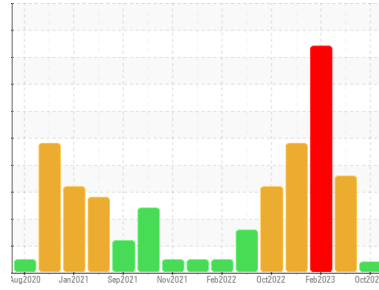




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Area
GUAY SON [CONHER]
 Machine Id
Maquina principal Mantito I
 Component
Diesel Engine
 Fluid
XTRA REV 15W40 (160 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is higher than normal. 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	KL0013324	KL0012814	KL0010243
Sample Date	Client Info	24 Oct 2023	16 Sep 2023	23 Feb 2023
Machine Age	hrs	10780	10291	0
Oil Age	hrs	177	5	0
Oil Changed	Client Info	Not Chngd	Not Chngd	N/A
Sample Status		ATTENTION	ABNORMAL	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	NEG	NEG	▲ 0.06

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >100	5	17	42
Chromium	ppm	ASTM D5185m >20	0	0	<1
Nickel	ppm	ASTM D5185m >4	0	0	<1
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m >3	0	0	<1
Aluminum	ppm	ASTM D5185m >20	0	<1	2
Lead	ppm	ASTM D5185m >40	<1	2	3
Copper	ppm	ASTM D5185m >330	<1	4	20
Tin	ppm	ASTM D5185m >15	0	<1	1
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	0	5
Barium	ppm	ASTM D5185m	0	0	2
Molybdenum	ppm	ASTM D5185m	0	4	33
Manganese	ppm	ASTM D5185m	0	<1	<1
Magnesium	ppm	ASTM D5185m	9	7	11
Calcium	ppm	ASTM D5185m	3114	2639	3042
Phosphorus	ppm	ASTM D5185m	926	1086	1128
Zinc	ppm	ASTM D5185m	786	1324	1306
Sulfur	ppm	ASTM D5185m	5174	4172	5182

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	7	13	11
Sodium	ppm	ASTM D5185m	3	11	▲ 42
Potassium	ppm	ASTM D5185m >20	0	35	▲ 245
Fuel	%	ASTM D3524 >5	1.2	▲ 4.5	▲ 5.5

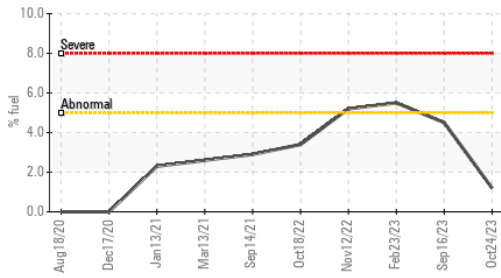
INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	0.1	0	0.4
Nitration	Abs/cm	*ASTM D7624 >20	7.5	5.7	10.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.3	15.5	17.1

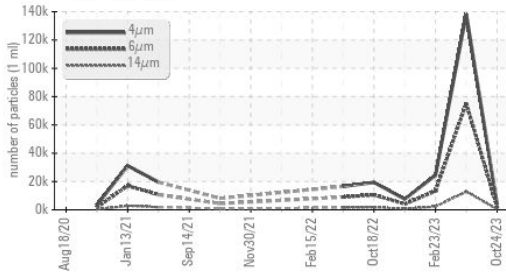


OIL ANALYSIS REPORT

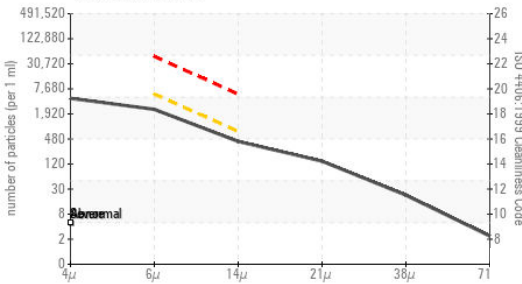
Fuel Dilution



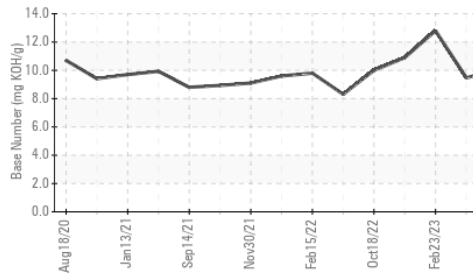
Particle Trend



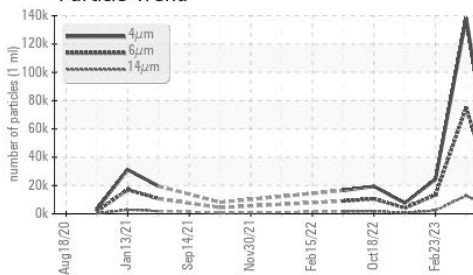
Particle Count



Base Number



Particle Trend



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		3967	138272	24376
Particles >6µm	ASTM D7647	>5000	2161	▲ 75325	▲ 13279
Particles >14µm	ASTM D7647	>640	368	▲ 12819	▲ 2260
Particles >21µm	ASTM D7647	>160	124	▲ 4318	▲ 761
Particles >38µm	ASTM D7647	>40	19	▲ 667	▲ 118
Particles >71µm	ASTM D7647	>10	2	▲ 68	▲ 12
Oil Cleanliness	ISO 4406 (c)	>19/16	18/16	▲ 23/21	▲ 21/18

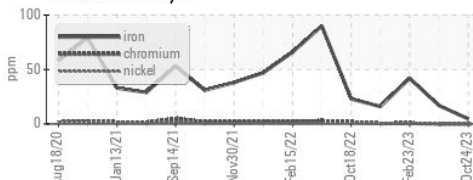
FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	*ASTM D7414	>25	13.2	7.8	10.1
Base Number (BN)	mg KOH/g	ASTM D2896		10.02	9.47	12.8

VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

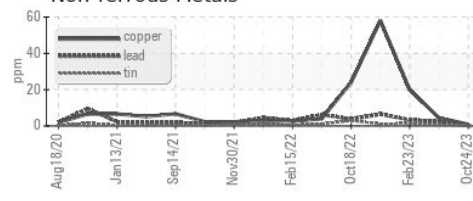
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	▲ 18.8	▲ 12.3	▲ 10.7

GRAPHS

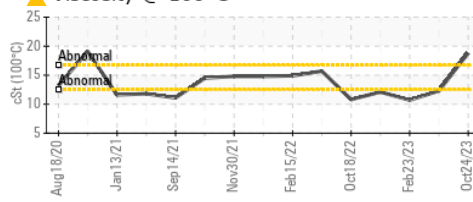
Ferrous Alloys



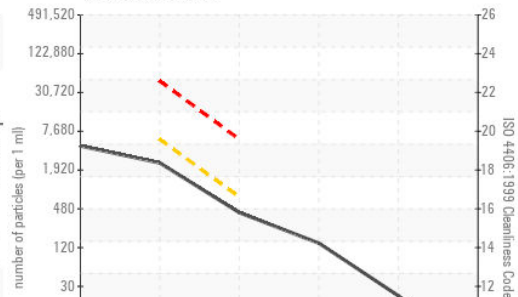
Non-ferrous Metals



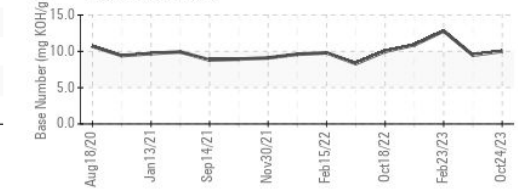
Viscosity @ 100°C



Particle Count



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013324 **Received** : 01 Nov 2023
Lab Number : 05996371 **Diagnosed** : 03 Nov 2023
Unique Number : 10724731 **Diagnostician** : Don Baldrige
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)

CONOR
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 HERMOSILLO,
 MX 83140
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 egarcia.comsa@gmail.com

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