



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

Area  
**SANDY B**  
Machine Id  
[SANDY B] 001 562531-1  
Component  
Port Main Engine  
Fluid  
SHELL ROTELLA T 15W40 (--- GAL)

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0068796</b>	MW0068846	MW0061659
Sample Date		Client Info		<b>03 May 2024</b>	06 Apr 2024	02 Jan 2024
Machine Age	hrs	Client Info		<b>8837</b>	8482	7257
Oil Age	hrs	Client Info		<b>335</b>	470	203
Filter Age	hrs	Client Info		<b>335</b>	470	203
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>0</b>	4	0
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	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>&lt;1</b>	2	1
Lead	ppm	ASTM D5185m	>18	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>80	<b>3</b>	2	3
Tin	ppm	ASTM D5185m	>14	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

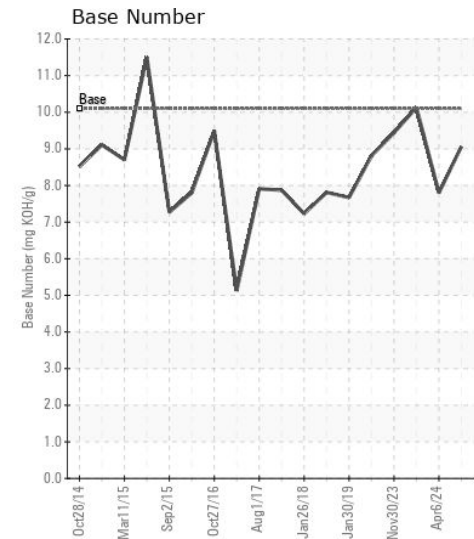
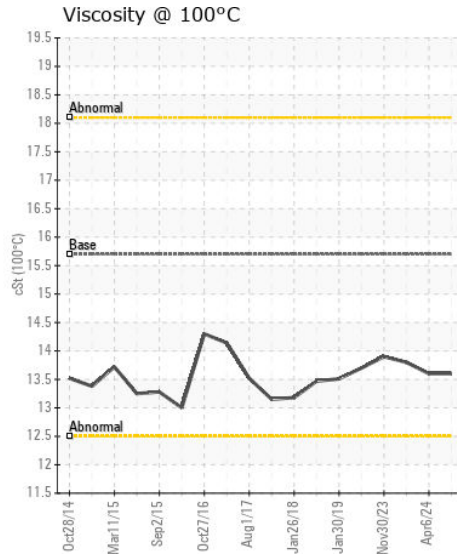
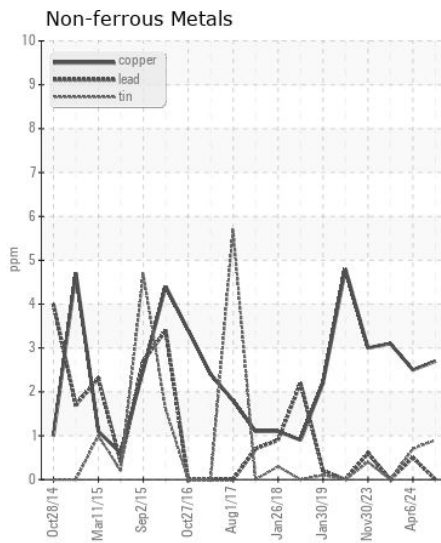
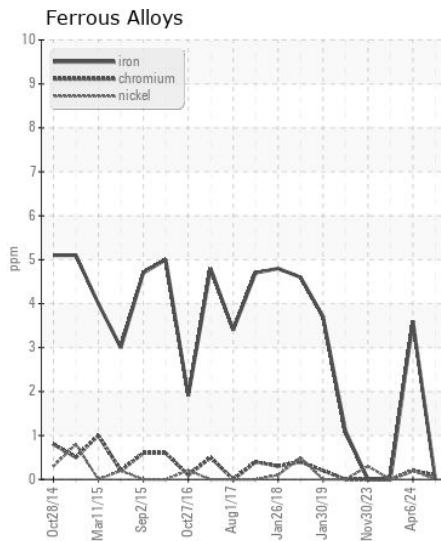
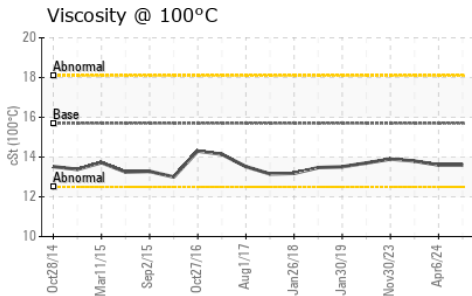
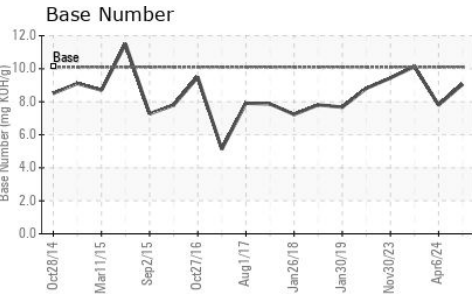
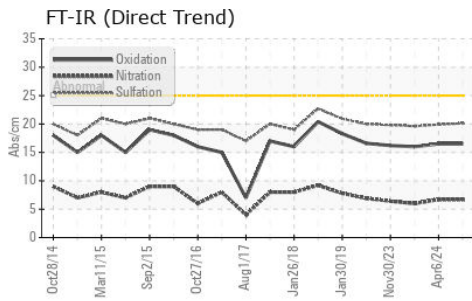
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>2</b>	4	2
Potassium	ppm	ASTM D5185m	>20	<b>7</b>	9	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		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>	6.7	6.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.1</b>	19.9	19.6
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	0
Boron	ppm	ASTM D5185m	316	<b>205</b>	198	185
Barium	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	1.2	<b>12</b>	11	8
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	24	<b>63</b>	51	43
Calcium	ppm	ASTM D5185m	2292	<b>2132</b>	2234	2036
Phosphorus	ppm	ASTM D5185m	1064	<b>988</b>	1038	959
Zinc	ppm	ASTM D5185m	1160	<b>1124</b>	1172	1129
Sulfur	ppm	ASTM D5185m	4996	<b>3841</b>	3868	3338
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.5</b>	16.5	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>9.06</b>	7.8	10.13
Visc @ 100°C	cSt	ASTM D445	15.7	<b>13.6</b>	13.6	13.8



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0068796  
**Lab Number** : 06177891  
**Unique Number** : 11029217  
**Test Package** : MAR 2

**Received** : 13 May 2024  
**Tested** : 14 May 2024  
**Diagnosed** : 15 May 2024 - Sean Felton

**INGRAM BARGE**  
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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)