



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
DETROIT 3723092

Component
Diesel Engine

Fluid
SHELL ROTELLA T 10W30 (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0083975	PC0074764	---
Sample Date		Client Info		16 Apr 2024	11 Jul 2023	---
Machine Age	mls	Client Info		163222	109348	---
Oil Age	mls	Client Info		54000	54000	---
Filter Age	mls	Client Info		54000	54000	---
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 D5185(m)	>65	62	54	---
Chromium	ppm	ASTM D5185(m)	>5	2	3	---
Nickel	ppm	ASTM D5185(m)	>3	0	<1	---
Titanium	ppm	ASTM D5185(m)	>5	0	<1	---
Silver	ppm	ASTM D5185(m)	>2	0	<1	---
Aluminum	ppm	ASTM D5185(m)	>35	21	37	---
Lead	ppm	ASTM D5185(m)	>10	0	2	---
Copper	ppm	ASTM D5185(m)	>180	29	63	---
Tin	ppm	ASTM D5185(m)	>8	<1	2	---
Vanadium	ppm	ASTM D5185(m)		0	0	---

CONTAMINATION

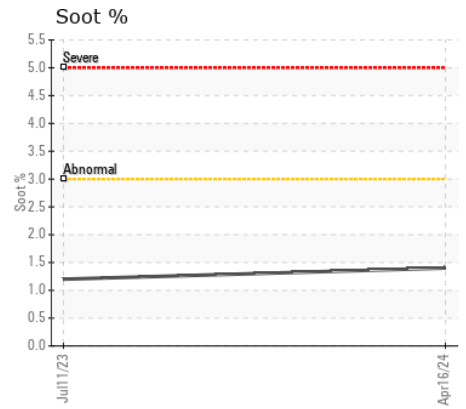
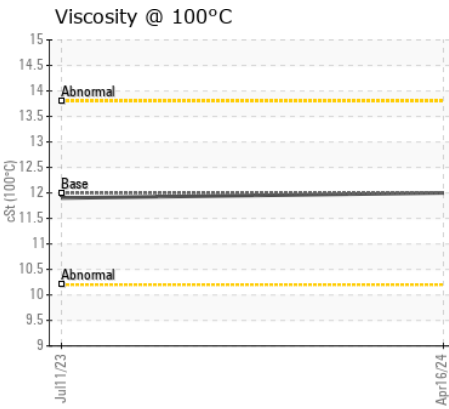
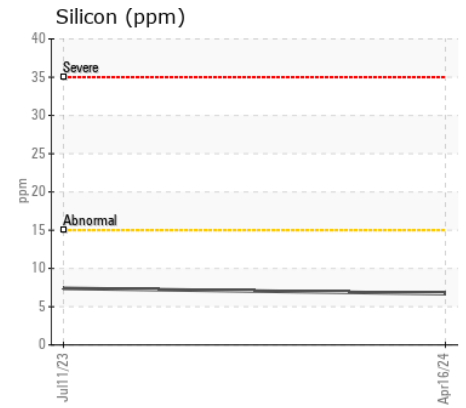
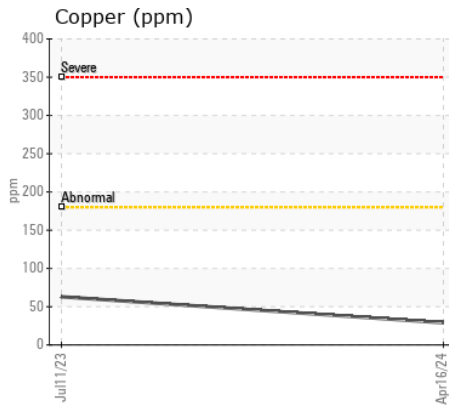
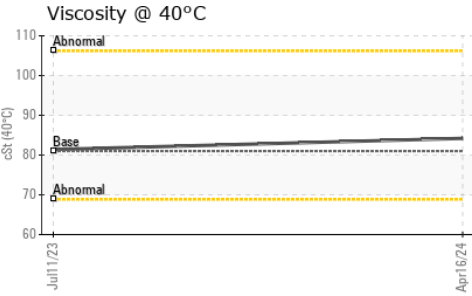
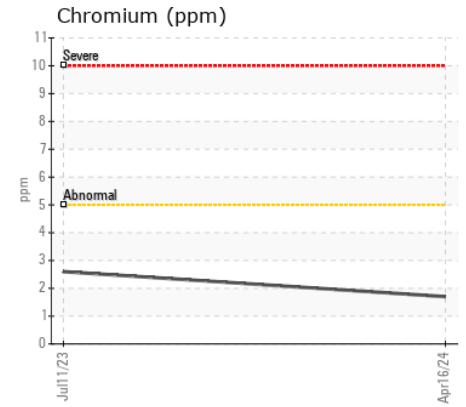
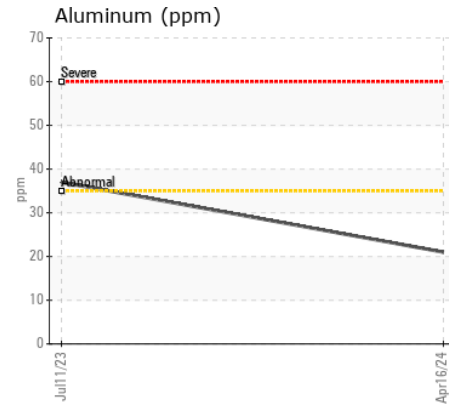
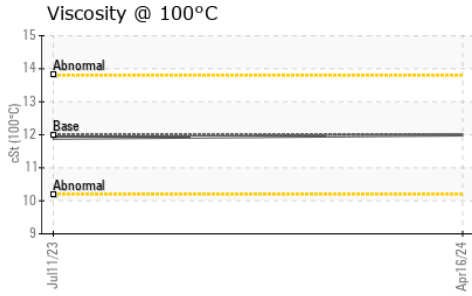
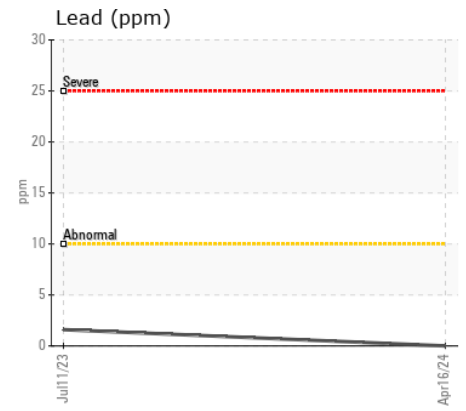
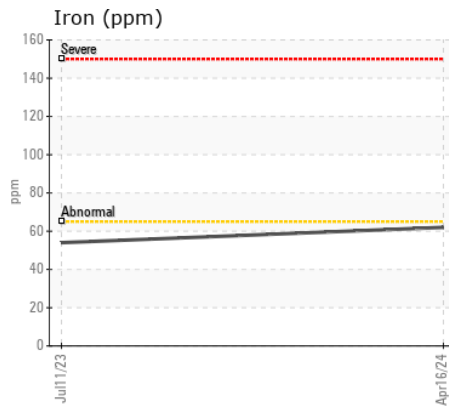
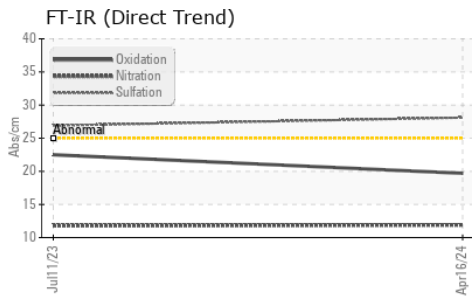
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	7	7	---
Potassium	ppm	ASTM D5185(m)	>20	48	77	---
Fuel		WC Method	>3.0	<1.0	0.4	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	ASTM D7844*	>3	1.4	1.2	---
Nitration	Abs/cm	ASTM D7624*	>20	11.9	11.8	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	28.1	26.9	---
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	---

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil.
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		3	4	---
Boron	ppm	ASTM D5185(m)		8	16	---
Barium	ppm	ASTM D5185(m)		0	0	---
Molybdenum	ppm	ASTM D5185(m)		17	53	---
Manganese	ppm	ASTM D5185(m)		2	2	---
Magnesium	ppm	ASTM D5185(m)		127	433	---
Calcium	ppm	ASTM D5185(m)		2281	1806	---
Phosphorus	ppm	ASTM D5185(m)		892	993	---
Zinc	ppm	ASTM D5185(m)		1107	1180	---
Sulfur	ppm	ASTM D5185(m)		2491	2110	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.7	22.5	---
Visc @ 40°C	cSt	ASTM D7279(m)	81	84.2	81.4	---
Visc @ 100°C	cSt	ASTM D7279(m)	12.	12.0	11.9	---
Viscosity Index (VI)	Scale	ASTM D2270*	141	136	140	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0083975 **Received** : 03 Jun 2024
Lab Number : 02639362 **Tested** : 03 Jun 2024
Unique Number : 5788524 **Diagnosed** : 03 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: KV40, VI)

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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.