



# OIL ANALYSIS REPORT

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

Machine Id  
**PETERBILT TDI1419**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (40 QTS)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0936246</b>	WC0869142	WC0869225
Sample Date		Client Info		<b>02 Jul 2024</b>	25 Jan 2024	17 Oct 2023
Machine Age	mls	Client Info		<b>443760</b>	426740	415096
Oil Age	mls	Client Info		<b>25000</b>	25000	25000
Filter Age	mls	Client Info		<b>25000</b>	25000	25000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	ATTENTION	ATTENTION

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	<b>11</b>	16	13
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>2</b>	3	1
Lead	ppm	ASTM D5185m	>30	<b>&lt;1</b>	3	1
Copper	ppm	ASTM D5185m	>30	<b>0</b>	2	<1
Tin	ppm	ASTM D5185m	>4	<b>0</b>	1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	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.

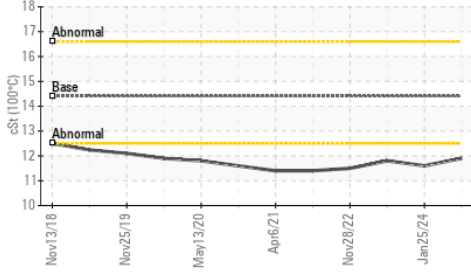
Silicon	ppm	ASTM D5185m	>30	<b>7</b>	5	3
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	2
Fuel	%	ASTM D3524	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.7</b>	0.7	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.8</b>	8.1	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.5</b>	21.4	20.7
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

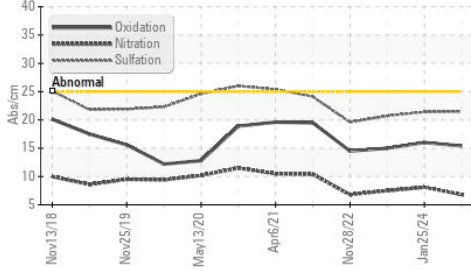
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>158	<b>2</b>	0	0
Boron	ppm	ASTM D5185m	250	<b>290</b>	289	4
Barium	ppm	ASTM D5185m	10	<b>0</b>	1	<1
Molybdenum	ppm	ASTM D5185m	100	<b>88</b>	95	60
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	450	<b>434</b>	542	869
Calcium	ppm	ASTM D5185m	3000	<b>1507</b>	1404	1078
Phosphorus	ppm	ASTM D5185m	1150	<b>1023</b>	1038	946
Zinc	ppm	ASTM D5185m	1350	<b>1216</b>	1221	1162
Sulfur	ppm	ASTM D5185m	4250	<b>3589</b>	3349	3348
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.4</b>	16.0	15.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.0</b>	7.0	9.3
Visc @ 100°C	cSt	ASTM D445	14.4	<b>11.9</b>	11.6	11.8

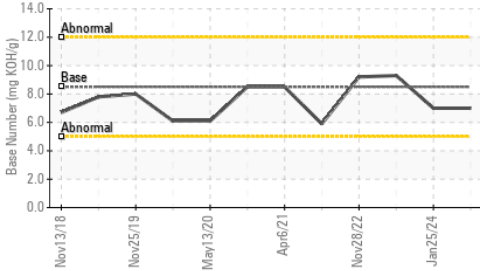
● Viscosity @ 100°C



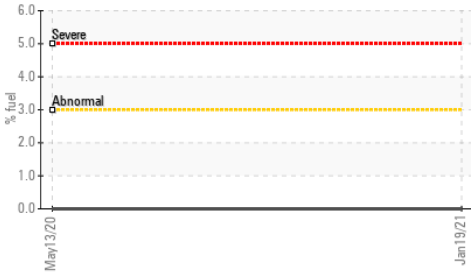
FT-IR (Direct Trend)



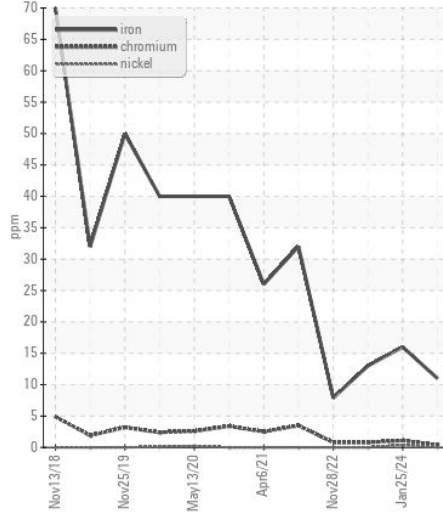
Base Number



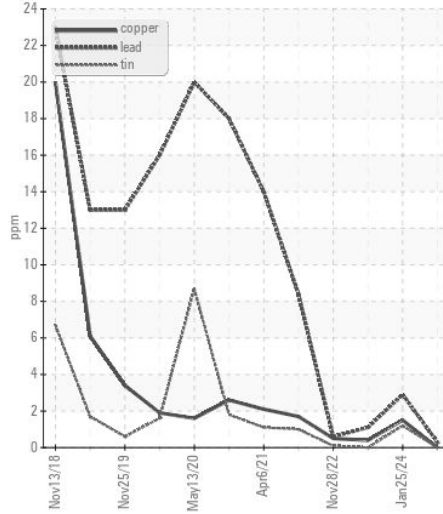
Fuel Dilution



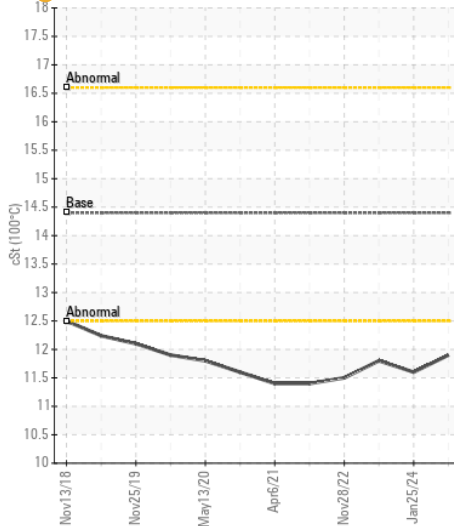
Ferrous Alloys



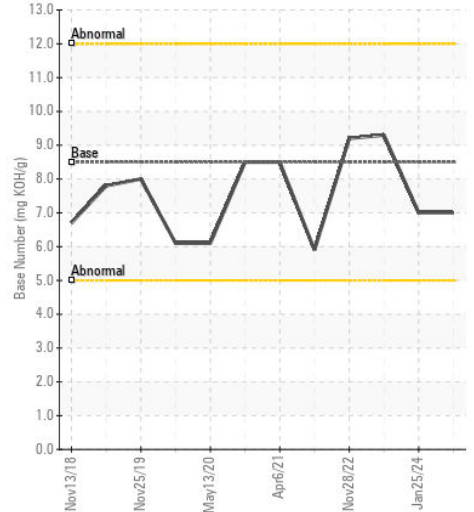
Non-ferrous Metals



● Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : WC0936246

Lab Number : 06231069

Unique Number : 11114562

Test Package : FLEET ( Additional Tests: FuelDilution, PercentFuel )

Received : 08 Jul 2024

Tested : 10 Jul 2024

Diagnosed : 10 Jul 2024 - Don Baldridge

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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