



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Machine Id
650121
Component
Hydraulic System
Fluid
PETRO CANADA PRODURO TO-4 SAE 30 (--- GAL)

RECOMMENDATION

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. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0274039	WC0272406	WC0272333
Sample Date		Client Info		27 Jan 2016	29 Dec 2015	01 Dec 2015
Machine Age	hrs	Client Info		14193	13830	13566
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

Chromium ppm levels are abnormal. Ring wear is indicated.

Iron	ppm	ASTM D5185(m)	>26	11	6	9
Chromium	ppm	ASTM D5185(m)	>5	▲ 4	<1	3
Nickel	ppm	ASTM D5185(m)		0	1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>11	2	1	2
Lead	ppm	ASTM D5185(m)		<1	0	<1
Copper	ppm	ASTM D5185(m)	>31	3	1	2
Tin	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the component(unconfirmed).

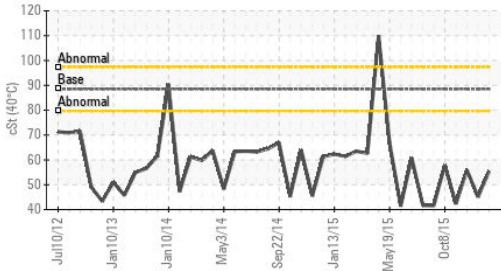
Silicon	ppm	ASTM D5185(m)	>21	6	6	5
Potassium	ppm	ASTM D5185(m)	>20	0	0	0
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	VLITE	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG

FLUID CONDITION

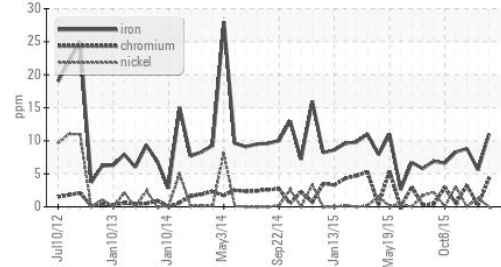
Viscosity of sample indicates oil is within SAE 20 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		6	2	6
Boron	ppm	ASTM D5185(m)	5	6	4	6
Barium	ppm	ASTM D5185(m)	0	<1	<1	<1
Molybdenum	ppm	ASTM D5185(m)	0	1	<1	1
Manganese	ppm	ASTM D5185(m)	10	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1	13	11	11
Calcium	ppm	ASTM D5185(m)	3131	3559	3652	3580
Phosphorus	ppm	ASTM D5185(m)	1194	909	882	912
Zinc	ppm	ASTM D5185(m)	1281	1086	1078	1072
Sulfur	ppm	ASTM D5185(m)	3811	3856	3184	3817
Visc @ 40°C	cSt	ASTM D7279(m)	88.5	▲ 55.4	▲ 45.1	▲ 55.9

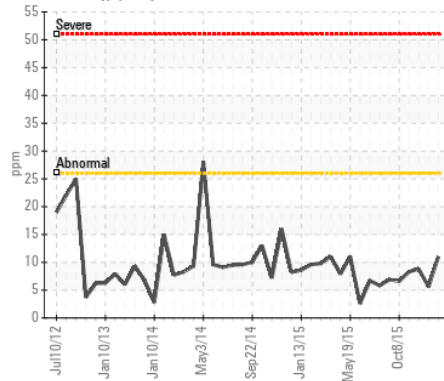
▲ Viscosity @ 40°C



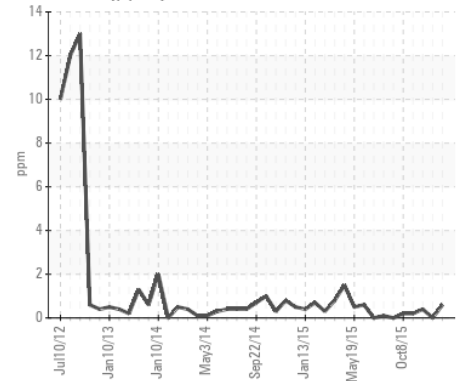
▲ Ferrous Alloys



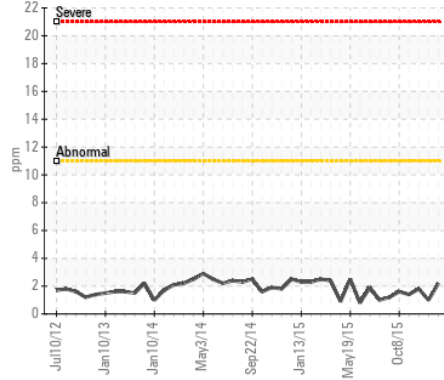
Iron (ppm)



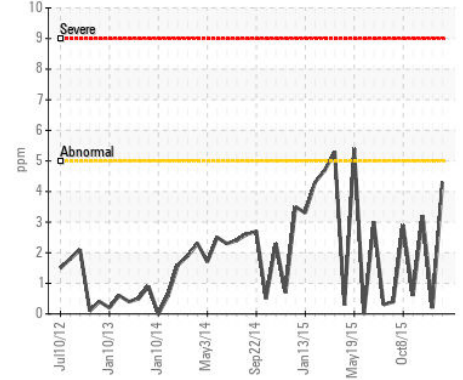
Lead (ppm)



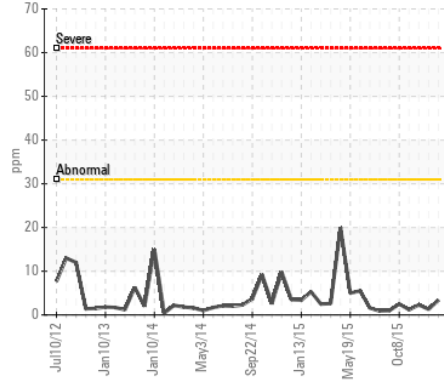
Aluminum (ppm)



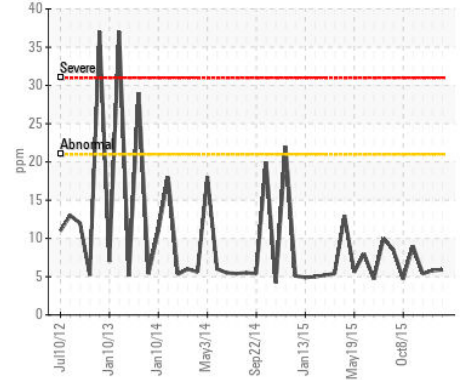
▲ Chromium (ppm)



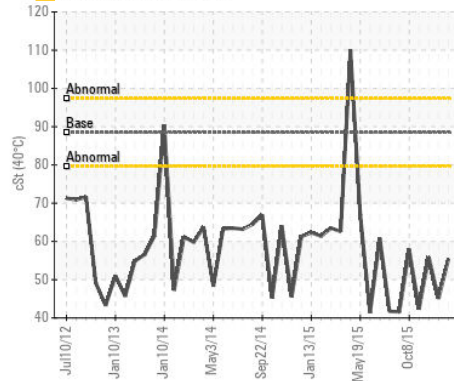
Copper (ppm)



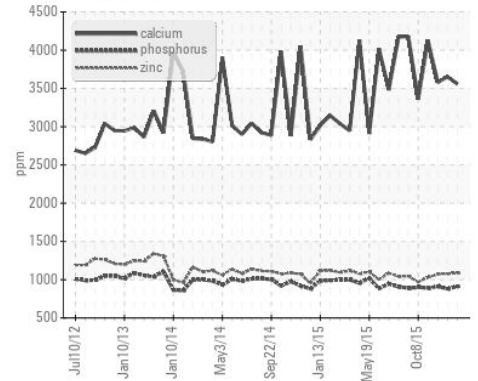
Silicon (ppm)



▲ Viscosity @ 40°C



Additives



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0274039
Lab Number : 02051919
Unique Number : 4262223
Test Package : MOB 1

STELCO - LAKE ERIE WORKS

2330 REGIONAL ROAD #3, DOOR: BOSC8
 NANTICOKE, ON
 CA N0A 1L0

Contact: Ryan Biggs
 ryan.biggs@stelco.com

T: (519)587-4541
 F: (519)587-7717

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.