



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR 1400 CR4405 (S/N 0015-108)
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (6 GAL)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0935933	WC0922279	WC0784823
Sample Date		Client Info		08 May 2024	22 Apr 2024	16 Oct 2023
Machine Age	hrs	Client Info		9661	9651	9409
Oil Age	hrs	Client Info		10	242	500
Filter Age	hrs	Client Info		10	242	500
Oil Changed		Client Info		Not Changd	Changed	Changed
Filter Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	1	5	6
Chromium	ppm	ASTM D5185m	>5	0	0	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>15	<1	2	3
Lead	ppm	ASTM D5185m	>30	<1	0	<1
Copper	ppm	ASTM D5185m	>125	0	<1	<1
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

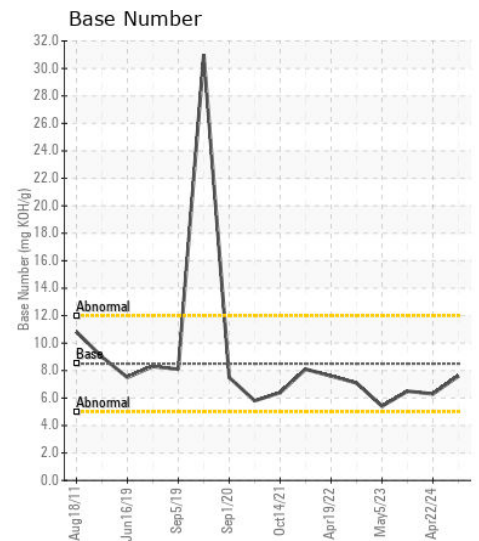
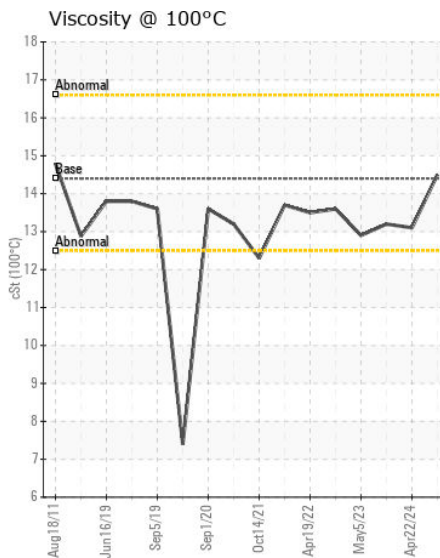
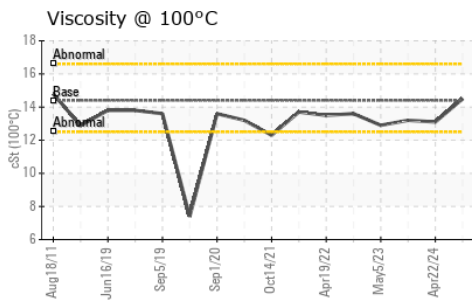
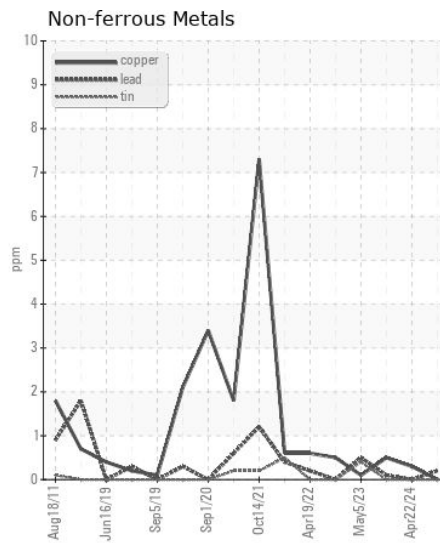
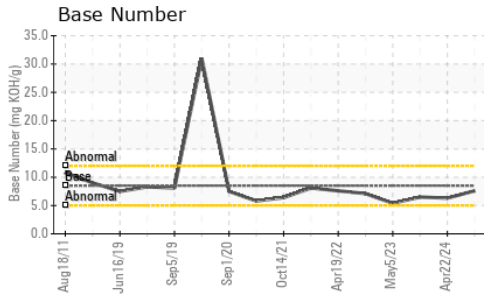
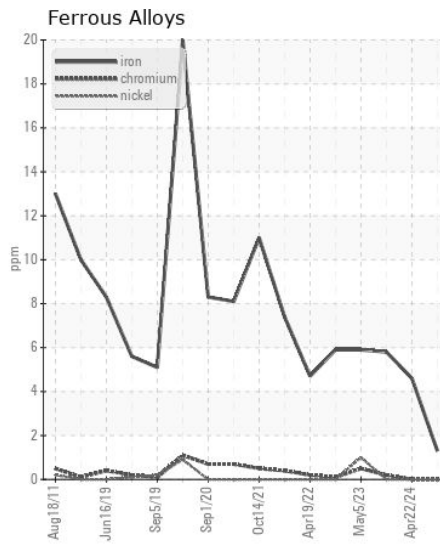
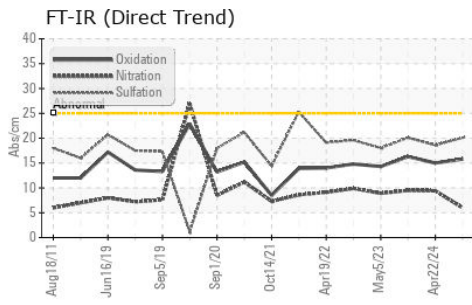
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	6	7	7
Potassium	ppm	ASTM D5185m	>20	<1	<1	4
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.0	9.4	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1	18.6	20.1
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

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.

Sodium	ppm	ASTM D5185m	>158	<1	2	<1
Boron	ppm	ASTM D5185m	250	165	46	45
Barium	ppm	ASTM D5185m	10	0	0	<1
Molybdenum	ppm	ASTM D5185m	100	12	67	58
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m	450	122	228	227
Calcium	ppm	ASTM D5185m	3000	2029	2022	1946
Phosphorus	ppm	ASTM D5185m	1150	939	1045	979
Zinc	ppm	ASTM D5185m	1350	1147	1228	1226
Sulfur	ppm	ASTM D5185m	4250	3973	4282	3796
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.8	15.0	16.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.6	6.3	6.5
Visc @ 100°C	cSt	ASTM D445	14.4	14.5	13.1	13.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0935933 **Received** : 13 May 2024
Lab Number : 06178234 **Tested** : 14 May 2024
Unique Number : 11029560 **Diagnosed** : 14 May 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

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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