MOBIL

LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area
(344443)
Machine Id
LIEBHERR LH24 118108-1251
Component
Hydraulic System
Fluid
MOBIL UNIVIS N-C 46 (--- 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 MOBIL UNIVIS N-C 46, 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

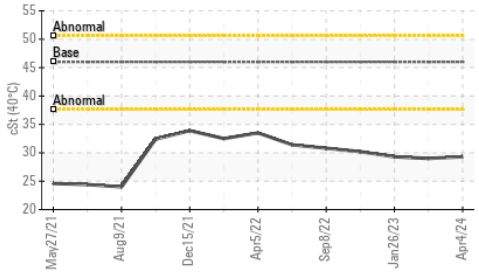
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

FLUID CONDITION

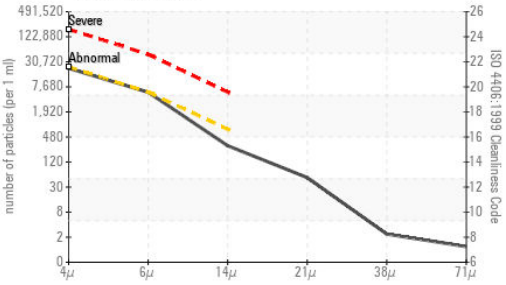
Viscosity of sample indicates oil is within ISO 32 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**LH0250457**	LH0194120	LH0194114
Sample Date		Client Info		**04 Apr 2024**	04 Apr 2023	26 Jan 2023
Machine Age	hrs	Client Info		**7662**	5211	4500
Oil Age	hrs	Client Info		**0**	0	0
Filter Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Not Changd	Not Changd
Filter Changed		Client Info		**N/A**	Changed	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185(m)	>50	**13**	10	9
Chromium	ppm	ASTM D5185(m)	>5	**2**	1	<1
Nickel	ppm	ASTM D5185(m)	>2	**0**	<1	0
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>2	**<1**	<1	<1
Lead	ppm	ASTM D5185(m)	>4	**0**	<1	<1
Copper	ppm	ASTM D5185(m)	>10	**4**	3	3
Tin	ppm	ASTM D5185(m)	>2	**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>17	**2**	3	2
Potassium	ppm	ASTM D5185(m)	>20	**0**	0	<1
Water		WC Method	>0.1	**NEG**	NEG	NEG
Particles >4µm		ASTM D7647	>20000	**18675**	2617	490
Particles >6µm		ASTM D7647	>5000	**4972**	481	135
Particles >14µm		ASTM D7647	>640	**260**	18	13
Particles >21µm		ASTM D7647	>160	**45**	5	5
Particles >38µm		ASTM D7647	>40	**2**	0	1
Particles >71µm		ASTM D7647	>10	**1**	0	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**21/19/15**	19/16/11	16/14/11
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**VLITE**	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 D5185(m)		**2**	<1	<1
Boron	ppm	ASTM D5185(m)		**<1**	<1	0
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)		**<1**	<1	<1
Calcium	ppm	ASTM D5185(m)		**64**	67	71
Phosphorus	ppm	ASTM D5185(m)		**361**	391	385
Zinc	ppm	ASTM D5185(m)		**442**	439	432
Sulfur	ppm	ASTM D5185(m)		**1778**	1693	1521
Visc @ 40°C	cSt	ASTM D7279(m)	46	▲ **29.3**	▲ 29.0	▲ 29.3

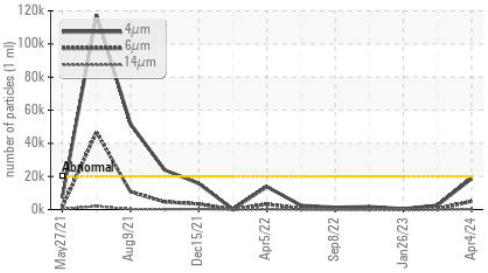
Viscosity @ 40°C



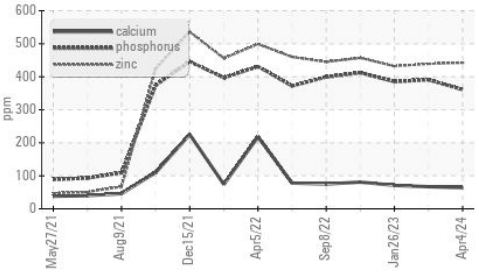
Particle Count



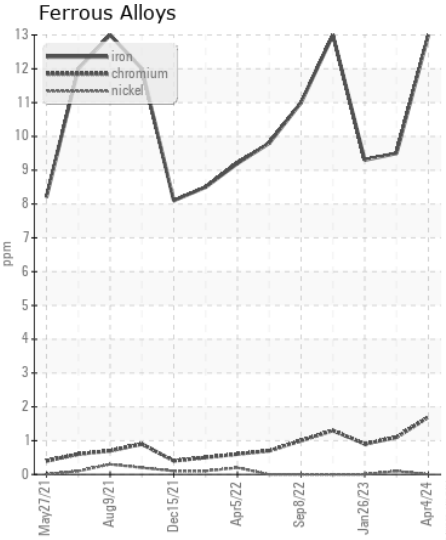
Particle Trend



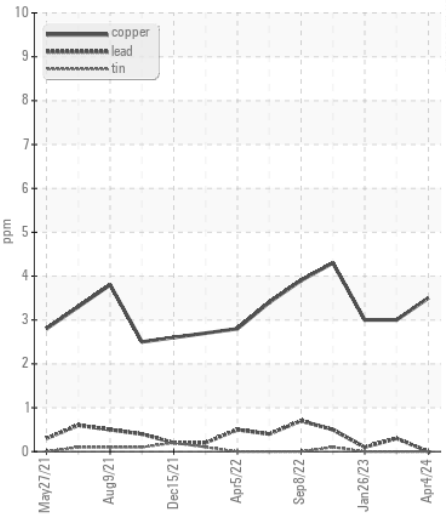
Additives



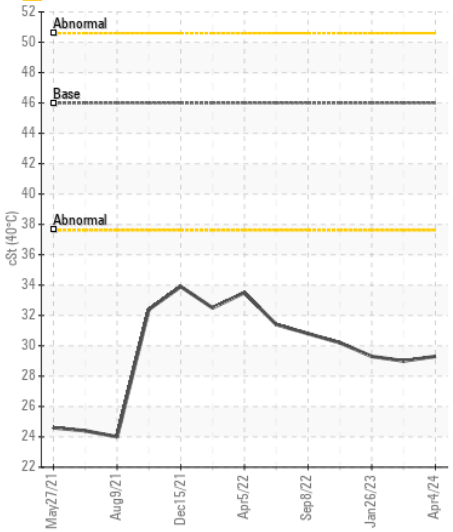
Ferrous Alloys



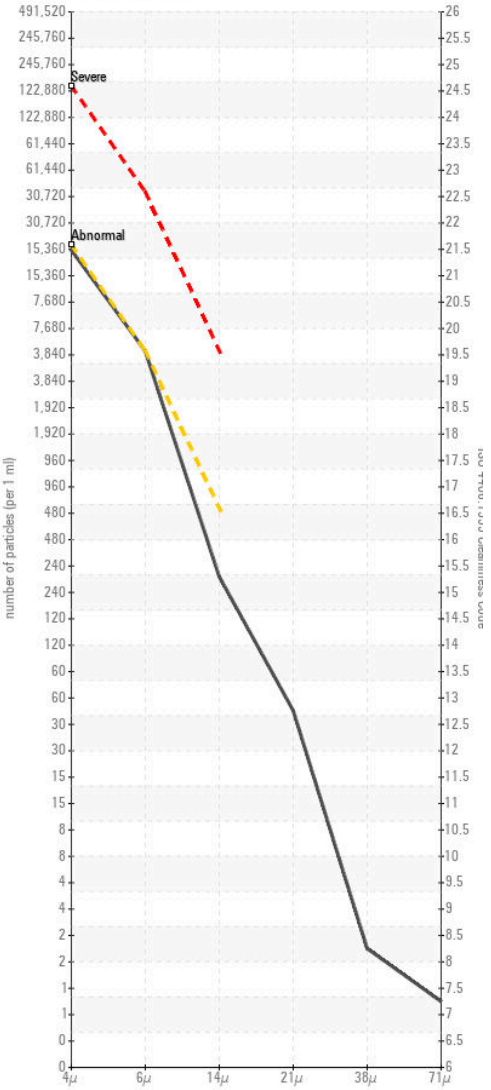
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0250457
Lab Number : 02630984
Unique Number : 5772137
Test Package : MOB 1 (Additional Tests: PrtCount)

Received : 23 Apr 2024
Tested : 23 Apr 2024
Diagnosed : 24 Apr 2024 - Kevin Marson

ABC RECYCLING
8081 MEADOW AVE.
BURNABY, BC
CA V3N 2V9
Contact: John Anderson
john.anderson@abcrecycling.com
T: (778)988-9944
F:

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.