



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
1218
Component
Diesel Engine
Fluid
SHELL ROTELLA T 10W30 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0827836	WC0691333	---
Sample Date		Client Info		15 Feb 2024	27 Jun 2023	---
Machine Age	mls	Client Info		195633	190110	---
Oil Age	mls	Client Info		0	0	---
Filter Age	mls	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	29	40	---
Chromium	ppm	ASTM D5185m	>20	<1	1	---
Nickel	ppm	ASTM D5185m	>4	0	<1	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>20	13	23	---
Lead	ppm	ASTM D5185m	>40	0	0	---
Copper	ppm	ASTM D5185m	>330	1	2	---
Tin	ppm	ASTM D5185m	>15	<1	<1	---
Vanadium	ppm	ASTM D5185m		0	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

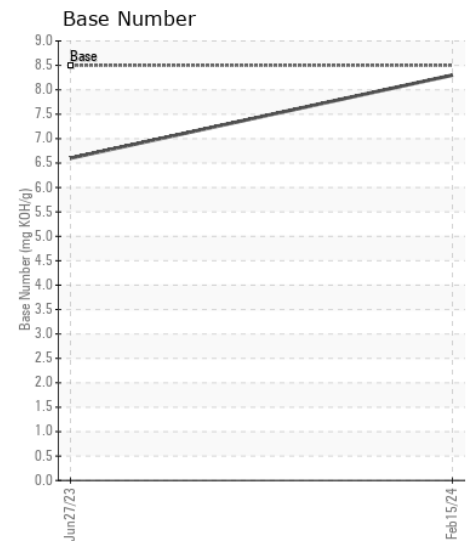
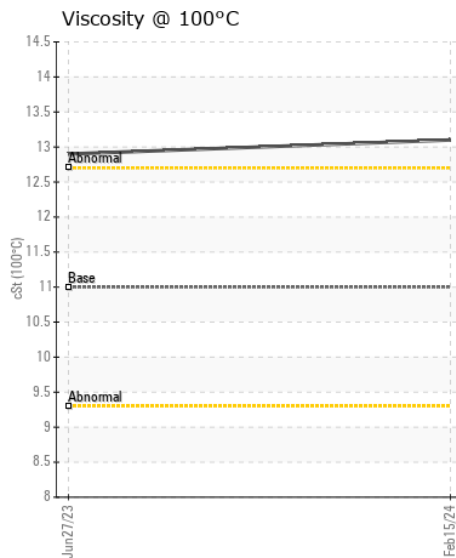
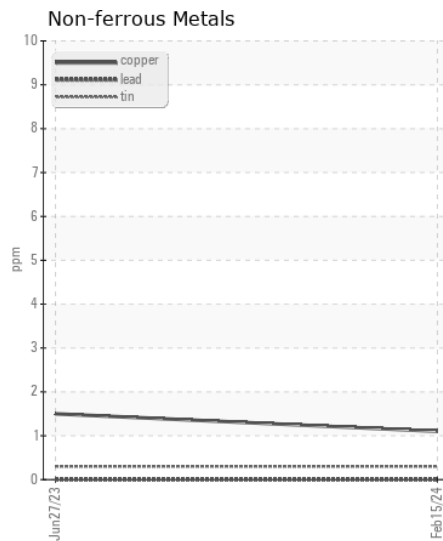
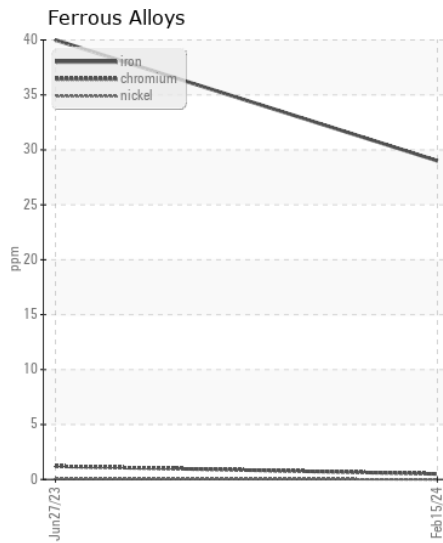
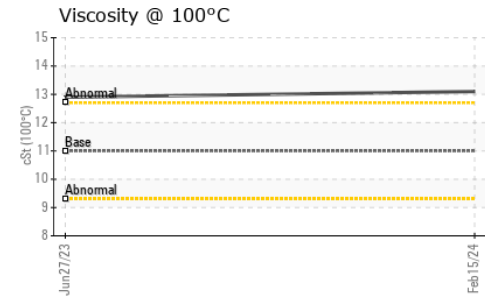
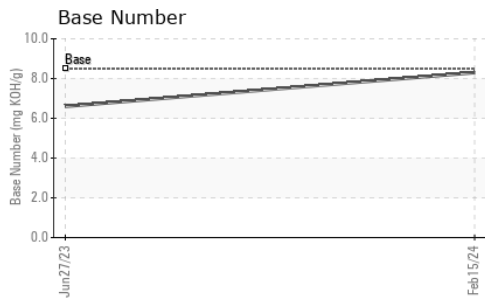
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	8	---
Potassium	ppm	ASTM D5185m	>20	<1	4	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.4	0.7	---
Nitration	Abs/cm	*ASTM D7624	>20	7.3	9.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	23.2	---
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	---

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.

Sodium	ppm	ASTM D5185m		2	2	---
Boron	ppm	ASTM D5185m	269	102	193	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m	0	58	82	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m	20	365	410	---
Calcium	ppm	ASTM D5185m	1521	1699	1698	---
Phosphorus	ppm	ASTM D5185m	948	935	1039	---
Zinc	ppm	ASTM D5185m	893	1012	1298	---
Sulfur	ppm	ASTM D5185m		2992	3704	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.4	19.2	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.3	6.6	---
Visc @ 100°C	cSt	ASTM D445	11.0	13.1	12.9	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0827836

Lab Number : 06098263

Unique Number : 10896493

Test Package : FLEET

Received : 23 Feb 2024

Tested : 26 Feb 2024

Diagnosed : 26 Feb 2024 - Don Baldrige

CARCO TRANSPORTATION

415 S WESTERN AVENUE

OKLAHOMA CITY, OK

US 73109

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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)