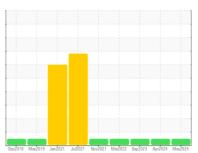


# **OIL ANALYSIS REPORT**

# Sample Rating Trend









Machine Id 9174 Component Natural Gas Engine Fluid

PETRO CANADA DURON GEO LD 15W40 (24 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

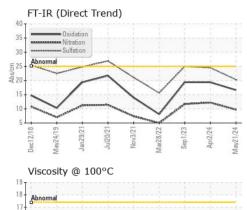
### **Fluid Condition**

The condition of the oil is acceptable for the time in service.

SAMPLE INFOR	RMATION	method				history2
Sample Number		Client Info		GFL0118900	GFL0094415	GFL0086773
Sample Date		Client Info		21 May 2024	02 Apr 2024	01 Sep 2023
Machine Age	hrs	Client Info		90563	90563	0
Oil Age	hrs	Client Info		90563	90563	0
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINA <sup>*</sup>	TION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR META	LS	method	limit/base	current	history1	history2
ron	ppm	ASTM D5185(m)	>50	16	28	46
Chromium	ppm	ASTM D5185(m)	>5	<1	2	2
Vickel	ppm	ASTM D5185(m)	>4	<1	<1	1
Titanium	ppm	ASTM D5185(m)	>5	0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>25	2	4	5
_ead	ppm	ASTM D5185(m)	>40	0	0	<1
Copper	ppm	ASTM D5185(m)	>150	<1	1	1
Γin	ppm	ASTM D5185(m)	>4	0	0	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
√anadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	50	14	7	8
Barium	ppm	ASTM D5185(m)	5	0	0	0
Molybdenum	ppm	ASTM D5185(m)	50	52	53	57
Manganese	ppm	ASTM D5185(m)	0	<1	0	1
Magnesium	ppm	ASTM D5185(m)	560	534	554	557
Calcium	ppm	ASTM D5185(m)	1510	1457	1562	1547
Phosphorus	ppm	ASTM D5185(m)	780	707	703	762
Zinc	ppm	ASTM D5185(m)	870	908	900	907
Sulfur	ppm	ASTM D5185(m)	2040	1950	1963	1967
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINA	NTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	4	4	12
Sodium	ppm	ASTM D5185(m)		4	5	6
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	1
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	9.7	12.2	11.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.3	24.5	25.0
FLUID DEGRA	ADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.6	19.4	19.4



# **OIL ANALYSIS REPORT**



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	VLITE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	Visual*	>0.1	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2

1100 Water	Joalai	VIOUUI			1120	1120
FLUID PROF	PERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.1	14.6	14.2	14.8
GRAPHS						
Iron (ppm)				Lead (ppm)		
Severe				60		
Abnormal	<u>.                                    </u>		mdd mdd			
10	1	/		20 -		
20				0		
Dec12/18 May24/19 Jan29/21	Jul20/21	Sep 1/23 Apr 2/24	May21/24	Dec12/18 May24/19 Jan29/21	Jul20/21 Nov3/21 Mar28/22	Sep1/23 Apr2/24 May21/24
ద్ద్ద్ధి Aluminum (ppn		S 4	Ma	ద్ క్లో Chromium (p	2	S A
50 T Severe	··· <b>·</b>			15	Pin)	
40 Severe				Severe		
Abnormal 20	_		E E	Abnormal		
10-	_			/	\	
4/18	Jul20/21	Sep 1/23 + Apr2/24 +	1/24	9/21	Jul20/21- Nov3/21-	Sep 1/23
Dec12/18 May24/19 Jan29/21	Jul2 Nov	Narzo/22 Sep1/23 Apr2/24	May21/24	Dec12/18 May24/19 Jan29/21	Jul20/21 Nov3/21 Mar28/22	Sep1/23 Apr2/24 May21/24
Copper (ppm)		,	!	Silicon (ppm)		
250	1			Severe		
150 Abnormal			E.	Abnormal		
100				10		_
0		8 #		0		
Dec12/18 May24/19 Jan29/21	Jul20/21	Sep 1/23 . Apr 2/24 .	May21/24	Dec12/18 May24/19 Jan29/21	Jul20/21 Nov3/21 Mar28/22	Sep1/23 Apr2/24 May21/24
Viscosity @ 100		≥	≥	Additives	2	≥
20			250	calcium		1 1 1
18 - Abnormal	1		200	SERVICE STATE	IS	
Base Abnormal			틆 150			
12			100	And the second s	China parties of the state of t	*****************
ay24/19 +	Jul20/21+	Sep 1/23 + Apr2/24 +	ay21/24	ay24/19 +	Jul20/21 - Nov3/21 -	Sep1/23 - Apr2/24 -
ec1 ay2	Jul.	arz Sep	ay2	ec1 ay2 an2	Julí Nov ar2	Sep Apri



CALA ISO 17025:2017 Accredited Laboratory

Laboratory

Lab Number : 02636921 Unique Number : 5786083

Sample No. : GFL0118900

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received : 22 May 2024

**Tested** Diagnosed

: 22 May 2024 : 22 May 2024 - Wes Davis

GFL Environmental - 222 - Sandhill SANDHILL DISPOSAL & RECYCLING DIVIS, 19 COMMERCE ROAD ORANGEVILLE, ON **CA L9W 3X5** 

Contact: GLENN COOK gcook@gflenv.com T: (519)940-4167

Test Package : MOB 1 ( Additional Tests: Visual ) 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.