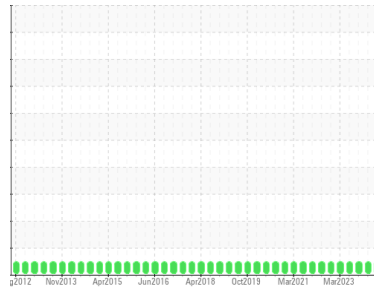




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

[150821]

Machine Id

GENERAC RALEIGH CABBARRUS PD

Component

Diesel Engine

Fluid

RED STAR 15W40 (8 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		WC0911382	WC0797333	WC0682964
Sample Date	Client Info		09 Apr 2024	13 Dec 2023	13 Sep 2023
Machine Age	hrs	Client Info	280	279	278
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Changed	N/A	N/A
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	0	0	1
Chromium	ppm	ASTM D5185m >20	<1	0	0
Nickel	ppm	ASTM D5185m >4	<1	0	0
Titanium	ppm	ASTM D5185m	31	26	28
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	2	2	3
Lead	ppm	ASTM D5185m >40	1	0	<1
Copper	ppm	ASTM D5185m >330	2	2	1
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	<1	<1
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	122	107	114
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	60	54	58
Manganese	ppm	ASTM D5185m	<1	<1	0
Magnesium	ppm	ASTM D5185m	190	189	203
Calcium	ppm	ASTM D5185m	2128	1959	2000
Phosphorus	ppm	ASTM D5185m	1160	984	1054
Zinc	ppm	ASTM D5185m	1230	1236	1269
Sulfur	ppm	ASTM D5185m	4424	3825	4206

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	5	23
Sodium	ppm	ASTM D5185m	0	<1	1
Potassium	ppm	ASTM D5185m >20	3	2	2

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	7.2	7.1	6.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	17.9	17.8	17.8

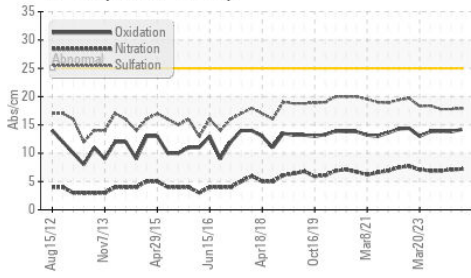
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.2	13.8	13.9
Base Number (BN)	mg KOH/g	ASTM D2896	7.7	8.0	8.2

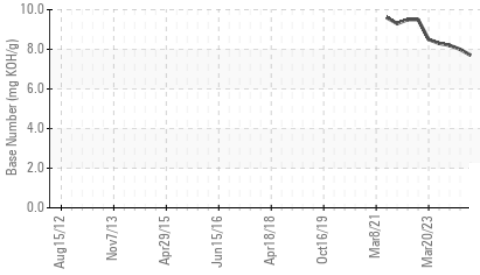


OIL ANALYSIS REPORT

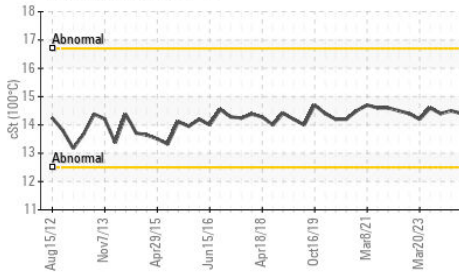
FT-IR (Direct Trend)



Base Number



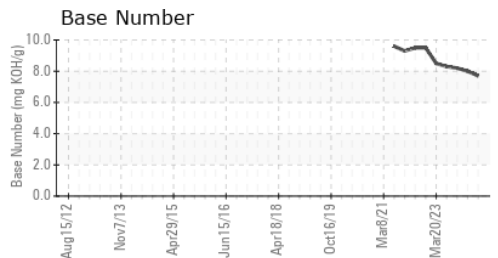
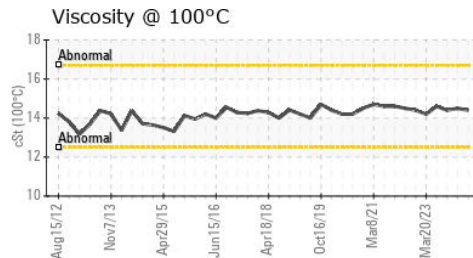
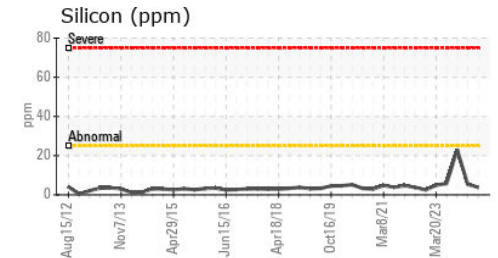
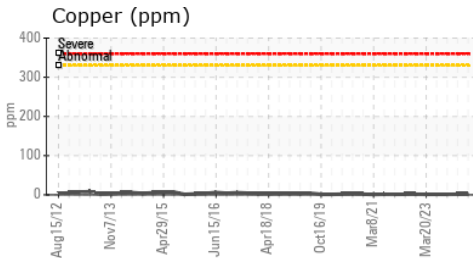
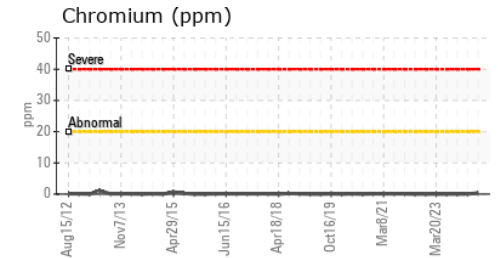
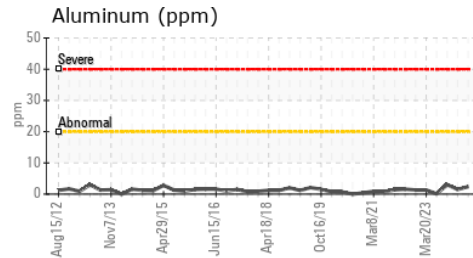
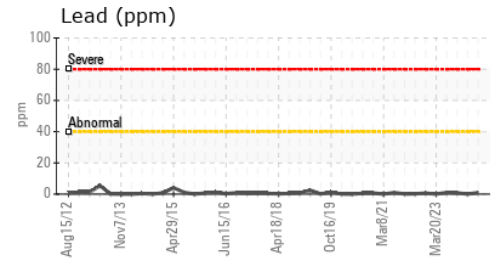
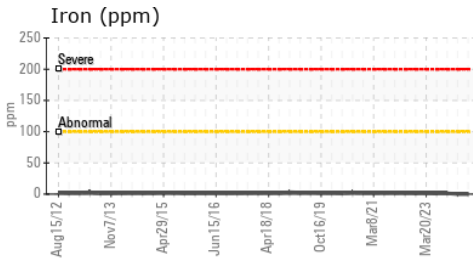
Viscosity @ 100°C



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	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	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	14.4

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0911382

Lab Number : 06148444

Unique Number : 10978522

Test Package : MOB 1 (Additional Tests: TBN)

Received : 15 Apr 2024

Tested : 16 Apr 2024

Diagnosed : 16 Apr 2024 - Wes Davis

NATIONAL POWER CORP

4541 PRESLYN DR

RALEIGH, NC

US 27616

Contact: BRANDON RICE

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)