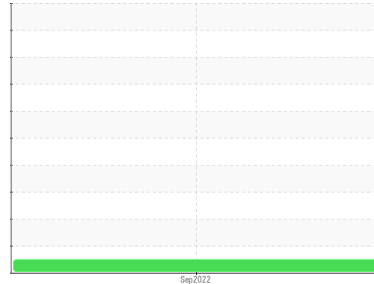




Area
[MBI]
 Machine Id
LIEBHERR L566 060217-1484
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 5W30 (--- GAL)



DIAGNOSIS

Recommendation
 Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 There is no indication of any contamination in the oil.

Fluid Condition
 The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		LH0172108	---	---
Sample Date	Client Info		07 Sep 2022	---	---
Machine Age	hrs Client Info		648	---	---
Oil Age	hrs Client Info		648	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			NORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m	>100	9	---	---
Chromium	ppm ASTM D5185m	>5	<1	---	---
Nickel	ppm ASTM D5185m	>5	0	---	---
Titanium	ppm ASTM D5185m		<1	---	---
Silver	ppm ASTM D5185m		<1	---	---
Aluminum	ppm ASTM D5185m	>15	1	---	---
Lead	ppm ASTM D5185m	>30	1	---	---
Copper	ppm ASTM D5185m	>125	135	---	---
Tin	ppm ASTM D5185m	>5	1	---	---
Vanadium	ppm ASTM D5185m		0	---	---
Cadmium	ppm ASTM D5185m		0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	250	69	---	---
Barium	ppm ASTM D5185m	10	7	---	---
Molybdenum	ppm ASTM D5185m	100	45	---	---
Manganese	ppm ASTM D5185m		4	---	---
Magnesium	ppm ASTM D5185m	450	814	---	---
Calcium	ppm ASTM D5185m	3000	1331	---	---
Phosphorus	ppm ASTM D5185m	1150	653	---	---
Zinc	ppm ASTM D5185m	1350	834	---	---
Sulfur	ppm ASTM D5185m	4250	2424	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m	>60	14	---	---
Sodium	ppm ASTM D5185m		0	---	---
Potassium	ppm ASTM D5185m	>20	4	---	---

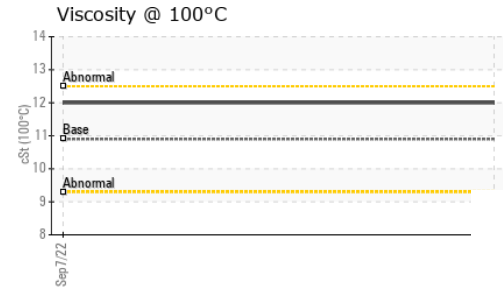
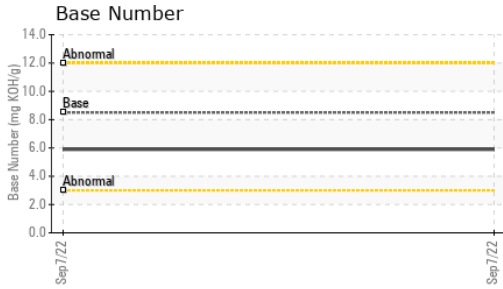
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	>3	0.1	---	---
Nitration	Abs/cm *ASTM D7624	>20	10.5	---	---
Sulfation	Abs.1mm *ASTM D7415	>30	39.5	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs.1mm *ASTM D7414	>25	48.2	---	---
Base Number (BN)	mg KOH/g ASTM D2896	8.5	5.9	---	---

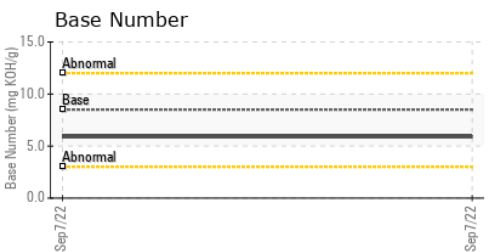
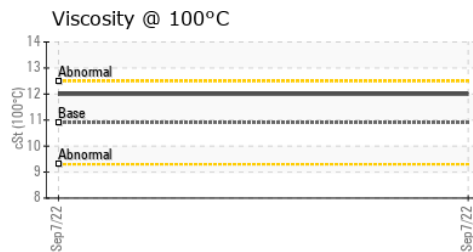
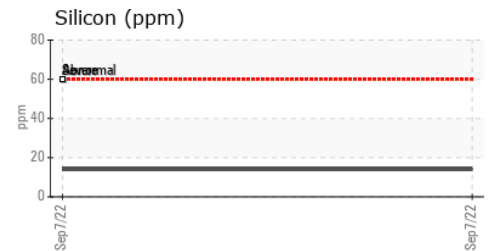
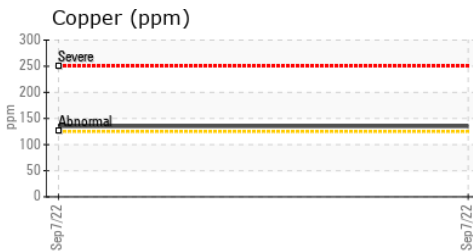
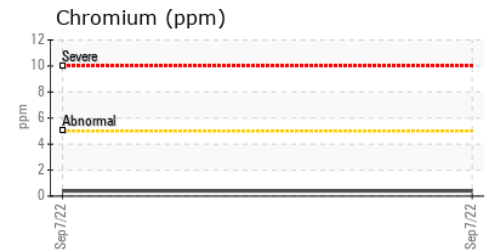
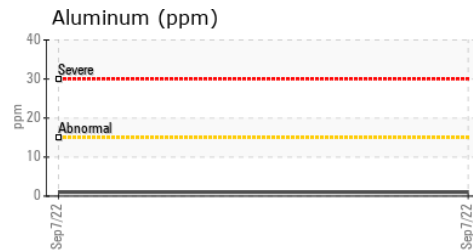
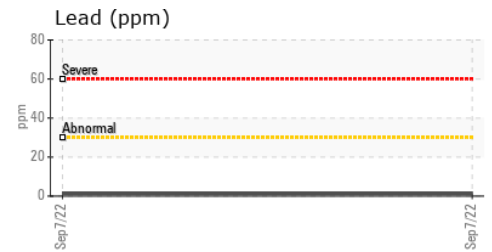
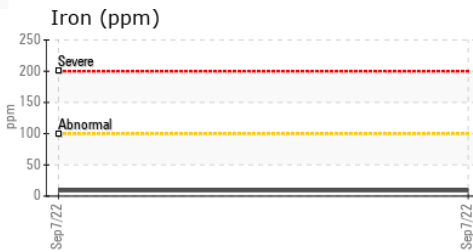
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
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	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	10.9	12.0	---	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0172108 **Received** : 05 Oct 2022
Lab Number : 05658914 **Diagnosed** : 07 Oct 2022
Unique Number : 10163483 **Diagnostician** : Jonathan Hester
Test Package : MOBCE (Additional Tests: TBN)

CENTRAL POWER
 11745 LACKLAND RD
 SAINT LOUIS, MO
 US 63146
 Contact: CHARLES BAUERS
 charles.bauers@cpower.com
 T: (314)427-4911
 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)