

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

FREIGHTLINER 06-5395

Component

Diesel Engine

DIESEL ENGINE OIL SAE 40 (--- GAL)

Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm.

All component wear rates are normal.

Contamination

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the

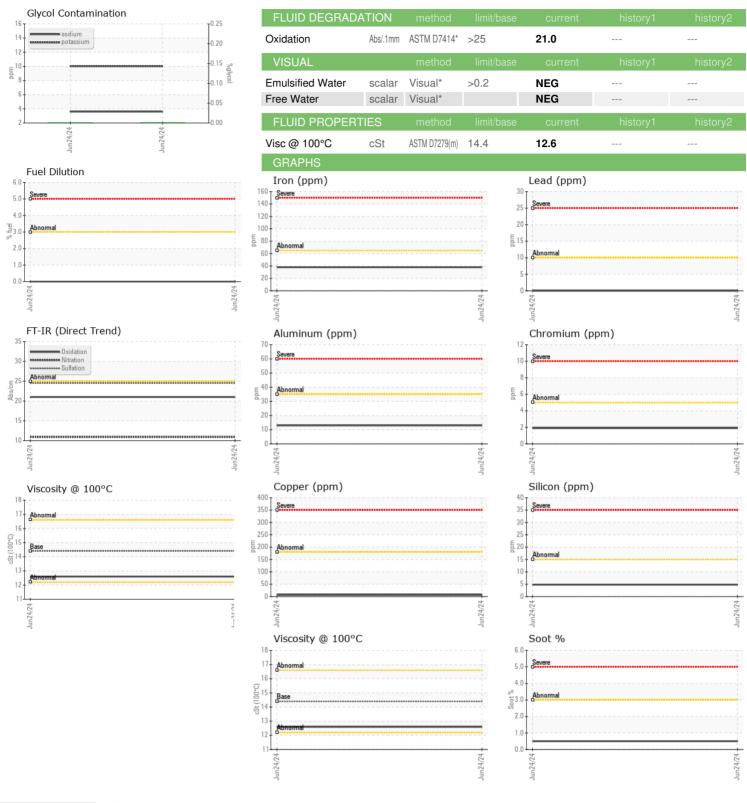
Fluid Condition

The condition of the oil is acceptable for the time in service.

Sample Number					Jun 2024		
Sample Number Client Info PP	CAMPLE INFORM	MATION		lineit/lenen		المراجعة المراجعة	histom O
Sample Date Client Info 24 Jun 2024 Machine Age hrs Client Info 10815		IATION		ilmit/base			nistory2
Machine Age hrs Client Info 10815 Oil Age hrs Client Info 700 Oil Changed Client Info Changed Sample Status NORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >55 2 Nickel ppm ASTM D5185(m) >5 2 Silver ppm ASTM D5185(m) >2 <1							
Oil Age hrs Client Info 700							
Contamination	-						
Sample Status	-	hrs					
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG			Client Info				
Water WC Method >0.2 NEG	Sample Status				NORMAL		
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >65 38	CONTAMINATION	1	method	limit/base	current	history1	history2
Iron	Water		WC Method	>0.2	NEG		
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185(m)	>65	38		
Titanium	Chromium	ppm	ASTM D5185(m)	>5	2		
Silver	Nickel	ppm	ASTM D5185(m)	>3	<1		
Aluminum	Titanium	ppm	ASTM D5185(m)	>5	<1		
Lead	Silver	ppm	ASTM D5185(m)	>2	<1		
Lead	Aluminum		ASTM D5185(m)	>35	13		
Tin	Lead	ppm	ASTM D5185(m)	>10	0		
Antimony	Copper	ppm	ASTM D5185(m)	>180	7		
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) 250 14 Barium ppm ASTM D5185(m) 10 0 Molybdenum ppm ASTM D5185(m) 100 83 Manganese ppm ASTM D5185(m) 450 60 Magnesium ppm ASTM D5185(m) 450 60 Phosphorus ppm ASTM D5185(m) 1150 976 Zinc ppm ASTM D5185(m) 1350 1145 Sulfur ppm ASTM D5185(m) 4250 2716	Tin	ppm	ASTM D5185(m)	>8	0		
Beryllium	Antimony	ppm	ASTM D5185(m)	>35	0		
Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 250 14 Barium ppm ASTM D5185(m) 10 0 Molybdenum ppm ASTM D5185(m) 100 83 Manganese ppm ASTM D5185(m) 450 60 Magnesium ppm ASTM D5185(m) 450 60 Calcium ppm ASTM D5185(m) 3000 2060 Phosphorus ppm ASTM D5185(m) 1150 976 Zinc ppm ASTM D5185(m) 1350 1145 Sulfur ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current <td>Vanadium</td> <td>ppm</td> <td>ASTM D5185(m)</td> <td></td> <td>0</td> <td></td> <td></td>	Vanadium	ppm	ASTM D5185(m)		0		
Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 250 14 Barium ppm ASTM D5185(m) 10 0 Molybdenum ppm ASTM D5185(m) 100 83 Manganese ppm ASTM D5185(m) 450 60 Magnesium ppm ASTM D5185(m) 450 60 Calcium ppm ASTM D5185(m) 3000 2060 Phosphorus ppm ASTM D5185(m) 1150 976 Zinc ppm ASTM D5185(m) 1350 1145 Sulfur ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current <td>Beryllium</td> <td>ppm</td> <td>ASTM D5185(m)</td> <td></td> <td>0</td> <td></td> <td></td>	Beryllium	ppm	ASTM D5185(m)		0		
Boron	Cadmium				0		
Barium ppm ASTM D5185(m) 10 0 Molybdenum ppm ASTM D5185(m) 100 83 Manganese ppm ASTM D5185(m) 450 60 Magnesium ppm ASTM D5185(m) 3000 2060 Calcium ppm ASTM D5185(m) 1150 976 Phosphorus ppm ASTM D5185(m) 1350 1145 Zinc ppm ASTM D5185(m) 4250 2716 Sulfur ppm ASTM D5185(m) <1 Lithium ppm ASTM D5185(m) >15 5 Silicon ppm ASTM D5185(m) >15 5 Sodium ppm ASTM D5185(m) >20 10 Potassium ppm ASTM D5185(m) <th>ADDITIVES</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	ADDITIVES		method	limit/base	current	history1	history2
Barium ppm ASTM D5185(m) 10 0 Molybdenum ppm ASTM D5185(m) 100 83 Manganese ppm ASTM D5185(m) 450 60 Magnesium ppm ASTM D5185(m) 3000 2060 Calcium ppm ASTM D5185(m) 1150 976 Phosphorus ppm ASTM D5185(m) 1350 1145 Zinc ppm ASTM D5185(m) 4250 2716 Sulfur ppm ASTM D5185(m) <1	Boron	ppm	ASTM D5185(m)	250	14		
Molybdenum ppm ASTM D5185(m) 100 83 Magnesium ppm ASTM D5185(m) 450 60 Calcium ppm ASTM D5185(m) 3000 2060 Phosphorus ppm ASTM D5185(m) 1150 976 Zinc ppm ASTM D5185(m) 1350 1145 Sulfur ppm ASTM D5185(m) 4250 2716 Lithium ppm ASTM D5185(m) >15 5 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 5 Sodium ppm ASTM D5185(m) >20 10 Fuel % ASTM D7593* >3.0 0.0 INFRA-RED method <	Barium	ppm	ASTM D5185(m)	10	0		
Manganese ppm ASTM D5185(m) <1 Magnesium ppm ASTM D5185(m) 450 60 Calcium ppm ASTM D5185(m) 3000 2060 Phosphorus ppm ASTM D5185(m) 1150 976 Zinc ppm ASTM D5185(m) 1350 1145 Sulfur ppm ASTM D5185(m) 4250 2716 Lithium ppm ASTM D5185(m) 4250 2716 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 5 Sodium ppm ASTM D5185(m) >20 10 Potassium ppm ASTM D7593* >3.0 0.0 Glycol % ASTM D7922*	Molybdenum		ASTM D5185(m)	100	83		
Magnesium ppm ASTM D5185(m) 450 60 Calcium ppm ASTM D5185(m) 3000 2060 Phosphorus ppm ASTM D5185(m) 1150 976 Zinc ppm ASTM D5185(m) 1350 1145 Sulfur ppm ASTM D5185(m) 4250 2716 Lithium ppm ASTM D5185(m) 4250 2716 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 5 Sodium ppm ASTM D5185(m) >216 4 Potassium ppm ASTM D7593* >3.0 0.0 Fuel % ASTM D7922* 0.0 INFRA-RED method limit/base	Manganese		ASTM D5185(m)		<1		
Calcium ppm ASTM D5185(m) 3000 2060 Phosphorus ppm ASTM D5185(m) 1150 976 Zinc ppm ASTM D5185(m) 1350 1145 Sulfur ppm ASTM D5185(m) 4250 2716 Lithium ppm ASTM D5185(m) 4250 2716 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 5 Sodium ppm ASTM D5185(m) >216 4 Potassium ppm ASTM D5185(m) >20 10 Fuel % ASTM D7593* >3.0 0.0 Glycol % ASTM D7922* 0.0 INFRA-RED method limit/base	Magnesium		ASTM D5185(m)	450	60		
Phosphorus ppm ASTM D5185(m) 1150 976 Zinc ppm ASTM D5185(m) 1350 1145 Sulfur ppm ASTM D5185(m) 4250 2716 Lithium ppm ASTM D5185(m) 4250 2716 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 5 Sodium ppm ASTM D5185(m) >216 4 Potassium ppm ASTM D5185(m) >20 10 Fuel % ASTM D7593* >3.0 0.0 Glycol % ASTM D7922* 0.0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7624* >20 <td>-</td> <td></td> <td>ASTM D5185(m)</td> <td>3000</td> <td>2060</td> <td></td> <td></td>	-		ASTM D5185(m)	3000	2060		
Zinc	Phosphorus		. ,	1150	976		
Sulfur ppm ASTM D5185(m) 4250 2716 Lithium ppm ASTM D5185(m) 4250 2716 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 5 Sodium ppm ASTM D5185(m) >216 4 Potassium ppm ASTM D5185(m) >20 10 Fuel % ASTM D7593* >3.0 0.0 Glycol % ASTM D7922* 0.0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7624* >3 0.5 Nitration Abs/cm ASTM D7624* >20 10.9	·		. ,	1350	1145		
Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 5 Sodium ppm ASTM D5185(m) >216 4 Potassium ppm ASTM D5185(m) >20 10 Fuel % ASTM D7593* >3.0 0.0 Glycol % ASTM D7922* 0.0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7624* >3 0.5 Nitration Abs/cm ASTM D7624* >20 10.9	Sulfur		. ,	4250	2716		
Silicon ppm ASTM D5185(m) >15 5 Sodium ppm ASTM D5185(m) >216 4 Potassium ppm ASTM D5185(m) >20 10 Fuel % ASTM D7593* >3.0 0.0 Glycol % ASTM D7922* 0.0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 0.5 Nitration Abs/cm ASTM D7624* >20 10.9	Lithium		. ,		<1		
Sodium ppm ASTM D5185(m) >216 4 Potassium ppm ASTM D5185(m) >20 10 Fuel % ASTM D7593* >3.0 0.0 Glycol % ASTM D7922* 0.0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 0.5 Nitration Abs/cm ASTM D7624* >20 10.9	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185(m) >20 10 Fuel % ASTM D7593* >3.0 0.0 Glycol % ASTM D7922* 0.0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 0.5 Nitration Abs/cm ASTM D7624* >20 10.9	Silicon	ppm	ASTM D5185(m)	>15	5		
Fuel % ASTM D7593* >3.0 0.0 Glycol % ASTM D7922* 0.0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 0.5 Nitration Abs/cm ASTM D7624* >20 10.9	Sodium	ppm	ASTM D5185(m)	>216	4		
Glycol % ASTM D7922* 0.0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 0.5 Nitration Abs/cm ASTM D7624* >20 10.9	Potassium	ppm	ASTM D5185(m)	>20	10		
INFRA-RED	Fuel	%	ASTM D7593*	>3.0	0.0		
Soot % % ASTM D7844* >3 0.5 Nitration Abs/cm ASTM D7624* >20 10.9	Glycol	%	ASTM D7922*		0.0		
Nitration Abs/cm ASTM D7624* >20 10.9	INFRA-RED		method	limit/base	current	history1	history2
Nitration Abs/cm ASTM D7624* >20 10.9	Soot %	%	ASTM D7844*	>3	0.5		



OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

Lab Number : 02646652

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : PP

Unique Number : 5812204

Received : 09 Jul 2024 **Tested** Diagnosed

: 12 Jul 2024

: 12 Jul 2024 - Wes Davis Test Package : MOB 1 (Additional Tests: FUELDILUTION, Glycol, PercentFuel)

cody.turcotte@ortec.ca

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. Validity of results and interpretation are based on the sample and information as supplied.

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