

PROBLEM SUMMARY

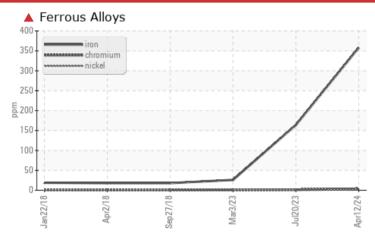
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RMR-Trinity 1216-96585 LIEBHERR LH50M 1216-96585 Component Splitter Box Fluid GEAR OIL SAE 80W90 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS							
Sample Status				SEVERE	ABNORMAL	NORMAL	
Iron	ppm	ASTM D5185m	>100	358	<u></u> 164	26	

Customer Id: RIVTRI Sample No.: DJJ0022498 Lab Number: 06152380 Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data: Sean Felton +1 919-379-4092 sfelton@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS						
Action Inspect Wear Source	Status	Date 	Done By	Description We advise that you inspect for the source(s) of wear.		
Change Fluid			?	Oil and filter change at the time of sampling has been noted.		
Change Filter			?	Oil and filter change at the time of sampling has been noted.		
Resample			?	We recommend an early resample to monitor this condition.		

HISTORICAL DIAGNOSIS

WEAR



20 Jul 2023 Diag: Sean Felton

The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. An increase in the aluminum level is noted. Gear wear is indicated. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.



NORMAL



03 Mar 2023 Diag: Sean Felton

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.



VISCOSITV



27 Sep 2018 Diag: Don Baldridge

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal.





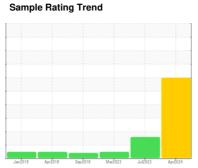




RMR-Trinity 1216-96585 LIEBHERR LH50M 1216-96585

Splitter Box

GEAR OIL SAE 80W90 (--- GAL)





DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Wear

Gear wear is indicated.

Contamination

There is no indication of any contamination in the

Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

CAMPLE INFORM	AATION	ام مطلم مما	limait/lanana		la la tament	history.O
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		DJJ0022498	DJJ0019879	DJJ0010674
Sample Date		Client Info		12 Apr 2024	20 Jul 2023	03 Mar 2023
Machine Age	hrs	Client Info		11651	10527	10023
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				SEVERE	ABNORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	▲ 358	△ 164	26
Chromium	ppm	ASTM D5185m	>5	4	2	<1
Nickel	ppm	ASTM D5185m	>5	2	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>20	15	1 6	2
Lead	ppm	ASTM D5185m	>30	1	0	0
Copper	ppm	ASTM D5185m	>20	3	<1	<1
Tin	ppm	ASTM D5185m	>10	1	0	0
Antimony	ppm		>5			
Vanadium	ppm	ASTM D5185m	20	<1	<1	0
Cadmium	ppm	ASTM D5185m		1	0	0
	рртт					
						hictory2
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	400	46	136	23
	ppm					*
Boron		ASTM D5185m	400	46	136	23
Boron Barium	ppm	ASTM D5185m ASTM D5185m	400 200	46 0	136 0	23
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	400 200	46 0 2	136 0 0	23 0 <1
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	400 200 12	46 0 2 6	136 0 0 3	23 0 <1 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	400 200 12	46 0 2 6 8	136 0 0 3 3	23 0 <1 <1 5
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	400 200 12 12 150	46 0 2 6 8 33	136 0 0 3 3 22	23 0 <1 <1 5 20
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	400 200 12 12 150 1650	46 0 2 6 8 33 1915	136 0 0 3 3 22 906	23 0 <1 <1 5 20
Boron 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 ASTM D5185m	400 200 12 12 150 1650 125	46 0 2 6 8 33 1915	136 0 0 3 3 22 906 50	23 0 <1 <1 5 20 544
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	400 200 12 12 150 1650 125 22500	46 0 2 6 8 33 1915 114 27601	136 0 0 3 3 22 906 50 22079	23 0 <1 <1 5 20 544 11 19476
Boron 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 ASTM D5185m	400 200 12 12 150 1650 125 22500 limit/base >30	46 0 2 6 8 33 1915 114 27601	136 0 0 3 3 22 906 50 22079	23 0 <1 <1 5 20 544 11 19476 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	400 200 12 12 150 1650 125 22500 limit/base >30	46 0 2 6 8 33 1915 114 27601 current 6	136 0 0 3 3 22 906 50 22079 history1	23 0 <1 <1 5 20 544 11 19476 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	400 200 12 12 150 1650 125 22500 limit/base >30 >170	46 0 2 6 8 33 1915 114 27601 current 6 2	136 0 0 3 3 22 906 50 22079 history1 3	23 0 <1 <1 5 20 544 11 19476 history2 2 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	400 200 12 12 150 1650 125 22500 limit/base >30 >170 >20	46 0 2 6 8 33 1915 114 27601 current 6 2 13	136 0 0 0 3 3 3 22 906 50 22079 history1 3 1 3	23 0 <1 <1 5 20 544 11 19476 history2 2 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	400 200 12 12 150 1650 125 22500 limit/base >30 >170 >20 limit/base	46 0 2 6 8 33 1915 114 27601 current 6 2 13	136 0 0 0 3 3 3 22 906 50 22079 history1 3 1 3	23 0 <1 <1 5 20 544 11 19476 history2 2 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	400 200 12 12 150 1650 125 22500 limit/base >30 >170 >20 limit/base	46 0 2 6 8 33 1915 114 27601 current 6 2 13 current	136 0 0 3 3 3 22 906 50 22079 history1 3 history1 NONE	23 0 <1 <1 5 20 544 11 19476 history2 2 <1 <1 NONE
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm	ASTM D5185m method *Visual *Visual	400 200 12 12 150 1650 125 22500 limit/base >30 >170 >20 limit/base NONE NONE	46 0 2 6 8 33 1915 114 27601 current 6 2 13 current NONE	136 0 0 0 3 3 3 22 906 50 22079 history1 3 1 3 history1 NONE NONE	23 0 <1 <1 5 20 544 11 19476 history2 2 <1 <1 NONE
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm	ASTM D5185m MEthod *Visual *Visual	400 200 12 12 150 1650 125 22500 limit/base >30 >170 >20 limit/base NONE NONE NONE	46 0 2 6 8 33 1915 114 27601 current 6 2 13 current NONE NONE	136 0 0 0 3 3 3 22 906 50 22079 history1 3 1 3 history1 NONE NONE NONE	23 0 <1 <1 5 20 544 11 19476 history2 2 <1 <1 history2 NONE NONE NONE
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm	ASTM D5185m **STM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m **STM D5185m **Wisual **Visual **Visual **Visual **Visual **Visual	400 200 12 12 150 1650 125 22500 limit/base >30 >170 >20 limit/base NONE NONE NONE NONE NONE NONE	46 0 2 6 8 33 1915 114 27601 current 6 2 13 current NONE NONE NONE	136 0 0 0 3 3 3 22 906 50 22079 history1 3 1 3 history1 NONE NONE NONE NONE NONE NONE	23 0 <1 <1 5 20 544 11 19476 history2 2 <1 <1 NONE NONE NONE NONE LIGHT
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm	ASTM D5185m Method ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	400 200 12 12 150 1650 125 22500 limit/base >30 >170 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	46 0 2 6 8 33 1915 114 27601 current 6 2 13 current NONE NONE NONE NONE NONE NONE NONE NON	136 0 0 0 3 3 3 222 906 50 22079 history1 3 1 3 history1 NONE NONE NONE NONE NONE NONE NONE NON	23 0 <1 <1 5 20 544 11 19476 history2 2 <1 <1 NONE NONE NONE NONE NONE NONE NONE NON
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm	ASTM D5185m **STM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m **STM D5185m **Wisual **Visual **Visual **Visual **Visual **Visual	400 200 12 12 150 1650 125 22500 limit/base >30 >170 >20 limit/base NONE NONE NONE NONE NONE NONE	46 0 2 6 8 33 1915 114 27601 current 6 2 13 current NONE NONE NONE NONE NONE NONE	136 0 0 0 3 3 3 22 906 50 22079 history1 3 1 3 history1 NONE NONE NONE NONE NONE NONE	23 0 <1 <1 <1 5 20 544 11 19476 history2 2 <1 <1 NONE NONE NONE NONE LIGHT

Emulsified Water

scalar *Visual

scalar

*Visual

>0.1

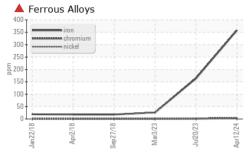
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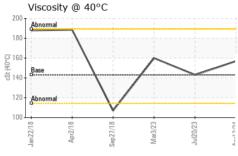
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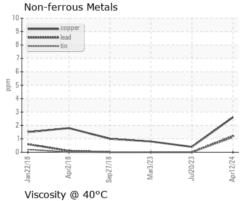
OIL ANALYSIS REPORT

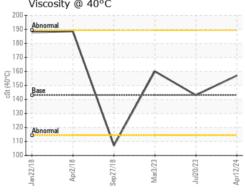




FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	143	157	143	160
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color				no image	no image	no image
Bottom				no image	no image	no image
GRAPHS						

Ferrous Alloys 150 100







Certificate 12367

Laboratory

Sample No. : DJJ0022498 Lab Number : 06152380 Unique Number : 10982458

Test Package : CONST

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested**

: 18 Apr 2024 : 22 Apr 2024 - Sean Felton Diagnosed

: 17 Apr 2024

RIVER METALS RECYCLING - DECATUR FACILITY

4301 IVERSON BLVD TRINITY, AL US 35673

Contact: LARRY BARBER

larry.barber@rmrecycling.com T:

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)

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