



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area  
**[WO276448]**  
 Machine Id  
**BELL B50E B93A650EK03007635**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL ROTELLA T3 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>BE0003302</b>	BE0003301	BE0003270
Sample Date		Client Info		<b>22 May 2024</b>	22 Feb 2024	21 Nov 2022
Machine Age	hrs	Client Info		<b>5065</b>	4556	2630
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
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.

PQ		ASTM D8184	>79	<b>---</b>	29	4
Iron	ppm	ASTM D5185m	>100	<b>33</b>	46	11
Chromium	ppm	ASTM D5185m	>20	<b>3</b>	7	1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	4	2
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>10</b>	12	20
Tin	ppm	ASTM D5185m	>15	<b>1</b>	1	<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

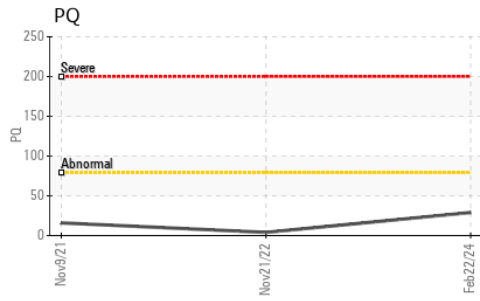
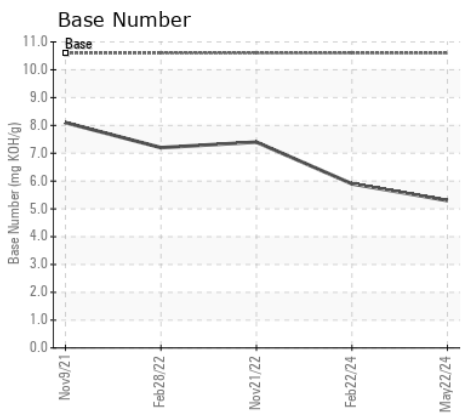
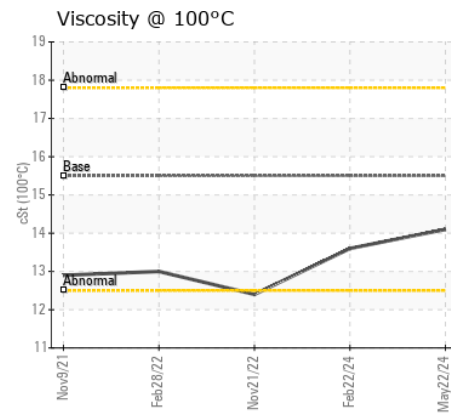
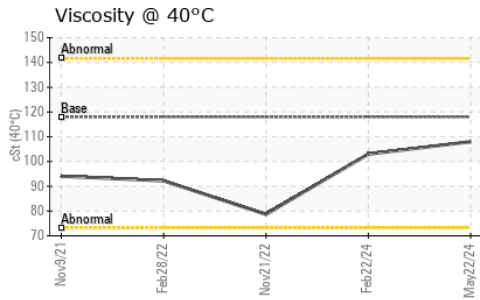
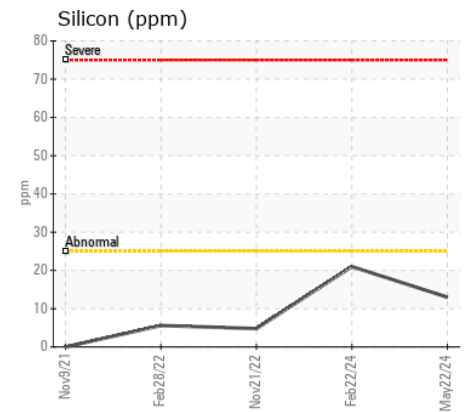
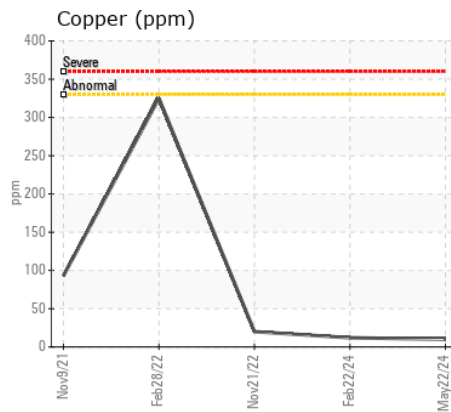
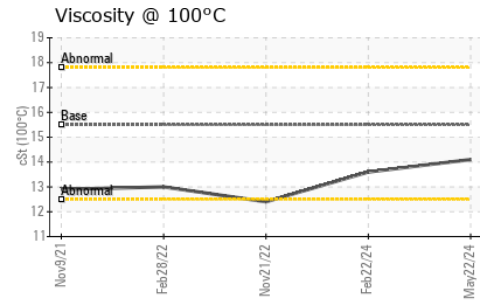
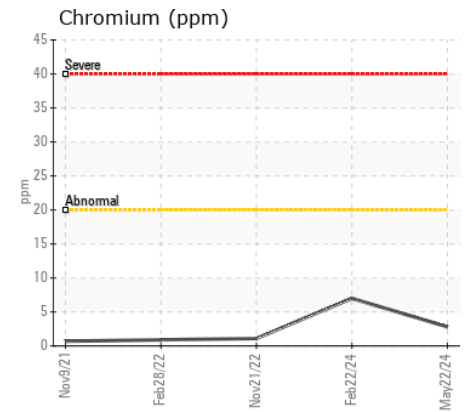
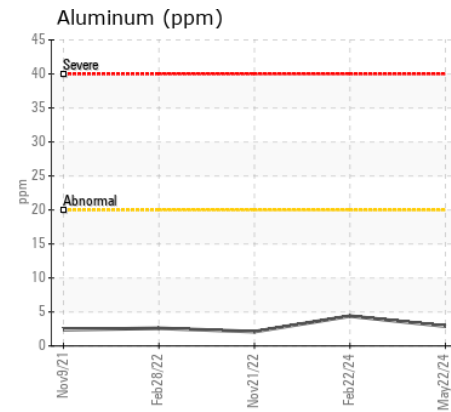
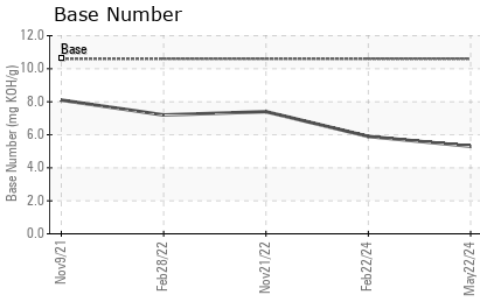
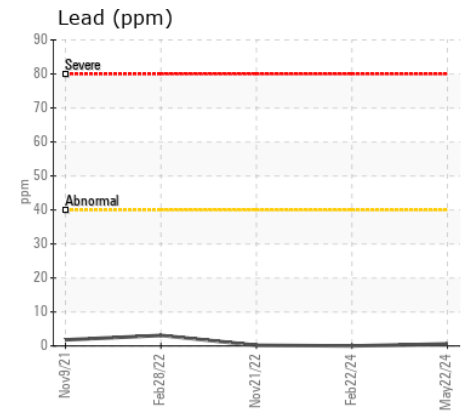
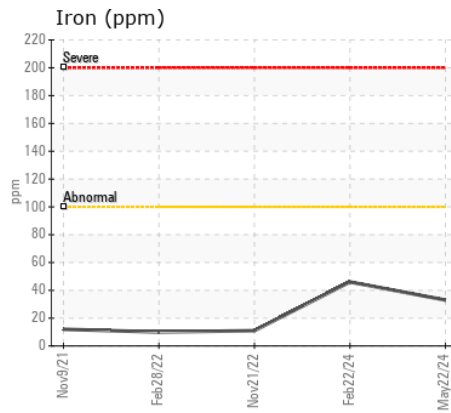
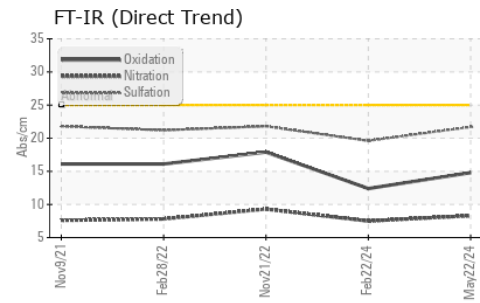
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>13</b>	21	5
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	39	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.3</b>	7.5	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.7</b>	19.6	21.8
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 suitable for further service.

Sodium	ppm	ASTM D5185m		<b>1</b>	28	2
Boron	ppm	ASTM D5185m	10	<b>8</b>	43	56
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	10	<b>19</b>	29	20
Manganese	ppm	ASTM D5185m		<b>1</b>	1	<1
Magnesium	ppm	ASTM D5185m	10	<b>234</b>	193	667
Calcium	ppm	ASTM D5185m	2600	<b>2073</b>	2120	1349
Phosphorus	ppm	ASTM D5185m	1050	<b>921</b>	819	752
Zinc	ppm	ASTM D5185m	1250	<b>1135</b>	1149	939
Sulfur	ppm	ASTM D5185m	3900	<b>3545</b>	3227	3146
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.8</b>	12.4	17.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.6	<b>5.3</b>	5.9	7.4
Visc @ 40°C	cSt	ASTM D445	118	<b>108</b>	103	78.7
Visc @ 100°C	cSt	ASTM D445	15.5	<b>14.1</b>	13.6	12.4
Viscosity Index (VI)	Scale	ASTM D2270	139	<b>131</b>	131	155



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : BE0003302  
**Lab Number** : 06193843  
**Unique Number** : 11055966  
**Test Package** : MOBCE  
**Received** : 29 May 2024  
**Tested** : 31 May 2024  
**Diagnosed** : 31 May 2024 - Angela Borella

**Four Seasons Equipment Inc.**  
 8111 Mills Road  
 Houston, TX  
 US 77064  
 Contact: Vaughan Phillips  
 vphillips@fourseasons-equip.com  
 T: (800)234-5007  
 F:

Certificate L2367  
 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)