

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### [[592767]] LIEBHERR HS895 188244 - Diesel Engine

Sample No: LH0278947

Oil Type: PETRO CANADA 10W40



#### SAMPLE INFORMATION

Sample Number	LH0278947	LH0281367	LH0276123	LH0266046
Sample Date	06 Jan 2024	21 Dec 2023	05 Sep 2023	06 Jun 2023
Machine Hours	20588	20240	19868	15269
Oil Hours	0	0	0	0
Oil Changed	N/A	N/A	N/A	Changed
Sample Status	NORMAL	ABNORMAL	NORMAL	NORMAL

HIGGS & HIGGS

RR # 4

ST THOMAS, ON

CA N5P 3S8

Contact: Bernie Higgs



#### OIL CONDITION

Visc @ 100°C	cSt	13.8	15.3	13.9	14.3
Oxidation (PA)	%	73	99	70	80

T: (519)631-4095

F: (519)631-2745



#### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.6	0.2	0.3
Nitration (PA)	%	72	95	69	78
Sulfation (PA)	%	60	71	58	63
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	5	4	4	5
Sodium	ppm	2	2	2	2
Potassium	ppm	<1	<1	<1	<1

#### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.



#### WEAR METALS

Iron	ppm	15	38	15	18
Copper	ppm	4	125	9	74
Lead	ppm	2	4	2	4
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	4	3	4	4
Chromium	ppm	<1	1	1	<1
Molybdenum	ppm	66	74	66	67
Nickel	ppm	<1	<1	<1	<1
Titanium	ppm	0	0	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	0	0	<1	<1
Vanadium	ppm	0	0	0	0



#### ADDITIVES

Calcium	ppm	1421	1336	1202	1432
Magnesium	ppm	955	1211	1097	1061
Zinc	ppm	1354	1484	1348	1462
Phosphorus	ppm	1133	1149	1145	1193
Barium	ppm	0	0	0	0
Boron	ppm	47	4	4	14

Depot: HIGSTT

Unique No: 5711584

Signed: Kevin Marson

Report Date: 23 Jan 2024

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### GRAPHS

