

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR HS883 187 299 - Diesel Engine

Sample No: LH0242042

Oil Type: CHEVRON DELO 400 LE 15W40



Liebherr Canada

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Sample Information

Sample Number	LH0242042	LH0136989	LH0110759	LH0089463
Sample Date	02 Mar 2024	25 May 2019	29 Jun 2017	28 Jul 2016
Machine Hours	35731	31042	28219	27084
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Not Changd	Changed
Sample Status	ABNORMAL	SEVERE	NORMAL	NORMAL



Oil Condition

Visc @ 40°C	cSt	---	---	---	99.0
Visc @ 100°C	cSt	10.9	12.8	14.4	13.2
Viscosity Index (VI)	Scale	---	---	---	131
Oxidation (PA)	%	76	86	67	89



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0	0	0	0
Nitration (PA)	%	80	91	53	81
Sulfation (PA)	%	57	62	66	67
Glycol	%	0.0	0.10	NEG	NEG
Fuel	%	6.9	1.5	<1.0	1.0
Silicon	ppm	2	3	3	4
Sodium	ppm	3	7	<1	3
Potassium	ppm	3	6	2	2



Wear Metals

Iron	ppm	8	6	2	5
Copper	ppm	2	2	0	<1
Lead	ppm	0	1	0	<1
Tin	ppm	0	0	0	0
Aluminum	ppm	1	2	2	3
Chromium	ppm	0	0	0	<1
Molybdenum	ppm	1	16	78	84
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	0	<1
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	1269	1298	1417	1452
Magnesium	ppm	696	645	384	414
Zinc	ppm	719	833	1188	1222
Phosphorus	ppm	648	723	972	1032
Barium	ppm	<1	0	0	<1
Boron	ppm	76	100	460	408

Diagnosis

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of fuel present in the oil. Test for glycol is negative. Tests confirm the presence of fuel in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Depot: LIERIC

Unique No: 5773886

Signed: Wes Davis

Report Date: 03 May 2024

Contact/Location: Kevin Steer - LIERIC



Graphs

