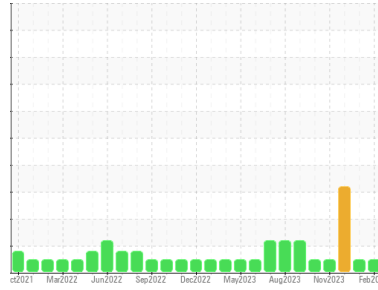


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
ARIEL
Component
Reciprocating Compressor
Fluid
{not provided} (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

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			TO50001889	TO50001888	TO50001882
Sample Date	Client Info			21 Feb 2024	09 Jan 2024	08 Dec 2023
Machine Age	hrs Client Info			0	0	0
Oil Age	hrs Client Info			0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	ABNORMAL

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

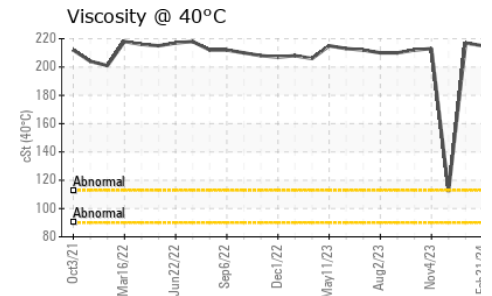
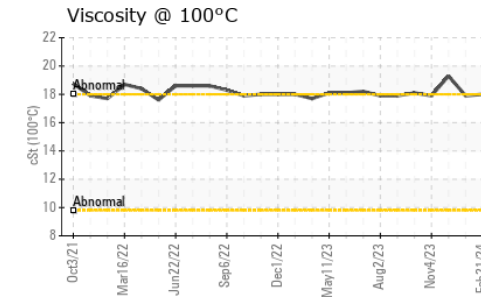
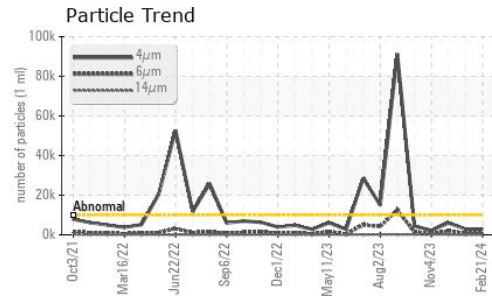
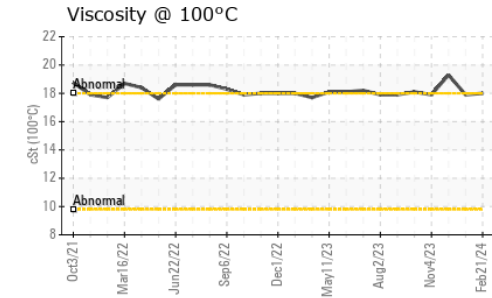
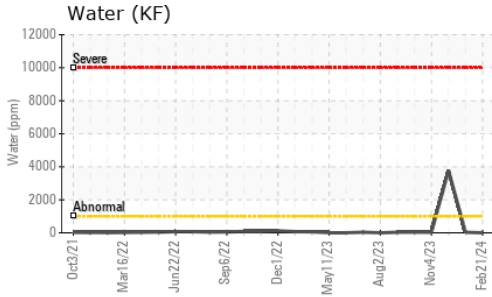
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		5	0	2
Calcium	ppm	ASTM D5185m		8	<1	0
Phosphorus	ppm	ASTM D5185m		21	8	12
Zinc	ppm	ASTM D5185m		2	0	0
Sulfur	ppm	ASTM D5185m		2650	2204	3505

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	2	2	▲ 31
Sodium	ppm	ASTM D5185m		0	<1	0
Potassium	ppm	ASTM D5185m	>20	1	2	3
Water	%	ASTM D6304	>0.1	0.00	0.003	▲ 0.376
ppm Water	ppm	ASTM D6304	>1000	0	32	▲ 3769

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	2902	2909	5949
Particles >6µm		ASTM D7647	>2500	676	683	1952
Particles >14µm		ASTM D7647	>320	54	54	154
Particles >21µm		ASTM D7647	>80	14	17	40
Particles >38µm		ASTM D7647	>20	0	0	1
Particles >71µm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	19/17/13	19/17/13	20/18/14

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.164	0.162	0.369

OIL ANALYSIS REPORT

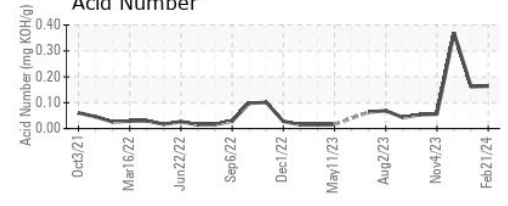
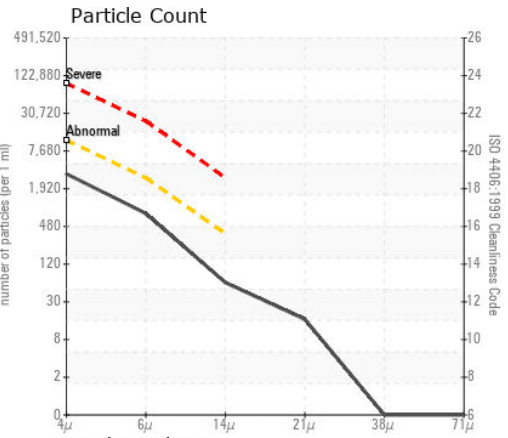
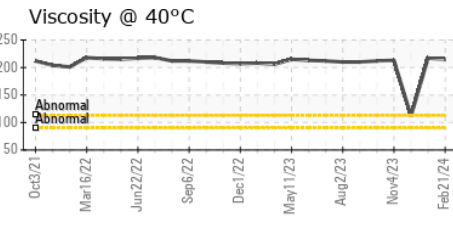
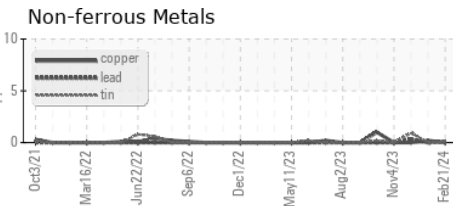
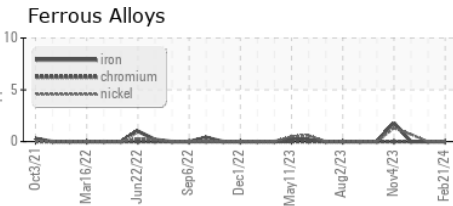


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	215	217	112
Visc @ 100°C	cSt	ASTM D445	18.0	17.9	19.3
Viscosity Index (VI)	Scale	ASTM D2270	91	89	194

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO50001889 **Received** : 18 Mar 2024
Lab Number : 06121640 **Tested** : 19 Mar 2024
Unique Number : 10930473 **Diagnosed** : 21 Mar 2024 - Jonathan Hester
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)