MOB I

LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR HS895 188297
Component
Hydraulic System
Fluid
LIEBHERR HYDRAULIC HVI (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as LIEBHERR HYDRAULIC HVI, however, a fluid match indicates that this fluid is ISO 32 AW Hydraulic Oil. Please confirm the oil type and grade on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

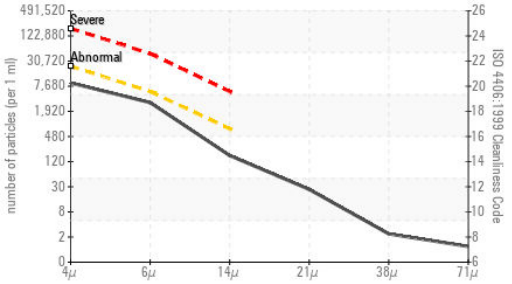
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

FLUID CONDITION

Viscosity of sample indicates oil is within ISO 32 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.

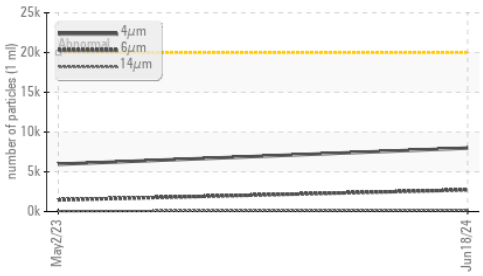
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**LH0295145**	LH0260276	---
Sample Date		Client Info		**18 Jun 2024**	02 May 2023	---
Machine Age	hrs	Client Info		**16385**	13473	---
Oil Age	hrs	Client Info		**0**	0	---
Filter Age	hrs	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	N/A	---
Filter Changed		Client Info		**N/A**	N/A	---
Sample Status				**NORMAL**	NORMAL	---
Iron	ppm	ASTM D5185(m)	>30	**4**	3	---
Chromium	ppm	ASTM D5185(m)	>10	**0**	0	---
Nickel	ppm	ASTM D5185(m)	>10	**<1**	0	---
Titanium	ppm	ASTM D5185(m)		**0**	0	---
Silver	ppm	ASTM D5185(m)		**<1**	0	---
Aluminum	ppm	ASTM D5185(m)	>4	**<1**	0	---
Lead	ppm	ASTM D5185(m)	>22	**<1**	<1	---
Copper	ppm	ASTM D5185(m)	>35	**11**	11	---
Tin	ppm	ASTM D5185(m)	>4	**0**	<1	---
Vanadium	ppm	ASTM D5185(m)		**0**	0	---
White Metal	scalar	Visual*	NONE	**NONE**	NONE	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	---
Silicon	ppm	ASTM D5185(m)	>15	**1**	2	---
Potassium	ppm	ASTM D5185(m)	>20	**2**	<1	---
Water		WC Method	>0.1	**NEG**	NEG	---
Particles >4µm		ASTM D7647	>20000	**7986**	5960	---
Particles >6µm		ASTM D7647	>5000	**2723**	1466	---
Particles >14µm		ASTM D7647	>640	**148**	51	---
Particles >21µm		ASTM D7647	>160	**23**	14	---
Particles >38µm		ASTM D7647	>40	**2**	1	---
Particles >71µm		ASTM D7647	>10	**1**	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**20/19/14**	20/18/13	---
Silt	scalar	Visual*	NONE	**NONE**	NONE	---
Debris	scalar	Visual*	NONE	**NONE**	NONE	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	---
Appearance	scalar	Visual*	NORML	**NORML**	NORML	---
Odor	scalar	Visual*	NORML	**NORML**	NORML	---
Emulsified Water	scalar	Visual*	>0.1	**NEG**	NEG	---
Sodium	ppm	ASTM D5185(m)		**1**	1	---
Boron	ppm	ASTM D5185(m)	0	**6**	6	---
Barium	ppm	ASTM D5185(m)	0	**<1**	0	---
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	---
Manganese	ppm	ASTM D5185(m)	<1	**0**	0	---
Magnesium	ppm	ASTM D5185(m)	7	**6**	5	---
Calcium	ppm	ASTM D5185(m)	1317	**281**	300	---
Phosphorus	ppm	ASTM D5185(m)	611	**351**	393	---
Zinc	ppm	ASTM D5185(m)	696	**437**	430	---
Sulfur	ppm	ASTM D5185(m)	2574	**2237**	2376	---
Visc @ 40°C	cSt	ASTM D7279(m)	46	**34.5**	34.9	---

Particle Count

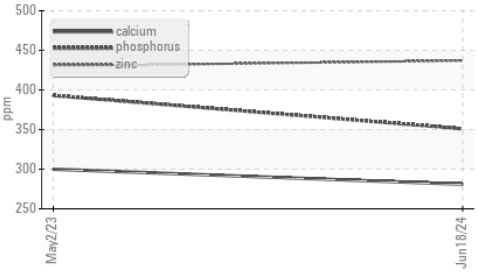


Viscosity @ 40°C

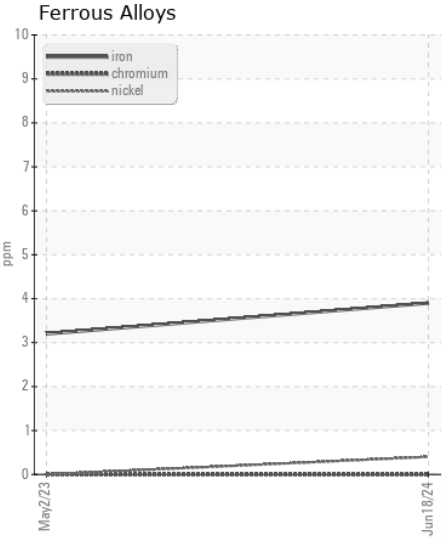
Particle Trend



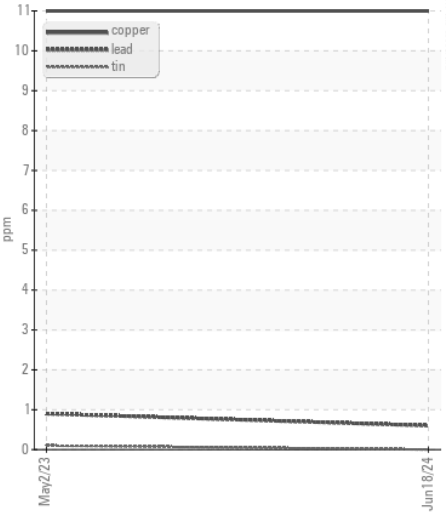
Additives



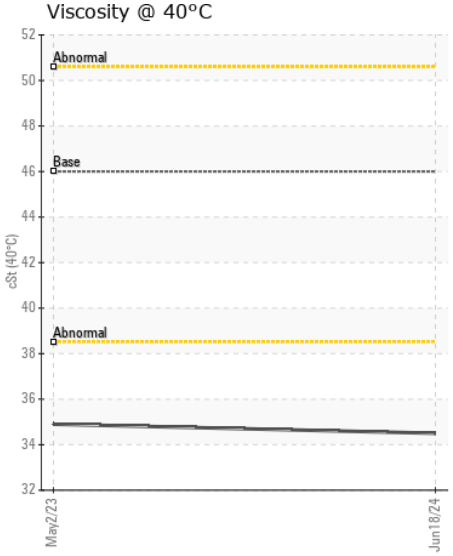
Ferrous Alloys



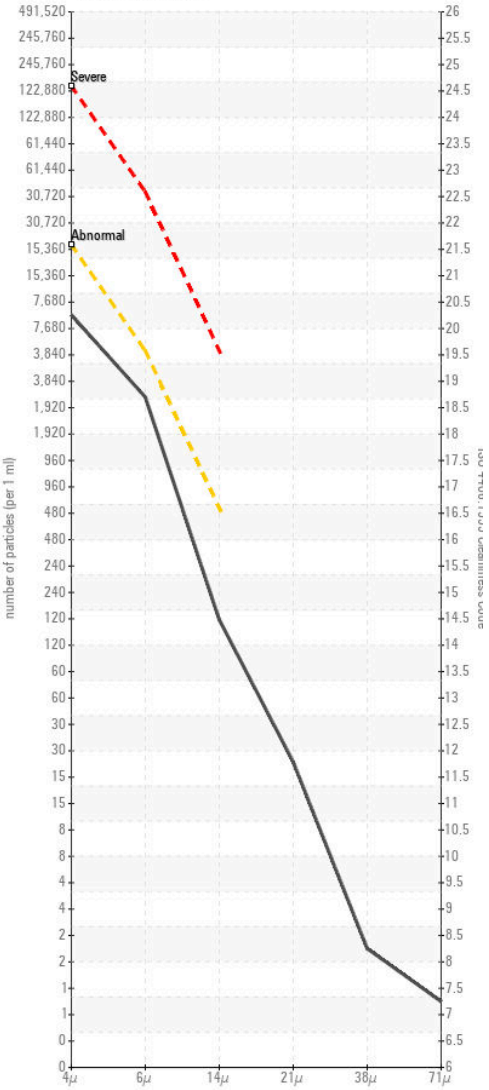
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0295145 **Received** : 26 Jun 2024
Lab Number : 02644184 **Tested** : 27 Jun 2024
Unique Number : 5801723 **Diagnosed** : 27 Jun 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount)

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.

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