

Area
Scooptram
Machine Id
LHD1710
Component
Front Differential
Fluid
PETRO CANADA DURATRAN (90 LTR)

RECOMMENDATION

We advise that you check for visible metal particles in the oil. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0046582	---	---
Sample Date		Client Info		11 May 2021	---	---
Machine Age	hrs	Client Info		4331	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				SEVERE	---	---

WEAR

Copper, tin and tin ppm levels are severe. Iron and lead ppm levels are abnormal. Moderate concentration of visible metal present. Thrust washer and/or bearing/bushing wear is indicated. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

PQ		ASTM D8184*		161	---	---
Iron	ppm	ASTM D5185(m)	>500	505	---	---
Chromium	ppm	ASTM D5185(m)	>3	2	---	---
Nickel	ppm	ASTM D5185(m)	>3	2	---	---
Titanium	ppm	ASTM D5185(m)	>2	<1	---	---
Silver	ppm	ASTM D5185(m)	>2	<1	---	---
Aluminum	ppm	ASTM D5185(m)	>30	4	---	---
Lead	ppm	ASTM D5185(m)	>13	▲ 24	---	---
Copper	ppm	ASTM D5185(m)	>103	▲ 738	---	---
Tin	ppm	ASTM D5185(m)	>5	▲ 32	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	▲ LTMOD	---	---

CONTAMINATION

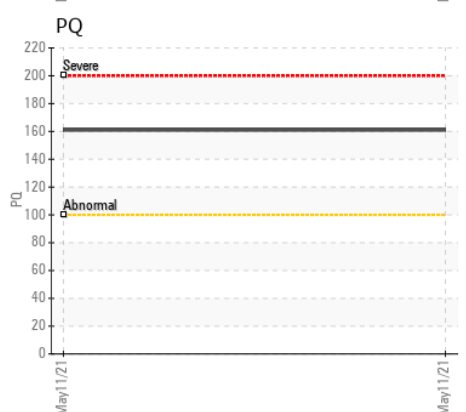
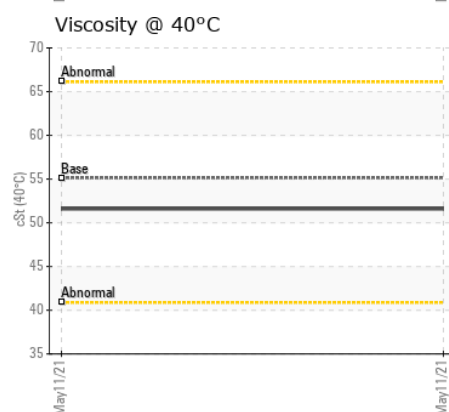
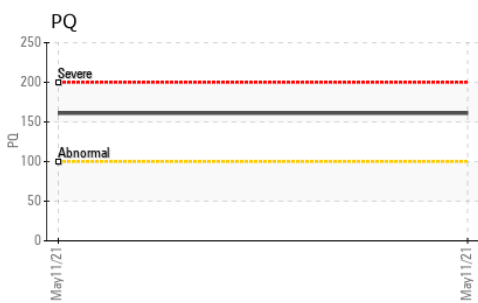
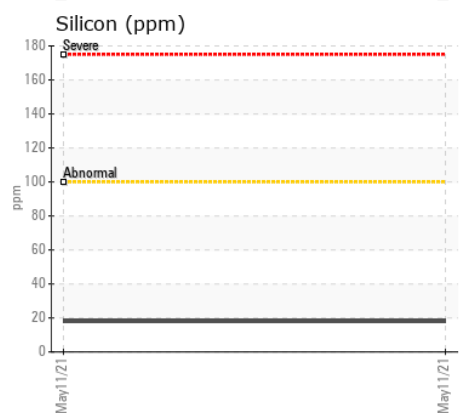
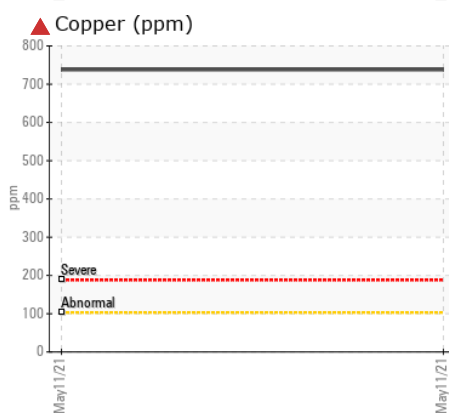
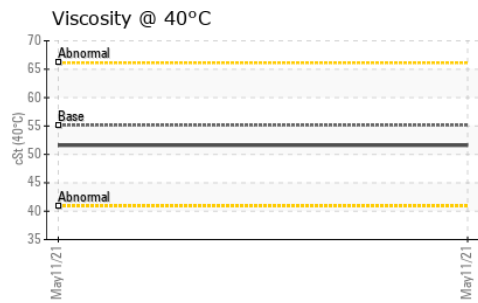
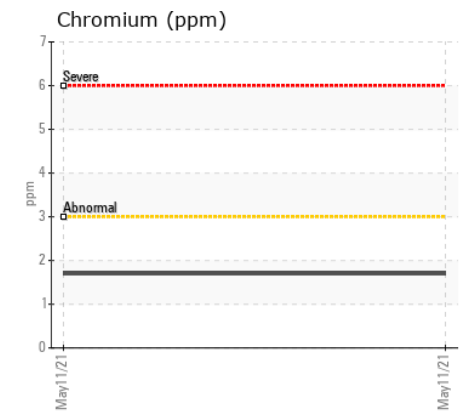
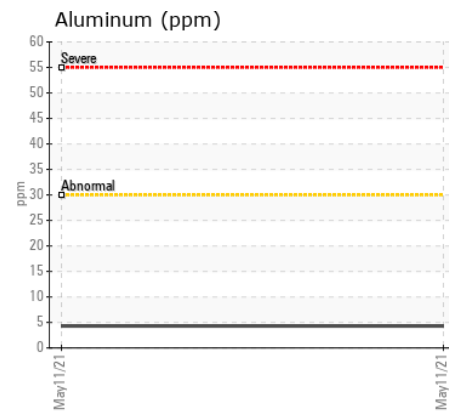
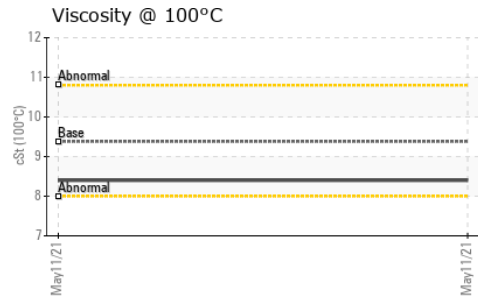
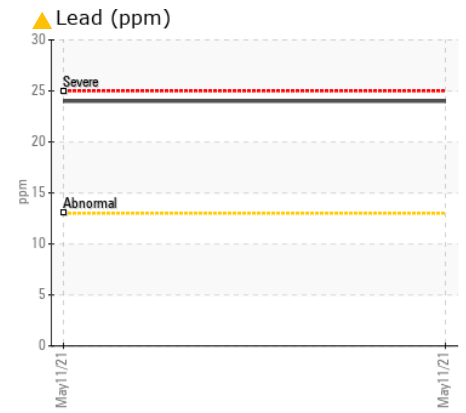
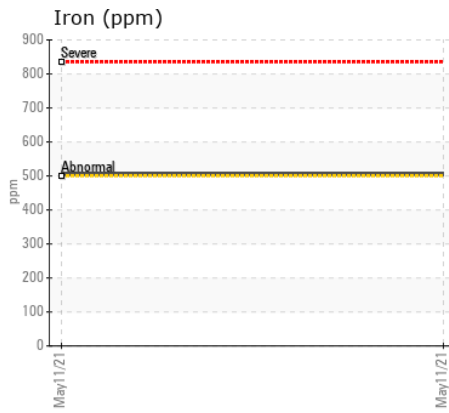
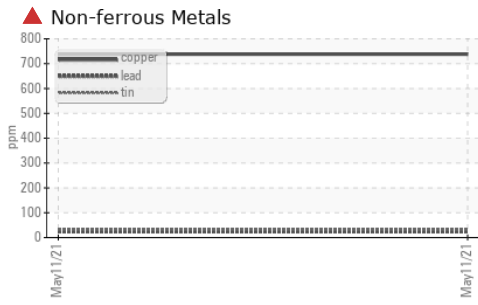
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>100	18	---	---
Potassium	ppm	ASTM D5185(m)	>20	4	---	---
Water		WC Method	>.2	NEG	---	---
Silt	scalar	Visual*	NONE	VLITE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>.2	NEG	---	---

FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		11	---	---
Boron	ppm	ASTM D5185(m)	110	80	---	---
Barium	ppm	ASTM D5185(m)	0.0	0	---	---
Molybdenum	ppm	ASTM D5185(m)	0.0	1	---	---
Manganese	ppm	ASTM D5185(m)	1	5	---	---
Magnesium	ppm	ASTM D5185(m)	13	14	---	---
Calcium	ppm	ASTM D5185(m)	3610	2970	---	---
Phosphorus	ppm	ASTM D5185(m)	1192	1006	---	---
Zinc	ppm	ASTM D5185(m)	1455	1106	---	---
Sulfur	ppm	ASTM D5185(m)	2641	3014	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	55.14	51.6	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	9.38	8.4	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	153	137	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0046582 **Received** : 13 May 2021
Lab Number : 02421303 **Tested** : 14 May 2021
Unique Number : 5224803 **Diagnosed** : 14 May 2021 - Kevin Marson

Lakeshore Gold Timmins West

Timmins, ON
CA

Test Package : MOB 1 (Additional Tests: Bottom, BottomAnalysis, FilterPatch, KV100, PQ, VI) **Contact:** Dale Arseneau
darseneau@ca.panamericansilver.com

T: (705)269-4344

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.

F: