WEAR CONTAMINATION **FLUID CONDITION**

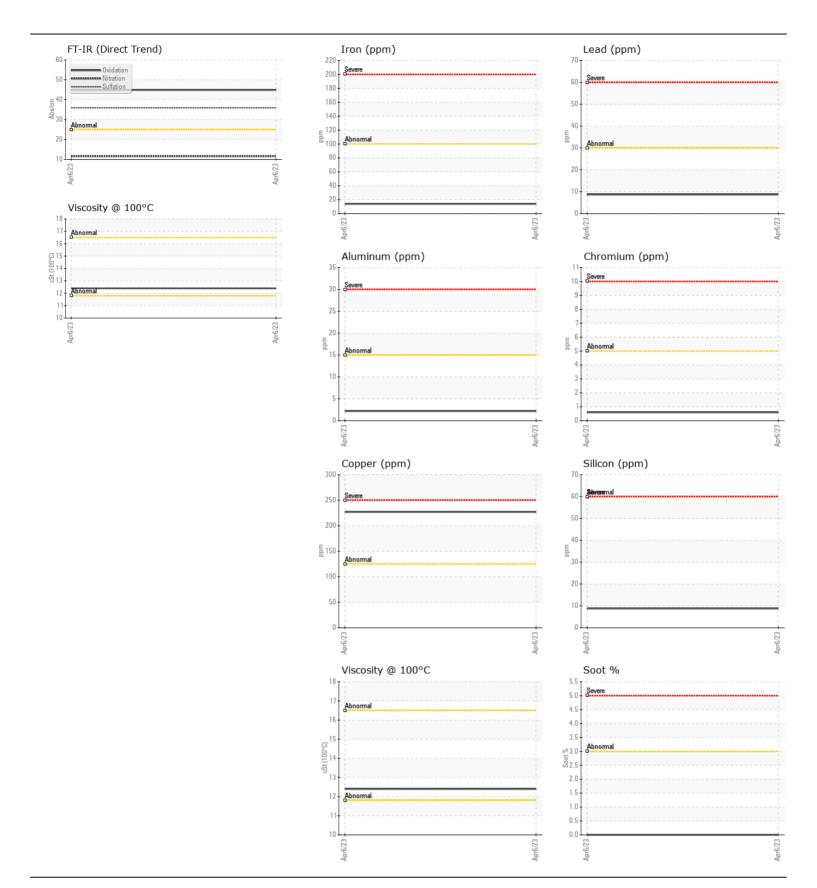
NORMAL NORMAL NORMAL



Machine Id LIEBHERR R945 055572-1866

Component Diesel Engine

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		LH0250467		
	Sample Date		Client Info		06 Apr 2023		
	Machine Age	hrs	Client Info		562		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		N/A		
	Sample Status				NORMAL		
WEAR	Iron	ppm	ASTM D5185(m)	>100	14		
Metal levels are typical for a new component breaking in.	Chromium	ppm	ASTM D5185(m)	>5	<1		
	Nickel	ppm	ASTM D5185(m)	>5	<1		
	Titanium	ppm	ASTM D5185(m)		<1		
	Silver	ppm	ASTM D5185(m)	>3	0		
	Aluminum	ppm	ASTM D5185(m)	>15	2		
	Lead	ppm	ASTM D5185(m)	>30	9		
	Copper	ppm	ASTM D5185(m)	>125	227		
	Tin	ppm	ASTM D5185(m)	>5	2		
	Vanadium	ppm	ASTM D5185(m)		0		
CONTAMINATION	Silicon	nnm	ASTM D5185(m)	>60	9		
	Potassium	ppm	ASTM D5185(m)	>20	1		
There is no indication of any contamination in the oil.	Fuel	ppm	WC Method		<1.0		
	Water		WC Method		NEG		
	Glycol		WC Method	70. L	NEG		
	Soot %	%	ASTM D7844*	>3	0		
	Nitration	Abs/cm	ASTM D7624*	>20	11.5		
	Sulfation	Abs/.1mm	ASTM D7415*	>30	35.9		
	Emulsified Water	scalar	Visual*	>0.2	NEG		
FLUID CONDITION	Sodium	nnm	ASTM D5185(m)	>20	3		
	Boron	ppm	ASTM D5185(m)		47		
The condition of the oil is acceptable for the time in service.	Barium	ppm	ASTM D5185(m)		21		
	Molybdenum	ppm	ASTM D5185(m)		49		
	Manganese	ppm	ASTM D5185(m)		1		
	Magnesium	ppm	ASTM D5185(m)		931		
	Calcium	ppm	ASTM D5185(m)		1330		
	Phosphorus	ppm	ASTM D5185(m)		838		
	Zinc	ppm	ASTM D5185(m)		950		
	Sulfur	ppm	ASTM D5185(m)		1907		
	Oxidation	Abs/.1mm	ASTM D7414*	>25	44.9		





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : LH0250467 Lab Number : 02553839 Unique Number : 5566854

Test Package : MOB 1

Received : 27 Apr 2023 **Tested** : 27 Apr 2023 Diagnosed

: 27 Apr 2023 - Kevin Marson

To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

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