



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

Propulsion/Salle des Machines

Machine Id

12A02#04 (S/N M4113-R)

Component

4 Diesel Engine

Fluid

PETRO CANADA RALUBE 40 CFS (720 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0751422	WC0751397	WC
Sample Date		Client Info		23 Oct 2023	01 Apr 2023	18 Oct 2022
Machine Age	hrs	Client Info		6035	4292	3885
Oil Age	hrs	Client Info		1655	2686	2279
Filter Age	hrs	Client Info		1655	2686	2279
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	6	6	6
Chromium	ppm	ASTM D5185(m)	>20	0	<1	0
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>20	2	2	2
Lead	ppm	ASTM D5185(m)	>40	0	0	0
Copper	ppm	ASTM D5185(m)	>330	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
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

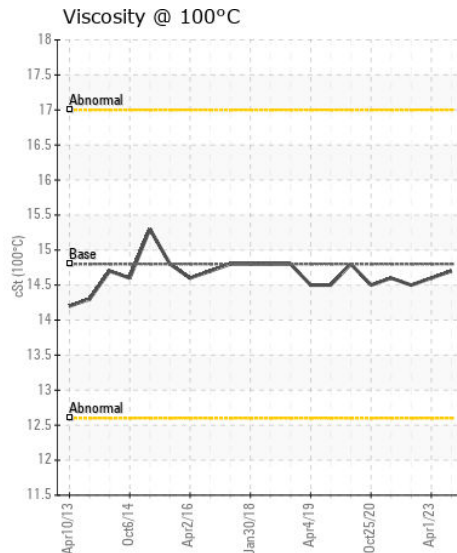
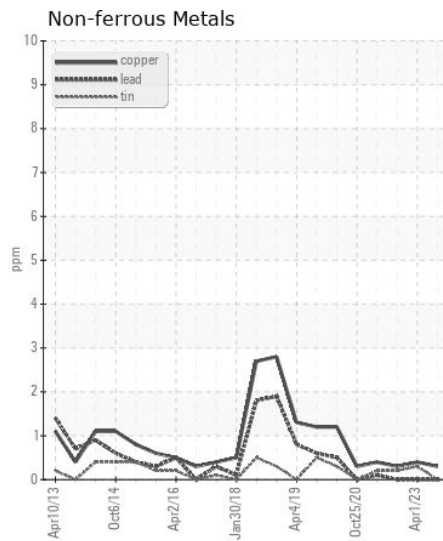
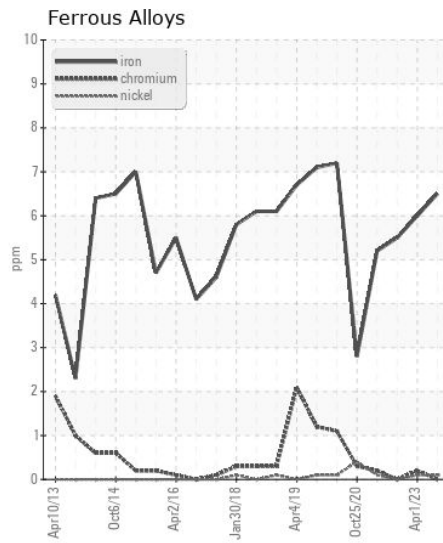
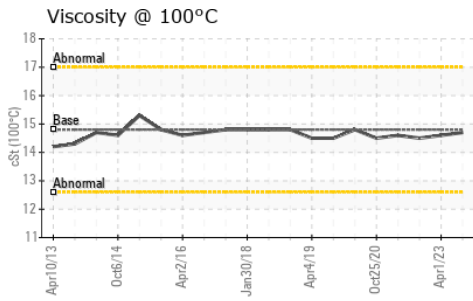
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	4	3	2
Potassium	ppm	ASTM D5185(m)	>20	<1	2	1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>2	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	13.0	13.2	13.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	14.8	14.7	15.4
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*	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		3	2	2
Boron	ppm	ASTM D5185(m)	0	<1	<1	<1
Barium	ppm	ASTM D5185(m)	0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	25	15	23	21
Calcium	ppm	ASTM D5185(m)	4300	4787	4825	4839
Phosphorus	ppm	ASTM D5185(m)	1.6	4	5	3
Zinc	ppm	ASTM D5185(m)	2	4	6	4
Sulfur	ppm	ASTM D5185(m)	1500	3069	3164	3115
Oxidation	Abs/.1mm	ASTM D7414*	>25	11.0	11.6	12.1
Visc @ 100°C	cSt	ASTM D7279(m)	14.8	14.7	14.6	14.5



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0751422
Lab Number : 02593087
Unique Number : 5670166
Test Package : MAR 1
Received : 01 Nov 2023
Tested : 01 Nov 2023
Diagnosed : 01 Nov 2023 - Wes Davis

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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.