



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR A918 095565-1184
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 5W40 (--- 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		LH0273353	LH0268879	LH0220686
Sample Date		Client Info		01 Apr 2024	24 Jan 2024	23 Sep 2022
Machine Age	hrs	Client Info		16661	15862	9750
Oil Age	hrs	Client Info		500	500	0
Filter Age	hrs	Client Info		0	0	0
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	14	28
Chromium	ppm	ASTM D5185m	>5	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>15	3	1	3
Lead	ppm	ASTM D5185m	>30	0	1	<1
Copper	ppm	ASTM D5185m	>125	0	3	2
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

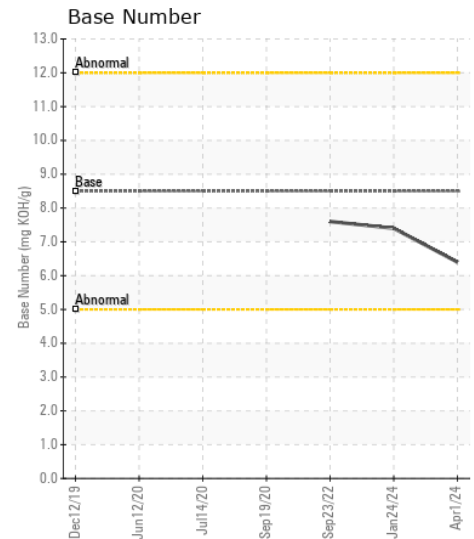
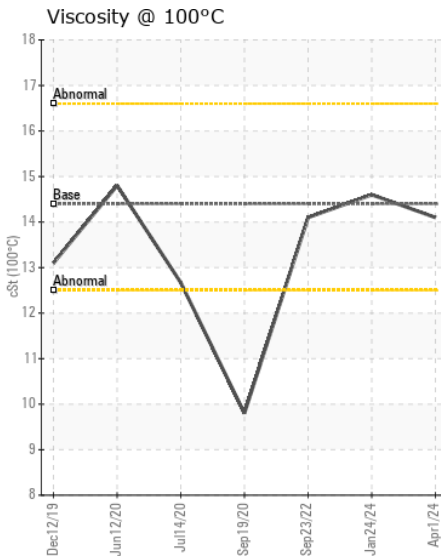
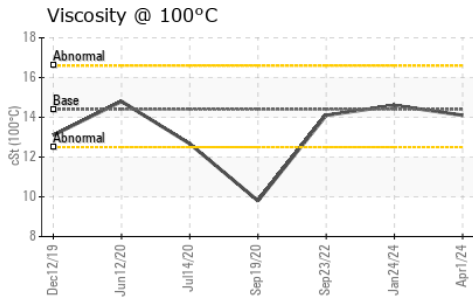
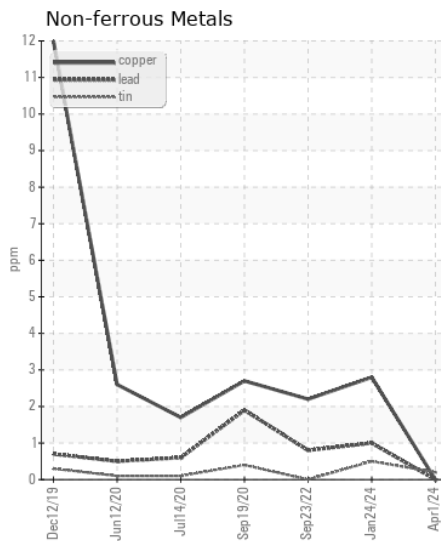
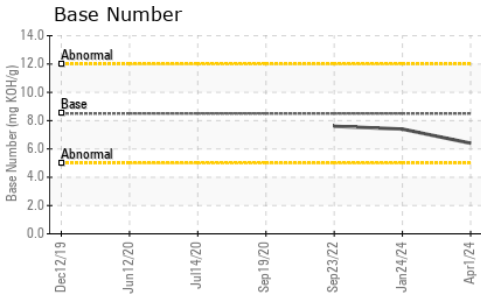
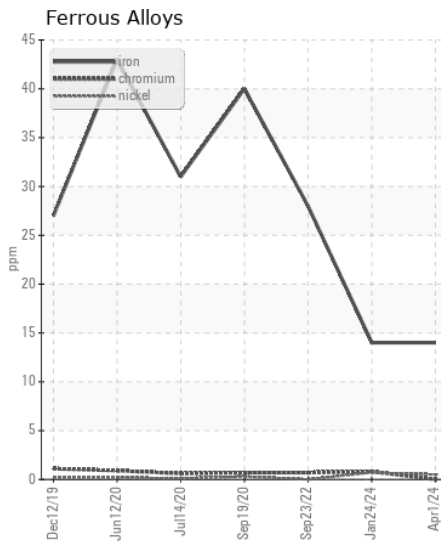
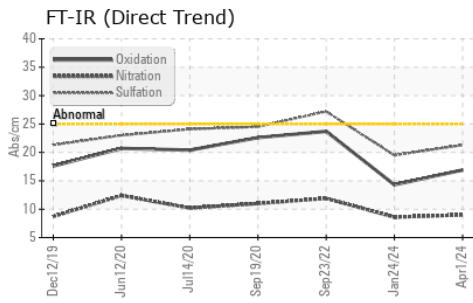
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	25	29	18
Potassium	ppm	ASTM D5185m	>20	4	4	3
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	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.0	8.6	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	19.5	27.2
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	>44	4	0	2
Boron	ppm	ASTM D5185m	250	105	80	101
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	20	15	84
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	708	740	752
Calcium	ppm	ASTM D5185m	3000	1462	1299	1560
Phosphorus	ppm	ASTM D5185m	1150	829	845	856
Zinc	ppm	ASTM D5185m	1350	991	905	1042
Sulfur	ppm	ASTM D5185m	4250	3687	3671	3347
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	14.3	23.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.4	7.4	7.6
Visc @ 100°C	cSt	ASTM D445	14.4	14.1	14.6	14.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0273353 **Received** : 11 Apr 2024
Lab Number : 06146353 **Tested** : 12 Apr 2024
Unique Number : 10976431 **Diagnosed** : 12 Apr 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

UNITED SCRAP
 1545 S CICERO AVE
 BURR RIDGE, IL
 US 60527
 Contact: Service Manager

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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F: