LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
142001
Component
Diesel Engine
Fluid
LIEBHERR MOTOROIL 10W-40 LOW ASH (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

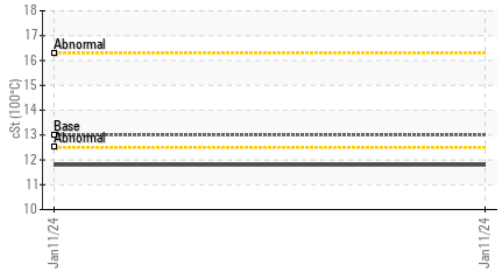
Fuel content negligible.

FLUID CONDITION

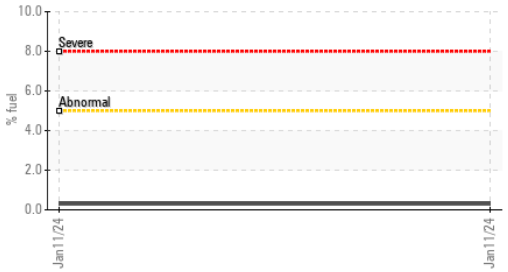
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LM0000793	---	---
Sample Date		Client Info		11 Jan 2024	---	---
Machine Age	hrs	Client Info		517	---	---
Oil Age	hrs	Client Info		517	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Not Changd	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---
Iron	ppm	ASTM D5185m	>100	9	---	---
Chromium	ppm	ASTM D5185m	>5	<1	---	---
Nickel	ppm	ASTM D5185m	>5	0	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>15	3	---	---
Lead	ppm	ASTM D5185m	>30	1	---	---
Copper	ppm	ASTM D5185m	>125	188	---	---
Tin	ppm	ASTM D5185m	>5	1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Silicon	ppm	ASTM D5185m	>60	9	---	---
Potassium	ppm	ASTM D5185m	>20	2	---	---
Fuel	%	ASTM D3524	>5	0.3	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	10.3	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	38.8	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Sodium	ppm	ASTM D5185m		<1	---	---
Boron	ppm	ASTM D5185m	169	99	---	---
Barium	ppm	ASTM D5185m	0	18	---	---
Molybdenum	ppm	ASTM D5185m	2	42	---	---
Manganese	ppm	ASTM D5185m	<1	5	---	---
Magnesium	ppm	ASTM D5185m	724	900	---	---
Calcium	ppm	ASTM D5185m	1323	1270	---	---
Phosphorus	ppm	ASTM D5185m	678	752	---	---
Zinc	ppm	ASTM D5185m	776	910	---	---
Sulfur	ppm	ASTM D5185m	2859	2199	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	49.2	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.28	6.0	---	---
Visc @ 100°C	cSt	ASTM D445	13.0	▲ 11.8	---	---

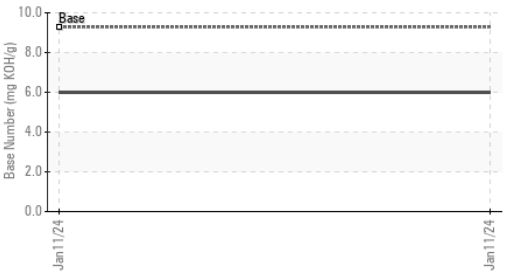
Viscosity @ 100°C



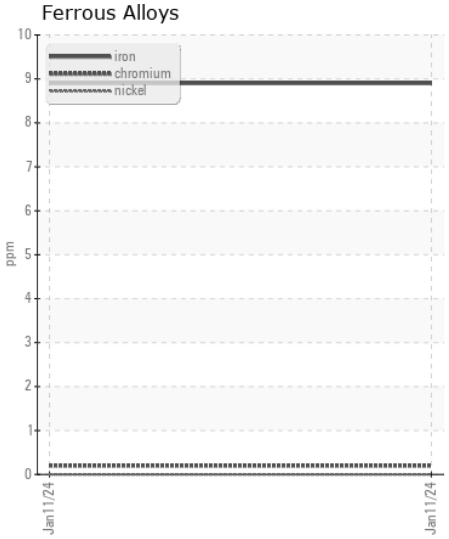
Fuel Dilution



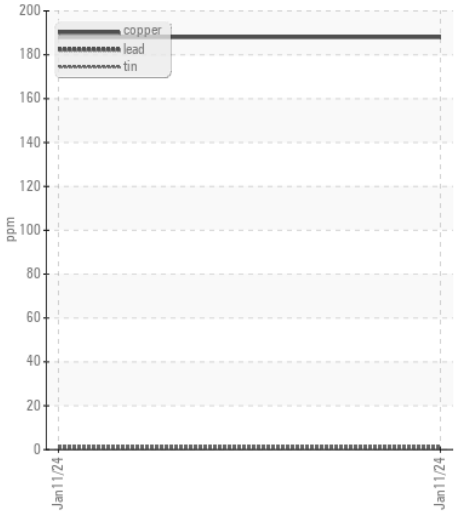
Base Number



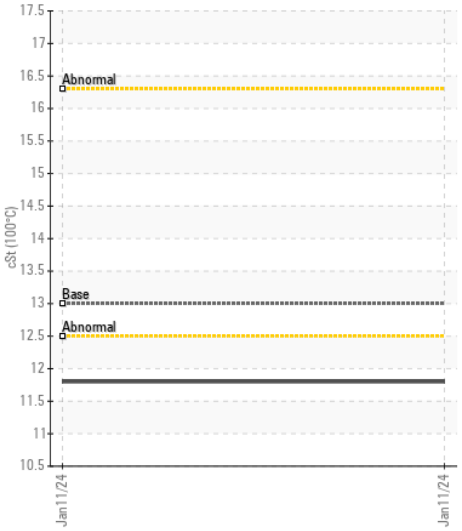
Ferrous Alloys



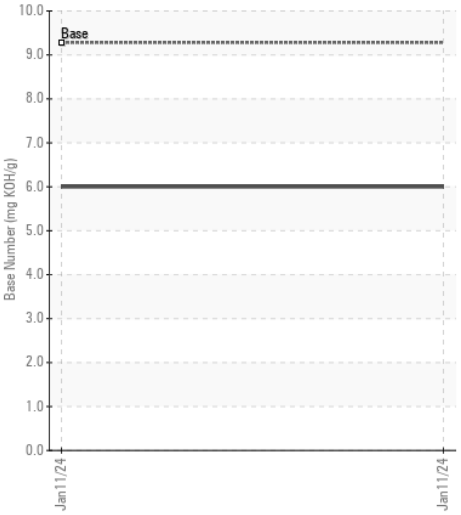
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: LM0000793	**Recieved**	: 18 Jan 2024
Lab Number	: 06064944	**Diagnosed**	: 24 Jan 2024
Unique Number	: 10836326	**Diagnostician**	: Angela Borella
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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