



WEAR	SEVERE
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Area
G.LOPES CONSTRUCTION INC./Off-Road
Machine Id
E83
Component
Hydraulic System
Fluid
PETRO CANADA DURATRAN (--- GAL)

RECOMMENDATION

We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0109741	PCA0078144	PCA0072035
Sample Date		Client Info		16 Jan 2024	17 Aug 2022	19 Apr 2022
Machine Age	hrs	Client Info		12563	11847	11498
Oil Age	hrs	Client Info		11466	10900	10900
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

The iron level is severe.

Iron	ppm	ASTM D5185m	>20	104	291	187
Chromium	ppm	ASTM D5185m	>10	0	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>10	<1	2	1
Lead	ppm	ASTM D5185m	>10	<1	2	1
Copper	ppm	ASTM D5185m	>75	2	2	1
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

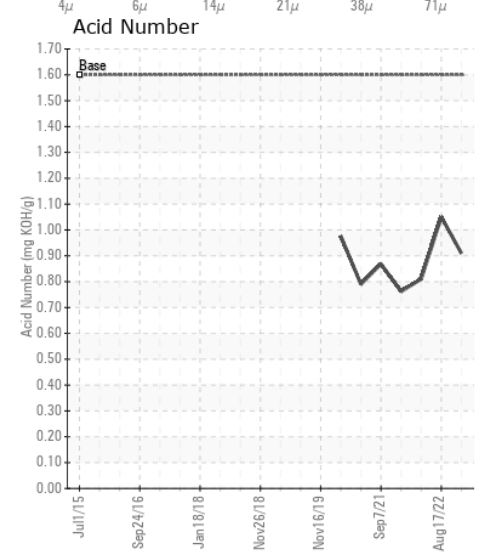
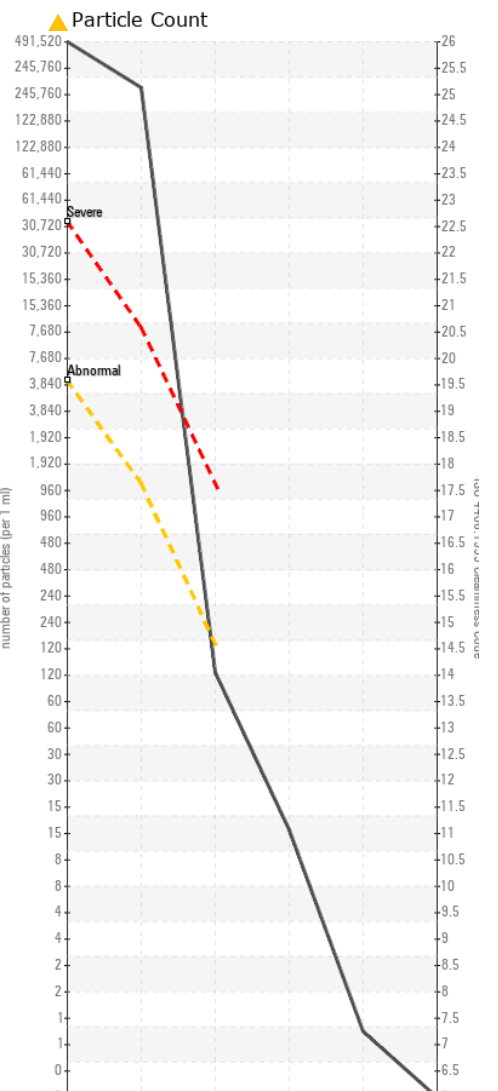
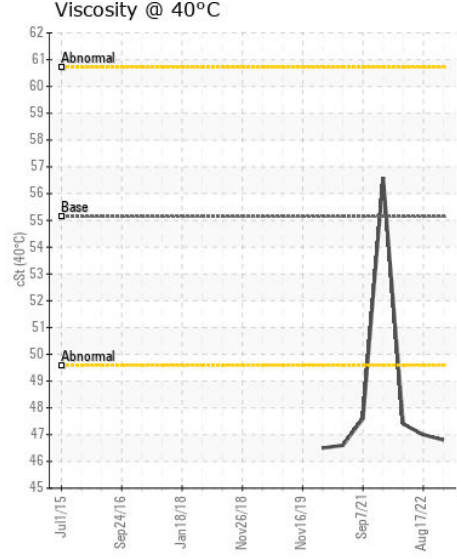
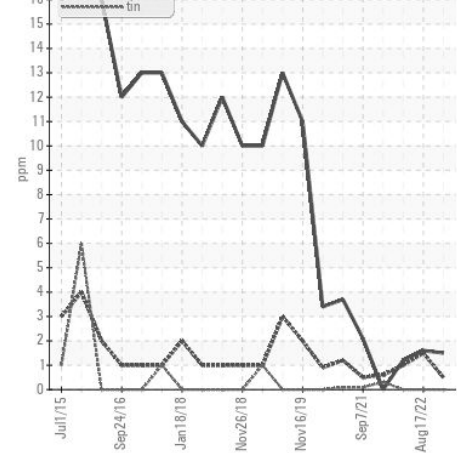
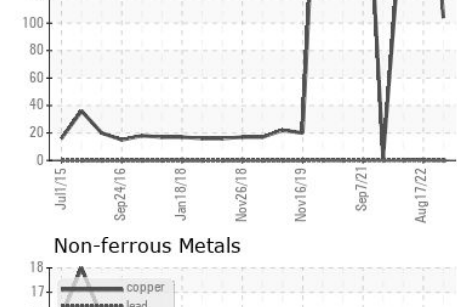
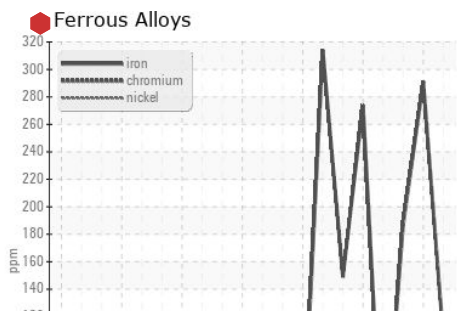
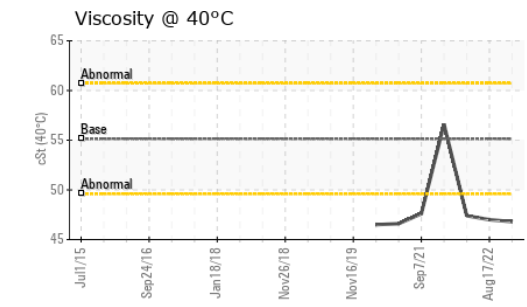
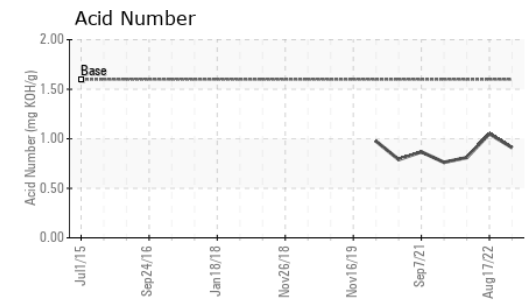
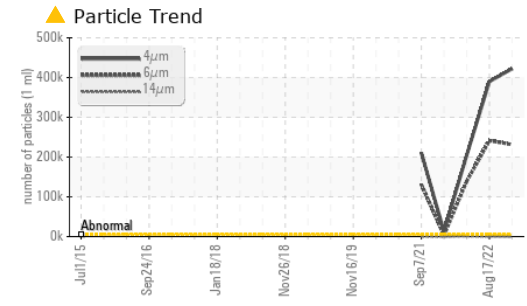
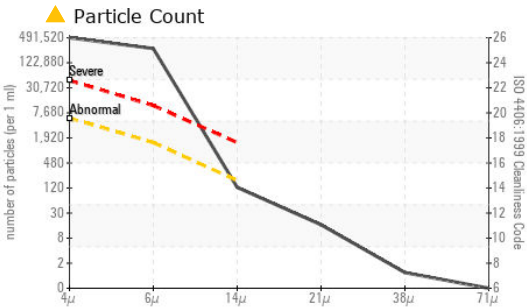
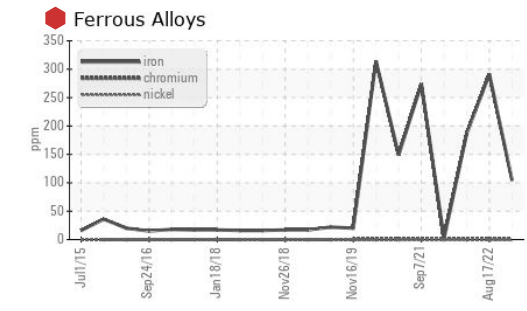
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	6	8	8
Potassium	ppm	ASTM D5185m	>20	0	2	2
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	422225	390101	204714
Particles >6µm		ASTM D7647	>1300	231429	241502	139255
Particles >14µm		ASTM D7647	>160	110	481	948
Particles >21µm		ASTM D7647	>40	14	4	2
Particles >38µm		ASTM D7647	>10	1	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	26/25/14	26/25/16	25/24/17
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185m		1	6	4
Boron	ppm	ASTM D5185m	110	55	103	107
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.0	4	5	5
Manganese	ppm	ASTM D5185m	1	2	4	3
Magnesium	ppm	ASTM D5185m	13	52	56	60
Calcium	ppm	ASTM D5185m	3610	2493	3200	3211
Phosphorus	ppm	ASTM D5185m	1192	952	1121	1144
Zinc	ppm	ASTM D5185m	1455	1144	1426	1421
Sulfur	ppm	ASTM D5185m	2641	2997	4456	3731
Acid Number (AN)	mg KOH/g	ASTM D8045	1.6	0.91	1.05	0.81
Visc @ 40°C	cSt	ASTM D445	55.14	46.8	47.0	47.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0109741 **Received** : 19 Jan 2024
Lab Number : 06065561 **Diagnosed** : 23 Jan 2024
Unique Number : 10836943 **Diagnostician** : Don Baldrige
Test Package : MOB 2

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 F:

Certificate L2367
 To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)