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

Visc @ 100°C	cSt	12.2	0 11.9	11.6	0 11.9
Oxidation (PA)	%	65	60	72	77
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CON	ΓΑΜΙΝ	ATION			
Water	%	NEG	NEG	NEG	NEG
Soot %	%	0 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	07	8 🔘
Sodium	ppm	<u> </u>	0 6	3	0 4
Potassium	ppm	<u> </u>	2	◯ <1	01

0 **WEAR METALS** 98 Iron ppm 22 09 0 19 Copper ppm 08 02 $\bigcirc 1$ \bigcirc Lead ppm 2 $\bigcirc 0$ \bigcirc <¹ <1 Tin 0 <1 0 <1 0 ppm Aluminum 0 33 $\bigcirc 5$ ppm 03 04 Chromium ○ <1 ppm 01 ○ <1 ○ <1 Molybdenum 346 61 63 59 ppm Nickel 0 <1 0 <1 0 < 1 ppm **○** <1 Titanium 3 0 ppm <1 <1 Silver 0 0 ppm <1 <1 Manganese 0 ppm \bigcirc <1 0 <1 $\bigcirc <1$ Vanadium ppm 0

ADDITIVES					
Calcium	ppm	996	0 1026	836	920
Magnesium	ppm	0 888	0 1022	0 1172	0 1107
Zinc	ppm	0 1162	0 1250	1285	0 1262
Phosphorus	ppm	927	0 1081	0 1089	0 1073
Barium	ppm	0	○ <1	○ <1	0
Boron	ppm	08	0 8	52	37





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

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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).

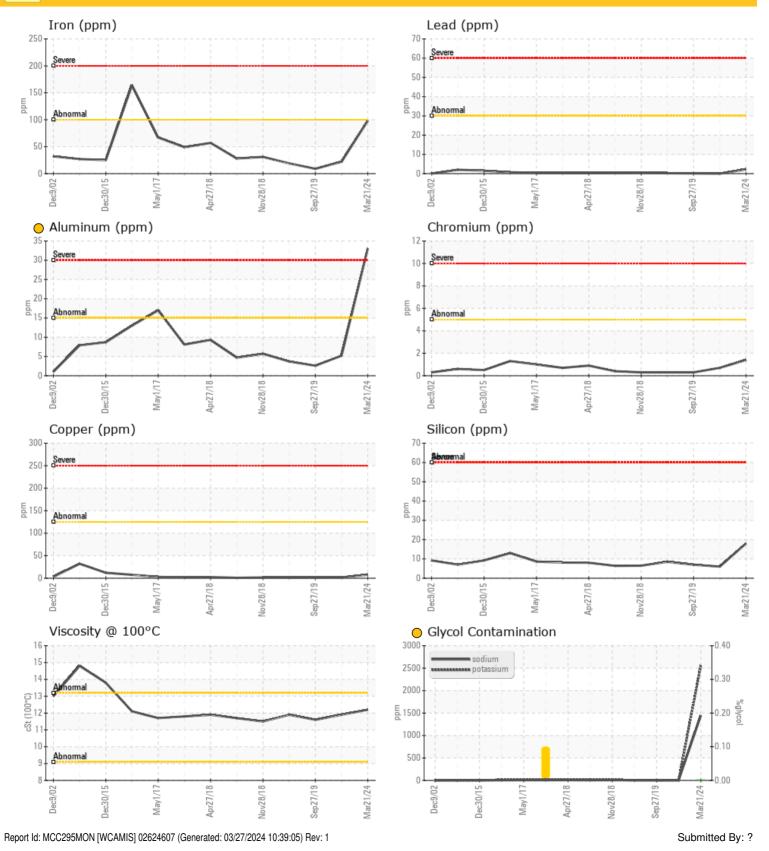






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