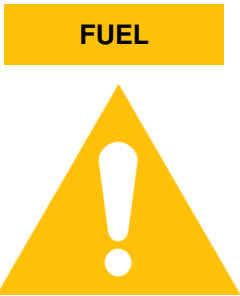
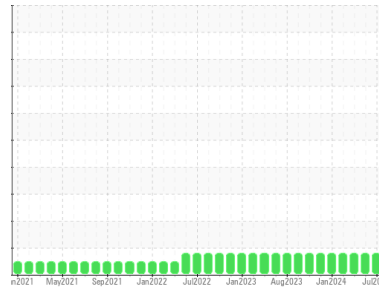


OIL ANALYSIS REPORT

Area
INDEPENDENCE
 Machine Id
Unit 04 DB200104E
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON MONOGRADE HD 40W (250 GAL)

Sample Rating Trend



DIAGNOSIS

- Recommendation**
No corrective action is recommended at this time. Resample at the next service interval to monitor.
- Wear**
All component wear rates are normal.
- Contamination**
There is a moderate amount of fuel present in the oil. No other contaminants were detected in the oil.
- Fluid Condition**
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0071484	PCA0097010	PCA0097014
Sample Date	Client Info		02 Jul 2024	15 Apr 2024	08 Mar 2024
Machine Age	hrs	Client Info	13851	13655	13428
Oil Age	hrs	Client Info	13851	13655	13428
Oil Changed	Client Info		Not Chngd	Not Chngd	Filtered
Sample Status			ABNORMAL	ABNORMAL	MARGINAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	16	14	14
Chromium	ppm	ASTM D5185m >4	<1	0	<1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >9	1	<1	2
Lead	ppm	ASTM D5185m >30	1	2	2
Copper	ppm	ASTM D5185m >35	3	2	2
Tin	ppm	ASTM D5185m >4	<1	1	<1
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	7	2	4
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	4	4	4
Manganese	ppm	ASTM D5185m	0	<1	0
Magnesium	ppm	ASTM D5185m	910	872	878
Calcium	ppm	ASTM D5185m	1056	1028	1054
Phosphorus	ppm	ASTM D5185m	1044	987	1049
Zinc	ppm	ASTM D5185m	1292	1099	1258
Sulfur	ppm	ASTM D5185m	2760	3014	3016

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	3	2	7
Sodium	ppm	ASTM D5185m	<1	3	<1
Potassium	ppm	ASTM D5185m >20	2	0	1
Fuel	%	ASTM D3524 >4.0	▲ 4.1	▲ 4.0	▲ 3.6

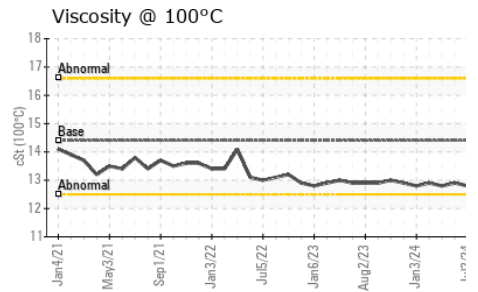
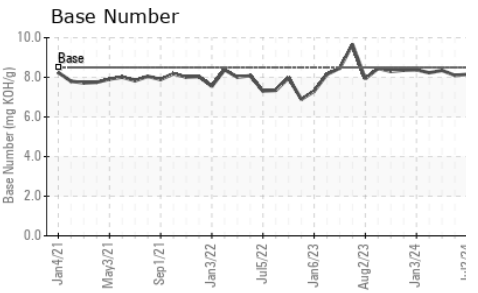
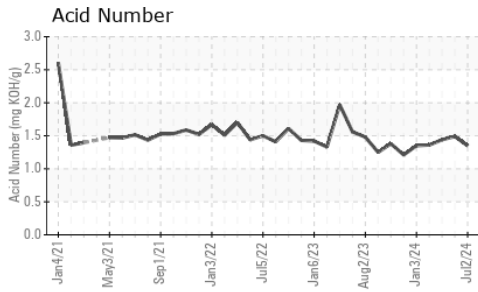
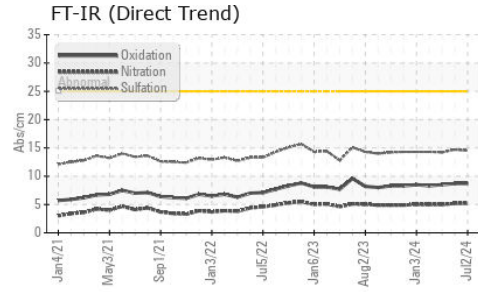
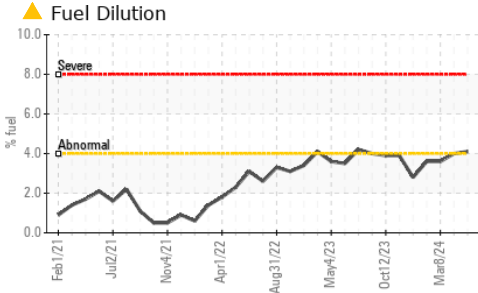
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	5.2	5.2	5.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	14.5	14.7	14.2

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	8.7	8.7	8.5
Acid Number (AN)	mg KOH/g	ASTM D8045	1.35	1.49	1.44
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	8.15	8.10	8.35

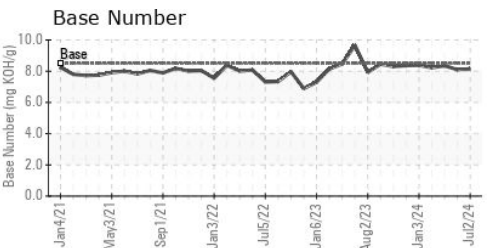
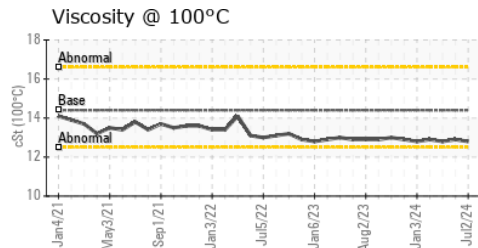
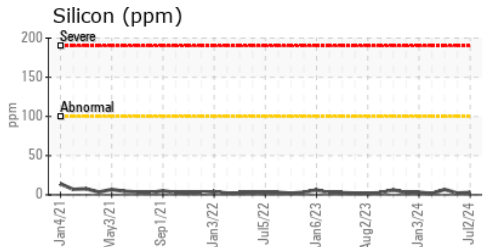
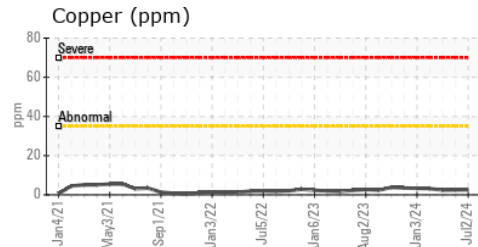
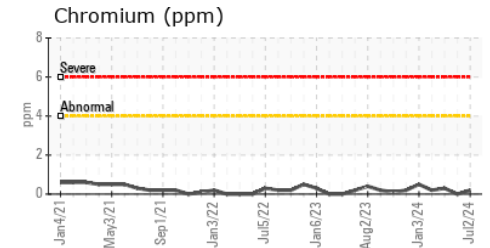
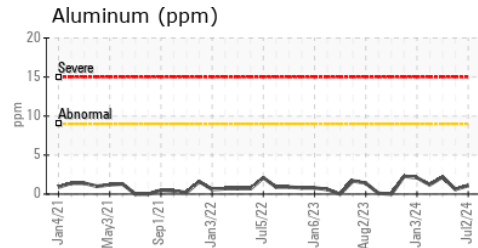
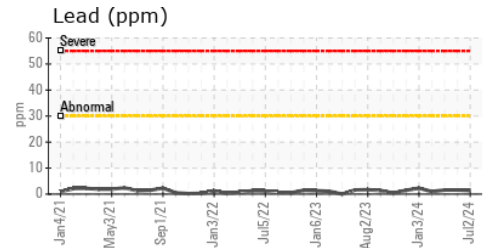
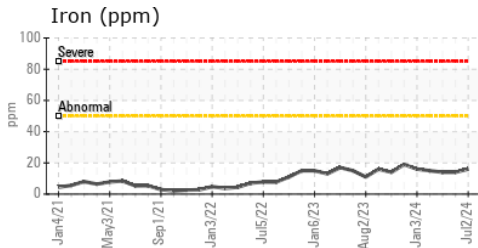
OIL ANALYSIS REPORT



VISUAL	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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	12.8	12.9

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : PCA0071484

Lab Number : 06230889

Unique Number : 11114382

Test Package : MOB 2 (Additional Tests : FuelDilution, PercentFuel)

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)

Received : 08 Jul 2024

Tested : 12 Jul 2024

Diagnosed : 12 Jul 2024 - Sean Felton

Magellan Midstream LP - Independence

836 South Rosser Road

Independence, KS

US 67301

Contact: Heath James

heath.james@oakok.com

T: (620)779-2040

F: