



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**DAVID G SEHRT**  
Machine Id  
[DAVID G SEHRT] 003 500046-3  
Component  
Starboard Main Engine  
Fluid  
CHEVRON DELO 710 LS (--- GAL)

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0030056</b>	MW05558697	MW0030079
Sample Date		Client Info		<b>01 Sep 2023</b>	11 May 2022	01 Mar 2022
Machine Age	hrs	Client Info		<b>76075</b>	73178	71508
Oil Age	hrs	Client Info		<b>400</b>	0	71508
Filter Age	hrs	Client Info		<b>400</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	N/A	Not Changd
Filter Changed		Client Info		<b>Changed</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>13</b>	13	9
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>15	<b>1</b>	2	1
Lead	ppm	ASTM D5185m	>18	<b>7</b>	5	4
Copper	ppm	ASTM D5185m	>80	<b>15</b>	20	14
Tin	ppm	ASTM D5185m	>14	<b>&lt;1</b>	4	3
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

There is no indication of any contamination in the oil.

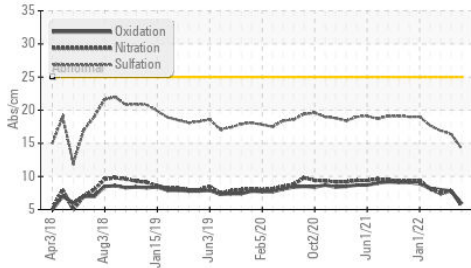
Silicon	ppm	ASTM D5185m	>20	<b>5</b>	3	2
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	1.2	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.6</b>	7.8	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>14.2</b>	16.4	16.9
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

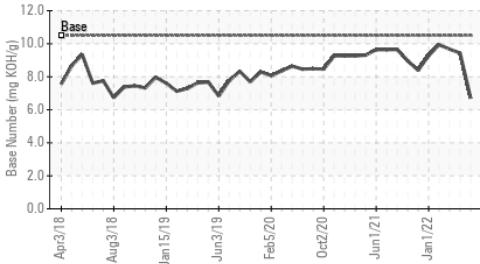
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	<b>4</b>	2	1
Boron	ppm	ASTM D5185m		<b>79</b>	82	82
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>54</b>	53	51
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>57</b>	90	84
Calcium	ppm	ASTM D5185m		<b>3679</b>	3028	2757
Phosphorus	ppm	ASTM D5185m		<b>66</b>	108	110
Zinc	ppm	ASTM D5185m		<b>32</b>	123	119
Sulfur	ppm	ASTM D5185m		<b>2969</b>	2118	1694
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>5.9</b>	7.8	8.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>6.7</b>	9.43	9.67
Visc @ 100°C	cSt	ASTM D445	15.5	<b>14.4</b>	14.5	14.6

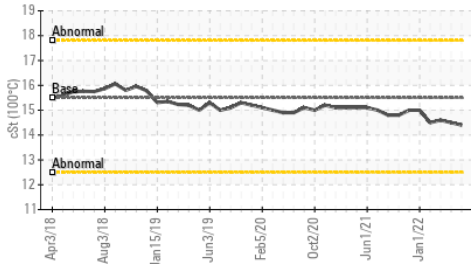
**FT-IR (Direct Trend)**



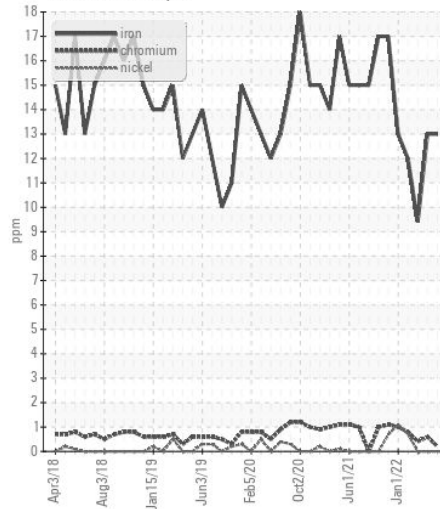
**Base Number**



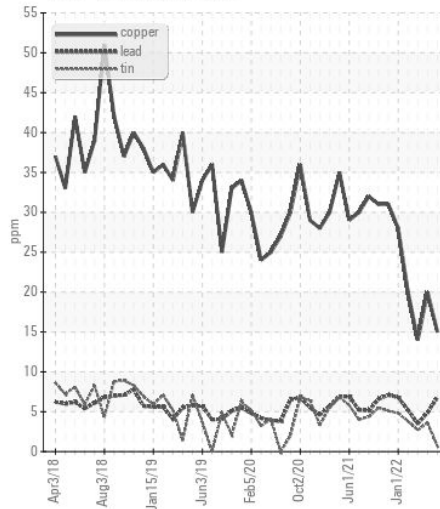
**Viscosity @ 100°C**



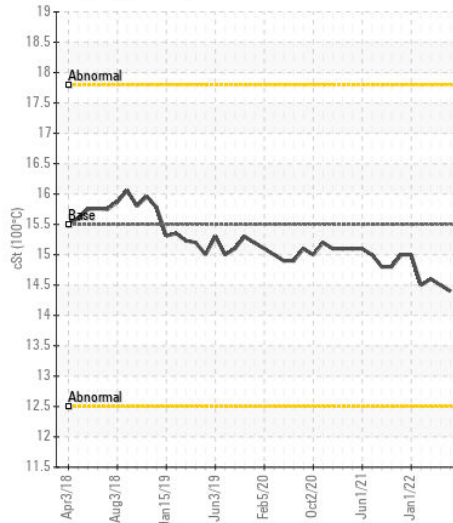
**Ferrous Alloys**



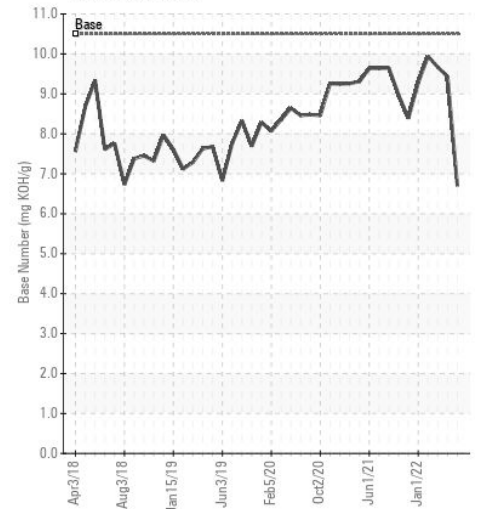
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

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

**Sample No.** : MW0030056

**Lab Number** : 05946360

**Unique Number** : 10642319

**Test Package** : MAR 2

**Received** : 08 Sep 2023

**Tested** : 11 Sep 2023

**Diagnosed** : 11 Sep 2023 - Wes Davis

**INGRAM BARGE**

900 S 3RD ST

PADUCAH, KY

US 42003

Contact: TONY HUCKABEE

tony.huckabee@ingrambarga.com

T: (270)415-4467

F: (615)695-3697

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)