



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

[WO36132]

Machine Id

228

Component

Diesel Engine

Fluid

PETRO CANADA DURON-E 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0903653	WC0822304	---
Sample Date		Client Info		24 Jun 2024	03 Aug 2023	---
Machine Age	mls	Client Info		58145	127	---
Oil Age	mls	Client Info		14056	0	---
Filter Age	mls	Client Info		14056	0	---
Oil Changed		Client Info		Changed	N/A	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	16	25	---
Chromium	ppm	ASTM D5185m	>20	<1	<1	---
Nickel	ppm	ASTM D5185m	>4	0	<1	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m	>3	0	<1	---
Aluminum	ppm	ASTM D5185m	>20	8	19	---
Lead	ppm	ASTM D5185m	>40	0	<1	---
Copper	ppm	ASTM D5185m	>330	6	9	---
Tin	ppm	ASTM D5185m	>15	0	2	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

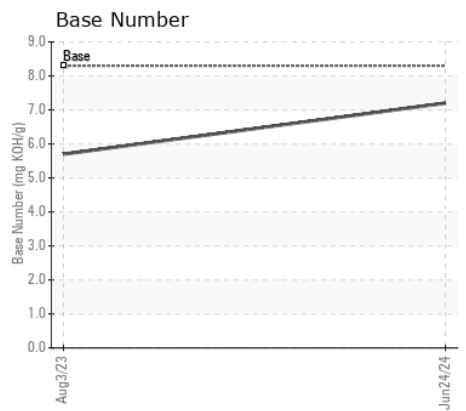
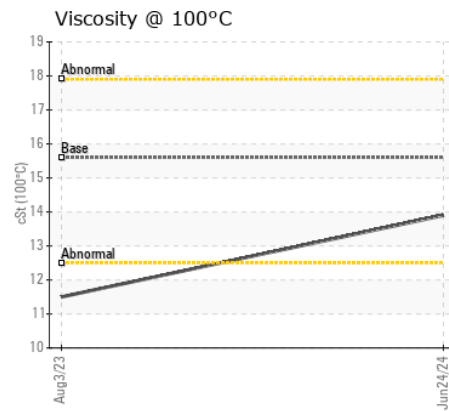
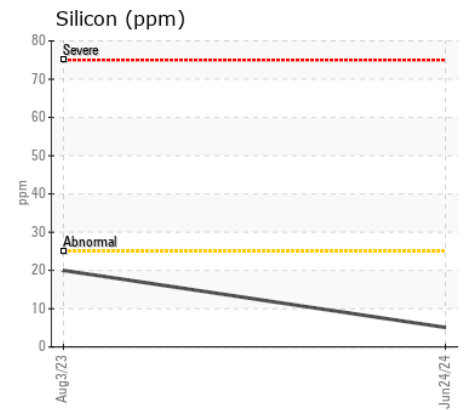
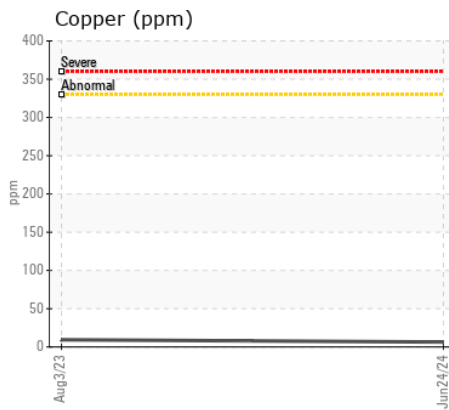
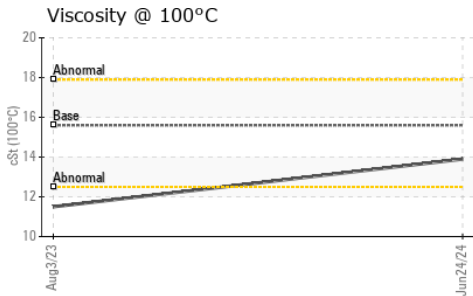
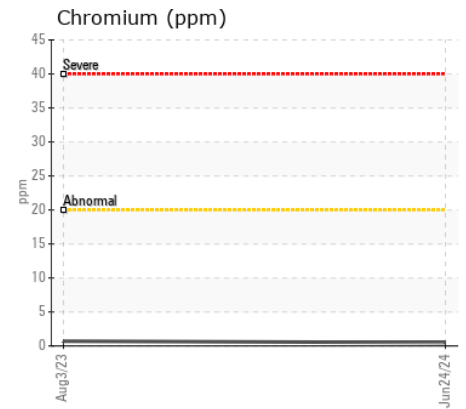
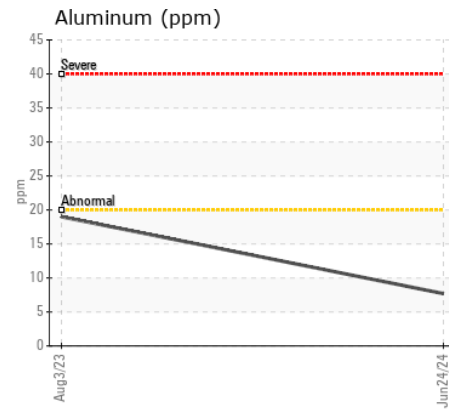
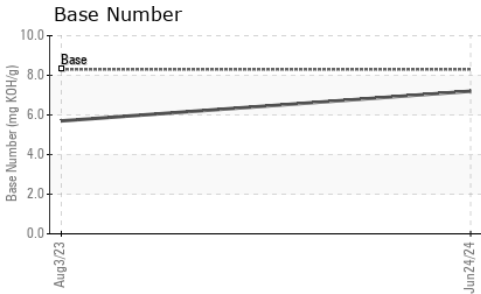
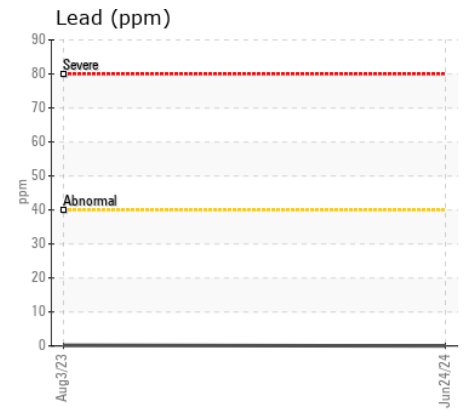
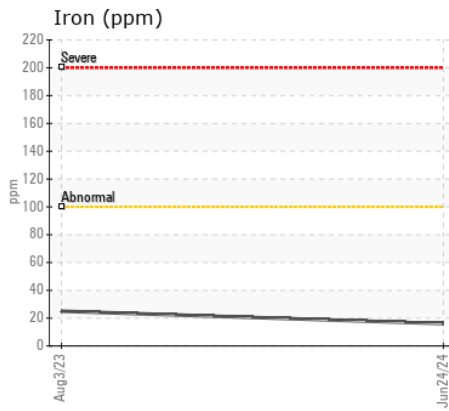
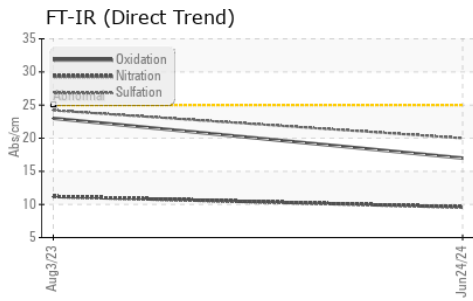
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	20	---
Potassium	ppm	ASTM D5185m	>20	15	43	---
Fuel		WC Method	>5	<1.0	▲ 2.5	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.4	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	9.6	11.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.0	24.2	---
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	---

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	<1	---
Boron	ppm	ASTM D5185m	1	0	49	---
Barium	ppm	ASTM D5185m	1	0	<1	---
Molybdenum	ppm	ASTM D5185m	60	62	63	---
Manganese	ppm	ASTM D5185m	1	<1	4	---
Magnesium	ppm	ASTM D5185m	1010	955	565	---
Calcium	ppm	ASTM D5185m	1070	1257	1575	---
Phosphorus	ppm	ASTM D5185m	1150	1075	860	---
Zinc	ppm	ASTM D5185m	1270	1282	1032	---
Sulfur	ppm	ASTM D5185m	2060	3510	3033	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.0	23.0	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.3	7.2	5.7	---
Visc @ 100°C	cSt	ASTM D445	15.6	13.9	▲ 11.5	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0903653 **Received** : 11 Jul 2024
Lab Number : 06233132 **Tested** : 12 Jul 2024
Unique Number : 11116625 **Diagnosed** : 12 Jul 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

CAMPBELL OIL COMPANY
 PO BOX 637, 418 PEANUT ROAD
 ELIZABETHTOWN, NC
 US 28337
 Contact: CHRIS CAMPBELL
 chrisc@campbelloil.net
 T: (910)862-0778
 F: (910)862-6173

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)