



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**222470**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (40 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0956995</b>	WC0907655	WC0869788
Sample Date		Client Info		<b>10 Jul 2024</b>	28 Feb 2024	29 Nov 2023
Machine Age	mls	Client Info		<b>39514</b>	35068	31257
Oil Age	mls	Client Info		<b>4446</b>	3811	4079
Filter Age	mls	Client Info		<b>4446</b>	3811	4079
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>120	<b>17</b>	10	11
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>4</b>	10	2
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	1	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	3	0
Copper	ppm	ASTM D5185m	>330	<b>4</b>	1	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

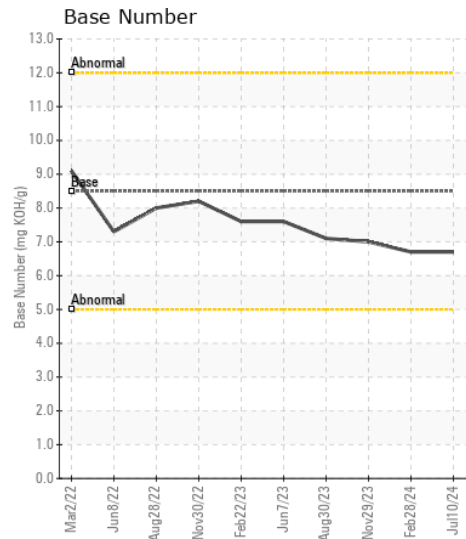
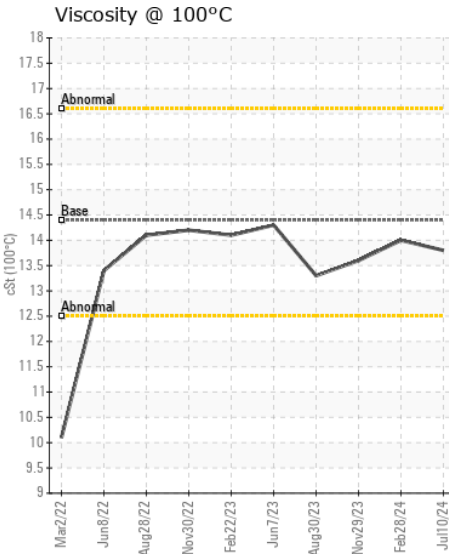
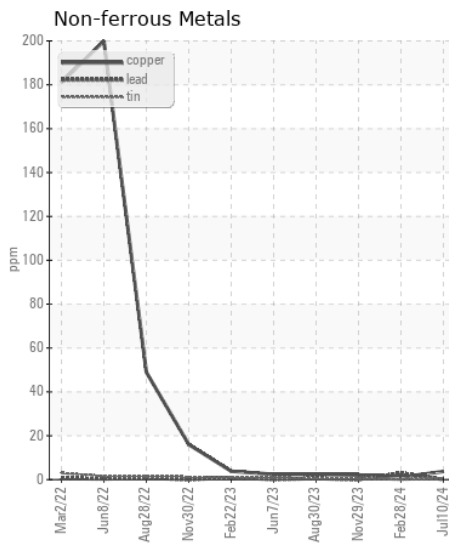
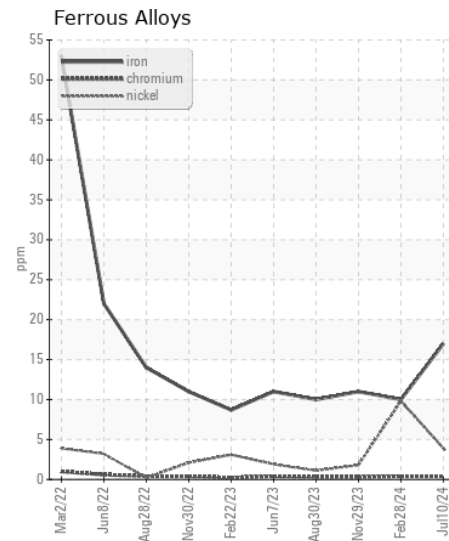
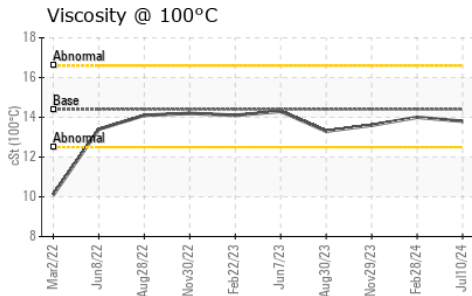
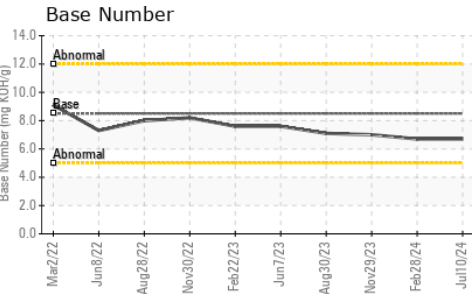
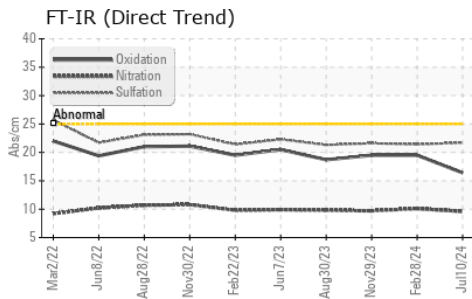
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	1	2
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.7</b>	0.5	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.6</b>	10.1	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.7</b>	21.4	21.6
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	<b>6</b>	5	3
Boron	ppm	ASTM D5185m	250	<b>12</b>	27	29
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	5
Molybdenum	ppm	ASTM D5185m	100	<b>51</b>	49	59
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	450	<b>773</b>	799	782
Calcium	ppm	ASTM D5185m	3000	<b>1163</b>	1349	1225
Phosphorus	ppm	ASTM D5185m	1150	<b>883</b>	772	778
Zinc	ppm	ASTM D5185m	1350	<b>1075</b>	932	925
Sulfur	ppm	ASTM D5185m	4250	<b>3013</b>	2524	2154
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.4</b>	19.5	19.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.7</b>	6.7	7.0
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.8</b>	14.0	13.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0956995  
**Lab Number** : 06239660  
**Unique Number** : 11128494  
**Test Package** : FLEET

**Received** : 17 Jul 2024  
**Tested** : 18 Jul 2024  
**Diagnosed** : 18 Jul 2024 - Wes Davis

**CITY OF GREENSBORO**  
 401 PATTON AVE - BUILDING H  
 GREENSBORO, NC  
 US 27406  
 Contact: JERRY GUNTER  
 jerry.gunter@greensboro-nc.gov

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)

T: x:  
 F: x: