



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id

EMILY DAVIS

Component

Starboard Main Engine

Fluid

CHEVRON DELO 400 MULTIGRADE 15W40 (150 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0061972	MW0061903	MW0062029
Sample Date		Client Info		02 Jul 2024	09 Jun 2024	13 May 2024
Machine Age	hrs	Client Info		7831	7360	6876
Oil Age	hrs	Client Info		934	463	1338
Filter Age	hrs	Client Info		427	463	673
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	Not Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	3	0	3
Chromium	ppm	ASTM D5185m	>10	<1	0	0
Nickel	ppm	ASTM D5185m	>5	<1	<1	0
Titanium	ppm	ASTM D5185m		12	13	14
Silver	ppm	ASTM D5185m	>5	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	<1	1
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>300	2	1	4
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
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.

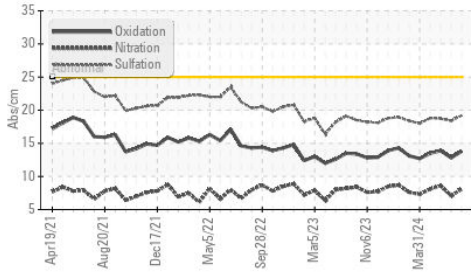
Silicon	ppm	ASTM D5185m	>25	4	3	3
Potassium	ppm	ASTM D5185m	>20	3	5	4
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.1	7.1	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	18.4	18.7
Silt	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

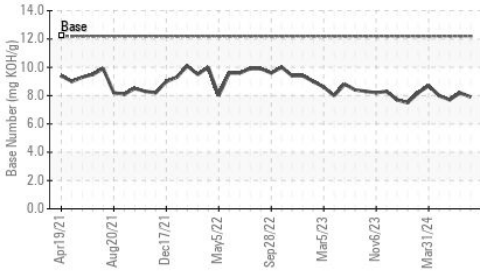
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	3	2
Boron	ppm	ASTM D5185m		139	184	81
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		38	35	30
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m		605	653	687
Calcium	ppm	ASTM D5185m		1418	1535	1529
Phosphorus	ppm	ASTM D5185m	1360	748	715	702
Zinc	ppm	ASTM D5185m	1480	847	842	791
Sulfur	ppm	ASTM D5185m		2815	3410	3321
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	12.8	13.9
Base Number (BN)	mg KOH/g	ASTM D2896	12.2	7.9	8.2	7.7
Visc @ 100°C	cSt	ASTM D445	15.1	13.9	13.9	13.8

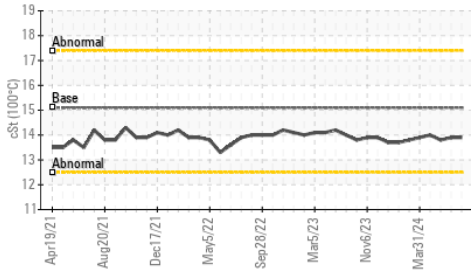
FT-IR (Direct Trend)



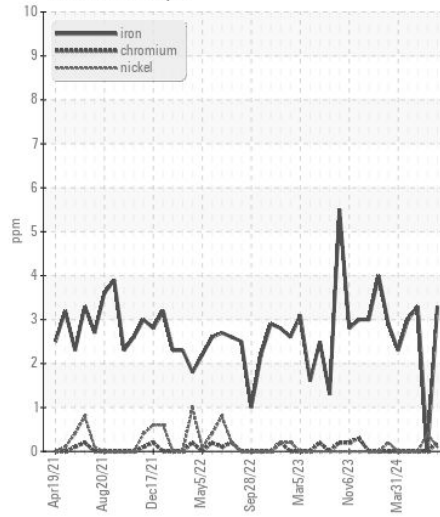
Base Number



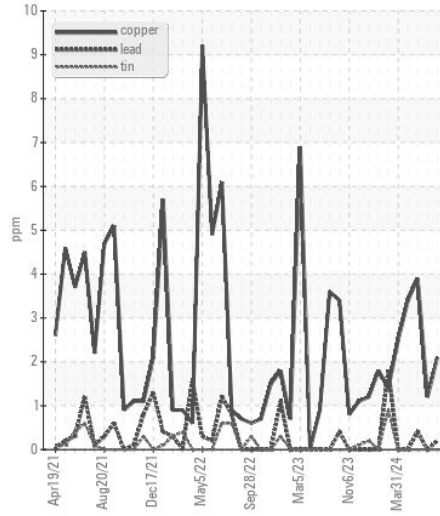
Viscosity @ 100°C



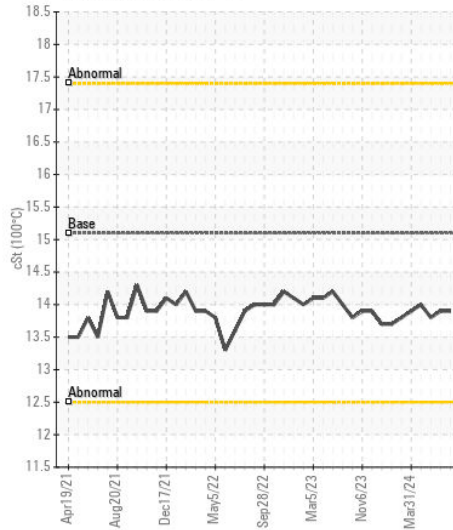
Ferrous Alloys



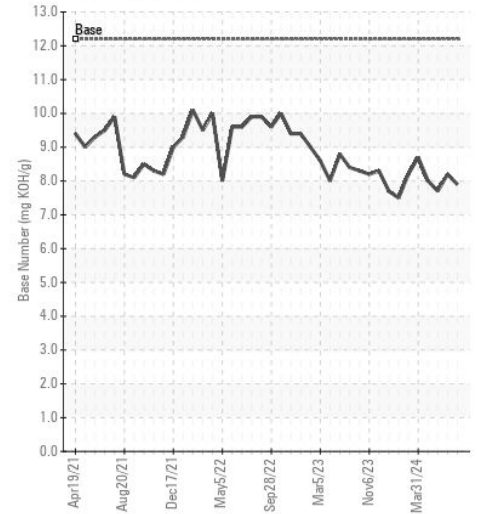
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0061972
Lab Number : 06238689
Unique Number : 11127523
Test Package : MAR 2

Received : 16 Jul 2024
Tested : 17 Jul 2024
Diagnosed : 17 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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