

Machine Id LIEBHERR

## LIEBHERR LH30M 153712-1253

Diesel Engine

PETRO CANADA DURON UHP 5W30 (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		LH	LH	
	Sample Date		Client Info		30 Apr 2024	14 Dec 2023	
	Machine Age	hrs	Client Info		1001	500	
	Oil Age	hrs	Client Info		0	0	
	Filter Age	hrs	Client Info		0	0	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				NORMAL	NORMAL	
WEAR	Iron	ppm	ASTM D5185(m)	>66	5	8	
All component wear rates are normal.	Chromium	ppm	ASTM D5185(m)		<1	<1	
	Nickel	ppm	ASTM D5185(m)		0	0	
	Titanium	ppm	ASTM D5185(m)		<1	0	
	Silver	ppm	ASTM D5185(m)	>3	0	<1	
	Aluminum	ppm	ASTM D5185(m)		1	2	
	Lead	ppm	ASTM D5185(m)	>10	6	10	
	Copper	ppm	ASTM D5185(m)	>74	276	282	
	Tin	ppm	ASTM D5185(m)	>4	<1	<1	
	Vanadium	ppm	ASTM D5185(m)		0	0	
	White Metal	scalar	Visual*	NONE	NONE	NONE	
	Yellow Metal	scalar	Visual*	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>15	5	8	
CONTAINATION	Potassium	ppm	ASTM D5185(m)		<1	2	
There is no indication of any contamination in the oil.	Fuel	pp	WC Method		<1.0	<1.0	
	Water		WC Method		NEG	NEG	
	Glycol	%	ASTM D7922*		0.0	NEG	
	Soot %	%	ASTM D7844*	>3	0	0	
	Nitration	Abs/cm	ASTM D7624*	>20	9.9	11.5	
	Sulfation	Abs/.1mm	ASTM D7415*	>30	23.9	39.0	
	Silt	scalar	Visual*	NONE	NONE	NONE	
	Debris	scalar	Visual*	NONE	NONE	NONE	
	Sand/Dirt	scalar	Visual*	NONE	NONE	VLITE	
	Appearance	scalar	Visual*	NORML	NORML	NORML	
	Odor	scalar	Visual*	NORML	NORML	NORML	
	Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)		4	2	
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185(m)	0	38	105	
	Barium	ppm	ASTM D5185(m)	0	4	31	
	Molybdenum	ppm	ASTM D5185(m)		62	45	
	Manganese	ppm	ASTM D5185(m)		<1	<1	
	Magnesium	ppm	ASTM D5185(m)		1132	880	
	Calcium	ppm	ASTM D5185(m)		941	1435	
	Phosphorus	ppm	ASTM D5185(m)		988	757	
	Zinc	ppm	ASTM D5185(m)	1260	1210	894	
	Sulfur	ppm	ASTM D5185(m)		2513	1986	
	Oxidation	Abs/.1mm	ASTM D7414*	>25	24.5	49.5	

Visc @ 100°C cSt ASTM D7279(m) 11.9

11.6

11.2



