



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

Machine Id  
**LEGACY**  
Component  
**Port Main Engine**  
Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0057307</b>	MW0016507	MW0016646
Sample Date		Client Info		<b>08 Jan 2024</b>	27 Dec 2022	21 Sep 2022
Machine Age	hrs	Client Info		<b>49587</b>	43369	41338
Oil Age	hrs	Client Info		<b>3547</b>	2010	2159
Filter Age	hrs	Client Info		<b>3547</b>	2010	2159
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
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>8</b>	8	5
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>12</b>	13	13
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>1</b>	0	0
Lead	ppm	ASTM D5185m	>18	<b>5</b>	<1	1
Copper	ppm	ASTM D5185m	>80	<b>&lt;1</b>	<1	0
Tin	ppm	ASTM D5185m	>14	<b>1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

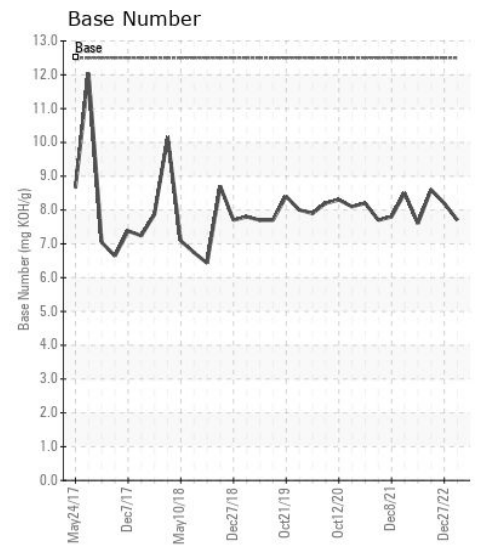
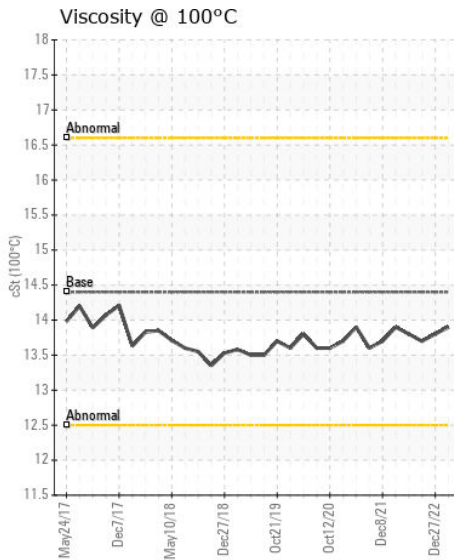
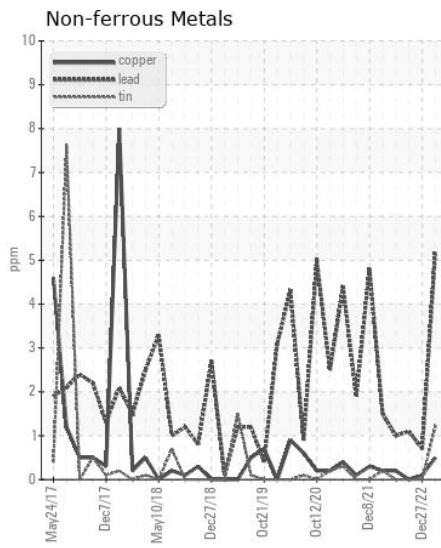
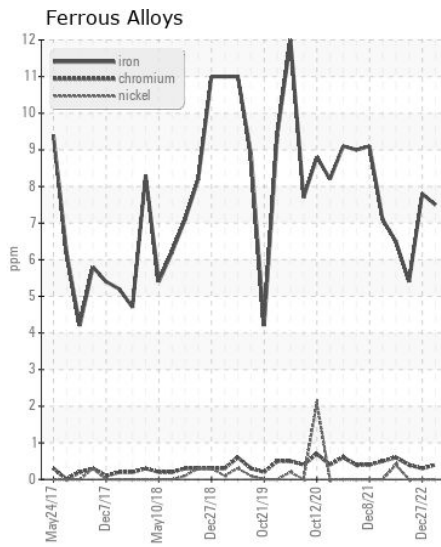
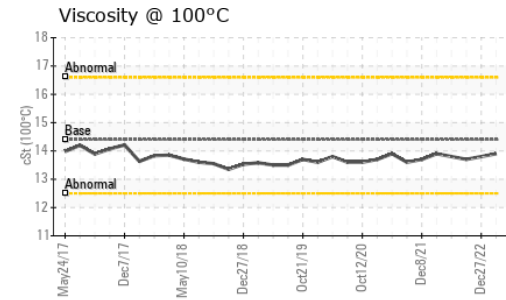
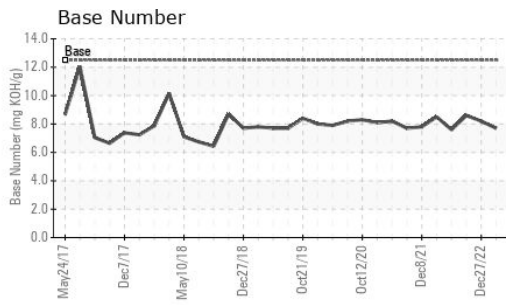
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>4</b>	3	2
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	4	4
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>0.4</b>	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.2</b>	8.2	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.1</b>	18.4	20.2
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>8</b>	4	3
Boron	ppm	ASTM D5185m	151	<b>70</b>	87	65
Barium	ppm	ASTM D5185m	0.4	<b>0</b>	1	2
Molybdenum	ppm	ASTM D5185m	250	<b>36</b>	32	33
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	0	<b>690</b>	583	603
Calcium	ppm	ASTM D5185m	2046	<b>1877</b>	1558	1657
Phosphorus	ppm	ASTM D5185m	1043	<b>834</b>	696	729
Zinc	ppm	ASTM D5185m	943	<b>1031</b>	841	874
Sulfur	ppm	ASTM D5185m	5012	<b>3624</b>	2957	3477
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.5</b>	12.8	13.8
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	<b>7.7</b>	8.2	8.6
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.9</b>	13.8	13.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0057307 **Received** : 12 Jan 2024  
**Lab Number** : 06058947 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10830329 **Diagnostician** : Don Baldrige  
**Test Package** : MAR 2

**AMERICAN RIVER TRANSPORTATION CO**  
 8400 RIVER RD, PO BOX 656  
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 US 70094-2317  
 Contact: KEVIN CHIASSON  
 kevin.chiasson@adm.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)

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F: