



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

Area  
**JHA**  
Machine Id  
**JHA (S/N L12-710G7C-T2)**  
Component  
**Port Main Engine**  
Fluid  
**CHEVRON DELO 710 LS (350 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0060781</b>	MW0050590	MW0054944
Sample Date		Client Info		<b>27 Nov 2023</b>	12 Oct 2023	14 Aug 2023
Machine Age	hrs	Client Info		<b>89248</b>	8765	7512
Oil Age	hrs	Client Info		<b>7204</b>	6117	4865
Filter Age	hrs	Client Info		<b>1087</b>	1241	1307
Oil Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
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>11</b>	11	9
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>1</b>	2	<1
Lead	ppm	ASTM D5185m	>18	<b>9</b>	5	3
Copper	ppm	ASTM D5185m	>80	<b>17</b>	16	14
Tin	ppm	ASTM D5185m	>14	<b>5</b>	4	3
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**

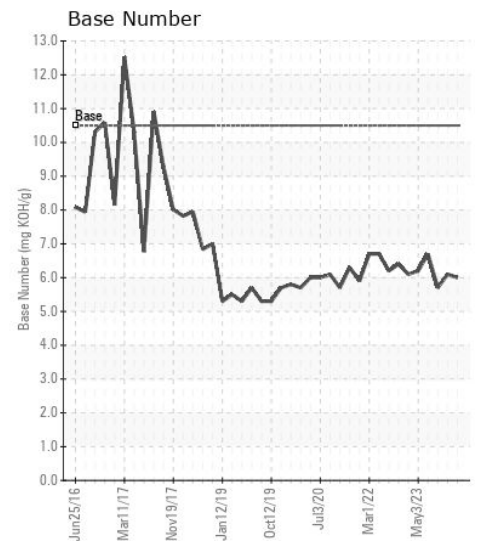
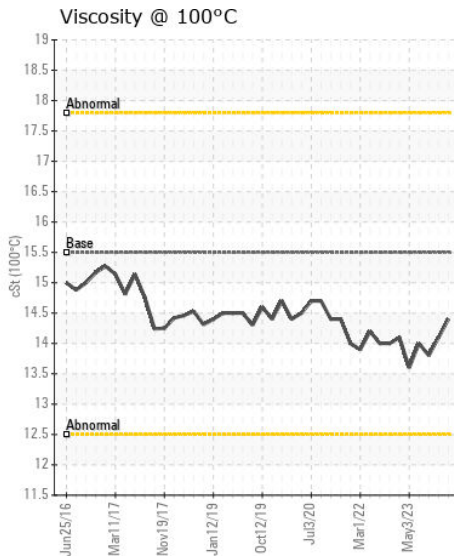
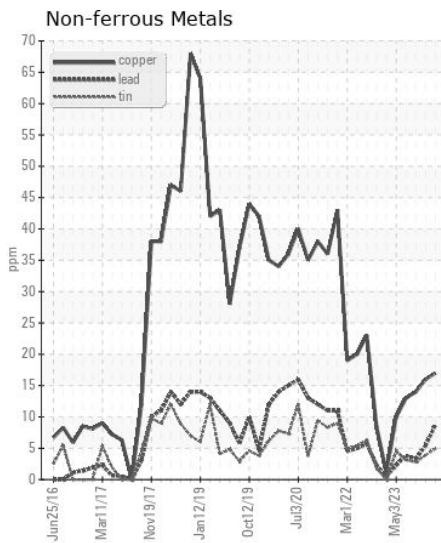
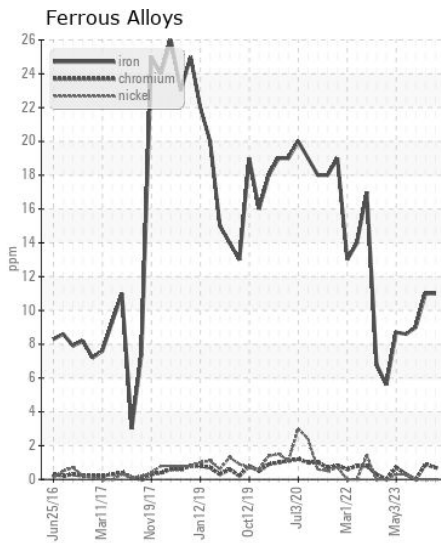
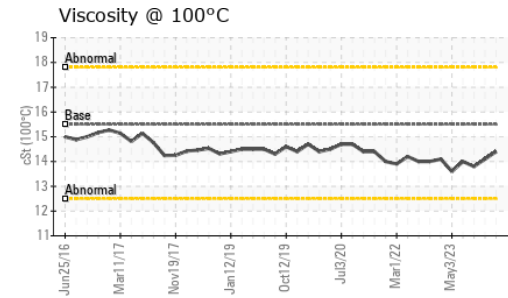
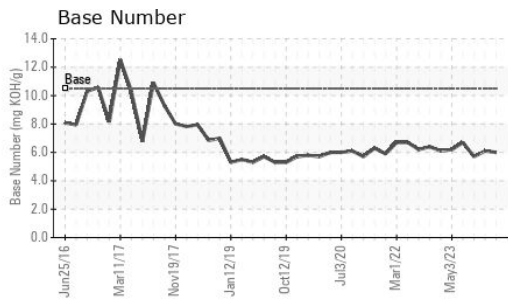
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>3</b>	3	2
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</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>0.2</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.5</b>	8.3	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.0</b>	17.1	16.3
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>	2	<1
Boron	ppm	ASTM D5185m		<b>35</b>	37	35
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>43</b>	42	43
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>11</b>	0	12
Calcium	ppm	ASTM D5185m		<b>3468</b>	3236	3188
Phosphorus	ppm	ASTM D5185m		<b>4</b>	0	4
Zinc	ppm	ASTM D5185m		<b>0</b>	0	0
Sulfur	ppm	ASTM D5185m		<b>2215</b>	1793	2039
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>11.7</b>	12.0	11.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>6.0</b>	6.1	5.7
Visc @ 100°C	cSt	ASTM D445	15.5	<b>14.4</b>	14.1	13.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0060781 **Recieved** : 10 Jan 2024  
**Lab Number** : 06056324 **Diagnosed** : 11 Jan 2024  
**Unique Number** : 10822273 **Diagnostician** : Wes Davis  
**Test Package** : MAR 2

**AMERICAN RIVER TRANSPORTATION CO.**  
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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)