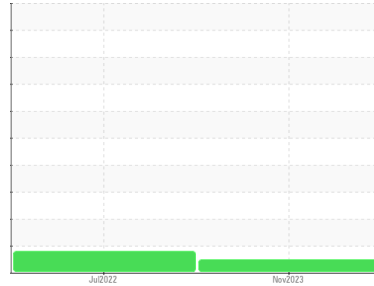




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

8243

Component

Front Diesel Engine

Fluid

DIESEL ENGINE OIL SAE 15W40 (--- QTS)

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 acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		RW0004659	RW0003780	---
Sample Date	Client Info		17 Nov 2023	19 Jul 2022	---
Machine Age	hrs	Client Info	883	664	---
Oil Age	hrs	Client Info	250	0	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			NORMAL	MARGINAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	1.2	---
Water	WC Method	>0.2	NEG	NEG	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	4	11	---
Chromium	ppm	ASTM D5185m >20	<1	1	---
Nickel	ppm	ASTM D5185m >4	<1	0	---
Titanium	ppm	ASTM D5185m	3	▲ 34	---
Silver	ppm	ASTM D5185m >3	0	0	---
Aluminum	ppm	ASTM D5185m >20	3	4	---
Lead	ppm	ASTM D5185m >40	0	<1	---
Copper	ppm	ASTM D5185m >330	<1	2	---
Tin	ppm	ASTM D5185m >15	<1	<1	---
Vanadium	ppm	ASTM D5185m	<1	<1	---
Cadmium	ppm	ASTM D5185m	0	<1	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	61	128	---
Barium	ppm	ASTM D5185m 10	0	0	---
Molybdenum	ppm	ASTM D5185m 100	53	36	---
Manganese	ppm	ASTM D5185m	<1	<1	---
Magnesium	ppm	ASTM D5185m 450	992	554	---
Calcium	ppm	ASTM D5185m 3000	835	1509	---
Phosphorus	ppm	ASTM D5185m 1150	1068	1025	---
Zinc	ppm	ASTM D5185m 1350	1212	1233	---
Sulfur	ppm	ASTM D5185m 4250	3363	4073	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	6	15	---
Sodium	ppm	ASTM D5185m >158	4	1	---
Potassium	ppm	ASTM D5185m >20	2	2	---

INFRA-RED

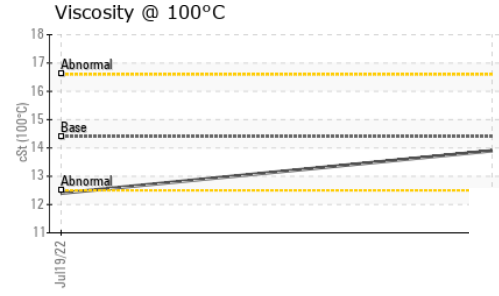
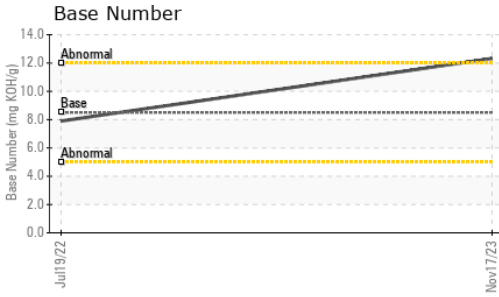
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624 >20	10.0	11.7	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.9	21.7	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	19.7	20.8	---
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	12.32	7.90	---



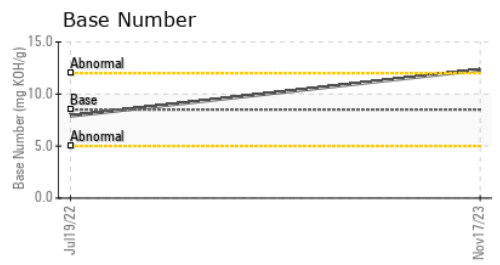
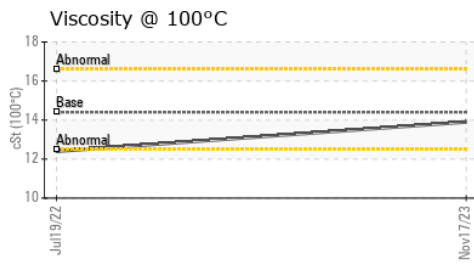
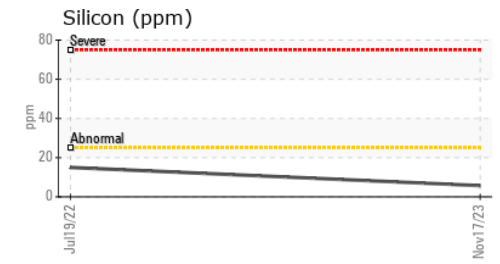
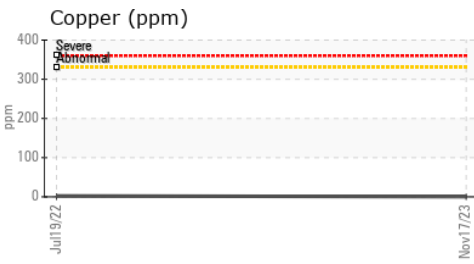
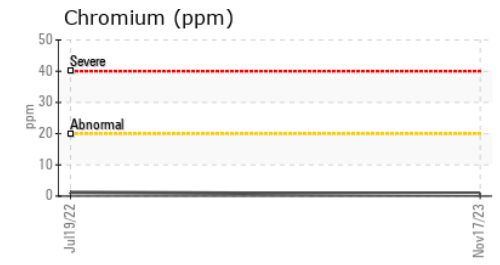
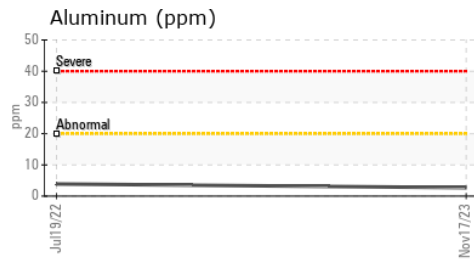
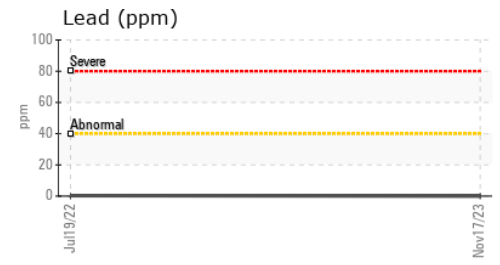
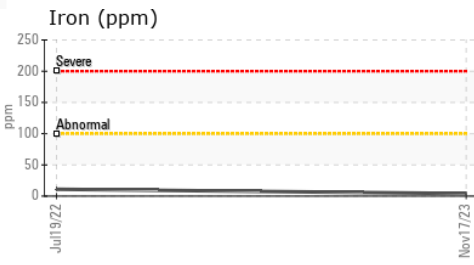
OIL ANALYSIS REPORT



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	13.9	12.4	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RW0004659 **Received** : 24 Nov 2023
Lab Number : **06016654** **Diagnosed** : 28 Nov 2023
Unique Number : 10755798 **Diagnostician** : Sean Felton
Test Package : MOB 2

NEWKIRK ELECTRIC
 1875 ROBERTS ST.
 MUSKEGON, MI
 US 49442
 Contact: ERIC KING
 ewking@newkirk-electric.com
 T: (231)206-6131
 F: (231)724-4090

Certificate L2367
 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)