



OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

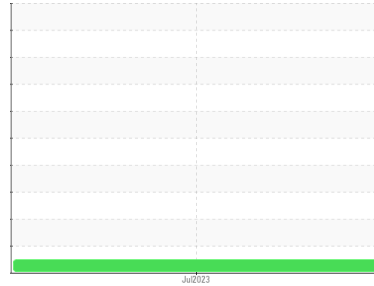


Area
[W102719]

Machine Id
CUMMINS HILLCO SUPPORT CAROLINA PINES

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 15W40 (--- 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		WC0770445	---	---
Sample Date	Client Info		13 Jul 2023	---	---
Machine Age	hrs	Client Info	123	---	---
Oil Age	hrs	Client Info	0	---	---
Oil Changed	Client Info		N/A	---	---
Sample Status			NORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >90	21	---	---
Chromium	ppm	ASTM D5185m >20	<1	---	---
Nickel	ppm	ASTM D5185m >2	0	---	---
Titanium	ppm	ASTM D5185m >2	<1	---	---
Silver	ppm	ASTM D5185m >2	0	---	---
Aluminum	ppm	ASTM D5185m >20	2	---	---
Lead	ppm	ASTM D5185m >40	0	---	---
Copper	ppm	ASTM D5185m >330	17	---	---
Tin	ppm	ASTM D5185m >15	<1	---	---
Vanadium	ppm	ASTM D5185m	0	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	91	---	---
Barium	ppm	ASTM D5185m 10	6	---	---
Molybdenum	ppm	ASTM D5185m 100	50	---	---
Manganese	ppm	ASTM D5185m	4	---	---
Magnesium	ppm	ASTM D5185m 450	671	---	---
Calcium	ppm	ASTM D5185m 3000	1732	---	---
Phosphorus	ppm	ASTM D5185m 1150	1140	---	---
Zinc	ppm	ASTM D5185m 1350	1384	---	---
Sulfur	ppm	ASTM D5185m 4250	4213	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	34	---	---
Sodium	ppm	ASTM D5185m >158	5	---	---
Potassium	ppm	ASTM D5185m >20	1	---	---

INFRA-RED

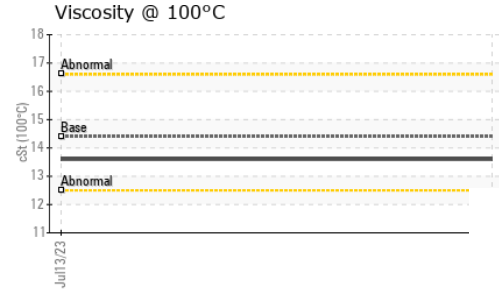
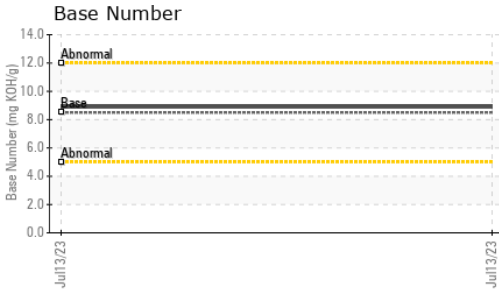
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	0.1	---	---
Nitration	Abs/cm	*ASTM D7624 >20	8.2	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.1	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	18.6	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	8.9	---	---



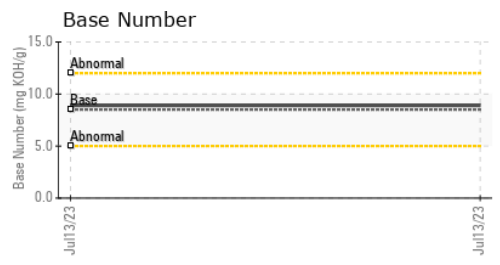
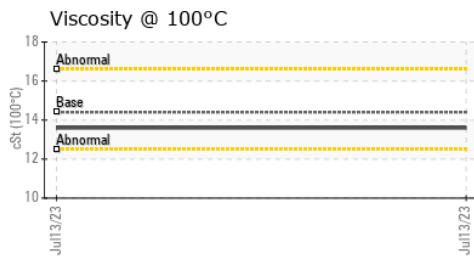
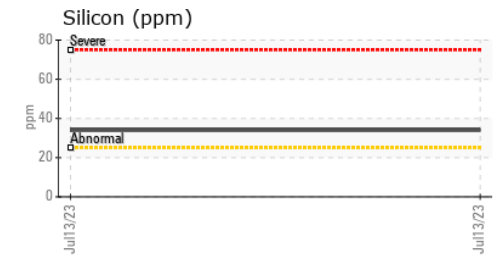
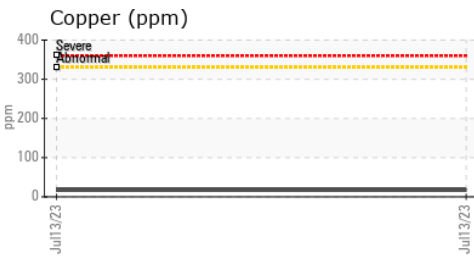
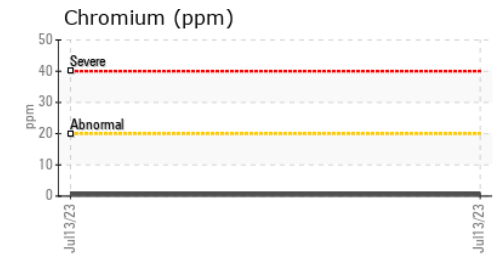
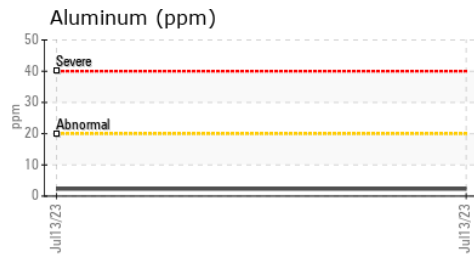
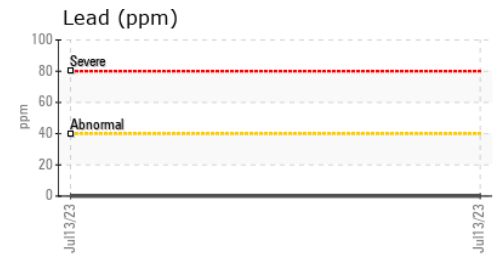
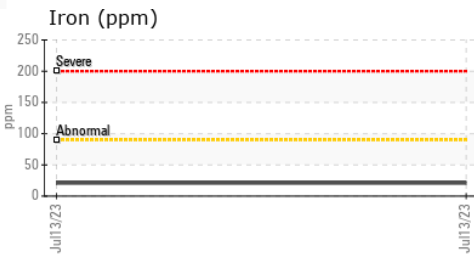
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.6	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0770445 **Received** : 24 Jul 2023
Lab Number : 05905313 **Diagnosed** : 25 Jul 2023
Unique Number : 10566669 **Diagnostician** : 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
 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)