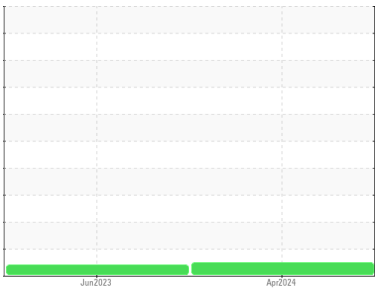
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
LIEBHERR 1300 CR-3317 (S/N 138-408)
Component
1 Winch
Fluid
GEAR OIL ISO 220 (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear
All component wear rates are normal.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0922182**	WC0810388	---
Sample Date		Client Info		**08 Apr 2024**	13 Jun 2023	---
Machine Age	hrs	Client Info		**10234**	9021	---
Oil Age	hrs	Client Info		**1213**	0	---
Oil Changed		Client Info		**Changed**	Changed	---
Sample Status				**NORMAL**	ATTENTION	---

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	**48**	42	---
Chromium	ppm	ASTM D5185m	>10	**0**	<1	---
Nickel	ppm	ASTM D5185m	>10	**0**	<1	---
Titanium	ppm	ASTM D5185m		**0**	0	---
Silver	ppm	ASTM D5185m		**0**	0	---
Aluminum	ppm	ASTM D5185m	>5	**0**	<1	---
Lead	ppm	ASTM D5185m	>15	**0**	0	---
Copper	ppm	ASTM D5185m	>80	**0**	1	---
Tin	ppm	ASTM D5185m		**0**	0	---
Vanadium	ppm	ASTM D5185m		**0**	0	---
Cadmium	ppm	ASTM D5185m		**0**	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	**12**	147	---
Barium	ppm	ASTM D5185m	15	**0**	2	---
Molybdenum	ppm	ASTM D5185m	15	**0**	2	---
Manganese	ppm	ASTM D5185m		**0**	<1	---
Magnesium	ppm	ASTM D5185m	50	**0**	20	---
Calcium	ppm	ASTM D5185m	50	**11**	98	---
Phosphorus	ppm	ASTM D5185m	350	**541**	1125	---
Zinc	ppm	ASTM D5185m	100	**19**	87	---
Sulfur	ppm	ASTM D5185m	12500	**9266**	20829	---

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

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	---
Free Water	scalar	*Visual		**NEG**	NEG	---

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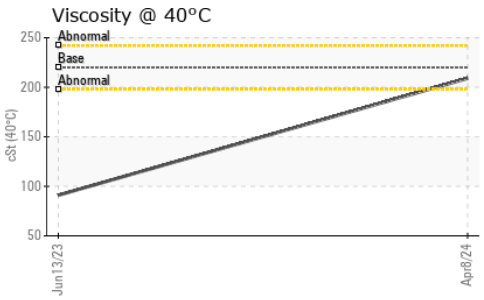
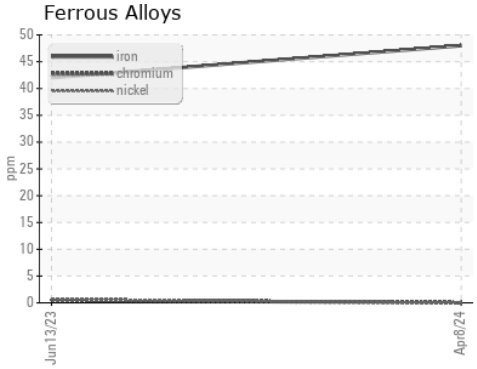


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	**209**	91.0	---

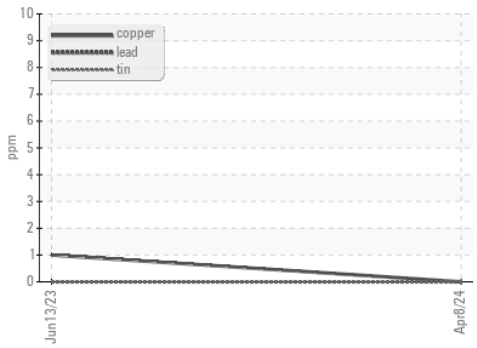
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

GRAPHS

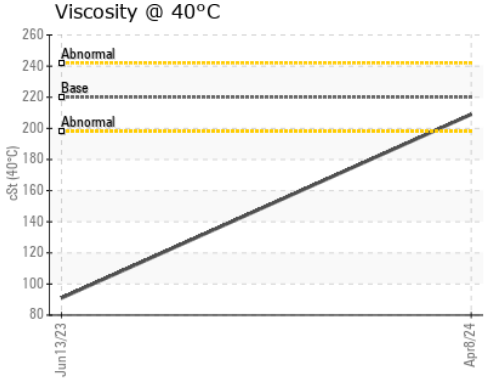
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0922182
Lab Number : 06146797
Unique Number : 10976875
Test Package : CONST

Received : 11 Apr 2024
Tested : 12 Apr 2024
Diagnosed : 12 Apr 2024 - Wes Davis

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)

BUCKNER - WILLIS
18123 HWY 75 NORTH
WILLIS, TX
US 77378
Contact: JOHN HAWKINS
johnh@bucknercompanies.com
T:
F: