



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR L580 032719-1170
Component
Diesel Engine
Fluid
COREY OIL 10W40 (11 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LHMC124413	LHMC122562	LHMC122581
Sample Date		Client Info		17 May 2024	27 Dec 2023	11 Jul 2023
Machine Age	hrs	Client Info		0	6176	15070
Oil Age	hrs	Client Info		500	250	0
Filter Age	hrs	Client Info		500	250	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	38	34	23
Chromium	ppm	ASTM D5185m	>5	2	1	1
Nickel	ppm	ASTM D5185m	>5	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>15	11	4	4
Lead	ppm	ASTM D5185m	>30	1	2	2
Copper	ppm	ASTM D5185m	>125	7	11	14
Tin	ppm	ASTM D5185m	>5	<1	1	1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

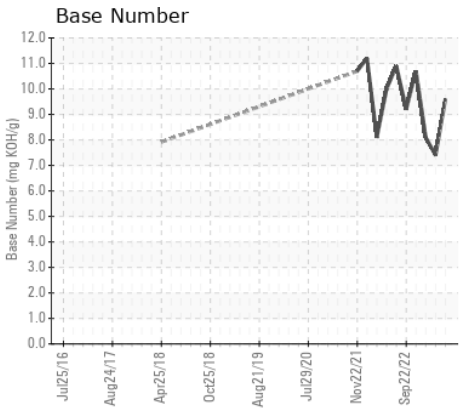
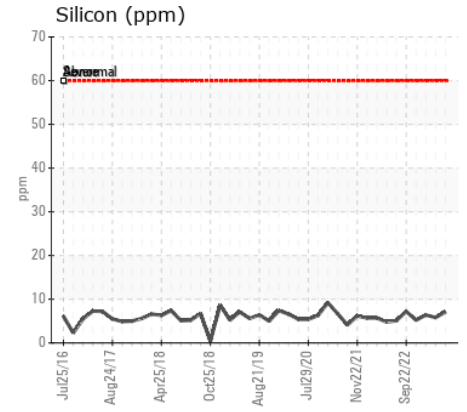
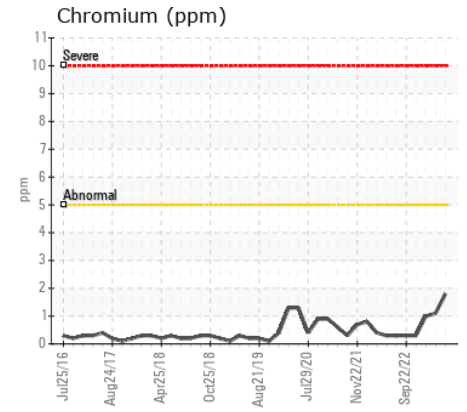
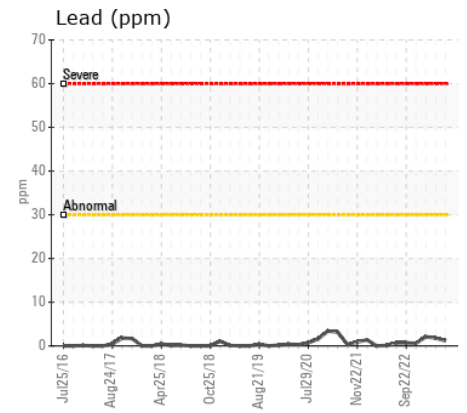
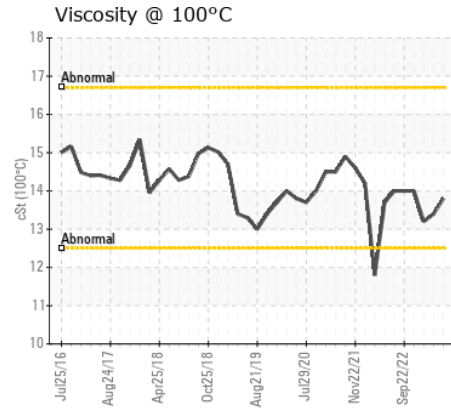
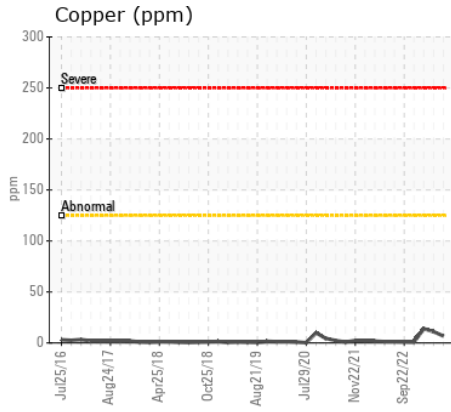
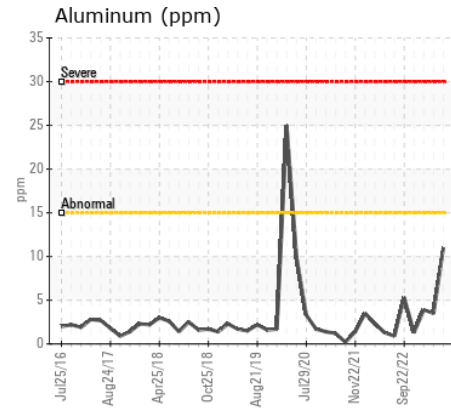
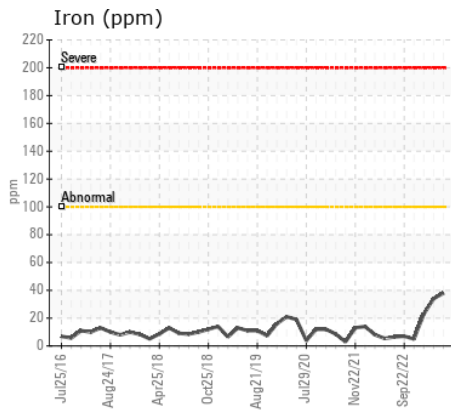
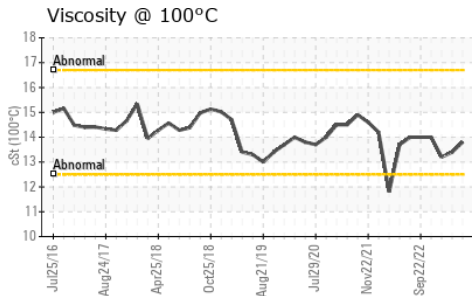
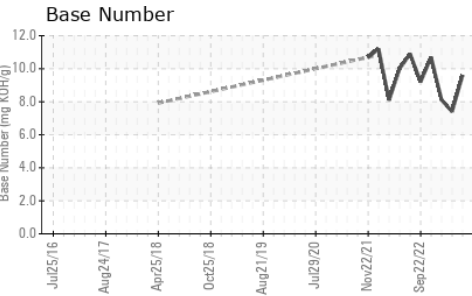
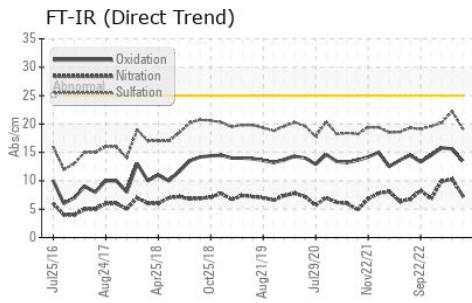
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	7	6	6
Potassium	ppm	ASTM D5185m	>20	<1	2	2
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	1	1.8	0.9
Nitration	Abs/cm	*ASTM D7624	>20	7.4	10.3	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	22.2	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		<1	0	3
Boron	ppm	ASTM D5185m		2	1	6
Barium	ppm	ASTM D5185m		0	11	0
Molybdenum	ppm	ASTM D5185m		60	60	60
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		1061	867	961
Calcium	ppm	ASTM D5185m		1196	1004	1038
Phosphorus	ppm	ASTM D5185m		1130	1023	1050
Zinc	ppm	ASTM D5185m		1425	1147	1285
Sulfur	ppm	ASTM D5185m		4352	3105	3052
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.5	15.6	15.8
Base Number (BN)	mg KOH/g	ASTM D2896		9.6	7.4	8.1
Visc @ 100°C	cSt	ASTM D445		13.8	13.4	13.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LHMC124413 **Received** : 28 May 2024
Lab Number : 06193187 **Tested** : 30 May 2024
Unique Number : 11049939 **Diagnosed** : 30 May 2024 - Wes Davis
Test Package : MOBCE (Additional Tests: TBN)

GENESEE AGGREGATES
 PO BOX 270518
 MILWAUKEE, WI
 US 53227

Contact: MATT ZARNSTORFF
 mzarnstorff@genagg.com
 T: (414)322-8565
 F: (262)968-3247

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)