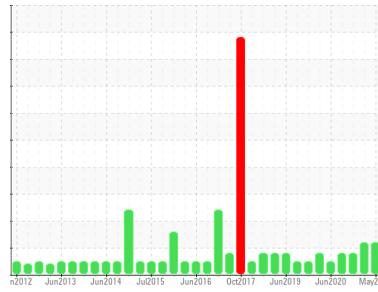




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

Refrigeration

5 High - Low Stage Compressor NCR (S/N 3235031)

Machine Id

Component
Refrigeration Compressor

Fluid

COLD STAR CS-2033-SC (150 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. The filter cleaned at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) 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		WC0892832	WC0892852	WC0632333
Sample Date	Client Info		16 May 2024	20 Dec 2023	16 Dec 2021
Machine Age	hrs	Client Info	37985	36903	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Filtered	Filtered	N/A
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >8	1	0	0
Chromium	ppm	ASTM D5185m >2	<1	0	0
Nickel	ppm	ASTM D5185m	1	<1	2
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m >2	1	0	<1
Aluminum	ppm	ASTM D5185m >3	1	0	0
Lead	ppm	ASTM D5185m >2	<1	0	0
Copper	ppm	ASTM D5185m >8	1	0	<1
Tin	ppm	ASTM D5185m >4	<1	0	0
Antimony	ppm	ASTM D5185m	---	---	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	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	<1	0	0
Manganese	ppm	ASTM D5185m	<1	<1	0
Magnesium	ppm	ASTM D5185m	<1	<1	0
Calcium	ppm	ASTM D5185m	0	0	0
Phosphorus	ppm	ASTM D5185m	8	16	41
Zinc	ppm	ASTM D5185m	0	0	0
Sulfur	ppm	ASTM D5185m	0	0	0

CONTAMINANTS

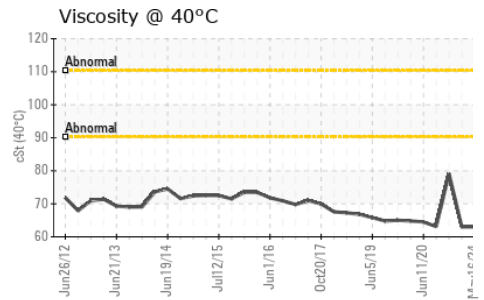
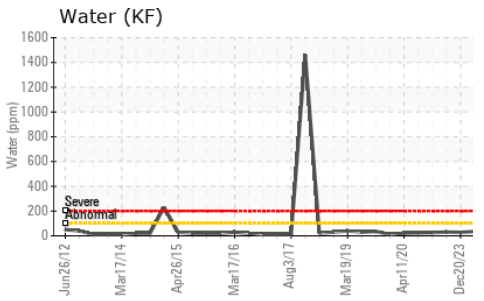
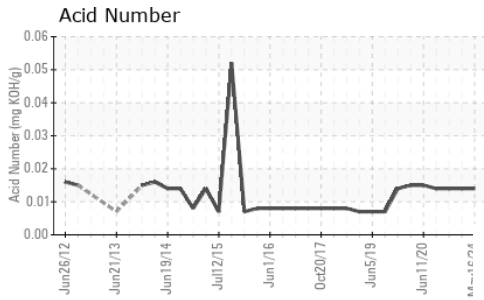
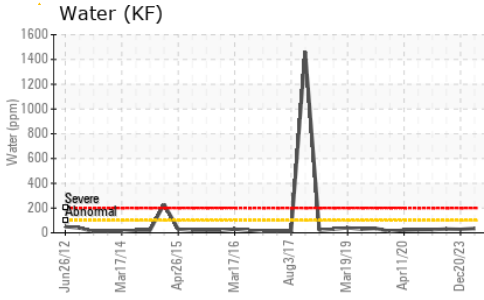
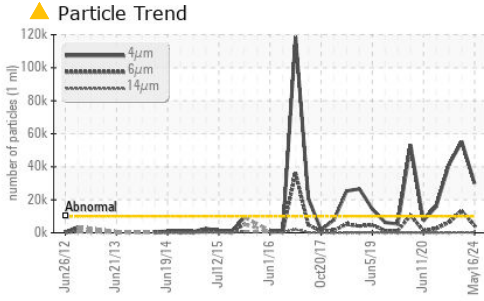
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	1	0	<1
Sodium	ppm	ASTM D5185m	0	0	0
Potassium	ppm	ASTM D5185m >20	<1	0	0
Water	%	ASTM D6304 >0.01	0.003	0.003	0.003
ppm Water	ppm	ASTM D6304 >100	35	28	30.6

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	▲ 29916	▲ 55234	▲ 41273
Particles >6µm	ASTM D7647	>2500	▲ 4287	▲ 13176	▲ 6387
Particles >14µm	ASTM D7647	>320	33	301	109
Particles >21µm	ASTM D7647	>80	3	46	10
Particles >38µm	ASTM D7647	>20	0	0	0
Particles >71µm	ASTM D7647	>4	0	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/15	▲ 22/19/12	▲ 23/21/15	▲ 23/20/14

FLUID DEGRADATION

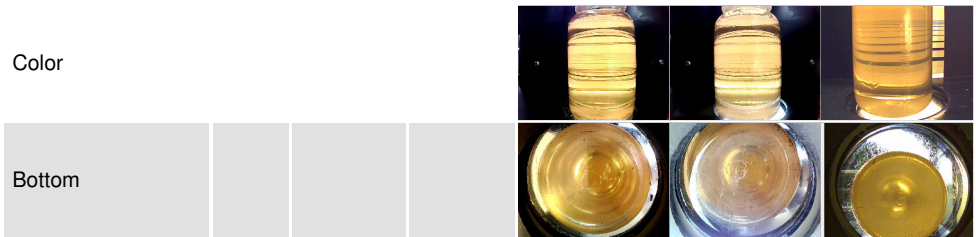
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974	0.014	0.014	0.014



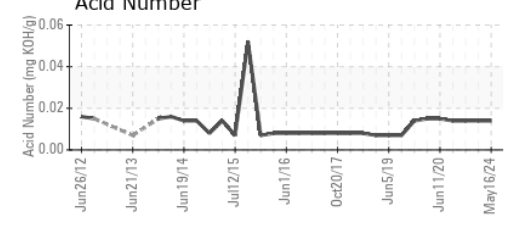
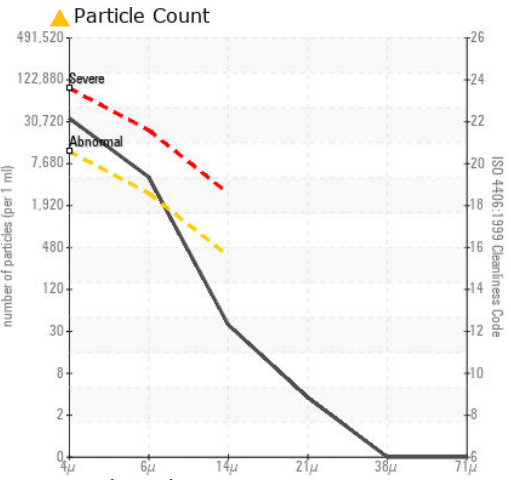
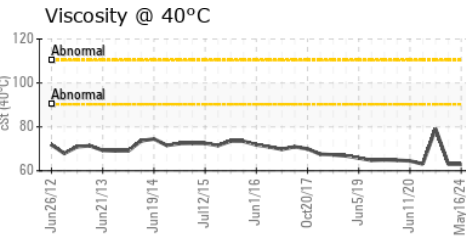
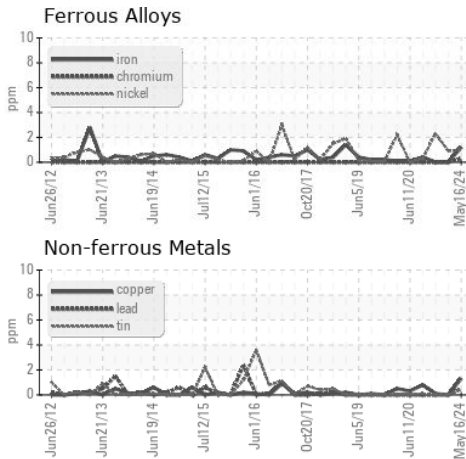
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.01	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	63.0	63.0	79.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0892832 **Received** : 29 May 2024
Lab Number : 06194051 **Tested** : 30 May 2024
Unique Number : 11056174 **Diagnosed** : 31 May 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: PrtCount)

TROPICANA PRODUCTS INC
 1001 13TH AVE EAST
 BRADENTON, FL
 US 34208
 Contact: STEVE RIEDEL
 steven.riedel@tropicana.com
 T: (941)742-2992
 F: (941)749-3980

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)