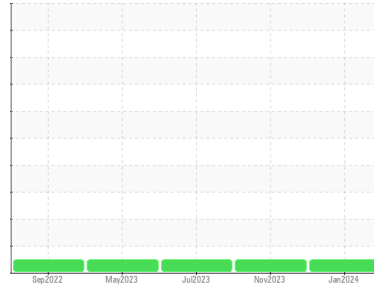


OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
109 (S/N 1XPBD49X9HD415616)

Component
Diesel Engine

Fluid
SHELL ROTELLA T4 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 suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0105520	PCA0089627	PCA0097127
Sample Date	Client Info		18 Jan 2024	03 Nov 2023	12 Jul 2023
Machine Age	mls	Client Info	931386	912512	875223
Oil Age	mls	Client Info	20874	19942	19969
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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 >165	11	11	16
Chromium	ppm	ASTM D5185m >5	<1	<1	<1
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m >2	<1	<1	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	2	1	2
Lead	ppm	ASTM D5185m >150	1	3	3
Copper	ppm	ASTM D5185m >90	<1	1	<1
Tin	ppm	ASTM D5185m >5	<1	0	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	83	62	42
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	9	13	13
Manganese	ppm	ASTM D5185m	<1	0	<1
Magnesium	ppm	ASTM D5185m	59	57	97
Calcium	ppm	ASTM D5185m	2336	2137	2319
Phosphorus	ppm	ASTM D5185m	1088	961	1020
Zinc	ppm	ASTM D5185m	1347	1156	1319
Sulfur	ppm	ASTM D5185m	3939	3492	4243

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >35	5	6	4
Sodium	ppm	ASTM D5185m	2	0	<1
Potassium	ppm	ASTM D5185m >20	11	9	4

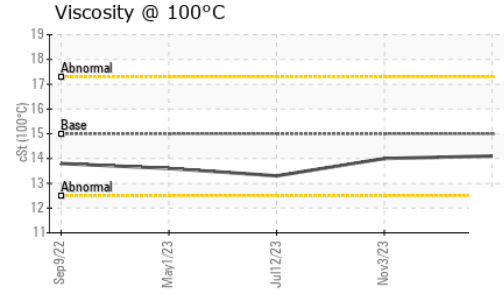
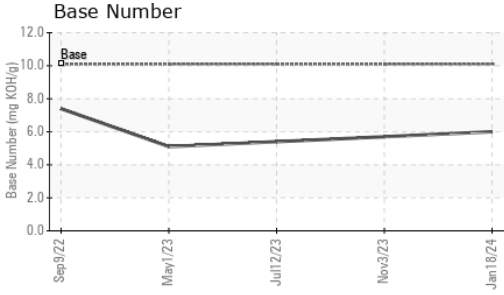
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >7.5	0.5	0.5	0.5
Nitration	Abs/cm	*ASTM D7624 >20	9.3	9.9	9.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.4	24.1	24.2

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	18.8	19.3	18.9
Base Number (BN)	mg KOH/g	ASTM D2896 10.1	6.0	5.7	5.4

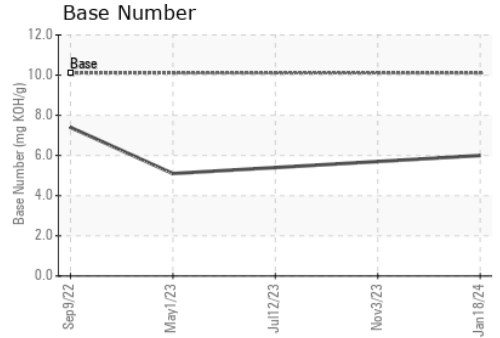
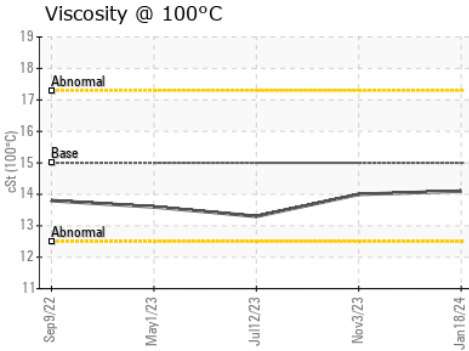
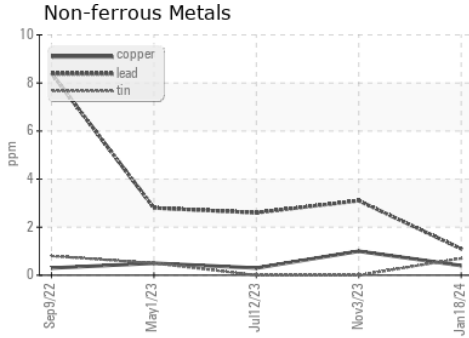
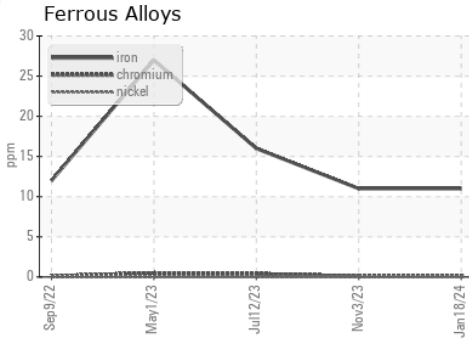
OIL ANALYSIS REPORT



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	15	14.1	14.0	13.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0105520 **Received** : 23 Jan 2024
Lab Number : **06068225** **Diagnosed** : 24 Jan 2024
Unique Number : 10844902 **Diagnostician** : Wes Davis
Test Package : FLEET

VULCRAFT
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 FLORENCE, SC
 US 29501
 Contact: DAVID VOUGHT
 david.vought@vulcraft-sc.com
 T: (843)409-3910
 F:

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)