



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
21 KENDALE
Component
Diesel Engine
Fluid
PETRO CANADA XR 4 SAE 15W40 (--- LTR)

RECOMMENDATION

No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0897581	WC0647768	WC0534351
Sample Date		Client Info		21 Feb 2024	01 Feb 2022	04 Jan 2021
Machine Age	hrs	Client Info		0	0	52
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	4	4	9
Chromium	ppm	ASTM D5185(m)	>20	0	0	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	<1	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	2	2
Lead	ppm	ASTM D5185(m)	>40	1	0	<1
Copper	ppm	ASTM D5185(m)	>330	2	2	3
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

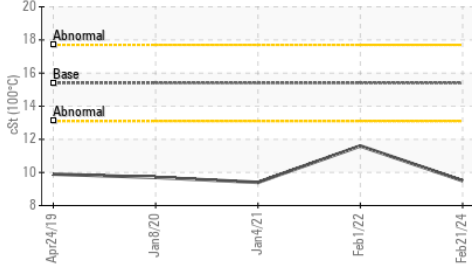
Silicon	ppm	ASTM D5185(m)	>25	9	7	6
Potassium	ppm	ASTM D5185(m)	>20	<1	2	1
Fuel	%	ASTM D7593*	>5	0.4	0.5	0.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	4.8	3.3	5.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	14.9	13.7	16.5
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

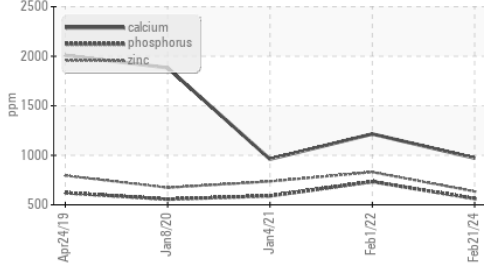
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		2	2	2
Boron	ppm	ASTM D5185(m)	1	32	2	10
Barium	ppm	ASTM D5185(m)	1	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	1	63	3	19
Manganese	ppm	ASTM D5185(m)		<1	<1	3
Magnesium	ppm	ASTM D5185(m)	10	518	547	666
Calcium	ppm	ASTM D5185(m)	3032	972	1215	961
Phosphorus	ppm	ASTM D5185(m)	1054	562	734	590
Zinc	ppm	ASTM D5185(m)	1332	635	830	736
Sulfur	ppm	ASTM D5185(m)	3985	1735	2707	1908
Oxidation	Abs/.1mm	ASTM D7414*	>25	8.7	5.8	10.3
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	9.5	11.6	9.4

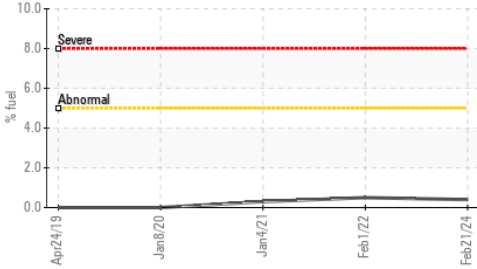
▲ Viscosity @ 100°C



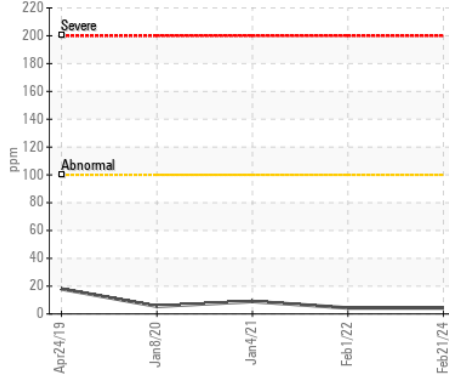
● Additives



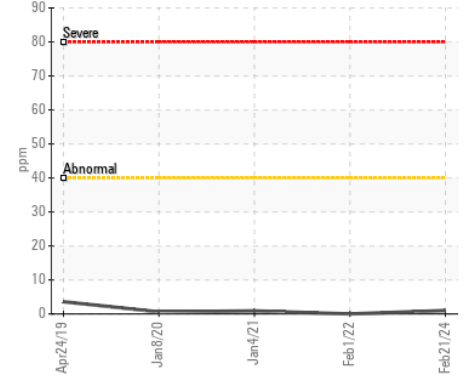
Fuel Dilution



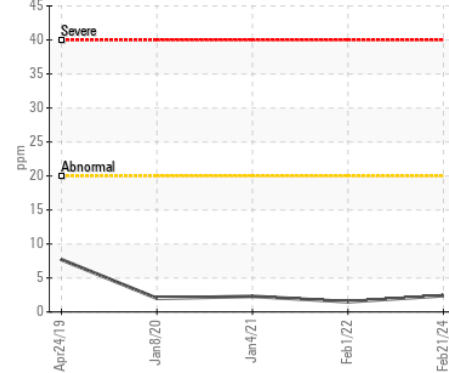
Iron (ppm)



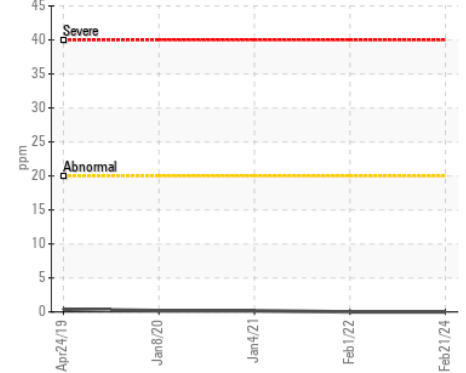
Lead (ppm)



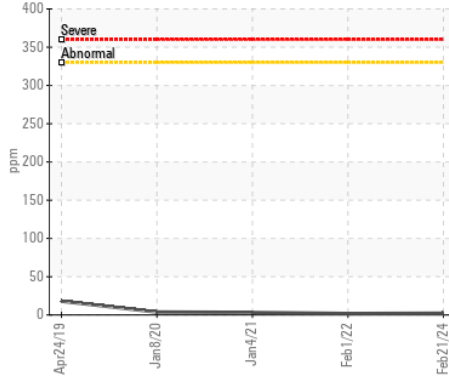
Aluminum (ppm)



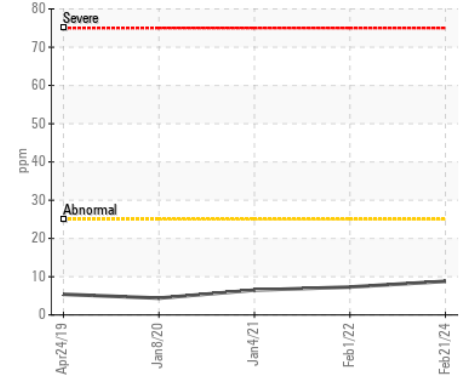
Chromium (ppm)



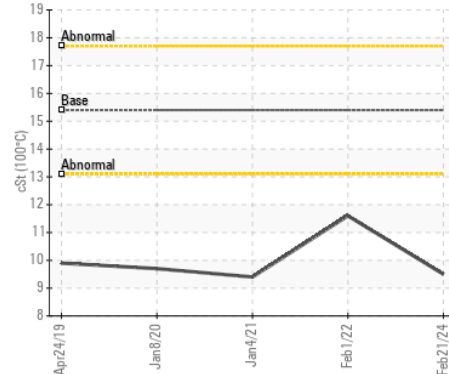
Copper (ppm)



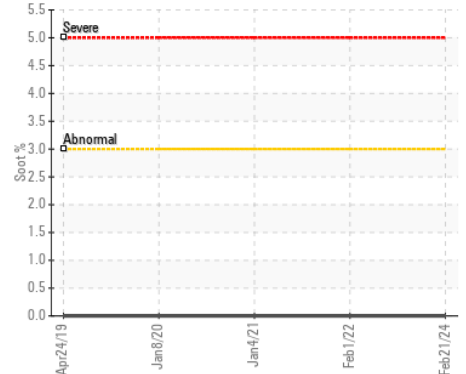
Silicon (ppm)



▲ Viscosity @ 100°C



Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0897581
Lab Number : 02619241
Unique Number : 5736351
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

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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.