



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL



Area  
**PCS - PORTABLE CRUSHING SERVICES**  
Machine Id  
**CATERPILLAR 545KW3412 GN01**  
Component  
**Right Diesel Engine**  
Fluid  
**CHEVRON DELO 400 SDE SAE 15W40 (50 QTS)**

**RECOMMENDATION**

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>KL0013789</b>	KL0013962	KL0013019
Sample Date		Client Info		<b>10 Apr 2024</b>	09 Jan 2024	03 Oct 2023
Machine Age	hrs	Client Info		<b>37207</b>	36703	36191
Oil Age	hrs	Client Info		<b>554</b>	50	1221
Filter Age	hrs	Client Info		<b>554</b>	50	1221
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	Not Chngd
Filter Changed		Client Info		<b>Not Chngd</b>	Changed	Not Chngd
Sample Status				<b>ATTENTION</b>	ATTENTION	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>21</b>	0	15
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>3</b>	2	0
Lead	ppm	ASTM D5185m	>40	<b>3</b>	0	2
Copper	ppm	ASTM D5185m	>330	<b>239</b>	31	162
Tin	ppm	ASTM D5185m	>15	<b>1</b>	0	<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**

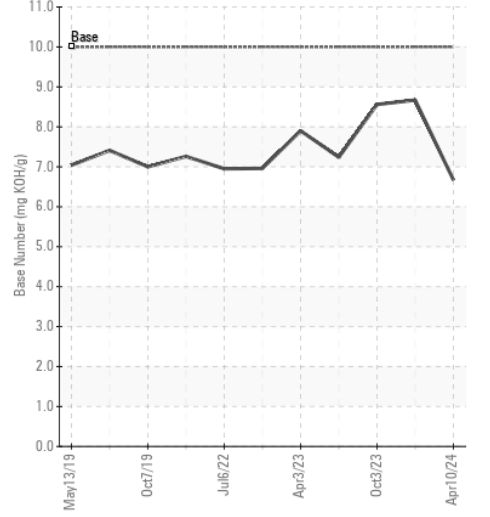
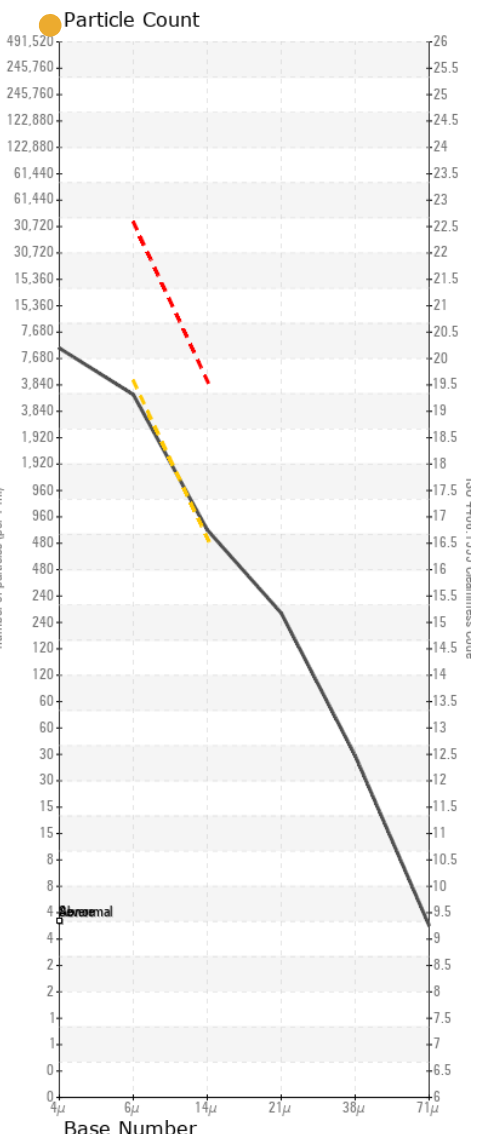
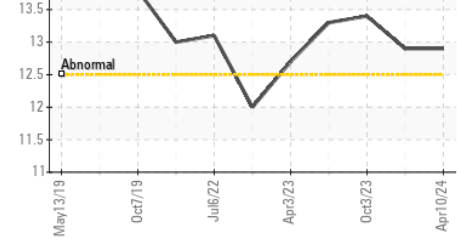
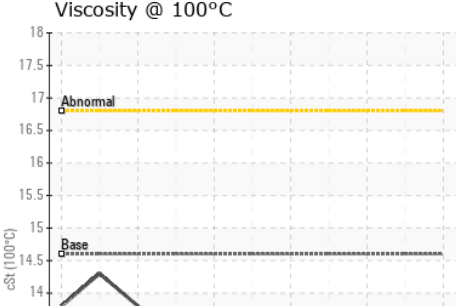
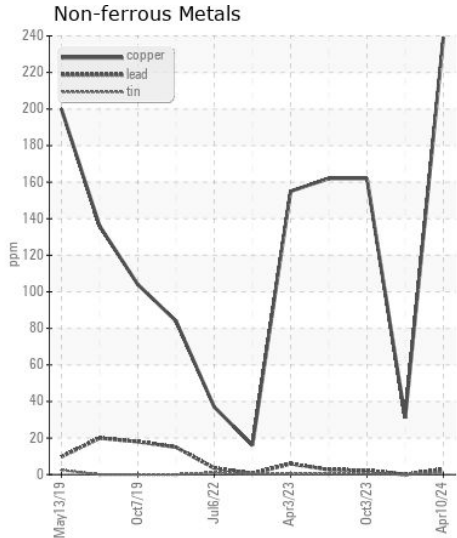
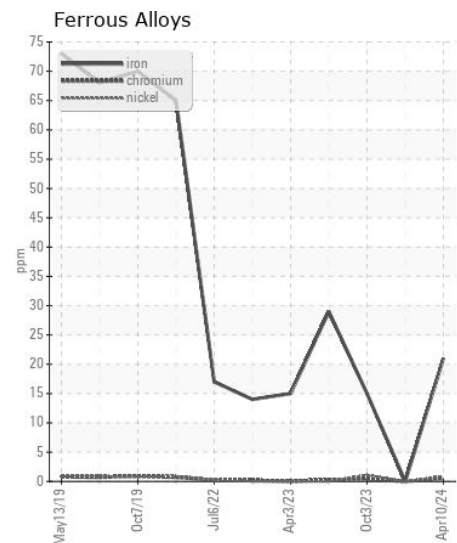
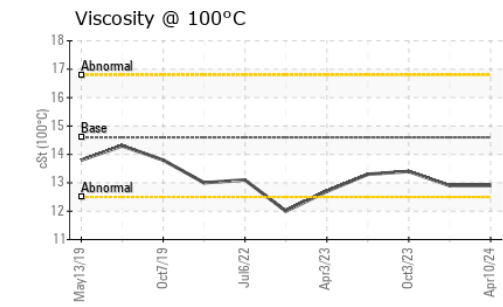
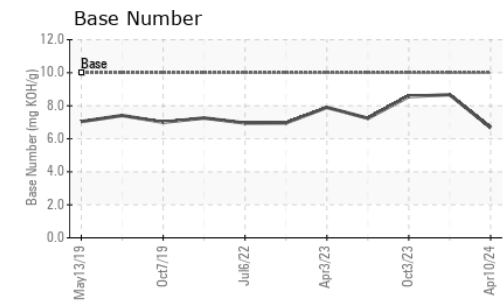
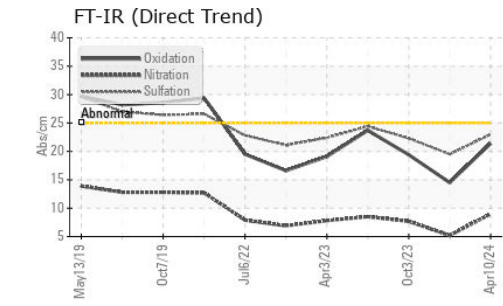
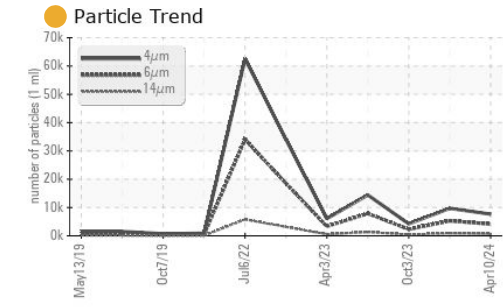
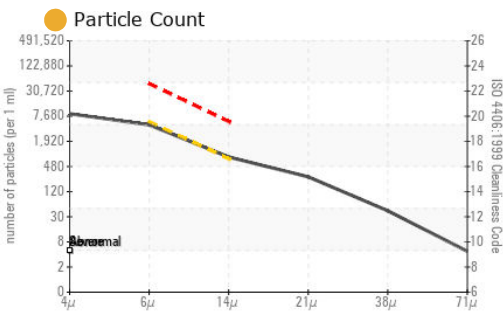
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	3	5
Potassium	ppm	ASTM D5185m	>20	<b>23</b>	0	2
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>0.3</b>	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.0</b>	5.2	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.0</b>	19.5	22.3
Particles >4µm		ASTM D7647		<b>7656</b>	9709	4228
Particles >6µm		ASTM D7647	>5000	<b>4171</b>	5289	2303
Particles >14µm		ASTM D7647	>640	<b>710</b>	900	392
Particles >21µm		ASTM D7647	>160	<b>239</b>	303	132
Particles >38µm		ASTM D7647	>40	<b>37</b>	47	20
Particles >71µm		ASTM D7647	>10	<b>4</b>	5	2
Oil Cleanliness		ISO 4406 (c)	>19/16	<b>19/17</b>	20/17	18/16
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>39</b>	4	3
Boron	ppm	ASTM D5185m		<b>282</b>	339	309
Barium	ppm	ASTM D5185m		<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>84</b>	76	93
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>437</b>	386	388
Calcium	ppm	ASTM D5185m		<b>1554</b>	1460	1481
Phosphorus	ppm	ASTM D5185m	760	<b>1047</b>	948	968
Zinc	ppm	ASTM D5185m	800	<b>1214</b>	1139	1202
Sulfur	ppm	ASTM D5185m	3000	<b>3777</b>	3566	3915
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>21.4</b>	14.5	19.4
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>6.67</b>	8.67	8.56
Visc @ 100°C	cSt	ASTM D445	14.6	<b>12.9</b>	12.9	13.4



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0013789 **Received** : 16 Apr 2024  
**Lab Number** : 06150596 **Tested** : 17 Apr 2024  
**Unique Number** : 10980674 **Diagnosed** : 17 Apr 2024 - Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: PrtCount )

**PIKES PEAK PERFORMANCE PRODUCTS**  
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Certificate L2367  
 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)