

## WEAR **ABNORMAL** CONTAMINATION NORMAL FLUID CONDITION NORMAL



LIEBHERR L556 057483-1332

Front Differential

{not provided} (--- GAL)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

W	/E	A	R

PQ levels are abnormal. Copper, iron and nickel ppm levels are abnormal. Gear wear is indicated. Thrust washer and/or bearing/bushing wear is indicated. The high ferrous density (PQ) index indicates that abnormal wear is occurring.

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## CONTAMINATION

There is no indication of any contamination in the oil.

## UID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH		
Sample Date		Client Info		22 Jan 2024		
Machine Age	hrs	Client Info		7383		
Oil Age	hrs	Client Info		0		
Filter Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Filter Changed		Client Info		N/A		
Sample Status				ABNORMAL		
PQ		ASTM D8184*	>500	<b>692</b>		
Iron	ppm	ASTM D5185(m)	>1000	<u> </u>		
Chromium	ppm	ASTM D5185(m)	>10	6		
Nickel	ppm	ASTM D5185(m)	>2	<mark>▲</mark> 3		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		<1		
Aluminum	ppm	ASTM D5185(m)	>25	5		
Lead	ppm	ASTM D5185(m)	>5	4		
Copper	ppm	ASTM D5185(m)	>100	<b>1</b> 41		
Tin	ppm	ASTM D5185(m)	>10	7		
Vanadium	ppm	ASTM D5185(m)		0		
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Silicon		ASTM D5185(m)	>100	22		
	ppm		>100			
Deteccium		( )				
Potassium	ppm	ASTM D5185(m)	>20	2		
Water		ASTM D5185(m) WC Method	>20 >.2	2 NEG		
Water Silt	scalar	ASTM D5185(m) WC Method Visual*	>20 >.2 NONE	2 NEG VLITE		
Water Silt Debris	scalar scalar	ASTM D5185(m) WC Method Visual* Visual*	>20 >.2 NONE NONE	2 NEG VLITE NONE	 	
Water Silt Debris Sand/Dirt	scalar scalar scalar	ASTM D5185(m) WC Method Visual* Visual* Visual*	>20 >.2 NONE NONE NONE	2 NEG VLITE NONE NONE	  	 
Water Silt Debris Sand/Dirt Appearance	scalar scalar scalar scalar	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual*	>20 >.2 NONE NONE NONE	2 NEG VLITE NONE NONE NORML	 	
Water Silt Debris Sand/Dirt Appearance Odor	scalar scalar scalar scalar scalar	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual*	>20 >.2 NONE NONE NORML NORML	2 NEG VLITE NONE NONE NORML NORML	  	 
Water Silt Debris Sand/Dirt Appearance	scalar scalar scalar scalar	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual*	>20 >.2 NONE NONE NONE	2 NEG VLITE NONE NONE NORML	  	
Water Silt Debris Sand/Dirt Appearance Odor	scalar scalar scalar scalar scalar scalar	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual*	>20 >.2 NONE NONE NORML NORML	2 NEG VLITE NONE NONE NORML NORML	  	
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	scalar scalar scalar scalar scalar scalar scalar	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m)	>20 >.2 NONE NONE NORML NORML	2 NEG VLITE NONE NORML NORML NEG		
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m)	>20 >.2 NONE NONE NORML NORML	2 NEG VLITE NONE NORML NORML NEG 17		
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m)	>20 >.2 NONE NONE NORML NORML	2 NEG VLITE NONE NORML NORML NEG 17 94 <1		
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	scalar scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >.2 NONE NONE NORML NORML	2 NEG VLITE NONE NORML NORML NEG 17 94		
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >.2 NONE NONE NORML NORML	2 NEG VLITE NONE NORML NORML NEG 17 94 <1 217 72		
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium	scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >.2 NONE NONE NORML NORML	2 NEG VLITE NONE NORML NORML NEG 17 94 <1 217 72 11		
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium Calcium	scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >.2 NONE NONE NORML NORML	2 NEG VLITE NONE NORML NORML NEG 17 94 <1 217 72 11 3378		
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >.2 NONE NONE NORML NORML	2 NEG VLITE NONE NORML NORML NEG 17 94 <1 217 72 11 3378 1197		
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Malybdenum Manganese Magnesium Calcium Phosphorus Zinc	scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >.2 NONE NONE NORML NORML	2 NEG VLITE NONE NORML NORML NEG 17 94 <1 217 72 11 3378 1197 1365		
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >.2 NONE NONE NORML NORML	2 NEG VLITE NONE NORML NORML NEG 17 94 <1 217 72 11 3378 1197		

Submitted By: Olivier Galimi



