



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

Area  
**JAMES L HAMILTON**  
Machine Id  
**[JAMES L HAMILTON] 001 572403-1**  
Component  
**Port Main Engine**  
Fluid  
**CHEVRON DELO 710 LS (220 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0041850</b>	MW0041849	MW0053827
Sample Date		Client Info		<b>01 Jan 2024</b>	01 Dec 2023	15 Nov 2023
Machine Age	hrs	Client Info		<b>59597</b>	58862	57424
Oil Age	hrs	Client Info		<b>59597</b>	58862	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>24</b>	25	24
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	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>2</b>	2	1
Lead	ppm	ASTM D5185m	>18	<b>9</b>	10	11
Copper	ppm	ASTM D5185m	>80	<b>30</b>	31	36
Tin	ppm	ASTM D5185m	>14	<b>6</b>	6	6
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

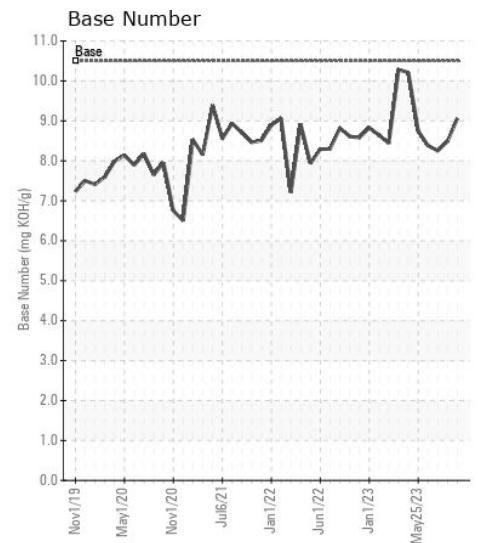
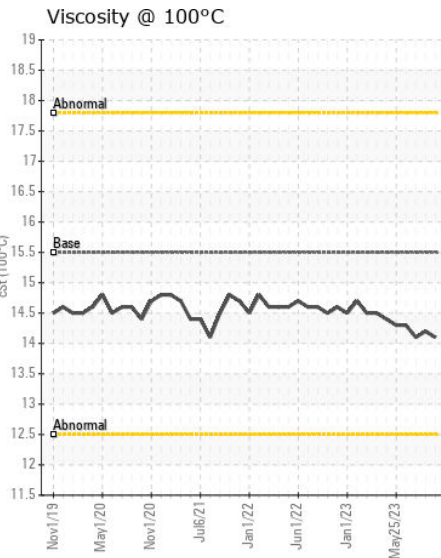
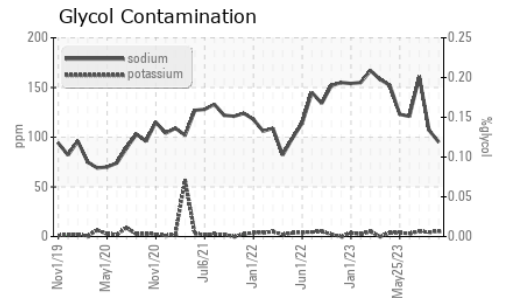
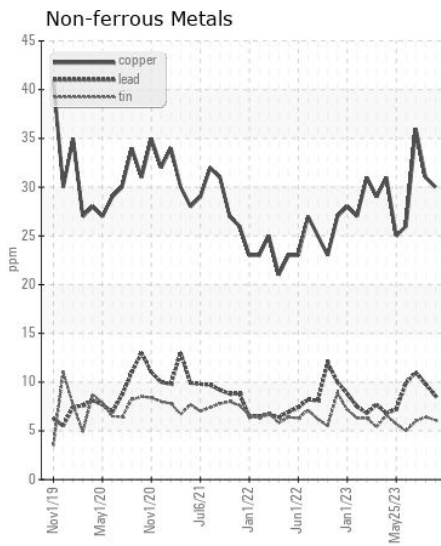
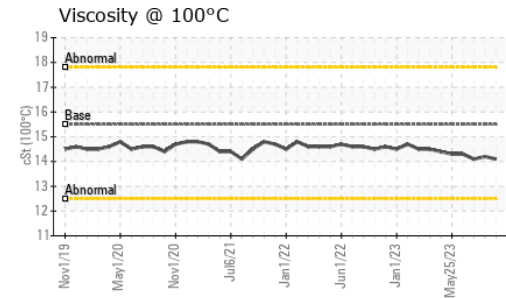
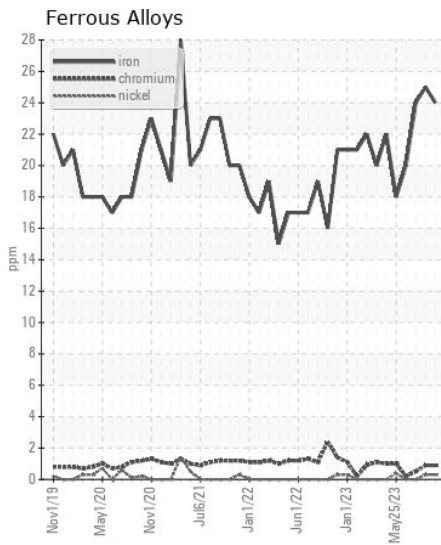
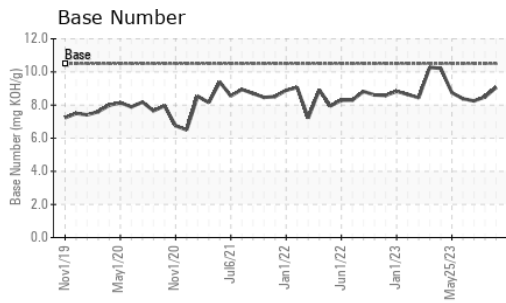
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>8</b>	8	10
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	4	5
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	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1</b>	1	1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.6</b>	8.8	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.8</b>	17.8	18.9
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>95</b>	107	161
Boron	ppm	ASTM D5185m		<b>52</b>	56	61
Barium	ppm	ASTM D5185m		<b>2</b>	3	6
Molybdenum	ppm	ASTM D5185m		<b>47</b>	51	51
Manganese	ppm	ASTM D5185m		<b>1</b>	1	<1
Magnesium	ppm	ASTM D5185m		<b>13</b>	14	13
Calcium	ppm	ASTM D5185m		<b>3224</b>	3405	3458
Phosphorus	ppm	ASTM D5185m		<b>19</b>	20	29
Zinc	ppm	ASTM D5185m		<b>0</b>	0	<1
Sulfur	ppm	ASTM D5185m		<b>2428</b>	2471	2718
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>8.3</b>	8.2	8.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>9.06</b>	8.49	8.25
Visc @ 100°C	cSt	ASTM D445	15.5	<b>14.1</b>	14.2	14.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0041850 **Received** : 11 Jan 2024  
**Lab Number** : 06058844 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10830226 **Diagnostician** : Jonathan Hester  
**Test Package** : MAR 2 ( Additional Tests: Glycol )

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: ANTHONY VAN CURA  
 anthony.vancura@ingrambarga.com  
 T: (270)415-4467  
 F: (615)695-3697