MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
SUE KOSSOW
Machine Id
[SUE KOSSOW] 008 641018-8
Component
Starboard Genset
Fluid
CHEVRON DELO 400 LE 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

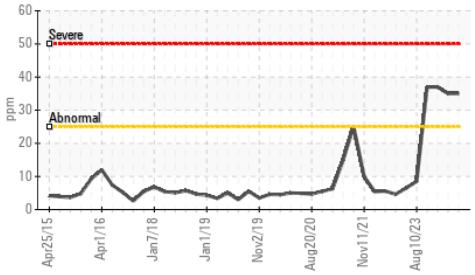
Elemental level of silicon (Si) above normal indicating ingress of seal material.

FLUID CONDITION

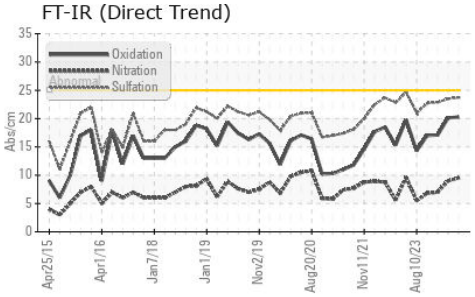
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0068026	MW0068049	MW0058402
Sample Date		Client Info		21 Jun 2024	27 Feb 2024	06 Jan 2024
Machine Age	hrs	Client Info		16323	16385	16251
Oil Age	hrs	Client Info		312	384	216
Filter Age	hrs	Client Info		312	384	216
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>50	6	6	4
Chromium	ppm	ASTM D5185m	>4	0	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	4	5	3
Lead	ppm	ASTM D5185m	>17	<1	<1	0
Copper	ppm	ASTM D5185m	>70	0	<1	<1
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	▲ 35	▲ 35	▲ 37
Potassium	ppm	ASTM D5185m	>20	<1	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	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.5	9.0	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.7	23.5	22.9
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
Sodium	ppm	ASTM D5185m		<1	3	<1
Boron	ppm	ASTM D5185m		276	291	322
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		118	119	119
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		651	622	638
Calcium	ppm	ASTM D5185m		1567	1476	1595
Phosphorus	ppm	ASTM D5185m	1200	650	625	669
Zinc	ppm	ASTM D5185m	1300	814	793	796
Sulfur	ppm	ASTM D5185m	3200	2589	2349	2357
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.3	20.1	17.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	8.5	8.8	8.4
Visc @ 100°C	cSt	ASTM D445	15.7	13.2	13.1	13.1

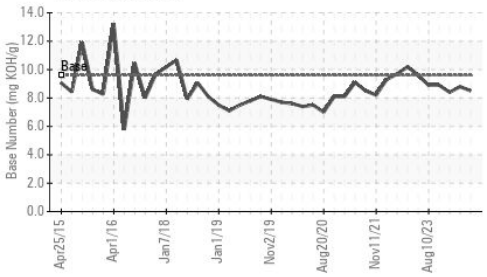
Silicon (ppm)



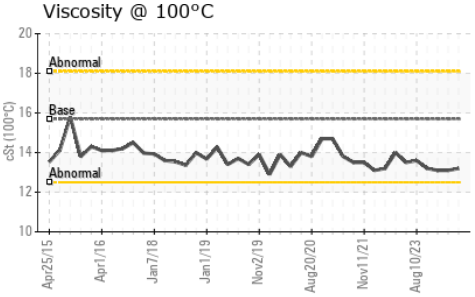
FT-IR (Direct Trend)



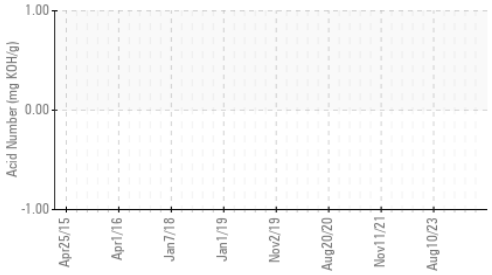
Base Number



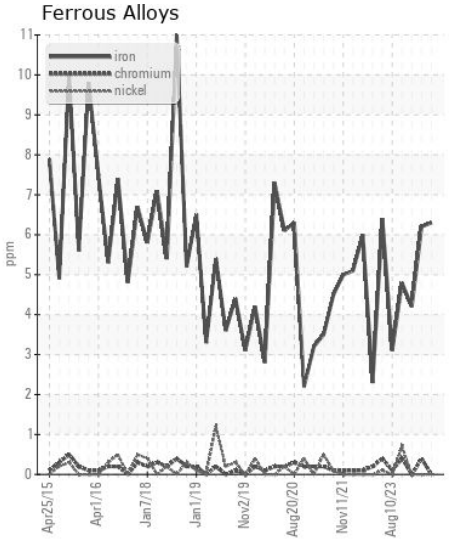
Viscosity @ 100°C



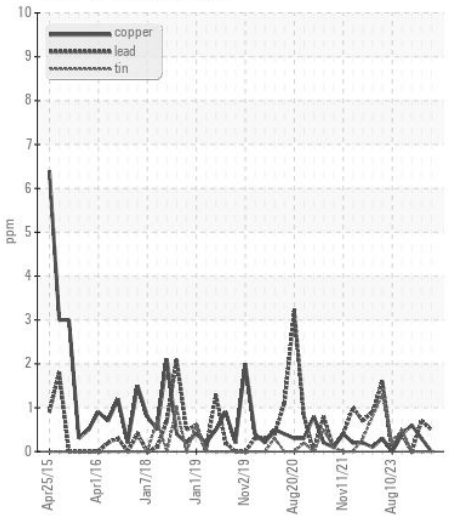
Acid Number



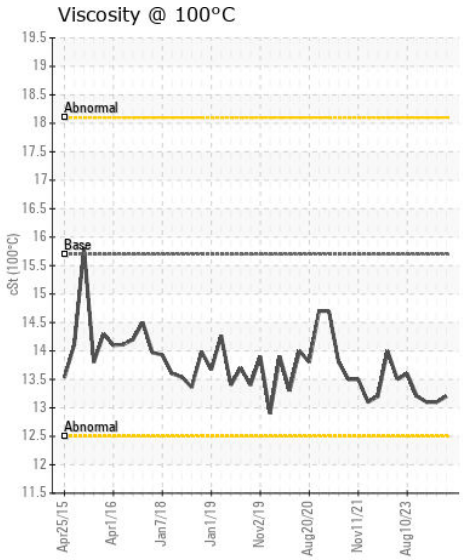
Ferrous Alloys



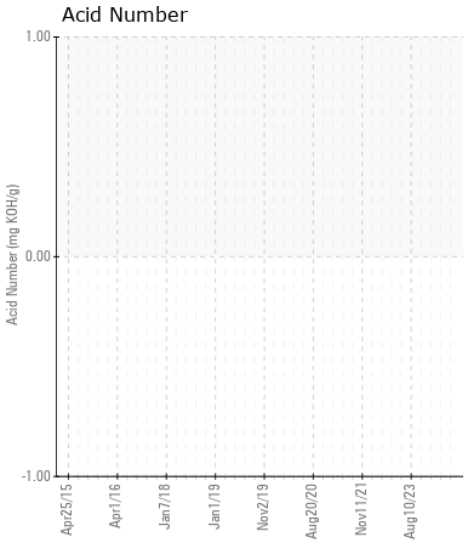
Non-ferrous Metals



Viscosity @ 100°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0068026 **Received** : 01 Jul 2024
Lab Number : 06225621 **Tested** : 03 Jul 2024
Unique Number : 11103818 **Diagnosed** : 03 Jul 2024 - Jonathan Hester
Test Package : MAR 2 (Additional Tests: KV40, TAN Man)

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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