

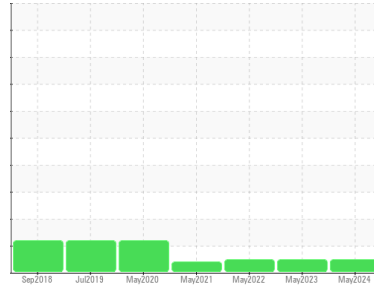


OIL ANALYSIS REPORT



Area
(EQ4283) E
 Machine Id
Kreag Road BPS (S/N FTE00895)
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON UHP 5W40 (20 GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0934064	WC0810882	WC0696103
Sample Date	Client Info		08 May 2024	18 May 2023	11 May 2022
Machine Age	hrs	Client Info	187	167	149
Oil Age	hrs	Client Info	38	33	149
Oil Changed	Client Info		Not Chngd	Not Chngd	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	1	1	2
Chromium	ppm	ASTM D5185m >6	<1	0	0
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m >2	<1	<1	1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >30	<1	<1	<1
Lead	ppm	ASTM D5185m >10	<1	<1	<1
Copper	ppm	ASTM D5185m >150	9	2	2
Tin	ppm	ASTM D5185m >4	0	<1	<1
Antimony	ppm	ASTM D5185m	---	---	---
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 65	67	70	73
Barium	ppm	ASTM D5185m 0	<1	0	0
Molybdenum	ppm	ASTM D5185m 65	59	57	57
Manganese	ppm	ASTM D5185m 0	<1	<1	0
Magnesium	ppm	ASTM D5185m 1160	1139	1100	1161
Calcium	ppm	ASTM D5185m 820	910	882	942
Phosphorus	ppm	ASTM D5185m 1160	1120	1049	1141
Zinc	ppm	ASTM D5185m 1260	1344	1328	1280
Sulfur	ppm	ASTM D5185m 3000	4194	3882	3201

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	7	6	5
Sodium	ppm	ASTM D5185m	2	2	1
Potassium	ppm	ASTM D5185m >20	<1	<1	0

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0	0	0.1
Nitration	Abs/cm	*ASTM D7624 >20	6.8	6.6	5.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	17.2	17.4	16.8

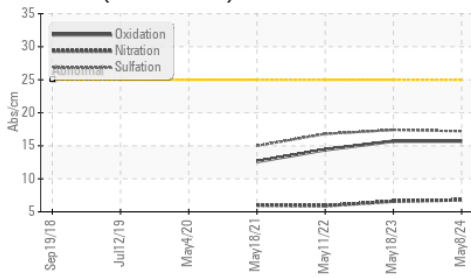
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.7	15.7	14.4
Base Number (BN)	mg KOH/g	ASTM D2896 11.0	8.7	9.3	9.1

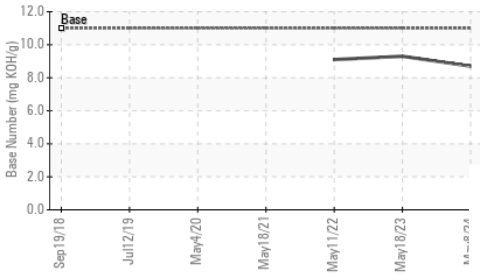


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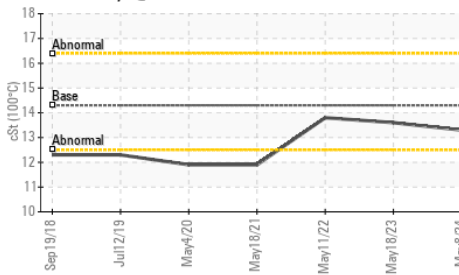
FT-IR (Direct Trend)



Base Number



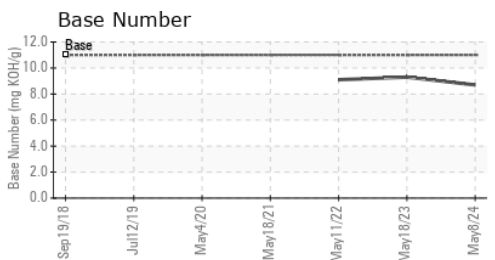
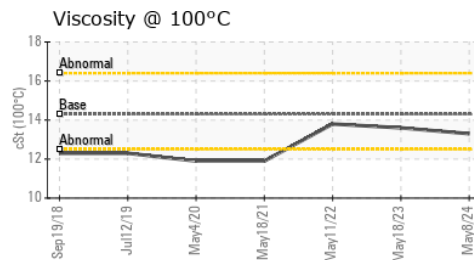
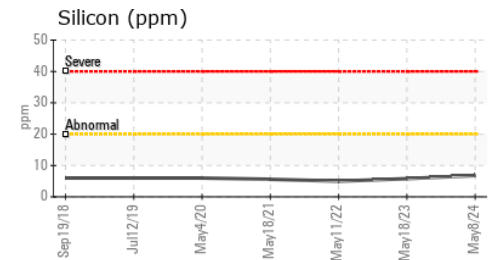
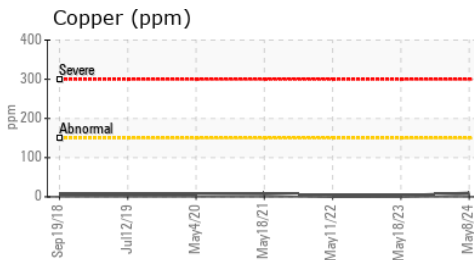
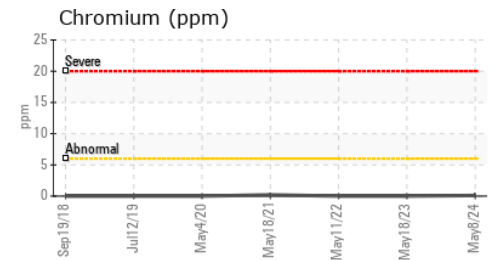
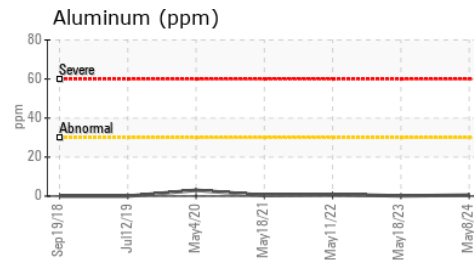
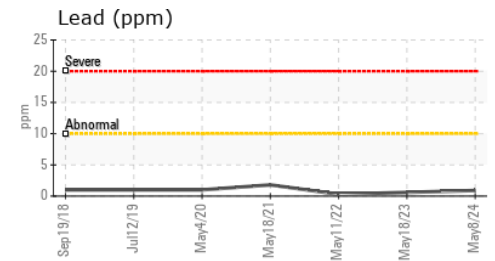
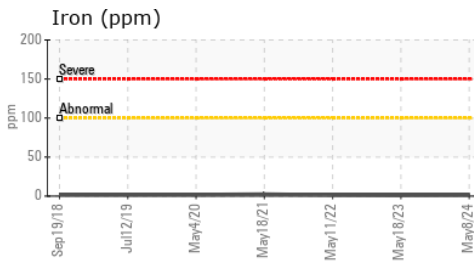
Viscosity @ 100°C



PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.3	13.3	13.6

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0934064
Lab Number : 06176874
Unique Number : 11022927
Test Package : MOB 1 (Additional Tests: TBN)

MONROE COUNTY WATER AUTHORITY
 4799 DEWEY AVE
 ROCHESTER, NY
 US 14612
 Contact: SCOTT TRAIL
 scott.trail@mcwa.com
 T: (585)775-5257
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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)