



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CITY OF EDEN DRAPER
 Component
Natural Gas Engine
 Fluid
SHELL ROTELLA T 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0887901	WC0887898	WC0514326
Sample Date		Client Info		30 Jan 2024	30 Jan 2024	03 Dec 2020
Machine Age	hrs	Client Info		158	158	114
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>50	0	9	23
Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	<1	2	2
Lead	ppm	ASTM D5185m	>30	0	3	6
Copper	ppm	ASTM D5185m	>35	<1	2	6
Tin	ppm	ASTM D5185m	>4	0	1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

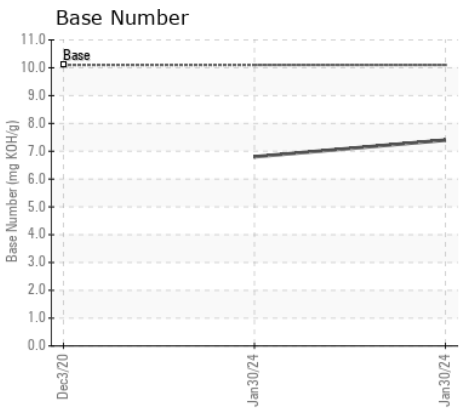
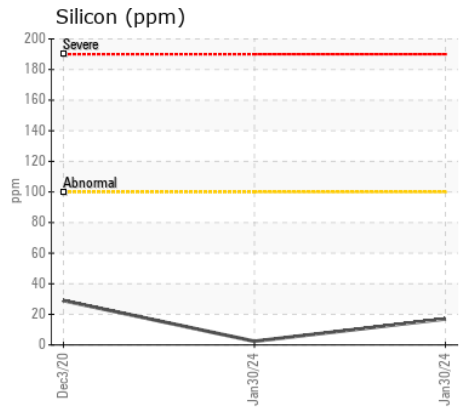
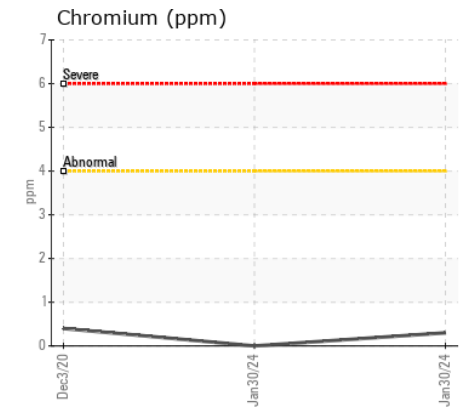
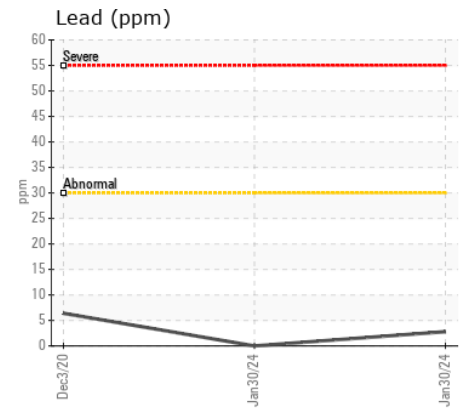
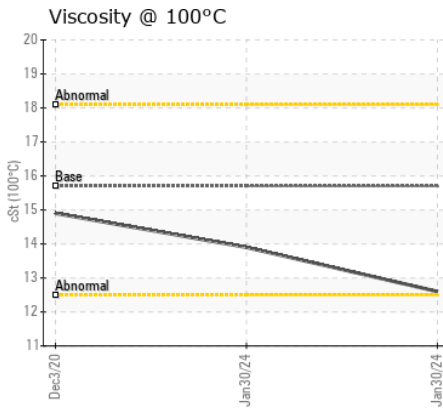
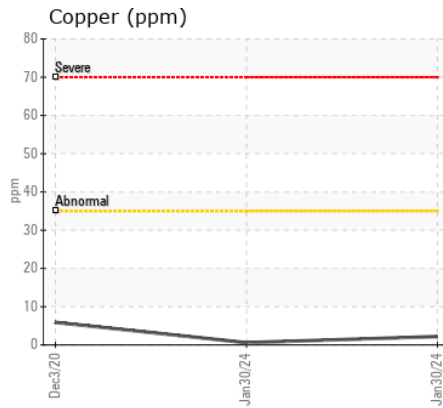
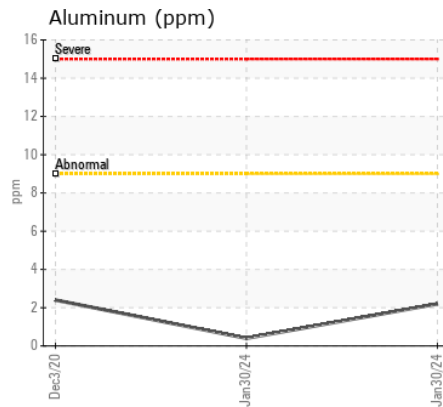
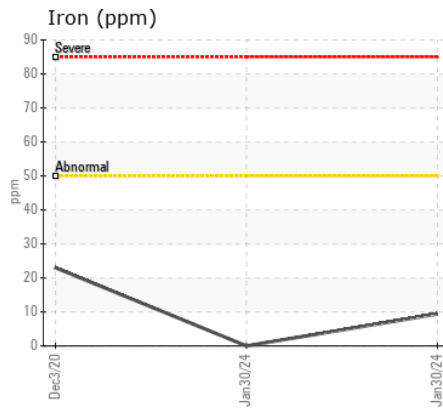
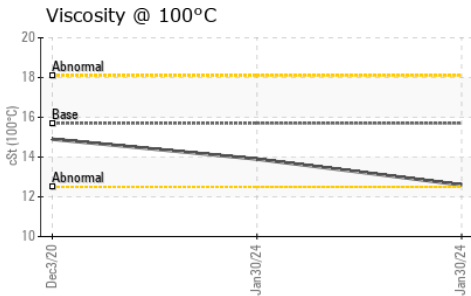
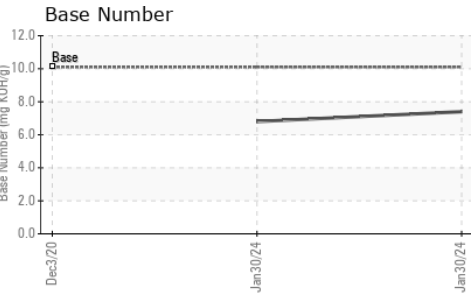
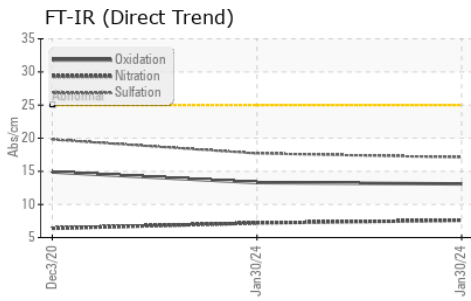
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	2	17	29
Potassium	ppm	ASTM D5185m	>20	<1	1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.6	7.2	6.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.1	17.7	19.8
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	>0.1	NEG	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		1	4	8
Boron	ppm	ASTM D5185m	316	80	74	46
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	84	78	61
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	24	57	206	773
Calcium	ppm	ASTM D5185m	2292	2292	1841	1347
Phosphorus	ppm	ASTM D5185m	1064	1113	996	976
Zinc	ppm	ASTM D5185m	1160	1231	1214	1164
Sulfur	ppm	ASTM D5185m	4996	4728	3568	2306
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.1	13.3	14.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	7.4	6.8	---
Visc @ 100°C	cSt	ASTM D445	15.7	12.6	13.9	14.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0887901 **Received** : 12 Apr 2024
Lab Number : 06146949 **Tested** : 15 Apr 2024
Unique Number : 10977027 **Diagnosed** : 15 Apr 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: 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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