



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR LR-1400 CR-4414 (S/N 000265-074)

Component
Hydraulic System

Fluid
ATF (120 GAL)

RECOMMENDATION

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

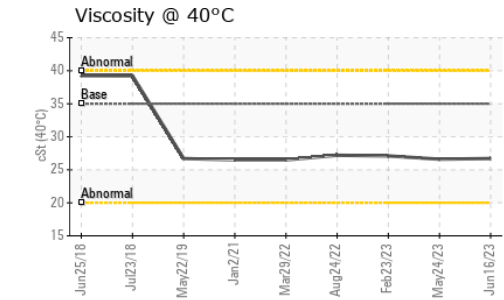
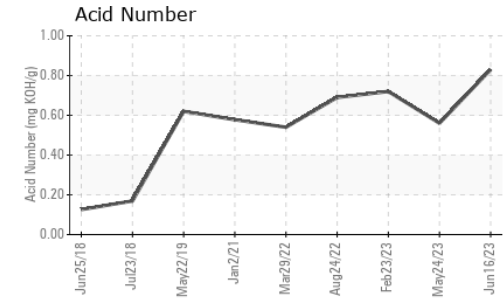
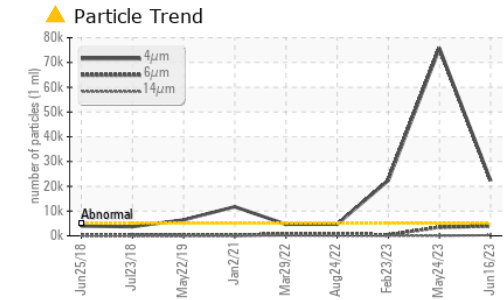
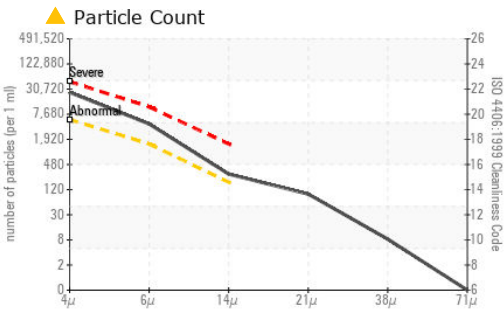
CONTAMINATION

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

FLUID CONDITION

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0823582	WC0784858	WC0761567
Sample Date		Client Info		16 Jun 2023	24 May 2023	23 Feb 2023
Machine Age	hrs	Client Info		25650	25632	25236
Oil Age	hrs	Client Info		1000	1000	0
Filter Age	hrs	Client Info		1000	1000	0
Oil Changed		Client Info		Not Changed	N/A	Not Changed
Filter Changed		Client Info		Not Changed	N/A	Not Changed
Sample Status				ABNORMAL	SEVERE	ABNORMAL
Iron	ppm	ASTM D5185m	>20	3	5	3
Chromium	ppm	ASTM D5185m	>10	0	<1	0
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	0	<1
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>75	4	4	5
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	3	4	4
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 22231	▲ 75751	▲ 22361
Particles >6µm		ASTM D7647	>1300	▲ 3915	▲ 3500	383
Particles >14µm		ASTM D7647	>160	● 249	25	8
Particles >21µm		ASTM D7647	>40	▲ 83	5	3
Particles >38µm		ASTM D7647	>10	7	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 22/19/15	▲ 23/19/12	▲ 22/16/10
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		3	2	3
Boron	ppm	ASTM D5185m		103	87	97
Barium	ppm	ASTM D5185m		0	0	3
Molybdenum	ppm	ASTM D5185m		<1	<1	<1
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		2	8	2
Calcium	ppm	ASTM D5185m		152	157	89
Phosphorus	ppm	ASTM D5185m		246	240	202
Zinc	ppm	ASTM D5185m		77	87	47
Sulfur	ppm	ASTM D5185m		1014	1053	926
Acid Number (AN)	mg KOH/g	ASTM D8045		0.83	0.56	0.72
Visc @ 40°C	cSt	ASTM D445	35.0	26.7	26.6	27.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0823582
Lab Number : 05881968
Unique Number : 10532451
Test Package : CONST

Received : 23 Jun 2023
Tested : 26 Jun 2023
Diagnosed : 27 Jun 2023 - Wes Davis

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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