OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
STERLING 9086
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

CONTAMINATION

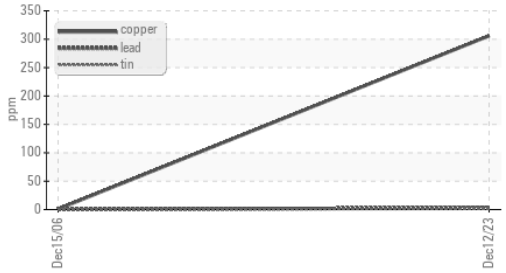
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

FLUID CONDITION

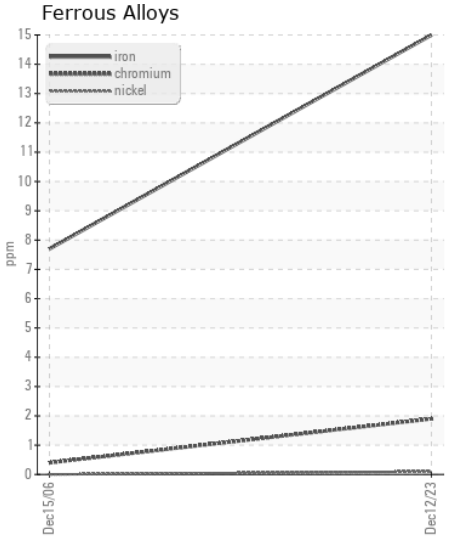
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0874157	WCMF107951	---
Sample Date		Client Info		12 Dec 2023	15 Dec 2006	---
Machine Age	mls	Client Info		0	429735	---
Oil Age	mls	Client Info		0	20000	---
Filter Age	mls	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				ABNORMAL	NORMAL	---
Iron	ppm	ASTM D5185m	>100	15	8	---
Chromium	ppm	ASTM D5185m	>20	2	<1	---
Nickel	ppm	ASTM D5185m	>4	<1	0	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m	>3	<1	0	---
Aluminum	ppm	ASTM D5185m	>20	21	1	---
Lead	ppm	ASTM D5185m	>40	3	0	---
Copper	ppm	ASTM D5185m	>330	▲ 306	<1	---
Tin	ppm	ASTM D5185m	>15	1	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>25	4	0	---
Potassium	ppm	ASTM D5185m	>20	44	2	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.3	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	7.5	5.	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.5	16.	---
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	>158	1	2	---
Boron	ppm	ASTM D5185m	250	4	2	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	56	<1	---
Manganese	ppm	ASTM D5185m		<1	1	---
Magnesium	ppm	ASTM D5185m	450	893	12	---
Calcium	ppm	ASTM D5185m	3000	1186	2892	---
Phosphorus	ppm	ASTM D5185m	1150	876	1158	---
Zinc	ppm	ASTM D5185m	1350	1191	1272	---
Sulfur	ppm	ASTM D5185m	4250	2605	4242	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.4	9.	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.0	13.00	---
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	15.24	---

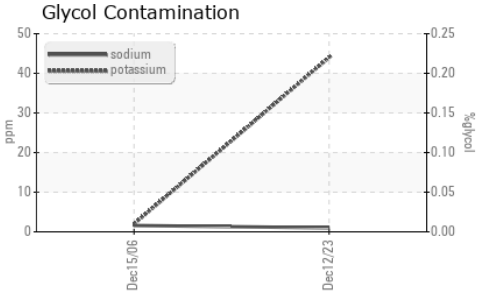
Non-ferrous Metals



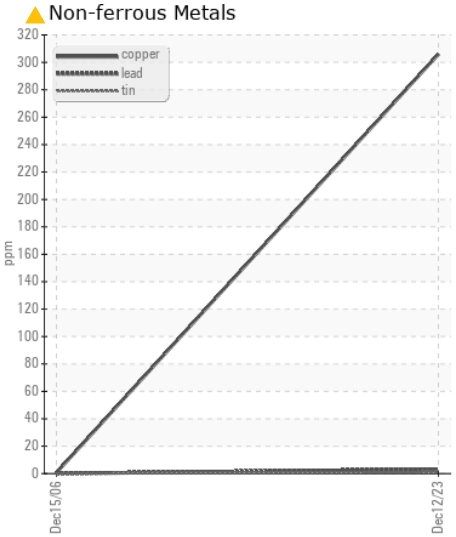
Ferrous Alloys



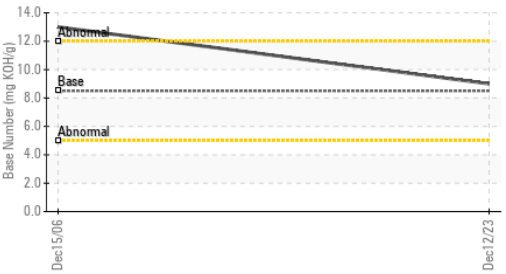
Glycol Contamination



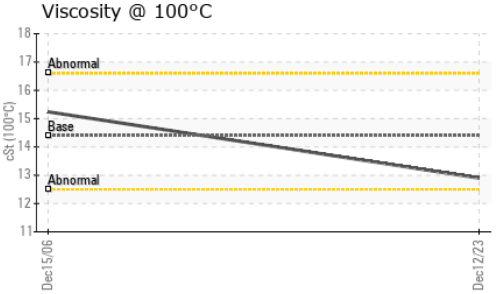
Non-ferrous Metals



Base Number



Viscosity @ 100°C



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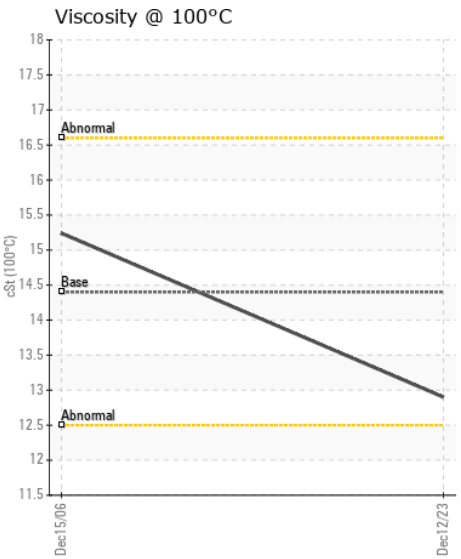
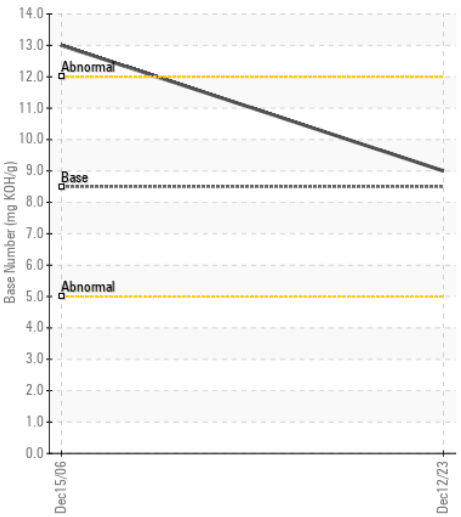
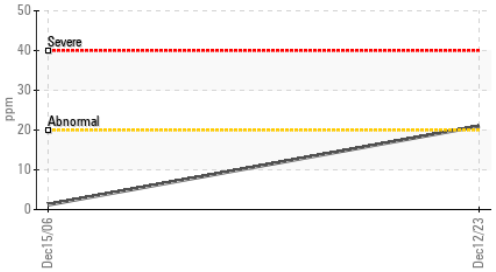


Base Number



Aluminum (ppm)



Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: WC0874157	**Recieved**	: 30 Jan 2024
Lab Number	: 06074528	**Diagnosed**	: 31 Jan 2024
Unique Number	: 10856619	**Diagnostician**	: Sean Felton
Test Package	: FLEET		

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)

SALEM NATIONALEASE CORPORATION
198 PARK PLAZA DRIVE
WINSTON SALEM, NC
US 27105
Contact: Audrey Hopkins
Audrey.Hopkins@salemcorp.com
T: (336)767-9642
F: x: