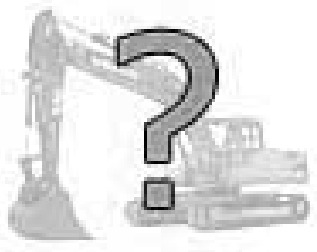
LIEBHERR
CONSTRUCTION EQUIPMENT

[CONDRAIN] 18134 - Coolant

Sample No: LH0277796

Oil Type: CONVENTIONAL COOLANT



LIEBHERR CANADA LTD.
1015 SUTTON DRIVE
BURLINGTON, ON
CA L7L 5Z8
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joseph.rodgers@liebherr.com
T: (905)319-9222
F: (905)319-6622

SAMPLE INFORMATION

Sample Number		LH0277796	---	---	---
Sample Date		17 Nov 2023	---	---	---
Machine Hours		6550	---	---	---
Sample Status		SEVERE	---	---	---

COOLANT CONDITION

Boron	ppm	6	---	---	---
Phosphorus	ppm	4	---	---	---
Sodium	ppm	9696	---	---	---
Potassium	ppm	746	---	---	---
Silicon	ppm	13	---	---	---
pH	Scale 0-14	6.79	---	---	---
Reserve Alkalinity	Scale 0-20	2.8	---	---	---
Molybdenum	ppm	134	---	---	---
Nitrites	ppm	480	---	---	---
Percentage Glycol	%	59.0	---	---	---
Freezing Point	°C	-56	---	---	---

CONTAMINATION

Magnesium	ppm	4	---	---	---
Calcium	ppm	10	---	---	---
Coolant Appearance		Opaque	---	---	---
Coolant Color		Other	---	---	---
Sand/Dirt	scalar	NONE	---	---	---
Debris	scalar	LIGHT	---	---	---
Precipitate	scalar	NONE	---	---	---
Silt	scalar	LIGHT	---	---	---

CORROSION

Iron	ppm	328	---	---	---
Aluminum	ppm	48	---	---	---
Copper	ppm	<1	---	---	---
Lead	ppm	0	---	---	---
Tin	ppm	0	---	---	---

Diagnosis

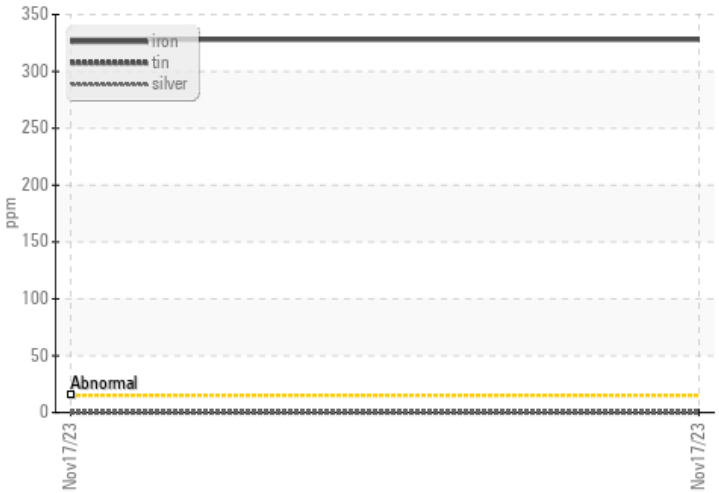
The coolant change at the time of sampling has been noted. We recommend an early resample to monitor this condition.Iron ppm levels are severe. Aluminum ppm levels are abnormal. The iron level is high indicating rust in the system which clogs the cooling system. The high metal levels indicate corrosion in the system. The reserve alkalinity of this fluid is lower than acceptable. The coolant is cloudy indicating either an overconcentration of coolant additives, or a mixing of incompatible coolant technologies. The low nitrite level indicates reduced cavitation protection which leads to corrosion and ammonia formation. The pH is low which causes rust formation.

Depot: LIEMIS
Unique No: 5683124
Signed: Kevin Marson
Report Date: 22 Nov 2023

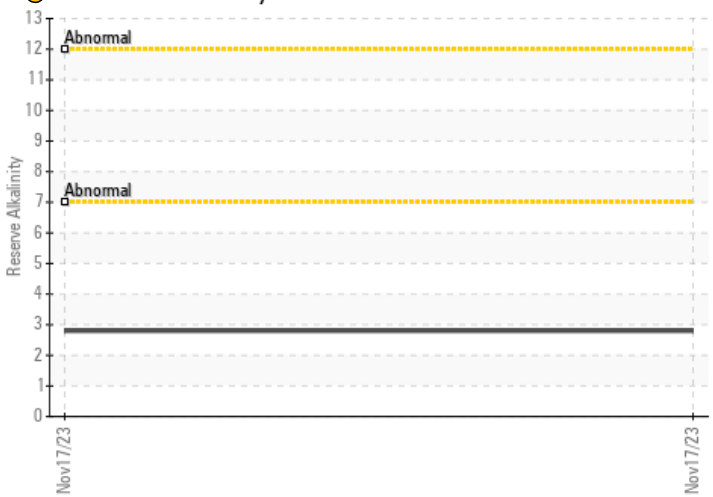
LIEBHERR
CONSTRUCTION EQUIPMENT

GRAPHS

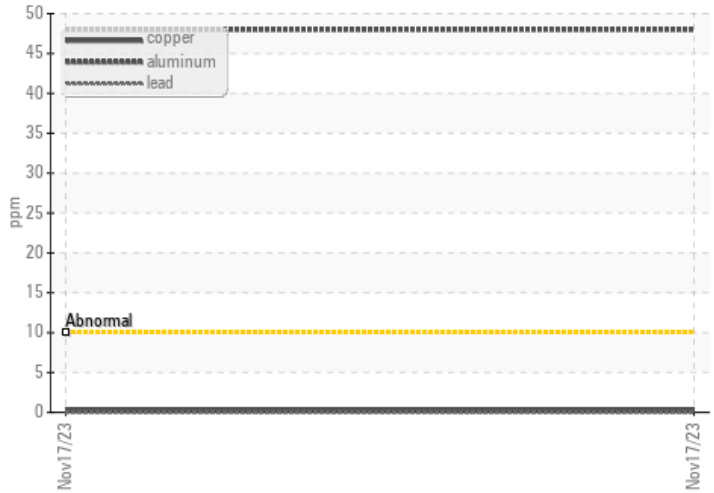
Iron/Tin/Silver



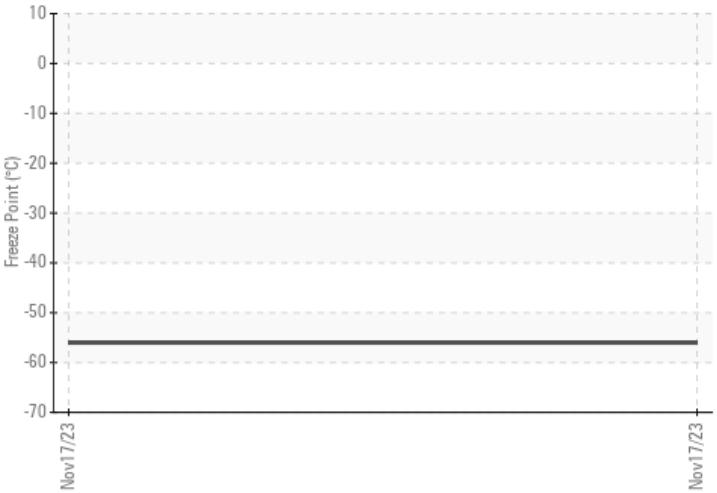
Reserve Alkalinity



Copper/Aluminum/Lead



Freeze Point



pH

Nitrites