

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A924C064062-1049 - Diesel Engine

Sample No: LH0274197

Oil Type: PETRO CANADA DURON SAE 10W30



MARCEL DUVAL FER ET METAUX INC.
661 RANG STE-MARIE
ST. SEBASTIEN, QC
CA J0J 2C0
Contact: Service Manager



SAMPLE INFORMATION

Sample Number	LH0274197	LH0261037	LH0235191	LH0225476
Sample Date	26 Oct 2023	14 Jun 2023	28 Sep 2022	19 May 2022
Machine Hours	13784	13298	12508	11988
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 100°C	cSt	13.6	13.9	13.8	13.8
Oxidation (PA)	%	59	65	60	57



CONTAMINATION

Soot %	%	1.2	1.5	1.3	0.8
Nitration (PA)	%	68	79	72	75
Sulfation (PA)	%	58	63	60	60
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	6	6	6
Sodium	ppm	2	2	2	1
Potassium	ppm	<1	2	0	<1



WEAR METALS

Iron	ppm	16	25	23	14
Copper	ppm	2	2	2	2
Lead	ppm	<1	1	1	<1
Tin	ppm	0	0	<1	<1
Aluminum	ppm	<1	2	1	2
Chromium	ppm	0	<1	<1	<1
Molybdenum	ppm	61	51	57	28
Nickel	ppm	0	0	0	<1
Titanium	ppm	0	0	0	0
Silver	ppm	<1	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1102	1310	1223	1709
Magnesium	ppm	967	832	916	443
Zinc	ppm	1208	1233	1251	1235
Phosphorus	ppm	996	1084	1110	1057
Barium	ppm	<1	0	0	0
Boron	ppm	3	19	4	24

T:
F:

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. Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The condition of the oil is acceptable for the time in service.

Depot: MARSTS
Unique No: 5669724
Signed: Kevin Marson
Report Date: 31 Oct 2023



GRAPHS

