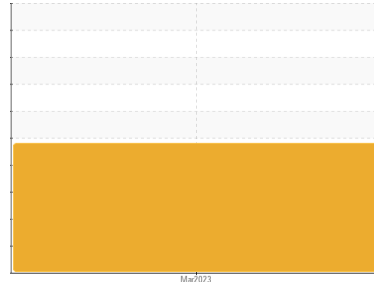


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
599
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

DIAGNOSIS

- ▲ Recommendation**
 We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.
- ▲ Wear**
 The nickel level is abnormal. All other 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**
 The oil viscosity is lower than normal. The BN level is low. Fuel is present in the oil and is lowering the viscosity.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0066379	---	---
Sample Date	Client Info		20 Mar 2023	---	---
Machine Age	hrs	Client Info	17872	---	---
Oil Age	hrs	Client Info	908	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	41	---	---
Chromium	ppm	ASTM D5185m >20	1	---	---
Nickel	ppm	ASTM D5185m >4	▲ 13	---	---
Titanium	ppm	ASTM D5185m	0	---	---
Silver	ppm	ASTM D5185m >3	0	---	---
Aluminum	ppm	ASTM D5185m >20	3	---	---
Lead	ppm	ASTM D5185m >40	<1	---	---
Copper	ppm	ASTM D5185m >330	9	---	---
Tin	ppm	ASTM D5185m >15	<1	---	---
Vanadium	ppm	ASTM D5185m	0	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	---	---
Barium	ppm	ASTM D5185m	2	---	---
Molybdenum	ppm	ASTM D5185m	55	---	---
Manganese	ppm	ASTM D5185m	1	---	---
Magnesium	ppm	ASTM D5185m	805	---	---
Calcium	ppm	ASTM D5185m	1082	---	---
Phosphorus	ppm	ASTM D5185m	837	---	---
Zinc	ppm	ASTM D5185m	1106	---	---
Sulfur	ppm	ASTM D5185m	2584	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	▲ 40	---	---
Sodium	ppm	ASTM D5185m	8	---	---
Potassium	ppm	ASTM D5185m >20	3	---	---
Fuel	%	ASTM D3524 >5	▲ 6.8	---	---

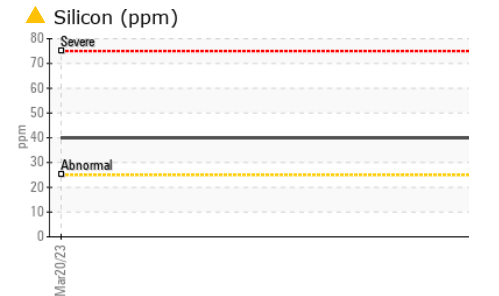
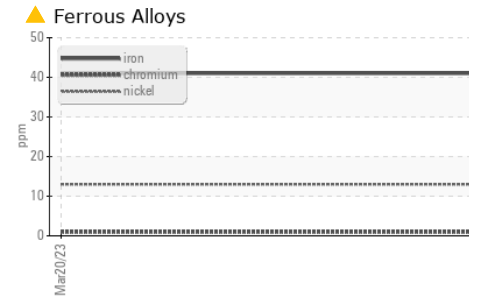
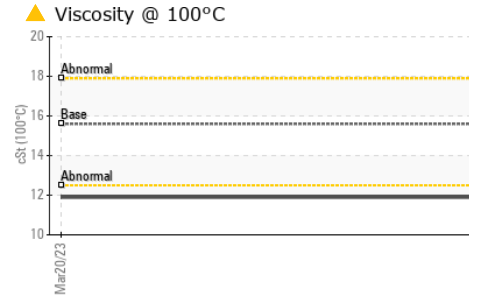
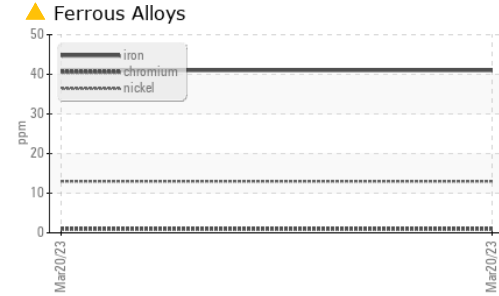
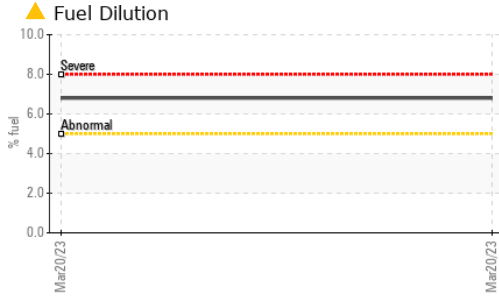
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	---	---
Nitration	Abs/cm	*ASTM D7624 >20	11.2	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	29.7	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	33.3	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	▲ 3.1	---	---

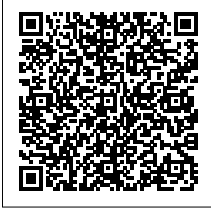
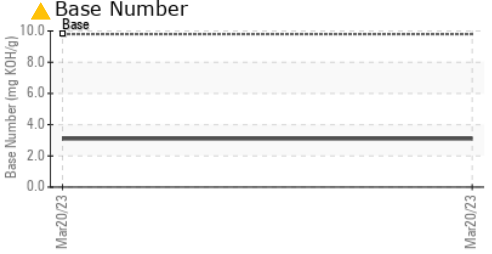
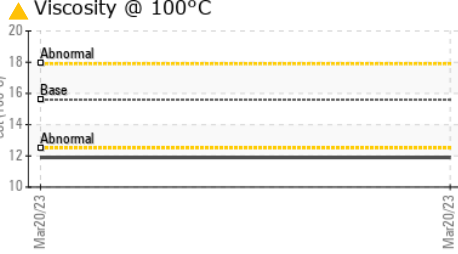
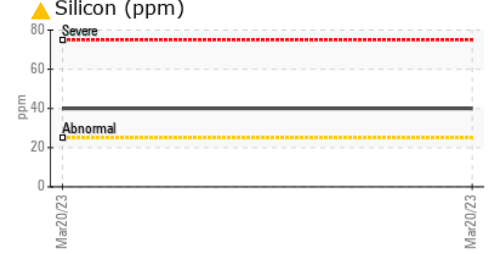
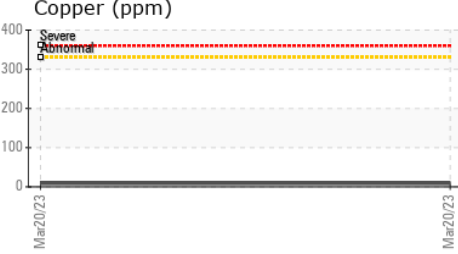
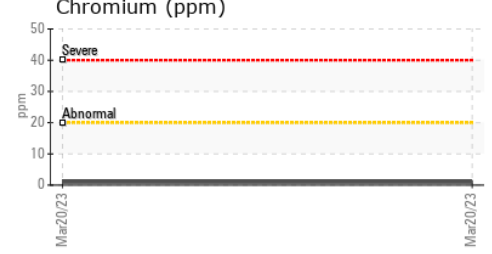
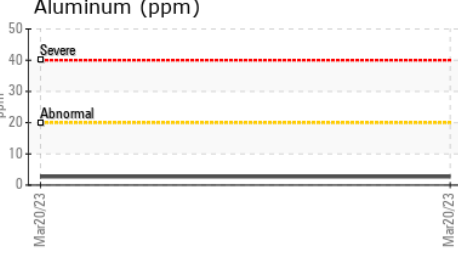
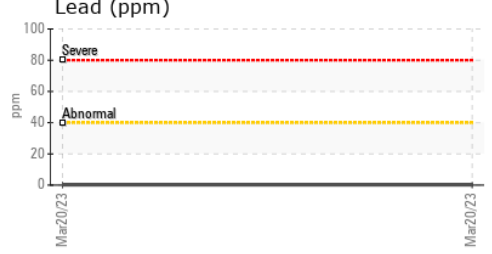
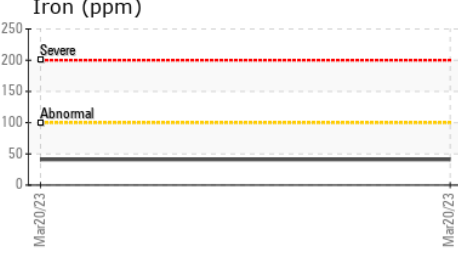
OIL ANALYSIS REPORT



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	15.6 ▲ 11.9	---	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0066379 **Received** : 03 Apr 2023
Lab Number : 05808506 **Diagnosed** : 10 Apr 2023
Unique Number : 10406035 **Diagnostician** : Angela Borella
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

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 OAKDALE, CA
 US 95361
 Contact: S MCHENRY
 smchenry@cv-ag.com
 T: (209)630-8094
 F:

Certificate L2367
 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)