



WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ATTENTION

Machine Id
1712
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. 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		HRE0000118	WC0887615	WC0844974
Sample Date		Client Info		04 Apr 2024	14 Feb 2024	21 Dec 2023
Machine Age	mls	Client Info		0	224956	219399
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	26	23	10
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	5	2
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	16	3	1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

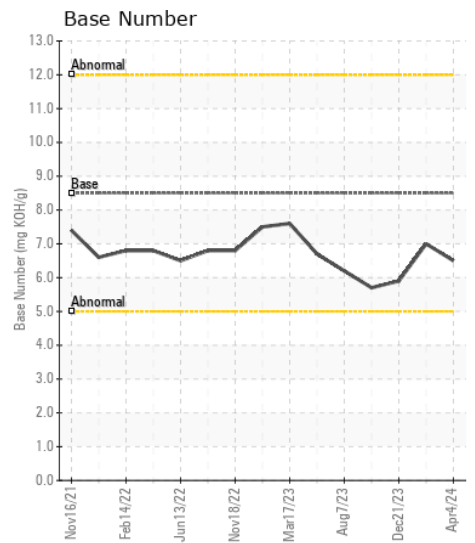
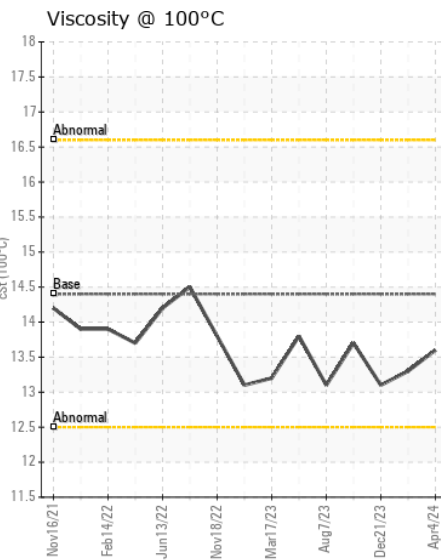
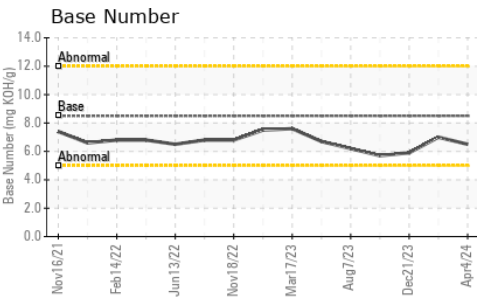
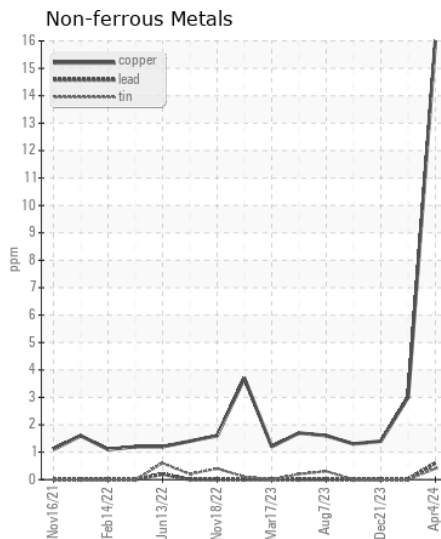
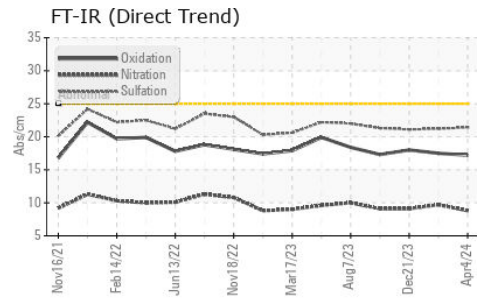
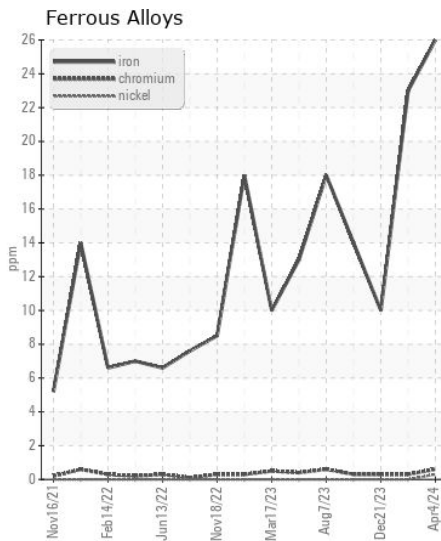
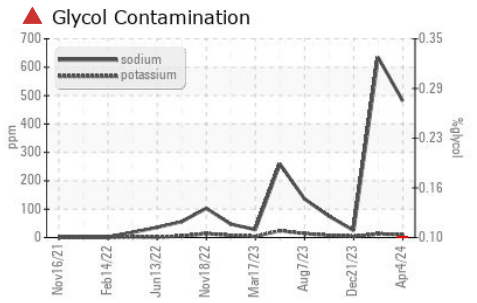
Test for glycol is positive. There is a high concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185m	>25	18	18	9
Potassium	ppm	ASTM D5185m	>20	▲ 10	▲ 13	4
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		▲ 0.10	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.8	9.7	9.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.4	21.2	21.1
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. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>158	● 481	▲ 634	25
Boron	ppm	ASTM D5185m	250	75	29	90
Barium	ppm	ASTM D5185m	10	0	10	3
Molybdenum	ppm	ASTM D5185m	100	121	141	77
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m	450	379	314	247
Calcium	ppm	ASTM D5185m	3000	1568	1601	1658
Phosphorus	ppm	ASTM D5185m	1150	1040	946	928
Zinc	ppm	ASTM D5185m	1350	1137	1139	1155
Sulfur	ppm	ASTM D5185m	4250	3332	3387	3598
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.2	17.5	18.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.5	7.0	5.9
Visc @ 100°C	cSt	ASTM D445	14.4	13.6	13.3	13.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HRE0000118 **Received** : 15 Apr 2024
Lab Number : 06148458 **Tested** : 17 Apr 2024
Unique Number : 10978536 **Diagnosed** : 17 Apr 2024 - Wes Davis
Test Package : FLEET (Additional Tests: Glycol)

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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)