

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L566 036436 - Diesel Engine

Sample No: LH0090429

Oil Type: PETRO CANADA 10W30



SAMPLE INFORMATION

Sample Number	LH0090429	LH0145257	LH0098735	LH0145597
Sample Date	21 Mar 2024	14 May 2020	27 Sep 2019	07 Jun 2019
Machine Hours	7312	5805	4869	0
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

McCain Farm
295 Tarrtown Rd
Monquart, NB
CA E7J 2M2
Contact: Service Manager



OIL CONDITION

Visc @ 100°C	cSt	12.2	11.9	11.6	11.9
Oxidation (PA)	%	65	60	72	77

T:
F:



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	1.6	0.5	0.2	0.6
Nitration (PA)	%	134	76	73	86
Sulfation (PA)	%	70	66	62	62
Glycol	%	0.0	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	18	6	7	8
Sodium	ppm	1443	6	3	4
Potassium	ppm	2557	2	<1	1

Diagnosis

Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Aluminum ppm levels are abnormal. Piston wear is indicated. Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative. The oil is no longer serviceable as a result of the abnormal and/or severe wear. The condition of the oil is acceptable for the time in service (see recommendation).



WEAR METALS

Iron	ppm	98	22	9	19
Copper	ppm	8	2	1	1
Lead	ppm	2	0	<1	<1
Tin	ppm	<1	<1	0	0
Aluminum	ppm	33	5	3	4
Chromium	ppm	1	<1	<1	<1
Molybdenum	ppm	346	61	63	59
Nickel	ppm	<1	<1	<1	<1
Titanium	ppm	3	<1	<1	0
Silver	ppm	0	<1	<1	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	996	1026	836	920
Magnesium	ppm	888	1022	1172	1107
Zinc	ppm	1162	1250	1285	1262
Phosphorus	ppm	927	1081	1089	1073
Barium	ppm	0	<1	<1	0
Boron	ppm	8	8	52	37

Depot: MCC295MON
Unique No: 5749726
Signed: Kevin Marson
Report Date: 27 Mar 2024



GRAPHS

