



# OIL ANALYSIS REPORT

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

Machine Id  
**PETERBILT 21705**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 10W30 (54 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0955681</b>	WC0909739	WC0832032
Sample Date		Client Info		<b>08 Jul 2024</b>	08 May 2024	28 Sep 2023
Machine Age	mls	Client Info		<b>162070</b>	155452	142978
Oil Age	mls	Client Info		<b>6618</b>	6827	7449
Filter Age	mls	Client Info		<b>6618</b>	6827	7449
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	>110	<b>5</b>	3	9
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>3</b>	1	<1
Lead	ppm	ASTM D5185m	>45	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>85	<b>&lt;1</b>	0	2
Tin	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
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.

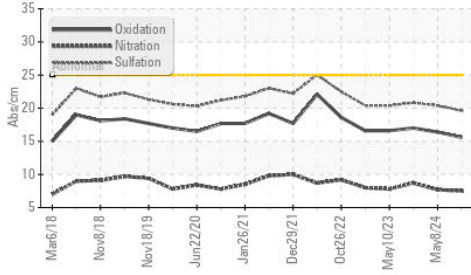
Silicon	ppm	ASTM D5185m	>30	<b>3</b>	3	4
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	5	3
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.5</b>	7.7	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.6</b>	20.4	20.8
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

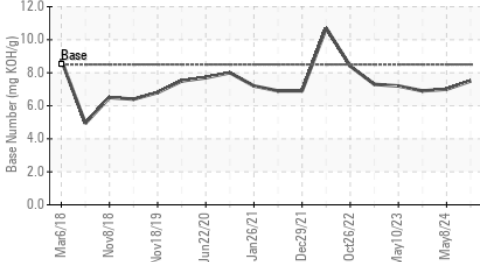
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Boron	ppm	ASTM D5185m	269	<b>108</b>	153	118
Barium	ppm	ASTM D5185m		<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m	0	<b>18</b>	3	16
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	20	<b>253</b>	46	98
Calcium	ppm	ASTM D5185m	1521	<b>2355</b>	2175	2027
Phosphorus	ppm	ASTM D5185m	948	<b>1207</b>	1024	967
Zinc	ppm	ASTM D5185m	893	<b>1406</b>	1186	1209
Sulfur	ppm	ASTM D5185m		<b>3811</b>	3951	3491
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.6</b>	16.4	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.5</b>	7.0	6.9
Visc @ 100°C	cSt	ASTM D445	11.0	<b>11.8</b>	11.7	12.0

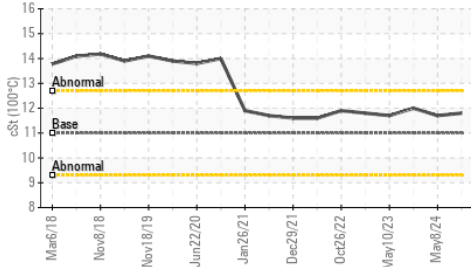
**FT-IR (Direct Trend)**



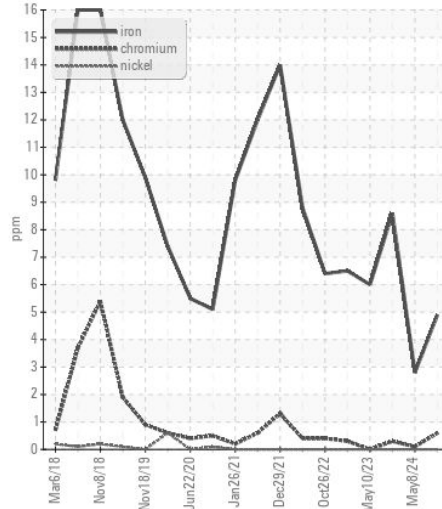
**Base Number**



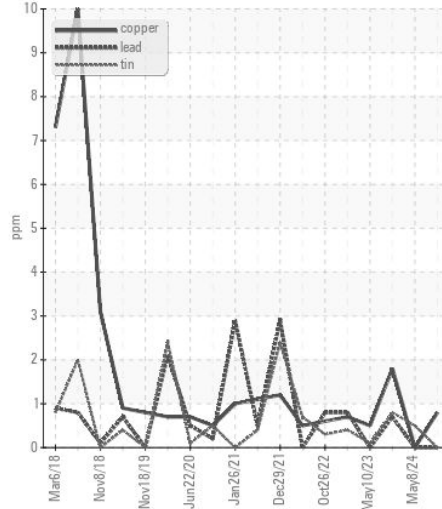
**Viscosity @ 100°C**



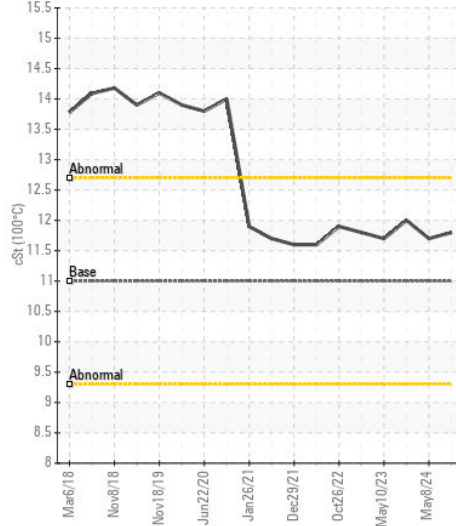
**Ferrous Alloys**



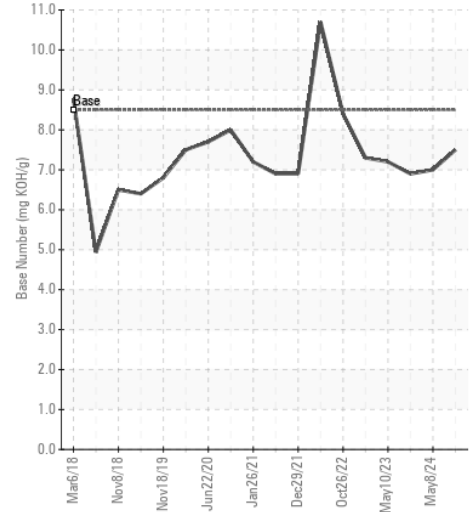
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0955681  
**Lab Number** : 06234683  
**Unique Number** : 11123517  
**Test Package** : FLEET

**GUY M TURNER & TURNER TRANSFER**  
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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)