



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
KENWORTH 226524

Component
Diesel Engine

Fluid
SHELL ROTELLA T 15W40 (11 GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0849106	WC0849105	WC0849104
Sample Date		Client Info		26 Feb 2024	04 Jan 2024	09 Oct 2023
Machine Age	kms	Client Info		4450000	4000000	4000000
Oil Age	kms	Client Info		24000	41000	11000
Filter Age	kms	Client Info		24000	41000	11000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	MARGINAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>200	16	18	7
Chromium	ppm	ASTM D5185(m)	>10	<1	<1	0
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>30	1	2	3
Lead	ppm	ASTM D5185(m)	>30	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>30	<1	1	<1
Tin	ppm	ASTM D5185(m)	>4	0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

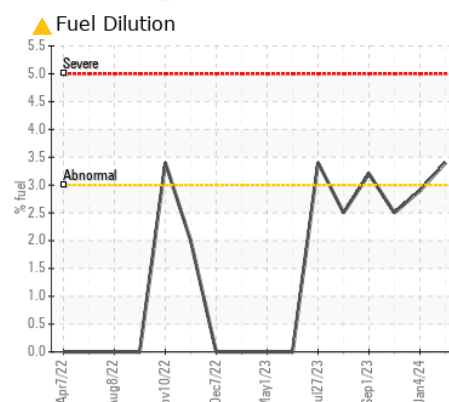
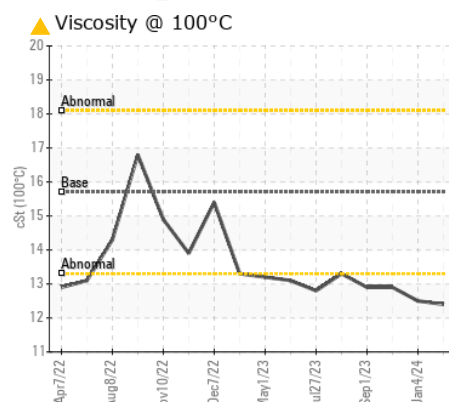
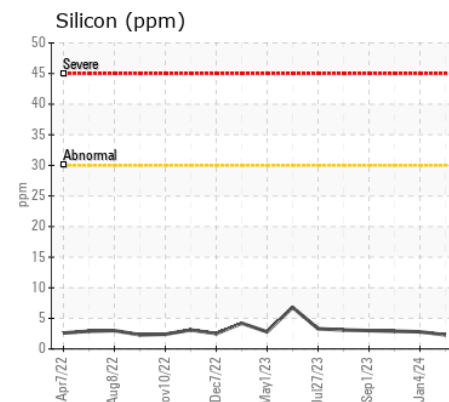
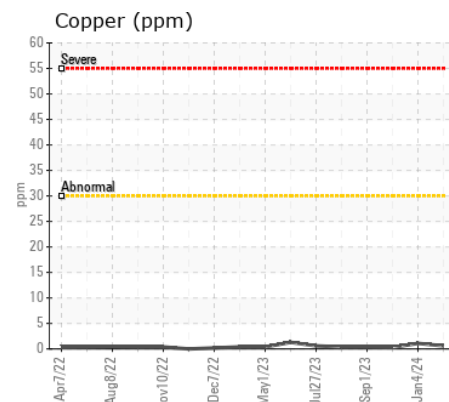
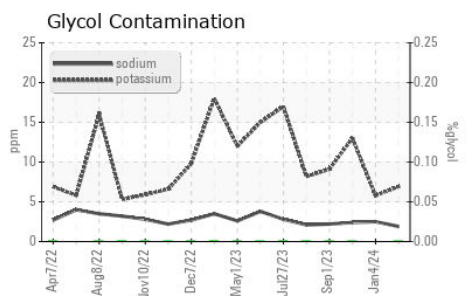
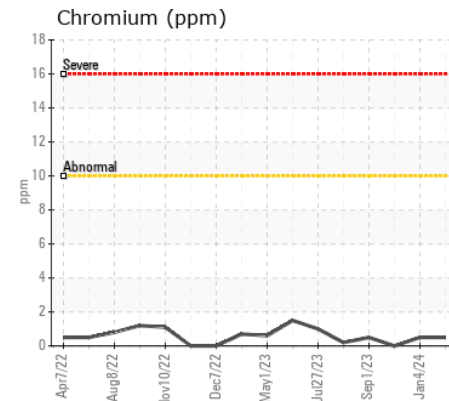
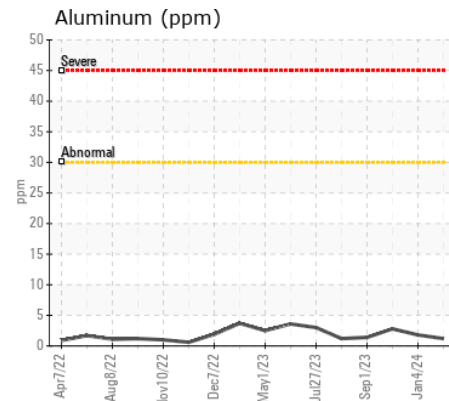
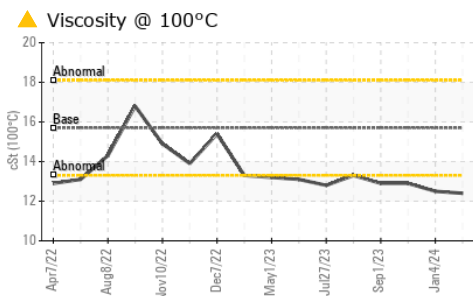
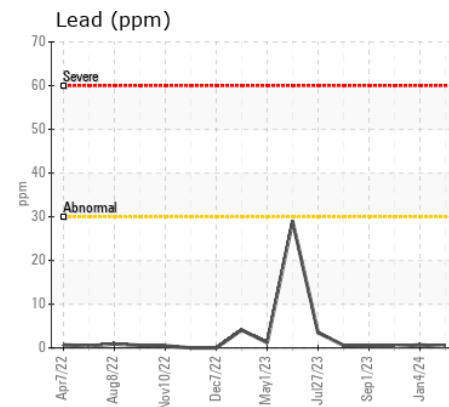
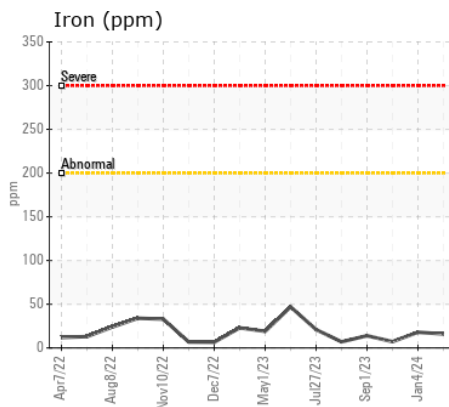
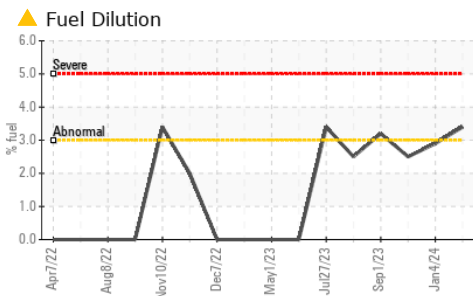
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>30	2	3	3
Potassium	ppm	ASTM D5185(m)	>20	7	6	13
Fuel	%	ASTM D7593*	>3.0	▲ 3.4	▲ 2.9	▲ 2.5
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		0.0	NEG	0.0
Soot %	%	ASTM D7844*	>3	0.6	0.6	0.4
Nitration	Abs/cm	ASTM D7624*	>20	7.8	8.0	6.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.1	21.9	20.5
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		2	2	2
Boron	ppm	ASTM D5185(m)	35	128	108	157
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	0	2	10	2
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	10	16	28	19
Calcium	ppm	ASTM D5185(m)	2340	2158	2161	2155
Phosphorus	ppm	ASTM D5185(m)	1110	924	931	959
Zinc	ppm	ASTM D5185(m)	1210	1093	1126	1132
Sulfur	ppm	ASTM D5185(m)	3890	2975	3056	2947
Oxidation	Abs/.1mm	ASTM D7414*	>25	17.3	16.8	15.1
Visc @ 100°C	cSt	ASTM D7279(m)	15.7	▲ 12.4	▲ 12.5	12.9



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0849106
Lab Number : 02618618
Unique Number : 5735728
Test Package : MOB 1 (Additional Tests: FUELDILUTION, Glycol, PercentFuel)

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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.