



Machine Id  
**CAPTAIN DUFFY**  
Component  
**Port Genset**  
Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)**

**RECOMMENDATION**

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0065017</b>	MW0016465	MW0052207
Sample Date		Client Info		<b>16 May 2024</b>	04 Mar 2024	19 Dec 2023
Machine Age	hrs	Client Info		<b>35086</b>	34206	33241
Oil Age	hrs	Client Info		<b>1849</b>	875	2068
Filter Age	hrs	Client Info		<b>974</b>	875	893
Oil Changed		Client Info		<b>Changed</b>	Not Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>2</b>	7	15
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>11</b>	14	15
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>1</b>	1	1
Lead	ppm	ASTM D5185m	>17	<b>&lt;1</b>	<1	9
Copper	ppm	ASTM D5185m	>70	<b>2</b>	<1	1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

Sodium and/or potassium levels are high.

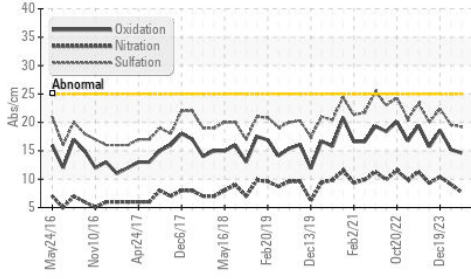
Silicon	ppm	ASTM D5185m	>25	<b>9</b>	3	4
Potassium	ppm	ASTM D5185m	>20	<b>▲ 73</b>	3	4
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.7</b>	9.1	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.2</b>	19.6	22.4
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**

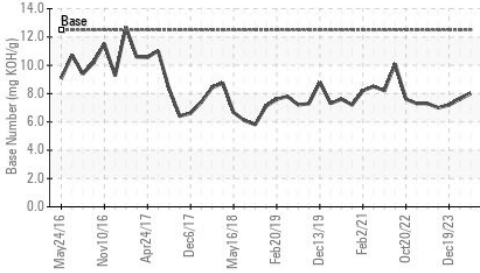
The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		<b>▲ 96</b>	8	12
Boron	ppm	ASTM D5185m	151	<b>84</b>	64	49
Barium	ppm	ASTM D5185m	0.4	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	250	<b>26</b>	30	30
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	0	<b>607</b>	678	740
Calcium	ppm	ASTM D5185m	2046	<b>1185</b>	1633	1733
Phosphorus	ppm	ASTM D5185m	1043	<b>697</b>	668	818
Zinc	ppm	ASTM D5185m	943	<b>733</b>	828	947
Sulfur	ppm	ASTM D5185m	5012	<b>3165</b>	3024	3160
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.6</b>	15.2	18.6
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	<b>8.0</b>	7.6	7.2
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.9</b>	14.3	15.2

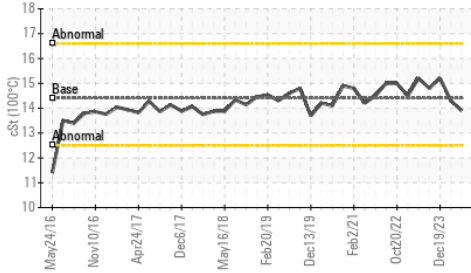
**FT-IR (Direct Trend)**



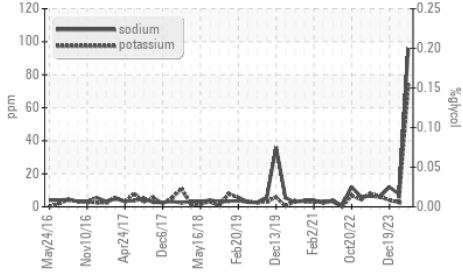
**Base Number**



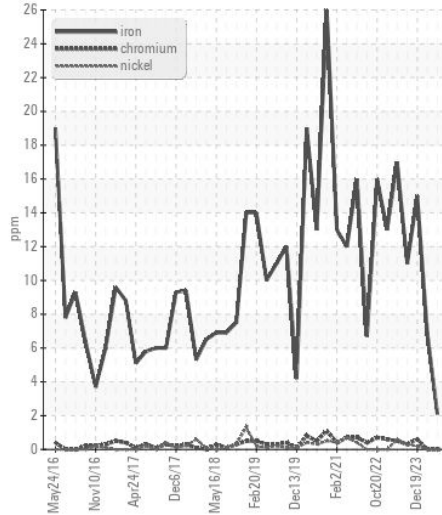
**Viscosity @ 100°C**



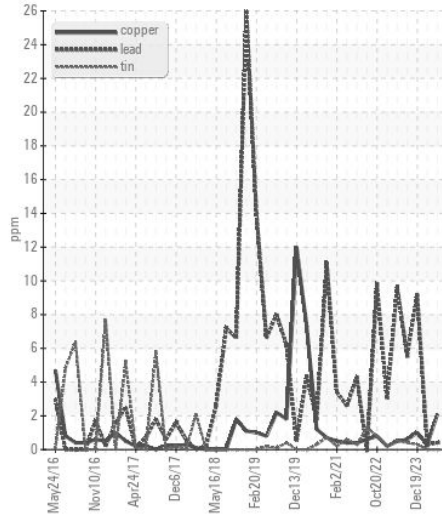
**Glycol Contamination**



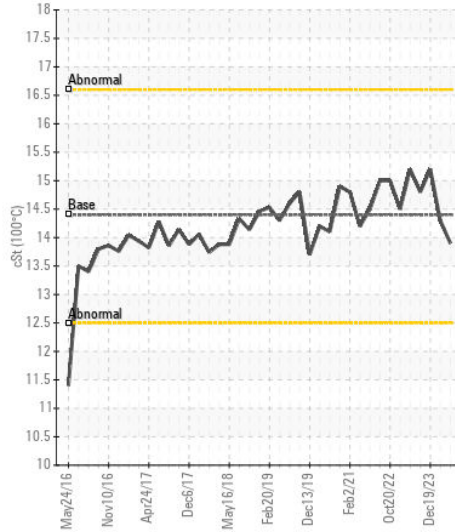
**Ferrous Alloys**



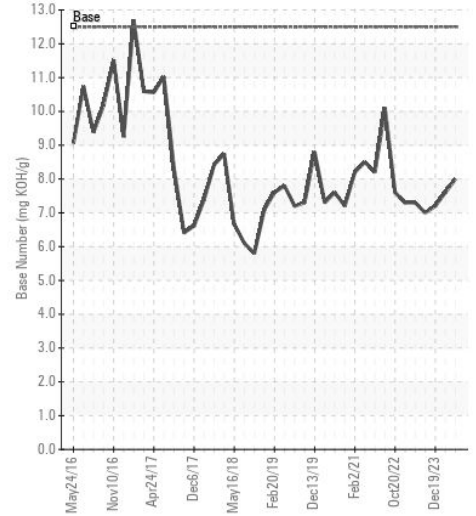
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : MW0065017

**Lab Number** : 06195228

**Unique Number** : 11057351

**Test Package** : MAR 2 ( Additional Tests: GLYCOL )

**Received** : 30 May 2024

**Tested** : 03 Jun 2024

**Diagnosed** : 03 Jun 2024 - Jonathan Hester

**AMERICAN RIVER TRANSPORTATION CO**

8400 RIVER RD, PO BOX 656

WESTWEGO, LA

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)

T:

F: