

## **OIL ANALYSIS REPORT**

#### Sample Rating Trend

## NORMAL

#### Machine Id

# 529137-SW7946 FREIGHTLINER CASCADIA 125

**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 INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0115313	GFL0066605	GFL0066602
Sample Date		Client Info		21 Apr 2024	30 Dec 2023	16 Dec 2023
Machine Age	mls	Client Info		0	0	0
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	12	7	8
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	2	2	7
Lead	ppm	ASTM D5185m	>30	0	<1	0
Copper	ppm	ASTM D5185m	>150	61	21	13
Tin	ppm	ASTM D5185m	>5	1	<1	1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	<1	<1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	2	0	0
Barium	ppm	ASTM D5185m	0	1	8	0
Molybdenum	ppm	ASTM D5185m	60	55	55	52
Manganese	ppm	ASTM D5185m	0	2	<1	<1
Magnesium	ppm	ASTM D5185m	1010	27	15	19
Calcium	ppm	ASTM D5185m	1070	2567	2510	2397
Phosphorus	ppm	ASTM D5185m	1150	1063	992	1110
Zinc	ppm	ASTM D5185m	1270	1295	1219	1306
Sulfur	ppm	ASTM D5185m	2060	3172	3326	3397
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	6	7	21
Sodium	ppm	ASTM D5185m		2	0	2
Potassium	ppm	ASTM D5185m	>20	7	4	6
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.2	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.4	5.5	5.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8	15.5	14.7
FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.7	8.7	8.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.3	7.6	7.9



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Oxidation	1		VISUAL		method	limit/base	current	history1	history2
- Nitration			White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Sulfation		-	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
		a bar barranda da da da da	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
-	A R & WAYARDOW BURNESS BAR		Silt	scalar	*Visual	NONE	NONE	NONE	NONE
			Debris	scalar	*Visual	NONE	NONE	NONE	A MODER
C2	(7)	4	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Dec16/23	Dec30/23	Apr21/24	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
De	De	Aţ	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Base Number			Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Base			Free Water	scalar	*Visual		NEG	NEG	NEG
			FLUID PROPE		method	limit/base	current	history1	history2
			Visc @ 100°C	cSt	ASTM D445	15.4	15.5	14.8	14.7
			GRAPHS						
			Ferrous Alloys						
Dec16/23	Dec30/23 -	NCI 10-W	10- iron chromium nickel		/				
Viscosity @ 100°C			8-	_/	/				
[]			۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲						
Abnormal			4						
Page			2-						
Base			0			M822221			
			Dec16/23	Dec30/23 -		Apr21/24 -			
Abnormal	1		Dec1	Dec3		Apr2			
	-		Non-ferrous Metal	s					
Dec16/23	Dec30/23	1010	70 copper						
D	D	ν	60 - management lead			/			
			50-		/				
			E 40 30		/				
			30-	/	/				
			20	_					
			10						
			10						
			0						
				c30/23		n21/24			
			Dec16/23	Dec30/23		Apr21/24			
			0	De		4	Base Number		
			Viscosity @ 100°C	De		10.0	Base		
			Uiscosity @ 100°C	De		10.0	Base		
			Uiscosity @ 100°C	De		10.0	Base		
			Uiscosity @ 100°C	De		10.0 (0, 8.0 Hoy Mg 6.0	Base		
			Viscosity @ 100°C	De		10.0 (6)HOX Buil Jag	Base		
			Uiscosity @ 100°C	De		10.0 (0, 8.0 Hoy Mg 6.0	Base		
			Viscosity @ 100°C	De		10.0 (PHOX But argumy see 2.0	Base		
			Viscosity @ 100°C			10.0 (0)HOX Bul Page Munut Bage 2.0 0.0	Base	23	24
			Viscosity @ 100°C			10.0 (0)HOX Bul Page Munut Bage 2.0 0.0	Base	ec30/23	101
			Viscosity @ 100°C	De		10.0 (PHOX But argumy see 2.0	Base	Deci30/23	An71/24
2666-3679-0.121	Lab		Viscosity @ 100°C	Dec30/23 Dc		10.0 (b)HOX bul) Japane HZ/12/Jul HX 27513	Base	ronmental - 980	- Northside Hauling
	Sam Sam	oratory 1ple No.	Viscosity @ 100°C	1 Madiso Recei	ived : 22	10.0 (0)HOX B00 HOX B00 HOX HOX B00 HOX HOX HOX HOX HOX HOX HOX HOX HO	Base	ronmental - 980	- Northside Hauling
	Sam Lab	oratory ıple No. Number	Viscosity @ 100°C	1 Madiso Recei Teste	ived : 22 d : 23	10.0 (0)HOX Bull Jangury 4.0 (0)HOX BULL 4.0 (0)HOX BU	GFL Envir	ronmental - 980	<b>- Northside Haulin</b> lle Ridge Park D Houston, Τλ
	Sam Lab	oratory nple No. Number ue Number	Viscosity @ 100°C	1 Madiso Recei	ived : 22 d : 23	10.0 (0)HOX B00 HOX B00 HOX HOX B00 HOX HOX HOX HOX HOX HOX HOX HOX HO	GFL Envir	ronmental - 980 1820 Cand	- Northside Hauling Ile Ridge Park D Houston, TX US 77073
	Sam Lab Unique ficate L2367 Test	oratory nple No. Number ue Number t Package	Viscosity @ 100°C	1 Madiso Recei Teste Diagr	ived : 22 d : 23 nosed : 24	10.0 (PHO) Bull January (PHO) Bu	GFL Envir	r <b>onmental - 980</b> 1820 Cand Conta	<b>- Northside Haulin</b> lle Ridge Park D Houston, Τλ
To a	icate L2367 Test	oratory nple No. Number ue Number t Package ple report, d	Viscosity @ 100°C	1 Madiso Recei Teste Diagr	ived : 22 id : 23 nosed : 24 800-237-1369	10.0 (0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(	GFL Envir	r <b>onmental - 980</b> 1820 Cand Conta	lle Ridge Park Houston, US 77( ct: Edwin Coll

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