



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
JOHN D GEARY
Machine Id
[JOHN D GEARY] 003 538269-3
Component
Starboard Main Engine
Fluid
CHEVRON DELO 710 LE (450 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0048940	MW0030005	MW0009572
Sample Date		Client Info		20 Feb 2024	01 Feb 2022	01 Aug 2021
Machine Age	hrs	Client Info		17438	29472	16453
Oil Age	hrs	Client Info		251	23407	0
Filter Age	hrs	Client Info		251	43	468
Oil Changed		Client Info		N/A	Not Changed	Not Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	25	16	25
Chromium	ppm	ASTM D5185m	>8	2	<1	1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>3	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>15	2	1	<1
Lead	ppm	ASTM D5185m	>18	11	5	6
Copper	ppm	ASTM D5185m	>80	17	14	26
Tin	ppm	ASTM D5185m	>14	8	3	7
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

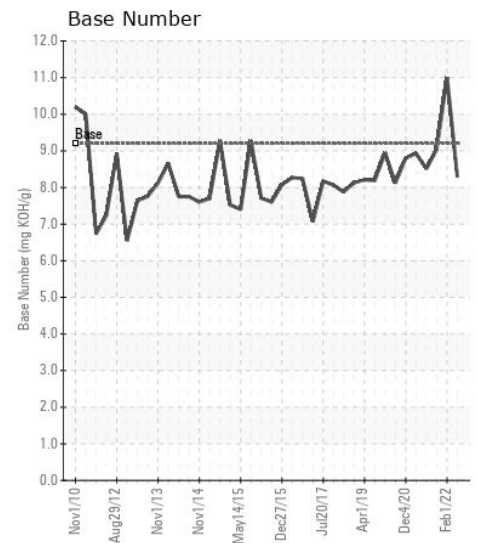
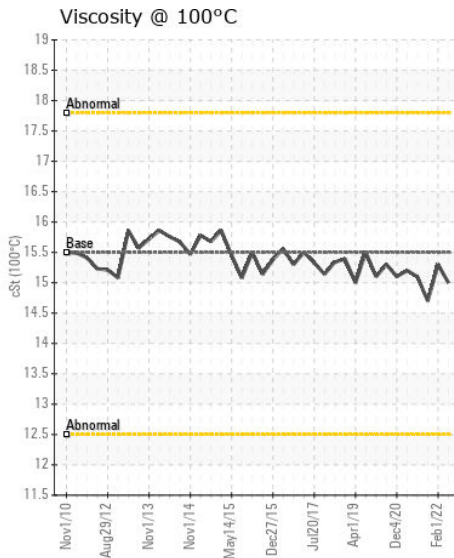
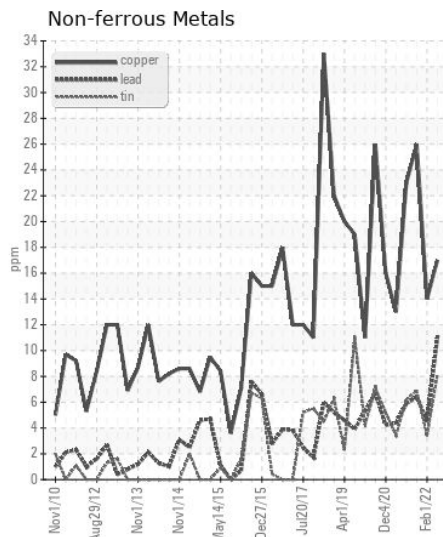
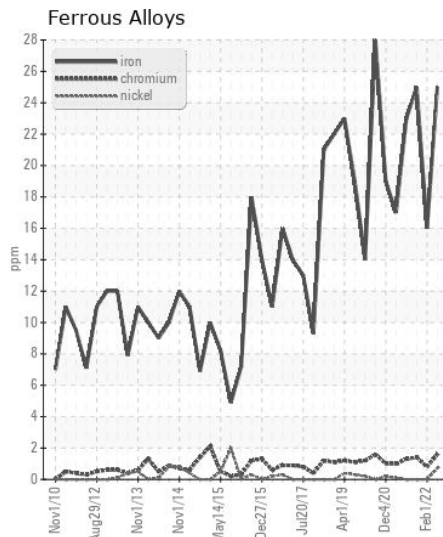
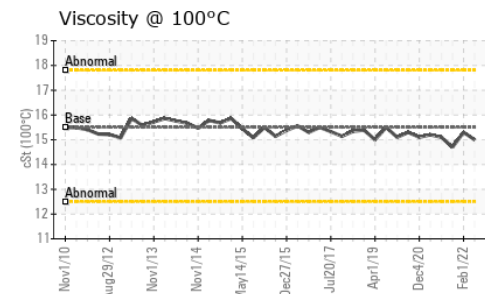
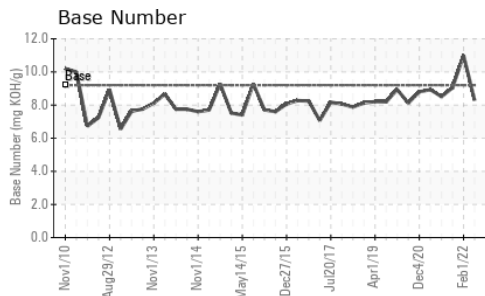
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	3	2	2
Potassium	ppm	ASTM D5185m	>20	<1	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	>3	0.7	0.2	1
Nitration	Abs/cm	*ASTM D7624	>20	8.1	10.0	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.1	19.0	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

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	>75	1	0	<1
Boron	ppm	ASTM D5185m		28	38	26
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		48	42	55
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		13	8	9
Calcium	ppm	ASTM D5185m		3707	3656	3439
Phosphorus	ppm	ASTM D5185m		20	4	32
Zinc	ppm	ASTM D5185m	10	23	0	2
Sulfur	ppm	ASTM D5185m		2614	2001	2165
Oxidation	Abs/.1mm	*ASTM D7414	>25	8.5	11.8	8.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.2	8.29	11.0	9.04
Visc @ 100°C	cSt	ASTM D445	15.5	15.0	15.3	14.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0048940
Lab Number : 06103817
Unique Number : 10902047
Test Package : MAR 2

Received : 28 Feb 2024
Tested : 29 Feb 2024
Diagnosed : 29 Feb 2024 - Wes Davis

INGRAM BARGE
 900 S 3RD ST
 PADUCAH, KY
 US 42003

Contact: ANTHONY VAN CURA
 anthony.vancura@ingrambarga.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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