



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**LIEBHERR HS8130 185282 (S/N GFL286)**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA SUPREME 5W30 (60 LTR)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0286605</b>	LH0277808	LH0265748
Sample Date		Client Info		<b>14 Jun 2024</b>	17 Nov 2023	02 Jun 2023
Machine Age	hrs	Client Info		<b>9030</b>	8008	7105
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	N/A	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>4</b>	4	6
Chromium	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>15	<b>1</b>	2	1
Lead	ppm	ASTM D5185(m)	>30	<b>0</b>	<1	2
Copper	ppm	ASTM D5185(m)	>125	<b>2</b>	3	3
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	Visual*	NONE	<b>VLITE</b>	NONE	---

### CONTAMINATION

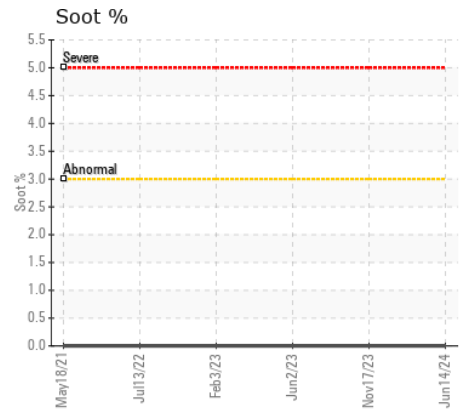
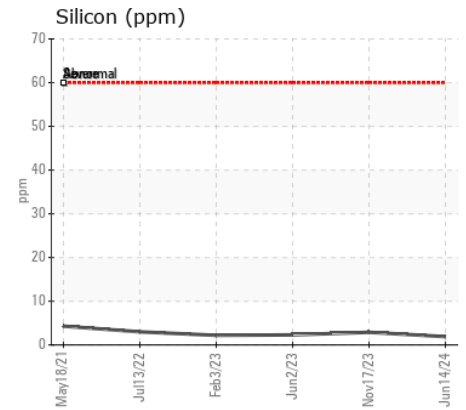
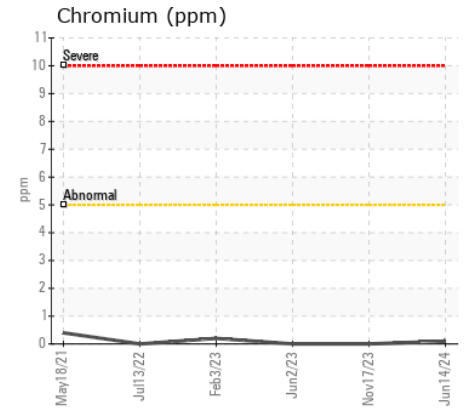
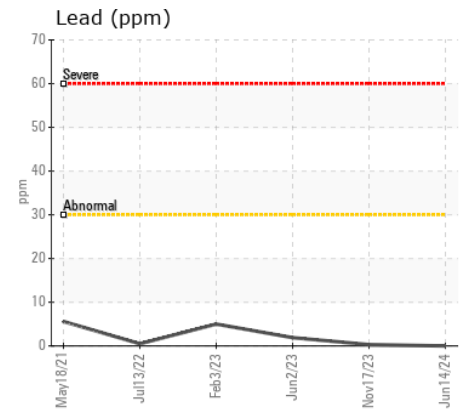
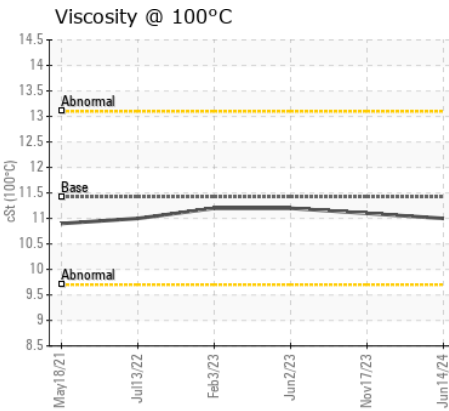
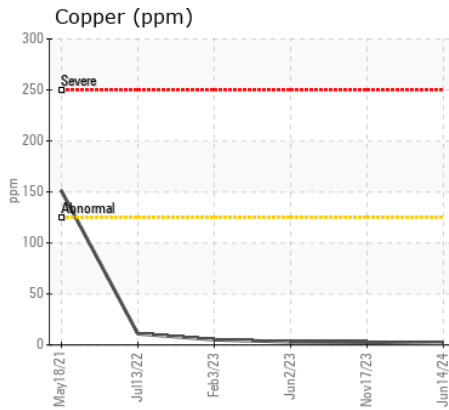
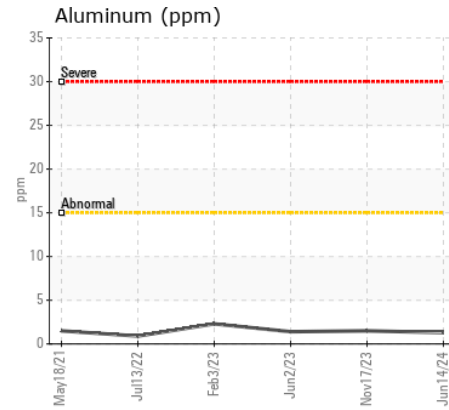
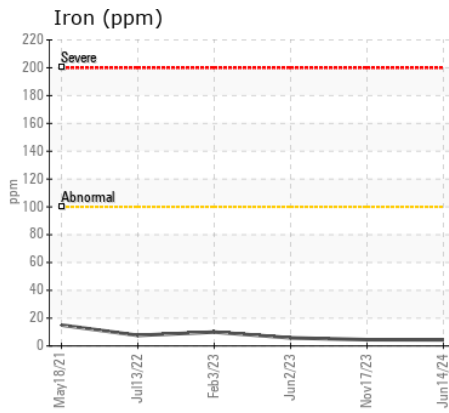
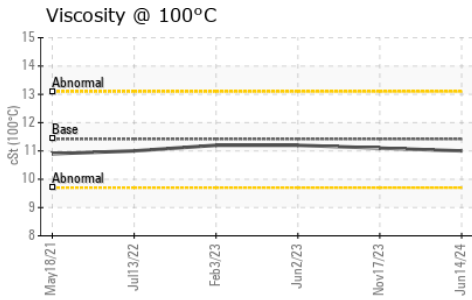
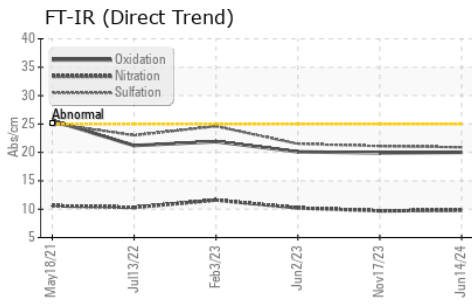
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	<b>2</b>	3	2
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	0	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.8</b>	9.7	10.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.9</b>	21.1	21.5
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>5</b>	5	6
Boron	ppm	ASTM D5185(m)	186	<b>23</b>	26	25
Barium	ppm	ASTM D5185(m)	<1	<b>&lt;1</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	79	<b>59</b>	58	44
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	578	<b>1097</b>	1082	810
Calcium	ppm	ASTM D5185(m)	1002	<b>834</b>	868	1319
Phosphorus	ppm	ASTM D5185(m)	745	<b>989</b>	988	983
Zinc	ppm	ASTM D5185(m)	837	<b>1201</b>	1185	1081
Sulfur	ppm	ASTM D5185(m)	2502	<b>2739</b>	2703	2516
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>20.0</b>	19.9	20.1
Visc @ 100°C	cSt	ASTM D7279(m)	11.42	<b>11.0</b>	11.1	11.2



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0286605 **Received** : 21 Jun 2024  
**Lab Number** : 02643318 **Tested** : 21 Jun 2024  
**Unique Number** : 5800857 **Diagnosed** : 21 Jun 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: Visual )

**HIGGS & HIGGS**  
 RR # 4  
 ST THOMAS, ON  
 CA N5P 3S8  
 Contact: Bernie Higgs

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

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