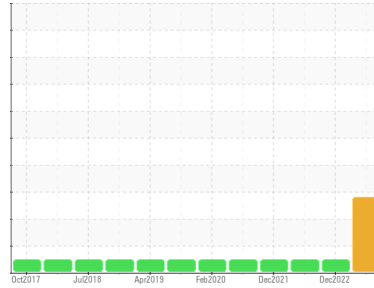


# OIL ANALYSIS REPORT



Area  
**Off-Road**  
Machine Id  
**E57**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

Sample Rating Trend



## DIAGNOSIS

**Recommendation**  
We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

**Wear**  
All component wear rates are normal.

**Contamination**  
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

**Fluid Condition**  
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>PCA0090817</b>	PCA0078346	PCA0078287
Sample Date	Client Info	<b>15 Aug 2023</b>	21 Dec 2022	06 Sep 2022
Machine Age	hrs	<b>7892</b>	7192	7151
Oil Age	hrs	<b>6426</b>	5767	6518
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>SEVERE</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >100	<b>21</b>	14	19
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	1	2
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m >25	<b>3</b>	2	3
Lead	ppm	ASTM D5185m >40	<b>1</b>	3	4
Copper	ppm	ASTM D5185m >330	<b>34</b>	2	4
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	1
Antimony	ppm	ASTM D5185m	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	<b>36</b>	13	6
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>34</b>	69	67
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>67</b>	1052	953
Calcium	ppm	ASTM D5185m 1070	<b>1987</b>	1215	1165
Phosphorus	ppm	ASTM D5185m 1150	<b>795</b>	1175	1034
Zinc	ppm	ASTM D5185m 1270	<b>998</b>	1376	1299
Sulfur	ppm	ASTM D5185m 2060	<b>3808</b>	3785	2874

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	<b>7</b>	17	18
Sodium	ppm	ASTM D5185m	<b>1</b>	<1	0
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	2
Fuel	%	ASTM D3524 >5	<b>17.9</b>	<1.0	<1.0

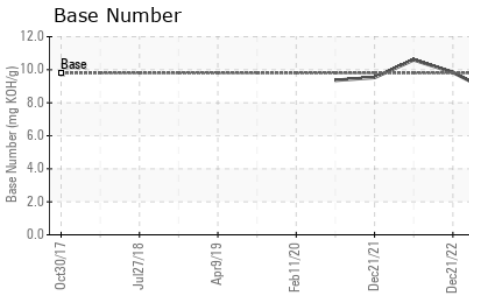
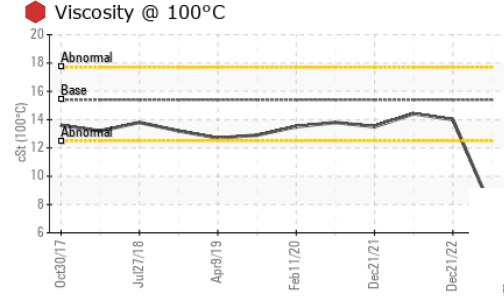
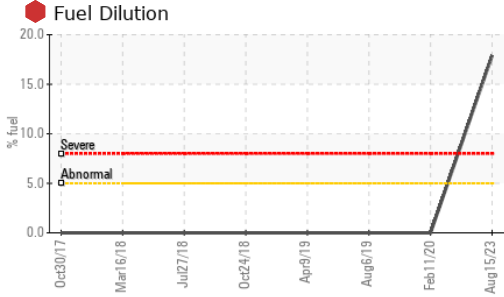
## INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	<b>0.1</b>	0.4	0.7
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.9</b>	7.5	8.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.4</b>	20.2	21.1

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>10.0</b>	15.7	16.5
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.63</b>	9.84	10.6

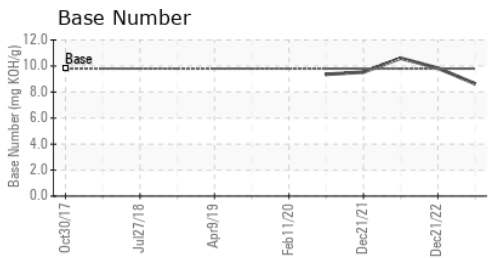
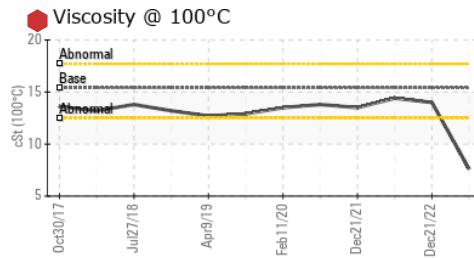
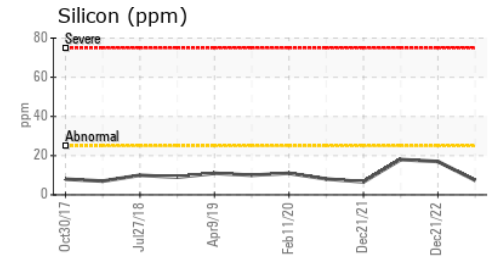
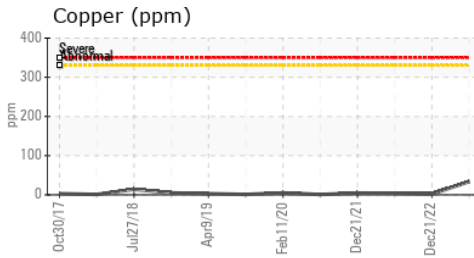
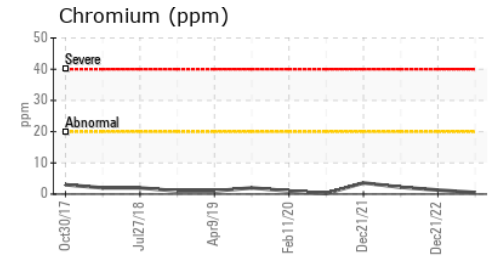
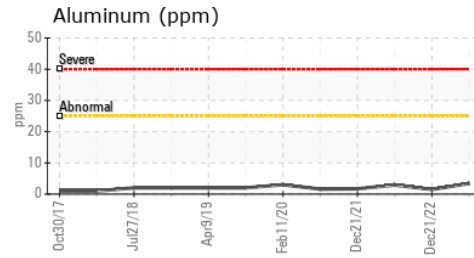
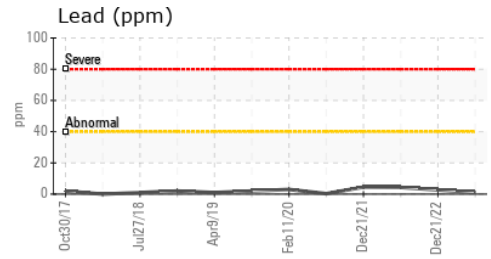
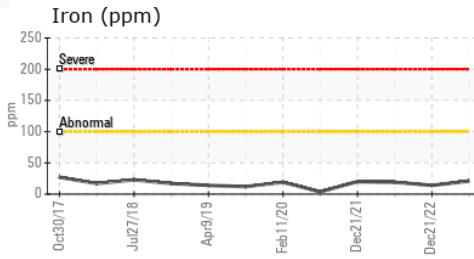
# OIL ANALYSIS REPORT



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	<span style="color: red;">7.6</span>	14.0	14.41

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0090817 **Received** : 17 Aug 2023  
**Lab Number** : 05927437 **Diagnosed** : 21 Aug 2023  
**Unique Number** : 10607384 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

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

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)

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F: