



WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
INTERNATIONAL FFB22
Component
Diesel Engine
Fluid
{not provided} (18 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. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL0036558	IL0034938	IL0031106
Sample Date		Client Info		10 Apr 2024	23 Feb 2024	23 Mar 2023
Machine Age	mls	Client Info		53587	53587	25920
Oil Age	mls	Client Info		3165	8680	5731
Filter Age	mls	Client Info		3165	8680	5731
Oil Changed		Client Info		Not Changd	Changed	Changed
Filter Changed		Client Info		Not Changd	Changed	Changed
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	19	40	36
Chromium	ppm	ASTM D5185m	>20	1	2	2
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	3
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	2	<1	2
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

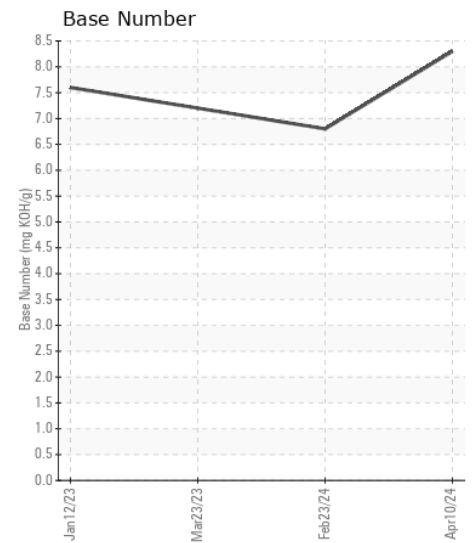
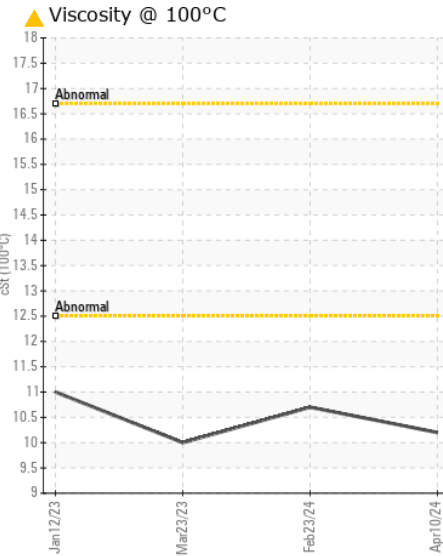
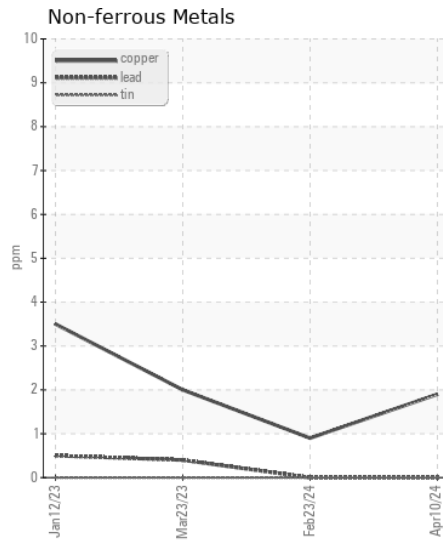
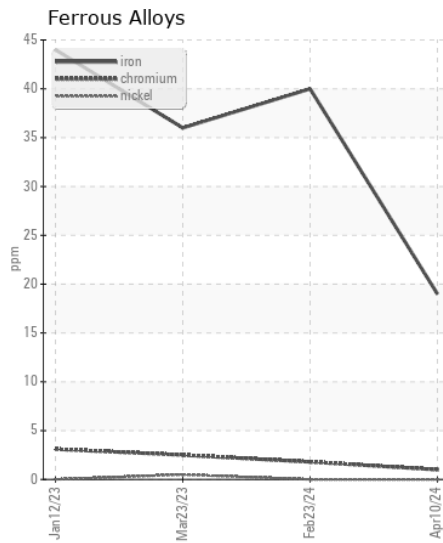
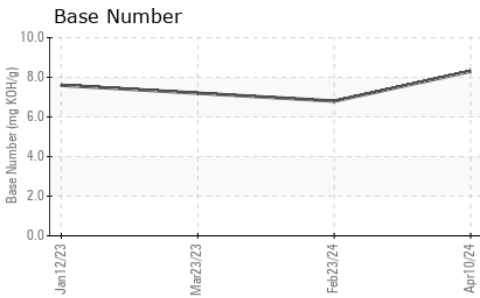
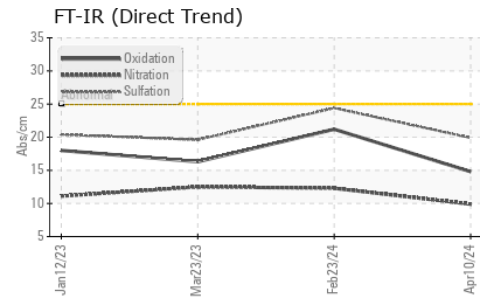
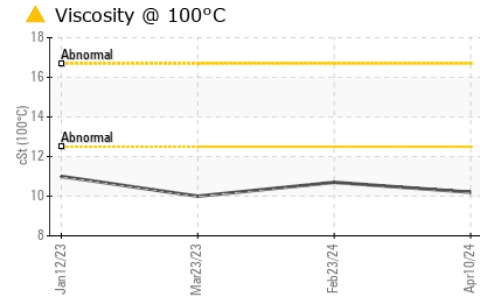
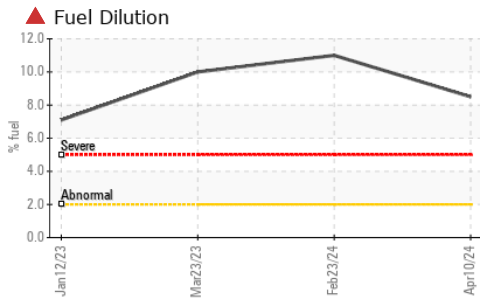
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	6	6	6
Potassium	ppm	ASTM D5185m	>20	2	1	1
Fuel	%	ASTM D3524	>2.0	▲ 8.5	▲ 11.0	▲ 10.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.6	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.9	12.3	12.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.9	24.4	19.6
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

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.

Sodium	ppm	ASTM D5185m		1	3	3
Boron	ppm	ASTM D5185m		54	24	27
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		3	20	75
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m		681	614	225
Calcium	ppm	ASTM D5185m		1223	1301	1736
Phosphorus	ppm	ASTM D5185m		953	945	930
Zinc	ppm	ASTM D5185m		1113	1115	1108
Sulfur	ppm	ASTM D5185m		3763	3764	3204
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.8	21.2	16.3
Base Number (BN)	mg KOH/g	ASTM D2896		8.3	6.8	7.2
Visc @ 100°C	cSt	ASTM D445		▲ 10.2	▲ 10.7	▲ 10.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : IL0036558

Lab Number : 06158292

Unique Number : 10993715

Test Package : FLEET (Additional Tests: PercentFuel)

Received : 23 Apr 2024

Tested : 25 Apr 2024

Diagnosed : 25 Apr 2024 - Wes Davis

RUSH TRUCK LEASING - CLEVELAND IDEALEASE

5 ACORN DR

OAKWOOD VILLAGE, OH

US 44146-5550

Contact: JOHN FOSTER

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F: (440)439-5657

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)