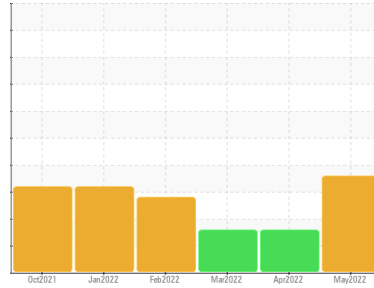


PROBLEM SUMMARY

Sample Rating Trend



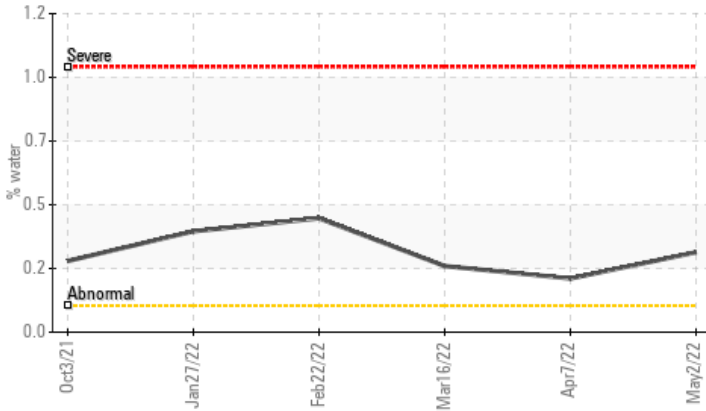
WATER



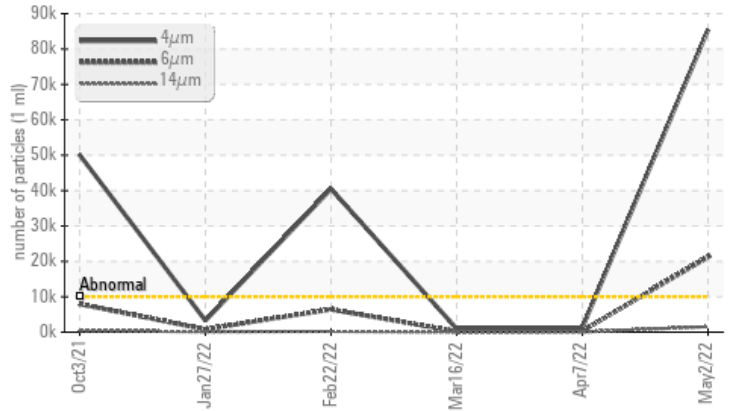
Machine Id
FRICK FRICK A
Component
Screw Compressor
Fluid
ISO 100 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Water



▲ Particle Trend



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Water	%	ASTM D6304	>0.1	▲ 0.301	▲ 0.202	▲ 0.249
ppm Water	ppm	ASTM D6304	>1000	▲ 3014.1	▲ 2027.0	▲ 2493.7
Particles >4µm		ASTM D7647	>10000	▲ 85471	1280	975
Particles >6µm		ASTM D7647	>2500	▲ 21240	349	177
Particles >14µm		ASTM D7647	>320	▲ 1545	34	24
Particles >21µm		ASTM D7647	>80	▲ 448	11	7
Oil Cleanliness		ISO 4406 (c)	>20/18/15	▲ 24/22/18	17/16/12	17/15/12

Customer Id: GARROW
Sample No.: TO70000048
Lab Number: 05550055
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	MISSED	Jul 21 2022	?	We recommend you service the filters on this component.

HISTORICAL DIAGNOSIS

07 Apr 2022 Diag: Jonathan Hester

WATER



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a light concentration of water present in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

[view report](#)



16 Mar 2022 Diag: Jonathan Hester

WATER



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a light concentration of water present in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

[view report](#)



22 Feb 2022 Diag: Jonathan Hester

WATER

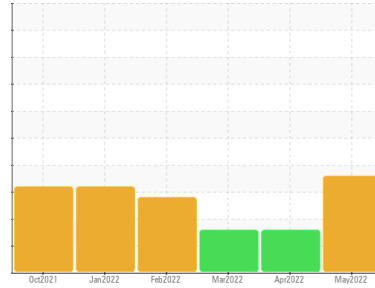


We advise that you follow the water drain-off procedure for this component, and use off-line filtration to improve the cleanliness of the system fluid. Resample at the next service interval to monitor. All component wear rates are normal. Insufficient sample was received to conduct all the routine laboratory tests. There is a high amount of silt (particulates < 14 microns in size) present in the oil. There is a moderate concentration of water present in the oil. The condition of the oil is acceptable for the time in service.

[view report](#)



Machine Id
FRICK FRICK A
 Component
Screw Compressor
 Fluid
ISO 100 (--- GAL)



DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present in the oil. There is a light concentration of water present in the oil.

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	TO70000048	TO70000044	TO70000041
Sample Date	Client Info	02 May 2022	07 Apr 2022	16 Mar 2022
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >60	0	0	0
Chromium	ppm	ASTM D5185m >4	0	0	0
Nickel	ppm	ASTM D5185m	<1	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	<1	0	0
Aluminum	ppm	ASTM D5185m >5	0	0	0
Lead	ppm	ASTM D5185m >10	<1	0	0
Copper	ppm	ASTM D5185m >30	0	0	0
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	0	<1
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m	0	0	0
Calcium	ppm	ASTM D5185m	6	0	0
Phosphorus	ppm	ASTM D5185m	33	19	17
Zinc	ppm	ASTM D5185m	2	0	0
Sulfur	ppm	ASTM D5185m	947	2165	2118

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >50	19	16	15
Sodium	ppm	ASTM D5185m	0	0	0
Potassium	ppm	ASTM D5185m >20	0	<1	2
Water	%	ASTM D6304 >0.1	▲ 0.301	▲ 0.202	▲ 0.249
ppm Water	ppm	ASTM D6304 >1000	▲ 3014.1	▲ 2027.0	▲ 2493.7

FLUID CLEANLINESS

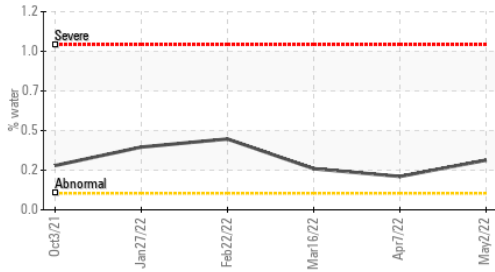
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >10000	▲ 85471	1280	975
Particles >6µm	ASTM D7647 >2500	▲ 21240	349	177
Particles >14µm	ASTM D7647 >320	▲ 1545	34	24
Particles >21µm	ASTM D7647 >80	▲ 448	11	7
Particles >38µm	ASTM D7647 >20	16	1	0
Particles >71µm	ASTM D7647 >4	0	0	0
Oil Cleanliness	ISO 4406 (c) >20/18/15	▲ 24/22/18	17/16/12	17/15/12

FLUID DEGRADATION

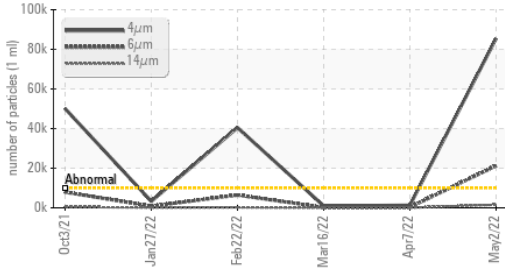
method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.185	0.205	0.231

OIL ANALYSIS REPORT

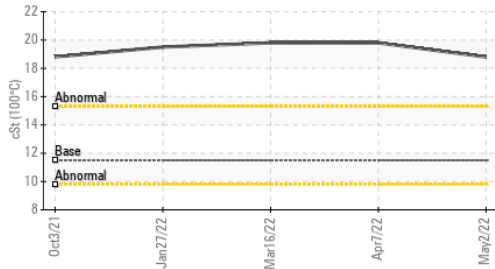
▲ Water



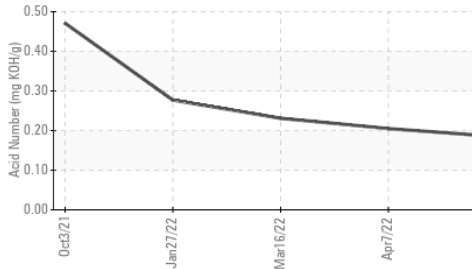
▲ Particle Trend



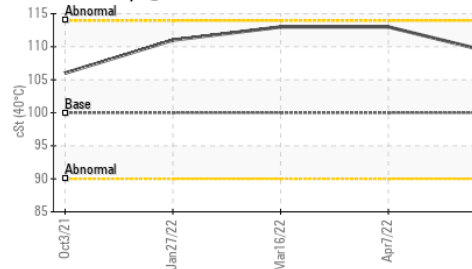
▲ Viscosity @ 100°C



▲ Acid Number



▲ Viscosity @ 40°C

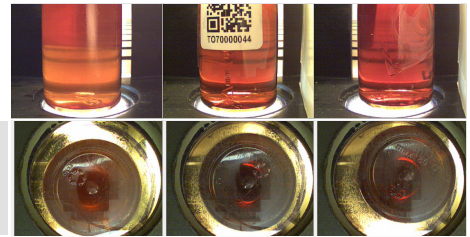


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	100	109	113
Visc @ 100°C	cSt	ASTM D445	11.5	18.8	19.8
Viscosity Index (VI)	Scale	ASTM D2270	102	193	198

SAMPLE IMAGES	method	limit/base	current	history1	history2
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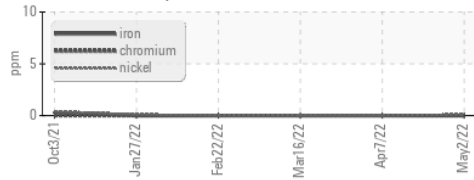
Color



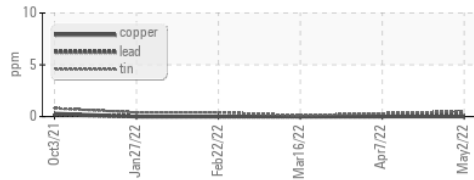
Bottom

GRAPHS

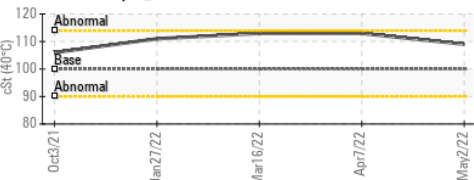
Ferrous Alloys



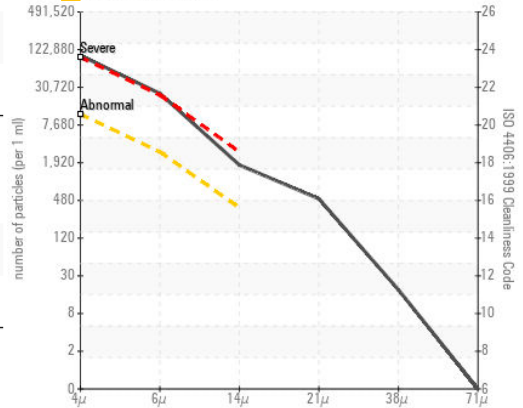
Non-ferrous Metals



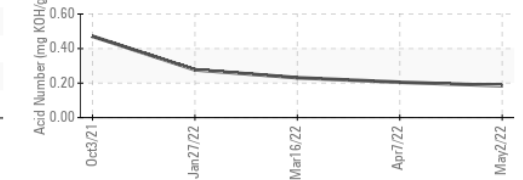
Viscosity @ 40°C



▲ Particle Count



▲ Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO70000048 **Received** : 20 May 2022
Lab Number : 05550055 **Diagnosed** : 23 May 2022
Unique Number : 9984422 **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: