



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR L586 023615-461
Component
Hydraulic System
Fluid
TRACTOR HYDRAULIC (160 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0267668	LH0200111	LH0200151
Sample Date		Client Info		11 Jan 2024	28 Apr 2022	24 Nov 2021
Machine Age	hrs	Client Info		15868	15224	14552
Oil Age	hrs	Client Info		0	0	2000
Filter Age	hrs	Client Info		0	0	50
Oil Changed		Client Info		Not Changed	N/A	Not Changed
Filter Changed		Client Info		Not Changed	N/A	Not Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	6	10	5
Chromium	ppm	ASTM D5185m	>5	<1	1	1
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	>5	0	<1	0
Lead	ppm	ASTM D5185m	>15	0	<1	<1
Copper	ppm	ASTM D5185m	>10	2	2	3
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

CONTAMINATION

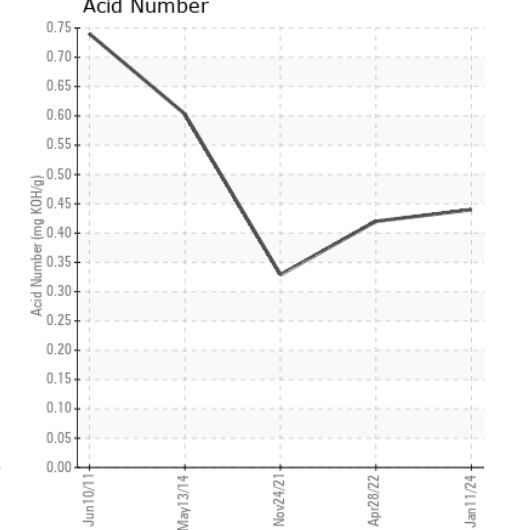
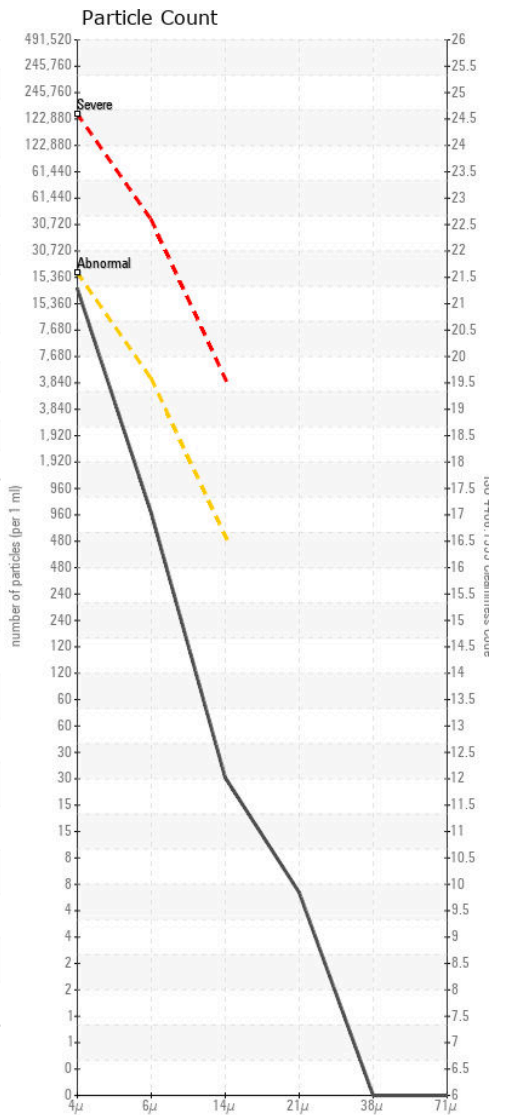
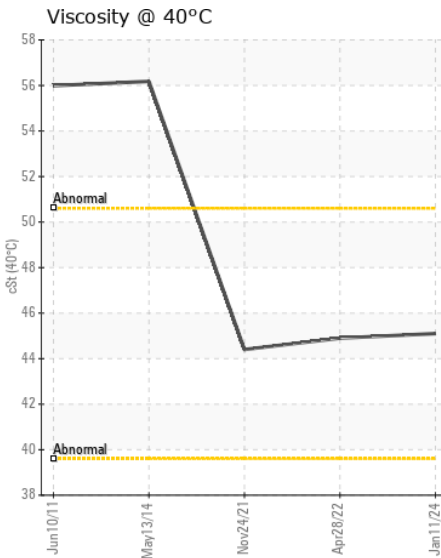
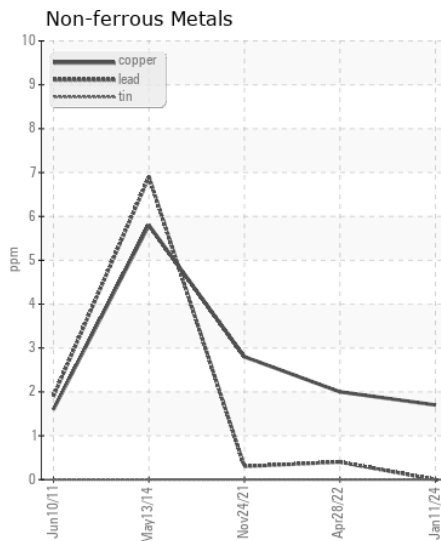
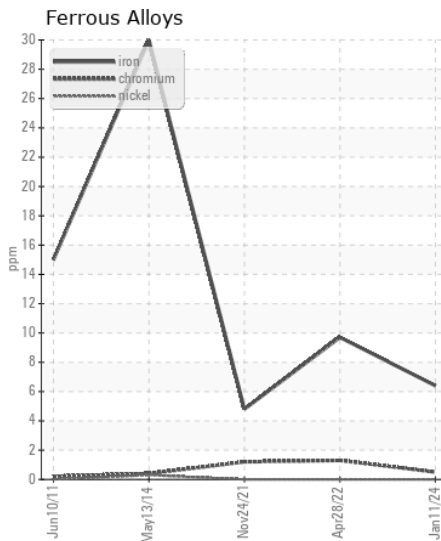
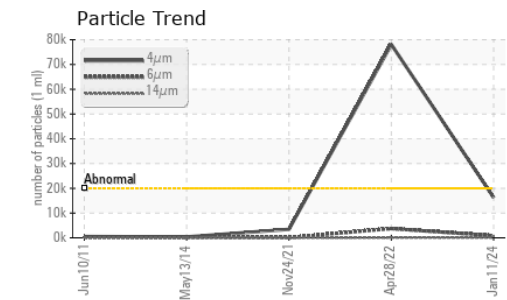
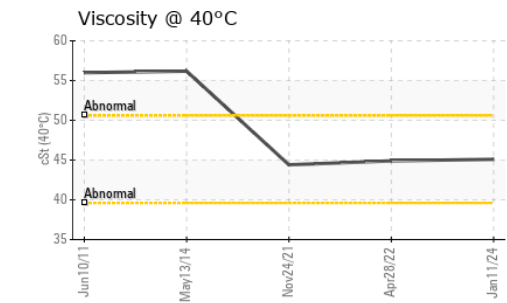
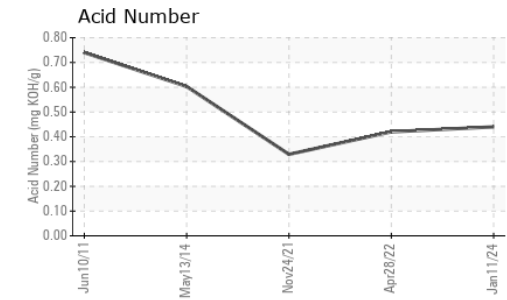
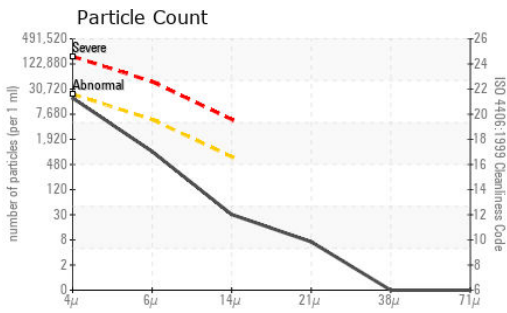
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

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	16276	▲ 78077	3430
Particles >6µm		ASTM D7647	>5000	861	3735	99
Particles >14µm		ASTM D7647	>640	27	50	6
Particles >21µm		ASTM D7647	>160	6	8	3
Particles >38µm		ASTM D7647	>40	0	0	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	21/17/12	▲ 23/19/13	19/14/10
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	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		5	6	3
Boron	ppm	ASTM D5185m		6	3	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	2	<1
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		3	10	2
Calcium	ppm	ASTM D5185m		326	75	59
Phosphorus	ppm	ASTM D5185m		393	321	376
Zinc	ppm	ASTM D5185m		479	407	445
Sulfur	ppm	ASTM D5185m		965	665	895
Acid Number (AN)	mg KOH/g	ASTM D8045		0.44	0.42	0.329
Visc @ 40°C	cSt	ASTM D445		45.1	44.9	44.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0267668
Lab Number : 06083049
Unique Number : 10870494
Test Package : CONST
Received : 07 Feb 2024
Tested : 08 Feb 2024
Diagnosed : 08 Feb 2024 - Wes Davis

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 T:
 F:

Certificate L2367
 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)