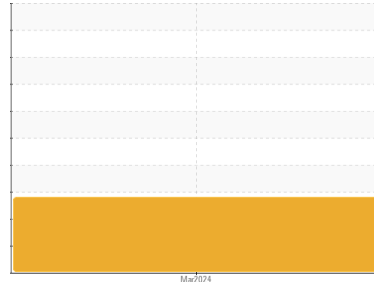


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
168
Component
Diesel Engine
Fluid
PETRO CANADA 15W40 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check the fuel injection system. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Elemental level of silicon (Si) above normal indicating ingress of seal material. There is a moderate amount of fuel present in the oil.

Fluid Condition
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PCA0120342	---	---
Sample Date	Client Info	04 Mar 2024	---	---
Machine Age	mls Client Info	97603	---	---
Oil Age	mls Client Info	0	---	---
Oil Changed	Client Info	N/A	---	---
Sample Status		ABNORMAL	---	---

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	NEG	---	---
Glycol	WC Method	NEG	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm	ASTM D5185m >100	25	---	---
Chromium ppm	ASTM D5185m >20	0	---	---
Nickel ppm	ASTM D5185m >4	0	---	---
Titanium ppm	ASTM D5185m	0	---	---
Silver ppm	ASTM D5185m >3	0	---	---
Aluminum ppm	ASTM D5185m >20	3	---	---
Lead ppm	ASTM D5185m >40	0	---	---
Copper ppm	ASTM D5185m >330	0	---	---
Tin ppm	ASTM D5185m >15	0	---	---
Vanadium ppm	ASTM D5185m	0	---	---
Cadmium ppm	ASTM D5185m	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron ppm	ASTM D5185m	34	---	---
Barium ppm	ASTM D5185m	0	---	---
Molybdenum ppm	ASTM D5185m	41	---	---
Manganese ppm	ASTM D5185m	0	---	---
Magnesium ppm	ASTM D5185m	593	---	---
Calcium ppm	ASTM D5185m	1672	---	---
Phosphorus ppm	ASTM D5185m	852	---	---
Zinc ppm	ASTM D5185m	1033	---	---
Sulfur ppm	ASTM D5185m	3160	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185m >25	▲ 33	---	---
Sodium ppm	ASTM D5185m	2	---	---
Potassium ppm	ASTM D5185m >20	1	---	---
Fuel %	ASTM D3524 >5	▲ 6.0	---	---

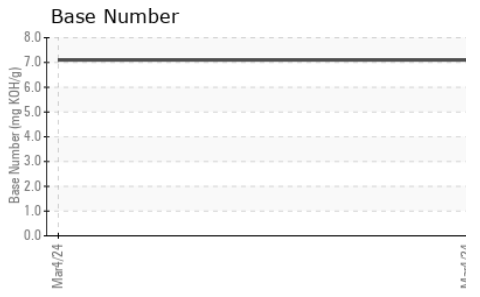
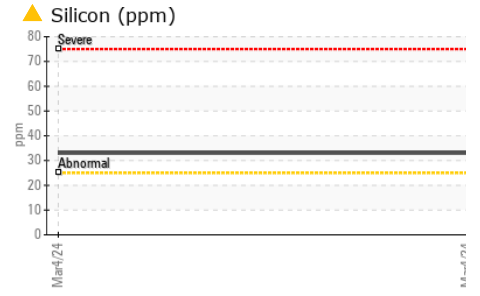
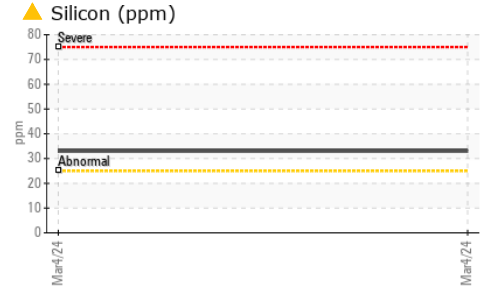
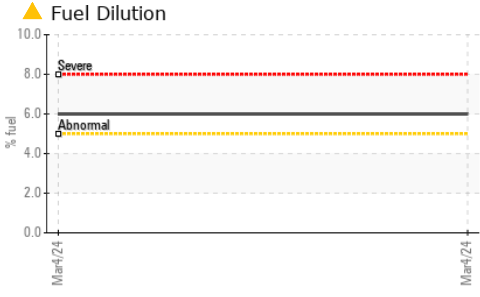
INFRA-RED

method	limit/base	current	history1	history2
Soot %	*ASTM D7844 >3	0.5	---	---
Nitration	*ASTM D7624 >20	12.4	---	---
Sulfation	*ASTM D7415 >30	22.5	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	26.3	---	---
Base Number (BN)	mg KOH/g ASTM D2896	7.1	---	---

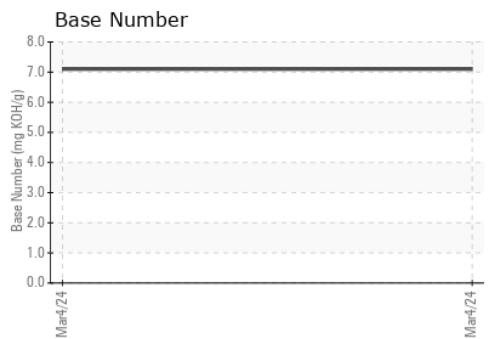
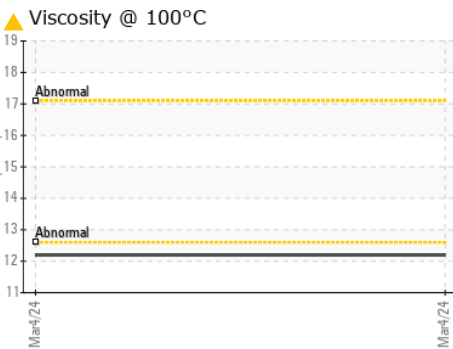
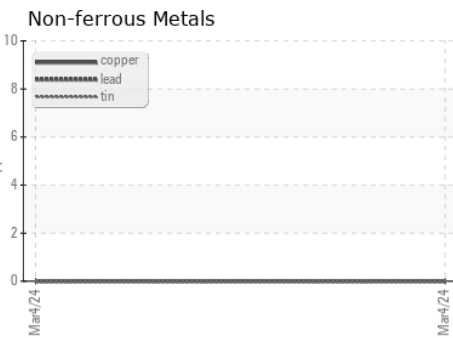
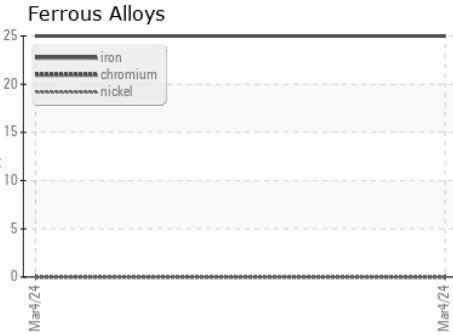
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	▲ 12.2	---	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0120342 **Received** : 21 Mar 2024
Lab Number : 06124624 **Tested** : 22 Mar 2024
Unique Number : 10938775 **Diagnosed** : 23 Mar 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

COSTYS ENERGY SERVICES
 2329 S MAIN ST
 MANSFIELD, PA
 US 16933
 Contact: CJ MARTIN
 cmartin@costysenergy.com

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)