



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
52000 series
Machine Id
Freightliner 52592
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (38 LTR)

RECOMMENDATION

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0892028	WC0813040	WC0695734
Sample Date		Client Info		07 Jan 2024	30 Apr 2023	27 May 2022
Machine Age	mls	Client Info		705983	1084265	1027930
Oil Age	mls	Client Info		32252	0	27189
Filter Age	mls	Client Info		32252	0	27189
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	SEVERE	SEVERE

WEAR

Aluminum and chromium ppm levels are abnormal. Ring wear is indicated. Piston wear is indicated.

Iron	ppm	ASTM D5185(m)	>65	60	▲ 70	138
Chromium	ppm	ASTM D5185(m)	>5	▲ 9	● 11	6
Nickel	ppm	ASTM D5185(m)	>3	1	<1	2
Titanium	ppm	ASTM D5185(m)	>5	0	1	<1
Silver	ppm	ASTM D5185(m)	>2	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>35	▲ 41	▲ 43	● 67
Lead	ppm	ASTM D5185(m)	>10	0	<1	<1
Copper	ppm	ASTM D5185(m)	>180	4	12	14
Tin	ppm	ASTM D5185(m)	>8	0	<1	1
Vanadium	ppm	ASTM D5185(m)		0	<1	<1

CONTAMINATION

There is no indication of any contamination in the oil.

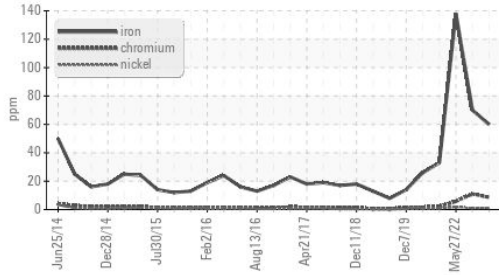
Silicon	ppm	ASTM D5185(m)	>15	5	12	19
Potassium	ppm	ASTM D5185(m)	>20	8	12	▲ 141
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		0.0	0.0	● 0.359
Soot %	%	ASTM D7844*	>3	0.9	1	1.6
Nitration	Abs/cm	ASTM D7624*	>20	10.1	10.7	17.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	27.1	28.4	32.4
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

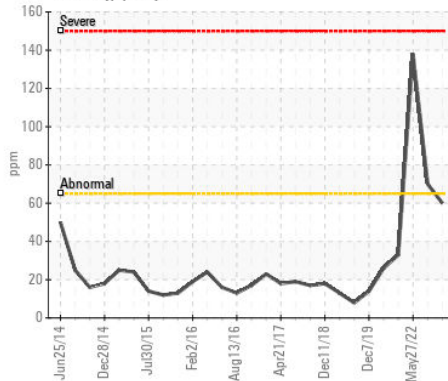
Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		8	9	▲ 84
Boron	ppm	ASTM D5185(m)	2	24	28	12
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	50	23	26	74
Manganese	ppm	ASTM D5185(m)	0	1	6	3
Magnesium	ppm	ASTM D5185(m)	950	232	199	1050
Calcium	ppm	ASTM D5185(m)	1050	1964	2360	1285
Phosphorus	ppm	ASTM D5185(m)	995	925	1063	1147
Zinc	ppm	ASTM D5185(m)	1180	1143	1214	1409
Sulfur	ppm	ASTM D5185(m)	2600	2702	2745	2229
Oxidation	Abs/.1mm	ASTM D7414*	>25	21.3	22.2	28.0
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	12.4	12.5	14.6

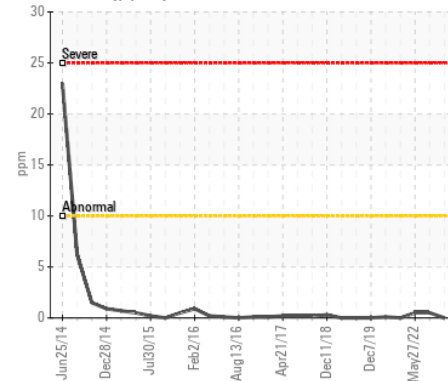
▲ Ferrous Alloys



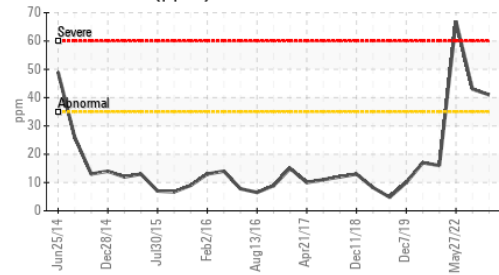
Iron (ppm)



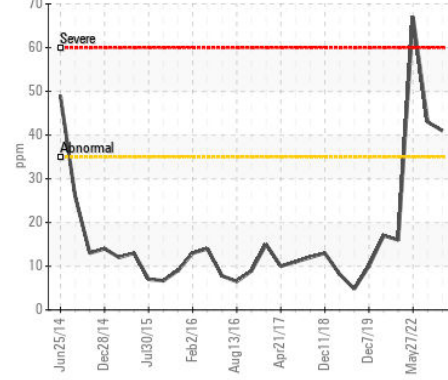
Lead (ppm)



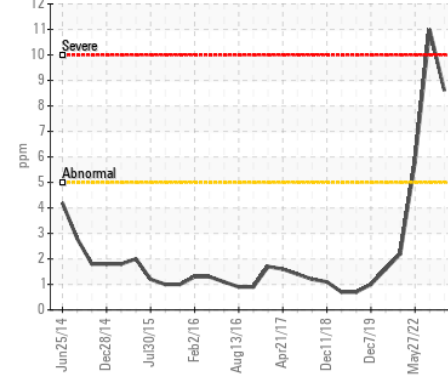
▲ Aluminum (ppm)



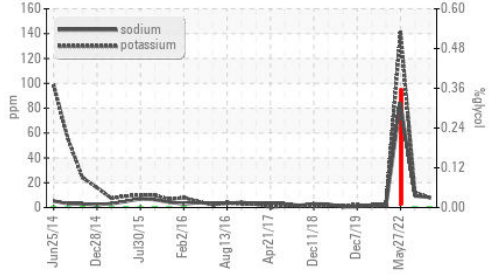
Aluminum (ppm)



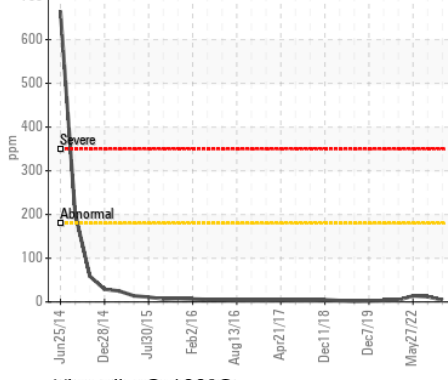
▲ Chromium (ppm)



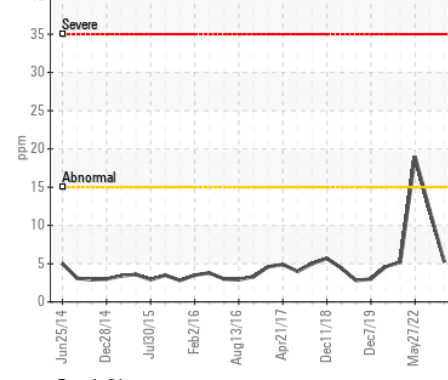
Glycol Contamination



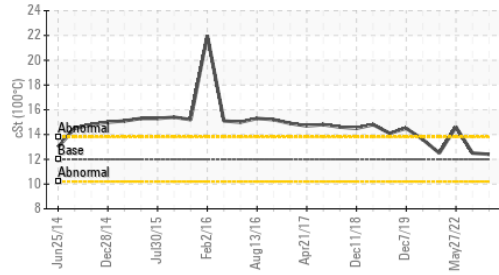
Copper (ppm)



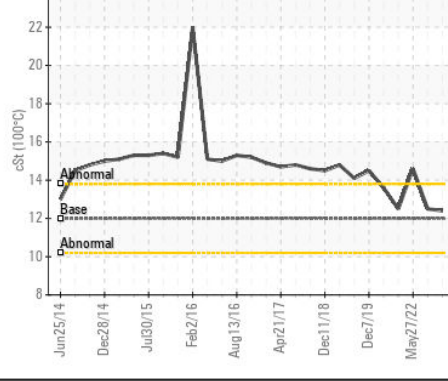
Silicon (ppm)



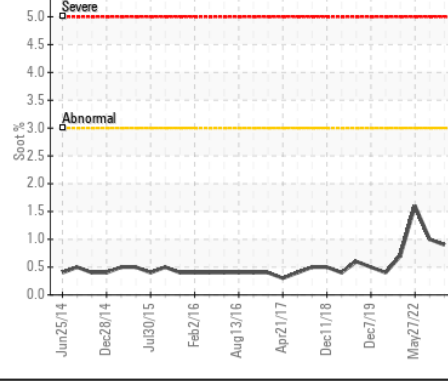
Viscosity @ 100°C



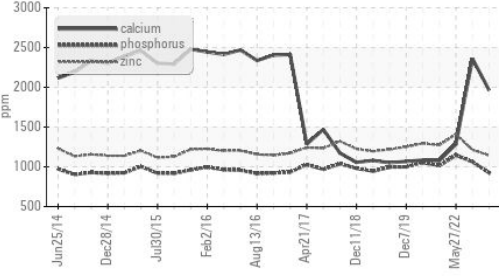
Viscosity @ 100°C



Soot %



Additives



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0892028 **Received** : 18 Jan 2024
Lab Number : 02609638 **Diagnosed** : 18 Jan 2024
Unique Number : 5710724 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol)

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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.