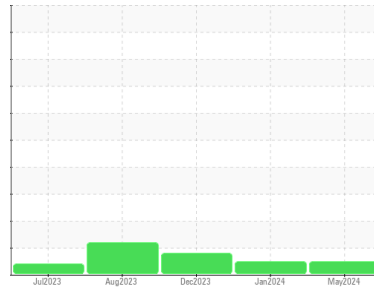




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

ANN T

Component

Starboard Genset

Fluid

CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with 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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0773823	WC0691872	WC0773862
Sample Date	Client Info		27 May 2024	19 Jan 2024	18 Dec 2023
Machine Age	hrs	Client Info	1790	1794	1544
Oil Age	hrs	Client Info	250	250	500
Oil Changed	Client Info		Changed	N/A	N/A
Sample Status			NORMAL	NORMAL	MARGINAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	<1.0	<1.0
Water	WC Method	>0.1	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	12	5	14
Chromium	ppm	ASTM D5185m >4	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	0	<1	0
Titanium	ppm	ASTM D5185m	6	8	8
Silver	ppm	ASTM D5185m >5	0	0	0
Aluminum	ppm	ASTM D5185m >12	3	3	2
Lead	ppm	ASTM D5185m >17	0	<1	2
Copper	ppm	ASTM D5185m >70	15	12	▲ 115
Tin	ppm	ASTM D5185m >15	<1	<1	0
Vanadium	ppm	ASTM D5185m	0	<1	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 151	99	115	20
Barium	ppm	ASTM D5185m 0.4	1	0	0
Molybdenum	ppm	ASTM D5185m 250	98	62	56
Manganese	ppm	ASTM D5185m	<1	1	<1
Magnesium	ppm	ASTM D5185m 0	631	588	542
Calcium	ppm	ASTM D5185m 2046	1692	1620	1957
Phosphorus	ppm	ASTM D5185m 1043	722	782	858
Zinc	ppm	ASTM D5185m 943	884	911	1053
Sulfur	ppm	ASTM D5185m 5012	3032	3045	3104

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	6	7	7
Sodium	ppm	ASTM D5185m	0	2	2
Potassium	ppm	ASTM D5185m >20	3	4	<1

INFRA-RED

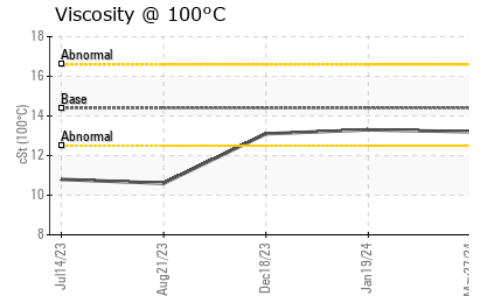
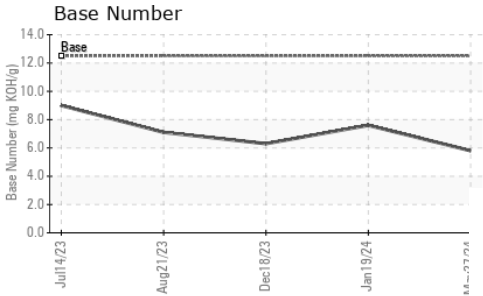
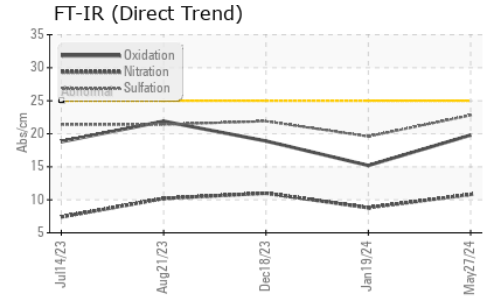
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	10.8	8.8	11.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	22.8	19.6	21.9

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	19.8	15.2	18.9
Base Number (BN)	mg KOH/g	ASTM D2896 12.5	5.8	7.6	6.3



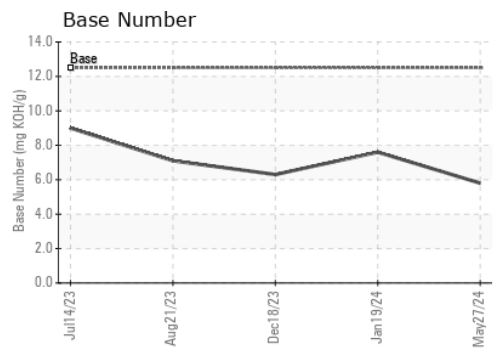
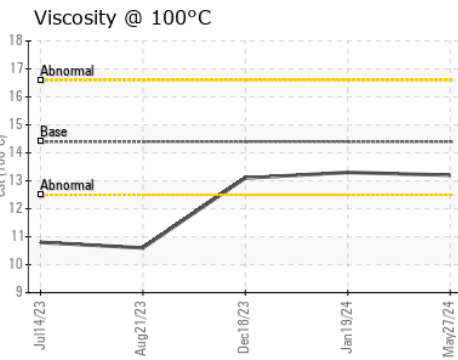
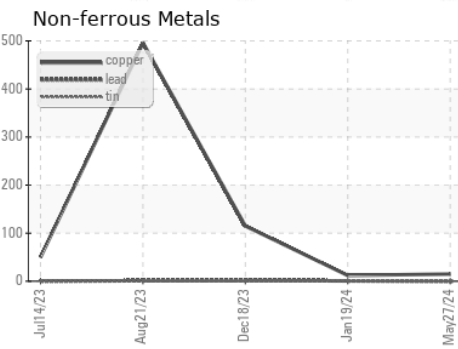
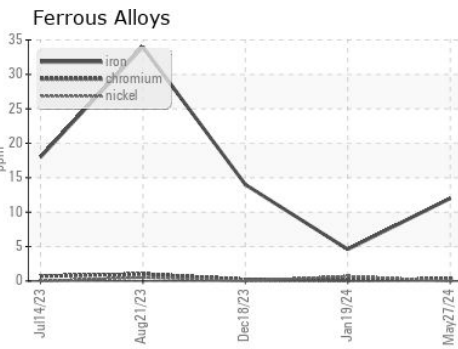
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.2	13.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0773823 **Received** : 10 Jun 2024
Lab Number : 06204185 **Tested** : 11 Jun 2024
Unique Number : 11071646 **Diagnosed** : 11 Jun 2024 - Wes Davis
Test Package : FLEET

ASSOCIATED TERMINALS - CRANE
 CONVENT, LA
 US 70723
 Contact: GREG JOSEY
 gjosey@associatedterminals.com

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) F: (225)562-3515