



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

Machine Id  
**10297495**  
Component  
**Diesel Engine**  
Fluid  
**{not provided} (--- GAL)**

### RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>IL0031047</b>	IL05967547	IL05772457
Sample Date		Client Info		<b>09 Apr 2024</b>	11 Aug 2023	31 Jan 2023
Machine Age	mls	Client Info		<b>103215</b>	100491	98694
Oil Age	mls	Client Info		<b>0</b>	20000	10000
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	MARGINAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>23</b>	25	35
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	2
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
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>5</b>	3	8
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	1	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	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.

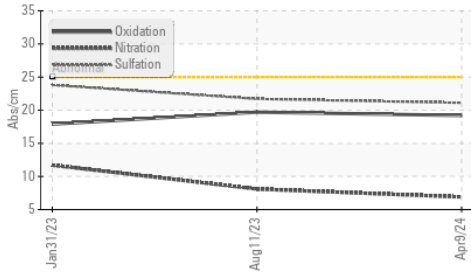
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	7	9
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	4
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	<1.0	▲ 4.3
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.2	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.9</b>	8.1	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.1</b>	21.7	23.8
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

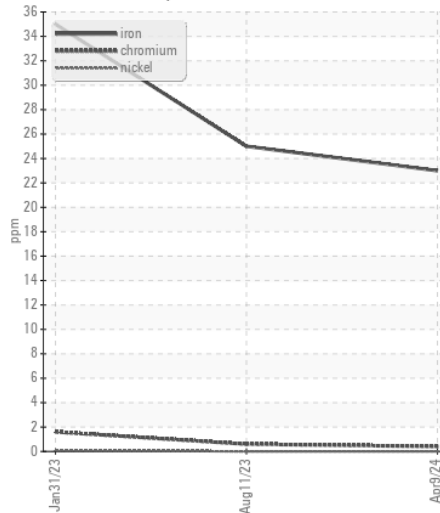
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>3</b>	3	0
Boron	ppm	ASTM D5185m		<b>53</b>	52	27
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>43</b>	39	5
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>462</b>	529	595
Calcium	ppm	ASTM D5185m		<b>1527</b>	1630	1391
Phosphorus	ppm	ASTM D5185m		<b>703</b>	787	1017
Zinc	ppm	ASTM D5185m		<b>795</b>	954	1146
Sulfur	ppm	ASTM D5185m		<b>2588</b>	2718	3688
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.2</b>	19.7	17.9
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.7</b>	9.9	6.9
Visc @ 100°C	cSt	ASTM D445		<b>10.5</b>	10.8	10.6

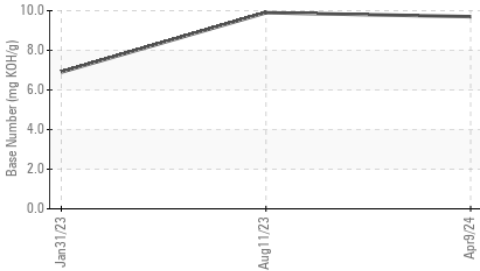
**FT-IR (Direct Trend)**



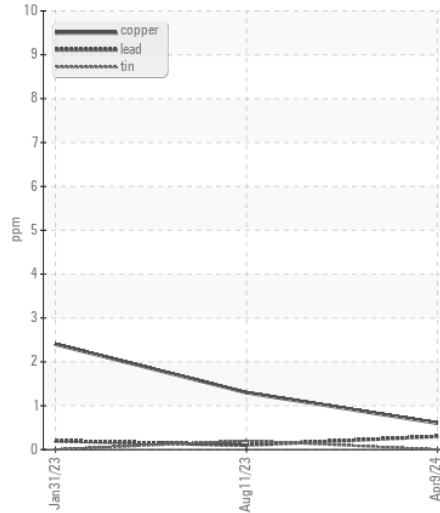
**Ferrous Alloys**



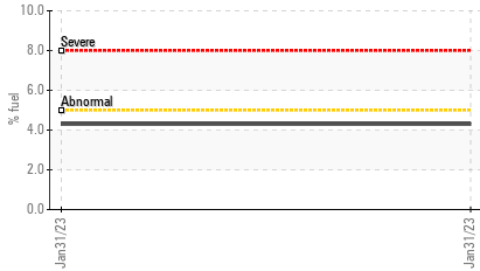
**Base Number**



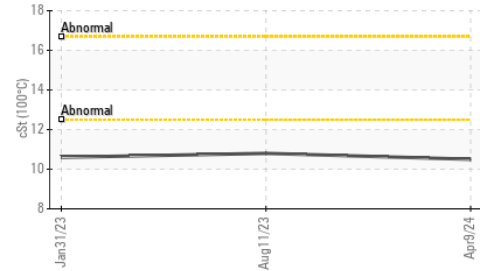
**Non-ferrous Metals**



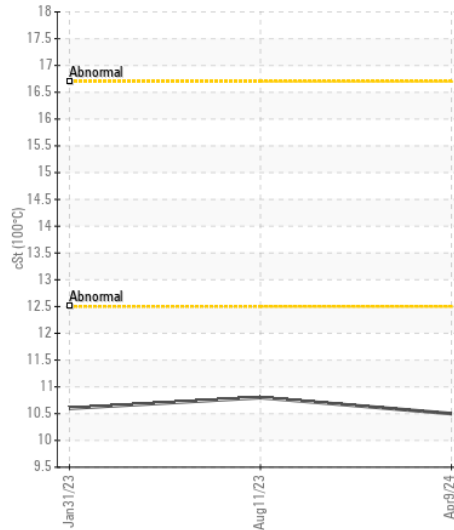
**Fuel Dilution**



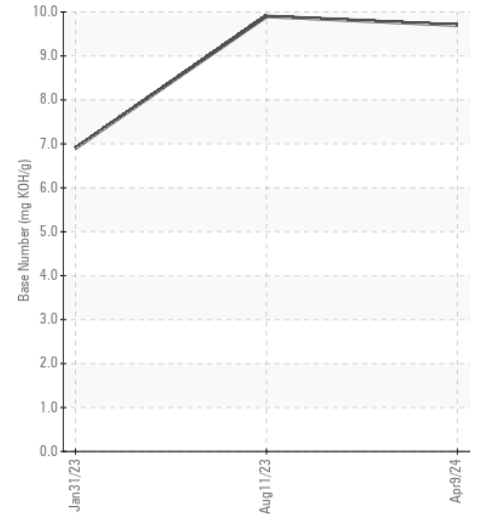
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : IL0031047 **Received** : 17 Apr 2024  
**Lab Number** : 06151588 **Tested** : 19 Apr 2024  
**Unique Number** : 10981666 **Diagnosed** : 19 Apr 2024 - Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution )

**IDEALRELEASE OF ATLANTA - FULTON**  
 4675 BAKERS FERRY ROAD  
 ATLANTA, GA  
 US 30331  
 Contact: DAVID JOHNS  
 davidjohns@idearelease.com  
 T: (404)699-5571  
 F: (404)699-7420

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)