MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MRC
Component
Starboard Genset
Fluid
CHEVRON URSA SUPER PLUS 40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

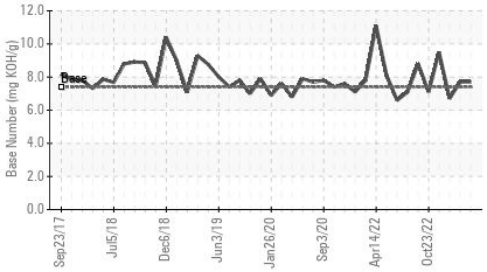
There is no indication of any contamination in the oil.

FLUID CONDITION

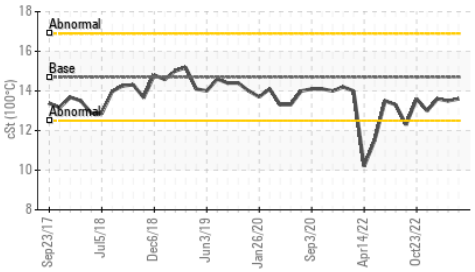
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW05823780	MW05765709	MW05745137
Sample Date		Client Info		18 Apr 2023	12 Feb 2023	19 Jan 2023
Machine Age	hrs	Client Info		4201	3800	3393
Oil Age	hrs	Client Info		401	407	552
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
Iron	ppm	ASTM D5185m	>25	6	7	4
Chromium	ppm	ASTM D5185m	>5	<1	<1	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	2	1
Lead	ppm	ASTM D5185m	>10	<1	<1	0
Copper	ppm	ASTM D5185m	>20	<1	<1	<1
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	5	4	2
Potassium	ppm	ASTM D5185m	>20	2	0	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	5.1	5.9	5.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.2	20.6	19.0
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	1	0
Boron	ppm	ASTM D5185m		405	382	290
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		68	85	60
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		221	407	229
Calcium	ppm	ASTM D5185m		2596	1547	1546
Phosphorus	ppm	ASTM D5185m	1000	841	792	537
Zinc	ppm	ASTM D5185m	1090	1025	946	608
Sulfur	ppm	ASTM D5185m		3229	3198	2198
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.3	14.4	12.5
Base Number (BN)	mg KOH/g	ASTM D2896	7.4	7.7	7.7	6.7
Visc @ 100°C	cSt	ASTM D445	14.7	13.6	13.5	13.6

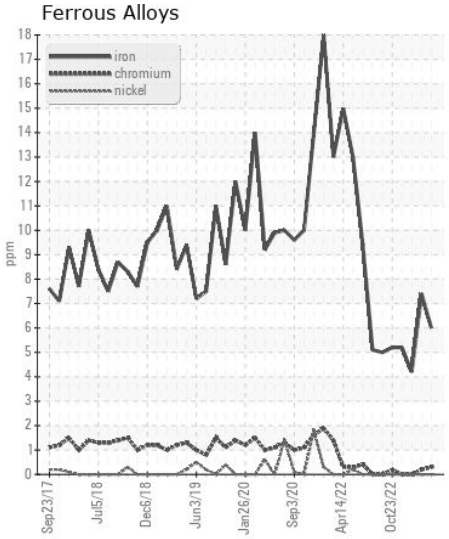
Base Number



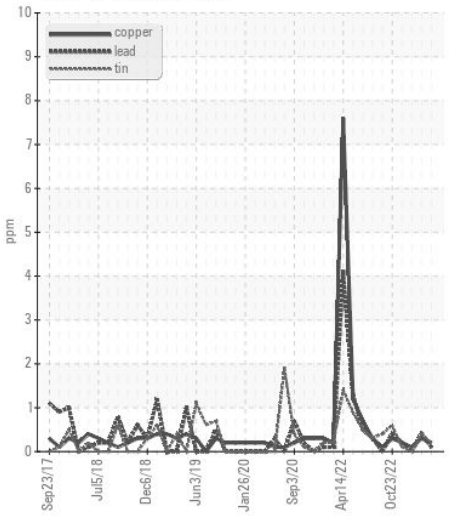
Viscosity @ 100°C



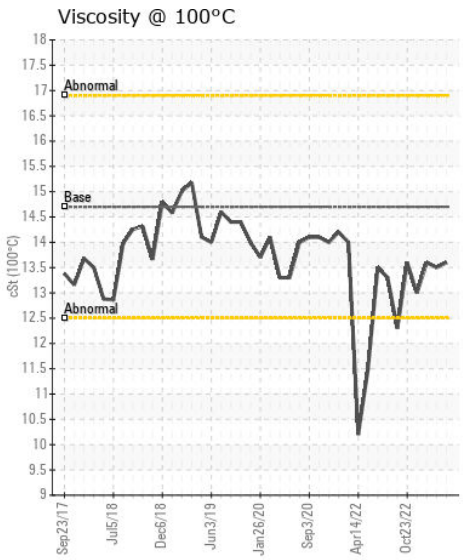
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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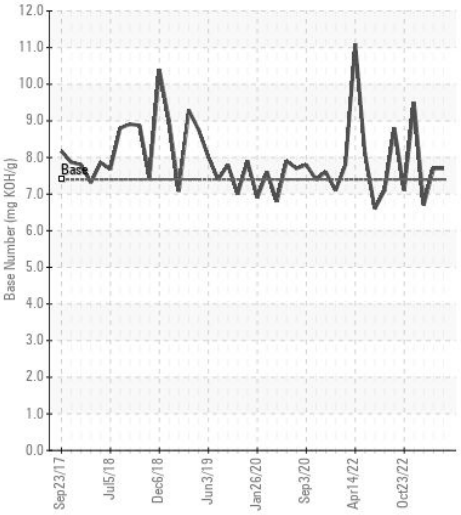

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW05823780
Lab Number : 05823780
Unique Number : 10431863
Test Package : MAR 2

Received : 19 Apr 2023
Tested : 20 Apr 2023
Diagnosed : 20 Apr 2023 - Wes Davis

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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