



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id

**EMILY DAVIS**

Component

**Port 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		<b>MW0062032</b>	MW0061900	MW0062035
Sample Date		Client Info		<b>31 Mar 2024</b>	23 Feb 2024	28 Jan 2024
Machine Age	hrs	Client Info		<b>43433</b>	4536	4510
Oil Age	hrs	Client Info		<b>471</b>	684	1500
Filter Age	hrs	Client Info		<b>471</b>	135	750
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>3</b>	3	4
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>14</b>	15	14
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	1	1
Lead	ppm	ASTM D5185m	>40	<b>0</b>	1	0
Copper	ppm	ASTM D5185m	>300	<b>2</b>	1	2
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

There is no indication of any contamination in the oil.

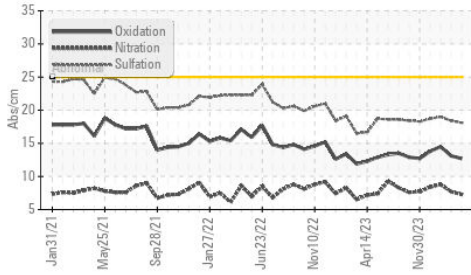
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	3	3
Potassium	ppm	ASTM D5185m	>20	<b>11</b>	2	2
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.3</b>	7.7	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.1</b>	18.4	19.0
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>LIGHT</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

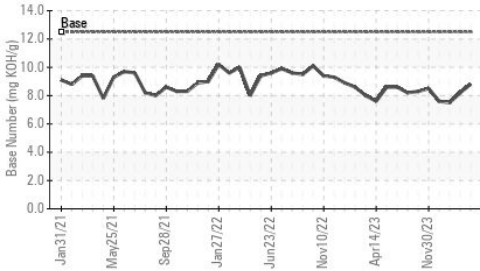
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>8</b>	<1	5
Boron	ppm	ASTM D5185m	151	<b>101</b>	119	89
Barium	ppm	ASTM D5185m	0.4	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	250	<b>31</b>	33	32
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	0	<b>750</b>	858	821
Calcium	ppm	ASTM D5185m	2046	<b>1494</b>	1711	1724
Phosphorus	ppm	ASTM D5185m	1043	<b>737</b>	827	834
Zinc	ppm	ASTM D5185m	943	<b>810</b>	1017	974
Sulfur	ppm	ASTM D5185m	5012	<b>3608</b>	3731	3603
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.7</b>	13.1	14.5
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	<b>8.8</b>	8.2	7.5
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.0</b>	14.0	13.8

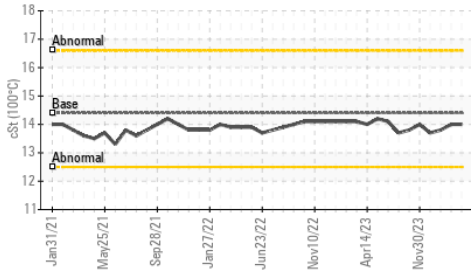
**FT-IR (Direct Trend)**



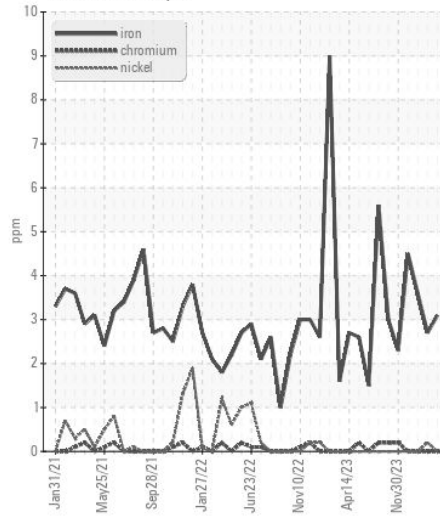
**Base Number**



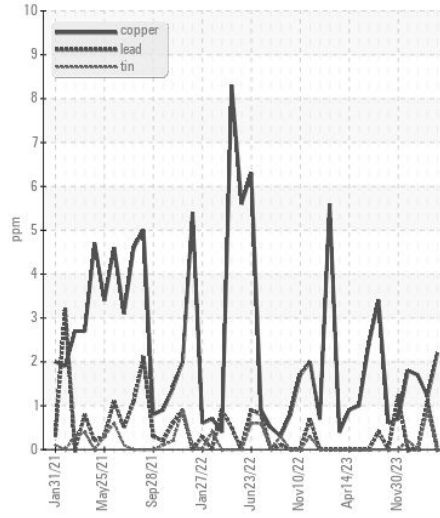
**Viscosity @ 100°C**



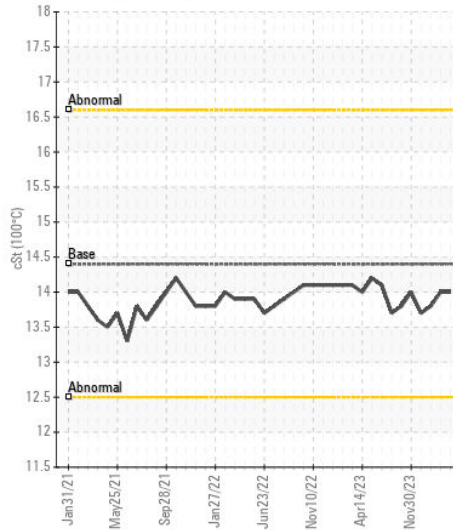
**Ferrous Alloys**



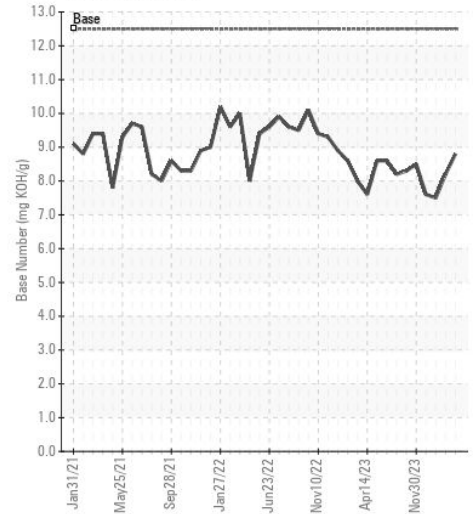
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0062032  
**Lab Number** : 06147138  
**Unique Number** : 10977216  
**Test Package** : MAR 2

**Received** : 12 Apr 2024  
**Tested** : 15 Apr 2024  
**Diagnosed** : 15 Apr 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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