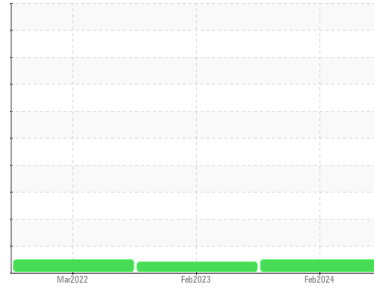




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
CUMMINS BIRMINGHAM
 Component
Diesel Engine
 Fluid
NAPA Motor Oil 15W40 (--- GAL)

DIAGNOSIS

Recommendation

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0894440	WC0771530	WC0663214
Sample Date	Client Info			15 Feb 2024	16 Feb 2023	01 Mar 2022
Machine Age	hrs	Client Info		722	576	547
Oil Age	hrs	Client Info		92	23	20
Oil Changed	Client Info			Not Changed	Not Changd	Not Changed
Sample Status				NORMAL	ATTENTION	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0		<1.0	0.3	<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	>90	4	6	6
Chromium	ppm	ASTM D5185m	>20	0	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	1	2
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	<1	<1	1
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		20	308	301
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		21	76	77
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		32	664	676
Calcium	ppm	ASTM D5185m		2263	1491	1495
Phosphorus	ppm	ASTM D5185m		948	686	745
Zinc	ppm	ASTM D5185m		1076	907	922
Sulfur	ppm	ASTM D5185m		3781	3163	2408

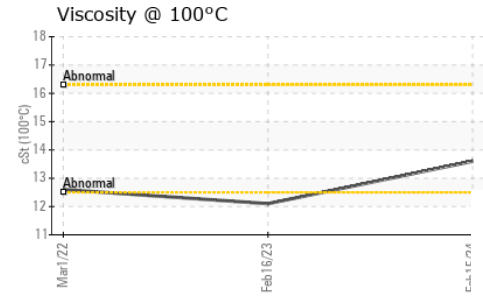
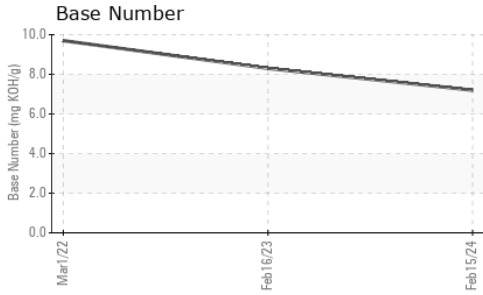
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	3	5	4
Sodium	ppm	ASTM D5185m		1	2	2
Potassium	ppm	ASTM D5185m	>20	<1	0	3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	5.9	6.3	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	15.8	20.0	21.8

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.8	15.8	16.1
Base Number (BN)	mg KOH/g	ASTM D2896		7.2	8.3	9.7



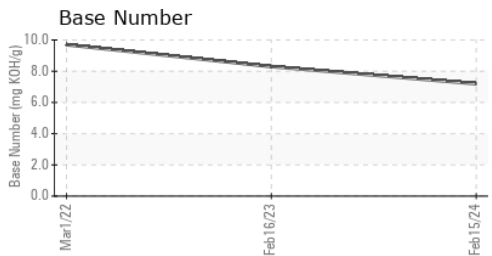
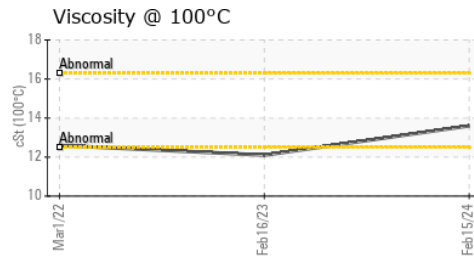
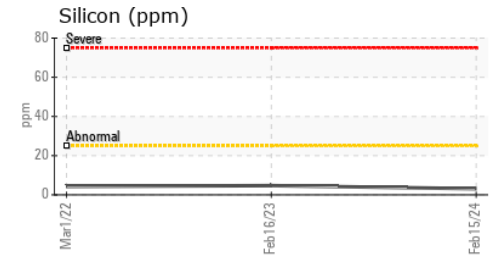
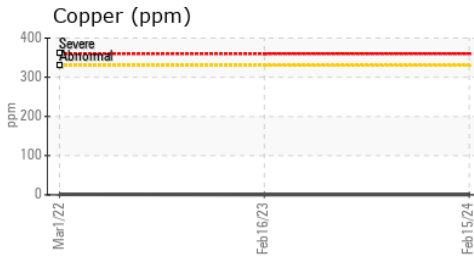
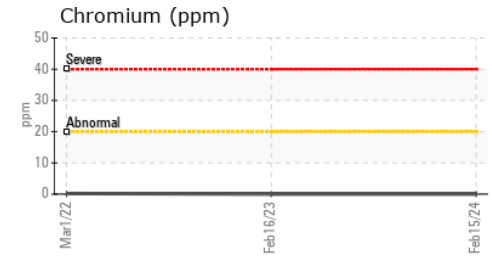
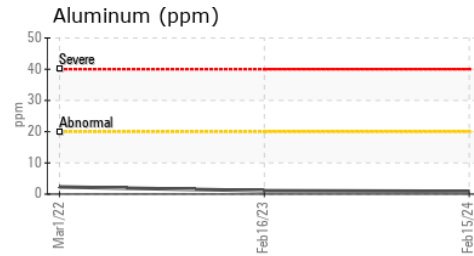
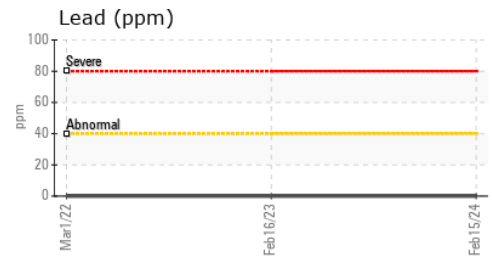
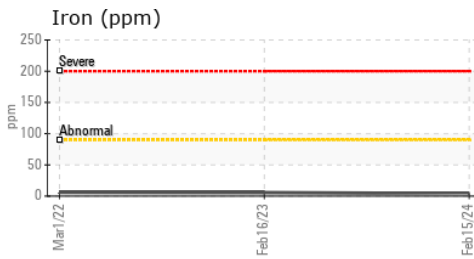
OIL ANALYSIS REPORT



PARAMETER	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	13.6	12.1	12.6

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0894440 **Received** : 27 Feb 2024
Lab Number : 06101312 **Tested** : 28 Feb 2024
Unique Number : 10899542 **Diagnosed** : 28 Feb 2024 - Don Baldrige
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