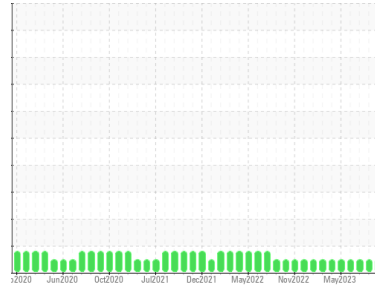




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**OKLAHOMA CITY**  
 Machine Id  
**2018 FREIGHTLINER 7729**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL Rotella T5 15W-40 (--- 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>WC0838593</b>	WC0838589	WC0820380
Sample Date	Client Info			<b>05 Oct 2023</b>	12 Sep 2023	04 Aug 2023
Machine Age	hrs	Client Info		<b>3474</b>	3419	3361
Oil Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method		>3.0	<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	>65	<b>27</b>	27	22
Chromium	ppm	ASTM D5185m	>5	<b>4</b>	4	3
Nickel	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>35	<b>13</b>	11	12
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>180	<b>32</b>	35	33
Tin	ppm	ASTM D5185m	>8	<b>4</b>	3	4
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>76</b>	58	61
Barium	ppm	ASTM D5185m		<b>12</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>76</b>	77	75
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>237</b>	216	207
Calcium	ppm	ASTM D5185m		<b>1781</b>	2030	1954
Phosphorus	ppm	ASTM D5185m		<b>959</b>	941	939
Zinc	ppm	ASTM D5185m		<b>1247</b>	1285	1245
Sulfur	ppm	ASTM D5185m		<b>2893</b>	3511	3362

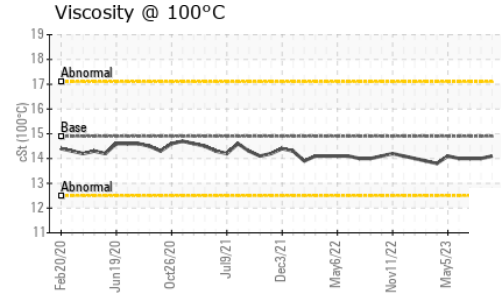
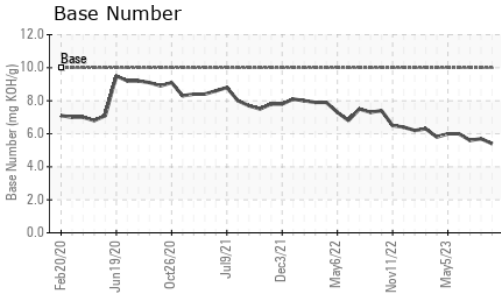
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<b>5</b>	5	4
Sodium	ppm	ASTM D5185m		<b>2</b>	2	3
Potassium	ppm	ASTM D5185m	>20	<b>22</b>	22	22

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	0.6	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.3</b>	9.9	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.3</b>	22.3	22.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.8</b>	16.7	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>5.4</b>	5.7	5.6



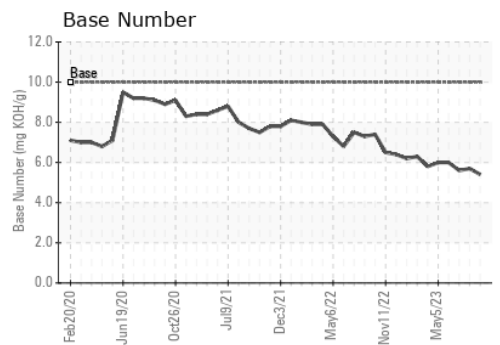
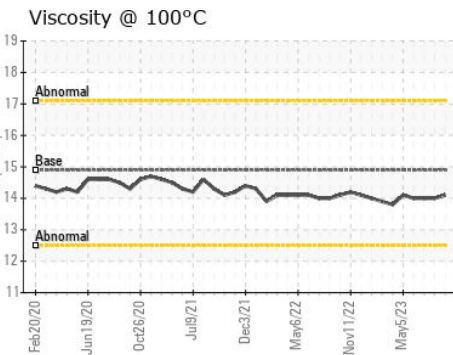
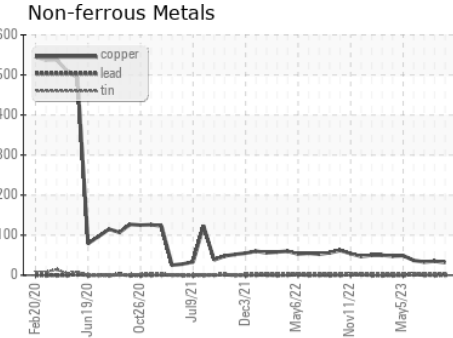
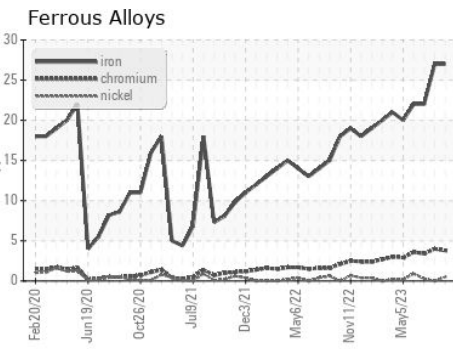
# OIL ANALYSIS REPORT



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	14.9	14.1	14.0

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0838593 **Received** : 13 Oct 2023  
**Lab Number** : 05978793 **Diagnosed** : 16 Oct 2023  
**Unique Number** : 10696088 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**LIBERTY DISPOSAL**  
 6401 S EASTERN AVE  
 OKLAHOMA CITY, OK  
 US 73149  
 Contact: RICK SCHMIDT  
 r.schmidt@ldi89.com

Certificate L2367  
 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)