



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ATTENTION

Machine Id
SP-1187

Component
Diesel Engine

Fluid
SHELL ROTELLA T 15W40 (--- QTS)

RECOMMENDATION

No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0785031	WC0761559	---
Sample Date		Client Info		03 Mar 2023	14 Feb 2023	---
Machine Age	mls	Client Info		126722	126689	---
Oil Age	mls	Client Info		0	10000	---
Filter Age	mls	Client Info		0	10000	---
Oil Changed		Client Info		N/A	Changed	---
Filter Changed		Client Info		N/A	Changed	---
Sample Status				ATTENTION	SEVERE	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	19	71	---
Chromium	ppm	ASTM D5185m	>20	0	2	---
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	2	10	---
Lead	ppm	ASTM D5185m	>40	0	<1	---
Copper	ppm	ASTM D5185m	>330	0	2	---
Tin	ppm	ASTM D5185m	>15	0	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

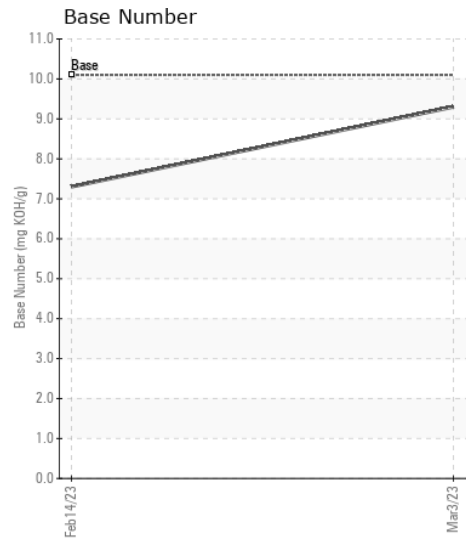
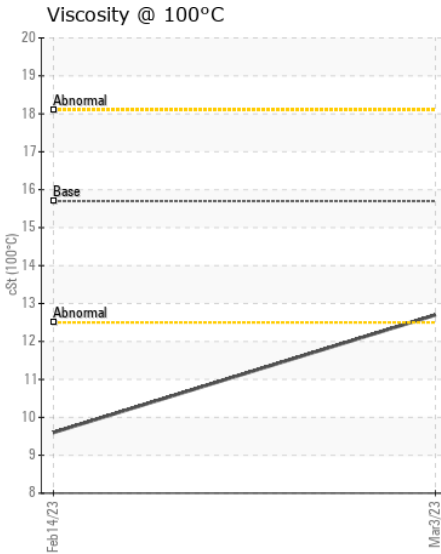
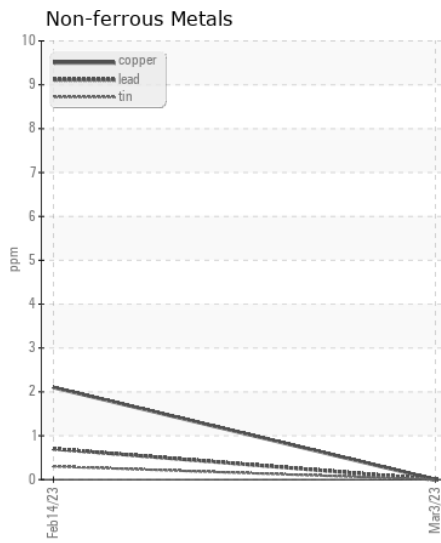
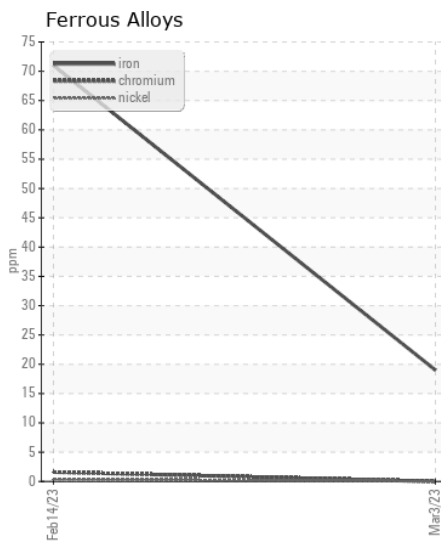
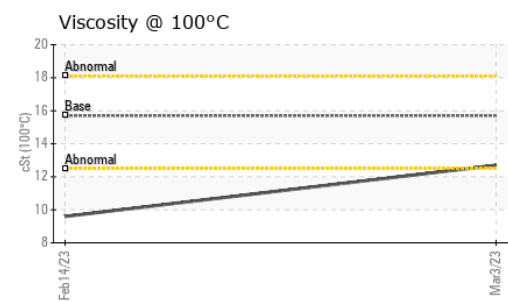
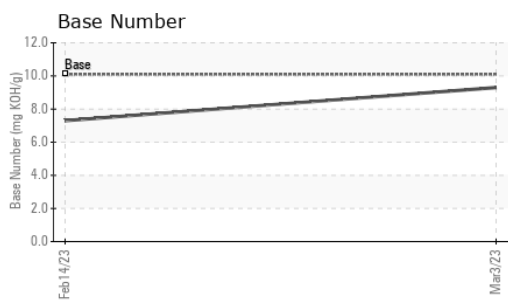
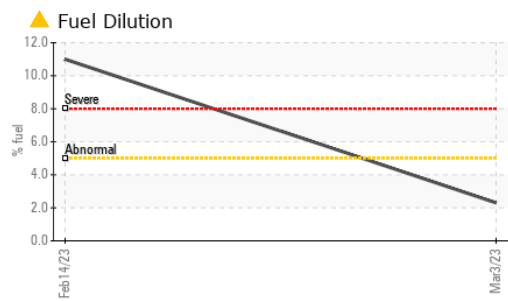
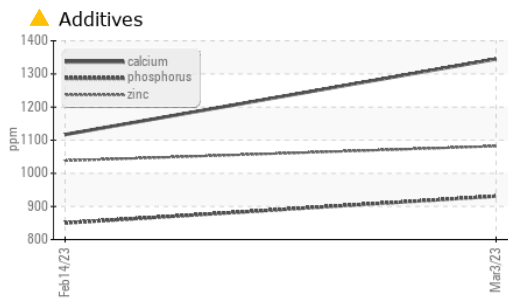
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>25	6	18	---
Potassium	ppm	ASTM D5185m	>20	<1	2	---
Fuel	%	ASTM D3524	>5	2.3	11.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.2	1	---
Nitration	Abs/cm	*ASTM D7624	>20	7.0	12.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.8	24.2	---
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

Additive levels indicate the addition of a different brand, or type of oil. 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		0	2	---
Boron	ppm	ASTM D5185m	316	31	32	---
Barium	ppm	ASTM D5185m	0.0	2	17	---
Molybdenum	ppm	ASTM D5185m	1.2	57	11	---
Manganese	ppm	ASTM D5185m		0	<1	---
Magnesium	ppm	ASTM D5185m	24	487	596	---
Calcium	ppm	ASTM D5185m	2292	1345	1117	---
Phosphorus	ppm	ASTM D5185m	1064	931	850	---
Zinc	ppm	ASTM D5185m	1160	1082	1038	---
Sulfur	ppm	ASTM D5185m	4996	2915	3525	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.4	20.3	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	9.3	7.3	---
Visc @ 100°C	cSt	ASTM D445	15.7	12.7	9.6	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0785031 **Received** : 07 Mar 2023
Lab Number : 05784858 **Diagnosed** : 09 Mar 2023
Unique Number : 10364528 **Diagnostician** : Wes Davis
Test Package : CONST (Additional Tests: PercentFuel, TBN)

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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