OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

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

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

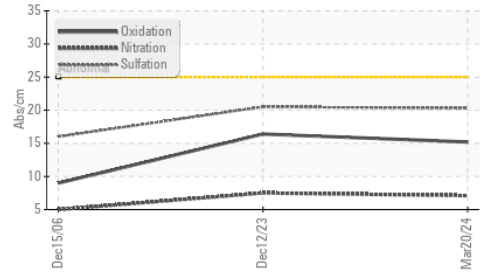
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

FLUID CONDITION

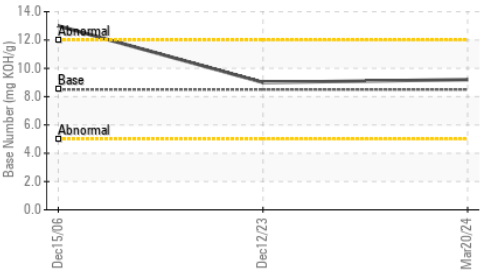
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0912501	WC0874157	WCMF107951
Sample Date		Client Info		20 Mar 2024	12 Dec 2023	15 Dec 2006
Machine Age	mls	Client Info		0	0	429735
Oil Age	mls	Client Info		0	0	20000
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	10	15	8
Chromium	ppm	ASTM D5185m	>20	<1	2	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	8	21	1
Lead	ppm	ASTM D5185m	>40	0	3	0
Copper	ppm	ASTM D5185m	>330	266	▲ 306	<1
Tin	ppm	ASTM D5185m	>15	<1	1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	4	4	0
Potassium	ppm	ASTM D5185m	>20	18	44	2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.1	7.5	5.
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	20.5	16.
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	>158	3	1	2
Boron	ppm	ASTM D5185m	250	1	4	2
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	62	56	<1
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m	450	978	893	12
Calcium	ppm	ASTM D5185m	3000	1097	1186	2892
Phosphorus	ppm	ASTM D5185m	1150	1088	876	1158
Zinc	ppm	ASTM D5185m	1350	1243	1191	1272
Sulfur	ppm	ASTM D5185m	4250	3396	2605	4242
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.2	16.4	9.
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.2	9.0	13.00
Visc @ 100°C	cSt	ASTM D445	14.4	13.3	12.9	15.24

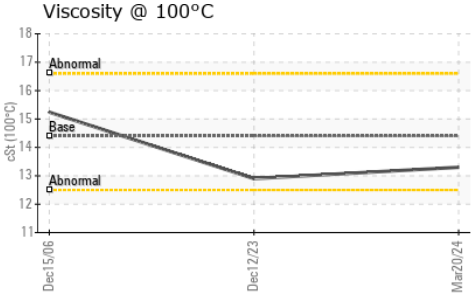
FT-IR (Direct Trend)



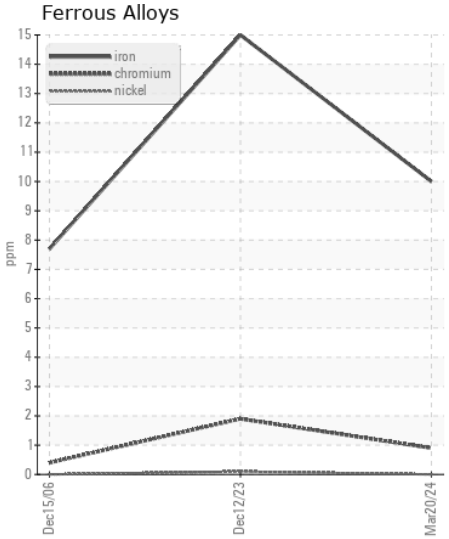
Base Number



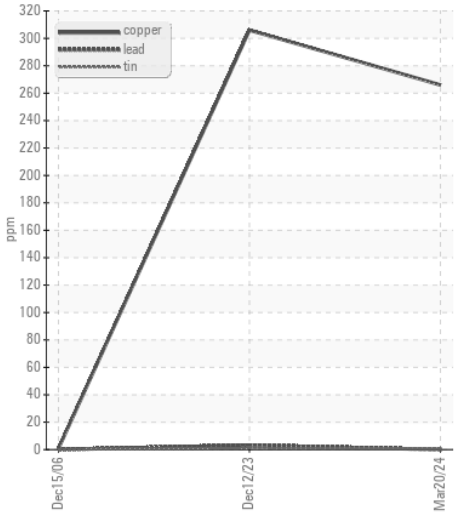
Viscosity @ 100°C



Ferrous Alloys



Non-ferrous Metals



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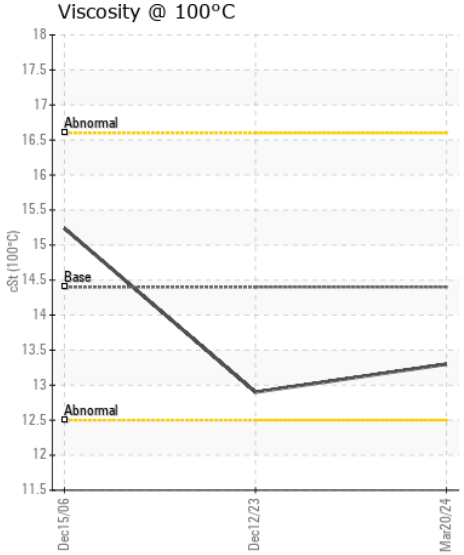

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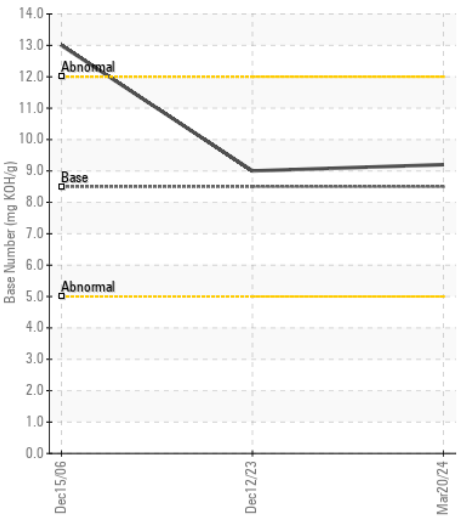

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0912501
Lab Number : 06153672
Unique Number : 10983750
Test Package : FLEET

Received : 18 Apr 2024
Tested : 19 Apr 2024
Diagnosed : 19 Apr 2024 - Wes Davis

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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