



# OIL ANALYSIS REPORT

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

Machine Id  
**0969147077 - ST JOHNS GEN 2**

Component  
**Diesel Engine**

Fluid  
**SHELL ROTELLA T 40 (--- GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0872220</b>	LF0001297	LF0000297
Sample Date		Client Info		<b>09 Jan 2024</b>	28 Jan 2023	14 Feb 2021
Machine Age	hrs	Client Info		<b>7</b>	12	13
Oil Age	hrs	Client Info		<b>7</b>	12	0
Filter Age	hrs	Client Info		<b>7</b>	12	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>ATTENTION</b>	ABNORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>16</b>	39	6
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>2</b>	6	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	2	<1
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	1	<1
Lead	ppm	ASTM D5185m	>40	<b>15</b>	42	3
Copper	ppm	ASTM D5185m	>330	<b>240</b>	395	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	5	<1
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

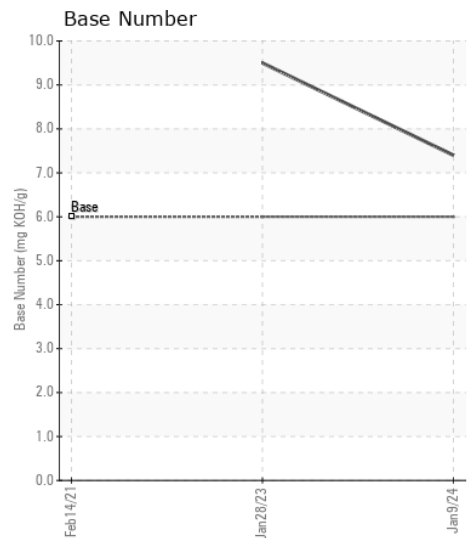
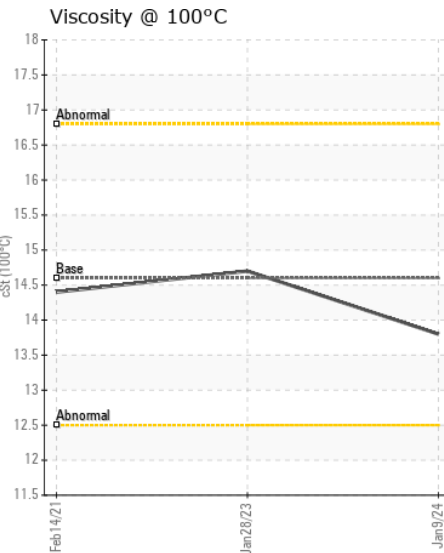
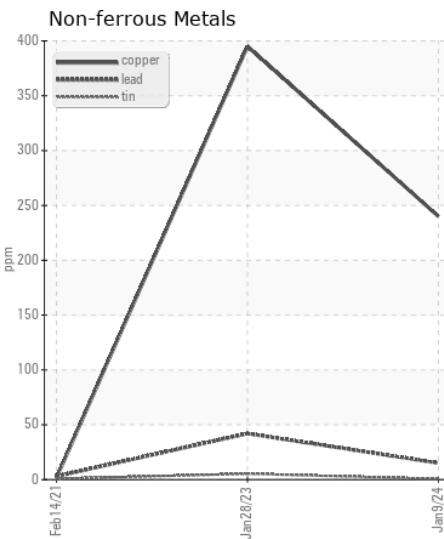
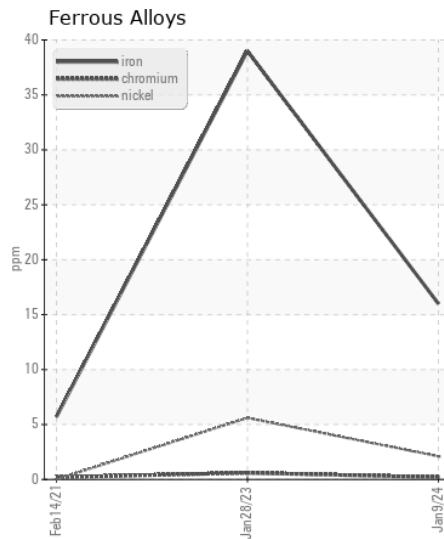
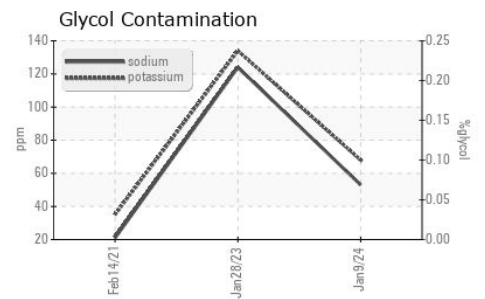
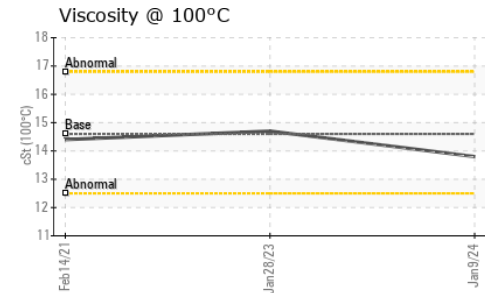
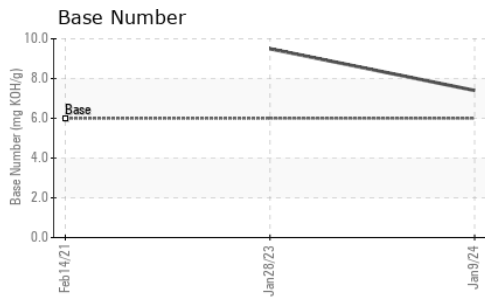
Sodium and/or potassium levels remain high. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	18	7
Potassium	ppm	ASTM D5185m	>20	<b>▲ 68</b>	▲ 134	35
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>3.1</b>	3.6	3.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>12.6</b>	14.9	16.8
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	>0.2	<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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>53</b>	▲ 124	21
Boron	ppm	ASTM D5185m	0	<b>48</b>	130	412
Barium	ppm	ASTM D5185m		<b>9</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>34</b>	39	44
Manganese	ppm	ASTM D5185m		<b>0</b>	1	<1
Magnesium	ppm	ASTM D5185m	432	<b>443</b>	17	15
Calcium	ppm	ASTM D5185m	1121	<b>1107</b>	2666	3432
Phosphorus	ppm	ASTM D5185m	996	<b>709</b>	853	974
Zinc	ppm	ASTM D5185m	881	<b>940</b>	1125	1110
Sulfur	ppm	ASTM D5185m		<b>2578</b>	3288	3087
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>5.7</b>	6.8	7.6
Base Number (BN)	mg KOH/g	ASTM D2896	6.0	<b>7.4</b>	9.5	---
Visc @ 100°C	cSt	ASTM D445	14.6	<b>13.8</b>	14.7	14.4



Certificate L2367

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

Sample No. : WC0872220

Lab Number : 06088519

Unique Number : 10875964

Test Package : FLEET ( Additional Tests: Glycol )

Received : 14 Feb 2024

Tested : 15 Feb 2024

Diagnosed : 15 Feb 2024 - Jonathan Hester

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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)