



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR A934C 064064-1007
Component
Pump Drive
Fluid
CHEVRON DELO GEAR ESI OIL 80W90 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0268381	LH0258825	LH0243333
Sample Date		Client Info		27 Jun 2024	20 Feb 2024	02 Oct 2023
Machine Age	hrs	Client Info		26934	26421	25481
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				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>63	37	23	11
Chromium	ppm	ASTM D5185m	>15	0	<1	0
Nickel	ppm	ASTM D5185m	>10	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	1	1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>5	<1	<1	0
Lead	ppm	ASTM D5185m	>4	<1	1	1
Copper	ppm	ASTM D5185m	>11	<1	<1	<1
Tin	ppm	ASTM D5185m	>4	0	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	MODER	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

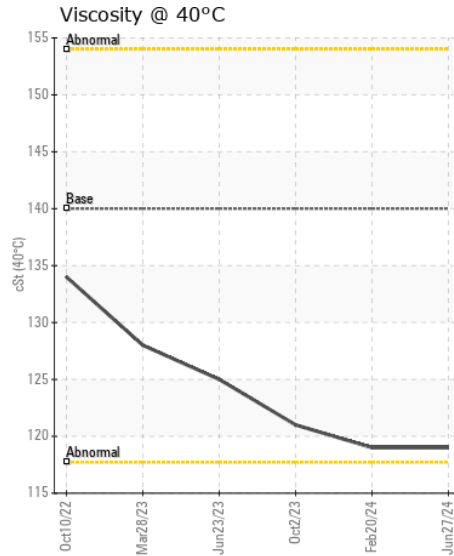
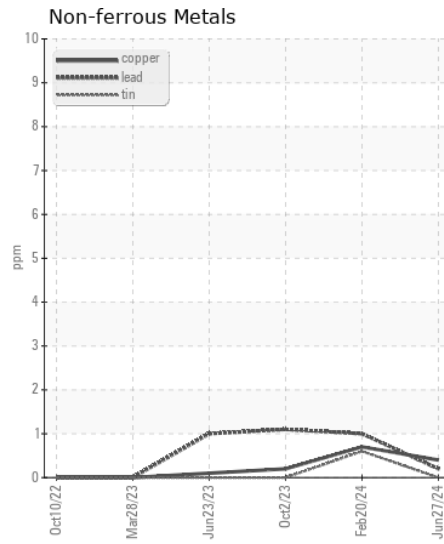
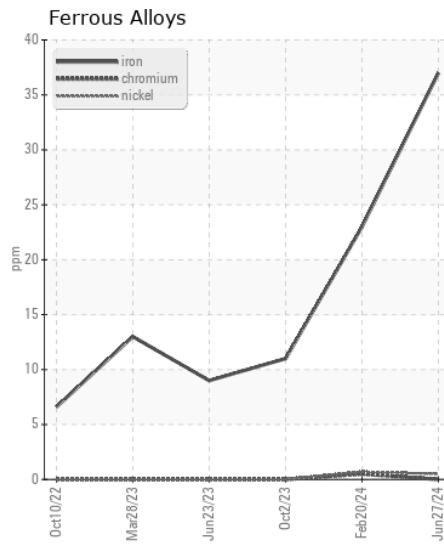
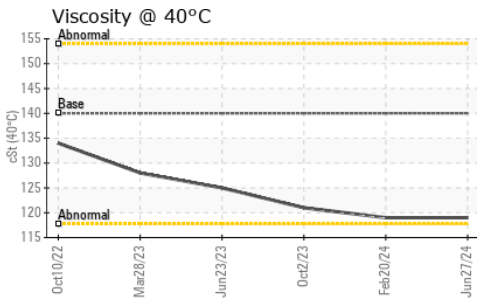
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>20	2	4	2
Potassium	ppm	ASTM D5185m	>20	3	4	3
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		2	<1	<1
Boron	ppm	ASTM D5185m	15	0	3	8
Barium	ppm	ASTM D5185m	0	0	2	0
Molybdenum	ppm	ASTM D5185m	0	0	1	<1
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m	0	6	5	17
Calcium	ppm	ASTM D5185m	5	54	50	55
Phosphorus	ppm	ASTM D5185m	600	986	756	1015
Zinc	ppm	ASTM D5185m	0	37	40	25
Sulfur	ppm	ASTM D5185m	22000	27483	22040	31847
Visc @ 40°C	cSt	ASTM D445	140	119	119	121



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0268381
Lab Number : 06237185
Unique Number : 11126019
Test Package : CONST

Received : 15 Jul 2024
Tested : 17 Jul 2024
Diagnosed : 17 Jul 2024 - Don Baldrige

AMERICAN STATE EQUIPMENT CO.
 2400 NORTH 14TH AVENUE
 WAUSAU, WI
 US 54401

Contact: CHRIS BARTNIK
 cbartnik@amstate.com

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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