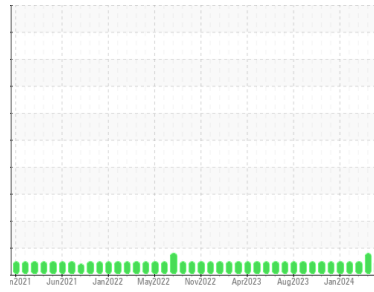




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
CRANE - ATTITUDE

Machine Id
ATTITUDE

Component
Starboard Genset

Fluid
CHEVRON DELO 400 LE 15W40 (5 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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			WC0892698	WC0892691	WC0892647
Sample Date	Client Info			23 Apr 2024	05 Apr 2024	13 Mar 2024
Machine Age	hrs	Client Info		12630	12355	12091
Oil Age	hrs	Client Info		225	250	309
Oil Changed	Client Info			Changed	N/A	Changed
Sample Status				NORMAL	ATTENTION	NORMAL

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	5	47	7
Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	4	11	6
Lead	ppm	ASTM D5185m	>17	0	1	<1
Copper	ppm	ASTM D5185m	>70	<1	<1	1
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		358	335	366
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		114	113	128
Manganese	ppm	ASTM D5185m		<1	2	<1
Magnesium	ppm	ASTM D5185m		582	653	608
Calcium	ppm	ASTM D5185m		1728	1780	1843
Phosphorus	ppm	ASTM D5185m	1200	762	842	822
Zinc	ppm	ASTM D5185m	1300	874	989	955
Sulfur	ppm	ASTM D5185m	3200	2957	3443	2995

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	3	10	9
Sodium	ppm	ASTM D5185m		2	0	0
Potassium	ppm	ASTM D5185m	>20	0	1	3

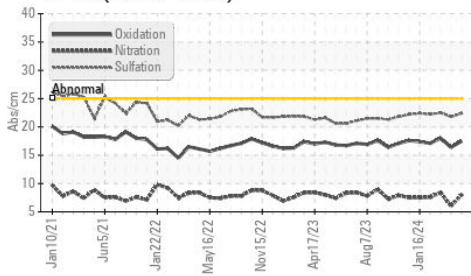
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0.2	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.0	6.0	8.4
Sulfation	Abs.1mm	*ASTM D7415	>30	22.4	21.8	22.5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs.1mm	*ASTM D7414	>25	17.5	16.4	18.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	8.7	9.2	8.4

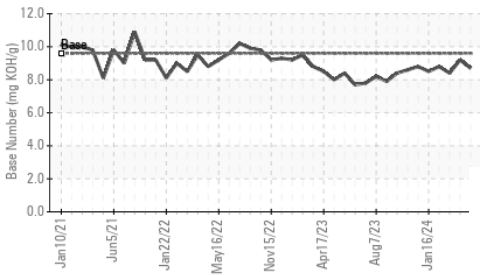


OIL ANALYSIS REPORT

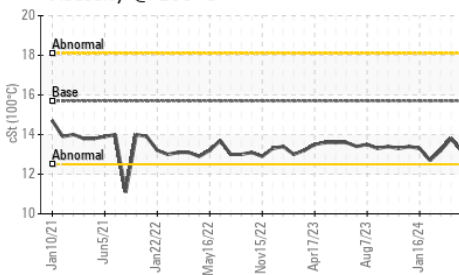
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

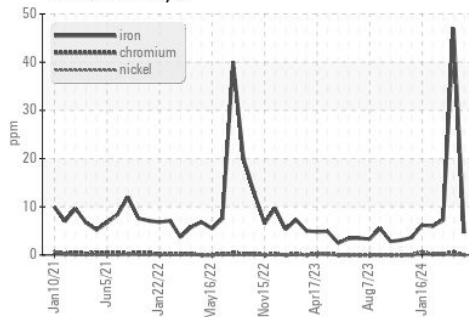


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

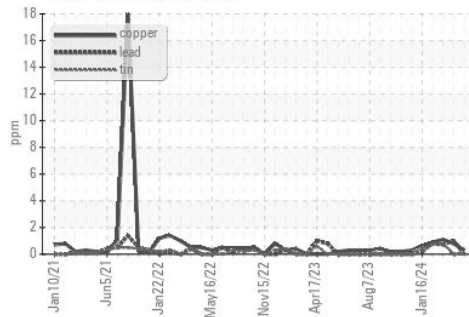
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	13.2	13.8

GRAPHS

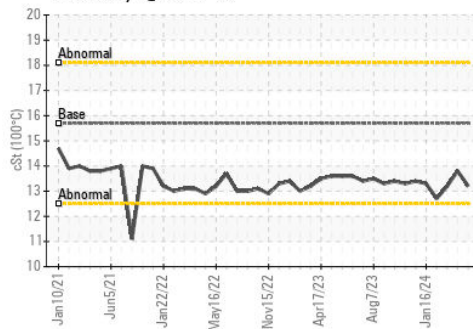
Ferrous Alloys



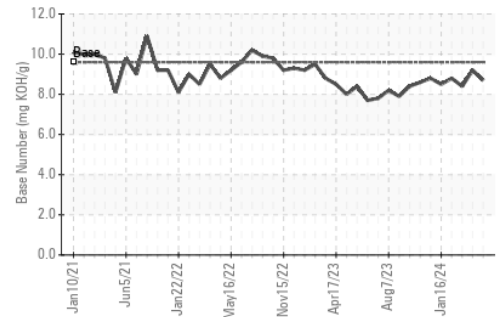
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0892698
 Lab Number : 06198976
 Unique Number : 11061099
 Test Package : FLEET

Received : 04 Jun 2024
 Tested : 05 Jun 2024
 Diagnosed : 05 Jun 2024 - Wes Davis

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)

T:
 F: (225)562-3515