



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

Area  
**A.A. BIRCH**  
Machine Id  
**[A.A. BIRCH] 001 616455-1**  
Component  
**Port Main Engine**  
Fluid  
**CHEVRON DELO 710 LE (220 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0053884</b>	MW0060237	MW0060284
Sample Date		Client Info		<b>01 Jan 2024</b>	01 Dec 2023	01 Nov 2023
Machine Age	hrs	Client Info		<b>39851</b>	39000	38298
Oil Age	hrs	Client Info		<b>14069</b>	23000	12290
Filter Age	hrs	Client Info		<b>44</b>	400	515
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	N/A
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>31</b>	23	22
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>2</b>	2	2
Lead	ppm	ASTM D5185m	>18	<b>6</b>	6	5
Copper	ppm	ASTM D5185m	>80	<b>24</b>	24	17
Tin	ppm	ASTM D5185m	>14	<b>5</b>	5	4
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

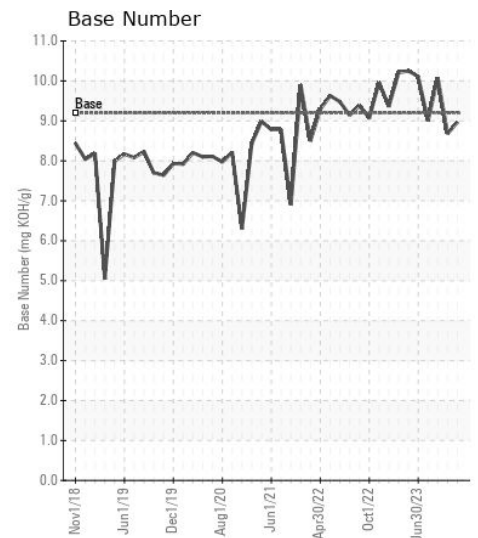
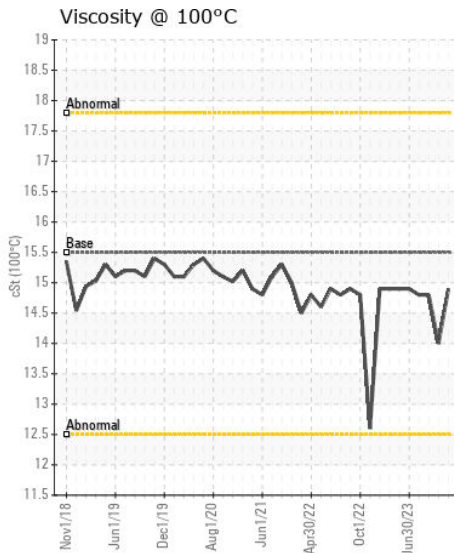
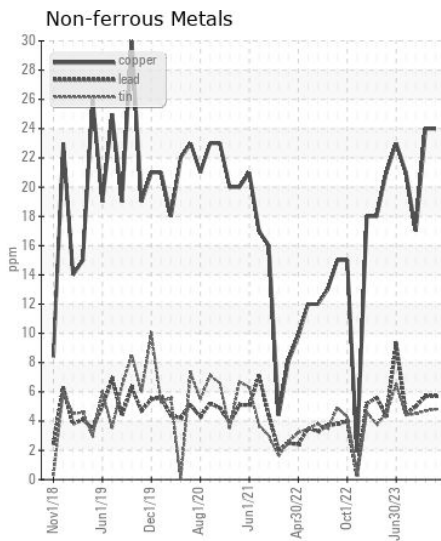
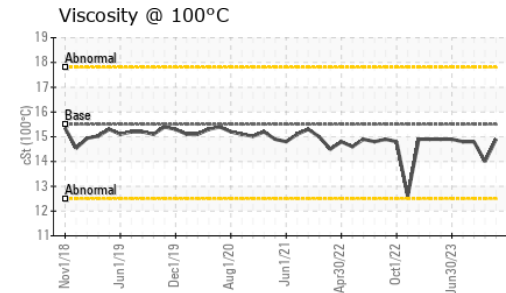
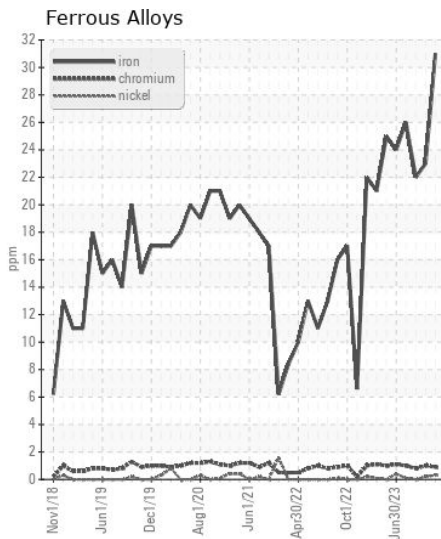
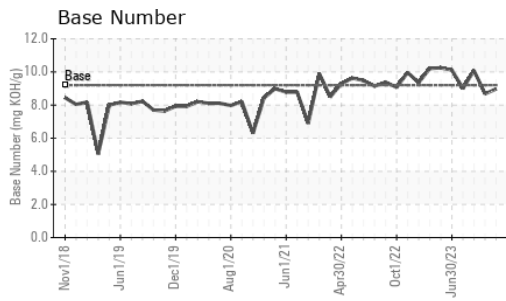
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>5</b>	5	4
Potassium	ppm	ASTM D5185m	>20	<b>2</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	>3	<b>1.2</b>	1.2	1.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.2</b>	8.2	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.6</b>	17.2	18.0
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>0</b>	0	2
Boron	ppm	ASTM D5185m		<b>41</b>	40	37
Barium	ppm	ASTM D5185m		<b>2</b>	2	0
Molybdenum	ppm	ASTM D5185m		<b>47</b>	46	42
Manganese	ppm	ASTM D5185m		<b>2</b>	1	<1
Magnesium	ppm	ASTM D5185m		<b>12</b>	11	14
Calcium	ppm	ASTM D5185m		<b>3521</b>	3407	3415
Phosphorus	ppm	ASTM D5185m		<b>21</b>	21	9
Zinc	ppm	ASTM D5185m	10	<b>0</b>	0	6
Sulfur	ppm	ASTM D5185m		<b>2711</b>	2663	2601
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>8.3</b>	8.3	8.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.2	<b>8.97</b>	8.68	10.08
Visc @ 100°C	cSt	ASTM D445	15.5	<b>14.9</b>	14.0	14.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0053884 **Received** : 11 Jan 2024  
**Lab Number** : 06058870 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10830252 **Diagnostician** : Wes Davis  
**Test Package** : MAR 2

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)

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

Contact: DALE MORIE  
 dale.morie@ingrambarga.com  
 T: (270)415-4467  
 F: (615)695-3697