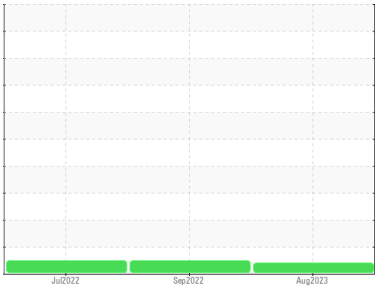
OIL DIAGNOSTICS

PROBLEM SUMMARY

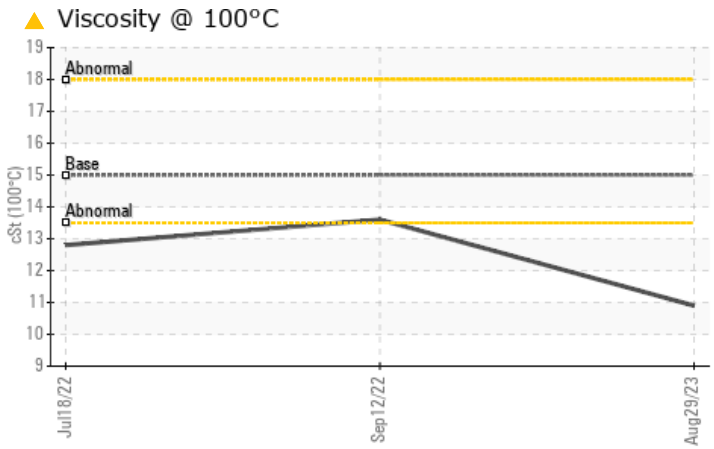
Sample Rating Trend



VISCOSITY

Machine Id
108 (S/N 1XPBD49X7HD415615)
Component
Diesel Engine
Fluid
SHELL ROTELLA T4 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ATTENTION**	NORMAL	NORMAL
Visc @ 100°C	cSt	ASTM D445	15	▲ **10.9**	13.6	12.8

Customer Id: VULFLO
Sample No.: PCA0089620
Lab Number: 05953626
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Sean Felton +1 919-379-4092
sfelton@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

12 Sep 2022 Diag: Don Baldridge

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

18 Jul 2022 Diag: Jonathan Hester

NORMAL

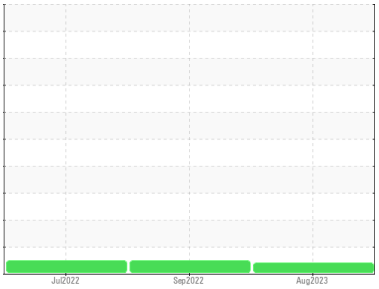
Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Machine Id
108 (S/N 1XPBD49X7HD415615)
Component
Diesel Engine
Fluid
SHELL ROTELLA T4 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0089620**	PCA0079356	PCA0075572
Sample Date		Client Info		**29 Aug 2023**	12 Sep 2022	18 Jul 2022
Machine Age	mls	Client Info		**869967**	812114	792279
Oil Age	mls	Client Info		**17470**	19885	20421
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ATTENTION**	NORMAL	NORMAL

CONTAMINATION	method	limit/base	current	history1	history2
Glycol	WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>165	**9**	7	8
Chromium	ppm	ASTM D5185m	>5	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**0**	0	0
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**2**	2	1
Lead	ppm	ASTM D5185m	>150	**<1**	3	1
Copper	ppm	ASTM D5185m	>90	**<1**	0	<1
Tin	ppm	ASTM D5185m	>5	**<1**	<1	1
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		**50**	211	216
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**51**	76	72
Manganese	ppm	ASTM D5185m		**<1**	0	<1
Magnesium	ppm	ASTM D5185m		**492**	412	359
Calcium	ppm	ASTM D5185m		**1803**	1398	1469
Phosphorus	ppm	ASTM D5185m		**804**	932	938
Zinc	ppm	ASTM D5185m		**1002**	1180	1220
Sulfur	ppm	ASTM D5185m		**3304**	3173	3580

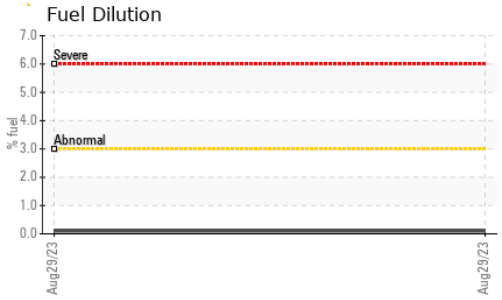
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>35	**7**	6	5
Sodium	ppm	ASTM D5185m		**3**	1	1
Potassium	ppm	ASTM D5185m	>20	**2**	4	1
Fuel	%	ASTM D3524	>3.0	**0.1**	<1.0	<1.0

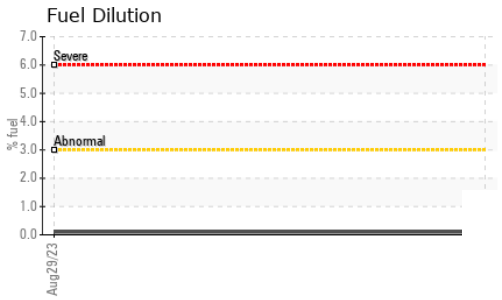
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>7.5	**0.3**	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**7.6**	8.4	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.9**	23.3	23.3

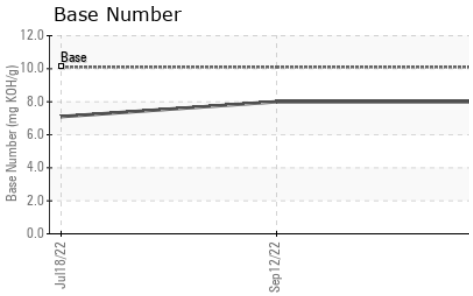
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**17.1**	16.5	16.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	**8.0**	8.0	7.1

OIL ANALYSIS REPORT

OIL DIAGNOSTICS



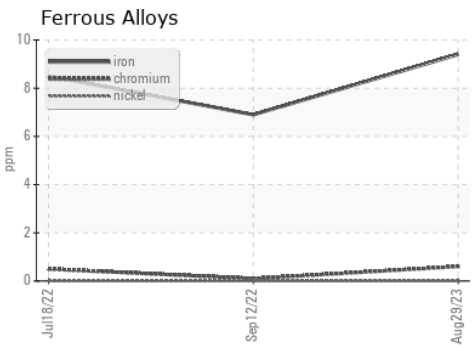


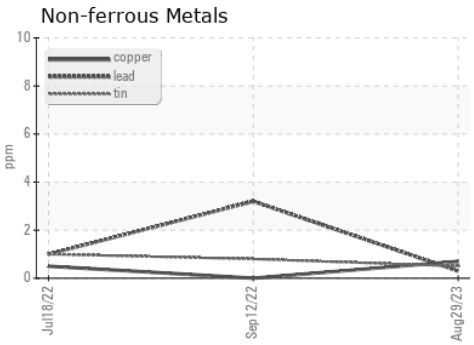


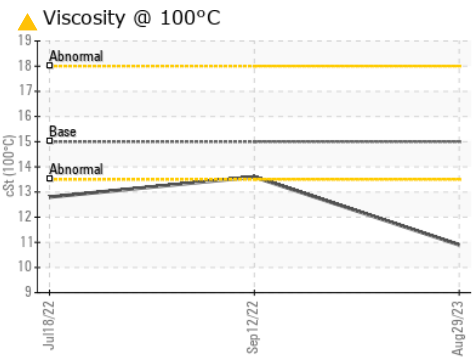
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

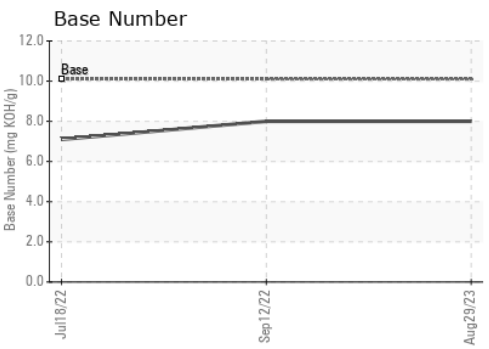
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15	▲ **10.9**	13.6	12.8

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0089620 **Received** : 18 Sep 2023
Lab Number : 05953626 **Diagnosed** : 20 Sep 2023
Unique Number : 10649585 **Diagnostician** : Sean Felton
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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)

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