CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR A944B-HD C-40 (S/N 018737-744)
Component
Diesel Engine
Fluid
CONOCO PHILLIPS GUARDOL ECT 15W40 (6 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

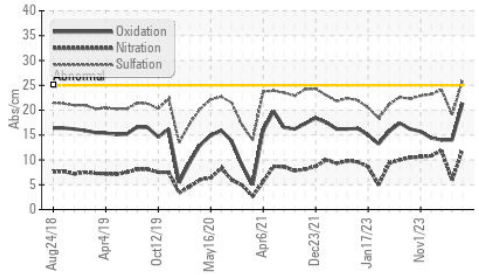
There is no indication of any contamination in the oil.

FLUID CONDITION

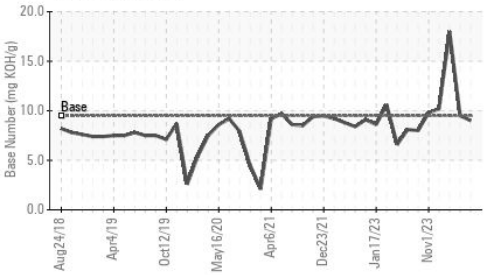
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0879524	WC0899833	WC0879518
Sample Date		Client Info		10 Jun 2024	11 Apr 2024	12 Feb 2024
Machine Age	hrs	Client Info		41761	41479	41430
Oil Age	hrs	Client Info		331	50	274
Filter Age	hrs	Client Info		331	50	274
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	SEVERE
Iron	ppm	ASTM D5185m	>100	42	4	40
Chromium	ppm	ASTM D5185m	>5	<1	0	1
Nickel	ppm	ASTM D5185m	>5	<1	0	<1
Titanium	ppm	ASTM D5185m		97	74	67
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>15	3	2	3
Lead	ppm	ASTM D5185m	>30	13	2	▲ 50
Copper	ppm	ASTM D5185m	>125	14	20	▲ 546
Tin	ppm	ASTM D5185m	>5	2	2	4
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>60	8	5	▲ 100
Potassium	ppm	ASTM D5185m	>20	5	3	▲ 1823
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	0.0	▲ 0.20
Soot %	%	*ASTM D7844	>3	1.6	0.1	0.4
Nitration	Abs/cm	*ASTM D7624	>20	12.1	5.9	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.0	19.1	24.1
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
Sodium	ppm	ASTM D5185m		10	8	▲ 1820
Boron	ppm	ASTM D5185m	85	97	163	386
Barium	ppm	ASTM D5185m		0	0	6
Molybdenum	ppm	ASTM D5185m		3	6	17
Manganese	ppm	ASTM D5185m		<1	0	1
Magnesium	ppm	ASTM D5185m	350	507	377	374
Calcium	ppm	ASTM D5185m	1800	2208	1796	1711
Phosphorus	ppm	ASTM D5185m	1000	1193	918	1821
Zinc	ppm	ASTM D5185m	1100	1471	1101	1166
Sulfur	ppm	ASTM D5185m	3500	4693	4396	3448
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.4	14.0	14.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.5	9.0	9.5	18.0
Visc @ 100°C	cSt	ASTM D445	15.3	16.7	14.3	15.4

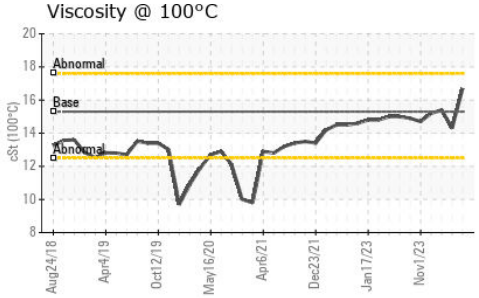
FT-IR (Direct Trend)



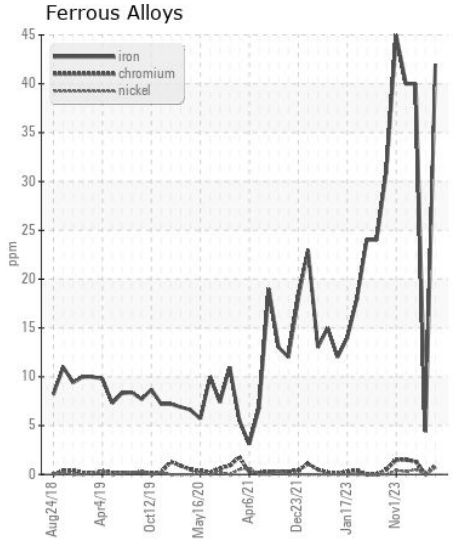
Base Number



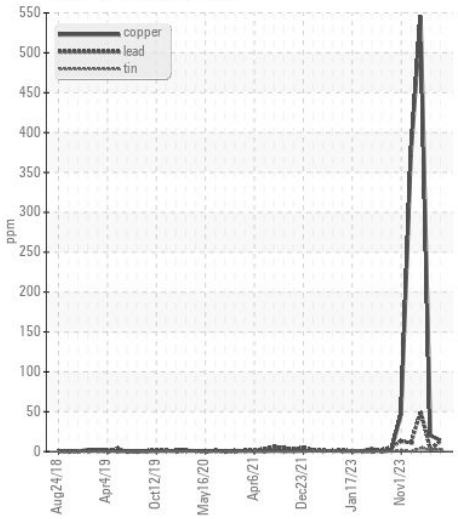
Viscosity @ 100°C



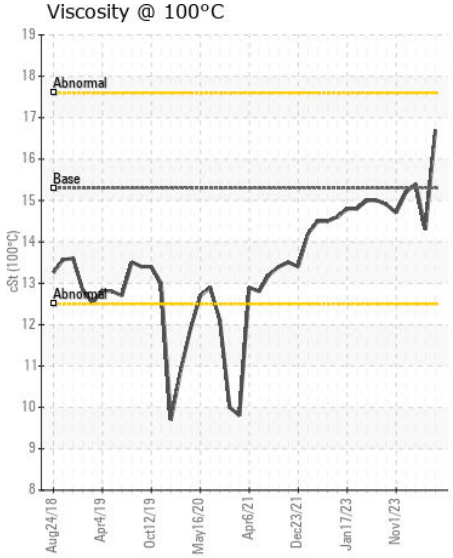
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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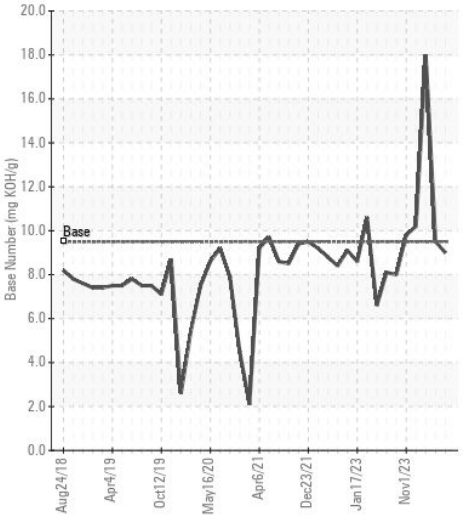

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0879524
Lab Number : 06214453
Unique Number : 11087317
Test Package : CONST (Additional Tests: TBN)

Received : 19 Jun 2024
Tested : 20 Jun 2024
Diagnosed : 20 Jun 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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