



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**411**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 5W30 (--- QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>HRE000230</b>	WC0686117	WC0577121
Sample Date		Client Info		<b>22 May 2024</b>	22 Nov 2022	12 Jul 2021
Machine Age	mls	Client Info		<b>685670</b>	583901	0
Oil Age	mls	Client Info		<b>50000</b>	100000	0
Filter Age	mls	Client Info		<b>50000</b>	50000	0
Oil Changed		Client Info		<b>Changed</b>	Changed	N/A
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>44</b>	38	60
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	1	2
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	2	<1
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>6</b>	6	9
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	1	2
Copper	ppm	ASTM D5185m	>330	<b>6</b>	9	50
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</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

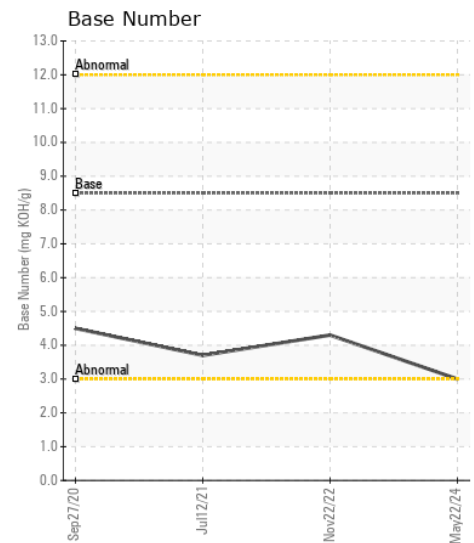
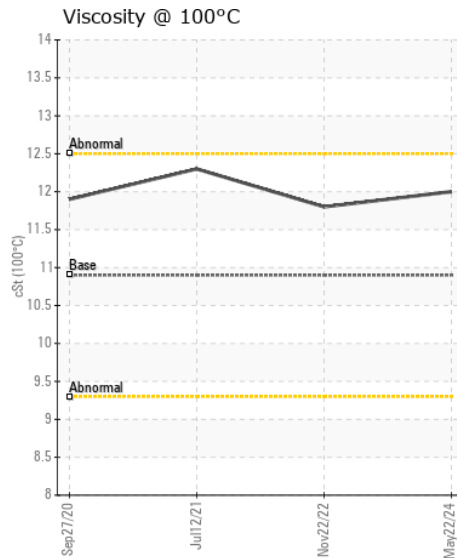
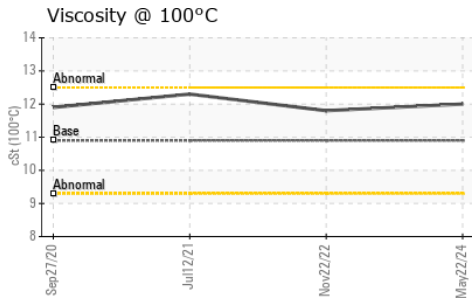
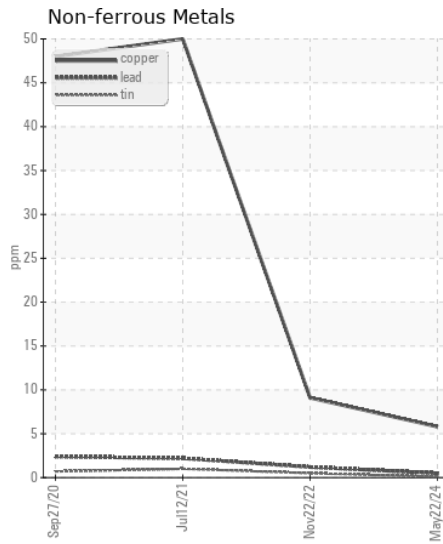
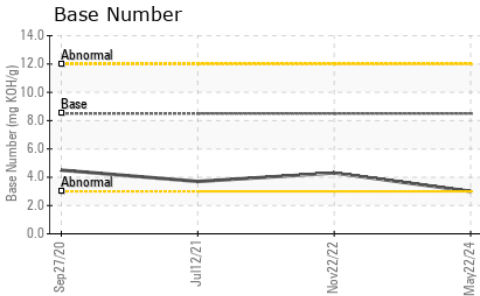
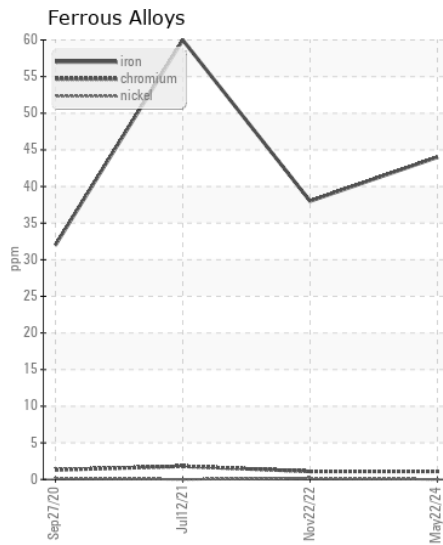
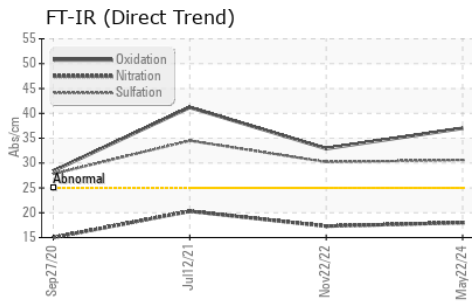
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	8	6
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	11	10
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.8</b>	0.7	1.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>18.0</b>	17.3	20.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>30.6</b>	30.2	34.5
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 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		<b>5</b>	6	6
Boron	ppm	ASTM D5185m	250	<b>13</b>	11	16
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>73</b>	64	63
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>1225</b>	1046	973
Calcium	ppm	ASTM D5185m	3000	<b>972</b>	886	925
Phosphorus	ppm	ASTM D5185m	1150	<b>1179</b>	1020	951
Zinc	ppm	ASTM D5185m	1350	<b>1440</b>	1208	1157
Sulfur	ppm	ASTM D5185m	4250	<b>3534</b>	3462	2176
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>37.0</b>	32.9	41.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>3.0</b>	4.3	▲ 3.7
Visc @ 100°C	cSt	ASTM D445	10.9	<b>12.0</b>	11.8	12.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : HRE0000230

**Lab Number** : 06193237

**Unique Number** : 11049989

**Test Package** : FLEET

**Received** : 28 May 2024

**Tested** : 30 May 2024

**Diagnosed** : 30 May 2024 - Sean Felton

**MABE TRUCKING**

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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)