



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
2227054
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0118392	PCA0088741	---
Sample Date		Client Info		08 Feb 2024	17 Sep 2023	---
Machine Age	mls	Client Info		20000	20000	---
Oil Age	mls	Client Info		20000	20000	---
Filter Age	mls	Client Info		20000	20000	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

Valve wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	49	38	---
Chromium	ppm	ASTM D5185m	>20	1	<1	---
Nickel	ppm	ASTM D5185m	>4	▲ 22	1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	1	17	---
Aluminum	ppm	ASTM D5185m	>20	17	37	---
Lead	ppm	ASTM D5185m	>40	0	0	---
Copper	ppm	ASTM D5185m	>330	101	33	---
Tin	ppm	ASTM D5185m	>15	3	4	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

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. No other contaminants were detected in the oil.

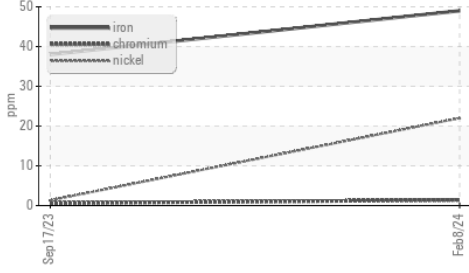
Silicon	ppm	ASTM D5185m	>25	15	▲ 56	---
Potassium	ppm	ASTM D5185m	>20	48	107	---
Fuel		WC Method	>5	<1.0	0.2	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.3	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	10.0	9.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	23.7	---
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

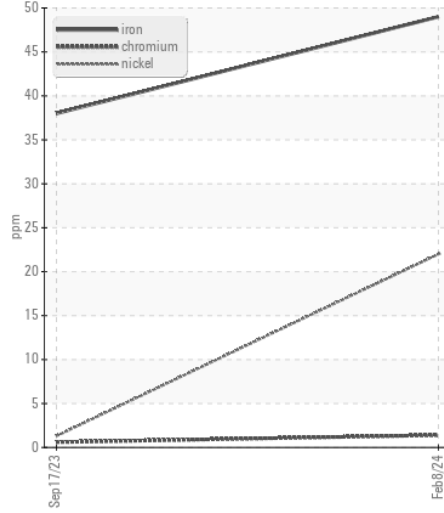
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		4	5	---
Boron	ppm	ASTM D5185m	2	11	169	---
Barium	ppm	ASTM D5185m	0	0	0	---
Molybdenum	ppm	ASTM D5185m	50	68	115	---
Manganese	ppm	ASTM D5185m	0	2	4	---
Magnesium	ppm	ASTM D5185m	950	884	676	---
Calcium	ppm	ASTM D5185m	1050	1179	1488	---
Phosphorus	ppm	ASTM D5185m	995	953	685	---
Zinc	ppm	ASTM D5185m	1180	1182	839	---
Sulfur	ppm	ASTM D5185m	2600	2397	2307	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.4	21.2	---
Base Number (BN)	mg KOH/g	ASTM D2896		6.1	8.5	---
Visc @ 100°C	cSt	ASTM D445	12.00	10.4	9.2	---

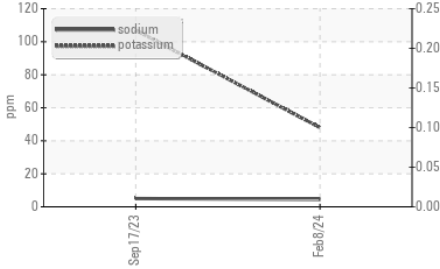
▲ Ferrous Alloys



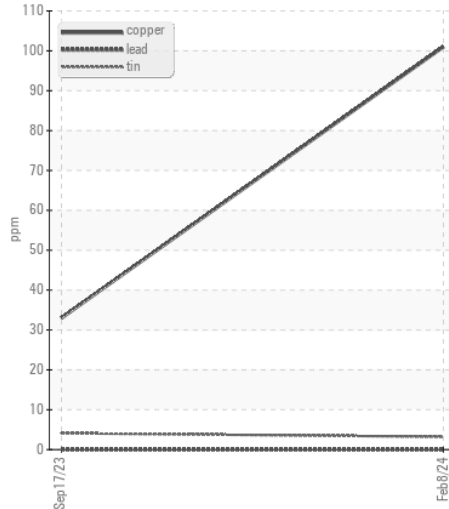
▲ Ferrous Alloys



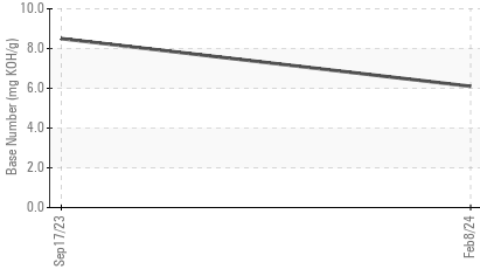
Glycol Contamination



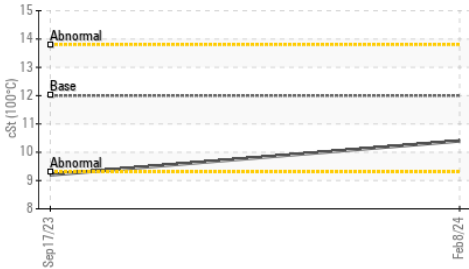
Non-ferrous Metals



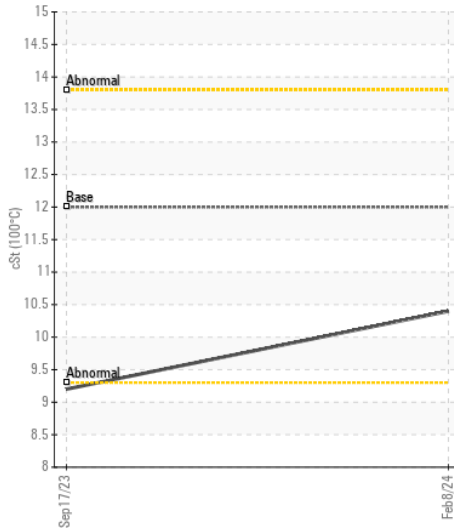
Base Number



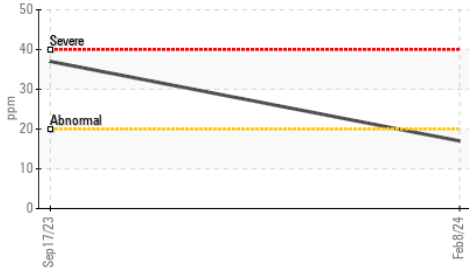
Viscosity @ 100°C



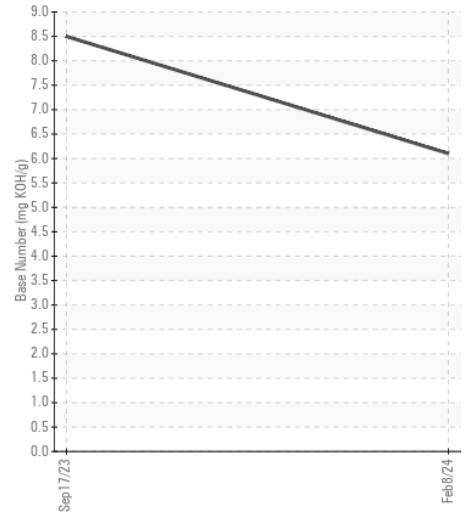
Viscosity @ 100°C



Aluminum (ppm)



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0118392 **Received** : 23 Feb 2024
Lab Number : 06098149 **Tested** : 25 Feb 2024
Unique Number : 10896379 **Diagnosed** : 26 Feb 2024 - Don Baldrige
Test Package : FLEET

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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)