

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH40M 126196-1215 - Hydraulic System

Sample No: LH0229814

Oil Type: LIEBHERR HYDRAULIC HVI



#### ORION EQUIPMENT

3909 NW FRUIT VALLEY RD  
VANCOUVER, WA  
US 98660  
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#### SAMPLE INFORMATION

Sample Number	LH0229814	LH0208130	LH0199744	---
Sample Date	22 Jul 2022	10 Mar 2022	18 Nov 2021	---
Machine Hours	1500	1000	500	---
Oil Hours	1500	1000	500	---
Oil Changed	Not Changd	N/A	Changed	---
Sample Status	ABNORMAL	ATTENTION	ABNORMAL	---



#### OIL CONDITION

Visc @ 40°C	cSt	42.7	44.4	45.2	---
Acid Number (AN)	mg KOH/g	0.69	1.21	1.222	---



#### CONTAMINATION

Water	%	NEG	NEG	NEG	---
Particles >4µm		2751	21954	---	---
Particles >6µm		526	4746	---	---
Particles >14µm		34	262	---	---
ISO 4406:1999 (c)		19/16/12	22/19/15	---	---
Silicon	ppm	1	2	<1	---
Sodium	ppm	<1	0	0	---
Potassium	ppm	0	2	<1	---



#### WEAR METALS

Iron	ppm	64	18	21	---
Copper	ppm	4	2	2	---
Lead	ppm	<1	<1	<1	---
Tin	ppm	<1	0	<1	---
Aluminum	ppm	0	1	0	---
Chromium	ppm	<1	<1	<1	---
Molybdenum	ppm	<1	0	<1	---
Nickel	ppm	0	0	0	---
Titanium	ppm	0	0	<1	---
Silver	ppm	<1	1	<1	---
Manganese	ppm	1	<1	<1	---
Vanadium	ppm	0	0	0	---



#### ADDITIVES

Calcium	ppm	657	1439	1429	---
Magnesium	ppm	9	4	4	---
Zinc	ppm	442	722	687	---
Phosphorus	ppm	416	615	629	---
Barium	ppm	0	0	0	---
Boron	ppm	8	<1	<1	---

No corrective action is recommended at this time. Resample at the next service interval to monitor. The iron level is abnormal. All other component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid.

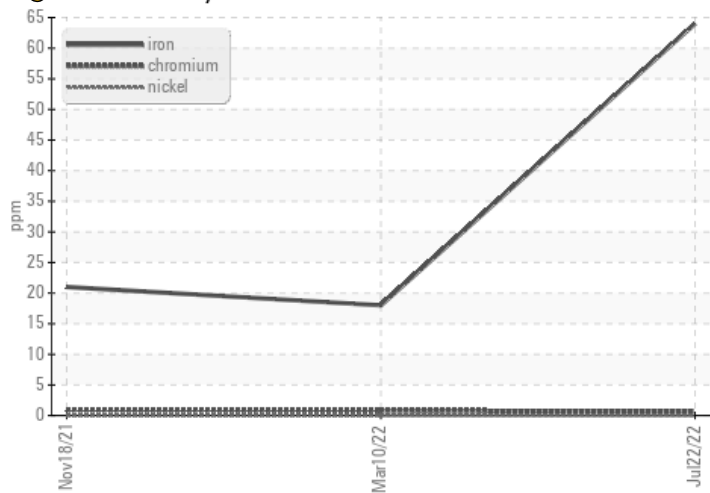
#### Diagnosis

Depot: ORIVAN  
Unique No: 10099571  
Signed: Jonathan Hester  
Report Date: 23 Aug 2022

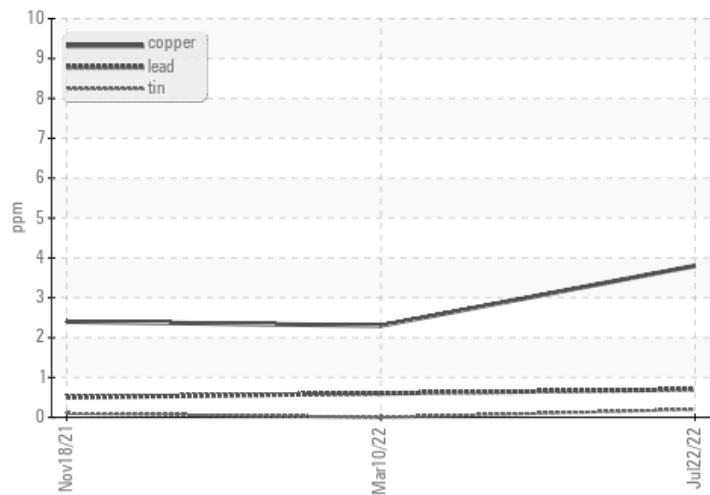


### GRAPHS

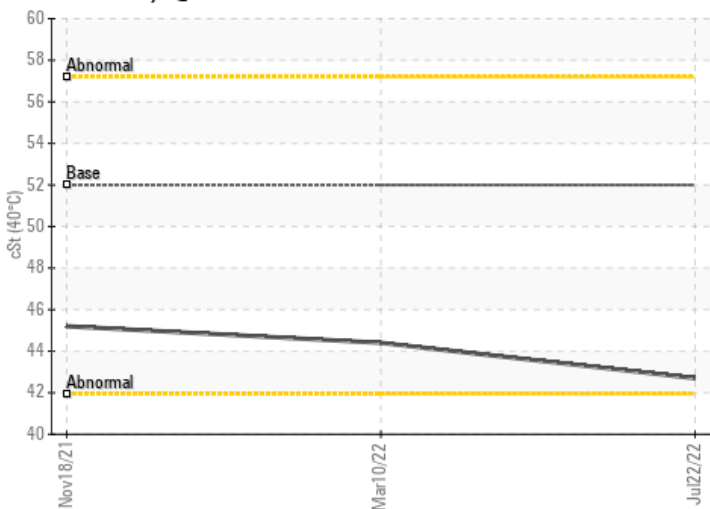
#### ● Ferrous Alloys



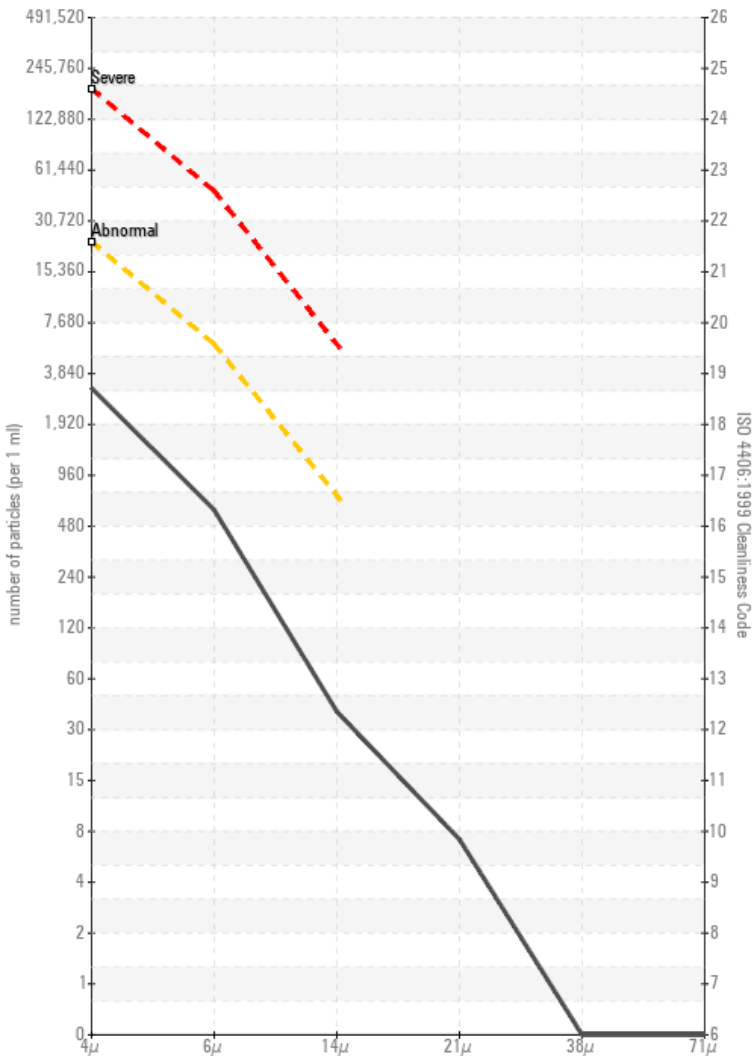
#### Non-ferrous Metals



#### Viscosity @ 40°C



#### Particle Count



#### Acid Number

