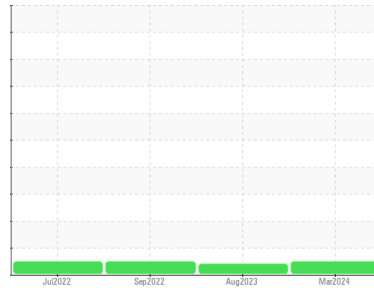


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
108 (S/N 1XPBD49X7HD415615)
 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		PCA0119511	PCA0089620	PCA0079356
Sample Date	Client Info		12 Mar 2024	29 Aug 2023	12 Sep 2022
Machine Age	mls	Client Info	908730	869967	812114
Oil Age	mls	Client Info	20409	17470	19885
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	ATTENTION	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	0.1	<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	9	7
Chromium	ppm	ASTM D5185m >5	1	<1	<1
Nickel	ppm	ASTM D5185m >4	<1	0	0
Titanium	ppm	ASTM D5185m >2	<1	<1	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	2	2	2
Lead	ppm	ASTM D5185m >150	1	<1	3
Copper	ppm	ASTM D5185m >90	<1	<1	0
Tin	ppm	ASTM D5185m >5	1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	122	50	211
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	7	51	76
Manganese	ppm	ASTM D5185m	<1	<1	0
Magnesium	ppm	ASTM D5185m	39	492	412
Calcium	ppm	ASTM D5185m	2295	1803	1398
Phosphorus	ppm	ASTM D5185m	955	804	932
Zinc	ppm	ASTM D5185m	1209	1002	1180
Sulfur	ppm	ASTM D5185m	3665	3304	3173

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >35	5	7	6
Sodium	ppm	ASTM D5185m	<1	3	1
Potassium	ppm	ASTM D5185m >20	9	2	4

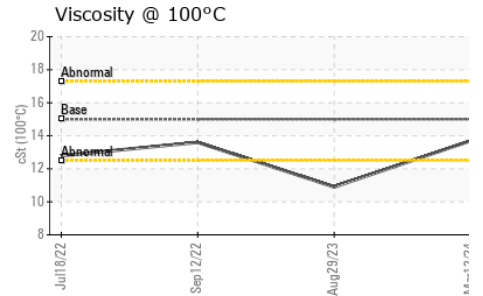
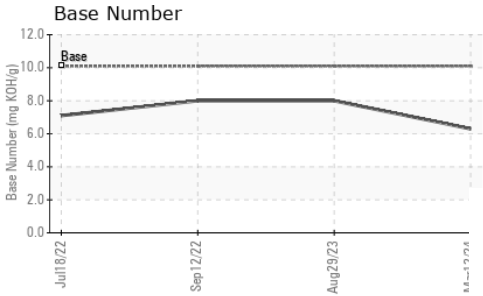
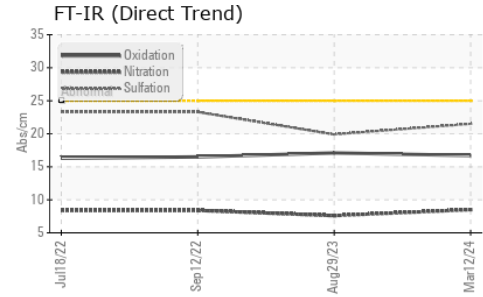
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >7.5	0.4	0.3	0.4
Nitration	Abs/cm	*ASTM D7624 >20	8.5	7.6	8.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	21.5	19.9	23.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.7	17.1	16.5
Base Number (BN)	mg KOH/g	ASTM D2896 10.1	6.3	8.0	8.0

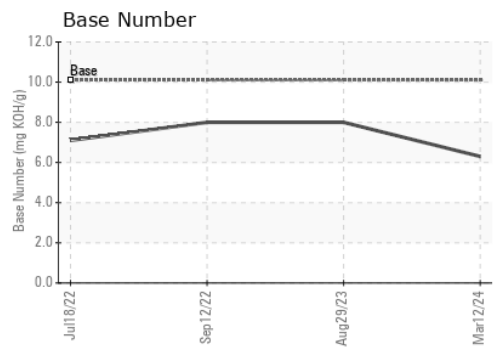
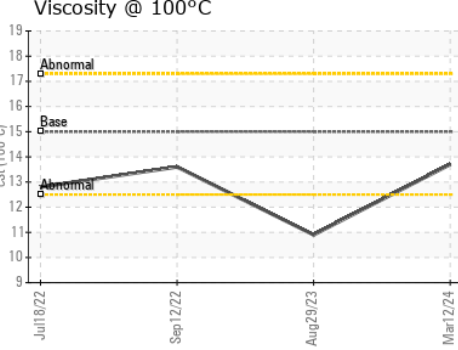
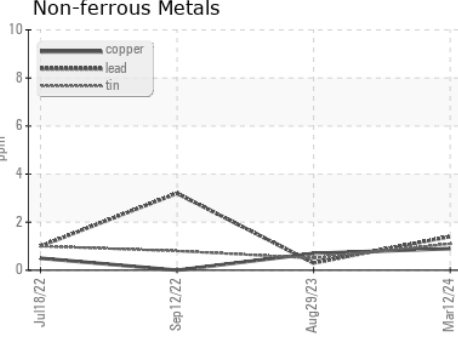
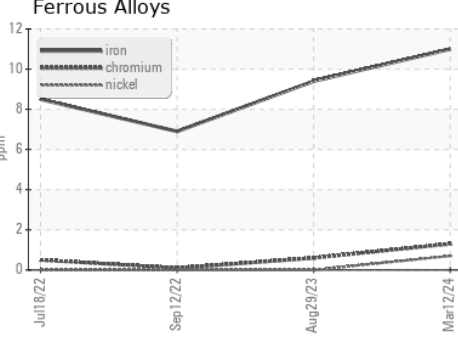
OIL ANALYSIS REPORT



PARAMETER	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	13.7	10.9	13.6

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0119511 **Received** : 10 Apr 2024
Lab Number : **06144043** **Tested** : 11 Apr 2024
Unique Number : 10968851 **Diagnosed** : 11 Apr 2024 - Wes Davis
Test Package : FLEET

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 FLORENCE, SC
 US 29501
 Contact: DAVID VOUGHT
 david.vought@vulcraft-sc.com
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 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)