



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
1956
 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		HRE0000543	HRE0000135	WC0887611
Sample Date		Client Info		18 Jun 2024	15 Apr 2024	23 Feb 2024
Machine Age	mls	Client Info		116965	112720	0
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				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	11	7	4
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	3	4
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	0	<1	<1
Tin	ppm	ASTM D5185m	>15	0	0	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

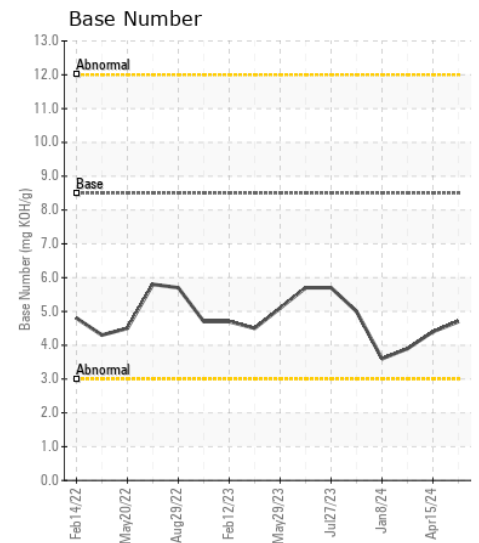
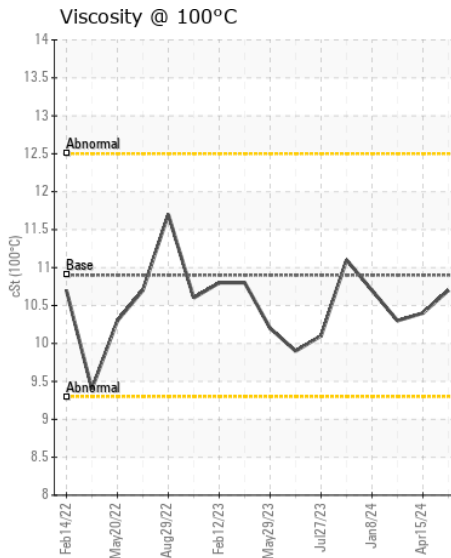
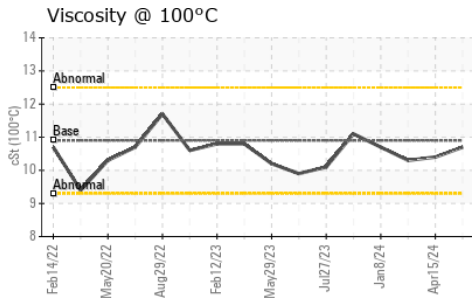
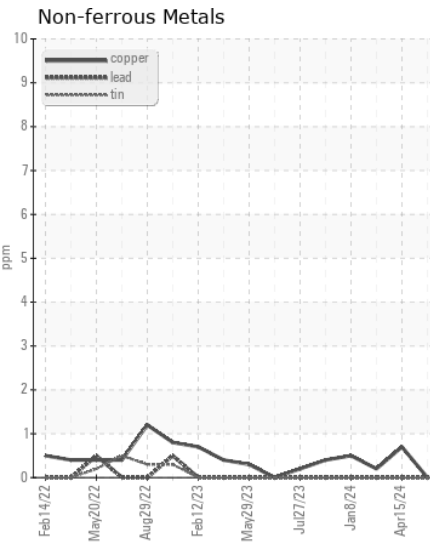
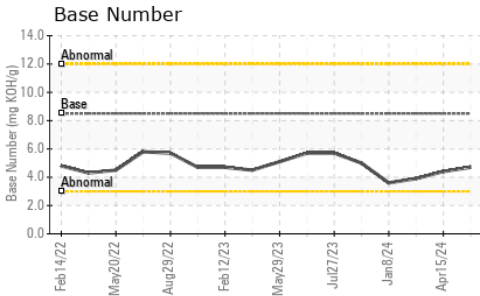
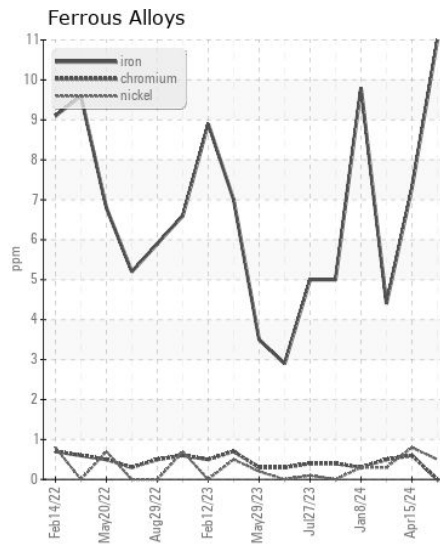
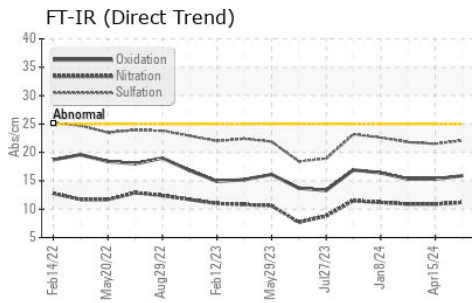
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	15	17	19
Potassium	ppm	ASTM D5185m	>20	0	2	1
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	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	11.2	10.9	10.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	21.5	21.8
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		<1	0	2
Boron	ppm	ASTM D5185m	250	20	23	27
Barium	ppm	ASTM D5185m	10	0	<1	0
Molybdenum	ppm	ASTM D5185m	100	202	204	213
Manganese	ppm	ASTM D5185m		34	5	4
Magnesium	ppm	ASTM D5185m	450	670	566	577
Calcium	ppm	ASTM D5185m	3000	1220	1153	1126
Phosphorus	ppm	ASTM D5185m	1150	607	570	548
Zinc	ppm	ASTM D5185m	1350	768	694	707
Sulfur	ppm	ASTM D5185m	4250	3130	2661	2512
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	15.3	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	4.7	4.4	3.9
Visc @ 100°C	cSt	ASTM D445	10.9	10.7	10.4	10.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HRE0000543
Lab Number : 06232954
Unique Number : 11116447
Test Package : FLEET

Received : 11 Jul 2024
Tested : 11 Jul 2024
Diagnosed : 12 Jul 2024 - Don Baldridge

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)

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