



LIEBHERR

OIL ANALYSIS REPORT



Machine Id
LIEBHERR LH30M 117275-1253
Component
Hydraulic System
Fluid
SHELL SPIRAX 5W30 (--- GAL)

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. The oil change at the time of sampling has been noted. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.

WEAR

All component wear rates are normal.

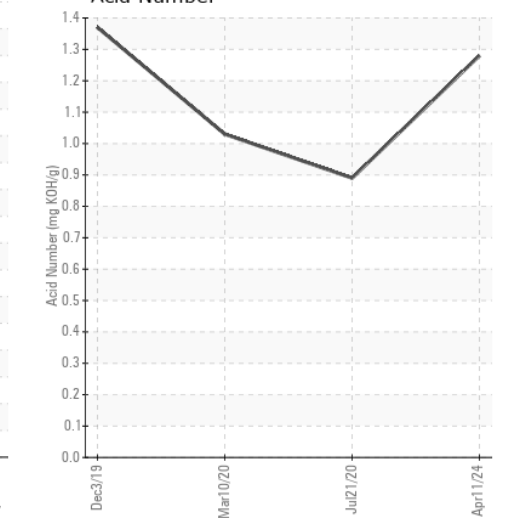
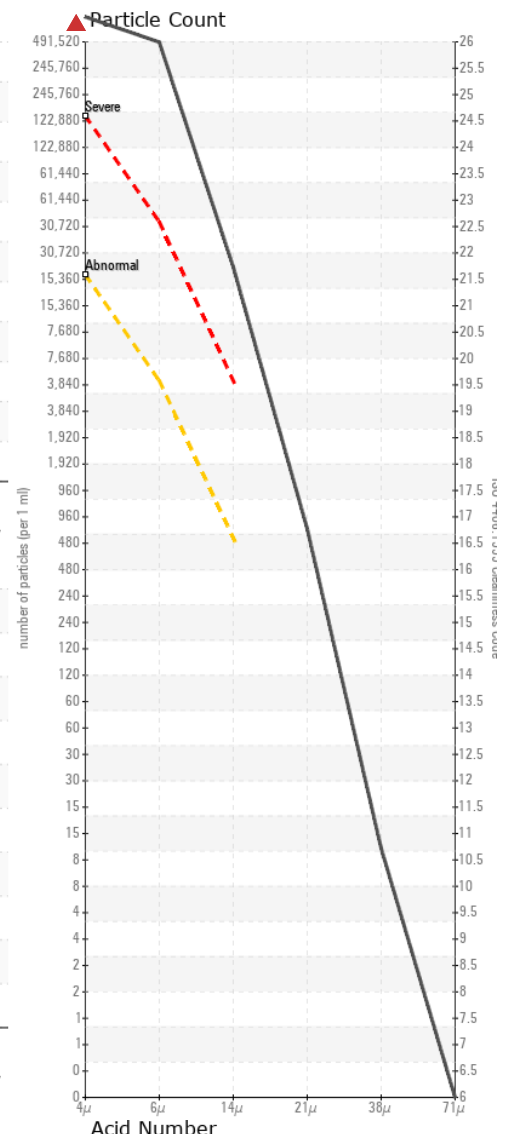
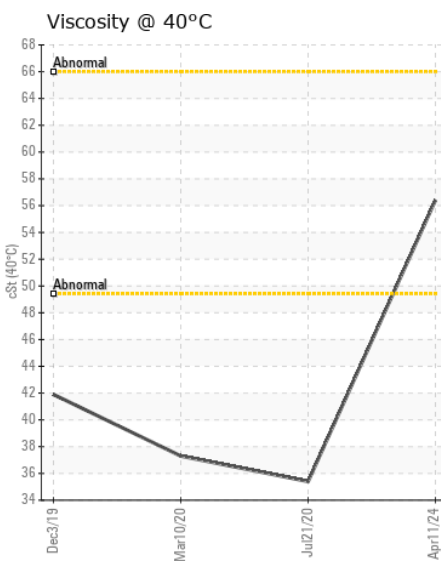
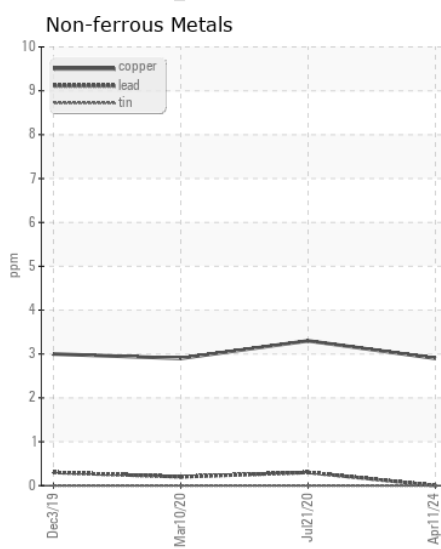
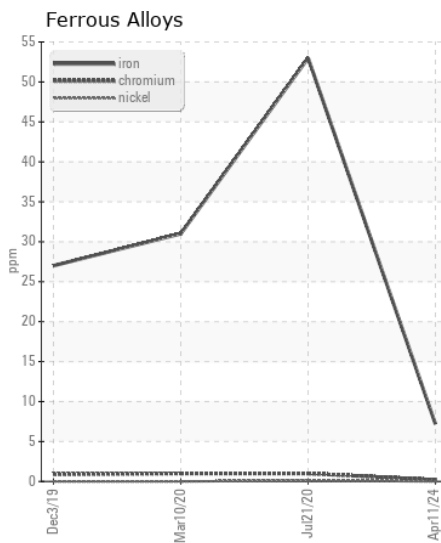
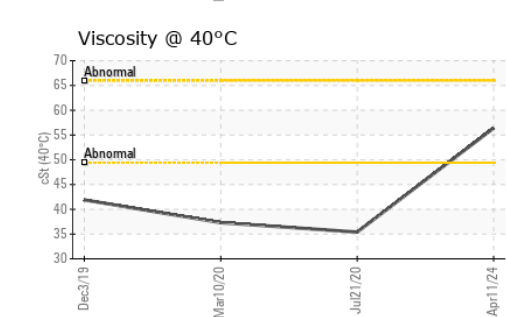
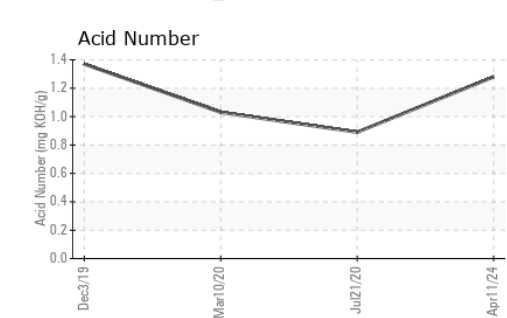
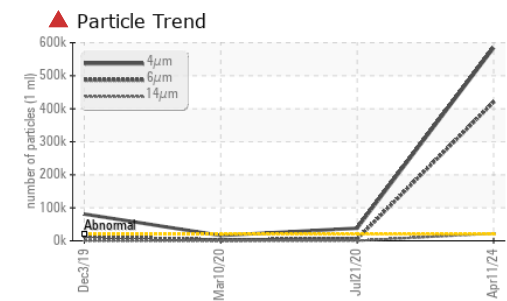
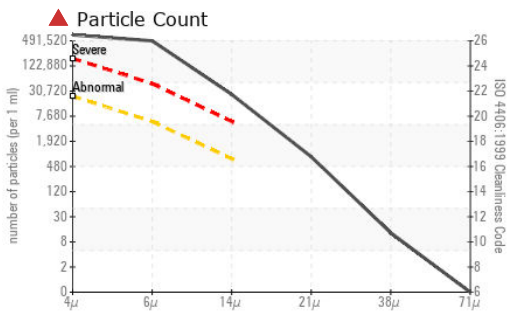
CONTAMINATION

There is a high amount of particulates (2 to 100 microns in size) present in the oil.

FLUID CONDITION

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0135258	LH0150443	LH0150429
Sample Date		Client Info		11 Apr 2024	21 Jul 2020	10 Mar 2020
Machine Age	hrs	Client Info		14313	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>50	7	▲ 53	31
Chromium	ppm	ASTM D5185(m)	>5	<1	1	1
Nickel	ppm	ASTM D5185(m)	>2	0	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>2	1	<1	<1
Lead	ppm	ASTM D5185(m)	>4	0	<1	<1
Copper	ppm	ASTM D5185(m)	>10	3	3	3
Tin	ppm	ASTM D5185(m)	>2	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>17	6	2	1
Potassium	ppm	ASTM D5185(m)	>20	<1	1	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	▲ 584417	● 38219	16228
Particles >6µm		ASTM D7647	>5000	▲ 420221	● 5948	2229
Particles >14µm		ASTM D7647	>640	▲ 22190	227	68
Particles >21µm		ASTM D7647	>160	▲ 721	52	23
Particles >38µm		ASTM D7647	>40	11	2	2
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 26/26/22	● 22/20/15	21/18/13
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	VLITE	VLITE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		3	<1	1
Boron	ppm	ASTM D5185(m)		1	1	<1
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		9	4	4
Calcium	ppm	ASTM D5185(m)		3251	574	731
Phosphorus	ppm	ASTM D5185(m)		812	460	501
Zinc	ppm	ASTM D5185(m)		983	544	588
Sulfur	ppm	ASTM D5185(m)		2690	2573	3006
Acid Number (AN)	mg KOH/g	ASTM D974*		1.28	0.89	1.03
Visc @ 40°C	cSt	ASTM D7279(m)		56.4	35.4	37.3



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0135258 **Received** : 19 Apr 2024
Lab Number : 02630283 **Tested** : 22 Apr 2024
Unique Number : 5763415 **Diagnosed** : 22 Apr 2024 - Wes Davis
Test Package : MOBCE (Additional Tests: TAN Man)

CHARGEMENT 2ML INC.
 130 AVENUE LA BARRE
 ST-BRUNO, QC
 CA G0W 2L0
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

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