



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

Machine Id  
**INTERNATIONAL 108390**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (--- QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>IL0033005</b>	IL0032798	IL0027496
Sample Date		Client Info		<b>10 Apr 2024</b>	01 Dec 2023	21 Jun 2023
Machine Age	mls	Client Info		<b>412045</b>	371487	333823
Oil Age	mls	Client Info		<b>40558</b>	37664	32842
Filter Age	mls	Client Info		<b>40558</b>	37664	32842
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>21</b>	24	22
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	1	1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	3	2
Lead	ppm	ASTM D5185m	>40	<b>2</b>	1	2
Copper	ppm	ASTM D5185m	>330	<b>2</b>	4	9
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<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

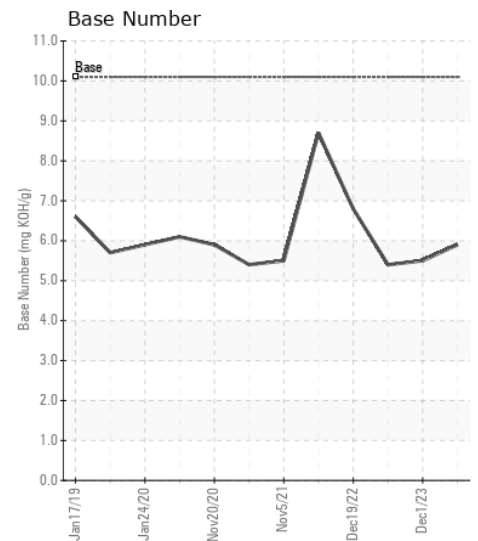
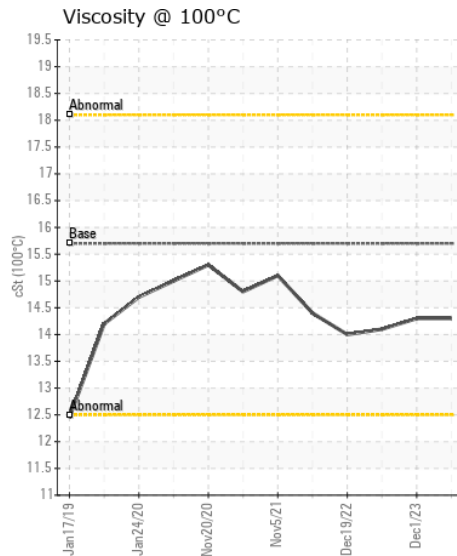
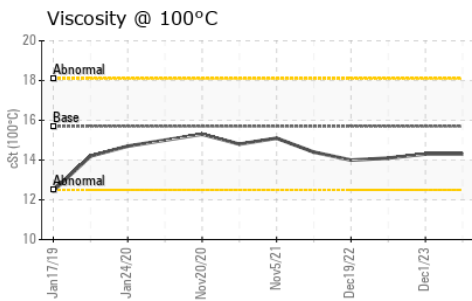
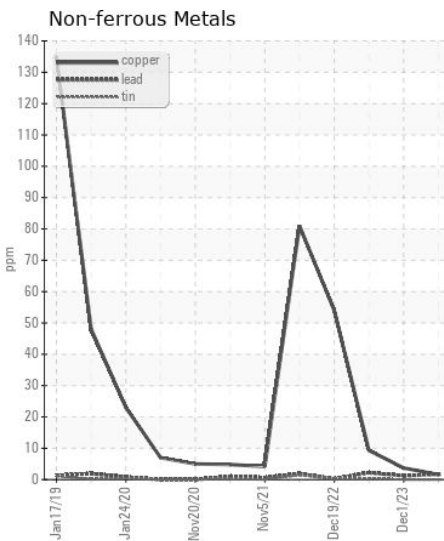
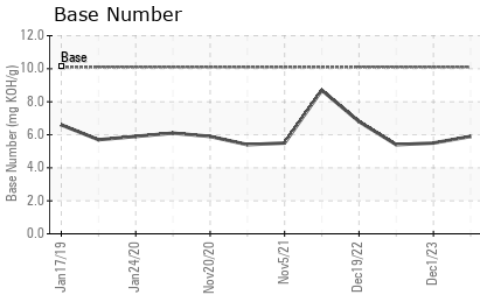
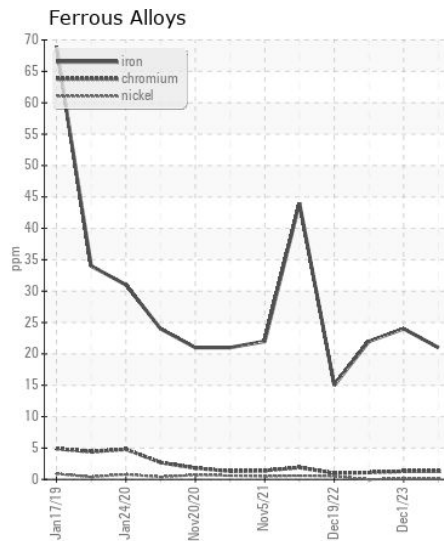
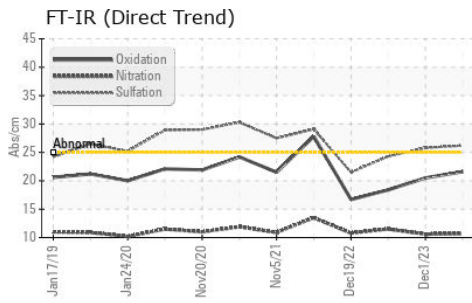
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	7	8
Potassium	ppm	ASTM D5185m	>20	<b>8</b>	14	2
Fuel		WC Method	>2.0	<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>	1.3	1.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.7</b>	10.6	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.2</b>	25.8	24.3
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>2</b>	<1	4
Boron	ppm	ASTM D5185m	316	<b>24</b>	21	13
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	12
Molybdenum	ppm	ASTM D5185m	1.2	<b>31</b>	34	97
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	24	<b>275</b>	240	53
Calcium	ppm	ASTM D5185m	2292	<b>2109</b>	2082	2241
Phosphorus	ppm	ASTM D5185m	1064	<b>1118</b>	988	963
Zinc	ppm	ASTM D5185m	1160	<b>1289</b>	1201	1214
Sulfur	ppm	ASTM D5185m	4996	<b>3343</b>	3228	4210
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>21.6</b>	20.5	18.4
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>5.9</b>	5.5	5.4
Visc @ 100°C	cSt	ASTM D445	15.7	<b>14.3</b>	14.3	14.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : IL0033005  
**Lab Number** : 06151805  
**Unique Number** : 10981883  
**Test Package** : FLEET

**Received** : 17 Apr 2024  
**Tested** : 18 Apr 2024  
**Diagnosed** : 19 Apr 2024 - Don Baldrige

**IDEALISE OF NORTHWEST WI**  
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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)