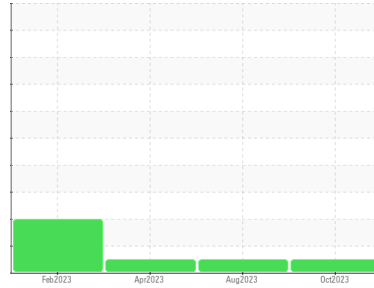


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
114 (S/N 3HSPAAPR1PN664807)

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			PCA0105513	PCA0097122	PCA0089616
Sample Date	Client Info			24 Oct 2023	18 Aug 2023	10 Apr 2023
Machine Age	mls	Client Info		98206	77725	37291
Oil Age	mls	Client Info		20481	19305	18467
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
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	11	12	17
Chromium	ppm	ASTM D5185m	>20	1	1	1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	6	11	10
Lead	ppm	ASTM D5185m	>40	0	<1	1
Copper	ppm	ASTM D5185m	>330	1	1	4
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0

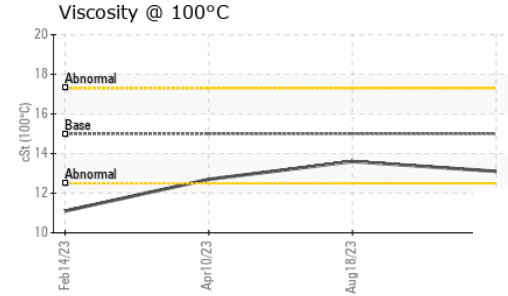
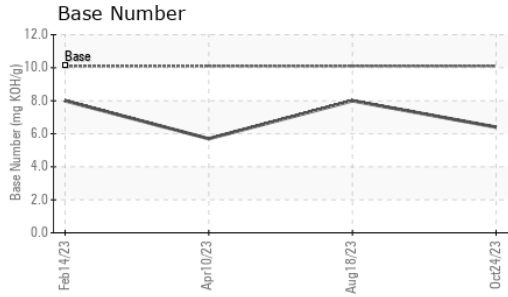
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		88	24	100
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		15	42	23
Manganese	ppm	ASTM D5185m		0	<1	1
Magnesium	ppm	ASTM D5185m		84	507	158
Calcium	ppm	ASTM D5185m		1984	1805	1940
Phosphorus	ppm	ASTM D5185m		942	1057	940
Zinc	ppm	ASTM D5185m		1117	1318	1165
Sulfur	ppm	ASTM D5185m		3293	3838	3186

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	6	10
Sodium	ppm	ASTM D5185m		<1	4	3
Potassium	ppm	ASTM D5185m	>20	26	34	38

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.7	8.9	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	20.4	19.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.0	16.8	16.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	6.4	8.0	5.7

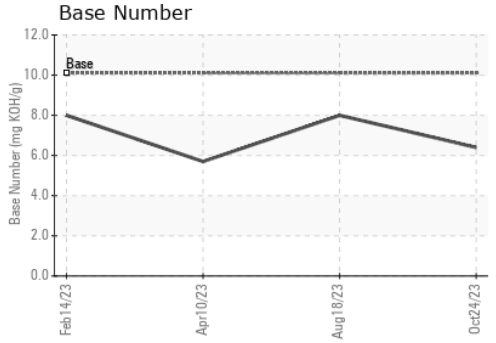
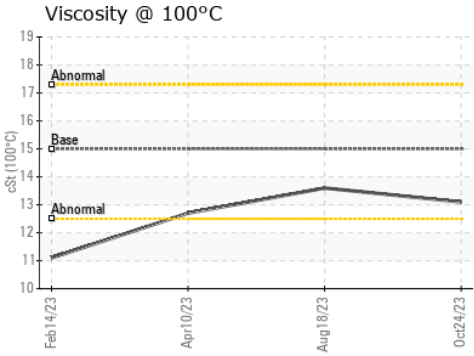
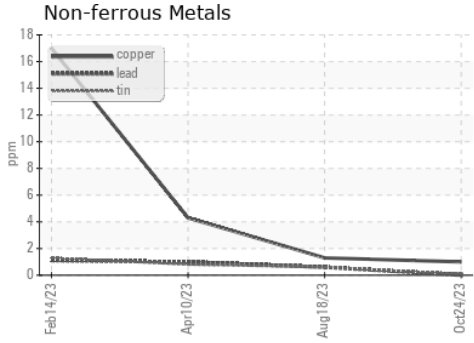
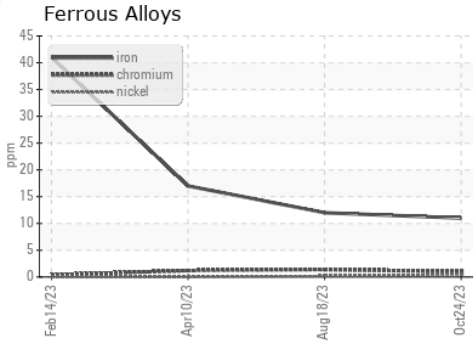
OIL ANALYSIS REPORT



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	13.1	13.6	12.7

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0105513 **Received** : 17 Nov 2023
Lab Number : **06011359** **Diagnosed** : 20 Nov 2023
Unique Number : 10750503 **Diagnostician** : Wes Davis
Test Package : FLEET

VULCRAFT
 1501 W DARLINGTON ST
 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)