



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
66COLLIER
 Component
Diesel Engine
 Fluid
PETRO CANADA XR 4 SAE 15W40 (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0897590	WC0678655	WC0555537
Sample Date		Client Info		01 Feb 2024	02 Sep 2022	09 Aug 2021
Machine Age	yrs	Client Info		0	0	1
Oil Age	yrs	Client Info		0	0	1
Filter Age	yrs	Client Info		0	0	1
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

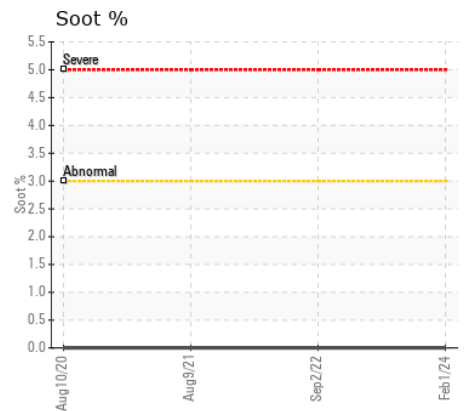
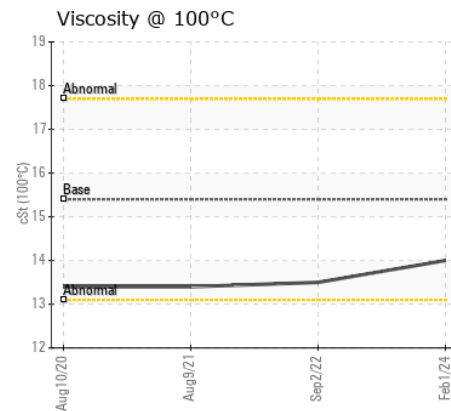
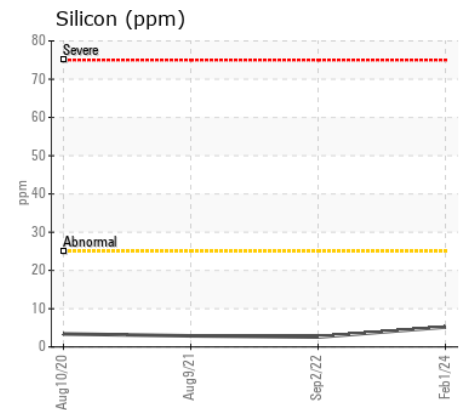
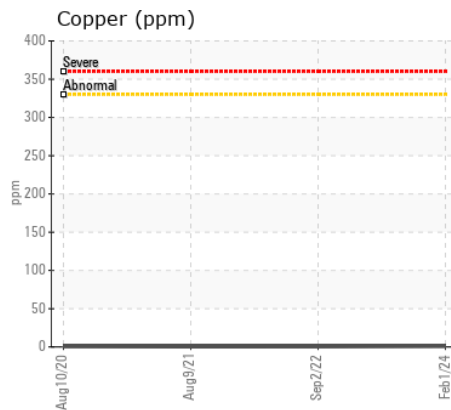
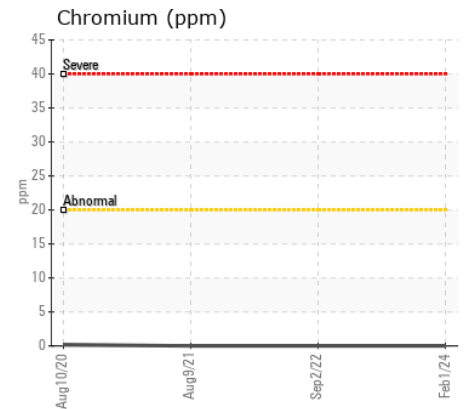
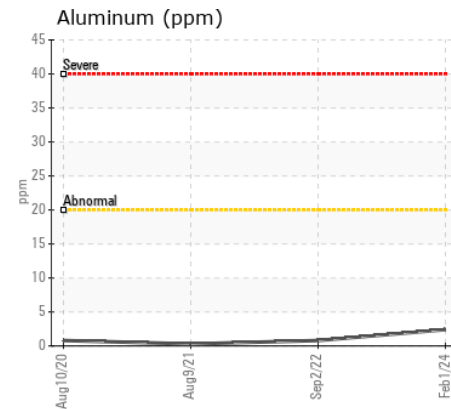
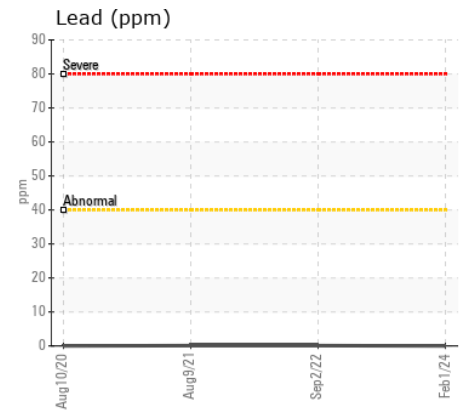
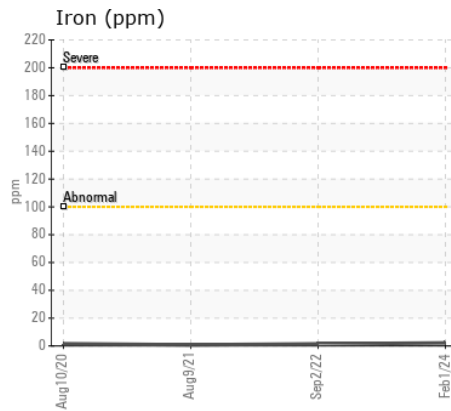
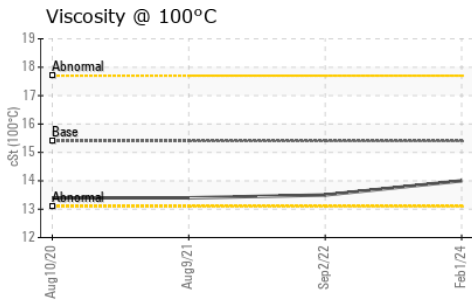
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	5	3	3
Potassium	ppm	ASTM D5185(m)	>20	2	<1	<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*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	4.6	5.2	4.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.6	19.6	18.8
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		2	1	1
Boron	ppm	ASTM D5185(m)	1	396	0	3
Barium	ppm	ASTM D5185(m)	1	0	0	0
Molybdenum	ppm	ASTM D5185(m)	1	85	61	60
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)	10	401	1007	1037
Calcium	ppm	ASTM D5185(m)	3032	1400	1089	1053
Phosphorus	ppm	ASTM D5185(m)	1054	1068	1144	1119
Zinc	ppm	ASTM D5185(m)	1332	1183	1236	1256
Sulfur	ppm	ASTM D5185(m)	3985	2994	2941	2902
Oxidation	Abs/.1mm	ASTM D7414*	>25	13.5	14.3	13.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.0	13.5	13.4



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0897590
Lab Number : 02619245
Unique Number : 5736355
Test Package : MOB 1
Received : 01 Mar 2024
Tested : 01 Mar 2024
Diagnosed : 01 Mar 2024 - 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.