



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

Area  
**STEPHEN P VENABLE**  
Machine Id  
[STEPHEN P VENABLE] 001 590046-1  
Component  
**Port Main Engine**  
Fluid  
**CHEVRON DELO 400 LE 15W40 (55 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0063012</b>	MW0063006	MW0067995
Sample Date		Client Info		<b>01 Jul 2024</b>	01 Jun 2024	22 May 2024
Machine Age	hrs	Client Info		<b>7581</b>	6887	6669
Oil Age	hrs	Client Info		<b>264</b>	550	332
Filter Age	hrs	Client Info		<b>264</b>	550	332
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>4</b>	5	7
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	1
Aluminum	ppm	ASTM D5185m	>15	<b>3</b>	2	4
Lead	ppm	ASTM D5185m	>18	<b>&lt;1</b>	0	1
Copper	ppm	ASTM D5185m	>80	<b>3</b>	4	7
Tin	ppm	ASTM D5185m	>14	<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**

There is no indication of any contamination in the oil.

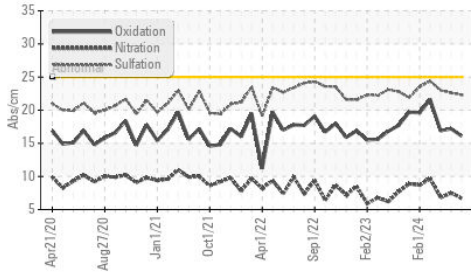
Silicon	ppm	ASTM D5185m	>20	<b>5</b>	4	6
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	2
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.7</b>	7.5	6.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.3</b>	22.6	23.0
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**

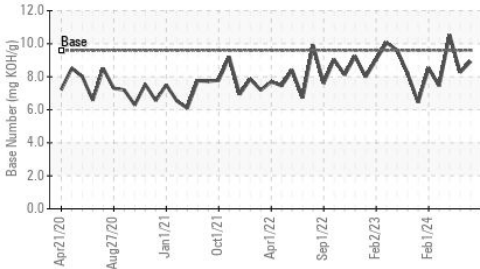
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	<b>&lt;1</b>	<1	2
Boron	ppm	ASTM D5185m		<b>417</b>	320	357
Barium	ppm	ASTM D5185m		<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m		<b>102</b>	128	110
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m		<b>497</b>	651	524
Calcium	ppm	ASTM D5185m		<b>1410</b>	1788	1386
Phosphorus	ppm	ASTM D5185m	1200	<b>853</b>	832	655
Zinc	ppm	ASTM D5185m	1300	<b>1077</b>	1033	784
Sulfur	ppm	ASTM D5185m	3200	<b>2790</b>	3419	2509
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.1</b>	17.2	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	<b>8.93</b>	8.26	10.53
Visc @ 100°C	cSt	ASTM D445	15.7	<b>13.8</b>	13.5	13.69

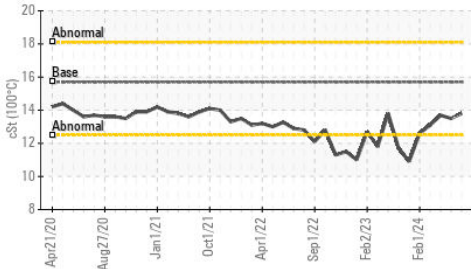
**FT-IR (Direct Trend)**



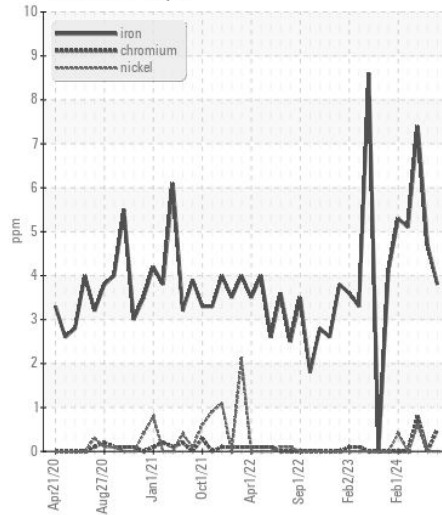
**Base Number**



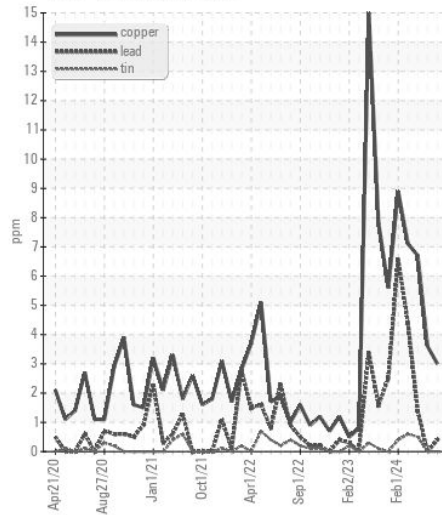
**Viscosity @ 100°C**



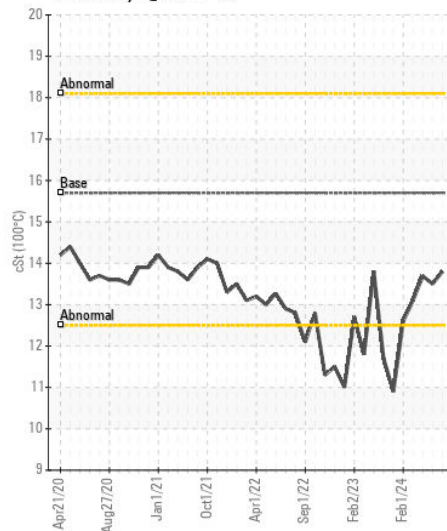
**Ferrous Alloys**



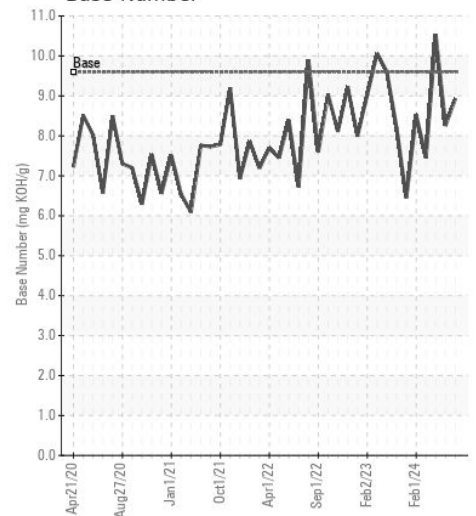
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

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

**Sample No.** : MW0063012

**Lab Number** : 06237077

**Unique Number** : 11125911

**Test Package** : MAR 2

**Received** : 15 Jul 2024

**Tested** : 17 Jul 2024

**Diagnosed** : 17 Jul 2024 - Don Baldrige

**INGRAM BARGE**

900 S 3RD ST

PADUCAH, KY

US 42003

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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)