



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area
KEITH LOFETBAUER
Machine Id
PETERBILT TRUCK 68
Component
Diesel Engine
Fluid
SHELL ROTELLA T3 15W40 (50 QTS)

RECOMMENDATION

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		KL0011901	KL0011906	KL0011900
Sample Date		Client Info		27 Feb 2024	24 Jan 2024	29 Nov 2023
Machine Age	mls	Client Info		71852	59263	46038
Oil Age	mls	Client Info		60000	47411	34186
Filter Age	mls	Client Info		12589	13225	10324
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ABNORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>165	58	43	33
Chromium	ppm	ASTM D5185m	>5	4	3	2
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m	>2	8	6	7
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	7	5	2
Lead	ppm	ASTM D5185m	>150	4	4	2
Copper	ppm	ASTM D5185m	>90	4	2	3
Tin	ppm	ASTM D5185m	>5	2	1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

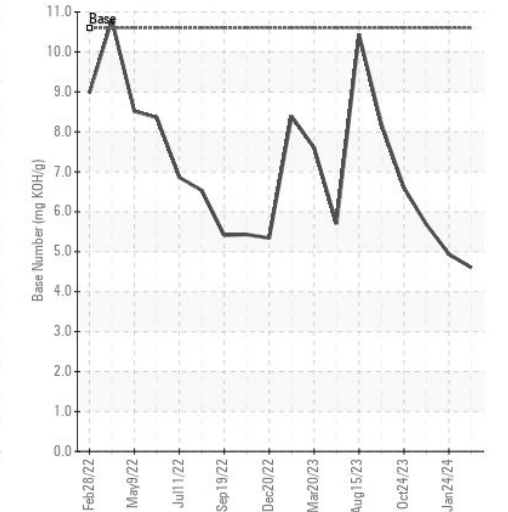
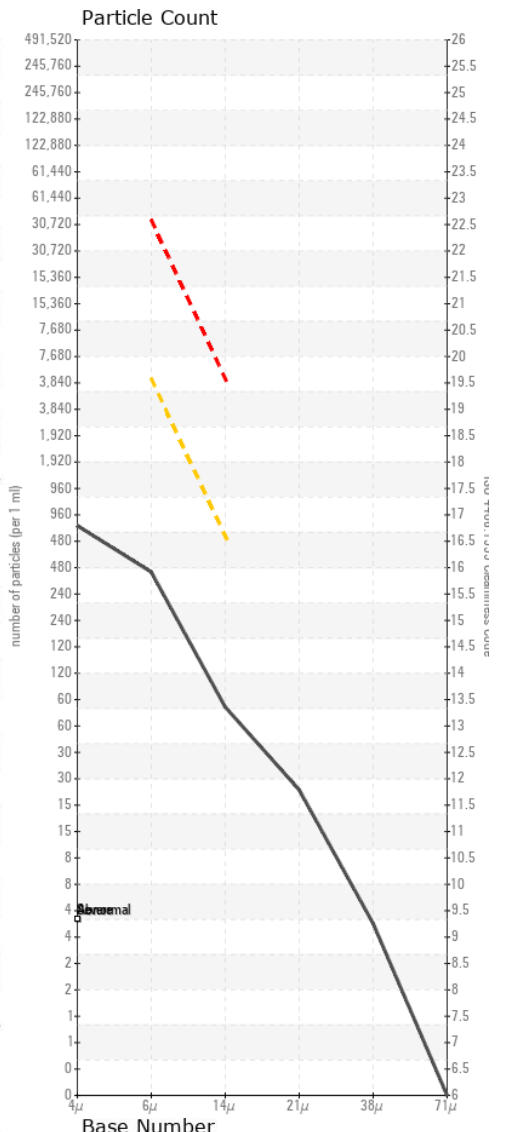
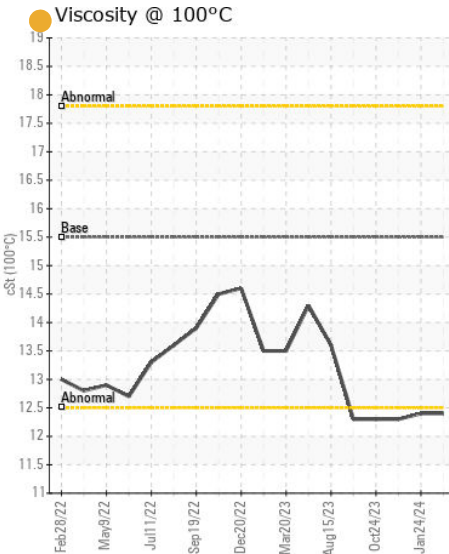
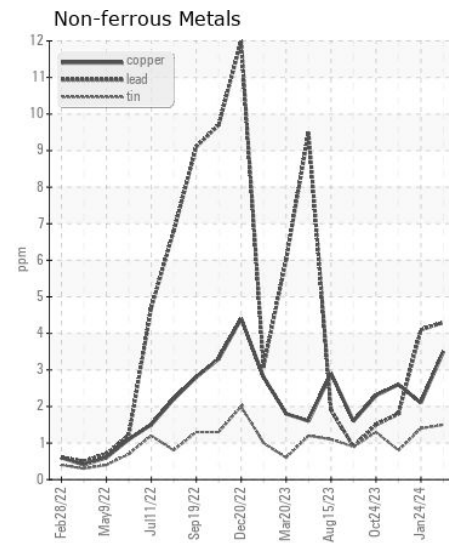
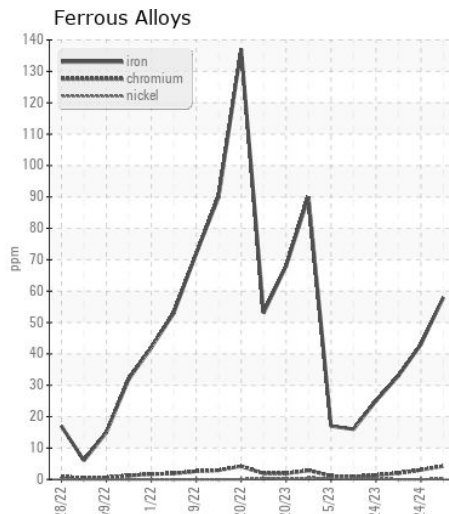
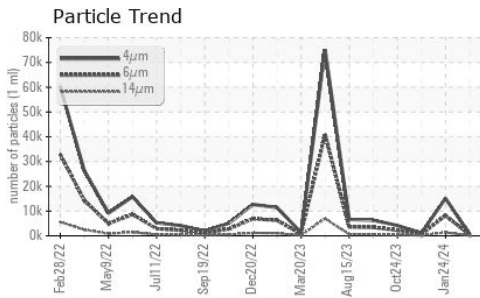
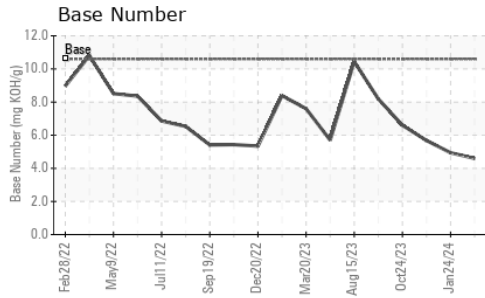
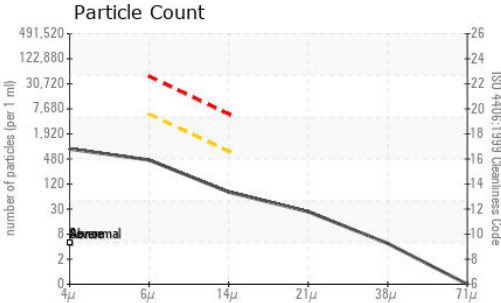
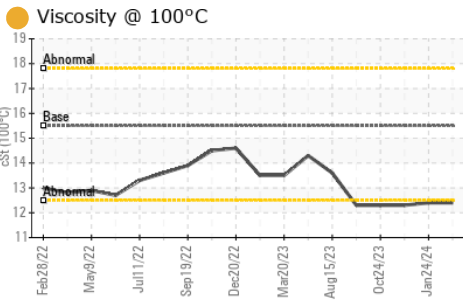
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>35	21	20	17
Potassium	ppm	ASTM D5185m	>20	4	3	2
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	1.1	0.8	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.4	9.0	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.3	24.9	22.5
Particles >4µm		ASTM D7647		731	15085	1131
Particles >6µm		ASTM D7647	>5000	398	▲ 8218	616
Particles >14µm		ASTM D7647	>640	68	▲ 1399	105
Particles >21µm		ASTM D7647	>160	23	▲ 471	35
Particles >38µm		ASTM D7647	>40	4	▲ 73	5
Particles >71µm		ASTM D7647	>10	0	7	1
Oil Cleanliness		ISO 4406 (c)	>19/16	16/13	▲ 20/18	16/14
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 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		6	4	0
Boron	ppm	ASTM D5185m	10	6	7	8
Barium	ppm	ASTM D5185m	0	0	1	0
Molybdenum	ppm	ASTM D5185m	10	13	13	15
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m	10	137	139	140
Calcium	ppm	ASTM D5185m	2600	2068	2098	2052
Phosphorus	ppm	ASTM D5185m	1050	950	905	908
Zinc	ppm	ASTM D5185m	1250	1102	1095	1040
Sulfur	ppm	ASTM D5185m	3900	3475	3130	3270
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.8	15.0	13.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.6	4.60	4.94	5.68
Visc @ 100°C	cSt	ASTM D445	15.5	12.4	12.4	12.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0011901 **Received** : 01 Mar 2024
Lab Number : 06106303 **Tested** : 05 Mar 2024
Unique Number : 10909800 **Diagnosed** : 05 Mar 2024 - Sean Felton
Test Package : MOB 2 (Additional Tests: PrtCount)

PIKES PEAK PERFORMANCE PRODUCTS
 7888 BULLET RD
 PEYTON, CO
 US 80831
 Contact: SCOTT RIGGS
 rriggs.pikespeakperformance@gmail.com
 T: (303)434-0126
 F: x:

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)