

## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id 6227011 Component Diesel Engine Fluid NOT GIVEN (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

There is no indication of any contamination in the oil.

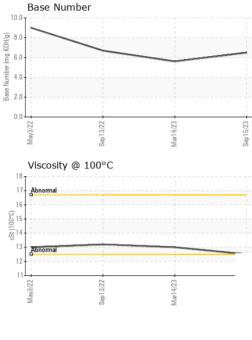
### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

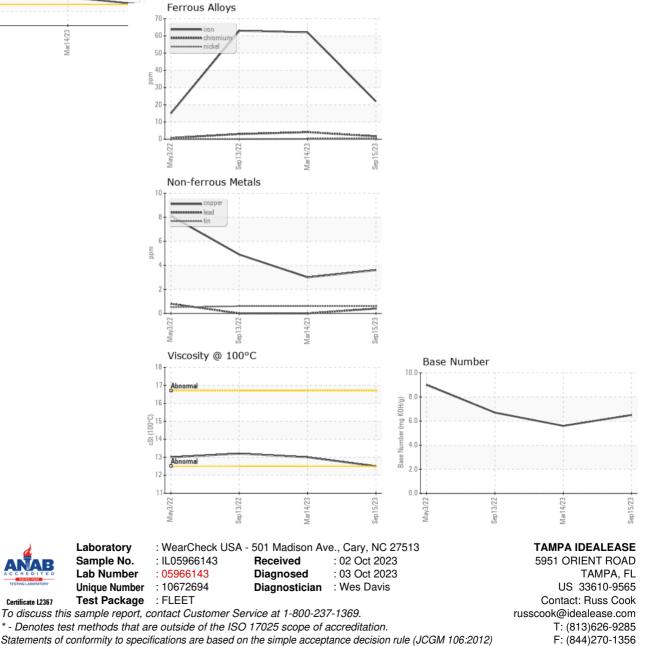
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		IL05966143	IL05802199	IL05644073
Sample Date		Client Info		15 Sep 2023	14 Mar 2023	13 Sep 2022
Machine Age	mls	Client Info		67646	57646	33156
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	22	62	63
Chromium	ppm	ASTM D5185m	>20	2	4	3
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	17	35	52
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	4	3	5
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		155	29	9
Barium	ppm	ASTM D5185m		0	2	<1
Molybdenum	ppm	ASTM D5185m		63	60	60
Manganese	ppm	ASTM D5185m		1	1	1
				107		
Magnesium	ppm	ASTM D5185m		487	706	711
-	ppm ppm	ASTM D5185m ASTM D5185m		487 1007	706 1229	711 1165
Magnesium Calcium Phosphorus				-		
Calcium	ppm	ASTM D5185m		1007	1229	1165
Calcium Phosphorus Zinc	ppm ppm	ASTM D5185m ASTM D5185m		1007 737	1229 698	1165 642
Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	1007 737 854	1229 698 910	1165 642 843
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	limit/base	1007 737 854 2342	1229 698 910 2388	1165 642 843 2260
Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method		1007 737 854 2342 current	1229 698 910 2388 history1	1165 642 843 2260 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	>25	1007 737 854 2342 current 5	1229 698 910 2388 history1 9	1165 642 843 2260 history2 8
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25	1007 737 854 2342 current 5 5	1229 698 910 2388 history1 9 4	1165 642 843 2260 history2 8 2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	>25 >20	1007 737 854 2342 current 5 5 18	1229 698 910 2388 history1 9 4 60	1165 642 843 2260 history2 8 2 114
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20 limit/base >3	1007 737 854 2342 current 5 5 18 current	1229 698 910 2388 history1 9 4 60 history1	<ul> <li>1165</li> <li>642</li> <li>843</li> <li>2260</li> <li>history2</li> <li>8</li> <li>2</li> <li>114</li> <li>history2</li> </ul>
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20 limit/base >3 >20	1007 737 854 2342 current 5 5 5 18 current 0.5	1229 698 910 2388 history1 9 4 60 history1 1	1165 642 843 2260 history2 8 2 114 history2 1
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> *ASTM D7844 *ASTM D7824	>25 >20 limit/base >3 >20	1007 737 854 2342 current 5 5 5 18 current 0.5 8.8	1229 698 910 2388 history1 9 4 60 history1 1 1 12.6	<ul> <li>1165</li> <li>642</li> <li>843</li> <li>2260</li> <li>history2</li> <li>8</li> <li>2</li> <li>114</li> <li>history2</li> <li>1</li> <li>13.4</li> </ul>
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624	>25 >20 limit/base >3 >20 >30 >30	1007 737 854 2342 current 5 5 18 current 0.5 8.8 20.3	1229 698 910 2388 history1 9 4 60 history1 1 12.6 25.4	1165 642 843 2260 history2 8 2 114 history2 1 1 13.4 26.2



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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	TIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		12.5	13.0	13.2
GRAPHS						



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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