



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
NWW GREENWOOD
Machine Id
DT822
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (40 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		PCA0127177	PCA0102375	---
Sample Date		Client Info		16 May 2024	11 Oct 2023	---
Machine Age	mls	Client Info		82513	50000	---
Oil Age	mls	Client Info		32513	0	---
Filter Age	mls	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

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

Iron	ppm	ASTM D5185m	>120	27	26	---
Chromium	ppm	ASTM D5185m	>20	2	1	---
Nickel	ppm	ASTM D5185m	>5	▲ 14	5	---
Titanium	ppm	ASTM D5185m	>2	<1	<1	---
Silver	ppm	ASTM D5185m	>2	2	1	---
Aluminum	ppm	ASTM D5185m	>20	5	7	---
Lead	ppm	ASTM D5185m	>40	<1	<1	---
Copper	ppm	ASTM D5185m	>330	13	39	---
Tin	ppm	ASTM D5185m	>15	2	2	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
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.

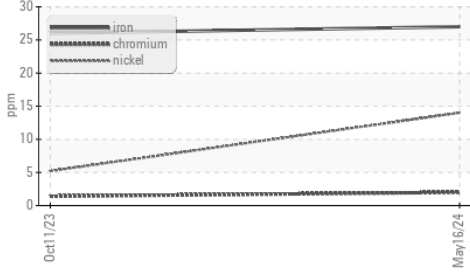
Silicon	ppm	ASTM D5185m	>25	10	14	---
Potassium	ppm	ASTM D5185m	>20	10	20	---
Fuel		WC Method	>3.0	<1.0	0.3	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>4	0.5	0.6	---
Nitration	Abs/cm	*ASTM D7624	>20	9.5	10.3	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	21.1	---
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

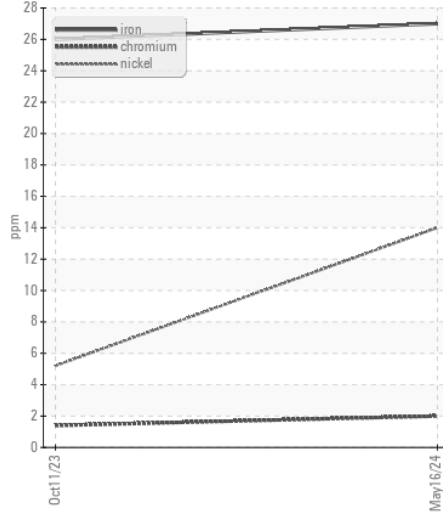
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		2	2	---
Boron	ppm	ASTM D5185m	2	2	3	---
Barium	ppm	ASTM D5185m	0	0	0	---
Molybdenum	ppm	ASTM D5185m	50	69	70	---
Manganese	ppm	ASTM D5185m	0	2	2	---
Magnesium	ppm	ASTM D5185m	950	889	863	---
Calcium	ppm	ASTM D5185m	1050	1206	1110	---
Phosphorus	ppm	ASTM D5185m	995	889	817	---
Zinc	ppm	ASTM D5185m	1180	1252	1144	---
Sulfur	ppm	ASTM D5185m	2600	2953	2241	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	16.6	---
Base Number (BN)	mg KOH/g	ASTM D2896		5.9	---	---
Visc @ 100°C	cSt	ASTM D445	12.00	10.9	11.1	---

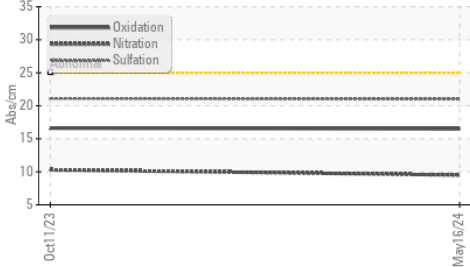
▲ Ferrous Alloys



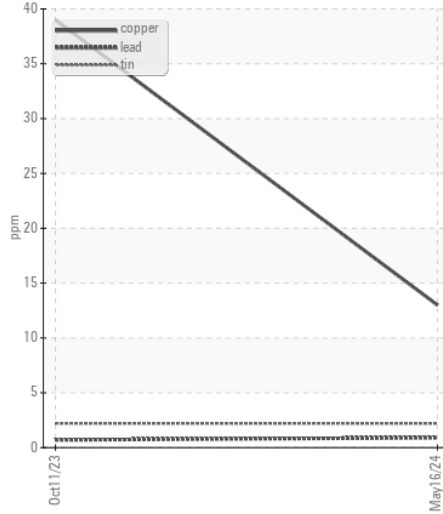
▲ Ferrous Alloys



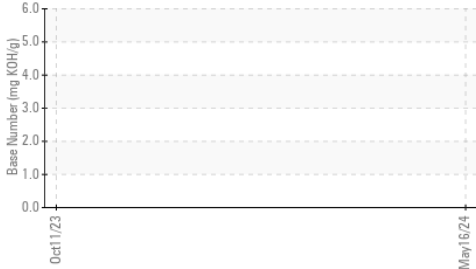
FT-IR (Direct Trend)



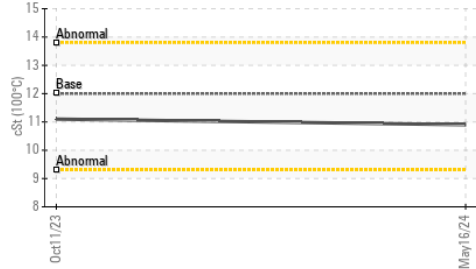
Non-ferrous Metals



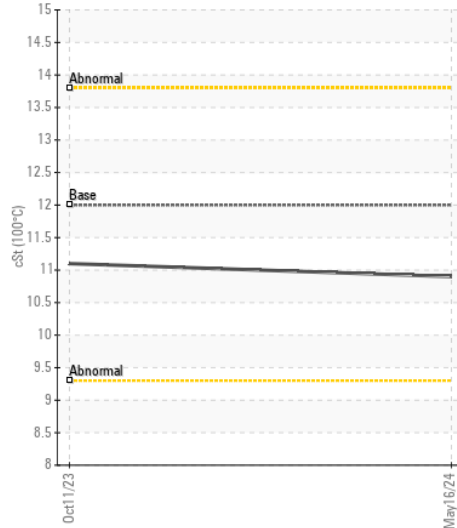
Base Number



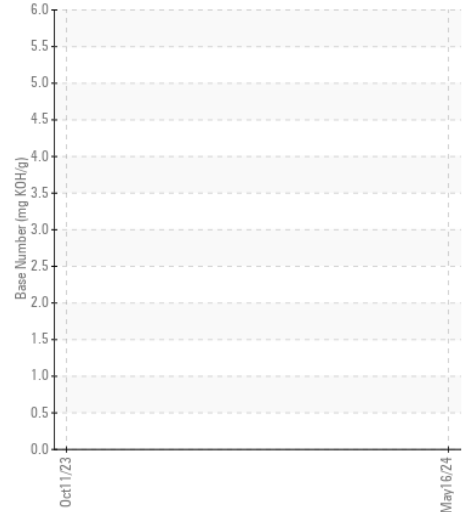
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : PCA0127177

Lab Number : 06190059

Unique Number : 11046811

Test Package : FLEET

Received : 23 May 2024

Tested : 25 May 2024

Diagnosed : 29 May 2024 - Don Baldrige

NW WHITE & CO - GREENWOOD DIVISION

411 QUARRY ROAD

GREENWOOD, SC

US 29149

Contact: Mitchell Brown

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F:

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)