**WEAR CONTAMINATION FLUID CONDITION** 

**NORMAL MARGINAL NORMAL** 

Machine Id 9907

Component Diesel Engine							
DIESEL ENGINE OIL SAE 15W40 ( GAL)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		WC0810317	WC0844988	WC079053
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.	Sample Date		Client Info		09 Jan 2024	08 Sep 2023	23 Mar 202
	Machine Age	mls	Client Info		365664	360242	354801
	Oil Age	mls	Client Info		0	0	0
	Filter Age	mls	Client Info		0	0	0
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				MARGINAL	ABNORMAL	ABNORMA
WEAR	Iron	ppm	ASTM D5185m	>100	3	13	14
All component wear rates are normal.	Chromium	ppm	ASTM D5185m		<1	1	<1
	Nickel	ppm	ASTM D5185m		0	0	0
	Titanium	ppm	ASTM D5185m		0	<1	<1
	Silver	ppm	ASTM D5185m	>3	0	0	0
	Aluminum	ppm	ASTM D5185m		2	2	0
	Lead	ppm	ASTM D5185m		0	16	17
	Copper	ppm	ASTM D5185m		<1	3	3
	Tin	ppm	ASTM D5185m		0	<1	<1
	Vanadium	ppm	ASTM D5185m		0	0	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m		5	10	10
Light fuel dilution occurring. No other contaminants were detected in the oil.	Potassium	ppm	ASTM D5185m		2	<1	1
	Fuel	%	ASTM D3524		<u>4.7</u>	<u></u> 5.8	6.0
	Water		WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method	-	NEG	NEG	NEG
	Soot %	%	*ASTM D7844		0.1	0.3	0.4
	Nitration	Abs/cm	*ASTM D7624	>20	7.2	10.3	10.1
	Sulfation	Abs/.1mm	*ASTM D7415		19.2	21.3	20.4
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
	Appearance	scalar	*Visual	NORML NORML	NORML	NORML	NORM!
	Odor Emulsified Water	scalar	*Visual *Visual	>0.2	NORML NEG	NORML NEG	NEG
FLUID CONDITION	Sodium	ppm	ASTM D5185m		1	4	0
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Boron	ppm	ASTM D5185m		67	18	18
	Barium	ppm	ASTM D5185m		3	2	2
	Molybdenum	ppm	ASTM D5185m	100	64	71	67
	Manganese	ppm	ASTM D5185m	150	0	<1	<1
	Magnesium	ppm	ASTM D5185m		335	389	360
	Calcium	ppm	ASTM D5185m	3000	1638	1731	1658
	Phosphorus	ppm	ASTM D5185m		970	1034	959
	Zinc	ppm	ASTM D5185m		1147	1246	1165
	Sulfur	ppm	ASTM D5185m	4250	3710	3397	3146

Oxidation

Visc @ 100°C cSt

19.4

7.1

12.4

15.5

7.9

12.3

Abs/.1mm \*ASTM D7414 >25

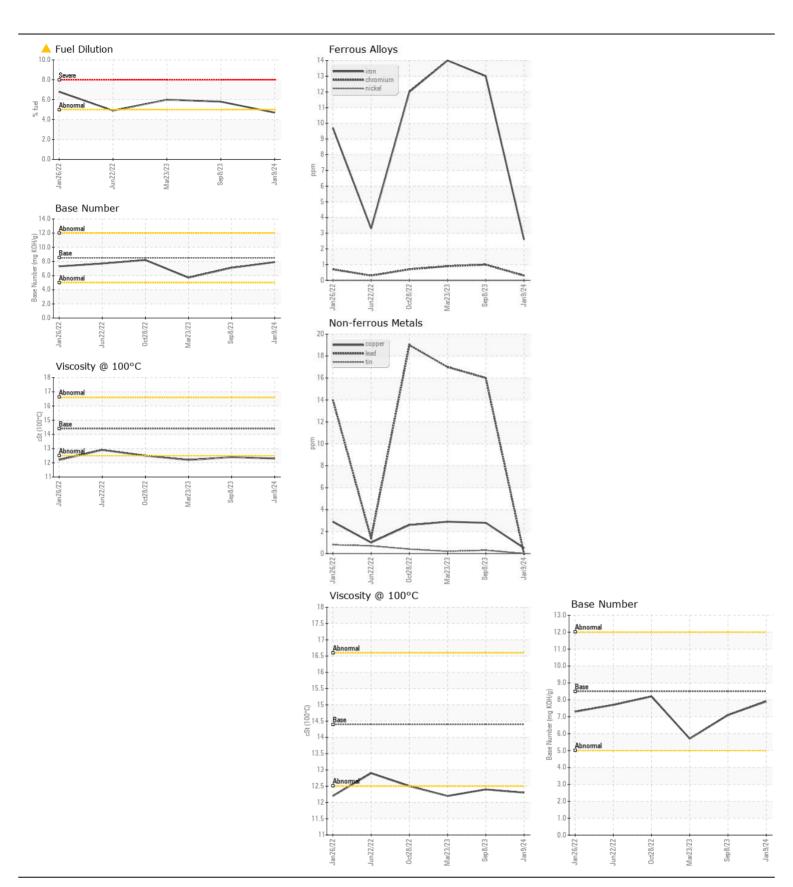
ASTM D445 14.4

Base Number (BN) mg KOH/g ASTM D2896 8.5

19.5

5.7

<u>12.2</u>







Laboratory Sample No. Lab Number **Unique Number** 

: WC0810317 : 06064119 : 10835501

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 18 Jan 2024 Diagnosed : 19 Jan 2024

Diagnostician : Wes Davis

Test Package : FLEET ( Additional Tests: PercentFuel ) 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. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) **TOWN OF CHAPEL HILL** 6900 MILLHOUSE RD CHAPEL HILL, NC

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