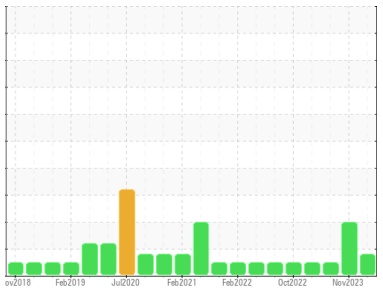
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
GUAY SON [CONHER]
Machine Id
IBACO BM ISMAR II AUX-1
Component
Diesel Engine
Fluid
RALOY 15W40 (8 LTR)

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. (Customer Sample Comment: Fluid: Raloy 15W40)

Wear
Cylinder, crank, or cam shaft wear is indicated.

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

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**KL0014206**	KL0013400	KL0012851
Sample Date		Client Info		**20 Mar 2024**	14 Nov 2023	20 Sep 2023
Machine Age	hrs	Client Info		**0**	0	17025
Oil Age	hrs	Client Info		**220**	200	72
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	▲ 3.3	1.9
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	▲ **133**	▲ 108	14
Chromium	ppm	ASTM D5185m	>20	**4**	2	<1
Nickel	ppm	ASTM D5185m	>4	**0**	<1	0
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**7**	1	3
Lead	ppm	ASTM D5185m	>40	**2**	1	0
Copper	ppm	ASTM D5185m	>330	**20**	2	<1
Tin	ppm	ASTM D5185m	>15	**3**	<1	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	<1	0

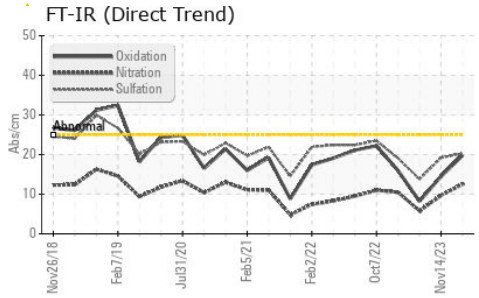
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**41**	4	0
Barium	ppm	ASTM D5185m		**4**	<1	0
Molybdenum	ppm	ASTM D5185m		**7**	2	<1
Manganese	ppm	ASTM D5185m		**1**	1	<1
Magnesium	ppm	ASTM D5185m		**22**	11	4
Calcium	ppm	ASTM D5185m		**3302**	2816	2658
Phosphorus	ppm	ASTM D5185m		**983**	1038	1106
Zinc	ppm	ASTM D5185m		**1148**	1306	1356
Sulfur	ppm	ASTM D5185m		**2961**	3322	3679

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**18**	12	8
Sodium	ppm	ASTM D5185m		**3**	0	<1
Potassium	ppm	ASTM D5185m	>20	**2**	4	2

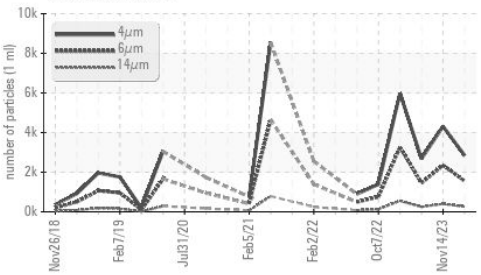
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.4**	0.6	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**12.5**	9.7	5.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.3**	19.2	13.8

OIL ANALYSIS REPORT

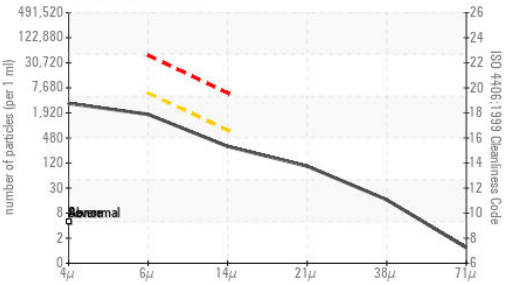
FT-IR (Direct Trend)



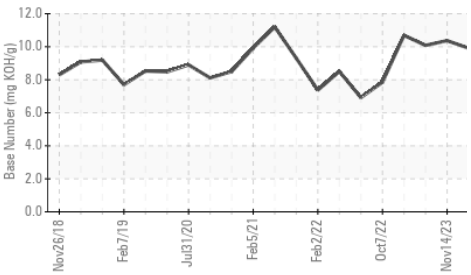
Particle Trend



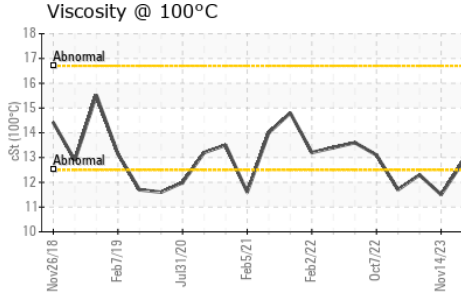
Particle Count



Base Number



Viscosity @ 100°C



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**2845**	4315	2680
Particles >6µm		ASTM D7647	>5000	**1550**	2351	1460
Particles >14µm		ASTM D7647	>640	**264**	400	248
Particles >21µm		ASTM D7647	>160	**89**	135	84
Particles >38µm		ASTM D7647	>40	**14**	21	13
Particles >71µm		ASTM D7647	>10	**1**	2	1
Oil Cleanliness		ISO 4406 (c)	>19/16	**18/15**	18/16	18/15

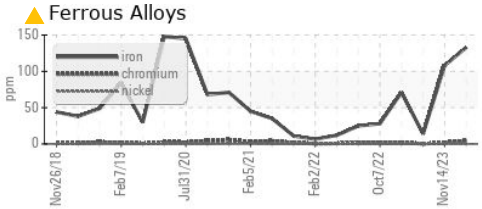
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.8**	14.5	8.2
Base Number (BN)	mg KOH/g	ASTM D2896		**9.91**	10.37	10.08

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

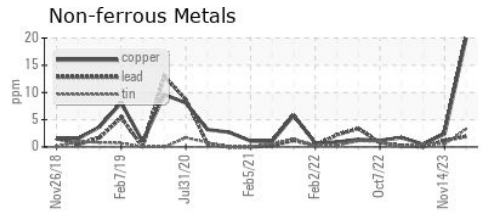
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**12.8**	11.5	12.3

GRAPHS

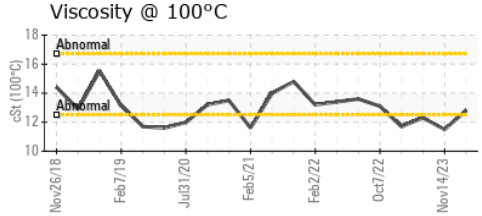
Ferrous Alloys



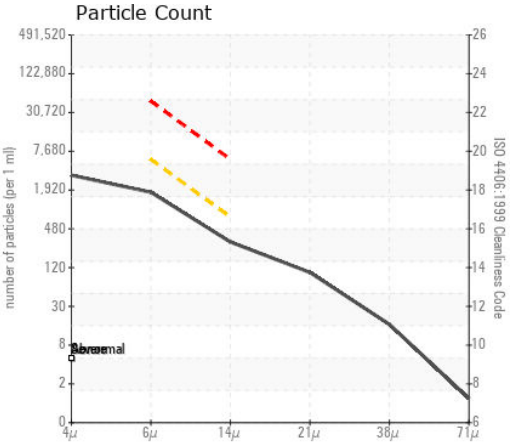
Non-ferrous Metals



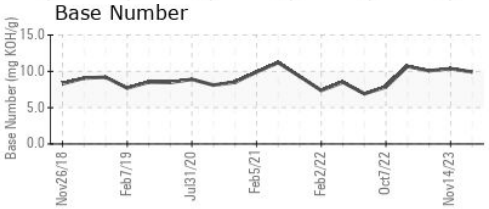
Viscosity @ 100°C



Particle Count



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014206
Lab Number : 06153314
Unique Number : 10983392
Test Package : MOB 2 (Additional Tests: PrtCount)

Received : 18 Apr 2024
Tested : 23 Apr 2024
Diagnosed : 23 Apr 2024 - Jonathan Hester

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)

CONOR
JUAREZ 348
HERMOSILLO,
MX 83140
Contact: EDUARDO GARCIA
egarcia.comsa@gmail.com
T: (526)622-1581 x:81
F: x:

Report Id: CONHERKL [WUSCAR] 06153314 (Generated: 04/23/2024 10:14:41) Rev: 1

Submitted By: EDUARDO GARCIA