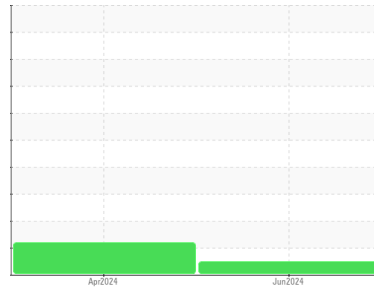


OIL ANALYSIS REPORT



Machine Id
LIEBHERR LH50M 147036
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON UHP 10W40 (--- GAL)

Sample Rating Trend



NORMAL

✓

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	PCA0100575	PCA0117928	---
Sample Date	Client Info	07 Jun 2024	19 Apr 2024	---
Machine Age	hrs Client Info	1274	1080	---
Oil Age	hrs Client Info	194	1080	---
Oil Changed	Client Info	Changed	Changed	---
Sample Status		NORMAL	ABNORMAL	---

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	1.0	---
Water	WC Method >0.2	NEG	NEG	---
Glycol	WC Method	NEG	NEG	---

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	4	17	---
Chromium	ppm ASTM D5185m >5	<1	1	---
Nickel	ppm ASTM D5185m >5	<1	<1	---
Titanium	ppm ASTM D5185m	<1	<1	---
Silver	ppm ASTM D5185m >3	0	0	---
Aluminum	ppm ASTM D5185m >15	4	3	---
Lead	ppm ASTM D5185m >30	<1	4	---
Copper	ppm ASTM D5185m >125	18	▲ 152	---
Tin	ppm ASTM D5185m >5	<1	2	---
Vanadium	ppm ASTM D5185m	<1	<1	---
Cadmium	ppm ASTM D5185m	0	<1	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 2	21	61	---
Barium	ppm ASTM D5185m 0	3	17	---
Molybdenum	ppm ASTM D5185m 60	55	44	---
Manganese	ppm ASTM D5185m 0	<1	2	---
Magnesium	ppm ASTM D5185m 1010	955	861	---
Calcium	ppm ASTM D5185m 1070	1140	1195	---
Phosphorus	ppm ASTM D5185m 1150	1063	744	---
Zinc	ppm ASTM D5185m 1270	1296	945	---
Sulfur	ppm ASTM D5185m 2060	3508	2433	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >60	7	9	---
Sodium	ppm ASTM D5185m	6	0	---
Potassium	ppm ASTM D5185m >20	2	5	---

INFRA-RED

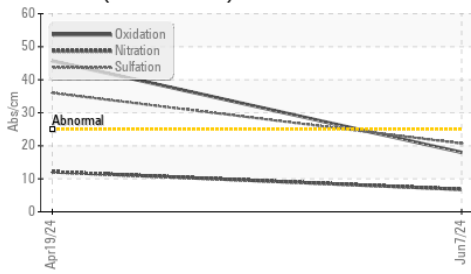
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.1	0.1	---
Nitration	Abs/cm *ASTM D7624 >20	6.8	12.1	---
Sulfation	Abs/.1mm *ASTM D7415 >30	20.7	36.0	---

FLUID DEGRADATION

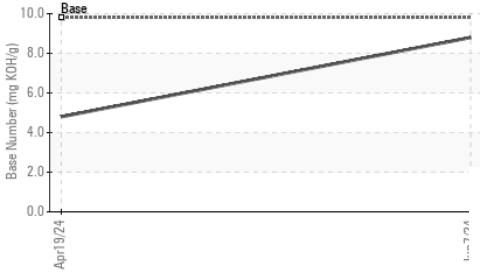
method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	18.0	45.7	---
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.8	4.8	---

OIL ANALYSIS REPORT

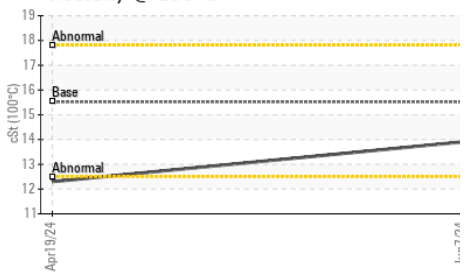
FT-IR (Direct Trend)



Base Number



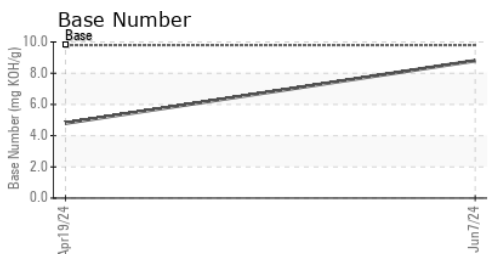
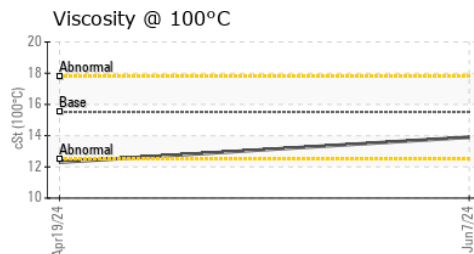
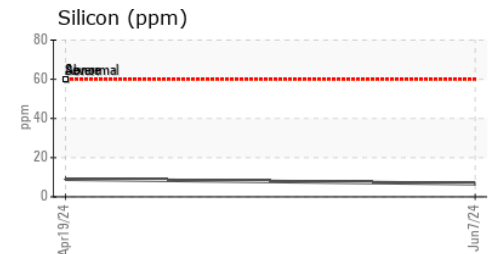
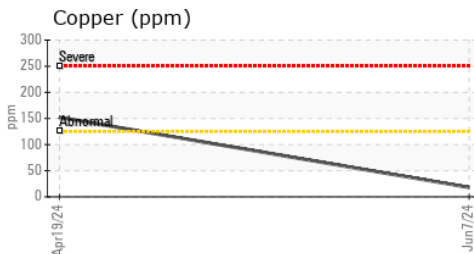
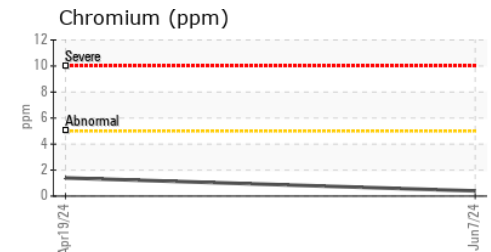
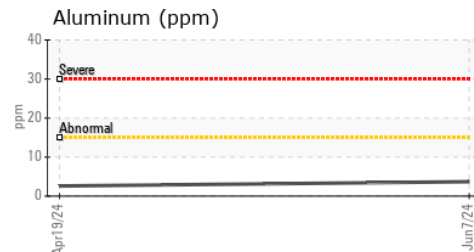
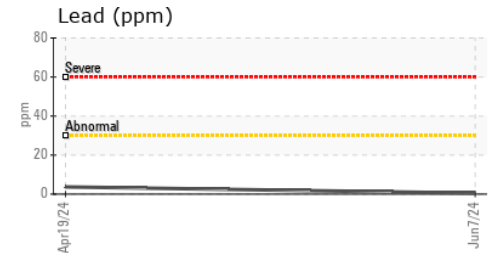
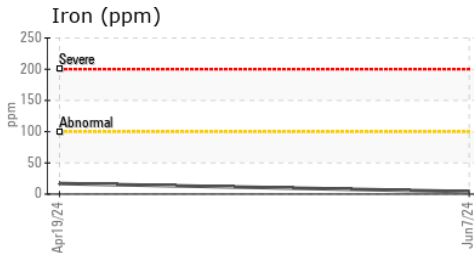
Viscosity @ 100°C



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	15.52	13.9	12.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0100575 **Received** : 27 Jun 2024
Lab Number : **06222037** **Tested** : 27 Jun 2024
Unique Number : 11100234 **Diagnosed** : 27 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

EQUIPMENT MANAGEMENT SERVICES
 11042 WICKER AVE
 CEDAR LAKE, IN
 US 46303
 Contact: TIM
 tim@equipmentmanagement.com
 T: (219)670-7876
 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)