



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR L586 1761-66584
Component
Rear Differential
Fluid
LIEBHERR GEAR BASIC 90 LS (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0258451	LH0244154	LH05893048
Sample Date		Client Info		25 Mar 2024	04 Sep 2023	10 Jun 2023
Machine Age	hrs	Client Info		4540	2964	2523
Oil Age	hrs	Client Info		1000	1000	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>1500	349	40	74
Chromium	ppm	ASTM D5185m	>10	2	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m	>5	0	0	<1
Silver	ppm	ASTM D5185m		0	0	1
Aluminum	ppm	ASTM D5185m	>20	0	<1	1
Lead	ppm	ASTM D5185m	>5	0	0	0
Copper	ppm	ASTM D5185m	>200	101	17	50
Tin	ppm	ASTM D5185m	>10	0	1	3
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	MODER

CONTAMINATION

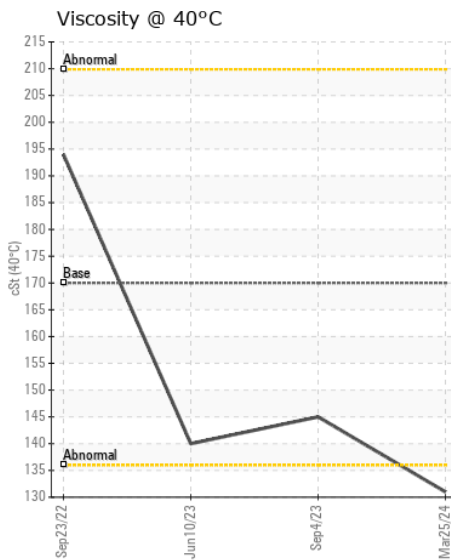
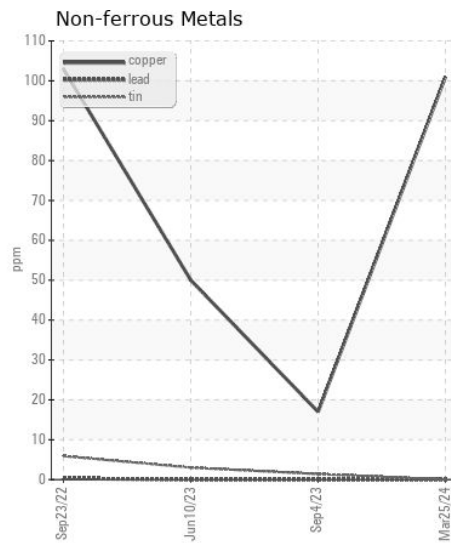
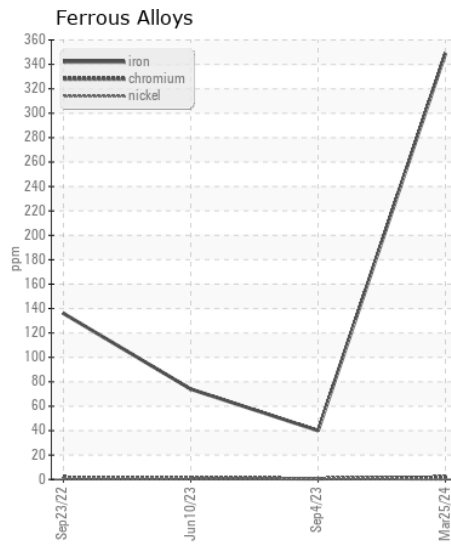
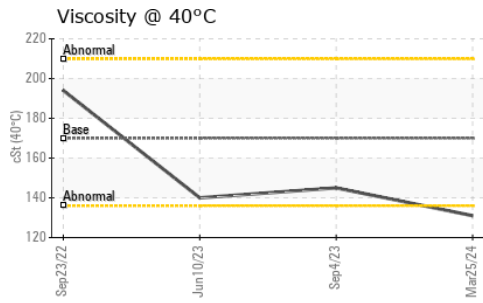
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	2	6	6
Potassium	ppm	ASTM D5185m	>20	<1	<1	0
Water		WC Method	>.2	NEG	NEG	NEG
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	>.2	NEG	NEG	NEG

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		1	1	5
Boron	ppm	ASTM D5185m	0	27	51	261
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	<1	<1
Manganese	ppm	ASTM D5185m	0	4	10	17
Magnesium	ppm	ASTM D5185m	<1	0	2	5
Calcium	ppm	ASTM D5185m	<1	14	13	16
Phosphorus	ppm	ASTM D5185m	2143	687	899	1691
Zinc	ppm	ASTM D5185m	<1	30	10	28
Sulfur	ppm	ASTM D5185m	23468	22471	21443	21469
Visc @ 40°C	cSt	ASTM D445	170	131	145	140



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : LH0258451

Lab Number : 06146812

Unique Number : 10976890

Test Package : CONST

Received : 11 Apr 2024

Tested : 12 Apr 2024

Diagnosed : 15 Apr 2024 - Sean Felton

MIDDLE RIVER MARINE

1771 SOUTH TORRENCE AVE

CHICAGO, IL

US 60617

Contact: Scott Molitor

scottmolitor@gomidriver.com

T:

F:

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)