



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**PETERBILT 21721**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 10W30 (48 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0909695</b>	WC0866865	WC0801669
Sample Date		Client Info		<b>24 May 2024</b>	05 Feb 2024	26 Jun 2023
Machine Age	mls	Client Info		<b>190711</b>	11768	171430
Oil Age	mls	Client Info		<b>7513</b>	11768	8421
Filter Age	mls	Client Info		<b>7513</b>	11768	8421
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>165	<b>6</b>	10	6
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	2	0
Lead	ppm	ASTM D5185m	>150	<b>&lt;1</b>	1	<1
Copper	ppm	ASTM D5185m	>90	<b>&lt;1</b>	2	<1
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	1	<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

There is no indication of any contamination in the oil.

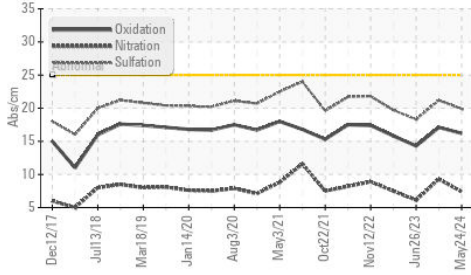
Silicon	ppm	ASTM D5185m	>35	<b>3</b>	5	4
Potassium	ppm	ASTM D5185m	>20	<b>7</b>	6	5
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>7.5	<b>0.2</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.4</b>	9.3	6.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.9</b>	21.2	18.3
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

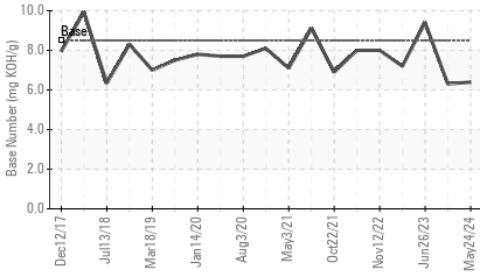
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	0	1
Boron	ppm	ASTM D5185m	269	<b>168</b>	118	159
Barium	ppm	ASTM D5185m		<b>0</b>	13	0
Molybdenum	ppm	ASTM D5185m	0	<b>5</b>	16	5
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	20	<b>28</b>	88	29
Calcium	ppm	ASTM D5185m	1521	<b>2095</b>	2161	2106
Phosphorus	ppm	ASTM D5185m	948	<b>1024</b>	949	944
Zinc	ppm	ASTM D5185m	893	<b>1192</b>	1199	1154
Sulfur	ppm	ASTM D5185m		<b>3843</b>	3903	3818
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.2</b>	17.1	14.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.4</b>	6.3	9.4
Visc @ 100°C	cSt	ASTM D445	11.0	<b>11.8</b>	11.9	11.7

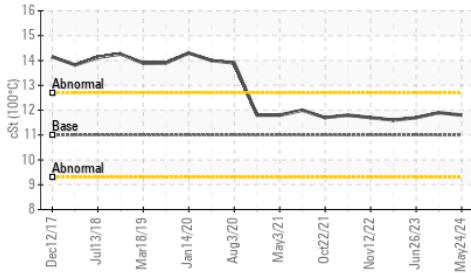
**FT-IR (Direct Trend)**



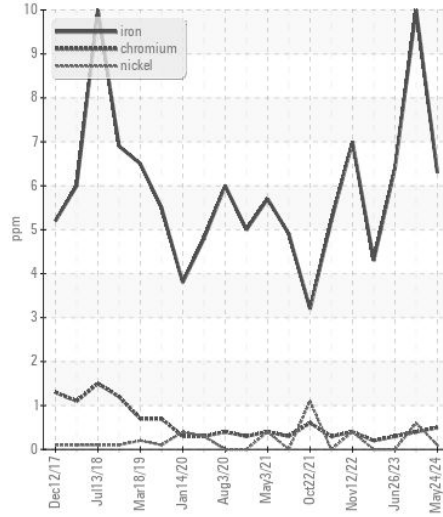
**Base Number**



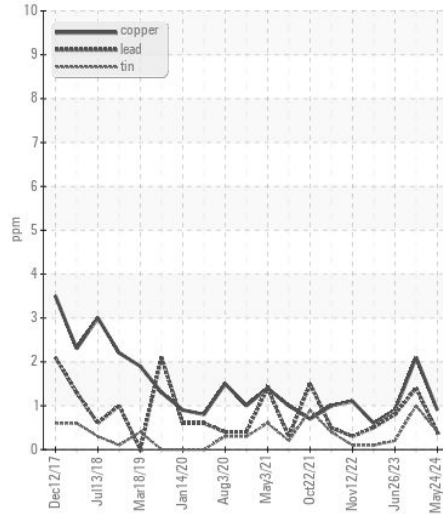
**Viscosity @ 100°C**



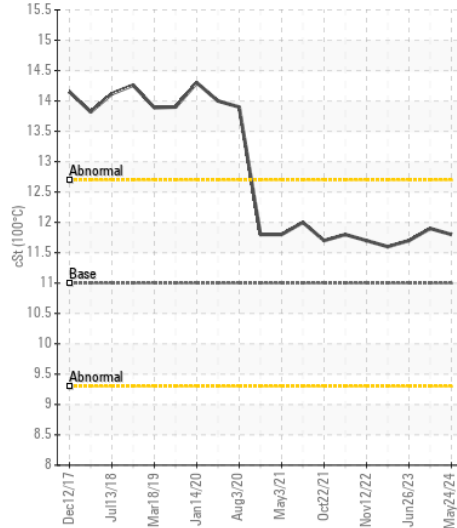
**Ferrous Alloys**



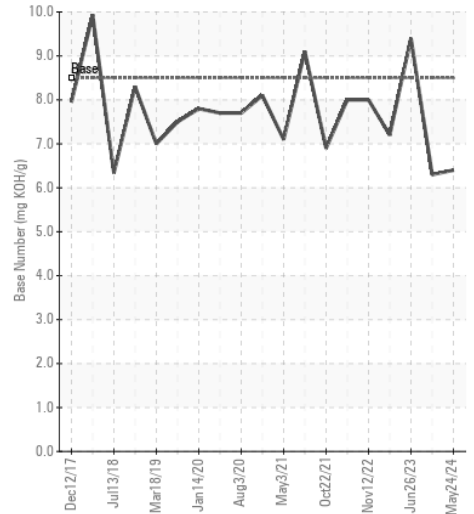
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0909695  
**Lab Number** : 06197376  
**Unique Number** : 11059499  
**Test Package** : FLEET

**Received** : 03 Jun 2024  
**Tested** : 04 Jun 2024  
**Diagnosed** : 04 Jun 2024 - Wes Davis

**GUY M TURNER & TURNER TRANSFER**  
 4505 SOUTH HOLDEN ROAD  
 GREENSBORO, NC  
 US 27406

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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)