



OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id

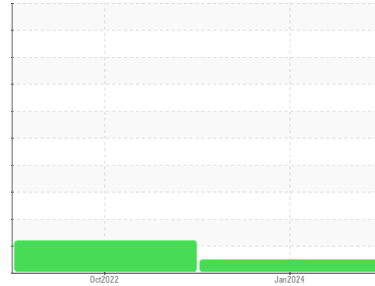
244

Component

Diesel Engine

Fluid

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



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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		RW0004984	RW0003814	---
Sample Date	Client Info		25 Jan 2024	05 Oct 2022	---
Machine Age	mls	Client Info	48000	12000	---
Oil Age	mls	Client Info	12000	12000	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			NORMAL	ATTENTION	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	▲ 2.0	---
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	20	95	---
Chromium	ppm	ASTM D5185m >20	1	3	---
Nickel	ppm	ASTM D5185m >4	0	<1	---
Titanium	ppm	ASTM D5185m	<1	<1	---
Silver	ppm	ASTM D5185m >3	0	0	---
Aluminum	ppm	ASTM D5185m >20	7	31	---
Lead	ppm	ASTM D5185m >40	0	2	---
Copper	ppm	ASTM D5185m >330	2	77	---
Tin	ppm	ASTM D5185m >15	<1	1	---
Vanadium	ppm	ASTM D5185m	0	1	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	5	21	---
Barium	ppm	ASTM D5185m 10	0	0	---
Molybdenum	ppm	ASTM D5185m 100	59	47	---
Manganese	ppm	ASTM D5185m	<1	6	---
Magnesium	ppm	ASTM D5185m 450	863	821	---
Calcium	ppm	ASTM D5185m 3000	1100	1277	---
Phosphorus	ppm	ASTM D5185m 1150	915	637	---
Zinc	ppm	ASTM D5185m 1350	1175	895	---
Sulfur	ppm	ASTM D5185m 4250	2948	2256	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	5	32	---
Sodium	ppm	ASTM D5185m >158	0	8	---
Potassium	ppm	ASTM D5185m >20	14	94	---

INFRA-RED

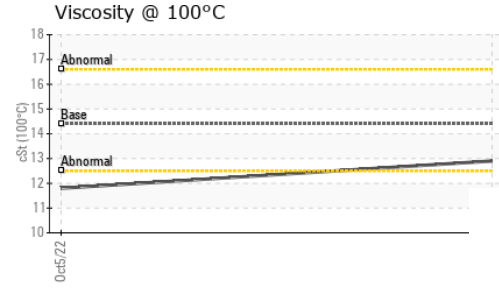
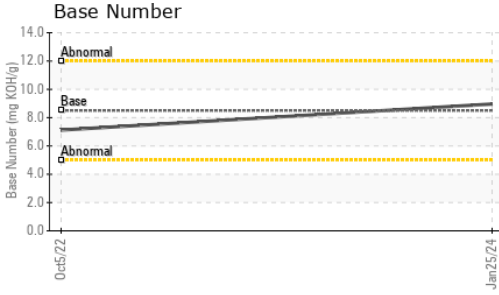
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.4	0.8	---
Nitration	Abs/cm	*ASTM D7624 >20	7.8	13.6	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.0	24.9	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.4	24.6	---
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	8.96	7.12	---



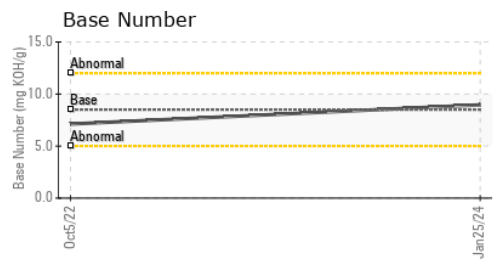
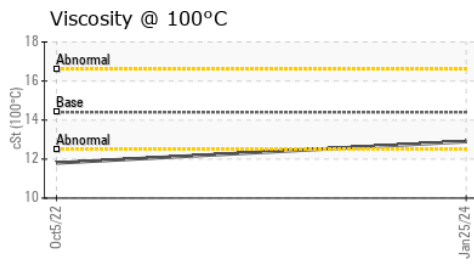
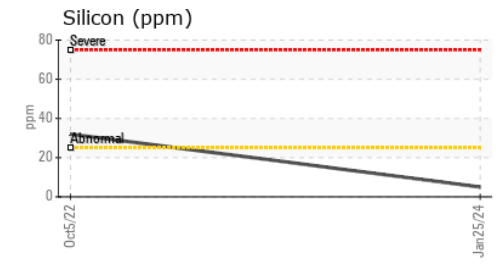
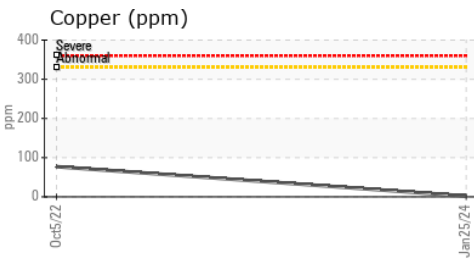
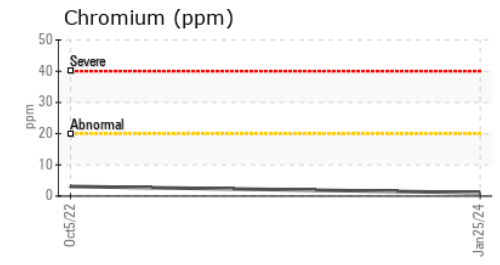
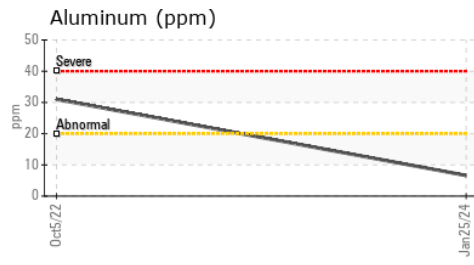
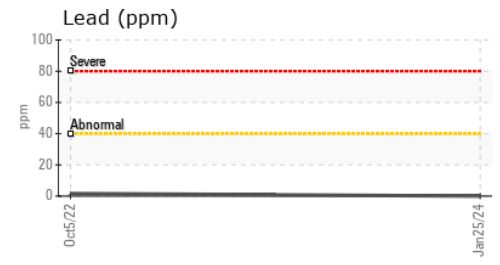
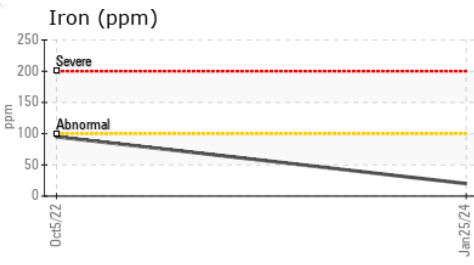
OIL ANALYSIS REPORT



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	12.9	▲ 11.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RW0004984 **Recieved** : 30 Jan 2024
Lab Number : 06074149 **Diagnosed** : 31 Jan 2024
Unique Number : 10856240 **Diagnostician** : Wes Davis
Test Package : MOB 2

WEST BRANCH/ROSE CITY SCHOOLS
 224 THOMAS
 WEST BRANCH, MI
 US 48661
 Contact: BUTCH HART
 hartb@wbrc.k12.mi.us
 T: (989)343-2240
 F: (989)343-2249

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)