

OIL ANALYSIS REPORT

Sample Rating Trend

FUEL

Machine Id KENWORTH 426142-SW4619

Diesel Engine Fluid MOBIL DELVAC ELITE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

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

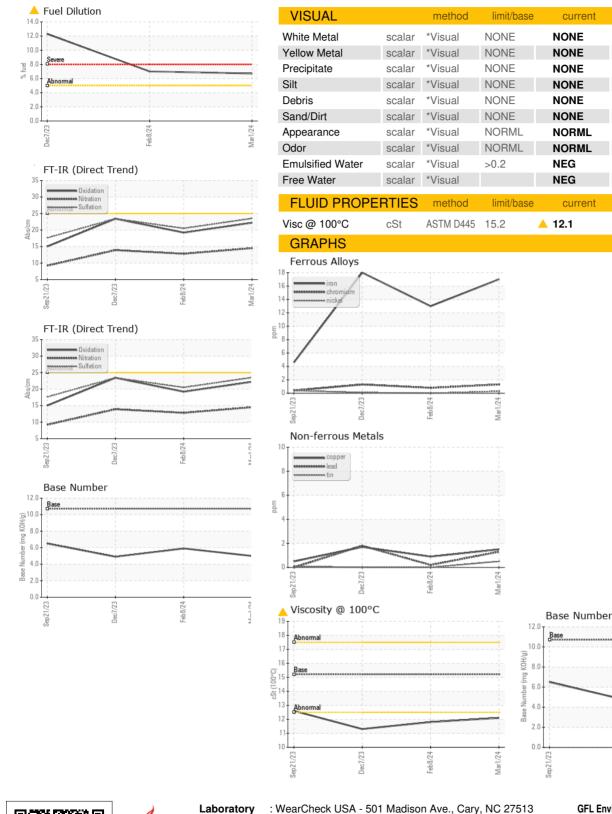
Fluid Condition

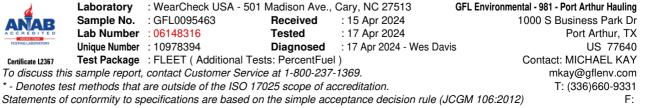
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATIONSample NumberSample DateMachine AgehrsOil AgehrsOil AgehrsOil Changedsample StatusCONTAMINATIONVaterglycolGlycolypmChromiumppmNickelppmSilverppmAluminumppmCopperppmTinppmCadmiumppmBoronppmBariumppmMalganeseppmMagnesiumppmCalciumppmMagnesiumppmCalciumppmCalciumppmCalciumppmCalciumppmCalciumppmCalciumppmCalciumppmCalciumppmCalciumppmCalciumppmCalciumppmCalciumppm	Client Info Client Info Client Info Client Info Client Info Client Info Client Info WC Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >100 >20 >4 >3 >20 >40	current GFL0095463 01 Mar 2024 16064 0 Changed ABNORMAL Current NEG NEG NEG 17 17 17 17 17 17 17 17 17 17 12 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	history1 GFL0111337 08 Feb 2024 16375 0 Changed ABNORMAL NEG NEG NEG 13 <1 0	history2 GFL0095496 07 Dec 2023 16042 500 Changed SEVERE history2 NEG NEG NEG 1 <1 <1 <1 2 2 0 4 2 0 4 2 0 4 2 0 1
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Sample Status CONTAMINATION Water Glycol WEAR METALS Iron ppm Chromium ppm Chromium ppm Nickel ppm Silver ppm Aluminum ppm Lead ppm Copper ppm Cadmium ppm Cadmium ppm Boron ppm Barium ppm Manganese ppm Mangensium ppm	WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>0.2 limit/base >100 >20 >4 -3 >20 >40 >330 >15	current NEG current 17 1 <1	history1 NEG NEG 13 <1	history2 NEG NEG 18 1 <1
Water Glycol Ppm WEAR METALS Iron ppm Chromium ppm Chromium ppm Titanium ppm Silver ppm Aluminum ppm Lead ppm Copper ppm Tin ppm Copper ppm Copper ppm Copper ppm Copper ppm Silven ppm Banium ppm Barium ppm Molybdenum ppm Maganese ppm	WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>0.2 limit/base >100 >20 >4 -3 >20 >40 >330 >15	NEG NEG 17 1 <1 <1 <1 <1 0 7 1 2 <1 2 <1 <1 <1	NEG NEG 13 <1 0 0 0 0 4 <1 <1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	NEG NEG 18 1 <1 <1 <1 0 4 2 2 2 0 <1
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Iron ppm Chromium ppm Nickel ppm Titanium ppm Silver ppm Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm Cadmium ppm ADDITIVES Boron ppm Barium ppm Molybdenum ppm Manganese ppm	ASTM D5185m ASTM D5185m	>100 >20 >4 >3 >20 >40 >330 >15	17 1 <1 0 7 1 2 <1 <1 <1	13 <1 0 0 4 <1 <1 0 0	18 1 <1 0 4 2 2 0 <1
Chromium ppm Nickel ppm Titanium ppm Silver ppm Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm Cadmium ppm ADDITIVES Boron ppm Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >4 >3 >20 >40 >330 >15	1 <1 0 7 1 2 <1 <1 <1	<1 0 0 4 <1 <1 0 0 0	1 <1 0 4 2 2 0 <1
NickelppmFitaniumppmSilverppmSilverppmAluminumppmLeadppmCopperppmCopperppmZanadiumppmCadmiumppmADDITIVESSoronBoronppmBariumppmMolybdenumppmManganeseppmMagnesiumppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>4 >3 >20 >40 >330 >15	<1 <1 0 7 1 2 <1 <1 <1 <1	0 0 4 <1 <1 0 0	<1 <1 0 4 2 2 0 <1
Titanium ppm Silver ppm Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm Cadmium ppm ADDITIVES Boron ppm Barium ppm Molybdenum ppm Manganese ppm Mangenesium ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>3 >20 >40 >330 >15	<1 0 7 1 2 <1 <1 <1 <1	0 0 4 <1 <1 0 0	<1 0 4 2 2 0 <1
Silver ppm Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm Cadmium ppm ADDITIVES Boron ppm Barium ppm Molybdenum ppm Manganese ppm Manganesium ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >40 >330 >15	0 7 1 2 <1 <1 <1	0 4 <1 <1 0 0	0 4 2 2 0 <1
Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm Cadmium ppm ADDITIVES Boron ppm Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >40 >330 >15	7 1 2 <1 <1 <1	4 <1 <1 0 0	4 2 2 0 <1
Lead ppm Copper ppm Tin ppm Vanadium ppm Cadmium ppm ADDITIVES Boron ppm Barium ppm Molybdenum ppm Manganese ppm Manganese ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>40 >330 >15	1 2 <1 <1 <1	<1 <1 0 0	2 2 0 <1
CopperppmTinppmVanadiumppmCadmiumppmCadmiumppmADDITIVESBoronppmBariumppmMolybdenumppmManganeseppmMagnesiumppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>330 >15	2 <1 <1 <1	<1 0 0	2 0 <1
Tin ppm Vanadium ppm Cadmium ppm ADDITIVES Boron ppm Barium ppm Molybdenum ppm Manganese ppm Mangenesium ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>15	<1 <1 <1	0 0	0 <1
Vanadium ppm Cadmium ppm ADDITIVES Boron ppm Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm	ASTM D5185m ASTM D5185m		<1 <1	0	<1
Vanadium ppm Cadmium ppm ADDITIVES Boron ppm Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm	ASTM D5185m	limit/base	<1		
ADDITIVES Boron ppm Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm		limit/base		0	
Boron ppm Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm	method	limit/base	current		<1
Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm			ourront	history1	history2
Molybdenum ppm Manganese ppm Magnesium ppm	ASTM D5185m		48	57	39
Manganese ppm Magnesium ppm	ASTM D5185m		1	1	0
Magnesium ppm	ASTM D5185m		131	113	112
	ASTM D5185m		<1	0	<1
Calcium ppm	ASTM D5185m		646	630	574
	ASTM D5185m		1243	1218	1074
Phosphorus ppm	ASTM D5185m		712	698	554
Zinc ppm	ASTM D5185m		831	790	721
Sulfur ppm	ASTM D5185m		3202	3013	3188
CONTAMINANTS	method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185m	>25	8	6	6
Sodium ppm	ASTM D5185m		1	6	0
Potassium ppm	ASTM D5185m	>20	8	2	3
Fuel %	ASTM D3524	>5	<u> </u>	▲ 7.0	12.3
INFRA-RED	method	limit/base	current	history1	history2
Soot %	*ASTM D7844	>3	0.9	0.6	0.8
Nitration Abs/cm	*ASTM D7624	>20	14.5	12.8	13.9
Sulfation Abs/.1mm	*ASTM D7415	>30	23.5	20.5	23.4
FLUID DEGRADATION					20.4
Oxidation Abs/.1mm	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g	*ASTM D7414	limit/base	current 22.2	history1 19.2	



OIL ANALYSIS REPORT





eb8/24

Dec7/23

history1

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

history

NEG

NEG

11.8

history2

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

histor

NEG

NEG

▲ 11.3

Report Id: GFL981 [WUSCAR] 06148316 (Generated: 04/17/2024 16:37:38) Rev: 1

Certificate 12367

Sample No.

Lab Number : 06148316

Unique Number : 10978394

: GFL0095463

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Test Package : FLEET (Additional Tests: PercentFuel)

Received

Diagnosed

Tested

: 15 Apr 2024

: 17 Apr 2024

: 17 Apr 2024 - Wes Davis

Submitted By: MICHAEL KAY

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