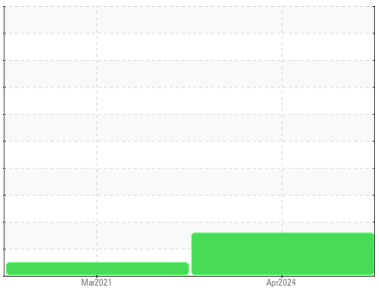
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

Sample Rating Trend



DEGRADATION

Machine Id
22887
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Recommendation
The oil is near the end of it`s useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Fuel content negligible. There is no indication of any contamination in the oil.

Fluid Condition
The oil viscosity is lower than normal. The BN level is low. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA06147167**	PCA05197710	---
Sample Date		Client Info		**13 Apr 2024**	06 Mar 2021	---
Machine Age	mls	Client Info		**0**	0	---
Oil Age	mls	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	N/A	---
Sample Status				**ABNORMAL**	NORMAL	---

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**11**	7	---
Chromium	ppm	ASTM D5185m	>20	**0**	<1	---
Nickel	ppm	ASTM D5185m	>4	**0**	<1	---
Titanium	ppm	ASTM D5185m		**0**	<1	---
Silver	ppm	ASTM D5185m	>3	**0**	0	---
Aluminum	ppm	ASTM D5185m	>20	**5**	2	---
Lead	ppm	ASTM D5185m	>40	**0**	<1	---
Copper	ppm	ASTM D5185m	>330	**4**	3	---
Tin	ppm	ASTM D5185m	>15	**0**	<1	---
Antimony	ppm	ASTM D5185m		**---**	<1	---
Vanadium	ppm	ASTM D5185m		**0**	0	---
Cadmium	ppm	ASTM D5185m		**0**	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	**16**	12	---
Barium	ppm	ASTM D5185m	0	**0**	0	---
Molybdenum	ppm	ASTM D5185m	50	**45**	58	---
Manganese	ppm	ASTM D5185m	0	**6**	1	---
Magnesium	ppm	ASTM D5185m	950	**740**	864	---
Calcium	ppm	ASTM D5185m	1050	**811**	1063	---
Phosphorus	ppm	ASTM D5185m	995	**645**	883	---
Zinc	ppm	ASTM D5185m	1180	**769**	1163	---
Sulfur	ppm	ASTM D5185m	2600	**2782**	2620	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**14**	10	---
Sodium	ppm	ASTM D5185m		**2**	3	---
Potassium	ppm	ASTM D5185m	>20	**<1**	1	---
Fuel	%	ASTM D3524	>5	**1.8**	<1.0	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0**	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	**11.7**	13.5	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	**25.6**	24.2	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**20.7**	20.4	---
Base Number (BN)	mg KOH/g	ASTM D2896		**3.6**	6.8	---

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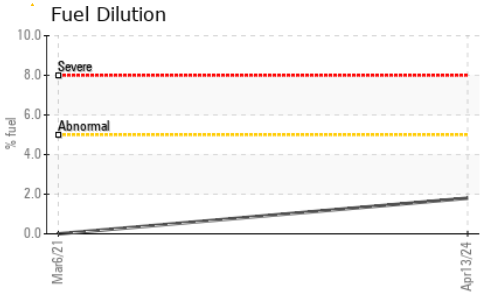
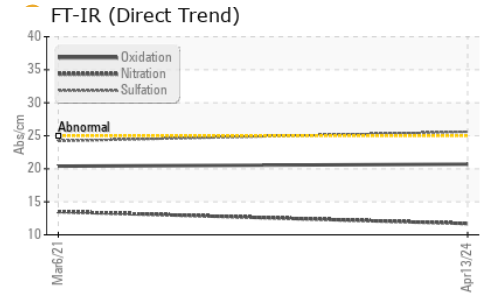
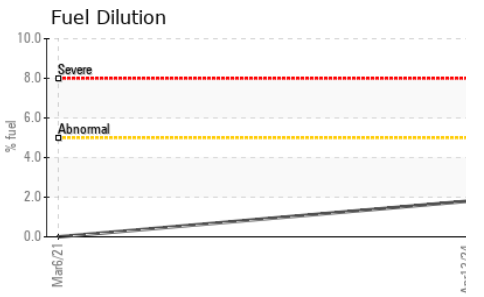
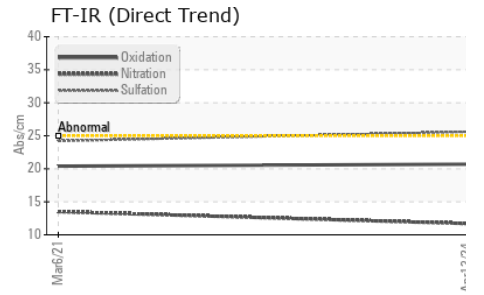




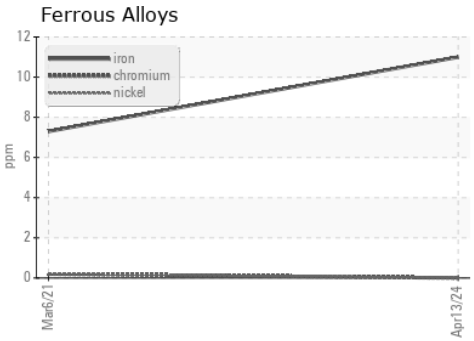


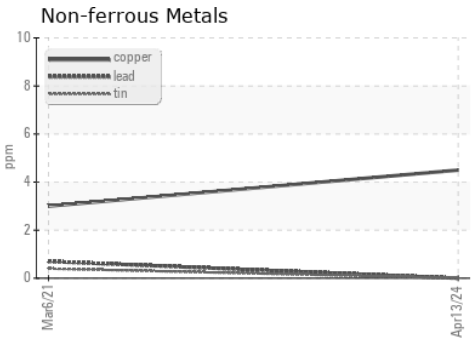


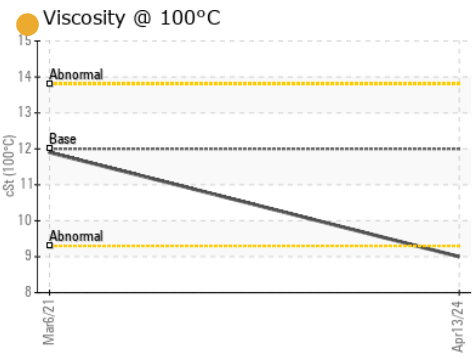
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	NONE	---
Sand/Dirt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

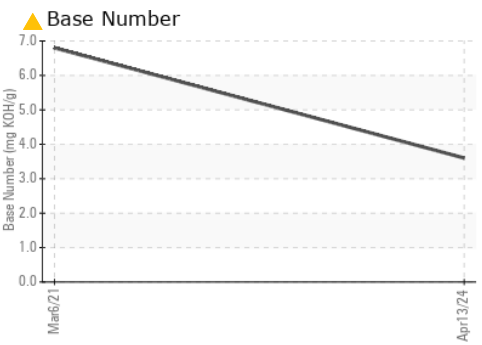
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	**9.0**	11.9	---

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA06147167 **Received** : 12 Apr 2024
Lab Number : 06147167 **Tested** : 17 Apr 2024
Unique Number : 10977245 **Diagnosed** : 17 Apr 2024 - Jonathan Hester
Test Package : FLEET (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)

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