



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

Machine Id  
**2117**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 5W30 (--- QTS)**

### RECOMMENDATION

The oil is near the end of it's useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>HRE000208</b>	WC0717416	WC0654973
Sample Date		Client Info		<b>14 May 2024</b>	05 Nov 2022	25 Feb 2022
Machine Age	mls	Client Info		<b>503437</b>	334104	227049
Oil Age	mls	Client Info		<b>50000</b>	100000	100000
Filter Age	mls	Client Info		<b>50000</b>	50000	50000
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>83</b>	69	42
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>1</b>	3	0
Aluminum	ppm	ASTM D5185m	>20	<b>12</b>	11	8
Lead	ppm	ASTM D5185m	>40	<b>2</b>	1	<1
Copper	ppm	ASTM D5185m	>330	<b>12</b>	7	5
Tin	ppm	ASTM D5185m	>15	<b>2</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

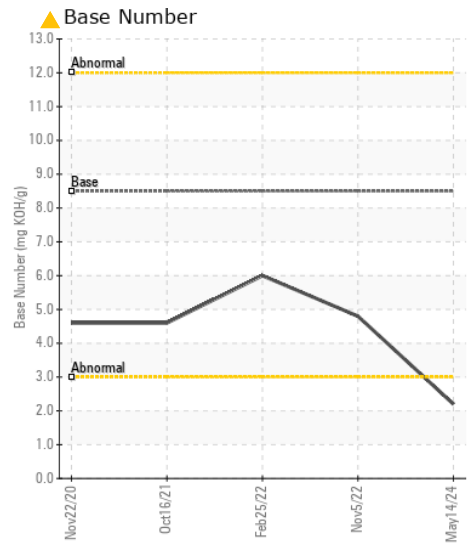
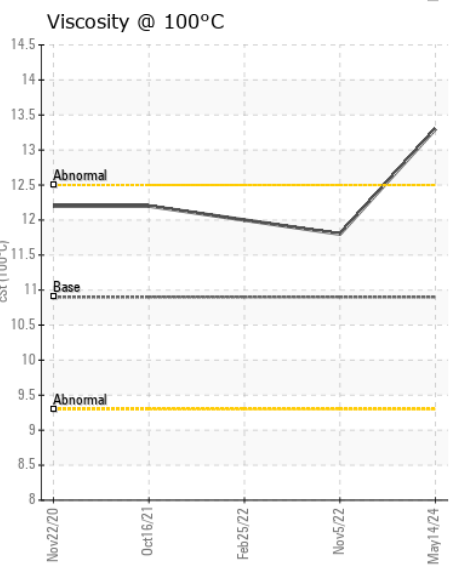
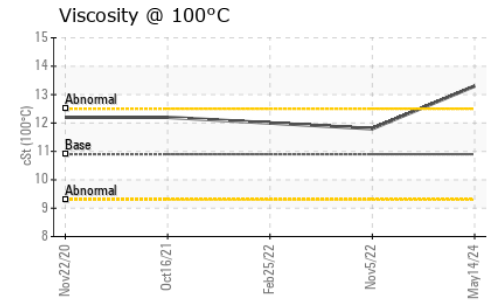
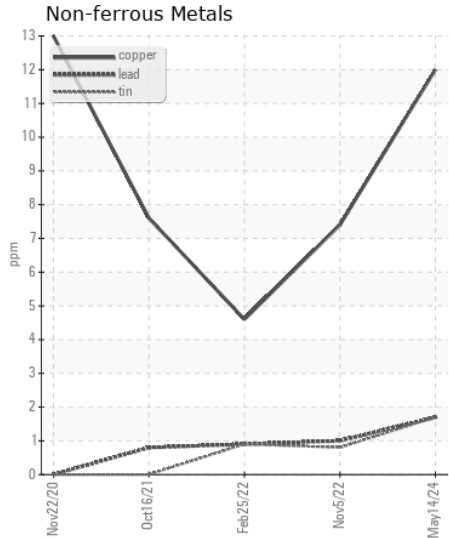
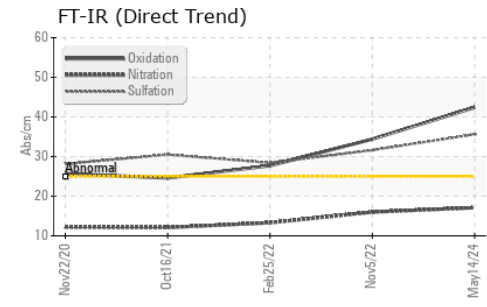
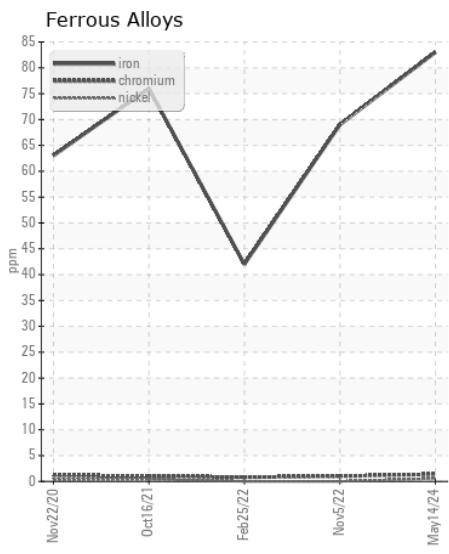
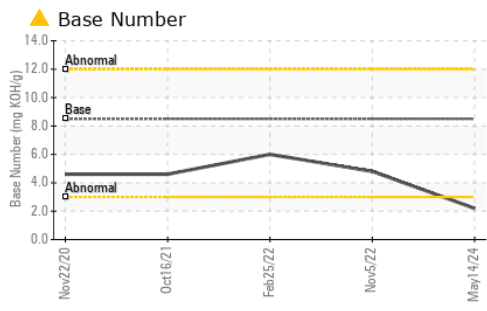
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>15</b>	11	10
Potassium	ppm	ASTM D5185m	>20	<b>10</b>	25	26
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>1.3</b>	1	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>17.1</b>	16	13.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>35.6</b>	31.6	28.4
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 level is low. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>6</b>	5	5
Boron	ppm	ASTM D5185m	250	<b>15</b>	13	12
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>71</b>	63	62
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>783</b>	1147	1109
Calcium	ppm	ASTM D5185m	3000	<b>1558</b>	953	1044
Phosphorus	ppm	ASTM D5185m	1150	<b>1084</b>	1069	1080
Zinc	ppm	ASTM D5185m	1350	<b>1437</b>	1340	1417
Sulfur	ppm	ASTM D5185m	4250	<b>3203</b>	3658	2904
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>42.4</b>	34.4	27.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>▲ 2.2</b>	4.8	6
Visc @ 100°C	cSt	ASTM D445	10.9	<b>13.3</b>	11.8	12.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : HRE0000208  
**Lab Number** : 06190005  
**Unique Number** : 11046757  
**Test Package** : FLEET  
**Received** : 23 May 2024  
**Tested** : 25 May 2024  
**Diagnosed** : 29 May 2024 - Don Baldrige

**MABE TRUCKING**  
 PO BOX 1081  
 EDEN, NC  
 US 27289  
 Contact: MAINTENANCE  
 maintenancemanager@mabetrucking.com

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)