



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
1754
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		HRE0000158	WC0887605	WC0860394
Sample Date		Client Info		30 May 2024	28 Feb 2024	25 Sep 2023
Machine Age	mls	Client Info		95239	91062	86880
Oil Age	mls	Client Info		6000	0	0
Filter Age	mls	Client Info		6000	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	9	14	7
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	5	3
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	0	<1	<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

There is no indication of any contamination in the oil.

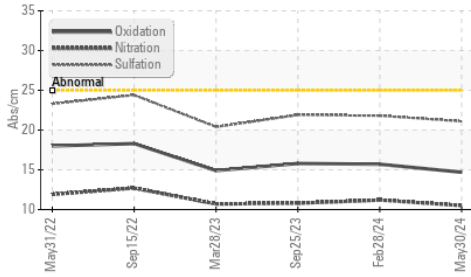
Silicon	ppm	ASTM D5185m	>25	16	20	16
Potassium	ppm	ASTM D5185m	>20	<1	2	1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0	0
Nitration	Abs/cm	*ASTM D7624	>20	10.5	11.2	10.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.1	21.8	21.9
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

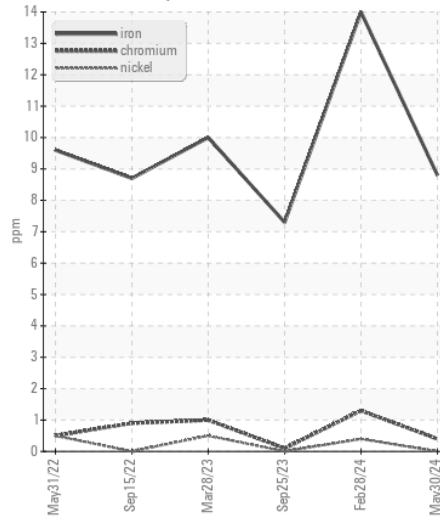
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		1	2	1
Boron	ppm	ASTM D5185m	250	26	25	16
Barium	ppm	ASTM D5185m	10	<1	0	0
Molybdenum	ppm	ASTM D5185m	100	186	209	201
Manganese	ppm	ASTM D5185m		11	2	0
Magnesium	ppm	ASTM D5185m	450	640	589	608
Calcium	ppm	ASTM D5185m	3000	1174	1124	1216
Phosphorus	ppm	ASTM D5185m	1150	581	554	559
Zinc	ppm	ASTM D5185m	1350	711	732	727
Sulfur	ppm	ASTM D5185m	4250	2842	2522	2468
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.7	15.7	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	4.4	3.9	4.6
Visc @ 100°C	cSt	ASTM D445	10.9	10.3	10.5	11.1

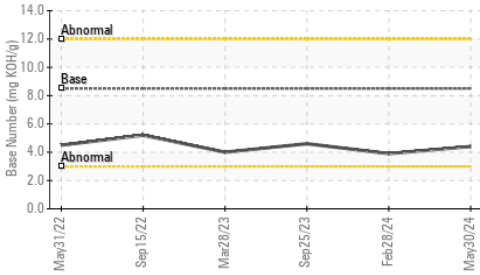
FT-IR (Direct Trend)



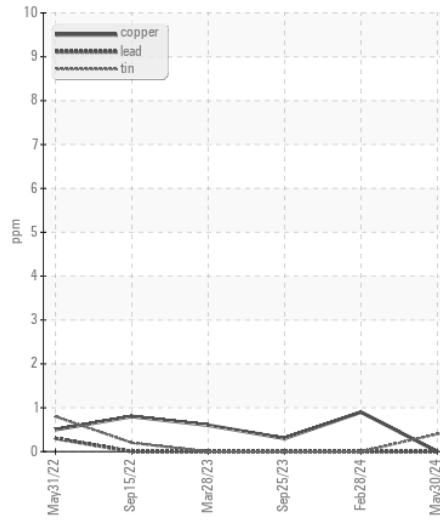
Ferrous Alloys



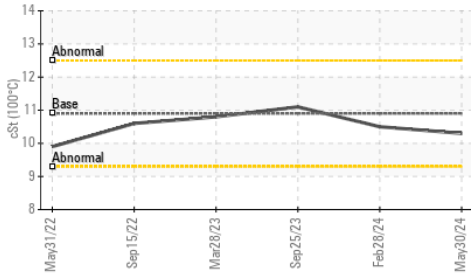
Base Number



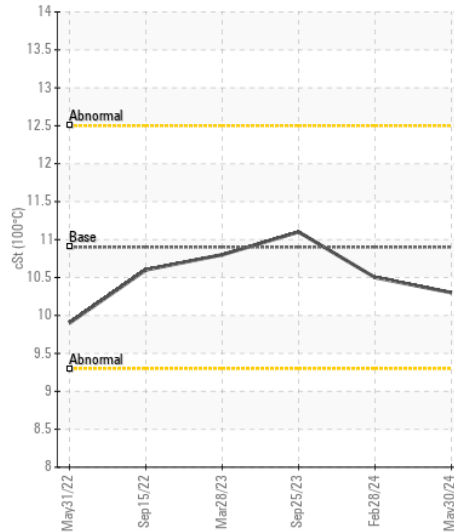
Non-ferrous Metals



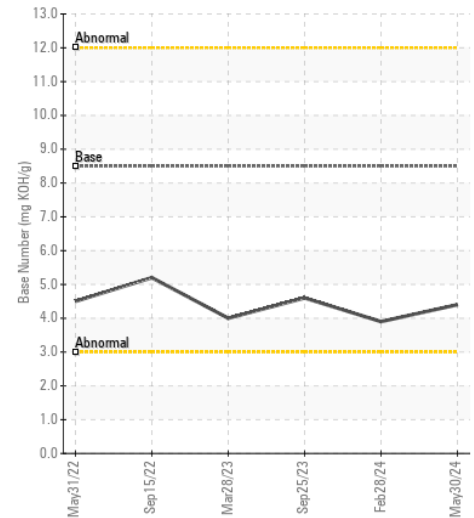
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HRE0000158 **Received** : 31 May 2024
Lab Number : 06196195 **Tested** : 03 Jun 2024
Unique Number : 11058318 **Diagnosed** : 03 Jun 2024 - Don Baldrige
Test Package : FLEET

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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