



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
RICK HARNACK
Machine Id
[RICK HARNACK] 008 685578-8
Component
Starboard Genset
Fluid
CHEVRON DELO 400 XLE 15W40 (7 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW06176433	MW0068084	MW0068085
Sample Date		Client Info		26 Apr 2024	02 Feb 2024	20 Jan 2024
Machine Age	hrs	Client Info		22639	21824	21449
Oil Age	hrs	Client Info		425	368	404
Filter Age	hrs	Client Info		0	368	404
Oil Changed		Client Info		N/A	Changed	Not Changd
Filter Changed		Client Info		N/A	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	5	6	5
Chromium	ppm	ASTM D5185m	>4	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		2	1	1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	3	3	3
Lead	ppm	ASTM D5185m	>17	2	<1	<1
Copper	ppm	ASTM D5185m	>70	<1	<1	4
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

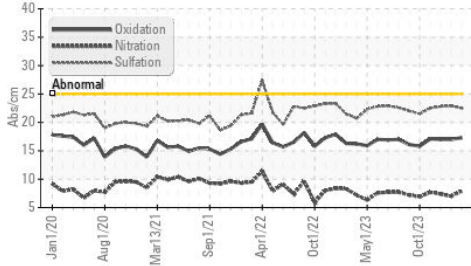
Silicon	ppm	ASTM D5185m	>25	6	7	6
Potassium	ppm	ASTM D5185m	>20	2	2	1
Fuel		WC Method	>4.0	<1.0	1.4	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.9	7.0	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.5	22.9	22.8
Silt	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	>0.1	NEG	NEG	NEG

FLUID CONDITION

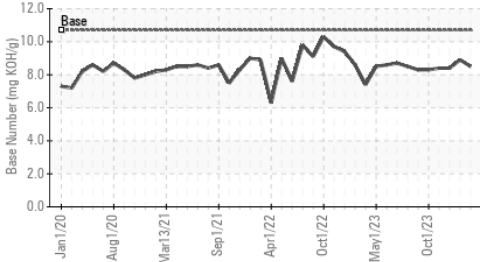
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	0	1
Boron	ppm	ASTM D5185m		346	335	323
Barium	ppm	ASTM D5185m		2	1	0
Molybdenum	ppm	ASTM D5185m		126	130	114
Manganese	ppm	ASTM D5185m		2	2	2
Magnesium	ppm	ASTM D5185m		658	636	648
Calcium	ppm	ASTM D5185m		1538	1468	1476
Phosphorus	ppm	ASTM D5185m	760	751	743	694
Zinc	ppm	ASTM D5185m	830	838	833	804
Sulfur	ppm	ASTM D5185m	2770	2826	2698	2479
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.3	17.0	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	8.5	8.9	8.4
Visc @ 100°C	cSt	ASTM D445	14.9	12.5	12.4	12.8

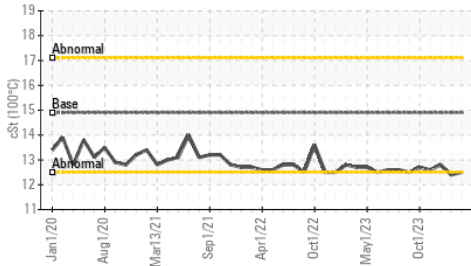
FT-IR (Direct Trend)



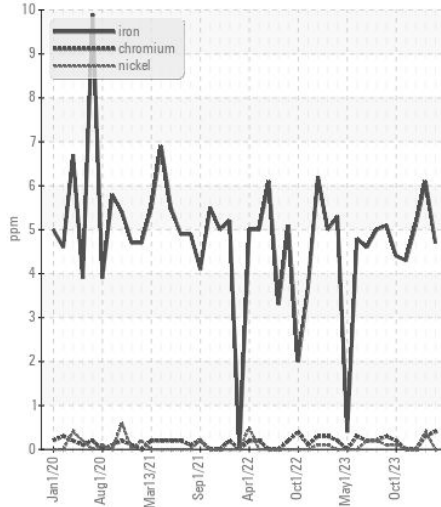
Base Number



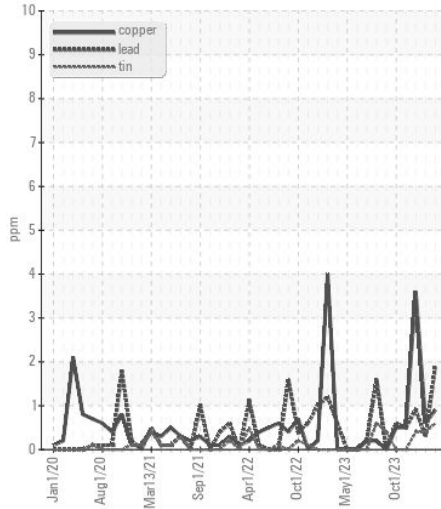
Viscosity @ 100°C



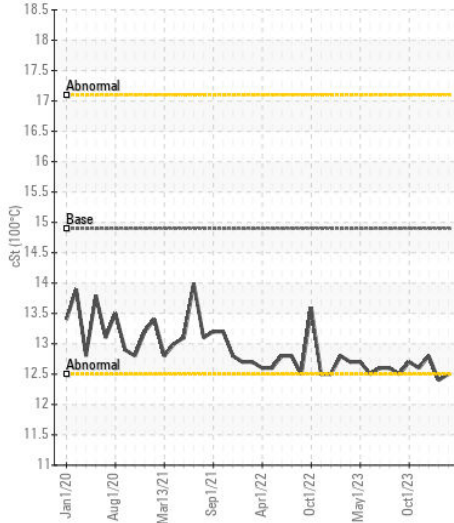
Ferrous Alloys



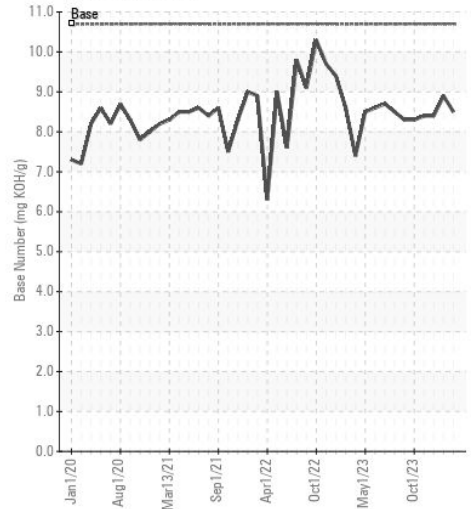
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW06176433
Lab Number : 06176433
Unique Number : 11022486
Test Package : MAR 2
Received : 10 May 2024
Tested : 13 May 2024
Diagnosed : 13 May 2024 - Wes Davis

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 PADUCAH, KY
 US 42003

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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)