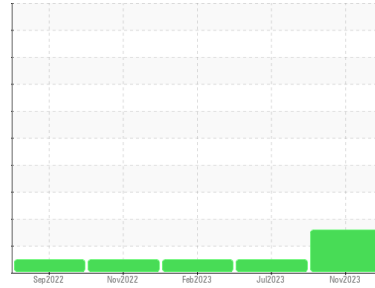


# OIL ANALYSIS REPORT

Sample Rating Trend



**WATER**



Machine Id  
**2126977**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 10W30 (--- QTS)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a light concentration of water present 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	<b>PCA0113260</b>	PCA0102147	PCA0088255
Sample Date	Client Info	<b>26 Nov 2023</b>	22 Jul 2023	17 Feb 2023
Machine Age	mls Client Info	<b>142597</b>	122121	0
Oil Age	mls Client Info	<b>21980</b>	45491	40000
Oil Changed	Client Info	<b>Not Chngd</b>	Changed	Changed
Sample Status		<b>MARGINAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	<1.0	<1.0

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>32</b>	38	21
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	1	0
Nickel	ppm ASTM D5185m >4	<b>2</b>	1	1
Titanium	ppm ASTM D5185m	<b>1</b>	2	8
Silver	ppm ASTM D5185m >3	<b>&lt;1</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>5</b>	7	11
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	2	2
Copper	ppm ASTM D5185m >330	<b>12</b>	21	69
Tin	ppm ASTM D5185m >15	<b>1</b>	2	1
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 2	<b>4</b>	0	4
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 50	<b>59</b>	62	52
Manganese	ppm ASTM D5185m 0	<b>1</b>	<1	<1
Magnesium	ppm ASTM D5185m 950	<b>910</b>	893	849
Calcium	ppm ASTM D5185m 1050	<b>1036</b>	1168	1252
Phosphorus	ppm ASTM D5185m 995	<b>980</b>	897	930
Zinc	ppm ASTM D5185m 1180	<b>1200</b>	1198	1242
Sulfur	ppm ASTM D5185m 2600	<b>3925</b>	2818	3193

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>8</b>	6	5
Sodium	ppm ASTM D5185m	<b>0</b>	<1	2
Potassium	ppm ASTM D5185m >20	<b>15</b>	23	29
Water	% ASTM D6304 >0.2	<b>▲ 0.145</b>	---	---
ppm Water	ppm ASTM D6304 >2000	<b>▲ 1450</b>	---	---
Glycol	% *ASTM D2982	<b>NEG</b>	NEG	NEG

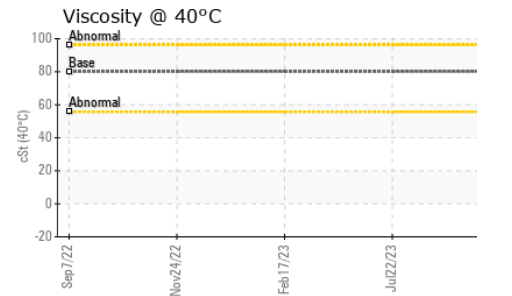
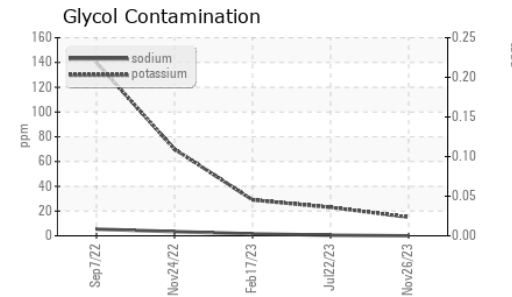
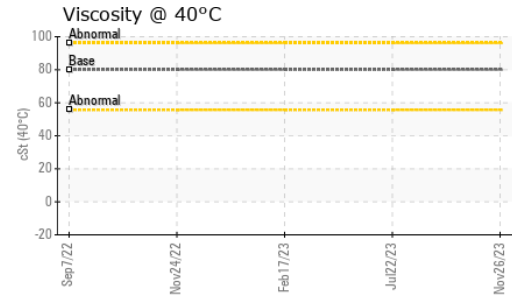
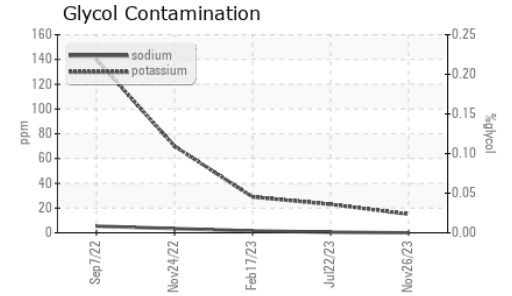
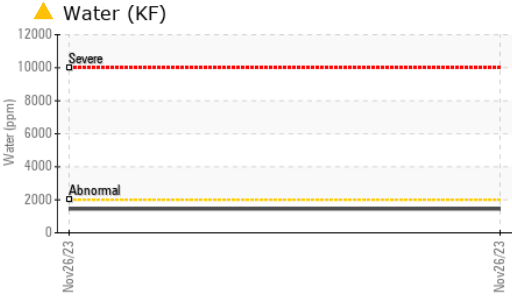
## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.5</b>	0.8	0.6
Nitration	Abs/cm *ASTM D7624 >20	<b>9.7</b>	10.2	8.9
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.4</b>	21.8	20.1

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>16.0</b>	16.5	15.0
Base Number (BN)	mg KOH/g ASTM D2896	<b>6.9</b>	6.1	7.3

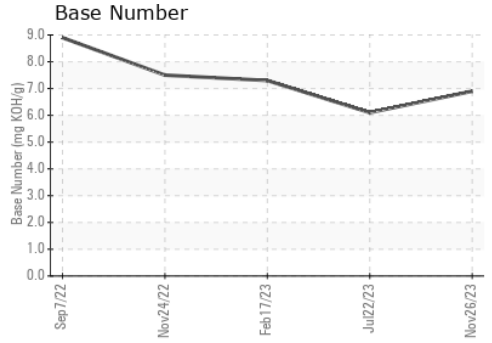
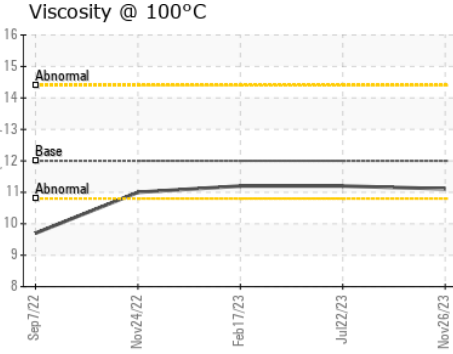
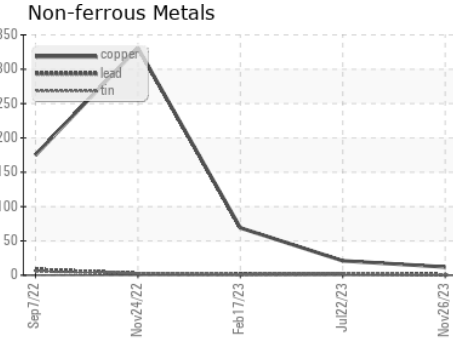
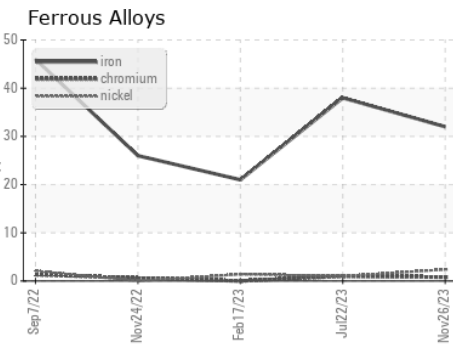
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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	▲ 0.2%	NEG
Free Water	scalar	*Visual		▲ NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.11	11.2

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0113260 **Received** : 15 Dec 2023  
**Lab Number** : 06037107 **Diagnosed** : 22 Dec 2023  
**Unique Number** : 10792336 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: Glycol, KF, KV40 )

**PERDUE FARMS - GEORGETOWN**  
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 GEORGETOWN, DE  
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 Robert.Lockwood@Perdue.com  
 T:  
 F:

Certificate L2367  
 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)