

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

FREIGHTLINER 523085

Component Diesel Engine

Fluid PETRO CANADA DURON HP 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 condition of the oil is acceptable for the time in service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0122248		
Sample Date		Client Info		10 Jun 2024		
Machine Age	hrs	Client Info		20023		
Oil Age	hrs	Client Info		681		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>80	33		
Chromium	ppm	ASTM D5185(m)	>5	1		
Nickel	ppm	ASTM D5185(m)	>2	، <1		
Titanium	ppm	ASTM D5185(m)	~~	0		
Silver	ppm	ASTM D5185(m)	>3	۰ <1		
Aluminum	ppm	ASTM D5185(m)	>30	2		
Lead	ppm	ASTM D5185(m)	>30	4		
Copper	ppm	ASTM D5185(m)	>150	1		
Tin	ppm	ASTM D5185(m)	>5	0		
Antimony	ppm	ASTM D5185(m)	20	0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES	ppm	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	5		
Barium	ppm	ASTM D5185(m)	0	0		
Molybdenum	ppm	ASTM D5185(m)	60	62		
Manganese	ppm	ASTM D5185(m)	0	<1		
Magnesium	ppm	ASTM D5185(m)	1010	1005		
Calcium	ppm	ASTM D5185(m)	1070	1166		
Phosphorus	ppm	ASTM D5185(m)	1150	1021		
Zinc	ppm	ASTM D5185(m)	1270	1274		
Sulfur	ppm	ASTM D5185(m)	2060	2406		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINAN		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	5		
Sodium	ppm	ASTM D5185(m)	00	4		
Potassium	ppm	ASTM D5185(m)	>20	<1		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.1		
Nitration	Abs/cm	ASTM D7624*	>20	9.2		
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.4		



3

30

25 4ps/cm 20

10

150

140 - Abnomma 130 - Base 30 - Base 30 - Abnomma

80

150

140 -130 -(2) 120 - Bas 35 110 -

100 90 - Ab 80

FT-IR (Direct Trend)

Oxidation

Nitration Sulfation

Viscosity @ 40°C

Viscosity @ 40°C

Abnormal

Abnormal

OIL ANALYSIS REPORT

12018 820111	DATION	method	limit/base	current	history1	histo
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.5		
VISUAL		method	limit/base	current	history1	histo
White Metal	scalar	Visual*	NONE	VLITE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML		
Emulsified Water	scalar	Visual*	>0.2	NEG		
Free Water	scalar	Visual*		NEG		
FLUID PROPE	RTIES	method	limit/base	current	history1	histo
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	105		
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	13.8		
Viscosity Index (VI)	Scale	ASTM D2270*	139	131		
GRAPHS						
Iron (ppm)				Lead (ppm)		
⁰ Severe			80	Smillion		
Abnormal			특.40			
io			20	U		
0			- (
Jun 10/24			Jun 10/24	Jun 10/24		
unf			Jun	μη		
Aluminum (ppm)				Chromium (p	pm)	
⁰ Severe			15			
0 - Abnormal			10 E) - O		
0-			d	Abnormal		
0				, L <u></u>		
24			24	4		
10/			10/2	10/2		
Jun 10/24			Jun10/24	Jun 10/24		
Copper (ppm)				Silicon (ppm)		
Copper (ppm)			40	Silicon (ppm)		
Copper (ppm)			40	Silicon (ppm)		
Copper (ppm)			40	Silicon (ppm)		
Copper (ppm)			40 30 톨 20 10	Silicon (ppm)		
Copper (ppm)			40 30 톨 20 10	Silicon (ppm)		
Copper (ppm)			40 30 <u>토</u> 20 10	Abnormal		
Copper (ppm)			40 30 톨 20 10	Soot %		
Copper (ppm)			40 30 <u>6</u> 20 10 4700 10 6.0	Soot %		
Copper (ppm)			40 30 <u>6</u> 20 10 4700 10 6.0	Soot %		
Copper (ppm)			4(30 <u>6</u> 20 10 700 700	Soot %		
Copper (ppm)			40 30 <u>6</u> 20 10 4700 10 6.0	Solicon (ppm)		

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 987 - Charlottetown CALA Sample No. : GFL0122248 Received : 28 Jun 2024 7 Superior Crescent Lab Number : 02644521 Tested : 28 Jun 2024 Charlottetown, PE ISO 17025:2017 Accredited Laboratory CA C1A 7N5 Unique Number : 5802060 Diagnosed : 28 Jun 2024 - Wes Davis Test Package : MOB 1 (Additional Tests: KV40, VI, Visual) Contact: Vicki Metcalfe vmetcalfe@gflenv.com 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. T: (782)377-5918 Validity of results and interpretation are based on the sample and information as supplied. F: (506)453-9490

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Contact/Location: Vicki Metcalfe - GFL987