



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
CHIP LACEY
Machine Id
[CHIP LACEY] 008 529830-8
Component
Starboard Genset
Fluid
CHEVRON DELO 400 XLE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0068911	MW06198951	MW0068906
Sample Date		Client Info		22 Jun 2024	28 May 2024	26 Apr 2024
Machine Age	hrs	Client Info		40371	39986	39612
Oil Age	hrs	Client Info		385	39986	382
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	7	5	7
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		12	14	16
Silver	ppm	ASTM D5185m	>5	<1	0	0
Aluminum	ppm	ASTM D5185m	>12	2	<1	<1
Lead	ppm	ASTM D5185m	>17	0	0	0
Copper	ppm	ASTM D5185m	>70	<1	0	<1
Tin	ppm	ASTM D5185m	>15	0	0	<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.

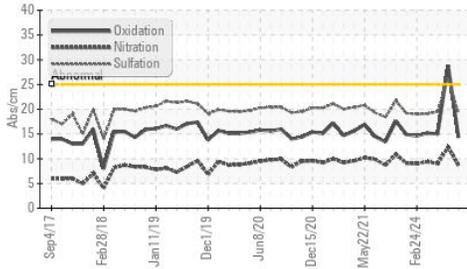
Silicon	ppm	ASTM D5185m	>25	5	0	4
Potassium	ppm	ASTM D5185m	>20	2	<1	0
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	1.5	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.6	12.4	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.1	26.3	19.5
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

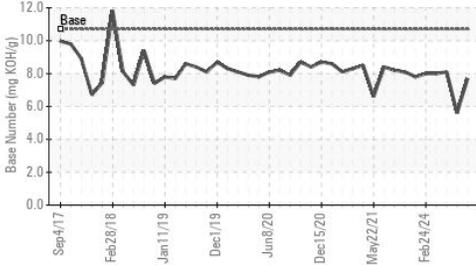
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	1	1
Boron	ppm	ASTM D5185m		147	99	111
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		48	33	39
Manganese	ppm	ASTM D5185m		2	1	1
Magnesium	ppm	ASTM D5185m		662	691	795
Calcium	ppm	ASTM D5185m		1545	1599	1608
Phosphorus	ppm	ASTM D5185m	760	851	761	750
Zinc	ppm	ASTM D5185m	830	957	844	868
Sulfur	ppm	ASTM D5185m	2770	3053	3494	3619
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	28.9	15.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	7.7	5.6	8.1
Visc @ 100°C	cSt	ASTM D445	14.9	12.6	12.6	12.8

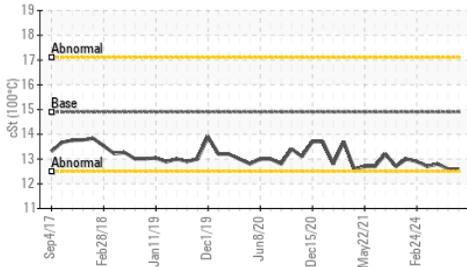
FT-IR (Direct Trend)



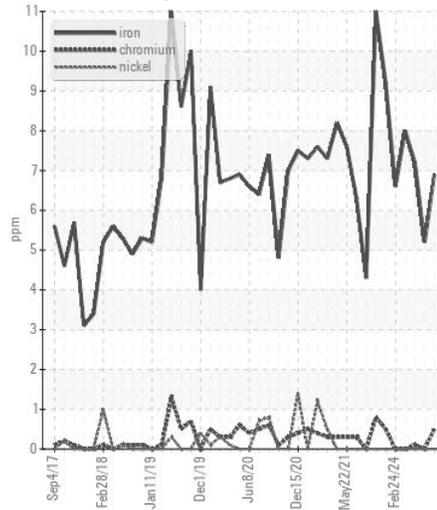
Base Number



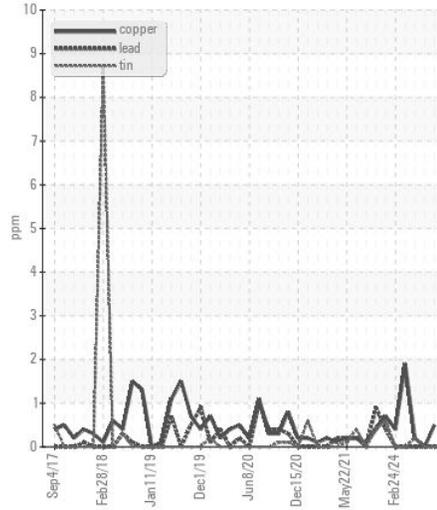
Viscosity @ 100°C



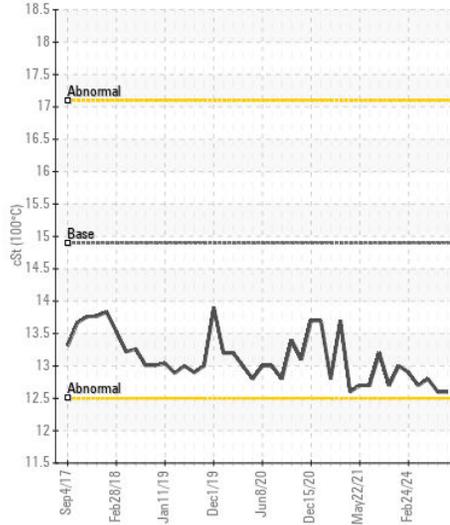
Ferrous Alloys



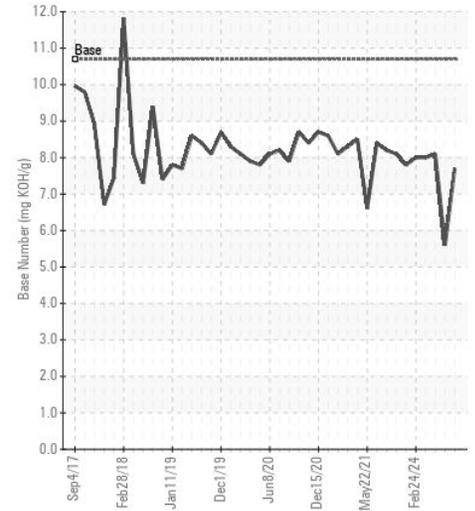
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : MW0068911

Lab Number : 06224200

Unique Number : 11102397

Test Package : MAR 2

Received : 28 Jun 2024

Tested : 01 Jul 2024

Diagnosed : 01 Jul 2024 - Wes Davis

INGRAM BARGE

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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)