

LIEBHERR

CONSTRUCTION EQUIPMENT



[(340369)] LIEBHERR R920 045718-1705 - Diesel Engine

Sample No: LH0247507

Oil Type: PETRO CANADA SUPREME 5W30



SAMPLE INFORMATION

Sample Number	LH0247507	LH0251813	LH0242546	LH0195625
Sample Date	24 Jun 2023	14 Mar 2023	03 Nov 2022	12 Jul 2022
Machine Hours	4406	0	3329	2793
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	12.2	12.6	14.2	13.4
Oxidation (PA)	%	81	89	75	73



CONTAMINATION

Soot %	%	0	0	0	0
Nitration (PA)	%	88	88	76	78
Sulfation (PA)	%	63	69	60	63
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	23	8	22	5
Sodium	ppm	5	5	3	3
Potassium	ppm	<1	0	0	0

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	12	11	11	13
Copper	ppm	2	2	4	2
Lead	ppm	<1	<1	<1	<1
Tin	ppm	0	0	<1	<1
Aluminum	ppm	2	2	2	1
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	61	58	57	62
Nickel	ppm	0	0	0	0
Titanium	ppm	4	8	4	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	965	1101	1225	1147
Magnesium	ppm	1137	1100	929	1016
Zinc	ppm	1273	1316	1221	1288
Phosphorus	ppm	1112	1166	1098	1080
Barium	ppm	0	0	0	0
Boron	ppm	33	44	8	4

Depot: CLOPEM
 Unique No: 5630720
 Signed: Wes Davis
 Report Date: 23 Aug 2023



GRAPHS

