

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

FREIGHTLINER 862537

Component Diesel Engine Fluid SAE 5W30 (--- 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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0085522		
Sample Date		Client Info		29 May 2024		
Machine Age	kms	Client Info		0		
Oil Age	kms	Client Info		0		
Oil Changed		Client Info		N/A		
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	17		
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	0		
Aluminum	ppm	ASTM D5185(m)	>30	4		
Lead	ppm	ASTM D5185(m)	>30	0		
Copper	ppm	ASTM D5185(m)	>150	22		
Tin	ppm	ASTM D5185(m)	>5	0		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		85		
Barium	ppm	ASTM D5185(m)		0		
Molybdenum	ppm	ASTM D5185(m)		77		
Manganese	ppm	ASTM D5185(m)		<1		
Magnesium	ppm	ASTM D5185(m)		578		
Calcium	ppm	ASTM D5185(m)		1339		
Phosphorus	ppm	ASTM D5185(m)		716		
Zinc	ppm	ASTM D5185(m)		837		
Sulfur	ppm	ASTM D5185(m)		2351		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	7		
Sodium	ppm	ASTM D5185(m)		4		
Potassium	ppm	ASTM D5185(m)	>20	1		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0		
Nitration	Abs/cm	ASTM D7624*	>20	7.7		
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.5		



35

30

3.0

(B/Number (mg KOH/g)) 1.5 1.0

Pice 0.5 0.0 May29/24

> 75· Abnormal

70

> 50 Abnormal 45 Mav29/24

14 13 Abnormal

(10°C) 11 (10°C) 11 (10°C) 11 Base Abnormal

75 Abnormal

70

65 (40°C) 25 25 Base

F

45 50

OIL ANALYSIS REPORT

T-IR (Direct Trend)	FLUID DEGRAD	<u>A LION</u>	method				history2
Oxidation	Oxidation	Abs/.1mm	ASTM D7414*	>25	11.6		
amorman Sulfation	Acid Number (AN)		ASTM D974*		2.78		
	Base Number (BN)	mg KOH/g	ASTM D2896*		5.78		
	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	Visual*	NONE	NONE		
- 124	Yellow Metal	scalar	Visual*	NONE	NONE		
May29/24	Precipitate	scalar	Visual*	NONE	NONE		
	Silt	scalar	Visual*	NONE	LIGHT		
cid Number	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		
May29/24	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
May29/24	Visc @ 40°C	cSt	ASTM D7279(m)	60.0	55.2		
	Visc @ 100°C	cSt	ASTM D7279(m)	11.0	9.8		
iscosity @ 40°C	Viscosity Index (VI)	Scale	ASTM D2270*	177	164		
bnormal	GRAPHS						
	Iron (ppm)				Lead (ppm)		
lase	150 Severe				80 60 Severe		
	Abnormal			mdd			
N	50				20		
Abnormal	04			/24	124		
May29/24	May29/2.			May29/24	/lay29		
Ma	Z Aluminum (ppm)			2	Chromium (p	om)	
/iscosity @ 100°C	60 Severe			, -	¹⁵ T		
				ε	10 - Severe		
Abnormal	E 40 Abnormal			mdd	5 - Abnormal		
Dana	0			-			
3856	-2/62/v			May29/24	y29/2		
Abnormal	Ma			Ma	May		
	Copper (ppm)				Silicon (ppm) ⁴⁰ ⊺ Severe		
9 C ac 19	200				30		
	Abnormal			mqq			
	0				10		
íiscosity @ 40°C	29/24			May29/24	29/24		
\bnomal	May			Mayi	Mayi		
	Viscosity @ 100°C			(B/)	Base Number		
Base	G 14 Abnormal			HOX WB KOH/d)			
	G12 Base Base Base			u ja	H.U +		
	in the second se			Number	2.0		
Abnormal	54 124			Base N	1.0 47		
	May29			May29	Vlay29		
Laboratory Sample No. Laboratory Sample No. Laboratory Unique Number Test Package To discuss this sample report, Test denoted (*) outside scop	: 5800382 : MOB 2 (Additional Te	Recei Teste Diagn sts: KV40	ved : 19 d : 20 osed : 20 0, TAN Auto	Jun 2024 Jun 2024 Jun 2024 - V , TAN Man,	Wes Davis VI, Visual)		ississauga, CA L5J Sehshad Sa

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