CONST

LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
LIEBHERR A934C 064064-1007
Component
Diesel Engine
Fluid
CHEVRON DELO LE 5W40 (7 GAL)

RECOMMENDATION

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

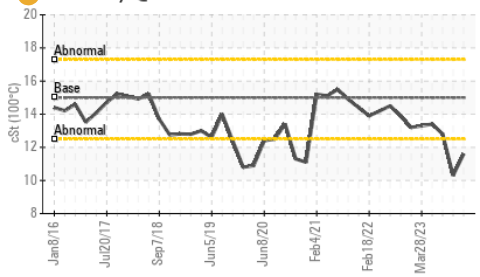
There is no indication of any contamination in the oil.

FLUID CONDITION

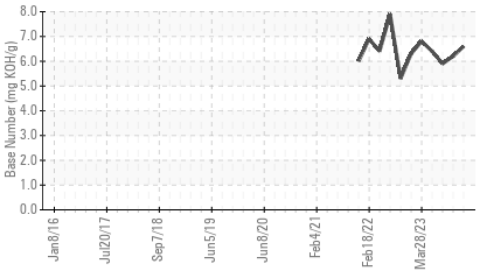
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0258824	LH0272765	LH0243356
Sample Date		Client Info		20 Feb 2024	21 Dec 2023	02 Oct 2023
Machine Age	hrs	Client Info		26421	25949	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		Changed	Changed	Changed
Sample Status				ATTENTION	ATTENTION	NORMAL
Iron	ppm	ASTM D5185m	>66	18	15	21
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		59	45	58
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>8	1	1	2
Lead	ppm	ASTM D5185m	>10	<1	<1	<1
Copper	ppm	ASTM D5185m	>74	1	3	1
Tin	ppm	ASTM D5185m	>4	0	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>15	10	6	7
Potassium	ppm	ASTM D5185m	>20	2	4	4
Fuel	%	ASTM D3524	>5	<1.0	0.5	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.3	1.1	2.5
Nitration	Abs/cm	*ASTM D7624	>20	8.2	7.1	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.4	24.3	26.3
Silt	scalar	*Visual	NONE	NONE	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		3	0	3
Boron	ppm	ASTM D5185m	66	65	58	33
Barium	ppm	ASTM D5185m		0	10	0
Molybdenum	ppm	ASTM D5185m	70	2	3	7
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	1230	474	320	578
Calcium	ppm	ASTM D5185m	930	1569	1561	1431
Phosphorus	ppm	ASTM D5185m	1230	944	916	914
Zinc	ppm	ASTM D5185m	1310	1131	982	1181
Sulfur	ppm	ASTM D5185m	3460	3516	3991	3297
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.1	15.3	15.7
Base Number (BN)	mg KOH/g	ASTM D2896		6.6	6.2	5.9
Visc @ 100°C	cSt	ASTM D445	15	▲ 11.6	10.3	12.8

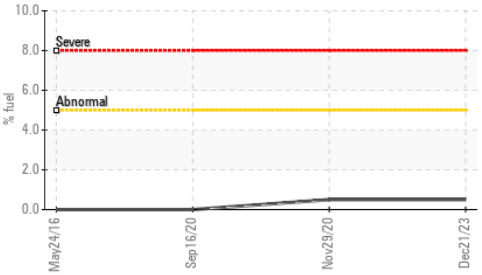
Viscosity @ 100°C



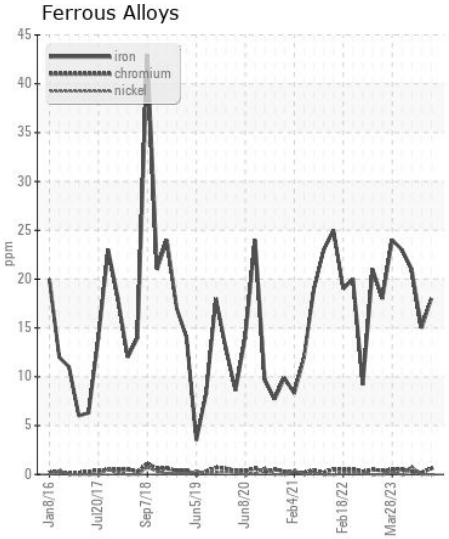
Base Number



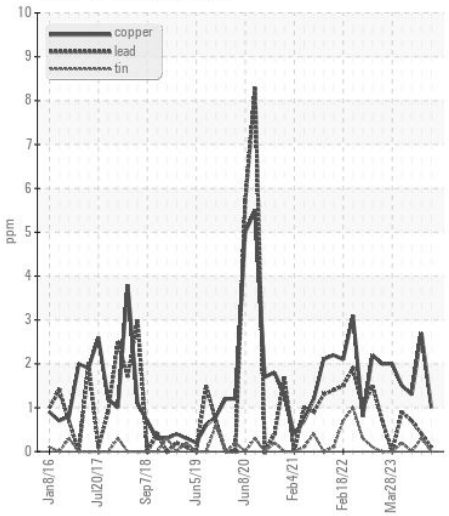
Fuel Dilution



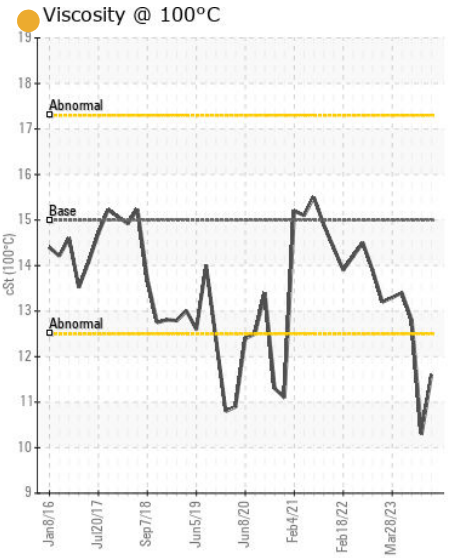
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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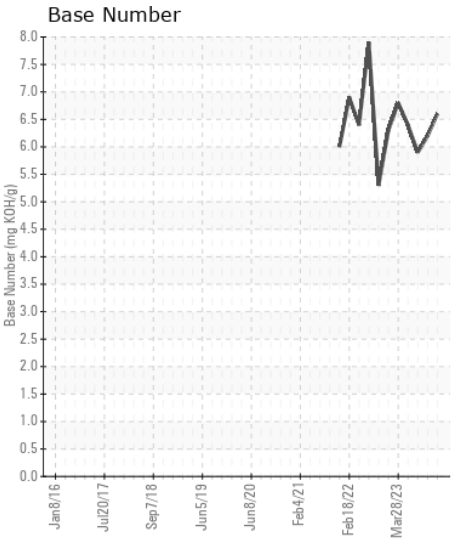

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0258824 **Received** : 28 Feb 2024
Lab Number : 06103606 **Tested** : 01 Mar 2024
Unique Number : 10901836 **Diagnosed** : 01 Mar 2024 - Don Baldridge
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

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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