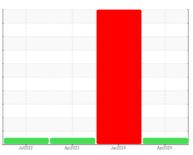


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id

LIEBHERR CR6611 - OUTER

Component Rear Left Final Drive

GEAR OIL ISO 220 (--- GAL)

DI			

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

Fluid Condition

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

		Jul202	2 Apr2023	Jan 2024 A	pr2024	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
	17111011		IIIIII Dasc			•
Sample Number		Client Info		WC0923076	WC0867461	WC0746695
Sample Date	la u a	Client Info		16 Apr 2024	05 Jan 2024	06 Apr 2023
Machine Age	hrs	Client Info		13914	13889	13215
Oil Age	hrs	Client Info		1000	0	754
Oil Changed		Client Info		N/A NORMAL	Changed	Changed
Sample Status		and the sale	Line It /le a a a		SEVERE	
CONTAMINATION	N	method	limit/base	current	history1 NEG	history2
Water		WC Method		NEG		NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	7	32	28
Chromium	ppm	ASTM D5185m	>10	<1	0	<1
Nickel	ppm		>10	<1	0	1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	2	2
Lead	ppm	ASTM D5185m	>25	1	<u>^</u> 79	<1
Copper	ppm	ASTM D5185m	>50	7	457	3
Tin	ppm	ASTM D5185m	>10	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	4	12	2
	ppm ppm	ASTM D5185m ASTM D5185m	50 15	4 0	12 0	2
Barium						
Barium Molybdenum	ppm	ASTM D5185m	15	0	0	0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	15	0	0	0 0 1 1 1
Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	15 15	0 2 <1	0 0 <1	0 0 1
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50	0 2 <1 10	0 0 <1 <1	0 0 1 1 1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50	0 2 <1 10	0 0 <1 <1 4	0 0 1 1 7
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50 50 350	0 2 <1 10 13 348	0 0 <1 <1 4 331	0 0 1 1 7 441
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50 50 350 100	0 2 <1 10 13 348 25	0 0 <1 <1 4 331 369	0 0 1 1 7 441 3
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50 50 350 100 12500	0 2 <1 10 13 348 25 4975	0 0 <1 <1 4 331 369 5371	0 0 1 1 7 441 3 5837
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50 50 350 100 12500 limit/base	0 2 <1 10 13 348 25 4975	0 0 <1 <1 4 331 369 5371 history1	0 0 1 1 7 441 3 5837 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	15 15 50 50 350 100 12500 limit/base	0 2 <1 10 13 348 25 4975 current	0 0 <1 <1 4 331 369 5371 history1	0 0 1 1 7 441 3 5837 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	15 15 50 50 350 100 12500 limit/base >75	0 2 <1 10 13 348 25 4975 current 3	0 0 <1 <1 4 331 369 5371 history1 4	0 0 1 1 7 441 3 5837 history2 6
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m **Visual	15 15 50 50 350 100 12500 limit/base >75 >20 limit/base	0 2 <1 10 13 348 25 4975 current 3 0 2 current NONE	0 0 0 <1 <1 4 331 369 5371 history1 4 0 1 history1 NONE	0 0 1 1 7 441 3 5837 history2 6 1 3 history2 NONE
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual	15 15 50 50 350 100 12500 limit/base >75 >20 limit/base NONE NONE	0 2 <1 10 13 348 25 4975 current 3 0 2 current NONE	0 0 0 <1 <1 4 331 369 5371 history1 4 0 1 history1 NONE	0 0 1 1 7 441 3 5837 history2 6 1 3 history2 NONE MODER
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m **Visual	15 15 50 50 350 100 12500 limit/base >75 >20 limit/base NONE NONE	0 2 <1 10 13 348 25 4975 current 3 0 2 current NONE	0 0 0 <1 <1 4 331 369 5371 history1 4 0 1 history1 NONE	0 0 1 1 7 441 3 5837 history2 6 1 3 history2 NONE
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual	15 15 50 50 350 100 12500 limit/base >75 >20 limit/base NONE NONE	0 2 <1 10 13 348 25 4975 current 3 0 2 current NONE	0 0 0 <1 <1 4 331 369 5371 history1 4 0 1 history1 NONE	0 0 1 1 7 441 3 5837 history2 6 1 3 history2 NONE MODER
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m *Visual *Visual *Visual	15 15 50 50 350 100 12500 limit/base >75 >20 limit/base NONE NONE	0 2 <1 10 13 348 25 4975 current 3 0 2 current NONE NONE	0 0 0 <1 <1 4 331 369 5371 history1 4 0 1 history1 NONE HEAVY NONE	0 0 1 1 7 441 3 5837 history2 6 1 3 history2 NONE NONE
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m *Visual *Visual *Visual *Visual	15 15 50 50 350 100 12500 limit/base >75 >20 limit/base NONE NONE NONE	0 2 <1 10 13 348 25 4975 current 3 0 2 current NONE NONE NONE	0 0 0 <1 <1 4 331 369 5371 history1 4 0 1 history1 NONE HEAVY NONE NONE	0 0 1 1 7 441 3 5837 history2 6 1 3 history2 NONE MODER NONE
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m MEthod ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual	15 15 50 50 350 100 12500 limit/base >75 >20 limit/base NONE NONE NONE NONE NONE NONE	0 2 <1 10 13 348 25 4975 current 3 0 2 current NONE NONE NONE NONE NONE NONE	0 0 0 <1 <1 4 331 369 5371 history1 4 0 1 history1 NONE HEAVY NONE NONE NONE	0 0 1 1 7 441 3 5837 history2 6 1 3 history2 NONE MODER NONE
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m MEthod ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	15 15 50 50 350 100 12500 limit/base >75 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	0 2 <1 10 13 348 25 4975 current 3 0 2 current NONE NONE NONE NONE NONE NONE NONE NON	0 0 0 <1 <1 4 331 369 5371 history1 4 0 1 history1 NONE NONE NONE NONE NONE NONE	0 0 1 1 7 441 3 5837 history2 6 1 3 history2 NONE MODER NONE NONE

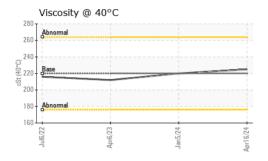
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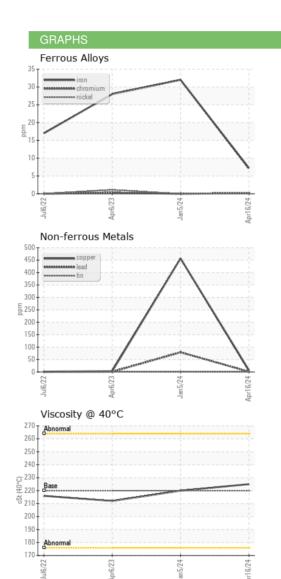
scalar *Visual



OIL ANALYSIS REPORT











Laboratory Sample No.

: WC0923076 Lab Number : 06155318 Unique Number : 10990741

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 19 Apr 2024 **Tested** Diagnosed

: 24 Apr 2024 : 24 Apr 2024 - Sean Felton

4732 NC 54 EAST GRAHAM, NC US 27253-9215 Contact: MICHAEL LAWSON

BUCKNER HEAVY LIFT

michaell@bucknercompanies.com T: (336)376-8888

Test Package : CONST Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F: (336)376-4090