



# WEAR CHECK

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id  
**FREIGHTLINER FTL-170**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (11 GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>KL0011813</b>	KL0011563	KL0011557
Sample Date		Client Info		<b>07 Dec 2023</b>	06 Oct 2023	06 Sep 2023
Machine Age	mls	Client Info		<b>335768</b>	318324	309094
Oil Age	mls	Client Info		<b>17444</b>	30947	21717
Filter Age	mls	Client Info		<b>17444</b>	30947	21717
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	<b>8</b>	26	17
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	2	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>30	<b>2</b>	6	7
Lead	ppm	ASTM D5185m	>30	<b>4</b>	8	4
Copper	ppm	ASTM D5185m	>150	<b>&lt;1</b>	3	2
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	1	<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

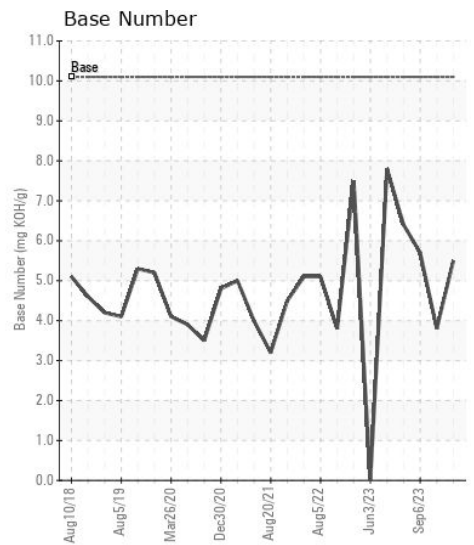
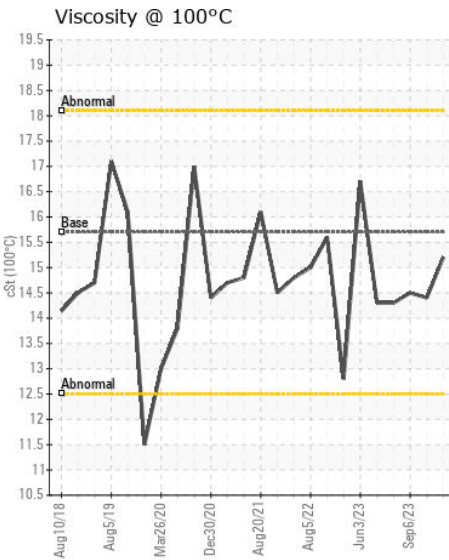
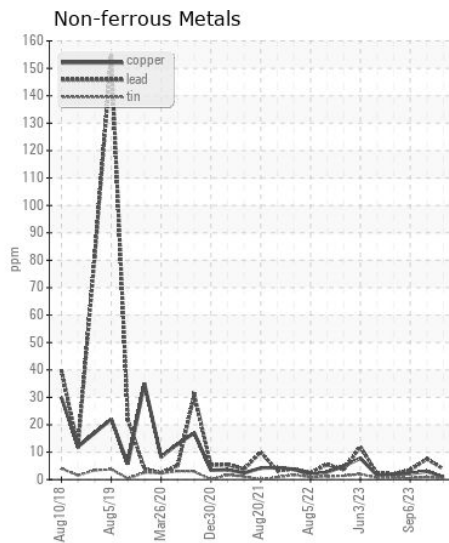
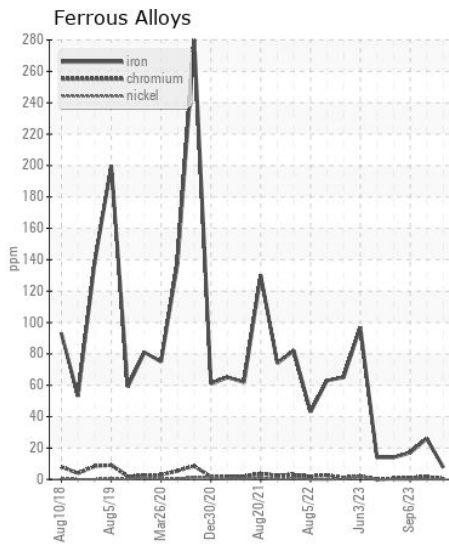
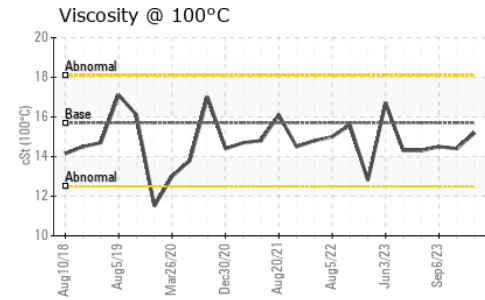
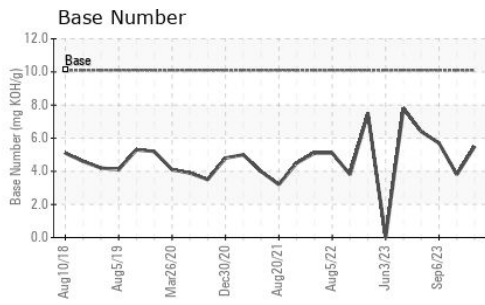
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>4</b>	6	6
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	2
Fuel		WC Method	>5	<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	>3	<b>0.3</b>	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.0</b>	10.4	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.3</b>	26.4	23.8
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		<b>1</b>	6	4
Boron	ppm	ASTM D5185m	316	<b>17</b>	14	15
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	1.2	<b>40</b>	53	49
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	24	<b>463</b>	549	496
Calcium	ppm	ASTM D5185m	2292	<b>1369</b>	1758	1514
Phosphorus	ppm	ASTM D5185m	1064	<b>829</b>	1072	939
Zinc	ppm	ASTM D5185m	1160	<b>1113</b>	1385	1200
Sulfur	ppm	ASTM D5185m	4996	<b>2351</b>	2760	2874
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.7</b>	26.5	21.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>5.5</b>	3.8	5.7
Visc @ 100°C	cSt	ASTM D445	15.7	<b>15.2</b>	14.4	14.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0011813  
**Lab Number** : 06037655  
**Unique Number** : 10792884  
**Test Package** : FLEET

**Received** : 18 Dec 2023  
**Tested** : 19 Dec 2023  
**Diagnosed** : 20 Dec 2023 - Jonathan Hester

**FTL LTD**  
 2302 E DUPONT AVE  
 BELLE, WV  
 US 25015  
 Contact: JOHN SMITH  
 johnhotrodsmith@gmail.com

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)

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F: