WEAR CONTAMINATION FLUID CONDITION

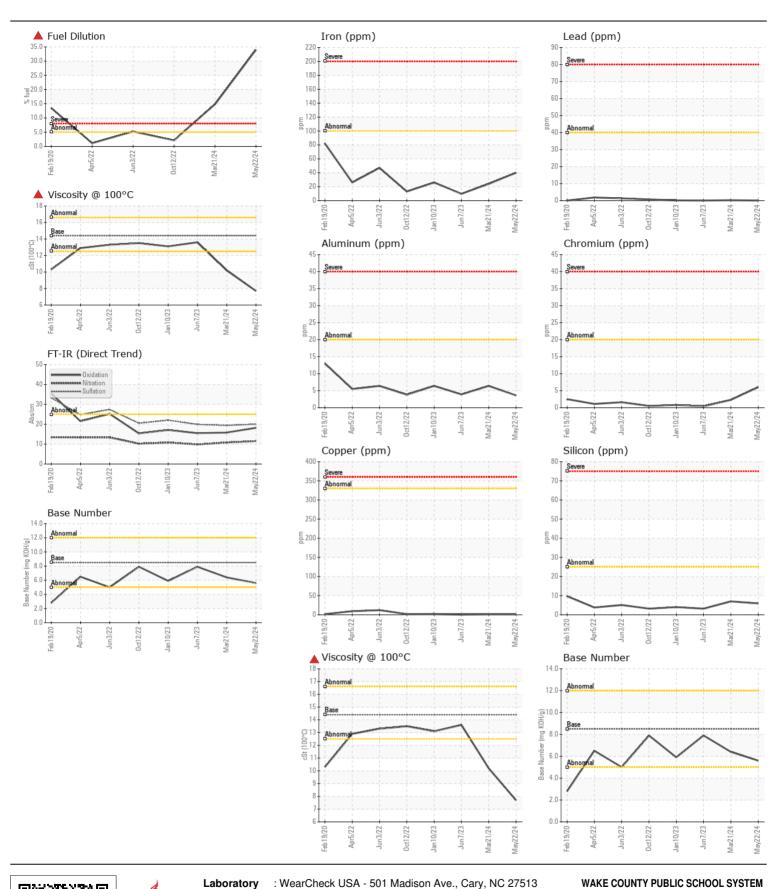
NORMAL SEVERE SEVERE

Machine Id

1428

## Component Diesel Engine

Diesel Engine Fluid DIESEL ENGINE OIL SAE 15W40 ( QTS)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.	Sample Number		Client Info		WC0932714	WC0905771	WC0821240
	Sample Date		Client Info		22 May 2024	21 Mar 2024	07 Jun 2023
	Machine Age	mls	Client Info		204176	200141	184180
	Oil Age	mls	Client Info		0	0	0
	Filter Age	mls	Client Info		0	0	0
	Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
	Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
	Sample Status				SEVERE	SEVERE	NORMAL
WEAD	lran		ACTM DE10Em	. 100	40	04	10
WEAR	Iron	ppm	ASTM D5185m		40	24	10
All component wear rates are normal.	Chromium Nickel	ppm	ASTM D5185m ASTM D5185m		6 0	2 <1	<1 0
	Titanium	ppm	ASTM D5185m	>4	0	<1	0
	Silver	ppm	ASTM D5185m	. 2	0	<1	0
	Aluminum	ppm ppm	ASTM D5185m		4	6	4
	Lead	ppm	ASTM D5185m		0	<1	0
	Copper	ppm	ASTM D5185m		1	1	<1
	Tin	ppm	ASTM D5185m		0	<1	0
	Vanadium	ppm	ASTM D5185m	7.0	0	<1	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	0:1:		AOTA DE LOS	05		_	
CONTAMINATION	Silicon	ppm	ASTM D5185m		6	7	3
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.	Potassium	ppm	ASTM D5185m		3	5	2
	Fuel	%	ASTM D3524 WC Method		▲ 34.0	▲ 14.8	<1.0 NEG
	Water Glycol		WC Method	>0.2	NEG NEG	NEG NEG	NEG
	Soot %	%	*ASTM D7844	~3	0.8	0.7	0.5
	Nitration	Abs/cm	*ASTM D7624	>20	11.5	10.8	9.8
	Sulfation	Abs/.1mm	*ASTM D7415		20.0	19.4	19.9
	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
	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
FLUID CONDITION	Sodium	nnm	ASTM D5185m	<158	1	3	1
	Boron	ppm	ASTM D5185m		29	28	30
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.	Barium	ppm	ASTM D5185m		0	0	0
	Molybdenum	ppm	ASTM D5185m		57	70	80
	Manganese	ppm	ASTM D5185m	. 50	0	<1	<1
	Magnesium	ppm	ASTM D5185m	450	72	92	143
	Calcium	ppm	ASTM D5185m		1326	1622	2261
	Phosphorus	ppm	ASTM D5185m		627	790	1101
	Zinc	ppm	ASTM D5185m	1350	831	973	1348
	Sulfur	ppm	ASTM D5185m	4250	2284	2954	4652
	Oxidation	Abs/.1mm	*ASTM D7414	>25	18.2	15.8	15.5
	Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.6	6.4	7.9
	Visc @ 100°C	cSt	ASTM D445	14.4	7.7	<u> </u>	13.6





Certificate L2367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Lab Number : 06220960

: WC0932714

**Tested** Unique Number: 11099157 Diagnosed Test Package : MOB 1 (Additional Tests: PercentFuel, TBN)

Received : 26 Jun 2024 : 01 Jul 2024

: 01 Jul 2024 - Wes Davis

1551 ROCK QUARRY ROAD RALEIGH, NC US 27610

Contact: DEVIN WEBER dweber@wcpss.net T: (919)856-8076

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)

F: x: