the oil is suitable for further service.	Molybdenum	ppm	ASTM D5185m		44	43	52
	Manganese	ppm	ASTM D5185m		1	<1	<1
	Magnesium	ppm	ASTM D5185m		450	487	494
	Calcium	ppm	ASTM D5185m ASTM D5185m		1452	1716	1744
	Phosphorus Zinc	ppm	ASTM D5185m		705 869	774 887	762 927
	Sulfur	ppm	ASTM D5165III		2657	2339	2713
	Oxidation	Abs/.1mm	*ASTM D7414	>25	20.6	19.8	20.0
	Base Number (BN)				9.0	9.8	9.5
	(214)	cSt		11.9			11.2





Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0902909 Lab Number : 06101498

Unique Number : 10899728

Received **Tested** Diagnosed

: 29 Feb 2024 : 29 Feb 2024 - Jonathan Hester Test Package : CONST (Additional Tests: PrtCount, TBN)

: 27 Feb 2024

Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

US 27509 Contact: Leigh Dennis rdennis@thesunrockgroup.com

T: (919)575-4505 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (919)575-0162

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