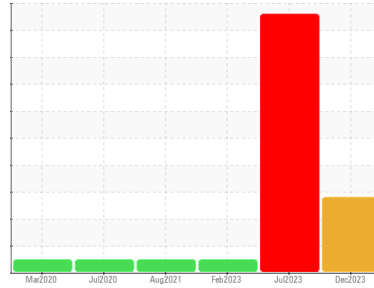


# OIL ANALYSIS REPORT

Sample Rating Trend



**GLYCOL**



Machine Id  
**5233**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### ▲ Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### ▲ Wear

Piston and cylinder wear is indicated.

### ▲ Contamination

Sodium and/or potassium levels are high. Test for glycol is negative.

### 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	<b>PCA0091659</b>	PCA0071441	PCA0045457
Sample Date	Client Info	<b>07 Dec 2023</b>	12 Jul 2023	16 Feb 2023
Machine Age	mls	Client Info	102357	93540
Oil Age	mls	Client Info	8817	12495
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Changed
Sample Status		<b>ABNORMAL</b>	SEVERE	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	0.8	<1.0
Water	WC Method >0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>▲ 144</b>	76	71
Chromium	ppm ASTM D5185m >20	<b>1</b>	<1	<1
Nickel	ppm ASTM D5185m >4	<b>2</b>	0	<1
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>▲ 60</b>	▲ 25	16
Lead	ppm ASTM D5185m >40	<b>1</b>	▲ 48	<1
Copper	ppm ASTM D5185m >330	<b>5</b>	31	2
Tin	ppm ASTM D5185m >15	<b>0</b>	0	0
Antimony	ppm ASTM D5185m	<b>---</b>	---	---
Vanadium	ppm ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 2	<b>1</b>	▲ 97	8
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 50	<b>68</b>	▲ 0	59
Manganese	ppm ASTM D5185m 0	<b>1</b>	4	<1
Magnesium	ppm ASTM D5185m 950	<b>908</b>	▲ 4	896
Calcium	ppm ASTM D5185m 1050	<b>1018</b>	▲ 38	1172
Phosphorus	ppm ASTM D5185m 995	<b>837</b>	▲ 205	893
Zinc	ppm ASTM D5185m 1180	<b>1163</b>	▲ 2	1144
Sulfur	ppm ASTM D5185m 2600	<b>2826</b>	▲ 207	3491

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>9</b>	6	4
Sodium	ppm ASTM D5185m	<b>0</b>	4	3
Potassium	ppm ASTM D5185m >20	<b>▲ 45</b>	4	22
Glycol	% *ASTM D2982	<b>NEG</b>	NEG	NEG

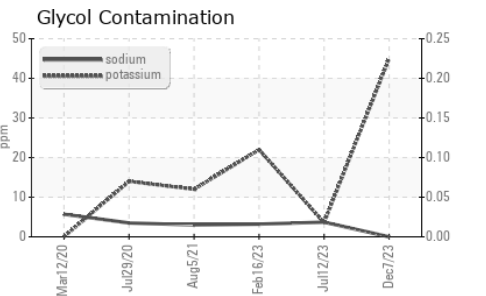
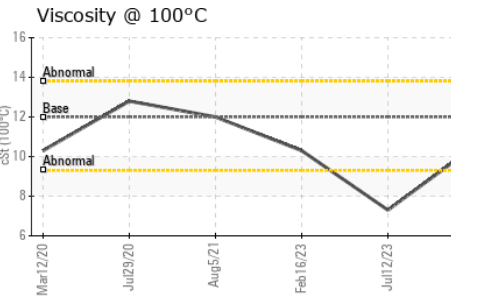
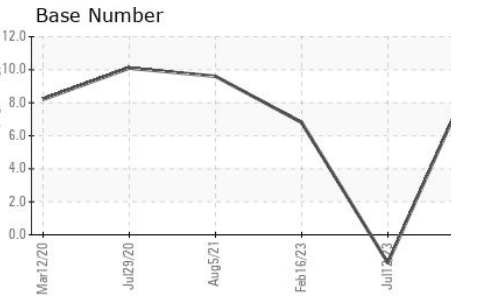
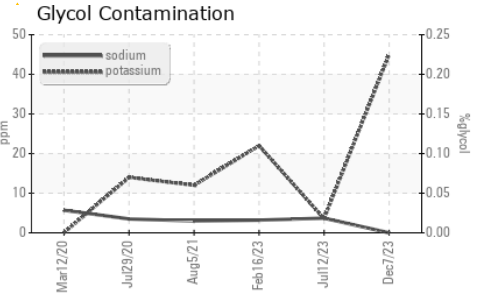
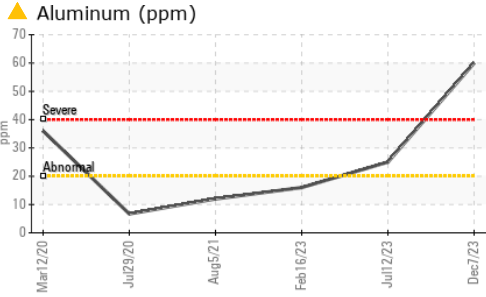
## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>1.3</b>	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	<b>13.0</b>	4.9	9.3
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>22.2</b>	▲ 58.4	19.9

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>20.4</b>	◆ 68.3	16.9
Base Number (BN)	mg KOH/g ASTM D2896	<b>9.9</b>	▲ -1.7	6.8

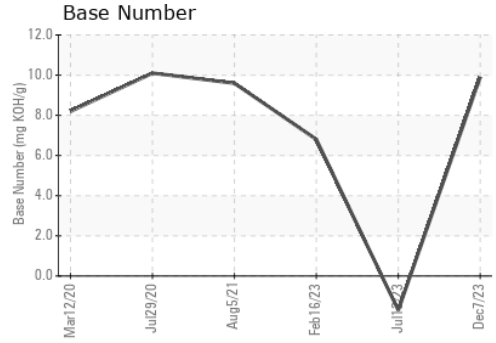
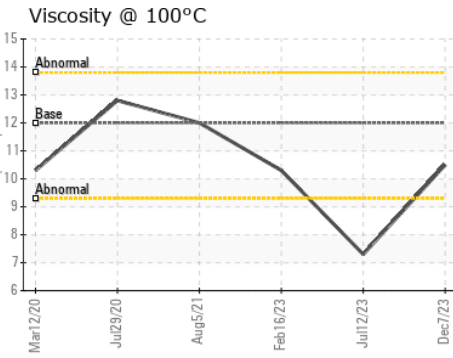
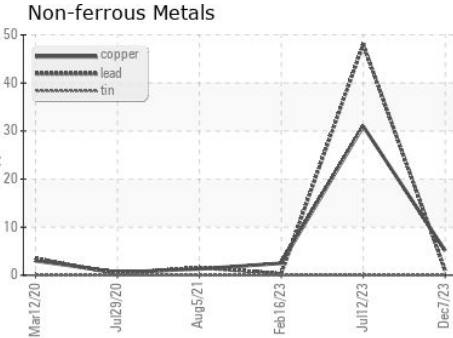
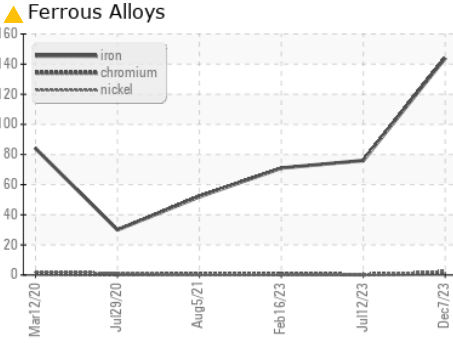
# OIL ANALYSIS REPORT



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	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	12.00	10.5	▲ 7.3	10.3

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0091659 **Received** : 20 Dec 2023  
**Lab Number** : 06040258 **Diagnosed** : 22 Dec 2023  
**Unique Number** : 10795487 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: Glycol )

**ICSB370 - Alton**  
 4525 North Alby Road  
 Godfrey, IL  
 US 62035  
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 T: (618)466-5400  
 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)