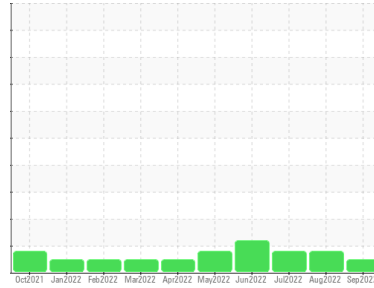


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**ARIEL**  
Component  
**Reciprocating Compressor**  
Fluid  
**NOT GIVEN (--- GAL)**

**DIAGNOSIS**

**Recommendation**

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

**Wear**

All component wear rates are normal.

**Contamination**

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

**Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>TO60000190</b>	TO60000185	TO60000183
Sample Date	Client Info			<b>06 Sep 2022</b>	03 Aug 2022	01 Jul 2022
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	ABNORMAL	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<b>0</b>	0	<1
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m		<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	<b>0</b>	0	<1
Lead	ppm	ASTM D5185m	>25	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

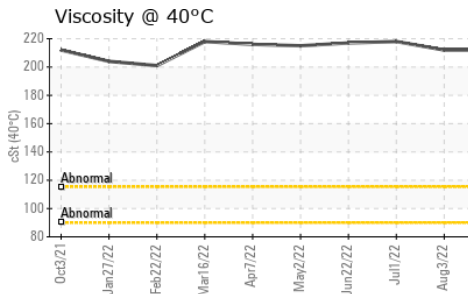
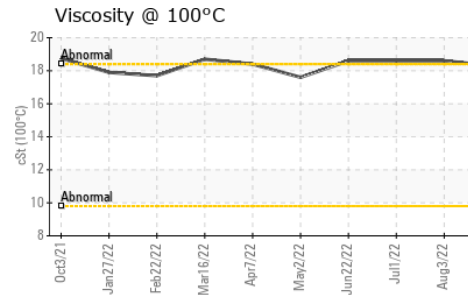
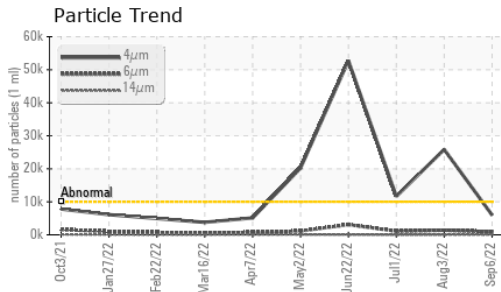
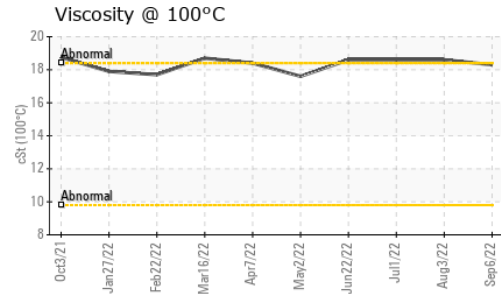
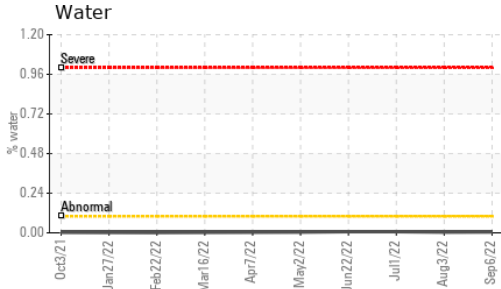
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	3	1
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m		<b>4</b>	5	9
Calcium	ppm	ASTM D5185m		<b>4</b>	6	11
Phosphorus	ppm	ASTM D5185m		<b>32</b>	21	19
Zinc	ppm	ASTM D5185m		<b>9</b>	12	9
Sulfur	ppm	ASTM D5185m		<b>2921</b>	2418	1587

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>3</b>	<1	<1
Sodium	ppm	ASTM D5185m		<b>0</b>	0	0
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Water	%	ASTM D6304	>0.1	<b>0.005</b>	0.004	0.007
ppm Water	ppm	ASTM D6304	>1000	<b>54.8</b>	43.0	70.5

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	<b>5985</b>	▲ 25840	▲ 11650
Particles >6µm		ASTM D7647	>2500	<b>913</b>	1399	1108
Particles >14µm		ASTM D7647	>320	<b>42</b>	41	31
Particles >21µm		ASTM D7647	>80	<b>9</b>	9	5
Particles >38µm		ASTM D7647	>20	<b>1</b>	0	0
Particles >71µm		ASTM D7647	>4	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	<b>20/17/13</b>	▲ 22/18/13	▲ 21/17/12

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.029</b>	0.016	0.015

# OIL ANALYSIS REPORT

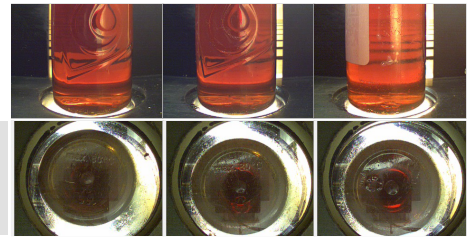


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	212	212	218
Visc @ 100°C	cSt	ASTM D445	18.3	18.6	18.6
Viscosity Index (VI)	Scale	ASTM D2270	95	97	94

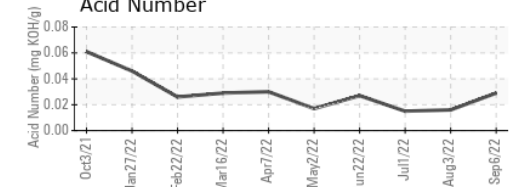
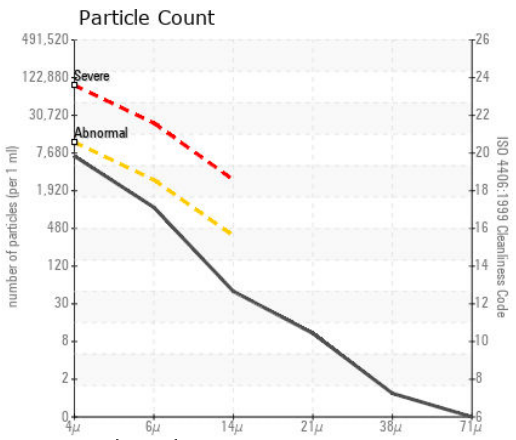
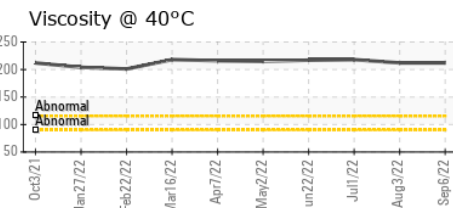
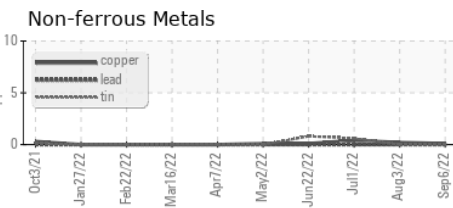
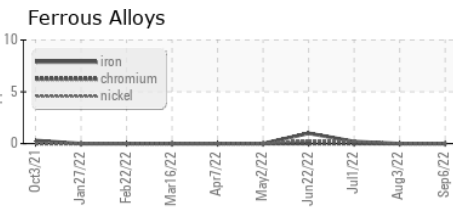
SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color



Bottom

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO60000190 **Received** : 22 Sep 2022  
**Lab Number** : 05648897 **Diagnosed** : 25 Sep 2022  
**Unique Number** : 10143436 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2 ( Additional Tests: KF, KV100, PrtCount, VI )

**GARLAND RENEWABLES**  
 3175 ELM GROVE RD  
 ROWLETT, TX  
 US 75089  
 Contact: DUSTIN FRY  
 dustin@morrowrenew.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)

T:  
F: