

LIEBHERR

CONSTRUCTION EQUIPMENT



[(360377)] LIEBHERR L580 059426-1464 - Diesel Engine

Sample No: LH0237635

Oil Type: PETRO CANADA 10W40



SAMPLE INFORMATION

Sample Number	LH0237635	LH0242479	LH0239705	LH0230692
Sample Date	19 Jul 2023	17 Nov 2022	18 Aug 2022	31 May 2022
Machine Hours	4747	3593	2987	2443
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	13.1	10.6	13.4	12.8
Oxidation (PA)	%	57	58	61	26



CONTAMINATION

Soot %	%	0	0	0	0
Nitration (PA)	%	57	57	57	33
Sulfation (PA)	%	53	53	55	41
Glycol	%	NEG	NEG	NEG	0.0
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	5	4	6	6
Sodium	ppm	2	1	2	2
Potassium	ppm	<1	<1	2	<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	4	4	5	10
Copper	ppm	2	14	96	372
Lead	ppm	<1	<1	3	11
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	<1	1	<1	1
Chromium	ppm	<1	0	<1	<1
Molybdenum	ppm	56	49	57	59
Nickel	ppm	0	0	0	0
Titanium	ppm	0	<1	<1	0
Silver	ppm	<1	0	0	<1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1004	900	1081	1077
Magnesium	ppm	981	822	968	1034
Zinc	ppm	1169	988	1169	1277
Phosphorus	ppm	1036	915	954	1063
Barium	ppm	0	0	0	<1
Boron	ppm	5	<1	1	2

Depot: CLOPEM
 Unique No: 5630691
 Signed: Wes Davis
 Report Date: 23 Aug 2023



GRAPHS

