



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
DETROIT KELLY LEE

Component
Starboard Genset

Fluid
CHEVRON DELO 710 LE (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0067051	MW0037239	MW0037245
Sample Date		Client Info		01 Jul 2024	04 Dec 2023	15 Aug 2023
Machine Age	hrs	Client Info		3145	852	4404
Oil Age	hrs	Client Info		500	467	500
Filter Age	hrs	Client Info		500	467	500
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	13	34	▲ 157
Chromium	ppm	ASTM D5185m	>4	<1	1	▲ 8
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>5	<1	0	0
Aluminum	ppm	ASTM D5185m	>12	3	1	<1
Lead	ppm	ASTM D5185m	>17	1	2	2
Copper	ppm	ASTM D5185m	>70	6	8	17
Tin	ppm	ASTM D5185m	>15	4	13	15
Vanadium	ppm	ASTM D5185m		<1	0	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.

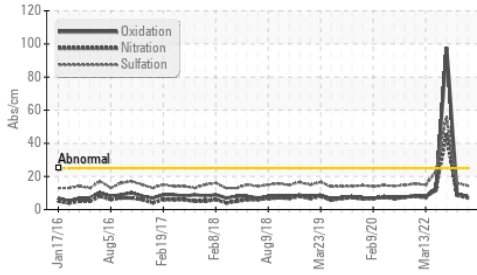
Silicon	ppm	ASTM D5185m	>25	4	10	7
Potassium	ppm	ASTM D5185m	>20	3	2	0
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.5	▲ 7.8
Nitration	Abs/cm	*ASTM D7624	>20	7.1	8.5	45.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	14.4	15.9	56.2
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

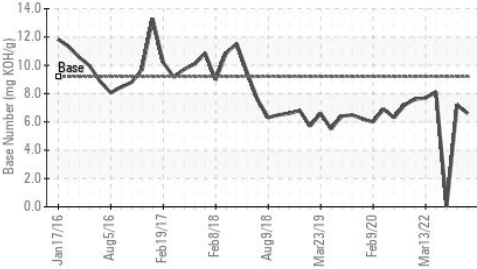
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	0	2
Boron	ppm	ASTM D5185m		40	39	32
Barium	ppm	ASTM D5185m		<1	10	0
Molybdenum	ppm	ASTM D5185m		48	45	45
Manganese	ppm	ASTM D5185m		<1	<1	2
Magnesium	ppm	ASTM D5185m		14	18	27
Calcium	ppm	ASTM D5185m		3479	3413	3512
Phosphorus	ppm	ASTM D5185m		37	12	10
Zinc	ppm	ASTM D5185m	10	32	4	0
Sulfur	ppm	ASTM D5185m		2060	2404	2495
Oxidation	Abs/.1mm	*ASTM D7414	>25	7.9	9.3	97.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.2	6.6	7.2	▲ 0.0
Visc @ 100°C	cSt	ASTM D445	15.5	14.0	14.3	▲ 40.1

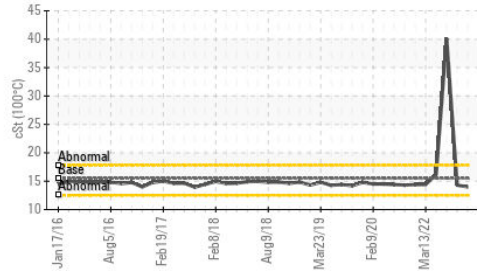
FT-IR (Direct Trend)



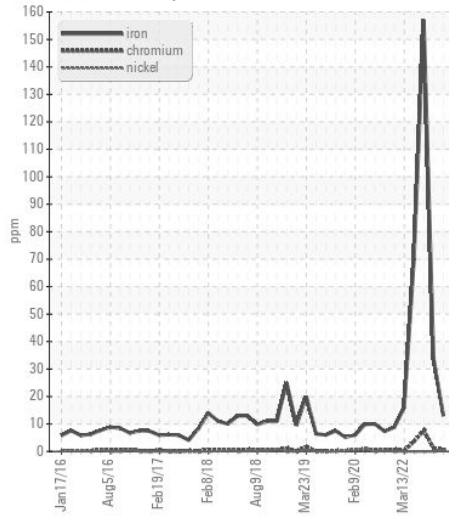
Base Number



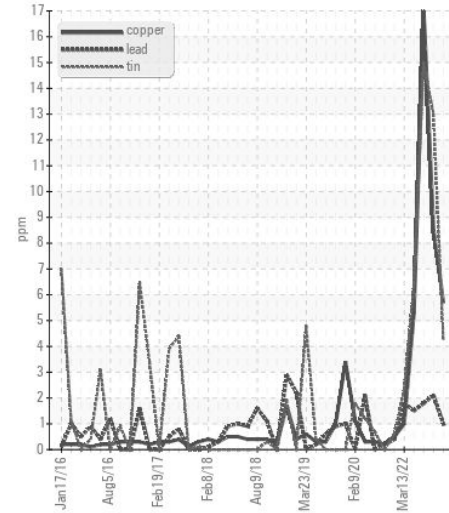
Viscosity @ 100°C



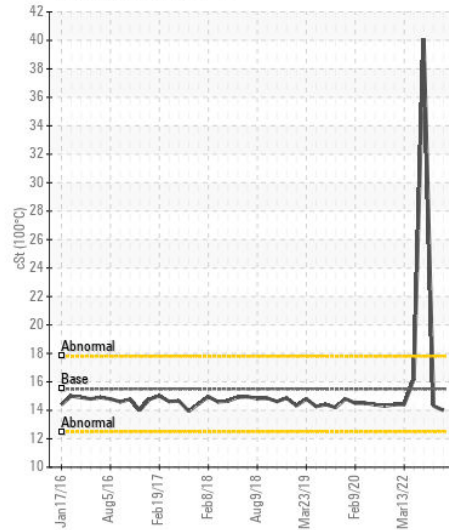
Ferrous Alloys



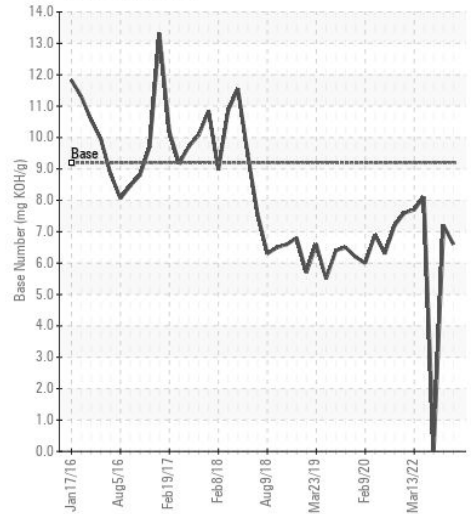
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0067051
Lab Number : 06226026
Unique Number : 11109519
Test Package : MAR 2

Received : 02 Jul 2024
Tested : 03 Jul 2024
Diagnosed : 03 Jul 2024 - Wes Davis

MAGNOLIA MARINE TRANSPORT
 697 HAINING ROAD
 VICKSBURG, MS
 US 39183
 Contact: MMT MAINTENANCE PLANNERS
 mmtmaintenanceplanners@ergon.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)

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