



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id  
**FREIGHTLINER 736**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (19 QTS)**

**RECOMMENDATION**

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0905826</b>	WC0870766	WC0806659
Sample Date		Client Info		<b>22 Mar 2024</b>	29 Jan 2024	11 Apr 2023
Machine Age	mls	Client Info		<b>309215</b>	304285	289279
Oil Age	mls	Client Info		<b>0</b>	0	0
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Sample Status				<b>SEVERE</b>	NORMAL	NORMAL

**WEAR**

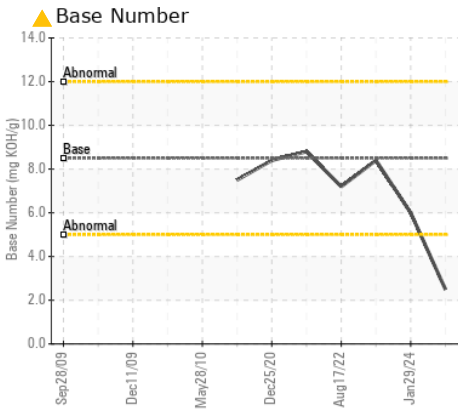
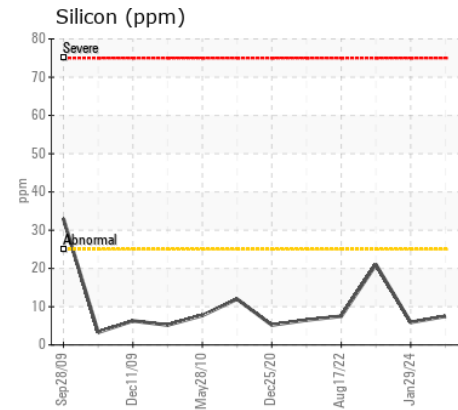
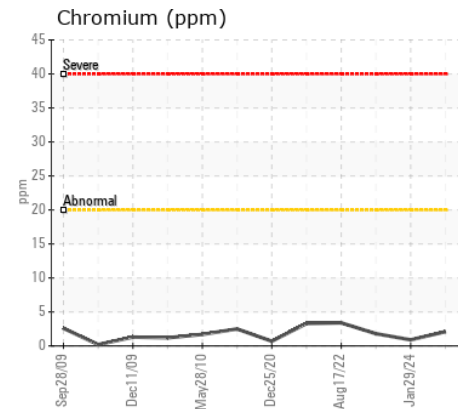
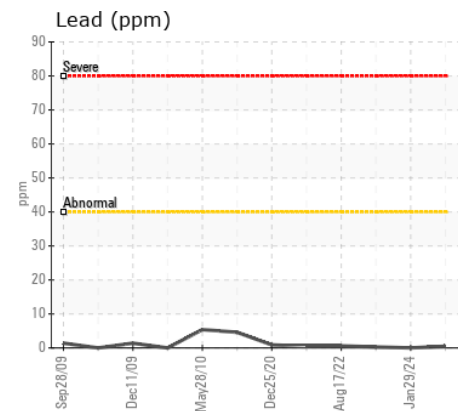
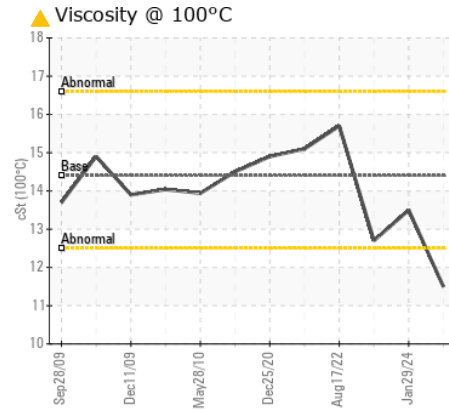
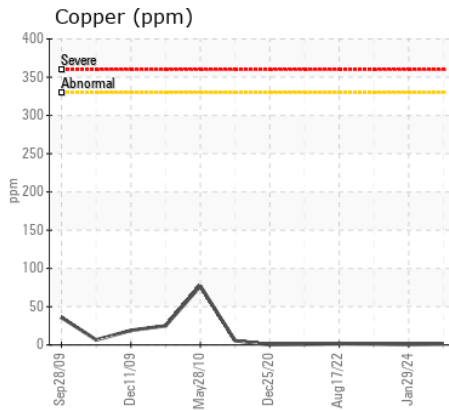
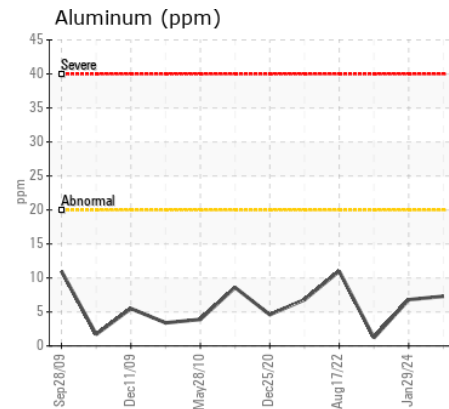
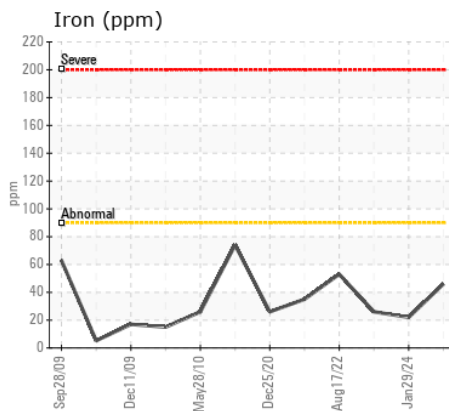
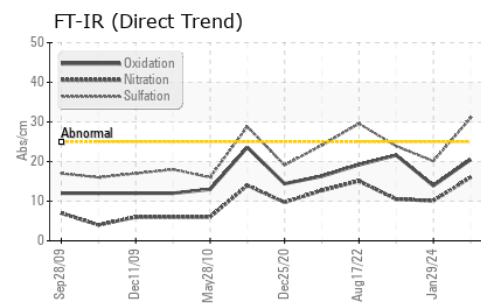
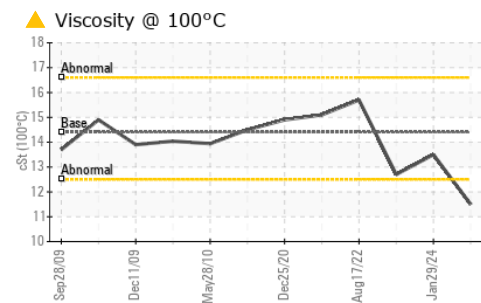
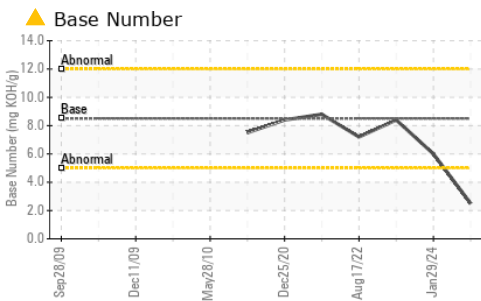
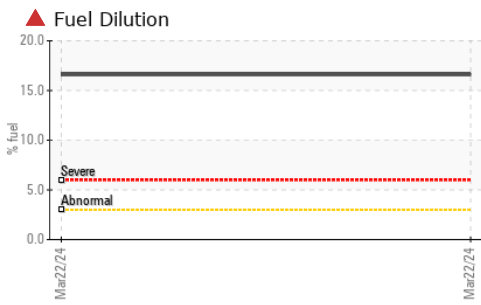
Iron	ppm	ASTM D5185m	>90	<b>46</b>	22	26
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	<1	2
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>7</b>	7	1
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>2</b>	<1	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	6	21
Potassium	ppm	ASTM D5185m	>20	<b>15</b>	12	7
Fuel	%	ASTM D3524	>3.0	<b>▲ 16.6</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	>6	<b>5</b>	1.3	1.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>16.0</b>	10.1	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>31.0</b>	20.1	23.9
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**

Sodium	ppm	ASTM D5185m	>158	<b>10</b>	9	4
Boron	ppm	ASTM D5185m	250	<b>21</b>	36	39
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>67</b>	87	46
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	450	<b>86</b>	115	399
Calcium	ppm	ASTM D5185m	3000	<b>1535</b>	2029	1687
Phosphorus	ppm	ASTM D5185m	1150	<b>737</b>	1035	722
Zinc	ppm	ASTM D5185m	1350	<b>930</b>	1249	900
Sulfur	ppm	ASTM D5185m	4250	<b>2668</b>	3947	2430
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.5</b>	13.9	21.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>▲ 2.5</b>	6.0	8.4
Visc @ 100°C	cSt	ASTM D445	14.4	<b>▲ 11.5</b>	13.5	12.7



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0905826  
**Lab Number** : 06189001  
**Unique Number** : 11045753  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel, TBN )

**WAKE COUNTY PUBLIC SCHOOL SYSTEM**  
 1551 ROCK QUARRY ROAD  
 RALEIGH, NC  
 US 27610

**Received** : 23 May 2024  
**Tested** : 28 May 2024  
**Diagnosed** : 28 May 2024 - Sean Felton  
 Contact: DEVIN WEBER  
 dweber@wcpss.net  
 T: (919)856-8076  
 F: x:

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)