



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id  
**DETROIT CAROLINE**

Component  
**Port Genset**

Fluid  
**KENDALL SUPER-D 3 SAE 15W40 (--- GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0843990	---	---
Sample Date		Client Info		07 Dec 2023	---	---
Machine Age	hrs	Client Info		9927	---	---
Oil Age	hrs	Client Info		1500	---	---
Filter Age	hrs	Client Info		1500	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ATTENTION	---	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	21	---	---
Chromium	ppm	ASTM D5185m	>4	<1	---	---
Nickel	ppm	ASTM D5185m	>2	0	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>5	0	---	---
Aluminum	ppm	ASTM D5185m	>12	1	---	---
Lead	ppm	ASTM D5185m	>17	<1	---	---
Copper	ppm	ASTM D5185m	>70	5	---	---
Tin	ppm	ASTM D5185m	>15	3	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

## CONTAMINATION

Sodium and/or potassium levels are high. Test for glycol is negative.

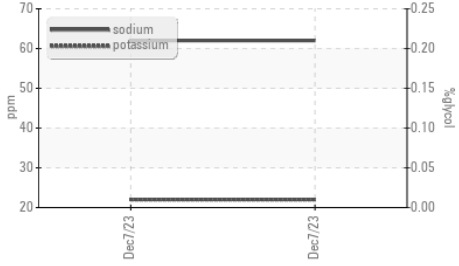
Silicon	ppm	ASTM D5185m	>25	4	---	---
Potassium	ppm	ASTM D5185m	>20	22	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.1	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844		0.3	---	---
Nitration	Abs/cm	*ASTM D7624	>20	8.7	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	15.8	---	---
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	>0.1	NEG	---	---

## FLUID CONDITION

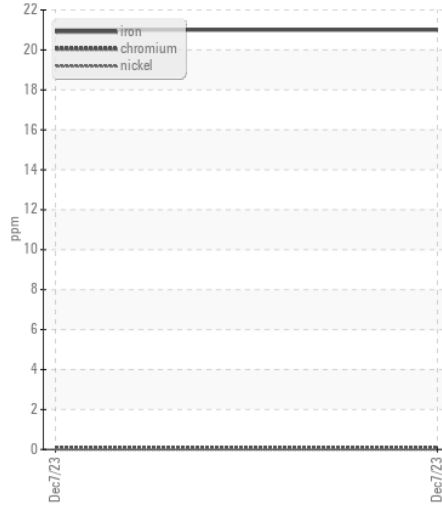
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		▲ 62	---	---
Boron	ppm	ASTM D5185m		41	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		30	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		21	---	---
Calcium	ppm	ASTM D5185m		3607	---	---
Phosphorus	ppm	ASTM D5185m		417	---	---
Zinc	ppm	ASTM D5185m	1450	524	---	---
Sulfur	ppm	ASTM D5185m		3357	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	10.0	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	12.2	9.1	---	---
Visc @ 100°C	cSt	ASTM D445	15.3	15.0	---	---

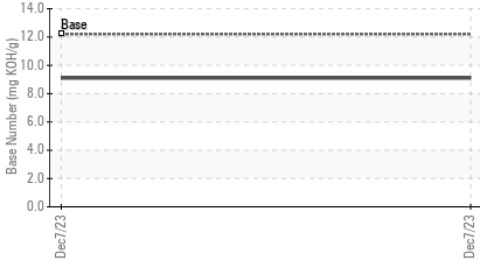
**▲ Glycol Contamination**



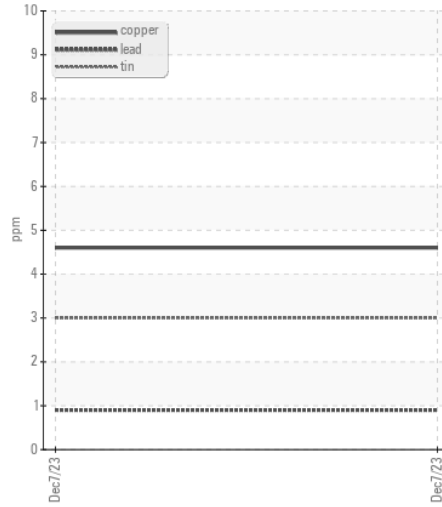
**Ferrous Alloys**



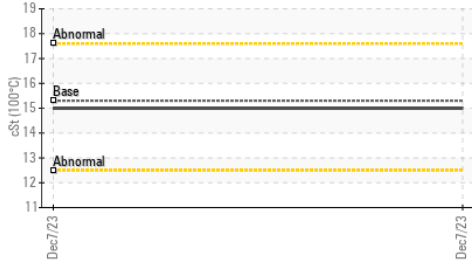
**Base Number**



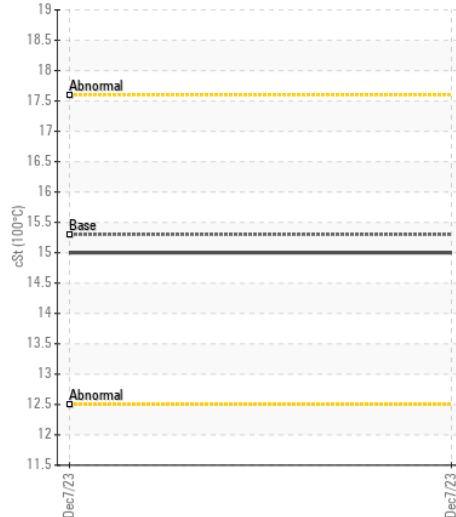
**Non-ferrous Metals**



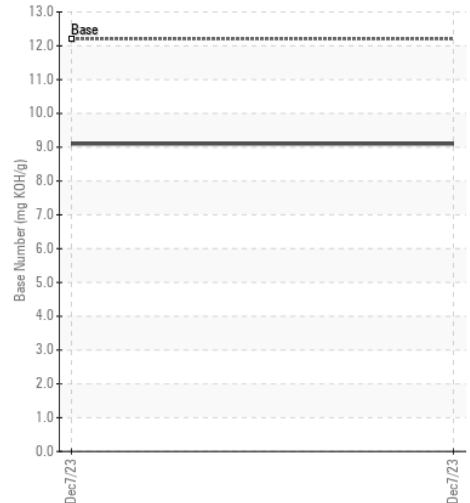
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : WC0843990

**Lab Number** : 06083005

**Unique Number** : 10870450

**Test Package** : FLEET

**Received** : 07 Feb 2024

**Tested** : 08 Feb 2024

**Diagnosed** : 12 Feb 2024 - Jonathan Hester

**SUPERIOR MARINE**

201 KELLY LANE

CHESAPEAKE, OH

US 45619

Contact: DARRELL KEARNS

darrellkearns@superiormarineinc.com

T:

F:

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)