

# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id  
**EMD 204**  
 Component  
**Diesel Engine**  
 Fluid  
**{not provided} (--- GAL)**

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PCA0092781</b>	---	---
Sample Date	Client Info			<b>08 May 2024</b>	---	---
Machine Age	hrs	Client Info		<b>0</b>	---	---
Oil Age	hrs	Client Info		<b>0</b>	---	---
Oil Changed	Client Info			<b>N/A</b>	---	---
Sample Status				<b>NORMAL</b>	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>4		<b>&lt;1.0</b>	---	---
Water	WC Method	>0.20		<b>NEG</b>	---	---
Glycol	WC Method			<b>NEG</b>	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>15</b>	---	---
Chromium	ppm	ASTM D5185m	>15	<b>5</b>	---	---
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	---	---
Lead	ppm	ASTM D5185m	>75	<b>5</b>	---	---
Copper	ppm	ASTM D5185m	>90	<b>12</b>	---	---
Tin	ppm	ASTM D5185m	>30	<b>2</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	---	---

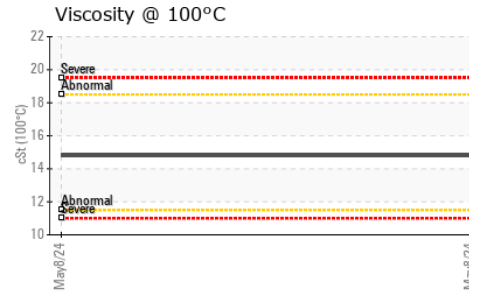
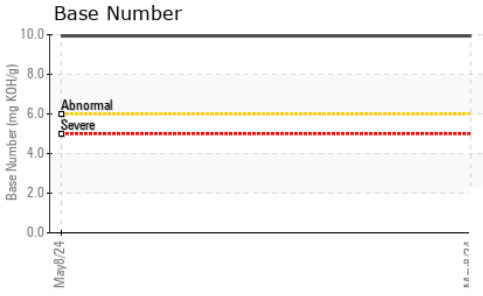
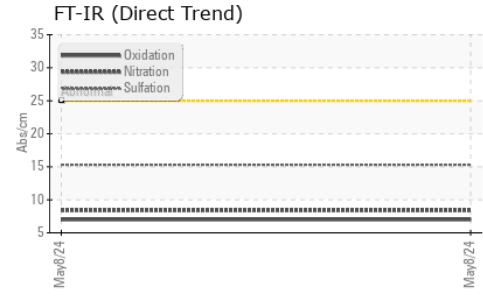
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>39</b>	---	---
Barium	ppm	ASTM D5185m		<b>1</b>	---	---
Molybdenum	ppm	ASTM D5185m		<b>44</b>	---	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m		<b>8</b>	---	---
Calcium	ppm	ASTM D5185m		<b>3189</b>	---	---
Phosphorus	ppm	ASTM D5185m		<b>24</b>	---	---
Zinc	ppm	ASTM D5185m		<b>4</b>	---	---
Sulfur	ppm	ASTM D5185m		<b>3035</b>	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>17	<b>5</b>	---	---
Sodium	ppm	ASTM D5185m		<b>11</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.9</b>	---	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.4</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>15.3</b>	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>7.0</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.94</b>	---	---

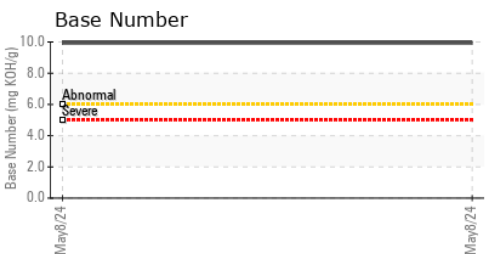
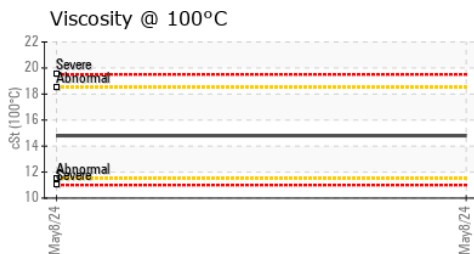
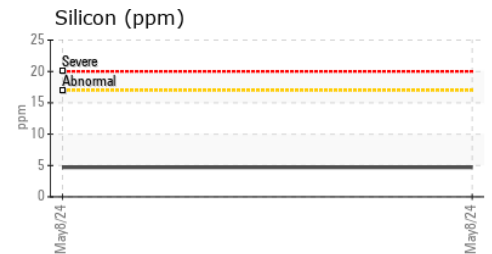
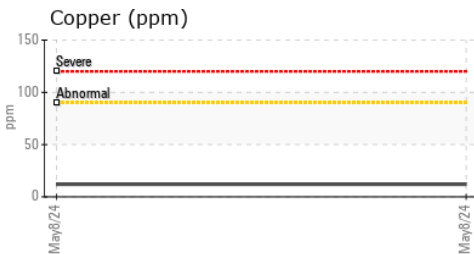
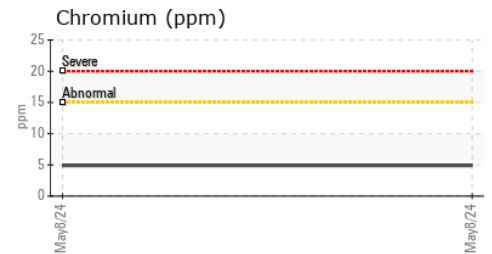
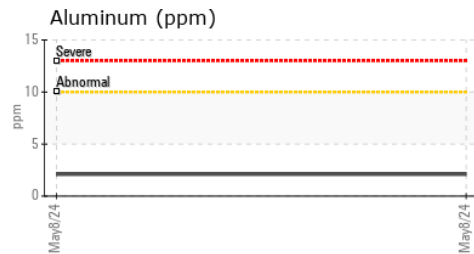
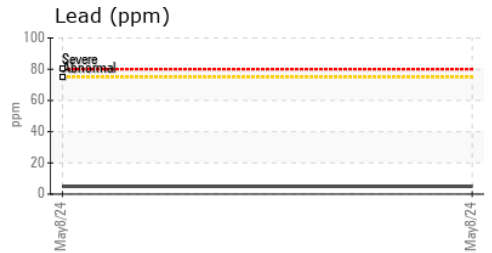
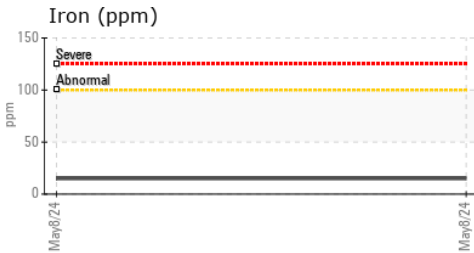
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.20	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	<b>14.8</b>	---	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0092781      **Received** : 29 May 2024  
**Lab Number** : **06194695**      **Tested** : 31 May 2024  
**Unique Number** : 11056818      **Diagnosed** : 31 May 2024 - Don Baldrige  
**Test Package** : MOB 2

**HOWELL OIL COMPANY**  
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 BELLE GLADE, FL  
 US 33430  
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 T: (561)261-9378  
 F:

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)