WEAR
CONTAMINATION
FLUID CONDITION

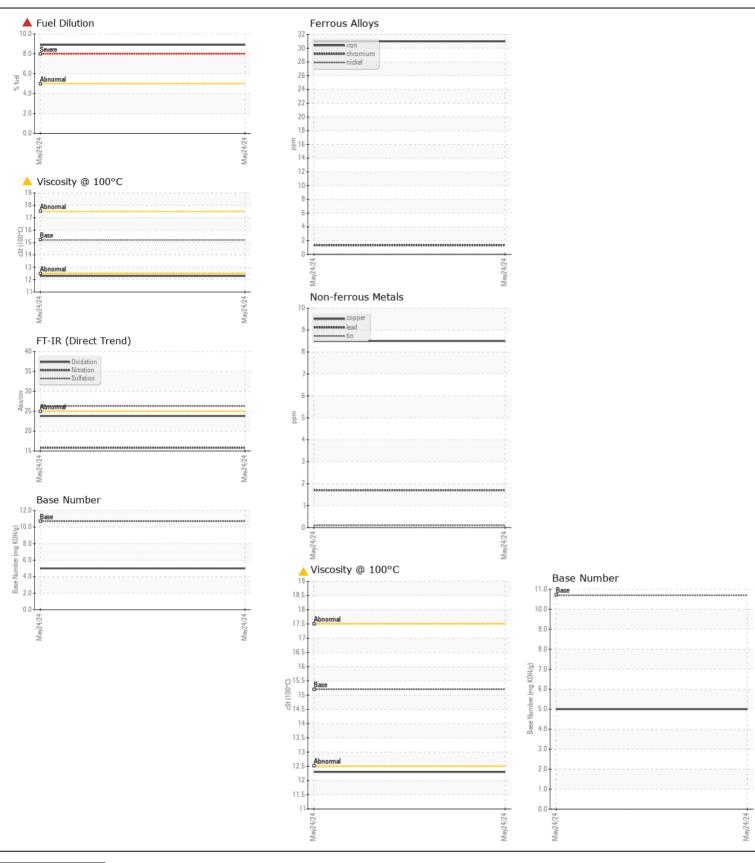
NORMAL SEVERE ABNORMAL

Machine Id

KENWORTH 426141-SW4617

Diesel Engine

Silt scalar	Method Client Info ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	Limit/Abn	Current GFL0111322 24 May 2024 16568 16568 0 Changed Changed	History2
We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. WEAR WEAR Metal levels are typical for a components first oil change. WEAR Metal levels are typical for a components first oil change. WEAR Metal levels are typical for a components first oil change. WEAR Metal levels are typical for a components first oil change. WEAR Metal levels are typical for a components first oil change. WEAR Metal levels are typical for a components first oil change. WEAR Metal levels are typical for a components first oil change. WEAR Metal levels are typical for a components first oil change. WEAR Metal levels are typical for a components first oil change. Iron Chromium ppm Nickel ppm Aluminum ppm Lead Copper pom Vanadium ppm Vanadium ppm Vanadium ppm Vanadium ppm Vanadium ppm Fuel % Water Clycol Soot % Nitration Abs/cm Sulfation Ab	Client Info ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100	16568 16568 0 Changed	
resample to monitor this condition. Machine Age hrs Gil Age hrs Filter Age hrs Gil Changed Filter Changed Sample Status	Client Info Client Info Client Info Client Info Client Info Client Info ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100	16568 0 Changed	
Oil Age hrs Filter Age Oil Changed Filter Changed Sample Status NEAR Metal levels are typical for a components first oil change. Weather the same typical for a components first oil change. Weather the same typical for a components first oil change. Iron ppm Chromium ppm Silver ppm Aluminum ppm Silver ppm Aluminum ppm Copper ppm Tin ppm Vanadium ppm White Metal scalar Yellow Metal Yellow Yellow Yellow Yellow	Client Info Client Info Client Info Client Info ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100	0 Changed	
VEAR Wetal levels are typical for a components first oil change. Wetal levels are typical for a components first oil change. Wetal levels are typical for a components first oil change. Iron ppm Chromium ppm Nickel ppm Titanium ppm Silver ppm Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm White Metal scalar Yellow Metal scalar Yellow Metal scalar CONTAMINATION There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. Silicon ppm Potassium ppm Fuel % Water Glycol Soot % % Nitration Abs/mm Silt scalar Debris scalar Sand/Dirt scalar Debris scalar Appearance scalar Odor scalar Emulsified Water scalar Odor scalar Emulsified Water scalar Odor scalar Emulsified Water scalar Odor ppm Boron ppm Boron ppm Boron ppm Barium ppm Molybdenum ppm Molybdenum ppm Molybdenum ppm Manganese ppm	Client Info Client Info Client Info ASTM D5185m	>100	Changed	
VEAR Metal levels are typical for a components first oil change. Iron ppm Chromium ppm Nickel ppm Silver ppm Aluminum ppm Aluminum ppm Lead ppm Tin ppm Vanadium ppm Tin ppm Vanadium ppm Potassium ppm Fuel % Water Glycol Soot % Nitration Abs/dm Sulfation Abs/dm Sulfation Abs/dm Sulfation Abs/dm Sulfation Abs/dm Sulfation Abs/dm Silt scalar Debris scalar Sand/Dirt scalar Debris scalar Sand/Dirt Scalar Scalar Sand/Dirt Scalar Scala	ASTM D5185m	>100		
VEAR Metal levels are typical for a components first oil change. Iron ppm Chromium ppm Nickel ppm Titanium ppm Silver ppm Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm White Metal scalar Yellow Metal scalar Netroscope Silicon ppm Fuel % Water Glycol Soot % Nitration Abs/Imm Silt scalar Debris scalar Debris scalar Appearance scalar Odor scalar Appearance scalar Odor scalar Emulsified Water scalar Silluid Condition The BN result indicates that there is suitable alkalinity remaining in the sil. Fuel is present in the oil and is lowering the viscosity. The oil is no onger serviceable due to the presence of contaminants. Sodium ppm Boron Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm Manganese	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100	Changed	
Metal levels are typical for a components first oil change. Iron	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100		
Metal levels are typical for a components first oil change. Chromium ppm Titanium ppm Silver ppm Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm Marganese ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100	SEVERE	
Metal levels are typical for a components first oil change. Chromium ppm Titanium ppm Silver ppm Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100	31	
Metal levels are typical for a components first oil change. Nickel ppm Titanium ppm Silver ppm Aluminum ppm Lead Copper ppm Tin ppm Vanadium ppm White Metal scalar Yellow Metal scalar Yellow Metal scalar Yellow In the oil. Silicon ppm Potassium ppm Fuel % Water Glycol Soot % Nitration Abs/mm Silt scalar Debris scalar Sand/Dirt scalar Appearance odor scalar Emulsified Water scalar COdor scalar Emulsified Water scalar Sodium ppm Boron ppm Boron ppm Boron ppm Boron ppm Manganese ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	× 20	1	
Titanium ppm Silver ppm Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm White Metal scalar Yellow Metal scalar Yellow Metal scalar Yellow In the oil. Silicon ppm Potassium ppm Fuel % Water Glycol Soot % Nitration Abs/Imm Silt scalar Debris scalar Appearance Abs/Imm Silt scalar Debris scalar Appearance Codor scalar Emulsified Water scalar Appearance Codor scalar Emulsified Water scalar Debris scalar Sand/Dirt scalar Appearance Scalar Sand/Dirt scalar Appearance Scalar Sand/Dirt scalar Appearance Scalar Appearance Scalar Bmusified Water scalar Appearance Scalar Bmusified Water scalar Appearance Scalar Sand/Dirt scalar Appearance Scalar Appearance Scalar Bmusified Water scalar Appearance Scal	ASTM D5185m ASTM D5185m ASTM D5185m		0	
Silver ppm Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm White Metal scalar Yellow Metal scalar Yellow Metal scalar Yellow In the oil. Tests confirm the presence of fuel in the oil. Silicon ppm Potassium ppm Fuel % Water Glycol Soot % Nitration Abs/cm Sulfation Abs/cm	ASTM D5185m ASTM D5185m	>4	0	
Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm White Metal scalar Yellow Metal scalar Notassium ppm Fuel % Water Glycol Soot % Nitration Abs/cm Sulfation Abs/cm Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar	ASTM D5185m	. 2	0	
Lead ppm Copper ppm Tin ppm Vanadium ppm White Metal scalar Yellow Metal scalar Potassium ppm Fuel % Water Glycol Soot % % Nitration Abs/cm Sulfation Abs/cm			-	
Copper ppm Tin ppm Vanadium ppm White Metal scalar Yellow Metal scalar Silicon ppm Potassium ppm Fuel % Water Glycol Soot % % Nitration Abs/.rmm Sulfation Abs/.rmm Sulfation Abs/.rmm Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar Appearance scalar Odor scalar Emulsified Water scalar Sodium ppm Boron ppm Molybdenum ppm Molybdenum ppm Molybdenum ppm Manganese ppm Manganese ppm Magnesium ppm	1 S M 1 h 1 2 h m		10 2	
Tin ppm Vanadium ppm White Metal scalar Yellow Metal scalar Yellow Metal scalar SCONTAMINATION There is a high amount of fuel present in the oil. Tests confirm the oresence of fuel in the oil. Silicon ppm Potassium ppm Fuel % Water Glycol Soot % % Nitration Abs/cm Sulfation Ab	ASTM D5185m ASTM D5185m		8	
Vanadium White Metal scalar Yellow Metal scalar Scalar Scalar Scalar Potassium ppm Fuel % Water Glycol Scot % % Nitration Abs/.tmm Silt scalar Debris scalar Debris scalar Scala	ASTM D5185m		<1	
White Metal scalar Yellow Metal scalar Silicon ppm Potassium ppm Fuel % Water Glycol Soot % Nitration Abs/tmm Silt scalar Debris scalar Debris scalar Sand/Dirt scalar Appearance odor scalar Emulsified Water scalar Scalar Scalar Scalar Scalar Debris scalar Debris scalar Scalar Scalar Debris Scalar Scala	ASTM D5185m	>10	0	
CONTAMINATION There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. Silicon ppm Potassium ppm Fuel % Water Glycol Soot % % Nitration Abs/cm Sulfation Abs/cm Sulfati	*Visual	NONE	NONE	
CONTAMINATION There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. Silicon ppm Potassium ppm Fuel % Water Glycol Soot % Nitration Abs/cm Sulfation Abs/.mm Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Debris Scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Sodium ppm Boron ppm Boron ppm Boron ppm Molybdenum ppm Molybdenum ppm Molybdenum ppm Manganese ppm Manganese ppm Magnesium ppm		NONE	NONE	
There is a high amount of fuel present in the oil. Tests confirm the oresence of fuel in the oil. Potassium Fuel % Water Glycol	Visuai		·····	
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. Potassium Fuel % Water Glycol	ASTM D5185m	>25	7	
Water Glycol Soot % % Nitration Abs/cm Sulfation Abs/.1mm Silt scalar Debris scalar Debris scalar Appearance scalar Odor scalar Emulsified Water scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Appearance scalar Odor scalar Emulsified Water scalar Appearance podor Scalar Sodium ppm Boron ppm Boron ppm Barium ppm Molybdenum ppm Molybdenum ppm Molybdenum ppm Manganese ppm Magnesium ppm Manganese ppm Magnesium ppm	ASTM D5185m	>20	17	
Water Glycol Soot % % Nitration Abs/cm Sulfation Abs/.1mm Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Soot w % Nitration Abs/.1mm Silt scalar Sand/Dirt scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Sodium ppm Boron ppm Boron ppm Boron ppm Barium ppm Molybdenum ppm Molybdenum ppm Molybdenum ppm Manganese ppm Manganese ppm Manganese ppm	ASTM D3524	>5	& 8.9	
Soot % % Nitration Abs/cm Sulfation Abs/.1mm Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Sodium ppm Boron ppm Boron ppm Barium ppm Molybdenum ppm Molybdenum ppm Manganese ppm Magnesium ppm Magnesium ppm	WC Method	>0.2	NEG	
Nitration Abs/cm Sulfation Abs/.1mm Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Sodium ppm Boron ppm Molybdenum ppm Molybdenum ppm Molybdenum ppm Manganese ppm Manganese ppm Magnesium ppm	WC Method		NEG	
Sulfation Abs/.1mm Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Sodium ppm Boron ppm Boron ppm Boron ppm Barium ppm Molybdenum ppm Molybdenum ppm Manganese ppm Manganese ppm Magnesium ppm	*ASTM D7844	>3	1	
Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Sodium ppm Boron ppm Boron ppm Boron ppm Barium ppm Molybdenum ppm Molybdenum ppm Manganese ppm Manganese ppm Magnesium ppm	*ASTM D7624	>20	15.8	
Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Sodium ppm Boron ppm Boron ppm Boron ppm Barium ppm Molybdenum ppm Molybdenum ppm Manganese ppm Manganese ppm Magnesium ppm	*ASTM D7415	>30	26.3	
Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Emulsified Water scalar Sodium ppm Boron ppm Boron ppm Barium ppm Barium ppm Molybdenum ppm Molybdenum ppm Manganese ppm Magnesium ppm Magnesium ppm	*Visual	NONE	NONE	
Appearance odor scalar Odor scalar Emulsified Water scalar Emulsified Water scalar Sodium ppm 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 onger serviceable due to the presence of contaminants. Sodium ppm Boron ppm Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm	*Visual	NONE	NONE	
The BN result indicates that there is suitable alkalinity remaining in the bil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants. Sodium ppm Boron ppm Barium ppm Molybdenum ppm Molybdenum ppm Manganese ppm Magnesium ppm	*Visual	NONE	NONE	
FLUID CONDITION The BN result indicates that there is suitable alkalinity remaining in the bil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants. Emulsified Water scalar Sodium ppm Boron ppm Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm	*Visual	NORML	NORML	
FLUID CONDITION The BN result indicates that there is suitable alkalinity remaining in the bil. Fuel is present in the oil and is lowering the viscosity. The oil is no onger serviceable due to the presence of contaminants. Sodium ppm Boron ppm Marjum ppm Molybdenum ppm Manganese ppm Magnesium ppm		NORML	NORML	
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 onger serviceable due to the presence of contaminants. Boron ppm Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm	*Visual	>0.2	NEG	
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 onger serviceable due to the presence of contaminants. Boron ppm Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm	AOTA DEADE			
The BN result indicates that there is suitable alkalinity remaining in the bil. Fuel is present in the oil and is lowering the viscosity. The oil is no onger serviceable due to the presence of contaminants. Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm	ASTM D5185m		9	
bil. Fuel is present in the oil and is lowering the viscosity. The oil is no onger serviceable due to the presence of contaminants. Molybdenum ppm Manganese ppm Magnesium ppm	ASTM D5185m		29	
Manganese ppm Magnesium ppm	ASTM D5185m		0	
Magnesium ppm	ASTM D5185m		118	
	ASTM D5185m		<1 605	
Caicium ddm	ASTM D5185m		625	
	ASTM D5185m		1282	
Phosphorus ppm	ASTM D5185m		764	
Zinc ppm	ASTM D5185m		841	
Sulfur ppm	ASTM D5185m	0.5	3708	
	*AOTA D7444		23.8	
Base Number (BN) mg KOH/g Visc @ 100°C cSt		10.7 15.2	5.0 12.3	





Certificate L2367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0111322 Lab Number : 06231231

Unique Number : 11114724 Test Package: FLEET (Additional Tests: FuelDilution, PercentFuel)

Received **Tested**

Diagnosed

: 09 Jul 2024 : 11 Jul 2024

: 11 Jul 2024 - Wes Davis

GFL Environmental - 981 - Port Arthur Hauling 1000 S Business Park Dr Port Arthur, TX US 77640

Contact: MICHAEL KAY mkay@gflenv.com T: (336)660-9331

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.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)