



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH30 101514-1253

Component
Hydraulic System

Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0285569	LH0272807	LH0235751
Sample Date		Client Info		28 Jun 2024	10 Jan 2024	25 Sep 2023
Machine Age	hrs	Client Info		12588	12010	11543
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		1000	0	0
Oil Changed		Client Info		N/A	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	14	19	16
Chromium	ppm	ASTM D5185m	>5	1	2	2
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>2	<1	1	0
Lead	ppm	ASTM D5185m	>4	0	0	<1
Copper	ppm	ASTM D5185m	>10	4	5	4
Tin	ppm	ASTM D5185m	>2	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

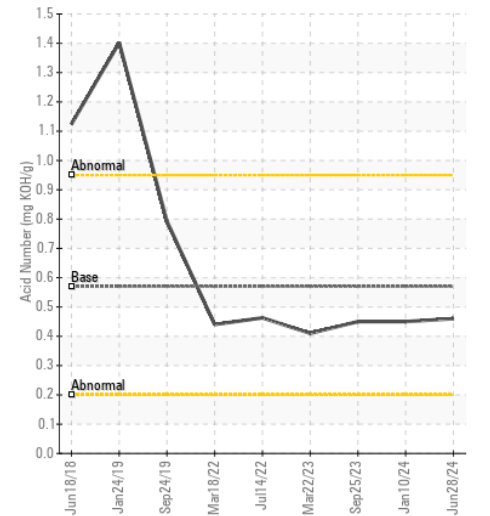
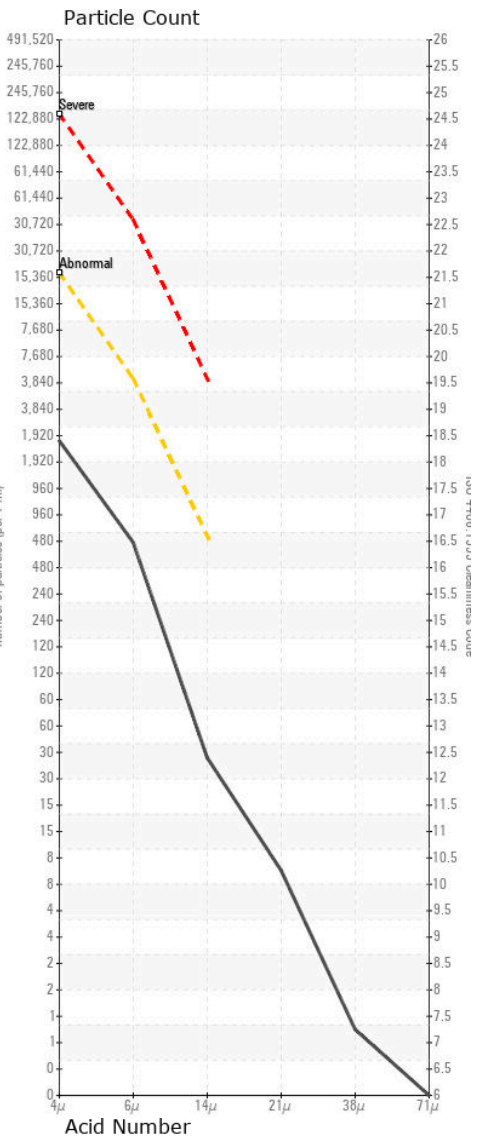
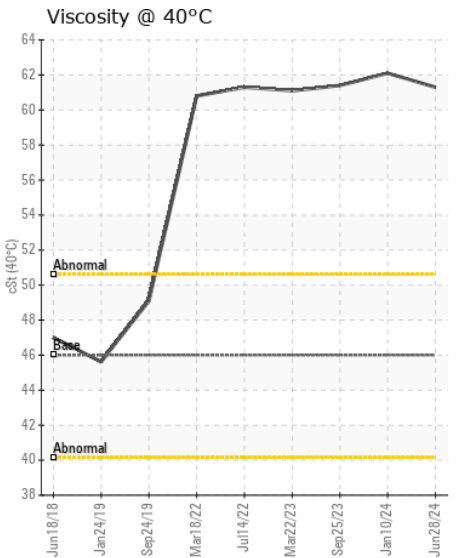
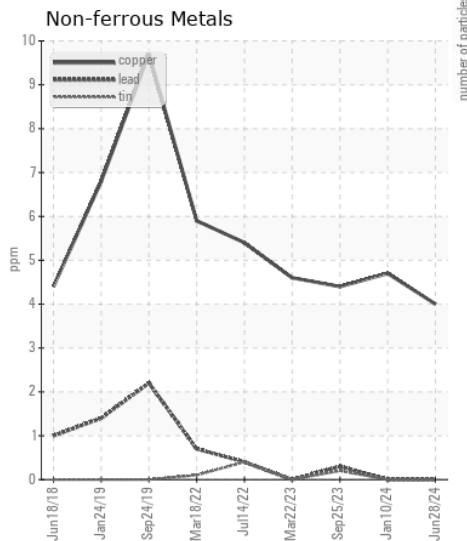
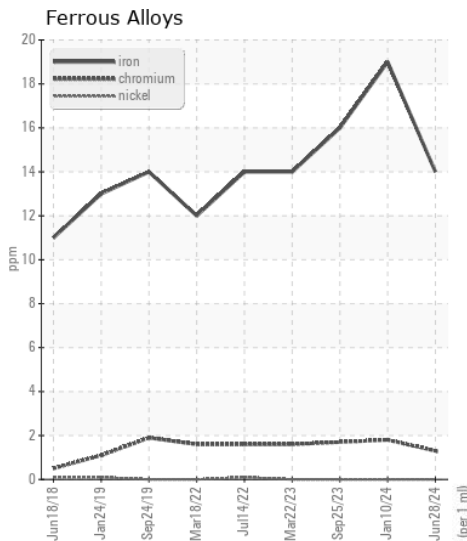
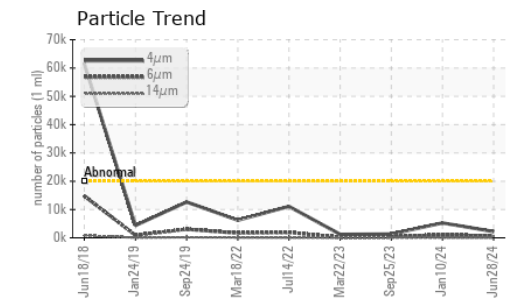
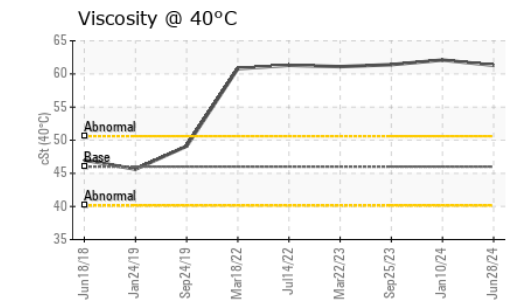
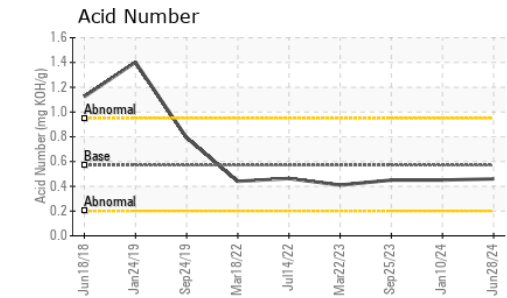
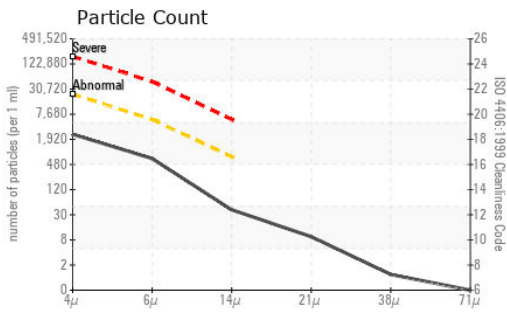
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185m	>17	1	2	2
Potassium	ppm	ASTM D5185m	>20	<1	<1	1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	2218	5257	1344
Particles >6µm		ASTM D7647	>5000	585	1094	339
Particles >14µm		ASTM D7647	>640	35	57	18
Particles >21µm		ASTM D7647	>160	8	12	4
Particles >38µm		ASTM D7647	>40	1	1	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	18/16/12	20/17/13	18/16/11
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

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	2	<1
Boron	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	0	0	<1
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	25	50	42	41
Calcium	ppm	ASTM D5185m	200	105	87	72
Phosphorus	ppm	ASTM D5185m	300	294	284	264
Zinc	ppm	ASTM D5185m	370	351	341	346
Sulfur	ppm	ASTM D5185m	2500	994	827	908
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.46	0.45	0.45
Visc @ 40°C	cSt	ASTM D445	46	61.3	62.1	61.4



Certificate L2367

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

Sample No. : LH0285569

Lab Number : 06227342

Unique Number : 11110835

Test Package : CONST

Received : 03 Jul 2024

Tested : 05 Jul 2024

Diagnosed : 05 Jul 2024 - Wes Davis

SPARTAN RECYCLING

3071 HOWARD ST

SPARTANBURG, SC

US 29303

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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