



FREIGHTLINER 820061 Diesel Engine

PETRO CANADA DURON HP 15W40 (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		GFL0122272		
	Sample Date		Client Info		14 May 2024		
	Machine Age	kms	Client Info		12943		
	Oil Age	kms	Client Info		222		
	Filter Age	kms	Client Info		222		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				NORMAL		
WEAR	Iron	ppm	ASTM D5185(m)	>80	29		
Metal levels are typical for a new component breaking in.	Chromium	ppm	ASTM D5185(m)	>5	<1		
	Nickel	ppm	ASTM D5185(m)		<1		
	Titanium	ppm	ASTM D5185(m)		0		
	Silver	ppm	ASTM D5185(m)	>3	0		
	Aluminum	ppm	ASTM D5185(m)	>30	9		
	Lead	ppm	ASTM D5185(m)	>30	0		
	Copper	ppm	ASTM D5185(m)	>150	4		
	Tin	ppm	ASTM D5185(m)	>5	0		
	Vanadium	ppm	ASTM D5185(m)		0		
CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>20	3		
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185(m)	>20	9		
	Fuel		WC Method	>5	<1.0		
	Water		WC Method	>0.2	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	ASTM D7844*	>3	0.2		
	Nitration	Abs/cm	ASTM D7624*	>20	7.6		
	Sulfation	Abs/.1mm	ASTM D7415*	>30	19.1		
	Emulsified Water	scalar	Visual*	>0.2	NEG		
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)		2		
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185(m)	0	3		
	Barium	ppm	ASTM D5185(m)	0	0		
	Molybdenum	ppm	ASTM D5185(m)	60	60		
	Manganese	ppm	ASTM D5185(m)	0	<1		
	Magnesium	ppm	ASTM D5185(m)	1010	983		
	Calcium	ppm	ASTM D5185(m)	1070	1059		
	Phosphorus	ppm	ASTM D5185(m)	1150	961		
	Zinc	ppm	ASTM D5185(m)	1270	1166		
	Sulfur	ppm	ASTM D5185(m)	2060	2443		

Oxidation

Visc @ 100°C cSt

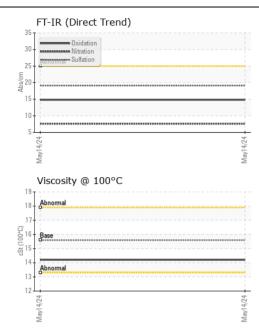
Abs/.1mm ASTM D7414* >25

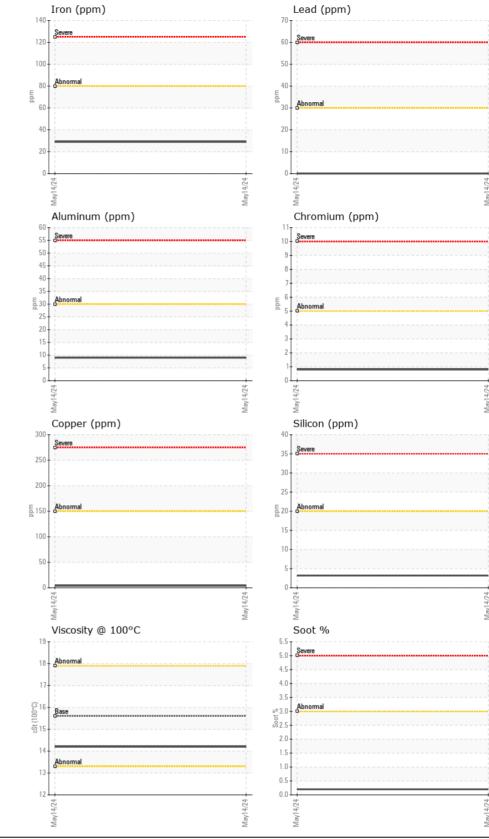
ASTM D7279(m) 15.6

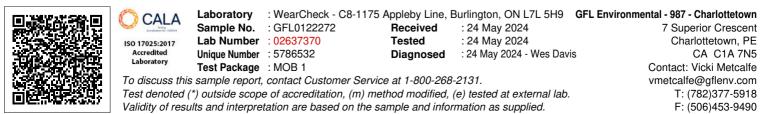
Contact/Location: Vicki Metcalfe - GFL987

14.8

14.2







Contact/Location: Vicki Metcalfe - GFL987 Page 2 of 2