



OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINANTS	NORMAL
OIL CONDITION	ABNORMAL



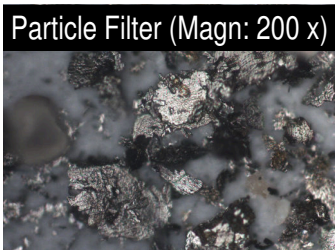
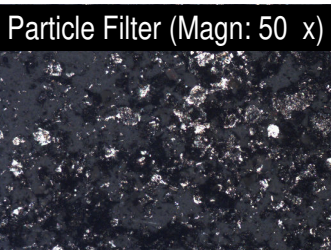
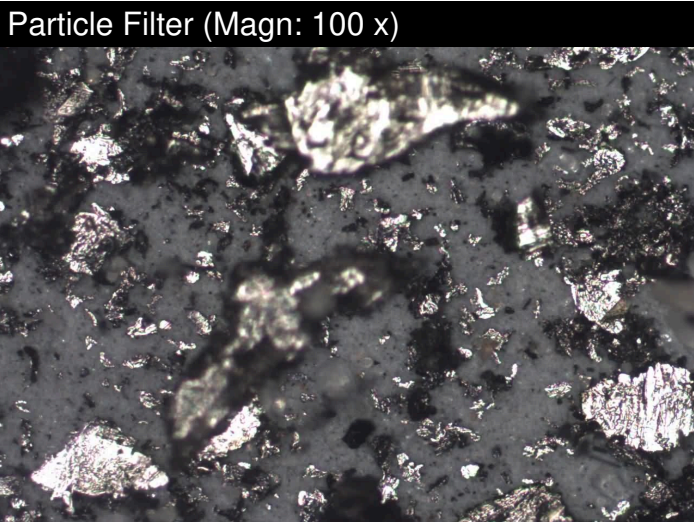
Area
(368664)
Machine Id
LIEBHERR L550 062917-1756
Component
Splitter Box
Fluid
NOT GIVEN (--- GAL)

RECOMMENDATION

We advise that you check for visible metal particles in the oil. The oil change at the time of sampling has been noted. An inspection for the source(s) of wear may be warranted at this time. We recommend an early resample to monitor this condition. Re-sampling is suggested to confirm test results prior to significant maintenance activities being performed. Please indicate that this is a resample on your Sample Information Form (SIF). The fluid was not specified, however, a fluid match indicates that this fluid is SAE 50 Gear Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample.

WEAR

Nickel ppm levels are severe. Wear particle analysis indicates that the ferrous sliding particles are severe. Wear particle analysis indicates that the ferrous black oxides and ferrous cutting and ferrous rolling particles are abnormal. Iron ppm levels are abnormal. Wear particle analysis indicates that the ferrous rubbing particles are abnormal. High concentration of visible metal present. Gear wear is indicated.



Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number				WC0242587	---	---
Sample Date				08 Nov 2022	---	---
Machine Age	hrs			2133	---	---
Oil Age	hrs			0	---	---
Filter Age	hrs			0	---	---
Oil Changed				Changed	---	---
Filter Changed				N/A	---	---
Sample Status				SEVERE	---	---
PQ		ASTM D8184	>80	9	---	---
Iron	ppm	ASTM D5185(m)	>100	▲ 107	---	---
Chromium	ppm	ASTM D5185(m)	>5	<1	---	---
Nickel	ppm	ASTM D5185(m)	>5	● 16	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)		0	---	---
Aluminum	ppm	ASTM D5185(m)	>20	2	---	---
Lead	ppm	ASTM D5185(m)	>30	1	---	---
Copper	ppm	ASTM D5185(m)	>20	<1	---	---
Tin	ppm	ASTM D5185(m)	>10	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual	NONE	● HEAVY	---	---
Yellow Metal	scalar	Visual	NONE	NONE	---	---
Ferrous Rubbing	Scale 0-10	ASTM D7684		▲ 4		
Ferrous Sliding	Scale 0-10	ASTM D7684		● 6		
Ferrous Cutting	Scale 0-10	ASTM D7684		▲ 2		
Ferrous Rolling	Scale 0-10	ASTM D7684		▲ 3		
Ferrous Break-in	Scale 0-10	ASTM D7684				
Ferrous Spheres	Scale 0-10	ASTM D7684				
Ferrous Black Oxides	Scale 0-10	ASTM D7684		▲ 3		
Ferrous Red Oxides	Scale 0-10	ASTM D7684				
Ferrous Corrosive	Scale 0-10	ASTM D7684				
Ferrous Other	Scale 0-10	ASTM D7684				
Nonferrous Rubbing	Scale 0-10	ASTM D7684				
Nonferrous Sliding	Scale 0-10	ASTM D7684				
Nonferrous Cutting	Scale 0-10	ASTM D7684				
Nonferrous Rolling	Scale 0-10	ASTM D7684				
Nonferrous Other	Scale 0-10	ASTM D7684				

CONTAMINANTS

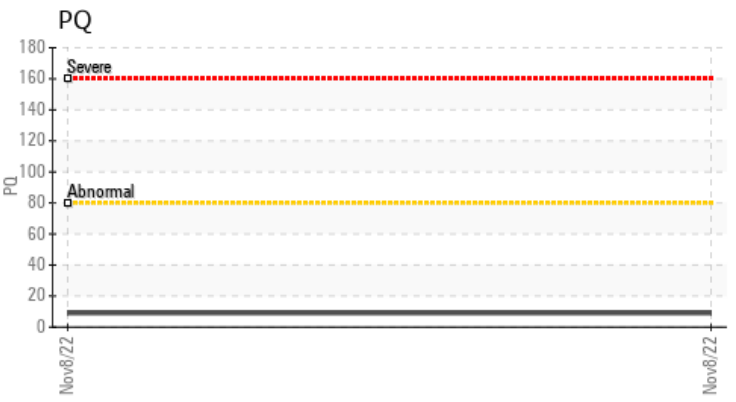
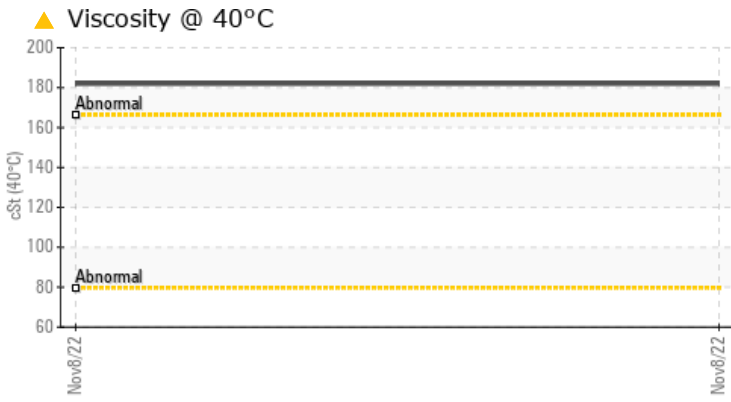
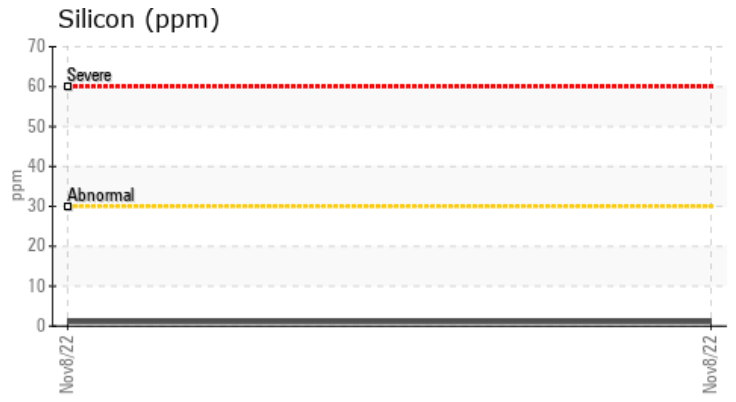
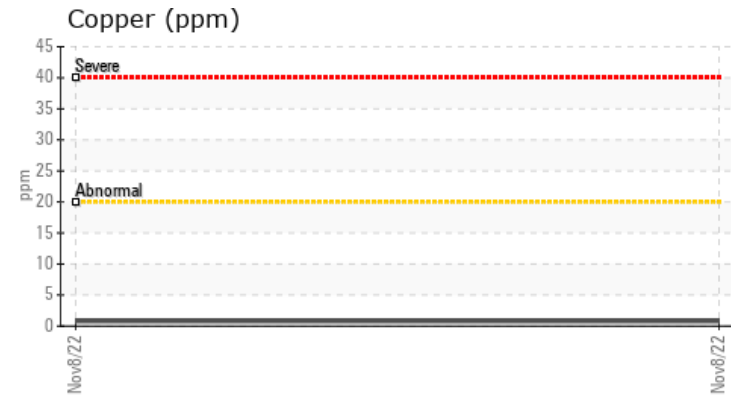
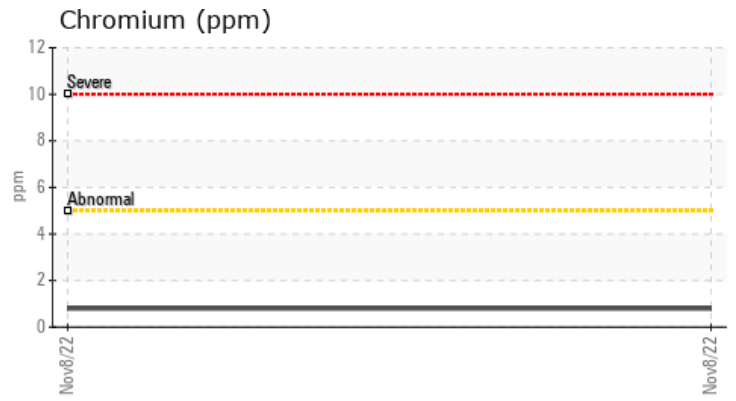
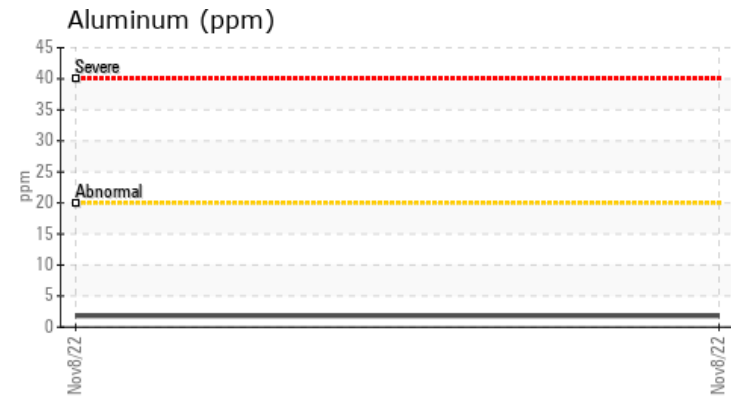
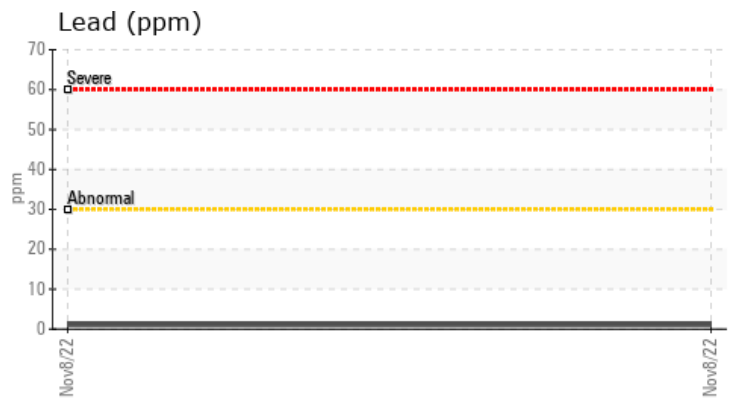
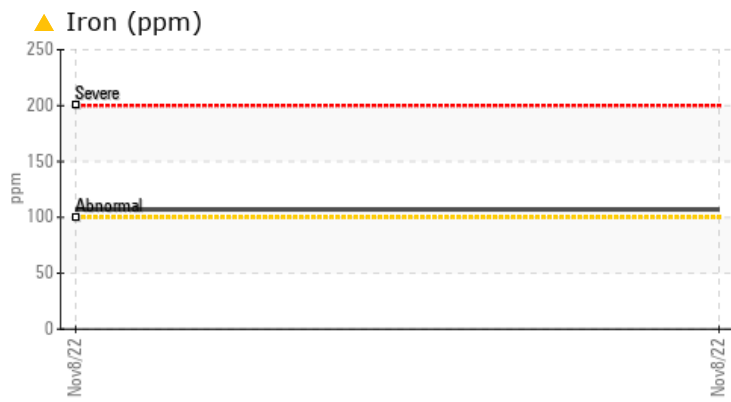
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>30	1	---	---
Potassium	ppm	ASTM D5185(m)	>20	4	---	---
Silt	scalar	Visual	NONE	NONE	---	---
Debris	scalar	Visual	NONE	NONE	---	---
Sand/Dirt	scalar	Visual	NONE	NONE	---	---
Appearance	scalar	Visual	NORML	NORML	---	---
Odor	scalar	Visual	NORML	NORML	---	---
Emulsified Water	scalar	Visual	>0.1	NEG	---	---
Carbonaceous Material	Scale 0-10	ASTM D7684				
Sand/Dirt	Scale 0-10	ASTM D7684		2		
Fibres	Scale 0-10	ASTM D7684				
Spheres	Scale 0-10	ASTM D7684				
Other	Scale 0-10	ASTM D7684				

OIL CONDITION

Viscosity of sample indicates oil is within SAE 50 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)	>25	10	---	---
Boron	ppm	ASTM D5185(m)		4	---	---
Barium	ppm	ASTM D5185(m)		5	---	---
Molybdenum	ppm	ASTM D5185(m)		3	---	---
Manganese	ppm	ASTM D5185(m)		7	---	---
Magnesium	ppm	ASTM D5185(m)		13	---	---
Calcium	ppm	ASTM D5185(m)		59	---	---
Phosphorus	ppm	ASTM D5185(m)		2239	---	---
Zinc	ppm	ASTM D5185(m)		146	---	---
Sulfur	ppm	ASTM D5185(m)		23606	---	---
Visc @ 40°C	cSt	ASTM D7279(m)		▲ 182	---	---
Lubricant Degradation	Scale 0-10	ASTM D7684				



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC1234567 **Received** : 11 Nov 2022
Lab Number : 01234567 **Diagnosed** : 29 Nov 2022
Unique Number : 12345678 **Diagnostician** : Bill Quesnel
Test Package : MOB 1 (Additional Tests: A-Ferr, Bottom, BottomAnalysis, FilterPatch, PQ)
 To discuss this sample report, contact Customer Service at 1-800-268-2131.
 (m) Denotes a modified test method, (e) Denotes a test conducted using an external laboratory.

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