

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

FREIGHTLINER 635850

Component Gasoline 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 condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0085538	PC0085554	
Sample Date		Client Info		19 Mar 2024	17 Jan 2024	
Machine Age	kms	Client Info		95890	91872	
Oil Age	kms	Client Info		8000	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>150	17	4	
Chromium	ppm	ASTM D5185(m)	>20	0	0	
Nickel	ppm	ASTM D5185(m)	>5	0	<1	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)	>2	0	0	
Aluminum	ppm	ASTM D5185(m)	>40	2	2	
Lead	ppm	ASTM D5185(m)	>50	0	<1	
Copper	ppm	ASTM D5185(m)	>155	16	11	
Tin	ppm	ASTM D5185(m)	>10	0	0	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium	ppm	ASTM D5185(m)		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		42	79	
Barium	ppm	ASTM D5185(m)		0	0	
Molybdenum	ppm	ASTM D5185(m)		67	67	
Manganese	ppm	ASTM D5185(m)		<1	0	
Magnesium	ppm	ASTM D5185(m)		605	635	
Calcium	ppm	ASTM D5185(m)		1141	1185	
Phosphorus	ppm	ASTM D5185(m)		650	736	
Zinc	ppm	ASTM D5185(m)		814	840	
Sulfur	ppm	ASTM D5185(m)		2183	2432	
Lithium	ppm	ASTM D5185(m)		<1	<1	
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>30	16	24	
Sodium	ppm	ASTM D5185(m)	>400	2	2	
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	0	
Nitration	Abs/cm	ASTM D7624*	>20	12.0	8.7	
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.7	19.0	



35

30

75 Abnormal

70

(0.00) (0

> 50 Abnormal

> 14 13 - Abnormal

() 11 33 10 Abnormal

Jan 17/24

Abnormal

70

Janl

FT-IR (Direct Trend)

Oxidation

Nitration Sulfation

Viscosity @ 40°C

Viscosity @ 100°C

Viscosity @ 40°C

OIL ANALYSIS REPORT

FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	17.9	14.3	
Base Number (BN)	mg KOH/g	ASTM D2896*		6.06	7.74	
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	VLITE	NONE	
			NONE			
Silt		Visual*			NONE	
Debris	scalar	Visual*	NONE	NONE	NONE	
Sand/Dirt	scalar	Visual*	NONE	VLITE	VLITE	
Appearance	scalar	Visual*	NORML	NORML	NORML	
Odor	scalar	Visual*	NORML	NORML	NORML	
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	
Free Water	scalar	Visual*		NEG	NEG	
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
		ASTM D7279(m)	60.0	58.5	57.0	
-		. ,		10.0		
	Scale	,		158	163	
				Lead (ppm)		
600 L				Severe		
400 - Severe				1 9		
200 - Abnormal				Abnormal		
0			0			
17/24			19/24	17/24		
Jan			Mai			
Aluminum (ppm)			60		om)	
				Smiller		
a 50 Abnormal			L L L L L L L L L L L L L L L L L L L	A		
			20	- 0		
24 0			24	24		
an 17/			flar19/	an17/		
Conner (nnm)			2	Silicon (nnm)		
300 Severe			80			
			60			
da 🖣				Abnormal		
0			20			
17/24				7/24		
Jan			Mar	Jan		
Viscosity @ 100°C	2		(B	Base Number		
Abnormal			Hoy 6.0			
212- Base 310- Abnormal			80.U			
			ag 4.0	-		
ಕ್ಷ 10 - Abnormal				L.,		
8			4 0			
8			ar19/24	n17/2		
8 8 4 4 10 10 10 10 10 10 10 10 10 10 10 10 10			Mar19/24	Jan 17/24		
Jan 17/24	5 Anniah	Line Rudia	Mar19/	Jan17//		
: WearCheck - C8-117			gton, ON L7L	Jan17//		
Jan 17/24	5 Appleby Recei Teste	ved : 01	Mar19/	Jan17//	2900 ST	UPS CANAD EELES AVE ONCORD, C
: WearCheck - C8-117 : PC0085538 r : 02632534 r : 5773687	Recei Teste Diagn	ved : 01 d : 02 losed : 02	gton, ON L7L May 2024	_ 5H9	2900 ST C	EELES AVE ONCORD, C CA L4K 3
: WearCheck - C8-117: : PC0085538 r : 02632534 r : 5773687 e : MOB 2 (Additional Te	Recei Teste Diagn ests: KV4	ved : 01 d : 02 iosed : 02 0, VI) : 02	gton, ON L7L May 2024 2 May 2024 May 2024 - W	_ 5H9	2900 ST C	EELES AVE
: WearCheck - C8-117 : PC0085538 r : 02632534 r : 5773687	Recei Teste Diagn ests: KV4 ice at 1-8	ved : 01 d : 02 losed : 02 0, VI) 00-268-213	gton, ON L7L May 2024 2 May 2024 May 2024 - W 7.	- 5H9 les Davis	2900 ST C	EELES AVE ONCORD, C CA L4K 3
	Base Number (BN) VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPE Visc @ 40°C Visc @ 100°C Viscosity Index (VI) GRAPHS Iron (ppm) Muminum (ppm) Copper (ppm) Severe Abnormal Copper (ppm) Severe Copper (ppm) Copper (ppm) Severe Copper (ppm) Severe Copper (ppm) Copper (ppm)	Base Number (BN) mg KOHg VISUAL White Metal scalar Yellow Metal scalar Precipitate scalar Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Codor scalar Free Water scalar Free Water scalar FLUID PROPERTIES Visc @ 40°C cSt Visc @ 100°C cSt Viscosity Index (VI) Scale GRAPHS Iron (ppm) M M M M M M M M M M M M M	Base Number (BN) mg KOHg ASTM D2896* VISUAL method White Metal scalar Visual* Precipitate scalar Visual* Precipitate scalar Visual* Debris scalar Visual* Debris scalar Visual* Sand/Dirt scalar Visual* Appearance scalar Visual* Codor scalar Visual* Free Water scalar Visual* FLUID PROPERTIES method Visc @ 40°C cSt ASTM D7279(m) Viscosity Index (VI) Scale ASTM D7279(m) Viscosity Index (VI) Scale ASTM D2270* GRAPHS Iron (ppm) Mammal	Base Number (BN) mg KOHg ASTM D2896" VISUAL method limit/base White Metal scalar Visual* NONE Yellow Metal scalar Visual* NONE Precipitate scalar Visual* NONE Silt scalar Visual* NONE Debris scalar Visual* NONE Sand/Dirt scalar Visual* NONE Appearance scalar Visual* NORML Odor scalar Visual* NORML Codor scalar Visual* NORML Emulsified Water scalar Visual* >0.2 Free Water scalar Visual* >0.2 Visc @ 40°C cSt ASTM D7279(m) 60.0 Visc @ 100°C cSt ASTM D7279(m) 60.0 Viscosity Index (VI) Scale ASTM D7279(m) 11.0 Viscosity Index (VI) Scale ASTM D7279(m) 60.0 GRAPHS fuminum (ppm) fuminum fuminum fuminum Mod <td>Base Number (BN) mg KOHig ASTM D2896' 6.06 VISUAL method limit/base current White Metal scalar Visual* NONE VLITE Yellow Metal scalar Visual* NONE NONE Precipitate scalar Visual* NONE NONE Sitt scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Appearance scalar Visual* NORML NORML Odor scalar Visual* NORML NORML Codor scalar Visual* NORML NORML Odor scalar Visual* NORML NORML Codor scalar Visual* NORML NORML Visual* NORML NORML NORML NORML Visual* NORML NORML NORML NORML Visual* Scalar Visual* NOE NEG Fluit Precevate scalar Scalar None None</td> <td>Base Number (BN) mg KOHg ASTM D2296" 6.06 7.74 VISUAL method limit/base current history1 White Metal scalar Visual* NONE VLITE NONE Yellow Metal scalar Visual* NONE NONE NONE NONE Precipitate scalar Visual* NONE NONE NONE NONE Debris scalar Visual* NONE NONE NONE NONE Sand/Dirt scalar Visual* NORML NORML NORML NORML Odor scalar Visual* NORML NORML NORML NORML Odor scalar Visual* NORML NORML NORML NORML Emulsified Water scalar Visual* NOE NEG NEG NEG Visc @ 40°C cSt ASIM D22701 177 158 163 GRAPHS Iron (ppm) fill <td< td=""></td<></td>	Base Number (BN) mg KOHig ASTM D2896' 6.06 VISUAL method limit/base current White Metal scalar Visual* NONE VLITE Yellow Metal scalar Visual* NONE NONE Precipitate scalar Visual* NONE NONE Sitt scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Appearance scalar Visual* NORML NORML Odor scalar Visual* NORML NORML Codor scalar Visual* NORML NORML Odor scalar Visual* NORML NORML Codor scalar Visual* NORML NORML Visual* NORML NORML NORML NORML Visual* NORML NORML NORML NORML Visual* Scalar Visual* NOE NEG Fluit Precevate scalar Scalar None None	Base Number (BN) mg KOHg ASTM D2296" 6.06 7.74 VISUAL method limit/base current history1 White Metal scalar Visual* NONE VLITE NONE Yellow Metal scalar Visual* NONE NONE NONE NONE Precipitate scalar Visual* NONE NONE NONE NONE Debris scalar Visual* NONE NONE NONE NONE Sand/Dirt scalar Visual* NORML NORML NORML NORML Odor scalar Visual* NORML NORML NORML NORML Odor scalar Visual* NORML NORML NORML NORML Emulsified Water scalar Visual* NOE NEG NEG NEG Visc @ 40°C cSt ASIM D22701 177 158 163 GRAPHS Iron (ppm) fill <td< td=""></td<>

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