CONST

LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
[MCDONAGH]
Machine Id
LIEBHERR R956 056876-1728
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 5W40 (--- GAL)

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

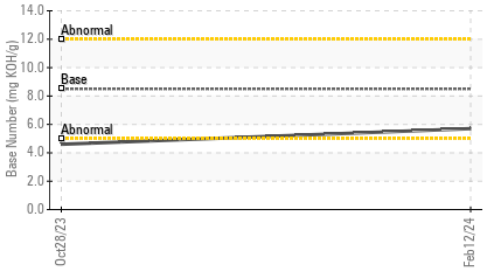
There is no indication of any contamination in the oil.

FLUID CONDITION

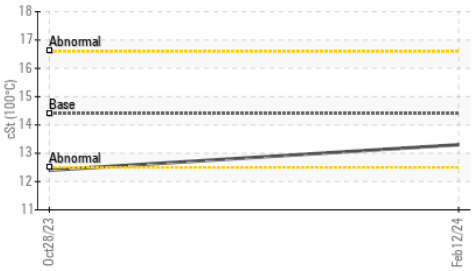
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0258538	LH0267589	---
Sample Date		Client Info		12 Feb 2024	28 Oct 2023	---
Machine Age	hrs	Client Info		1075	552	---
Oil Age	hrs	Client Info		500	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	ATTENTION	---
Iron	ppm	ASTM D5185m	>100	1	18	---
Chromium	ppm	ASTM D5185m	>5	<1	1	---
Nickel	ppm	ASTM D5185m	>5	0	<1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>15	2	4	---
Lead	ppm	ASTM D5185m	>30	2	3	---
Copper	ppm	ASTM D5185m	>125	70	200	---
Tin	ppm	ASTM D5185m	>5	<1	1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>60	8	10	---
Potassium	ppm	ASTM D5185m	>20	4	9	---
Fuel		WC Method	>5	<1.0	1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	8.8	11.5	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.8	37.6	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---
Sodium	ppm	ASTM D5185m	>44	3	0	---
Boron	ppm	ASTM D5185m	250	71	84	---
Barium	ppm	ASTM D5185m	10	5	28	---
Molybdenum	ppm	ASTM D5185m	100	21	46	---
Manganese	ppm	ASTM D5185m		<1	1	---
Magnesium	ppm	ASTM D5185m	450	748	882	---
Calcium	ppm	ASTM D5185m	3000	1377	1272	---
Phosphorus	ppm	ASTM D5185m	1150	777	753	---
Zinc	ppm	ASTM D5185m	1350	933	907	---
Sulfur	ppm	ASTM D5185m	4250	2543	2274	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.4	47.6	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.7	4.6	---
Visc @ 100°C	cSt	ASTM D445	14.4	13.3	12.4	---

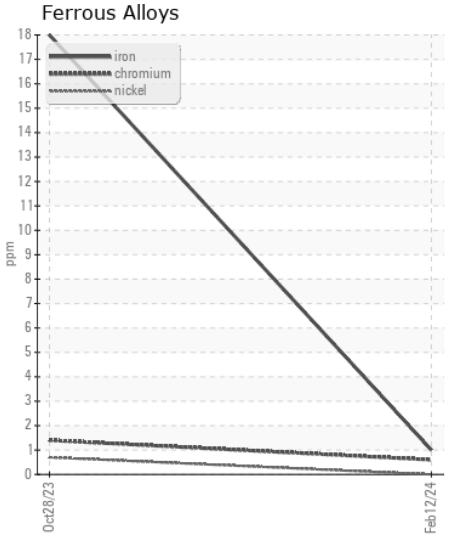
Base Number



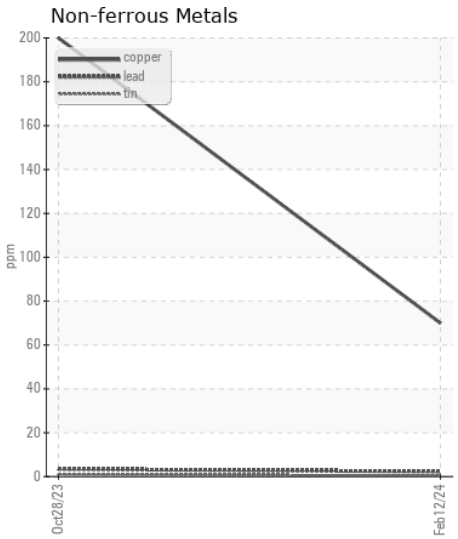
Viscosity @ 100°C



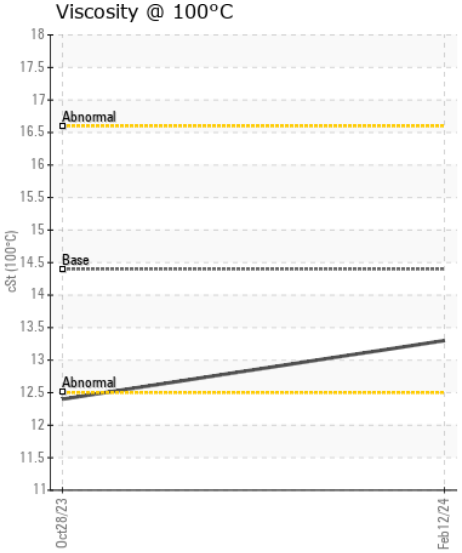
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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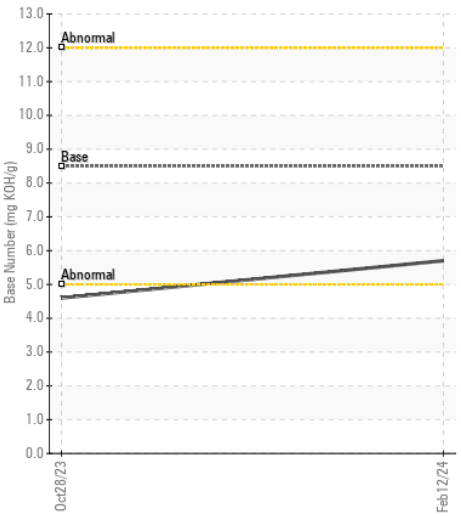

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0258538 **Received** : 26 Feb 2024
Lab Number : 06100817 **Tested** : 27 Feb 2024
Unique Number : 10899047 **Diagnosed** : 27 Feb 2024 - Wes Davis
Test Package : CONST (Additional Tests: 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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