

Limit/Abn Current

Historv1

History<sub>2</sub>

Machine Id Component Rear Differential

RECOMMENDATION

## LIEBHERR LH50 1216-115017

CHEVRON DELO GEAR ESI OIL 80W90 (--- GAL)

Test

UOM

Method

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		LH0263951	LH0243327	LH0243379
	Sample Date		Client Info		30 Jan 2024	29 Sep 2023	03 Apr 2023
	Machine Age	hrs	Client Info		8879	8189	7172
	Oil Age	hrs	Client Info		0	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
WEAR	Iron	ppm	ASTM D5185m	>190	7	20	72
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>2	0	0	0
	Nickel	ppm	ASTM D5185m		0	0	0
	Titanium	ppm	ASTM D5185m		<1	1	0
	Silver	ppm	ASTM D5185m		0	0	0
	Aluminum	ppm	ASTM D5185m	>5	0	0	0
	Lead	ppm	ASTM D5185m	>15	0	0	0
	Copper	ppm	ASTM D5185m	>70	<1	1	1
	Tin	ppm	ASTM D5185m	>2	0	0	0
	Vanadium	ppm	ASTM D5185m		0	0	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	MODER
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	>20	<1	1	3
	Silicon Potassium	ppm ppm	ASTM D5185m ASTM D5185m		<1 0	1	3 2
CONTAMINATION There is no indication of any contamination in the oil.				>20			
	Potassium		ASTM D5185m	>20	0	1	2
	Potassium Water	ppm	ASTM D5185m WC Method	>20 >.2	0 NEG	1 NEG	2 NEG
	Potassium Water Silt	ppm scalar	ASTM D5185m WC Method *Visual	>20 >.2 NONE	0 NEG NONE	1 NEG NONE	2 NEG NONE
	Potassium Water Silt Debris	ppm scalar scalar	ASTM D5185m WC Method *Visual *Visual	>20 >.2 NONE NONE NONE	0 NEG NONE NONE NONE NORML	1 NEG NONE NONE NONE NORML	2 NEG NONE NONE NONE
	Potassium Water Silt Debris Sand/Dirt Appearance Odor	ppm scalar scalar scalar scalar scalar	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual	>20 >.2 NONE NONE NORML NORML	0 NEG NONE NONE NORE NORML	1 NEG NONE NONE NONE NORML NORML	2 NEG NONE NONE NORML NORML
	Potassium Water Silt Debris Sand/Dirt Appearance	ppm scalar scalar scalar scalar scalar	ASTM D5185m WC Method *Visual *Visual *Visual *Visual	>20 >.2 NONE NONE NONE	0 NEG NONE NONE NONE NORML	1 NEG NONE NONE NONE NORML	2 NEG NONE NONE NONE
	Potassium Water Silt Debris Sand/Dirt Appearance Odor	ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>20 >.2 NONE NONE NORML NORML >.2	0 NEG NONE NONE NORE NORML	1 NEG NONE NONE NONE NORML NORML	2 NEG NONE NONE NORML NORML
There is no indication of any contamination in the oil.	Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>20 >.2 NONE NONE NORML NORML >.2	0 NEG NONE NONE NORML NORML NEG	1 NEG NONE NONE NORML NORML NEG	2 NEG NONE NONE NORML NORML NEG
There is no indication of any contamination in the oil.	Potassium 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 ASTM D5185m ASTM D5185m	>20 >.2 NONE NONE NORML NORML >.2 15 0	0 NEG NONE NONE NORML NORML NEG	1 NEG NONE NONE NORML NORML NEG 0	2 NEG NONE NONE NORML NORML NEG 2
There is no indication of any contamination in the oil.	Potassium 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 >.2 NONE NONE NORML NORML >.2 15 0	0 NEG NONE NONE NORML NORML NEG 1 7	1 NEG NONE NONE NORML NORML NEG 0 3	2 NEG NONE NONE NORML NORML NEG 2 12
There is no indication of any contamination in the oil.	Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >.2 NONE NONE NORML >.2 15 0 0	0 NEG NONE NONE NORML NORML NEG 1 7 0	1 NEG NONE NONE NORML NORML NEG 0 3 0	2 NEG NONE NONE NORML NORML NEG 2 12 0 11
There is no indication of any contamination in the oil.	Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Barium Molybdenum Manganese	ppm scalar scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >.2 NONE NONE NORML NORML >.2 15 0 0	0 NEG NONE NONE NORML NORML NEG 1 7 0 0 0 <1 3	1 NEG NONE NONE NORML NORML NEG 0 3 0 3 0 <1 <1 <1 15	2 NEG NONE NONE NORML NORML NEG 2 12 0 11 1 1 1
There is no indication of any contamination in the oil.	Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Barium Malybdenum Manganese Magnesium	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 ASTM D5185m ASTM D5185m	>20 >.2 NONE NONE NORML NORML >.2 15 0 0 0	0 NEG NONE NONE NORML NORML NEG 1 7 0 0 <1 3 39	1 NEG NONE NONE NORML NORML NEG 0 3 0 <1 <1 <1 15 40	2 NEG NONE NONE NORML NORML NEG 2 12 0 1 1 1 1 1 1 1 60
There is no indication of any contamination in the oil.	Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium 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 >.2 NONE NONE NORML >.2 15 0 0 0 0 5 600	0 NEG NONE NONE NORML NORML NEG 1 7 0 0 <1 3 39 831	1 NEG NONE NONE NORML NORML NEG 0 3 0 3 0 4 1 5 40 713	2 NEG NONE NONE NORML NORML NEG 2 12 0 12 0 11 1 1 1 1 1 1 60 795
There is no indication of any contamination in the oil.	Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Barium Malybdenum Manganese Magnesium	ppm scalar scalar scalar scalar scalar 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	>20 >.2 NONE NONE NORML NORML >.2 15 0 0 0 0 5 600 0 0	0 NEG NONE NONE NORML NORML NEG 1 7 0 0 <1 3 39	1 NEG NONE NONE NORML NORML NEG 0 3 0 <1 <1 <1 15 40	2 NEG NONE NONE NORML NORML NEG 2 12 0 1 1 1 1 1 1 1 60

Visc @ 40°C

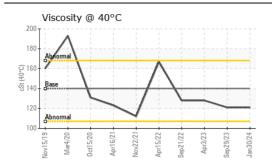
cSt

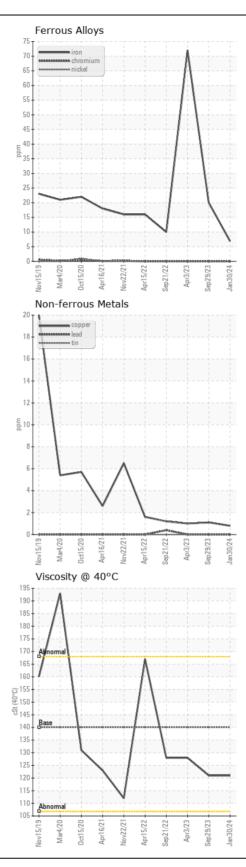
ASTM D445 140

121

121

128





Sample No. : LH0263951 Lab Number : 06084388 Unique Number : 10871833 Test Package : CONST Certificate L2367 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received :08 Feb 2024 :09 Feb 2024 Tested : 12 Feb 2024 - Sean Felton Diagnosed

ALTER RECYCLING 2175 BADGERLAND DR GREEN BAY, WI US 54303 Contact: LORI GRAVES lori.graves@altertrading.com

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

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: ALTGRE [WUSCAR] 06084388 (Generated: 02/12/2024 11:51:48) Rev: 1

Laboratory

F:

Т: