# LIEBHERR

# **CONSTRUCTION EQUIPMENT**

## [[593756]] LIEBHERR HS8100 184996 - 2 Winch

Sample No: LH0284987

Oil Type: PETRO CANADA TRAXON 75W90 SYNTHETIC

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SAMPLEINFORMATION							
Sample Number	LH0284987	LH0261252	LH0239655	LH0133882			
Sample Date	26 Jan 2024	04 May 2023	29 Jul 2022	20 Nov 2020			
Machine Hours	12043	10190	8773	0			
Oil Hours	0	0	0	0			
Oil Changed	N/A	Changed	Changed	Changed			
Sample Status	SEVERE	SEVERE	NORMAL	NORMAL			

OIL	CONDITI	ON				
Visc @ 40°C	cSt	<b>93.3</b>	95.0	<b>104</b>	95.2	
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CONT	AMINATIO	ON			
Water	%	NEG	NEG	NEG	0.081
Silicon	ppm	<b>7</b>	<b>10</b>	O <1	<b>3</b>
Sodium	ppm	<b>0</b> <1	<b>1</b>	<b>1</b>	O <1
Potassium	ppm	<b>0</b> <1	O 1	O <1	O <1

WEA	R METALS				
PQ		<b>63</b>	0 8		O 16
Iron	ppm	<b>625</b>	<b>1443</b>	<b>6</b>	○ 230
Copper	ppm	<b>217</b>	<b>9</b> 6	<b>2</b>	<b>6</b>
Lead	ppm	<b>6</b>	<b>3</b>	O <1	O <1
Tin	ppm	<b>18</b>	6	0	0
Aluminum	ppm	<b>2</b>	O 2	O <1	O <1
Chromium	ppm	<b>5</b>	<b>1</b> 9	0	2
Molybdenum	ppm	<b>0</b>	O <1	<b>0</b>	O <1
Nickel	ppm	<b>2</b>	<b>7</b>	0	<1
Titanium	ppm	0	<1	0	0
Silver	ppm	0	0	<1	<1
Manganese	ppm	<b>5</b>	O 11	<b>0</b>	O 2
Vanadium	ppm	0	0	0	0

ADDITIVES							
Calcium	ppm	<b>19</b>	O 14	0 8	<b>45</b>		
Magnesium	ppm	<b>3</b>	O 2	<b>1</b>	<b>3</b>		
Zinc	ppm	<b>81</b>	O 211	O 25	<b>S</b> 58		
Phosphorus	ppm	<b>1110</b>	O 1302	O 1198	O 1399		
Barium	ppm	<b>0</b>	0	O 0	0		
Boron	ppm	<b>152</b>	O 194	○ 302	O 102		



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

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#### Diagnosis

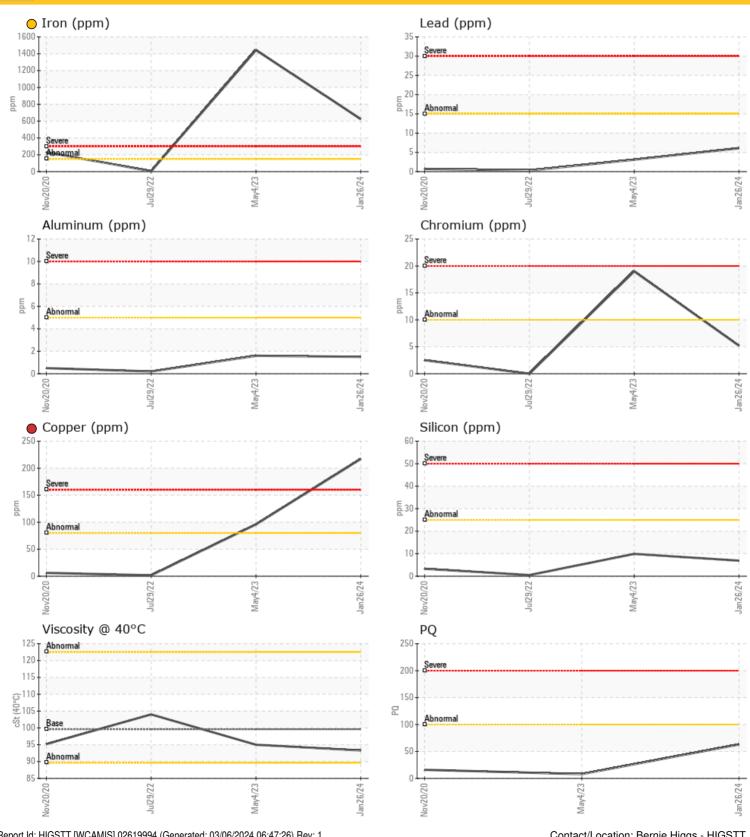
We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Copper and tin ppm levels are severe. Iron ppm levels are abnormal. There is no indication of any contamination in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot:HIGSTTUnique No:5737104Signed:Kevin MarsonReport Date:06 Mar 2024





### **GRAPHS**



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Contact/Location: Bernie Higgs - HIGSTT