

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### TRONAIR 06-5041-3610 6331160801 - Hydraulic System

Sample No: LH0221450

Oil Type: SKYDROL LD-4



#### SAMPLE INFORMATION

Sample Number	LH0221450	LH0221449	LH0221448	LH0221447
Sample Date	05 Feb 2024	27 Jun 2023	27 Feb 2023	01 Nov 2022
Machine Hours	0	0	0	0
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Not Changd	Not Changd	Not Changd
Sample Status	ABNORMAL	ABNORMAL	NORMAL	ABNORMAL

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#### OIL CONDITION

Visc @ 40°C	cSt	9.2	10.0	10.3	10.5
Acid Number (AN)	mg KOH/g	0.02	0.01	0.04	0.05



#### CONTAMINATION

Water	%	0.519	0.350	0.248	0.461
Particles 5-15µm	count	28318	10273	4560	10300
Particles 15-25µm	count	1124	580	340	436
Particles 25-50µm	count	496	393	220	98
Particles 50-100µm	count	135	67	20	12
Particles >100µm	count	61	0	0	126
NAS 1638	Class	8	6	5	9
Silicon	ppm	<1	<1	<1	1
Sodium	ppm	4	2	3	3
Potassium	ppm	16	17	17	18



#### WEAR METALS

Iron	ppm	0	0	<1	<1
Copper	ppm	0	<1	0	0
Lead	ppm	0	0	0	<1
Tin	ppm	0	0	<1	0
Aluminum	ppm	<1	0	0	0
Chromium	ppm	0	0	0	0
Molybdenum	ppm	0	0	0	0
Nickel	ppm	<1	0	<1	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	0	0	0
Vanadium	ppm	0	0	0	0



#### ADDITIVES

Calcium	ppm	2	<1	0	<1
Magnesium	ppm	<1	0	0	<1
Zinc	ppm	<1	1	<1	<1
Phosphorus	ppm	36766	31584	31132	27830
Barium	ppm	0	0	0	0
Boron	ppm	4	<1	3	6

#### Diagnosis

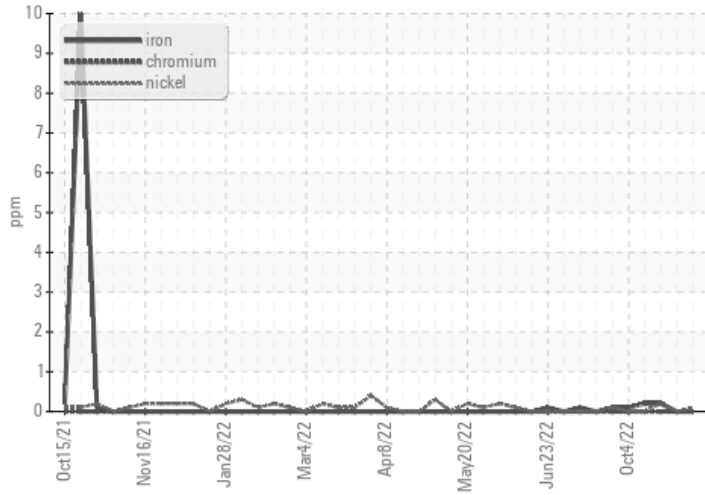
We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. The water content is negligible. The system cleanliness is above the acceptable limit for the target SAE AS4059 (replaces NAS 1638) cleanliness code. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Depot: LIESTLDAF  
Unique No: 5723278  
Signed: Kevin Marson  
Report Date: 09 Feb 2024

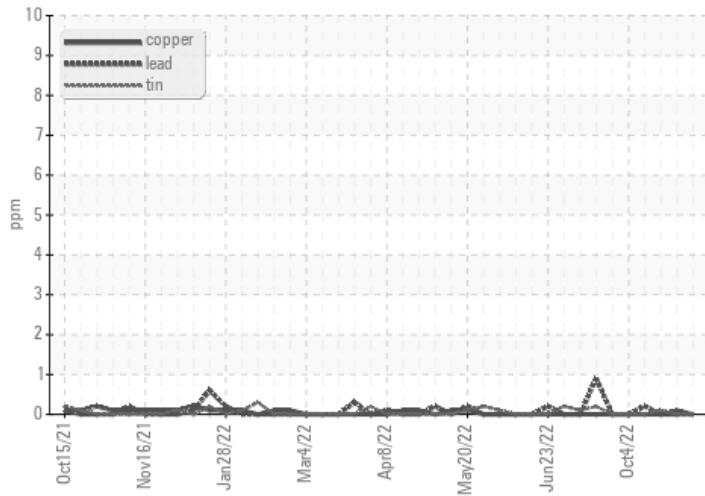


### GRAPHS

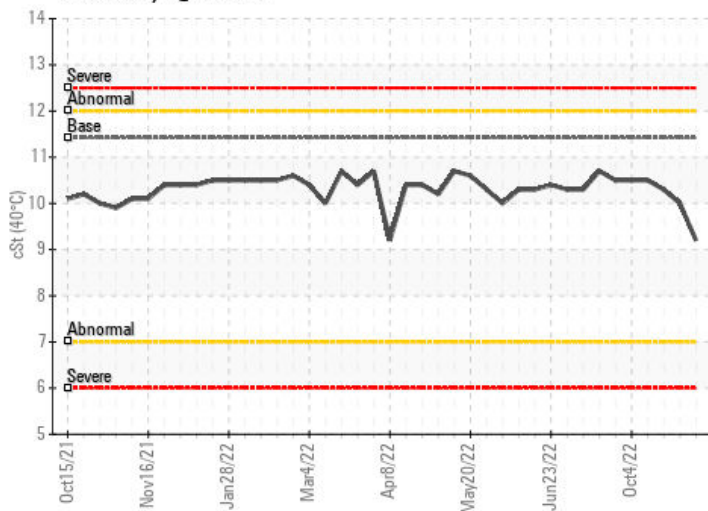
Ferrous Alloys



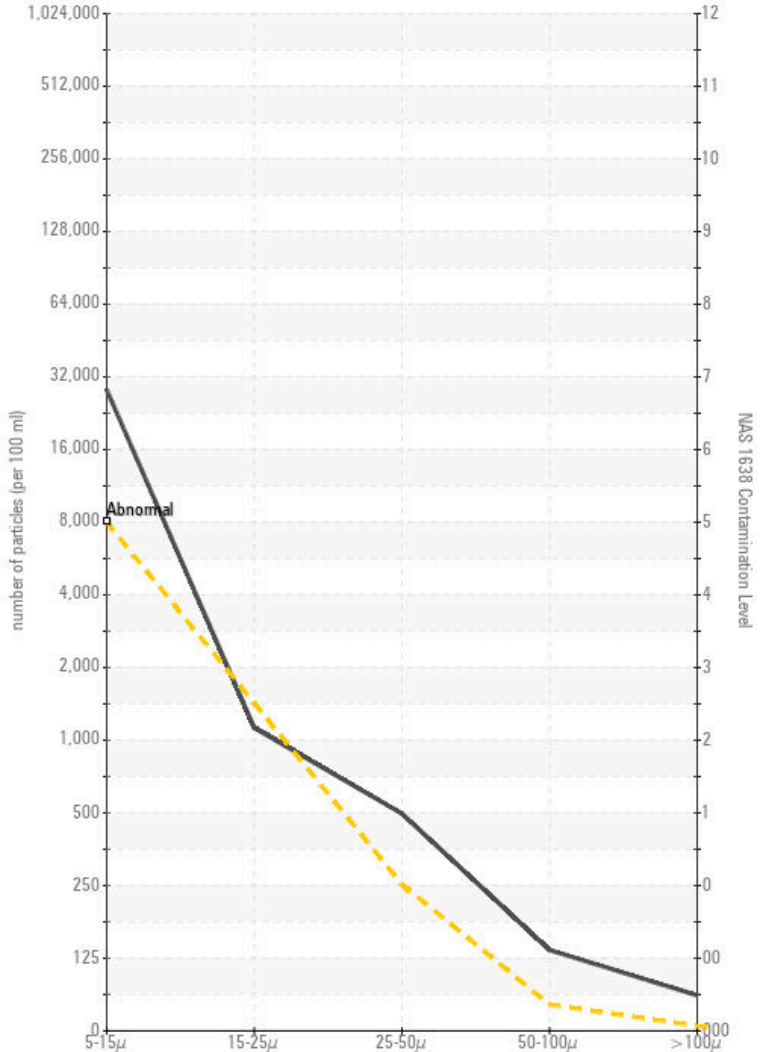
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

