



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	ABNORMAL



Area
IBACO [CONHER]
Machine Id
BM Luis II
Component
Bottom Diesel Engine
Fluid
XTRA REV 15W40 (160 LTR)

RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013469	KL0013417	KL0013336
Sample Date		Client Info		20 Jan 2024	14 Nov 2023	25 Oct 2023
Machine Age	hrs	Client Info		18637	0	17533
Oil Age	hrs	Client Info		638	659	423
Filter Age	hrs	Client Info		638	659	423
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	20	25	15
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	1	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	<1	<1
Lead	ppm	ASTM D5185m	>40	1	1	<1
Copper	ppm	ASTM D5185m	>330	13	16	9
Tin	ppm	ASTM D5185m	>15	0	<1	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

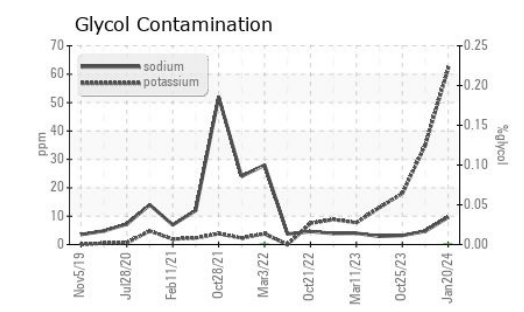
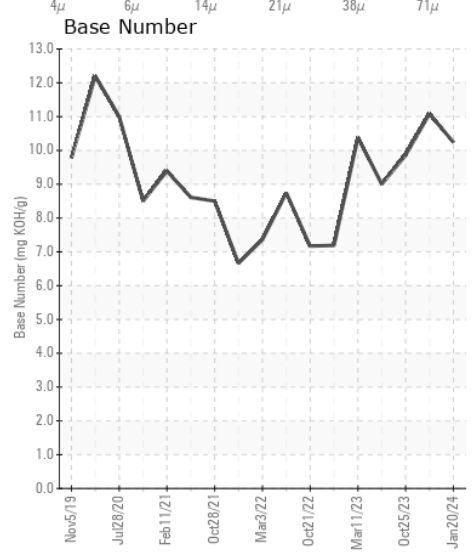
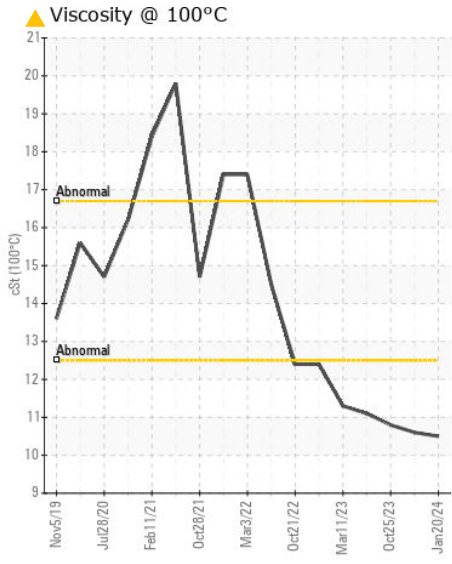
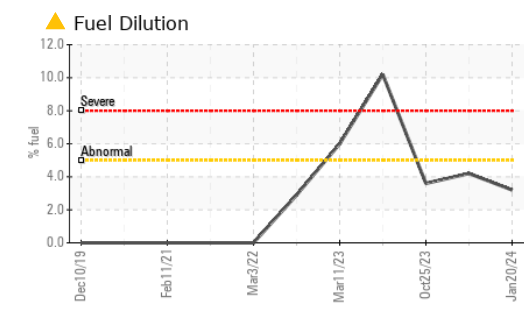
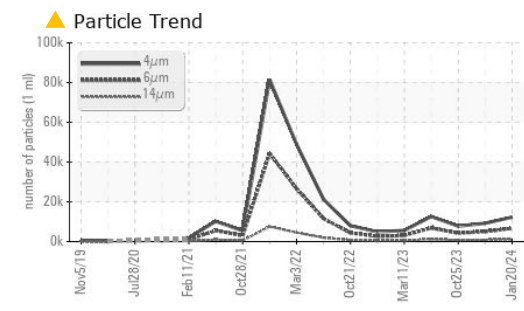
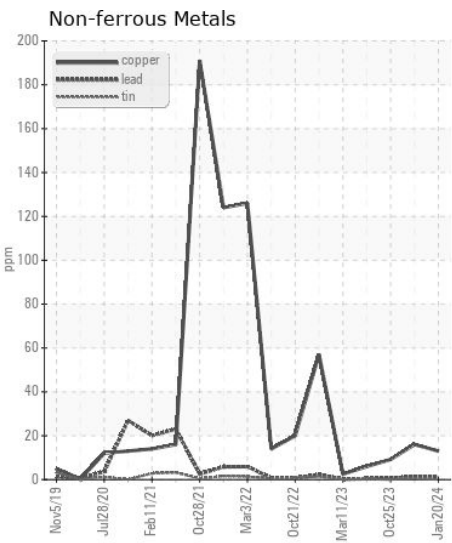
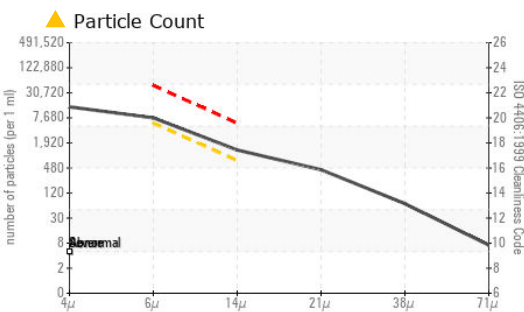
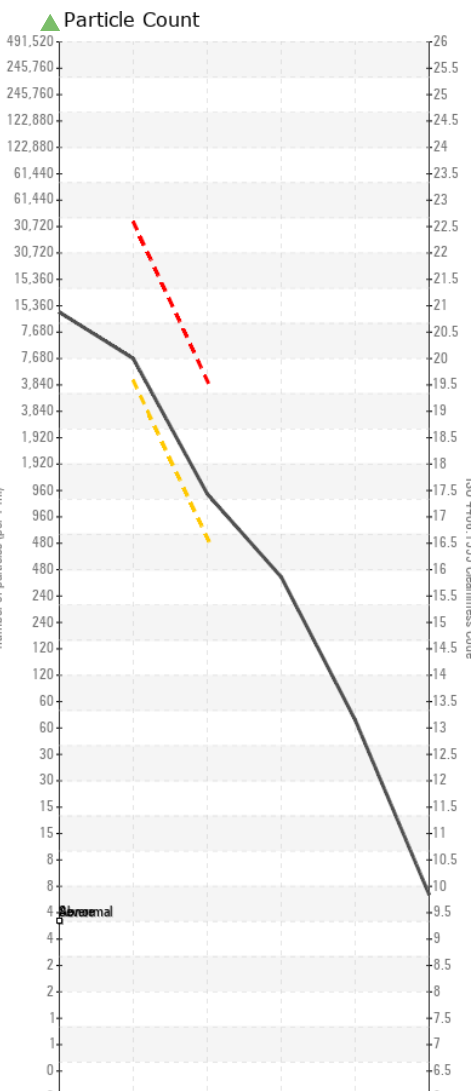
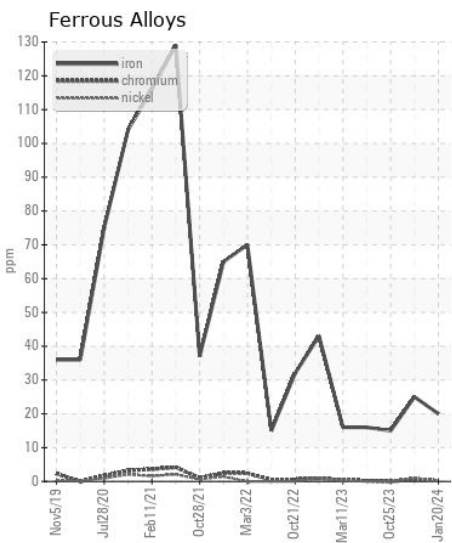
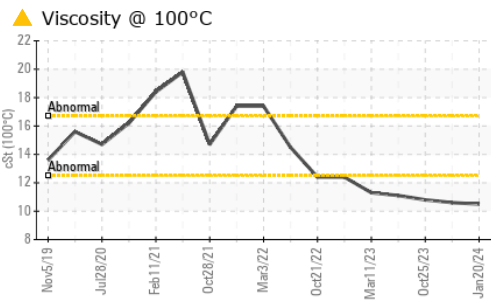
There is a moderate amount of particulates present in the oil. Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>25	10	9	8
Potassium	ppm	ASTM D5185m	>20	62	35	18
Fuel	%	ASTM D3524	>5	▲ 3.2	▲ 4.2	▲ 3.6
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		0.0	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.4	8.0	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	15.3	16.7	15.7
Particles >4µm		ASTM D7647		12266	9230	7769
Particles >6µm		ASTM D7647	>5000	▲ 6682	▲ 5028	▲ 4232
Particles >14µm		ASTM D7647	>640	▲ 1137	▲ 856	▲ 720
Particles >21µm		ASTM D7647	>160	▲ 383	▲ 288	▲ 243
Particles >38µm		ASTM D7647	>40	▲ 59	▲ 45	37
Particles >71µm		ASTM D7647	>10	6	5	4
Oil Cleanliness		ISO 4406 (c)	>19/16	▲ 20/17	▲ 20/17	▲ 19/17
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. Fuel is present in the oil and is lowering the viscosity.

Sodium	ppm	ASTM D5185m		10	5	3
Boron	ppm	ASTM D5185m		<1	5	4
Barium	ppm	ASTM D5185m		<1	<1	0
Molybdenum	ppm	ASTM D5185m		6	9	6
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m		5	16	17
Calcium	ppm	ASTM D5185m		2619	2668	2496
Phosphorus	ppm	ASTM D5185m		1211	1111	1101
Zinc	ppm	ASTM D5185m		1273	1265	1259
Sulfur	ppm	ASTM D5185m		3843	3531	3222
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.0	9.8	10.0
Base Number (BN)	mg KOH/g	ASTM D2896		10.24	11.08	9.86
Visc @ 100°C	cSt	ASTM D445		▲ 10.5	▲ 10.6	▲ 10.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013469 **Received** : 30 Jan 2024
Lab Number : 06075013 **Diagnosed** : 02 Feb 2024
Unique Number : 10857104 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: FuelDilution, Glycol, PercentFuel, PrtCount)

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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)