LIEBHERR
CONSTRUCTION EQUIPMENT

[[593756]] LIEBHERR HS8100 184996 - Left Track Drive

Sample No: LH0284980

Oil Type: PETRO CANADA TRAXON 75W90 SYNTHETIC

SAMPLE INFORMATION

Sample Number		**LH0284980**	LH0261249	LH0239658	LH
Sample Date		**26 Jan 2024**	04 May 2023	29 Jul 2022	23 Jul 2021
Machine Hours		**12043**	10190	8773	5818
Oil Hours		**0**	0	0	0
Oil Changed		**N/A**	Changed	N/A	N/A
Sample Status		**SEVERE**	SEVERE	SEVERE	NORMAL

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

T: (519)631-4095
F: (519)631-2745

OIL CONDITION

Visc @ 40°C	cSt	🟢 **92.1**	🟢 98.3	🟢 101	🟢 90.0

CONTAMINATION

Water	%	**NEG**	NEG	NEG	NEG
Silicon	ppm	🔴 **607**	🔴 380	🔴 347	🟢 51
Sodium	ppm	🟢 **37**	🟢 22	🟢 25	🟢 4
Potassium	ppm	🟢 **53**	🟢 35	🟢 33	🟢 6

WEAR METALS

Iron	ppm	🟠 **808**	🟢 372	🟢 460	🟢 250
Copper	ppm	🟢 **47**	🟢 48	🟠 70	🟢 36
Lead	ppm	🟢 **1**	🟢 1	🟢 2	🟢 1
Tin	ppm	🟢 **2**	🟢 3	🟢 5	🟢 2
Aluminum	ppm	🟠 **143**	🟠 93	🟠 90	🟢 14
Chromium	ppm	🟢 **8**	🟢 4	🟢 5	🟢 2
Molybdenum	ppm	🟢 **<1**	🟢 <1	🟢 <1	🟢 0
Nickel	ppm	🟠 **11**	🟢 3	2	1
Titanium	ppm	**7**	6	6	1
Silver	ppm	**0**	0	0	0
Manganese	ppm	🟢 **10**	🟢 5	6	🟢 6
Vanadium	ppm	**<1**	<1	<1	<1

ADDITIVES

Calcium	ppm	**812**	534	588	🟢 90
Magnesium	ppm	**98**	60	53	31
Zinc	ppm	**22**	🟢 18	🟢 25	🟢 25
Phosphorus	ppm	🟢 **1220**	🟢 1298	🟢 1159	🟢 1483
Barium	ppm	🟢 **<1**	🟢 <1	🟢 1	🟢 <1
Boron	ppm	🟢 **246**	🟢 215	🟢 147	27

Diagnosis

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.Nickel ppm levels are abnormal. Aluminum and iron ppm levels are noted. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. High amount of ingressed dirt has caused abrasive wear to the component. Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot:	HIGSTT
Unique No:	5737100
Signed:	Kevin Marson
Report Date:	06 Mar 2024

⚙ **GRAPHS**

Iron (ppm)

Lead (ppm)

Aluminum (ppm)

Chromium (ppm)

Copper (ppm)

Silicon (ppm)

Viscosity @ 40°C

Additives