

Machine Id FREIGHTLINER 1476 Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 5W40 (--- QTS)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

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All component wear rates are normal.

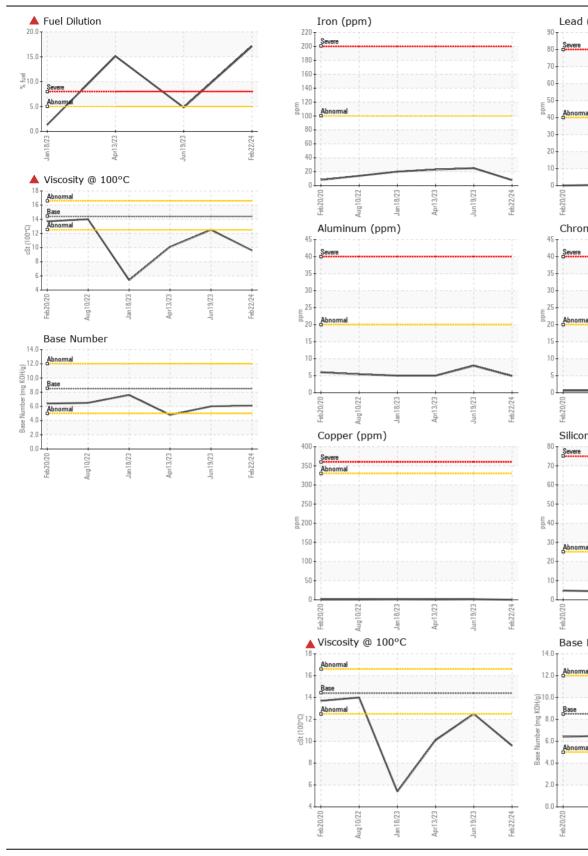
CONTAMINATION

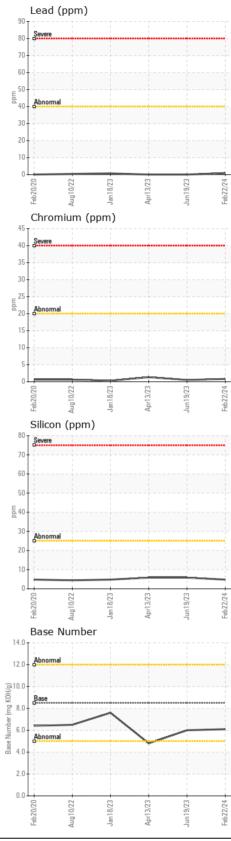
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sample Date Client Info 22 Feb 2024 19 Jun 2023 13 Apr 2023 Machine Age mls Client Info 229929 54387 220543 Oil Age mls Client Info 0 0 0 Filter Age mls Client Info 0 0 0 Oil Changed Client Info N/A Not Changd Not Changed					\frown		
Sample Date Client Info 22 Feb 2024 19 Jun 2023 13 Apr 2023 Machine Age mis Client Info 0 0 0 Oil Age mis Client Info 0 0 0 Oil Age mis Client Info N/A Not Change 0 0 Oil Changed Client Info N/A Not Change Not Change Not Change Sample Status Client Info N/A Not Change Not Change Sample Status Severe MAR(INAL Severe Iron ppm ASTM D5185m >20 <1	Test	UOM	Method	Limit/Abn	Current	History1	History2
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Oil Age mis Client Info O O O Filter Age mis Client Info N/A Not Change Not Change Oil Changed Client Info N/A Not Change Not Change Sample Status Client Info N/A Not Change Not Change Chromium ppm ASTM D5185m >100 8 25 23 Chromium ppm ASTM D5185m >24 0 0 <1 Nickel ppm ASTM D5185m >3 0 0 <1 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >33 0 2 <1 0 Copper ppm ASTM D5185m >40 <1 0 0 <1 0 Vanadium ppm ASTM D5185m >20 3 8 3 3 Valedow Metal scalar 'Visual NONE NONE NONE NONE <th>Sample Date</th> <th></th> <th>Client Info</th> <th></th> <th>22 Feb 2024</th> <th>19 Jun 2023</th> <th>13 Apr 2023</th>	Sample Date		Client Info		22 Feb 2024	19 Jun 2023	13 Apr 2023
Filter Age mis Client Info 0 0 0 Oil Changed Client Info N/A Not Changel Not Changel Filter Changed Client Info N/A Not Changel Not Changel Sample Status SEVERE MARGINAL SEVERE Iron ppm ASTM D5185m >100 8 25 23 Chromium ppm ASTM D5185m >20 <1 <1 1 Nickel ppm ASTM D5185m >3 0 0 <1 0 Silver ppm ASTM D5185m >3 0 0 <1 0 Copper ppm ASTM D5185m >40 <1 0 0 <1 Vanadium ppm ASTM D5185m >40 <1 0 0 <1 Vanadium ppm ASTM D5185m >25 5 6 6 6 Vellow Metal scalar 'Visual NONE NONE NO	Machine Age	mls	Client Info		229929	54387	220543
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Titanium ppm ASTM D5185m O <1		ppm					
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Tin ppm ASTM D5185m >15 0 0 <1		ppm				-	
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Molybdenum ppm ASTM D5185m 100 69 87 74 Manganese ppm ASTM D5185m 100 69 87 74 Magnesium ppm ASTM D5185m 450 111 69 34 Calcium ppm ASTM D5185m 3000 1824 2244 1897 Phosphorus ppm ASTM D5185m 1150 890 955 864 Zinc ppm ASTM D5185m 1350 1066 1154 1046 Sulfur ppm ASTM D5185m 4250 2919 4199 3100 Oxidation Abs/.1mm<*ASTM D7414 >25 16.2 17.9 24.5 Base Number (BN) mg KOH/g ASTM D2896 8.5 6.1 6.0 4.8	Boron	ppm	ASTM D5185m	250	25	28	21
Manganese ppm ASTM D5185m <1		ppm	ASTM D5185m	10	0	0	2
Magnesium ppm ASTM D5185m 450 111 69 34 Calcium ppm ASTM D5185m 3000 1824 2244 1897 Phosphorus ppm ASTM D5185m 1150 890 955 864 Zinc ppm ASTM D5185m 1350 1066 1154 1046 Sulfur ppm ASTM D5185m 4250 2919 4199 3100 Oxidation Abs/.1mm *ASTM D7414 >25 16.2 17.9 24.5 Base Number (BN) mg KOH/g ASTM D2896 8.5 6.1 6.0 4.8	Molybdenum	ppm	ASTM D5185m	100	69	87	74
Calcium ppm ASTM D5185m 3000 1824 2244 1897 Phosphorus ppm ASTM D5185m 1150 890 955 864 Zinc ppm ASTM D5185m 1350 1066 1154 1046 Sulfur ppm ASTM D5185m 4250 2919 4199 3100 Oxidation Abs/.1mm *ASTM D7414 >25 16.2 17.9 24.5 Base Number (BN) mg KOH/g ASTM D2896 8.5 6.1 6.0 4.8	Manganese	ppm	ASTM D5185m		<1	<1	<1
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Zinc ppm ASTM D5185m 1350 1066 1154 1046 Sulfur ppm ASTM D5185m 4250 2919 4199 3100 Oxidation Abs/.1mm *ASTM D714 >25 16.2 17.9 24.5 Base Number (BN) mg KOH/g ASTM D2896 8.5 6.1 6.0 4.8	Calcium	ppm	ASTM D5185m	3000	1824	2244	1897
Sulfur ppm ASTM D5185m 4250 2919 4199 3100 Oxidation Abs/.1mm *ASTM D7414 >25 16.2 17.9 24.5 Base Number (BN) mg KOH/g ASTM D2896 8.5 6.1 6.0 4.8	Phosphorus	ppm	ASTM D5185m	1150	890	955	864
Oxidation Abs/.1mm *ASTM D7414 >25 16.2 17.9 24.5 Base Number (BN) mg KOH/g ASTM D2896 8.5 6.1 6.0 4.8	Zinc	ppm	ASTM D5185m	1350	1066	1154	1046
Base Number (BN) mg KOH/g ASTM D2896 8.5 6.1 6.0 4.8	Sulfur	ppm	ASTM D5185m	4250	2919	4199	3100
	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.2	17.9	24.5
Visc @ 100°C cSt ASTM D445 14.4 ↓ 9.6 / 12.5 ▲ 10.1	Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.1	6.0	4.8
	Visc @ 100°C	cSt	ASTM D445	14.4	9.6	12.5	1 0.1





WAKE COUNTY PUBLIC SCHOOL SYSTEM Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : WC0906140 Received 1551 ROCK QUARRY ROAD : 26 Feb 2024 Lab Number : 06100795 : 29 Feb 2024 RALEIGH, NC Tested : 29 Feb 2024 - Wes Davis US 27610 Unique Number : 10899025 Diagnosed Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN) Contact: DEVIN WEBER Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. dweber@wcpss.net * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (919)856-8076 F: x: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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Contact/Location: DEVIN WEBER - WCPRAL