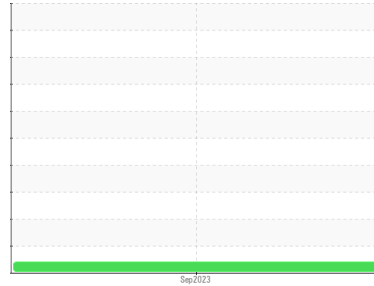




# OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id  
**E002-062563 - FRANKLIN CO 911**  
 Component  
**Diesel Engine**  
 Fluid  
**RED STAR 10W30 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

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

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### ▲ Fluid Condition

The oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0812684</b>	---	---
Sample Date	Client Info		<b>28 Sep 2023</b>	---	---
Machine Age	hrs	Client Info	<b>12</b>	---	---
Oil Age	hrs	Client Info	<b>0</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ATTENTION</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>4</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>0</b>	---	---
Nickel	ppm	ASTM D5185m >4	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m >3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	---	---
Lead	ppm	ASTM D5185m >40	<b>2</b>	---	---
Copper	ppm	ASTM D5185m >330	<b>4</b>	---	---
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>37</b>	---	---
Barium	ppm	ASTM D5185m	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m	<b>54</b>	---	---
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m	<b>368</b>	---	---
Calcium	ppm	ASTM D5185m	<b>1940</b>	---	---
Phosphorus	ppm	ASTM D5185m	<b>1020</b>	---	---
Zinc	ppm	ASTM D5185m	<b>1206</b>	---	---
Sulfur	ppm	ASTM D5185m	<b>3709</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>8</b>	---	---
Sodium	ppm	ASTM D5185m	<b>3</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>6</b>	---	---

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>4.7</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.3</b>	---	---

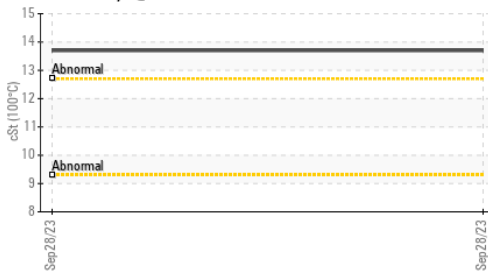
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.5</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	<b>10.3</b>	---	---

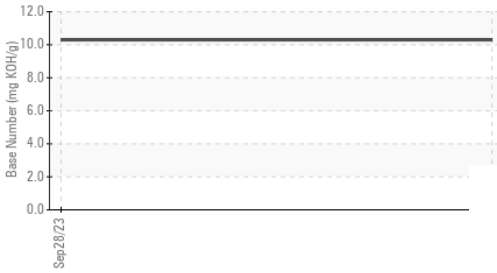


# OIL ANALYSIS REPORT

▲ Viscosity @ 100°C



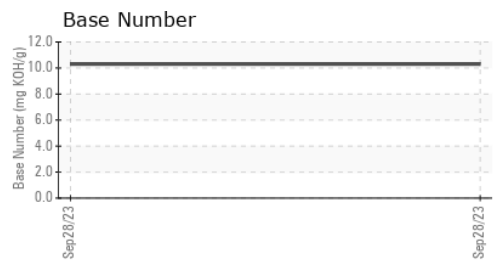
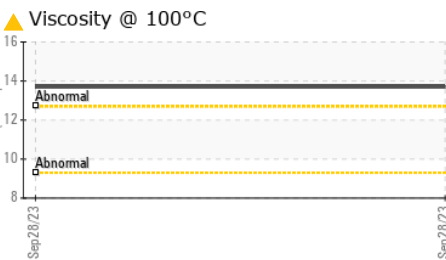
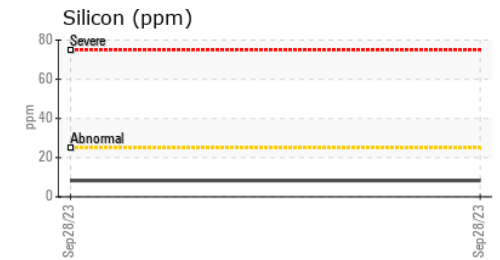
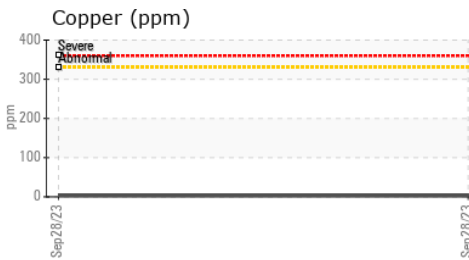
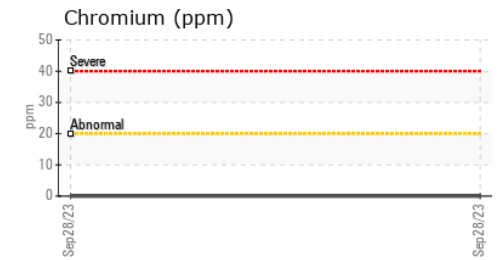
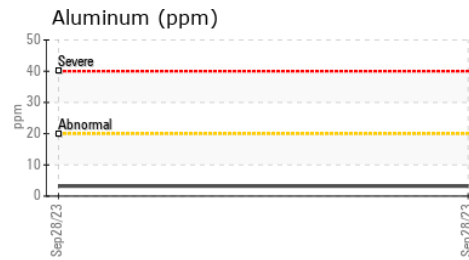
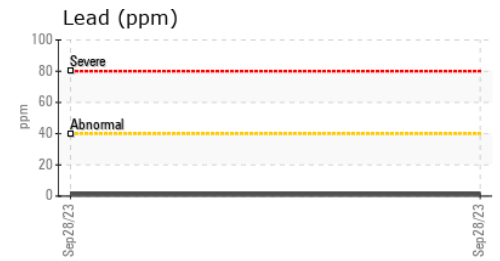
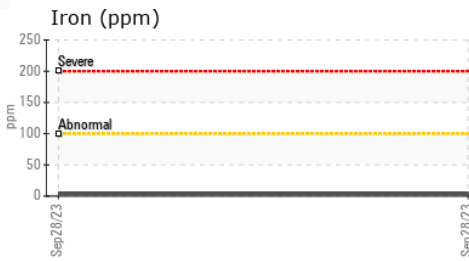
Base Number



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	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	▲ 13.7	---	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0812684 **Received** : 03 Oct 2023  
**Lab Number** : 05967350 **Diagnosed** : 05 Oct 2023  
**Unique Number** : 10673901 **Diagnostician** : Jonathan Hester  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**NATIONAL POWER CORP**  
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 RALEIGH, NC  
 US 27616  
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 brandon.rice@natpow.com  
 T:  
 F: (919)790-9714

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)