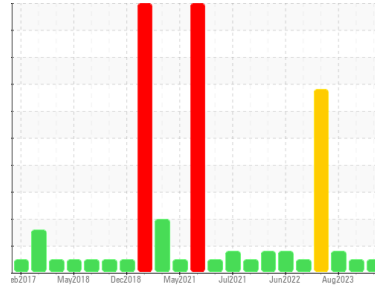




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**9132**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### 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	history1	history2
Sample Number	Client Info		<b>GFL0099591</b>	GFL0091613	GFL0084304
Sample Date	Client Info		<b>04 Dec 2023</b>	12 Sep 2023	02 Aug 2023
Machine Age	kms	Client Info	<b>489174</b>	11454	11129
Oil Age	kms	Client Info	<b>0</b>	300	500
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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 D5185(m)	>75	<b>57</b>	30	▲ 76
Chromium	ppm	ASTM D5185(m)	>5	<b>2</b>	1	4
Nickel	ppm	ASTM D5185(m)	>4	<b>1</b>	<1	1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>15	<b>9</b>	6	14
Lead	ppm	ASTM D5185(m)	>25	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>100	<b>2</b>	1	3
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	0	<b>2</b>	2	2
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>59</b>	55	58
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>869</b>	884	936
Calcium	ppm	ASTM D5185(m)	1070	<b>966</b>	1034	1043
Phosphorus	ppm	ASTM D5185(m)	1150	<b>882</b>	1003	995
Zinc	ppm	ASTM D5185(m)	1270	<b>1090</b>	1106	1161
Sulfur	ppm	ASTM D5185(m)	2060	<b>2231</b>	2366	2343
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

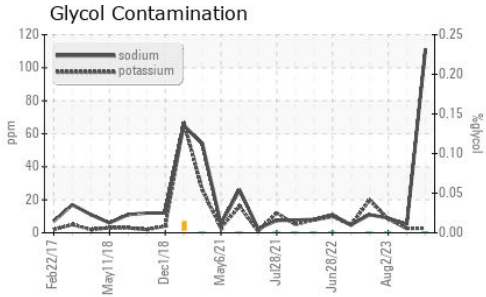
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>8</b>	12	13
Sodium	ppm	ASTM D5185(m)		<b>111</b>	5	9
Potassium	ppm	ASTM D5185(m)	>20	<b>3</b>	3	8
Glycol	%	ASTM D7922*		<b>0.0</b>	NEG	0.0

## INFRA-RED

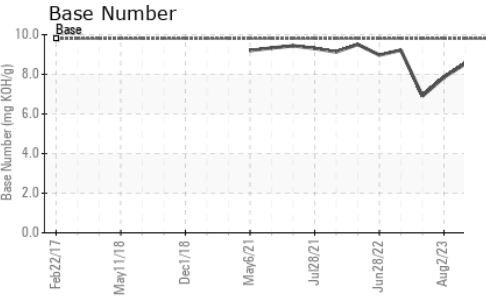
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>6	<b>2.1</b>	0.9	3
Nitration	Abs/cm	ASTM D7624*	>20	<b>13.9</b>	8.4	13.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>26.6</b>	21.1	27.8



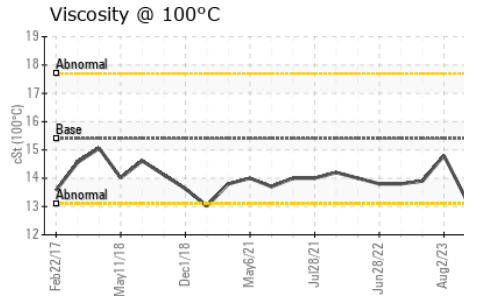
# OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>25.3</b>	17.3	21.2
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>7.64</b>	8.54	7.85

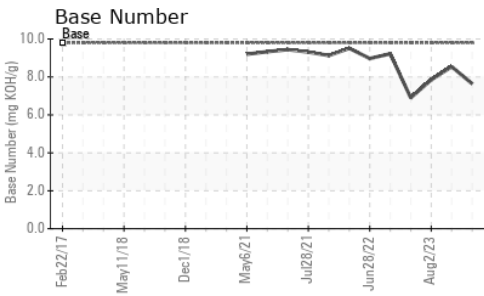
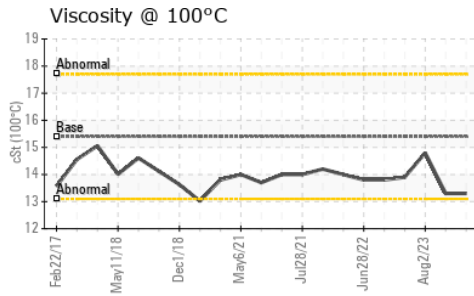
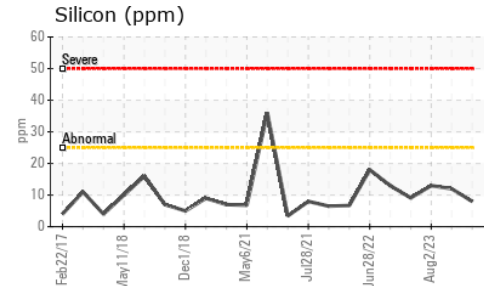
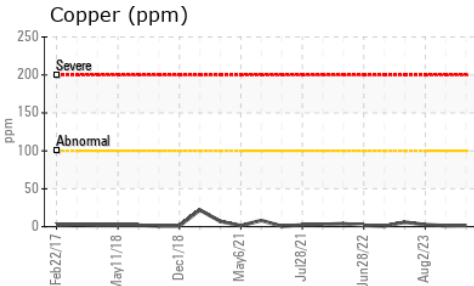
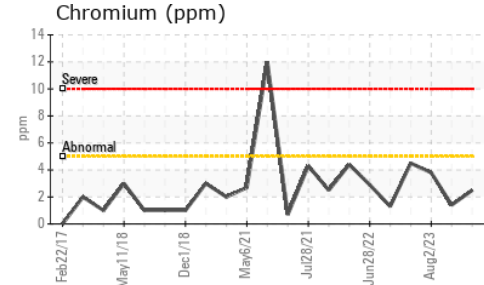
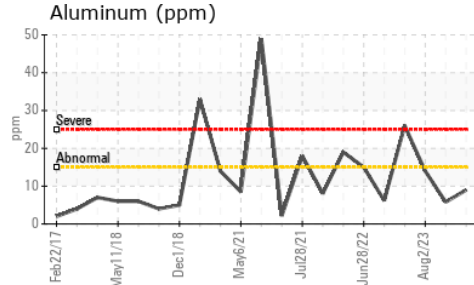
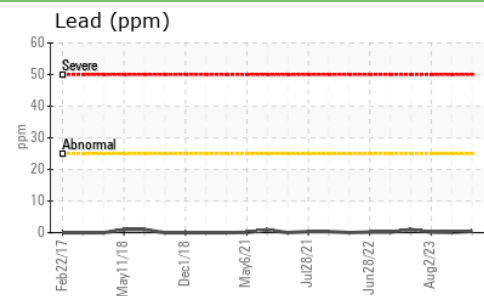
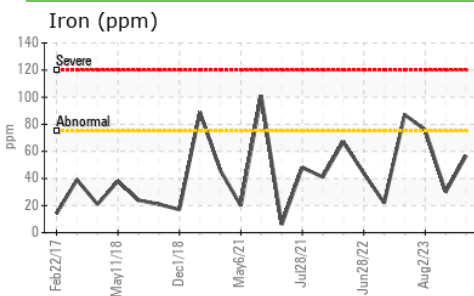


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG



FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>13.3</b>	13.3	14.8

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County  
**Sample No.** : GFL0099591 **Received** : 14 Dec 2023 220 Carmek Blvd  
**Lab Number** : 02603003 **Diagnosed** : 15 Dec 2023 Rocky View County, AB  
**Unique Number** : 5696088 **Diagnostician** : Kevin Marson CA T1X 1X1  
**Test Package** : MOB 2 ( Additional Tests: Glycol ) Contact: GFL Calgary calgarymaintenance@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

T:  
 F: (403)369-6163