



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
106090-1216 LIEBHERR LH50 106090-1216
 Component
Hydraulic System
 Fluid
{not provided} (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DJJ0021709	DJJ0015722	DJJ0011869
Sample Date		Client Info		09 Feb 2024	18 Jan 2023	08 Mar 2022
Machine Age	hrs	Client Info		0	8901	7327
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Filter Changed		Client Info		N/A	Not Changd	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	4	5	4
Chromium	ppm	ASTM D5185m	>5	2	1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>2	<1	<1	<1
Lead	ppm	ASTM D5185m	>4	0	<1	<1
Copper	ppm	ASTM D5185m	>10	0	<1	<1
Tin	ppm	ASTM D5185m	>2	0	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	VLITE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

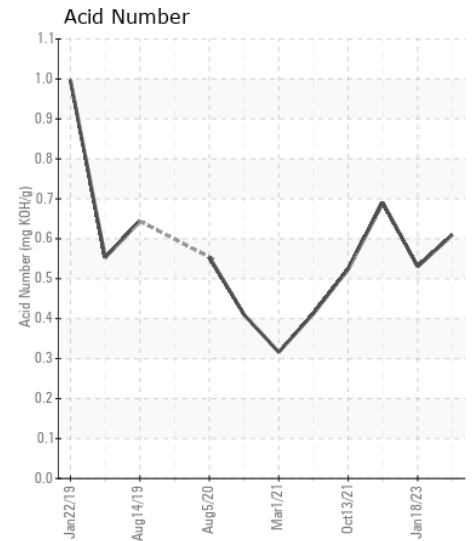
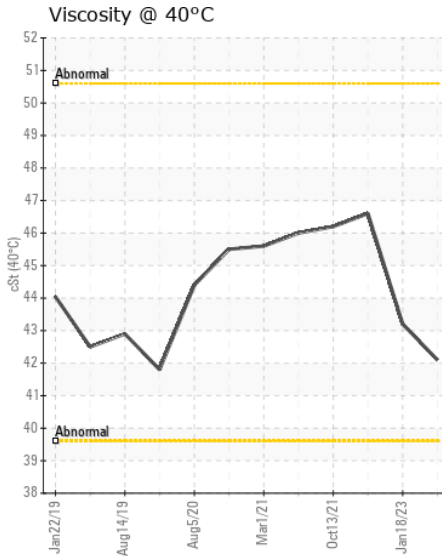
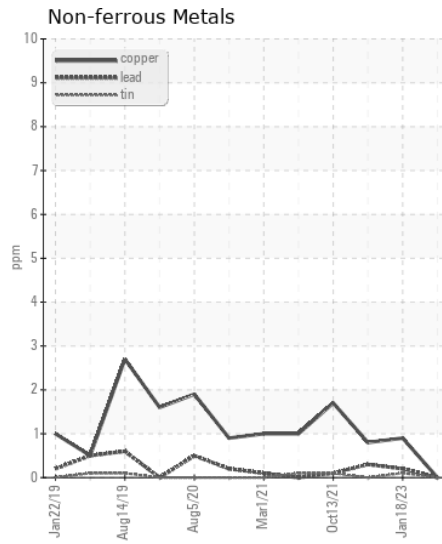
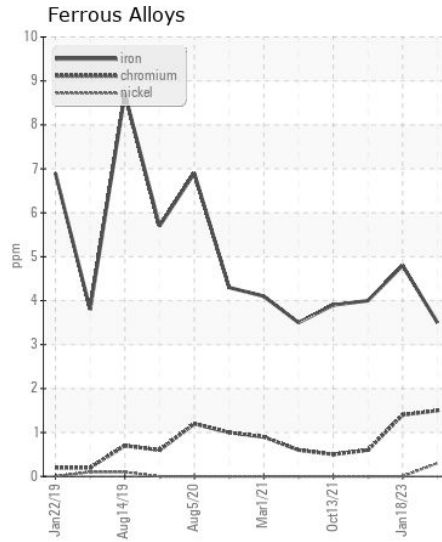
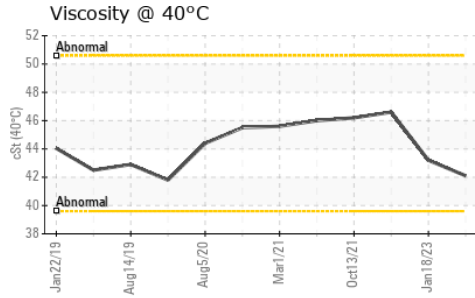
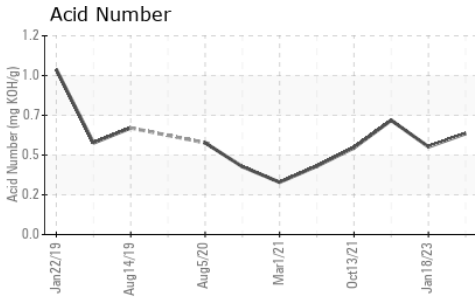
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>17	4	3	3
Potassium	ppm	ASTM D5185m	>20	4	<1	2
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	---	6463	5752
Particles >6µm		ASTM D7647	>5000	---	432	236
Particles >14µm		ASTM D7647	>640	---	43	17
Particles >21µm		ASTM D7647	>160	---	11	6
Particles >38µm		ASTM D7647	>40	---	1	0
Particles >71µm		ASTM D7647	>10	---	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	---	20/16/13	20/15/11
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	MODER	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	>0.1	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	<1	0
Boron	ppm	ASTM D5185m		25	24	31
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m		14	10	14
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m		72	91	134
Calcium	ppm	ASTM D5185m		273	349	389
Phosphorus	ppm	ASTM D5185m		404	408	434
Zinc	ppm	ASTM D5185m		458	469	469
Sulfur	ppm	ASTM D5185m		1793	1619	1675
Acid Number (AN)	mg KOH/g	ASTM D8045		0.61	0.53	0.69
Visc @ 40°C	cSt	ASTM D445		42.1	43.2	46.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0021709
Lab Number : 06088709
Unique Number : 10876154
Test Package : MOBCE

Received : 14 Feb 2024
Tested : 15 Feb 2024
Diagnosed : 15 Feb 2024 - Jonathan Hester

RIVER METALS RECYCLING - LOUISVILLE
 PO BOX 6521
 LOUISVILLE, KY
 US 40206
 Contact: RYAN BOWDEN

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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