



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(335553)
Machine Id
LIEBHERR T60-9s 021026-1709
Component
Front Differential
Fluid
LIEBHERR GEAR BASIC 90 LS (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0289804	LH	LH
Sample Date		Client Info		29 Jun 2023	18 May 2023	27 Apr 2021
Machine Age	hrs	Client Info		1000	2330	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>1250	50	34	68
Chromium	ppm	ASTM D5185(m)	>6	<1	0	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)		0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>35	<1	<1	1
Lead	ppm	ASTM D5185(m)	>4	0	0	0
Copper	ppm	ASTM D5185(m)	>30	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>4	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

CONTAMINATION

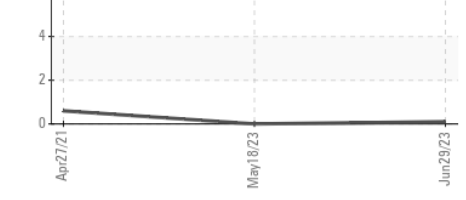
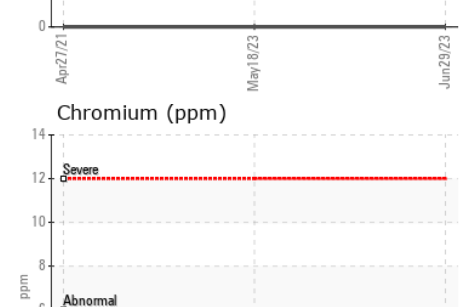
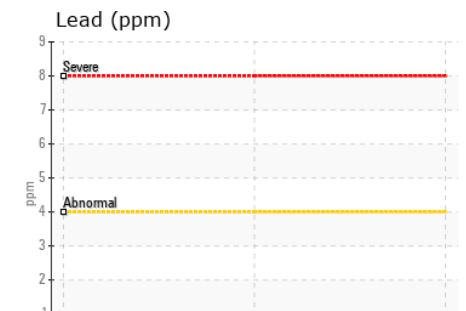
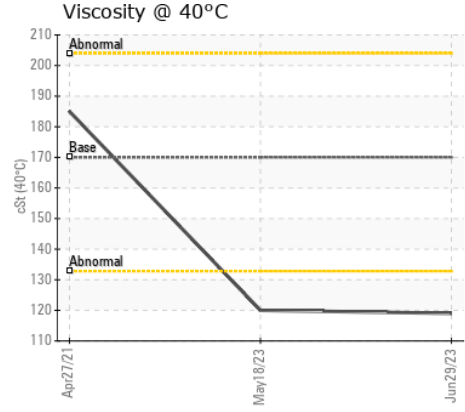
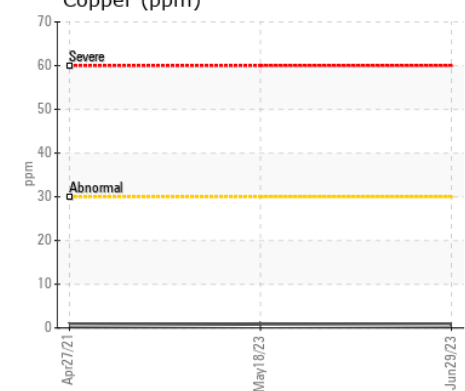
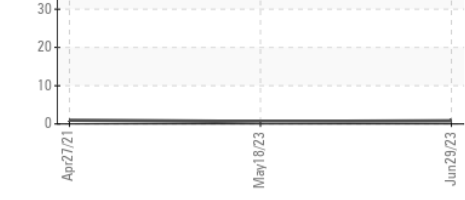
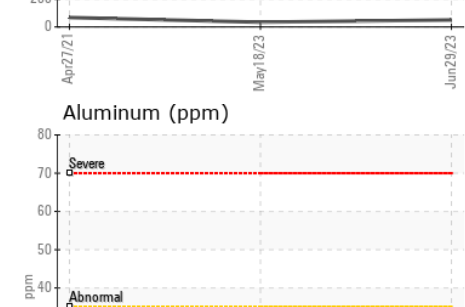
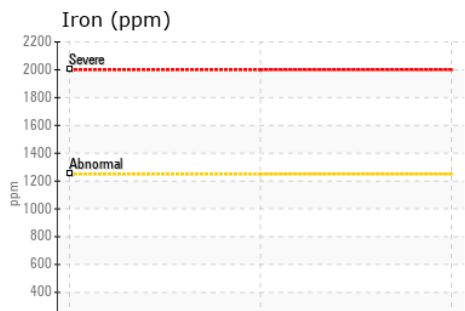
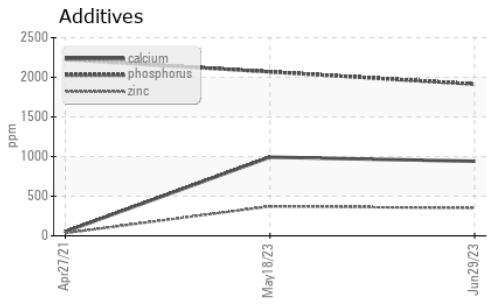
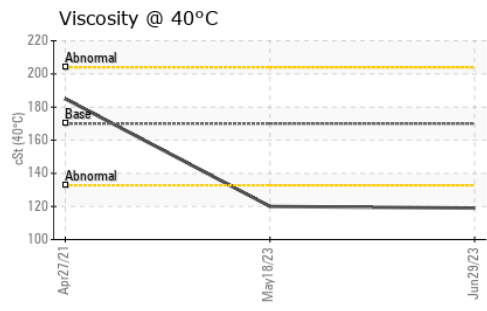
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>100	8	8	18
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	1
Water		WC Method	>.2	NEG	NEG	NEG
Silt	scalar	Visual*	NONE	VLITE	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*	>.2	NEG	NEG	NEG

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 90 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		4	3	7
Boron	ppm	ASTM D5185(m)	0	20	23	2
Barium	ppm	ASTM D5185(m)	0	<1	0	1
Molybdenum	ppm	ASTM D5185(m)	0	0	<1	2
Manganese	ppm	ASTM D5185(m)	0	4	4	11
Magnesium	ppm	ASTM D5185(m)	<1	6	5	4
Calcium	ppm	ASTM D5185(m)	<1	941	993	52
Phosphorus	ppm	ASTM D5185(m)	2143	1914	2069	2223
Zinc	ppm	ASTM D5185(m)	<1	350	371	34
Sulfur	ppm	ASTM D5185(m)	23468	20117	20751	32773
Visc @ 40°C	cSt	ASTM D7279(m)	170	119	120	185



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0289804
Lab Number : 02639233
Unique Number : 5788395
Test Package : MOB 1
Received : 31 May 2024
Tested : 31 May 2024
Diagnosed : 31 May 2024 - Kevin Marson

9168-3094 QC INC.
 379 DU COLLEGE
 St Donat de Montcalm, QC
 CA J0T 2C0
 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.

T:
F: