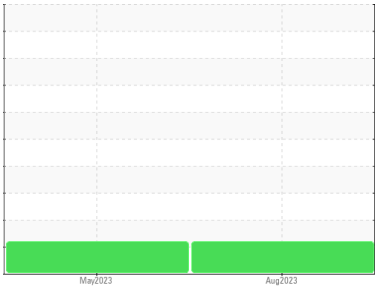
PROBLEM SUMMARY

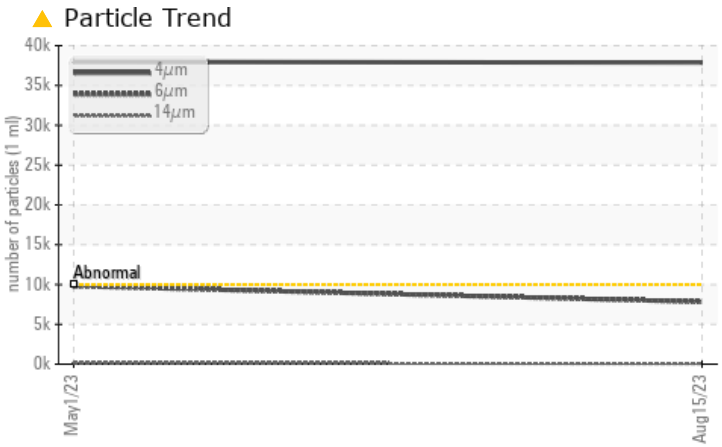
Area
[3160795]
Machine Id
SC-04 (S/N V2446)
Component
Refrigeration Compressor
Fluid
FES 4 (70 GAL)

Sample Rating Trend



ISO

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	---
Particles >4µm		ASTM D7647	>10000	▲ **37869**	▲ 37972	---
Particles >6µm		ASTM D7647	>2500	▲ **7827**	▲ 9800	---
Oil Cleanliness		ISO 4406 (c)	>20/18/15	▲ **22/20/13**	▲ 22/20/14	---

Customer Id: USCMCD
Sample No.: USP244458
Lab Number: 05978308
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

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

01 May 2023 Diag: Doug Bogart

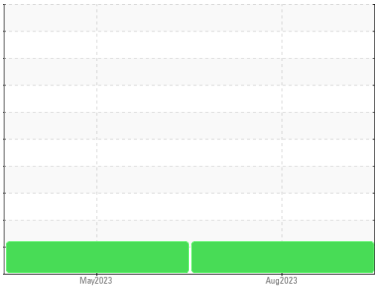
ISO

Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
[3160795]
Machine Id
SC-04 (S/N V2446)
Component
Refrigeration Compressor
Fluid
FES 4 (70 GAL)

DIAGNOSIS

Recommendation
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		**USP244458**	USP244457	---
Sample Date		Client Info		**15 Aug 2023**	01 May 2023	---
Machine Age	hrs	Client Info		**8383**	7259	---
Oil Age	hrs	Client Info		**8383**	7259	---
Oil Changed		Client Info		**N/A**	N/A	---
Sample Status				**ABNORMAL**	ABNORMAL	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>8	**5**	8	---
Chromium	ppm	ASTM D5185m	>2	**0**	0	---
Nickel	ppm	ASTM D5185m		**0**	0	---
Titanium	ppm	ASTM D5185m		**<1**	0	---
Silver	ppm	ASTM D5185m	>2	**0**	0	---
Aluminum	ppm	ASTM D5185m	>3	**0**	0	---
Lead	ppm	ASTM D5185m	>2	**0**	0	---
Copper	ppm	ASTM D5185m	>8	**<1**	<1	---
Tin	ppm	ASTM D5185m	>4	**0**	0	---
Vanadium	ppm	ASTM D5185m		**0**	0	---
Cadmium	ppm	ASTM D5185m		**0**	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	---
Barium	ppm	ASTM D5185m		**1**	0	---
Molybdenum	ppm	ASTM D5185m		**0**	0	---
Manganese	ppm	ASTM D5185m		**0**	<1	---
Magnesium	ppm	ASTM D5185m		**0**	<1	---
Calcium	ppm	ASTM D5185m		**<1**	0	---
Phosphorus	ppm	ASTM D5185m		**0**	<1	---
Zinc	ppm	ASTM D5185m		**0**	<1	---
Sulfur	ppm	ASTM D5185m		**0**	0	---

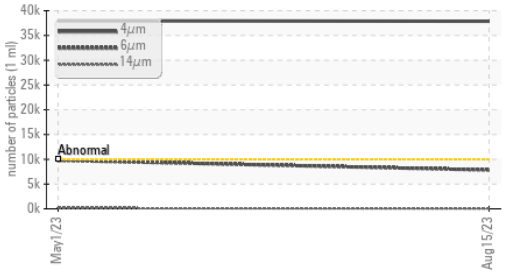
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**0**	0	---
Sodium	ppm	ASTM D5185m		**<1**	<1	---
Potassium	ppm	ASTM D5185m	>20	**0**	0	---
Water	%	ASTM D6304	>0.01	**0.003**	0.001	---
ppm Water	ppm	ASTM D6304	>100	**29.1**	12.0	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	▲ **37869**	▲ 37972	---
Particles >6µm		ASTM D7647	>2500	▲ **7827**	▲ 9800	---
Particles >14µm		ASTM D7647	>320	**60**	131	---
Particles >21µm		ASTM D7647	>80	**9**	12	---
Particles >38µm		ASTM D7647	>20	**1**	0	---
Particles >71µm		ASTM D7647	>4	**0**	0	---
Oil Cleanliness		ISO 4406 (c)	>20/18/15	▲ **22/20/13**	▲ 22/20/14	---

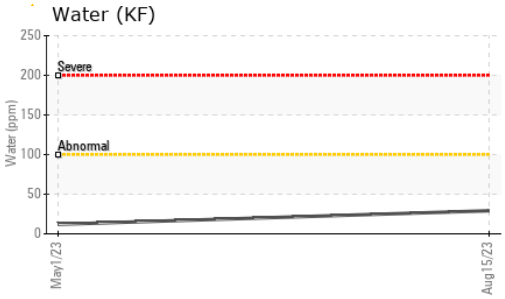
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974		**0.014**	0.014	---

OIL ANALYSIS REPORT

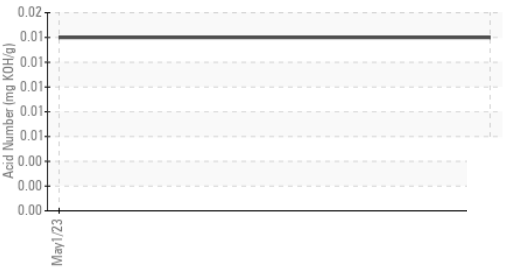
Particle Trend



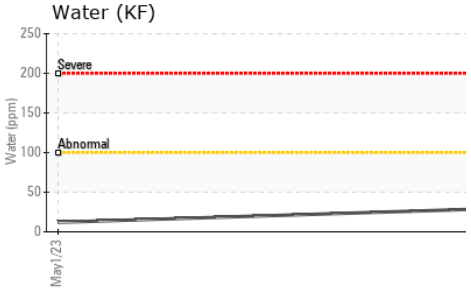
Water (KF)



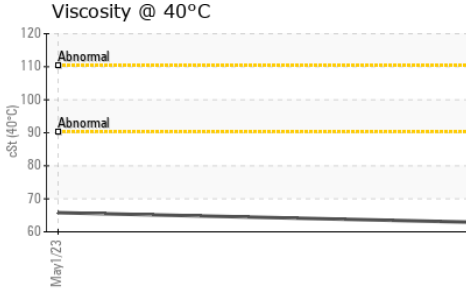
Acid Number



Water (KF)

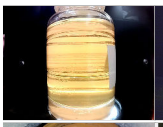
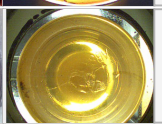


Viscosity @ 40°C



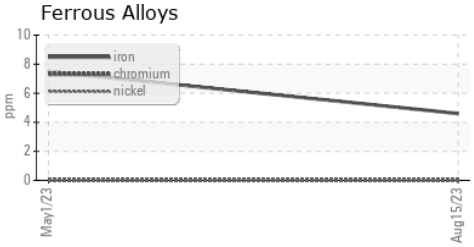
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	LIGHT	---
Sand/Dirt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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**62.8**	65.8	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					*no image*
Bottom					*no image*

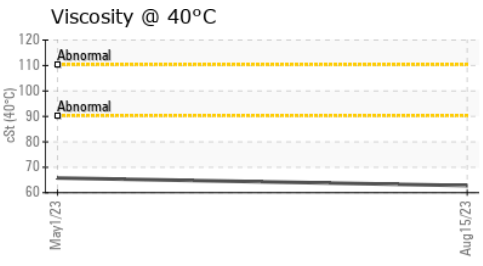
GRAPHS

Ferrous Alloys

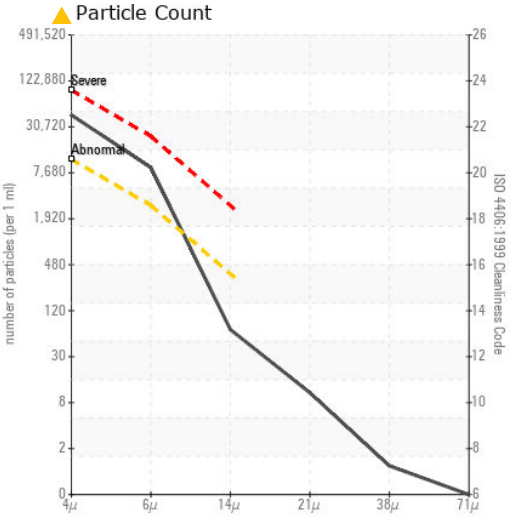


Non-ferrous Metals

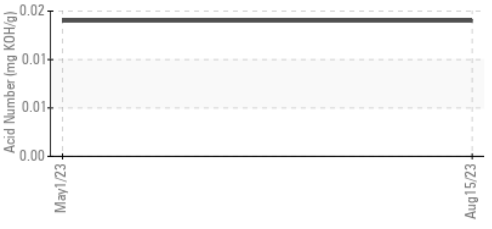
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP244458
Lab Number : 05978308
Unique Number : 10695603
Test Package : IND 2

Received : 13 Oct 2023
Diagnosed : 17 Oct 2023
Diagnostician : Doug Bogart

UNITED STATES COLD STORAGE - USCMED
1275 MEDLINE PLACE
MCDONOUGH, GA
US 30253
Contact: Service Manager

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: