



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(370846)
Machine Id
LIEBHERR R938 052202-1650
Component
Diesel Engine
Fluid
PETRO CANADA DURON UHP 10W40 (--- 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0290714	LH0239075	LH0227112
Sample Date		Client Info		14 Jun 2024	02 Sep 2022	19 Apr 2022
Machine Age	hrs	Client Info		3617	2161	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	6	8	6
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		<1	<1	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>15	2	5	1
Lead	ppm	ASTM D5185(m)	>30	0	<1	1
Copper	ppm	ASTM D5185(m)	>125	4	10	42
Tin	ppm	ASTM D5185(m)	>5	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

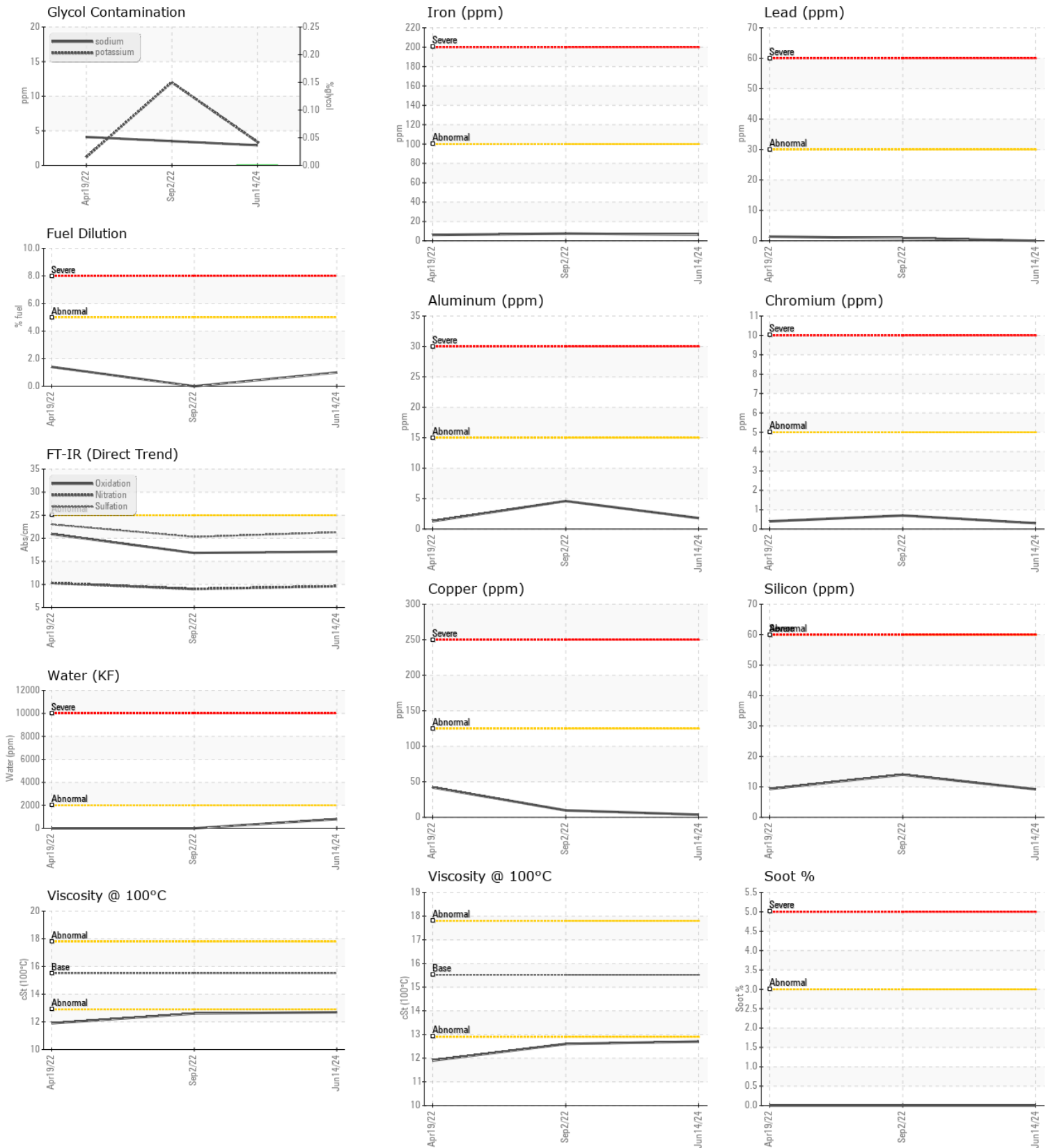
Light fuel dilution occurring. The water content is negligible. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185(m)	>60	9	14	9
Potassium	ppm	ASTM D5185(m)	>20	3	12	1
Fuel	%	ASTM D7593*	>5	1	<1.0	1.4
Water	%	ASTM D6304*	>0.2	0.080	---	---
ppm Water	ppm	ASTM D6304*	>2000	805	---	---
Glycol	%	ASTM D7922*		0.0	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	9.6	9.0	10.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.3	20.3	23.0
Emulsified Water	scalar	Visual*	>0.2	.2%	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		3	4	4
Boron	ppm	ASTM D5185(m)	2	55	51	37
Barium	ppm	ASTM D5185(m)	0	<1	1	<1
Molybdenum	ppm	ASTM D5185(m)	60	0	6	51
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	693	667	1113
Calcium	ppm	ASTM D5185(m)	1070	1292	1199	899
Phosphorus	ppm	ASTM D5185(m)	1150	935	985	1059
Zinc	ppm	ASTM D5185(m)	1270	1126	1045	1257
Sulfur	ppm	ASTM D5185(m)	2060	2985	2849	2714
Oxidation	Abs/.1mm	ASTM D7414*	>25	17.1	16.8	20.9
Visc @ 100°C	cSt	ASTM D7279(m)	15.52	12.7	12.6	11.9



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0290714
Lab Number : 02643655
Unique Number : 5801194
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, KF, PercentFuel)

EQUIPMENT ST-ARNEAULT
 350 RANG SUD
 STE-GENEVIEVE-DE-BATISCAN, QC
 CA G0X 1A0
 Contact: Service Manager

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.

T:
F: