



# OIL ANALYSIS REPORT

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



Machine Id  
**BELL B45E B93A645ET03308115**  
 Component  
**Diesel Engine**  
 Fluid  
**SYNERGY 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>BE0016962</b>	BE0016961	---
Sample Date		Client Info		<b>03 Jun 2024</b>	19 Sep 2023	---
Machine Age	hrs	Client Info		<b>1060</b>	529	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	ATTENTION	---

## WEAR

All component wear rates are normal.

PQ		ASTM D8184	>79	<b>17</b>	---	---
Iron	ppm	ASTM D5185m	>100	<b>42</b>	74	---
Chromium	ppm	ASTM D5185m	>20	<b>4</b>	8	---
Nickel	ppm	ASTM D5185m	>4	<b>3</b>	1	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	---
Aluminum	ppm	ASTM D5185m	>20	<b>14</b>	26	---
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	---
Copper	ppm	ASTM D5185m	>330	<b>171</b>	250	---
Tin	ppm	ASTM D5185m	>15	<b>1</b>	2	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

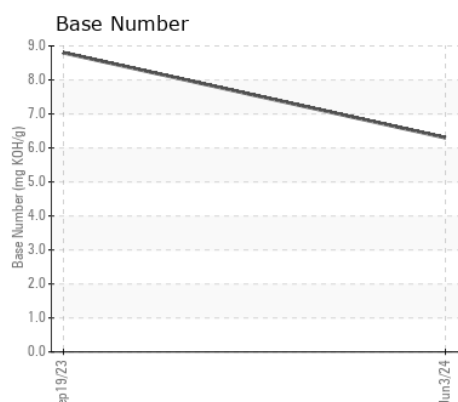
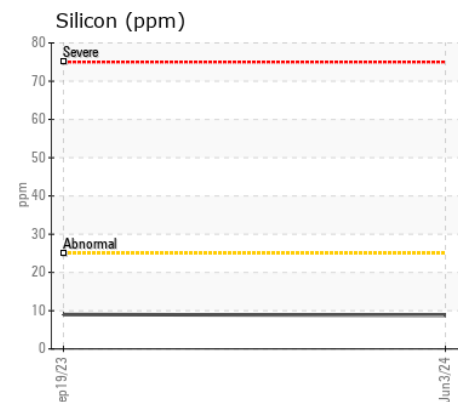
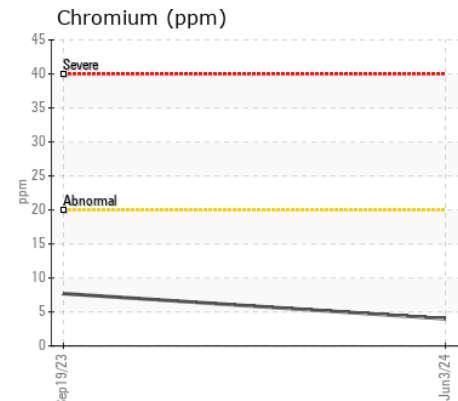
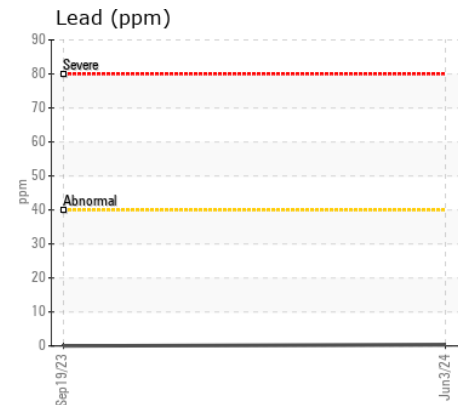
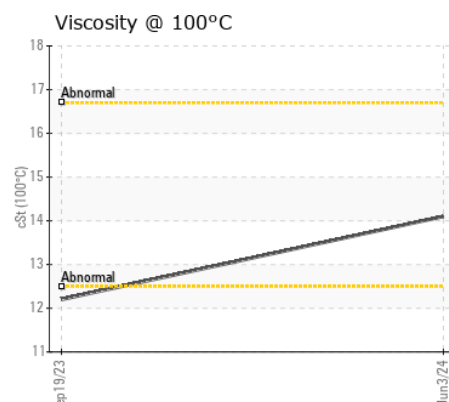
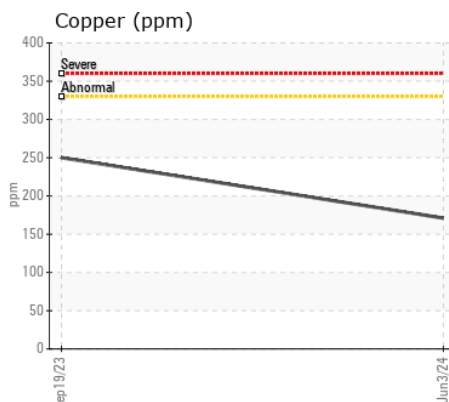
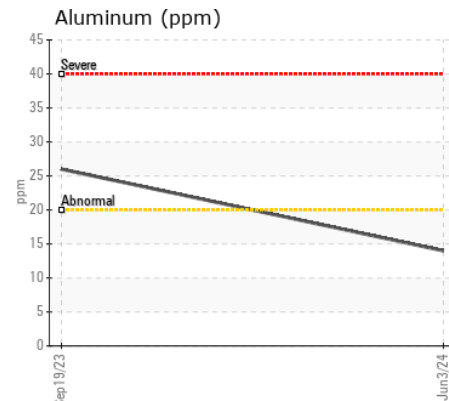
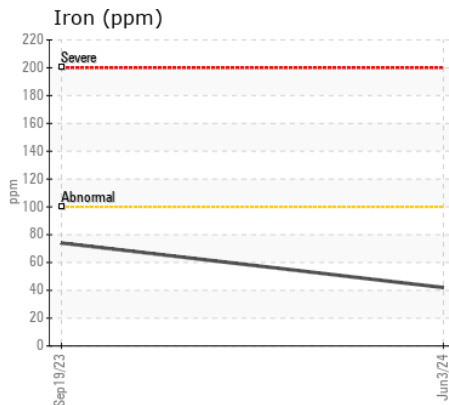
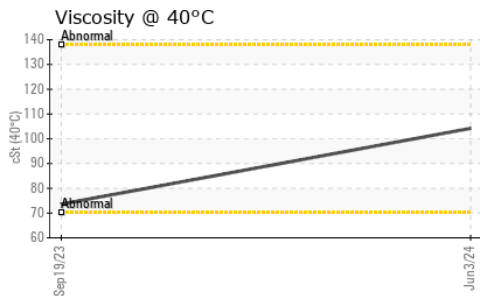
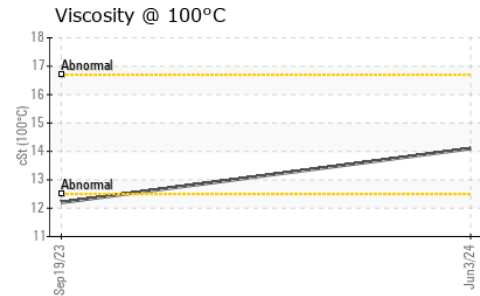
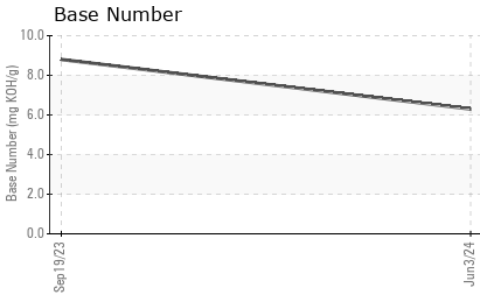
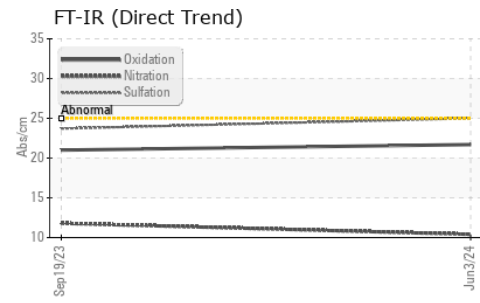
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>9</b>	9	---
Potassium	ppm	ASTM D5185m	>20	<b>15</b>	13	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.7</b>	0.6	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.4</b>	11.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.0</b>	23.7	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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>	5	---
Boron	ppm	ASTM D5185m		<b>163</b>	17	---
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>106</b>	4	---
Manganese	ppm	ASTM D5185m		<b>3</b>	8	---
Magnesium	ppm	ASTM D5185m		<b>410</b>	121	---
Calcium	ppm	ASTM D5185m		<b>1677</b>	2474	---
Phosphorus	ppm	ASTM D5185m		<b>849</b>	678	---
Zinc	ppm	ASTM D5185m		<b>1056</b>	819	---
Sulfur	ppm	ASTM D5185m		<b>2378</b>	2240	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>21.7</b>	21.0	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.3</b>	8.8	---
Visc @ 40°C	cSt	ASTM D445		<b>104.2</b>	73.6	---
Visc @ 100°C	cSt	ASTM D445		<b>14.1</b>	12.2	---
Viscosity Index (VI)	Scale	ASTM D2270		<b>137</b>	163	---



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : BE0016962  
**Lab Number** : 06213046  
**Unique Number** : 11085910  
**Test Package** : MOBCE  
**Received** : 17 Jun 2024  
**Tested** : 21 Jun 2024  
**Diagnosed** : 21 Jun 2024 - Jonathan Hester

**Oak Hills**  
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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)