



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
PETERBILT 386 ORS84 (S/N 170575)
 Component
Diesel Engine
 Fluid
VALVOLINE PREMIUM BLUE (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0885563	WC0849041	WC0793091
Sample Date		Client Info		13 May 2024	05 Dec 2023	05 May 2023
Machine Age	mls	Client Info		1077501	1057219	1036846
Oil Age	mls	Client Info		20282	20373	21441
Filter Age	mls	Client Info		20282	20373	21441
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

The chromium level is abnormal. The aluminum level is abnormal.

Iron	ppm	ASTM D5185m	>165	50	32	22
Chromium	ppm	ASTM D5185m	>5	▲ 7	1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	▲ 34	3	5
Lead	ppm	ASTM D5185m	>150	2	3	2
Copper	ppm	ASTM D5185m	>90	1	<1	8
Tin	ppm	ASTM D5185m	>5	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

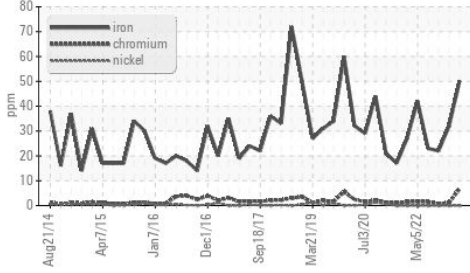
Silicon	ppm	ASTM D5185m	>35	9	7	4
Potassium	ppm	ASTM D5185m	>20	<1	2	<1
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>7.5	0.9	0.8	0.9
Nitration	Abs/cm	*ASTM D7624	>20	12.8	13.1	13.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.7	26.8	26.9
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

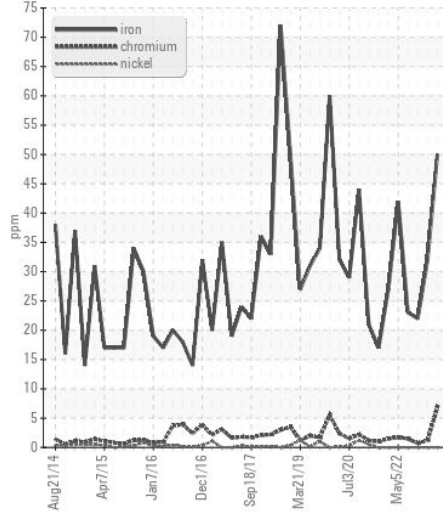
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		4	4	4
Boron	ppm	ASTM D5185m	2.9	28	18	22
Barium	ppm	ASTM D5185m	0.1	0	0	0
Molybdenum	ppm	ASTM D5185m	0.0	63	75	68
Manganese	ppm	ASTM D5185m		1	0	0
Magnesium	ppm	ASTM D5185m	18	821	685	884
Calcium	ppm	ASTM D5185m	2936	1312	1285	1383
Phosphorus	ppm	ASTM D5185m	998	808	777	792
Zinc	ppm	ASTM D5185m	1095	933	907	996
Sulfur	ppm	ASTM D5185m	5469	2794	2680	2794
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.5	26.2	26.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.0	4.8	4.1	4.6
Visc @ 100°C	cSt	ASTM D445	15.2	13.8	12.6	13.1

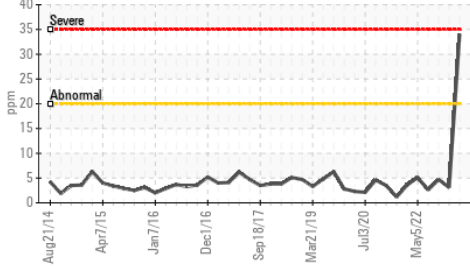
▲ Ferrous Alloys



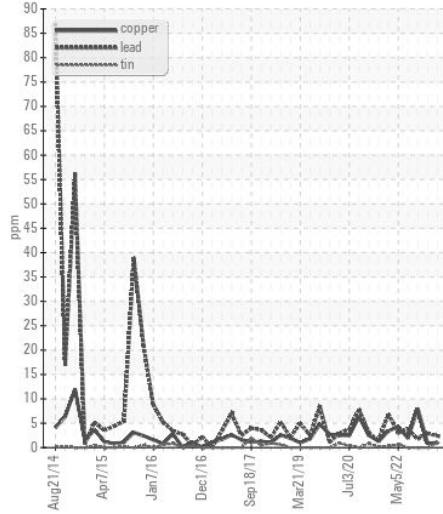
▲ Ferrous Alloys



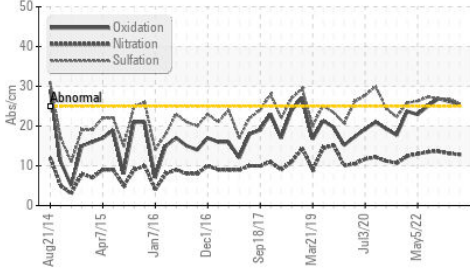
▲ Aluminum (ppm)



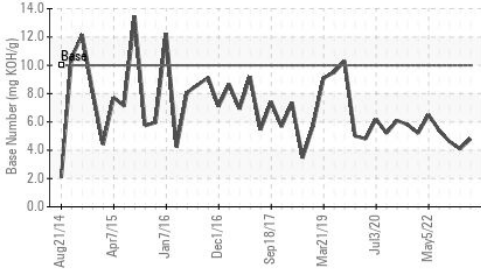
Non-ferrous Metals



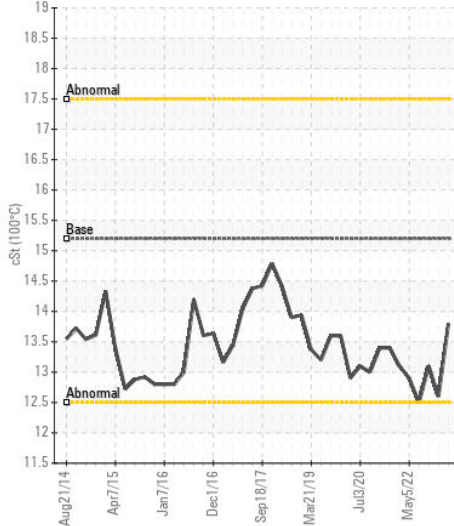
FT-IR (Direct Trend)



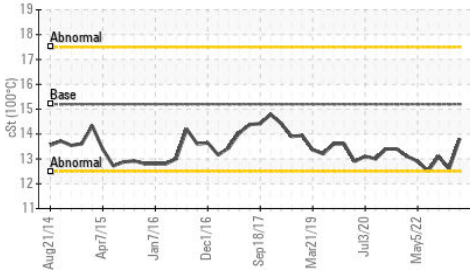
Base Number



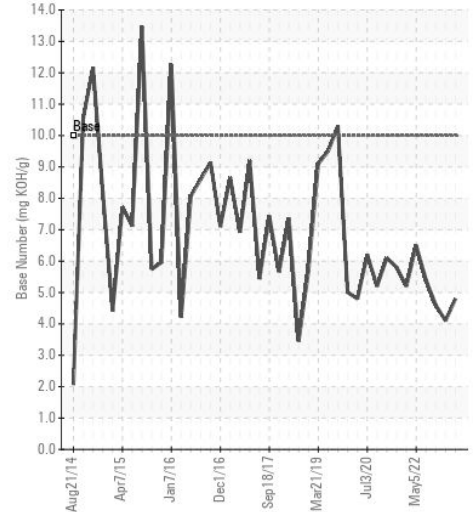
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : WC0885563

Lab Number : 06187058

Unique Number : 11043810

Test Package : CONST (Additional Tests: TBN)

Received : 21 May 2024

Tested : 23 May 2024

Diagnosed : 23 May 2024 - Sean Felton

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127-50 NORTHERN BLVD

FLUSHING, NY

US 11368

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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)