



# OIL ANALYSIS REPORT

Sample Rating Trend

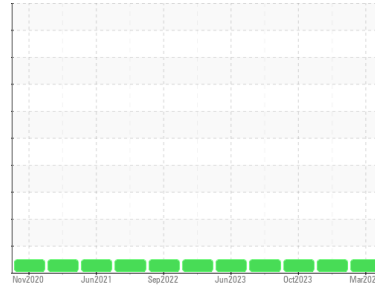
**NORMAL**



Machine Id  
**523005-7219**

Component  
**Diesel Engine**

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



## 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>GFL0058118</b>	GFL0045473	GFL0091801
Sample Date	Client Info	<b>05 Mar 2024</b>	12 Dec 2023	19 Oct 2023
Machine Age	hrs	<b>25050</b>	24736	24469
Oil Age	hrs	<b>324</b>	0	21220
Oil Changed	Client Info	<b>Not Changed</b>	Changed	Not Changed
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## 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
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >120	<b>2</b>	6	7
Chromium	ppm ASTM D5185m >20	<b>0</b>	<1	<1
Nickel	ppm ASTM D5185m >5	<b>0</b>	<1	<1
Titanium	ppm ASTM D5185m >2	<b>0</b>	<1	<1
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>&lt;1</b>	2	3
Lead	ppm ASTM D5185m >40	<b>0</b>	<1	<1
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	2	2
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>0</b>	<1	<1

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>1</b>	2	<1
Barium	ppm ASTM D5185m 0	<b>0</b>	12	0
Molybdenum	ppm ASTM D5185m 60	<b>55</b>	59	52
Manganese	ppm ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>1056</b>	956	939
Calcium	ppm ASTM D5185m 1070	<b>1141</b>	1038	964
Phosphorus	ppm ASTM D5185m 1150	<b>1046</b>	1011	888
Zinc	ppm ASTM D5185m 1270	<b>1309</b>	1224	1184
Sulfur	ppm ASTM D5185m 2060	<b>3143</b>	3385	2694

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>2</b>	4	5
Sodium	ppm ASTM D5185m	<b>1</b>	<1	3
Potassium	ppm ASTM D5185m >20	<b>0</b>	4	3

## INFRA-RED

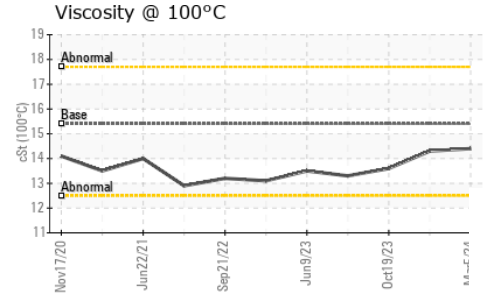
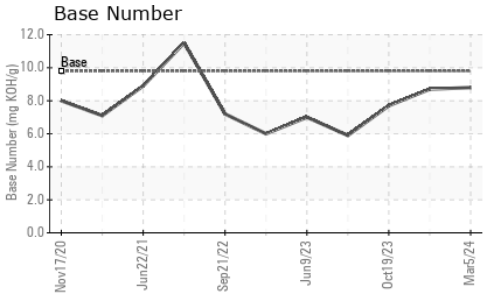
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	<b>0.3</b>	0.1	0.3
Nitration	Abs/cm *ASTM D7624 >20	<b>5.5</b>	5.3	6.9
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.0</b>	18.0	18.4

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>13.8</b>	13.6	14.4
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.8</b>	8.7	7.7



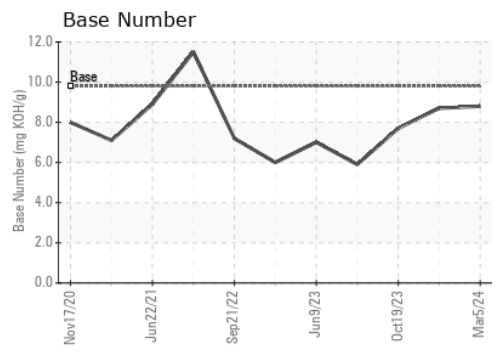
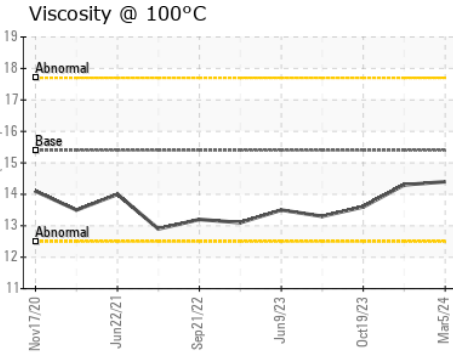
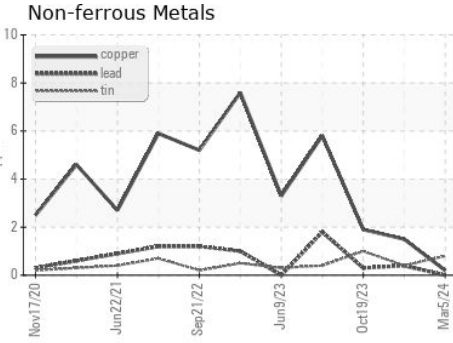
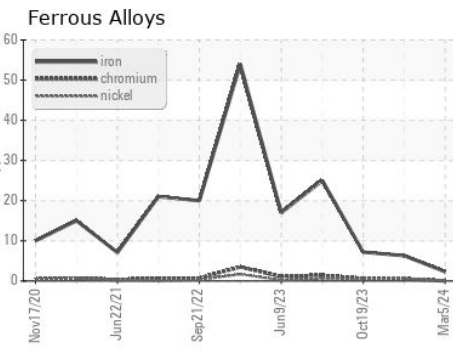
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
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	<b>14.4</b>	14.3	13.6

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0058118 **Received** : 06 Mar 2024  
**Lab Number** : **06110792** **Tested** : 07 Mar 2024  
**Unique Number** : 10914289 **Diagnosed** : 07 Mar 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 654 - Richmond Hauling**  
 11800 Lewis Road  
 Chester, VA  
 US 23831  
 Contact: Jimmy Mayes  
 jmayes@gflenv.com  
 T:  
 F:

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)