



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
1957
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 5W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		HRE0000159	HRE0000109	WC0887589
Sample Date		Client Info		30 May 2024	18 Mar 2024	18 Feb 2024
Machine Age	mls	Client Info		0	127697	123646
Oil Age	mls	Client Info		0	0	6000
Filter Age	mls	Client Info		0	0	6000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	10	9	7
Chromium	ppm	ASTM D5185m	>20	0	1	<1
Nickel	ppm	ASTM D5185m	>4	0	1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	4	4
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	0	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

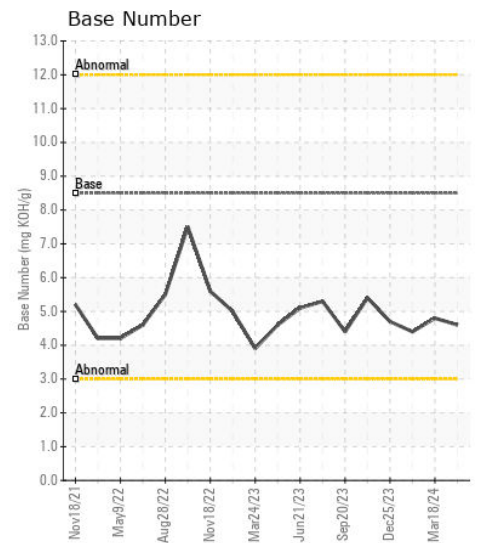
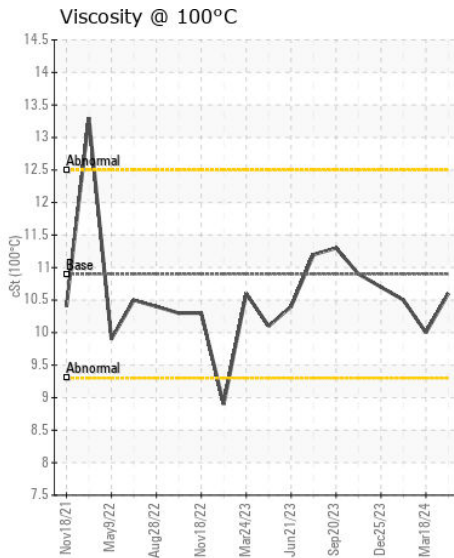
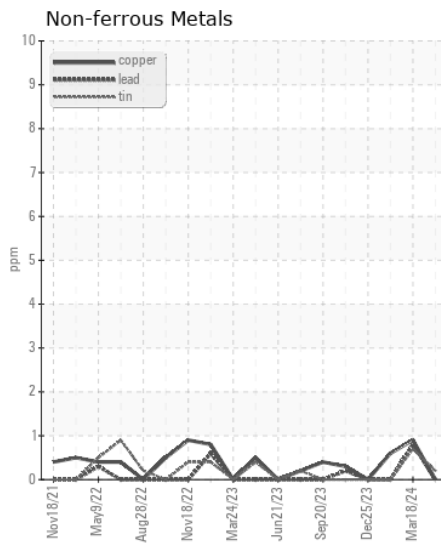
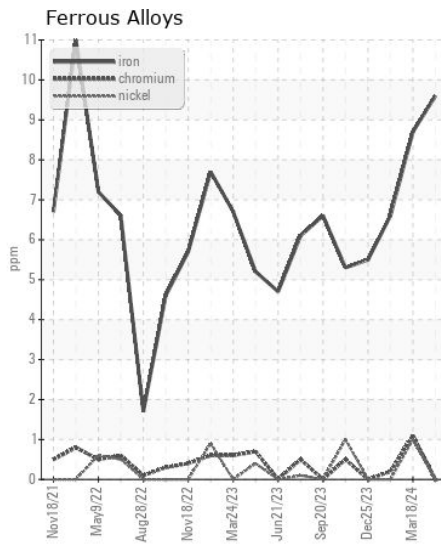
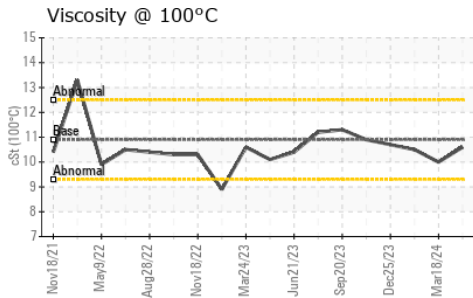
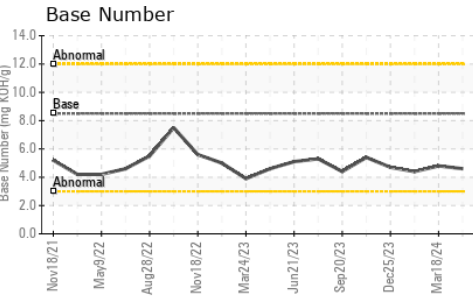
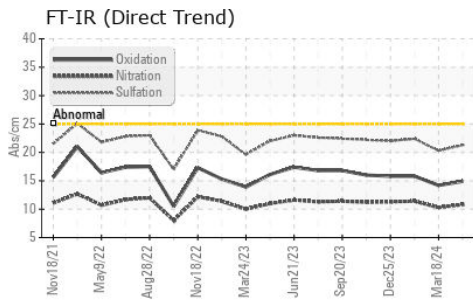
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	16	21	16
Potassium	ppm	ASTM D5185m	>20	0	2	2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0	0
Nitration	Abs/cm	*ASTM D7624	>20	10.8	10.3	11.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	20.3	22.4
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 condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	0	1
Boron	ppm	ASTM D5185m	250	34	35	27
Barium	ppm	ASTM D5185m	10	<1	1	11
Molybdenum	ppm	ASTM D5185m	100	213	252	204
Manganese	ppm	ASTM D5185m		15	4	4
Magnesium	ppm	ASTM D5185m	450	626	773	558
Calcium	ppm	ASTM D5185m	3000	1225	1510	1116
Phosphorus	ppm	ASTM D5185m	1150	588	777	587
Zinc	ppm	ASTM D5185m	1350	710	906	658
Sulfur	ppm	ASTM D5185m	4250	2946	3406	2726
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.9	14.2	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	4.6	4.8	4.4
Visc @ 100°C	cSt	ASTM D445	10.9	10.6	10.0	10.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HRE0000159
Lab Number : **06196212**
Unique Number : 11058335
Test Package : FLEET

Received : 31 May 2024
Tested : 03 Jun 2024
Diagnosed : 03 Jun 2024 - Don Baldrige

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

Contact: Lisa DePasqua
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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)