

Machine Id LIEBI Component Pump Fluid GEAR

LIEBHERR LH50M 1216-108671

Pump Drive

GEAR OIL LS 80W90 (3 QTS)

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.

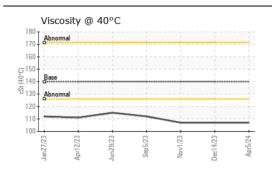
FLUID CONDITION

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

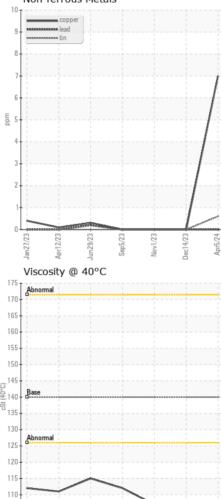
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0258881	LH0263998	LH0272541
Sample Date		Client Info		05 Apr 2024	14 Dec 2023	01 Nov 2023
Machine Age	hrs	Client Info		20592	19125	18598
Oil Age	hrs	Client Info		500	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
			. 60	 06	E	0
Iron	ppm		>63	36	5	8
Chromium	ppm	ASTM D5185m	>15	<1	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	_	0	0	0
Aluminum	ppm	ASTM D5185m	>5	0	0	0
Lead	ppm	ASTM D5185m	>4	0	0	0
Copper	ppm	ASTM D5185m	>11	7	0	0
Tin	ppm	ASTM D5185m	>4	<1	0	0
Vanadium	ppm	ASTM D5185m	NONE	0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	2	<1	<1
	ppin	ASTIVI DJIOJIII	~20	-		< 1
Potassium	ppm	ASTM D5185m	>20	<1	0	<1
Potassium Water				_		
		ASTM D5185m	>20	<1	0	<1
Water	ppm	ASTM D5185m WC Method	>20 >0.2	<1 NEG	0 NEG	<1 NEG
Water Silt	ppm scalar	ASTM D5185m WC Method *Visual	>20 >0.2 NONE	<1 NEG NONE	0 NEG NONE	<1 NEG NONE
Water Silt Debris	ppm scalar scalar	ASTM D5185m WC Method *Visual *Visual	>20 >0.2 NONE NONE	<1 NEG NONE NONE	0 NEG NONE NONE	<1 NEG NONE NONE
Water Silt Debris Sand/Dirt	ppm scalar scalar scalar	ASTM D5185m WC Method *Visual *Visual *Visual	>20 >0.2 NONE NONE NONE	<1 NEG NONE NONE NONE	0 NEG NONE NONE	<1 NEG NONE NONE NONE
Water Silt Debris Sand/Dirt Appearance	ppm scalar scalar scalar scalar	ASTM D5185m WC Method *Visual *Visual *Visual *Visual	>20 >0.2 NONE NONE NONE	<1 NEG NONE NONE NONE NORML	0 NEG NONE NONE NONE NORML	<1 NEG NONE NONE NORE NORML
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm scalar scalar scalar scalar scalar	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>20 >0.2 NONE NONE NORML NORML	<1 NEG NONE NONE NONE NORML NORML NEG	0 NEG NONE NONE NORML NORML NEG	<1 NEG NONE NONE NORML NORML NEG
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>20 >0.2 NONE NONE NORML NORML >0.2	<1 NEG NONE NONE NORML NORML NEG 2	0 NEG NONE NONE NORML NORML NEG	<1 NEG NONE NONE NORML NORML NEG
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>20 >0.2 NONE NONE NORML NORML	<1 NEG NONE NONE NORML NORML NEG 2 15	0 NEG NONE NONE NORML NORML NEG <1	<1 NEG NONE NONE NORML NORML NEG 1 3
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML >0.2	<pre><1 NEG NONE NONE NONE NORML NORML NEG 2 15 0</pre>	0 NEG NONE NONE NORML NORML NEG <1 1 0	<1 NEG NONE NONE NORML NORML NEG 1 3 0
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	ppm scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML >0.2	<1 NEG NONE NONE NORML NORML NEG 2 15 0 0	0 NEG NONE NONE NORML NORML NEG <1 1 0 0	<pre><1 NEG NONE NONE NORML NORML NEG 1 3 0 0</pre>
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	 >20 >0.2 NONE NORML >0.2 150 	<1 NEG NONE NONE NORML NORML NEG 2 15 0 0 2 15	0 NEG NONE NONE NORML NORML NEG <1 1 0 0 0 <1	<1 NEG NONE NONE NORML NORML NEG 1 3 0 0 0 0
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	 >20 >0.2 NONE NONE NORML >0.2 150 10 	<pre><1 NEG NONE NONE NORML NORML NORML 2 15 0 </pre>	0 NEG NONE NONE NORML NORML NEG <1 1 0 0 0 <1 4	<pre><1 NEG NONE NONE NONE NORML NORML NEG 1 3 0 0 0 0 3</pre>
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	 >20 >0.2 NONE NONE NORML NORML >0.2 150 10 70 	<pre><1 NEG NONE NONE NORML NORML NEG 2 15 0 </pre> <pre> 2 15 4 81</pre>	0 NEG NONE NONE NORML NORML NEG <1 1 0 0 <1 4 88	<1 NONE NONE NORML NORML NORML 1 3 0 0 0 3 84
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	 >20 >0.2 NONE NORME NORML >0.2 150 10 70 2000 	<pre><1 NEG NONE NONE NORML NORML NEG 2 15 0 </pre> <pre> </pre> <pre> 2 </pre> <pre> 4 </pre> <pre> 81 </pre>	0 NEG NONE NONE NORML NORML NEG <1 1 0 0 0 <1 4	 <1 NEG NONE NONE NORML NORML NORML NEG 1 3 0 0 0 3
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	 >20 >0.2 NONE NONE NORML NORML >0.2 150 150 70 2000 50 	<1 NONE NONE NORML NORML NORML NORML 0 2 15 0 0 <1 4 81 873 73	0 NEG NONE NONE NORML NORML NEG <1 1 0 0 (1 4 88 88 821 74	 <1 NEG NONE NONE NORML NORML NORML NEG 1 3 0 0 3 84 712 83
Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	 >20 >0.2 NONE NORME NORML >0.2 150 10 70 2000 	<pre><1 NEG NONE NONE NORML NORML NEG 2 15 0 </pre> <pre> </pre> <pre> 2 </pre> <pre> 4 </pre> <pre> 81 </pre>	0 NEG NONE NONE NORML NORML NEG <1 1 0 0 <1 4 88 88 821	 <1 NEG NONE NORM NORML NORML NEG 1 3 0 0 0 3 84 712

Report Id: LEC0008 [WUSCAR] 06157146 (Generated: 04/25/2024 18:40:59) Rev: 1

Contact/Location: CHRIS BARTNIK - LEC0008



Ferrous Alloys 36 34 32 icke 30 28 26 24 22 20 E 18 16 14 12 10 8 6 0 Nov1/23 Dec14/23 Apr5/24. C/23 an27/2: Apr1 Non-ferrous Metals 10 lead ppm Nov1/23 lec14/23 an 5/7 Pr] Viscosity @ 40°C 17 170 165 160 155 150 (145 (0.00 (140 र्दे 135 130 Ah 12 120 115 110 105 Sep5/23 Apr5/24 -Jan27/23 Jun29/23 Nov1/23 Dec14/23 Apr12/23



AMERICAN STATE EQUIPMENT CO. 2400 NORTH 14TH AVENUE WAUSAU, WI : 23 Apr 2024 - Wes Davis US 54401 Contact: CHRIS BARTNIK cbartnik@amstate.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

: LH0258881

* - 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)

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

Received

Diagnosed

Tested

: 22 Apr 2024

: 23 Apr 2024

Certificate L2367

Laboratory

Sample No.

Lab Number : 06157146

Unique Number : 10992569

Test Package : CONST

Contact/Location: CHRIS BARTNIK - LEC0008 Page 2 of 2

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