MAR II

WEAR CHECK
Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ABNORMAL

Area
JOHN F SECREST
Machine Id
[JOHN F SECREST] 003 565425-3
Component
Starboard Main Engine
Fluid
CHEVRON DELO 710 LS (250 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

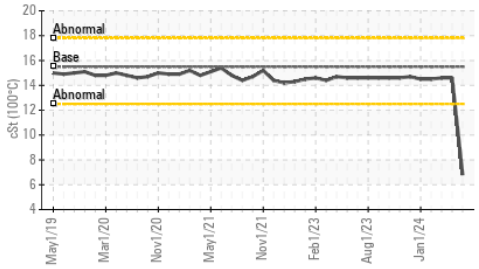
Light fuel dilution occurring.

FLUID CONDITION

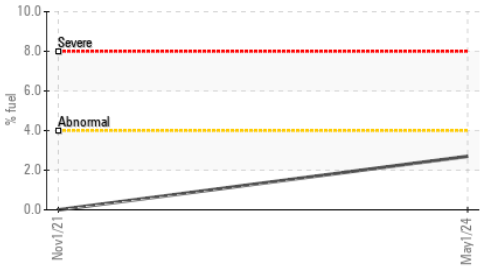
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0068750	MW0065923	MW0065916
Sample Date		Client Info		01 May 2024	01 Apr 2024	01 Mar 2024
Machine Age	hrs	Client Info		13813	13093	12350
Oil Age	hrs	Client Info		0	13093	12350
Filter Age	hrs	Client Info		0	13093	83
Oil Changed		Client Info		N/A	N/A	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>75	12	20	14
Chromium	ppm	ASTM D5185m	>8	2	4	2
Nickel	ppm	ASTM D5185m	>2	0	1	0
Titanium	ppm	ASTM D5185m	>3	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	1	4	1
Lead	ppm	ASTM D5185m	>18	4	8	5
Copper	ppm	ASTM D5185m	>80	13	24	14
Tin	ppm	ASTM D5185m	>14	7	11	6
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	4	7	4
Potassium	ppm	ASTM D5185m	>20	0	3	0
Fuel	%	ASTM D3524	>4.0	▲ 2.7	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	8.3	8.3	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.0	17.0	17.1
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	>75	2	3	1
Boron	ppm	ASTM D5185m		49	62	38
Barium	ppm	ASTM D5185m		<1	<1	0
Molybdenum	ppm	ASTM D5185m		47	67	46
Manganese	ppm	ASTM D5185m		2	3	1
Magnesium	ppm	ASTM D5185m		17	20	17
Calcium	ppm	ASTM D5185m		3636	4914	3675
Phosphorus	ppm	ASTM D5185m		11	21	9
Zinc	ppm	ASTM D5185m		11	17	5
Sulfur	ppm	ASTM D5185m		2813	3488	2600
Oxidation	Abs/.1mm	*ASTM D7414	>25	8.8	8.9	8.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	9.14	8.91	9.28
Visc @ 100°C	cSt	ASTM D445	15.5	▲ 6.8	14.6	14.6

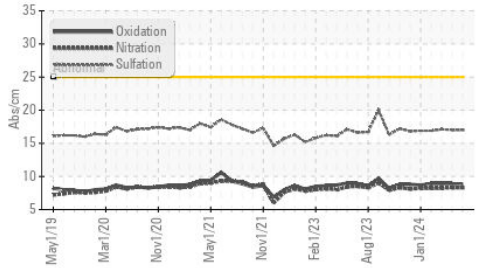
Viscosity @ 100°C



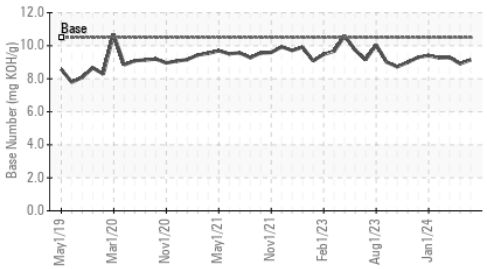
Fuel Dilution



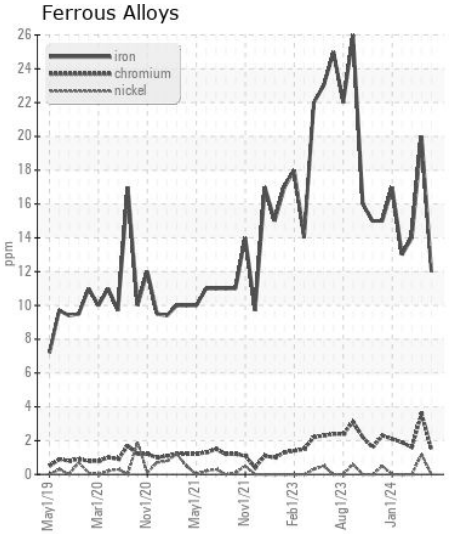
FT-IR (Direct Trend)



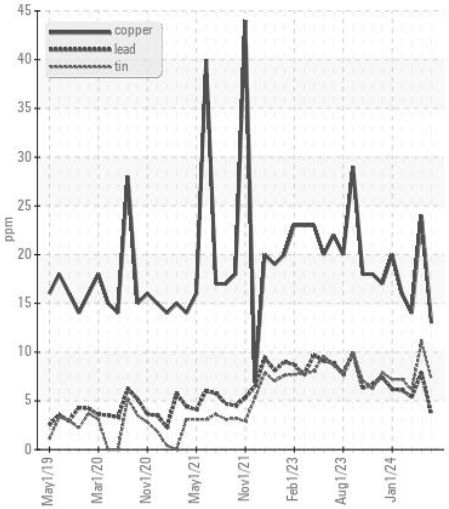
Base Number



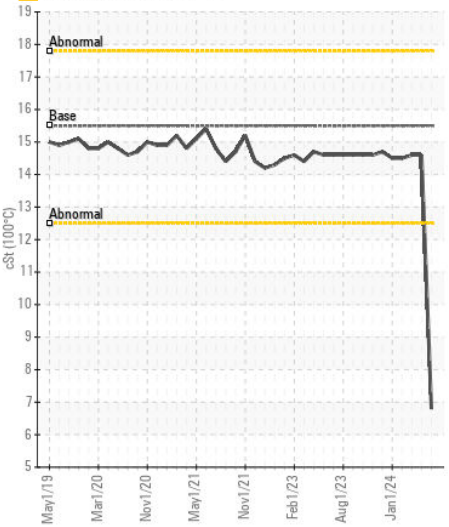
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0068750 **Received** : 10 May 2024
Lab Number : 06176238 **Tested** : 15 May 2024
Unique Number : 11022291 **Diagnosed** : 15 May 2024 - Wes Davis
Test Package : MAR 2 (Additional Tests: FuelDilution, PercentFuel)

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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