



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

Area  
**RONALD L SENSENBACH**  
Machine Id  
[RONALD L SENSENBACH] 001 685579-1  
Component  
**Port Main Engine**  
Fluid  
**CHEVRON DELO 400 XLE 15W40 (220 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0068206</b>	MW0068221	MW0058701
Sample Date		Client Info		<b>01 May 2024</b>	01 Apr 2024	02 Mar 2024
Machine Age	hrs	Client Info		<b>30529</b>	29803	29092
Oil Age	hrs	Client Info		<b>1382</b>	656	1375
Filter Age	hrs	Client Info		<b>657</b>	656	689
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>2</b>	5	7
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>3</b>	3	2
Lead	ppm	ASTM D5185m	>18	<b>0</b>	1	0
Copper	ppm	ASTM D5185m	>80	<b>4</b>	16	36
Tin	ppm	ASTM D5185m	>14	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	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.

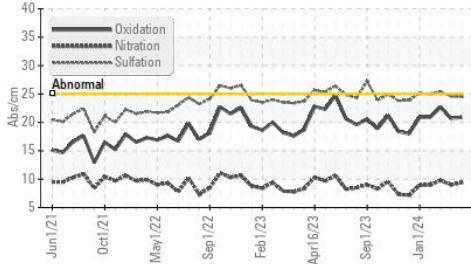
Silicon	ppm	ASTM D5185m	>20	<b>5</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	1
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.2</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.4</b>	9.0	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.5</b>	24.6	25.4
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</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**

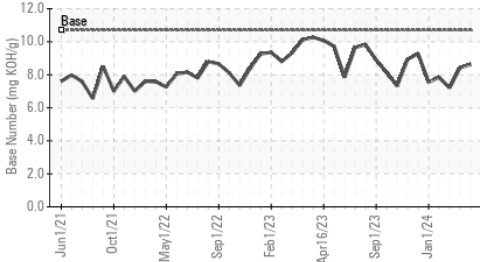
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	<b>&lt;1</b>	0	1
Boron	ppm	ASTM D5185m		<b>334</b>	345	284
Barium	ppm	ASTM D5185m		<b>1</b>	<1	0
Molybdenum	ppm	ASTM D5185m		<b>124</b>	145	129
Manganese	ppm	ASTM D5185m		<b>1</b>	1	<1
Magnesium	ppm	ASTM D5185m		<b>668</b>	814	678
Calcium	ppm	ASTM D5185m		<b>1502</b>	1953	1550
Phosphorus	ppm	ASTM D5185m	760	<b>709</b>	853	683
Zinc	ppm	ASTM D5185m	830	<b>829</b>	1078	773
Sulfur	ppm	ASTM D5185m	2770	<b>2788</b>	3640	2792
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.9</b>	20.7	22.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>8.62</b>	8.43	7.20
Visc @ 100°C	cSt	ASTM D445	14.9	<b>13.4</b>	13.5	13.6

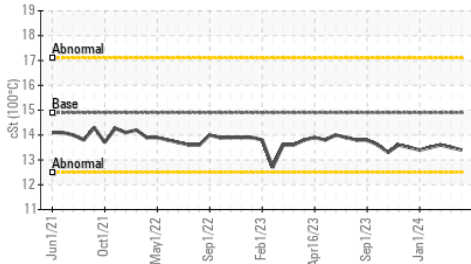
**FT-IR (Direct Trend)**



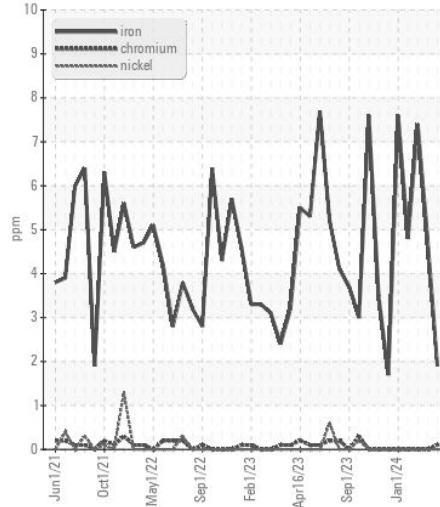
**Base Number**



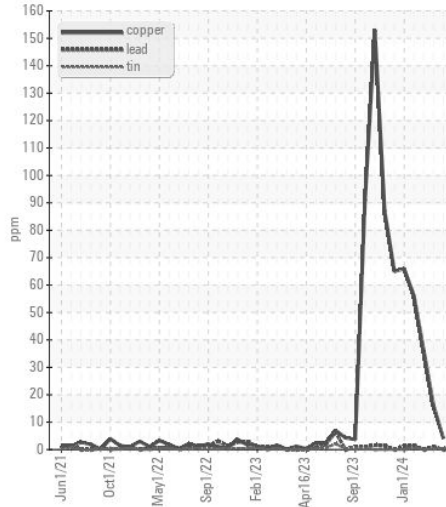
**Viscosity @ 100°C**



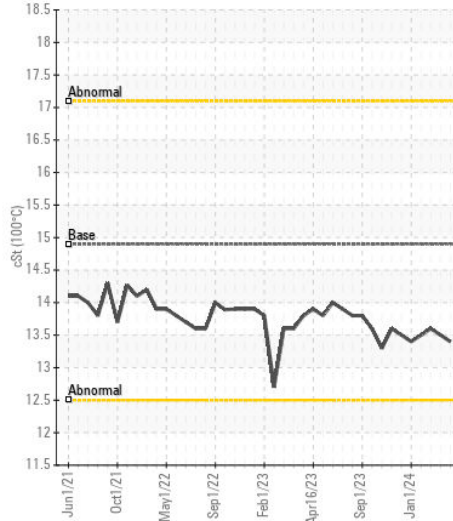
**Ferrous Alloys**



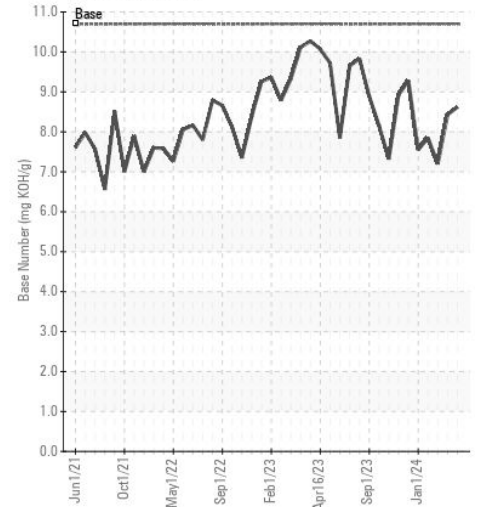
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

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

**Sample No.** : MW0068206

**Lab Number** : 06177890

**Unique Number** : 11029216

**Test Package** : MAR 2

**Received** : 13 May 2024

**Tested** : 14 May 2024

**Diagnosed** : 14 May 2024 - Wes Davis

**INGRAM BARGE**

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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)