



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id  
**1953**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 5W30 (--- 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>HRE0000548</b>	HRE0000140	WC0860412
Sample Date		Client Info		<b>13 Jun 2024</b>	09 Apr 2024	17 Jan 2024
Machine Age	mls	Client Info		<b>120127</b>	0	0
Oil Age	mls	Client Info		<b>0</b>	6000	6000
Filter Age	mls	Client Info		<b>0</b>	6000	6000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>9</b>	8	8
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	3	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>0</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	0
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

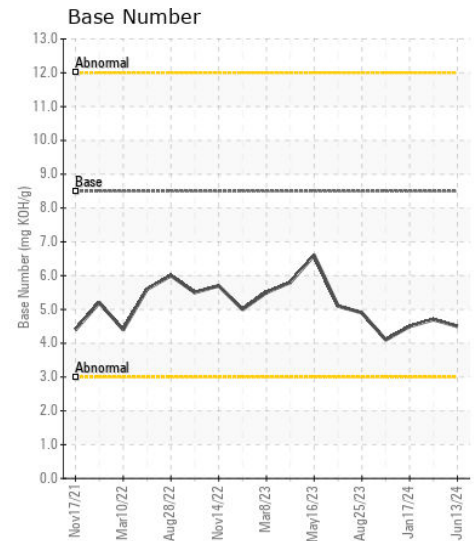
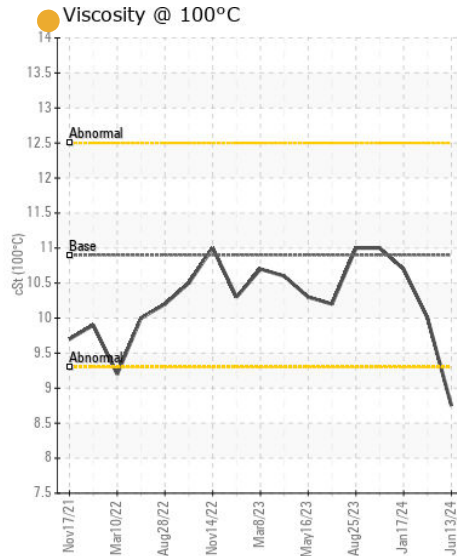
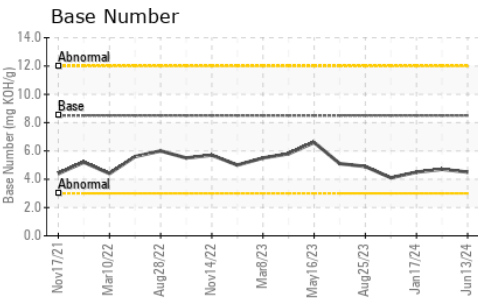
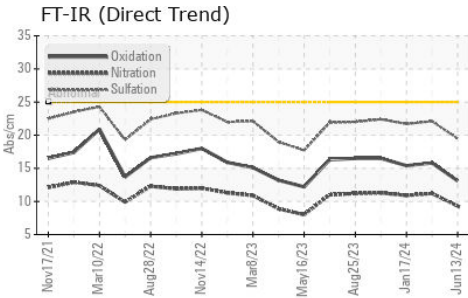
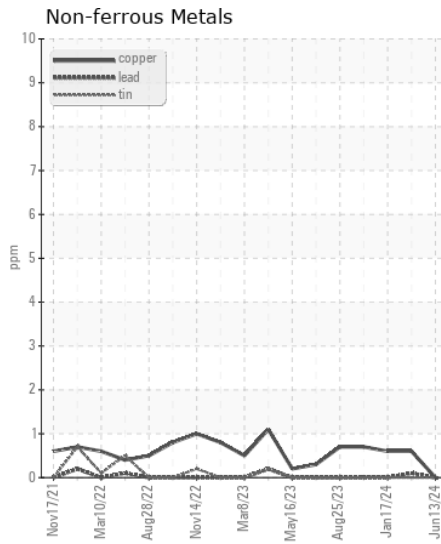
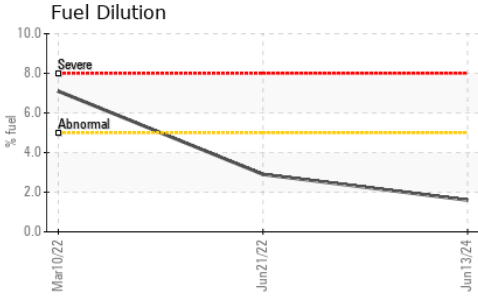
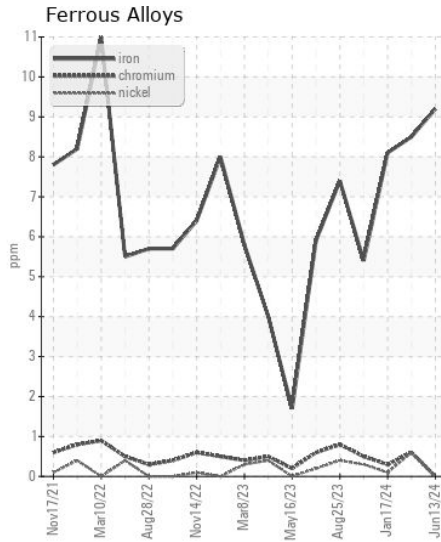
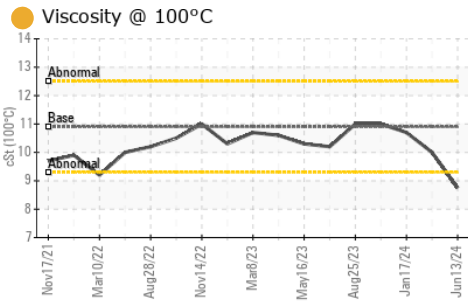
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>14</b>	17	18
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	2
Fuel	%	ASTM D3524	>5	<b>1.6</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</b>	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.3</b>	11.2	10.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.5</b>	22.1	21.7
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 lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Boron	ppm	ASTM D5185m	250	<b>20</b>	18	27
Barium	ppm	ASTM D5185m	10	<b>0</b>	<1	4
Molybdenum	ppm	ASTM D5185m	100	<b>103</b>	188	217
Manganese	ppm	ASTM D5185m		<b>18</b>	4	3
Magnesium	ppm	ASTM D5185m	450	<b>452</b>	576	633
Calcium	ppm	ASTM D5185m	3000	<b>1413</b>	1191	1157
Phosphorus	ppm	ASTM D5185m	1150	<b>694</b>	563	575
Zinc	ppm	ASTM D5185m	1350	<b>812</b>	673	721
Sulfur	ppm	ASTM D5185m	4250	<b>3183</b>	2495	2664
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.1</b>	15.8	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>4.5</b>	4.7	4.5
Visc @ 100°C	cSt	ASTM D445	10.9	<b>8.75</b>	10.0	10.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : HRE0000548 **Received** : 18 Jun 2024  
**Lab Number** : 06213227 **Tested** : 24 Jun 2024  
**Unique Number** : 11086091 **Diagnosed** : 24 Jun 2024 - Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

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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)