



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR 944C-LI C-44 (S/N 028924-194)

Component
Diesel Engine

Fluid
CONOCO PHILLIPS GUARDOL ECT 15W40 (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0899818	WC0828399	WC0828389
Sample Date		Client Info		08 Feb 2024	14 Dec 2023	18 Oct 2023
Machine Age	hrs	Client Info		4742	4106	4106
Oil Age	hrs	Client Info		910	321	274
Filter Age	hrs	Client Info		910	321	274
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	14	18	23
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		92	79	70
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>15	2	2	2
Lead	ppm	ASTM D5185m	>30	0	<1	2
Copper	ppm	ASTM D5185m	>125	4	11	41
Tin	ppm	ASTM D5185m	>5	<1	1	2
Vanadium	ppm	ASTM D5185m		1	1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

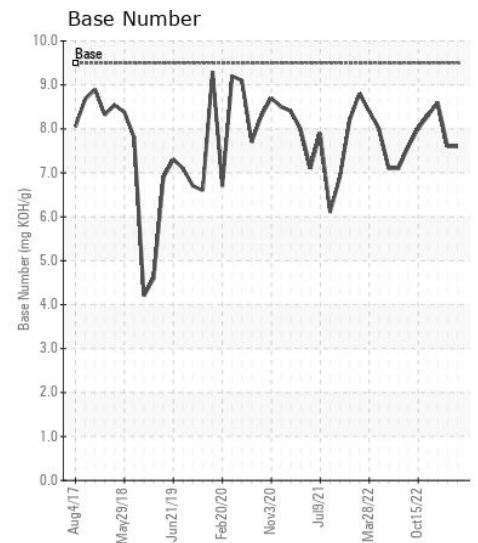
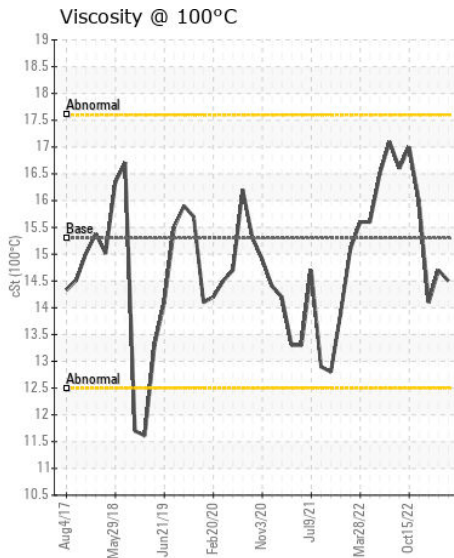
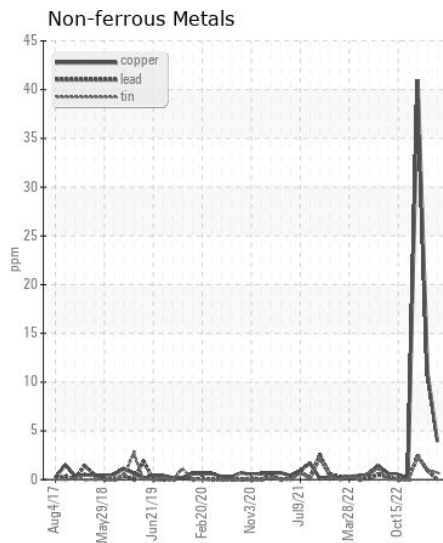
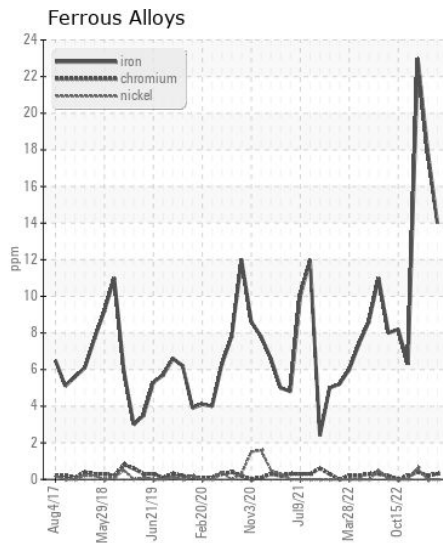
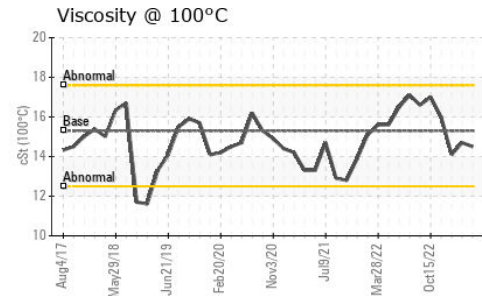
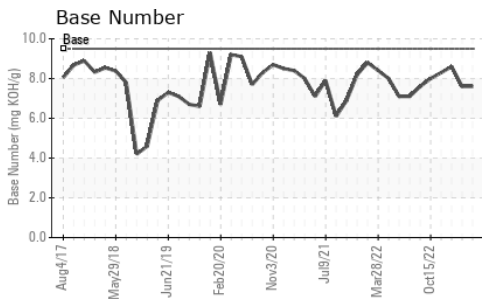
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	7	6	10
Potassium	ppm	ASTM D5185m	>20	4	<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	0.8	1	0.9
Nitration	Abs/cm	*ASTM D7624	>20	8.6	9.3	9.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.5	20.9	20.2
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		4	15	33
Boron	ppm	ASTM D5185m	85	109	92	119
Barium	ppm	ASTM D5185m		15	13	58
Molybdenum	ppm	ASTM D5185m		3	7	13
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m	350	410	461	474
Calcium	ppm	ASTM D5185m	1800	1788	1743	1911
Phosphorus	ppm	ASTM D5185m	1000	1085	1054	1107
Zinc	ppm	ASTM D5185m	1100	1199	1272	1235
Sulfur	ppm	ASTM D5185m	3500	4630	3733	4048
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.8	15.4	15.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.5	7.6	7.6	8.6
Visc @ 100°C	cSt	ASTM D445	15.3	14.5	14.7	14.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0899818 **Received** : 14 Feb 2024
Lab Number : 06088608 **Tested** : 15 Feb 2024
Unique Number : 10876053 **Diagnosed** : 15 Feb 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

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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)