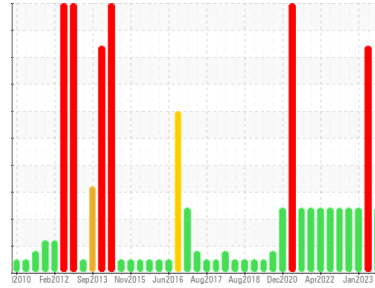


# OIL ANALYSIS REPORT



Area  
**Off-Road**  
Machine Id  
**L29**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

Sample Rating Trend



**GLYCOL**



## DIAGNOSIS

### Recommendation

We advise that you check for possible coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

Sodium and/or potassium levels remain high.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PCA0109786</b>	PCA0083079	PCA0083129
Sample Date	Client Info		<b>20 Nov 2023</b>	29 Mar 2023	09 Jan 2023
Machine Age	hrs	Client Info	<b>33422</b>	32608	32608
Oil Age	hrs	Client Info	<b>30460</b>	29646	30500
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	SEVERE	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<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>49</b>	69	79
Chromium	ppm	ASTM D5185m >20	<b>1</b>	<1	2
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>3</b>	<1	<1
Lead	ppm	ASTM D5185m >40	<b>5</b>	7	6
Copper	ppm	ASTM D5185m >330	<b>26</b>	6	8
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>5</b>	6	3
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>96</b>	119	102
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>920</b>	1095	1001
Calcium	ppm	ASTM D5185m 1070	<b>1031</b>	1302	1187
Phosphorus	ppm	ASTM D5185m 1150	<b>1092</b>	1159	1037
Zinc	ppm	ASTM D5185m 1270	<b>1227</b>	1462	1287
Sulfur	ppm	ASTM D5185m 2060	<b>3050</b>	3796	3492

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>8</b>	8	7
Sodium	ppm	ASTM D5185m	<b>▲ 310</b>	▲ 412	▲ 317
Potassium	ppm	ASTM D5185m >20	<b>▲ 152</b>	▲ 166	▲ 128
Glycol	%	*ASTM D2982	<b>NEG</b>	◈ 0.10	NEG

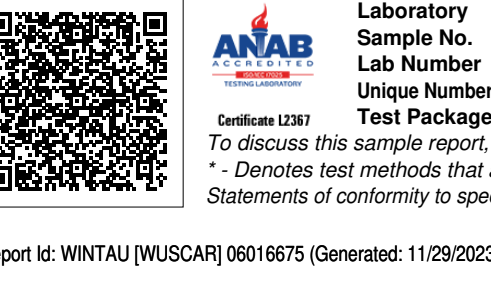
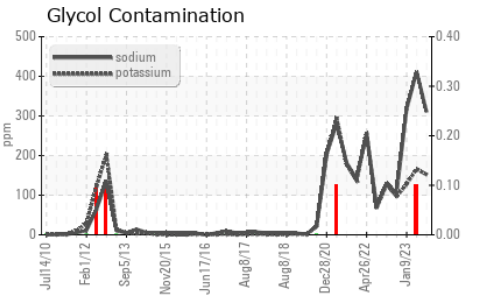
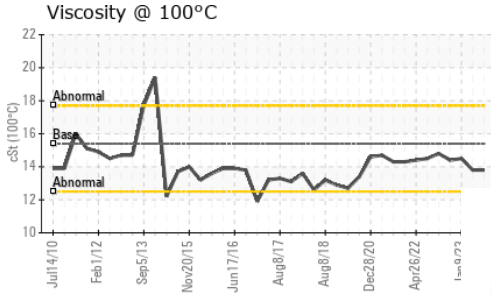
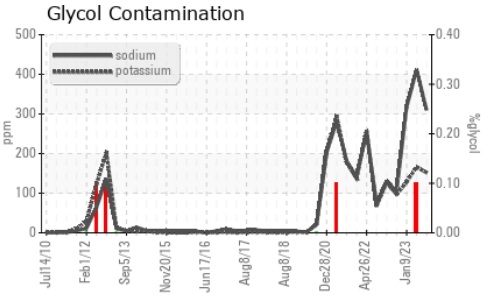
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1</b>	1.1	0.6
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.8</b>	9.6	9.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.5</b>	21.3	20.4

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.8</b>	16.3	16.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>11.55</b>	11.56	10.36

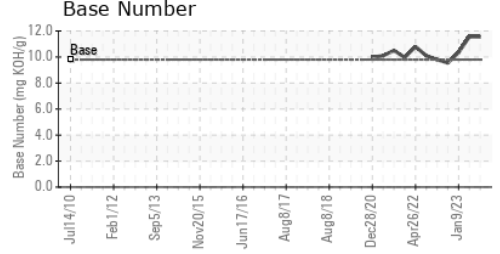
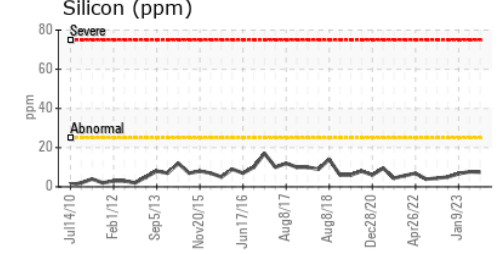
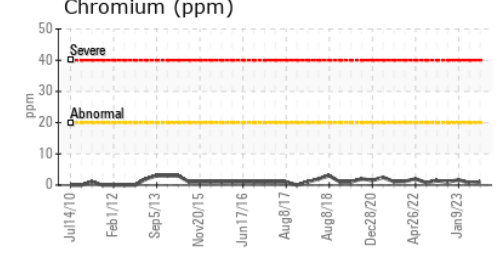
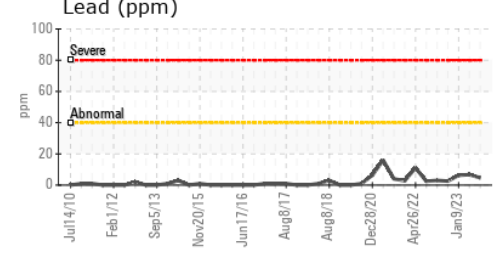
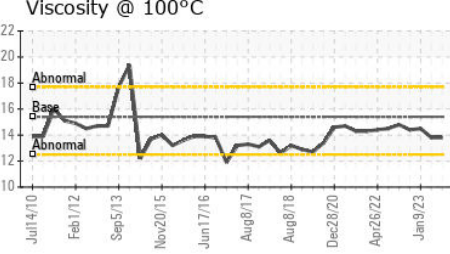
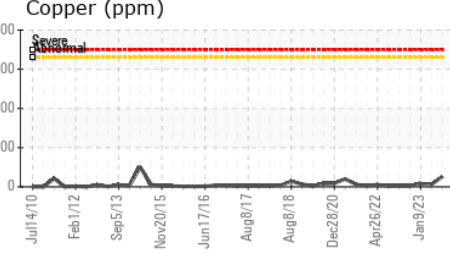
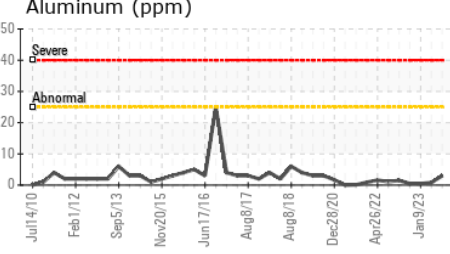
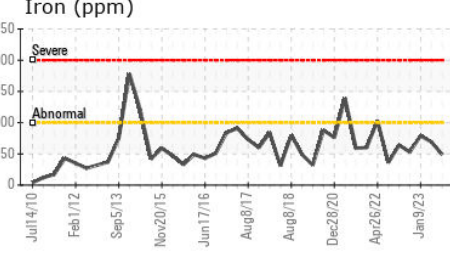
# OIL ANALYSIS REPORT



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	15.4	13.8	13.8

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0109786 **Received** : 24 Nov 2023  
**Lab Number** : 06016675 **Diagnosed** : 28 Nov 2023  
**Unique Number** : 10755819 **Diagnostician** : Jonathan Hester  
**Test Package** : MOB 2

**WIN Waste Innovations - Shop # - Taunton**  
 565 WINTHROP ST  
 TAUNTON, MA  
 US 02780  
 Contact: Dave Wilson  
 dwilson@win-waste.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)