



OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

ATTENTION
ABNORMAL
NORMAL

Machine Id
LIEBHERR 31240

Component
Left Final Drive

Fluid
CHEVRON DELO GEAR ESI OIL 80W90 (6 QTS)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

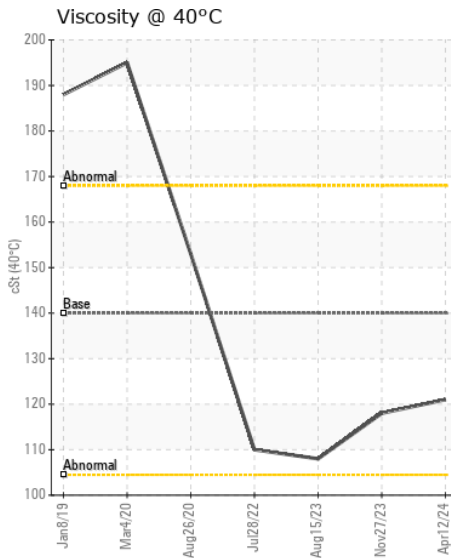
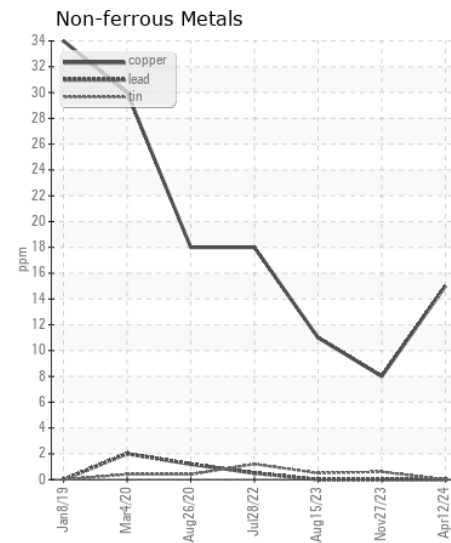
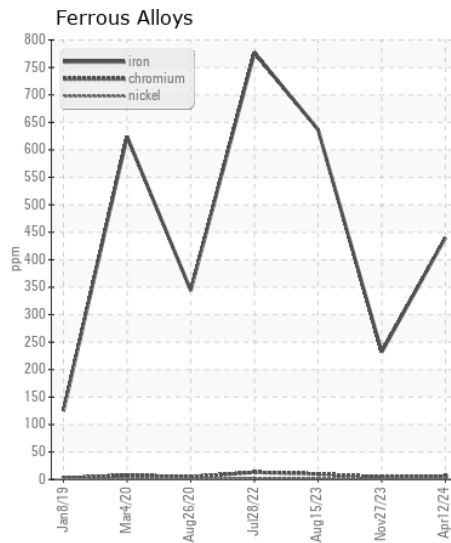
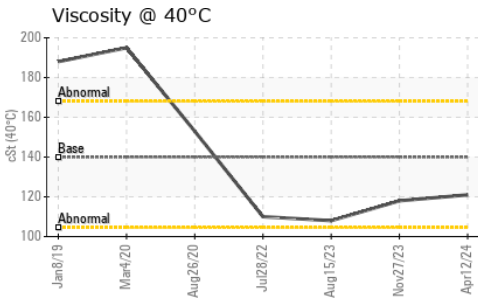
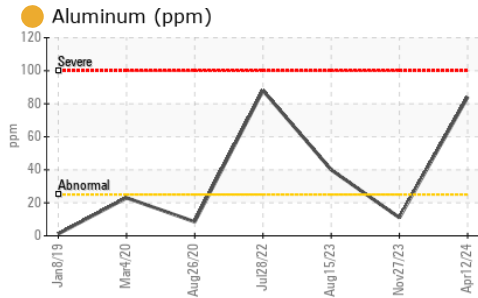
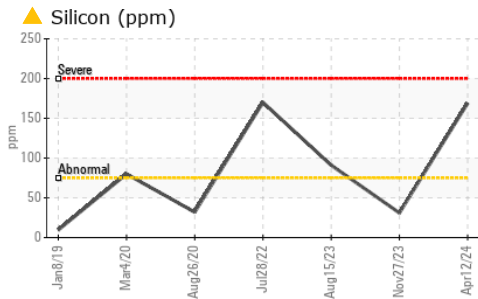
The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0913670	WC0857042	WC0822772
Sample Date		Client Info		12 Apr 2024	27 Nov 2023	15 Aug 2023
Machine Age	hrs	Client Info		10788	10304	9827
Oil Age	hrs	Client Info		1000	500	2000
Filter Age	hrs	Client Info		1000	500	2000
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL

Iron	ppm	ASTM D5185m	>500	440	232	▲ 637
Chromium	ppm	ASTM D5185m	>10	6	4	▲ 10
Nickel	ppm	ASTM D5185m	>10	1	<1	2
Titanium	ppm	ASTM D5185m		3	<1	2
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	84	11	● 40
Lead	ppm	ASTM D5185m	>25	0	0	0
Copper	ppm	ASTM D5185m	>50	15	8	11
Tin	ppm	ASTM D5185m	>10	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>75	▲ 169	31	▲ 91
Potassium	ppm	ASTM D5185m	>20	21	4	6
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	MODER	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
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

Sodium	ppm	ASTM D5185m		7	3	4
Boron	ppm	ASTM D5185m	15	52	85	114
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	7	6	7
Manganese	ppm	ASTM D5185m		3	2	5
Magnesium	ppm	ASTM D5185m	0	29	26	24
Calcium	ppm	ASTM D5185m	5	92	120	125
Phosphorus	ppm	ASTM D5185m	600	2067	1895	3047
Zinc	ppm	ASTM D5185m	0	61	94	96
Sulfur	ppm	ASTM D5185m	22000	19579	17712	20409
Visc @ 40°C	cSt	ASTM D445	140	121	118	108



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0913670
Lab Number : 06151382
Unique Number : 10981460
Test Package : CONST
Received : 16 Apr 2024
Tested : 18 Apr 2024
Diagnosed : 19 Apr 2024 - Sean Felton

SULLIVAN EASTERN INC-LIEBHERR
 2860 C SLATER RD
 MORRISVILLE, NC
 US 27560
 Contact: CHRIS CALTON

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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