



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	NORMAL

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. Resample at the next service interval to monitor. No other corrective action is recommended at this time. (Customer Sample Comment: Early oil change after replacing charge air cooler because of air leak when tested. Trying to check if this changes both fuel dilution and visible metal in sample)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0849115	WC0849108	WC0849107
Sample Date		Client Info		13 Jun 2024	02 May 2024	11 Apr 2024
Machine Age	kms	Client Info		4500000	4500000	4500000
Oil Age	kms	Client Info		16000	12000	24000
Filter Age	kms	Client Info		16000	12000	24000
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				MARGINAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>200	10	8	18
Chromium	ppm	ASTM D5185(m)	>10	<1	0	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	0	0
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>30	5	<1	1
Lead	ppm	ASTM D5185(m)	>30	0	0	0
Copper	ppm	ASTM D5185(m)	>30	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

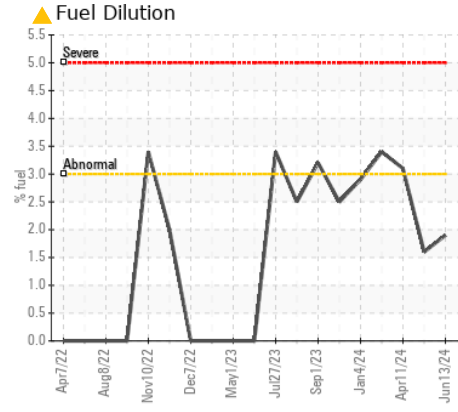
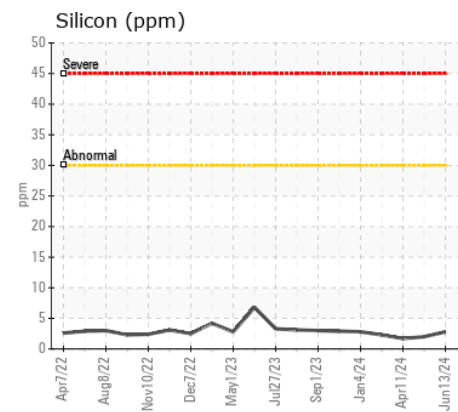
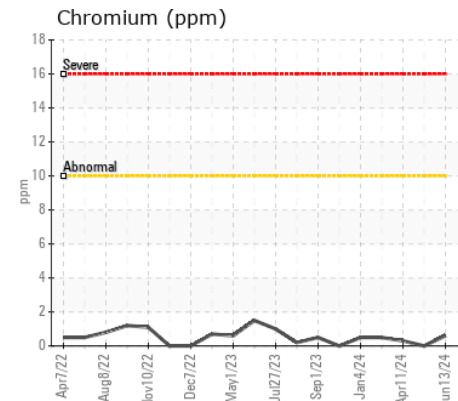
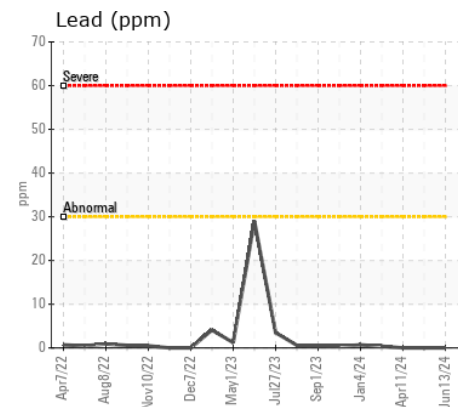
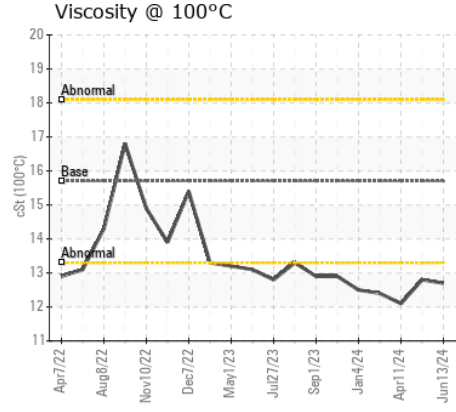
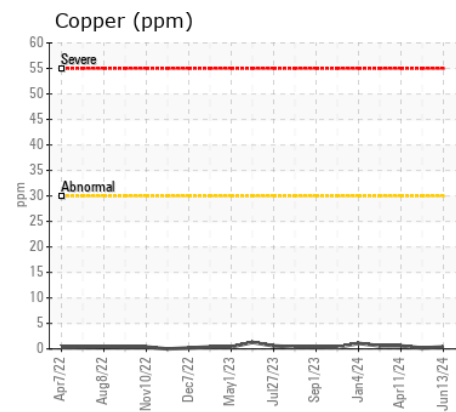
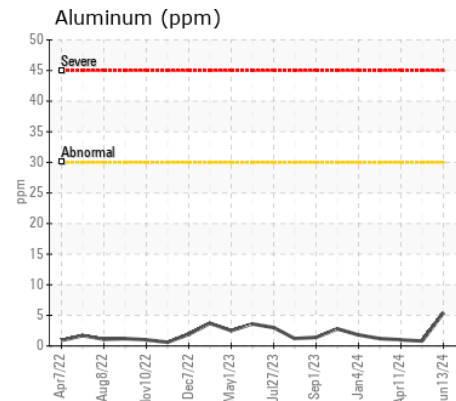
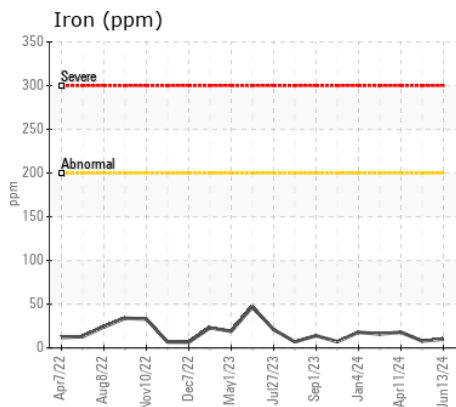
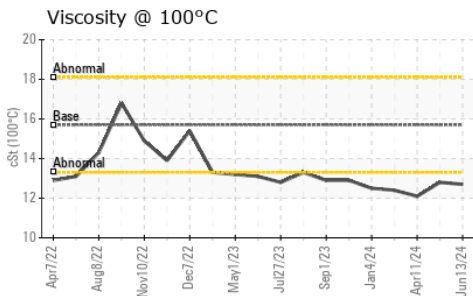
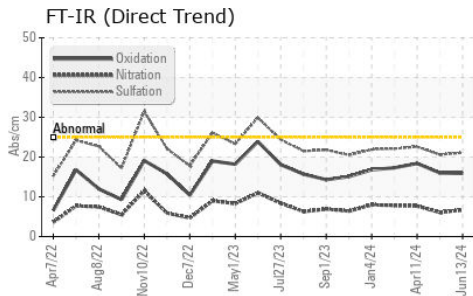
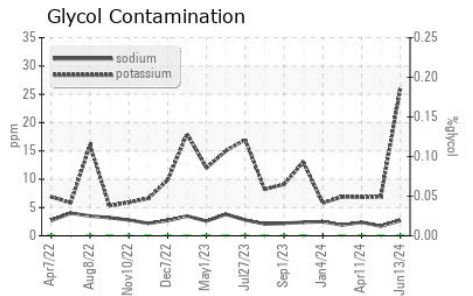
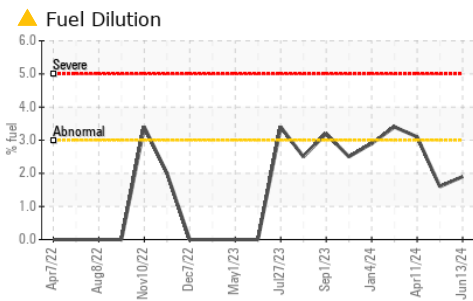
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185(m)	>30	3	2	2
Potassium	ppm	ASTM D5185(m)	>20	26	7	7
Fuel	%	ASTM D7593*	>3.0	▲ 1.9	▲ 1.6	▲ 3.1
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		0.0	0.0	0.0
Soot %	%	ASTM D7844*	>3	0.6	0.3	0.5
Nitration	Abs/cm	ASTM D7624*	>20	6.7	6.1	7.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.1	20.6	22.6
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		3	2	2
Boron	ppm	ASTM D5185(m)	35	138	148	124
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	2	<1	<1
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	10	22	15	16
Calcium	ppm	ASTM D5185(m)	2340	2140	2139	2216
Phosphorus	ppm	ASTM D5185(m)	1110	918	927	928
Zinc	ppm	ASTM D5185(m)	1210	1101	1091	1113
Sulfur	ppm	ASTM D5185(m)	3890	2881	2816	2870
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.9	16.0	18.4
Visc @ 100°C	cSt	ASTM D7279(m)	15.7	12.7	12.8	▲ 12.1



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **2636021 ONT INC - GRANT HOWARD**
Sample No. : WC0849115 **Received** : 17 Jun 2024 159 QUEEN ST, P.O BOX 63
Lab Number : 02642246 **Tested** : 21 Jun 2024 AILSA CRAIG, ON
Unique Number : 5799785 **Diagnosed** : 21 Jun 2024 - Kevin Marson CA N0M 1A0
Test Package : MOB 1 (Additional Tests: BottomAnalysis, FILTERPATCH, FUELDILUTION, Glycol, Percent Fuel Dilution) 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: