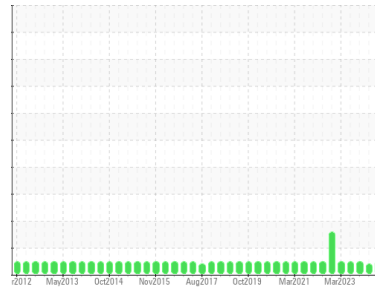




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

[150817]

Machine Id

**GENERAC RALEIGH MARSH CENTER**

Component

**Diesel Engine**

Fluid

**RED STAR 15W40 (6 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a new component breaking in.

### 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>WC0911431</b>	WC0797337	WC0812703
Sample Date	Client Info		<b>02 Apr 2024</b>	14 Dec 2023	12 Sep 2023
Machine Age	hrs	Client Info	<b>271</b>	270	269
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Changed</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	ABNORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>51	<b>0</b>	0	1
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>30</b>	25	25
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>2</b>	2	3
Lead	ppm	ASTM D5185m	>26	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>26	<b>&lt;1</b>	1	1
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>123</b>	104	114
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>57</b>	48	51
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m		<b>232</b>	251	270
Calcium	ppm	ASTM D5185m		<b>2079</b>	1816	1937
Phosphorus	ppm	ASTM D5185m		<b>1141</b>	1062	1060
Zinc	ppm	ASTM D5185m		<b>1216</b>	1218	1266
Sulfur	ppm	ASTM D5185m		<b>4263</b>	3936	4210

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>22	<b>8</b>	5	5
Sodium	ppm	ASTM D5185m	>31	<b>0</b>	1	1
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	<1	2

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.7</b>	6.6	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.7</b>	17.7	17.8

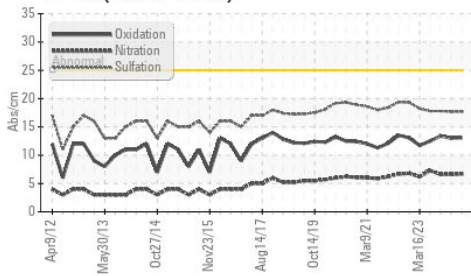
## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.1</b>	13.0	13.4
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.2</b>	8.4	8.4

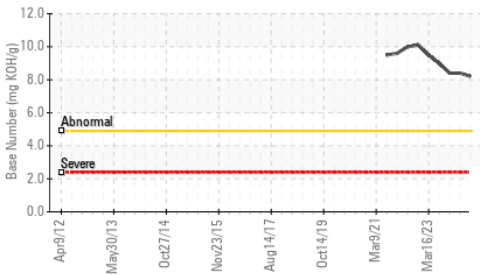


# OIL ANALYSIS REPORT

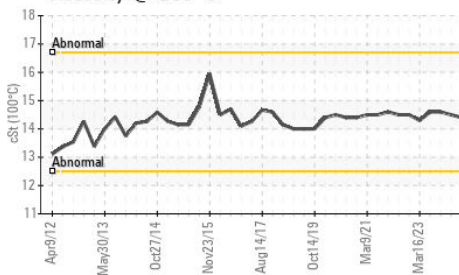
FT-IR (Direct Trend)



Base Number



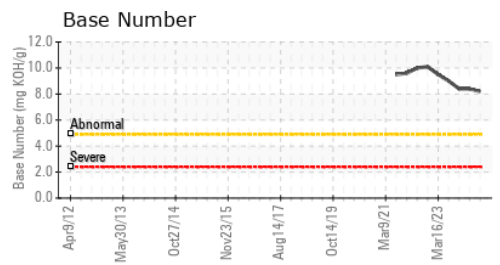
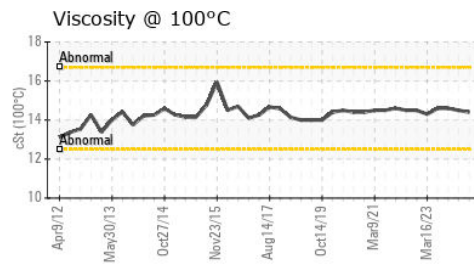
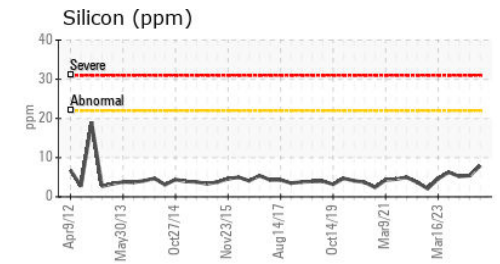
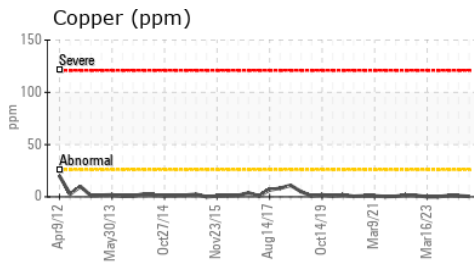
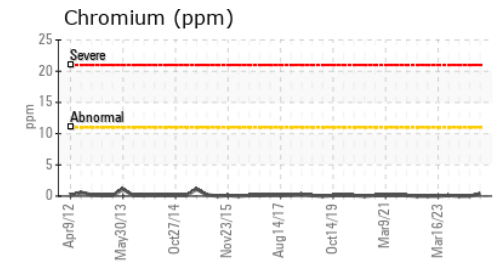
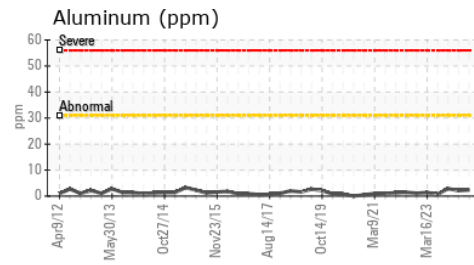
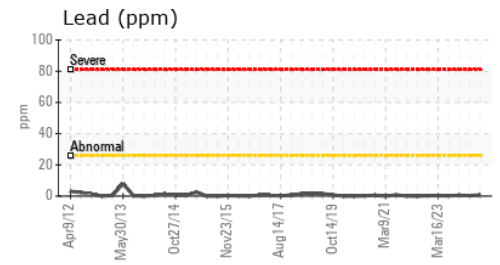
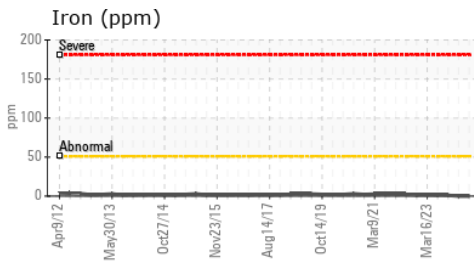
Viscosity @ 100°C



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	14.5	14.6

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0911431 **Received** : 15 Apr 2024  
**Lab Number** : 06148446 **Tested** : 16 Apr 2024  
**Unique Number** : 10978524 **Diagnosed** : 16 Apr 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**NATIONAL POWER CORP**  
 4541 PRESLYN DR  
 RALEIGH, NC  
 US 27616  
 Contact: BRANDON RICE  
 brandon.rice@natpow.com

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)

T: (919)790-9714