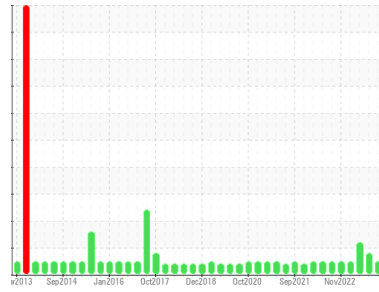




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
NH3 Compressor
 Machine Id
CARCA H-10
 Component
Refrigeration Compressor
 Fluid
USPI 1009-68 SC (--- 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

An increase in the AN level is noted. Confirmed. 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	USP0008006	USP0005069	USP243270
Sample Date	Client Info	04 Apr 2024	15 Jan 2024	30 Jul 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	ATTENTION	ATTENTION

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185m	>8	24	22	26
Chromium ppm ASTM D5185m	>2	0	0	0
Nickel ppm ASTM D5185m		0	0	0
Titanium ppm ASTM D5185m		<1	0	0
Silver ppm ASTM D5185m	>2	0	0	0
Aluminum ppm ASTM D5185m	>3	<1	1	<1
Lead ppm ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m	>8	2	2	2
Tin ppm ASTM D5185m	>4	<1	0	0
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	0
Barium ppm ASTM D5185m		0	0	0
Molybdenum ppm ASTM D5185m		0	0	0
Manganese ppm ASTM D5185m		<1	0	<1
Magnesium ppm ASTM D5185m		<1	<1	0
Calcium ppm ASTM D5185m		0	6	4
Phosphorus ppm ASTM D5185m		0	0	0
Zinc ppm ASTM D5185m		11	36	67
Sulfur ppm ASTM D5185m	50	2366	2241	2238

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm ASTM D5185m	>15	0	<1	<1
Sodium ppm ASTM D5185m		0	0	0
Potassium ppm ASTM D5185m	>20	<1	<1	<1
Water % ASTM D6304	>0.01	0.002	0.004	0.002
ppm Water ppm ASTM D6304	>100	24	40	23.5

FLUID CLEANLINESS

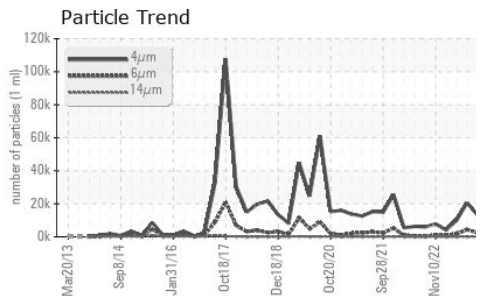
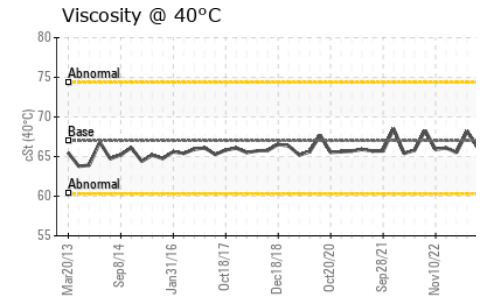
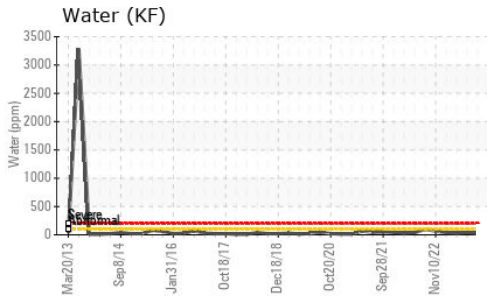
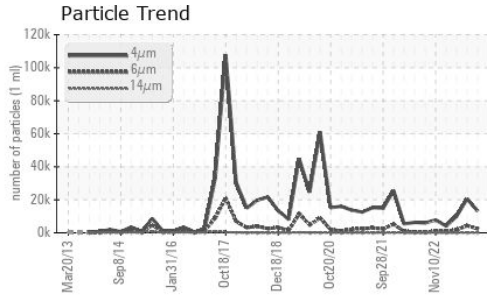
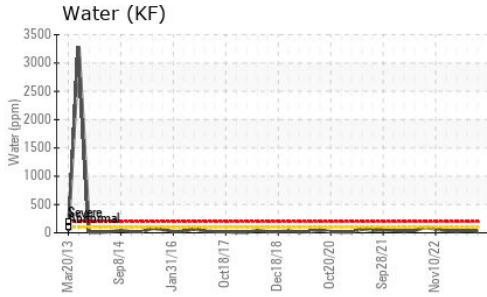
method	limit/base	current	history1	history2
Particles >4µm ASTM D7647		13185	20565	10078
Particles >6µm ASTM D7647	>2500	2413	4388	1778
Particles >14µm ASTM D7647	>320	81	128	50
Particles >21µm ASTM D7647	>80	16	20	11
Particles >38µm ASTM D7647	>20	0	1	0
Particles >71µm ASTM D7647	>4	0	0	0
Oil Cleanliness ISO 4406 (c)	>--/18/15	21/18/14	22/19/14	21/18/13

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D974	0.005	0.123	0.097	0.137



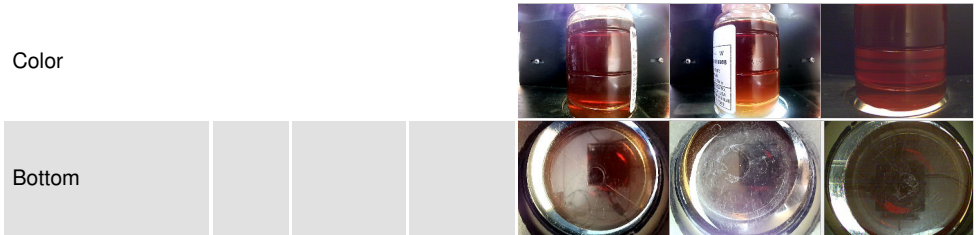
OIL ANALYSIS REPORT



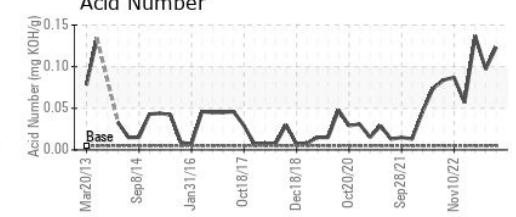
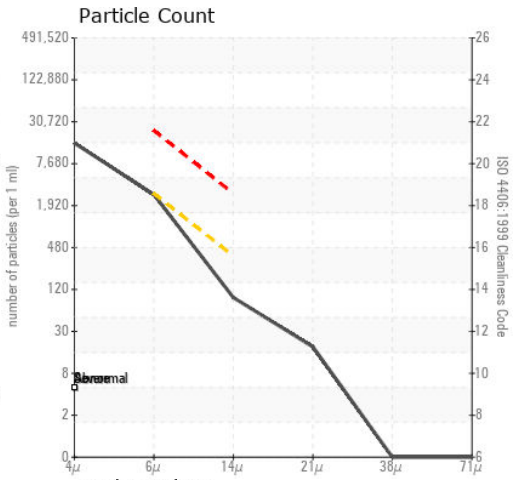
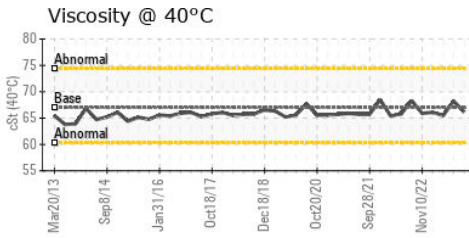
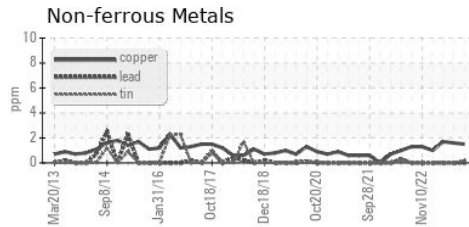
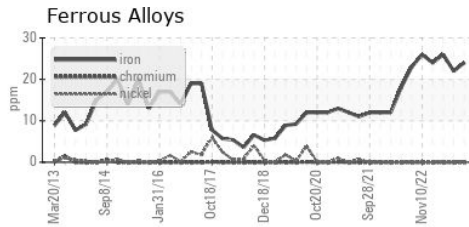
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 67	66.2	68.2	65.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : USP0008006
 Lab Number : 06139945
 Unique Number : 10964753
 Test Package : IND 2

Received : 05 Apr 2024
 Tested : 08 Apr 2024
 Diagnosed : 08 Apr 2024 - Doug Bogart

CARGILL-CALIFORNIA
 1001 E. SMITH STREET
 CALIFORNIA, MO
 US 65018
 Contact: REFRIGERATION DEPT.

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)

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