

WEAR NORMAL CONTAMINATION MARGINAL FLUID CONDITION ABNORMAL

Machine Id FREIGHTLINER 2122 Component Diesel Engine Fluid MOBIL 15W40 (--- GAL)

RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

WEAR

All component wear rates are normal.

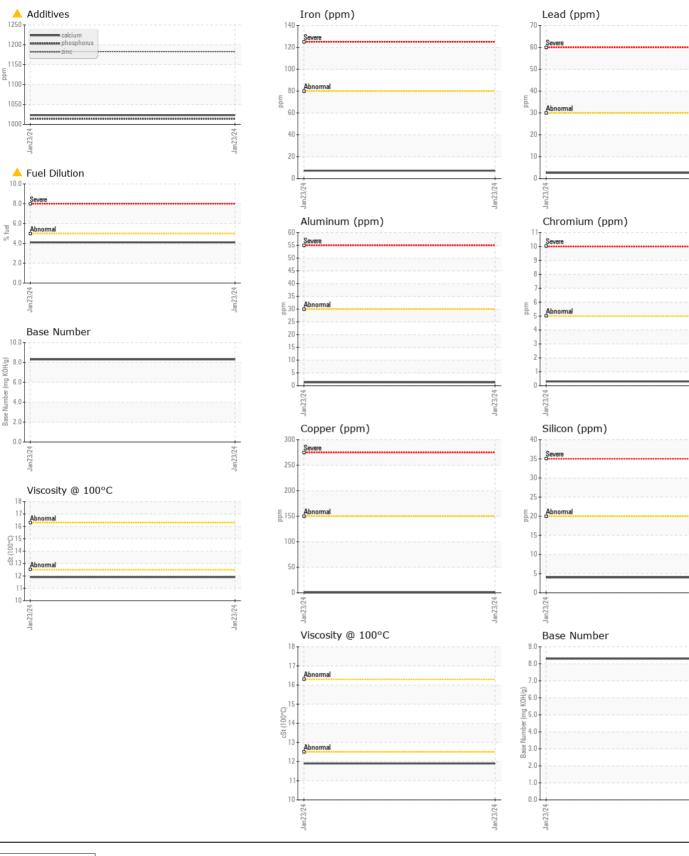
CONTAMINATION

Calcium and/or magnesium levels higher than normal indicating possible contamination with cement dust, advise investigate. Light fuel dilution occurring. No other contaminants were detected in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0893858		
Sample Date		Client Info		23 Jan 2024		
Machine Age	mls	Client Info		327237		
Oil Age	mls	Client Info		0		
Filter Age	mls	Client Info		0		
Oil Changed		Client Info		Changed		
Filter Changed		Client Info		Changed		
Sample Status				ABNORMAL		
Iron	ppm	ASTM D5185m	>80	7		
Chromium	ppm	ASTM D5185m	>5	<1		
Nickel	ppm	ASTM D5185m	>2	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>30	1		
Lead	ppm	ASTM D5185m	>30	3		
Copper	ppm	ASTM D5185m	>150	<1		
Tin	ppm	ASTM D5185m	>5	<1		
Vanadium	ppm	ASTM D5185m		0		
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Silicon	ppm	ASTM D5185m	>20	4		
Potassium	ppm	ASTM D5185m	>20	0		
Fuel	%	ASTM D3524	>5	4 .1		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
Soot %	%	*ASTM D7844	>3	0.5		
Nitration	Abs/cm	*ASTM D7624	>20	6.8		
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4		
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		
Sodium	nnm	ASTM D5185m	>118	1		
Boron	ppm	ASTM D5185m	>110	5		
Barium	ppm	ASTM D5185m		0		
Molybdenum	ppm	ASTM D5185m		57		
	ppm	ASTM D5185m				
Manganese Magnesium	ppm	ASTM D5185m		<1 905		
Calcium	ppm	ASTM D5185m				
Phosphorus	ppm	ASTM D5185m ASTM D5185m		▲ 1023 1014		
	ppm	ASTM D5185m		1014		
Zinc Sulfur	ppm			1183		
	ppm	ASTM D5185m	> 2E	2841		
Oxidation Base Number (BN)	Abs/.1mm	*ASTM D7414 ASTM D2896	>25	13.7 8.3		
Visc @ 100°C	mg KOH/g	ASTM D2090 ASTM D445				
VISC @ 100°C	cSt	AO I IVI D445		11.9		

FLUID CONDITION

Calcium ppm levels are abnormally high. The BN result indicates that there is suitable alkalinity remaining in the oil.



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Contact/Location: Service Manager - CONFAY