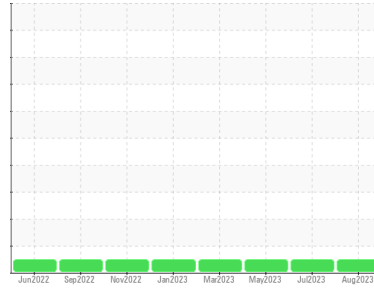


OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
110 (S/N 1XKZDP9X5JJ216950)

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			PCA0089621	PCA0097110	PCA0097117
Sample Date	Client Info			30 Aug 2023	11 Jul 2023	10 May 2023
Machine Age	mls	Client Info		486731	466739	447318
Oil Age	mls	Client Info		19992	19421	20334
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method			<1.0	<1.0	<1.0
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		7	8	5
Chromium	ppm	ASTM D5185m		<1	<1	0
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		4	3	3
Lead	ppm	ASTM D5185m		0	0	0
Copper	ppm	ASTM D5185m		<1	0	<1
Tin	ppm	ASTM D5185m		<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

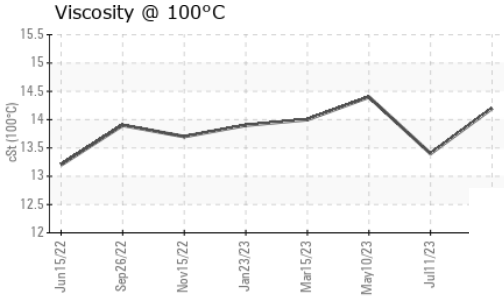
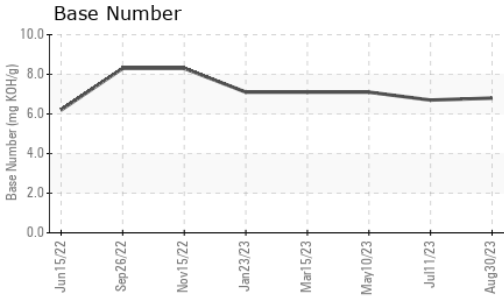
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		89	88	118
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		16	10	6
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		53	81	57
Calcium	ppm	ASTM D5185m		2312	2239	2168
Phosphorus	ppm	ASTM D5185m		980	973	936
Zinc	ppm	ASTM D5185m		1270	1246	1195
Sulfur	ppm	ASTM D5185m		4279	4244	3791

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		6	6	5
Sodium	ppm	ASTM D5185m		2	<1	1
Potassium	ppm	ASTM D5185m		11	5	5

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0.4	0.3	0.2
Nitration	Abs/cm	*ASTM D7624		7.9	7.8	7.9
Sulfation	Abs/.1mm	*ASTM D7415		19.9	20.3	21.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		15.2	15.4	16.8
Base Number (BN)	mg KOH/g	ASTM D2896		6.8	6.7	7.1

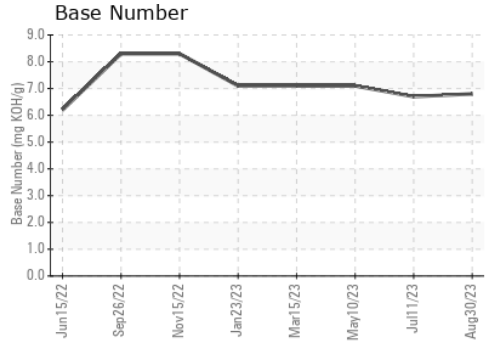
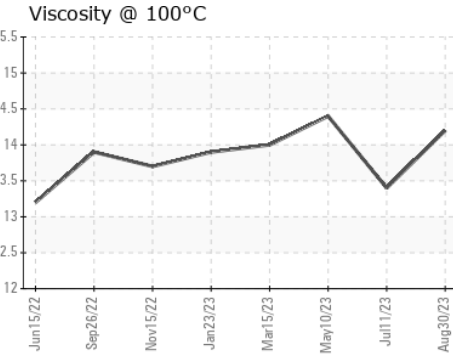
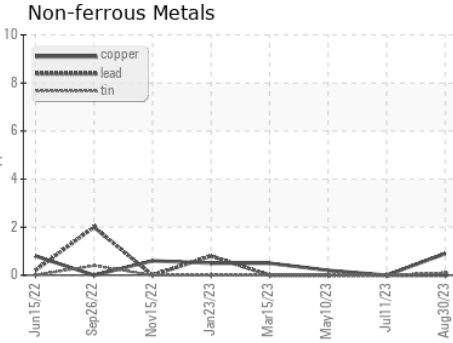
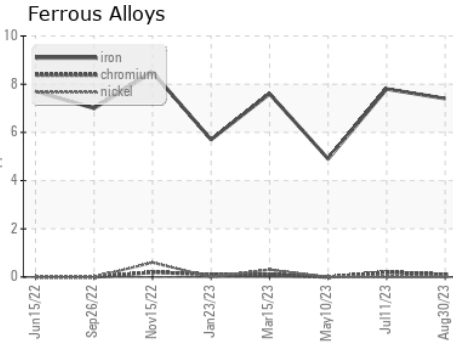
OIL ANALYSIS REPORT



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	NEG	NEG	NEG
Free Water	scalar	*Visual	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.2	13.4	14.4

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0089621 **Received** : 18 Sep 2023
Lab Number : **05953627** **Diagnosed** : 20 Sep 2023
Unique Number : 10649586 **Diagnostician** : Wes Davis
Test Package : FLEET

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 FLORENCE, SC
 US 29501
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 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)