



WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
7708
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 5W40 (--- GAL)

RECOMMENDATION

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. 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.

WEAR

All component wear rates are normal.

CONTAMINATION

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

FLUID CONDITION

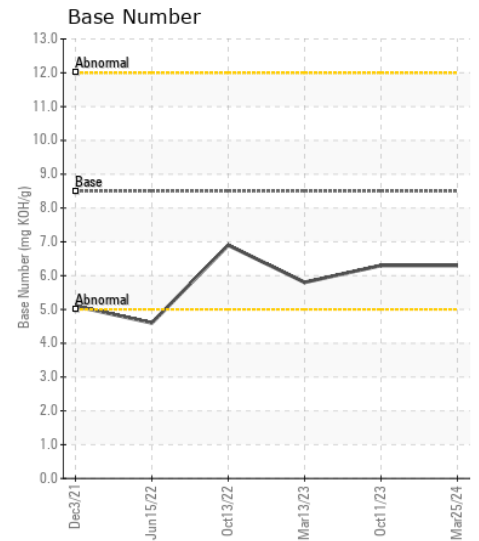
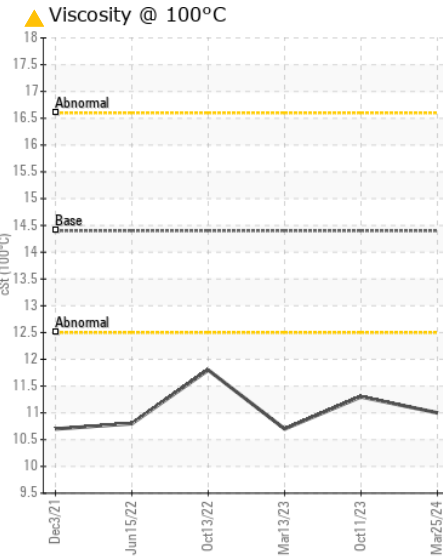
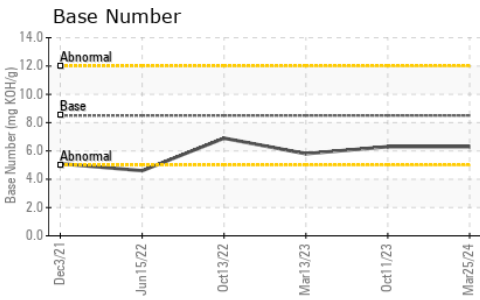
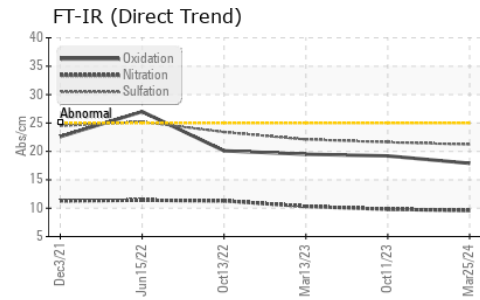
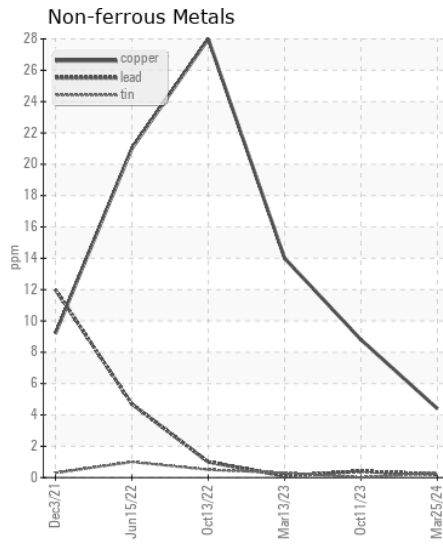
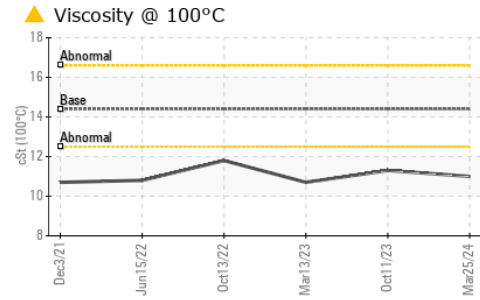
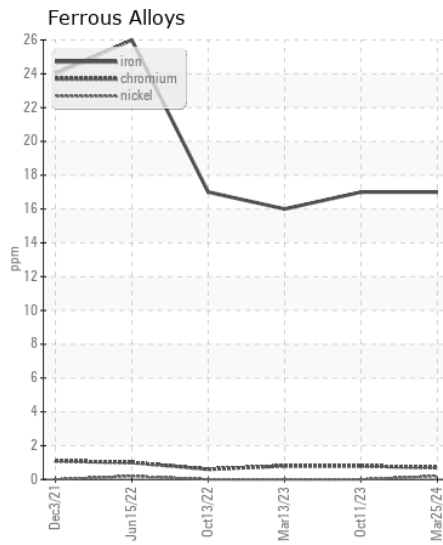
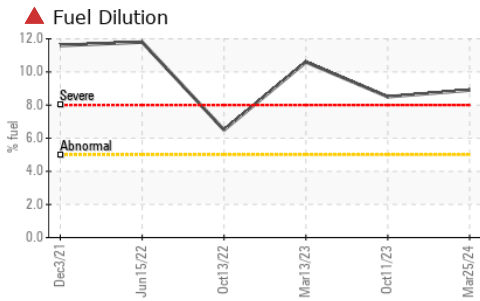
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		HRE0000094	WC0860445	WC0790576
Sample Date		Client Info		25 Mar 2024	11 Oct 2023	13 Mar 2023
Machine Age	mls	Client Info		445331	439886	434394
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				SEVERE	SEVERE	SEVERE

Iron	ppm	ASTM D5185m	>100	17	17	16
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	1
Aluminum	ppm	ASTM D5185m	>20	3	2	3
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	4	9	14
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>25	14	16	▲ 31
Potassium	ppm	ASTM D5185m	>20	1	<1	<1
Fuel	%	ASTM D3524	>5	▲ 8.9	▲ 8.5	▲ 10.6
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.6	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.6	9.8	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	21.6	22.1
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

Sodium	ppm	ASTM D5185m	>44	3	5	3
Boron	ppm	ASTM D5185m	250	78	10	22
Barium	ppm	ASTM D5185m	10	<1	0	2
Molybdenum	ppm	ASTM D5185m	100	74	62	67
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	256	299	209
Calcium	ppm	ASTM D5185m	3000	1496	1594	1652
Phosphorus	ppm	ASTM D5185m	1150	825	835	860
Zinc	ppm	ASTM D5185m	1350	987	1156	1038
Sulfur	ppm	ASTM D5185m	4250	2598	2729	2820
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.9	19.2	19.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.3	6.3	5.8
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 11.0	▲ 11.3	▲ 10.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HRE0000094
Lab Number : 06148476
Unique Number : 10978554
Test Package : FLEET (Additional Tests: PercentFuel)

Received : 15 Apr 2024
Tested : 18 Apr 2024
Diagnosed : 18 Apr 2024 - Wes Davis

TOWN OF CHAPEL HILL
 6900 MILLHOUSE RD
 CHAPEL HILL, NC
 US 27516

Contact: Lisa DePasqua
 ldepasqua@townofchapelhill.org

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)

T: (919)696-4941

F: