



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
4900 series
 Machine Id
Freightliner 4901
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (16 LTR)

RECOMMENDATION

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0904888	WC0844359	WC0732262
Sample Date		Client Info		09 May 2024	02 Jan 2024	24 Aug 2022
Machine Age	mls	Client Info		141966	133961	0
Oil Age	mls	Client Info		8005	9523	7642
Filter Age	mls	Client Info		8005	9523	7642
Oil Changed		Client Info		N/A	Changed	Not Changd
Filter Changed		Client Info		N/A	Changed	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>80	48	34	28
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>30	7	8	6
Lead	ppm	ASTM D5185(m)	>30	0	<1	0
Copper	ppm	ASTM D5185(m)	>150	3	1	1
Tin	ppm	ASTM D5185(m)	>5	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	LIGHT	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

Test for glycol is positive. There is a light concentration of glycol present in the oil. There is a moderate concentration of water present in the oil.

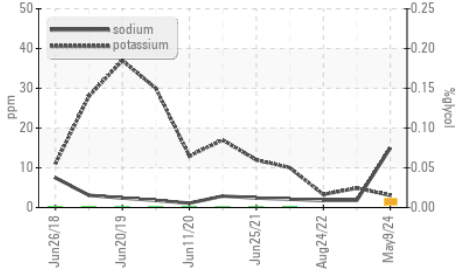
Silicon	ppm	ASTM D5185(m)	>20	9	6	4
Potassium	ppm	ASTM D5185(m)	>20	3	5	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water	%	ASTM D6304*	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		▲ 0.011	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.3	0.6	0.1
Nitration	Abs/cm	ASTM D7624*	>20	9.1	10.5	5.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.3	21.1	14.5
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	▲ .2%	NEG	NEG

FLUID CONDITION

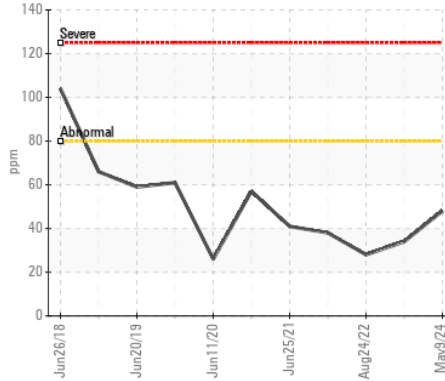
The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		15	2	2
Boron	ppm	ASTM D5185(m)	0	3	1	1
Barium	ppm	ASTM D5185(m)	0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	60	59	61	59
Manganese	ppm	ASTM D5185(m)	0	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	977	985	969
Calcium	ppm	ASTM D5185(m)	1070	1038	1069	1073
Phosphorus	ppm	ASTM D5185(m)	1150	1006	1014	1068
Zinc	ppm	ASTM D5185(m)	1270	1186	1201	1201
Sulfur	ppm	ASTM D5185(m)	2060	2599	2509	2435
Oxidation	Abs/.1mm	ASTM D7414*	>25	17.1	18.6	9.1
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	13.3	14.2	11.5

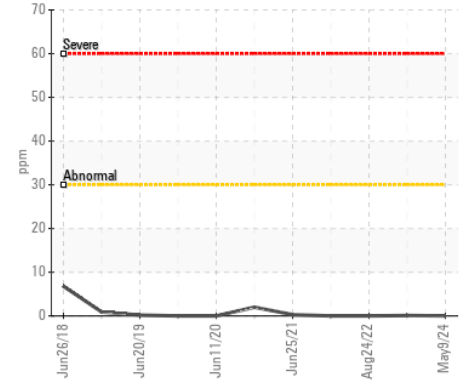
▲ Glycol Contamination



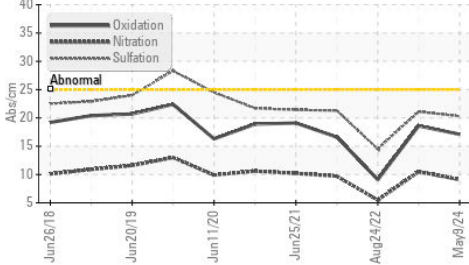
Iron (ppm)



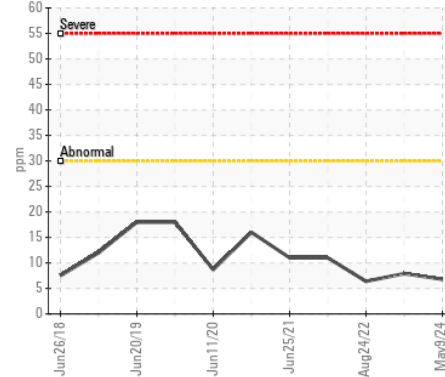
Lead (ppm)



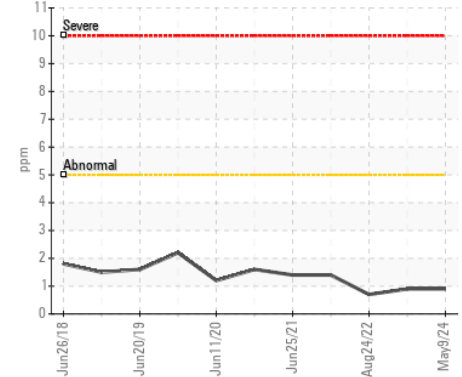
FT-IR (Direct Trend)



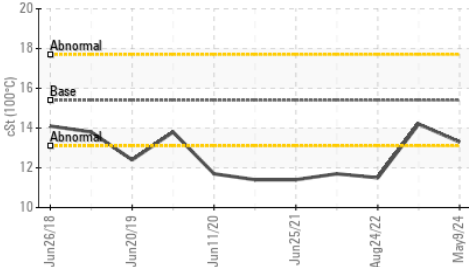
Aluminum (ppm)



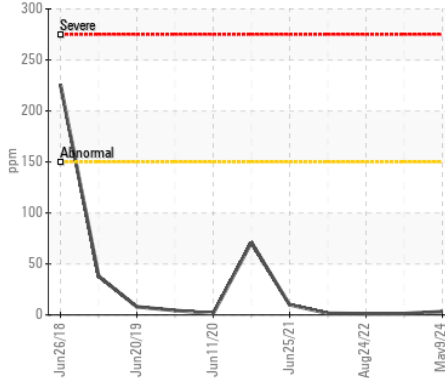
Chromium (ppm)



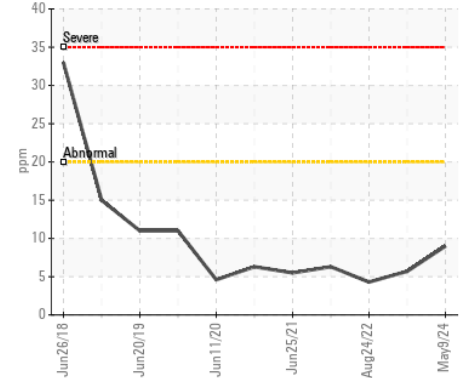
Viscosity @ 100°C



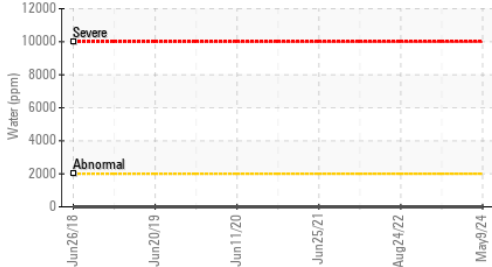
Copper (ppm)



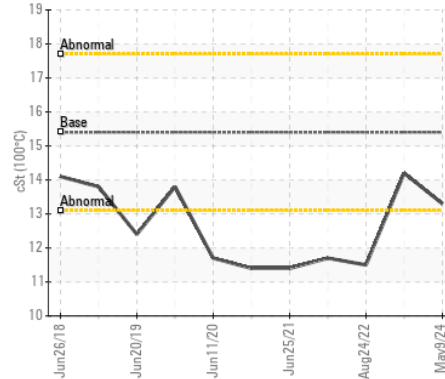
Silicon (ppm)



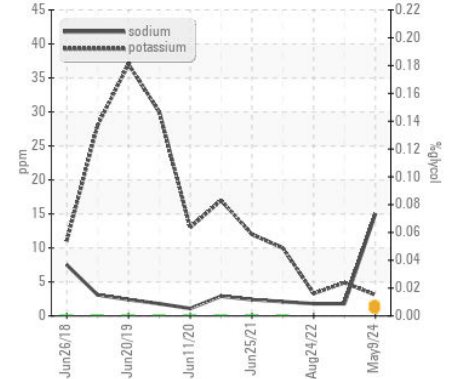
Water (KF)



Viscosity @ 100°C



▲ Glycol Contamination



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0904888 **Received** : 14 May 2024
Lab Number : 02635200 **Tested** : 14 May 2024
Unique Number : 5776353 **Diagnosed** : 15 May 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol, KF, Visual)

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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.