



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
SIGNET VOLUNTEER

Component
Port Main Engine

Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0064099	MW0064149	MW0064153
Sample Date		Client Info		11 Apr 2024	24 Feb 2024	18 Feb 2024
Machine Age	hrs	Client Info		8009	7893	7874
Oil Age	hrs	Client Info		0	0	7874
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	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	5	5	3
Chromium	ppm	ASTM D5185m	>8	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	1	<1	0
Titanium	ppm	ASTM D5185m	>3	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>15	1	2	2
Lead	ppm	ASTM D5185m	>18	2	<1	<1
Copper	ppm	ASTM D5185m	>80	1	<1	3
Tin	ppm	ASTM D5185m	>14	1	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	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.

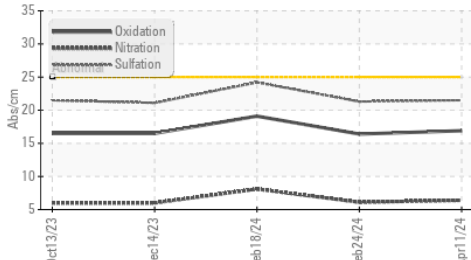
Silicon	ppm	ASTM D5185m	>20	5	5	▲ 107
Potassium	ppm	ASTM D5185m	>20	4	5	5
Fuel		WC Method	>4.0	<1.0	0.5	▲ 4.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.2	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	6.4	6.1	8.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.5	21.3	24.2
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

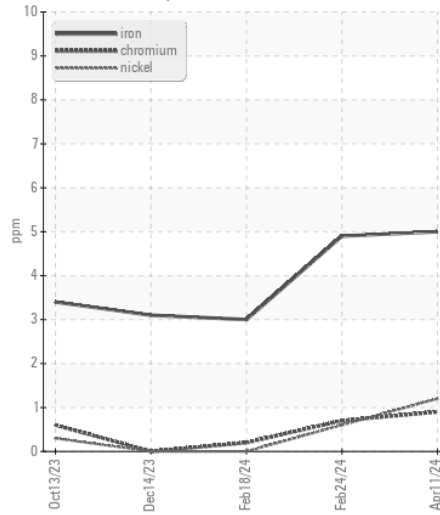
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	<1	<1	14
Boron	ppm	ASTM D5185m	151	263	217	616
Barium	ppm	ASTM D5185m	0.4	0	1	10
Molybdenum	ppm	ASTM D5185m	250	58	54	64
Manganese	ppm	ASTM D5185m		1	<1	0
Magnesium	ppm	ASTM D5185m	0	302	279	384
Calcium	ppm	ASTM D5185m	2046	1849	1610	1131
Phosphorus	ppm	ASTM D5185m	1043	913	770	857
Zinc	ppm	ASTM D5185m	943	1011	950	746
Sulfur	ppm	ASTM D5185m	5012	3407	3126	3003
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	16.4	19.1
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	8.3	8.1	8.0
Visc @ 100°C	cSt	ASTM D445	14.4	13.7	13.8	▲ 11.6

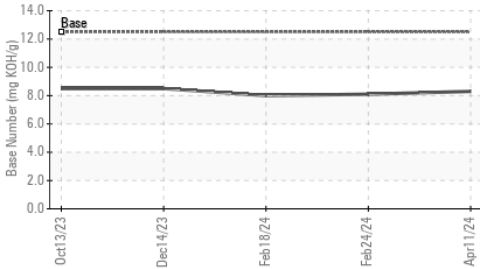
FT-IR (Direct Trend)



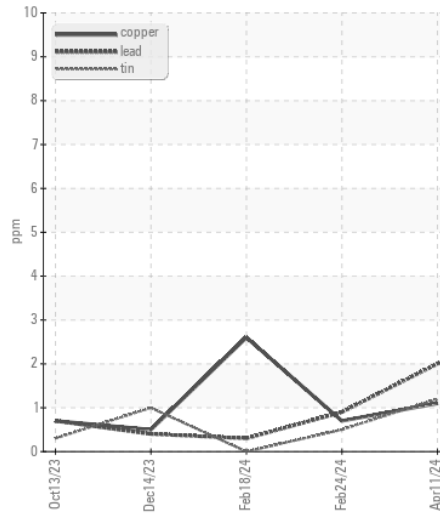
Ferrous Alloys



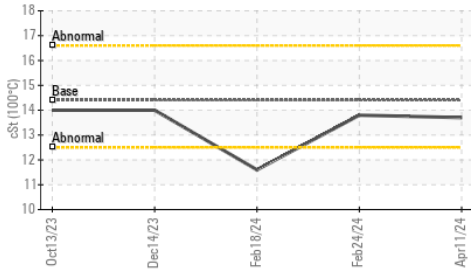
Base Number



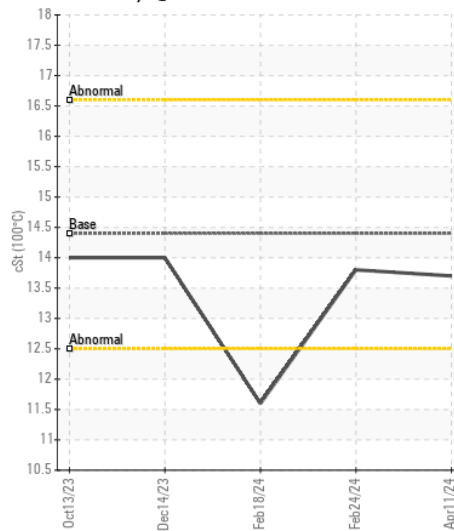
Non-ferrous Metals



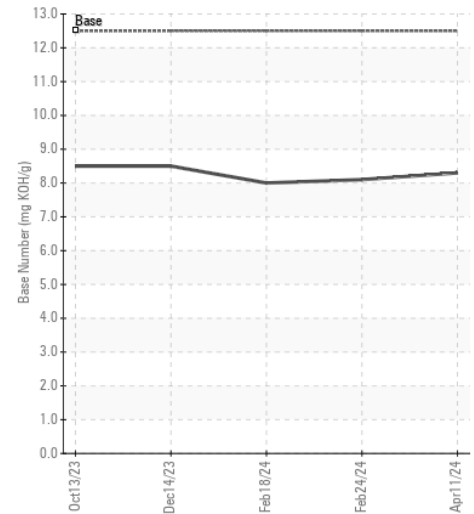
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : MW0064099

Lab Number : 06152754

Unique Number : 10982832

Test Package : MAR 2

Received : 18 Apr 2024

Tested : 18 Apr 2024

Diagnosed : 22 Apr 2024 - Don Baldrige

MARITIME COMPANY

3802 PORT RIVER RD

PASCAGOULA, MS

US 39567

Contact: MARK KOPSYWA

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T:

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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