



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
KENWORTH 226524

Component
Diesel Engine

Fluid
SHELL ROTELLA T 15W40 (11 GAL)

RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you check for visible metal particles in the oil. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. We suspect that the abnormal contaminant(s) is the result of incorrect sampling technique. **DISCLAIMER:** Interpretation of results is based on the sample as received from the customer. The condition of the sample and the method of sampling cannot be verified. (Customer Sample Comment: I'm not exactly sure of component age as I bought it used 2 years ago and also a question please, have you guys done anything to your testing procedures to make test more sensitive for fuel dilution as I've had this issue recently and after a bunch of tes)

WEAR

Light concentration of visible metal present.

CONTAMINATION

There is a moderate amount of fuel present in the oil. Moderate concentration of visible dirt/debris present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

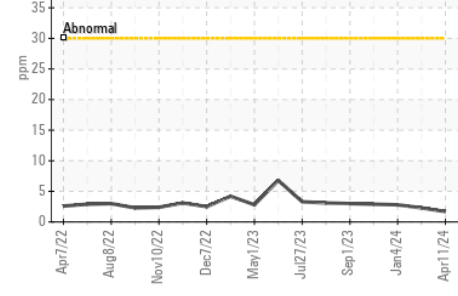
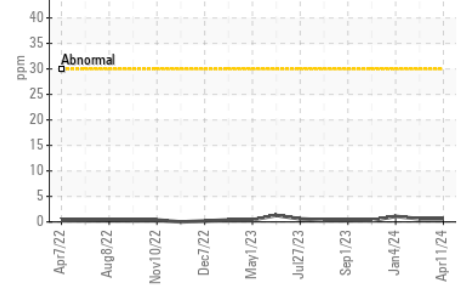
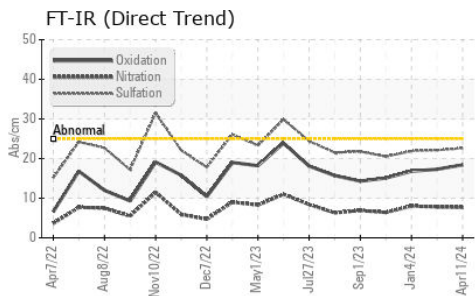
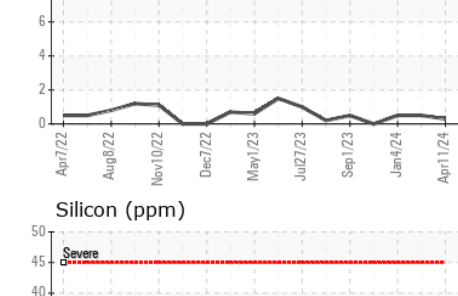
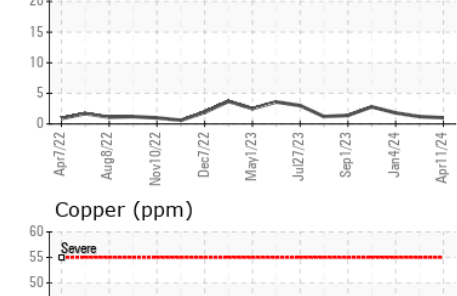
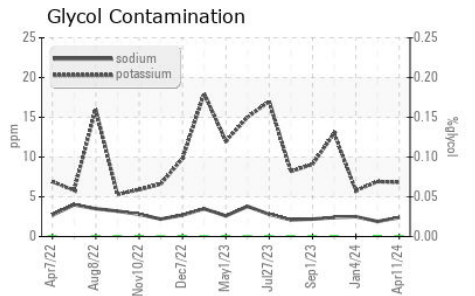
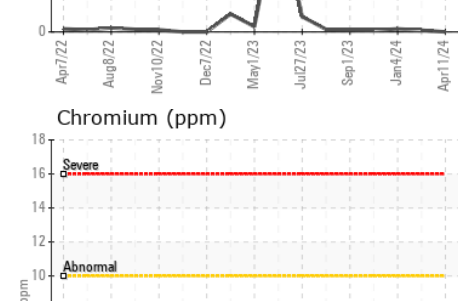
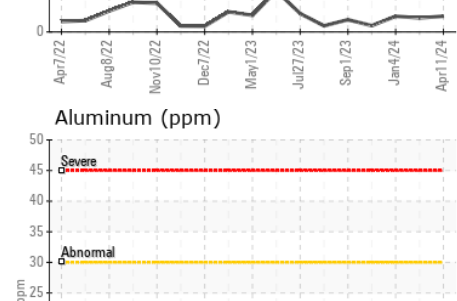
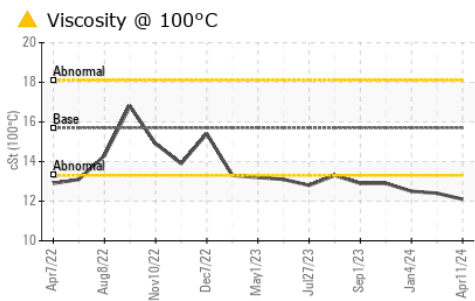
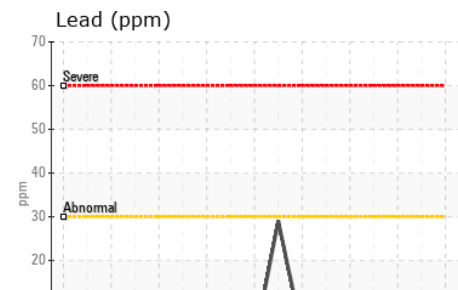
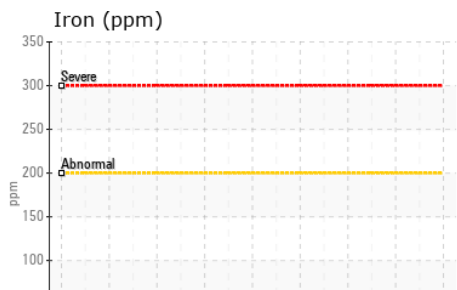
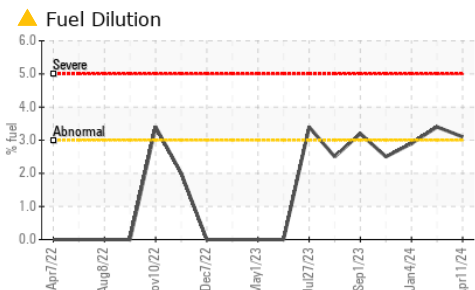
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0849107	WC0849106	WC0849105
Sample Date		Client Info		11 Apr 2024	26 Feb 2024	04 Jan 2024
Machine Age	kms	Client Info		4500000	4450000	4000000
Oil Age	kms	Client Info		24000	24000	41000
Filter Age	kms	Client Info		24000	24000	41000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

Iron	ppm	ASTM D5185(m)	>200	18	16	18
Chromium	ppm	ASTM D5185(m)	>10	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	0	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>30	1	1	2
Lead	ppm	ASTM D5185(m)	>30	0	<1	<1
Copper	ppm	ASTM D5185(m)	>30	<1	<1	1
Tin	ppm	ASTM D5185(m)	>4	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	▲ LIGHT	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

Silicon	ppm	ASTM D5185(m)	>30	2	2	3
Potassium	ppm	ASTM D5185(m)	>20	7	7	6
Fuel	%	ASTM D7593*	>3.0	▲ 3.1	▲ 3.4	▲ 2.9
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		0.0	0.0	NEG
Soot %	%	ASTM D7844*	>3	0.5	0.6	0.6
Nitration	Abs/cm	ASTM D7624*	>20	7.7	7.8	8.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.6	22.1	21.9
Silt	scalar	Visual*	NONE	VLITE	---	---
Debris	scalar	Visual*	NONE	▲ VLITE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

Sodium	ppm	ASTM D5185(m)		2	2	2
Boron	ppm	ASTM D5185(m)	35	124	128	108
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<1	2	10
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	10	16	16	28
Calcium	ppm	ASTM D5185(m)	2340	2216	2158	2161
Phosphorus	ppm	ASTM D5185(m)	1110	928	924	931
Zinc	ppm	ASTM D5185(m)	1210	1113	1093	1126
Sulfur	ppm	ASTM D5185(m)	3890	2870	2975	3056
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.4	17.3	16.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.7	▲ 12.1	▲ 12.4	▲ 12.5



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **2636021 ONT INC - GRANT HOWARD**
Sample No. : WC0849107 **Received** : 12 Apr 2024 **159 QUEEN ST, P.O BOX 63**
Lab Number : 02628344 **Tested** : 17 Apr 2024 **AILSA CRAIG, ON**
Unique Number : 5761476 **Diagnosed** : 17 Apr 2024 - Kevin Marson **CA N0M 1A0**
Test Package : MOB 1 (Additional Tests: BottomAnalysis, FILTERPATCH, Glycol, PercentFuel, Viscosity) **Contact: Grant Howard**
To discuss this sample report, contact Customer Service at 1-800-268-2131. **lohowie0161@gmail.com**
Test denoted () outside scope of accreditation, (m) method modified, (e) tested at external lab.* **T: (519)857-6903**
Validity of results and interpretation are based on the sample and information as supplied. **F:**