



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

Machine Id  
**JOHN NUGENT (S/N 74-F1-1144)**  
Component  
**Port Main Engine**  
Fluid  
**CHEVRON DELO 710 LS (365 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0053316</b>	MW0050225	MW0057436
Sample Date		Client Info		<b>15 Feb 2024</b>	15 Jan 2024	15 Dec 2023
Machine Age	hrs	Client Info		<b>15408</b>	14664	13920
Oil Age	hrs	Client Info		<b>15408</b>	14664	13920
Filter Age	hrs	Client Info		<b>1010</b>	206	797
Oil Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>16</b>	12	12
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	<1	<1
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>1</b>	1	<1
Lead	ppm	ASTM D5185m	>18	<b>1</b>	1	2
Copper	ppm	ASTM D5185m	>80	<b>12</b>	9	10
Tin	ppm	ASTM D5185m	>14	<b>3</b>	3	2
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

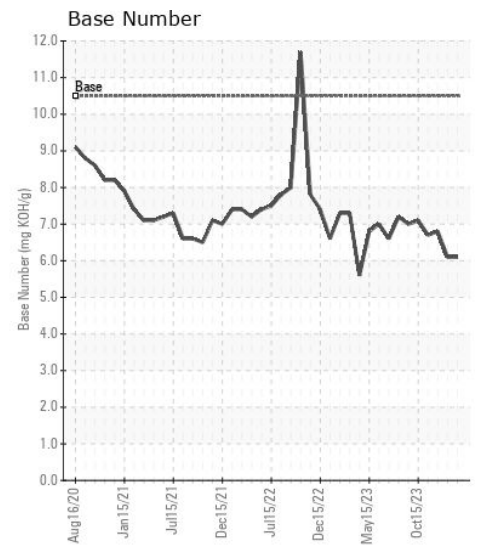
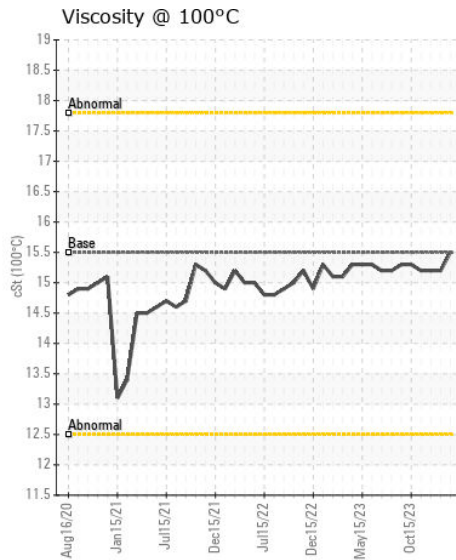
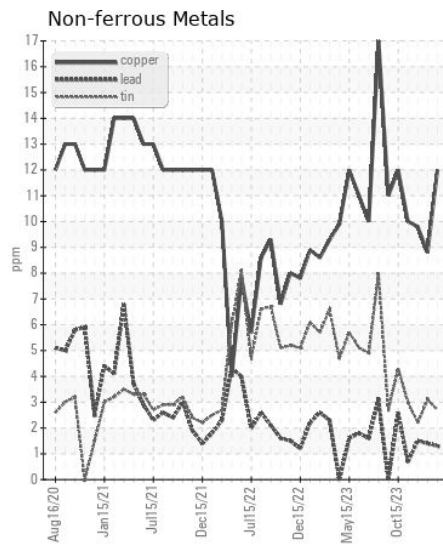
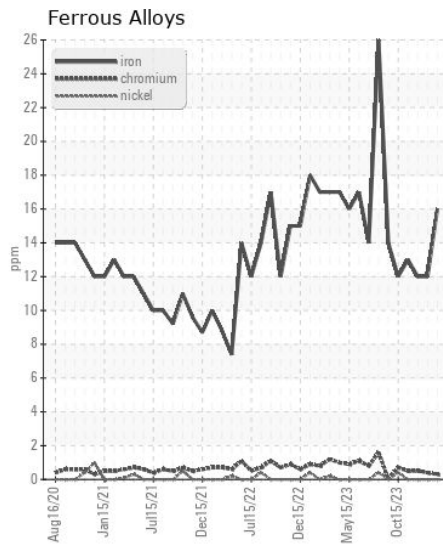
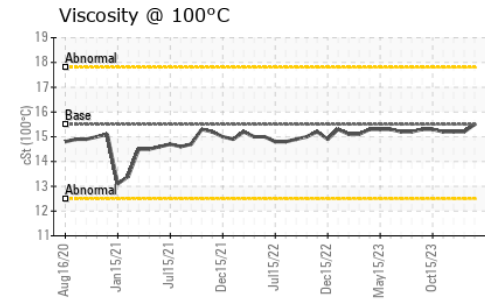
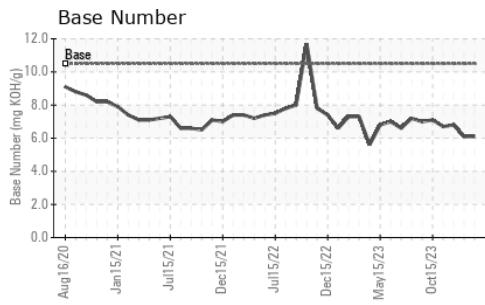
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	<1	0
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>1.4</b>	1.3	1.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.6</b>	7.1	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>16.8</b>	16.2	16.0
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>3</b>	<1	1
Boron	ppm	ASTM D5185m		<b>46</b>	42	37
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>55</b>	43	42
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>32</b>	12	23
Calcium	ppm	ASTM D5185m		<b>3888</b>	3324	3341
Phosphorus	ppm	ASTM D5185m		<b>18</b>	3	9
Zinc	ppm	ASTM D5185m		<b>24</b>	0	16
Sulfur	ppm	ASTM D5185m		<b>2571</b>	2179	1933
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>7.5</b>	7.0	7.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>6.1</b>	6.1	6.8
Visc @ 100°C	cSt	ASTM D445	15.5	<b>15.5</b>	15.2	15.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0053316  
**Lab Number** : 06102760  
**Unique Number** : 10900990  
**Test Package** : MAR 2

**Received** : 28 Feb 2024  
**Tested** : 04 Mar 2024  
**Diagnosed** : 04 Mar 2024 - Wes Davis

**AMERICAN COMMERCIAL LINES**  
 PO BOX 610, 1701 E. MARKET STREET  
 JEFFERSONVILLE, IN  
 US 47130  
 Contact: RONALD SCHNEIDER  
 ronald.schneider@bargeacbl.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)

T:  
 F: (812)288-1644