



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Area
[600286]
Machine Id
LIEBHERR HS895HD 188227
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 46 (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0286569	LH0274764	LH0261270
Sample Date		Client Info		01 Mar 2024	13 Oct 2023	04 May 2023
Machine Age	hrs	Client Info		26121	25204	24070
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>30	6	6	4
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		1	<1	0
Aluminum	ppm	ASTM D5185(m)	>4	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>22	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>35	4	4	3
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

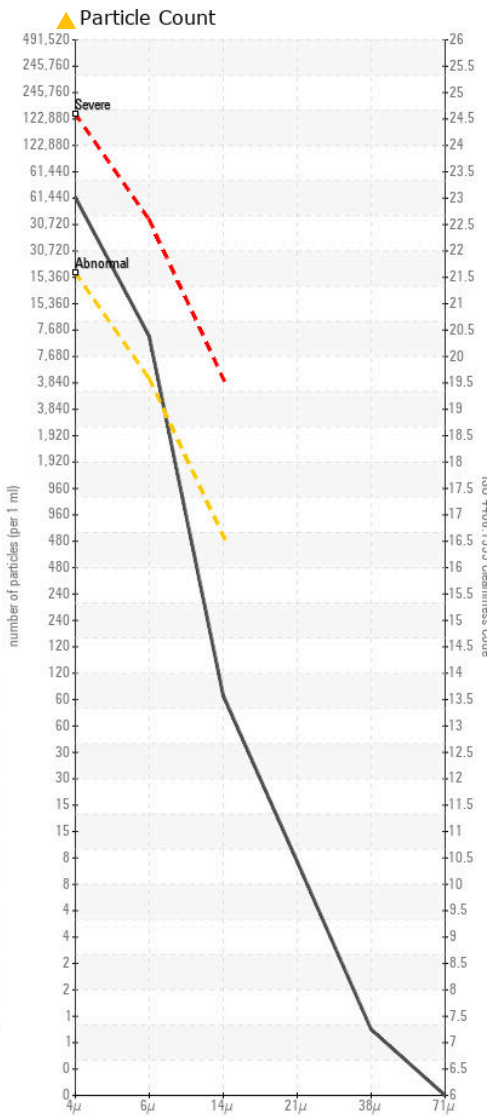
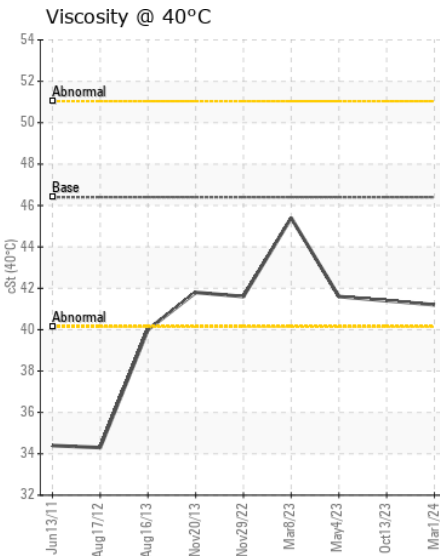
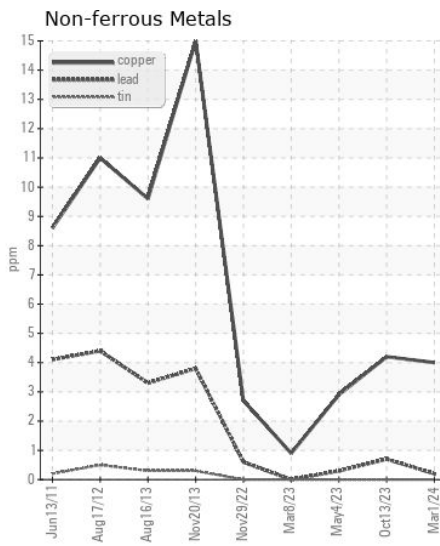
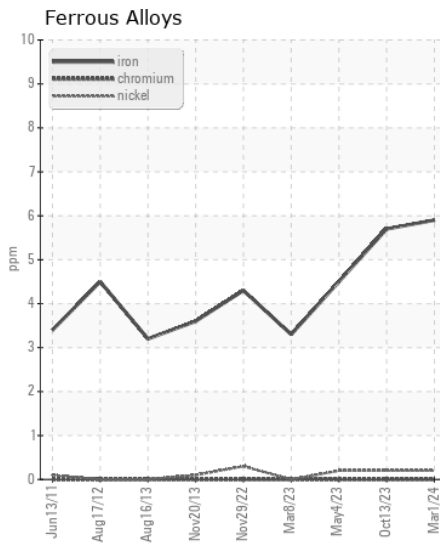
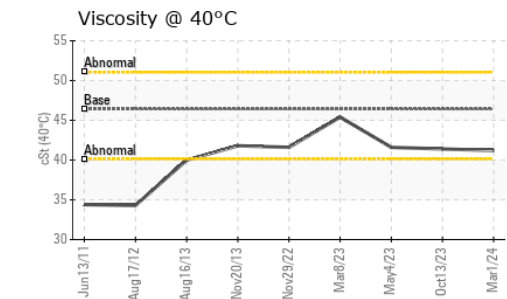
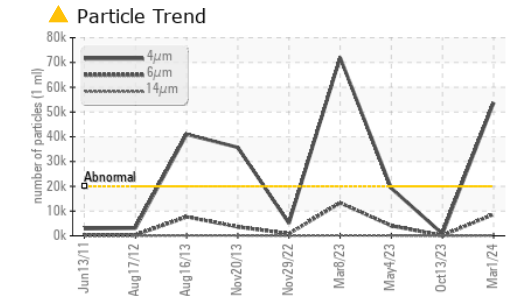
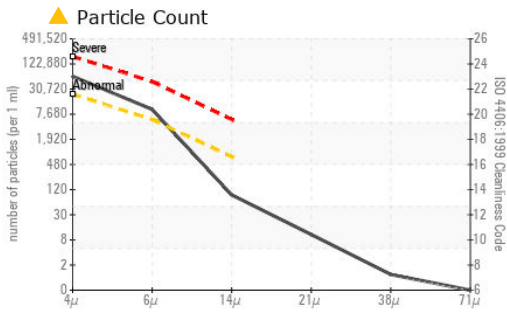
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185(m)	>15	1	2	1
Potassium	ppm	ASTM D5185(m)	>20	1	<1	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	53711	791	19217
Particles >6µm		ASTM D7647	>5000	8687	122	4076
Particles >14µm		ASTM D7647	>640	79	5	129
Particles >21µm		ASTM D7647	>160	9	1	16
Particles >38µm		ASTM D7647	>40	1	1	1
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	23/20/13	17/14/10	21/19/14
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	.2%

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185(m)		2	3	2
Boron	ppm	ASTM D5185(m)	0	14	18	12
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	12	16	8
Manganese	ppm	ASTM D5185(m)	0	0	0	<1
Magnesium	ppm	ASTM D5185(m)	0	166	207	99
Calcium	ppm	ASTM D5185(m)	50	322	391	263
Phosphorus	ppm	ASTM D5185(m)	330	488	530	477
Zinc	ppm	ASTM D5185(m)	430	553	608	494
Sulfur	ppm	ASTM D5185(m)	760	1896	1971	1739
Visc @ 40°C	cSt	ASTM D7279(m)	46.4	41.2	41.4	41.6



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0286569 **Received** : 05 Mar 2024
Lab Number : 02619955 **Tested** : 05 Mar 2024
Unique Number : 5737065 **Diagnosed** : 06 Mar 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount)

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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