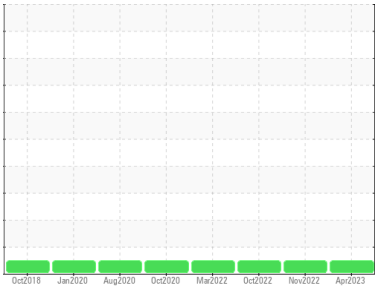
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
GUAY SON [CONHER]
Machine Id
CHINO 1 IBACO BM CHINO I AUX-1
Component
Diesel Engine
Fluid
VALVOLINE 15W40 (8 LTR)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. 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.

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**KL0011394**	KL0011281	KL0010124
Sample Date		Client Info		**06 Apr 2023**	22 Nov 2022	04 Oct 2022
Machine Age	hrs	Client Info		**3929**	0	635
Oil Age	hrs	Client Info		**192**	288	539
Oil Changed		Client Info		**Not Changd**	Changed	Not Changd
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
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	**4**	14	105
Chromium	ppm	ASTM D5185m	>20	**0**	<1	3
Nickel	ppm	ASTM D5185m	>4	**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	<1	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**<1**	2	2
Lead	ppm	ASTM D5185m	>40	**0**	1	<1
Copper	ppm	ASTM D5185m	>330	**1**	11	136
Tin	ppm	ASTM D5185m	>15	**0**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

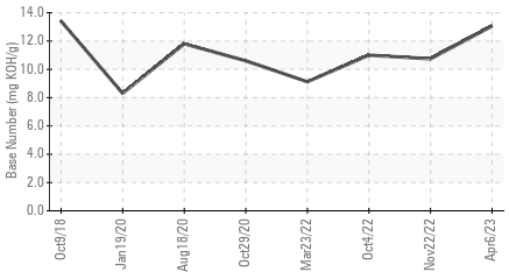
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**5**	2	11
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**3**	2	7
Manganese	ppm	ASTM D5185m		**<1**	<1	3
Magnesium	ppm	ASTM D5185m		**28**	24	44
Calcium	ppm	ASTM D5185m		**3828**	3999	3642
Phosphorus	ppm	ASTM D5185m		**947**	981	900
Zinc	ppm	ASTM D5185m		**1233**	1192	1134
Sulfur	ppm	ASTM D5185m		**4580**	4923	4098

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**3**	6	27
Sodium	ppm	ASTM D5185m		**0**	2	2
Potassium	ppm	ASTM D5185m	>20	**<1**	0	1

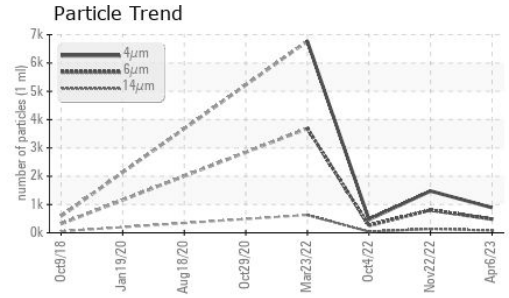
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**6.0**	7.2	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**16.4**	18.6	19.0

OIL ANALYSIS REPORT

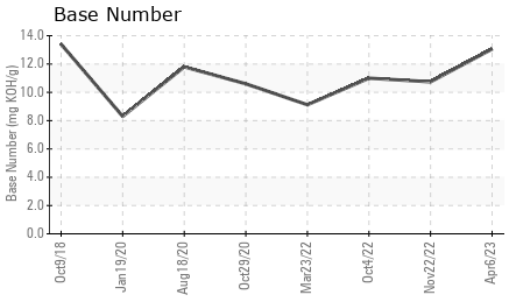
Base Number



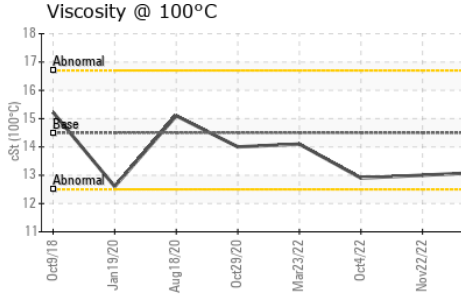
Particle Trend



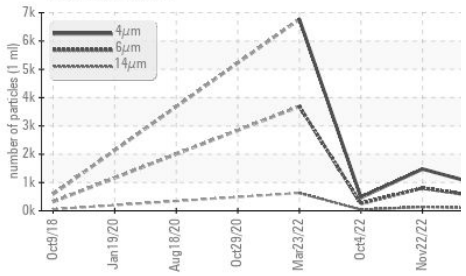
Base Number



Viscosity @ 100°C



Particle Trend



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**887**	1477	468
Particles >6µm		ASTM D7647	>5000	**483**	804	255
Particles >14µm		ASTM D7647	>640	**82**	137	43
Particles >21µm		ASTM D7647	>160	**28**	46	15
Particles >38µm		ASTM D7647	>40	**4**	7	2
Particles >71µm		ASTM D7647	>10	**0**	1	0
Oil Cleanliness		ISO 4406 (c)	>19/16	**16/14**	17/14	15/13

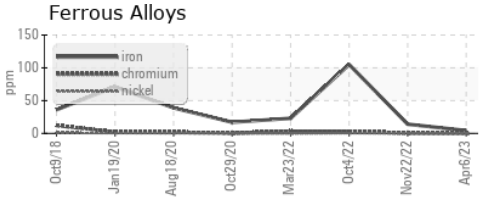
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**10.3**	11.6	12.3
Acid Number (AN)	mg KOH/g	ASTM D8045		**1.03**	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		**13.06**	10.74	11.0

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

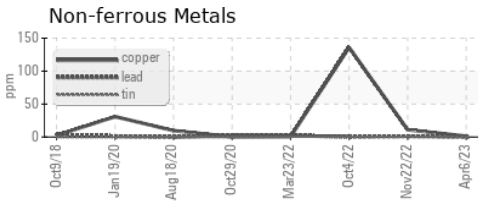
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.5	**13.1**	13.0	12.9

GRAPHS

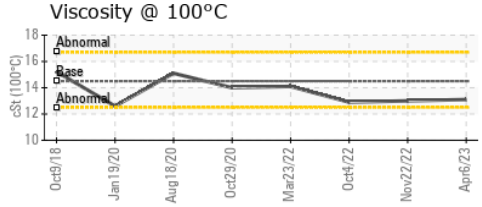
Ferrous Alloys



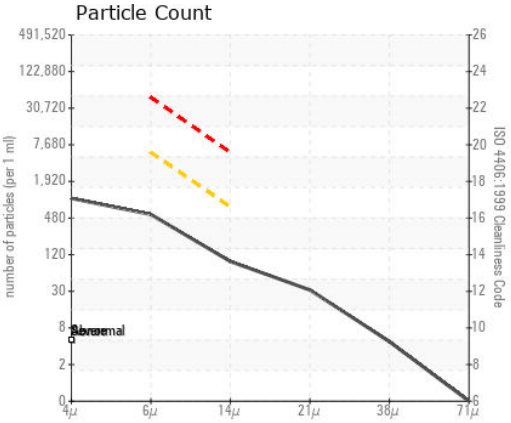
Non-ferrous Metals



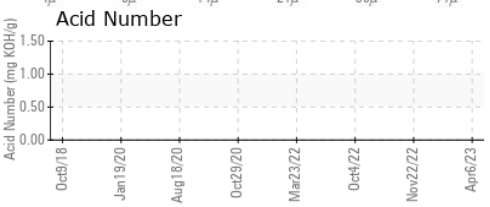
Viscosity @ 100°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0011394 **Recieved** : 14 Apr 2023
Lab Number : 05821118 **Diagnosed** : 18 Apr 2023
Unique Number : 10429201 **Diagnostician** : Angela Borella
Test Package : MOB 2 (Additional Tests: 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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