



# OIL ANALYSIS REPORT

WEAR	<b>ABNORMAL</b>
CONTAMINATION	<b>SEVERE</b>
FLUID CONDITION	<b>ABNORMAL</b>



Area  
**PCS - PORTABLE CRUSHING SERVICES**  
Machine Id  
**KOMATSU WA470 LD05 - PCS**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON DELO 400 SDE SAE 15W40 (10 QTS)**

## RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>KL0013770</b>	KL0013956	KL0013097
Sample Date		Client Info		<b>10 Apr 2024</b>	09 Jan 2024	03 Oct 2023
Machine Age	hrs	Client Info		<b>7981</b>	7844	7322
Oil Age	hrs	Client Info		<b>188</b>	50	449
Filter Age	hrs	Client Info		<b>188</b>	50	449
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>SEVERE</b>	ABNORMAL	ATTENTION

## WEAR

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>70</b>	91	68
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>4</b>	0	1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>7</b>	2	0
Lead	ppm	ASTM D5185m	>40	<b>28</b>	6	3
Copper	ppm	ASTM D5185m	>330	<b>▲ 730</b>	12	4
Tin	ppm	ASTM D5185m	>15	<b>4</b>	1	<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

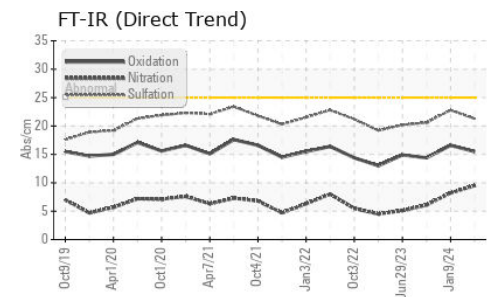
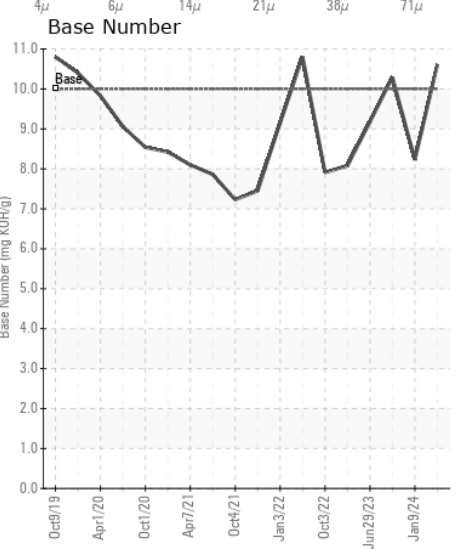
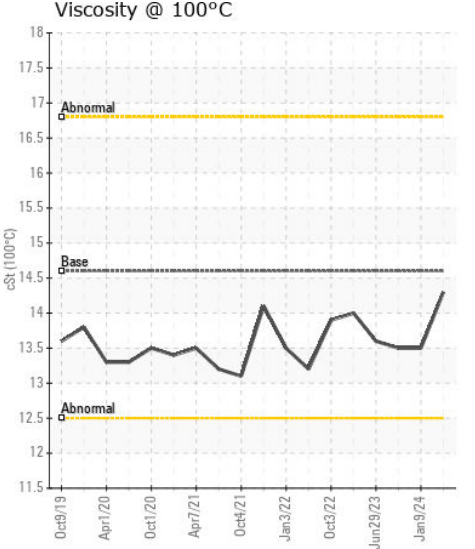
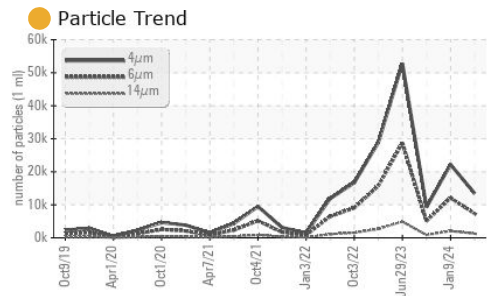
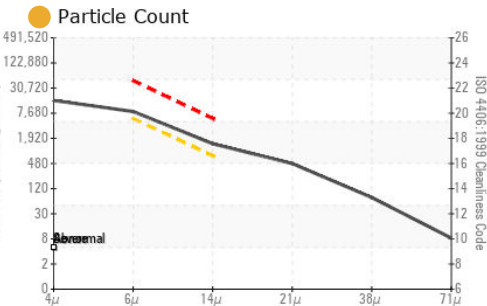
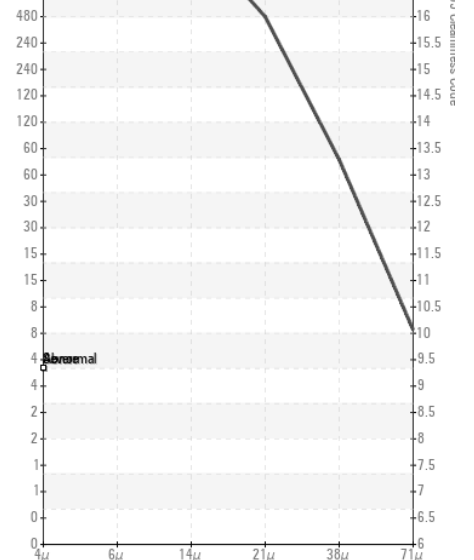
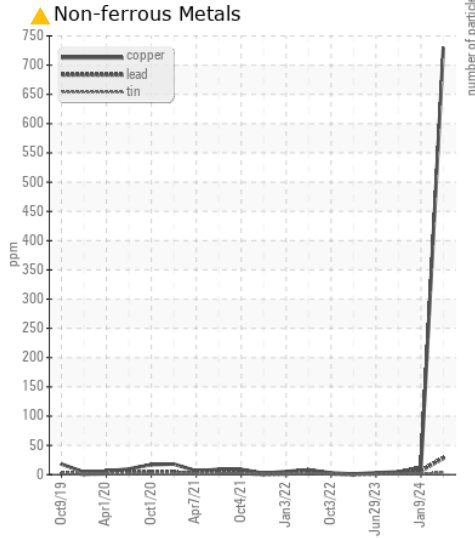
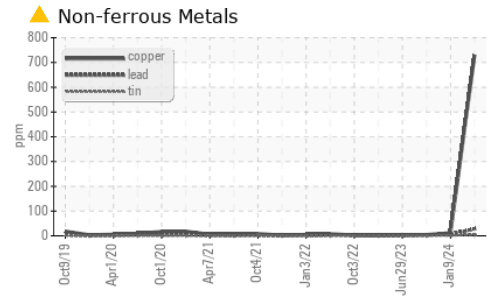
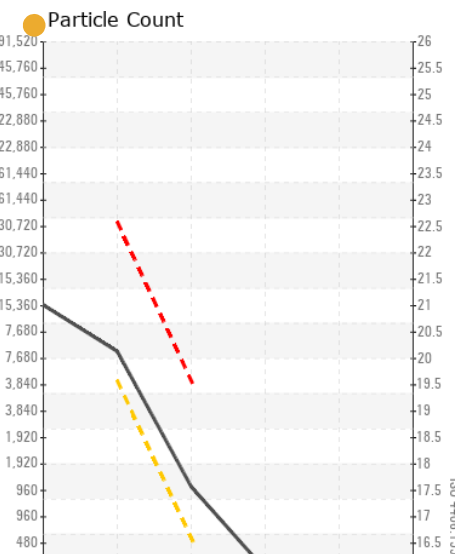
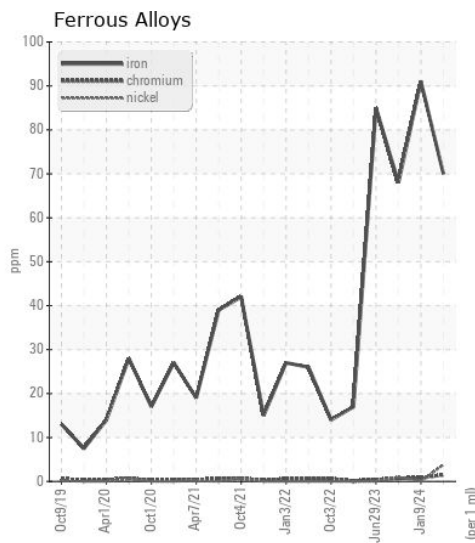
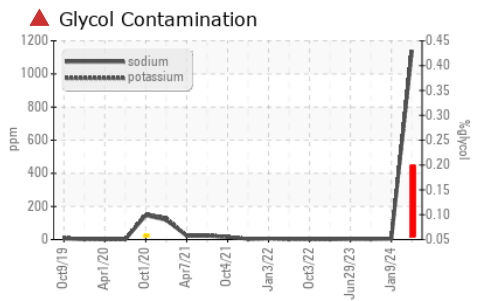
There is a moderate amount of particulates present in the oil. Sodium and/or potassium levels are high. Test for glycol is positive. There is a high concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>16</b>	7	6
Potassium	ppm	ASTM D5185m	>20	<b>▲ 1129</b>	5	6
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>▲ 0.20</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	1.3	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.5</b>	8.2	6.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.3</b>	22.8	20.6
Particles >4µm		ASTM D7647		<b>13467</b>	22184	9309
Particles >6µm		ASTM D7647	>5000	<b>● 7336</b>	▲ 12085	● 5071
Particles >14µm		ASTM D7647	>640	<b>● 1249</b>	▲ 2057	● 863
Particles >21µm		ASTM D7647	>160	<b>● 421</b>	▲ 693	● 291
Particles >38µm		ASTM D7647	>40	<b>● 65</b>	▲ 107	● 45
Particles >71µm		ASTM D7647	>10	<b>7</b>	11	5
Oil Cleanliness		ISO 4406 (c)	>19/16	<b>● 20/17</b>	▲ 21/18	● 20/17
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 is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<b>▲ 1140</b>	6	2
Boron	ppm	ASTM D5185m		<b>483</b>	261	388
Barium	ppm	ASTM D5185m		<b>2</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>216</b>	89	89
Manganese	ppm	ASTM D5185m		<b>2</b>	2	<1
Magnesium	ppm	ASTM D5185m		<b>509</b>	389	370
Calcium	ppm	ASTM D5185m		<b>2124</b>	1498	1425
Phosphorus	ppm	ASTM D5185m	760	<b>1680</b>	1050	1042
Zinc	ppm	ASTM D5185m	800	<b>1785</b>	1276	1270
Sulfur	ppm	ASTM D5185m	3000	<b>6759</b>	3639	3963
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.5</b>	16.6	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>10.61</b>	8.23	10.29
Visc @ 100°C	cSt	ASTM D445	14.6	<b>14.3</b>	13.5	13.5



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0013770 **Received** : 16 Apr 2024  
**Lab Number** : 06150595 **Tested** : 17 Apr 2024  
**Unique Number** : 10980673 **Diagnosed** : 18 Apr 2024 - Don Baldrige  
**Test Package** : MOB 2 ( Additional Tests: Glycol, PrtCount )  
 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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