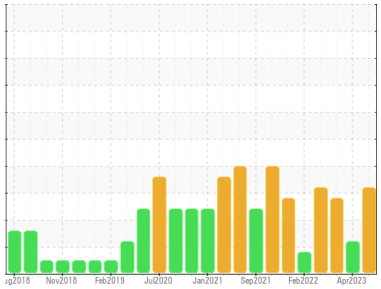
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

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

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present in the oil. There is a moderate amount of fuel present in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**KL0012850**	KL0012318	KL0010159
Sample Date		Client Info		**20 Sep 2023**	06 Apr 2023	07 Oct 2022
Machine Age	hrs	Client Info		**12985**	12975	11147
Oil Age	hrs	Client Info		**10**	473	11147
Oil Changed		Client Info		**Not Changd**	Not Changd	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**6**	14	12
Chromium	ppm	ASTM D5185m	>20	**0**	0	<1
Nickel	ppm	ASTM D5185m	>2	**0**	0	0
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**3**	<1	2
Lead	ppm	ASTM D5185m	>40	**0**	0	<1
Copper	ppm	ASTM D5185m	>330	**5**	<1	2
Tin	ppm	ASTM D5185m	>15	**<1**	0	1
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**9**	162	119
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**6**	71	46
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**23**	298	171
Calcium	ppm	ASTM D5185m		**2498**	1993	2509
Phosphorus	ppm	ASTM D5185m		**1098**	944	1114
Zinc	ppm	ASTM D5185m		**1332**	1191	1262
Sulfur	ppm	ASTM D5185m		**3699**	3975	4990

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**9**	8	▲ 27
Sodium	ppm	ASTM D5185m		**6**	5	0
Potassium	ppm	ASTM D5185m	>20	**23**	26	2
Fuel	%	ASTM D3524	>5	▲ **5.9**	▲ 7.0	▲ 5.3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.1**	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**4.2**	7.8	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	**12.5**	18.7	18.0

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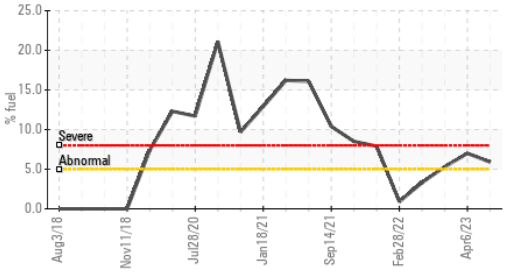
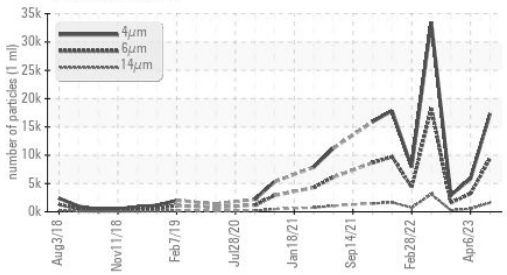
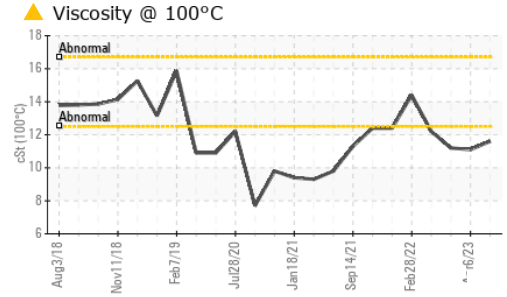
Fuel Dilution



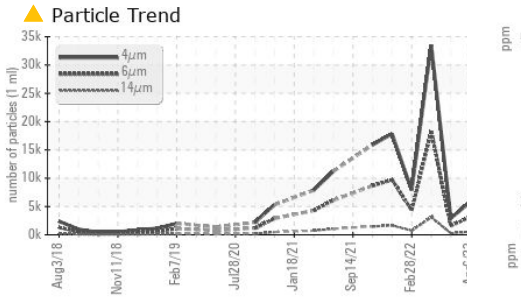
Particle Trend



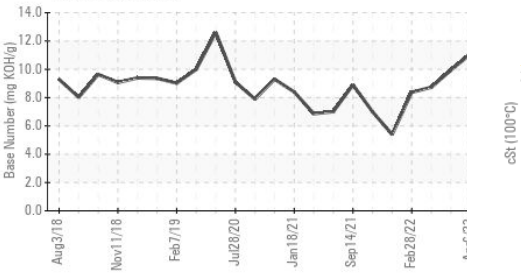
Viscosity @ 100°C



Particle Trend



Base Number



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**17312**	5829	2927
Particles >6µm		ASTM D7647	>5000	▲ **9431**	3175	1595
Particles >14µm		ASTM D7647	>640	▲ **1605**	540	271
Particles >21µm		ASTM D7647	>160	▲ **541**	182	91
Particles >38µm		ASTM D7647	>40	▲ **83**	28	14
Particles >71µm		ASTM D7647	>10	**9**	3	1
Oil Cleanliness		ISO 4406 (c)	>19/16	▲ **20/18**	19/16	18/15

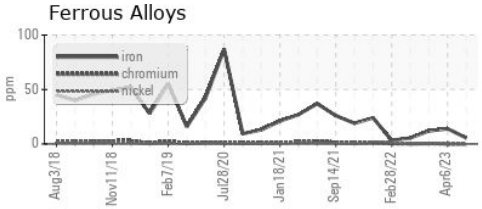
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**6.1**	14.0	11.4
Base Number (BN)	mg KOH/g	ASTM D2896		**10.67**	11.08	9.94

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

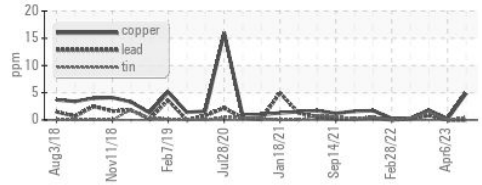
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		▲ **11.6**	▲ 11.1	▲ 11.2

GRAPHS

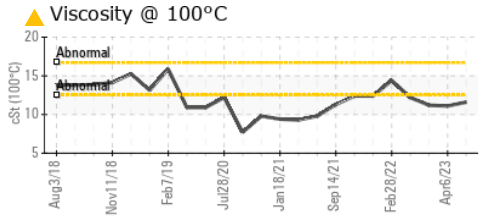
Ferrous Alloys



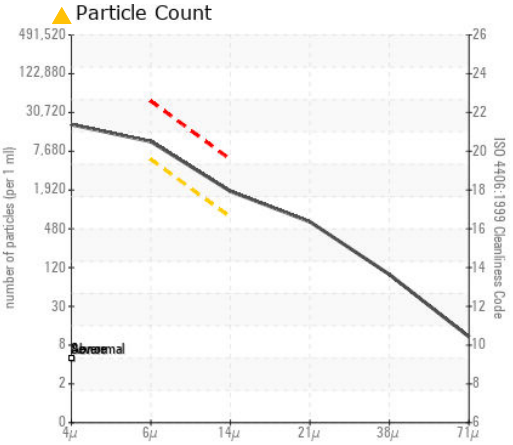
Non-ferrous Metals



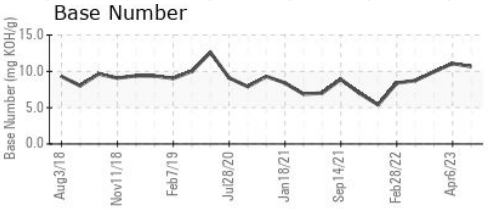
Viscosity @ 100°C



Particle Count



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0012850 **Received** : 29 Sep 2023
Lab Number : 05964772 **Diagnosed** : 03 Oct 2023
Unique Number : 10671323 **Diagnostician** : Angela Borella
Test Package : MOB 2 (Additional Tests: PercentFuel, 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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