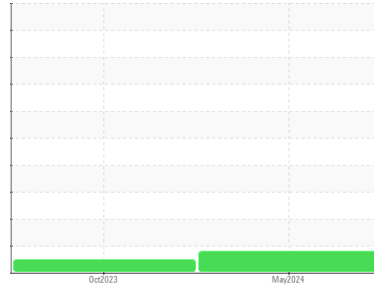


OIL ANALYSIS REPORT



Area
NWW GREENWOOD
 Machine Id
DT822
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (40 QTS)

Sample Rating Trend



WEAR



DIAGNOSIS

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.

Wear

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

Contamination

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 acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	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	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			ABNORMAL	NORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	0.3	---
Water	WC Method	>0.2	NEG	NEG	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
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	---
Cadmium	ppm	ASTM D5185m	<1	0	---

ADDITIVES

	method	limit/base	current	history1	history2
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	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	10	14	---
Sodium	ppm	ASTM D5185m	2	2	---
Potassium	ppm	ASTM D5185m >20	10	20	---

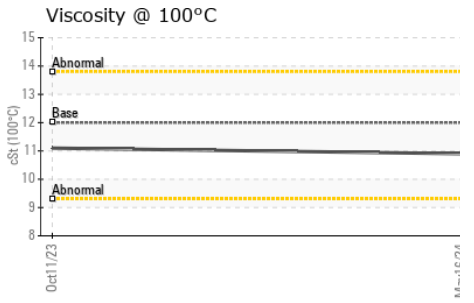
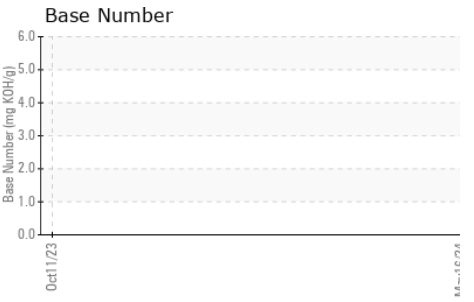
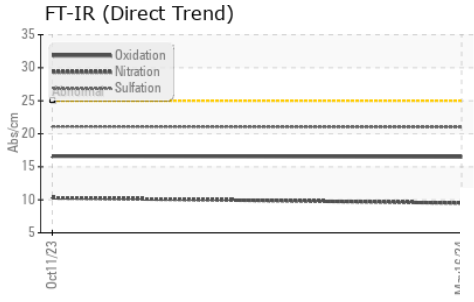
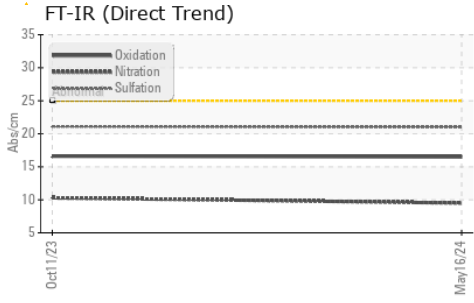
INFRA-RED

	method	limit/base	current	history1	history2
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	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.5	16.6	---
Base Number (BN)	mg KOH/g	ASTM D2896	5.9	---	---

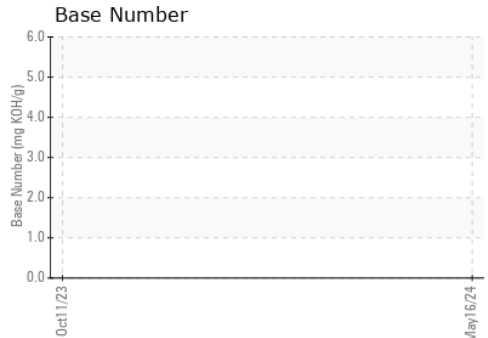
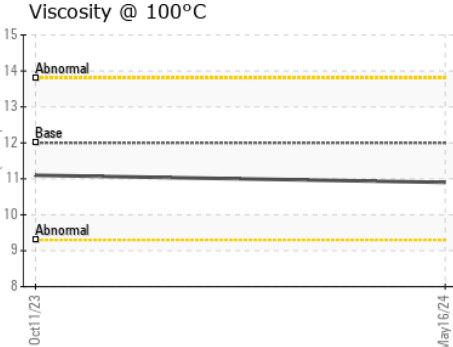
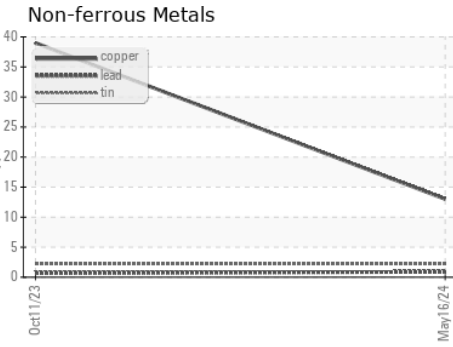
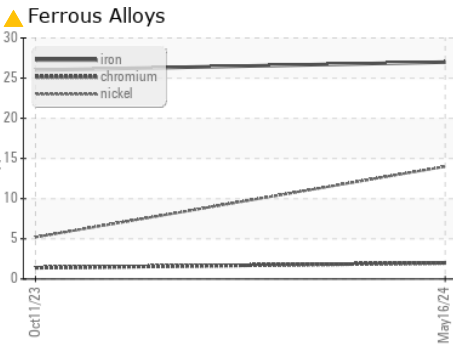
OIL ANALYSIS REPORT



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	10.9	11.1

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0127177 **Received** : 23 May 2024
Lab Number : 06190059 **Tested** : 25 May 2024
Unique Number : 11046811 **Diagnosed** : 29 May 2024 - Don Baldrige
Test Package : FLEET

NW WHITE & CO - GREENWOOD DIVISION
 411 QUARRY ROAD
 GREENWOOD, SC
 US 29149
 Contact: Mitchell Brown
 greenwoodshop@nwwhite.com
 T: (864)389-9553
 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)