



WEAR	<b>ABNORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**2207**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 5W30 (--- QTS)**

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>HRE0000666</b>	WC0836271	WC0686118
Sample Date		Client Info		<b>20 Jun 2024</b>	28 Aug 2023	05 Dec 2022
Machine Age	mls	Client Info		<b>338055</b>	223794	107081
Oil Age	mls	Client Info		<b>50000</b>	50000	100000
Filter Age	mls	Client Info		<b>50000</b>	50000	50000
Oil Changed		Client Info		<b>Changed</b>	N/A	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### WEAR

Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>▲ 112</b>	▲ 107	▲ 151
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>20	<b>16</b>	29	120
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	1
Copper	ppm	ASTM D5185m	>330	<b>5</b>	8	19
Tin	ppm	ASTM D5185m	>15	<b>1</b>	1	3
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

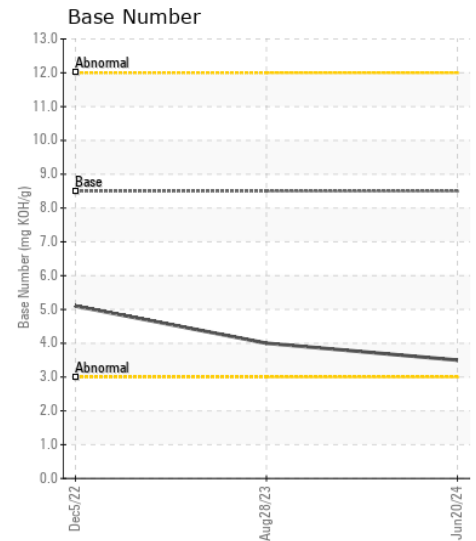
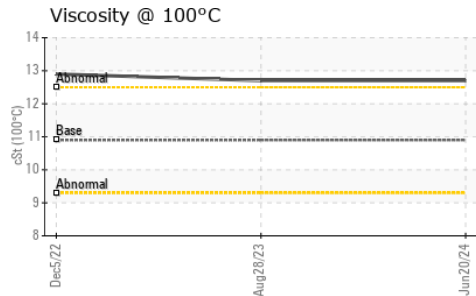
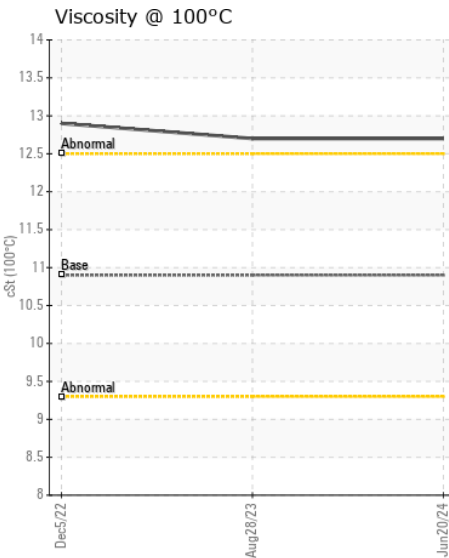
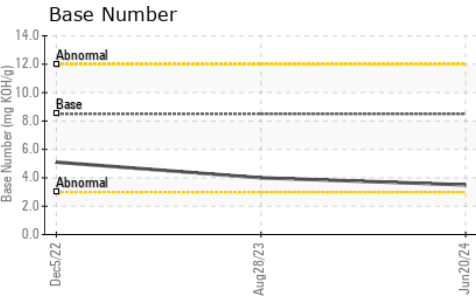
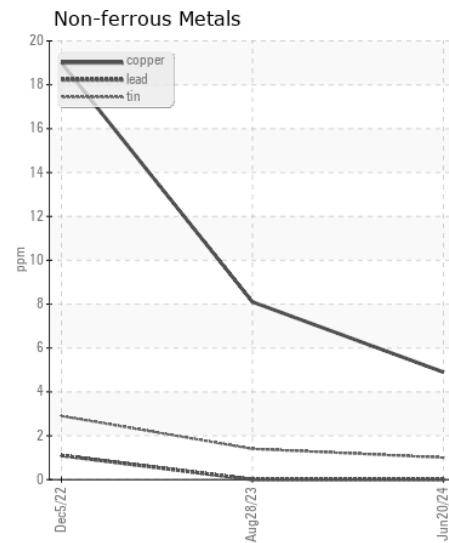
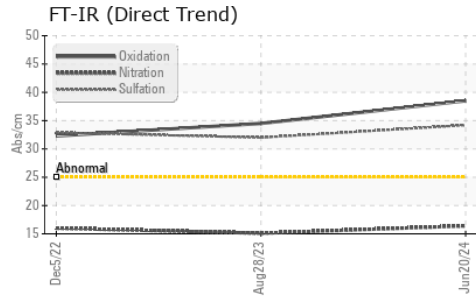
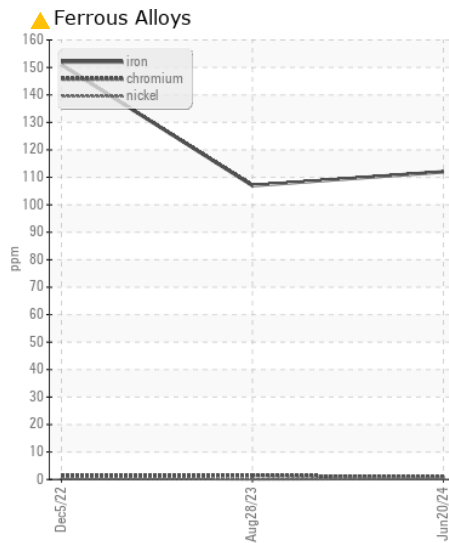
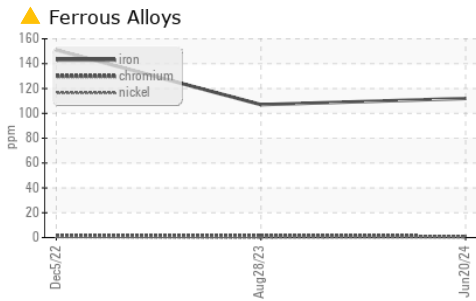
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>22</b>	21	24
Potassium	ppm	ASTM D5185m	>20	<b>21</b>	62	313
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>1.2</b>	1	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>16.4</b>	15.1	16.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>34.2</b>	32.0	32.9
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>7</b>	7	10
Boron	ppm	ASTM D5185m	250	<b>11</b>	11	19
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>70</b>	66	27
Manganese	ppm	ASTM D5185m		<b>2</b>	2	3
Magnesium	ppm	ASTM D5185m	450	<b>1233</b>	1205	903
Calcium	ppm	ASTM D5185m	3000	<b>972</b>	996	1279
Phosphorus	ppm	ASTM D5185m	1150	<b>1197</b>	1147	905
Zinc	ppm	ASTM D5185m	1350	<b>1472</b>	1430	1050
Sulfur	ppm	ASTM D5185m	4250	<b>3641</b>	3737	3710
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>38.5</b>	34.5	32.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>3.5</b>	4.0	5.1
Visc @ 100°C	cSt	ASTM D445	10.9	<b>12.7</b>	12.7	12.9



Certificate L2367

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

**Sample No.** : HRE0000666

**Lab Number** : 06227237

**Unique Number** : 11110730

**Test Package** : FLEET

**Received** : 03 Jul 2024

**Tested** : 06 Jul 2024

**Diagnosed** : 06 Jul 2024 - Don Baldrige

**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)