

#### Machine Id LIEBHERR 1400 CR4415 (S/N 074-414) Component 1 Swing Drive

# GEAR OIL ISO 220 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

### **WEAR**

All component wear rates are normal.

### CONTAMINATION

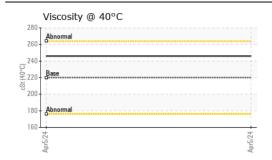
There is no indication of any contamination in the oil.

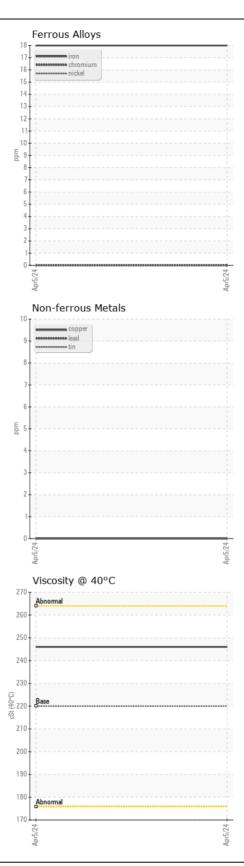
## FLUID CONDITION

The condition of the oil is acceptable for the time in service.

	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		WC0873461		
;	Sample Date		Client Info		05 Apr 2024		
	Machine Age	hrs	Client Info		11100		
	Oil Age	hrs	Client Info		1000		
	Filter Age	hrs	Client Info		0		
1	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status		NORMAL				
	Iron	ppm	ASTM D5185m	>400	18		
	Chromium	ppm	ASTM D5185m	>10	0		
	Nickel	ppm	ASTM D5185m	>10	0		
	Titanium	ppm	ASTM D5185m	210	0		
	Silver	ppm	ASTM D5185m		0		
	Aluminum	ppm	ASTM D5185m	>25	0		
	Lead	ppm	ASTM D5185m	>50	0		
	Copper	ppm	ASTM D5185m	>200	0		
	Tin	ppm	ASTM D5185m	>10	0		
	Vanadium	ppm	ASTM D5185m	,	0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
	Silicon	ppm	ASTM D5185m	>50	1		
	Potassium	ppm	ASTM D5185m	>20	2		
	Water		WC Method	>0.2	NEG		
	Silt	agalar		NONE			
		scalar	*Visual	NONE	MODER		
1	Debris	scalar	*Visual *Visual	NONE	NONE		
	Debris Sand/Dirt						
		scalar	*Visual	NONE	NONE NONE NORML		
	Sand/Dirt Appearance Odor	scalar scalar	*Visual *Visual	NONE NONE	NONE		
	Sand/Dirt Appearance	scalar scalar scalar	*Visual *Visual *Visual	NONE NONE NORML	NONE NONE NORML		
	Sand/Dirt Appearance Odor Emulsified Water	scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual	NONE NORML NORML	NONE NONE NORML NORML		  
	Sand/Dirt Appearance Odor Emulsified Water Sodium	scalar scalar scalar scalar scalar ppm	*Visual *Visual *Visual *Visual *Visual ASTM D5185m	NONE NORML NORML >0.2	NONE NORML NORML NEG	  	   
	Sand/Dirt Appearance Odor Emulsified Water	scalar scalar scalar scalar scalar ppm ppm	*Visual *Visual *Visual *Visual *Visual	NONE NORML NORML	NONE NORML NORML NEG	  	   
	Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	scalar scalar scalar scalar scalar ppm ppm	*Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	NONE NORML NORML >0.2	NONE NORML NORML NEG 1 0		   
	Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	scalar scalar scalar scalar scalar ppm ppm	*Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	NONE NORML NORML >0.2 50 15	NONE NORML NORML NEG 1 0 0		
	Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	scalar scalar scalar scalar ppm ppm ppm	*Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	NONE NORML NORML >0.2 50 15	NONE NORML NORML NEG 1 0 0 0		
	Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	scalar scalar scalar scalar ppm ppm ppm ppm	*Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	NONE NORML NORML >0.2 50 15 15	NONE NORML NORML NEG 1 0 0 0 0		
	Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	scalar scalar scalar scalar ppm ppm ppm ppm ppm	*Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	NONE NORML NORML >0.2 50 15 15 50	NONE NORML NORML NEG 1 0 0 0 0 0 0 0 0		
	Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	*Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	NONE NORML NORML >0.2 50 15 15 50 50	NONE NORML NORML NEG 1 0 0 0 0 0 0 0 21		
	Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	*Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	NONE NORML NORML >0.2 50 15 15 50 50 50 350	NONE NORML NORML NEG 1 0 0 0 0 0 0 0 21 445		

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Contact/Location: MICHAEL LAWSON - BUCGRA Page 2 of 2