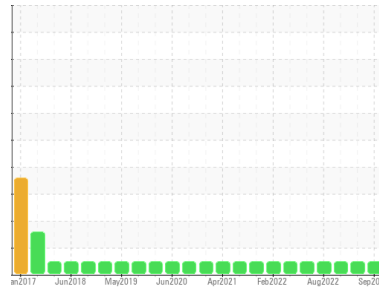




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**FREIGHTLINER 2341**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (19 QTS)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>RW0004781</b>	RW0003888	RW0003950
Sample Date	Client Info			<b>18 Sep 2023</b>	21 Mar 2023	18 Oct 2022
Machine Age	hrs	Client Info		<b>8310</b>	7888	7116
Oil Age	hrs	Client Info		<b>422</b>	772	0
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	<b>39</b>	33	13
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>8</b>	5	4
Lead	ppm	ASTM D5185m	>30	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>150	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	<b>3</b>	4	5
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>64</b>	66	66
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>988</b>	939	911
Calcium	ppm	ASTM D5185m	3000	<b>1091</b>	1157	1111
Phosphorus	ppm	ASTM D5185m	1150	<b>1043</b>	1011	1004
Zinc	ppm	ASTM D5185m	1350	<b>1286</b>	1241	1224
Sulfur	ppm	ASTM D5185m	4250	<b>3033</b>	3025	3529

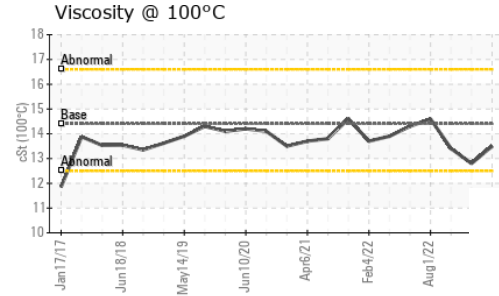
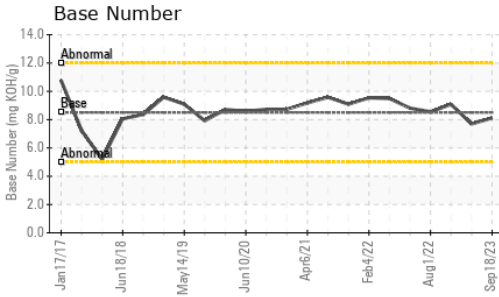
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	<b>4</b>	6	3
Sodium	ppm	ASTM D5185m	>158	<b>2</b>	2	0
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	8	4

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.7</b>	1.2	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.3</b>	11.8	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.1</b>	23.6	21.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.6</b>	22.5	17.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>8.12</b>	7.69	9.08



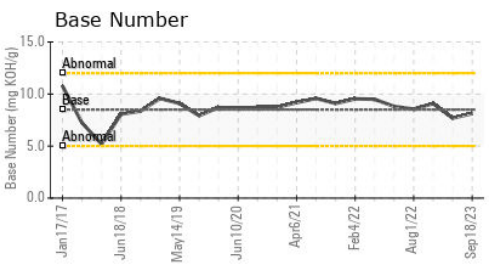
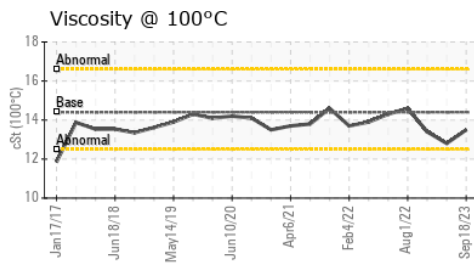
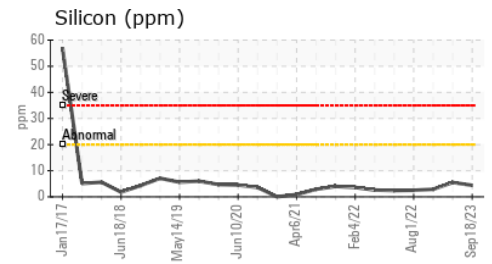
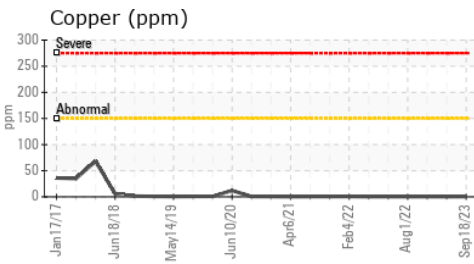
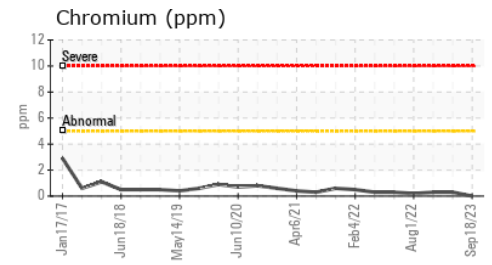
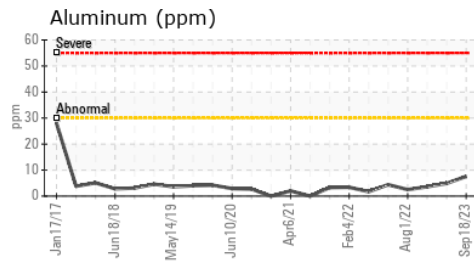
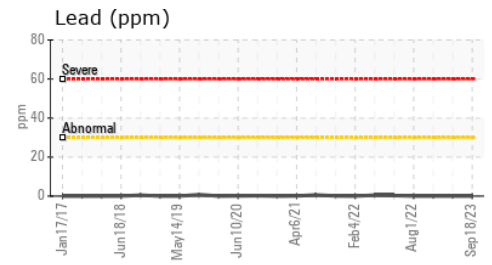
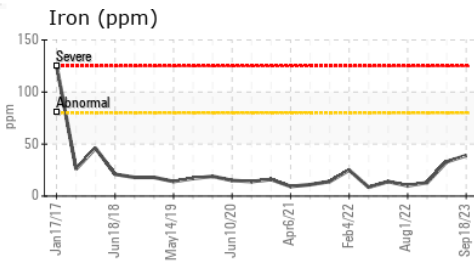
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.5</b>	12.8	13.4

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RW0004781 **Received** : 29 Sep 2023  
**Lab Number** : 05965554 **Diagnosed** : 03 Oct 2023  
**Unique Number** : 10672105 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2

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 jbrock@fhgov.com  
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 F:

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)