CONST

LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
LIEBHERR LH60 1217-94976
Component
Hydraulic System
Fluid
CHEVRON RANDO HD 46 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

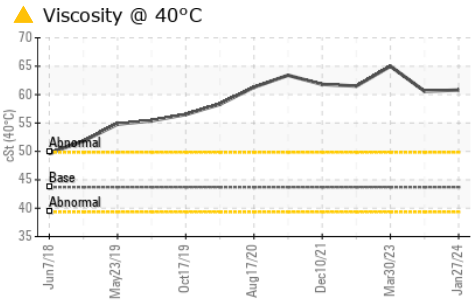
CONTAMINATION

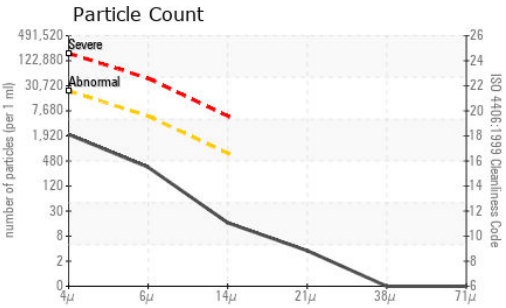
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

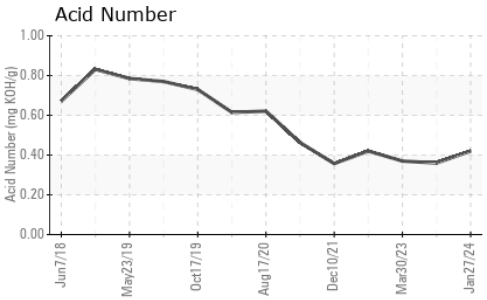
FLUID CONDITION

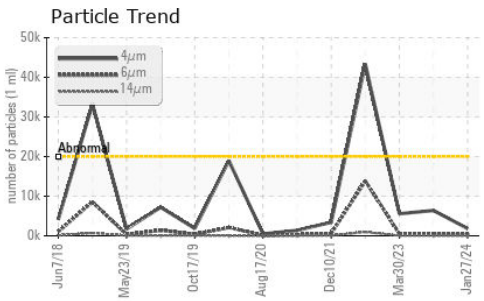
Viscosity of sample indicates oil is within ISO 68 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

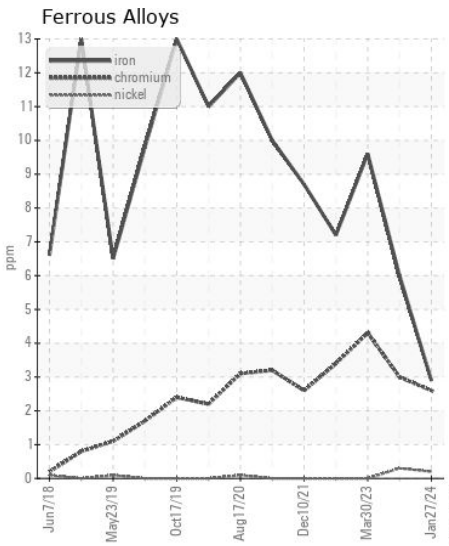
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0236316	LH0236439	LH0245056
Sample Date		Client Info		27 Jan 2024	11 Jan 2024	30 Mar 2023
Machine Age	hrs	Client Info		0	14146	13089
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Filter Changed		Client Info		Changed	Not Changd	N/A
Sample Status				ATTENTION	ATTENTION	ATTENTION
Iron	ppm	ASTM D5185m	>60	3	6	10
Chromium	ppm	ASTM D5185m	>40	3	3	4
Nickel	ppm	ASTM D5185m	>10	<1	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>5	<1	2	<1
Lead	ppm	ASTM D5185m	>5	0	<1	0
Copper	ppm	ASTM D5185m	>15	<1	2	2
Tin	ppm	ASTM D5185m	>5	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>15	<1	1	<1
Potassium	ppm	ASTM D5185m	>20	0	1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	1823	6402	5565
Particles >6µm		ASTM D7647	>5000	299	455	497
Particles >14µm		ASTM D7647	>640	14	40	34
Particles >21µm		ASTM D7647	>160	3	12	7
Particles >38µm		ASTM D7647	>40	0	0	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	18/15/11	20/16/12	20/16/12
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	1
Boron	ppm	ASTM D5185m		2	2	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	2	<1
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		10	10	6
Calcium	ppm	ASTM D5185m		210	220	140
Phosphorus	ppm	ASTM D5185m		375	391	347
Zinc	ppm	ASTM D5185m		481	455	420
Sulfur	ppm	ASTM D5185m		1235	1278	1467
Acid Number (AN)	mg KOH/g	ASTM D8045		0.42	0.36	0.37
Visc @ 40°C	cSt	ASTM D445	43.7	▲ 60.8	▲ 60.6	▲ 65.0

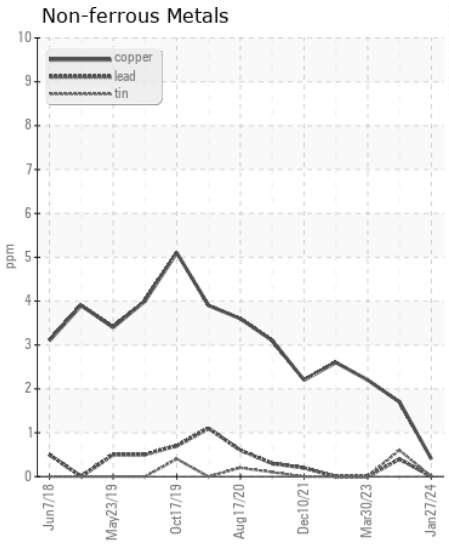


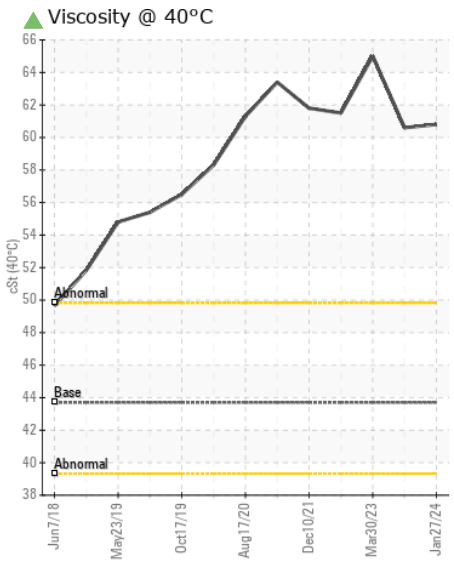


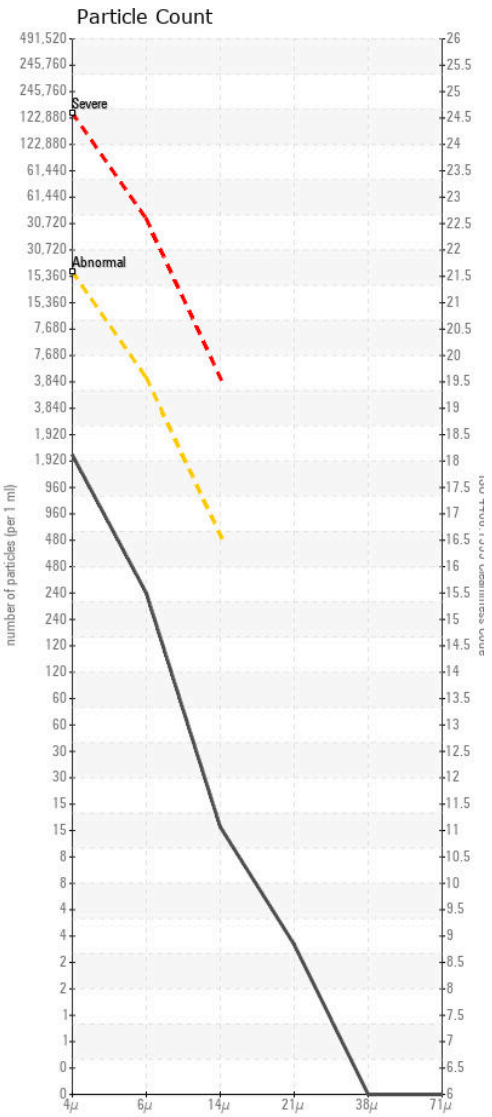


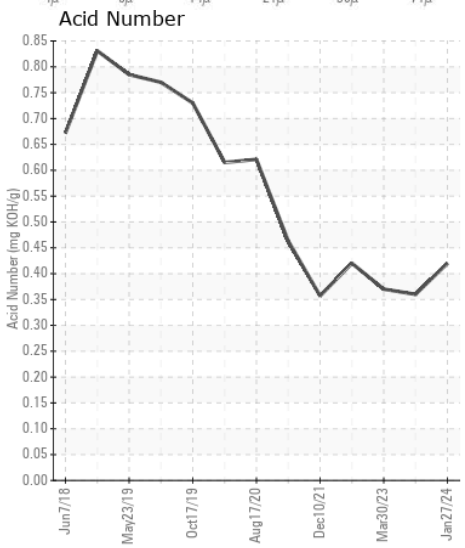












Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: LH0236316	**Received**	: 14 Feb 2024
Lab Number	: 06088707	**Tested**	: 15 Feb 2024
Unique Number	: 10876152	**Diagnosed**	: 15 Feb 2024 - Jonathan Hester
Test Package	: CONST		

ALTER RECYCLINE - DUBUQUE
PO BOX 390
WEBSTER, NY
US 14580
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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