



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id  
**HC2210 (S/N 96605)**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 10W30 (--- GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0823626</b>	WC0935937	WC0867431
Sample Date		Client Info		<b>27 Jun 2024</b>	30 Apr 2024	18 Nov 2023
Machine Age	hrs	Client Info		<b>8109</b>	7653	7116
Oil Age	hrs	Client Info		<b>456</b>	537	0
Filter Age	hrs	Client Info		<b>456</b>	537	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	NORMAL	ATTENTION

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>&lt;1</b>	3	2
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Lead	ppm	ASTM D5185m	>40	<b>0</b>	1	2
Copper	ppm	ASTM D5185m	>330	<b>2</b>	0	3
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

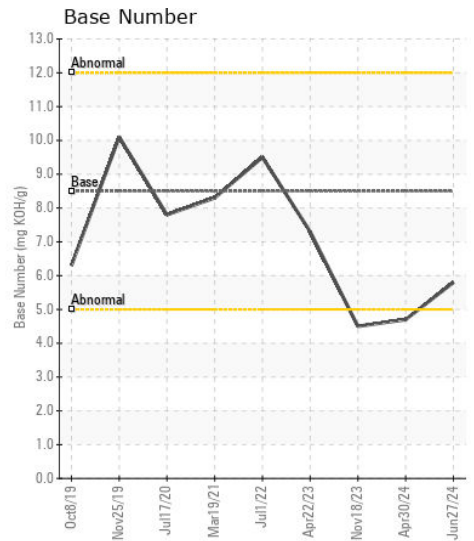
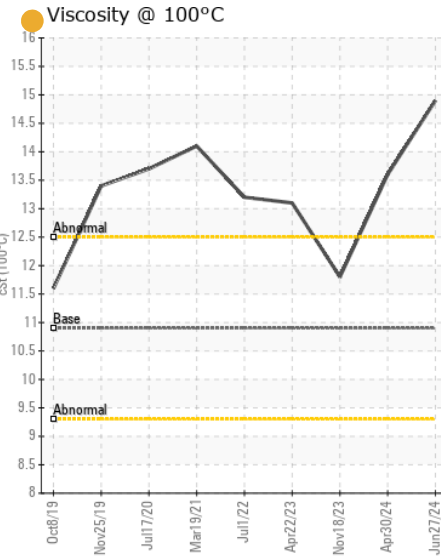
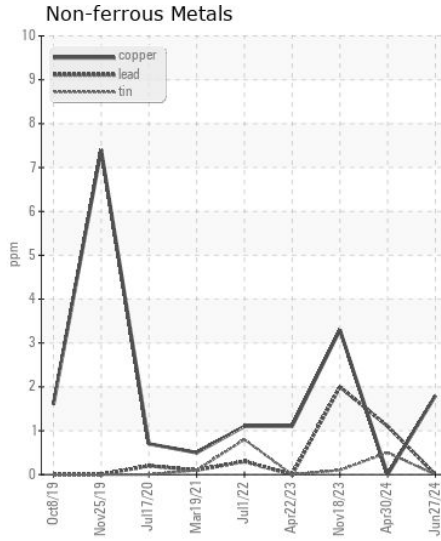
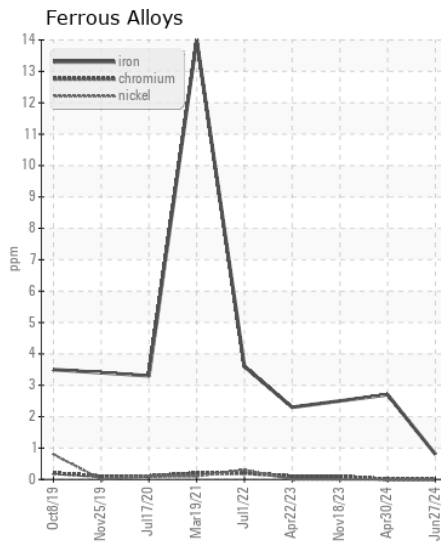
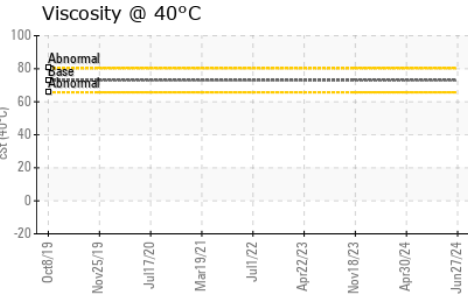
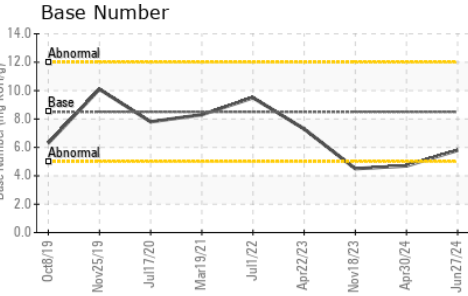
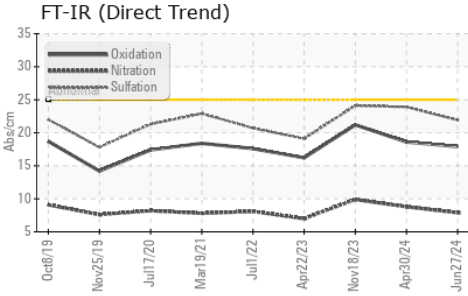
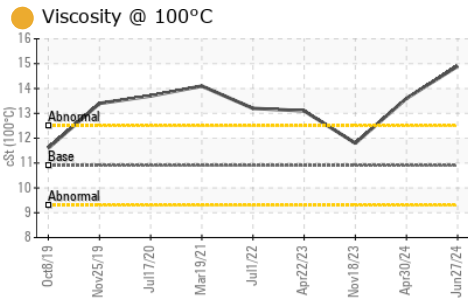
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	6	10
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	0	6
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	1.5
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.9</b>	8.8	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.9</b>	23.9	24.1
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		<b>1</b>	<1	5
Boron	ppm	ASTM D5185m	250	<b>130</b>	123	68
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	100	<b>&lt;1</b>	15	24
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	450	<b>77</b>	193	217
Calcium	ppm	ASTM D5185m	3000	<b>2058</b>	2136	2052
Phosphorus	ppm	ASTM D5185m	1150	<b>988</b>	1006	1069
Zinc	ppm	ASTM D5185m	1350	<b>1172</b>	1248	1245
Sulfur	ppm	ASTM D5185m	4250	<b>3777</b>	3933	3360
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.9</b>	18.6	21.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>5.8</b>	4.7	4.5
Visc @ 100°C	cSt	ASTM D445	10.9	<b>14.9</b>	13.6	11.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0823626 **Received** : 01 Jul 2024  
**Lab Number** : 06225553 **Tested** : 03 Jul 2024  
**Unique Number** : 11103750 **Diagnosed** : 03 Jul 2024 - Don Baldridge  
**Test Package** : CONST ( Additional Tests: KV40, TBN )

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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