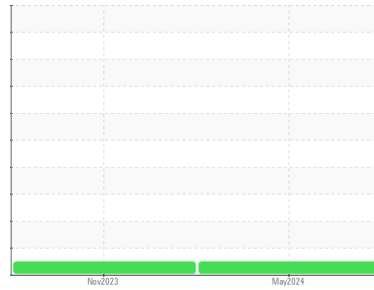


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
222673
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- QTS)

DIAGNOSIS

Recommendation

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

Wear

Metal levels are typical for a new component breaking in.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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 condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0057344	PCA0057258	---
Sample Date	Client Info		03 May 2024	14 Nov 2023	---
Machine Age	mls	Client Info	2951	44753	---
Oil Age	mls	Client Info	628	11814	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			NORMAL	NORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	---
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	20	14	---
Chromium	ppm	ASTM D5185m >20	<1	<1	---
Nickel	ppm	ASTM D5185m >4	<1	0	---
Titanium	ppm	ASTM D5185m	<1	<1	---
Silver	ppm	ASTM D5185m >3	1	0	---
Aluminum	ppm	ASTM D5185m >20	15	10	---
Lead	ppm	ASTM D5185m >40	<1	0	---
Copper	ppm	ASTM D5185m >330	3	3	---
Tin	ppm	ASTM D5185m >15	1	<1	---
Vanadium	ppm	ASTM D5185m	<1	0	---
Cadmium	ppm	ASTM D5185m	<1	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	5	17	---
Barium	ppm	ASTM D5185m 0	1	10	---
Molybdenum	ppm	ASTM D5185m 50	58	43	---
Manganese	ppm	ASTM D5185m 0	1	<1	---
Magnesium	ppm	ASTM D5185m 950	903	549	---
Calcium	ppm	ASTM D5185m 1050	1267	1445	---
Phosphorus	ppm	ASTM D5185m 995	1017	803	---
Zinc	ppm	ASTM D5185m 1180	1245	863	---
Sulfur	ppm	ASTM D5185m 2600	3358	2657	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	12	9	---
Sodium	ppm	ASTM D5185m	2	0	---
Potassium	ppm	ASTM D5185m >20	41	24	---

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0.2	---
Nitration	Abs/cm	*ASTM D7624 >20	9.7	10.5	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.0	20.8	---

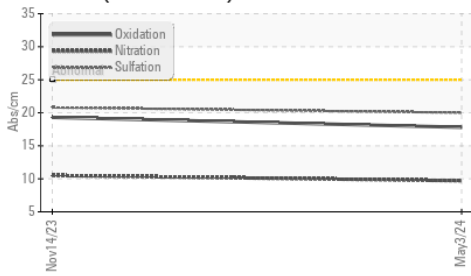
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	17.8	19.3	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.62	7.60	---

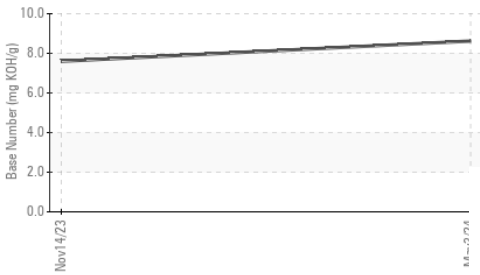


OIL ANALYSIS REPORT

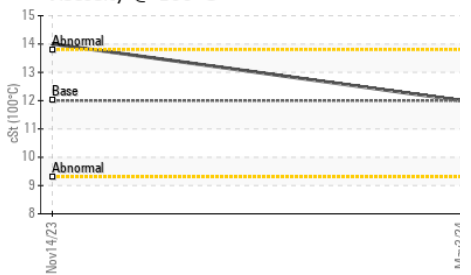
FT-IR (Direct Trend)



Base Number



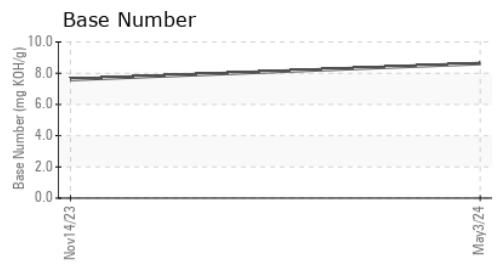
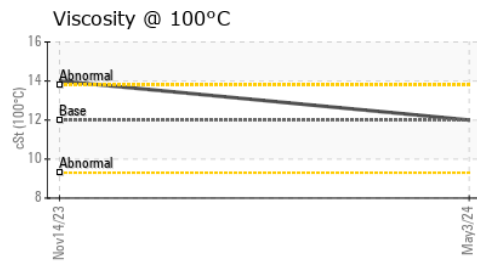
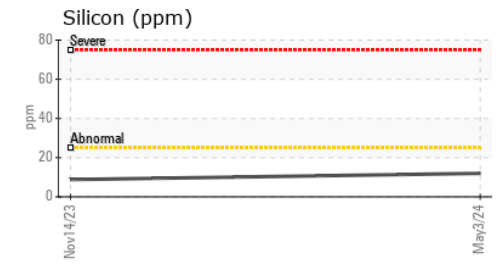
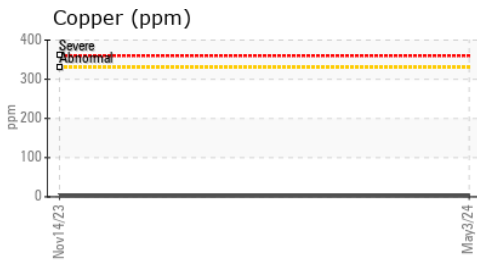
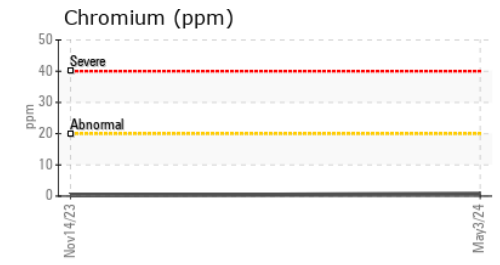
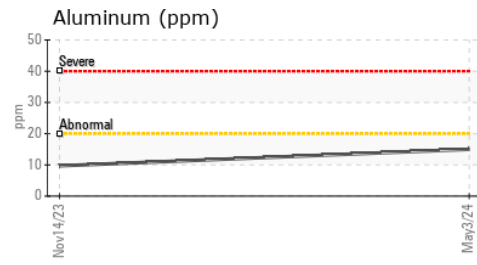
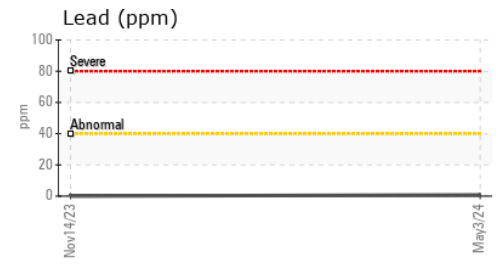
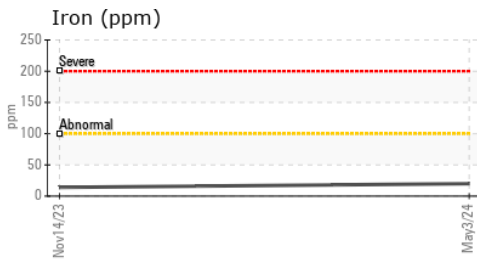
Viscosity @ 100°C



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	12.00	12.0	14.0

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0057344
Lab Number : 06190727
Unique Number : 11047479
Test Package : MOB 2

Received : 24 May 2024
Tested : 28 May 2024
Diagnosed : 28 May 2024 - Wes Davis

VALLEY PACIFIC PETROLEUM SERVICES
 152 FRANK WEST CIRCLE
 STOCKTON, CA
 US 95206

Contact: MARCEY LIGHTFOOT
 marcey.lightfoot@vpps.net

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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