CONST

LIEBHERR

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR LH50 1216-118499
Component
Hydraulic System
Fluid
CHEVRON RANDO HD 46 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

The iron level is abnormal. All other component wear rates are normal.

CONTAMINATION

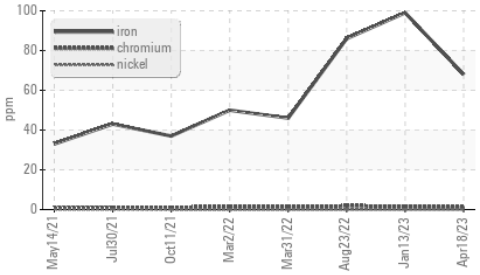
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

FLUID CONDITION

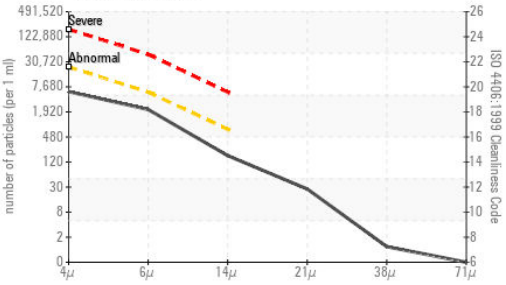
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0244194	LH0236678	LH0236507
Sample Date		Client Info		18 Apr 2023	13 Jan 2023	23 Aug 2022
Machine Age	hrs	Client Info		5488	4897	4046
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>50	▲ 68	▲ 99	▲ 86
Chromium	ppm	ASTM D5185m	>5	1	2	2
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>2	<1	<1	1
Lead	ppm	ASTM D5185m	>4	0	<1	<1
Copper	ppm	ASTM D5185m	>10	1	3	2
Tin	ppm	ASTM D5185m	>2	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>17	2	1	2
Potassium	ppm	ASTM D5185m	>20	0	2	1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	5147	▲ 37827	8188
Particles >6µm		ASTM D7647	>5000	1921	2084	1121
Particles >14µm		ASTM D7647	>640	151	104	51
Particles >21µm		ASTM D7647	>160	24	17	8
Particles >38µm		ASTM D7647	>40	1	1	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/18/14	▲ 22/18/14	20/17/13
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	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		1	0	0
Boron	ppm	ASTM D5185m		0	0	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		1	2	2
Magnesium	ppm	ASTM D5185m		5	5	5
Calcium	ppm	ASTM D5185m		1164	1218	1191
Phosphorus	ppm	ASTM D5185m		472	490	457
Zinc	ppm	ASTM D5185m		539	577	539
Sulfur	ppm	ASTM D5185m		3215	3716	3314
Acid Number (AN)	mg KOH/g	ASTM D8045		0.91	0.76	0.78
Visc @ 40°C	cSt	ASTM D445	43.7	42.8	42.5	42.8

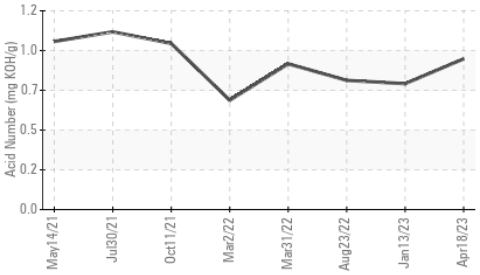
Ferrous Alloys



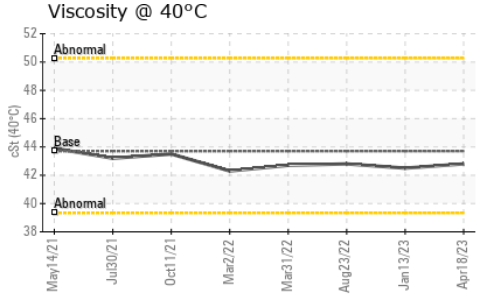
Particle Count



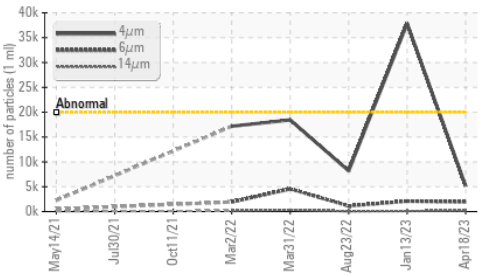
Acid Number



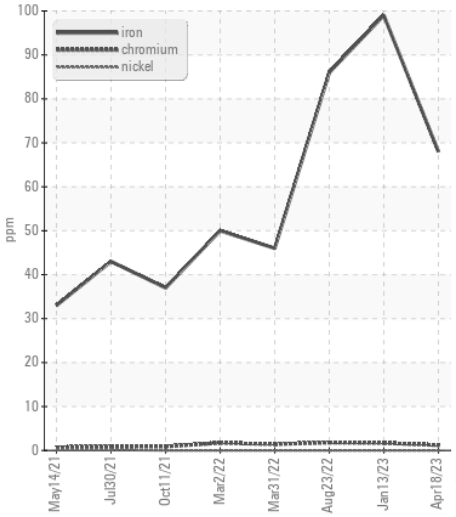
Viscosity @ 40°C



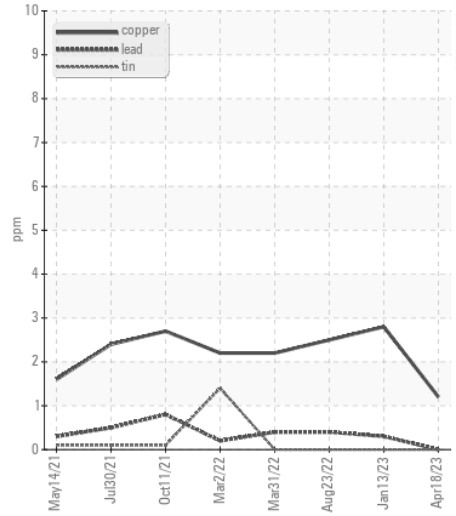
Particle Trend



Ferrous Alloys



Non-ferrous Metals



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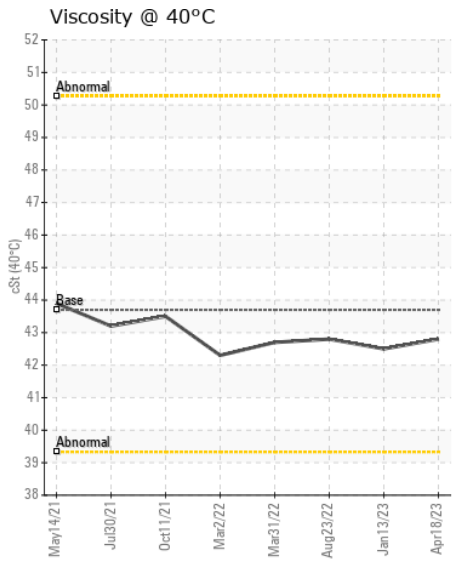
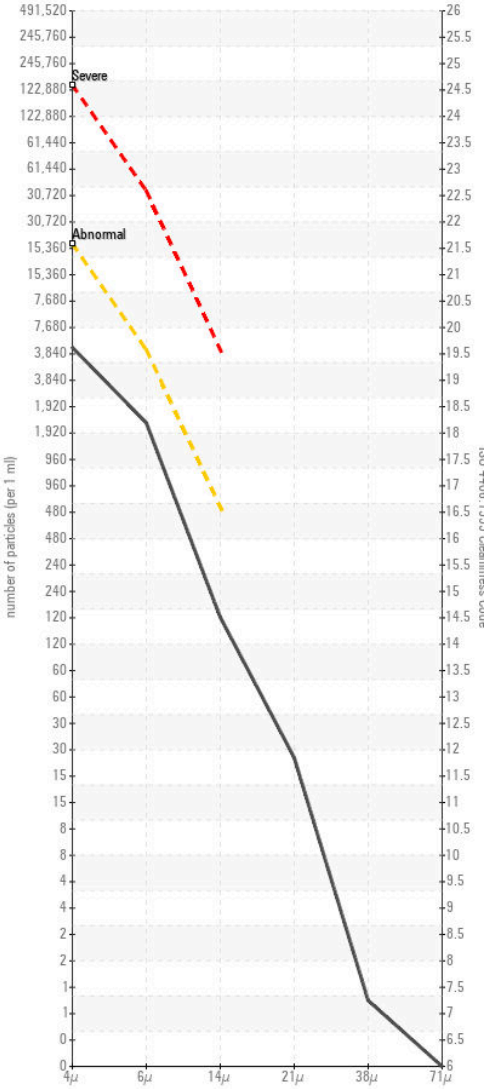
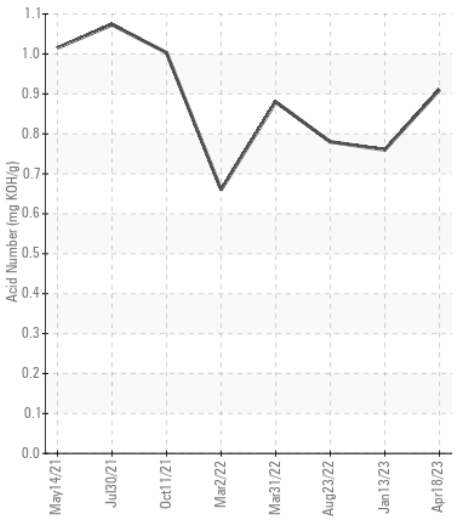


Particle Count



Acid Number



Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: LH0244194	**Received**	: 24 Apr 2023
Lab Number	: 05827559	**Tested**	: 25 Apr 2023
Unique Number	: 10441052	**Diagnosed**	: 26 Apr 2023 - Don Baldridge
Test Package	: CONST		

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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Report Id: SADFON [WUSCAR] 05827559 (Generated: 02/15/2024 09:58:51) Rev: 1

Submitted By: ?