



# WEAR CHECK

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**PETERBILT AL-140**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>KL0011817</b>	KL0008439	KL0008434
Sample Date		Client Info		<b>07 Dec 2023</b>	26 Feb 2023	27 Jan 2023
Machine Age	mls	Client Info		<b>295835</b>	274777	267464
Oil Age	mls	Client Info		<b>28571</b>	7313	49312
Filter Age	mls	Client Info		<b>28571</b>	7313	49312
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	<b>45</b>	60	▲ 278
Chromium	ppm	ASTM D5185m	>4	<b>2</b>	1	4
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>25	<b>4</b>	14	15
Lead	ppm	ASTM D5185m	>45	<b>12</b>	2	12
Copper	ppm	ASTM D5185m	>85	<b>2</b>	4	13
Tin	ppm	ASTM D5185m	>4	<b>2</b>	3	4
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

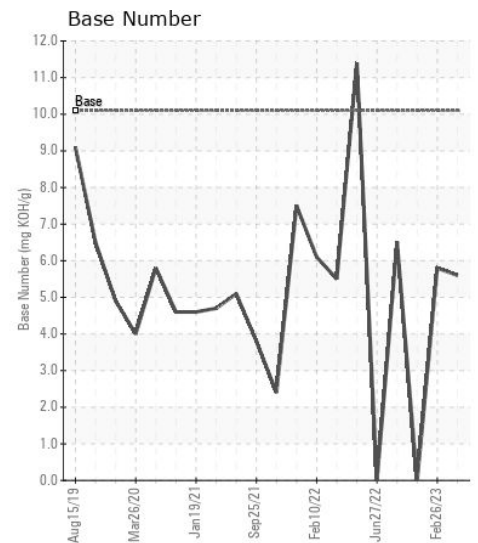
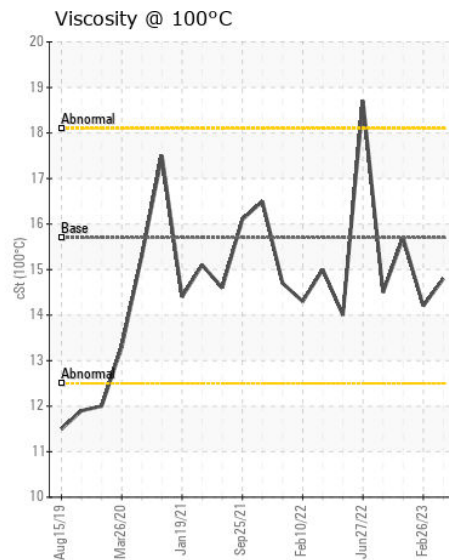
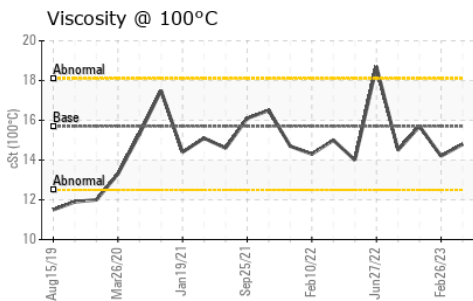
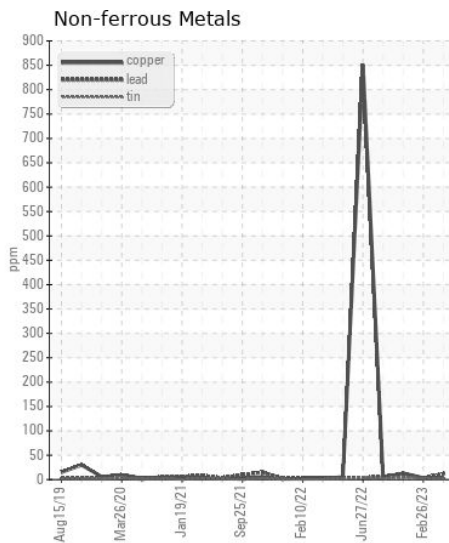
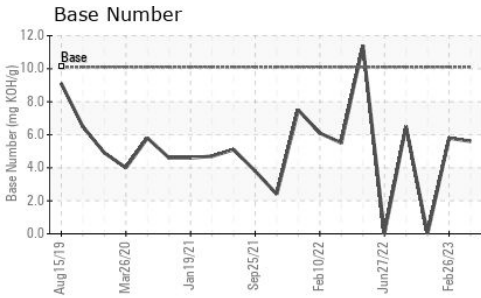
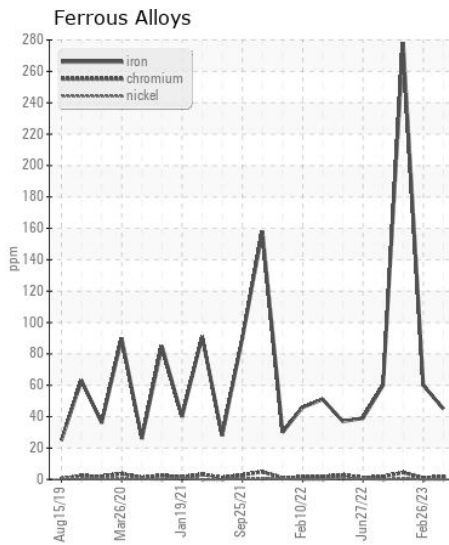
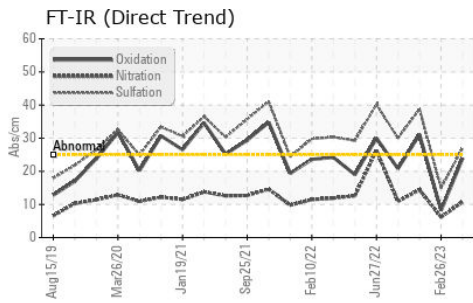
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	<b>20</b>	8	25
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	9	▲ 114
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	0.2
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	0.0
Soot %	%	*ASTM D7844	>3	<b>1.4</b>	0.1	▲ 4.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.8</b>	6.2	14.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>27.0</b>	15.0	38.8
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>4</b>	12	▲ 101
Boron	ppm	ASTM D5185m	316	<b>21</b>	12	49
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	1.2	<b>58</b>	273	98
Manganese	ppm	ASTM D5185m		<b>1</b>	1	5
Magnesium	ppm	ASTM D5185m	24	<b>567</b>	953	329
Calcium	ppm	ASTM D5185m	2292	<b>1461</b>	1224	1961
Phosphorus	ppm	ASTM D5185m	1064	<b>927</b>	1168	1056
Zinc	ppm	ASTM D5185m	1160	<b>1252</b>	1367	1493
Sulfur	ppm	ASTM D5185m	4996	<b>2389</b>	3674	3418
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>23.9</b>	8.2	31.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>5.6</b>	5.8	▲ 0.0
Visc @ 100°C	cSt	ASTM D445	15.7	<b>14.8</b>	14.2	15.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : KL0011817

**Lab Number** : 06037653

**Unique Number** : 10792882

**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

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T:

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)