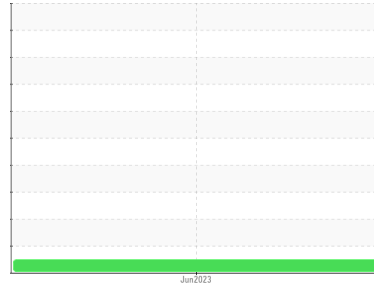


Area
PARK ENERGY INVESTIGATION
 Machine Id
YAGER A - ENGINE

Component
Natural Gas Engine
 Fluid
PETRO CANADA SENTRON LA 2000 (6 QTS)



DIAGNOSIS

Recommendation
 Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Mixture LA200 and Lucas. 75/25 (Customer Sample Comment: Mixture LA200 and Lucas. 75/25)

Wear
 All component wear rates are normal.

Contamination
 Fuel content negligible. 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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history 1	history 2
Sample Number	Client Info	PCA0073705	---	---
Sample Date	Client Info	30 Jun 2023	---	---
Machine Age	hrs	0	---	---
Oil Age	hrs	576	---	---
Oil Changed	Client Info	Changed	---	---
Sample Status		NORMAL	---	---

WEAR METALS

method	limit/base	current	history 1	history 2	
Iron	ppm	ASTM D5185m >50	25	---	---
Chromium	ppm	ASTM D5185m >4	<1	---	---
Nickel	ppm	ASTM D5185m >2	<1	---	---
Titanium	ppm	ASTM D5185m	<1	---	---
Silver	ppm	ASTM D5185m >3	0	---	---
Aluminum	ppm	ASTM D5185m >9	11	---	---
Lead	ppm	ASTM D5185m >30	4	---	---
Copper	ppm	ASTM D5185m >35	3	---	---
Tin	ppm	ASTM D5185m >4	<1	---	---
Vanadium	ppm	ASTM D5185m	0	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

method	limit/base	current	history 1	history 2	
Boron	ppm	ASTM D5185m 2	0	---	---
Barium	ppm	ASTM D5185m 1	0	---	---
Molybdenum	ppm	ASTM D5185m 1	3	---	---
Manganese	ppm	ASTM D5185m 5	<1	---	---
Magnesium	ppm	ASTM D5185m 1	16	---	---
Calcium	ppm	ASTM D5185m 1237	1523	---	---
Phosphorus	ppm	ASTM D5185m 270	341	---	---
Zinc	ppm	ASTM D5185m 330	402	---	---
Sulfur	ppm	ASTM D5185m 2670	3512	---	---

CONTAMINANTS

method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185m >+100	13	---	---
Sodium	ppm	ASTM D5185m	1	---	---
Potassium	ppm	ASTM D5185m >20	0	---	---
Fuel	%	ASTM D3524 >4.0	0.3	---	---

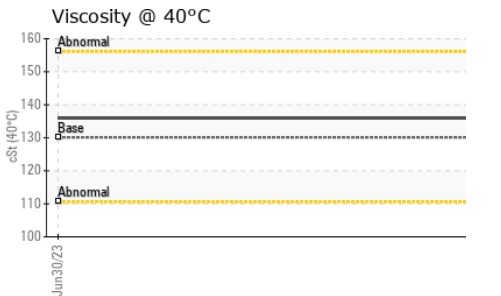
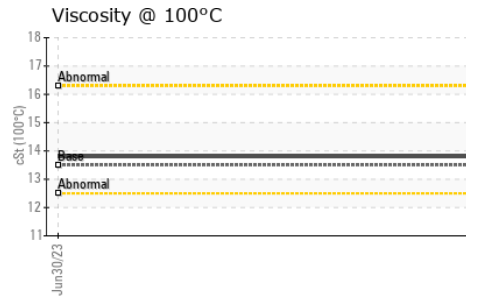
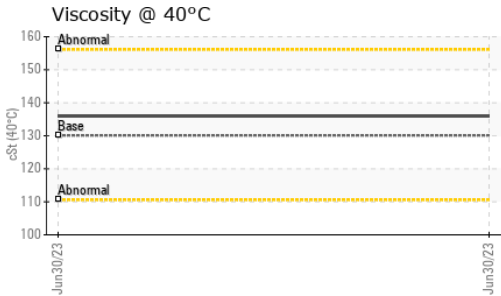
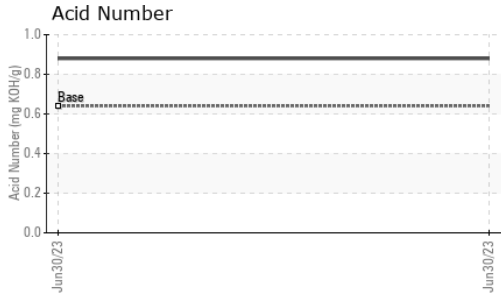
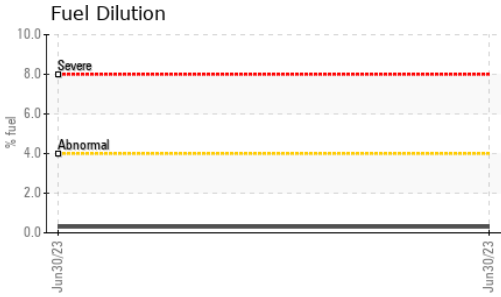
INFRA-RED

method	limit/base	current	history 1	history 2	
Soot %	%	*ASTM D7844	0.1	---	---
Nitration	Abs/cm	*ASTM D7624 >20	6.1	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.4	---	---

FLUID DEGRADATION

method	limit/base	current	history 1	history 2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.4	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045 0.64	0.88	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 4.4	4.29	---	---

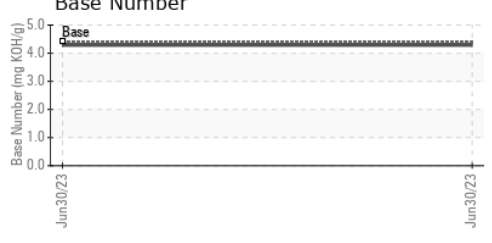
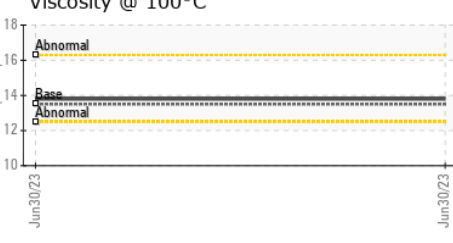
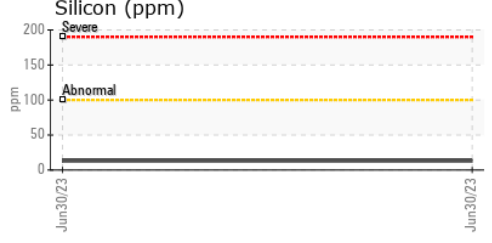
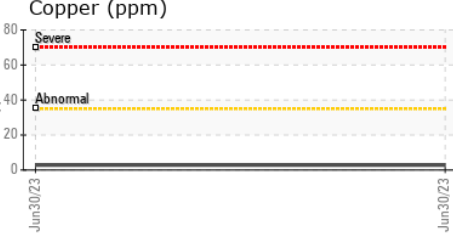
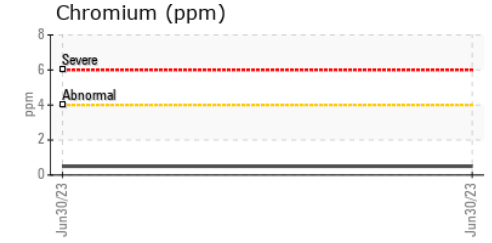
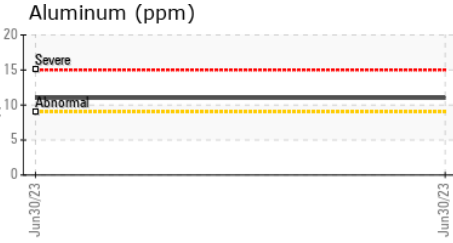
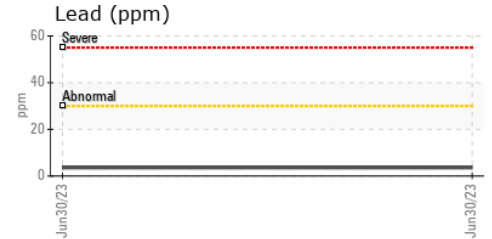
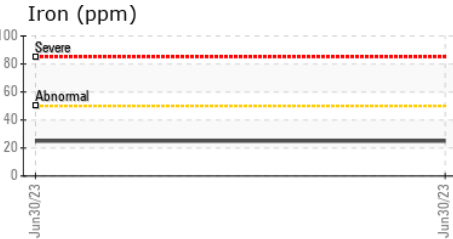
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445	130.1	136	---
Visc @ 100°C	cSt	ASTM D445	13.5	13.8	---
Viscosity Index (VI)	Scale	ASTM D2270	99	97	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0073705 **Received** : 10 Jul 2023
Lab Number : 05893924 **Diagnosed** : 12 Jul 2023
Unique Number : 10549734 **Diagnostician** : Doug Bogart
Test Package : MOB 2 (Additional Tests: FuelDilution, KV40, PercentFuel, VI)

PETRO-CANADA LUBRICANTS - GARRETT BAPP
 2416 N 12TH ST
 BROKEN ARROW, OK
 US 74012
 Contact: GARRETT BAPP

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)

T:
F: