

Machine Id  
**WESTERN STAR 39**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON HP 15W40 (--- Oz)**

**DIAGNOSIS**

**Recommendation**

Resample at the next service interval to monitor.

**Wear**

Metal levels are typical for a new component breaking in.

**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 suitable for further service.

**SAMPLE INFORMATION** method limit/base current history 1 history 2

Sample Number	Client Info	<b>PCA0083454</b>	PCA0028063	PCA0006224
Sample Date	Client Info	<b>01 May 2023</b>	22 Nov 2022	27 Oct 2020
Machine Age	mls Client Info	<b>487</b>	1181	1
Oil Age	mls Client Info	<b>487</b>	1181	1
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

**CONTAMINATION** method limit/base current history 1 history 2

Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method		<b>NEG</b>	NEG	NEG

**WEAR METALS** method limit/base current history 1 history 2

Iron	ppm	ASTM D5185m	>100	<b>3</b>	7	12
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	4
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	<1	1
Lead	ppm	ASTM D5185m	>40	<b>0</b>	1	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	3
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Antimony	ppm	ASTM D5185m		<b>---</b>	---	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	<1

**ADDITIVES** method limit/base current history 1 history 2

Boron	ppm	ASTM D5185m		<b>1</b>	2	77
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>56</b>	59	8
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>971</b>	954	814
Calcium	ppm	ASTM D5185m		<b>1045</b>	1042	1404
Phosphorus	ppm	ASTM D5185m		<b>1055</b>	1023	812
Zinc	ppm	ASTM D5185m		<b>1303</b>	1238	842
Sulfur	ppm	ASTM D5185m		<b>3916</b>	3725	2628

**CONTAMINANTS** method limit/base current history 1 history 2

Silicon	ppm	ASTM D5185m	>25	<b>3</b>	4	6
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	1	2
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	2

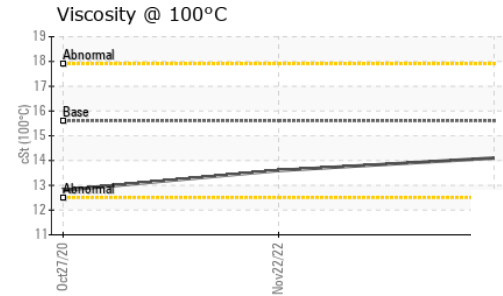
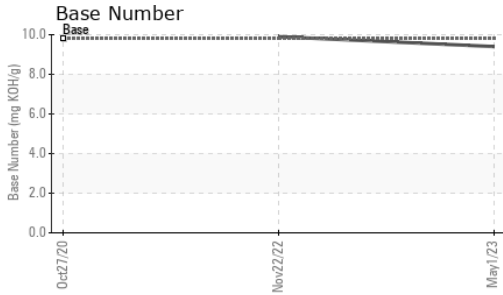
**INFRA-RED** method limit/base current history 1 history 2

Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.1</b>	6.2	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.0</b>	19.4	18.5

**FLUID DEGRADATION** method limit/base current history 1 history 2

Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.6</b>	14.6	13.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>9.4</b>	9.9	---

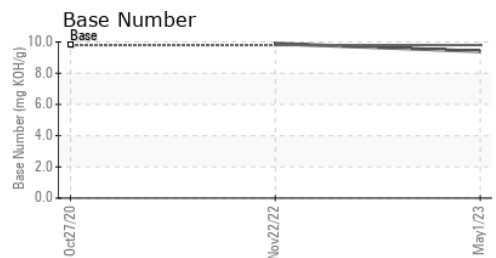
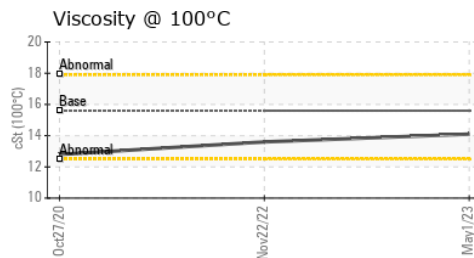
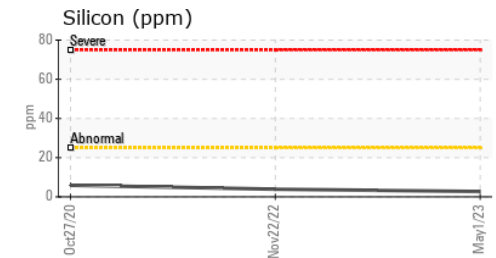
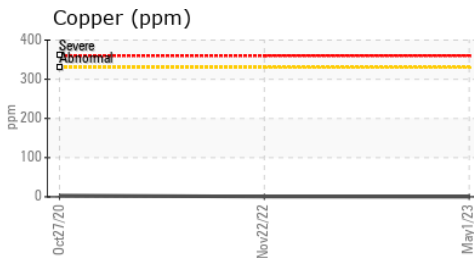
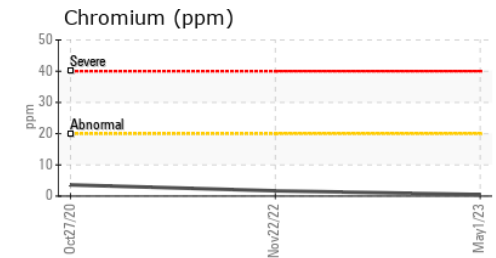
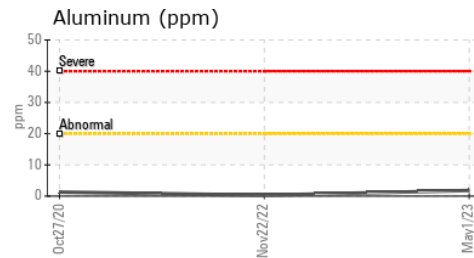
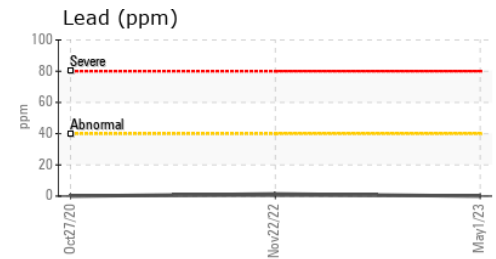
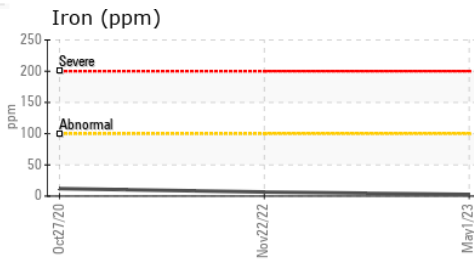
# OIL ANALYSIS REPORT



PARAMETER	method	limit/base	current	history 1	history 2
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	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	15.6	<b>14.1</b>	13.6	12.8

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0083454 **Received** : 10 Jul 2023  
**Lab Number** : 05894298 **Diagnosed** : 11 Jul 2023  
**Unique Number** : 10550108 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**ALBERT HOGOBOOM OILFIELD TRUCKING INC**  
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 US 67042  
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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)