WEAR CONTAMINATION **FLUID CONDITION**

NORMAL NORMAL NORMAL

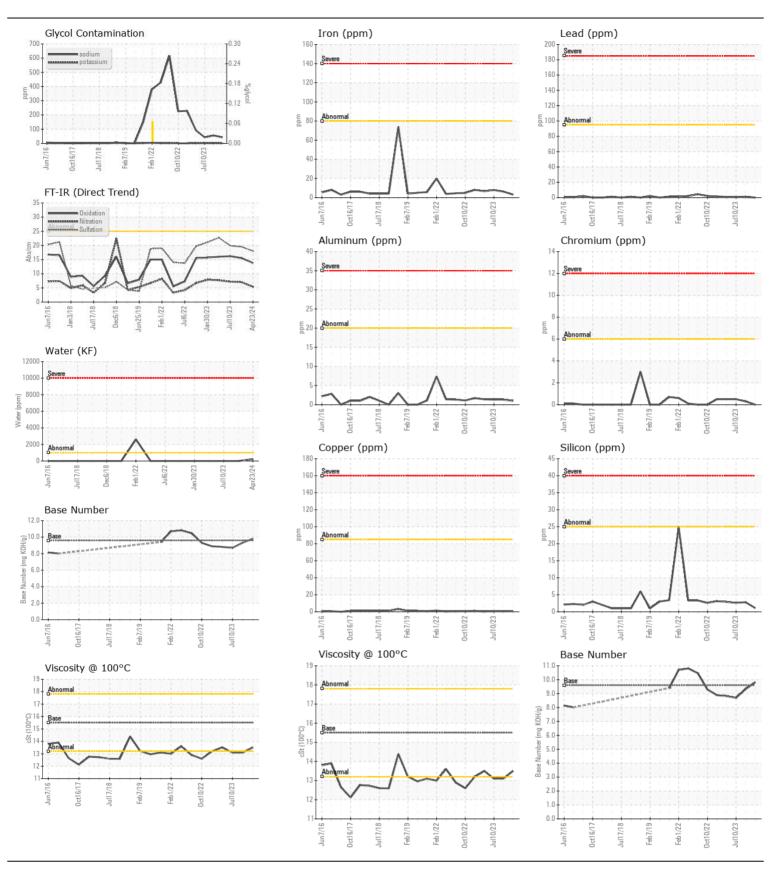
Machine Id

4487

Front Diesel Engine

PETRO CANADA DURON XL SYN BLEND 15W40 (37 LTR)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		GFL0117275	GFL0099620	GFL008427
	Sample Date		Client Info		23 Apr 2024	29 Jan 2024	10 Jul 202
	Machine Age	kms	Client Info		11391164	1134500	29591
	Oil Age	kms	Client Info		0	0	0
	Filter Age	kms	Client Info		0	0	0
	Oil Changed		Client Info		Changed	Changed	N/A
	Filter Changed Sample Status		Client Info		Changed	Changed	N/A
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185(m)	>80	3	6	8
All component wear rates are normal.	Chromium	ppm	ASTM D5185(m)	>6	0	<1	<1
	Nickel	ppm	ASTM D5185(m)	>2	0	<1	0
	Titanium	ppm	ASTM D5185(m)	>2	0	0	0
	Silver	ppm	ASTM D5185(m)	>2	0	0	0
	Aluminum	ppm	ASTM D5185(m)	>20	1	1	1
	Lead	ppm	ASTM D5185(m)	>95	0	1	<1
	Copper	ppm	ASTM D5185(m)	>85	<1	<1	<1
	Tin	ppm	ASTM D5185(m)	>9	0	<1	<1
	Vanadium	ppm	ASTM D5185(m)		0	0	0
CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>25	1	3	3
The water content is negligible. There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
	Fuel		WC Method	>4.0	<1.0	<1.0	1.9
	Water	%	ASTM D6304*	>0.1	0.021		
	ppm Water	ppm	ASTM D6304*	>1000	217		
	Glycol	%	ASTM D7922*		0.0	NEG	NEG
	Soot %	%	ASTM D7844*		0	0.1	0.2
	Nitration	Abs/cm	ASTM D7624*	>20	5.4	7.0	7.2
	Sulfation	Abs/.1mm	ASTM D7415*	>30	18.0	19.5	19.9
	Emulsified Water	scalar	Visual*	>0.1	.2%	NEG	NEG
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)		42	55	42
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Boron	ppm	ASTM D5185(m)	1	3	3	2
	Barium	ppm	ASTM D5185(m)		0	0	0
	Molybdenum	ppm	ASTM D5185(m)	60	57	57	57
	Manganese	ppm	ASTM D5185(m)	1	0	0	<1
	Magnesium	ppm	ASTM D5185(m)	1010	914	913	944
	Calcium	ppm	ASTM D5185(m)	1070	1001	1047	1031
	Phosphorus	ppm	ASTM D5185(m)	1150	975	967	1013
	Zinc	ppm	ASTM D5185(m)	1270	1115	1112	1121
	Sulfur	ppm	ASTM D5185(m)	2060	2474	2665	2476
	Oxidation	Abs/.1mm	ASTM D7414*	>25	13.8	15.5	16.2
	Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	9.81	9.32	8.69
							13.1





CALA ISO 17025:2017 Accredited

Laboratory

Sample No. **Lab Number**

Laboratory

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County : GFL0117275

: 02632516 Unique Number : 5773669 Test Package : MOB 2 (Additional Tests: Glycol, KF)

Received **Tested** Diagnosed

:01 May 2024 : 02 May 2024

: 02 May 2024 - Wes Davis

Rocky View County, AB **CA T1X 1X1** Contact: GFL Calgary calgarymaintenance@gflenv.com

F: (403)369-6163

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:

220 Carmek Blvd