CONST

LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR R944C 032007-793
Component
Diesel Engine
Fluid
CONOCO PHILLIPS GUARDOL ECT 15W40 (7 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

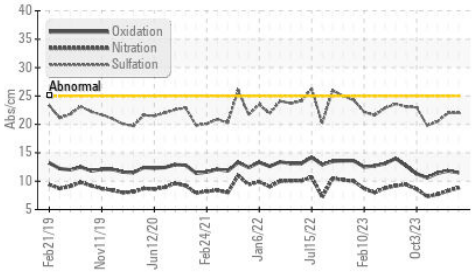
There is no indication of any contamination in the oil.

FLUID CONDITION

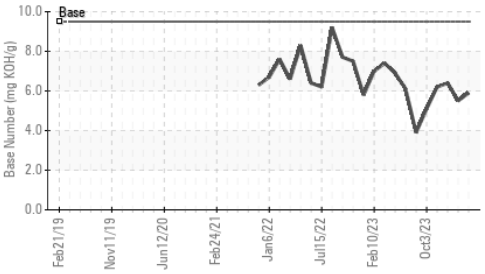
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0273215	LH0273210	LH0273255
Sample Date		Client Info		02 May 2024	11 Mar 2024	12 Jan 2024
Machine Age	hrs	Client Info		22682	22245	21756
Oil Age	hrs	Client Info		300	250	250
Filter Age	hrs	Client Info		300	250	250
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	11	15	7
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		4	5	4
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>15	1	2	2
Lead	ppm	ASTM D5185m	>30	<1	0	<1
Copper	ppm	ASTM D5185m	>125	<1	<1	1
Tin	ppm	ASTM D5185m	>5	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>60	7	9	5
Potassium	ppm	ASTM D5185m	>20	2	2	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	2.8	2.6	2.4
Nitration	Abs/cm	*ASTM D7624	>20	8.8	8.3	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.0	22.0	20.5
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
Sodium	ppm	ASTM D5185m		<1	2	2
Boron	ppm	ASTM D5185m	85	40	23	18
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		26	29	31
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	350	596	473	536
Calcium	ppm	ASTM D5185m	1800	1554	1350	1147
Phosphorus	ppm	ASTM D5185m	1000	1089	947	912
Zinc	ppm	ASTM D5185m	1100	1308	1110	1061
Sulfur	ppm	ASTM D5185m	3500	4140	3474	2839
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.5	11.8	11.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.5	5.9	5.5	6.4
Visc @ 100°C	cSt	ASTM D445	15.3	13.6	13.16	13.1

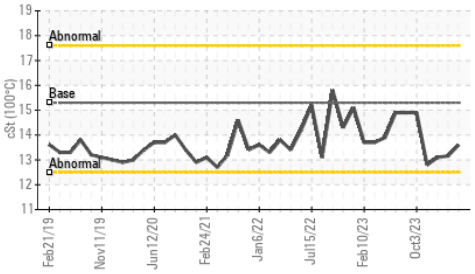
FT-IR (Direct Trend)



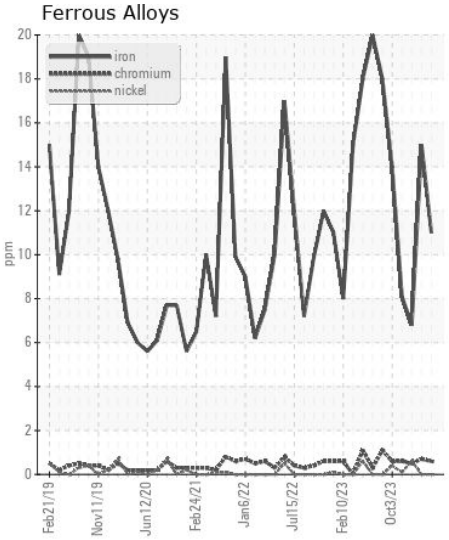
Base Number



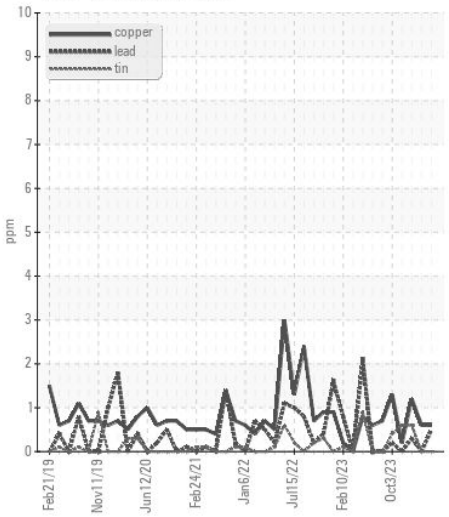
Viscosity @ 100°C



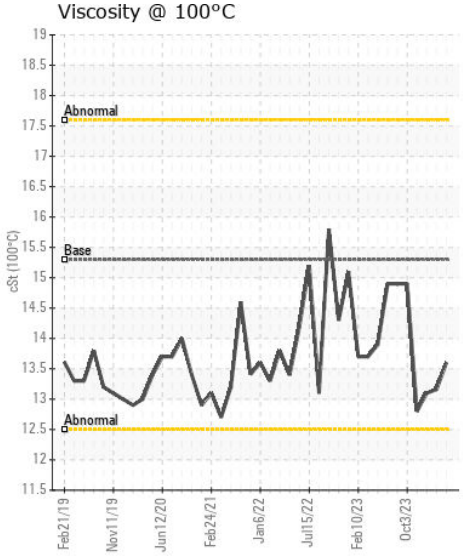
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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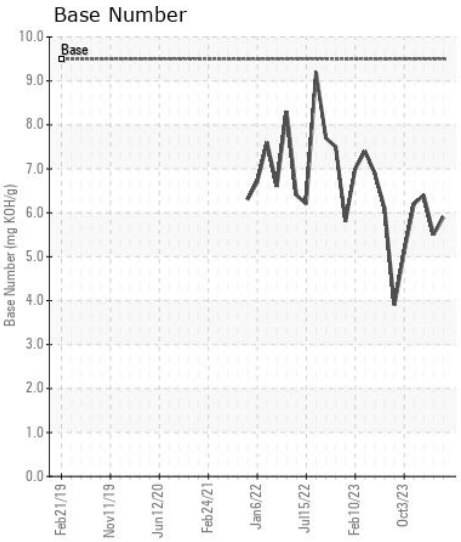

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0273215
Lab Number : 06193374
Unique Number : 11050126
Test Package : CONST (Additional Tests: TBN)

Received : 28 May 2024
Tested : 30 May 2024
Diagnosed : 30 May 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)

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