MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

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.

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.

CONTAMINATION

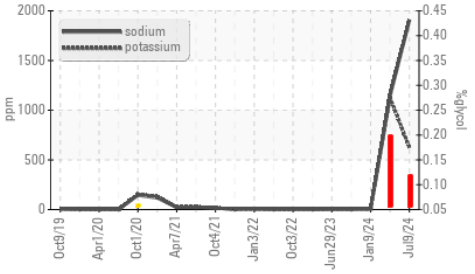
Sodium and/or potassium levels are high. Test for glycol is positive. There is a high concentration of glycol present in the oil. The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

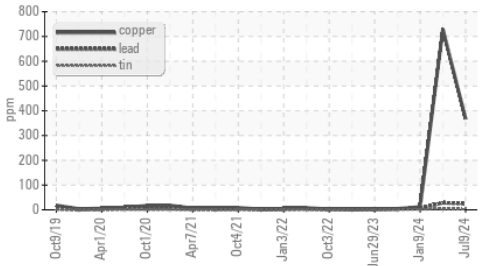
The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0014720	KL0013770	KL0013956
Sample Date		Client Info		09 Jul 2024	10 Apr 2024	09 Jan 2024
Machine Age	hrs	Client Info		8140	7981	7844
Oil Age	hrs	Client Info		347	188	50
Filter Age	hrs	Client Info		347	188	50
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				SEVERE	SEVERE	ABNORMAL
Iron	ppm	ASTM D5185m	>100	27	70	91
Chromium	ppm	ASTM D5185m	>20	<1	2	<1
Nickel	ppm	ASTM D5185m	>4	<1	4	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	7	2
Lead	ppm	ASTM D5185m	>40	24	28	6
Copper	ppm	ASTM D5185m	>330	▲ 367	▲ 730	12
Tin	ppm	ASTM D5185m	>15	2	4	1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	10	16	7
Potassium	ppm	ASTM D5185m	>20	▲ 625	▲ 1129	5
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		▲ 0.12	▲ 0.20	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.5	1.3
Nitration	Abs/cm	*ASTM D7624	>20	10.1	9.5	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.7	21.3	22.8
Particles >4µm		ASTM D7647		1261	13467	22184
Particles >6µm		ASTM D7647	>5000	687	● 7336	▲ 12085
Particles >14µm		ASTM D7647	>640	117	● 1249	▲ 2057
Particles >21µm		ASTM D7647	>160	39	● 421	▲ 693
Particles >38µm		ASTM D7647	>40	6	● 65	▲ 107
Particles >71µm		ASTM D7647	>10	1	7	11
Oil Cleanliness		ISO 4406 (c)	>19/16	17/14	● 20/17	▲ 21/18
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
Sodium	ppm	ASTM D5185m		▲ 1904	▲ 1140	6
Boron	ppm	ASTM D5185m		268	483	261
Barium	ppm	ASTM D5185m		2	2	0
Molybdenum	ppm	ASTM D5185m		391	216	89
Manganese	ppm	ASTM D5185m		1	2	2
Magnesium	ppm	ASTM D5185m		287	509	389
Calcium	ppm	ASTM D5185m		1183	2124	1498
Phosphorus	ppm	ASTM D5185m	760	1064	1680	1050
Zinc	ppm	ASTM D5185m	800	1222	1785	1276
Sulfur	ppm	ASTM D5185m	3000	4336	6759	3639
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.5	15.5	16.6
Base Number (BN)	mg KOH/g	ASTM D2896	10	13.44	10.61	8.23
Visc @ 100°C	cSt	ASTM D445	14.6	● 22.6	14.3	13.5

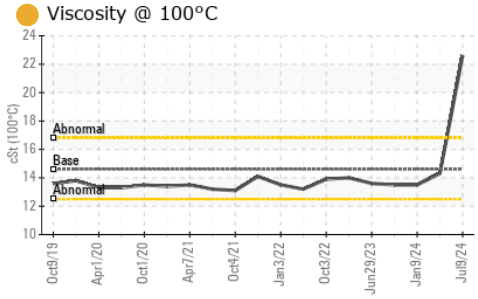
Glycol Contamination



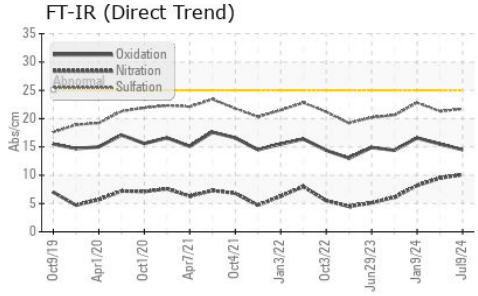
Non-ferrous Metals



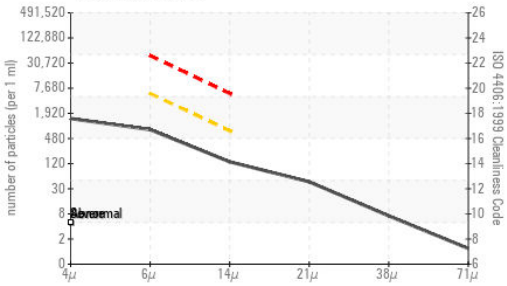
Viscosity @ 100°C



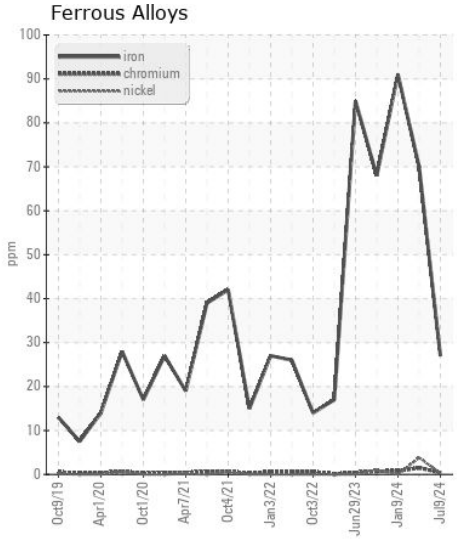
FT-IR (Direct Trend)



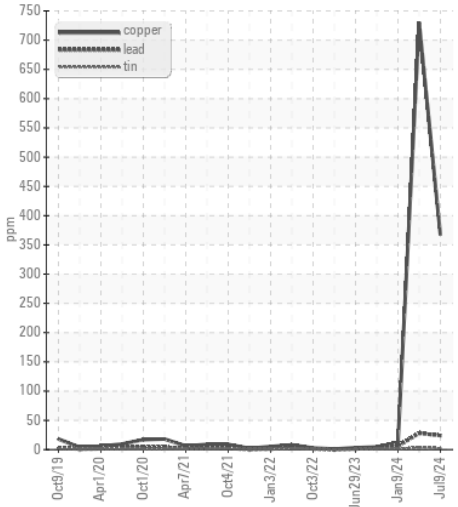
Particle Count



Ferrous Alloys



Non-ferrous Metals



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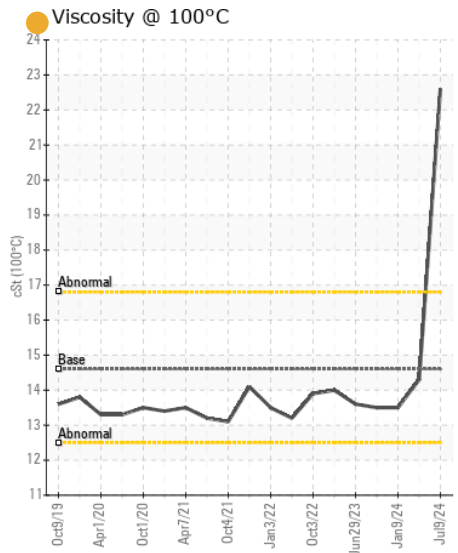
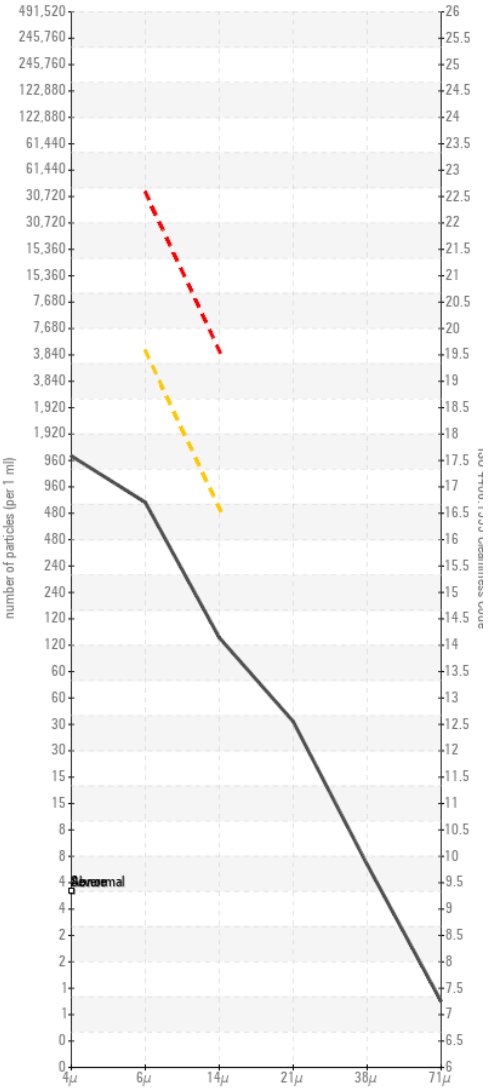
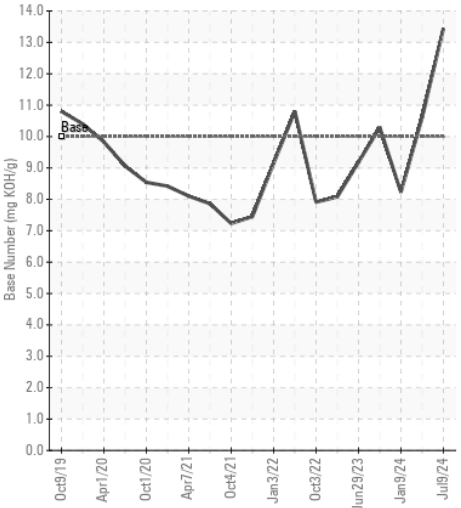


Particle Count



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014720
Lab Number : 06237994
Unique Number : 11126828
Test Package : MOB 2 (Additional Tests: PrtCount)

Received : 16 Jul 2024
Tested : 17 Jul 2024
Diagnosed : 18 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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